D3 Fixed, 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.
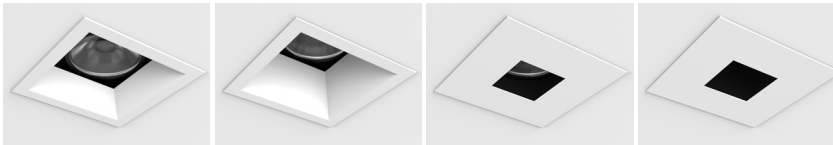
TruBeam—produces uniform color across any available beam angle.

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

IC Housing
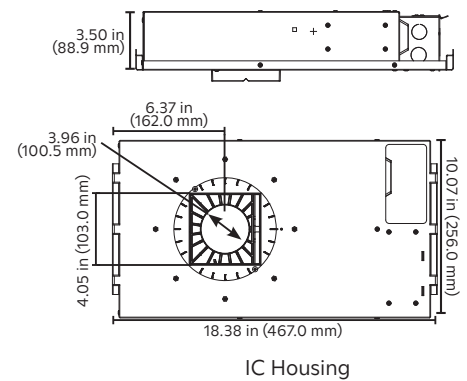
OPTIONS

Flanged

| Shallow | Deep | Shallow Pinhole | Deep Pinhole |

Flangeless Mud-in
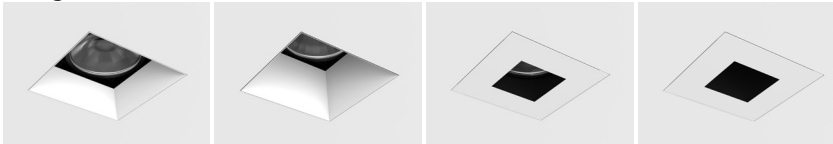
| Shallow | Deep | Shallow Pinhole | Deep Pinhole |

Flangeless Millwork
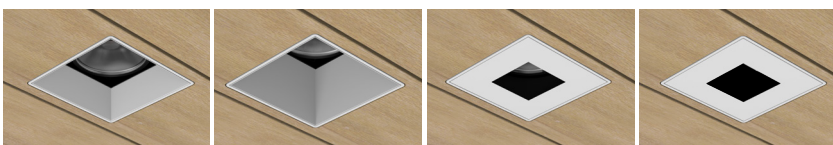
| Shallow | Deep | Shallow Pinhole | Deep Pinhole |

Finish

| White | Black | Silver | Bronze | Paintable White |

SPECIFICATIONS[1]

Optical Performance

Delivered Lumens[2]

Beam Angle (1 in [25.4 mm] recess)	9 W	13 W	18 W	Pinhole lm multiplier
15° beam, low glare	650 lm	882 lm	1092 lm	0.57
25° beam, low glare	623 lm	845 lm	1046 lm	0.48
40° beam, low glare	569 lm	772 lm	955 lm	0.61
60° beam, low glare	561 lm	760 lm	941 lm	0.60
15° beam, high output	682 lm	928 lm	1148 lm	0.62
25° beam, high output	678 lm	923 lm	1142 lm	0.48
40° beam, high output	646 lm	878 lm	1087 lm	0.54
60° beam, high output	630 lm	857 lm	1061 lm	0.55

CRI (Ra)	**>90 (R9 >90)**
Lumen Maintenance[3]	**50,000 hours to L70 @ 25°C T_A**
Color Point Range[4]	**1400 K–10,000 K, Fully Saturated, & Pastel**
Equivalent Traditional Lamp	**75W halogen**
Dimming Protocol	**Wireless RF/CCX (Lutron Clear Connect-Type X)**
Dimming Range[4]	**0.1-100%**

Delivered Efficacy

Beam Angle (1 in [25.4 mm] recess)	9 W	13 W	18 W
15° beam, low glare	72 lm/W	68 lm/W	61 m/W
25° beam, low glare	69 lm/W	65 lm/W	58 lm/W
40° beam, low glare	63 lm/W	59 lm/W	53 lm/W
60° beam, low glare	62 lm/W	58 lm/W	52 lm/W
15° beam, high output	76 lm/W	71 lm/W	63 lm/W
25° beam, high output	75 lm/W	71 lm/W	62 lm/W
40° beam, high output	72 lm/W	68 lm/W	59 lm/W
60° beam, high output	70 lm/W	66 lm/W	58 lm/W

Environmental

Ambient Temperature (T_A)	**0 – 40 °C [5]**
Extended Ambient Temperature	**–35 – 0 °C [6]**
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 [5]**
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**
Additional Optic Lens	**2.5 in (63.5 mm) lens, ⅛ in (3.18 mm) thick**
Additional Trim Lens	**2.75 in (69.85 mm) lens, ⅛ in (3.18 mm) thick**
Fixture Weight	**7.75 lb (3.51 kg)**
Housing Material	**Powder Coated Steel, Polymer**
Lens Material	**Glass**

---

[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] 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.

