Tech Lighting Architectural - Dimmer Compatibility Chart

Applicable for ESSENCE Static White and Warm Dim

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
Standard Phase = Forward and Reverse Phase
F = Forward Phase (Leading Edge / Triac / Incandescent / Lutron C.L)
R = Reverse Phase (Trailing Edge / ELV)
M = Magnetic Low-Voltage (Leading Edge / MLV)
W = Wireless Compatible

STANDARD PHASE 120V POWER SUPPLY (Forward/Reverse) (700AT***24ELV120, used since Sept 2020)

Manufacturer	Name	Tested Part Number	Type	Top	Bottom	Pop-On	Drop-Out	Notes
Compatible / Recommended								
Lutron	RadioRa 2	RRD-6NA	F, R, W	94 %	0.2 %	--	--	also MRF2-6ELV
Lutron	RadioRa 2	RRD-10ND	F, W	96 %	0.2 %	--	--	also MRF2-6ND
Lutron	RadioRa 2	RRD-H6BRL	F, W	80 %	0.2 %	--	--	--
Lutron	Vive	MRF2S-6CL	F, W	87 %	0.2 %	--	--	also RRD-6CL, HQRD/A-6CL
Lutron	Caseta	PD-6WCL	F, W	79 %	0.2 %	--	--	--
Lutron	Diva Reverse Phase	DVRP-253P	R	75 %	0.2 %	--	--	--
Lutron	Diva*	DVCL-153P*	F	98 %	0.2 %	--	--	also TGCL-153P, SCL-153P, LECL-153P
Lutron	Sunnata	STCL-153	F	86 %	0.2 %	--	--	--
Lutron	Maestro	MACL-153M	F	77 %	0.2 %	--	--	--
Leviton	Decora	DSL06-1LZ	F	100 %	0.2 %	--	--	--
Leviton	Decora	TSL06-1LZ	F	100 %	0.4 %	--	--	--
Leviton	Decora Smart	DW1KD-1BZ	F, W	99 %	0.2 %	--	--	--
Leviton	Decora Rocker Slider	DSE06-10Z	R	100 %	0.2 %	--	--	--
Leviton	Decora SureSlide	6672	F	100 %	0.9 %	--	--	--
Diode LED	Switchex	DI-24V-SE-60W	R	100 %	0.2 %	--	--	--
Legrand	Radiant	RHL743P	F	89 %	0.2 %	--	--	--
Legrand	Adorne	ADTP600RMHW1	F, R, W	69 %	0.2 %	--	Yes	trim adjustment available
Legrand	Adorne	ADTH700RMTUW1	F, R, W	63 %	0.2 %	--	Yes	trim adjustment available
Forbes & Lomax	F&L Collection	FLR603P	F	74 %	0.2 %	--	--	--
Eaton	Toggle Dimmer	TAL06P2	F, M	100 %	0.2 %	--	--	--
Insteon	Insteon Dimmer	2477D	R, W	100 %	0.2 %	--	--	--
Control4	Decora Forward	C4-FPD120	F	100 %	0.2 %	--	Yes	trim adjustment available
Control4	Decora Adaptive	C4-APD120	F, R, M	100 %	0.2 %	--	Yes	trim adjustment available
Not Recommended or Incompatible								
Lutron	Nova T	NTELV-600	R	--	--	--	--	per Lutron: not UL rated for LEDs
Lutron	Skylark	SELV-300P	R	--	--	--	--	per Lutron: not UL rated for LEDs
Lutron	Diva	DVELV-300P	R	--	--	--	--	per Lutron: not UL rated for LEDs
Lutron	Maestro	MAELV-600P	R	--	--	--	--	per Lutron: not UL rated for LEDs
Lutron	Glyder	GL-600P-WH	F	--	--	--	--	per Lutron: not UL rated for LEDs
Lutron	Skylark	S-600P	F	--	--	--	--	per Lutron: not UL rated for LEDs
Lutron	Rotary Dimmer	DV-600P-WH	F	--	--	--	--	per Lutron: not UL rated for LEDs
Lutron	Diva	DV-600P	F	--	--	--	--	per Lutron: not UL rated for LEDs

MAGNETIC LOW-VOLTAGE 120V POWER SUPPLY* (MLV)

