



## ARCCO Design Services Reflectors for Bridgelux RS / ES Series LED Arrays

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- Optical-grade precision polished reflector surfaces
- Optimized for even and balanced subject illumination
- Software-optimized conic profile



*ARCCO Optics #APLO-8001 and #APLO-8002 reflectors are specifically designed for use with the Bridgelux ES and RS series LED arrays.*

*Our software-optimized design, combined with optical-grade precision polished reflector surfaces provide very even and uniform disbursement of light, and have been shown in laboratory testing to enhance subject lumen output in excess of 300%.*

*Versatile design accommodates mounting via heat-staking, screw-mount, or drop-in rim mounting.*

### Typical applications for reflector/array technologies include:

- Flood Lighting
- High Bay Lighting
- General Illumination
- Architectural Lighting
- Numerous other applications where high-efficacy, high lumen output illumination is required



Bridgelux ES and RS Series LED arrays are trademarks of Bridgelux Inc.

For Information about these LED array technologies, please visit the [Bridgelux Website](#), or view the [ES Series](#) or [RS Series](#) Datasheets.



For Ordering information, please contact:

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Corporate Site:  
[www.arccoinc.com](http://www.arccoinc.com)



## General Characteristics:

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### Material Composition:

Black Polycarbonate with vacuum metalized aluminum coating, protected by clear-coat lacquer.

*\*Small defects in the reflective coating, and flow lines and weld lines on the surfaces of the reflectors are acceptable if the optical performance of the reflector is within the specifications described in the **Optical Characteristics** section of this data sheet.\**

### Cleaning:

Clean reflectors only if necessary. Use only soap and water to clean the surfaces and reflectors. Never expose the reflectors to alcohol, as it will damage the plastic.

### Handling:

Always handle the reflectors by the outside surfaces or flange. Never touch the inside surfaces of the reflector with fingers; finger oils and contamination will absorb or refract light and affect reflector performance.

### Relevant temperature data:

Operating Temperature Range:  
-40deg C / + 100 deg C

Storage Temperature Range:  
-40deg C / + 100 deg C

### Eye Safety Briefing:

Eye safety classification for the use of Bridgelux LED Arrays are contained in the CIE S 009/E2002 Photobiological Safety of Lamps and Lamp Systems specification.

Bridgelux LED Arrays are classified under section 6 lamp classification as Risk Group 2 (Moderate Risk). Please use appropriate precautions. It is important that employees working with LEDs are trained to use them safely.

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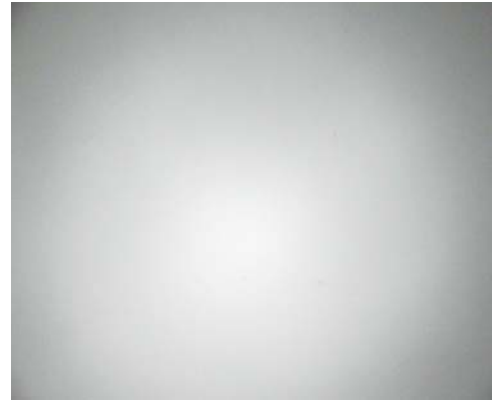


## Optical Characteristics:

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RS Array w/o Reflector



RS Array with Reflector

Optical Performance: On-axis efficiency (candela/lumen) and beam angle (degrees)		Flood		Cutoff Light	
		On-axis Efficiency	Beam Angle	Off-axis Efficiency	Beam Angle
Arcco P/N:	Reflector Name	cd / lm	Deg.	cd / lm	Deg.
APLO-8001	RS Series	2	0°	.05	52°
APLO-8002	ES Series	2	0°	.05	52°

- To calculate the on-axis intensity, multiply the on-axis efficiency of the reflector (cd/lm) by the total flux of the Bridgelux LED Array used. See **Illumination Calculations** section below. For more detail on flux binning please check the datasheet associated with the chosen array at the [Bridgelux website](#).
- Luminous intensity depends on the flux binning and tolerances of the LEDs. Please refer to the Bridgelux [ES Series](#) and [RS Series](#) LED array datasheets for more information.
- Typical luminance measured in lux per lumen. To estimate the luminance in lux, multiply the typical luminance by the flux in lumen of the LED array used. See **Illumination Calculations** section below.



## Illumination Calculations:

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To calculate peak **candela**: Find the “on-axis efficiency” value in the table above. It is 2 candela/lumen”. Multiply this value by the lumens output from your LED (refer to the BridgeLux [ES Series](#) and [RS Series](#) LED array datasheets) for nominal lumens values. OR for a more accurate calculation, refer to the intensity binning tables.

