

DATE

PROJECT

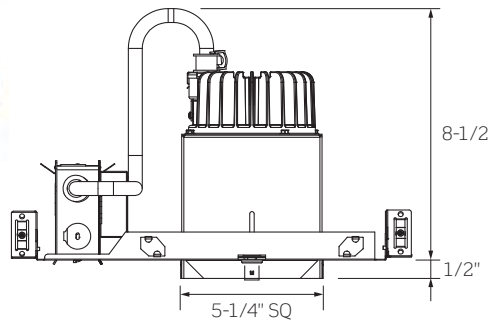
TYPE

# R4SQNC SERIES | 4-Inch Square Universal New Construction Downlight Housing

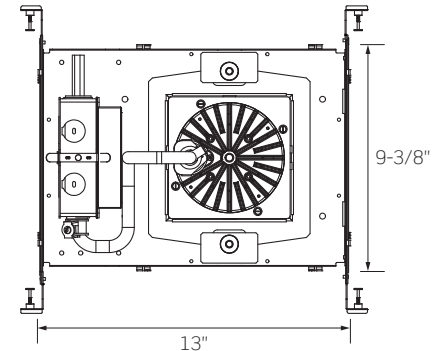


**Ceiling Opening:** 5-3/8"  
**Ceiling Thickness:** 1/2" - 2"

Side View



Top View



	R4SQNC1	R4SQNC2	R4SQNC3	R4SQNC4	R4SQNC5	R4SQNC6
WATTAGE	12W	15W	21W	30W	38W	45W
LUMEN OUTPUT <sup>1</sup>	1100Lm	1600Lm	2200Lm	3000Lm	3700Lm	4100Lm
BEAMS	33° Narrow / 38° Medium / 62° Wide / Wall Wash					
COLOR TEMPERATURE	2700K / 3000K / 3500K / 4000K					
CRI	83 (80min) / 90+					
INPUT WATTAGE	12W	15W	21W	30W	38W	45W
INPUT CURRENT (A) 120V/277V/347V	.08/.04/.03	.12/.06/.04	.17/.08/.06	.23/.11/.08	.31/.14/.11	.36/.16/.12
INPUT VOLTAGE	120VAC / 277VAC / 347VAC, 50/60Hz					
Standard Driver	120VAC / 277VAC, 50/60Hz				N/A	N/A
Lutron Eco-System® Driver	120VAC / 277VAC, 50/60Hz				N/A	N/A
eldoLED ECOdrive / SOLOdrive	120VAC / 277VAC, 50/60Hz					
DRIVER POWER FACTOR	> 0.90					
TOTAL HARMONIC DISTORTION (THD)	< 20%					
LISTINGS	cCSAus Certified to UL Standards; Suitable for Wet Locations except Wall Wash option cCSAus Certified to UL924 Standard for Emergency Lighting when specified with the Emergency Battery Backup option ENERGY STAR® Certified: – Series 1 through 6, except High CRI 2700K Color Temperature (27KC Option) – Certified trims: C4322SQ (all finishes) – 347V Option, Lutron and eldoLED Dimming Options are not ENERGY STAR® Certified					
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

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# R4SQNC SERIES | 4-Inch Square Universal New Construction Downlight Housing

