

WS4™

4' LED Wet Location Linear Luminaire

Product Description

The versatile Cree WS Series wet location linear luminaire is suitable for indoor and outdoor applications. Constructed of one-piece molded, durable fiberglass-reinforced polyester and UV-stabilized, impact-resistant diffused acrylic shielding, the Cree WS Series is wet location listed and water-tight sealed for IP65 rating, which provides protection from external elements. The operating temperature range is -25°C - +35°C (-13°F - +95°F), allowing for cold to hot weather environment installations.

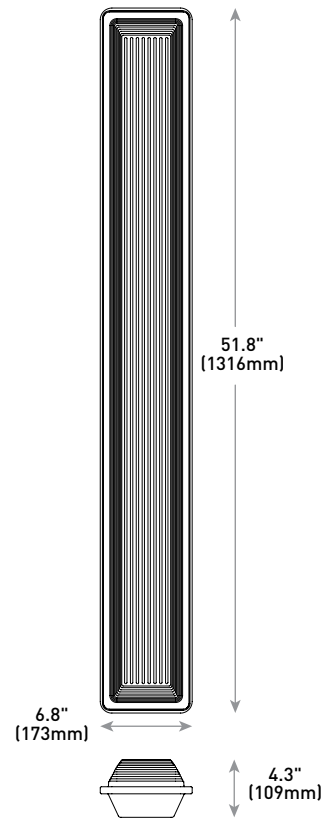
Performance Summary

Initial Delivered Lumens: 4700-6300 lumens
Efficacy: Up to 98 LPW
CRI: Minimum 80 CRI
CCT: 3500K, 4000K, 5000K, 5700K
Input Voltage: 120-277 VAC
Limited Warranty*: 10 years on luminaire
Dimensions: L 51.8" (1316mm) x W 6.8" (173mm) x H 4.3" (109mm)
Weight: 12 lbs. (5.4kg)
Mounting: Ceiling, wall, or suspended
Dimming: 0-10V dimming: 10% - 47L and 50L; 15% - 59L and 63L

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

Accessories

Field-Installed	
Tamper Proof Kit WS4TPK - Includes 4 tamper proof screws and bit	Mounting Bracket Kit WS4MBK - Includes 2 stainless steel surface mount brackets
Tamper Proof Kit for Stainless Steel Latches WSSSL4TPK - Includes 4 tamper proof screws and bit	Cable Suspension Kit WS4CSK - Includes 2 stainless steel brackets and 2-5' (1.5m) aircraft cables



Ordering Information

Example: WS4-59L-35K-10V-FD

WS4				10V	FD	
Product	Initial Delivered Lumens	CCT	Voltage	Control	Color/CRI	Options
WS4	47L 50W, 4700 lumens - 94 LPW 50L 51W, 5000 lumens - 98 LPW 59L 63W, 5900 lumens - 94 LPW 63L 64W, 6300 lumens - 98 LPW	35K 3500K - Available with 47L and 59L Initial Delivered Lumens only 40K 4000K - Available with 47L and 59L Initial Delivered Lumens only 50K 5000K - Available with 50L and 63L Initial Delivered Lumens only 57K 5700K - Available with 50L and 63L Initial Delivered Lumens only	Blank 120-277 Volt	10V 0-10V Dimming	FD CRI 80	SSL Stainless Steel Latches



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Canada: www.cree.com/canada

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

Product Specifications

CREE LED TECHNOLOGY

Cree's total systems approach to product development is a comprehensive engineering philosophy that combines the most advanced LED sources, driver technologies, optics and forms. The result is highly-reliable luminaire solutions for both indoor and outdoor applications that reduce energy use, extend lifetimes, and maximize illumination performance and quality.

