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: P1458803

Luminaire Tested: GLAN-SB7A-735-U-T4LG-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: | P1458803 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 5/21/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | STREETWORKS |
| Catalog Number: | GLAN-SB7A-735-U-T4LG-HSS |
| Description: | GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 350mA 7xLight Square PACKAGE 70CRI 3500K FIXTURE w/ TYPE IV LOW GLARE WITH HOUSE SIDE SHIELD |
| Light Source: | (182) 3500K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 23127.6 lumens |
| Efficiency: | N/A |
| Efficacy: | 116.2 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1.5' x H: 0') |
| IES Classification: | Type IV - Short |
| BUG Rating: | B2 - U0 - G3 |

| | |
|---|---|
| Input Watts (W): | 199.1 |
| 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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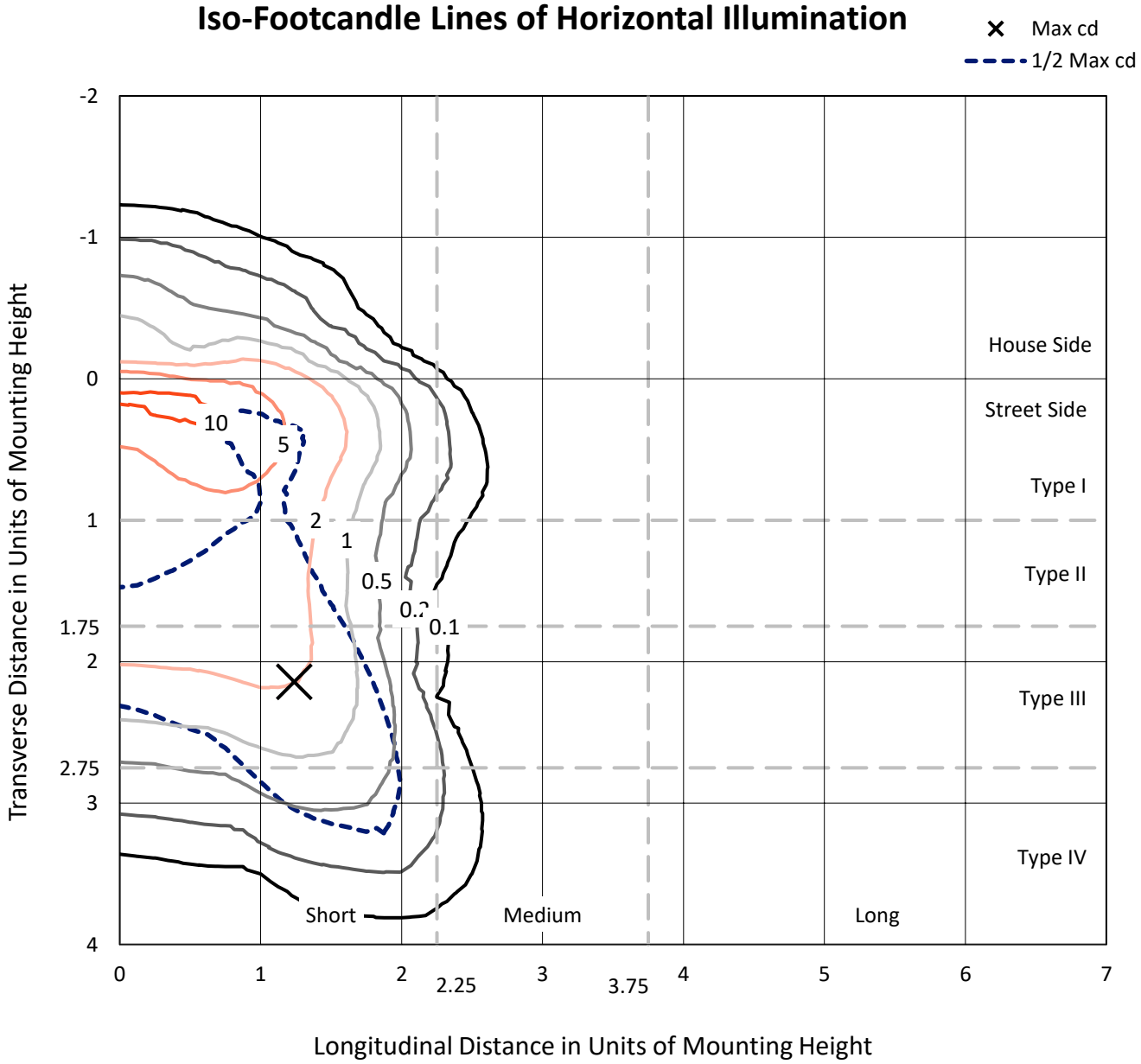
Scaled Data Report

REPORT NUMBER: P1458803
CATALOG NUMBER: GLAN-SB7A-735-U-T4LG-HSS

## Iso-Footcandle Lines of Horizontal Illumination




Based on 25 foot mounting height. Maximum calculated value = 11.2 fc
Type IV - Short - N/A

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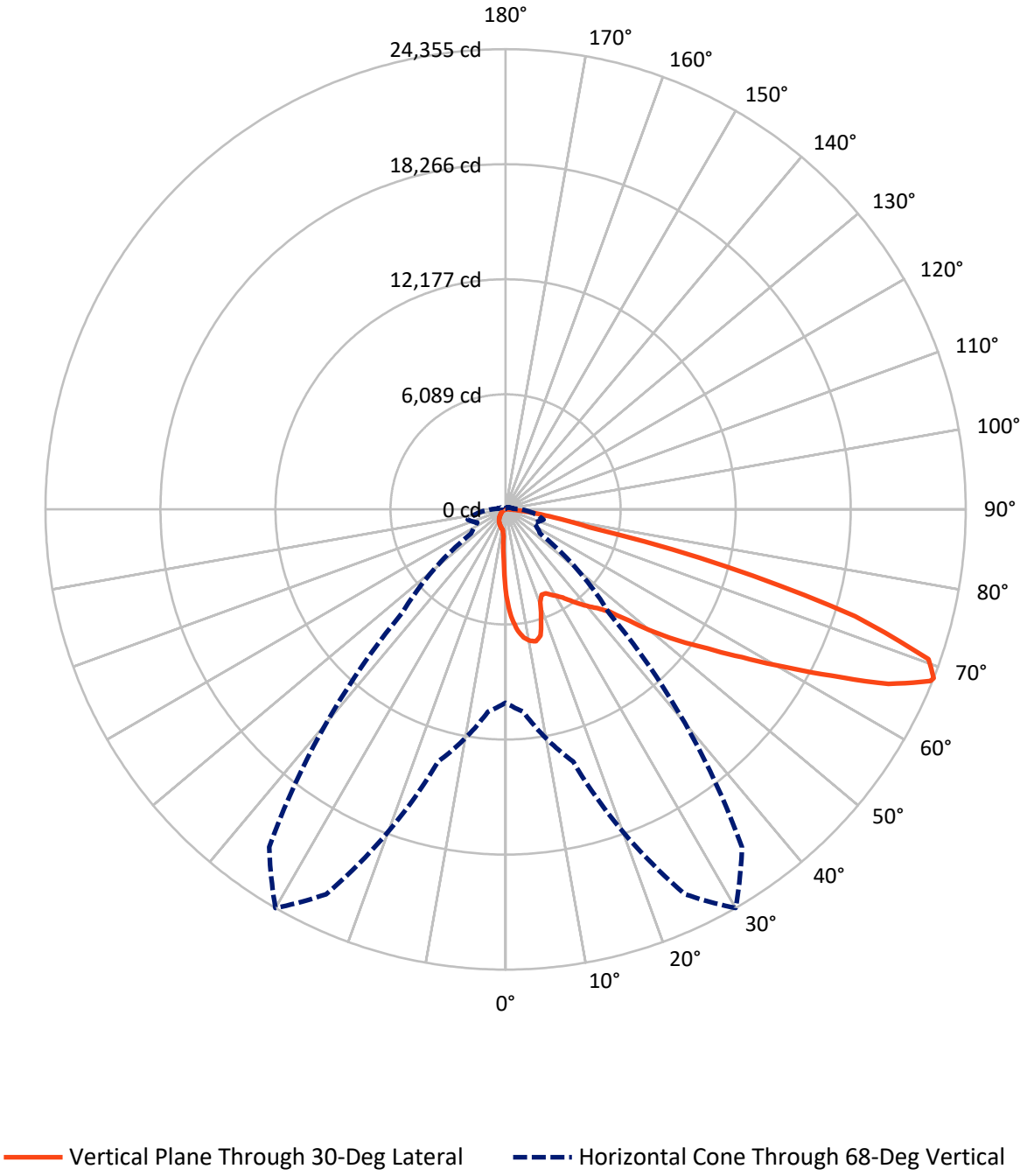
## Luminous Intensity Polar Plot



