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: P1216752

Luminaire Tested: 14-ID2-30-CFR1-L840-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: | P1216752 |
| | TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2508-507-13) |
| Test Lab: | INNOVATION CENTER |
| Issue Date: | 12/5/2025 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | CORELITE |
| Catalog Number: | 14-ID2-30-CFR1-L840-U |
| Description: | 1X4 IN DEPTH TROFFER WITH 1INCH CUBE REGRESS LENS |
| Light Source: | 4000K CCT, 80 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 3225.5 lumens |
| Efficiency: | N/A |
| Efficacy: | 122.6 lumens/watt |
| Spacing Criteria (0/90/45): | 1.21 / 1.17 / 1.28 |
| Luminous Opening: | Rectangular (W 1' x L: 4' x H: 0') |
| CIE Type: | Direct |

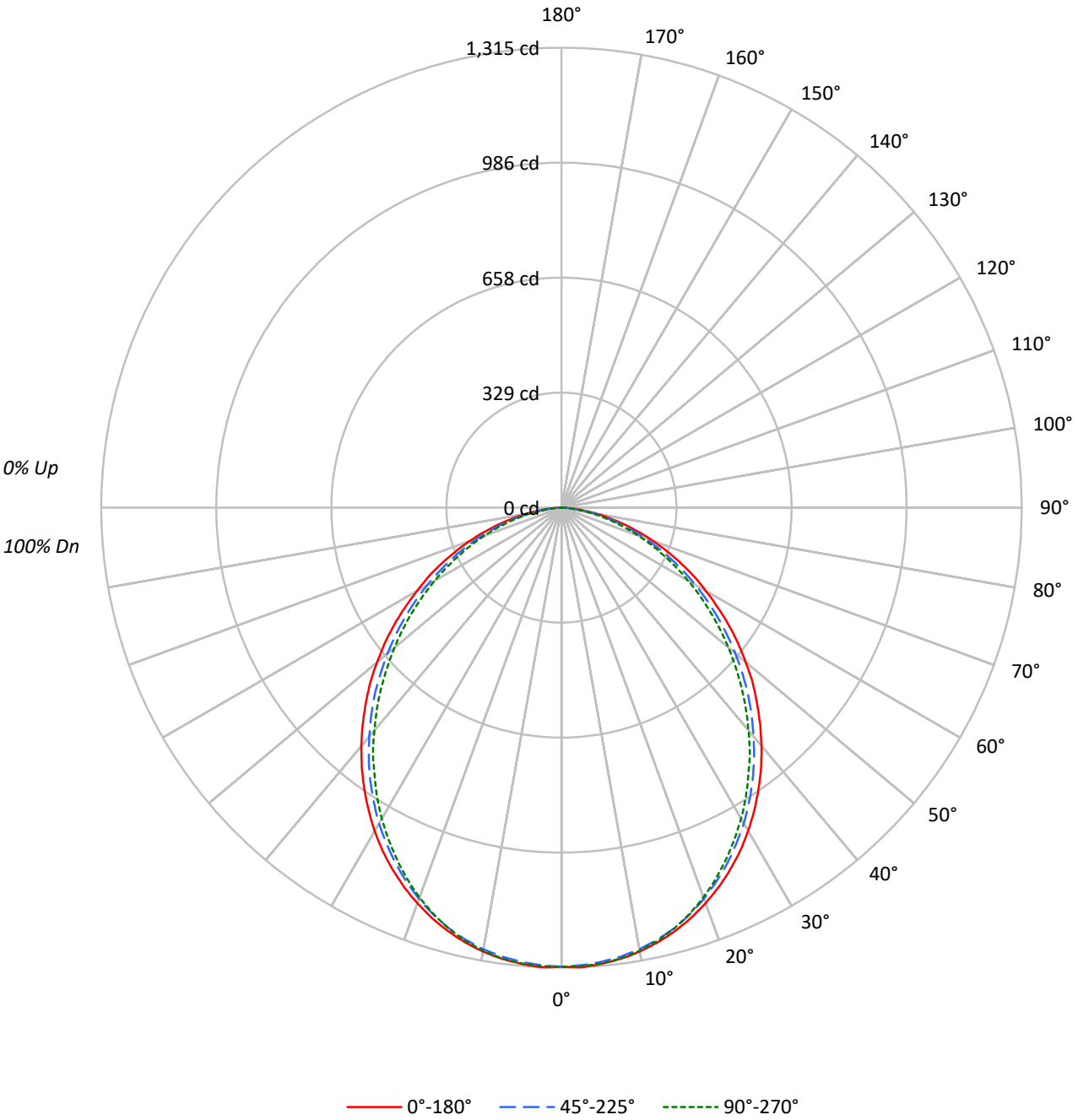
| | |
|---|---|
| Input Watts (W): | 26.3 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | NR |
| Total Harmonic Distortion (THDi): | NR |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 24 FT |

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

Scaled Data Report

TEST NUMBER: P1216752
CATALOG NUMBER: 14-ID2-30-CFR1-L840-U

## Luminous Intensity Polar Plot



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

Scaled Data Report

TEST NUMBER: P1216752
CATALOG NUMBER: 14-ID2-30-CFR1-L840-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 | 109 | 105 | 101 | 97 | 107 | 103 | 99 | 96 | 99 | 96 | 93 | 95 | 92 | 90 | 91 | 89 | 87 | 85 |
| 2 | 100 | 92 | 86 | 80 | 97 | 90 | 84 | 79 | 87 | 82 | 77 | 84 | 79 | 76 | 81 | 77 | 74 | 72 |
| 3 | 92 | 81 | 74 | 67 | 89 | 80 | 73 | 67 | 77 | 71 | 66 | 74 | 69 | 65 | 72 | 67 | 63 | 61 |
| 4 | 84 | 73 | 64 | 58 | 82 | 71 | 63 | 57 | 69 | 62 | 56 | 66 | 61 | 56 | 64 | 59 | 55 | 53 |
| 5 | 78 | 65 | 56 | 50 | 75 | 64 | 56 | 50 | 62 | 55 | 49 | 60 | 54 | 49 | 58 | 53 | 48 | 46 |
| 6 | 72 | 59 | 50 | 44 | 70 | 58 | 50 | 44 | 56 | 49 | 43 | 54 | 48 | 43 | 53 | 47 | 43 | 41 |
| 7 | 67 | 53 | 45 | 39 | 65 | 53 | 45 | 39 | 51 | 44 | 39 | 50 | 43 | 38 | 48 | 43 | 38 | 36 |
| 8 | 62 | 49 | 41 | 35 | 61 | 48 | 40 | 35 | 47 | 40 | 35 | 46 | 39 | 34 | 45 | 39 | 34 | 32 |
| 9 | 58 | 45 | 37 | 32 | 57 | 44 | 37 | 31 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 29 |
| 10 | 55 | 42 | 34 | 29 | 53 | 41 | 34 | 29 | 40 | 33 | 29 | 39 | 33 | 28 | 38 | 32 | 28 | 27 |

## AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|---|---|---|---|
| 0° | 3532 | 3532 | 3532 |
| 5° | 3537 | 3522 | 3534 |
| 10° | 3523 | 3503 | 3515 |
| 15° | 3492 | 3467 | 3470 |
| 20° | 3447 | 3408 | 3395 |
| 25° | 3390 | 3330 | 3299 |
| 30° | 3317 | 3239 | 3190 |
| 35° | 3226 | 3128 | 3060 |
| 40° | 3124 | 3000 | 2920 |
| 45° | 3006 | 2869 | 2769 |
| 50° | 2878 | 2716 | 2606 |
| 55° | 2734 | 2553 | 2435 |
| 60° | 2565 | 2380 | 2251 |
| 65° | 2400 | 2188 | 2046 |
| 70° | 2194 | 1980 | 1834 |
| 75° | 1942 | 1722 | 1574 |
| 80° | 1587 | 1393 | 1249 |
| 85° | 1127 | 926 | 756 |

## MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 3006 cd/sqm

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

Scaled Data Report

TEST NUMBER: P1216752
CATALOG NUMBER: 14-ID2-30-CFR1-L840-U

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 124.0 | 3.8 |
| 10°-20° | 351.2 | 10.9 |
| 20°-30° | 517.2 | 16.0 |
| 30°-40° | 596.6 | 18.5 |
| 40°-50° | 583.4 | 18.1 |
| 50°-60° | 490.5 | 15.2 |
| 60°-70° | 344.6 | 10.7 |
| 70°-80° | 178.5 | 5.5 |
| 80°-90° | 39.6 | 1.2 |
| 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° | 992.4 | 30.8 |
| 0°-40° | 1589.0 | 49.3 |
| 0°-60° | 2662.8 | 82.6 |
| 0°-90° | 3225.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3225.5 | 100.0 |

**CANDELA DISTRIBUTION:**

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|---|---|---|---|---|---|---|
| 0° | 1313 | 1313 | 1313 | 1313 | 1313 | |
| 5° | 1309 | 1308 | 1304 | 1304 | 1308 | 124 |
| 15° | 1253 | 1251 | 1245 | 1242 | 1246 | 353 |
| 25° | 1142 | 1137 | 1122 | 1110 | 1111 | 526 |
| 35° | 982 | 974 | 952 | 935 | 931 | 614 |
| 45° | 790 | 780 | 754 | 733 | 728 | 610 |
| 55° | 583 | 572 | 544 | 526 | 519 | 520 |
| 65° | 377 | 367 | 344 | 328 | 321 | 373 |
| 75° | 187 | 180 | 166 | 155 | 151 | 198 |
| 85° | 36 | 38 | 30 | 26 | 24 | 45 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

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

Scaled Data Report

TEST NUMBER: P1216752
CATALOG NUMBER: 14-ID2-30-CFR1-L840-U

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 22.5° | 45° | 67.5° | 90° |
|---|---|---|---|---|---|
| 0° | *1312.6* | 1312.6 | 1312.6 | 1312.6 | 1312.6 |
| 2.5° | *1315.4* | *1312.6* | *1309.4* | *1310.5* | *1312.1* |
| 5° | *1309.4* | 1307.7 | 1303.9 | 1304.5 | 1308.3 |
| 7.5° | *1301.2* | 1299.0 | 1294.7 | 1295.8 | 1300.1 |
| 10° | *1289.2* | 1286.0 | 1282.1 | 1282.7 | 1286.5 |
| 12.5° | *1272.9* | 1270.2 | 1265.3 | 1264.7 | 1268.5 |
| 15° | *1253.3* | 1250.6 | 1244.6 | 1242.4 | 1245.7 |
| 17.5° | *1230.4* | 1227.1 | 1219.5 | 1215.7 | 1217.9 |
| 20° | *1203.7* | 1200.4 | 1190.1 | 1183.0 | 1185.7 |
| 22.5° | *1174.3* | 1170.5 | 1157.4 | 1149.2 | 1150.3 |
| 25° | *1141.6* | 1136.7 | 1121.5 | 1110.0 | 1111.1 |
| 27.5° | *1106.2* | 1099.7 | 1082.8 | 1070.3 | 1069.7 |
| 30° | *1067.5* | 1060.5 | 1042.5 | 1027.8 | 1026.7 |
| 32.5° | *1025.6* | 1018.5 | 997.8 | 982.0 | 980.9 |
| 35° | *982.0* | 973.9 | 952.1 | 934.6 | 931.4 |
| 37.5° | *936.8* | 927.6 | 904.1 | 887.3 | 884.5 |
| 40° | *889.4* | 879.6 | 854.0 | 836.1 | 831.2 |
| 42.5° | *840.4* | 831.2 | 803.9 | 786.5 | 780.0 |
| 45° | *789.8* | 780.0 | 753.8 | 733.1 | 727.7 |
| 47.5° | *741.3* | 728.2 | 700.4 | 683.0 | 674.8 |
| 50° | *687.4* | 676.5 | 648.7 | 630.7 | 622.6 |
| 52.5° | *635.6* | 624.7 | 595.9 | 577.9 | 570.8 |
| 55° | *582.8* | 571.9 | 544.1 | 526.1 | 519.1 |
| 57.5° | *528.3* | 519.6 | 492.9 | 476.0 | 468.4 |
| 60° | *476.6* | 467.9 | 442.3 | 426.5 | 418.3 |
| 62.5° | *428.1* | 417.2 | 392.2 | 377.5 | 369.3 |
| 65° | *376.9* | 367.1 | 343.7 | 328.4 | 321.4 |
| 67.5° | *327.3* | 318.1 | 296.3 | 283.2 | 277.8 |
| 70° | *278.9* | 270.7 | 251.6 | 238.6 | 233.1 |
| 72.5° | *231.5* | 224.4 | 207.5 | 195.0 | 191.2 |
| 75° | *186.8* | 180.3 | 165.6 | 154.7 | 151.4 |
| 77.5° | *143.2* | 139.4 | 125.8 | 116.6 | 113.8 |
| 80° | *102.4* | 100.8 | 89.9 | 82.2 | 80.6 |
| 82.5° | *66.4* | 65.9 | 58.8 | 52.3 | 50.1 |
| 85° | *36.5* | 37.6 | 30.0 | 25.6 | 24.5 |
| 87.5° | *13.1* | 13.1 | 9.3 | 8.2 | 7.6 |
| 90° | *0.0* | 0.0 | 0.0 | 0.0 | 0.0 |

