

# R2ASQNC

## 2" Square LED Adjustable Recessed Downlight: New Construction IC and StopAire

### Specifications/Features

#### Housing/Mounting

Specification grade 2" downlight delivering 1700 lumens. Housing is 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. Dual nailer hanger bars are adjustable for 16" and 24" center joists (14-1/4" to 24-1/2").

Nailer bars enable easy installation and may be extended to rest on T-bar ceilings. Optional clip-on T-bar hangers also available.

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. Quick-connect design enables easy installation and removal of Universal LED Module. For MVD dimming option, drivers are fully accessible from above or below the ceiling. For 12D3, MVD4, MVD6, MVD7, MVD8, and MVD9 dimming options, drivers are only accessible from above the ceiling.

Housing features a removable cover for driver access and utilizes a spring latch tether to provide secondary support of the Universal LED Module.

#### Electrical

Driver with Class 2 output. RoHS compliant.

Output over voltage, over-current and short circuit protection.

Approved for through-circuit wiring. Max.: (8) 12 AWG (4in/4out). Pre-wired junction box with knockouts. (7) 1/2" concentric knockouts.

#### Universal LED Module

Consists of a high output multi-chip LED array arranged into a single LED package, enabling precise optical control.

Available in four wattage/lumen packages: 8W/700Lm, 10W/1100Lm, 14W/1200Lm, and 21W/1700Lm.

Excellent fixture-to-fixture color consistency with a 2-step MacAdam Ellipse tolerance.

System designed and rated for 50,000 hours at 70% lumen maintenance.

The 3000K Crisp White LED option delivers 90+ color rendering with additional violet wavelengths that enhance white visibility.

Matte black painted mechanism is constructed of 16-gauge sheet metal, an aluminum die-cast heat-sink, an acrylic TIR optic, and a thermoplastic optic holder. Four spring steel supports secure module into housing/ceiling.

Precision TIR Optics produce 14°, 29°, and 37° beam distributions. Optics are interchangeable and can be field replaced.

Module features rotational adjustability of 30° per side (60° total).

Module features adjustability to 45° when installed in a 1/2" to 1" thick ceiling. 30° in 1-1/2" ceiling.

With optional FA-47 accessory holder clip: Two lens/louver, 45° at 3/4" thick ceiling. Snoot, 45° at 5/8" thick ceiling.

Mechanism adjustment features white graduation marks every 15° for consistent aiming.

#### Dimming

All R2ASQ adjustable downlights are available for non-dimming and dimming applications.

For a list of compatible dimmers, refer to the Dimming Specifications sheet.

#### Trims

Specification Grade trims are available in different styles and finishes.

Angle Cut, Full Cone and Pinhole trims are available.

#### Warranty

This complete fixture is covered by ConTech's full five (5) year replacement guarantee after date of purchase.

#### Labels/Usage

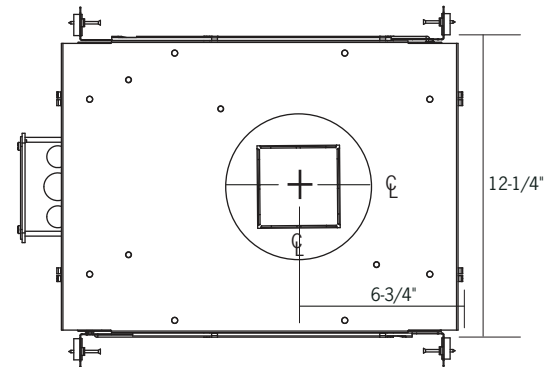
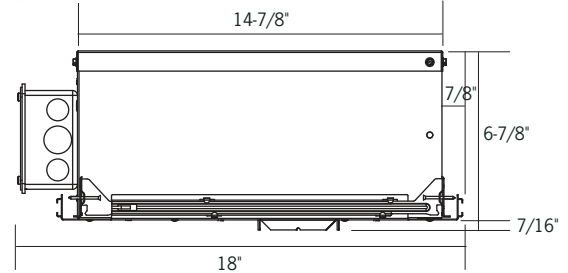
cCSAus Certified using US (UL) and Canadian (CSA) standards. Suitable for damp locations.

Conforms to Washington State Energy Code (WSEC) for low air infiltration.

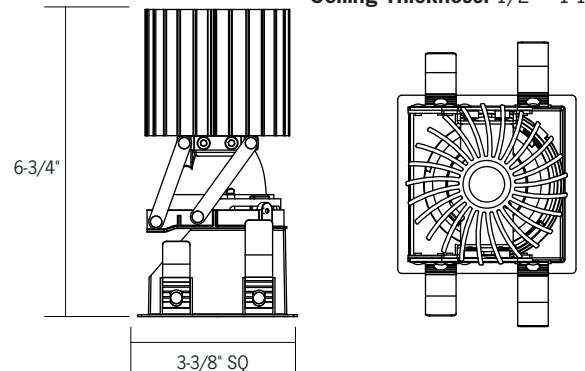
Tested in accordance with ASTM E283 (2.0 CFM or less).

