



**Hadco Westbrooke pendant luminaires** offer a simple and modern look but still traditional, providing style and performance to work in several urban applications including residential streets, city streets, campuses, parking lots and retail centers. These pendants are now available with comfort optics, providing a low glare solution for pedestrian applications.

Project: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 Cat.No: \_\_\_\_\_  
 Type: \_\_\_\_\_  
 Lamps: \_\_\_\_\_ Qty: \_\_\_\_\_  
 Notes: \_\_\_\_\_

### Ordering guide

**Example:** CXF14-32-G3-A-2-730-A-3-N-SP1-N

Model	LEDs	Generation <b>G3</b>	Finish	Distribution	Color Temp.	Voltage	Drive current
<b>CXF14</b> Westbrooke	<b>32'</b> 32 LEDs	<b>G3</b> Gen 3	<b>A</b> Black	<b>2</b> Type 2	<b>730<sup>3</sup></b> Warm 3000K	<b>A</b> 120-277 VAC	<b>3</b> 350mA
<b>CXF15</b> Westbrooke	<b>48</b> 48 LEDs		<b>B</b> White	<b>2H</b> Type 2 w/HSS	<b>740</b> Neutral 4000K	<b>B<sup>1,2</sup></b> 347-480 VAC	<b>5</b> 530mA
	<b>64</b> 64 LEDs		<b>G</b> Verde Green	<b>3</b> Type 3			<b>7</b> 700mA
	<b>80</b> 80 LEDs		<b>H</b> Bronze	<b>3H</b> Type 3 w/HSS			
			<b>I</b> Silver Gray	<b>3W</b> Type 3 Wide			
			<b>J</b> Dark Green	<b>3WH</b> Type 3 Wide w/HSS			
				<b>4</b> Type 4			
				<b>5</b> Type 5			
<b>Driver Options</b>				<b>Surge Suppression</b>	<b>Spinning</b>		
<b>DA</b>	4 Hrs 25% Reduction			<b>SP1</b> Parallel 10kV standard <b>SP2</b> Parallel 20kV	<b>F</b> Fluted spinning <b>N</b> No options		
<b>DB</b>	4 Hrs 50% Reduction						
<b>DC</b>	4 Hrs 75% Reduction						
<b>DD</b>	6 Hrs 25% Reduction						
<b>DE</b>	6 Hrs 50% Reduction						
<b>DF</b>	6 Hrs 75% Reduction						
<b>DG</b>	8 Hrs 25% Reduction						
<b>DH</b>	8 Hrs 50% Reduction						
<b>DJ</b>	8 Hrs 75% Reduction						
<b>DALI</b>	Compatible with DALI						
<b>S</b>	FAWS Filed adjustable wattage selector						
<b>SRD<sup>2</sup></b>	Sensor ready driver, standard configuration						
<b>SRD1<sup>2</sup></b>	Sensor ready driver, alternate configuration						
<b>N</b>	No dimming						

1. 32LED at 350mA and 530mA are not compatible with 347-480V.  
 2. 347-480V not compatible with optional dimming or optional programming.  
 3. Only 3000K CCT and warmer/below are IDA International DarkSky Approved.



**DARKSKY APPROVED**  
 Reduces light pollution  
 Certified by DarkSky.org



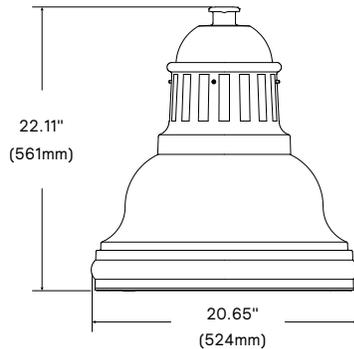
# CXF14/CXF15 Westbrooke

## Pendant

### Dimensions

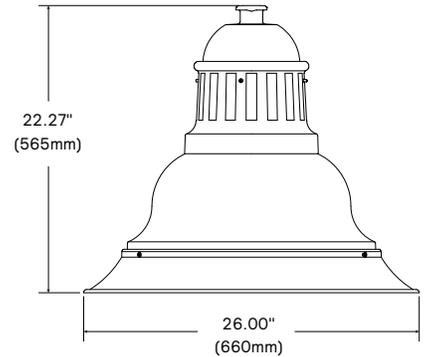
#### CXF14

<b>Width</b>	21" diameter
<b>Height</b>	22-5/16"
<b>EPA</b>	1.6 sq. ft
<b>Weight (maximum)</b>	38 lbs (17.24 kg)