[6] Color accuracy not guaranteed in Extended Ambient Temperature range.

* 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.

SPECIFICATIONS[1] (cont.)

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 Inside Dimension	**Flanged:** **2.84 in (72.14 mm) Bevel**
	                 1.97 in (50 mm) Pinhole
	
	Flangeless: **2.76 in (70.1 mm) Bevel**
	                 1.97 in (50 mm) Pinhole

Trim Thickness	**¹⁄₁₆ in (1.6 mm) (Flanged trims only)**
Optics Outside Dimension	**2.5 in (63.5 mm)**
Trim Depth	**1 in (25.4 mm), 2 (50.8 mm)**
Ceiling Thickness (min-max)	**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)**
Modular Emitter/LED Module (tool-free)	**0.75 in (19 mm)**
Housing Vertical Adjustment via Butterfly Bracket	**1.75 in (44.5 mm)**
Service Position	**Tilt to 40˚** **Full 364˚ Rotation**
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[2]	**800 mA, 0.2 mS duration**
Surge Protection	**2.5 KV**
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 LVS™ model LUT-SHUNT-A-TD (UL₈ file E206507)[3].**

LUTRON | KETRA

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	Optic Accessory	Shipping Option

Order code: _____

Trim

Product Line			

Model	Trim Finish	Trim Lens

Order code: _____

Product Line	Code
Commercial (Athena compatible)	**CM-**
Residential (HomeWorks compatible)	**HW-**

Fixture / Trim	
D3 Fixed, Square Flanged[1,2]	**D3FXSQ**
D3 Fixed, Square Flangeless[3,4,9]	**D3FXSM**
D3 Fixed, Collar Adapter Not Specified[8]	**D3FXXX**

Power Consumption	
9 W	**09**
13 W	**13**
18 W	**18**

Control System	
CCX (Clear Connect–Type X)	**GT**

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**

Beam Angle (continued)	Code
Spot (15°) High Output	**15H**
Flood (25°) High Output	**25H**
Wide Flood (40°) High Output	**40H**
Very Wide Flood (60°) High Output	**60H**

Region/Voltage	
120 V∼ 60 Hz, North America	**11**
277 V∼ 60 Hz, North America	**12**

Housing Type	
New Construction, IC/Airtight	**NCIC**
New Construction, IC/Airtight, Flangeless Millwork Trim[3]	**NCIM**
New Construction, IC/Airtight, Exterior Enclosed/Covered Porch (HomeWorks resi products only)[5,6]	**NCOC**
New Construction, IC/Airtight, Exterior Enclosed/Covered Porch, Flangeless Millwork (HomeWorks resi products only)[5,6]	**NCOM**

Optic Accessory[7] (See diagram on p. 3)	
None	**N**
Solite Lens	**S**
Frosted Lens	**F**
Hex Louver	**H**

Shipping Option	
Single Pack (Default, ships with Butterfly Brackets & 24 in Hanger Bars to be installed in field)	**SP**

Product Line	Code
Universal	**UN-**
Model	Code
Flanged Trim[1,2]	
D3 Square Shallow Bevel	**D3TFSQ1**
D3 Square Deep Bevel	**D3TFSQ2**
D3 Square Shallow Pinhole	**D3TFSP1**
D3 Square Deep Pinhole	**D3TFSP2**
Flangeless Mud-In Trim[4]	
D3 Square Shallow Bevel	**D3TXSQ1**
D3 Square Deep Bevel	**D3TXSQ2**
D3 Square Shallow Pinhole	**D3TXSP1**
D3 Square Deep Pinhole	**D3TXSP2**
Flangeless Millwork Trim[3,4]	
D3 Square Shallow Bevel	**D3TMSQ1**
D3 Square Deep Bevel	**D3TMSQ2**
D3 Square Shallow Pinhole	**D3TMSP1**
D3 Square Deep Pinhole	**D3TMSP2**

Trim Finish	
White	**PWH**
Black	**PBK**
Silver	**PSR**
Bronze	**PBZ**
Paintable White	**CWH**

Trim Lens[7] (See diagram on p. 3)	
None	**N**
Solite Lens	**S**
Frosted Lens	**F**

---

1. D3 Fixed, Square flanged fixture (D3FXSQ) can only be used with flanged trims (D3TFS--) and is compatible with NCIC/NCOC housing type, but is incompatible with NCIM/NCOM.
2. Use flanged trims (D3TFS) 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 Fixed, Square flangeless fixture (D3FXSM) can be used with a flangeless mud-in trim (D3TXS--) with NCIC/NCOC housing type, or with a flangeless millwork trim (D3TMS--) with NCIM/NCOM housing type.
4. Use the flangeless millwork trims (D3TMS--) 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]	Code
Trim Lens, Square Bevel, Solite Flanged Trims Only	**TLSQFS**
Trim Lens, Square Bevel, Frost Flanged Trims Only	**TLSQFF**
Trim Lens, Square Mud-in, Solite Mud-in Trims Only	**TLSQXS**
Trim Lens, Square Mud-in, Frost Mud-in Trims Only	**TLSQXF**
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	Code
(2) Butterfly brackets	**MA B**
(2) 24 in (609 mm) Hanger bars	**MA N**

