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

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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: P1501062

Luminaire Tested: GSS-SB1B-750-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: | P1501062 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 7/20/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB1B-750-U-T3LG |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 1SQUARE 40W 70CRI 5000K FIXTURE w/ TYPE III LOW GLARE DISTRIBUTION FIXTURE |
| Light Source: | (26) 5000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 5544 lumens |
| Efficiency: | N/A |
| Efficacy: | 138.6 lumens/watt |
| Luminous Opening: | Rectangular (W 0.5' x L: 0.5' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B1 - U0 - G1 |

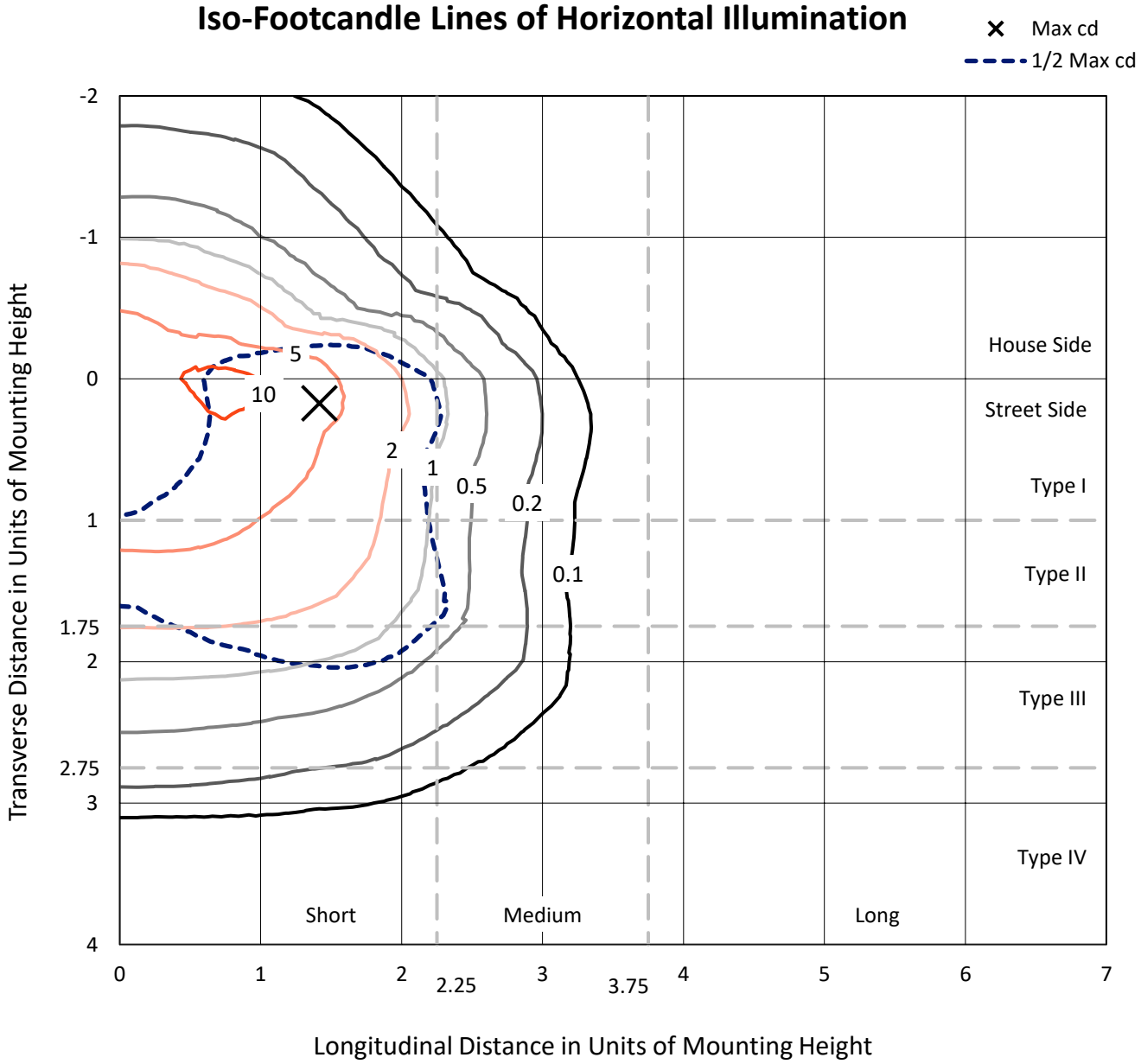
| | |
|---|---|
| Input Watts (W): | 40 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 5.3% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1501062
CATALOG NUMBER: GSS-SB1B-750-U-T3LG

## Iso-Footcandle Lines of Horizontal Illumination



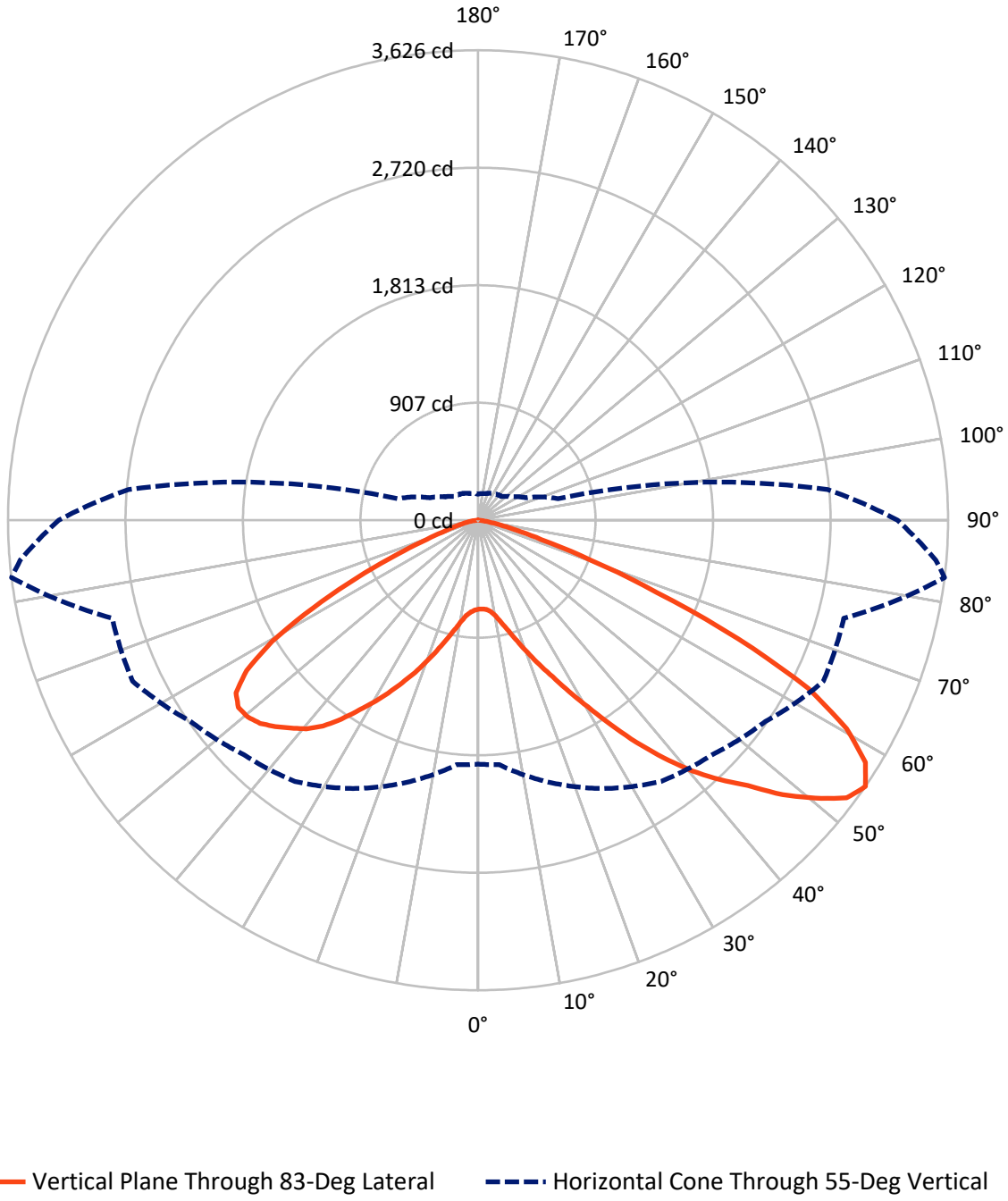

Based on 10 foot mounting height. Maximum calculated value = 11.6 fc
Type III - Short - N/A

