Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled data based on original data using

LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: CORELITE

Report Number: P1215965

Luminaire Tested: 24-ID2-70-CFD2-L930-U

Issue Date: 12/5/2025

Report Generated By 670265710 / DESKTOP-98SHLC4

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | P1215965 |
| | TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2506-458-28) |
| Test Lab: | INNOVATION CENTER |
| Issue Date: | 12/5/2025 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | CORELITE |
| Catalog Number: | 24-ID2-70-CFD2-L930-U |
| Description: | 2X4 IN DEPTH TROFFER WITH 2INCH CUBE DROP LENS |
| Light Source: | 3000K CCT, 90 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 5946.4 lumens |
| Efficiency: | N/A |
| Efficacy: | 98.5 lumens/watt |
| Spacing Criteria (0/90/45): | 1.21 / 1.21 / 1.32 |
| Luminous Opening: | Rectangular w/ Sides (W: 2' x L: 4' x H: 0.16') |
| CIE Type: | Direct |

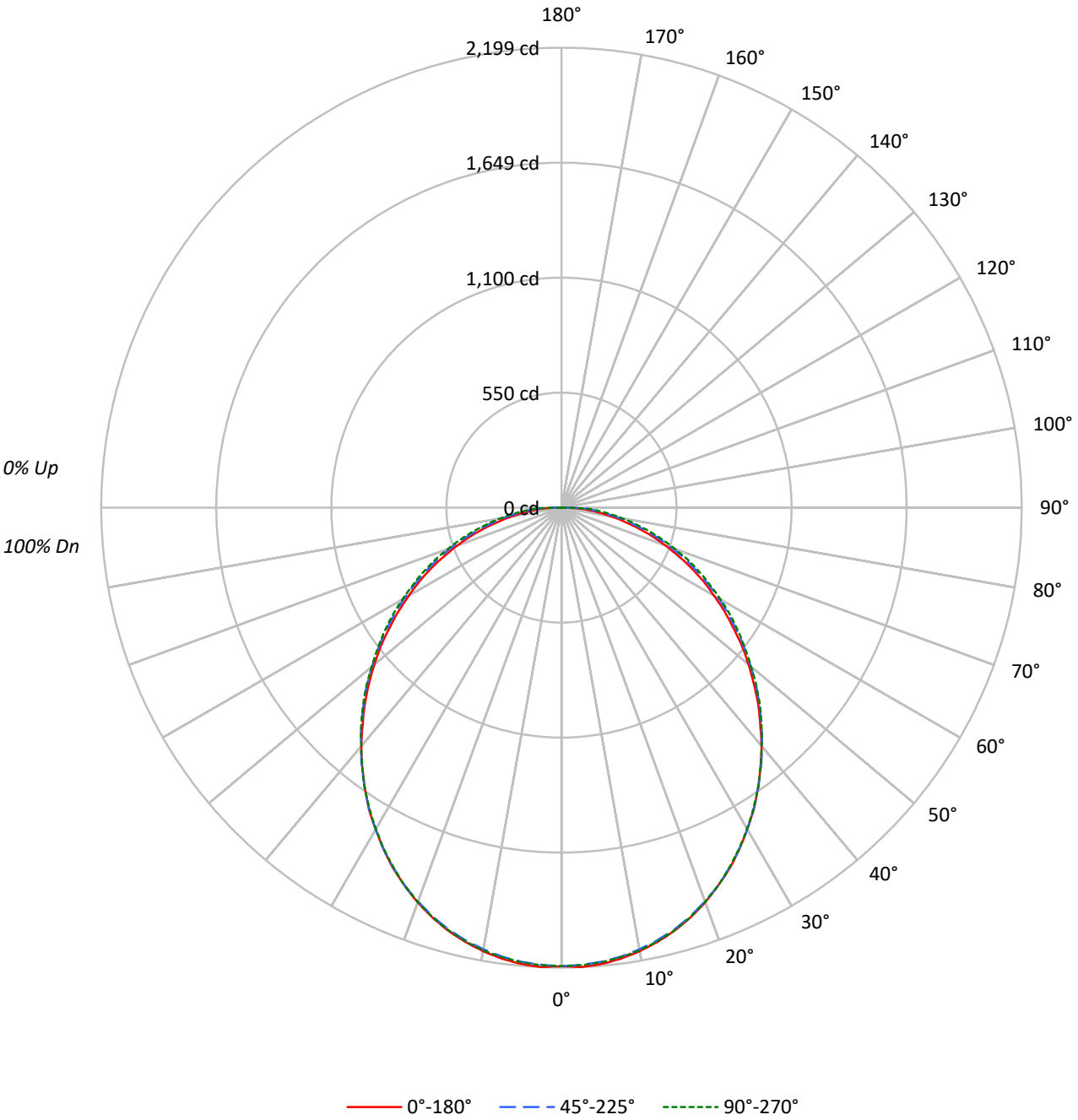
| | |
|---|---|
| Input Watts (W): | 60.4 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | NR |
| Total Harmonic Distortion (THDi): | NR |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 24 FT |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

TEST NUMBER: P1215965
CATALOG NUMBER: 24-ID2-70-CFD2-L930-U

## Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

TEST NUMBER: P1215965
CATALOG NUMBER: 24-ID2-70-CFD2-L930-U

## COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| RF | 20 | | | | 20 | | | | 20 | | | 20 | | | 20 | | | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RC | 80 | | | | 70 | | | | 50 | | | 30 | | | 10 | | | 0 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 108 | 103 | 99 | 95 | 106 | 101 | 97 | 93 | 97 | 94 | 90 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 99 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 85 | 79 | 75 | 81 | 77 | 73 | 78 | 75 | 71 | 69 |
| 3 | 90 | 79 | 71 | 64 | 87 | 78 | 70 | 64 | 75 | 68 | 63 | 72 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 70 | 61 | 55 | 80 | 69 | 61 | 54 | 66 | 59 | 53 | 64 | 58 | 53 | 62 | 56 | 52 | 50 |
| 5 | 76 | 63 | 54 | 47 | 74 | 62 | 53 | 47 | 60 | 52 | 46 | 58 | 51 | 46 | 56 | 50 | 45 | 43 |
| 6 | 70 | 57 | 48 | 41 | 68 | 56 | 47 | 41 | 54 | 46 | 41 | 52 | 45 | 40 | 51 | 45 | 40 | 38 |
| 7 | 65 | 51 | 43 | 36 | 63 | 51 | 42 | 36 | 49 | 42 | 36 | 48 | 41 | 36 | 46 | 40 | 36 | 34 |
| 8 | 61 | 47 | 38 | 33 | 59 | 46 | 38 | 32 | 45 | 38 | 32 | 44 | 37 | 32 | 43 | 36 | 32 | 30 |
| 9 | 57 | 43 | 35 | 29 | 55 | 43 | 35 | 29 | 41 | 34 | 29 | 40 | 34 | 29 | 39 | 33 | 29 | 27 |
| 10 | 53 | 40 | 32 | 27 | 52 | 39 | 32 | 27 | 38 | 31 | 26 | 37 | 31 | 26 | 37 | 31 | 26 | 24 |

## AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|---|---|---|---|
| 0° | 2949 | 2949 | 2949 |
| 5° | 2948 | 2922 | 2927 |
| 10° | 2922 | 2887 | 2896 |
| 15° | 2885 | 2842 | 2852 |
| 20° | 2835 | 2783 | 2791 |
| 25° | 2773 | 2712 | 2717 |
| 30° | 2697 | 2630 | 2634 |
| 35° | 2616 | 2539 | 2548 |
| 40° | 2528 | 2444 | 2450 |
| 45° | 2432 | 2346 | 2364 |
| 50° | 2330 | 2246 | 2261 |
| 55° | 2224 | 2139 | 2171 |
| 60° | 2115 | 2032 | 2073 |
| 65° | 2014 | 1914 | 1978 |
| 70° | 1874 | 1793 | 1861 |
| 75° | 1716 | 1620 | 1732 |
| 80° | 1516 | 1444 | 1578 |
| 85° | 1325 | 1261 | 1426 |

## MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 2432 cd/sqm

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

TEST NUMBER: P1215965
CATALOG NUMBER: 24-ID2-70-CFD2-L930-U

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 207.1 | 3.5 |
| 10°-20° | 588.5 | 9.9 |
| 20°-30° | 874.5 | 14.7 |
| 30°-40° | 1024.5 | 17.2 |
| 40°-50° | 1031.3 | 17.3 |
| 50°-60° | 914.0 | 15.4 |
| 60°-70° | 703.2 | 11.8 |
| 70°-80° | 434.8 | 7.3 |
| 80°-90° | 168.6 | 2.8 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 1670.1 | 28.1 |
| 0°-40° | 2694.6 | 45.3 |
| 0°-60° | 4639.8 | 78.0 |
| 0°-90° | 5946.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5946.4 | 100.0 |

**CANDELA DISTRIBUTION:**

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|---|---|---|---|---|---|---|
| 0° | 2192 | 2192 | 2192 | 2192 | 2192 | |
| 5° | 2190 | 2184 | 2180 | 2178 | 2182 | 208 |
| 15° | 2094 | 2088 | 2087 | 2086 | 2091 | 590 |
| 25° | 1903 | 1899 | 1899 | 1898 | 1898 | 875 |
| 35° | 1638 | 1638 | 1638 | 1638 | 1638 | 1024 |
| 45° | 1329 | 1333 | 1337 | 1339 | 1342 | 1024 |
| 55° | 1002 | 1014 | 1022 | 1031 | 1031 | 898 |
| 65° | 687 | 697 | 710 | 724 | 728 | 679 |
| 75° | 379 | 393 | 410 | 430 | 433 | 402 |
| 85° | 125 | 141 | 161 | 175 | 177 | 138 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

TEST NUMBER: P1215965
CATALOG NUMBER: 24-ID2-70-CFD2-L930-U

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 22.5° | 45° | 67.5° | 90° |
|---|---|---|---|---|---|
| 0° | *2192.0* | 2192.0 | 2192.0 | 2192.0 | 2192.0 |
| 2.5° | *2198.6* | *2192.0* | *2187.8* | *2185.3* | *2189.5* |
| 5° | *2190.3* | 2183.6 | 2179.5 | 2177.8 | 2182.0 |
| 7.5° | *2175.3* | 2168.6 | 2165.3 | 2164.4 | 2168.6 |
| 10° | *2153.6* | 2146.9 | 2144.4 | 2143.6 | 2149.4 |
| 12.5° | *2126.1* | 2120.3 | 2118.6 | 2119.4 | 2122.8 |
| 15° | *2093.6* | 2087.7 | 2086.9 | 2086.1 | 2091.1 |
| 17.5° | *2053.6* | 2048.6 | 2048.6 | 2046.9 | 2051.9 |
| 20° | *2008.5* | 2002.7 | 2003.5 | 2002.7 | 2006.0 |
| 22.5° | *1956.8* | 1953.5 | 1956.0 | 1955.2 | 1956.0 |
| 25° | *1902.6* | 1899.3 | 1899.3 | 1898.5 | 1898.5 |
| 27.5° | *1840.9* | 1840.1 | 1840.1 | 1837.6 | 1838.4 |
| 30° | *1775.9* | 1776.7 | 1775.9 | 1775.1 | 1773.4 |
| 32.5° | *1710.9* | 1709.2 | 1709.2 | 1709.2 | 1706.7 |
| 35° | *1637.5* | 1638.3 | 1637.5 | 1638.3 | 1638.3 |
| 37.5° | *1562.5* | 1567.5 | 1565.8 | 1567.5 | 1563.3 |
| 40° | *1487.4* | 1489.1 | 1490.8 | 1490.8 | 1488.3 |
| 42.5° | *1405.7* | 1414.9 | 1415.7 | 1415.7 | 1415.7 |
| 45° | *1329.0* | 1333.2 | 1337.4 | 1339.0 | 1341.5 |
| 47.5° | *1247.3* | 1254.8 | 1262.3 | 1260.6 | 1264.0 |
| 50° | *1166.4* | 1176.4 | 1181.4 | 1185.6 | 1183.1 |
| 52.5° | *1088.1* | 1093.9 | 1102.2 | 1107.2 | 1106.4 |
| 55° | *1002.2* | 1013.9 | 1022.2 | 1031.4 | 1031.4 |
| 57.5° | *923.8* | 937.1 | 943.8 | 954.7 | 956.3 |
| 60° | *840.4* | 855.4 | 866.3 | 876.3 | 877.1 |
| 62.5° | *766.2* | 776.2 | 787.9 | 802.1 | 799.6 |
| 65° | *687.0* | 697.0 | 710.4 | 723.7 | 727.9 |
| 67.5° | *605.3* | 619.5 | 635.3 | 648.7 | 654.5 |
| 70° | *528.6* | 543.6 | 562.0 | 575.3 | 577.0 |
| 72.5° | *453.6* | 469.4 | 484.4 | 501.1 | 505.3 |
| 75° | *379.4* | 392.7 | 410.2 | 430.2 | 432.7 |
| 77.5° | *305.2* | 323.5 | 341.0 | 359.4 | 360.2 |
| 80° | *240.1* | 255.1 | 276.0 | 292.7 | 296.0 |
| 82.5° | *176.8* | 193.4 | 213.4 | 231.0 | 232.6 |
| 85° | *125.1* | 140.9 | 160.9 | 175.1 | 176.8 |
| 87.5° | *84.2* | 100.1 | 118.4 | 132.6 | 134.2 |
| 90° | *0.0* | 0.0 | 0.0 | 0.0 | 0.0 |

