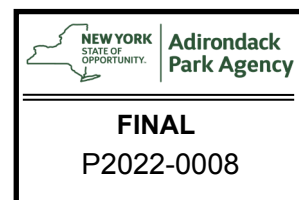


**WOODS HOLLOW CAMPGROUND**

# **FOOTCANDLE ANALYSIS & EXTERIOR LIGHTING FIXTURE CUTSHEETS**

**TOWN OF MAYFIELD  
FULTON COUNTY, NEW YORK**

**DECEMBER 6, 2021**



**ENVIRONMENTAL DESIGN  
PARTNERSHIP, LLP.**  
Shaping the physical environment

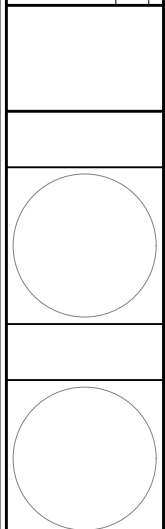
900 New York 146 Clifton Park, NY 12065  
(P) 518.371.7621 [edplp.com](http://edplp.com)



**RV PARK FOR WOODS HOLLOW CAMPGROUND**  
 WOODS HOLLOW MINING COMPANY

WOODS HOLLOW ROAD  
 TOWN OF MAYFIELD  
 FULTON COUNTY, NEW YORK

OWNER BY	EDP
DESIGNED BY	EDP
EDP PROJECT NUMBER	148275
DATE	12/08/21
REVISION	DATE
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SCALE: AS NOTED

NOT FOR CONSTRUCTION

SHEET TITLE: FOOTCANDLE ANALYSIS KEY PLAN

SHEET: FC-01

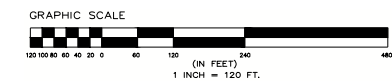


- LEGEND:**
- DENOTES SINGLE-FIXTURE LIGHT POLE
  - S1 DENOTES DOUBLE-FIXTURE LIGHT POLE
  - DENOTES WALL-MOUNTED LIGHT
  - W1 DENOTES CANOPY DOWN-LIGHT
  - W2 DENOTES SIGNAGE FLOOD LIGHT
  - C1 DENOTES SIGNAGE LIGHT
  - F1 DENOTES LIGHT LEVEL AT GROUND PLANE IN 0.0 FOOTCANDLES

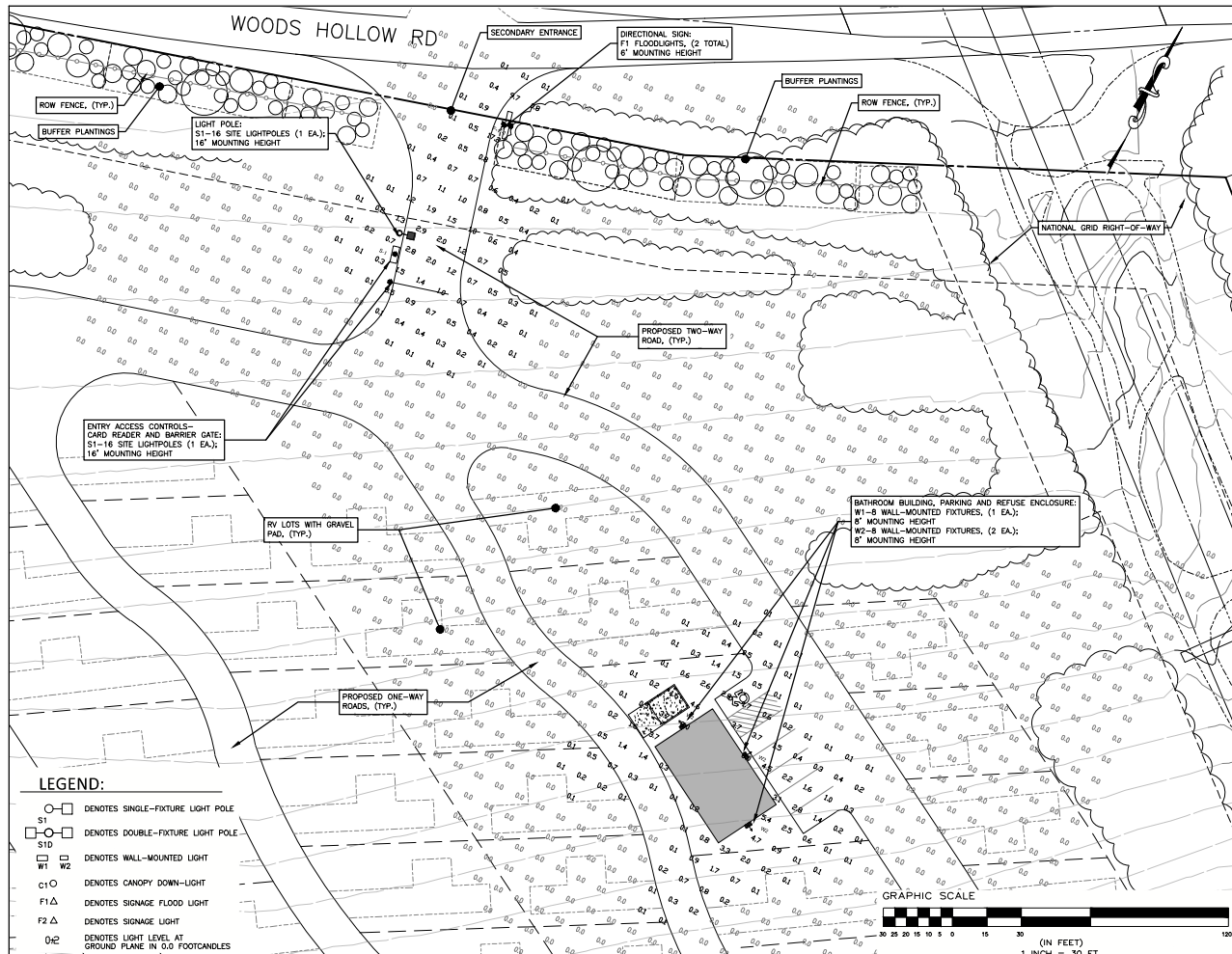
EXTERIOR LIGHTING SCHEDULE						
LABEL	QTY	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	LAMP	PHOTOMETRIC DISTRIBUTION PATTERN
S1-14	13	GARDCO/SIGNIFY NORTH AMERICA CORP.	ECF-S-64L-600mA-AM-G2-AR-4-120-CSS0-IMR3-PCB-F1-RPA-BZ	ECOFORM SMALL AREA LIGHT (SINGLE FIXTURE, POLE-MOUNTED)	AMBER NARROW SPECTRUM LED	TYPE 4
S1D-14	3	GARDCO/SIGNIFY NORTH AMERICA CORP.	ECF-S-64L-600mA-AM-G2-AR-4-120-CSS0-IMR3-PCB-F1-RPA-BZ	ECOFORM SMALL AREA LIGHT (DOUBLE FIXTURE, POLE-MOUNTED)	AMBER NARROW SPECTRUM LED	TYPE 4
S1-10	5	GARDCO/SIGNIFY NORTH AMERICA CORP.	ECF-S-64L-600mA-AM-G2-AR-4-120-CSS0-IMR3-PCB-F1-RPA-BZ	ECOFORM SMALL AREA LIGHT (POLE-MOUNTED) WITH WILDLIFE-FRIENDLY SHIELD	AMBER NARROW SPECTRUM LED	TYPE 4
W1	13	GARDCO/SIGNIFY NORTH AMERICA CORP.	PWS-48L-600mA-AM-G2-4-UNV-CE50-IMR2-PCB-F1-BZ	PUREFORM LED WALL SCONCE PWS	AMBER NARROW SPECTRUM LED	TYPE 4
W2	13	GARDCO/SIGNIFY NORTH AMERICA CORP.	PWS-48L-600mA-AM-G2-2-UNV-CE50-IMR2-PCB-F1-BZ	PUREFORM LED WALL SCONCE PWS	AMBER NARROW SPECTRUM LED	TYPE 2
C1	5	GARDCO/SIGNIFY NORTH AMERICA CORP.	SVPG-140L-450-WW-G2-SM-3-EBPC-120-BL-F1-BZ	SOFTVIEW LED CANOPY LUMINAIRES (PAVILIONS)	LED 3000K	TYPE 4
F1	4	GARDCO/SIGNIFY NORTH AMERICA CORP.	FLDS-A01-730-RNF-YOK-120-FAWS-FS1-VPA-PCB-BZ	DURAFORM SMALL FLOODLIGHT WITH SHIELD (SECONDARY ENTRANCE DIRECTIONAL SIGNS)	LED 3000K	NARROW FLOOD (RECTANGULAR)
F2	4	RAB LIGHTING	GN1LED-13-Y-R-AC-11-A	GOOSENECK LED SIGN LUMINAIRE (IDENTIFICATION SIGN)	LED 3000K	NARROW FLOOD (RECTANGULAR)

**NOTES:**

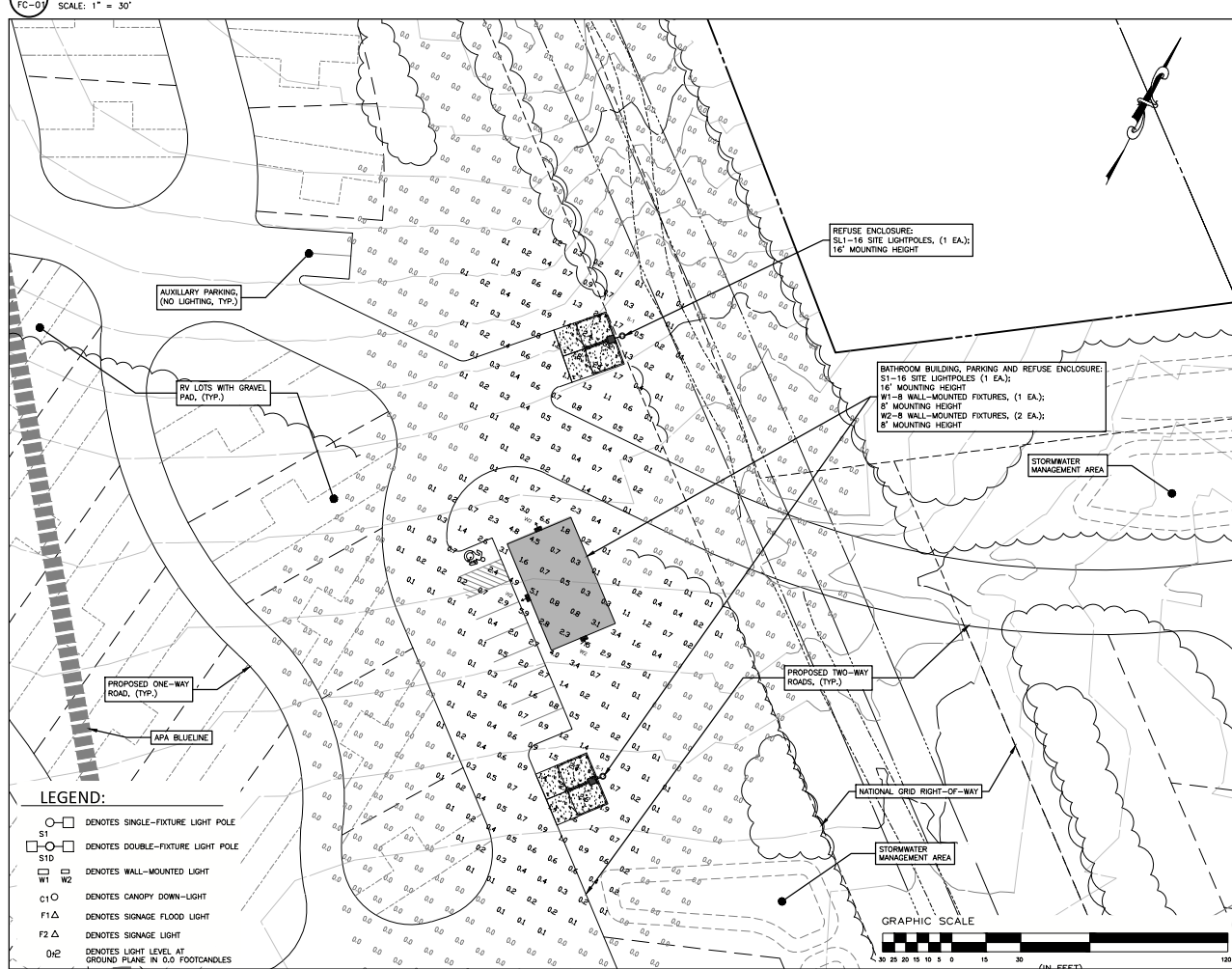
- REFER TO FOOTCANDLE ANALYSIS, SHEETS FC-02 THROUGH FC-04, FOR ENLARGED PLANS OF PHOTOMETRICS DISTRIBUTION DISPLAY FOR PROPOSED LIGHTING IN AREAS A-I.
- SITE LIGHTING IN USE DURING SEASONAL CAMPGROUND OPERATION ONLY. MAINTENANCE BUILDING AND BUILDING-MOUNTED SECURITY LIGHTING IN USE YEAR-ROUND AS REQUIRED TO COMPLY WITH BUILDING CODE.



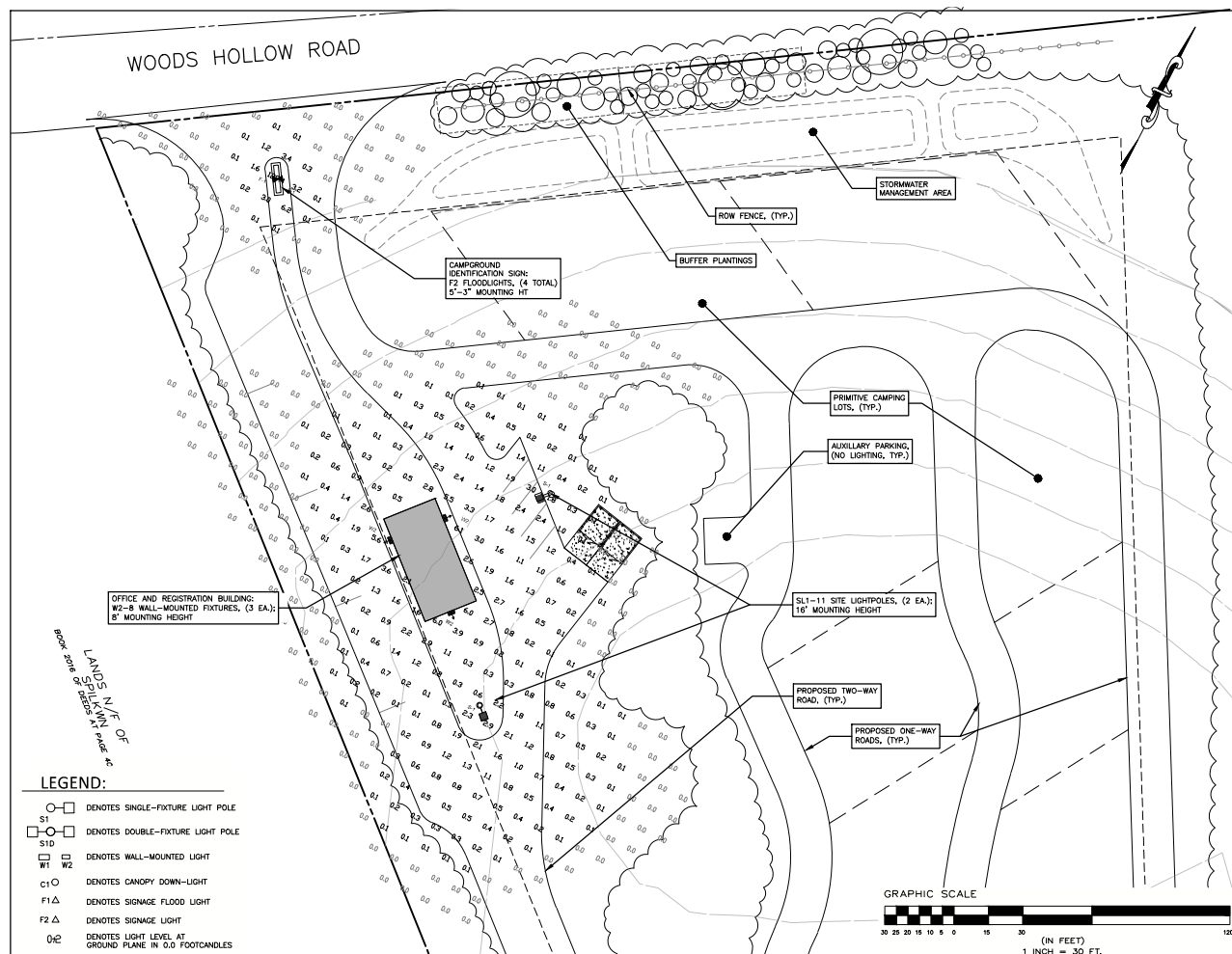




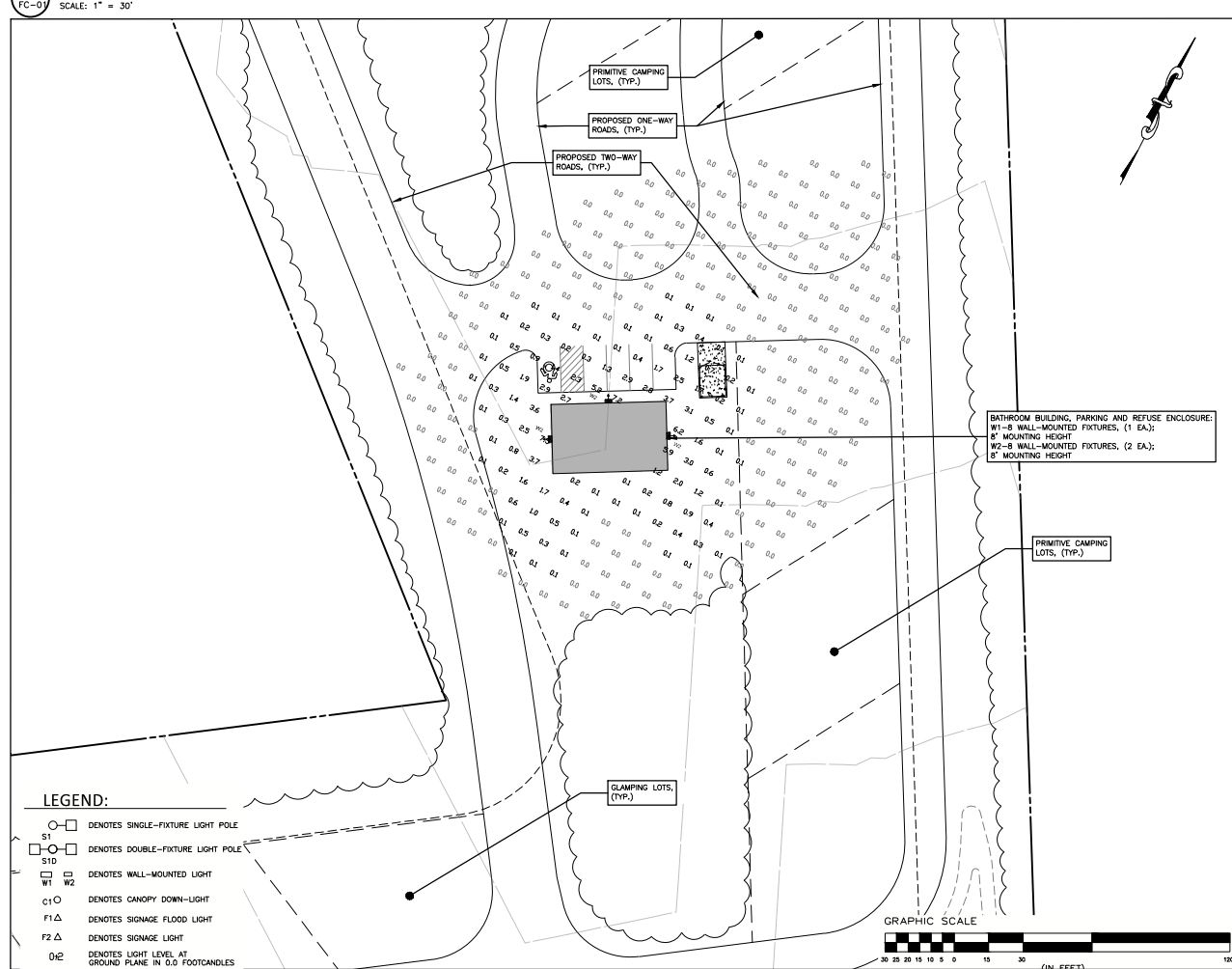
1 AREA A – FOOTCANDLE ANALYSIS: SECONDARY ENTRANCE ON WOODS HOLLOW ROAD AND BATH HOUSE  
SCALE: 1" = 30'



2 AREA B – FOOTCANDLE ANALYSIS: RV CAMPING AREA BATH HOUSE  
SCALE: 1" = 30'



3 AREA C – FOOTCANDLE ANALYSIS: MAIN ENTRANCE ON WOODS HOLLOW ROAD AND OFFICE  
SCALE: 1" = 30'



4 AREA D – FOOTCANDLE ANALYSIS: PRIMITIVE CAMPING AREA BATH HOUSE  
SCALE: 1" = 30'

RV PARK FOR  
**WOODS HOLLOW CAMPGROUND**  
WOODS HOLLOW MINING COMPANY

WOODS HOLLOW ROAD  
TOWN OF MAYFIELD  
FULTON COUNTY, NEW YORK

REVISION	DATE	BY

SCALE: AS NOTED

NOT FOR CONSTRUCTION

SHEET TITLE:  
**FOOTCANDLE ANALYSIS**

SHEET:  
**FC-02**







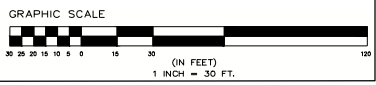
**RV PARK FOR  
 WOODS HOLLOW CAMPGROUND**  
 WOODS HOLLOW MINING COMPANY

WOODS HOLLOW ROAD  
 TOWN OF MAYFIELD  
 FULTON COUNTY, NEW YORK

DESIGNED BY	EDP
CHECKED BY	TJM
DATE	11/23/21
PROJECT NUMBER	140276
REVISION	DATE
1	11/23/21
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- LEGEND:**
- □ DENOTES SINGLE-FIXTURE LIGHT POLE
  - S1
  - ○ DENOTES DOUBLE-FIXTURE LIGHT POLE
  - S1D
  - □ DENOTES WALL-MOUNTED LIGHT
  - WT
  - WT
  - c1○ DENOTES CANOPY DOWN-LIGHT
  - F1△ DENOTES SIGNAGE FLOOD LIGHT
  - F2△ DENOTES SIGNAGE LIGHT
  - 0H2 DENOTES LIGHT LEVEL AT GROUND PLANE IN 0.0 FOOTCANDLES



**1** AREA I -- FOOTCANDLE ANALYSIS: CONCESSIONS BUILDING, OUTDOOR RECREATION AREAS, CANOE/KAYAK RENTAL BUILDING, PAVILIONS, PARKING AREAS AND WALKWAYS

SCALE: 1" = 30'

SCALE: AS NOTED

NOT FOR CONSTRUCTION

SHEET TITLE:  
**FOOTCANDLE ANALYSIS**

SHEET:  
**FC-04**



The **Gardco EcoForm Gen-2 luminaire** features narrow spectrum amber LEDs combined with special shielding, making it a wildlife friendly lighting solution. EcoForm features an innovative retrofit arm kit, simplifying site conversions to LED by eliminating the need to drill additional holes in most existing poles. Integral control systems available for further energy savings.

Project: **Woods Hollow Campground**  
Location: **Town of Mayfield**  
Cat.No:  
Type:  
Qty:

Notes: **S1-16: 16 'ht single-fixture pole-mounted LED light fixture**

Ordering guide

example: ECF-S-64L-600-AM-G2-AR-5-120-FWC-MGY

Prefix	Number of LEDs	Drive Current	LED Color - Generation	Mounting	Distribution	Voltage
<b>ECF-S</b>	<b>64L</b>	<b>600mA</b>	<b>AM-G2</b>	<b>AR</b>	<b>4</b>	<b>120</b>
<b>ECF-S</b> EcoForm site and area, wildlife	<b>32L</b> 32 LEDs (2 modules) <b>48L</b> 48 LEDs (3 modules) <b>64L</b> 64 LEDs (4 modules)	<b>400</b> 400mA <b>600</b> 600mA	<b>AM-G2</b> Direct Amber, nominal 590nm narrow spectrum LED Generation 2	<b>AR<sup>2</sup></b> Arm Mount (standard)  The following mounting kits must be ordered separately (See accessories)  <b>WS</b> Wall mount with surface conduit rear entry permitted <b>RAM<sup>2</sup></b> Retrofit arm mount kit	<b>Type 2</b> 2 Type 2 <b>Type 3</b> 3 Type 3 <b>Type 4</b> 4 Type 4 <b>Type 5</b> 5 Type 5 <b>5W</b> Type 5W	<b>120</b> 120V <b>208</b> 208V <b>240</b> 240V <b>277</b> 277V <b>347</b> 347V <b>480</b> 480V <b>UNV</b> 120-277V (50/60Hz) <b>HVU</b> 347-480V (50/60Hz)

Dimming controls	Motion sensing lens	Photo-sensing	Electrical	Luminaire	Finish
<b>CS50</b>	<b>IMRI3</b>	<b>PCB</b>	<b>F1</b>	<b>FWS</b>	<b>BZ</b>
<b>DD<sup>4</sup></b> 0-10V External dimming (for controls by others) <b>FAWS<sup>4,5</sup></b> Field Adjustable Wattage Selector <b>BL<sup>1,4,14</sup></b> Bi-level functionality  <b>DynaDimmer: Automatic Profile Dimming</b> <b>CS50<sup>4,8</sup></b> Safety 50% Dimming, 7 hours <b>CM50<sup>4,8</sup></b> Median 50% Dimming, 8 hours <b>CS30<sup>4,8</sup></b> Safety 30% Dimming, 7 hours <b>CM30<sup>4,8</sup></b> Median 30% Dimming, 8 hours	<b>IMRI3<sup>13</sup></b> Integral with #3 lens <b>IMRI7<sup>13</sup></b> Integral with #7 lens	<b>PCB<sup>8,9</sup></b> Photocontrol Button <b>TLRD5<sup>10</sup></b> Twist Lock Receptacle 5 Pin <b>TLRD7<sup>10</sup></b> Twist Lock Receptacle 7 Pin <b>TLRPC<sup>11</sup></b> Twist Lock Receptacle w/ Photocell	<b>Fusing</b> <b>F1<sup>9</sup></b> Single (120, 277, 347VAC) <b>F2<sup>9</sup></b> Double (208, 240, 480VAC)  <b>Pole Mount Fusing</b> <b>FP1<sup>9</sup></b> Single (120, 277, 347VAC) <b>FP2<sup>9</sup></b> Double (208, 240, 480VAC) <b>FP3<sup>9</sup></b> Canadian Double Pull (208, 240, 480VAC)  <b>Surge Protection (10kA standard)</b> <b>SP2</b> Increased 20kA	<b>Square Pole Adapter</b> included in standard product  <b>TB</b> Terminal Block <b>RPA<sup>12</sup></b> Round Pole Adapter (fits to 3" - 3.9" O.D. pole) <b>FWC<sup>3</sup></b> Wildlife Friendly External House side shield	<b>Textured</b> <b>BK</b> Black <b>WH</b> White <b>BZ</b> Bronze <b>DGY</b> Dark Gray <b>MGY</b> Medium Gray  <b>Customer specified</b> <b>RAL</b> Specify optional color or RAL (ex: RAL7024) <b>CC</b> Custom color (Must supply color chip for required factory quote)

- BL-IMRI3/7 equipped with out-boarded sensor housing when voltage is HVU (347-480V)
- Mounts to a 4" round pole with adapter included for square poles.
- Limited to a maximum of 45 degrees aiming above horizontal.
- Not available with other dimming control options.
- Not available with motion sensor.
- Not available with photocontrol.
- Must specify a motion sensor lens.
- Not available in 347 or 480V
- Must specify input voltage.
- TLRD5, TLRD7 and TLRPC receptacle pins 4 & 5 are capped off when ordered with any of the Dimming controls DD or FAWS or LLC.
- Not available in 480V. Order photocell separately with TLRD5/7.
- Not available with DCC.
- Not available with SF and WS. RPAs provided with black finish standard.
- HIS not available with Type 5, 5W, BLC, BLC-90, BLC-270, LCL or RCL optics.
- Not available with DD, DCC, and FAWS dimming control options.
- Not available with DD, DCC, FAWS and LLC dimming control options.
- When ordering SRDR, controller (by others) to be used on socket must be SR compatible (See specifications for more details). Consult factory for lead time. All 7 pins in NEMA receptacle are connected to SR driver. SRDR not available with TLRD5 or TLRPC.
- 0-10V dimming driver standard.
- LCL and RCL not available with 48L-1.2A or 64L-1A.





# ECF-S EcoForm wildlife

## Site & Area

EcoForm Accessories<sup>1</sup> (ordered separately, field installed)

### Luminaire Accessories

**PTF2**

ECF-BD-G2	Bird deterrent
ECF-RAM-G2-(F)	Retrofit Arm mount kit
ECF-WS-G2-(F)	Wall mount with surface conduit rear entry permitted

**EcoForm PTF2**  
(pole top fitter fits 23/8-21/2" OD x 4" depth tenon)

<b>PTF2-ECF-S/L-1-90-(F)</b>	1 luminaire at 90°
<b>PTF2-ECF-S/L-2-90-(F)</b>	2 luminaires at 90°
<b>PTF2-ECF-S/L-2-180-(F)</b>	2 luminaires at 180°
<b>PTF2-ECF-S/L-3-90-(F)</b>	3 luminaires at 90°
<b>PTF2-ECF-S/L-4-90-(F)</b>	4 luminaires at 90°
<b>PTF2-ECF-S/L-3-120-(F)</b>	3 luminaires at 120°

**EcoForm PTF3**  
(pole top fitter fits 3-31/2" OD x 6" depth tenon)

<b>PTF3-ECF-S/L-1-90-(F)</b>	1 luminaire at 90°
<b>PTF3-ECF-S/L-2-90-(F)</b>	2 luminaires at 90°
<b>PTF3-ECF-S/L-2-180-(F)</b>	2 luminaires at 180°
<b>PTF3-ECF-S/L-3-90-(F)</b>	3 luminaires at 90°
<b>PTF3-ECF-S/L-4-90-(F)</b>	4 luminaires at 90°
<b>PTF3-ECF-S/L-3-120-(F)</b>	3 luminaires at 120°

**EcoForm PTF4**  
(pole top fitter fits 31/2-4" OD x 6" depth tenon)

<b>PTF4-ECF-S/L-1-90-(F)</b>	1 luminaire at 90°
<b>PTF4-ECF-S/L-2-90-(F)</b>	2 luminaires at 90°
<b>PTF4-ECF-S/L-2-180-(F)</b>	2 luminaires at 180°
<b>PTF4-ECF-S/L-3-90-(F)</b>	3 luminaires at 90°
<b>PTF4-ECF-S/L-4-90-(F)</b>	4 luminaires at 90°
<b>PTF4-ECF-S/L-3-120-(F)</b>	3 luminaires at 120°

(F) = Specify finish

1. Consult Signify to confirm whether specific accessories are BAA-compliant.

## Predicted Lumen Depreciation Data

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L<sub>70</sub> is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L<sub>70</sub> hours limited to 6 times actual LED test hours

Ambient Temperature °C	Driver mA	Calculated L <sub>70</sub> Hours	L <sub>70</sub> per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	up to 600 mA	>100,000 hours	>60,000 hours	>88%

## LED Wattage and Lumen Values

### Unshielded

Ordering Code	Total LEDs	LED Current (mA)	Dominant Wavelength (nm)	Average System Watts	Type 2			Type 3			Type 4			Type 5			Type 5W		
					Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating
ECF-S-32L-400-AM-G2-x	32	400	596	32	2,092	66	B1-U0-G1	2,047	65	B1-U0-G1	2,141	68	B1-U0-G1	2,259	72	B2-U0-G0	2,187	69	B2-U0-G1
ECF-S-32L-600-AM-G2-x	32	600	596	48	2,449	51	B1-U0-G1	2,396	50	B1-U0-G1	2,507	52	B1-U0-G1	2,645	55	B2-U0-G1	2,560	53	B2-U0-G1
ECF-S-48L-400-AM-G2-x	48	400	596	47	3,120	66	B1-U0-G1	3,052	64	B1-U0-G1	3,193	67	B1-U0-G1	3,369	71	B2-U0-G1	3,261	69	B2-U0-G1
ECF-S-48L-600-AM-G2-x	48	600	596	72	3,650	50	B1-U0-G1	3,571	49	B1-U0-G1	3,736	52	B1-U0-G1	3,943	54	B3-U0-G1	3,816	53	B3-U0-G1
ECF-S-64L-400-AM-G2-x	64	400	596	62	4,106	67	B1-U0-G1	4,017	65	B1-U0-G1	4,202	68	B1-U0-G1	4,434	72	B3-U0-G1	4,292	70	B3-U0-G1
ECF-S-64L-600-AM-G2-x	64	600	596	94	4,805	51	B1-U0-G1	4,701	50	B1-U0-G1	4,918	52	B1-U0-G2	5,190	55	B3-U0-G1	5,023	54	B3-U0-G1

### Shielded

Ordering Code	Total LEDs	LED Current (mA)	Dominant Wavelength (nm)	Average System Watts	2-FWC		3-FWC		4-FWC		5-FWC		5W-FWC	
					Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)
ECF-S-32L-400-AM-G2-x	32	400	596	32	680	22	665	21	696	22	734	23	710	22
ECF-S-32L-600-AM-G2-x	32	600	596	48	795	16	778	16	814	17	859	18	831	17
ECF-S-48L-400-AM-G2-x	48	400	596	48	1,013	21	991	21	1,037	22	1,094	23	1,059	22
ECF-S-48L-600-AM-G2-x	48	600	596	73	1,186	16	1,160	16	1,213	17	1,281	18	1,239	17
ECF-S-64L-400-AM-G2-x	64	400	596	62	1,334	22	1,305	21	1,365	22	1,441	23	1,394	23
ECF-S-64L-600-AM-G2-x	64	600	596	94	1,561	17	1,527	16	1,598	17	1,686	18	1,632	17

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

NOTE: Some data may be scaled based on tests of similar (but not identical) luminaires. Contact factory for configurations not shown.