COMPONENT DIAGRAM
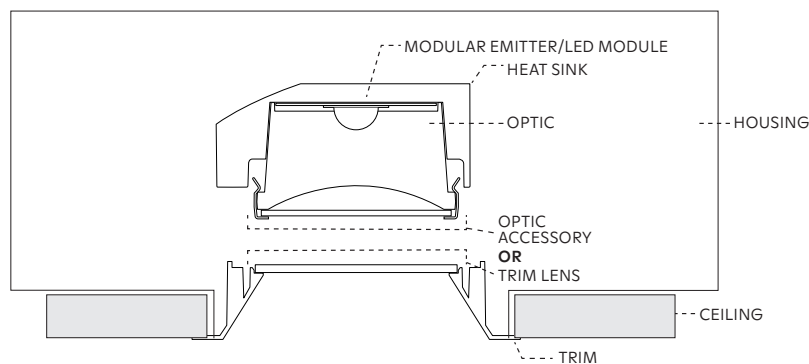
[1] Downlight is wet location rated when trim is installed with lens.
[2] Only one optional optical or trim accessory can be used at a time.
[3] Downlights with outdoor housings require a trim installed with lens.

COMPONENT ORDERING GUIDE (cont.)

Rough-in
Housing

Order code: _____

Collar
Adapters

Order code: _____

Modular Emitter/
LED Module

Order code: _____

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

Collar Adapters[1]	Code
Collar Adapter, Round Flanged	**UN-D3CTFR**
Collar Adapter, Round Flangeless Mud-in[2]	**UN-D3CTXR**
Collar Adapter, Round Flangeless Millwork[3]	**UN-D3CTMR**

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

Order code: _____

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**

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

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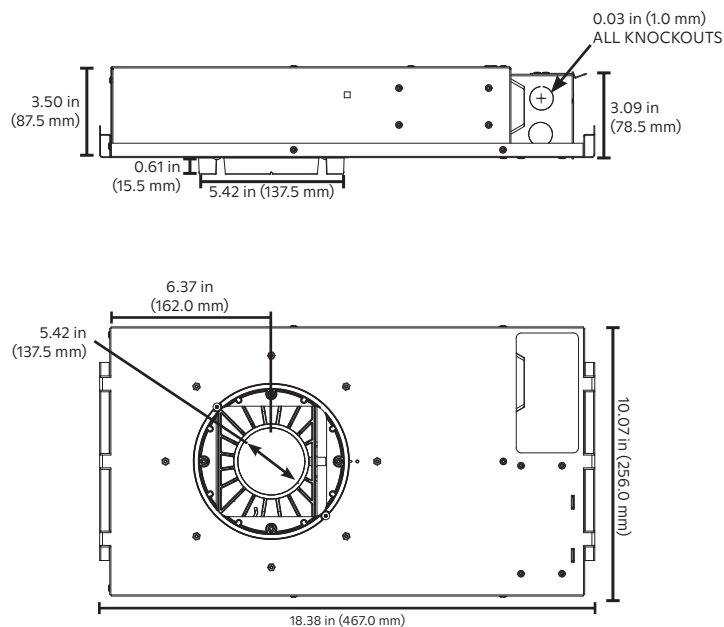3 Millwork Trim Retainer supplied with Millwork Trim to ensure color match.
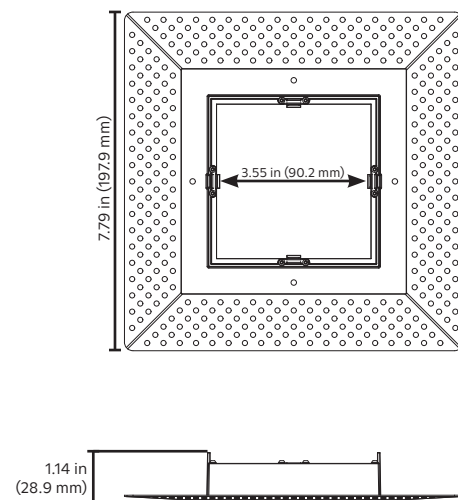
PRODUCT DIMENSIONS

Flanged Housing

0.89 in (22.5 mm)
ALL KNOCKOUTS

3.50 in
(88.9 mm)

3.09 in
(78.5 mm)

0.63 in
(16 mm)

6.37 in
(162.0 mm)

3.96 in
(100.5 mm)

4.05 in (103.0 mm)

