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: P1359587

Luminaire Tested: **GSS-SB2A-730-U-T2-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: | P1359587 |
| Test Lab: | INNOVATION CENTER(G3) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB2A-730-U-T2-HSS |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 2SQUARE 58W 70CRI 3000K FIXTURE w/ TYPE II DISTRIBUTION OPTIC AND HOUSE SIDE SHIELD |
| Light Source: | (52) 3000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 6450.5 lumens |
| Efficiency: | N/A |
| Efficacy: | 111.2 lumens/watt |
| Luminous Opening: | Rectangular (W 1' x L: 0.5' x H: 0') |
| IES Classification: | Type II - Medium |
| BUG Rating: | B1 - U0 - G2 |

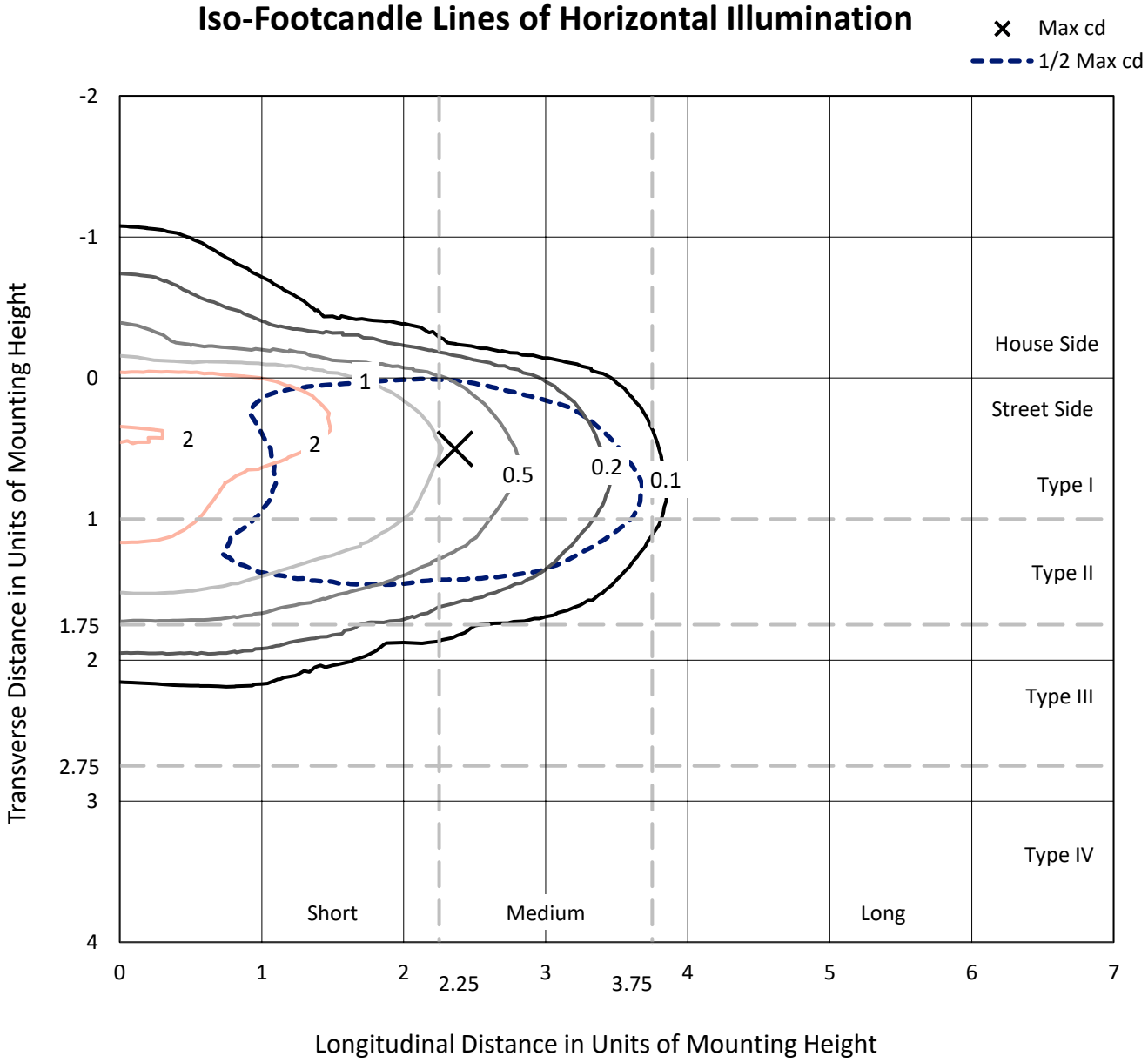
| | |
|---|---|
| Input Watts (W): | 58 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 9.0% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature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