## ORDERING INFORMATION

Example Order:  –

Housing/LED Series	Color Temp/CRI	Electrical	Dimming	Beam Dist.	Options
<b>R4SQNC1</b> - 12W / 1100lm	83 (80min) CRI	<b>12</b> - 120V	<b>D1</b> <sup>1</sup> - TRIAC, ELV, 0-10V	<b>N</b> - 33° Narrow	<b>ER</b> <sup>6</sup> - Factory Installed
<b>R4SQNC2</b> - 15W / 1600lm	<b>27K</b> - 2700K	<b>27</b> - 277V	<b>D2</b> <sup>2</sup> - 347V 0-10V	<b>M</b> - 38° Medium	7W/200mA
<b>R4SQNC3</b> - 21W / 2200lm	<b>30K</b> - 3000K	<b>34</b> - 347V	<b>D4</b> <sup>3</sup> - Lutron Hi-Lume 1% EcoSystem Driver with Soft-on, Fade-to-Black	<b>W</b> - 62° Wide	Emergency Battery Backup
<b>R4SQNC4</b> - 30W / 3000lm	<b>35K</b> - 3500K		<b>D6</b> <sup>4</sup> - eldoLED ECOdrive 0-10V, 1% Dimming	<b>WW</b> - Wall Wash	Battery Backup (Remote Test Switch)
<b>R4SQNC5</b> - 38W / 3700lm	<b>40K</b> - 4000K		<b>D7</b> <sup>4</sup> - eldoLED ECOdrive DALI, 1% Dimming		
<b>R4SQNC6</b> - 45W / 4100lm	90+ CRI		<b>D8</b> <sup>4</sup> - eldoLED SOLOdrive 0-10V, 0.1% Dimming		
	<b>27KC</b> - 2700K		<b>D9</b> <sup>4</sup> - eldoLED SOLOdrive DALI, 0.1% Dimming		
	<b>30KC</b> - 3000K		<b>DMX</b> <sup>4,5</sup> - eldoLED POWERdrive DMX 0.0% Dimming		
	<b>35KC</b> - 3500K				
	<b>40KC</b> - 4000K				

1. TRIAC and ELV Dimming for 120V only
2. Only available for 347V Dimming option (D2); cannot be used with Emergency Battery Backup option
3. Lutron Eco-System Driver is available for both 120V and 277V, Series 1 through 4 only (12W through 30W); not available for use with LED Series 5 or 6 (38W or 45W)
4. eldoLED Drivers are programmed for linear curve dimming as standard. For Logarithmic Curve Dimming, consult factory
5. Verify DMX Driver and Control System compatibility with factory prior to ordering
6. Emergency Battery Backup option: 725 lumen nominal average for any Series 1 through 6

## ACCESSORY & REPLACEMENT OPTIC ORDERING INFORMATION

### Accessories

Standard Hanger Bars Supplied with Housing

- HB-30** - T-Bar Hanger Set
- RL-KIT** - Commercial Mounting Brackets
- 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

### Replacement Optics

- 4SQOPT-N** - 33° Beam Replacement Optic
- 4SQOPT-M** - 38° Beam Replacement Optic
- 4SQOPT-W** - 62° Beam Replacement Optic

See “Trims for 4-Inch Square Downlights” Specification Sheet for compatible Trim information and details

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# R4SQNC SERIES | 4-Inch Square Universal New Construction Downlight Housing

## PRODUCT DETAILS

### Construction

- Specification Grade 4-inch Square 16 Gauge Galvanized Steel New Construction Housing with Die-Cast Aluminum Heat Sink
- Mounting Frame features a Post Installation Mechanism that allows 1/4-inch adjustment in all directions, as well as 5° of rotation adjustment to ensure proper alignment
- Quick-connect Light Engine
- LED Drivers are fully accessible from below the ceiling
- Dual Nailer Hanger Bars are adjustable for 16- and 24-inch center joists (14-1/4- to 24-1/2- inch). Nailer Bars may be extended to rest on T-Bar ceilings; optional clip-on T-Bar Hangers available.
- Pre-wired Junction Box with convenient Screwdriver Pry-outs plus four (4) 1/2-inch Knockouts and one (1) 1/2-inch x 3/4-inch Concentric Knockout
- Output over-voltage, over-current and short circuit protection
- Approved for Through Circuit Wiring: max. eight (8) 12 AWG (4in/4out), wiring rated to 90°C
- Requires minimum 3-inch clearance around Housing from insulation material; thermal protection provided in case of improper insulation use