#### CXF15

<b>Width</b>	26" diameter
<b>Height</b>	22-5/16"
<b>EPA</b>	1.6 sq. ft
<b>Weight (maximum)</b>	38 lbs (17.24 kg)



Note: Figures are shown with optional fluted spinning

### 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	Driver mA	Calculated L70 Hours	L70 per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	2100 mA	>100,000 hours	>60,000 hours	>87%

### Field Adjustable Wattage (FAWS) Multiplier Chart

FAWS Position	Typical Delivered Lumens Multiplier	Typical System Wattage
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: Typical value accuracy +/- 5%

# CXF14/CXF15 Westbrooke

## Pendant

### LED Wattage and Lumen Values: Westbrooke CXF14/CXF15

Flat Glass Lens 3000K 32 LEDs					Type 2			Type 3			Type 3W		
Ordering Code	LED qty	LED Current (mA)	Average System Watts	Color Temp.	Lumens output (LM)	BUG Rating	Efficacy (LM/W)	Lumens output (LM)	BUG Rating	Efficacy (LM/W)	Lumens output (LM)	BUG Rating	Efficacy (LM/W)
CXF32-G3-x-730-3	32	350	35	3000	4715	B1-U0-G1	134	4601	B1-U0-G1	131	4521	B1-U0-G1	128
CXF32-G3-x-730-5	32	530	51	3000	6750	B2-U0-G1	132	6587	B1-U0-G1	129	6473	B1-U0-G2	126
CXF32-G3-x-730-7	32	700	71	3000	8405	B2-U0-G1	119	8203	B2-U0-G2	116	8061	B2-U0-G2	114
Flat Glass Lens 3000K 32 LEDs (continued)					Type 4			Type 5					
CXF32-G3-x-730-3	32	350	35	3000	4650	B1-U0-G1	132	4516	B3-U0-G1	128			
CXF32-G3-x-730-5	32	530	51	3000	6657	B1-U0-G2	130	6465	B3-U0-G1	126			
CXF32-G3-x-730-7	32	700	71	3000	8290	B2-U0-G2	118	8051	B3-U0-G2	114			

Flat Glass Lens 3000K 48 LEDs					Type 2			Type 3			Type 3W		
Ordering Code	LED qty	LED Current (mA)	Average System Watts	Color Temp.	Lumens output (LM)	BUG Rating	Efficacy (LM/W)	Lumens output (LM)	BUG Rating	Efficacy (LM/W)	Lumens output (LM)	BUG Rating	Efficacy (LM/W)
CXF48-G3-x-730-3	48	350	54	3000	6870	B2-U0-G1	127	6705	B1-U0-G1	124	6589	B1-U0-G2	122
CXF48-G3-x-730-5	48	530	80	3000	9836	B2-U0-G2	123	9599	B2-U0-G2	120	9433	B2-U0-G2	118
CXF48-G3-x-730-7	48	700	105	3000	12249	B3-U0-G2	117	11954	B2-U0-G2	114	11747	B2-U0-G2	112
Flat Glass Lens 3000K 48 LEDs (continued)					Type 4			Type 5					
CXF48-G3-x-730-3	48	350	54	3000	6776	B1-U0-G2	125	6580	B3-U0-G1	122			
CXF48-G3-x-730-5	48	530	80	3000	9701	B2-U0-G2	121	9421	B3-U0-G2	118			
CXF48-G3-x-730-7	48	700	105	3000	12081	B2-U0-G2	115	11732	B4-U0-G2	112			

Flat Glass Lens 3000K 64 LEDs					Type 2			Type 3			Type 3W		
Ordering Code	LED qty	LED Current (mA)	Average System Watts	Color Temp.	Lumens output (LM)	BUG Rating	Efficacy (LM/W)	Lumens output (LM)	BUG Rating	Efficacy (LM/W)	Lumens output (LM)	BUG Rating	Efficacy (LM/W)
CXF64-G3-x-730-3	64	350	68	3000	7602	B2-U0-G1	112	7418	B2-U0-G1	109	7290	B1-U0-G2	107
CXF64-G3-x-730-5	64	530	99	3000	10882	B2-U0-G2	110	10620	B2-U0-G2	107	10437	B2-U0-G2	105
CXF64-G3-x-730-7	64	700	114	3000	13552	B3-U0-G2	119	13226	B2-U0-G2	116	12997	B2-U0-G2	114
Flat Glass Lens 3000K 64 LEDs (continued)					Type 4			Type 5					
CXF64-G3-x-730-3	64	350	68	3000	7497	B2-U0-G2	110	7281	B3-U0-G2	107			
CXF64-G3-x-730-5	64	530	99	3000	10733	B2-U0-G2	108	10423	B4-U0-G2	105			
CXF64-G3-x-730-7	64	700	114	3000	13367	B2-U0-G2	117	12980	B4-U0-G2	114			

