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: P1359898

Luminaire Tested: **GSS-SB1D-740-U-T3**

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: | P1359898 |
| Test Lab: | INNOVATION CENTER(G3) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB1D-740-U-T3 |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 1SQUARE 76W 70CRI 4000K FIXTURE w/ TYPE III DISTRIBUTION OPTIC |
| Light Source: | (26) 4000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 9609.9 lumens |
| Efficiency: | N/A |
| Efficacy: | 126.4 lumens/watt |
| Luminous Opening: | Rectangular (W 0.5' x L: 0.5' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B2 - U0 - G2 |

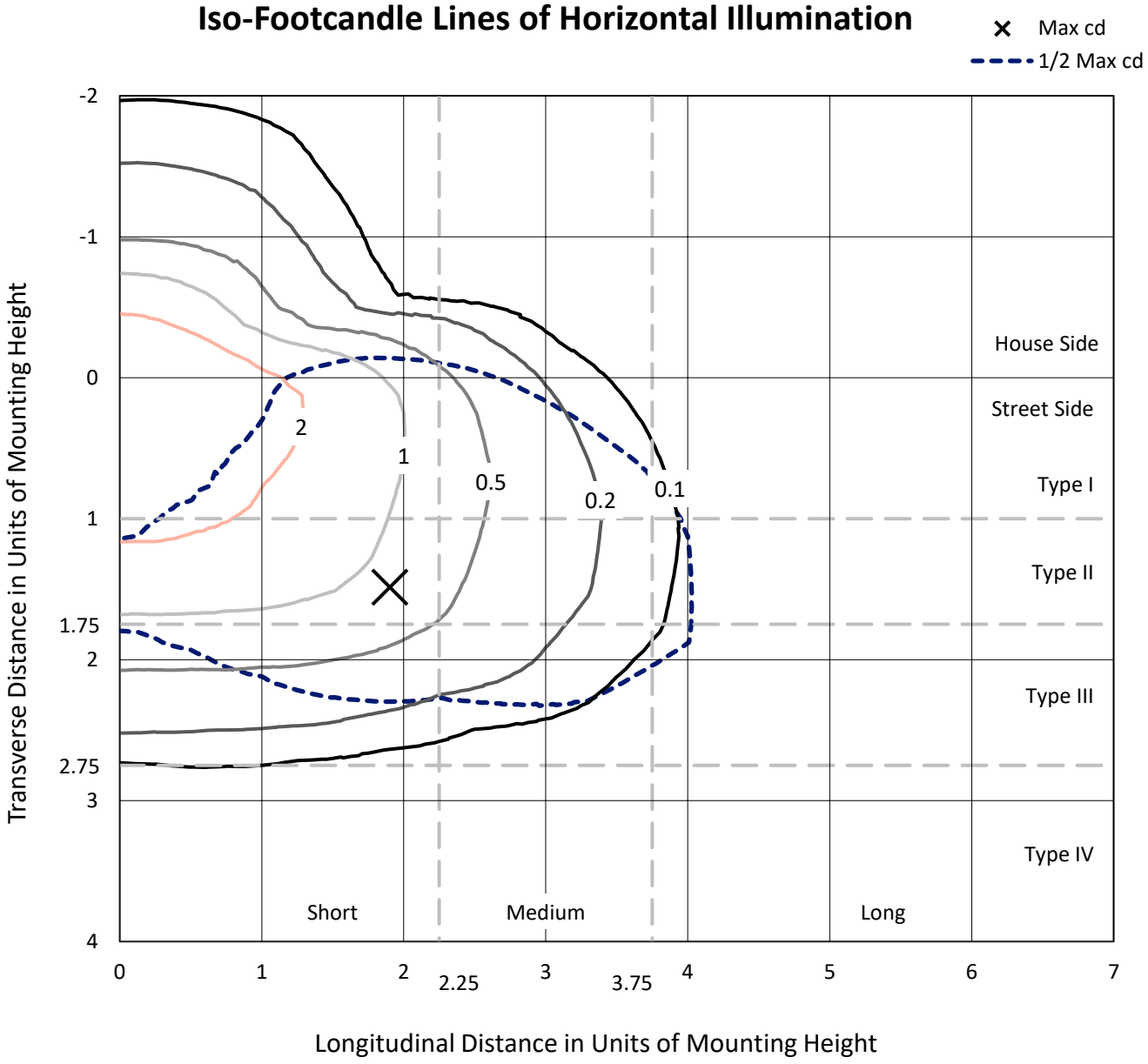
| | |
|---|---|
| Input Watts (W): | 76 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 6.7% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1359898
CATALOG NUMBER: GSS-SB1D-740-U-T3