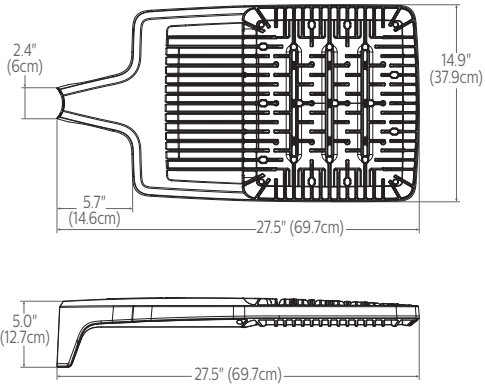
# ECF-S EcoForm wildlife

## Site & Area

### Dimensions

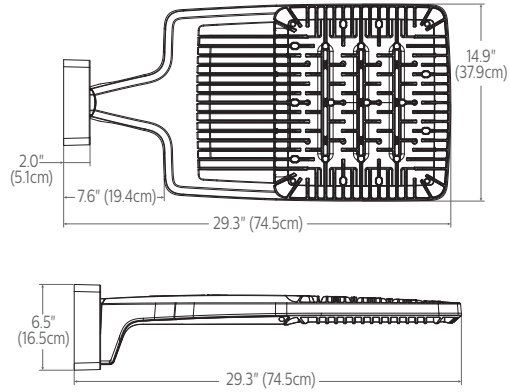
#### Standard Arm (AR)

Weight: 22 Lbs (9.9 Kg) EPA: 0.21ft<sup>2</sup> (.019m<sup>2</sup>)



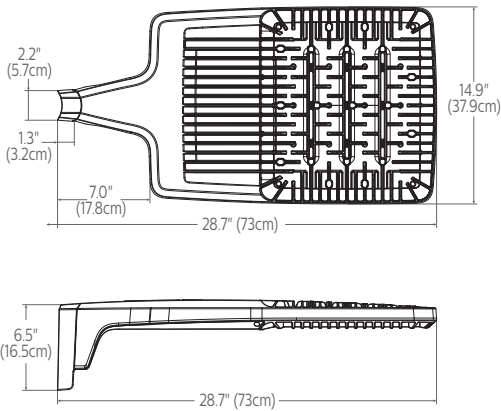
#### Wall (WS)

Weight: 27 Lbs. (12. 2Kg)EPA: 0.27ft<sup>2</sup> (.025m<sup>2</sup>)



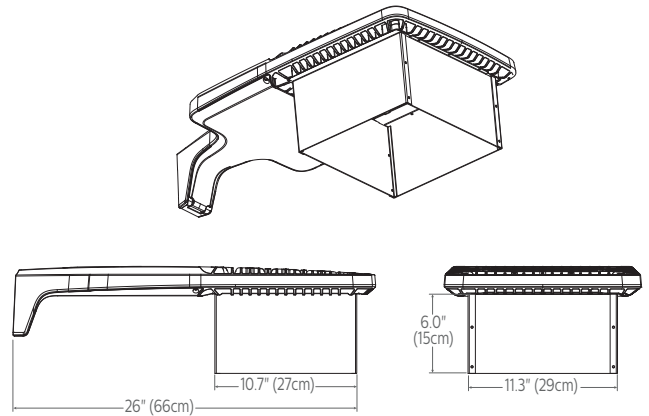
#### Retrofit Arm (RAM)

Weight: 24 Lbs (10.9 Kg) EPA: 0.24ft<sup>2</sup> (.022m<sup>2</sup>)

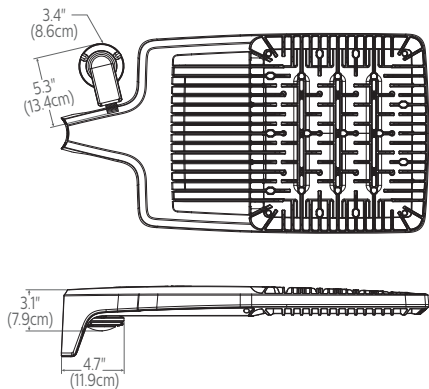


#### Wildlife Friendly External House side shield (FWC)

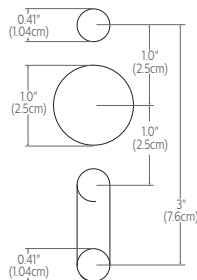
Weight: 23 Lbs (10.4 Kg) EPA: 1.0ft<sup>2</sup> (.093m<sup>2</sup>)



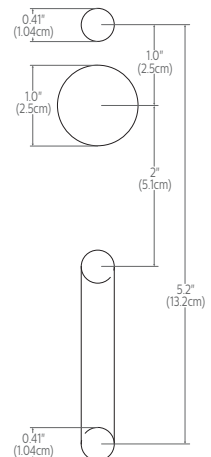
#### Outboard IMR-HVU sensor



#### Standard Arm (AR) drill pattern



#### Retrofit Arm (RAM) drill pattern



# ECF-S EcoForm wildlife

## Site & Area

### Specifications

#### Housing

One piece die cast aluminum housing with integral arm and separate, self retained hinged, one piece die cast door frame.

#### IP Rating

LED light engine rated IP66. Driver compartment rated to IP65.

#### Vibration resistance

Luminaire is tested and rated 3G over 100,000 cycles conforming to standards set forth by ANSI C136.31-2010. Testing includes vibration in three axes, all performed on the same luminaire.

#### Light Engine

Light engine comprises of a module of 16-LED aluminum metal clad board fully sealed with optics offered in multiples of 2, 3 and 4 modules or 32, 48 and 64 LEDs. Module is RoHS compliant. Direct Amber LED is narrow spectrum with dominant wavelength at 596 nm (peak wavelength at 601 nm). LED light engine is rated IP66 in accordance to Section 9 of IEC 60598-1.

#### LED Thermal management

The housing design allows the one piece housing to provide excellent thermal management critical to long LED system life.

#### Optical systems

Type 2, 3, 4, 5 and 5W.

#### Mounting

Standard luminaire arm mounts to 4" round poles. Can also be used with 5" O.D. poles. Square pole adapter included with every luminaire. Round Pole Adapter (RPA) required for 3-3.9" poles.

#### Control options

**0-10V dimming (DD):** Access to 0-10V dimming leads supplied through back of luminaire (for secondary dimming controls by others). Cannot be used with other control options.

**Field Adjustable Wattage Selector (FAWS):** Luminaire equipped with the ability to manually adjust the wattage in the field to reduce total luminaire lumen output and light levels. Comes pre-set to the highest position at the lumen output selected. Use chart below to estimate reduction in lumen output desired. Cannot be used with other control options or motion response.

FAWS Position	Percent of Typical Lumen Output
1	25%
2	50%
3	55%
4	65%
5	75%
6	80%
7	85%
8	90%
9	95%
10	100%

**Note:** Typical value accuracy +/- 5%

**Automatic Profile Dimming (CS/CM/CE/CA):** Standard dimming profiles provide flexibility towards energy savings goals while optimizing light levels during specific dark hours. Dimming profiles include two dimming settings including dim to 30% or 50% of the total lumen output. When used in combination with not programmed motion response it overrides the controller's schedule when motion is detected. After 5 minutes with no motion, it will return to the automatic dimming profile schedule. Automatic dimming profile scheduled with the following settings:

- **CS50/CS30:** Security for 7 hours night duration (Ex., 11 PM - 6 AM)
- **CM50/CM30:** Median for 8 hours night duration (Ex., 10 PM - 6 AM)

All above profiles are calculated from mid point of the night. Dimming is set for 6 hours after the mid point and 1 or 2 hours before depending of the duration of dimming. Cannot be used with other dimming control options.

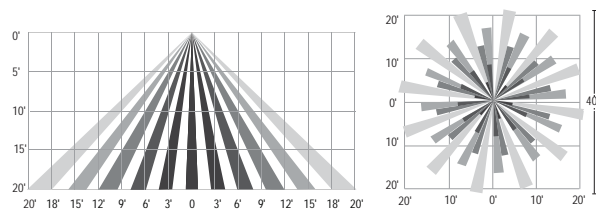
#### Motion response options

**Bi-Level Infrared Motion Response (BL-IMRI):** Motion Response module is mounted integral to luminaire factory pre-programmed to 50% dimming when not ordered with other control options. BL-IMRI is set/operates in the following fashion: The motion sensor is set to a constant 50%. When motion is detected by the PIR sensor, the luminaire returns to full power/light output. Dimming on low is factory set to 50% with 5 minutes default in "full power" prior to dimming back to low. When no motion is detected for 5 minutes, the motion response system reduces the wattage by 50%, to 50% of the normal constant wattage reducing the light level. Other dimming settings can be provided if different dimming levels are required. This can also be done with FSIR-100 Wireless Remote Programming Tool (contact Technical Support for details).

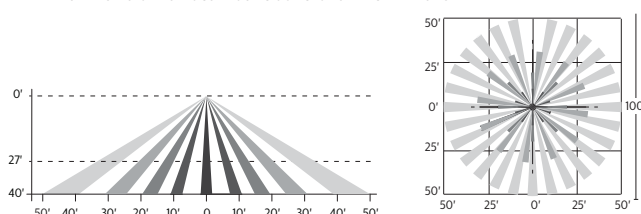
**Infrared Motion Response with Other Controls:** When used in combination with other controls (Automatic Dimming Profile), motion response device will simply override controller's schedule with the added benefits of a combined dimming profile and sensor detection. In this configuration, the motion response device cannot be re-programmed with FSIR-100 Wireless Remote Programming Tool. The profile can only be re-programmed via the controller.

**Infrared Motion Response Lenses (IMRI3/IMRI7):** Infrared Motion Response Integral module is available with two different sensor lens types to accommodate various mounting heights and occupancy detection ranges. Lens #3 (IMRI3) is designed for mounting heights up to 20' with a 40' diameter coverage area. Lens #7 is designed for higher mounting heights up to 40' with larger coverage areas up to 100' diameter coverage area. See charts for approximate detection patterns:

IMRI3 Luminaire or remote mount controller with #3 lens



IMRI7 Luminaire or remote mount controller with #7 lens





# ECF-S EcoForm wildlife

## Site & Area

### Specifications (continued)

#### Electrical

**Twist-Lock Receptacle (TLRD5/TLRD7/ TLRPC):** Twist Lock Receptacle with 5 pins enabling dimming or with 7 pins with additional functionality (by others) can be used with a twist-lock photoelectric cell or a shorting cap. Dimming Receptacle Type B (5-pin) and Type D-24 (7-pin) in accordance to ANSI C136.41. Can be used with third-party control system. Receptacle located on top of luminaire housing. When specifying receptacle with twistlock photoelectric cell, voltage must be specified. When ordering Twist-lock receptacle (TLRD5 or TLRD7), photocell or shorting cap is not included. TLRPC is shipped standard with 5 pin.

**Driver:** Driver efficiency (>90% standard). 120-480V available (restrictions apply). Open/short circuit protection. Optional 0-10V dimming to 10% power. RoHS compliant.

**Button Photocontrol (PCB):** Button style design for internal luminaires mounting applications. The photocontrol is constructed of a high impact UV stabilized polycarbonate housing. Rated voltage of 120V or 208-277V with a load rating of 1000 VA. The photocell will turn on with 1-4Fc of ambient light.

**Surge protection (SP1/SP2):** Surge protection device tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and NeutralGround, and in accordance with DOE MSSLC Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High test level 10kV/10kA. 20kV / 10kA surge protection device that provides extra protection beyond the SP1 10kV/10kA level.

#### Retrofit Arm Mount

EcoForm features an innovative retrofit arm kit. When specified with the retrofit arm (**RAM**) option, EcoForm seamlessly simplifies site conversions to LED by eliminating the need for additional pole drilling on most existing poles. RAM will be boxed separately.

#### Listings

UL/cUL listed to the UL 1598 standard, suitable for Wet Locations. Suitable for use in ambients from -40° to 40°C (-40° to 104°F). The quality systems of this facility have been registered by UL to the ISO 9001 series standards. Florida Wildlife Certified.

#### Finish

Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (**TGIC**) textured polyester powdercoat finish. Standard colors include bronze (**BZ**), black (**BK**), white (**WH**), dark gray (**DGY**), and medium gray (**MGY**). Consult factory for specs on optional or custom colors.

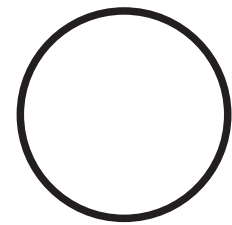
#### Warranty

EcoForm luminaires feature a 5 year limited warranty. See [signify.com/warranties](http://signify.com/warranties) for complete details and exclusions.

### Buy American Act of 1933 (BAA):

This product is manufactured in one of our US factories and, as of the date of this document, this product was considered a commercially available off-the-shelf (COTS) item meeting the requirements of the BAA. This BAA designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies. Prior to ordering, please visit [www.signify.com/baa](http://www.signify.com/baa) to view a current list of BAA-compliant products to confirm this product's current compliance.





The Gardco TRA Tapered Round Aluminum pole consists of a one-piece design fabricated aluminum tubing circumferentially welded to a structural quality hot rolled carbon steel plate. The poles are finished with either Architectural Class 1 anodizing or electrostatically applied TGIC polyester powdercoat.

Project: Woods Hollow Campground  
 Location: Town of Mayfield, NY  
 Cat.No:  
 Type:  
 Notes: 14-ft height pole for S1-16: single-fixture pole-mounted LED light fixture

### Ordering Guide

example: TRA-CB-16L-D2-BRP

Prefix	Base	Height	Wind Factor	Drilling <sup>1</sup>	Finish	Options
TRA	CB	14	-	D1	BRP	
TRA	CB	8	-	D1 1 Way	BRP Bronze	DR Duplex Receptacle
		10	-	D2 2 Way at 180°	BLP Black	GFCI Ground Fault Receptacle
		12	L	D2@90 2 Way at 90°	WP White	VDA Vibration Dampener
		14		D3 3 Way at 90°	MGY Medium Grey	AHH Additional Hand Hole
		16		D3@120 3 Way at 120°	DGY Dark Grey	For DR, GFCI, and AHH options indicate height above base and orientation to original hand hole. See Pole Orientation Information on Page 5.
		25		D4 4 Way	BRA Bronze Anodized	<b>Nipples and Couplings</b>
		28		T2 2.4" OD Tenon X 4" long	BLA Black Anodized	CL1/2 Coupling - Internal Thread 1/2"
		30		T3 3" OD Tenon X 4" long	NA Natural Anodized	CL3/4 Coupling - Internal Thread 3/4"
		35		T4 4" OD Tenon X 6" long	OC Optional Color (Specify RAL designation ex: RAL7024)	CL1 Coupling - Internal Thread 1"
			M	P Plain Top (No Drilling/No Tenon)	SC Special Color (Specify. Must supply color chip.)	CL1-1/4 Coupling - Internal Thread 1-1/4"
		12				CL1-1/2 Coupling - Internal Thread 1-1/2"
		14				NL1/2 Nipple - External Thread 1/2"
		16				NL3/4 Nipple - External Thread 3/4"
		20				NL1 Nipple - External Thread 1"
			H			NL1-1/4 Nipple - External Thread 1-1/4"
		20				NL1-1/2 Nipple - External Thread 1-1/2"
		25				Indicate height above base and orientation to hand hole. See Pole Orientation Information on Page 5.
		28				<b>Single Mount Bullhorn Brackets</b>
		30				A15BH-19 Single - 1.9" OD <sup>2</sup>
		35				A15BH-24 Single - 2.4" OD
		39				A215BH-19 2-Tenon - 1.9" OD <sup>2</sup>
						A215BH-24 2-Tenon - 2.4" OD
						Indicate height above base and orientation to hand hole. See Pole Orientation Information on Page 4.
						Additional and alternative brackets and accessories available. Refer to the Signify product catalog (eCat) website for more information.

1. Standard poles are drilled in factory for compatibility with Signify luminaires only (D\* options). For non-Signify-brand luminaires, select the P drilling option.  
 2. For Gardco DFL7/DFC7 only

### Anchor Bolts for Gardco TRA Poles<sup>3</sup> (ordered separately)

	Pole Type	12NC for ordering	Description (in inches)
For Pre-ship service (Order 4 per pole)	8 to 25L	912400215786	0.75 x 18 x 3.75
	25H to 39H	912400215784	1 x 36 x 4.5
For shipment with the pole (Order 1 per pole)	8 to 25L	912400207384	0.75 x 18 x 3.75
	25H to 39H	912400200208	1 x 36 x 4.5

3. Consult Signify to confirm whether specific accessories are BAA-compliant.

# Poles Tapered Round Aluminum (Cast Base)

## Pole Data

Product Catalog Number	Pole Specs				Anchor Bolt Data <sup>2</sup>		
	Height (ft)	Pole Diameter (inches)	Wall Thickness (inches)	Structure Weight (lbs)	Bolt Circle (inches)	Bolt Size (inches)	Max Proj. (inches)
TRA-CB-8	7' 8"	3 x 4	0.125	17	7.50 (+/- 0.75)	0.75 x 18 x 3.75	3.25
TRA-CB-10	9' 8"	3 x 4	0.125	20	7.50 (+/- 0.75)	0.75 x 18 x 3.75	3.25
TRA-CB-12L	11' 8"	3 x 4	0.125	23	7.50 (+/- 0.75)	0.75 x 18 x 3.75	3.25
TRA-CB-12M	11' 8"	3 x 5	0.125	26	8.63 (+/- 0.88)	0.75 x 18 x 3.75	3.25
TRA-CB-14L	13' 8"	3 x 4	0.125	27	7.50 (+/- 0.75)	0.75 x 18 x 3.75	3.25
TRA-CB-14M	13' 8"	3 x 5	0.125	31	8.63 (+/- 0.88)	0.75 x 18 x 3.75	3.25
TRA-CB-16L	15' 8"	3 x 5	0.125	30	8.63 (+/- 0.88)	0.75 x 18 x 3.75	3.25
TRA-CB-16M	15' 8"	3 x 5	0.188	35	8.63 (+/- 0.88)	0.75 x 18 x 3.75	3.25
TRA-CB-20M	19' 8"	3 x 5	0.156	51	8.63 (+/- 0.88)	0.75 x 18 x 3.75	3.25
TRA-CB-20H	19' 8"	3 x 5	0.188	60	8.63 (+/- 0.88)	0.75 x 18 x 3.75	3.25
TRA-CB-25L <sup>3</sup>	24' 8"	4 x 6	0.156	74	8.63 (+/- 0.88)	0.75 x 18 x 3.75	3.50
TRA-CB-25H	24' 8"	4 x 7	0.156	85	9.50 (+/- 0.75)	1 x 36 x 4.5	4.13
TRA-CB-28L <sup>3</sup>	27' 8"	4 x 7	0.156	92	10.56 (+/- 0.43)	1 x 36 x 4.5	4.13
TRA-CB-28H	27' 8"	4.5 x 8	0.188	124	10.56 (+/- 0.43)	1 x 36 x 4.5	4.13
TRA-CB-30L <sup>3</sup>	29' 8"	4 x 7	0.156	99	11.63 (+/- 0.37)	1 x 36 x 4.5	4.13
TRA-CB-30H	29' 8"	4.5 x 8	0.188	134	10.56 (+/- 0.43)	1 x 36 x 4.5	4.13
TRA-CB-35L <sup>3</sup>	34' 8"	4.5 x 8	0.156	133	11.63 (+/- 0.37)	1 x 36 x 4.5	4.13
TRA-CB-35H	34' 8"	4.5 x 8	0.25	205	11.63 (+/- 0.37)	1 x 36 x 4.5	4.13
TRA-CB-39L <sup>3</sup>	38' 8"	4.5 x 8	0.188	179	11.63 (+/- 0.37)	1 x 36 x 4.5	4.13
TRA-CB-39H	38' 8"	6 x 10	0.188	232	14.25 (+/- 0.75)	1 x 36 x 4.5	4.75

- Warning:** Additional wind loading, in terms of EPA, from banners, cameras, floodlights and other accessories attached to the pole, must be added to the luminaire(s) EPA before selecting the pole with the appropriate wind load capability.
- Factory supplied template must be used when setting anchor bolts. Gardco will not honor any claim for incorrect anchorage placement resulting from failure to use factory supplied templates.
- Includes (VDA) Vibration Dampener standard.



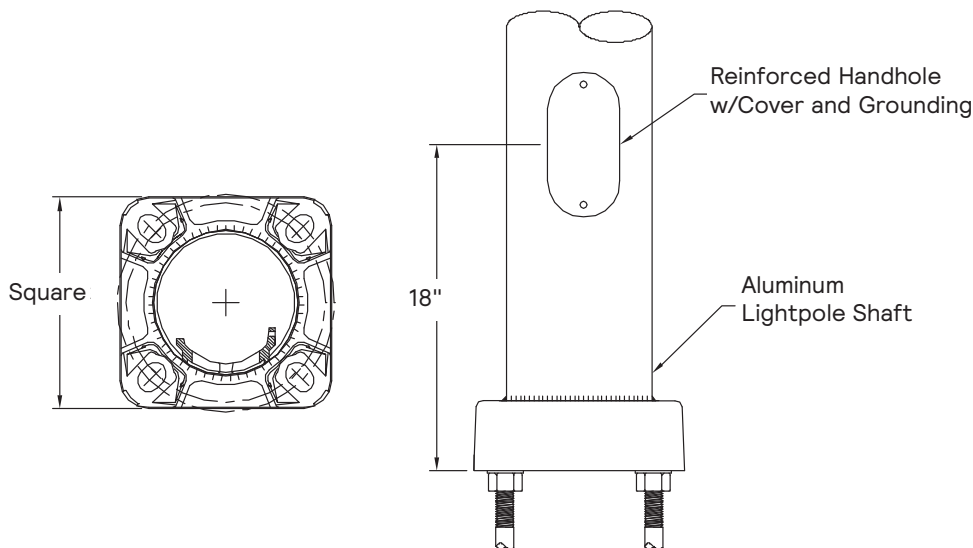
# Poles Tapered Round Aluminum (Cast Base)

## Pole Data

Catalog Number	Maximum Luminaire Loading <sup>1</sup>							
	High Wind Conditions		Normal Wind Conditions					
	110 MPH		100 MPH		90 MPH		80 MPH	
Prefix	EPA ft <sup>2</sup>	Max Weight (lbs)	EPA ft <sup>2</sup>	Max Weight (lbs)	EPA ft <sup>2</sup>	Max Weight (lbs)	EPA ft <sup>2</sup>	Max Weight (lbs)
TRA-CB-8	4.1	75	5.1	75	6.5	75	8.5	75
TRA-CB-10	2.9	75	3.7	75	4.8	75	6.4	75
TRA-CB-12L	1.9	75	2.6	75	3.5	75	4.8	75
TRA-CB-12M	4.6	75	5.8	75	7.4	75	9.8	75
TRA-CB-14L	1.1	75	1.6	75	2.4	75	3.5	75
TRA-CB-14M	3.4	75	4.4	75	5.8	75	7.8	75
TRA-CB-16L	0.4	75	0.8	75	1.5	75	2.4	75
TRA-CB-16M	2.4	75	3.2	75	4.3	75	6.0	75
TRA-CB-20M	1.5	100	2.2	100	3.2	100	4.7	100
TRA-CB-20H	2.3	100	3.1	100	4.3	100	6.1	100
TRA-CB-25L <sup>3</sup>	1.9	100	2.5	100	3.5	100	5.1	100
TRA-CB-25H	4.2	150	5.3	150	7.0	150	9.6	150
TRA-CB-28L <sup>3</sup>	2.8	150	3.7	150	5.0	150	7.1	150
TRA-CB-28H	6.8	150	8.5	150	10.8	150	14.3	150
TRA-CB-30L <sup>3</sup>	2.0	150	2.7	150	3.8	150	5.7	150
TRA-CB-30H	5.6	150	7.1	150	9.2	150	12.2	150
TRA-CB-35L <sup>3</sup>	2.1	150	2.9	150	4.0	150	5.7	150
TRA-CB-35H	5.8	150	7.3	150	9.5	150	12.7	150
TRA-CB-39L <sup>3</sup>	1.9	150	2.8	150	3.9	150	5.6	150
TRA-CB-39H	5.8	200	7.7	200	10.2	200	13.6	200

- Warning:** Additional wind loading, in terms of EPA, from banners, cameras, floodlights and other accessories attached to the pole, must be added to the luminaire(s) EPA before selecting the pole with the appropriate wind load capability.
- Factory supplied template must be used when setting anchor bolts. Gardco will not honor any claim for incorrect anchorage placement resulting from failure to use factory supplied templates.
- Includes (VDA) Vibration Dampener standard.

## Dimensions



**NOTE:** Factory supplied template must be used when setting anchor bolts. Gardco will not honor any claim for incorrect anchorage placement from failure to use factory supplied templates.

# Poles Tapered Round Aluminum (Cast Base)

## Specifications

All aluminum alloys shall comply with metalurgical and mechanical properties set forth in the Aluminum Association Standards.

### POLE SHAFT

The pole shaft shall be spun tapered from all new seamless 6063 alloy aluminum and shall be heat treated to produce a T6 temper. Each shaft shall have a minimum 6" long straight section at the top to accommodate drilling and/or Gardco floodlight and bullhorn brackets. Shafts are polished with fine grain aluminum oxide cloths, resulting in a high quality, circumferential satin brushed finish. After finishing, each pole shall be fully wrapped with neutral PH krinkle/kraft paper for protection in shipment.

### ANCHOR BASE

The anchor base (base plate) is cast from A356 alloy aluminum. The anchor base casting and shaft shall be joined by a continuous circumferential weld at the inside bottom of the anchor base. The completed assembly will be heat treated to T6 temper after all structural welding is completed. The 1100-0 alloy collars are spun from heavy duty .125" stock, making them damage and vandal resistant.

### ANCHOR BOLTS

Anchor bolts are fabricated from a commercial quality hot rolled carbon steel bar with a minimum yield strength of 55,000 PSI. Bolts have an "L" bend on one end and threaded on the opposite end. Anchor bolts are hot dipped galvanized a minimum length of 12" on the threaded end. Four (4) properly sized bolts, each furnished with two (2) regular hex nuts and two (2) flat washers, are provided per pole (priced separately), unless otherwise specified.

### HAND HOLE

Each hand hole includes an easy to install, self-contained Swing Latch hand hole cover assembly. U.S. Patent Swing Latch cover is fabricated from durable polycarbonate/ABS blend plastic. All poles include a peripherally reinforced flush covered handhole centered 18" above the bottom of the pole. The opening in the 4" diameter pole shall measure 2 3/8" X 4 1/2". The opening in the 5" and 6" diameter pole shall measure 3" X 5". The opening in the 7", 8" and 10" diameter pole shall measure 4" X 6". Hand hole dimensions are nominal.

### DRILLING

Standard poles are drilled in factory for compatibility with Signify luminaires, optional brackets, and accessories. Signify is not liable for damage caused by unauthorized attachments, alterations, or modifications.

If luminaires are to be supplied by others, Signify/Gardco/Stonco is not responsible for pole compatibility with luminaires, structural integrity of the pole or wind load requirements.

### FINISH

Poles are available with Association Architectural Class 1 anodized finish. Electrostatically applied, thermally cured TGIC polyester powdercoat finish or liquid polyurethane is also available.

### POLE TOP CAP

Each pole assembly is provided with a removable plastic top push cap. Finish is Black.

### DESIGN

The charted weights include luminaire(s) and/or mounting bracket(s) and are based on an approximate weight to EPA ratio of 25 pounds per square foot. The wind velocities are based on 10 mph increments from 80 mph through 110 mph. Poles to be located in areas of known abnormal conditions may require special consideration.

For example: coastal areas, airports and areas of special winds.

Poles are designed for ground-mounted applications. Poles mounted on structures (such as buildings and bridges) may also necessitate special consideration requiring Gardco's recommendation. Height correction factors and drag coefficients are applied to the entire structure. An appropriate safety factor is maintained based on the minimum yield strength of the material incorporated in the pole. Mounting height is the vertical distance from the base of the pole to the center of the luminaire arm at the point of luminaire attachment. For loadings other than those covered in the design section, such as overhead wiring, guying of the poles or other field installed attachments, consult the factory for recommendations. PE digitally stamped pole calculations are available on Gardco Site and Area poles upon request for an additional charge. Detailed project and installation information is required to fulfill this service. For more information, consult the factory.

### WARNING

This design information is intended as a general guideline only. The customer is solely responsible for proper selection of pole, luminaire, accessory and foundation under the given site conditions and intended usage. The addition of any items to the pole, in addition to the luminaire, will dramatically impact the EPA load on that pole. It is strongly recommended that a qualified professional be consulted to analyze the loads given the user's specific needs to ensure proper selection of the pole, luminaire, accessories, and foundation. Gardco assumes no responsibility for such proper analysis or product selections. Failure to insure proper site analysis, pole selection, loads and installation can result in pole failure, leading to serious injury or property damage.

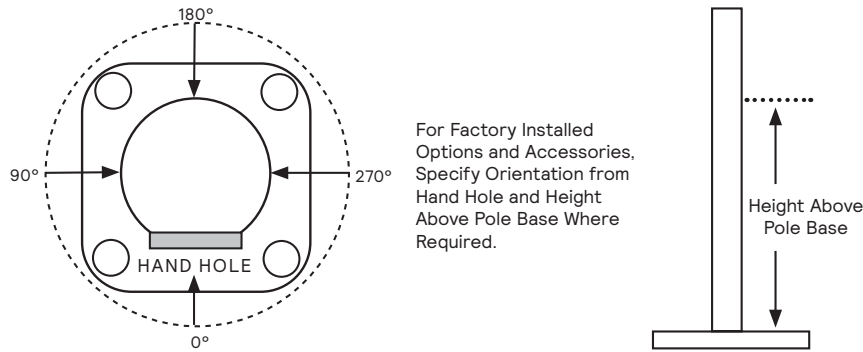
### WARRANTY

Gardco poles feature a 1 year limited warranty. See Warranty Information on [www.signify.com/warranties](http://www.signify.com/warranties) for complete details and exclusions.

