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: P1458951

Luminaire Tested: GLAN-SB8A-830-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: | P1458951 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 5/22/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | STREETWORKS |
| Catalog Number: | GLAN-SB8A-830-U-T4LG-HSS |
| Description: | GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 350mA 8xLight Square PACKAGE 80CRI 3000K FIXTURE w/ TYPE IV LOW GLARE WITH HOUSE SIDE SHIELD |
| Light Source: | (208) 3000K CCT, 80 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 23625.3 lumens |
| Efficiency: | N/A |
| Efficacy: | 104.0 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): | 227.1 |
| 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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REPORT NUMBER: P1458951
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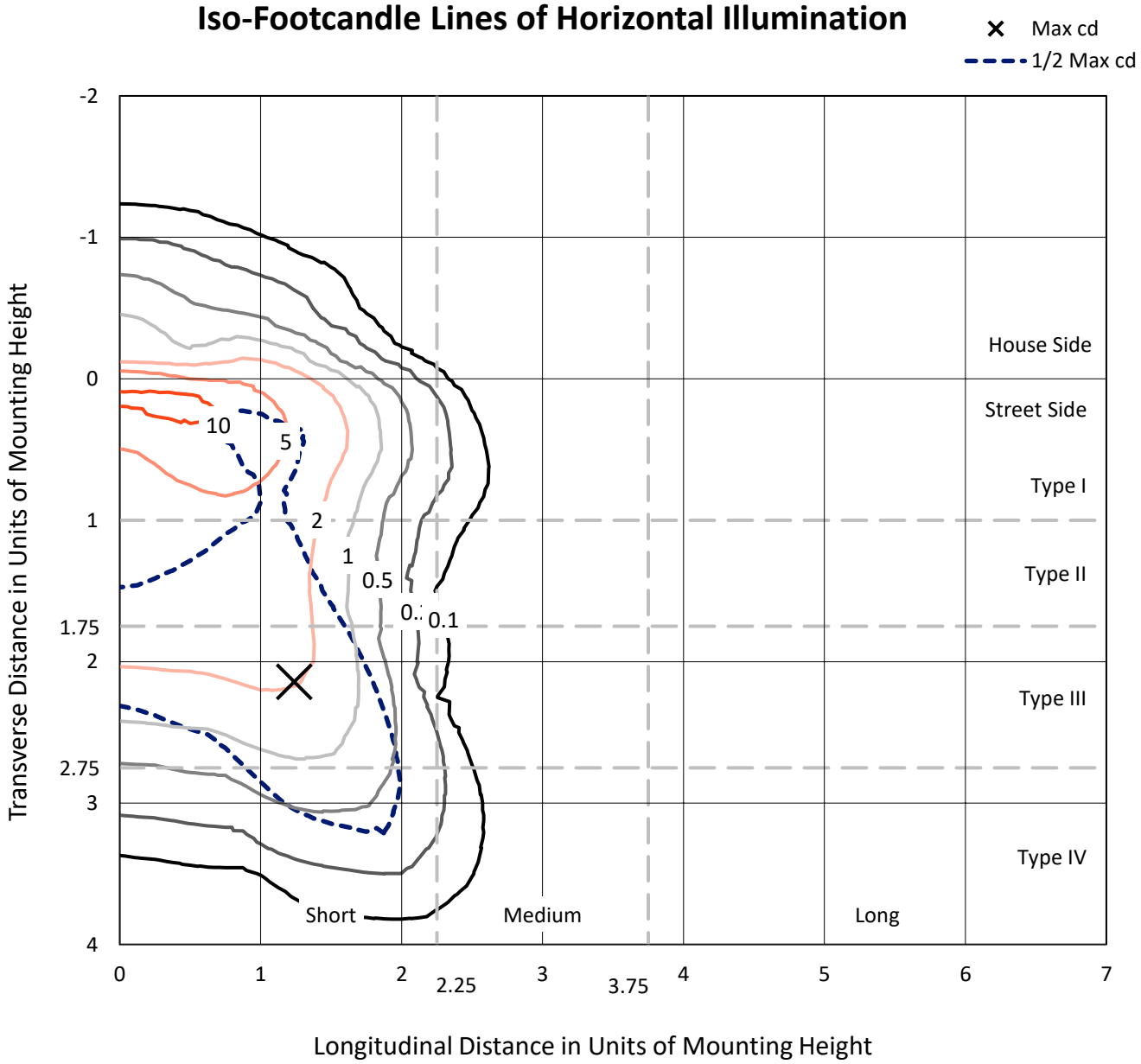
## Iso-Footcandle Lines of Horizontal Illumination




Based on 25 foot mounting height. Maximum calculated value = 11.4 fc
Type IV - Short - N/A

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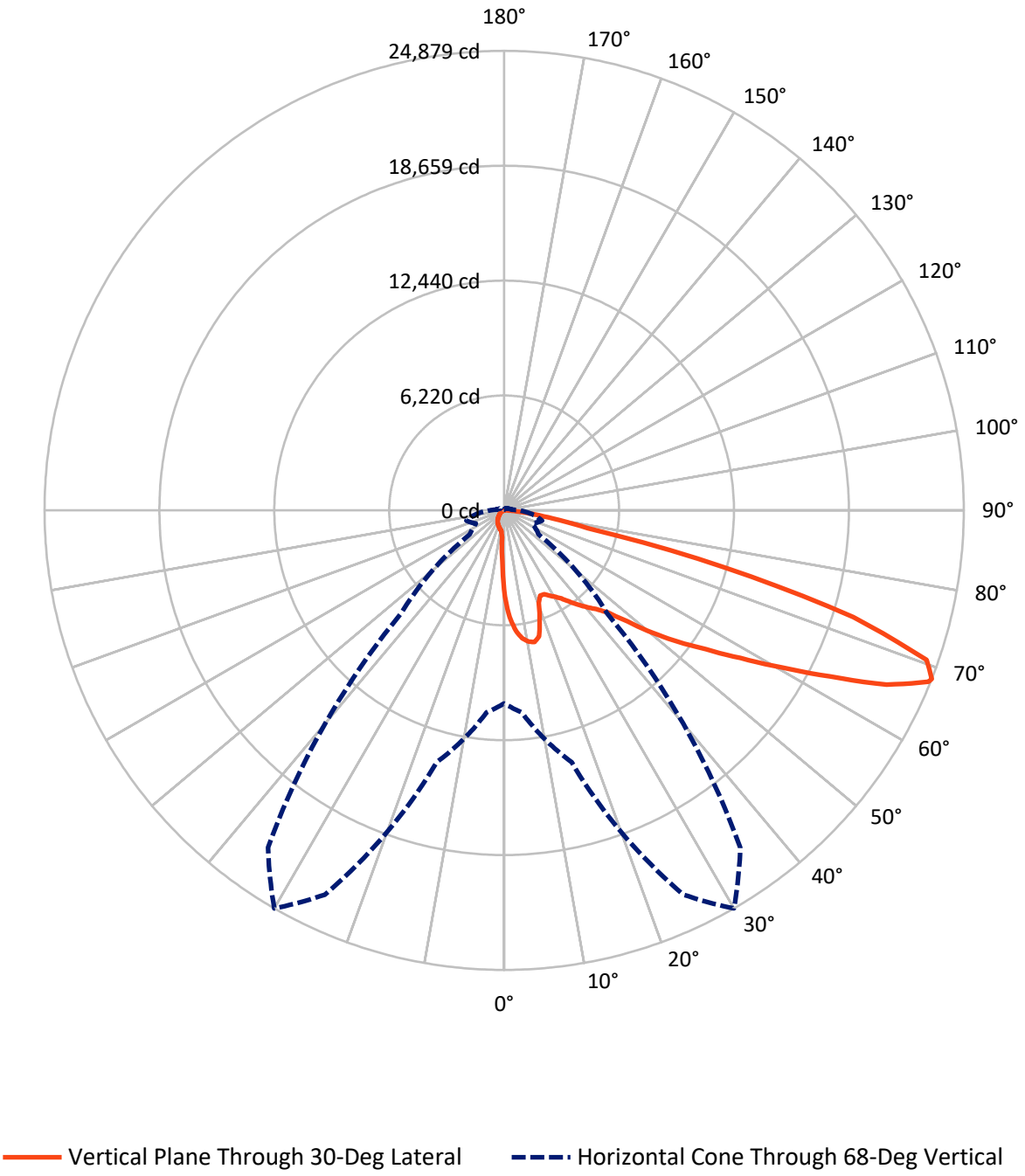
## Luminous Intensity Polar Plot



