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: P1359131

Luminaire Tested: **GSS-SB2A-740-U-T2**

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: | P1359131 |
| Test Lab: | INNOVATION CENTER(G3) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB2A-740-U-T2 |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 2SQUARE 58W 70CRI 4000K FIXTURE w/ TYPE II DISTRIBUTION OPTIC |
| Light Source: | (52) 4000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 8568 lumens |
| Efficiency: | N/A |
| Efficacy: | 147.7 lumens/watt |
| Luminous Opening: | Rectangular (W 1' x L: 0.5' x H: 0') |
| IES Classification: | Type II - Medium |
| BUG Rating: | B2 - U0 - G2 |

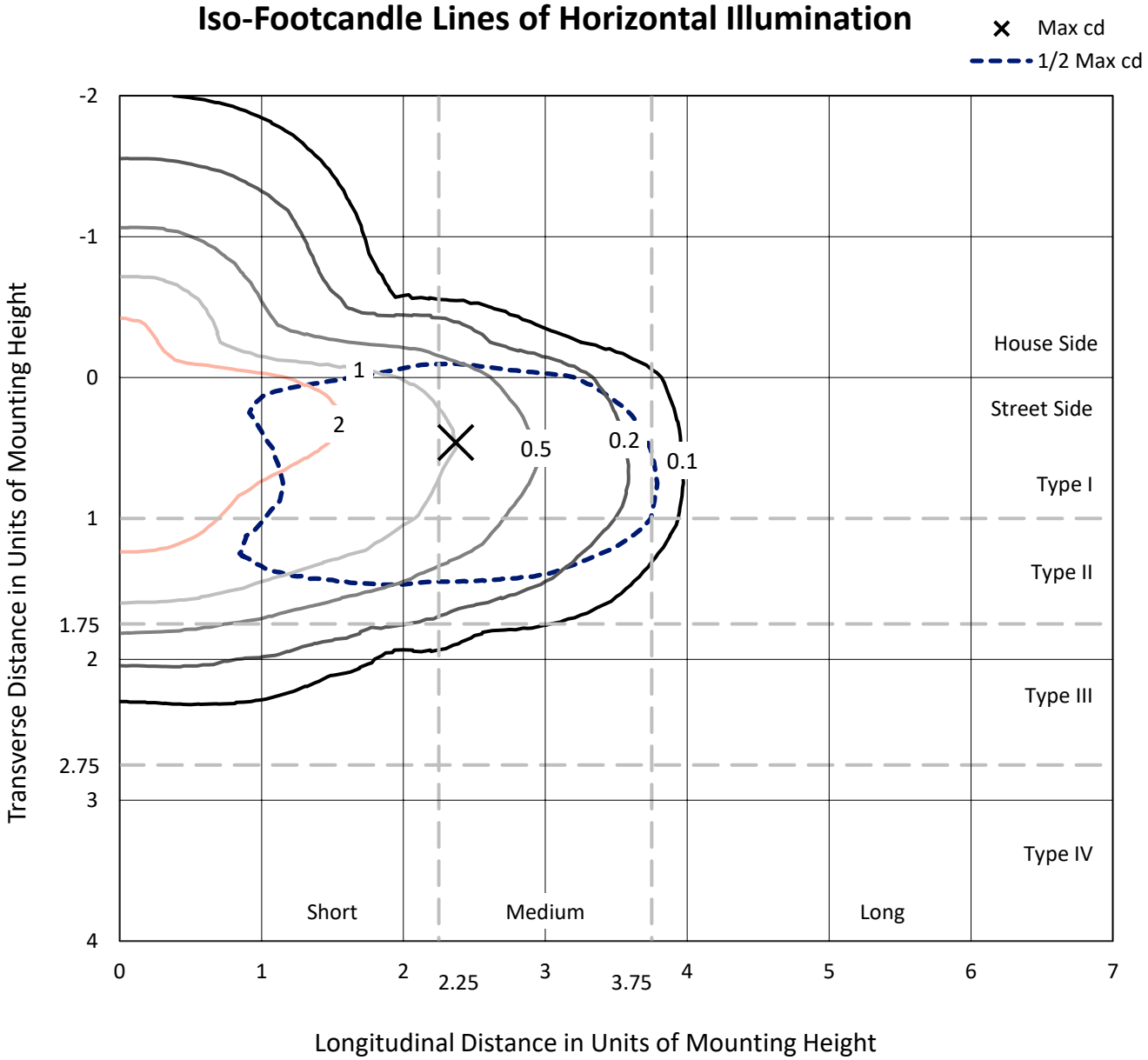
| | |
|---|---|
| Input Watts (W): | 58 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 9.0% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1359131
CATALOG NUMBER: GSS-SB2A-740-U-T2