TEST NUMBER: P1215965
CATALOG NUMBER: 24-ID2-70-CFD2-L930-U

**CIE UGR TABLE:**

| Reflectances: | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ceiling | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 |
| | Wall | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 |
| | Reference plane | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Room dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| X=2H | Y=2H | 14.49 | 16.13 | 14.86 | 16.45 | 16.76 | 14.77 | 16.41 | 15.13 | 16.72 | 17.04 |
| | 3H | 16.20 | 17.69 | 16.58 | 18.02 | 18.38 | 16.66 | 18.14 | 17.04 | 18.47 | 18.83 |
| | 4H | 16.84 | 18.24 | 17.24 | 18.59 | 18.97 | 17.42 | 18.82 | 17.82 | 19.17 | 19.55 |
| | 6H | 17.30 | 18.61 | 17.72 | 18.97 | 19.36 | 18.05 | 19.35 | 18.46 | 19.71 | 20.10 |
| | 8H | 17.45 | 18.70 | 17.88 | 19.09 | 19.49 | 18.29 | 19.54 | 18.72 | 19.93 | 20.32 |
| | 12H | 17.56 | 18.76 | 17.99 | 19.14 | 19.57 | 18.51 | 19.70 | 18.94 | 20.08 | 20.51 |
| 4H | 2H | 15.13 | 16.53 | 15.53 | 16.88 | 17.26 | 15.35 | 16.75 | 15.75 | 17.10 | 17.47 |
| | 3H | 17.07 | 18.25 | 17.48 | 18.65 | 19.05 | 17.46 | 18.65 | 17.87 | 19.04 | 19.44 |
| | 4H | 17.84 | 18.91 | 18.27 | 19.32 | 19.76 | 18.37 | 19.44 | 18.80 | 19.85 | 20.29 |
| | 6H | 18.43 | 19.37 | 18.88 | 19.81 | 20.26 | 19.14 | 20.08 | 19.59 | 20.52 | 20.97 |
| | 8H | 18.63 | 19.51 | 19.09 | 19.95 | 20.42 | 19.45 | 20.33 | 19.91 | 20.77 | 21.24 |
| | 12H | 18.79 | 19.58 | 19.26 | 20.05 | 20.52 | 19.73 | 20.53 | 20.21 | 21.00 | 21.47 |
| 8H | 4H | 18.19 | 19.07 | 18.65 | 19.51 | 19.98 | 18.66 | 19.54 | 19.12 | 19.98 | 20.44 |
| | 6H | 18.91 | 19.65 | 19.41 | 20.14 | 20.61 | 19.57 | 20.30 | 20.06 | 20.79 | 21.27 |
| | 8H | 19.19 | 19.85 | 19.70 | 20.36 | 20.84 | 19.97 | 20.64 | 20.48 | 21.14 | 21.63 |
| | 12H | 19.43 | 20.02 | 19.94 | 20.51 | 21.07 | 20.37 | 20.96 | 20.87 | 21.45 | 22.00 |
| 12H | 4H | 18.24 | 19.04 | 18.72 | 19.51 | 19.98 | 18.69 | 19.48 | 19.17 | 19.96 | 20.42 |
| | 6H | 19.00 | 19.66 | 19.51 | 20.17 | 20.65 | 19.62 | 20.29 | 20.13 | 20.79 | 21.28 |
| | 8H | 19.34 | 19.93 | 19.85 | 20.42 | 20.98 | 20.09 | 20.68 | 20.60 | 21.17 | 21.73 |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

# LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

Corelite

Report Number: SP1-2506-458-9

Test Date: 08/26/2025

Luminaire Tested: 22ID2-55-CFR1-L930-U

Data in this report applies to families of products including 22ID2-55-CFR1-L930-U

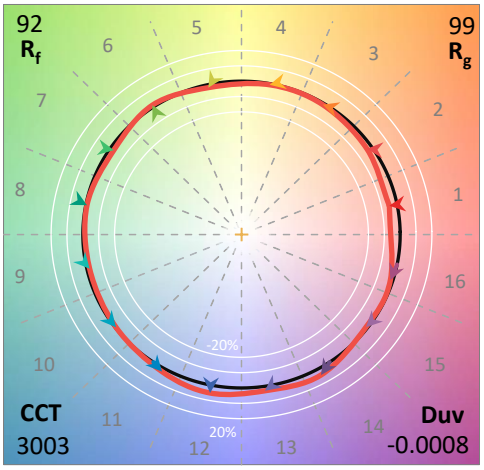
Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2506-458-9 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 08/27/2025 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | Corelite |
| Catalog Number: | **22ID2-55-CFR1-L930-U** |
| Description: | 2X2 CGTX WITH INDEPTH FRAME AND CFR1 LENS - 5500 LUMEN 3000K 90CRI |

## Spectral Parameters

| | | | | | |
|---|---|---|---|---|---|
| CCT (K): | 3003 | CRI (Ra): | 93.2 | | |
| CIE u': | 0.2507 | R1: | 93.7 | R9: | 59.0 |
| CIE v': | 0.5202 | R2: | 97.2 | R10: | 92.7 |
| Duv: | -0.0008 | R3: | 98.7 | R11: | 94.9 |
| CIE x: | 0.4356 | R4: | 93.5 | R12: | 82.6 |
| CIE y: | 0.4017 | R5: | 93.6 | R13: | 94.8 |
| CIE z: | 0.1627 | R6: | 96.3 | R14: | 99.1 |
| Peak Wavelength (nm): | 618 | R7: | 91.5 | R15: | 89.5 |
| Dominant Wavelength (nm): | 583 | R8: | 81.5 | | |
| Purity: | 51.31044 | | | | |
| Rf: | 91.9 | | | | |
| Rg: | 99.2 | | | | |




## Test Conditions

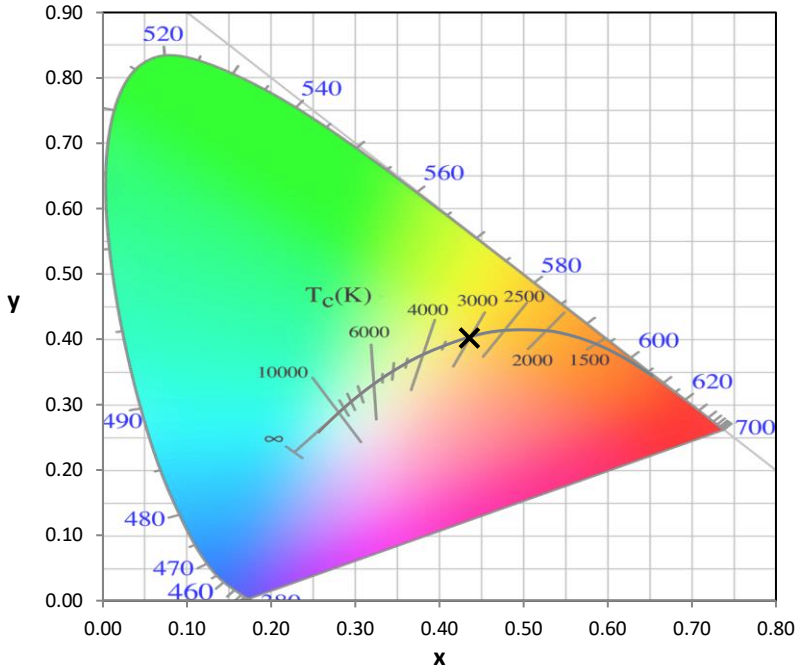
| | |
|---|---|
| Stabilization Time: | 32M |
| Operation Time: | 1H 32M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2506-458-9

