

D3 Wall Wash, Square

PRODUCT DESCRIPTION

Ketra full spectrum 3 in (76.2 mm) recessed LED downlights are available in fixed, adjustable, and wall-wash options to complete any lighting design project.

FEATURES

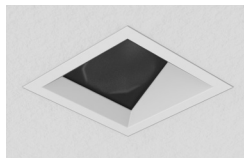
High Def Palette—covers a wide range of 16.7 million colors, including pastels, saturated colors and high CRI whites spanning from 1,400K to 10,000K.

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

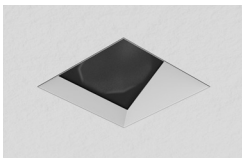
TruBeam—produces uniform color across any available beam angle.

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

OPTIONS



Flanged

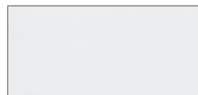


Flangeless Mud-in



Millwork Shallow

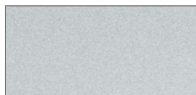
Colors



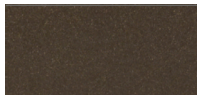
White



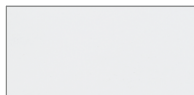
Black



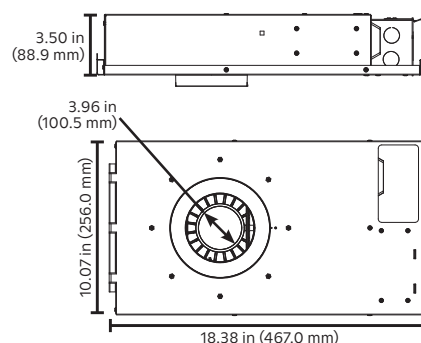
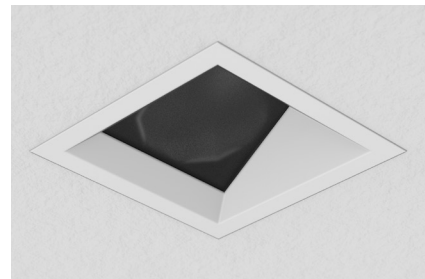
Silver



Bronze



Paintable White



SPECIFICATIONS¹

Optical Performance

Delivered Lumen Output ²			
Beam Angle (1 in [25.4 mm] recess)	9 W	13 W	18 W
Wall Wash	414 lm	573 lm	705 lm
CRI (Ra)	>90 (R9>90) 2400K-5000K TYP		
Lumen Maintenance ⁴	50,000 hours to L70 @ 25°C T_A		
Color Point Range ⁴	1400K – 10,000K, Fully Saturated, & Pastel		
Equivalent Traditional Lamp	75 W halogen		
Dimming Range ⁴	0.1 - 100%		
Delivered Efficacy			
Beam Angle (1 in [25.4 mm] recess)	9 W	13 W	18 W
Wall Wash	46 lm/W	44 lm/W	39 lm/W
Surge Protection	2.5 KV		

Environmental

Ambient Temperature (T _A)	0 - 40 °C⁶
Storage Temperature	-20 - 80 °C
Humidity	0 - 95%, Non-condensing
Certification	UL, cUL, 120 V~: FCC Class B, 277 V~: FCC Class A, Title 24 [JA8]*
Location	UL Wet Location
Exterior/Interior	Exterior use available for residential applications with Trim Lens
Extended Operating Temperature	-35 - 0 °C^{6,7}

Mechanical

Mounting Options	Hanger Bars/ Butterfly Brackets
Field Replaceable Optics	Yes
Field Replaceable Light Engine	Yes
Field Replaceable Power Supply	Yes
Fixture Weight	7.75 lb (3.51 kg)
Housing Material	Powder Coated Steel, Polymer
Lens Material	PMMA

