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: P1363810

Luminaire Tested: **GSS-SB1D-730-U-SL3-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: | P1363810 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB1D-730-U-SL3-HSS |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 1SQUARE 76W 70CRI 3000K FIXTURE w/ TYPE III SPILL CONTROL DISTRIBUTION OPTIC AND HOUSE SIDE SHIELD |
| Light Source: | (26) 3000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 6626.4 lumens |
| Efficiency: | N/A |
| Efficacy: | 87.2 lumens/watt |
| Luminous Opening: | Rectangular (W 0.5' x L: 0.5' x H: 0') |
| IES Classification: | Type III - Medium |
| BUG Rating: | B1 - U0 - G2 |

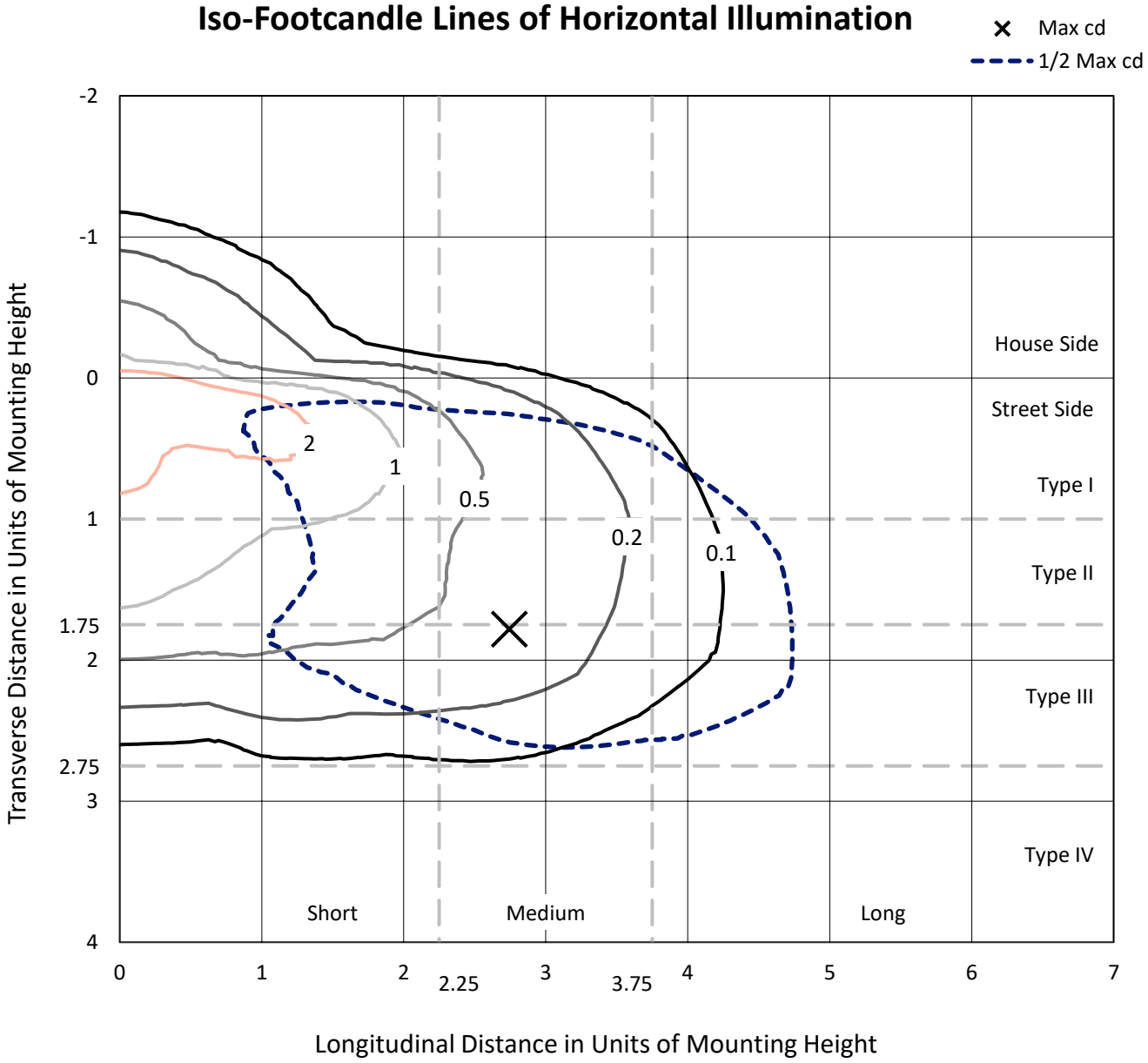
| | |
|---|---|
| Input Watts (W): | 76 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 6.7% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature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

