

Essentia® Series Downlights

LED Round Downlight – 6"

Rev. Date: V18 01/20/2025

Product Description

The Essentia® Series Downlights deliver beautiful 90+CRI light, with efficacy up to 80 lumens per watt. Available in a variety of lumen packages, color temperatures and beam angles, each downlight is rated at 50,000 hours and features a premium quality self-flanged reflector finish supported by a range of color trim options. Essentia® Series Downlights are engineered to provide outstanding value and performance. It's your essential, comprehensive downlight portfolio for new construction and renovation applications.

Applications: New construction and renovation applications with non-insulated ceilings or where insulation can be kept 3" (76mm) from housing

Performance Summary

Initial Delivered Lumens: 891-3,311 lumens

Input Power: 12-42 watts

CRI: 90

CCT: 3500K, 4000K

Beam Angles: Medium and Wide

Limited Warranty[†]: 1 year for luminaire and luminaire accessories

Dimming: 0/1-10V dimming down to 1% and Triac dimming down to 10%

[†] As of 1/20/2025, this is a clearance product and has a 1-year limited warranty. See <https://www.creelighting.com/resources/warranties/> for warranty terms

Accessories

Field-Installed

SmartCast® 10V Zone Controller

[CSC-ZC-10V-CWC](#)

- Intelligent sensing and control of 0-10V luminaires

C-Channel Hangar Bars

RBH30C

- Pair of 30" (762mm) rigid 3/4" x 1/2" (19mm x 13mm) c-channel bars

RBH24C-1

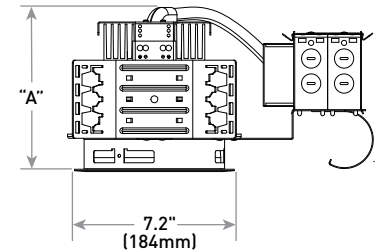
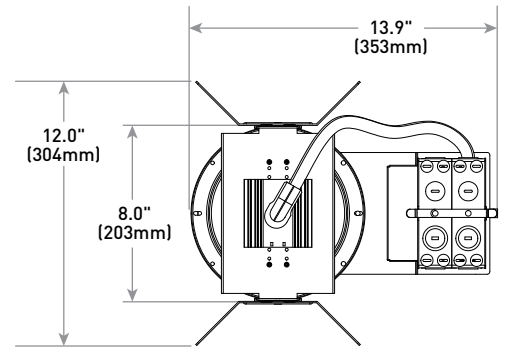
- Pair of 24" (610mm) rigid 1-1/2" (38mm) x 1/2" (13mm) c-channel bars

T-Bar Clips

RARC7

- Set of four

- For use with RBH24C-1 hanger bars



Initial Delivered Lumens	Dim "A"
11L, 15L, 24L	6.8" (172mm)
34L	6.8" (173mm)
42L	7.3" (186mm)

Ordering Information

Fully assembled luminaire is composed of two components that must be ordered separately:

Example: **Trim:** S-DL6T-M-SSC + **Housing:** S-DL6-11L-35K

Housing (Trim must be ordered separately)				
Product	Beam	Finish	Reflector	Flange Color
S-DL6T	M	P	W	WF
S-DL6T	M	SS	C	Blank
S-DL6T	M	SS	C	WF
S-DL6T	W	P	W	WF
S-DL6T	W	SS	C	Blank
S-DL6T	W	SS	C	WF

Housing (Trim must be ordered separately)				
Product/Size	Initial Delivered Lumens	CCT	Voltage	Controls
S-DL6	11L 12W, 891 lumens	35K 3500K	Blank Universal 120-277 Volt	Blank 0/1-10V and Triac Dimming
S-DL6	11L 12W, 958 lumens	40K 4000K	Blank Universal 120-277 Volt	Blank 0/1-10V and Triac Dimming
S-DL6	15L 15W, 1,046 lumens	35K 3500K	Blank Universal 120-277 Volt	Blank 0/1-10V and Triac Dimming
S-DL6	15L 15W, 1,125 lumens	40K 4000K	Blank Universal 120-277 Volt	Blank 0/1-10V and Triac Dimming
S-DL6	24L 23W, 1,786 lumens	40K 4000K	Blank Universal 120-277 Volt	Blank 0/1-10V and Triac Dimming
S-DL6	34L 34W, 2,491 lumens	35K 3500K	Blank Universal 120-277 Volt	Blank 0/1-10V and Triac Dimming
S-DL6	34L 34W, 2,678 lumens	40K 4000K	Blank Universal 120-277 Volt	Blank 0/1-10V and Triac Dimming
S-DL6	42L 42W, 3,311 lumens	40K 4000K	Blank Universal 120-277 Volt	Blank 0/1-10V and Triac Dimming



Website: [creelighting.com](https://www.creelighting.com)

US: (800) 236-6800 Canada: (800) 473-1234

CREE  **LIGHTING®**

Product Specifications

CONSTRUCTION & MATERIALS

- Semi-specular clear reflector/flange finish, standard
- Multiple reflector/flange colors available
- Light engine, optics and driver accessible from below ceiling
- Heavy-gauge formed steel housing
- Mounting brackets are adjustable from above or below the ceiling
- Ten 1/2" (13mm) and two 3/4" (19mm) knockouts with pry-outs
- Eight knockouts with Romex® cable clamp
- **Max. Ceiling Thickness:** 1-3/8" (35mm)


