



Soraa Internal Test Report: IES LM79-08

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| Company Information: |
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| SORAA Inc 6500 Kaiser Dr, Fremont, CA 94555 (510) 456-2200 |
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SP20-11-60D-830-H1

Soraa PAR20 E26/120V, 3000K, 10.7W, 60D

Relevant Standards

IES LM-79

ANSI C78.377

IES PR-16

Soraa Lamp Lab

1.0 Product Information

| | |
|---------------------------|--|
| Customer Reference ID | SP20-11-60D-830-H1 |
| Manufacturer Reference ID | SP20-11-60D-830-H1 |
| Lamp Description | LAMP, PAR20 E26/120V 10.7W 3000K 90 CRI 60D Soraa-US |
| Rated Input Voltage | 120V |
| Rated Input Power | 10.7W |
| Nominal CCT | 3000K |

Photos



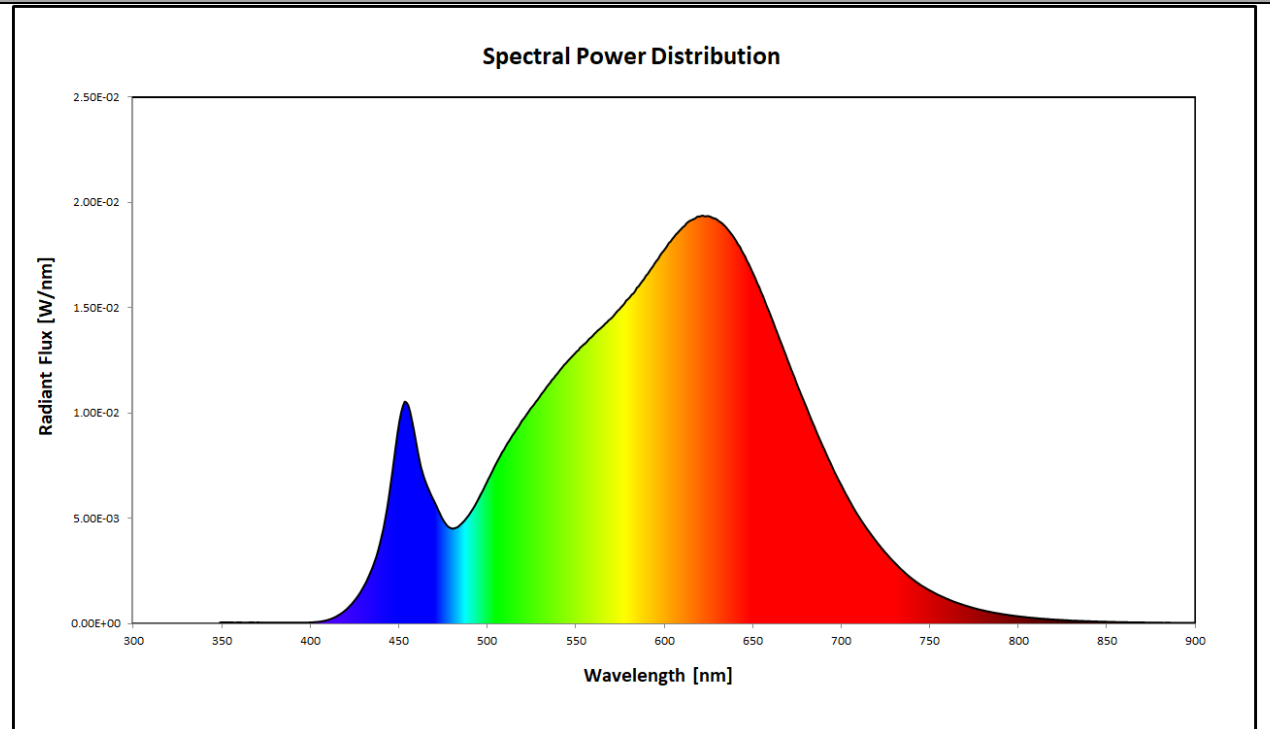
2.0 Results – Sphere Measurements

| Test Conditions | |
|---------------------------|----------------------------|
| Orientation | Vertical |
| Stabilization Time (min) | 35-40 |
| Correction Factor Applied | Self-Absorption Correction |
| Sphere Geometry | 2m Sphere |
| | 95% Coating Reflectance |
| | 4π Geometry |
| Ambient Temperature (°C) | 23±1 |

