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: P1363365

Luminaire Tested: **GSS-SB4C-740-U-SL3**

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: | P1363365 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB4C-740-U-SL3 |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 4SQUARE 204W 70CRI 4000K FIXTURE w/ TYPE III SPILL CONTROL DISTRIBUTION OPTIC |
| Light Source: | (104) 4000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 28537.8 lumens |
| Efficiency: | N/A |
| Efficacy: | 139.9 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1' x H: 0') |
| IES Classification: | Type III - Medium |
| BUG Rating: | B3 - U0 - G4 |

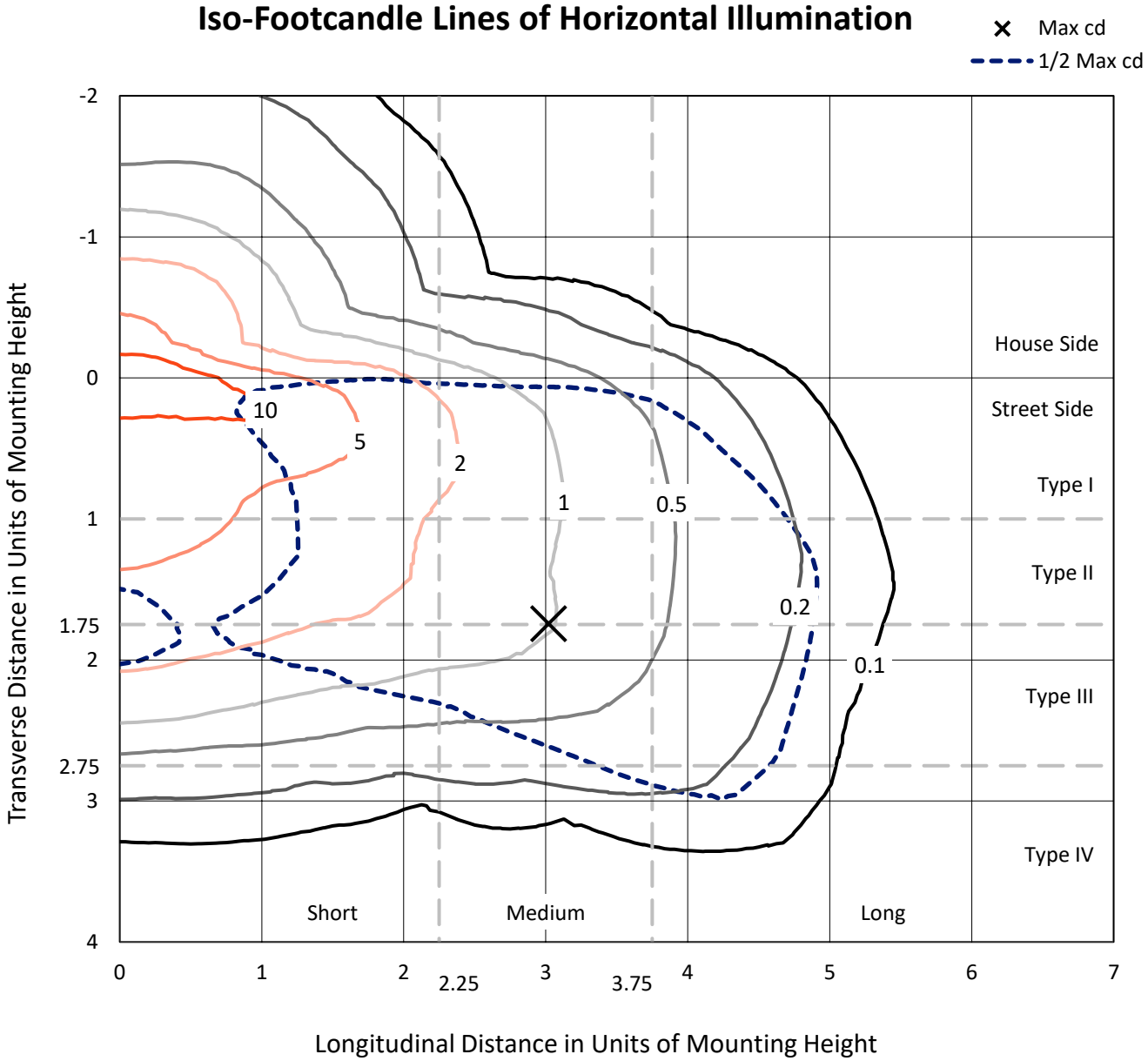
| | |
|---|---|
| Input Watts (W): | 204 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 9.5% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1363365
CATALOG NUMBER: GSS-SB4C-740-U-SL3

## Iso-Footcandle Lines of Horizontal Illumination



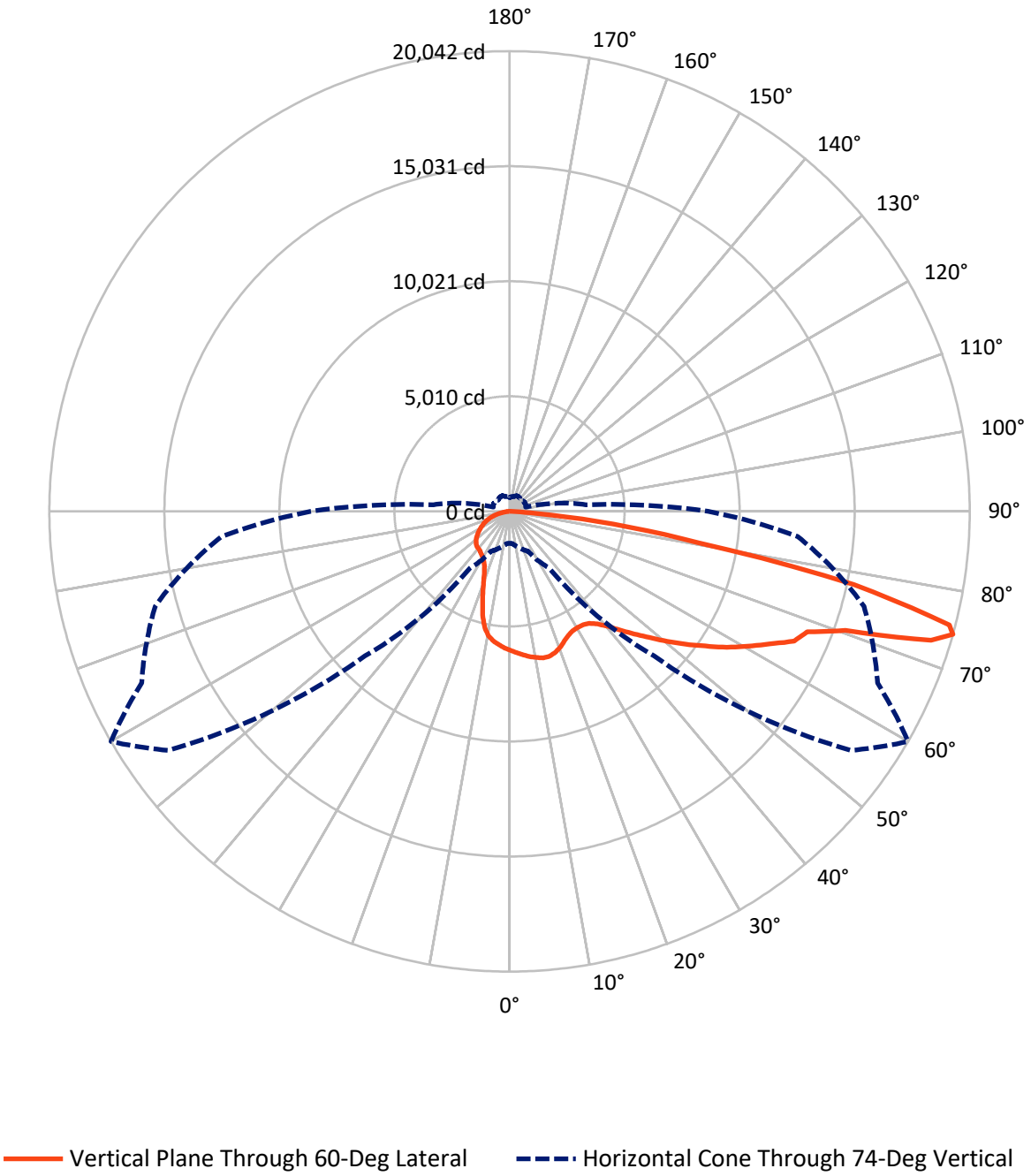

Based on 20 foot mounting height. Maximum calculated value = 15.1 fc
Type III - Medium - N/A

