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

Scaled data based on original data using

LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P1365714

Luminaire Tested: **GSS-SB3D-727-U-T2R**

Issue Date: 02/18/2026

Report Generated By 670245763

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

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-08 |
| Report Number: | P1365714 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB3D-727-U-T2R |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 3SQUARE 219W 70CRI 2700K FIXTURE w/ TYPE II ROADWAY DISTRIBUTION OPTIC |
| Light Source: | (78) 2700K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 26647.8 lumens |
| Efficiency: | N/A |
| Efficacy: | 121.7 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 0.5' x H: 0') |
| IES Classification: | Type II - Medium |
| BUG Rating: | B3 - U0 - G3 |

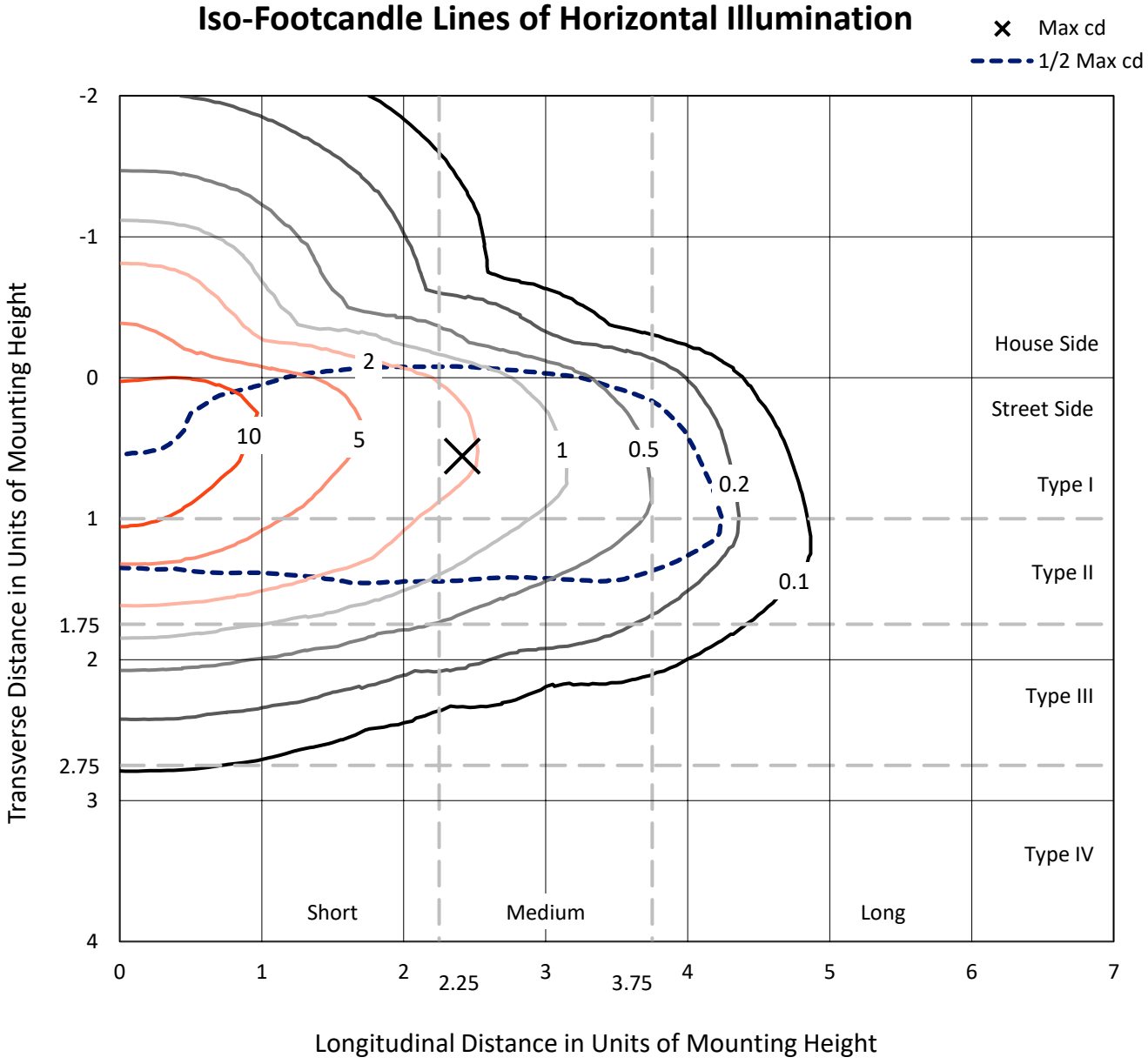
| | |
|---|---|
| Input Watts (W): | 219 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 2.5% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1365714
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## Iso-Footcandle Lines of Horizontal Illumination



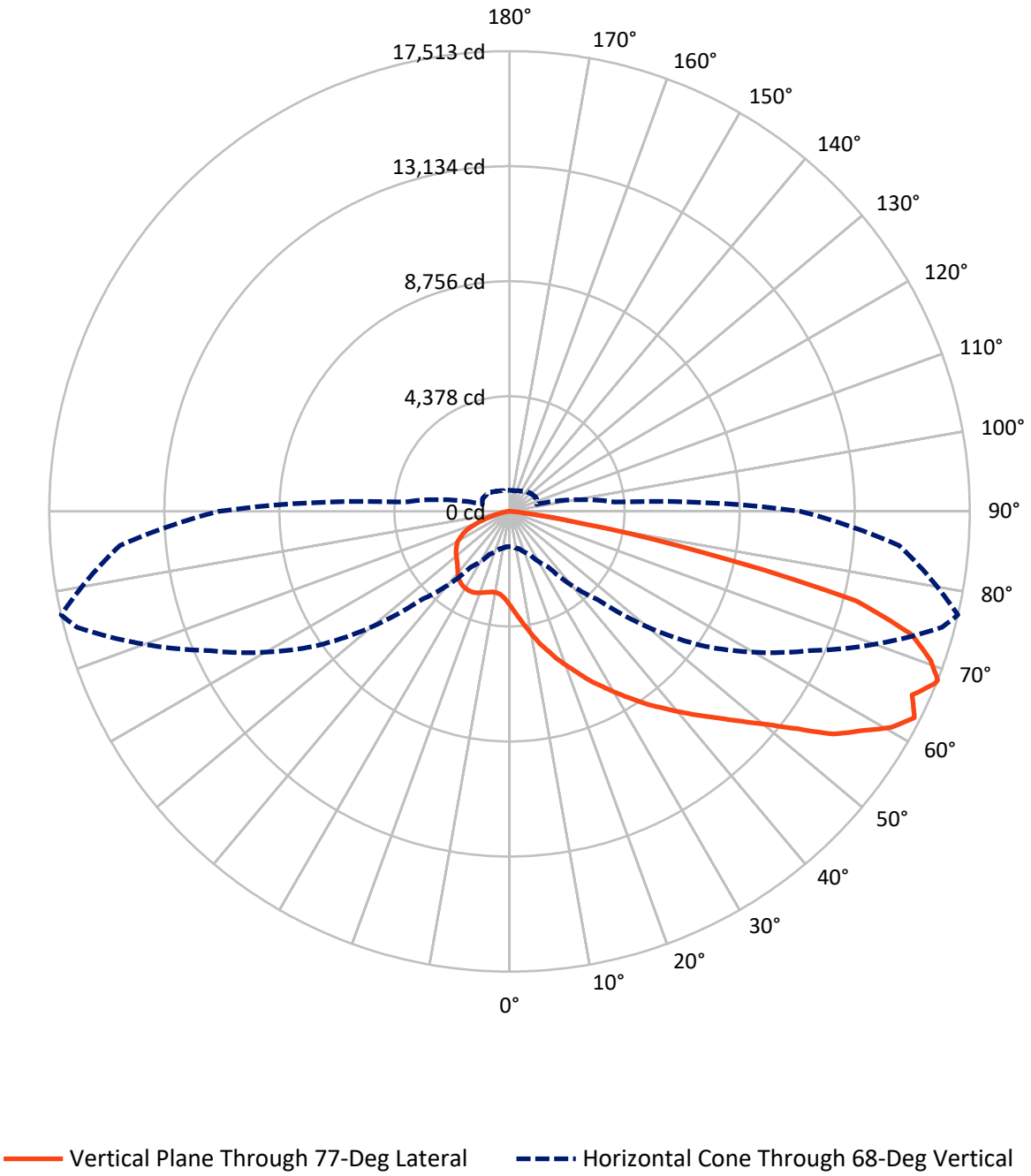

Based on 20 foot mounting height. Maximum calculated value = 15.5 fc
Type II - Medium - N/A

