KR4™
LED Architectural Downlight – Round 4″ Aperture

Product Description

The KR4™ LED specification downlight features Cree TrueWhite® Technology and delivers beautiful, high-quality light with efficacy up to 57 lumens per watt. Designed for new construction applications, the KR Series is available in variety of color temperatures, with high-quality anodized aluminum reflector finishes, dimmable product options, and sloped ceiling adaptor options, making it suitable for a wide variety of applications.

Performance Summary

Utilizes Cree TrueWhite® Technology

Made in the U.S.A. of U.S. and imported parts

Delivered Light Output*: 9L: 655Lumens(L), **13L:** 956L, **20L:** 1495L, **30L:** 2239L

Input Power: KR4-9L: 13 watts(W), **KR4-13L:** 18W, **KR4-20L:** 30W, **KR4-30L:** 39W

CRI: 90

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

Dimming: 5% Triac Dimming, 10% 0/1-10V Dimming**, 1% Lutron EcoSystem® Dimming**, 1% Lutron® Forward Phase Dimming**

Lifetime: Designed to last 50,000 hours

Limited Warranty: 10 years†

* Delivered lumen output is typical when using a SSGC type reflector. See Application Performance Chart under Photometry for more detail.

** 0/1-10V for 120V or 277V on 20L and 30L models, Triac for 120V on 9L and 13L models, Lutron dimming for 13L, 20L and 30L models

† See www.cree.com/lighting for warranty terms.

Ordering Information – Housing
Example: KR4-9L-27K-120V

KR4					
Series	**Size**	**Source Lumen Output**	**CCT**	**Voltage**	**Control Options**
KR	**4** 4 inch	**9L** 850 Lumens **13L** 1250 Lumens **20L** 2000 Lumens **30L** 3000 Lumens	**35K** 3500K **30K** 3000K **27K** 2700K **40K** 4000K	**120V** 120 Volts **277V** 277 Volts	Triac DImming* **10V** 0/1-10V Dimming* **LES** Lutron EcoSystem Dimming* **LFP** Lutron Forward Phase Dimming*

*Triac available on 9L and 13L, 10V available on 20L and 30L; LES, LFP available available on 13L, 20L, and 30L
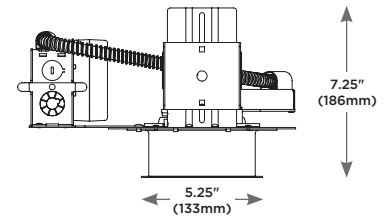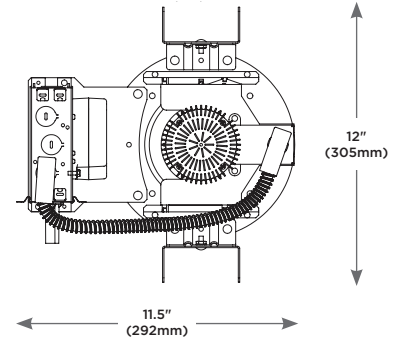
Ordering Information – Reflector
Example: KR4T-SSGC-FF

KR4T		
Series	**Reflector Finish**	**Flange Finish**
KR4T	**SSGC** Soft Satin Glow, Clear **SSGCG** Soft Satin Glow, Champagne Gold	**FF** Matching **WF** White Paint

Ordering Information-Sloped Ceiling Adaptor
Example: KRKS405WW

KRKS4		WW
Part	**Adaptor Angle**	**Option**
KRKS4	**05 thru 35** (order in 5 degree increments)	**WW** Required

12″ (305mm)

11.5″ (292mm)

7.25″ (186mm)

5.25″ (133mm)

Accessories:
4″ Sloped Ceiling Adaptor

FRAME EXTENDER BASE LOCATION

3″ (105mm)

8″ (203mm)

9″ (305mm)

RISE   RUN   ANGLE°
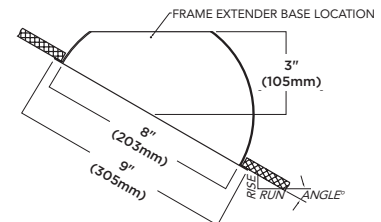
Rev. Date 09/12/2013

CREE®

Product Specifications

CREE TRUEWHITE˙ TECHNOLOGY

Cree TrueWhite® technology begins with the highest performing commercially available LEDs. Cree TrueWhite® Technology mixes the light from red and unsaturated yellow LEDs to create beautiful, warm, white light. This patented approach enables color management to preserve high color consistency over the life of the product. Cree TrueWhite® Technology also enables a CRI of at least 90 while maintaining high luminous efficacy — a no compromise solution.