## Iso-Footcandle Lines of Horizontal Illumination



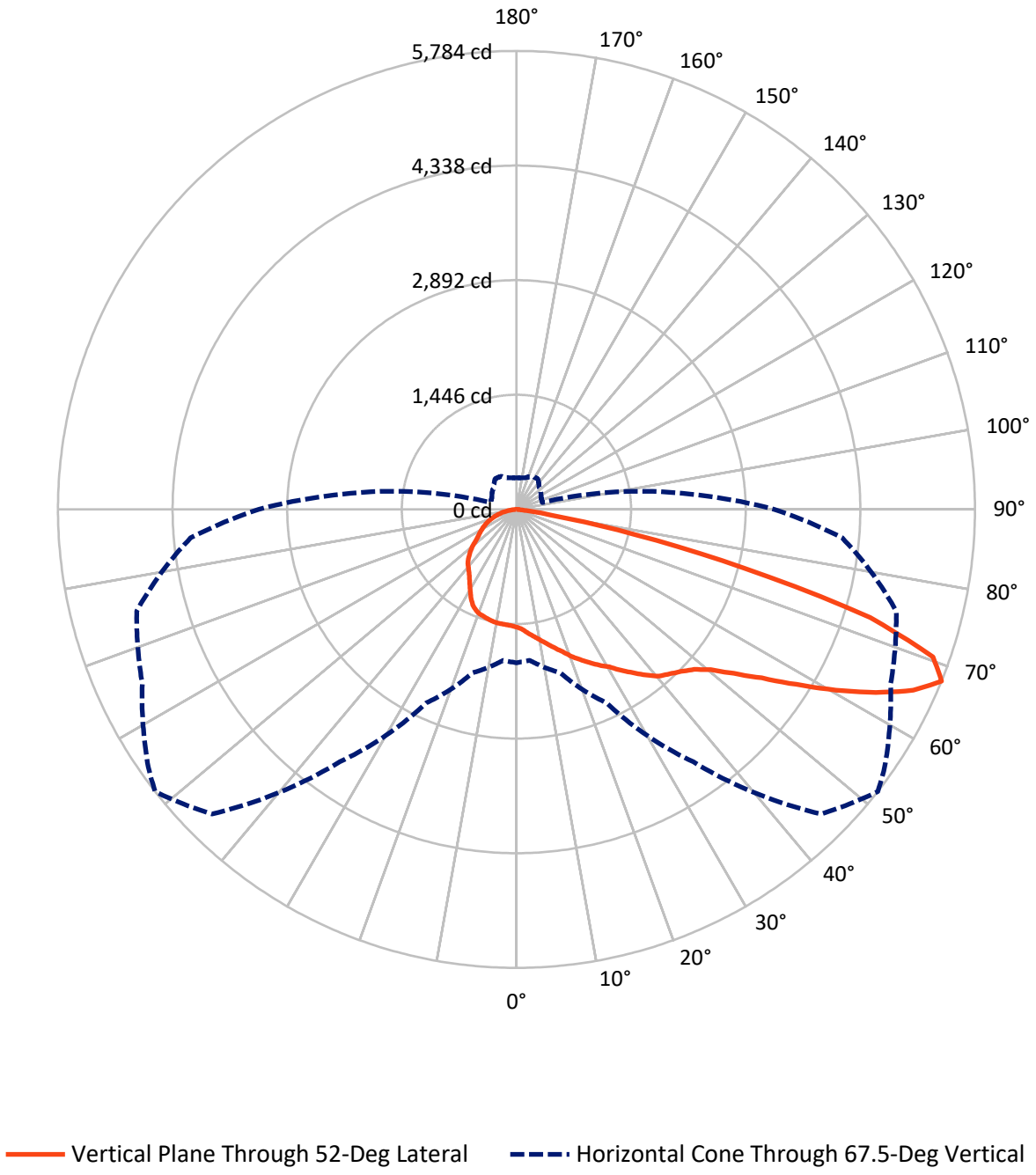

Based on 20 foot mounting height. Maximum calculated value = 4.2 fc
Type III - Short - N/A

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REPORT NUMBER: P1359898
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## Luminous Intensity Polar Plot



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Scaled Data Report

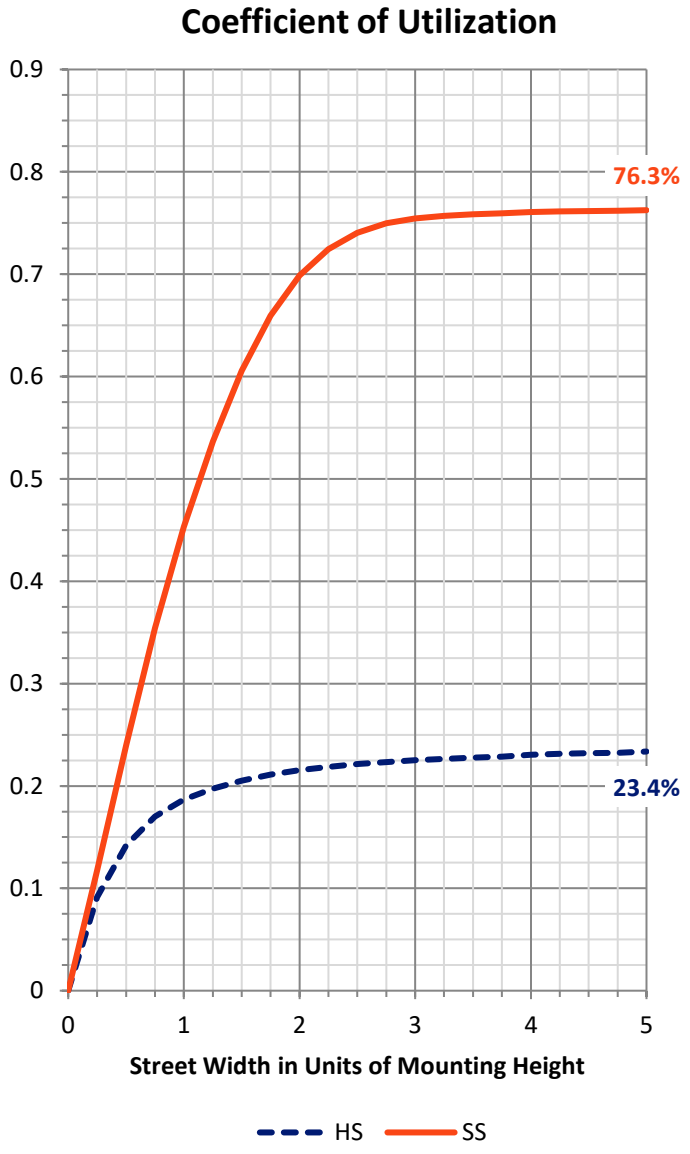
REPORT NUMBER: P1359898
CATALOG NUMBER: GSS-SB1D-740-U-T3

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 2273.5 | 0.0 | 2273.5 |
| | % Fixture | 23.7 | 0.0 | 23.7 |
| **Street Side** | Lumens | 7336.3 | 0.0 | 7336.3 |
| | % Fixture | 76.3 | 0.0 | 76.3 |
| **Total** | Lumens | 9609.9 | 0.0 | 9609.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 145.8 | 1.5 |
| 10°-20° | 459.9 | 4.8 |
| 20°-30° | 786.4 | 8.2 |
| 30°-40° | 1140.8 | 11.9 |
| 40°-50° | 1481.8 | 15.4 |
| 50°-60° | 2007.8 | 20.9 |
| 60°-70° | 2342.0 | 24.4 |
| 70°-80° | 1154.7 | 12.0 |
| 80°-90° | 90.6 | 0.9 |
| 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° | 9609.9 | 100.0 |
| 0°-180° | 9609.9 | 100.0 |



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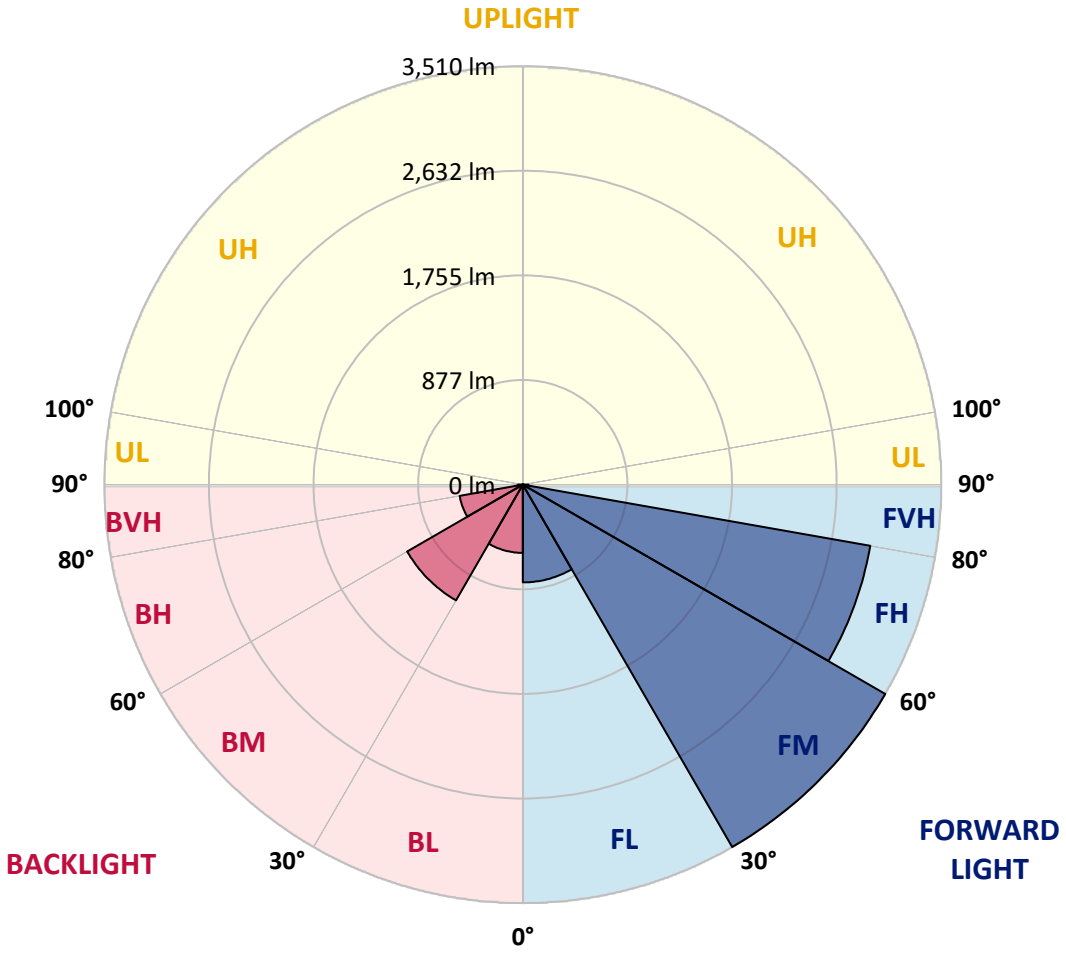
Scaled Data Report