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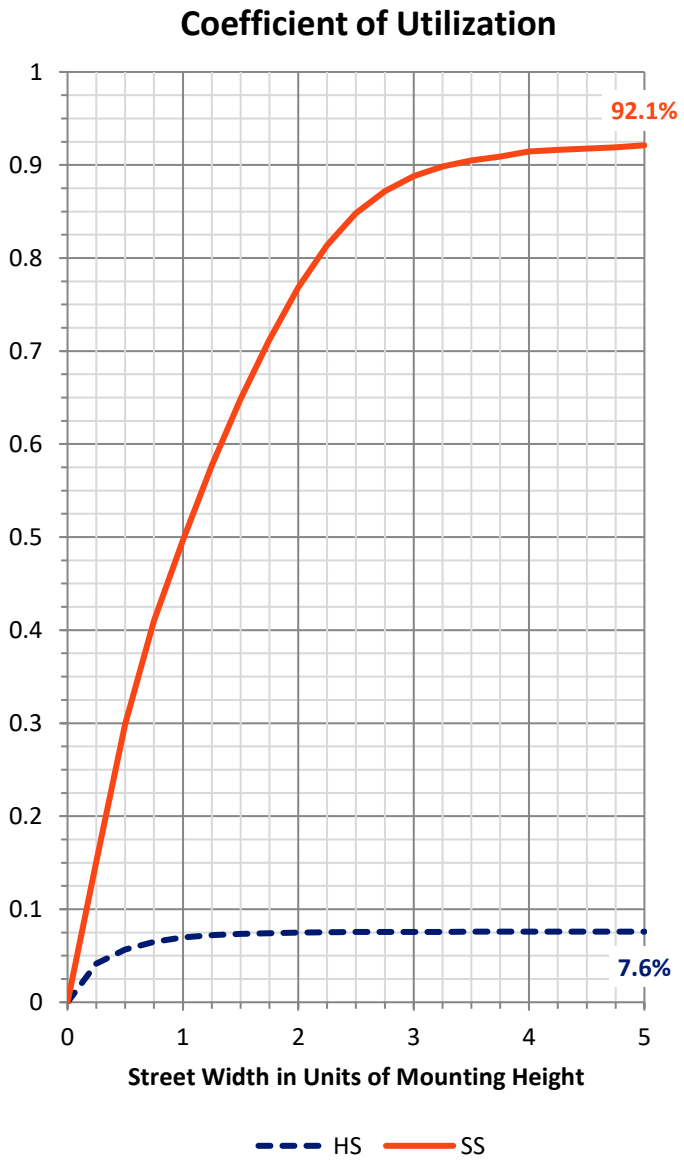
**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 1803.2 | 0.0 | 1803.2 |
| | % Fixture | 7.6 | 0.0 | 7.6 |
| **Street Side** | Lumens | 21822.1 | 0.0 | 21822.1 |
| | % Fixture | 92.4 | 0.0 | 92.4 |
| **Total** | Lumens | 23625.3 | 0.0 | 23625.3 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 402.0 | 1.7 |
| 10°-20° | 1147.6 | 4.9 |
| 20°-30° | 1803.5 | 7.6 |
| 30°-40° | 2828.6 | 12.0 |
| 40°-50° | 4227.9 | 17.9 |
| 50°-60° | 5624.5 | 23.8 |
| 60°-70° | 5437.2 | 23.0 |
| 70°-80° | 1954.5 | 8.3 |
| 80°-90° | 199.5 | 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° | 23625.3 | 100.0 |
| 0°-180° | 23625.3 | 100.0 |



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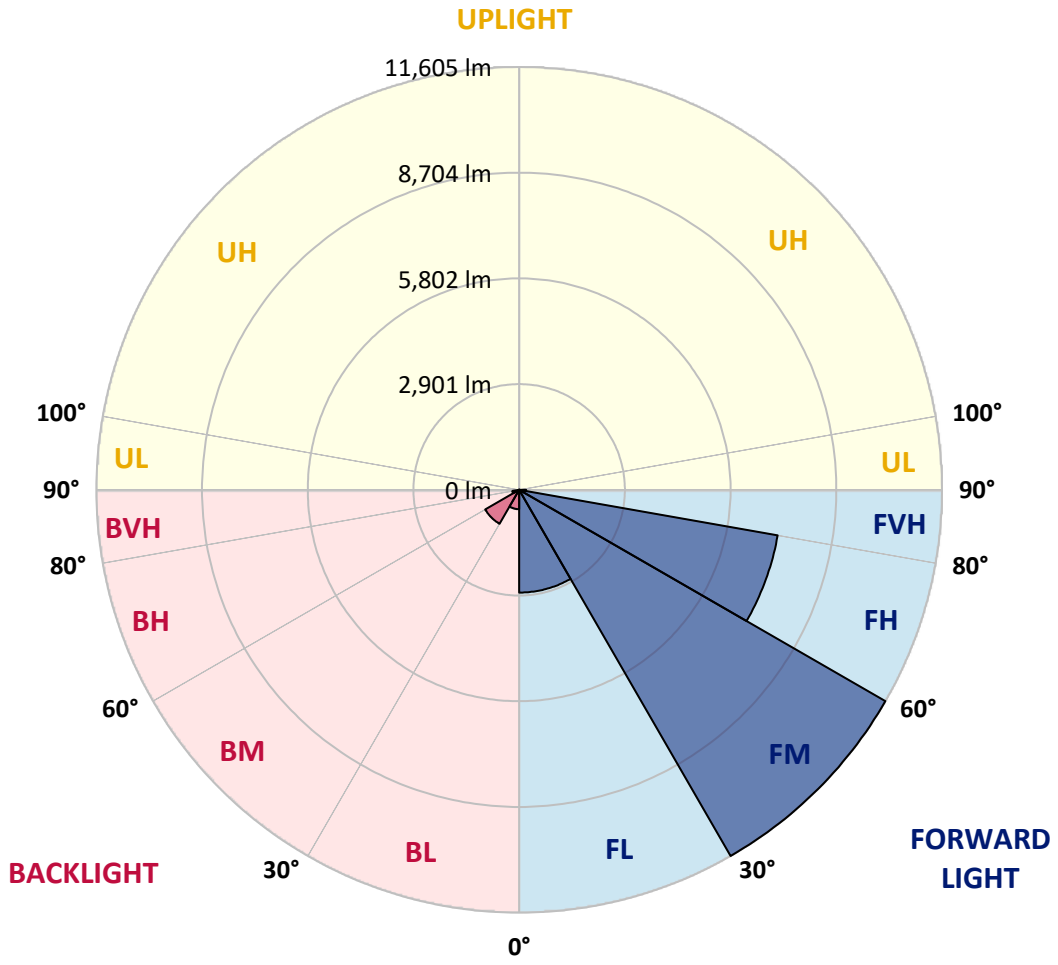
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 2820.9 | 11.9 | | | |
| FM | (30°-60°) | 11604.7 | 49.1 | | | |
| FH | (60°-80°) | 7204.1 | 30.5 | | | G3/7500 |
| FVH | (80°-90°) | 192.4 | 0.8 | | | G2/225 |
| BL | (0°-30°) | 532.2 | 2.3 | B2/1000 | | |
| BM | (30°-60°) | 1076.4 | 4.6 | B2/2500 | | |
| BH | (60°-80°) | 187.5 | 0.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 7.1 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

