



### SORAA VIVID™

Soraa VIVID lamps offer beautiful and accurate color and white rendering across the entire visible spectrum, mimicking the natural range of sunlight to deliver unmatched quality of light for color critical applications.

### POINT SOURCE OPTICS™

Point Source Optics deliver exceptional beam quality with crisp shadows, perfect uniformity and precisely controlled beam distributions from 9° to 36°.

### SORAA VIVID COLOR™

Soraa VIVID lamps utilize full spectrum light to provide industry-leading color rendition of CRI/95, R9/95, Rf/90, Rg/100 for precise color reproduction.

### SORAA NATURAL WHITE™

Soraa VIVID lamps are engineered to deliver outstanding whiteness rendering for true-to-life whites, which matches or exceeds incandescent sources at 2700K and 3000K.

### FLICKER

Soraa lamps demonstrate low levels of flicker in both dimmed and undimmed states.

### ACCESSORIES

Narrow spot compatible with the Soraa SNAP SYSTEM™

### GENERAL SPECIFICATIONS

#### Form Factor

Width: 111mm (4.37")

Height: 57mm (2.24")

Weight: 250g

#### Operating Temperature

Minimum: -40°C (ambient)

Typical: 70°C - 80°C (base)

Maximum: 90°C (base)

#### Electrical

Wattage: 18.5W

Power factor: 0.92

Voltage: 12V +/- 1.2V

Frequency: 50/60Hz

#### Dimming and Flicker

Dimmable to <20%

Flicker Index < 0.10

Percent Flicker: 28%

|                   |  |
|-------------------|--|
| Output            | 930 - 1000 lumen   |
| Beam Angle        | 9°, 25°, 36°   |
| Color Temperature | 2700K, 3000K   |
| Color Metrics     | CIE Metrics: CRI 95, R9 95<br>TM30 Metrics: Rf 90, Rg 100<br>Whiteness Index: Rw 100 |
| Applications      | Hotels & Hospitality<br>Galleries & Museums<br>High-End Retail                       |



### ENERGY EFFICIENCY

85% more energy efficient than standard halogen lamps, with typical payback of one year or less.

### THERMAL COMPATIBILITY

Suitable for use in fully enclosed fixtures, included glass-fronted fixtures, subject to the maximum heatsink temperature limits stated in this data sheet. Designed to safely turn down in high temperature environments to protect LED and components.

### ELECTRICAL COMPATIBILITY

Works with trailing edge and leading edge phase cut dimmers, 12V AC magnetic and electronic transformers and 12V DC transformers. Check individual lamp website pages for compatibility data. For more information visit: [www.soraa.com](http://www.soraa.com).

### INTENDED USE & LOCATION RATING

Intended for use in AR111 compatible recessed downlights, track lighting and other indoor and outdoor applications. Suitable for damp locations, not rated for use in wet locations.

This light source produces greater than 2mW/klm of UV light and is intended only for high color and white rendering applications, where the UV light is required to activate optical brightening agents in illuminated objects.

### LIFETIME & WARRANTY

Rated lifetime to L70: 35,000hrs

Warranty: 3yrs or 25,000hrs whichever comes first.

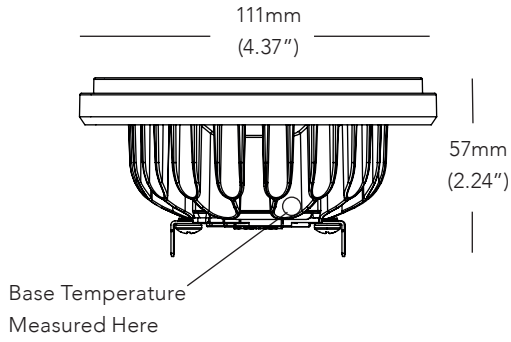
For warranty information, visit: [www.soraa.com/resources/legal](http://www.soraa.com/resources/legal)



