

# 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

Made 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, 50-60Hz

**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

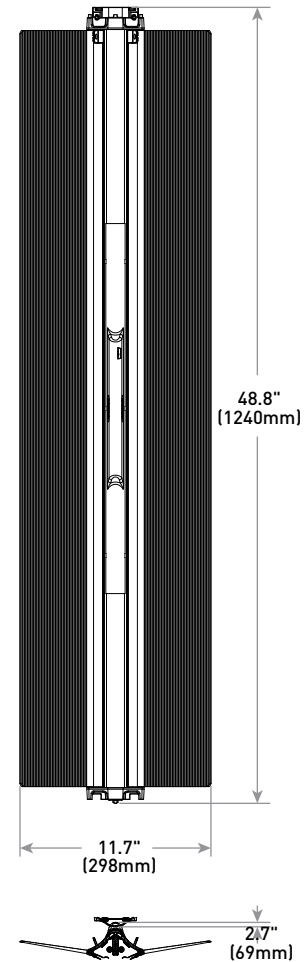
## Accessories

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 – 3,700 lumens	35K 3500K 40K 4000K	10V 0-10V dimming to 5%	Blank 120-277 Volt



## 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, 50-60Hz
- **Operating Temperature Range:** 0°C - +35°C (32°F - +95°F)
- **Total Harmonic Distortion:** < 20%
- **10V Source Current:** 0.25mA

### CONTROLS

- Continuous dimming to 5% with 0-10V DC control protocol
- For use with Class 1 or Class 2 dimming systems. Reference [www.creelink.com/exLink.asp?7098214OZ58R34I26620963](http://www.creelink.com/exLink.asp?7098214OZ58R34I26620963) 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 Premium qualified. Please refer to [www.designlights.org/OPL](http://www.designlights.org/OPL) for most current information
- RoHS compliant. Consult factory for additional details

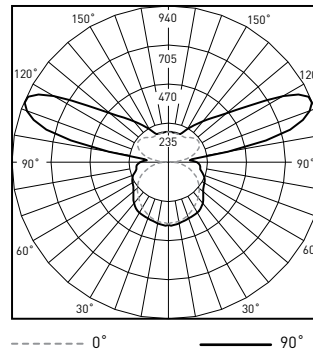
Electrical Data*				
System Watts 120-277V	Total Current			
	120V	208V	240V	277V
32	0.27	0.15	0.13	0.12

\* 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/m<sup>2</sup>)

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%

### Recommended LN Series Lumen Maintenance Factors (LMF)<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  
<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 (IDUT) 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 (IDUT) i.e. the packaged LED chip