REPORT NUMBER: P1359898
CATALOG NUMBER: GSS-SB1D-740-U-T3

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 819.8 | 8.5 | | | |
| FM | (30°-60°) | 3509.8 | 36.5 | | | |
| FH | (60°-80°) | 2959.1 | 30.8 | | | G2/5000 |
| FVH | (80°-90°) | 47.6 | 0.5 | | | G1/100 |
| BL | (0°-30°) | 572.3 | 6.0 | B2/1000 | | |
| BM | (30°-60°) | 1120.5 | 11.7 | B2/2500 | | |
| BH | (60°-80°) | 537.6 | 5.6 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 43.1 | 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 III Short



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REPORT NUMBER: P1359898
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 52° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1487.1 | 1487.1 | 1487.1 | 1487.1 | 1487.1 | 1487.1 | *1487.1* | 1487.1 | 1487.1 | 1487.1 | 1487.1 |
| 2.5° | 1532.1 | 1529.9 | 1527.8 | 1519.2 | 1519.2 | 1521.4 | *1517.1* | 1519.2 | 1517.1 | 1506.4 | 1497.8 |
| 5° | 1617.7 | 1598.4 | 1594.1 | 1589.8 | 1594.1 | 1581.3 | *1570.6* | 1564.2 | 1540.6 | 1534.2 | 1508.5 |
| 7.5° | 1654.0 | 1656.2 | 1654.0 | 1645.5 | 1639.1 | 1639.1 | *1621.9* | 1613.4 | 1598.4 | 1572.7 | 1529.9 |
| 10° | 1705.4 | 1703.3 | 1696.8 | 1701.1 | 1713.9 | 1692.6 | *1679.7* | 1673.3 | 1647.6 | 1611.2 | 1570.6 |
| 12.5° | 1797.4 | 1782.4 | 1778.1 | 1771.7 | 1769.6 | 1756.7 | *1741.8* | 1743.9 | 1713.9 | 1658.3 | 1615.5 |
| 15° | 1876.6 | 1859.5 | 1878.7 | 1865.9 | 1848.8 | 1829.5 | *1814.5* | 1801.7 | 1767.4 | 1716.1 | 1662.6 |
| 17.5° | 1951.5 | 1942.9 | 1951.5 | 1951.5 | 1949.3 | 1917.2 | *1887.3* | 1876.6 | 1835.9 | 1778.1 | 1707.5 |
| 20° | 2009.2 | 2009.2 | 2024.2 | 2024.2 | 2017.8 | 1998.5 | *1979.3* | 1966.4 | 1908.7 | 1833.8 | 1752.5 |
| 22.5° | 2084.1 | 2049.9 | 2082.0 | 2084.1 | 2086.3 | 2071.3 | *2058.5* | 2041.3 | 1981.4 | 1891.5 | 1788.8 |
| 25° | 2154.7 | 2126.9 | 2146.2 | 2133.3 | 2141.9 | 2148.3 | *2141.9* | 2135.5 | 2069.1 | 1966.4 | 1842.3 |
| 27.5° | 2266.0 | 2238.2 | 2251.0 | 2221.1 | 2221.1 | 2214.7 | *2225.4* | 2233.9 | 2161.2 | 2039.2 | 1889.4 |
| 30° | 2432.9 | 2400.8 | 2390.1 | 2353.7 | 2317.4 | 2302.4 | *2306.7* | 2321.6 | 2272.4 | 2109.8 | 1936.5 |
| 32.5° | 2576.3 | 2559.2 | 2550.6 | 2520.6 | 2475.7 | 2407.2 | *2417.9* | 2417.9 | 2366.6 | 2161.2 | 1960.0 |
| 35° | 2694.0 | 2689.7 | 2691.8 | 2651.2 | 2642.6 | 2531.3 | *2531.3* | 2527.1 | 2432.9 | 2229.6 | 2022.1 |
| 37.5° | 2771.0 | 2747.5 | 2758.2 | 2773.1 | 2745.3 | 2670.4 | *2651.2* | 2640.5 | 2524.9 | 2302.4 | 2103.4 |
| 40° | 2753.9 | 2736.8 | 2777.4 | 2805.2 | 2783.8 | 2768.9 | *2766.7* | 2745.3 | 2616.9 | 2394.4 | 2223.2 |
| 42.5° | 2751.7 | 2736.8 | 2786.0 | 2815.9 | 2805.2 | 2828.8 | *2835.2* | 2850.2 | 2734.6 | 2539.9 | 2394.4 |
| 45° | 2760.3 | 2753.9 | 2835.2 | 2873.7 | 2848.0 | 2880.1 | *2916.5* | 2929.3 | 2884.4 | 2717.5 | 2608.4 |
| 47.5° | 2830.9 | 2822.3 | 2916.5 | 2961.4 | 2982.8 | 3038.5 | *3014.9* | 3036.3 | 3062.0 | 2970.0 | 2854.4 |
| 50° | 2899.4 | 2907.9 | 3034.2 | 3077.0 | 3181.8 | 3258.9 | *3177.5* | 3211.8 | 3297.4 | 3263.1 | 3184.0 |
| 52.5° | 3008.5 | 3010.6 | 3134.8 | 3241.7 | 3442.9 | 3515.6 | *3436.5* | 3440.7 | 3556.3 | 3620.5 | 3515.6 |
| 55° | 3036.3 | 3059.9 | 3226.8 | 3449.3 | 3738.2 | 3789.5 | *3753.1* | 3738.2 | 3875.1 | 3962.8 | 3849.4 |
| 57.5° | 3034.2 | 3021.3 | 3228.9 | 3537.0 | 3962.8 | 4144.7 | *4166.1* | 4125.5 | 4241.0 | 4277.4 | 4215.3 |
| 60° | 2955.0 | 2980.7 | 3207.5 | 3599.1 | 4172.5 | 4577.0 | *4628.3* | 4574.8 | 4630.4 | 4641.1 | 4467.8 |
| 62.5° | 2713.2 | 2721.8 | 3032.0 | 3601.2 | 4337.3 | 4936.4 | *5088.4* | 5028.4 | 4977.1 | 4844.4 | 4523.5 |
| 65° | 2319.5 | 2304.5 | 2602.0 | 3303.8 | 4367.3 | 5283.1 | *5501.3* | 5501.3 | 5167.5 | 4912.9 | 4405.8 |
| 67.5° | *1934.3* | *1910.8* | *2133.3* | *2694.0* | *3887.9* | *5435.0* | *5783.8* | *5670.4* | *5208.2* | *4960.0* | *4125.5* |
| 70° | 932.9 | 999.3 | 1339.5 | 1906.5 | 2972.1 | 4589.8 | *5574.1* | 5616.9 | 5176.1 | 4812.3 | 3582.0 |
| 72.5° | 333.8 | 318.8 | 481.4 | 817.4 | 1645.5 | 2995.7 | *4666.8* | 5043.4 | 4951.4 | 4388.7 | 2933.6 |
| 75° | 154.1 | 156.2 | 201.1 | 284.6 | 532.8 | 1461.5 | *2967.8* | 3472.8 | 4241.0 | 3648.3 | 2195.4 |
| 77.5° | 119.8 | 119.8 | 136.9 | 162.6 | 220.4 | 472.9 | *1517.1* | 1949.3 | 2741.0 | 2259.6 | 1046.3 |
| 80° | 87.7 | 89.9 | 92.0 | 107.0 | 134.8 | 177.6 | *451.5* | 676.2 | 999.3 | 725.4 | 340.2 |
| 82.5° | 62.1 | 62.1 | 59.9 | 59.9 | 72.8 | 79.2 | *122.0* | 171.2 | 293.1 | 199.0 | 89.9 |
| 85° | 25.7 | 30.0 | 25.7 | 25.7 | 25.7 | 32.1 | *38.5* | 44.9 | 64.2 | 55.6 | 38.5 |
| 87.5° | 4.3 | 4.3 | 4.3 | 6.4 | 8.6 | 10.7 | *12.8* | 15.0 | 17.1 | 17.1 | 17.1 |
| 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: P1359898
CATALOG NUMBER: GSS-SB1D-740-U-T3