Dimensions

Ceiling Square Cut-out	4 in (101.6 mm) flanged; 5.5 in (139.70 mm) flangeless mud-in; 4 in (101.6 mm) flangeless millwork
Trim Outside Dimension	4.63 in (117.6 mm) flanged; 3.75 in (95.2 mm) flangeless mud-in; 4 in (101.6 mm) flangeless millwork
Trim Thickness	¼ in (1.6 mm)
Optics Outside Dimension	2.5 in (63.5 mm)
Trim Depth	1 in (25.4 mm)
Ceiling Thickness (min-max)	Flanged, flangeless mud-in: 0.625 - 1.5 in (15.8 - 38.1 mm) Flangeless millwork collar: 0.625 - 2.5 in (15.8 - 63.5 mm)
Adjustability	Tilt Fixed at 20° 364° Rotation
Service Position	Tilt to 40° Full 364° Rotation
Modular Emitter/LED Module (tool-free)	0.75 in (19 mm)
Housing Vertical Adjustment via Butterfly Bracket	1.75 in (44.5 mm)
Housing Height	3.50 in (88.9 mm)
Housing Length	18.38 in (466.8 mm)
Housing Width	10 in (254 mm)

Electrical

Power Consumption	D3.09 9 W D3.13 13 W D3.18 18 W
Power Factor	>0.9
Inrush Current ⁵	800 mA, 0.2 mS duration
Voltage	120 V~ 60 Hz 277 V~ 60 Hz
Emergency Lighting	Evaluated by UL⁸ for use in emergency lighting systems in accordance with standard UL⁸ 924 and CSA C22.2 No. 141 when paired with the LVSTM model LUT-SHUNT-A-TD (UL⁸ file E206507)⁸.

¹ All performance measurements taken with 1 in (25.4 mm) white trim, with light engine at nadir and 1 in (25.4 mm) regress, at 3000 K, 25 °C ambient, 100% power input, default vibrancy, 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 For more information on inrush current, refer to Ketra's Inrush App Note in the Support section of our website.

⁶ Rated for direct application of spray foam with less than R-21 insulative value or 3 in (76.2 mm) of closed cell spray foam. 95 °F (35 °C) maximum operating temperature.

⁷ Color accuracy not guaranteed in Extended Operating Temperature range.

⁸ 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.

* All products in the D3 family are Title 24 JA8 compliant. For more information please contact customer service at ketrasales@lutron.com or 844.588.6445.

ORDERING GUIDE

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

Housing

Product Line	Fixture / Trim	Power Consumption	Control System
Beam Angle	Region / Voltage	Housing Type	Shipping Option

Order code: _____

Trim

Product Line	Model	Trim Finish	Trim Lens
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Order code: _____

Product Line	Code	Beam Angle	Code	Product Line	Code
Commercial (Athena compatible)	CM-	Wall Wash	WW	Universal	UN-
Residential (HomeWorks compatible)	HW-	Region/Voltage		Model	
Fixture / Trim		120 V~ 60 Hz, North America	11	D3 Square Flanged Wall Wash ^{1,2}	D3TFSW1
D3 Wall Wash, Square Flanged ^{1,2}	D3WWSQ	277 V~ 60 Hz, North America	12	D3 Square Flangeless Mud-In Wall Wash ⁴	D3TXSW1
D3 Wall Wash, Square Flangeless ^{3,4,9}	D3WWSM	Housing Type		D3 Square Flangeless Millwork Wall Wash ^{3,4}	D3TMSW1
D3 Wall Wash, Collar Adapter Not Specified ⁸	D3WWXX	New Construction, IC/Airtight	NCIC	Trim Finish	
Power Consumption		New Construction, IC/Airtight, Flangeless Millwork Trim ³	NCIM	White	PWH
9 W	09	New Construction, IC/Airtight, Exterior Enclosed/Covered Porch ^{5,6}	NCOC	Black	PBK
13 W	13	New Construction, IC/Airtight, Exterior Enclosed/Covered Porch, Flangeless Millwork Trim ^{5,6}	NCOM	Silver	PSR
18 W	18	Shipping Option		Bronze	PBZ
Control System		Single Pack	SP	Paintable White	CWH
CCX (Clear Connect-Type X)	GT	(Default, ships with Butterfly Brackets & 24 in Hanger Bars to be installed in field)		Trim Lens⁷	
				Wall Wash	W

¹ D3 Wall Wash, Square flanged fixture (D3WWSQ) can only be used with flanged trims (D3TFSW1) and is compatible with NCIC/NCOC housing type, but is incompatible with NCIM/NCOM.

