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: P1367699

Luminaire Tested: **GSS-SB2A-750-U-T4W-HSS**

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: | P1367699 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB2A-750-U-T4W-HSS |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 2SQUARE 58W 70CRI 5000K FIXTURE w/ TYPE IV WIDE DISTRIBUTION OPTIC AND HOUSE SIDE SHIELD |
| Light Source: | (52) 5000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 6359 lumens |
| Efficiency: | N/A |
| Efficacy: | 109.6 lumens/watt |
| Luminous Opening: | Rectangular (W 1' x L: 0.5' x H: 0') |
| IES Classification: | Type IV - Short |
| BUG Rating: | B1 - U0 - G2 |

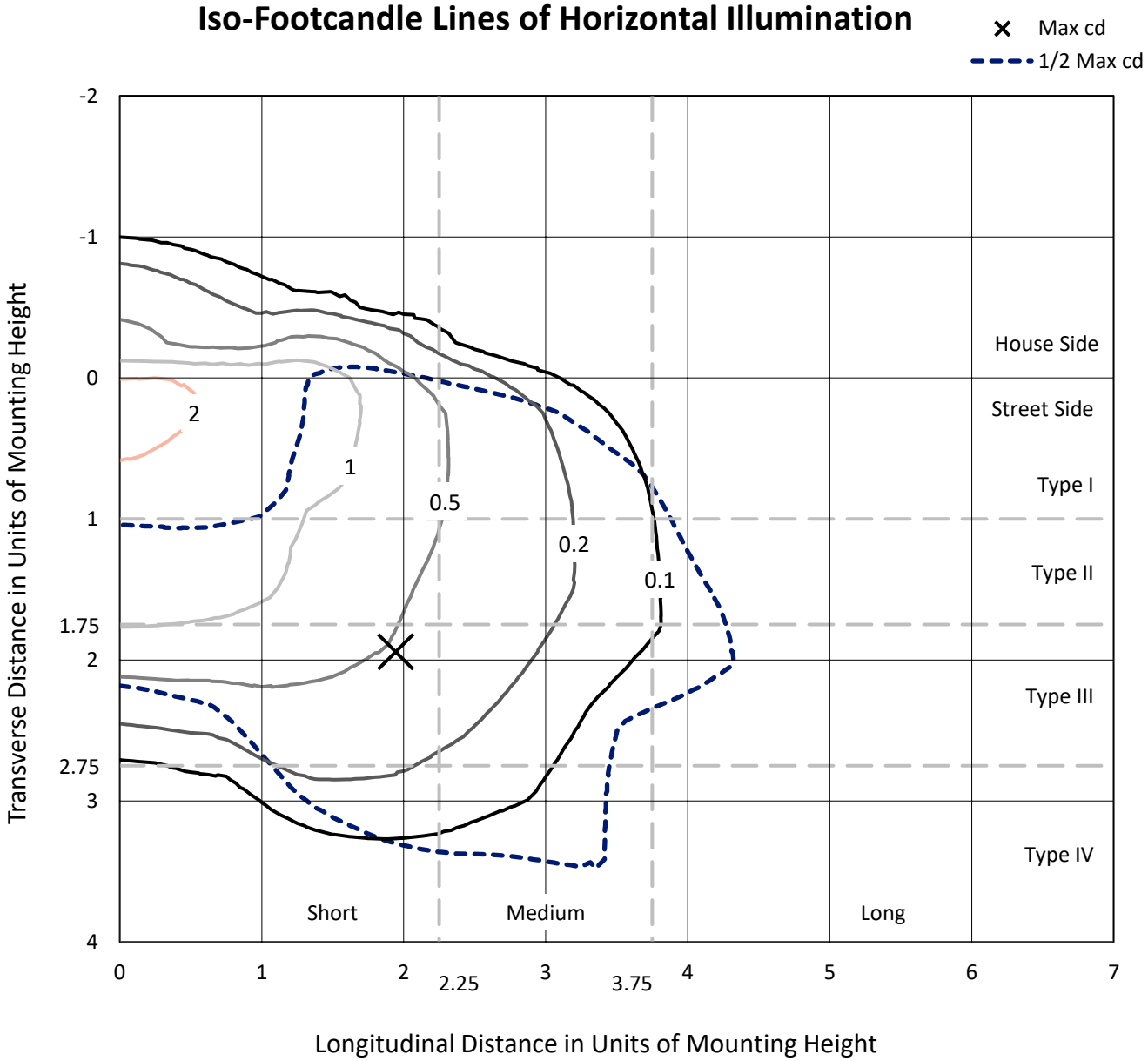
| | |
|---|---|
| Input Watts (W): | 58 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 9.0% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1367699
CATALOG NUMBER: GSS-SB2A-750-U-T4W-HSS