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Scaled Data Report

REPORT NUMBER: P1363810
CATALOG NUMBER: GSS-SB1D-730-U-SL3-HSS

## Iso-Footcandle Lines of Horizontal Illumination



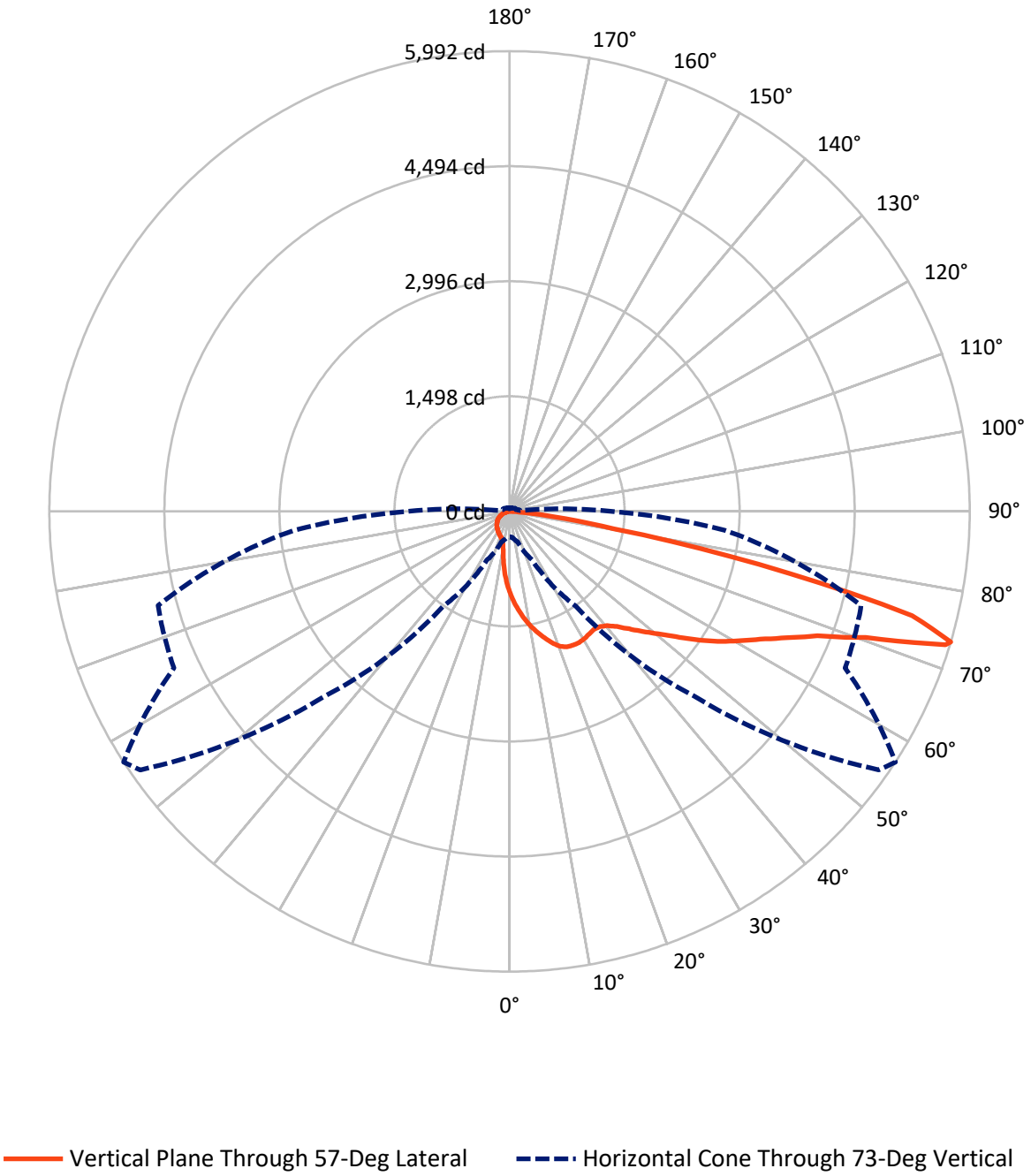

Based on 20 foot mounting height. Maximum calculated value = 3.9 fc
Type III - Medium - N/A

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## Luminous Intensity Polar Plot



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Scaled Data Report

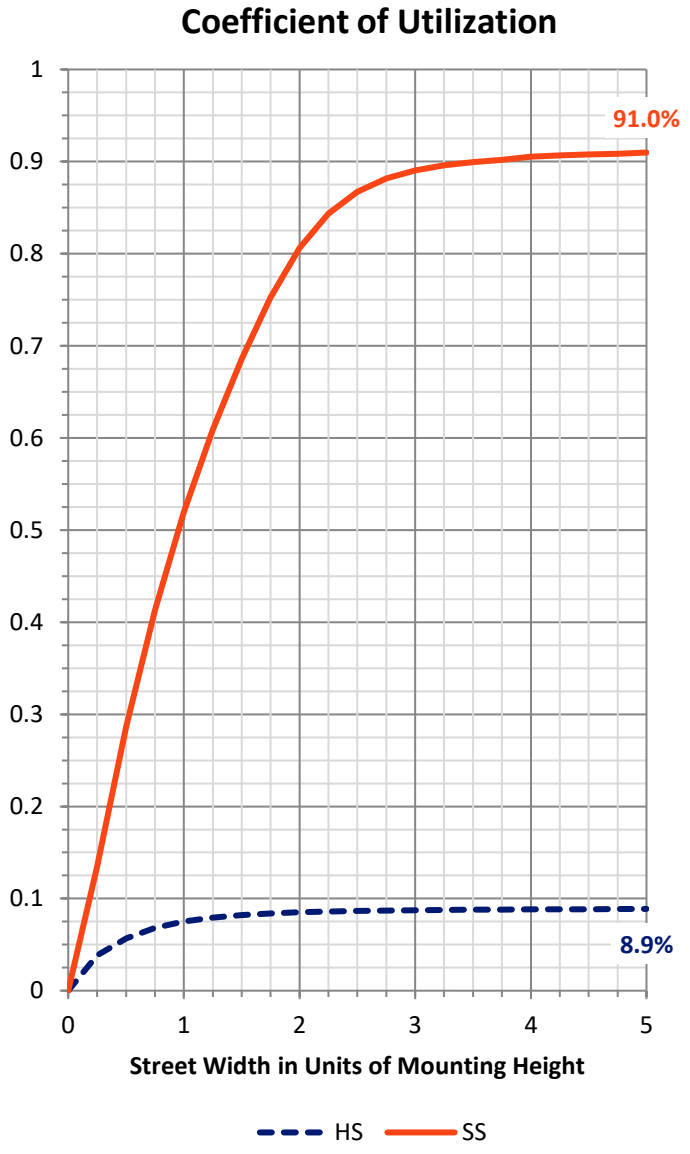
REPORT NUMBER: P1363810
CATALOG NUMBER: GSS-SB1D-730-U-SL3-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 593.5 | 0.0 | 593.5 |
| | % Fixture | 9.0 | 0.0 | 9.0 |
| **Street Side** | Lumens | 6032.8 | 0.0 | 6032.8 |
| | % Fixture | 91.0 | 0.0 | 91.0 |
| **Total** | Lumens | 6626.4 | 0.0 | 6626.4 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 98.8 | 1.5 |
| 10°-20° | 283.4 | 4.3 |
| 20°-30° | 430.1 | 6.5 |
| 30°-40° | 622.9 | 9.4 |
| 40°-50° | 930.3 | 14.0 |
| 50°-60° | 1347.0 | 20.3 |
| 60°-70° | 1631.9 | 24.6 |
| 70°-80° | 1178.6 | 17.8 |
| 80°-90° | 103.3 | 1.6 |
| 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° | 6626.4 | 100.0 |
| 0°-180° | 6626.4 | 100.0 |



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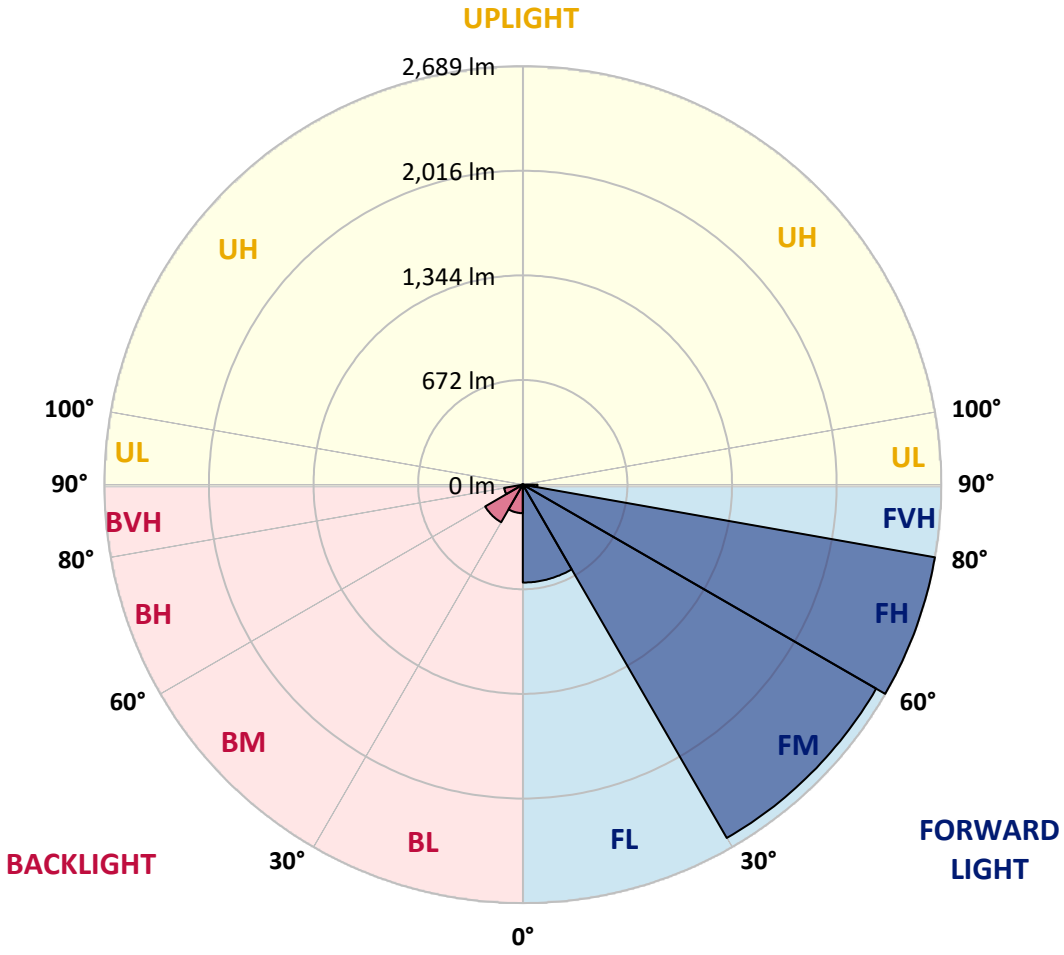
Scaled Data Report