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## Luminous Intensity Polar Plot



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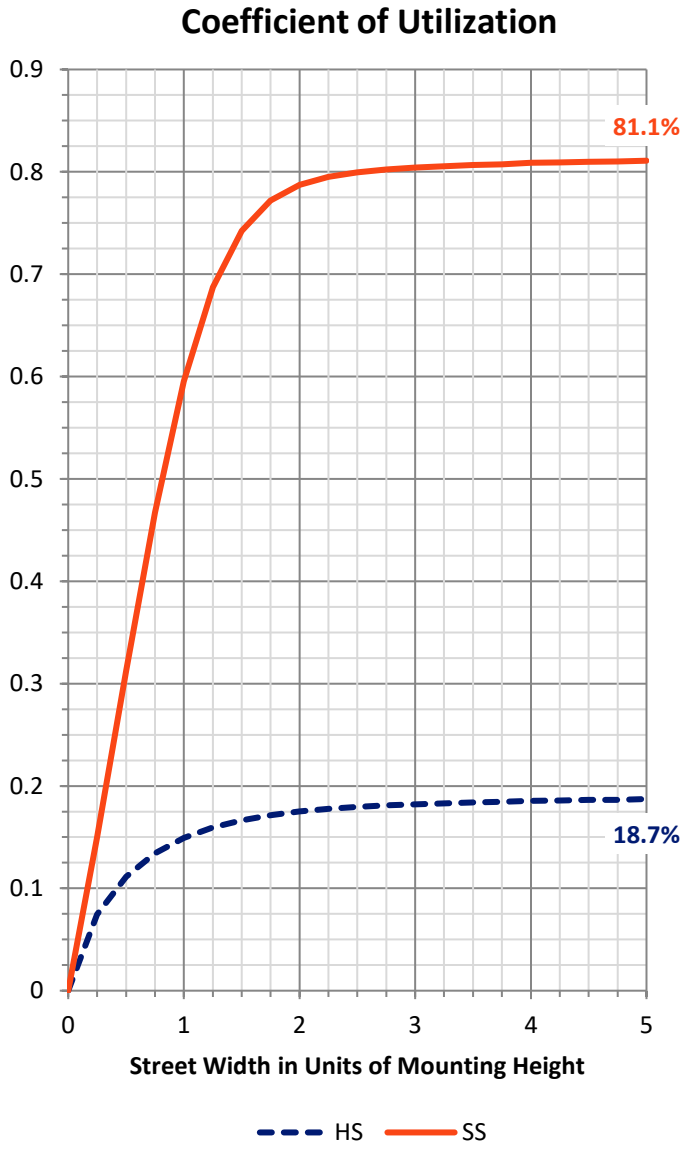
REPORT NUMBER: P1365714
CATALOG NUMBER: GSS-SB3D-727-U-T2R

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 5030.4 | 0.0 | 5030.4 |
| | % Fixture | 18.9 | 0.0 | 18.9 |
| **Street Side** | Lumens | 21617.4 | 0.0 | 21617.4 |
| | % Fixture | 81.1 | 0.0 | 81.1 |
| **Total** | Lumens | 26647.8 | 0.0 | 26647.8 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 367.8 | 1.4 |
| 10°-20° | 1291.6 | 4.8 |
| 20°-30° | 2361.0 | 8.9 |
| 30°-40° | 3825.6 | 14.4 |
| 40°-50° | 5261.8 | 19.7 |
| 50°-60° | 5899.7 | 22.1 |
| 60°-70° | 4972.3 | 18.7 |
| 70°-80° | 2464.4 | 9.2 |
| 80°-90° | 203.5 | 0.8 |
| 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°-90° | 26647.8 | 100.0 |
| 0°-180° | 26647.8 | 100.0 |



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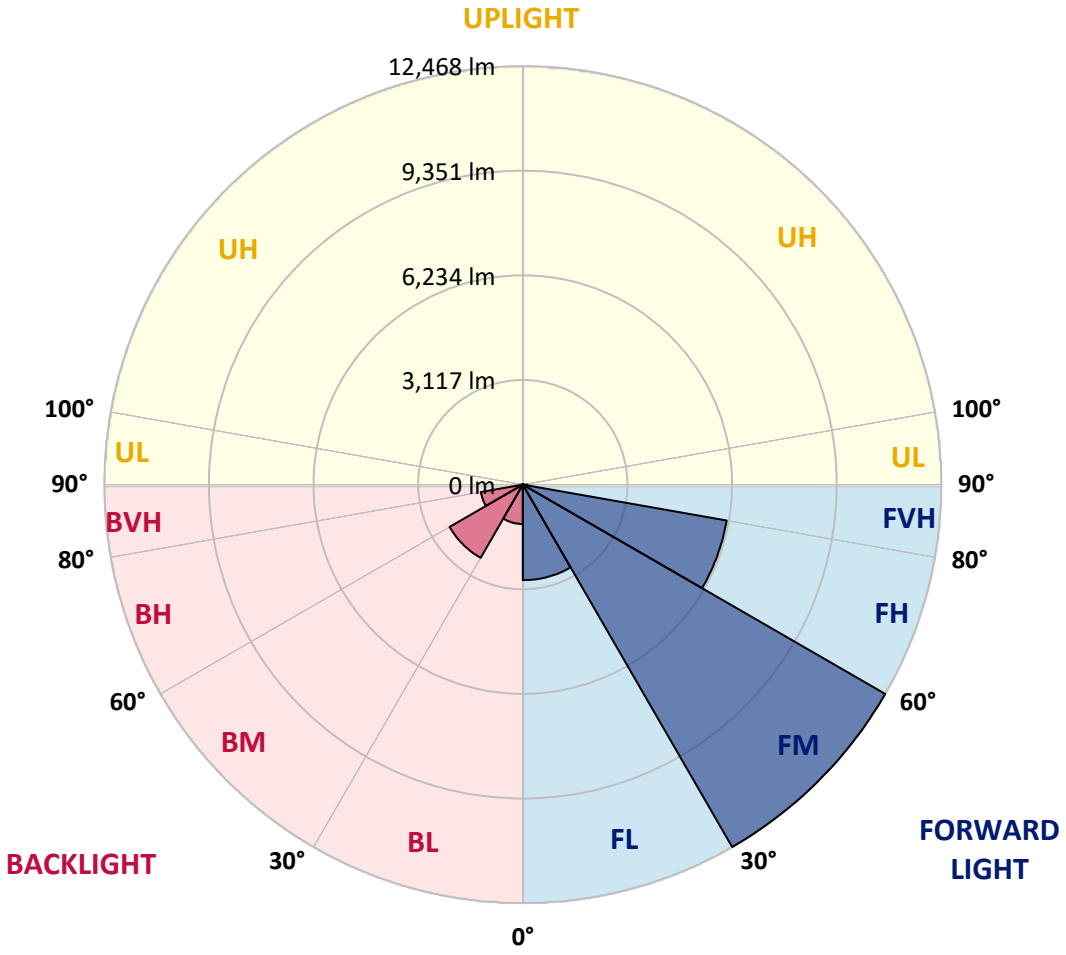
Scaled Data Report

REPORT NUMBER: P1365714
CATALOG NUMBER: GSS-SB3D-727-U-T2R

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 2847.5 | 10.7 | | | |
| FM | (30°-60°) | 12468.3 | 46.8 | | | |
| FH | (60°-80°) | 6167.9 | 23.1 | | | G3/7500 |
| FVH | (80°-90°) | 133.8 | 0.5 | | | G2/225 |
| BL | (0°-30°) | 1172.9 | 4.4 | B3/2500 | | |
| BM | (30°-60°) | 2518.9 | 9.5 | B3/5000 | | |
| BH | (60°-80°) | 1268.9 | 4.8 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 69.8 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B3-U0-G3**
Type II Medium