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## Luminous Intensity Polar Plot



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Scaled Data Report

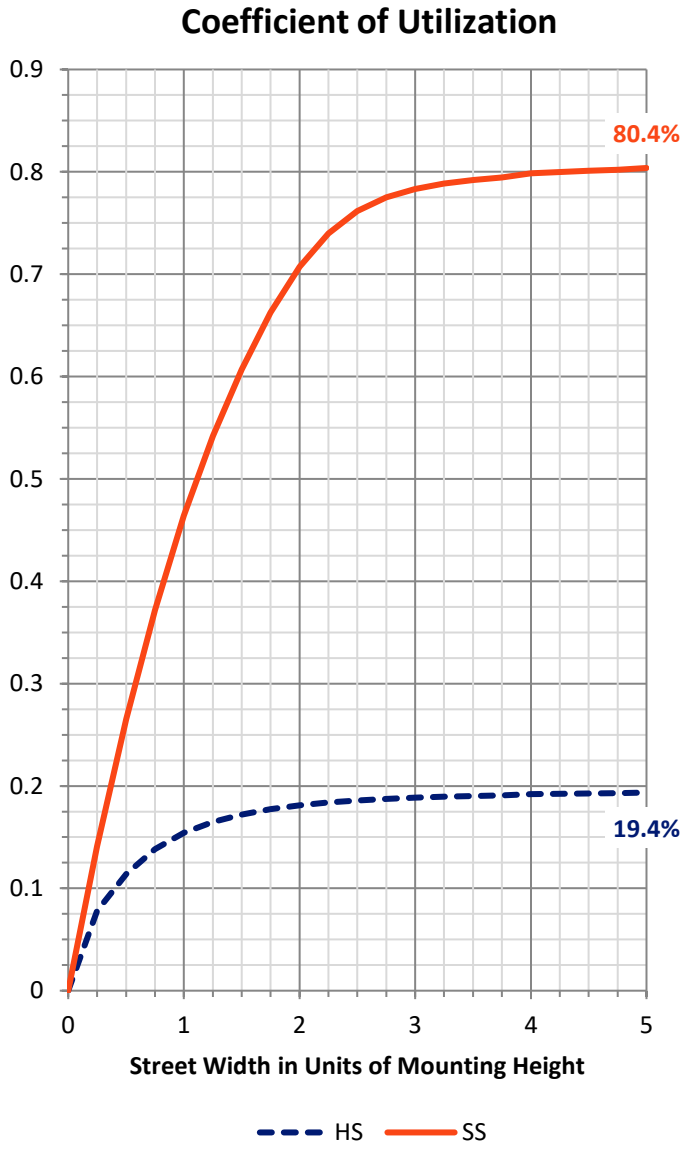
REPORT NUMBER: P1363365
CATALOG NUMBER: GSS-SB4C-740-U-SL3

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 5570.5 | 0.0 | 5570.5 |
| | % Fixture | 19.5 | 0.0 | 19.5 |
| **Street Side** | Lumens | 22967.3 | 0.0 | 22967.3 |
| | % Fixture | 80.5 | 0.0 | 80.5 |
| **Total** | Lumens | 28537.8 | 0.0 | 28537.8 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 557.0 | 2.0 |
| 10°-20° | 1366.7 | 4.8 |
| 20°-30° | 2043.3 | 7.2 |
| 30°-40° | 2912.8 | 10.2 |
| 40°-50° | 4188.3 | 14.7 |
| 50°-60° | 5607.9 | 19.7 |
| 60°-70° | 6585.2 | 23.1 |
| 70°-80° | 4696.9 | 16.5 |
| 80°-90° | 579.7 | 2.0 |
| 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° | 28537.8 | 100.0 |
| 0°-180° | 28537.8 | 100.0 |



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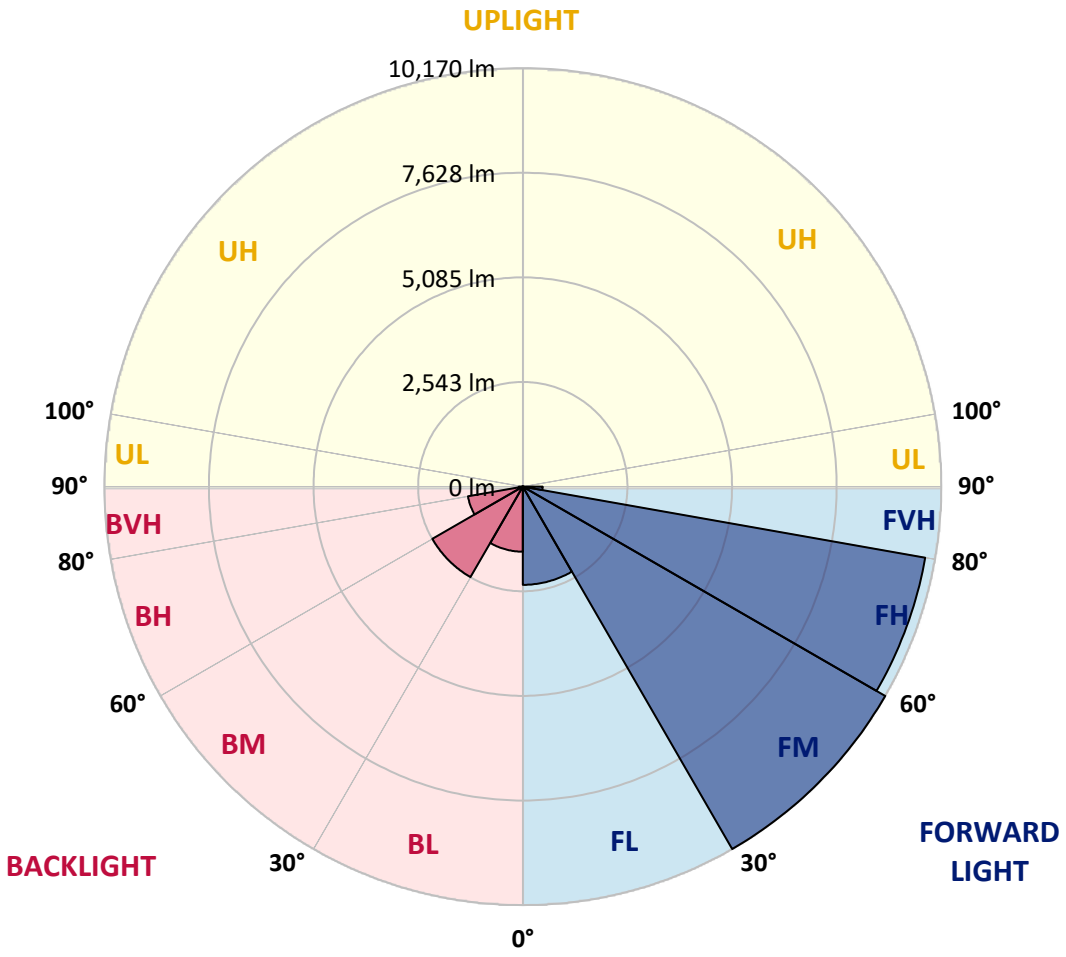
Scaled Data Report

REPORT NUMBER: P1363365
CATALOG NUMBER: GSS-SB4C-740-U-SL3

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 2386.1 | 8.4 | | | |
| FM | (30°-60°) | 10170.2 | 35.6 | | | |
| FH | (60°-80°) | 9929.2 | 34.8 | | | G4/12000 |
| FVH | (80°-90°) | 481.7 | 1.7 | | | G3/500 |
| BL | (0°-30°) | 1580.9 | 5.5 | B3/2500 | | |
| BM | (30°-60°) | 2538.8 | 8.9 | B3/5000 | | |
| BH | (60°-80°) | 1352.9 | 4.7 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 97.9 | 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-G4**
Type III Medium



