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

Cooper Lighting Solutions Photometric Lab
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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: McGRAW-EDISON

Report Number: P1501046

Luminaire Tested: GSS-SB3B-735-U-T3LG

Issue Date: 07/20/2026

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: | P1501046 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 7/20/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB3B-735-U-T3LG |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 3SQUARE 109W 70CRI 3500K FIXTURE w/ TYPE III LOW GLARE DISTRIBUTION FIXTURE |
| Light Source: | (78) 3500K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 16114.2 lumens |
| Efficiency: | N/A |
| Efficacy: | 147.8 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 0.5' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B3 - U0 - G2 |

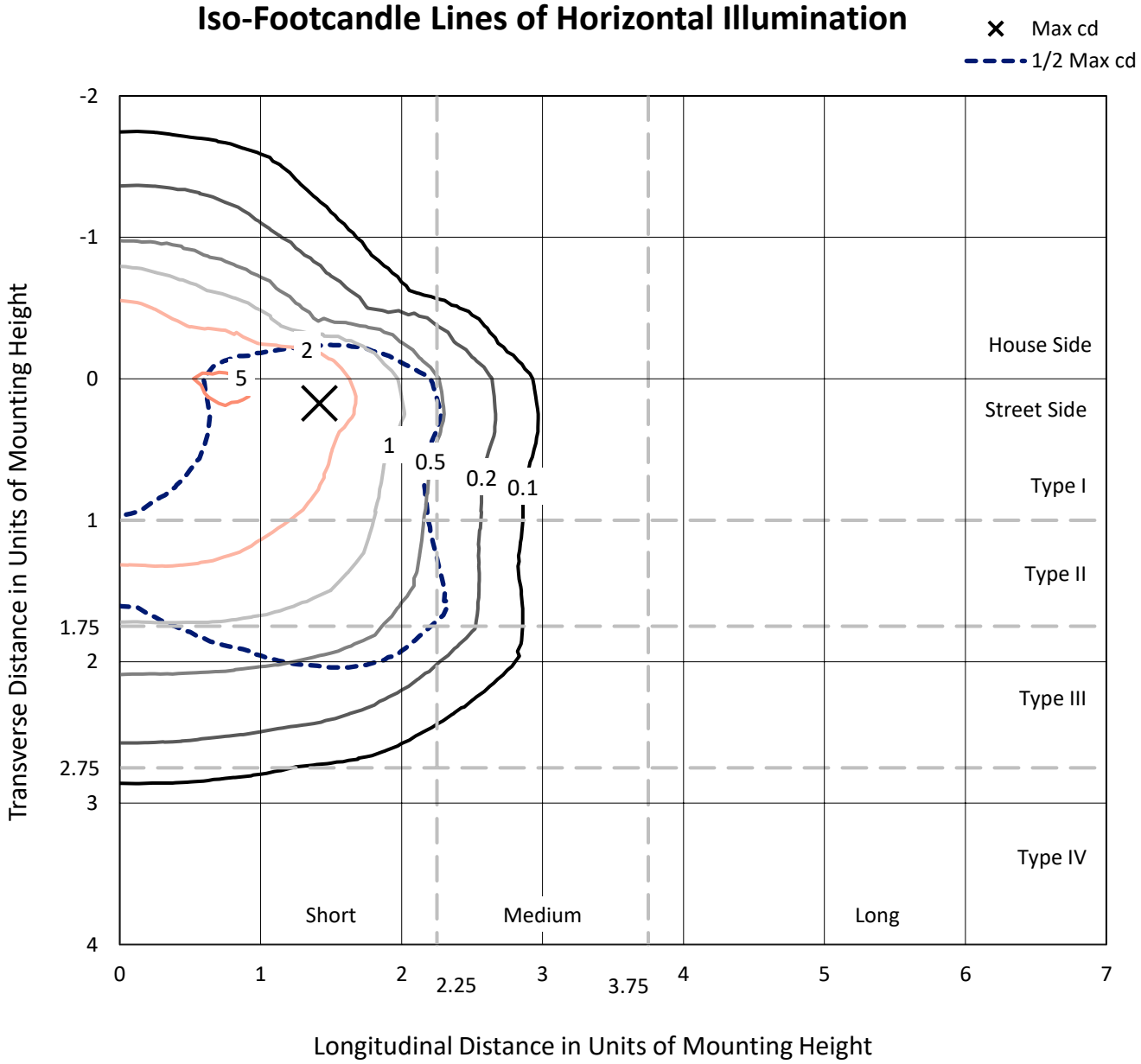
| | |
|---|---|
| Input Watts (W): | 109 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 8.7% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1501046
CATALOG NUMBER: GSS-SB3B-735-U-T3LG

