

# ELEMENT Dimmer Compatibility Chart - E2, E3, E4 & Multiples

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

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

Drop-out = % light output at drop-out, if occurring

Flicker/Shimmer = minimum % light output without experiencing flicker/shimmer, evaluated over a period of 10 seconds

R = Reverse Phase (Trailing Edge / ELV)

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

W = Wireless Compatible

## STANDARD TRIAC/ELV DRIVER

## Applicable for ELEMENT 2", 3", 4" and Multiples

### Compatible / Recommended

Manufacturer	Name	Tested Part Number	Type	Top	Bottom	Pop-On	Drop-Out	Notes
Lutron	Nova T	NTELV-600	R	73 %	0.2 %	7.4 %		no trim adjustment available
Lutron	RadioRa 2	RRD-6NA	F, R, W	100 %	1.4 %	4.6 %	1.4 %	
Lutron	HomeWorks QS	HQRD-6NA	F, R, W	92 %	0.1 %	4.8 %	0.1 %	
Lutron	Maestro	MRF2-6ELV	F, R, W	92 %	0.1 %	2.4 %	0.1 %	
Lutron	Caseta	PD-5NE-WH	R, W	100 %	0.0 %	1.7 %	0.0 %	
Lutron	Diva Reverse Phase	DVRP-253P	R	100 %	0.2 %	8.5 %		no trim adjustment available
Lutron	Toggler / Ariadni	TGCL-153P	F	100 %	0.1 %	1.3 %	0.1 %	
Lutron	Diva / Skylark	DVCL-153P	F	100 %	0.0 %	0.9 %	0.0 %	
Lutron	Maestro	MACL-153M	F	89 %	0.1 %	1.5 %	0.1 %	
Lutron	Caseta	PD-6WCL	F, W	87 %	0.1 %	1.3 %	0.1 %	
Insteon	Insteon Dimmer	2477D	R, W	100 %	0.0 %	0.1 %		
Leviton	Decora	DSL06-1LZ	F	100 %	0.4 %	1.5 %	0.4 %	
Legrand	Harmony	HCL45-3PW	F	100 %	0.1 %	3.5 %	0.1 %	
Legrand	Adorne	ADTP600RMHW1	F, R, W	70 %	0.5 %	1.3 %		
Legrand	Adorne	ADTH700RMTUW1	F, R, W	92 %	0.7 %	7.5 %		
Forbes & Lomax	F&L Collection	FLR603P	F	100 %	0.0 %	1.1 %	0.0 %	no trim adjustment available
Leviton	Decora Smart	DW1KD-1BZ	F, W	100 %	1.0 %	1.5 %		

### Not Recommended or Incompatible

Lutron	Skylark	SELV-300P	R	76 %	0.2 %	8.4 %		Lutron: not UL rated for LEDs; no trim
Lutron	Diva	DVELV-300P	R	72 %	0.2 %	7.5 %		Lutron: not UL rated for LEDs; no trim
Lutron	Maestro	MAELV-600P	R	96 %	0.2 %	7.7 %	0.2 %	Lutron: not UL rated for LEDs; no trim
Lutron	Glyder	GL-600P-WH	F	106 %	0.4 %	1.1 %	0.4 %	Lutron: not UL rated for LEDs; no trim
Lutron	Skylark	S-600P	F	106 %	0.0 %	1.5 %	0.0 %	Lutron: not UL rated for LEDs
Lutron	Ariadni	AY-600P-WH	F	105 %	0.1 %	0.6 %	0.1 %	Lutron: not UL rated for LEDs; no trim
Lutron	Rotary Dimmer	DV-600P-WH	F	105 %	0.0 %	2.5 %	0.0 %	Lutron: not UL rated for LEDs; no trim
Lutron	Diva	DV-600P	F	105 %	0.1 %	1.1 %	0.1 %	Lutron: not UL rated for LEDs; no trim