10.07 in (256.0 mm)

18.38 in (467.0 mm)
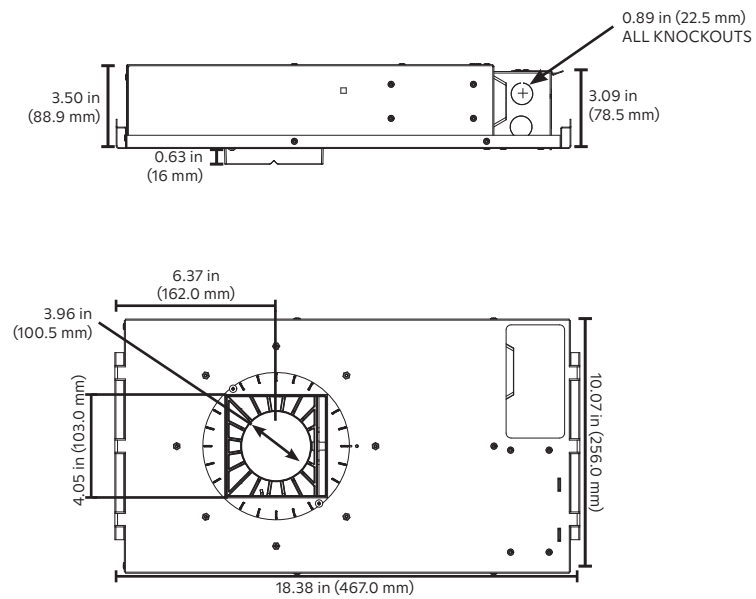
PRODUCT DIMENSIONS (cont.)

Flangeless Mud-in Housing

0.03 in (1.0 mm)
ALL KNOCKOUTS

3.50 in
(87.5 mm)

3.09 in
(78.5 mm)

0.61 in
(15.5 mm)

5.42 in (137.5 mm)

6.37 in
(162.0 mm)

5.42 in
(137.5 mm)

10.07 in (256.0 mm)

18.38 in (467.0 mm)

Flangeless Mud-in Trim Retainer

7.79 in (197.9 mm)

3.55 in (90.2 mm)

1.14 in
(28.9 mm)

844.588.6445 | ketra.com

PRODUCT DIMENSIONS (cont.)

Flangeless Millwork Housing

3.50 in
(88.9 mm)

0.89 in [22.61 mm]
ALL KNOCKOUTS

3.09 in
(78.50 mm)

4.00 in
(101.6 mm)

Flangeless Millwork Trim Retainer

4.00 in (101.60 mm)

3.55 in (90.20 mm)

0.89 in
(22.55 mm)
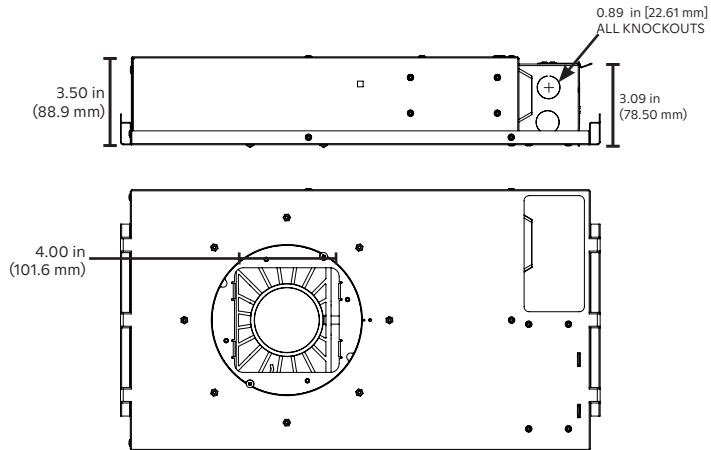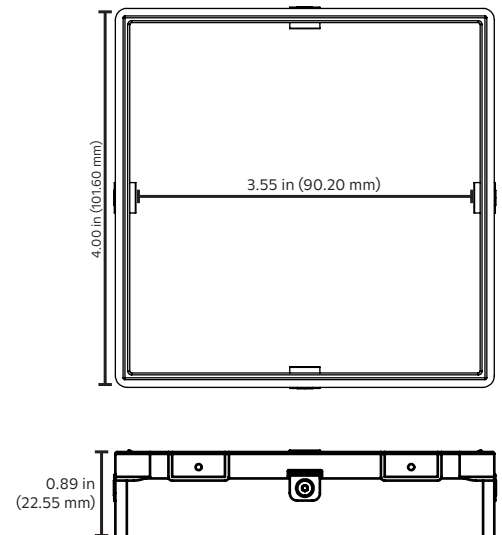
PRODUCT DIMENSIONS (cont.)

