

Ketra D2R Wall Wash Remodeler Downlight

PRODUCT DESCRIPTION

Ketra full spectrum D2R, non-IC rated, recessed LED downlights are available in fixed, adjustable, and wall-wash options to complete any lighting design project.

FEATURES

High Def Palette—covers a wide range of 16.7 million colors, including pastels, saturated colors and high CRI whites spanning from 1400 K to 10,000 K.

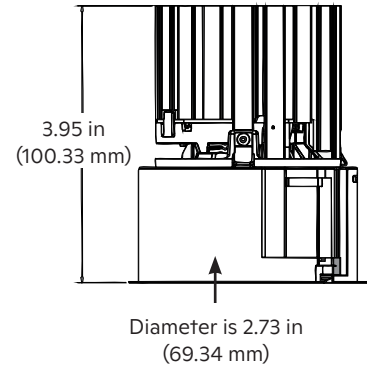
Dynamic Spectrum—precisely tunes the amount of energy across the visible spectrum to produce Natural Light, Natural Dimming, and Vibrancy.

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.



Wall Wash LED Module with Ceiling Mount



OPTIONS

Round Bevel

Square Bevel

Flanged



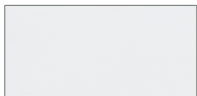
Flangeless
Mud-In



Flangeless
Millwork



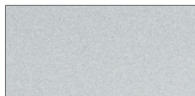
Trim Finish



White



Black



Silver



Bronze



Gloss Black¹



Silver / White²



Black / White²



Gloss Black / White²

¹ Flangeless trims only.
² White flange standard with flanged trims.

SPECIFICATIONS¹

Optical Performance

Delivered Lumens ²	803 lm
CRI (Ra)	>90 from 2700 K to 5000 K
R9	>90
Lumen Maintenance ³	50,000 hours to L70 @ 25 °C T _A
Color Point Range	1400 K – 10,000 K, Fully Saturated & Pastel
Dimming Protocol	Wireless RF/CCX (Lutron Clear Connect-Type X)
Dimming Range	0.1-100%
Delivered Efficacy	49.2 lm/w

Environmental

Ambient Temperature ⁵	32 – 104 °F (0 – 40 °C)
Extended Ambient Temperature ⁴	-32 – 32 °F (-35 – 0 °C)
Humidity	0 – 95%, Non-condensing
Certification	UL, cUL, 120 V~: FCC Class B, T24 (JA8) ⁵ ; Non-IC Rated
Location	UL Damp Location, UL Wet Location (shower) available with Trim Lens. Installation not compatible with metal ceilings. UL2043 and CAN/ULC-S142 rated for use in air handling spaces (plenums).
Outdoor/Indoor	Outdoor use available for fixed and adjustable option only in residential enclosed/covered patio applications. Trim lens required. Wall Wash option not available for outdoor applications.

Warranty

Limited Warranty	5 year fixture, LED, and dimming warranty
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Mechanical

Mounting Options	Flanged and mud-in ceiling mount: Installed after the ceiling installation is complete. Millwork ceiling mount: Requires access prior to ceiling installation to attach the mount.
Field Replaceable Optics	Yes
Field Replaceable LED Module	Yes
Field Replaceable Power Supply	Yes
Field LED Module Type Convertibility	Wall Wash LED Module is not interchangeable with Adjustable or Fixed LED Modules
Fixture Weight ⁶	1.24 lb (0.565 kg)
LED Module Material	Painted and Anodized Aluminium
Lens Material	PMMA

¹ All measurements are considered typical performance and were taken with 1 in (25.4 mm) white trim at 3000 K, 25 °C ambient, 100% power input, no accessory, 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 Color accuracy not guaranteed in Extended Ambient Temperature range.

⁵ All products in the D2R family are Title 24 JA8 compliant when installed with a Trim Accessory lens on the trim. For more information, please contact Lighting Technical Support at lightingsupport@lutron.com or 1.844.LUTRON1 (1.844.588.7661).

⁶ Includes the weight of the power supply, LED Module, mount and trim.

SPECIFICATIONS ¹ (cont.)

Dimensions

Ceiling Hole Diameter/Width	3.13 in (79.37 mm) Flanged 4.00 in (101.6 mm) Flangeless Mud-In 2.83 in (71.88 mm) Flangeless Millwork
Ceiling Thickness (min-max)	0.5 – 2 in (12.7 – 50.8 mm)
Ceiling Install Cavity ²	Maintain 0.75 in (19.05 mm) of space above the product
LED Module Diameter	2.73 in (69.21 mm)
Trim Thickness	0.050 in (1.27 mm)
Adjustability	Emitter full 361° rotation
Mount Height	1.7 in (43.18 mm)
Mount Length/Diameter	Flanged 3.40 in (86.36 mm) Mud-In 6.00 in (152.4 mm) Millwork 3.43 in (87.12 mm)

Electrical

Power Consumption	16.3 W
Input Current	150 mA
Power Factor	>0.9
Inrush Current	800 mA, 0.2 ms duration
Surge Protection	2.5 KV
Voltage	120 V~ 60 Hz
Emergency Lighting	Evaluated by UL® for use in emergency lighting systems in accordance with standard UL® 924 and CSA C22.2 No. 141 when paired with the LVS™ model LUT-SHUNT-A-TD (UL® file E206507) ³ .
Wiring	CCX devices require continuous power for optimal mesh performance, and must be wired such that their power cannot be inadvertently or frequently interrupted. Bypass any dimmer or switch in between the breaker and the CCX device.

