

# CR Series

CR6™ LED Downlight - 6"

## Product Description

The CR6™ LED downlight delivers up to 800 lumens of exceptional 90+ CRI light while achieving up to 67 lumens per watt. This breakthrough performance is achieved by combining the high efficacy and high-quality light of Cree TrueWhite® Technology. The CR6 is available in warm and cool color temperatures, and has a variety of trim options. It easily installs into most standard six-inch recessed IC or non-IC housings.

**Applications:** New construction or upgrade for residential and commercial lighting

## Performance Summary

Utilizes Cree TrueWhite® Technology

**Initial Delivered Lumens:** 625, 800 lumens

**Input Power:** 9.5, 12 watts

**CRI:** 90

**CCT:** 2700K, 3000K, 3500K, 4000K

**Limited Warranty\*:** 5 years

**Lifetime:** Designed to last 50,000 hours

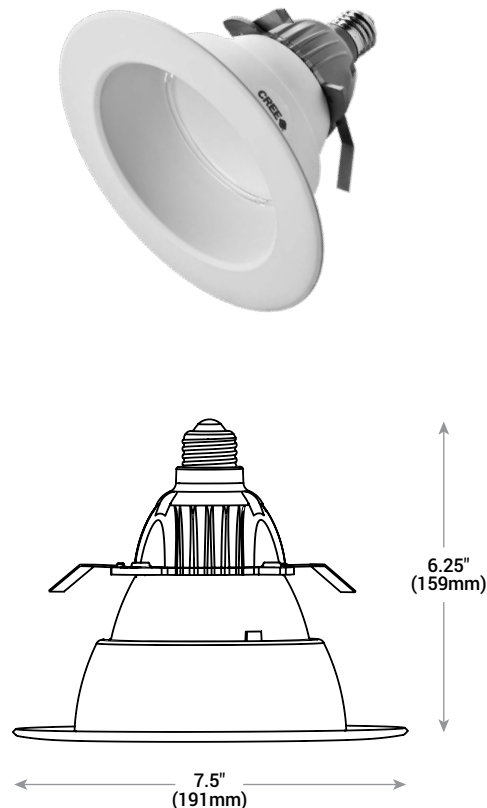
**Dimming:** Dimmable to 5%\*

\*See [www.cree.com/lighting/products/warranty](http://www.cree.com/lighting/products/warranty) for warranty terms

## Housings & Accessories

Reference Housing & Accessory documents for more details.

Trims & Reflectors	
<b>CT6A</b> - Diffuse anodized finish reflector <b>CT6AW</b> - Wheat diffuse anodized finish reflector	<b>CT6AB</b> - Black diffuse anodized finish reflector <b>CT6BB</b> - Flat black reflector and trim
Housings	
<b>Edison Base Housing</b> <b>RC</b> - New Construction <b>RR6</b> - Retrofit <b>C6</b> - Recessed "Pan" Conversion Kit	<b>GU24 Base Surface Mount Housing</b> <b>SC6-GU24</b> - Textured white finish <b>SC6-GU24 US</b> - Textured white finish, U.S. Manufactured <b>SC6-BL-GU24</b> - Textured black finish
<b>GU24 Base Housing</b> <b>RC6-GU24</b> - New Construction <b>H6-GU24</b> - Architectural <b>RR6-GU24</b> - Retrofit <b>C6-GU24</b> - Recessed "Pan" Conversion Kit <b>C6-120V-LSA</b> - Hard Wire Recessed "Pan" Conversion Kit	<b>GU24 Base Ceiling Mount Housing</b> <b>SC6-CM-GU24</b> - Textured white finish <b>SC6-CM-GU24 US</b> - Textured white finish, U.S. Manufactured <b>SC6-CM-BL-GU24</b> - Textured black finish <b>GU24 Base Wall Mount Housing</b> <b>SC6-WM-GU24</b> - Textured white finish <b>SC6-WM-BL-GU24</b> - Textured black finish



## Ordering Information

Example: CR6-625L-27K-12-E26

**QUICKSHIP™**

For full list of Cree Quick Ship products visit [www.cree.com/lighting/quickship](http://www.cree.com/lighting/quickship)

CR	6			12	
Series	Size	Initial Delivered Lumens	CCT	Voltage	Base Type
CR	6 6" (152mm)	<b>625L</b> 9.5W, 625 Lumens - 66 LPW <b>800L</b> 12W, 800 Lumens - 67 LPW	<b>27K</b> 2700K <b>30K</b> 3000K <b>35K</b> 3500K <b>40K</b> 4000K	<b>12</b> 120 Volts	<b>E26</b> Edison Base <b>GU24</b> GU24 Base (Title 24 Compliant)

\* Reference [www.cree.com/Lighting/Products/Indoor/Downlights-US/CR-Series](http://www.cree.com/Lighting/Products/Indoor/Downlights-US/CR-Series) for recommended dimmers



Rev. Date: V3 10/28/2015



US: [www.cree.com/lighting](http://www.cree.com/lighting)

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Canada: [www.cree.com/canada](http://www.cree.com/canada)