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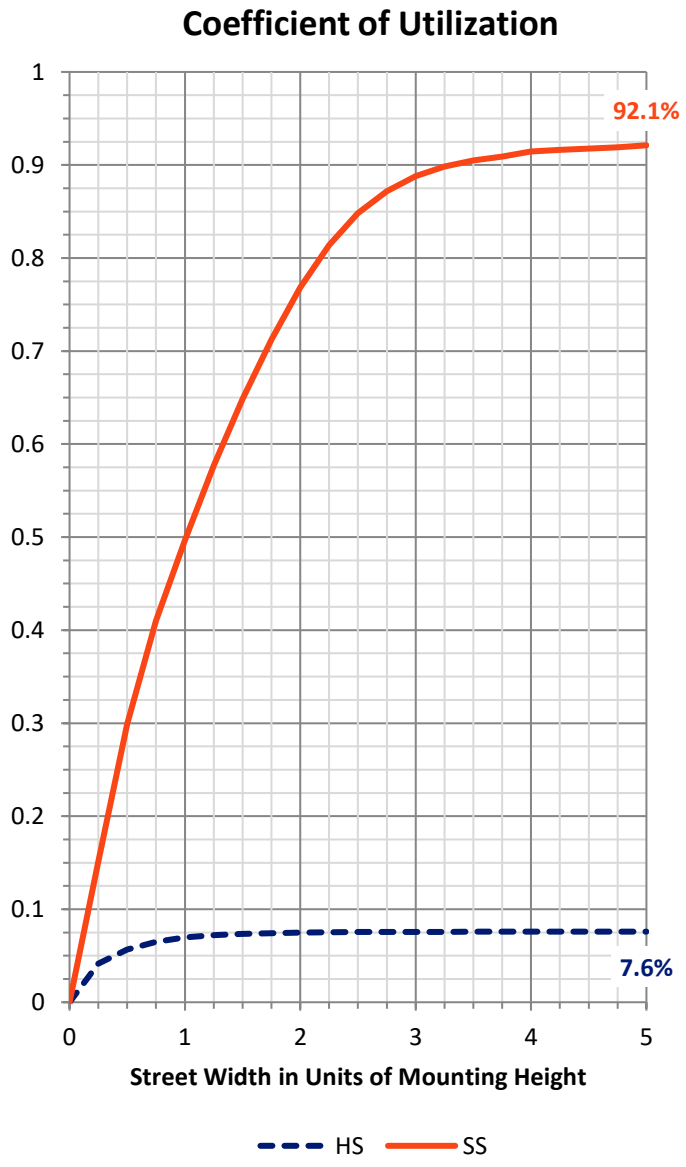
**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 1765.2 | 0.0 | 1765.2 |
| | % Fixture | 7.6 | 0.0 | 7.6 |
| **Street Side** | Lumens | 21362.3 | 0.0 | 21362.3 |
| | % Fixture | 92.4 | 0.0 | 92.4 |
| **Total** | Lumens | 23127.6 | 0.0 | 23127.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 393.5 | 1.7 |
| 10°-20° | 1123.5 | 4.9 |
| 20°-30° | 1765.5 | 7.6 |
| 30°-40° | 2769.0 | 12.0 |
| 40°-50° | 4138.9 | 17.9 |
| 50°-60° | 5506.0 | 23.8 |
| 60°-70° | 5322.6 | 23.0 |
| 70°-80° | 1913.3 | 8.3 |
| 80°-90° | 195.3 | 0.8 |
| 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° | 23127.6 | 100.0 |
| 0°-180° | 23127.6 | 100.0 |



