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: P1214674

Luminaire Tested: 22-ID2-45-CFR2-L835-U

Issue Date: 12/4/2025

Report Generated By 670265710 / DESKTOP-98SHLC4

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

Scaled Data Report

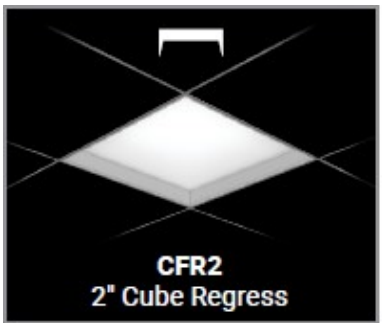
**Test Information**

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | P1214674 |
| | TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2506-458-11) |
| Test Lab: | INNOVATION CENTER |
| Issue Date: | 12/4/2025 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | CORELITE |
| Catalog Number: | 22-ID2-45-CFR2-L835-U |
| Description: | 2X2 IN DEPTH TROFFER WITH 2INCH CUBE REGRESS LENS |
| Light Source: | 3500K CCT, 80 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 4773.5 lumens |
| Efficiency: | N/A |
| Efficacy: | 122.7 lumens/watt |
| Spacing Criteria (0/90/45): | 1.18 / 1.17 / 1.27 |
| Luminous Opening: | Rectangular (W 2' x L: 2' x H: 0') |
| CIE Type: | Direct |

| | |
|---|---|
| Input Watts (W): | 38.9 |
| 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 |



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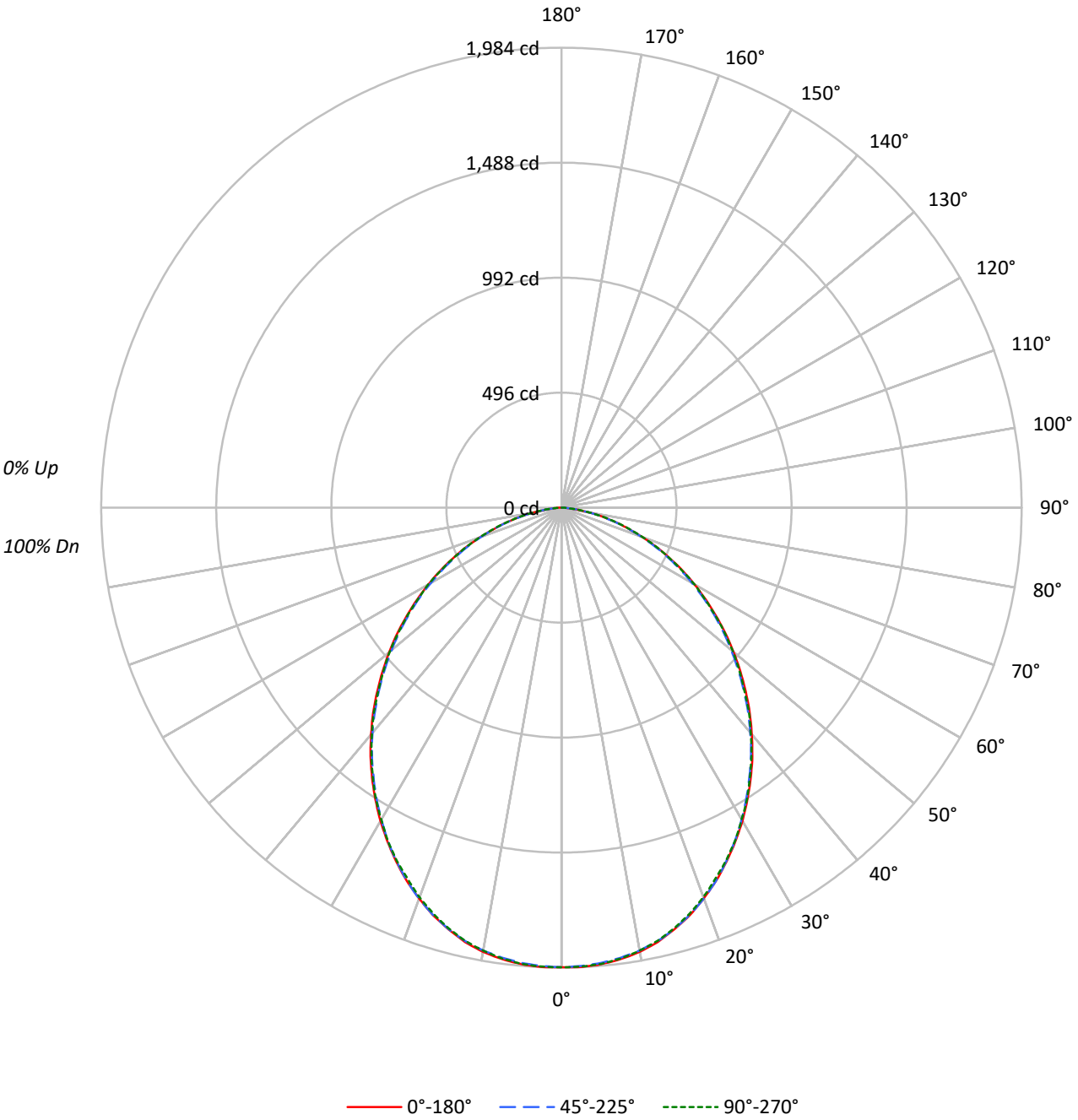
Scaled Data Report

TEST NUMBER: P1214674
CATALOG NUMBER: 22-ID2-45-CFR2-L835-U

## Luminous Intensity Polar Plot



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## 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 | 110 | 105 | 101 | 98 | 107 | 103 | 99 | 96 | 99 | 96 | 93 | 95 | 92 | 90 | 91 | 89 | 87 | 85 |
| 2 | 100 | 92 | 86 | 81 | 98 | 91 | 85 | 80 | 87 | 82 | 78 | 84 | 80 | 76 | 81 | 77 | 74 | 72 |
| 3 | 92 | 82 | 74 | 68 | 89 | 80 | 73 | 67 | 77 | 71 | 66 | 75 | 69 | 65 | 72 | 68 | 64 | 62 |
| 4 | 84 | 73 | 64 | 58 | 82 | 72 | 64 | 58 | 69 | 62 | 57 | 67 | 61 | 56 | 65 | 60 | 55 | 53 |
| 5 | 78 | 65 | 57 | 50 | 76 | 64 | 56 | 50 | 62 | 55 | 50 | 60 | 54 | 49 | 58 | 53 | 49 | 46 |
| 6 | 72 | 59 | 50 | 44 | 70 | 58 | 50 | 44 | 56 | 49 | 44 | 55 | 48 | 43 | 53 | 47 | 43 | 41 |
| 7 | 67 | 54 | 45 | 39 | 65 | 53 | 45 | 39 | 51 | 44 | 39 | 50 | 44 | 39 | 49 | 43 | 38 | 36 |
| 8 | 62 | 49 | 41 | 35 | 61 | 49 | 41 | 35 | 47 | 40 | 35 | 46 | 40 | 35 | 45 | 39 | 35 | 33 |
| 9 | 58 | 45 | 37 | 32 | 57 | 45 | 37 | 32 | 44 | 37 | 32 | 43 | 36 | 31 | 42 | 36 | 31 | 30 |
| 10 | 55 | 42 | 34 | 29 | 54 | 41 | 34 | 29 | 40 | 34 | 29 | 39 | 33 | 29 | 39 | 33 | 29 | 27 |

## AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|---|---|---|---|
| 0° | 5336 | 5336 | 5336 |
| 5° | 5340 | 5326 | 5336 |
| 10° | 5317 | 5301 | 5303 |
| 15° | 5245 | 5244 | 5234 |
| 20° | 5137 | 5139 | 5122 |
| 25° | 5002 | 4996 | 4987 |
| 30° | 4850 | 4826 | 4828 |
| 35° | 4675 | 4642 | 4655 |
| 40° | 4484 | 4450 | 4463 |
| 45° | 4277 | 4227 | 4243 |
| 50° | 4056 | 3998 | 4041 |
| 55° | 3818 | 3762 | 3793 |
| 60° | 3562 | 3495 | 3565 |
| 65° | 3272 | 3212 | 3261 |
| 70° | 2917 | 2885 | 2932 |
| 75° | 2511 | 2467 | 2535 |
| 80° | 1912 | 1912 | 1987 |
| 85° | 1050 | 1124 | 1105 |

## MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 4277 cd/sqm

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Scaled Data Report

TEST NUMBER: P1214674
CATALOG NUMBER: 22-ID2-45-CFR2-L835-U

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 187.4 | 3.9 |
| 10°-20° | 529.6 | 11.1 |
| 20°-30° | 774.7 | 16.2 |
| 30°-40° | 886.9 | 18.6 |
| 40°-50° | 861.4 | 18.0 |
| 50°-60° | 722.0 | 15.1 |
| 60°-70° | 504.5 | 10.6 |
| 70°-80° | 256.0 | 5.4 |
| 80°-90° | 51.1 | 1.1 |
| 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° | 1491.6 | 31.2 |
| 0°-40° | 2378.5 | 49.8 |
| 0°-60° | 3962.0 | 83.0 |
| 0°-90° | 4773.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4773.5 | 100.0 |

**CANDELA DISTRIBUTION:**

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|---|---|---|---|---|---|---|
| 0° | 1983 | 1983 | 1983 | 1983 | 1983 | |
| 5° | 1977 | 1974 | 1972 | 1972 | 1975 | 188 |
| 15° | 1883 | 1882 | 1882 | 1878 | 1879 | 530 |
| 25° | 1685 | 1688 | 1682 | 1684 | 1680 | 775 |
| 35° | 1423 | 1422 | 1413 | 1419 | 1417 | 890 |
| 45° | 1124 | 1120 | 1111 | 1116 | 1115 | 867 |
| 55° | 814 | 806 | 802 | 808 | 808 | 728 |
| 65° | 514 | 507 | 504 | 508 | 512 | 511 |
| 75° | 242 | 238 | 237 | 241 | 244 | 257 |
| 85° | 34 | 35 | 36 | 37 | 36 | 50 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

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Scaled Data Report

TEST NUMBER: P1214674
CATALOG NUMBER: 22-ID2-45-CFR2-L835-U

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 22.5° | 45° | 67.5° | 90° |
|---|---|---|---|---|---|
| 0° | *1982.9* | 1982.9 | 1982.9 | 1982.9 | 1982.9 |
| 2.5° | *1983.5* | *1981.7* | *1978.8* | *1980.0* | *1981.7* |
| 5° | *1977.0* | 1974.0 | 1971.6 | 1972.2 | 1975.2 |
| 7.5° | *1964.5* | 1960.9 | 1957.9 | 1959.1 | 1961.5 |
| 10° | *1946.0* | 1942.4 | 1940.0 | 1940.0 | 1940.6 |
| 12.5° | *1919.7* | 1916.2 | 1915.0 | 1913.2 | 1914.4 |
| 15° | *1882.8* | 1882.2 | 1882.2 | 1878.0 | 1878.6 |
| 17.5° | *1843.4* | 1841.6 | 1841.6 | 1836.9 | 1836.3 |
| 20° | *1793.9* | 1793.9 | 1794.5 | 1791.6 | 1788.6 |
| 22.5° | *1742.7* | 1743.3 | 1742.1 | 1739.1 | 1733.1 |
| 25° | *1684.8* | 1687.8 | 1682.5 | 1683.6 | 1679.5 |
| 27.5° | *1624.0* | 1624.6 | 1620.4 | 1622.2 | 1620.4 |
| 30° | *1560.8* | 1560.8 | 1553.1 | 1559.6 | 1553.7 |
| 32.5° | *1492.3* | 1494.7 | 1484.5 | 1489.9 | 1489.3 |
| 35° | *1423.1* | 1422.5 | 1413.0 | 1418.9 | 1417.1 |
| 37.5° | *1352.2* | 1349.2 | 1342.0 | 1345.6 | 1345.6 |
| 40° | *1276.4* | 1272.9 | 1266.9 | 1272.3 | 1270.5 |
| 42.5° | *1201.9* | 1197.2 | 1189.4 | 1193.0 | 1196.6 |
| 45° | *1123.8* | 1119.6 | 1110.7 | 1115.5 | 1114.9 |
| 47.5° | *1046.3* | 1042.1 | 1032.0 | 1037.4 | 1039.8 |
| 50° | *968.8* | 964.6 | 955.1 | 960.5 | 965.2 |
| 52.5° | *892.5* | 885.3 | 879.4 | 885.9 | 885.9 |
| 55° | *813.8* | 806.1 | 801.9 | 807.8 | 808.4 |
| 57.5° | *737.5* | 730.9 | 725.6 | 730.9 | 731.5 |
| 60° | *661.8* | 656.4 | 649.3 | 655.2 | 662.4 |
| 62.5° | *589.0* | 582.5 | 576.5 | 581.3 | 584.9 |
| 65° | *513.9* | 506.8 | 504.4 | 508.0 | 512.1 |
| 67.5° | *445.4* | 438.2 | 434.0 | 435.8 | 443.6 |
| 70° | *370.8* | 370.2 | 366.7 | 367.3 | 372.6 |
| 72.5° | *304.1* | 302.3 | 301.7 | 304.1 | 308.8 |
| 75° | *241.5* | 238.5 | 237.3 | 240.9 | 243.8 |
| 77.5° | *183.6* | 181.8 | 178.9 | 180.6 | 181.8 |
| 80° | *123.4* | 122.8 | 123.4 | 127.6 | 128.2 |
| 82.5° | *75.1* | 75.1 | 75.7 | 79.3 | 76.9 |
| 85° | *34.0* | 34.6 | 36.4 | 37.0 | 35.8 |
| 87.5° | *12.5* | 13.1 | 12.5 | 14.3 | 13.1 |
| 90° | *0.0* | 0.0 | 0.0 | 0.0 | 0.0 |

