

D4 Retrofit Downlight

PRODUCT DESCRIPTION

Ketra 4 in (101.6 mm) retrofit LED downlight solution integrating the Ketra S30 lamp (included).

FEATURES

High Def Palette—covers a wide range of 16.7 million colors, including pastels, saturated colors and high CRI whites spanning from 1,400K to 10,000K.

Dynamic Spectrum—precisely tunes the amount of energy across the visible spectrum to produce Natural Light, Natural Dimming and Vibrancy.

TruBeam—produces uniform color across any available beam angle.

Color Lock—maintains your desired color point at a one-step MacAdam Ellipse across all Ketra product families and over each product's lifetime.

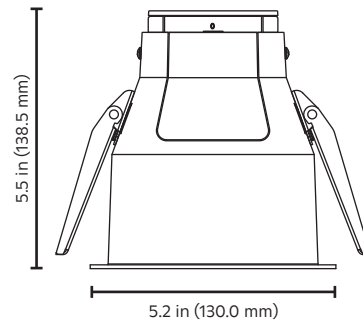
Finish



White



Black



SPECIFICATIONS¹

Optical Performance

Delivered Lumens ²	800 lm
CRI (Ra) ³	>90 (R9 >90)
Lumen Maintenance ³	50,000 hours to L70 @ 25 °C T _A
Color Point Maintenance ³	One-step MacAdam Ellipse over product lifetime
Dimming Range ⁴	0.1-100%
Efficacy ¹	92.2 lm/W

Environmental

Ambient Temperature	0 to 50 °C
Humidity	0 - 95%, Non-condensing
Location	UL Damp Location, IP20, Airtight, UL2043 rated for use in air handling plenums
Outdoor/Indoor	Not for use in outdoor applications
Warranty	5 year fixture, LED, and dimming warranty

Mechanical

Fixture Weight	2.65 lbs (1200 g)
Housing Material	Powder Coated Aluminum, ABS Plastic, Corrosion Protected Steel
Lens Material	UL F1 outdoor rating for UV and water contact PMMA

Electrical

Power Consumption	08.5 W
Power Factor	>0.9
Current	142 mA Max
Emergency Lighting	Evaluated by UL _s for use in emergency lighting systems in accordance with standard UL _s 924 and CSA C22.2 No. 141 when paired with the LVS™ model LUT-SHUNT-A-TD (UL _s file E206507) ⁵ .

Certification

Current Certifications	UL, cUL, RoHS, FCC Class B
Title 20	The GU24 base state regulated LED lamp is sold with the D4R luminaire. It is Title 20 compliant when ordered separately as a replacement lamp in the Spot, Flood, Wide Flood or Very Wide Flood beam angles
Title 24	The D4R is a recessed downlight solution that can be used to comply with Title 24 and JA8 when ordered with the Spot, Flood, Wide Flood or Very Wide Flood beam angles. For additional details, refer to Application Note #849 (P/N 048849) at www.lutron.com ⁶

¹ All performance measurements taken at 1 in regresss depth, 3000K, 25 °C ambient, 100% power input, with a white baffle, unless otherwise stated.

² Lumen measurement complies with IES LM-79-08 testing procedures.

³ Lumen maintenance values calculated in accordance to TM-21 procedures based on LM-80 compliant measurement data.

⁴ Intensity and color point control requires compatible system.

⁵ See Lutron Application Note 106 (P/N 048106) at www.lutron.com for wiring details. This is only applicable to CCX fixtures used in an Athena system.

⁶ Reference the S30 lamp part numbers for MAEDbS listings.

ORDERING GUIDE

Please download this PDF to use the interactive drop down features of the ordering guide.

Product Line	D4R	FXRD	Regress Depth	Baffle	GT	Beam Angle	11	Trim Finish
	Model	Fixture Style			Control System		Region / Voltage	
08ICAT	SP							
Power Consumption / Housing Rating	Packaging							

Order code: _____

Product Line	Code	Baffle	Code	Trim Finish	Code
Commercial (Athena compatible)	CM-	No Baffle (for flush 0 in regress)	NA	White	WH
Residential (HomeWorks compatible)	HW-	White Baffle	WH	Black	BK
		Black Baffle	BK		
Model		Control System		Power Consumption / Housing Rating	
4 in (101.6 mm) Retrofit Downlight	D4R	CCX (Clear Connect-Type X)	GT	8.5 W, ICAT/PLENUM	08ICAT
Fixture Style		Beam Angle		Packaging	
Fixed Round	FXRD	Spot (15°)	15	Single Pack	SP
		Flood (25°)	25		
		Wide Flood (40°)	40		
		Very Wide Flood (60°)	60		
		Extra Wide Flood (90°)	90		
Regress Depth		Region / Voltage			
No Baffle (0 in [0 mm])	00	North America, 120 V~ 60 Hz	11		
Half Inch (0.5 in [12.7 mm])	05				
One Inch (1 in [25.4 mm])	10				
Two Inch (2 in [50.8 mm])	20				

