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: P1358385

Luminaire Tested: **GSS-SB1C-722-U-SL4**

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: | P1358385 |
| Test Lab: | INNOVATION CENTER(G3) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB1C-722-U-SL4 |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 1SQUARE 52W 70CRI 2200K FIXTURE w/ TYPE IV SPILL CONTROL DISTRIBUTION OPTIC |
| Light Source: | (26) 2200K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 5361 lumens |
| Efficiency: | N/A |
| Efficacy: | 103.1 lumens/watt |
| Luminous Opening: | Rectangular (W 0.5' x L: 0.5' x H: 0') |
| IES Classification: | Type IV - Short |
| BUG Rating: | B1 - U0 - G1 |

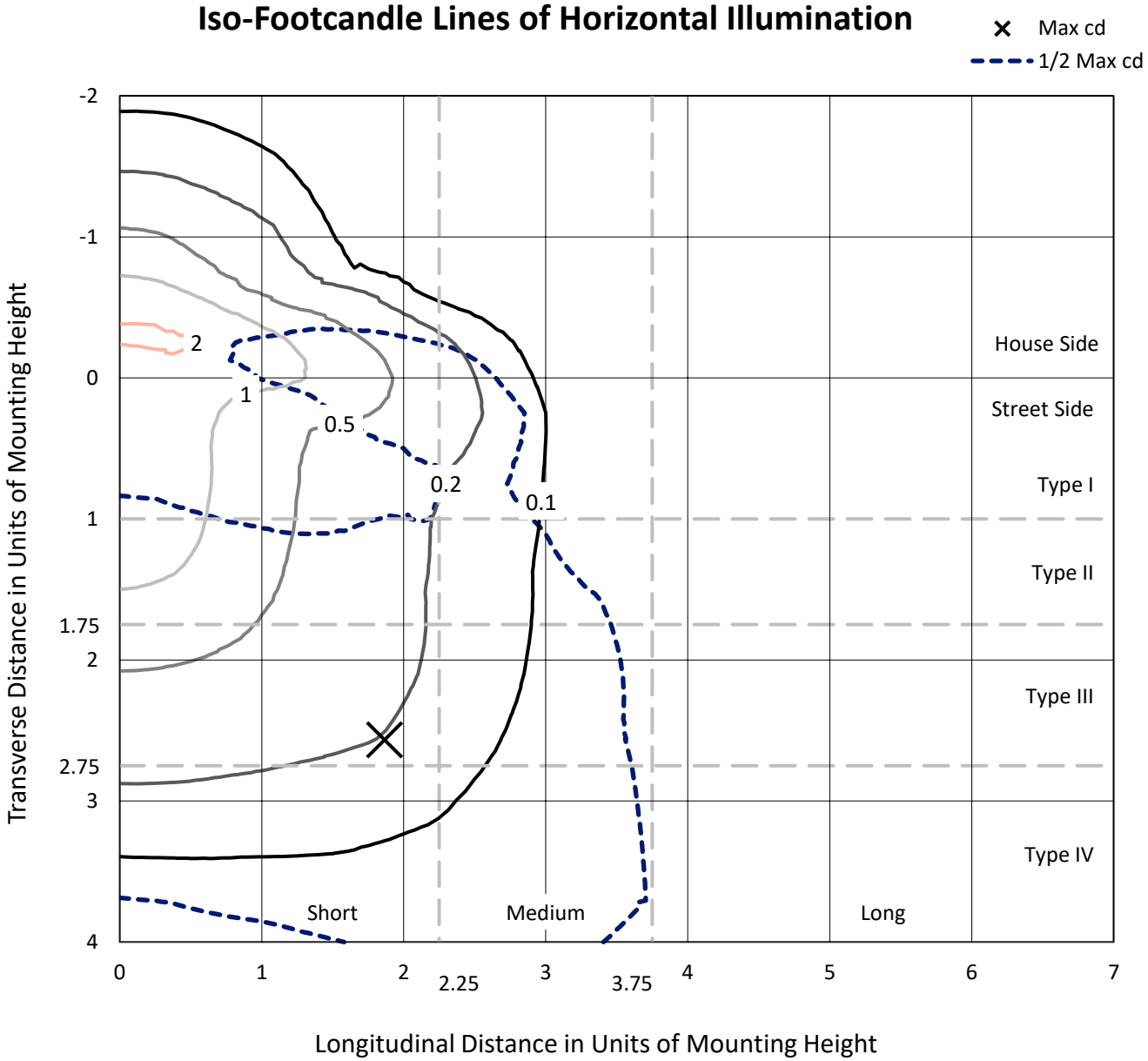
| | |
|---|---|
| Input Watts (W): | 52 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 10.1% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1358385
CATALOG NUMBER: GSS-SB1C-722-U-SL4

## Iso-Footcandle Lines of Horizontal Illumination



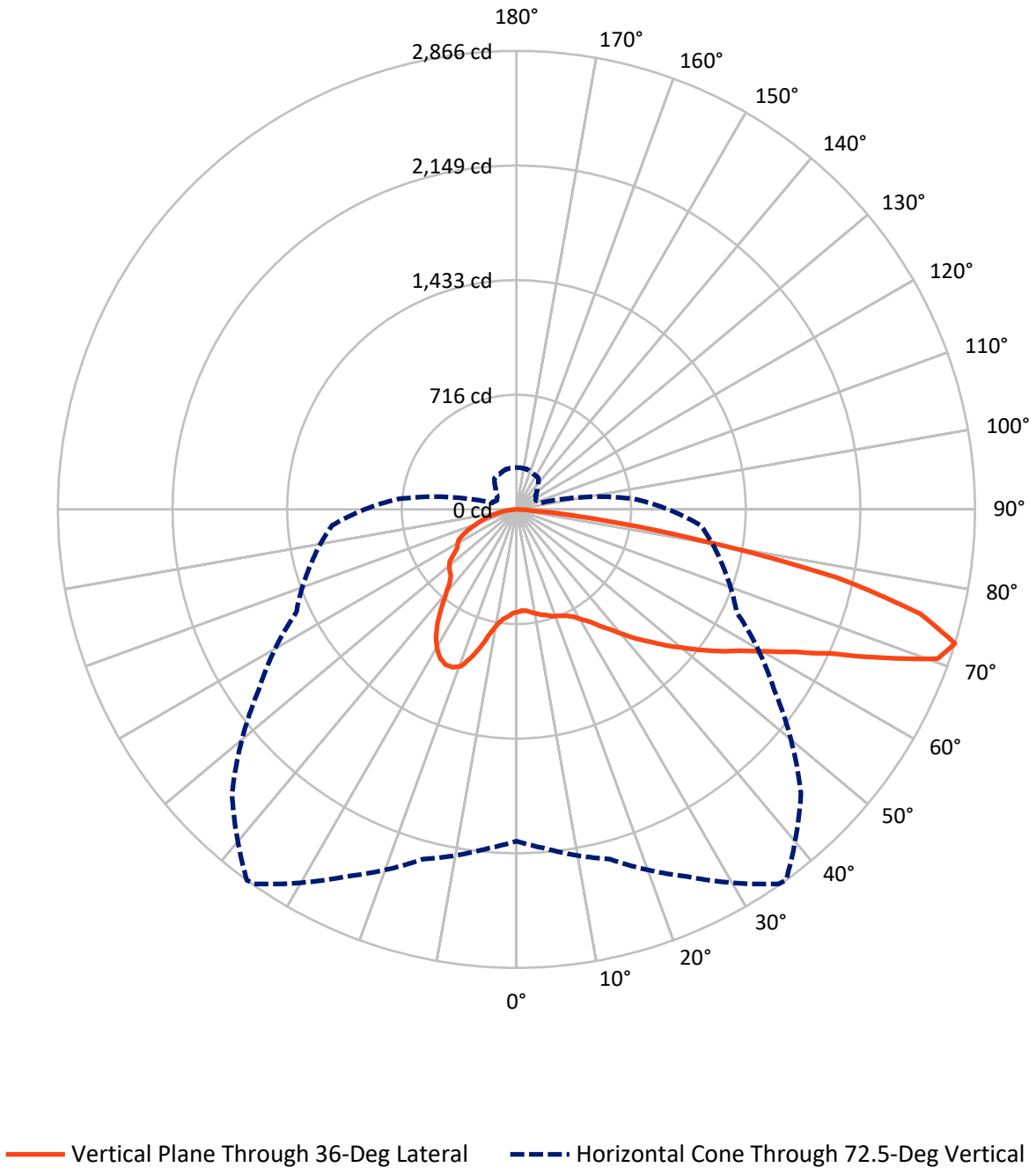

Based on 20 foot mounting height. Maximum calculated value = 2.2 fc
Type IV - Short - N/A