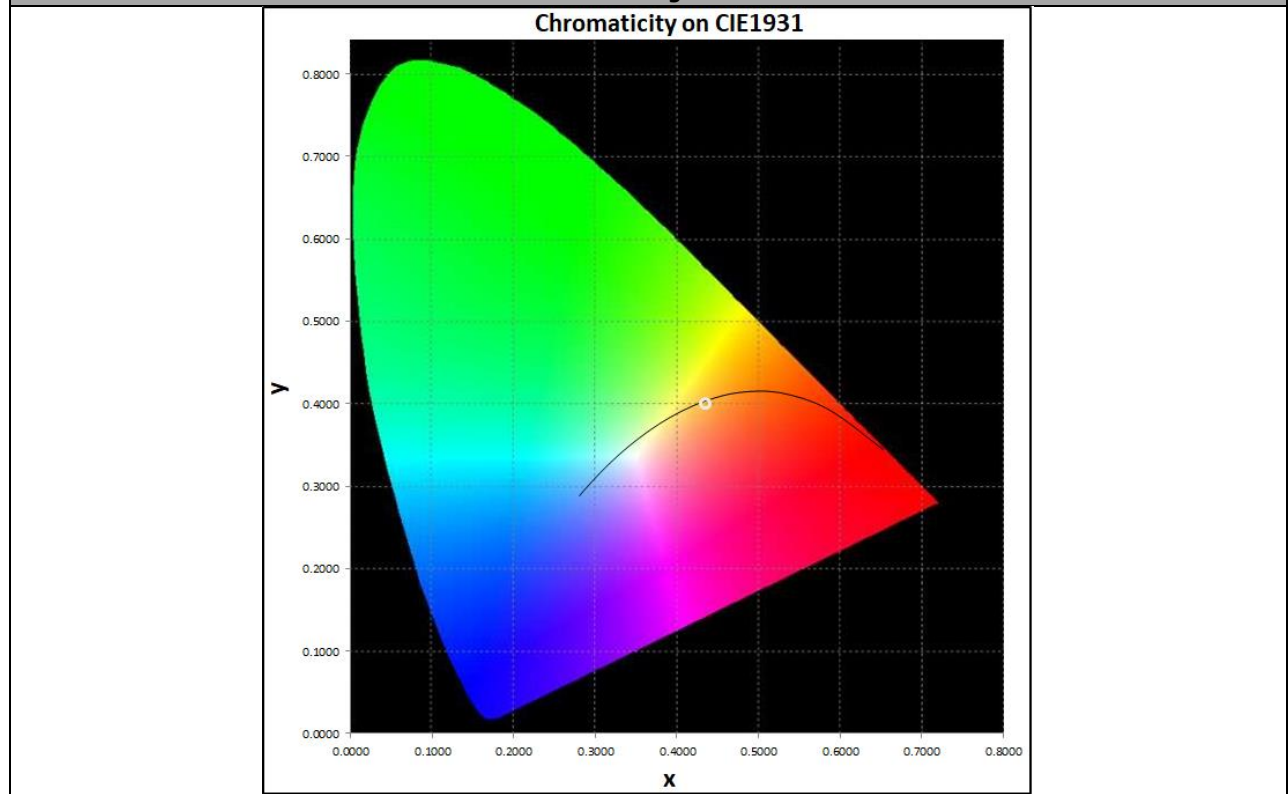
| Instrument | | | |
|-----------------------|--------------------------------|--------------------|----------------|
| | Instrument | Manufacturer | Model |
| Photometric | Spectroradiometer | Otsuka Electronics | MC-9801:311C |
| | Integrating Sphere | Labsphere | 2m |
| | Standard Lamp | Labsphere | CSFS-1400 Lamp |
| Electrical Instrument | Power Supply for Standard Lamp | Labsphere | LPS-150-0268 |
| | Power Supply for Aux Lamp | Labsphere | LPS-100-0833 |
| | Power Supply for Test Lamps | Ametek | 1501i |
| | Power Meter for Test Lamps | Yokogawa | WT210 |
| Thermometer | Digital Ambient Monitor | Mitsubishi | PAR-33MAA |

