ERP POWER

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

ESM040W-0940-33-SS-F1B	Total Score:	91.5%	Driver Current (mA) with no Dimmer:	945	Driver Light (FC) with no Dimmer:	5340	Scoring
	Avg. Min. Dimming:	4.0%					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	91.7%	4740	130	840	36	89%	2%	2	11.0%	2	2	1	2	2
Leviton	IPI06-1LZ	91.7%	5340	0	945	0	100%	0%	2	0.0%	2	2	1	2	2
Leviton	6631-2	91.7%	5340	0	945	0	100%	0%	2	0.0%	2	2	1	2	2
Lutron	DVCL-153P	91.7%	5340	270	945	58	100%	5%	2	0.0%	2	2	1	2	2
Lutron	DV600P	91.7%	5340	200	945	47	100%	4%	2	0.0%	2	2	1	2	2
Lutron	TGCL-153P	91.7%	5340	170	945	42	100%	3%	2	0.0%	2	2	1	2	2
Lutron	S600P	91.7%	5340	50	945	17	100%	1%	2	0.0%	2	2	1	2	2
Leviton	VPE06	91.7%	5340	380	945	76	100%	7%	2	0.0%	2	2	1	2	2
Lutron	DVELV303P	91.7%	5340	240	945	54	100%	4%	2	0.0%	2	2	1	2	2
Lutron	SELV300P	91.7%	5340	280	945	60	100%	5%	2	0.0%	2	2	1	2	2
Leviton	6683-IW	91.7%	5340	0	945	0	100%	0%	2	0.0%	2	2	1	2	2
Leviton	6161	87.5%	5340	700	945	128	100%	13%	2	0.0%	2	2	1	2	2
Leviton	6633-P	91.7%	5340	80	945	26	100%	1%	2	0.0%	2	2	1	2	2
Lutron	TG-600P	91.7%	5340	530	945	103	100%	10%	2	0.0%	2	2	1	2	2
Cooper	DLC03P	91.7%	5340	200	945	45	100%	4%	2	0.0%	2	2	1	2	2
Lutron	LG600P	91.7%	5340	200	945	46	100%	4%	2	0.0%	2	2	1	2	2
Lutron	CT103P	91.7%	5340	370	945	75	100%	7%	2	0.0%	2	2	1	2	2
Cooper	SLC03P	91.7%	5340	0	945	0	100%	0%	2	0.0%	2	2	1	2	2
Leviton	IPE04	91.7%	5340	210	945	50	100%	4%	2	0.0%	2	2	1	2	2
Lutron	MAELV600	91.7%	5340	480	945	93	100%	9%	2	0.0%	2	2	1	2	2
Lutron	FAELV500	91.7%	5340	92	945	47	100%	2%	2	0.0%	2	2	1	2	2
Lightolier	ZP260QEW	91.7%	5340	300	945	62	100%	6%	2	0.0%	2	2	1	2	2
Cooper	DAL06P	91.7%	5340	0	945	0	100%	0%	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.