# Poles Straight Square Steel

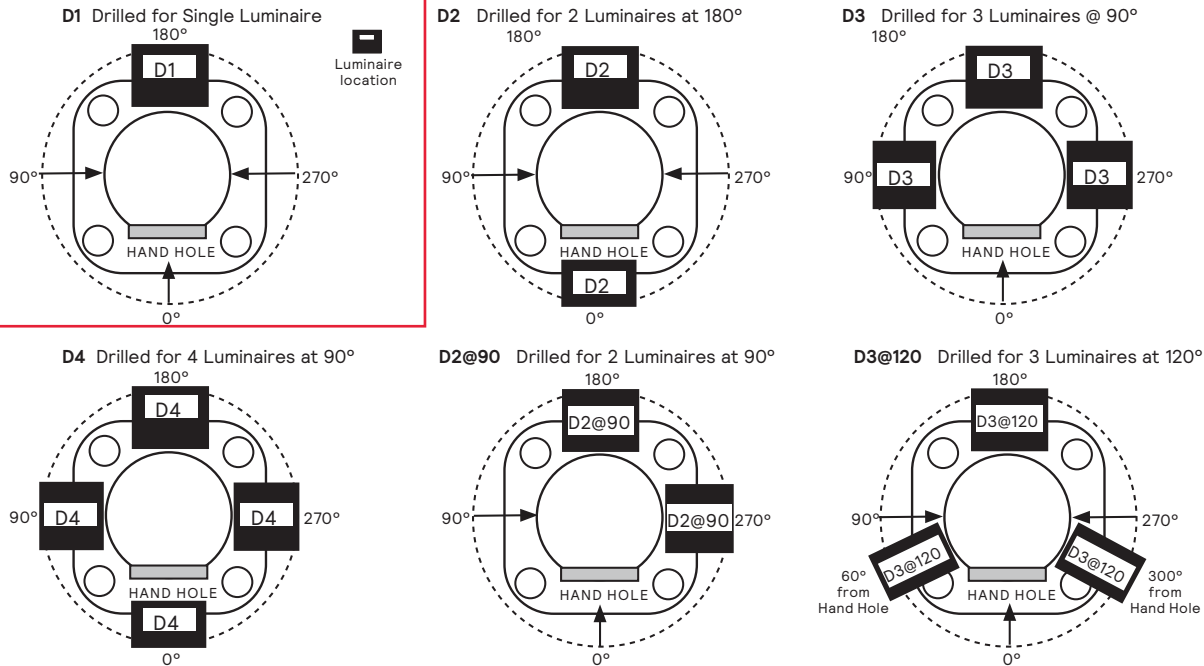
## Orientation Information

Factory installed options and accessories



Orientation is measured clockwise from the Hand Hole Center.

### Standard arm mount luminaire orientation



### Buy American Act of 1933 (BAA):

This product is manufactured in one of our US factories and, as of the date of this document, this product was considered a commercially available off-the-shelf (COTS) item meeting the requirements of the BAA. This BAA designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies. Prior to ordering, please visit [www.signify.com/baa](http://www.signify.com/baa) to view a current list of BAA-compliant products to confirm this product's current compliance.





The **Gardco EcoForm Gen-2 luminaire** features narrow spectrum amber LEDs combined with special shielding, making it a wildlife friendly lighting solution. EcoForm features an innovative retrofit arm kit, simplifying site conversions to LED by eliminating the need to drill additional holes in most existing poles. Integral control systems available for further energy savings.

Project: **Woods Hollow Campground**

Location: **Town of Mayfield**

Cat.No:

Type:

Qty:

Notes: **S1D-16: 16' ht double-fixture pole-mounted LED light fixture**

**Ordering guide**

example: ECF-S-64L-600-AM-G2-AR-5-120-FWC-MGY

Prefix	Number of LEDs	Drive Current	LED Color - Generation	Mounting	Distribution	Voltage
<b>ECF-S</b>	<b>64L</b>	<b>600mA</b>	<b>AM-G2</b>	<b>AR</b>	<b>4</b>	<b>120</b>
<b>ECF-S</b> EcoForm site and area, wildlife	<b>32L</b> 32 LEDs (2 modules) <b>48L</b> 48 LEDs (3 modules) <b>64L</b> 64 LEDs (4 modules)	<b>400</b> 400mA <b>600</b> 600mA	<b>AM-G2</b> Direct Amber, nominal 590nm narrow spectrum LED Generation 2	<b>AR<sup>2</sup></b> Arm Mount (standard)  The following mounting kits must be ordered separately (See accessories)  <b>WS</b> Wall mount with surface conduit rear entry permitted <b>RAM<sup>2</sup></b> Retrofit arm mount kit	<b>Type 2</b> 2 Type 2 <b>Type 3</b> 3 Type 3 <b>Type 4</b> 4 Type 4 <b>Type 5</b> 5 Type 5 <b>5W</b> Type 5W	<b>120</b> 120V <b>208</b> 208V <b>240</b> 240V <b>277</b> 277V <b>347</b> 347V <b>480</b> 480V <b>UNV</b> 120-277V (50/60Hz) <b>HVU</b> 347-480V (50/60Hz)

Options	Dimming controls	Motion sensing lens	Photo-sensing	Electrical	Luminaire	Finish
	<b>CS50</b>	<b>IMRI3</b>	<b>PCB</b>	<b>F1</b>	<b>FWS</b>	<b>BZ</b>
<b>DD<sup>4</sup></b> 0-10V External dimming (for controls by others) <b>FAWS<sup>4,5</sup></b> Field Adjustable Wattage Selector <b>BL<sup>1,4,14</sup></b> Bi-level functionality  <b>DynaDimmer: Automatic Profile Dimming</b> <b>CS50<sup>4,8</sup></b> Safety 50% Dimming, 7 hours <b>CM50<sup>4,8</sup></b> Median 50% Dimming, 8 hours <b>CS30<sup>4,8</sup></b> Safety 30% Dimming, 7 hours <b>CM30<sup>4,8</sup></b> Median 30% Dimming, 8 hours	<b>IMRI3<sup>13</sup></b> Integral with #3 lens <b>IMRI7<sup>13</sup></b> Integral with #7 lens	<b>PCB<sup>8,9</sup></b> Photocontrol Button <b>TLRD5<sup>10</sup></b> Twist Lock Receptacle 5 Pin <b>TLRD7<sup>10</sup></b> Twist Lock Receptacle 7 Pin <b>TLRPC<sup>11</sup></b> Twist Lock Receptacle w/ Photocell	<b>Fusing</b> <b>F1<sup>9</sup></b> Single (120, 277, 347VAC) <b>F2<sup>9</sup></b> Double (208, 240, 480VAC)  <b>Pole Mount Fusing</b> <b>FP1<sup>9</sup></b> Single (120, 277, 347VAC) <b>FP2<sup>9</sup></b> Double (208, 240, 480VAC) <b>FP3<sup>9</sup></b> Canadian Double Pull (208, 240, 480VAC)  <b>Surge Protection (10kA standard)</b> <b>SP2</b> Increased 20kA	Square Pole Adapter included in standard product  <b>TB</b> Terminal Block <b>RPA<sup>12</sup></b> Round Pole Adapter (fits to 3"- 3.9" O.D. pole) <b>FWC<sup>3</sup></b> Wildlife Friendly External House side shield	<b>Textured</b> <b>BK</b> Black <b>WH</b> White <b>BZ</b> Bronze <b>DGY</b> Dark Gray <b>MGY</b> Medium Gray  <b>Customer specified</b> <b>RAL</b> Specify optional color or RAL (ex: RAL7024) <b>CC</b> Custom color (Must supply color chip for required factory quote)	

- BL-IMRI3/7 equipped with out-boarded sensor housing when voltage is HVU (347-480V)
- Mounts to a 4" round pole with adapter included for square poles.
- Limited to a maximum of 45 degrees aiming above horizontal.
- Not available with other dimming control options.
- Not available with motion sensor.
- Not available with photocontrol.
- Must specify a motion sensor lens.
- Not available in 347 or 480V
- Must specify input voltage.
- TLRD5, TLRD7 and TLRPC receptacle pins 4 & 5 are capped off when ordered with any of the Dimming controls DD or FAWS or LLC.
- Not available in 480V. Order photocell separately with TLRD5/7.
- Not available with DCC.
- Not available with SF and WS. RPAs provided with black finish standard.
- HIS not available with Type 5, 5W, BLC, BLC-90, BLC-270, LCL or RCL optics.
- Not available with DD, DCC, and FAWS dimming control options.
- Not available with DD, DCC, FAWS and LLC dimming control options.
- When ordering SRDR, controller (by others) to be used on socket must be SR compatible (See specifications for more details). Consult factory for lead time. All 7 pins in NEMA receptacle are connected to SR driver. SRDR not available with TLRD5 or TLRPC.
- 0-10V dimming driver standard.
- LCL and RCL not available with 48L-1.2A or 64L-1A.





# ECF-S EcoForm wildlife

## Site & Area

EcoForm Accessories<sup>1</sup> (ordered separately, field installed)

### Luminaire Accessories

**PTF2**

ECF-BD-G2	Bird deterrent
ECF-RAM-G2-(F)	Retrofit Arm mount kit
ECF-WS-G2-(F)	Wall mount with surface conduit rear entry permitted

**EcoForm PTF2**  
(pole top fitter fits 23/8-21/2" OD x 4" depth tenon)

PTF2-ECF-S/L-1-90-(F)	1 luminaire at 90°
PTF2-ECF-S/L-2-90-(F)	2 luminaires at 90°
PTF2-ECF-S/L-2-180-(F)	2 luminaires at 180°
PTF2-ECF-S/L-3-90-(F)	3 luminaires at 90°
PTF2-ECF-S/L-4-90-(F)	4 luminaires at 90°
PTF2-ECF-S/L-3-120-(F)	3 luminaires at 120°

**EcoForm PTF3**  
(pole top fitter fits 3-31/2" OD x 6" depth tenon)

PTF3-ECF-S/L-1-90-(F)	1 luminaire at 90°
PTF3-ECF-S/L-2-90-(F)	2 luminaires at 90°
PTF3-ECF-S/L-2-180-(F)	2 luminaires at 180°
PTF3-ECF-S/L-3-90-(F)	3 luminaires at 90°
PTF3-ECF-S/L-4-90-(F)	4 luminaires at 90°
PTF3-ECF-S/L-3-120-(F)	3 luminaires at 120°

**EcoForm PTF4**  
(pole top fitter fits 31/2-4" OD x 6" depth tenon)

PTF4-ECF-S/L-1-90-(F)	1 luminaire at 90°
PTF4-ECF-S/L-2-90-(F)	2 luminaires at 90°
PTF4-ECF-S/L-2-180-(F)	2 luminaires at 180°
PTF4-ECF-S/L-3-90-(F)	3 luminaires at 90°
PTF4-ECF-S/L-4-90-(F)	4 luminaires at 90°
PTF4-ECF-S/L-3-120-(F)	3 luminaires at 120°

(F) = Specify finish

1. Consult Signify to confirm whether specific accessories are BAA-compliant.

## Predicted Lumen Depreciation Data

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L<sub>70</sub> is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L<sub>70</sub> hours limited to 6 times actual LED test hours

Ambient Temperature °C	Driver mA	Calculated L <sub>70</sub> Hours	L <sub>70</sub> per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	up to 600 mA	>100,000 hours	>60,000 hours	>88%

## LED Wattage and Lumen Values

### Unshielded

Ordering Code	Total LEDs	LED Current (mA)	Dominant Wavelength (nm)	Average System Watts	Type 2			Type 3			Type 4			Type 5			Type 5W		
					Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating
ECF-S-32L-400-AM-G2-x	32	400	596	32	2,092	66	BI-U0-G1	2,047	65	BI-U0-G1	2,141	68	BI-U0-G1	2,259	72	B2-U0-G0	2,187	69	B2-U0-G1
ECF-S-32L-600-AM-G2-x	32	600	596	48	2,449	51	BI-U0-G1	2,396	50	BI-U0-G1	2,507	52	BI-U0-G1	2,645	55	B2-U0-G1	2,560	53	B2-U0-G1
ECF-S-48L-400-AM-G2-x	48	400	596	47	3,120	66	BI-U0-G1	3,052	64	BI-U0-G1	3,193	67	BI-U0-G1	3,369	71	B2-U0-G1	3,261	69	B2-U0-G1
ECF-S-48L-600-AM-G2-x	48	600	596	72	3,650	50	BI-U0-G1	3,571	49	BI-U0-G1	3,736	52	BI-U0-G1	3,943	54	B3-U0-G1	3,816	53	B3-U0-G1
ECF-S-64L-400-AM-G2-x	64	400	596	62	4,106	67	BI-U0-G1	4,017	65	BI-U0-G1	4,202	68	BI-U0-G1	4,434	72	B3-U0-G1	4,292	70	B3-U0-G1
ECF-S-64L-600-AM-G2-x	64	600	596	94	4,805	51	BI-U0-G1	4,701	50	BI-U0-G1	4,918	52	BI-U0-G1	5,190	55	B3-U0-G1	5,023	54	B3-U0-G1

### Shielded

Ordering Code	Total LEDs	LED Current (mA)	Dominant Wavelength (nm)	Average System Watts	2-FWC		3-FWC		4-FWC		5-FWC		5W-FWC	
					Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)
ECF-S-32L-400-AM-G2-x	32	400	596	32	680	22	665	21	696	22	734	23	710	22
ECF-S-32L-600-AM-G2-x	32	600	596	48	795	16	778	16	814	17	859	18	831	17
ECF-S-48L-400-AM-G2-x	48	400	596	48	1,013	21	991	21	1,037	22	1,094	23	1,059	22
ECF-S-48L-600-AM-G2-x	48	600	596	73	1,186	16	1,160	16	1,213	17	1,281	18	1,239	17
ECF-S-64L-400-AM-G2-x	64	400	596	62	1,334	22	1,305	21	1,365	22	1,441	23	1,394	23
ECF-S-64L-600-AM-G2-x	64	600	596	94	1,561	17	1,527	16	1,598	17	1,686	18	1,632	17

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

NOTE: Some data may be scaled based on tests of similar (but not identical) luminaires. Contact factory for configurations not shown.

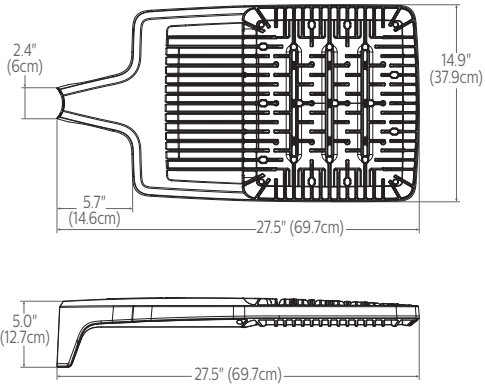
# ECF-S EcoForm wildlife

## Site & Area

### Dimensions

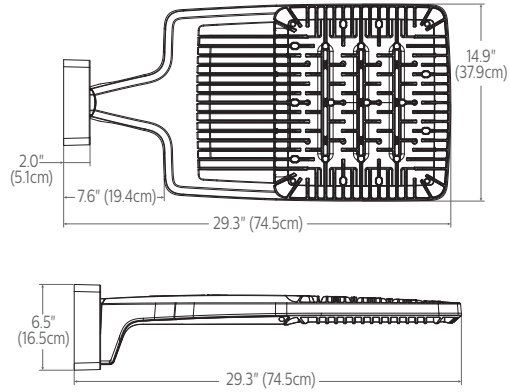
#### Standard Arm (AR)

Weight: 22 Lbs (9.9 Kg) EPA: 0.21ft<sup>2</sup> (.019m<sup>2</sup>)



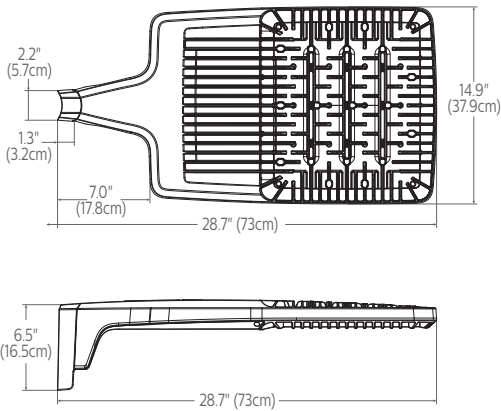
#### Wall (WS)

Weight: 27 Lbs. (12. 2Kg)EPA: 0.27ft<sup>2</sup> (.025m<sup>2</sup>)



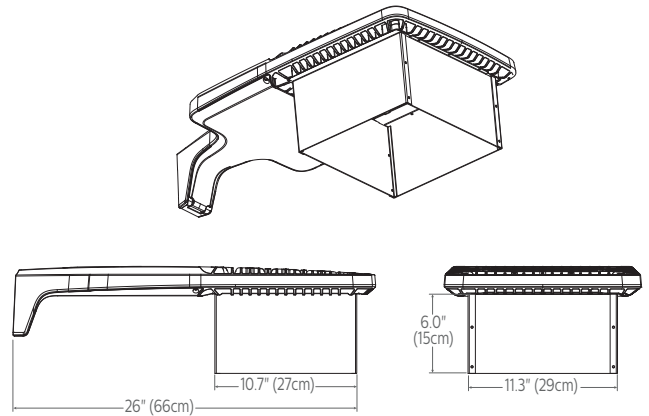
#### Retrofit Arm (RAM)

Weight: 24 Lbs (10.9 Kg) EPA: 0.24ft<sup>2</sup> (.022m<sup>2</sup>)

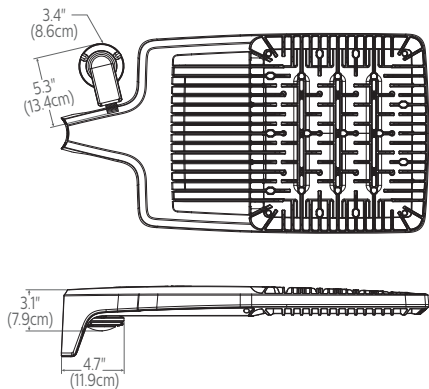


#### Wildlife Friendly External House side shield (FWC)

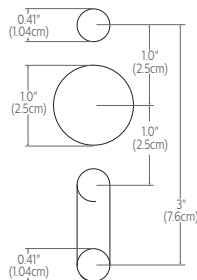
Weight: 23 Lbs (10.4 Kg) EPA: 1.0ft<sup>2</sup> (.093m<sup>2</sup>)



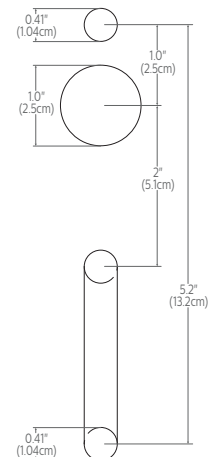
#### Outboard IMR-HVU sensor



#### Standard Arm (AR) drill pattern



#### Retrofit Arm (RAM) drill pattern



# ECF-S EcoForm wildlife

## Site & Area

### Specifications

#### Housing

One piece die cast aluminum housing with integral arm and separate, self retained hinged, one piece die cast door frame.

#### IP Rating

LED light engine rated IP66. Driver compartment rated to IP65.

#### Vibration resistance

Luminaire is tested and rated 3G over 100,000 cycles conforming to standards set forth by ANSI C136.31-2010. Testing includes vibration in three axes, all performed on the same luminaire.

#### Light Engine

Light engine comprises of a module of 16-LED aluminum metal clad board fully sealed with optics offered in multiples of 2, 3 and 4 modules or 32, 48 and 64 LEDs. Module is RoHS compliant. Direct Amber LED is narrow spectrum with dominant wavelength at 596 nm (peak wavelength at 601 nm). LED light engine is rated IP66 in accordance to Section 9 of IEC 60598-1.

#### LED Thermal management

The housing design allows the one piece housing to provide excellent thermal management critical to long LED system life.

#### Optical systems

Type 2, 3, 4, 5 and 5W.

#### Mounting

Standard luminaire arm mounts to 4" round poles. Can also be used with 5" O.D. poles. Square pole adapter included with every luminaire. Round Pole Adapter (RPA) required for 3-3.9" poles.

#### Control options

**0-10V dimming (DD):** Access to 0-10V dimming leads supplied through back of luminaire (for secondary dimming controls by others). Cannot be used with other control options.

**Field Adjustable Wattage Selector (FAWS):** Luminaire equipped with the ability to manually adjust the wattage in the field to reduce total luminaire lumen output and light levels. Comes pre-set to the highest position at the lumen output selected. Use chart below to estimate reduction in lumen output desired. Cannot be used with other control options or motion response.

FAWS Position	Percent of Typical Lumen Output
1	25%
2	50%
3	55%
4	65%
5	75%
6	80%
7	85%
8	90%
9	95%
10	100%

Note: Typical value accuracy +/- 5%

**Automatic Profile Dimming (CS/CM/CE/CA):** Standard dimming profiles provide flexibility towards energy savings goals while optimizing light levels during specific dark hours. Dimming profiles include two dimming settings including dim to 30% or 50% of the total lumen output. When used in combination with not programmed motion response it overrides the controller's schedule when motion is detected. After 5 minutes with no motion, it will return to the automatic dimming profile schedule. Automatic dimming profile scheduled with the following settings:

- **CS50/CS30:** Security for 7 hours night duration (Ex., 11 PM - 6 AM)
- **CM50/CM30:** Median for 8 hours night duration (Ex., 10 PM - 6 AM)

All above profiles are calculated from mid point of the night. Dimming is set for 6 hours after the mid point and 1 or 2 hours before depending of the duration of dimming. Cannot be used with other dimming control options.

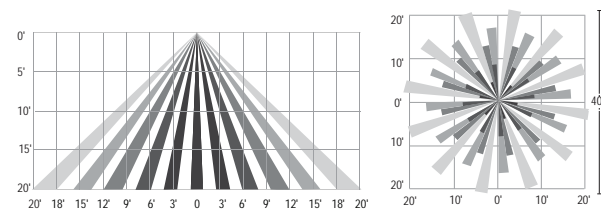
#### Motion response options

**Bi-Level Infrared Motion Response (BL-IMRI):** Motion Response module is mounted integral to luminaire factory pre-programmed to 50% dimming when not ordered with other control options. BL-IMRI is set/operates in the following fashion: The motion sensor is set to a constant 50%. When motion is detected by the PIR sensor, the luminaire returns to full power/light output. Dimming on low is factory set to 50% with 5 minutes default in "full power" prior to dimming back to low. When no motion is detected for 5 minutes, the motion response system reduces the wattage by 50%, to 50% of the normal constant wattage reducing the light level. Other dimming settings can be provided if different dimming levels are required. This can also be done with FSIR-100 Wireless Remote Programming Tool (contact Technical Support for details).

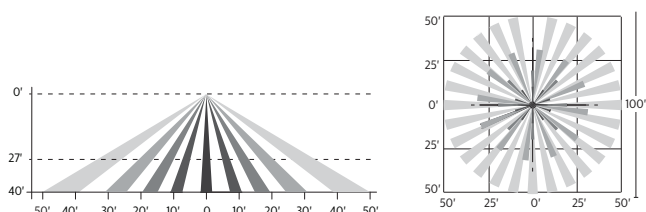
**Infrared Motion Response with Other Controls:** When used in combination with other controls (Automatic Dimming Profile), motion response device will simply override controller's schedule with the added benefits of a combined dimming profile and sensor detection. In this configuration, the motion response device cannot be re-programmed with FSIR-100 Wireless Remote Programming Tool. The profile can only be re-programmed via the controller.

**Infrared Motion Response Lenses (IMRI3/IMRI7):** Infrared Motion Response Integral module is available with two different sensor lens types to accommodate various mounting heights and occupancy detection ranges. Lens #3 (IMRI3) is designed for mounting heights up to 20' with a 40' diameter coverage area. Lens #7 is designed for higher mounting heights up to 40' with larger coverage areas up to 100' diameter coverage area. See charts for approximate detection patterns:

IMRI3 Luminaire or remote mount controller with #3 lens



IMRI7 Luminaire or remote mount controller with #7 lens



# ECF-S EcoForm wildlife

## Site & Area

### Specifications (continued)

#### Electrical

**Twist-Lock Receptacle (TLRD5/TLRD7/ TLRPC):** Twist Lock Receptacle with 5 pins enabling dimming or with 7 pins with additional functionality (by others) can be used with a twist-lock photoelectric cell or a shorting cap. Dimming Receptacle Type B (5-pin) and Type D-24 (7-pin) in accordance to ANSI C136.41. Can be used with third-party control system. Receptacle located on top of luminaire housing. When specifying receptacle with twistlock photoelectric cell, voltage must be specified. When ordering Twist-lock receptacle (TLRD5 or TLRD7), photocell or shorting cap is not included. TLRPC is shipped standard with 5 pin.

**Driver:** Driver efficiency (>90% standard). 120-480V available (restrictions apply). Open/short circuit protection. Optional 0-10V dimming to 10% power. RoHS compliant.

**Button Photocontrol (PCB):** Button style design for internal luminaires mounting applications. The photocontrol is constructed of a high impact UV stabilized polycarbonate housing. Rated voltage of 120V or 208-277V with a load rating of 1000 VA. The photocell will turn on with 1-4Fc of ambient light.

**Surge protection (SP1/SP2):** Surge protection device tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and NeutralGround, and in accordance with DOE MSSLC Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High test level 10kV/10kA. 20kV / 10kA surge protection device that provides extra protection beyond the SP1 10kV/10kA level.

#### Retrofit Arm Mount

EcoForm features an innovative retrofit arm kit. When specified with the retrofit arm (**RAM**) option, EcoForm seamlessly simplifies site conversions to LED by eliminating the need for additional pole drilling on most existing poles. RAM will be boxed separately.

#### Listings

UL/cUL listed to the UL 1598 standard, suitable for Wet Locations. Suitable for use in ambients from -40° to 40°C (-40° to 104°F). The quality systems of this facility have been registered by UL to the ISO 9001 series standards. Florida Wildlife Certified.

#### Finish

Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (**TGIC**) textured polyester powdercoat finish. Standard colors include bronze (**BZ**), black (**BK**), white (**WH**), dark gray (**DGY**), and medium gray (**MGY**). Consult factory for specs on optional or custom colors.

#### Warranty

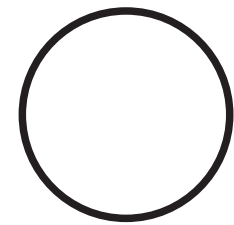
EcoForm luminaires feature a 5 year limited warranty. See [signify.com/warranties](http://signify.com/warranties) for complete details and exclusions.

### Buy American Act of 1933 (BAA):

This product is manufactured in one of our US factories and, as of the date of this document, this product was considered a commercially available off-the-shelf (COTS) item meeting the requirements of the BAA. This BAA designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies. Prior to ordering, please visit [www.signify.com/baa](http://www.signify.com/baa) to view a current list of BAA-compliant products to confirm this product's current compliance.







The Gardco TRA Tapered Round Aluminum pole consists of a one-piece design fabricated aluminum tubing circumferentially welded to a structural quality hot rolled carbon steel plate. The poles are finished with either Architectural Class 1 anodizing or electrostatically applied TGIC polyester powdercoat.

Project: Woods Hollow Campground

Location: Town of Mayfield, NY

Cat.No:

Type:

Notes: 14-ft height pole for S1D-16; double-fixture pole-mounted LED light fixture

### Ordering Guide

example: TRA-CB-16L-D2-BRP

Prefix	Base	Height	Wind Factor	Drilling <sup>1</sup>	Finish	Options
TRA	CB	14	-	D2	BRP	
TRA	CB	8	-	D1 1 Way	BRP Bronze	DR Duplex Receptacle
		10	-	D2 2 Way at 180°	BLP Black	GFCI Ground Fault Receptacle
		12	L	D2@90 2 Way at 90°	WP White	VDA Vibration Dampener
		14		D3 3 Way at 90°	MGY Medium Grey	AHH Additional Hand Hole
		16		D3@120 3 Way at 120°	DGY Dark Grey	For DR, GFCI, and AHH options indicate height above base and orientation to original hand hole. See Pole Orientation Information on Page 5.
		25		D4 4 Way	BRA Bronze Anodized	<b>Nipples and Couplings</b>
		28		T2 2.4" OD Tenon X 4" long	BLA Black Anodized	CL1/2 Coupling - Internal Thread 1/2"
		30		T3 3" OD Tenon X 4" long	NA Natural Anodized	CL3/4 Coupling - Internal Thread 3/4"
		35		T4 4" OD Tenon X 6" long	OC Optional Color (Specify RAL designation ex: RAL7024)	CL1 Coupling - Internal Thread 1"
				P Plain Top (No Drilling/No Tenon)	SC Special Color (Specify. Must supply color chip.)	CL1-1/4 Coupling - Internal Thread 1-1/4"
			M			CL1-1/2 Coupling - Internal Thread 1-1/2"
		12				NL1/2 Nipple - External Thread 1/2"
		14				NL3/4 Nipple - External Thread 3/4"
		16				NL1 Nipple - External Thread 1"
		20				NL1-1/4 Nipple - External Thread 1-1/4"
			H			NL1-1/2 Nipple - External Thread 1-1/2"
		20				Indicate height above base and orientation to hand hole. See Pole Orientation Information on Page 5.
		25				<b>Single Mount Bullhorn Brackets</b>
		28				A15BH-19 Single - 1.9" OD <sup>2</sup>
		30				A15BH-24 Single - 2.4" OD
		35				A215BH-19 2-Tenon - 1.9" OD <sup>2</sup>
		39				A215BH-24 2-Tenon - 2.4" OD
						Indicate height above base and orientation to hand hole. See Pole Orientation Information on Page 4.
						Additional and alternative brackets and accessories available. Refer to the Signify product catalog (eCat) website for more information.

1. Standard poles are drilled in factory for compatibility with Signify luminaires only (D\* options). For non-Signify-brand luminaires, select the P drilling option.

2. For Gardco DFL7/DFC7 only

### Anchor Bolts for Gardco TRA Poles<sup>3</sup> (ordered separately)

	Pole Type	12NC for ordering	Description (in inches)
For Pre-ship service (Order 4 per pole)	8 to 25L	912400215786	0.75 x 18 x 3.75
	25H to 39H	912400215784	1 x 36 x 4.5
For shipment with the pole (Order 1 per pole)	8 to 25L	912400207384	0.75 x 18 x 3.75
	25H to 39H	912400200208	1 x 36 x 4.5

3. Consult Signify to confirm whether specific accessories are BAA-compliant.

# Poles Tapered Round Aluminum (Cast Base)

## Pole Data

Product Catalog Number	Pole Specs				Anchor Bolt Data <sup>2</sup>		
	Height (ft)	Pole Diameter (inches)	Wall Thickness (inches)	Structure Weight (lbs)	Bolt Circle (inches)	Bolt Size (inches)	Max Proj. (inches)
TRA-CB-8	7' 8"	3 x 4	0.125	17	7.50 (+/- 0.75)	0.75 x 18 x 3.75	3.25
TRA-CB-10	9' 8"	3 x 4	0.125	20	7.50 (+/- 0.75)	0.75 x 18 x 3.75	3.25
TRA-CB-12L	11' 8"	3 x 4	0.125	23	7.50 (+/- 0.75)	0.75 x 18 x 3.75	3.25
TRA-CB-12M	11' 8"	3 x 5	0.125	26	8.63 (+/- 0.88)	0.75 x 18 x 3.75	3.25
TRA-CB-14L	13' 8"	3 x 4	0.125	27	7.50 (+/- 0.75)	0.75 x 18 x 3.75	3.25
TRA-CB-14M	13' 8"	3 x 5	0.125	31	8.63 (+/- 0.88)	0.75 x 18 x 3.75	3.25
TRA-CB-16L	15' 8"	3 x 5	0.125	30	8.63 (+/- 0.88)	0.75 x 18 x 3.75	3.25
TRA-CB-16M	15' 8"	3 x 5	0.188	35	8.63 (+/- 0.88)	0.75 x 18 x 3.75	3.25
TRA-CB-20M	19' 8"	3 x 5	0.156	51	8.63 (+/- 0.88)	0.75 x 18 x 3.75	3.25
TRA-CB-20H	19' 8"	3 x 5	0.188	60	8.63 (+/- 0.88)	0.75 x 18 x 3.75	3.25
TRA-CB-25L <sup>3</sup>	24' 8"	4 x 6	0.156	74	8.63 (+/- 0.88)	0.75 x 18 x 3.75	3.50
TRA-CB-25H	24' 8"	4 x 7	0.156	85	9.50 (+/- 0.75)	1 x 36 x 4.5	4.13
TRA-CB-28L <sup>3</sup>	27' 8"	4 x 7	0.156	92	10.56 (+/- 0.43)	1 x 36 x 4.5	4.13
TRA-CB-28H	27' 8"	4.5 x 8	0.188	124	10.56 (+/- 0.43)	1 x 36 x 4.5	4.13
TRA-CB-30L <sup>3</sup>	29' 8"	4 x 7	0.156	99	11.63 (+/- 0.37)	1 x 36 x 4.5	4.13
TRA-CB-30H	29' 8"	4.5 x 8	0.188	134	10.56 (+/- 0.43)	1 x 36 x 4.5	4.13
TRA-CB-35L <sup>3</sup>	34' 8"	4.5 x 8	0.156	133	11.63 (+/- 0.37)	1 x 36 x 4.5	4.13
TRA-CB-35H	34' 8"	4.5 x 8	0.25	205	11.63 (+/- 0.37)	1 x 36 x 4.5	4.13
TRA-CB-39L <sup>3</sup>	38' 8"	4.5 x 8	0.188	179	11.63 (+/- 0.37)	1 x 36 x 4.5	4.13
TRA-CB-39H	38' 8"	6 x 10	0.188	232	14.25 (+/- 0.75)	1 x 36 x 4.5	4.75

- Warning:** Additional wind loading, in terms of EPA, from banners, cameras, floodlights and other accessories attached to the pole, must be added to the luminaire(s) EPA before selecting the pole with the appropriate wind load capability.
- Factory supplied template must be used when setting anchor bolts. Gardco will not honor any claim for incorrect anchorage placement resulting from failure to use factory supplied templates.
- Includes (VDA) Vibration Dampener standard.

