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: P1359183

Luminaire Tested: **GSS-SB3A-727-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: | P1359183 |
| Test Lab: | INNOVATION CENTER(G3) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB3A-727-U-T2 |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 3SQUARE 85W 70CRI 2700K FIXTURE w/ TYPE II DISTRIBUTION OPTIC |
| Light Source: | (78) 2700K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 11319.5 lumens |
| Efficiency: | N/A |
| Efficacy: | 133.2 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 0.5' x H: 0') |
| IES Classification: | Type II - Medium |
| BUG Rating: | B2 - U0 - G2 |

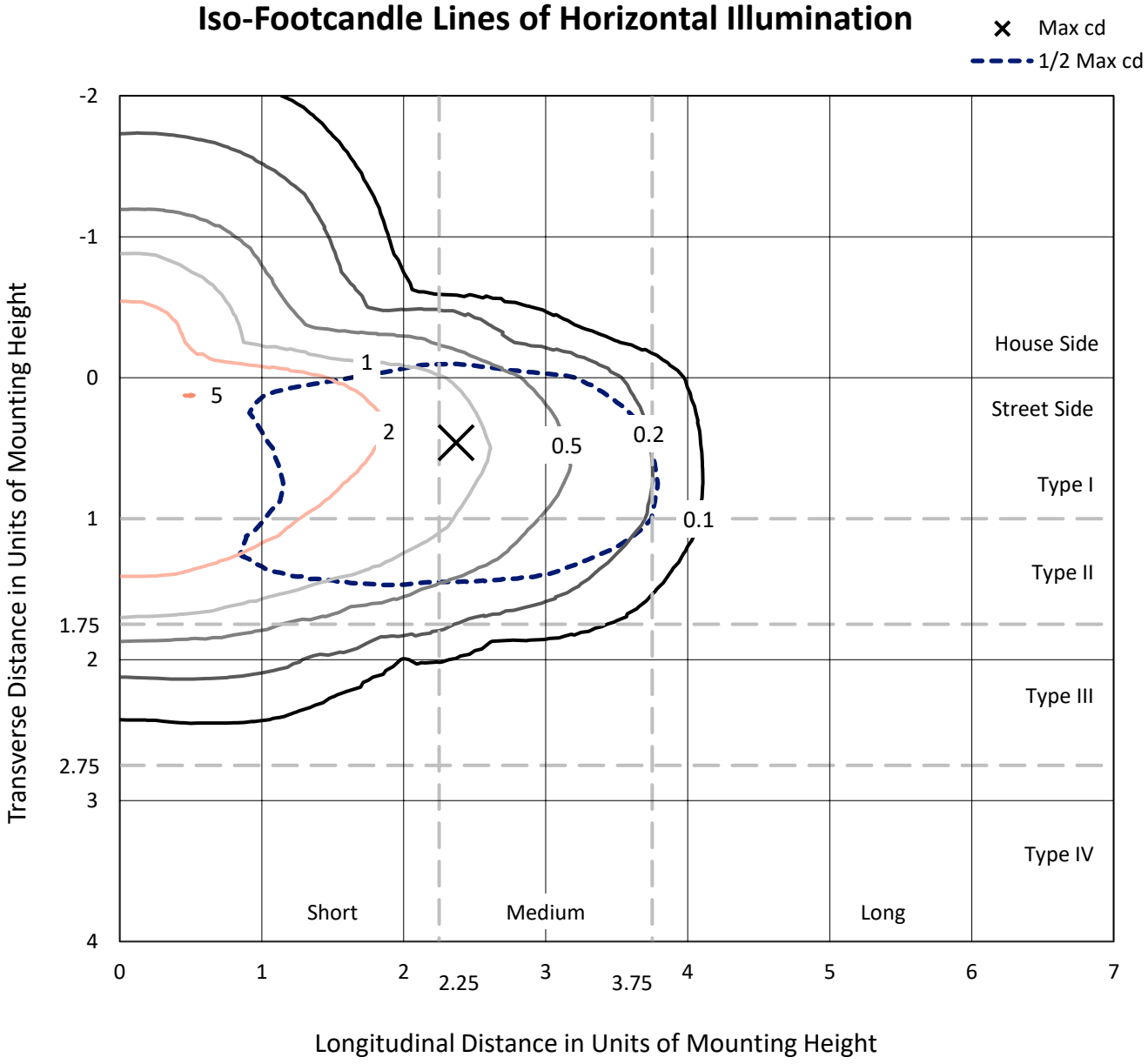
| | |
|---|---|
| Input Watts (W): | 85 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 11.0% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1359183
CATALOG NUMBER: GSS-SB3A-727-U-T2

