Rania D2R Wall Wash Remodeler Downlight

PRODUCT DESCRIPTION

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

FEATURES

Exceptional White Light—Rania leverages a breakthrough three-channel solution, paired with proprietary optics and state of the art color mixing technology to deliver a wide CCT range and replicates natural white light more faithfully than any light source other than Ketra.

Natural Show—The Rania fixtures' wide color temperature range and native control enables it to participate in Lutron's Natural Show. Natural show automatically adjusts the intensity and color temperature of the light over the course of the day. It can be used to bring the outside in by matching outdoor light - from the cool bright light at noon to the warm lower light in the evening.

Wall Wash LED Module with Ceiling Mount
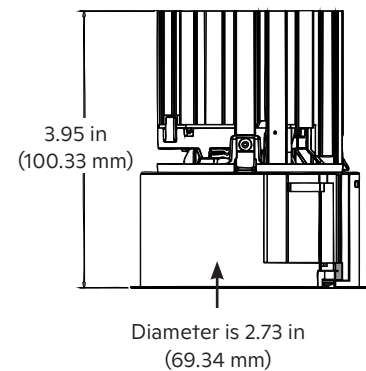
3.95 in
(100.33 mm)

Diameter is 2.73 in
(69.34 mm)

OPTIONS

	Round Bevel	Square Bevel
Flanged		
Flangeless Mud-In		
Flangeless Millwork		

Trim Finish

White	Black	Silver	Bronze	Gloss Black [1]

Silver / White [2]	Black / White [2]	Gloss Black /White [2]

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

SPECIFICATIONS[1]

Optical Performance

Delivered Lumens [2]	**651 lm**
CRI (Ra)	**>90 from 2700 K to 5000 K**
R9	**>80**
Lumen Maintenance [3]	**50,000 hours to L70 @ 25 °C T_A**
CCT Range	**1800 K– 5500 K**
Dimming Protocol	**Wireless RF/CCX (Lutron Clear Connect-Type X)**
Dimming Range	**0.1-100%**
Delivered Efficacy	**40 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.**

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**

Warranty

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

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.

844.588.6445 | luxury.lutron.com

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.**

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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	TW	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	
Rania	**TW**

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**

Wallwash LED Module (includes the Emitter) [1]

Ceiling-Mount [1]

Trim [1]
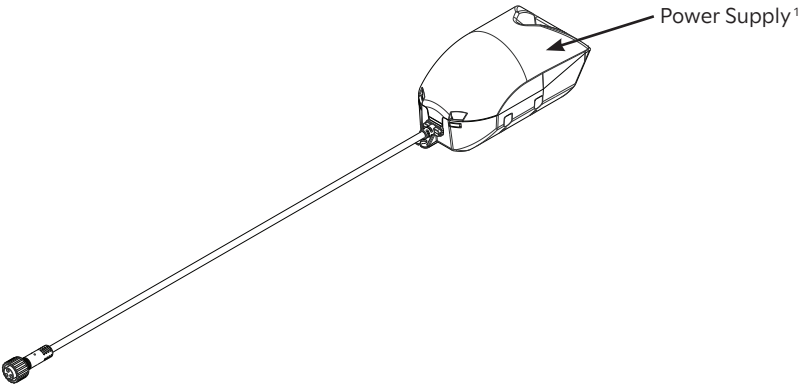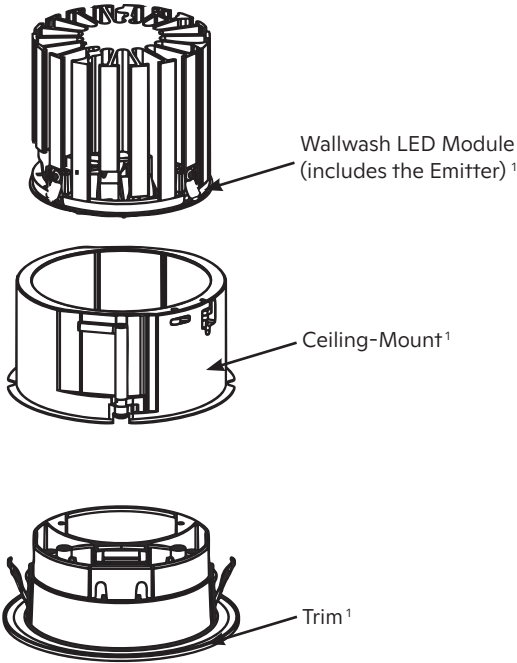
Power Supply [1]

1   Required for installation.

COMPONENT ORDERING GUIDE (CONT.)