Communication

Processor or Gateway to Device	All CCX devices must be within 75 ft (22.9 m) of their assigned processor or gateway. It is recommended that the wireless processor or gateway and the CCX devices assigned to it are located on the same floor.
Device to Device	Each CCX device must have at least two other non-battery powered CCX devices within 25 ft (7.5 m). Groups or clusters of CCX devices assigned to the same processor or gateway must not be separated by more than 25 ft (7.5 m).
Interference Sources	CCX devices must be placed a minimum of 3 ft (1.0 m) from 2.4 GHz interference sources such as wireless access points, microwave ovens, Vive hubs.

¹ All measurements are considered typical performance and were taken with 1 in (25.4 mm) white trim at 3000 K, 25 °C ambient, 100% power input, no accessory, unless otherwise stated.

² Maintain 6 in (152.4 mm) from all insulation in the ceiling. Refer to the LED module drawings in the 'Product Dimensions' section for a visual and information.

³ See Lutron Application Note 106 (P/N 048106) at www.lutron.com for wiring details of emergency lighting in commercial systems.

COMPONENT ORDERING GUIDE

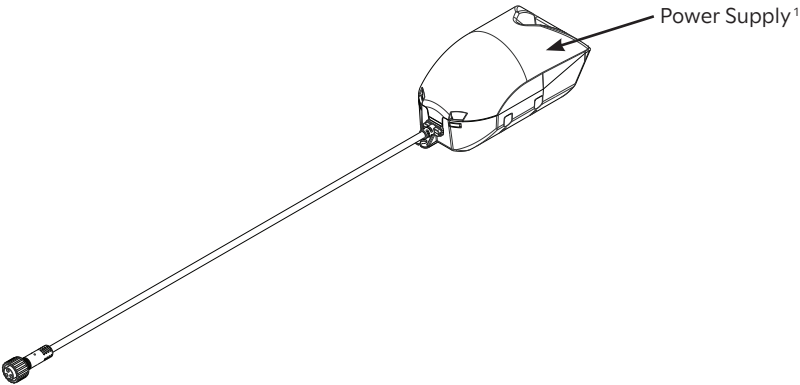
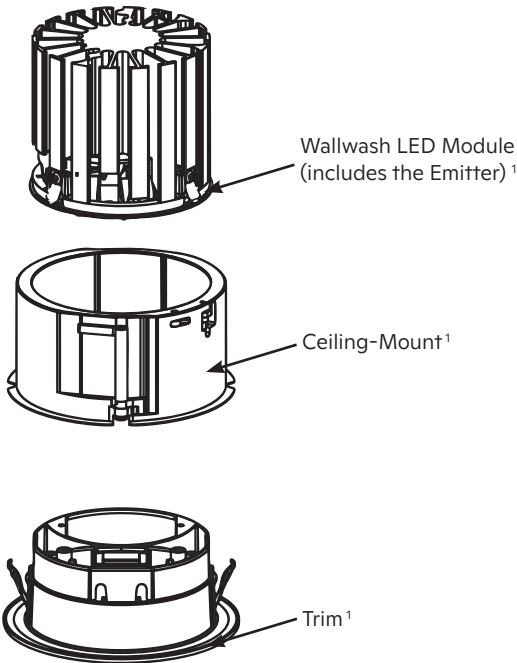
Please download this PDF to use the interactive drop down features of the ordering guide.

LED Module

HW	D2R	FS	W	18
Product Line	Series	LED Type	Fixture Type	Power Supply Max. Rating
WW	W	11		
Beam Angle	Optic Style	Voltage		

Order code: _____

Product Line	Code
Residential (HomeWorks compatible)	HW-
Commercial (coming soon)	CM-
Series	
D2R Fixture	D2R
LED Type	
Ketra	FS
Fixture Type	
Wall Wash	W
Power Supply Max. Rating	
18 W	18
Beam Angle	
Wall Wash	WW
Optic Style	
Wall Wash	W
Voltage	
120 V~ 60 Hz	11



¹ Required for installation.

COMPONENT ORDERING GUIDE (CONT.)
Power Supply

D2R	PS	120
Product Line	Product	Voltage

Order code: _____

Ceiling Mounts

UN-D2R			
Product Line	Shape	Ceiling Interface	Ceiling Thickness

Order code: _____

Replacement Optics

UN-D2	OP	WWXX
Product Line	Accessory Type	Beam Angle

Order code: _____

Product Line	Code
Recessed Downlight	D2R
Product	
Power Supply	PS
Voltage	
120 V~ 60 Hz	120

Product Line	Code
Universal Part	UN-D2R
Shape	
Square	SQ
Round	RD
Ceiling Interface	
Flanged	F
Flangeless Mud-In	X
Flangeless Millwork	M
Ceiling Thickness ^{1,2}	
Standard Ceiling	S
Thick Ceiling	T
Deep Ceiling	D

Product Line	Code
Universal Part - Recessed Downlight	UN-D2
Accessory Type	
Optic	OP
Beam Angle	
Wall Wash	WWXX

Ceiling Thickness Options Table

Ceiling Type	Dimensions: in (mm)	Ceiling Thickness
Flanged/Flangeless Mud In	0.5-1 (12.7-25.4)	Standard (S)
	>1-1.5 (25.4-38.1)	Thick (T)
	>1.5-2 (38.1-50.8)	Deep (D)
Flangeless Millwork	0.5-2.0 (12.7-50.8)	No selection required

NOTE: See the Trim Ordering Guide for trim options and the Replacement Optic Section for optic options.

