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: P1363019

Luminaire Tested: **GSS-SB2A-727-U-SL2-HSS**

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: | P1363019 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB2A-727-U-SL2-HSS |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 2SQUARE 58W 70CRI 2700K FIXTURE w/ TYPE II SPILL CONTROL DISTRIBUTION OPTIC AND HOUSE SIDE SHIELD |
| Light Source: | (52) 2700K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 6391.8 lumens |
| Efficiency: | N/A |
| Efficacy: | 110.2 lumens/watt |
| Luminous Opening: | Rectangular (W 1' x L: 0.5' x H: 0') |
| IES Classification: | Type II - Medium |
| BUG Rating: | B1 - U0 - G2 |

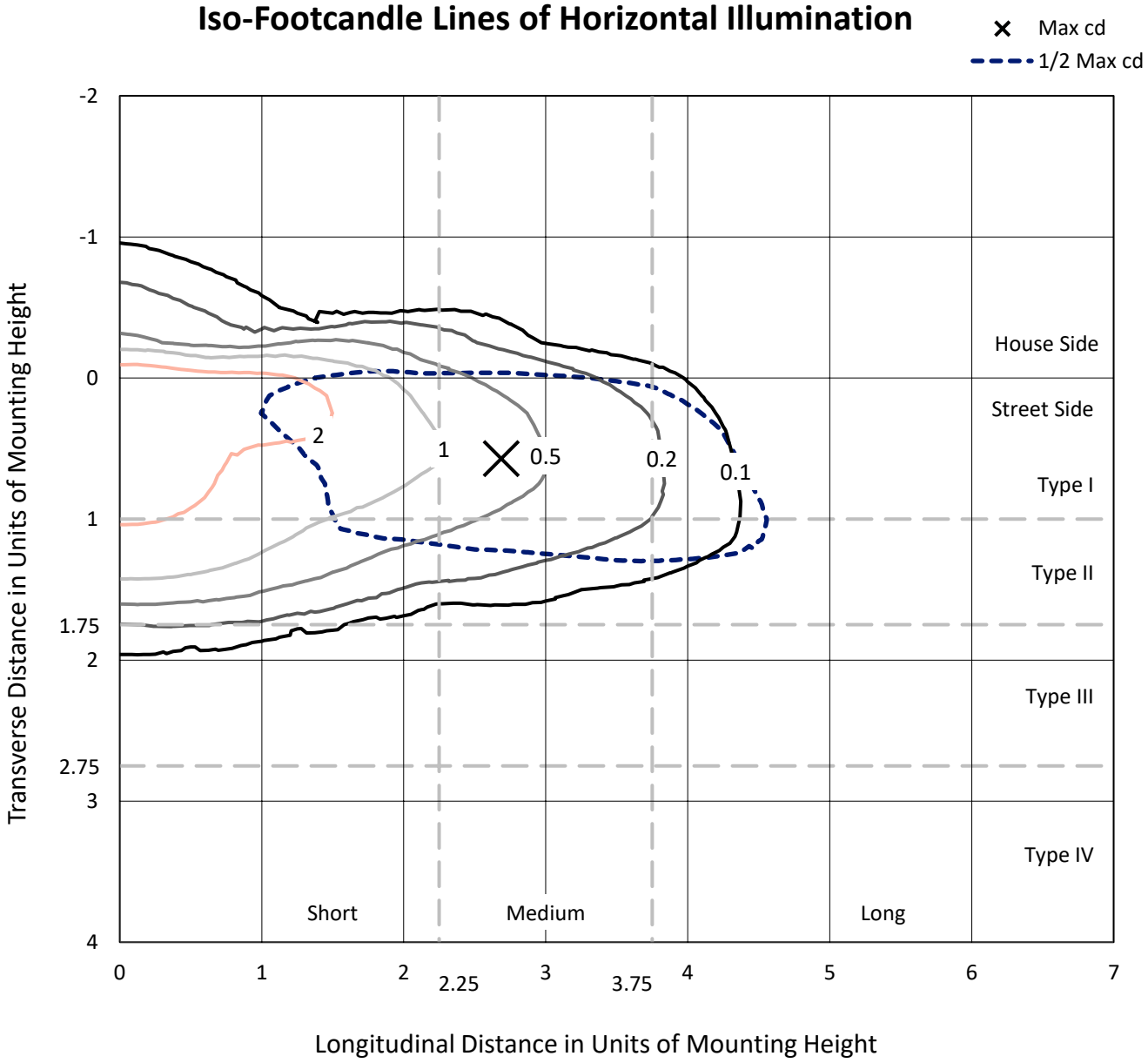
| | |
|---|---|
| Input Watts (W): | 58 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 9.0% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature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