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 77° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 3585.1 | 3585.1 | 3585.1 | 3585.1 | 3585.1 | 3585.1 | 3585.1 | 3585.1 | 3585.1 | *3585.1* | 3585.1 |
| 2.5° | 4472.1 | 4447.5 | 4429.0 | 4367.4 | 4330.4 | 4231.9 | 4151.8 | 4016.3 | 3843.8 | *3831.5* | 3695.9 |
| 5° | 5155.8 | 5125.0 | 5100.4 | 5014.2 | 4977.2 | 4804.7 | 4650.7 | 4410.5 | 4164.1 | *4121.0* | 3849.9 |
| 7.5° | 5710.2 | 5673.3 | 5648.6 | 5568.6 | 5494.6 | 5359.1 | 5162.0 | 4872.5 | 4515.2 | *4435.1* | 4077.9 |
| 10° | 6098.3 | 6098.3 | 6092.1 | 6042.9 | 5999.7 | 5870.4 | 5642.5 | 5303.7 | 4878.6 | *4786.2* | 4318.1 |
| 12.5° | 6400.1 | 6381.7 | 6406.3 | 6437.1 | 6443.3 | 6369.3 | 6159.9 | 5778.0 | 5266.7 | *5174.3* | 4570.7 |
| 15° | 6424.8 | 6430.9 | 6523.3 | 6646.5 | 6800.5 | 6825.2 | 6652.7 | 6252.3 | 5642.5 | *5519.3* | 4866.3 |
| 17.5° | 6301.6 | 6332.4 | 6461.7 | 6665.0 | 6960.7 | 7139.3 | 7102.4 | 6745.1 | 6049.0 | *5919.7* | 5137.4 |
| 20° | 6264.6 | 6301.6 | 6430.9 | 6683.5 | 7034.6 | 7330.3 | 7441.2 | 7182.5 | 6455.6 | *6276.9* | 5433.0 |
| 22.5° | 6486.4 | 6498.7 | 6591.1 | 6800.5 | 7139.3 | 7478.1 | 7724.5 | 7601.3 | 6886.8 | *6689.7* | 5771.8 |
| 25° | 7090.1 | 7077.7 | 7071.6 | 7120.9 | 7373.4 | 7669.1 | 7970.9 | 7995.6 | 7336.4 | *7139.3* | 6092.1 |
| 27.5° | 8094.1 | 8143.4 | 8001.7 | 7730.7 | 7755.3 | 7983.2 | 8217.3 | 8346.7 | 7773.8 | *7558.2* | 6412.5 |
| 30° | 9344.6 | 9338.4 | 9085.9 | 8648.5 | 8315.9 | 8396.0 | 8525.3 | 8679.3 | 8211.2 | *8014.0* | 6769.7 |
| 32.5° | 10410.2 | 10385.6 | 10114.6 | 9609.5 | 9085.9 | 8913.4 | 8962.7 | 8993.5 | 8716.3 | *8494.5* | 7133.2 |
| 35° | 11094.0 | 11100.2 | 10841.4 | 10404.1 | 9818.9 | 9535.5 | 9412.3 | 9338.4 | 9221.4 | *9005.8* | 7564.4 |
| 37.5° | 11777.7 | 11740.8 | 11414.3 | 10896.9 | 10410.2 | 10176.2 | 10034.5 | 9720.3 | 9689.5 | *9498.6* | 7946.3 |
| 40° | 12289.0 | 12252.1 | 11919.4 | 11328.1 | 10884.6 | 10693.6 | 10638.2 | 10163.8 | 10213.1 | *10046.8* | 8371.3 |
| 42.5° | 12523.1 | 12529.2 | 12227.4 | 11691.5 | 11235.7 | 11143.3 | 11254.1 | 10675.1 | 10767.5 | *10613.5* | 8833.3 |
| 45° | 12529.2 | 12498.4 | 12289.0 | 11864.0 | 11519.0 | 11445.1 | 11746.9 | 11254.1 | 11371.2 | *11229.5* | 9369.2 |
| 47.5° | 12190.5 | 12190.5 | 12104.2 | 11851.7 | 11666.9 | 11673.0 | 12159.7 | 11839.3 | 12048.8 | *11944.1* | 9991.4 |
| 50° | 11451.3 | 11512.9 | 11549.8 | 11599.1 | 11592.9 | 11833.2 | 12492.3 | 12449.2 | 12775.6 | *12744.8* | 10687.4 |
| 52.5° | 9196.7 | 9455.5 | 10385.6 | 10983.1 | 11365.0 | 11814.7 | 12855.7 | 13077.5 | 13693.5 | *13748.9* | 11691.5 |
| 55° | 7336.4 | 7398.0 | 8180.4 | 9720.3 | 10853.8 | 11660.7 | 12985.1 | 13785.9 | 14870.0 | *14956.3* | 12609.3 |
| 57.5° | 5956.6 | 6104.5 | 6578.8 | 8051.0 | 9738.8 | 11315.7 | 13071.3 | 14167.8 | 15615.4 | *15757.0* | 13367.0 |
| 60° | 4404.3 | 4490.6 | 4946.4 | 6166.1 | 8155.7 | 10508.8 | 13120.6 | 14518.9 | 16483.9 | *16687.2* | 14352.6 |
| 62.5° | 3240.1 | 3246.3 | 3535.8 | 4305.8 | 6437.1 | 9184.4 | 12738.7 | 14802.3 | 17056.8 | *17290.9* | 14666.7 |
| 65° | 2094.4 | 2119.0 | 2408.5 | 3073.8 | 4348.9 | 7527.4 | 11857.8 | 13693.5 | 16496.2 | *16841.2* | 14475.8 |
| 67.5° | 1410.6 | 1453.7 | 1626.2 | 1958.9 | 2913.6 | 5371.4 | 9252.2 | 12677.1 | 17013.7 | *17469.5* | 14937.8 |
| 68° | *1342.9* | *1349.0* | *1484.5* | *1804.9* | *2593.3* | *4755.4* | *8894.9* | *12547.7* | *17038.3* | *17512.6* | *14882.3* |
| 70° | 1065.7 | 1078.0 | 1164.2 | 1336.7 | 1761.7 | 2913.6 | 7182.5 | 11463.6 | 16582.5 | *17001.3* | 14075.4 |
| 72.5° | 813.1 | 831.6 | 887.0 | 954.8 | 1145.7 | 1786.4 | 4201.1 | 9338.4 | 15381.3 | *15978.8* | 12744.8 |
| 75° | 689.9 | 696.1 | 739.2 | 763.8 | 751.5 | 1084.1 | 2359.2 | 7305.6 | 13083.6 | *13631.9* | 10465.7 |
| 77.5° | 542.1 | 560.6 | 622.2 | 634.5 | 572.9 | 751.5 | 1238.1 | 4170.3 | 7681.4 | *7502.8* | 5038.8 |
| 80° | 388.1 | 400.4 | 449.7 | 425.0 | 449.7 | 517.4 | 585.2 | 1496.9 | 3197.0 | *2790.4* | 1182.7 |
| 82.5° | 135.5 | 154.0 | 308.0 | 295.7 | 295.7 | 234.1 | 264.9 | 653.0 | 831.6 | *726.9* | 295.7 |
| 85° | 24.6 | 30.8 | 86.2 | 123.2 | 110.9 | 86.2 | 110.9 | 203.3 | 166.3 | *141.7* | 86.2 |
| 87.5° | 6.2 | 6.2 | 12.3 | 12.3 | 12.3 | 18.5 | 30.8 | 43.1 | 49.3 | *49.3* | 49.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 |