## Iso-Footcandle Lines of Horizontal Illumination



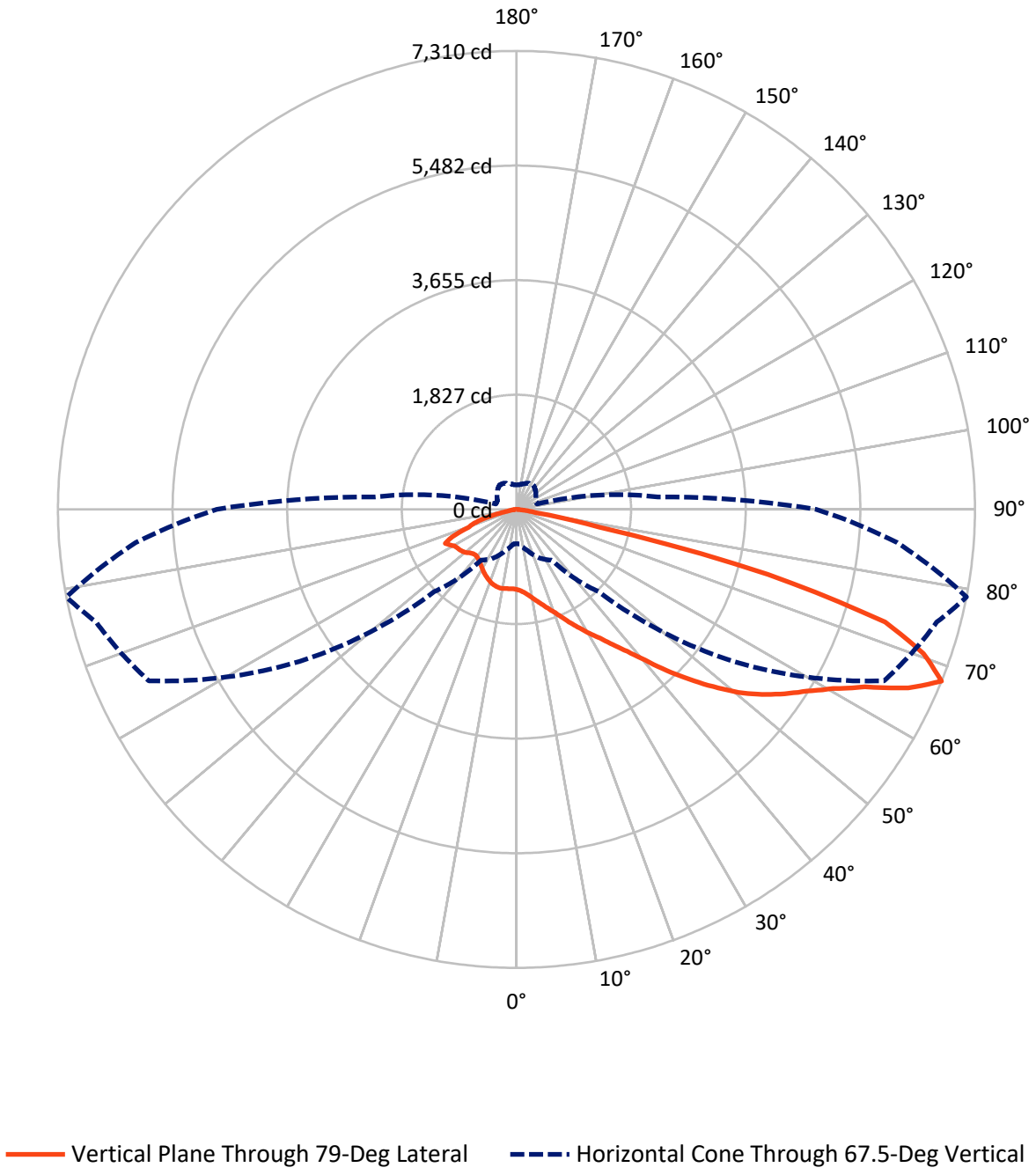

Based on 20 foot mounting height. Maximum calculated value = 3.8 fc
Type II - Medium - N/A

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REPORT NUMBER: P1359131
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## Luminous Intensity Polar Plot



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Scaled Data Report

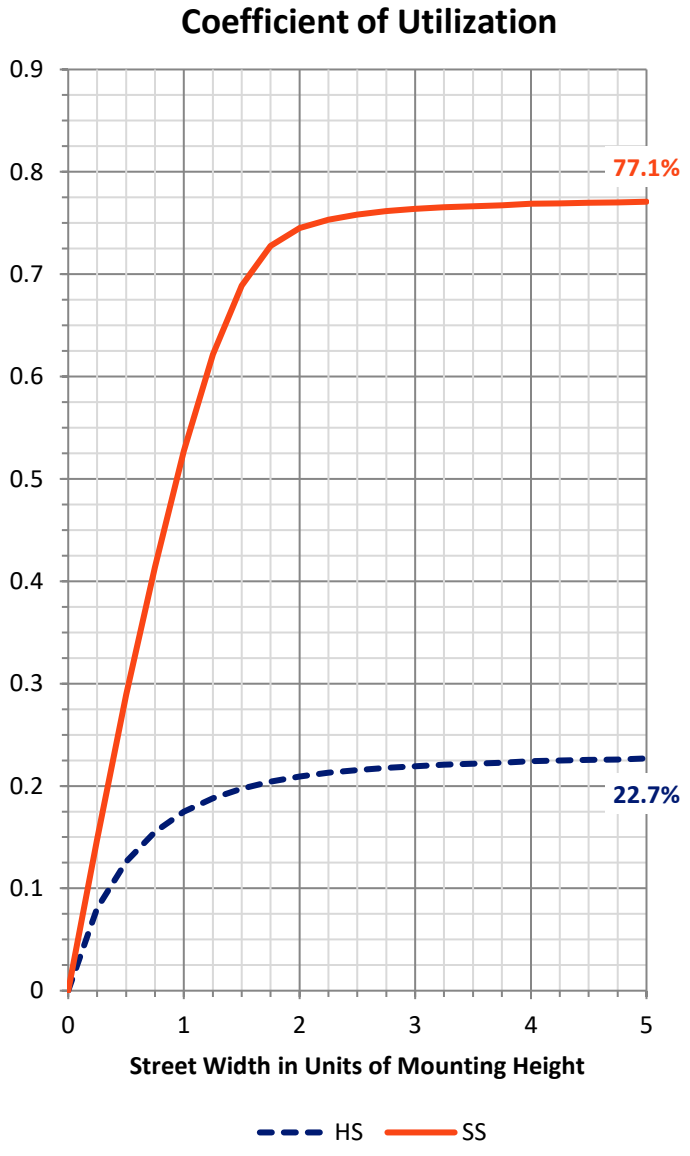
REPORT NUMBER: P1359131
CATALOG NUMBER: GSS-SB2A-740-U-T2

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 1963.1 | 0.0 | 1963.1 |
| | % Fixture | 22.9 | 0.0 | 22.9 |
| **Street Side** | Lumens | 6604.9 | 0.0 | 6604.9 |
| | % Fixture | 77.1 | 0.0 | 77.1 |
| **Total** | Lumens | 8568.0 | 0.0 | 8568.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 122.1 | 1.4 |
| 10°-20° | 367.6 | 4.3 |
| 20°-30° | 621.1 | 7.2 |
| 30°-40° | 958.2 | 11.2 |
| 40°-50° | 1463.4 | 17.1 |
| 50°-60° | 2023.4 | 23.6 |
| 60°-70° | 2044.8 | 23.9 |
| 70°-80° | 899.6 | 10.5 |
| 80°-90° | 67.8 | 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° | 8568.0 | 100.0 |
| 0°-180° | 8568.0 | 100.0 |



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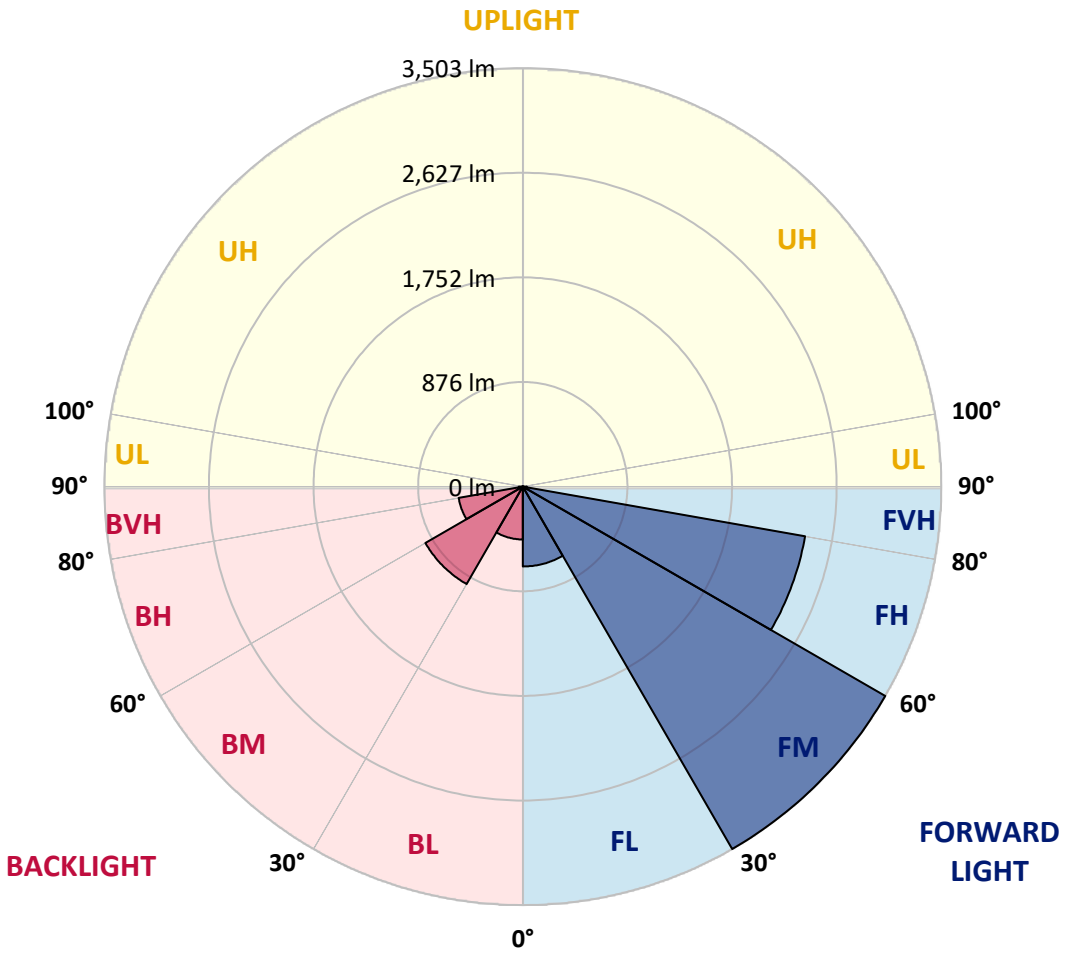
Scaled Data Report

