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

Scaled data based on original data using

LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P1359975

Luminaire Tested: **GSS-SB3A-730-U-T3**

Issue Date: 02/18/2026

Report Generated By 670245763

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

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-08 |
| Report Number: | P1359975 |
| Test Lab: | INNOVATION CENTER(G3) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB3A-730-U-T3 |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 3SQUARE 85W 70CRI 3000K FIXTURE w/ TYPE III DISTRIBUTION OPTIC |
| Light Source: | (78) 3000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 12232 lumens |
| Efficiency: | N/A |
| Efficacy: | 143.9 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 0.5' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B2 - U0 - G2 |

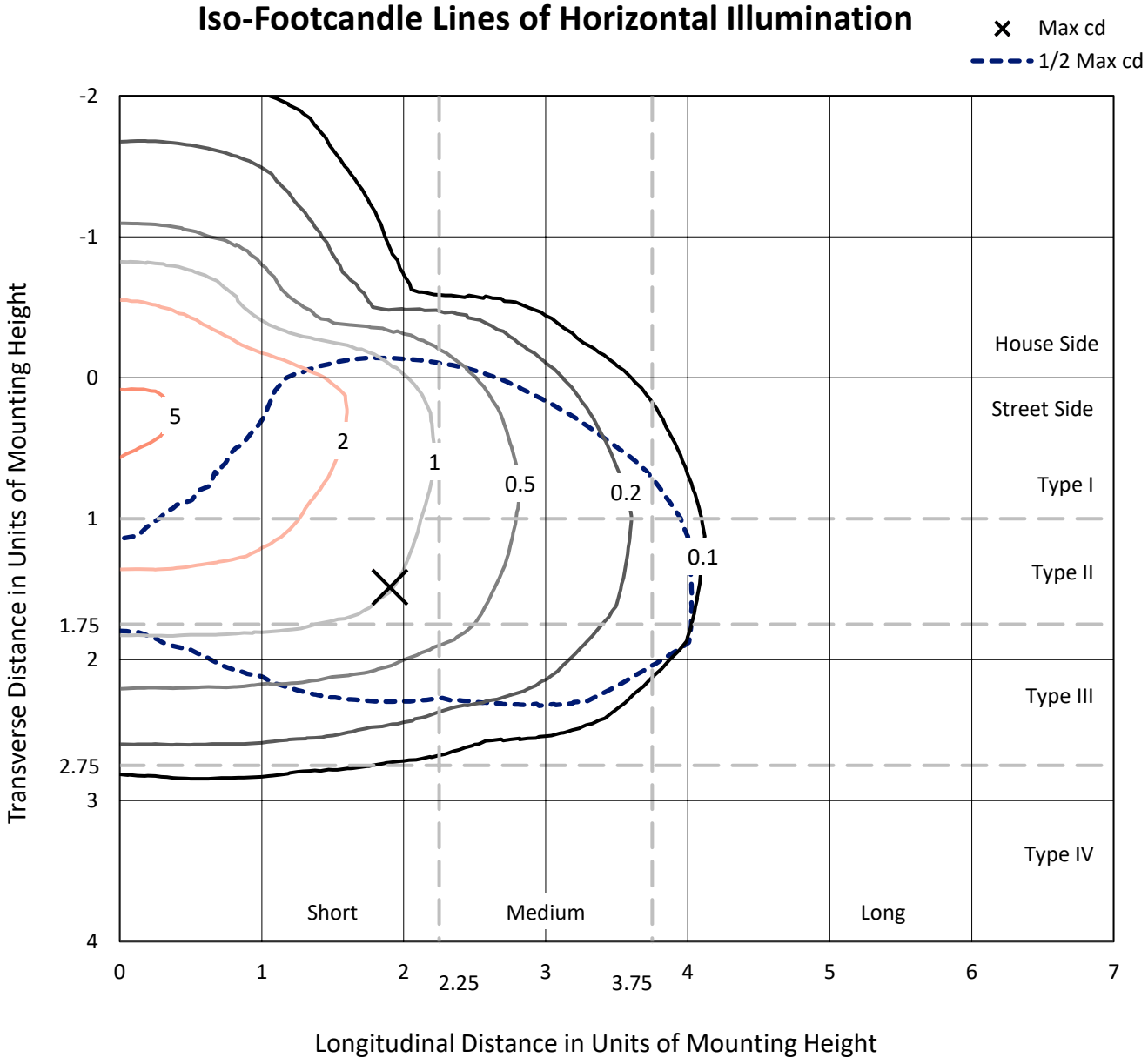
| | |
|---|---|
| Input Watts (W): | 85 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 11.0% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1359975
CATALOG NUMBER: GSS-SB3A-730-U-T3

