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

Cooper Lighting Solutions Photometric Lab
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Peachtree City, GA 30269

Scaled data based on original data using

LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P1501043

Luminaire Tested: GSS-SB2C-735-U-T3LG

Issue Date: 07/20/2026

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

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-2024 |
| Report Number: | P1501043 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 7/20/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB2C-735-U-T3LG |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 2SQUARE 102W 70CRI 3500K FIXTURE w/ TYPE III LOW GLARE DISTRIBUTION FIXTURE |
| Light Source: | (52) 3500K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 14106.4 lumens |
| Efficiency: | N/A |
| Efficacy: | 138.3 lumens/watt |
| Luminous Opening: | Rectangular (W 1' x L: 0.5' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B2 - U0 - G2 |

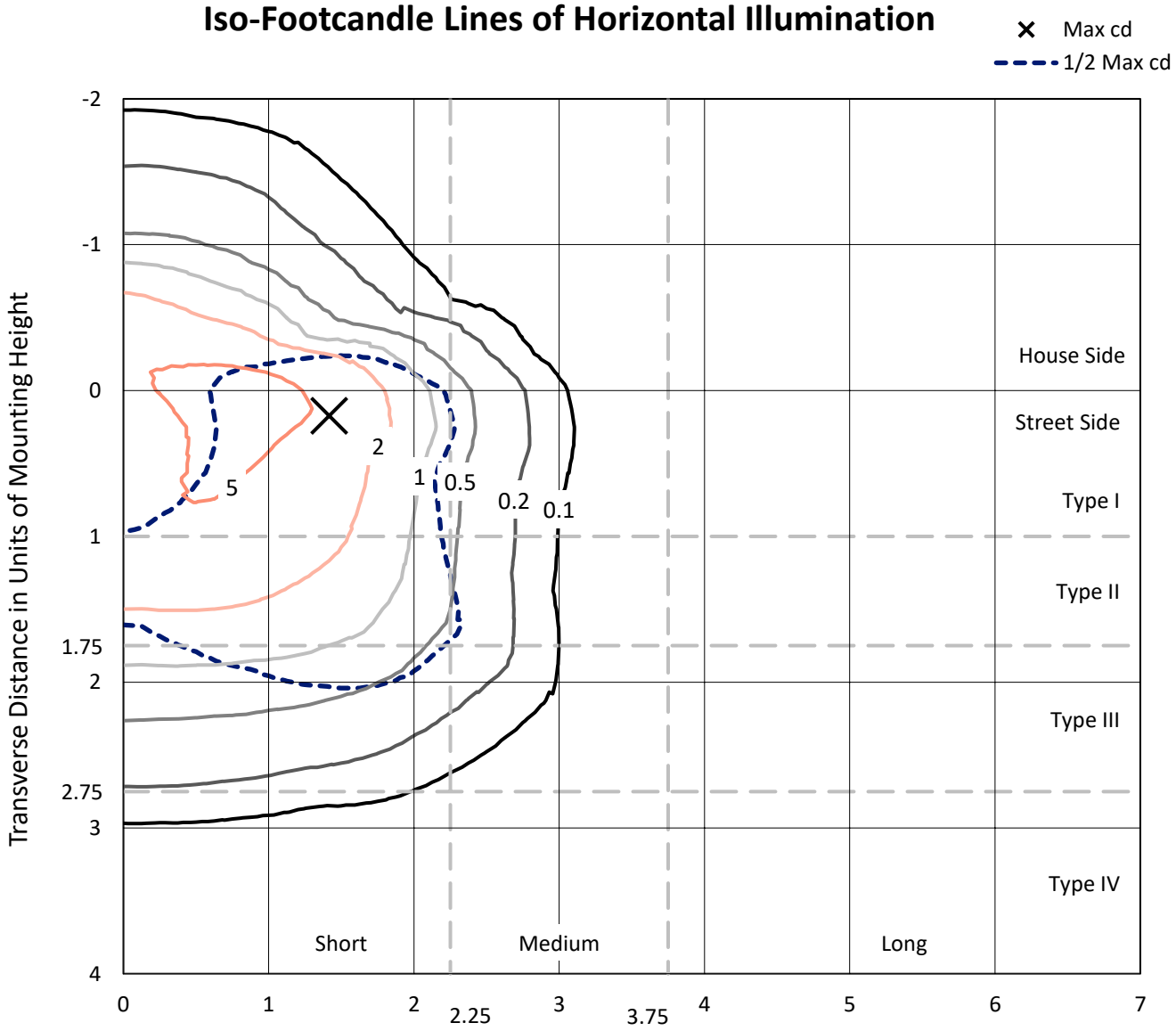
| | |
|---|---|
| Input Watts (W): | 102 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 9.5% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1501043
CATALOG NUMBER: GSS-SB2C-735-U-T3LG

## Iso-Footcandle Lines of Horizontal Illumination



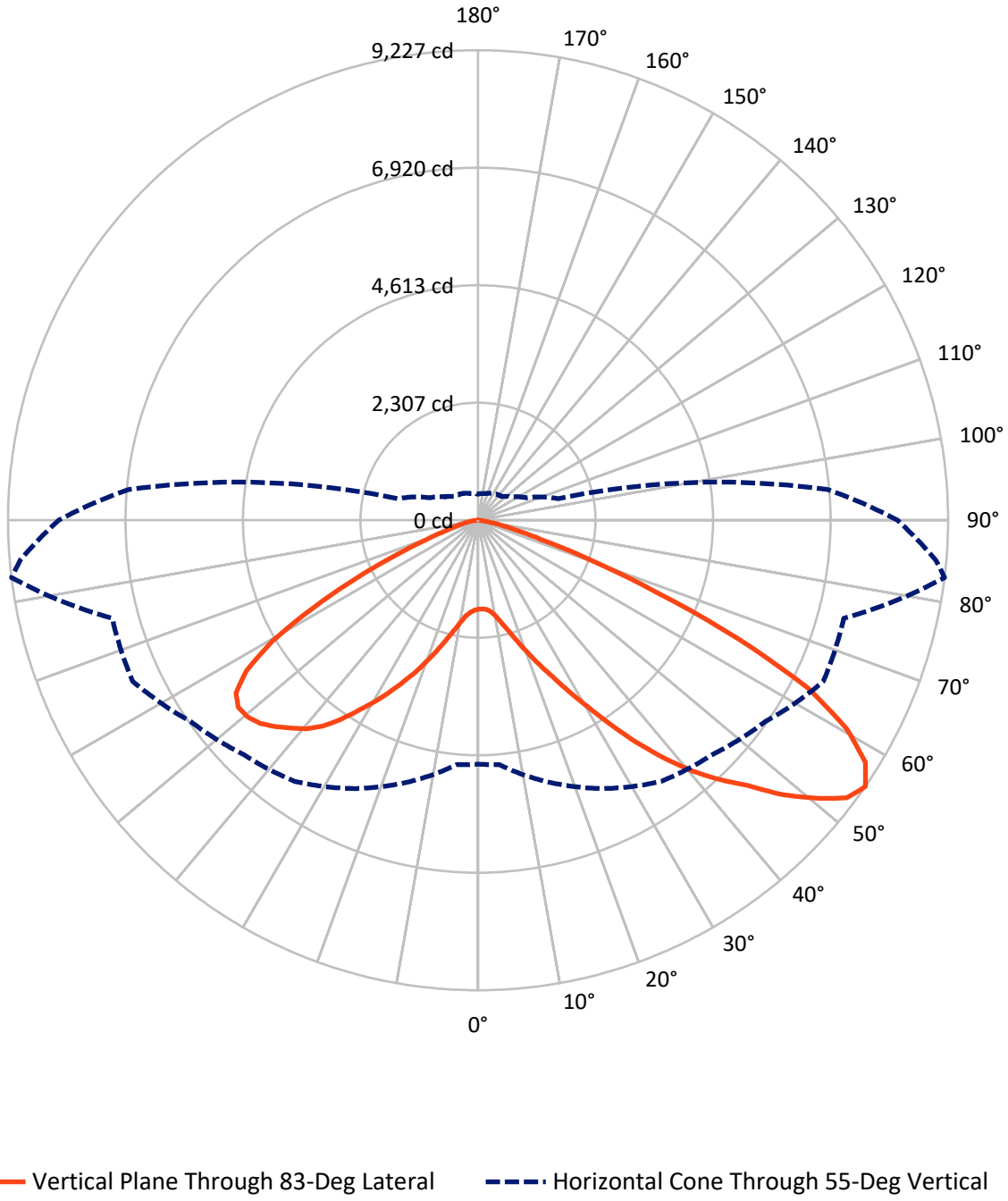

Based on 20 foot mounting height. Maximum calculated value = 7.4 fc
Type III - Short - N/A

