

LN Series

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

Product Description

The LN4™ suspended ambient luminaire delivers 110 lumens per watt utilizing Cree WaveMax™ Technology. The 4' (1.2m) luminaire offers 3400 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 as well as the option for Cree SmartCast® Technology for even more energy savings when utilized. Design and installation are drastically simpler and faster by using a modular lighting engine and integral SmartCast® Technology lighting controls to eliminate unnecessary parts, wiring, and labor.

Applications: Suspended ambient applications for new construction and upgrade

Performance Summary

Utilizes Cree TrueWhite® Technology

Utilizes Cree WaveMax™ Technology

Initial Delivered Lumens: 3400 lumens (60% uplight, 40% downlight)

Input Power: 31 watts

Efficacy: 110 LPW

CRI: 90+ CRI

CCT: 3500K, 4000K

Input Voltage: 120-277 VAC, 60Hz

Limited Warranty*: 10 years on LN4™ luminaire/5 years on LN4™ luminaire with Cree SmartCast® Technology

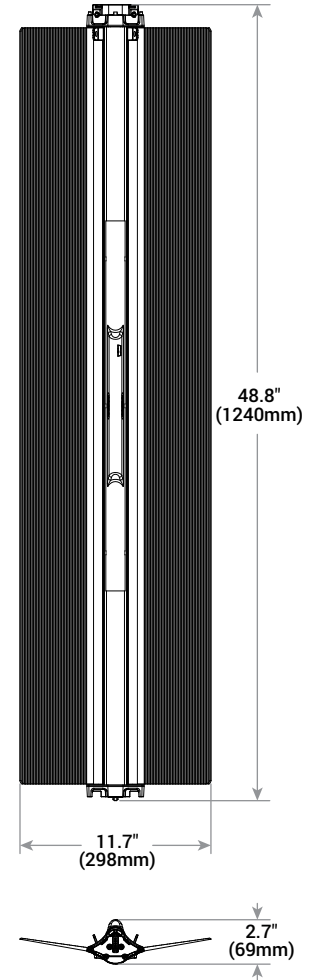
Dimensions: L 48.8" (1240mm) x W 11.7" (298mm) x H 2.7" (69mm)

Controls: 0-10V dimming to 5% or SmartCast® Technology

*See www.cree.com/lighting/products/warranty for warranty terms

Accessories

Field-Installed	
Mounting Hardware LN-EC - Set of End Caps, one with power feed, one without (one needed per power feed) LN-CK-5-AC - Canopy Kit with Aircraft Cable and Power Feed - 32" (813mm); standard mounting is 18" (457mm) from ceiling LN-CK-0-AC - Canopy Kit with Aircraft Cable, no Power Feed - 32" (813mm); standard mounting is 18" (457mm) from ceiling Emergency Options Inverter ELI-125W (powers up to 4 luminaires) - Emergency 125W inverter (Ceiling Installation) Generator EL-SR-120 - Emergency Relay, 120V EL-SR-277 - Emergency Relay, 277V	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 CWD CWC WH Cree SmartCast® Technology Wireless Switch CWS CWC WH



Ordering Information

Example: LN4 34L 35K 10V

LN4	34L			
Product	Initial Delivered Lumens	CCT	Control	Voltage
LN4	34L 31W, 3400 lumens - 110 LPW	35K 3500K 40K 4000K	10V 0-10V dimming to 5% CMA Cree SmartCast® Technology - Controls ready with integral motion and ambient sensors	Blank 120-277 Volt



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Rev. Date: V2 R2.05/29/2015

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

Product Specifications

CREE SMARTCAST® TECHNOLOGY

Cree SmartCast® Technology changes the paradigm of lighting control. With the press of a single button, Cree SmartCast® Technology enabled luminaires and controls create their own secure network and auto-associate to form logical groups throughout every space. Integrated sensors and robust wireless communication included in every luminaire combined with revolutionary OneButton™ Setup enables automated setup and configuration of luminaires and wall controls. With no extra wires or interfaces, Cree SmartCast® Technology products reduce installation time and complexity.

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.

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.

CONSTRUCTION & MATERIALS

- Constructed of durable lightweight aluminum
- Acrylic lens delivers a low-glare, diffused light distribution
- Continuous rows using one power feed up to 48' at 120V and 136' 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

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% for 120-277V
- **10V Source Current:** 0.25mA

CONTROLS

- Continuous dimming to 5% with 0-10V DC control protocol
- SmartCast® Technology. Prior to installation please reference Cree SmartCast Technology Deployment Guide at www.creelink.com/exLink.asp?236135640H88E44I39771048

REGULATORY & VOLUNTARY QUALIFICATIONS

- Suitable for damp locations
- Designed for indoor use

Cree SmartCast® Technology

INTEGRAL MOTION SENSOR

- Passive infrared (PIR)
- Coverage area: 100 sq. ft. at 10 ft. mounting height
- Not intended to be mounted higher than 12 ft.
- 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 ft.
- 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 ft. in typical commercial applications
 - 300 ft. 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

Recommended LN Series Lumen Maintenance Factors (LMF) ¹					
Ambient	Initial LMF	25K hr Projected ² LMF	50K hr Calculated ³ LMF	75K hr Calculated ³ LMF	100K hr Calculated ³ LMF
0°C (32°F)	1.07	0.98	0.93	0.88	0.82
5°C (41°F)	1.05	0.97	0.92	0.87	0.81
10°C (50°F)	1.04	0.96	0.91	0.85	0.80
15°C (59°F)	1.03	0.95	0.90	0.84	0.79
20°C (68°F)	1.01	0.93	0.88	0.83	0.78
25°C (77°F)	1.00	0.92	0.87	0.82	0.77
30°C (86°F)	0.99	0.91	0.86	0.81	0.76
35°C (95°F)	0.97	0.90	0.85	0.80	0.75

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 (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

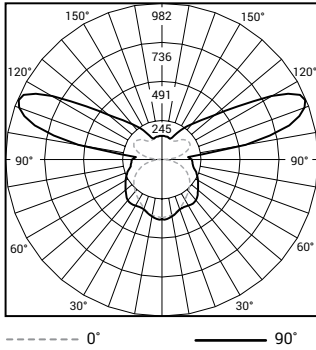


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Photometry

LN4 34L 40K BASED ON DTC REPORT TEST #: 17459-G

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%



Average Luminance Table (cd/m ²)				
		Horizontal Angle		
		0°	45°	90°
Vertical Angle	45°	929	1,115	1,236
	55°	965	1,175	1,324
	65°	987	1,261	1,575
	75°	961	1,580	2,136
	85°	845	2,788	5,247

Coefficients Of Utilization – Zonal Cavity Method				
RC %:	80			
RW %:	70	50	30	10
RCR: 0	105	105	105	105
1	94	89	85	80
2	85	77	70	64
3	77	67	59	52
4	70	59	50	44
5	64	52	43	37
6	59	46	38	32
7	54	42	33	28
8	50	38	30	24
9	47	34	27	21
10	44	31	24	19

Effective Floor Cavity Reflectance: 20%

Zonal Lumen Summary			
Zone	Lumens	% Lamp	Luminaire
0-30	286	N/A	8.3%
0-40	484	N/A	14.0%
0-60	938	N/A	27.2%
0-90	1,468	N/A	42.6%
90-120	1,215	N/A	35.3%
90-150	1,850	N/A	53.7%
90-180	1,975	N/A	57.4%
0-180	3,444	N/A	100%

Reference www.cree.com/Lighting/Products/Indoor/Surface-Ambient/LN-Series for detailed photometric data