## LUTRON HI-LUME 2-WIRE LTE DRIVER

### Compatible / Recommended

Manufacturer	Name	Tested Part Number	Type	Top	Bottom	Pop-On	Drop-Out	Notes
Lutron	RadioRa 2	RRD-6NA	F, R, W	101 %	1.3 %	0.5 %	1.3 %	
Lutron	HomeWorks QS	HQRD-6NA	F, R, W	100 %	1.4 %	0.6 %		
Lutron	Maestro	MRF2-6ELV	F, R, W	100 %	1.4 %	0.6 %		
Lutron	Ariadni	AY-600P-WH	F	102 %	1.4 %	0.6 %		
Lutron	Glyder	GL-600P-WH	F	101 %	1.4 %	0.5 %		
Lutron	Skylark	S-600P	F	101 %	1.4 %	0.5 %		

### Not Recommended or Incompatible

Lutron	Caseta	PD-5NE-WH	R	--	--	--		<i>incompatible w/ Hi-Lume 2-wire</i>
Insteon	Insteon Dimmer	2477D	R	--	--	--		<i>incompatible w/ Hi-Lume 2-wire</i>
Lutron	Diva Reverse Phase	DVRP-253P	R	--	--	--		<i>incompatible w/ Hi-Lume 2-wire</i>
Lutron	Nova T	NTELV-600	R	--	--	--		<i>incompatible w/ Hi-Lume 2-wire</i>
Lutron	Maestro	MAELV-600P	R	102 %	1.4 %	0.6 %		Lutron: not UL rated for LEDs; no trim
Lutron	Skylark	SELV-300P	R	--	--	--		<i>incompatible w/ Hi-Lume 2-wire</i>
Lutron	Diva	DVELV-300P	R	--	--	--		<i>incompatible w/ Hi-Lume 2-wire</i>
Lutron	Toggler / Ariadni	TGCL-153P	F	--	--	--		<i>incompatible w/ Hi-Lume 2-wire</i>
Lutron	Diva / Skylark	DVCL-153P	F	--	--	--		<i>incompatible w/ Hi-Lume 2-wire</i>
Lutron	Maestro	MACL-153M	F	--	--	--		<i>incompatible w/ Hi-Lume 2-wire</i>
Lutron	Caseta	PD-6WCL	F	--	--	--		<i>incompatible w/ Hi-Lume 2-wire</i>
Lutron	Maestro	MRF2-6CL	F	--	--	--		<i>incompatible w/ Hi-Lume 2-wire</i>
Lutron	Diva	DV-600P	F	--	--	--		<i>incompatible w/ Hi-Lume 2-wire</i>
Lutron	Rotary Dimmer	DV-600P-WH	F	102 %	1.4 %	0.6 %		Lutron: not UL rated for LEDs; no trim

**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 fluctation</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 Conditions	<p>2) Test results reflect: 150W load, dimmers trimmed to their lowest level</p>
Unlisted Dimmers	<p>3) For additional compatibility, please submit specific request to factory</p>
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 "drop-out" if the fixture dims to off prior to reaching the bottom of the dimmer setting</li> <li>- eliminating low-end flicker or shimmer or buzzing, if present</li> </ul>
Programming	<p>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.</p>
Digital System Input vs. Actual Light Output	<p>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.</p>
Slider Position vs. Actual Light Output	<p>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.</p>
Eye Perception vs. Actual Light Output	<p>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.</p>