REPORT NUMBER: P1359131
CATALOG NUMBER: GSS-SB2A-740-U-T2

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 668.5 | 7.8 | | | |
| FM | (30°-60°) | 3503.0 | 40.9 | | | |
| FH | (60°-80°) | 2399.1 | 28.0 | | | G2/5000 |
| FVH | (80°-90°) | 34.3 | 0.4 | | | G1/100 |
| BL | (0°-30°) | 442.4 | 5.2 | B1/500 | | |
| BM | (30°-60°) | 942.0 | 11.0 | B1/1000 | | |
| BH | (60°-80°) | 545.3 | 6.4 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 33.4 | 0.4 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B2-U0-G2**
Type II Medium



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 79° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1277.9 | 1277.9 | 1277.9 | 1277.9 | 1277.9 | 1277.9 | 1277.9 | 1277.9 | 1277.9 | *1277.9* | 1277.9 |
| 2.5° | 1337.2 | 1358.3 | 1358.3 | 1348.7 | 1344.9 | 1343.0 | 1329.6 | 1314.3 | 1308.6 | *1299.0* | 1293.2 |
| 5° | 1419.5 | 1419.5 | 1423.3 | 1413.8 | 1419.5 | 1411.9 | 1392.7 | 1373.6 | 1350.6 | *1333.4* | 1325.8 |
| 7.5° | 1427.2 | 1442.5 | 1452.0 | 1452.0 | 1463.5 | 1465.4 | 1455.9 | 1434.8 | 1406.1 | *1379.3* | 1365.9 |
| 10° | 1434.8 | 1448.2 | 1448.2 | 1463.5 | 1488.4 | 1507.5 | 1513.3 | 1505.6 | 1459.7 | *1440.6* | 1413.8 |
| 12.5° | 1417.6 | 1432.9 | 1438.6 | 1469.3 | 1503.7 | 1540.0 | 1566.8 | 1570.6 | 1541.9 | *1507.5* | 1467.3 |
| 15° | 1358.3 | 1371.7 | 1394.6 | 1440.6 | 1501.8 | 1557.3 | 1608.9 | 1637.6 | 1605.1 | *1580.2* | 1524.7 |
| 17.5° | 1277.9 | 1285.6 | 1323.9 | 1383.2 | 1467.3 | 1561.1 | 1651.0 | 1706.5 | 1698.8 | *1666.3* | 1601.3 |
| 20° | 1270.3 | 1277.9 | 1289.4 | 1333.4 | 1431.0 | 1547.7 | 1677.8 | 1784.9 | 1806.0 | *1756.2* | 1675.9 |
| 22.5° | 1335.3 | 1343.0 | 1343.0 | 1348.7 | 1409.9 | 1536.2 | 1704.6 | 1869.1 | 1916.9 | *1874.8* | 1771.5 |
| 25° | 1425.2 | 1440.6 | 1423.3 | 1409.9 | 1431.0 | 1543.9 | 1719.9 | 1964.7 | 2058.5 | *2006.8* | 1878.7 |
| 27.5° | 1553.4 | 1551.5 | 1536.2 | 1496.0 | 1490.3 | 1566.8 | 1762.0 | 2039.3 | 2194.3 | *2140.7* | 1989.6 |
| 30° | 1731.3 | 1740.9 | 1706.5 | 1622.3 | 1584.0 | 1618.5 | 1819.3 | 2100.6 | 2337.8 | *2293.8* | 2094.8 |
| 32.5° | 1932.2 | 1928.4 | 1886.3 | 1806.0 | 1712.2 | 1702.6 | 1872.9 | 2165.6 | 2502.3 | *2446.8* | 2226.8 |
| 35° | 2148.4 | 2144.6 | 2131.2 | 1993.4 | 1871.0 | 1819.3 | 1959.0 | 2240.2 | 2693.6 | *2647.7* | 2381.8 |
| 37.5° | 2343.5 | 2360.7 | 2400.9 | 2179.0 | 2048.9 | 1972.4 | 2070.0 | 2364.6 | 2938.5 | *2871.5* | 2569.3 |
| 40° | 2510.0 | 2540.6 | 2578.8 | 2378.0 | 2215.4 | 2150.3 | 2217.3 | 2567.4 | 3200.6 | *3160.4* | 2795.0 |
| 42.5° | 2663.0 | 2684.1 | 2680.2 | 2557.8 | 2418.1 | 2345.4 | 2402.8 | 2777.8 | 3539.2 | *3510.5* | 3072.4 |
| 45° | 2850.5 | 2873.5 | 2863.9 | 2747.2 | 2607.5 | 2542.5 | 2645.8 | 3024.6 | 3860.6 | *3864.4* | 3334.5 |
| 47.5° | 3034.2 | 3057.1 | 3051.4 | 2944.2 | 2810.3 | 2756.8 | 2898.3 | 3315.4 | 4170.5 | *4222.2* | 3619.6 |
| 50° | 3206.3 | 3227.4 | 3238.9 | 3171.9 | 3055.2 | 2997.8 | 3145.1 | 3588.9 | 4470.9 | *4587.6* | 3891.2 |
| 52.5° | 3254.2 | 3280.9 | 3359.4 | 3384.2 | 3332.6 | 3263.7 | 3370.9 | 3851.0 | 4729.1 | *4903.2* | 4153.3 |
| 55° | 3097.3 | 3143.2 | 3311.6 | 3437.8 | 3590.9 | 3598.5 | 3606.2 | 4105.5 | 4954.9 | *5188.3* | 4392.4 |
| 57.5° | 2823.7 | 2831.4 | 3028.4 | 3284.8 | 3648.3 | 3973.5 | 4011.7 | 4402.0 | 5174.9 | *5465.7* | 4629.7 |
| 60° | 2217.3 | 2177.1 | 2496.6 | 2930.8 | 3441.6 | 4122.7 | 4658.4 | 4861.2 | 5448.5 | *5800.5* | 4914.7 |
| 62.5° | 1188.0 | 1191.9 | 1455.9 | 1995.3 | 2850.5 | 3977.3 | 5213.2 | 5546.0 | 5848.3 | *6234.7* | 5337.5 |
| 65° | 746.1 | 774.8 | 924.0 | 1163.2 | 1725.6 | 3160.4 | 5247.6 | 6456.7 | 6481.5 | *6866.1* | 5867.4 |
| 67.5° | *545.2* | *552.9* | *679.1* | *853.2* | *989.1* | *1853.8* | *4224.1* | *6468.1* | *6938.8* | *7309.9* | *6093.2* |
| 70° | 405.6 | 409.4 | 499.3 | 642.8 | 721.2 | 868.5 | 2691.7 | 5597.7 | 6701.5 | *6885.2* | 5528.8 |
| 72.5° | 296.5 | 298.4 | 346.3 | 472.5 | 568.2 | 516.5 | 1264.5 | 4032.8 | 5819.6 | *6146.7* | 4974.0 |
| 75° | 208.5 | 212.4 | 246.8 | 327.1 | 382.6 | 359.7 | 482.1 | 2521.4 | 4178.2 | *4141.8* | 3474.2 |
| 77.5° | 156.9 | 158.8 | 181.7 | 231.5 | 260.2 | 235.3 | 271.7 | 1178.5 | 1492.2 | *1346.8* | 1096.2 |
| 80° | 114.8 | 120.5 | 132.0 | 145.4 | 174.1 | 151.1 | 153.0 | 331.0 | 359.7 | *315.7* | 283.1 |
| 82.5° | 61.2 | 68.9 | 88.0 | 88.0 | 101.4 | 89.9 | 80.3 | 147.3 | 155.0 | *145.4* | 126.3 |
| 85° | 19.1 | 19.1 | 21.0 | 26.8 | 40.2 | 40.2 | 40.2 | 49.7 | 51.7 | *51.7* | 44.0 |
| 87.5° | 3.8 | 3.8 | 3.8 | 3.8 | 5.7 | 7.7 | 11.5 | 15.3 | 17.2 | *19.1* | 19.1 |
| 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: P1359131
CATALOG NUMBER: GSS-SB2A-740-U-T2