¹ The ceiling thickness option required varies by ceiling interface. See Ceiling Thickness Options table above for details.

² No ceiling thickness selection is required for millwork.

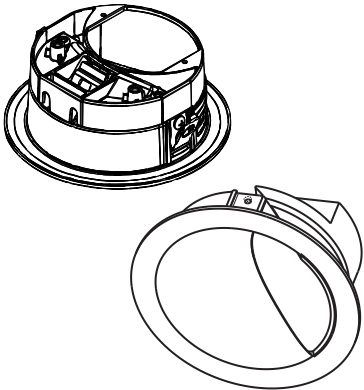
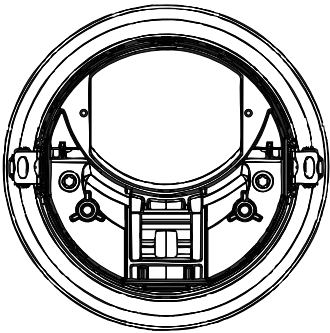
TRIM ORDERING GUIDE

Trim

UN-	D2			
Product Line	Series			
		W		WW
Shape	Ceiling Interface	Aperture Profile	Trim Finish	Trim Accessory

Order code: _____

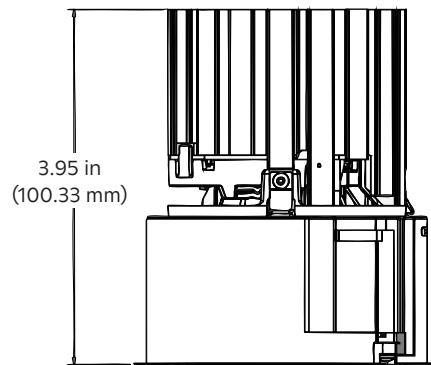
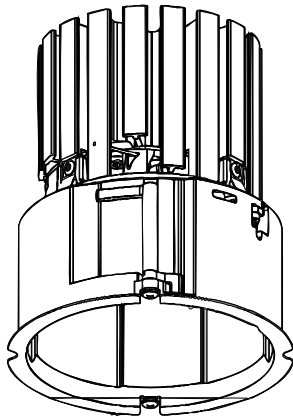
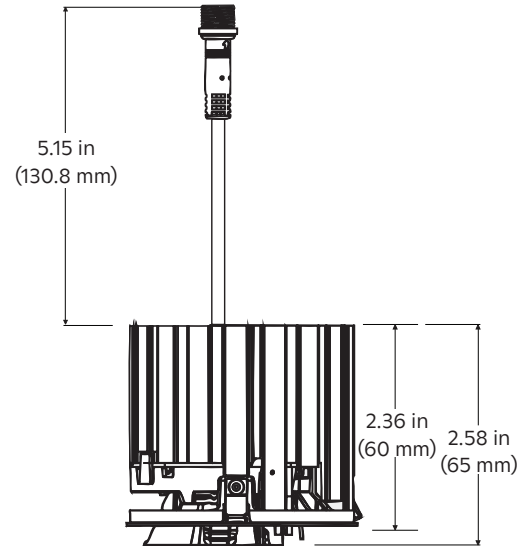
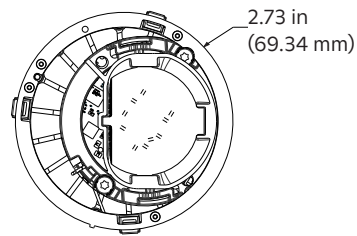
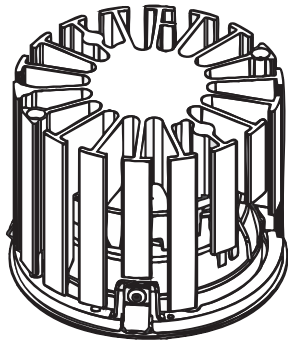
Product Line	Code	Trim Finish	
Universal	UN-	White	WH
		Black ²	BK
Series		Gloss Black ²	GB
D2 Fixture	D2	Bronze	RB
Shape		Silver	SR
Round	RD	Silver/White	SW
Square	SQ	Black/White ²	BW
Ceiling Interface		Gloss Black/White ²	GW
Flanged	F		
Flangeless Mud-In	X	Trim Accessory	Code
Flangeless Millwork	M	Wall Wash Lens ¹	WW
Aperture Profile			
Wall Wash ¹	W		



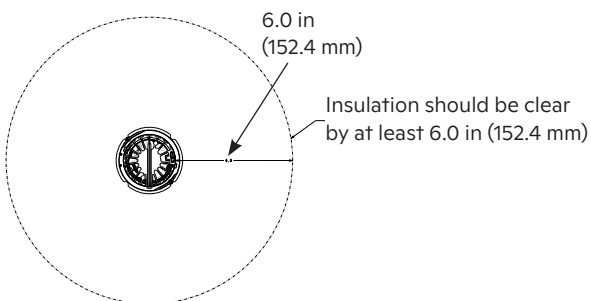
¹ Wall wash fixture is unique and cannot be converted to other fixture types and vice versa.
² Recommended finish for best performance.