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Scaled Data Report

REPORT NUMBER: P1501043
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## Luminous Intensity Polar Plot



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Scaled Data Report

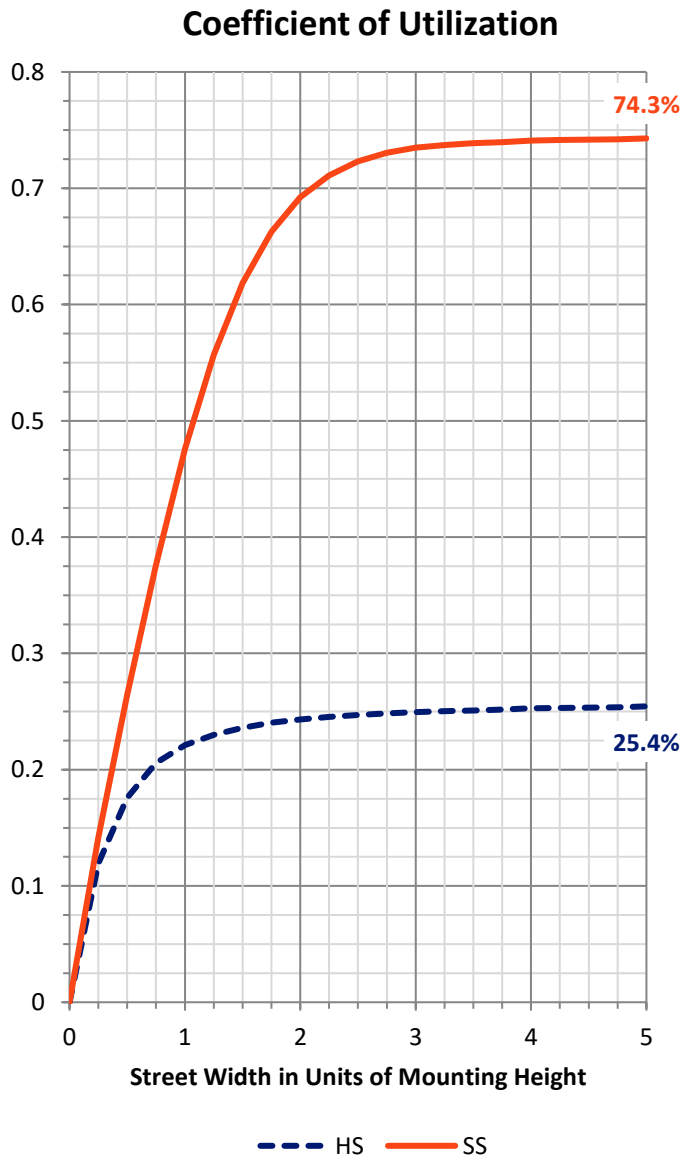
REPORT NUMBER: P1501043
CATALOG NUMBER: GSS-SB2C-735-U-T3LG

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 3620.0 | 0.0 | 3620.0 |
| | % Fixture | 25.7 | 0.0 | 25.7 |
| **Street Side** | Lumens | 10486.4 | 0.0 | 10486.4 |
| | % Fixture | 74.3 | 0.0 | 74.3 |
| **Total** | Lumens | 14106.4 | 0.0 | 14106.4 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 168.7 | 1.2 |
| 10°-20° | 549.6 | 3.9 |
| 20°-30° | 1100.4 | 7.8 |
| 30°-40° | 1957.8 | 13.9 |
| 40°-50° | 2950.3 | 20.9 |
| 50°-60° | 3595.1 | 25.5 |
| 60°-70° | 2907.2 | 20.6 |
| 70°-80° | 796.2 | 5.6 |
| 80°-90° | 81.1 | 0.6 |
| 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° | 14106.4 | 100.0 |
| 0°-180° | 14106.4 | 100.0 |



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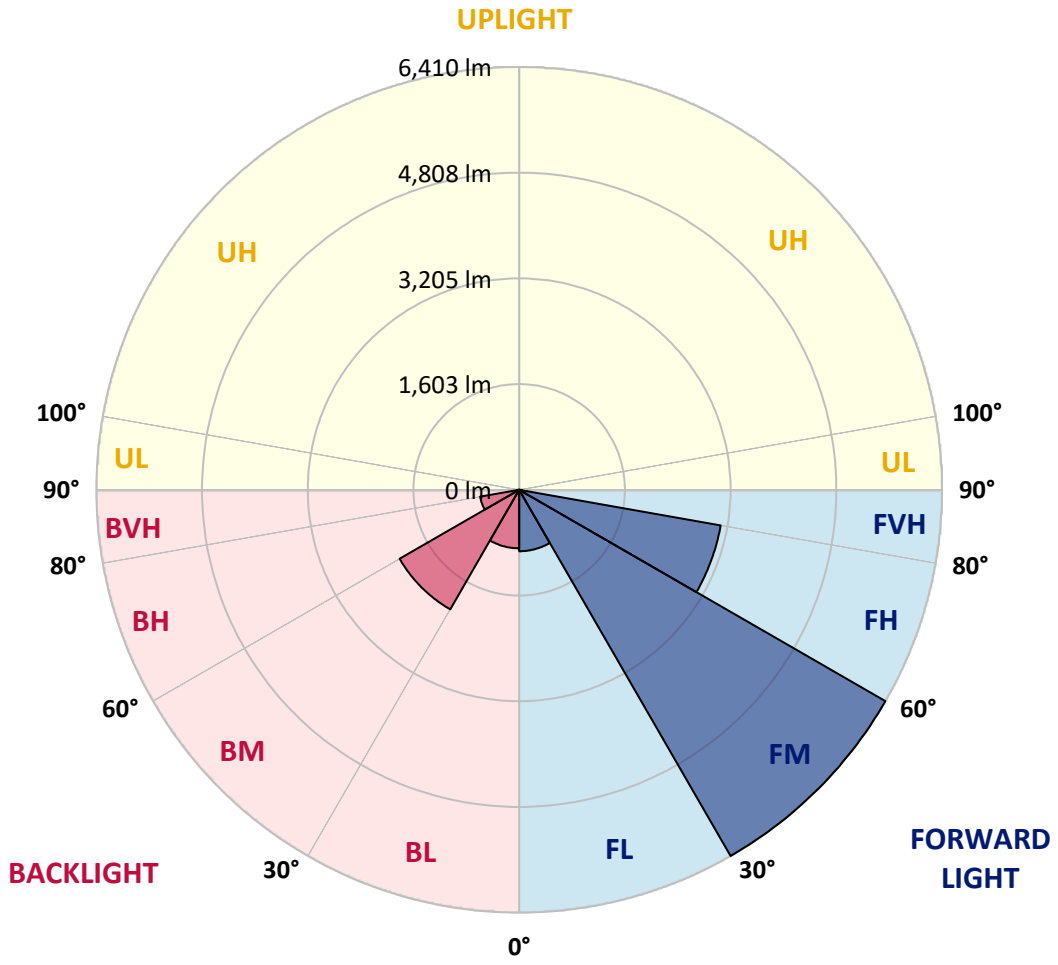
Scaled Data Report