**Example** – If the Arcco reflector # APLO-8002 is use on a cool white BridgeLux ES Series LED at 1750 mA, the typical luminous flux of the LED is 2000 lumens:

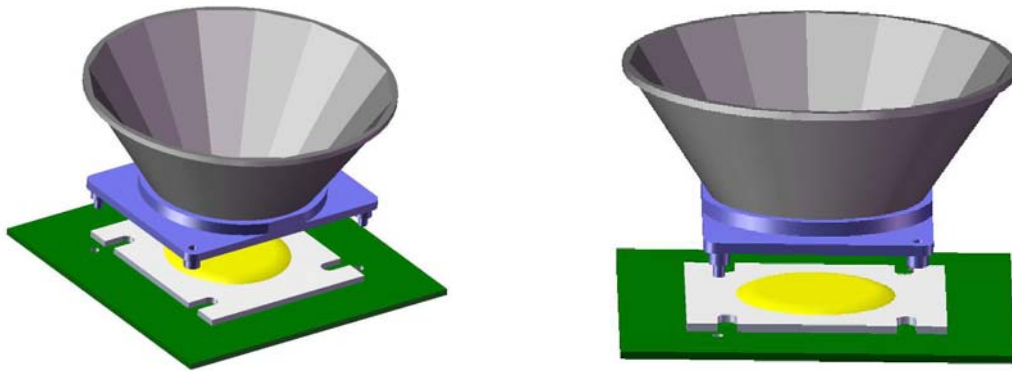
The calculation is: (2 candela/lumen) x (2000 lumens) = 4000 candela peak on-axis.

The central spot **beam angle** specified in the table above is 52 degrees full beam-width measured at half-peak. This means at 26 degrees off-axis (half of 52 degrees), the intensity should be half of 4000 candela, or 2000 candelas.

## Mechanical Characteristics:

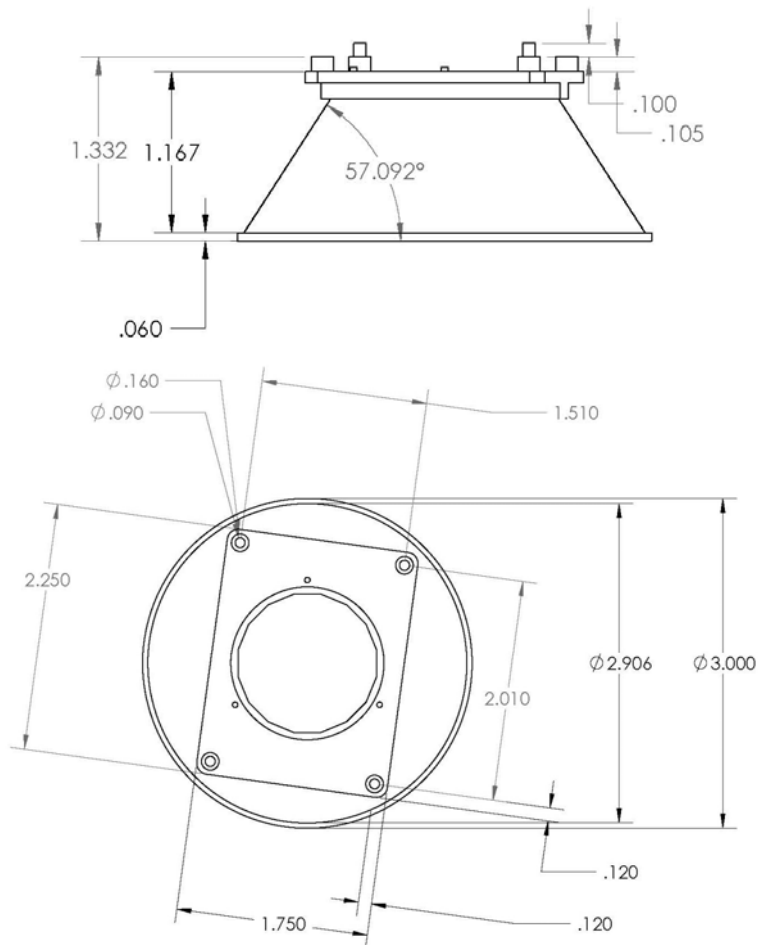
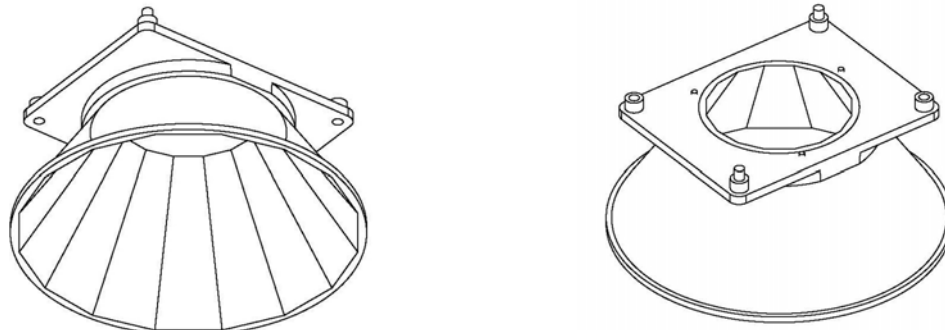
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### Mounting view for reflector on Bridgelux LED Array



## Mechanical Drawings and Schematics for Arcco Reflectors:

### APLO-8001



## Mechanical Drawings and Schematics for Arcco Reflectors:

### APLO-8002