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Scaled Data Report

REPORT NUMBER: P1363019
CATALOG NUMBER: GSS-SB2A-727-U-SL2-HSS

## Iso-Footcandle Lines of Horizontal Illumination



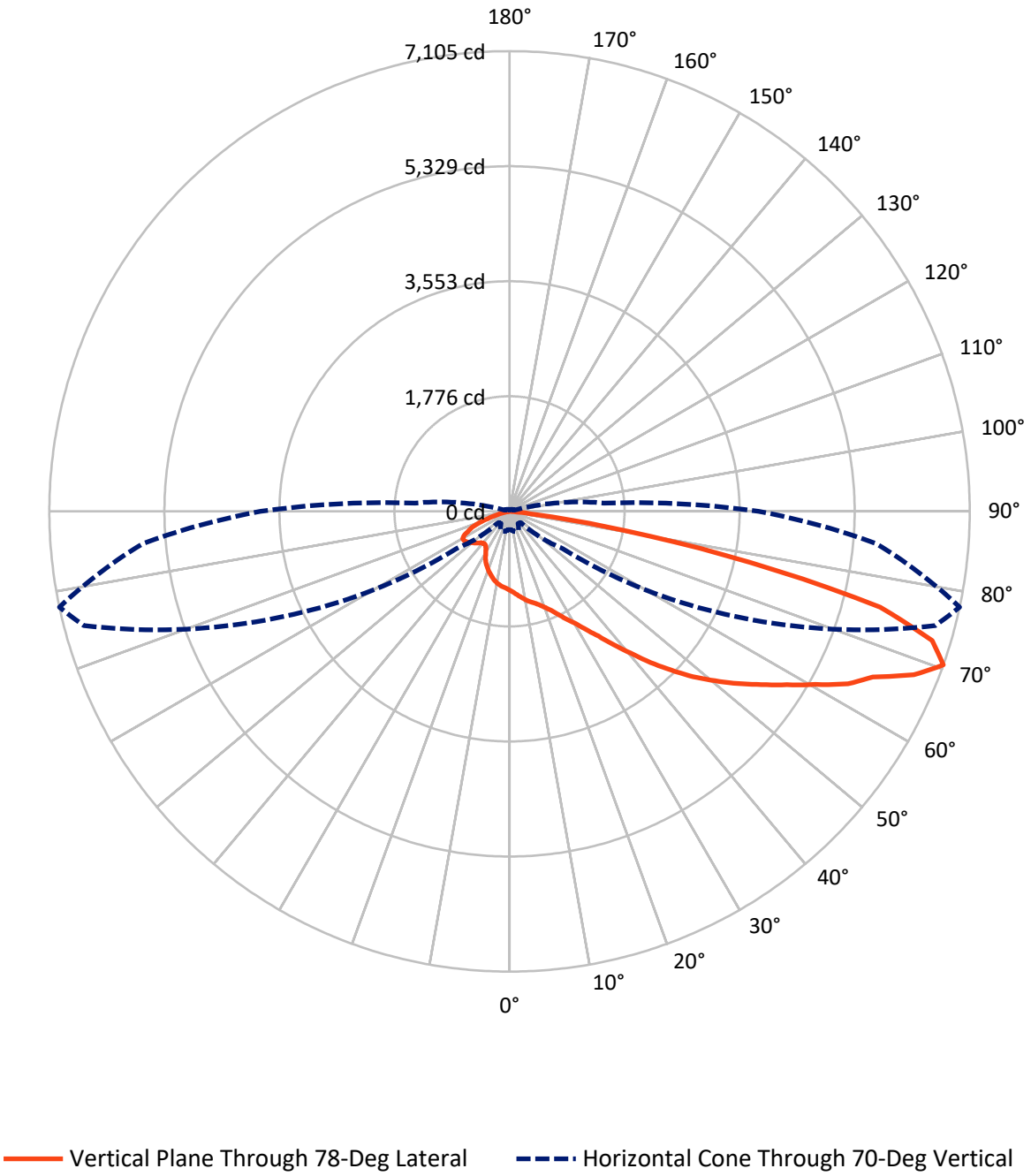

Based on 20 foot mounting height. Maximum calculated value = 3.6 fc
Type II - Medium - N/A

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## Luminous Intensity Polar Plot



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Scaled Data Report

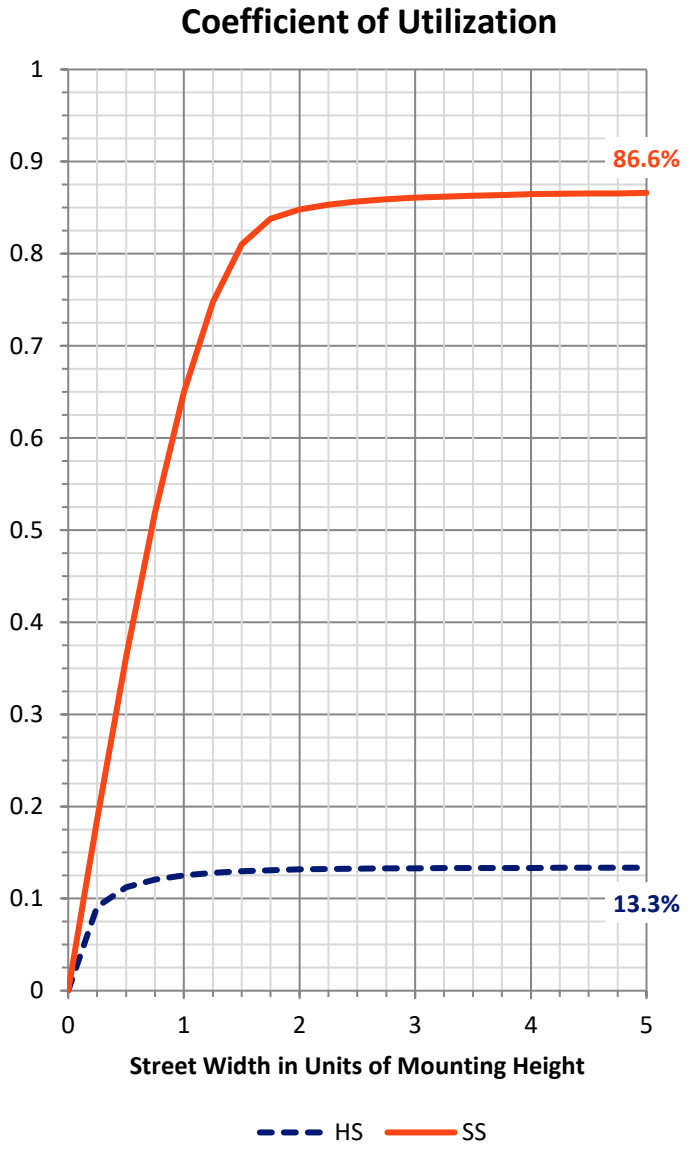
REPORT NUMBER: P1363019
CATALOG NUMBER: GSS-SB2A-727-U-SL2-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 859.7 | 0.0 | 859.7 |
| | % Fixture | 13.5 | 0.0 | 13.5 |
| **Street Side** | Lumens | 5532.1 | 0.0 | 5532.1 |
| | % Fixture | 86.5 | 0.0 | 86.5 |
| **Total** | Lumens | 6391.8 | 0.0 | 6391.8 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 111.4 | 1.7 |
| 10°-20° | 276.0 | 4.3 |
| 20°-30° | 457.8 | 7.2 |
| 30°-40° | 729.8 | 11.4 |
| 40°-50° | 1113.8 | 17.4 |
| 50°-60° | 1483.1 | 23.2 |
| 60°-70° | 1384.4 | 21.7 |
| 70°-80° | 782.9 | 12.2 |
| 80°-90° | 52.5 | 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° | 6391.8 | 100.0 |
| 0°-180° | 6391.8 | 100.0 |



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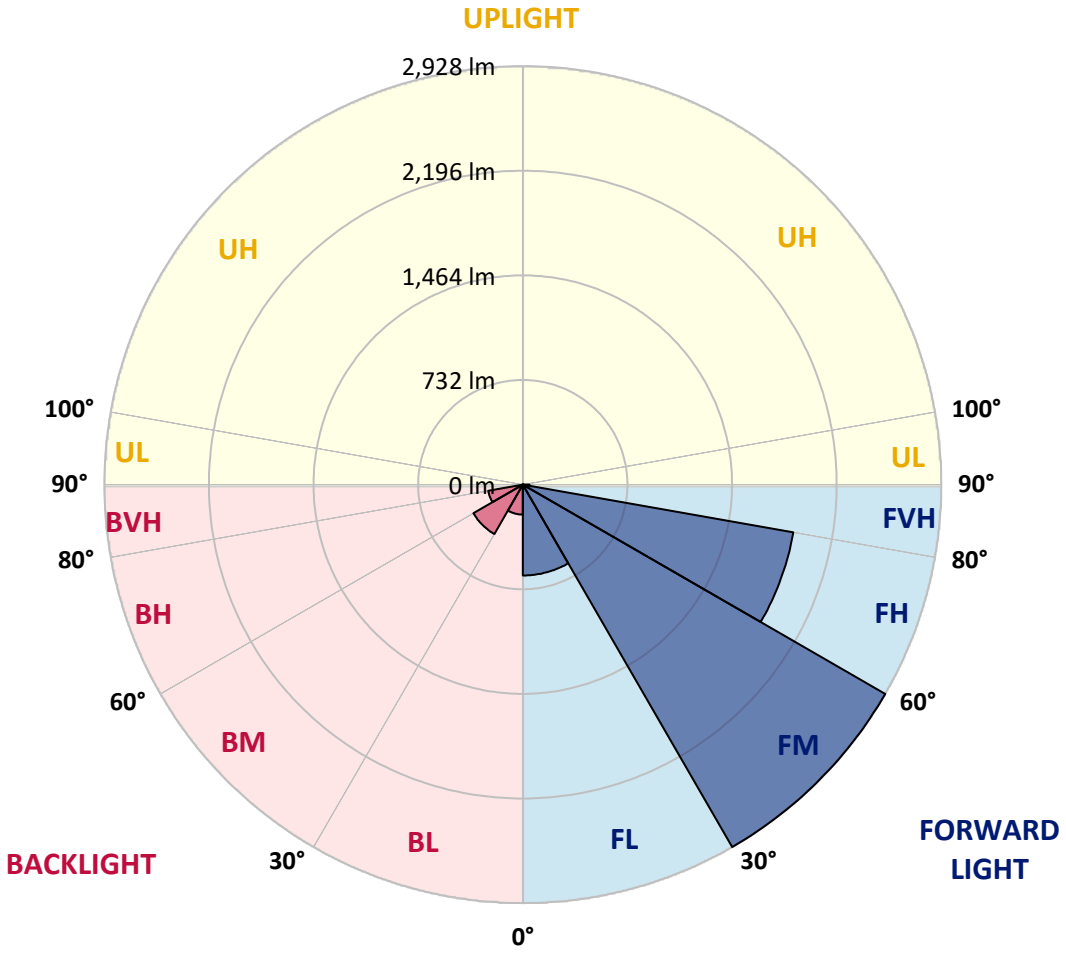
Scaled Data Report