TEST NUMBER: P1216752
CATALOG NUMBER: 14-ID2-30-CFR1-L840-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 | 15.49 | 17.07 | 15.86 | 17.39 | 17.70 | 14.84 | 16.42 | 15.20 | 16.73 | 17.05 |
| | 3H | 17.11 | 18.54 | 17.49 | 18.86 | 19.23 | 16.33 | 17.75 | 16.70 | 18.08 | 18.44 |
| | 4H | 17.68 | 19.02 | 18.08 | 19.37 | 19.75 | 16.82 | 18.15 | 17.22 | 18.50 | 18.88 |
| | 6H | 18.06 | 19.30 | 18.47 | 19.66 | 20.05 | 17.12 | 18.36 | 17.53 | 18.72 | 19.11 |
| | 8H | 18.16 | 19.34 | 18.58 | 19.72 | 20.12 | 17.19 | 18.37 | 17.62 | 18.76 | 19.16 |
| | 12H | 18.21 | 19.34 | 18.64 | 19.72 | 20.15 | 17.21 | 18.34 | 17.64 | 18.73 | 19.15 |
| 4H | 2H | 15.97 | 17.31 | 16.37 | 17.66 | 18.03 | 15.44 | 16.78 | 15.84 | 17.13 | 17.50 |
| | 3H | 17.81 | 18.92 | 18.22 | 19.32 | 19.72 | 17.13 | 18.25 | 17.54 | 18.64 | 19.04 |
| | 4H | 18.50 | 19.50 | 18.93 | 19.92 | 20.35 | 17.73 | 18.73 | 18.16 | 19.15 | 19.58 |
| | 6H | 18.99 | 19.87 | 19.45 | 20.31 | 20.77 | 18.13 | 19.00 | 18.58 | 19.44 | 19.90 |
| | 8H | 19.13 | 19.94 | 19.59 | 20.39 | 20.85 | 18.22 | 19.04 | 18.68 | 19.48 | 19.95 |
| | 12H | 19.21 | 19.94 | 19.69 | 20.42 | 20.89 | 18.27 | 19.00 | 18.75 | 19.48 | 19.95 |
| 8H | 4H | 18.69 | 19.51 | 19.16 | 19.95 | 20.42 | 18.00 | 18.82 | 18.46 | 19.26 | 19.72 |
| | 6H | 19.28 | 19.96 | 19.77 | 20.45 | 20.92 | 18.48 | 19.16 | 18.98 | 19.65 | 20.12 |
| | 8H | 19.47 | 20.08 | 19.98 | 20.58 | 21.07 | 18.62 | 19.23 | 19.13 | 19.74 | 20.22 |
| | 12H | 19.61 | 20.14 | 20.11 | 20.63 | 21.20 | 18.70 | 19.24 | 19.21 | 19.73 | 20.29 |
| 12H | 4H | 18.70 | 19.43 | 19.18 | 19.91 | 20.38 | 18.02 | 18.75 | 18.50 | 19.23 | 19.70 |
| | 6H | 19.29 | 19.90 | 19.80 | 20.41 | 20.89 | 18.52 | 19.13 | 19.03 | 19.63 | 20.12 |
| | 8H | 19.53 | 20.06 | 20.03 | 20.55 | 21.12 | 18.70 | 19.24 | 19.21 | 19.73 | 20.29 |

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: SP1-2506-458-5

Test Date: 08/26/2025

Luminaire Tested: 22ID2-55-CFR1-L840-U

Data in this report applies to families of products including 22ID2-55-CFR1-L840-U

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

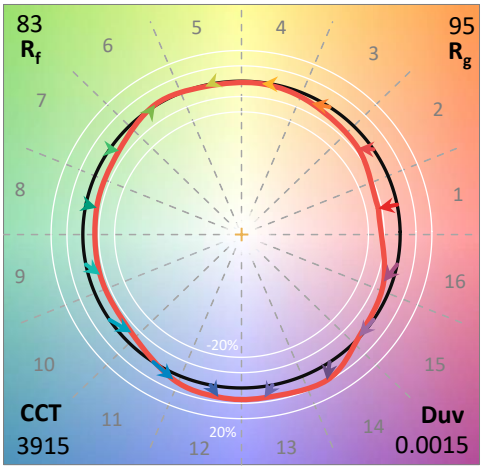
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2506-458-5 |
| 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-L840-U** |
| Description: | 2X2 CGTX WITH INDEPTH FRAME AND CFR1 LENS - 5500 LUMEN 4000K 80CRI |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 3915 |
| CIE u': | 0.2259 |
| CIE v': | 0.5051 |
| Duv: | 0.0015 |
| CIE x: | 0.3854 |
| CIE y: | 0.3830 |
| CIE z: | 0.2316 |
| Peak Wavelength (nm): | 453 |
| Dominant Wavelength (nm): | 578 |
| Purity: | 30.6207 |
| Rf: | 83.2 |
| Rg: | 94.6 |

| | |
|---|---|
| CRI (Ra): | 82.3 |
| R1: | 80.6 |
| R2: | 88.9 |
| R3: | 94.6 |
| R4: | 80.5 |
| R5: | 80.0 |
| R6: | 84.0 |
| R7: | 86.1 |
| R8: | 64.0 |
| R9: | 7.6 |
| R10: | 72.9 |
| R11: | 78.7 |
| R12: | 57.3 |
| R13: | 82.7 |
| R14: | 97.1 |
| R15: | 74.3 |




## Test Conditions

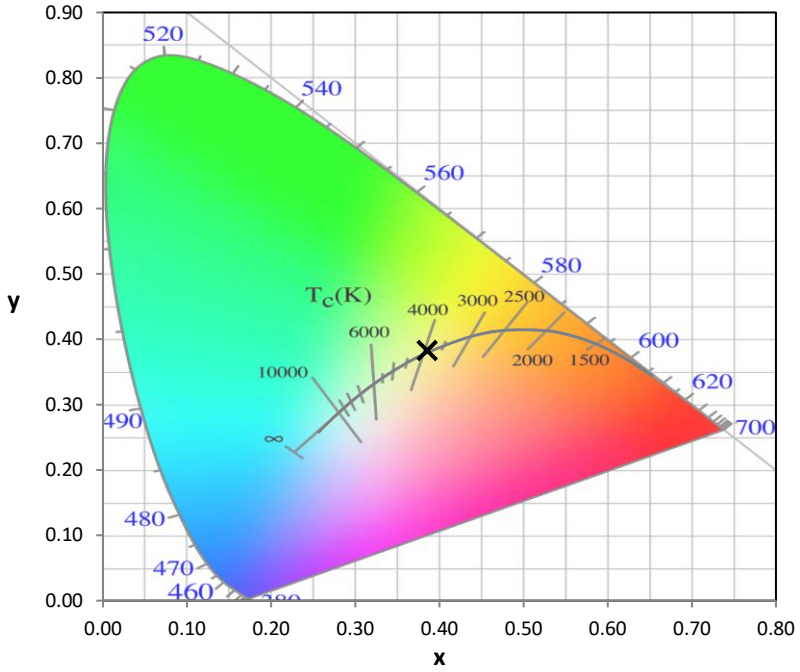
| | |
|---|---|
| Stabilization Time: | 34M |
| Operation Time: | 1H 34M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2506-458-5