## Iso-Footcandle Lines of Horizontal Illumination



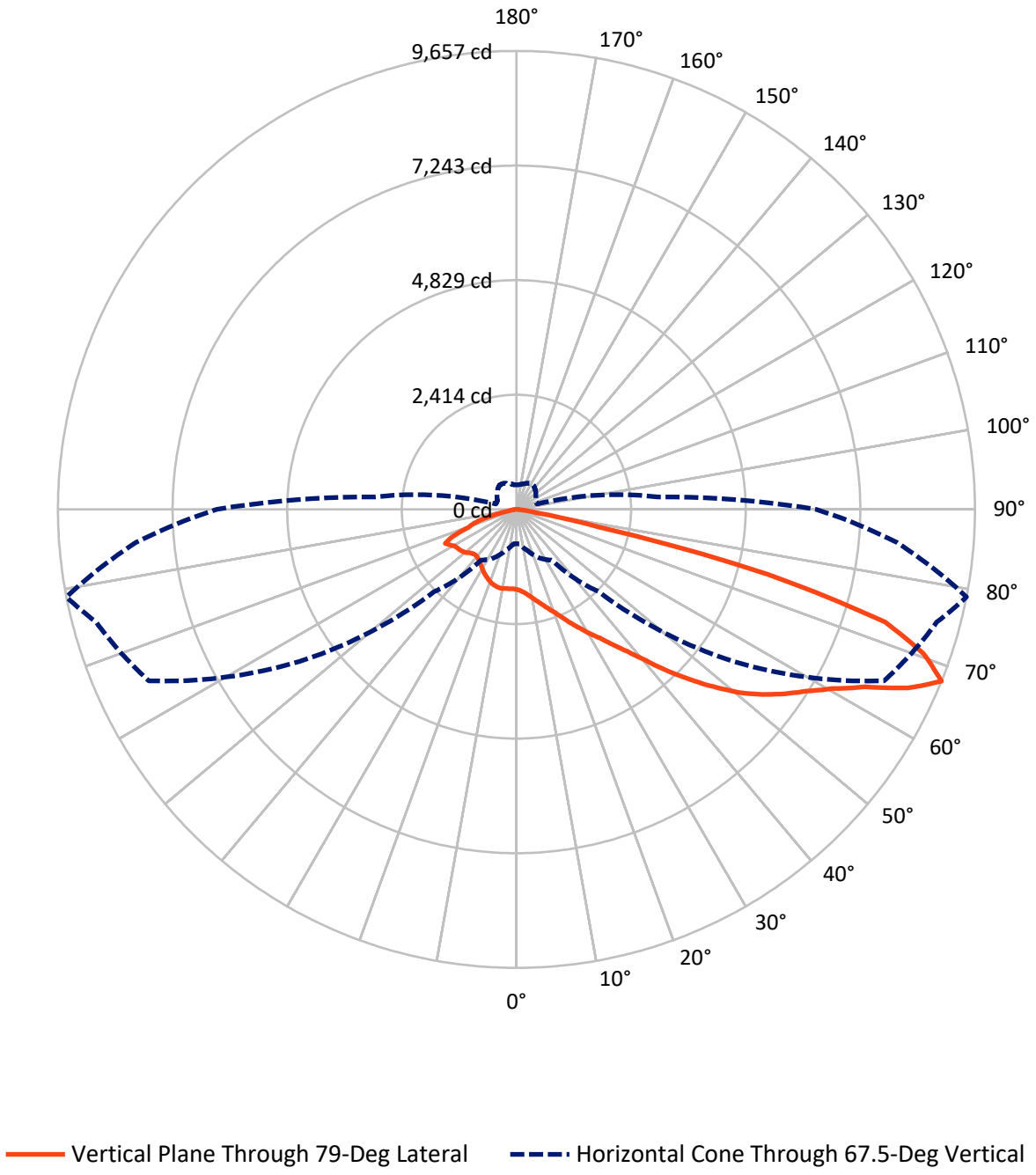

Based on 20 foot mounting height. Maximum calculated value = 5 fc
Type II - Medium - N/A

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REPORT NUMBER: P1359183
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## Luminous Intensity Polar Plot



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Scaled Data Report

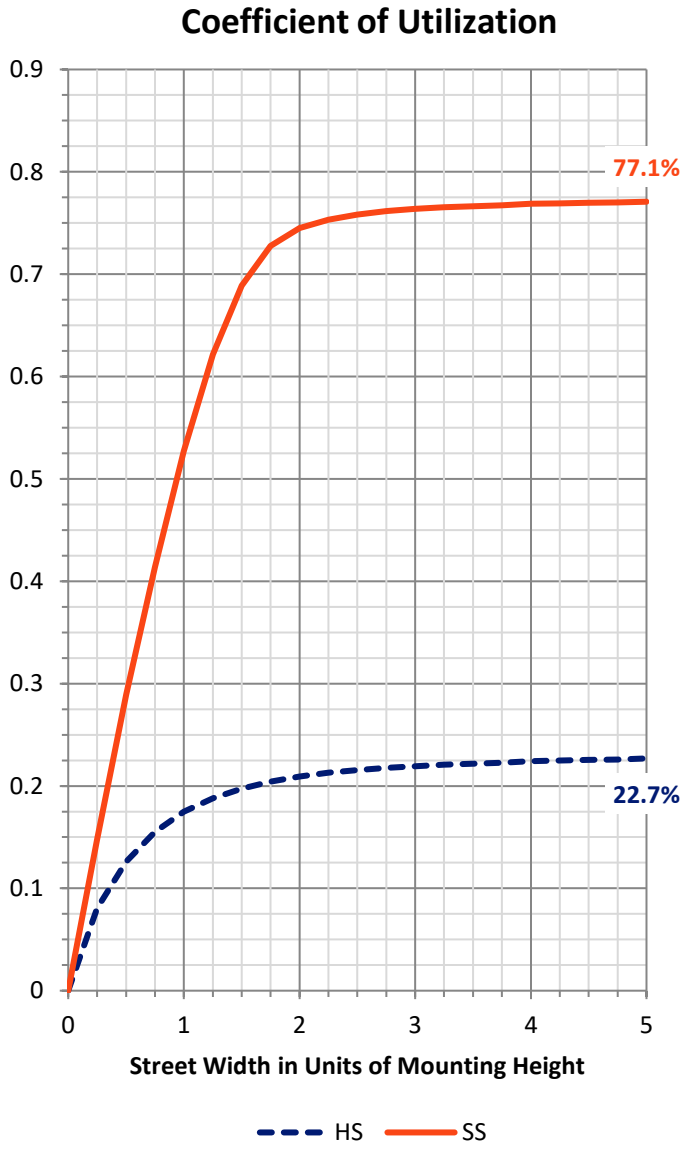
REPORT NUMBER: P1359183
CATALOG NUMBER: GSS-SB3A-727-U-T2

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 2593.6 | 0.0 | 2593.6 |
| | % Fixture | 22.9 | 0.0 | 22.9 |
| **Street Side** | Lumens | 8725.9 | 0.0 | 8725.9 |
| | % Fixture | 77.1 | 0.0 | 77.1 |
| **Total** | Lumens | 11319.5 | 0.0 | 11319.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 161.3 | 1.4 |
| 10°-20° | 485.7 | 4.3 |
| 20°-30° | 820.6 | 7.2 |
| 30°-40° | 1266.0 | 11.2 |
| 40°-50° | 1933.3 | 17.1 |
| 50°-60° | 2673.1 | 23.6 |
| 60°-70° | 2701.4 | 23.9 |
| 70°-80° | 1188.5 | 10.5 |
| 80°-90° | 89.5 | 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° | 11319.5 | 100.0 |
| 0°-180° | 11319.5 | 100.0 |



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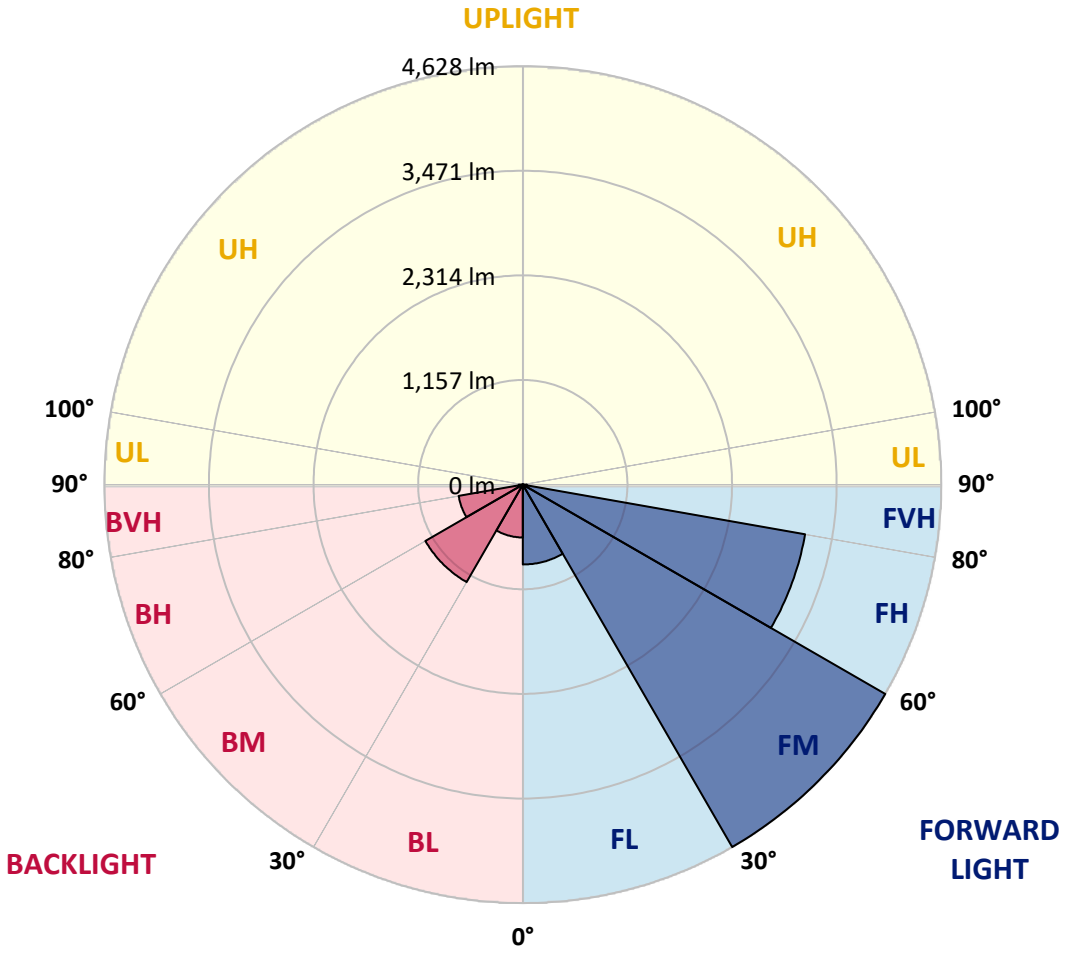
Scaled Data Report