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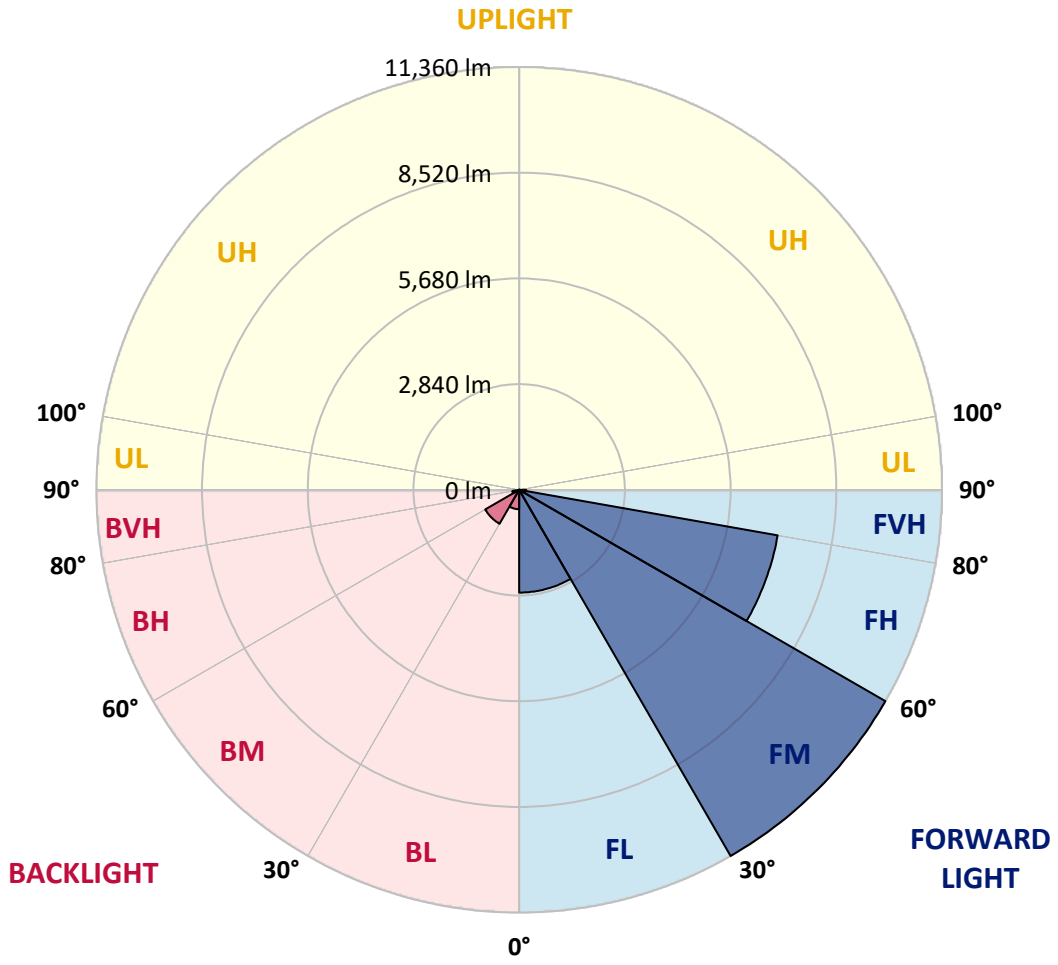
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 2761.4 | 11.9 | | | |
| FM | (30°-60°) | 11360.3 | 49.1 | | | |
| FH | (60°-80°) | 7052.3 | 30.5 | | | G3/7500 |
| FVH | (80°-90°) | 188.3 | 0.8 | | | G2/225 |
| BL | (0°-30°) | 521.0 | 2.3 | B2/1000 | | |
| BM | (30°-60°) | 1053.7 | 4.6 | B2/2500 | | |
| BH | (60°-80°) | 183.6 | 0.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 6.9 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B2-U0-G3**
Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 30° | 35° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 4560.5 | 4560.5 | 4560.5 | 4560.5 | 4560.5 | 4560.5 | 4560.5 | 4560.5 | 4560.5 | 4560.5 | 4560.5 |
| 2.5° | 5828.8 | 5828.8 | 5787.2 | 5731.8 | 5669.4 | 5648.6 | 5530.8 | 5364.5 | 5191.2 | 4990.2 | 4699.1 |
| 5° | 6577.4 | 6570.4 | 6487.3 | 6487.3 | 6404.1 | 6327.8 | 6210.0 | 5967.4 | 5690.2 | 5329.8 | 4823.9 |
| 7.5° | 6910.0 | 6923.9 | 6889.2 | 6889.2 | 6840.7 | 6785.3 | 6716.0 | 6480.3 | 6154.6 | 5669.4 | 4948.6 |
| 10° | 7027.9 | 7034.8 | 7034.8 | 7083.3 | 7069.4 | 7062.5 | 7055.6 | 6923.9 | 6584.3 | 6016.0 | 5080.3 |
| 12.5° | 6743.7 | 6778.3 | 6875.4 | 7090.2 | 7159.5 | 7235.8 | 7339.7 | 7298.2 | 7062.5 | 6452.6 | 5281.3 |
| 15° | 5828.8 | 5835.8 | 6106.1 | 6639.7 | 6923.9 | 7215.0 | 7617.0 | 7700.1 | 7547.7 | 6923.9 | 5489.2 |
| 17.5° | 4810.0 | 4830.8 | 5045.6 | 5641.7 | 6099.1 | 6771.4 | 7776.4 | 8116.0 | 8060.6 | 7388.3 | 5683.3 |
| 20° | 4387.2 | 4414.9 | 4518.9 | 4893.2 | 5239.7 | 5863.5 | 7617.0 | 8511.1 | 8531.8 | 7852.6 | 5863.5 |
| 22.5° | 4290.2 | 4311.0 | 4394.1 | 4685.2 | 4900.1 | 5315.9 | 7076.4 | 8822.9 | 9065.5 | 8386.3 | 6078.3 |
| 25° | 4262.5 | 4283.3 | 4408.0 | 4726.8 | 4927.8 | 5274.4 | 6584.3 | 8989.3 | 9696.2 | 8940.8 | 6286.3 |
| 27.5° | 4241.7 | 4269.4 | 4470.4 | 4879.3 | 5114.9 | 5447.6 | 6494.2 | 9023.9 | 10299.2 | 9529.9 | 6625.9 |
| 30° | 4269.4 | 4311.0 | 4574.3 | 5038.7 | 5309.0 | 5683.3 | 6709.0 | 9058.6 | 10964.6 | 10202.2 | 7055.6 |
| 32.5° | 4380.3 | 4414.9 | 4733.8 | 5253.6 | 5565.5 | 5988.2 | 7076.4 | 9266.5 | 11595.3 | 10888.3 | 7464.5 |
| 35° | 4505.0 | 4553.6 | 4934.7 | 5558.5 | 5932.8 | 6411.0 | 7575.4 | 9675.4 | 12198.3 | 11539.8 | 7887.3 |
| 37.5° | 4657.5 | 4713.0 | 5170.4 | 5905.1 | 6334.8 | 6875.4 | 8116.0 | 10243.8 | 12731.9 | 12073.5 | 8310.1 |
| 40° | 4865.4 | 4927.8 | 5440.7 | 6272.4 | 6736.8 | 7277.4 | 8649.7 | 10805.2 | 13140.8 | 12392.3 | 8587.3 |
| 42.5° | 5683.3 | 5766.4 | 5981.3 | 6632.8 | 7152.6 | 7707.1 | 9176.4 | 11338.8 | 13293.3 | 12496.3 | 8642.7 |
| 45° | 7208.1 | 7291.2 | 7235.8 | 7360.5 | 7707.1 | 8226.9 | 9751.7 | 11851.7 | 13314.1 | 12468.6 | 8615.0 |
| 47.5° | 8739.8 | 8836.8 | 8788.3 | 8719.0 | 8795.2 | 9044.7 | 10396.2 | 12177.5 | 13203.2 | 12454.7 | 8615.0 |
| 50° | 10202.2 | 10146.7 | 10153.7 | 10132.9 | 10202.2 | 10333.9 | 11020.0 | 12239.8 | 13175.5 | 12586.4 | 8691.3 |
| 52.5° | 10985.4 | 11013.1 | 11186.4 | 11442.8 | 11595.3 | 11727.0 | 11733.9 | 12336.9 | 12974.5 | 12364.6 | 8601.2 |
| 55° | 11754.7 | 11810.1 | 12212.1 | 12648.8 | 12988.4 | 13237.9 | 12447.8 | 12274.5 | 11775.5 | 11623.0 | 8129.9 |
| 57.5° | 12621.0 | 12697.3 | 13265.6 | 14166.6 | 14762.7 | 14894.3 | 13154.7 | 11110.1 | 9966.5 | 10562.6 | 7215.0 |
| 60° | 13813.1 | 13903.2 | 14658.7 | 16010.2 | 16897.4 | 16627.1 | 13210.2 | 9259.6 | 7915.0 | 8767.5 | 5953.6 |
| 62.5° | 14748.8 | 14929.0 | 16294.4 | 18401.3 | 19378.6 | 18519.2 | 12177.5 | 7097.2 | 5530.8 | 6161.5 | 4345.6 |
| 65° | 13750.8 | 14097.3 | 16322.1 | 21139.0 | 22268.7 | 20744.0 | 10555.6 | 4844.6 | 3118.9 | 3985.2 | 2779.3 |
| 67.5° | 11117.0 | 11602.2 | 14492.4 | 22469.7 | 24251.0 | 21915.3 | 8310.1 | 2571.3 | 1788.2 | 2314.9 | 1462.4 |
| 68° | 10229.9 | 10756.6 | 13820.1 | 22469.7 | 24354.9 | 21811.3 | 7714.0 | 2224.8 | 1649.5 | 2079.2 | 1268.3 |
| 70° | 7069.4 | 7443.7 | 10625.0 | 21208.3 | 23745.0 | 19884.5 | 5080.3 | 1275.3 | 1240.6 | 1427.8 | 838.6 |
| 72.5° | 3465.4 | 3867.4 | 5683.3 | 16807.3 | 19343.9 | 15282.5 | 2314.9 | 845.6 | 942.6 | 1046.6 | 658.4 |
| 75° | 1379.2 | 1462.4 | 2238.7 | 8289.3 | 12087.4 | 9751.7 | 1212.9 | 637.6 | 810.9 | 817.8 | 519.8 |
| 77.5° | 790.1 | 838.6 | 1240.6 | 3049.6 | 4532.8 | 4359.5 | 783.2 | 457.4 | 644.6 | 589.1 | 339.6 |
| 80° | 443.6 | 450.5 | 700.0 | 1608.0 | 2592.1 | 2321.8 | 533.7 | 332.7 | 492.1 | 415.8 | 228.7 |
| 82.5° | 221.8 | 249.5 | 443.6 | 887.1 | 1441.6 | 1476.3 | 284.2 | 235.6 | 395.1 | 298.0 | 187.1 |
| 85° | 159.4 | 173.3 | 318.8 | 492.1 | 665.4 | 998.0 | 173.3 | 117.8 | 298.0 | 201.0 | 131.7 |
| 87.5° | 83.2 | 104.0 | 201.0 | 242.6 | 270.3 | 339.6 | 83.2 | 55.4 | 166.3 | 117.8 | 69.3 |
| 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: P1458803
CATALOG NUMBER: GLAN-SB7A-735-U-T4LG-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 4560.5 | 4560.5 | 4560.5 | 4560.5 | 4560.5 | 4560.5 | 4560.5 | 4560.5 | 4560.5 | 4560.5 | 4560.5 |
| 2.5° | 4560.5 | 4401.1 | 4075.3 | 3694.1 | 3396.1 | 3091.1 | 2841.6 | 2606.0 | 2495.1 | 2481.2 | 2509.0 |
| 5° | 4539.7 | 4193.1 | 3451.6 | 2723.8 | 2127.8 | 1711.9 | 1483.2 | 1365.4 | 1303.0 | 1275.3 | 1282.2 |
| 7.5° | 4498.1 | 3971.4 | 2786.2 | 1843.6 | 1379.2 | 1199.0 | 1143.6 | 1122.8 | 1115.9 | 1115.9 | 1115.9 |
| 10° | 4456.5 | 3673.3 | 2134.7 | 1351.5 | 1129.7 | 1081.2 | 1067.3 | 1067.3 | 1060.4 | 1060.4 | 1067.3 |
| 12.5° | 4435.7 | 3396.1 | 1656.5 | 1129.7 | 1053.5 | 1032.7 | 1018.8 | 1011.9 | 1011.9 | 1011.9 | 1018.8 |
| 15° | 4387.2 | 3091.1 | 1337.6 | 1046.6 | 1005.0 | 977.2 | 970.3 | 963.4 | 963.4 | 963.4 | 963.4 |
| 17.5° | 4345.6 | 2793.1 | 1164.4 | 991.1 | 956.5 | 928.7 | 921.8 | 914.9 | 914.9 | 921.8 | 921.8 |
| 20° | 4283.3 | 2509.0 | 1046.6 | 935.7 | 907.9 | 880.2 | 873.3 | 866.4 | 873.3 | 873.3 | 873.3 |
| 22.5° | 4207.0 | 2273.3 | 977.2 | 894.1 | 859.4 | 831.7 | 831.7 | 831.7 | 831.7 | 831.7 | 838.6 |
| 25° | 4158.5 | 2107.0 | 928.7 | 845.6 | 810.9 | 790.1 | 783.2 | 783.2 | 797.0 | 797.0 | 804.0 |
| 27.5° | 4234.7 | 2065.4 | 935.7 | 831.7 | 769.3 | 748.5 | 741.6 | 741.6 | 755.5 | 762.4 | 769.3 |
| 30° | 4463.5 | 2141.6 | 1018.8 | 873.3 | 741.6 | 706.9 | 700.0 | 700.0 | 720.8 | 727.7 | 734.7 |
| 32.5° | 4726.8 | 2301.0 | 1143.6 | 928.7 | 720.8 | 665.4 | 651.5 | 651.5 | 672.3 | 679.2 | 686.2 |
| 35° | 5087.2 | 2550.5 | 1309.9 | 977.2 | 734.7 | 623.8 | 596.1 | 596.1 | 609.9 | 623.8 | 630.7 |
| 37.5° | 5551.6 | 2959.5 | 1504.0 | 1011.9 | 734.7 | 575.3 | 540.6 | 533.7 | 547.5 | 547.5 | 554.5 |
| 40° | 6036.7 | 3493.1 | 1705.0 | 1011.9 | 700.0 | 526.7 | 492.1 | 471.3 | 478.2 | 471.3 | 478.2 |
| 42.5° | 6307.1 | 3922.8 | 1878.3 | 949.5 | 658.4 | 478.2 | 443.6 | 415.8 | 408.9 | 395.1 | 402.0 |
| 45° | 6459.5 | 4116.9 | 1829.7 | 880.2 | 616.8 | 443.6 | 402.0 | 367.3 | 353.5 | 332.7 | 332.7 |
| 47.5° | 6459.5 | 4137.7 | 1566.4 | 824.8 | 575.3 | 415.8 | 360.4 | 325.7 | 305.0 | 284.2 | 291.1 |
| 50° | 6383.3 | 3950.6 | 1240.6 | 769.3 | 526.7 | 388.1 | 325.7 | 298.0 | 270.3 | 256.4 | 256.4 |
| 52.5° | 6064.5 | 3340.7 | 949.5 | 700.0 | 471.3 | 353.5 | 291.1 | 263.4 | 235.6 | 228.7 | 228.7 |
| 55° | 5516.9 | 2453.5 | 769.3 | 630.7 | 422.8 | 325.7 | 263.4 | 242.6 | 214.9 | 201.0 | 201.0 |
| 57.5° | 4484.2 | 1677.3 | 637.6 | 568.3 | 374.3 | 291.1 | 235.6 | 214.9 | 180.2 | 166.3 | 166.3 |
| 60° | 3326.8 | 1095.1 | 540.6 | 499.0 | 318.8 | 263.4 | 207.9 | 180.2 | 152.5 | 138.6 | 131.7 |
| 62.5° | 2245.6 | 741.6 | 450.5 | 395.1 | 270.3 | 228.7 | 180.2 | 152.5 | 117.8 | 90.1 | 90.1 |
| 65° | 1400.0 | 575.3 | 374.3 | 311.9 | 235.6 | 201.0 | 152.5 | 117.8 | 83.2 | 62.4 | 55.4 |
| 67.5° | 804.0 | 464.4 | 305.0 | 242.6 | 201.0 | 159.4 | 117.8 | 97.0 | 69.3 | 48.5 | 41.6 |
| 68° | *741.6* | *443.6* | *284.2* | *228.7* | *187.1* | *152.5* | *110.9* | *90.1* | *62.4* | *41.6* | *41.6* |
| 70° | 603.0 | 395.1 | 242.6 | 187.1 | 159.4 | 124.8 | 97.0 | 76.2 | 48.5 | 27.7 | 27.7 |
| 72.5° | 533.7 | 332.7 | 207.9 | 145.5 | 110.9 | 104.0 | 76.2 | 55.4 | 34.7 | 20.8 | 13.9 |
| 75° | 436.6 | 263.4 | 166.3 | 110.9 | 76.2 | 76.2 | 55.4 | 34.7 | 13.9 | 0.0 | 0.0 |
| 77.5° | 284.2 | 194.1 | 131.7 | 69.3 | 41.6 | 48.5 | 34.7 | 13.9 | 0.0 | 0.0 | 0.0 |
| 80° | 187.1 | 145.5 | 90.1 | 34.7 | 20.8 | 20.8 | 6.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 131.7 | 97.0 | 55.4 | 13.9 | 6.9 | 6.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 83.2 | 41.6 | 20.8 | 6.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 34.7 | 13.9 | 6.9 | 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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# LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-5