² Use flanged trims (D3TFSW1) on wood and stone ceilings with thickness in the range of 0.625 in - 1.5 in (15.8 mm - 38.1 mm) with NCIC/NCOC housing type.

³ D3 Wall Wash, Square flangeless fixture (D3WWSM) can be used with a flangeless mud-in trim (D3TXSW1) with NCIC/NCOC housing type, or with a flangeless millwork trim (D3TMSW1) with NCIM/NCOM housing type.

⁴ Use the flangeless millwork trims (D3TMSW1) on wood and stone ceilings with thickness in the range of 0.625 in - 2.5 in (15.8 mm - 63.5 mm) with NCIM/NCOM housing type.

⁵ D3s are available for residential exterior applications only and must have a trim installed with a lens.

⁶ D3s installed outdoors must use housing type NCOC or NCOM.

⁷ Downlight is wet location rated when trim is installed with lens.

⁸ Ceiling installation cannot begin until the collar adapter is installed (see the Component Ordering Guide for details).

⁹ Millwork Trim Retainer supplied with Millwork Trim to ensure color match.

COMPONENT ORDERING GUIDE

Replacement Optics

Product Line	Accessory Type	Beam Angle
Order code: _____		

Product Line	Code
Universal Part - Recessed Downlight	UN-D3
Accessory Type	
Optic	OP
Beam Angle	
Spot (15°) Low Glare	15L
Flood (25°) Low Glare	25L
Wide Flood (40°) Low Glare	40L
Very Wide Flood (60°) Low Glare	60L
Spot (15°) High Output	15H
Flood (25°) High Output	25H
Wide Flood (40°) High Output	40H
Very Wide Flood (60°) High Output	60H

Optics Accessories

Product Line	Accessory
Order code: _____	

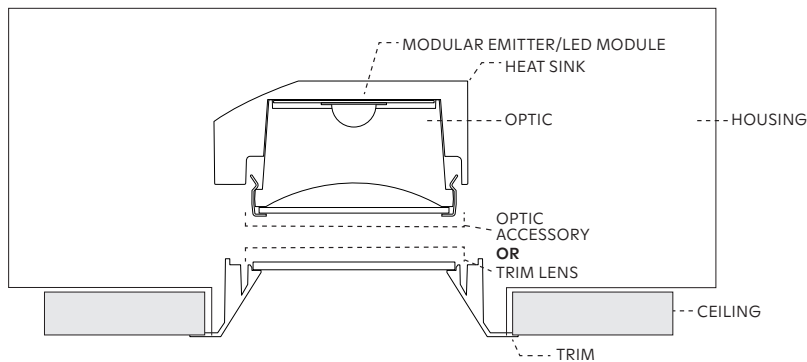
Product Line	Code
Universal Part - Recessed Downlight	UN-D3
Accessory ^{1,2,3}	
Trim Lens, Round Bevel, Solite Flanged Trims Only	TLRDFS
Trim Lens, Round Bevel, Frost Flanged Trims Only	TLRDFF
Trim Lens, Round Mud-In, Solite Mud-in Trims Only	TLRDXS
Trim Lens, Round Mud-In, Frost Mud-in Trims Only	TLRDXF
Trim Lens, Pinhole, Solite	TLPINS
Trim Lens, Pinhole, Frost	TLPINF
Optic Accessory Solite	OAS
Optic Accessory Frost	OAF
Optic Accessory Hex Louver	OAH

Mounting & Installation Kits

Product Line	Accessory	Collar Adapters
Order code: _____		

Product Line	Code
Universal Part - Recessed Downlight	UN-D3
Accessory	
(2) Butterfly brackets	MA B
(2) 24 in (609 mm) Hanger bars	MA N
Collar Adapters ⁴	
Collar Adapter, Round Flanged	CTFR
Collar Adapter, Round Flangeless Mud-in ⁵	CTXR
Collar Adapter, Round Flangeless Millwork ⁶	CTMR

COMPONENT DIAGRAM



- ¹ Downlight is wet location rated when trim is installed with lens.
- ² Only one optional optical or trim accessory can be used at a time.
- ³ Downlights with outdoor housings require a trim installed with lens.
- ⁴ Ceiling installation cannot begin until collar adapter is installed.
- ⁵ Mud-In Trim Retainer supplied with Mud-In Collar Adapter.
- ⁶ Millwork Trim Retainer supplied with Millwork Trim to ensure color match.

