

# LS Series

LS8™ LED Surface Ambient Luminaire – 8'

Rev. Date: V14 05/23/2023

## Product Description

The LS8™ surface ambient luminaire delivers 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 and suspended ambient applications for new construction and upgrade

## Performance Summary

Utilizes Cree TrueWhite® Technology

**Initial Delivered Lumens:** 8,000-10,000 lumens

**Input Power:** 88 or 110 watts

**Efficacy:** Up to 100 LPW

**CRI:** 90+ CRI

**CCT:** 3500K, 4000K, 5000K

**Input Voltage:** 120-277, 347 VAC

**L<sub>70</sub> Lifetime:** >100,000 hours at 35 °C

**Limited Warranty\*:** 10 years on luminaire/1 year on accessories

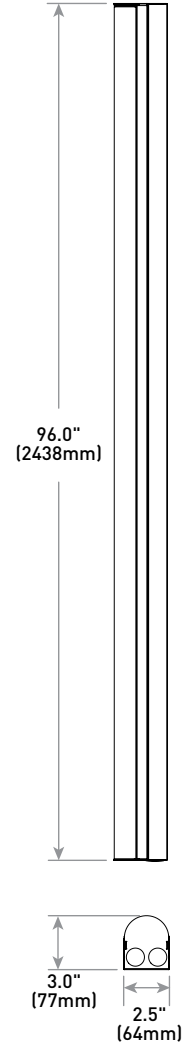
**Limited Warranty Emergency Back Up (EB) Battery:** 1 Year on Battery Back Up. Test regularly in accordance with local codes

**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%

\* See <http://creelighting.com/warranty> for warranty terms



## Reflectors & Accessories

Field-Installed		
<b>End Caps</b> LS-EC (pair) - For individual mounting, order one LS-EC per luminaire - For continuous row mounting, order one LS-EC per row	<b>Non-Power Feed Adjustable Cable Support for T-Bar Ceilings*</b> AC5-48-Q14B-TB AC5-48-Q14B-TB-50BULK (Pack of 50) - Includes 5.0" (127mm) Canopy, 48.0" (1219mm) Adjustable Cable, Q14B Gripper and T-Bar Clip AC2-48-Q14B-TB AC2-48-Q14B-TB-50BULK (Pack of 50) - Same as above except with 2" (51mm) Canopy	<b>Power Feed w/Adjustable Cable Support for T-Bar &amp; Hard Ceilings*</b> 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
<b>Joint Aligner</b> LS-RJ - Top housing aligner for continuous rows LS-RFLJ - Reflector aligner for continuous row	<b>Non-Power Feed Adjustable Loop Cable for Unfinished Ceilings*</b> AC-144-Q14B-LP AC-144-Q14B-LP-50BULK (Pack of 50) - Includes 144.0" (366cm) L x 1/16" (2mm) Diameter Adjustable Galvanized Loop Cable w/Q14B Gripper	
<b>Reflectors</b> - Refer to reflector spec sheet <b>Solid</b> <a href="#">LS8-SR</a> - Pair of reflectors - < 0.5% Uplight <b>Apertured</b> <a href="#">LS8-AR</a> - Pair of reflectors - ~ 6.5% Uplight	<b>Non-Power Feed Adjustable Cable Support for Hard Ceilings*</b> AC5-48-Q14B-JB - Includes 5.0" (127mm) Canopy, 48.0" (1219mm) Adjustable Cable, Q14B Gripper and J-Box Strap <b>Continuous Row Through Wiring Kit*</b> LS8TWK - Includes (3) #12AWG 54.0" (1372mm) Wires for Line (black), Neutral (white), Ground (green), (2) #18AWG 54.0" (1372mm) Wires for 0-10V dimming (purple, gray) and (10) Wire Nuts - Optional accessory for use when luminaire is not ordered with factory installed TW option - Does not power luminaires w/EB14 option. Additional unswitched (i.e. continuous power) dedicated feeds (by others) must be supplied to EB14	

\* Refer to the [CS & LS Accessory spec sheet](#) for more details

## Ordering Information

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

LS8				10V	
Product	Lumen Package	CCT	Voltage	Control	Options
LS8	<b>80L</b> 8,000 lumens <b>100L</b> 10,000 lumens	<b>35K</b> 3500K <b>40K</b> 4000K <b>50K</b> 5000K	<b>Blank</b> 120-277 Volt <b>34</b> 347 Volt -Available with 80L only	<b>10V</b> 0-10V dimming to 5%	<b>EB14 Emergency Backup</b> - Minimum 90 minutes - 1,400 lumens - Minimum operating temperature: 0°C (32°F) - Not available in 347 voltage  <b>TW Through Wire Option</b> - Factory installed - Includes quick connects for use in continuous row applications - Not for use with 347V or EB14 option



