



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: CXF14C-196-G2-A-2-830-A-4-DL-SP1-N

Series	LEDs	Generation	Finish	Distribution	CCT
	196	G2			
CXF14C Westbrooke	196 196 LEDs	G2 Gen 2	A Black	1 Type 1	830 ³ 3000K (80CRI)
CXF14C Westbrooke			B White	2 Type 2	840 4000K (80CRI)
			G Verde Green	3 Type 3	
			H Bronze	4 Type 4	
			I Silver Gray	5 Type 5	
			J Dark Green		
Voltage	Drive current	Driver Options	Surge Supression	Spinning	
A 120-277 VAC	4 450mA	DL ^{1,2} DALI (default: logarithmic)	SP1 Parallel 10kV standard	F Fluted spinning	
B 347-480 VAC	6 650mA	N None	SP2 Parallel 20kV	N No options	
	11 1150mA				
	16 1675mA				
	21 2100mA				

- DL not available with B (347-480) voltage.
- DL not available with 4 (450mA) and 6 (650mA) drive currents.
- Only 3000K CCT and warmer/below are IDA International DarkSky Approved.



DARKSKY APPROVED
 Reduces light pollution
 Certified by DarkSky.org



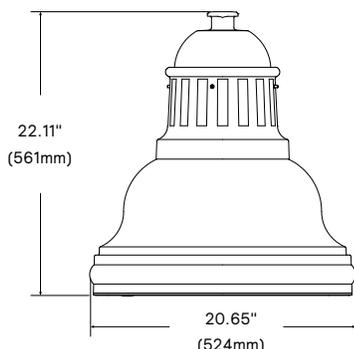
CXF14/CXF15 Westbrooke

Pendant

Dimensions

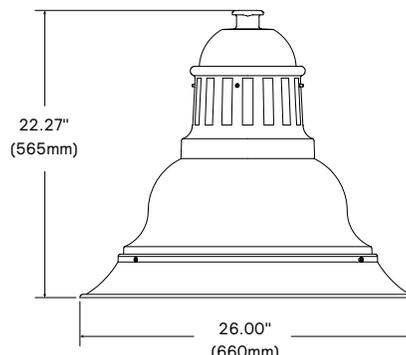
CXF14

Width: 21" diameter
Height: 22-5/16"
EPA: 1.6 sq. ft
Weight: 38 lbs (17.24 kg)
 (max)



CXF15

Width: 26" diameter
Height: 22-5/16"
EPA: 1.6 sq. ft
Weight: 38 lbs (17.24 kg)
 (max)



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 L ₇₀ Hours	L ₇₀ per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	2100mA	>100,000 hours	>60,000 hours	>87%

LED Wattage and Lumen Values: CXF14/CXF15

LED Module: 3000K				Type 1			Type 2			Type 3			Type 4			Type 5		
Ordering Code	LED qty	LED Current (mA)	Avg. System Wattage	Delivered Lumens ²	BUG Rating	Efficacy (LPW)	Delivered Lumens ²	BUG Rating	Efficacy (LPW)	Delivered Lumens ²	BUG Rating	Efficacy (LPW)	Delivered Lumens ²	BUG Rating	Efficacy (LPW)	Delivered Lumens ²	BUG Rating	Efficacy (LPW)
CXF1xC-196-G2-x-830-4	196	450	21	2431	B1-U0-G1	116	2090	B1-U0-G1	100	2334	B1-U0-G1	112	2519	B1-U0-G1	121	2270	B1-U0-G1	109
CXF1xC-196-G2-x-830-6	196	650	30	3503	B2-U0-G2	117	3012	B1-U0-G1	100	3363	B2-U0-G2	112	3630	B1-U0-G1	121	3271	B2-U0-G1	109
CXF1xC-196-G2-x-830-11	196	1150	51	5988	B3-U0-G3	117	5148	B2-U0-G2	101	5749	B2-U0-G2	113	6205	B2-U0-G2	122	5591	B3-U0-G2	110
CXF1xC-196-G2-x-830-16	196	1675	74	8357	B3-U0-G3	113	7185	B3-U0-G3	97	8024	B3-U0-G3	109	8661	B2-U0-G2	118	7804	B3-U0-G2	106
CXF1xC-196-G2-x-830-21	196	2100	93	10000	B3-U0-G3	107	8598	B3-U0-G3	92	9601	B3-U0-G3	103	10364	B3-U0-G3	111	9338	B3-U0-G2	100

