

# AR111 18.5W



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|                                   |   |
|-----------------------------------|---|
| <b>OUTPUT RANGE: VIVID SERIES</b> | 930 - 1040 lumen                                      |
| <b>BEAM ANGLE RANGE</b>           | 9°, 25°, 36°  |
| <b>COLOR TEMPERATURE RANGE</b>    | 2700K, 3000K, 4000K                                   |
| <b>APPLICATION</b>                | Halogen replacement for indoor & outdoor applications |

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## POINT SOURCE OPTICS

Exceptional beam control enables unique 9° narrow spot and smooth uniform beams

Single light source, single crisp shadow

## SORAA VIVID COLOR™ AND SORAA NATURAL WHITE™

All Soraa VIVID lamps feature the right amount of spectral content from violet to deep red in every wavelength from 400nm to 700nm with 95 CRI, R9>95 and Rw 100 typical

Soraa's whiteness methodology means we render white faithfully, matching or exceeding that of halogen and incandescent sources at 2700K and 3000K

## ENERGY EFFICIENCY AND LONG LIFE

85% more energy efficient than standard halogen lamps

Typical payback of one year or less

Rated lifetime to L70: 35,000hrs

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

Detailed warranty information available at [soraa.com/resources/legal](http://soraa.com/resources/legal)

## CERTIFICATIONS

FCC Title 47 Part 15B, RoHS, CE



## GENERAL SPECIFICATIONS

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### 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 < 0.1

Percent Flicker: 28%

## HIGHLY COMPATIBLE

Thermally and geometrically compatible with standard fixtures and suitable for damp locations

Suitable for fully enclosed fixtures. Can be used with front glass cover

Works with trailing edge and leading edge phase cut dimmers, 12V AC magnetic and electronic transformers and 12V DC transformers (see [www.soraa.com/resources](http://www.soraa.com/resources))

## INTENDED USE AND APPLICATIONS

Intended for use in AR111 compatible recessed downlights, track lighting and other indoor and outdoor applications

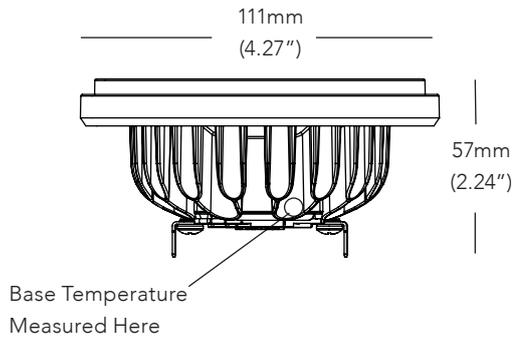
Soraa lamps are designed to safely turn down in any thermal environment not conducive to minimum airflow or proper ventilation

## ACCESSORIES

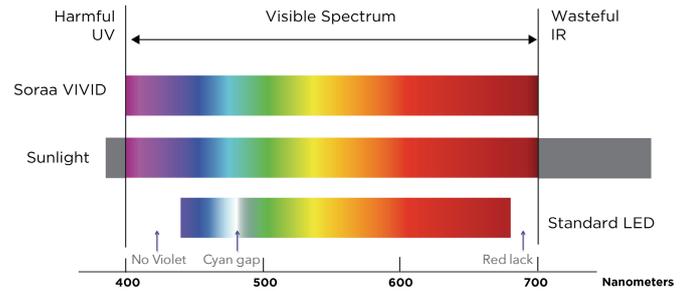
Narrow spot compatible with the Soraa SNAP System™

Soraa AR111 lamps come supplied with an optional Anti-Glare Shield

## DIMENSIONS

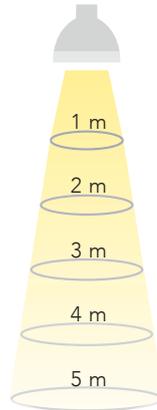


## COLOR RENDERING



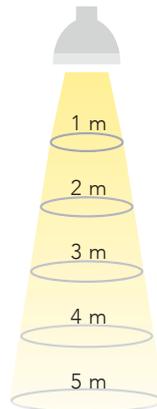
## 9 DEGREE BEAM

| 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%                   |



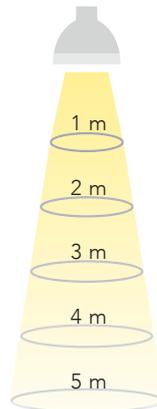
## 25 DEGREE BEAM

| 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

| Model #                | Product Code | CCT (K) | Beam Angle | Field Angle | Peak Intensity | Total Flux (Lm) | Efficacy (Lm/W) | 90° Lumens | McA | EI | SNAP |
|------------------------|--------------|---------|------------|-------------|----------------|-----------------|-----------------|------------|-----|----|------|
| <b>VIVID SERIES</b>    |              |         |            |             |                |                 |                 |            |     |    |      |
| SR111-18-09D-927-03-S3 | 01025        | 2700    | 9          | 16          | 22400          | 930             | 50              | 835        | 3   | A  | YES  |
| SR111-18-25D-927-03-S3 | 01027        | 2700    | 25         | 40          | 5020           | 930             | 50              | 860        | 3   | A  | -    |
| SR111-18-36D-927-03-S3 | 01029        | 2700    | 36         | 60          | 2320           | 930             | 50              | 855        | 3   | A  | -    |
| SR111-18-09D-930-03-S3 | 01041        | 3000    | 9          | 16          | 24100          | 1000            | 54              | 900        | 3   | A  | YES  |
| SR111-18-25D-930-03-S3 | 01043        | 3000    | 25         | 40          | 5400           | 1000            | 54              | 930        | 3   | A  | -    |
| SR111-18-36D-930-03-S3 | 01045        | 3000    | 36         | 60          | 2500           | 1000            | 54              | 920        | 3   | A  | -    |
| SR111-18-09D-940-03-S3 | 01057        | 4000    | 9          | 16          | 25060          | 1040            | 56              | 935        | 4   | A  | YES  |
| SR111-18-25D-940-03-S3 | 01059        | 4000    | 25         | 40          | 5600           | 1040            | 56              | 965        | 4   | A  | -    |
| SR111-18-36D-940-03-S3 | 01061        | 4000    | 36         | 60          | 2600           | 1040            | 56              | 955        | 4   | A  | -    |