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-735-U-5WQ

Data in this report applies to families of products including GSS-SB1A-735-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

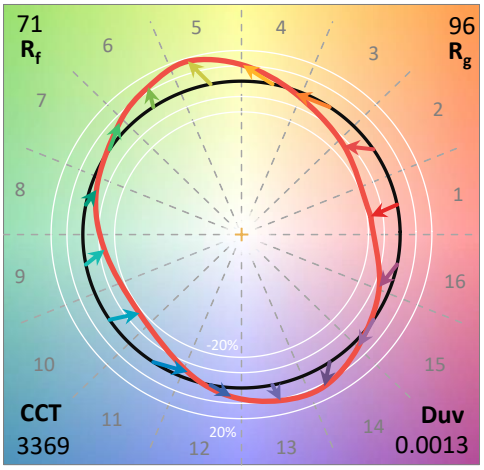
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-5 |
| 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-735-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 3500K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 3369 |
| CIE u': | 0.2386 |
| CIE v': | 0.5156 |
| Duv: | 0.0013 |
| CIE x: | 0.4143 |
| CIE y: | 0.3980 |
| CIE z: | 0.1877 |
| Peak Wavelength (nm): | 590 |
| Dominant Wavelength (nm): | 580 |
| Purity: | 43.80166 |
| Rf: | 71.4 |
| Rg: | 96 |

| | |
|---|---|
| CRI (Ra): | 70.1 |
| R1: | 66.6 |
| R2: | 77.6 |
| R3: | 88.5 |
| R4: | 69.5 |
| R5: | 66.4 |
| R6: | 69.6 |
| R7: | 77.5 |
| R8: | 44.9 |
| R9: | -40.2 |
| R10: | 49.1 |
| R11: | 66.3 |
| R12: | 45.7 |
| R13: | 68.0 |
| R14: | 93.4 |
| R15: | 57.6 |