(700AT***24MLV120, used since 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	95 %	5.0 %	--	Yes	trim adjustment available
Lutron	RadioRa 2	RRD-10ND	F, W	95 %	5.0 %	--	Yes	trim adjustment available
Lutron	RadioRa 2	RRD-H6BRL	F, W	88 %	5.0 %	--	Yes	trim adjustment available
Lutron	Caseta ELV+	PD-5NE	F, R, W	77 %	5.0 %	--	Yes	trim adjustment available
Lutron	Sunnata	STCL-153	F, M	65 %	5.0 %	--	Yes	no trim adjustment available
Leviton	Decora Smart	DW1KD-1BZ	F, W	94 %	5.0 %	--	--	--
Eaton	Toggle Dimmer	TAL06P2	F, M	84 %	5.0 %	--	--	not recommended for 100W MLV
Control4	Decora Forward	C4-FPD120	F	94 %	5.0 %	--	Yes	trim adjustment available
Not Recommended or Incompatible								
Lutron	Nova T	NTELV-600	R	--	--	--	--	per Lutron: not UL rated for LEDs
Lutron	Skylark	SELV-300P	R	--	--	--	--	per Lutron: not UL rated for LEDs
Lutron	Diva	DVELV-300P	R	--	--	--	--	per Lutron: not UL rated for LEDs
Lutron	Maestro	MAELV-600P	R	--	--	--	--	per Lutron: not UL rated for LEDs
Lutron	Glyder	GL-600P-WH	F	--	--	--	--	per Lutron: not UL rated for LEDs
Lutron	Skylark	S-600P	F	--	--	--	--	per Lutron: not UL rated for LEDs
Lutron	Ariadni	AY-600P-WH	F	--	--	--	--	per Lutron: not UL rated for LEDs
Lutron	Rotary Dimmer	DV-600P-WH	F	--	--	--	--	per Lutron: not UL rated for LEDs
Lutron	Diva	DV-600P	F	--	--	--	--	per Lutron: not UL rated for LEDs
Lutron	Maestro PRO	MA-PRO	F, R	--	--	--	--	incompatible
Control4	Decora Adaptive	C4-APD120	F, R, M	96 %	9.7 %	--	Yes	not recommended

*Magnetic Low-Voltage (MLV) Power Supplies are *not compatible* with Warm Dim

0-10V POWER SUPPLY

(700AT***24010120-277, used since Sept 2020)

Compatible / Recommended								
Manufacturer	Name	Tested Part Number	Type	Top	Bottom	Pop-On	Drop-	Notes
Lutron	Diva	DVSTV	0-10V	100 %	5.3 %	--	--	

LUTRON HI-LUME ECOSYSTEM/3-WIRE POWER SUPPLY*

(700AT9624HLECO120-277, used since Sept 2020)

Compatible / Recommended

For Lutron Hi-Lume EcoSystem/3-wire L3D0 0.1% Power Supply, refer to Lutron's Technical Document Library for the latest dimmer compatibility listings and performance specifications.

https://www.lutron.com/TechnicalDocumentLibrary/369883.pdf

*Lutron Hi-Lume EcoSystem/3-wire Power Supplies are *not compatible* with Warm Dim

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	2) Test results reflect: 150W load, dimmers trimmed to their lowest level. Performance may vary depending on install load.
Unlisted	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