## Iso-Footcandle Lines of Horizontal Illumination



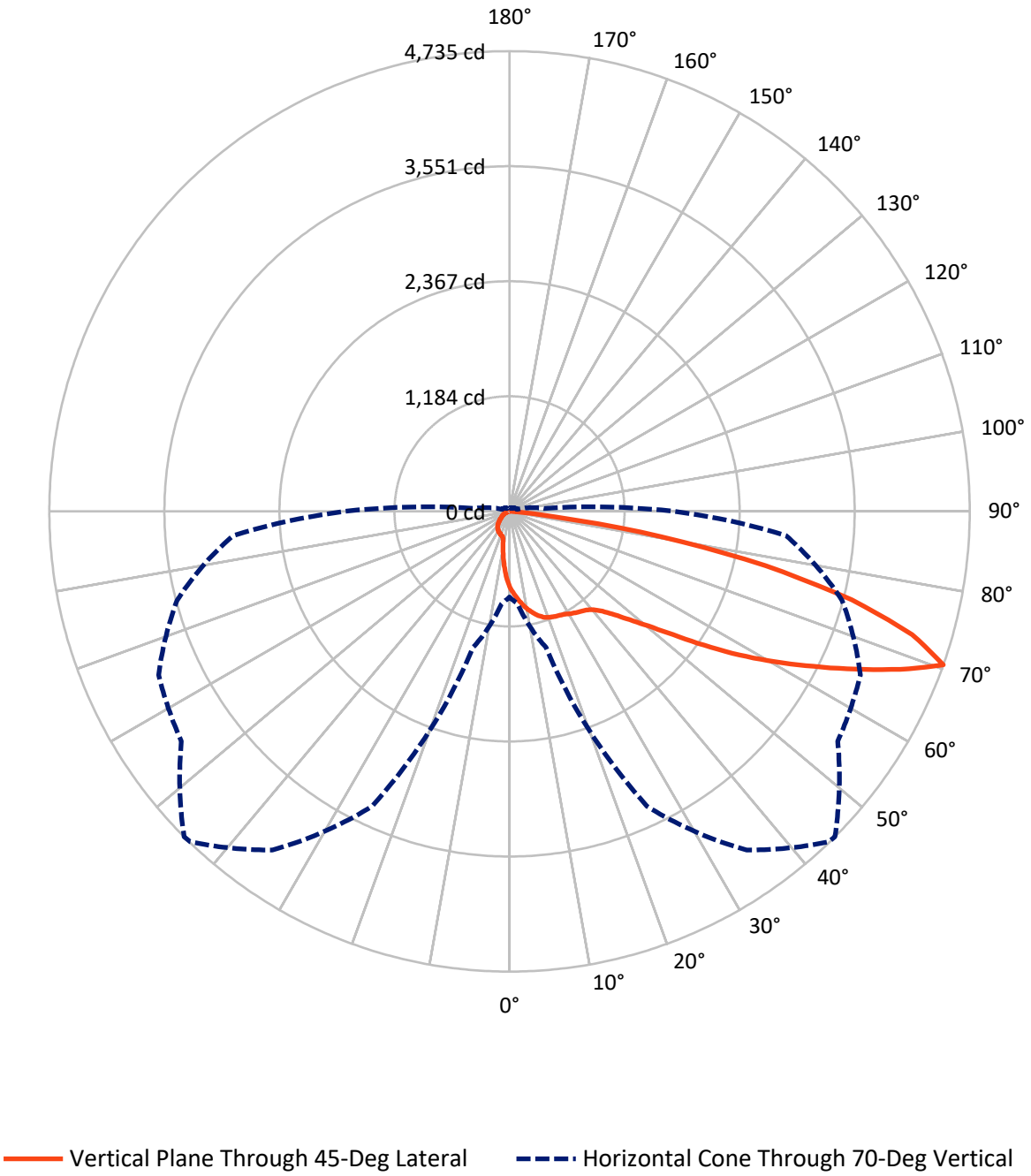

Based on 20 foot mounting height. Maximum calculated value = 2.7 fc
Type IV - Short - N/A

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## Luminous Intensity Polar Plot



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Scaled Data Report

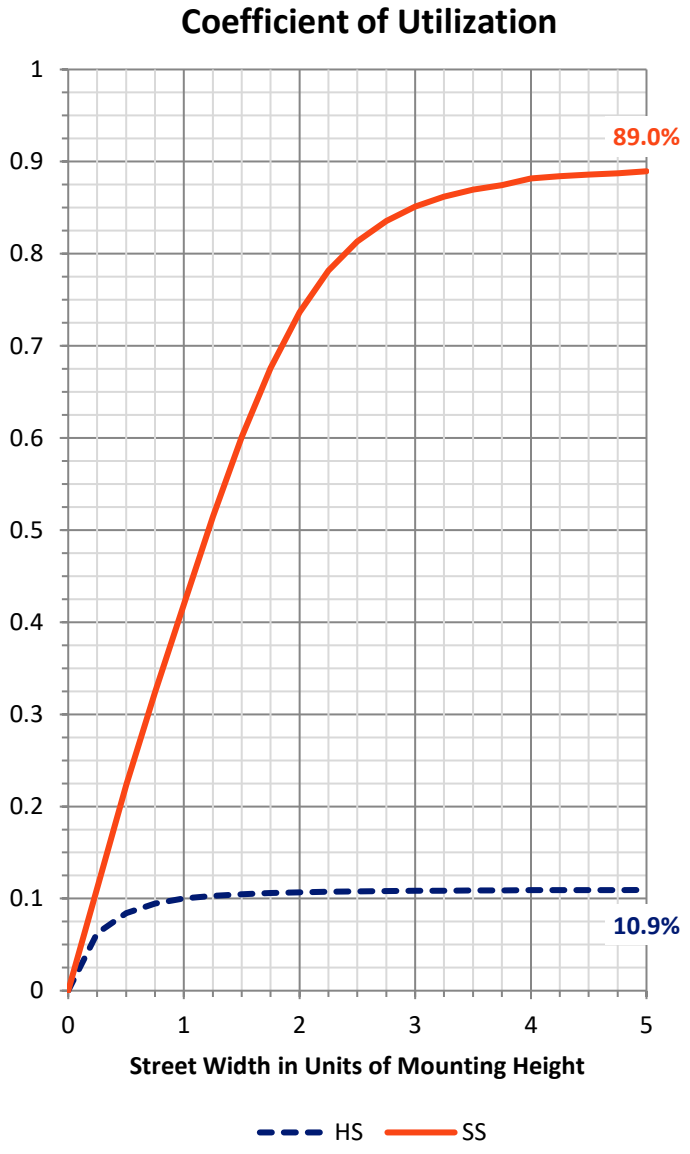
REPORT NUMBER: P1367699
CATALOG NUMBER: GSS-SB2A-750-U-T4W-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 702.2 | 0.0 | 702.2 |
| | % Fixture | 11.0 | 0.0 | 11.0 |
| **Street Side** | Lumens | 5656.8 | 0.0 | 5656.8 |
| | % Fixture | 89.0 | 0.0 | 89.0 |
| **Total** | Lumens | 6359.0 | 0.0 | 6359.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 72.0 | 1.1 |
| 10°-20° | 212.3 | 3.3 |
| 20°-30° | 352.4 | 5.5 |
| 30°-40° | 499.6 | 7.9 |
| 40°-50° | 792.4 | 12.5 |
| 50°-60° | 1395.3 | 21.9 |
| 60°-70° | 1808.7 | 28.4 |
| 70°-80° | 1155.3 | 18.2 |
| 80°-90° | 71.0 | 1.1 |
| 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° | 6359.0 | 100.0 |
| 0°-180° | 6359.0 | 100.0 |



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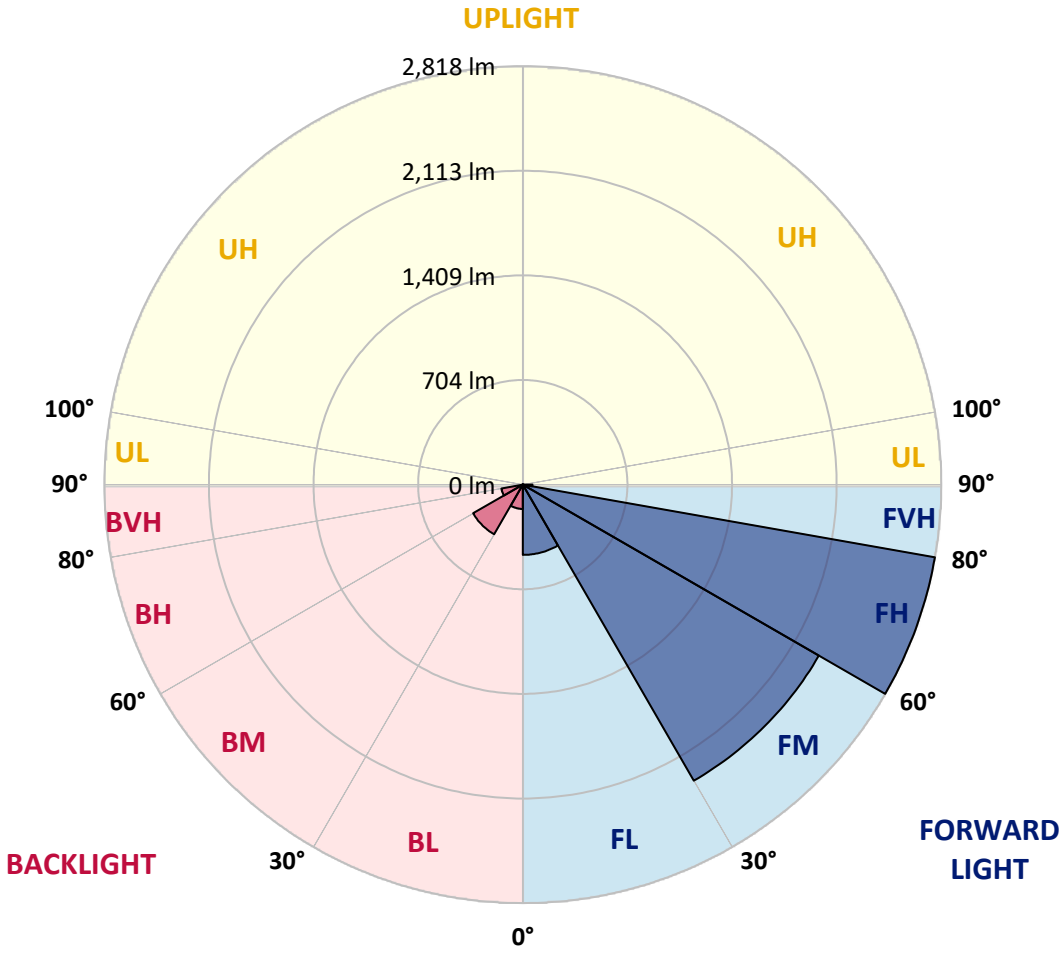
Scaled Data Report