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Scaled Data Report

REPORT NUMBER: P1365714
CATALOG NUMBER: GSS-SB3D-727-U-T2R

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 3585.1 | 3585.1 | 3585.1 | 3585.1 | 3585.1 | 3585.1 | 3585.1 | 3585.1 | 3585.1 | 3585.1 | 3585.1 |
| 2.5° | 3622.0 | 3529.6 | 3351.0 | 3190.8 | 3061.5 | 2938.3 | 2839.7 | 2772.0 | 2722.7 | 2698.0 | 2698.0 |
| 5° | 3702.1 | 3505.0 | 3178.5 | 2889.0 | 2667.2 | 2519.4 | 2427.0 | 2371.6 | 2365.4 | 2359.2 | 2359.2 |
| 7.5° | 3825.3 | 3548.1 | 3061.5 | 2698.0 | 2507.1 | 2427.0 | 2402.4 | 2396.2 | 2396.2 | 2408.5 | 2408.5 |
| 10° | 3991.6 | 3622.0 | 3012.2 | 2630.3 | 2525.6 | 2500.9 | 2488.6 | 2507.1 | 2513.2 | 2519.4 | 2525.6 |
| 12.5° | 4188.7 | 3714.4 | 2987.6 | 2661.1 | 2599.5 | 2587.2 | 2593.3 | 2587.2 | 2605.6 | 2618.0 | 2611.8 |
| 15° | 4379.7 | 3831.5 | 3012.2 | 2722.7 | 2673.4 | 2667.2 | 2648.8 | 2661.1 | 2654.9 | 2648.8 | 2648.8 |
| 17.5° | 4595.3 | 3967.0 | 3036.8 | 2772.0 | 2722.7 | 2698.0 | 2673.4 | 2661.1 | 2636.4 | 2630.3 | 2624.1 |
| 20° | 4829.4 | 4102.5 | 3080.0 | 2815.1 | 2735.0 | 2679.6 | 2636.4 | 2587.2 | 2550.2 | 2531.7 | 2531.7 |
| 22.5° | 5069.6 | 4244.2 | 3116.9 | 2821.2 | 2710.4 | 2611.8 | 2537.9 | 2476.3 | 2420.8 | 2383.9 | 2365.4 |
| 25° | 5316.0 | 4385.9 | 3129.2 | 2796.6 | 2636.4 | 2519.4 | 2420.8 | 2346.9 | 2273.0 | 2236.0 | 2223.7 |
| 27.5° | 5568.6 | 4509.1 | 3110.8 | 2735.0 | 2537.9 | 2408.5 | 2297.6 | 2217.6 | 2156.0 | 2112.8 | 2112.8 |
| 30° | 5815.0 | 4626.1 | 3061.5 | 2648.8 | 2433.2 | 2303.8 | 2192.9 | 2119.0 | 2063.6 | 2026.6 | 2020.4 |
| 32.5° | 6098.3 | 4743.1 | 2999.9 | 2537.9 | 2328.4 | 2211.4 | 2100.5 | 2032.8 | 1983.5 | 1965.0 | 1971.2 |
| 35° | 6381.7 | 4847.8 | 2901.3 | 2433.2 | 2217.6 | 2119.0 | 2014.3 | 1958.9 | 1940.4 | 1928.1 | 1921.9 |
| 37.5° | 6658.9 | 4921.8 | 2772.0 | 2303.8 | 2125.2 | 2008.1 | 1958.9 | 1903.4 | 1854.1 | 1792.5 | 1786.4 |
| 40° | 6942.2 | 4983.4 | 2605.6 | 2174.4 | 2020.4 | 1928.1 | 1903.4 | 1829.5 | 1712.5 | 1607.7 | 1607.7 |
| 42.5° | 7268.7 | 5045.0 | 2427.0 | 2051.2 | 1891.1 | 1848.0 | 1841.8 | 1724.8 | 1552.3 | 1478.4 | 1472.2 |
| 45° | 7656.8 | 5088.1 | 2266.8 | 1934.2 | 1755.6 | 1737.1 | 1786.4 | 1632.4 | 1490.7 | 1429.1 | 1435.3 |
| 47.5° | 8106.4 | 5186.6 | 2125.2 | 1804.9 | 1626.2 | 1657.0 | 1663.2 | 1546.1 | 1435.3 | 1361.3 | 1361.3 |
| 50° | 8685.5 | 5359.1 | 1977.3 | 1638.5 | 1533.8 | 1601.6 | 1546.1 | 1459.9 | 1342.9 | 1299.7 | 1293.6 |
| 52.5° | 9455.5 | 5500.8 | 1854.1 | 1503.0 | 1472.2 | 1540.0 | 1466.1 | 1373.7 | 1275.1 | 1213.5 | 1207.3 |
| 55° | 10040.6 | 5507.0 | 1737.1 | 1398.3 | 1429.1 | 1416.8 | 1386.0 | 1287.4 | 1213.5 | 1139.6 | 1139.6 |
| 57.5° | 10669.0 | 5470.0 | 1632.4 | 1336.7 | 1386.0 | 1330.5 | 1305.9 | 1201.2 | 1127.3 | 1071.8 | 1059.5 |
| 60° | 11346.5 | 5402.2 | 1521.5 | 1293.6 | 1349.0 | 1268.9 | 1213.5 | 1127.3 | 1065.7 | 1022.5 | 1022.5 |
| 62.5° | 11463.6 | 5075.8 | 1386.0 | 1281.3 | 1305.9 | 1207.3 | 1121.1 | 1053.3 | 991.7 | 967.1 | 967.1 |
| 65° | 11248.0 | 4730.8 | 1232.0 | 1219.7 | 1238.1 | 1133.4 | 1034.9 | 973.3 | 924.0 | 899.3 | 893.2 |
| 67.5° | 11254.1 | 4170.3 | 1108.8 | 1145.7 | 1114.9 | 1047.2 | 948.6 | 893.2 | 831.6 | 813.1 | 813.1 |
| 68° | *11057.0* | *4034.7* | *1065.7* | *1133.4* | *1090.3* | *1022.5* | *924.0* | *862.4* | *806.9* | *800.8* | *800.8* |
| 70° | 10133.0 | 3270.9 | 911.7 | 1047.2 | 1016.4 | 936.3 | 813.1 | 782.3 | 745.3 | 739.2 | 745.3 |
| 72.5° | 8851.8 | 2414.7 | 733.0 | 880.9 | 905.5 | 726.9 | 714.5 | 702.2 | 659.1 | 659.1 | 653.0 |
| 75° | 6923.7 | 1761.7 | 554.4 | 696.1 | 671.4 | 665.3 | 609.8 | 603.7 | 566.7 | 560.6 | 548.2 |
| 77.5° | 3141.6 | 899.3 | 375.8 | 462.0 | 535.9 | 591.4 | 511.3 | 492.8 | 468.2 | 468.2 | 462.0 |
| 80° | 880.9 | 462.0 | 252.6 | 264.9 | 326.5 | 480.5 | 400.4 | 363.4 | 381.9 | 369.6 | 320.3 |
| 82.5° | 271.0 | 191.0 | 154.0 | 166.3 | 154.0 | 277.2 | 295.7 | 227.9 | 203.3 | 215.6 | 227.9 |
| 85° | 92.4 | 86.2 | 73.9 | 80.1 | 67.8 | 110.9 | 129.4 | 86.2 | 92.4 | 92.4 | 80.1 |
| 87.5° | 49.3 | 49.3 | 37.0 | 30.8 | 24.6 | 18.5 | 12.3 | 12.3 | 6.2 | 6.2 | 6.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-3

Test Date: 10/09/2024

Luminaire Tested: GSS-SB1A-727-U-5WQ

Data in this report applies to families of products including GSS-SB1A-727-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

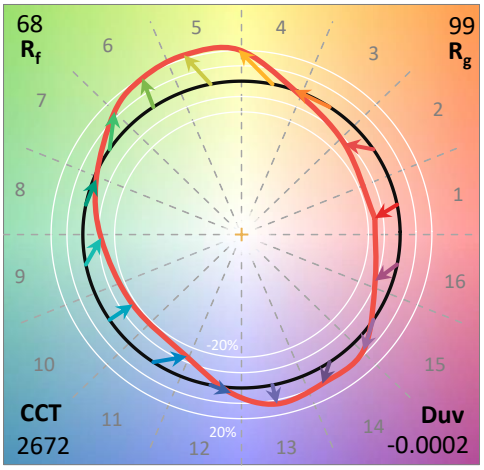
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-3 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/15/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGraw-Edison |
| Catalog Number: | **GSS-SB1A-727-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 2700K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 2672 |
| CIE u': | 0.2638 |
| CIE v': | 0.5276 |
| Duv: | -0.0002 |
| CIE x: | 0.4619 |
| CIE y: | 0.4106 |
| CIE z: | 0.1275 |
| Peak Wavelength (nm): | 601 |
| Dominant Wavelength (nm): | 584 |
| Purity: | 61.88407 |
| Rf: | 67.9 |
| Rg: | 98.6 |

| | |
|---|---|
| CRI (Ra): | 71.1 |
| R1: | 68.3 |
| R2: | 79.8 |
| R3: | 91.2 |
| R4: | 69.4 |
| R5: | 66.5 |
| R6: | 72.6 |
| R7: | 77.0 |
| R8: | 44.1 |
| R9: | -27.8 |
| R10: | 54.4 |
| R11: | 65.8 |
| R12: | 45.6 |
| R13: | 69.8 |
| R14: | 94.5 |
| R15: | 60.1 |