COMPONENT ORDERING GUIDE (cont.)

Rough-in
Housing

Order code: _____

Modular Emitter/
LED Module

Order code: _____

Power Supply

Order code: _____

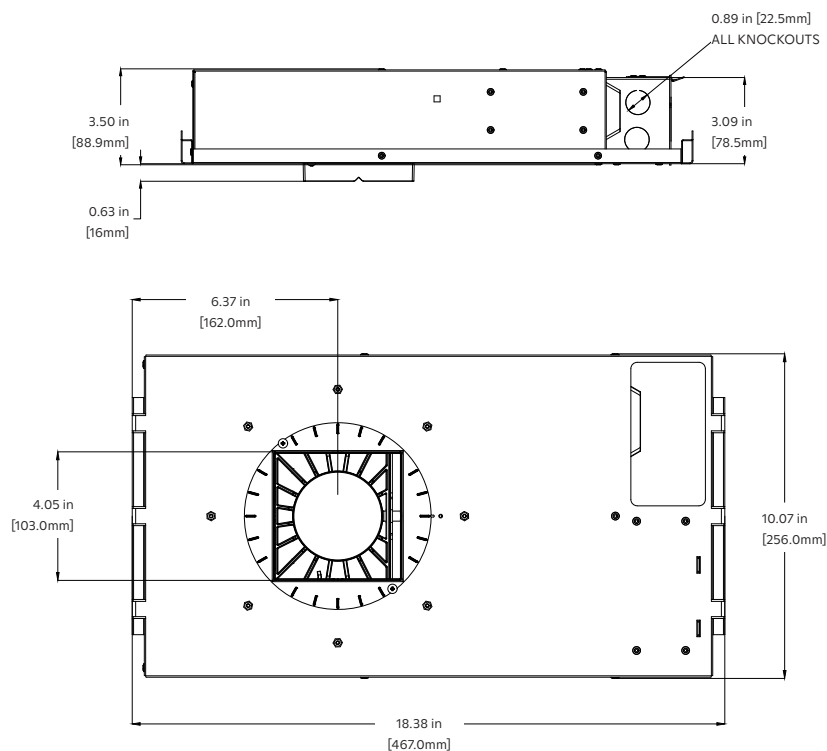
Rough-in Housing	Code
Housing, No Collar	UN-D3ADXX
Housing, Flanged Square Collar	UN-D3ADFS
Housing, Mud-In Square Collar	UN-D3ADXS
Housing, Millwork Square Collar	UN-D3ADMS

Modular Emitter/LED Module	Code
Standard (25°, 40°, 60°) Modular Emitter/LED Module	UN-D3MEMTRST
Spot (15°) Modular Emitter/ LED Module	UN-D3MEMTRSP