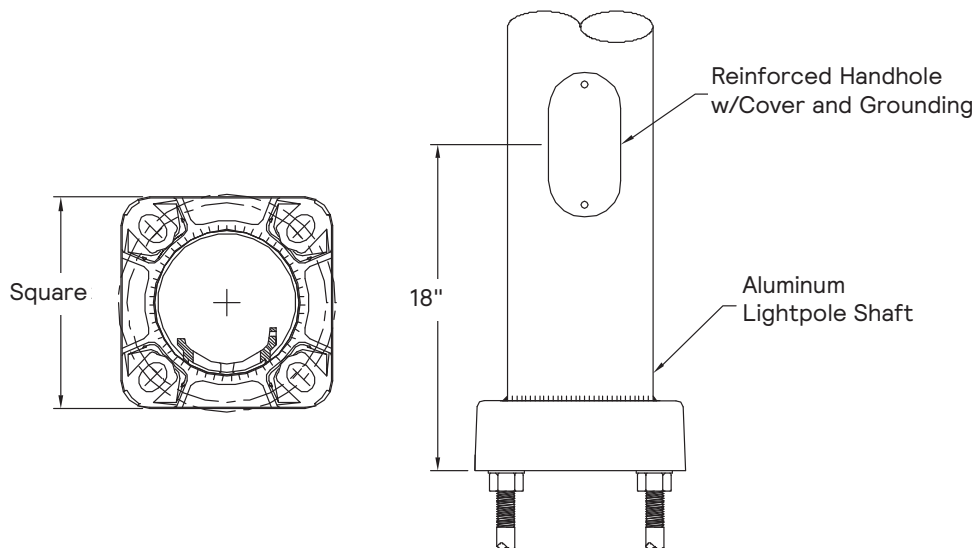
# Poles Tapered Round Aluminum (Cast Base)

## Pole Data

Catalog Number	Maximum Luminaire Loading <sup>1</sup>							
	High Wind Conditions		Normal Wind Conditions					
	110 MPH		100 MPH		90 MPH		80 MPH	
Prefix	EPA ft <sup>2</sup>	Max Weight (lbs)	EPA ft <sup>2</sup>	Max Weight (lbs)	EPA ft <sup>2</sup>	Max Weight (lbs)	EPA ft <sup>2</sup>	Max Weight (lbs)
TRA-CB-8	4.1	75	5.1	75	6.5	75	8.5	75
TRA-CB-10	2.9	75	3.7	75	4.8	75	6.4	75
TRA-CB-12L	1.9	75	2.6	75	3.5	75	4.8	75
TRA-CB-12M	4.6	75	5.8	75	7.4	75	9.8	75
TRA-CB-14L	1.1	75	1.6	75	2.4	75	3.5	75
TRA-CB-14M	3.4	75	4.4	75	5.8	75	7.8	75
TRA-CB-16L	0.4	75	0.8	75	1.5	75	2.4	75
TRA-CB-16M	2.4	75	3.2	75	4.3	75	6.0	75
TRA-CB-20M	1.5	100	2.2	100	3.2	100	4.7	100
TRA-CB-20H	2.3	100	3.1	100	4.3	100	6.1	100
TRA-CB-25L <sup>3</sup>	1.9	100	2.5	100	3.5	100	5.1	100
TRA-CB-25H	4.2	150	5.3	150	7.0	150	9.6	150
TRA-CB-28L <sup>3</sup>	2.8	150	3.7	150	5.0	150	7.1	150
TRA-CB-28H	6.8	150	8.5	150	10.8	150	14.3	150
TRA-CB-30L <sup>3</sup>	2.0	150	2.7	150	3.8	150	5.7	150
TRA-CB-30H	5.6	150	7.1	150	9.2	150	12.2	150
TRA-CB-35L <sup>3</sup>	2.1	150	2.9	150	4.0	150	5.7	150
TRA-CB-35H	5.8	150	7.3	150	9.5	150	12.7	150
TRA-CB-39L <sup>3</sup>	1.9	150	2.8	150	3.9	150	5.6	150
TRA-CB-39H	5.8	200	7.7	200	10.2	200	13.6	200

- Warning:** Additional wind loading, in terms of EPA, from banners, cameras, floodlights and other accessories attached to the pole, must be added to the luminaire(s) EPA before selecting the pole with the appropriate wind load capability.
- Factory supplied template must be used when setting anchor bolts. Gardco will not honor any claim for incorrect anchorage placement resulting from failure to use factory supplied templates.
- Includes (VDA) Vibration Dampener standard.

## Dimensions



**NOTE:** Factory supplied template must be used when setting anchor bolts. Gardco will not honor any claim for incorrect anchorage placement from failure to use factory supplied templates.

# Poles Tapered Round Aluminum (Cast Base)

## Specifications

All aluminum alloys shall comply with metalurgical and mechanical properties set forth in the Aluminum Association Standards.

### POLE SHAFT

The pole shaft shall be spun tapered from all new seamless 6063 alloy aluminum and shall be heat treated to produce a T6 temper. Each shaft shall have a minimum 6" long straight section at the top to accommodate drilling and/or Gardco floodlight and bullhorn brackets. Shafts are polished with fine grain aluminum oxide cloths, resulting in a high quality, circumferential satin brushed finish. After finishing, each pole shall be fully wrapped with neutral PH krinkle/kraft paper for protection in shipment.

### ANCHOR BASE

The anchor base (base plate) is cast from A356 alloy aluminum. The anchor base casting and shaft shall be joined by a continuous circumferential weld at the inside bottom of the anchor base. The completed assembly will be heat treated to T6 temper after all structural welding is completed. The 1100-0 alloy collars are spun from heavy duty .125" stock, making them damage and vandal resistant.

### ANCHOR BOLTS

Anchor bolts are fabricated from a commercial quality hot rolled carbon steel bar with a minimum yield strength of 55,000 PSI. Bolts have an "L" bend on one end and threaded on the opposite end. Anchor bolts are hot dipped galvanized a minimum length of 12" on the threaded end. Four (4) properly sized bolts, each furnished with two (2) regular hex nuts and two (2) flat washers, are provided per pole (priced separately), unless otherwise specified.

### HAND HOLE

Each hand hole includes an easy to install, self-contained Swing Latch hand hole cover assembly. U.S. Patent Swing Latch cover is fabricated from durable polycarbonate/ABS blend plastic. All poles include a peripherally reinforced flush covered handhole centered 18" above the bottom of the pole. The opening in the 4" diameter pole shall measure 2 3/8" X 4 1/2". The opening in the 5" and 6" diameter pole shall measure 3" X 5". The opening in the 7", 8" and 10" diameter pole shall measure 4" X 6". Hand hole dimensions are nominal.

### DRILLING

Standard poles are drilled in factory for compatibility with Signify luminaires, optional brackets, and accessories. Signify is not liable for damage caused by unauthorized attachments, alterations, or modifications.

If luminaires are to be supplied by others, Signify/Gardco/Stonco is not responsible for pole compatibility with luminaires, structural integrity of the pole or wind load requirements.

### FINISH

Poles are available with Association Architectural Class 1 anodized finish. Electrostatically applied, thermally cured TGIC polyester powdercoat finish or liquid polyurethane is also available.

### POLE TOP CAP

Each pole assembly is provided with a removable plastic top push cap. Finish is Black.

### DESIGN

The charted weights include luminaire(s) and/or mounting bracket(s) and are based on an approximate weight to EPA ratio of 25 pounds per square foot. The wind velocities are based on 10 mph increments from 80 mph through 110 mph. Poles to be located in areas of known abnormal conditions may require special consideration.

For example: coastal areas, airports and areas of special winds.

Poles are designed for ground-mounted applications. Poles mounted on structures (such as buildings and bridges) may also necessitate special consideration requiring Gardco's recommendation. Height correction factors and drag coefficients are applied to the entire structure. An appropriate safety factor is maintained based on the minimum yield strength of the material incorporated in the pole. Mounting height is the vertical distance from the base of the pole to the center of the luminaire arm at the point of luminaire attachment. For loadings other than those covered in the design section, such as overhead wiring, guying of the poles or other field installed attachments, consult the factory for recommendations. PE digitally stamped pole calculations are available on Gardco Site and Area poles upon request for an additional charge. Detailed project and installation information is required to fulfill this service. For more information, consult the factory.

### WARNING

This design information is intended as a general guideline only. The customer is solely responsible for proper selection of pole, luminaire, accessory and foundation under the given site conditions and intended usage. The addition of any items to the pole, in addition to the luminaire, will dramatically impact the EPA load on that pole. It is strongly recommended that a qualified professional be consulted to analyze the loads given the user's specific needs to ensure proper selection of the pole, luminaire, accessories, and foundation. Gardco assumes no responsibility for such proper analysis or product selections. Failure to insure proper site analysis, pole selection, loads and installation can result in pole failure, leading to serious injury or property damage.

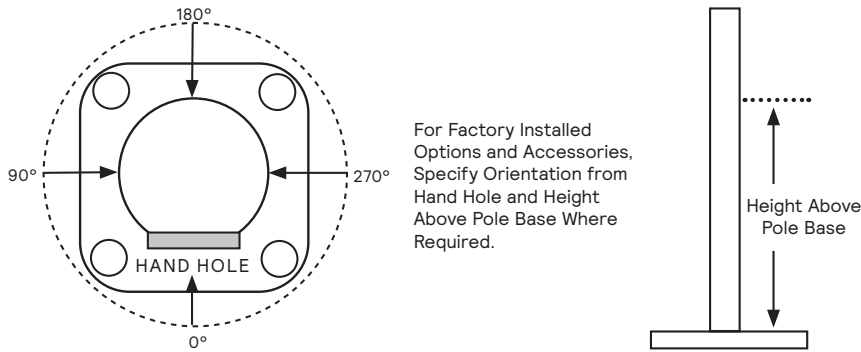
### WARRANTY

Gardco poles feature a 1 year limited warranty. See Warranty Information on [www.signify.com/warranties](http://www.signify.com/warranties) for complete details and exclusions.

# Poles Straight Square Steel

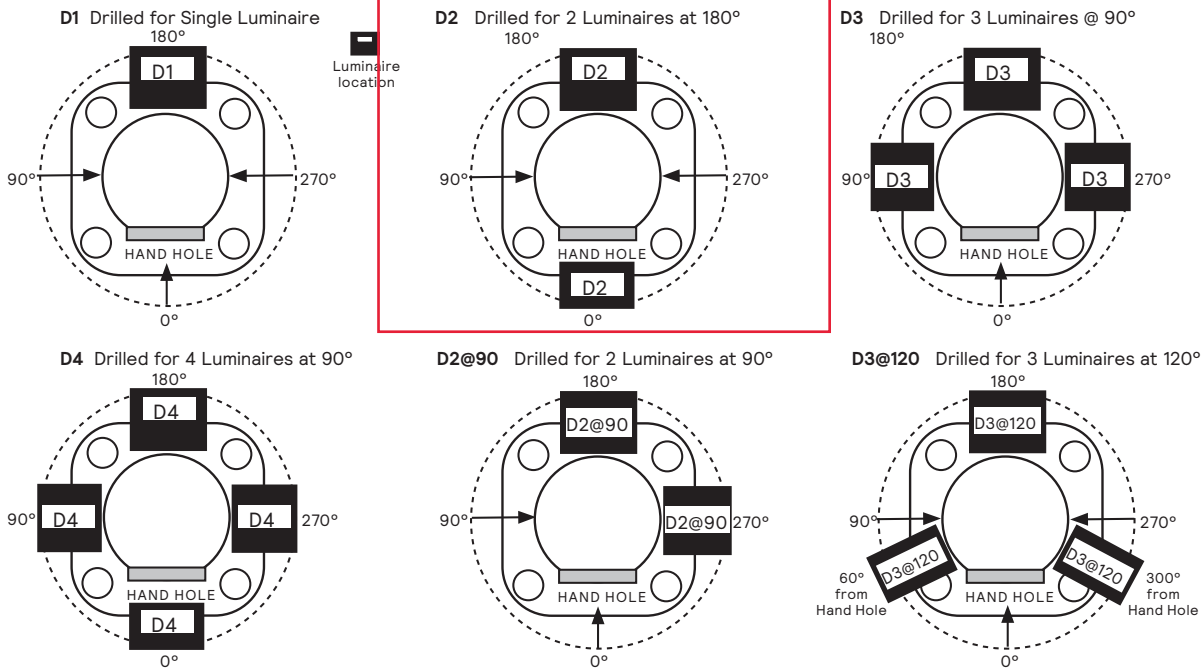
## Orientation Information

Factory installed options and accessories



Orientation is measured clockwise from the Hand Hole Center.

## Standard arm mount luminaire orientation



## Buy American Act of 1933 (BAA):

This product is manufactured in one of our US factories and, as of the date of this document, this product was considered a commercially available off-the-shelf (COTS) item meeting the requirements of the BAA. This BAA designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies. Prior to ordering, please visit [www.signify.com/baa](http://www.signify.com/baa) to view a current list of BAA-compliant products to confirm this product's current compliance.







The **Gardco EcoForm Gen-2 luminaire** features narrow spectrum amber LEDs combined with special shielding, making it a wildlife friendly lighting solution. EcoForm features an innovative retrofit arm kit, simplifying site conversions to LED by eliminating the need to drill additional holes in most existing poles. Integral control systems available for further energy savings.

Project: **Woods Hollow Campground**  
 Location: **Town of Mayfield**  
 Cat.No:  
 Type:  
 Qty:

Notes: **S1-10: 10 ht single-fixture pole-mounted LED light fixture**

**Ordering guide**

example: ECF-S-64L-600-AM-G2-AR-5-120-FWC-MGY

Prefix	Number of LEDs	Drive Current	LED Color - Generation	Mounting	Distribution	Voltage
<b>ECF-S</b>	<b>64L</b>	<b>600mA</b>	<b>AM-G2</b>	<b>AR</b>	<b>4</b>	<b>120</b>
<b>ECF-S</b> EcoForm site and area, wildlife	<b>32L</b> 32 LEDs (2 modules) <b>48L</b> 48 LEDs (3 modules) <b>64L</b> 64 LEDs (4 modules)	<b>400</b> 400mA <b>600</b> 600mA	<b>AM-G2</b> Direct Amber, nominal 590nm narrow spectrum LED Generation 2	<b>AR<sup>2</sup></b> Arm Mount (standard)  The following mounting kits must be ordered separately (See accessories)  <b>WS</b> Wall mount with surface conduit rear entry permitted <b>RAM<sup>2</sup></b> Retrofit arm mount kit	<b>Type 2</b> 2 Type 2 <b>Type 3</b> 3 Type 3 <b>Type 4</b> 4 Type 4 <b>Type 5</b> 5 Type 5 5W Type 5W	<b>120</b> 120V <b>208</b> 208V <b>240</b> 240V <b>277</b> 277V <b>347</b> 347V <b>480</b> 480V <b>UNV</b> 120-277V (50/60Hz) <b>HVU</b> 347-480V (50/60Hz)

Options						
Dimming controls	Motion sensing lens	Photo-sensing	Electrical	Luminaire	Finish	
<b>CS50</b>	<b>IMRI3</b>	<b>PCB</b>	<b>F1</b>	<b>FWS</b>	<b>BZ</b>	
<b>DD<sup>4</sup></b> 0-10V External dimming (for controls by others) <b>FAWS<sup>4,5</sup></b> Field Adjustable Wattage Selector <b>BL<sup>1,4,14</sup></b> Bi-level functionality  <b>DynaDimmer: Automatic Profile Dimming</b> <b>CS50<sup>4,8</sup></b> Safety 50% Dimming, 7 hours <b>CM50<sup>4,8</sup></b> Median 50% Dimming, 8 hours <b>CS30<sup>4,8</sup></b> Safety 30% Dimming, 7 hours <b>CM30<sup>4,8</sup></b> Median 30% Dimming, 8 hours	<b>IMRI3<sup>13</sup></b> Integral with #3 lens <b>IMRI7<sup>16</sup></b> Integral with #7 lens	<b>PCB<sup>8,9</sup></b> Photocontrol Button <b>TLRD5<sup>10</sup></b> Twist Lock Receptacle 5 Pin <b>TLRD7<sup>10</sup></b> Twist Lock Receptacle 7 Pin <b>TLRPC<sup>11</sup></b> Twist Lock Receptacle w/ Photocell	<b>Fusing</b> <b>F1<sup>9</sup></b> Single (120, 277, 347VAC) <b>F2<sup>9</sup></b> Double (208, 240, 480VAC)  <b>Pole Mount Fusing</b> <b>FP1<sup>9</sup></b> Single (120, 277, 347VAC) <b>FP2<sup>9</sup></b> Double (208, 240, 480VAC) <b>FP3<sup>9</sup></b> Canadian Double Pull (208, 240, 480VAC)  <b>Surge Protection (10kA standard)</b> <b>SP2</b> Increased 20kA	<b>Square Pole Adapter</b> included in standard product  <b>TB</b> Terminal Block <b>RPA<sup>12</sup></b> Round Pole Adapter (fits to 3" - 3.9" O.D. pole) <b>FWC<sup>3</sup></b> Wildlife Friendly External House side shield	<b>Textured</b> <b>BK</b> Black <b>WH</b> White <b>BZ</b> Bronze <b>DGY</b> Dark Gray <b>MGY</b> Medium Gray  <b>Customer specified</b> <b>RAL</b> Specify optional color or RAL (ex: RAL7024) <b>CC</b> Custom color (Must supply color chip for required factory quote)	

- BL-IMRI3/7 equipped with out-boarded sensor housing when voltage is HVU (347-480V)
- Mounts to a 4" round pole with adapter included for square poles.
- Limited to a maximum of 45 degrees aiming above horizontal.
- Not available with other dimming control options.
- Not available with motion sensor.
- Not available with photocontrol.
- Must specify a motion sensor lens.
- Not available in 347 or 480V
- Must specify input voltage.
- TLRD5, TLRD7 and TLRPC receptacle pins 4 & 5 are capped off when ordered with any of the Dimming controls DD or FAWS or LLC.
- Not available in 480V. Order photocell separately with TLRD5/7.
- Not available with DCC.
- Not available with SF and WS. RPAs provided with black finish standard.
- HIS not available with Type 5, 5W, BLC, BLC-90, BLC-270, LCL or RCL optics.
- Not available with DD, DCC, and FAWS dimming control options.
- Not available with DD, DCC, FAWS and LLC dimming control options.
- When ordering SRDR, controller (by others) to be used on socket must be SR compatible (See specifications for more details). Consult factory for lead time. All 7 pins in NEMA receptacle are connected to SR driver. SRDR not available with TLRD5 or TLRPC.
- 0-10V dimming driver standard.
- LCL and RCL not available with 48L-1.2A or 64L-1A.



# ECF-S EcoForm wildlife

## Site & Area

EcoForm Accessories<sup>1</sup> (ordered separately, field installed)

Luminaire Accessories	
PTF2	

ECF-BD-G2	Bird deterrent
ECF-RAM-G2-(F)	Retrofit Arm mount kit
ECF-WS-G2-(F)	Wall mount with surface conduit rear entry permitted

<b>EcoForm PTF2</b> (pole top fitter fits 23/8-21/2" OD x 4" depth tenon) PTF2-ECF-S/L-1-90-(F) 1 luminaire at 90° PTF2-ECF-S/L-2-90-(F) 2 luminaires at 90° PTF2-ECF-S/L-2-180-(F) 2 luminaires at 180° PTF2-ECF-S/L-3-90-(F) 3 luminaires at 90° PTF2-ECF-S/L-4-90-(F) 4 luminaires at 90° PTF2-ECF-S/L-3-120-(F) 3 luminaires at 120°	<b>EcoForm PTF3</b> (pole top fitter fits 3-31/2" OD x 6" depth tenon) PTF3-ECF-S/L-1-90-(F) 1 luminaire at 90° PTF3-ECF-S/L-2-90-(F) 2 luminaires at 90° PTF3-ECF-S/L-2-180-(F) 2 luminaires at 180° PTF3-ECF-S/L-3-90-(F) 3 luminaires at 90° PTF3-ECF-S/L-4-90-(F) 4 luminaires at 90° PTF3-ECF-S/L-3-120-(F) 3 luminaires at 120°	<b>EcoForm PTF4</b> (pole top fitter fits 31/2-4" OD x 6" depth tenon) PTF4-ECF-S/L-1-90-(F) 1 luminaire at 90° PTF4-ECF-S/L-2-90-(F) 2 luminaires at 90° PTF4-ECF-S/L-2-180-(F) 2 luminaires at 180° PTF4-ECF-S/L-3-90-(F) 3 luminaires at 90° PTF4-ECF-S/L-4-90-(F) 4 luminaires at 90° PTF4-ECF-S/L-3-120-(F) 3 luminaires at 120°
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(F) = Specify finish

1. Consult Signify to confirm whether specific accessories are BAA-compliant.

## Predicted Lumen Depreciation Data

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L<sub>70</sub> is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L<sub>70</sub> hours limited to 6 times actual LED test hours

Ambient Temperature °C	Driver mA	Calculated L <sub>70</sub> Hours	L <sub>70</sub> per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	up to 600 mA	>100,000 hours	>60,000 hours	>88%

## LED Wattage and Lumen Values

Unshielded	Ordering Code	Total LEDs	LED Current (mA)	Dominant Wavelength (nm)	Average System Watts	Type 2			Type 3			Type 4			Type 5			Type 5W		
						Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating
	ECF-S-32L-400-AM-G2-x	32	400	596	32	2,092	66	B1-U0-G1	2,047	65	B1-U0-G1	2,141	68	B1-U0-G1	2,259	72	B2-U0-G0	2,187	69	B2-U0-G1
	ECF-S-32L-600-AM-G2-x	32	600	596	48	2,449	51	B1-U0-G1	2,396	50	B1-U0-G1	2,507	52	B1-U0-G1	2,645	55	B2-U0-G1	2,560	53	B2-U0-G1
	ECF-S-48L-400-AM-G2-x	48	400	596	47	3,120	66	B1-U0-G1	3,052	64	B1-U0-G1	3,193	67	B1-U0-G1	3,369	71	B2-U0-G1	3,261	69	B2-U0-G1
	ECF-S-48L-600-AM-G2-x	48	600	596	72	3,650	50	B1-U0-G1	3,571	49	B1-U0-G1	3,736	52	B1-U0-G1	3,943	54	B3-U0-G1	3,816	53	B3-U0-G1
	ECF-S-64L-400-AM-G2-x	64	400	596	62	4,106	67	B1-U0-G1	4,017	65	B1-U0-G1	4,202	68	B1-U0-G1	4,434	72	B3-U0-G1	4,292	70	B3-U0-G1
	ECF-S-64L-600-AM-G2-x	64	600	596	94	4,805	51	B1-U0-G1	4,701	50	B1-U0-G1	4,918	52	B1-U0-G2	5,190	55	B3-U0-G1	5,023	54	B3-U0-G1

Shielded	Ordering Code	Total LEDs	LED Current (mA)	Dominant Wavelength (nm)	Average System Watts	2-FWC		3-FWC		4-FWC		5-FWC		5W-FWC	
						Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)
	ECF-S-32L-400-AM-G2-x	32	400	596	32	680	22	665	21	696	22	734	23	710	22
	ECF-S-32L-600-AM-G2-x	32	600	596	48	795	16	778	16	814	17	859	18	831	17
	ECF-S-48L-400-AM-G2-x	48	400	596	48	1,013	21	991	21	1,037	22	1,094	23	1,059	22
	ECF-S-48L-600-AM-G2-x	48	600	596	73	1,186	16	1,160	16	1,213	17	1,281	18	1,239	17
	ECF-S-64L-400-AM-G2-x	64	400	596	62	1,334	22	1,305	21	1,365	22	1,441	23	1,394	23
	ECF-S-64L-600-AM-G2-x	64	600	596	94	1,561	17	1,527	16	1,598	17	1,686	18	1,632	17

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

NOTE: Some data may be scaled based on tests of similar (but not identical) luminaires. Contact factory for configurations not shown.

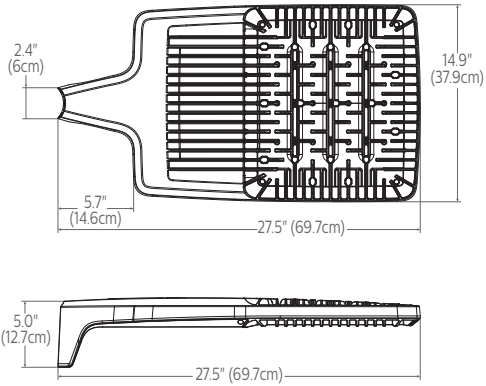
# ECF-S EcoForm wildlife

## Site & Area

### Dimensions

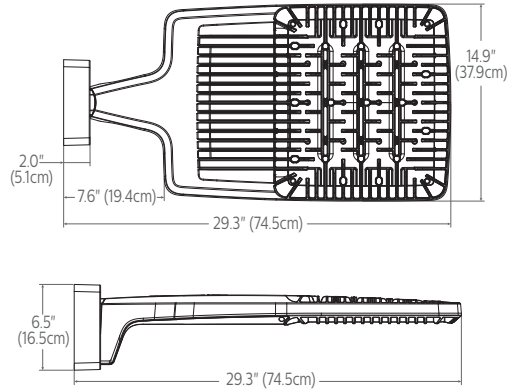
#### Standard Arm (AR)

Weight: 22 Lbs (9.9 Kg) EPA: 0.21ft<sup>2</sup> (.019m<sup>2</sup>)



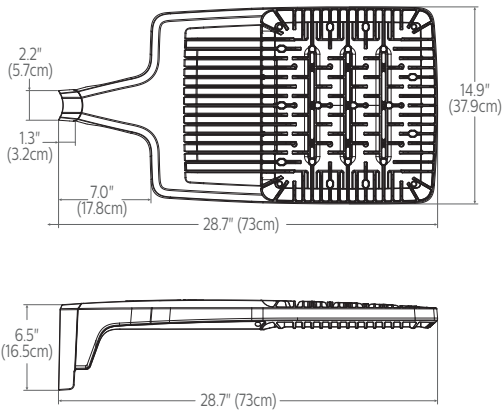
#### Wall (WS)

Weight: 27 Lbs. (12. 2Kg)EPA: 0.27ft<sup>2</sup> (.025m<sup>2</sup>)



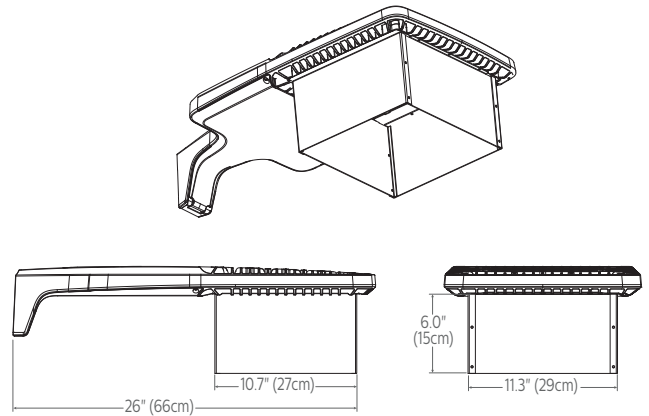
#### Retrofit Arm (RAM)

Weight: 24 Lbs (10.9 Kg) EPA: 0.24ft<sup>2</sup> (.022m<sup>2</sup>)

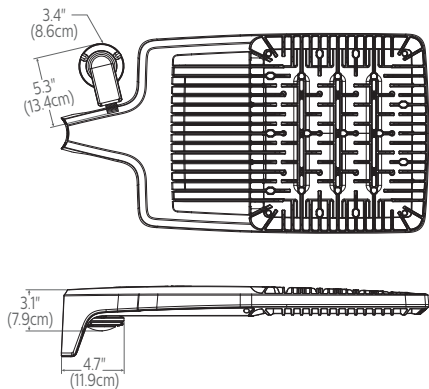


#### Wildlife Friendly External House side shield (FWC)

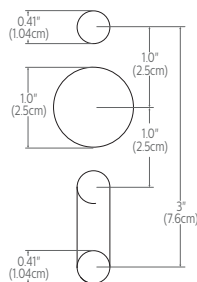
Weight: 23 Lbs (10.4 Kg) EPA: 1.0ft<sup>2</sup> (.093m<sup>2</sup>)



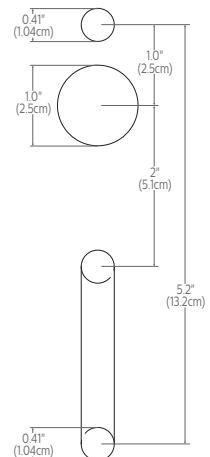
#### Outboard IMR-HVU sensor



#### Standard Arm (AR) drill pattern



#### Retrofit Arm (RAM) drill pattern



# ECF-S EcoForm wildlife

## Site & Area

### Specifications

#### Housing

One piece die cast aluminum housing with integral arm and separate, self retained hinged, one piece die cast door frame.

#### IP Rating

LED light engine rated IP66. Driver compartment rated to IP65.

#### Vibration resistance

Luminaire is tested and rated 3G over 100,000 cycles conforming to standards set forth by ANSI C136.31-2010. Testing includes vibration in three axes, all performed on the same luminaire.

#### Light Engine

Light engine comprises of a module of 16-LED aluminum metal clad board fully sealed with optics offered in multiples of 2, 3 and 4 modules or 32, 48 and 64 LEDs. Module is RoHS compliant. Direct Amber LED is narrow spectrum with dominant wavelength at 596 nm (peak wavelength at 601 nm). LED light engine is rated IP66 in accordance to Section 9 of IEC 60598-1.

#### LED Thermal management

The housing design allows the one piece housing to provide excellent thermal management critical to long LED system life.

#### Optical systems

Type 2, 3, 4, 5 and 5W.

#### Mounting

Standard luminaire arm mounts to 4" round poles. Can also be used with 5" O.D. poles. Square pole adapter included with every luminaire. Round Pole Adapter (RPA) required for 3-3.9" poles.

#### Control options

**0-10V dimming (DD):** Access to 0-10V dimming leads supplied through back of luminaire (for secondary dimming controls by others). Cannot be used with other control options.

**Field Adjustable Wattage Selector (FAWS):** Luminaire equipped with the ability to manually adjust the wattage in the field to reduce total luminaire lumen output and light levels. Comes pre-set to the highest position at the lumen output selected. Use chart below to estimate reduction in lumen output desired. Cannot be used with other control options or motion response.

FAWS Position	Percent of Typical Lumen Output
1	25%
2	50%
3	55%
4	65%
5	75%
6	80%
7	85%
8	90%
9	95%
10	100%

**Note:** Typical value accuracy +/- 5%

**Automatic Profile Dimming (CS/CM/CE/CA):** Standard dimming profiles provide flexibility towards energy savings goals while optimizing light levels during specific dark hours. Dimming profiles include two dimming settings including dim to 30% or 50% of the total lumen output. When used in combination with not programmed motion response it overrides the controller's schedule when motion is detected. After 5 minutes with no motion, it will return to the automatic dimming profile schedule. Automatic dimming profile scheduled with the following settings:

- **CS50/CS30:** Security for 7 hours night duration (Ex., 11 PM - 6 AM)
- **CM50/CM30:** Median for 8 hours night duration (Ex., 10 PM - 6 AM)

All above profiles are calculated from mid point of the night. Dimming is set for 6 hours after the mid point and 1 or 2 hours before depending of the duration of dimming. Cannot be used with other dimming control options.

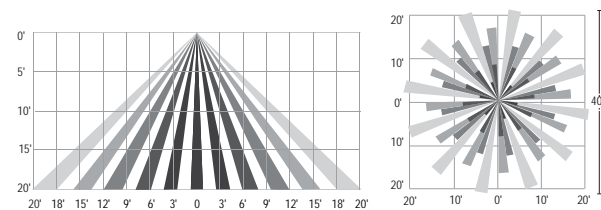
#### Motion response options

**Bi-Level Infrared Motion Response (BL-IMRI):** Motion Response module is mounted integral to luminaire factory pre-programmed to 50% dimming when not ordered with other control options. BL-IMRI is set/operates in the following fashion: The motion sensor is set to a constant 50%. When motion is detected by the PIR sensor, the luminaire returns to full power/light output. Dimming on low is factory set to 50% with 5 minutes default in "full power" prior to dimming back to low. When no motion is detected for 5 minutes, the motion response system reduces the wattage by 50%, to 50% of the normal constant wattage reducing the light level. Other dimming settings can be provided if different dimming levels are required. This can also be done with FSIR-100 Wireless Remote Programming Tool (contact Technical Support for details).