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



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REPORT NUMBER: P1458951
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 30° | 35° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 4658.6 | 4658.6 | 4658.6 | 4658.6 | *4658.6* | 4658.6 | 4658.6 | 4658.6 | 4658.6 | 4658.6 | 4658.6 |
| 2.5° | 5954.3 | 5954.3 | 5911.8 | 5855.1 | *5791.4* | 5770.2 | 5649.8 | 5479.9 | 5302.9 | 5097.6 | 4800.2 |
| 5° | 6718.9 | 6711.8 | 6626.9 | 6626.9 | *6541.9* | 6464.0 | 6343.7 | 6095.9 | 5812.7 | 5444.5 | 4927.7 |
| 7.5° | 7058.7 | 7072.9 | 7037.5 | 7037.5 | *6987.9* | 6931.3 | 6860.5 | 6619.8 | 6287.0 | 5791.4 | 5055.1 |
| 10° | 7179.1 | 7186.2 | 7186.2 | 7235.7 | *7221.6* | 7214.5 | 7207.4 | 7072.9 | 6726.0 | 6145.4 | 5189.6 |
| 12.5° | 6888.8 | 6924.2 | 7023.3 | 7242.8 | *7313.6* | 7391.5 | 7497.7 | 7455.2 | 7214.5 | 6591.5 | 5394.9 |
| 15° | 5954.3 | 5961.3 | 6237.5 | 6782.6 | *7072.9* | 7370.3 | 7780.9 | 7865.9 | 7710.1 | 7072.9 | 5607.3 |
| 17.5° | 4913.5 | 4934.7 | 5154.2 | 5763.1 | *6230.4* | 6917.1 | 7943.7 | 8290.7 | 8234.0 | 7547.3 | 5805.6 |
| 20° | 4481.6 | 4509.9 | 4616.1 | 4998.5 | *5352.5* | 5989.7 | 7780.9 | 8694.2 | 8715.5 | 8021.6 | 5989.7 |
| 22.5° | 4382.5 | 4403.7 | 4488.7 | 4786.1 | *5005.5* | 5430.3 | 7228.7 | 9012.8 | 9260.6 | 8566.8 | 6209.1 |
| 25° | 4354.2 | 4375.4 | 4502.9 | 4828.5 | *5033.9* | 5387.9 | 6726.0 | 9182.7 | 9904.9 | 9133.2 | 6421.5 |
| 27.5° | 4332.9 | 4361.3 | 4566.6 | 4984.3 | *5225.0* | 5564.9 | 6633.9 | 9218.1 | 10520.9 | 9735.0 | 6768.5 |
| 30° | 4361.3 | 4403.7 | 4672.8 | 5147.1 | *5423.3* | 5805.6 | 6853.4 | 9253.5 | 11200.5 | 10421.7 | 7207.4 |
| 32.5° | 4474.5 | 4509.9 | 4835.6 | 5366.6 | *5685.2* | 6117.1 | 7228.7 | 9465.9 | 11844.8 | 11122.6 | 7625.1 |
| 35° | 4602.0 | 4651.5 | 5040.9 | 5678.1 | *6060.5* | 6549.0 | 7738.4 | 9883.7 | 12460.8 | 11788.2 | 8057.0 |
| 37.5° | 4757.7 | 4814.4 | 5281.7 | 6032.1 | *6471.1* | 7023.3 | 8290.7 | 10464.2 | 13005.9 | 12333.3 | 8488.9 |
| 40° | 4970.1 | 5033.9 | 5557.8 | 6407.4 | *6881.7* | 7434.0 | 8835.8 | 11037.7 | 13423.6 | 12659.0 | 8772.1 |
| 42.5° | 5805.6 | 5890.5 | 6110.0 | 6775.5 | *7306.5* | 7872.9 | 9373.9 | 11582.8 | 13579.4 | 12765.2 | 8828.7 |
| 45° | 7363.2 | 7448.1 | 7391.5 | 7518.9 | *7872.9* | 8403.9 | 9961.5 | 12106.8 | 13600.6 | 12736.9 | 8800.4 |
| 47.5° | 8927.9 | 9027.0 | 8977.4 | 8906.6 | *8984.5* | 9239.4 | 10620.0 | 12439.5 | 13487.4 | 12722.7 | 8800.4 |
| 50° | 10421.7 | 10365.1 | 10372.2 | 10350.9 | *10421.7* | 10556.3 | 11257.2 | 12503.2 | 13459.0 | 12857.2 | 8878.3 |
| 52.5° | 11221.8 | 11250.1 | 11427.1 | 11689.0 | *11844.8* | 11979.3 | 11986.4 | 12602.4 | 13253.7 | 12630.7 | 8786.3 |
| 55° | 12007.6 | 12064.3 | 12474.9 | 12921.0 | *13267.9* | 13522.8 | 12715.6 | 12538.6 | 12028.9 | 11873.1 | 8304.8 |
| 57.5° | 12892.6 | 12970.5 | 13551.1 | 14471.5 | *15080.4* | 15214.9 | 13437.8 | 11349.2 | 10181.0 | 10789.9 | 7370.3 |
| 60° | 14110.4 | 14202.4 | 14974.2 | 16354.8 | *17261.0* | 16984.9 | 13494.4 | 9458.9 | 8085.3 | 8956.2 | 6081.7 |
| 62.5° | 15066.2 | 15250.3 | 16645.0 | 18797.3 | *19795.6* | 18917.7 | 12439.5 | 7249.9 | 5649.8 | 6294.1 | 4439.1 |
| 65° | 14046.7 | 14400.7 | 16673.4 | 21593.9 | *22748.0* | 21190.4 | 10782.8 | 4948.9 | 3186.0 | 4071.0 | 2839.1 |
| 67.5° | 11356.3 | 11851.9 | 14804.2 | 22953.3 | *24772.9* | 22386.9 | 8488.9 | 2626.7 | 1826.6 | 2364.7 | 1493.9 |
| 68° | *10450.1* | *10988.1* | *14117.5* | *22953.3* | *24879.0* | *22280.7* | *7880.0* | *2272.7* | *1685.0* | *2124.0* | *1295.6* |
| 70° | 7221.6 | 7603.9 | 10853.6 | 21664.7 | *24256.0* | 20312.5 | 5189.6 | 1302.7 | 1267.3 | 1458.5 | 856.7 |
| 72.5° | 3540.0 | 3950.6 | 5805.6 | 17169.0 | *19760.2* | 15611.4 | 2364.7 | 863.8 | 962.9 | 1069.1 | 672.6 |
| 75° | 1408.9 | 1493.9 | 2286.8 | 8467.7 | *12347.5* | 9961.5 | 1239.0 | 651.4 | 828.4 | 835.4 | 531.0 |
| 77.5° | 807.1 | 856.7 | 1267.3 | 3115.2 | *4630.3* | 4453.3 | 800.0 | 467.3 | 658.4 | 601.8 | 346.9 |
| 80° | 453.1 | 460.2 | 715.1 | 1642.6 | *2647.9* | 2371.8 | 545.2 | 339.8 | 502.7 | 424.8 | 233.6 |
| 82.5° | 226.6 | 254.9 | 453.1 | 906.2 | *1472.6* | 1508.0 | 290.3 | 240.7 | 403.6 | 304.4 | 191.2 |
| 85° | 162.8 | 177.0 | 325.7 | 502.7 | *679.7* | 1019.5 | 177.0 | 120.4 | 304.4 | 205.3 | 134.5 |
| 87.5° | 85.0 | 106.2 | 205.3 | 247.8 | *276.1* | 346.9 | 85.0 | 56.6 | 169.9 | 120.4 | 70.8 |
| 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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Scaled Data Report