Flanged Bevel Trim

4.63 in
(117.5 mm)

2.84 in
(72.1 mm)

Ceiling Hole Dimension
4 in (101.6 mm)

Shallow Bevel

1.08 in
(27.5 mm)

4.63 in (117.5 mm)

Deep Bevel

1.85 in
(46.9 mm)

4.63 in (117.5 mm)

Flanged Pinhole Trim

4.63 in
(117.5 mm)

1.77 in
(45.0 mm)

Ceiling Hole Dimension
4 in (101.6 mm)

Shallow Bevel

1.2 in
(30.5 mm)

4.63 in (117.5 mm)

Deep Bevel

2.20 in
(55.9 mm)

4.63 in (117.5 mm)
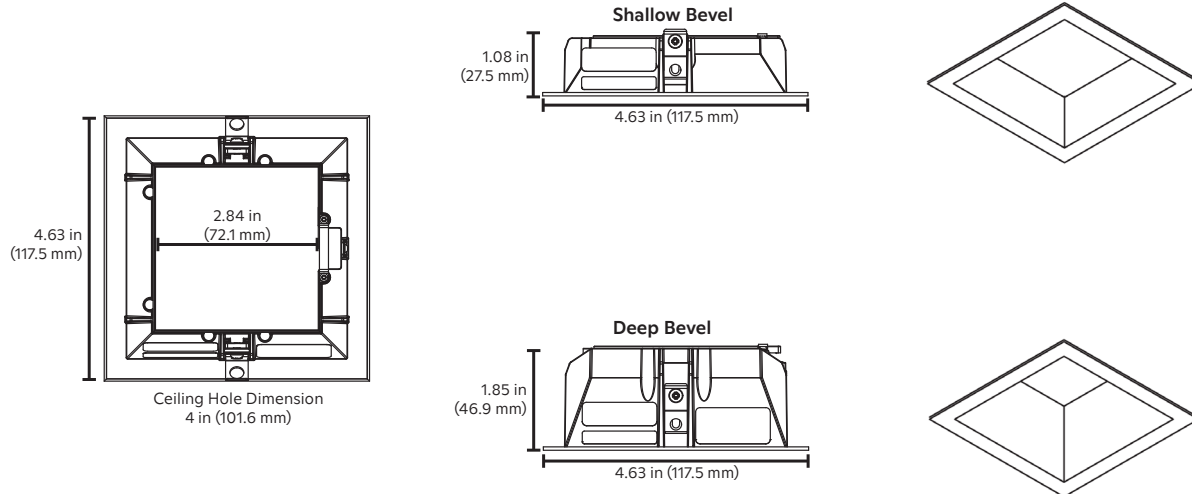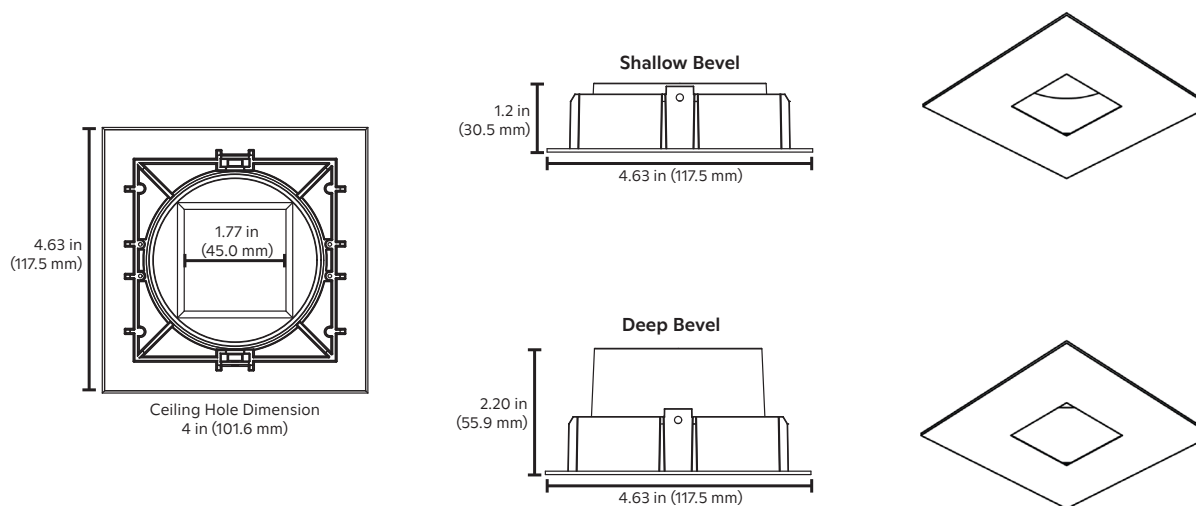
PRODUCT DIMENSIONS (cont.)