Power Supply

D2R	PS	120
Product Line	Product	Voltage

Order code: _____

Product Line	Code
Recessed Downlight	**D2R**

Product	
Power Supply	**PS**

Voltage	
120 V∼ 60 Hz	**120**

Ceiling Mounts

UN-D2R			
Product Line	Shape	Ceiling Interface	Ceiling Thickness

Order code: _____

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**

Replacement Optics

UN-D2	OP	WWXX
Product Line	Accessory Type	Beam Angle

Order code: _____

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				

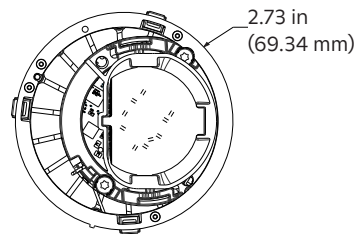|		**W**		**WW**
Shape	Ceiling Interface	Aperture Profile	Trim Finish	Trim Accessory

Order code: _____

Product Line	Code
Universal	**UN-**

Series	
D2 Fixture	**D2**

Shape	
Round	**RD**
Square	**SQ**

Ceiling Interface	
Flanged	**F**
Flangeless Mud-In	**X**
Flangeless Millwork	**M**

Aperture Profile	
Wall Wash [1]	**W**

Trim Finish	
White	**WH**
Black [2]	**BK**
Gloss Black [2]	**GB**
Bronze	**RB**
Silver	**SR**
Silver/White	**SW**
Black/White [2]	**BW**
Gloss Black/White [2]	**GW**

Trim Accessory	Code
Wall Wash Lens [1]	**WW**

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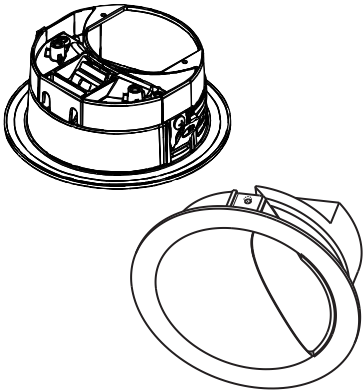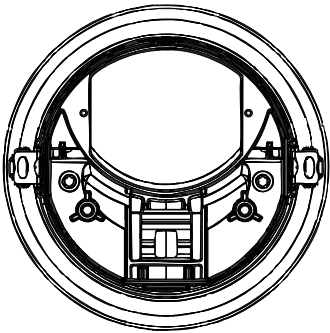
[1] Wall wash fixture is unique and cannot be converted to other fixture types and vice versa.
[2] Recommended finish for best performance.

PRODUCT DIMENSIONS

Wall Wash LED Module

2.73 in
(69.34 mm)

5.15 in
(130.8 mm)

2.36 in
(60 mm)

2.58 in
(65 mm)

3.95 in
(100.33 mm)

LED Module with Ceiling Mount

6.0 in
(152.4 mm)