REPORT NUMBER: P1363019
CATALOG NUMBER: GSS-SB2A-727-U-SL2-HSS

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 635.6 | 9.9 | | | |
| FM | (30°-60°) | 2928.0 | 45.8 | | | |
| FH | (60°-80°) | 1921.9 | 30.1 | | | G2/5000 |
| FVH | (80°-90°) | 46.6 | 0.7 | | | G1/100 |
| BL | (0°-30°) | 209.7 | 3.3 | B1/500 | | |
| BM | (30°-60°) | 398.8 | 6.2 | B1/1000 | | |
| BH | (60°-80°) | 245.4 | 3.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 5.9 | 0.1 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B1-U0-G2**
Type II Medium



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 78° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1221.2 | 1221.2 | 1221.2 | 1221.2 | 1221.2 | 1221.2 | 1221.2 | 1221.2 | 1221.2 | *1221.2* | 1221.2 |
| 2.5° | 1375.2 | 1355.5 | 1355.5 | 1346.6 | 1337.6 | 1321.5 | 1301.8 | 1280.3 | 1262.4 | *1253.5* | 1239.1 |
| 5° | 1473.7 | 1468.3 | 1466.5 | 1452.2 | 1437.9 | 1414.6 | 1389.5 | 1348.4 | 1310.8 | *1298.2* | 1266.0 |
| 7.5° | 1470.1 | 1466.5 | 1473.7 | 1491.6 | 1504.1 | 1495.2 | 1473.7 | 1423.6 | 1364.5 | *1343.0* | 1294.6 |
| 10° | 1359.1 | 1348.4 | 1373.4 | 1412.8 | 1470.1 | 1529.2 | 1538.2 | 1489.8 | 1414.6 | *1389.5* | 1321.5 |
| 12.5° | 1258.8 | 1258.8 | 1271.4 | 1307.2 | 1378.8 | 1484.5 | 1566.8 | 1550.7 | 1464.8 | *1434.3* | 1344.8 |
| 15° | 1246.3 | 1237.3 | 1240.9 | 1257.0 | 1307.2 | 1411.0 | 1548.9 | 1597.3 | 1511.3 | *1470.1* | 1366.3 |
| 17.5° | 1303.6 | 1292.9 | 1283.9 | 1276.7 | 1283.9 | 1351.9 | 1493.4 | 1636.7 | 1566.8 | *1522.1* | 1394.9 |
| 20° | 1393.1 | 1393.1 | 1369.8 | 1341.2 | 1317.9 | 1330.5 | 1448.6 | 1661.7 | 1633.1 | *1584.7* | 1437.9 |
| 22.5° | 1522.1 | 1505.9 | 1491.6 | 1446.8 | 1389.5 | 1362.7 | 1428.9 | 1688.6 | 1724.4 | *1665.3* | 1497.0 |
| 25° | 1629.5 | 1634.9 | 1618.7 | 1563.2 | 1482.7 | 1423.6 | 1445.1 | 1699.3 | 1828.3 | *1769.2* | 1570.4 |
| 27.5° | 1751.3 | 1745.9 | 1731.6 | 1676.1 | 1582.9 | 1498.8 | 1489.8 | 1720.8 | 1948.2 | *1885.6* | 1656.4 |
| 30° | 1864.1 | 1864.1 | 1846.2 | 1783.5 | 1688.6 | 1597.3 | 1556.1 | 1756.6 | 2068.2 | *2010.9* | 1753.0 |
| 32.5° | 1989.4 | 1991.2 | 1955.4 | 1889.1 | 1792.4 | 1688.6 | 1640.2 | 1810.3 | 2216.8 | *2173.9* | 1883.8 |
| 35° | 2091.5 | 2095.1 | 2086.1 | 2014.5 | 1887.3 | 1783.5 | 1728.0 | 1894.5 | 2390.5 | *2365.5* | 2057.5 |
| 37.5° | 2170.3 | 2175.6 | 2157.7 | 2125.5 | 2007.3 | 1874.8 | 1821.1 | 1998.4 | 2600.0 | *2616.1* | 2283.1 |
| 40° | 2261.6 | 2261.6 | 2261.6 | 2213.2 | 2125.5 | 1975.1 | 1916.0 | 2127.3 | 2825.6 | *2875.8* | 2533.8 |
| 42.5° | 2342.2 | 2347.5 | 2356.5 | 2318.9 | 2238.3 | 2118.3 | 2032.4 | 2272.3 | 3078.1 | *3190.9* | 2843.6 |
| 45° | 2383.4 | 2394.1 | 2426.3 | 2410.2 | 2349.3 | 2232.9 | 2155.9 | 2413.8 | 3355.7 | *3495.4* | 3176.6 |
| 47.5° | 2408.4 | 2421.0 | 2463.9 | 2483.6 | 2458.6 | 2320.7 | 2272.3 | 2582.1 | 3620.7 | *3814.1* | 3518.6 |
| 50° | 2428.1 | 2446.0 | 2494.4 | 2532.0 | 2555.3 | 2394.1 | 2386.9 | 2754.0 | 3885.7 | *4113.1* | 3830.2 |
| 52.5° | 2370.8 | 2388.7 | 2480.1 | 2600.0 | 2619.7 | 2505.1 | 2506.9 | 2940.3 | 4154.3 | *4417.5* | 4118.5 |
| 55° | 2166.7 | 2179.2 | 2306.4 | 2548.1 | 2696.7 | 2634.0 | 2669.9 | 3182.0 | 4448.0 | *4720.2* | 4394.3 |
| 57.5° | 1541.8 | 1618.7 | 1844.4 | 2227.6 | 2601.8 | 2818.5 | 2931.3 | 3448.8 | 4790.0 | *5051.4* | 4673.6 |
| 60° | 641.1 | 696.6 | 915.0 | 1590.1 | 2250.8 | 2843.6 | 3291.2 | 3887.5 | 5178.6 | *5427.5* | 4990.5 |
| 62.5° | 417.2 | 422.6 | 444.1 | 682.2 | 1428.9 | 2494.4 | 3429.1 | 4508.9 | 5726.5 | *5864.4* | 5164.2 |
| 65° | 372.5 | 379.6 | 390.4 | 424.4 | 526.5 | 1683.2 | 2963.5 | 4718.4 | 6172.4 | *6163.4* | 5065.8 |
| 67.5° | 331.3 | 340.2 | 359.9 | 363.5 | 293.7 | 619.6 | 1991.2 | 4410.4 | 6636.2 | *6732.9* | 5334.4 |
| 70° | *282.9* | *286.5* | *322.3* | *325.9* | *231.0* | *243.5* | *1002.8* | *3828.4* | *6808.1* | *7105.3* | *5678.2* |
| 72.5° | 197.0 | 207.7 | 272.2 | 286.5 | 184.4 | 157.6 | 365.3 | 2786.3 | 6328.2 | *6822.4* | 5656.7 |
| 75° | 116.4 | 121.8 | 155.8 | 195.2 | 143.3 | 111.0 | 164.7 | 1713.7 | 5445.4 | *5909.2* | 5033.5 |
| 77.5° | 84.2 | 89.5 | 112.8 | 152.2 | 91.3 | 75.2 | 102.1 | 895.3 | 3781.9 | *3801.6* | 2841.8 |