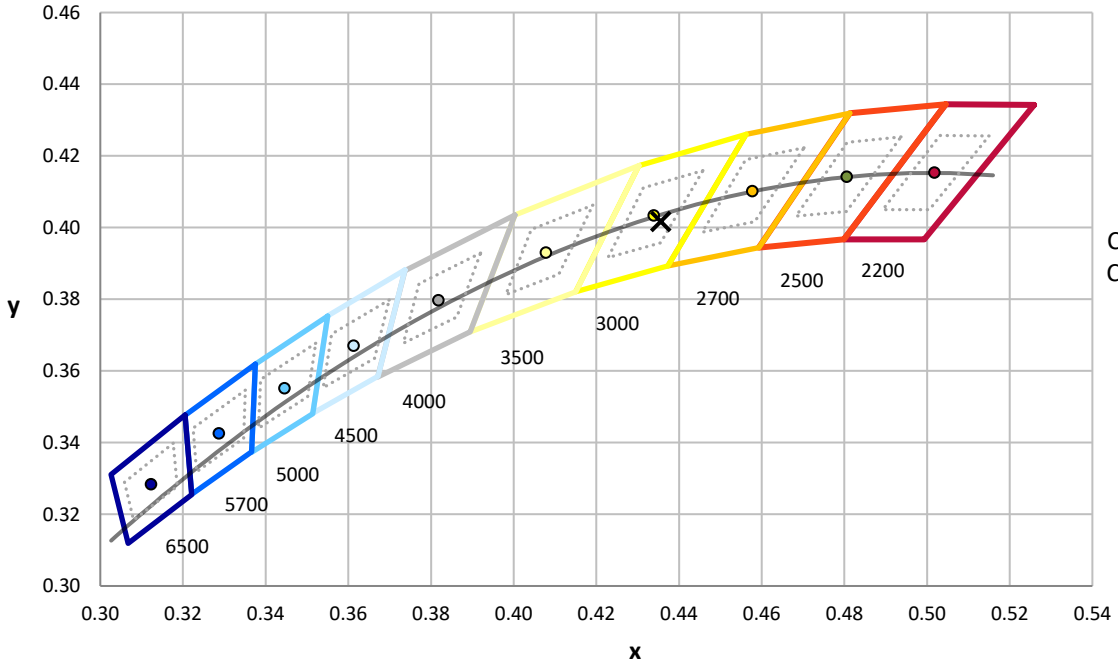
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | 76INCH SPHERE IN0058 | 6/16/2025 | 12/16/2025 |
| Power Meter | XITRON INXT2011004 | 1/21/2025 | 1/21/2026 |
| AC Power Source | CHROMA 61603 IN0063 | 10/22/2024 | 10/22/2025 |
| DC Power Source | AGILENT E3634A IN0208 | 10/22/2024 | 10/22/2025 |
| Sphere Thermometer | ONSET IN0085 | 10/22/2024 | 10/22/2025 |
| Room Thermometer | ONSET IN0046 | 10/22/2024 | 10/22/2025 |