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## Luminous Intensity Polar Plot



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Scaled Data Report

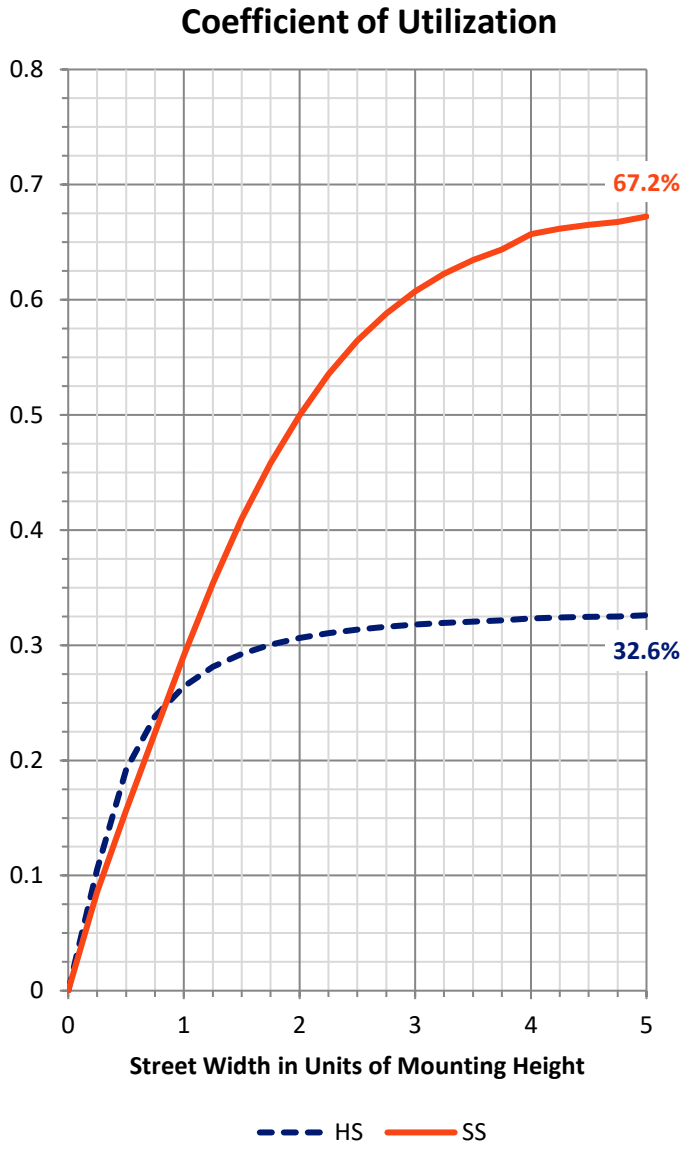
REPORT NUMBER: P1358385
CATALOG NUMBER: GSS-SB1C-722-U-SL4

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 1764.3 | 0.0 | 1764.3 |
| | % Fixture | 32.9 | 0.0 | 32.9 |
| **Street Side** | Lumens | 3596.8 | 0.0 | 3596.8 |
| | % Fixture | 67.1 | 0.0 | 67.1 |
| **Total** | Lumens | 5361.0 | 0.0 | 5361.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 63.6 | 1.2 |
| 10°-20° | 219.1 | 4.1 |
| 20°-30° | 416.0 | 7.8 |
| 30°-40° | 607.5 | 11.3 |
| 40°-50° | 807.9 | 15.1 |
| 50°-60° | 1035.9 | 19.3 |
| 60°-70° | 1218.5 | 22.7 |
| 70°-80° | 912.8 | 17.0 |
| 80°-90° | 79.7 | 1.5 |
| 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° | 5361.0 | 100.0 |
| 0°-180° | 5361.0 | 100.0 |



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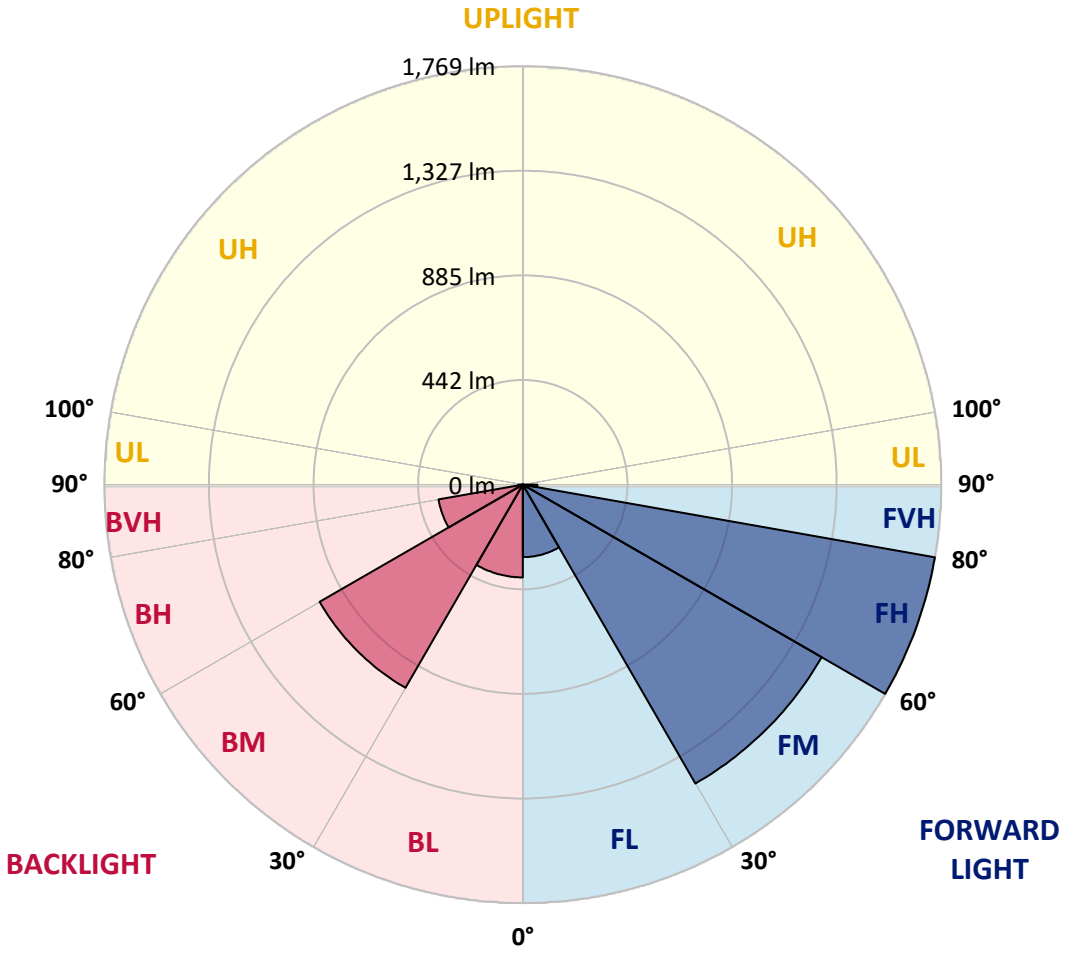
Scaled Data Report

REPORT NUMBER: P1358385
CATALOG NUMBER: GSS-SB1C-722-U-SL4

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 306.5 | 5.7 | | | |
| FM | (30°-60°) | 1459.5 | 27.2 | | | |
| FH | (60°-80°) | 1769.4 | 33.0 | | | G1/1800 |
| FVH | (80°-90°) | 61.4 | 1.1 | | | G1/100 |
| BL | (0°-30°) | 392.2 | 7.3 | B1/500 | | |
| BM | (30°-60°) | 991.9 | 18.5 | B1/1000 | | |
| BH | (60°-80°) | 361.9 | 6.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 18.3 | 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 IV Short



