

# Tech Lighting Architectural - Dimmer Compatibility Chart

Applicable for ELEMENT 2", 3", 4" LO, ENTRA 3" Cylinders, and ENTRA CL (LED ONLY)

Test Methodology/Nomenclature:

% = light output at a given point vs. max light output when measured without a dimmer

Top = % light output at top of dimmer setting

Bottom = % light output at bottom of dimmer setting (stable, without experiencing flicker/shimmer)

Turn-on/Pop-on = % light output (initial) required for all lights to turn-on within 1 seconds

Drop-out = fixture turns off before reaching the bottom dimmer setting

\* = most recommended

Standard Phase = Forward and Reverse Phase

F = Forward Phase (Leading Edge / Triac / Incandescent / Lutron C.L and LED+)

R = Reverse Phase (Trailing Edge / ELV)

W = Wireless Compatible

**STANDARD 120V PHASE DIMMING** (Forward/Reverse)

(PTB, used since July/Sept 2020)

**Compatible / Recommended**

Manufacturer	Name	Tested Part Number	Type	Top	Bottom	Pop-On	Drop-Out	Notes
Lutron	RadioRa 2	RRD-6NA	F, R, W	100 %	1.4 %	--	--	also MRF2-6ELV
Lutron	RadioRa 2	RRD-10ND	F, W	100 %	1.3 %	--	--	also MRF2-6ND
Lutron	RadioRa 2	RRD-H6BRL	F, W	100 %	1.4 %	--	--	--
Lutron	HomeWorks QS	HQRD-10ND	F, W	100 %	1.3 %	--	--	--
Lutron	HomeWorks QS	RPM-4A-120 (-4U)	F, R, W	100 %	1.0 %	--	--	--
Lutron	Din Rail	LQSE-4A-120-D	F, R, W	100 %	1.0 %	--	--	--
Lutron	Vive	MRF2S-6CL	F, W	99 %	1.4 %	--	--	also RRD-6CL, HQRD/A-6CL
Lutron	Caseta ELV+	PD-5NE	F, R, W	94 %	1.4 %	--	--	--
Lutron	Caseta	PD-6WCL	F, W	100 %	1.4 %	--	--	--
Lutron	Diva Reverse Phase	DVRP-253P	R	100 %	1.2 %	--	--	--
Lutron	Diva*	DVCL-153P*	F	100 %	1.0 %	--	--	also TGCL-153P, SCL-153P, LECL-153P
Lutron	Maestro	MACL-153M	F	100 %	1.3 %	--	Yes	trim adjustment available
Leviton	Decora	DSL06-1LZ	F	98 %	4.2 %	--	--	--
Leviton	Decora	TSL06-1LZ	F	97 %	2.6 %	--	--	--
Leviton	Decora Smart	DW1KD-1BZ	F, W	100 %	3.2 %	--	--	--
Leviton	Decora Rocker Slider	DSE06-10Z	R	96 %	1.4 %	--	--	--
Leviton	Decora SureSlide	6672	F	93 %	4.0 %	--	--	--
Legrand	Radiant	RHL743P	F	94 %	1.4 %	--	--	--
Legrand	Adorne	ADTP600RMHW1	F, R, W	100 %	1.4 %	--	--	--
Legrand	Adorne	ADTH700RMTUW1	F, R, W	100 %	1.4 %	--	--	--
Insteon	Insteon Dimmer	2477D	R, W	100 %	1.4 %	--	--	--
Control4	Decora Forward	C4-FPD120	F, W	100 %	1.8 %	1.8 %	--	Control4 level of 16% = 1.8% lumens
Control4	Decora Adaptive	C4-APD120	F, R, W	100 %	1.9 %	1.9 %	--	Control4 level of 23% = 1.9% lumens
Control4	8 Channel DIN Rail A	C4-DIN-8APD-E	F, R	100 %	1.9 %	1.9 %	--	Control4 level of 7% = 1.9% lumens
Control4	8 Channel DIN Rail F	C4-DIN-8FPD-E	F	100 %	1.9 %	1.9 %	--	Control4 level of 5% = 1.8% lumens

**STANDARD 120V PHASE DIMMING** (Forward/Reverse)

(PTB, used since July/Sept 2020)