REPORT NUMBER: SP1-2506-458-9

## CIE 1931 Chromaticity Diagram




## CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles

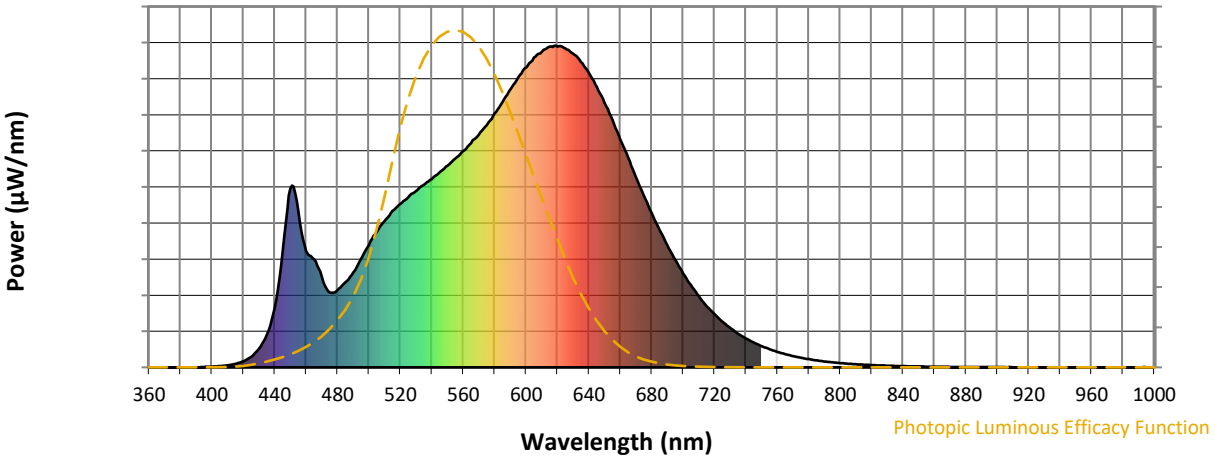



CCT = 3003K
CIE x = 0.4356
CIE y = 0.4017
Duv = -0.0008

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2506-458-9

## Photopic Flux vs. Wavelength

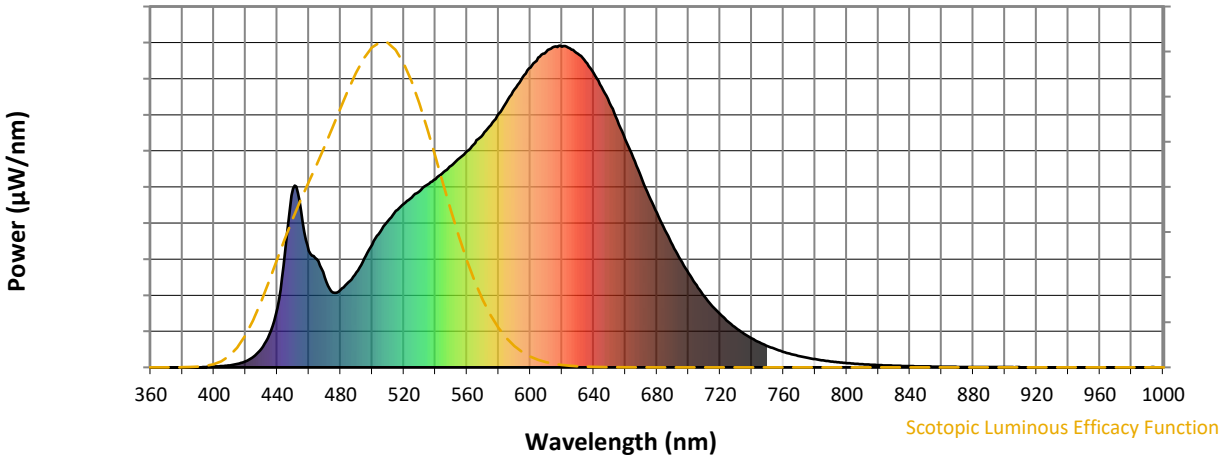



## Photopic Lumens: NR

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 296 | NR | 620 | 997 | NR | 750 | 66 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 338 | NR | 625 | 992 | NR | 755 | 56 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 381 | NR | 630 | 975 | NR | 760 | 48 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 421 | NR | 635 | 949 | NR | 765 | 41 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 456 | NR | 640 | 916 | NR | 770 | 35 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 487 | NR | 645 | 871 | NR | 775 | 30 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 508 | NR | 650 | 821 | NR | 780 | 26 | NR | 910 | 1 | NR |
| 395 | 1 | NR | 525 | 529 | NR | 655 | 769 | NR | 785 | 22 | NR | 915 | 0 | NR |
| 400 | 2 | NR | 530 | 548 | NR | 660 | 709 | NR | 790 | 18 | NR | 920 | 0 | NR |
| 405 | 4 | NR | 535 | 568 | NR | 665 | 652 | NR | 795 | 16 | NR | 925 | 0 | NR |
| 410 | 6 | NR | 540 | 585 | NR | 670 | 591 | NR | 800 | 13 | NR | 930 | 0 | NR |
| 415 | 11 | NR | 545 | 607 | NR | 675 | 534 | NR | 805 | 11 | NR | 935 | 0 | NR |
| 420 | 19 | NR | 550 | 627 | NR | 680 | 480 | NR | 810 | 10 | NR | 940 | 0 | NR |
| 425 | 33 | NR | 555 | 649 | NR | 685 | 427 | NR | 815 | 8 | NR | 945 | 0 | NR |
| 430 | 58 | NR | 560 | 673 | NR | 690 | 380 | NR | 820 | 7 | NR | 950 | 0 | NR |
| 435 | 103 | NR | 565 | 697 | NR | 695 | 334 | NR | 825 | 6 | NR | 955 | 0 | NR |
| 440 | 184 | NR | 570 | 723 | NR | 700 | 292 | NR | 830 | 5 | NR | 960 | 0 | NR |
| 445 | 360 | NR | 575 | 753 | NR | 705 | 255 | NR | 835 | 4 | NR | 965 | 0 | NR |
| 450 | 557 | NR | 580 | 789 | NR | 710 | 221 | NR | 840 | 4 | NR | 970 | 0 | NR |
| 455 | 486 | NR | 585 | 825 | NR | 715 | 190 | NR | 845 | 3 | NR | 975 | 0 | NR |
| 460 | 362 | NR | 590 | 864 | NR | 720 | 166 | NR | 850 | 3 | NR | 980 | 0 | NR |
| 465 | 337 | NR | 595 | 902 | NR | 725 | 143 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 279 | NR | 600 | 932 | NR | 730 | 122 | NR | 860 | 2 | NR | 990 | 0 | NR |
| 475 | 233 | NR | 605 | 963 | NR | 735 | 105 | NR | 865 | 2 | NR | 995 | 0 | NR |
| 480 | 241 | NR | 610 | 981 | NR | 740 | 90 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 264 | NR | 615 | 997 | NR | 745 | 77 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2506-458-9

## Scotopic Flux vs. Wavelength

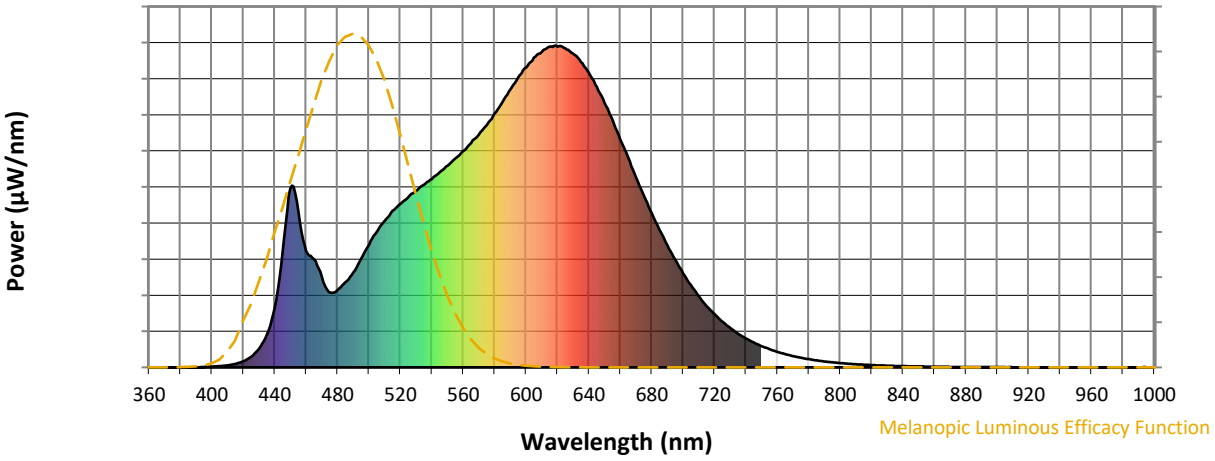



**Scotopic Lumens: NR** **S/P: 1.43**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 296 | NR | 620 | 997 | NR | 750 | 66 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 338 | NR | 625 | 992 | NR | 755 | 56 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 381 | NR | 630 | 975 | NR | 760 | 48 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 421 | NR | 635 | 949 | NR | 765 | 41 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 456 | NR | 640 | 916 | NR | 770 | 35 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 487 | NR | 645 | 871 | NR | 775 | 30 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 508 | NR | 650 | 821 | NR | 780 | 26 | NR | 910 | 1 | NR |
| 395 | 1 | NR | 525 | 529 | NR | 655 | 769 | NR | 785 | 22 | NR | 915 | 0 | NR |
| 400 | 2 | NR | 530 | 548 | NR | 660 | 709 | NR | 790 | 18 | NR | 920 | 0 | NR |
| 405 | 4 | NR | 535 | 568 | NR | 665 | 652 | NR | 795 | 16 | NR | 925 | 0 | NR |
| 410 | 6 | NR | 540 | 585 | NR | 670 | 591 | NR | 800 | 13 | NR | 930 | 0 | NR |
| 415 | 11 | NR | 545 | 607 | NR | 675 | 534 | NR | 805 | 11 | NR | 935 | 0 | NR |
| 420 | 19 | NR | 550 | 627 | NR | 680 | 480 | NR | 810 | 10 | NR | 940 | 0 | NR |
| 425 | 33 | NR | 555 | 649 | NR | 685 | 427 | NR | 815 | 8 | NR | 945 | 0 | NR |
| 430 | 58 | NR | 560 | 673 | NR | 690 | 380 | NR | 820 | 7 | NR | 950 | 0 | NR |
| 435 | 103 | NR | 565 | 697 | NR | 695 | 334 | NR | 825 | 6 | NR | 955 | 0 | NR |
| 440 | 184 | NR | 570 | 723 | NR | 700 | 292 | NR | 830 | 5 | NR | 960 | 0 | NR |
| 445 | 360 | NR | 575 | 753 | NR | 705 | 255 | NR | 835 | 4 | NR | 965 | 0 | NR |
| 450 | 557 | NR | 580 | 789 | NR | 710 | 221 | NR | 840 | 4 | NR | 970 | 0 | NR |
| 455 | 486 | NR | 585 | 825 | NR | 715 | 190 | NR | 845 | 3 | NR | 975 | 0 | NR |
| 460 | 362 | NR | 590 | 864 | NR | 720 | 166 | NR | 850 | 3 | NR | 980 | 0 | NR |
| 465 | 337 | NR | 595 | 902 | NR | 725 | 143 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 279 | NR | 600 | 932 | NR | 730 | 122 | NR | 860 | 2 | NR | 990 | 0 | NR |
| 475 | 233 | NR | 605 | 963 | NR | 735 | 105 | NR | 865 | 2 | NR | 995 | 0 | NR |
| 480 | 241 | NR | 610 | 981 | NR | 740 | 90 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 264 | NR | 615 | 997 | NR | 745 | 77 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2506-458-9

## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.82**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 296 | NR | 620 | 997 | NR | 750 | 66 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 338 | NR | 625 | 992 | NR | 755 | 56 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 381 | NR | 630 | 975 | NR | 760 | 48 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 421 | NR | 635 | 949 | NR | 765 | 41 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 456 | NR | 640 | 916 | NR | 770 | 35 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 487 | NR | 645 | 871 | NR | 775 | 30 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 508 | NR | 650 | 821 | NR | 780 | 26 | NR | 910 | 1 | NR |
| 395 | 1 | NR | 525 | 529 | NR | 655 | 769 | NR | 785 | 22 | NR | 915 | 0 | NR |
| 400 | 2 | NR | 530 | 548 | NR | 660 | 709 | NR | 790 | 18 | NR | 920 | 0 | NR |
| 405 | 4 | NR | 535 | 568 | NR | 665 | 652 | NR | 795 | 16 | NR | 925 | 0 | NR |
| 410 | 6 | NR | 540 | 585 | NR | 670 | 591 | NR | 800 | 13 | NR | 930 | 0 | NR |
| 415 | 11 | NR | 545 | 607 | NR | 675 | 534 | NR | 805 | 11 | NR | 935 | 0 | NR |
| 420 | 19 | NR | 550 | 627 | NR | 680 | 480 | NR | 810 | 10 | NR | 940 | 0 | NR |
| 425 | 33 | NR | 555 | 649 | NR | 685 | 427 | NR | 815 | 8 | NR | 945 | 0 | NR |
| 430 | 58 | NR | 560 | 673 | NR | 690 | 380 | NR | 820 | 7 | NR | 950 | 0 | NR |
| 435 | 103 | NR | 565 | 697 | NR | 695 | 334 | NR | 825 | 6 | NR | 955 | 0 | NR |
| 440 | 184 | NR | 570 | 723 | NR | 700 | 292 | NR | 830 | 5 | NR | 960 | 0 | NR |
| 445 | 360 | NR | 575 | 753 | NR | 705 | 255 | NR | 835 | 4 | NR | 965 | 0 | NR |
| 450 | 557 | NR | 580 | 789 | NR | 710 | 221 | NR | 840 | 4 | NR | 970 | 0 | NR |
| 455 | 486 | NR | 585 | 825 | NR | 715 | 190 | NR | 845 | 3 | NR | 975 | 0 | NR |
| 460 | 362 | NR | 590 | 864 | NR | 720 | 166 | NR | 850 | 3 | NR | 980 | 0 | NR |
| 465 | 337 | NR | 595 | 902 | NR | 725 | 143 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 279 | NR | 600 | 932 | NR | 730 | 122 | NR | 860 | 2 | NR | 990 | 0 | NR |
| 475 | 233 | NR | 605 | 963 | NR | 735 | 105 | NR | 865 | 2 | NR | 995 | 0 | NR |
| 480 | 241 | NR | 610 | 981 | NR | 740 | 90 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 264 | NR | 615 | 997 | NR | 745 | 77 | NR | 875 | 1 | NR | | | |

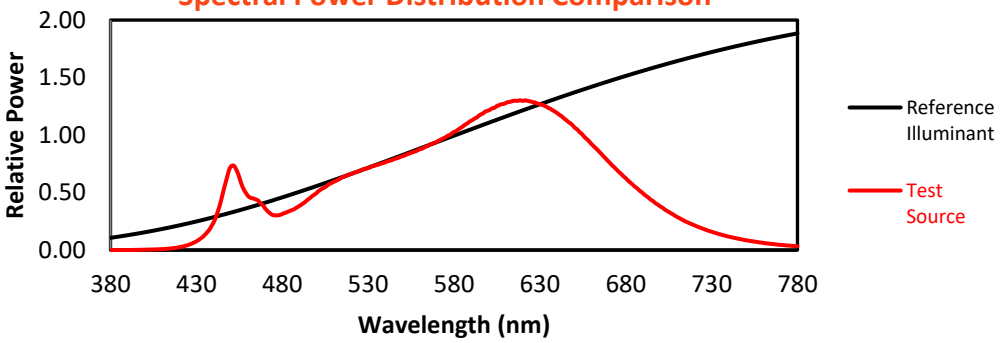
REPORT NUMBER: SP1-2506-458-9

# TM-30-18

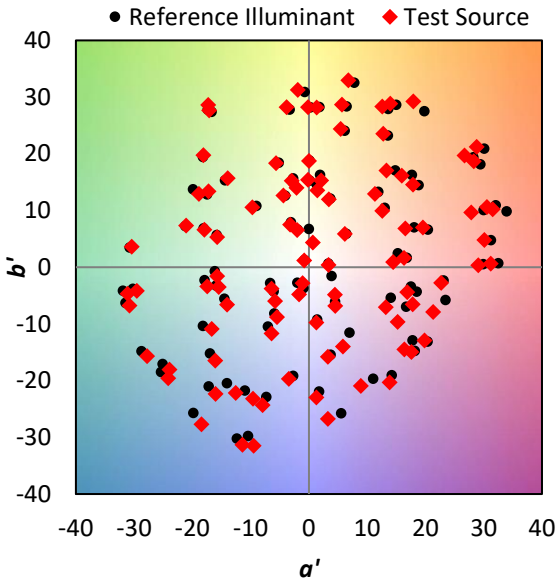
## Summary

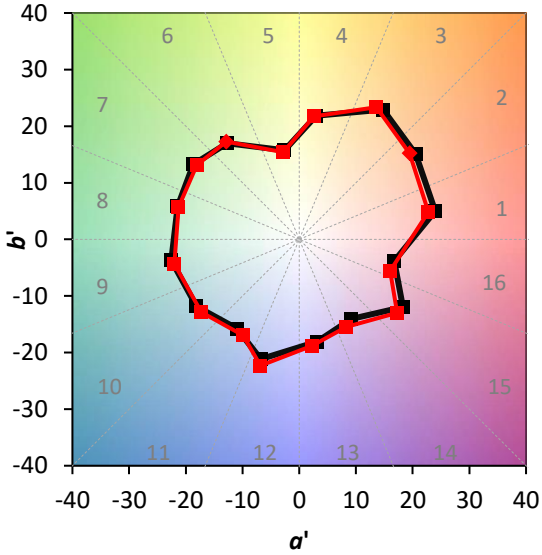
$R_f$ = 91.9
$R_g$ = 99.2
CIE $R_a$ = 93.2
$R_9$ = 59.0

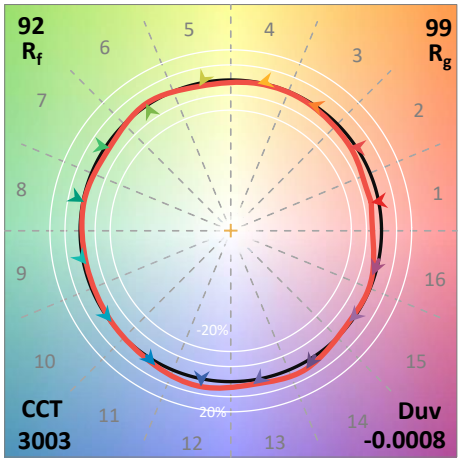
## Spectral Power Distribution Comparison

