

DATE

PROJECT

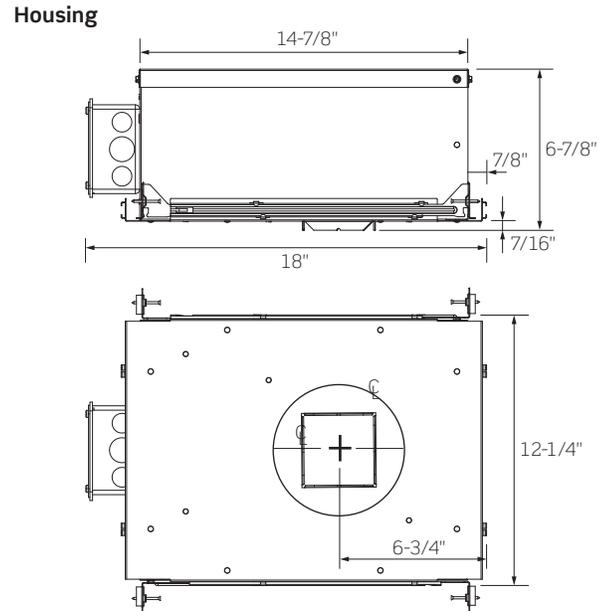
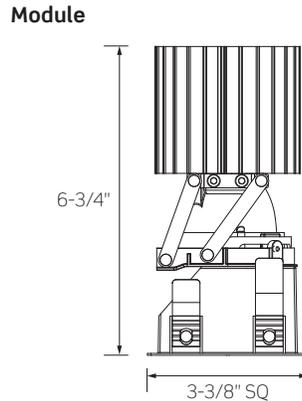
TYPE

R2ASQNC | 2-Inch Square Static White Adjustable Downlight: New Construction Insulated Ceiling (IC)/StopAire™



SW
STATIC WHITE

Ceiling Opening: 3-1/4"
Ceiling Thickness: 1/2" - 1-1/2"



	R2ASQNC05	R2ASQNC1	R2ASQNC2	R2ASQNC3
WATTAGE	8W	10W	14W	21W
LUMEN OUTPUT ¹	700Lm	1100Lm	1200Lm	1700Lm
COLOR TEMPERATURE	2700K / 3000K / 3500K / 4000K / 3000K Crisp White			
CRI	83 (80min) / 90+			
BEAM SPREAD	14° Spot / 29° Medium / 37° Flood			
INPUT WATTAGE	8W	10W	14W	21W
INPUT CURRENT (A) 120V / 277V	.07 / .03	.08 / .04	.12 / .05	.18 / .08
INPUT VOLTAGE	90-305V AC, 50/60Hz			
Standard Driver	90-305V AC, 50/60Hz			
Lutron Eco-System® Driver	120-277V AC, 50/60Hz			
eldoLED ECOdrive / SOLOdrive	120-277V AC, 50/60Hz			
DRIVER POWER FACTOR	> 0.90			
TOTAL HARMONIC DISTORTION (THD)	< 20%			
LISTINGS	    cCSAus Certified using U.S. (UL) and Canadian (CSA) Standards; Suitable for Damp Locations Conforms to Washington State Energy Code for Low Air Infiltration; tested in accordance with ASTM E283 City of Chicago Environmental Air (CCEA) Rated			
WARRANTY	Five (5) year replacement after date of purchase Emergency Battery Backup option covered by a one (1) year replacement guarantee after date of purchase			
SYSTEM RATING	50,000 Hours @ 70% Lumen Maintenance			

1. Approximate lumen output based on 3000K performance; see photometric test results for additional information

DATE	PROJECT	TYPE
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ORDERING INFORMATION

HOUSING + MODULE + TRIM = COMPLETE SYSTEM

Example Order: Housing: Module: Trim:

Housing

Housing	LED Series	Electrical/Dimming	Options
R2ASQNC - New Construction Insulated Ceiling (IC) StopAire™ Square Housing	05 - 8W/800lm 1 - 10W/1000lm 2 - 14W/1300lm 3 - 21W/1700lm	MVD¹ - 120-277V TRIAC, ELV and 0-10V Dimming MVD4² - Lutron Hi-lume 1% EcoSystem LED Driver with Soft-on, Fade-to-Black MVD6^{2,3} - 120-277V eldoLED ECOdrive 0-10V, Dim to 1% MVD7^{2,3} - 120-277V eldoLED ECOdrive DALI, Dim to 1% MVD8^{2,3} - 120-277V eldoLED SOLOdrive 0-10V, Dim to 0.1% MVD9^{2,3} - 120-277V eldoLED SOLOdrive DALI, Dim to 0.1%	ER⁴ - Factory Installed 7W/200mA Emergency Backup Battery Backup (Remote Test Switch)

Housing Accessories

Standard Hanger Bars Supplied with Housing

- HB-24** - 27 Inch Flat Hanger Bars for RL-KIT
- HBC-24** - 25 Inch C-Channel Hanger Bars for RL-KIT in Grid Ceiling Construction
- HB-30** - T-Bar Hanger Set
- RL-KIT** - Commercial Mounting Brackets

1. TRIAC and ELV Dimming for 120V only
2. Lutron and eldoLED Dimming options require above ceiling driver access
3. eldoLED Drivers are programmed for Linear Curve Dimming as standard; for Logarithmic Curve Dimming, please consult factory
4. Emergency Backup Option cannot be used in an IC (Insulated Ceiling) application, requires above ceiling battery access; 550 Lumen Nominal Average for any Series 05, 1, 2 or 3

LED Module

LED Module	Color Temp/CRI	Beam Distribution	Module Accessories
UMODSQ - 2 Inch Square Universal LED Module	<i>83 (80min) CRI</i> 27K - 2700K 30K - 3000K 35K - 3500K 40K - 4000K <i>90+ Crisp White</i> 30KW - 3000K	S - 14° Spot M - 29° Medium F - 37° Flood	FA-47 - Black Accessory Holder; Accepts Two (2) Media Accessories require the FA-47 Holder R2ASNRI-B - Black Dual Ring Snoot: 60MM OD X 1 Inch Long FA-55 - Black Honeycomb Louver LF50** - 2-1/8-In. Dia. Lenses

Replacement Optics

- 2INOPTIC-S** - 14° Spot
- 2INOPTIC-M** - 26° Medium
- 2INOPTIC-F** - 33° Flood

**Color/Pattern Legend

- 73 (Spread Lens), -LS (Linear Spread Lens), -SL (Soft Light), -SOL (Solite), -UV (Optivex UV Filter), -A (Amber), -B (Blue), -CL (Clear), -DPE (Dichroic Peach), -G (Green), -LB (Light Blue), -R (Red), -RO (Rose), -Y (Yellow)

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SQUARE TRIM PLATE OPTIONS **NOTE:** R2A and R2RM Series Trims are NOT compatible with each other



C2322SQ-WHT



C2322SQ Series
Reflector

2-5/8-In. Sq Aperture
3-5/8-In. Sq Trim Frame

Wet Location Certified when used with LF50 Lens. Accepts one (1) FA-55 Black Honeycomb Square Louver or one (1) LF50 Tempered Glass Square Lens.