## Test Conditions

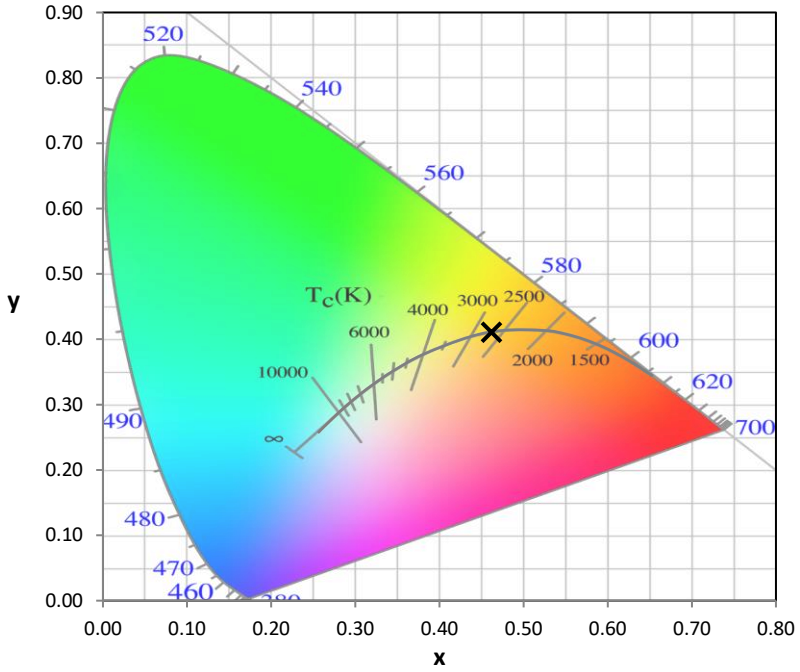
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-3

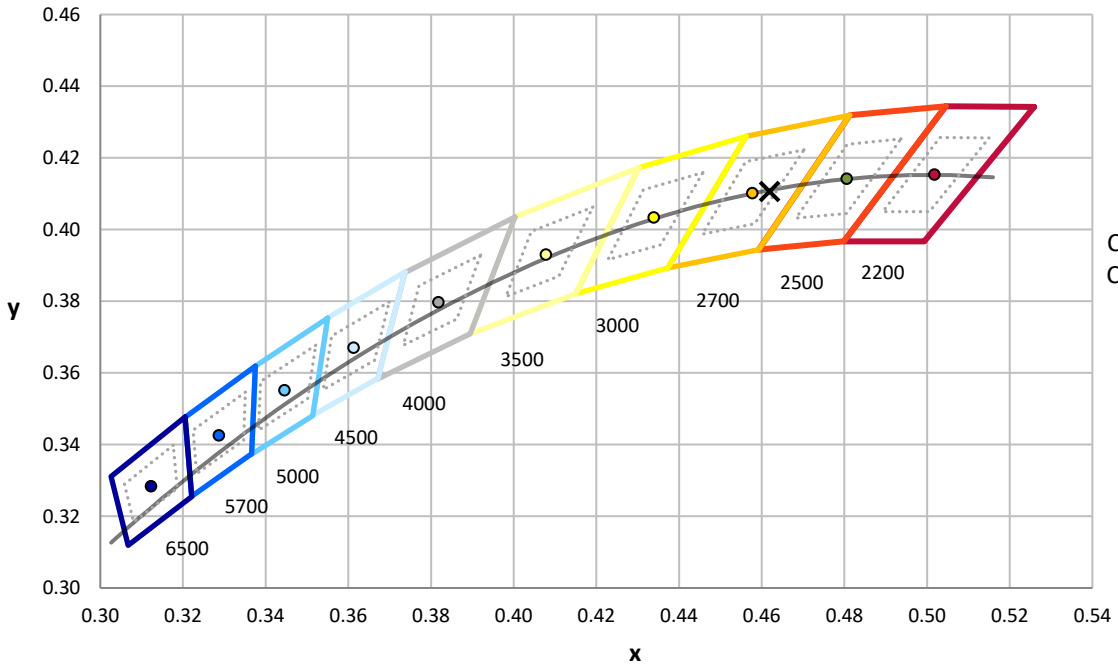
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC Power Source | IN0208 | 10/24/2023 | 10/24/2024 |
| Sphere Thermometer | IN0085 | 10/24/2023 | 10/24/2024 |
| Room Thermometer | IN0046 | 10/24/2023 | 10/24/2024 |

REPORT NUMBER: SP1-2407-184-3

## CIE 1931 Chromaticity Diagram




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

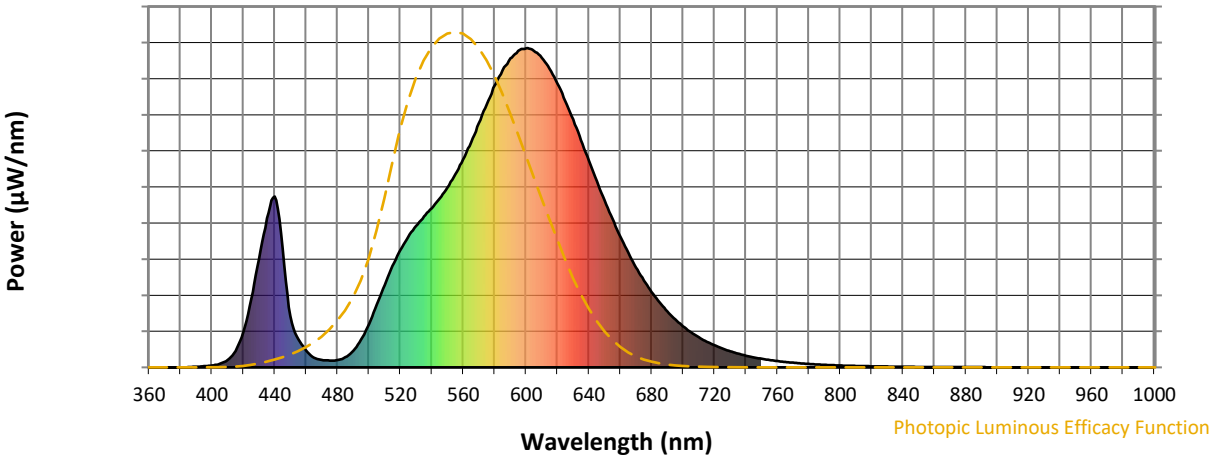



CCT = 2672K
CIE x = 0.4619
CIE y = 0.4106
Duv = -0.0002

Point lies inside the ANSI 2700K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-3

## Photopic Flux vs. Wavelength

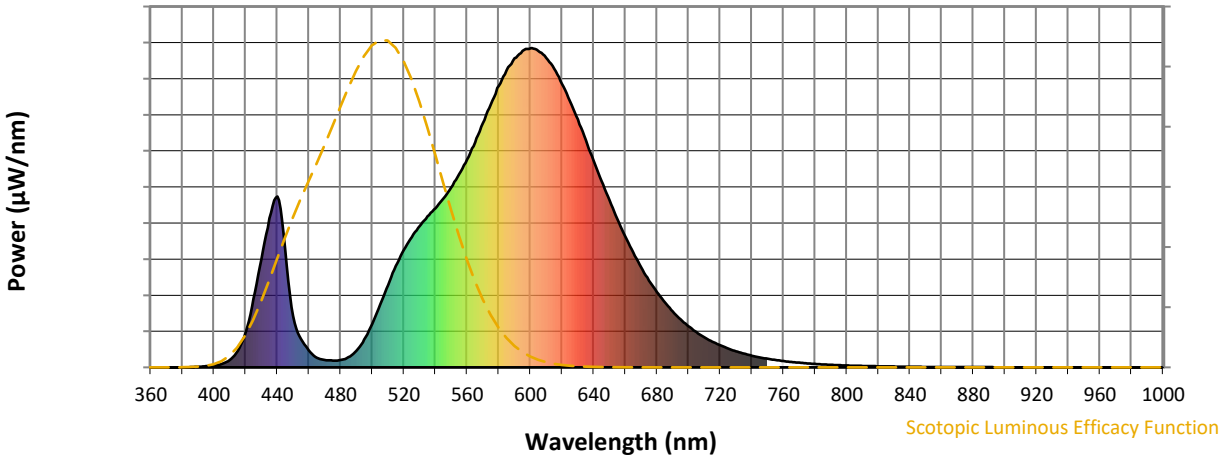



## Photopic Lumens: NR

| 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 | 52 | NR | 620 | 888 | NR | 750 | 27 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 87 | NR | 625 | 834 | NR | 755 | 23 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 135 | NR | 630 | 776 | NR | 760 | 20 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 196 | NR | 635 | 712 | NR | 765 | 17 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 258 | NR | 640 | 648 | NR | 770 | 15 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 317 | NR | 645 | 583 | NR | 775 | 12 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 368 | NR | 650 | 523 | NR | 780 | 11 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 408 | NR | 655 | 465 | NR | 785 | 9 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 443 | NR | 660 | 410 | NR | 790 | 8 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 473 | NR | 665 | 360 | NR | 795 | 7 | NR | 925 | 0 | NR |
| 410 | 23 | NR | 540 | 498 | NR | 670 | 313 | NR | 800 | 6 | NR | 930 | 0 | NR |
| 415 | 51 | NR | 545 | 530 | NR | 675 | 272 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 111 | NR | 550 | 563 | NR | 680 | 236 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 214 | NR | 555 | 605 | NR | 685 | 203 | NR | 815 | 4 | NR | 945 | 0 | NR |
| 430 | 339 | NR | 560 | 651 | NR | 690 | 175 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 467 | NR | 565 | 705 | NR | 695 | 150 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 535 | NR | 570 | 765 | NR | 700 | 128 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 372 | NR | 575 | 824 | NR | 705 | 110 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 160 | NR | 580 | 882 | NR | 710 | 94 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 89 | NR | 585 | 930 | NR | 715 | 80 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 53 | NR | 590 | 968 | NR | 720 | 69 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 31 | NR | 595 | 991 | NR | 725 | 59 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 23 | NR | 600 | 999 | NR | 730 | 50 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 21 | NR | 605 | 992 | NR | 735 | 43 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 23 | NR | 610 | 969 | NR | 740 | 36 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 32 | NR | 615 | 935 | NR | 745 | 31 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-3