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1487.1 | 1487.1 | 1487.1 | 1487.1 | 1487.1 | 1487.1 | 1487.1 | 1487.1 | 1487.1 | 1487.1 | 1487.1 |
| 2.5° | 1493.6 | 1493.6 | 1487.1 | 1476.4 | 1472.2 | 1465.7 | 1463.6 | 1461.5 | 1457.2 | 1465.7 | 1461.5 |
| 5° | 1502.1 | 1493.6 | 1485.0 | 1467.9 | 1465.7 | 1455.0 | 1444.3 | 1442.2 | 1435.8 | 1442.2 | 1442.2 |
| 7.5° | 1521.4 | 1508.5 | 1489.3 | 1472.2 | 1457.2 | 1455.0 | 1435.8 | 1418.7 | 1418.7 | 1420.8 | 1418.7 |
| 10° | 1555.6 | 1540.6 | 1521.4 | 1489.3 | 1461.5 | 1435.8 | 1403.7 | 1382.3 | 1384.4 | 1384.4 | 1380.1 |
| 12.5° | 1600.5 | 1579.1 | 1544.9 | 1497.8 | 1455.0 | 1414.4 | 1375.9 | 1369.4 | 1367.3 | 1371.6 | 1358.7 |
| 15° | 1634.8 | 1615.5 | 1559.9 | 1506.4 | 1440.1 | 1399.4 | 1358.7 | 1343.8 | 1345.9 | 1341.6 | 1330.9 |
| 17.5° | 1677.6 | 1647.6 | 1579.1 | 1500.0 | 1422.9 | 1384.4 | 1337.4 | 1305.3 | 1288.1 | 1290.3 | 1288.1 |
| 20° | 1718.2 | 1675.4 | 1594.1 | 1500.0 | 1418.7 | 1350.2 | 1290.3 | 1247.5 | 1211.1 | 1204.7 | 1202.5 |
| 22.5° | 1748.2 | 1705.4 | 1611.2 | 1502.1 | 1393.0 | 1311.7 | 1223.9 | 1168.3 | 1114.8 | 1106.3 | 1104.1 |
| 25° | 1791.0 | 1735.3 | 1630.5 | 1487.1 | 1358.7 | 1247.5 | 1138.4 | 1076.3 | 1029.2 | 1020.7 | 1020.7 |
| 27.5° | 1827.4 | 1767.4 | 1656.2 | 1472.2 | 1303.1 | 1159.8 | 1057.0 | 995.0 | 965.0 | 950.1 | 950.1 |
| 30° | 1865.9 | 1799.5 | 1677.6 | 1427.2 | 1228.2 | 1072.0 | 992.8 | 952.2 | 918.0 | 903.0 | 896.6 |
| 32.5° | 1908.7 | 1853.0 | 1681.9 | 1382.3 | 1153.3 | 1014.2 | 947.9 | 913.7 | 877.3 | 855.9 | 853.8 |
| 35° | 1962.2 | 1921.5 | 1666.9 | 1316.0 | 1078.4 | 969.3 | 905.1 | 866.6 | 830.2 | 808.8 | 813.1 |
| 37.5° | 2047.8 | 2000.7 | 1621.9 | 1221.8 | 1016.4 | 941.5 | 870.9 | 815.2 | 772.5 | 738.2 | 740.4 |
| 40° | 2174.0 | 2097.0 | 1555.6 | 1108.4 | 971.5 | 909.4 | 830.2 | 766.0 | 704.0 | 652.6 | 652.6 |
| 42.5° | 2317.4 | 2182.6 | 1474.3 | 1003.5 | 937.2 | 868.7 | 787.4 | 706.1 | 618.4 | 564.9 | 562.8 |
| 45° | 2477.8 | 2257.4 | 1380.1 | 918.0 | 881.6 | 819.5 | 731.8 | 616.3 | 558.5 | 530.7 | 528.5 |
| 47.5° | 2691.8 | 2338.8 | 1268.9 | 843.1 | 817.4 | 770.3 | 648.3 | 564.9 | 530.7 | 509.3 | 507.1 |
| 50° | 2893.0 | 2426.5 | 1176.9 | 770.3 | 748.9 | 712.5 | 590.6 | 543.5 | 515.7 | 498.6 | 494.3 |
| 52.5° | 3126.2 | 2516.4 | 1074.2 | 699.7 | 671.9 | 622.7 | 577.7 | 532.8 | 507.1 | 494.3 | 490.0 |
| 55° | 3357.3 | 2642.6 | 960.8 | 635.5 | 603.4 | 582.0 | 564.9 | 526.4 | 500.7 | 492.1 | 485.7 |
| 57.5° | 3620.5 | 2764.6 | 821.7 | 567.0 | 554.2 | 552.1 | 562.8 | 524.2 | 502.8 | 487.9 | 479.3 |
| 60° | 3757.4 | 2818.1 | 676.2 | 505.0 | 507.1 | 520.0 | 554.2 | 524.2 | 490.0 | 464.3 | 453.6 |
| 62.5° | 3710.3 | 2708.9 | 534.9 | 442.9 | 462.2 | 485.7 | 539.2 | 505.0 | 462.2 | 442.9 | 430.1 |
| 65° | 3522.0 | 2522.8 | 417.3 | 389.4 | 421.5 | 442.9 | 502.8 | 477.2 | 434.4 | 415.1 | 413.0 |
| 67.5° | *3250.3* | *2199.7* | *338.1* | *342.4* | *374.5* | *402.3* | *470.7* | *460.0* | *410.8* | *398.0* | *398.0* |
| 70° | 2732.5 | 1767.4 | 278.2 | 299.6 | 327.4 | 357.3 | 447.2 | 432.2 | 380.9 | 374.5 | 374.5 |
| 72.5° | 2135.5 | 1247.5 | 237.5 | 263.2 | 271.7 | 314.5 | 415.1 | 400.1 | 370.2 | 385.2 | 387.3 |
| 75° | 1506.4 | 759.6 | 203.3 | 222.5 | 231.1 | 258.9 | 385.2 | 391.6 | 363.8 | 413.0 | 421.5 |
| 77.5° | 684.7 | 333.8 | 158.3 | 175.5 | 186.2 | 220.4 | 331.7 | 363.8 | 314.5 | 314.5 | 297.4 |
| 80° | 239.7 | 141.2 | 126.2 | 126.2 | 134.8 | 171.2 | 276.0 | 299.6 | 252.5 | 222.5 | 214.0 |
| 82.5° | 87.7 | 77.0 | 94.1 | 94.1 | 85.6 | 104.8 | 184.0 | 199.0 | 181.9 | 158.3 | 156.2 |
| 85° | 34.2 | 36.4 | 57.8 | 57.8 | 42.8 | 51.4 | 102.7 | 107.0 | 102.7 | 89.9 | 89.9 |
| 87.5° | 15.0 | 15.0 | 17.1 | 17.1 | 15.0 | 12.8 | 19.3 | 19.3 | 12.8 | 8.6 | 4.3 |
| 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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# 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