Chicago Plenum CCEA listed.

Assembled in the USA.



**Ceiling Cut-out:** 3-1/4"  
**Ceiling Thickness:** 1/2" – 1-1/2"



	Series-05	Series-1	Series-2	Series-3
<b>Input Wattage (W)</b>	8	10	14	21
<b>Input Current (A) 120/277</b>	.07/.03	.08/.04	.12/.05	.18/.08
<b>Input Voltage</b>				
Standard Driver	90-305V AC, 50/60Hz			
Lutron HiLume®	120V AC, 50/60Hz			
Lutron Eco-System®	120-277V AC, 50/60Hz			
eldoLED ECOdrive/SOLOdrive	120-277V AC, 50/60Hz			
<b>Color Temp</b>	2700K/3000K/3500K/4000K			
<b>CRI Standard/High</b>	83 (80min) / 90+			
<b>Driver</b>				
Power Factor	> 0.90			
THD	< 20%			

# R2ASQNC

**2" Square LED Adjustable Recessed Downlight:  
New Construction IC and StopAire**

## Ordering Information

### Housing/Driver Kit + Module + Trim = Complete System

Example Order: Housing:   
Module:   
Trim:

Housing	LED Series	Electrical/Dimming	Options
<input type="text" value="R2ASQNC"/>	<input type="text" value="05"/>	<input type="text" value="MVD1"/>	<input type="text" value="ER4"/>
<b>R2ASQNC</b> - New Construction 2" Square, IC, StopAire Housing	<b>05</b> - 8W/700lm <b>1</b> - 10W/1100lm <b>2</b> - 14W/1200lm <b>3</b> - 21W/1700lm	<b>MVD1</b> - 120-277V Triac, ELV and 0-10V Dimming <b>12D3<sup>2</sup></b> - Lutron Hi-Lume 1% 2-Wire LED Driver (120V Forward Phase Only) <b>MVD4<sup>2</sup></b> - Lutron Hi-Lume 1% EcoSystem LED Driver with Soft-on, Fade-to-Black <b>MVD6<sup>2,3</sup></b> - 120-277V eldoLED ECOdrive 0-10V, Dim to 1% <b>MVD7<sup>2,3</sup></b> - 120-277V eldoLED ECOdrive DALI, Dim to 1% <b>MVD8<sup>2,3</sup></b> - 120-277V eldoLED SOLOdrive 0-10V, Dim to 0.1% <b>MVD9<sup>2,3</sup></b> - 120-277V eldoLED SOLOdrive DALI, Dim to 0.1%	<b>ER4</b> - Factory Installed 7W/200mA Emergency Battery Backup (Remote Test Switch)

LED Module	Color Temp	Beam Dist.	
<input type="text" value="UMODSQ"/>	<input type="text" value="27K"/>	<input type="text" value="S"/>	<ol style="list-style-type: none"> <li>1. Triac and ELV Dimming for 120V only.</li> <li>2. Lutron and eldoLED dimming options require above ceiling access.</li> <li>3. eldo LED Drivers are programmed for linear curve dimming as standard. For logarithmic curve dimming, please consult factory.</li> <li>4. Emergency Backup Option: Cannot be used in IC (Insulated Ceiling) or Chicago Plenum applications. Requires above ceiling battery access. 550 Lumen nominal average for all Series 05, 1, 2, or 3</li> </ol>
<b>UMODSQ</b> - 2" Square Universal Module	<b>27K</b> - 2700K <b>30K</b> - 3000K <b>35K</b> - 3500K <b>40K</b> - 4000K <b>30KW</b> - 3000K 90+ CRI, Crisp White	<b>27KC</b> - 2700K, 93+ CRI <b>30KC</b> - 3000K, 93+ CRI <b>35KC</b> - 3500K, 93+ CRI <b>40KC</b> - 4000K, 90+ CRI	
		<b>S</b> - 14° Spot <b>M</b> - 29° Medium <b>F</b> - 37° Flood	

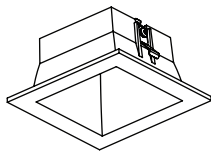
### Accessories

- 2INOPTIC-S** - 14° Beam Optic
- 2INOPTIC-M** - 29° Beam Optic
- 2INOPTIC-F** - 37° Beam Optic
- FA-47** - Black Accessory Holder Clip; Accepts Two (2) Media
- R2ASNRI-B** - Black Dual Ring Snoot 60MM OD X 1" Long, FA-47 required
- FA-16 60MM** - Honeycomb Louver, FA-47 required
- LF16-\* 60MM** - 2-3/8" Diameter Lenses, FA-47 required

