ERP POWER

Dimming Compatibility Matrix with 120 Vac TRIAC, ELV and 0-10 V Dimmers

ESM020W-0280-42	Total Score:	97.8%	Driver Current (mA) with no Dimmer:	281	Driver Light (FC) with no Dimmer:	610	Scoring
	Avg. Min. Dimming:	3.4%					0 - Needs improvement
							1 - Unlikely to be noticed
							2 - No issues

Dimmer List		Indiv. Score	Light Output (Foot Candle)		Current (mA)		Dimming Range[1]		Smooth Dimming[2]	Sag[3]	No Start Flash[4]	Flicker[5]	Shimmer[6]	Able to turn off[7]	Audible Noise[8]
Mfg.	Model	%	Max	Min	Max	Min	Max	Min		%					
Lutron	S-603PG	100.0%	540	6	245	2	89%	1%	2	13.0%	2	2	2	2	2
Leviton	IPI06-1LZ	100.0%	610	6	281	2	100%	1%	2	0.0%	2	2	2	2	2
Leviton	6631-2	95.8%	610	6	281	2	100%	1%	2	0.0%	1	2	2	2	2
Lutron	DVCL-153P	100.0%	610	6	281	2	100%	1%	2	0.0%	2	2	2	2	2
Lutron	DV600P	91.7%	610	6	281	2	100%	1%	2	0.0%	2	2	1	2	2
Lutron	TGCL-153P	100.0%	610	20	281	8	100%	3%	2	0.0%	2	2	2	2	2
Lutron	S600P	100.0%	610	6	281	2	100%	1%	2	0.0%	2	2	2	2	2
Leviton	VPE06	100.0%	610	50	281	20	100%	8%	2	0.0%	2	2	2	2	2
Lutron	DVELV303P	100.0%	610	30	281	12	100%	5%	2	0.0%	2	2	2	2	2
Lutron	SELV300P	100.0%	610	32	281	13	100%	5%	2	0.0%	2	2	2	2	2
Leviton	6683-IW	95.8%	610	6	281	2	100%	1%	2	0.0%	1	2	2	2	2
Leviton	6161	100.0%	610	12	281	5	100%	2%	2	0.0%	2	2	2	2	2
Leviton	6633-P	100.0%	610	6	281	2	100%	1%	2	0.0%	2	2	2	2	2
Lutron	TG-600P	100.0%	610	35	281	14	100%	6%	2	0.0%	2	2	2	2	2
Cooper	DLC03P	91.7%	610	7	281	3	100%	1%	1	0.0%	2	2	2	2	2
Lutron	LG600P	100.0%	610	6	281	2	100%	1%	2	0.0%	2	2	2	2	2
Lutron	CT103P	100.0%	610	11	281	4	100%	2%	2	0.0%	2	2	2	2	2
Cooper	SLC03P	91.7%	610	6	281	2	100%	1%	1	0.0%	2	2	2	2	2
Leviton	IPE04	100.0%	610	30	281	11	100%	5%	2	0.0%	2	2	2	2	2
Lutron	MAELV600	95.8%	610	65	281	25	100%	11%	2	0.0%	2	2	2	2	2
Lutron	FAELV500	95.8%	610	69	281	27	100%	11%	2	0.0%	2	2	2	2	2
Lightolier	ZP260QEW	100.0%	610	39	281	15	100%	6%	2	0.0%	2	2	2	2	2
Cooper	DAL06P	91.7%	610	6	281	2	100%	1%	2	0.0%	2	2	1	2	2

NOTES:

1. If light is measured, then the dimming range is based on light output. If light is not measured, then the dimming range is based on the percentage of output current.
2. While adjusting the dimming level, a smooth dimming, with no sudden jumps in light output, results in a score of 2. A small jump that is only noticeable if directly staring at the light results in a score of 1.
   A large obvious jump results in a score of 0.
3. Percentage away from 100% output current when dimmer is inserted in the circuit, at the dimmer's maximum conduction angle.
4. No flash at startup (at maximum conduction angle) results in a score of 2. A smooth, but still noticeable transition from overshoot results in a score of 1. A transition with overshoot and undershoot results in a score of 0.
5. Highly visible repeating light fluctuations. No flicker results in a score of 2. Flicker results in a score of 0. There is no "1" score.
   Flicker is measured using a stable AC source delivered by a power supply. AC line voltage instability will cause visible light fluctuations.
6. Low frequency or random variations in light output that are typically less noticeable than flicker (the light output does not turn off at any point).
   No shimmer, perfect light output, results in a score of 2. Only noticeable shimmer, if staring directly at the LEDs, results in a score of 1. Obvious shimmer, even if looking away from the LEDs, results in a score of 0.
   Like Flicker, Shimmer is measured using a stable AC source delivered by a power supply. AC line voltage instability will cause visible light fluctuations.
7. No light output when dimmer switch or button is turned off.
8. Audible noise with driver located at 3 feet and measured at 90 degree conduction angle (worst case). A strongly apparent noise resuts in a score of 0.
   A score of 1 is assigned if the noise is not very obvious, and most likely to not be noticed inside of a fixture.
9. All the dimmers are set to the widest dimming range, when the trim potentiometer is available. Testing is done with 1 dimmer per LED driver.