REPORT NUMBER: P1458951
CATALOG NUMBER: GLAN-SB8A-830-U-T4LG-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 4658.6 | 4658.6 | 4658.6 | 4658.6 | 4658.6 | 4658.6 | 4658.6 | 4658.6 | 4658.6 | 4658.6 | 4658.6 |
| 2.5° | 4658.6 | 4495.8 | 4163.0 | 3773.6 | 3469.2 | 3157.7 | 2902.8 | 2662.1 | 2548.8 | 2534.6 | 2563.0 |
| 5° | 4637.4 | 4283.4 | 3525.8 | 2782.4 | 2173.6 | 1748.8 | 1515.1 | 1394.8 | 1331.0 | 1302.7 | 1309.8 |
| 7.5° | 4594.9 | 4056.8 | 2846.2 | 1883.3 | 1408.9 | 1224.8 | 1168.2 | 1147.0 | 1139.9 | 1139.9 | 1139.9 |
| 10° | 4552.4 | 3752.4 | 2180.6 | 1380.6 | 1154.0 | 1104.5 | 1090.3 | 1090.3 | 1083.2 | 1083.2 | 1090.3 |
| 12.5° | 4531.2 | 3469.2 | 1692.1 | 1154.0 | 1076.2 | 1054.9 | 1040.8 | 1033.7 | 1033.7 | 1033.7 | 1040.8 |
| 15° | 4481.6 | 3157.7 | 1366.4 | 1069.1 | 1026.6 | 998.3 | 991.2 | 984.1 | 984.1 | 984.1 | 984.1 |
| 17.5° | 4439.1 | 2853.2 | 1189.4 | 1012.4 | 977.0 | 948.7 | 941.6 | 934.6 | 934.6 | 941.6 | 941.6 |
| 20° | 4375.4 | 2563.0 | 1069.1 | 955.8 | 927.5 | 899.2 | 892.1 | 885.0 | 892.1 | 892.1 | 892.1 |
| 22.5° | 4297.5 | 2322.2 | 998.3 | 913.3 | 877.9 | 849.6 | 849.6 | 849.6 | 849.6 | 849.6 | 856.7 |
| 25° | 4248.0 | 2152.3 | 948.7 | 863.8 | 828.4 | 807.1 | 800.0 | 800.0 | 814.2 | 814.2 | 821.3 |
| 27.5° | 4325.9 | 2109.8 | 955.8 | 849.6 | 785.9 | 764.6 | 757.6 | 757.6 | 771.7 | 778.8 | 785.9 |
| 30° | 4559.5 | 2187.7 | 1040.8 | 892.1 | 757.6 | 722.2 | 715.1 | 715.1 | 736.3 | 743.4 | 750.5 |
| 32.5° | 4828.5 | 2350.6 | 1168.2 | 948.7 | 736.3 | 679.7 | 665.5 | 665.5 | 686.8 | 693.8 | 700.9 |
| 35° | 5196.7 | 2605.4 | 1338.1 | 998.3 | 750.5 | 637.2 | 608.9 | 608.9 | 623.0 | 637.2 | 644.3 |
| 37.5° | 5671.1 | 3023.2 | 1536.4 | 1033.7 | 750.5 | 587.6 | 552.2 | 545.2 | 559.3 | 559.3 | 566.4 |
| 40° | 6166.7 | 3568.3 | 1741.7 | 1033.7 | 715.1 | 538.1 | 502.7 | 481.4 | 488.5 | 481.4 | 488.5 |
| 42.5° | 6442.8 | 4007.3 | 1918.7 | 970.0 | 672.6 | 488.5 | 453.1 | 424.8 | 417.7 | 403.6 | 410.6 |
| 45° | 6598.5 | 4205.5 | 1869.1 | 899.2 | 630.1 | 453.1 | 410.6 | 375.2 | 361.1 | 339.8 | 339.8 |
| 47.5° | 6598.5 | 4226.7 | 1600.1 | 842.5 | 587.6 | 424.8 | 368.2 | 332.8 | 311.5 | 290.3 | 297.4 |
| 50° | 6520.7 | 4035.6 | 1267.3 | 785.9 | 538.1 | 396.5 | 332.8 | 304.4 | 276.1 | 262.0 | 262.0 |
| 52.5° | 6195.0 | 3412.6 | 970.0 | 715.1 | 481.4 | 361.1 | 297.4 | 269.0 | 240.7 | 233.6 | 233.6 |
| 55° | 5635.7 | 2506.3 | 785.9 | 644.3 | 431.9 | 332.8 | 269.0 | 247.8 | 219.5 | 205.3 | 205.3 |
| 57.5° | 4580.7 | 1713.4 | 651.4 | 580.6 | 382.3 | 297.4 | 240.7 | 219.5 | 184.1 | 169.9 | 169.9 |
| 60° | 3398.4 | 1118.6 | 552.2 | 509.8 | 325.7 | 269.0 | 212.4 | 184.1 | 155.8 | 141.6 | 134.5 |
| 62.5° | 2293.9 | 757.6 | 460.2 | 403.6 | 276.1 | 233.6 | 184.1 | 155.8 | 120.4 | 92.0 | 92.0 |
| 65° | 1430.2 | 587.6 | 382.3 | 318.6 | 240.7 | 205.3 | 155.8 | 120.4 | 85.0 | 63.7 | 56.6 |
| 67.5° | 821.3 | 474.4 | 311.5 | 247.8 | 205.3 | 162.8 | 120.4 | 99.1 | 70.8 | 49.6 | 42.5 |
| 68° | *757.6* | *453.1* | *290.3* | *233.6* | *191.2* | *155.8* | *113.3* | *92.0* | *63.7* | *42.5* | *42.5* |
| 70° | 616.0 | 403.6 | 247.8 | 191.2 | 162.8 | 127.4 | 99.1 | 77.9 | 49.6 | 28.3 | 28.3 |
| 72.5° | 545.2 | 339.8 | 212.4 | 148.7 | 113.3 | 106.2 | 77.9 | 56.6 | 35.4 | 21.2 | 14.2 |
| 75° | 446.0 | 269.0 | 169.9 | 113.3 | 77.9 | 77.9 | 56.6 | 35.4 | 14.2 | 0.0 | 0.0 |
| 77.5° | 290.3 | 198.2 | 134.5 | 70.8 | 42.5 | 49.6 | 35.4 | 14.2 | 0.0 | 0.0 | 0.0 |
| 80° | 191.2 | 148.7 | 92.0 | 35.4 | 21.2 | 21.2 | 7.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 134.5 | 99.1 | 56.6 | 14.2 | 7.1 | 7.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 85.0 | 42.5 | 21.2 | 7.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 35.4 | 14.2 | 7.1 | 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: SP1-2407-184-9

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-830-U-5WQ

Data in this report applies to families of products including GSS-SB1A-830-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