## Scotopic Flux vs. Wavelength

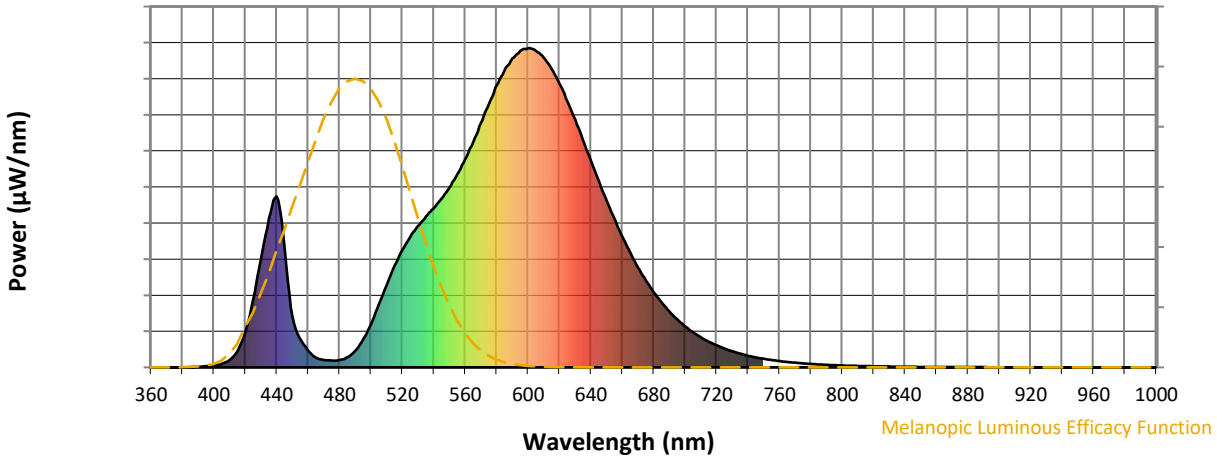



**Scotopic Lumens: NR** **S/P: 1.02**

| 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 | 52 | NR | 620 | 888 | NR | 750 | 27 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 87 | NR | 625 | 834 | NR | 755 | 23 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 135 | NR | 630 | 776 | NR | 760 | 20 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 196 | NR | 635 | 712 | NR | 765 | 17 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 258 | NR | 640 | 648 | NR | 770 | 15 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 317 | NR | 645 | 583 | NR | 775 | 12 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 368 | NR | 650 | 523 | NR | 780 | 11 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 408 | NR | 655 | 465 | NR | 785 | 9 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 443 | NR | 660 | 410 | NR | 790 | 8 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 473 | NR | 665 | 360 | NR | 795 | 7 | NR | 925 | 0 | NR |
| 410 | 23 | NR | 540 | 498 | NR | 670 | 313 | NR | 800 | 6 | NR | 930 | 0 | NR |
| 415 | 51 | NR | 545 | 530 | NR | 675 | 272 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 111 | NR | 550 | 563 | NR | 680 | 236 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 214 | NR | 555 | 605 | NR | 685 | 203 | NR | 815 | 4 | NR | 945 | 0 | NR |
| 430 | 339 | NR | 560 | 651 | NR | 690 | 175 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 467 | NR | 565 | 705 | NR | 695 | 150 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 535 | NR | 570 | 765 | NR | 700 | 128 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 372 | NR | 575 | 824 | NR | 705 | 110 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 160 | NR | 580 | 882 | NR | 710 | 94 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 89 | NR | 585 | 930 | NR | 715 | 80 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 53 | NR | 590 | 968 | NR | 720 | 69 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 31 | NR | 595 | 991 | NR | 725 | 59 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 23 | NR | 600 | 999 | NR | 730 | 50 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 21 | NR | 605 | 992 | NR | 735 | 43 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 23 | NR | 610 | 969 | NR | 740 | 36 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 32 | NR | 615 | 935 | NR | 745 | 31 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-3

## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 1.71**

| 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 | 52 | NR | 620 | 888 | NR | 750 | 27 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 87 | NR | 625 | 834 | NR | 755 | 23 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 135 | NR | 630 | 776 | NR | 760 | 20 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 196 | NR | 635 | 712 | NR | 765 | 17 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 258 | NR | 640 | 648 | NR | 770 | 15 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 317 | NR | 645 | 583 | NR | 775 | 12 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 368 | NR | 650 | 523 | NR | 780 | 11 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 408 | NR | 655 | 465 | NR | 785 | 9 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 443 | NR | 660 | 410 | NR | 790 | 8 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 473 | NR | 665 | 360 | NR | 795 | 7 | NR | 925 | 0 | NR |
| 410 | 23 | NR | 540 | 498 | NR | 670 | 313 | NR | 800 | 6 | NR | 930 | 0 | NR |
| 415 | 51 | NR | 545 | 530 | NR | 675 | 272 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 111 | NR | 550 | 563 | NR | 680 | 236 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 214 | NR | 555 | 605 | NR | 685 | 203 | NR | 815 | 4 | NR | 945 | 0 | NR |
| 430 | 339 | NR | 560 | 651 | NR | 690 | 175 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 467 | NR | 565 | 705 | NR | 695 | 150 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 535 | NR | 570 | 765 | NR | 700 | 128 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 372 | NR | 575 | 824 | NR | 705 | 110 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 160 | NR | 580 | 882 | NR | 710 | 94 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 89 | NR | 585 | 930 | NR | 715 | 80 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 53 | NR | 590 | 968 | NR | 720 | 69 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 31 | NR | 595 | 991 | NR | 725 | 59 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 23 | NR | 600 | 999 | NR | 730 | 50 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 21 | NR | 605 | 992 | NR | 735 | 43 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 23 | NR | 610 | 969 | NR | 740 | 36 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 32 | NR | 615 | 935 | NR | 745 | 31 | NR | 875 | 1 | NR | | | |