TEST NUMBER: P1214674
CATALOG NUMBER: 22-ID2-45-CFR2-L835-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 | 16.50 | 18.07 | 16.87 | 18.39 | 18.70 | 16.49 | 18.06 | 16.85 | 18.38 | 18.69 |
| | 3H | 18.04 | 19.45 | 18.41 | 19.78 | 20.14 | 18.02 | 19.44 | 18.40 | 19.76 | 20.12 |
| | 4H | 18.54 | 19.87 | 18.94 | 20.22 | 20.60 | 18.54 | 19.87 | 18.94 | 20.22 | 20.60 |
| | 6H | 18.85 | 20.08 | 19.27 | 20.45 | 20.84 | 18.86 | 20.08 | 19.27 | 20.45 | 20.84 |
| | 8H | 18.92 | 20.09 | 19.34 | 20.48 | 20.88 | 18.92 | 20.10 | 19.35 | 20.48 | 20.88 |
| | 12H | 18.93 | 20.05 | 19.36 | 20.44 | 20.86 | 18.94 | 20.07 | 19.37 | 20.45 | 20.88 |
| 4H | 2H | 17.03 | 18.36 | 17.43 | 18.71 | 19.09 | 17.03 | 18.35 | 17.43 | 18.70 | 19.08 |
| | 3H | 18.77 | 19.88 | 19.18 | 20.28 | 20.68 | 18.76 | 19.87 | 19.17 | 20.27 | 20.67 |
| | 4H | 19.39 | 20.38 | 19.82 | 20.80 | 21.24 | 19.39 | 20.39 | 19.82 | 20.80 | 21.24 |
| | 6H | 19.80 | 20.66 | 20.25 | 21.10 | 21.56 | 19.80 | 20.67 | 20.26 | 21.11 | 21.57 |
| | 8H | 19.88 | 20.69 | 20.34 | 21.14 | 21.60 | 19.90 | 20.71 | 20.36 | 21.15 | 21.62 |
| | 12H | 19.92 | 20.64 | 20.40 | 21.12 | 21.59 | 19.94 | 20.67 | 20.42 | 21.14 | 21.61 |
| 8H | 4H | 19.61 | 20.42 | 20.07 | 20.86 | 21.33 | 19.61 | 20.42 | 20.07 | 20.86 | 21.33 |
| | 6H | 20.09 | 20.76 | 20.58 | 21.25 | 21.73 | 20.10 | 20.77 | 20.60 | 21.26 | 21.74 |
| | 8H | 20.21 | 20.81 | 20.73 | 21.32 | 21.81 | 20.24 | 20.84 | 20.75 | 21.35 | 21.84 |
| | 12H | 20.28 | 20.81 | 20.79 | 21.30 | 21.87 | 20.32 | 20.85 | 20.82 | 21.34 | 21.90 |
| 12H | 4H | 19.61 | 20.34 | 20.10 | 20.82 | 21.29 | 19.61 | 20.34 | 20.10 | 20.82 | 21.29 |
| | 6H | 20.10 | 20.70 | 20.61 | 21.21 | 21.70 | 20.12 | 20.72 | 20.63 | 21.22 | 21.71 |
| | 8H | 20.27 | 20.80 | 20.78 | 21.29 | 21.85 | 20.29 | 20.82 | 20.80 | 21.31 | 21.88 |

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: SP1-2506-458-1

Test Date: 07/23/2025

Luminaire Tested: 22ID2-55-CFR1-L835-U

Data in this report applies to families of products including 22ID2-55-CFR1-L835-U

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

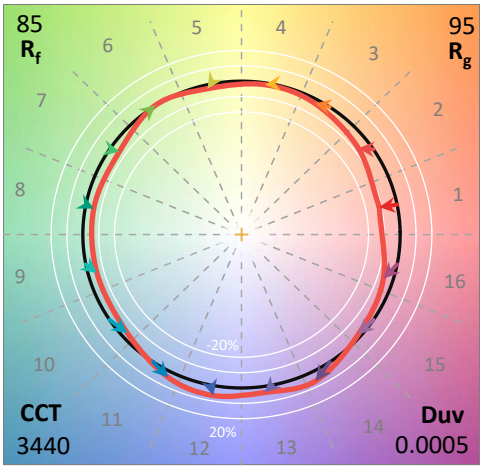
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2506-458-1 |
| 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-L835-U** |
| Description: | 2X2 CGTX WITH INDEPTH FRAME AND CFR1 LENS - 5500 LUMEN 3500K 80CRI |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 3440 |
| CIE u': | 0.2370 |
| CIE v': | 0.5132 |
| Duv: | 0.0005 |
| CIE x: | 0.4093 |
| CIE y: | 0.3940 |
| CIE z: | 0.1967 |
| Peak Wavelength (nm): | 599 |
| Dominant Wavelength (nm): | 580 |
| Purity: | 41.09375 |
| Rf: | 84.9 |
| Rg: | 94.6 |

| | |
|---|---|
| CRI (Ra): | 84.2 |
| R1: | 82.8 |
| R2: | 91.7 |
| R3: | 96.7 |
| R4: | 81.9 |
| R5: | 82.6 |
| R6: | 88.8 |
| R7: | 85.0 |
| R8: | 63.7 |
| R9: | 13.6 |
| R10: | 80.1 |
| R11: | 81.1 |
| R12: | 65.8 |
| R13: | 85.2 |
| R14: | 98.7 |
| R15: | 76.2 |




## Test Conditions

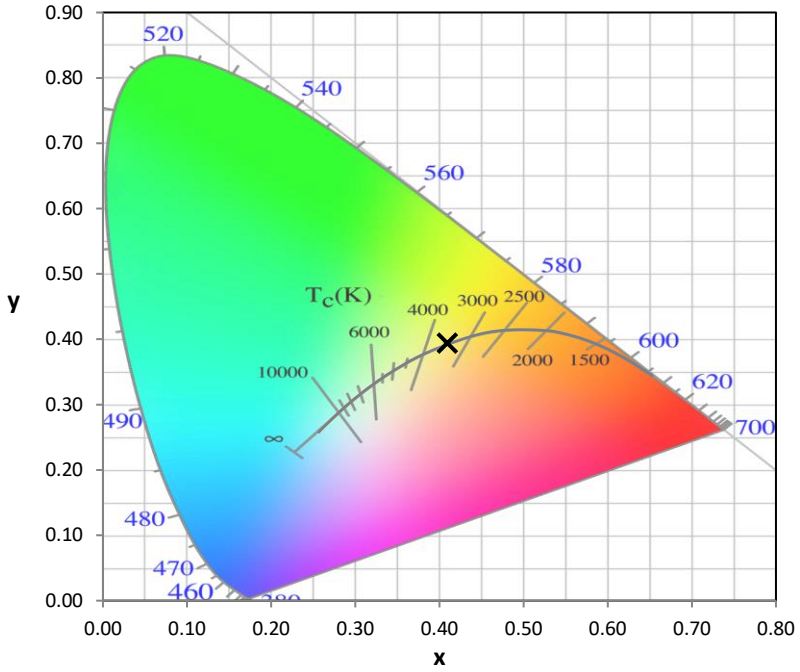
| | |
|---|---|
| Stabilization Time: | 36M |
| Operation Time: | 1H 36M |
| Sphere Temperature (°C): | 24.0 |