## Iso-Footcandle Lines of Horizontal Illumination



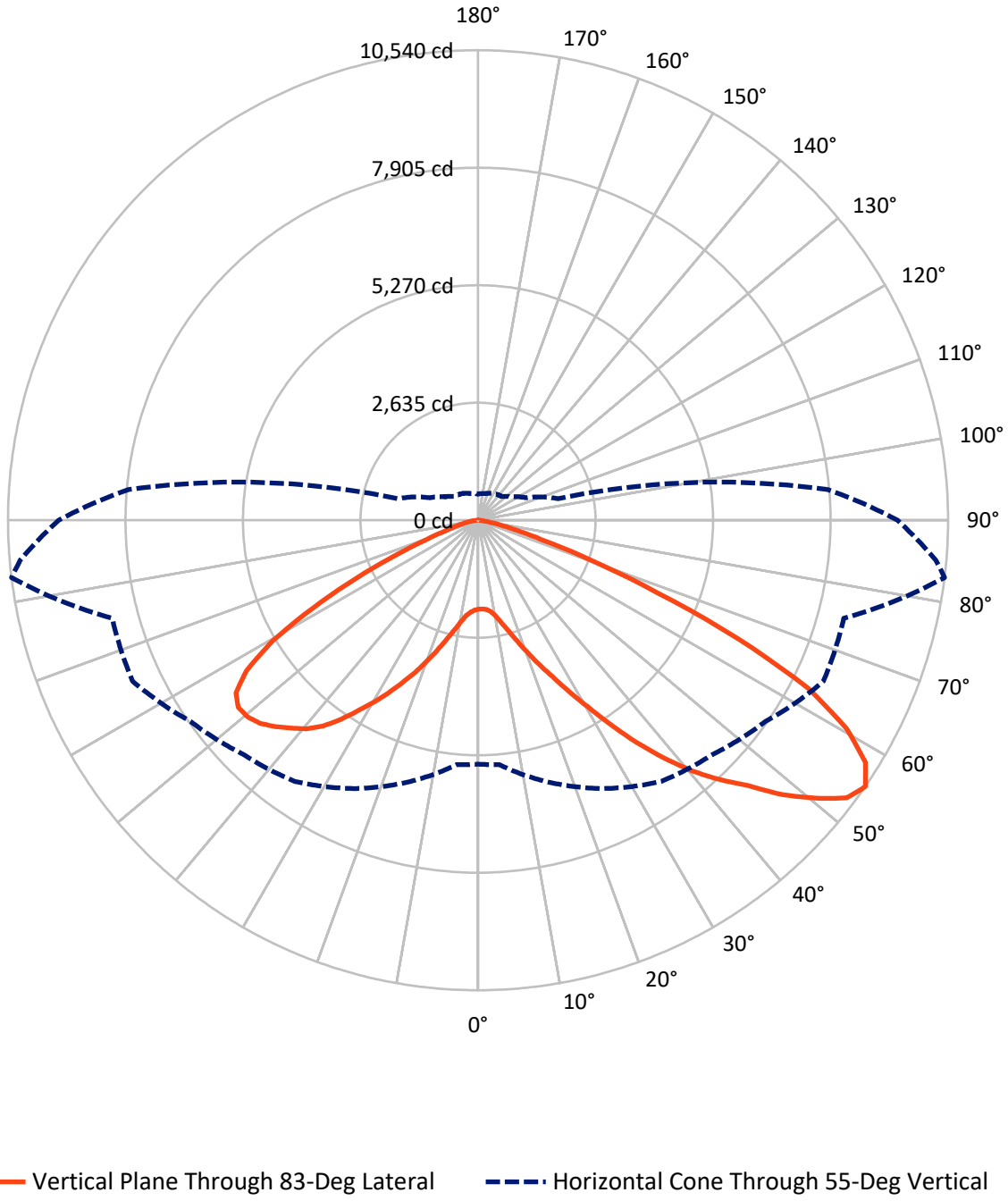

Based on 25 foot mounting height. Maximum calculated value = 5.4 fc
Type III - Short - N/A

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REPORT NUMBER: P1501046
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## Luminous Intensity Polar Plot



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Scaled Data Report

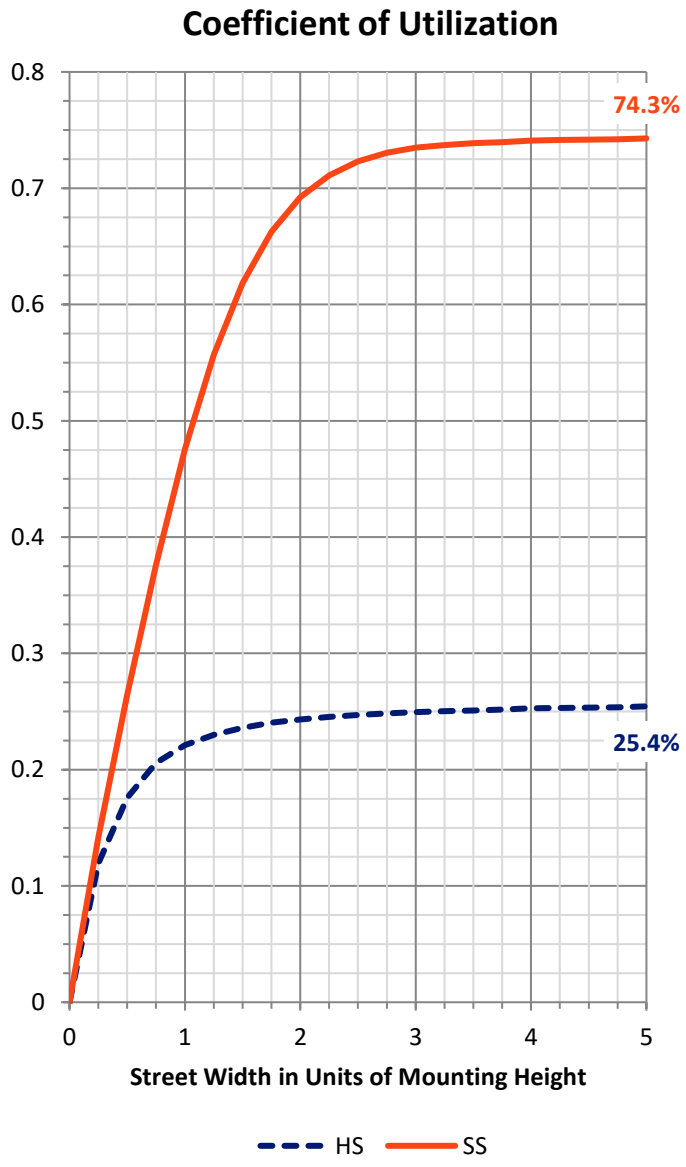
REPORT NUMBER: P1501046
CATALOG NUMBER: GSS-SB3B-735-U-T3LG

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 4135.2 | 0.0 | 4135.2 |
| | % Fixture | 25.7 | 0.0 | 25.7 |
| **Street Side** | Lumens | 11979.0 | 0.0 | 11979.0 |
| | % Fixture | 74.3 | 0.0 | 74.3 |
| **Total** | Lumens | 16114.2 | 0.0 | 16114.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 192.7 | 1.2 |
| 10°-20° | 627.9 | 3.9 |
| 20°-30° | 1257.0 | 7.8 |
| 30°-40° | 2236.4 | 13.9 |
| 40°-50° | 3370.2 | 20.9 |
| 50°-60° | 4106.8 | 25.5 |
| 60°-70° | 3320.9 | 20.6 |
| 70°-80° | 909.6 | 5.6 |
| 80°-90° | 92.6 | 0.6 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-90° | 16114.2 | 100.0 |
| 0°-180° | 16114.2 | 100.0 |



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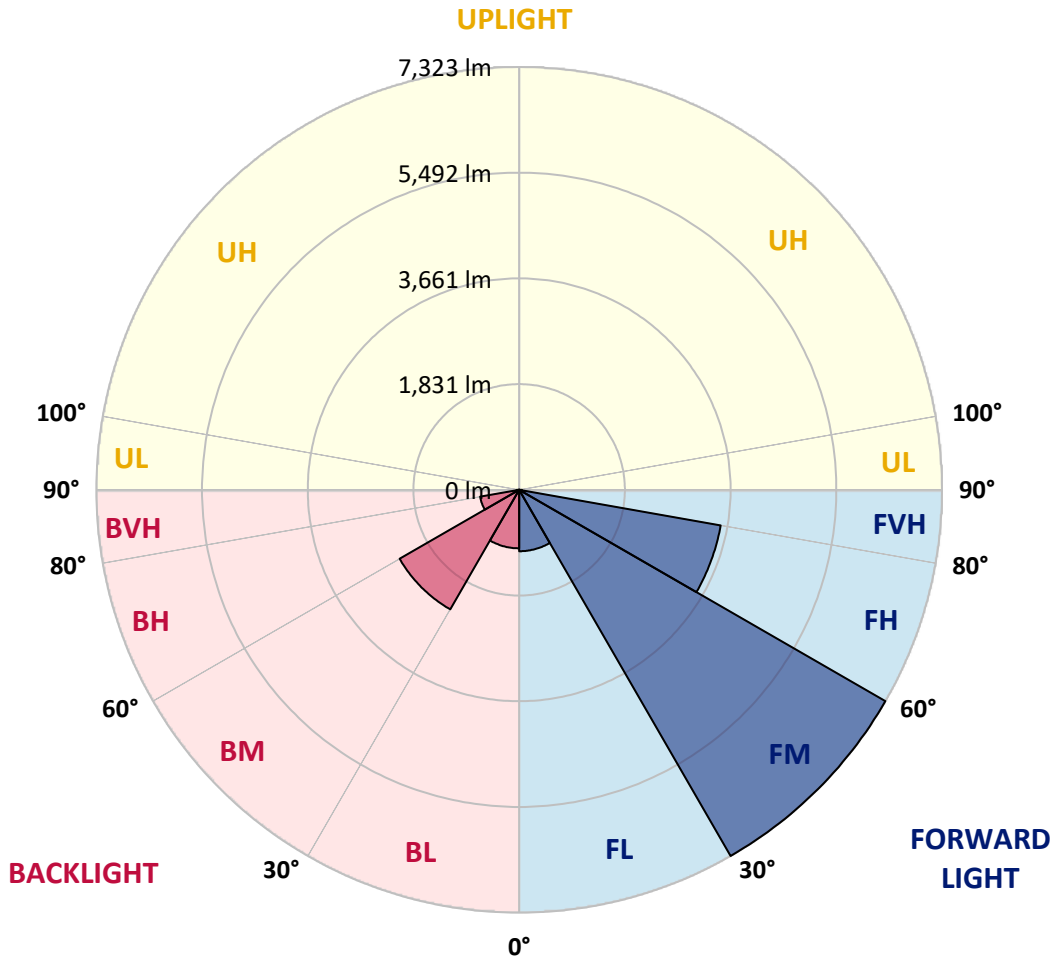
Scaled Data Report