LED Module: 4000K				Type 1			Type 2			Type 3			Type 4			Type 5		
Ordering Code	LED qty	LED Current (mA)	Avg. System Wattage	Delivered Lumens ²	BUG Rating	Efficacy (LPW)	Delivered Lumens ²	BUG Rating	Efficacy (LPW)	Delivered Lumens ²	BUG Rating	Efficacy (LPW)	Delivered Lumens ²	BUG Rating	Efficacy (LPW)	Delivered Lumens ²	BUG Rating	Efficacy (LPW)
CXF1xC-196-G2-x-840-4	196	450	21	2528	B1-U0-G1	121	2174	B1-U0-G1	104	2427	B1-U0-G1	116	2620	B1-U0-G1	125	2361	B1-U0-G1	113
CXF1xC-196-G2-x-840-6	196	650	30	3643	B2-U0-G2	121	3132	B1-U0-G1	104	3498	B2-U0-G2	117	3775	B1-U0-G1	126	3402	B2-U0-G1	113
CXF1xC-196-G2-x-840-11	196	1150	51	6228	B3-U0-G3	122	5354	B2-U0-G2	105	5979	B2-U0-G2	117	6453	B2-U0-G2	127	5815	B3-U0-G2	114
CXF1xC-196-G2-x-840-16	196	1675	74	8691	B3-U0-G3	118	7472	B3-U0-G3	101	8345	B3-U0-G3	113	9007	B2-U0-G2	122	8116	B3-U0-G2	110
CXF1xC-196-G2-x-840-21	196	2100	93	10400	B3-U0-G3	112	8942	B3-U0-G3	96	9985	B3-U0-G3	107	10779	B3-U0-G3	116	9712	B3-U0-G2	104

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.

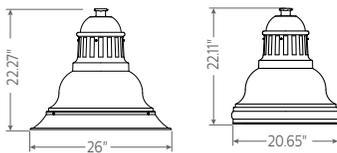
Mounting

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

Light guide technology provides low-glare, uniform illumination. Composed of 196 LEDs strategically positioned on the edge of the optical plate. Light engine luminous opening size optimized to best achieve a balance between lumen output and optical performance with the need to provide visual comfort. Light engine frame ensures contact with housing to provide heat conduction and sealing against the elements. Light engine is RoHS compliant. Maximum ambient operating temperature up to 40°C(104°F). Standard color temperatures: 3000K +/- 130K, 4000K +/- 130K, Minimum CRI of 80. Also available in 2700K, 3500K, 5000K and Amber (>590nm) with extended lead times. Contact factory for details.

Finish

Color in accordance with the AAMA 2603 standard. Application of polyester powder coat paint (4 mils/100 microns) with ± 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.

Hardware

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

Optical system

The advanced LED comfort optical system provides Types 1, 2, 3, 4 and 5. Composed of high performance UV-stabilized optical grade lens with molded micro-optics to achieve desired distribution optimized to get a exceptional lighting uniformity. Performance tested per LM- 79 and TM-15 (IESNA) certifying its photometric performance. Street side indicated luminaire designed with 0% uplight (U0 per IESNA TM-15).

Driver

High power factor of 95%. Electronic driver, operating range 50/60 Hz. Auto adjusting universal voltage input from 120 to 277 and 347 to 480 VAC rated for both application line to line or line to neutral, Class 2, THD of 20% max. Maximum ambient operating temperature from 40°F (40°C) to 130°F (50°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). Dimmable driver 0-10V. 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) with DALI, driver is class 1. 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.

Driver options

DALI: Pre-set driver compatible with the DALI logarithmic control system.

Surge protection

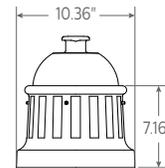
Surge protector tested in accordance with ANSI/ IEEE C62.45 per ANSI/ IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line Ground, Line Neutral and Neutral Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid State Street Lighting Consortium) 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.

Wiring

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

Luminaire options

F: Fluted spinning



N: None

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 2014 Quality Standards Certification.

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Pendant

Specifications (continued)

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](https://www.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.

Warranty

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

IP Ratings

IP66 rated LED light engine.

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 to view a current list of BAA-compliant products to confirm this product's current compliance.