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: STREETWORKS

Report Number: P1456442

Luminaire Tested: GLAN-SB1D-730-U-T3LG

Issue Date: 05/20/2026

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: | P1456442 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 5/21/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | STREETWORKS |
| Catalog Number: | GLAN-SB1D-730-U-T3LG |
| Description: | GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 900mA 1xLight Square PACKAGE 70CRI 3000K FIXTURE w/ TYPE III LOW GLARE |
| Light Source: | (26) 3000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 9926.4 lumens |
| Efficiency: | N/A |
| Efficacy: | 124.7 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): | 79.6 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.97 |
| Total Harmonic Distortion (THDi): | NR |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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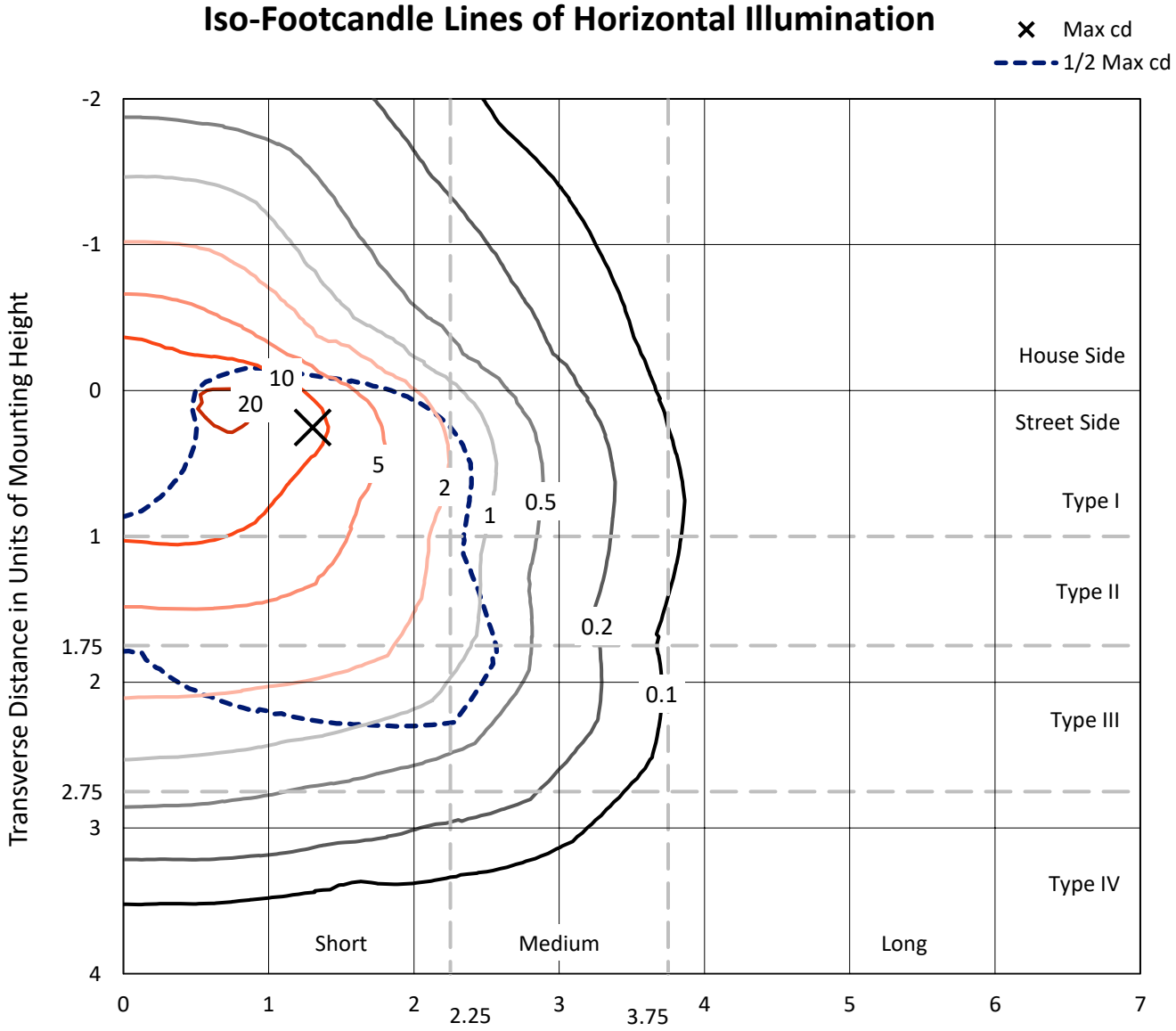
Scaled Data Report

REPORT NUMBER: P1456442
CATALOG NUMBER: GLAN-SB1D-730-U-T3LG

## Iso-Footcandle Lines of Horizontal Illumination




Based on 10 foot mounting height. Maximum calculated value = 22.7 fc
Type III - Short - N/A

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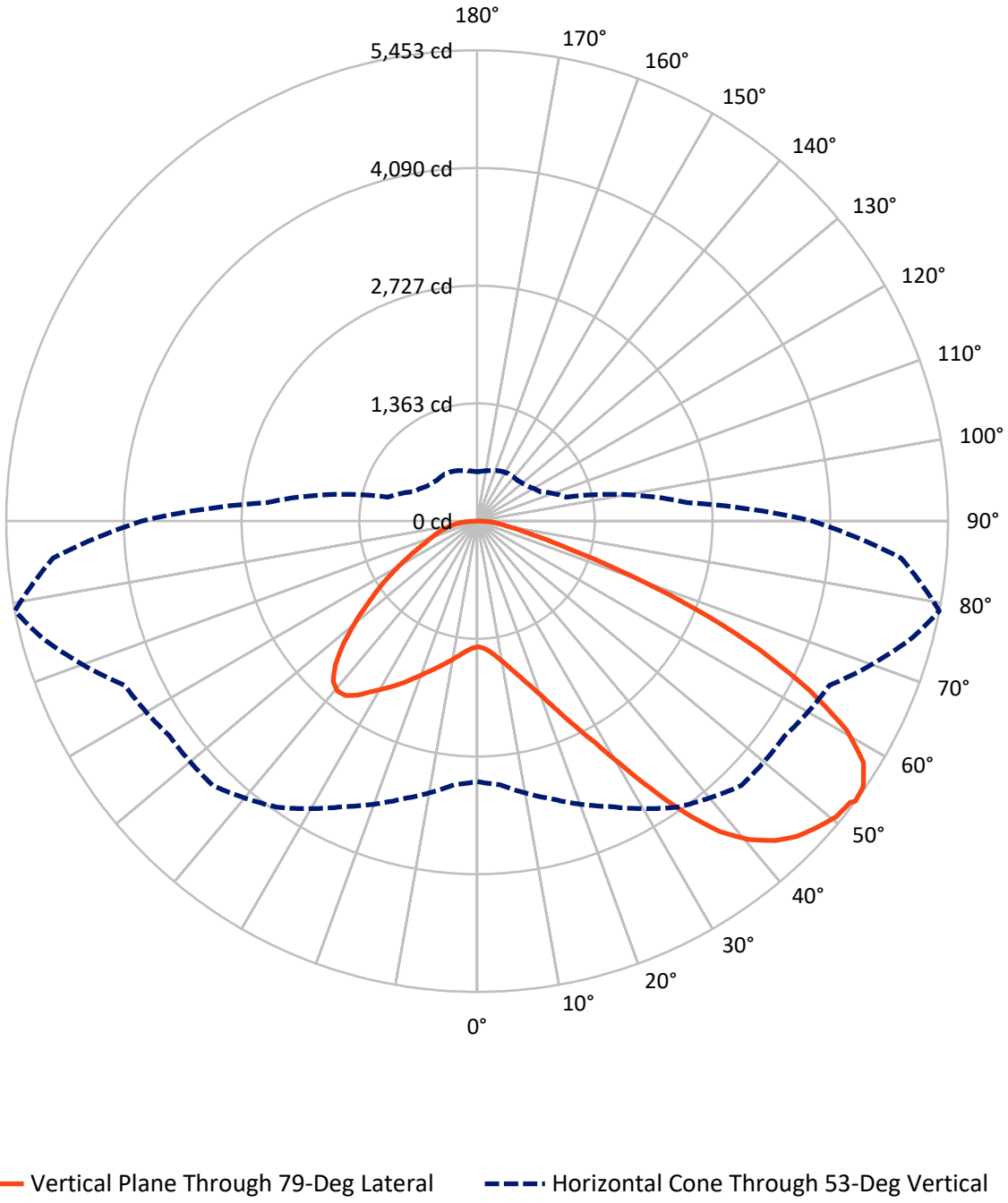
## Luminous Intensity Polar Plot