REPORT NUMBER: P1501046
CATALOG NUMBER: GSS-SB3B-735-U-T3LG

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1064.0 | 6.6 | | | |
| FM | (30°-60°) | 7322.8 | 45.4 | | | |
| FH | (60°-80°) | 3543.9 | 22.0 | | | G2/5000 |
| FVH | (80°-90°) | 48.3 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 1013.7 | 6.3 | B3/2500 | | |
| BM | (30°-60°) | 2390.6 | 14.8 | B2/2500 | | |
| BH | (60°-80°) | 686.6 | 4.3 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 44.4 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B3-U0-G2**
Type III Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 83° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1994.8 | 1994.8 | 1994.8 | 1994.8 | 1994.8 | 1994.8 | 1994.8 | 1994.8 | 1994.8 | *1994.8* | 1994.8 |
| 2.5° | 1937.5 | 1933.9 | 1930.3 | 1926.7 | 1933.9 | 1944.6 | 1955.4 | 1962.5 | 1980.4 | *1994.8* | 1987.6 |
| 5° | 1783.5 | 1776.3 | 1783.5 | 1812.1 | 1837.2 | 1880.2 | 1923.1 | 1951.8 | 1991.2 | *2009.1* | 2016.3 |
| 7.5° | 1647.4 | 1640.2 | 1647.4 | 1683.2 | 1726.2 | 1794.2 | 1883.8 | 1955.4 | 2027.0 | *2070.0* | 2077.1 |
| 10° | 1647.4 | 1651.0 | 1651.0 | 1665.3 | 1686.8 | 1754.8 | 1862.3 | 1998.4 | 2123.7 | *2184.6* | 2198.9 |
| 12.5° | 1701.1 | 1701.1 | 1701.1 | 1719.0 | 1733.3 | 1787.1 | 1908.8 | 2077.1 | 2277.7 | *2367.2* | 2378.0 |
| 15° | 1772.7 | 1769.2 | 1779.9 | 1790.6 | 1815.7 | 1869.4 | 1991.2 | 2191.7 | 2446.0 | *2582.1* | 2596.4 |
| 17.5° | 1873.0 | 1865.8 | 1876.6 | 1901.7 | 1937.5 | 1998.4 | 2120.1 | 2349.3 | 2678.8 | *2850.7* | 2872.2 |
| 20° | 1984.0 | 1980.4 | 2001.9 | 2041.3 | 2091.5 | 2166.7 | 2306.3 | 2539.1 | 2943.8 | *3162.3* | 3201.7 |
| 22.5° | 2116.5 | 2109.4 | 2148.8 | 2220.4 | 2288.4 | 2374.4 | 2542.7 | 2786.2 | 3248.2 | *3509.7* | 3549.0 |
| 25° | 2266.9 | 2266.9 | 2320.7 | 2406.6 | 2510.5 | 2664.5 | 2832.8 | 3101.4 | 3606.3 | *3885.7* | 3946.6 |
| 27.5° | 2514.1 | 2532.0 | 2553.5 | 2643.0 | 2789.8 | 2997.5 | 3176.6 | 3481.0 | 3996.7 | *4347.7* | 4369.2 |
| 30° | 2915.2 | 2908.0 | 2943.8 | 3004.7 | 3126.5 | 3344.9 | 3613.5 | 3939.4 | 4490.9 | *4859.8* | 4913.5 |
| 32.5° | 3276.9 | 3287.6 | 3337.8 | 3452.4 | 3599.2 | 3785.4 | 4107.7 | 4508.8 | 5028.1 | *5454.3* | 5479.4 |
| 35° | 3642.2 | 3649.3 | 3746.0 | 3917.9 | 4136.4 | 4344.1 | 4695.1 | 5089.0 | 5611.9 | *6116.8* | 6184.9 |
| 37.5° | 4154.3 | 4147.1 | 4243.8 | 4390.6 | 4684.3 | 5006.6 | 5289.5 | 5665.6 | 6170.5 | *6761.5* | 6840.2 |
| 40° | 4537.5 | 4576.9 | 4759.5 | 4945.7 | 5221.5 | 5554.6 | 5794.5 | 6149.1 | 6628.9 | *7391.8* | 7463.4 |
| 42.5° | 4931.4 | 4963.7 | 5207.2 | 5486.5 | 5776.6 | 6002.2 | 6188.5 | 6517.9 | 6994.2 | *7950.4* | 7989.8 |
| 45° | 5257.3 | 5300.3 | 5579.6 | 5934.2 | 6235.0 | 6464.2 | 6528.7 | 6836.7 | 7366.7 | *8487.6* | 8548.5 |
| 47.5° | 5465.0 | 5511.6 | 5841.1 | 6256.5 | 6564.5 | 6808.0 | 6786.5 | 7219.9 | 7764.2 | *9200.3* | 9178.8 |
| 50° | 5608.3 | 5636.9 | 5995.1 | 6439.1 | 6840.2 | 7001.4 | 7094.5 | 7653.2 | 8172.5 | *9798.4* | 9719.6 |
| 52.5° | 5712.1 | 5758.7 | 6084.6 | 6571.6 | 6994.2 | 7205.5 | 7456.2 | 8154.6 | 8455.4 | *10346.3* | 10170.8 |
| 55° | *5468.6* | *5504.4* | *6077.4* | *6639.7* | *7151.8* | *7431.2* | *7868.1* | *8544.9* | *8491.2* | *10539.7* | *10303.3* |
| 57.5° | 5217.9 | 5246.6 | 5776.6 | 6621.8 | 7323.7 | 7710.5 | 8337.2 | 8595.1 | 8172.5 | *10242.5* | 9945.2 |
| 60° | 4902.8 | 4924.3 | 5454.3 | 6432.0 | 7327.3 | 7929.0 | 8577.2 | 8229.8 | 7581.6 | *9494.0* | 9211.0 |
| 62.5° | 4322.6 | 4322.6 | 4906.4 | 5919.9 | 7148.2 | 8040.0 | 8512.7 | 7538.6 | 6790.1 | *8315.7* | 7925.4 |
| 65° | 3749.6 | 3724.5 | 4118.5 | 5006.6 | 6671.9 | 8011.3 | 8029.2 | 6664.8 | 5561.7 | *6414.1* | 6109.7 |
| 67.5° | 3126.5 | 3130.0 | 3362.8 | 4064.8 | 5404.2 | 7413.2 | 7008.6 | 5149.9 | 3874.9 | *4319.0* | 4161.4 |
| 70° | 2116.5 | 2170.3 | 2406.6 | 2951.0 | 4075.5 | 5253.7 | 5579.6 | 3488.2 | 2417.4 | *2682.4* | 2553.5 |
| 72.5° | 805.8 | 816.5 | 1092.3 | 1547.1 | 2574.9 | 3158.7 | 3892.9 | 1951.8 | 1414.6 | *1479.1* | 1486.2 |
| 75° | 340.2 | 354.5 | 465.6 | 651.8 | 1142.4 | 1722.6 | 2048.5 | 988.4 | 859.5 | *884.6* | 877.4 |
| 77.5° | 229.2 | 236.4 | 282.9 | 351.0 | 515.7 | 691.2 | 855.9 | 558.7 | 526.4 | *494.2* | 479.9 |
| 80° | 171.9 | 171.9 | 204.1 | 236.4 | 290.1 | 354.5 | 372.5 | 282.9 | 315.2 | *261.4* | 254.3 |
| 82.5° | 111.0 | 118.2 | 128.9 | 139.7 | 164.7 | 175.5 | 150.4 | 154.0 | 182.6 | *136.1* | 128.9 |
| 85° | 53.7 | 57.3 | 60.9 | 64.5 | 64.5 | 60.9 | 53.7 | 68.0 | 93.1 | *57.3* | 53.7 |
| 87.5° | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 3.6 | 3.6 | 3.6 | *3.6* | 3.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 |