COMPONENT ORDERING GUIDES

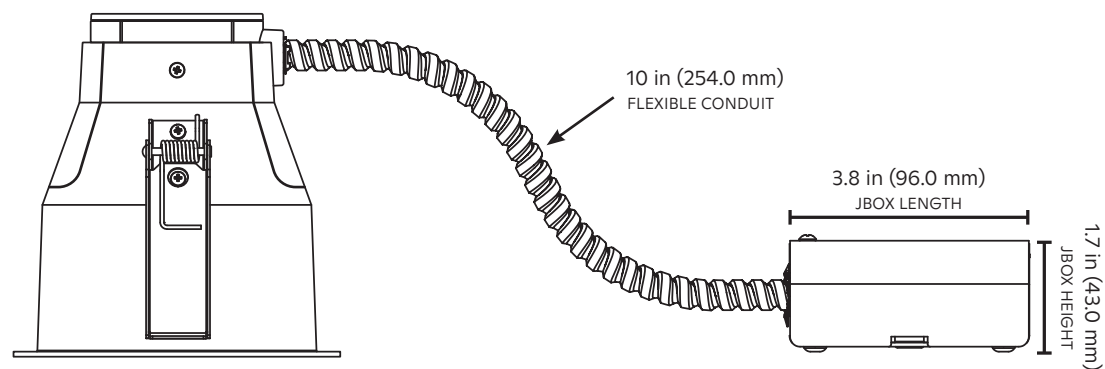
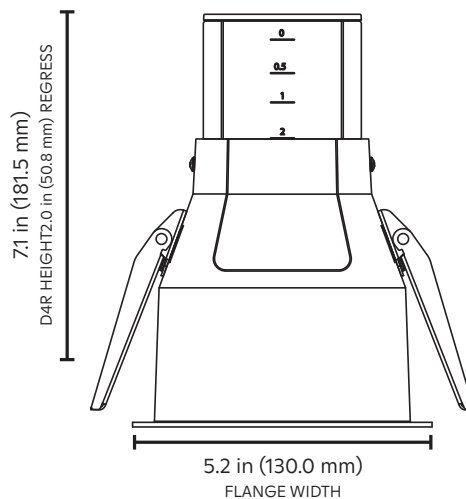
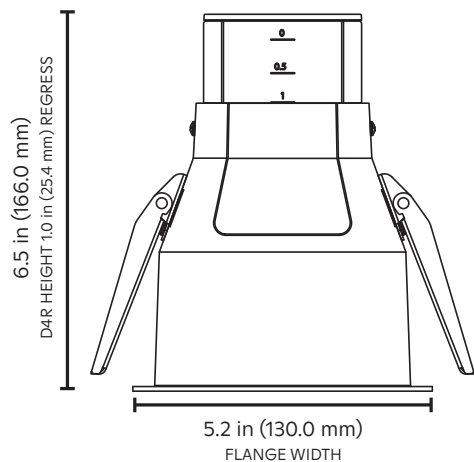
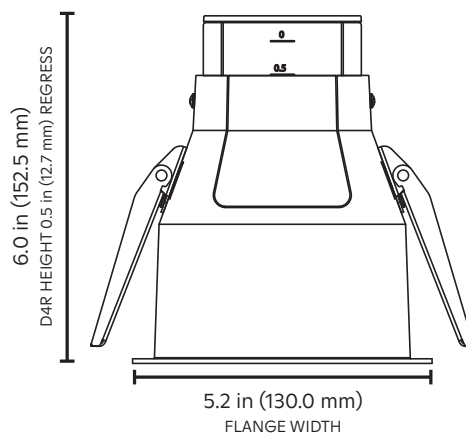
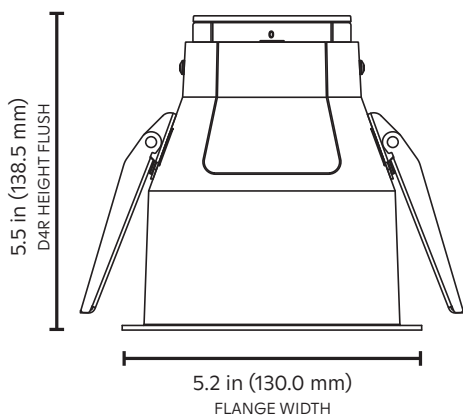
Replacement Baffle