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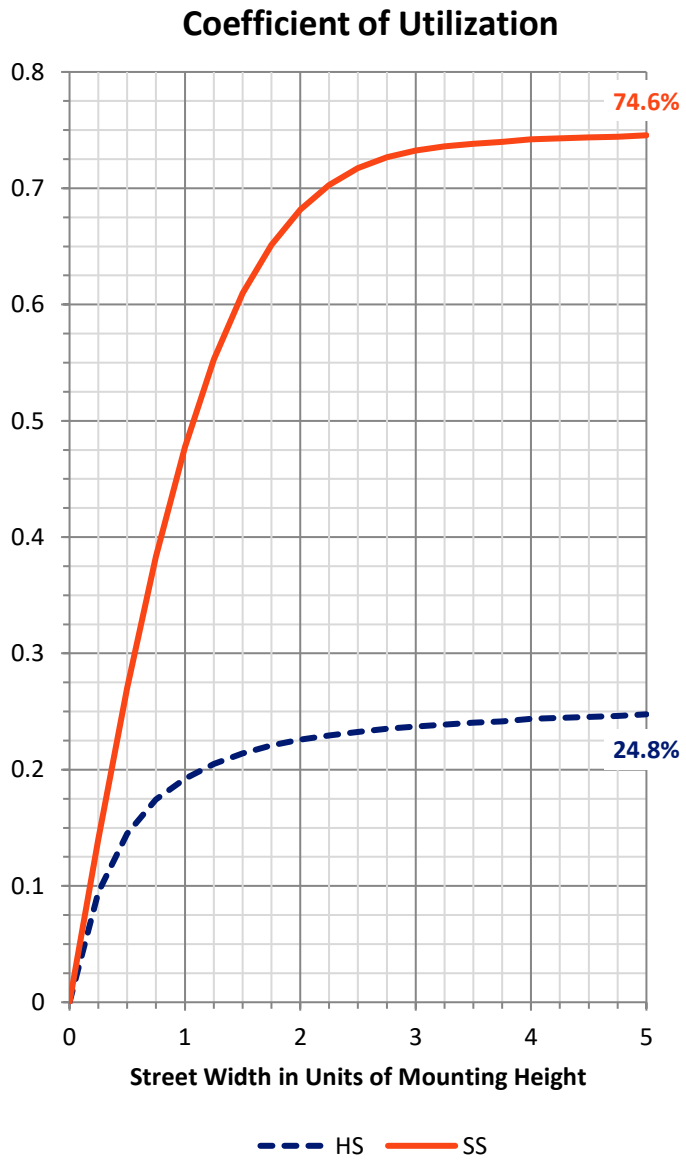
**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 2502.4 | 0.0 | 2502.4 |
| | % Fixture | 25.2 | 0.0 | 25.2 |
| **Street Side** | Lumens | 7424.1 | 0.0 | 7424.1 |
| | % Fixture | 74.8 | 0.0 | 74.8 |
| **Total** | Lumens | 9926.4 | 0.0 | 9926.4 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 138.8 | 1.4 |
| 10°-20° | 430.0 | 4.3 |
| 20°-30° | 822.1 | 8.3 |
| 30°-40° | 1411.4 | 14.2 |
| 40°-50° | 1977.0 | 19.9 |
| 50°-60° | 2243.6 | 22.6 |
| 60°-70° | 1967.5 | 19.8 |
| 70°-80° | 769.3 | 7.8 |
| 80°-90° | 166.7 | 1.7 |
| 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° | 9926.4 | 100.0 |
| 0°-180° | 9926.4 | 100.0 |