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Scaled Data Report

REPORT NUMBER: P1501046
CATALOG NUMBER: GSS-SB3B-735-U-T3LG

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1994.8 | 1994.8 | 1994.8 | 1994.8 | 1994.8 | 1994.8 | 1994.8 | 1994.8 | 1994.8 | 1994.8 | 1994.8 |
| 2.5° | 1998.4 | 2012.7 | 2023.4 | 2030.6 | 2048.5 | 2044.9 | 2055.7 | 2062.8 | 2070.0 | 2080.7 | 2066.4 |
| 5° | 2034.2 | 2059.2 | 2087.9 | 2109.4 | 2130.9 | 2141.6 | 2145.2 | 2152.3 | 2155.9 | 2163.1 | 2159.5 |
| 7.5° | 2113.0 | 2141.6 | 2184.6 | 2206.1 | 2224.0 | 2224.0 | 2213.2 | 2209.6 | 2198.9 | 2206.1 | 2206.1 |
| 10° | 2245.5 | 2288.4 | 2335.0 | 2338.6 | 2317.1 | 2292.0 | 2252.6 | 2231.1 | 2202.5 | 2195.3 | 2188.2 |
| 12.5° | 2438.9 | 2496.2 | 2532.0 | 2506.9 | 2431.7 | 2338.6 | 2234.7 | 2138.0 | 2062.8 | 2030.6 | 2023.4 |
| 15° | 2657.3 | 2728.9 | 2736.1 | 2664.5 | 2528.4 | 2302.8 | 2084.3 | 1976.9 | 1937.5 | 1937.5 | 1933.9 |
| 17.5° | 2958.1 | 3008.3 | 2979.6 | 2807.7 | 2503.3 | 2134.4 | 1976.9 | 1959.0 | 1969.7 | 1984.0 | 1984.0 |
| 20° | 3273.3 | 3330.6 | 3212.4 | 2908.0 | 2349.3 | 2034.2 | 1987.6 | 2001.9 | 2027.0 | 2041.3 | 2037.7 |
| 22.5° | 3649.3 | 3678.0 | 3448.8 | 2911.6 | 2184.6 | 2009.1 | 2009.1 | 2027.0 | 2044.9 | 2066.4 | 2066.4 |
| 25° | 4036.1 | 4025.4 | 3667.2 | 2779.1 | 2091.5 | 2001.9 | 1994.8 | 2009.1 | 2016.3 | 2027.0 | 2023.4 |
| 27.5° | 4469.4 | 4412.1 | 3835.5 | 2567.8 | 2062.8 | 1980.4 | 1944.6 | 1930.3 | 1937.5 | 1948.2 | 1951.8 |
| 30° | 4967.2 | 4831.1 | 3971.6 | 2435.3 | 2052.1 | 1930.3 | 1844.4 | 1805.0 | 1797.8 | 1812.1 | 1812.1 |
| 32.5° | 5543.8 | 5250.2 | 4054.0 | 2417.4 | 2041.3 | 1840.8 | 1726.2 | 1651.0 | 1636.6 | 1643.8 | 1661.7 |
| 35° | 6134.7 | 5755.1 | 4032.5 | 2463.9 | 2044.9 | 1769.2 | 1600.8 | 1500.6 | 1486.2 | 1493.4 | 1511.3 |
| 37.5° | 6754.3 | 6235.0 | 3950.2 | 2535.5 | 2016.3 | 1672.5 | 1486.2 | 1364.5 | 1343.0 | 1357.3 | 1364.5 |
| 40° | 7234.2 | 6639.7 | 3746.0 | 2564.2 | 1966.1 | 1550.7 | 1353.7 | 1249.9 | 1192.6 | 1189.0 | 1206.9 |
| 42.5° | 7678.3 | 6958.4 | 3524.0 | 2517.6 | 1862.3 | 1421.8 | 1217.6 | 1113.8 | 1024.2 | 956.2 | 956.2 |
| 45° | 8122.3 | 7280.7 | 3298.4 | 2385.1 | 1690.4 | 1285.7 | 1074.4 | 934.7 | 830.9 | 780.7 | 784.3 |
| 47.5° | 8566.4 | 7592.3 | 3029.8 | 2184.6 | 1518.5 | 1142.4 | 920.4 | 809.4 | 737.7 | 698.3 | 698.3 |
| 50° | 8978.3 | 7817.9 | 2686.0 | 1865.8 | 1321.5 | 999.2 | 813.0 | 748.5 | 694.8 | 659.0 | 651.8 |
| 52.5° | 9340.0 | 7968.3 | 2220.4 | 1479.1 | 1106.6 | 838.0 | 755.6 | 705.5 | 666.1 | 626.7 | 616.0 |
| 55° | *9404.4* | *7868.1* | *1858.7* | *1189.0* | *913.2* | *752.1* | *712.7* | *669.7* | *616.0* | *598.1* | *587.3* |
| 57.5° | 9006.9 | 7338.0 | 1568.6 | 1002.8 | 780.7 | 691.2 | 676.9 | 626.7 | 583.7 | 565.8 | 555.1 |
| 60° | 8330.1 | 6374.7 | 1296.4 | 859.5 | 694.8 | 633.9 | 651.8 | 601.7 | 533.6 | 522.9 | 512.1 |
| 62.5° | 7112.4 | 4974.4 | 1035.0 | 723.4 | 630.3 | 590.9 | 608.8 | 537.2 | 479.9 | 465.6 | 462.0 |
| 65° | 5529.5 | 3559.8 | 870.3 | 637.5 | 580.2 | 547.9 | 540.8 | 476.3 | 433.3 | 422.6 | 422.6 |
| 67.5° | 3860.6 | 2263.4 | 727.0 | 583.7 | 515.7 | 494.2 | 490.6 | 447.7 | 419.0 | 408.3 | 408.3 |
| 70° | 2363.6 | 1371.6 | 612.4 | 533.6 | 454.8 | 415.4 | 440.5 | 433.3 | 390.4 | 379.6 | 376.0 |
| 72.5° | 1228.4 | 820.1 | 537.2 | 490.6 | 383.2 | 354.5 | 393.9 | 397.5 | 361.7 | 376.0 | 372.5 |
| 75° | 712.7 | 569.4 | 469.1 | 433.3 | 304.4 | 297.2 | 343.8 | 379.6 | 351.0 | 361.7 | 354.5 |
| 77.5° | 408.3 | 365.3 | 361.7 | 354.5 | 239.9 | 243.5 | 308.0 | 340.2 | 300.8 | 311.6 | 286.5 |
| 80° | 225.6 | 236.4 | 250.7 | 222.0 | 168.3 | 189.8 | 247.1 | 272.2 | 229.2 | 225.6 | 207.7 |
| 82.5° | 118.2 | 146.8 | 168.3 | 143.3 | 96.7 | 114.6 | 168.3 | 168.3 | 146.8 | 139.7 | 136.1 |
| 85° | 53.7 | 60.9 | 78.8 | 71.6 | 35.8 | 43.0 | 78.8 | 86.0 | 75.2 | 68.0 | 64.5 |
| 87.5° | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 7.2 | 10.7 | 3.6 | 3.6 | 3.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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# 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