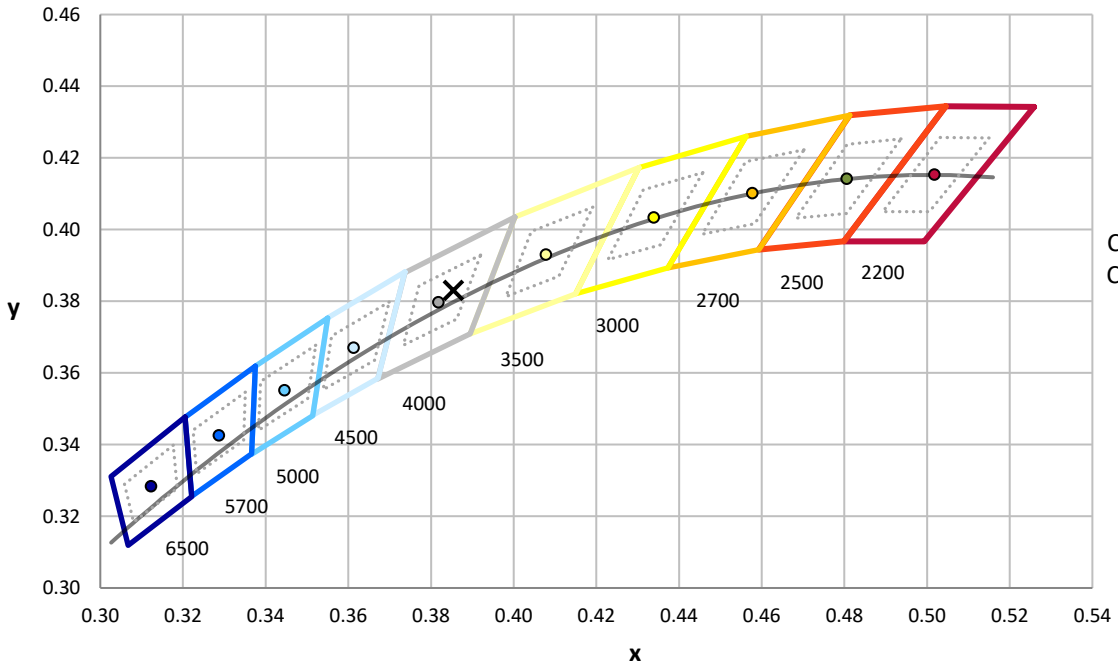
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | 76INCH SPHERE IN0058 | 6/16/2025 | 12/16/2025 |
| Power Meter | XITRON INXT2011004 | 1/21/2025 | 1/21/2026 |
| AC Power Source | CHROMA 61603 IN0063 | 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: SP1-2506-458-5