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1277.9 | 1277.9 | 1277.9 | 1277.9 | 1277.9 | 1277.9 | 1277.9 | 1277.9 | 1277.9 | 1277.9 | 1277.9 |
| 2.5° | 1289.4 | 1276.0 | 1262.6 | 1239.7 | 1228.2 | 1211.0 | 1195.7 | 1188.0 | 1182.3 | 1180.4 | 1180.4 |
| 5° | 1314.3 | 1293.2 | 1251.2 | 1211.0 | 1174.6 | 1142.1 | 1117.2 | 1098.1 | 1086.6 | 1077.1 | 1077.1 |
| 7.5° | 1339.2 | 1310.5 | 1247.3 | 1176.5 | 1124.9 | 1084.7 | 1050.3 | 1038.8 | 1035.0 | 1025.4 | 1019.7 |
| 10° | 1381.2 | 1335.3 | 1241.6 | 1140.2 | 1067.5 | 1033.1 | 1017.8 | 1013.9 | 1015.8 | 1017.8 | 1017.8 |
| 12.5° | 1413.8 | 1364.0 | 1226.3 | 1094.3 | 1023.5 | 1004.4 | 1006.3 | 1015.8 | 1031.2 | 1029.2 | 1025.4 |
| 15° | 1459.7 | 1385.1 | 1195.7 | 1040.7 | 989.1 | 989.1 | 1008.2 | 1029.2 | 1044.5 | 1054.1 | 1048.4 |
| 17.5° | 1513.3 | 1409.9 | 1149.8 | 991.0 | 960.4 | 977.6 | 1017.8 | 1038.8 | 1065.6 | 1071.3 | 1067.5 |
| 20° | 1580.2 | 1431.0 | 1098.1 | 943.2 | 941.2 | 977.6 | 1012.0 | 1042.6 | 1063.7 | 1069.4 | 1073.2 |
| 22.5° | 1645.3 | 1450.1 | 1031.2 | 908.7 | 920.2 | 966.1 | 998.6 | 1031.2 | 1040.7 | 1046.5 | 1048.4 |
| 25° | 1712.2 | 1469.3 | 969.9 | 881.9 | 904.9 | 950.8 | 977.6 | 991.0 | 992.9 | 989.1 | 989.1 |
| 27.5° | 1784.9 | 1471.2 | 908.7 | 860.9 | 887.7 | 927.8 | 943.2 | 947.0 | 939.3 | 912.5 | 904.9 |
| 30° | 1861.4 | 1452.0 | 859.0 | 841.8 | 868.5 | 901.1 | 912.5 | 901.1 | 874.3 | 836.0 | 832.2 |
| 32.5° | 1924.6 | 1423.3 | 822.6 | 818.8 | 847.5 | 876.2 | 876.2 | 855.1 | 815.0 | 776.7 | 774.8 |
| 35° | 2020.2 | 1383.2 | 786.3 | 803.5 | 828.4 | 841.8 | 845.6 | 815.0 | 771.0 | 734.6 | 730.8 |
| 37.5° | 2114.0 | 1348.7 | 771.0 | 784.4 | 807.3 | 818.8 | 807.3 | 776.7 | 748.0 | 717.4 | 717.4 |
| 40° | 2259.4 | 1327.7 | 751.8 | 771.0 | 790.1 | 792.0 | 771.0 | 748.0 | 751.8 | 734.6 | 732.7 |
| 42.5° | 2418.1 | 1325.8 | 744.2 | 757.6 | 771.0 | 767.1 | 736.5 | 736.5 | 742.3 | 709.8 | 702.1 |
| 45° | 2599.9 | 1352.6 | 744.2 | 738.5 | 746.1 | 734.6 | 717.4 | 713.6 | 700.2 | 652.4 | 650.4 |
| 47.5° | 2789.3 | 1417.6 | 748.0 | 711.7 | 709.8 | 705.9 | 698.3 | 684.9 | 644.7 | 604.5 | 598.8 |
| 50° | 2938.5 | 1507.5 | 759.5 | 677.2 | 669.6 | 683.0 | 669.6 | 646.6 | 600.7 | 562.4 | 556.7 |
| 52.5° | 3116.4 | 1597.4 | 751.8 | 635.1 | 625.6 | 660.0 | 646.6 | 614.1 | 579.7 | 556.7 | 551.0 |
| 55° | 3303.9 | 1691.2 | 721.2 | 577.8 | 585.4 | 631.3 | 627.5 | 591.1 | 549.1 | 518.4 | 514.6 |
| 57.5° | 3491.4 | 1809.8 | 669.6 | 528.0 | 556.7 | 614.1 | 598.8 | 554.8 | 526.1 | 505.1 | 501.2 |
| 60° | 3778.3 | 1980.0 | 595.0 | 476.4 | 528.0 | 577.8 | 552.9 | 539.5 | 508.9 | 491.7 | 482.1 |
| 62.5° | 4149.5 | 2263.2 | 497.4 | 428.5 | 487.8 | 533.8 | 531.8 | 516.5 | 489.8 | 470.6 | 464.9 |
| 65° | 4677.5 | 2532.9 | 407.5 | 382.6 | 436.2 | 480.2 | 503.1 | 489.8 | 463.0 | 441.9 | 440.0 |
| 67.5° | *4778.9* | *2263.2* | *338.6* | *334.8* | *378.8* | *428.5* | *472.5* | *463.0* | *420.9* | *394.1* | *390.3* |
| 70° | 4159.0 | 1616.6 | 285.0 | 288.9 | 331.0 | 375.0 | 422.8 | 399.8 | 365.4 | 350.1 | 348.2 |
| 72.5° | 3692.3 | 1388.9 | 239.1 | 246.8 | 277.4 | 317.6 | 346.3 | 353.9 | 329.1 | 315.7 | 309.9 |
| 75° | 2661.1 | 1040.7 | 193.2 | 202.8 | 223.8 | 246.8 | 300.4 | 313.7 | 290.8 | 277.4 | 267.8 |
| 77.5° | 987.2 | 434.3 | 143.5 | 153.0 | 168.4 | 200.9 | 243.0 | 271.7 | 254.4 | 264.0 | 237.2 |
| 80° | 237.2 | 153.0 | 105.2 | 103.3 | 118.6 | 151.1 | 193.2 | 214.3 | 197.0 | 187.5 | 162.6 |
| 82.5° | 103.3 | 74.6 | 68.9 | 68.9 | 72.7 | 99.5 | 128.2 | 151.1 | 147.3 | 122.4 | 116.7 |
| 85° | 38.3 | 32.5 | 32.5 | 34.4 | 34.4 | 45.9 | 68.9 | 80.3 | 72.7 | 63.1 | 61.2 |
| 87.5° | 17.2 | 17.2 | 13.4 | 11.5 | 9.6 | 9.6 | 11.5 | 7.7 | 5.7 | 3.8 | 3.8 |
| 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