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## Luminous Intensity Polar Plot



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Scaled Data Report

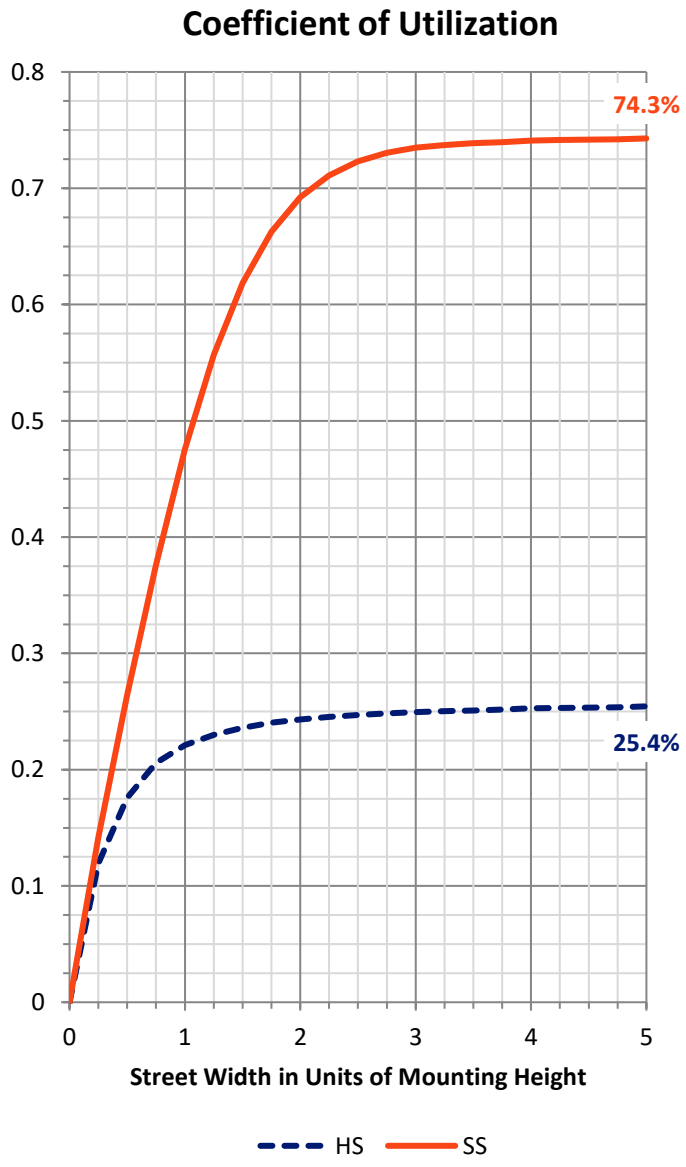
REPORT NUMBER: P1501062
CATALOG NUMBER: GSS-SB1B-750-U-T3LG

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 1422.7 | 0.0 | 1422.7 |
| | % Fixture | 25.7 | 0.0 | 25.7 |
| **Street Side** | Lumens | 4121.3 | 0.0 | 4121.3 |
| | % Fixture | 74.3 | 0.0 | 74.3 |
| **Total** | Lumens | 5544.0 | 0.0 | 5544.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 66.3 | 1.2 |
| 10°-20° | 216.0 | 3.9 |
| 20°-30° | 432.5 | 7.8 |
| 30°-40° | 769.4 | 13.9 |
| 40°-50° | 1159.5 | 20.9 |
| 50°-60° | 1412.9 | 25.5 |
| 60°-70° | 1142.5 | 20.6 |
| 70°-80° | 312.9 | 5.6 |
| 80°-90° | 31.9 | 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° | 5544.0 | 100.0 |
| 0°-180° | 5544.0 | 100.0 |



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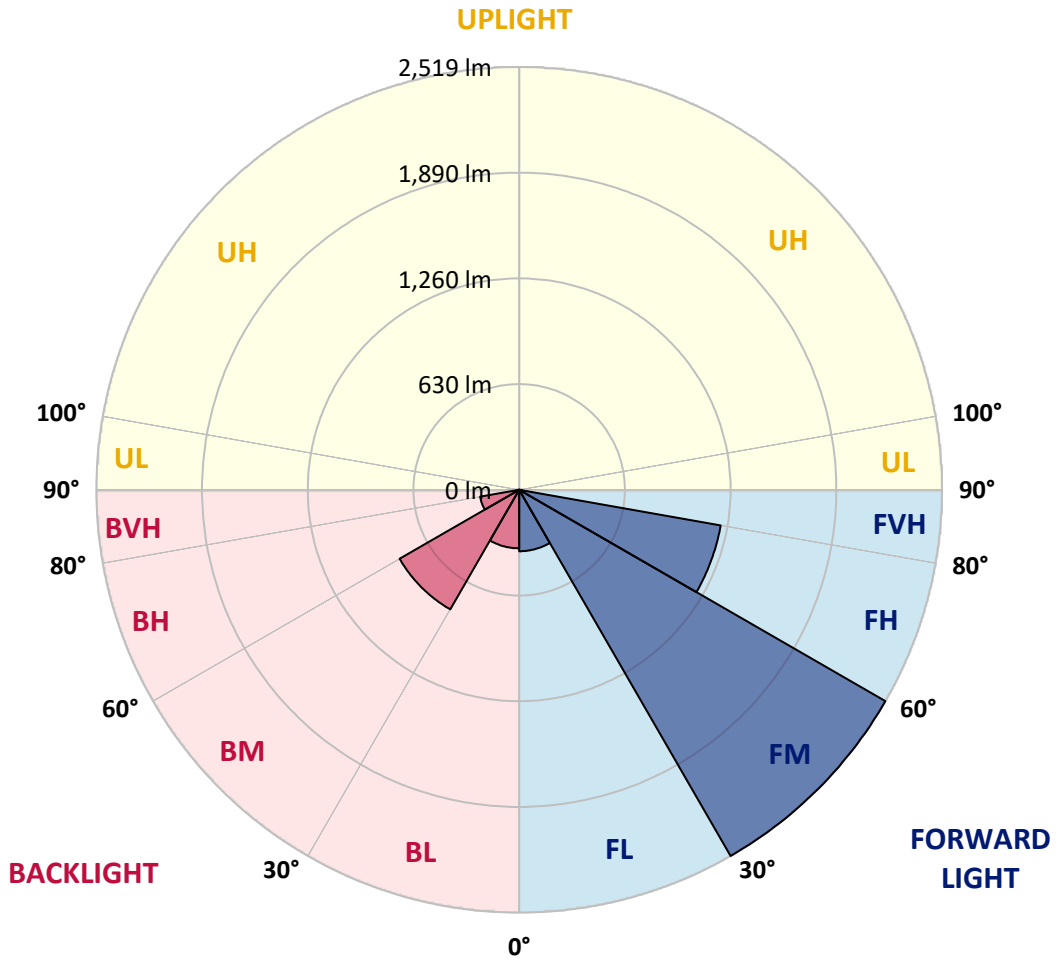
Scaled Data Report

