

# LN Series

LN4™ Suspended Ambient LED Luminaire – Indirect/Direct – 4'

## Product Description

The LN4™ suspended ambient luminaire delivers up to 115 lumens per watt utilizing Cree WaveMax® Technology. The 4' (1.2m) luminaire offers up to 3,700 lumens of Cree TrueWhite® Technology 90+ CRI in both 3500K and 4000K color temperatures. The LN Series features an architectural, sleek design with an indirect/direct lighting system that delivers superior ceiling uniformity and creates a comfortable visual environment. The LN4 luminaire offers standard 0-10V dimming.

**Applications:** Suspended ambient applications for new construction and upgrade

## Performance Summary

Utilizes Cree TrueWhite® Technology

Utilizes Cree WaveMax® Technology

Assembled in the U.S.A. of U.S. and imported parts

**Initial Delivered Lumens:** Up to 3,700 lumens (60% uplight, 40% downlight)

**Input Power:** 32 watts

**Efficacy:** Up to 115 LPW

**CRI:** 90+ CRI

**CCT:** 3500K, 4000K

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

**Limited Warranty\*:** 10 years

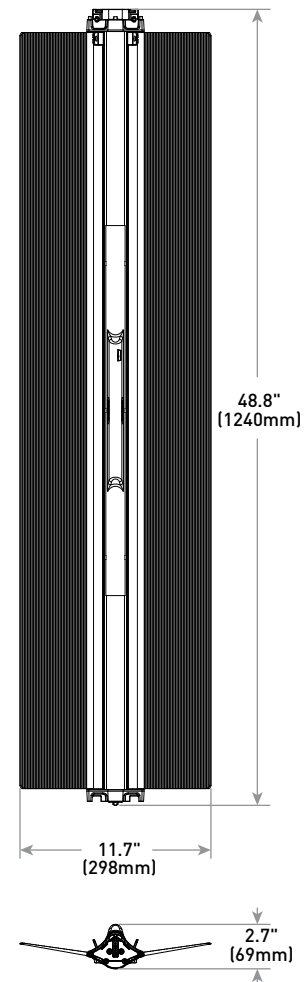
**Dimensions:** L 48.8" (1240mm) x W 11.7" (298mm) x H 2.7" (69mm)

**Controls:** 0-10V dimming to 5%

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

## Accessories

Field-Installed	
<b>Mounting Hardware</b> LN-EC - Power canopy and hanging hardware required to support a run. Order 1 LN-EC per run, regardless of number of fixtures in a run. For continuous rows, one LN-CK-0-AC accessory must be ordered for each additional 8' (2.4m) section added to run - Maximum continuous run is 48' (14.6m) at 120V or 136' (41.5m) at 277V - Includes 4.6" (117mm) Canopy w/32" (813mm) Aircraft Cable and Power Feed, 2.1" (53mm) Canopy w/32" (813mm) Aircraft Cable, and set of End Caps, one which accepts power feed LN-CK-0-AC - One required for each 8' (2.4m) section added to run beyond starter - 2.1" (53mm) Canopy Kit w/32" (813mm) Aircraft Cable, no Power Feed	<b>Emergency Options</b> <b>Inverter</b> ELI-125W - Emergency 125W inverter (ceiling installation) - Can't be combined in continuous rows with non-emergency luminaires - Powers continuous runs up to 12' at 100% output; maximum continuous run length (48' @ 120V; 136' @ 277V) at 5% output - Minimum 90 minutes <b>Emergency Relay</b> - For use with customer supplied generators/inverters EL-SR-120 - 120V UL-924 Relay EL-SR-277 - 277V UL-924 Relay



## Ordering Information

Example: LN4-34L-35K-10V; must specify mounting hardware (see accessory table above)

LN4	34L		10V	
Product	Initial Delivered Lumens	CCT	Control	Voltage
LN4	34L 3,400 lumens (35K) 3,700 lumens (40K)	35K 3500K 40K 4000K	10V 0-10V dimming to 5%	Blank 120-277 Volt



Rev. Date: V6 11/07/2017



**Product Specifications**

**CREE WAVEMAX® TECHNOLOGY**

Featuring up to 90% optical efficiency and precise control, Cree WaveMax® Technology provides unmatched comfort and decreased LED source luminance by smoothly spreading brightness over a broader area. When integrated with luminous surfaces made of a polymer medium engineered with DiamondFacet™ optical elements, extremely high efficacy luminaires are the result – ultimately creating more visually comfortable and appealing environments while exceeding illumination performance.