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 60° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 6053.0 | 6053.0 | 6053.0 | 6053.0 | 6053.0 | 6053.0 | 6053.0 | 6053.0 | 6053.0 | 6053.0 | 6053.0 |
| 2.5° | 6244.9 | 6252.0 | 6223.6 | 6202.2 | 6202.2 | 6166.7 | 6166.7 | 6166.7 | 6131.2 | 6124.1 | 6074.4 |
| 5° | 6315.9 | 6308.8 | 6294.6 | 6301.7 | 6308.8 | 6294.6 | 6301.7 | 6280.4 | 6230.7 | 6216.4 | 6138.3 |
| 7.5° | 6117.0 | 6117.0 | 6152.5 | 6223.6 | 6323.0 | 6372.7 | 6401.2 | 6387.0 | 6365.6 | 6323.0 | 6209.3 |
| 10° | 5399.4 | 5449.2 | 5555.7 | 5790.2 | 6081.5 | 6323.0 | 6479.3 | 6472.2 | 6479.3 | 6422.5 | 6294.6 |
| 12.5° | 4767.1 | 4788.4 | 4887.9 | 5093.9 | 5513.1 | 6031.7 | 6465.1 | 6550.4 | 6571.7 | 6536.2 | 6379.9 |
| 15° | 4426.1 | 4419.0 | 4497.2 | 4660.6 | 4980.3 | 5548.6 | 6308.8 | 6543.3 | 6671.1 | 6664.0 | 6500.6 |
| 17.5° | 4276.9 | 4284.0 | 4326.6 | 4433.2 | 4667.7 | 5136.6 | 6031.7 | 6458.0 | 6720.9 | 6806.1 | 6614.3 |
| 20° | 4348.0 | 4326.6 | 4348.0 | 4369.3 | 4497.2 | 4866.6 | 5733.3 | 6308.8 | 6763.5 | 6941.1 | 6742.2 |
| 22.5° | 4497.2 | 4475.8 | 4468.7 | 4454.5 | 4482.9 | 4710.3 | 5463.4 | 6124.1 | 6799.0 | 7118.7 | 6891.4 |
| 25° | 4760.0 | 4738.7 | 4674.8 | 4596.6 | 4561.1 | 4660.6 | 5285.8 | 5967.8 | 6834.5 | 7367.4 | 7083.2 |
| 27.5° | 5136.6 | 5108.1 | 5015.8 | 4831.1 | 4717.4 | 4731.6 | 5228.9 | 5882.5 | 6898.5 | 7608.9 | 7267.9 |
| 30° | 5697.8 | 5683.6 | 5477.6 | 5179.2 | 4944.7 | 4859.5 | 5257.3 | 5861.2 | 6969.5 | 7886.0 | 7452.6 |
| 32.5° | 6202.2 | 6188.0 | 6031.7 | 5697.8 | 5307.1 | 5065.5 | 5328.4 | 5889.6 | 7061.9 | 8241.2 | 7722.6 |
| 35° | 6614.3 | 6585.9 | 6458.0 | 6202.2 | 5804.4 | 5378.1 | 5484.7 | 5989.1 | 7260.8 | 8710.1 | 8049.4 |
| 37.5° | 7033.5 | 7012.2 | 6834.5 | 6564.6 | 6315.9 | 5811.5 | 5747.6 | 6216.4 | 7530.8 | 9349.5 | 8525.4 |
| 40° | 7537.9 | 7509.5 | 7296.3 | 6976.6 | 6756.4 | 6401.2 | 6124.1 | 6578.8 | 7942.8 | 10081.3 | 9065.4 |
| 42.5° | 8021.0 | 7992.6 | 7743.9 | 7466.8 | 7189.8 | 6969.5 | 6656.9 | 7061.9 | 8454.4 | 11012.0 | 9704.8 |
| 45° | 8582.3 | 8582.3 | 8234.1 | 7928.6 | 7637.4 | 7367.4 | 7161.3 | 7616.0 | 9051.2 | 12063.5 | 10415.2 |
| 47.5° | 9108.0 | 9058.3 | 8717.2 | 8383.3 | 8099.1 | 7587.6 | 7644.5 | 8198.6 | 9719.0 | 13129.1 | 11182.5 |
| 50° | 9278.5 | 9264.3 | 9036.9 | 8738.6 | 8497.0 | 7857.6 | 8141.8 | 8894.9 | 10472.1 | 14145.1 | 11907.2 |
| 52.5° | 9477.4 | 9413.5 | 9086.7 | 9044.0 | 8767.0 | 8198.6 | 8752.8 | 9612.4 | 11161.2 | 15068.7 | 12489.7 |
| 55° | 9726.1 | 9655.0 | 9207.4 | 9122.2 | 8973.0 | 8582.3 | 9449.0 | 10351.3 | 11814.8 | 15786.2 | 13036.8 |
| 57.5° | 10180.8 | 10095.5 | 9463.2 | 9278.5 | 9157.7 | 9065.4 | 10237.6 | 11168.3 | 12475.5 | 16347.5 | 13505.7 |
| 60° | 10443.6 | 10372.6 | 9832.6 | 9697.7 | 9520.0 | 9733.2 | 11083.0 | 11921.4 | 13100.7 | 16780.9 | 13868.0 |
| 62.5° | 10308.6 | 10258.9 | 9882.4 | 10138.1 | 10280.2 | 10614.1 | 12049.3 | 12702.9 | 13598.0 | 17107.7 | 13882.2 |
| 65° | 9612.4 | 9512.9 | 9257.2 | 10031.6 | 11154.1 | 12099.0 | 13278.3 | 13619.4 | 13924.8 | 16226.7 | 13043.9 |
| 67.5° | 7942.8 | 7843.4 | 7992.6 | 8788.3 | 10656.8 | 14386.6 | 14969.2 | 13988.8 | 13335.2 | 15423.9 | 12923.1 |
| 70° | 3609.1 | 3445.7 | 4348.0 | 6216.4 | 8816.7 | 13889.3 | 17320.8 | 15523.4 | 13932.0 | 15352.9 | 12681.6 |
| 72.5° | 1769.0 | 1840.1 | 2124.2 | 2792.1 | 5392.3 | 10663.9 | 19096.9 | 19196.4 | 15956.7 | 15537.6 | 12852.1 |
| 74° | 1385.4 | 1406.7 | 1641.1 | 1918.2 | 3012.3 | 8902.0 | 18144.9 | 20041.8 | 17683.1 | 15978.1 | 12589.2 |
| 75° | 1193.6 | 1222.0 | 1456.4 | 1598.5 | 1939.5 | 7495.3 | 16937.2 | 19786.1 | 18471.7 | 15892.8 | 12006.6 |
| 77.5° | 873.9 | 866.8 | 1037.3 | 1271.7 | 909.4 | 3339.1 | 13718.8 | 15331.5 | 15750.7 | 12944.4 | 8006.8 |
| 80° | 539.9 | 561.3 | 717.6 | 888.1 | 603.9 | 1271.7 | 8063.6 | 8376.2 | 7452.6 | 7495.3 | 3886.2 |
| 82.5° | 326.8 | 341.0 | 383.6 | 461.8 | 333.9 | 447.6 | 3651.7 | 4554.0 | 3772.5 | 2451.1 | 653.6 |
| 85° | 99.5 | 106.6 | 127.9 | 163.4 | 120.8 | 163.4 | 1229.1 | 1108.3 | 788.6 | 326.8 | 191.8 |
| 87.5° | 7.1 | 7.1 | 14.2 | 14.2 | 21.3 | 35.5 | 49.7 | 56.8 | 63.9 | 71.0 | 71.0 |
| 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: P1363365
CATALOG NUMBER: GSS-SB4C-740-U-SL3