Flangeless Bevel Trim

Shallow Bevel

1.09 in
(27.8 mm)

3.75 in (95.4 mm)

3.75 in
(95.3 mm)

2.76 in
(70.0 mm)

Ceiling Hole Diameter
5.5 in (139.7 mm)

Deep Bevel

1.95 in
(49.5 mm)

3.75 in (95.4 mm)
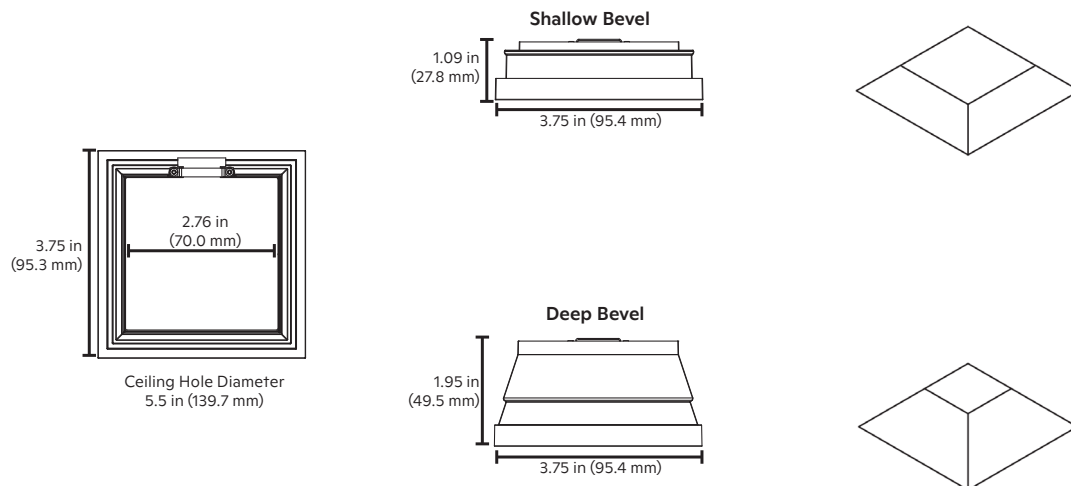
Flangeless Pinhole Trim

Shallow Pinhole

1.2 in
(30.5 mm)

3.75 in (95.4 mm)

3.75 in
(95.3 mm)

1.77 in
(45.0 mm)

Ceiling Hole Diameter
5.5 in (139.7 mm)

Deep Pinhole

2.20 in
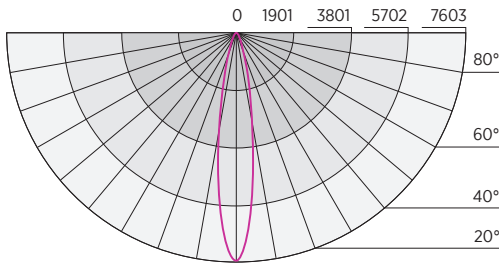(55.9 mm)

3.75 in (95.4 mm)
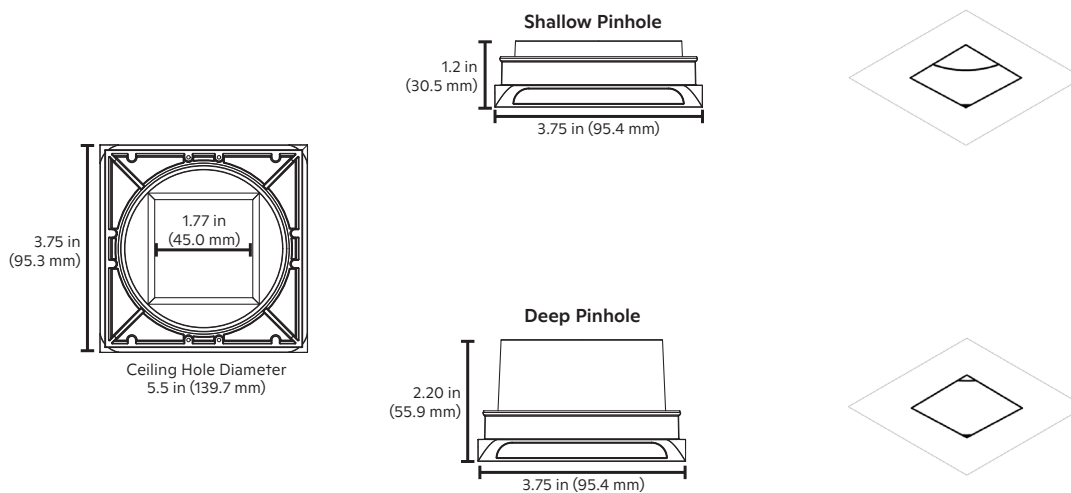
PHOTOMETRIC DATA[1]: 2700 – 5000K VALUES ONLY, DELIVERED LUMENS