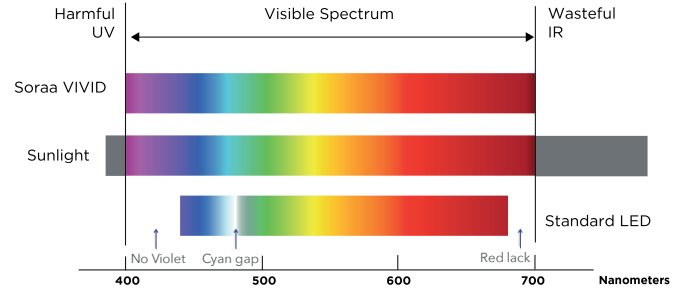
RoHS



## DIMENSIONS

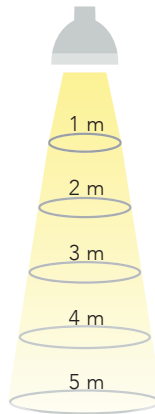


## COLOR RENDERING



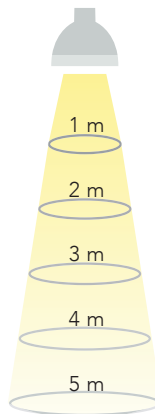
### 9 DEGREE BEAM

| Beam Dia at 50% Intensity (m) | Field Dia at 10% Intensity (m) | Lux (% of Intensity) |
|-------------------------------|--------------------------------|----------------------|
| 0.2                           | 0.3                            | 77%                  |
| 0.3                           | 0.6                            | 23%                  |
| 0.5                           | 0.8                            | 11%                  |
| 0.6                           | 1.1                            | 6%                   |
| 0.8                           | 1.4                            | 4%                   |



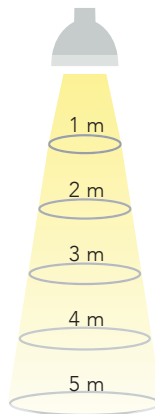
### 25 DEGREE BEAM

| Beam Dia at 50% Intensity (m) | Field Dia at 10% Intensity (m) | Lux (% of Intensity) |
|-------------------------------|--------------------------------|----------------------|
| 0.4                           | 0.7                            | 77%                  |
| 0.9                           | 1.5                            | 23%                  |
| 1.3                           | 2.2                            | 11%                  |
| 1.8                           | 2.9                            | 6%                   |
| 2.2                           | 3.6                            | 4%                   |



### 36 DEGREE BEAM

| Beam Dia at 50% Intensity (m) | Field Dia at 10% Intensity (m) | Lux (% of Intensity) |
|-------------------------------|--------------------------------|----------------------|
| 0.6                           | 1.2                            | 77%                  |
| 1.3                           | 2.3                            | 23%                  |
| 1.9                           | 3.5                            | 11%                  |
| 2.6                           | 4.6                            | 6%                   |
| 3.2                           | 5.8                            | 4%                   |



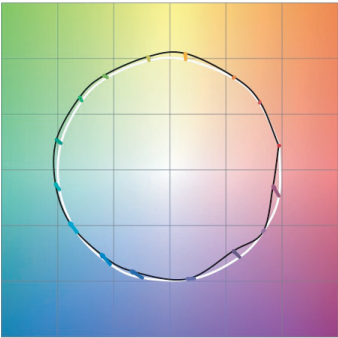
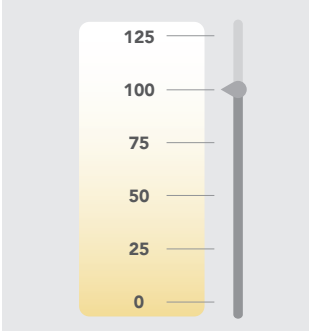
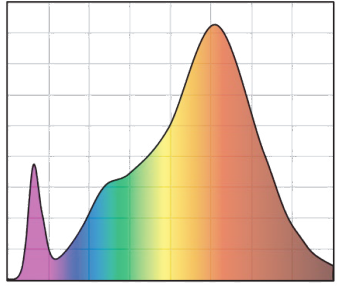
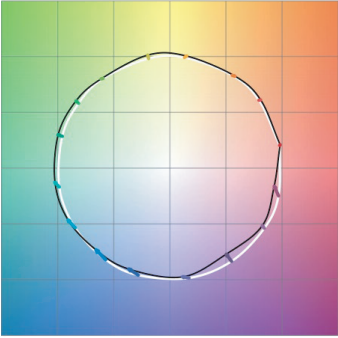
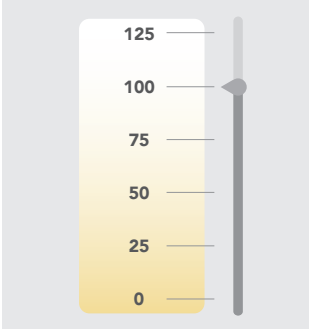
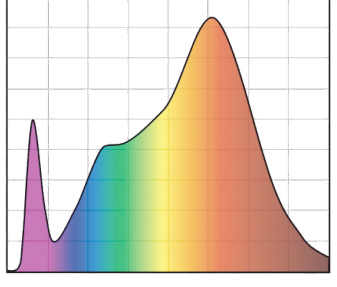
Note: Lux may be calculated by multiplying the Peak Intensity of the desired model number by the percentage in the tables above