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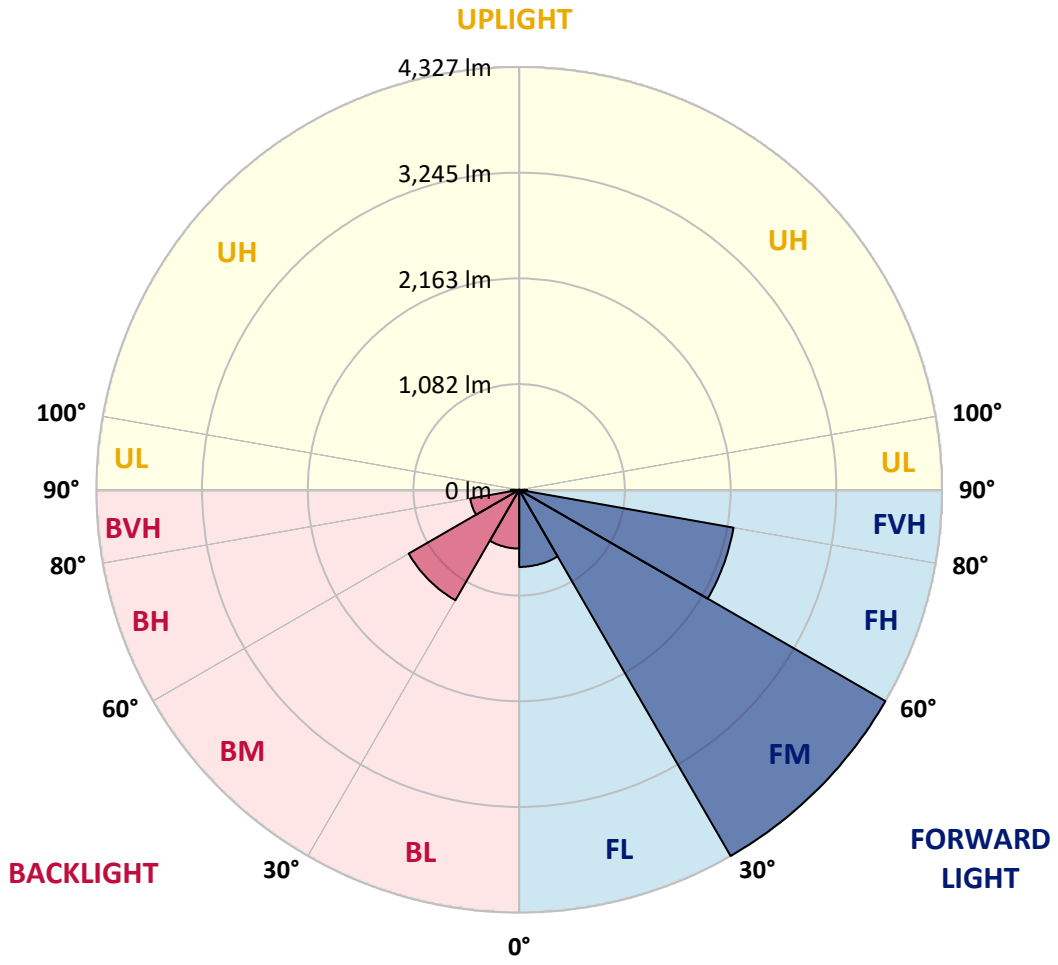
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 789.1 | 7.9 | | | |
| FM | (30°-60°) | 4326.6 | 43.6 | | | |
| FH | (60°-80°) | 2227.6 | 22.4 | | | G2/5000 |
| FVH | (80°-90°) | 80.8 | 0.8 | | | G1/100 |
| BL | (0°-30°) | 601.8 | 6.1 | B2/1000 | | |
| BM | (30°-60°) | 1305.4 | 13.2 | B2/2500 | | |
| BH | (60°-80°) | 509.3 | 5.1 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 85.8 | 0.9 | | | 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: P1456442
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 79° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1457.2 | 1457.2 | 1457.2 | 1457.2 | 1457.2 | 1457.2 | 1457.2 | 1457.2 | 1457.2 | *1457.2* | 1457.2 |
| 2.5° | 1459.4 | 1459.4 | 1450.6 | 1459.4 | 1455.0 | 1461.6 | 1466.1 | 1466.1 | 1474.9 | *1472.7* | 1472.7 |
| 5° | 1435.1 | 1430.7 | 1428.5 | 1444.0 | 1452.8 | 1470.5 | 1490.4 | 1499.2 | 1514.7 | *1514.7* | 1516.9 |
| 7.5° | 1371.0 | 1368.8 | 1379.8 | 1410.8 | 1439.5 | 1483.8 | 1525.8 | 1550.1 | 1574.4 | *1578.8* | 1578.8 |
| 10° | 1331.2 | 1329.0 | 1342.2 | 1379.8 | 1426.3 | 1490.4 | 1556.7 | 1607.6 | 1647.4 | *1658.5* | 1658.5 |
| 12.5° | 1331.2 | 1331.2 | 1342.2 | 1379.8 | 1428.5 | 1505.9 | 1596.5 | 1682.8 | 1744.7 | *1758.0* | 1753.5 |
| 15° | 1368.8 | 1366.6 | 1379.8 | 1419.6 | 1466.1 | 1539.0 | 1649.6 | 1764.6 | 1848.6 | *1872.9* | 1875.2 |
| 17.5° | 1408.6 | 1406.4 | 1426.3 | 1477.1 | 1532.4 | 1605.4 | 1718.2 | 1859.7 | 1979.1 | *2010.0* | 2016.7 |
| 20° | 1470.5 | 1468.3 | 1492.6 | 1541.3 | 1609.8 | 1693.8 | 1811.0 | 1972.5 | 2138.3 | *2171.5* | 2180.3 |
| 22.5° | 1541.3 | 1543.5 | 1570.0 | 1629.7 | 1698.3 | 1808.8 | 1952.6 | 2131.7 | 2330.7 | *2381.5* | 2390.4 |
| 25° | 1689.4 | 1682.8 | 1704.9 | 1746.9 | 1819.9 | 1952.6 | 2129.5 | 2324.0 | 2560.7 | *2622.6* | 2633.6 |
| 27.5° | 1886.2 | 1875.2 | 1899.5 | 1941.5 | 1994.6 | 2118.4 | 2321.8 | 2538.5 | 2823.8 | *2901.2* | 2903.4 |
| 30° | 2063.1 | 2056.5 | 2089.7 | 2175.9 | 2231.2 | 2326.3 | 2543.0 | 2790.6 | 3148.8 | *3261.6* | 3266.0 |
| 32.5° | 2215.7 | 2213.5 | 2275.4 | 2386.0 | 2512.0 | 2613.7 | 2823.8 | 3109.0 | 3560.1 | *3690.6* | 3661.9 |
| 35° | 2361.6 | 2368.3 | 2445.7 | 2560.7 | 2728.7 | 2932.1 | 3144.4 | 3469.5 | 3993.6 | *4150.6* | 4104.1 |
| 37.5° | 2509.8 | 2514.2 | 2615.9 | 2764.1 | 2941.0 | 3206.3 | 3491.6 | 3860.9 | 4369.5 | *4564.1* | 4462.3 |
| 40° | 2646.9 | 2660.2 | 2797.3 | 2956.5 | 3186.4 | 3456.2 | 3774.6 | 4132.9 | 4659.1 | *4851.5* | 4741.0 |
| 42.5° | 2784.0 | 2803.9 | 2952.0 | 3171.0 | 3416.4 | 3697.2 | 3971.4 | 4298.7 | 4844.9 | *5059.4* | 4889.1 |
| 45° | 2925.5 | 2938.8 | 3122.3 | 3350.1 | 3628.7 | 3887.4 | 4084.2 | 4404.9 | 4973.1 | *5205.3* | 4973.1 |
| 47.5° | 3020.6 | 3047.1 | 3248.4 | 3511.5 | 3790.1 | 4033.4 | 4174.9 | 4449.1 | 5055.0 | *5300.4* | 5004.1 |
| 50° | 3058.2 | 3095.8 | 3312.5 | 3604.4 | 3922.8 | 4170.5 | 4245.6 | 4473.4 | 5145.6 | *5384.4* | 4997.5 |
| 52.5° | 3051.6 | 3086.9 | 3323.5 | 3646.4 | 4028.9 | 4296.5 | 4314.2 | 4499.9 | 5209.8 | *5413.2* | 4940.0 |
| 53° | *3016.2* | *3064.8* | *3330.2* | *3648.6* | *4044.4* | *4329.7* | *4345.1* | *4502.1* | *5218.6* | *5453.0* | *4931.1* |
| 55° | 2894.6 | 2921.1 | 3261.6 | 3646.4 | 4117.4 | 4453.5 | 4431.4 | 4568.5 | 5242.9 | *5426.5* | 4833.8 |
| 57.5° | 2784.0 | 2810.5 | 3106.8 | 3604.4 | 4177.1 | 4628.2 | 4570.7 | 4557.4 | 5110.2 | *5276.1* | 4588.4 |
| 60° | 2713.2 | 2722.1 | 2971.9 | 3471.7 | 4152.8 | 4749.8 | 4661.4 | 4427.0 | 4783.0 | *4920.1* | 4157.2 |
| 62.5° | 2653.5 | 2651.3 | 2872.4 | 3281.5 | 4059.9 | 4767.5 | 4679.0 | 4104.1 | 4303.1 | *4325.2* | 3582.3 |
| 65° | 2518.6 | 2503.2 | 2717.7 | 3067.0 | 3867.5 | 4687.9 | 4462.3 | 3615.4 | 3666.3 | *3593.3* | 2876.9 |
| 67.5° | 2251.1 | 2217.9 | 2408.1 | 2739.8 | 3476.1 | 4462.3 | 4048.8 | 3047.1 | 2890.1 | *2744.2* | 2167.0 |
| 70° | 1612.0 | 1612.0 | 1764.6 | 2096.3 | 2790.6 | 3856.5 | 3476.1 | 2306.4 | 1990.1 | *1859.7* | 1448.4 |
| 72.5° | 789.4 | 809.3 | 968.5 | 1238.3 | 1870.7 | 2799.5 | 2662.4 | 1494.8 | 1207.4 | *1143.2* | 928.7 |
| 75° | 336.1 | 338.3 | 413.5 | 548.4 | 948.6 | 1656.2 | 1667.3 | 862.4 | 773.9 | *743.0* | 614.7 |
| 77.5° | 234.4 | 238.8 | 272.0 | 322.8 | 451.1 | 760.7 | 866.8 | 521.9 | 519.6 | *497.5* | 437.8 |
| 80° | 179.1 | 183.5 | 205.6 | 241.0 | 302.9 | 389.2 | 448.9 | 353.8 | 371.5 | *349.4* | 316.2 |
| 82.5° | 134.9 | 139.3 | 154.8 | 181.3 | 216.7 | 260.9 | 252.1 | 260.9 | 274.2 | *260.9* | 227.8 |
| 85° | 90.7 | 92.9 | 103.9 | 126.0 | 139.3 | 157.0 | 157.0 | 190.2 | 199.0 | *194.6* | 179.1 |
| 87.5° | 46.4 | 46.4 | 55.3 | 66.3 | 70.8 | 73.0 | 64.1 | 84.0 | 95.1 | *103.9* | 84.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 |