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 6053.0 | 6053.0 | 6053.0 | 6053.0 | 6053.0 | 6053.0 | 6053.0 | 6053.0 | 6053.0 | 6053.0 | 6053.0 |
| 2.5° | 6074.4 | 6053.0 | 6024.6 | 5974.9 | 5939.4 | 5903.9 | 5861.2 | 5797.3 | 5776.0 | 5783.1 | 5797.3 |
| 5° | 6124.1 | 6067.3 | 5982.0 | 5868.3 | 5783.1 | 5712.0 | 5598.4 | 5506.0 | 5449.2 | 5449.2 | 5420.7 |
| 7.5° | 6173.8 | 6095.7 | 5960.7 | 5768.9 | 5619.7 | 5420.7 | 5207.6 | 4994.5 | 4845.3 | 4781.3 | 4724.5 |
| 10° | 6259.1 | 6138.3 | 5918.1 | 5662.3 | 5342.6 | 4944.7 | 4511.4 | 4070.9 | 3793.8 | 3651.7 | 3644.6 |
| 12.5° | 6315.9 | 6195.1 | 5896.7 | 5484.7 | 4880.8 | 4127.7 | 3467.0 | 3104.7 | 2991.0 | 2941.3 | 2927.1 |
| 15° | 6408.3 | 6244.9 | 5847.0 | 5157.9 | 4170.3 | 3268.1 | 2905.7 | 2799.2 | 2792.1 | 2799.2 | 2806.3 |
| 17.5° | 6486.4 | 6287.5 | 5719.1 | 4639.2 | 3346.2 | 2841.8 | 2749.4 | 2742.3 | 2792.1 | 2813.4 | 2834.7 |
| 20° | 6571.7 | 6323.0 | 5491.8 | 3914.6 | 2884.4 | 2713.9 | 2699.7 | 2742.3 | 2813.4 | 2870.2 | 2877.3 |
| 22.5° | 6692.5 | 6351.4 | 5093.9 | 3197.0 | 2664.2 | 2642.9 | 2678.4 | 2721.0 | 2763.7 | 2813.4 | 2827.6 |
| 25° | 6820.3 | 6351.4 | 4546.9 | 2706.8 | 2550.5 | 2607.4 | 2642.9 | 2607.4 | 2593.1 | 2635.8 | 2635.8 |
| 27.5° | 6919.8 | 6301.7 | 3772.5 | 2444.0 | 2472.4 | 2564.7 | 2543.4 | 2465.3 | 2451.1 | 2479.5 | 2472.4 |
| 30° | 6990.8 | 6117.0 | 2991.0 | 2301.9 | 2394.2 | 2472.4 | 2415.5 | 2372.9 | 2344.5 | 2351.6 | 2358.7 |
| 32.5° | 7097.4 | 5832.8 | 2451.1 | 2202.4 | 2330.3 | 2323.2 | 2316.1 | 2273.4 | 2237.9 | 2245.0 | 2252.1 |
| 35° | 7225.3 | 5363.9 | 2145.6 | 2131.4 | 2273.4 | 2216.6 | 2223.7 | 2174.0 | 2131.4 | 2131.4 | 2138.5 |
| 37.5° | 7388.7 | 4802.7 | 2017.7 | 2102.9 | 2181.1 | 2174.0 | 2152.7 | 2088.7 | 2024.8 | 2010.6 | 2010.6 |
| 40° | 7566.3 | 4113.5 | 1953.7 | 2088.7 | 2138.5 | 2159.8 | 2117.1 | 2039.0 | 1868.5 | 1761.9 | 1754.8 |
| 42.5° | 7680.0 | 3545.2 | 1932.4 | 2067.4 | 2131.4 | 2152.7 | 2095.8 | 1854.3 | 1690.9 | 1619.8 | 1612.7 |
| 45° | 7843.4 | 3232.6 | 1932.4 | 2010.6 | 2102.9 | 2124.2 | 1925.3 | 1761.9 | 1669.6 | 1634.0 | 1641.1 |
| 47.5° | 8006.8 | 3232.6 | 1932.4 | 1968.0 | 2024.8 | 2053.2 | 1790.3 | 1719.3 | 1634.0 | 1634.0 | 1662.5 |
| 50° | 8234.1 | 3410.2 | 1918.2 | 1904.0 | 1925.3 | 1818.8 | 1705.1 | 1648.2 | 1534.6 | 1491.9 | 1499.1 |
| 52.5° | 8575.1 | 3680.1 | 1861.4 | 1811.7 | 1818.8 | 1683.8 | 1648.2 | 1563.0 | 1449.3 | 1364.1 | 1342.8 |
| 55° | 8944.6 | 3971.4 | 1747.7 | 1705.1 | 1698.0 | 1598.5 | 1584.3 | 1491.9 | 1385.4 | 1271.7 | 1250.4 |
| 57.5° | 9349.5 | 4205.9 | 1605.6 | 1598.5 | 1577.2 | 1513.3 | 1534.6 | 1470.6 | 1321.4 | 1172.2 | 1150.9 |
| 60° | 9733.2 | 4468.7 | 1470.6 | 1484.8 | 1449.3 | 1435.1 | 1463.5 | 1420.9 | 1236.2 | 1072.8 | 1058.6 |
| 62.5° | 9733.2 | 4461.6 | 1349.9 | 1364.1 | 1357.0 | 1321.4 | 1371.2 | 1342.8 | 1122.5 | 987.5 | 973.3 |
| 65° | 9200.3 | 4262.7 | 1207.8 | 1243.3 | 1271.7 | 1200.7 | 1264.6 | 1214.9 | 1023.0 | 916.5 | 895.2 |
| 67.5° | 9129.3 | 4184.6 | 1065.7 | 1101.2 | 1150.9 | 1072.8 | 1115.4 | 1065.7 | 930.7 | 838.3 | 824.1 |
| 70° | 8987.2 | 4006.9 | 937.8 | 980.4 | 1001.7 | 916.5 | 973.3 | 937.8 | 838.3 | 767.3 | 753.1 |
| 72.5° | 9058.3 | 3850.6 | 802.8 | 852.5 | 859.6 | 781.5 | 838.3 | 824.1 | 738.9 | 689.1 | 660.7 |
| 74° | *8660.4* | *3332.0* | *724.7* | *767.3* | *753.1* | *696.2* | *746.0* | *746.0* | *667.8* | *632.3* | *596.8* |
| 75° | 8134.7 | 2955.5 | 667.8 | 710.5 | 674.9 | 639.4 | 689.1 | 696.2 | 618.1 | 618.1 | 561.3 |
| 77.5° | 5342.6 | 1982.2 | 525.7 | 554.2 | 539.9 | 518.6 | 547.0 | 539.9 | 483.1 | 468.9 | 433.4 |
| 80° | 2614.5 | 1087.0 | 397.9 | 383.6 | 390.7 | 383.6 | 405.0 | 397.9 | 369.4 | 355.2 | 348.1 |
| 82.5° | 490.2 | 362.3 | 262.9 | 255.8 | 241.6 | 227.3 | 255.8 | 255.8 | 341.0 | 383.6 | 383.6 |
| 85° | 149.2 | 142.1 | 127.9 | 127.9 | 120.8 | 106.6 | 113.7 | 163.4 | 198.9 | 135.0 | 127.9 |
| 87.5° | 63.9 | 63.9 | 56.8 | 49.7 | 35.5 | 35.5 | 28.4 | 28.4 | 28.4 | 28.4 | 28.4 |
| 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: SP1-2407-184-1

Test Date: 10/09/2024

Luminaire Tested: GSS-SB1A-740-U-5WQ

Data in this report applies to families of products including GSS-SB1A-740-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

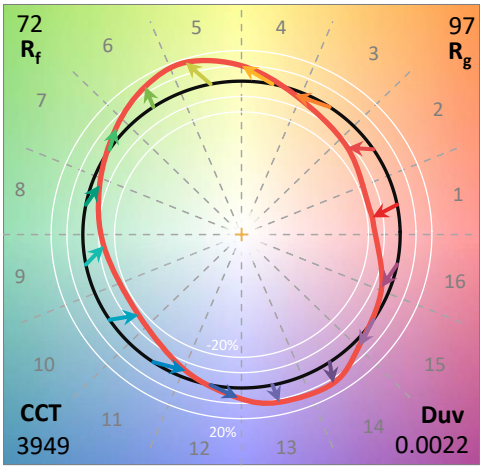
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-1 |
| 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-740-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 4000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 3949 |
| CIE u': | 0.2248 |
| CIE v': | 0.5053 |
| Duv: | 0.0022 |
| CIE x: | 0.3844 |
| CIE y: | 0.3840 |
| CIE z: | 0.2316 |
| Peak Wavelength (nm): | 440 |
| Dominant Wavelength (nm): | 578 |
| Purity: | 30.60026 |
| Rf: | 71.8 |
| Rg: | 96.5 |

| | |
|---|---|
| CRI (Ra): | 70.7 |
| R1: | 68.0 |
| R2: | 76.0 |
| R3: | 84.3 |
| R4: | 72.0 |
| R5: | 68.6 |
| R6: | 68.3 |
| R7: | 77.9 |
| R8: | 50.3 |
| R9: | -36.7 |
| R10: | 45.1 |
| R11: | 70.7 |
| R12: | 47.1 |
| R13: | 68.5 |
| R14: | 91.1 |
| R15: | 58.7 |