PRODUCT DIMENSIONS

Wall Wash LED Module



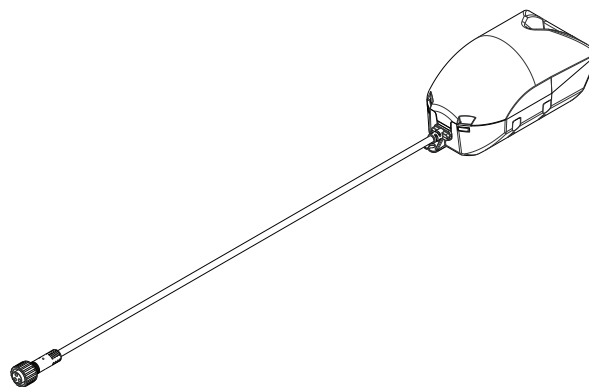
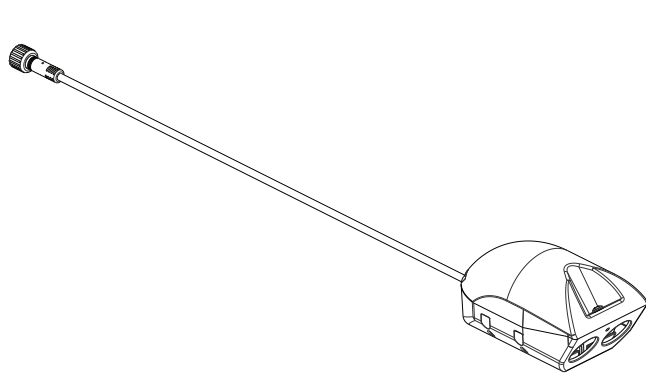
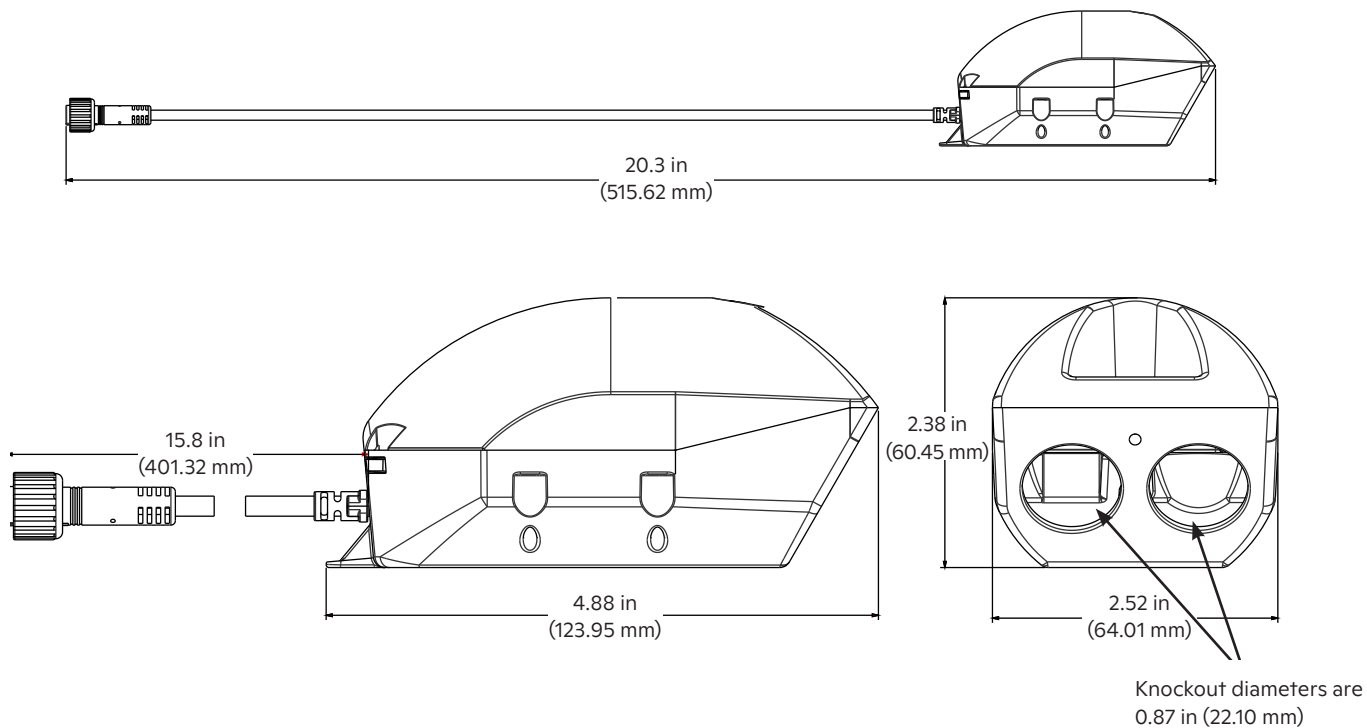
LED Module with Ceiling Mount