REPORT NUMBER: SP1-2506-458-1

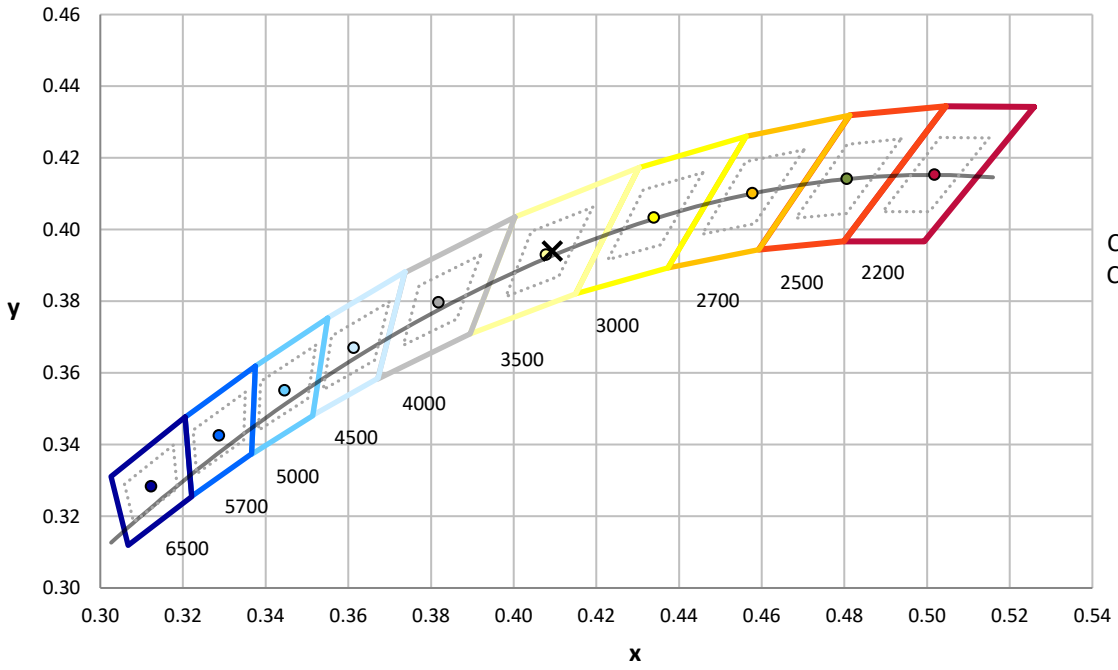
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | 76INCH SPHERE IN0058 | 6/16/2025 | 12/16/2025 |
| Power Meter | XITRON INXT2011004 | 1/21/2025 | 1/21/2026 |
| AC Power Source | CHROMA 61603 IN0063 | 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: SP1-2506-458-1

