

LS Series

LS8™ LED Surface Ambient Luminaire – 8'

Product Description

The LS8™ surface ambient luminaire delivers up to 100 lumens per watt of Cree TrueWhite® Technology 90+ CRI illumination. The 8' (2438mm) luminaire is available with up to 10,000 lumens in 3500K, 4000K and 5000K color temperatures. The LS Series features sleek and compact architectural design with flexible lumen packages, color temperatures and standard 0–10V dimming. Flexible mounting of the LS Series allows for individual mount or continuous row applications for surface mount, suspended mount, pendant mount and cove installations.

Applications: Surface ambient applications for new construction and upgrade

Performance Summary

Utilizes Cree TrueWhite® Technology

Delivered Light Output: 8,000-10,000 lumens

Input Power: 88-100 watts

Efficacy: 89-100 LPW

CRI: 90+ CRI

CCT: 3500K, 4000K, 5000K

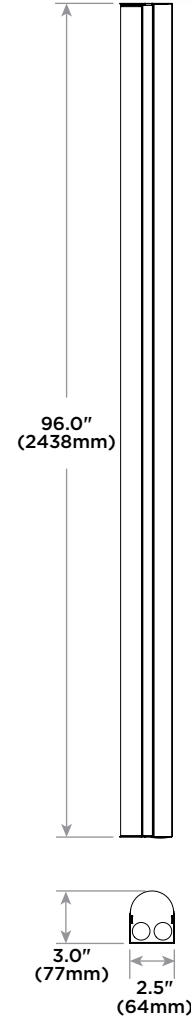
Input Voltage: 120-277, 347 VAC, 60Hz

Limited Warranty: 10 years on luminaire

Dimensions: L 96.0" (2438mm) x W 2.5" (64mm) x H 3.0" (77mm)

Weight: 10 lbs. (4.5kg)

Dimming: 0–10V dimming to 5%*



Reflectors & Accessories

| Field-Installed | | |
|---|--|---|
| Reflectors - Refer to reflector spec sheet Solid LS8-SR - Pair of reflectors Apertured LS8-AR - Pair of reflectors Joint Aligner LS-RJ - Top housing aligner for continuous rows LS-RFLJ - Reflector aligner for continuous row | Adjustable Cable Support Kits for T-Bar Applications AC5-48-Q14B-TB - Includes 5.0" (127mm) Canopy, 48.0" (1219mm) Adjustable Cable, Q14B Gripper and T-Bar Clip Continuous Row Through Wiring Kit LS8TWK - Includes (3) #12AWG 102.0" (2591mm) Wires for Line (black), Neutral (white), Ground (green), (2) #18AWG 102.0" (2591mm) Wires for 0–10V dimming (purple, gray) and (10) Wire Nuts | Adjustable Cable Support Kits w/ Power Feeds AC5-12/3-48-Q14B-JB - Non-dimming applications - Includes 5.0" (127mm) Cable Canopy, 48" (1219mm) #12/3 SJT Cord, Q14B Gripper and J-Box Strap AC5-18/5-48-Q14B-JB - Dimming applications - Includes 5.0" (127mm) Cable Canopy, 48.0" (1219mm) #18/5 SJT Cord, Q14B Gripper and J-Box Strap AC5-18/2-48-Q14B-JB - For use with AC5-12/3-48-Q14B-JB for selective luminaire dimming control in row mounted luminaires - Includes 5.0" (127mm) Cable Canopy, 48.0" (1219mm) #18/2 SVT Cord, Q14B Gripper and J-Box Strap |

Ordering Information

Example: LS8-80L-35K-10V

| LS8 | | | 10V | | |
|---------|---|---|------------------------------------|--|--|
| Product | Initial Delivered Lumens | CCT | Control | Voltage | Options |
| LS8 | 80L 88W, 8000 lumens - 91 LPW (120-277V) 90W, 8000 lumens - 89 LPW (347V) 100L 100W, 10000 lumens - 100 LPW | 35K 3500K 40K 4000K 50K 5000K | 10V* 0-10V dimming to 5% | Blank 120-277 Volt 34 347 Volts -Available with 80L only | EB14 Emergency Backup - Minimum 90 minutes - 1400 lumens - 120-277V only - Available in US only |



Rev. Date: V3 10/29/2015



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Product Specifications

CREE TRUEWHITE® TECHNOLOGY

A revolutionary way to generate high-quality white light, Cree TrueWhite® Technology is a patented approach that delivers an exclusive combination of 90+ CRI, beautiful light characteristics and lifelong color consistency, all while maintaining high luminous efficacy – a true no compromise solution.