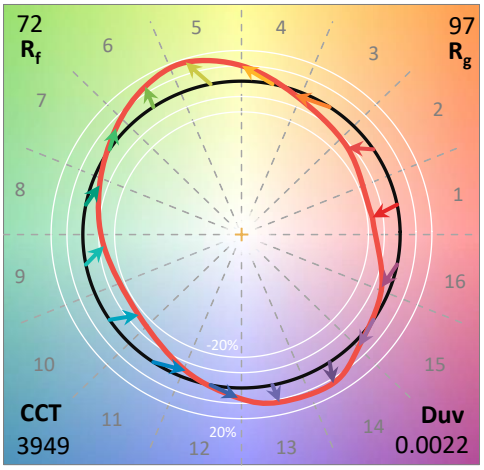
## Test Information

| | |
|---|---|
| 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

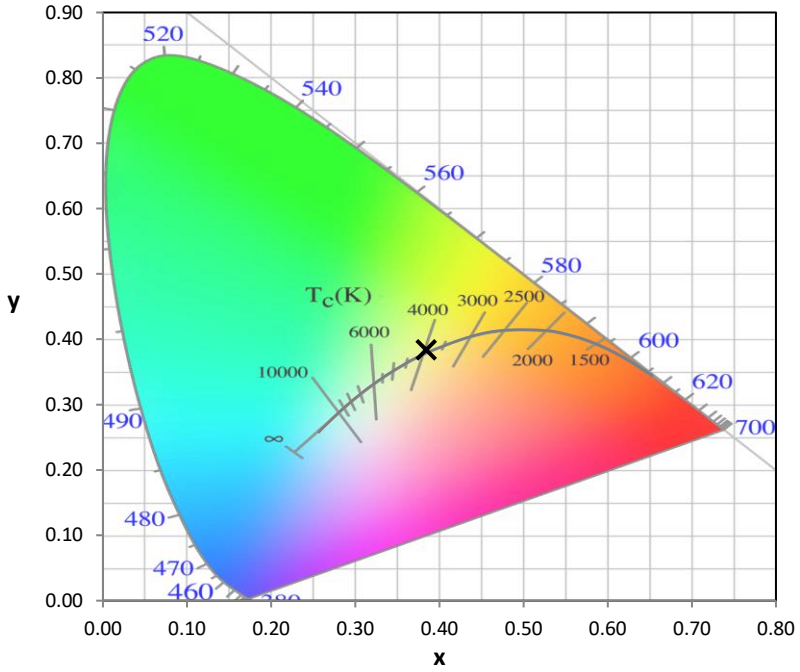
| | |
|---|---|
| Stabilization Time: | 34M |
| Operation Time: | 1H 34M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-1

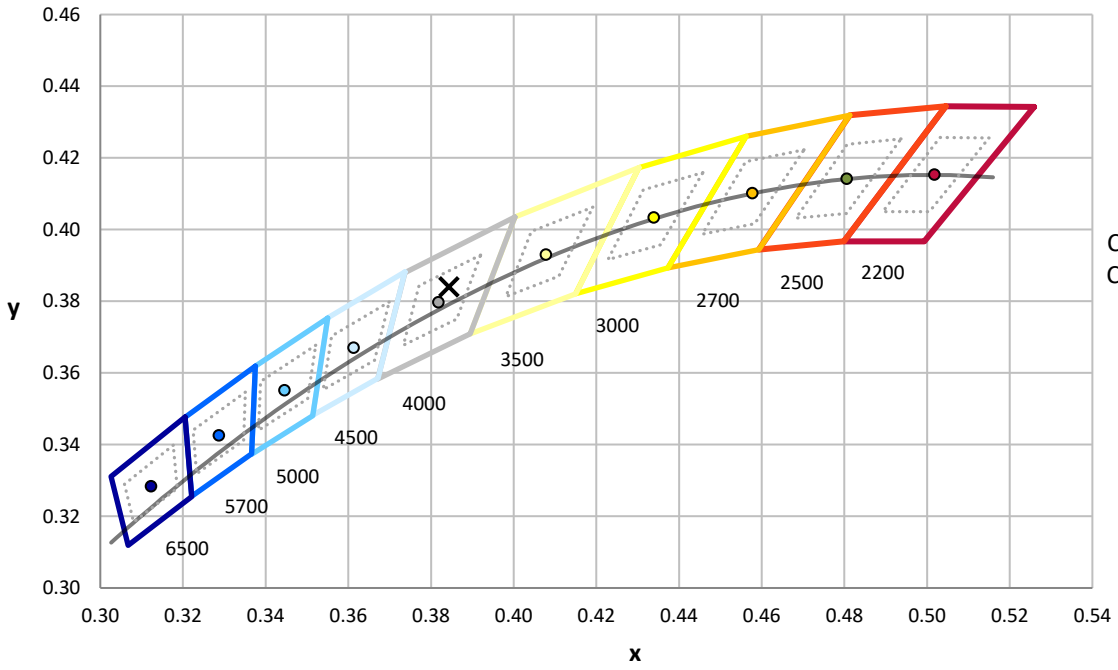
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