REPORT NUMBER: P1501062
CATALOG NUMBER: GSS-SB1B-750-U-T3LG

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 366.1 | 6.6 | | | |
| FM | (30°-60°) | 2519.3 | 45.4 | | | |
| FH | (60°-80°) | 1219.3 | 22.0 | | | G1/1800 |
| FVH | (80°-90°) | 16.6 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 348.7 | 6.3 | B1/500 | | |
| BM | (30°-60°) | 822.5 | 14.8 | B1/1000 | | |
| BH | (60°-80°) | 236.2 | 4.3 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 15.3 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B1-U0-G1**
Type III Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 83° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 686.3 | 686.3 | 686.3 | 686.3 | 686.3 | 686.3 | 686.3 | 686.3 | 686.3 | *686.3* | 686.3 |
| 2.5° | 666.6 | 665.3 | 664.1 | 662.9 | 665.3 | 669.0 | 672.7 | 675.2 | 681.4 | *686.3* | 683.8 |
| 5° | 613.6 | 611.1 | 613.6 | 623.4 | 632.1 | 646.9 | 661.6 | 671.5 | 685.1 | *691.2* | 693.7 |
| 7.5° | 566.8 | 564.3 | 566.8 | 579.1 | 593.9 | 617.3 | 648.1 | 672.7 | 697.4 | *712.2* | 714.6 |
| 10° | 566.8 | 568.0 | 568.0 | 572.9 | 580.3 | 603.7 | 640.7 | 687.5 | 730.6 | *751.6* | 756.5 |
| 12.5° | 585.3 | 585.3 | 585.3 | 591.4 | 596.3 | 614.8 | 656.7 | 714.6 | 783.6 | *814.4* | 818.1 |
| 15° | 609.9 | 608.7 | 612.4 | 616.1 | 624.7 | 643.2 | 685.1 | 754.1 | 841.5 | *888.4* | 893.3 |
| 17.5° | 644.4 | 641.9 | 645.6 | 654.2 | 666.6 | 687.5 | 729.4 | 808.3 | 921.6 | *980.8* | 988.2 |
| 20° | 682.6 | 681.4 | 688.7 | 702.3 | 719.6 | 745.4 | 793.5 | 873.6 | 1012.8 | *1088.0* | 1101.5 |
| 22.5° | 728.2 | 725.7 | 739.3 | 763.9 | 787.3 | 816.9 | 874.8 | 958.6 | 1117.5 | *1207.5* | 1221.0 |
| 25° | 779.9 | 779.9 | 798.4 | 828.0 | 863.7 | 916.7 | 974.6 | 1067.0 | 1240.7 | *1336.8* | 1357.8 |
| 27.5° | 864.9 | 871.1 | 878.5 | 909.3 | 959.8 | 1031.3 | 1092.9 | 1197.6 | 1375.0 | *1495.8* | 1503.2 |
| 30° | 1002.9 | 1000.5 | 1012.8 | 1033.7 | 1075.6 | 1150.8 | 1243.2 | 1355.3 | 1545.1 | *1672.0* | 1690.5 |
| 32.5° | 1127.4 | 1131.1 | 1148.3 | 1187.8 | 1238.3 | 1302.3 | 1413.2 | 1551.2 | 1729.9 | *1876.5* | 1885.1 |
| 35° | 1253.1 | 1255.5 | 1288.8 | 1347.9 | 1423.1 | 1494.5 | 1615.3 | 1750.8 | 1930.7 | *2104.4* | 2127.9 |
| 37.5° | 1429.2 | 1426.8 | 1460.0 | 1510.6 | 1611.6 | 1722.5 | 1819.8 | 1949.2 | 2122.9 | *2326.2* | 2353.3 |
| 40° | 1561.1 | 1574.6 | 1637.5 | 1701.5 | 1796.4 | 1911.0 | 1993.6 | 2115.5 | 2280.6 | *2543.1* | 2567.7 |
| 42.5° | 1696.6 | 1707.7 | 1791.5 | 1887.6 | 1987.4 | 2065.0 | 2129.1 | 2242.4 | 2406.3 | *2735.3* | 2748.8 |
| 45° | 1808.7 | 1823.5 | 1919.6 | 2041.6 | 2145.1 | 2224.0 | 2246.1 | 2352.1 | 2534.4 | *2920.1* | 2941.0 |
| 47.5° | 1880.2 | 1896.2 | 2009.6 | 2152.5 | 2258.5 | 2342.2 | 2334.8 | 2483.9 | 2671.2 | *3165.3* | 3157.9 |
| 50° | 1929.5 | 1939.3 | 2062.6 | 2215.3 | 2353.3 | 2408.8 | 2440.8 | 2633.0 | 2811.7 | *3371.0* | 3343.9 |
| 52.5° | 1965.2 | 1981.2 | 2093.4 | 2260.9 | 2406.3 | 2479.0 | 2565.3 | 2805.5 | 2909.0 | *3559.6* | 3499.2 |
| 55° | *1881.4* | *1893.8* | *2090.9* | *2284.3* | *2460.5* | *2556.6* | *2706.9* | *2939.8* | *2921.3* | *3626.1* | *3544.8* |
| 57.5° | 1795.2 | 1805.0 | 1987.4 | 2278.2 | 2519.7 | 2652.7 | 2868.3 | 2957.1 | 2811.7 | *3523.8* | 3421.6 |
| 60° | 1686.8 | 1694.1 | 1876.5 | 2212.9 | 2520.9 | 2727.9 | 2950.9 | 2831.4 | 2608.4 | *3266.3* | 3169.0 |
| 62.5° | 1487.2 | 1487.2 | 1688.0 | 2036.7 | 2459.3 | 2766.1 | 2928.7 | 2593.6 | 2336.1 | *2861.0* | 2726.7 |
| 65° | 1290.0 | 1281.4 | 1416.9 | 1722.5 | 2295.4 | 2756.2 | 2762.4 | 2293.0 | 1913.5 | *2206.7* | 2102.0 |
| 67.5° | 1075.6 | 1076.9 | 1157.0 | 1398.4 | 1859.3 | 2550.5 | 2411.2 | 1771.8 | 1333.1 | *1485.9* | 1431.7 |
| 70° | 728.2 | 746.7 | 828.0 | 1015.3 | 1402.1 | 1807.5 | 1919.6 | 1200.1 | 831.7 | *922.8* | 878.5 |
| 72.5° | 277.2 | 280.9 | 375.8 | 532.3 | 885.9 | 1086.7 | 1339.3 | 671.5 | 486.7 | *508.9* | 511.3 |
| 75° | 117.1 | 122.0 | 160.2 | 224.2 | 393.0 | 592.6 | 704.8 | 340.1 | 295.7 | *304.3* | 301.9 |
| 77.5° | 78.9 | 81.3 | 97.3 | 120.7 | 177.4 | 237.8 | 294.5 | 192.2 | 181.1 | *170.0* | 165.1 |
| 80° | 59.1 | 59.1 | 70.2 | 81.3 | 99.8 | 122.0 | 128.1 | 97.3 | 108.4 | *89.9* | 87.5 |
| 82.5° | 38.2 | 40.7 | 44.4 | 48.1 | 56.7 | 60.4 | 51.7 | 53.0 | 62.8 | *46.8* | 44.4 |
| 85° | 18.5 | 19.7 | 20.9 | 22.2 | 22.2 | 20.9 | 18.5 | 23.4 | 32.0 | *19.7* | 18.5 |
| 87.5° | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 1.2 | 1.2 | 1.2 | *1.2* | 1.2 |
| 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: P1501062
CATALOG NUMBER: GSS-SB1B-750-U-T3LG

