

DATE

PROJECT

TYPE

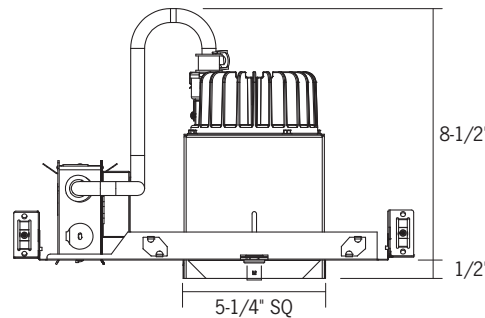
R4SQ SERIES | 4-Inch Square Downlights: R4SQNC Universal New Construction Housing



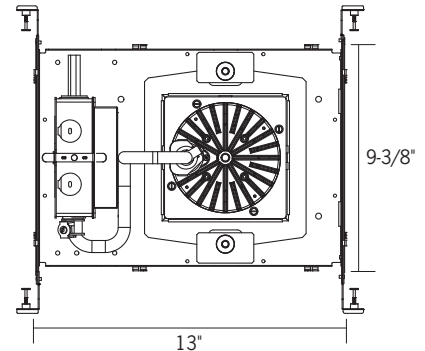
Ceiling Opening: 5-3/8"
Ceiling Thickness: 1/2" - 2"

For Universal New Construction Housing with Integrated Sensor, refer to R4SQNCIE Specification Sheet

Side View



Top View



	R4SQNC1	R4SQNC2	R4SQNC3	R4SQNC4	R4SQNC5	R4SQNC6
WATTAGE	12W	15W	21W	30W	38W	45W
LUMEN OUTPUT ¹	1100Lm	1600Lm	2200Lm	3000Lm	3700Lm	4100Lm
BEAM SPREAD	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 / 347VAC, 50/60Hz					
Lutron HiLume® Driver	120VAC, 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. Lumen values are approximate, see photometric test results

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R4SQ SERIES | 4-Inch Square Downlights: R4SQNC Universal New Construction Housing

ORDERING INFORMATION

Example Order: R4SQNC130K12DW - ER

Housing/LED Series	Color Temp/CRI	Electrical	Dimming	Beam Dist.	Options
R4SQNC1 - 12W 1100lm	83 (80min) CRI 27K - 2700K	12 - 120V 27 - 277V	D1 - Triac, ELV, 0-10V D2 ² - 347V 0-10V	N - 33° Narrow M - 38° Medium W - 62° Wide WW - Wall Wash	ER ⁶ - Factory Installed 7W/200mA Emergency Battery Backup [Remote Test Switch]
R4SQNC2 - 15W 1600lm	30K - 3000K 35K - 3500K	34 ¹ - 347V	D3 ³ - Lutron Hi-lume 1% 2-Wire LED Driver (120V Forward Phase Only)		
R4SQNC3 - 21W 2200lm	40K - 4000K 90+ CRI		D4 ³ - Lutron Hi-lume 1% EcoSystem Driver with Soft-on, Fade-to-Black		
R4SQNC4 - 30W 3000lm	27KC - 2700K 30KC - 3000K		D6 ⁴ - eldoLED ECOdrive, 0-10V, 1% Dimming		
R4SQNC5 - 38W 3700lm	35KC - 3500K 40KC - 4000K		D7 ⁴ - eldoLED ECOdrive, DALI, 1% Dimming D8 ⁴ - eldoLED SOLOdrive, 0-10V, 0.1% Dimming D9 ⁴ - eldoLED SOLOdrive, DALI, 0.1% Dimming		
R4SQNC6 - 45W 4100lm			DMX ^{4,5} - eldoLED POWERdrive, DMX 0.0% Dimming		

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 Hi-Lume 2-Wire dimming available in 120V only, Eco-System available for both 120V and 277V. Lutron dimming options are available for 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

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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R4SQ SERIES | 4-Inch Square Downlights: R4SQNC Universal New Construction 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

- Glass TIR Optics provide smooth, uniform beams; maximizing output and minimizing glare. Available in 33° Narrow, 38° Medium, 62° Wide and Wall Wash distributions
- 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
- 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
- Assembled in the USA

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R4SQ SERIES | 4-Inch Square Downlights: Trims

TRIMMED OPTIONS



C4322SQ-PL
Platinum Reflector



C4322SQ Series

Specification Grade Square 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 Square Reflector

C4322SQDF Series

ISOWET Dead Front Square Reflector
4-1/2-Inch SQ Aperture, 5-3/4-Inch SQ Trim Flange