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CR6™ LED Downlight - 6"

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 upper housing protects LEDs, driver and power supply. Adjustable flip clips resist heat while providing retention for flush ceiling fit
- Thermal management system uses both upper housing and lower reflector to conduct heat away from LEDs and transfer it to the plenum space for optimal performance. LED junction temperatures stay below specified maximum even when installed in insulated ceilings
- 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 CT6 snap-in trims

OPTICAL SYSTEM

- Unique combination of reflective and refractive optical components achieves a uniform, comfortable appearance while eliminating pixelation and color fringing. This ensures smooth light patterns are projected with no hot spots and minimal striations
- 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
- Diffusing polycarbonate lens shields direct view of LEDs while lower reflector balances brightness of lens with the ceiling to create a low-glare high angle appearance

ELECTRICAL SYSTEM

- Integral, high-efficiency driver and power supply
- **Power Factor:** > 0.9
- **Total Harmonic Distortion:** < 20%
- **Input Voltage:** 120V, 60Hz
- **Dimming:** Dimmable to 5% with most incandescent dimmers. Reference [www.cree.com/Lighting/Products/Indoor/Downlights-US/CR-Series](http://www.cree.com/Lighting/Products/Indoor/Downlights-US/CR-Series) for recommended dimmers
- **Operating Temperature Range:** 0°C - +35°C (32°F - +95°F)

REGULATORY & VOLUNTARY QUALIFICATIONS

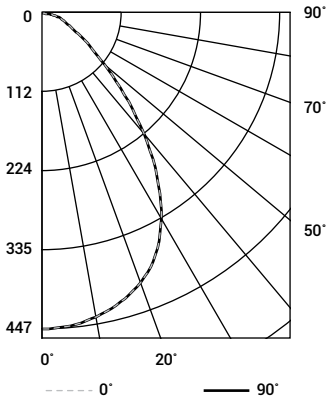
- ENERGY STAR® qualified. Please refer to [http://www.energystar.gov/certified-products/certified-products?c=products.pr\\_find\\_es\\_products&s=mega](http://www.energystar.gov/certified-products/certified-products?c=products.pr_find_es_products&s=mega) for most current information
- cULus Classified
- Suitable for wet locations for covered ceilings only
- Exceeds California Title-24 high efficacy luminaire requirements Please refer to <http://www.appliances.energy.ca.gov/AdvancedSearch.aspx> for most current information
- Meets FCC Part 15 standards for conducted and radiated emissions

Photometry

CR6-800L-27K-12-E26 BASED ON ONSPEX REPORT #: 2444322

CR6-625L: MULTIPLY BY 0.78

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°	17,630	18,200	18,559
	55°	10,723	10,960	11,192
	65°	7,339	7,378	7,499
	75°	7,252	7,279	7,384
	85°	4,818	4,996	5,477

Reference [www.cree.com/Lighting/Products/Indoor/Downlights-US/CR-Series](http://www.cree.com/Lighting/Products/Indoor/Downlights-US/CR-Series) for detailed photometric data

Coefficients Of Utilization – Zonal Cavity Method				
RC %:	80			
RW %:	70	50	30	10
RCR: 0	119	119	119	119
1	111	107	104	101
2	103	96	91	86
3	96	87	80	75
4	89	79	71	66
5	83	72	64	59
6	77	66	58	53
7	72	60	53	47
8	68	56	48	43
9	64	52	44	39
10	60	48	41	36

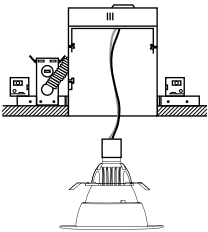
Effective Floor Cavity Reflectance: 20%

Zonal Lumen Summary			
Zone	Lumens	% Lamp	Luminaire
0-30	335	N/A	42.5%
0-40	513	N/A	65.0%
0-60	716	N/A	90.8%
0-90	789	N/A	100.0%

Installation

- Designed to easily install in standard 6" (152mm) downlight housings with minimum housing height of 6.5" (165mm) and diameter of 5.75" - 6.5" (146mm - 165mm)
- Quick install system utilizes a unique retention feature. Simply attach socket to CR6. Move light to ready position and slide into housing

NOTE: Reference [www.cree.com/Lighting/Products/Indoor/Downlights-US/CR-Series](http://www.cree.com/Lighting/Products/Indoor/Downlights-US/CR-Series) for detailed installation instructions



Application Reference

Open Space					
Spacing	Lumens	Wattage	LPW	w/ft²	Average FC
4 x 4	625	9.5	66	0.60	36
6 x 6				0.28	18
8 x 8				0.15	10
10 x 10				0.10	7
4 x 4	800	12	67	0.76	47
6 x 6				0.35	22
8 x 8				0.19	13
10 x 10				0.13	8

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	625	9.5	66	0.40	13
6' on Center				0.27	9
8' on Center				0.20	7
10' on Center				0.17	6
4' on Center	800	12	67	0.51	17
6' on Center				0.34	11
8' on Center				0.25	8
10' on Center				0.21	7

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

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