## Test Conditions

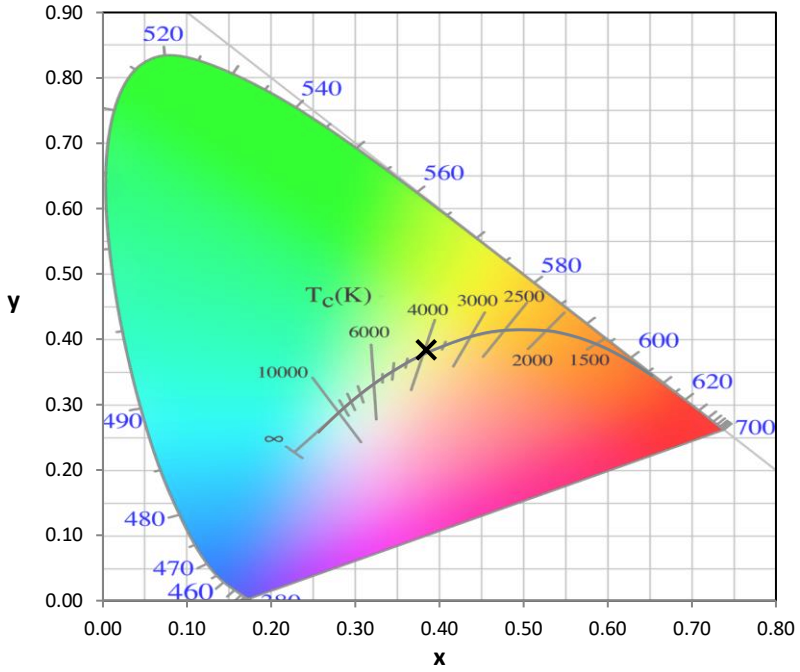
| | |
|---|---|
| Stabilization Time: | 34M |
| Operation Time: | 1H 34M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-1

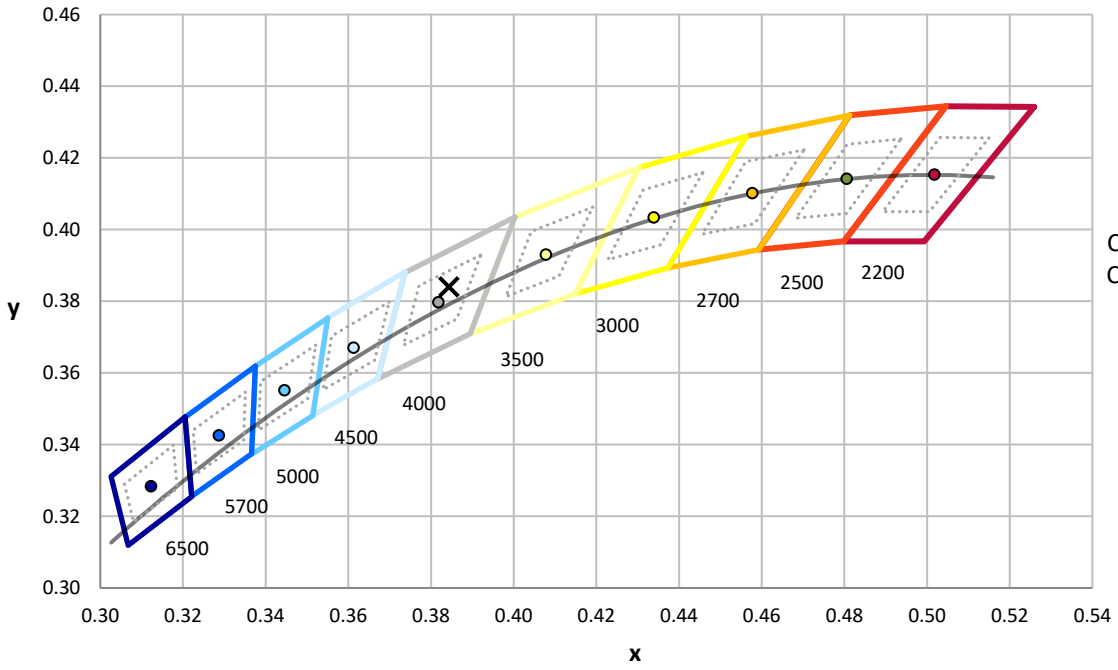
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC 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: SP1-2407-184-1

## CIE 1931 Chromaticity Diagram




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

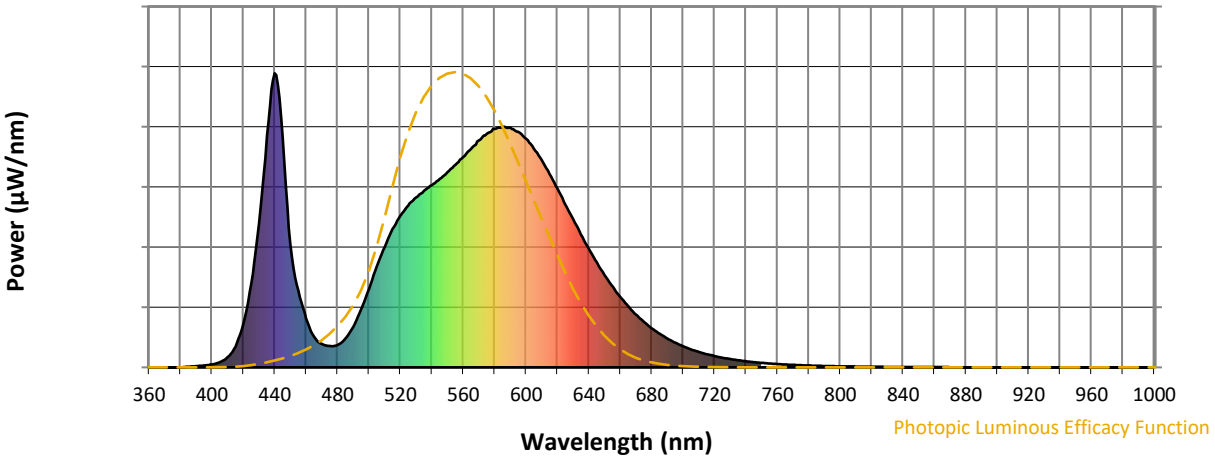



CCT = 3949K
CIE x = 0.3844
CIE y = 0.3840
Duv = 0.0022

Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-1

## Photopic Flux vs. Wavelength

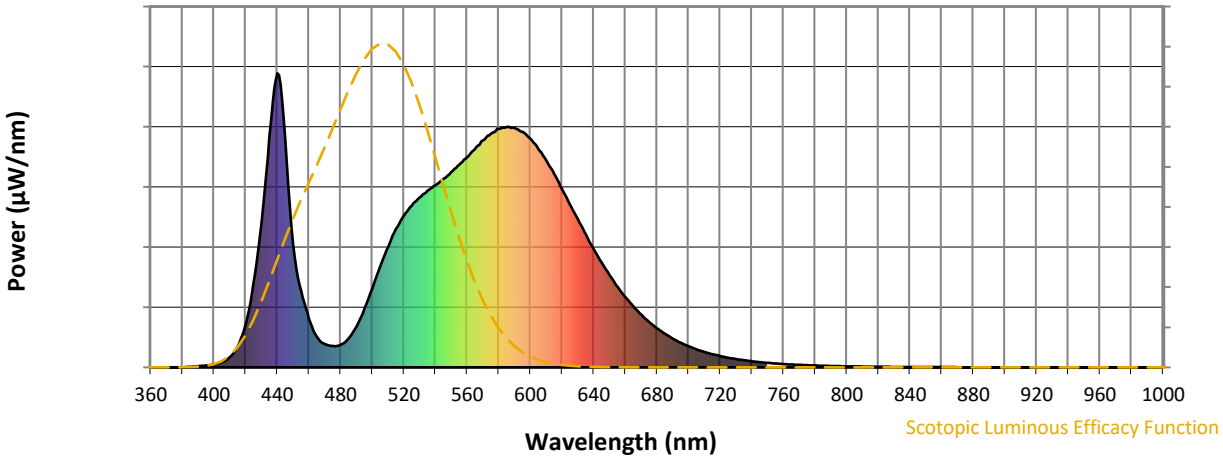



## Photopic Lumens: NR

| 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 | 139 | NR | 620 | 607 | NR | 750 | 15 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 198 | NR | 625 | 554 | NR | 755 | 13 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 267 | NR | 630 | 504 | NR | 760 | 11 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 452 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 410 | NR | 640 | 403 | NR | 770 | 8 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 470 | NR | 645 | 357 | NR | 775 | 7 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 516 | NR | 650 | 314 | NR | 780 | 6 | NR | 910 | 0 | NR |
| 395 | 7 | NR | 525 | 550 | NR | 655 | 275 | NR | 785 | 5 | NR | 915 | 0 | NR |
| 400 | 10 | NR | 530 | 578 | NR | 660 | 240 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 17 | NR | 535 | 601 | NR | 665 | 208 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 35 | NR | 540 | 620 | NR | 670 | 179 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 70 | NR | 545 | 641 | NR | 675 | 155 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 147 | NR | 550 | 664 | NR | 680 | 133 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 285 | NR | 555 | 689 | NR | 685 | 114 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 487 | NR | 560 | 715 | NR | 690 | 98 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 787 | NR | 565 | 743 | NR | 695 | 84 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 1000 | NR | 570 | 771 | NR | 700 | 72 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 783 | NR | 575 | 794 | NR | 705 | 61 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 417 | NR | 580 | 811 | NR | 710 | 52 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 261 | NR | 585 | 817 | NR | 715 | 45 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 167 | NR | 590 | 815 | NR | 720 | 39 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 801 | NR | 725 | 33 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 777 | NR | 730 | 28 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 744 | NR | 735 | 24 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 704 | NR | 740 | 21 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 98 | NR | 615 | 657 | NR | 745 | 18 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-1