Beam Angle: 15˚ Spot, Low Glare

Model Number	Wattage	Delivered Lumens	CBCP
D3FXSQ18BT15L	18 W	1092	7603

Foot-candles		Beam Dia.
211	6 ft (1.8 m)	1.58 ft (0.48 m)
119	8 ft (2.4 m)	2.11 ft (0.64 m)
76	10 ft (3 m)	2.63 ft (0.80 m)
53	12 ft (3.7 m)	3.16 ft (0.96 m)
39	14 ft (4.3 m)	3.69 ft (1.12 m)

Distance From Light

0 1901 3801 5702 7603

Beam Angle: 15˚ Spot, High Output

Model Number	Wattage	Delivered Lumens	CBCP
D3FXSQ18BT15H	18 W	1148	9279

Foot-candles		Beam Dia.
258	6 ft (1.8 m)	1.58 ft (0.48 m)
145	8 ft (2.4 m)	2.11 ft (0.64 m)
93	10 ft (3 m)	2.63 ft (0.80 m)
64	12 ft (3.7 m)	3.16 ft (0.96 m)
47	14 ft (4.3 m)	3.69 ft (1.12 m)

Distance From Light

0 2320 4638 6959 9279
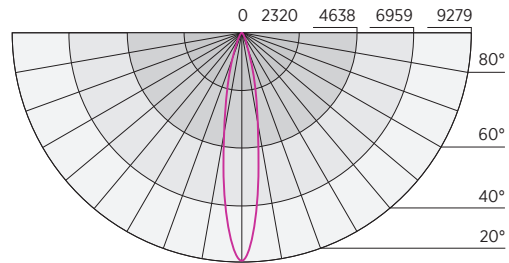
Beam Angle: 25˚ Spot, Low Glare

Model Number	Wattage	Delivered Lumens	CBCP
D3FXSQ18BT25L	18 W	1046	4198

Foot-candles		Beam Dia.
117	6 ft (1.8 m)	2.66 ft (0.81 m)
66	8 ft (2.4 m)	3.55 ft (1.08 m)
42	10 ft (3 m)	4.43 ft (1.35 m)
29	12 ft (3.7 m)	5.32 ft (1.62 m)
21	14 ft (4.3 m)	6.21 ft (1.89 m)

Distance From Light

0 1050 2089 3149 4198
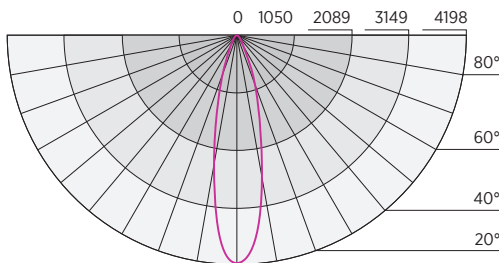
Beam Angle: 25˚ Spot, High Output

Model Number	Wattage	Delivered Lumens	CBCP
D3FXSQ18BT25H	18 W	1142	4297

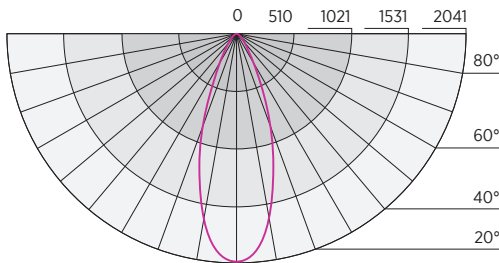| Foot-candles		Beam Dia.
119	6 ft (1.8 m)	2.66 ft (0.81 m)
67	8 ft (2.4 m)	3.55 ft (1.08 m)
43	10 ft (3 m)	4.43 ft (1.35 m)
30	12 ft (3.7 m)	5.32 ft (1.62 m)
22	14 ft (4.3 m)	6.21 ft (1.89 m)
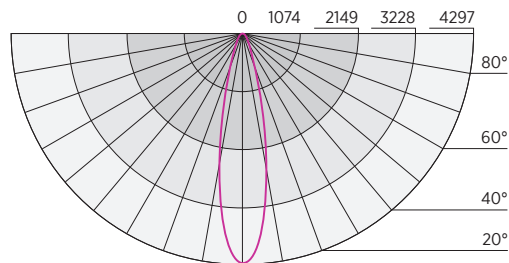
Distance From Light

0 1074 2149 3228 4297

[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.

PHOTOMETRIC DATA[1]: 2700 – 5000K VALUES ONLY, DELIVERED LUMENS

Beam Angle: 40˚ Wide Flood, Low Glare

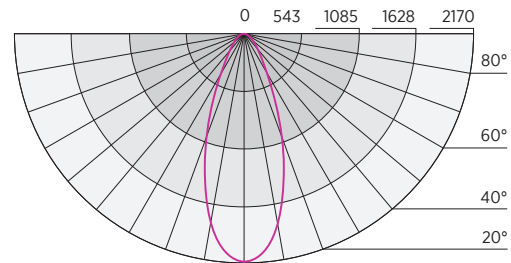| Model Number	Wattage	Delivered Lumens	CBCP
D3FXSQ18BT40L	18 W	955	2041

