

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)

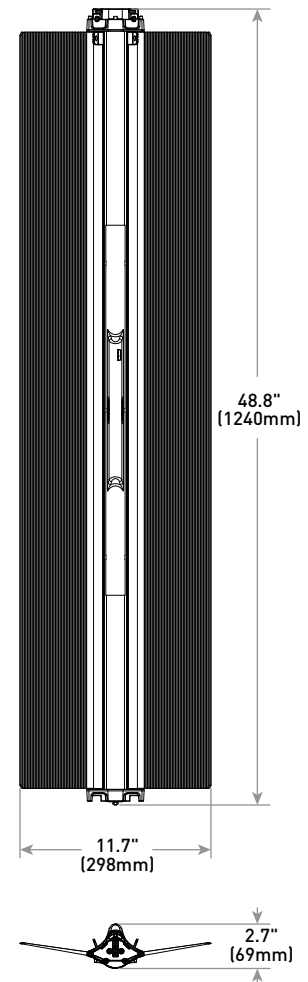
Controls: Cree SmartCast® Technology

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

Accessories

Field-Installed	
Mounting Hardware 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 - 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	Emergency Options Cont. Emergency Relay - For use with customer supplied generators/inverters EL-SR-120 - 120V UL-924 Relay EL-SR-277 - 277V UL-924 Relay Luminaires w/Cree SmartCast® Technology Cree SmartCast® Technology Configuration Tool CCT-CWC-1 - One required per project when CMA control is selected Cree SmartCast® Technology Face Plates† 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 Cree SmartCast® Technology Wireless Dimmer/Switch† CWD-CWC-WH Cree SmartCast® Technology Wireless Switch† CWS-CWC-WH
Emergency Options Inverter 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	

† 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 11/27/2017



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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. (30.5m²) 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

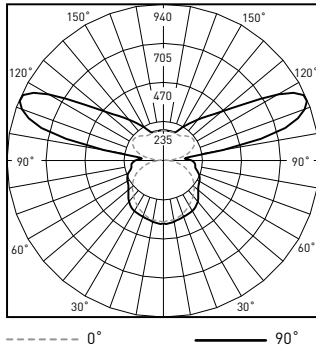
DEPLOYMENT

- 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 ¹					
Ambient	Initial LMF	25K hr Projected ² LMF	50K hr Projected ² LMF	75K hr Calculated ³ LMF	100K hr Calculated ³ 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

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