Insulation should be clear
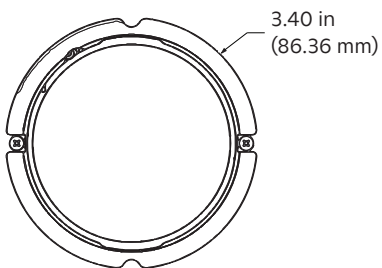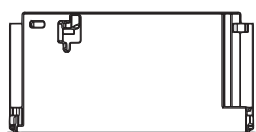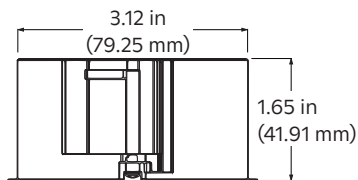by at least 6.0 in (152.4 mm)
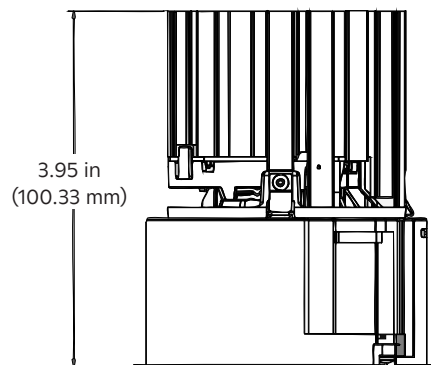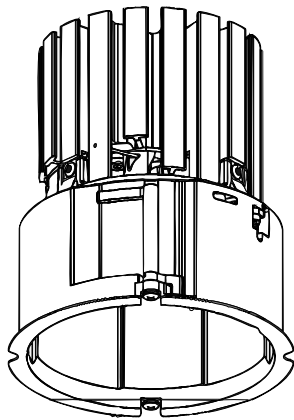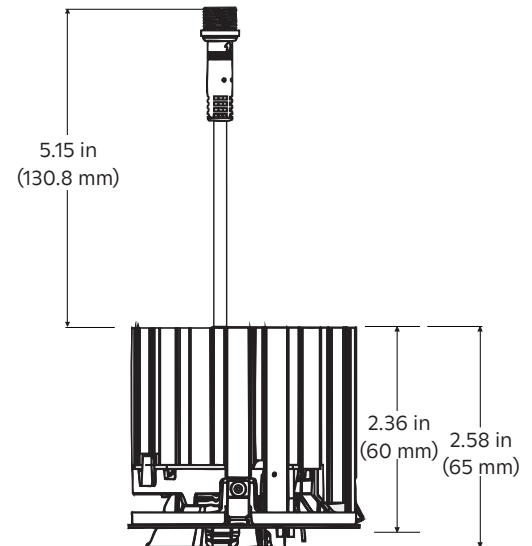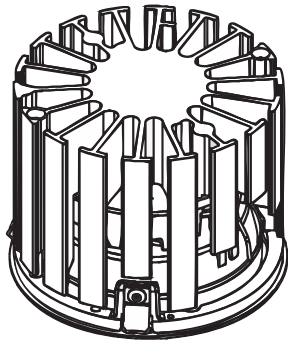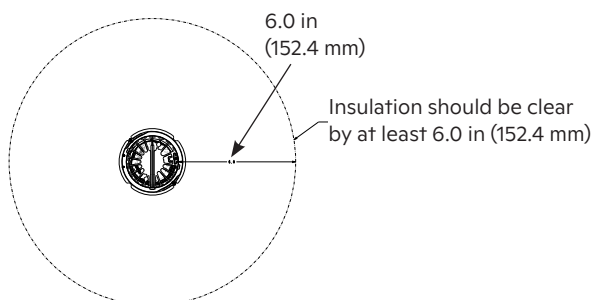
View of LED module from above the ceiling

PRODUCT DIMENSIONS (cont.)

Power Supply

20.3 in
(515.62 mm)

15.8 in
(401.32 mm)

4.88 in
(123.95 mm)

2.38 in
(60.45 mm)

2.52 in
(64.01 mm)

Knockout diameters are
0.87 in (22.10 mm)

PRODUCT DIMENSIONS (cont.)

Flanged Mount, Round

3.12 in
(79.25 mm)

1.65 in
(41.91 mm)
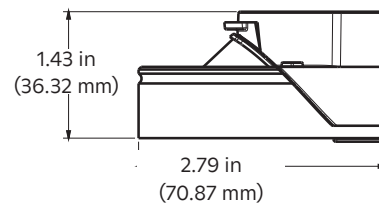
3.40 in
(86.36 mm)

D2R spring clip

3.51 in
(89.2 mm)

1.33 in
(33.8 mm)