CONSTRUCTION & MATERIALS
• Initial color within a 3-step MacAdam Ellipse.
• Low brightness parabolic spun Alzak aluminum cone, 0.06″ (2mm) thick with polished radius and continuous self-flange.
• Soft Satin Glow Clear finish, standard.
• 2″ (51mm) aperture throat to accommodate all standard and extra-thick ceilings and provide flexibility in mounting within grid.
• Provided with quick mounting brackets for optional carrying channels.
• Light engine, optics, and driver accessible from below ceiling.

ELECTRICAL SYSTEM
• **Input Voltage:** 120 or 277V
• 5%–100% Triac dimming standard on 120V (9L and 13L models)
• 10% - 100% 0/1-10V dimming standard (20L and 30L models)
• 1% - 100% Lutron EcoSystem and Forward Phase dimming available on 13L, 20L, and 30L models. Consult Lutron for compatible dimmers.
• **Power Factor:** >0.9

REGULATORY & VOLUNTARY QUALIFICATIONS
• cULus Listed® for thru-wiring 8#12AWG-90°C and damp location.
• RoHS compliant.
• Thermally protected.
• Meets Buy American requirements within ARRA. Consult factory for Buy American compliance with Lutron dimming options.
• EnergyStar Qualified with Triac or 0-10V dimming options (except 20L models at 277V). Other models (using LES and LFP) are pending qualification.

Installation

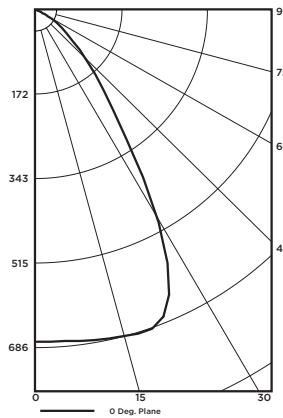• Recommended ceiling cutout 4.25″ (108mm)

Note: 30L versions require marked spacing: 24″ (600mm) X 12″ (300mm) X ½″ (12mm). (24″ [600mm] luminaire to luminaire, 12″ (300mm) luminaire to side wall, ½″ (12mm) above luminaire.

Photometry

All published luminaire photometric testing performed to IESNA LM-79-2008 standards.

Soft Satin Reflector

O Deg. Plane

CESTL Test Report #: 157453
KR4-13L-27K-120V (SSGC-WF)
Initial Delivered Lumens: 956
Efficacy: 55 Lm/W
S/M: 1.2

Intensity (Candlepower) Summary

Angle	Mean CP
0°	664
5°	666
15°	681
25°	639
35°	324
45°	152
55°	65
65°	20
75°	5
85°	0
90°	0

Cone of Light

Distance from Workplane	Footcandles	Beam Diameter
6′	18	7.0′
8′	10	9.2′
10′	7	11.2′
12′	5	13.2′
14′	3	16.8′

Zonal Lumen Summary

Zone	Lumens	% Luminiare
0-30	542	62.4%
0-40	751	89.3%
0-60	929	99.0%
0-90	956	100%

Reflector Finish Multiplier

Reflector Finish	Approximate Multiplier
SSGC	1.0
SSGCG	0.97

Testing represents 13L output models. To estimate performance for other output models, use the Application Performance chart above. For exact photometric data please reference our available IES and LM-79 test results at www.cree.com/lighting/krseries

Application Reference

Open Space					
Spacing	Lumens	Wattage	LPW	w/ft²	Average FC
4 x 4	956	17.6	55	1.04	57
6 x 6				0.49	27
8 x 8				0.26	15
10 x 10				0.17	10

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	956	17.6	55	0.73	24
6′ on Center				0.49	16
8′ on Center				0.35	11
10′ on Center				0.29	9

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

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