| 80° | 26.9 | 30.4 | 69.8 | 102.1 | 66.3 | 48.3 | 62.7 | 302.6 | 1910.6 | *1803.2* | 868.5 |
| 82.5° | 14.3 | 14.3 | 43.0 | 53.7 | 41.2 | 30.4 | 35.8 | 125.3 | 612.4 | *392.2* | 137.9 |
| 85° | 7.2 | 7.2 | 17.9 | 21.5 | 16.1 | 14.3 | 17.9 | 44.8 | 64.5 | *59.1* | 39.4 |
| 87.5° | 0.0 | 0.0 | 1.8 | 1.8 | 1.8 | 3.6 | 7.2 | 12.5 | 16.1 | *16.1* | 17.9 |
| 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: P1363019
CATALOG NUMBER: GSS-SB2A-727-U-SL2-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1221.2 | 1221.2 | 1221.2 | 1221.2 | 1221.2 | 1221.2 | 1221.2 | 1221.2 | 1221.2 | 1221.2 | 1221.2 |
| 2.5° | 1223.0 | 1208.7 | 1187.2 | 1162.1 | 1144.2 | 1119.2 | 1097.7 | 1088.7 | 1072.6 | 1069.0 | 1065.4 |
| 5° | 1235.5 | 1206.9 | 1158.6 | 1103.0 | 1054.7 | 997.4 | 950.8 | 915.0 | 890.0 | 879.2 | 873.8 |
| 7.5° | 1255.2 | 1208.7 | 1129.9 | 1038.6 | 950.8 | 864.9 | 778.9 | 712.7 | 675.1 | 639.3 | 641.1 |
| 10° | 1266.0 | 1210.5 | 1092.3 | 965.2 | 834.4 | 701.9 | 573.0 | 474.5 | 422.6 | 392.2 | 385.0 |
| 12.5° | 1274.9 | 1201.5 | 1049.3 | 873.8 | 687.6 | 497.8 | 368.9 | 304.4 | 277.6 | 274.0 | 272.2 |
| 15° | 1280.3 | 1190.8 | 995.6 | 768.2 | 521.1 | 336.6 | 274.0 | 256.1 | 248.9 | 247.1 | 247.1 |
| 17.5° | 1292.9 | 1178.2 | 940.1 | 637.5 | 361.7 | 268.6 | 245.3 | 236.4 | 231.0 | 229.2 | 229.2 |
| 20° | 1314.3 | 1180.0 | 882.8 | 494.2 | 281.1 | 245.3 | 227.4 | 218.5 | 211.3 | 211.3 | 211.3 |
| 22.5° | 1350.2 | 1187.2 | 809.4 | 370.7 | 247.1 | 223.8 | 207.7 | 197.0 | 193.4 | 195.2 | 195.2 |
| 25° | 1398.5 | 1205.1 | 734.2 | 286.5 | 227.4 | 202.3 | 186.2 | 177.3 | 175.5 | 177.3 | 177.3 |
| 27.5° | 1459.4 | 1224.8 | 641.1 | 247.1 | 209.5 | 184.4 | 168.3 | 162.9 | 161.2 | 164.7 | 164.7 |
| 30° | 1525.6 | 1248.1 | 530.0 | 227.4 | 193.4 | 170.1 | 155.8 | 150.4 | 150.4 | 155.8 | 155.8 |
| 32.5° | 1618.7 | 1285.7 | 429.8 | 211.3 | 180.9 | 159.4 | 145.0 | 139.7 | 141.5 | 146.8 | 146.8 |
| 35° | 1744.1 | 1334.0 | 352.8 | 200.6 | 171.9 | 150.4 | 137.9 | 130.7 | 132.5 | 134.3 | 136.1 |
| 37.5° | 1907.0 | 1400.3 | 304.4 | 193.4 | 162.9 | 145.0 | 128.9 | 123.6 | 123.6 | 125.3 | 125.3 |
| 40° | 2089.7 | 1479.1 | 281.1 | 188.0 | 155.8 | 136.1 | 121.8 | 114.6 | 114.6 | 118.2 | 118.2 |
| 42.5° | 2322.5 | 1563.2 | 263.2 | 180.9 | 146.8 | 128.9 | 112.8 | 107.4 | 105.6 | 109.2 | 109.2 |
| 45° | 2591.1 | 1685.0 | 252.5 | 173.7 | 137.9 | 120.0 | 105.6 | 98.5 | 96.7 | 98.5 | 100.3 |
| 47.5° | 2863.3 | 1813.9 | 241.7 | 164.7 | 132.5 | 112.8 | 100.3 | 91.3 | 89.5 | 89.5 | 89.5 |
| 50° | 3119.3 | 1942.9 | 234.6 | 154.0 | 127.1 | 105.6 | 93.1 | 86.0 | 82.4 | 82.4 | 82.4 |
| 52.5° | 3348.5 | 2062.8 | 231.0 | 145.0 | 121.8 | 100.3 | 89.5 | 80.6 | 75.2 | 75.2 | 75.2 |
| 55° | 3567.0 | 2179.2 | 225.6 | 134.3 | 116.4 | 93.1 | 84.2 | 75.2 | 69.8 | 68.0 | 68.0 |
| 57.5° | 3787.2 | 2286.7 | 211.3 | 123.6 | 105.6 | 87.7 | 78.8 | 69.8 | 64.5 | 60.9 | 60.9 |
| 60° | 3968.1 | 2352.9 | 189.8 | 111.0 | 93.1 | 80.6 | 73.4 | 64.5 | 57.3 | 51.9 | 51.9 |
| 62.5° | 3980.6 | 2284.9 | 157.6 | 98.5 | 82.4 | 73.4 | 66.3 | 57.3 | 48.3 | 41.2 | 41.2 |
| 65° | 3767.5 | 2048.5 | 125.3 | 82.4 | 73.4 | 64.5 | 55.5 | 48.3 | 39.4 | 32.2 | 30.4 |
| 67.5° | 3815.9 | 1858.7 | 96.7 | 69.8 | 64.5 | 51.9 | 44.8 | 39.4 | 32.2 | 26.9 | 26.9 |
| 70° | *3844.5* | *1463.0* | *77.0* | *57.3* | *53.7* | *41.2* | *35.8* | *34.0* | *26.9* | *21.5* | *21.5* |
| 72.5° | 3593.8 | 906.1 | 62.7 | 48.3 | 41.2 | 28.7 | 28.7 | 26.9 | 21.5 | 16.1 | 14.3 |
| 75° | 3169.5 | 540.8 | 48.3 | 37.6 | 28.7 | 21.5 | 21.5 | 19.7 | 14.3 | 10.7 | 10.7 |
| 77.5° | 1916.0 | 284.7 | 37.6 | 28.7 | 19.7 | 16.1 | 14.3 | 12.5 | 9.0 | 7.2 | 5.4 |
| 80° | 592.7 | 100.3 | 28.7 | 19.7 | 14.3 | 12.5 | 9.0 | 5.4 | 3.6 | 3.6 | 1.8 |
| 82.5° | 82.4 | 35.8 | 21.5 | 16.1 | 10.7 | 7.2 | 5.4 | 3.6 | 1.8 | 1.8 | 1.8 |
| 85° | 28.7 | 19.7 | 14.3 | 10.7 | 7.2 | 5.4 | 3.6 | 1.8 | 1.8 | 0.0 | 0.0 |
| 87.5° | 16.1 | 14.3 | 10.7 | 7.2 | 5.4 | 3.6 | 3.6 | 1.8 | 0.0 | 0.0 | 0.0 |
| 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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# 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