View of LED module from above the ceiling

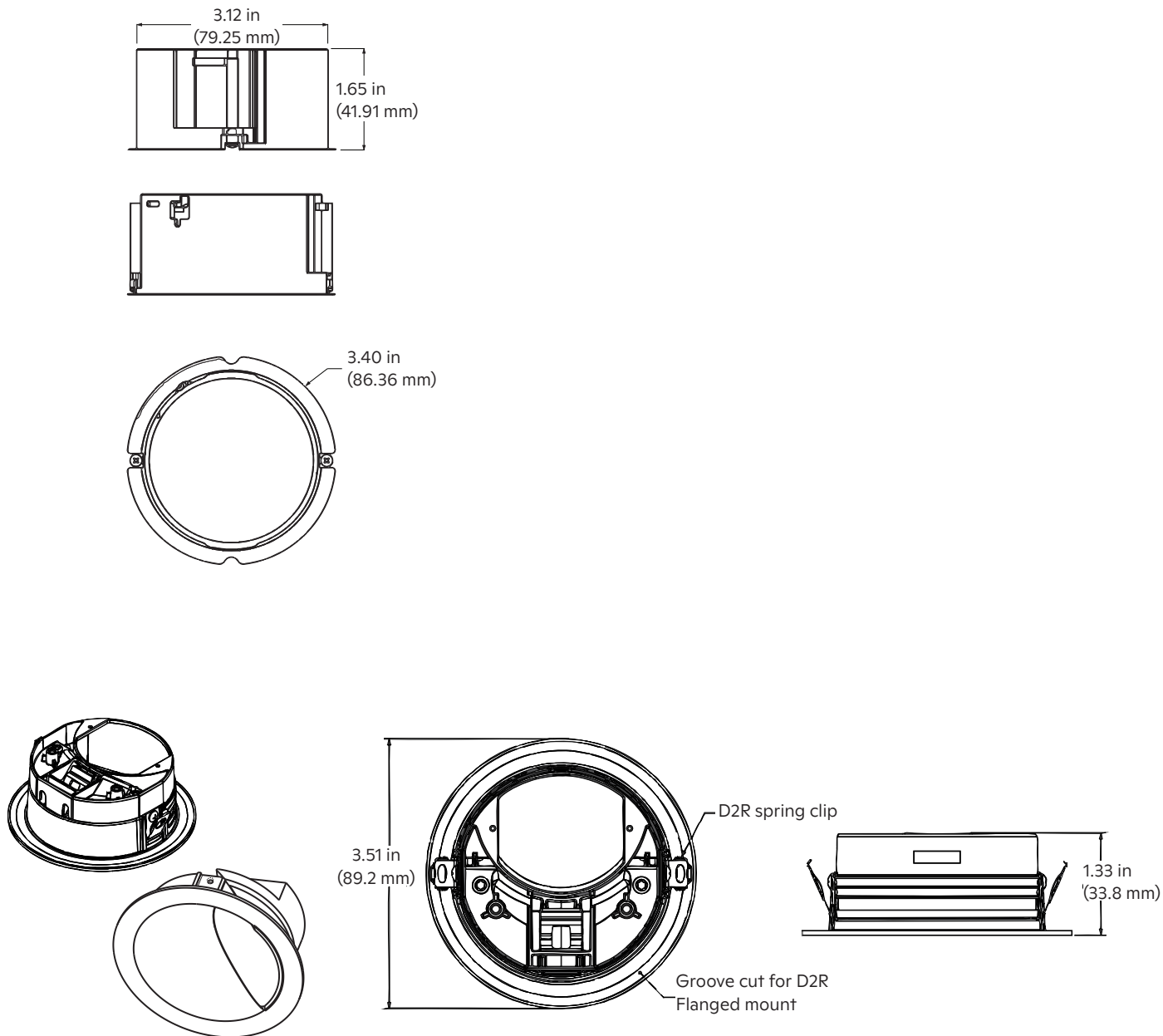
PRODUCT DIMENSIONS (cont.)

Power Supply



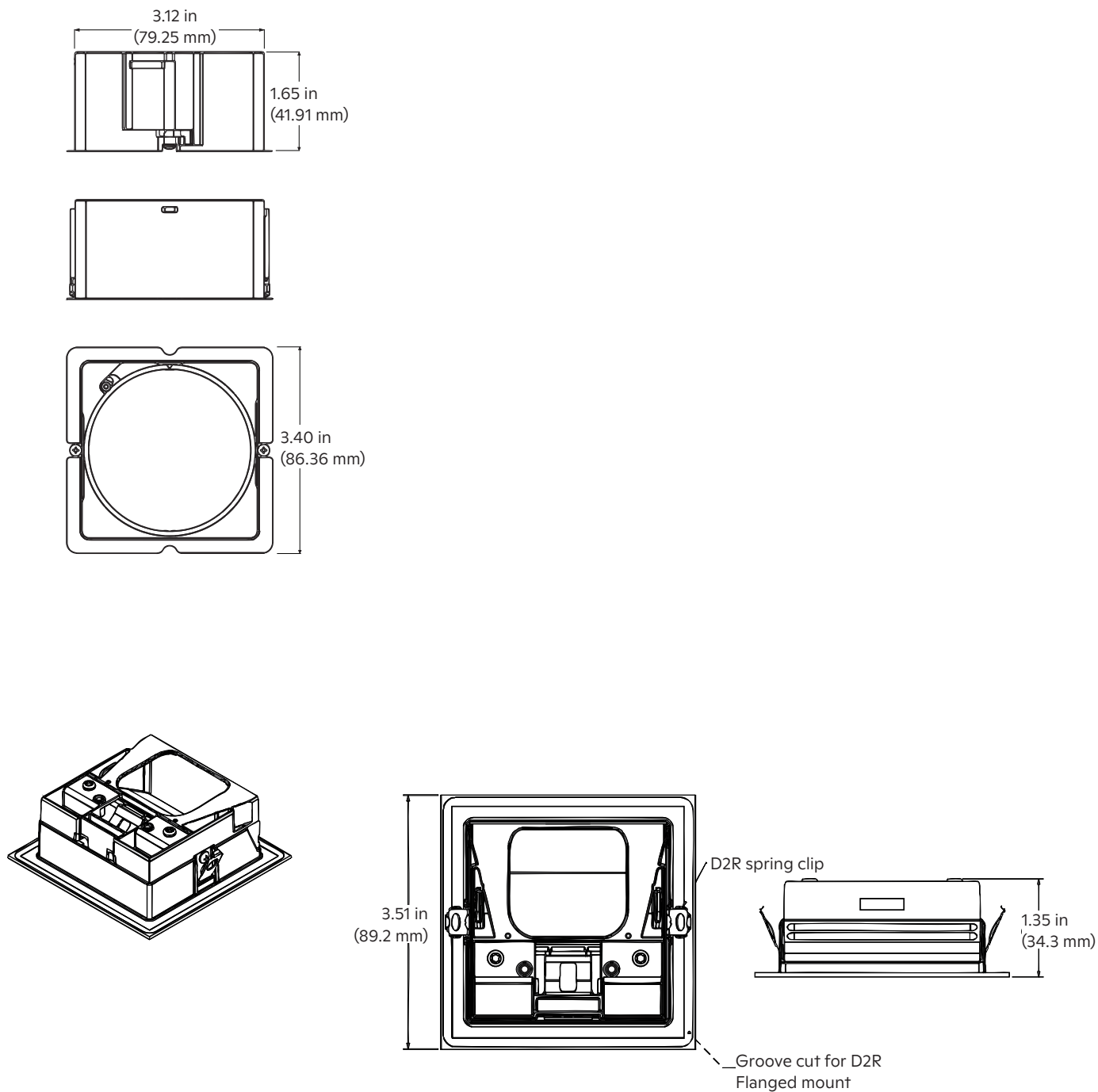
PRODUCT DIMENSIONS (cont.)

