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

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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: P1458173

Luminaire Tested: GLAN-SB2C-730-U-T3LG-HSS

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: | P1458173 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 5/21/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | STREETWORKS |
| Catalog Number: | GLAN-SB2C-730-U-T3LG-HSS |
| Description: | GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 615mA 2xLight Square PACKAGE 70CRI 3000K FIXTURE w/ TYPE III LOW GLARE WITH HOUSE SIDE SHIELD |
| Light Source: | (52) 3000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 11444.2 lumens |
| Efficiency: | N/A |
| Efficacy: | 113.4 lumens/watt |
| Luminous Opening: | Rectangular (W 1' x L: 1' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B1 - U0 - G2 |

| | |
|---|---|
| Input Watts (W): | 100.9 |
| 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: P1458173
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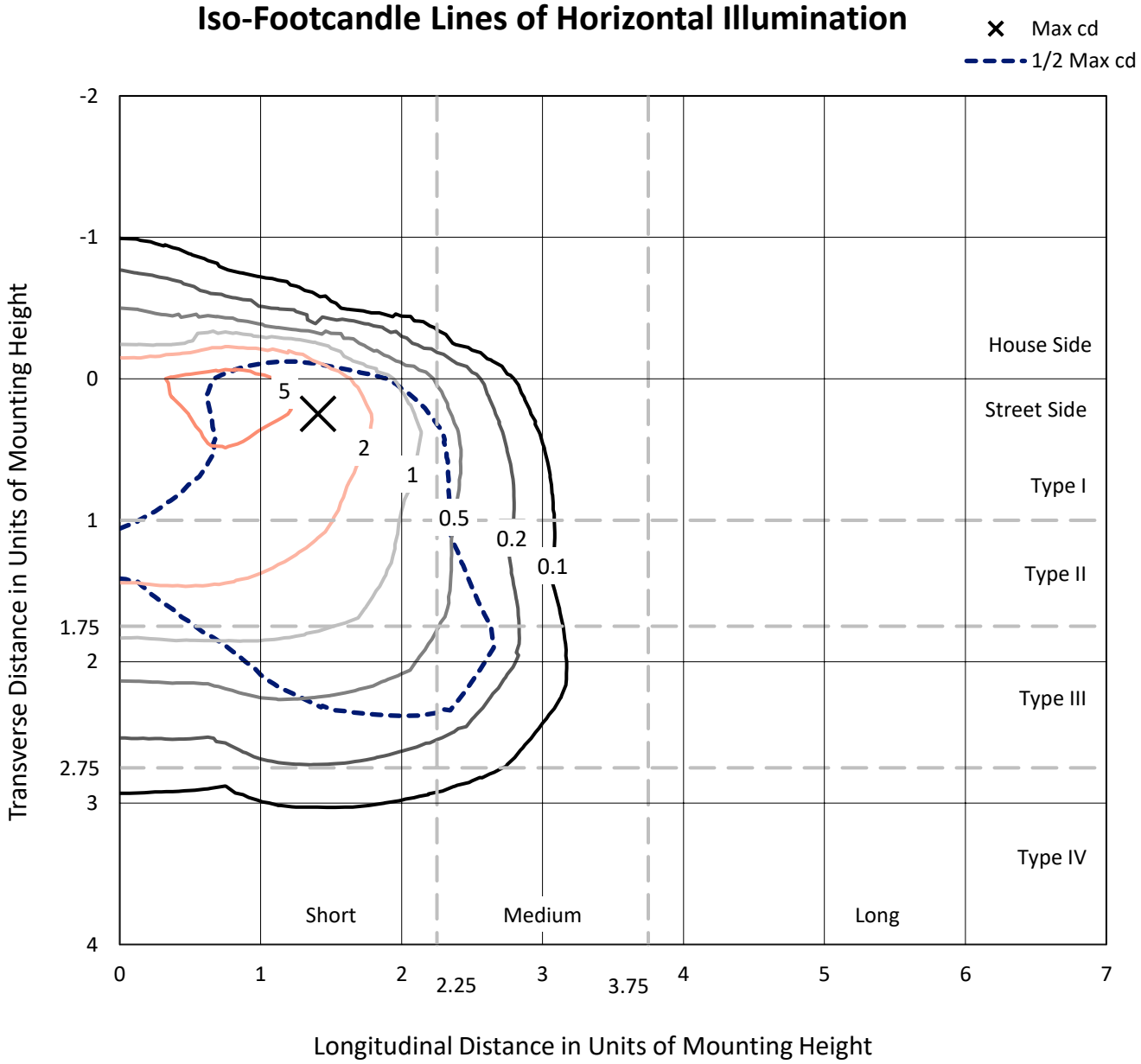
## Iso-Footcandle Lines of Horizontal Illumination




Based on 20 foot mounting height. Maximum calculated value = 7.1 fc
Type III - Short - N/A

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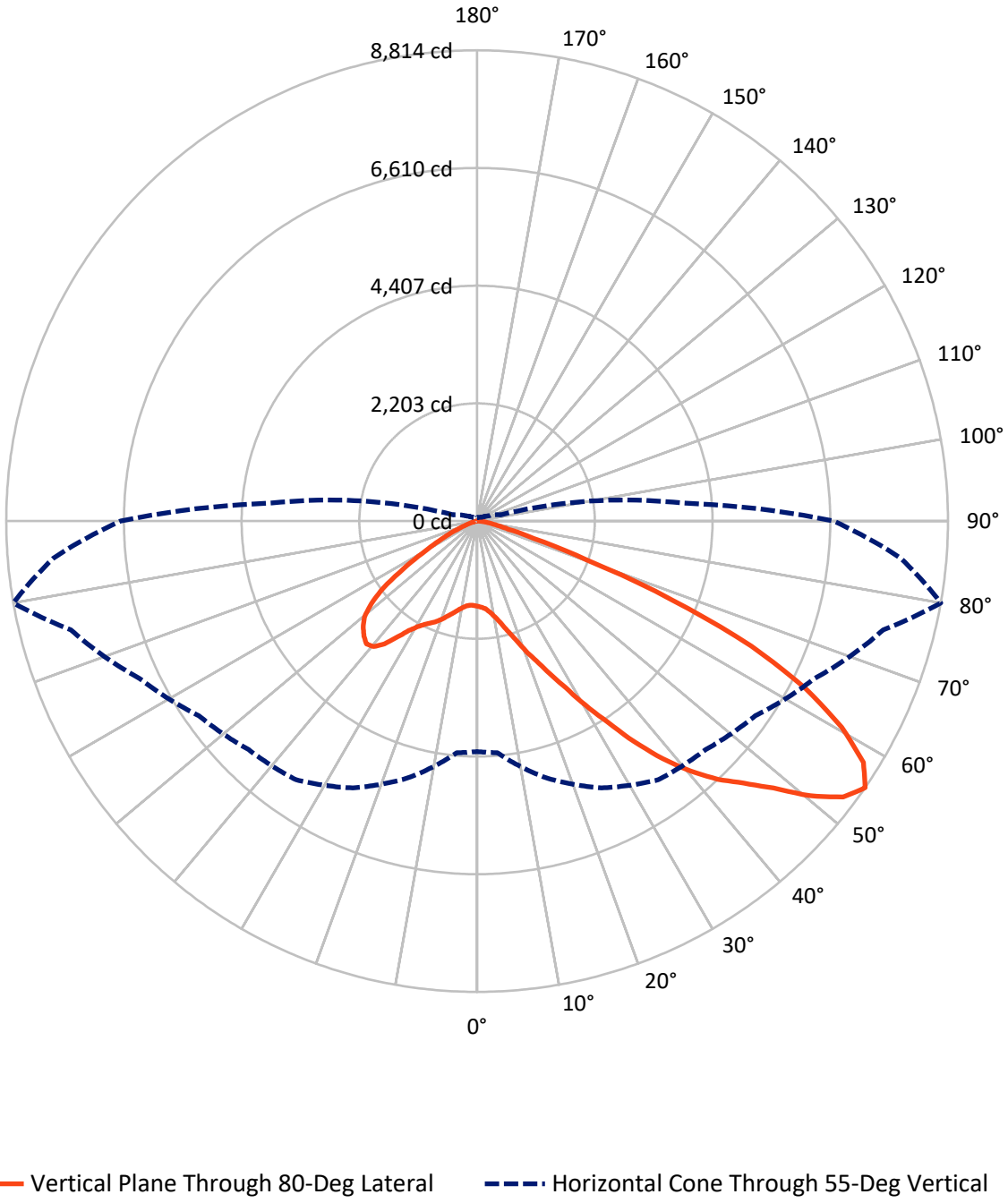
## Luminous Intensity Polar Plot