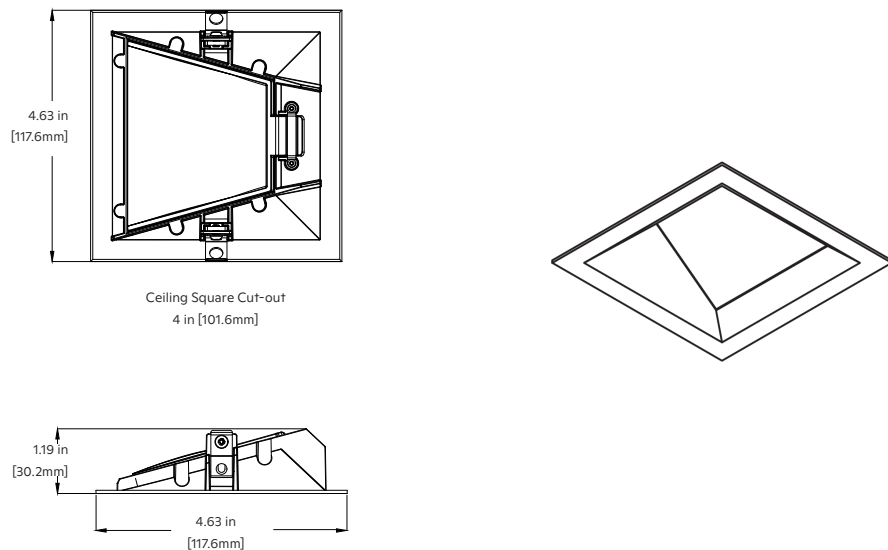
Power Supply	Code
Comm 9 W CCX 120 V~	CM-D3PS09GT11
Comm 9 W CCX 277 V~	CM-D3PS09GT12
Comm 13 W CCX 120 V~	CM-D3PS13GT11
Comm 13 W CCX 277 V~	CM-D3PS13GT12
Comm 18 W CCX 120 V~	CM-D3PS18GT11
Comm 13 W CCX 277 V~	CM-D3PS18GT12
Resi 9 W CCX 120 V~	HW-D3PS09GT11
Resi 9 W CCX 277 V~	HW-D3PS09GT12
Resi 13 W CCX 120 V~	HW-D3PS13GT11
Resi 13 W CCX 277 V~	HW-D3PS13GT12
Resi 18 W CCX 120 V~	HW-D3PS18GT11
Resi 13 W CCX 277 V~	HW-D3PS18GT12

