

## D3 Wall Wash Round

### 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.

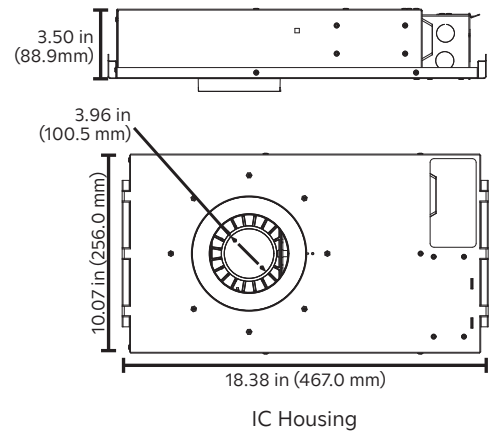
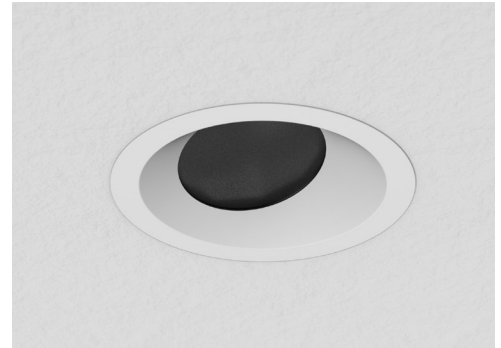
### FEATURES

**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.

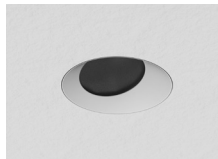
**Color Lock**—maintains your desired color point at a one-step MacAdam Ellipse across all Ketra product families and over each product's lifetime.



### OPTIONS



Flanged

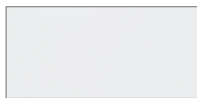


Flangeless Mud-in



Flangeless Millwork

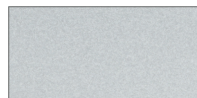
### Finish



White



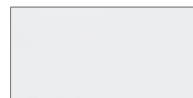
Black



Silver



Bronze



Paintable White

## SPECIFICATIONS<sup>1</sup>

### Optical Performance

Delivered Lumens <sup>2</sup>			
Beam Angle (1 in [25.4 mm] recess) <sup>3</sup>	9 W	13 W	18 W
Wall Wash	414 lm	573 lm	705 lm
CRI (Ra)	>90 (R9>90) 2400 K - 5000 K TYP		
Lumen Maintenance <sup>4</sup>	50,000 hours to L70 @ 25 °C T <sub>A</sub>		
Color Point Range <sup>5</sup>	1400K – 10,000K, Fully Saturated, & Pastel		
Equivalent Traditional Lamp	75 W halogen		
Dimming Protocol	Wireless RF/CCX (Lutron Clear Connect-Type X)		
Dimming Range <sup>5</sup>	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

### Environmental

Ambient Temperature (T <sub>A</sub> )	0 - 40 °C <sup>6</sup>
Extended Ambient Temperature	-35 – 0 °C <sup>7</sup>
Humidity	0 - 95%, Non-condensing
Certification	UL, cUL, 120 V~: FCC Class B, 277 V~: FCC Class A, Title 24 [JA8]* IC fixtures are rated for spray foam applications <sup>8</sup>
Location	UL Damp Location, UL Wet Location (shower) available with Trim Lens. UL2043 and CAN/ULC-S142 rated for use in air handling spaces (plenums)
Outdoor/Indoor	Outdoor use available for residential enclosed/covered patio applications. Trim lens required
Warranty	5 year fixture, LED and dimming warranty

### 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 Hole Diameter	4 in (101.6 mm) flanged; 5.5 in (139.70 mm) flangeless mud-in; 4 in (101.6 mm) flangeless millwork
Trim Outside Diameter	4.63 in (117.6 mm) flanged; 3.75 in (95.2 mm) flangeless mud-in; 4 in (101.6 mm) flangeless millwork
Trim Inside Diameter	3.75 in (95.2 mm)
Trim Thickness	¼ in (1.6 mm) (Flanged trims only)
Optics Outside Diameter	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 <sup>9</sup>	800 mA, 0.2 mS duration
Surge Protection	2.5 KV
Voltage	120 V~ 60 Hz 277 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) <sup>9</sup> .