REPORT NUMBER: P1363810
CATALOG NUMBER: GSS-SB1D-730-U-SL3-HSS

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 628.9 | 9.5 | | | |
| FM | (30°-60°) | 2621.1 | 39.6 | | | |
| FH | (60°-80°) | 2688.5 | 40.6 | | | G2/5000 |
| FVH | (80°-90°) | 94.4 | 1.4 | | | G1/100 |
| BL | (0°-30°) | 183.5 | 2.8 | B1/500 | | |
| BM | (30°-60°) | 279.2 | 4.2 | B1/1000 | | |
| BH | (60°-80°) | 121.9 | 1.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 9.0 | 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 III Medium



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REPORT NUMBER: P1363810
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 57° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1066.0 | 1066.0 | 1066.0 | 1066.0 | 1066.0 | 1066.0 | 1066.0 | *1066.0* | 1066.0 | 1066.0 | 1066.0 |
| 2.5° | 1281.7 | 1286.1 | 1271.0 | 1262.3 | 1245.1 | 1217.0 | 1189.0 | *1189.0* | 1156.6 | 1126.4 | 1087.5 |
| 5° | 1471.6 | 1458.7 | 1452.2 | 1430.6 | 1398.3 | 1363.7 | 1314.1 | *1301.2* | 1249.4 | 1184.6 | 1107.0 |
| 7.5° | 1616.2 | 1601.1 | 1594.6 | 1575.2 | 1538.5 | 1493.2 | 1426.3 | *1415.5* | 1340.0 | 1245.1 | 1132.9 |
| 10° | 1704.7 | 1693.9 | 1693.9 | 1678.8 | 1650.7 | 1603.3 | 1536.4 | *1521.3* | 1430.6 | 1301.2 | 1150.1 |
| 12.5° | 1665.8 | 1661.5 | 1687.4 | 1721.9 | 1734.9 | 1706.8 | 1635.6 | *1616.2* | 1512.6 | 1363.7 | 1171.7 |
| 15° | 1488.9 | 1484.6 | 1532.1 | 1622.7 | 1732.7 | 1780.2 | 1726.3 | *1709.0* | 1601.1 | 1428.5 | 1193.3 |
| 17.5° | 1318.4 | 1312.0 | 1357.3 | 1447.9 | 1611.9 | 1788.8 | 1821.2 | *1799.6* | 1689.6 | 1493.2 | 1217.0 |
| 20° | 1221.3 | 1214.9 | 1245.1 | 1318.4 | 1467.3 | 1719.8 | 1870.8 | *1875.1* | 1786.7 | 1564.4 | 1240.7 |
| 22.5° | 1186.8 | 1184.6 | 1199.7 | 1249.4 | 1355.1 | 1601.1 | 1890.3 | *1916.1* | 1892.4 | 1646.4 | 1275.3 |
| 25° | 1201.9 | 1193.3 | 1197.6 | 1217.0 | 1292.5 | 1506.2 | 1879.5 | *1929.1* | 1980.9 | 1745.7 | 1320.6 |
| 27.5° | 1240.7 | 1234.3 | 1227.8 | 1227.8 | 1266.6 | 1437.1 | 1851.4 | *1933.4* | 2071.5 | 1853.6 | 1359.4 |
| 30° | 1305.5 | 1296.9 | 1277.4 | 1253.7 | 1266.6 | 1394.0 | 1819.0 | *1922.6* | 2149.2 | 1970.1 | 1413.4 |
| 32.5° | 1452.2 | 1445.7 | 1389.6 | 1314.1 | 1296.9 | 1383.2 | 1782.4 | *1903.2* | 2233.3 | 2108.2 | 1476.0 |
| 35° | 1596.8 | 1590.3 | 1551.5 | 1443.6 | 1348.6 | 1391.8 | 1758.6 | *1890.3* | 2336.9 | 2276.5 | 1549.3 |
| 37.5° | 1661.5 | 1650.7 | 1620.5 | 1562.3 | 1469.5 | 1441.4 | 1765.1 | *1905.4* | 2485.8 | 2462.1 | 1639.9 |
| 40° | 1743.5 | 1726.3 | 1680.9 | 1627.0 | 1586.0 | 1555.8 | 1816.9 | *1957.1* | 2652.0 | 2675.7 | 1739.2 |
| 42.5° | 1864.4 | 1844.9 | 1778.0 | 1702.5 | 1655.1 | 1715.5 | 1916.1 | *2049.9* | 2857.0 | 2913.1 | 1860.0 |
| 45° | 2030.5 | 2004.6 | 1918.3 | 1819.0 | 1760.8 | 1795.3 | 2049.9 | *2181.6* | 3085.7 | 3182.8 | 2000.3 |
| 47.5° | 2181.6 | 2175.1 | 2078.0 | 1963.6 | 1894.6 | 1849.3 | 2194.5 | *2334.8* | 3327.4 | 3484.9 | 2144.9 |
| 50° | 2324.0 | 2300.2 | 2205.3 | 2093.1 | 2034.8 | 1959.3 | 2354.2 | *2505.2* | 3569.0 | 3761.1 | 2300.2 |
| 52.5° | 2479.3 | 2453.4 | 2324.0 | 2196.7 | 2138.4 | 2121.1 | 2561.3 | *2708.1* | 3780.5 | 4052.4 | 2457.8 |
| 55° | 2600.2 | 2563.5 | 2421.1 | 2315.3 | 2222.6 | 2280.8 | 2783.6 | *2951.9* | 3968.2 | 4315.6 | 2617.4 |
| 57.5° | 2751.2 | 2703.8 | 2500.9 | 2423.2 | 2352.0 | 2442.7 | 3033.9 | *3195.7* | 4164.6 | 4537.9 | 2777.1 |
| 60° | 2882.9 | 2846.2 | 2649.8 | 2552.7 | 2485.8 | 2626.1 | 3277.7 | *3420.2* | 4317.8 | 4727.8 | 2923.9 |
| 62.5° | 2481.5 | 2477.2 | 2529.0 | 2820.3 | 2721.0 | 2904.4 | 3538.8 | *3664.0* | 4410.6 | 4855.1 | 2984.3 |
| 65° | 1760.8 | 1773.7 | 1918.3 | 2824.6 | 3178.5 | 3370.5 | 3881.9 | *3963.9* | 4414.9 | 4710.5 | 2865.6 |
| 67.5° | 1119.9 | 1107.0 | 1286.1 | 2365.0 | 3195.7 | 4289.8 | 4404.1 | *4322.1* | 4216.4 | 4555.2 | 2880.7 |
| 70° | 671.1 | 675.4 | 735.8 | 1715.5 | 2634.7 | 4499.1 | 5133.5 | *4922.0* | 4335.1 | 4669.5 | 2893.6 |
| 72.5° | 364.7 | 373.3 | 459.6 | 841.6 | 1745.7 | 3579.8 | 5906.0 | *5936.2* | 4740.7 | 4723.5 | 2844.0 |
| 73° | *332.3* | *334.5* | *412.1* | *703.5* | *1510.5* | *3402.9* | *5869.3* | *5992.3* | *4822.7* | *4738.6* | *2811.6* |
| 75° | 220.1 | 220.1 | 280.5 | 399.2 | 662.5 | 2645.5 | 4872.4 | *5416.1* | 5101.1 | 4583.2 | 2559.2 |
| 77.5° | 135.9 | 144.6 | 194.2 | 276.2 | 241.7 | 1331.4 | 2865.6 | *3314.4* | 4548.7 | 3448.2 | 1607.6 |