## CIE 1931 Chromaticity Diagram




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

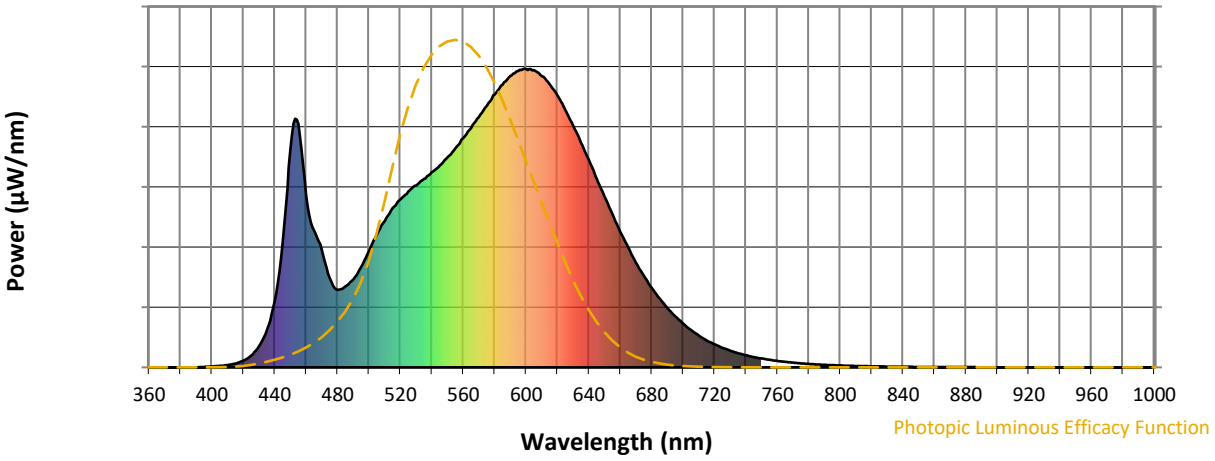



CCT = 3440K
CIE x = 0.4093
CIE y = 0.3940
Duv = 0.0005

Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2506-458-1

## Photopic Flux vs. Wavelength

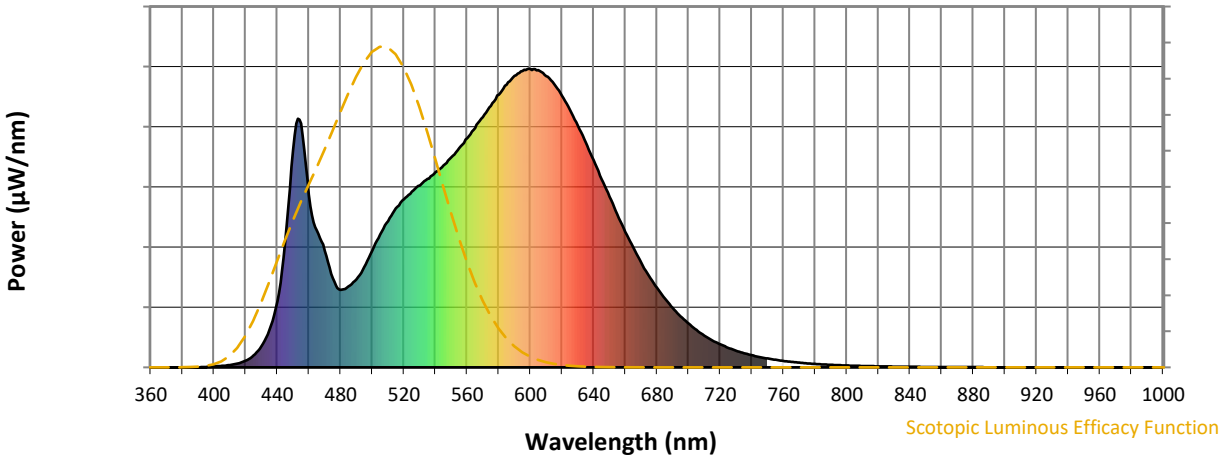



## Photopic Lumens: NR

| 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 | 295 | NR | 620 | 910 | NR | 750 | 30 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 335 | NR | 625 | 862 | NR | 755 | 25 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 390 | NR | 630 | 809 | NR | 760 | 21 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 445 | NR | 635 | 752 | NR | 765 | 18 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 490 | NR | 640 | 694 | NR | 770 | 16 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 532 | NR | 645 | 630 | NR | 775 | 13 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 563 | NR | 650 | 571 | NR | 780 | 12 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 588 | NR | 655 | 512 | NR | 785 | 10 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 609 | NR | 660 | 453 | NR | 790 | 8 | NR | 920 | 0 | NR |
| 405 | 5 | NR | 535 | 631 | NR | 665 | 401 | NR | 795 | 7 | NR | 925 | 0 | NR |
| 410 | 8 | NR | 540 | 654 | NR | 670 | 351 | NR | 800 | 6 | NR | 930 | 0 | NR |
| 415 | 13 | NR | 545 | 677 | NR | 675 | 306 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 23 | NR | 550 | 702 | NR | 680 | 267 | NR | 810 | 5 | NR | 940 | 0 | NR |
| 425 | 40 | NR | 555 | 734 | NR | 685 | 230 | NR | 815 | 4 | NR | 945 | 0 | NR |
| 430 | 70 | NR | 560 | 767 | NR | 690 | 199 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 126 | NR | 565 | 802 | NR | 695 | 171 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 221 | NR | 570 | 838 | NR | 700 | 146 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 418 | NR | 575 | 875 | NR | 705 | 125 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 729 | NR | 580 | 913 | NR | 710 | 107 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 816 | NR | 585 | 946 | NR | 715 | 90 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 578 | NR | 590 | 976 | NR | 720 | 77 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 458 | NR | 595 | 992 | NR | 725 | 66 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 390 | NR | 600 | 999 | NR | 730 | 56 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 299 | NR | 605 | 995 | NR | 735 | 47 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 260 | NR | 610 | 975 | NR | 740 | 40 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 271 | NR | 615 | 948 | NR | 745 | 34 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2506-458-1

## Scotopic Flux vs. Wavelength




**Scotopic Lumens: NR** **S/P: 1.53**

| 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 | 295 | NR | 620 | 910 | NR | 750 | 30 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 335 | NR | 625 | 862 | NR | 755 | 25 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 390 | NR | 630 | 809 | NR | 760 | 21 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 445 | NR | 635 | 752 | NR | 765 | 18 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 490 | NR | 640 | 694 | NR | 770 | 16 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 532 | NR | 645 | 630 | NR | 775 | 13 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 563 | NR | 650 | 571 | NR | 780 | 12 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 588 | NR | 655 | 512 | NR | 785 | 10 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 609 | NR | 660 | 453 | NR | 790 | 8 | NR | 920 | 0 | NR |
| 405 | 5 | NR | 535 | 631 | NR | 665 | 401 | NR | 795 | 7 | NR | 925 | 0 | NR |
| 410 | 8 | NR | 540 | 654 | NR | 670 | 351 | NR | 800 | 6 | NR | 930 | 0 | NR |
| 415 | 13 | NR | 545 | 677 | NR | 675 | 306 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 23 | NR | 550 | 702 | NR | 680 | 267 | NR | 810 | 5 | NR | 940 | 0 | NR |
| 425 | 40 | NR | 555 | 734 | NR | 685 | 230 | NR | 815 | 4 | NR | 945 | 0 | NR |
| 430 | 70 | NR | 560 | 767 | NR | 690 | 199 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 126 | NR | 565 | 802 | NR | 695 | 171 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 221 | NR | 570 | 838 | NR | 700 | 146 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 418 | NR | 575 | 875 | NR | 705 | 125 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 729 | NR | 580 | 913 | NR | 710 | 107 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 816 | NR | 585 | 946 | NR | 715 | 90 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 578 | NR | 590 | 976 | NR | 720 | 77 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 458 | NR | 595 | 992 | NR | 725 | 66 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 390 | NR | 600 | 999 | NR | 730 | 56 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 299 | NR | 605 | 995 | NR | 735 | 47 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 260 | NR | 610 | 975 | NR | 740 | 40 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 271 | NR | 615 | 948 | NR | 745 | 34 | NR | 875 | 1 | NR | | | |

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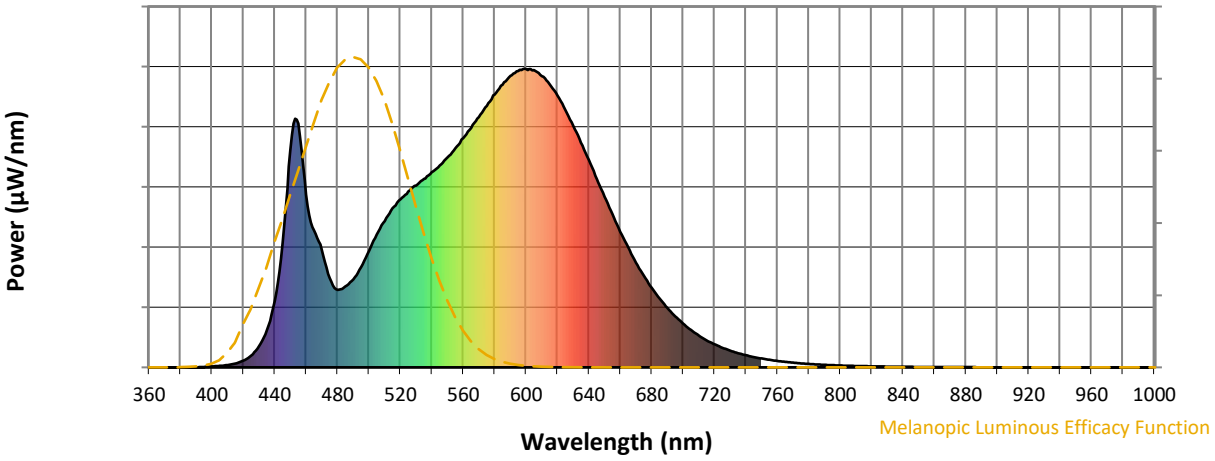
## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 3.07**