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REPORT NUMBER: P1358385
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 36° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 642.0 | 642.0 | 642.0 | 642.0 | 642.0 | 642.0 | 642.0 | 642.0 | 642.0 | 642.0 | 642.0 |
| 2.5° | 637.1 | 633.5 | 635.9 | 633.5 | 633.5 | 633.5 | 635.9 | 635.9 | 639.6 | 639.6 | 639.6 |
| 5° | 642.0 | 640.8 | 642.0 | 640.8 | 637.1 | 637.1 | 639.6 | 637.1 | 643.2 | 640.8 | 644.4 |
| 7.5° | 655.4 | 652.9 | 652.9 | 649.3 | 650.5 | 648.1 | 650.5 | 646.8 | 650.5 | 648.1 | 648.1 |
| 10° | 671.2 | 667.5 | 668.7 | 663.9 | 660.2 | 661.4 | 663.9 | 660.2 | 661.4 | 662.7 | 662.7 |
| 12.5° | 684.5 | 682.1 | 682.1 | 672.4 | 674.8 | 674.8 | 677.2 | 673.6 | 676.0 | 674.8 | 679.7 |
| 15° | 701.6 | 697.9 | 695.5 | 688.2 | 687.0 | 685.8 | 689.4 | 685.8 | 691.8 | 690.6 | 696.7 |
| 17.5° | 717.4 | 713.7 | 711.3 | 699.1 | 696.7 | 700.3 | 701.6 | 699.1 | 705.2 | 707.6 | 719.8 |
| 20° | 732.0 | 733.2 | 724.7 | 710.1 | 710.1 | 711.3 | 711.3 | 711.3 | 721.0 | 724.7 | 738.0 |
| 22.5° | 757.5 | 755.1 | 746.5 | 729.5 | 722.2 | 722.2 | 733.2 | 725.9 | 732.0 | 740.5 | 763.6 |
| 25° | 790.3 | 785.5 | 770.9 | 749.0 | 736.8 | 738.0 | 741.7 | 736.8 | 744.1 | 753.8 | 789.1 |
| 27.5° | 848.7 | 842.6 | 817.1 | 773.3 | 758.7 | 759.9 | 761.1 | 747.8 | 746.5 | 762.4 | 811.0 |
| 30° | 933.8 | 926.5 | 887.6 | 832.9 | 794.0 | 796.4 | 783.0 | 758.7 | 750.2 | 767.2 | 836.5 |
| 32.5° | 1026.2 | 1016.5 | 977.6 | 899.7 | 847.5 | 835.3 | 809.8 | 767.2 | 753.8 | 772.1 | 859.6 |
| 35° | 1136.8 | 1128.3 | 1080.9 | 971.5 | 899.7 | 892.5 | 841.4 | 785.5 | 763.6 | 775.7 | 881.5 |
| 37.5° | 1293.7 | 1271.8 | 1214.7 | 1063.9 | 963.0 | 952.0 | 882.7 | 811.0 | 764.8 | 773.3 | 911.9 |
| 40° | 1428.7 | 1406.8 | 1344.8 | 1180.6 | 1043.2 | 1026.2 | 943.5 | 841.4 | 776.9 | 778.2 | 950.8 |
| 42.5° | 1569.7 | 1549.0 | 1482.2 | 1279.1 | 1115.0 | 1106.4 | 997.0 | 877.9 | 792.8 | 791.5 | 994.6 |
| 45° | 1718.0 | 1719.3 | 1615.9 | 1397.0 | 1200.1 | 1183.0 | 1062.7 | 926.5 | 821.9 | 807.3 | 1066.3 |
| 47.5° | 1927.2 | 1904.1 | 1777.6 | 1510.1 | 1294.9 | 1273.0 | 1132.0 | 977.6 | 865.7 | 843.8 | 1146.6 |
| 50° | 2096.2 | 2079.1 | 1925.9 | 1640.2 | 1383.7 | 1360.6 | 1213.4 | 1033.5 | 904.6 | 894.9 | 1253.6 |
| 52.5° | 2237.2 | 2208.0 | 2067.0 | 1763.0 | 1483.4 | 1462.7 | 1280.3 | 1088.2 | 959.3 | 954.5 | 1378.8 |
| 55° | 2315.0 | 2284.6 | 2164.3 | 1877.3 | 1596.4 | 1564.8 | 1355.7 | 1153.9 | 1025.0 | 1027.4 | 1518.6 |
| 57.5° | 2375.8 | 2344.2 | 2226.3 | 1963.6 | 1708.3 | 1665.8 | 1438.4 | 1225.6 | 1102.8 | 1125.9 | 1709.5 |
| 60° | 2397.7 | 2366.1 | 2278.6 | 2077.9 | 1828.7 | 1801.9 | 1532.0 | 1314.4 | 1192.8 | 1241.4 | 1895.6 |
| 62.5° | 2429.3 | 2436.6 | 2374.6 | 2217.8 | 1985.5 | 1962.4 | 1652.4 | 1423.8 | 1303.4 | 1342.3 | 1961.2 |
| 65° | 2454.9 | 2451.2 | 2458.5 | 2411.1 | 2204.4 | 2171.6 | 1831.1 | 1566.0 | 1377.6 | 1376.4 | 1928.4 |
| 67.5° | 2395.3 | 2398.9 | 2437.8 | 2554.6 | 2508.4 | 2476.7 | 2062.1 | 1697.4 | 1412.8 | 1440.8 | 1823.8 |
| 70° | 2350.3 | 2361.2 | 2413.5 | 2559.4 | 2790.4 | 2794.1 | 2384.3 | 1809.2 | 1513.8 | 1440.8 | 1532.0 |
| 72.5° | 2073.1 | 2129.0 | 2264.0 | 2532.7 | 2857.3 | 2865.8 | 2514.4 | 1966.1 | 1517.4 | 1331.4 | 1157.5 |
| 75° | 1372.7 | 1416.5 | 1776.4 | 2272.5 | 2620.2 | 2606.8 | 2328.4 | 1890.7 | 1420.1 | 1085.8 | 736.8 |
| 77.5° | 404.9 | 487.6 | 831.7 | 1409.2 | 1961.2 | 2046.3 | 1910.1 | 1293.7 | 1052.9 | 509.5 | 262.6 |
| 80° | 115.5 | 128.9 | 232.2 | 494.9 | 1059.0 | 1150.2 | 1186.7 | 618.9 | 312.5 | 135.0 | 87.5 |
| 82.5° | 55.9 | 58.4 | 83.9 | 138.6 | 453.5 | 496.1 | 415.8 | 187.2 | 83.9 | 48.6 | 34.0 |
| 85° | 9.7 | 12.2 | 20.7 | 41.3 | 81.5 | 98.5 | 92.4 | 37.7 | 25.5 | 21.9 | 15.8 |
| 87.5° | 2.4 | 2.4 | 3.6 | 3.6 | 4.9 | 4.9 | 4.9 | 6.1 | 6.1 | 6.1 | 6.1 |
| 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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Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P1358385
CATALOG NUMBER: GSS-SB1C-722-U-SL4