| 80° | 49.6 | 53.9 | 120.8 | 181.3 | 140.3 | 504.9 | 1201.9 | *1378.8* | 2108.2 | 1750.0 | 580.5 |
| 82.5° | 25.9 | 28.1 | 75.5 | 92.8 | 75.5 | 131.6 | 537.3 | *574.0* | 850.2 | 455.3 | 107.9 |
| 85° | 12.9 | 15.1 | 32.4 | 38.8 | 30.2 | 43.2 | 133.8 | *125.2* | 192.0 | 60.4 | 30.2 |
| 87.5° | 0.0 | 0.0 | 2.2 | 4.3 | 6.5 | 8.6 | 12.9 | *12.9* | 15.1 | 17.3 | 17.3 |
| 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
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Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P1363810
CATALOG NUMBER: GSS-SB1D-730-U-SL3-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1066.0 | 1066.0 | 1066.0 | 1066.0 | 1066.0 | 1066.0 | 1066.0 | 1066.0 | 1066.0 | 1066.0 | 1066.0 |
| 2.5° | 1063.8 | 1046.5 | 1005.5 | 964.5 | 934.3 | 902.0 | 871.8 | 845.9 | 830.8 | 824.3 | 830.8 |
| 5° | 1066.0 | 1029.3 | 945.1 | 861.0 | 779.0 | 712.1 | 649.5 | 604.2 | 571.8 | 561.0 | 556.7 |
| 7.5° | 1066.0 | 1005.5 | 873.9 | 735.8 | 615.0 | 526.5 | 463.9 | 435.9 | 420.8 | 418.6 | 418.6 |
| 10° | 1063.8 | 977.5 | 794.1 | 612.8 | 474.7 | 414.3 | 394.9 | 390.6 | 390.6 | 390.6 | 392.7 |
| 12.5° | 1061.6 | 951.6 | 703.5 | 494.1 | 399.2 | 379.8 | 373.3 | 373.3 | 375.5 | 377.6 | 379.8 |
| 15° | 1057.3 | 912.8 | 608.5 | 412.1 | 371.1 | 364.7 | 360.4 | 360.4 | 362.5 | 366.8 | 366.8 |
| 17.5° | 1053.0 | 873.9 | 515.7 | 375.5 | 358.2 | 351.7 | 349.6 | 347.4 | 351.7 | 356.0 | 356.0 |
| 20° | 1044.4 | 824.3 | 438.0 | 356.0 | 345.3 | 340.9 | 338.8 | 336.6 | 338.8 | 343.1 | 345.3 |
| 22.5° | 1033.6 | 761.7 | 386.3 | 343.1 | 334.5 | 328.0 | 325.8 | 323.7 | 323.7 | 332.3 | 332.3 |
| 25° | 1022.8 | 692.7 | 356.0 | 330.1 | 321.5 | 315.0 | 310.7 | 308.6 | 310.7 | 317.2 | 317.2 |
| 27.5° | 1001.2 | 617.1 | 336.6 | 319.4 | 310.7 | 302.1 | 297.8 | 293.5 | 295.6 | 302.1 | 302.1 |
| 30° | 968.9 | 537.3 | 325.8 | 308.6 | 297.8 | 287.0 | 280.5 | 276.2 | 278.4 | 284.8 | 287.0 |
| 32.5° | 921.4 | 468.2 | 321.5 | 299.9 | 287.0 | 271.9 | 263.3 | 256.8 | 258.9 | 267.6 | 267.6 |
| 35° | 871.8 | 418.6 | 319.4 | 291.3 | 274.0 | 258.9 | 243.8 | 235.2 | 239.5 | 248.1 | 250.3 |
| 37.5° | 820.0 | 390.6 | 319.4 | 287.0 | 265.4 | 246.0 | 224.4 | 215.8 | 217.9 | 226.6 | 228.7 |
| 40° | 774.7 | 377.6 | 321.5 | 282.7 | 254.6 | 230.9 | 207.2 | 196.4 | 200.7 | 211.5 | 209.3 |
| 42.5° | 757.4 | 375.5 | 321.5 | 271.9 | 243.8 | 215.8 | 189.9 | 179.1 | 183.4 | 189.9 | 192.0 |
| 45° | 776.8 | 384.1 | 317.2 | 261.1 | 228.7 | 198.5 | 176.9 | 166.2 | 168.3 | 172.6 | 176.9 |
| 47.5° | 843.7 | 394.9 | 310.7 | 248.1 | 215.8 | 185.6 | 164.0 | 155.4 | 151.0 | 157.5 | 159.7 |
| 50° | 936.5 | 401.4 | 299.9 | 235.2 | 205.0 | 172.6 | 153.2 | 142.4 | 138.1 | 140.3 | 142.4 |
| 52.5° | 1042.2 | 401.4 | 289.1 | 222.3 | 194.2 | 159.7 | 144.6 | 133.8 | 125.2 | 127.3 | 127.3 |
| 55° | 1148.0 | 397.0 | 261.1 | 211.5 | 183.4 | 151.0 | 135.9 | 120.8 | 114.4 | 114.4 | 112.2 |
| 57.5° | 1258.0 | 390.6 | 226.6 | 196.4 | 170.5 | 140.3 | 125.2 | 112.2 | 103.6 | 99.3 | 99.3 |
| 60° | 1365.9 | 381.9 | 207.2 | 181.3 | 155.4 | 131.6 | 114.4 | 103.6 | 92.8 | 86.3 | 84.2 |
| 62.5° | 1422.0 | 358.2 | 185.6 | 161.8 | 140.3 | 118.7 | 103.6 | 92.8 | 79.8 | 71.2 | 69.1 |
| 65° | 1391.8 | 308.6 | 159.7 | 144.6 | 127.3 | 105.7 | 92.8 | 82.0 | 66.9 | 56.1 | 56.1 |
| 67.5° | 1424.2 | 258.9 | 135.9 | 123.0 | 110.0 | 90.6 | 77.7 | 71.2 | 58.3 | 49.6 | 49.6 |
| 70° | 1435.0 | 202.8 | 114.4 | 105.7 | 94.9 | 75.5 | 66.9 | 62.6 | 51.8 | 43.2 | 41.0 |
| 72.5° | 1355.1 | 151.0 | 92.8 | 88.5 | 77.7 | 58.3 | 56.1 | 51.8 | 43.2 | 34.5 | 34.5 |
| 73° | *1322.7* | *140.3* | *88.5* | *84.2* | *73.4* | *56.1* | *53.9* | *49.6* | *41.0* | *34.5* | *32.4* |
| 75° | 1165.2 | 107.9 | 73.4 | 69.1 | 58.3 | 47.5 | 45.3 | 41.0 | 34.5 | 28.1 | 28.1 |
| 77.5° | 772.5 | 77.7 | 56.1 | 51.8 | 43.2 | 36.7 | 34.5 | 30.2 | 25.9 | 21.6 | 21.6 |
| 80° | 284.8 | 51.8 | 41.0 | 36.7 | 32.4 | 30.2 | 25.9 | 21.6 | 17.3 | 17.3 | 15.1 |
| 82.5° | 58.3 | 34.5 | 30.2 | 25.9 | 23.7 | 21.6 | 17.3 | 15.1 | 12.9 | 12.9 | 12.9 |
| 85° | 23.7 | 21.6 | 17.3 | 17.3 | 17.3 | 15.1 | 12.9 | 12.9 | 10.8 | 10.8 | 8.6 |
| 87.5° | 15.1 | 12.9 | 12.9 | 10.8 | 10.8 | 8.6 | 8.6 | 8.6 | 8.6 | 8.6 | 8.6 |
| 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: SP1-2407-184-4