## CIE 1931 Chromaticity Diagram




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

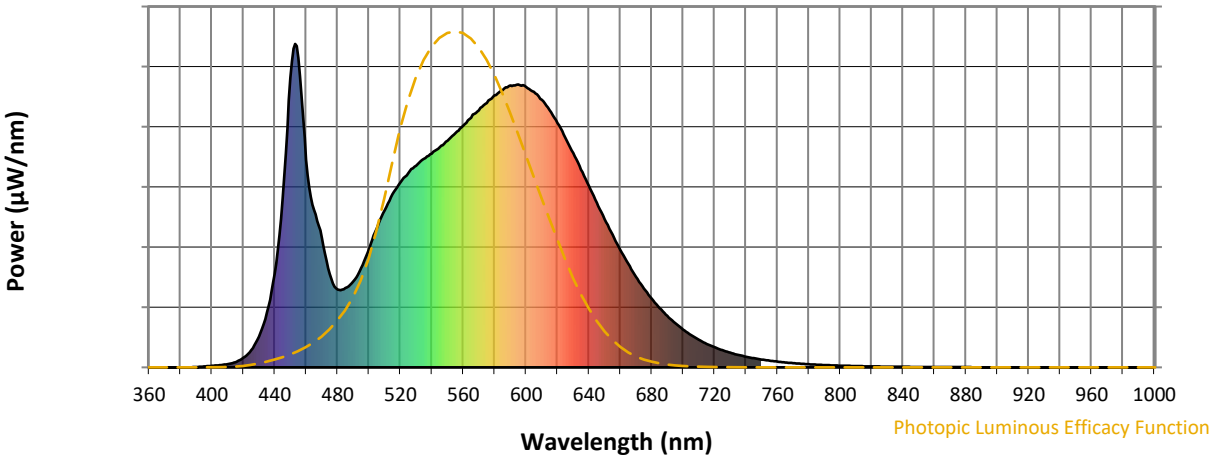



CCT = 3915K
CIE x = 0.3854
CIE y = 0.3830
Duv = 0.0015

Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2506-458-5

## Photopic Flux vs. Wavelength

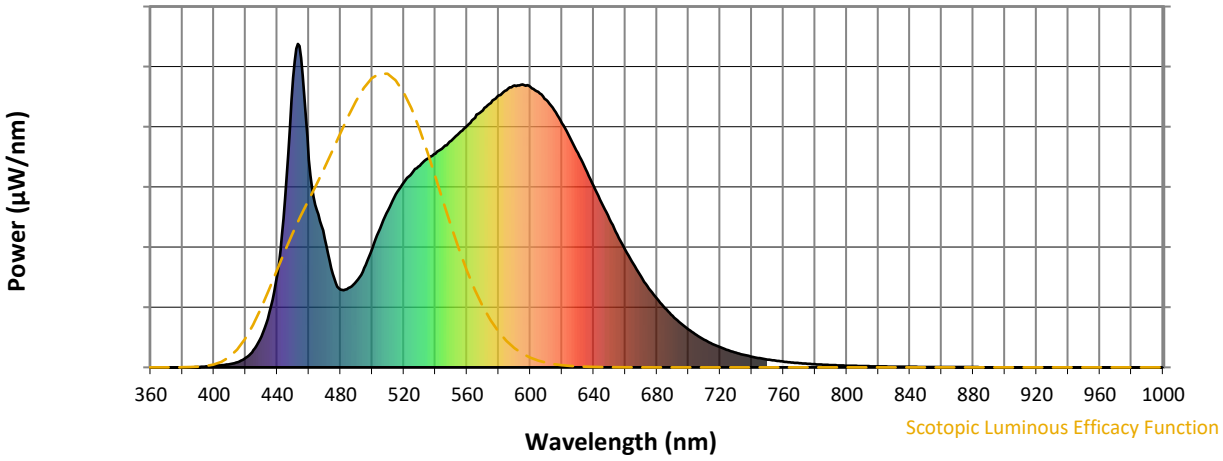



## Photopic Lumens: NR

| 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 | 266 | NR | 620 | 755 | NR | 750 | 24 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 307 | NR | 625 | 710 | NR | 755 | 21 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 366 | NR | 630 | 663 | NR | 760 | 18 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 430 | NR | 635 | 612 | NR | 765 | 15 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 486 | NR | 640 | 561 | NR | 770 | 13 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 536 | NR | 645 | 509 | NR | 775 | 11 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 571 | NR | 650 | 458 | NR | 780 | 10 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 600 | NR | 655 | 410 | NR | 785 | 8 | NR | 915 | 0 | NR |
| 400 | 5 | NR | 530 | 624 | NR | 660 | 363 | NR | 790 | 7 | NR | 920 | 0 | NR |
| 405 | 7 | NR | 535 | 645 | NR | 665 | 321 | NR | 795 | 6 | NR | 925 | 0 | NR |
| 410 | 10 | NR | 540 | 661 | NR | 670 | 280 | NR | 800 | 5 | NR | 930 | 0 | NR |
| 415 | 16 | NR | 545 | 681 | NR | 675 | 244 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 30 | NR | 550 | 701 | NR | 680 | 213 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 53 | NR | 555 | 724 | NR | 685 | 183 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 95 | NR | 560 | 747 | NR | 690 | 159 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 170 | NR | 565 | 772 | NR | 695 | 136 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 289 | NR | 570 | 795 | NR | 700 | 117 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 522 | NR | 575 | 817 | NR | 705 | 100 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 895 | NR | 580 | 841 | NR | 710 | 85 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 957 | NR | 585 | 857 | NR | 715 | 72 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 642 | NR | 590 | 871 | NR | 720 | 62 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 487 | NR | 595 | 875 | NR | 725 | 53 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 397 | NR | 600 | 866 | NR | 730 | 45 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 289 | NR | 605 | 852 | NR | 735 | 39 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 241 | NR | 610 | 827 | NR | 740 | 33 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 245 | NR | 615 | 796 | NR | 745 | 28 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2506-458-5

## Scotopic Flux vs. Wavelength

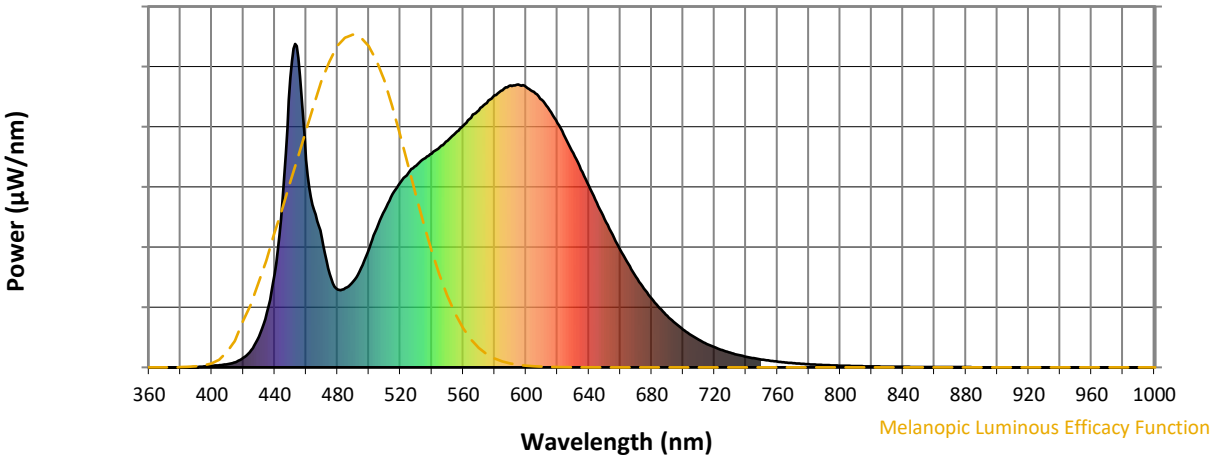



**Scotopic Lumens: NR** **S/P: 1.65**

| 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 | 266 | NR | 620 | 755 | NR | 750 | 24 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 307 | NR | 625 | 710 | NR | 755 | 21 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 366 | NR | 630 | 663 | NR | 760 | 18 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 430 | NR | 635 | 612 | NR | 765 | 15 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 486 | NR | 640 | 561 | NR | 770 | 13 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 536 | NR | 645 | 509 | NR | 775 | 11 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 571 | NR | 650 | 458 | NR | 780 | 10 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 600 | NR | 655 | 410 | NR | 785 | 8 | NR | 915 | 0 | NR |
| 400 | 5 | NR | 530 | 624 | NR | 660 | 363 | NR | 790 | 7 | NR | 920 | 0 | NR |
| 405 | 7 | NR | 535 | 645 | NR | 665 | 321 | NR | 795 | 6 | NR | 925 | 0 | NR |
| 410 | 10 | NR | 540 | 661 | NR | 670 | 280 | NR | 800 | 5 | NR | 930 | 0 | NR |
| 415 | 16 | NR | 545 | 681 | NR | 675 | 244 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 30 | NR | 550 | 701 | NR | 680 | 213 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 53 | NR | 555 | 724 | NR | 685 | 183 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 95 | NR | 560 | 747 | NR | 690 | 159 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 170 | NR | 565 | 772 | NR | 695 | 136 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 289 | NR | 570 | 795 | NR | 700 | 117 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 522 | NR | 575 | 817 | NR | 705 | 100 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 895 | NR | 580 | 841 | NR | 710 | 85 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 957 | NR | 585 | 857 | NR | 715 | 72 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 642 | NR | 590 | 871 | NR | 720 | 62 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 487 | NR | 595 | 875 | NR | 725 | 53 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 397 | NR | 600 | 866 | NR | 730 | 45 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 289 | NR | 605 | 852 | NR | 735 | 39 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 241 | NR | 610 | 827 | NR | 740 | 33 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 245 | NR | 615 | 796 | NR | 745 | 28 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2506-458-5

## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 3.36**

| 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 | 266 | NR | 620 | 755 | NR | 750 | 24 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 307 | NR | 625 | 710 | NR | 755 | 21 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 366 | NR | 630 | 663 | NR | 760 | 18 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 430 | NR | 635 | 612 | NR | 765 | 15 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 486 | NR | 640 | 561 | NR | 770 | 13 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 536 | NR | 645 | 509 | NR | 775 | 11 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 571 | NR | 650 | 458 | NR | 780 | 10 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 600 | NR | 655 | 410 | NR | 785 | 8 | NR | 915 | 0 | NR |
| 400 | 5 | NR | 530 | 624 | NR | 660 | 363 | NR | 790 | 7 | NR | 920 | 0 | NR |
| 405 | 7 | NR | 535 | 645 | NR | 665 | 321 | NR | 795 | 6 | NR | 925 | 0 | NR |
| 410 | 10 | NR | 540 | 661 | NR | 670 | 280 | NR | 800 | 5 | NR | 930 | 0 | NR |
| 415 | 16 | NR | 545 | 681 | NR | 675 | 244 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 30 | NR | 550 | 701 | NR | 680 | 213 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 53 | NR | 555 | 724 | NR | 685 | 183 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 95 | NR | 560 | 747 | NR | 690 | 159 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 170 | NR | 565 | 772 | NR | 695 | 136 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 289 | NR | 570 | 795 | NR | 700 | 117 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 522 | NR | 575 | 817 | NR | 705 | 100 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 895 | NR | 580 | 841 | NR | 710 | 85 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 957 | NR | 585 | 857 | NR | 715 | 72 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 642 | NR | 590 | 871 | NR | 720 | 62 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 487 | NR | 595 | 875 | NR | 725 | 53 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 397 | NR | 600 | 866 | NR | 730 | 45 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 289 | NR | 605 | 852 | NR | 735 | 39 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 241 | NR | 610 | 827 | NR | 740 | 33 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 245 | NR | 615 | 796 | NR | 745 | 28 | NR | 875 | 1 | NR | | | |

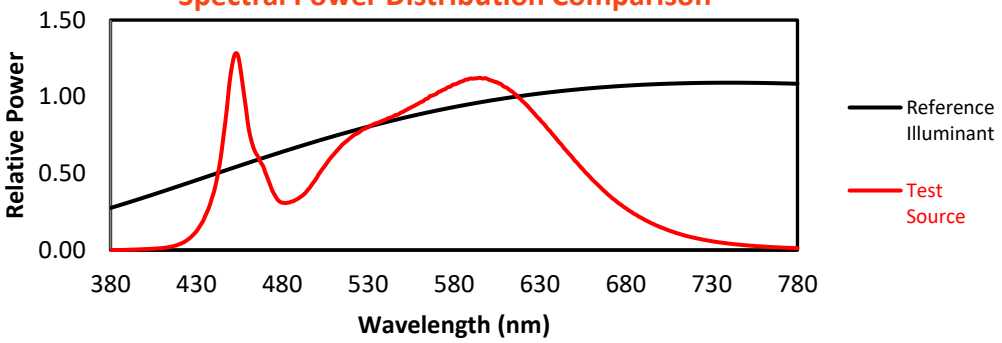
REPORT NUMBER: SP1-2506-458-5

# TM-30-18

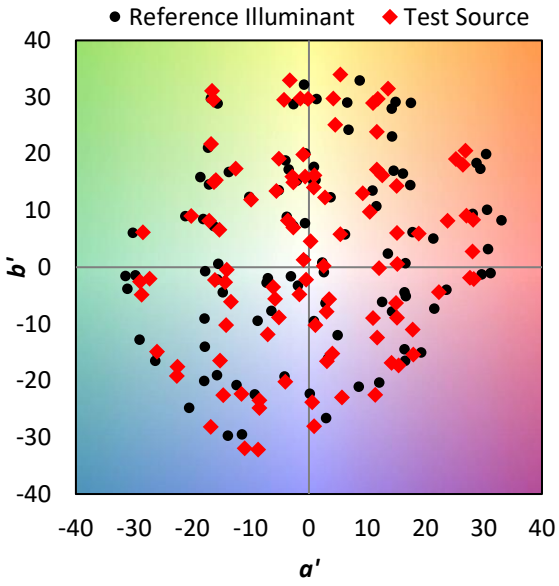
## Summary

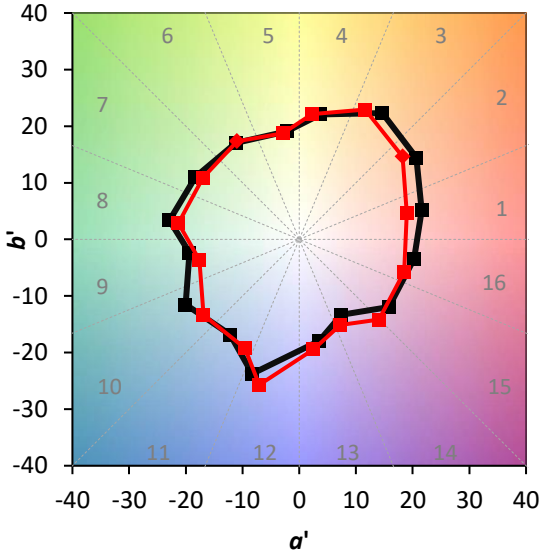
$R_f$ = 83.2
$R_g$ = 94.6
CIE $R_a$ = 82.3
$R_9$ = 7.6

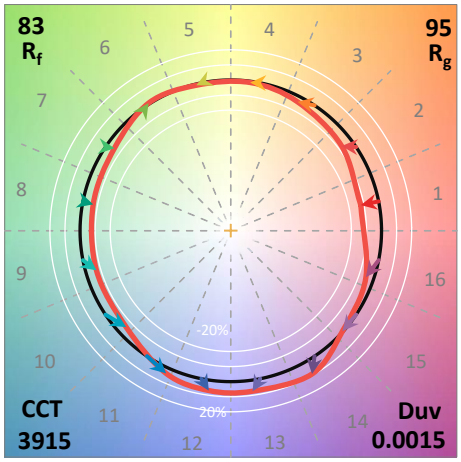
## Spectral Power Distribution Comparison