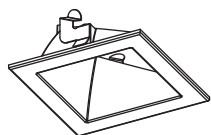
\*Color/Pattern Legend:

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

## Specification Grade Trims

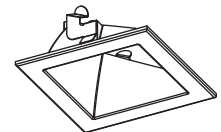


**C2322SQ-(BLK\*, SL\*, WHT)**  
Reflector is available in painted satin silver, painted matte white, and painted matte black finishes. Trims are wet location certified when used with an LF50 lens. Trim accepts one (1) FA-55 2-1/8" Square Black Honeycomb Louver or (1) LF50 2-1/8" Square Tempered Glass Lens.  
Aperture: 2-5/8" SQ; Trim Frame: 3-5/8" SQ

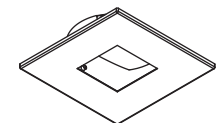


**C2304SQ-(BLK\*, SL\*, WHT)**  
2" Spec Grade Angle Cut Reflector Trim.  
Aperture: 2-5/8" SQ; Trim Frame: 3-5/8" SQ

**C2304SQWL-(BLK\*, SL\*, WHT)**  
2" Spec Grade Angle Cut Reflector Trim, Wet Location. Clear glass lens provides wet location certification.  
Aperture: 2-5/8" SQ; Trim Frame: 3-5/8" SQ



**C2305SQ-(BLK, WHT)**  
2" Pinhole Trim, SQ: 3-5/8"; 1-1/2" Aperture



\*Available with White Painted Flange, add -WPF to part number

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## Photometrics

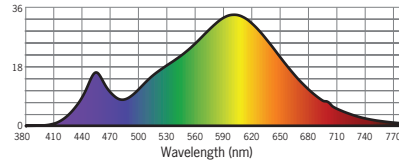
### R2ASQNC3MVD-UMODSQ30KF-C2304SQ-SL

Designed for 50,000 Hour Lamp Life<sup>1</sup>; LM-63 Test No. G16110706

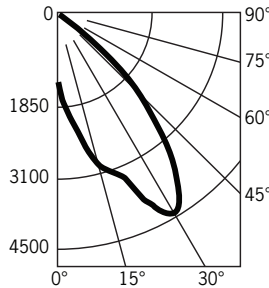
Fixture aimed at 30° from Nadir

Light Output (Fixture Delivered Lumens): 1709  
Total Watts@120V: 20.6; Lumens Per Watt: 82.9  
Center Beam Candle Power: 4449  
Color Rendering Index (CRI)<sup>2</sup>: 81  
Color Temperature (CCT)<sup>3</sup>: 3061K Warm White  
Spectral Power Distribution Chart<sup>4</sup>

LM-79 Test No. 84022



**Candela Curve**



**Candlepower Summary**

FROM 0	CANDELA	LUMENS
0	1190	
5	1825	113
15	3045	370
25	3930	707
35	4034	903
45	2194	553
55	181	54
65	2	3
75	0	1
85	0	0

Beam Distribution: 37°

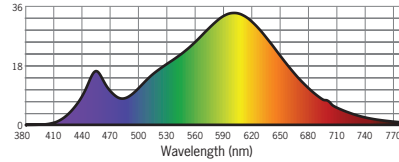
### R2ASQNC3MVD-UMODSQ30KM-C2304SQ-SL

Designed for 50,000 Hour Lamp Life<sup>1</sup>; LM-63 Test No. G16110805

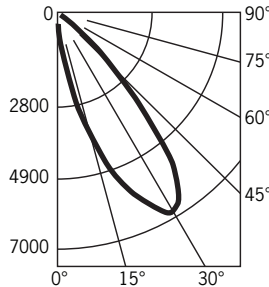
Fixture aimed at 30° from Nadir

Light Output (Fixture Delivered Lumens): 1562  
Total Watts@120V: 20.6; Lumens Per Watt: 75.8  
Center Beam Candle Power: 6724  
Color Rendering Index (CRI)<sup>2</sup>: 81  
Color Temperature (CCT)<sup>3</sup>: 3042K Warm White  
Spectral Power Distribution Chart<sup>4</sup>

