



## Electrical compatibility – ARC Downlights 120V - North America

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## **General compatibility guidelines**

### **Scope**

This document provides the basic guidelines regards electrical compatibility of SORAA 120V ARC Downlights (fixed, adjustable and wall-washer).

### **Dimmer Compatibility**

SORAA 120V ARC Downlights are made to work with reverse phase and forward phase phase cut dimmers. However, the use of reverse phase dimmers is preferred and will show in general better behavior .

Dimmer compatibility tables are on pages **3-5**.

The percentages for each dimmer combination are the percentage of light output that we were able to dim down to without seeing any problems like flicker/shimmer. Anything 30% or above is considered not compatible and you will see a “NC” in a grey cell.

There might be a minimum wattage load on the dimmer. If this minimum load is not met, there might be compatibility issues.

### **Maximum number of Pendants on a dimmer**

The following need to be considered when determining the amount of pendants on a dimmer.

1. SORAA tests have been carried out with 1 fixture unless stated otherwise.
2. There is a repetitive, very brief current spike the LED will see twice per cycle. This current spike has to be provided by the dimmer, and will affect the recommended fixture load on each dimmer.
3. Ultimately the dimmer manufacturer is the only one with authority to rate their product, but SORAA can give an Engineering estimate.
4. We recommend to use a 5.0 de-rating factor for dimmers loaded with our 120V fixtures.

**For example for a 500W dimmer it would mean  $500/5 = 100W$  of LED, so an estimated maximum of 5 fixtures of 18.5W.**

### **Disclaimer**

Compatibility tests are conducted by Soraa only as guidance for the user.

All tests are conducted under bench conditions; results may differ from test results depending on conditions at the application site.

Results may vary due to variability in component choices and manufacturing processes by dimmer manufacturers.

For more information on the dimmers please find specs on the manufacturer’s website.

## SORAA ARC Downlight - DIMMER COMPATIBILITY LIST - North America

Dimmer Manufacturer	Dimmer family	Dimmer part number	Edge Trigger	Quantity of fixtures tested	Input Volatge	Downlight 50mm 18W	Comments
Cooper		D106P	Forward	2	120V	11%	
Cooper		SLC03P	Forward	2	120V	10%	
Crestron		DIN-1DIMU4	Reverse	2	120V	8%	
Leviton		6613-P	Forward	2	120V	8%	
Leviton		6633-P	Forward	2	120V	8%	
Leviton		6404	Forward	2	120V	8%	
Leviton		IPL06	Forward	2	120V	7%	
Leviton		6615-P	Reverse	2	120V	8%	
Lutron	Caseta	PD-10NXD-XX	Forward	2	120V	11%	
Lutron	Caseta	PD-5NE-XX	Reverse	2	120V	6%	
Lutron	Caseta	PD-6WCL	Forward	2	120V	12%	
Lutron	Diva	DVELV-300P	Reverse	2	120V	6%	
Lutron	Diva	DVLV-600P	Forward	2	120V	11%	
Lutron	Diva	DVCL-153P	Forward	2	120V	NC	
Lutron	Diva	DV-600P	Forward	2	120V	9%	
Lutron	Grafik Eye QS	QSGR	Forward	2	120V	9%	
Lutron	Grafik Eye QS	QSGR + PHP module	Reverse	2	120V	6%	
Lutron	LCP Panel	LP-RPM-4A-120	Reverse	2	120V	6%	
Lutron	LCP Panel	LP-RPM-4U-120	Forward	2	120V	10%	

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Dimmer Manufacturer	Dimmer family	Dimmer part number	Edge Trigger	Quantity of fixtures tested	Input Volatge	Downlight 50mm 18W	Comments
Lutron	Maestro	MA-600	Forward	2	120V	12%	2pcs 18W downlights minimum
Lutron	Maestro	MALV-600	Forward	2	120V	17%	2pcs 18W downlights minimum
Lutron	Maestro	MACL-153M	Forward	2	120V	8%	
Lutron	Maestro	MAELV-600	Reverse	2	120V	12%	
Lutron	Maestro	MAW-600	Forward	2	120V	15%	2pcs 18W downlights minimum
Lutron	Maestro	MRF2-6ND-120	Forward	2	120V	9%	
Lutron	Nova T	NTELV-300	Reverse	2	120V	6%	
Lutron	Nova T	NTLV-600	Forward	2	120V	10%	
Lutron	Radio RA2	RRD-10D	Forward	2	120V	10%	2pcs 18W downlights minimum
Lutron	Radio RA2	RRD-6NA	Reverse	2	120V	8%	
Lutron	Skylark	S-600	Forward	2	120V	12%	
Lutron	Skylark	S-603PG	Forward	2	120V	9%	
Lutron	Skylark	SELV-300P	Reverse	2	120V	6%	
Lutron	Skylark	SLV-600P	Forward	2	120V	9%	
Lutron	Skylark Contour	CT-600P	Forward	2	120V	9%	
Lutron	Skylark Contour	CTCL-153P	Forward	2	120V	12%	
Lutron	Spacer	SPSELV-600	Reverse	2	120V	6%	
Lutron	Spacer	SPELV-600	Reverse	2	120V	7%	
Lutron	Verti	VTELV-600M	Reverse	2	120V	14%	
Marlin	Stellar	RMS 4	Reverse	2	120V	7%	
0-10V controllers					120V	5%	
0-10V controllers					277V	14%	(*)

## SORAA ARC Downlights 120V - DIMMER COMPATIBILITY LIST - North America

### Notes:

Compatibility tests are conducted by Soraa (unless stated otherwise) only as guidance for the user

All tests are conducted under bench conditions; results may differ from test results depending on conditions at the application site

Results may vary due to variability in component choices and manufacturing processes by the dimmer manufacturer

Regards compatibility tests conducted by dimmer manufacturer, please contact the dimmer manufacturer or Soraa for more details and/or reports.

(\*) Test results with this dimmer added to the compatibility list as of this Revision

--%	Dims to < 20% (of the measured light output)
--%	Dims to 20-30% (of the measured light output)
NC	Not compatible (or dims to >30%)
Blank cell	Not tested