REPORT NUMBER: P1367699
CATALOG NUMBER: GSS-SB2A-750-U-T4W-HSS

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 473.1 | 7.4 | | | |
| FM | (30°-60°) | 2301.4 | 36.2 | | | |
| FH | (60°-80°) | 2817.5 | 44.3 | | | G2/5000 |
| FVH | (80°-90°) | 64.7 | 1.0 | | | G1/100 |
| BL | (0°-30°) | 163.6 | 2.6 | B1/500 | | |
| BM | (30°-60°) | 385.9 | 6.1 | B1/1000 | | |
| BH | (60°-80°) | 146.5 | 2.3 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 6.2 | 0.1 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B1-U0-G2**
Type IV Short



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REPORT NUMBER: P1367699
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 44° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 786.0 | 786.0 | 786.0 | 786.0 | 786.0 | 786.0 | *786.0* | 786.0 | 786.0 | 786.0 | 786.0 |
| 2.5° | 877.9 | 877.9 | 869.8 | 865.7 | 859.5 | 847.3 | *847.3* | 839.1 | 822.8 | 810.5 | 796.3 |
| 5° | 967.8 | 963.7 | 951.4 | 943.3 | 926.9 | 908.5 | *908.5* | 886.1 | 861.6 | 843.2 | 812.6 |
| 7.5° | 1041.3 | 1039.2 | 1031.0 | 1016.8 | 994.3 | 971.8 | *967.8* | 941.2 | 906.5 | 873.8 | 837.1 |
| 10° | 1112.7 | 1112.7 | 1094.3 | 1078.0 | 1053.5 | 1024.9 | *1024.9* | 990.2 | 949.4 | 910.6 | 863.6 |
| 12.5° | 1174.0 | 1165.8 | 1151.5 | 1125.0 | 1100.5 | 1071.9 | *1069.8* | 1035.1 | 992.3 | 951.4 | 896.3 |
| 15° | 1220.9 | 1216.8 | 1198.5 | 1169.9 | 1141.3 | 1112.7 | *1112.7* | 1076.0 | 1035.1 | 988.2 | 929.0 |
| 17.5° | 1253.6 | 1251.5 | 1231.1 | 1198.5 | 1167.8 | 1143.3 | *1145.4* | 1112.7 | 1076.0 | 1027.0 | 965.7 |
| 20° | 1261.8 | 1255.6 | 1239.3 | 1208.7 | 1184.2 | 1161.7 | *1163.8* | 1139.3 | 1106.6 | 1067.8 | 1000.4 |
| 22.5° | 1249.5 | 1247.5 | 1229.1 | 1204.6 | 1190.3 | 1174.0 | *1176.0* | 1161.7 | 1141.3 | 1100.5 | 1041.3 |
| 25° | 1235.2 | 1231.1 | 1218.9 | 1198.5 | 1190.3 | 1182.1 | *1186.2* | 1180.1 | 1171.9 | 1139.3 | 1082.1 |
| 27.5° | 1231.1 | 1227.0 | 1212.8 | 1194.4 | 1194.4 | 1194.4 | *1198.5* | 1206.6 | 1204.6 | 1178.0 | 1122.9 |
| 30° | 1237.3 | 1239.3 | 1225.0 | 1206.6 | 1202.5 | 1214.8 | *1223.0* | 1241.3 | 1241.3 | 1212.8 | 1167.8 |
| 32.5° | 1255.6 | 1253.6 | 1241.3 | 1216.8 | 1214.8 | 1235.2 | *1243.4* | 1269.9 | 1263.8 | 1241.3 | 1206.6 |
| 35° | 1292.4 | 1292.4 | 1274.0 | 1237.3 | 1229.1 | 1255.6 | *1263.8* | 1296.5 | 1296.5 | 1276.0 | 1245.4 |
| 37.5° | 1359.8 | 1367.9 | 1345.5 | 1286.3 | 1259.7 | 1274.0 | *1286.3* | 1325.0 | 1339.3 | 1314.8 | 1292.4 |
| 40° | 1480.2 | 1463.9 | 1441.4 | 1359.8 | 1310.8 | 1323.0 | *1329.1* | 1372.0 | 1392.4 | 1361.8 | 1347.5 |
| 42.5° | 1774.2 | 1755.8 | 1657.8 | 1472.0 | 1394.5 | 1396.5 | *1402.6* | 1443.5 | 1482.3 | 1447.5 | 1435.3 |
| 45° | 2209.1 | 2192.8 | 2027.4 | 1710.9 | 1519.0 | 1508.8 | *1517.0* | 1551.7 | 1604.8 | 1580.3 | 1568.0 |
| 47.5° | 2541.9 | 2521.5 | 2396.9 | 2062.1 | 1719.1 | 1657.8 | *1664.0* | 1690.5 | 1780.3 | 1759.9 | 1757.9 |
| 50° | 2703.2 | 2690.9 | 2617.4 | 2439.8 | 2056.0 | 1851.8 | *1849.8* | 1874.3 | 1996.8 | 1994.7 | 2000.8 |
| 52.5° | 2864.5 | 2864.5 | 2807.3 | 2723.6 | 2460.2 | 2119.3 | *2107.0* | 2084.5 | 2252.0 | 2264.2 | 2329.5 |
| 55° | 3040.0 | 3044.1 | 3042.1 | 3019.6 | 2860.4 | 2468.4 | *2429.6* | 2350.0 | 2548.0 | 2584.8 | 2664.4 |
| 57.5° | 3217.7 | 3225.8 | 3242.2 | 3330.0 | 3285.0 | 2835.9 | *2786.9* | 2639.9 | 2895.1 | 2886.9 | 2938.0 |
| 60° | 3356.5 | 3364.7 | 3432.0 | 3595.4 | 3632.1 | 3207.5 | *3140.1* | 2972.7 | 3240.1 | 3193.2 | 3160.5 |
| 62.5° | 3272.8 | 3293.2 | 3532.1 | 3815.9 | 3936.3 | 3554.5 | *3511.7* | 3348.3 | 3581.1 | 3432.0 | 3246.3 |
| 65° | 2490.8 | 2592.9 | 3121.7 | 3858.8 | 4212.0 | 3948.6 | *3911.8* | 3748.5 | 3813.8 | 3468.8 | 3178.9 |
| 67.5° | 1539.4 | 1680.3 | 2254.0 | 3595.4 | 4352.8 | 4377.3 | *4336.5* | 4044.5 | 3832.2 | 3499.4 | 3101.3 |
| 70° | *882.0* | *953.5* | *1447.5* | *3346.3* | *4252.8* | *4726.5* | *4734.6* | *4122.1* | *3983.3* | *3542.3* | *2854.3* |
| 72.5° | 581.9 | 602.3 | 794.2 | 2799.1 | 4122.1 | 4285.5 | *4332.4* | 4408.0 | 4085.4 | 3346.3 | 2354.0 |
| 75° | 265.4 | 275.6 | 400.2 | 1790.5 | 3136.0 | 3683.2 | *3638.3* | 3670.9 | 3879.2 | 2923.7 | 1727.3 |
| 77.5° | 83.7 | 96.0 | 161.3 | 681.9 | 1668.0 | 2723.6 | *2690.9* | 1892.6 | 2874.7 | 1600.7 | 541.0 |
| 80° | 40.8 | 47.0 | 96.0 | 206.2 | 616.6 | 1543.5 | *1582.3* | 645.2 | 910.6 | 361.4 | 110.3 |
| 82.5° | 18.4 | 20.4 | 55.1 | 98.0 | 240.9 | 453.3 | *481.8* | 210.3 | 236.8 | 112.3 | 40.8 |
| 85° | 8.2 | 10.2 | 22.5 | 38.8 | 67.4 | 73.5 | *79.6* | 44.9 | 87.8 | 63.3 | 20.4 |
| 87.5° | 0.0 | 2.0 | 2.0 | 6.1 | 6.1 | 8.2 | *8.2* | 10.2 | 12.3 | 14.3 | 12.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 | 0.0 | 0.0 | 0.0 |