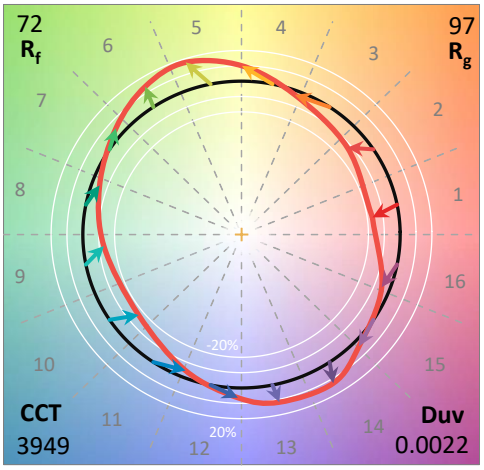
## Test Information

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

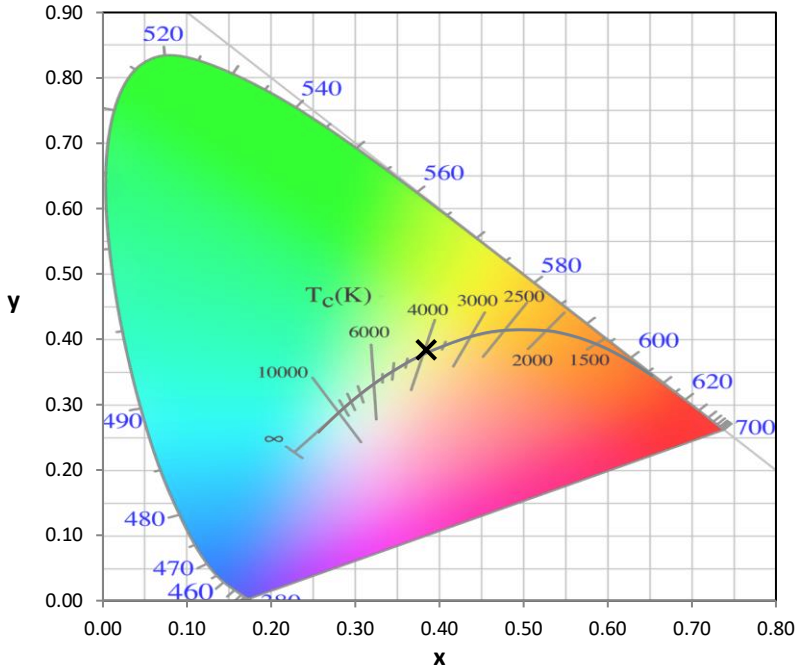
| | |
|---|---|
| Stabilization Time: | 34M |
| Operation Time: | 1H 34M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-1

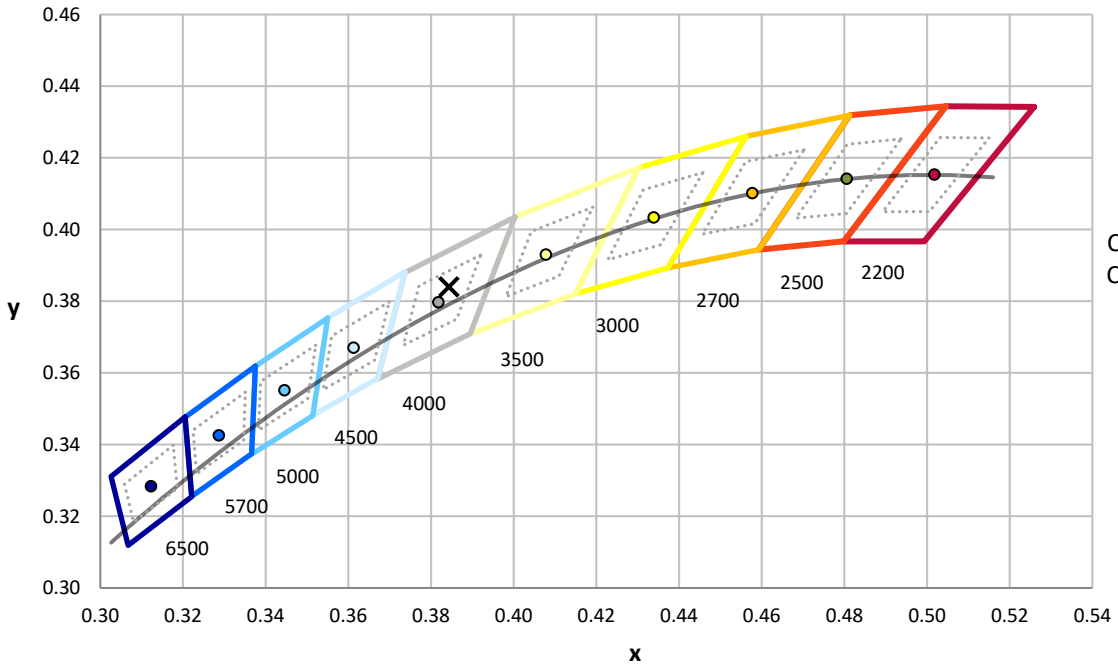
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

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## CIE 1931 Chromaticity Diagram