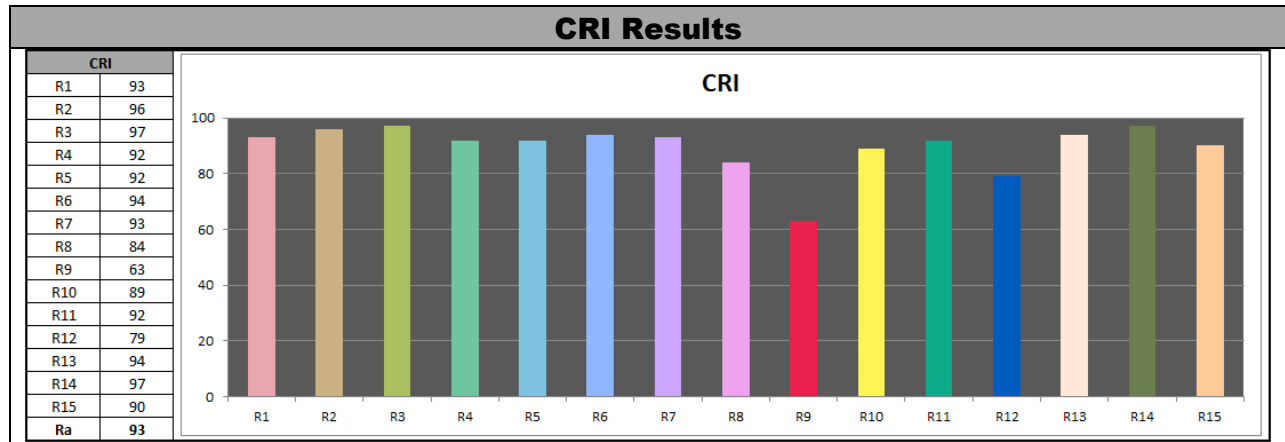
| Measurement Results | | | |
|--------------------------|---------------|-------------------|--------|
| Photometric | | Electrical | |
| Total Flux [lm] | 974 | Input Voltage [V] | 120.07 |
| Luminous Efficacy [lm/W] | 89.8 | Frequency [Hz] | 60.0 |
| Chromaticity Coordinates | $u' = 0.2505$ | Current [A] | 0.0958 |
| | $v' = 0.5196$ | Power [W] | 10.85 |
| | $x = 0.4345$ | Power Factor | 0.9425 |
| | $y = 0.4006$ | | |
| CCT [K] | 3014 | | |
| CRI | 93 | | |
| R9 | 63 | | |
| Duv | -0.0011 | | |

Spectral Results



Chromaticity Results





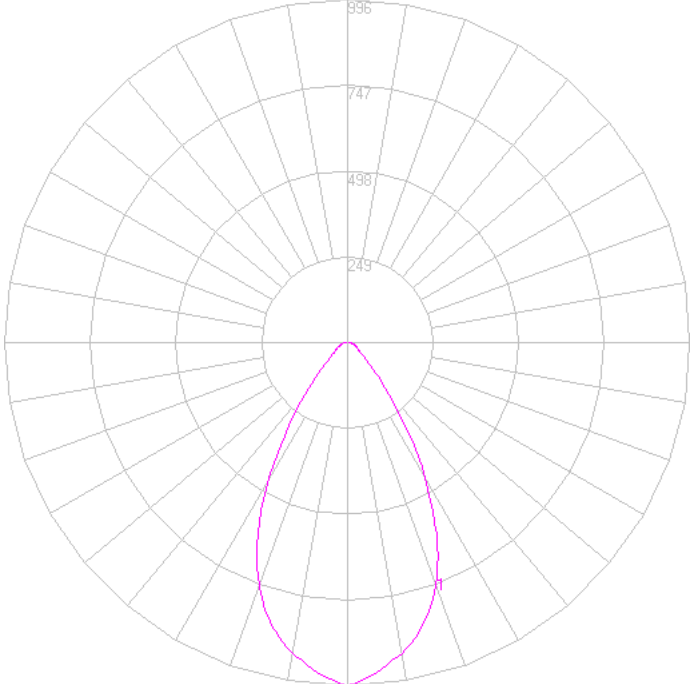
3.0 Results – Goniometric Measurements

| Test Conditions | |
|--------------------------|-----------|
| Goniometer Distance (m) | Far-Field |
| Stabilization Time (min) | >30 |

| Instrument | | | |
|-----------------------|-----------------------------|--------------|---------|
| | Instrument | Manufacturer | Model |
| Photometric | Photometer | TechnoTeam | Rigo801 |
| Electrical Instrument | Power Supply for Test Lamps | Ametek | 1501i |
| | Power Meter for Test Lamps | Yokogawa | WT210 |

| Measurement Results | | | |
|------------------------------|------|-------------------|--------|
| Photometric | | Electrical | |
| Center Beam Candlepower [cd] | 996 | Input Voltage [V] | 120.07 |
| Beam Angle [°] | 57.3 | Frequency [Hz] | 60.0 |
| Field Angle [°] | 90.7 | | |
| Luminous Flux [lm] | 970 | Current [A] | 0.0958 |
| | | Power [W] | 10.85 |
| | | Power Factor | 0.9425 |

Goniometric Results (Polar, 0°-180°)



Goniometric Results (Cartesian, 0°-180°)