Foot-candles		Beam Dia.
57	6 ft (1.8 m)	4.37 ft (1.33 m)
32	8 ft (2.4 m)	5.82 ft (1.77 m)
20	10 ft (3 m)	7.28 ft (2.22 m)
14	12 ft (3.7 m)	8.74 ft (2.66 m)
10	14 ft (4.3 m)	10.19 ft (3.11 m)

Distance From Light

0   510   1021   1531   2041

Beam Angle: 40˚ Wide Flood, High Output

Model Number	Wattage	Delivered Lumens	CBCP
D3FXSQ18BT40H	18 W	1087	2170

Foot-candles		Beam Dia.
60	6 ft (1.8 m)	4.37 ft (1.33 m)
34	8 ft (2.4 m)	5.82 ft (1.77 m)
22	10 ft (3 m)	7.28 ft (2.22 m)
15	12 ft (3.7 m)	8.74 ft (2.66 m)
11	14 ft (4.3 m)	10.19 ft (3.11 m)

Distance From Light

0   543   1085   1628   2170

Beam Angle: 60˚ Very Wide Flood, Low Glare

Model Number	Wattage	Delivered Lumens	CBCP
D3FXSQ18BT60L	18 W	941	1235

Foot-candles		Beam Dia.
34	6 ft (1.8 m)	6.93 ft (2.11 m)
19	8 ft (2.4 m)	9.24 ft (2.81 m)
12	10 ft (3 m)	11.55 ft (3.52 m)
9	12 ft (3.7 m)	13.86 ft (4.22 m)
6	14 ft (4.3 m)	16.17 ft (4.93 m)

Distance From Light

0   309   617   926   1235
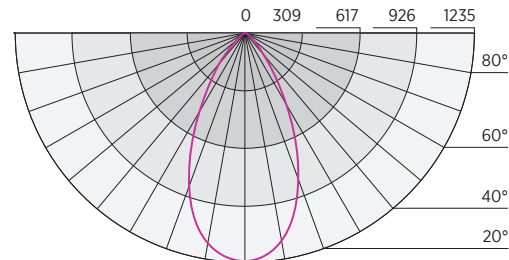
Beam Angle: 60˚ Very Wide Flood, High Output

Model Number	Wattage	Delivered Lumens	CBCP
D3FXSQ18BT60H	18 W	1061	1257

Foot-candles		Beam Dia.
35	6 ft (1.8 m)	6.93 ft (2.11 m)
20	8 ft (2.4 m)	9.24 ft (2.81 m)
13	10 ft (3 m)	11.55 ft (3.52 m)
9	12 ft (3.7 m)	13.86 ft (4.22 m)
6	14 ft (4.3 m)	16.17 ft (4.93 m)
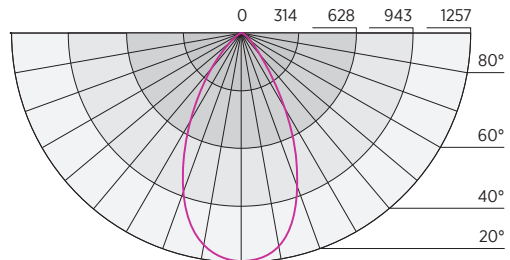
Distance From Light

0   314   628   943   1257

[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.

WIDE GAMUT

CIE 1931 Color Chart
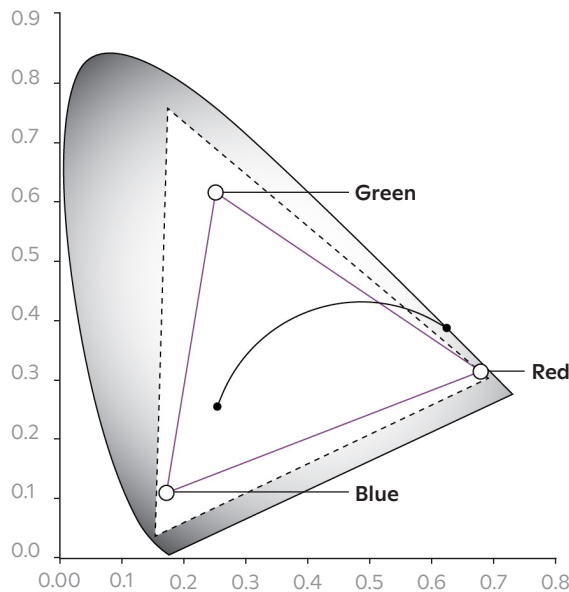
Ketra's D3 LED Downlight can easily be commissioned into Lutron HomeWorks or Athena systems. The product can reproduce any color point with the triangle shaped gamut indicated in the chart to the left. With Ketra's Color Lock tool, the color point is maintained to an accuracy of one-step MacAdam Ellipse 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.[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.

Diagnostic reporting capability[2]: 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).

---

[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).