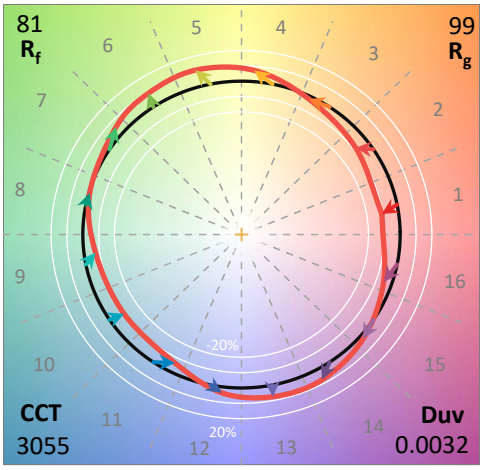
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-9 |
| 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-830-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 80 CRI 3000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 3055 |
| CIE u': | 0.2475 |
| CIE v': | 0.5247 |
| Duv: | 0.0032 |
| CIE x: | 0.4377 |
| CIE y: | 0.4124 |
| CIE z: | 0.1499 |
| Peak Wavelength (nm): | 604 |
| Dominant Wavelength (nm): | 581 |
| Purity: | 55.16339 |
| Rf: | 81.5 |
| Rg: | 99.2 |

| | |
|---|---|
| CRI (Ra): | 80.9 |
| R1: | 79.5 |
| R2: | 85.6 |
| R3: | 92.1 |
| R4: | 82.4 |
| R5: | 78.9 |
| R6: | 81.7 |
| R7: | 85.1 |
| R8: | 61.9 |
| R9: | 6.8 |
| R10: | 67.1 |
| R11: | 82.5 |
| R12: | 63.4 |
| R13: | 80.2 |
| R14: | 95.1 |
| R15: | 71.7 |




## Test Conditions

| | |
|---|---|
| Stabilization Time: | 20M |
| Operation Time: | 1H 20M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-9

| 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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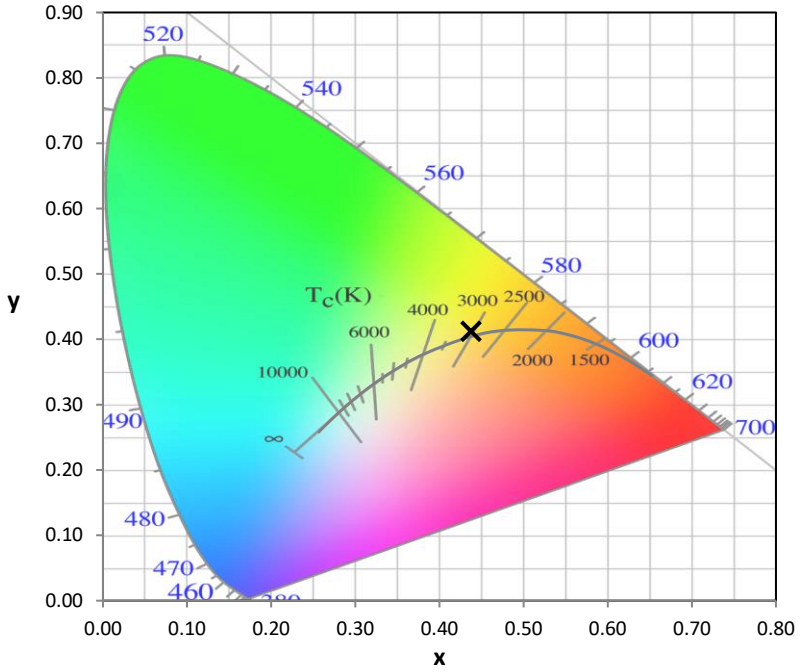
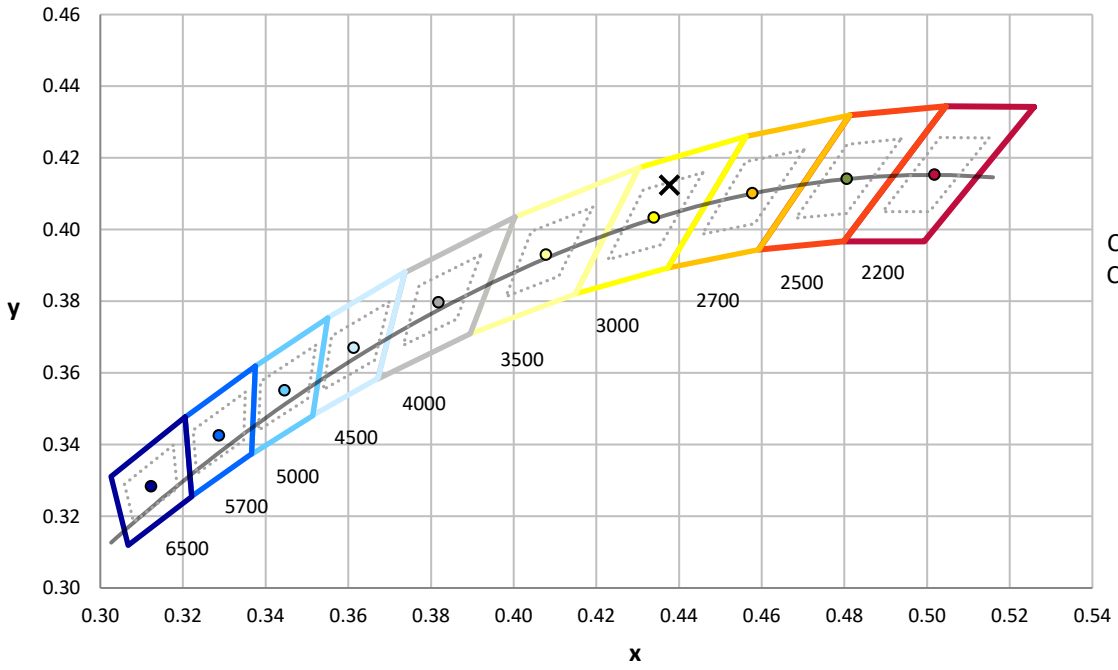
## CIE 1931 Chromaticity Diagram




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




CCT = 3055K
CIE x = 0.4377
CIE y = 0.4124
Duv = 0.0032

Point lies inside the ANSI 3000K 4-step quadrangle

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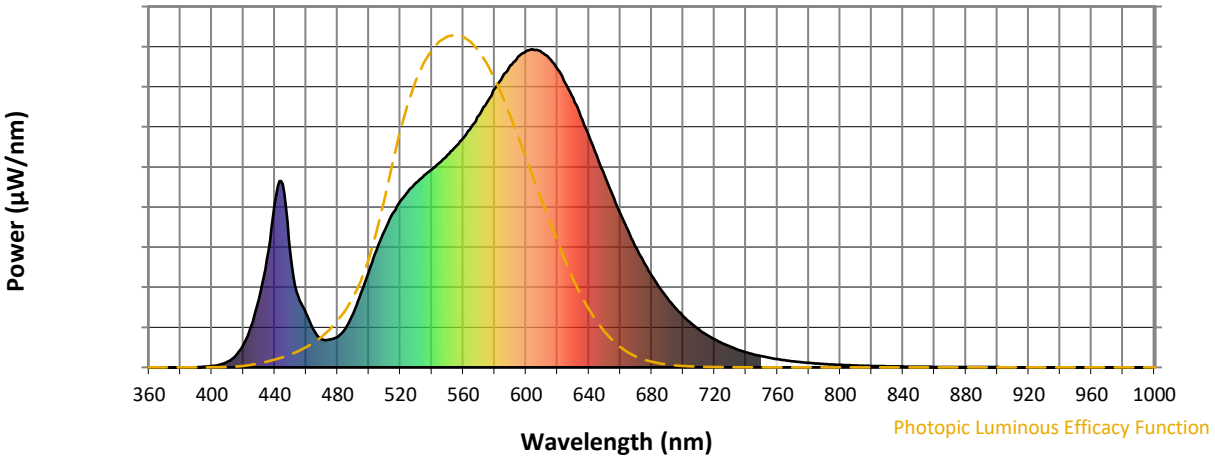
## Photopic Flux vs. Wavelength