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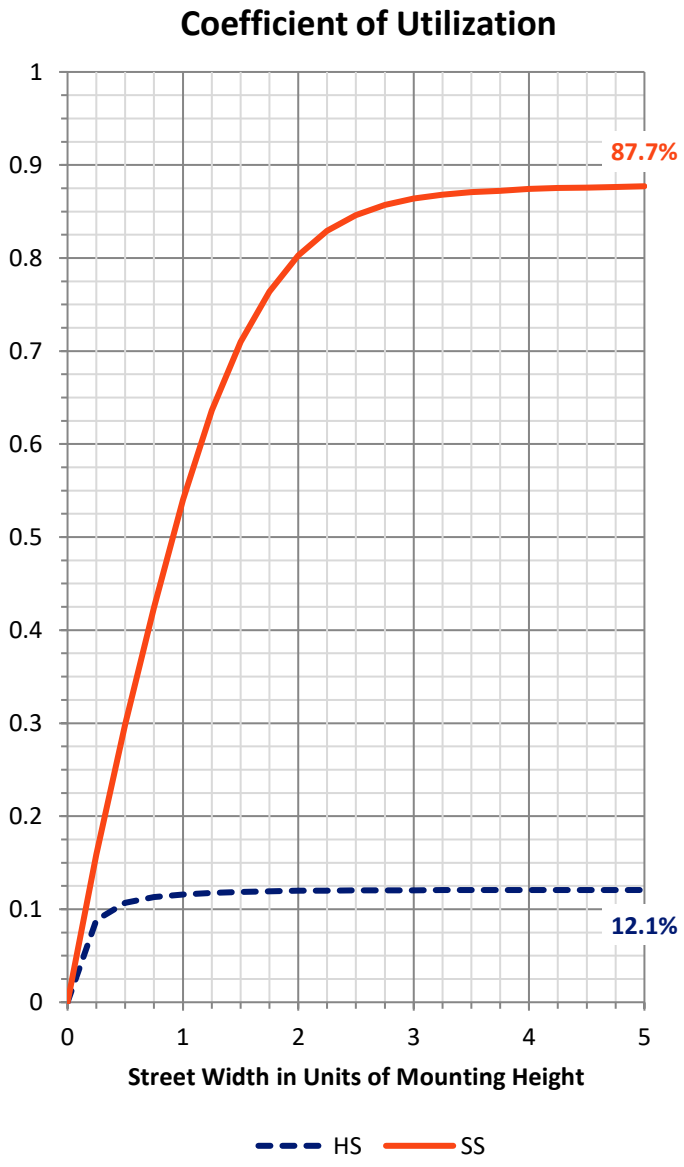
CATALOG NUMBER: GLAN-SB2C-730-U-T3LG-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 1391.2 | 0.0 | 1391.2 |
| | % Fixture | 12.2 | 0.0 | 12.2 |
| **Street Side** | Lumens | 10053.1 | 0.0 | 10053.1 |
| | % Fixture | 87.8 | 0.0 | 87.8 |
| **Total** | Lumens | 11444.2 | 0.0 | 11444.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 133.8 | 1.2 |
| 10°-20° | 352.7 | 3.1 |
| 20°-30° | 690.5 | 6.0 |
| 30°-40° | 1404.7 | 12.3 |
| 40°-50° | 2368.2 | 20.7 |
| 50°-60° | 3025.8 | 26.4 |
| 60°-70° | 2583.3 | 22.6 |
| 70°-80° | 825.5 | 7.2 |
| 80°-90° | 59.6 | 0.5 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-90° | 11444.2 | 100.0 |
| 0°-180° | 11444.2 | 100.0 |



