

LR6 Series

LR6™ LED Downlight - 6"

Product Description

The LR6™ downlight is an unparalleled combination of light quality and efficacy – bringing outstanding performance and value to the retrofit downlight space. Delivering up to 1800 lumens of exceptional 90+ CRI light while achieving up to 100 lumens per watt, this breakthrough performance is achieved by combining the high efficacy and high-quality light of Cree TrueWhite® Technology, with an integrated driver and thermal management design. The LR6™ downlight is available in warm or neutral color temperatures, three lumen packages, and offers a variety of trim options.

Applications: Commercial new construction and retrofit

Performance Summary

Utilizes Cree TrueWhite® Technology
Initial Delivered Lumens: 650-1,800 lumens
Input Power: 7.5-22 watts
CRI: 90
CCT: 2700K, 3500K, 4000K
Limited Warranty*: 10 years
Lifetime: Designed to last 50,000 hours
Dimming: Dimmable to 5%
Must order in multiples of master carton (MC) quantities of 5

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

Housings & Trims

Reference Housing & Accessory documents for more details.

Housings		
120V GU24 Base Recessed Housings H6-GU24 - Architectural new construction RC6-GU24 - New construction RR6-GU24 - Retrofit 120V GU24 Base Surface Mount Housings SC6-GU24 - Textured white finish SC6-BL-GU24 - Textured black finish	120V GU24 Base Cord Mount Housings SC6-CM-GU24 - Textured white finish SC6-CM-BL-GU24 - Textured black finish 120V GU24 Base Wall Mount Housings SC6-WM-GU24 - Textured white finish 277V Recessed Housings H6-277V - Architectural new construction RC6-277V - New construction RR6-277V - Retrofit	277V Surface Mount Housings SC6-277V - Textured white finish SC6-BL-277V - Textured black finish 277V Cord Mount Housings SC6-CM-277V - Textured white finish SC6-CM-BL-277V - Textured black finish 277V Wall Mount Housings SC6-WM-277V - Textured white finish

Trims		
LT6A-DR Diffuse anodized reflector w/white flange LT6AW-DR Wheat diffuse anodized reflector w/white flange	LT6AP-DR Pewter diffuse anodized reflector w/white flange LT6AB-DR Black anodized reflector w/white flange	LT6WH-DR Smooth white painted reflector/flange LT6BB-DR Flat black reflector/flange

Ordering Information

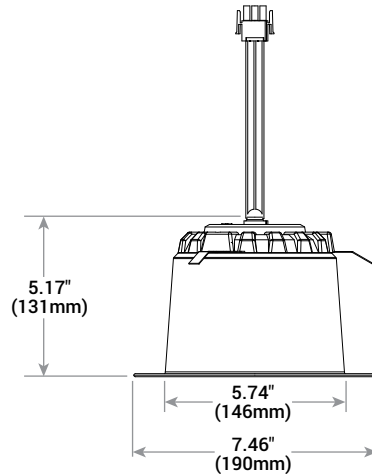
Example: LR6-7L-27K-GU24-E26

LR6	Series	Initial Delivered Lumens*	CCT	Voltage	Base Type
LR6**	7L 7.5W, 650 lumens - 87 LPW 10L 10.5W, 1,050 lumens - 100 LPW 18L 22W, 1,800 lumens - 82 LPW	27K 2700K 35K 3500K 40K 4000K	Blank 120 Volts 277V 277 Volts	Blank 277V Connector - Must be used with Cree six-inch 277V housings (see Housings table above)	GU24 - GU24 base - Available only with LR6-10L and LR6-18L GU24-E26 - GU24 base w/Edison adaptor - Available only with the LR6-7L

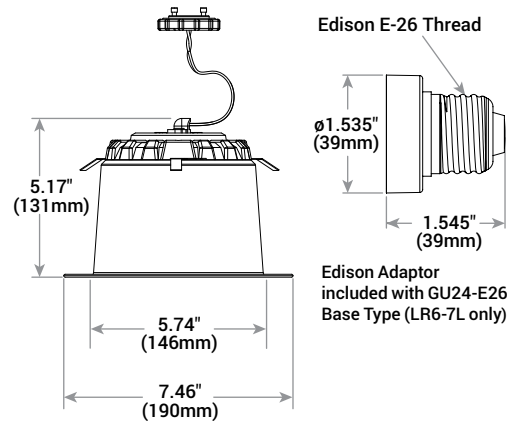
* Actual lumens vary based on color temperature
 ** LR6 must be ordered in Master Carton quantities of 5



277V Connector



120V GU24



Rev. Date: V3 09/01/2015



Product Specifications

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

- Durable aluminum housing protects the light source. Adjustable flip clips provide robust retention for flush ceiling fit
- Thermal management system uses integral heat sink to conduct heat away from LEDs for optimal performance. LED junction temperatures stay below specified maximum even when installed in with worst case installations
- Suitable for insulated and non-insulated ceilings
- One-piece aluminum lower reflector redirects light while also conducting heat away from LEDs. It creates a comfortable visual transition from the lens to the ceiling plane and easily accommodates LT6 snap-in trims
- 5.5" (140mm) pigtail