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Scaled Data Report

REPORT NUMBER: P1359587
CATALOG NUMBER: GSS-SB2A-730-U-T2-HSS

## Iso-Footcandle Lines of Horizontal Illumination



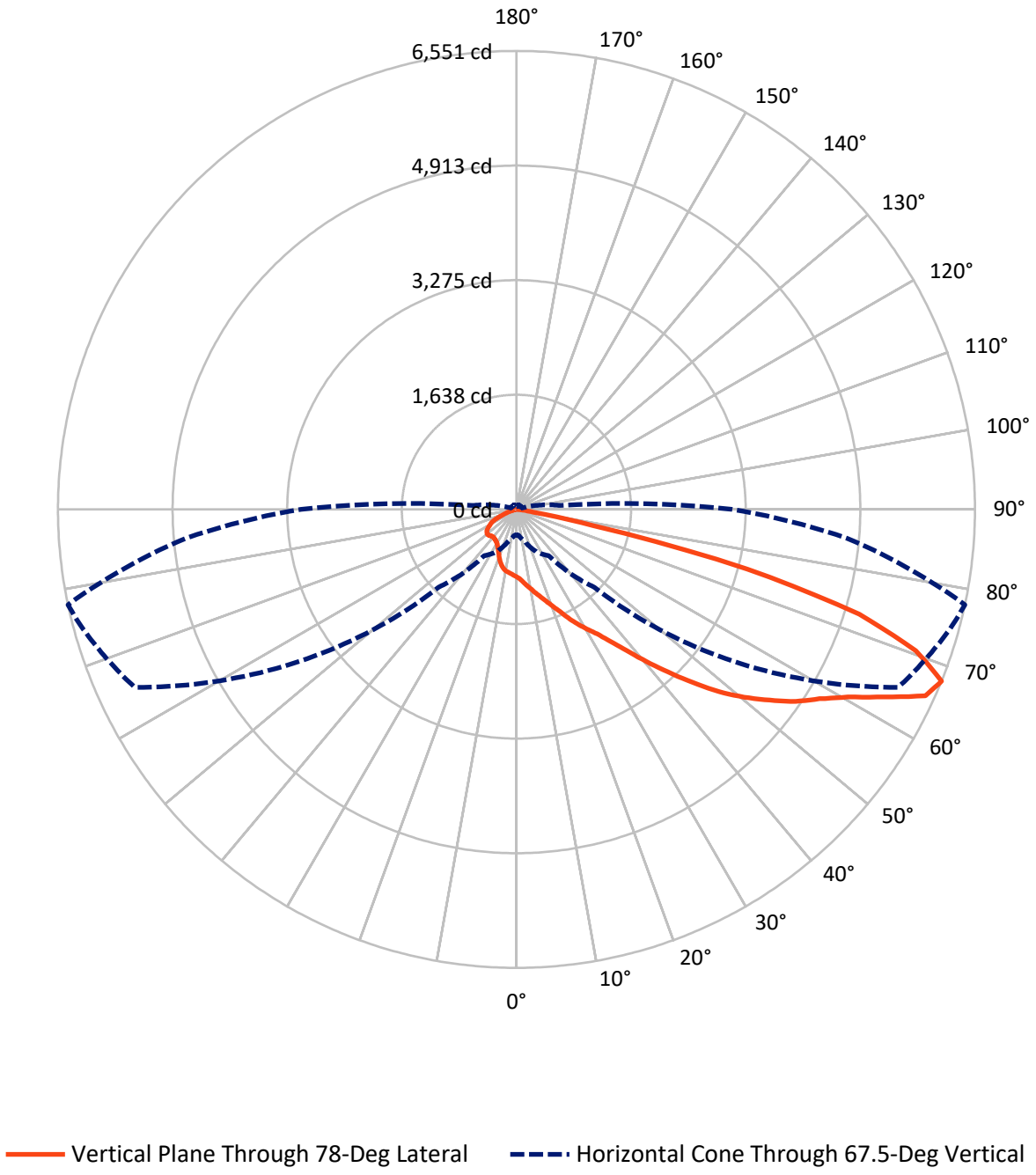

Based on 20 foot mounting height. Maximum calculated value = 3.3 fc
Type II - Medium - N/A

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## Luminous Intensity Polar Plot



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Scaled Data Report

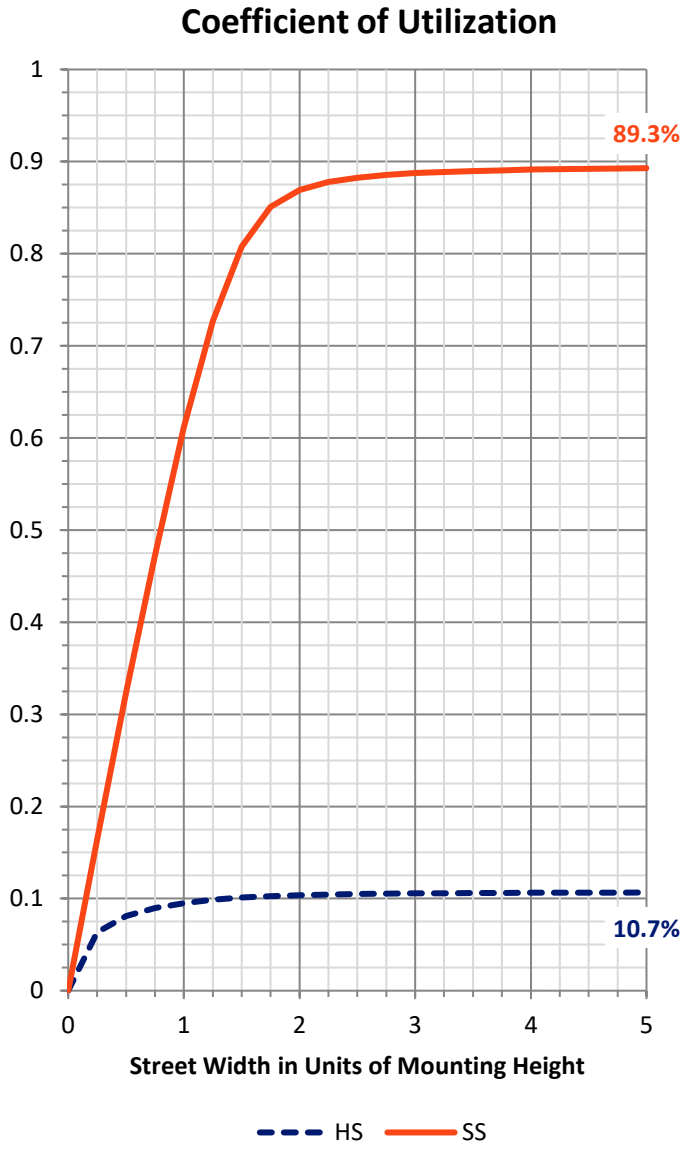
REPORT NUMBER: P1359587
CATALOG NUMBER: GSS-SB2A-730-U-T2-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 692.2 | 0.0 | 692.2 |
| | % Fixture | 10.7 | 0.0 | 10.7 |
| **Street Side** | Lumens | 5758.3 | 0.0 | 5758.3 |
| | % Fixture | 89.3 | 0.0 | 89.3 |
| **Total** | Lumens | 6450.5 | 0.0 | 6450.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 87.0 | 1.3 |
| 10°-20° | 236.9 | 3.7 |
| 20°-30° | 389.7 | 6.0 |
| 30°-40° | 680.7 | 10.6 |
| 40°-50° | 1158.1 | 18.0 |
| 50°-60° | 1670.4 | 25.9 |
| 60°-70° | 1612.2 | 25.0 |
| 70°-80° | 592.2 | 9.2 |
| 80°-90° | 23.3 | 0.4 |
| 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° | 6450.5 | 100.0 |
| 0°-180° | 6450.5 | 100.0 |



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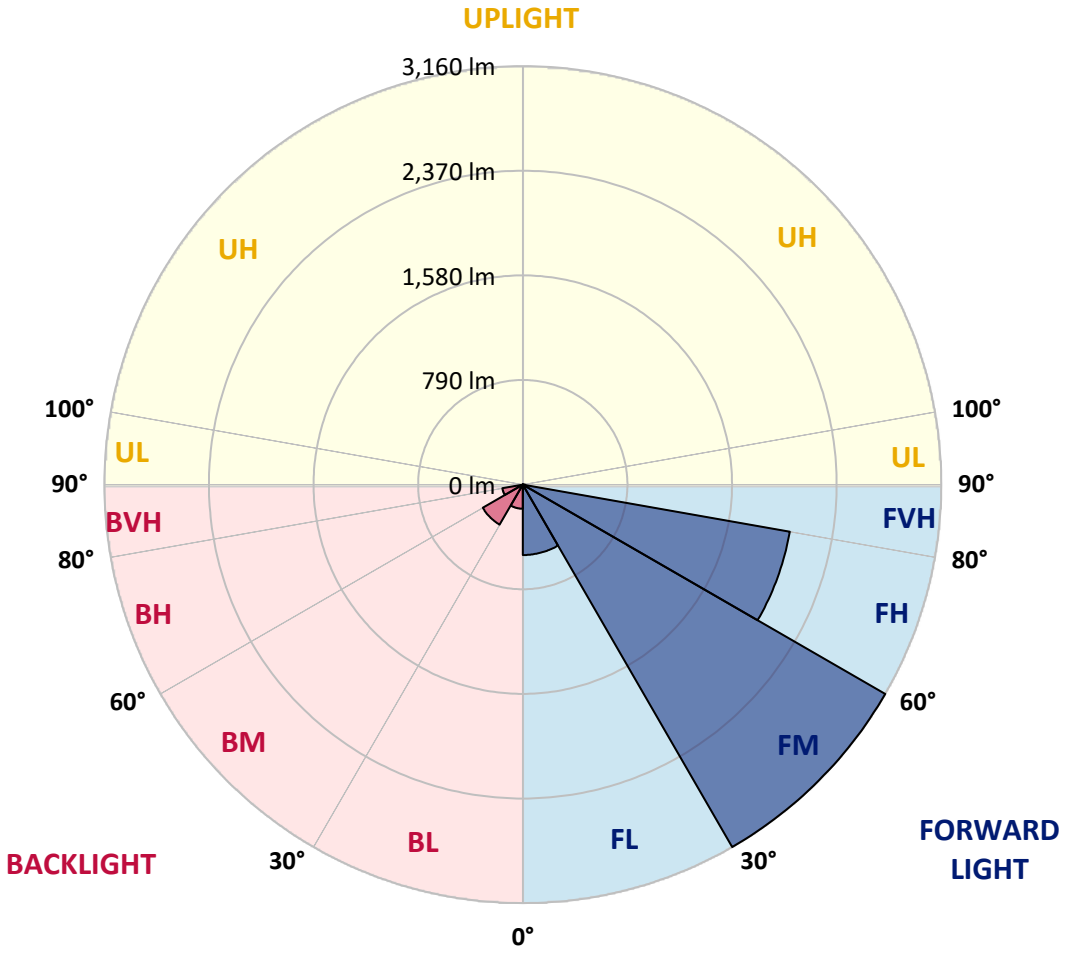
Scaled Data Report