## Scotopic Flux vs. Wavelength

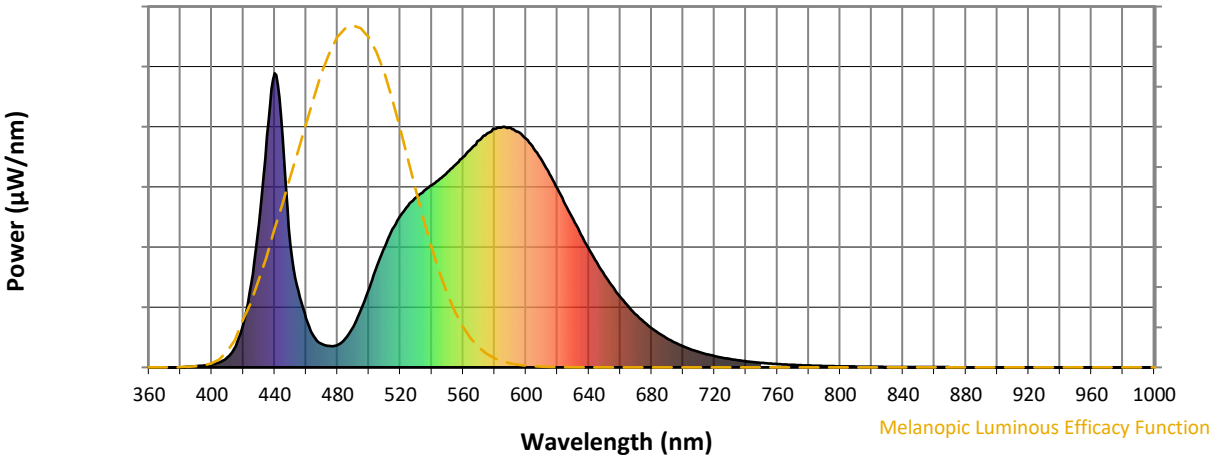



**Scotopic Lumens: NR** **S/P: 1.47**

| 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 | 139 | NR | 620 | 607 | NR | 750 | 15 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 198 | NR | 625 | 554 | NR | 755 | 13 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 267 | NR | 630 | 504 | NR | 760 | 11 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 452 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 410 | NR | 640 | 403 | NR | 770 | 8 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 470 | NR | 645 | 357 | NR | 775 | 7 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 516 | NR | 650 | 314 | NR | 780 | 6 | NR | 910 | 0 | NR |
| 395 | 7 | NR | 525 | 550 | NR | 655 | 275 | NR | 785 | 5 | NR | 915 | 0 | NR |
| 400 | 10 | NR | 530 | 578 | NR | 660 | 240 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 17 | NR | 535 | 601 | NR | 665 | 208 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 35 | NR | 540 | 620 | NR | 670 | 179 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 70 | NR | 545 | 641 | NR | 675 | 155 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 147 | NR | 550 | 664 | NR | 680 | 133 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 285 | NR | 555 | 689 | NR | 685 | 114 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 487 | NR | 560 | 715 | NR | 690 | 98 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 787 | NR | 565 | 743 | NR | 695 | 84 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 1000 | NR | 570 | 771 | NR | 700 | 72 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 783 | NR | 575 | 794 | NR | 705 | 61 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 417 | NR | 580 | 811 | NR | 710 | 52 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 261 | NR | 585 | 817 | NR | 715 | 45 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 167 | NR | 590 | 815 | NR | 720 | 39 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 801 | NR | 725 | 33 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 777 | NR | 730 | 28 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 744 | NR | 735 | 24 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 704 | NR | 740 | 21 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 98 | NR | 615 | 657 | NR | 745 | 18 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-1

## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.78**

| 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 | 139 | NR | 620 | 607 | NR | 750 | 15 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 198 | NR | 625 | 554 | NR | 755 | 13 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 267 | NR | 630 | 504 | NR | 760 | 11 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 452 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 410 | NR | 640 | 403 | NR | 770 | 8 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 470 | NR | 645 | 357 | NR | 775 | 7 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 516 | NR | 650 | 314 | NR | 780 | 6 | NR | 910 | 0 | NR |
| 395 | 7 | NR | 525 | 550 | NR | 655 | 275 | NR | 785 | 5 | NR | 915 | 0 | NR |
| 400 | 10 | NR | 530 | 578 | NR | 660 | 240 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 17 | NR | 535 | 601 | NR | 665 | 208 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 35 | NR | 540 | 620 | NR | 670 | 179 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 70 | NR | 545 | 641 | NR | 675 | 155 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 147 | NR | 550 | 664 | NR | 680 | 133 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 285 | NR | 555 | 689 | NR | 685 | 114 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 487 | NR | 560 | 715 | NR | 690 | 98 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 787 | NR | 565 | 743 | NR | 695 | 84 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 1000 | NR | 570 | 771 | NR | 700 | 72 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 783 | NR | 575 | 794 | NR | 705 | 61 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 417 | NR | 580 | 811 | NR | 710 | 52 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 261 | NR | 585 | 817 | NR | 715 | 45 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 167 | NR | 590 | 815 | NR | 720 | 39 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 801 | NR | 725 | 33 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 777 | NR | 730 | 28 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 744 | NR | 735 | 24 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 704 | NR | 740 | 21 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 98 | NR | 615 | 657 | NR | 745 | 18 | NR | 875 | 1 | NR | | | |