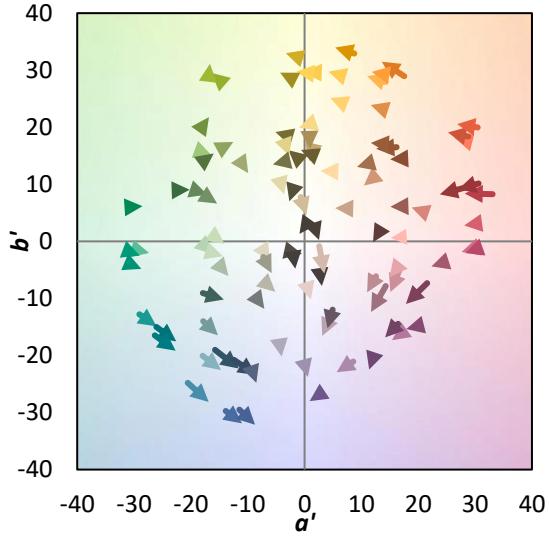



## Color Vector Graphics



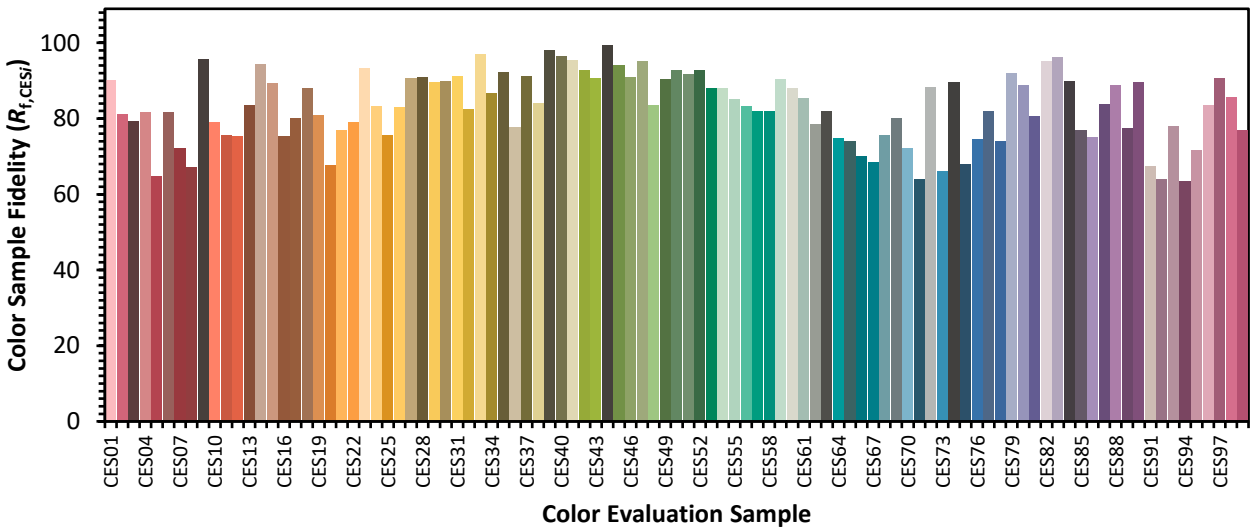



REPORT NUMBER: SP1-2506-458-5

# TM-30-18

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

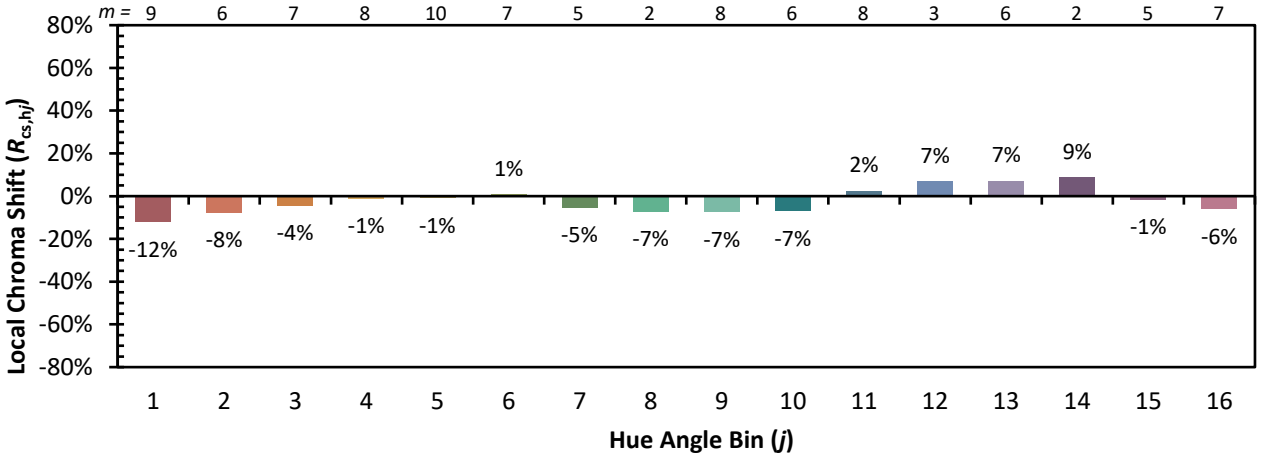
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 83 | CES51 = 92 | CES76 = 75 |
| CES02 = 61 | CES27 = 91 | CES52 = 93 | CES77 = 82 |
| CES03 = 31 | CES28 = 91 | CES53 = 88 | CES78 = 74 |
| CES04 = 70 | CES29 = 90 | CES54 = 88 | CES79 = 92 |
| CES05 = 48 | CES30 = 90 | CES55 = 85 | CES80 = 89 |
| CES06 = 50 | CES31 = 91 | CES56 = 83 | CES81 = 81 |
| CES07 = 41 | CES32 = 83 | CES57 = 82 | CES82 = 95 |
| CES08 = 40 | CES33 = 97 | CES58 = 82 | CES83 = 96 |
| CES09 = 29 | CES34 = 87 | CES59 = 90 | CES84 = 90 |
| CES10 = 74 | CES35 = 92 | CES60 = 88 | CES85 = 77 |
| CES11 = 57 | CES36 = 78 | CES61 = 85 | CES86 = 75 |
| CES12 = 63 | CES37 = 91 | CES62 = 79 | CES87 = 84 |
| CES13 = 42 | CES38 = 84 | CES63 = 82 | CES88 = 89 |
| CES14 = 74 | CES39 = 98 | CES64 = 75 | CES89 = 77 |
| CES15 = 71 | CES40 = 96 | CES65 = 74 | CES90 = 90 |
| CES16 = 47 | CES41 = 95 | CES66 = 70 | CES91 = 67 |
| CES17 = 49 | CES42 = 93 | CES67 = 69 | CES92 = 64 |
| CES18 = 56 | CES43 = 91 | CES68 = 76 | CES93 = 78 |
| CES19 = 71 | CES44 = 99 | CES69 = 80 | CES94 = 63 |
| CES20 = 65 | CES45 = 94 | CES70 = 72 | CES95 = 72 |
| CES21 = 86 | CES46 = 91 | CES71 = 64 | CES96 = 84 |
| CES22 = 78 | CES47 = 95 | CES72 = 88 | CES97 = 91 |
| CES23 = 91 | CES48 = 83 | CES73 = 66 | CES98 = 86 |
| CES24 = 90 | CES49 = 90 | CES74 = 90 | CES99 = 77 |
| CES25 = 71 | CES50 = 93 | CES75 = 68 | |