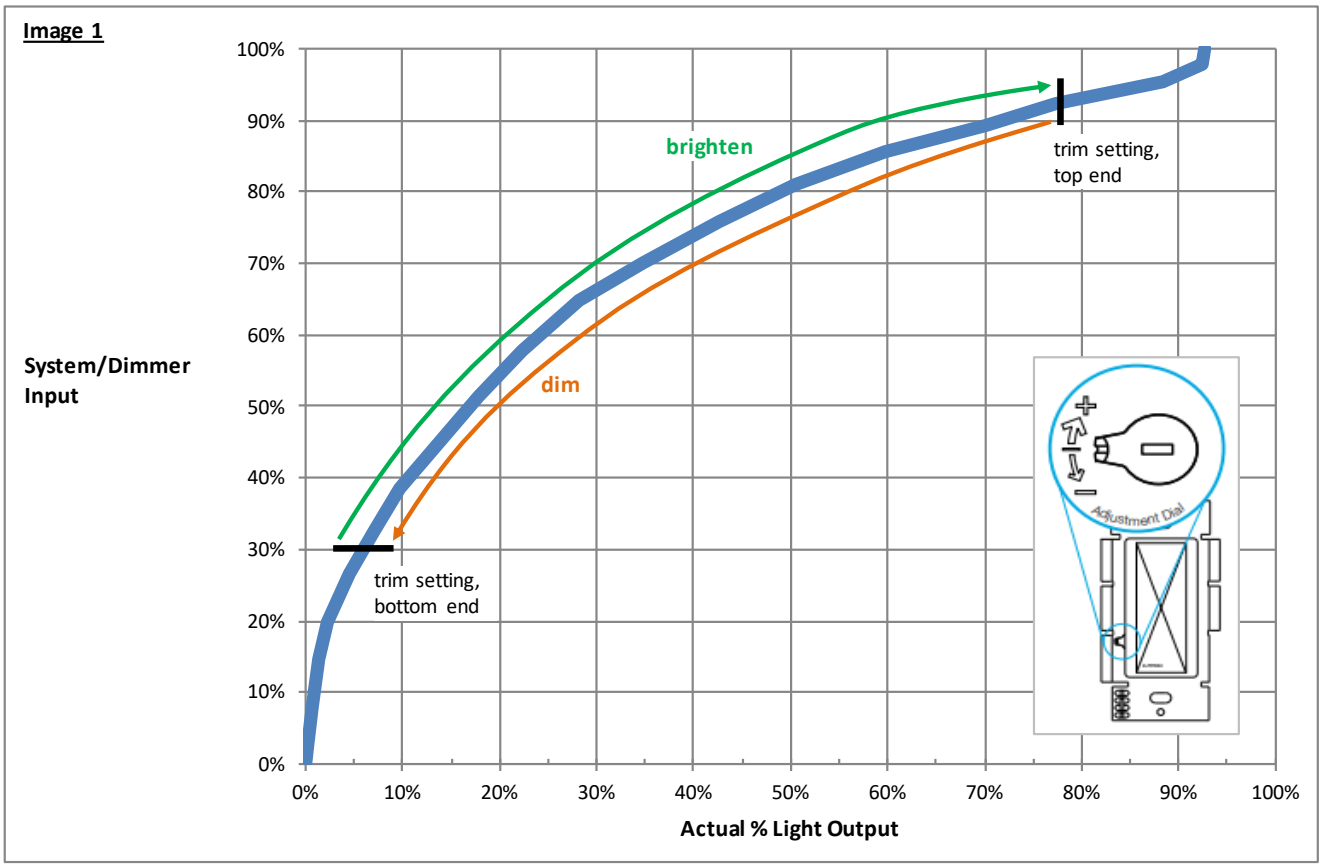
System/Dimmer Input
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Actual % Light Output
brighten
dim
trim setting, top end
trim setting, bottom end
Adjustment Dial

Image 2

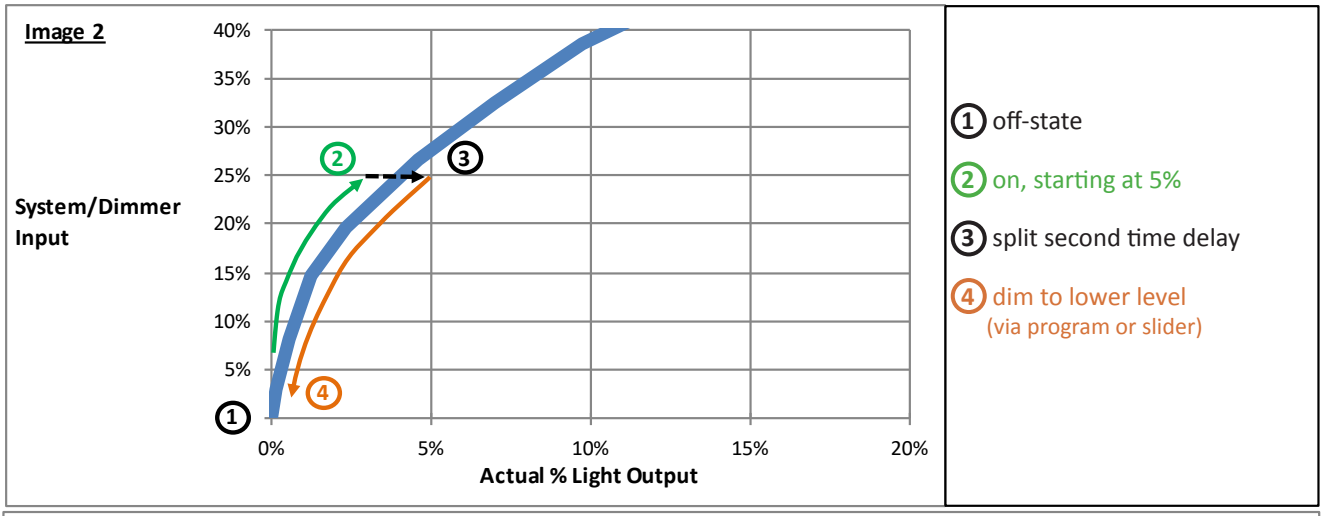

Image 3