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Scaled Data Report

REPORT NUMBER: P1456442
CATALOG NUMBER: GLAN-SB1D-730-U-T3LG

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1457.2 | 1457.2 | 1457.2 | 1457.2 | 1457.2 | 1457.2 | 1457.2 | 1457.2 | 1457.2 | 1457.2 | 1457.2 |
| 2.5° | 1472.7 | 1474.9 | 1468.3 | 1466.1 | 1463.9 | 1452.8 | 1452.8 | 1441.7 | 1439.5 | 1441.7 | 1435.1 |
| 5° | 1521.4 | 1516.9 | 1499.2 | 1486.0 | 1470.5 | 1439.5 | 1421.8 | 1397.5 | 1390.9 | 1384.3 | 1377.6 |
| 7.5° | 1581.1 | 1574.4 | 1543.5 | 1508.1 | 1466.1 | 1406.4 | 1373.2 | 1333.4 | 1320.1 | 1309.1 | 1304.6 |
| 10° | 1656.2 | 1643.0 | 1594.3 | 1519.1 | 1441.7 | 1368.8 | 1322.3 | 1273.7 | 1251.6 | 1247.2 | 1236.1 |
| 12.5° | 1753.5 | 1729.2 | 1638.6 | 1521.4 | 1419.6 | 1324.6 | 1273.7 | 1236.1 | 1227.3 | 1225.0 | 1214.0 |
| 15° | 1861.9 | 1826.5 | 1680.6 | 1523.6 | 1390.9 | 1287.0 | 1256.0 | 1236.1 | 1236.1 | 1233.9 | 1227.3 |
| 17.5° | 1994.6 | 1937.1 | 1720.4 | 1514.7 | 1355.5 | 1275.9 | 1260.4 | 1242.7 | 1238.3 | 1240.5 | 1231.7 |
| 20° | 2153.8 | 2058.7 | 1762.4 | 1503.7 | 1340.0 | 1278.1 | 1260.4 | 1236.1 | 1225.0 | 1222.8 | 1216.2 |
| 22.5° | 2337.3 | 2198.0 | 1808.8 | 1486.0 | 1340.0 | 1275.9 | 1247.2 | 1214.0 | 1191.9 | 1183.0 | 1174.2 |
| 25° | 2547.4 | 2359.4 | 1857.5 | 1479.3 | 1344.5 | 1267.1 | 1220.6 | 1167.6 | 1132.2 | 1118.9 | 1112.3 |
| 27.5° | 2801.7 | 2529.7 | 1892.8 | 1486.0 | 1342.2 | 1247.2 | 1174.2 | 1105.6 | 1065.8 | 1043.7 | 1039.3 |
| 30° | 3082.5 | 2713.2 | 1917.2 | 1497.0 | 1329.0 | 1209.6 | 1118.9 | 1041.5 | 986.2 | 959.7 | 953.1 |
| 32.5° | 3414.2 | 2918.9 | 1941.5 | 1497.0 | 1295.8 | 1156.5 | 1054.8 | 970.7 | 913.3 | 882.3 | 877.9 |
| 35° | 3781.3 | 3171.0 | 1963.6 | 1494.8 | 1256.0 | 1099.0 | 990.6 | 904.4 | 844.7 | 813.7 | 811.5 |
| 37.5° | 4093.1 | 3361.1 | 1974.7 | 1472.7 | 1200.7 | 1032.7 | 930.9 | 844.7 | 782.8 | 749.6 | 747.4 |
| 40° | 4285.4 | 3440.7 | 1952.6 | 1428.5 | 1134.4 | 964.1 | 864.6 | 785.0 | 723.1 | 683.3 | 674.4 |
| 42.5° | 4358.4 | 3403.1 | 1881.8 | 1355.5 | 1054.8 | 895.6 | 809.3 | 725.3 | 643.5 | 610.3 | 603.7 |
| 45° | 4334.1 | 3257.2 | 1731.4 | 1251.6 | 966.3 | 833.6 | 760.7 | 665.6 | 612.5 | 583.8 | 581.6 |
| 47.5° | 4252.3 | 3031.7 | 1543.5 | 1121.1 | 873.5 | 778.4 | 696.6 | 650.1 | 601.5 | 570.5 | 568.3 |
| 50° | 4108.5 | 2790.6 | 1317.9 | 973.0 | 789.4 | 720.9 | 681.1 | 643.5 | 603.7 | 579.4 | 574.9 |
| 52.5° | 3925.0 | 2518.6 | 1110.1 | 829.2 | 716.5 | 670.0 | 665.6 | 639.1 | 608.1 | 581.6 | 570.5 |
| 53° | *3883.0* | *2447.9* | *1070.3* | *804.9* | *705.4* | *663.4* | *661.2* | *639.1* | *603.7* | *579.4* | *570.5* |
| 55° | 3681.8 | 2229.0 | 944.2 | 718.7 | 650.1 | 641.3 | 661.2 | 636.8 | 592.6 | 572.7 | 566.1 |
| 57.5° | 3358.9 | 1941.5 | 822.6 | 639.1 | 592.6 | 614.7 | 654.5 | 628.0 | 579.4 | 544.0 | 532.9 |
| 60° | 2969.7 | 1612.0 | 729.7 | 586.0 | 550.6 | 581.6 | 628.0 | 597.0 | 530.7 | 513.0 | 510.8 |
| 62.5° | 2505.4 | 1304.6 | 659.0 | 541.8 | 515.2 | 546.2 | 588.2 | 535.1 | 486.5 | 473.2 | 468.8 |
| 65° | 1957.0 | 1037.1 | 603.7 | 508.6 | 479.8 | 504.2 | 532.9 | 499.7 | 468.8 | 457.7 | 455.5 |
| 67.5° | 1455.0 | 813.7 | 559.5 | 479.8 | 444.5 | 459.9 | 493.1 | 484.3 | 457.7 | 451.1 | 448.9 |
| 70° | 1003.9 | 661.2 | 519.6 | 453.3 | 400.2 | 417.9 | 468.8 | 475.4 | 448.9 | 444.5 | 442.3 |
| 72.5° | 703.2 | 559.5 | 477.6 | 424.6 | 364.9 | 382.5 | 457.7 | 457.7 | 429.0 | 435.6 | 431.2 |
| 75° | 528.5 | 471.0 | 429.0 | 389.2 | 320.6 | 347.2 | 442.3 | 437.8 | 409.1 | 437.8 | 426.8 |
| 77.5° | 398.0 | 380.3 | 371.5 | 345.0 | 280.8 | 307.4 | 411.3 | 402.5 | 364.9 | 367.1 | 347.2 |
| 80° | 289.7 | 294.1 | 318.4 | 294.1 | 234.4 | 254.3 | 347.2 | 342.7 | 296.3 | 305.2 | 280.8 |
| 82.5° | 207.9 | 218.9 | 272.0 | 236.6 | 170.3 | 181.3 | 238.8 | 258.7 | 232.2 | 218.9 | 223.3 |
| 85° | 157.0 | 163.6 | 218.9 | 174.7 | 106.1 | 119.4 | 163.6 | 185.7 | 181.3 | 168.1 | 170.3 |
| 87.5° | 66.3 | 75.2 | 101.7 | 81.8 | 61.9 | 61.9 | 101.7 | 130.5 | 117.2 | 99.5 | 103.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-4

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-730-U-5WQ

Data in this report applies to families of products including GSS-SB1A-730-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

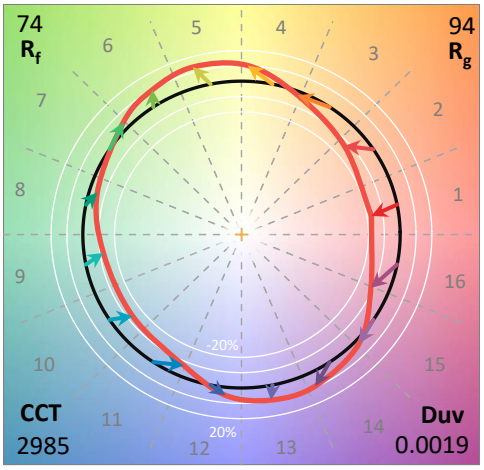
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-4 |
| 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-730-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 3000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 2985 |
| CIE u': | 0.2504 |
| CIE v': | 0.5243 |
| Duv: | 0.0019 |
| CIE x: | 0.4408 |
| CIE y: | 0.4101 |
| CIE z: | 0.1491 |
| Peak Wavelength (nm): | 595 |
| Dominant Wavelength (nm): | 582 |
| Purity: | 55.41818 |
| Rf: | 73.8 |
| Rg: | 94.4 |

| | |
|---|---|
| CRI (Ra): | 70.8 |
| R1: | 66.3 |
| R2: | 80.6 |
| R3: | 94.5 |
| R4: | 68.2 |
| R5: | 66.5 |
| R6: | 74.7 |
| R7: | 76.2 |
| R8: | 39.6 |
| R9: | -43.2 |
| R10: | 57.6 |
| R11: | 64.8 |
| R12: | 53.5 |
| R13: | 68.7 |
| R14: | 97.0 |
| R15: | 56.4 |