PRODUCT DIMENSIONS

Flanged Housing

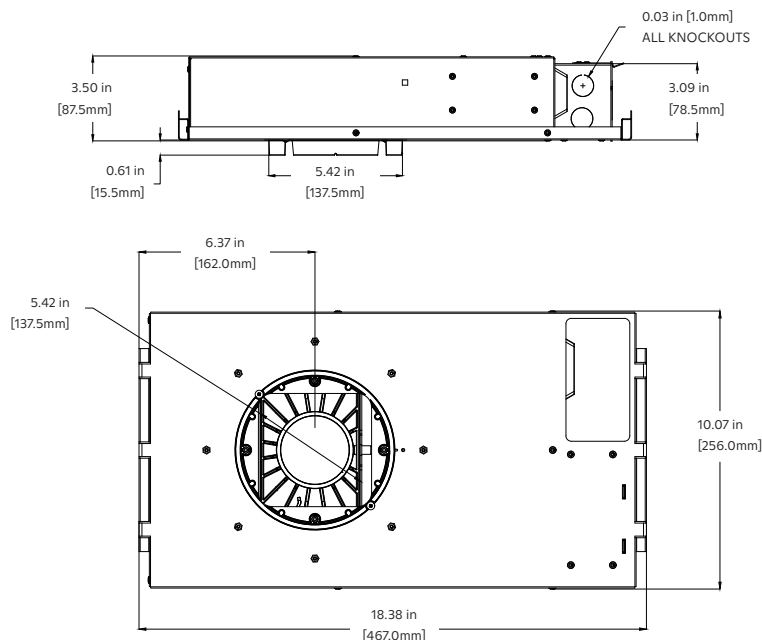


Flanged Trim

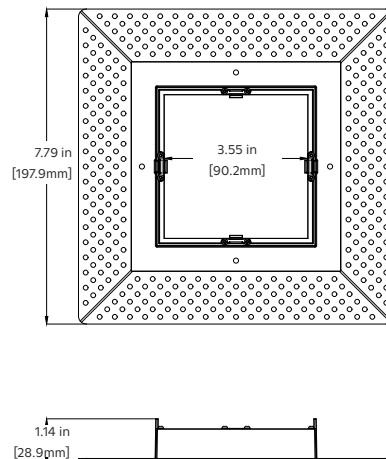


PRODUCT DIMENSIONS

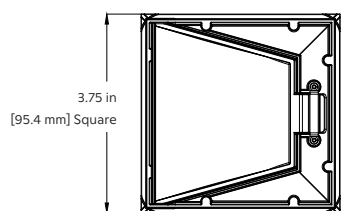
Flangeless Mud-in Housing



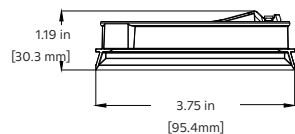
Flangeless Mud-in Trim Retainer



Flangeless Mud-in Trim

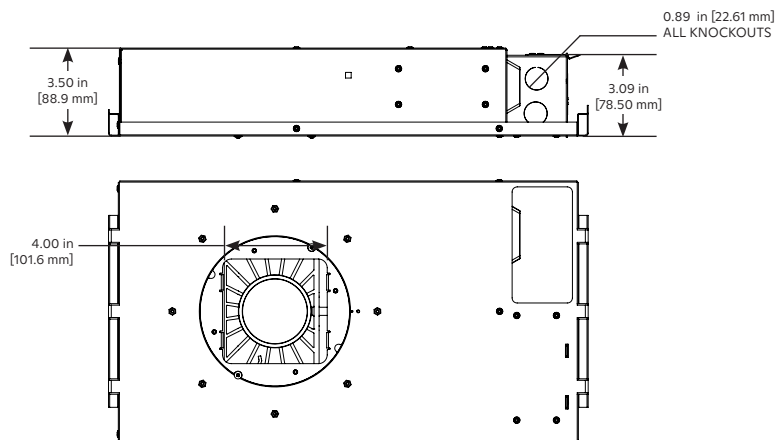


Ceiling Square Cut-Out
5.5 in [139.7 mm]

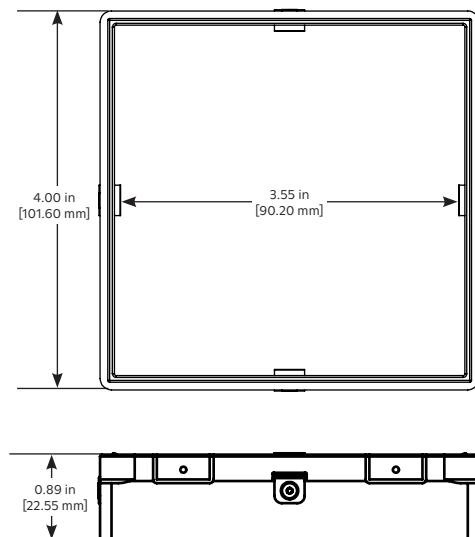


PRODUCT DIMENSIONS

Flangeless Millwork Housing



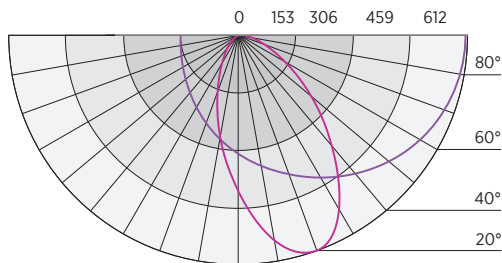
Flangeless Millwork Trim Retainer



PHOTOMETRIC DATA: 2700 - 5000K VALUES ONLY, DELIVERED LUMENS

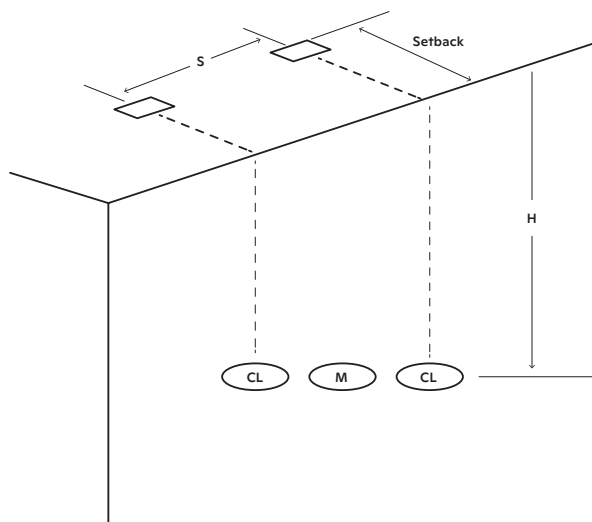
Beam Angle: Wall Wash

Product Code	Wattage	Lumens
D3WWSQ18BTWW	18 W	705



- 1 Vertical plane through horizontal angles (0-180) (through max. cd.)
2 Horizontal cone through vertical angle (20) (through max. cd.)