Flanged Mount, Round



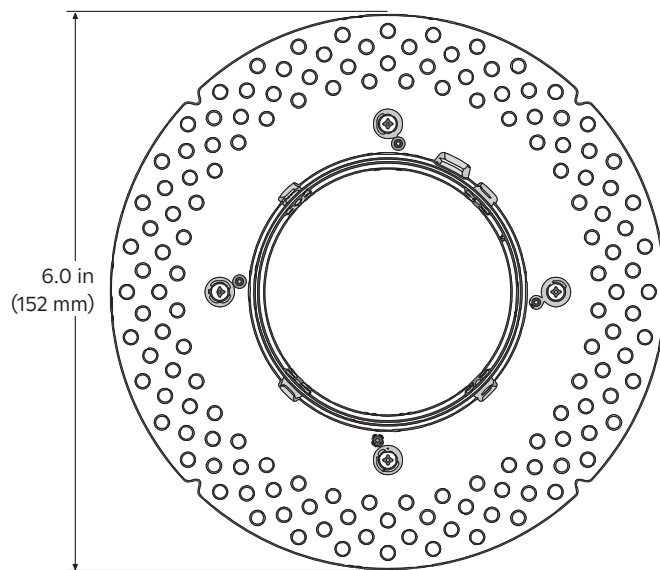
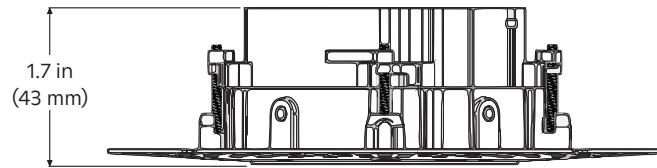
PRODUCT DIMENSIONS (cont.)

Flanged Mount, Square

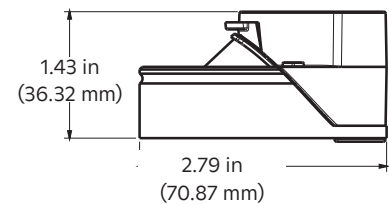
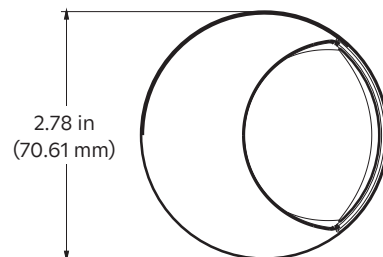
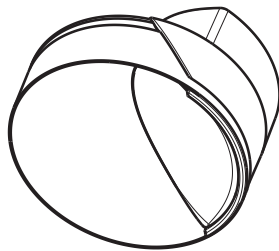


PRODUCT DIMENSIONS (cont.)

Flangeless Mud-In Mount, Round

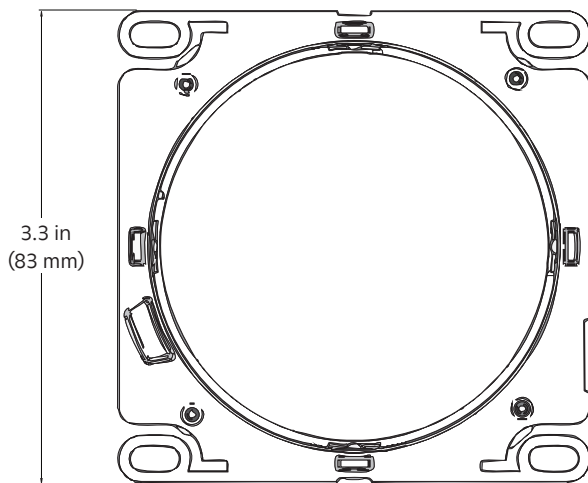
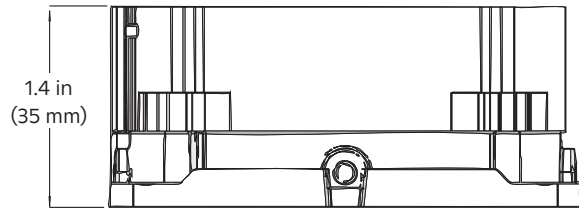


Trim

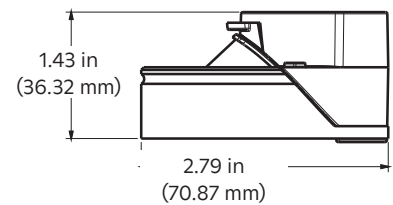
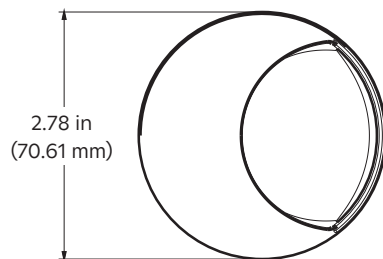
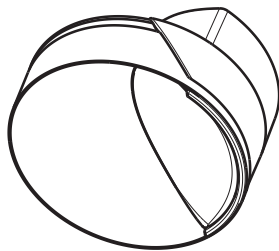


PRODUCT DIMENSIONS (cont.)