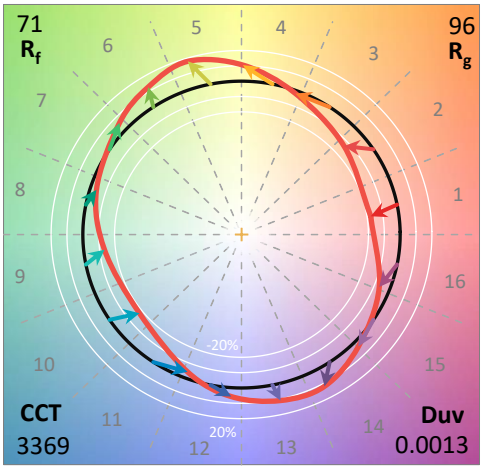
## Test Information

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

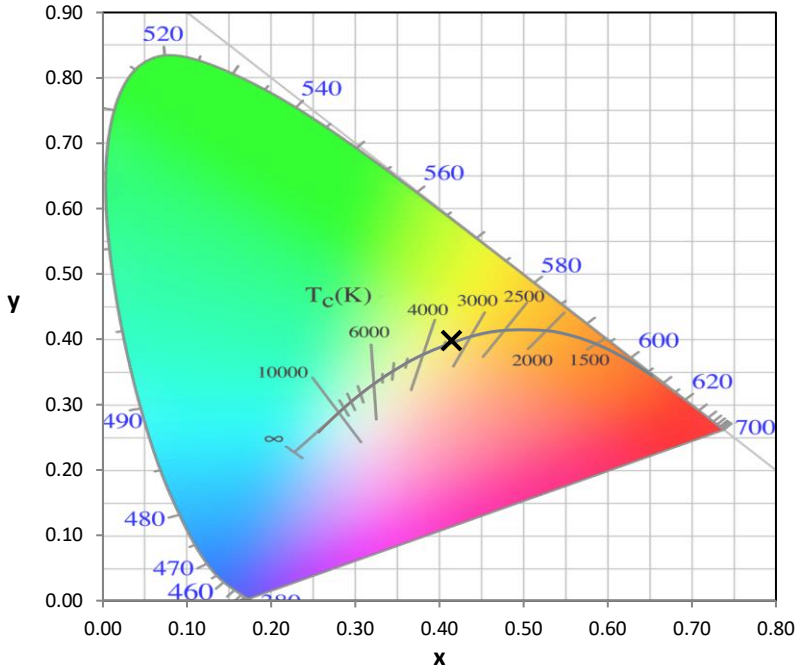
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-5

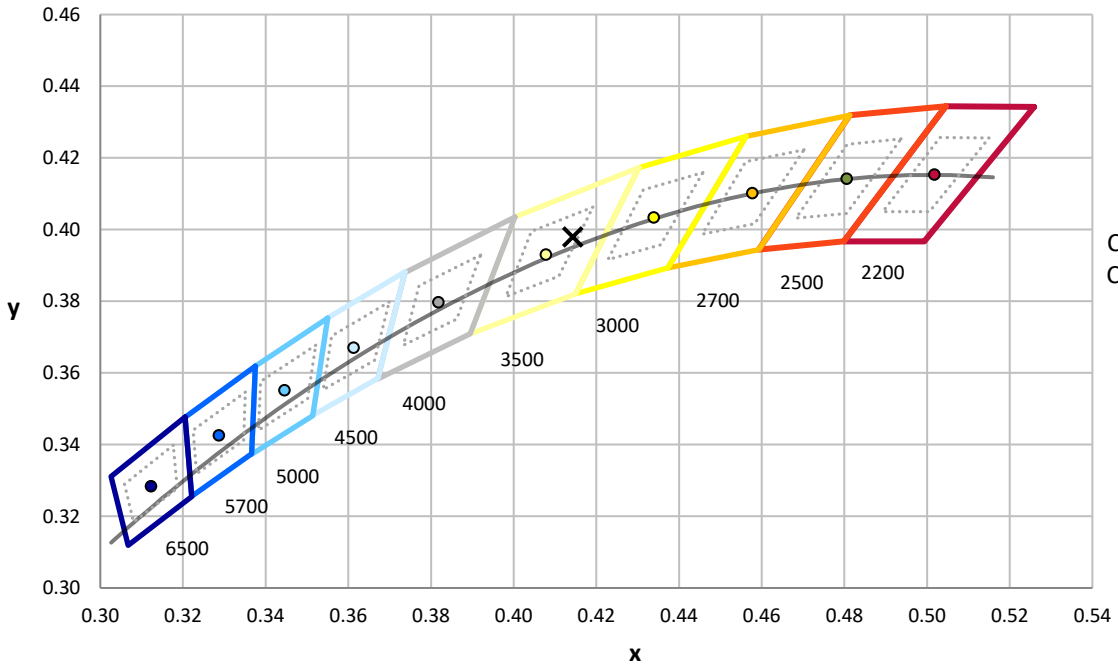
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