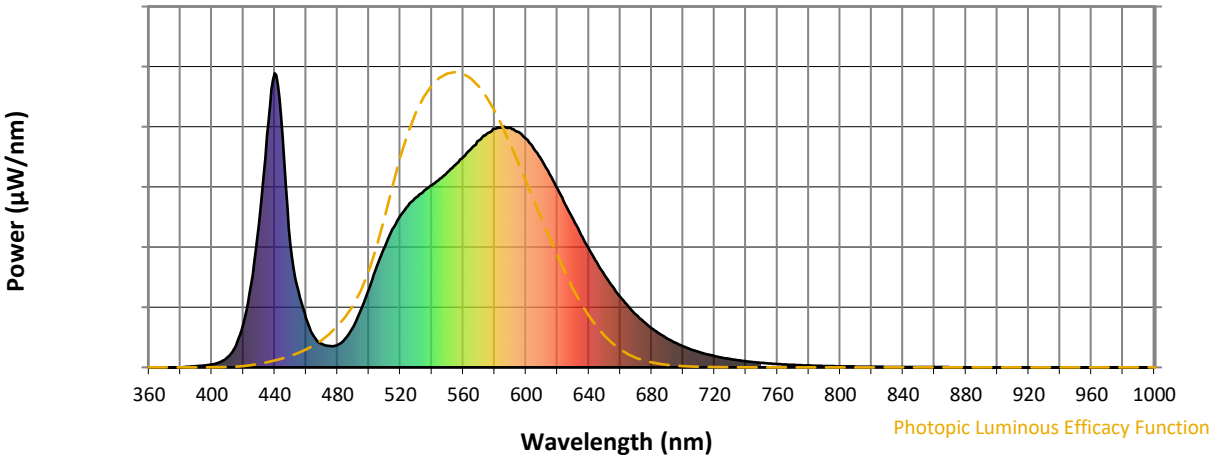



CCT = 3949K
CIE x = 0.3844
CIE y = 0.3840
Duv = 0.0022

Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-1

## Photopic Flux vs. Wavelength

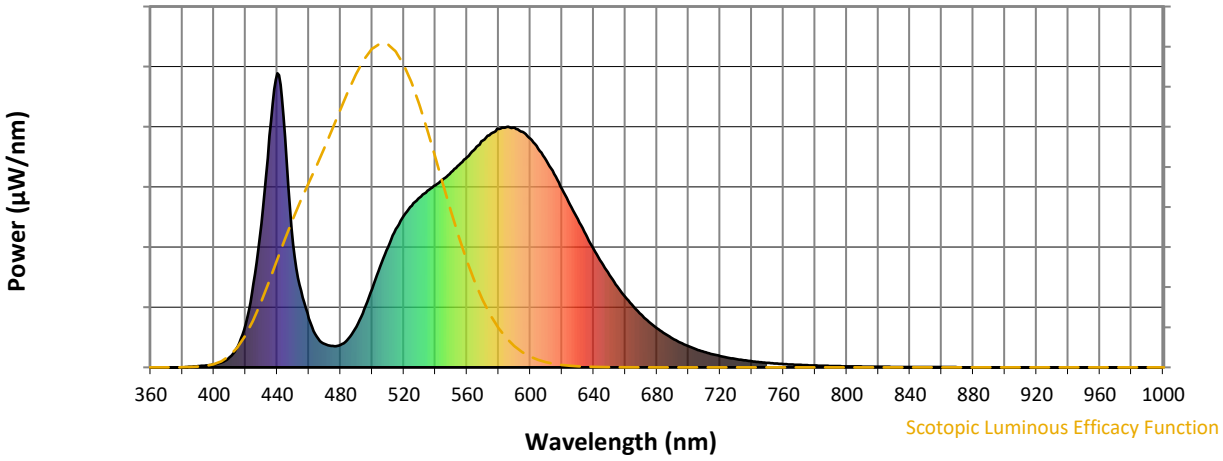



## Photopic Lumens: NR

| 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

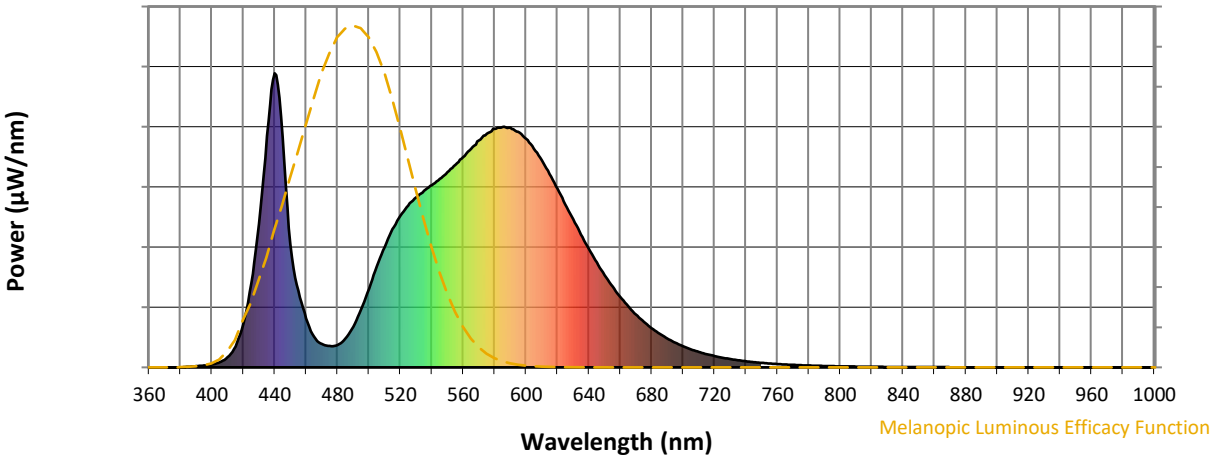



**Scotopic Lumens: NR** **S/P: 1.47**

| 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 | | | |

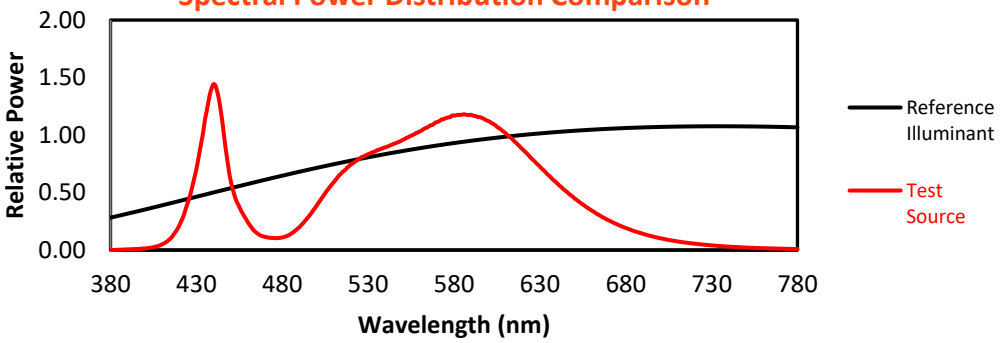
REPORT NUMBER: SP1-2407-184-1

# TM-30-18

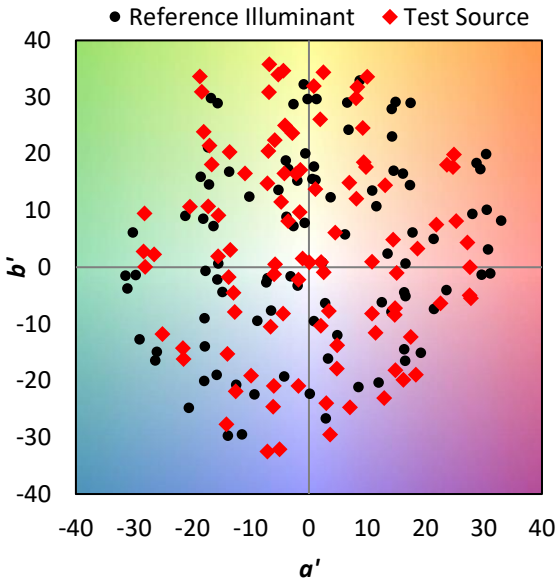
## Summary

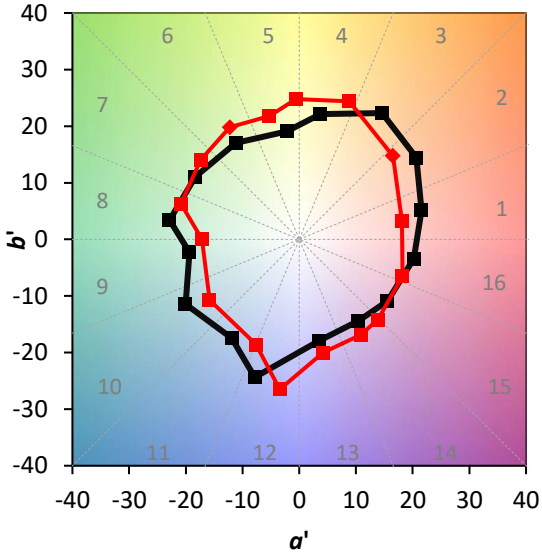
$R_f$ = 71.8
$R_g$ = 96.5
CIE $R_a$ = 70.7
$R_9$ = -36.7

