ERP POWER

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

ESM020W-0440-34-SS-F1B	Total Score:	92.8%	Driver Current (mA) with no Dimmer:	433	Driver Light (FC) with no Dimmer:	1630	Scoring
	Avg. Min. Dimming:	2.2%					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)	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%	1370	10	383	14	84%	1%	2	2	2	1	2	2
Leviton	IPI06-1LZ	83.3%	1630	8	433	10	100%	0%	2	2	0	2	2	2
Leviton	6631-2	75.0%	1630	8	433	10	100%	0%	1	2	0	2	2	2
Lutron	DVCL-153P	83.3%	1630	8	433	9	100%	0%	2	2	0	2	2	2
Lutron	DV600P	100.0%	1630	9	433	11	100%	1%	2	2	2	2	2	2
Lutron	TGCL-153P	100.0%	1630	10	433	15	100%	1%	2	2	2	2	2	2
Lutron	S600P	83.3%	1630	10	433	12	100%	1%	2	2	0	2	2	2
Leviton	VPE06	100.0%	1630	50	433	32	100%	3%	2	2	2	2	2	2
Lutron	DVELV303P	100.0%	1630	20	433	20	100%	1%	2	2	2	2	2	2
Lutron	SELV300P	100.0%	1630	20	433	22	100%	1%	2	2	2	2	2	2
Leviton	6683-IW	100.0%	1630	20	433	21	100%	1%	2	2	2	2	2	2
Leviton	6161	100.0%	1630	130	433	57	100%	8%	2	2	2	2	2	2
Leviton	6633-P	75.0%	1630	10	433	15	100%	1%	1	2	0	2	2	2
Lutron	TG-600P	100.0%	1630	90	433	43	100%	6%	2	2	2	2	2	2
Cooper	DLC03P	75.0%	1630	8	433	10	100%	0%	1	2	0	2	2	2
Lutron	LG600P	100.0%	1630	10	433	12	100%	1%	2	2	2	2	2	2
Lutron	CT103P	100.0%	1630	50	433	32	100%	3%	2	2	2	2	2	2
Cooper	SLC03P	91.7%	1630	10	433	15	100%	1%	1	2	2	2	2	2
Leviton	IPE04	100.0%	1630	20	433	20	100%	1%	2	2	2	2	2	2
Lutron	MAELV600	100.0%	1630	75	433	39	100%	5%	2	2	2	2	2	2
Lutron	FAELV500	100.0%	1630	80	433	40	100%	5%	2	2	2	2	2	2
Lightolier	ZP260QEW	100.0%	1630	120	433	53	100%	7%	2	2	2	2	2	2
Cooper	DAL06P	75.0%	1630	10	433	12	100%	1%	1	2	0	2	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.