REPORT NUMBER: P1359183
CATALOG NUMBER: GSS-SB3A-727-U-T2

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 883.1 | 7.8 | | | |
| FM | (30°-60°) | 4627.9 | 40.9 | | | |
| FH | (60°-80°) | 3169.5 | 28.0 | | | G2/5000 |
| FVH | (80°-90°) | 45.4 | 0.4 | | | G1/100 |
| BL | (0°-30°) | 584.5 | 5.2 | B2/1000 | | |
| BM | (30°-60°) | 1244.5 | 11.0 | B2/2500 | | |
| BH | (60°-80°) | 720.4 | 6.4 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 44.2 | 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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REPORT NUMBER: P1359183
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 79° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1688.3 | 1688.3 | 1688.3 | 1688.3 | 1688.3 | 1688.3 | 1688.3 | 1688.3 | 1688.3 | *1688.3* | 1688.3 |
| 2.5° | 1766.7 | 1794.5 | 1794.5 | 1781.8 | 1776.8 | 1774.3 | 1756.6 | 1736.3 | 1728.8 | *1716.1* | 1708.5 |
| 5° | 1875.4 | 1875.4 | 1880.4 | 1867.8 | 1875.4 | 1865.2 | 1840.0 | 1814.7 | 1784.4 | *1761.6* | 1751.5 |
| 7.5° | 1885.5 | 1905.7 | 1918.3 | 1918.3 | 1933.5 | 1936.0 | 1923.4 | 1895.6 | 1857.7 | *1822.3* | 1804.6 |
| 10° | 1895.6 | 1913.3 | 1913.3 | 1933.5 | 1966.3 | 1991.6 | 1999.2 | 1989.1 | 1928.4 | *1903.2* | 1867.8 |
| 12.5° | 1872.8 | 1893.0 | 1900.6 | 1941.1 | 1986.6 | 2034.6 | 2070.0 | 2075.0 | 2037.1 | *1991.6* | 1938.5 |
| 15° | 1794.5 | 1812.2 | 1842.5 | 1903.2 | 1984.0 | 2057.3 | 2125.6 | 2163.5 | 2120.5 | *2087.7* | 2014.4 |
| 17.5° | 1688.3 | 1698.4 | 1749.0 | 1827.3 | 1938.5 | 2062.4 | 2181.2 | 2254.5 | 2244.4 | *2201.4* | 2115.5 |
| 20° | 1678.2 | 1688.3 | 1703.5 | 1761.6 | 1890.5 | 2044.7 | 2216.6 | 2358.1 | 2385.9 | *2320.2* | 2214.0 |
| 22.5° | 1764.1 | 1774.3 | 1774.3 | 1781.8 | 1862.7 | 2029.5 | 2251.9 | 2469.3 | 2532.5 | *2476.9* | 2340.4 |
| 25° | 1882.9 | 1903.2 | 1880.4 | 1862.7 | 1890.5 | 2039.6 | 2272.2 | 2595.7 | 2719.5 | *2651.3* | 2481.9 |
| 27.5° | 2052.3 | 2049.7 | 2029.5 | 1976.5 | 1968.9 | 2070.0 | 2327.8 | 2694.2 | 2899.0 | *2828.2* | 2628.5 |
| 30° | 2287.3 | 2300.0 | 2254.5 | 2143.3 | 2092.7 | 2138.2 | 2403.6 | 2775.1 | 3088.5 | *3030.4* | 2767.5 |
| 32.5° | 2552.7 | 2547.7 | 2492.1 | 2385.9 | 2262.1 | 2249.4 | 2474.4 | 2861.1 | 3305.9 | *3232.6* | 2941.9 |
| 35° | 2838.3 | 2833.3 | 2815.6 | 2633.6 | 2471.8 | 2403.6 | 2588.1 | 2959.6 | 3558.6 | *3498.0* | 3146.7 |
| 37.5° | 3096.1 | 3118.9 | 3171.9 | 2878.7 | 2706.9 | 2605.8 | 2734.7 | 3123.9 | 3882.1 | *3793.7* | 3394.3 |
| 40° | 3316.0 | 3356.4 | 3407.0 | 3141.6 | 2926.8 | 2840.8 | 2929.3 | 3391.8 | 4228.4 | *4175.3* | 3692.6 |
| 42.5° | 3518.2 | 3546.0 | 3540.9 | 3379.2 | 3194.7 | 3098.6 | 3174.5 | 3669.8 | 4675.8 | *4637.8* | 4059.1 |
| 45° | 3765.9 | 3796.2 | 3783.6 | 3629.4 | 3444.9 | 3359.0 | 3495.4 | 3995.9 | 5100.4 | *5105.4* | 4405.3 |
| 47.5° | 4008.5 | 4038.8 | 4031.3 | 3889.7 | 3712.8 | 3642.0 | 3829.1 | 4380.0 | 5509.8 | *5578.0* | 4781.9 |
| 50° | 4236.0 | 4263.8 | 4278.9 | 4190.5 | 4036.3 | 3960.5 | 4155.1 | 4741.5 | 5906.6 | *6060.8* | 5140.8 |
| 52.5° | 4299.2 | 4334.6 | 4438.2 | 4471.0 | 4402.8 | 4311.8 | 4453.3 | 5087.7 | 6247.8 | *6477.8* | 5487.1 |
| 55° | 4091.9 | 4152.6 | 4375.0 | 4541.8 | 4744.0 | 4754.1 | 4764.2 | 5423.9 | 6546.1 | *6854.4* | 5803.0 |
| 57.5° | 3730.5 | 3740.6 | 4000.9 | 4339.6 | 4819.8 | 5249.5 | 5300.0 | 5815.6 | 6836.7 | *7220.9* | 6116.4 |
| 60° | 2929.3 | 2876.2 | 3298.3 | 3872.0 | 4546.9 | 5446.6 | 6154.3 | 6422.2 | 7198.1 | *7663.2* | 6493.0 |
| 62.5° | 1569.5 | 1574.6 | 1923.4 | 2636.1 | 3765.9 | 5254.5 | 6887.3 | 7327.0 | 7726.4 | *8236.9* | 7051.5 |
| 65° | 985.7 | 1023.6 | 1220.8 | 1536.7 | 2279.7 | 4175.3 | 6932.8 | 8530.1 | 8562.9 | *9071.0* | 7751.6 |
| 67.5° | *720.3* | *730.4* | *897.2* | *1127.2* | *1306.7* | *2449.1* | *5580.6* | *8545.3* | *9167.0* | *9657.3* | *8049.9* |
| 70° | 535.8 | 540.9 | 659.7 | 849.2 | 952.8 | 1147.5 | 3556.1 | 7395.3 | 8853.6 | *9096.2* | 7304.3 |
| 72.5° | 391.8 | 394.3 | 457.5 | 624.3 | 750.6 | 682.4 | 1670.6 | 5327.8 | 7688.5 | *8120.6* | 6571.3 |
| 75° | 275.5 | 280.5 | 326.0 | 432.2 | 505.5 | 475.2 | 636.9 | 3331.2 | 5519.9 | *5471.9* | 4589.8 |
| 77.5° | 207.2 | 209.8 | 240.1 | 305.8 | 343.7 | 310.9 | 358.9 | 1556.9 | 1971.4 | *1779.3* | 1448.2 |
| 80° | 151.6 | 159.2 | 174.4 | 192.1 | 230.0 | 199.7 | 202.2 | 437.2 | 475.2 | *417.0* | 374.1 |
| 82.5° | 80.9 | 91.0 | 116.3 | 116.3 | 134.0 | 118.8 | 106.2 | 194.6 | 204.7 | *192.1* | 166.8 |
| 85° | 25.3 | 25.3 | 27.8 | 35.4 | 53.1 | 53.1 | 53.1 | 65.7 | 68.2 | *68.2* | 58.1 |
| 87.5° | 5.1 | 5.1 | 5.1 | 5.1 | 7.6 | 10.1 | 15.2 | 20.2 | 22.7 | *25.3* | 25.3 |
| 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: P1359183
CATALOG NUMBER: GSS-SB3A-727-U-T2