REPORT NUMBER: P1359587
CATALOG NUMBER: GSS-SB2A-730-U-T2-HSS

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 531.5 | 8.2 | | | |
| FM | (30°-60°) | 3160.3 | 49.0 | | | |
| FH | (60°-80°) | 2047.5 | 31.7 | | | G2/5000 |
| FVH | (80°-90°) | 19.0 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 182.1 | 2.8 | B1/500 | | |
| BM | (30°-60°) | 348.8 | 5.4 | B1/1000 | | |
| BH | (60°-80°) | 156.9 | 2.4 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 4.4 | 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 II Medium



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REPORT NUMBER: P1359587
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 78° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 965.5 | 965.5 | 965.5 | 965.5 | 965.5 | 965.5 | 965.5 | 965.5 | 965.5 | *965.5* | 965.5 |
| 2.5° | 1068.5 | 1066.7 | 1070.4 | 1063.1 | 1064.9 | 1055.9 | 1036.0 | 1023.3 | 1007.1 | *996.2* | 983.6 |
| 5° | 1146.3 | 1148.1 | 1144.5 | 1146.3 | 1140.9 | 1128.2 | 1117.4 | 1084.8 | 1057.7 | *1046.9* | 1019.7 |
| 7.5° | 1171.6 | 1175.2 | 1175.2 | 1184.3 | 1189.7 | 1195.1 | 1186.1 | 1151.7 | 1115.6 | *1101.1* | 1055.9 |
| 10° | 1171.6 | 1171.6 | 1184.3 | 1196.9 | 1222.2 | 1240.3 | 1238.5 | 1225.8 | 1180.6 | *1159.0* | 1108.3 |
| 12.5° | 1139.1 | 1137.3 | 1153.5 | 1189.7 | 1224.0 | 1265.6 | 1296.4 | 1285.5 | 1243.9 | *1227.7* | 1153.5 |
| 15° | 1048.7 | 1050.5 | 1081.2 | 1135.4 | 1204.2 | 1274.7 | 1327.1 | 1350.6 | 1321.7 | *1296.4* | 1222.2 |
| 17.5° | 929.3 | 936.6 | 972.7 | 1048.7 | 1151.7 | 1265.6 | 1365.1 | 1421.1 | 1403.0 | *1379.5* | 1289.1 |
| 20° | 885.9 | 887.7 | 907.6 | 961.9 | 1079.4 | 1231.3 | 1375.9 | 1497.1 | 1511.5 | *1473.5* | 1361.5 |
| 22.5° | 952.8 | 960.1 | 952.8 | 956.5 | 1030.6 | 1189.7 | 1386.8 | 1564.0 | 1616.4 | *1580.2* | 1448.2 |
| 25° | 1075.8 | 1068.5 | 1048.7 | 1032.4 | 1045.0 | 1159.0 | 1392.2 | 1648.9 | 1748.4 | *1717.6* | 1562.1 |
| 27.5° | 1215.0 | 1198.7 | 1182.5 | 1144.5 | 1119.2 | 1177.0 | 1410.3 | 1699.6 | 1871.3 | *1847.8* | 1665.2 |
| 30° | 1430.2 | 1426.5 | 1377.7 | 1290.9 | 1227.7 | 1247.5 | 1439.2 | 1752.0 | 2012.3 | *1983.4* | 1770.1 |
| 32.5° | 1683.3 | 1674.2 | 1611.0 | 1493.4 | 1381.3 | 1347.0 | 1497.1 | 1802.6 | 2169.6 | *2119.0* | 1905.7 |
| 35° | 1936.4 | 1934.6 | 1896.6 | 1724.9 | 1573.0 | 1482.6 | 1600.1 | 1880.4 | 2352.3 | *2316.1* | 2052.1 |
| 37.5° | 2138.9 | 2151.6 | 2175.1 | 1945.4 | 1799.0 | 1661.6 | 1737.5 | 2005.1 | 2581.9 | *2556.6* | 2236.5 |
| 40° | 2307.1 | 2328.7 | 2359.5 | 2166.0 | 2008.7 | 1876.7 | 1923.7 | 2209.4 | 2858.5 | *2854.9* | 2457.1 |
| 42.5° | 2451.7 | 2486.0 | 2460.7 | 2350.4 | 2205.8 | 2095.5 | 2128.1 | 2444.5 | 3158.6 | *3174.9* | 2710.2 |
| 45° | 2621.7 | 2643.3 | 2645.2 | 2529.4 | 2395.6 | 2319.7 | 2374.0 | 2712.1 | 3505.8 | *3525.7* | 2979.6 |
| 47.5° | 2807.9 | 2800.6 | 2813.3 | 2728.3 | 2607.2 | 2538.5 | 2636.1 | 2995.9 | 3822.2 | *3892.7* | 3254.5 |
| 50° | 2956.1 | 2981.5 | 3001.3 | 2954.3 | 2842.2 | 2782.6 | 2894.7 | 3288.8 | 4135.0 | *4216.3* | 3514.8 |
| 52.5° | 2972.4 | 2986.9 | 3088.1 | 3133.3 | 3127.9 | 3032.1 | 3162.3 | 3561.8 | 4402.6 | *4529.1* | 3726.4 |
| 55° | 2737.4 | 2838.6 | 3005.0 | 3160.4 | 3364.8 | 3381.0 | 3417.2 | 3822.2 | 4637.6 | *4843.7* | 3907.2 |
| 57.5° | 2249.2 | 2325.1 | 2616.2 | 2986.9 | 3379.2 | 3717.3 | 3858.3 | 4104.2 | 4878.1 | *5104.1* | 4116.9 |
| 60° | 1531.4 | 1500.7 | 1840.6 | 2556.6 | 3162.3 | 3849.3 | 4451.4 | 4596.0 | 5134.8 | *5438.6* | 4342.9 |
| 62.5° | 831.7 | 853.4 | 1063.1 | 1647.1 | 2525.8 | 3661.3 | 4959.4 | 5462.1 | 5597.7 | *5899.6* | 4605.1 |
| 65° | 533.4 | 553.3 | 683.4 | 938.4 | 1479.0 | 2858.5 | 4861.8 | 6203.4 | 6192.5 | *6420.3* | 4813.0 |
| 67.5° | *365.2* | *374.3* | *479.1* | *665.4* | *808.2* | *1574.8* | *3780.6* | *6017.1* | *6442.0* | *6550.5* | *4744.3* |
| 70° | 245.9 | 254.9 | 339.9 | 491.8 | 580.4 | 690.7 | 2252.8 | 4964.9 | 5986.4 | *6055.1* | 4198.3 |
| 72.5° | 155.5 | 164.5 | 206.1 | 329.1 | 437.5 | 390.5 | 1034.2 | 3462.4 | 4981.1 | *5120.4* | 3590.8 |
| 75° | 88.6 | 94.0 | 128.4 | 227.8 | 276.6 | 256.7 | 278.4 | 2167.8 | 3344.9 | *3404.5* | 2390.2 |