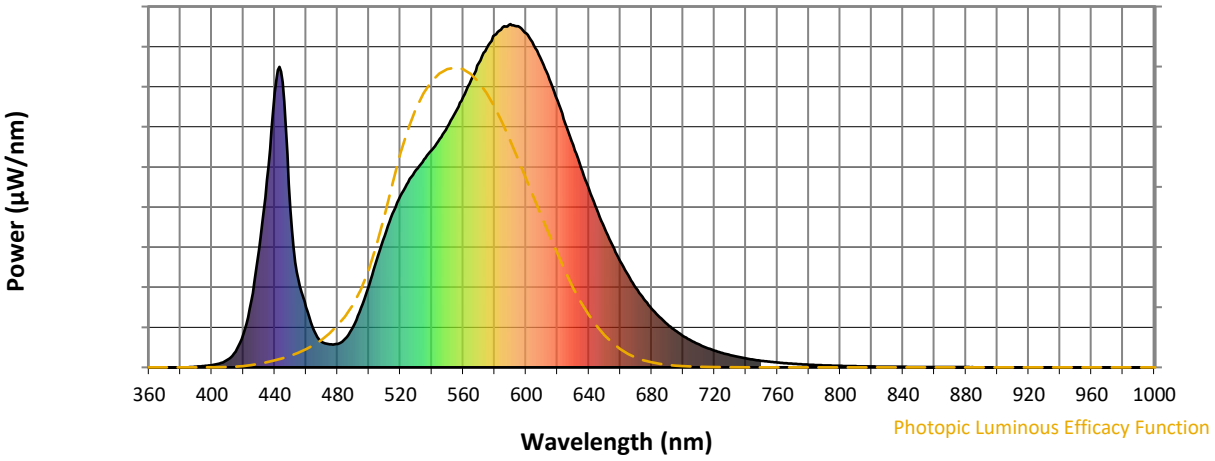



CCT = 3369K
CIE x = 0.4143
CIE y = 0.3980
Duv = 0.0013

Point lies inside the ANSI 3500K 4-step quadrangle

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## Photopic Flux vs. Wavelength

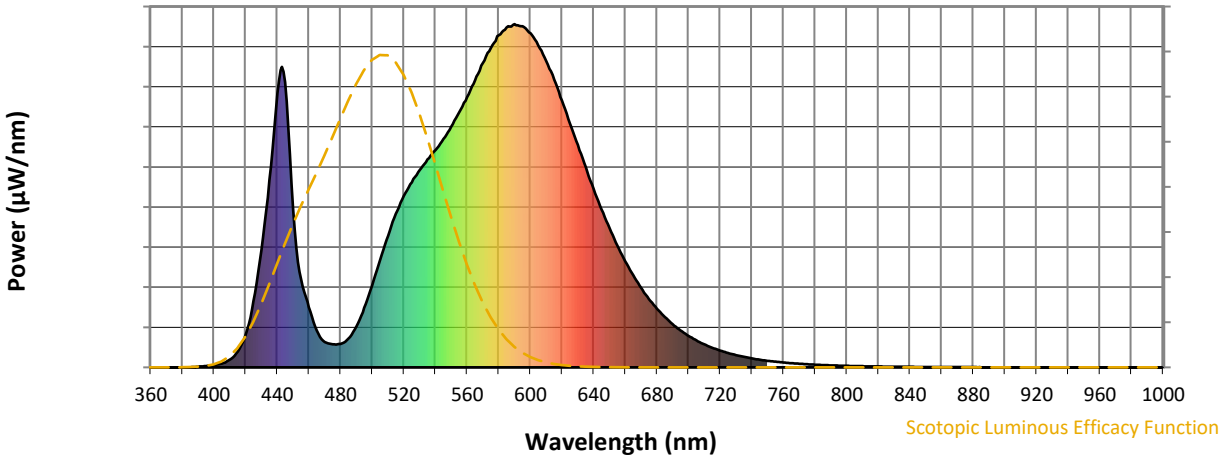



## Photopic Lumens: NR

| 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

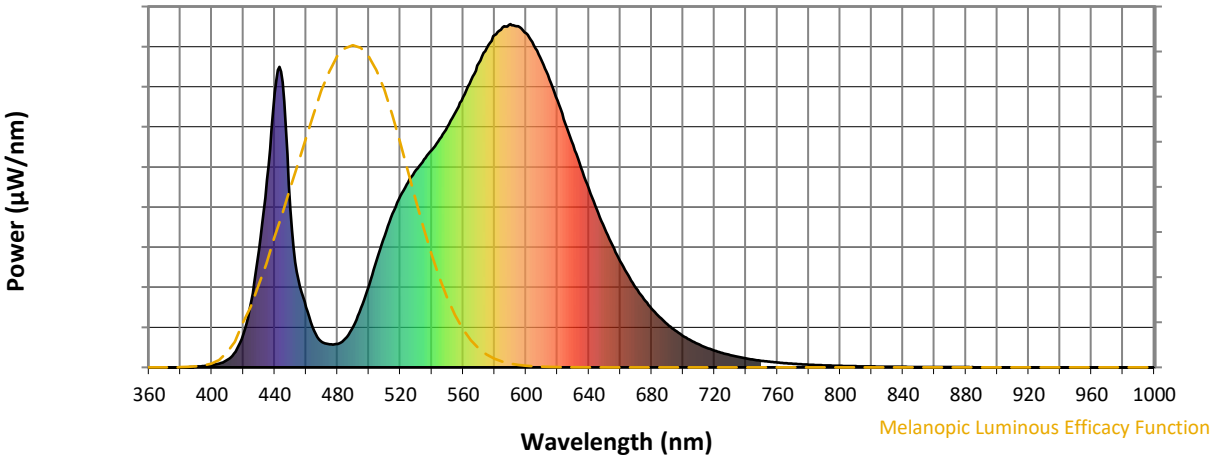



**Scotopic Lumens: NR** **S/P: 1.29**

| 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 | | | |

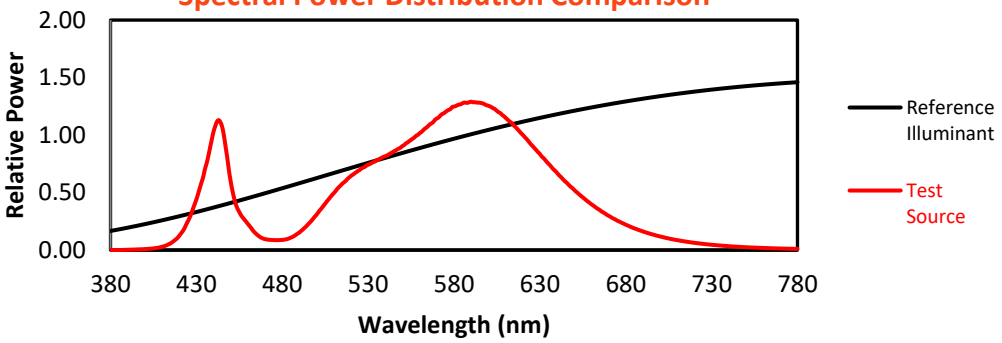
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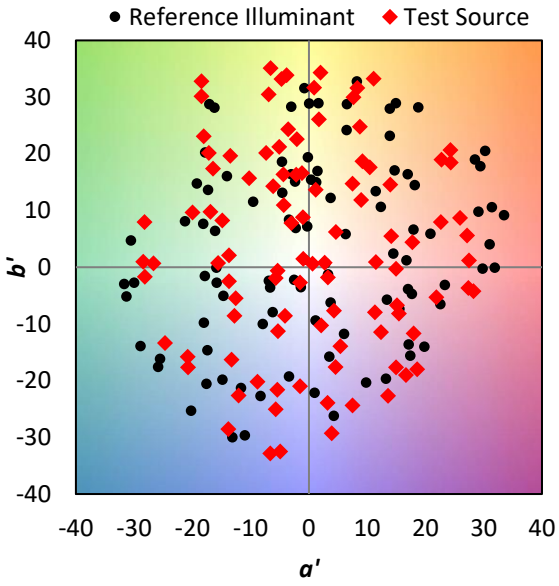
## Summary