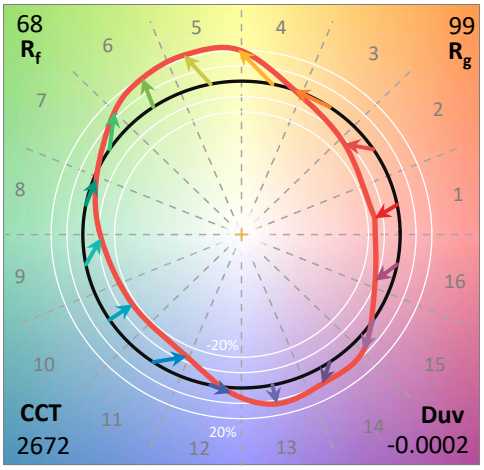
## Test Information

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

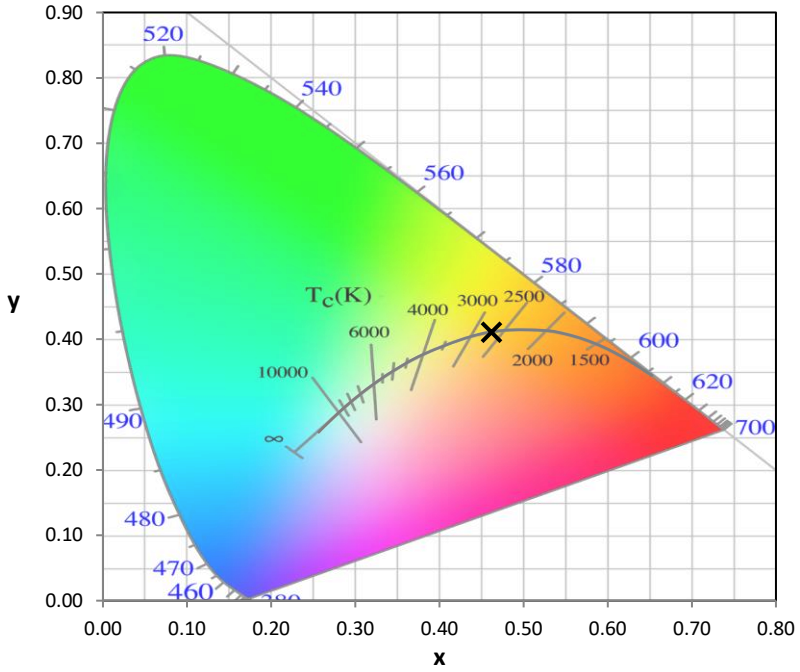
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-3

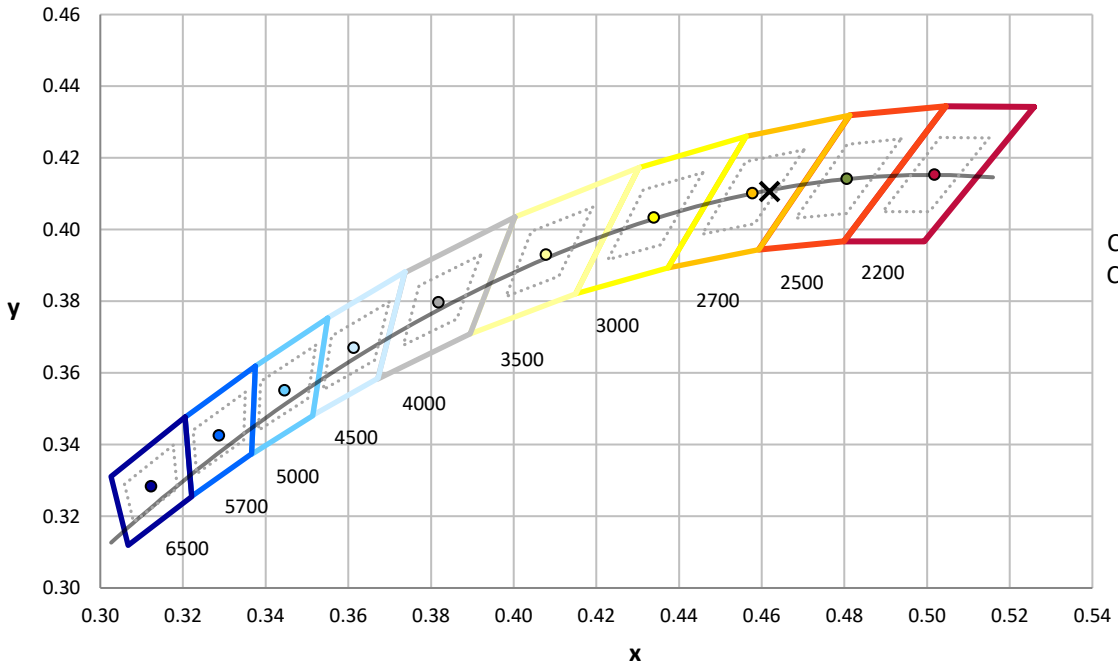
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