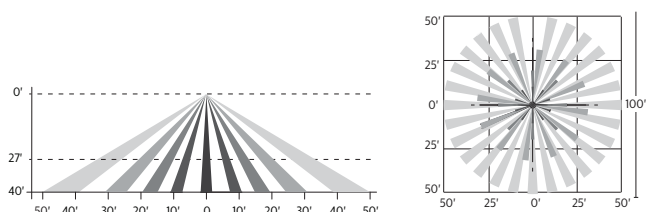
**Infrared Motion Response with Other Controls:** When used in combination with other controls (Automatic Dimming Profile), motion response device will simply override controller's schedule with the added benefits of a combined dimming profile and sensor detection. In this configuration, the motion response device cannot be re-programmed with FSIR-100 Wireless Remote Programming Tool. The profile can only be re-programmed via the controller.

**Infrared Motion Response Lenses (IMRI3/IMRI7):** Infrared Motion Response Integral module is available with two different sensor lens types to accommodate various mounting heights and occupancy detection ranges. Lens #3 (IMRI3) is designed for mounting heights up to 20' with a 40' diameter coverage area. Lens #7 is designed for higher mounting heights up to 40' with larger coverage areas up to 100' diameter coverage area. See charts for approximate detection patterns:

IMRI3 Luminaire or remote mount controller with #3 lens



IMRI7 Luminaire or remote mount controller with #7 lens



# ECF-S EcoForm wildlife

## Site & Area

### Specifications (continued)

#### Electrical

**Twist-Lock Receptacle (TLRD5/TLRD7/ TLRPC):** Twist Lock Receptacle with 5 pins enabling dimming or with 7 pins with additional functionality (by others) can be used with a twist-lock photoelectric cell or a shorting cap. Dimming Receptacle Type B (5-pin) and Type D-24 (7-pin) in accordance to ANSI C136.41. Can be used with third-party control system. Receptacle located on top of luminaire housing. When specifying receptacle with twistlock photoelectric cell, voltage must be specified. When ordering Twist-lock receptacle (TLRD5 or TLRD7), photocell or shorting cap is not included. TLRPC is shipped standard with 5 pin.

**Driver:** Driver efficiency (>90% standard). 120-480V available (restrictions apply). Open/short circuit protection. Optional 0-10V dimming to 10% power. RoHS compliant.

**Button Photocontrol (PCB):** Button style design for internal luminaires mounting applications. The photocontrol is constructed of a high impact UV stabilized polycarbonate housing. Rated voltage of 120V or 208-277V with a load rating of 1000 VA. The photocell will turn on with 1-4Fc of ambient light.

**Surge protection (SP1/SP2):** Surge protection device tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and NeutralGround, and in accordance with DOE MSSLC Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High test level 10kV/10kA. 20kV / 10kA surge protection device that provides extra protection beyond the SP1 10kV/10kA level.

#### Retrofit Arm Mount

EcoForm features an innovative retrofit arm kit. When specified with the retrofit arm (**RAM**) option, EcoForm seamlessly simplifies site conversions to LED by eliminating the need for additional pole drilling on most existing poles. RAM will be boxed separately.

#### Listings

UL/cUL listed to the UL 1598 standard, suitable for Wet Locations. Suitable for use in ambients from -40° to 40°C (-40° to 104°F). The quality systems of this facility have been registered by UL to the ISO 9001 series standards. Florida Wildlife Certified.

#### Finish

Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (**TGIC**) textured polyester powdercoat finish. Standard colors include bronze (**BZ**), black (**BK**), white (**WH**), dark gray (**DGY**), and medium gray (**MGY**). Consult factory for specs on optional or custom colors.

#### Warranty

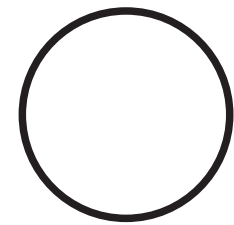
EcoForm luminaires feature a 5 year limited warranty. See [signify.com/warranties](http://signify.com/warranties) for complete details and exclusions.

### Buy American Act of 1933 (BAA):

This product is manufactured in one of our US factories and, as of the date of this document, this product was considered a commercially available off-the-shelf (COTS) item meeting the requirements of the BAA. This BAA designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies. Prior to ordering, please visit [www.signify.com/baa](http://www.signify.com/baa) to view a current list of BAA-compliant products to confirm this product's current compliance.







The Gardco TRA Tapered Round Aluminum pole consists of a one-piece design fabricated aluminum tubing circumferentially welded to a structural quality hot rolled carbon steel plate. The poles are finished with either Architectural Class 1 anodizing or electrostatically applied TGIC polyester powdercoat.

Project: Woods Hollow Campground  
 Location: Town of Mayfield, NY  
 Cat.No:  
 Type:  
 Notes: 8-ft height pole for S1-10:  
 pole-mounted LED light fixture

### Ordering Guide

example: TRA-CB-16L-D2-BRP

Prefix	Base	Height	Wind Factor	Drilling <sup>1</sup>	Finish	Options
TRA	CB	8	-	D1	BRP	
TRA	CB	8	-	D1	BRP	DR Duplex Receptacle GFCI Ground Fault Receptacle VDA Vibration Dampener AHH Additional Hand Hole  For DR, GFCI, and AHH options indicate height above base and orientation to original hand hole. See Pole Orientation Information on Page 5.  <b>Nipples and Couplings</b> CL1/2 Coupling - Internal Thread 1/2" CL3/4 Coupling - Internal Thread 3/4" CL1 Coupling - Internal Thread 1" CL1-1/4 Coupling - Internal Thread 1-1/4" CL1-1/2 Coupling - Internal Thread 1-1/2" NL1/2 Nipple - External Thread 1/2" NL3/4 Nipple - External Thread 3/4" NL1 Nipple - External Thread 1" NL1-1/4 Nipple - External Thread 1-1/4" NL1-1/2 Nipple - External Thread 1-1/2"  Indicate height above base and orientation to hand hole. See Pole Orientation Information on Page 5.  <b>Single Mount Bullhorn Brackets</b> A15BH-19 Single - 1.9" OD <sup>2</sup> A15BH-24 Single - 2.4" OD A215BH-19 2-Tenon - 1.9" OD <sup>2</sup> A215BH-24 2-Tenon - 2.4" OD  Indicate height above base and orientation to hand hole. See Pole Orientation Information on Page 4.  Additional and alternative brackets and accessories available. Refer to the Signify product catalog (eCat) website for more information.
		10	-	D2	BLP	
		12	L	D2@90	WP	
		14		D3	MGY	
		16		D3@120	DGY	
		25		D4	BRA	
		28		T2	BLA	
		30		T3	NA	
		35		T4	OC	
				P	SC	
		12	M			
		14				
		16				
		20				
		20	H			
		25				
		28				
		30				
		35				
		39				

1. Standard poles are drilled in factory for compatibility with Signify luminaires only (D\* options). For non-Signify-brand luminaires, select the P drilling option.  
 2. For Gardco DFL7/DFC7 only

### Anchor Bolts for Gardco TRA Poles<sup>3</sup> (ordered separately)

	Pole Type	12NC for ordering	Description (in inches)
For Pre-ship service (Order 4 per pole)	8 to 25L	912400215786	0.75 x 18 x 3.75
	25H to 39H	912400215784	1 x 36 x 4.5
For shipment with the pole (Order 1 per pole)	8 to 25L	912400207384	0.75 x 18 x 3.75
	25H to 39H	912400200208	1 x 36 x 4.5

3. Consult Signify to confirm whether specific accessories are BAA-compliant.

# Poles Tapered Round Aluminum (Cast Base)

## Pole Data

Product Catalog Number	Pole Specs				Anchor Bolt Data <sup>2</sup>		
	Height (ft)	Pole Diameter (inches)	Wall Thickness (inches)	Structure Weight (lbs)	Bolt Circle (inches)	Bolt Size (inches)	Max Proj. (inches)
TRA-CB-8	7' 8"	3 x 4	0.125	17	7.50 (+/- 0.75)	0.75 x 18 x 3.75	3.25
TRA-CB-10	9' 8"	3 x 4	0.125	20	7.50 (+/- 0.75)	0.75 x 18 x 3.75	3.25
TRA-CB-12L	11' 8"	3 x 4	0.125	23	7.50 (+/- 0.75)	0.75 x 18 x 3.75	3.25
TRA-CB-12M	11' 8"	3 x 5	0.125	26	8.63 (+/- 0.88)	0.75 x 18 x 3.75	3.25
TRA-CB-14L	13' 8"	3 x 4	0.125	27	7.50 (+/- 0.75)	0.75 x 18 x 3.75	3.25
TRA-CB-14M	13' 8"	3 x 5	0.125	31	8.63 (+/- 0.88)	0.75 x 18 x 3.75	3.25
TRA-CB-16L	15' 8"	3 x 5	0.125	30	8.63 (+/- 0.88)	0.75 x 18 x 3.75	3.25
TRA-CB-16M	15' 8"	3 x 5	0.188	35	8.63 (+/- 0.88)	0.75 x 18 x 3.75	3.25
TRA-CB-20M	19' 8"	3 x 5	0.156	51	8.63 (+/- 0.88)	0.75 x 18 x 3.75	3.25
TRA-CB-20H	19' 8"	3 x 5	0.188	60	8.63 (+/- 0.88)	0.75 x 18 x 3.75	3.25
TRA-CB-25L <sup>3</sup>	24' 8"	4 x 6	0.156	74	8.63 (+/- 0.88)	0.75 x 18 x 3.75	3.50
TRA-CB-25H	24' 8"	4 x 7	0.156	85	9.50 (+/- 0.75)	1 x 36 x 4.5	4.13
TRA-CB-28L <sup>3</sup>	27' 8"	4 x 7	0.156	92	10.56 (+/- 0.43)	1 x 36 x 4.5	4.13
TRA-CB-28H	27' 8"	4.5 x 8	0.188	124	10.56 (+/- 0.43)	1 x 36 x 4.5	4.13
TRA-CB-30L <sup>3</sup>	29' 8"	4 x 7	0.156	99	11.63 (+/- 0.37)	1 x 36 x 4.5	4.13
TRA-CB-30H	29' 8"	4.5 x 8	0.188	134	10.56 (+/- 0.43)	1 x 36 x 4.5	4.13
TRA-CB-35L <sup>3</sup>	34' 8"	4.5 x 8	0.156	133	11.63 (+/- 0.37)	1 x 36 x 4.5	4.13
TRA-CB-35H	34' 8"	4.5 x 8	0.25	205	11.63 (+/- 0.37)	1 x 36 x 4.5	4.13
TRA-CB-39L <sup>3</sup>	38' 8"	4.5 x 8	0.188	179	11.63 (+/- 0.37)	1 x 36 x 4.5	4.13
TRA-CB-39H	38' 8"	6 x 10	0.188	232	14.25 (+/- 0.75)	1 x 36 x 4.5	4.75

- Warning:** Additional wind loading, in terms of EPA, from banners, cameras, floodlights and other accessories attached to the pole, must be added to the luminaire(s) EPA before selecting the pole with the appropriate wind load capability.
- Factory supplied template must be used when setting anchor bolts. Gardco will not honor any claim for incorrect anchorage placement resulting from failure to use factory supplied templates.
- Includes (VDA) Vibration Dampener standard.

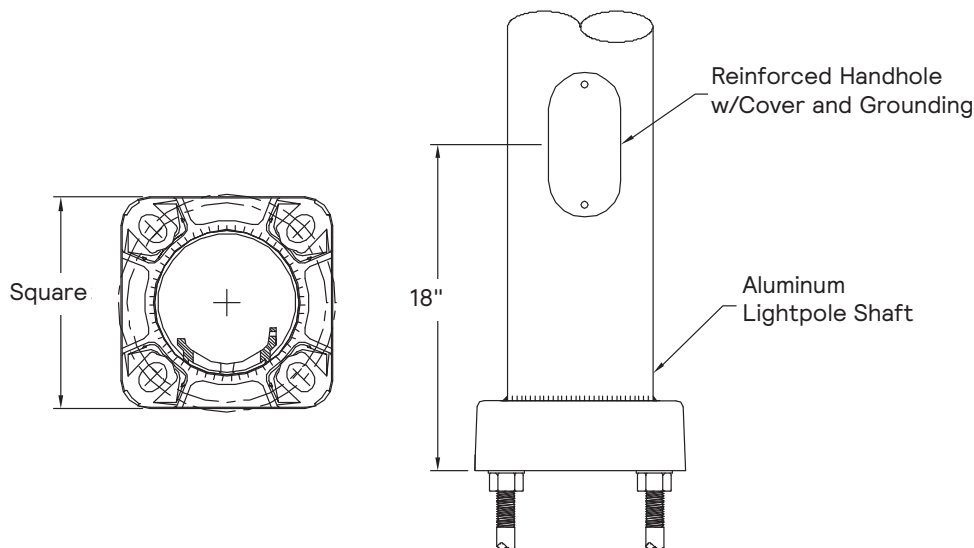
# Poles Tapered Round Aluminum (Cast Base)

## Pole Data

Catalog Number	Maximum Luminaire Loading <sup>1</sup>							
	High Wind Conditions		Normal Wind Conditions					
	110 MPH		100 MPH		90 MPH		80 MPH	
Prefix	EPA ft <sup>2</sup>	Max Weight (lbs)	EPA ft <sup>2</sup>	Max Weight (lbs)	EPA ft <sup>2</sup>	Max Weight (lbs)	EPA ft <sup>2</sup>	Max Weight (lbs)
TRA-CB-8	4.1	75	5.1	75	6.5	75	8.5	75
TRA-CB-10	2.9	75	3.7	75	4.8	75	6.4	75
TRA-CB-12L	1.9	75	2.6	75	3.5	75	4.8	75
TRA-CB-12M	4.6	75	5.8	75	7.4	75	9.8	75
TRA-CB-14L	1.1	75	1.6	75	2.4	75	3.5	75
TRA-CB-14M	3.4	75	4.4	75	5.8	75	7.8	75
TRA-CB-16L	0.4	75	0.8	75	1.5	75	2.4	75
TRA-CB-16M	2.4	75	3.2	75	4.3	75	6.0	75
TRA-CB-20M	1.5	100	2.2	100	3.2	100	4.7	100
TRA-CB-20H	2.3	100	3.1	100	4.3	100	6.1	100
TRA-CB-25L <sup>3</sup>	1.9	100	2.5	100	3.5	100	5.1	100
TRA-CB-25H	4.2	150	5.3	150	7.0	150	9.6	150
TRA-CB-28L <sup>3</sup>	2.8	150	3.7	150	5.0	150	7.1	150
TRA-CB-28H	6.8	150	8.5	150	10.8	150	14.3	150
TRA-CB-30L <sup>3</sup>	2.0	150	2.7	150	3.8	150	5.7	150
TRA-CB-30H	5.6	150	7.1	150	9.2	150	12.2	150
TRA-CB-35L <sup>3</sup>	2.1	150	2.9	150	4.0	150	5.7	150
TRA-CB-35H	5.8	150	7.3	150	9.5	150	12.7	150
TRA-CB-39L <sup>3</sup>	1.9	150	2.8	150	3.9	150	5.6	150
TRA-CB-39H	5.8	200	7.7	200	10.2	200	13.6	200

- Warning:** Additional wind loading, in terms of EPA, from banners, cameras, floodlights and other accessories attached to the pole, must be added to the luminaire(s) EPA before selecting the pole with the appropriate wind load capability.
- Factory supplied template must be used when setting anchor bolts. Gardco will not honor any claim for incorrect anchorage placement resulting from failure to use factory supplied templates.
- Includes (VDA) Vibration Dampener standard.

## Dimensions



**NOTE:** Factory supplied template must be used when setting anchor bolts. Gardco will not honor any claim for incorrect anchorage placement from failure to use factory supplied templates.

# Poles Tapered Round Aluminum (Cast Base)

## Specifications

All aluminum alloys shall comply with metalurgical and mechanical properties set forth in the Aluminum Association Standards.

### POLE SHAFT

The pole shaft shall be spun tapered from all new seamless 6063 alloy aluminum and shall be heat treated to produce a T6 temper. Each shaft shall have a minimum 6" long straight section at the top to accommodate drilling and/or Gardco floodlight and bullhorn brackets. Shafts are polished with fine grain aluminum oxide cloths, resulting in a high quality, circumferential satin brushed finish. After finishing, each pole shall be fully wrapped with neutral PH krinkle/kraft paper for protection in shipment.

### ANCHOR BASE

The anchor base (base plate) is cast from A356 alloy aluminum. The anchor base casting and shaft shall be joined by a continuous circumferential weld at the inside bottom of the anchor base. The completed assembly will be heat treated to T6 temper after all structural welding is completed. The 1100-0 alloy collars are spun from heavy duty .125" stock, making them damage and vandal resistant.

### ANCHOR BOLTS

Anchor bolts are fabricated from a commercial quality hot rolled carbon steel bar with a minimum yield strength of 55,000 PSI. Bolts have an "L" bend on one end and threaded on the opposite end. Anchor bolts are hot dipped galvanized a minimum length of 12" on the threaded end. Four (4) properly sized bolts, each furnished with two (2) regular hex nuts and two (2) flat washers, are provided per pole (priced separately), unless otherwise specified.

### HAND HOLE

Each hand hole includes an easy to install, self-contained Swing Latch hand hole cover assembly. U.S. Patent Swing Latch cover is fabricated from durable polycarbonate/ABS blend plastic. All poles include a peripherally reinforced flush covered handhole centered 18" above the bottom of the pole. The opening in the 4" diameter pole shall measure 2 3/8" X 4 1/2". The opening in the 5" and 6" diameter pole shall measure 3" X 5". The opening in the 7", 8" and 10" diameter pole shall measure 4" X 6". Hand hole dimensions are nominal.

### DRILLING

Standard poles are drilled in factory for compatibility with Signify luminaires, optional brackets, and accessories. Signify is not liable for damage caused by unauthorized attachments, alterations, or modifications.

If luminaires are to be supplied by others, Signify/Gardco/Stonco is not responsible for pole compatibility with luminaires, structural integrity of the pole or wind load requirements.

### FINISH

Poles are available with Association Architectural Class 1 anodized finish. Electrostatically applied, thermally cured TGIC polyester powdercoat finish or liquid polyurethane is also available.

### POLE TOP CAP

Each pole assembly is provided with a removable plastic top push cap. Finish is Black.

### DESIGN

The charted weights include luminaire(s) and/or mounting bracket(s) and are based on an approximate weight to EPA ratio of 25 pounds per square foot. The wind velocities are based on 10 mph increments from 80 mph through 110 mph. Poles to be located in areas of known abnormal conditions may require special consideration.

For example: coastal areas, airports and areas of special winds.

Poles are designed for ground-mounted applications. Poles mounted on structures (such as buildings and bridges) may also necessitate special consideration requiring Gardco's recommendation. Height correction factors and drag coefficients are applied to the entire structure. An appropriate safety factor is maintained based on the minimum yield strength of the material incorporated in the pole. Mounting height is the vertical distance from the base of the pole to the center of the luminaire arm at the point of luminaire attachment. For loadings other than those covered in the design section, such as overhead wiring, guying of the poles or other field installed attachments, consult the factory for recommendations. PE digitally stamped pole calculations are available on Gardco Site and Area poles upon request for an additional charge. Detailed project and installation information is required to fulfill this service. For more information, consult the factory.

### WARNING

This design information is intended as a general guideline only. The customer is solely responsible for proper selection of pole, luminaire, accessory and foundation under the given site conditions and intended usage. The addition of any items to the pole, in addition to the luminaire, will dramatically impact the EPA load on that pole. It is strongly recommended that a qualified professional be consulted to analyze the loads given the user's specific needs to ensure proper selection of the pole, luminaire, accessories, and foundation. Gardco assumes no responsibility for such proper analysis or product selections. Failure to insure proper site analysis, pole selection, loads and installation can result in pole failure, leading to serious injury or property damage.

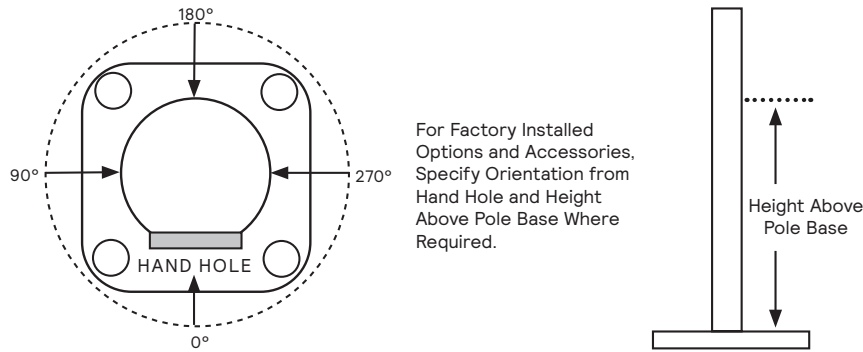
### WARRANTY

Gardco poles feature a 1 year limited warranty. See Warranty Information on [www.signify.com/warranties](http://www.signify.com/warranties) for complete details and exclusions.

# Poles Straight Square Steel

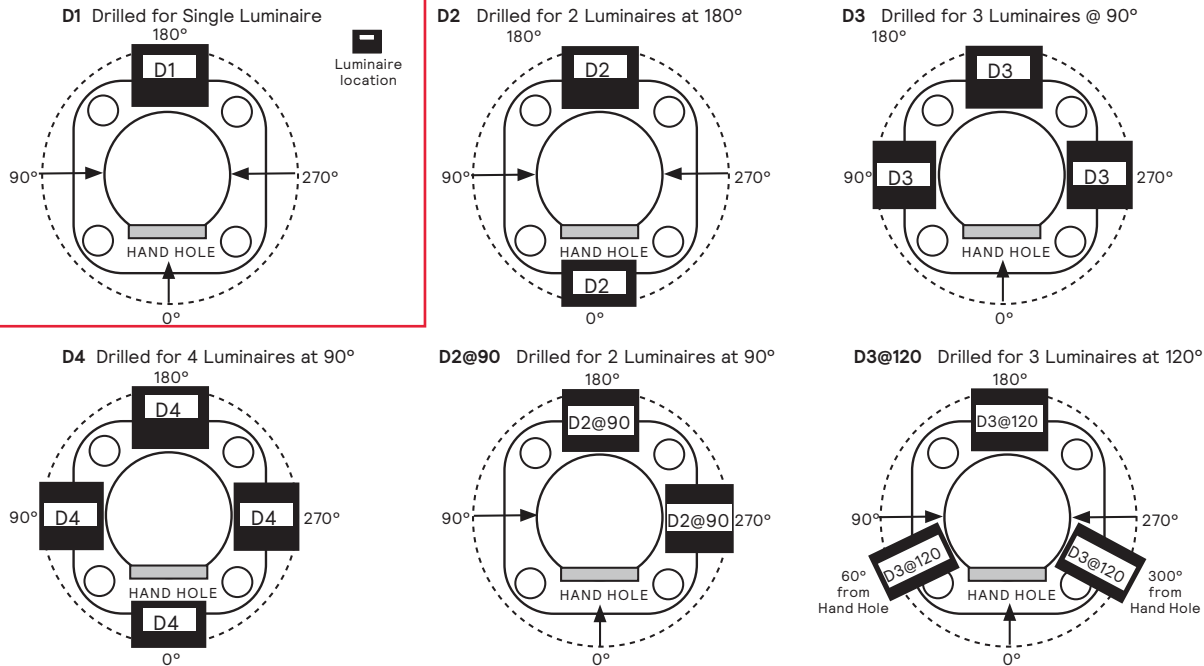
## Orientation Information

Factory installed options and accessories



Orientation is measured clockwise from the Hand Hole Center.

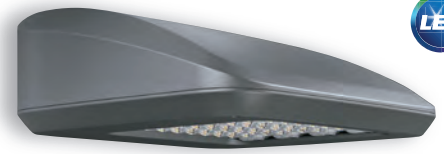
### Standard arm mount luminaire orientation



### Buy American Act of 1933 (BAA):

This product is manufactured in one of our US factories and, as of the date of this document, this product was considered a commercially available off-the-shelf (COTS) item meeting the requirements of the BAA. This BAA designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies. Prior to ordering, please visit [www.signify.com/baa](http://www.signify.com/baa) to view a current list of BAA-compliant products to confirm this product's current compliance.





**Gardco PureForm LED wall sconce PWS** features narrow spectrum amber LEDs combined with special shielding, making it a wildlife friendly lighting solution. Multiple distribution and shielding options are available to achieve maximum control. A full range of control options provides additional energy savings.

Project: Woods Hollow Campground  
 Location: Town of Mayfield, NY  
 Cat.No:  
 Type:  
 Lamps: Qty:

Notes: W1-10 and W1-8: Wall mount LED light fixture(s); mounting 10-ft ht and 8-ft ht

Ordering guide

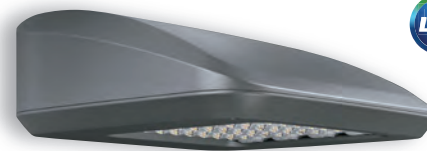
example: PWS-48L-500-AM-G2-2-UNV-FWC-DGY

Prefix	Number of LEDs	Drive Current	LED Color - Generation	Distribution	Voltage	Options				Finish
						Dimming controls	Motion-sensing lens	Photo-sensing	Electrical & Shield	
<b>PWS</b>	<b>48L</b>	<b>600mA</b>	<b>AM-G2</b>	<b>4</b>	<b>UNV</b>	<b>CE50</b>	<b>IMRI2</b>	<b>PCB</b>	<b>F1</b>	<b>BZ</b>
PWS Pure-Form wall sconce	48L 48 LEDs	400 400mA  600 600mA	AM-G2 Direct Amber (590nm) Generation 2 <sup>2</sup>	2 Type 2  3 Type 3  4 Type 4	UNV 120-277V  HVV 347-480V  120 120V  208 208V  240 240V  277 277V  347 347V  480 480V	DD 0-10V External dimming (controls by others) <sup>4</sup> DCC Dual Circuit Control <sup>4,5,6,9</sup> FAWS Field Adjustable Wattage Selector <sup>4,5</sup> SW Interface Module for SiteWise <sup>3,4,6</sup> BL Bi-level functionality <sup>4,10</sup>  DynaDimmer: Automatic Profile Dimming <sup>4,7</sup> CS50 Security 50% Dimming, 7 hours CM50 Median 50% Dimming, 8 hours CE50 Economy 50% Dimming, 9 hours DA50 All Night 50% Dimming  CS30 Security 30% Dimming, 7 hours CM30 Median 30% Dimming, 8 hours CE30 Economy 30% Dimming, 9 hours DA30 All Night 30% Dimming	IMRI2 <sup>11</sup> Integral with #2 lens  IMRI3 <sup>11</sup> Integral with #3 lens	PCB Photocontrol Button <sup>7,8,32</sup>	Fusing F1 Single (120, 277, 347VAC) <sup>8</sup>  F2 Double (208, 240, 480VAC) <sup>8</sup>  F3 Canadian Double Pull (208, 240, 480VAC) <sup>8</sup>  Surge Protection (10kA is standard) SP2 Increased 20kA FWC Wildlife Friendly External House side shield <sup>1</sup>	Textured BK Black WH White BZ Bronze DGY Dark Gray MGY Medium Gray  Customer specified RAL Specify optional color or RAL (ex: RAL7024) CC Custom color (Must supply color chip for required factory quote)

- 1. External shield shipped with luminaire.
- 2. Extended lead times apply. Contact factory for details.
- 3. Available only in 120 or 277V.
- 4. Not available with other dimming control options.
- 5. Not available with motion sensor.
- 6. Not available with photocontrol.
- 7. Not available in 347 or 480V.
- 8. Must specify input voltage.
- 9. Not available with 64L.
- 10. Must specify a motion sensor lens.
- 11. Not available with DD, DCC, and FAWS dimming control options.







**Gardco PureForm LED wall sconce PWS** features narrow spectrum amber LEDs combined with special shielding, making it a wildlife friendly lighting solution. Multiple distribution and shielding options are available to achieve maximum control. A full range of control options provides additional energy savings.

Project: Woods Hollow Campground  
 Location: Town of Mayfield, NY  
 Cat.No:  
 Type:  
 Lamps: Qty:  
 Notes: **W2: Wall mount LED light fixture; mounting 8-ft ht**

Ordering guide

example: PWS-48L-500-AM-G2-2-UNV-FWC-DGY

Prefix	Number of LEDs	Drive Current	LED Color - Generation	Distribution	Voltage	Options				Finish
						Dimming controls	Motion-sensing lens	Photo-sensing	Electrical & Shield	
<b>PWS</b>	<b>48L</b>	<b>600mA</b>	<b>AM-G2</b>	<b>2</b>	<b>UNV</b>	<b>CE50</b>	<b>IMRI2</b>	<b>PCB</b>	<b>F1</b>	<b>BZ</b>
PWS Pure-Form wall sconce	48L 48 LEDs	400 400mA  600 600mA	AM-G2 Direct Amber (590nm) Generation 2 <sup>2</sup>	2 Type 2  3 Type 3  4 Type 4	UNV 120-277V  HVV 347-480V  120 120V  208 208V  240 240V  277 277V  347 347V  480 480V	DD 0-10V External dimming (controls by others) <sup>4</sup> DCC Dual Circuit Control <sup>4,5,6,9</sup> FAWS Field Adjustable Wattage Selector <sup>4,5</sup> SW Interface Module for SiteWise <sup>3,4,6</sup> BL Bi-level functionality <sup>4,10</sup>  DynaDimmer: Automatic Profile Dimming <sup>4,7</sup>  CS50 Security 50% Dimming, 7 hours CM50 Median 50% Dimming, 8 hours CE50 Economy 50% Dimming, 9 hours DA50 All Night 50% Dimming  CS30 Security 30% Dimming, 7 hours CM30 Median 30% Dimming, 8 hours CE30 Economy 30% Dimming, 9 hours DA30 All Night 30% Dimming	IMRI2 <sup>11</sup> Integral with #2 lens  IMRI3 <sup>11</sup> Integral with #3 lens	PCB Photocontrol Button <sup>7,8,32</sup>	Fusing F1 Single (120, 277, 347VAC) <sup>8</sup>  F2 Double (208, 240, 480VAC) <sup>8</sup>  F3 Canadian Double Pull (208, 240, 480VAC) <sup>8</sup>  Surge Protection (10kA is standard)  SP2 Increased 20kA  FWC Wildlife Friendly External House side shield <sup>1</sup>	Textured BK Black WH White BZ Bronze DGY Dark Gray MGY Medium Gray  Customer specified RAL Specify optional color or RAL (ex: RAL7024) CC Custom color (Must supply color chip for required factory quote)

- 1. External shield shipped with luminaire.
- 2. Extended lead times apply. Contact factory for details.
- 3. Available only in 120 or 277V.
- 4. Not available with other dimming control options.
- 5. Not available with motion sensor.
- 6. Not available with photocontrol.
- 7. Not available in 347 or 480V.
- 8. Must specify input voltage.
- 9. Not available with 64L.
- 10. Must specify a motion sensor lens.
- 11. Not available with DD, DCC, and FAWS dimming control options.



# PWS PureForm LED wall sconce

## wall mount

### Luminaire Accessories (order separately)

#### Mounting Accessories

##### Wall Mount

PWS-WS-G2 Wall Mounted Box for Surface Conduit Painted Black

#### System accessories

##### Wireless system remote mount module

LLCR2-(F) #2 lens - specify finish in place of (F)  
LLCR3-(F) #3 lens - specify finish in place of (F)

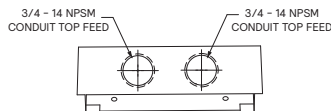
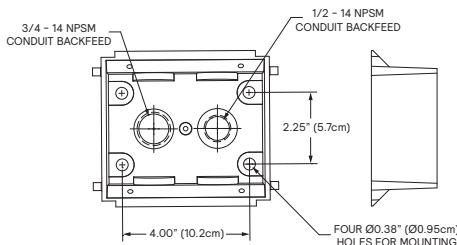
##### Central Remote Motion Response

(used connected to SiteWise main panel)

MS2-A-FVR-3  
MS2-A-FVR-7

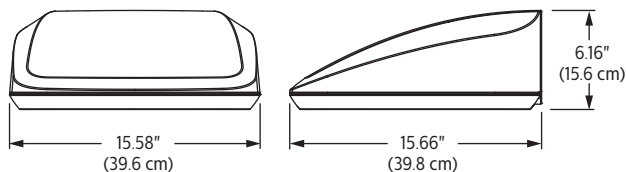
#### Wireless system remote controller accessory

Wireless system offers a remote radio/sensor module that allows connection to a Limelight system (sold by others). Remote module can be mounted to wall or pole with j-box supplied. May be specified by choosing one of two different lenses to accommodate a variety of mounting heights/sensor detection ranges. Must specify option DD on luminaires that are planned to be used with remote mount controllers.