| 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 | 295 | NR | 620 | 910 | NR | 750 | 30 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 335 | NR | 625 | 862 | NR | 755 | 25 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 390 | NR | 630 | 809 | NR | 760 | 21 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 445 | NR | 635 | 752 | NR | 765 | 18 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 490 | NR | 640 | 694 | NR | 770 | 16 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 532 | NR | 645 | 630 | NR | 775 | 13 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 563 | NR | 650 | 571 | NR | 780 | 12 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 588 | NR | 655 | 512 | NR | 785 | 10 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 609 | NR | 660 | 453 | NR | 790 | 8 | NR | 920 | 0 | NR |
| 405 | 5 | NR | 535 | 631 | NR | 665 | 401 | NR | 795 | 7 | NR | 925 | 0 | NR |
| 410 | 8 | NR | 540 | 654 | NR | 670 | 351 | NR | 800 | 6 | NR | 930 | 0 | NR |
| 415 | 13 | NR | 545 | 677 | NR | 675 | 306 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 23 | NR | 550 | 702 | NR | 680 | 267 | NR | 810 | 5 | NR | 940 | 0 | NR |
| 425 | 40 | NR | 555 | 734 | NR | 685 | 230 | NR | 815 | 4 | NR | 945 | 0 | NR |
| 430 | 70 | NR | 560 | 767 | NR | 690 | 199 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 126 | NR | 565 | 802 | NR | 695 | 171 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 221 | NR | 570 | 838 | NR | 700 | 146 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 418 | NR | 575 | 875 | NR | 705 | 125 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 729 | NR | 580 | 913 | NR | 710 | 107 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 816 | NR | 585 | 946 | NR | 715 | 90 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 578 | NR | 590 | 976 | NR | 720 | 77 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 458 | NR | 595 | 992 | NR | 725 | 66 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 390 | NR | 600 | 999 | NR | 730 | 56 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 299 | NR | 605 | 995 | NR | 735 | 47 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 260 | NR | 610 | 975 | NR | 740 | 40 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 271 | NR | 615 | 948 | NR | 745 | 34 | NR | 875 | 1 | NR | | | |

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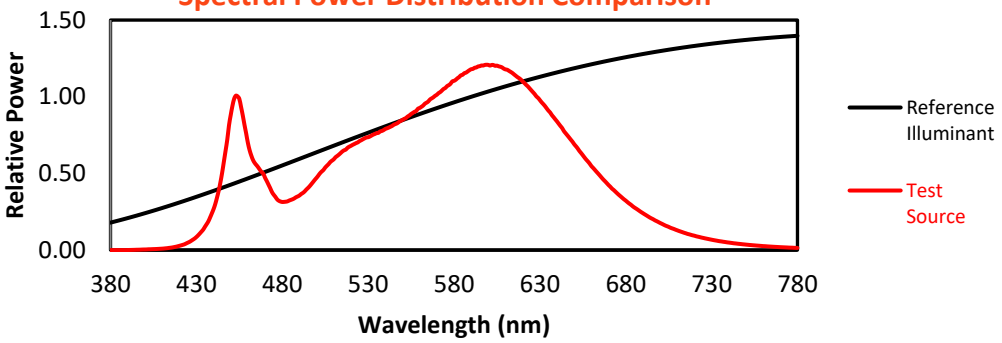
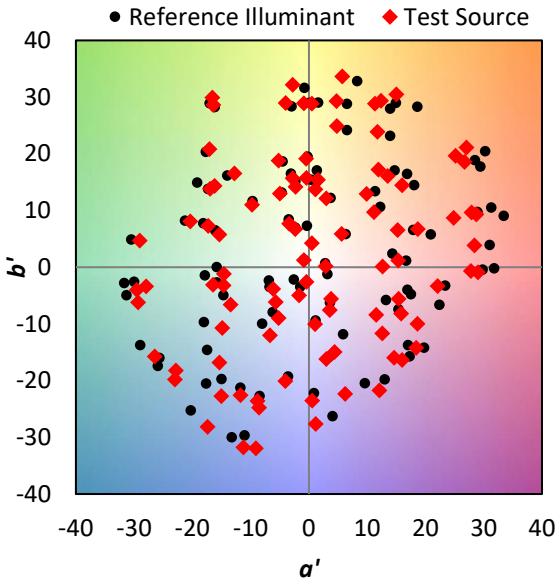
## Summary

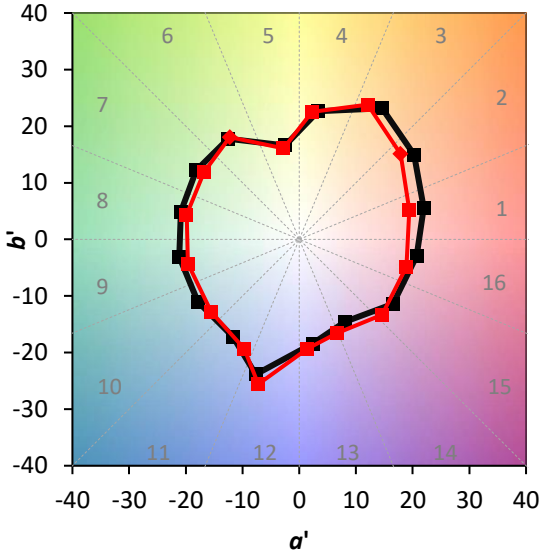
$R_f$ = 84.9
$R_g$ = 94.6
CIE $R_a$ = 84.2
$R_9$ = 13.6

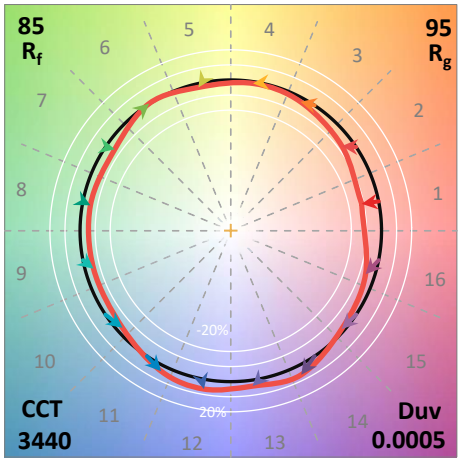
## Spectral Power Distribution Comparison