## SPECIFICATIONS BY MODEL NUMBER\* SORAA LED AR111 18.5W 12V

| Model #                | Product Code | CCT (K) | Beam Angle | Field Angle | Peak Intensity | Total Flux (Lm) | 90° Lumens | Efficacy (Lm/W) | McA | SNAP |
|------------------------|--------------|---------|------------|-------------|----------------|-----------------|------------|-----------------|-----|------|
| <b>VIVID SERIES</b>    |              |         |            |             |                |                 |            |                 |     |      |
| SR111-18-09D-927-03-S3 | 01025        | 2700    | 9          | 16          | 22400          | 930             | 835        | 50              | 3   | YES  |
| SR111-18-25D-927-03-S3 | 01027        | 2700    | 25         | 40          | 5020           | 930             | 860        | 50              | 3   | -    |
| SR111-18-36D-927-03-S3 | 01029        | 2700    | 36         | 60          | 2320           | 930             | 855        | 50              | 3   | -    |
| SR111-18-09D-930-03-S3 | 01041        | 3000    | 9          | 16          | 24100          | 1000            | 900        | 54              | 3   | YES  |
| SR111-18-25D-930-03-S3 | 01043        | 3000    | 25         | 40          | 5400           | 1000            | 930        | 54              | 3   | -    |
| SR111-18-36D-930-03-S3 | 01045        | 3000    | 36         | 60          | 2500           | 1000            | 920        | 54              | 3   | -    |

**CCT:** Correlated Color Temperature **McA:** White Point Accuracy in McA step **SNAP:** SORAA SNAP System Compatible

\*Specifications are at stable warm operating conditions (25°C ambient)

| SERIES/CCT         | COLOR ACCURACY  | WHITENESS INDEX  | SPECTRAL POWER DISTRIBUTION   |
|--------------------|---|--|---|
| <b>VIVID 2700K</b> |  <p><b>Rf: 90, Rg: 100, Rfh1: 95</b></p>  |  <p><b>Rw: 100</b></p>  |  <p><b>CRI: 95, R9: 95</b></p>  |
| <b>VIVID 3000K</b> |  <p><b>Rf: 90, Rg: 100, Rfh1: 95</b></p> |  <p><b>Rw: 100</b></p> |  <p><b>CRI: 95, R9: 95</b></p> |

**Rf:** TM-30 metric measuring color fidelity (whether colors are similar to those under natural light). Rf is a more accurate version of the CRI Ra. Rf is 100 for natural light.

**Rg:** TM-30 metric measuring color gamut (whether colors are more saturated than under natural light). Rg is 100 for natural light.

**Rfh1:** TM-30 metric measuring color fidelity for red tones. Rfh1 is a more accurate version of the CRI R9. Rfh1 is 100 for natural light.

**Rw:** Soraa-developed metric to measure white fidelity. Rw measures the magnitude of excitation of whitening agents within whites. Rw is about 100 for natural light.