REPORT NUMBER: P1501043
CATALOG NUMBER: GSS-SB2C-735-U-T3LG

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 931.4 | 6.6 | | | |
| FM | (30°-60°) | 6410.4 | 45.4 | | | |
| FH | (60°-80°) | 3102.4 | 22.0 | | | G2/5000 |
| FVH | (80°-90°) | 42.2 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 887.4 | 6.3 | B2/1000 | | |
| BM | (30°-60°) | 2092.8 | 14.8 | B2/2500 | | |
| BH | (60°-80°) | 601.0 | 4.3 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 38.9 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B2-U0-G2**
Type III Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 83° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1746.2 | 1746.2 | 1746.2 | 1746.2 | 1746.2 | 1746.2 | 1746.2 | 1746.2 | 1746.2 | *1746.2* | 1746.2 |
| 2.5° | 1696.1 | 1692.9 | 1689.8 | 1686.7 | 1692.9 | 1702.3 | 1711.7 | 1718.0 | 1733.7 | *1746.2* | 1740.0 |
| 5° | 1561.3 | 1555.0 | 1561.3 | 1586.3 | 1608.3 | 1645.9 | 1683.5 | 1708.6 | 1743.1 | *1758.8* | 1765.0 |
| 7.5° | 1442.1 | 1435.9 | 1442.1 | 1473.5 | 1511.1 | 1570.7 | 1649.0 | 1711.7 | 1774.4 | *1812.1* | 1818.3 |
| 10° | 1442.1 | 1445.3 | 1445.3 | 1457.8 | 1476.6 | 1536.2 | 1630.2 | 1749.4 | 1859.1 | *1912.4* | 1924.9 |
| 12.5° | 1489.1 | 1489.1 | 1489.1 | 1504.8 | 1517.4 | 1564.4 | 1671.0 | 1818.3 | 1993.9 | *2072.3* | 2081.7 |
| 15° | 1551.9 | 1548.7 | 1558.1 | 1567.5 | 1589.5 | 1636.5 | 1743.1 | 1918.7 | 2141.2 | *2260.4* | 2272.9 |
| 17.5° | 1639.6 | 1633.4 | 1642.8 | 1664.7 | 1696.1 | 1749.4 | 1856.0 | 2056.6 | 2345.0 | *2495.5* | 2514.3 |
| 20° | 1736.8 | 1733.7 | 1752.5 | 1787.0 | 1830.9 | 1896.7 | 2019.0 | 2222.8 | 2577.0 | *2768.3* | 2802.7 |
| 22.5° | 1852.8 | 1846.5 | 1881.0 | 1943.7 | 2003.3 | 2078.5 | 2225.9 | 2439.1 | 2843.5 | *3072.4* | 3106.8 |
| 25° | 1984.5 | 1984.5 | 2031.5 | 2106.8 | 2197.7 | 2332.5 | 2479.8 | 2715.0 | 3157.0 | *3401.5* | 3454.8 |
| 27.5° | 2200.8 | 2216.5 | 2235.3 | 2313.7 | 2442.2 | 2624.0 | 2780.8 | 3047.3 | 3498.7 | *3806.0* | 3824.8 |
| 30° | 2551.9 | 2545.7 | 2577.0 | 2630.3 | 2736.9 | 2928.1 | 3163.3 | 3448.6 | 3931.4 | *4254.3* | 4301.3 |
| 32.5° | 2868.6 | 2878.0 | 2921.9 | 3022.2 | 3150.7 | 3313.8 | 3595.9 | 3947.0 | 4401.6 | *4774.7* | 4796.6 |
| 35° | 3188.3 | 3194.6 | 3279.3 | 3429.7 | 3621.0 | 3802.8 | 4110.1 | 4454.9 | 4912.6 | *5354.7* | 5414.2 |
| 37.5° | 3636.7 | 3630.4 | 3715.0 | 3843.6 | 4100.6 | 4382.8 | 4630.5 | 4959.7 | 5401.7 | *5919.0* | 5987.9 |
| 40° | 3972.1 | 4006.6 | 4166.5 | 4329.5 | 4570.9 | 4862.5 | 5072.5 | 5382.9 | 5803.0 | *6470.7* | 6533.4 |
| 42.5° | 4317.0 | 4345.2 | 4558.4 | 4802.9 | 5056.8 | 5254.3 | 5417.4 | 5705.8 | 6122.8 | *6959.8* | 6994.3 |
| 45° | 4602.3 | 4639.9 | 4884.4 | 5194.8 | 5458.1 | 5658.8 | 5715.2 | 5984.8 | 6448.8 | *7430.1* | 7483.4 |
| 47.5° | 4784.1 | 4824.8 | 5113.3 | 5476.9 | 5746.6 | 5959.7 | 5940.9 | 6320.3 | 6796.8 | *8053.9* | 8035.1 |
| 50° | 4909.5 | 4934.6 | 5248.1 | 5636.8 | 5987.9 | 6129.0 | 6210.5 | 6699.6 | 7154.2 | *8577.5* | 8508.5 |
| 52.5° | 5000.4 | 5041.2 | 5326.5 | 5752.8 | 6122.8 | 6307.7 | 6527.2 | 7138.5 | 7401.9 | *9057.2* | 8903.5 |
| 55° | *4787.2* | *4818.6* | *5320.2* | *5812.4* | *6260.7* | *6505.2* | *6887.7* | *7480.2* | *7433.2* | *9226.5* | *9019.5* |
| 57.5° | 4567.8 | 4592.9 | 5056.8 | 5796.7 | 6411.2 | 6749.8 | 7298.4 | 7524.1 | 7154.2 | *8966.2* | 8706.0 |
| 60° | 4291.9 | 4310.7 | 4774.7 | 5630.6 | 6414.3 | 6941.0 | 7508.5 | 7204.3 | 6636.9 | *8311.0* | 8063.4 |
| 62.5° | 3784.0 | 3784.0 | 4295.0 | 5182.2 | 6257.6 | 7038.2 | 7452.0 | 6599.3 | 5944.1 | *7279.6* | 6937.9 |
| 65° | 3282.4 | 3260.5 | 3605.3 | 4382.8 | 5840.6 | 7013.1 | 7028.8 | 5834.3 | 4868.7 | *5614.9* | 5348.4 |
| 67.5° | 2736.9 | 2740.0 | 2943.8 | 3558.3 | 4730.8 | 6489.6 | 6135.3 | 4508.2 | 3392.1 | *3780.9* | 3642.9 |
| 70° | 1852.8 | 1899.8 | 2106.8 | 2583.3 | 3567.7 | 4599.1 | 4884.4 | 3053.5 | 2116.2 | *2348.2* | 2235.3 |
| 72.5° | 705.4 | 714.8 | 956.2 | 1354.3 | 2254.1 | 2765.1 | 3407.8 | 1708.6 | 1238.3 | *1294.8* | 1301.0 |
| 75° | 297.8 | 310.4 | 407.6 | 570.6 | 1000.1 | 1508.0 | 1793.2 | 865.3 | 752.4 | *774.4* | 768.1 |
| 77.5° | 200.6 | 206.9 | 247.7 | 307.2 | 451.4 | 605.1 | 749.3 | 489.1 | 460.9 | *432.6* | 420.1 |
| 80° | 150.5 | 150.5 | 178.7 | 206.9 | 253.9 | 310.4 | 326.0 | 247.7 | 275.9 | *228.9* | 222.6 |
| 82.5° | 97.2 | 103.5 | 112.9 | 122.3 | 144.2 | 153.6 | 131.7 | 134.8 | 159.9 | *119.1* | 112.9 |
| 85° | 47.0 | 50.2 | 53.3 | 56.4 | 56.4 | 53.3 | 47.0 | 59.6 | 81.5 | *50.2* | 47.0 |
| 87.5° | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 3.1 | 3.1 | 3.1 | *3.1* | 3.1 |
| 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: P1501043
CATALOG NUMBER: GSS-SB2C-735-U-T3LG