LM-79 Test No. 84023



**Candela Curve**



**Candlepower Summary**

FROM 0	CANDELA	LUMENS
0	115	
5	434	20
15	3502	355
25	6098	964
35	6156	1242
45	2245	554
55	98	31
65	2	2
75	0	1
85	0	0

Beam Distribution: 29°

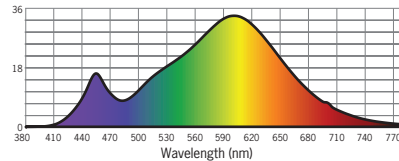
### R2ASQNC3MVD-UMODSQ30KS-C2304SQ-SL

Designed for 50,000 Hour Lamp Life<sup>1</sup>; LM-63 Test No. G16110409

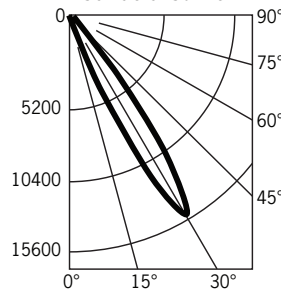
Fixture aimed at 30° from Nadir

Light Output (Fixture Delivered Lumens): 1181  
Total Watts@120V: 20.6; Lumens Per Watt: 57.3  
Center Beam Candle Power: 15516  
Color Rendering Index (CRI)<sup>2</sup>: 81  
Color Temperature (CCT)<sup>3</sup>: 3038K Warm White  
Spectral Power Distribution Chart<sup>4</sup>

LM-79 Test No. 84024



**Candela Curve**



**Candlepower Summary**

FROM 0	CANDELA	LUMENS
0	44	
5	43	4
15	331	38
25	7917	1166
35	10812	2138
45	869	219
55	21	11
65	2	4
75	0	2
85	0	0

Beam Distribution: 14°

## Multiplication Factors

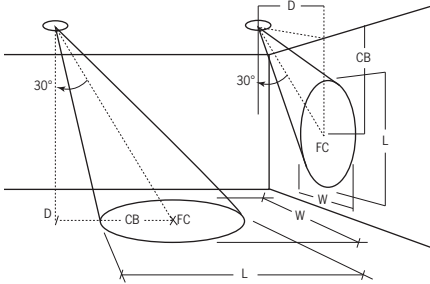
CCT	STANDARD CRI	HIGH CRI	CRISP WHITE	SERIES 05, 8W	SERIES 1, 10W	SERIES 2, 14W	PL & WHT REFLECTORS	BLK REFLECTOR
2700K	0.94	0.70	0.79	0.46	0.57	0.75	1.0	0.94
3000K	N/A	0.75	0.79	0.46	0.57	0.75	1.0	0.94
3500K	1.0	0.81	0.79	0.46	0.57	0.75	1.0	0.94
4000K	1.00	0.87	0.79	0.46	0.57	0.75	1.0	0.94

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

# R2ASQNC

## 2" Square LED Adjustable Recessed Downlight: New Construction IC and StopAire

### Photometrics



**APPLICATION DATA NOTES BASED UPON R2ASQNC3MVD-UMODSQ30K(S,M,F)-C2304SQ-SL:**

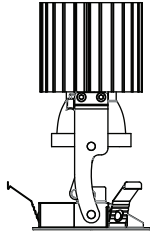
- D - Offset distance between the luminaire to the illuminated plane in feet
- CB - Projected distance between the luminaire and the center point where the beam is aimed in feet
- FC - Horizontal or vertical illuminance at the center point where the beam is aimed in footcandles
- L - Beam length corresponding 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

For ConTech Lighting 2" LED Round and Square Downlights: **R2A, RN2A, R2ASQ, and RN2ASQ Series**

- Incandescent 120VAC 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 low voltage dimming wires that are separate from the 120V or 277V AC power. The dimmer sends a variable output voltage to the fixture 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 (120V or 277V AC) input 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 low voltage control wires (color coded violet and gray).
- Lutron HiLume and EcoSystem drivers provide continuous dimming from 1%-100%. For a complete list of compatible dimmers and controls, please visit [www.lutron.com](http://www.lutron.com)
- Use DALI approved controls for dimming eldoLED MVD7 (1%-100%) and MVD9 (0.1%-100%) options.



			<b>R2ANC*, R2ARM* RN2ANC*, RN2ARM* R2ASQNC*, R2ASQRM*</b> Dimming Options 12D, 27D, MVD Dimming Range	<b>R2ANC, R2ANC, R2ASQNC</b> eldoLED ECoDrive 0-10V Dimming Options MVD6 Dimming Range	<b>R2ANC, R2ANC R2ASQNC</b> eldoLED SOLOdrive 0-10V Dimming Options MVD8 Dimming Range
<b>Manufacturer</b>	<b>Product</b>	<b>Model</b>	<b>Light Output</b>	<b>Light Output</b>	<b>Light Output</b>
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. Testing was performed with a single fixture connected to dimmer.
2. Testing has been performed on these dimmers, but this does not imply any warranty of compatibility.
3. Dimming performance can be influenced by different loads, as well as variations in dimmer switches within the same model.
4. Dimmer maximum load rating with LED may differ from published traditional source dimmer ratings. Consult manufacturer for maximum dimmer information.
5. Consult factory for additional dimming information.