<sup>1</sup> 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.

<sup>2</sup> Lumen measurement complies with IES LM-79-08 testing procedures.

<sup>3</sup> Tilt and Beam Angle are fixed for wall wash applications. Wall wash housings are field changeable to be adjustable. See D3 Installation Guide for more details.

<sup>4</sup> Lumen maintenance values calculated in accordance to TM-21 procedures based on LM-80 compliant measurement data.

<sup>5</sup> Intensity and color point control requires compatible system.

<sup>6</sup> 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 ambient temperature.

<sup>7</sup> Color accuracy not guaranteed in Extended Ambient Temperature range.

<sup>8</sup> For more information on inrush current, refer to Ketra's Inrush App Note in the Support section of our website.

<sup>9</sup> See Lutron Application Note 106 (P/N 048106) at [www.lutron.com](http://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](mailto: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
--------------	-------	-------------	-----------

Order code: \_\_\_\_\_

Product Line	Code
Commercial (Athena compatible)	<b>CM-</b>
Residential (HomeWorks compatible)	<b>HW-</b>
<b>Fixture / Trim</b>	
D3 Wall Wash, Round Flanged <sup>1,2</sup>	<b>D3WWRD</b>
D3 Wall Wash, Round Flangeless <sup>3,4,9</sup>	<b>D3WWRM</b>
D3 Wall Wash, Collar Adapter Not Specified <sup>8</sup>	<b>D3WWXX</b>
<b>Power Consumption</b>	
9 W	<b>09</b>
13 W	<b>13</b>
18 W	<b>18</b>
<b>Control System</b>	
CCX (Clear Connect-Type X)	<b>GT</b>

Beam Angle	Code
Wall Wash	<b>WW</b>
<b>Region/Voltage</b>	
120 V~ 60 Hz, North America	<b>11</b>
277 V~ 60 Hz, North America	<b>12</b>
<b>Housing Type</b>	
New Construction, IC/Airtight	<b>NCIC</b>
New Construction, IC/Airtight, Flangeless Millwork Trim <sup>3</sup>	<b>NCIM</b>
New Construction, IC/Airtight, Exterior Enclosed/Covered Porch (HomeWorks resi products only) <sup>5,6</sup>	<b>NCOC</b>
New Construction, IC/Airtight, Exterior Enclosed/Covered Porch, Flangeless Millwork (HomeWorks Resi Products only) <sup>5,6</sup>	<b>NCOM</b>
<b>Shipping Option</b>	
Single Pack (Default, ships with Butterfly Brackets & 24 in Hanger Bars to be installed in field)	<b>SP</b>

Product Line	Code
Universal	<b>UN-</b>
<b>Model</b>	
D3 Round Flanged Wall Wash <sup>1,2</sup>	<b>D3TFRW1</b>
D3 Round Flangeless Mud-In Wall Wash <sup>4</sup>	<b>D3TXRW1</b>
D3 Round Flangeless Millwork Wall Wash <sup>3,4</sup>	<b>D3TMRW1</b>
<b>Trim Finish</b>	
White	<b>PWH</b>
Black	<b>PBK</b>
Silver	<b>PSR</b>
Bronze	<b>PBZ</b>
Paintable White	<b>CWH</b>
<b>Trim Lens<sup>7</sup></b>	
Wall Wash	<b>W</b>