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

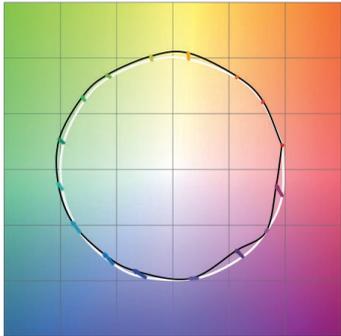
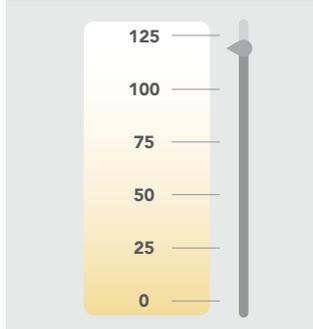
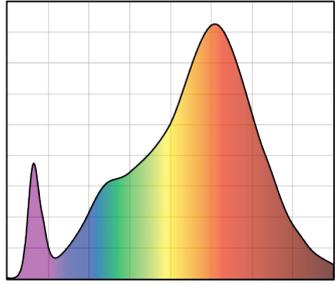
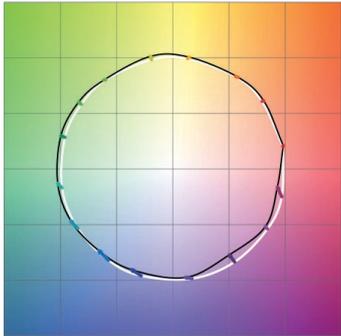
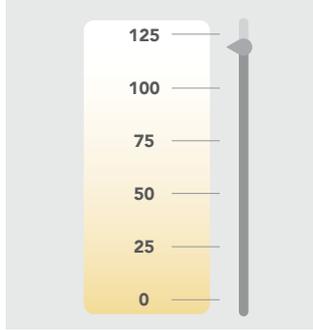
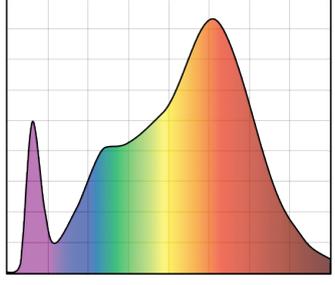
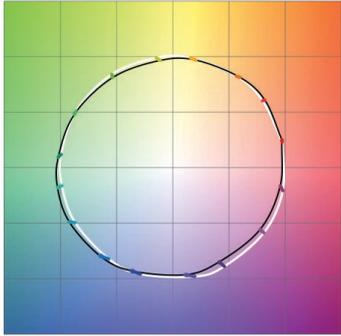
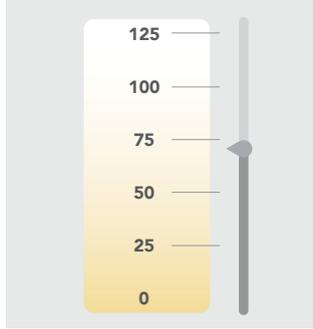
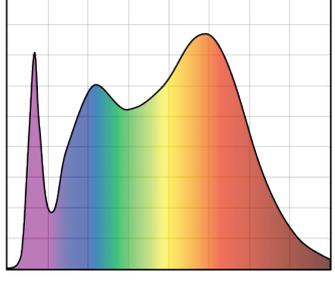
\*Specifications are at stable warm operating conditions (25°C ambient)

**SERIES/CCT**

**COLOR ACCURACY**

**WHITENESS INDEX**

**SPECTRAL POWER DISTRIBUTION**

|                               |   |   |   |
|-------------------------------|---|---|---|
| <p><b>VIVID<br/>2700K</b></p> |  <p><b>Rf: 90, Rg: 100, Rfh1: 95</b></p>   |  <p><b>Rw: 120</b></p>  |  <p><b>Wavelength (nm)</b> 380 780</p> <p><b>CRI: 95, R9: 95</b></p>   |
| <p><b>VIVID<br/>3000K</b></p> |  <p><b>Rf: 90, Rg: 100, Rfh1: 95</b></p>   |  <p><b>Rw: 120</b></p>  |  <p><b>Wavelength (nm)</b> 380 780</p> <p><b>CRI: 95, R9: 95</b></p>   |
| <p><b>VIVID<br/>4000K</b></p> |  <p><b>Rf: 90, Rg: 100, Rfh1: 95</b></p> |  <p><b>Rw: 70</b></p> |  <p><b>Wavelength (nm)</b> 380 780</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.