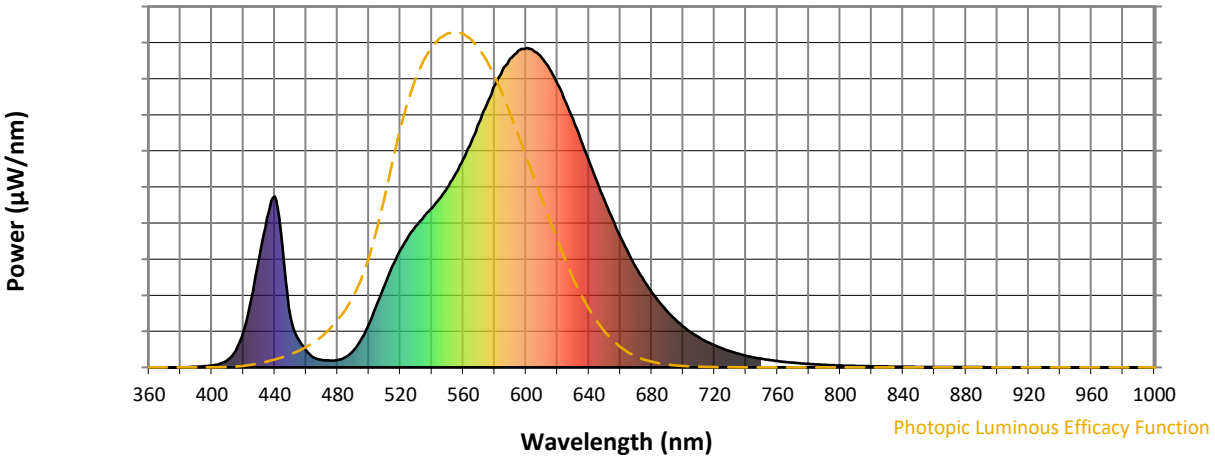



CCT = 2672K
CIE x = 0.4619
CIE y = 0.4106
Duv = -0.0002

Point lies inside the ANSI 2700K 4-step quadrangle

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## Photopic Flux vs. Wavelength

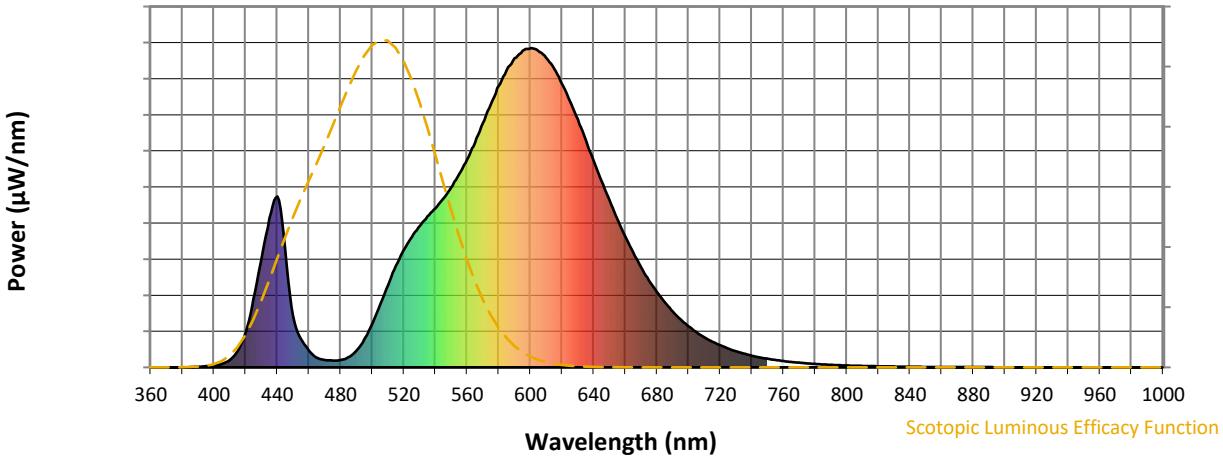



## Photopic Lumens: NR

| 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

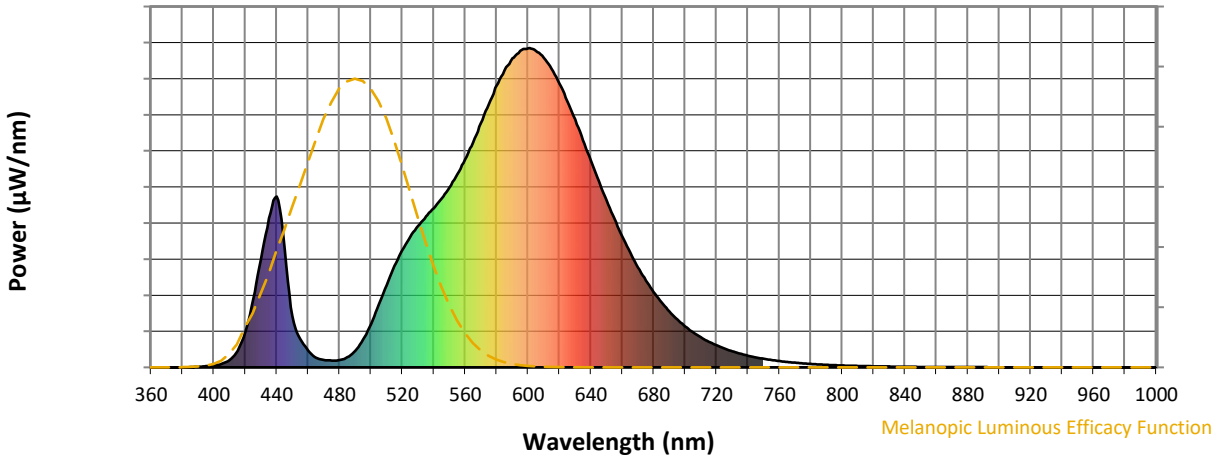



**Scotopic Lumens: NR** **S/P: 1.02**

| 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 | | | |

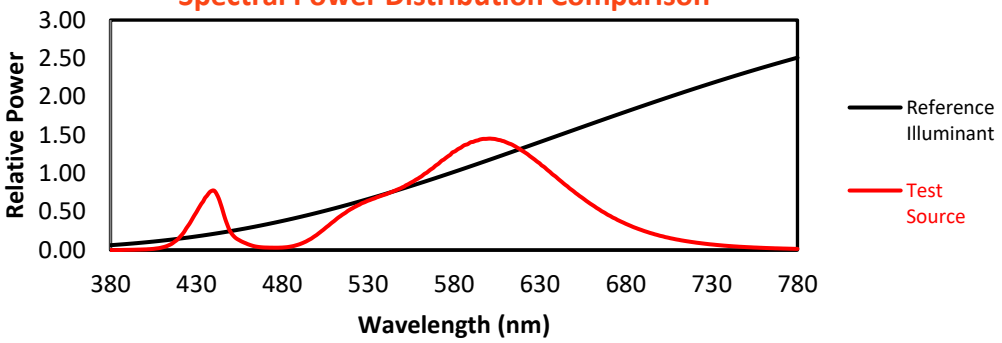
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# TM-30-18