C2304SQ-BLK

C2304SQ Series
Angle Cut Reflector

2-5/8-In. Sq Aperture
3-5/8-In. Sq Trim Frame

Specification Grade Angle Cut Reflector

C2322SQ - Square Reflector

BLK¹ - Matte Black Painted
SL¹ - Satin Silver Painted
WHT - Matte White Painted

1. Available with White Painted Flange: add -WPF to end of part number

C2304SQ - Square Reflector

BLK¹ - Matte Black Painted
SL¹ - Satin Silver Painted
WHT - Matte White Painted

1. Available with White Painted Flange: add -WPF to end of part number



C2305SQ-BLK

C2305SQ Series
Square Pinhole Trim

1-1/2 In. Sq Aperture
3-5/8 In. Sq Trim Frame



C2304SQWL-SL



C2304SQWL Series
Wet Location Angle Cut Reflector

2-5/8-In. Sq Aperture
3-5/8-In. Sq Trim Frame

Specification Grade Angle Cut Reflector; Clear Glass Lens provides Wet Location Certification

Reflector
C2305SQ - Pinhole Trim

Trim Plate
B - Matte Black
P - Matte White

C2304SQ - Square Reflector

BLK¹ - Matte Black Painted
SL¹ - Satin Silver Painted
WHT - Matte White Painted

1. Available with White Painted Flange: add -WPF to end of part number

ACCESSORY ORDERING INFORMATION

Accessories

FA-55 - Honeycomb Louver

LF50² - Tempered Glass Lenses

2. Lens Color/Pattern Legend

-73 (Spread Lens), **-LS** (Linear Spread Lens), **-SL** (Soft Light), **-SOL** (Solite),

-UV (Optivex UV Filter), **-A** (Amber), **-B** (Blue), **-CL** (Clear), **-DPE** (Dichroic Peach),

-G (Green), **-LB** (Light Blue), **-R** (Red), **-RO** (Rose), **-Y** (Yellow)

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PRODUCT DETAILS

Construction

- Housing rated for Insulated Ceiling (IC) and StopAire™ applications; for use in direct contact with insulation materials
- 16-Gauge Galvanized Steel Housing painted Matte Black inside and out
- Mounting frame features a post installation mechanism that allows 1/4" adjustment in all directions, as well as 5° of rotation adjustment to ensure proper alignment
- Spring Latch Tether to provide secondary support of the Universal LED Module; four (4) Spring Steel Supports secure module into housing/ceiling
- Quick-connect design enables easy installation and removal of Universal LED Module; three (3) Spring Steel Supports secure Module into Housing/ceiling
- Approved for through-circuit wiring: Max. (8) 12 AWG (4in/4out)
- Pre-wired Junction Box with Knockouts: seven (7) 1/2 inch Concentric Knockouts
- Removable cover for Driver access
- For MVD Dimming Option, 120-277V TRIAC, ELV and 0-10V; Drivers are fully accessible from above or below the ceiling
- For MVD4, MVD6, MVD7, MVD8 and MVD9 Dimming Options, Drivers are only accessible from above the ceiling
- Output over voltage, over current and short circuit protection
- Matte Black painted Adjustment Mechanism is constructed of 16-gauge Sheet Metal, Aluminum Die-cast Heat Sink, Acrylic TIR Optic and Thermoplastic Optic Holder. White Graduation Marks painted every 15° for consistent aiming, as well as a Set Screw to lock tilt adjustment in place.
- Module features rotational adjustability of 30° per side (60° total). Adjusts to 45° when installed in a 1/2 to 1-inch thick ceiling, to 30° in 1-1/2-inch ceiling. Using the optional FA-47 Accessory Holder Clip with two (2) Lenses/Louvers, Module adjusts to 45° in 3/4-inch thick ceiling.
- Dual Extension Nailer Bars are adjustable for 16 and 24 inch center joists (14-1/4 – 24-1/2 inches). Nailer Bars enable easy installation and may be extended to rest on T-bar ceilings. Optional clip-on T-bar Hangers available.
- Many Trim options available to complement any design style. See ordering information for details. **Note:** R2A series and R2RM series trims are not compatible with each other.