Flat Glass Lens 3000K 80 LEDs					Type 2			Type 3			Type 3W		
Ordering Code	LED qty	LED Current (mA)	Average System Watts	Color Temp.	Lumens output (LM)	BUG Rating	Efficacy (LM/W)	Lumens output (LM)	BUG Rating	Efficacy (LM/W)	Lumens output (LM)	BUG Rating	Efficacy (LM/W)
CXF80-G3-x-730-3	80	350	87	3000	10695	B2-U0-G2	123	10438	B2-U0-G2	120	10257	B2-U0-G2	118
CXF80-G3-x-730-5	80	530	126	3000	15312	B3-U0-G2	121	14943	B3-U0-G2	118	14684	B2-U0-G2	116
CXF80-G3-x-730-7	80	700	168	3000	19068	B3-U0-G2	113	18609	B3-U0-G2	111	18287	B3-U0-G3	109
Flat Glass Lens 3000K 80 LEDs (continued)					Type 4			Type 5					
CXF80-G3-x-730-3	80	350	87	3000	10549	B2-U0-G2	121	10244	B4-U0-G2	118			
CXF80-G3-x-730-5	80	530	126	3000	15102	B3-U0-G2	120	14665	B4-U0-G2	116			
CXF80-G3-x-730-7	80	700	168	3000	18807	B3-U0-G3	112	18263	B4-U0-G2	109			

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.

# CXF14/CXF15 Westbrooke

## Pendant

### LED Wattage and Lumen Values: Westbrooke CXF14/CXF15

Flat Glass Lens 4000K 32 LEDs					Type 2			Type 3			Type 3W		
Ordering Code	LED qty	LED Current (mA)	Average System Watts	Color Temp.	Lumens output (LM)	BUG Rating	Efficacy (LM/W)	Lumens output (LM)	BUG Rating	Efficacy (LM/W)	Lumens output (LM)	BUG Rating	Efficacy (LM/W)
CXF32-G3-x-740-3	32	350	35	4000	4950	B1-U0-G1	141	4831	B1-U0-G1	131	4747	B1-U0-G1	135
CXF32-G3-x-740-5	32	530	51	4000	7087	B2-U0-G1	138	6916	B1-U0-G1	129	6797	B1-U0-G2	133
CXF32-G3-x-740-7	32	700	71	4000	8826	B2-U0-G1	125	8613	B2-U0-G2	116	8464	B2-U0-G2	120
Flat Glass Lens 4000K 32 LEDs (continued)					Type 4			Type 5					
CXF32-G3-x-740-3	32	350	35	4000	4882	B1-U0-G1	139	4741	B3-U0-G1	135			
CXF32-G3-x-740-5	32	530	51	4000	6990	B1-U0-G2	137	6788	B3-U0-G1	133			
CXF32-G3-x-740-7	32	700	71	4000	8705	B2-U0-G2	123	8453	B3-U0-G2	120			

Flat Glass Lens 4000K 48 LEDs					Type 2			Type 3			Type 3W		
Ordering Code	LED qty	LED Current (mA)	Average System Watts	Color Temp.	Lumens output (LM)	BUG Rating	Efficacy (LM/W)	Lumens output (LM)	BUG Rating	Efficacy (LM/W)	Lumens output (LM)	BUG Rating	Efficacy (LM/W)
CXF48-G3-x-740-3	48	350	54	4000	7214	B2-U0-G1	134	7040	B2-U0-G1	130	6918	B1-U0-G2	128
CXF48-G3-x-740-5	48	530	80	4000	10328	B2-U0-G2	129	10079	B2-U0-G2	126	9904	B2-U0-G2	124
CXF48-G3-x-740-7	48	700	105	4000	12861	B3-U0-G2	122	12552	B2-U0-G2	120	12334	B2-U0-G2	117
Flat Glass Lens 4000K 48 LEDs (continued)					Type 4			Type 5					
CXF48-G3-x-740-3	48	350	54	4000	7115	B1-U0-G2	132	6910	B3-U0-G1	128			
CXF48-G3-x-740-5	48	530	80	4000	10186	B2-U0-G2	127	9892	B4-U0-G2	124			
CXF48-G3-x-740-7	48	700	105	4000	12685	B2-U0-G2	121	12319	B4-U0-G2	117			