### Performance Summary

- 2700K, 3000K, 3500K and 4000K Color Temperatures
- CRI of 80 min., 83 typical; high CRI of 90+ available; excellent fixture-to-fixture color consistency with a 3-step MacAdam Ellipse tolerance
- Glass TIR Optics provide smooth, uniform beams; maximizing output and minimizing glare. Available in 33° Narrow, 38° Medium, and 62° Wide; optics are interchangeable and can be field replaced
- A high efficiency, soft-focus, field removable film is installed for even greater softening of the beam
- Wall Wash distribution provides a smooth, wide beam with excellent uniformity; well suited for any wall lighting application
- All R4SQ Downlights are available for non-dimming and dimming applications; for compatible Dimmers, refer to the Dimming Specification Sheet
- Flanged or Trimless Specification Grade Trims in several different styles and finishes available
- Trimless options require use of a Mud Frame (MF4SQ, ordered separately) for securing housing and trim in 1/2- to 5/8-inch ceiling thicknesses only
- Trimless options cannot be used on Remodel Style Housings (R4SQRM)
- UL8750 and Class 2 Compliant; RoHS Compliant, US only

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# R4SQ SERIES | 4-Inch Square Downlight Trims

## TRIMMED OPTIONS



**C4322SQ-PL**  
Platinum Reflector



**C4322SQ Series**  
*Specification Grade Reflector*

4-1/2-Inch SQ Aperture,  
5-3/4-Inch SQ Trim Flange

Specification Grade Segmented Reflectors. Wet Location approved.



**C4322SQDC-SL**  
Satin Silver  
Painted Reflector



**C4322SQDC Series**  
*Die-Cast Specification Grade Reflector*

**C4322SQDF Series**  
*ISOWET Dead Front Reflector*

4-1/2-Inch SQ Aperture,  
5-3/4-Inch SQ Trim Flange

Specification Grade Die-Cast Reflector or Isolated Thermoplastic Reflector. Wet Location approved.

**C4322SQ** - Specular Reflector

**CLR**<sup>1</sup> - Anodized Clear  
**PL**<sup>1</sup> - Anodized Platinum  
**WHT** - Matte White Painted

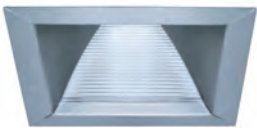
1. Available with White Painted Flange; add -WPF to end of part number

**C4322SQDC** - Die-Cast Reflector

**C4322SQDF** - ISOWET  
Dead Front Reflector

**SL**<sup>1</sup> - Satin Silver Painted  
**WHT** - Matte White Painted

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



**C4323SQ-PL**  
Anodized Platinum Wall Wash



**C4323SQ Series**  
*Lensed Wall Wash Trim*

4-1/2-Inch SQ Aperture,  
5-3/4-Inch SQ Trim Flange

Angled Diffuse Glass Spread Lens. Wet Location approved.



**C4323SQDC-SL**  
Satin Silver Painted Wall Wash



**C4323SQDC Series**  
*Die-Cast Lensed Wall Wash Trim*

4-1/2-Inch SQ Aperture,  
5-3/4-Inch SQ Trim Flange

Lensed Wall Wash Trim. Wet Location approved.

**C4323SQ** - Wall Wash

**CLR**<sup>1</sup> - Anodized Clear  
**PL**<sup>1</sup> - Anodized Platinum  
**WHT** - Matte White Painted

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

**C4323SQDC** - Die-Cast Wall Wash

**SL**<sup>1</sup> - Satin Silver Painted  
**WHT** - Matte White Painted

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

## TRIMLESS OPTIONS

Trimless Options require use of Mud Frame accessory (MF4SQ, ordered separately)



**MF4SQ**  
Square Mud Frame

**4-Inch Square Mud Frame**

8-1/2-Inch SQ

Required for use with trimless options. Adhesive backed Thermoplastic Mesh Frame, White.

