Tech Lighting Architectural - Dimmer Compatibility Chart

Applicable for Multiples (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 recommened

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

R = Reverse Phase (Trailing Edge / ELV)

W = Wireless Compatible

STANDARD 120V PHASE DIMMING (Forward/Reverse)   (-3001 used since November 2018)

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 %	4.6 %	Yes	also MRF2-6ELV, trim adjust. avail.
Lutron	HomeWorks QS	HQRD-6NA	F, R, W	92 %	0.1 %	4.8 %	Yes	trim adjustment available
Lutron	HomeWorks QS	RPM-4A-120 (-4U)	F, R, W	100 %	3.0 %	5.8 %	Yes	Forward/MLV recommended
Lutron	Din Rail	LQSE-4A-120-D	F, R, W	100 %	8.0 %	6.0 %	Yes	trim adjustment available
Lutron	Caseta ELV+	PD-5NE	F, R, W	100 %	0.1 %	1.7 %	Yes	trim adjustment available
Lutron	Caseta	PD-6WCL	F, W	87 %	0.1 %	1.3 %	Yes	trim adjustment available
Lutron	Diva Reverse Phase	DVRP-253P	R	100 %	0.2 %	8.5 %	--	no trim adjustment available
Lutron	Diva*	DVCL-153P*	F	100 %	0.1 %	0.9 %	Yes	trim adjustment available
Lutron	Toggler / Ariadni	TGCL-153P	F	100 %	0.1 %	1.3 %	Yes	trim adjustment available
Lutron	Maestro	MACL-153M	F	89 %	0.1 %	1.5 %	Yes	trim adjustment available
Leviton	Decora	DSL06-1LZ	F	100 %	0.4 %	1.5 %	Yes	trim adjustment available
Leviton	Decora Smart	DW1KD-1BZ	F, W	100 %	1.0 %	1.5 %	--	trim adjustment available
Legrand	Harmony	HCL45-3PW	F	100 %	0.1 %	3.5 %	Yes	trim adjustment available
Legrand	Adorne	ADTP600RMHW1	F, R, W	70 %	0.5 %	1.3 %	--	trim adjustment available
Legrand	Adorne	ADTH700RMTUW1	F, R, W	92 %	0.7 %	7.5 %	--	trim adjustment available
Insteon	Insteon Dimmer	2477D	R, W	100 %	0.1 %	0.1 %	--	--
Forbes & Lomax	F&L Collection	FLR603P	F	100 %	0.1 %	1.1 %	Yes	no trim adjustment available
Control4	Decora Adaptive	C4-APD120	F, R	100 %	5.2 %	7.0 %	Yes	trim adjustment available
Control4	Decora Forward	C4-FPD120	F	100 %	0.6 %	3.0 %	Yes	trim adjustment available
Crestron	iLux	CLS-C6	F	100 %	3.0 %	value is with trim set to remove pop-on/drop-out		
Crestron	iLux Expansion Mod.	CLS-EXP-DIM	F	100 %	2.0 %	value is with trim set to remove pop-on/drop-out		
Crestron	iLux Expansion Mod.	CLS-EXP-DIMU	F, R	100 %	10.0 %	value is with trim set to remove pop-on/drop-out		
Crestron	4 Channel Mod.	CLX-1DIMU4-HP	F, R	100 %	7.0 %	value is with trim set to remove pop-on/drop-out		
Crestron	8 Channel Mod.	CLX-2DIM8	F	100 %	4.0 %	value is with trim set to remove pop-on/drop-out		
Crestron	8 Channel Mod.	CLX-2DIMU8	F, R	100 %	7.0 %	value is with trim set to remove pop-on/drop-out		
Crestron	4 Channel DIN Rail	DIN-1DIM4	F	100 %	4.0 %	value is with trim set to remove pop-on/drop-out		
Crestron	4 Channel DIN Rail	DIN-1DIMU4	F, R	100 %	7.0 %	value is with trim set to remove pop-on/drop-out		
Crestron	Cameo	CLW-DIMEX-E	F, W	100 %	4.0 %	value is with trim set to remove pop-on/drop-out		
Crestron	Cameo	CLW-DELVEX	R, W	100 %	7.0 %	value is with trim set to remove pop-on/drop-out		
Crestron	Green Light	GL-EXP-DIMU-CN	F, R	100 %	8.0 %	value is with trim set to remove pop-on/drop-out		
Crestron	Green Light	GL-EXP-DIMU-DALI	F, R	100 %	8.0 %	value is with trim set to remove pop-on/drop-out		
Crestron	Green Light Express	GLXX-2DIM8	F, R	100 %	4.0 %	value is with trim set to remove pop-on/drop-out		

Not Recommended or Incompatible

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

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

Notes:

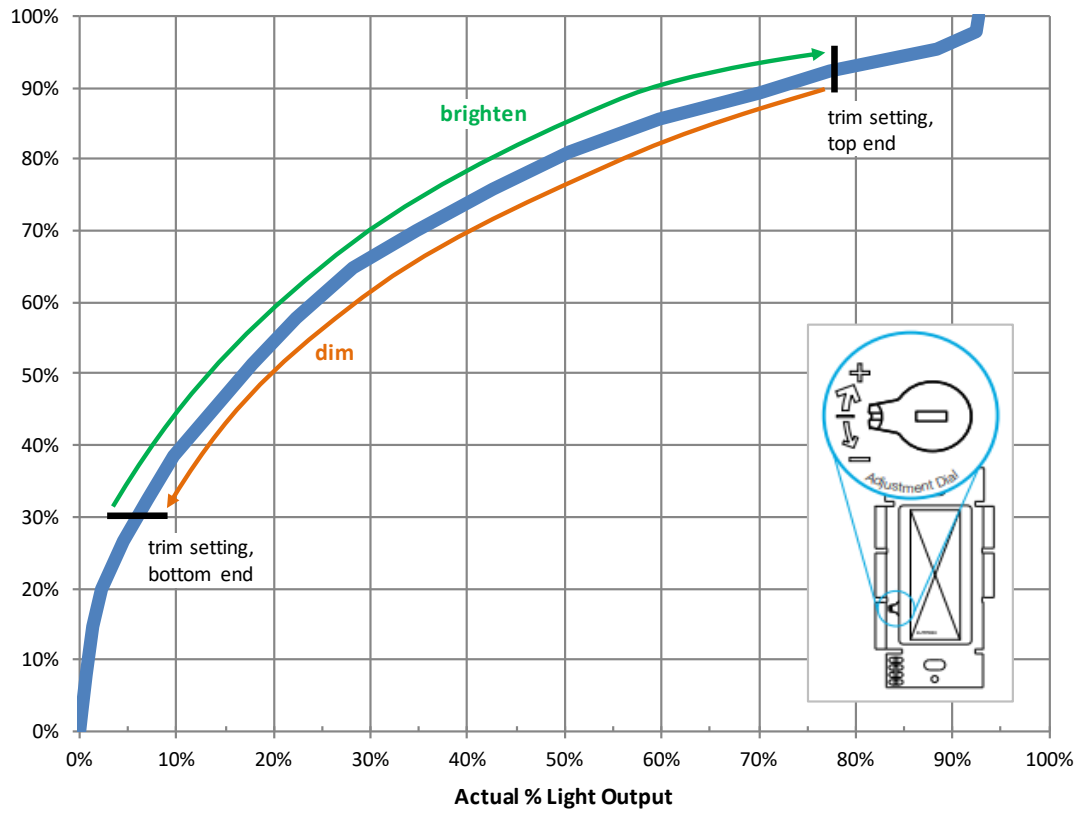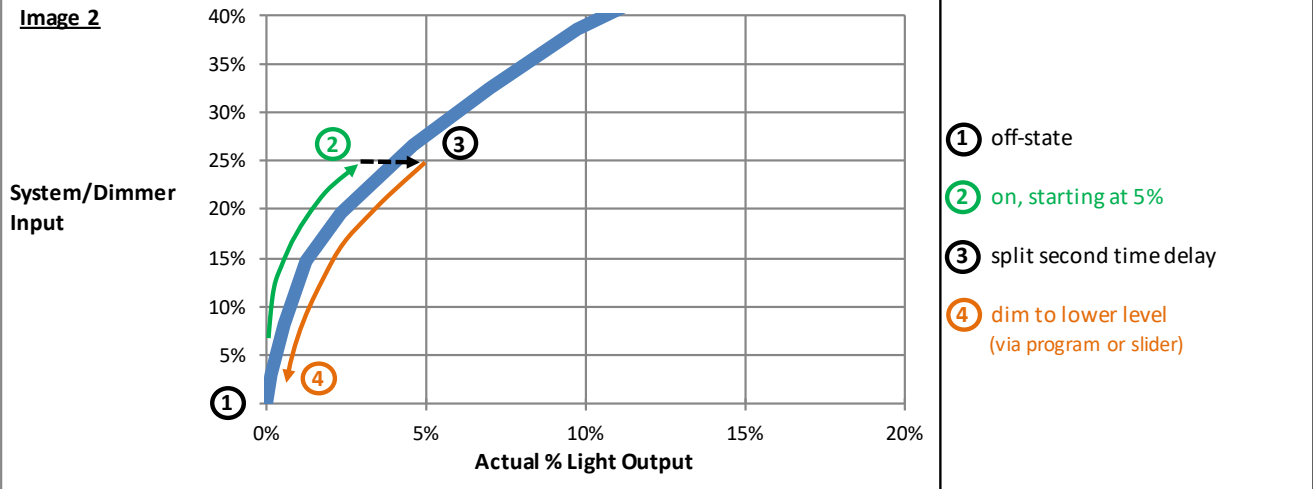|	

Performance Variation	1) Results may vary for a number of reasons including the following:
	    - job site line voltage fluctation
	    - fixture to dimmer distance
	    - number of fixtures per dimmer, i.e. dimmer load
	    - dimmer tolerances
	    - driver/COB manufacturing tolerances

Tested Conditions	2) Test results reflect: 150W load, dimmers trimmed to their lowest level. Crestron and Control4 tested with 75W load.
Unlisted Dimmers	3) For additional compatibility, please submit specific request to factory

Trim Settings	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.
	5) Adjustment of the trim settings may be preferred for a number or reasons, including:
	    - limiting the brightness of the fixture at full-on
	    - reducing "popcorn" affect if multiple fixtures come on at different times
	    - reducing "pop-on time" if there is an undesirable delay at turn-on from the off-state
	    - eliminating "pop-on" if the fixture does not turn on at the lowest dimmer setting
	    - eliminating "drop-out" if the fixture turns off prior to reaching the lowest dimmer setting
	    - eliminating low-end flicker or shimmer or buzzing, if present

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

System/Dimmer Input

100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%

brighten

dim

trim setting, top end

trim setting, bottom end

Adjustment Dial

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Actual % Light Output

Image 2

System/Dimmer
Input

Legend:
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

75% Slider Position
40% Light Output

25% Slider Position
4% Light Output