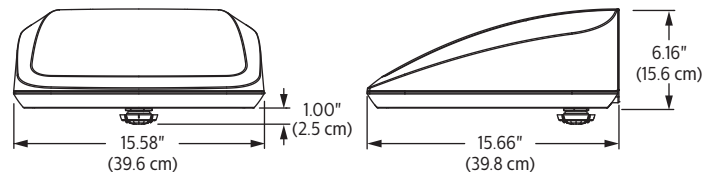


### Dimensions

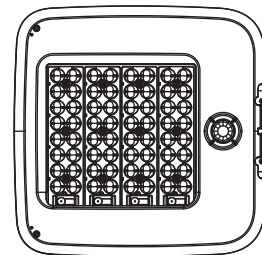
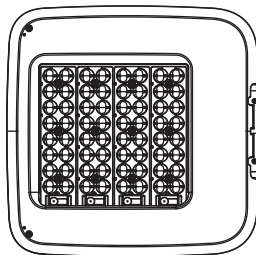
#### Standard Luminaire



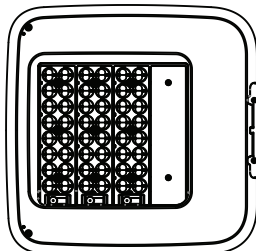
#### Motion Response and Wireless System



4 modules



3 modules



#### Luminaire Weights

PureForm LED wall sconce PWS Luminaire	Weight
	24 lbs

# PWS PureForm LED wall sconce

## wall mount

### LED Wattage and Lumen Values – Unshielded

Ordering Code	LED Qty	LED Current (mA)	Dominant Wavelength (nm)	Average System Wattage (W)	Type 2			Type 3			Type 4		
					Lumen Output	Efficacy (Lm/W)	BUG Rating	Lumen Output	Efficacy (Lm/W)	BUG Rating	Lumen Output	Efficacy (Lm/W)	BUG Rating
PWS-48L-400-AM-G2-x	48	400	596	48	2834	59	B1-U0-G1	2740	57	B1-U0-G1	2843	60	B1-U0-G1
PWS-48L-600-AM-G2-x	48	600	596	73	3316	46	B1-U0-G1	3207	44	B1-U0-G1	3327	46	B1-U0-G1
PWS-64L-600-AM-G2-x	64	600	596	94	4367	46	B1-U0-G1	4223	45	B1-U0-G1	4381	46	B1-U0-G1

### LED Wattage and Lumen Values – Shielded

Ordering Code	LED Qty	LED Current (mA)	Dominant Wavelength (nm)	Average System Wattage (W)	2-FWC			3-FWC			4-FWC		
					Lumen Output	Efficacy (Lm/W)	BUG Rating	Lumen Output	Efficacy (Lm/W)	BUG Rating	Lumen Output	Efficacy (Lm/W)	BUG Rating
PWS-48L-400-AM-G2-x	48	400	596	48	1094	23	B1-U0-G0	1058	22	B1-U0-G0	1098	23	B1-U0-G0
PWS-48L-600-AM-G2-x	48	600	596	73	1280	18	B1-U0-G0	1238	17	B1-U0-G0	1284	18	B1-U0-G0
PWS-64L-600-AM-G2-x	64	600	596	94	1686	18	B1-U0-G0	1630	17	B1-U0-G0	1691	18	B1-U0-G0

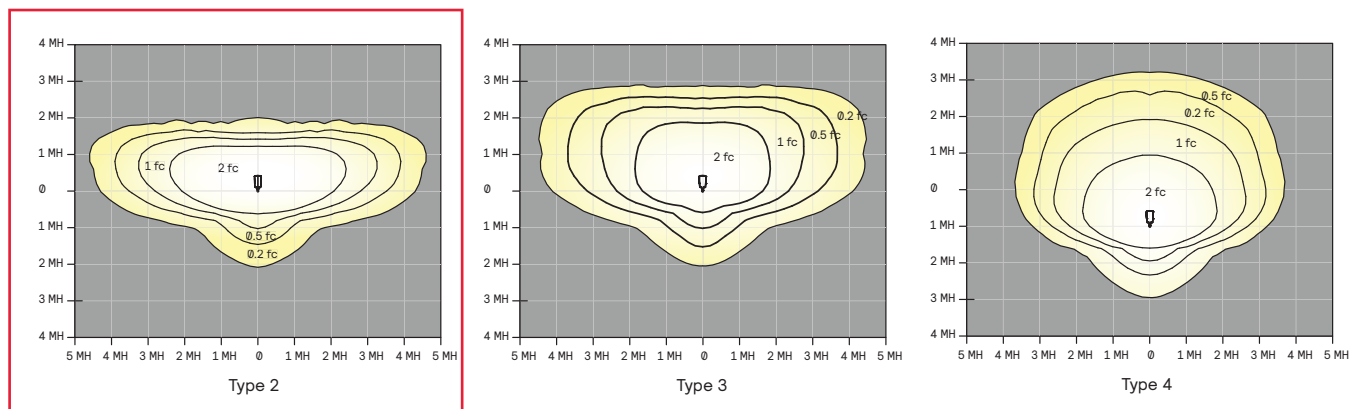
### Predicted Lumen Depreciation Data

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L<sub>70</sub> is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L<sub>70</sub> hours limited to 6 times actual LED test hours

Ambient Temperature °C	Drive current	Calculated L <sub>70</sub> Hours	L <sub>70</sub> per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	up to 600 mA	>100,000 hours	>60,000 hours	>88%

### Optical Distributions

Based on 20' mounting height



# PWS PureForm LED wall sconce

## wall mount

### Specifications

#### Housing

Main body housing and door frame made of low copper die cast aluminum alloy for a high resistance to corrosion. Door hinges secured by aircraft cable to allow access to driver or other electronic components for servicing. The door frame acts as the main heat transfer component and it is optimized to allowing the main housing to have no fins, giving the freedom to have a clean minimalist aesthetic design while allowing it to house emergency battery backup equipment and various other options. Luminaire housing rated to IP65, tested in accordance to Section 9 of IEC 60598-1.

#### Light engine

Light engine comprises of a module of 16-LED aluminum metal clad board fully sealed with optics offered in multiples of 3 and 4 modules or 48 and 64 LEDs. Module is RoHS compliant. Direct Amber LED is narrow spectrum with dominant wavelength at 596 nm (peak wavelength at 601 nm). Contact factory for details. LED light engine is rated IP66 in accordance to Section 9 of IEC 60598-1.

#### Optical systems

Type 2, 3, and 4 distributions available. Performance tested per LM-79 and TM-15 (IESNA) certifying its photometric performance. Luminaire designed with 0% uplight (U0 per IESNA TM-15).

#### Mounting

Mounting is completed through integral back plate that features a separate recessed feature for hook and lock quick mount plate that secures with two set screws from bottom of luminaire. Luminaire ships fully assembled, ready to install.

#### Control options

**0-10V dimming (DD):** Access to 0-10V dimming leads supplied through back of luminaire (for secondary dimming controls by others). Cannot be used with other control options.

**Field Adjustable Wattage Selector (FAWS):** Luminaire equipped with the ability to manually adjust the wattage in the field to reduce total luminaire lumen output and light levels. Comes pre-set to the highest position at the lumen output selected. Use chart below to estimate reduction in lumen output desired. Cannot be used with other control options or motion response.

FAWS Position	Percent of Typical Lumen Output
1	25%
2	50%
3	55%
4	65%
5	75%
6	80%
7	85%
8	90%
9	95%
10	100%

**Note:** Typical value accuracy +/- 5%

**SiteWise (SW):** SiteWise system includes a controller fully integrated in the luminaire that enables the luminaires to communicate with a dimming signal transmitter cabinet located on site using patented central dimming technology. A locally accessible mobile app allows users to access the system and set functionalities such as ON/OFF, dimming levels and scheduling. SiteWise is available with motion response options in order to bring the light back to 100% when motion is detected. Cannot be used with other control options or photocell options. Additional functionalities are available such as communication with indoor lighting and connection to BMS systems. Complete information on the control system can be found on the SiteWise website at [philips.com/sitewise](http://philips.com/sitewise).

**Automatic Profile Dimming (CS/CM/CE/CA):** Standard dimming profile of 30% or 50% provide flexibility towards energy savings goals while optimizing light levels during specific dark hours. When used in combination with not programmed motion response it overrides the controller's schedule when motion is detected. After 5 minutes with no motion, it will return to the automatic dimming profile schedule. Automatic dimming profile scheduled with the following settings:

- **CS50/CS30:** Security for 7 hours night duration (Ex., 11 PM - 6 AM)
- **CM50/CM30:** Median for 8 hours night duration (Ex., 10 PM - 6 AM)
- **CE50/CE30:** Economy for 9 hours night duration (Ex., 9 PM - 6 AM)
- **CA50/CA30:** for all night (during all dark hours)

All above profiles are calculated from mid point of the night. Dimming is set for 6 hours after the mid point and 1, 2, or 3 hours before depending of the duration of dimming. Cannot be used with other dimming control options.

# PWS PureForm LED wall sconce

## wall mount

### Specifications (cont'd)

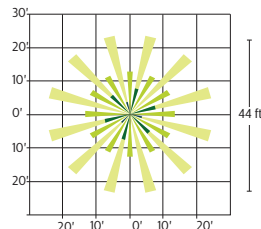
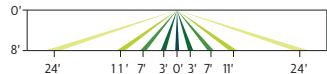
#### Motion response options

**Bi-Level Infrared Motion Response (BL-IMRI3):** Motion Response module is mounted integral to luminaire factory pre-programmed to 50% dimming when not ordered with other control options. BL-IMRI is set/operates in the following fashion: The motion sensor is set to a constant 50%. When motion is detected by the PIR sensor, the luminaire returns to full power/light output. Dimming on low is factory set to 50% with 5 minutes default in "full power" prior to dimming back to low. When no motion is detected for 5 minutes, the motion response system reduces the wattage by 50%, to 50% of the normal constant wattage reducing the light level. Other dimming settings can be provided if different dimming levels are required. This can also be done with FSIR-100 Wireless Remote Programming Tool (contact Technical Support for details).

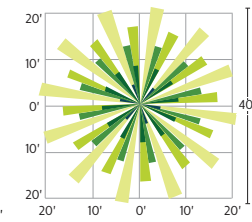
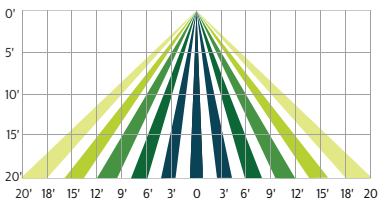
**Infrared Motion Response with Other Controls (SW-IMRI3):** When used in combination with other controls (Automatic Dimming Profile and SiteWise), motion response device will simply override controller's schedule with the added benefits of a combined dimming profile and sensor detection. In this configuration, the motion response device cannot be re-programmed with FSIR-100 Wireless Remote Programming Tool. The profile can only be re-programmed via the controller.

**Infrared Motion Response Lenses (IMRI2/IMRI3):** Infrared Motion Response Integral module is available with two different sensor lens types to accommodate various mounting heights and occupancy detection ranges. Lens #2 (IMRI2) is designed for lower mounting heights up to 8' with larger coverage areas up to 44' diameter coverage area. Lens #3 (IMRI3) is designed for mounting heights up to 20' with a 40' diameter coverage area. See charts for approximate detection patterns:

IMRI2 Luminaire or remote mount controller with #2 lens



IMRI3 Luminaire or remote mount controller with #3 lens



#### Electrical

**Driver:** Driver efficiency (>90% standard). 120-480V available (restrictions apply). Open/short circuit protection. Optional 0-10V dimming to 10% power. RoHS compliant.

**Button Photocontrol (PCB):** Button style design for internal luminaires mounting applications. The photocontrol is constructed of a high impact UV stabilized polycarbonate housing. Rated voltage of 120V or 208-277V with a load rating of 1000 VA. The photocell will turn on with 1-4Fc of ambient light.

**Surge protection (SP1/SP2):** Each luminaire is provided as standard with surge protector tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/5kA waveforms for Line Ground, Line Neutral and Neutral Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid-State Street Lighting Consortium) Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High Test Level 10kV / 5kA. Optional 20kV is available for additional protection.

#### Listings

UL/cUL listed to the UL 1598 standard, suitable for wet locations when mounted downward facing. Also listed for damp locations when inverted upward facing when mounted in covered ceiling application. Suitable for use in ambient temperatures from -40° to 40°C (-40° to 104°F). Florida Wildlife Certified.

#### Finish

Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidic isocyanurate (TGIC) textured polyester powdercoat finish. The surface treatment achieves a minimum of 1000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard. Standard colors include bronze (BZ), black (BK), white (WH), dark gray (DGY), and medium gray (MGY). Consult factory for specs on optional or custom colors.

#### Warranty

PureForm luminaires feature a 5-year limited warranty. See [signify.com/warranties](http://signify.com/warranties) for complete details and exclusions.



# PWS PureForm LED wall sconce

## wall mount

### Luminaire Accessories (order separately)

#### Mounting Accessories

##### Wall Mount

PWS-WS-G2 Wall Mounted Box for Surface Conduit Painted Black

#### System accessories

##### Wireless system remote mount module

LLCR2-(F) #2 lens - specify finish in place of (F)  
LLCR3-(F) #3 lens - specify finish in place of (F)

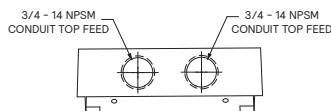
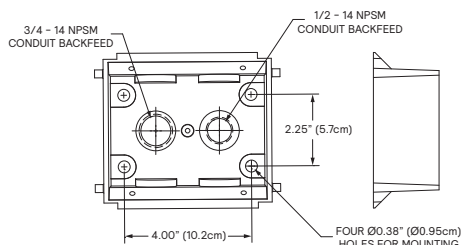
##### Central Remote Motion Response

(used connected to SiteWise main panel)

MS2-A-FVR-3  
MS2-A-FVR-7

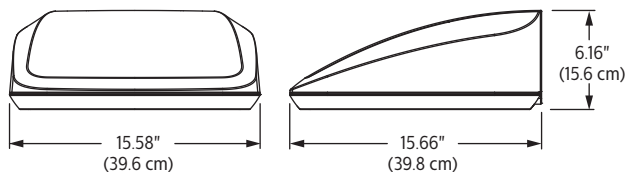
#### Wireless system remote controller accessory

Wireless system offers a remote radio/sensor module that allows connection to a Limelight system (sold by others). Remote module can be mounted to wall or pole with j-box supplied. May be specified by choosing one of two different lenses to accommodate a variety of mounting heights/sensor detection ranges. Must specify option DD on luminaires that are planned to be used with remote mount controllers.

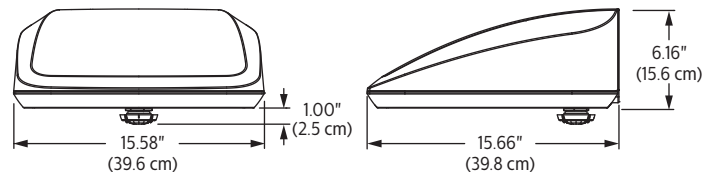


### Dimensions

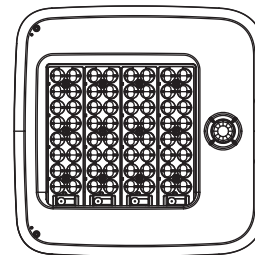
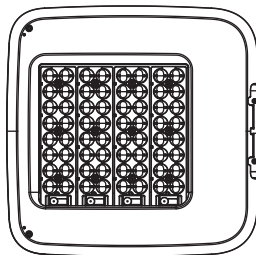
#### Standard Luminaire



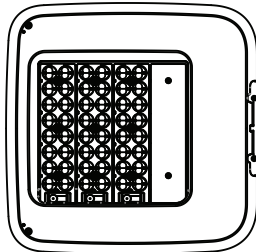
#### Motion Response and Wireless System



4 modules



3 modules



#### Luminaire Weights

PureForm LED wall sconce PWS Luminaire	Weight
	24 lbs



# PWS PureForm LED wall sconce

## wall mount

### LED Wattage and Lumen Values – Unshielded

Ordering Code	LED Qty	LED Current (mA)	Dominant Wavelength (nm)	Average System Wattage (W)	Type 2			Type 3			Type 4		
					Lumen Output	Efficacy (Lm/W)	BUG Rating	Lumen Output	Efficacy (Lm/W)	BUG Rating	Lumen Output	Efficacy (Lm/W)	BUG Rating
PWS-48L-400-AM-G2-x	48	400	596	48	2834	59	B1-U0-G1	2740	57	B1-U0-G1	2843	60	B1-U0-G1
PWS-48L-600-AM-G2-x	48	600	596	73	3316	46	B1-U0-G1	3207	44	B1-U0-G1	3327	46	B1-U0-G1
PWS-64L-600-AM-G2-x	64	600	596	94	4367	46	B1-U0-G1	4223	45	B1-U0-G1	4381	46	B1-U0-G1

### LED Wattage and Lumen Values – Shielded

Ordering Code	LED Qty	LED Current (mA)	Dominant Wavelength (nm)	Average System Wattage (W)	2-FWC			3-FWC			4-FWC		
					Lumen Output	Efficacy (Lm/W)	BUG Rating	Lumen Output	Efficacy (Lm/W)	BUG Rating	Lumen Output	Efficacy (Lm/W)	BUG Rating
PWS-48L-400-AM-G2-x	48	400	596	48	1094	23	B1-U0-G0	1058	22	B1-U0-G0	1098	23	B1-U0-G0
PWS-48L-600-AM-G2-x	48	600	596	73	1280	18	B1-U0-G0	1238	17	B1-U0-G0	1284	18	B1-U0-G0
PWS-64L-600-AM-G2-x	64	600	596	94	1686	18	B1-U0-G0	1630	17	B1-U0-G0	1691	18	B1-U0-G0

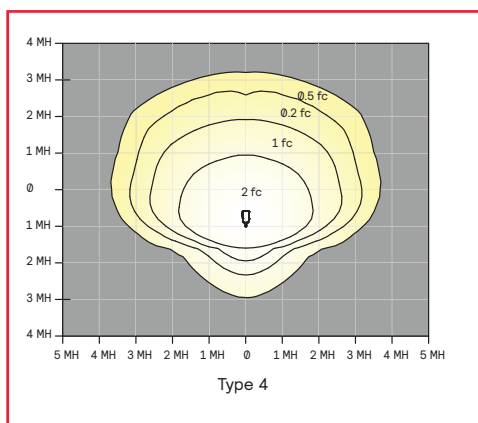
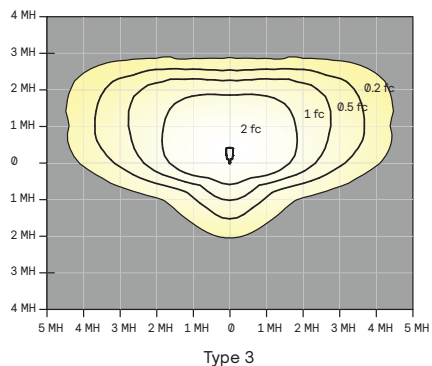
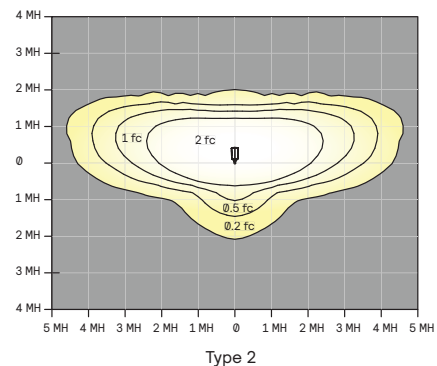
### Predicted Lumen Depreciation Data

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L<sub>70</sub> is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L<sub>70</sub> hours limited to 6 times actual LED test hours

Ambient Temperature °C	Drive current	Calculated L <sub>70</sub> Hours	L <sub>70</sub> per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	up to 600 mA	>100,000 hours	>60,000 hours	>88%

### Optical Distributions

Based on 20' mounting height



# PWS PureForm LED wall sconce

## wall mount

### Specifications

#### Housing

Main body housing and door frame made of low copper die cast aluminum alloy for a high resistance to corrosion. Door hinges secured by aircraft cable to allow access to driver or other electronic components for servicing. The door frame acts as the main heat transfer component and it is optimized to allowing the main housing to have no fins, giving the freedom to have a clean minimalist aesthetic design while allowing it to house emergency battery backup equipment and various other options. Luminaire housing rated to IP65, tested in accordance to Section 9 of IEC 60598-1.

#### Light engine

Light engine comprises of a module of 16-LED aluminum metal clad board fully sealed with optics offered in multiples of 3 and 4 modules or 48 and 64 LEDs. Module is RoHS compliant. Direct Amber LED is narrow spectrum with dominant wavelength at 596 nm (peak wavelength at 601 nm). Contact factory for details. LED light engine is rated IP66 in accordance to Section 9 of IEC 60598-1.

#### Optical systems

Type 2, 3, and 4 distributions available. Performance tested per LM-79 and TM-15 (IESNA) certifying its photometric performance. Luminaire designed with 0% uplight (U0 per IESNA TM-15).

#### Mounting

Mounting is completed through integral back plate that features a separate recessed feature for hook and lock quick mount plate that secures with two set screws from bottom of luminaire. Luminaire ships fully assembled, ready to install.

#### Control options

**0-10V dimming (DD):** Access to 0-10V dimming leads supplied through back of luminaire (for secondary dimming controls by others). Cannot be used with other control options.

**Field Adjustable Wattage Selector (FAWS):** Luminaire equipped with the ability to manually adjust the wattage in the field to reduce total luminaire lumen output and light levels. Comes pre-set to the highest position at the lumen output selected. Use chart below to estimate reduction in lumen output desired. Cannot be used with other control options or motion response.

FAWS Position	Percent of Typical Lumen Output
1	25%
2	50%
3	55%
4	65%
5	75%
6	80%
7	85%
8	90%
9	95%
10	100%

**Note:** Typical value accuracy +/- 5%

**SiteWise (SW):** SiteWise system includes a controller fully integrated in the luminaire that enables the luminaires to communicate with a dimming signal transmitter cabinet located on site using patented central dimming technology. A locally accessible mobile app allows users to access the system and set functionalities such as ON/OFF, dimming levels and scheduling. SiteWise is available with motion response options in order to bring the light back to 100% when motion is detected. Cannot be used with other control options or photocell options. Additional functionalities are available such as communication with indoor lighting and connection to BMS systems. Complete information on the control system can be found on the SiteWise website at [philips.com/sitewise](http://philips.com/sitewise).

**Automatic Profile Dimming (CS/CM/CE/CA):** Standard dimming profile of 30% or 50% provide flexibility towards energy savings goals while optimizing light levels during specific dark hours. When used in combination with not programmed motion response it overrides the controller's schedule when motion is detected. After 5 minutes with no motion, it will return to the automatic dimming profile schedule. Automatic dimming profile scheduled with the following settings:

- **CS50/CS30:** Security for 7 hours night duration (Ex., 11 PM - 6 AM)
- **CM50/CM30:** Median for 8 hours night duration (Ex., 10 PM - 6 AM)
- **CE50/CE30:** Economy for 9 hours night duration (Ex., 9 PM - 6 AM)
- **CA50/CA30:** for all night (during all dark hours)

All above profiles are calculated from mid point of the night. Dimming is set for 6 hours after the mid point and 1, 2, or 3 hours before depending of the duration of dimming. Cannot be used with other dimming control options.

# PWS PureForm LED wall sconce

## wall mount

### Specifications (cont'd)

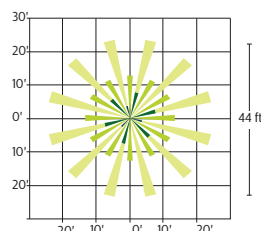
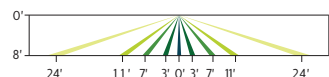
#### Motion response options

**Bi-Level Infrared Motion Response (BL-IMRI3):** Motion Response module is mounted integral to luminaire factory pre-programmed to 50% dimming when not ordered with other control options. BL-IMRI is set/operates in the following fashion: The motion sensor is set to a constant 50%. When motion is detected by the PIR sensor, the luminaire returns to full power/light output. Dimming on low is factory set to 50% with 5 minutes default in "full power" prior to dimming back to low. When no motion is detected for 5 minutes, the motion response system reduces the wattage by 50%, to 50% of the normal constant wattage reducing the light level. Other dimming settings can be provided if different dimming levels are required. This can also be done with FSIR-100 Wireless Remote Programming Tool (contact Technical Support for details).

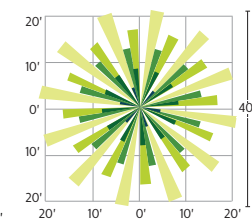
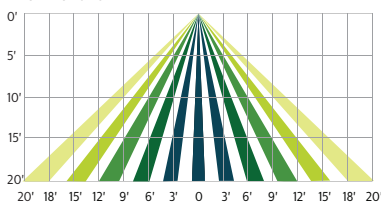
**Infrared Motion Response with Other Controls (SW-IMRI3):** When used in combination with other controls (Automatic Dimming Profile and SiteWise), motion response device will simply override controller's schedule with the added benefits of a combined dimming profile and sensor detection. In this configuration, the motion response device cannot be re-programmed with FSIR-100 Wireless Remote Programming Tool. The profile can only be re-programmed via the controller.

**Infrared Motion Response Lenses (IMRI2/IMRI3):** Infrared Motion Response Integral module is available with two different sensor lens types to accommodate various mounting heights and occupancy detection ranges. Lens #2 (IMRI2) is designed for lower mounting heights up to 8' with larger coverage areas up to 44' diameter coverage area. Lens #3 (IMRI3) is designed for mounting heights up to 20' with a 40' diameter coverage area. See charts for approximate detection patterns:

IMRI2 Luminaire or remote mount controller with #2 lens



IMRI3 Luminaire or remote mount controller with #3 lens



#### Electrical

**Driver:** Driver efficiency (>90% standard). 120-480V available (restrictions apply). Open/short circuit protection. Optional 0-10V dimming to 10% power. RoHS compliant.

**Button Photocontrol (PCB):** Button style design for internal luminaires mounting applications. The photocontrol is constructed of a high impact UV stabilized polycarbonate housing. Rated voltage of 120V or 208-277V with a load rating of 1000 VA. The photocell will turn on with 1-4Fc of ambient light.

**Surge protection (SP1/SP2):** Each luminaire is provided as standard with surge protector tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/5kA waveforms for Line Ground, Line Neutral and Neutral Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid-State Street Lighting Consortium) Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High Test Level 10kV / 5kA. Optional 20kV is available for additional protection.

#### Listings

UL/cUL listed to the UL 1598 standard, suitable for wet locations when mounted downward facing. Also listed for damp locations when inverted upward facing when mounted in covered ceiling application. Suitable for use in ambient temperatures from -40° to 40°C (-40° to 104°F). Florida Wildlife Certified.

#### Finish

Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidic isocyanurate (TGIC) textured polyester powdercoat finish. The surface treatment achieves a minimum of 1000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard. Standard colors include bronze (BZ), black (BK), white (WH), dark gray (DGY), and medium gray (MGY). Consult factory for specs on optional or custom colors.

#### Warranty

PureForm luminaires feature a 5-year limited warranty. See [signify.com/warranties](http://signify.com/warranties) for complete details and exclusions.





**Gardco SoftView LED parking garage luminaires** feature edge lit technology, providing visual comfort with minimal glare to enhance the user experience. An added uplight feature reduces the cave effect for an increased sense of security. SoftView features multiple optical distributions, lumen packages and mounting options providing you with the ideal solution for your garage lighting and low bay needs. Optional emergency battery backup available for path of egress lighting and is integral to the luminaire.

Project: Woods Hollow Camprground  
 Location: Town of Mayfield, NY  
 Cat.No:  
 Type:  
 Lumens: Qty:  
 Notes: C1: Canopy surface- mount LED light fixture; mounting 12-ft ht

### Ordering guide

example: SVPG-140L-2100-NW-G2-SM-5-120-BL-IMRI2-MGY

Luminaire	Number of LEDs	Drive Current	Color Temperature	Mounting	Distribution	Emergency	Voltage	Options			Finish
								Dimming controls	Sensing	Electrical	
SVPG	140L	450	WW-G2	SM	3	EBPC	120	BL		F1	BZ
SoftView	140 LEDs	450mA	Warm White 3000K (70 CRI) Generation 2	SM	1R Type IR Rectangular	none leave blank	120V	none leave blank (0-10V dimming driver standard)	none leave blank	Fusing none leave blank	BZ Bronze
Parking Garage	(comfort engine)	800 800mA	CRI) Generation 2	Normal vibration rated (pendant and junction box by others)	3 <sup>18</sup> Type III Asymmetric	EBP <sup>1,2,3,6,7</sup> Emergency Battery pack	208 208V	DD <sup>9,10,13,14</sup> 0-10V Dimming external leads (controls by others)	IMRI2 <sup>12,16</sup> Integral Motion Response, #2 lens	F1 <sup>1</sup> Single Fuse (120, 277, 347V)	MGY Medium Gray
		1200 1200mA	Neutral White 4000K (70 CRI) Generation 2		5 Type V	EBPC <sup>1,2,4,6,7,13</sup> Emergency Battery pack cold rated	240V	IMRI3 <sup>12,16</sup> Integral Motion Response, #3 lens	IMRI7 <sup>12,16</sup> Integral Motion Response, #7 lens	F2 <sup>2</sup> Double Fuse (208, 240, 480V)	WH White
		1675 <sup>3</sup> 1675mA	CW-G2 <sup>17</sup> Cool White 5000K (70 CRI) Generation 2	SBO Surface Mount, Bridge / Overpass vibration rated	CD Concentrated Downlight		277 277V	BL <sup>10,11,14</sup> Bi-level with motion sensor		F3 <sup>3</sup> Double Fuse Canadian double pull (208, 240, 480V)	OC <sup>5</sup> Optional Color (specify optional color or RAL ex: OC-LGP or OC-RAL7024, contact factory)
		2100 <sup>3,4,18</sup> 2100mA	BW-G2 <sup>5</sup> Balanced White 3500K (80 CRI) Generation 2	PM Direct Pendant Mount, Bridge / Overpass vibration rated (pendant and junction box by others)	T <sup>15</sup> Trunnion Mount (must also order separate line item TM mounting kit, see Accessories)		UNV Universal 120-277V	LLC <sup>6,7,10,11,14,19</sup> Wireless Controls	(factory customizable, contact factory <sup>3</sup> )	Surge Protection blank SP1 10KV 10KA (standard)	SC <sup>5</sup> Special Color (must supply color chip, requires factory quote)
	266L <sup>18</sup> 266 LEDs (comfort engine)	1200 <sup>18</sup> 1200mA	830-G2 <sup>5</sup> 3000K (80CRI) Generation 2	WM Wall Mount (must also order separate line item WM mounting kit, see Accessories)			347 <sup>2</sup> 347V			SP2 20KV 10KA (option)	
		1675 <sup>3,18</sup> 1675mA	840-G2 <sup>5</sup> 4000K (80CRI) Generation 2				480 <sup>2</sup> 480V				
		2100 <sup>3,4,18</sup> 2100mA	(BW-G2, 830-G2, 840-G2 - Specials, contact factory <sup>2</sup> )				HVU <sup>2</sup> Universal 347-480V				
		2400 <sup>3,4,18,19</sup> 2400mA									
		3000 <sup>3,4,18,19</sup> 3000mA									
		3400 <sup>3,4,18,19</sup> 3400mA									

- Choose either **EBP** suitable for 0°C (32°F) to +40°C (+104°F) or **EBPC** suitable for -20°C (-4°F) to +40°C (+104°F).
- EBP** or **EBPC** not available with **347V**, **480V** or **HVU**
- EBP** not available with 1675mA, 2100mA, 2400mA, 3000mA or 3400mA due to thermal restrictions.
- EBPC** not available with 2100mA, 2400mA, 3000mA or 3400mA due to thermal restrictions.
- Must contact factory prior to ordering - these items are ETO Specials.
- LLC** not available with Emergency options (**EBP**, **EBPC**) due to thermal and fit restrictions.
- Available with **120V**, **208V**, **240V**, **277V** or **UNV** only.
- Must specify applicable specific input voltage, not available with **UNV** or **HVU**.
- Luminaire includes 0-10V dimming wires for dimming control by others.
- 0-10V dimming driver standard.
- Must be combined with Motion Sensing option (**IMRI2** or **IMRI3** or **IMRI7**), choose only 1 Motion Sensing option.
- Must be combined with Dimming Controls option (**BL** or **LLC**).
- Not available with Motion Sensing.
- Choose only 1 Dimming Controls option: either **DD** or **BL** or **LLC**.
- Trunnion Mount (T)** not available with both **DD** and **EBP** or **EBPC**; is available with each individually (**DD** or **EBP** or **EBPC**).
- IMRI2**, **IMRI3**, or **IMRI7** not available with 3000mA or 3400mA due to thermal restrictions.
- Extended lead times apply. Contact factory for details.
- 3** Type III Asymmetric not available with any 266L configurations due to thermal and fit restrictions.
- LLC** Wireless Controls not available with 2400mA, 3000mA, or 3400mA due to fit restrictions (2x drivers).