## Test Conditions

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

REPORT NUMBER: SP1-2407-184-5

| 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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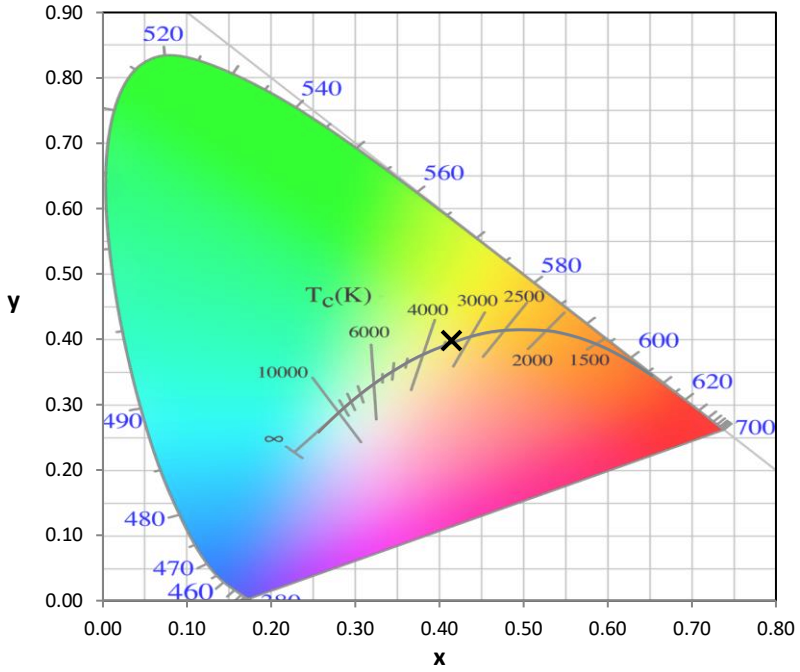
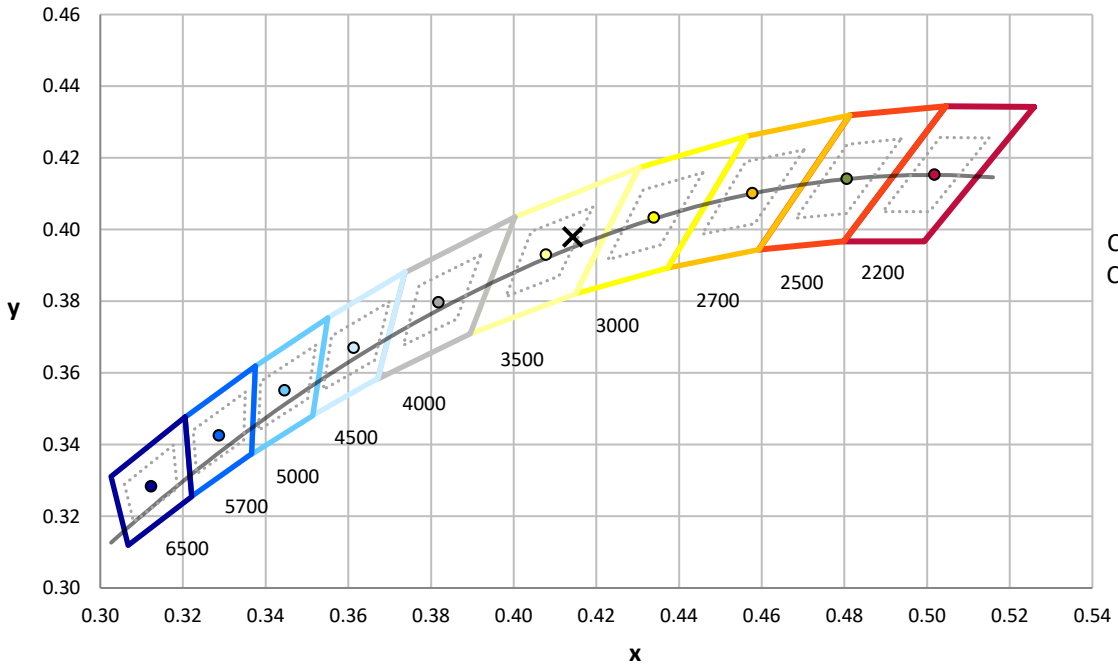
**CIE 1931 Chromaticity Diagram**




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




CCT = 3369K
CIE x = 0.4143
CIE y = 0.3980
Duv = 0.0013

Point lies inside the ANSI 3500K 4-step quadrangle

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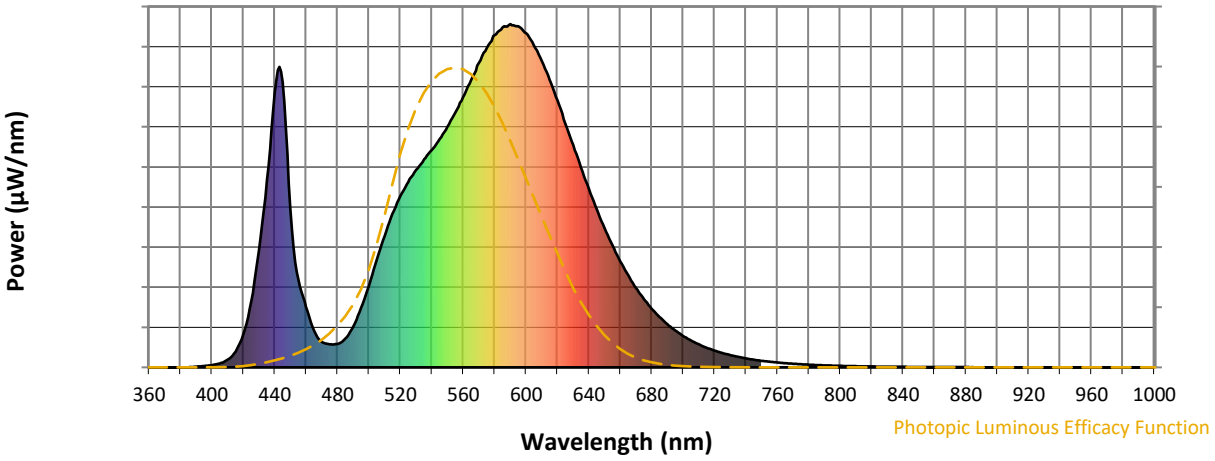
## Photopic Flux vs. Wavelength




## 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 | 119 | NR | 620 | 778 | NR | 750 | 19 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 173 | NR | 625 | 711 | NR | 755 | 16 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 239 | NR | 630 | 648 | NR | 760 | 14 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 313 | NR | 635 | 582 | NR | 765 | 12 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 383 | NR | 640 | 520 | NR | 770 | 11 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 448 | NR | 645 | 460 | NR | 775 | 9 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 500 | NR | 650 | 406 | NR | 780 | 8 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 539 | NR | 655 | 355 | NR | 785 | 7 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 575 | NR | 660 | 309 | NR | 790 | 6 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 606 | NR | 665 | 269 | NR | 795 | 5 | NR | 925 | 0 | NR |
| 410 | 22 | NR | 540 | 633 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 45 | NR | 545 | 666 | NR | 675 | 199 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 96 | NR | 550 | 701 | NR | 680 | 171 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 193 | NR | 555 | 743 | NR | 685 | 147 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 341 | NR | 560 | 788 | NR | 690 | 126 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 547 | NR | 565 | 837 | NR | 695 | 107 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 799 | NR | 570 | 887 | NR | 700 | 92 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 831 | NR | 575 | 931 | NR | 705 | 78 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 461 | NR | 580 | 967 | NR | 710 | 67 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 256 | NR | 585 | 990 | NR | 715 | 57 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 176 | NR | 590 | 1000 | NR | 720 | 49 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 107 | NR | 595 | 994 | NR | 725 | 42 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 74 | NR | 600 | 973 | NR | 730 | 36 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 67 | NR | 605 | 938 | NR | 735 | 31 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 68 | NR | 610 | 892 | NR | 740 | 26 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 84 | NR | 615 | 838 | NR | 745 | 22 | NR | 875 | 1 | NR | | | |

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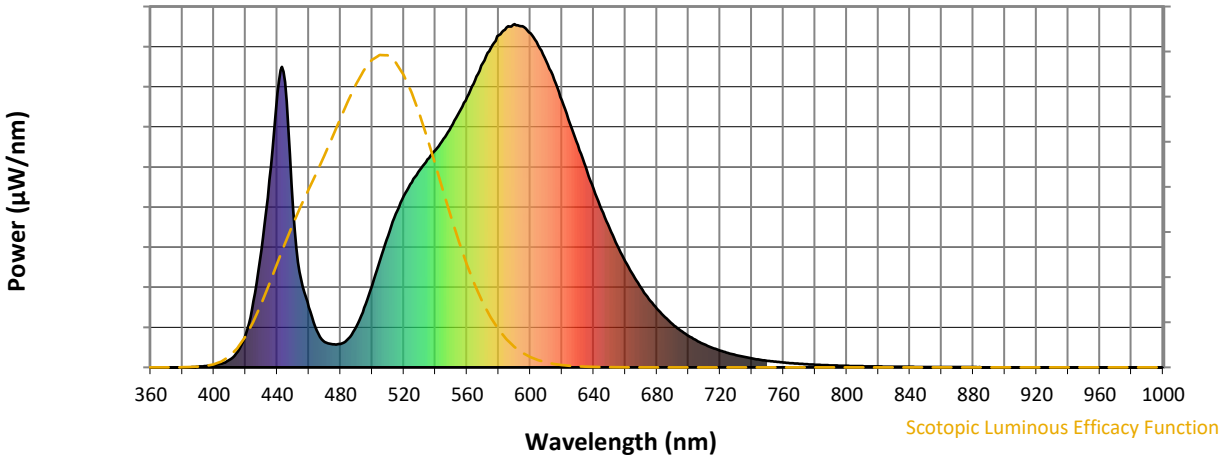
## Scotopic Flux vs. Wavelength




