

LS-C High Efficiency Series

LS4™ Commercial High Efficiency Series LED Surface Ambient Luminaire – 4'

Product Description

The LS-C High Efficiency surface ambient luminaire delivers 132-147 lumens per watt with 80+ CRI illumination. The 4' (1219mm) luminaire is available with up to 5000 lumens in 3500K, 4000K and 5000K color temperatures. The LS-C Series features sleek and compact architectural design with flexible lumen packages, color temperatures and standard 0-10V dimming. Flexible mounting of the LS-C 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

Initial Delivered Lumens: 2,500-5,000 lumens

Input Power: 19-36 watts

Efficacy: 132-147 LPW

CRI: 80+ CRI

CCT: 3500K, 4000K, 5000K

Input Voltage: 120-277 VAC or 347 VAC

L₇₀ Lifetime: > 100,000 hours at 35°C

Limited Warranty*: 5 years on luminaire

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

Dimensions: L 48.0" (1219mm) x W 2.5" (64mm) x H 3.0" (77mm)

Weight: 5 lbs. (2.3kg)

Dimming: 0-10V dimming to 5%

*See <http://lighting.cree.com/warranty> for warranty terms

Reflectors & Accessories

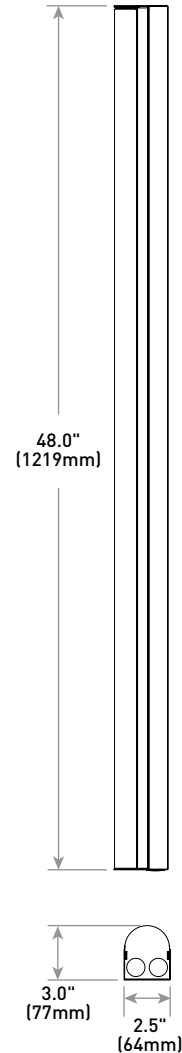
Field-Installed		
Reflectors - Refer to reflector spec sheet Solid LS4-SR - Pair of reflectors Apertured LS4-AR - Pair of reflectors Joint Aligner LS-RJ - Top housing aligner for continuous rows LS-RFLJ - Reflector aligner for continuous row	Adjustable Cable Support Kits for T-Bar Applications[†] AC5-48-Q14B-TB 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 Adjustable Loop Cable Kit for Unfinished Ceiling Applications[†] 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 Continuous Row Through Wiring Kit[†] LS4TWW - 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 - Not for use with EB14 option	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 Dimming Occupancy Sensor w/Photocell S-WRAC-OC-1 - Enables daylight harvesting - Not for use with EB14 option - Not for continuous row applications - Refer to installation instructions for details

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

Ordering Information

Example: LS4C-40L-35K-10V-FD

LS4C				10V	FD	
Product	Initial Delivered Lumens	CCT	Voltage	Control	CRI	Options
LS4C	25L 19W, 2,500 lumens 40L 29W, 4,000 lumens 50L 36W, 5,000 lumens	35K 3500K 40K 4000K 50K 5000K	Blank 120-277 Volt 34 347 Volt	10V 0-10V dimming to 5%	FD 80+ CRI	EB14 Emergency Backup - Minimum 90 minutes - 1,400 lumens - Minimum operating temperature: 0°C (32°F) - Not for use with 34 voltage TW Through Wire Option - Factory installed - Includes quick connects for use in continuous row applications - Not for use with EB14 option



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US: lighting.cree.com

T (800) 236-6800 F (262) 504-4515

Canada: www.cree.com/canada



T (800) 473-1234 F (800) 890-7507

Product Specifications

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:** 120-277V or 347V, 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:** < 25%

CONTROLS

- Continuous dimming to 5% with 0-10V DC control protocol
- **10V Source Current:** 0.15mA
- Use only lighting controls with neutral connection or controls intended for use with LED fixtures
- Reference www.creelink.com/exLink.asp?70982140Z58R34126620963 for recommended dimming controls and wiring diagrams

REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed pending
- Suitable for damp locations
- Suitable for continuous row mounting
- Requires minimum 90°C supply conductors
- Designed for indoor use
- Not intended for use in environments containing airborne corrosive agents such as chemical solvents, cleaners, or cutting fluids
- **Ingress Protection:** IP20 pending
- UL924 (EB option). Maximum mounting height: 10.0' (3.0m)
- RoHS compliant pending. Consult factory for additional details
- Meets FCC Part 15, Subpart B, Class A standards for conducted and radiated emissions pending