| 77.5° | 45.2 | 48.8 | 81.4 | 146.5 | 177.2 | 142.8 | 148.3 | 943.8 | 1168.0 | *1124.6* | 656.3 |
| 80° | 21.7 | 25.3 | 50.6 | 88.6 | 115.7 | 81.4 | 86.8 | 213.3 | 280.2 | *238.7* | 153.7 |
| 82.5° | 10.8 | 10.8 | 32.5 | 36.2 | 63.3 | 48.8 | 38.0 | 74.1 | 104.9 | *106.7* | 70.5 |
| 85° | 7.2 | 5.4 | 9.0 | 12.7 | 14.5 | 19.9 | 21.7 | 30.7 | 34.4 | *36.2* | 27.1 |
| 87.5° | 0.0 | 0.0 | 1.8 | 1.8 | 3.6 | 5.4 | 9.0 | 12.7 | 12.7 | *14.5* | 12.7 |
| 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: P1359587
CATALOG NUMBER: GSS-SB2A-730-U-T2-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 965.5 | 965.5 | 965.5 | 965.5 | 965.5 | 965.5 | 965.5 | 965.5 | 965.5 | 965.5 | 965.5 |
| 2.5° | 976.3 | 970.9 | 936.6 | 907.6 | 882.3 | 864.2 | 840.7 | 835.3 | 820.8 | 811.8 | 813.6 |
| 5° | 992.6 | 967.3 | 904.0 | 849.8 | 790.1 | 730.4 | 678.0 | 659.9 | 623.8 | 611.1 | 614.7 |
| 7.5° | 1012.5 | 981.8 | 878.7 | 772.0 | 669.0 | 593.0 | 518.9 | 473.7 | 437.5 | 423.1 | 421.3 |
| 10° | 1050.5 | 998.0 | 848.0 | 694.3 | 551.5 | 448.4 | 383.3 | 358.0 | 345.3 | 341.7 | 341.7 |
| 12.5° | 1090.2 | 1016.1 | 806.4 | 600.3 | 435.7 | 356.2 | 330.9 | 323.6 | 320.0 | 318.2 | 318.2 |
| 15° | 1130.0 | 1028.8 | 746.7 | 486.4 | 354.4 | 321.8 | 311.0 | 307.4 | 301.9 | 300.1 | 303.7 |
| 17.5° | 1186.1 | 1037.8 | 678.0 | 397.8 | 318.2 | 301.9 | 291.1 | 287.5 | 282.1 | 280.2 | 282.1 |
| 20° | 1234.9 | 1052.3 | 598.5 | 339.9 | 296.5 | 283.9 | 269.4 | 262.2 | 260.4 | 258.5 | 258.5 |
| 22.5° | 1292.7 | 1068.5 | 506.2 | 307.4 | 278.4 | 260.4 | 244.1 | 238.7 | 235.0 | 235.0 | 235.0 |
| 25° | 1374.1 | 1081.2 | 432.1 | 292.9 | 258.5 | 236.9 | 220.6 | 215.2 | 213.3 | 211.5 | 213.3 |
| 27.5° | 1442.8 | 1081.2 | 383.3 | 283.9 | 242.3 | 217.0 | 202.5 | 198.9 | 195.3 | 191.7 | 193.5 |
| 30° | 1507.9 | 1057.7 | 347.1 | 276.6 | 231.4 | 200.7 | 189.8 | 182.6 | 179.0 | 173.6 | 173.6 |
| 32.5° | 1582.0 | 1036.0 | 332.7 | 269.4 | 220.6 | 188.0 | 177.2 | 171.8 | 168.1 | 162.7 | 162.7 |
| 35° | 1661.6 | 998.0 | 330.9 | 264.0 | 209.7 | 179.0 | 168.1 | 164.5 | 159.1 | 155.5 | 155.5 |
| 37.5° | 1773.7 | 974.5 | 327.3 | 256.7 | 200.7 | 170.0 | 159.1 | 157.3 | 153.7 | 150.1 | 151.9 |
| 40° | 1923.7 | 972.7 | 320.0 | 251.3 | 193.5 | 160.9 | 151.9 | 148.3 | 148.3 | 144.6 | 144.6 |
| 42.5° | 2068.4 | 980.0 | 320.0 | 240.5 | 186.2 | 151.9 | 144.6 | 142.8 | 139.2 | 133.8 | 133.8 |
| 45° | 2245.6 | 1007.1 | 323.6 | 229.6 | 179.0 | 146.5 | 139.2 | 135.6 | 132.0 | 128.4 | 128.4 |
| 47.5° | 2410.1 | 1041.4 | 327.3 | 218.8 | 171.8 | 141.0 | 135.6 | 133.8 | 128.4 | 124.8 | 126.6 |
| 50° | 2549.3 | 1083.0 | 318.2 | 207.9 | 160.9 | 139.2 | 132.0 | 130.2 | 122.9 | 121.1 | 122.9 |
| 52.5° | 2674.1 | 1108.3 | 291.1 | 197.1 | 150.1 | 135.6 | 128.4 | 126.6 | 119.3 | 117.5 | 115.7 |
| 55° | 2769.9 | 1117.4 | 260.4 | 180.8 | 141.0 | 130.2 | 122.9 | 119.3 | 113.9 | 110.3 | 108.5 |
| 57.5° | 2863.9 | 1081.2 | 220.6 | 159.1 | 130.2 | 121.1 | 115.7 | 112.1 | 104.9 | 97.6 | 95.8 |
| 60° | 2972.4 | 1036.0 | 184.4 | 132.0 | 117.5 | 112.1 | 106.7 | 103.1 | 94.0 | 81.4 | 81.4 |
| 62.5° | 3099.0 | 1014.3 | 146.5 | 108.5 | 103.1 | 97.6 | 97.6 | 94.0 | 79.6 | 66.9 | 65.1 |
| 65° | 3193.0 | 884.1 | 112.1 | 90.4 | 88.6 | 83.2 | 85.0 | 83.2 | 66.9 | 50.6 | 48.8 |
| 67.5° | *3080.9* | *632.8* | *86.8* | *75.9* | *74.1* | *66.9* | *72.3* | *70.5* | *57.9* | *43.4* | *39.8* |
| 70° | 2630.7 | 412.2 | 70.5 | 63.3 | 59.7 | 50.6 | 59.7 | 61.5 | 48.8 | 34.4 | 32.5 |
| 72.5° | 2238.3 | 264.0 | 56.0 | 50.6 | 41.6 | 36.2 | 47.0 | 52.4 | 39.8 | 27.1 | 25.3 |
| 75° | 1549.5 | 166.3 | 41.6 | 38.0 | 28.9 | 25.3 | 38.0 | 41.6 | 32.5 | 18.1 | 18.1 |
| 77.5° | 511.7 | 83.2 | 30.7 | 25.3 | 19.9 | 18.1 | 28.9 | 30.7 | 21.7 | 12.7 | 10.8 |
| 80° | 97.6 | 39.8 | 21.7 | 16.3 | 14.5 | 10.8 | 18.1 | 16.3 | 9.0 | 7.2 | 7.2 |
| 82.5° | 47.0 | 23.5 | 16.3 | 12.7 | 7.2 | 7.2 | 5.4 | 7.2 | 7.2 | 5.4 | 5.4 |
| 85° | 21.7 | 14.5 | 10.8 | 7.2 | 5.4 | 3.6 | 3.6 | 5.4 | 5.4 | 5.4 | 3.6 |
| 87.5° | 12.7 | 10.8 | 7.2 | 5.4 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 1.8 |
| 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