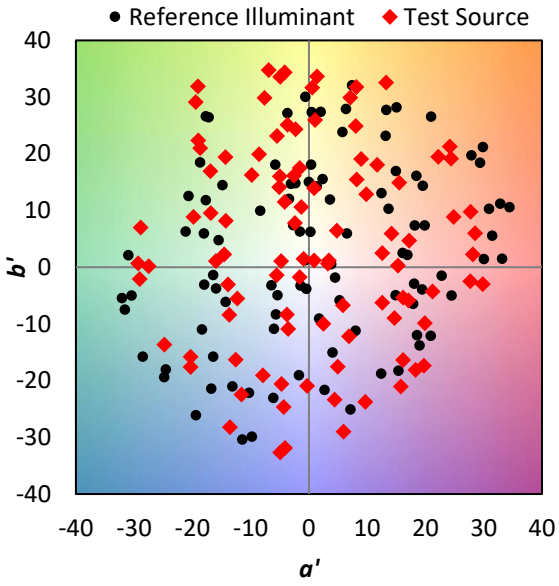
## Summary

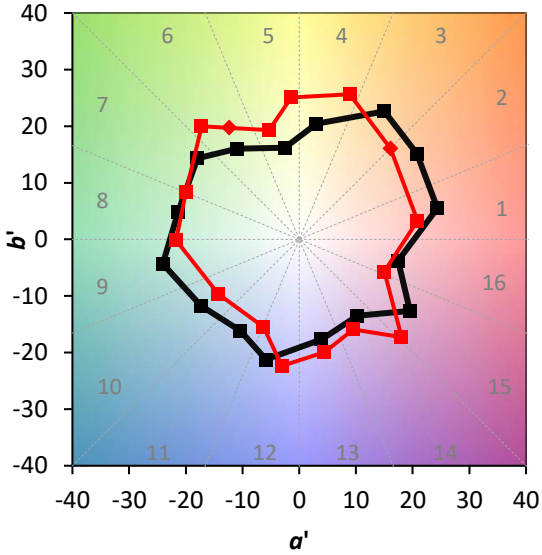
$R_f$ = 67.9
$R_g$ = 98.6
CIE $R_a$ = 71.1
$R_9$ = -27.8

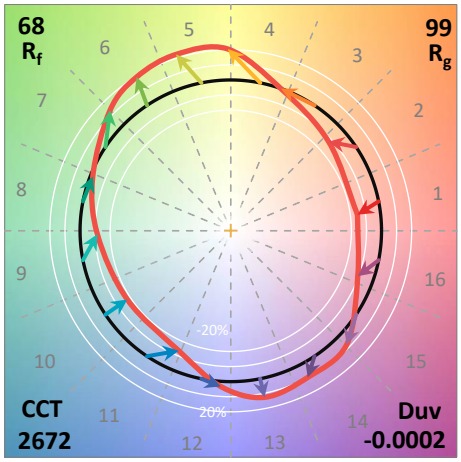
## Spectral Power Distribution Comparison

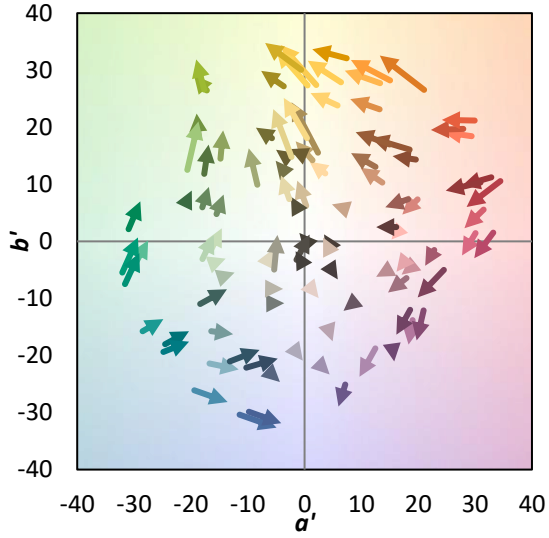



## Color Vector Graphics



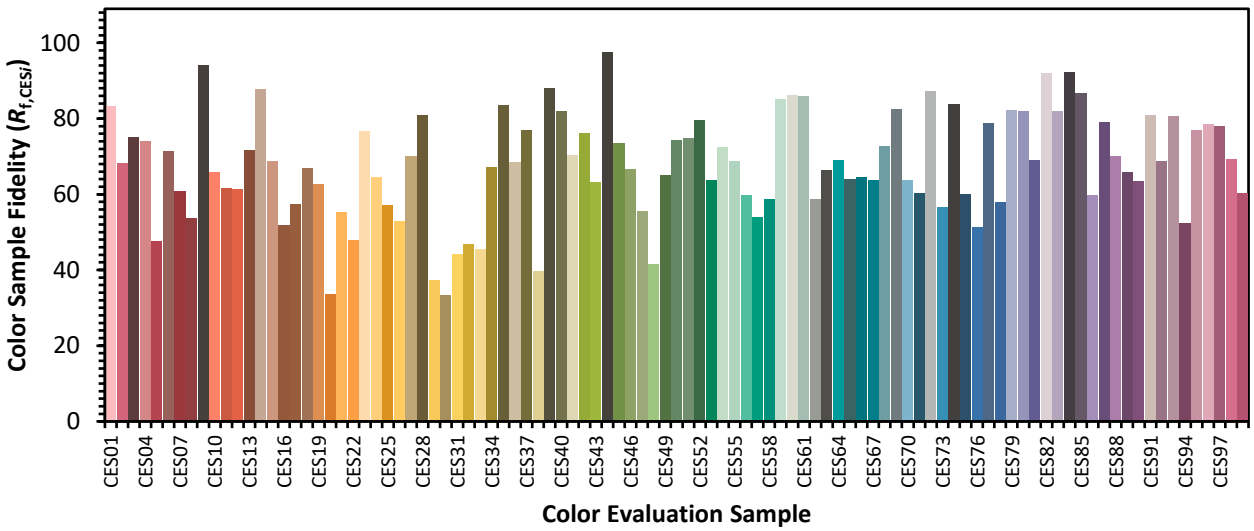



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# TM-30-18

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

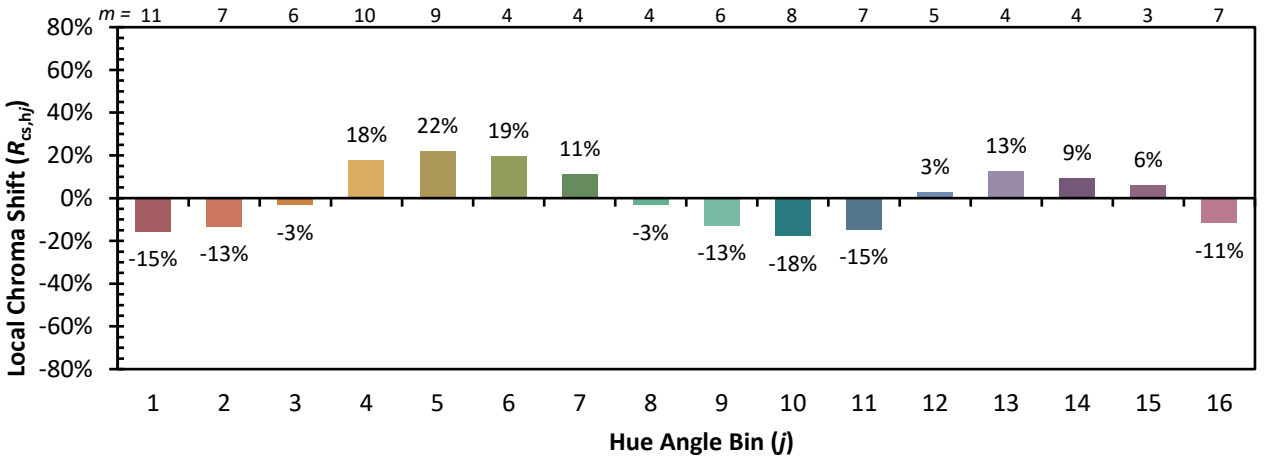
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 53 | CES51 = 75 | CES76 = 51 |
| CES02 = 63 | CES27 = 70 | CES52 = 80 | CES77 = 79 |
| CES03 = 31 | CES28 = 81 | CES53 = 64 | CES78 = 58 |
| CES04 = 71 | CES29 = 37 | CES54 = 73 | CES79 = 82 |
| CES05 = 50 | CES30 = 33 | CES55 = 69 | CES80 = 82 |
| CES06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