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1746.2 | 1746.2 | 1746.2 | 1746.2 | 1746.2 | 1746.2 | 1746.2 | 1746.2 | 1746.2 | 1746.2 | 1746.2 |
| 2.5° | 1749.4 | 1761.9 | 1771.3 | 1777.6 | 1793.2 | 1790.1 | 1799.5 | 1805.8 | 1812.1 | 1821.5 | 1808.9 |
| 5° | 1780.7 | 1802.7 | 1827.7 | 1846.5 | 1865.4 | 1874.8 | 1877.9 | 1884.2 | 1887.3 | 1893.6 | 1890.4 |
| 7.5° | 1849.7 | 1874.8 | 1912.4 | 1931.2 | 1946.9 | 1946.9 | 1937.5 | 1934.3 | 1924.9 | 1931.2 | 1931.2 |
| 10° | 1965.7 | 2003.3 | 2044.1 | 2047.2 | 2028.4 | 2006.4 | 1971.9 | 1953.1 | 1928.1 | 1921.8 | 1915.5 |
| 12.5° | 2135.0 | 2185.1 | 2216.5 | 2194.5 | 2128.7 | 2047.2 | 1956.3 | 1871.6 | 1805.8 | 1777.6 | 1771.3 |
| 15° | 2326.2 | 2388.9 | 2395.2 | 2332.5 | 2213.3 | 2015.8 | 1824.6 | 1730.5 | 1696.1 | 1696.1 | 1692.9 |
| 17.5° | 2589.6 | 2633.4 | 2608.4 | 2457.9 | 2191.4 | 1868.5 | 1730.5 | 1714.9 | 1724.3 | 1736.8 | 1736.8 |
| 20° | 2865.4 | 2915.6 | 2812.1 | 2545.7 | 2056.6 | 1780.7 | 1740.0 | 1752.5 | 1774.4 | 1787.0 | 1783.8 |
| 22.5° | 3194.6 | 3219.7 | 3019.1 | 2548.8 | 1912.4 | 1758.8 | 1758.8 | 1774.4 | 1790.1 | 1808.9 | 1808.9 |
| 25° | 3533.2 | 3523.8 | 3210.3 | 2432.8 | 1830.9 | 1752.5 | 1746.2 | 1758.8 | 1765.0 | 1774.4 | 1771.3 |
| 27.5° | 3912.5 | 3862.4 | 3357.6 | 2247.8 | 1805.8 | 1733.7 | 1702.3 | 1689.8 | 1696.1 | 1705.5 | 1708.6 |
| 30° | 4348.3 | 4229.2 | 3476.8 | 2131.8 | 1796.4 | 1689.8 | 1614.6 | 1580.1 | 1573.8 | 1586.3 | 1586.3 |
| 32.5° | 4853.1 | 4596.0 | 3548.9 | 2116.2 | 1787.0 | 1611.4 | 1511.1 | 1445.3 | 1432.7 | 1439.0 | 1454.7 |
| 35° | 5370.3 | 5038.0 | 3530.1 | 2156.9 | 1790.1 | 1548.7 | 1401.4 | 1313.6 | 1301.0 | 1307.3 | 1323.0 |
| 37.5° | 5912.7 | 5458.1 | 3458.0 | 2219.6 | 1765.0 | 1464.1 | 1301.0 | 1194.5 | 1175.6 | 1188.2 | 1194.5 |
| 40° | 6332.8 | 5812.4 | 3279.3 | 2244.7 | 1721.1 | 1357.5 | 1185.0 | 1094.1 | 1044.0 | 1040.8 | 1056.5 |
| 42.5° | 6721.6 | 6091.4 | 3084.9 | 2203.9 | 1630.2 | 1244.6 | 1065.9 | 975.0 | 896.6 | 837.1 | 837.1 |
| 45° | 7110.3 | 6373.6 | 2887.4 | 2087.9 | 1479.7 | 1125.5 | 940.5 | 818.2 | 727.3 | 683.4 | 686.6 |
| 47.5° | 7499.0 | 6646.3 | 2652.3 | 1912.4 | 1329.3 | 1000.1 | 805.7 | 708.5 | 645.8 | 611.3 | 611.3 |
| 50° | 7859.6 | 6843.8 | 2351.3 | 1633.4 | 1156.8 | 874.7 | 711.7 | 655.2 | 608.2 | 576.8 | 570.6 |
| 52.5° | 8176.2 | 6975.5 | 1943.7 | 1294.8 | 968.7 | 733.6 | 661.5 | 617.6 | 583.1 | 548.6 | 539.2 |
| 55° | *8232.6* | *6887.7* | *1627.1* | *1040.8* | *799.4* | *658.4* | *623.9* | *586.3* | *539.2* | *523.6* | *514.1* |
| 57.5° | 7884.7 | 6423.7 | 1373.2 | 877.8 | 683.4 | 605.1 | 592.5 | 548.6 | 511.0 | 495.3 | 485.9 |
| 60° | 7292.1 | 5580.4 | 1134.9 | 752.4 | 608.2 | 554.9 | 570.6 | 526.7 | 467.1 | 457.7 | 448.3 |
| 62.5° | 6226.2 | 4354.6 | 906.0 | 633.3 | 551.8 | 517.3 | 533.0 | 470.3 | 420.1 | 407.6 | 404.4 |
| 65° | 4840.5 | 3116.2 | 761.8 | 558.0 | 507.9 | 479.7 | 473.4 | 417.0 | 379.3 | 369.9 | 369.9 |
| 67.5° | 3379.6 | 1981.4 | 636.4 | 511.0 | 451.4 | 432.6 | 429.5 | 391.9 | 366.8 | 357.4 | 357.4 |
| 70° | 2069.1 | 1200.7 | 536.1 | 467.1 | 398.2 | 363.7 | 385.6 | 379.3 | 341.7 | 332.3 | 329.2 |
| 72.5° | 1075.3 | 717.9 | 470.3 | 429.5 | 335.5 | 310.4 | 344.9 | 348.0 | 316.6 | 329.2 | 326.0 |
| 75° | 623.9 | 498.5 | 410.7 | 379.3 | 266.5 | 260.2 | 301.0 | 332.3 | 307.2 | 316.6 | 310.4 |
| 77.5° | 357.4 | 319.8 | 316.6 | 310.4 | 210.0 | 213.2 | 269.6 | 297.8 | 263.3 | 272.7 | 250.8 |
| 80° | 197.5 | 206.9 | 219.5 | 194.4 | 147.3 | 166.2 | 216.3 | 238.3 | 200.6 | 197.5 | 181.8 |
| 82.5° | 103.5 | 128.5 | 147.3 | 125.4 | 84.6 | 100.3 | 147.3 | 147.3 | 128.5 | 122.3 | 119.1 |
| 85° | 47.0 | 53.3 | 69.0 | 62.7 | 31.4 | 37.6 | 69.0 | 75.2 | 65.8 | 59.6 | 56.4 |
| 87.5° | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 6.3 | 9.4 | 3.1 | 3.1 | 3.1 |
| 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: SP1-2407-184-5

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-735-U-5WQ

Data in this report applies to families of products including GSS-SB1A-735-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

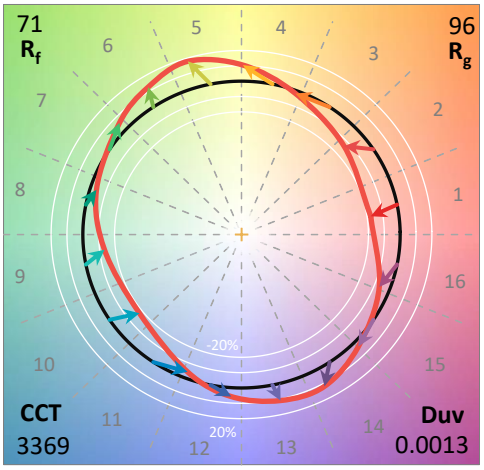
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-5 |
| 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-735-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 3500K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 3369 |
| CIE u': | 0.2386 |
| CIE v': | 0.5156 |
| Duv: | 0.0013 |
| CIE x: | 0.4143 |
| CIE y: | 0.3980 |
| CIE z: | 0.1877 |
| Peak Wavelength (nm): | 590 |
| Dominant Wavelength (nm): | 580 |
| Purity: | 43.80166 |
| Rf: | 71.4 |
| Rg: | 96 |

| | |
|---|---|
| CRI (Ra): | 70.1 |
| R1: | 66.6 |
| R2: | 77.6 |
| R3: | 88.5 |
| R4: | 69.5 |
| R5: | 66.4 |
| R6: | 69.6 |
| R7: | 77.5 |
| R8: | 44.9 |
| R9: | -40.2 |
| R10: | 49.1 |
| R11: | 66.3 |
| R12: | 45.7 |
| R13: | 68.0 |
| R14: | 93.4 |
| R15: | 57.6 |