Image 1

System/Dimmer  
Input

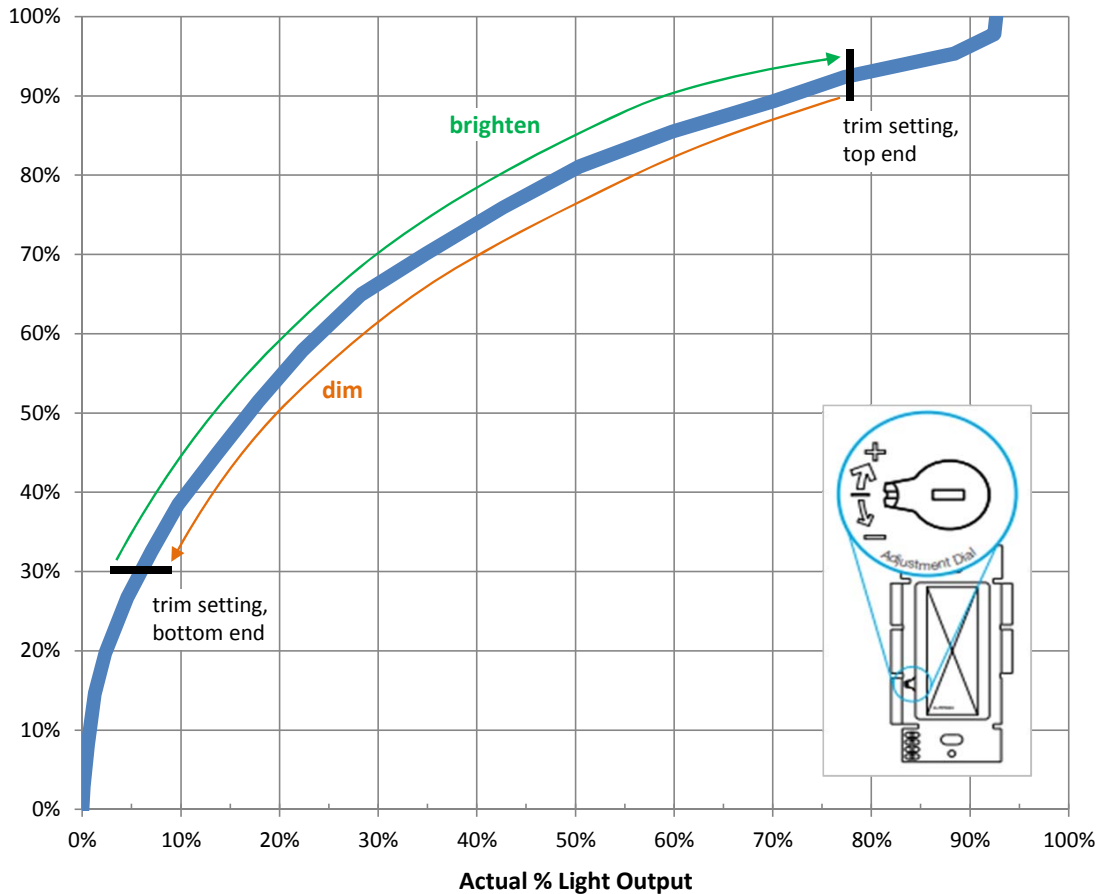
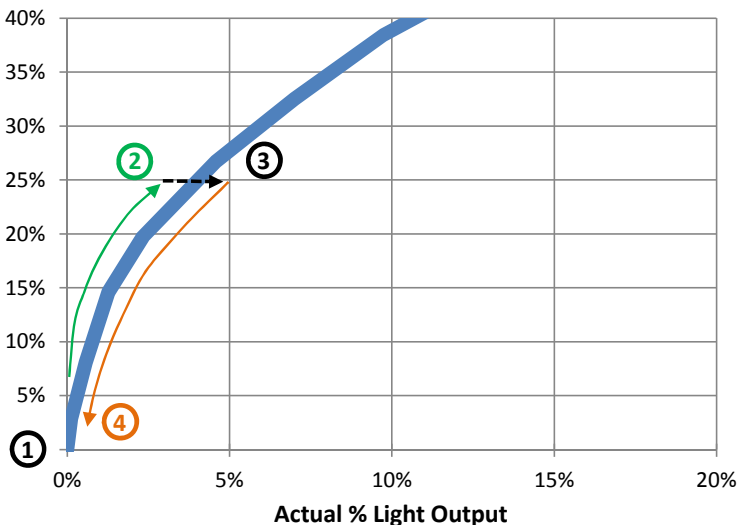


Image 2

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