OPTICAL SYSTEM

- Unique combination of reflective and refractive optical components achieves a uniform, comfortable appearance while eliminating pixelation, hot spots and minimizing glare
- Components work together to optimize distribution, balancing the delivery of high illuminance levels on horizontal surfaces with an ideal amount of light on walls and vertical surfaces. This increases the perception of spaciousness
- Deep set polycarbonate diffusing lens shields direct view of LEDs and provides greater visual cut-off

ELECTRICAL SYSTEM

- Integral, high-efficiency power supply
- **Power Factor:** minimum 0.9
- **Total Harmonic Distortion:** < 20%
- **Input Voltage:** 120V, 50/60Hz or 277V, 50/60Hz
- **Dimming:** 120V dimmable to 5% with most incandescent dimmer. 277V dimmable to 5% with trailing edge dimmers. Reference www.cree.com/Lighting/Products/Indoor/Downlights-US/LR-Series for recommended dimmers
- **Operating Temperature Range:** -20°C - +35°C (-4°F - +95°F)

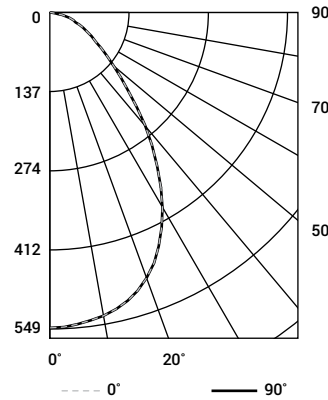
REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Classified
- Suitable for wet locations for covered ceilings only
- ENERGY STAR® qualified. Please refer to www.energystar.gov/certified-products/certified-products?c=products.pr_find_es_products&s=mega for most current information
- Exceeds California Title-24 high efficacy luminaire requirements when ordered with GU24 base or 277V. Please refer to www.appliances.energy.ca.gov/AdvancedSearch.aspx for most current information
- Meets FCC Part 15 standards for conducted and radiated emissions
- RoHS Compliant. Consult factory for additional details

Photometry

LR6-10L-35K-GU24 BASED ON CESTL REPORT TEST #: PL06010-001

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/m²)				
Vertical Angle	Horizontal Angle			
	0°	45°	90°	
45°	13,215	13,215	13,215	
55°	8,204	8,204	8,204	
65°	5,541	5,541	5,541	
75°	3,834	3,834	3,834	
85°	1,165	1,165	1,165	

Coefficients Of Utilization – Zonal Cavity Method				
RC %:	80			
RW %:	70	50	30	10
RCR: 0	119	119	119	119
1	111	107	103	100
2	103	96	90	85
3	95	86	79	74
4	88	78	70	65
5	82	71	63	57
6	77	65	57	51
7	72	60	52	46
8	67	55	47	42
9	63	51	44	39
10	60	48	40	36

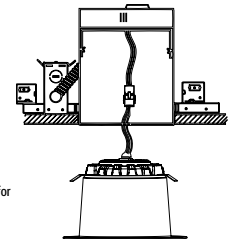
Effective Floor Cavity Reflectance: 20%

Zonal Lumen Summary			
Zone	Lumens	% Lamp	Luminaire
0-30	403	N/A	41.9%
0-40	605	N/A	62.9%
0-60	854	N/A	88.7%
0-90	962	N/A	100%
0-180	962	N/A	100%

Reference www.cree.com/Lighting/Products/Indoor/Downlights/LR-Series for detailed photometric data

Installation

- Designed to easily install in standard 6" (152mm) downlight housings with minimum depth 6.5" (165mm) and diameter of 5.75" - 6.25" (146mm - 159mm)
- Quick install system utilizes a unique retention feature. Simply attach socket to LR6 downlight. Move light to ready position and slide into housing



NOTE: Reference www.cree.com/Lighting/Products/Indoor/Downlights-US/LR-Series for detailed installation instructions

Application Reference

Open Space					
Spacing	Lumens	Wattage	LPW	w/ft²	Average FC
4 x 4	1,050	10.5	100	0.63	62
6 x 6				0.29	29
8 x 8				0.16	16
10 x 10				0.11	11

10' Ceiling, 80/50/20 Reflectances, 2.5 workplane. LLF: 1.0 Initial. Open Space: 50' x 40' x 10

Corridor					
Spacing	Lumens	Wattage	LPW	w/ft²	Average FC
4' on Center	1,050	10.5	100	0.44	27
6' on Center				0.28	17
8' on Center				0.21	13
10' on Center				0.18	11

10' Ceiling, 80/20/50 Reflectances, Light levels on the ground. LLF: 1.0 Initial. Corridor: 6' Wide x 100' Long