Groove cut for D2R
Flanged mount
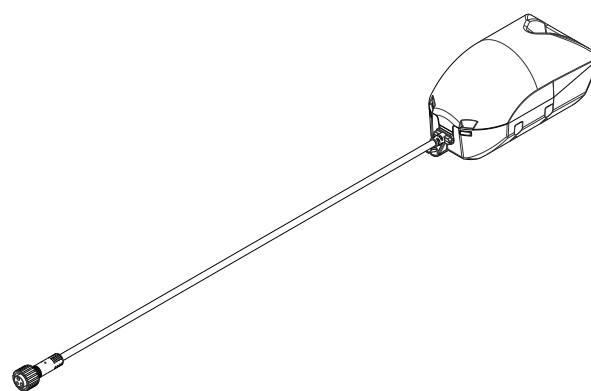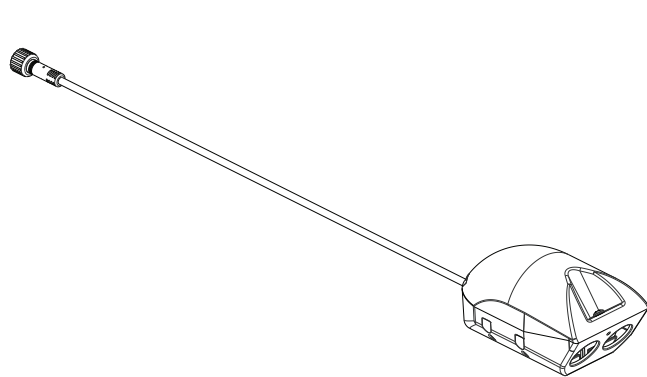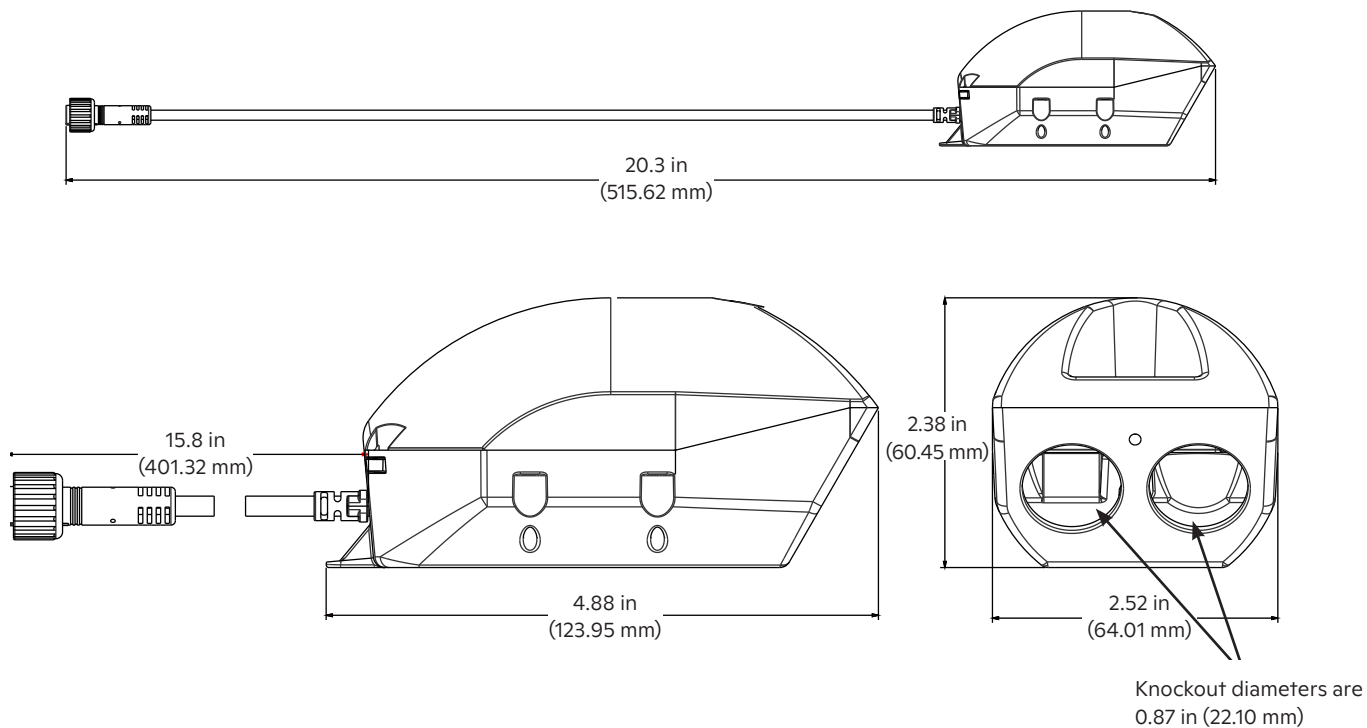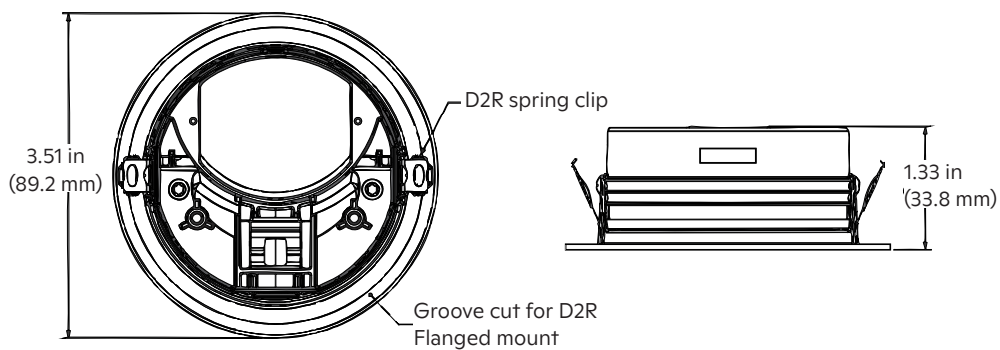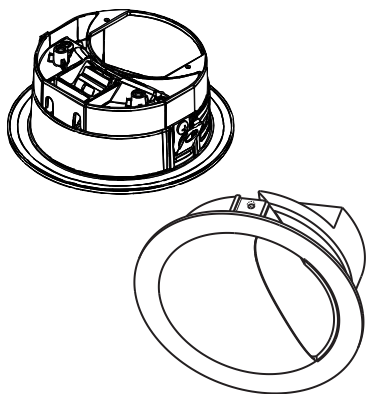
PRODUCT DIMENSIONS (cont.)