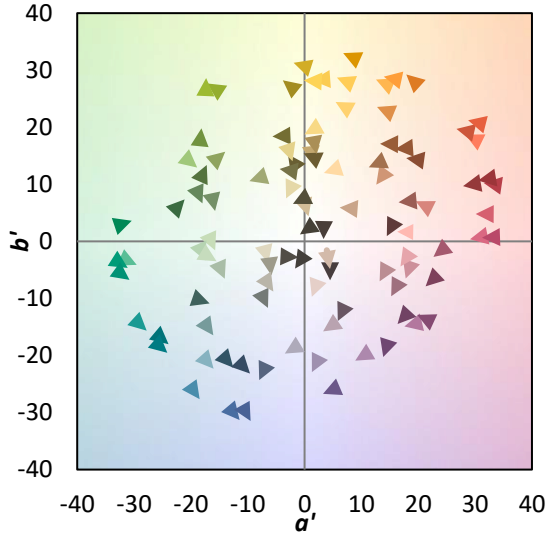



## Color Vector Graphics



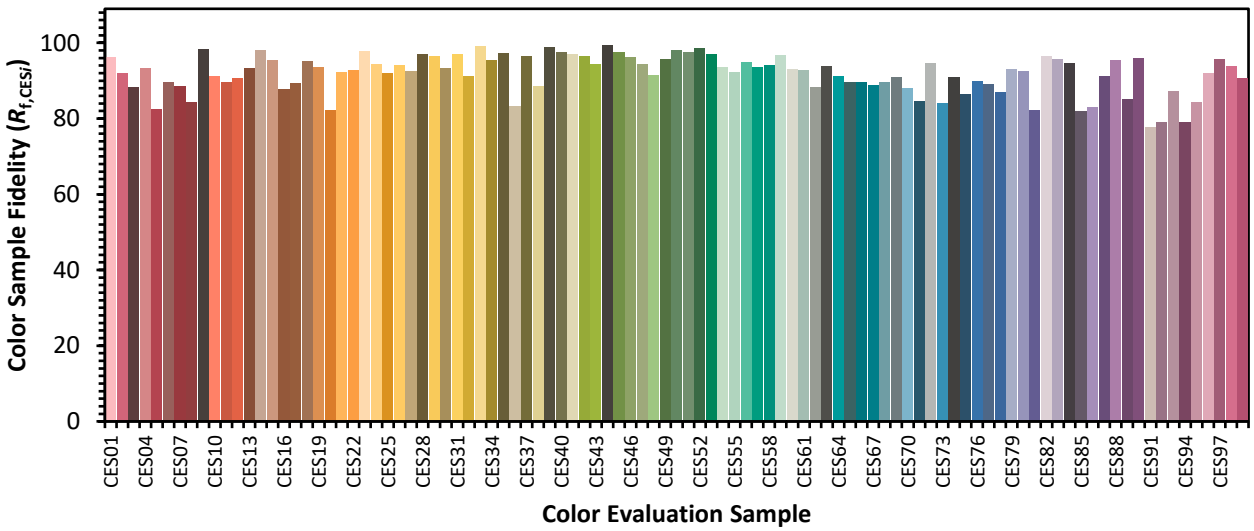



REPORT NUMBER: SP1-2506-458-9

# TM-30-18

**Individual Sample Fidelity Index ($R_{f,i}$)**

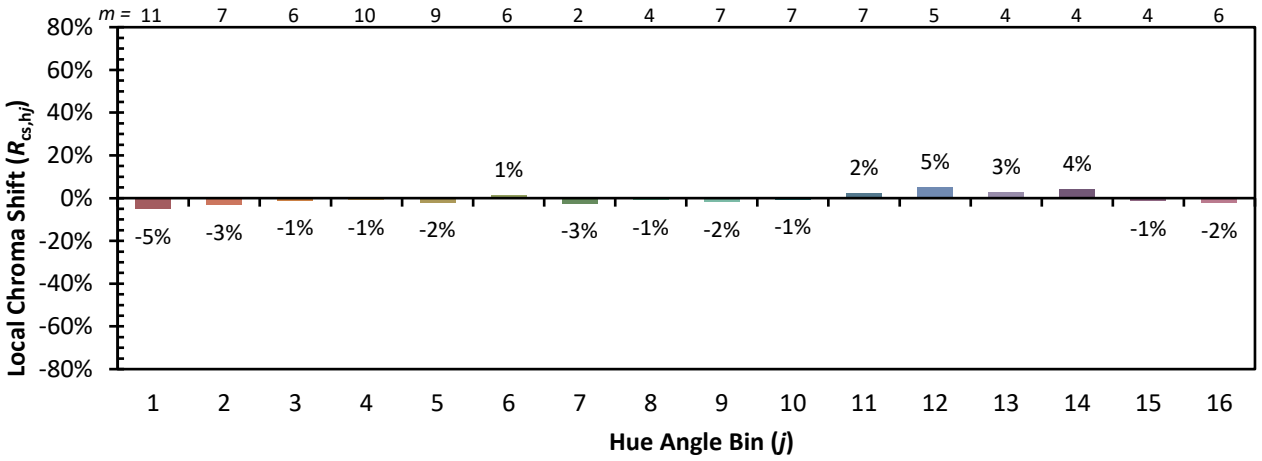
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 94 | CES51 = 97 | CES76 = 90 |
| CES02 = 63 | CES27 = 92 | CES52 = 99 | CES77 = 89 |
| CES03 = 32 | CES28 = 97 | CES53 = 97 | CES78 = 87 |
| CES04 = 70 | CES29 = 97 | CES54 = 94 | CES79 = 93 |
| CES05 = 51 | CES30 = 93 | CES55 = 92 | CES80 = 93 |
| CES06 = 51 | CES31 = 97 | CES56 = 95 | CES81 = 82 |
| CES07 = 43 | CES32 = 91 | CES57 = 94 | CES82 = 97 |
| CES08 = 42 | CES33 = 99 | CES58 = 94 | CES83 = 96 |
| CES09 = 29 | CES34 = 95 | CES59 = 97 | CES84 = 95 |
| CES10 = 76 | CES35 = 97 | CES60 = 93 | CES85 = 82 |
| CES11 = 59 | CES36 = 83 | CES61 = 93 | CES86 = 83 |
| CES12 = 65 | CES37 = 97 | CES62 = 88 | CES87 = 91 |
| CES13 = 44 | CES38 = 89 | CES63 = 94 | CES88 = 96 |
| CES14 = 74 | CES39 = 99 | CES64 = 91 | CES89 = 85 |
| CES15 = 72 | CES40 = 98 | CES65 = 90 | CES90 = 96 |
| CES16 = 48 | CES41 = 97 | CES66 = 90 | CES91 = 78 |
| CES17 = 50 | CES42 = 96 | CES67 = 89 | CES92 = 79 |
| CES18 = 57 | CES43 = 94 | CES68 = 90 | CES93 = 87 |
| CES19 = 72 | CES44 = 99 | CES69 = 91 | CES94 = 79 |
| CES20 = 67 | CES45 = 98 | CES70 = 88 | CES95 = 84 |
| CES21 = 86 | CES46 = 96 | CES71 = 85 | CES96 = 92 |
| CES22 = 79 | CES47 = 94 | CES72 = 95 | CES97 = 96 |
| CES23 = 92 | CES48 = 91 | CES73 = 84 | CES98 = 94 |
| CES24 = 91 | CES49 = 96 | CES74 = 91 | CES99 = 91 |
| CES25 = 72 | CES50 = 98 | CES75 = 87 | |