- <sup>1</sup> D3 Wall Wash, Round flanged fixture (D3WWRD) can only be used with Wall Wash flanged trims (D3TFRW1) and is compatible with NCIC/NCOC housing type, but is incompatible with NCIM/NCOM.
- <sup>2</sup> Use flanged trims (D3TFRW1) 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.
- <sup>3</sup> D3 Wall Wash, Round flangeless fixture (D3WWRM) can be used with a flangeless mud-in trim (D3TXRW1) with NCIC/NCOC housing type, or with a flangeless millwork trim (D3TMRW1) with NCIM/NCOM housing type.
- <sup>4</sup> Use the flangeless millwork trims (D3TMRW1) 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.
- <sup>5</sup> D3s are available for residential exterior applications only and must have a trim installed with a lens.
- <sup>6</sup> D3s installed outdoors must use housing type NCOC or NCOM.
- <sup>7</sup> Downlight is wet location rated when trim is installed with lens.
- <sup>8</sup> Ceiling installation cannot begin until the collar adapter is installed (see the Component Ordering Guide for details).
- <sup>9</sup> 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: _____	

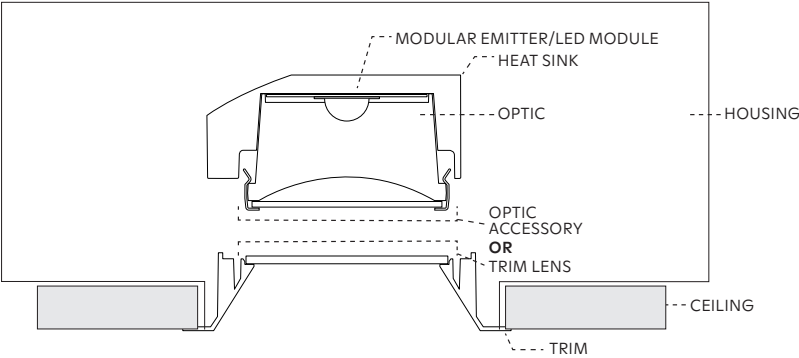
Product Line	Code
Universal Part - Recessed Downlight	UN-D3
Accessory <sup>1,2,3</sup>	
Trim Lens, Round Bevel, Solite Flanged Trims Only	TLRDFS
Trim Lens, Round Bevel, Frost Flanged Trims Only	TLRDFF
Trim Lens, Round Mud-In, Solite Mud-in Trims Only	TLRDXS
Trim Lens, Round Mud-In, Frost Mud-in Trims 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
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

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.

## COMPONENT ORDERING GUIDE (cont.)

Rough-in  
Housing

Order code: \_\_\_\_\_

Collar  
Adapters

Order code: \_\_\_\_\_

Modular Emitter/  
LED Module

Order code: \_\_\_\_\_

Rough-in Housing	Code	Collar Adapters <sup>1</sup>	Code	Modular Emitter/LED Module	Code
Housing, No Collar	<b>UN-D3ADXX</b>	Collar Adapter, Round Flanged	<b>UN-D3CTFR</b>	Standard (25°, 40°, 60°) Modular Emitter/LED Module	<b>UN-D3MEMTRST</b>
Housing, Flanged Round Collar	<b>UN-D3ADFR</b>	Collar Adapter, Round Flangeless Mud-in <sup>2</sup>	<b>UN-D3CTXR</b>	Spot (15°) Modular Emitter/ LED Module	<b>UN-D3MEMTRSP</b>
Housing, Mud-In Round Collar	<b>UN-D3ADXR</b>	Collar Adapter, Round Flangeless Millwork <sup>3</sup>	<b>UN-D3CTMR</b>		
Housing, Millwork Round Collar	<b>UN-D3ADMR</b>				