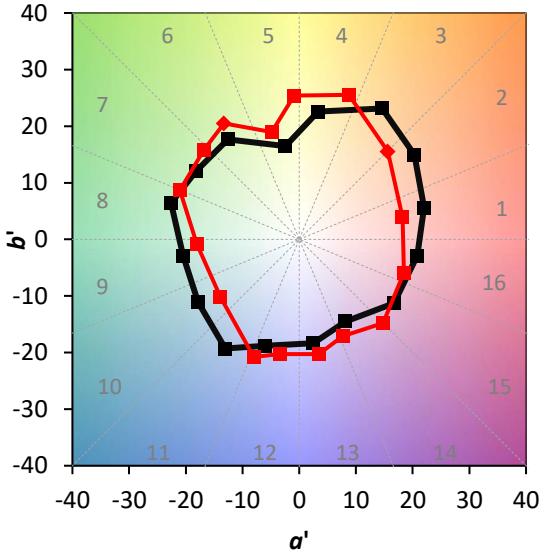
$R_f$ = 71.4
$R_g$ = 96
CIE $R_a$ = 70.1
$R_9$ = -40.2

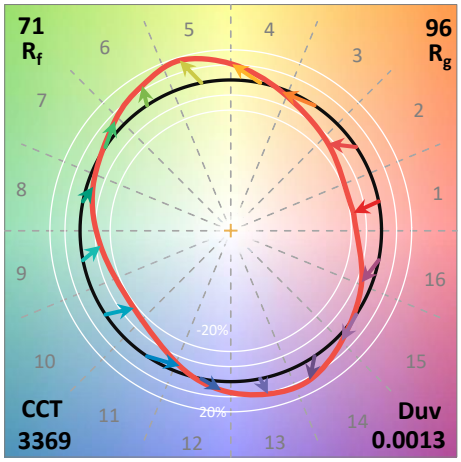
## Spectral Power Distribution Comparison

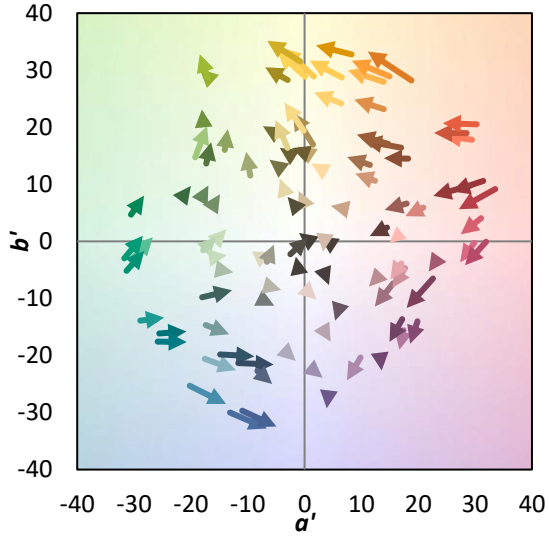



## Color Vector Graphics



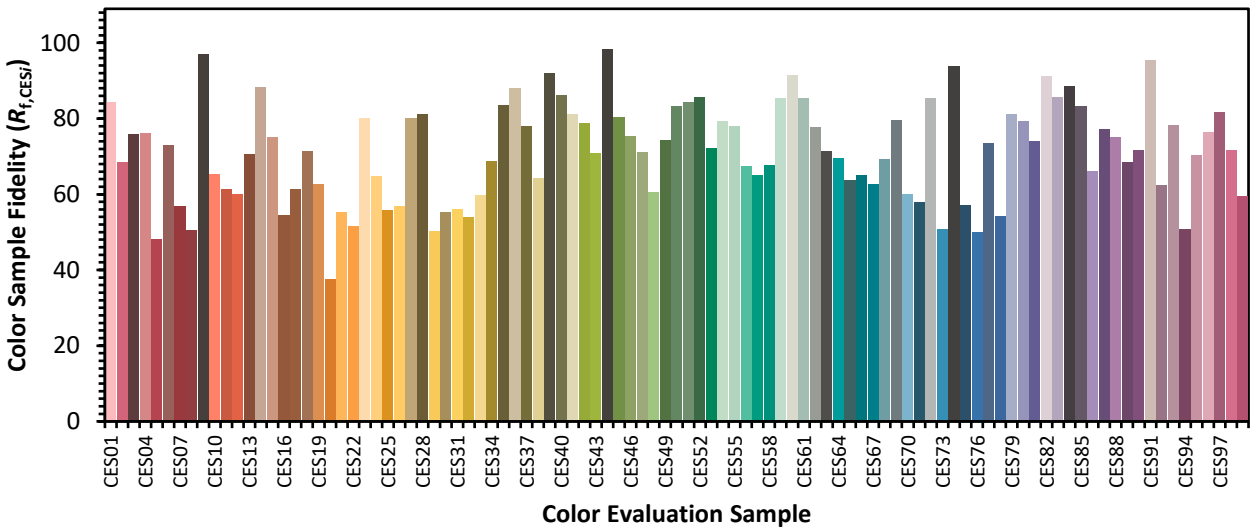



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## Individual Sample Fidelity Index ($R_{f,i}$)

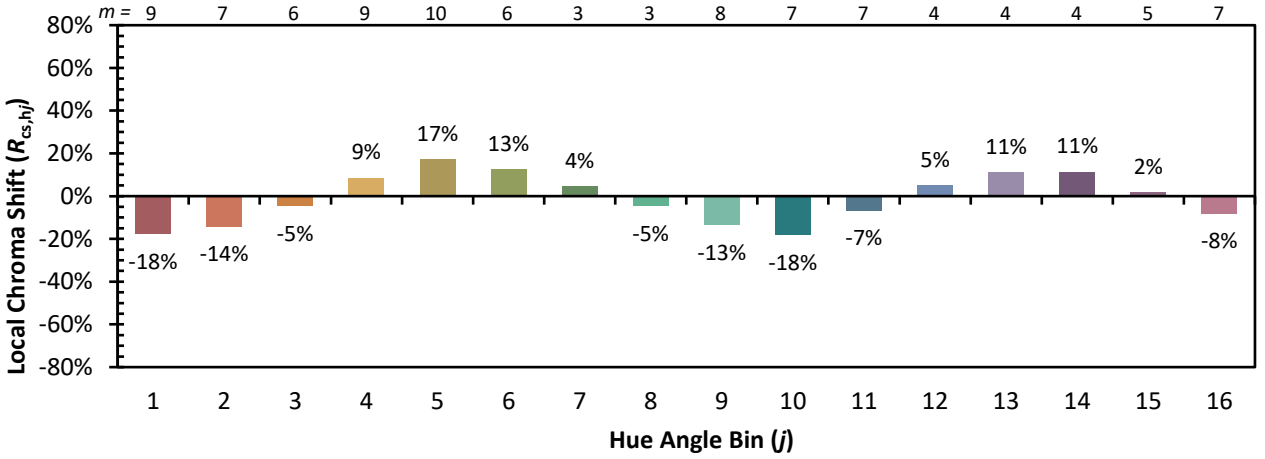
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 57 | CES51 = 84 | CES76 = 50 |
| CES02 = 62 | CES27 = 80 | CES52 = 86 | CES77 = 74 |
| CES03 = 31 | CES28 = 81 | CES53 = 72 | CES78 = 54 |
| CES04 = 70 | CES29 = 50 | CES54 = 79 | CES79 = 81 |
| CES05 = 48 | CES30 = 55 | CES55 = 78 | CES80 = 79 |
| CES06 = 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 | |