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1688.3 | 1688.3 | 1688.3 | 1688.3 | 1688.3 | 1688.3 | 1688.3 | 1688.3 | 1688.3 | 1688.3 | 1688.3 |
| 2.5° | 1703.5 | 1685.8 | 1668.1 | 1637.8 | 1622.6 | 1599.9 | 1579.6 | 1569.5 | 1562.0 | 1559.4 | 1559.4 |
| 5° | 1736.3 | 1708.5 | 1652.9 | 1599.9 | 1551.8 | 1508.9 | 1476.0 | 1450.7 | 1435.6 | 1422.9 | 1422.9 |
| 7.5° | 1769.2 | 1731.3 | 1647.9 | 1554.4 | 1486.1 | 1433.1 | 1387.6 | 1372.4 | 1367.3 | 1354.7 | 1347.1 |
| 10° | 1824.8 | 1764.1 | 1640.3 | 1506.4 | 1410.3 | 1364.8 | 1344.6 | 1339.5 | 1342.1 | 1344.6 | 1344.6 |
| 12.5° | 1867.8 | 1802.1 | 1620.1 | 1445.7 | 1352.2 | 1326.9 | 1329.4 | 1342.1 | 1362.3 | 1359.8 | 1354.7 |
| 15° | 1928.4 | 1829.9 | 1579.6 | 1374.9 | 1306.7 | 1306.7 | 1332.0 | 1359.8 | 1380.0 | 1392.6 | 1385.0 |
| 17.5° | 1999.2 | 1862.7 | 1519.0 | 1309.2 | 1268.8 | 1291.5 | 1344.6 | 1372.4 | 1407.8 | 1415.4 | 1410.3 |
| 20° | 2087.7 | 1890.5 | 1450.7 | 1246.0 | 1243.5 | 1291.5 | 1337.0 | 1377.5 | 1405.3 | 1412.8 | 1417.9 |
| 22.5° | 2173.6 | 1915.8 | 1362.3 | 1200.5 | 1215.7 | 1276.4 | 1319.3 | 1362.3 | 1374.9 | 1382.5 | 1385.0 |
| 25° | 2262.1 | 1941.1 | 1281.4 | 1165.1 | 1195.5 | 1256.1 | 1291.5 | 1309.2 | 1311.7 | 1306.7 | 1306.7 |
| 27.5° | 2358.1 | 1943.6 | 1200.5 | 1137.3 | 1172.7 | 1225.8 | 1246.0 | 1251.1 | 1241.0 | 1205.6 | 1195.5 |
| 30° | 2459.2 | 1918.3 | 1134.8 | 1112.1 | 1147.5 | 1190.4 | 1205.6 | 1190.4 | 1155.0 | 1104.5 | 1099.4 |
| 32.5° | 2542.6 | 1880.4 | 1086.8 | 1081.7 | 1119.7 | 1157.6 | 1157.6 | 1129.8 | 1076.7 | 1026.1 | 1023.6 |
| 35° | 2669.0 | 1827.3 | 1038.8 | 1061.5 | 1094.4 | 1112.1 | 1117.1 | 1076.7 | 1018.6 | 970.5 | 965.5 |
| 37.5° | 2792.8 | 1781.8 | 1018.6 | 1036.2 | 1066.6 | 1081.7 | 1066.6 | 1026.1 | 988.2 | 947.8 | 947.8 |
| 40° | 2984.9 | 1754.0 | 993.3 | 1018.6 | 1043.8 | 1046.4 | 1018.6 | 988.2 | 993.3 | 970.5 | 968.0 |
| 42.5° | 3194.7 | 1751.5 | 983.2 | 1000.9 | 1018.6 | 1013.5 | 973.1 | 973.1 | 980.6 | 937.7 | 927.6 |
| 45° | 3434.8 | 1786.9 | 983.2 | 975.6 | 985.7 | 970.5 | 947.8 | 942.7 | 925.0 | 861.9 | 859.3 |
| 47.5° | 3685.0 | 1872.8 | 988.2 | 940.2 | 937.7 | 932.6 | 922.5 | 904.8 | 851.7 | 798.7 | 791.1 |
| 50° | 3882.1 | 1991.6 | 1003.4 | 894.7 | 884.6 | 902.3 | 884.6 | 854.3 | 793.6 | 743.1 | 735.5 |
| 52.5° | 4117.2 | 2110.4 | 993.3 | 839.1 | 826.5 | 872.0 | 854.3 | 811.3 | 765.8 | 735.5 | 727.9 |
| 55° | 4364.9 | 2234.3 | 952.8 | 763.3 | 773.4 | 834.1 | 829.0 | 781.0 | 725.4 | 684.9 | 679.9 |
| 57.5° | 4612.6 | 2391.0 | 884.6 | 697.6 | 735.5 | 811.3 | 791.1 | 733.0 | 695.0 | 667.2 | 662.2 |
| 60° | 4991.7 | 2615.9 | 786.0 | 629.3 | 697.6 | 763.3 | 730.4 | 712.7 | 672.3 | 649.6 | 636.9 |
| 62.5° | 5482.0 | 2990.0 | 657.1 | 566.1 | 644.5 | 705.2 | 702.6 | 682.4 | 647.0 | 621.7 | 614.2 |
| 65° | 6179.6 | 3346.3 | 538.3 | 505.5 | 576.3 | 634.4 | 664.7 | 647.0 | 611.6 | 583.8 | 581.3 |
| 67.5° | *6313.5* | *2990.0* | *447.4* | *442.3* | *500.4* | *566.1* | *624.3* | *611.6* | *556.0* | *520.7* | *515.6* |
| 70° | 5494.6 | 2135.7 | 376.6 | 381.6 | 437.2 | 495.4 | 558.6 | 528.2 | 482.7 | 462.5 | 460.0 |
| 72.5° | 4877.9 | 1834.9 | 315.9 | 326.0 | 366.5 | 419.6 | 457.5 | 467.6 | 434.7 | 417.0 | 409.4 |
| 75° | 3515.7 | 1374.9 | 255.3 | 267.9 | 295.7 | 326.0 | 396.8 | 414.5 | 384.2 | 366.5 | 353.8 |
| 77.5° | 1304.2 | 573.7 | 189.6 | 202.2 | 222.4 | 265.4 | 321.0 | 358.9 | 336.1 | 348.8 | 313.4 |
| 80° | 313.4 | 202.2 | 139.0 | 136.5 | 156.7 | 199.7 | 255.3 | 283.1 | 260.3 | 247.7 | 214.8 |
| 82.5° | 136.5 | 98.6 | 91.0 | 91.0 | 96.0 | 131.4 | 169.3 | 199.7 | 194.6 | 161.8 | 154.2 |
| 85° | 50.5 | 43.0 | 43.0 | 45.5 | 45.5 | 60.7 | 91.0 | 106.2 | 96.0 | 83.4 | 80.9 |
| 87.5° | 22.7 | 22.7 | 17.7 | 15.2 | 12.6 | 12.6 | 15.2 | 10.1 | 7.6 | 5.1 | 5.1 |
| 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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# 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