**Scotopic Lumens: NR** **S/P: 1.29**

| 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 | 119 | NR | 620 | 778 | NR | 750 | 19 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 173 | NR | 625 | 711 | NR | 755 | 16 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 239 | NR | 630 | 648 | NR | 760 | 14 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 313 | NR | 635 | 582 | NR | 765 | 12 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 383 | NR | 640 | 520 | NR | 770 | 11 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 448 | NR | 645 | 460 | NR | 775 | 9 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 500 | NR | 650 | 406 | NR | 780 | 8 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 539 | NR | 655 | 355 | NR | 785 | 7 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 575 | NR | 660 | 309 | NR | 790 | 6 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 606 | NR | 665 | 269 | NR | 795 | 5 | NR | 925 | 0 | NR |
| 410 | 22 | NR | 540 | 633 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 45 | NR | 545 | 666 | NR | 675 | 199 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 96 | NR | 550 | 701 | NR | 680 | 171 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 193 | NR | 555 | 743 | NR | 685 | 147 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 341 | NR | 560 | 788 | NR | 690 | 126 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 547 | NR | 565 | 837 | NR | 695 | 107 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 799 | NR | 570 | 887 | NR | 700 | 92 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 831 | NR | 575 | 931 | NR | 705 | 78 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 461 | NR | 580 | 967 | NR | 710 | 67 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 256 | NR | 585 | 990 | NR | 715 | 57 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 176 | NR | 590 | 1000 | NR | 720 | 49 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 107 | NR | 595 | 994 | NR | 725 | 42 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 74 | NR | 600 | 973 | NR | 730 | 36 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 67 | NR | 605 | 938 | NR | 735 | 31 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 68 | NR | 610 | 892 | NR | 740 | 26 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 84 | NR | 615 | 838 | NR | 745 | 22 | NR | 875 | 1 | NR | | | |

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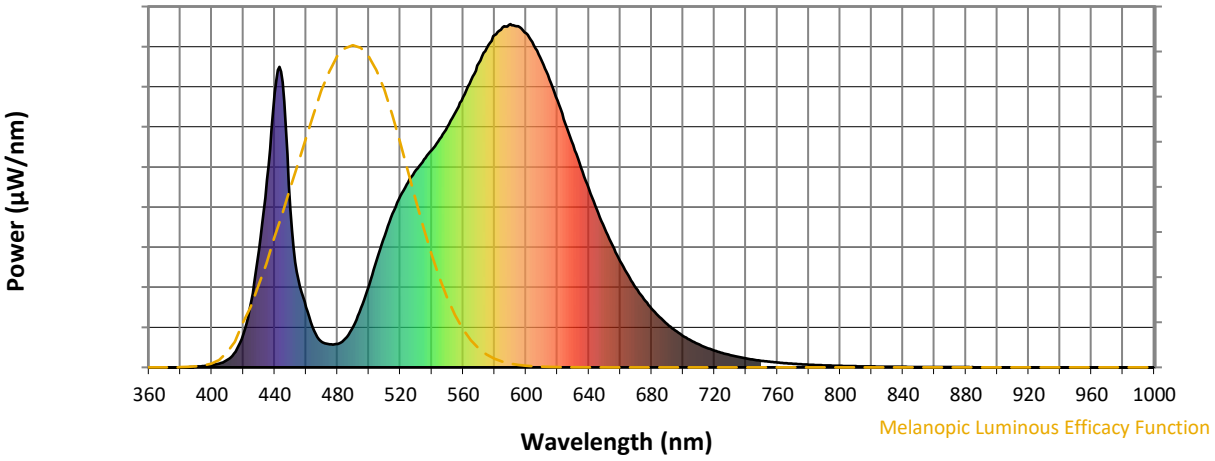
## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.36**

| 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 | 119 | NR | 620 | 778 | NR | 750 | 19 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 173 | NR | 625 | 711 | NR | 755 | 16 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 239 | NR | 630 | 648 | NR | 760 | 14 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 313 | NR | 635 | 582 | NR | 765 | 12 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 383 | NR | 640 | 520 | NR | 770 | 11 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 448 | NR | 645 | 460 | NR | 775 | 9 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 500 | NR | 650 | 406 | NR | 780 | 8 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 539 | NR | 655 | 355 | NR | 785 | 7 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 575 | NR | 660 | 309 | NR | 790 | 6 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 606 | NR | 665 | 269 | NR | 795 | 5 | NR | 925 | 0 | NR |
| 410 | 22 | NR | 540 | 633 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 45 | NR | 545 | 666 | NR | 675 | 199 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 96 | NR | 550 | 701 | NR | 680 | 171 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 193 | NR | 555 | 743 | NR | 685 | 147 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 341 | NR | 560 | 788 | NR | 690 | 126 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 547 | NR | 565 | 837 | NR | 695 | 107 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 799 | NR | 570 | 887 | NR | 700 | 92 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 831 | NR | 575 | 931 | NR | 705 | 78 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 461 | NR | 580 | 967 | NR | 710 | 67 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 256 | NR | 585 | 990 | NR | 715 | 57 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 176 | NR | 590 | 1000 | NR | 720 | 49 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 107 | NR | 595 | 994 | NR | 725 | 42 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 74 | NR | 600 | 973 | NR | 730 | 36 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 67 | NR | 605 | 938 | NR | 735 | 31 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 68 | NR | 610 | 892 | NR | 740 | 26 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 84 | NR | 615 | 838 | NR | 745 | 22 | NR | 875 | 1 | NR | | | |

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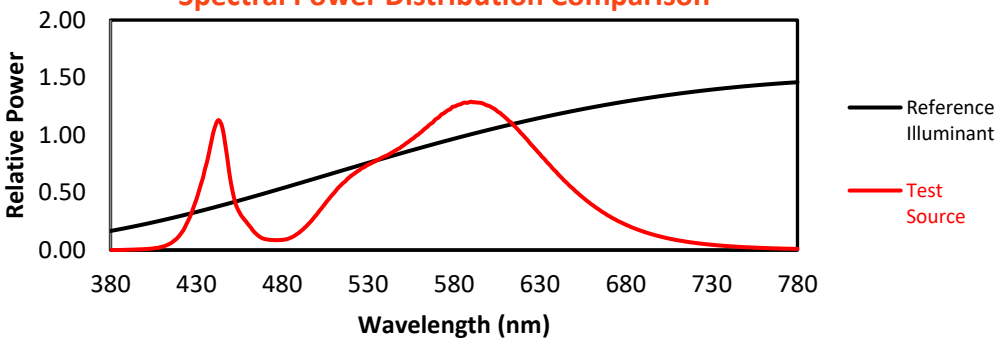
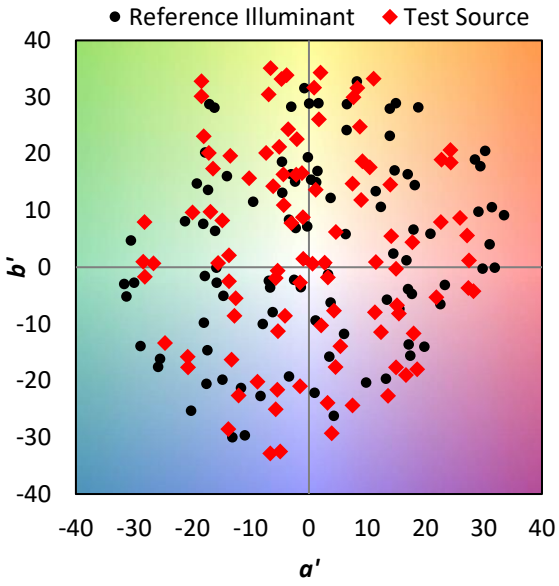
## Summary