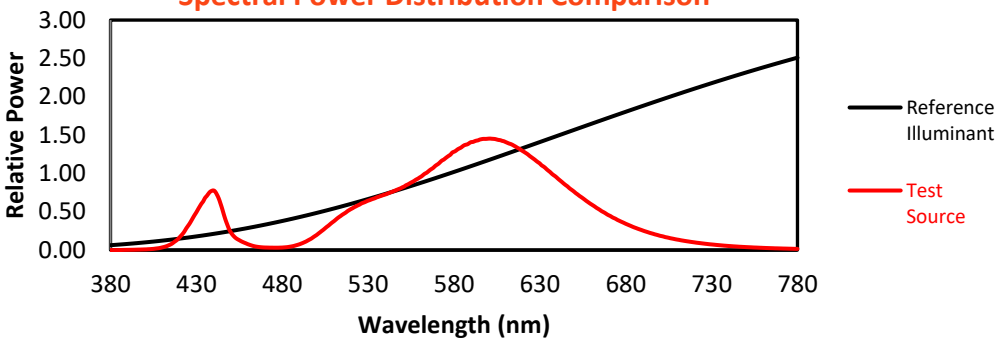
REPORT NUMBER: SP1-2407-184-3

# TM-30-18

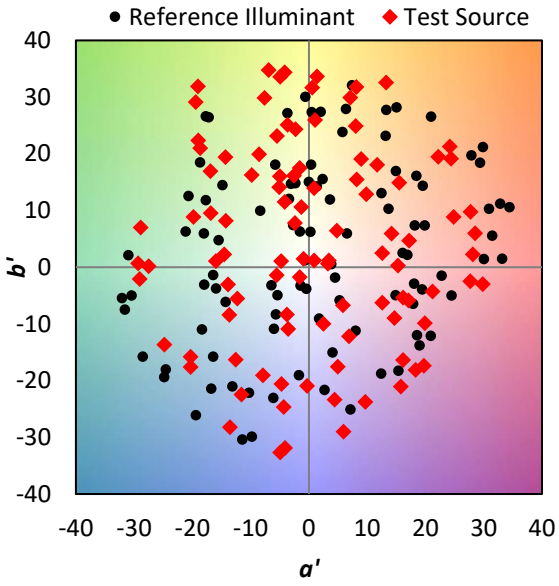
## Summary

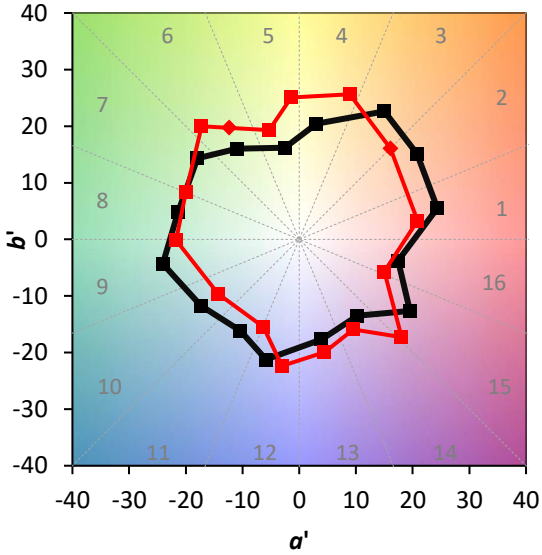
$R_f$ = 67.9
$R_g$ = 98.6
CIE $R_a$ = 71.1
$R_9$ = -27.8

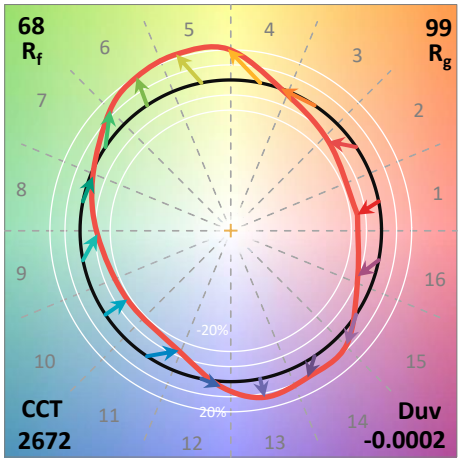
## Spectral Power Distribution Comparison

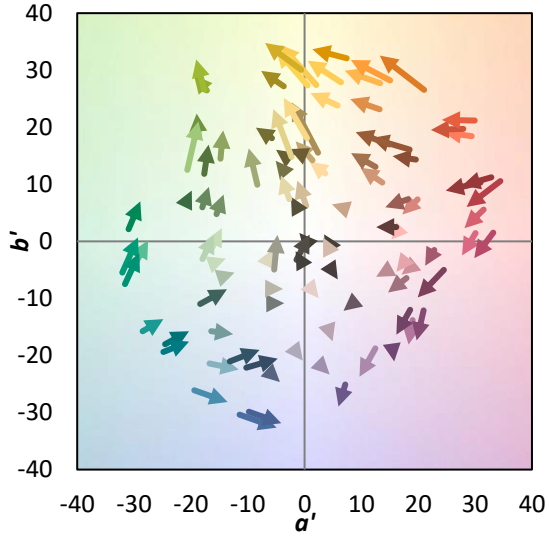



## Color Vector Graphics



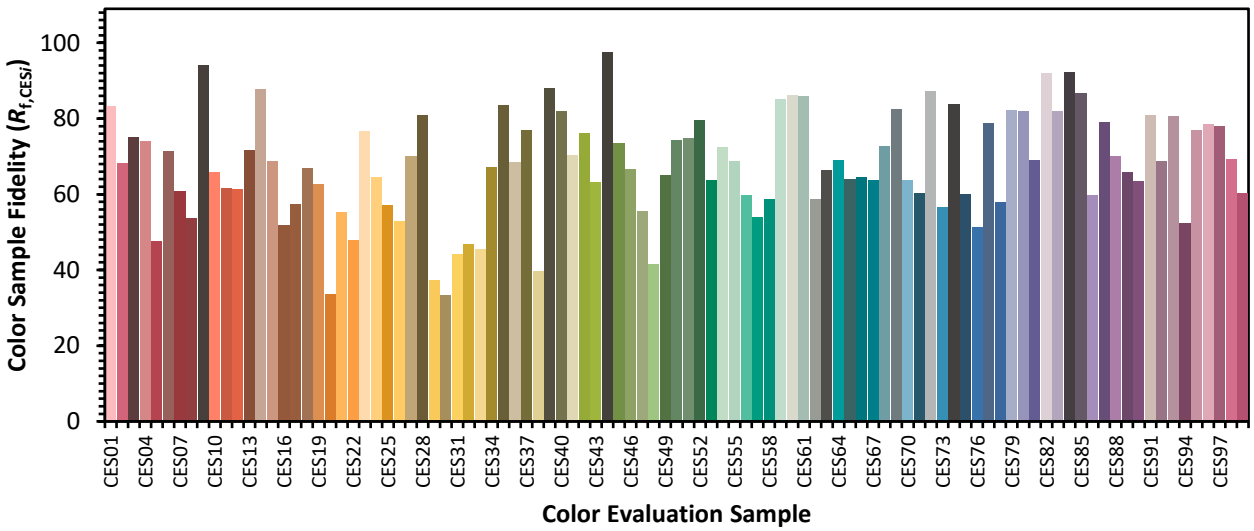



REPORT NUMBER: SP1-2407-184-3

# TM-30-18

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

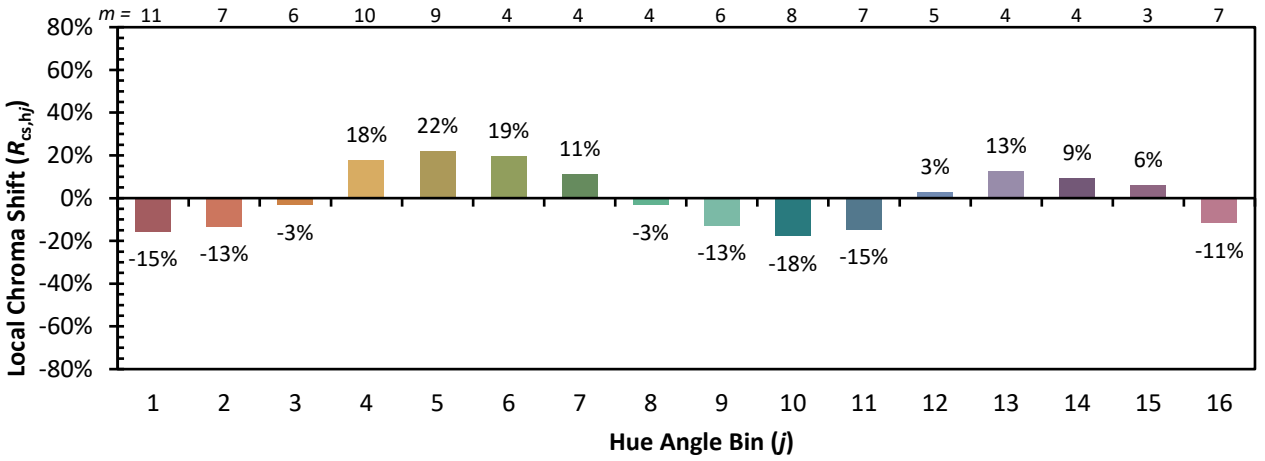
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 53 | CES51 = 75 | CES76 = 51 |
| CES02 = 63 | CES27 = 70 | CES52 = 80 | CES77 = 79 |
| CES03 = 31 | CES28 = 81 | CES53 = 64 | CES78 = 58 |
| CES04 = 71 | CES29 = 37 | CES54 = 73 | CES79 = 82 |
| CES05 = 50 | CES30 = 33 | CES55 = 69 | CES80 = 82 |
| CES06 = 52 | CES31 = 44 | CES56 = 60 | CES81 = 69 |
| CES07 = 42 | CES32 = 47 | CES57 = 54 | CES82 = 92 |
| CES08 = 41 | CES33 = 45 | CES58 = 59 | CES83 = 82 |
| CES09 = 29 | CES34 = 67 | CES59 = 85 | CES84 = 92 |
| CES10 = 77 | CES35 = 84 | CES60 = 86 | CES85 = 87 |
| CES11 = 60 | CES36 = 68 | CES61 = 86 | CES86 = 60 |
| CES12 = 66 | CES37 = 77 | CES62 = 59 | CES87 = 79 |
| CES13 = 44 | CES38 = 40 | CES63 = 66 | CES88 = 70 |
| CES14 = 74 | CES39 = 88 | CES64 = 69 | CES89 = 66 |
| CES15 = 72 | CES40 = 82 | CES65 = 64 | CES90 = 64 |
| CES16 = 48 | CES41 = 70 | CES66 = 65 | CES91 = 81 |
| CES17 = 51 | CES42 = 76 | CES67 = 64 | CES92 = 69 |
| CES18 = 57 | CES43 = 63 | CES68 = 73 | CES93 = 81 |
| CES19 = 73 | CES44 = 97 | CES69 = 83 | CES94 = 53 |
| CES20 = 67 | CES45 = 74 | CES70 = 64 | CES95 = 77 |
| CES21 = 88 | CES46 = 67 | CES71 = 60 | CES96 = 79 |
| CES22 = 80 | CES47 = 55 | CES72 = 87 | CES97 = 78 |
| CES23 = 92 | CES48 = 42 | CES73 = 57 | CES98 = 69 |
| CES24 = 92 | CES49 = 65 | CES74 = 84 | CES99 = 60 |
| CES25 = 73 | CES50 = 74 | CES75 = 60 | |