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

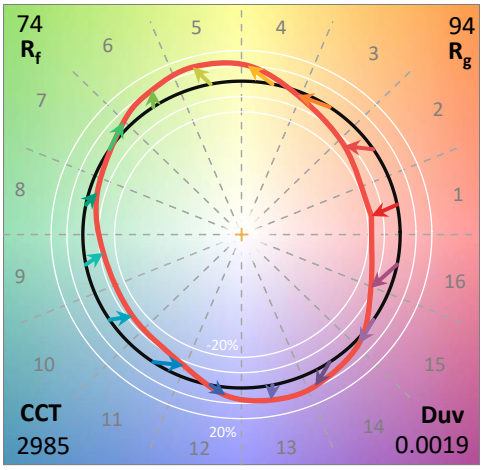
## Test Information

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

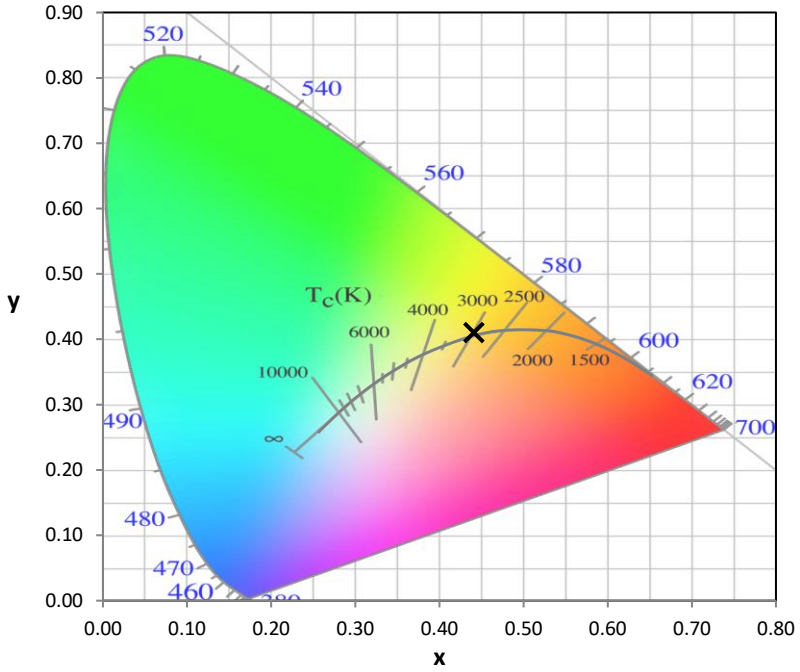
| | |
|---|---|
| Stabilization Time: | 36M |
| Operation Time: | 1H 36M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-4

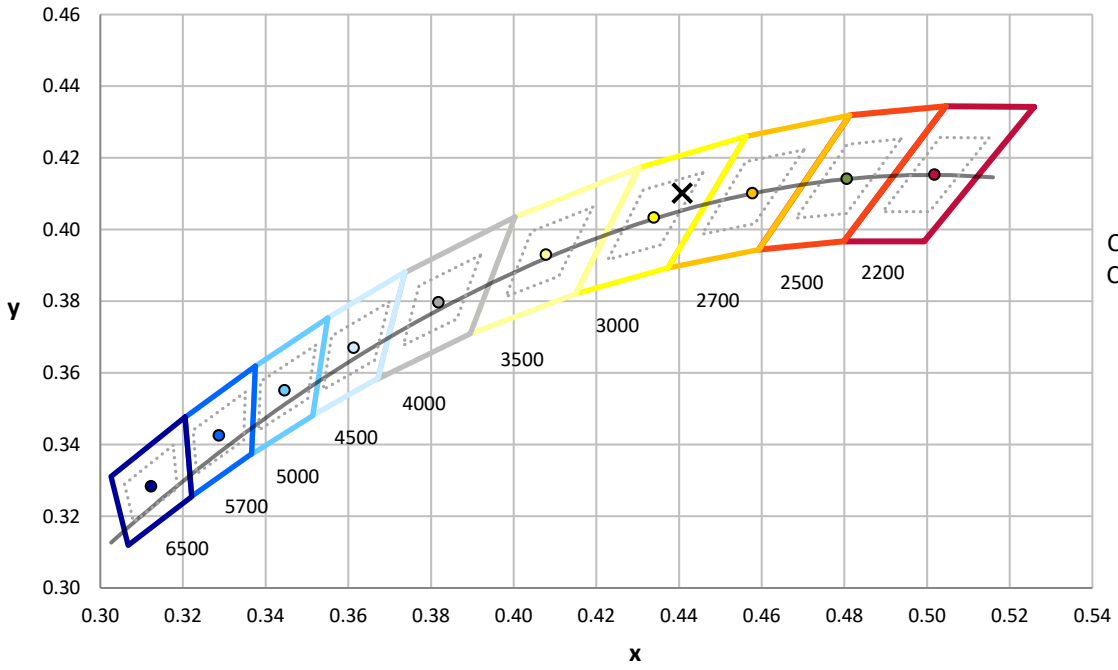
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