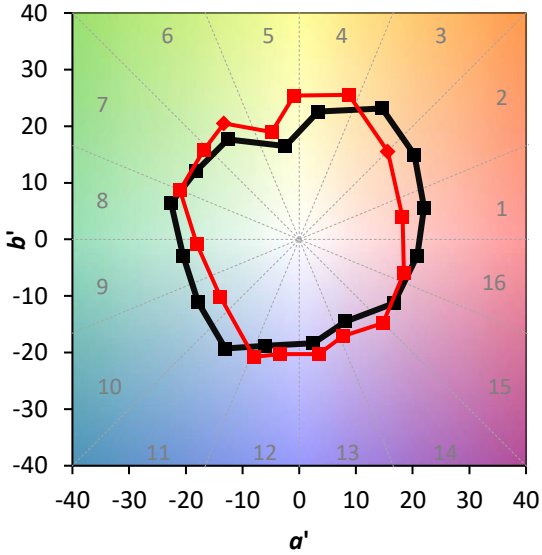
$R_f$ = 71.4
$R_g$ = 96
CIE $R_a$ = 70.1
$R_9$ = -40.2

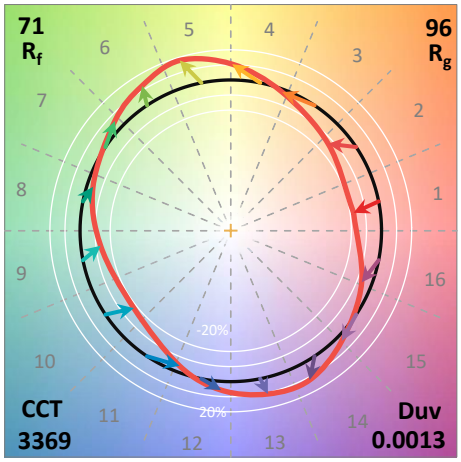
## Spectral Power Distribution Comparison

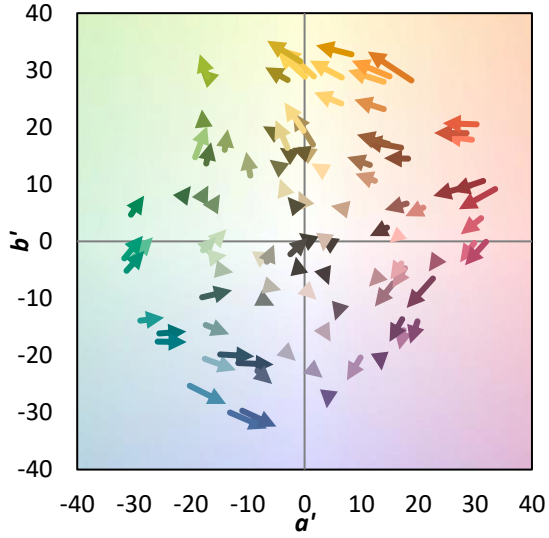



## Color Vector Graphics



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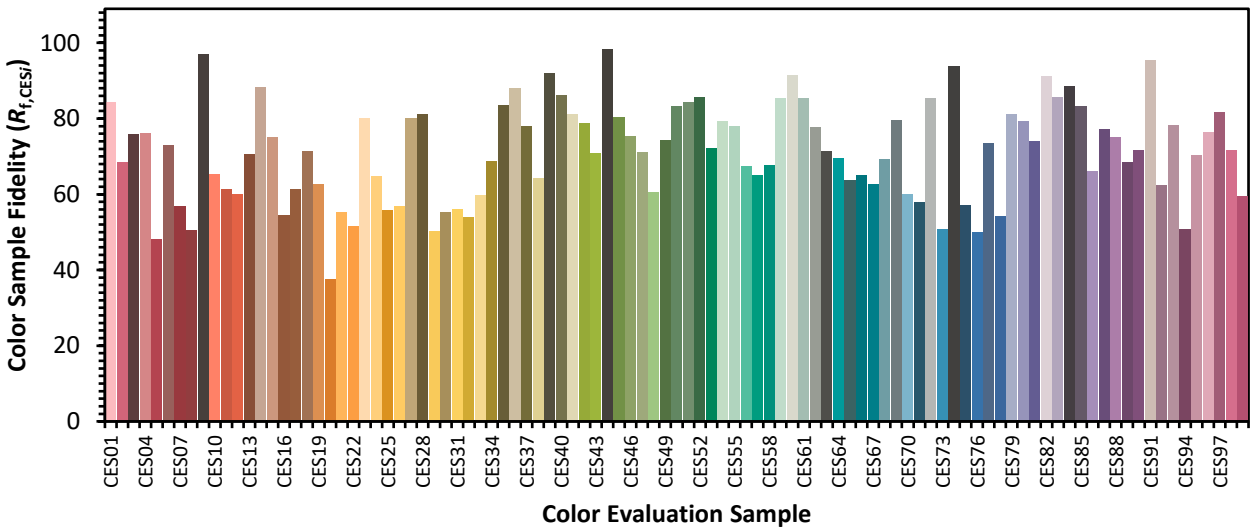
## Individual Sample Fidelity Index ($R_{f,i}$)

| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 57 | CES51 = 84 | CES76 = 50 |
| CES02 = 62 | CES27 = 80 | CES52 = 86 | CES77 = 74 |
| CES03 = 31 | CES28 = 81 | CES53 = 72 | CES78 = 54 |
| CES04 = 70 | CES29 = 50 | CES54 = 79 | CES79 = 81 |
| CES05 = 48 | CES30 = 55 | CES55 = 78 | CES80 = 79 |
| CES06 = 51 | CES31 = 56 | CES56 = 67 | CES81 = 74 |
| CES07 = 40 | CES32 = 54 | CES57 = 65 | CES82 = 91 |
| CES08 = 39 | CES33 = 60 | CES58 = 68 | CES83 = 86 |
| CES09 = 29 | CES34 = 69 | CES59 = 85 | CES84 = 89 |
| CES10 = 75 | CES35 = 83 | CES60 = 91 | CES85 = 83 |
| CES11 = 58 | CES36 = 88 | CES61 = 85 | CES86 = 66 |
| CES12 = 64 | CES37 = 78 | CES62 = 78 | CES87 = 77 |
| CES13 = 43 | CES38 = 64 | CES63 = 71 | CES88 = 75 |
| CES14 = 74 | CES39 = 92 | CES64 = 70 | CES89 = 68 |
| CES15 = 71 | CES40 = 86 | CES65 = 64 | CES90 = 72 |
| CES16 = 47 | CES41 = 81 | CES66 = 65 | CES91 = 95 |
| CES17 = 50 | CES42 = 79 | CES67 = 63 | CES92 = 62 |
| CES18 = 56 | CES43 = 71 | CES68 = 69 | CES93 = 78 |
| CES19 = 72 | CES44 = 98 | CES69 = 80 | CES94 = 51 |
| CES20 = 65 | CES45 = 80 | CES70 = 60 | CES95 = 70 |
| CES21 = 87 | CES46 = 75 | CES71 = 58 | CES96 = 76 |
| CES22 = 79 | CES47 = 71 | CES72 = 85 | CES97 = 82 |
| CES23 = 92 | CES48 = 61 | CES73 = 51 | CES98 = 72 |
| CES24 = 91 | CES49 = 74 | CES74 = 94 | CES99 = 60 |
| CES25 = 72 | CES50 = 83 | CES75 = 57 | |



