

# LN Series with Cree SmartCast® Technology

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 with Cree SmartCast® Technology, Cree's intelligent light solution, provides extreme energy productivity and code compliance – all with installation that's so intuitive and simple, it just works.

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

## Performance Summary

Utilizes Cree TrueWhite® Technology

Utilizes Cree WaveMax® Technology

**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)

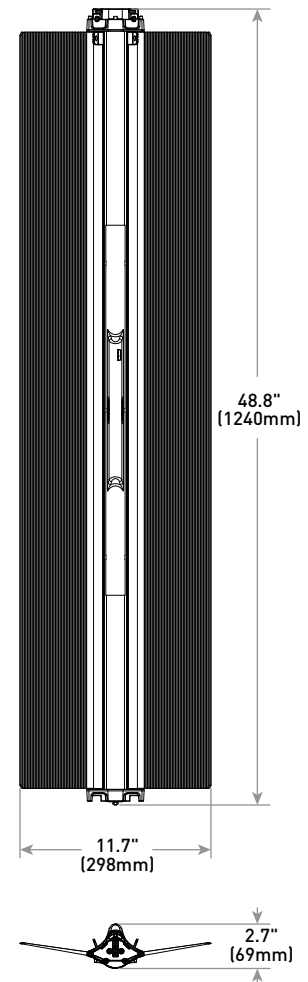
**Controls:** Cree SmartCast® Technology

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

## Accessories

Field-Installed	
<b>Mounting Hardware</b> LN-EC - Power canopy and hanging hardware to support up to an 8' (2.4m) individual mount or an 8' starter section. 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/3/32" (813mm) Aircraft Cable and Power Feed, 2.1" (53mm) Canopy w/3/32" (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/3/32" (813mm) Aircraft Cable, no Power Feed	<b>Luminaires w/Cree SmartCast® Technology</b> <b>Cree SmartCast® Technology Configuration Tool</b> <a href="#">CCT-CWC-1</a> - One required per project when CMA control is selected <b>Cree SmartCast® Technology Face Plates*</b> CFP-1-WH - Matching Cree face plate, 1-gang, white CFP-2-WH - Matching Cree face plate, 2-gang, white CFP-3-WH - Matching Cree face plate, 3-gang, white <b>Cree SmartCast® Technology Wireless Dimmer/Switch*</b> CWD-CWC-WH <b>Cree SmartCast® Technology Wireless Switch*</b> CWS-CWC-WH
<b>Emergency Options</b> <b>Inverter</b> ELI-125W (powers up to 4 luminaires) - Emergency 125W inverter (Ceiling Installation) <b>Generator</b> EL-SR-120 - Emergency Relay, 120V EL-SR-277 - Emergency Relay, 277V	

\* Refer to the [Wireless Dimmer SmartCast Control](#) spec sheet for more details



## Ordering Information

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

LN4	34L		CMA	
Product	Initial Delivered Lumens	CCT	Control	Voltage
LN4	34L 3,400 lumens (35K) 3,700 lumens (40K)	35K 3500K 40K 4000K	CMA Cree SmartCast® Technology - Integral motion and ambient sensors and wireless communication	Blank 120-277 Volt

Rev. Date: V4 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 SMARTCAST® TECHNOLOGY

Cree SmartCast® Technology is the most intuitive and easiest to install intelligent light solution on the market. SmartCast Technology delivers up to 70% energy savings at up to half the cost of other solutions. Luminaires combine best-in-class light with onboard sensors and intelligence to deliver a better light experience. Extreme energy productivity, code compliance and a better light experience without any extra design, installation or setup work.

### 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%

### 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
- DLC qualified. Please refer to <https://www.designlights.org/search/> for most current information
- RoHS compliant. Consult factory for additional details

## Cree SmartCast® Technology

### INTEGRAL MOTION SENSOR

- Passive infrared (PIR)
- **Coverage Area:** 100 sq. ft. (30.5m<sup>2</sup>) at 10' (3.0m) mounting height
- Not intended to be mounted higher than 12' (3.7m)
- **Operation:**
  - Grouped with a wall control: Luminaire will operate in vacancy mode (manual-on/auto-off)
  - Not grouped with a wall control: Luminaire will operate in occupancy mode (auto-on/auto-off)
- Luminaires operate at full intensity until OneButton™ Setup is initiated by the Cree Configuration Tool

### INTEGRAL AMBIENT LIGHT SENSOR

- Sensor response matches response of human eye
- Not intended to be mounted higher than 12' (3.7m)
- Luminaires operate at full intensity until OneButton™ Setup is initiated by the Cree Configuration Tool
- Daylight harvesting calibration performed automatically during OneButton™ Setup

### INTEGRAL WIRELESS COMMUNICATION

- 2.4GHz wireless mesh technology with AES 128-bit encryption
- Self assigns to quietest channel during OneButton™ Setup
- **Range:**
  - 30' (9.1m) in typical commercial applications
  - 300' (91.4m) open air without obstructions
- **Network:** 250 devices max.
- **Space:** 100 devices max. per group
- FCC certified
- IC certified

### LUMINAIRE

- Luminaires operate at full intensity until OneButton™ Setup is initiated by the Cree Configuration Tool
- 10 year power fail memory of settings

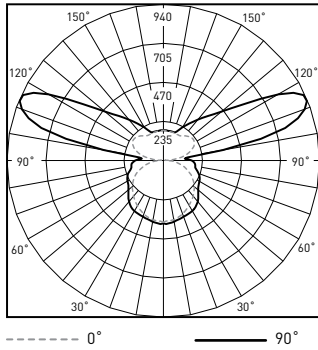
### DEPLOYMENT

- Please refer to the SmartCast® Deployment Guide at <https://www.creelink.com/exLink.asp?236135640H88E44I39771048>

**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%



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

Average Luminance Table [cd/m²]				
Vertical Angle	Horizontal Angle			
		0°	45°	90°
	45°	1,068	1,195	1,197
	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

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%

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