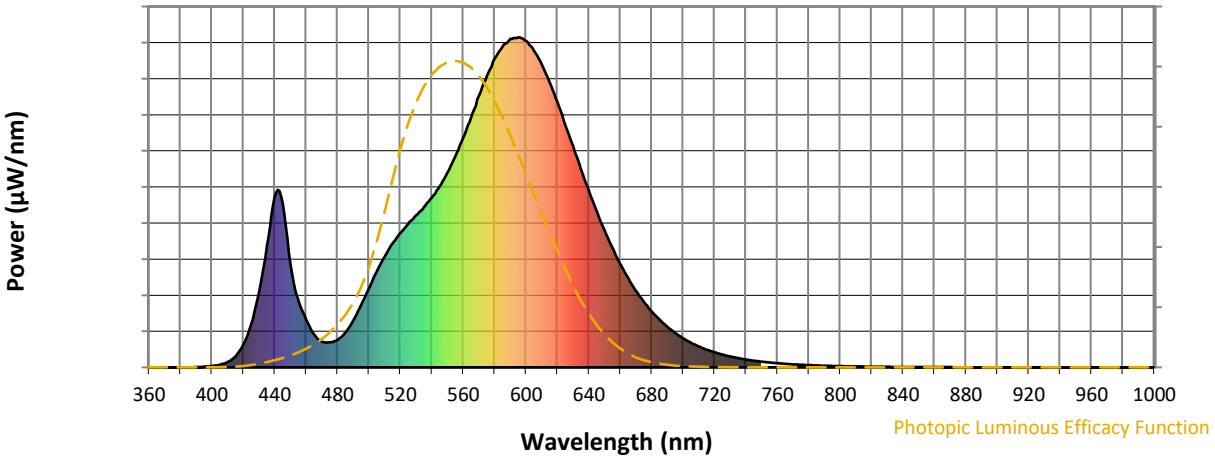



CCT = 2985K
CIE x = 0.4408
CIE y = 0.4101
Duv = 0.0019

Point lies inside the ANSI 3000K 4-step quadrangle

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## Photopic Flux vs. Wavelength

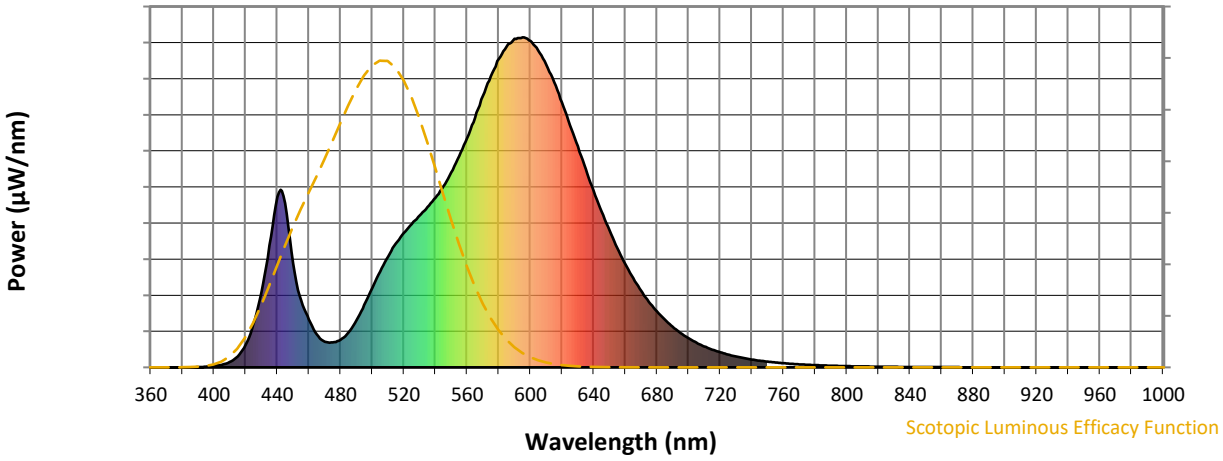



## Photopic Lumens: NR

| 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

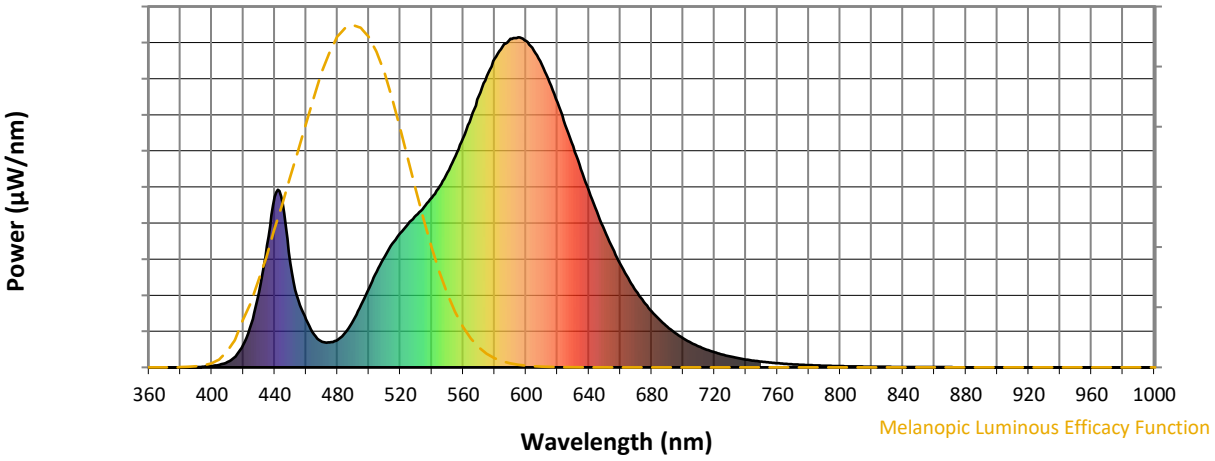



**Scotopic Lumens: NR** **S/P: 1.19**

| 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 | | | |

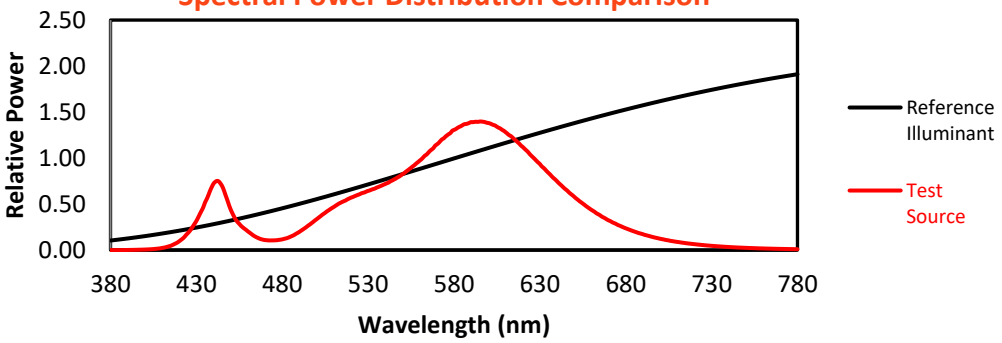
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# TM-30-18