Flat Glass Lens 4000K 64 LEDs					Type 2			Type 3			Type 3W		
Ordering Code	LED qty	LED Current (mA)	Average System Watts	Color Temp.	Lumens output (LM)	BUG Rating	Efficacy (LM/W)	Lumens output (LM)	BUG Rating	Efficacy (LM/W)	Lumens output (LM)	BUG Rating	Efficacy (LM/W)
CXF64-G3-x-740-3	64	350	68	4000	7982	B2-U0-G1	117	7789	B2-U0-G2	114	7655	B1-U0-G2	112
CXF64-G3-x-740-5	64	530	99	4000	11427	B3-U0-G2	115	11151	B2-U0-G2	112	10958	B2-U0-G2	111
CXF64-G3-x-740-7	64	700	114	4000	14230	B3-U0-G2	125	13887	B3-U0-G2	122	13647	B2-U0-G2	120
Flat Glass Lens 4000K 64 LEDs (continued)					Type 4			Type 5					
CXF64-G3-x-740-3	64	350	68	4000	7872	B2-U0-G2	116	7645	B3-U0-G2	112			
CXF64-G3-x-740-5	64	530	99	4000	11270	B2-U0-G2	114	10944	B4-U0-G2	110			
CXF64-G3-x-740-7	64	700	114	4000	14035	B2-U0-G2	123	13629	B4-U0-G2	120			

Flat Glass Lens 4000K 80 LEDs					Type 2			Type 3			Type 3W		
Ordering Code	LED qty	LED Current (mA)	Average System Watts	Color Temp.	Lumens output (LM)	BUG Rating	Efficacy (LM/W)	Lumens output (LM)	BUG Rating	Efficacy (LM/W)	Lumens output (LM)	BUG Rating	Efficacy (LM/W)
CXF80-G3-x-740-3	80	350	87	4000	11230	B3-U0-G2	129	10960	B2-U0-G2	126	10770	B2-U0-G2	124
CXF80-G3-x-740-5	80	530	126	4000	16077	B3-U0-G2	127	15690	B3-U0-G2	124	15418	B2-U0-G2	122
CXF80-G3-x-740-7	80	700	168	4000	20022	B3-U0-G2	119	19539	B3-U0-G2	116	19201	B3-U0-G3	114
Flat Glass Lens 4000K 80 LEDs (continued)					Type 4			Type 5					
CXF80-G3-x-740-3	80	350	87	4000	11076	B2-U0-G2	127	10756	B4-U0-G2	123			
CXF80-G3-x-740-5	80	530	126	4000	15857	B3-U0-G2	126	15399	B4-U0-G2	122			
CXF80-G3-x-740-7	80	700	168	4000	19747	B3-U0-G3	117	19177	B4-U0-G2	114			

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.

# CXF14/CXF15 Westbrooke

## Pendant

### Specifications

#### Housing

In a round shape, this housing is constructed of low copper die-cast aluminum and 0.090" thick spun aluminum. All non-ferrous fasteners prevent corrosion and ensure longer life.

#### Tool-less Access

The hinged lens frame is cast aluminum with a stainless steel spring latch for tool-less access

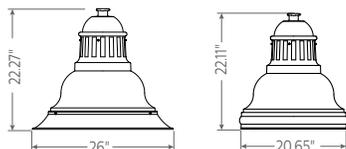
#### Mounting

Top arm mount - if new installation or as needed = choose one of the Bracket Arm Adapters or one of the Hanging Fixtures Mounting Arms:

##### Bracket Arm Adapters

- **TFHAM3** horizontal arm clamp collar adapter
- **TFHAM4** horizontal arm clamp collar adapter
- **TFTC1** vertical threaded arm clamp collar adapter (for internally threaded 3/4-14 NPS mating arm, threaded pipe included)

##### Hanging Fixtures - Hub, Post, or Wall Mounting Arms



#### Light engine

LED engine is composed of five main components: Heat Sink, Lens, LED lamp, Optical System, and Driver. Electrical components are RoHS compliant.

#### LED module

LED type LUXEON T. Composed of high-performance white LEDs. Color temperature as per ANSI/NEMA bin Neutral White, 4000 Kelvin nominal (3985K +/- 275K or 3710K to 4260K) or Warm White, 3000 Kelvin nominal (3045K +/- 175K or 2870K to 3220K), CRI 70 Min. 75 Typical.