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 642.0 | 642.0 | 642.0 | 642.0 | 642.0 | 642.0 | 642.0 | 642.0 | 642.0 | 642.0 | 642.0 |
| 2.5° | 645.6 | 645.6 | 650.5 | 652.9 | 652.9 | 649.3 | 649.3 | 660.2 | 655.4 | 657.8 | 656.6 |
| 5° | 646.8 | 651.7 | 651.7 | 659.0 | 662.7 | 668.7 | 671.2 | 676.0 | 680.9 | 680.9 | 679.7 |
| 7.5° | 654.1 | 657.8 | 663.9 | 668.7 | 678.5 | 688.2 | 691.8 | 706.4 | 708.9 | 714.9 | 712.5 |
| 10° | 665.1 | 671.2 | 680.9 | 694.3 | 706.4 | 722.2 | 729.5 | 745.3 | 753.8 | 763.6 | 757.5 |
| 12.5° | 682.1 | 689.4 | 705.2 | 723.4 | 750.2 | 774.5 | 794.0 | 809.8 | 821.9 | 832.9 | 829.2 |
| 15° | 700.3 | 714.9 | 735.6 | 768.4 | 815.9 | 859.6 | 885.2 | 911.9 | 918.0 | 927.7 | 926.5 |
| 17.5° | 732.0 | 741.7 | 783.0 | 848.7 | 910.7 | 948.4 | 970.3 | 983.6 | 980.0 | 983.6 | 981.2 |
| 20° | 757.5 | 781.8 | 856.0 | 952.0 | 1012.8 | 1037.1 | 1039.6 | 1027.4 | 1001.9 | 997.0 | 987.3 |
| 22.5° | 795.2 | 831.7 | 950.8 | 1050.5 | 1099.2 | 1096.7 | 1061.5 | 1025.0 | 992.2 | 978.8 | 973.9 |
| 25° | 831.7 | 897.3 | 1050.5 | 1144.1 | 1157.5 | 1115.0 | 1061.5 | 1014.0 | 970.3 | 956.9 | 946.0 |
| 27.5° | 877.9 | 972.7 | 1163.6 | 1223.2 | 1183.0 | 1117.4 | 1038.4 | 984.9 | 943.5 | 921.6 | 916.8 |
| 30° | 925.3 | 1060.2 | 1258.4 | 1260.9 | 1190.3 | 1091.9 | 995.8 | 948.4 | 901.0 | 879.1 | 880.3 |
| 32.5° | 989.7 | 1156.3 | 1338.7 | 1288.8 | 1169.7 | 1040.8 | 938.7 | 887.6 | 846.3 | 835.3 | 832.9 |
| 35° | 1052.9 | 1264.5 | 1403.1 | 1291.3 | 1121.0 | 969.1 | 863.3 | 806.1 | 780.6 | 769.7 | 774.5 |
| 37.5° | 1142.9 | 1375.2 | 1440.8 | 1268.2 | 1050.5 | 873.0 | 774.5 | 729.5 | 710.1 | 706.4 | 711.3 |
| 40° | 1241.4 | 1477.3 | 1465.1 | 1241.4 | 954.5 | 770.9 | 689.4 | 661.4 | 649.3 | 651.7 | 660.2 |
| 42.5° | 1347.2 | 1561.2 | 1483.4 | 1180.6 | 841.4 | 677.2 | 621.3 | 609.2 | 627.4 | 638.3 | 645.6 |
| 45° | 1460.3 | 1637.8 | 1489.4 | 1094.3 | 735.6 | 605.5 | 582.4 | 605.5 | 633.5 | 638.3 | 642.0 |
| 47.5° | 1572.1 | 1704.7 | 1489.4 | 980.0 | 634.7 | 558.1 | 570.2 | 600.6 | 622.5 | 614.0 | 615.2 |
| 50° | 1679.1 | 1758.2 | 1485.8 | 847.5 | 564.2 | 533.8 | 554.4 | 573.9 | 564.2 | 539.8 | 542.3 |
| 52.5° | 1776.4 | 1805.6 | 1460.3 | 711.3 | 505.8 | 527.7 | 528.9 | 504.6 | 482.7 | 470.5 | 473.0 |
| 55° | 1884.6 | 1849.3 | 1384.9 | 589.7 | 468.1 | 511.9 | 477.8 | 446.2 | 457.2 | 453.5 | 452.3 |
| 57.5° | 1997.7 | 1900.4 | 1281.5 | 485.1 | 432.9 | 474.2 | 436.5 | 434.1 | 432.9 | 428.0 | 421.9 |
| 60° | 2095.0 | 1941.8 | 1127.1 | 381.8 | 380.6 | 417.0 | 428.0 | 421.9 | 415.8 | 406.1 | 401.2 |
| 62.5° | 2039.0 | 1838.4 | 901.0 | 308.8 | 327.1 | 372.1 | 412.2 | 400.0 | 401.2 | 392.7 | 389.1 |
| 65° | 1881.0 | 1634.1 | 614.0 | 257.8 | 276.0 | 331.9 | 374.5 | 363.5 | 357.5 | 355.0 | 352.6 |
| 67.5° | 1676.7 | 1415.3 | 404.9 | 204.3 | 231.0 | 290.6 | 330.7 | 317.3 | 325.9 | 325.9 | 324.6 |
| 70° | 1319.2 | 1082.1 | 255.3 | 166.6 | 183.6 | 240.7 | 274.8 | 280.9 | 293.0 | 294.2 | 293.0 |
| 72.5° | *948.4* | *740.5* | *159.3* | *133.7* | *145.9* | *183.6* | *239.5* | *245.6* | *259.0* | *261.4* | *261.4* |
| 75° | 559.3 | 417.0 | 107.0 | 107.0 | 113.1 | 149.6 | 198.2 | 217.6 | 223.7 | 226.2 | 223.7 |
| 77.5° | 224.9 | 160.5 | 70.5 | 79.0 | 87.5 | 120.4 | 152.0 | 176.3 | 173.9 | 172.7 | 166.6 |
| 80° | 80.2 | 69.3 | 48.6 | 52.3 | 63.2 | 90.0 | 113.1 | 120.4 | 127.7 | 124.0 | 120.4 |
| 82.5° | 32.8 | 31.6 | 30.4 | 34.0 | 37.7 | 54.7 | 79.0 | 79.0 | 80.2 | 79.0 | 77.8 |
| 85° | 12.2 | 12.2 | 14.6 | 17.0 | 20.7 | 25.5 | 35.3 | 45.0 | 37.7 | 26.7 | 28.0 |
| 87.5° | 6.1 | 6.1 | 4.9 | 4.9 | 6.1 | 8.5 | 8.5 | 10.9 | 10.9 | 6.1 | 3.6 |
| 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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Peachtree City, GA 30269

# LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-2

Test Date: 10/09/2024

Luminaire Tested: GSS-SB1A-722-U-5WQ

Data in this report applies to families of products including GSS-SB1A-722-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

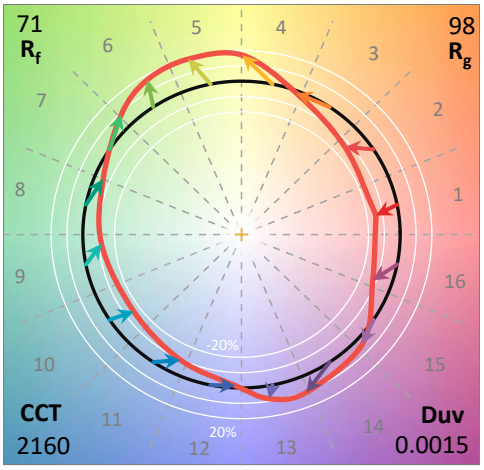
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-2 |
| 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-722-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 2200K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 2160 |
| CIE u': | 0.2927 |
| CIE v': | 0.5388 |
| Duv: | 0.0015 |
| CIE x: | 0.5130 |
| CIE y: | 0.4197 |
| CIE z: | 0.0674 |
| Peak Wavelength (nm): | 609 |
| Dominant Wavelength (nm): | 587 |
| Purity: | 79.96089 |
| Rf: | 70.6 |
| Rg: | 97.6 |

| | |
|---|---|
| CRI (Ra): | 71.9 |
| R1: | 68.7 |
| R2: | 82.6 |
| R3: | 95.5 |
| R4: | 66.4 |
| R5: | 65.4 |
| R6: | 75.9 |
| R7: | 77.2 |
| R8: | 43.5 |
| R9: | -17.8 |
| R10: | 60.5 |
| R11: | 60.2 |
| R12: | 48.2 |
| R13: | 70.7 |
| R14: | 96.8 |
| R15: | 61.8 |




## Test Conditions

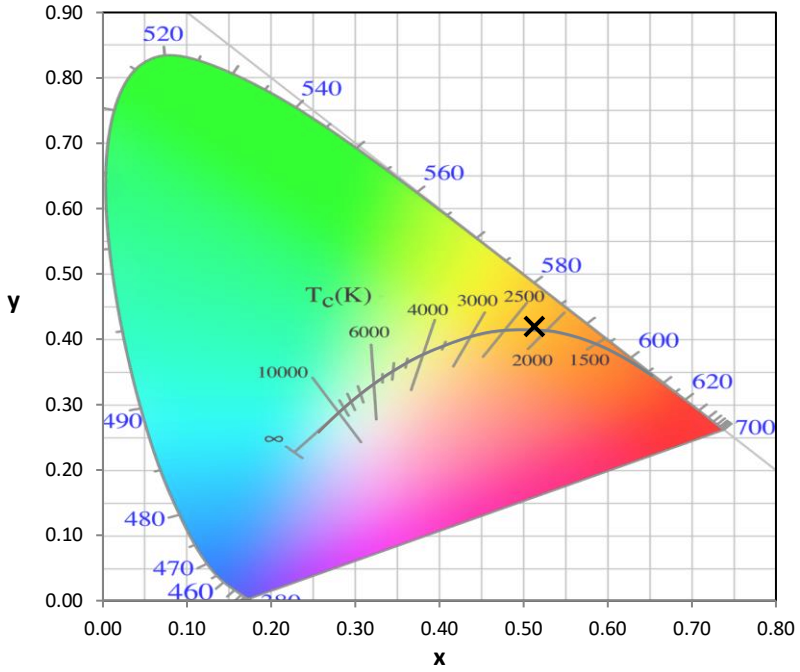
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-2