**MF4SQ** - 4-Inch Square Mud Frame



**CN4322SQDC-SL**  
Satin Silver Painted Wall Wash



**CN4322SQDC Series**  
*Specification Grade Die-Cast Trimless Reflector*

4-1/2-Inch SQ Aperture,  
5-3/16-Inch SQ Trim Flange

Specification Grade Specular Reflector. Wet Location approved. For use with 1/2- to 5/8-inch ceiling thicknesses only. **Trim cannot be used on Remodel Housings (R4SQRM).**

**CN4322SQDC** - Trimless Reflector

**SL** - Satin Silver Painted  
**WHT** - Matte White Painted

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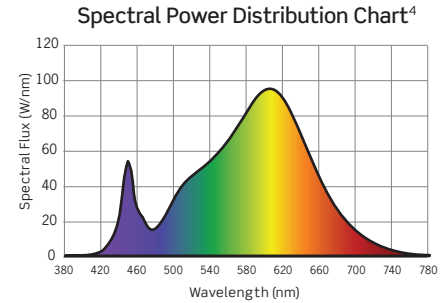
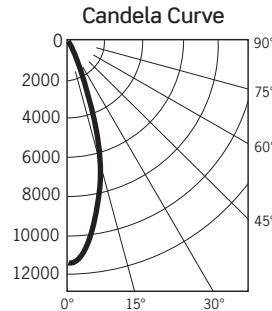
TYPE

# R4SQ SERIES | 4-Inch Square Downlight Photometrics

## R4SQNC630K12DN / C4322SQ-CLR

Fixture Delivered Lumens: 4207.7  
 Total Watts@120V: 44.7  
 Lumens Per Watt: 94.1  
 Center Beam Candle Power: 11502  
 Beam Distribution: 33.7°  
 Spacing Criterion: 0.55  
 Color Rendering Index (CRI)<sup>1</sup>: 83.3  
 Color Temperature (CCT)<sup>2</sup>: 3053K  
 Designed for 50,000 Hour Lamp Life<sup>3</sup>  
 LM-63 Test No. G21072004  
 LM-79 Test No. S21071503

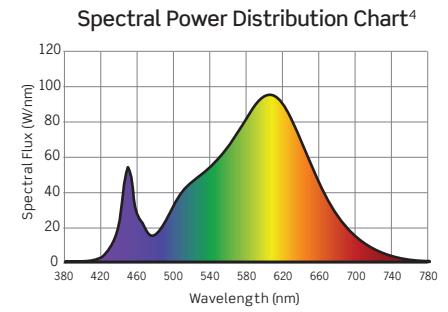
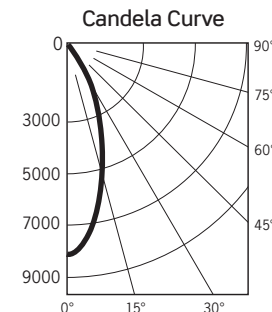
DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
6 FT	319.5	3.6
8 FT	179.7	4.8
10 FT	115.0	6.0
12 FT	79.9	7.2
14 FT	58.7	8.4
16 FT	44.9	9.7



## R4SQNC630K12DM / C4322SQ-CLR

Fixture Delivered Lumens: 4454.1  
 Total Watts@120V: 44.7  
 Lumens Per Watt: 99.6  
 Center Beam Candle Power: 8124  
 Beam Distribution: 38.0°  
 Spacing Criterion: 0.61  
 Color Rendering Index (CRI)<sup>1</sup>: 83.3  
 Color Temperature (CCT)<sup>2</sup>: 3053K  
 Designed for 50,000 Hour Lamp Life<sup>3</sup>  
 LM-63 Test No. G21071405  
 LM-79 Test No. S21071503