Flangeless Millwork Mount, Round

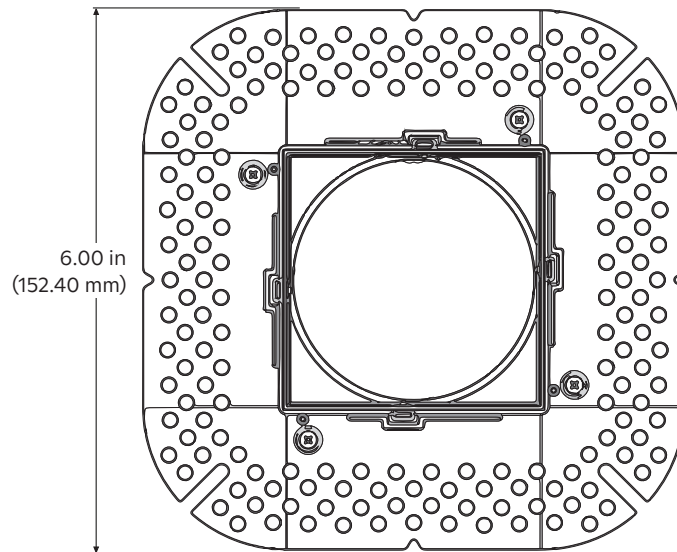
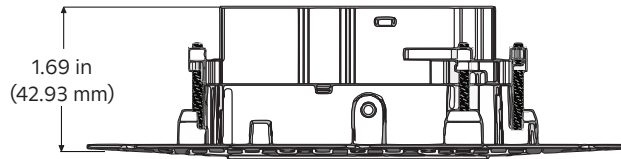


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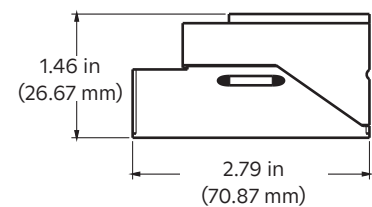
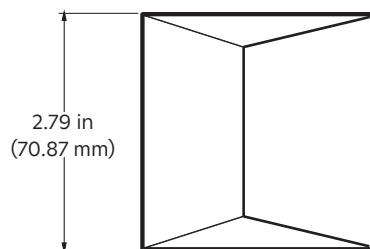
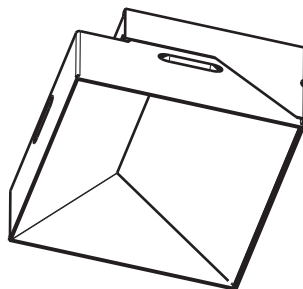


PRODUCT DIMENSIONS (cont.)

Flangeless Mud-In Mount Square

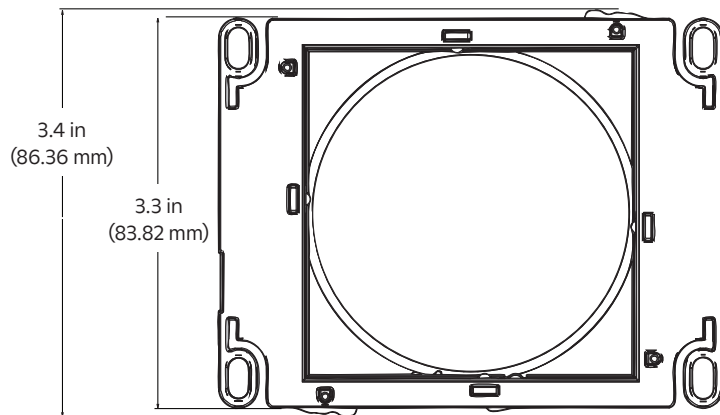
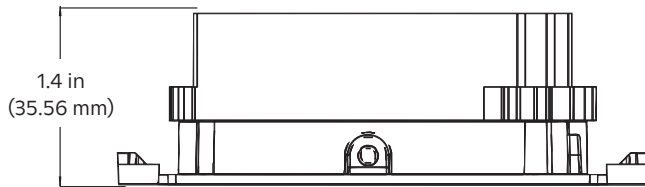


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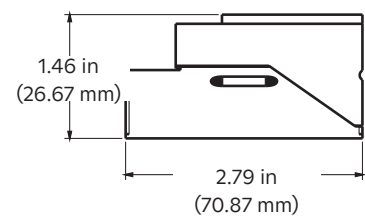
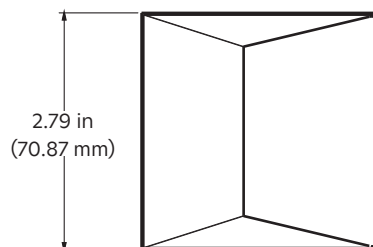
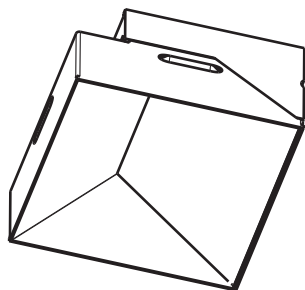


PRODUCT DIMENSIONS (cont.)