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

Scaled Data Report

REPORT NUMBER: P1367699
CATALOG NUMBER: GSS-SB2A-750-U-T4W-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 786.0 | 786.0 | 786.0 | 786.0 | 786.0 | 786.0 | 786.0 | 786.0 | 786.0 | 786.0 | 786.0 |
| 2.5° | 788.1 | 777.9 | 763.6 | 743.2 | 728.9 | 706.4 | 690.1 | 677.8 | 663.5 | 667.6 | 669.7 |
| 5° | 794.2 | 777.9 | 739.1 | 690.1 | 647.2 | 604.3 | 573.7 | 545.1 | 526.8 | 524.7 | 516.5 |
| 7.5° | 810.5 | 782.0 | 716.6 | 637.0 | 561.5 | 504.3 | 453.3 | 414.5 | 390.0 | 381.8 | 377.7 |
| 10° | 833.0 | 792.2 | 690.1 | 577.8 | 477.8 | 400.2 | 341.0 | 310.3 | 298.1 | 296.0 | 296.0 |
| 12.5° | 857.5 | 806.5 | 663.5 | 518.6 | 396.1 | 312.4 | 285.8 | 281.8 | 281.8 | 283.8 | 283.8 |
| 15° | 886.1 | 816.7 | 632.9 | 449.2 | 316.5 | 275.6 | 273.6 | 273.6 | 273.6 | 277.7 | 275.6 |
| 17.5° | 914.7 | 831.0 | 596.2 | 379.8 | 273.6 | 265.4 | 265.4 | 265.4 | 265.4 | 269.5 | 267.5 |
| 20° | 945.3 | 841.2 | 557.4 | 316.5 | 261.3 | 259.3 | 259.3 | 257.3 | 257.3 | 261.3 | 261.3 |
| 22.5° | 980.0 | 849.3 | 514.5 | 273.6 | 255.2 | 251.1 | 251.1 | 251.1 | 249.1 | 253.2 | 253.2 |
| 25° | 1014.7 | 861.6 | 465.5 | 251.1 | 247.0 | 245.0 | 243.0 | 243.0 | 240.9 | 245.0 | 243.0 |
| 27.5° | 1053.5 | 875.9 | 418.5 | 243.0 | 240.9 | 238.9 | 236.8 | 234.8 | 232.8 | 236.8 | 234.8 |
| 30° | 1098.4 | 890.2 | 373.6 | 238.9 | 234.8 | 232.8 | 228.7 | 226.6 | 222.5 | 226.6 | 226.6 |
| 32.5° | 1139.3 | 904.5 | 338.9 | 236.8 | 230.7 | 222.5 | 216.4 | 212.3 | 210.3 | 214.4 | 216.4 |
| 35° | 1182.1 | 926.9 | 320.5 | 240.9 | 226.6 | 214.4 | 204.2 | 198.0 | 196.0 | 200.1 | 202.1 |
| 37.5° | 1233.2 | 953.5 | 316.5 | 249.1 | 222.5 | 204.2 | 189.9 | 179.7 | 177.6 | 181.7 | 183.8 |
| 40° | 1304.6 | 990.2 | 324.6 | 253.2 | 216.4 | 191.9 | 171.5 | 161.3 | 155.2 | 155.2 | 157.2 |
| 42.5° | 1396.5 | 1067.8 | 330.8 | 257.3 | 206.2 | 177.6 | 155.2 | 140.9 | 130.7 | 130.7 | 132.7 |
| 45° | 1537.4 | 1196.4 | 361.4 | 253.2 | 196.0 | 159.3 | 136.8 | 118.4 | 110.3 | 110.3 | 112.3 |
| 47.5° | 1727.3 | 1376.1 | 447.1 | 245.0 | 181.7 | 142.9 | 118.4 | 102.1 | 96.0 | 96.0 | 96.0 |
| 50° | 1978.4 | 1600.7 | 539.0 | 230.7 | 165.4 | 126.6 | 102.1 | 91.9 | 87.8 | 85.8 | 83.7 |
| 52.5° | 2278.5 | 1837.5 | 604.3 | 216.4 | 151.1 | 112.3 | 91.9 | 83.7 | 79.6 | 77.6 | 77.6 |
| 55° | 2568.4 | 2004.9 | 626.8 | 202.1 | 136.8 | 100.0 | 85.8 | 79.6 | 75.5 | 73.5 | 73.5 |
| 57.5° | 2744.0 | 2037.6 | 534.9 | 185.8 | 122.5 | 91.9 | 77.6 | 73.5 | 69.4 | 67.4 | 67.4 |
| 60° | 2784.8 | 1896.7 | 377.7 | 163.3 | 106.2 | 81.7 | 71.5 | 67.4 | 63.3 | 59.2 | 59.2 |
| 62.5° | 2639.9 | 1568.0 | 263.4 | 132.7 | 93.9 | 73.5 | 65.3 | 61.3 | 55.1 | 51.0 | 49.0 |
| 65° | 2347.9 | 1145.4 | 185.8 | 104.1 | 81.7 | 65.3 | 57.2 | 53.1 | 47.0 | 40.8 | 38.8 |
| 67.5° | 2049.8 | 694.2 | 120.5 | 85.8 | 71.5 | 53.1 | 49.0 | 47.0 | 40.8 | 34.7 | 34.7 |
| 70° | *1696.6* | *355.3* | *83.7* | *69.4* | *59.2* | *42.9* | *40.8* | *40.8* | *36.8* | *30.6* | *30.6* |
| 72.5° | 1308.7 | 130.7 | 57.2 | 55.1 | 44.9 | 32.7 | 36.8 | 34.7 | 30.6 | 26.5 | 26.5 |
| 75° | 888.1 | 63.3 | 42.9 | 38.8 | 30.6 | 26.5 | 28.6 | 28.6 | 26.5 | 22.5 | 20.4 |
| 77.5° | 281.8 | 40.8 | 32.7 | 30.6 | 24.5 | 22.5 | 24.5 | 24.5 | 20.4 | 18.4 | 16.3 |
| 80° | 71.5 | 28.6 | 26.5 | 22.5 | 18.4 | 18.4 | 20.4 | 16.3 | 16.3 | 14.3 | 14.3 |
| 82.5° | 30.6 | 20.4 | 18.4 | 16.3 | 14.3 | 14.3 | 14.3 | 14.3 | 12.3 | 12.3 | 12.3 |
| 85° | 16.3 | 14.3 | 12.3 | 12.3 | 12.3 | 10.2 | 10.2 | 12.3 | 10.2 | 10.2 | 10.2 |
| 87.5° | 10.2 | 10.2 | 8.2 | 6.1 | 6.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Cooper Lighting Solutions Photometric Lab
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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