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

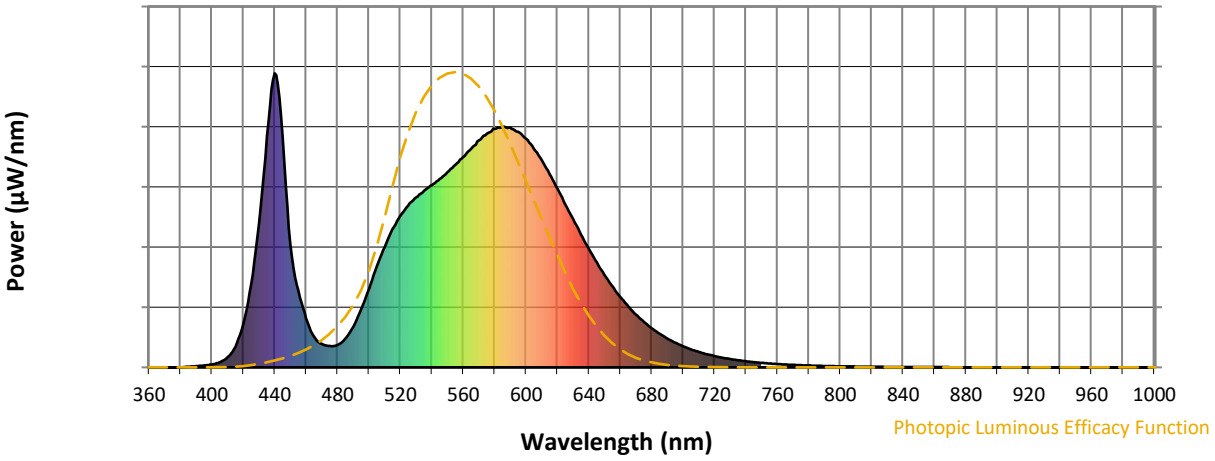



CCT = 3949K
CIE x = 0.3844
CIE y = 0.3840
Duv = 0.0022

Point lies inside the ANSI 4000K 4-step quadrangle

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## Photopic Flux vs. Wavelength

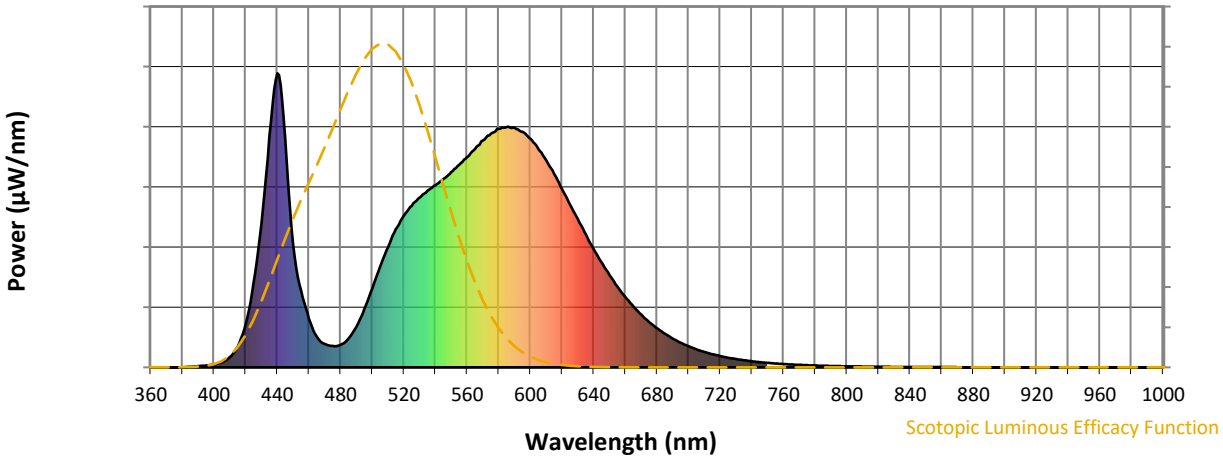



## Photopic Lumens: NR

| 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 | 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 | | | |

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## Scotopic Flux vs. Wavelength

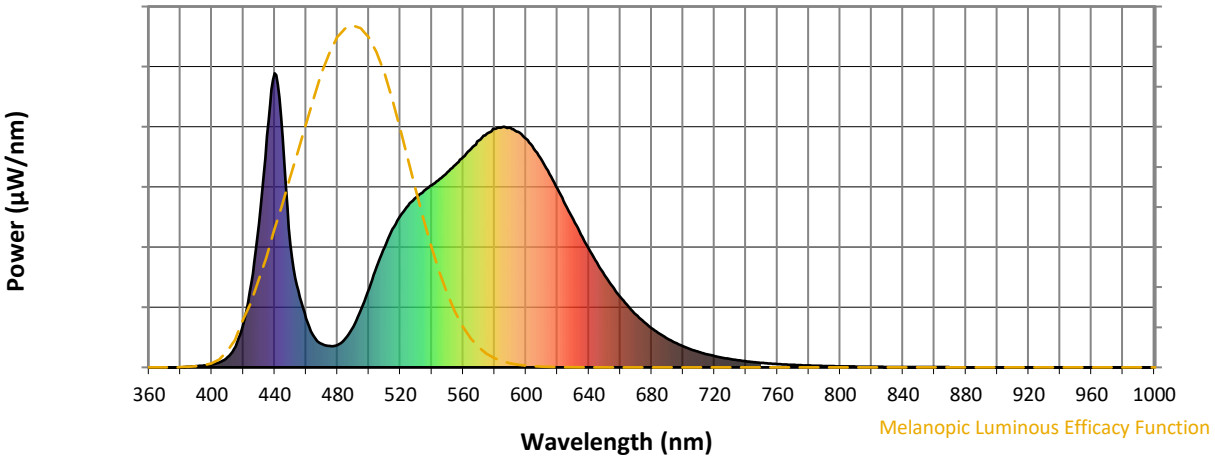



**Scotopic Lumens: NR** **S/P: 1.47**

| 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 | | | |

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## 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 | | | |

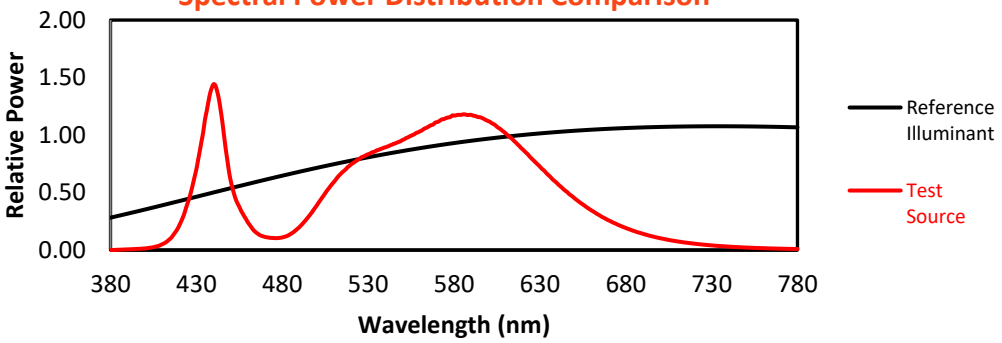
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# TM-30-18