Performance Summary

- High output multi-chip LED array arranged into a single LED package, enabling precise optical control
- Excellent fixture to fixture color consistency within a 2-step MacAdam Ellipse tolerance
- 3000K Crisp White LED option delivers 90+ color rendering with additional violet wavelengths that enhance white visibility
- Precision TIR Optics produce 14°, 29°, and 37° beam distributions; optics are interchangeable and can be field replaced
- Driver with Class 2 output, RoHS Compliant
- All R2ASQ Adjustable Downlights are available for non-dimming and dimming applications; for a list of compatible dimmers, refer to the Dimming Specifications sheet

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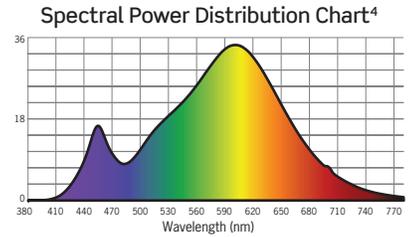
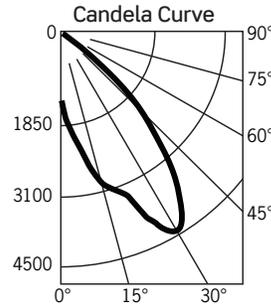
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PHOTOMETRICS

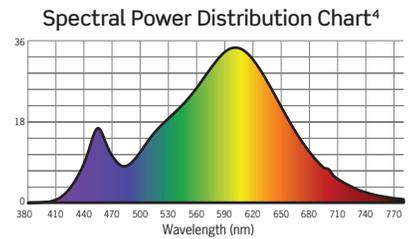
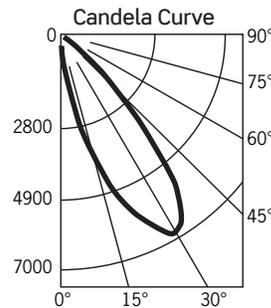
R2ASQNC3MVD/UMODSQ30KF/C2304SQ-SL

Fixture Aimed at 30° from Nadir
 Fixture Delivered Lumens: 1709
 Total Watts@120V: 20.6
 Lumens Per Watt: 82.9
 Center Beam Candle Power: 4449
 Beam Distribution: 37°
 Color Rendering Index (CRI)¹: 81
 Color Temperature (CCT)²: 3061K
 Designed for 50,000 Hour Lamp Life³
 LM-63 Test No. G16110706
 LM-79 Test No. 84022



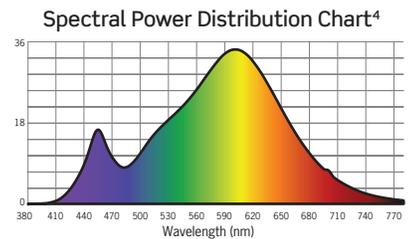
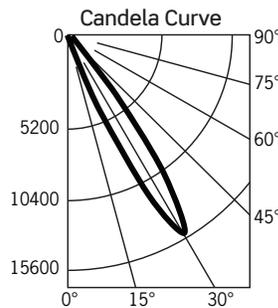
R2ASQNC3MVD/UMODSQ30KM/C2304SQ-SL

Fixture Aimed at 30° from Nadir
 Fixture Delivered Lumens: 1562
 Total Watts@120V: 20.6
 Lumens Per Watt: 75.8
 Center Beam Candle Power: 6724
 Beam Distribution: 29°
 Color Rendering Index (CRI)¹: 81
 Color Temperature (CCT)²: 3042K
 Designed for 50,000 Hour Lamp Life³
 LM-63 Test No. G16110805
 LM-79 Test No. 84023



R2ASQNC3MVD/UMODSQ30KS/C2304SQ-SL

Fixture Aimed at 30° from Nadir
 Fixture Delivered Lumens: 1181
 Total Watts@120V: 20.6
 Lumens Per Watt: 57.3
 Center Beam Candle Power: 15516
 Beam Distribution: 14°
 Color Rendering Index (CRI)¹: 81
 Color Temperature (CCT)²: 3038K
 Designed for 50,000 Hour Lamp Life³
 LM-63 Test No. G16110409
 LM-79 Test No. 84024