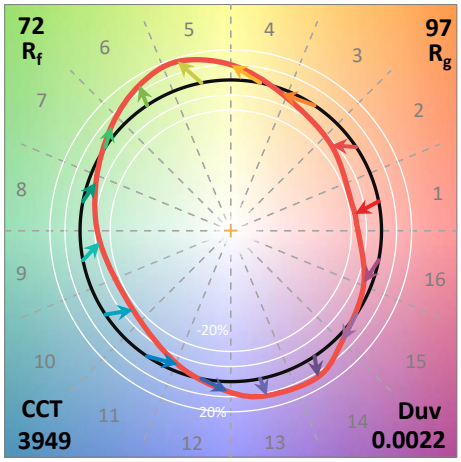
## Spectral Power Distribution Comparison

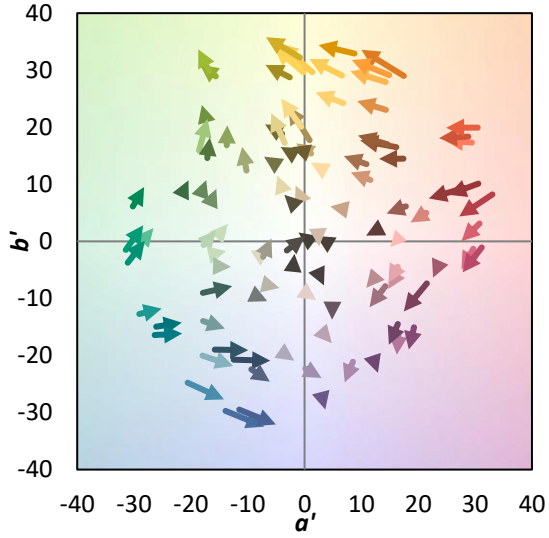



## Color Vector Graphics



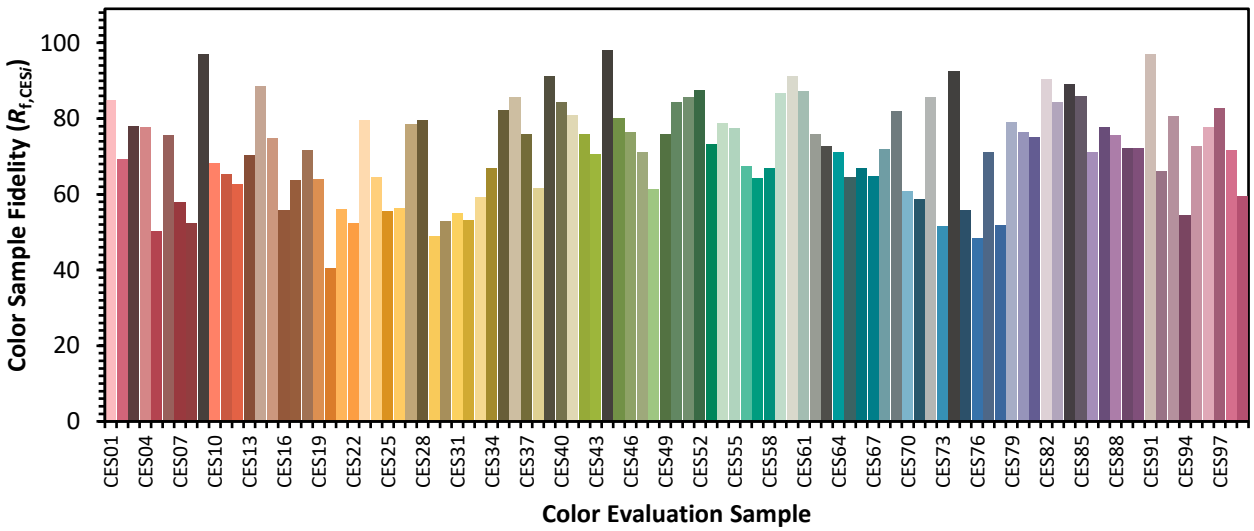



REPORT NUMBER: SP1-2407-184-1

# TM-30-18

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

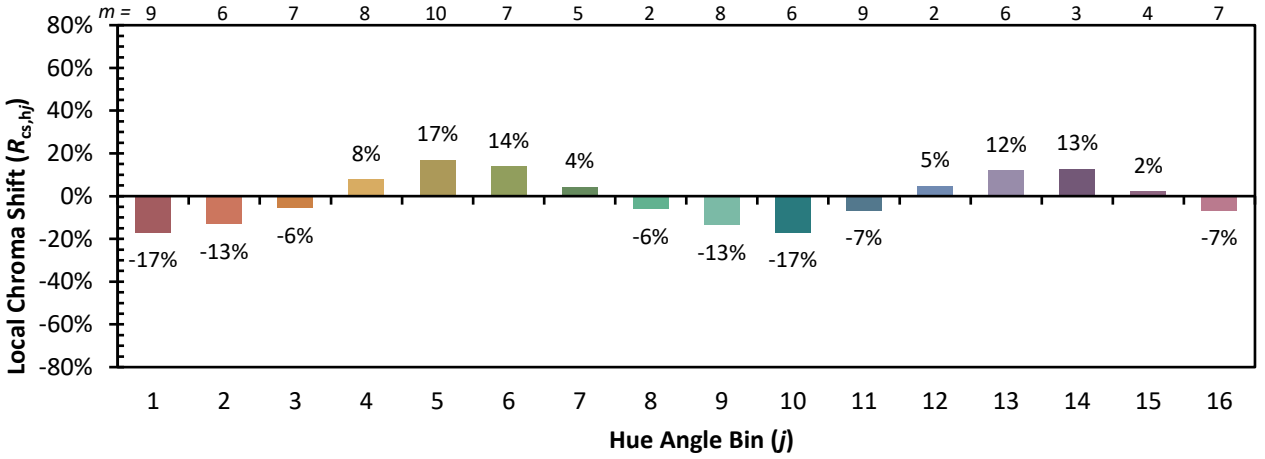
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 56 | CES51 = 86 | CES76 = 48 |
| CES02 = 61 | CES27 = 79 | CES52 = 88 | CES77 = 71 |
| CES03 = 30 | CES28 = 80 | CES53 = 73 | CES78 = 52 |
| CES04 = 70 | CES29 = 49 | CES54 = 79 | CES79 = 79 |
| CES05 = 47 | CES30 = 53 | CES55 = 77 | CES80 = 77 |
| CES06 = 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 | |