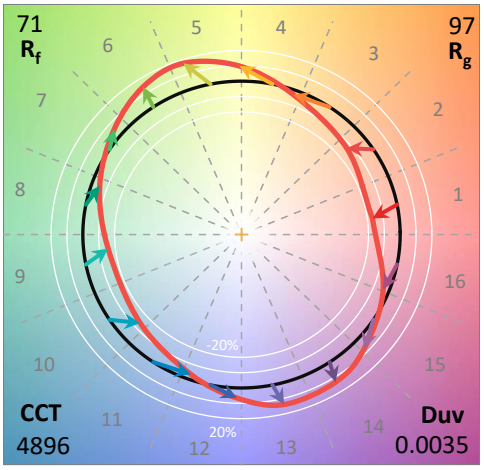
## Test Information

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

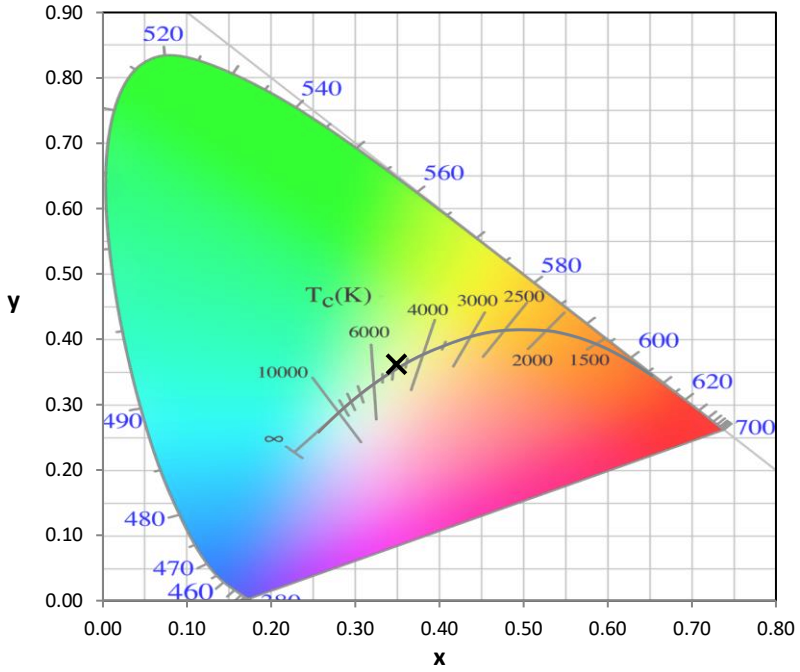
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-6

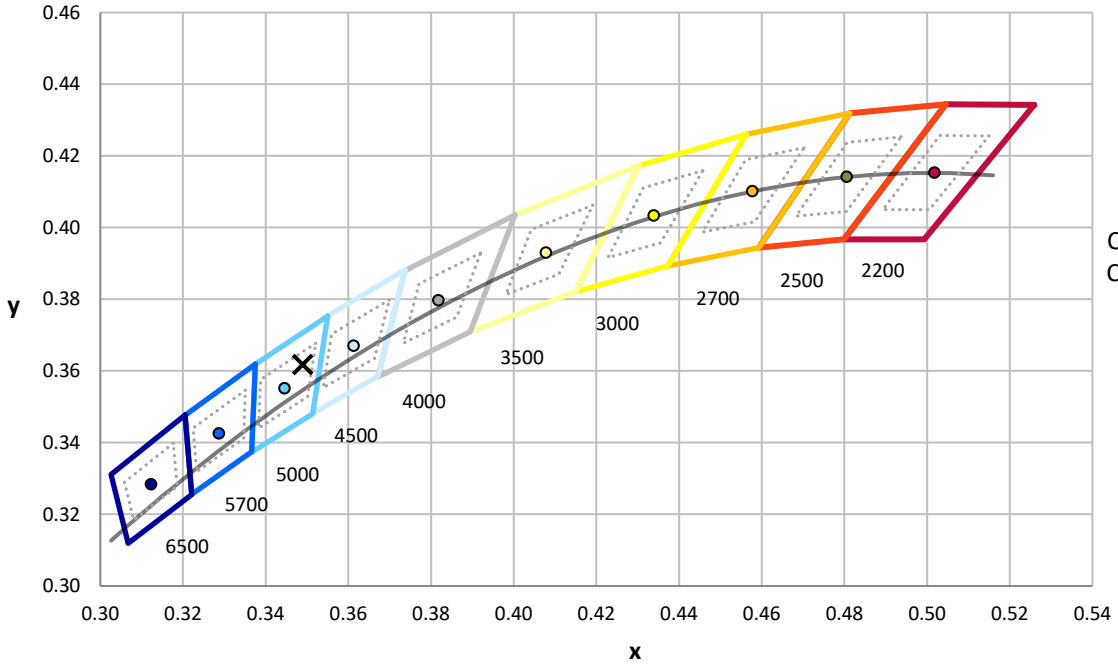
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