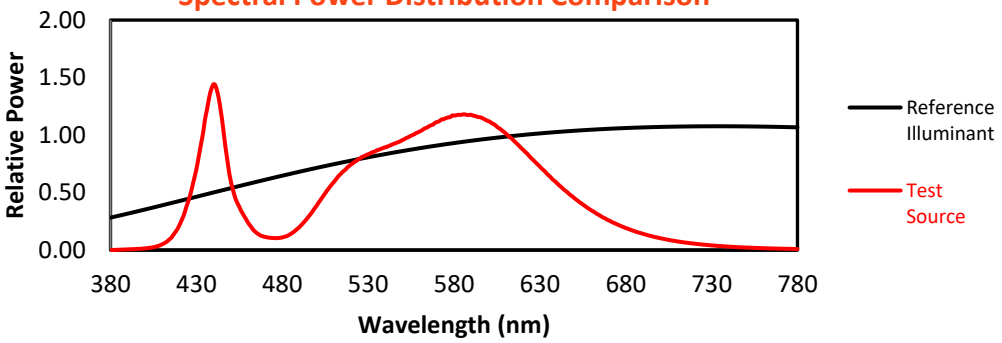
REPORT NUMBER: SP1-2407-184-1

# TM-30-18

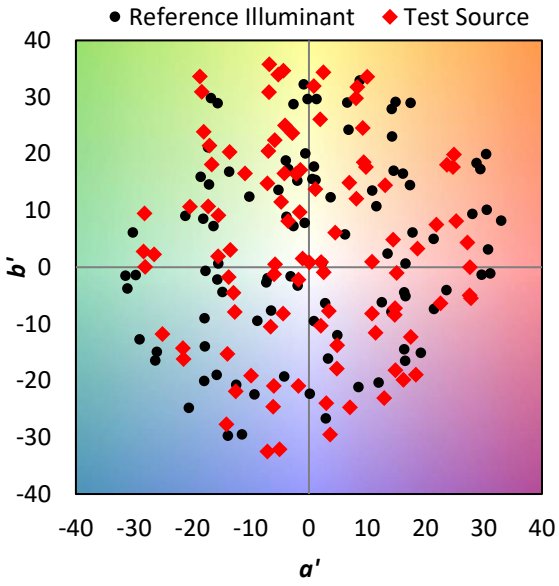
## Summary

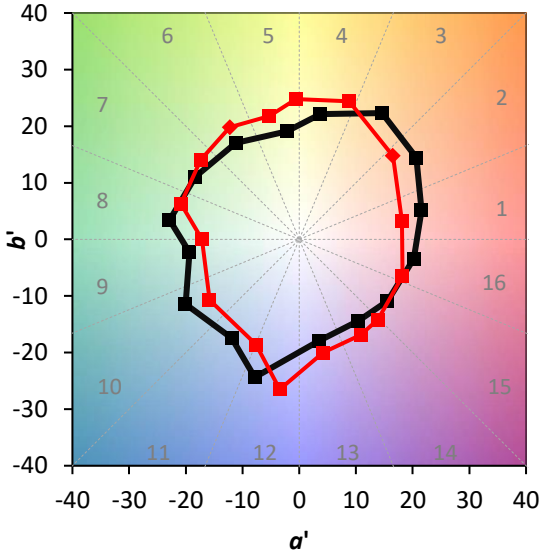
$R_f$ = 71.8
$R_g$ = 96.5
CIE $R_a$ = 70.7
$R_9$ = -36.7

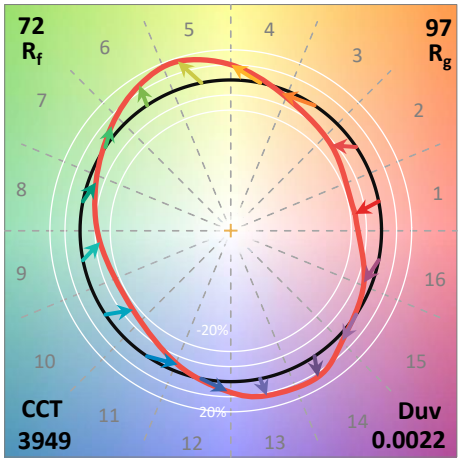
## Spectral Power Distribution Comparison

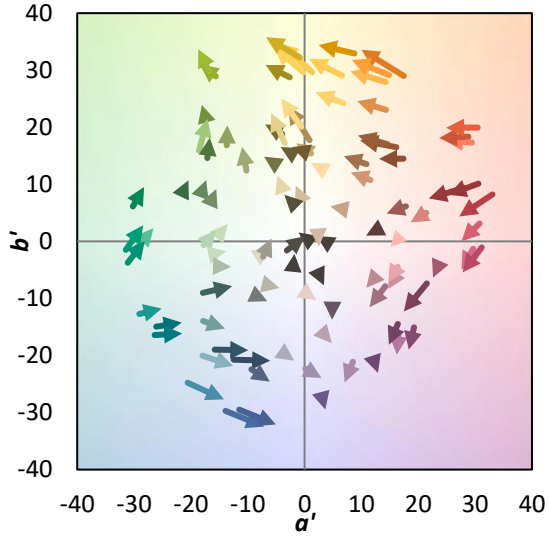



## Color Vector Graphics



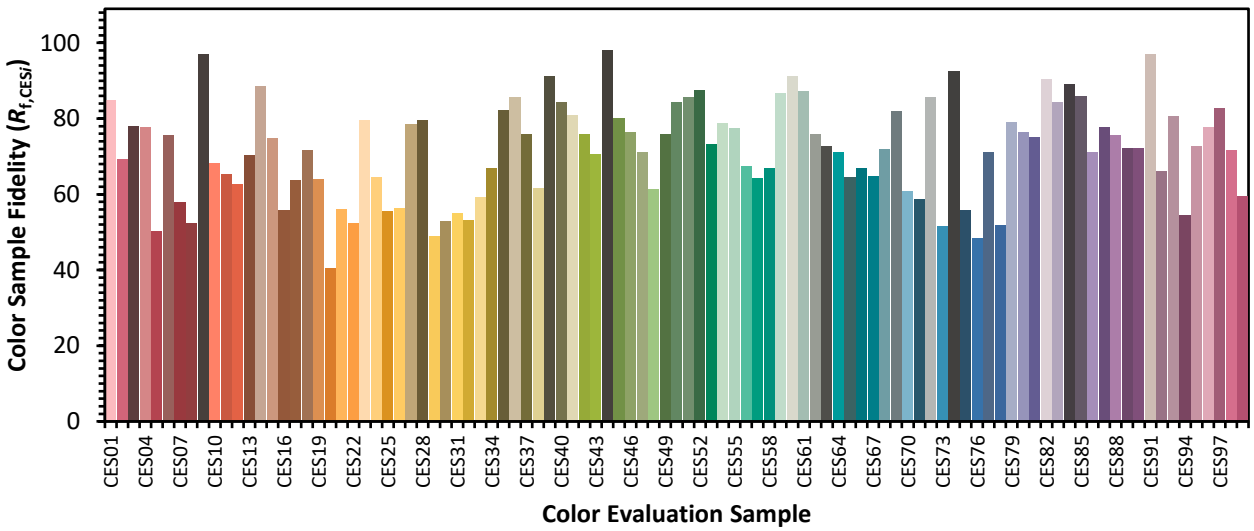



REPORT NUMBER: SP1-2407-184-1

# TM-30-18

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

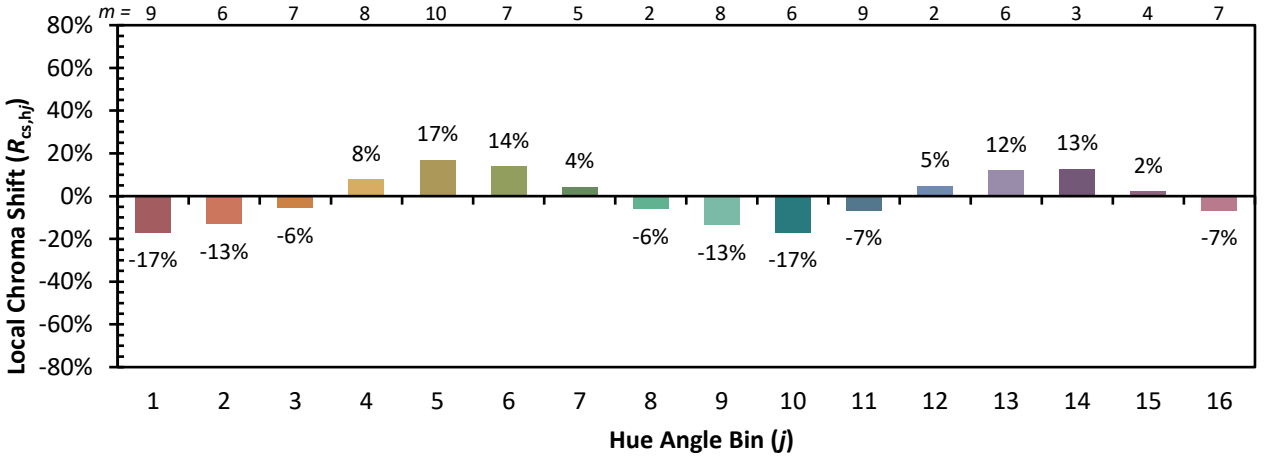
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 56 | CES51 = 86 | CES76 = 48 |
| CES02 = 61 | CES27 = 79 | CES52 = 88 | CES77 = 71 |
| CES03 = 30 | CES28 = 80 | CES53 = 73 | CES78 = 52 |
| CES04 = 70 | CES29 = 49 | CES54 = 79 | CES79 = 79 |
| CES05 = 47 | CES30 = 53 | CES55 = 77 | CES80 = 77 |
| CES06 = 50 | CES31 = 55 | CES56 = 67 | CES81 = 75 |
| CES07 = 40 | CES32 = 53 | CES57 = 64 | CES82 = 90 |
| CES08 = 39 | CES33 = 59 | CES58 = 67 | CES83 = 84 |
| CES09 = 29 | CES34 = 67 | CES59 = 87 | CES84 = 89 |
| CES10 = 74 | CES35 = 82 | CES60 = 91 | CES85 = 86 |
| CES11 = 57 | CES36 = 86 | CES61 = 87 | CES86 = 71 |
| CES12 = 63 | CES37 = 76 | CES62 = 76 | CES87 = 78 |
| CES13 = 42 | CES38 = 62 | CES63 = 73 | CES88 = 76 |
| CES14 = 74 | CES39 = 91 | CES64 = 71 | CES89 = 72 |
| CES15 = 71 | CES40 = 84 | CES65 = 64 | CES90 = 72 |
| CES16 = 46 | CES41 = 81 | CES66 = 67 | CES91 = 97 |
| CES17 = 49 | CES42 = 76 | CES67 = 65 | CES92 = 66 |
| CES18 = 56 | CES43 = 71 | CES68 = 72 | CES93 = 81 |
| CES19 = 72 | CES44 = 98 | CES69 = 82 | CES94 = 55 |
| CES20 = 65 | CES45 = 80 | CES70 = 61 | CES95 = 73 |
| CES21 = 86 | CES46 = 76 | CES71 = 59 | CES96 = 78 |
| CES22 = 78 | CES47 = 71 | CES72 = 86 | CES97 = 83 |
| CES23 = 92 | CES48 = 61 | CES73 = 52 | CES98 = 72 |
| CES24 = 91 | CES49 = 76 | CES74 = 93 | CES99 = 60 |
| CES25 = 72 | CES50 = 84 | CES75 = 56 | |