## Iso-Footcandle Lines of Horizontal Illumination



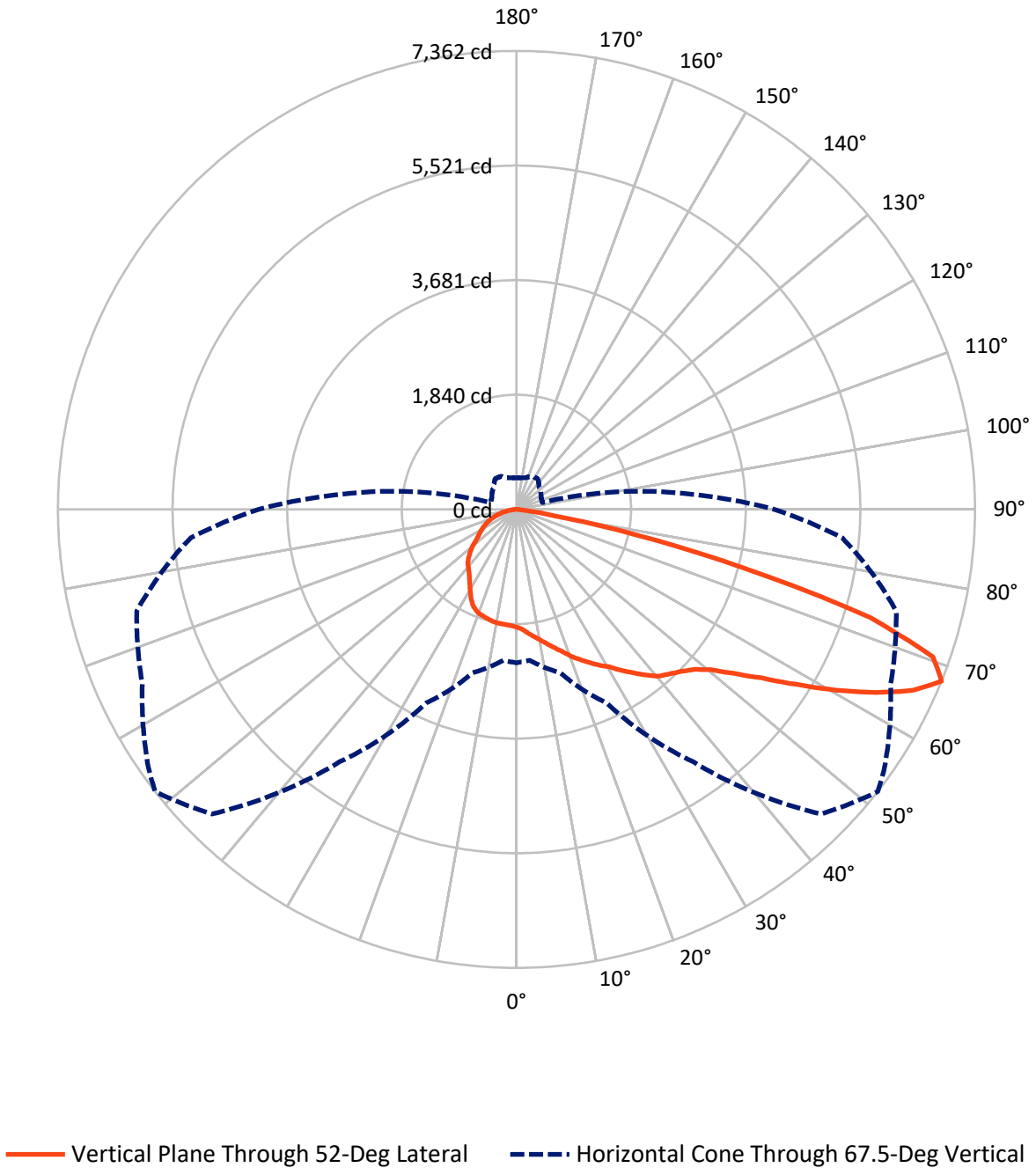

Based on 20 foot mounting height. Maximum calculated value = 5.4 fc
Type III - Short - N/A