<b>Compatible / Recommended</b>								
Manufacturer	Name	Tested Part Number	Type	Top	Bottom	Pop-On	Drop-Out	Notes
Crestron	iLux	CLS-C6	F	100 %	9.0 %	9.0 %	--	Crestron level of 18% = 9.0% lumens
Crestron	iLux Expansion Mod.	CLS-EXP-DIM	F	100 %	9.0 %	9.0 %	--	Crestron level of 18% = 9.0% lumens
Crestron	iLux Expansion Mod.	CLS-EXP-DIMU	F, R	100 %	20.0 %	20.0 %	--	Crestron level of 18% = 20% lumens
Crestron	4 Channel Mod.	CLX-1DIMU4	F, R	100 %	4.0 %	4.0 %	--	Crestron level of 22% = 4.0% lumens
Crestron	8 Channel Mod.	CLX-2DIM8	F	100 %	3.0 %	3.0 %	--	Crestron level of 20% = 3.0% lumens
Crestron	8 Channel Mod.	CLX-2DIMU8	F, R	100 %	4.0 %	4.0 %	--	Crestron level of 22% = 4.0% lumens
Crestron	4 Channel DIN Rail	DIN-1DIM4	F	100 %	3.0 %	3.0 %	--	Crestron level of 19% = 3.0% lumens
Crestron	4 Channel DIN Rail	DIN-1DIMU4	F, R	100 %	3.0 %	3.0 %	--	Crestron level of 19% = 3.0% lumens
Crestron	Cameo	CLW-DIMEX-E	F, W	100 %	8.0 %	8.0 %	--	Crestron level of 18% = 8.0% lumens
Crestron	Cameo	CLW-DELVEX	R, W	100 %	3.0 %	3.0 %	--	Crestron level of 16% = 3.0% lumens
Crestron	Horizon In-Wall	HZ-DIMEX	F, W	100 %	2.0 %	2.0 %	--	Crestron level of 22% = 2.0% lumens
Crestron	Horizon In-Wall UNV	HZ-DIMUEX	F, R, W	100 %	2.0 %	2.0 %	--	Crestron level of 22% = 2.0% lumens
Crestron	Green Light Express	GLXX-2DIM8	F, R	100 %	3.0 %	3.0 %	--	Crestron level of 20% = 3.0% lumens
<b>Not Recommended or Incompatible</b>								
Lutron	Nova T	NTELV-600	R	73 %	0.2 %	7.4 %	--	per Lutron: not UL rated for LEDs
Lutron	Skylark	SELV-300P	R	76 %	0.2 %	8.4 %	--	per Lutron: not UL rated for LEDs
Lutron	Diva	DVELV-300P	R	100 %	1.2 %	--	--	per Lutron: not UL rated for LEDs
Lutron	Maestro	MAELV-600P	R	100 %	1.4 %	--	--	per Lutron: not UL rated for LEDs
Lutron	Glyder	GL-600P-WH	F	100 %	0.4 %	1.1 %	Yes	per Lutron: not UL rated for LEDs
Lutron	Skylark	S-600P	F	100 %	0.0 %	1.5 %	Yes	per Lutron: not UL rated for LEDs
Lutron	Ariadni	AY-600P-WH	F	100 %	0.1 %	0.6 %	Yes	per Lutron: not UL rated for LEDs
Lutron	Rotary Dimmer	DV-600P-WH	F	100 %	0.0 %	2.5 %	Yes	per Lutron: not UL rated for LEDs
Lutron	Diva	DV-600P	F	100 %	0.1 %	1.1 %	Yes	per Lutron: not UL rated for LEDs
Eaton	Toggle Dimmer	TAL06P2	F	100 %	1.4 %	--	--	Incompatible
Forbes & Lomax	F&L Collection	FLR603P	F	98 %	1.4 %	--	--	Incompatible
Crestron	Din Rail Analog	DIN-AO8	0-10V	--	--	--	--	Incompatible

## 0-10V DIMMING

(PTB, used since July/Sept 2020)

### Compatible / Recommended

Manufacturer	Name	Tested Part Number	Type	Top	Bottom	Pop-On	Drop-Out	Notes
Lutron	Diva	DVSTV	0-10V	100 %	1.0 %	--	--	
Control4	Decora 0-10V	C4-TV120277	0-10V	100 %	1.6 %	--	--	Control4 level of 1% = 1.6% lumens
Control4	8 Channel 0-10V	C4-DIN-8TV-E	0-10V	100 %	1.6 %	--	--	Control4 level of 1% = 1.6% lumens
Crestron	iLux 0-10V	CLS-EXP-DIMFLV	0-10V	100 %	1.0 %	--	--	Crestron level of 20% = 1% lumens
Crestron	4 Channel DIN Rail	DIN-4DIMFLV4	0-10V	100 %	1.0 %	--	--	Crestron level of 15% = 1% lumens
Crestron	8 Channel 0-10V	CLX-2DIMFLV8	0-10V	100 %	1.0 %	--	--	Crestron level of 5% = 1% lumens
Crestron	Cameo In-Wall 0-10V	CLW-DIMFLVEX-P	0-10V	100 %	1.0 %	--	--	Crestron level of 10% = 1% lumens
Crestron	Horizon In-Wall 0-10V	HZ-DIMLVEX	0-10V	100 %	1.0 %	--	--	Crestron level of 15% = 1% lumens