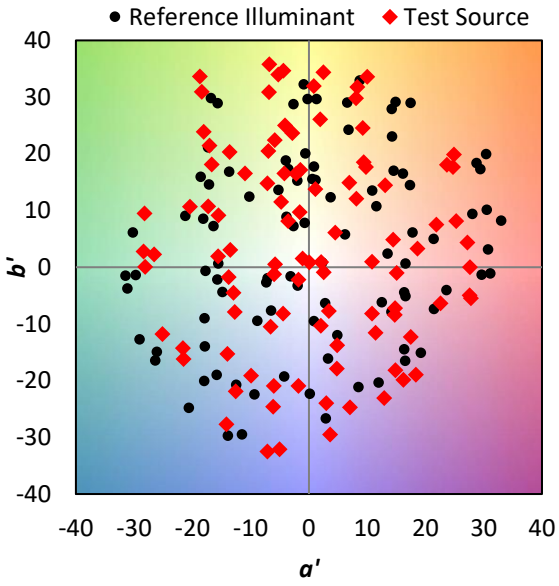
## Summary

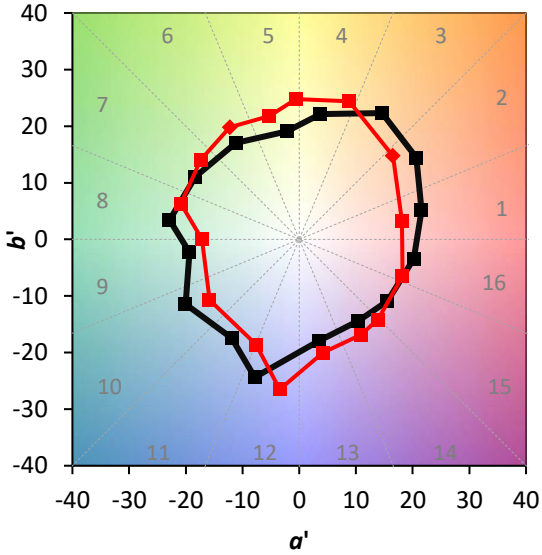
$R_f$ = 71.8
$R_g$ = 96.5
CIE $R_a$ = 70.7
$R_9$ = -36.7

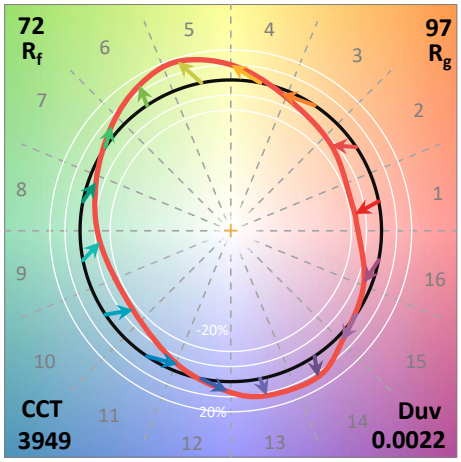
## Spectral Power Distribution Comparison

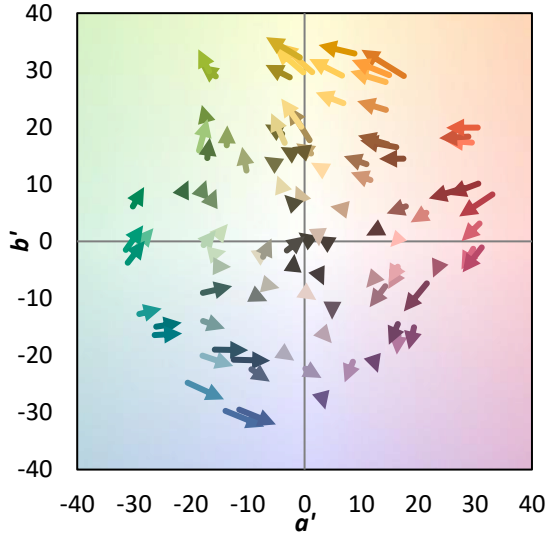



## Color Vector Graphics



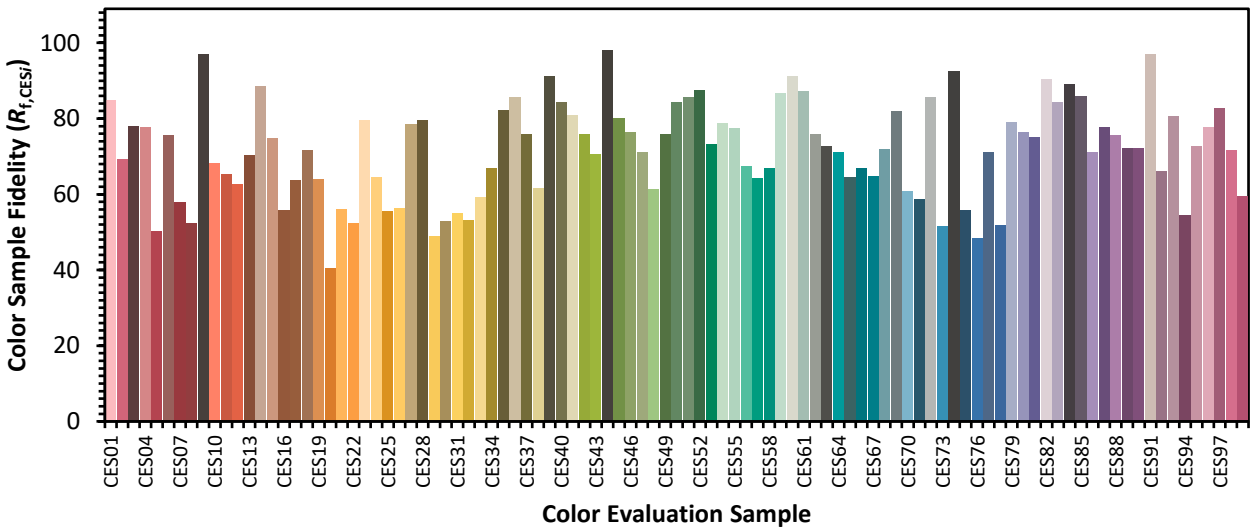



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**Individual Sample Fidelity Index ($R_{f,i}$)**

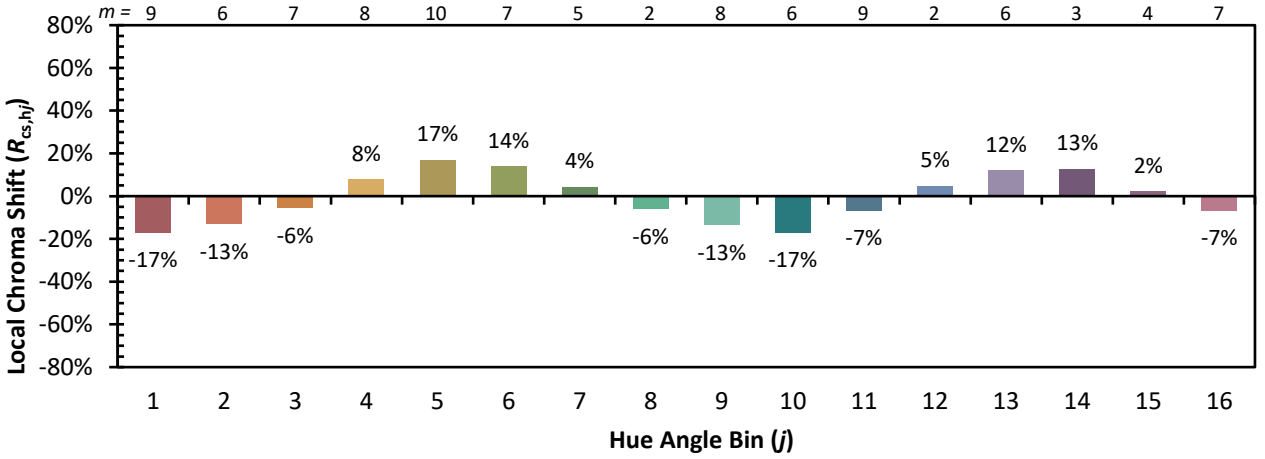
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 56 | CES51 = 86 | CES76 = 48 |
| CES02 = 61 | CES27 = 79 | CES52 = 88 | CES77 = 71 |
| CES03 = 30 | CES28 = 80 | CES53 = 73 | CES78 = 52 |
| CES04 = 70 | CES29 = 49 | CES54 = 79 | CES79 = 79 |
| CES05 = 47 | CES30 = 53 | CES55 = 77 | CES80 = 77 |
| CES06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