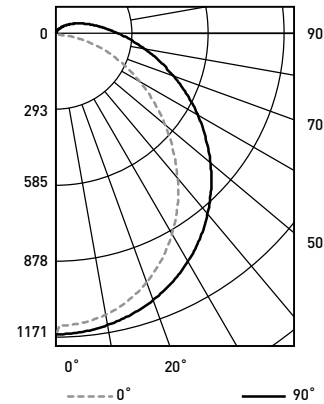
Electrical Data*								
Initial Delivered Lumens	CCT	System Watts			Total Current [A]			
		120-277V	347V		120V	208V	240V	277V
25L	35K	19	18	0.16	0.10	0.09	0.08	0.06
	40K	18	17	0.15	0.10	0.08	0.07	0.05
	50K	18	17	0.15	0.10	0.08	0.07	0.05
25L w/EB14	35K	22	N/A	0.19	0.12	0.10	0.09	N/A
	40K	21	N/A	0.19	0.12	0.10	0.09	N/A
	50K	21	N/A	0.19	0.12	0.10	0.09	N/A
40L	35K	29	28	0.24	0.15	0.13	0.11	0.08
	40K	28	27	0.23	0.13	0.12	0.10	0.08
	50K	27	26	0.23	0.13	0.11	0.10	0.08
40L w/EB14	35K	33	N/A	0.28	0.18	0.15	0.13	N/A
	40K	33	N/A	0.28	0.18	0.15	0.13	N/A
	50K	31	N/A	0.26	0.17	0.14	0.12	N/A
50L	35K	36	35	0.31	0.18	0.16	0.14	0.10
	40K	34	33	0.29	0.17	0.15	0.13	0.10
	50K	34	33	0.28	0.17	0.15	0.13	0.10
50L w/EB14	35K	40	N/A	0.34	0.20	0.18	0.15	N/A
	40K	38	N/A	0.32	0.18	0.16	0.14	N/A
	50K	38	N/A	0.31	0.18	0.16	0.14	N/A

* Electrical data at 25°C (77°F). Actual wattage may differ by +/- 10% when operating between 120-347V +/- 10%

Photometry

LS4C-40L-35K-10V-FD BASED ON DTC REPORT TEST #: PL11642-001A

Luminaire 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 luminaire efficiency of 100%.



Average Luminance Table (cd/m²)				
		Horizontal Angle		
		0°	45°	90°
Vertical Angle	45°	11,443	10,198	10,309
	55°	10,143	8,955	9,283
	65°	8,760	7,784	8,258
	75°	7,133	6,748	7,245
	85°	5,122	6,049	6,484

Reference <http://lighting.cree.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	117	117	117	117
1	105	100	95	90
2	95	86	79	72
3	86	75	67	60
4	79	66	57	50
5	73	59	50	43
6	67	53	44	38
7	62	48	39	33
8	58	44	35	29
9	54	40	32	26
10	51	37	29	24

Effective Floor Cavity Reflectance: 20%

Zonal Lumen Summary			
Zone	Lumens	% Lamp	Luminaire
0-30	891	N/A	23.1%
0-40	1,453	N/A	37.7%
0-60	2,563	N/A	66.6%
0-90	3,527	N/A	91.6%
0-180	3,851	N/A	100%

LS-C Series Ambient Adjusted Lumen Maintenance 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)	1.04	0.98	0.90	0.83	0.77
5°C (41°F)	1.03	0.97	0.89	0.82	0.76
10°C (50°F)	1.02	0.96	0.89	0.82	0.75
15°C (59°F)	1.01	0.95	0.88	0.81	0.74
20°C (68°F)	1.01	0.95	0.88	0.81	0.74
25°C (77°F)	1.00	0.94	0.87	0.80	0.74
30°C (86°F)	0.99	0.93	0.86	0.79	0.73
35°C (95°F)	0.99	0.93	0.86	0.79	0.73

¹ Lumen maintenance values at 25°C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing. Luminaire ambient temperature factors [LATF] have been applied to all lumen maintenance factors

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