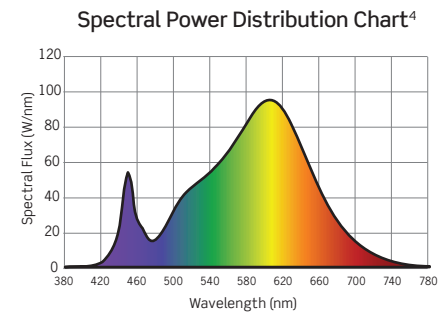
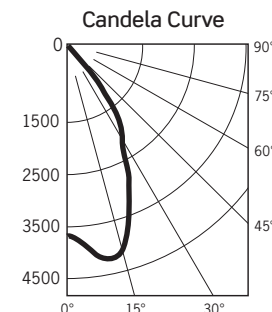
DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
6 FT	225.7	4.2
8 FT	126.9	5.6
10 FT	81.2	7.0
12 FT	56.4	8.4
14 FT	41.4	9.9
16 FT	31.7	11.3



## R4SQNC630K12DW / C4322SQ-CLR

Fixture Delivered Lumens: 4295.6  
 Total Watts@120V: 44.7  
 Lumens Per Watt: 96.1  
 Center Beam Candle Power: 3684  
 Beam Distribution: 61.7°  
 Spacing Criterion: 1.0  
 Color Rendering Index (CRI)<sup>1</sup>: 8/3  
 Color Temperature (CCT)<sup>2</sup>: 3053K  
 Designed for 50,000 Hour Lamp Life<sup>3</sup>  
 LM-63 Test No. G21071403  
 LM-79 Test No. S21071503

DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
6 FT	102.3	7.2
8 FT	57.6	9.6
10 FT	36.8	11.9
12 FT	25.6	14.3
14 FT	18.8	16.7
16 FT	14.4	19.1



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 MULTIPLIERS			OUTPUT MULTIPLIERS					TRIM MULTIPLIERS	
CCT	STD CRI	HIGH CRI	SERIES 1	SERIES 2	SERIES 3	SERIES 4	SERIES 5	C4322SQDC-SL	C4322SQDF-SL
2700K	0.94	0.70	0.27	0.37	0.52	0.71	0.88	0.93	0.94
3000K	N/A	0.75							
3500K	1.0	0.81							
4000K	1.0	0.87							

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# R4SQ SERIES | 4-Inch Square Downlight Photometrics

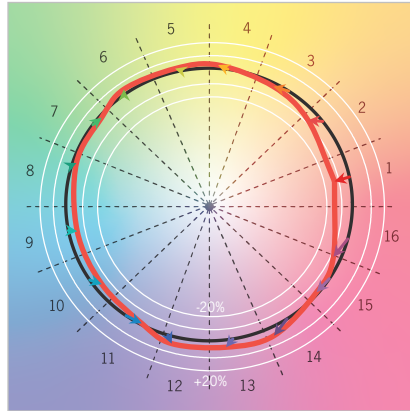
TM-30 DATA: R4SQNC630K12DM / C4322SQ-CLR

ANSI/IES TM-30-18 Color Rendition Report Test No. S21071503

Colors are for visual orientation purposes only

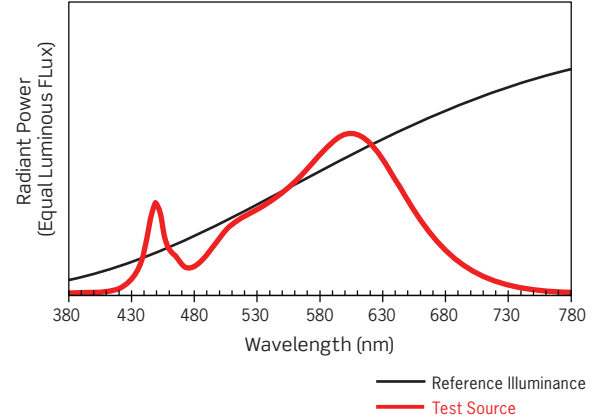
$R_f$	86
$R_g$	97
CCT(K)	3053K
$D_{uv}$	0.0014
$u^l$	0.2482
$v^l$	0.5223