Flanged Mount, Square
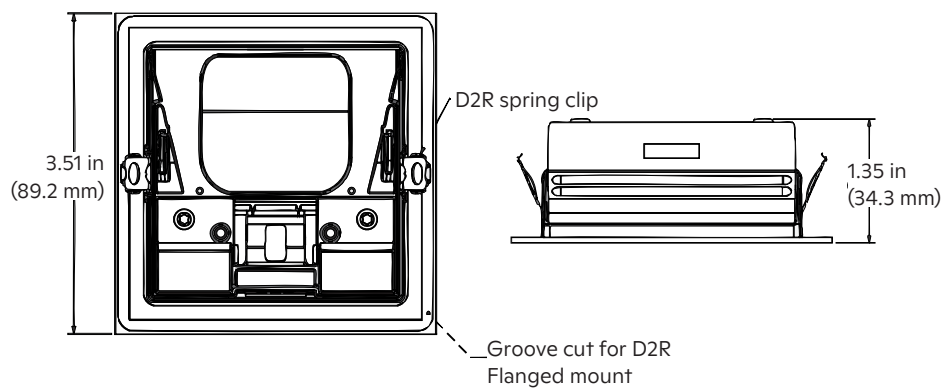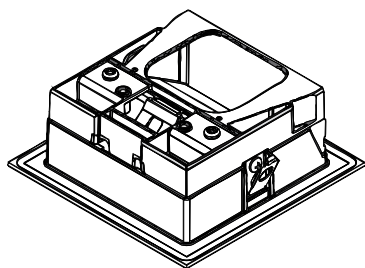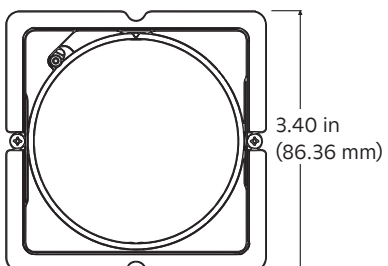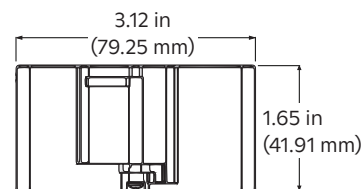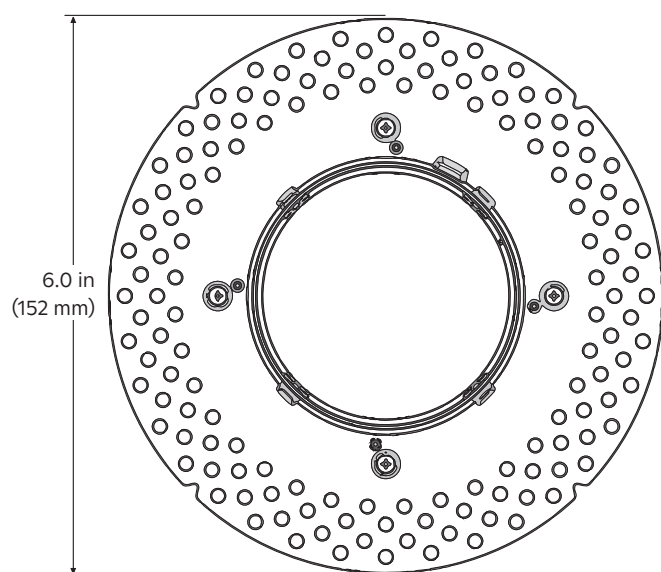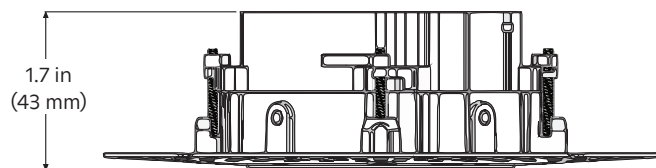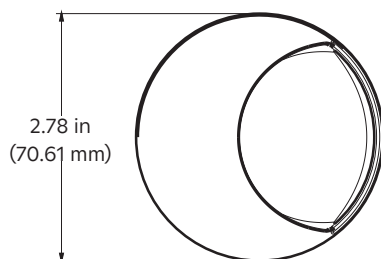
3.12 in
(79.25 mm)