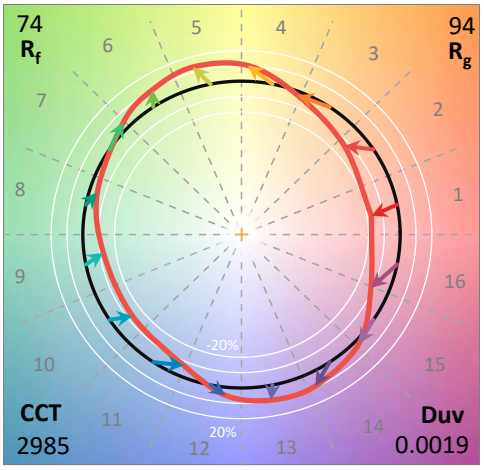
## Test Information

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

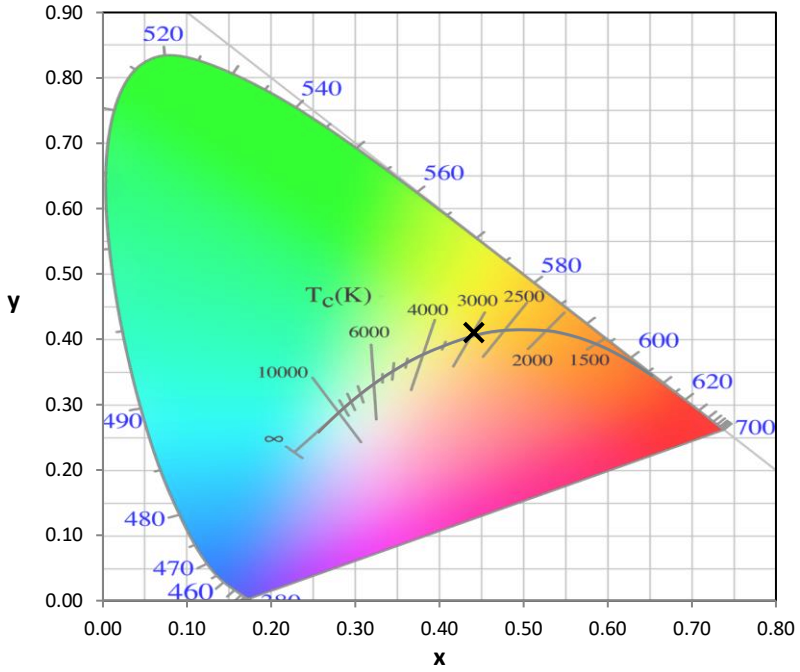
| | |
|---|---|
| Stabilization Time: | 36M |
| Operation Time: | 1H 36M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-4

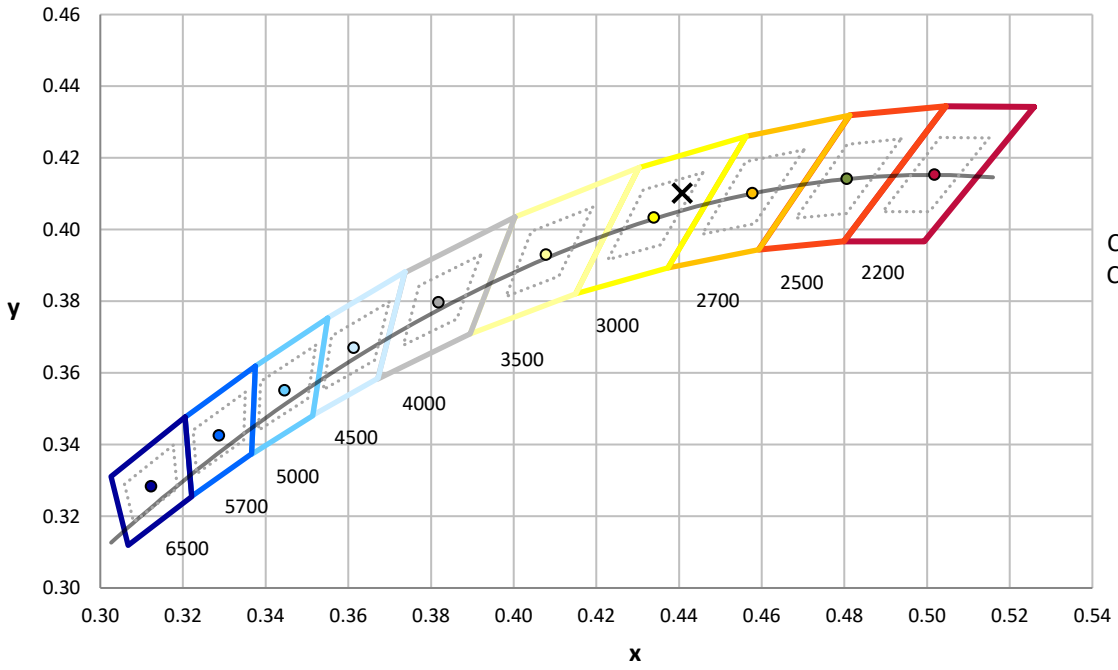
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