1. Accuracy of rendering colors 2. Color appearance of light source 3. Dependent on surrounding temperatures 4. Colors present within the light source

PHOTOMETRIC MULTIPLICATION FACTORS

Lumen output values fluctuate based on Color Temperature, Luminaire Wattage/Output and Trim Selection. To estimate lumen output of these various options, multiply 3000K results by the following:

CCT/CRI				OUTPUT			TRIM	
CCT	STD CRI	HIGH CRI	CRISP WHT	8W SERIES 05	10W SERIES 1	14W SERIES 2	C2304SQ PL/WHT	C2304SQ BLK
2700K	0.94	0.70	0.79	0.46	0.57	0.75	1.0	0.94
3000K	N/A	0.75	0.79					
3500K								
4000K								

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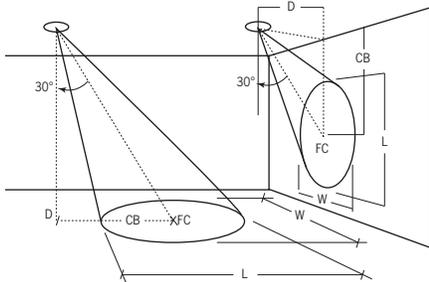
PROJECT

TYPE

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PHOTOMETRICS

Application Data Notes Based Upon R2ASQNC3MVD/UMODSQ30K(S,M,F)/C2304SQ-SL



- D:** Offset distance between the Luminaire to the Illuminated Plane, in feet
- CB:** Projected distance between the Luminaire and the Center Point where the Beam is aimed, in feet
- FC:** Horizontal or Vertical Illuminance at the Center Point where the Beam is aimed, in footcandles
- L:** Beam Length corresponding to the Perimeter where the Luminous Intensity is 50% of Center Beam Candlepower (CBCP), in feet
- W:** Beam Width corresponding to the Perimeter where the Luminous Intensity is 50% of Center Beam Candlepower (CBCP), in feet

Luminaires Aimed at 30° from Nadir

		ILLUMINANCE ON HORIZONTAL PLANE					ILLUMINANCE ON VERTICAL PLANE				
		D	CB	FC	L	W	D	CB	FC	L	W
SPOT		5	2.9	389	1.4	1.5	3	5.2	244	2.4	1.4
		7.5	4.3	173	2.2	2.2	4	6.9	137	3.2	1.9
		10	5.8	97	2.9	2.9	5	8.7	88	3.9	2.4
		12.5	7.2	62	3.6	3.7	6	10.4	61	4.7	2.9
MEDIUM		5	2.9	182	2.7	2.9	3	5.2	144	3	2.5
		7.5	4.3	81	4.1	4.3	4	6.9	81	4	3.3
		10	5.8	46	5.5	5.8	5	8.7	52	5	4.1
		12.5	7.2	29	6.8	7.2	6	10.4	36	6.1	5.0
FLOOD		5	2.9	119	3.8	4.1	3	5.2	99	3.2	3.2
		7.5	4.3	53	5.7	6.1	4	6.9	55	4.3	4.3
		10	5.8	30	7.6	8.1	5	8.7	35	5.4	5.3
		12.5	7.2	19	9.6	10.1	6	10.4	25	6.5	6.4