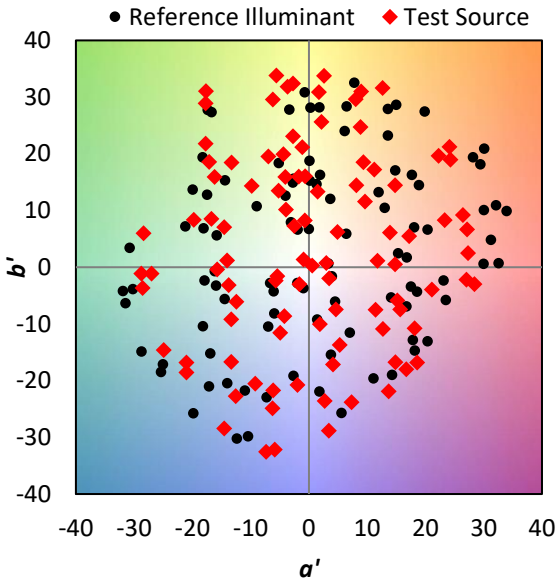
## Summary

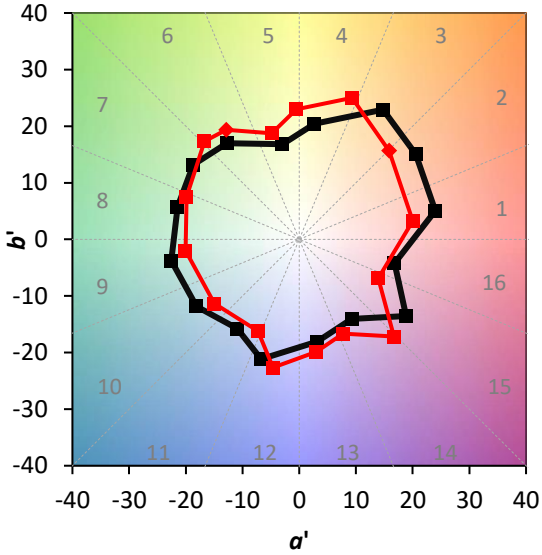
$R_f$ = 73.8
$R_g$ = 94.4
CIE $R_a$ = 70.8
$R_9$ = -43.2

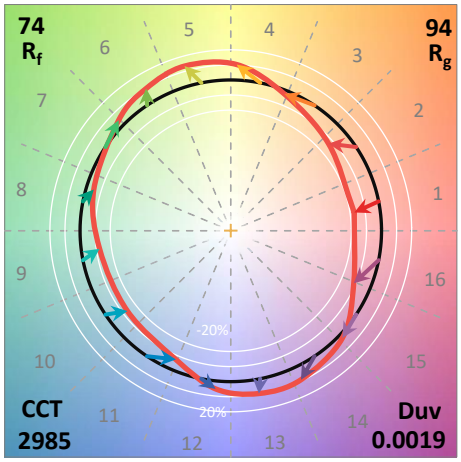
## Spectral Power Distribution Comparison

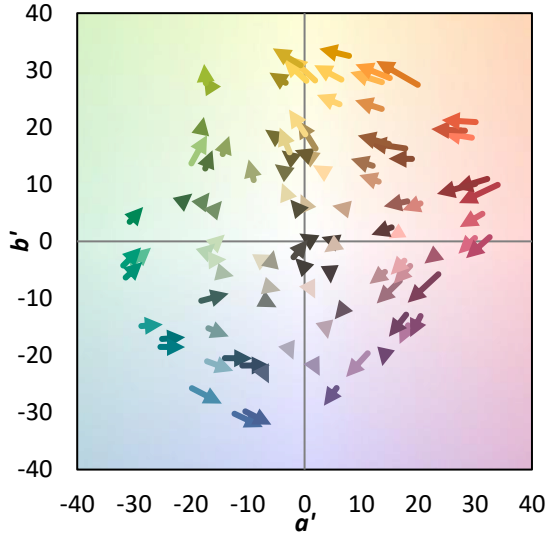



## Color Vector Graphics



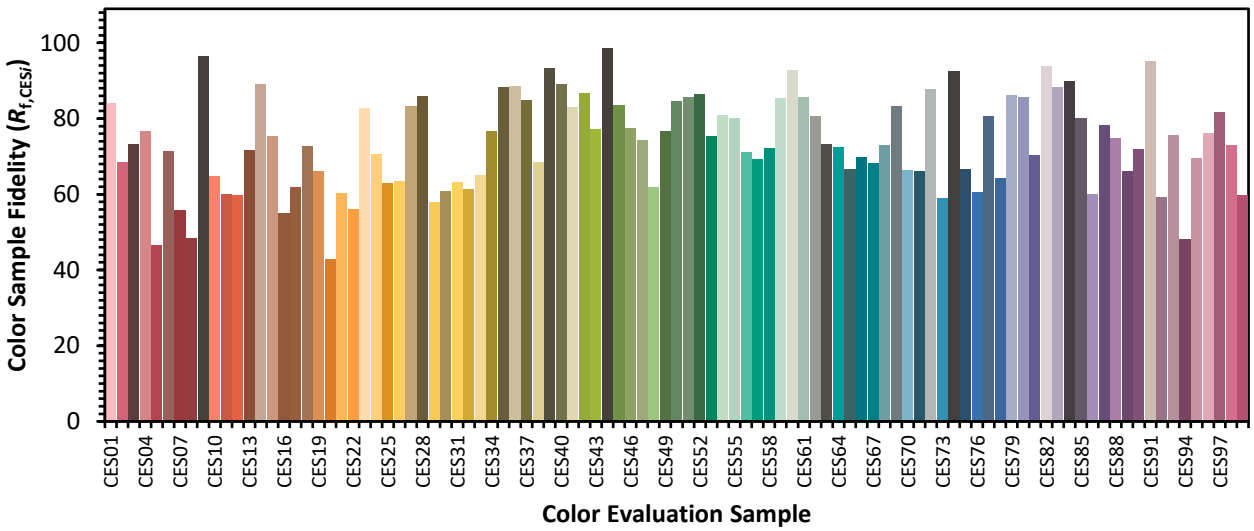



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**Individual Sample Fidelity Index ($R_{f,i}$)**

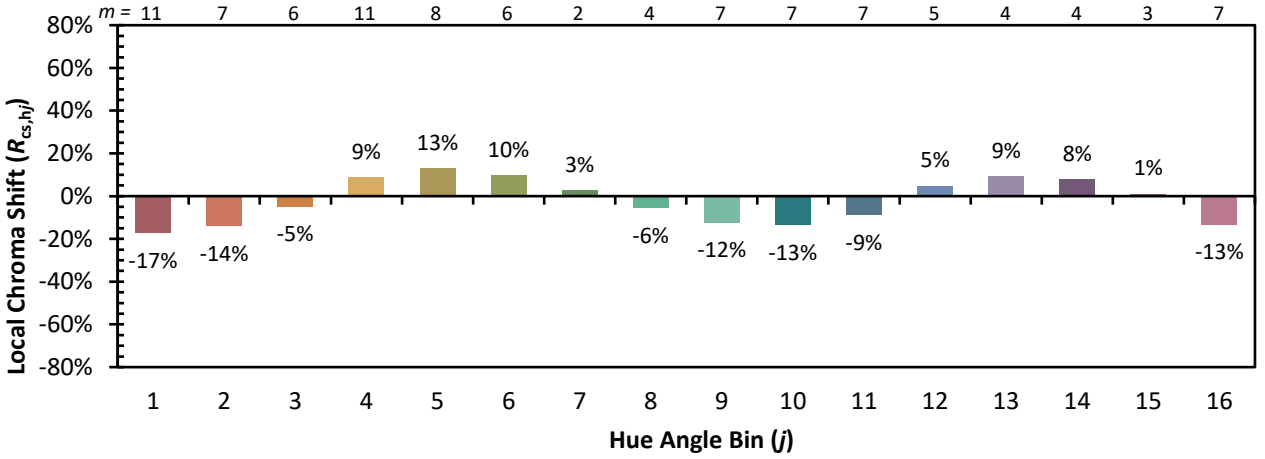
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 63 | CES51 = 86 | CES76 = 61 |
| CES02 = 62 | CES27 = 83 | CES52 = 86 | CES77 = 81 |
| CES03 = 31 | CES28 = 86 | CES53 = 75 | CES78 = 64 |
| CES04 = 71 | CES29 = 58 | CES54 = 81 | CES79 = 86 |
| CES05 = 49 | CES30 = 61 | CES55 = 80 | CES80 = 86 |
| CES06 = 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 | |