## Test Conditions

| | |
|---|---|
| Stabilization Time: | 36M |
| Operation Time: | 1H 36M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-4

| 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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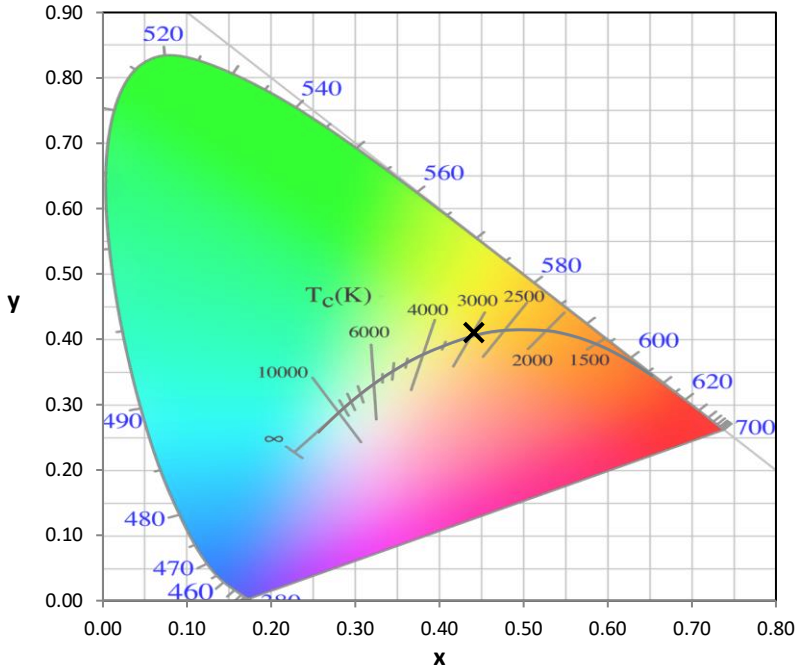
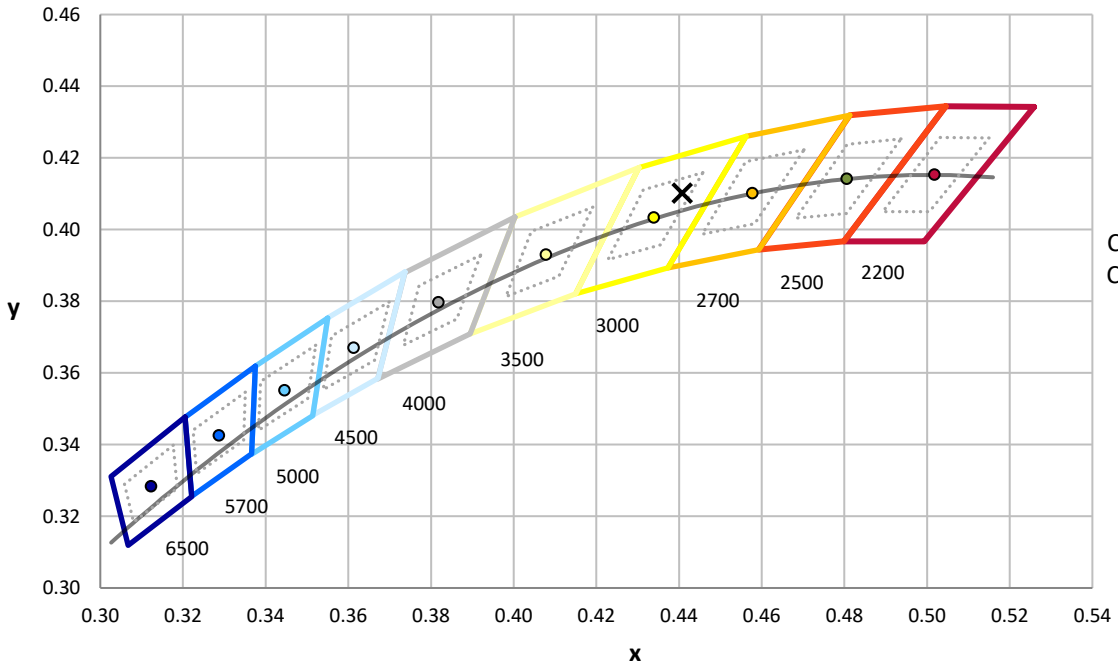
## CIE 1931 Chromaticity Diagram




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




CCT = 2985K
CIE x = 0.4408
CIE y = 0.4101
Duv = 0.0019

Point lies inside the ANSI 3000K 4-step quadrangle

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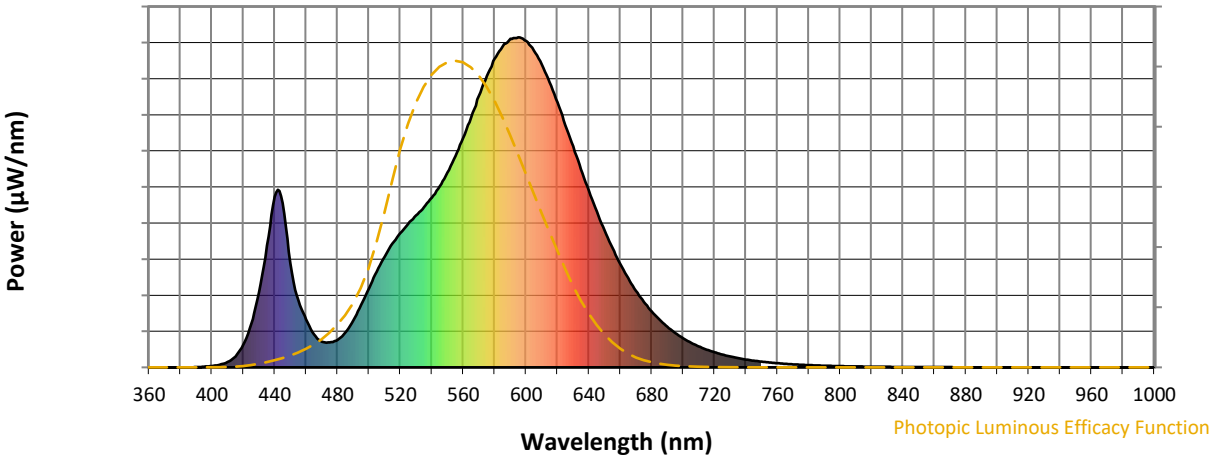
## Photopic Flux vs. Wavelength




## 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 | 142 | NR | 620 | 803 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 189 | NR | 625 | 734 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 240 | NR | 630 | 670 | NR | 760 | 13 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 290 | NR | 635 | 600 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 335 | NR | 640 | 535 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 375 | NR | 645 | 473 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 408 | NR | 650 | 415 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 434 | NR | 655 | 362 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 461 | NR | 660 | 313 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 486 | NR | 665 | 271 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 16 | NR | 540 | 514 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 33 | NR | 545 | 549 | NR | 675 | 198 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 69 | NR | 550 | 591 | NR | 680 | 169 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 640 | NR | 685 | 144 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 227 | NR | 560 | 695 | NR | 690 | 123 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 369 | NR | 565 | 757 | NR | 695 | 104 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 517 | NR | 570 | 822 | NR | 700 | 88 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 498 | NR | 575 | 882 | NR | 705 | 75 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 315 | NR | 580 | 935 | NR | 710 | 63 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 204 | NR | 585 | 972 | NR | 715 | 54 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 145 | NR | 590 | 996 | NR | 720 | 46 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 100 | NR | 595 | 1000 | NR | 725 | 39 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 78 | NR | 600 | 989 | NR | 730 | 33 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 76 | NR | 605 | 960 | NR | 735 | 28 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 83 | NR | 610 | 918 | NR | 740 | 24 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 105 | NR | 615 | 864 | NR | 745 | 20 | NR | 875 | 1 | NR | | | |