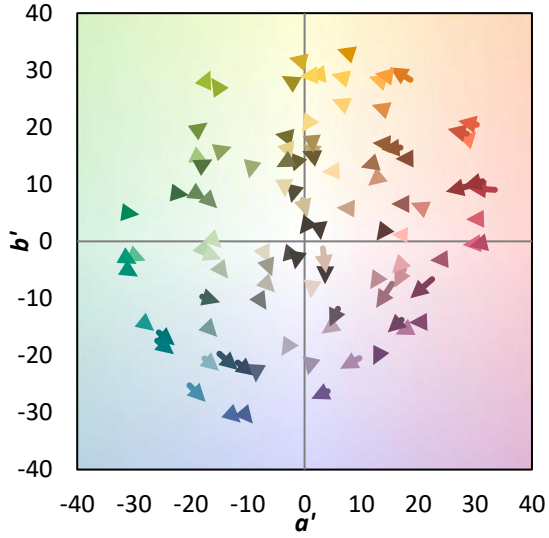



## Color Vector Graphics



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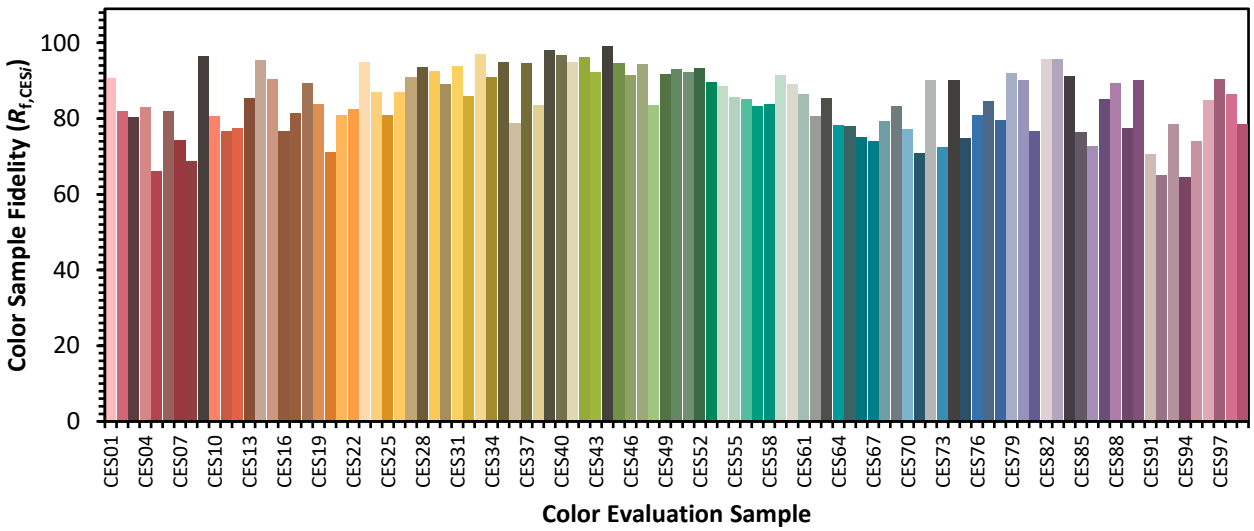
**Individual Sample Fidelity Index ($R_{f,i}$)**

| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 87 | CES51 = 92 | CES76 = 81 |
| CES02 = 62 | CES27 = 91 | CES52 = 93 | CES77 = 85 |
| CES03 = 31 | CES28 = 94 | CES53 = 90 | CES78 = 80 |
| CES04 = 70 | CES29 = 92 | CES54 = 89 | CES79 = 92 |
| CES05 = 49 | CES30 = 89 | CES55 = 86 | CES80 = 90 |
| CES06 = 51 | CES31 = 94 | CES56 = 85 | CES81 = 77 |
| CES07 = 41 | CES32 = 86 | CES57 = 83 | CES82 = 96 |
| CES08 = 40 | CES33 = 97 | CES58 = 84 | CES83 = 96 |
| CES09 = 29 | CES34 = 91 | CES59 = 91 | CES84 = 91 |
| CES10 = 75 | CES35 = 95 | CES60 = 89 | CES85 = 76 |
| CES11 = 58 | CES36 = 79 | CES61 = 87 | CES86 = 73 |
| CES12 = 64 | CES37 = 95 | CES62 = 81 | CES87 = 85 |
| CES13 = 43 | CES38 = 84 | CES63 = 85 | CES88 = 89 |
| CES14 = 74 | CES39 = 98 | CES64 = 78 | CES89 = 78 |
| CES15 = 71 | CES40 = 97 | CES65 = 78 | CES90 = 90 |
| CES16 = 47 | CES41 = 95 | CES66 = 75 | CES91 = 71 |
| CES17 = 50 | CES42 = 96 | CES67 = 74 | CES92 = 65 |
| CES18 = 56 | CES43 = 92 | CES68 = 79 | CES93 = 79 |
| CES19 = 72 | CES44 = 99 | CES69 = 83 | CES94 = 64 |
| CES20 = 66 | CES45 = 95 | CES70 = 77 | CES95 = 74 |
| CES21 = 86 | CES46 = 91 | CES71 = 71 | CES96 = 85 |
| CES22 = 78 | CES47 = 94 | CES72 = 90 | CES97 = 90 |
| CES23 = 92 | CES48 = 83 | CES73 = 72 | CES98 = 86 |
| CES24 = 90 | CES49 = 92 | CES74 = 90 | CES99 = 79 |
| CES25 = 72 | CES50 = 93 | CES75 = 75 | |