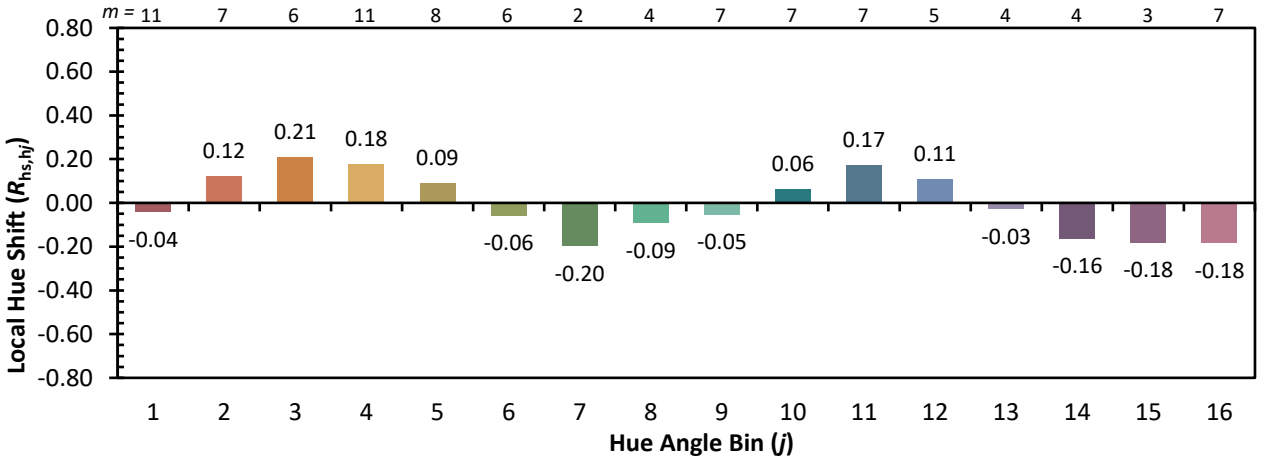


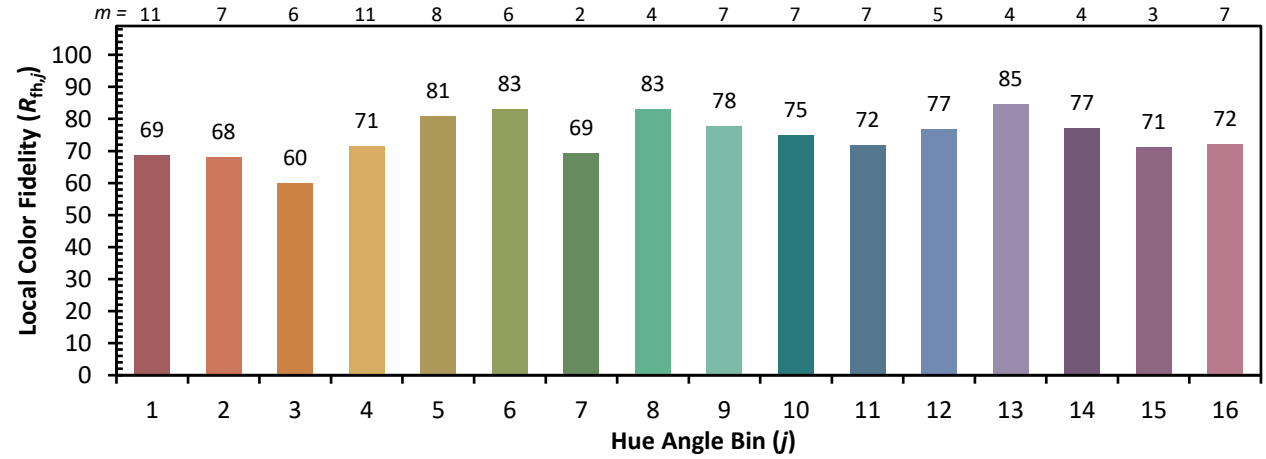
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## Color Rendition by Hue-Angle Bin



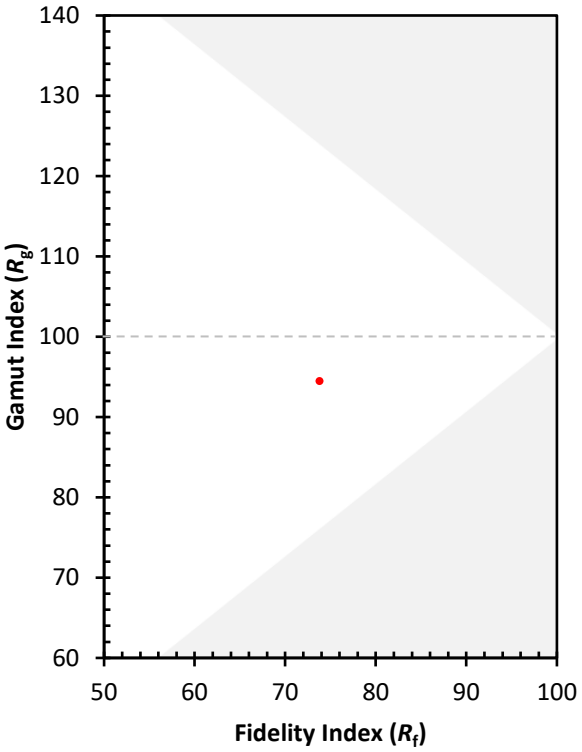



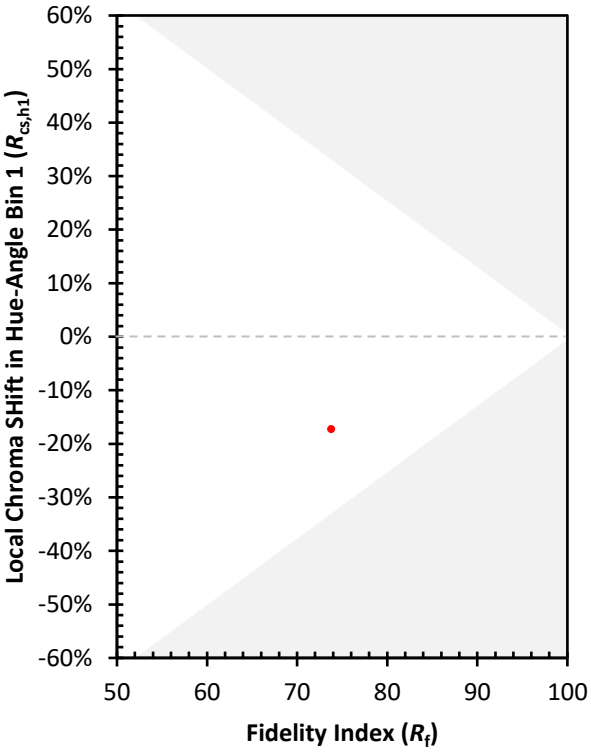



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## Measure Comparisons




(END OF REPORT)