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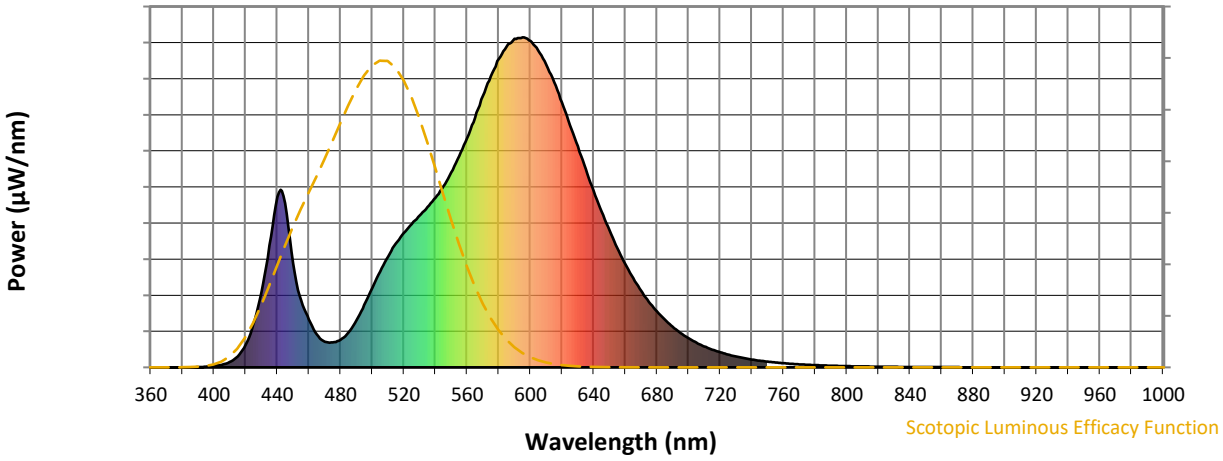
## Scotopic Flux vs. Wavelength




**Scotopic Lumens: NR** **S/P: 1.19**

| 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 | 142 | NR | 620 | 803 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 189 | NR | 625 | 734 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 240 | NR | 630 | 670 | NR | 760 | 13 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 290 | NR | 635 | 600 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 335 | NR | 640 | 535 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 375 | NR | 645 | 473 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 408 | NR | 650 | 415 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 434 | NR | 655 | 362 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 461 | NR | 660 | 313 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 486 | NR | 665 | 271 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 16 | NR | 540 | 514 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 33 | NR | 545 | 549 | NR | 675 | 198 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 69 | NR | 550 | 591 | NR | 680 | 169 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 640 | NR | 685 | 144 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 227 | NR | 560 | 695 | NR | 690 | 123 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 369 | NR | 565 | 757 | NR | 695 | 104 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 517 | NR | 570 | 822 | NR | 700 | 88 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 498 | NR | 575 | 882 | NR | 705 | 75 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 315 | NR | 580 | 935 | NR | 710 | 63 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 204 | NR | 585 | 972 | NR | 715 | 54 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 145 | NR | 590 | 996 | NR | 720 | 46 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 100 | NR | 595 | 1000 | NR | 725 | 39 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 78 | NR | 600 | 989 | NR | 730 | 33 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 76 | NR | 605 | 960 | NR | 735 | 28 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 83 | NR | 610 | 918 | NR | 740 | 24 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 105 | NR | 615 | 864 | NR | 745 | 20 | NR | 875 | 1 | NR | | | |

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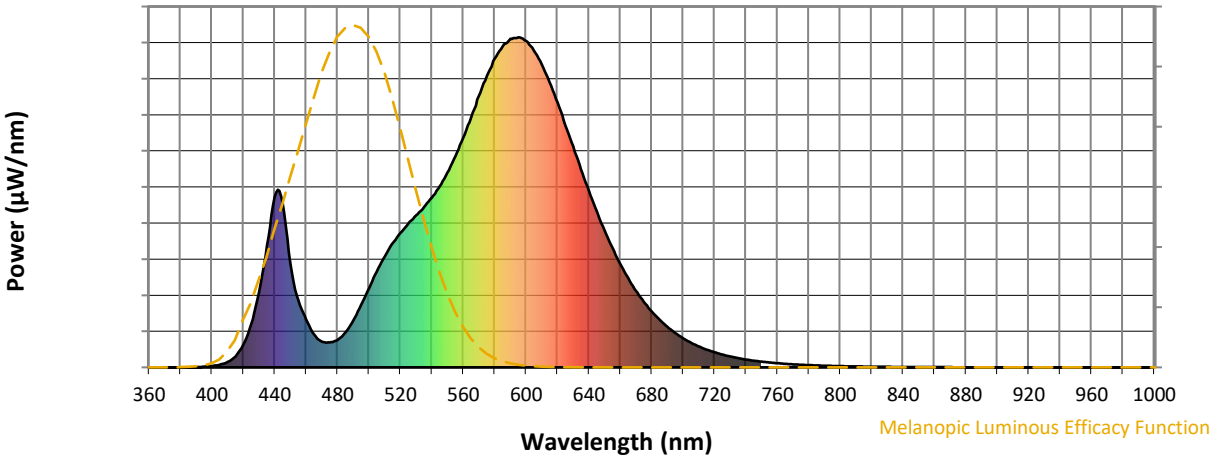
## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.13**

| 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 | 142 | NR | 620 | 803 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 189 | NR | 625 | 734 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 240 | NR | 630 | 670 | NR | 760 | 13 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 290 | NR | 635 | 600 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 335 | NR | 640 | 535 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 375 | NR | 645 | 473 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 408 | NR | 650 | 415 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 434 | NR | 655 | 362 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 461 | NR | 660 | 313 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 486 | NR | 665 | 271 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 16 | NR | 540 | 514 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 33 | NR | 545 | 549 | NR | 675 | 198 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 69 | NR | 550 | 591 | NR | 680 | 169 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 640 | NR | 685 | 144 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 227 | NR | 560 | 695 | NR | 690 | 123 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 369 | NR | 565 | 757 | NR | 695 | 104 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 517 | NR | 570 | 822 | NR | 700 | 88 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 498 | NR | 575 | 882 | NR | 705 | 75 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 315 | NR | 580 | 935 | NR | 710 | 63 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 204 | NR | 585 | 972 | NR | 715 | 54 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 145 | NR | 590 | 996 | NR | 720 | 46 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 100 | NR | 595 | 1000 | NR | 725 | 39 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 78 | NR | 600 | 989 | NR | 730 | 33 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 76 | NR | 605 | 960 | NR | 735 | 28 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 83 | NR | 610 | 918 | NR | 740 | 24 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 105 | NR | 615 | 864 | NR | 745 | 20 | NR | 875 | 1 | NR | | | |

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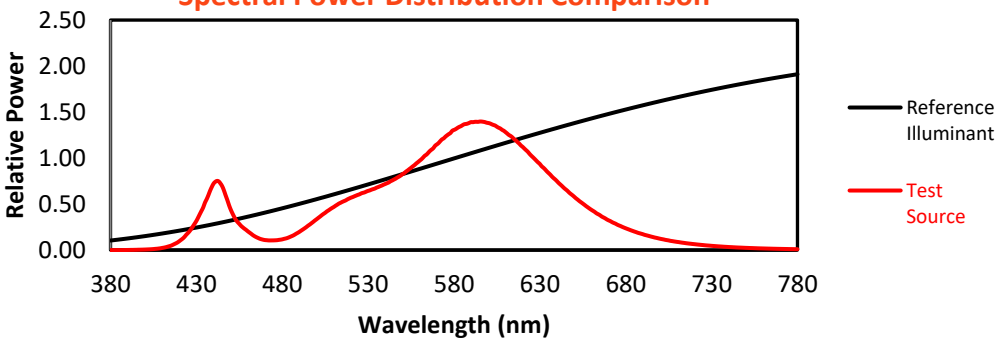
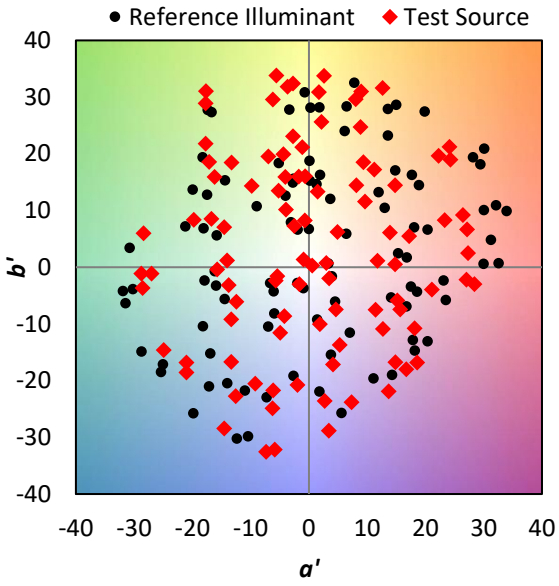
## Summary