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

C4322SQ-CLR* - Anodized Clear Specular Reflector **Quantity**

C4322SQ-PL* - Anodized Platinum Reflector

C4322SQ-WHT - Matte White Painted Reflector

**Available with White Painted Flange, add "-WPF" to end of part number*

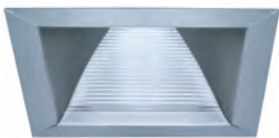
C4322SQDC-SL* - Satin Silver Painted Die-Cast Reflector **Quantity**

C4322SQDC-WHT - Matte White Painted Die-Cast Reflector

C4322SQDF-SL* - Satin Silver Painted ISOWET Dead Front Reflector

C4322SQDF-WHT - Matte White Painted ISOWET Dead Front Reflector

**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-CLR* - Anodized Clear Wall Wash **Quantity**

C4323SQ-PL* - Anodized Platinum Wall Wash

C4323SQ-WHT - Matte White Painted Wall Wash

**Available with White Painted Flange, add "-WPF" to end of part number*

C4323SQDC-SL* - Satin Silver Painted **Quantity**

C4323SQDC-WHT - Matte White Painted

**Available with White Painted Flange, add "-WPF" to end of part number*

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R4SQ SERIES | 4-Inch Square Downlights: Trims

TRIMLESS OPTIONS

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



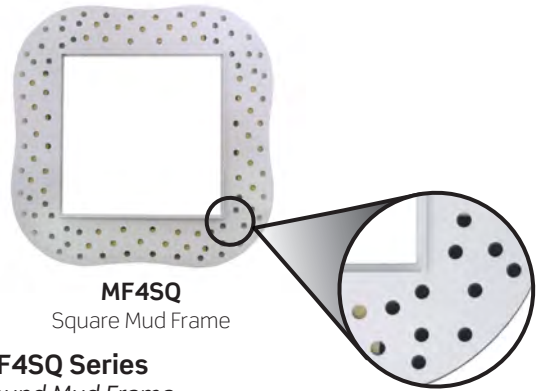
CN4322SQDC-SL
Painted Satin Silver Trimless Reflector



CN4322SQDC Series

Specification Grade Die-Cast Square Trimless Reflector
4-3/4-Inch SQ Aperture, 5-3/16-Inch SQ Trim Flange

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



MF4SQ
Square Mud Frame

MF4SQ Series

Round Mud Frame
8-1/2-Inch SQ

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

CN4322SQDC-SL	- Satin Silver Painted Square Trimless Reflector	Quantity
CN4322SQDC-WHT	- Matte White Painted Square Trimless Reflector	

MF4SQ	- 4-Inch Square Mud Frame	Quantity
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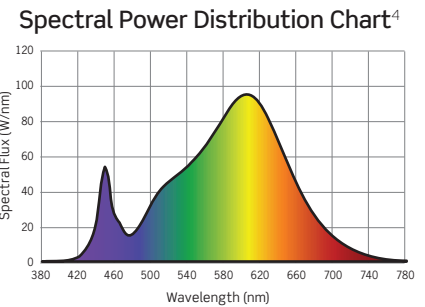
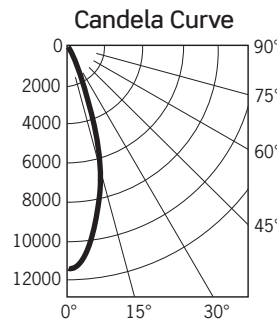
R4SQ SERIES | 4-Inch Square Downlights

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)¹: 83.3
 Color Temperature (CCT)²: 3053K
 Designed for 50,000 Hour Lamp Life³
 LM-63 Test No. G21072004
 LM-79 Test No. S21071503

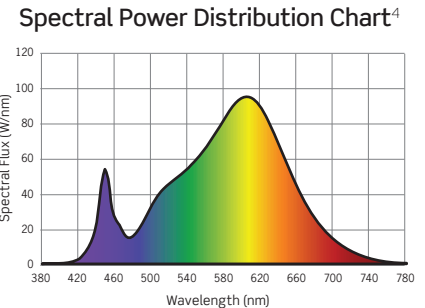
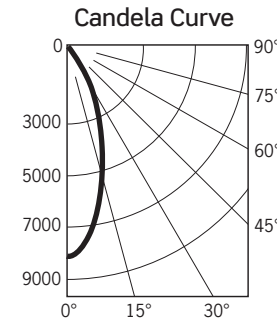
DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
6 FT	319.5	3.6
8 FT	179.7	4.8
10 FT	115.0	6.0
12 FT	79.9	7.2
14 FT	58.7	8.4
16 FT	44.9	9.7



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)¹: 83.3
 Color Temperature (CCT)²: 3053K
 Designed for 50,000 Hour Lamp Life³
 LM-63 Test No. G21071405
 LM-79 Test No. S21071503