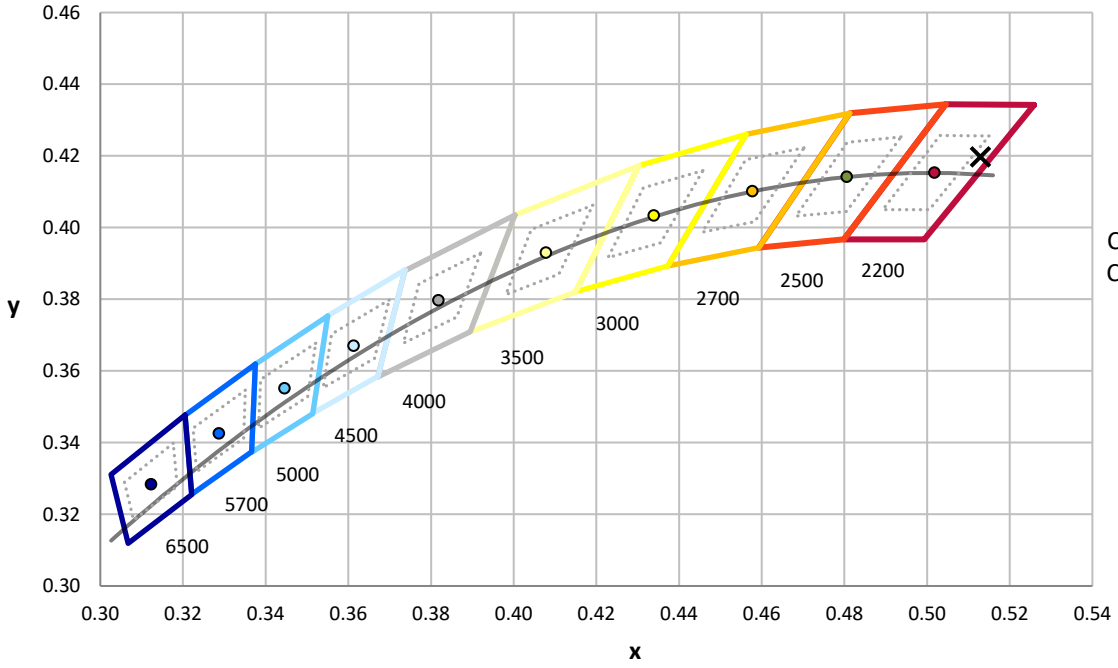
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

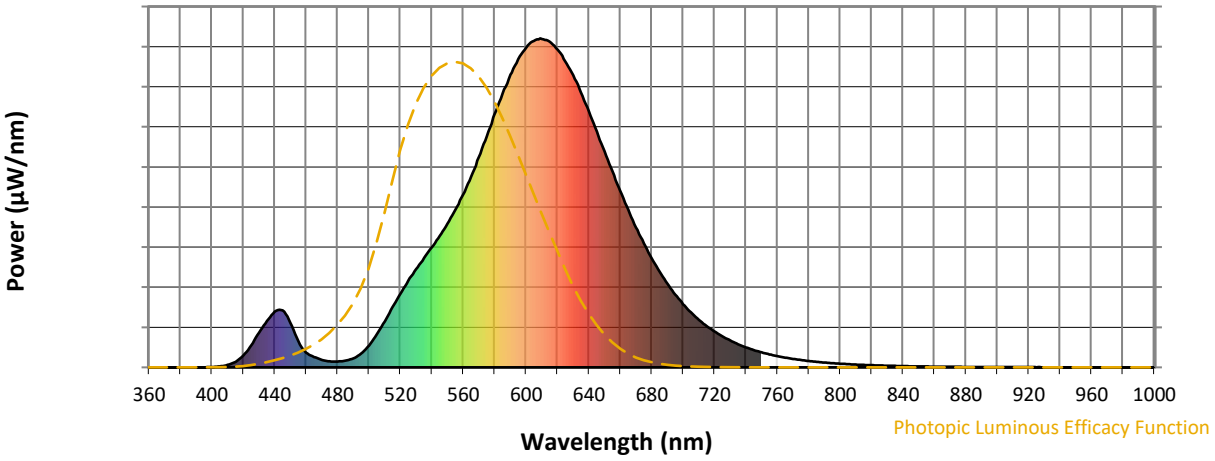



CCT = 2160K
CIE x = 0.5130
CIE y = 0.4197
Duv = 0.0015

Point lies inside the ANSI 2200K 7-step quadrangle

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## Photopic Flux vs. Wavelength

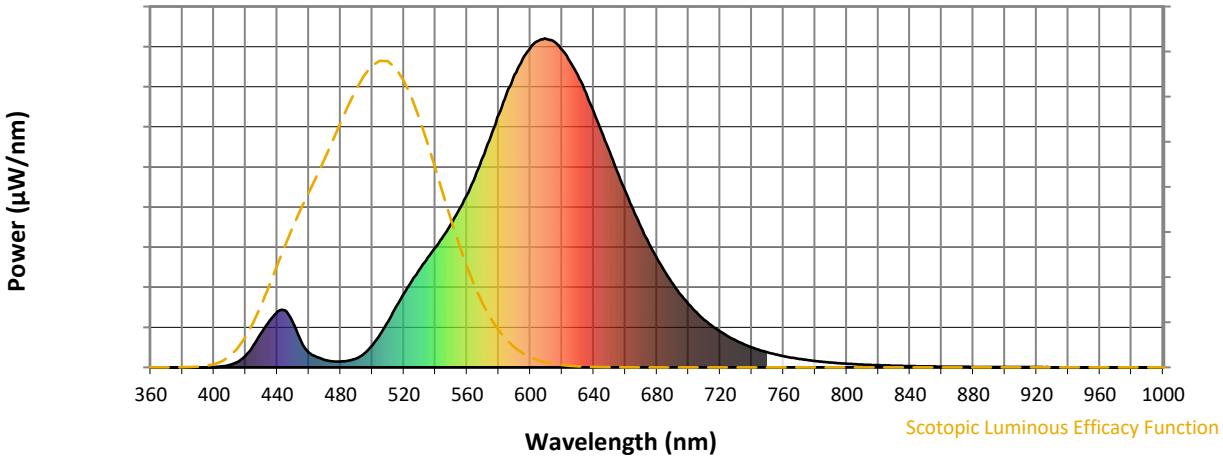



## Photopic Lumens: NR

| 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 | 27 | NR | 620 | 966 | NR | 750 | 46 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 42 | NR | 625 | 930 | NR | 755 | 39 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 67 | NR | 630 | 888 | NR | 760 | 34 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 101 | NR | 635 | 835 | NR | 765 | 30 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 139 | NR | 640 | 778 | NR | 770 | 26 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 183 | NR | 645 | 717 | NR | 775 | 22 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 224 | NR | 650 | 656 | NR | 780 | 19 | NR | 910 | 1 | NR |
| 395 | 0 | NR | 525 | 262 | NR | 655 | 595 | NR | 785 | 17 | NR | 915 | 1 | NR |
| 400 | 1 | NR | 530 | 299 | NR | 660 | 536 | NR | 790 | 15 | NR | 920 | 1 | NR |
| 405 | 3 | NR | 535 | 332 | NR | 665 | 480 | NR | 795 | 13 | NR | 925 | 1 | NR |
| 410 | 7 | NR | 540 | 365 | NR | 670 | 425 | NR | 800 | 11 | NR | 930 | 1 | NR |
| 415 | 17 | NR | 545 | 400 | NR | 675 | 376 | NR | 805 | 10 | NR | 935 | 0 | NR |
| 420 | 36 | NR | 550 | 437 | NR | 680 | 332 | NR | 810 | 8 | NR | 940 | 0 | NR |
| 425 | 67 | NR | 555 | 479 | NR | 685 | 291 | NR | 815 | 8 | NR | 945 | 0 | NR |
| 430 | 105 | NR | 560 | 525 | NR | 690 | 255 | NR | 820 | 7 | NR | 950 | 0 | NR |
| 435 | 141 | NR | 565 | 579 | NR | 695 | 221 | NR | 825 | 6 | NR | 955 | 0 | NR |
| 440 | 169 | NR | 570 | 639 | NR | 700 | 192 | NR | 830 | 5 | NR | 960 | 0 | NR |
| 445 | 173 | NR | 575 | 703 | NR | 705 | 167 | NR | 835 | 4 | NR | 965 | 0 | NR |
| 450 | 136 | NR | 580 | 769 | NR | 710 | 144 | NR | 840 | 4 | NR | 970 | 0 | NR |
| 455 | 80 | NR | 585 | 832 | NR | 715 | 125 | NR | 845 | 3 | NR | 975 | 0 | NR |
| 460 | 45 | NR | 590 | 890 | NR | 720 | 109 | NR | 850 | 3 | NR | 980 | 0 | NR |
| 465 | 32 | NR | 595 | 937 | NR | 725 | 94 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 23 | NR | 600 | 972 | NR | 730 | 81 | NR | 860 | 2 | NR | 990 | 0 | NR |
| 475 | 18 | NR | 605 | 992 | NR | 735 | 70 | NR | 865 | 2 | NR | 995 | 0 | NR |
| 480 | 18 | NR | 610 | 998 | NR | 740 | 61 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 20 | NR | 615 | 990 | NR | 745 | 53 | NR | 875 | 2 | NR | | | |

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## Scotopic Flux vs. Wavelength