US: [creelighting.com](http://creelighting.com) (800) 236-6800

Canada: [creelighting-canada.com](http://creelighting-canada.com) (800) 473-1234

**CREE** LIGHTING

**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
- ~ 11% Uplight

**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); minimum operating temperature with EB14 option is 0°C (32°F)
- **Total Harmonic Distortion:** < 20% for 120-277V

**CONTROLS**

- Continuous dimming to 5% with 0-10V DC control protocol
- **10V Source Current:** 0.25mA
- Use only lighting controls with neutral connection or controls intended for use with LED fixtures
- Reference <https://cree.widen.net/s/2b8dlcwsq/cr-flex-zr-cs-ln-ls-ur-stylus-series-control-options-dimming-specsheet> for recommended dimming controls and wiring diagrams

**REGULATORY & VOLUNTARY QUALIFICATIONS**

- cULus Listed
- Suitable for damp locations
- Suitable for continuous row mounting
- Designed for indoor use only
- Not intended for use in environments containing airborne corrosive agents such as chemical solvents, cleaners, or cutting fluids
- **Ingress Protection:** IP20
- UL924 (EB option). Maximum mounting height: 10.0' (3.0m)
- RoHS compliant. Consult factory for additional details
- EB14 option meets CA Title 20 Appliance Regulations
- Meets FCC Part 15, Subpart B, Class A limits for conducted and radiated emissions
- **CA RESIDENTS WARNING:** Cancer and Reproductive Harm – [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)

Delivered Lumens & Electrical Data*										
Lumen Package	CCT	Initial Delivered Lumens**	System Watts		Efficacy (LPW @ 120-277V)	Total Current (A)				
			120-277V	347V		120V	208V	240V	277V	347V
80L	All	8,000	88	88	91	0.75	0.45	0.39	0.34	0.26
80L w/ EB14	All		92	N/A	87	0.78	0.47	0.40	0.35	N/A
100L	All	10,000	100	N/A	100	0.84	0.49	0.42	0.36	N/A
100L w/ EB14	All		110	N/A	91	0.93	0.56	0.48	0.42	N/A

\* Electrical data at 25°C (77°F). Actual wattage may differ by +/- 10% when operating between 120-277V or 347V +/- 10%  
 \*\* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens

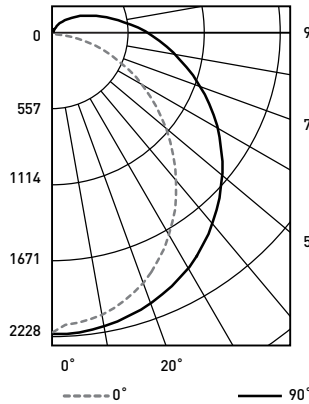
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**Photometry**

**LS8-80L-35K-10V BASED ON CESTL REPORT TEST #: PL10234-001A**

Luminaire photometry has been conducted in accordance with IES LM-79. IES LM-79 specifies the entire luminaire as the source resulting in a luminaire efficiency of 100%.



Average Luminance Table (cd/m²)			
Vertical Angle	Horizontal Angle		
	0°	45°	90°
45°	11,385	11,400	12,013
55°	10,397	10,800	11,753
65°	9,235	10,399	11,658
75°	7,756	10,343	11,834
85°	5,274	11,407	12,948

Reference <http://creelighting.com/products/indoor/surface-ambient/ls-series> for detailed photometric data

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	94	84	77	70
3	85	73	65	57
4	77	65	55	48
5	71	58	48	41
6	65	52	42	36
7	61	47	38	31
8	56	43	34	28
9	53	39	31	25
10	49	36	28	22

Effective Floor Cavity Reflectance: 20%

Zonal Lumen Summary			
Zone	Lumens	% Lamp	Luminaire
0-30	1,709	N/A	20.8%
0-40	2,809	N/A	34.2%
0-60	5,082	N/A	61.9%
0-90	7,326	N/A	89.2%
0-180	8,210	N/A	100%

LS Series Ambient Adjusted Lumen Maintenance¹					
Ambient	Initial LMF	25K hr Reported² LMF	50K hr Estimated³ LMF	75K hr Estimated³ LMF	100K hr Estimated³ LMF
0°C (32°F)	1.04	1.04	1.04	1.04	1.04
5°C (41°F)	1.03	1.03	1.03	1.03	1.03
10°C (50°F)	1.02	1.02	1.02	1.02	1.02
15°C (59°F)	1.02	1.02	1.02	1.02	1.02
20°C (68°F)	1.01	1.01	1.01	1.01	1.01
25°C (77°F)	1.00	1.00	1.00	1.00	1.00
30°C (86°F)	0.99	0.99	0.99	0.99	0.99
35°C (95°F)	0.98	0.98	0.98	0.98	0.98

¹ 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.  
 ² In 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.  
 ³ Estimated values are calculated and represent time durations that exceed the 6x test duration of the LED.



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