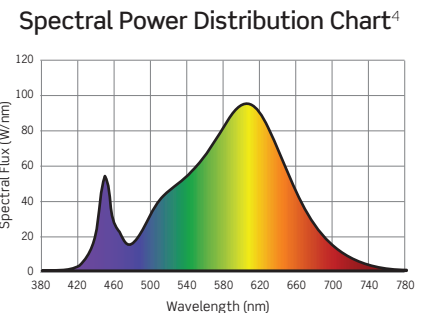
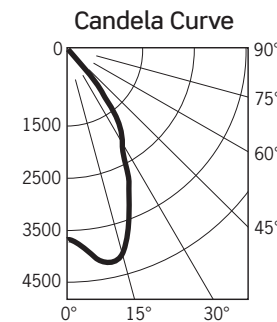
DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
6 FT	225.7	4.2
8 FT	126.9	5.6
10 FT	81.2	7.0
12 FT	56.4	8.4
14 FT	41.4	9.9
16 FT	31.7	11.3



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)¹: 83.3
 Color Temperature (CCT)²: 3053K
 Designed for 50,000 Hour Lamp Life³
 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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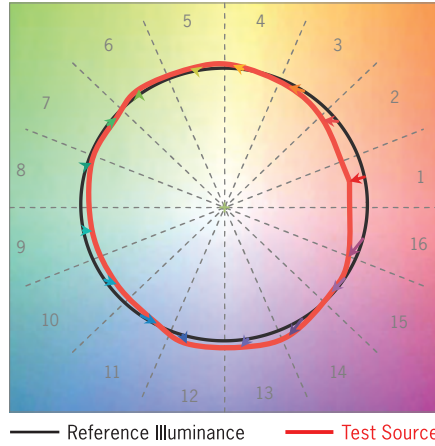
TM-30 DATA: R4SQNC630K12DM / C4322SQ-CLR

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

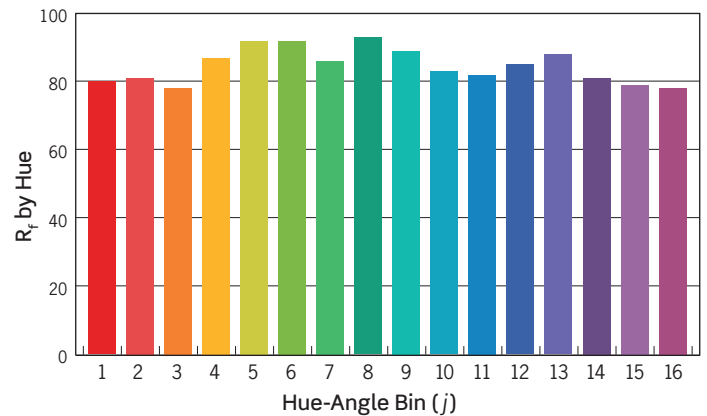
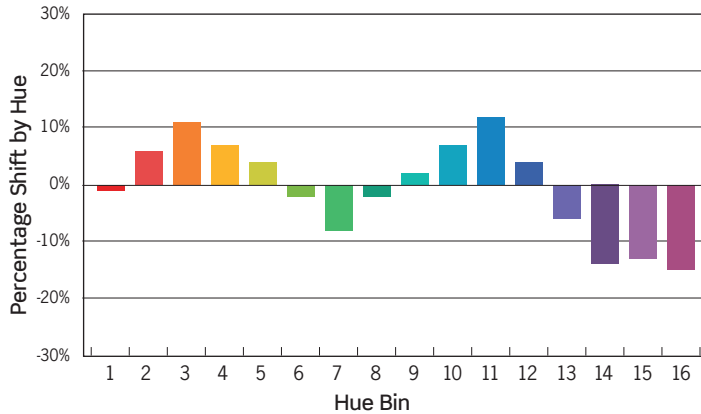
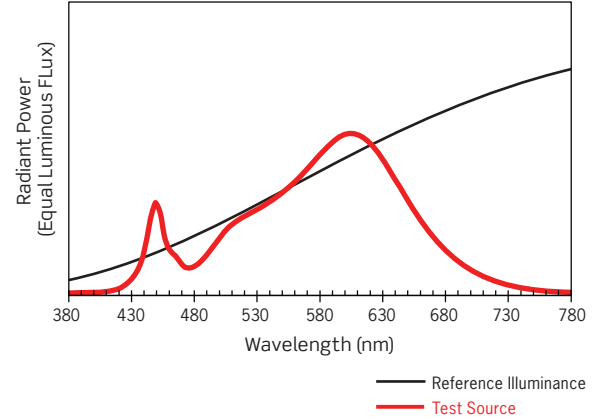
Colors are for visual orientation purposes only

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

Color Vector Graphic



Spectral Power Distribution Comparison



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 _f 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 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 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 HiLume and EcoSystem Drivers provide continuous dimming from 1%–100%. For a complete list of compatible Dimmers and Controls, visit 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.