ELECTRICAL SYSTEM

- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- **Input Voltage:** 120-277V, 50/60Hz
- **Operating Temperature Range:** 0°C - +35°C (32°F - +95°F)

CONTROLS

- Triac dimming down to 10%
- 0/1-10V dimming down to 1% with 0-10V DC control protocol
- **10V Source Current:** 1.00mA
- 0-10V dimming control must be Class 2 and either have a neutral connection or be suitable for use with LED luminaires
- Reference [dimming spec sheet](#) for recommended dimming controls

REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed
- Suitable for damp locations
- Designed for indoor use only
- Suitable for thru-wiring 8#12AWG-90°C
- Thermally protected Type NON-IC in accordance with Article 410 of the NEC and UL 1598
- Meets FCC Part 15, Subpart B, Class A limits for conducted and radiated emissions
- RoHS compliant. Consult factory for additional details
-  **CA RESIDENTS WARNING:** Cancer and Reproductive Harm – www.p65warnings.ca.gov

Electrical Data*					
Initial Delivered Lumens	System Watts 120-277V	Total Current (A)			
		120V	208V	240V	277V
11L	12	0.10	0.06	0.05	0.04
15L	15	0.12	0.07	0.06	0.05
24L	23	0.19	0.11	0.10	0.08
34L	34	0.28	0.16	0.14	0.12
42L	42	0.35	0.20	0.18	0.15

* Electrical data at 25°C (77°F). Actual wattage may differ by +/- 10% when operating between 120-277V +/- 10%

Essentia® Series Downlights Ambient Adjusted Lumen Maintenance ¹					
Ambient	Initial LMF	25K hr Reported ² LMF	50K hr Estimated ³ LMF	75K hr Estimated ³ LMF	100K hr Estimated ³ LMF
25°C (77°F)	1.00	0.94	0.89	0.84	0.80

¹ Lumen maintenance values at 25°C (77°F) are calculated per IES TM-21 based on IES LM-80 report data for the LED package and in-situ luminaire testing. Luminaire ambient temperature factors (LATF) have been applied to all lumen maintenance factors.

² In accordance with IES TM-21, Reported values represent interpolated values based on time durations that are up to 6x the tested duration in the IES LM-80 report for the LED.

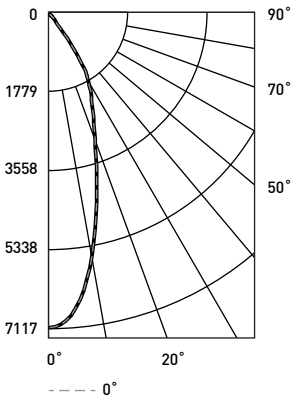
³ Estimated values are calculated and represent time durations that exceed the 6x test duration of the LED.

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Photometry

DL6-42L-40K + S-DL6T-M-SSC BASED ON CESTL REPORT TEST #: PL08067-001

Luminaire photometry has been conducted in accordance with IES LM-79. IES LM-79 specifies the entire luminaire as the source resulting in a luminaire efficiency of 100%.



Initial Delivered Lumens: 3,469
Efficacy: 81.0 LPW
S/M: 0.56
Beam Angle: 34.7°

Coefficients Of Utilization – Zonal Cavity Method				
RC %:	80			
RW %:	70	50	30	10
RCR: 0	119	119	119	119
1	114	111	109	107
2	109	105	101	98
3	104	99	94	90
4	100	93	88	84
5	95	88	83	79
6	91	83	78	74
7	87	79	74	70
8	84	75	70	66
9	80	72	67	63
10	77	69	63	60

Effective Floor Cavity Reflectance: 20%

Average Luminance Table (cd/m²)				
Vertical Angle	Horizontal Angle			
		0°	45°	90°
	45°	7,000	7,000	7,000
	55°	1,562	1,562	1,562
	65°	591	591	591
	75°	537	537	537
	85°	503	503	503

Zonal Lumen Summary			
Zone	Lumens	% Lamp	Luminaire
0-30	2,802	N/A	80.8%
0-40	3,364	N/A	97.0%
0-60	3,460	N/A	99.8%
0-90	3,469	N/A	100%
0-180	3,469	N/A	100%

Cone of Light		
Distance from Workplane	Footcandles	Beam Diameter
6' (1.8m)	203	3.4' (1.0m)
8' (2.4m)	114	4.5' (1.4m)
10' (3.0m)	78	5.3' (1.6m)
12' (3.7m)	51	6.7' (2.0m)
14' (4.3m)	37	7.9' (2.4m)

Reference <https://www.creelighting.com/products/indoor/new-construction-downlights/essentia-series-downlights> for detailed photometric data

Application Reference

Open Space					
Spacing	Lumens	Wattage	LPW	w/ft²	Average FC
4 x 4	3,311	42	79	2.58	211
6 x 6				1.20	99
8 x 8				0.65	53
10 x 10				0.43	35

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

Corridor					
Spacing	Lumens	Wattage	LPW	w/ft²	Average FC
4' on Center	3,311	42	79	1.79	111
6' on Center				1.22	75
8' on Center				0.86	53
10' on Center				0.72	44

10' Ceiling, 80/20/50 Reflectances, LLF: 1.0 Initial. 2.5' Workplane. Corridor: 6' Wide x 100' Long

Beam Angles

Initial Delivered Lumens	Beam Angle	
	M	W
11L-24L	25°	45°
34L-42L	40°	55°

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