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 686.3 | 686.3 | 686.3 | 686.3 | 686.3 | 686.3 | 686.3 | 686.3 | 686.3 | 686.3 | 686.3 |
| 2.5° | 687.5 | 692.4 | 696.1 | 698.6 | 704.8 | 703.5 | 707.2 | 709.7 | 712.2 | 715.9 | 710.9 |
| 5° | 699.8 | 708.5 | 718.3 | 725.7 | 733.1 | 736.8 | 738.0 | 740.5 | 741.7 | 744.2 | 743.0 |
| 7.5° | 726.9 | 736.8 | 751.6 | 759.0 | 765.1 | 765.1 | 761.4 | 760.2 | 756.5 | 759.0 | 759.0 |
| 10° | 772.5 | 787.3 | 803.3 | 804.6 | 797.2 | 788.5 | 775.0 | 767.6 | 757.7 | 755.3 | 752.8 |
| 12.5° | 839.1 | 858.8 | 871.1 | 862.5 | 836.6 | 804.6 | 768.8 | 735.6 | 709.7 | 698.6 | 696.1 |
| 15° | 914.2 | 938.9 | 941.3 | 916.7 | 869.9 | 792.2 | 717.1 | 680.1 | 666.6 | 666.6 | 665.3 |
| 17.5° | 1017.7 | 1035.0 | 1025.1 | 966.0 | 861.2 | 734.3 | 680.1 | 674.0 | 677.7 | 682.6 | 682.6 |
| 20° | 1126.1 | 1145.9 | 1105.2 | 1000.5 | 808.3 | 699.8 | 683.8 | 688.7 | 697.4 | 702.3 | 701.1 |
| 22.5° | 1255.5 | 1265.4 | 1186.5 | 1001.7 | 751.6 | 691.2 | 691.2 | 697.4 | 703.5 | 710.9 | 710.9 |
| 25° | 1388.6 | 1384.9 | 1261.7 | 956.1 | 719.6 | 688.7 | 686.3 | 691.2 | 693.7 | 697.4 | 696.1 |
| 27.5° | 1537.7 | 1518.0 | 1319.6 | 883.4 | 709.7 | 681.4 | 669.0 | 664.1 | 666.6 | 670.3 | 671.5 |
| 30° | 1708.9 | 1662.1 | 1366.4 | 837.8 | 706.0 | 664.1 | 634.5 | 621.0 | 618.5 | 623.4 | 623.4 |
| 32.5° | 1907.3 | 1806.3 | 1394.7 | 831.7 | 702.3 | 633.3 | 593.9 | 568.0 | 563.1 | 565.5 | 571.7 |
| 35° | 2110.6 | 1980.0 | 1387.4 | 847.7 | 703.5 | 608.7 | 550.8 | 516.3 | 511.3 | 513.8 | 519.9 |
| 37.5° | 2323.8 | 2145.1 | 1359.0 | 872.3 | 693.7 | 575.4 | 511.3 | 469.4 | 462.0 | 467.0 | 469.4 |
| 40° | 2488.9 | 2284.3 | 1288.8 | 882.2 | 676.4 | 533.5 | 465.7 | 430.0 | 410.3 | 409.1 | 415.2 |
| 42.5° | 2641.6 | 2394.0 | 1212.4 | 866.2 | 640.7 | 489.1 | 418.9 | 383.2 | 352.4 | 329.0 | 329.0 |
| 45° | 2794.4 | 2504.9 | 1134.8 | 820.6 | 581.6 | 442.3 | 369.6 | 321.6 | 285.8 | 268.6 | 269.8 |
| 47.5° | 2947.2 | 2612.1 | 1042.4 | 751.6 | 522.4 | 393.0 | 316.7 | 278.5 | 253.8 | 240.3 | 240.3 |
| 50° | 3088.9 | 2689.7 | 924.1 | 641.9 | 454.6 | 343.8 | 279.7 | 257.5 | 239.0 | 226.7 | 224.2 |
| 52.5° | 3213.3 | 2741.4 | 763.9 | 508.9 | 380.7 | 288.3 | 260.0 | 242.7 | 229.2 | 215.6 | 211.9 |
| 55° | *3235.5* | *2706.9* | *639.5* | *409.1* | *314.2* | *258.7* | *245.2* | *230.4* | *211.9* | *205.8* | *202.1* |
| 57.5° | 3098.8 | 2524.6 | 539.7 | 345.0 | 268.6 | 237.8 | 232.9 | 215.6 | 200.8 | 194.7 | 191.0 |
| 60° | 2865.9 | 2193.2 | 446.0 | 295.7 | 239.0 | 218.1 | 224.2 | 207.0 | 183.6 | 179.9 | 176.2 |
| 62.5° | 2447.0 | 1711.4 | 356.1 | 248.9 | 216.9 | 203.3 | 209.5 | 184.8 | 165.1 | 160.2 | 158.9 |
| 65° | 1902.4 | 1224.7 | 299.4 | 219.3 | 199.6 | 188.5 | 186.0 | 163.9 | 149.1 | 145.4 | 145.4 |
| 67.5° | 1328.2 | 778.7 | 250.1 | 200.8 | 177.4 | 170.0 | 168.8 | 154.0 | 144.2 | 140.5 | 140.5 |
| 70° | 813.2 | 471.9 | 210.7 | 183.6 | 156.5 | 142.9 | 151.5 | 149.1 | 134.3 | 130.6 | 129.4 |
| 72.5° | 422.6 | 282.2 | 184.8 | 168.8 | 131.8 | 122.0 | 135.5 | 136.8 | 124.4 | 129.4 | 128.1 |
| 75° | 245.2 | 195.9 | 161.4 | 149.1 | 104.7 | 102.3 | 118.3 | 130.6 | 120.7 | 124.4 | 122.0 |
| 77.5° | 140.5 | 125.7 | 124.4 | 122.0 | 82.6 | 83.8 | 106.0 | 117.1 | 103.5 | 107.2 | 98.6 |
| 80° | 77.6 | 81.3 | 86.2 | 76.4 | 57.9 | 65.3 | 85.0 | 93.6 | 78.9 | 77.6 | 71.5 |
| 82.5° | 40.7 | 50.5 | 57.9 | 49.3 | 33.3 | 39.4 | 57.9 | 57.9 | 50.5 | 48.1 | 46.8 |
| 85° | 18.5 | 20.9 | 27.1 | 24.6 | 12.3 | 14.8 | 27.1 | 29.6 | 25.9 | 23.4 | 22.2 |
| 87.5° | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 2.5 | 3.7 | 1.2 | 1.2 | 1.2 |
| 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: SP1-2407-184-6

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-750-U-5WQ

Data in this report applies to families of products including GSS-SB1A-750-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

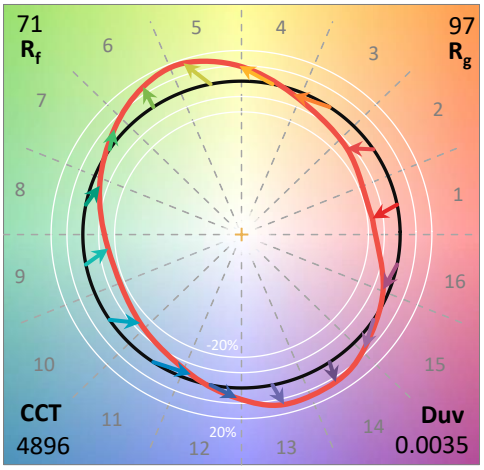
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-6 |
| 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-750-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 5000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 4896 |
| CIE u': | 0.2101 |
| CIE v': | 0.4901 |
| Duv: | 0.0035 |
| CIE x: | 0.3489 |
| CIE y: | 0.3618 |
| CIE z: | 0.2893 |
| Peak Wavelength (nm): | 443 |
| Dominant Wavelength (nm): | 570 |
| Purity: | 13.25435 |
| Rf: | 70.7 |
| Rg: | 96.8 |

| | |
|---|---|
| CRI (Ra): | 70.2 |
| R1: | 68.1 |
| R2: | 73.9 |
| R3: | 79.4 |
| R4: | 72.1 |
| R5: | 69.2 |
| R6: | 65.7 |
| R7: | 78.1 |
| R8: | 55.3 |
| R9: | -35.1 |
| R10: | 39.3 |
| R11: | 71.1 |
| R12: | 43.8 |
| R13: | 68.1 |
| R14: | 88.4 |
| R15: | 59.7 |




## Test Conditions

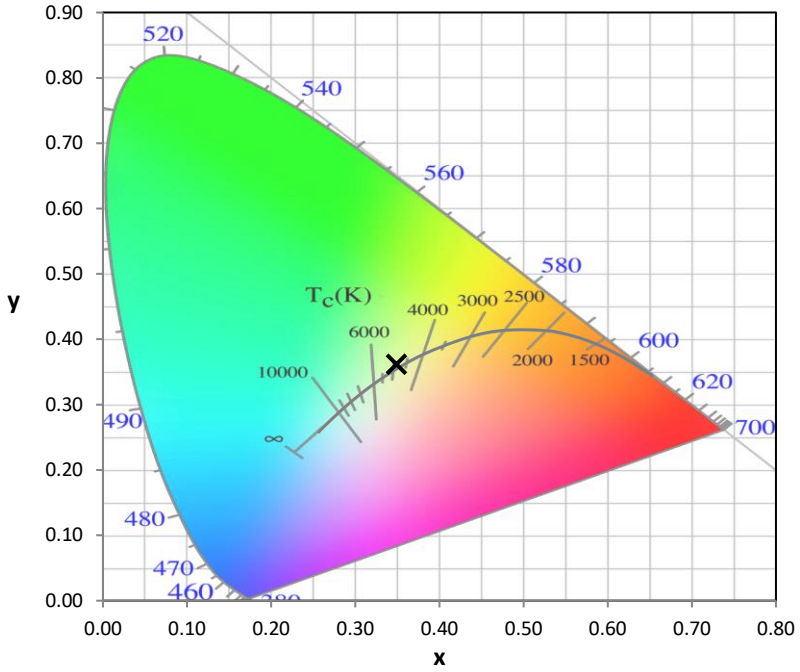
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-6