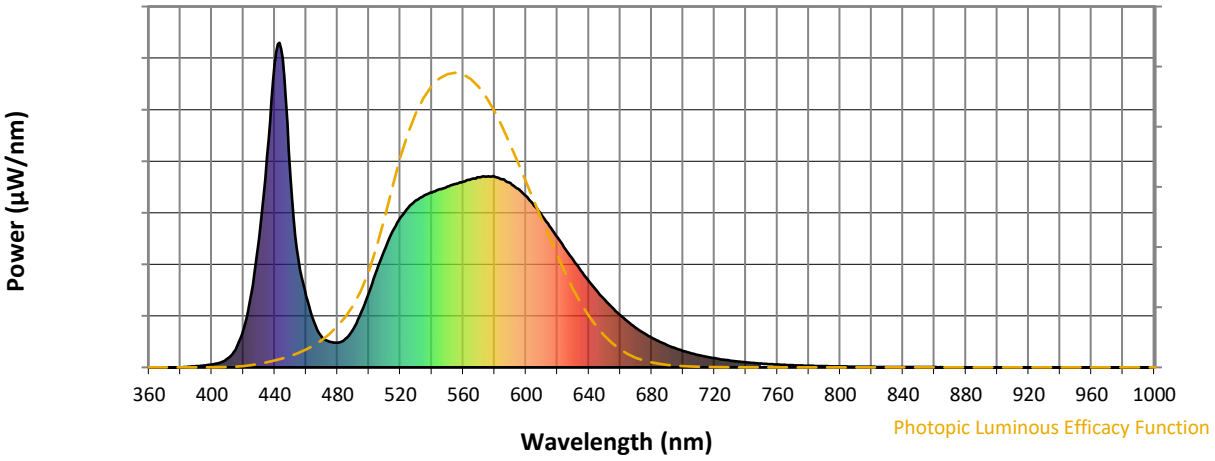



CCT = 4896K
CIE x = 0.3489
CIE y = 0.3618
Duv = 0.0035

Point lies inside the ANSI 5000K 4-step quadrangle

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## Photopic Flux vs. Wavelength

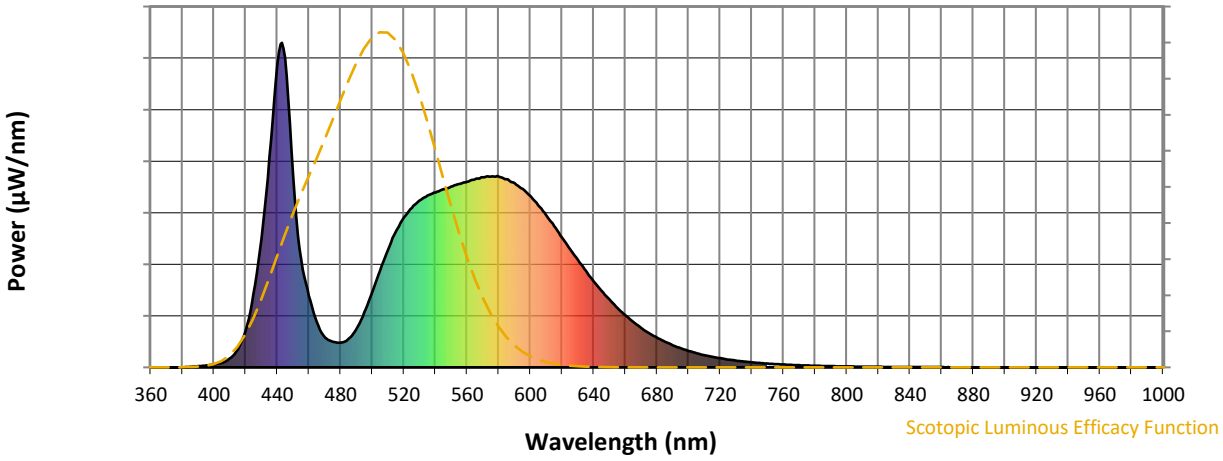



## Photopic Lumens: NR

| 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

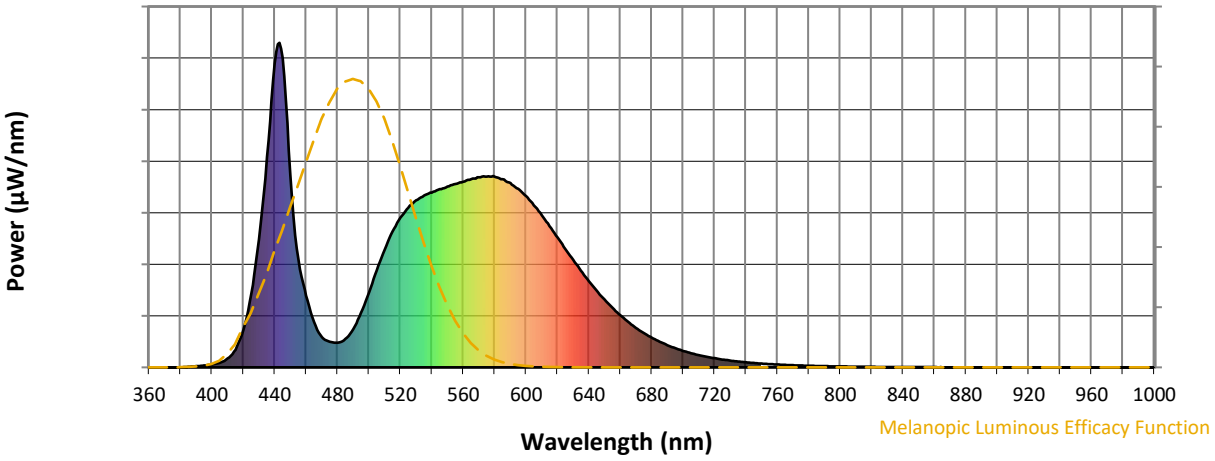



**Scotopic Lumens: NR** **S/P: 1.7**

| 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 | | | |

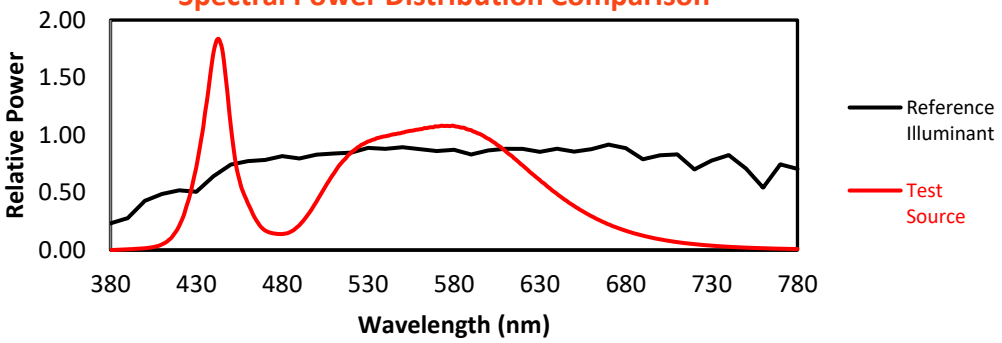
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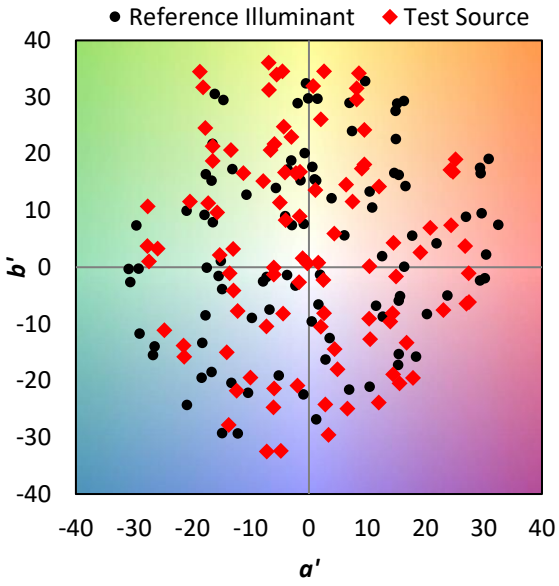
## Summary