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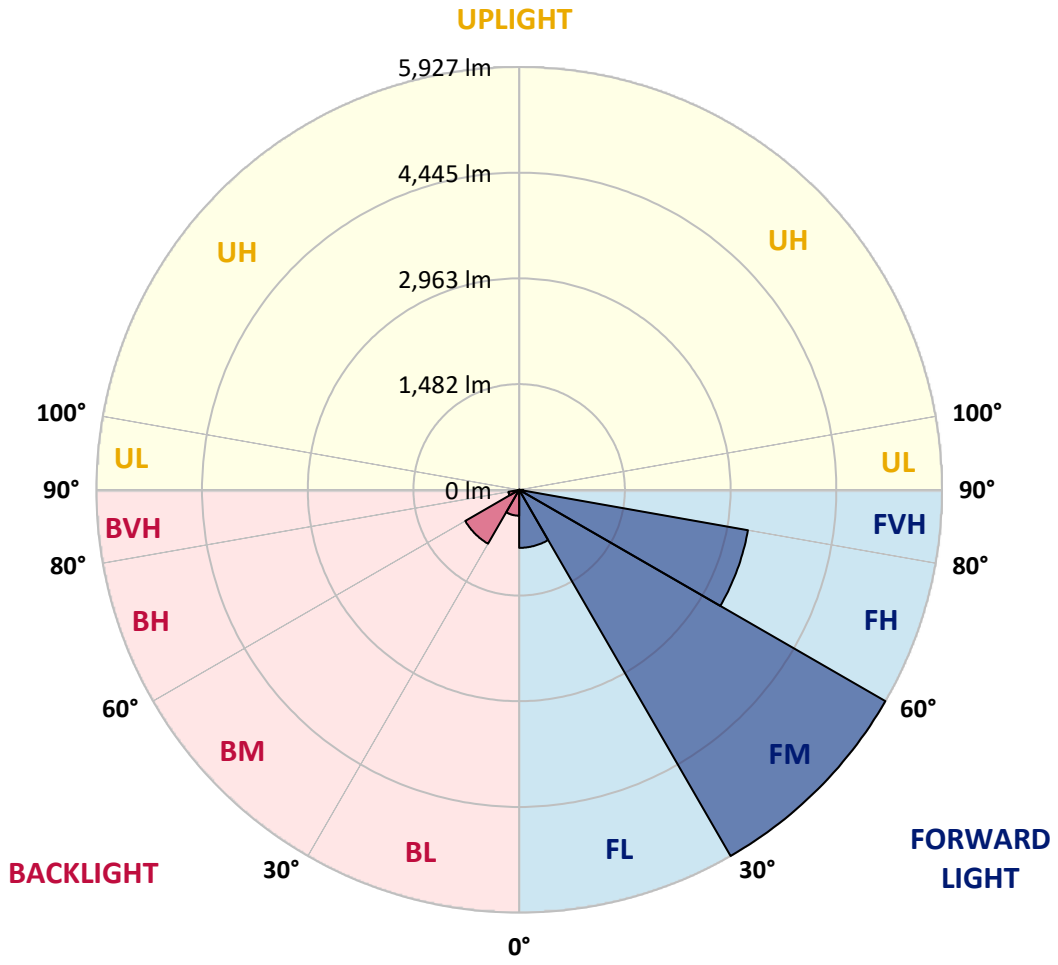
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 813.7 | 7.1 | | | |
| FM | (30°-60°) | 5926.9 | 51.8 | | | |
| FH | (60°-80°) | 3256.0 | 28.5 | | | G2/5000 |
| FVH | (80°-90°) | 56.5 | 0.5 | | | G1/100 |
| BL | (0°-30°) | 363.3 | 3.2 | B1/500 | | |
| BM | (30°-60°) | 871.9 | 7.6 | B1/1000 | | |
| BH | (60°-80°) | 152.9 | 1.3 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 3.1 | 0.0 | | | 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 Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 80° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1594.2 | 1594.2 | 1594.2 | 1594.2 | 1594.2 | 1594.2 | 1594.2 | 1594.2 | 1594.2 | *1594.2* | 1594.2 |
| 2.5° | 1603.9 | 1607.2 | 1603.9 | 1607.2 | 1613.7 | 1610.4 | 1623.4 | 1620.2 | 1620.2 | *1616.9* | 1603.9 |
| 5° | 1512.8 | 1516.1 | 1522.6 | 1538.9 | 1561.6 | 1584.4 | 1613.7 | 1633.2 | 1652.7 | *1649.5* | 1636.5 |
| 7.5° | 1333.9 | 1340.4 | 1366.4 | 1399.0 | 1473.8 | 1542.1 | 1616.9 | 1665.7 | 1708.0 | *1721.0* | 1711.3 |
| 10° | 1233.0 | 1239.5 | 1255.8 | 1288.3 | 1356.7 | 1470.5 | 1616.9 | 1717.8 | 1792.6 | *1818.7* | 1821.9 |
| 12.5° | 1223.3 | 1226.5 | 1239.5 | 1275.3 | 1333.9 | 1431.5 | 1613.7 | 1786.1 | 1913.0 | *1952.0* | 1965.1 |
| 15° | 1229.8 | 1236.3 | 1249.3 | 1278.6 | 1346.9 | 1457.5 | 1639.7 | 1893.5 | 2072.4 | *2127.7* | 2131.0 |
| 17.5° | 1255.8 | 1262.3 | 1278.6 | 1311.1 | 1385.9 | 1525.8 | 1721.0 | 2004.1 | 2264.4 | *2326.2* | 2362.0 |
| 20° | 1307.9 | 1311.1 | 1330.6 | 1372.9 | 1457.5 | 1610.4 | 1841.4 | 2153.8 | 2495.4 | *2586.5* | 2612.5 |
| 22.5° | 1376.2 | 1385.9 | 1412.0 | 1464.0 | 1571.4 | 1727.6 | 2007.3 | 2335.9 | 2749.1 | *2843.5* | 2889.0 |
| 25° | 1451.0 | 1464.0 | 1503.1 | 1587.7 | 1724.3 | 1906.5 | 2212.3 | 2576.7 | 3048.4 | *3162.3* | 3224.1 |
| 27.5° | 1603.9 | 1607.2 | 1633.2 | 1740.6 | 1916.3 | 2140.7 | 2472.6 | 2885.8 | 3399.8 | *3533.2* | 3601.5 |
| 30° | 1939.0 | 1942.3 | 1919.5 | 1948.8 | 2127.7 | 2417.3 | 2778.4 | 3246.9 | 3809.7 | *3995.2* | 4050.5 |
| 32.5° | 2349.0 | 2365.2 | 2362.0 | 2342.4 | 2423.8 | 2693.8 | 3142.8 | 3679.6 | 4291.2 | *4486.4* | 4538.5 |
| 35° | 2814.2 | 2853.2 | 2843.5 | 2837.0 | 2846.7 | 3048.4 | 3559.2 | 4157.8 | 4837.8 | *5075.3* | 5117.6 |
| 37.5° | 3269.7 | 3279.4 | 3325.0 | 3380.3 | 3386.8 | 3526.7 | 4040.7 | 4665.4 | 5345.3 | *5647.9* | 5713.0 |
| 40° | 3621.0 | 3653.6 | 3767.4 | 3878.1 | 3991.9 | 4102.5 | 4437.6 | 5075.3 | 5748.8 | *6155.4* | 6184.7 |
| 42.5° | 3894.3 | 3972.4 | 4138.3 | 4310.8 | 4541.7 | 4665.4 | 4815.0 | 5364.9 | 6077.4 | *6607.7* | 6594.6 |
| 45° | 4226.2 | 4258.7 | 4492.9 | 4720.7 | 4954.9 | 5143.6 | 5140.4 | 5608.9 | 6334.4 | *6994.8* | 6913.5 |
| 47.5° | 4450.7 | 4489.7 | 4808.5 | 5075.3 | 5316.1 | 5410.4 | 5429.9 | 5872.4 | 6689.0 | *7463.3* | 7271.4 |
| 50° | 4571.0 | 4639.4 | 4987.5 | 5325.8 | 5586.1 | 5615.4 | 5703.2 | 6217.2 | 7154.2 | *8084.7* | 7723.6 |
| 52.5° | 4584.0 | 4649.1 | 5049.3 | 5485.2 | 5768.3 | 5826.8 | 5976.5 | 6607.7 | 7606.5 | *8582.5* | 7983.8 |
| 55° | *4314.0* | *4353.1* | *4974.5* | *5511.3* | *5911.4* | *6048.1* | *6353.9* | *6968.8* | *7870.0* | *8813.5* | *7961.1* |
| 57.5° | 4060.2 | 4099.3 | 4639.4 | 5465.7 | 6057.8 | 6337.6 | 6757.3 | 7216.0 | 7665.0 | *8527.2* | 7453.5 |
| 60° | 3842.3 | 3861.8 | 4353.1 | 5254.2 | 6113.1 | 6620.7 | 7105.4 | 6972.0 | 7134.7 | *7840.7* | 6584.9 |
| 62.5° | 3432.3 | 3445.4 | 4027.7 | 4873.6 | 6002.5 | 6838.6 | 7225.8 | 6454.7 | 6552.4 | *6894.0* | 5563.3 |
| 65° | 2593.0 | 2641.8 | 3175.3 | 4587.3 | 5820.3 | 6939.5 | 6946.0 | 5823.6 | 5722.7 | *5641.4* | 4375.8 |
| 67.5° | 1760.1 | 1815.4 | 2137.5 | 4125.3 | 5524.3 | 6981.8 | 6402.7 | 5007.0 | 4359.6 | *3939.9* | 2866.2 |
| 70° | 1405.5 | 1405.5 | 1516.1 | 3315.2 | 4821.5 | 6441.7 | 5729.2 | 3780.5 | 2768.6 | *2176.5* | 1535.6 |
| 72.5° | 924.0 | 927.2 | 1031.3 | 2105.0 | 3419.3 | 4912.6 | 4671.9 | 2186.3 | 1438.0 | *1109.4* | 758.0 |
| 75° | 335.1 | 335.1 | 452.2 | 842.6 | 1808.9 | 2924.8 | 2846.7 | 1044.3 | 780.8 | *605.1* | 458.7 |
| 77.5° | 178.9 | 185.4 | 218.0 | 348.1 | 693.0 | 1190.7 | 1112.7 | 533.6 | 442.5 | *377.4* | 286.3 |