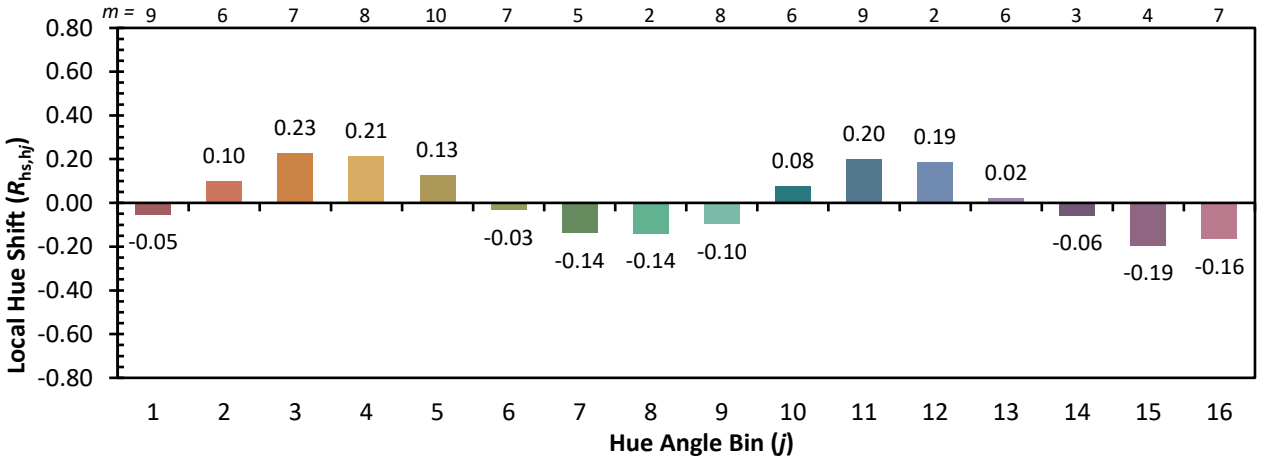


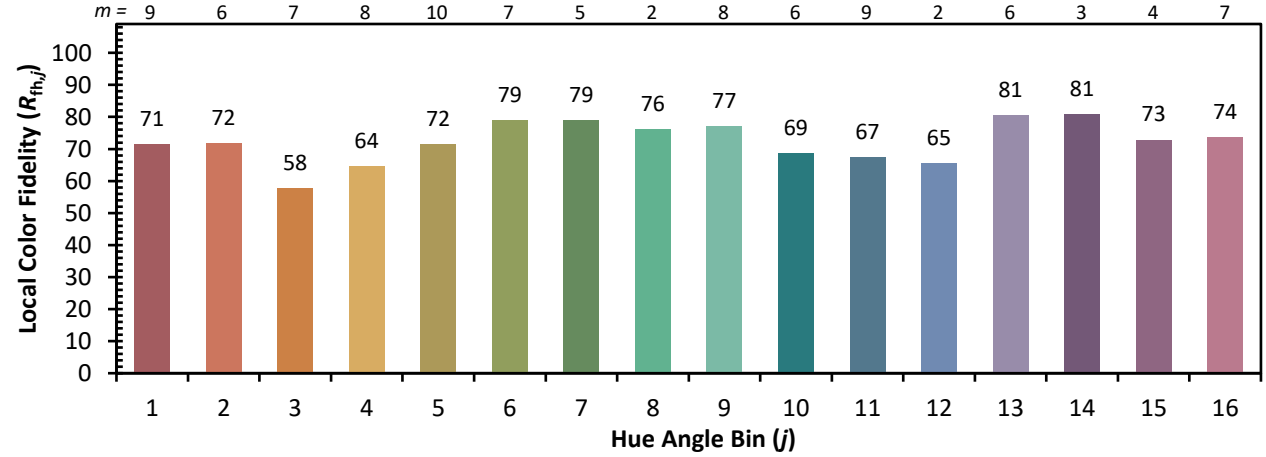
REPORT NUMBER: SP1-2407-184-1

**TM-30-18**

## Color Rendition by Hue-Angle Bin



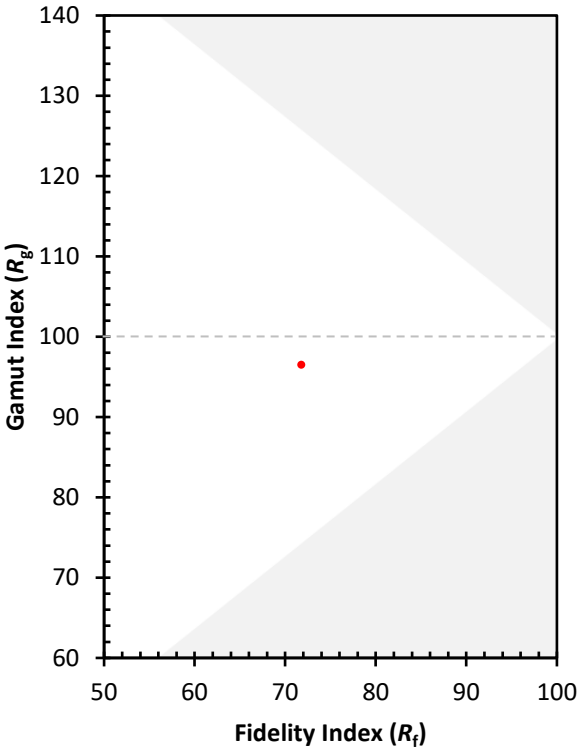



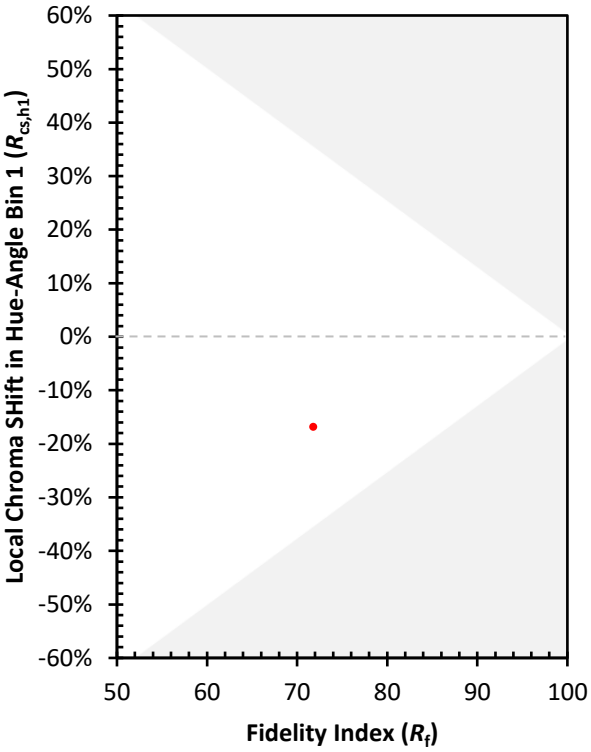



REPORT NUMBER: SP1-2407-184-1

# TM-30-18

## Measure Comparisons




(END OF REPORT)