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Scaled Data Report

REPORT NUMBER: P1359975
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## Luminous Intensity Polar Plot



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Scaled Data Report

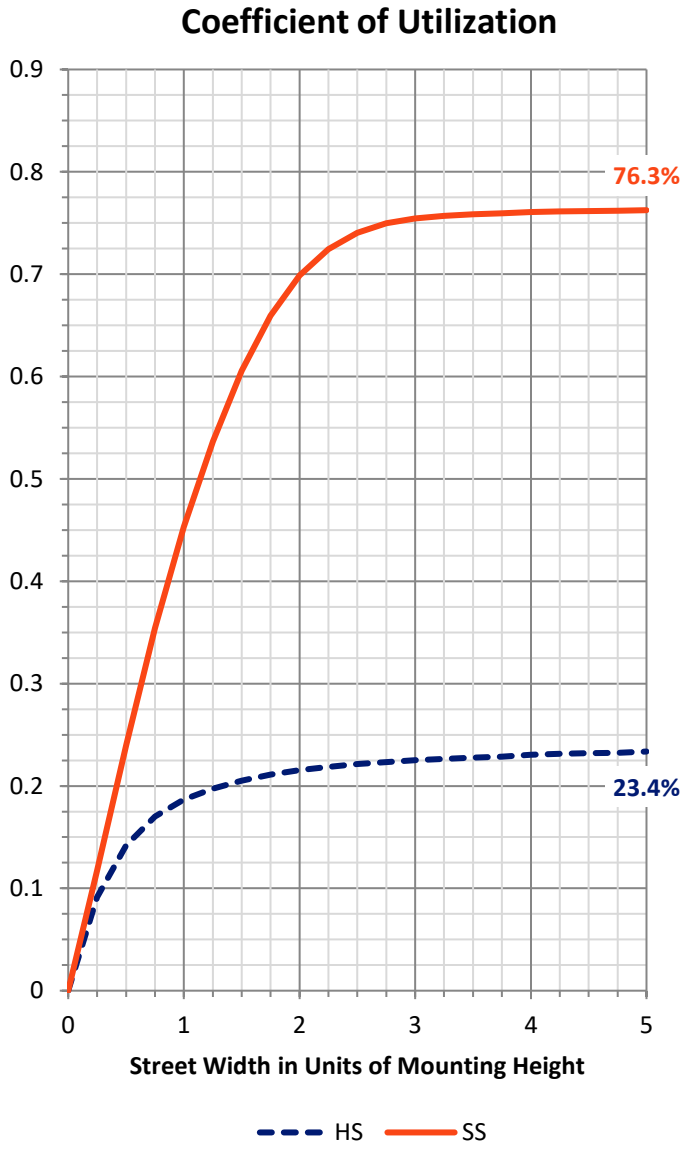
REPORT NUMBER: P1359975
CATALOG NUMBER: GSS-SB3A-730-U-T3

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 2893.9 | 0.0 | 2893.9 |
| | % Fixture | 23.7 | 0.0 | 23.7 |
| **Street Side** | Lumens | 9338.1 | 0.0 | 9338.1 |
| | % Fixture | 76.3 | 0.0 | 76.3 |
| **Total** | Lumens | 12232.0 | 0.0 | 12232.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 185.6 | 1.5 |
| 10°-20° | 585.4 | 4.8 |
| 20°-30° | 1000.9 | 8.2 |
| 30°-40° | 1452.0 | 11.9 |
| 40°-50° | 1886.2 | 15.4 |
| 50°-60° | 2555.6 | 20.9 |
| 60°-70° | 2981.1 | 24.4 |
| 70°-80° | 1469.8 | 12.0 |
| 80°-90° | 115.4 | 0.9 |
| 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° | 12232.0 | 100.0 |
| 0°-180° | 12232.0 | 100.0 |