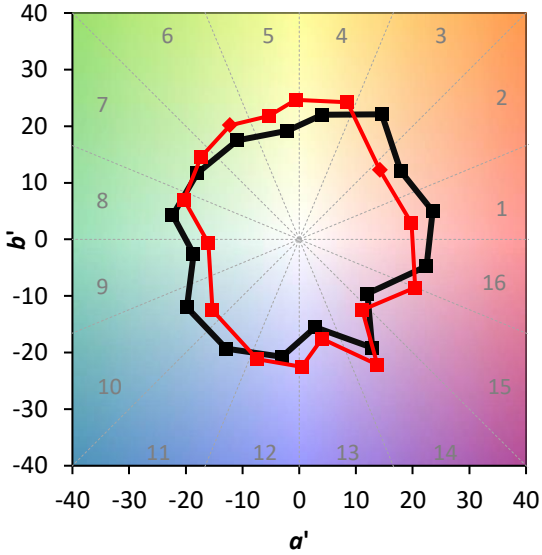
$R_f$ = 70.7
$R_g$ = 96.8
CIE $R_a$ = 70.2
$R_9$ = -35.1

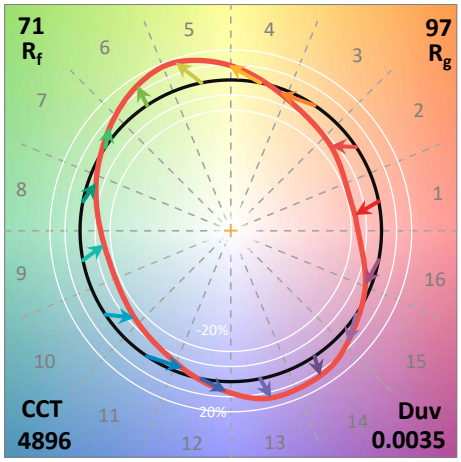
## Spectral Power Distribution Comparison

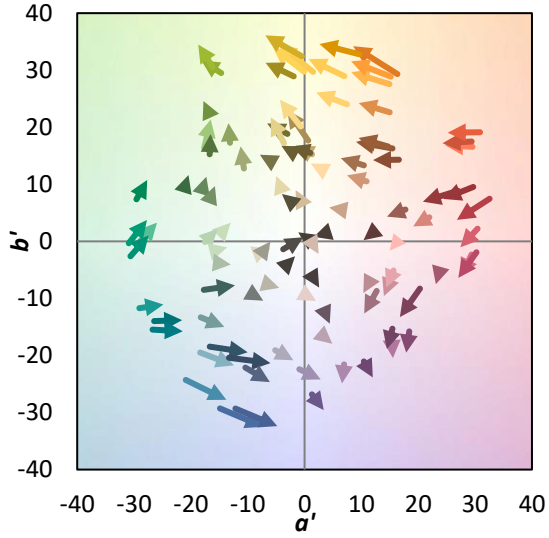



## Color Vector Graphics



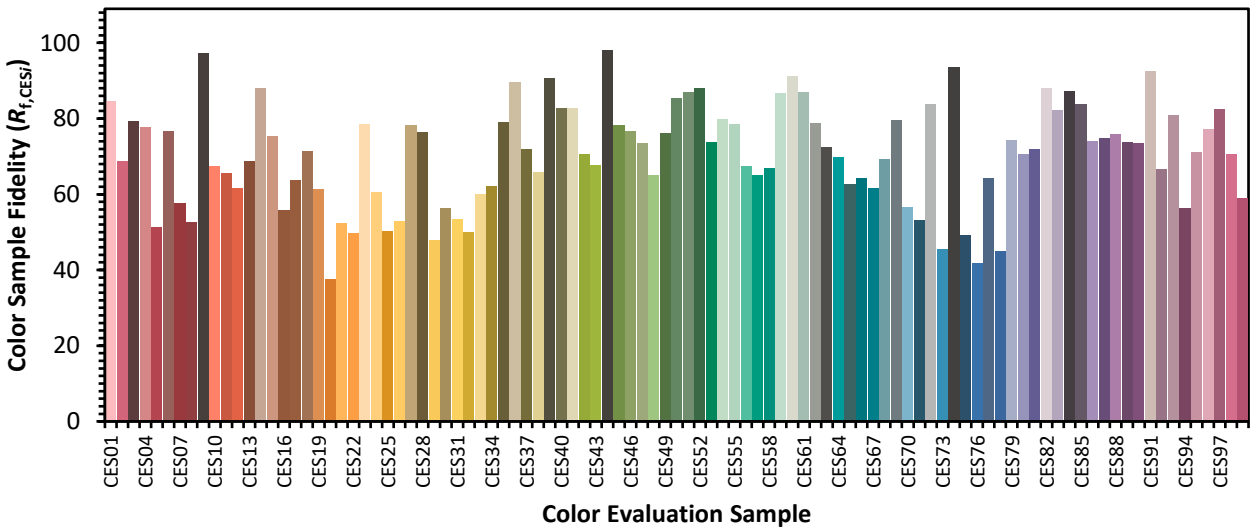



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## Individual Sample Fidelity Index ($R_{f,i}$)

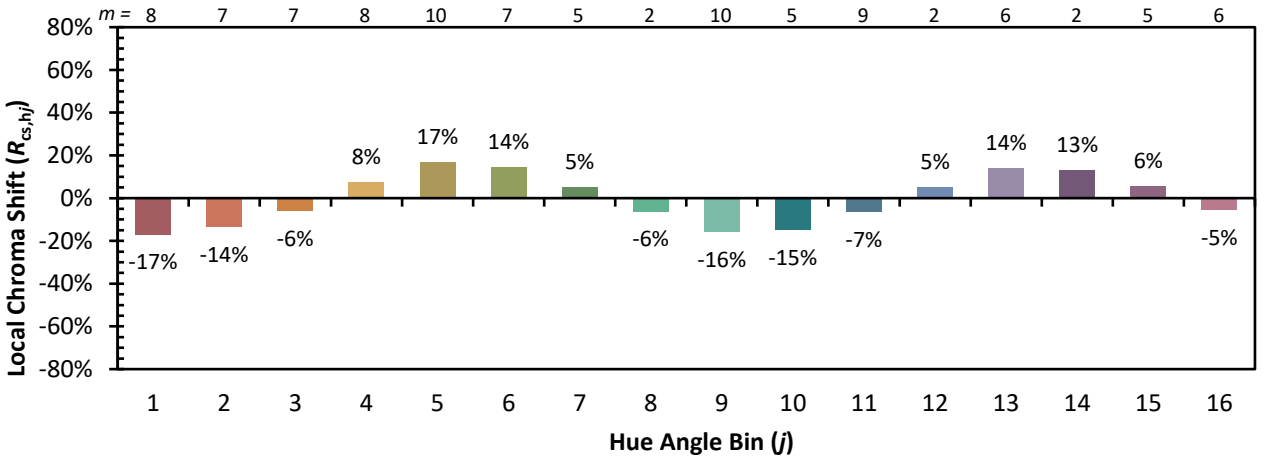
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 53 | CES51 = 87 | CES76 = 42 |
| CES02 = 59 | CES27 = 78 | CES52 = 88 | CES77 = 64 |
| CES03 = 30 | CES28 = 76 | CES53 = 74 | CES78 = 45 |
| CES04 = 69 | CES29 = 48 | CES54 = 80 | CES79 = 74 |
| CES05 = 46 | CES30 = 56 | CES55 = 79 | CES80 = 71 |
| CES06 = 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 | |