# SVPG SoftView

## Garage & canopy luminaire

### Accessories (ordered separately)

<b>FSIR-100</b>	Hand-held Wireless Remote Programming Tool (For use with 'IMRI2', 'IMRI3' and 'IMRI7' motion response when field programming is required). If desired, only one is needed per job.	<b>SVPG-G2-TM-(F)</b>	Trunnion Mount kit (field installed, can ONLY use when T Trunnion Mount product is ordered)	<b>BXC</b>	Bird excluding coil (field installed, fits on all mounting options)
<b>ES</b>	External House Side Shield (field installed)	<b>SVPG-G2-WM-(F)</b>	Wall Mount kit (field installed, can ONLY use when WM Wall Mount product is ordered)	<b>BXK</b>	Bird excluding spikes (field installed, fits on Pendant, Trunnion, and Wall mounts only)
<b>WG</b>	Wire Guard (field installed)			<b>BXS</b>	Bird excluding shroud (field installed, fits on Pendant mount only)

(F) = specify finish

### LED wattage and lumen values

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts	Type 1R			Type 3			Type 5			Type CD		
					Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
SVPG-140L-450-NW-G2-x	140	450	4000	22	2,026	B1-U3-G1	92	2,366	B1-U3-G1	107	2,395	B2-U2-G1	108	2,522	B1-U0-G1	114
SVPG-140L-800-NW-G2-x	140	800	4000	37	3,513	B2-U3-G2	95	4,103	B2-U3-G2	111	4,153	B2-U3-G1	113	4,374	B2-U0-G1	119
SVPG-140L-1200-NW-G2-x	140	1200	4000	54	5,071	B2-U3-G2	94	5,921	B2-U3-G2	110	5,994	B3-U3-G2	111	6,312	B3-U0-G2	117
SVPG-140L-1675-NW-G2-x	140	1675	4000	76	6,823	B3-U3-G3	90	7,967	B3-U3-G3	106	8,065	B3-U3-G2	107	8,494	B3-U0-G2	113
SVPG-140L-2100-NW-G2-x	140	2100	4000	95	8,168	B3-U3-G3	86	9,538	B3-U3-G3	101	9,655	B3-U3-G2	102	10,168	B3-U0-G2	107
SVPG-266L-1200-NW-G2-x	266	1200	4000	52	5,808	B3-U3-G3	112				7,038	B3-U3-G2	136	7,657	B3-U0-G2	148
SVPG-266L-1675-NW-G2-x	266	1675	4000	72	7,475	B3-U3-G3	104				8,971	B3-U3-G2	125	9,876	B3-U0-G2	137
SVPG-266L-2100-NW-G2-x	266	2100	4000	91	8,967	B3-U3-G3	99				10,702	B3-U3-G2	118	11,860	B3-U0-G2	131
SVPG-266L-2400-NW-G2-x	266	2400	4000	108	10,371	B3-U3-G3	96				12,330	B3-U3-G2	115	13,729	B3-U0-G2	128
SVPG-266L-3000-NW-G2-x	266	3000	4000	134	12,126	B3-U4-G3	91				14,366	B4-U3-G3	108	16,064	B3-U0-G3	120
SVPG-266L-3400-NW-G2-x	266	3400	4000	151	13,530	B3-U4-G3	90				15,994	B4-U3-G3	106	17,932	B4-U0-G3	119
SVPG-140L-450-WW-G2-x	140	450	3000	22	1,956	B1-U3-G1	89	2,285	B1-U3-G1	103	2,313	B2-U2-G1	105	2,436	B1-U0-G1	110
SVPG-140L-800-WW-G2-x	140	800	3000	37	3,392	B2-U3-G2	92	3,962	B2-U3-G2	108	4,010	B2-U3-G1	109	4,223	B2-U0-G1	115
SVPG-140L-1200-WW-G2-x	140	1200	3000	54	4,896	B2-U3-G2	91	5,718	B2-U3-G2	106	5,788	B3-U3-G2	107	6,095	B3-U0-G2	113
SVPG-140L-1675-WW-G2-x	140	1675	3000	76	6,588	B3-U3-G3	87	7,693	B3-U3-G3	102	7,788	B3-U3-G2	103	8,202	B3-U0-G2	109
SVPG-140L-2100-WW-G2-x	140	2100	3000	95	7,887	B3-U3-G3	83	9,210	B3-U3-G3	97	9,323	B3-U3-G2	98	9,818	B3-U0-G2	104
SVPG-266L-1200-WW-G2-x	266	1200	3000	52	5,808	B3-U3-G3	112				7,038	B3-U3-G2	136	7,657	B3-U0-G2	148
SVPG-266L-1675-WW-G2-x	266	1675	3000	72	7,475	B3-U3-G3	104				8,971	B3-U3-G2	125	9,876	B3-U0-G2	137
SVPG-266L-2100-WW-G2-x	266	2100	3000	91	8,967	B3-U3-G3	99				10,702	B3-U3-G2	118	11,860	B3-U0-G2	131
SVPG-266L-2400-WW-G2-x	266	2400	3000	108	10,371	B3-U3-G3	96				12,330	B3-U3-G2	115	13,729	B3-U0-G2	128
SVPG-266L-3000-WW-G2-x	266	3000	3000	134	12,126	B3-U4-G3	91				14,366	B4-U3-G3	108	16,064	B3-U0-G3	120
SVPG-266L-3400-WW-G2-x	266	3400	3000	151	13,530	B3-U4-G3	90				15,994	B4-U3-G3	106	17,932	B4-U0-G3	119
SVPG-140L-450-CW-G2-x	140	450	5000	22	2,119	B1-U3-G1	96	2,474	B1-U3-G1	112	2,505	B2-U2-G1	113	2,638	B1-U0-G1	119
SVPG-140L-800-CW-G2-x	140	800	5000	37	3,674	B2-U3-G2	100	4,291	B2-U3-G2	117	4,343	B2-U3-G1	118	4,574	B2-U0-G1	124
SVPG-140L-1200-CW-G2-x	140	1200	5000	54	5,303	B2-U3-G2	98	6,193	B2-U3-G2	115	6,269	B3-U3-G2	116	6,602	B3-U0-G2	122
SVPG-140L-1675-CW-G2-x	140	1675	5000	76	7,135	B3-U3-G3	95	8,332	B3-U3-G3	110	8,434	B3-U3-G2	112	8,883	B3-U0-G2	118
SVPG-140L-2100-CW-G2-x	140	2100	5000	95	8,542	B3-U3-G3	90	9,975	B3-U3-G3	105	10,097	B3-U3-G2	107	10,634	B3-U0-G2	112
SVPG-266L-1200-CW-G2-x	266	1200	5000	52	5,808	B3-U3-G3	112				7,038	B3-U3-G2	136	7,657	B3-U0-G2	148
SVPG-266L-1675-CW-G2-x	266	1675	5000	72	7,475	B3-U3-G3	104				8,971	B3-U3-G2	125	9,876	B3-U0-G2	137
SVPG-266L-2100-CW-G2-x	266	2100	5000	91	8,967	B3-U3-G3	99				10,702	B3-U3-G2	118	11,860	B3-U0-G2	131
SVPG-266L-2400-CW-G2-x	266	2400	5000	108	10,371	B3-U3-G3	96				12,330	B3-U3-G2	115	13,729	B3-U0-G2	128
SVPG-266L-3000-CW-G2-x	266	3000	5000	134	12,126	B3-U4-G3	91				14,366	B4-U3-G3	108	16,064	B3-U0-G3	120
SVPG-266L-3400-CW-G2-x	266	3400	5000	151	13,530	B3-U4-G3	90				15,994	B4-U3-G3	106	17,932	B4-U0-G3	119

### Emergency mode:

Ordering Code	Lumen output	Maximum mounting height
SVPG-140L-xxx-NW-G2-5-EBP	1696	14.8 ft
SVPG-140L-xxx-NW-G2-5-EBPC	2293	16.7 ft

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

**NOTE:** Some data may be scaled based on tests of similar (but not identical) luminaires. Contact factory for configurations not shown.

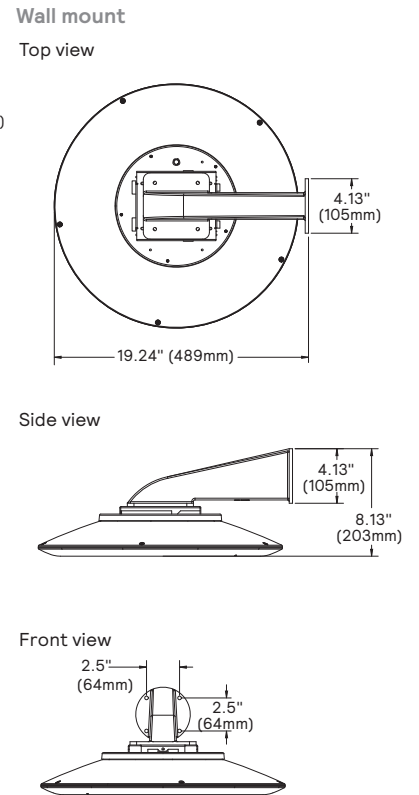
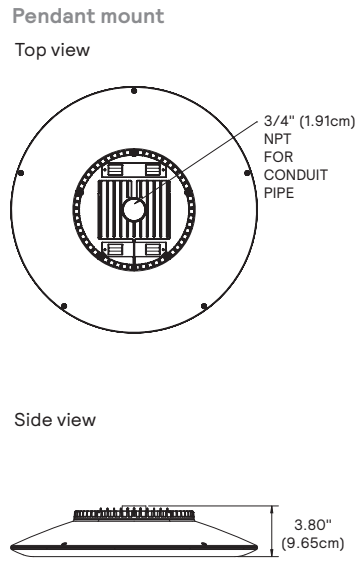
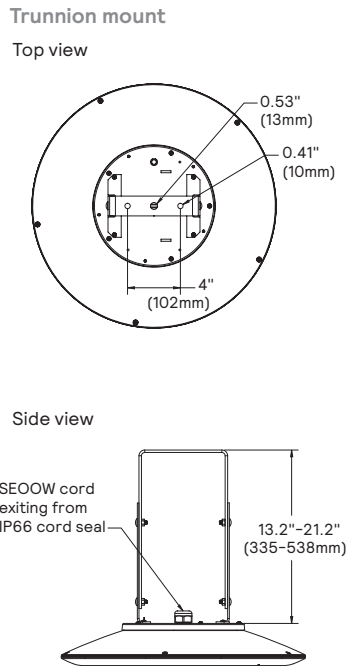
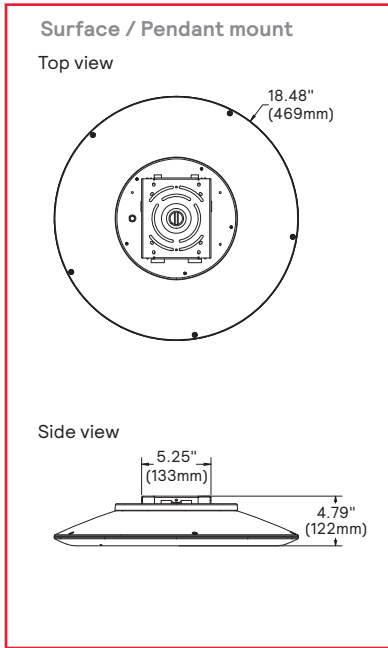
For emergency **EBP** and **EBPC** options, published values are based on initial lumens. It is highly recommended to confirm with a photometric layout that emergency performance meets your applicable ordinances.



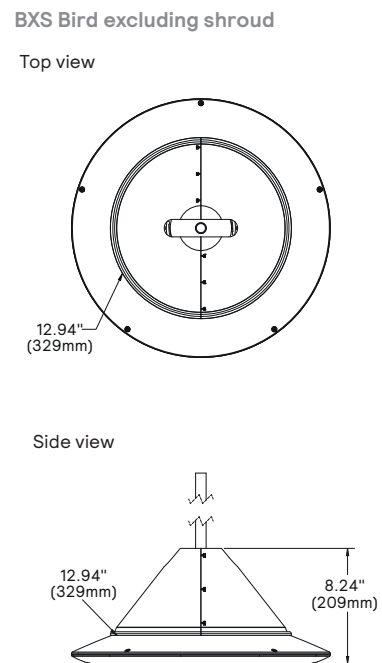
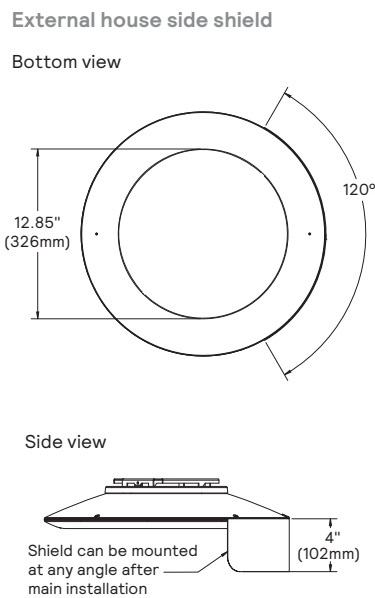
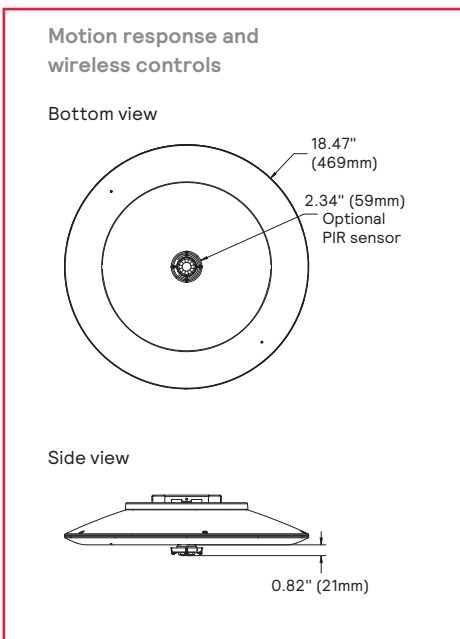
# SVPG SoftView

## Garage & canopy luminaire

### Dimension drawings



SoftView LED	Weight
140L Luminaire	9.1 lbs (4.1 Kg)
266L Luminaire	10.3 lbs (4.7 Kg)
Luminaire with EBP	11.6 lbs (5.3 Kg)
Luminaire with EBPC	15.1 lbs (6.8 Kg)



# SVPG SoftView

## Garage & canopy luminaire

### Specifications

#### Construction

Lower housing made of low copper die cast Aluminum alloy for high resistance to corrosion. Upper polycarbonate lens provides uplight, tapered shape of upper housing deters dirt accumulation, eases cleaning frequency, and deters birds from sitting or nesting. UV-resistant acrylic lower lens.

#### IP Rating

IP66 rated luminaire with seal around entire perimeter of the lens. All electrical components within entire perimeter of lens, therefore all are also within IP66 seal.

#### LED Thermal management

The luminaire design provides excellent thermal management critical to long LED, driver and system life. Natural convection air flow, product does not use any cooling device with moving parts (only passive cooling).

#### Light engine

Edge-lit, light guide technology provides low-glare, uniform illumination. Composed of 140 or 266 mid power LEDs. Color temperatures per ANSI/NEMA bin Warm White 3000K nominal (3045 +/-175K), Neutral White 4000K nominal (3985 +/- 275K), or Cool White 5000K nominal (5029 +/- 283K). Minimum CRI of 70. 80CRI choices available - must contact factory prior to ordering, these are ETO Specials. LEDs tested by ISO 17025 accredited lab in accordance with IESNA LM-80 guidelines, extrapolations in accordance with IESNA TM-21.

#### Optical system

Type 1R Rectangular, Type 3 Asymmetric, Type 5 Symmetrical and Concentrated Downlight (CD) distributions available, designed for compliance to IES RP-8. Consider Type 1R for one luminaire per bay applications, ramps, and drive lanes leading up to or exiting parking stall decks; Type 3 for wall mount applications and perimeter mounted luminaires to throw light into parking garage away from property line (LEED compliance, property cut-off, avoid light trespass); Type 5 for general use in parking bays; Concentrated Downlight and/or higher lumen configurations when enhanced lighting is required for entries and exits, ramps, payment areas, lobbies and waiting areas, etc. and for security lighting per IES G-1. Uplight (up to 3%) provided with Type 1R, Type 3 and Type 5 to eliminate cave effect; for these distributions almost no uplight (<1%) available - must contact factory prior to ordering, this is an ETO Special. Almost no uplight (<1%) provided standard with Type CD. More uplight available - must contact factory prior to ordering, this is an ETO Special. Light guide plate composed of high performance optical grade PMMA (polymethyl methacrylate) acrylic. Light guide technology allows for optimal light distribution without direct view of the LEDs, providing low-glare, uniform illumination and visual comfort. Performance tested per LM-63, LM-79 and TM-15 (IESNA) certifying its photometric performance.

#### Electrical

Constant current electronic driver. High power factor (0.9 minimum). 50/60 Hz. Low THD (20% maximum). Open/short circuit protection and voltage overload protection, automatic recovery after correction. Driver comes standard with 6KV on-board surge protection. Dimming driver standard. 0-10V dimming to minimum 10% power. RoHS compliant. Surge protector standard and tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10KV/10KA waveforms for Line-Ground, Line-Neutral and Neutral-Ground. Optional enhanced surge protector 20KV/10KA also available. When Emergency options **EBP** or **EBPC** are selected, two surge protectors are provided for complete protection - one for unswitched hot line and one for switched hot line.

Due to the inrush current that occurs with electronic drivers, recommend using a time delay or slow blow fuse to avoid unnecessary and unwanted fuse blowing that can occur with fast acting fuses.

#### Mounting

**SM:** Surface mount for Normal vibration rating. Stamped anodized aluminum upper housing with a die formed 16 ga. galvanized steel EZ-hang plate supplied for mounting to a recessed or surface-mounted 4" (10.16 cm) junction box (by others) - flush ceiling mount to a recessed junction box, or direct mount to a surface-mounted junction box. Integral hanger tabs on the plate support the luminaire during wiring. Single screw secures luminaire for quick and easy installation. Includes minimum 12" (30.48cm) wires. For indirect pendant mounting with Normal vibration rating, order Surface Mount (SM) and mount to a wet location junction box (by others) which you then direct mount onto rigid pendant (by others).

**SBO:** Surface mount for higher Bridge / Overpass vibration rating. Die-cast aluminum upper housing with a supplied die formed 16 ga. galvanized steel EZ-hang plate with integral strengthening feet. Plate supplied for mounting to junction box (by others), integral hanger tabs on plate support luminaire during wiring. Single screw secures luminaire for quick and easy installation. Includes minimum 12" (30.48 cm) wires.

**PM:** Direct pendant mount for higher Bridge / Overpass vibration rating. Die-cast aluminum upper housing includes integral 3/4" NPT tapped hole for direct mounting onto rigid 3/4" pendant (by others). Includes minimum 38" (96.52 cm) wires.

**T:** Mounts to a concrete ceiling with an anodized aluminum trunion bracket assembly (order separate line item accessory, painted to match luminaire finish). Includes minimum 36" (91.44 cm) SEOW cord exiting luminaire through IP66 cord seal.. The assembly permits (8) one inch (2.54 cm) incremental mounting height adjustments, ranging from 13 to 21 inches (33.02 to 53.34 cm).

**WM:** Anchors directly on a wall with wall bracket assembly (order separate line item accessory, painted to match luminaire finish), includes minimum 12" (30.48cm) wires.

#### Control Options

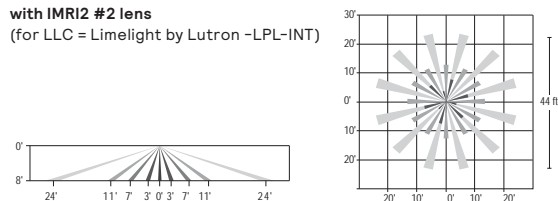
Please note that other controls can be integrated as ETO Specials - contact factory.

**DD:** 0-10V dimming driver with dimming wires externally accessible for connecting dimming controls by others.

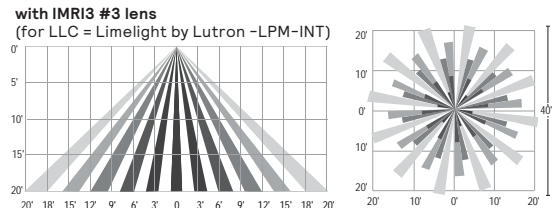
**BL:** Motion Response luminaires include a WattStopper passive infrared (PIR) motion sensor. Motion sensor standby power is 0.5 watts. In Motion Response luminaires, when no motion is detected for 10 minutes, the Motion Response system reduces the wattage by 80%, to 20% of the normal constant wattage per RP-8, reducing the light level accordingly. When motion is detected by the PIR, the luminaire returns to full wattage and full light output. Motion Response includes light sensor feature called **Photocell On/Off** which is disabled by default. This feature can be enabled in the field using the hand-held Wireless Remote Programming Tool FSIR-100 (ordered separately) - this allows for daylight harvesting (California Title 24 compliant). Motion sensor also includes reading/measuring feature called **Light Level** that can be used to establish a baseline for daylight harvesting. See FSIR-100 User Guide for details.

**LLC:** Optional wireless controller ready to be connected to a Limelight by Lutron system which includes gateways, commissioning, etc. - contact Lutron for these system elements. Available with various lenses depending upon mounting height. Other options such as -LRF-INT internal RF only radio module or -LPH-EXT external wireless controller available as ETO Specials - contact factory.

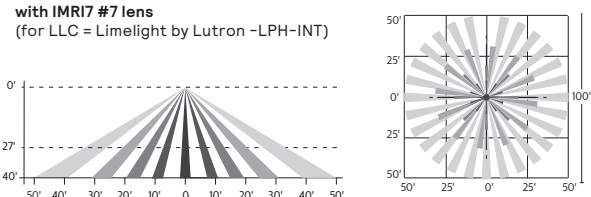
with IMR12 #2 lens  
(for LLC = Limelight by Lutron -LPL-INT)



with IMR13 #3 lens  
(for LLC = Limelight by Lutron -LPM-INT)



with IMR17 #7 lens  
(for LLC = Limelight by Lutron -LPH-INT)



# SVPG SoftView

## Garage & canopy luminaire

### Specifications (continued)

#### Vibration resistance

Luminaire meets the ANSI C136.31-2018 specifications for Normal or Bridge / Overpass applications, as noted in Ordering guide on page 1 and in the Specifications text for each Mounting, tested by independent lab over 100,000 cycles in all three axes.

#### IK Rating

IK10 high impact resistance rating for both the upper lens and the lower lens.

#### Emergency battery backup

Optional internal emergency battery pack immediately detects AC power loss then provides emergency light output for a minimum of 90 minutes when power is lost compliant with UL 924/ CSA22.2 No. 141 and NFPA 101 Life Safety Code path of egress requirements. Integral so there is a consistent look between emergency and non-emergency luminaires, separate accessory box is not required. **EBP** suitable for use in ambient temperature conditions from 0°C (+32°F) to +40°C (+104°F). **EBPC** suitable for use in ambient temperatures from -20°C (-4°F) to +40°C (+104°F). **EBP** and **EBPC** are not available for use with **347V**, **480V** or **HVU**. **EBP** and **EBPC** always include surge protection for both the switched and unswitched lines to ensure complete protection.

Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (**TGIC**) textured polyester powdercoat finish on lower housing.

Standard textured finishes include: **BZ** – Bronze Textured, **WH** – White Textured, **MGY** – Medium Gray Textured. Consult factory for specs on optional (**OC**) or custom (**SC**) colors. All exposed surfaces achieve a minimum of 1500 hours Salt Fog Test for corrosion in accordance with the ASTM B117 standard.

#### Hardware and Seals

All exposed screws shall be stainless steel and/or corrosion resistant and captive. All seals and sealing devices are made and/or lined with silicone and/or rubber.

#### LED Products

##### Manufacturing Standard

The electronic components sensitive to electrostatic discharge (ESD) such as LEDs are assembled in compliance with EC61340-5-1 and ANSI/ESD S20.20 standards so as to eliminate ESD events that could decrease the useful life of the product.

#### LED Luminaire Useful Life

Refer to IES files for energy consumption and delivered lumens for each option. Based on ISTMT in situ thermal testing in accordance with UL1598 and UL8750, exclusive Signify System Reliability

Tool, Advance driver data and LED manufacturer LM-80/TM-21 data, expected to reach 100,000 + hours with L70 lumen maintenance @ 25°C. Luminaire Useful Life accounts for LED lumen maintenance AND all of these additional factors including: LED life, driver life, PCB substrate, solder joints, on/off cycles, burning hours and corrosion.

#### Certifications and Compliance

cULus Listed for Canada and U.S. to the UL 1598 and UL8750 standards, suitable for Wet Locations. Suitable for use in ambients from -40°C (-40°F) to +50°C (+122°F) up to 2400mA, to +40°C (+104°F) for 3000mA and 3400mA. The quality systems of the facility where manufactured have been registered by UL to the ISO 9001 series standards. Emergency Battery Backup options (**EBP** and **EBPC**) are tested and listed emergency lighting devices per UL 924 and CSA 22.2 No. 141. Luminaire is UL924 Listed as an emergency Directly Controlled Luminaire whenever installed as part of a mesh network system as detailed on applicable installation instructions - must contact factory prior to ordering, this is an ETO Special. SoftView configurations are DesignLights Consortium qualified, consult DLC QPL Qualified Products List for more details. Controls options enable compliance with Outdoor lighting energy codes including ASHRAE 90.1, California Title 24, and IECC.

#### Limited Warranty

5-year limited warranty. See [signify.com/warranties](http://signify.com/warranties) for complete details and exclusions.

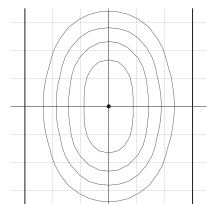
### Predicted Lumen Depreciation Data

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L70 is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L70 hours limited to 6 times actual LED test hours

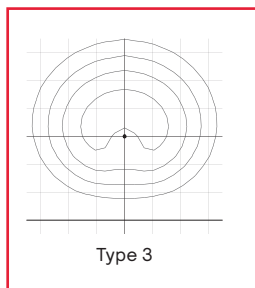
Ambient Temperature °C	Drive current	Calculated L70 Hours	L70 per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	all 140L up to 2100 mA	>100,000 hours	>60,000 hours	>87%
25°C	all 266L up to 3400 mA	>100,000 hours	>60,000 hours	>83%

### Optical Distributions

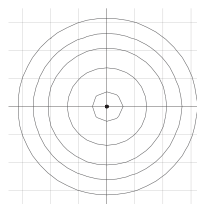
Based on 10' mounting height



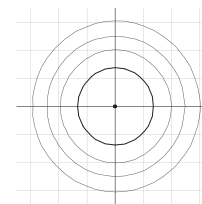
Type 1R



Type 3



Type 5



Type CD

The information presented in this document is not intended as any commercial offer and does not form part of any quotation or contract.





**Gardco DuraForm small floodlight** provides seamless replacement of existing HID luminaires. This luminaire is available in three sizes (also see FLDM and FLDL), offers multiple lumen packages, and a complete array of optical distributions, making it an outstanding solution for all types of floodlighting applications. Includes Service Tag, Signify's innovative way to provide assistance throughout the life of the product.

Project:	Woods Hollow Campground
Location:	Town of Mayfield, NY
Cat.No:	
Type:	
Lumens:	Qty:
Notes:	F1: Small LED floodlight with top visor; mounting 6-ft ht

**Ordering guide**

example: FLDS-A02-740-RSP-SLF-120-PCB-BZ

Prefix	Configuration (nominal lumens)	Color Temperature	Distribution	Mounting	Voltage
<b>FLDS</b>	<b>A01</b>	<b>730</b>	<b>RNF</b>	<b>YOK</b>	<b>120</b>
<b>FLDS</b> DuraForm small	<b>A01</b> 3,400	<b>730</b> 70CRI 3000K	<b>SPT</b> Spot 12° Round (NEMA 2x2)	<b>SFC</b> Slip Fitter Mount with Cord (fits on 2-3/8" to 3" O.D. tenon, 6' or 1.83m cord exits luminaire)	<b>120</b> 120V
	<b>A02</b> 4,900	<b>740</b> 70CRI 4000K	<b>RSP</b> Rectangular Spot (NEMA 3x3)		<b>208</b> 208V
	<b>A03</b> 6,100	<b>750</b> <sup>10</sup> 70CRI 5000K	<b>NFL</b> Narrow Flood (NEMA 4x4)	<b>SLF</b> Slip Fitter Mount (fits on 2-3/8" to 3" O.D. tenon, wires through slip fitter)	<b>240</b> 240V
	<b>A04</b> 6,800	(750 - Special, contact factory)	<b>MFL</b> Medium Flood (NEMA 5x5)		<b>277</b> 277V
	<b>A05</b> 9,800		<b>WFL</b> Wide Flood (NEMA 6x6)	<b>YOK</b> Yoke Mount (6' or 1.83m cord exits luminaire)	<b>347</b> 347V
	<b>A06</b> 12,200		<b>7X6</b> (NEMA 7x6)		<b>480</b> 480V
			<b>A33</b> Asymmetric 33 Flood (NEMA 6x5)		<b>UNV</b> 120-277V
			<b>RMF</b> Rectangular Medium Flood (NEMA 7x4)		<b>HVU</b> 347-480V
			<b>RNF</b> Rectangular Narrow Flood (NEMA 7x5)		

Options		Fusing		Surge Protection		Hardware Options		Other Options		Finish	
<b>FAWS</b>		<b>FS1</b>				<b>VPA</b>		<b>PCB</b>		<b>BZ</b>	
<b>none</b>	leave blank (0-10V dimming driver standard)	<b>none</b>	leave blank	<b>blank</b>	Surge Protector 10kV / 10kA (standard)	<b>blank</b>	Captive screws	<b>blank</b>	Terminal Block, Service Tag, and Wiring Cover (standard)	<b>BK</b>	Black
<b>DALI</b> <sup>1,2,3</sup>	Digitally Addressable Lighting Interface driver	<b>FS1</b> <sup>7</sup>	Single Fuse (120V, 277V, or 347V)	<b>SP2</b>	Surge Protector 20kV / 10kA (option)	<b>TOL</b>	Tool-less entry latches	<b>API</b>	Factory-installed ANSI C136.15-2015 compliant label	<b>BZ</b>	Bronze
<b>DLEA</b> <sup>1,4,5</sup>	Dimming Leads Externally Accessible (for controls by others)	<b>FS2</b> <sup>7</sup>	Double Fuse (208V, 240V, or 480V)			<b>VPA</b>	Vandal Proof Access (bit included with luminaire)	<b>C##</b> <sup>10</sup>	Cord length specified by customer for SFC or YOK (put length in feet in place of "##" - example: C10 for 10' cord, must be ordered same time as luminaire - factory installed) (6' cord standard)	<b>MG</b>	Medium Gray
<b>FAWS</b> <sup>1,4</sup>	Field Adjustable Wattage Selector	<b>FS3</b> <sup>7,11</sup>	Canadian Double Pull Fuse (208V, 240V, or 480V)					<b>PCB</b> <sup>2,5,6,7</sup>	Photocontrol Button	<b>OC</b> <sup>10</sup>	Optional Color (specify optional color or RAL, contact factory)
<b>WLDC</b> <sup>1,2,4,5,6</sup>	Wireless Dimming Controls							<b>TT7</b> <sup>5,6,9</sup>	Tool-less NEMA Twist-lock 7-pin receptacle	<b>SC</b> <sup>10</sup>	Special Color (must supply color chip, requires factory quote)
								<b>BAC</b> <sup>11,12</sup>	Meets the requirements of the Buy American Act of 1933 (BAA)		

- Choose only 1 Dimming Controls option: either DALI or DLEA or FAWS or WLDC.
- Not available with 347V, 480V, or HVU.
- Your specific required DALI profiles will be programmed at the factory. Contact factory for details. Also contact factory if +50C ambient with DALI is required.
- 0-10V dimming driver standard.
- Luminaire has 0-10V dimming wires exiting the luminaire for dimming controls by others. DLEA not available with PCB or TT7 - choose only 1 of the three options.
- Must also select one of the Wireless System Accessories (LLCR2-(F), etc.) whenever DALI is selected. WLDC not available with PCB or TT7 - only
- choose one of the three options.
- Must specify applicable specific input voltage, not available with UNV or HVU.
- Not available with 480V.
- Use of photoelectric cell (by others) or shorting cap (by others) is required to ensure proper illumination.
- Must contact factory prior to ordering - these items are ETO Specials.
- Extended lead times apply. Contact factory for details.
- Failure to properly select the "BAC" suffix could result in you receiving product that is not BAA compliant product with no recourse for an RMA or refund. This BAC designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies.
- Consult Signify to confirm whether specific accessories are BAA-compliant.