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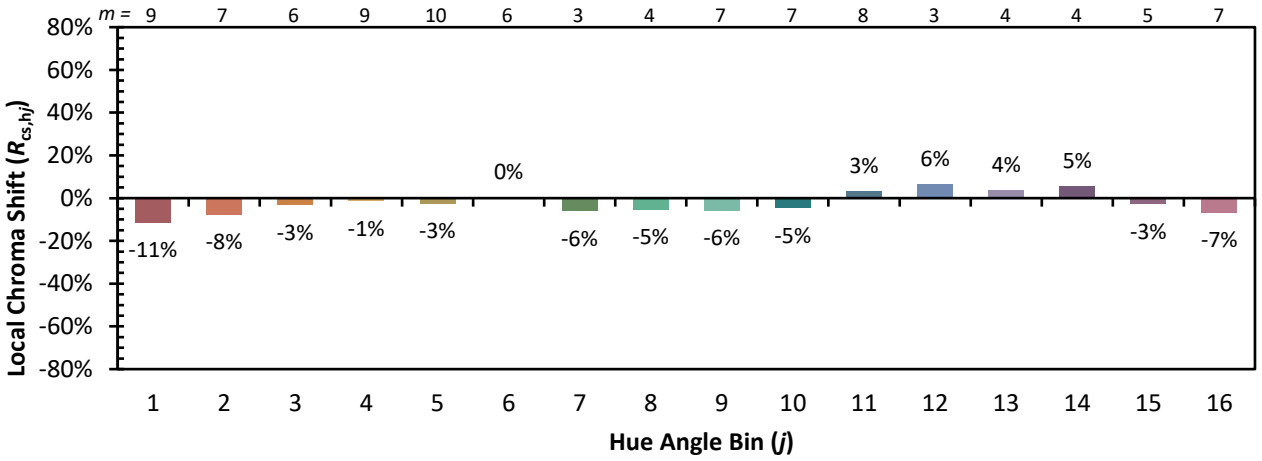
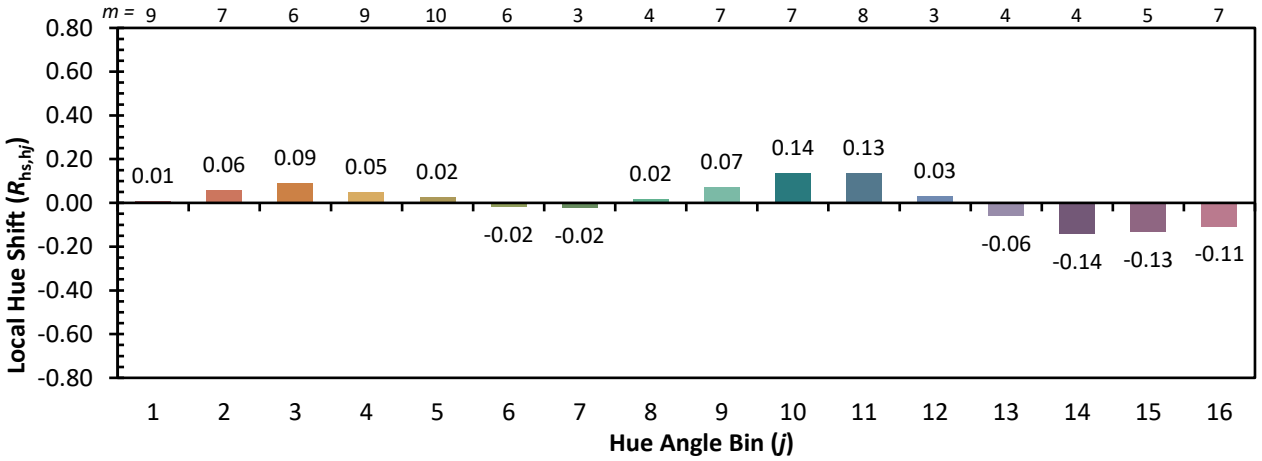
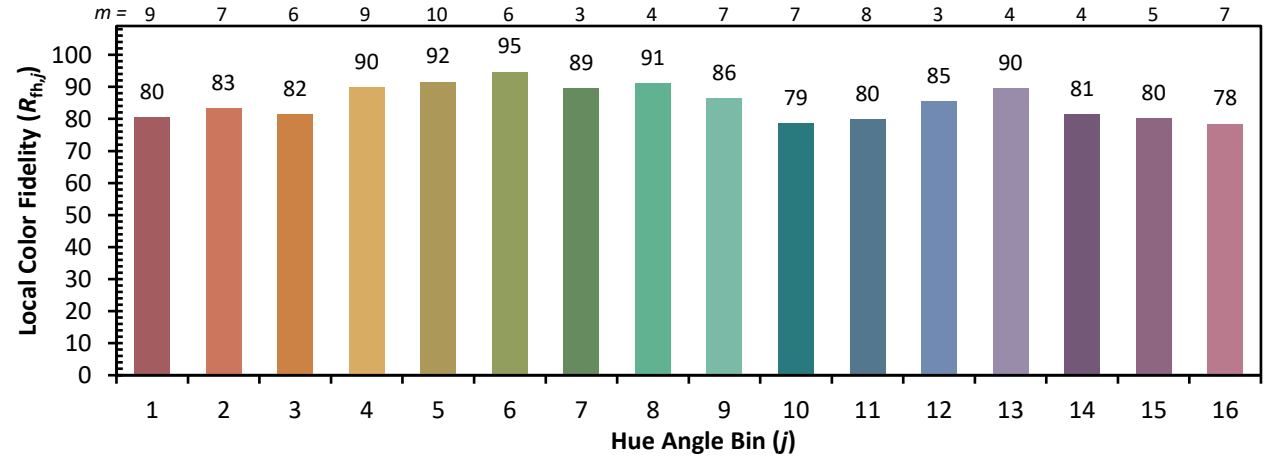
## Color Rendition by Hue-Angle Bin



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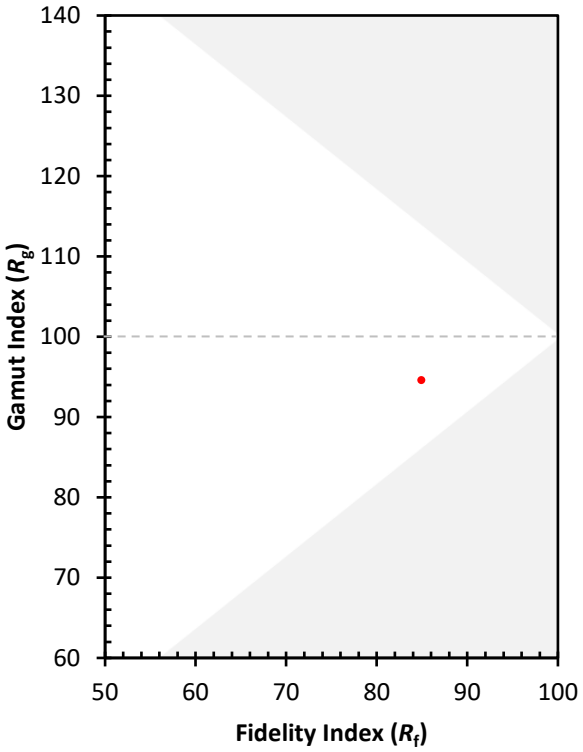
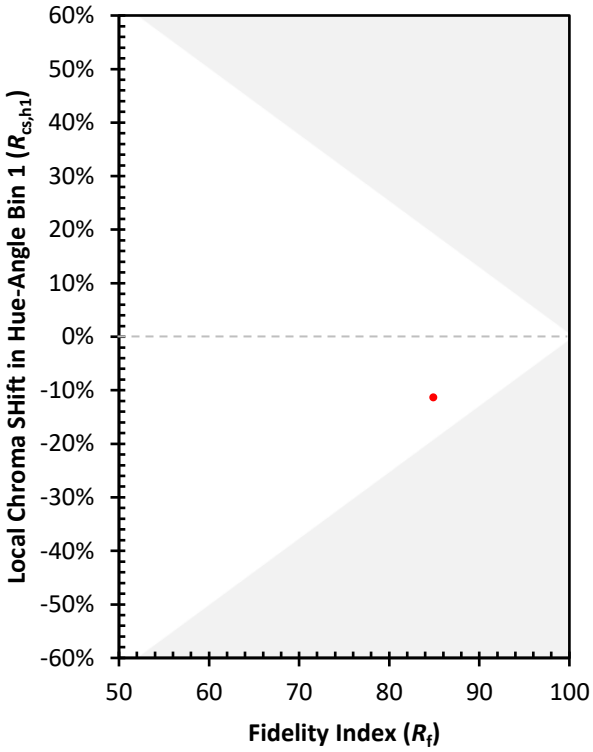
### Measure Comparisons




(END OF REPORT)