Rev. Date: V805/23/2023

## **Product Description**

The Cree Lighting WS Series is a versatile IP65/IP66 rated and NSF certified fixture that provides sealed protection against dust and water ingress. Constructed of a one-piece, durable fiberglass housing and available with either diffused acrylic or polycarbonate lenses; the WS Series can be suspended or surface mounted while maintaining its operating range of  $-25^{\circ}\text{C} - +40^{\circ}\text{C} \left[-13^{\circ}\text{F} - +104^{\circ}\text{F}\right]$ .

**Applications:** Food processing, animal containment, parking garages, garden centers, breezeways, cold-storage and other industrial applications

# **Performance Summary**

Initial Delivered Lumens: 4,100 or 6,100 lumens

Efficacy: Up to 142 LPW

Input Wattage: 30 or 43 watts

CRI: Minimum 80 CRI

CCT: 3500K, 4000K, 5000K

Input Voltage: 120-277 VAC or 347-480 VAC

Limited Warranty<sup>†</sup>: 5 years for luminaire; 1 year for luminaire accessories

Mounting: Ceiling, wall, or suspended

Dimming: 0-10V dimming to 10%

Operating Temperature Range: Up to +40  $^{\circ}$ C (104  $^{\circ}$ F)

Assembled in the USA by Cree Lighting from US and imported parts

†See <a href="https://www.creelighting.com/resources/warranties">https://www.creelighting.com/resources/warranties</a> for warranty terms

#### Accessories

#### Field-Installed

Tamper Proof Kit

- Includes 4 tamper proof screws and bit

Tamper Proof Kit for Stainless Steel Latches WSSSL4TPK

- Includes 4 tamper proof screws and bit

## Stainless Steel Safety Cables

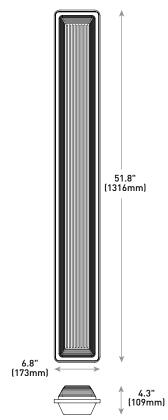
SC-5C - 5 0' (1 5m) Cable

- Two required per luminaire

- Non-NSF certified

## Luminaire (shown with LRA lens)





# **Ordering Information**

Example: WS4-C-40L-LFA-35K-8-UL

| WS4     | С      |  |  |   | 8            |  |                             |
|---------|--------|--|--|---|--------------|--|-----------------------------|
| Product | Series | Lumen Package  | Lens   | сст                                       | CRI          | Voltage                                  | Options                     |
| WS4     | С      | <b>40L</b><br>30W, 4,100 lumens<br><b>60L</b><br>43W, 6,100 lumens | LFA Frosted Acrylic LFP Frosted Polycarbonate LRA Ribbed Acrylic | 35K<br>3500K<br>40K<br>400K<br>50K<br>50K | 8<br>80+ CRI | UL<br>120-277 Volt<br>UH<br>347-480 Volt | SSL Stainless Steel Latches |













## **Product Specifications**

#### **CONSTRUCTION & MATERIALS**

- · Molded one-piece reinforced fiberglass housing
- Two 3/4" IP entry points are provided (one at each end of the housing) for continuous feed
- Includes eight captive white thermoplastic latches standard; stainless steel latches optional
- Suitable for ceiling and wall mount
- Includes two stainless steel mounting brackets and bails for surface or suspended mounting
- Weight: 11.4 lbs. (5.2kg)

#### OPTICAL SYSTEM

- Three injection molded lens choices: frosted ribbed acrylic, frosted acrylic, and frosted UV-stabilized polycarbonate
- Polyurethane gasketing is poured in place, providing a continuous, seamless seal

#### **ELECTRICAL SYSTEM**

Input Voltage: 120-277V or 347-480V, 50/60Hz

Power Factor: > 0.9 at full load

Total Harmonic Distortion: < 20% at full load

Operating Temperature Range: -25°C to +40°C (-13°F to +104°F)

- Integral 6kV/3kA surge suppression protection standard
- When code dictates fusing, a slow blow fuse or type  $\ensuremath{\mathsf{C/D}}$  breaker should be used to address inrush current

#### CONTROLS

- Continuous dimming to 10% with 0-10V DC control protocol standard
- 10V Source Current: 0.15mA
- Use only lighting controls with neutral connection or controls intended for use with LED fixtures
- Reference dimming document for additional information