1.65 in
(41.91 mm)

3.40 in
(86.36 mm)

3.51 in
(89.2 mm)
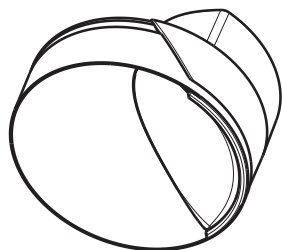
D2R spring clip

1.35 in
(34.3 mm)

Groove cut for D2R
Flanged mount

PRODUCT DIMENSIONS (cont.)

Flangeless Mud-In Mount, Round

1.7 in
(43 mm)

6.0 in
(152 mm)

Trim

2.78 in
(70.61 mm)

1.43 in
(36.32 mm)

2.79 in
(70.87 mm)

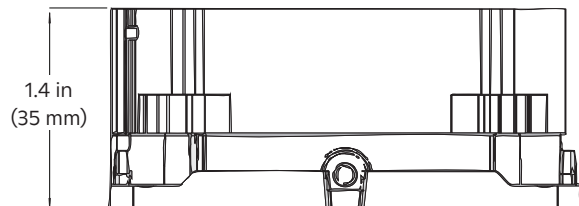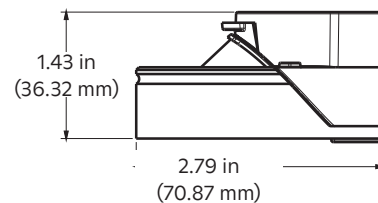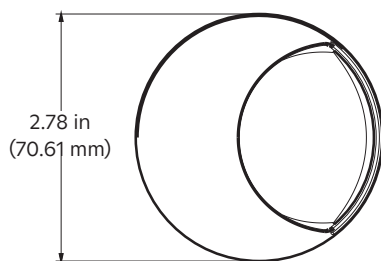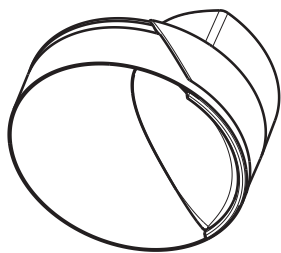## PRODUCT DIMENSIONS (cont.)

Flangeless Millwork Mount, Round

1.4 in
(35 mm)

3.3 in
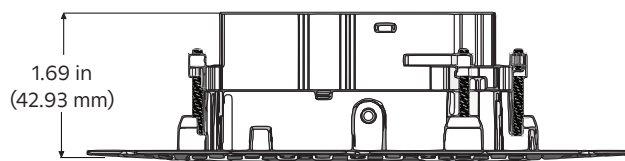(83 mm)
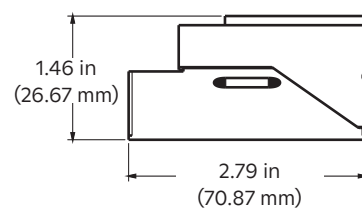
Trim

2.78 in
(70.61 mm)

1.43 in
(36.32 mm)