Power Supply

Order code: \_\_\_\_\_

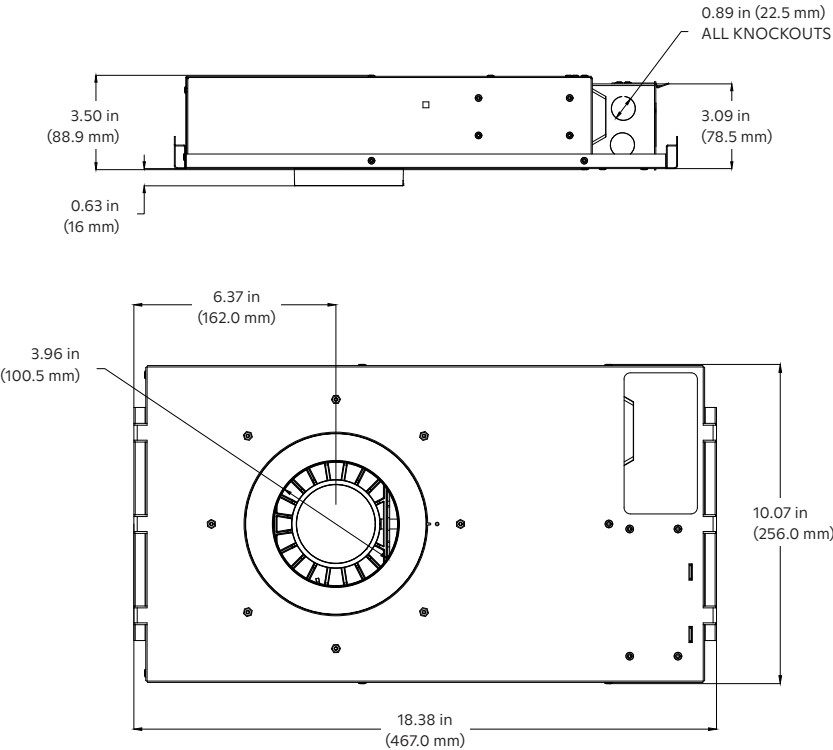
Power Supply	Code
Comm 9 W CCX 120 V~	<b>CM-D3PS09GT11</b>
Comm 9 W CCX 277 V~	<b>CM-D3PS09GT12</b>
Comm 13 W CCX 120 V~	<b>CM-D3PS13GT11</b>
Comm 13 W CCX 277 V~	<b>CM-D3PS13GT12</b>
Comm 18 W CCX 120 V~	<b>CM-D3PS18GT11</b>
Comm 13 W CCX 277 V~	<b>CM-D3PS18GT12</b>
Resi 9 W CCX 120 V~	<b>HW-D3PS09GT11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

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

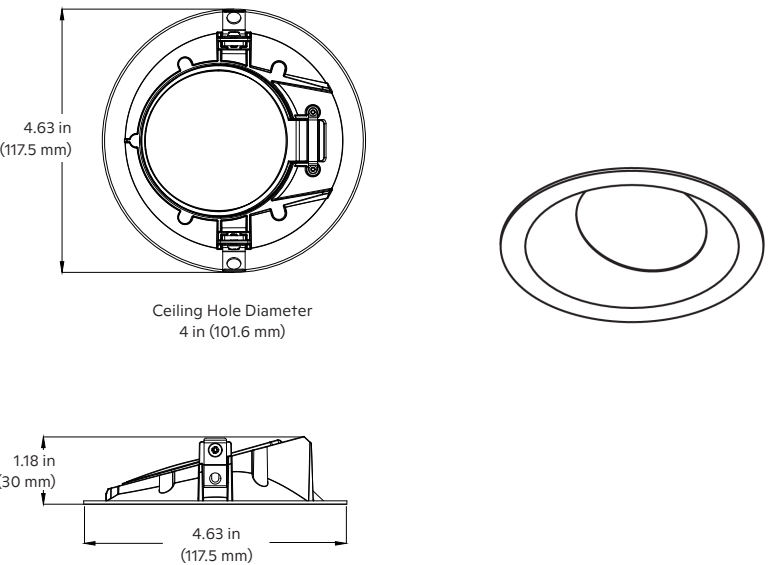
- <sup>1</sup> Ceiling installation cannot begin until collar adapter is installed.
- <sup>2</sup> Mud-In Trim Retainer supplied with Mud-In Collar Adapter.
- <sup>3</sup> Millwork Trim Retainer supplied with Millwork Trim to ensure color match.