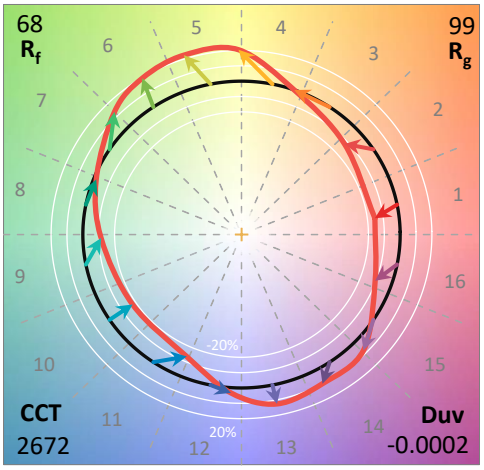
## Test Information

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

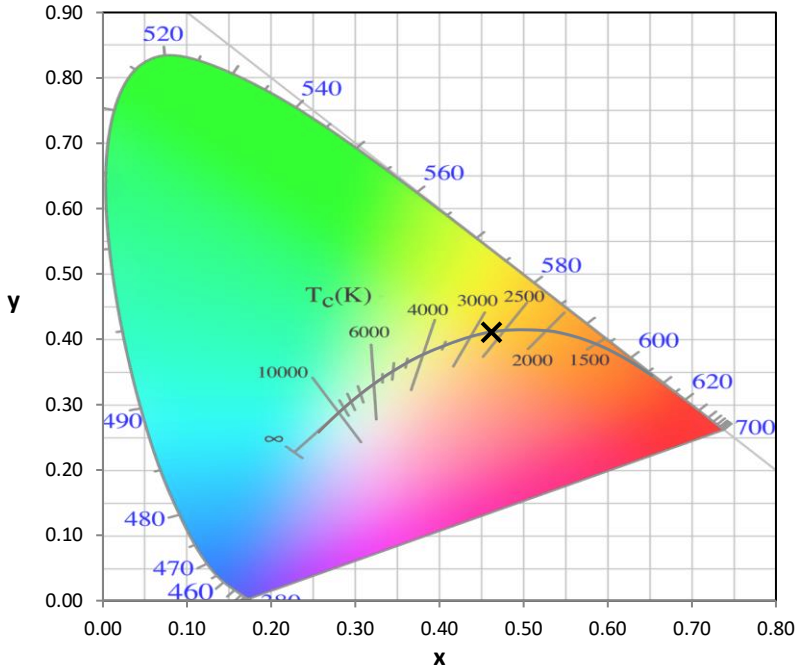
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-3

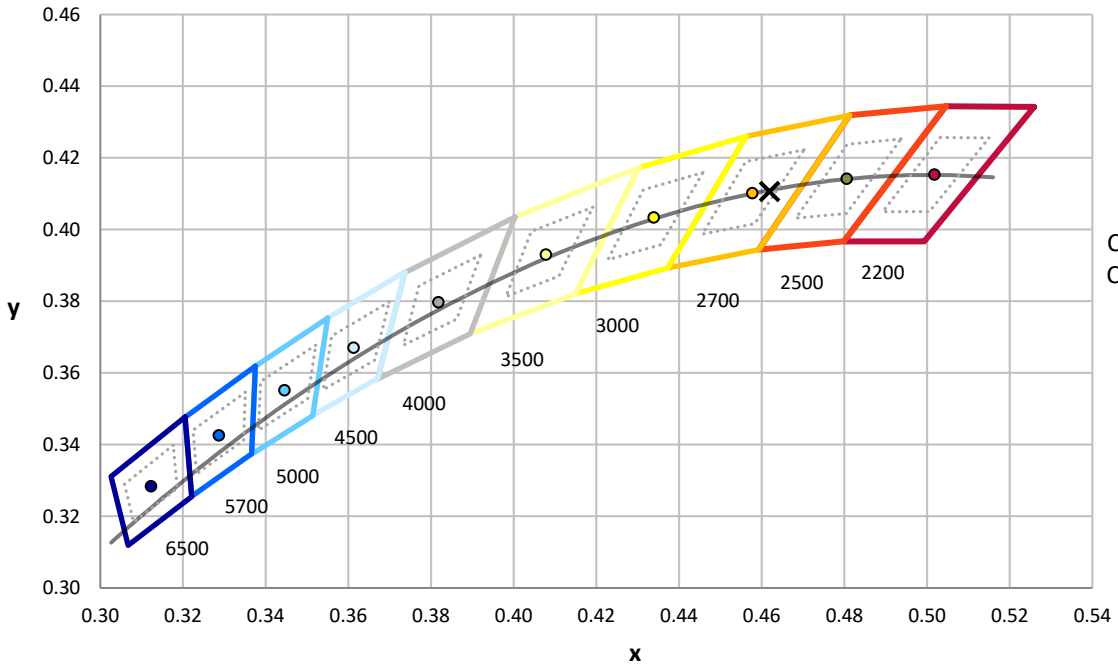
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

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## CIE 1931 Chromaticity Diagram