CONSTRUCTION & MATERIALS

- Constructed of durable 22 gauge steel
- Acrylic lens delivers a low-glare, diffused light distribution
- Prepainted white for enhanced smooth finish

OPTICAL SYSTEM

- Unique combination of reflective and refractive optical components achieves a uniform, comfortable appearance while eliminating pixelation and color fringing
- Components work together to optimize distribution, balancing the delivery of high illuminance levels on horizontal surfaces with an ideal amount of light on walls and vertical surfaces. This increases the perception of spaciousness

ELECTRICAL SYSTEM

- **Power Factor:** > 0.9
- **Input Power :** Stays constant over life
- **Input Voltage:** 120-277 or 347 VAC, 60Hz
- **Operating Temperature Range:** -28°C - +35°C (-18.4°F - +95°F)
- **Total Harmonic Distortion:** < 20% for 120-277V
- **Source Current:** 0.25mA

CONTROLS

- Continuous dimming to 5% with 0-10V DC control protocol.
Reference www.cree.com/Lighting/Products/Indoor/Surface-Ambient/LS-Series for recommended dimming controls and wiring diagrams

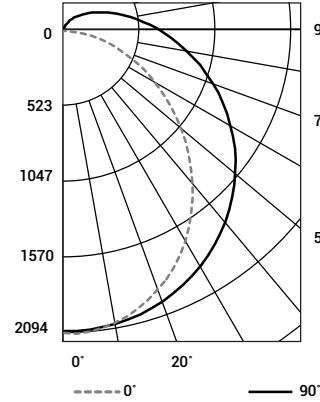
REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed
- Suitable for damp locations
- Designed for indoor use
- UL924 (EB option)
- DLC qualified. Please refer to <http://www.designlights.org/QPL> for most current information
- Meets FCC Part 15 standards for conducted and radiated emissions
- Not intended for use in environments containing airborne corrosive agents such as chemical solvents, cleaners, or cutting fluids

Photometry

LS8-80L-40K BASED ON CESTL REPORT TEST #: PL03354-001

Fixture photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. IESNA LM-79-08 specifies the entire luminaire as the source resulting in a fixture efficiency of 100%.



| Coefficients Of Utilization – Zonal Cavity Method | | | | |
|---|-----|-----|-----|-----|
| RC %: | 80 | | | |
| RW %: | 70 | 50 | 30 | 10 |
| RCR: 0 | 116 | 116 | 116 | 116 |
| 1 | 104 | 98 | 93 | 88 |
| 2 | 93 | 84 | 76 | 70 |
| 3 | 85 | 73 | 64 | 57 |
| 4 | 77 | 64 | 55 | 48 |
| 5 | 71 | 57 | 48 | 41 |
| 6 | 65 | 51 | 42 | 36 |
| 7 | 60 | 47 | 37 | 31 |
| 8 | 56 | 42 | 34 | 28 |
| 9 | 52 | 39 | 30 | 25 |
| 10 | 49 | 36 | 28 | 22 |

Effective Floor Cavity Reflectance: 20%

| Average Luminance Table (cd/m²) | | | |
|---------------------------------|------------------|-------|-------|
| Vertical Angle | Horizontal Angle | | |
| | 0° | 45° | 90° |
| 45° | 3,078 | 3,623 | 4,133 |
| 55° | 2,643 | 3,507 | 4,213 |
| 65° | 2,153 | 3,467 | 4,399 |
| 75° | 1,562 | 3,612 | 4,847 |
| 85° | 733 | 4,385 | 6,232 |

| Zonal Lumen Summary | | | |
|---------------------|--------|--------|-----------|
| Zone | Lumens | % Lamp | Luminaire |
| 0-30 | 1,627 | N/A | 20.6% |
| 0-40 | 2,677 | N/A | 33.8% |
| 0-60 | 4,855 | N/A | 61.3% |
| 0-90 | 7,026 | N/A | 88.8% |
| 0-180 | 7,915 | N/A | 100% |

Reference www.cree.com/Lighting/Products/Indoor/Surface-Ambient/LS-Series for detailed photometric data

| Recommended LS Series Lumen Maintenance Factors (LMF) ¹ | | | | | |
|--|-------------|-----------------------------------|------------------------------------|------------------------------------|-------------------------------------|
| Ambient | Initial LMF | 25K hr Projected ² LMF | 50K hr Calculated ³ LMF | 75K hr Calculated ³ LMF | 100K hr Calculated ³ LMF |
| 0°C (32°F) | 1.05 | 0.99 | 0.94 | 0.90 | 0.85 |
| 5°C (41°F) | 1.04 | 0.98 | 0.93 | 0.89 | 0.85 |
| 10°C (50°F) | 1.03 | 0.97 | 0.93 | 0.88 | 0.84 |
| 15°C (59°F) | 1.02 | 0.96 | 0.92 | 0.87 | 0.83 |
| 20°C (68°F) | 1.01 | 0.95 | 0.91 | 0.86 | 0.82 |
| 25°C (77°F) | 1.00 | 0.94 | 0.90 | 0.86 | 0.81 |
| 30°C (86°F) | 0.99 | 0.93 | 0.89 | 0.85 | 0.81 |
| 35°C (95°F) | 0.98 | 0.92 | 0.88 | 0.84 | 0.80 |

¹ Lumen maintenance values at 25°C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing
² In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing (DUT) i.e. the packaged LED chip
³ In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing (DUT) i.e. the packaged LED chip