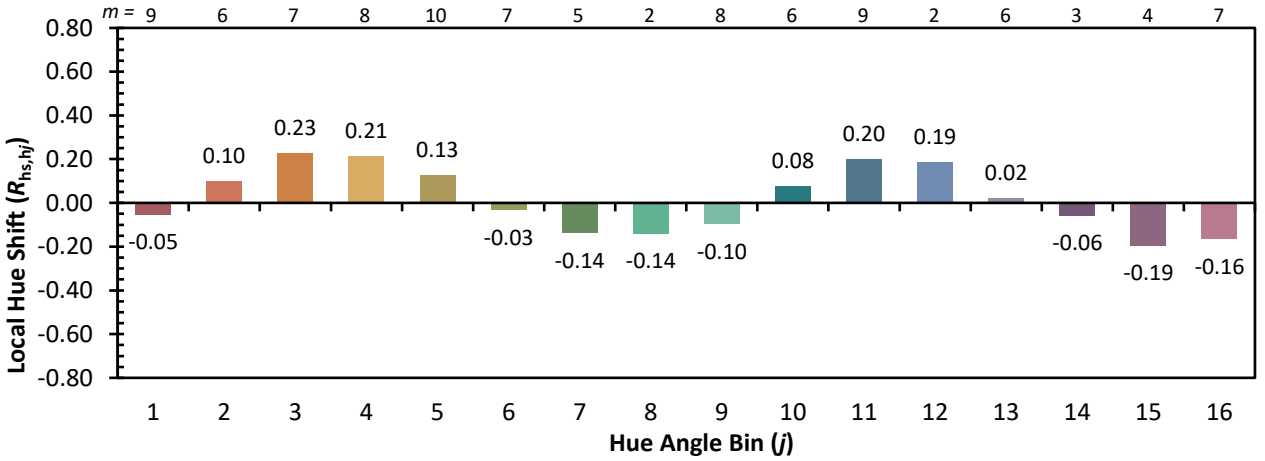


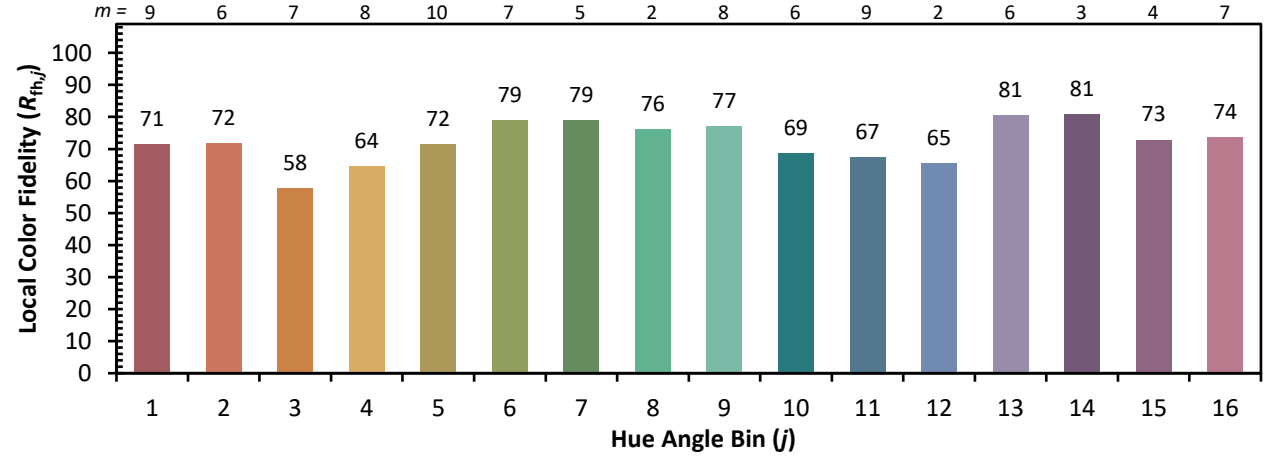
REPORT NUMBER: SP1-2407-184-1

**TM-30-18**

## Color Rendition by Hue-Angle Bin



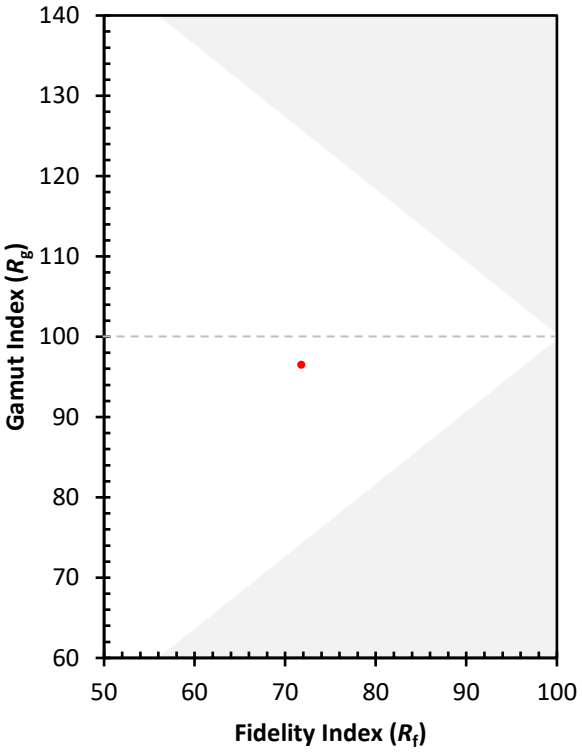



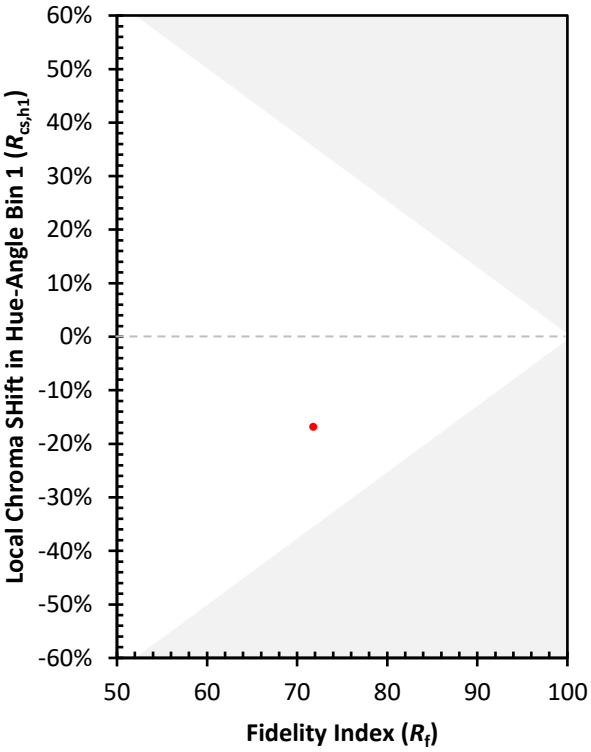



REPORT NUMBER: SP1-2407-184-1

# TM-30-18

## Measure Comparisons




(END OF REPORT)