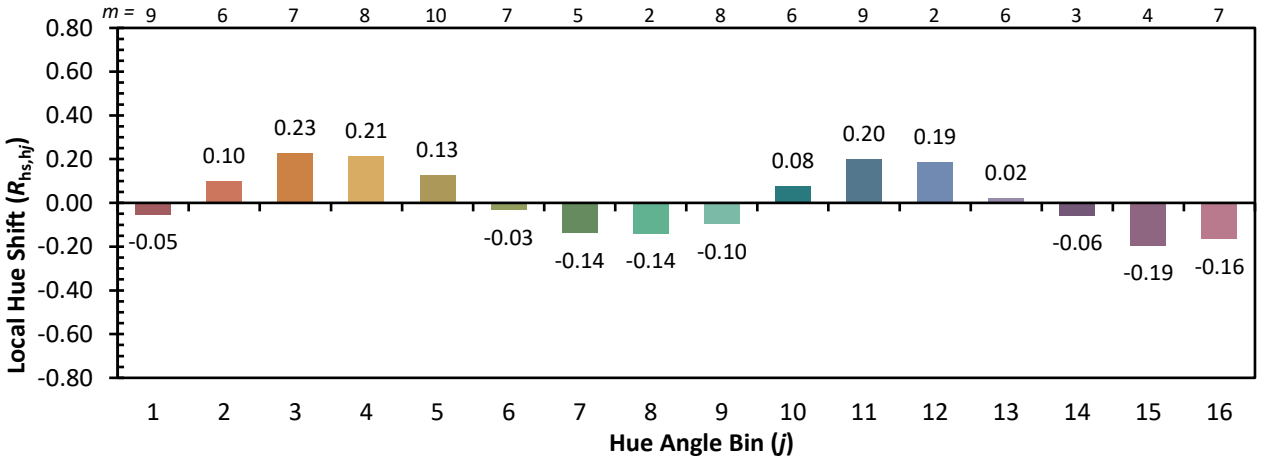


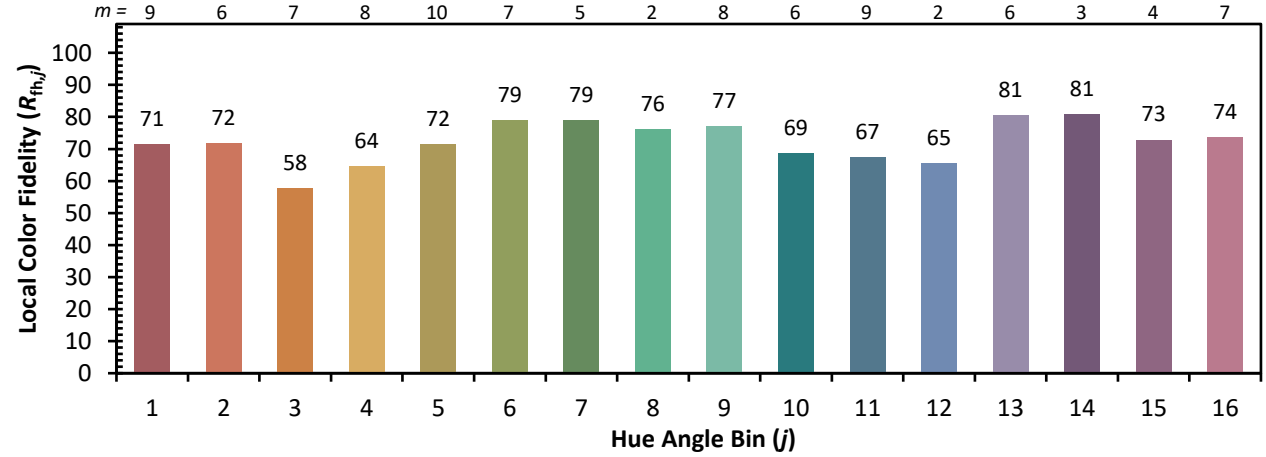
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## Color Rendition by Hue-Angle Bin



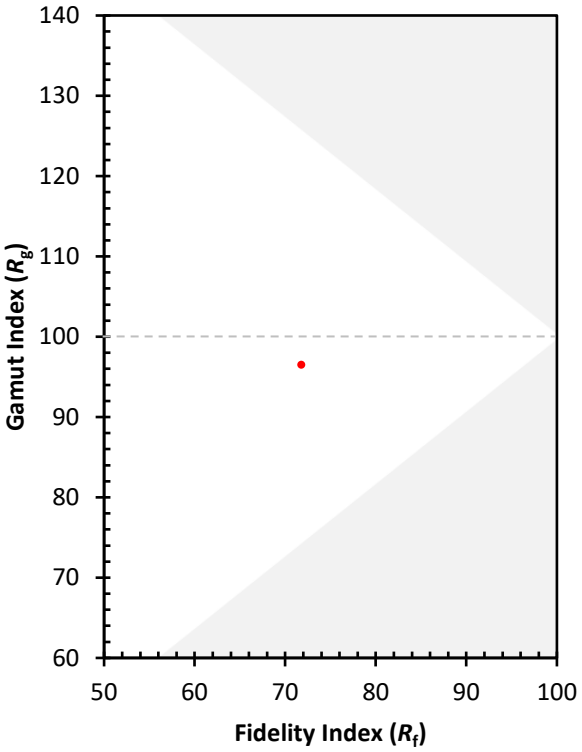



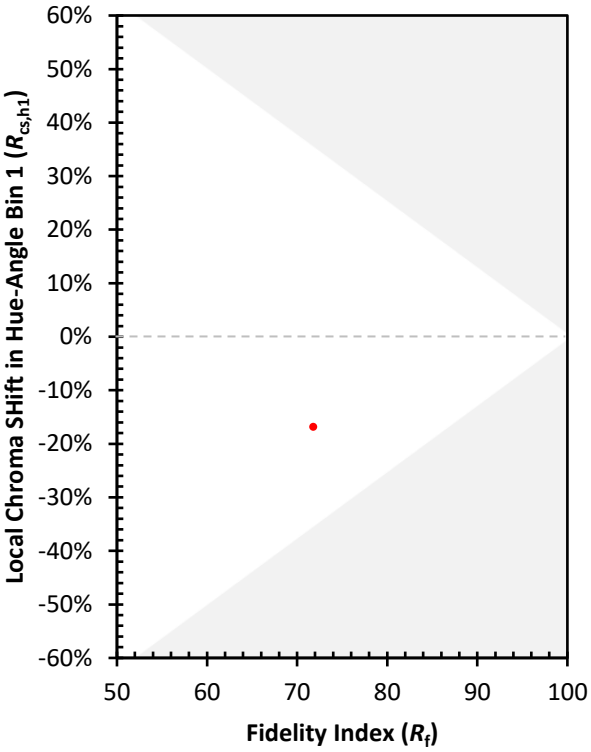



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## Measure Comparisons




(END OF REPORT)