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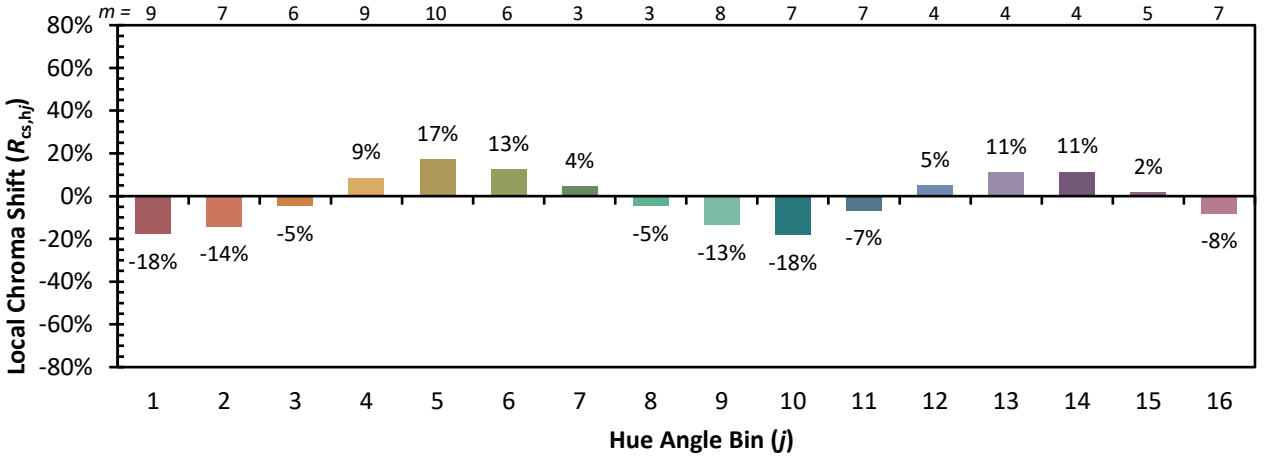
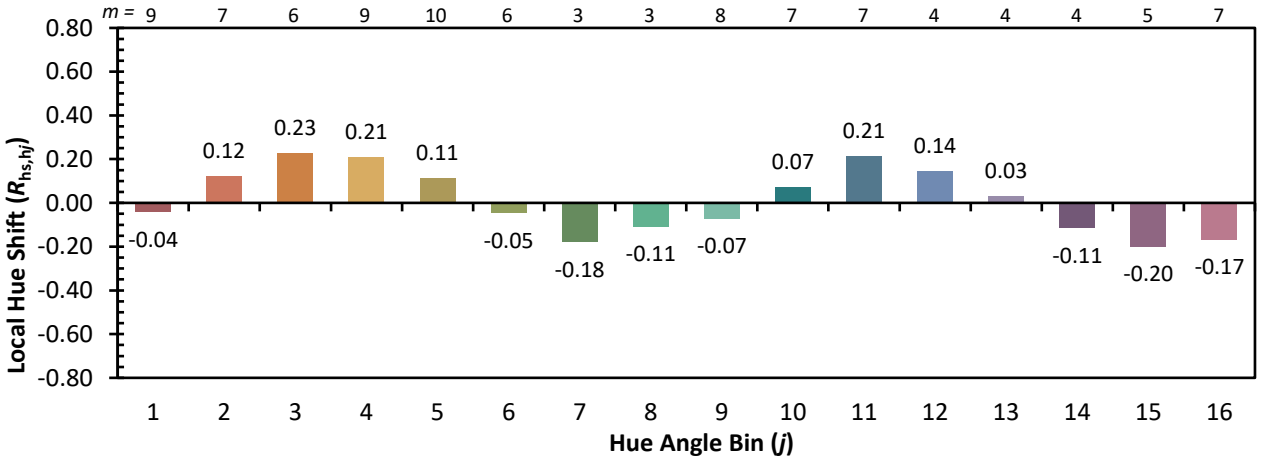
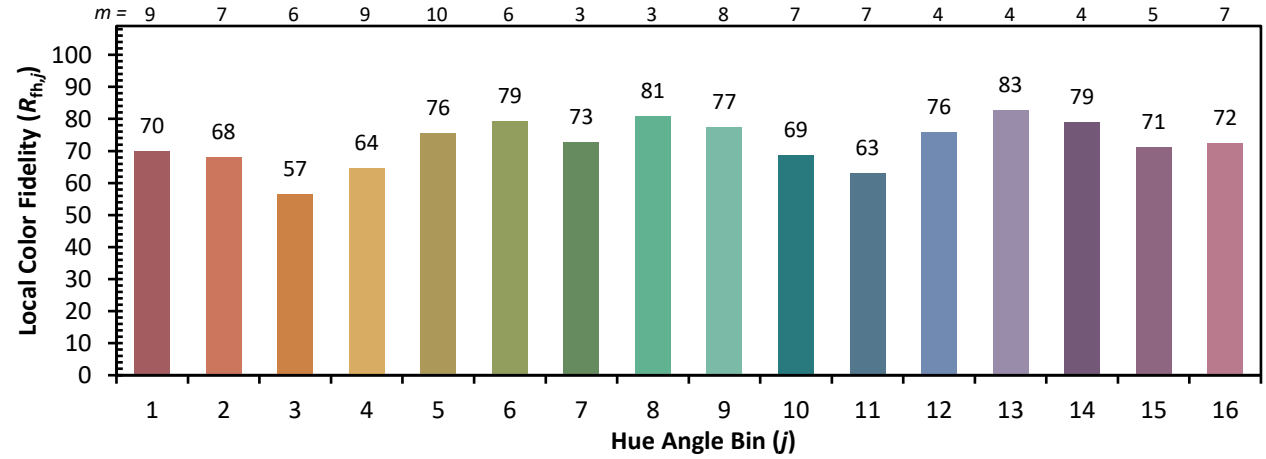
## Color Rendition by Hue-Angle Bin



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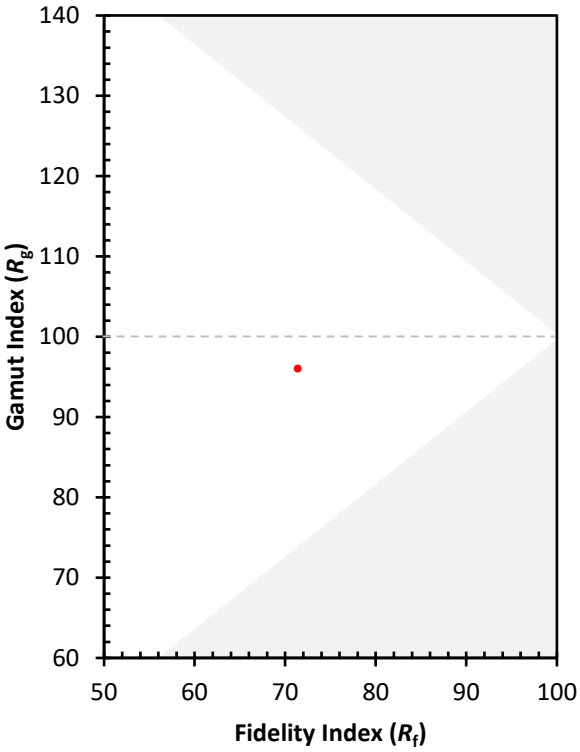
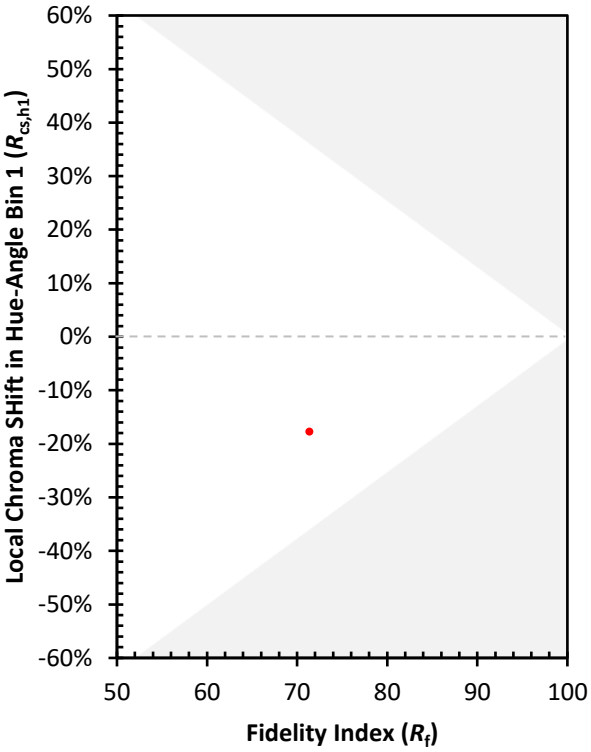
## Measure Comparisons

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