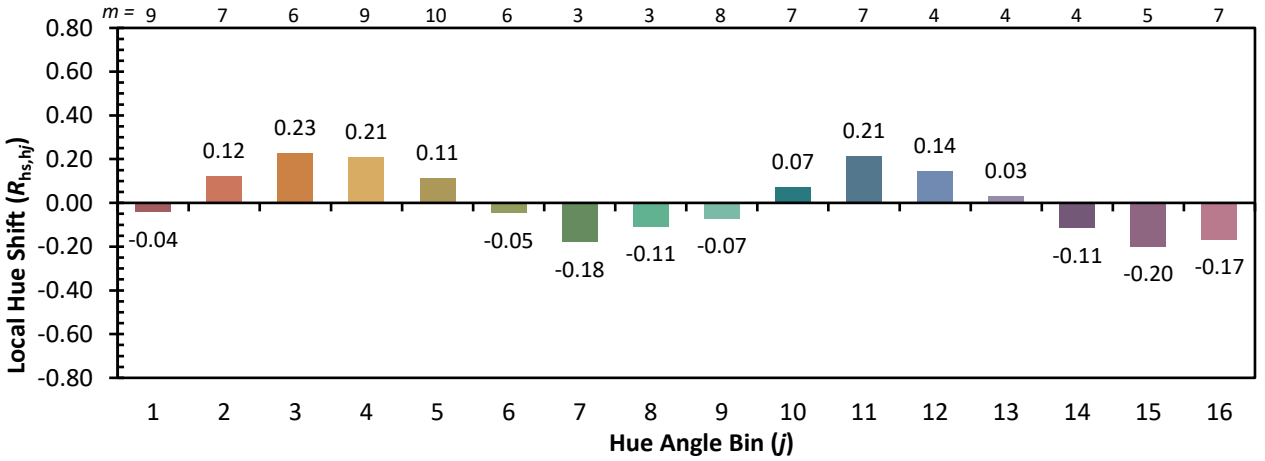


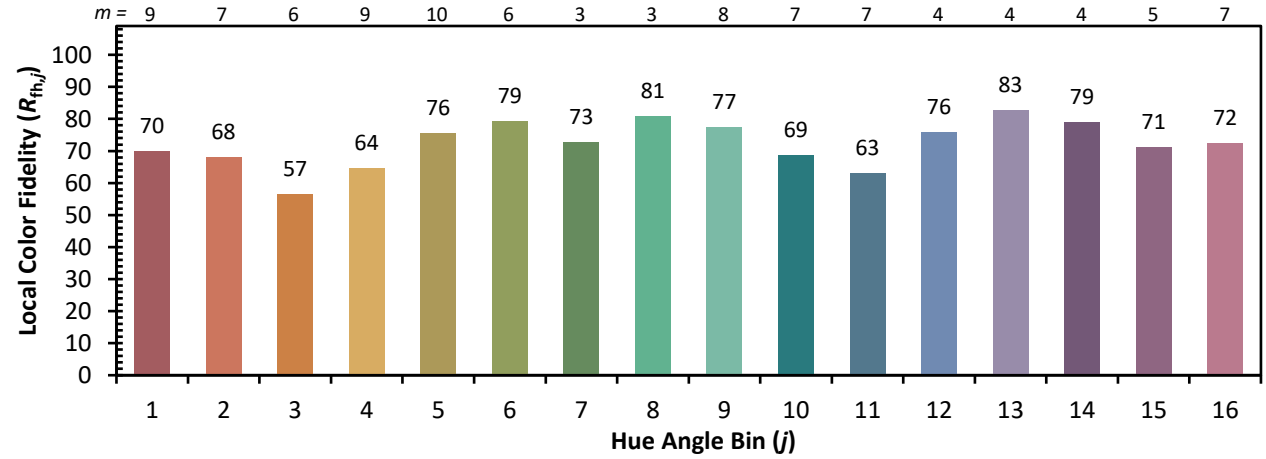
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## Color Rendition by Hue-Angle Bin



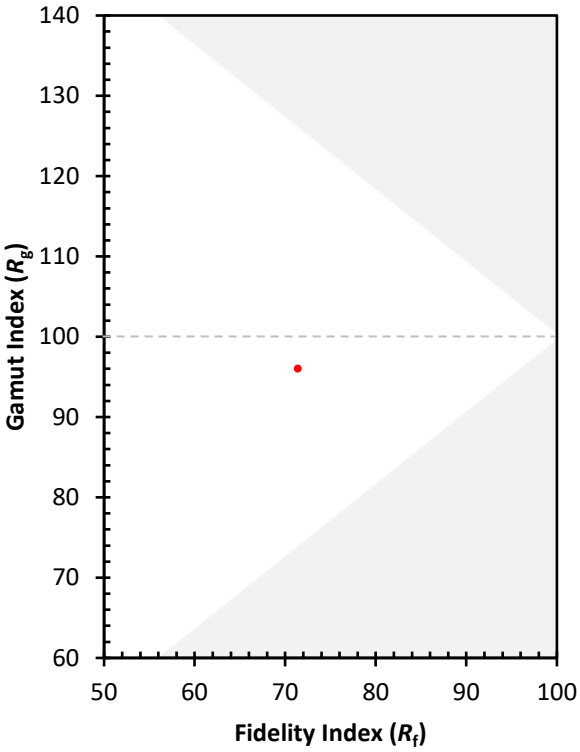



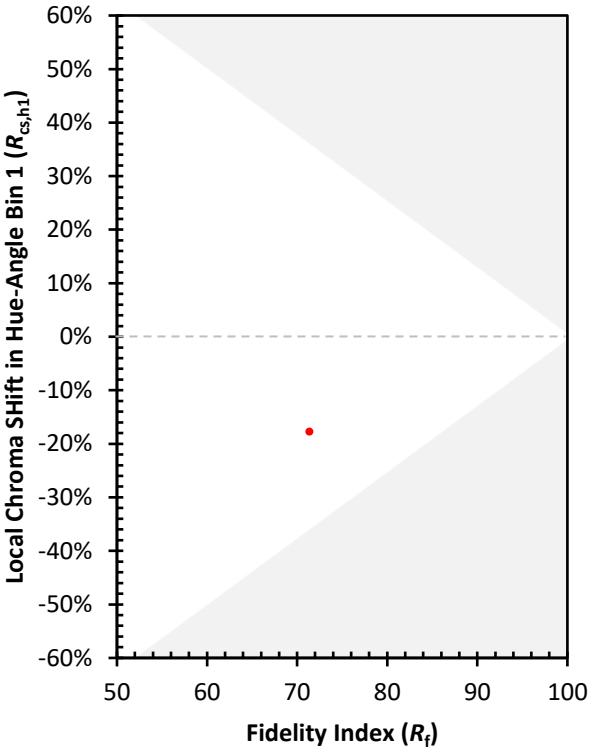



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## Measure Comparisons




(END OF REPORT)