2.79 in
(70.87 mm)
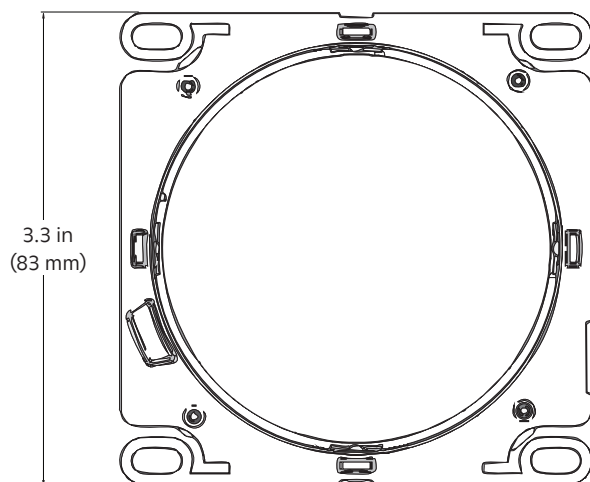
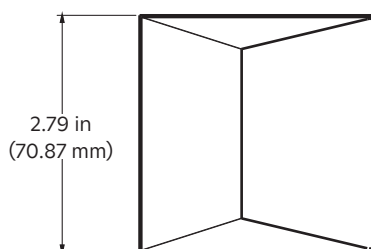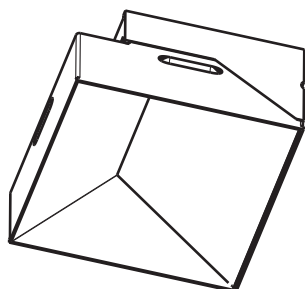## PRODUCT DIMENSIONS (cont.)

Flangeless Mud-In Mount Square

1.69 in
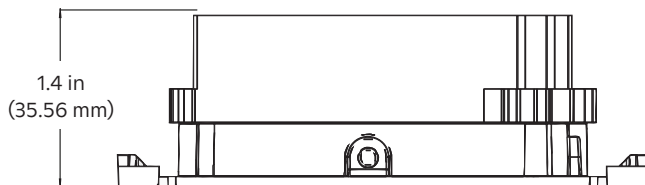(42.93 mm)

6.00 in
(152.40 mm)

Trim

2.79 in
(70.87 mm)

1.46 in
(26.67 mm)

2.79 in
(70.87 mm)
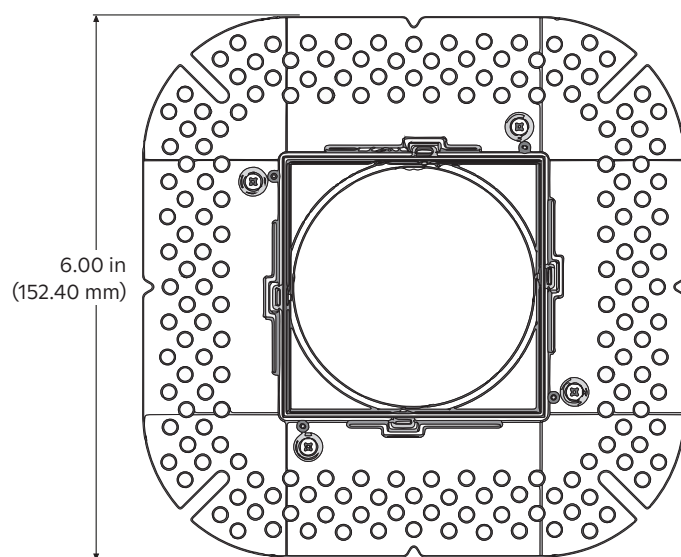
PRODUCT DIMENSIONS (cont.)

Flangeless Millwork Mount, Square

1.4 in
(35.56 mm)

3.4 in
(86.36 mm)

3.3 in
(83.82 mm)

Trim

2.79 in
(70.87 mm)