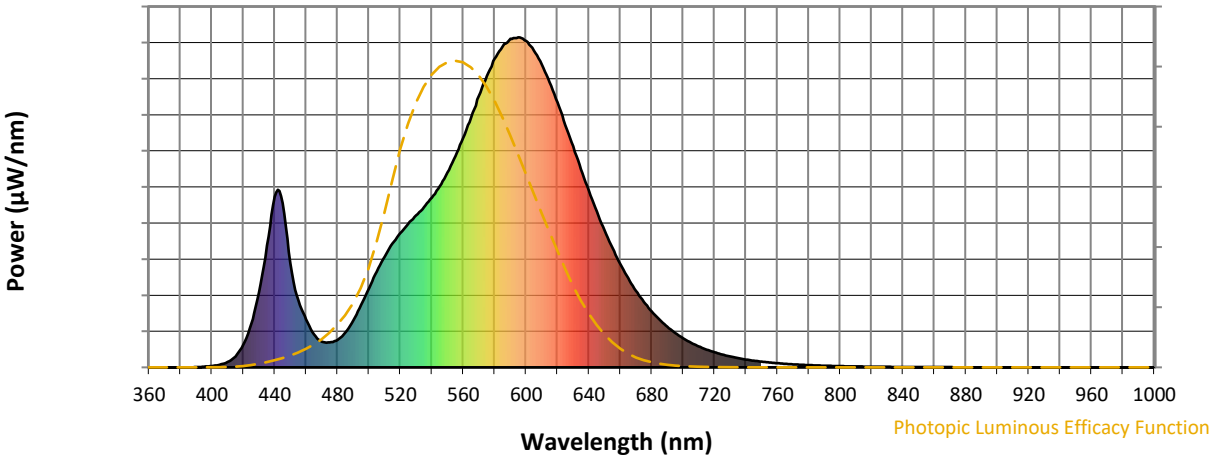



CCT = 2985K
CIE x = 0.4408
CIE y = 0.4101
Duv = 0.0019

Point lies inside the ANSI 3000K 4-step quadrangle

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## Photopic Flux vs. Wavelength

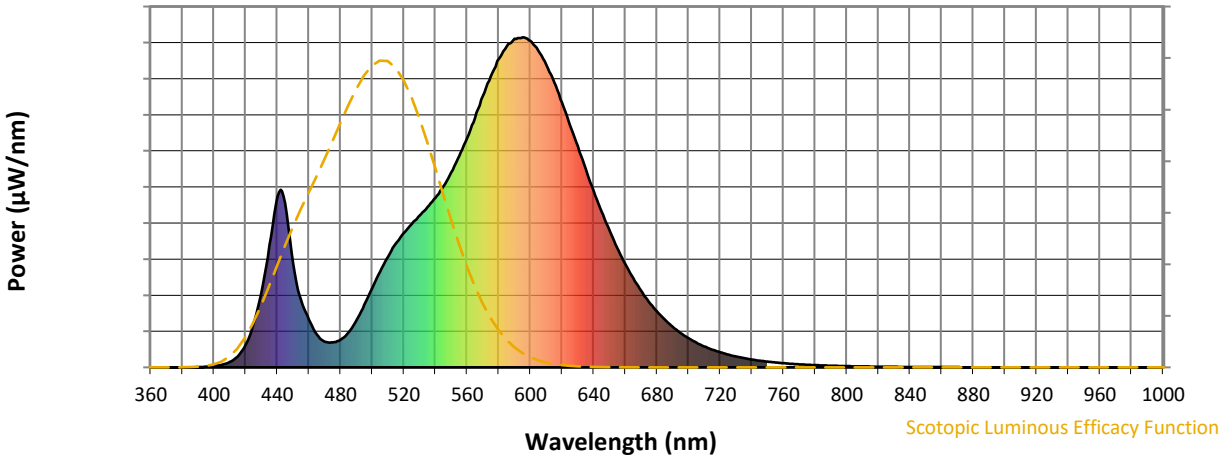



## Photopic Lumens: NR

| 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

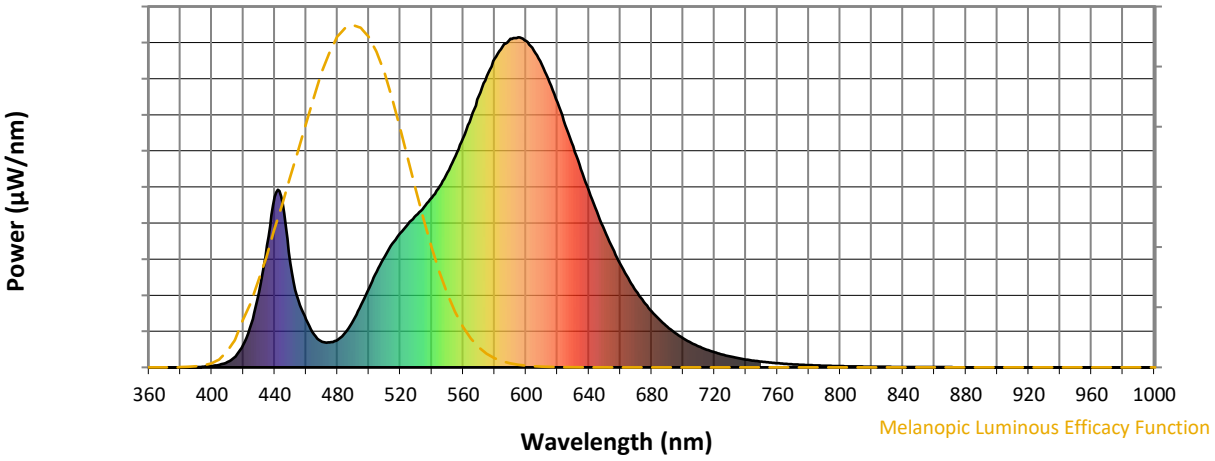



**Scotopic Lumens: NR** **S/P: 1.19**

| 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 | | | |

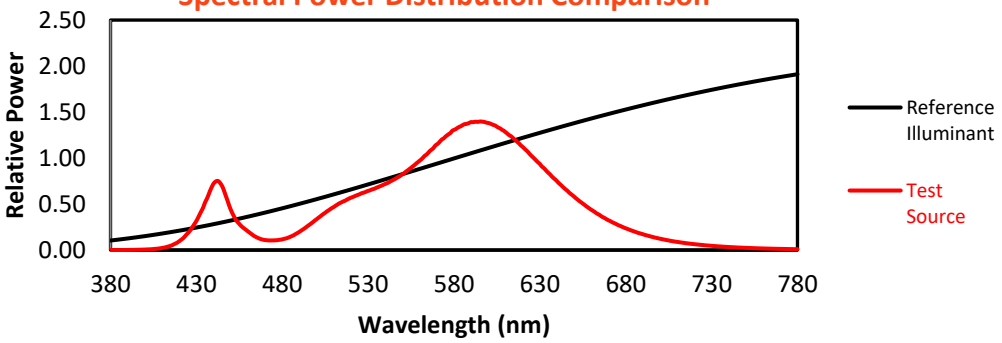
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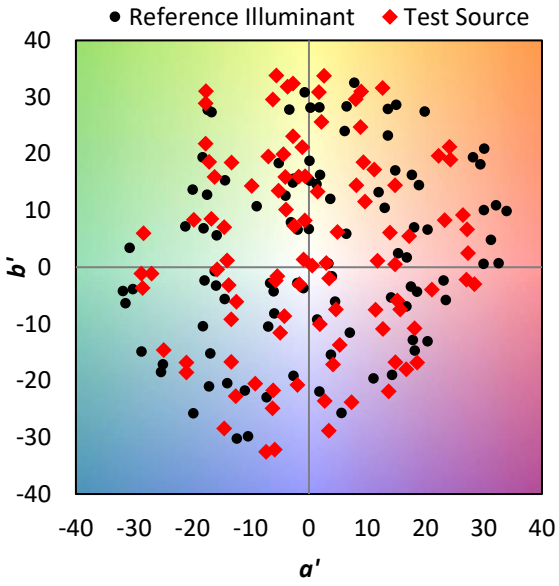
## Summary