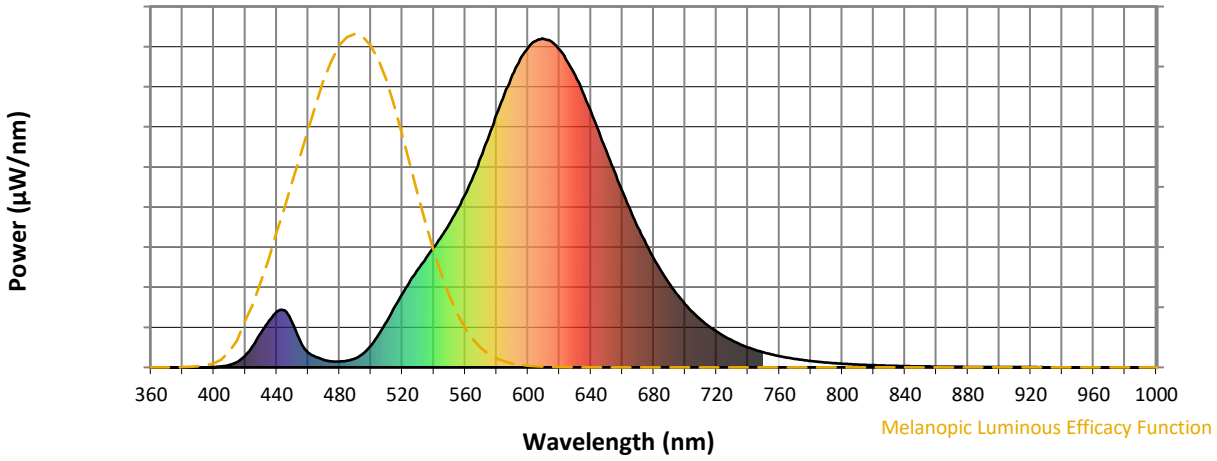



**Scotopic Lumens: NR** **S/P: 0.8**

| 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 | 27 | NR | 620 | 966 | NR | 750 | 46 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 42 | NR | 625 | 930 | NR | 755 | 39 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 67 | NR | 630 | 888 | NR | 760 | 34 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 101 | NR | 635 | 835 | NR | 765 | 30 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 139 | NR | 640 | 778 | NR | 770 | 26 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 183 | NR | 645 | 717 | NR | 775 | 22 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 224 | NR | 650 | 656 | NR | 780 | 19 | NR | 910 | 1 | NR |
| 395 | 0 | NR | 525 | 262 | NR | 655 | 595 | NR | 785 | 17 | NR | 915 | 1 | NR |
| 400 | 1 | NR | 530 | 299 | NR | 660 | 536 | NR | 790 | 15 | NR | 920 | 1 | NR |
| 405 | 3 | NR | 535 | 332 | NR | 665 | 480 | NR | 795 | 13 | NR | 925 | 1 | NR |
| 410 | 7 | NR | 540 | 365 | NR | 670 | 425 | NR | 800 | 11 | NR | 930 | 1 | NR |
| 415 | 17 | NR | 545 | 400 | NR | 675 | 376 | NR | 805 | 10 | NR | 935 | 0 | NR |
| 420 | 36 | NR | 550 | 437 | NR | 680 | 332 | NR | 810 | 8 | NR | 940 | 0 | NR |
| 425 | 67 | NR | 555 | 479 | NR | 685 | 291 | NR | 815 | 8 | NR | 945 | 0 | NR |
| 430 | 105 | NR | 560 | 525 | NR | 690 | 255 | NR | 820 | 7 | NR | 950 | 0 | NR |
| 435 | 141 | NR | 565 | 579 | NR | 695 | 221 | NR | 825 | 6 | NR | 955 | 0 | NR |
| 440 | 169 | NR | 570 | 639 | NR | 700 | 192 | NR | 830 | 5 | NR | 960 | 0 | NR |
| 445 | 173 | NR | 575 | 703 | NR | 705 | 167 | NR | 835 | 4 | NR | 965 | 0 | NR |
| 450 | 136 | NR | 580 | 769 | NR | 710 | 144 | NR | 840 | 4 | NR | 970 | 0 | NR |
| 455 | 80 | NR | 585 | 832 | NR | 715 | 125 | NR | 845 | 3 | NR | 975 | 0 | NR |
| 460 | 45 | NR | 590 | 890 | NR | 720 | 109 | NR | 850 | 3 | NR | 980 | 0 | NR |
| 465 | 32 | NR | 595 | 937 | NR | 725 | 94 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 23 | NR | 600 | 972 | NR | 730 | 81 | NR | 860 | 2 | NR | 990 | 0 | NR |
| 475 | 18 | NR | 605 | 992 | NR | 735 | 70 | NR | 865 | 2 | NR | 995 | 0 | NR |
| 480 | 18 | NR | 610 | 998 | NR | 740 | 61 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 20 | NR | 615 | 990 | NR | 745 | 53 | NR | 875 | 2 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 1.21**

| 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 | 27 | NR | 620 | 966 | NR | 750 | 46 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 42 | NR | 625 | 930 | NR | 755 | 39 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 67 | NR | 630 | 888 | NR | 760 | 34 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 101 | NR | 635 | 835 | NR | 765 | 30 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 139 | NR | 640 | 778 | NR | 770 | 26 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 183 | NR | 645 | 717 | NR | 775 | 22 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 224 | NR | 650 | 656 | NR | 780 | 19 | NR | 910 | 1 | NR |
| 395 | 0 | NR | 525 | 262 | NR | 655 | 595 | NR | 785 | 17 | NR | 915 | 1 | NR |
| 400 | 1 | NR | 530 | 299 | NR | 660 | 536 | NR | 790 | 15 | NR | 920 | 1 | NR |
| 405 | 3 | NR | 535 | 332 | NR | 665 | 480 | NR | 795 | 13 | NR | 925 | 1 | NR |
| 410 | 7 | NR | 540 | 365 | NR | 670 | 425 | NR | 800 | 11 | NR | 930 | 1 | NR |
| 415 | 17 | NR | 545 | 400 | NR | 675 | 376 | NR | 805 | 10 | NR | 935 | 0 | NR |
| 420 | 36 | NR | 550 | 437 | NR | 680 | 332 | NR | 810 | 8 | NR | 940 | 0 | NR |
| 425 | 67 | NR | 555 | 479 | NR | 685 | 291 | NR | 815 | 8 | NR | 945 | 0 | NR |
| 430 | 105 | NR | 560 | 525 | NR | 690 | 255 | NR | 820 | 7 | NR | 950 | 0 | NR |
| 435 | 141 | NR | 565 | 579 | NR | 695 | 221 | NR | 825 | 6 | NR | 955 | 0 | NR |
| 440 | 169 | NR | 570 | 639 | NR | 700 | 192 | NR | 830 | 5 | NR | 960 | 0 | NR |
| 445 | 173 | NR | 575 | 703 | NR | 705 | 167 | NR | 835 | 4 | NR | 965 | 0 | NR |
| 450 | 136 | NR | 580 | 769 | NR | 710 | 144 | NR | 840 | 4 | NR | 970 | 0 | NR |
| 455 | 80 | NR | 585 | 832 | NR | 715 | 125 | NR | 845 | 3 | NR | 975 | 0 | NR |
| 460 | 45 | NR | 590 | 890 | NR | 720 | 109 | NR | 850 | 3 | NR | 980 | 0 | NR |
| 465 | 32 | NR | 595 | 937 | NR | 725 | 94 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 23 | NR | 600 | 972 | NR | 730 | 81 | NR | 860 | 2 | NR | 990 | 0 | NR |
| 475 | 18 | NR | 605 | 992 | NR | 735 | 70 | NR | 865 | 2 | NR | 995 | 0 | NR |
| 480 | 18 | NR | 610 | 998 | NR | 740 | 61 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 20 | NR | 615 | 990 | NR | 745 | 53 | NR | 875 | 2 | NR | | | |