## 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 | 170 | NR | 620 | 938 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 234 | NR | 625 | 894 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 302 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 371 | NR | 635 | 788 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 431 | NR | 640 | 728 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 482 | NR | 645 | 665 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 523 | NR | 650 | 603 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 553 | NR | 655 | 542 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 580 | NR | 660 | 484 | NR | 790 | 11 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 603 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 18 | NR | 540 | 622 | NR | 670 | 377 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 36 | NR | 545 | 644 | NR | 675 | 330 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 71 | NR | 550 | 668 | NR | 680 | 289 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 693 | NR | 685 | 250 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 215 | NR | 560 | 720 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 341 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 514 | NR | 570 | 792 | NR | 700 | 161 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 576 | NR | 575 | 832 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 358 | NR | 580 | 875 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 222 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 170 | NR | 590 | 950 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 115 | NR | 595 | 977 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 88 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 87 | NR | 605 | 997 | NR | 735 | 56 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 96 | NR | 610 | 990 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 122 | NR | 615 | 971 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

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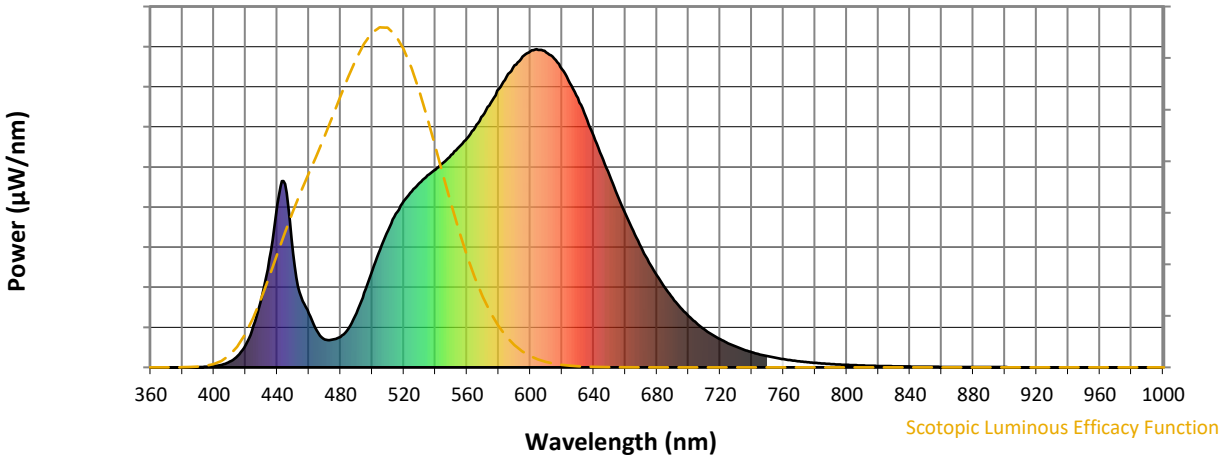
## Scotopic Flux vs. Wavelength




**Scotopic Lumens: NR** **S/P: 1.28**

| 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 | 170 | NR | 620 | 938 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 234 | NR | 625 | 894 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 302 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 371 | NR | 635 | 788 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 431 | NR | 640 | 728 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 482 | NR | 645 | 665 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 523 | NR | 650 | 603 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 553 | NR | 655 | 542 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 580 | NR | 660 | 484 | NR | 790 | 11 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 603 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 18 | NR | 540 | 622 | NR | 670 | 377 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 36 | NR | 545 | 644 | NR | 675 | 330 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 71 | NR | 550 | 668 | NR | 680 | 289 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 693 | NR | 685 | 250 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 215 | NR | 560 | 720 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 341 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 514 | NR | 570 | 792 | NR | 700 | 161 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 576 | NR | 575 | 832 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 358 | NR | 580 | 875 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 222 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 170 | NR | 590 | 950 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 115 | NR | 595 | 977 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 88 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 87 | NR | 605 | 997 | NR | 735 | 56 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 96 | NR | 610 | 990 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 122 | NR | 615 | 971 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

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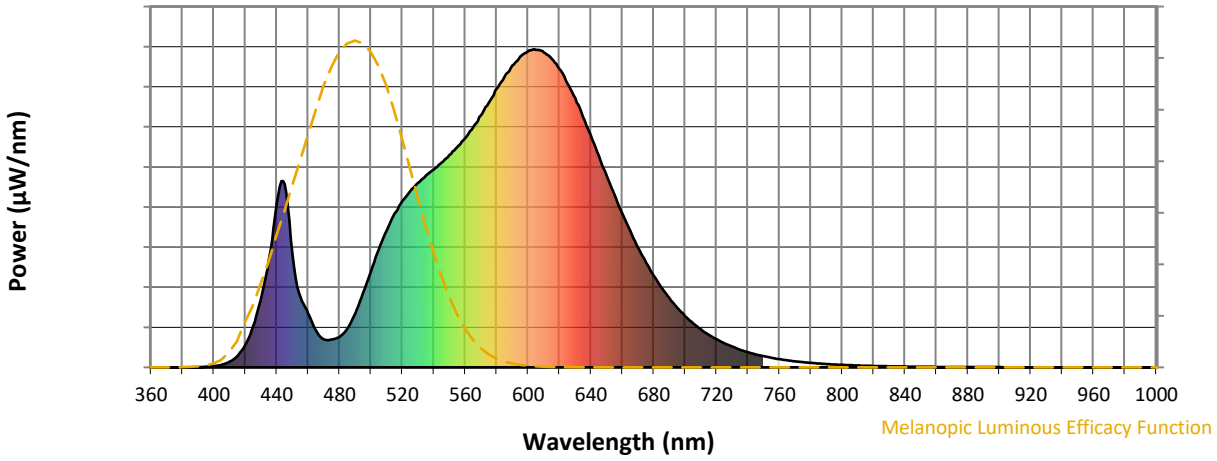
## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.33**

| 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 | 170 | NR | 620 | 938 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 234 | NR | 625 | 894 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 302 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 371 | NR | 635 | 788 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 431 | NR | 640 | 728 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 482 | NR | 645 | 665 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 523 | NR | 650 | 603 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 553 | NR | 655 | 542 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 580 | NR | 660 | 484 | NR | 790 | 11 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 603 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 18 | NR | 540 | 622 | NR | 670 | 377 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 36 | NR | 545 | 644 | NR | 675 | 330 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 71 | NR | 550 | 668 | NR | 680 | 289 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 693 | NR | 685 | 250 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 215 | NR | 560 | 720 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 341 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 514 | NR | 570 | 792 | NR | 700 | 161 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 576 | NR | 575 | 832 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 358 | NR | 580 | 875 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 222 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 170 | NR | 590 | 950 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 115 | NR | 595 | 977 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 88 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 87 | NR | 605 | 997 | NR | 735 | 56 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 96 | NR | 610 | 990 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 122 | NR | 615 | 971 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

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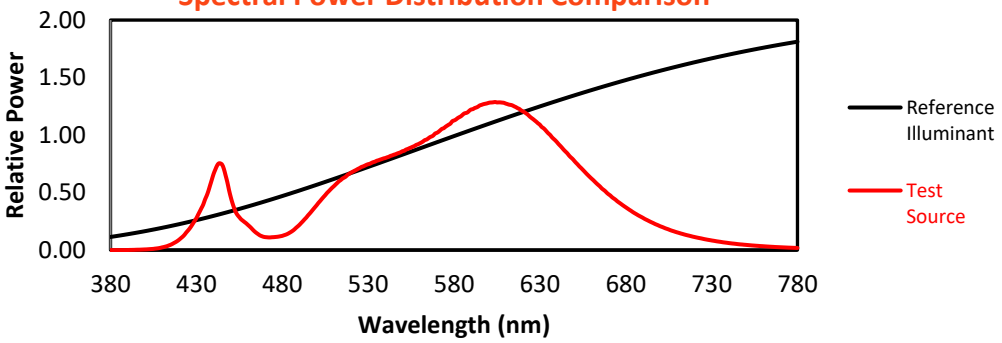
# TM-30-18