## LUTRON HI-LUME 2-WIRE LTE 1% DRIVER

### Compatible / Recommended

For Lutron Hi-Lume 2-wire LTE 1% driver options, refer to Lutron's Technical Document Library for the latest dimmer compatibility listings and performance specifications.

[http://www.lutron.com/TechnicalDocumentLibrary/369543\\_ENG.pdf](http://www.lutron.com/TechnicalDocumentLibrary/369543_ENG.pdf)

**Notes:**

Performance Variation	<p>1) Results may vary for a number of reasons including the following:</p> <ul style="list-style-type: none"> <li>- job site line voltage fluctuation</li> <li>- fixture to dimmer distance</li> <li>- number of fixtures per dimmer, i.e. dimmer load</li> <li>- dimmer tolerances</li> <li>- driver/COB manufacturing tolerances</li> </ul>
Tested	2) Test results reflect: 150W load, dimmers trimmed to their lowest level.
Unlisted	3) For additional compatibility, please submit specific request to factory
Trim Settings	<p>4) Most modern dimmers and control systems allow bottom and top end levels to be trimmed, limiting the usable dim range in order to suit the lighting designer or end user's preferences. See Image 1.</p> <p>5) Adjustment of the trim settings may be preferred for a number of reasons, including:</p> <ul style="list-style-type: none"> <li>- limiting the brightness of the fixture at full-on</li> <li>- reducing "popcorn" affect if multiple fixtures come on at different times</li> <li>- reducing "pop-on time" if there is an undesirable delay at turn-on from the off-state</li> <li>- eliminating "pop-on" if the fixture does not turn on at the lowest dimmer setting</li> <li>- eliminating "drop-out" if the fixture turns off prior to reaching the lowest dimmer setting</li> <li>- eliminating low-end flicker or shimmer or buzzing, if present</li> </ul>
Programming	6) Modern control systems (Homeworks, RadioRa, Control 4, etc.) can be programmed in a number of ways including to turn on at a higher level then immediately dim lower after a short/settable time interval. For example, to reduce pop-on time, popcorning effect, or low-end flicker/shimmer, the control system can be programmed to turn-on at 5% then dim down to 0.8% after 0.5 seconds, thus allowing the full dimming range to be available once the fixture is in the on-state. See Image 2.
Digital System Input vs. Actual Light Output	7) Modern control systems (Homeworks, RadioRa, Control 4, etc.) can be programmed to adjust light levels. However, there is non-linear correlation between the light level selection values and the actual light output of the fixture. For example, a program setting of "50%" on the control system may correlate to 17% actual light output, a program setting of "20%" may correlate to 2% actual light output. See Image 3.
Slider Position vs. Actual Light Output	8) Like modern control systems, slider dimmers have a non-linear correlation between the slider position and the actual light output of the fixture. For example, a slider position of ~75% on the dimmer may correlate to 40% actual light output and a slider position of ~25% on the dimmer may correlate to 4% actual light output. See Image 3.
Eye Perception vs. Actual Light Output	9) The human eye responds to low light levels by enlarging the pupil, allowing more light to enter the eye. This response results in a difference between measured (actual) and perceived light levels. The dilation of the pupil allows more light to enter the eye so that a fixture dimmed to 10% of its maximum measured light output is perceived as being dimmed to only 32%. Likewise, a fixture dimmed to 1% is perceived to be at 10%. See Image 3.