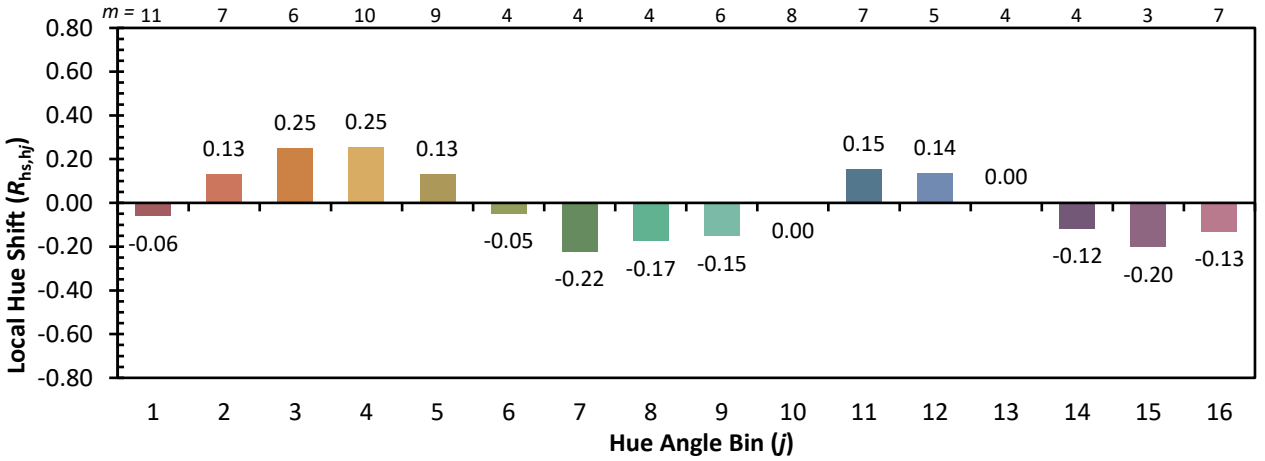


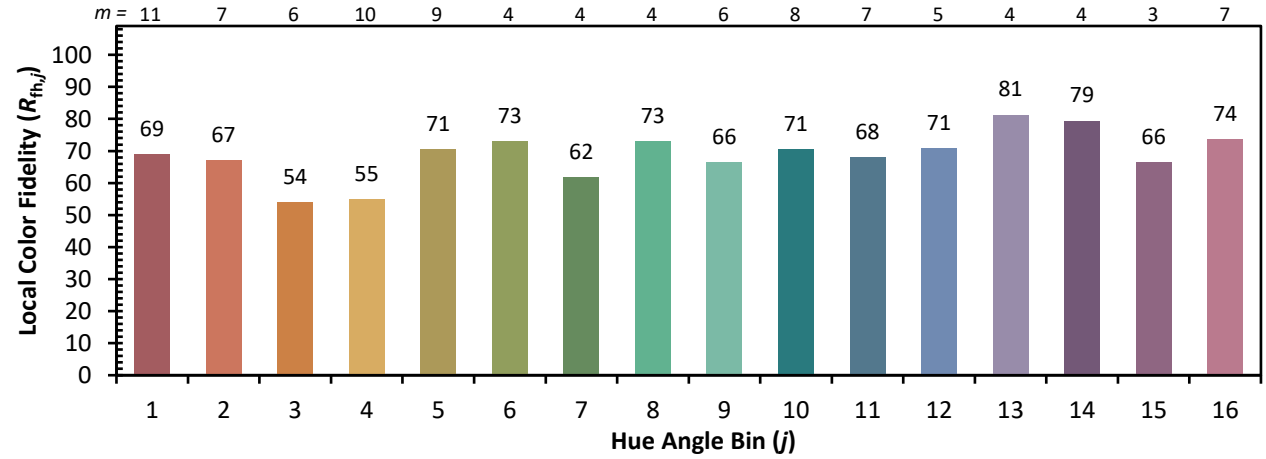
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## Color Rendition by Hue-Angle Bin



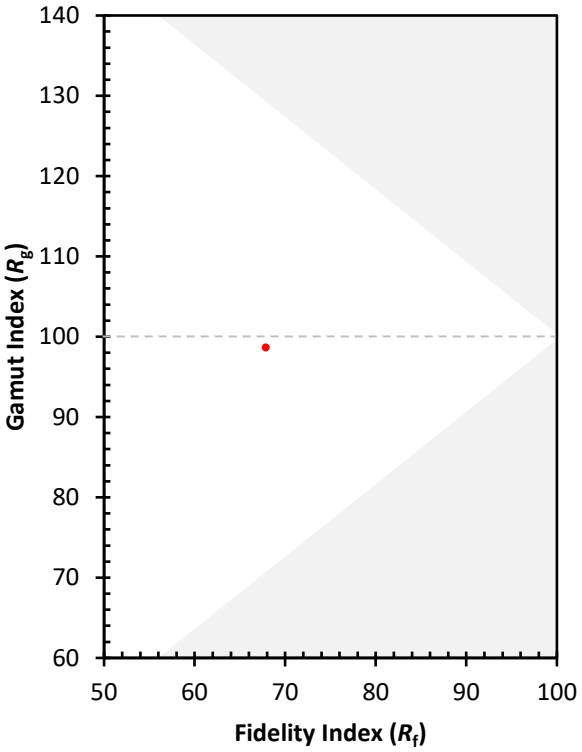



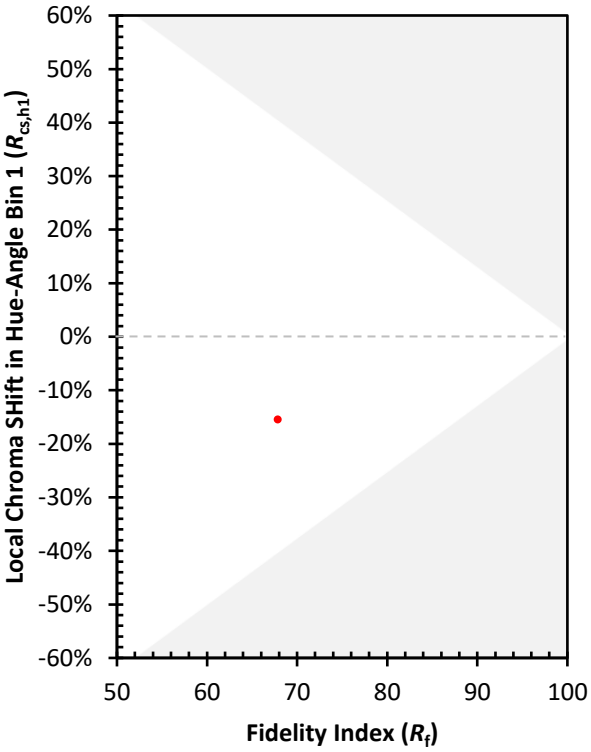



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## Measure Comparisons




(END OF REPORT)