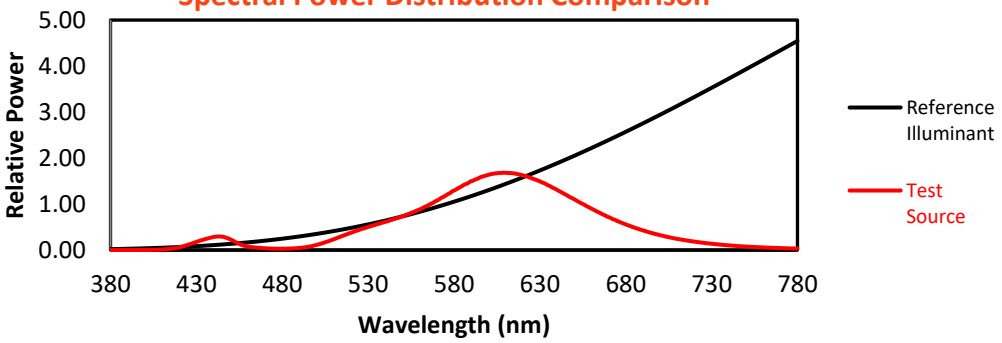
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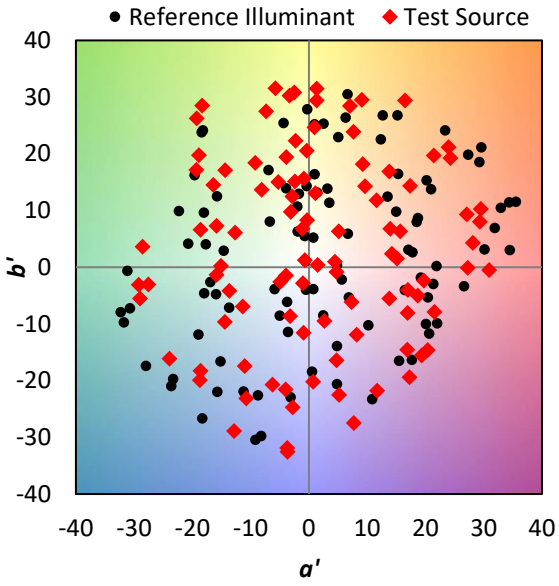
## Summary

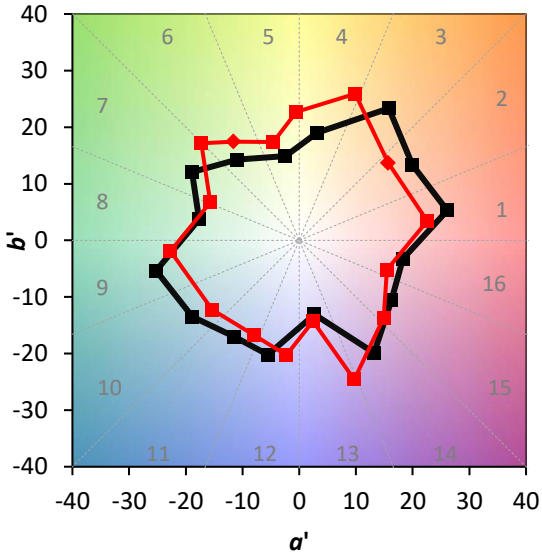
$R_f$ = 70.6
$R_g$ = 97.6
CIE $R_a$ = 71.9
$R_9$ = -17.8

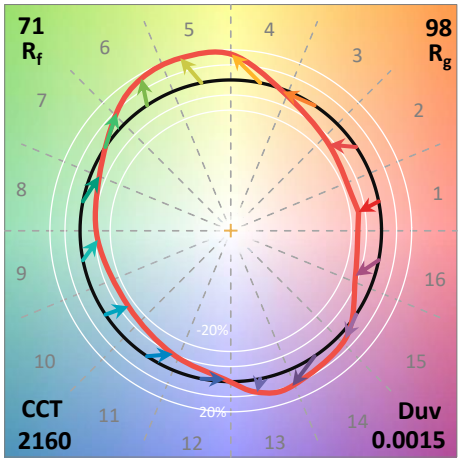
## Spectral Power Distribution Comparison

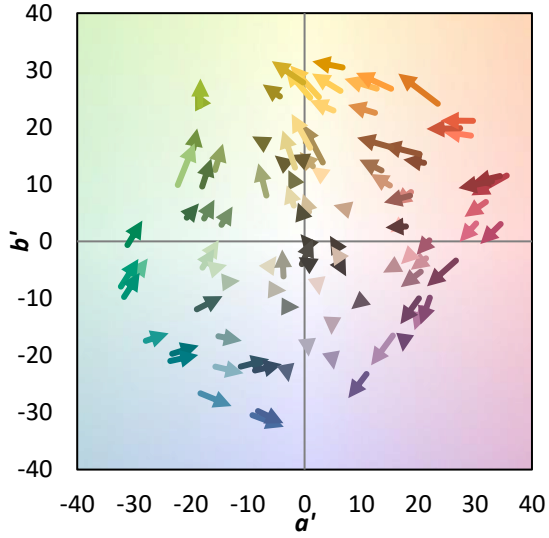



## Color Vector Graphics



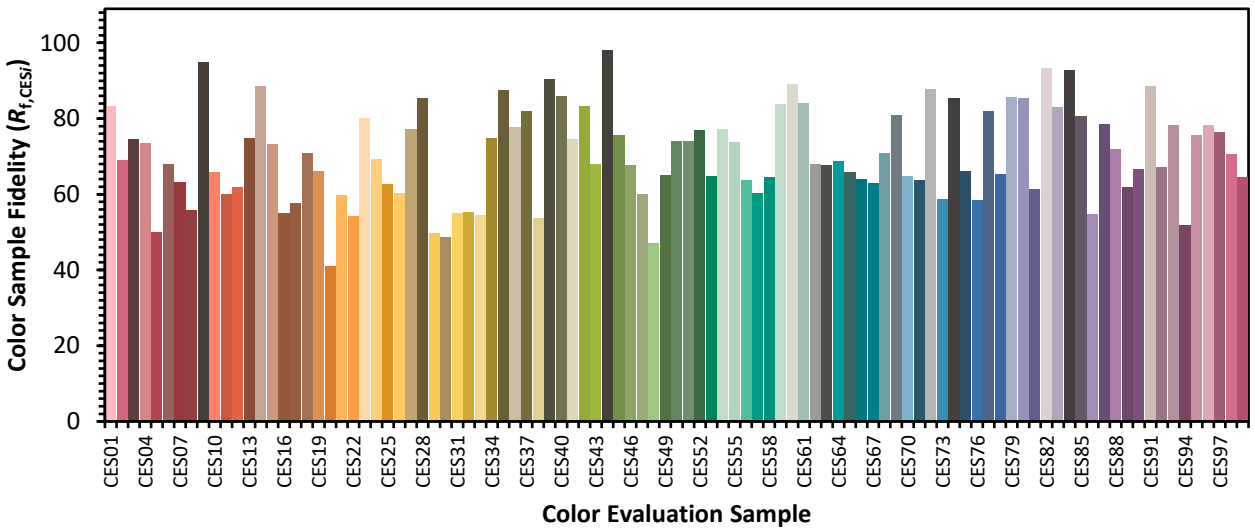



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**Individual Sample Fidelity Index ($R_{f,i}$)**

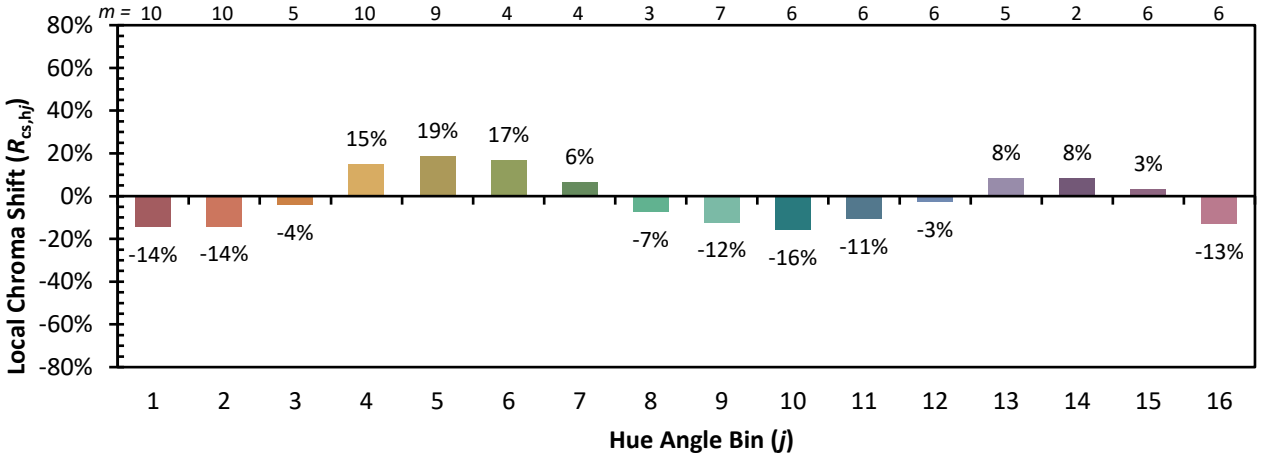
| | | | |
|---|---|---|---|
| CES01 = 87 | CES26 = 60 | CES51 = 74 | CES76 = 58 |
| CES02 = 65 | CES27 = 77 | CES52 = 77 | CES77 = 82 |
| CES03 = 32 | CES28 = 85 | CES53 = 65 | CES78 = 65 |
| CES04 = 72 | CES29 = 50 | CES54 = 77 | CES79 = 86 |
| CES05 = 52 | CES30 = 49 | CES55 = 74 | CES80 = 85 |
| CES06 = 53 | CES31 = 55 | CES56 = 64 | CES81 = 61 |
| CES07 = 44 | CES32 = 55 | CES57 = 60 | CES82 = 93 |
| CES08 = 43 | CES33 = 55 | CES58 = 64 | CES83 = 83 |
| CES09 = 29 | CES34 = 75 | CES59 = 84 | CES84 = 93 |
| CES10 = 79 | CES35 = 88 | CES60 = 89 | CES85 = 81 |
| CES11 = 62 | CES36 = 78 | CES61 = 84 | CES86 = 55 |
| CES12 = 68 | CES37 = 82 | CES62 = 68 | CES87 = 79 |
| CES13 = 45 | CES38 = 54 | CES63 = 68 | CES88 = 72 |
| CES14 = 75 | CES39 = 90 | CES64 = 69 | CES89 = 62 |
| CES15 = 72 | CES40 = 86 | CES65 = 66 | CES90 = 67 |
| CES16 = 49 | CES41 = 75 | CES66 = 64 | CES91 = 89 |
| CES17 = 51 | CES42 = 83 | CES67 = 63 | CES92 = 67 |
| CES18 = 57 | CES43 = 68 | CES68 = 71 | CES93 = 78 |
| CES19 = 74 | CES44 = 98 | CES69 = 81 | CES94 = 52 |
| CES20 = 68 | CES45 = 76 | CES70 = 65 | CES95 = 76 |
| CES21 = 89 | CES46 = 68 | CES71 = 64 | CES96 = 78 |
| CES22 = 81 | CES47 = 60 | CES72 = 88 | CES97 = 76 |
| CES23 = 92 | CES48 = 47 | CES73 = 59 | CES98 = 71 |
| CES24 = 92 | CES49 = 65 | CES74 = 85 | CES99 = 65 |
| CES25 = 74 | CES50 = 74 | CES75 = 66 | |