| 80° | 120.4 | 123.6 | 146.4 | 214.7 | 335.1 | 458.7 | 357.9 | 299.3 | 299.3 | *253.8* | 192.0 |
| 82.5° | 65.1 | 68.3 | 97.6 | 139.9 | 178.9 | 214.7 | 172.4 | 175.7 | 211.5 | *172.4* | 110.6 |
| 85° | 45.5 | 45.5 | 74.8 | 100.9 | 100.9 | 104.1 | 74.8 | 110.6 | 123.6 | *107.4* | 74.8 |
| 87.5° | 26.0 | 26.0 | 42.3 | 48.8 | 48.8 | 45.5 | 22.8 | 39.0 | 48.8 | *55.3* | 32.5 |
| 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: P1458173
CATALOG NUMBER: GLAN-SB2C-730-U-T3LG-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1594.2 | 1594.2 | 1594.2 | 1594.2 | 1594.2 | 1594.2 | 1594.2 | 1594.2 | 1594.2 | 1594.2 | 1594.2 |
| 2.5° | 1600.7 | 1590.9 | 1571.4 | 1532.4 | 1512.8 | 1486.8 | 1464.0 | 1434.7 | 1428.2 | 1425.0 | 1412.0 |
| 5° | 1626.7 | 1607.2 | 1548.6 | 1464.0 | 1392.5 | 1324.1 | 1255.8 | 1216.8 | 1184.2 | 1168.0 | 1164.7 |
| 7.5° | 1691.8 | 1652.7 | 1545.4 | 1395.7 | 1262.3 | 1145.2 | 1044.3 | 956.5 | 911.0 | 871.9 | 875.2 |
| 10° | 1789.4 | 1727.6 | 1551.9 | 1330.6 | 1132.2 | 943.5 | 797.1 | 670.2 | 579.1 | 536.8 | 533.6 |
| 12.5° | 1919.5 | 1831.7 | 1574.6 | 1265.6 | 972.8 | 709.2 | 523.8 | 449.0 | 429.4 | 426.2 | 422.9 |
| 15° | 2078.9 | 1955.3 | 1597.4 | 1181.0 | 758.0 | 491.3 | 426.2 | 409.9 | 406.7 | 403.4 | 403.4 |
| 17.5° | 2270.9 | 2098.4 | 1610.4 | 1037.8 | 553.1 | 422.9 | 400.2 | 390.4 | 387.2 | 383.9 | 383.9 |
| 20° | 2511.6 | 2257.9 | 1626.7 | 855.6 | 468.5 | 406.7 | 380.6 | 367.6 | 364.4 | 364.4 | 361.1 |
| 22.5° | 2749.1 | 2436.8 | 1613.7 | 696.2 | 452.2 | 387.2 | 357.9 | 344.9 | 338.4 | 338.4 | 335.1 |
| 25° | 3022.4 | 2619.0 | 1574.6 | 627.9 | 449.0 | 370.9 | 335.1 | 315.6 | 305.8 | 302.6 | 302.6 |
| 27.5° | 3334.7 | 2827.2 | 1512.8 | 631.2 | 449.0 | 357.9 | 305.8 | 279.8 | 273.3 | 266.8 | 266.8 |
| 30° | 3692.6 | 3081.0 | 1467.3 | 673.5 | 455.5 | 344.9 | 279.8 | 247.3 | 237.5 | 231.0 | 234.2 |
| 32.5° | 4102.5 | 3364.0 | 1464.0 | 741.8 | 465.2 | 325.3 | 250.5 | 214.7 | 205.0 | 201.7 | 205.0 |
| 35° | 4567.8 | 3715.4 | 1538.9 | 793.8 | 439.2 | 283.0 | 214.7 | 185.4 | 175.7 | 175.7 | 178.9 |
| 37.5° | 5085.1 | 4118.8 | 1639.7 | 780.8 | 354.6 | 224.5 | 185.4 | 162.7 | 152.9 | 156.2 | 159.4 |
| 40° | 5556.8 | 4434.4 | 1656.0 | 666.9 | 266.8 | 192.0 | 159.4 | 143.1 | 136.6 | 139.9 | 143.1 |
| 42.5° | 5914.7 | 4688.2 | 1499.8 | 517.3 | 224.5 | 162.7 | 136.6 | 123.6 | 120.4 | 126.9 | 126.9 |
| 45° | 6204.2 | 4789.0 | 1252.6 | 383.9 | 198.5 | 139.9 | 120.4 | 113.9 | 107.4 | 110.6 | 110.6 |
| 47.5° | 6506.8 | 4805.3 | 1021.6 | 309.1 | 175.7 | 126.9 | 110.6 | 104.1 | 97.6 | 97.6 | 97.6 |
| 50° | 6799.6 | 4766.2 | 780.8 | 273.3 | 162.7 | 113.9 | 100.9 | 94.3 | 87.8 | 84.6 | 84.6 |
| 52.5° | 6871.2 | 4453.9 | 572.6 | 253.8 | 149.7 | 107.4 | 94.3 | 87.8 | 81.3 | 78.1 | 78.1 |
| 55° | *6672.7* | *3861.8* | *449.0* | *227.7* | *136.6* | *97.6* | *87.8* | *81.3* | *71.6* | *68.3* | *68.3* |
| 57.5° | 6018.8 | 2944.3 | 357.9 | 195.2 | 123.6 | 94.3 | 81.3 | 74.8 | 65.1 | 61.8 | 61.8 |
| 60° | 5169.7 | 2088.7 | 289.6 | 159.4 | 113.9 | 84.6 | 74.8 | 65.1 | 58.6 | 52.1 | 52.1 |
| 62.5° | 4229.4 | 1499.8 | 234.2 | 133.4 | 107.4 | 74.8 | 68.3 | 58.6 | 45.5 | 35.8 | 35.8 |
| 65° | 3243.6 | 1076.9 | 182.2 | 107.4 | 97.6 | 65.1 | 58.6 | 48.8 | 35.8 | 26.0 | 26.0 |
| 67.5° | 2098.4 | 696.2 | 136.6 | 94.3 | 74.8 | 55.3 | 45.5 | 39.0 | 32.5 | 22.8 | 19.5 |
| 70° | 1106.2 | 406.7 | 100.9 | 81.3 | 55.3 | 42.3 | 39.0 | 32.5 | 26.0 | 16.3 | 16.3 |
| 72.5° | 572.6 | 266.8 | 74.8 | 71.6 | 42.3 | 29.3 | 32.5 | 26.0 | 19.5 | 9.8 | 9.8 |
| 75° | 367.6 | 178.9 | 55.3 | 58.6 | 26.0 | 22.8 | 22.8 | 16.3 | 9.8 | 6.5 | 3.3 |
| 77.5° | 237.5 | 120.4 | 39.0 | 48.8 | 16.3 | 13.0 | 13.0 | 6.5 | 3.3 | 0.0 | 0.0 |
| 80° | 139.9 | 74.8 | 26.0 | 32.5 | 6.5 | 6.5 | 3.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 71.6 | 39.0 | 13.0 | 13.0 | 3.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 45.5 | 19.5 | 3.3 | 3.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 22.8 | 6.5 | 3.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 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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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