## Test Conditions

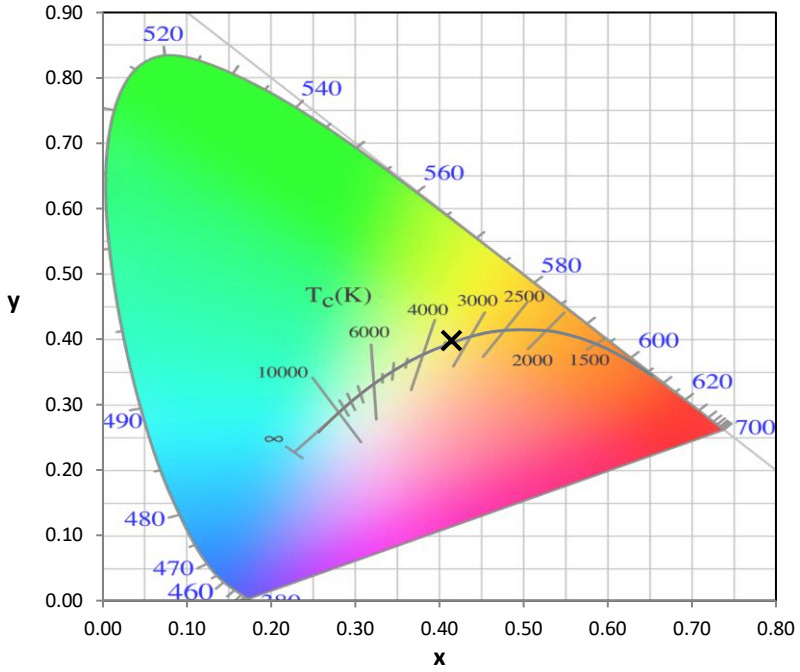
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-5

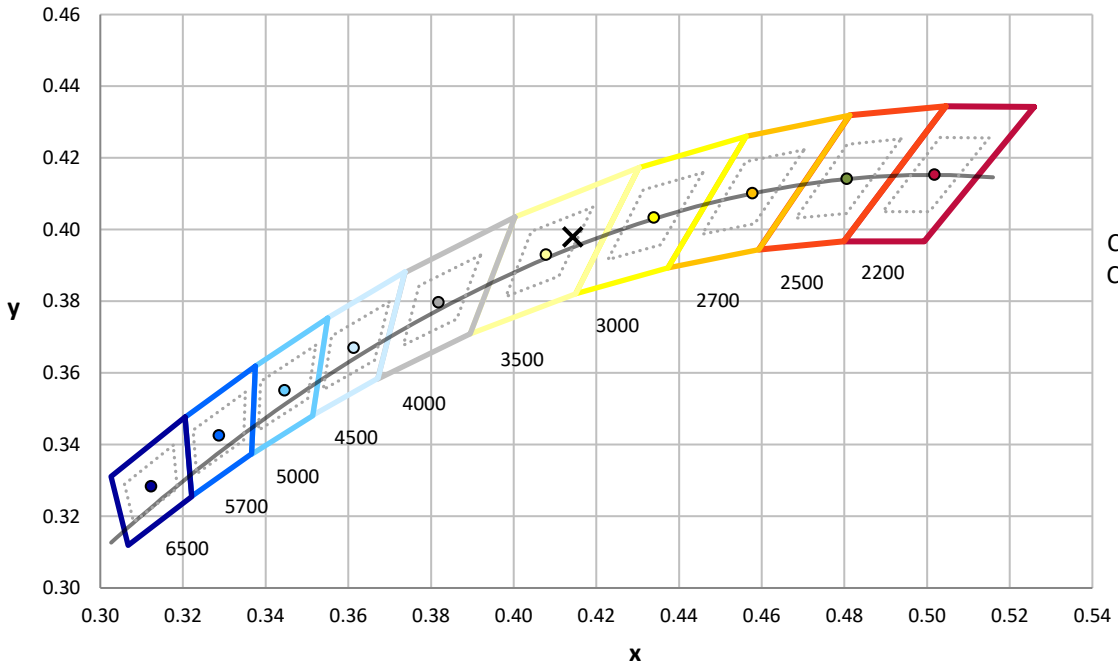
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

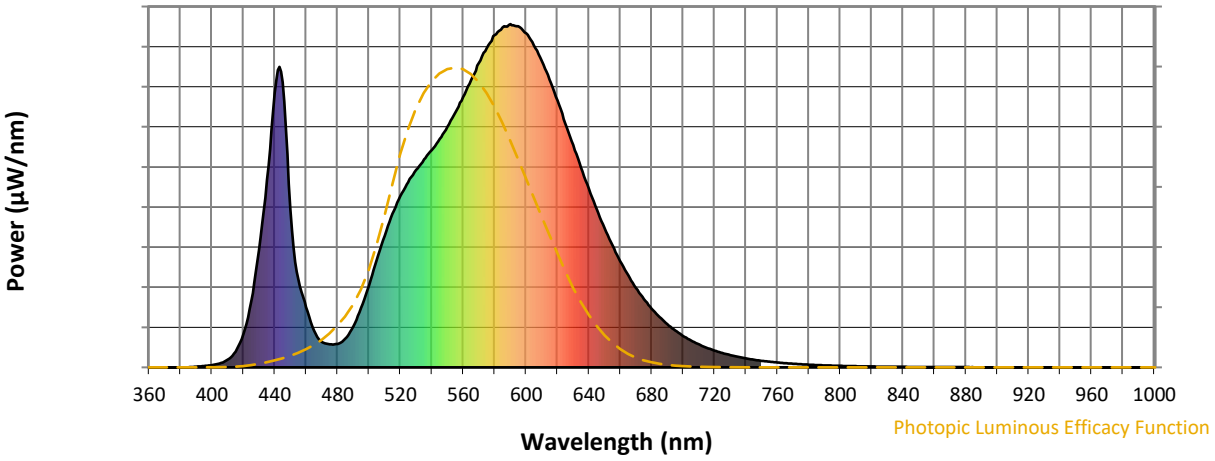



CCT = 3369K
CIE x = 0.4143
CIE y = 0.3980
Duv = 0.0013

Point lies inside the ANSI 3500K 4-step quadrangle

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## Photopic Flux vs. Wavelength

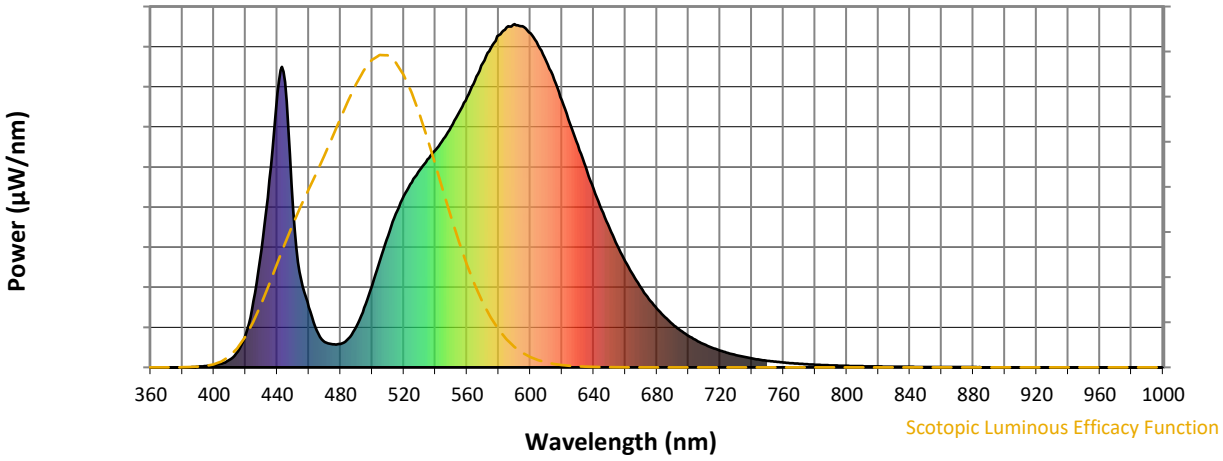



## Photopic Lumens: NR

| 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 | 119 | NR | 620 | 778 | NR | 750 | 19 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 173 | NR | 625 | 711 | NR | 755 | 16 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 239 | NR | 630 | 648 | NR | 760 | 14 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 313 | NR | 635 | 582 | NR | 765 | 12 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 383 | NR | 640 | 520 | NR | 770 | 11 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 448 | NR | 645 | 460 | NR | 775 | 9 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 500 | NR | 650 | 406 | NR | 780 | 8 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 539 | NR | 655 | 355 | NR | 785 | 7 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 575 | NR | 660 | 309 | NR | 790 | 6 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 606 | NR | 665 | 269 | NR | 795 | 5 | NR | 925 | 0 | NR |
| 410 | 22 | NR | 540 | 633 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 45 | NR | 545 | 666 | NR | 675 | 199 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 96 | NR | 550 | 701 | NR | 680 | 171 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 193 | NR | 555 | 743 | NR | 685 | 147 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 341 | NR | 560 | 788 | NR | 690 | 126 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 547 | NR | 565 | 837 | NR | 695 | 107 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 799 | NR | 570 | 887 | NR | 700 | 92 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 831 | NR | 575 | 931 | NR | 705 | 78 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 461 | NR | 580 | 967 | NR | 710 | 67 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 256 | NR | 585 | 990 | NR | 715 | 57 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 176 | NR | 590 | 1000 | NR | 720 | 49 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 107 | NR | 595 | 994 | NR | 725 | 42 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 74 | NR | 600 | 973 | NR | 730 | 36 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 67 | NR | 605 | 938 | NR | 735 | 31 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 68 | NR | 610 | 892 | NR | 740 | 26 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 84 | NR | 615 | 838 | NR | 745 | 22 | NR | 875 | 1 | NR | | | |