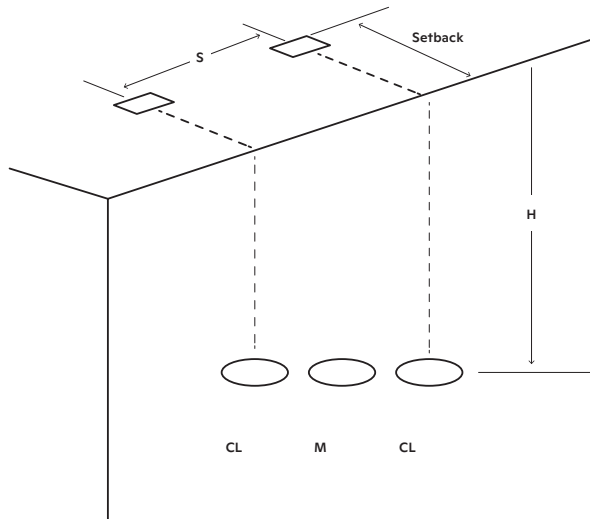
Flangeless Millwork Mount, Square



Trim



PLACEMENT GUIDE FOR MULTIPLE WALL WASH UNITS



Typical Footcandles Measured on the Wall

2 ft (0.6 m) from wall ("Setback")	2 ft (0.6 m) on Center (S)			3 ft (0.9 m) on Center (S)			4 ft (1.2 m) on Center (S)		
Distance from Ceiling (H)	CL	M	CL	CL	M	CL	CL	M	CL
1 ft (0.305 m)	42	40	42	32	22	32	30	12	30
2 ft (0.609 m)	45	46	45	33	28	33	29	16	29
3 ft (0.914 m)	37	37	37	26	24	26	22	16	22
4 ft (1.219 m)	28	29	28	20	19	20	17	13	17
5 ft (1.524 m)	21	22	21	15	15	15	12	10	12
6 ft (1.828 m)	17	17	17	12	12	12	10	9	10
7 ft (2.133 m)	13	13	13	9	9	9	7	7	7
8 ft (2.438 m)	10	10	10	7	7	7	6	6	6
9 ft (2.743 m)	8	8	8	6	6	6	5	5	5
10 ft (3.048 m)	7	7	7	5	5	5	4	4	4

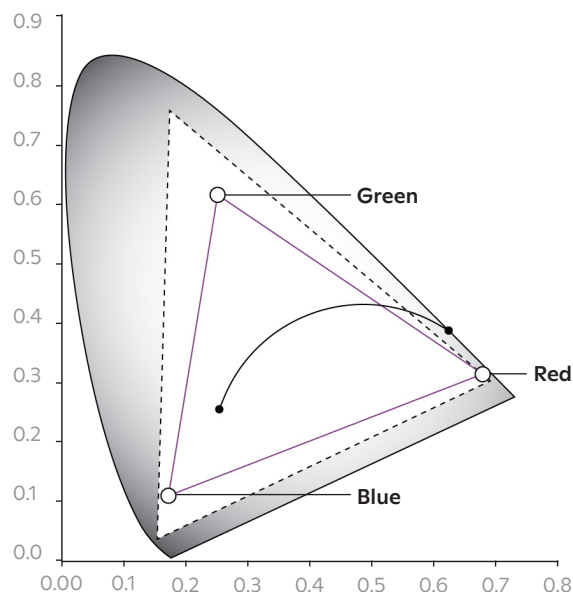
3 ft (0.9 m) from wall ("Setback")	2 ft (0.6 m) on Center (S)			3 ft (0.9 m) on Center (S)			4 ft (1.2 m) on Center (S)		
Distance from Ceiling (H)	CL	M	CL	CL	M	CL	CL	M	CL
1 ft (0.305 m)	18	18	18	12	12	12	10	7	10
2 ft (0.609 m)	28	29	28	20	19	20	16	13	16
3 ft (0.914 m)	29	29	29	20	20	20	16	14	16
4 ft (1.219 m)	25	25	25	18	18	18	14	13	14
5 ft (1.524 m)	21	21	21	15	15	15	12	11	12
6 ft (1.828 m)	18	18	18	13	13	13	10	10	10
7 ft (2.133 m)	15	14	15	11	11	11	8	8	8
8 ft (2.438 m)	12	12	12	9	9	9	7	7	7
9 ft (2.743 m)	10	10	10	8	8	8	6	6	6
10 ft (3.048 m)	9	8	9	7	7	7	5	5	5

PHOTOMETRIC DATA

Coming Soon, ies. files available at lutron.com

WIDE GAMUT

CIE 1931 Color Chart



Ketra's D2R LED Downlight can easily be commissioned into Lutron HomeWorks systems (Athena or myRoom XC- coming soon). The product can reproduce any color point with the triangle shaped gamut indicated in the chart to the left. With Ketra's Color Lock tool, the color point is maintained to an accuracy of one- step MacAdam Ellipse over the lifetime of the product and across operating temperature ranges.

- **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.

D2R 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 lifetime.¹

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 2700 K to 5000 K.

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.

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 1400 K to 10,000 K Correlated Color Temperature (CCT).

¹ Color accuracy not guaranteed in Extended Ambient Temperature range.

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