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

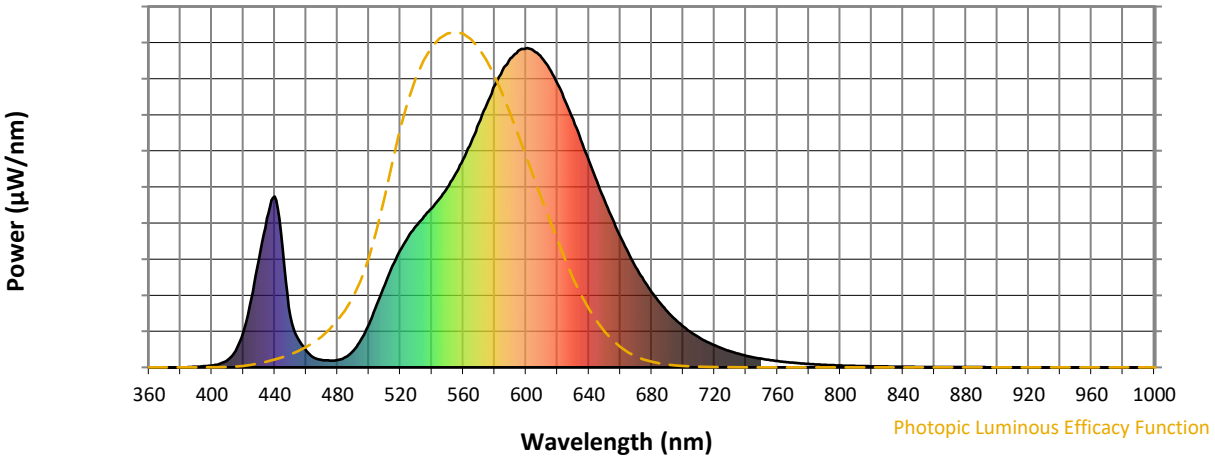



CCT = 2672K
CIE x = 0.4619
CIE y = 0.4106
Duv = -0.0002

Point lies inside the ANSI 2700K 4-step quadrangle

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## Photopic Flux vs. Wavelength

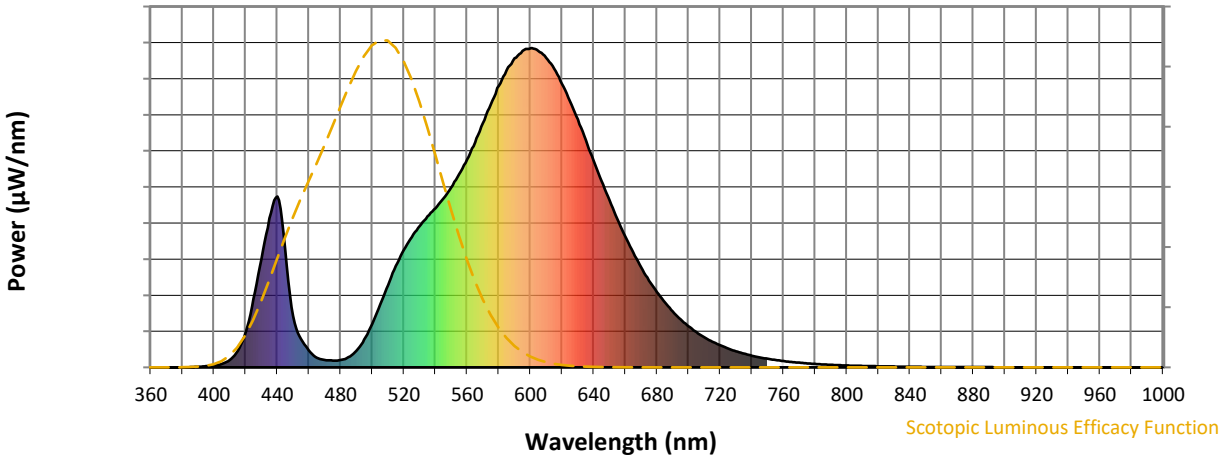



## Photopic Lumens: NR

| 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 | | | |

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## Scotopic Flux vs. Wavelength

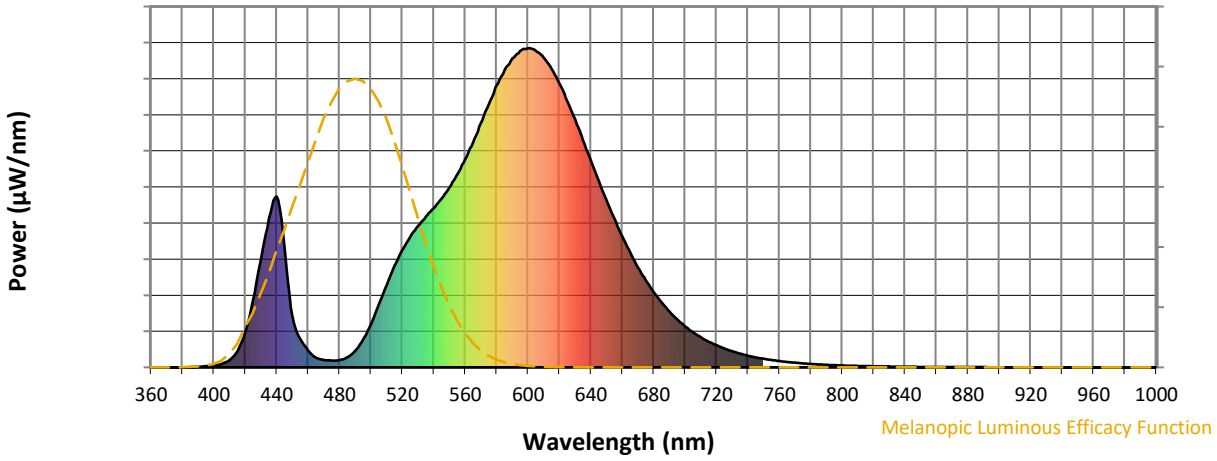



**Scotopic Lumens: NR** **S/P: 1.02**

| 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 | | | |

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## 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 | | | |

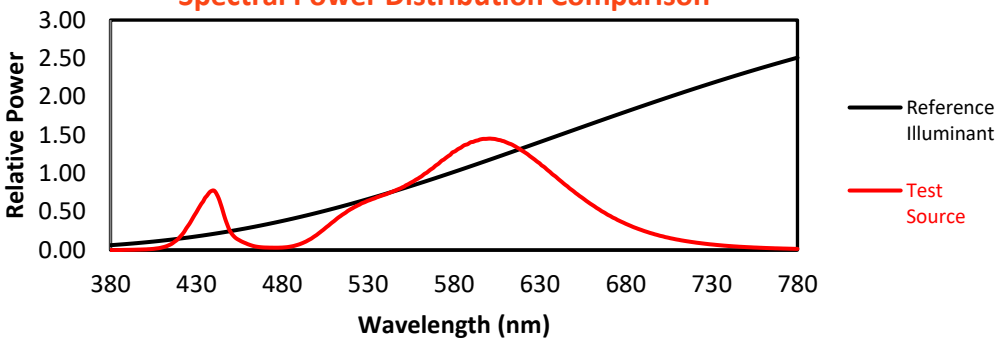
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# TM-30-18