1.46 in
(26.67 mm)
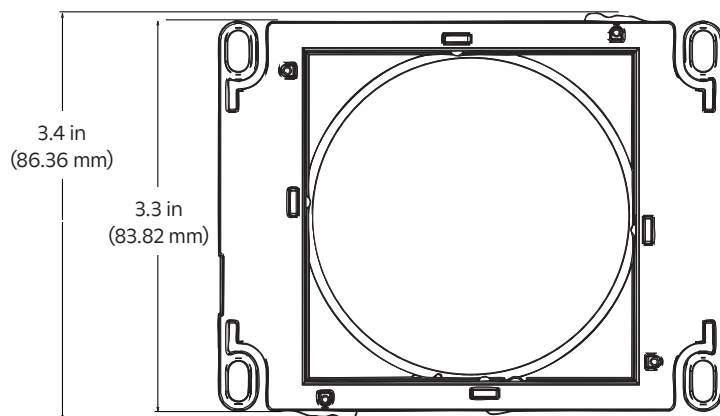
2.79 in
(70.87 mm)
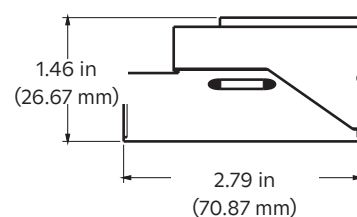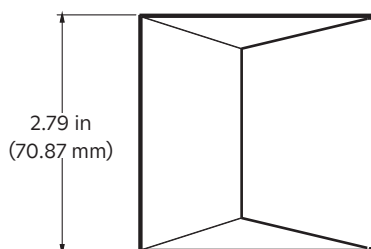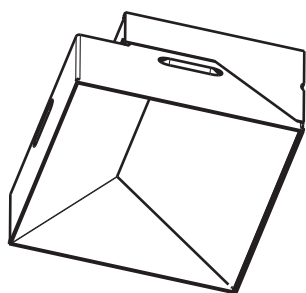
PLACEMENT GUIDE FOR MULTIPLE WALL WASH UNITS
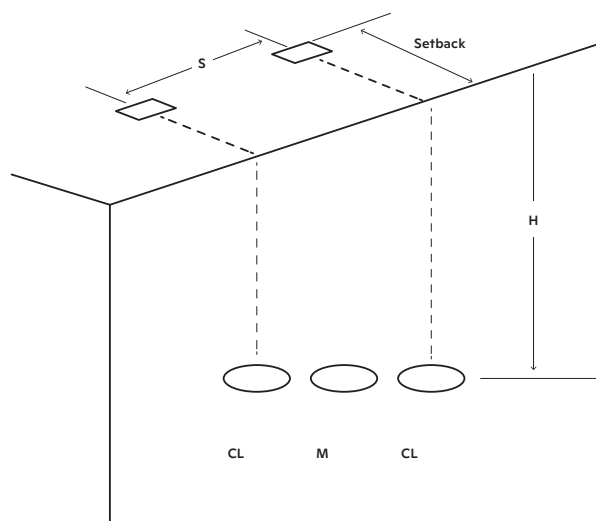
Typical Footcandles Measured on the Wall

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)	34	32	34	26	18	26	24	10	24
2 ft (0.609 m)	36	37	36	27	23	27	23	13	23
3 ft (0.914 m)	30	30	30	21	19	21	18	13	18
4 ft (1.219 m)	23	23	23	16	15	16	14	11	14
5 ft (1.524 m)	17	18	17	12	12	12	10	8	10
6 ft (1.828 m)	14	14	14	10	10	10	8	7	8
7 ft (2.133 m)	11	11	11	7	7	7	6	6	6
8 ft (2.438 m)	8	8	8	6	6	6	5	5	5
9 ft (2.743 m)	6	6	6	5	5	5	4	4	4
10 ft (3.048 m)	6	6	6	4	4	4	3	3	3

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)	15	15	15	10	10	10	8	6	8
2 ft (0.609 m)	23	23	23	16	15	16	13	11	13
3 ft (0.914 m)	23	23	23	16	16	16	13	11	13
4 ft (1.219 m)	20	20	20	15	15	15	11	11	11
5 ft (1.524 m)	17	17	17	12	12	12	10	9	10
6 ft (1.828 m)	15	15	15	11	11	11	8	8	8
7 ft (2.133 m)	12	11	12	9	9	9	6	6	6
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	6	7	6	6	6	4	4	4

PHOTOMETRIC DATA

Coming Soon, ies. files available at lutron.com

D2R General Specifications

Rania's D2R LED Downlight can easily be commissioned into Lutron HomeWorks systems (Athena or myRoom XC – coming soon) .

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 2700K to 5000K.

Single Source Multi-Die Modular Emitter/LED Module Design: Employ a single source multi-die modular emitter/ LED module consisting of LEDs binned to 3-step MacAdam ellipses.

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[1]: 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.

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

Color Point Range: Single light source capable of producing white light from 1800K to 5500K Correlated Color Temperature (CCT).

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