#### Heat sink

Made of cast aluminum optimizing the LEDs efficiency and life. Product does not use any cooling device with moving parts (only passive cooling device).

#### 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 surface treatment achieves a minimum of 2000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard.

#### 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. System is rated IP66. Performance shall be tested per LM-63, LM-79 and TM-15 (IESNA) certifying its photometric performance. Type 2, 3, 3W, 4 and Type 5 Street side indicated. House side shield optional (can be field installed) 2H: Type 2 with House Side Shield, 3H: Type 3 short with house side shield, 3WH: Type 3 Wide with House side shield.

#### Driver

Driver comes standard with dimming compatible 0-10V. High power factor of 95%. Electronic driver, operating range 50/60 Hz. Auto adjusting universal voltage input from 120 to 277 VAC rated for both application line to line or line to neutral, Class I, THD of 20% max. Maximum ambient operating temperature from 40°F (4°C) to 130°F (55°C). Certified in compliance to UL1310 cULus requirement (dry and damp location). Assembled on a unitized removable tray with Tyco quick disconnect plug resisting to 221°F (105°C). 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). 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.

**DA:** 4 Hrs 25% Reduction

**DB:** 4 Hrs 50% Reduction

**DC:** 4 Hrs 75% Reduction

**DD:** 6 Hrs 25% Reduction

**DE:** 6 Hrs 50% Reduction

**DF:** 6 Hrs 75% Reduction

**DG:** 8 Hrs 25% Reduction

**DH:** 8 Hrs 50% Reduction

**DJ:** 8 Hrs 75% Reduction

**DALI:** Pre-set driver compatible with the

DALI logarithmic control system.

**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.

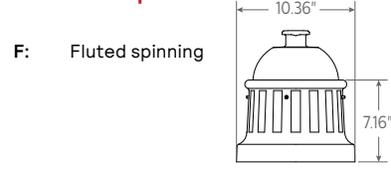
**SRD:** Sensor Ready Driver including SR communication (used for dimming and other functionalities), 24V auxiliary supply and a logical signal input (LSI) connected to the top NEMA twist lock receptacle.

**SRD1:** Sensor Ready Driver including SR communication (used for dimming and other functionalities) but with 24V auxiliary supply and a logical signal input (LSI) not connected to the top NEMA twist lock.

#### Surge protection

Surge protector 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, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid State Street Lighting Consortium) model specification for LED roadway luminaires electrical immunity requirements for High Test Level 10kV / 10kA. Optional SP2: 20kV /10kA surge protection device that provides extra protection beyond the SP1 10kV/10kA level.

#### Luminaire options



**N:** None

#### Wiring

Gauge 18 wires. Top mount option come with quick disconnects. Arm mount options provide a 6" Minimum exceeding from luminaire.

# CXF14/CXF15 Westbrooke

## Pendant

### Specifications (cont.)

#### Hardware

All non-ferrous fasteners prevent corrosion and ensure longer life.

#### 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, using LM-80 data from LED manufacturers and engineering prediction methods, the luminaire useful life is expected to reach 100,000+ hours with >L70 lumen maintenance @ 25°C. (48 LED and 64 LED@700mA is 82,000). Luminaire useful life accounts for LED lumen maintenance and all of these additional factors including: LED color shift, LED life, driver life, PCB substrate, solder joints, on/off cycles, burning hours and corrosion. Lifetime statements do not include the use of controls, including networked controllers.

#### 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.

#### Quality control

The manufacturer must provide a written confirmation of its ISO 9001 2008 and ISO 14001 2004 International Quality Standards Certification.

#### Service Tag

Each individual luminaire is uniquely identifiable, thanks to the Service tag application. With a simple scan of a QR code, placed inside the luminaire, 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: [signify.com/global/service-tag](http://signify.com/global/service-tag)

#### Certifications and Compliance

cETLus Listed for Canada and U.S. to the UL 1598 and UL8750 standards, suitable for Wet Locations. The quality systems of the facility where manufactured have been registered by UL to the ISO 9001 series standards. LM80 & LM79 tested. CCTs 3000K and warmer are Dark Sky Approved.

#### IP Ratings

The LED optics chamber is IP66 rated.

#### Warranty

5-year limited warranty. Options available for extended warranties – contact factory. See [signify.com/warranties](http://signify.com/warranties) for details and restrictions.

#### 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.