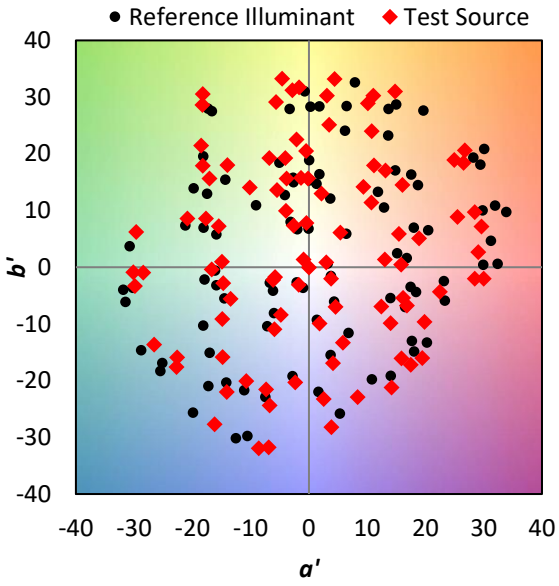
## Summary

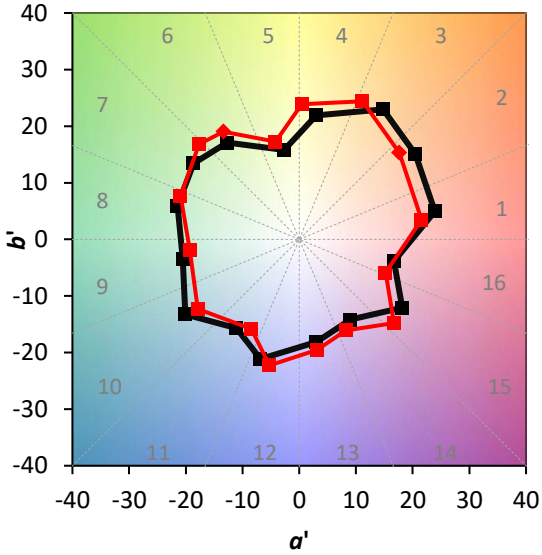
$R_f$ = 81.5
$R_g$ = 99.2
CIE $R_a$ = 80.9
$R_9$ = 6.8

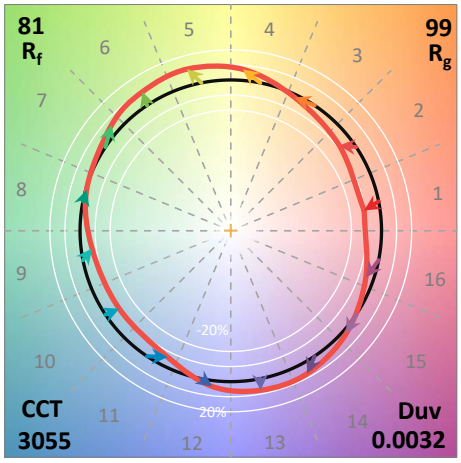
## Spectral Power Distribution Comparison

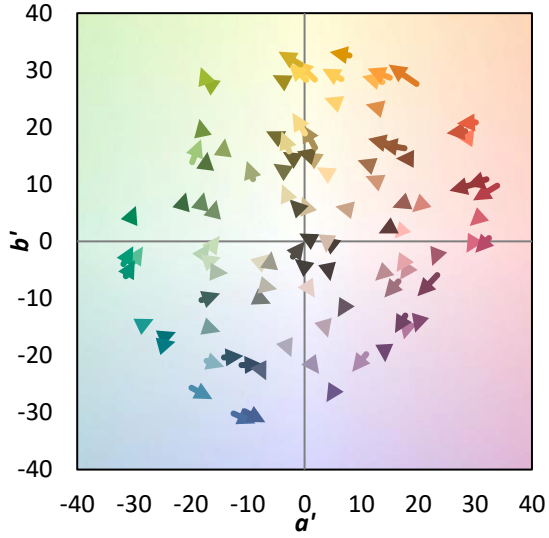



## Color Vector Graphics



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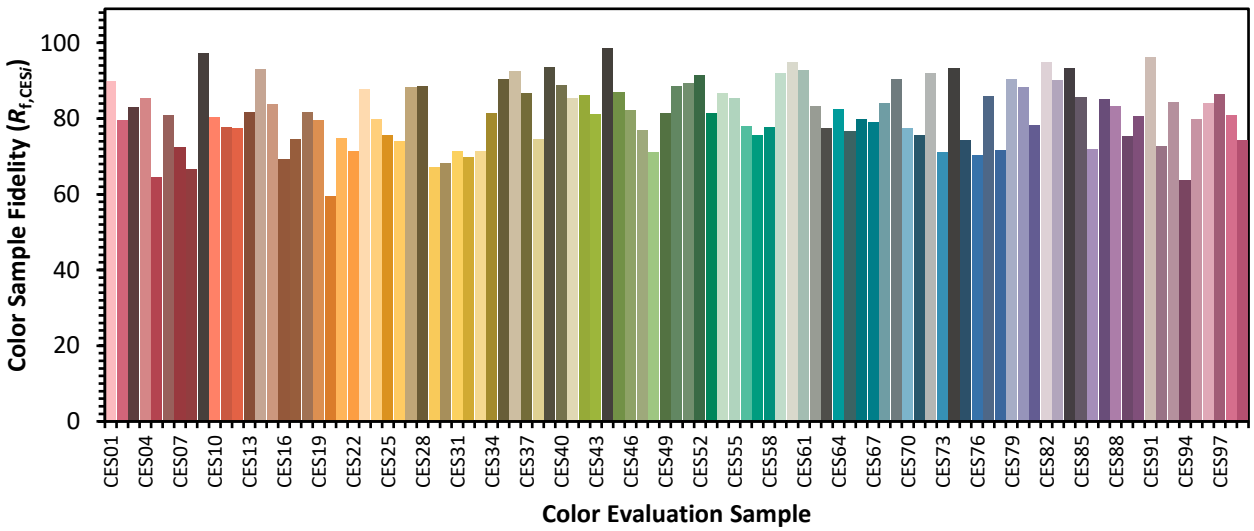
## Individual Sample Fidelity Index ($R_{f,i}$)

| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 74 | CES51 = 89 | CES76 = 70 |
| CES02 = 63 | CES27 = 88 | CES52 = 91 | CES77 = 86 |
| CES03 = 31 | CES28 = 89 | CES53 = 81 | CES78 = 72 |
| CES04 = 70 | CES29 = 67 | CES54 = 87 | CES79 = 90 |
| CES05 = 50 | CES30 = 68 | CES55 = 85 | CES80 = 88 |
| CES06 = 51 | CES31 = 71 | CES56 = 78 | CES81 = 78 |
| CES07 = 42 | CES32 = 70 | CES57 = 76 | CES82 = 95 |
| CES08 = 41 | CES33 = 71 | CES58 = 78 | CES83 = 90 |
| CES09 = 29 | CES34 = 82 | CES59 = 92 | CES84 = 93 |
| CES10 = 76 | CES35 = 90 | CES60 = 95 | CES85 = 86 |
| CES11 = 59 | CES36 = 93 | CES61 = 93 | CES86 = 72 |
| CES12 = 65 | CES37 = 87 | CES62 = 83 | CES87 = 85 |
| CES13 = 43 | CES38 = 75 | CES63 = 77 | CES88 = 83 |
| CES14 = 74 | CES39 = 94 | CES64 = 83 | CES89 = 75 |
| CES15 = 71 | CES40 = 89 | CES65 = 77 | CES90 = 81 |
| CES16 = 47 | CES41 = 85 | CES66 = 80 | CES91 = 96 |
| CES17 = 50 | CES42 = 86 | CES67 = 79 | CES92 = 73 |
| CES18 = 56 | CES43 = 81 | CES68 = 84 | CES93 = 84 |
| CES19 = 72 | CES44 = 99 | CES69 = 90 | CES94 = 64 |
| CES20 = 66 | CES45 = 87 | CES70 = 77 | CES95 = 80 |
| CES21 = 87 | CES46 = 82 | CES71 = 76 | CES96 = 84 |
| CES22 = 79 | CES47 = 77 | CES72 = 92 | CES97 = 87 |
| CES23 = 92 | CES48 = 71 | CES73 = 71 | CES98 = 81 |
| CES24 = 91 | CES49 = 81 | CES74 = 93 | CES99 = 74 |
| CES25 = 72 | CES50 = 89 | CES75 = 74 | |