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## Scotopic Flux vs. Wavelength

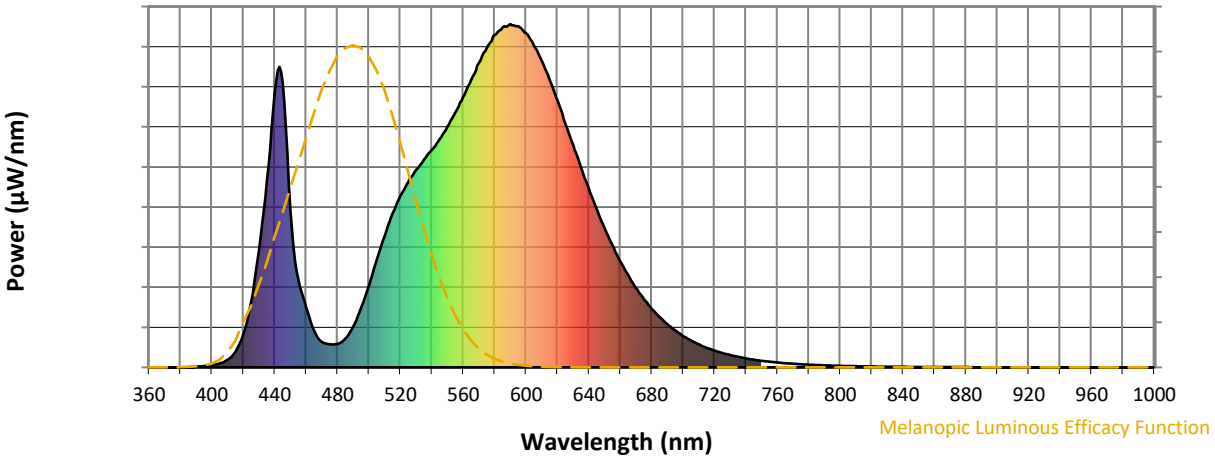



**Scotopic Lumens: NR** **S/P: 1.29**

| 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 | 119 | NR | 620 | 778 | NR | 750 | 19 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 173 | NR | 625 | 711 | NR | 755 | 16 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 239 | NR | 630 | 648 | NR | 760 | 14 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 313 | NR | 635 | 582 | NR | 765 | 12 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 383 | NR | 640 | 520 | NR | 770 | 11 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 448 | NR | 645 | 460 | NR | 775 | 9 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 500 | NR | 650 | 406 | NR | 780 | 8 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 539 | NR | 655 | 355 | NR | 785 | 7 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 575 | NR | 660 | 309 | NR | 790 | 6 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 606 | NR | 665 | 269 | NR | 795 | 5 | NR | 925 | 0 | NR |
| 410 | 22 | NR | 540 | 633 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 45 | NR | 545 | 666 | NR | 675 | 199 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 96 | NR | 550 | 701 | NR | 680 | 171 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 193 | NR | 555 | 743 | NR | 685 | 147 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 341 | NR | 560 | 788 | NR | 690 | 126 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 547 | NR | 565 | 837 | NR | 695 | 107 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 799 | NR | 570 | 887 | NR | 700 | 92 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 831 | NR | 575 | 931 | NR | 705 | 78 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 461 | NR | 580 | 967 | NR | 710 | 67 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 256 | NR | 585 | 990 | NR | 715 | 57 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 176 | NR | 590 | 1000 | NR | 720 | 49 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 107 | NR | 595 | 994 | NR | 725 | 42 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 74 | NR | 600 | 973 | NR | 730 | 36 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 67 | NR | 605 | 938 | NR | 735 | 31 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 68 | NR | 610 | 892 | NR | 740 | 26 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 84 | NR | 615 | 838 | NR | 745 | 22 | NR | 875 | 1 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.36**

| 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 | 119 | NR | 620 | 778 | NR | 750 | 19 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 173 | NR | 625 | 711 | NR | 755 | 16 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 239 | NR | 630 | 648 | NR | 760 | 14 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 313 | NR | 635 | 582 | NR | 765 | 12 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 383 | NR | 640 | 520 | NR | 770 | 11 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 448 | NR | 645 | 460 | NR | 775 | 9 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 500 | NR | 650 | 406 | NR | 780 | 8 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 539 | NR | 655 | 355 | NR | 785 | 7 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 575 | NR | 660 | 309 | NR | 790 | 6 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 606 | NR | 665 | 269 | NR | 795 | 5 | NR | 925 | 0 | NR |
| 410 | 22 | NR | 540 | 633 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 45 | NR | 545 | 666 | NR | 675 | 199 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 96 | NR | 550 | 701 | NR | 680 | 171 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 193 | NR | 555 | 743 | NR | 685 | 147 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 341 | NR | 560 | 788 | NR | 690 | 126 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 547 | NR | 565 | 837 | NR | 695 | 107 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 799 | NR | 570 | 887 | NR | 700 | 92 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 831 | NR | 575 | 931 | NR | 705 | 78 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 461 | NR | 580 | 967 | NR | 710 | 67 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 256 | NR | 585 | 990 | NR | 715 | 57 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 176 | NR | 590 | 1000 | NR | 720 | 49 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 107 | NR | 595 | 994 | NR | 725 | 42 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 74 | NR | 600 | 973 | NR | 730 | 36 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 67 | NR | 605 | 938 | NR | 735 | 31 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 68 | NR | 610 | 892 | NR | 740 | 26 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 84 | NR | 615 | 838 | NR | 745 | 22 | NR | 875 | 1 | NR | | | |

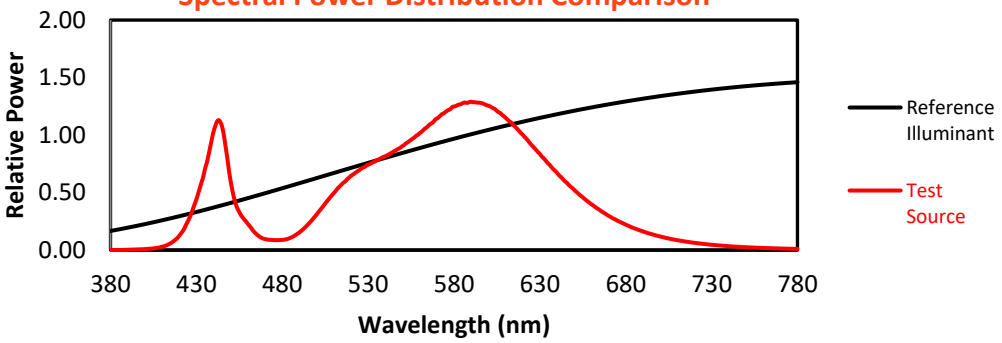
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# TM-30-18