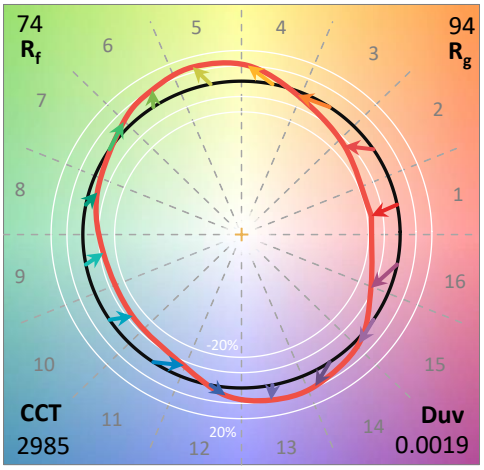
## Test Information

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

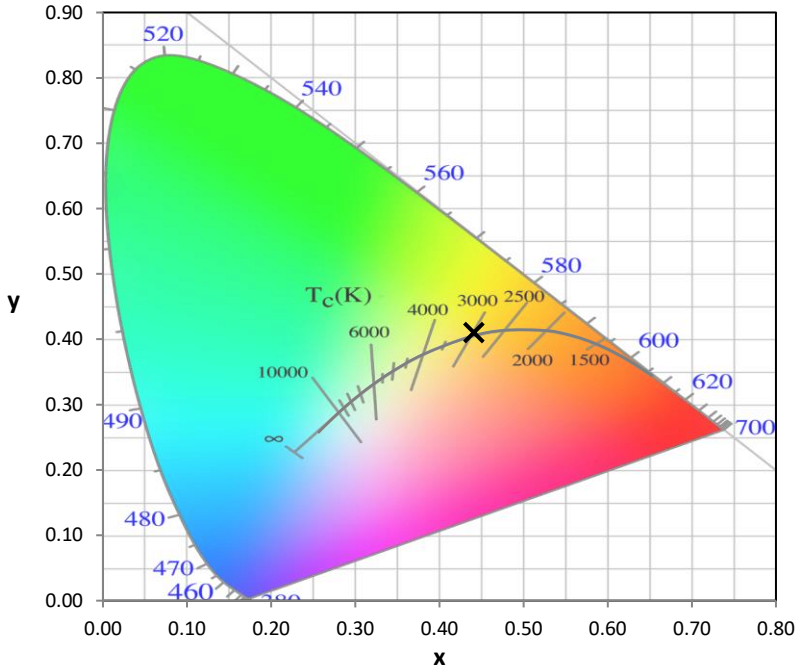
| | |
|---|---|
| Stabilization Time: | 36M |
| Operation Time: | 1H 36M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-4

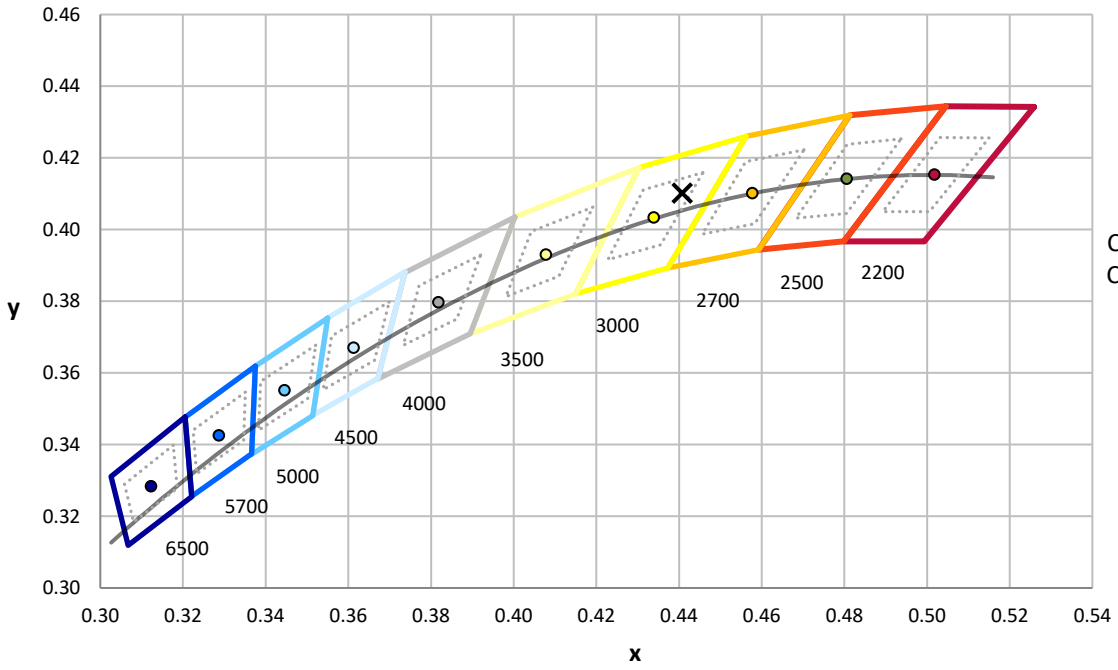
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