MULTIPLE UNITS DIAGRAM



2 ft from wall ("Setback") 2 ft on Center (S) 3 ft on Center (S) 4 ft on Center (S)

Distance from Ceiling (H)	CL	M	CL	CL	M	CL	CL	M	CL
1 ft (0.305 m)	30	29	30	21	20	21	17	14	17
2 ft (0.609 m)	42	43	43	30	30	30	24	21	24
3 ft (0.914 m)	43	45	43	32	31	31	25	23	25
4 ft (1.219 m)	35	36	36	26	26	25	20	20	20
5 ft (1.524 m)	25	26	27	20	19	19	15	15	15
6 ft (1.828 m)	18	19	20	15	15	14	12	12	11
7 ft (2.133 m)	14	14	15	11	11	11	9	9	9
8 ft (2.438 m)	10	11	11	9	9	9	7	7	7
9 ft (2.743 m)	8	9	9	7	7	7	6	6	6
10 ft (3.048 m)	7	7	7	6	6	6	5	5	5

3 ft from wall ("Setback") 2 ft on Center (S) 3 ft on Center (S) 4 ft on Center (S)

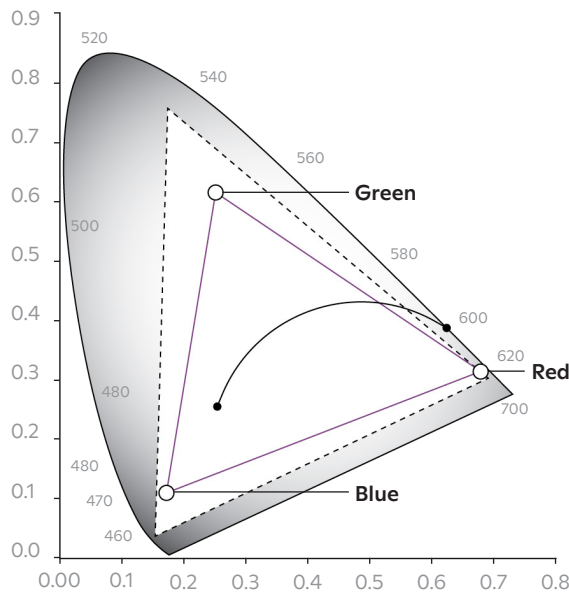
Distance from Ceiling (H)	CL	M	CL	CL	M	CL	CL	M	CL
1 ft (0.305 m)	14	15	15	11	11	11	9	8	9
2 ft (0.609 m)	24	25	25	18	18	18	14	13	14
3 ft (0.914 m)	30	31	31	22	23	23	18	16	18
4 ft (1.219 m)	29	30	31	22	23	23	18	16	18
5 ft (1.524 m)	25	26	26	19	20	20	16	14	16
6 ft (1.828 m)	20	21	21	16	16	17	13	12	13
7 ft (2.133 m)	16	17	17	13	14	14	11	10	11
8 ft (2.438 m)	13	14	14	11	11	11	9	8	9
9 ft (2.743 m)	11	11	11	9	10	10	8	7	8
10 ft (3.048 m)	9	9	9	8	8	8	7	6	7

¹ Calculated with five luminaires. Reflectances: 80, 50, 20.

² Values are rounded to the nearest footcandle.

WIDE GAMUT

CIE 1931 Color Chart



Ketra's D3 LED Downlight can easily be commissioned into Lutron HomeWorks or Athena systems. 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 calibration is relaxed such that each product produces the most saturated color it is capable of.

D3 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 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.

Warranty: Ketra's light source is warranted to be free from 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 while operating at ambient temperatures between -35 °C and 0 °C.