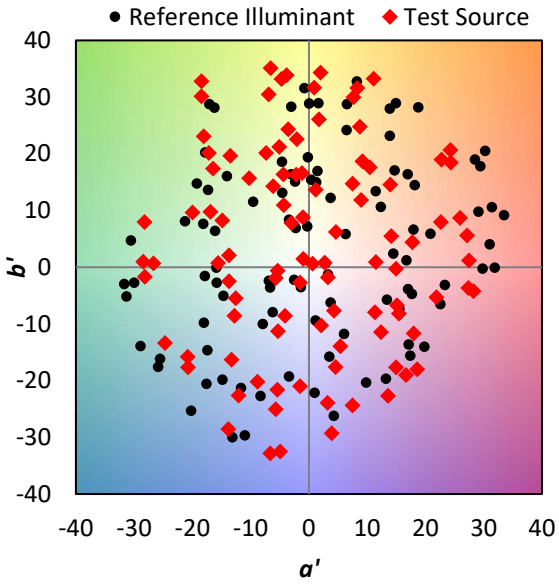
## Summary

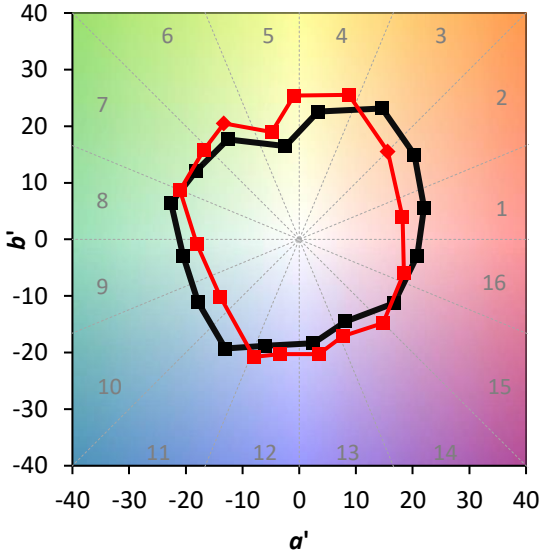
$R_f$ = 71.4
$R_g$ = 96
CIE $R_a$ = 70.1
$R_9$ = -40.2

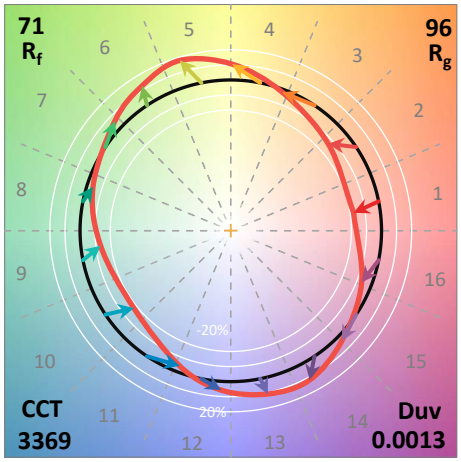
## Spectral Power Distribution Comparison

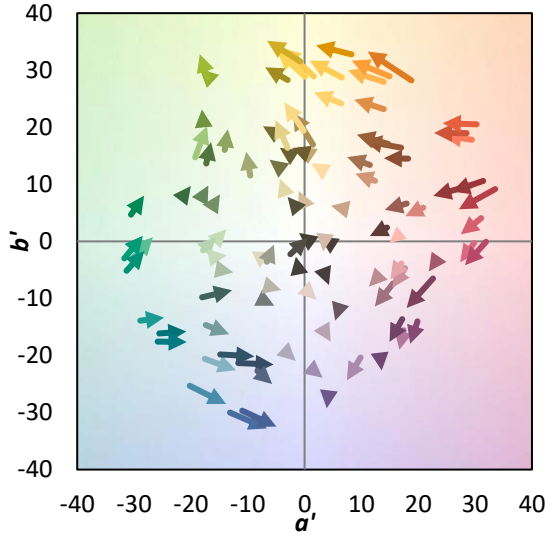



## Color Vector Graphics



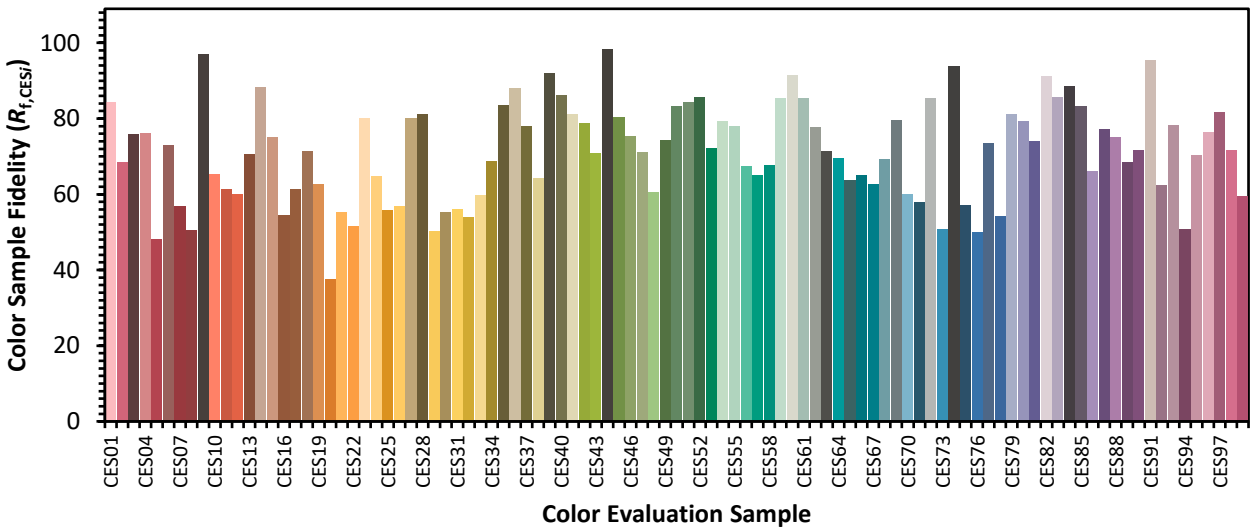



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## Individual Sample Fidelity Index ($R_{f,i}$)

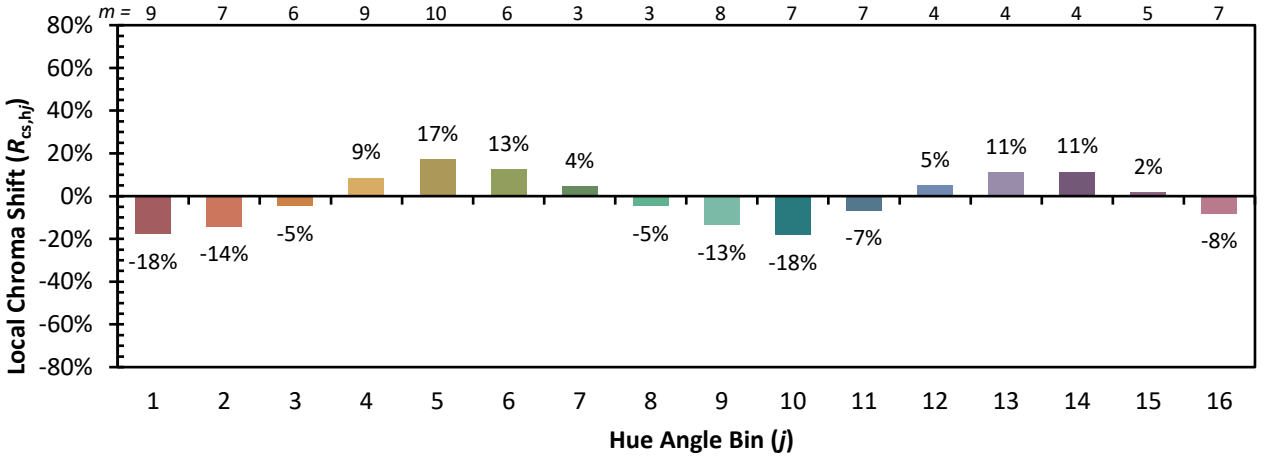
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 57 | CES51 = 84 | CES76 = 50 |
| CES02 = 62 | CES27 = 80 | CES52 = 86 | CES77 = 74 |
| CES03 = 31 | CES28 = 81 | CES53 = 72 | CES78 = 54 |
| CES04 = 70 | CES29 = 50 | CES54 = 79 | CES79 = 81 |
| CES05 = 48 | CES30 = 55 | CES55 = 78 | CES80 = 79 |
| CES06 = 51 | CES31 = 56 | CES56 = 67 | CES81 = 74 |
| CES07 = 40 | CES32 = 54 | CES57 = 65 | CES82 = 91 |
| CES08 = 39 | CES33 = 60 | CES58 = 68 | CES83 = 86 |
| CES09 = 29 | CES34 = 69 | CES59 = 85 | CES84 = 89 |
| CES10 = 75 | CES35 = 83 | CES60 = 91 | CES85 = 83 |
| CES11 = 58 | CES36 = 88 | CES61 = 85 | CES86 = 66 |
| CES12 = 64 | CES37 = 78 | CES62 = 78 | CES87 = 77 |
| CES13 = 43 | CES38 = 64 | CES63 = 71 | CES88 = 75 |
| CES14 = 74 | CES39 = 92 | CES64 = 70 | CES89 = 68 |
| CES15 = 71 | CES40 = 86 | CES65 = 64 | CES90 = 72 |
| CES16 = 47 | CES41 = 81 | CES66 = 65 | CES91 = 95 |
| CES17 = 50 | CES42 = 79 | CES67 = 63 | CES92 = 62 |
| CES18 = 56 | CES43 = 71 | CES68 = 69 | CES93 = 78 |
| CES19 = 72 | CES44 = 98 | CES69 = 80 | CES94 = 51 |
| CES20 = 65 | CES45 = 80 | CES70 = 60 | CES95 = 70 |
| CES21 = 87 | CES46 = 75 | CES71 = 58 | CES96 = 76 |
| CES22 = 79 | CES47 = 71 | CES72 = 85 | CES97 = 82 |
| CES23 = 92 | CES48 = 61 | CES73 = 51 | CES98 = 72 |
| CES24 = 91 | CES49 = 74 | CES74 = 94 | CES99 = 60 |
| CES25 = 72 | CES50 = 83 | CES75 = 57 | |