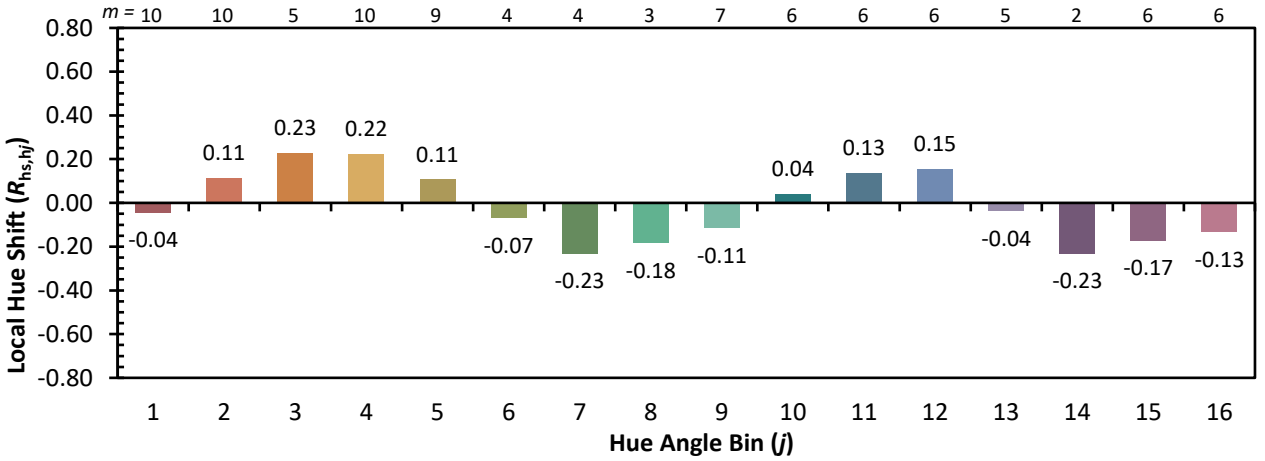


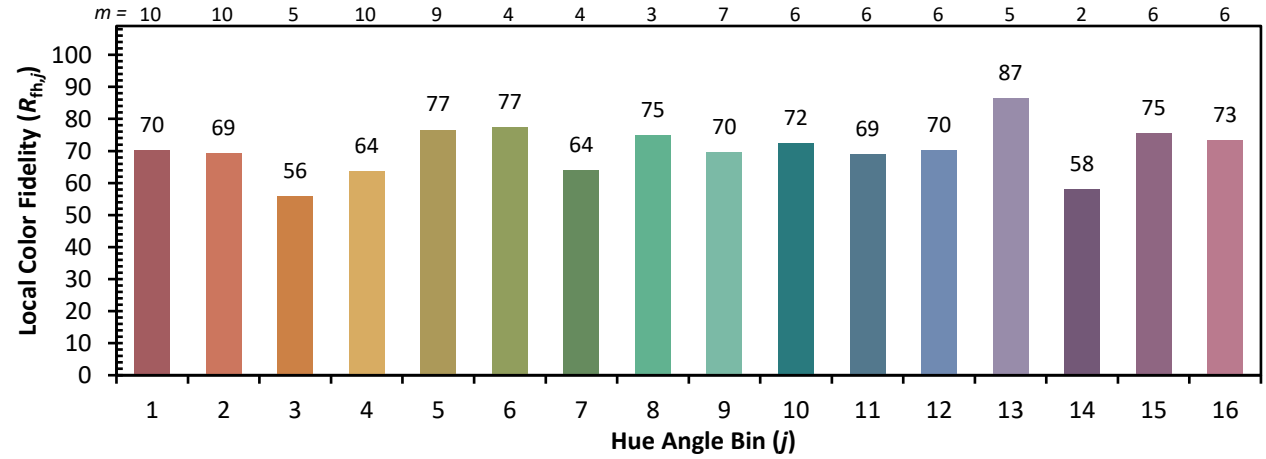
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## Color Rendition by Hue-Angle Bin



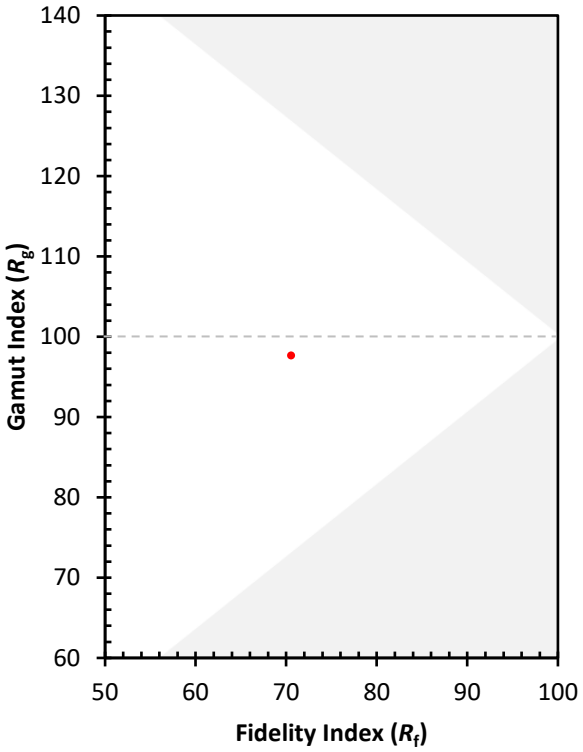



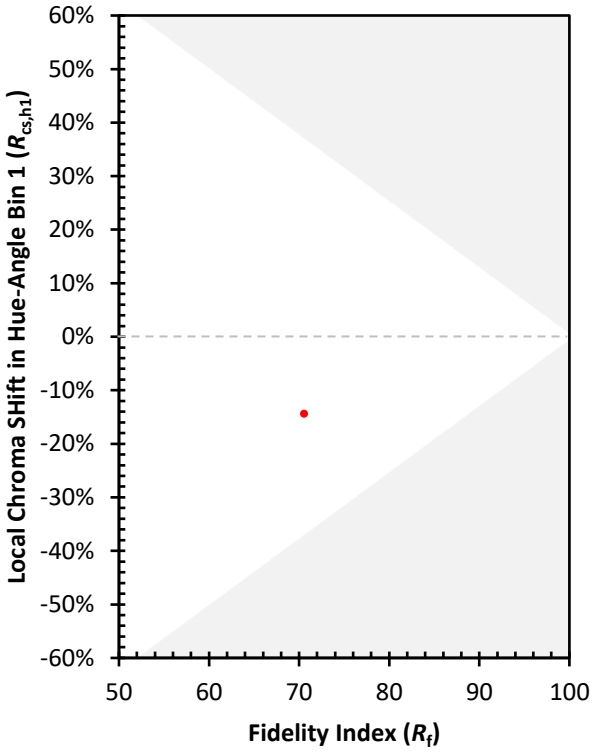



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## Measure Comparisons




(END OF REPORT)