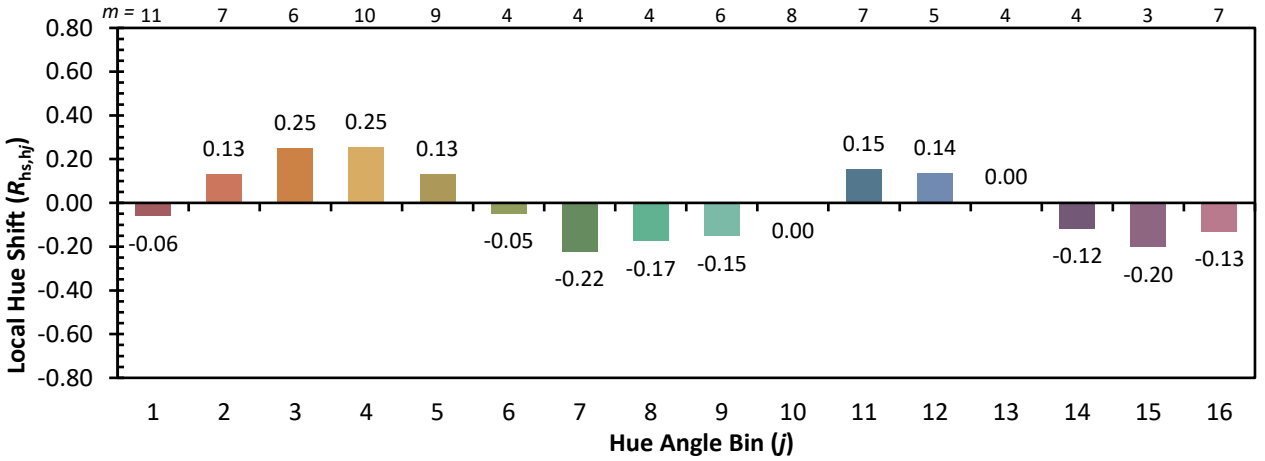


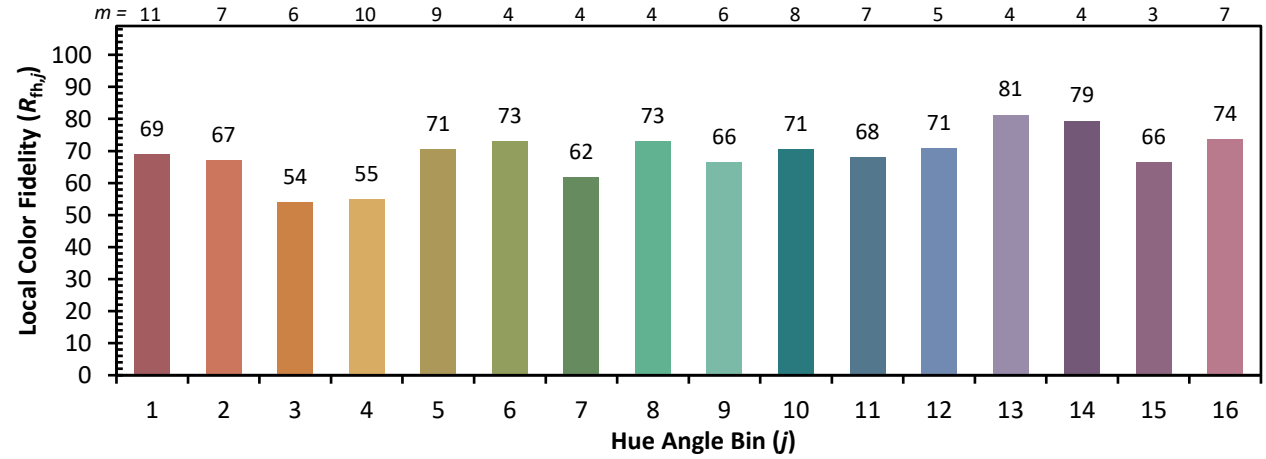
REPORT NUMBER: SP1-2407-184-3

# TM-30-18

## Color Rendition by Hue-Angle Bin



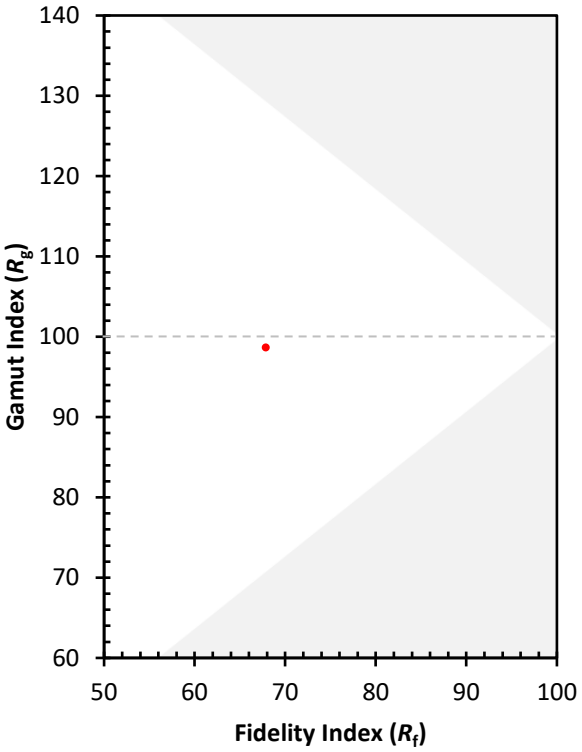



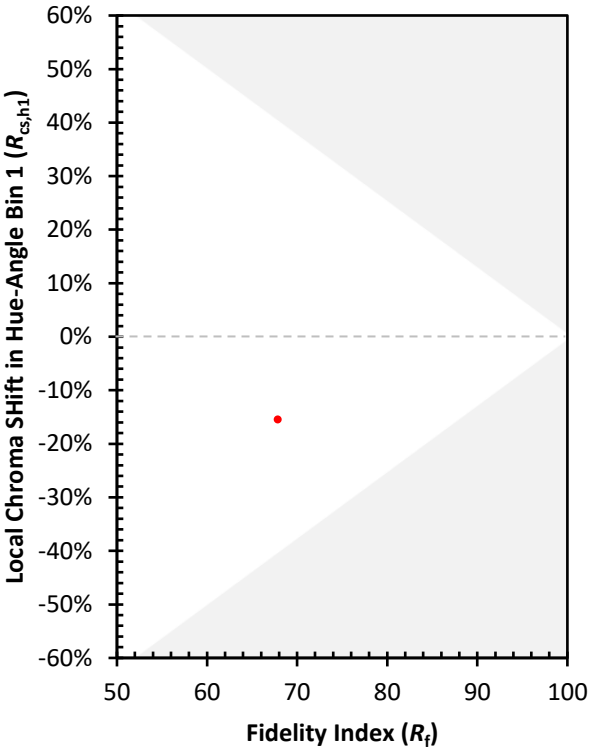



REPORT NUMBER: SP1-2407-184-3

# TM-30-18

## Measure Comparisons




(END OF REPORT)