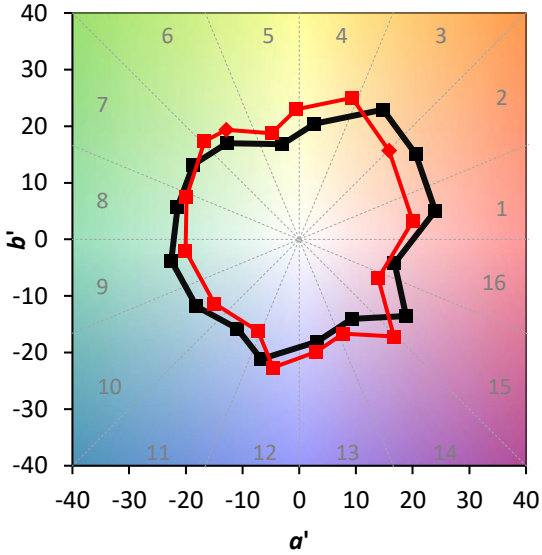
$R_f$ = 73.8
$R_g$ = 94.4
CIE $R_a$ = 70.8
$R_9$ = -43.2

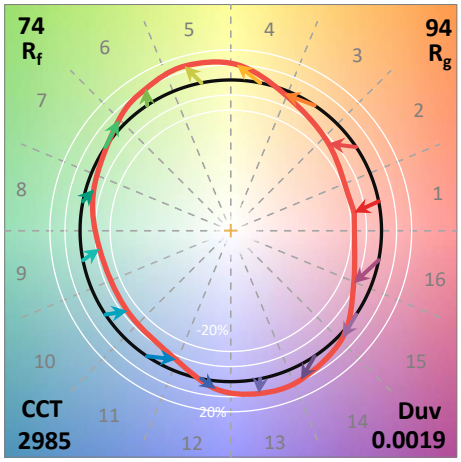
## Spectral Power Distribution Comparison

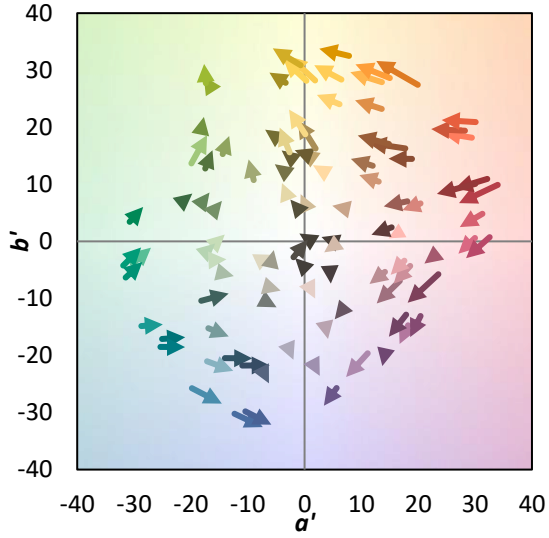



## Color Vector Graphics



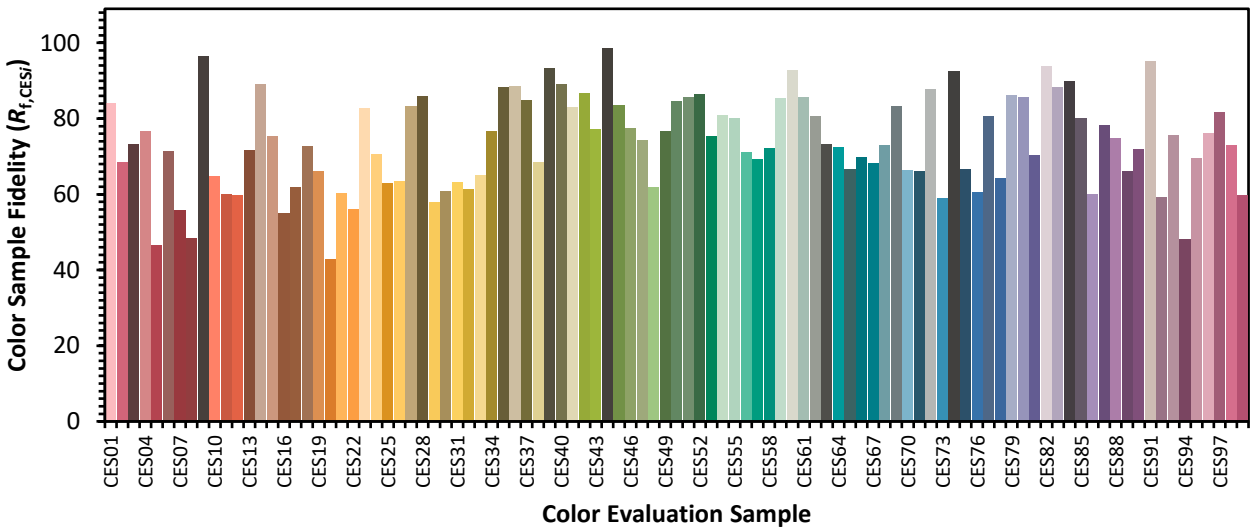



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**Individual Sample Fidelity Index ($R_{f,i}$)**

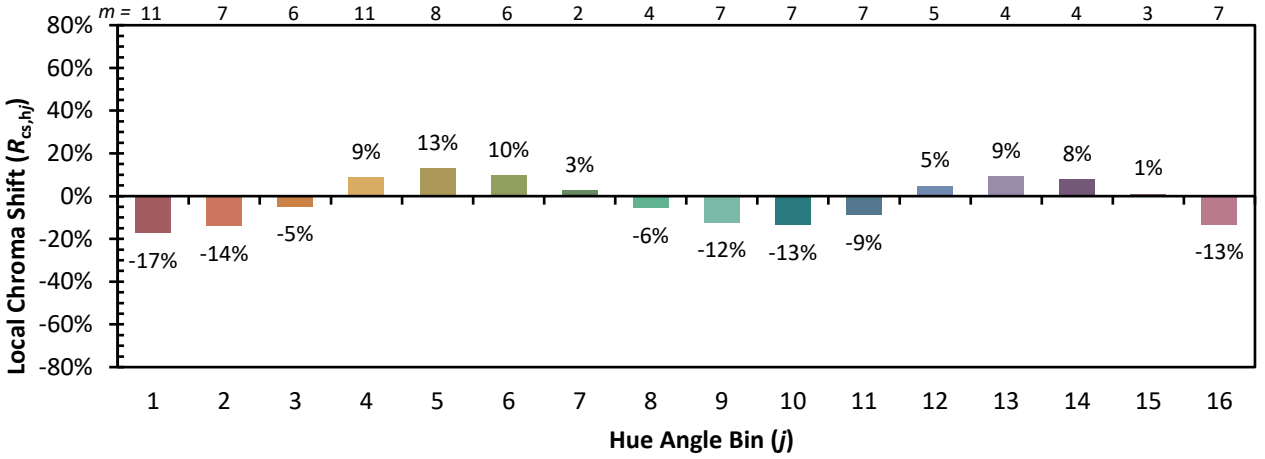
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 63 | CES51 = 86 | CES76 = 61 |
| CES02 = 62 | CES27 = 83 | CES52 = 86 | CES77 = 81 |
| CES03 = 31 | CES28 = 86 | CES53 = 75 | CES78 = 64 |
| CES04 = 71 | CES29 = 58 | CES54 = 81 | CES79 = 86 |
| CES05 = 49 | CES30 = 61 | CES55 = 80 | CES80 = 86 |
| CES06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