Color Vector Graphic

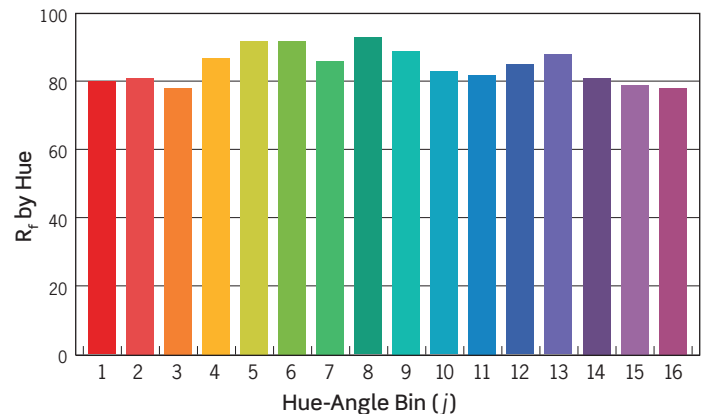
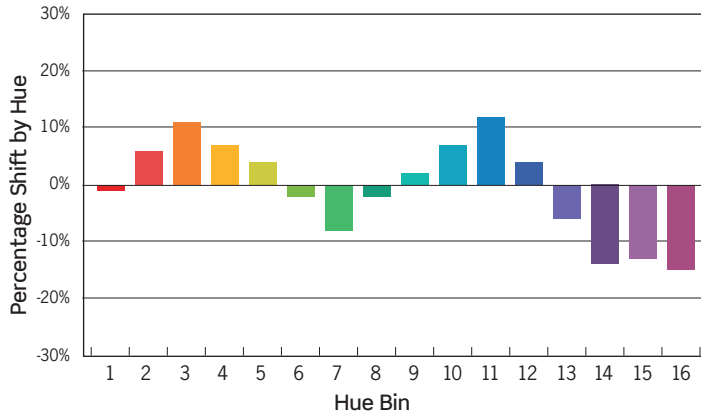


— Reference Illuminance — Test Source

Spectral Power Distribution Comparison



— Reference Illuminance  
— Test Source



HUE BIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HUE SHIFT	-1%	6%	11%	7%	4%	-2%	-8%	-2%	2%	7%	12%	4%	-6%	-14%	-13%	-15%
R <sub>f</sub> VALUE	81	82	79	88	93	93	87	94	90	84	83	86	89	82	80	79

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## R4SQ SERIES | 4-Inch Square Downlight 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 120V AC 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 to the Dimmer (120V or 277V AC). 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 Violet and Pink/Grey.
- Lutron EcoSystem Drivers provide continuous dimming from 1%–100%. For a complete list of compatible Dimmers and Controls, visit [www.lutron.com](http://www.lutron.com)
- Use DALI approved Controls for dimming eldoLED ECOdrive, 1% Dimming (Dimming Option D7 or MVD7) and eldoLED SOLOdrive, 0.1% Dimming (Dimming Option D9 or MVD9).

Manufacturer	Product	Model	TRIAC, ELV, 0-10V DIMMING	eldoLED ECOdrive 0-10V	eldoLED SOLOdrive 0-10V
			(12D, 27D or MVD Option*)	(12D6, 27D6 or MVD6 Option)	(12D8, 27D8 or MVD8 Option)
			Light Output	Light Output	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	6%-100%	NA	NA
Leviton	Decora	6161	15%-100%	NA	NA
Leviton	SureSlide	6633-P	1%-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	1%-100%	NA	NA
Lutron	Ariadni	TG-600P	13%-100%	NA	NA
Lutron	Diva	DVCL-153P	1%-100%	NA	NA
Lutron	Diva	DV600P	6%-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	8%-100%	NA	NA
Lutron	Maestro	MAELV600	16%-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	5%-96%	NA	NA
Lutron	Skylark	S600P	5%-100%	NA	NA
Lutron	Skylark	SELV300P	10%-100%	NA	NA
Lutron	Skylark	CT103P	9%-100%	NA	NA

\*277V Triac Dimming is not available

### NOTES

1. Testing was performed with a single luminaire 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.