CONSTRUCTION & MATERIALS

- Constructed of fiberglass reinforced polyester
- Polycarbonate latches
- Two 3/4" IP entry points are provided (one at each end of the housing) for continuous feed
- Top of housing has six embossments providing mounting flexibility to uneven surfaces

OPTICAL SYSTEM

- Cree LED Technology
- Frosted injection molded acrylic shielding
- Polyurethane gasketing is poured in place, providing a continuous, seamless seal
- Highly reflective reflector plate provides maximum efficiency

ELECTRICAL SYSTEM

- **Power Factor:** = 0.9 nominal
- **Input Power:** Stays constant over life
- **Input Voltage:** 120-277V, 50/60Hz
- **Operating Temperature Range:** -25°C - + 35°C (-13°F - + 95°F)
- **Total Harmonic Distortion:** < 20%
- **Source Current:** 0.15mA

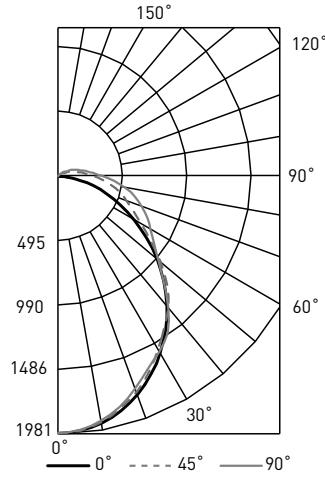
REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed
- Suitable for wet locations
- IP65 rated
- DLC qualified for Linear Ambient – Direct category (3500K, 4000K, 5000K color temperatures; all lumen packages). Please refer to www.designlights.org/QPL for most current information
- DLC qualified for Low-Bay category (5700K color temperatures; all lumen packages). Please refer to www.designlights.org/QPL for most current information
- RoHS compliant. Consult factory for additional details

Photometry

WS4-59L-35K-10V-FD BASED ON DTC REPORT TEST #: 38552

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				
RCC %:	80			
RW %:	70	50	30	0
RCR: 0	1.18	1.18	1.18	1.18
1	1.06	1.00	.95	.91
2	0.96	0.87	0.79	0.73
3	0.87	0.76	0.67	0.61
4	0.80	0.67	0.58	0.51
5	0.73	0.60	.51	0.44
6	0.68	0.54	.45	0.39
7	0.63	0.49	.40	0.34
8	0.59	0.45	.36	0.31
9	0.55	0.41	.33	0.27
10	0.51	0.38	.30	0.25

Effective Floor Cavity Reflectance: 20%

Average Luminance Table (cd/m²)			
Vertical Angle	Horizontal Angle		
	0°	45°	90°
45°	1,152	1,163	1,170
55°	831	878	889
65°	530	586	731
75°	278	357	597
85°	86	192	425

Zonal Lumen Summary			
Zone	Lumens	% Lamp	Luminaire
0-30	1,482	N/A	24.9%
0-40	2,387	N/A	40.2%
0-60	4,075	N/A	68.6%
0-90	5,556	N/A	93.5%
0-180	5,941	N/A	100%

Reference <http://lighting.cree.com/products/indoor/surface-ambient/ws-series> for detailed photometric data

Recommended WS Series Lumen Maintenance Factors (LMF) ¹					
Ambient	Initial LMF	25K hr Projected ² LMF	50K hr Projected ² LMF	75K hr Projected ² LMF	100K hr Projected ² LMF
0°C (32°F)	1.07	1.01	0.93	0.86	0.79
5°C (41°F)	1.06	1.00	0.92	0.85	0.78
10°C (50°F)	1.04	0.98	0.91	0.83	0.77
15°C (59°F)	1.03	0.97	0.89	0.82	0.76
20°C (68°F)	1.01	0.96	0.88	0.81	0.75
25°C (77°F)	1.00	0.94	0.87	0.80	0.73
30°C (86°F)	0.99	0.93	0.85	0.79	0.72
35°C (95°F)	0.97	0.91	0.84	0.77	0.71

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 (IDUT) i.e. the packaged LED chip)