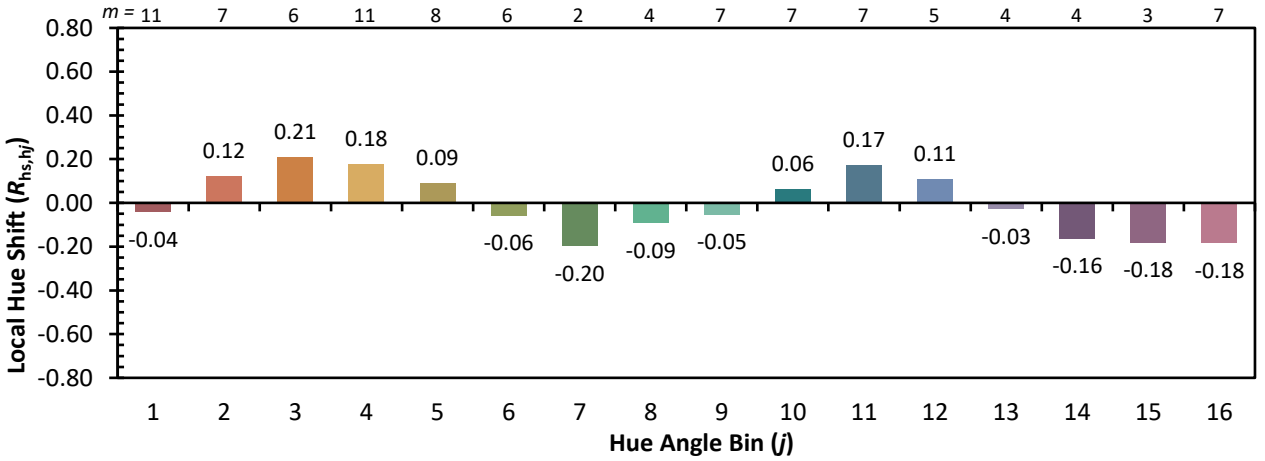


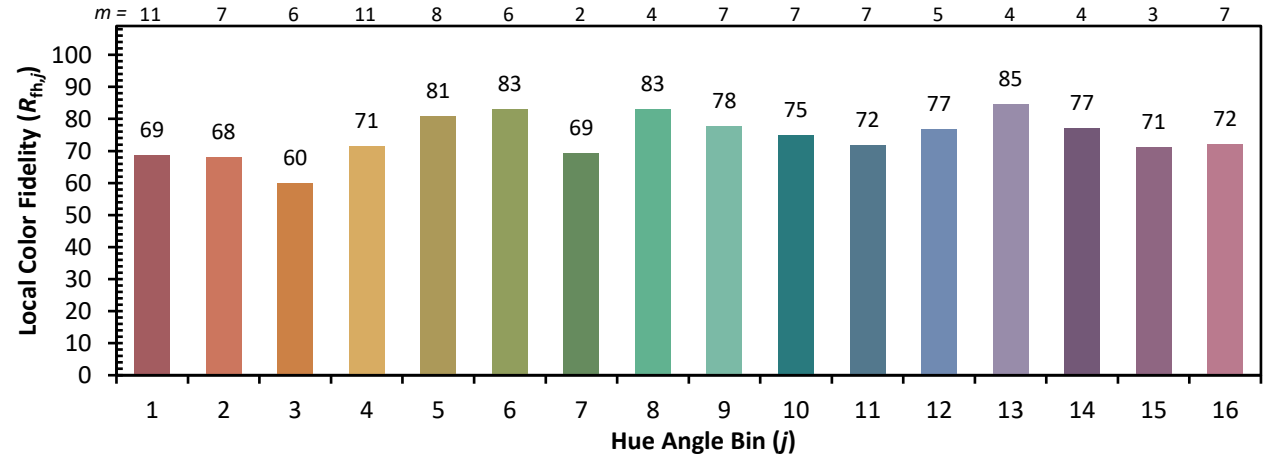
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## Color Rendition by Hue-Angle Bin



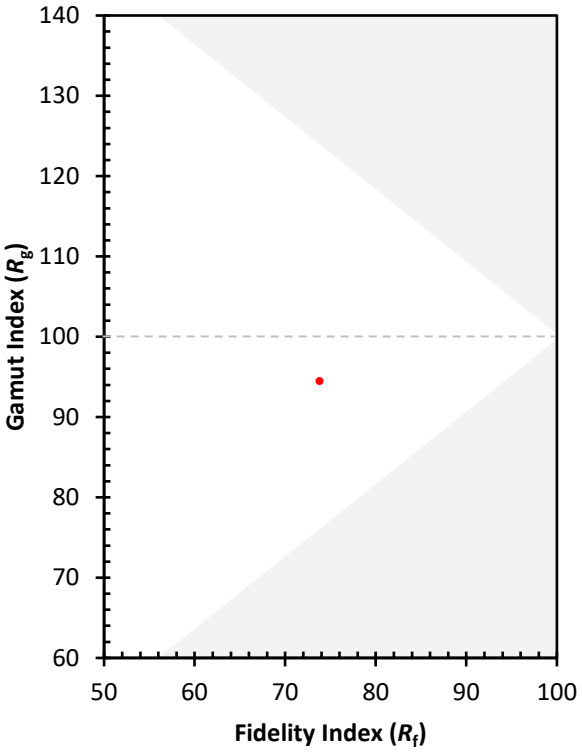



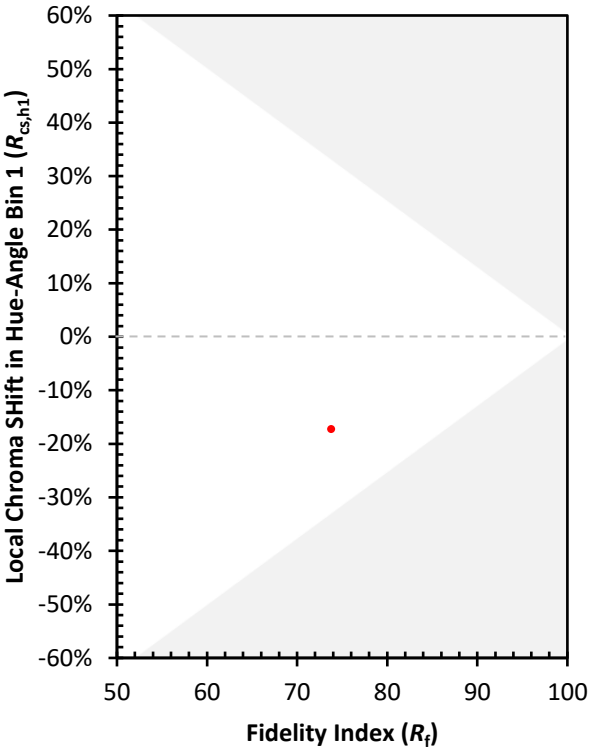



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## Measure Comparisons




(END OF REPORT)