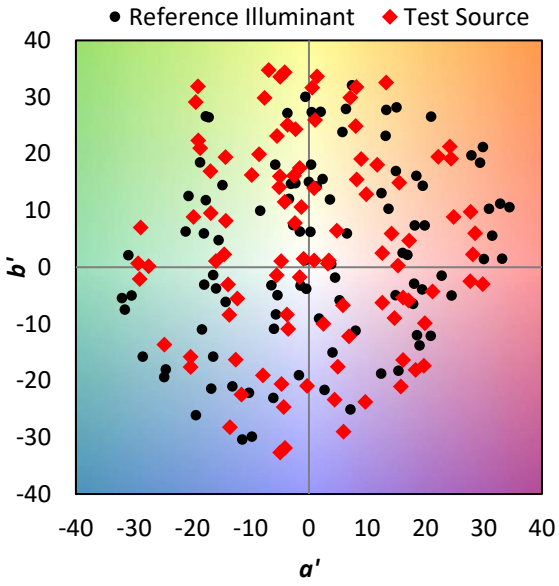
## Summary

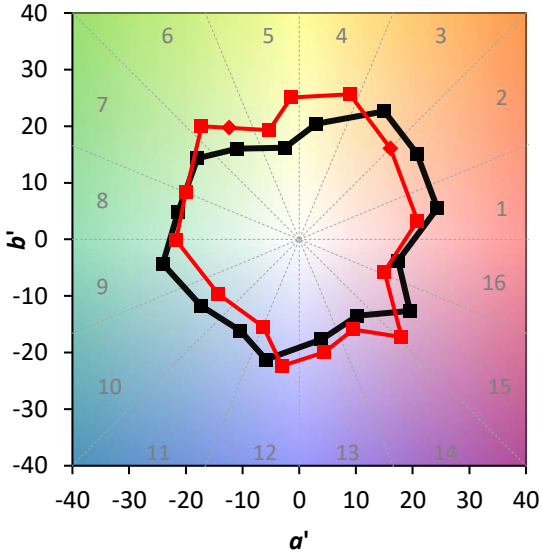
$R_f$ = 67.9
$R_g$ = 98.6
CIE $R_a$ = 71.1
$R_9$ = -27.8

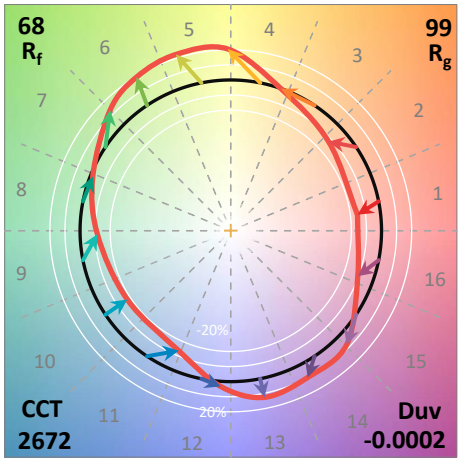
## Spectral Power Distribution Comparison

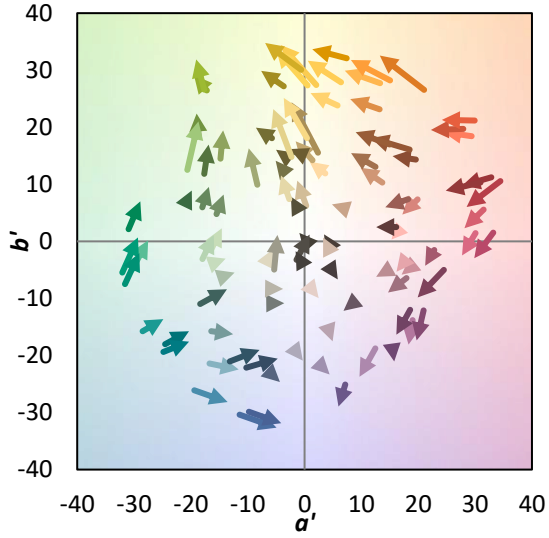



## Color Vector Graphics



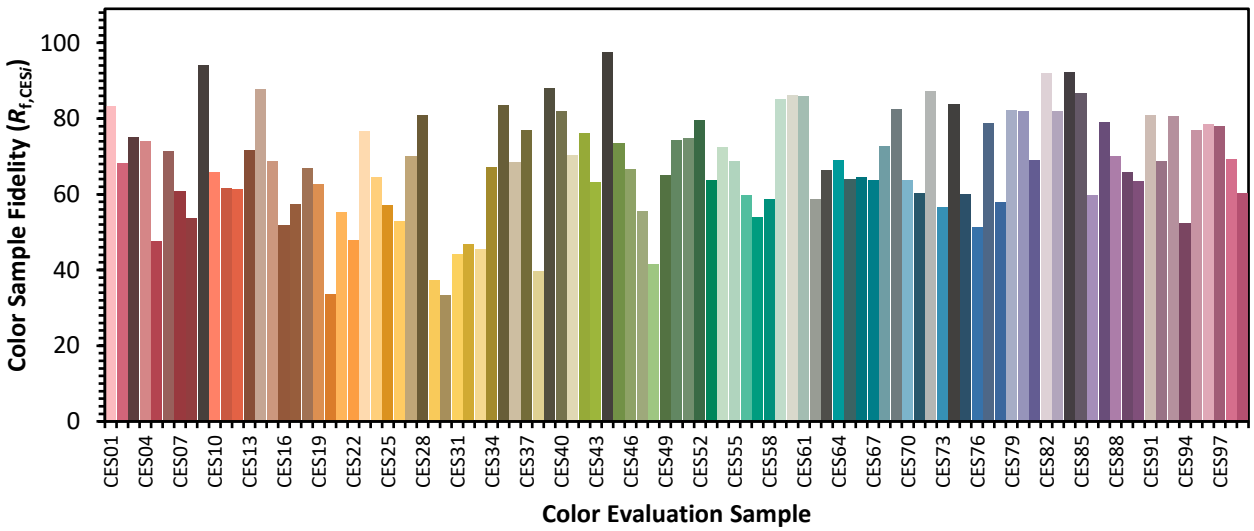



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**Individual Sample Fidelity Index ($R_{f,i}$)**

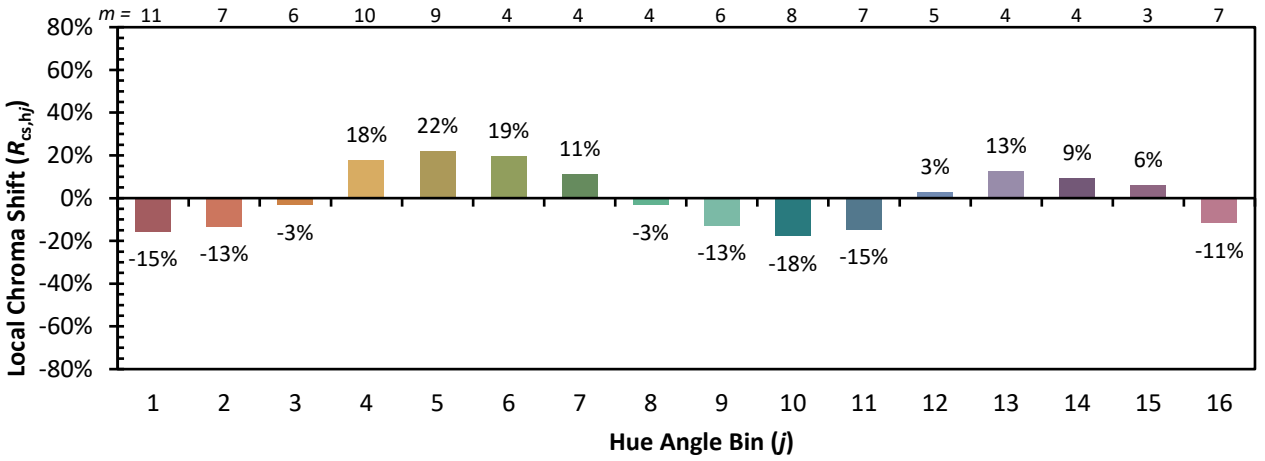
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 53 | CES51 = 75 | CES76 = 51 |
| CES02 = 63 | CES27 = 70 | CES52 = 80 | CES77 = 79 |
| CES03 = 31 | CES28 = 81 | CES53 = 64 | CES78 = 58 |
| CES04 = 71 | CES29 = 37 | CES54 = 73 | CES79 = 82 |
| CES05 = 50 | CES30 = 33 | CES55 = 69 | CES80 = 82 |
| CES06 = 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 | |