**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 lightweight aluminum
- Acrylic lens delivers a low-glare, diffused light distribution
- Maximum continuous run is up to 48' (14.6m) at 120V and 136' (41.5m) at 277V
- **Weight:** 9.4 lbs. (4.3kg)

**OPTICAL SYSTEM**

- Cree WaveMax® Technology optics enable more uniform ceiling and task illumination for a comfortable visual environment
- Inspired design targeted to deliver 60% directional uplight and 40% volumetric downlight to create a soft balanced light experience
- Optimal mounting is 18" (457mm) from ceiling

**ELECTRICAL SYSTEM**

- **Power Factor:** > 0.9
- **Input Power:** Stays constant over life
- **Input Voltage:** 120-277 VAC, 60Hz
- **Operating Temperature Range:** 0°C - +35°C (32°F - +95°F)
- **Total Harmonic Distortion:** < 20%

**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 [www.creelink.com/exLink.asp?70982140Z58R34I26620963](http://www.creelink.com/exLink.asp?70982140Z58R34I26620963) for recommended dimming controls and wiring diagrams

**REGULATORY & VOLUNTARY QUALIFICATIONS**

- cULus Listed
- Suitable for damp locations
- Designed for indoor use
- Meets FCC Part 15, Subpart B, Class A standards for conducted and radiated emissions
- Meets Buy American requirements within ARRA
- DLC qualified. Please refer to <https://www.designlights.org/search/> for most current information
- RoHS compliant. Consult factory for additional details

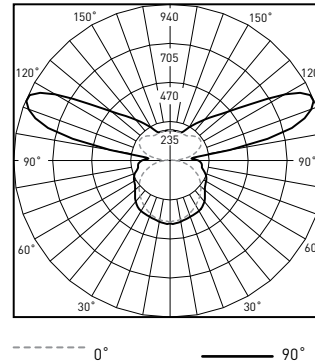
Electrical Data*				
System Watts 120-277V	Total Current (A)			
	120V	208V	240V	277V
32	0.27	0.15	0.13	0.12

\* Electrical data at 25°C (77°F). Actual wattage may differ by +/- 10% when operating between 120-277V +/- 10%

**Photometry**

**LN4-34L-35K-CMA BASED ON CESTL REPORT TEST #: PL07271-001B**

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)				
Vertical Angle	Horizontal Angle			
	0°	45°	90°	
	45°	1,068	1,195	
55°	1,118	1,270	1,279	
65°	1,195	1,409	1,617	
75°	1,302	1,868	2,246	
85°	1,685	4,329	6,199	

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

Coefficients Of Utilization – Zonal Cavity Method				
RC %:	80			
RW %:	70	50	30	10
RCR: 0	105	105	105	105
1	94	89	85	81
2	85	77	70	64
3	77	67	59	53
4	70	59	50	44
5	64	52	44	37
6	59	47	38	32
7	54	42	34	28
8	50	38	30	24
9	47	34	27	22
10	44	31	24	19

Effective Floor Cavity Reflectance: 20%

Zonal Lumen Summary			
Zone	Lumens	% Lamp	Luminaire
0-30	297	N/A	8.5%
0-40	500	N/A	14.4%
0-60	950	N/A	27.3%
0-90	1,472	N/A	42.3%
90-120	1,145	N/A	32.9%
90-150	1,849	N/A	53.2%
90-180	2,006	N/A	57.7%
0-180	3,478	N/A	100%

LN Series Ambient Adjusted Lumen Maintenance <sup>1</sup>					
Ambient	Initial LMF	25K hr Projected <sup>2</sup> LMF	50K hr Projected <sup>2</sup> LMF	75K hr Calculated <sup>3</sup> LMF	100K hr Calculated <sup>3</sup> LMF
0°C (32°F)	1.07	1.06	1.05	1.05	1.04
5°C (41°F)	1.05	1.04	1.04	1.04	1.03
10°C (50°F)	1.04	1.03	1.03	1.02	1.02
15°C (59°F)	1.03	1.02	1.01	1.01	1.00
20°C (68°F)	1.01	1.00	1.00	1.00	0.99
25°C (77°F)	1.00	0.99	0.99	0.98	0.98
30°C (86°F)	0.99	0.98	0.97	0.97	0.96
35°C (95°F)	0.97	0.96	0.96	0.96	0.95

<sup>1</sup> 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

<sup>2</sup> 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

<sup>3</sup> 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