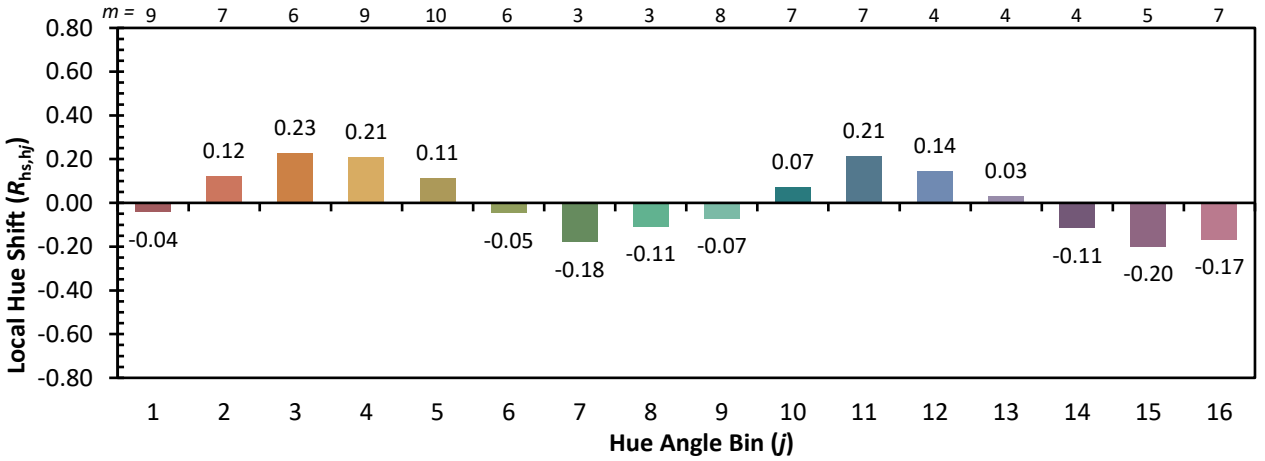


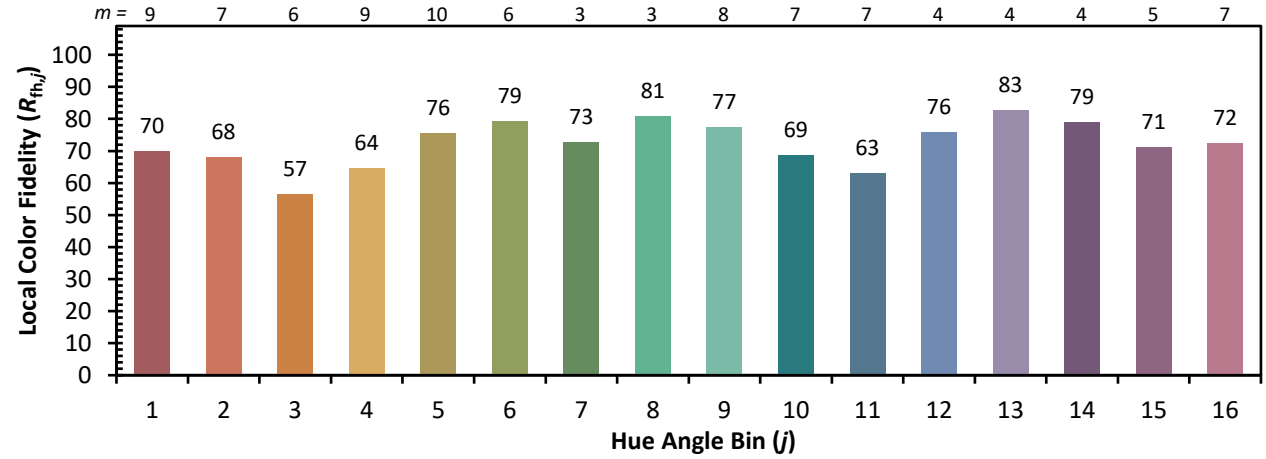
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## Color Rendition by Hue-Angle Bin



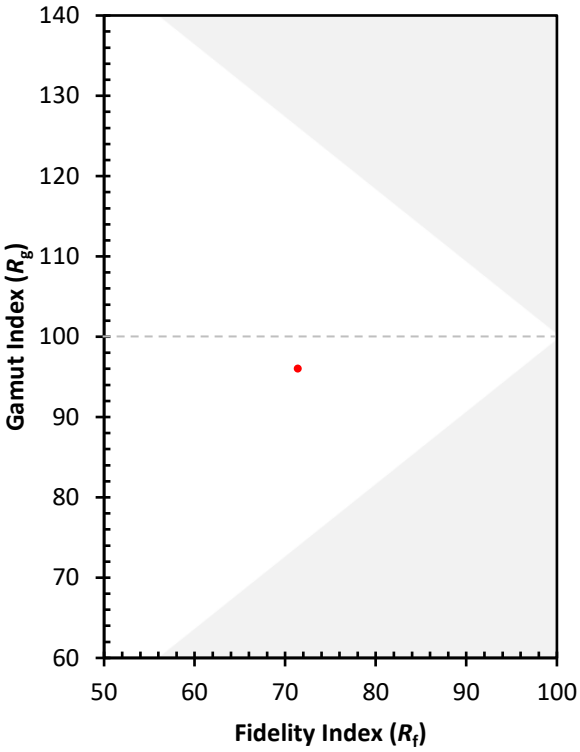



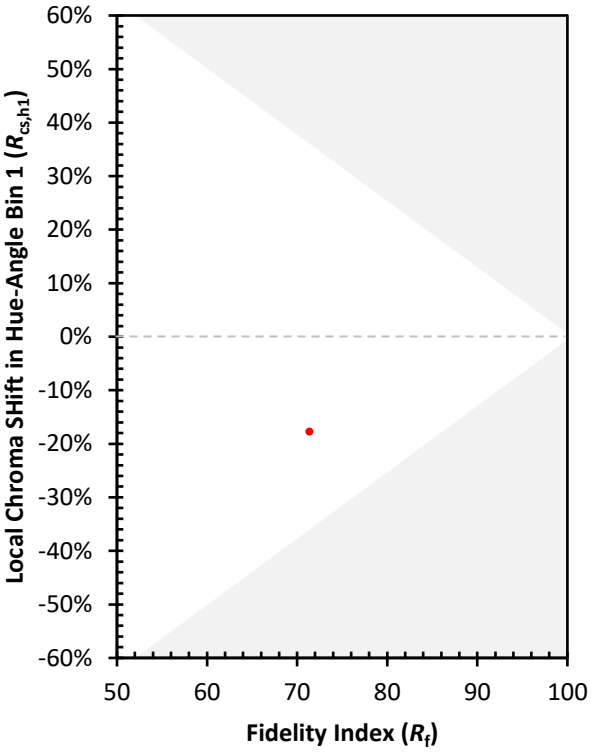



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## Measure Comparisons




(END OF REPORT)