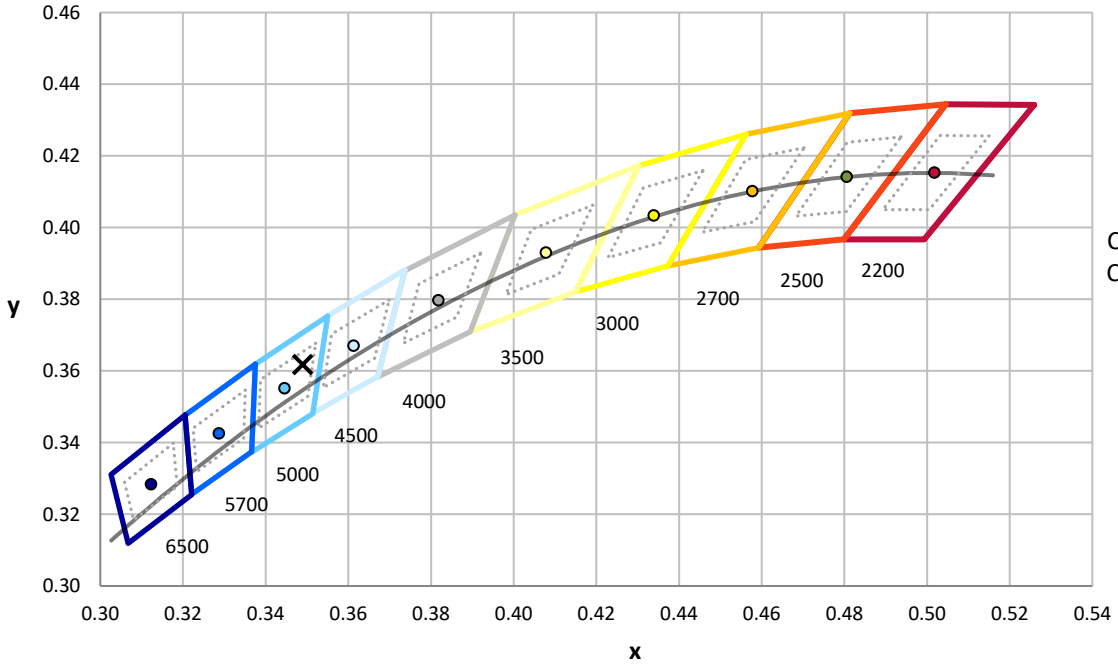
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

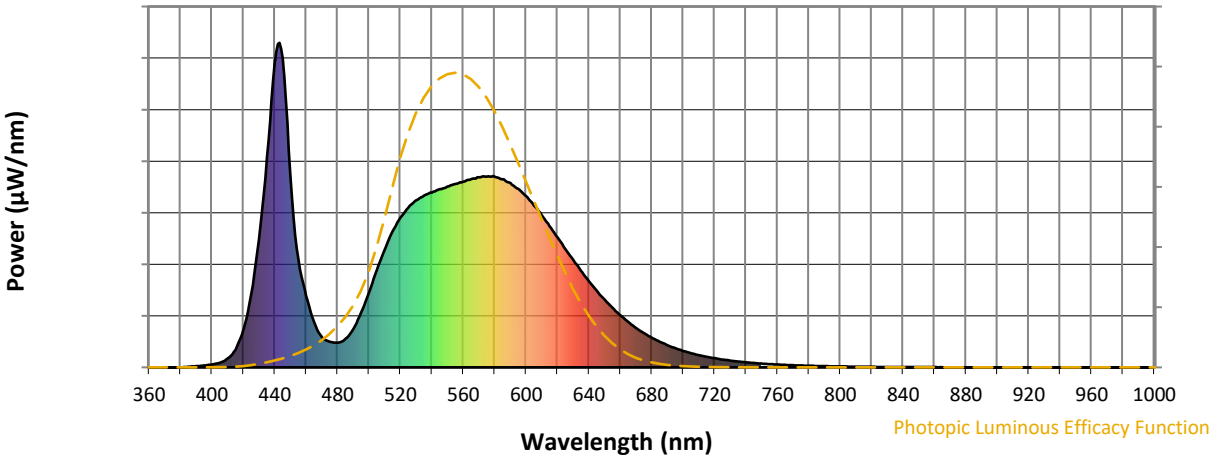



CCT = 4896K
CIE x = 0.3489
CIE y = 0.3618
Duv = 0.0035

Point lies inside the ANSI 5000K 4-step quadrangle

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## Photopic Flux vs. Wavelength

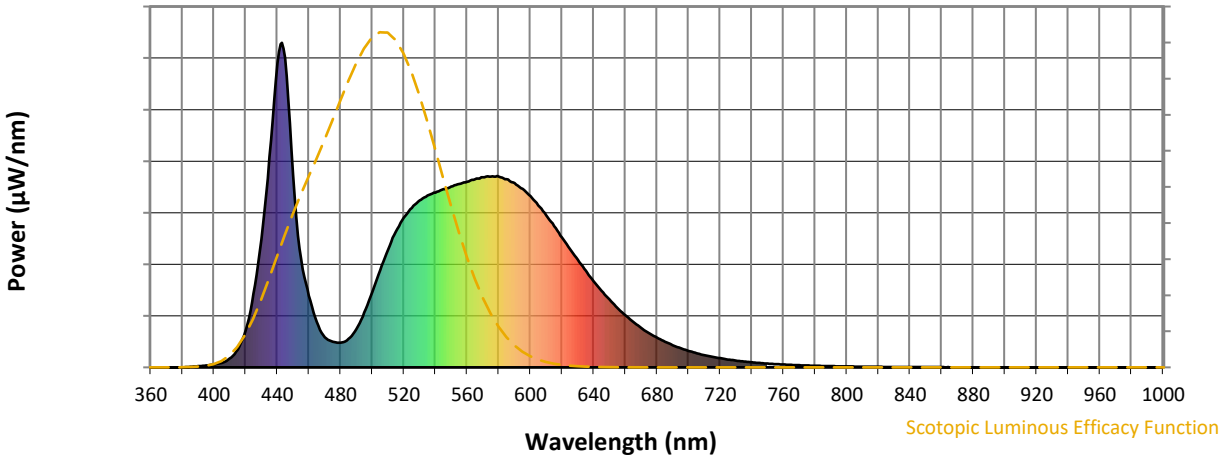



## Photopic Lumens: NR

| 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 | 118 | NR | 620 | 401 | NR | 750 | 12 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 168 | NR | 625 | 365 | NR | 755 | 10 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 230 | NR | 630 | 331 | NR | 760 | 9 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 299 | NR | 635 | 298 | NR | 765 | 8 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 362 | NR | 640 | 266 | NR | 770 | 6 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 418 | NR | 645 | 236 | NR | 775 | 6 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 461 | NR | 650 | 209 | NR | 780 | 5 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 491 | NR | 655 | 184 | NR | 785 | 4 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 514 | NR | 660 | 160 | NR | 790 | 4 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 530 | NR | 665 | 140 | NR | 795 | 3 | NR | 925 | 0 | NR |
| 410 | 27 | NR | 540 | 539 | NR | 670 | 122 | NR | 800 | 3 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 549 | NR | 675 | 106 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 115 | NR | 550 | 557 | NR | 680 | 92 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 226 | NR | 555 | 565 | NR | 685 | 79 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 395 | NR | 560 | 572 | NR | 690 | 68 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 648 | NR | 565 | 580 | NR | 695 | 59 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 937 | NR | 570 | 586 | NR | 700 | 51 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 953 | NR | 575 | 588 | NR | 705 | 44 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 591 | NR | 580 | 588 | NR | 710 | 38 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 334 | NR | 585 | 580 | NR | 715 | 32 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 221 | NR | 590 | 568 | NR | 720 | 28 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 140 | NR | 595 | 550 | NR | 725 | 24 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 93 | NR | 600 | 527 | NR | 730 | 21 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 79 | NR | 605 | 499 | NR | 735 | 18 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 469 | NR | 740 | 15 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 87 | NR | 615 | 435 | NR | 745 | 13 | NR | 875 | 0 | NR | | | |