**PRODUCT DIMENSIONS**

**Flanged Housing**

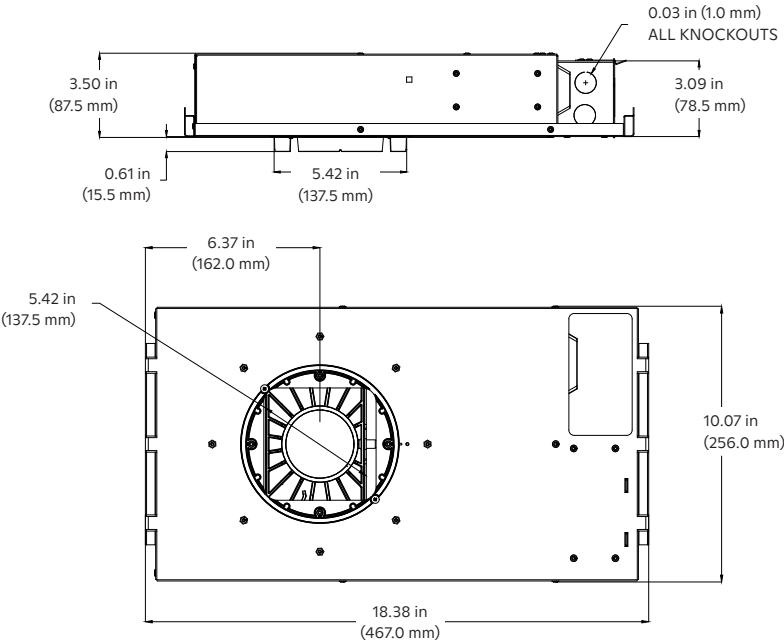


**Flanged Trim**

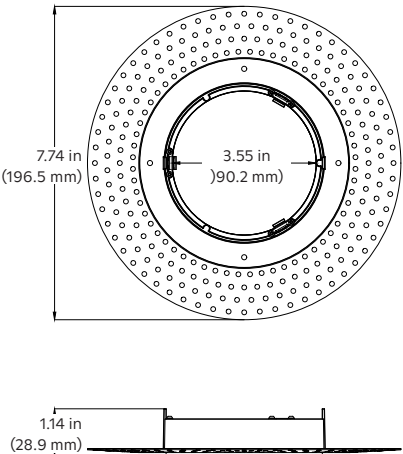


**PRODUCT DIMENSIONS (cont.)**

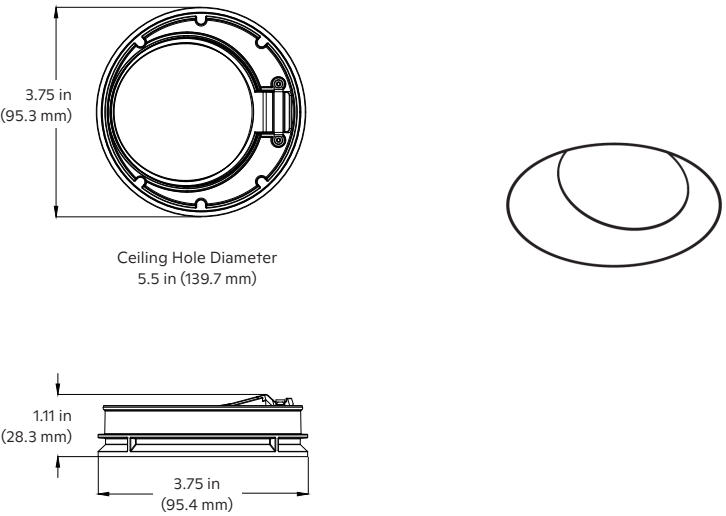
**Flangeless Mud-in Housing**



**Flangeless Mud-in Trim Retainer**

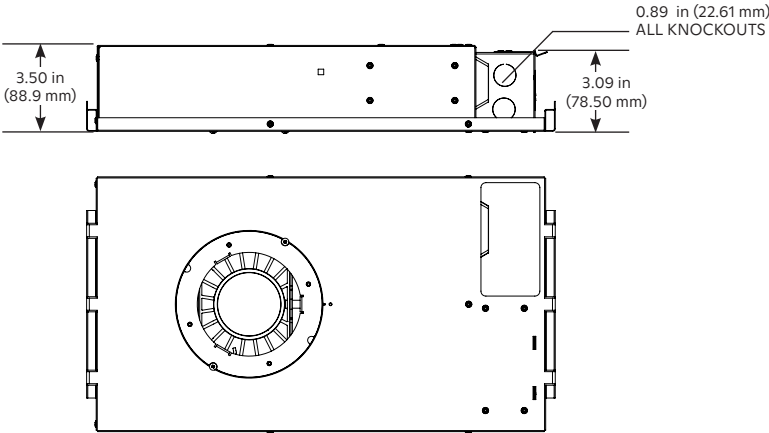


**Flangeless Mud-in Trim**

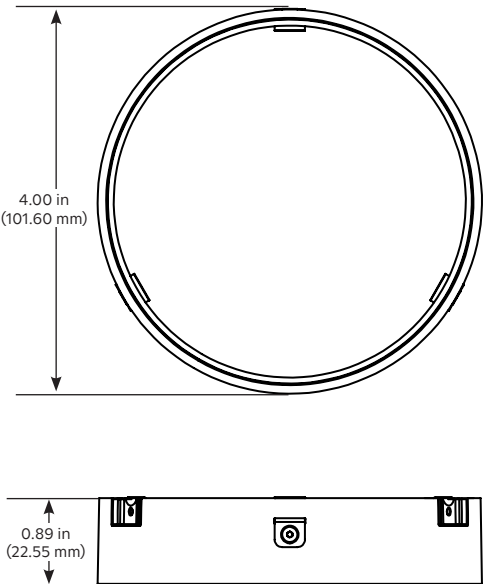


**PRODUCT DIMENSIONS (cont.)**

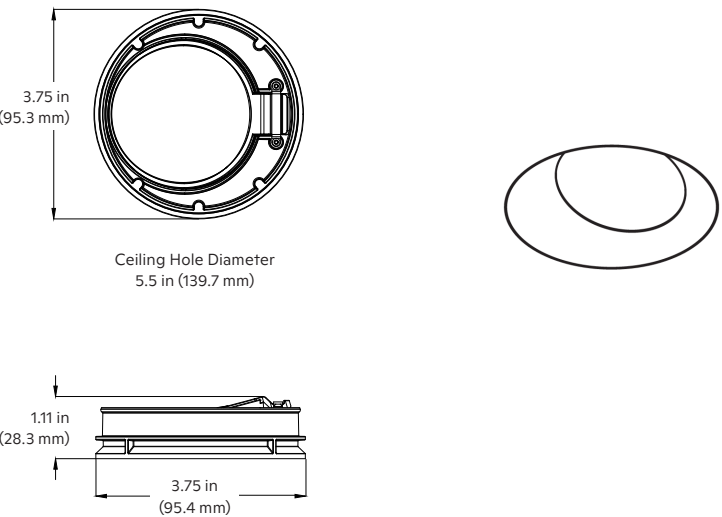
**Flangeless Millwork Housing**



**Flangeless Millwork Trim Retainer**



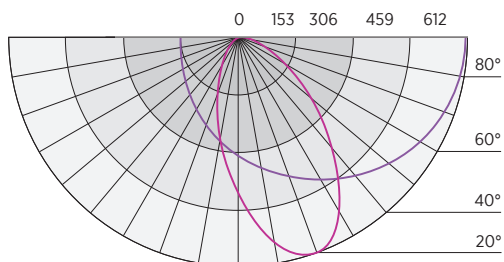
**Flangeless Millwork Trim**



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

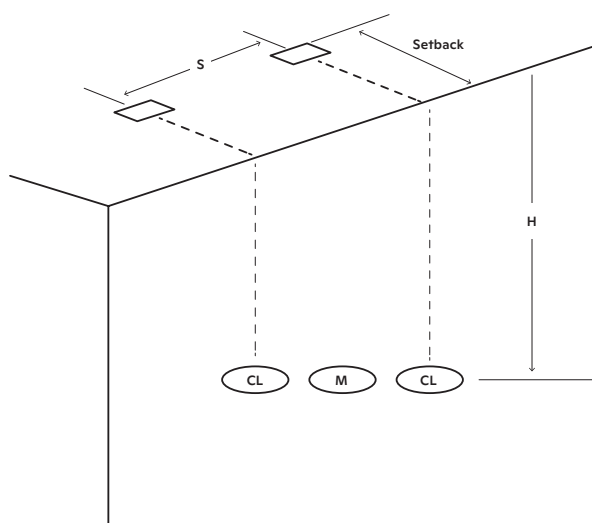