#### **REGULATORY & VOLUNTARY QUALIFICATIONS**

- cULus Listed
- Suitable for wet locations
- IP65 and IP66 rated in accordance with IEC Publication 60598-1
- · Intended for covered canopy use
- Requires minimum 90°C supply conductors
- · RoHS compliant. Consult factory for additional details
- ANSI C136.2 6kV/3kA surge protection, tested in accordance with IEEE/ANSI C62.41.2
- Assembled in the USA by Cree Lighting from US and imported parts
- · Meets Buy American requirements within ARRA
- DLC qualified. Please refer to www.designlights.org/QPL for most cur-
- NSF Splash-Zone 2 Certified. Refer to http://info.nsf.org/Certified/Food/ for additional details
- CA RESIDENTS WARNING: Cancer and Reproductive Harm www.p65warnings.ca.gov

| Electrical Data* |     |                                     |                             |                   |                   |      |      |      |      |      |
|------------------|-----|-------------------------------------|-----------------------------|-------------------|-------------------|------|------|------|------|------|
| Lumen<br>Package | ССТ | Delivered<br>Lumens<br>(all lenses) | System<br>Watts<br>120-480V | Efficacy<br>(LPW) | Total Current (A) |      |      |      |      |      |
|                  |     |                                     |                             |                   | 120V              | 208V | 240V | 277V | 347V | 480V |
| 40L              | All | 4,100                               | 30                          | 137               | 0.25              | 0.14 | 0.13 | 0.11 | 0.09 | 0.06 |
| 60L              | All | 6,100                               | 43                          | 142               | 0.36              | 0.21 | 0.18 | 0.15 | 0.12 | 0.09 |

<sup>\*</sup> Electrical data at  $25^{\circ}$ C (77°F). Actual wattage may differ by +/- 10% when operating between 120-277V or 347-480V +/- 10%

| WS Series Ambient Adjusted Lumen Maintenance¹ |                |  |  |   |  |  |  |  |
|---|----------------|--|--|---|--|--|--|--|
| Ambient                                       | Initial<br>LMF | 25K hr<br>Reported <sup>2</sup><br>LMF | 50K hr<br>Reported <sup>2</sup><br>LMF | 75K hr<br>Estimated <sup>3</sup><br>LMF | 100K hr<br>Estimated <sup>3</sup><br>LMF |  |  |  |
| 0°C (32°F)                                    | 1.04           | 0.98                                   | 0.92                                   | 0.87                                    | 0.82                                     |  |  |  |
| 5°C (41°F)                                    | 1.03           | 0.97                                   | 0.91                                   | 0.86                                    | 0.81                                     |  |  |  |
| 10°C (50°F)                                   | 1.03           | 0.97                                   | 0.91                                   | 0.86                                    | 0.81                                     |  |  |  |
| 15°C (59°F)                                   | 1.02           | 0.96                                   | 0.91                                   | 0.85                                    | 0.81                                     |  |  |  |
| 20°C (68°F)                                   | 1.01           | 0.93                                   | 0.88                                   | 0.83                                    | 0.78                                     |  |  |  |
| 25°C (77°F)                                   | 1.00           | 0.93                                   | 0.87                                   | 0.82                                    | 0.77                                     |  |  |  |
| 30°C (86°F)                                   | 0.99           | 0.92                                   | 0.87                                   | 0.82                                    | 0.77                                     |  |  |  |
| 35°C (95°F)                                   | 0.98           | 0.91                                   | 0.86                                   | 0.81                                    | 0.77                                     |  |  |  |
| 40°C (104°F)                                  | 0.97           | 0.91                                   | 0.85                                   | 0.80                                    | 0.76                                     |  |  |  |

<sup>&</sup>lt;sup>1</sup> Lumen maintenance values at 25°C (77°F) are calculated per IES TM-21 based on IES LM-80 report data for the LED package and in-situ luminaire testing. Luminaire ambient temperature factors (LATF) have been applied to all lumen maintenance factors. Please refer to the Temperature Zone Reference Document for outdoor average nighttime ambient conditions

## LFP and LFA Lenses (lens only)



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<sup>&</sup>lt;sup>2</sup> The accordance with IES TM-21, Reported values represent interpolated values based on time durations that are up to 6x the tested duration in the IES LM-80 report for the LED.

<sup>3</sup> Estimated values are calculated and represent time durations that exceed the 6x test duration of the LED.