REPORT NUMBER: SP1-2407-184-4

## 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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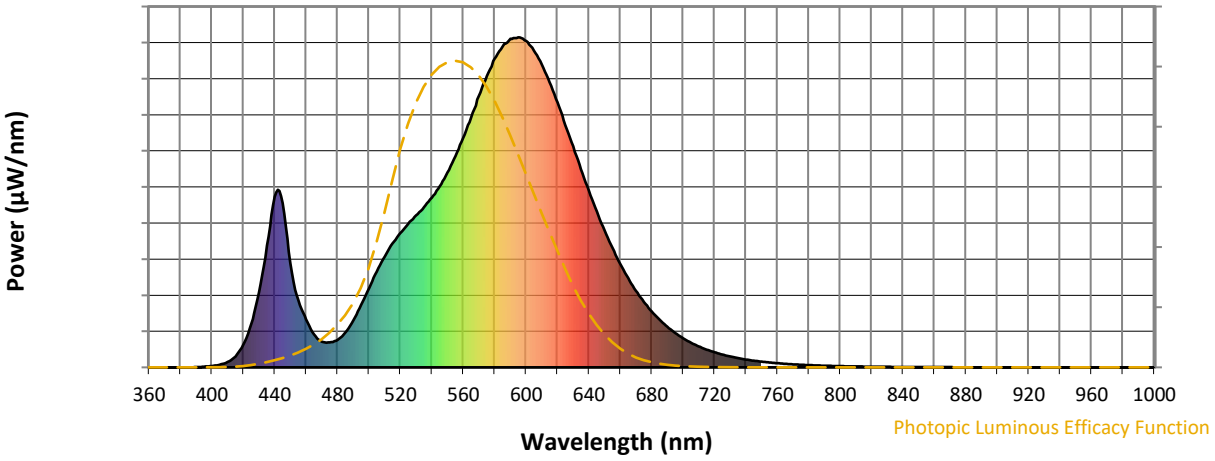
## Photopic Flux vs. Wavelength




## 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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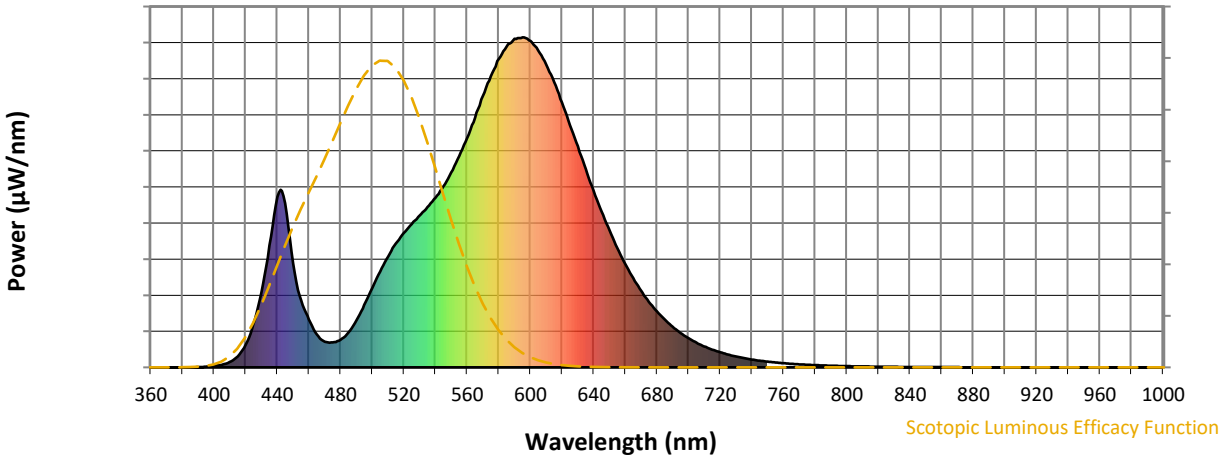
## Scotopic Flux vs. Wavelength




**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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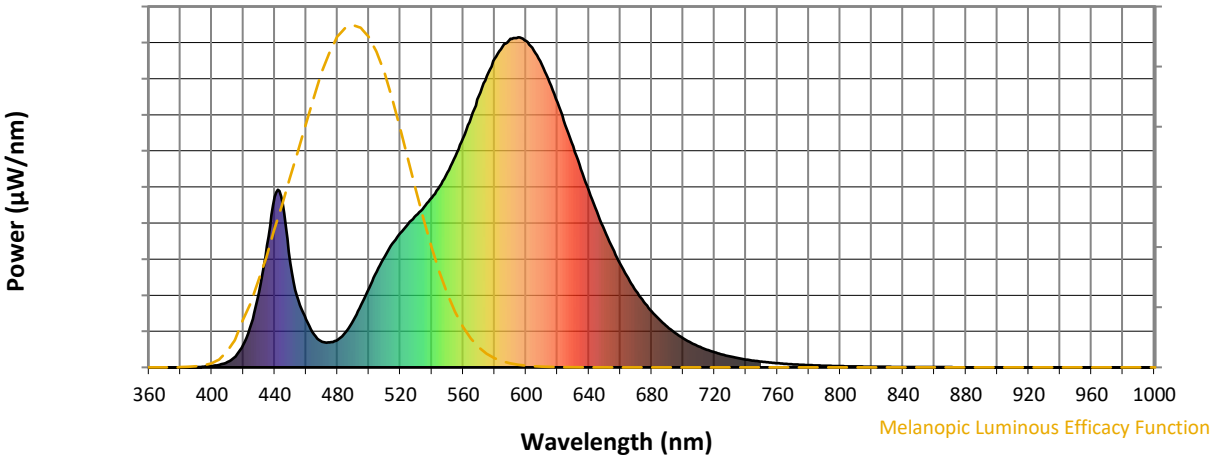
## Melanopic Flux vs. Wavelength




**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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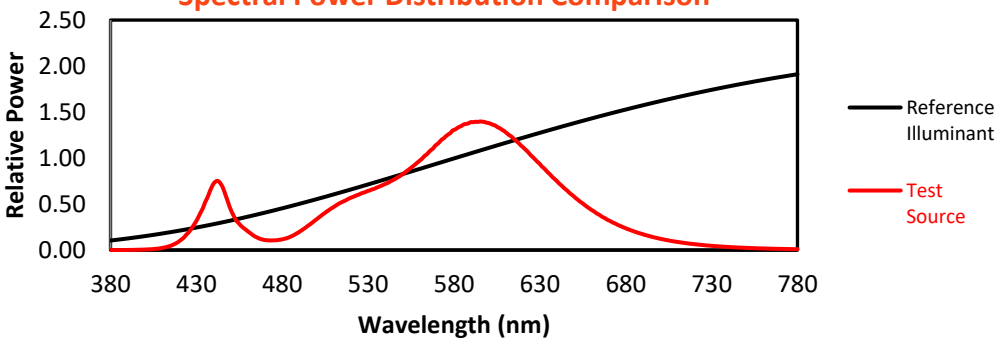
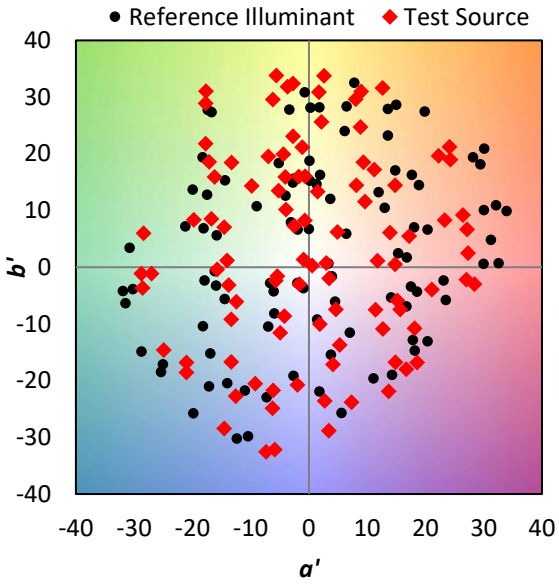
## Summary