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## Scotopic Flux vs. Wavelength

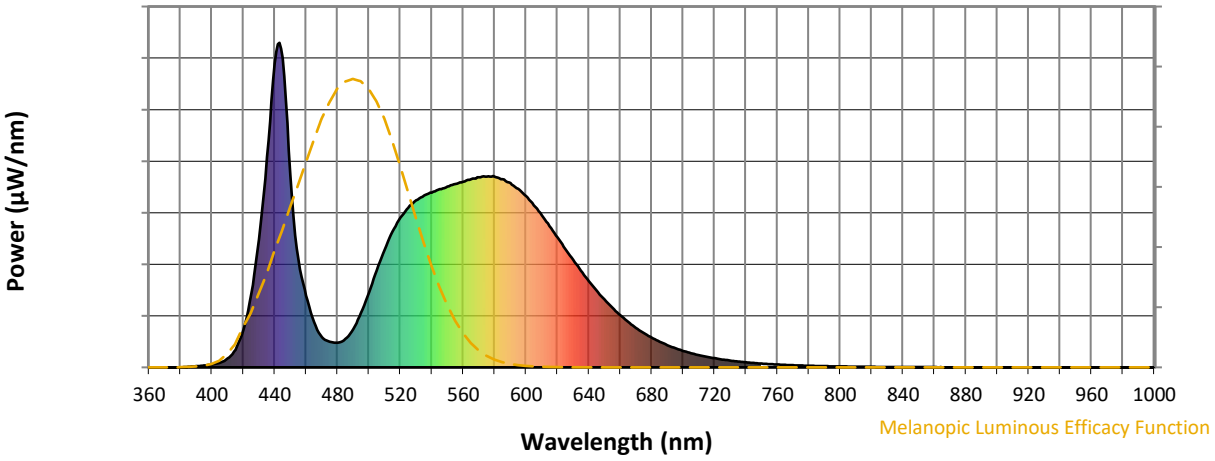



**Scotopic Lumens: NR** **S/P: 1.7**

| 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 | 118 | NR | 620 | 401 | NR | 750 | 12 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 168 | NR | 625 | 365 | NR | 755 | 10 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 230 | NR | 630 | 331 | NR | 760 | 9 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 299 | NR | 635 | 298 | NR | 765 | 8 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 362 | NR | 640 | 266 | NR | 770 | 6 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 418 | NR | 645 | 236 | NR | 775 | 6 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 461 | NR | 650 | 209 | NR | 780 | 5 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 491 | NR | 655 | 184 | NR | 785 | 4 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 514 | NR | 660 | 160 | NR | 790 | 4 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 530 | NR | 665 | 140 | NR | 795 | 3 | NR | 925 | 0 | NR |
| 410 | 27 | NR | 540 | 539 | NR | 670 | 122 | NR | 800 | 3 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 549 | NR | 675 | 106 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 115 | NR | 550 | 557 | NR | 680 | 92 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 226 | NR | 555 | 565 | NR | 685 | 79 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 395 | NR | 560 | 572 | NR | 690 | 68 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 648 | NR | 565 | 580 | NR | 695 | 59 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 937 | NR | 570 | 586 | NR | 700 | 51 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 953 | NR | 575 | 588 | NR | 705 | 44 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 591 | NR | 580 | 588 | NR | 710 | 38 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 334 | NR | 585 | 580 | NR | 715 | 32 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 221 | NR | 590 | 568 | NR | 720 | 28 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 140 | NR | 595 | 550 | NR | 725 | 24 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 93 | NR | 600 | 527 | NR | 730 | 21 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 79 | NR | 605 | 499 | NR | 735 | 18 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 469 | NR | 740 | 15 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 87 | NR | 615 | 435 | NR | 745 | 13 | NR | 875 | 0 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 3.37**

| 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 | 118 | NR | 620 | 401 | NR | 750 | 12 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 168 | NR | 625 | 365 | NR | 755 | 10 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 230 | NR | 630 | 331 | NR | 760 | 9 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 299 | NR | 635 | 298 | NR | 765 | 8 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 362 | NR | 640 | 266 | NR | 770 | 6 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 418 | NR | 645 | 236 | NR | 775 | 6 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 461 | NR | 650 | 209 | NR | 780 | 5 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 491 | NR | 655 | 184 | NR | 785 | 4 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 514 | NR | 660 | 160 | NR | 790 | 4 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 530 | NR | 665 | 140 | NR | 795 | 3 | NR | 925 | 0 | NR |
| 410 | 27 | NR | 540 | 539 | NR | 670 | 122 | NR | 800 | 3 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 549 | NR | 675 | 106 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 115 | NR | 550 | 557 | NR | 680 | 92 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 226 | NR | 555 | 565 | NR | 685 | 79 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 395 | NR | 560 | 572 | NR | 690 | 68 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 648 | NR | 565 | 580 | NR | 695 | 59 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 937 | NR | 570 | 586 | NR | 700 | 51 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 953 | NR | 575 | 588 | NR | 705 | 44 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 591 | NR | 580 | 588 | NR | 710 | 38 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 334 | NR | 585 | 580 | NR | 715 | 32 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 221 | NR | 590 | 568 | NR | 720 | 28 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 140 | NR | 595 | 550 | NR | 725 | 24 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 93 | NR | 600 | 527 | NR | 730 | 21 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 79 | NR | 605 | 499 | NR | 735 | 18 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 469 | NR | 740 | 15 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 87 | NR | 615 | 435 | NR | 745 | 13 | NR | 875 | 0 | NR | | | |

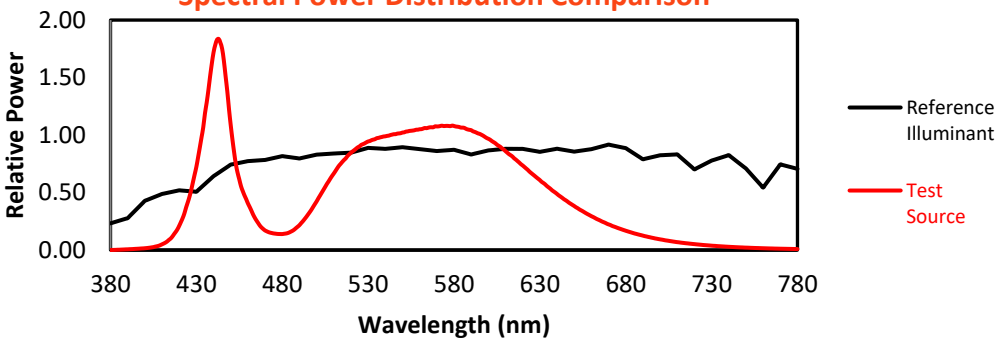
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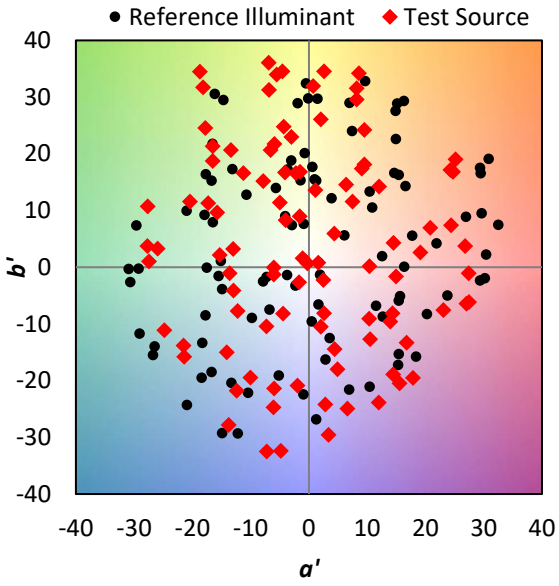
## Summary