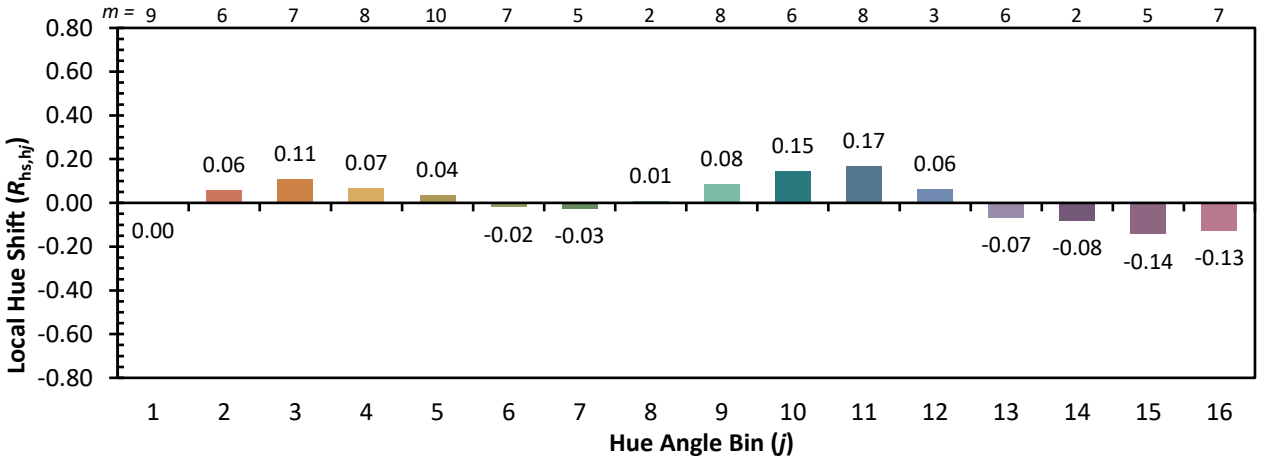


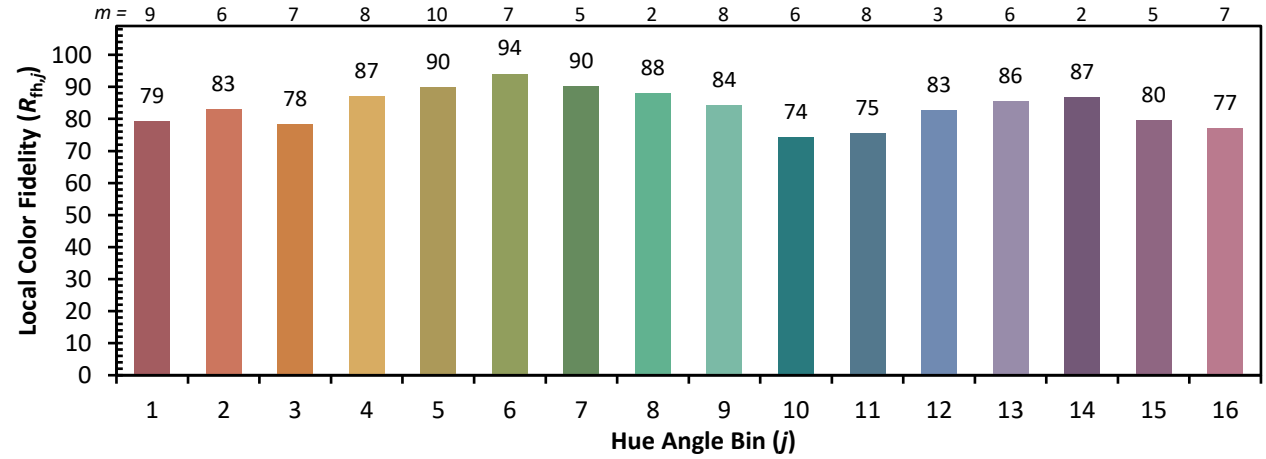
REPORT NUMBER: SP1-2506-458-5

**TM-30-18**

## Color Rendition by Hue-Angle Bin



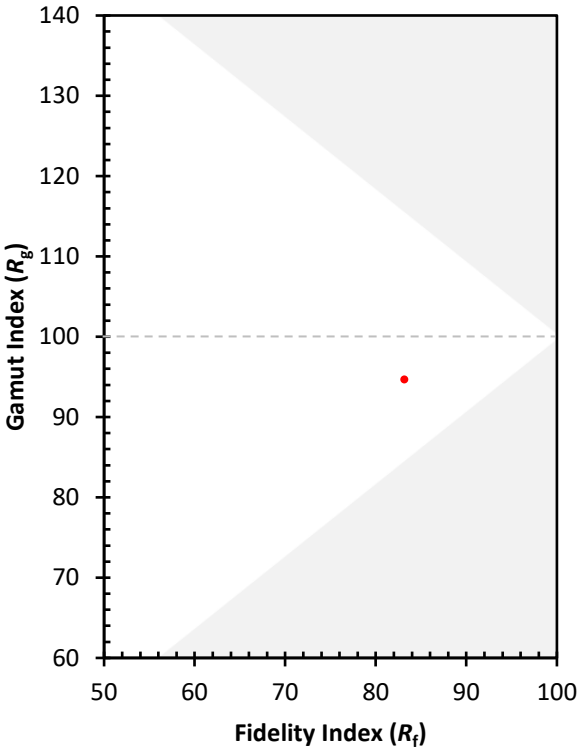



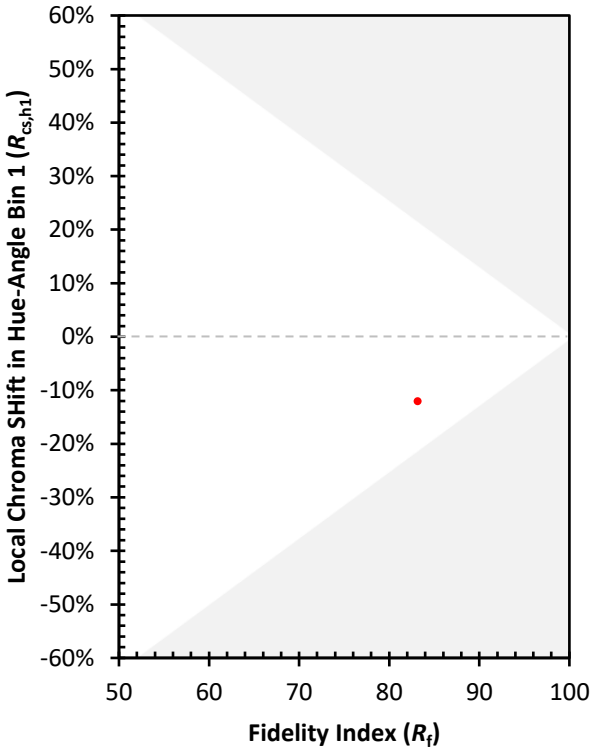



REPORT NUMBER: SP1-2506-458-5

# TM-30-18

## Measure Comparisons




(END OF REPORT)