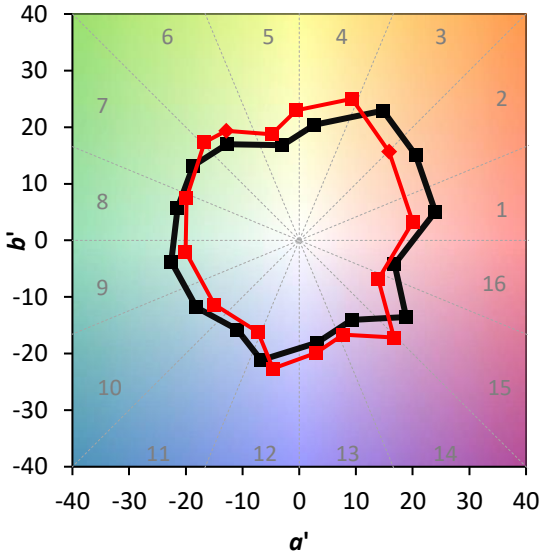
$R_f$ = 73.8
$R_g$ = 94.4
CIE $R_a$ = 70.8
$R_9$ = -43.2

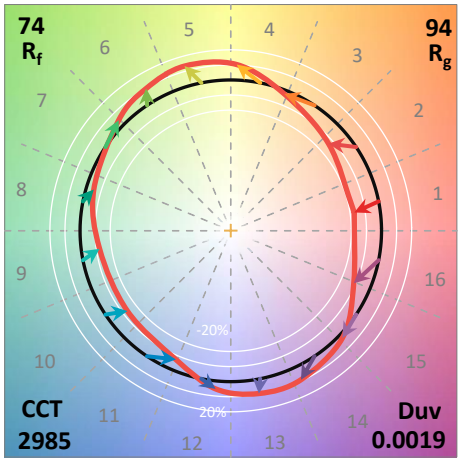
## Spectral Power Distribution Comparison

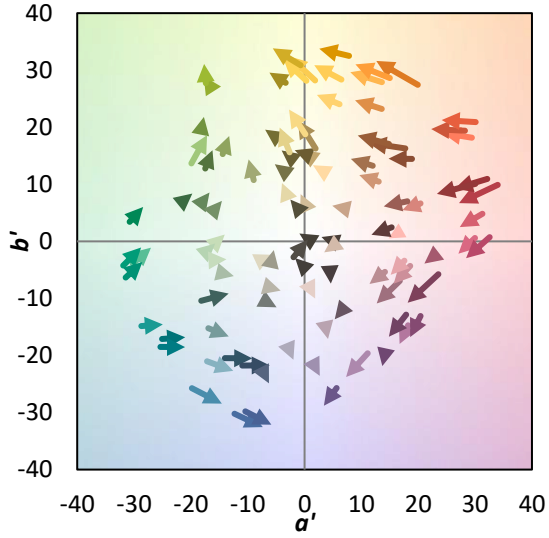



## Color Vector Graphics



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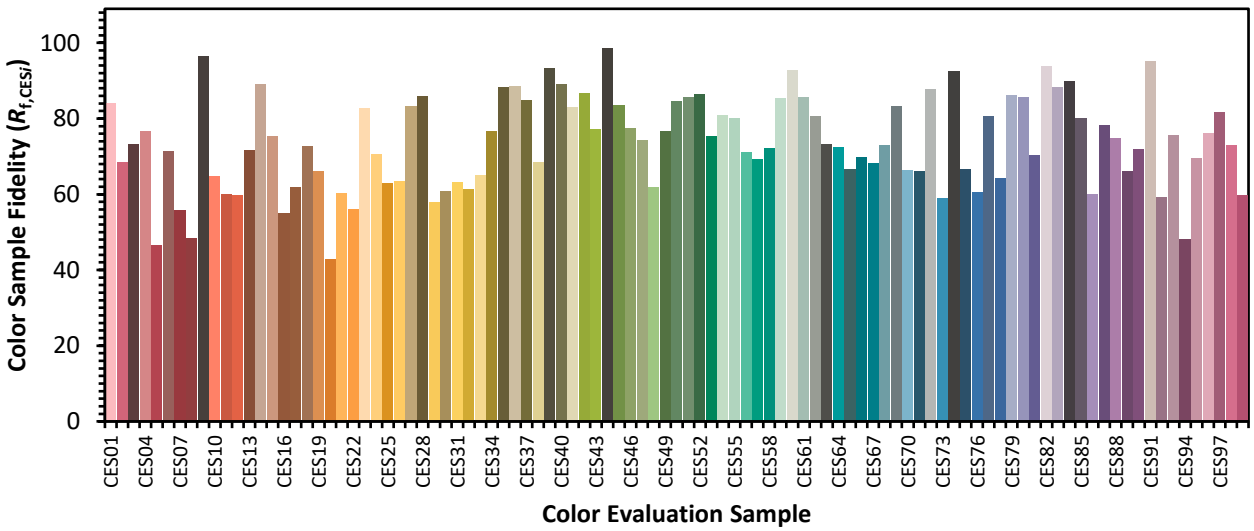
**Individual Sample Fidelity Index ($R_{f,i}$)**

| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 63 | CES51 = 86 | CES76 = 61 |
| CES02 = 62 | CES27 = 83 | CES52 = 86 | CES77 = 81 |
| CES03 = 31 | CES28 = 86 | CES53 = 75 | CES78 = 64 |
| CES04 = 71 | CES29 = 58 | CES54 = 81 | CES79 = 86 |
| CES05 = 49 | CES30 = 61 | CES55 = 80 | CES80 = 86 |
| CES06 = 51 | CES31 = 63 | CES56 = 71 | CES81 = 70 |
| CES07 = 41 | CES32 = 61 | CES57 = 69 | CES82 = 94 |
| CES08 = 40 | CES33 = 65 | CES58 = 72 | CES83 = 88 |
| CES09 = 29 | CES34 = 77 | CES59 = 85 | CES84 = 90 |
| CES10 = 76 | CES35 = 88 | CES60 = 93 | CES85 = 80 |
| CES11 = 59 | CES36 = 89 | CES61 = 86 | CES86 = 60 |
| CES12 = 65 | CES37 = 85 | CES62 = 81 | CES87 = 78 |
| CES13 = 43 | CES38 = 69 | CES63 = 73 | CES88 = 75 |
| CES14 = 74 | CES39 = 93 | CES64 = 72 | CES89 = 66 |
| CES15 = 71 | CES40 = 89 | CES65 = 67 | CES90 = 72 |
| CES16 = 47 | CES41 = 83 | CES66 = 70 | CES91 = 95 |
| CES17 = 50 | CES42 = 87 | CES67 = 68 | CES92 = 59 |
| CES18 = 56 | CES43 = 77 | CES68 = 73 | CES93 = 76 |
| CES19 = 73 | CES44 = 99 | CES69 = 83 | CES94 = 48 |
| CES20 = 66 | CES45 = 83 | CES70 = 66 | CES95 = 70 |
| CES21 = 87 | CES46 = 77 | CES71 = 66 | CES96 = 76 |
| CES22 = 79 | CES47 = 74 | CES72 = 88 | CES97 = 82 |
| CES23 = 92 | CES48 = 62 | CES73 = 59 | CES98 = 73 |
| CES24 = 91 | CES49 = 77 | CES74 = 93 | CES99 = 60 |
| CES25 = 73 | CES50 = 85 | CES75 = 67 | |