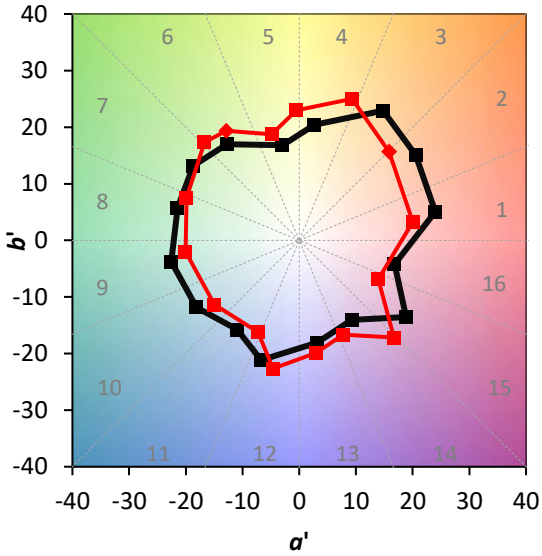
$R_f$ = 73.8
$R_g$ = 94.4
CIE $R_a$ = 70.8
$R_9$ = -43.2

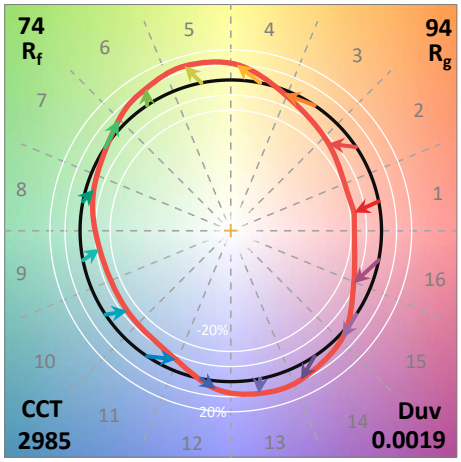
## Spectral Power Distribution Comparison

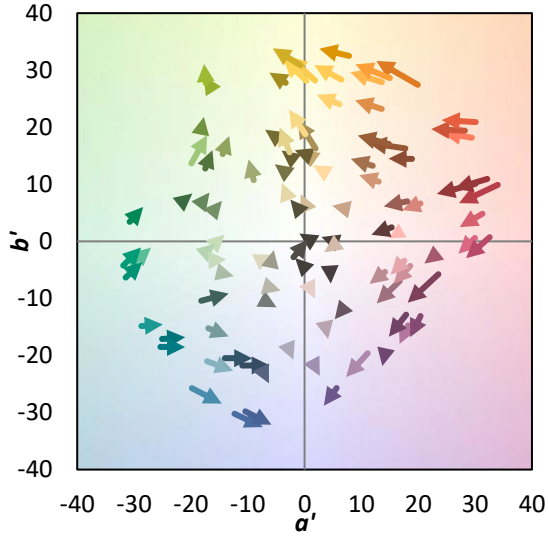



## Color Vector Graphics



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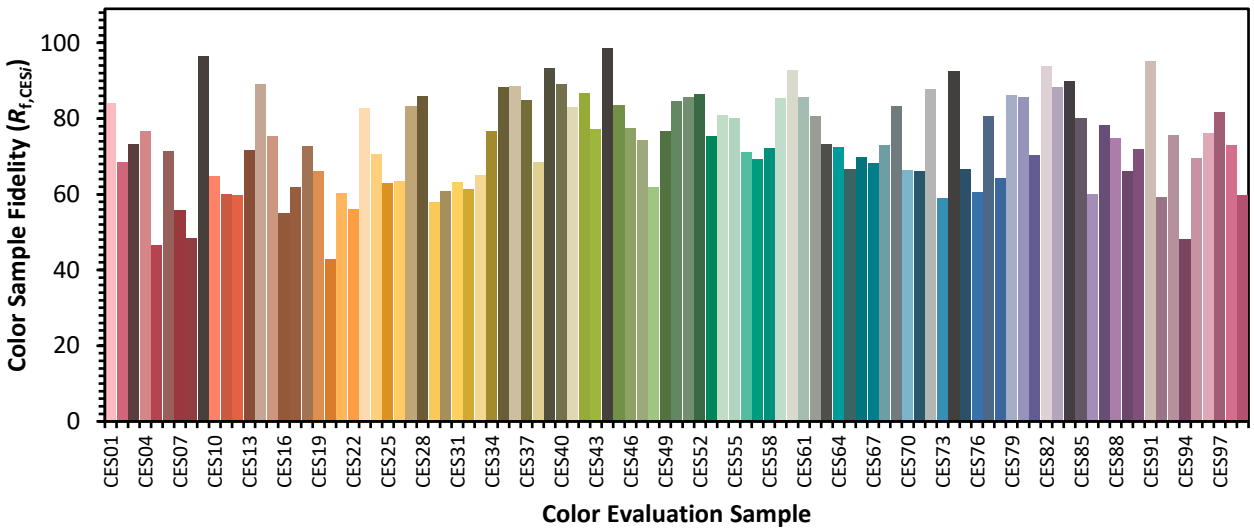
# TM-30-18