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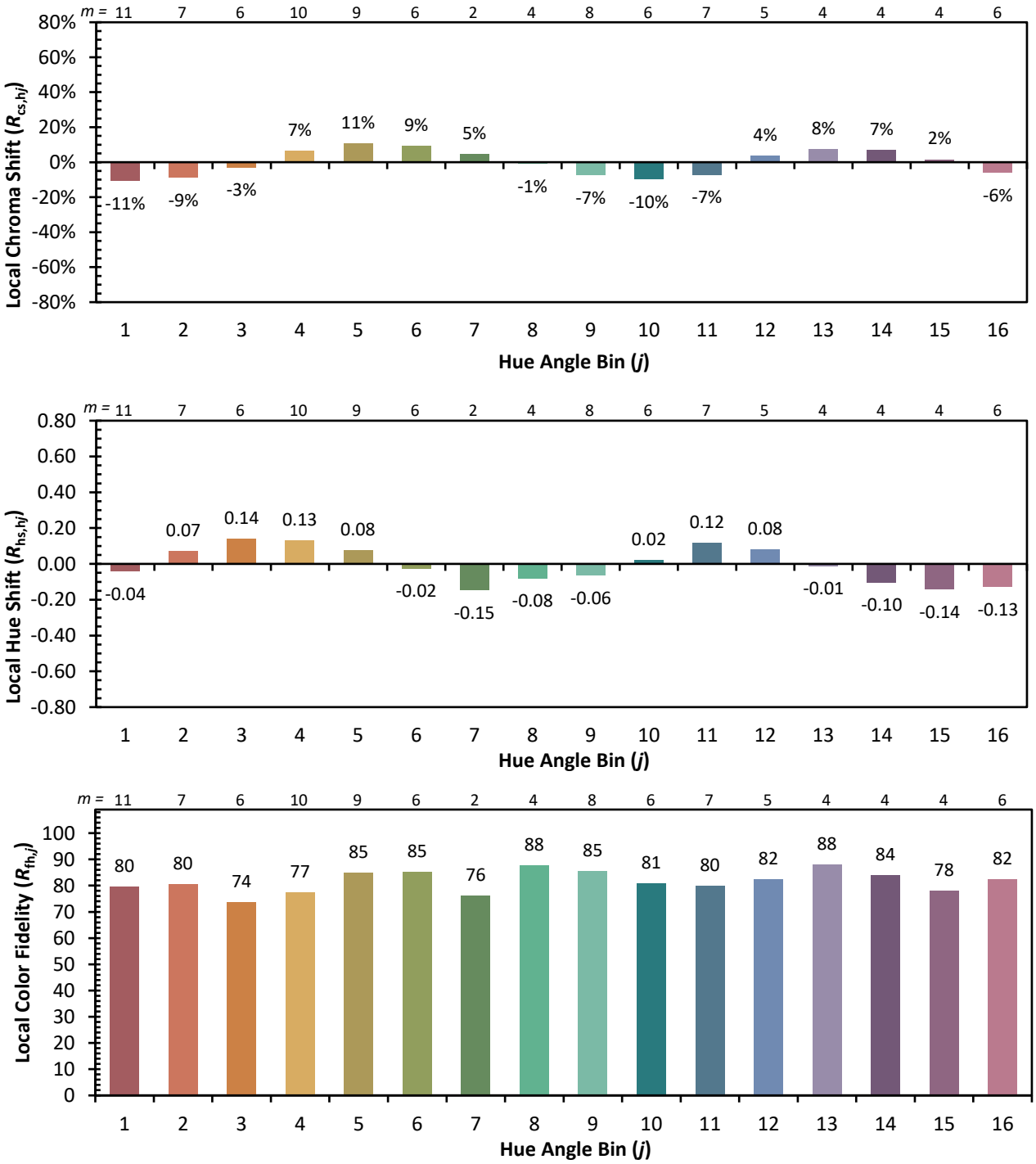
## Color Rendition by Hue-Angle Bin



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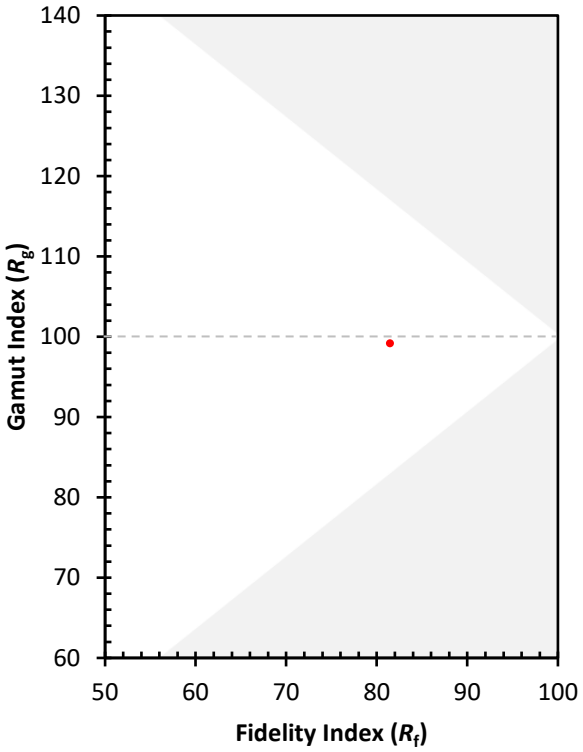
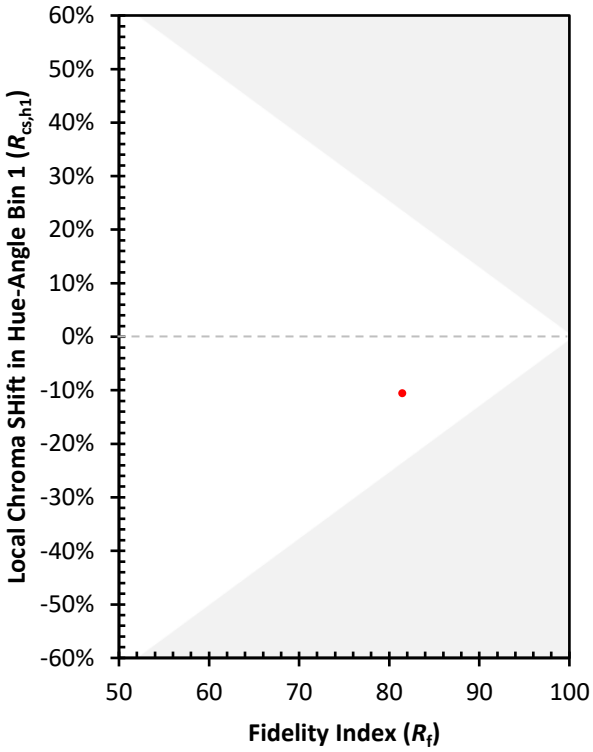
## Measure Comparisons




(END OF REPORT)