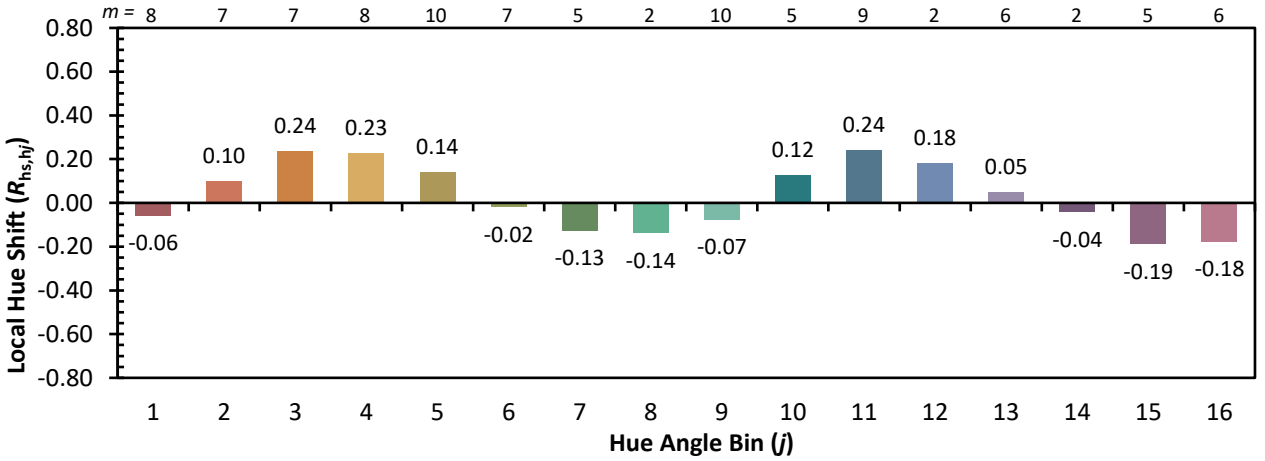


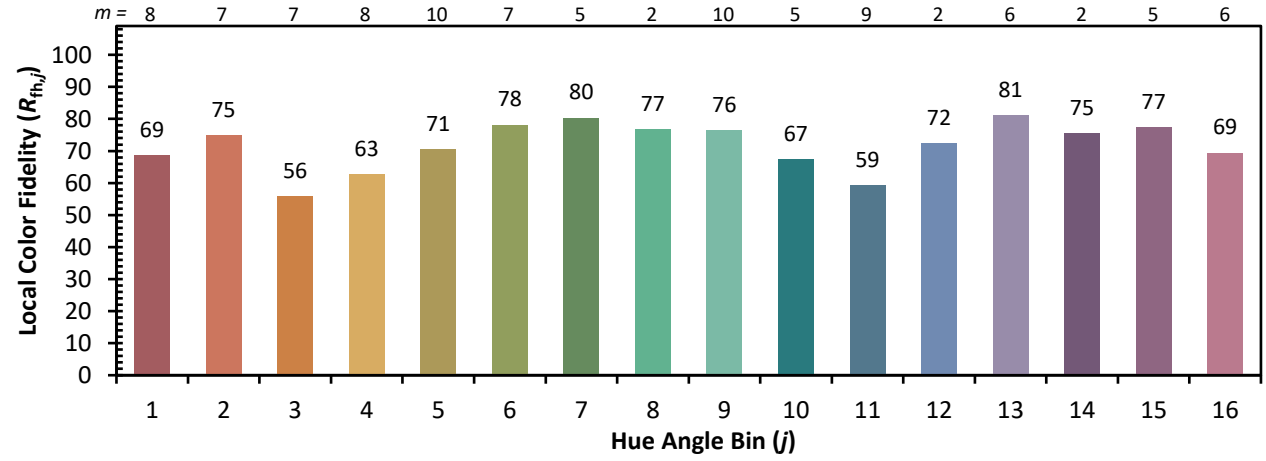
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## Color Rendition by Hue-Angle Bin



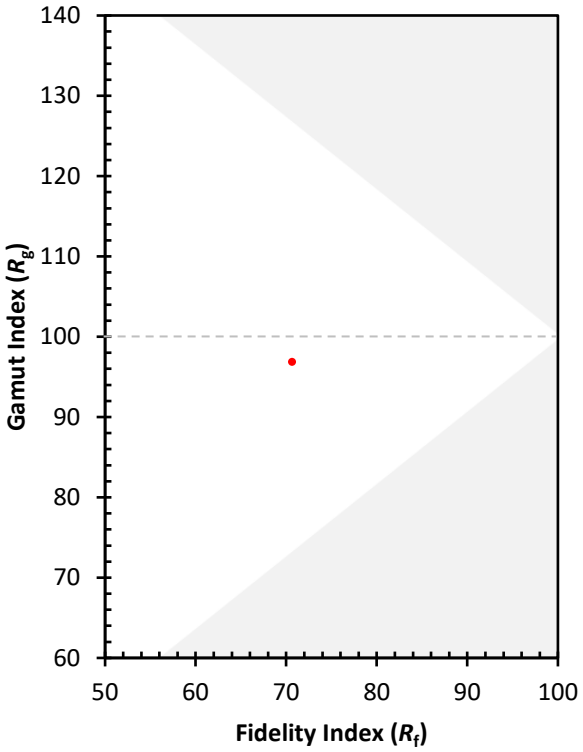



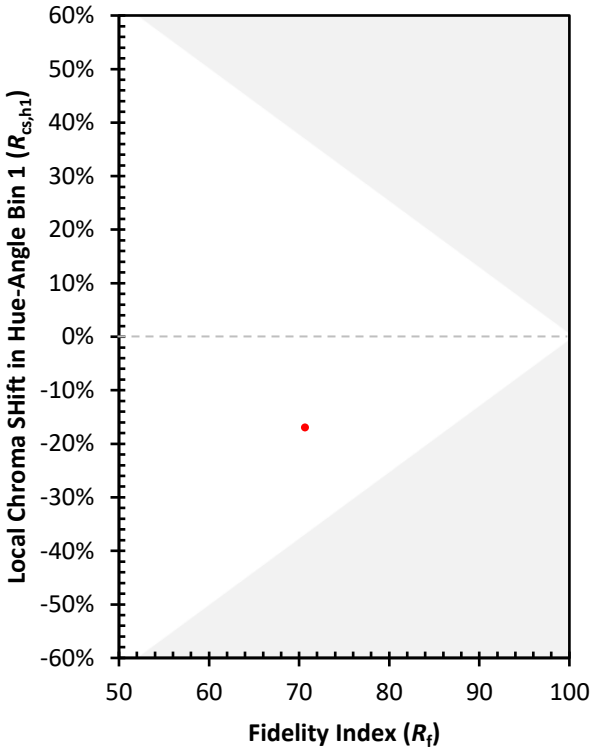



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## Measure Comparisons




(END OF REPORT)