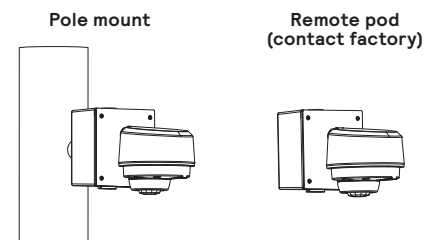
**Wireless System Accessories**<sup>13</sup>

(ordered separately, field installed - for wall or pole mount)



- LLCR2-(F)<sup>11</sup> with #2 lens, Limelight by Lutron model # -LPL-INT (specify finish at placeholder F)
- LLCR3-(F)<sup>11</sup> with #3 lens, Limelight by Lutron model # -LPM-INT (specify finish at placeholder F)
- LLCR7-(F)<sup>11</sup> with #7 lens, Limelight by Lutron model # -LPH-INT (specify finish at placeholder F)

Wireless pole mounted & remote controller accessory comes with standard 0-10V dimming driver. The wireless system offers a remote controller module that allows connectivity to the wireless system gateway. The remote wireless controller can be mounted to wall or pole j-box supplied. May be specified by choosing one of three different lenses to accommodate a variety of mounting heights/sensor detection ranges. Controller radio/sensor module includes Limelight by Lutron Radio Module PCB Assembly and Limelight by Lutron PIR Sensor Assembly [for low (LPL), medium (LPM), or high (LPH) mounting heights], photocell and motion sensor.



# FLDS DuraForm

## Small floodlight

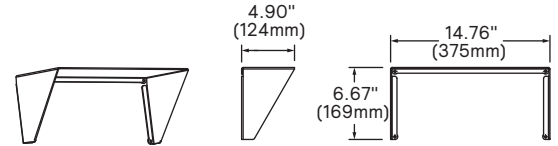
### Accessories <sup>13</sup>

(ordered separately, field installed - mounting hardware included, uses dedicated mounting holes - do NOT remove lens)

#### FLDS-VSR-BZ

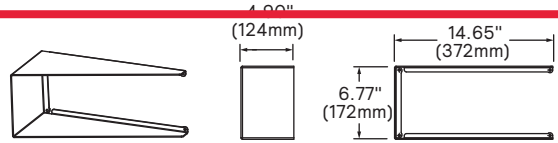
**FLDS-VSR-(F)** Visor, top or bottom, painted same finish to match luminaire (specify finish at placeholder F, can not be used with GSH)

**FLDS-VSR Visor  
Top or Bottom**



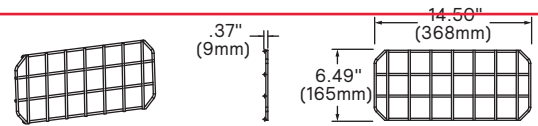
**FLDS-GSH-(F)** Glare Shield, left or right, painted same finish to match luminaire (specify finish at placeholder F, can not be used with VSR)

**FLDS-GSH Glare Shield  
Left or Right**



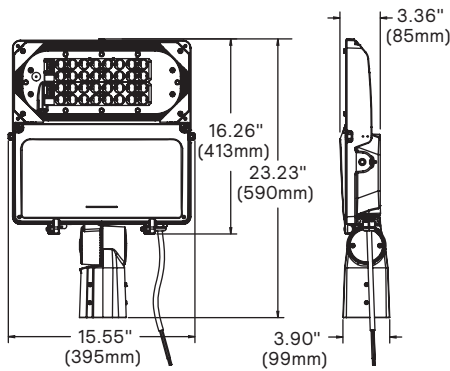
**FLDS-WRG** Wire Guard (nestable and can be used with either VSR or GSH)

**FLDS-WRG Wire Guard  
Nestable**



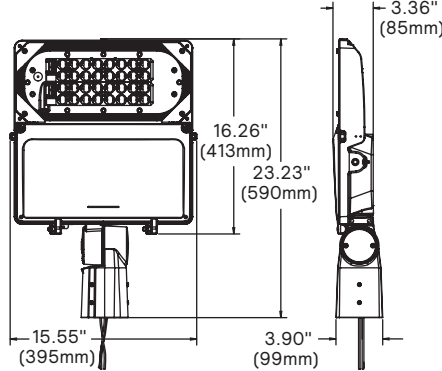
13. Consult Signify to confirm whether specific accessories are BAA-compliant.

### Dimensions



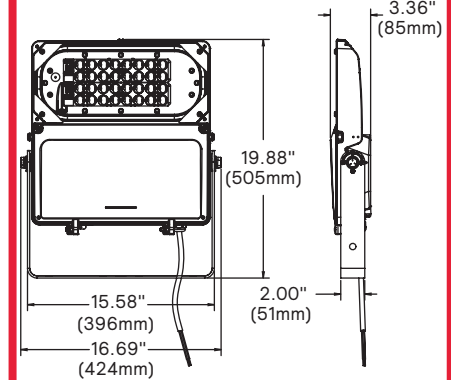
**SFC**

Luminaire weight: 19 lbs (8.6 kg)



**SLF**

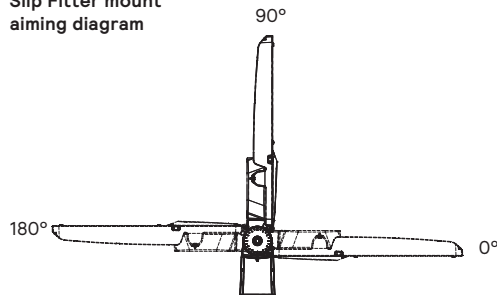
Luminaire weight: 19 lbs (8.6 kg)



**YOK**

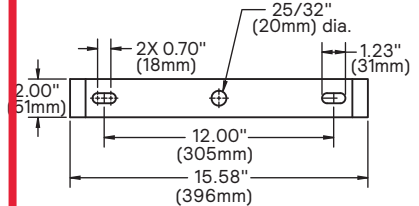
Luminaire weight: 20 lbs (9.1 kg)

**Slip Fitter mount  
aiming diagram**

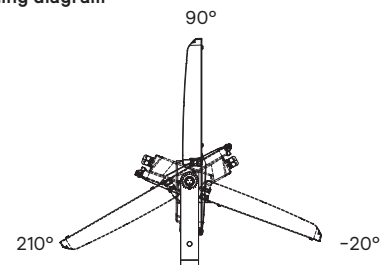


7-pin NEMA Twist Lock Receptacle option  
Aiming limited to 0-90° per ANSI C136.10

**Yoke mount  
detail**



**Yoke mount  
aiming diagram**



7-pin NEMA Twist Lock Receptacle option  
Aiming limited to 0-90° per ANSI C136.10

**90 degree  
mounting  
(perpendicular  
to sign face)**

Mounting	Effective Projected Area (EPA-ft <sup>2</sup> )		
	Single: 0° Aim	Single: 45° Aim	Single: 90° Aim
SFC or SLF	0.192	1.144	2.231
YOK	0.201	1.087	2.038

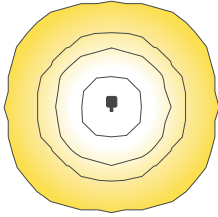


# FLDS DuraForm

## Small floodlight

### Optical Distribution Diagrams

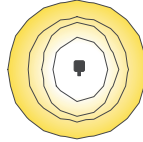
**SPT Spot 12° Round (NEMA 2x2)**



20' or 6.10m setback, 0° tilt

Applications include: flags, tighter spotlighting, accenting, taller columns, tighter scalloping, taller structures / monuments / statues, tallest trees.

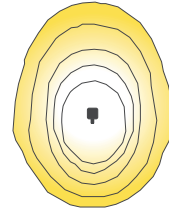
**RSP Rectangular Spot (NEMA 3x3)**



15' or 4.57m setback, 0° tilt

Applications include: flags, spotlighting, accenting, columns, scalloping, structures / monuments / statues, taller trees.

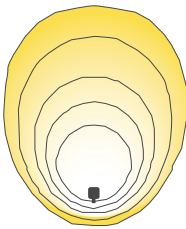
**NFL Narrow Flood (NEMA 4x4)**



30' or 9.14m mounting height, 45° tilt

Applications include: area lighting, storage yards, transportation terminals, trailer lots, utility sub-stations, prison yards, ports, industrial sites, facades, structures / monuments / statues.

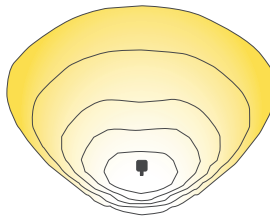
**MFL Medium Flood (NEMA 5x5)**



30' or 9.14m mounting height, 45° tilt

Applications include: area lighting, storage yards, transportation terminals, trailer lots, utility sub-stations, prison yards, ports, industrial sites, fence perimeters and borders, facades, structures / monuments / statues.

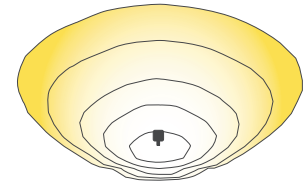
**WFL Wide Flood (NEMA 6x6)**



30' or 9.14m mounting height, 45° tilt

Applications include: area lighting, storage yards, transportation terminals, trailer lots, utility sub-stations, prison yards, ports, industrial sites, fence perimeters and borders, large facades.

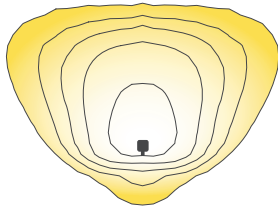
**7x6 (NEMA 7x6)**



30' or 9.14m mounting height, 45° tilt

Applications include: area lighting, utility sub-stations, fence perimeters and borders, large and taller facades, wall grazing, signs (especially larger and taller ones).

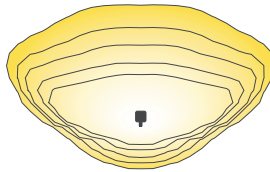
**A33 Asymmetric 33° Flood (NEMA 6x5)**



30' or 9.14m mounting height, 30° tilt

Applications include: area lighting, storage yards, transportation terminals, utility sub-stations, large facades, wall washing, large structures / monuments / statues, trees with large canopies.

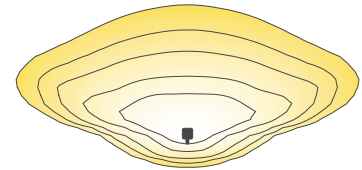
**RMF Rectangular Medium Flood (NEMA 7x4)**



10' or 3.05m setback, 30° tilt

Applications include: building entrances and exits, security lighting, checkpoints and inspection stations, signs, ornamental trees and shrubs

**RNF Rectangular Narrow Flood (NEMA 7x5)**



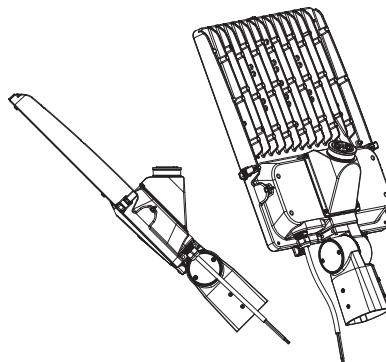
15' or 4.57m setback, 45° tilt

Applications include: facades, wall grazing, signs (especially larger and more rectangular)

### Additional drawings

**7-pin Twist Lock Receptacle Option**

Aiming limited to 0-90° per ANSI C136.10  
(NOTE: available on ALL mountings - SFC shown for illustrative purposes only)



# FLDS DuraForm

## Small floodlight

### LED Wattage and Lumen Values – 3000K

Ordering Code	Color Temp.	Average System Watts	Wattage Label*	SPT		NFL		MFL		WFL		7x6	
				Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)
FLDS-A01-730	3000	29	30	3,469	120	3,296	114	3,436	119	3,435	119	3,341	116
FLDS-A02-730	3000	43	40	4,939	115	4,693	109	4,893	114	4,892	114	4,757	111
FLDS-A03-730	3000	56	60	6,169	109	5,862	104	6,110	108	6,109	108	5,941	105
FLDS-A04-730	3000	53	50	6,805	129	6,466	123	6,741	128	6,740	128	6,555	125
FLDS-A05-730	3000	82	80	9,846	120	9,356	114	9,753	119	9,751	119	9,483	115
FLDS-A06-730	3000	109	110	12,217	112	11,608	106	12,101	111	12,099	111	11,767	108

### LED Wattage and Lumen Values – 4000K & 5000K

Ordering Code	Color Temp.	Average System Watts	Wattage Label*	SPT		NFL		MFL		WFL		7x6	
				Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)
FLDS-A01-740 and -750	4000 and 5000	29	30	3,798	131	3,609	125	3,762	130	3,761	130	3,658	127
FLDS-A02-740 and -750	4000 and 5000	43	40	5,400	126	5,131	120	5,349	125	5,348	125	5,201	121
FLDS-A03-740 and -750	4000 and 5000	56	60	6,751	120	6,414	114	6,687	119	6,686	119	6,502	115
FLDS-A04-740 and -750	4000 and 5000	53	50	7,442	141	7,071	134	7,372	140	7,370	140	7,168	136
FLDS-A05-740 and -750	4000 and 5000	82	80	10,768	131	10,232	124	10,666	130	10,664	130	10,371	126
FLDS-A06-740 and -750	4000 and 5000	109	110	13,359	122	12,693	116	13,232	121	13,230	121	12,866	118

### LED Wattage and Lumen Values – 3000K

Ordering Code	Color Temp.	Average System Watts	Wattage Label*	RSP		RMF		RNF		A33	
				Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)
FLDS-A01-730	3000	29	30	3,137	109	3,128	108	3,179	110	3,219	111
FLDS-A02-730	3000	43	40	4,465	104	4,453	104	4,525	105	4,581	107
FLDS-A03-730	3000	56	60	5,575	99	5,560	99	5,649	100	5,720	101
FLDS-A04-730	3000	53	50	6,151	117	6,134	117	6,233	118	6,311	120
FLDS-A05-730	3000	82	80	8,902	108	8,878	108	9,021	110	9,133	111
FLDS-A06-730	3000	109	110	11,044	101	11,014	101	11,191	102	11,331	104

### LED Wattage and Lumen Values – 4000K & 5000K

Ordering Code	Color Temp.	Average System Watts	Wattage Label*	RSP		RMF		RNF		A33	
				Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)
FLDS-A01-740 and -750	4000 and 5000	29	30	3,429	119	3,419	118	3,475	120	3,518	122
FLDS-A02-740 and -750	4000 and 5000	43	40	4,880	114	4,867	113	4,946	115	5,007	117
FLDS-A03-740 and -750	4000 and 5000	56	60	6,093	108	6,077	108	6,174	109	6,252	111
FLDS-A04-740 and -750	4000 and 5000	53	50	6,723	128	6,704	127	6,813	130	6,898	131
FLDS-A05-740 and -750	4000 and 5000	82	80	9,730	118	9,704	118	9,860	120	9,982	121
FLDS-A06-740 and -750	4000 and 5000	109	110	12,071	110	12,038	110	12,232	112	12,385	113

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

NOTE: Some data may be scaled based on tests of similar (but not identical) luminaires. Contact factory for configurations not shown. IES files available with VSR Visor or GSH Glare Shield Accessories.

\*Wattage Label per ANSI C136.15-2015. Consult factory for other labelling needs.

### Field Adjustable Wattage Selector (FAWS) Multiplier Chart

FAWS Position	Typical Delivered Lumens Multiplier	Typical System Wattage Multiplier
1	0.31	0.28
2	0.53	0.50
3	0.62	0.58
4	0.70	0.67
5	0.78	0.75
6	0.83	0.81
7	0.89	0.87
8	0.92	0.91
9	0.96	0.95
10	1.00	1.00

Note: Actual performance may vary due to LED and driver tolerances.

### Predicted Lumen Depreciation Data

Ambient Temperature °C	Drive current	Calculated L70 Hours	L70 per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	up to 1050 mA	>100,000 hours	>36,000 hours	>98%

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L70 is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L70 hours limited to 6 times actual LED test hours

# FLDS DuraForm

## Small floodlight

### Specifications

#### Housing and Door

Made of low copper die cast Aluminum alloy (A360) for high resistance to corrosion. A hinged removable door opens to provide access to electronic components and to a terminal block. Door is secured to prevent accidental dropping or disengagement. Captive flanged hex head screws with slotted drive provide access to electrical components and are compatible with 1/4" flat blade screwdriver.

#### Mounting

Up tilt aiming and down tilt aiming possible with all of the mounting options. Top edge of casting includes aiming sight for daytime aiming (see instructions). cULus Listed as suitable for mounting within 4' or 1.2m of the ground.

**SFC:** Adjustable Slip Fitter with 6' (1.83m) of AWG 16-3 SEOWW cord (or AWG 16-5 if DLEA or WLDC external control options are selected) exiting the luminaire through IP66 rated cord seal. Customer-specified length or different cord type available - contact factory. Slip Fitter made of low copper die cast Aluminum alloy (A360) for high resistance to corrosion, adjustable knuckle has 5 degree aiming increments with integral interlocking teeth and bolt to secure aiming in place, integral cast-in aiming marks. Fits on a range of tenons from 2-3/8" to 3" (60.3mm to 76.2mm) O.D.

**SLF:** Same Adjustable Slip Fitter as SFC but with AWG 16-3 wires (or AWG 16-5 if DLEA or WLDC external control options are selected) exiting through the Slip Fitter. Integral splice compartment for field wiring with cULus Wet Location rated access cover with seal around entire perimeter.

**YOK:** Adjustable Yoke with 6' (1.83m) of AWG 16-3 SEOWW cord (or AWG 16-5 if DLEA or WLDC external control options are selected) exiting the luminaire through IP66 rated cord seal. Customer-specified length or different cord type available - contact factory. Yoke made of high strength steel, galvanized and painted for high resistance to corrosion, fully adjustable (no minimum aiming increments) with bolts to secure aiming in place, integral aiming marks.

#### IP Rating

IP66 rated luminaire in all aiming positions including up tilt aiming per ANSI C136.37 with seal around entire perimeter of the lens and seal around entire perimeter of the electrical / driver compartment.

#### Light Engine

Composed of 5 main components: Heat Sink, Lens, LED Module, Optical System, Driver. Electrical components are RoHS compliant. LEDs tested by ISO 17025 2005 accredited lab in accordance with IESNA LM-80 guidelines in compliance with EPA ENERGY STAR, extrapolations in accordance with IESNA TM-21. Metal core board ensures greater heat transfer and longer lifespan.

**Heat Sink:** Housing acts as heat sink, designed to ensure high efficacy and superior cooling by natural convection air flow always close to LEDs and driver(s) optimizing their efficiency and life. Product does not use any cooling device with moving parts (only passive cooling).

**Lens:** Made of soda-lime clear tempered glass flat lens, mechanically assembled and sealed onto the housing heat sink forming IP66 seal. NOTE: Lens is not designed to be removable (if removed impacts IP66 seal).

**IK Rating:** IK09 high impact resistance rating for luminaire lens.

**LED Module:** Composed of high performance white LEDs. Color temperature as per ANSI/NEMA bin 3000K nominal (3045K +/-175K) or 4000K nominal (3985K +/- 275K), both CRI 70 min. 75 Typical.

**Optical System:** Composed of high performance UV stabilized optical grade polymer refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. Performance shall be tested per LM-63, LM-79 and TM-15 (IESNA) certifying its photometric performance.

**Driver:** High power factor of 90% min. Electronic driver, operating range 50/60 Hz. Auto adjusting universal voltage input from 120 to 277 or 347 to 480 VAC rated for both application line to line or line to neutral, Class I, THD of 20% max. The current supplying the LEDs will be reduced by the driver if the driver experiences internal overheating as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction. Standard built in driver surge protection of 2.5kV (min). Driver enables setting LED drive current to meet your specific total wattage consumption, lumen output and/or efficacy needs - ETO Specials, contact factory.

#### Integrated Features

Please note that these integrated features always come with this luminaire standard at no additional cost.

0-10V dimming driver included as standard, dimming leads pre-wired to Dimming Controls option except when DLEA or WLDC external controls options are selected.

**SP1:** Surge protection device tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground. Enhanced surge protection device SP2 20kV/10kA available as an option. Surge protection device wired in parallel so that if it fails open the luminaire will remain lit/ powered on.

**Service Tag:** Each individual luminaire is uniquely identifiable, thanks to the Service tag application. With a simple scan of a QR code you gain instant access to the luminaire configuration, making installation and maintenance operations faster and easier, no matter what stage of the luminaire's lifetime. Just download the app and register your product right away.

For more details visit: [philips.com/servicetag](http://philips.com/servicetag)

**Terminal Block:** 3-position. Accepts wires from #2AWG to #14AWG, rated 600V, 85A.

**Wiring Cover:** Cosmetic cover over LED board wiring. Painted same finish to match luminaire.

#### Controls Options

Please note that other controls can be integrated as ETO Specials - contact factory.

**DALI:** Pre-set driver compatible with the DALI Digitally Addressable Lighting Interface control system.

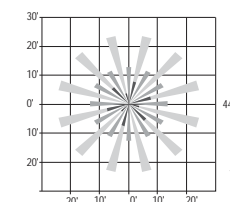
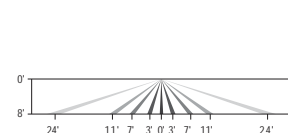
**DLEA:** 0-10V dimming driver's dimming wires are externally accessible for connecting dimming controls by others.

**FAWS:** Field Adjustable Wattage Selector, pre-set to the highest position, can be easily switched in the field to the required position. This reduces total luminaire wattage consumption and reduces the light level - see the FAWS multiplier chart for more details.

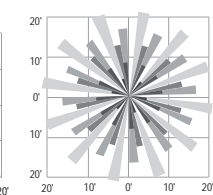
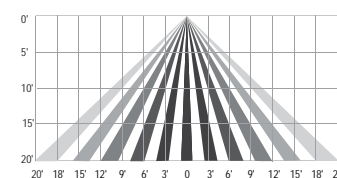
*Note: It is not recommended to use FAWS with other dimming or controls; if you do, set the switch to position 10 (maximum output) to enable the other dimming or controls. Switching FAWS to any position other than 10 will disable the other dimming or controls.*

**WLDC:** Optional wireless remote controller ready to be connected to a Limelight by Lutron system which includes gateways, commissioning, etc - contact Lutron for these system elements. Available with various lenses depending upon mounting height. Also available with remote pod accessory to extend motion response or add other luminaires (contact factory for more information). Other options such as -LRF-INT internal RF only radio module or -LPH-EXT external wireless controller available as ETO Specials - contact factory.

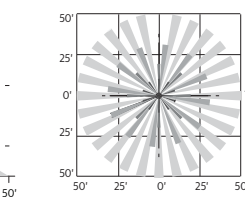
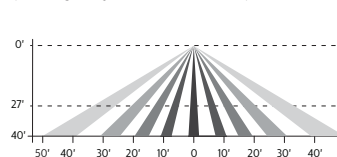
**with LLCR2 #2 lens**  
(Limelight by Lutron -LPL-INT)



**with LLCR3 #3 lens**  
(Limelight by Lutron -LPM-INT)



**with LLCR7 #7 lens**  
(Limelight by Lutron -LPH-INT)



# FLDS DuraForm

## Small floodlight

### Specifications (continued)

#### Luminaire Options

**SP2:** 20kV / 10kA surge protection device that provides extra protection beyond the standard SP1 10kV/10kA level. Surge protection device wired in parallel so that if it fails open the luminaire will remain lit/powerd on.

**TT7\*:** Tool Less orientable twist-lock receptacle with 7 pins enabling dimming, can be used with a twist-lock photoelectric cell or a shorting cap.

*\* Use of photoelectric cell or shorting cap is required to ensure proper illumination.*

**API:** Factory Installed NEMA label, ANSI C136.15-2015 compliant, identifies LED source and wattage, affixed to luminaire at factory. Consult factory for other labeling needs.

**FS1:** Fusing, single (120, 277 or 347VAC) installed in electrical compartment

**FS2:** Fusing, double (208, 240 or 480VAC) installed in electrical compartment

**FS3:** Fusing, Canadian Double Pull (208, 240 or 480VAC) installed in electrical compartment.

**TOL:** Tool Free access 316 stainless steel latches provide a high resistance to corrosion. Latches operable while wearing protective electrical gloves.

**VPA:** Vandal Proof hardware to prevent access to internal components, 316 stainless steel, complete with Ceramic primer seal to reduce seizing of the parts, also offers a high resistance to corrosion. Bit included with luminaire.

**PCB:** Photocell Button (a.k.a. button photoeye).

#### Luminaire Useful Life

Refer to IES files for energy consumption and delivered lumens for each option. Based on ISTMT in situ thermal testing in accordance with UL1598 and UL8750, Signify System Reliability Tool, Advance driver data and LED manufacturer LM-80/TM-21 data, expected to reach 100,000 + hours with  $L_{70}$  lumen maintenance @ 25°C. Luminaire Useful Life accounts for LED lumen maintenance AND all of these additional factors including: LED life, driver life, PCB substrate, solder joints, on/off cycles, burning hours and corrosion.

#### Wiring

#2-#14 AWG wires from the primary circuit, located inside the housing. Due to the inrush current that occurs with electronic drivers, recommend using a time-delay or slow blow fuse to avoid unwanted fuse blowing (false tripping) that can occur with normal or fast acting fuses.

#### Hardware and Seals

All exposed hardware shall be high-grade 316 stainless steel and ceramic coated for superior corrosion resistance and to prevent galvanic corrosion, and, shall be captive. All seals and sealing devices are made and/or lined with EPDM and/or silicone and/or rubber.

#### Finish

Color in accordance with the AAMA 2603 standard. Application of polyester powder coat paint (4 mils/100 microns) with  $\pm 1$  mils/24 microns of tolerance. The Thermosetting resins provides a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and humidity proof in accordance with

the ASTM D2247 standard. The finish achieves a minimum scribe rating of 8 per ASTM D1654 after a minimum of 5000 hours salt spray in accordance with testing performed per ASTM B117 standard.

#### LED Products Manufacturing Standard

The electronic components sensitive to electrostatic discharge (ESD) such as light emitting diodes (LEDs) are assembled in compliance with IEC61340-5-1 and ANSI/ESD S20.20 standards so as to eliminate ESD events that could decrease the useful life of the product.

#### Vibration Resistance

Luminaire meets the ANSI C136.31-2018 specifications, tested by independent lab over 100,000 cycles in all three axes: Bridge/Overpass for both Slip Fitters and for Yoke.

#### Certifications and Compliance

cULus Listed for Canada and USA, per UL1598 and UL8750, including suitable for mounting within 4' or 1.2m of the ground. Configurations are DesignLights Consortium qualified, consult DLC QPL Qualified Products List for more details. Luminaire complies with or exceeds the following ANSI C136 standards: .2, .3, .10, .15, .21, .22, .24, .25, .31, .32, .37, .41. Entire luminaire is rated and cULus Elevated Ambient Listed for operation in ambient temperature of -40°C (-40°F) up to +50°C (+122°F) - contact factory if +50°C ambient with DALI is required. Controls options enable compliance with Outdoor lighting energy codes including ASHRAE 90.1, California Title 24, and IECC.

#### Limited Warranty

10-year limited warranty.

See [signify.com/warranties](http://signify.com/warranties) for details and restrictions.

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# GN1LED13YRAC11A

## Woods Hollow Campground F2-Gooseneck LED Sign Luminaire for Identification Sign



13 & 26 Watt Angled Cone Shade LED Gooseneck Luminaire designed to match the architecture of Main Street storefronts and building perimeters. LED Gooseneck Cone Shade with 24" Goose Arm Style 1.

Color: Bronze

Weight: 13.0 lbs

**Project:**

Woods Hollow

**Type:**

**Prepared By:**

EDP LLP

**Date:**

12/06/2021

**Driver Info**

Type	Constant Current
120V	0.3A
208V	0.3A
240V	0.3A
277V	0.15A
Input Watts	15.6W

**LED Info**

Watts	13W
Color Temp	3000K (Warm)
Color Accuracy	87 CRI
L70 Lifespan	100,000 Hours
Lumens	344
Efficacy	22.1 lm/W

### Technical Specifications

**Compliance**

**UL Listed:**

Suitable for wet locations. Suitable for mounting within 1.2m (4ft) of the ground.

**IESNA LM-79 & IESNA LM-80 Testing:**

RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.

**Performance**

**Lifespan:**

100,000-Hour LED lifespan based on IES LM-80 results and TM-21 calculations

**Construction**

**Fixture:**

The GN1LED13YRAC11A comes with the GOOSE1A Arm

**Housing:**

Precision die-cast aluminum housing, lens frame and mounting plate

**Gaskets:**

High-temperature Silicone

**Mounting:**

Heavy-duty mounting arm with "O" ring seal and stainless steel screw

**Cold Weather Starting:**

Minimum starting temperature is -40°C (-40°F)

**Shades:**

11" Angled Cone Shade offered

**Finish:**

Formulated for high durability and long-lasting color

**Green Technology:**

Mercury and UV free. RoHS-compliant components.

**LED Characteristics**

**LED:**

Single multi-chip, 13W high-output, long-life LED

**Color Stability:**

LED color temperature is warranted to shift no more than 200K in color temperature over a 5-year period

**Color Uniformity:**

RAB's range of Correlated Color Temperature follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2017.



## Technical Specifications (continued)

### Electrical

#### Driver:

Constant Current, Class 2, 100-277V, 50/60 Hz, 100-240VAC 0.3 - 0.15A, 277VAC 0.15A, THD ≤20%, PF 97.5%.

#### Surge Protection:

4kV

### Other

#### Patents:

The design of the Gooseneck is protected by patents pending in US, Canada, China and Taiwan

#### Warranty:

RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish. RAB's warranty is subject to all terms and conditions found at [rablighting.com/warranty](http://rablighting.com/warranty).

#### Equivalency:

Equivalent to 75W Incandescent, 50W Metal Halide or 18W CFL

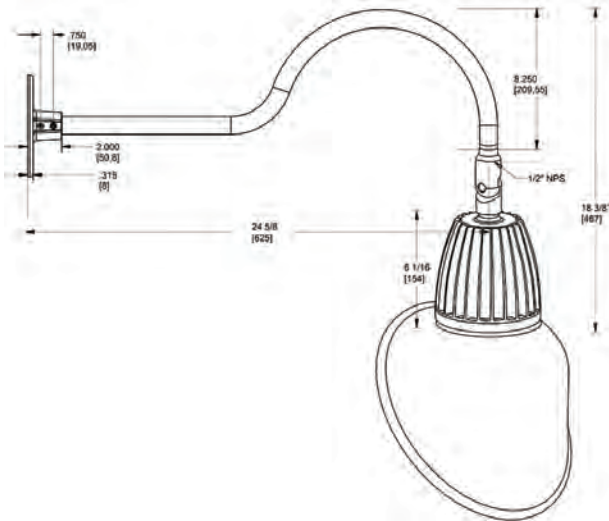
#### Lead Time:

12 - 14 weeks standard shipping.

#### Buy American Act Compliance:

RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.

## Dimensions



## Features

- Adjustable 45° swivel joint
- Superior heat sink
- Die-cast aluminum housing
- 5-Year, No-Compromise Warranty

## Ordering Matrix

Family	Wattage	Color Temp	Reflector	Shade	ShadeSize	Finish
GN1LED	13	Y	R	AC	11	A

- 13 = 13W**   **Y = 3000K (Warm)**   **Blank = Flood**   **AC = Angled Cone**   **11 = 11"**  
**26 = 26W**   **N = 4000K (Neutral)**   **R = Rectangular**   **Blank = 15"**
- B = Black**
  - W = White**
  - A = Bronze**
  - S = Silver**
  - G = Hunter Green**
  - YL = Yellow**
  - LB = Light Blue**
  - BL = Royal Blue**
  - BWN = Brown**
  - I = Ivory**
  - R = Red**