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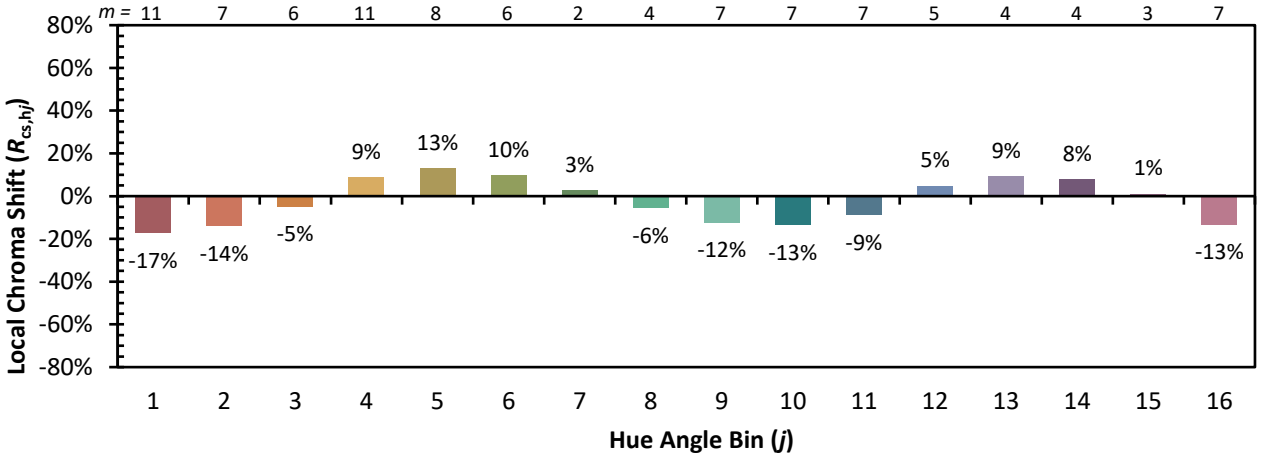
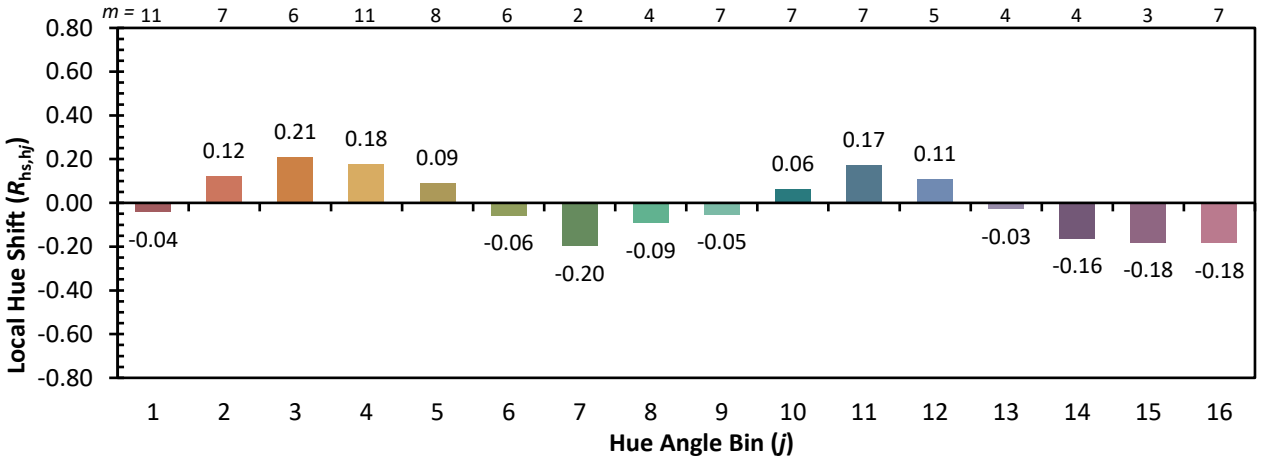
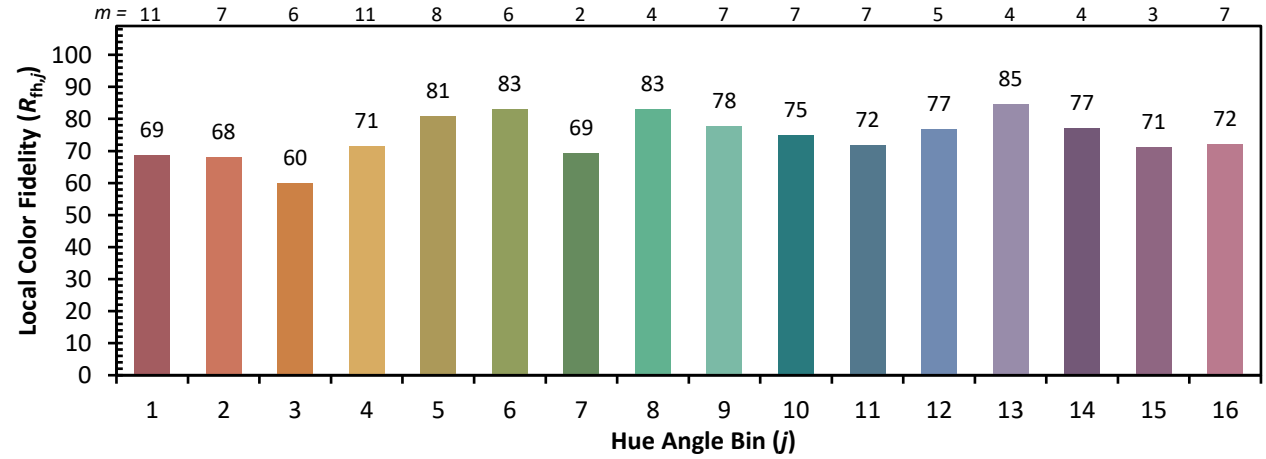
## Color Rendition by Hue-Angle Bin



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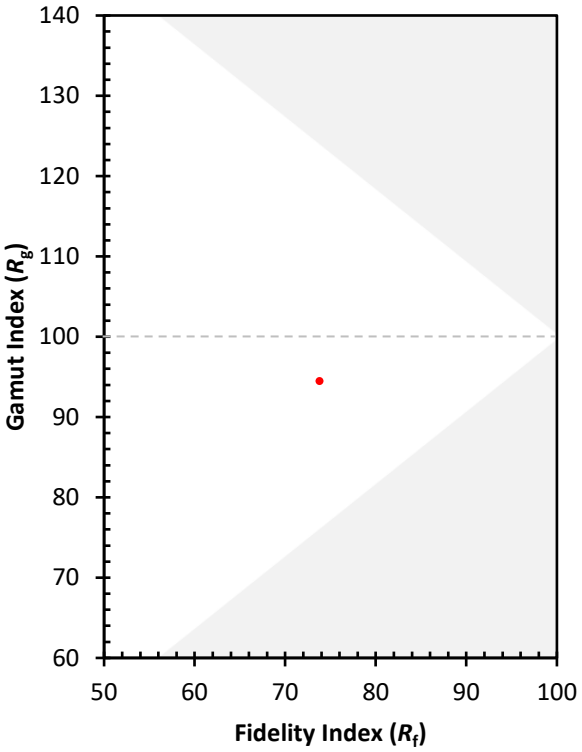
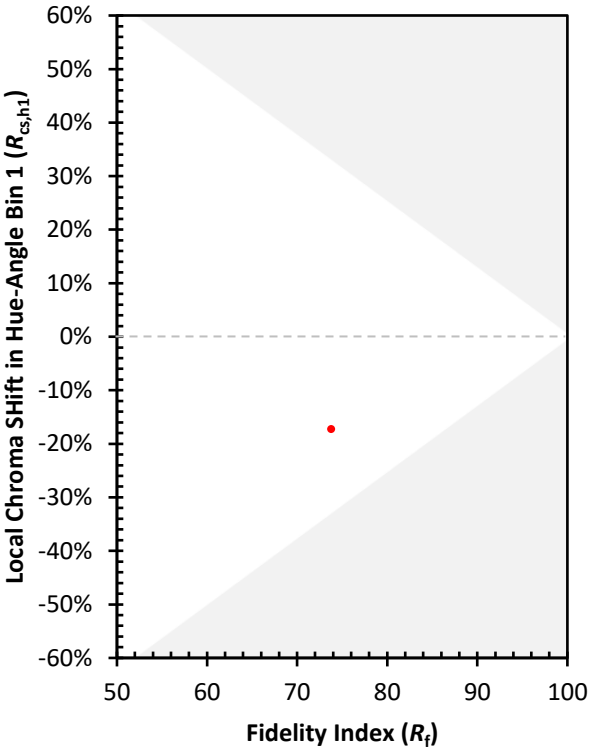
## Measure Comparisons




(END OF REPORT)