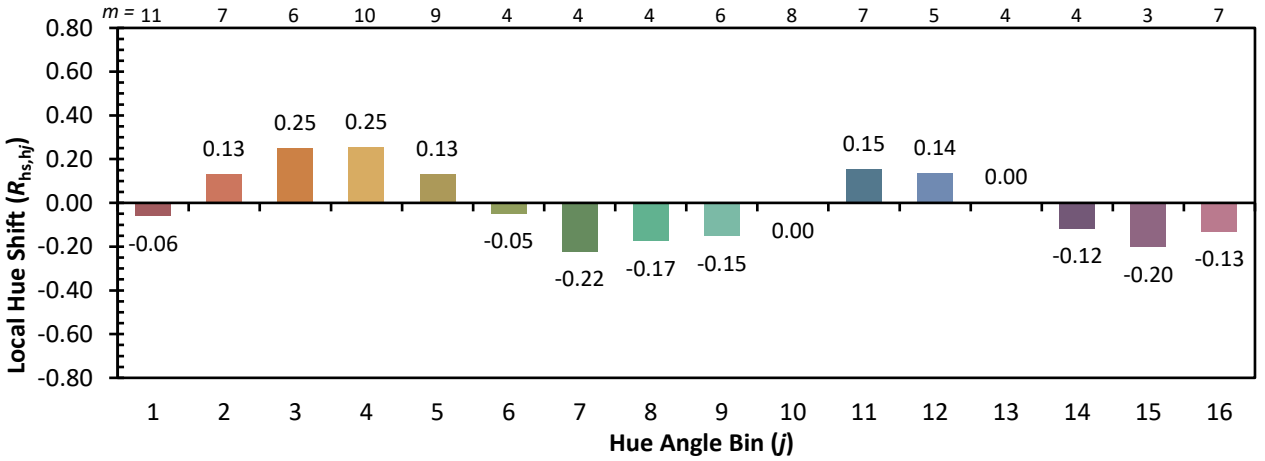


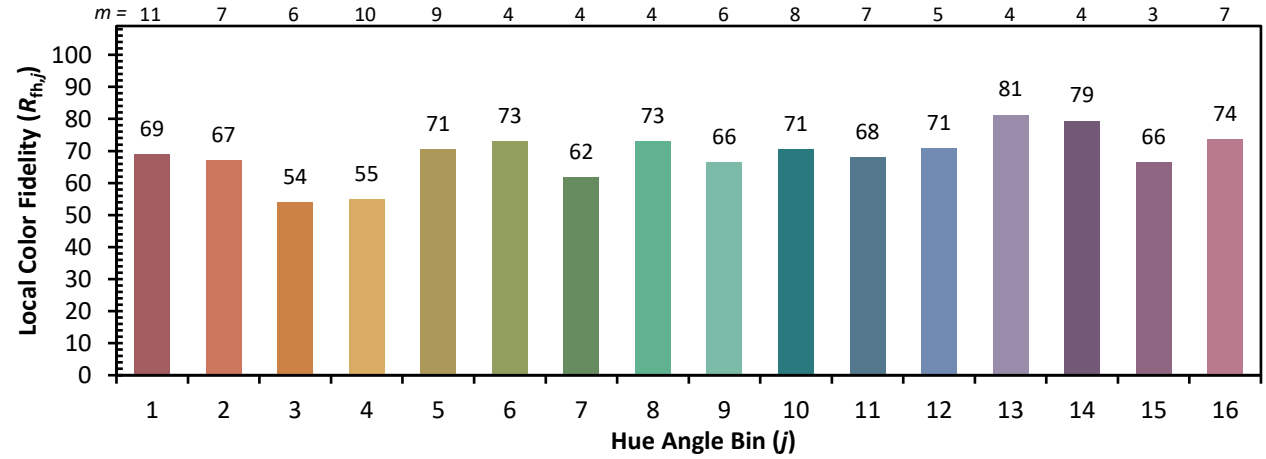
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## Color Rendition by Hue-Angle Bin



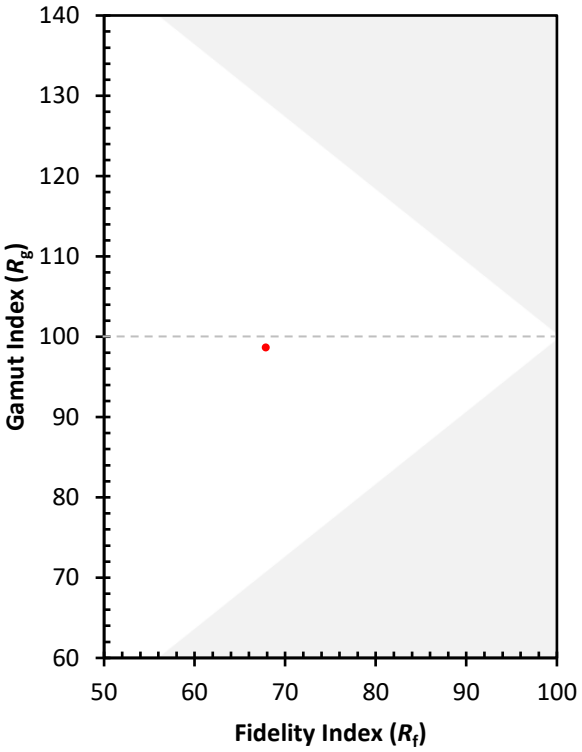



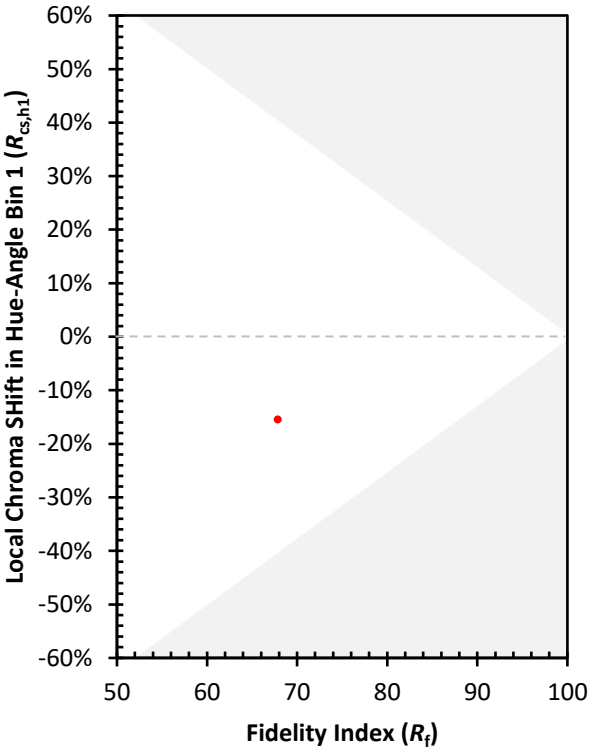



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## Measure Comparisons




(END OF REPORT)