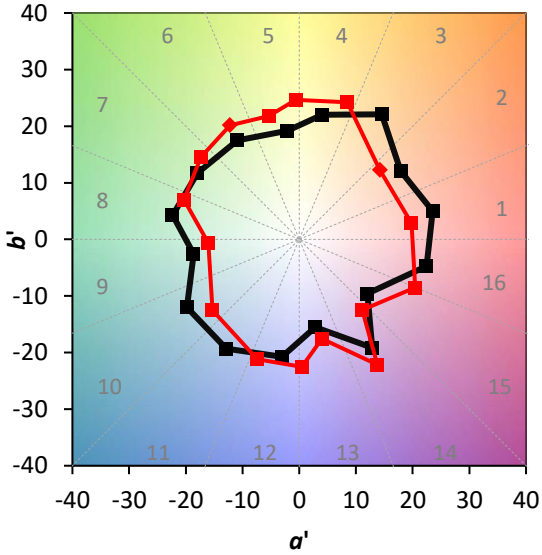
$R_f$ = 70.7
$R_g$ = 96.8
CIE $R_a$ = 70.2
$R_9$ = -35.1

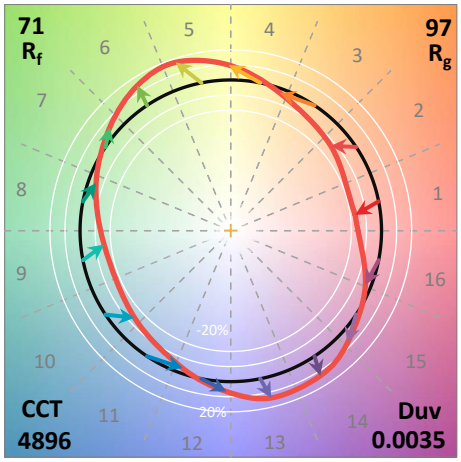
## Spectral Power Distribution Comparison

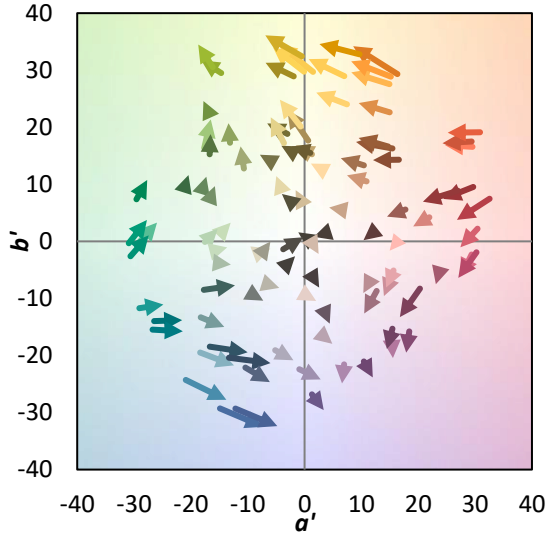



## Color Vector Graphics



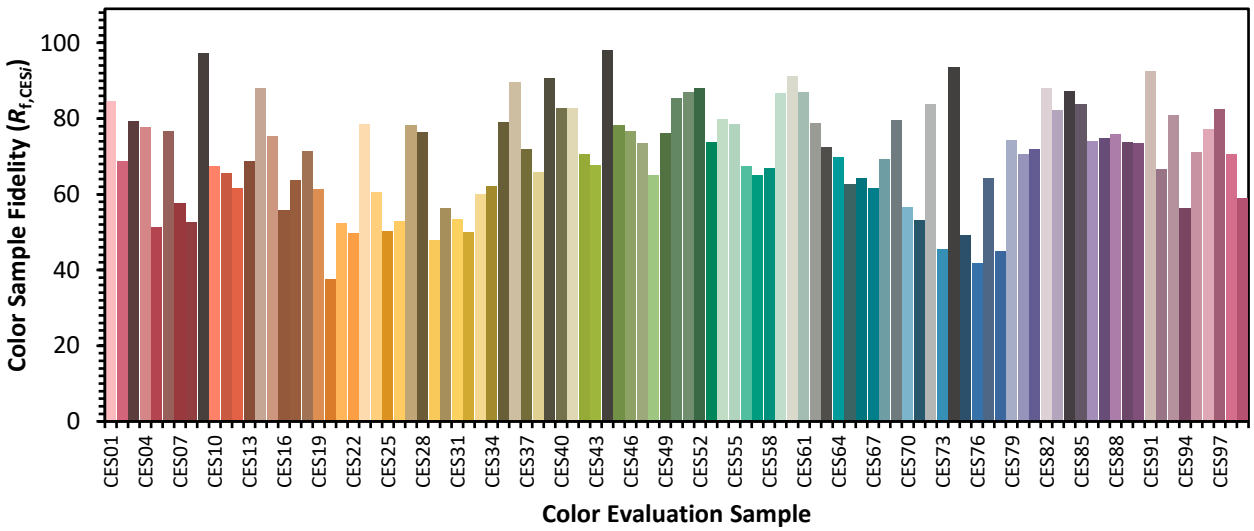



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## Individual Sample Fidelity Index ($R_{f,i}$)

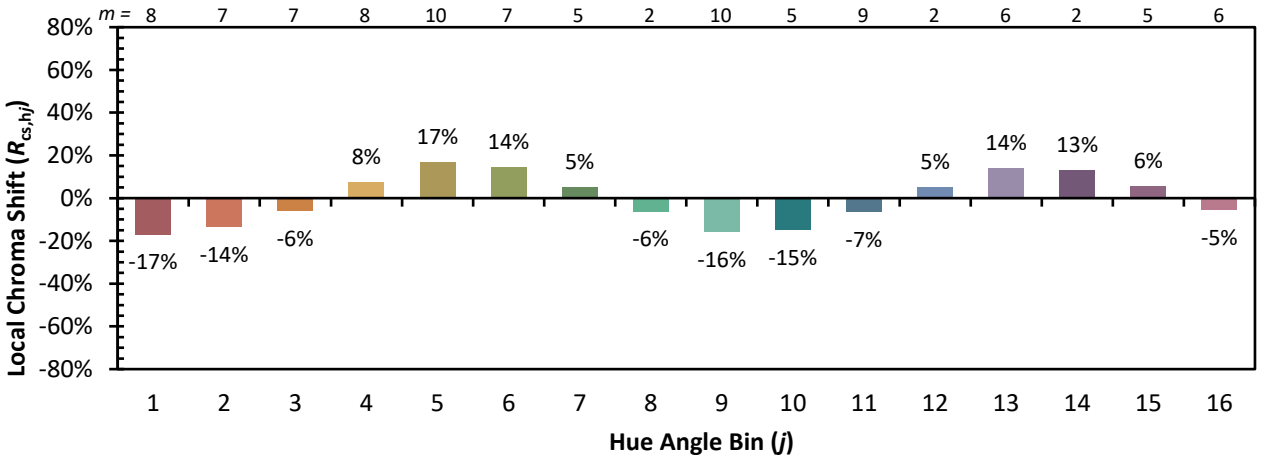
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 53 | CES51 = 87 | CES76 = 42 |
| CES02 = 59 | CES27 = 78 | CES52 = 88 | CES77 = 64 |
| CES03 = 30 | CES28 = 76 | CES53 = 74 | CES78 = 45 |
| CES04 = 69 | CES29 = 48 | CES54 = 80 | CES79 = 74 |
| CES05 = 46 | CES30 = 56 | CES55 = 79 | CES80 = 71 |
| CES06 = 50 | CES31 = 54 | CES56 = 68 | CES81 = 72 |
| CES07 = 39 | CES32 = 50 | CES57 = 65 | CES82 = 88 |
| CES08 = 38 | CES33 = 60 | CES58 = 67 | CES83 = 82 |
| CES09 = 29 | CES34 = 62 | CES59 = 87 | CES84 = 87 |
| CES10 = 72 | CES35 = 79 | CES60 = 91 | CES85 = 84 |
| CES11 = 56 | CES36 = 90 | CES61 = 87 | CES86 = 74 |
| CES12 = 61 | CES37 = 72 | CES62 = 79 | CES87 = 75 |
| CES13 = 41 | CES38 = 66 | CES63 = 72 | CES88 = 76 |
| CES14 = 74 | CES39 = 91 | CES64 = 70 | CES89 = 74 |
| CES15 = 70 | CES40 = 83 | CES65 = 63 | CES90 = 73 |
| CES16 = 46 | CES41 = 83 | CES66 = 64 | CES91 = 92 |
| CES17 = 49 | CES42 = 70 | CES67 = 62 | CES92 = 67 |
| CES18 = 55 | CES43 = 68 | CES68 = 69 | CES93 = 81 |
| CES19 = 71 | CES44 = 98 | CES69 = 80 | CES94 = 56 |
| CES20 = 64 | CES45 = 78 | CES70 = 56 | CES95 = 71 |
| CES21 = 85 | CES46 = 77 | CES71 = 53 | CES96 = 77 |
| CES22 = 77 | CES47 = 73 | CES72 = 84 | CES97 = 82 |
| CES23 = 91 | CES48 = 65 | CES73 = 46 | CES98 = 71 |
| CES24 = 90 | CES49 = 76 | CES74 = 94 | CES99 = 59 |
| CES25 = 71 | CES50 = 85 | CES75 = 49 | |