Image 1  
 UPDATED 3/4/21  
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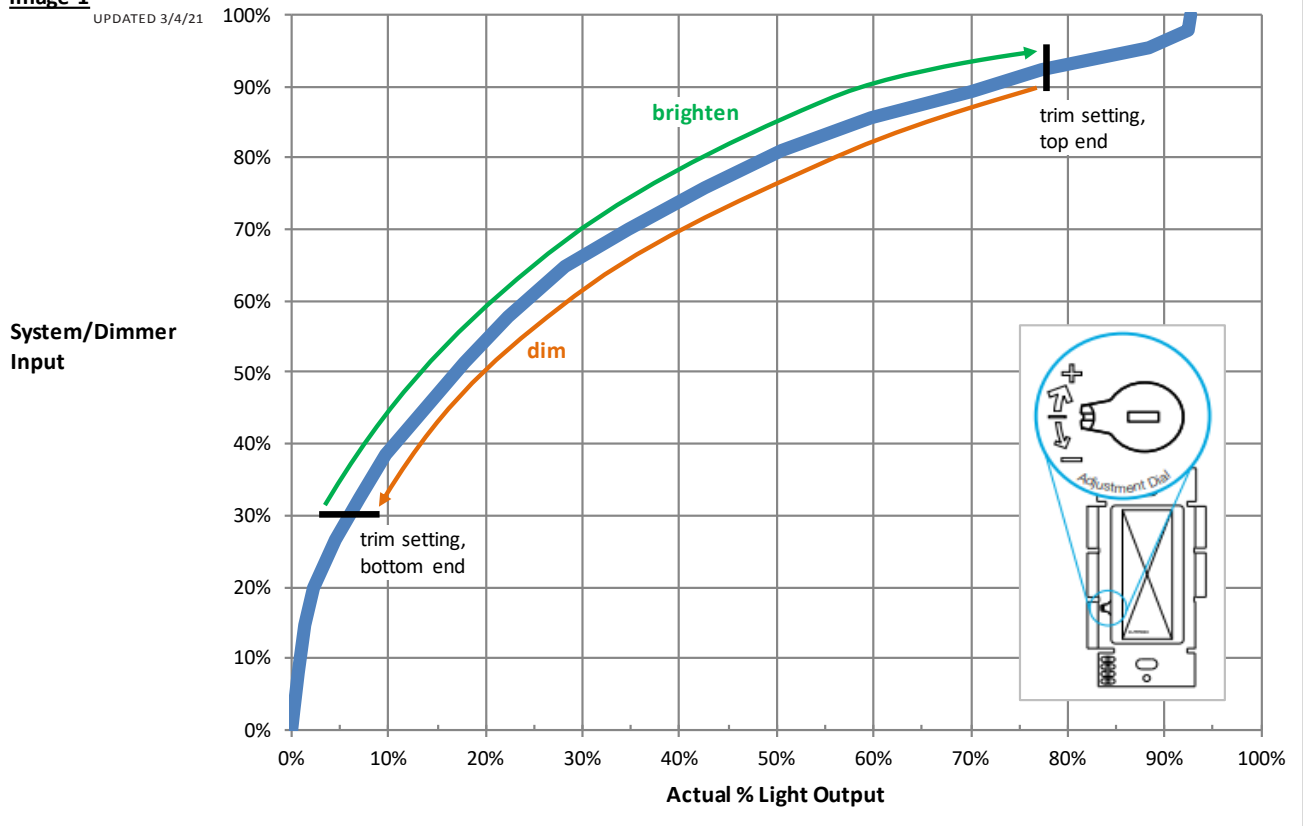
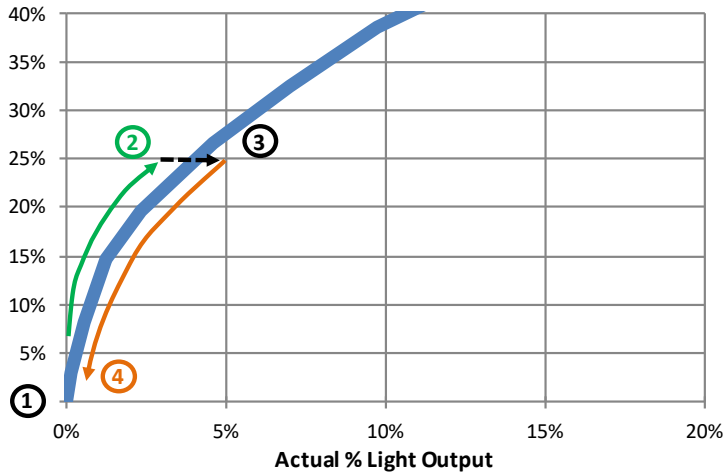


Image 2

System/Dimmer Input



- ① off-state
- ② on, starting at 5%
- ③ split second time delay
- ④ dim to lower level (via program or slider)

Image 3

System/Dimmer Input and Perceived Light Output