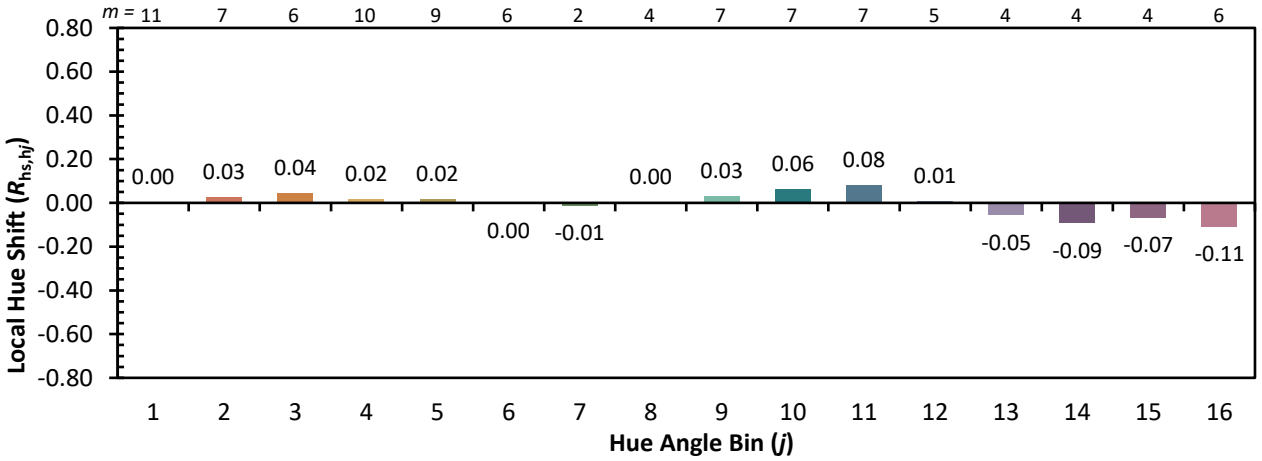


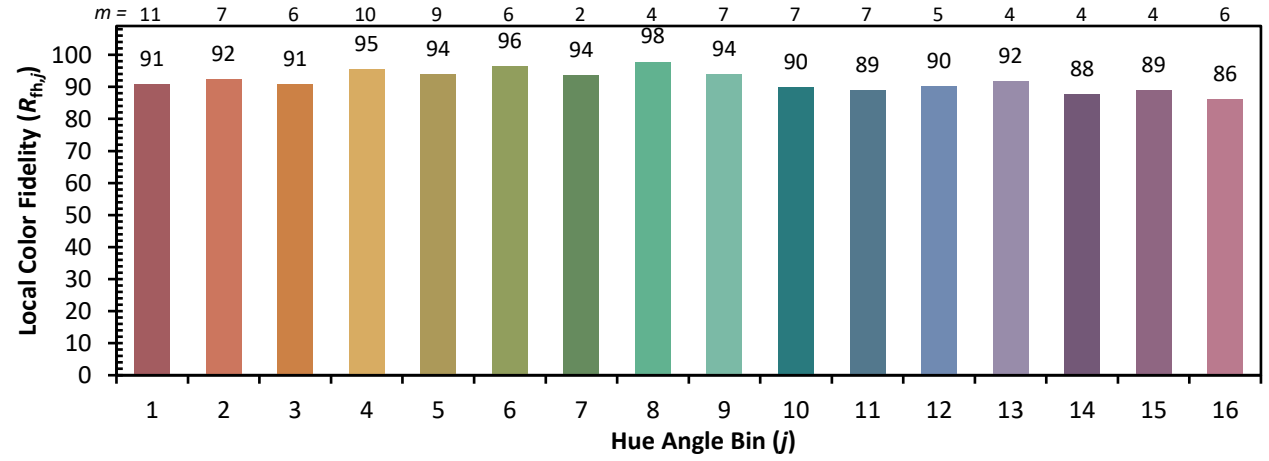
REPORT NUMBER: SP1-2506-458-9

**TM-30-18**

## Color Rendition by Hue-Angle Bin



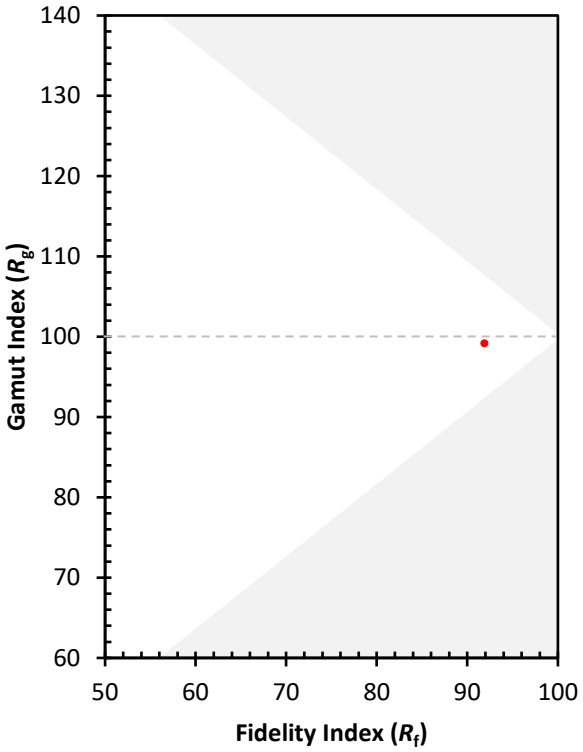



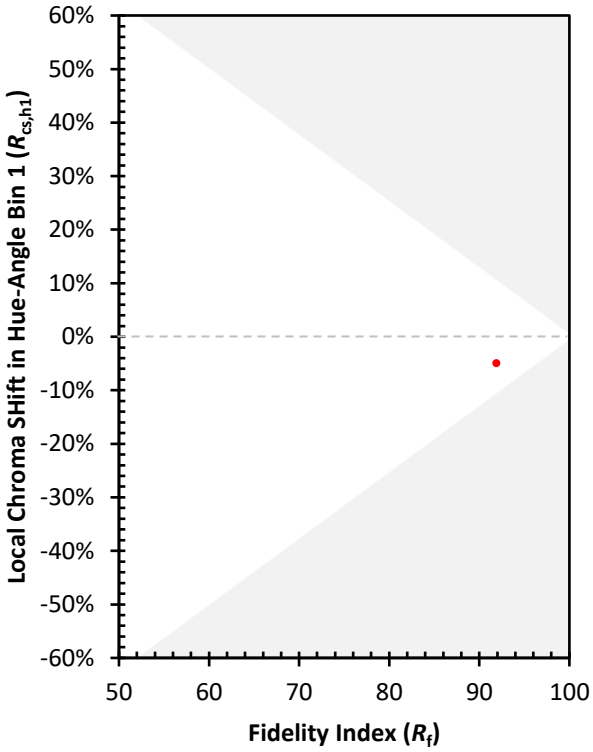



REPORT NUMBER: SP1-2506-458-9

## TM-30-18

### Measure Comparisons




(END OF REPORT)