### Beam Angle: Wall Wash

Model Number	Wattage	Delivered Lumens
D3WWRD18BTWW	18 W	705



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

## PLACEMENT GUIDE FOR MULTIPLE UNITS



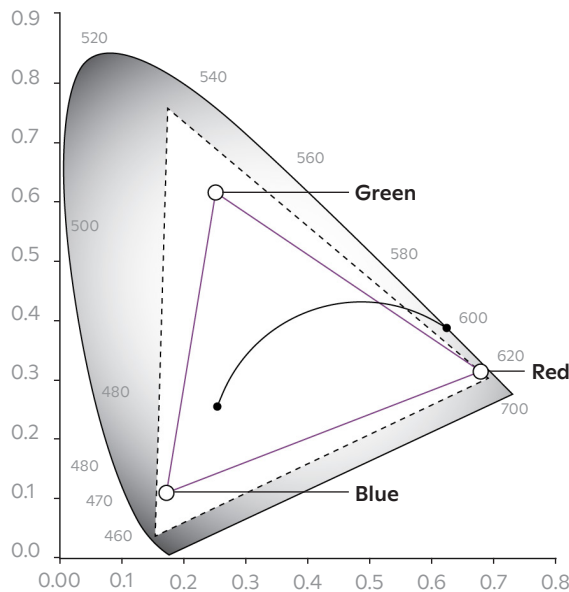
2 ft (0.6 m) from wall ("Setback")	2 ft (0.6 m) on Center (S)			3 ft (0.9 m) on Center (S)			4 ft (1.2 m) on Center (S)		
Distance from Ceiling (H)	CL	M	CL	CL	M	CL	CL	M	CL
1 ft (0.305 m)	30	29	30	21	20	21	17	14	17
2 ft (0.609 m)	42	43	43	30	30	30	24	21	24
3 ft (0.914 m)	43	45	43	32	31	31	25	23	25
4 ft (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 (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)	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

<sup>1</sup> Calculated with five luminaires. Reflectances: 80, 50, 20.  
<sup>2</sup> 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 lock not guaranteed such that each product produces the most saturated color of which it is capable.

## 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.<sup>1</sup>

**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 capability<sup>2</sup>:** 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 warrantied 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).

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

<sup>2</sup> For diagnostics support or more information, please contact Lighting Technical Support at [lightingsupport@lutron.com](mailto:lightingsupport@lutron.com) or 1.844.LUTRON1 (1.844.588.7661).