UN-	D4R	BF	RD		
Product Line	Model	Component	Baffle Shape	Regress Depth	Finish

Order code: _____

Product Line	Code	Baffle Shape	Code
Universal	UN-	Round	RD
Model		Regress Depth	
4 in (101.6 mm) Retrofit Downlight	D4R	Half Inch (0.5 in [12.7 mm])	05
		One inch (1 in [25.4 mm])	10
		Two Inch (2 in [50.8mm])	20
Component		Finish	
Baffle	BF	Black	BK
		White	WH

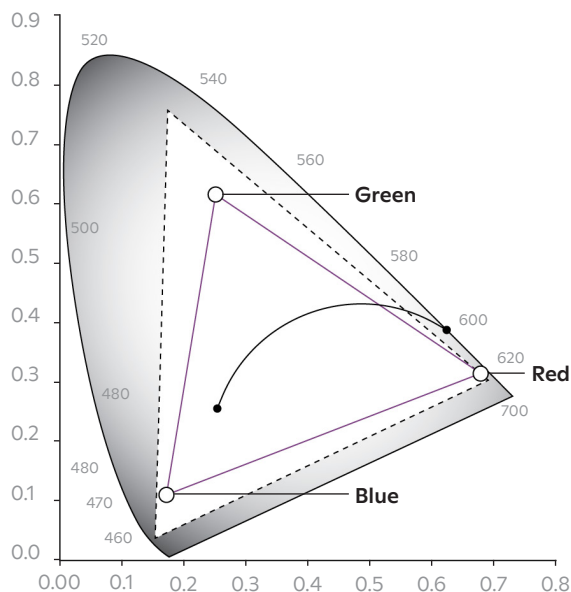
PRODUCT DIMENSIONS



CAD files available upon request

WIDE GAMUT

CIE 1931 Color Chart



Ketra's D4R LED Downlight can easily be commissioned into Lutron HomeWorks or Athena systems. The product can reproduce any color point within the triangle shaped gamut indicated in the chart to the left. With Ketra's innovative optical and thermal feedback system, the color point is maintained to an accuracy of one-step MacAdam Ellipse over the lifetime of the product and across operating temperature range.

- **Color Lock**—Color point is maintained to an accuracy of one-step MacAdam Ellipse over the lifetime of the product and across operating temperature range.
- **Expanded Gamut**—Color lock not guaranteed such that each product produces the most saturated color of which it is capable.

D4R General Specifications

Color Point Maintenance: Employ closed loop optical and thermal feedback capable of maintaining color point accuracy at a one-step MacAdam ellipse over product lifetime¹.

Wireless Capability: LED light source shall have an integrated wireless control on board.

Color Rendering Index (CRI): Capable of CRI greater than 90 at any point along the Black Body Curve from 2,700K to 5,000K.

Single Source Multi-Die Modular Emitter/LED Module Design: Employ a single source multi-die modular emitter/LED module consisting of both monochromatic and phosphor converted blue LED die.

LED Estimated Useful Life: Minimum of 50,000 hours at 70 percent lumen maintenance, calculated based on IES LM-80 test data.

Diagnostic reporting capability²: Clear Connect-Type X (CCX) light sources provide diagnostics and built-in technology to check input voltage and wireless connectivity.

Warranty: Ketra's light source is warranted to be free from material defects in material and workmanship for five (5) years or 25,000 hours from date of shipment, whichever is less.

Lighting System Capable of the Following Dimming Functionality:

1. Automatically mimicking natural daylight by shifting Correlated Color Temperature (CCT) and intensity based on time-of-day.
2. Shifting from high CCT at high intensity to low CCT at low intensity, mimicking dimming curve of an incandescent lamp.
3. Changing intensity while maintaining full color spectrum or CCT.
4. Changing full color spectrum or CCT while maintaining intensity.

Spectral Power Distribution Manipulation: Light system capable of manipulating the Spectral Power Distribution (SPD) by automatically adjusting distributions of color intensity while maintaining the same Correlated Color Temperature (CCT).

Dimming Range: Dimmable from 100 to 0.1 percent measured luminous flux.

Color Point Range: Single light source capable of producing 16.7 million colors and white from 1,400K to 10,000K Correlated Color Temperature (CCT).

¹ Color point maintenance not guaranteed in the expanded gamut or while operating at ambient temperatures between -13 to 32 °F (-25 to 0 °C).

² For diagnostics support or more information, please contact Lighting Technical Support at lightingsupport@lutron.com or 1.844.LUTRON1 (1.844.588.7661).