DATE

PROJECT

TYPE

R2A & RN2A SERIES | 2-Inch Adjustable Downlights: Dimming Specifications

- Incandescent 120V AC Dimmers adjust the light with *Forward Phase Control*, where the Dimmer “chops” the forward part of the AC Wave to deliver less or more power to the light source. No neutral wire connection required.
- Electronic Low Voltage 120VAC Dimmers adjust the light with *Reverse Phase Control*, where the dimmer “chops” the back part of the AC Wave to deliver less or more power to the light source. Neutral wire connection required.
- 0-10V DC Low Voltage Dimmers operate using two (2) low voltage dimming wires that are separate from the 120V or 277V AC Power. The Dimmer sends a variable output voltage to the luminaire based upon the dimming level. 10V Corresponds to undimmed operation, 5V to 50% and so on.
- Switching On/Off is controlled with the Line Voltage Power Input (120V or 277V AC) to the Dimmer and then dimming operation is controlled with the 0-10V DC low voltage wiring connection between the Dimmer and the LED Driver. The control signal runs on two (2) low voltage control wires (color coded Purple and Pink/Gray).
- Lutron EcoSystem Drivers provide continuous dimming from 1% to 100%. For a complete list of compatible Dimmers and Controls, please visit www.lutron.com
- Use DALI approved Controls for dimming eldoLED MVD7 (1%-100%) and MVD9 (0.1%-100%) options.

R2A, RN2A, R2AWD, RN2AWD, R2ASQ, RN2ASQ, R2ASQWD and RN2ASQWD Series*

Manufacturer	Product	Model	Dim. Options: 12D, 27D, MVD Light Output	Dim. Option: MVD6 Light Output	Dim. Option: MVD8 Light Output
Leviton	IllumaTech	IPI06-1LZ	1%-100%	NA	NA
Leviton	SureSlide	6631-2	1%-100%	NA	NA
Leviton	Vizia	VPE06	9%-100%	NA	NA
Leviton	Trimatron	6683-IW	4%-100%	NA	NA
Leviton	Decora	6161	15%-100%	NA	NA
Leviton	SureSlide	6633-P	0%-100%	NA	NA
Leviton	IllumaTech	IPE04	6%-100%	NA	NA
Leviton	IllumaTech	IP710-DLX	NA	1%-100%	0.1%-100%
Cooper	Devine	DLC03P	1%-100%	NA	NA
Cooper	Skye	SLC03P	0%-100%	NA	NA
Cooper	Decorator	DAL06P	0%-100%	NA	NA
Pass & Seymour	Titan	CD4FB-W	NA	1%-100%	0.1%-100%
Synergy		ISD BC	NA	1%-100%	0.1%-100%
Watt Stopper	Miro Decorator	DCLV1	NA	1%-100%	0.1%-100%
Lutron	Ariadni	TGCL-153P	4%-100%	NA	NA
Lutron	Ariadni	TG-600P	11%-100%	NA	NA
Lutron	Diva	DVCL-153P	0%-100%	NA	NA
Lutron	Diva	DV600P	0%-100%	NA	NA
Lutron	Diva	DVELV303P	6%-100%	NA	NA
Lutron	Diva	DVTV	NA	1%-100%	0.1%-100%
Lutron	Faetra	FAELV500	12%-100%	NA	NA
Lutron	Lumea	LG600P	5%-100%	NA	NA
Lutron	Maestro	MAELV600	11%-100%	NA	NA
Lutron	Nova	NFTV	NA	1%-100%	0.1%-100%
Lutron	Nova T	NTFTV	NA	1%-100%	0.1%-100%
Lutron	Skylark	S-603PG	4%-96%	NA	NA
Lutron	Skylark	S600P	1%-100%	NA	NA
Lutron	Skylark	SELV300P	7%-100%	NA	NA
Lutron	Skylark	CT103P	9%-100%	NA	NA

*277V TRIAC Dimming is not available

NOTES

1. If light is measured, then the dimming range is based on light output. If light is not measured, then the dimming range is based on the percentage of output current.
2. Testing was performed with a single fixture connected to dimmer.
3. Testing has been performed on these dimmers, but this does not imply any warranty of compatibility.
4. Dimming performance can be influenced by different loads, as well as variations in dimmer switches within the same model.
5. Dimmer maximum load rating with LED may differ from published traditional source dimmer ratings. Consult manufacturer for maximum dimmer information.
6. Consult factory for additional dimming information.