**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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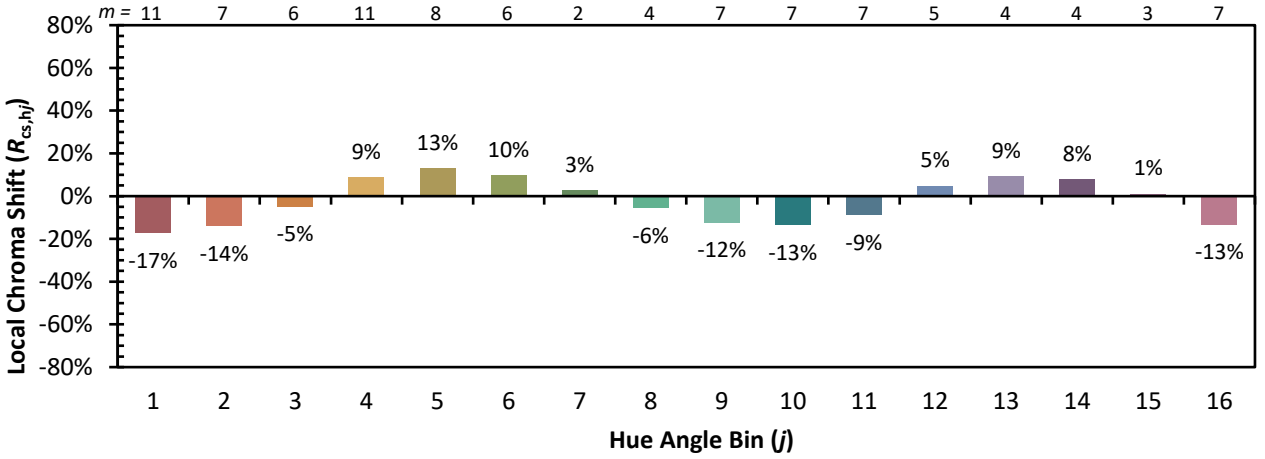
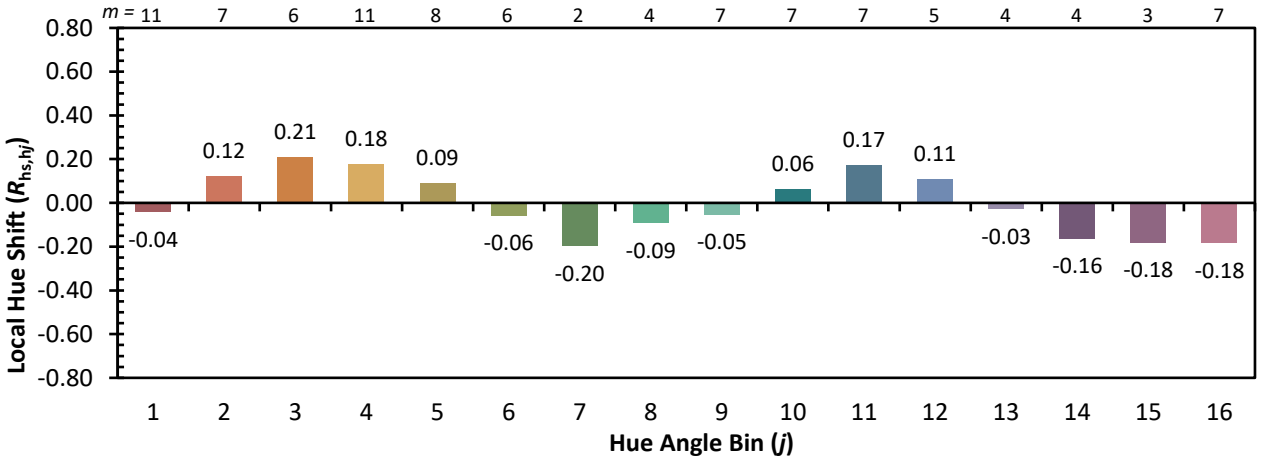
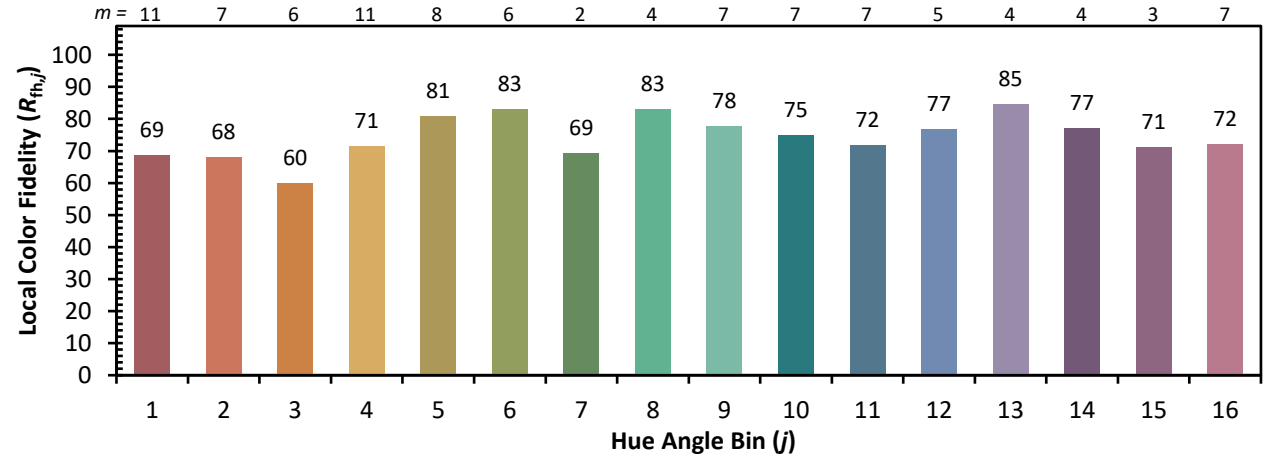
## Color Rendition by Hue-Angle Bin



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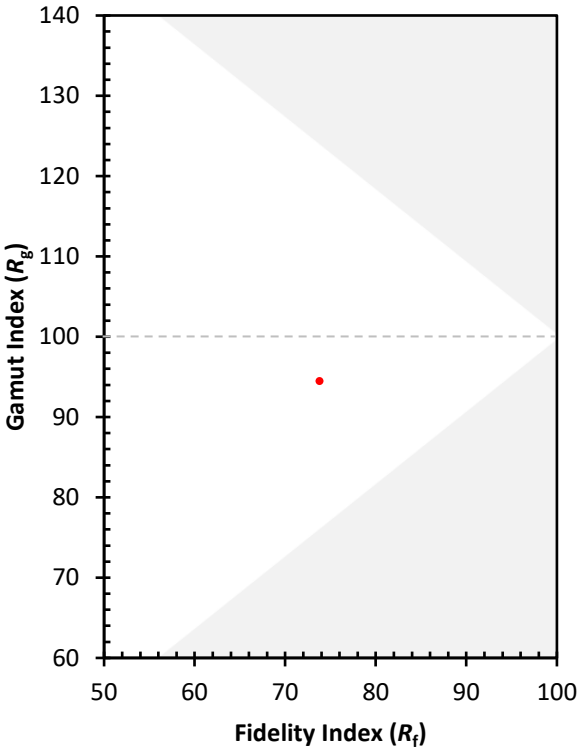
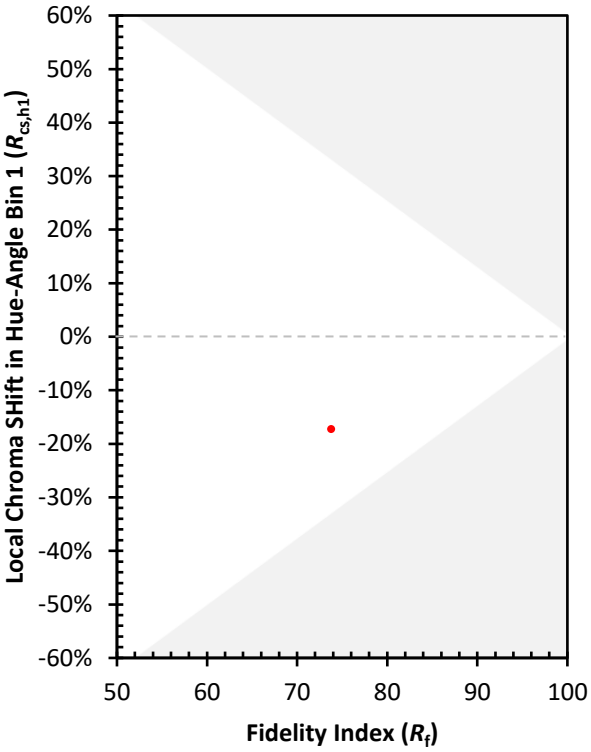
## Measure Comparisons

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