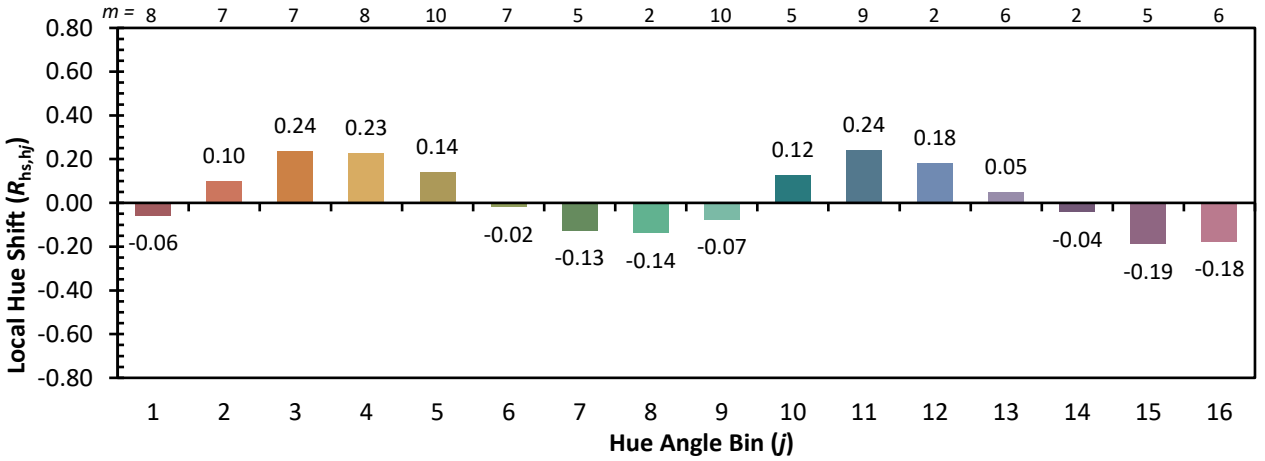


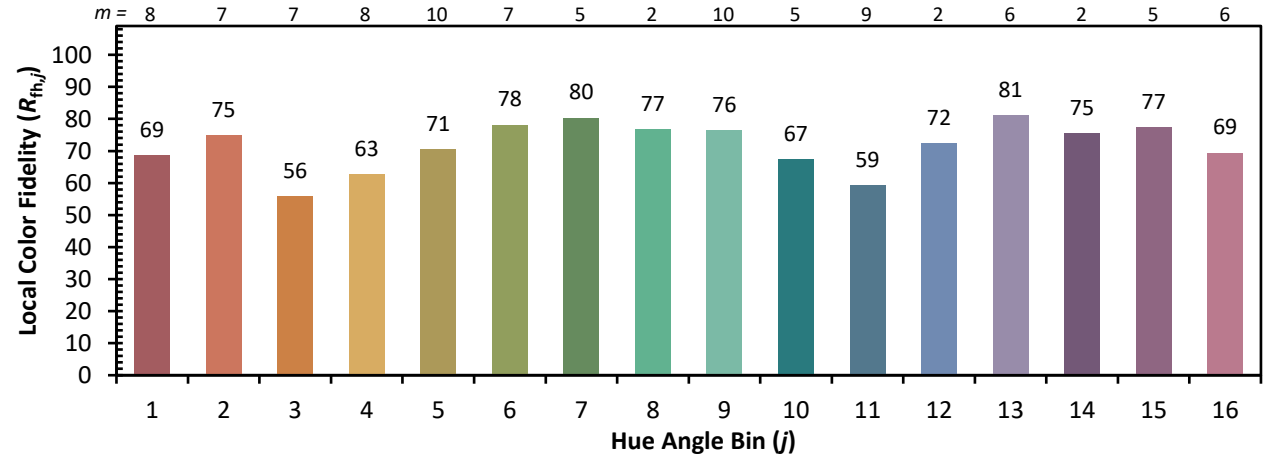
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## Color Rendition by Hue-Angle Bin



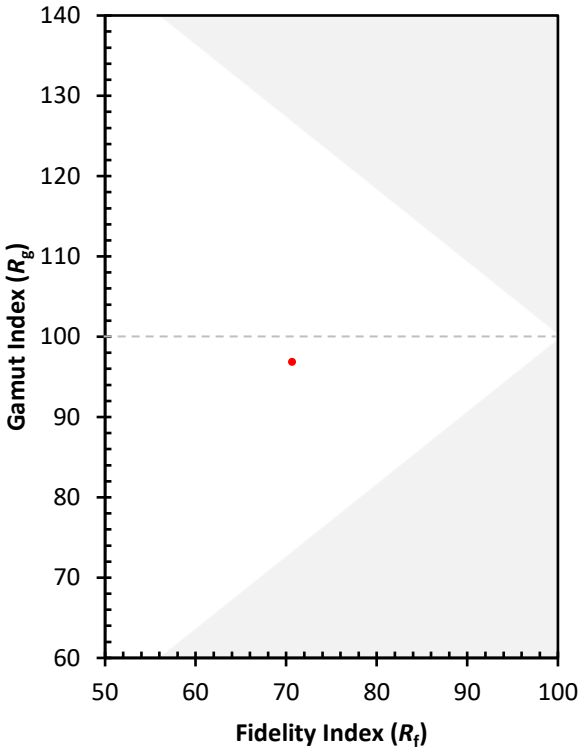



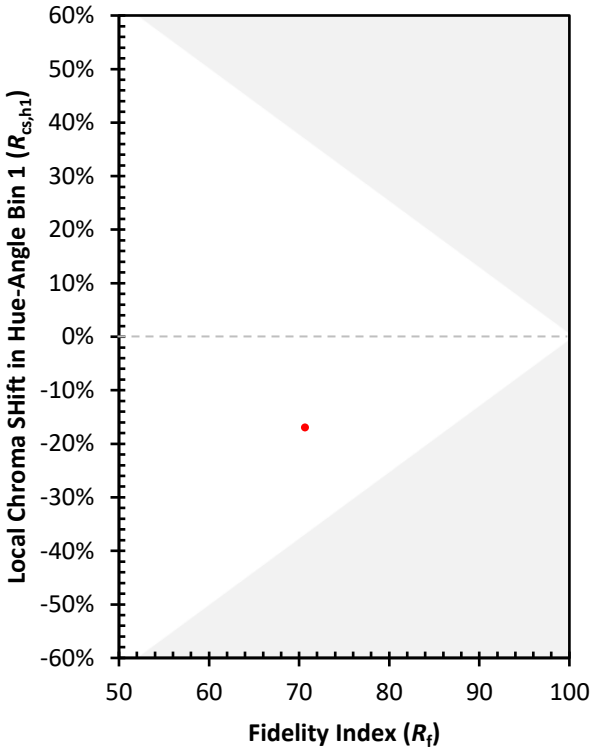



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## Measure Comparisons




(END OF REPORT)