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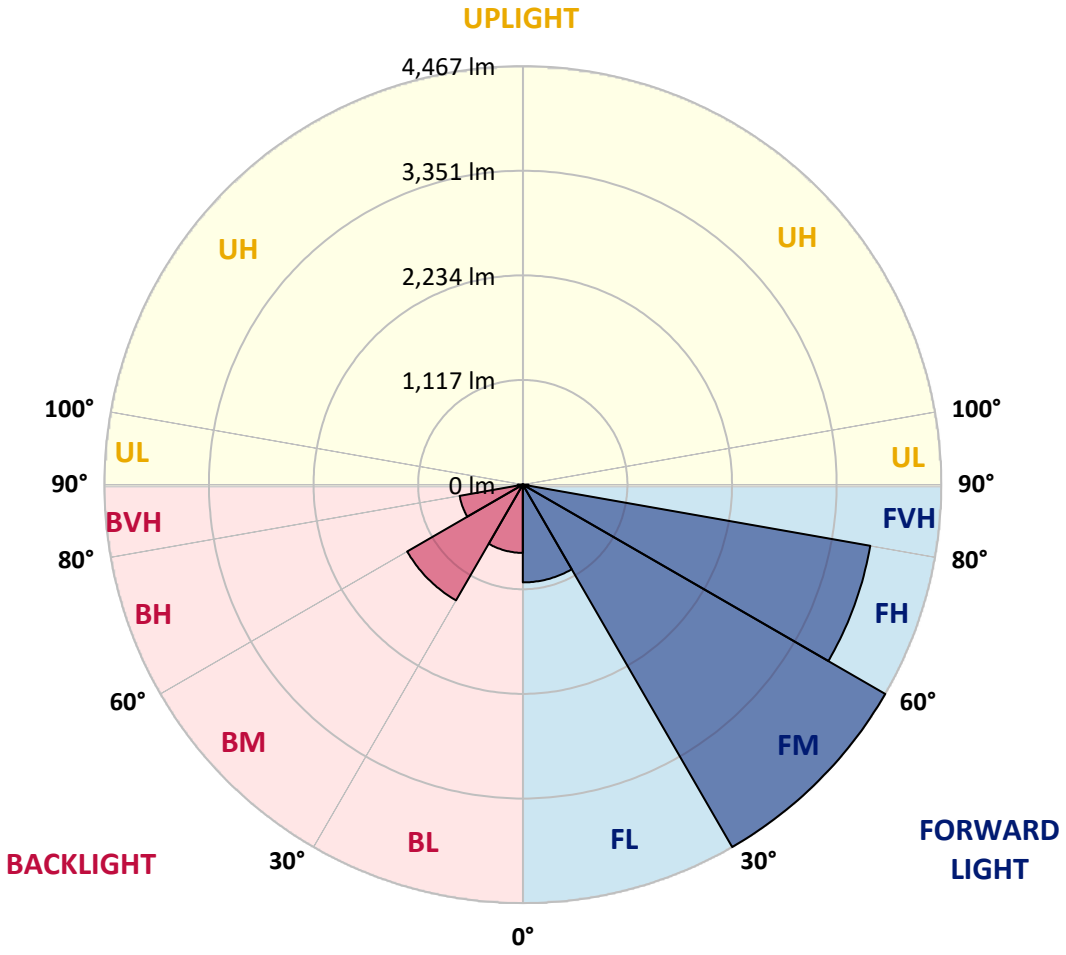
Scaled Data Report

REPORT NUMBER: P1359975
CATALOG NUMBER: GSS-SB3A-730-U-T3

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1043.5 | 8.5 | | | |
| FM | (30°-60°) | 4467.5 | 36.5 | | | |
| FH | (60°-80°) | 3766.5 | 30.8 | | | G2/5000 |
| FVH | (80°-90°) | 60.6 | 0.5 | | | G1/100 |
| BL | (0°-30°) | 728.4 | 6.0 | B2/1000 | | |
| BM | (30°-60°) | 1426.3 | 11.7 | B2/2500 | | |
| BH | (60°-80°) | 684.3 | 5.6 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 54.8 | 0.4 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B2-U0-G2**
Type III Short



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REPORT NUMBER: P1359975
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 52° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1892.9 | 1892.9 | 1892.9 | 1892.9 | 1892.9 | 1892.9 | *1892.9* | 1892.9 | 1892.9 | 1892.9 | 1892.9 |
| 2.5° | 1950.1 | 1947.4 | 1944.6 | 1933.8 | 1933.8 | 1936.5 | *1931.0* | 1933.8 | 1931.0 | 1917.4 | 1906.5 |
| 5° | 2059.0 | 2034.5 | 2029.1 | 2023.6 | 2029.1 | 2012.7 | *1999.1* | 1990.9 | 1961.0 | 1952.8 | 1920.1 |
| 7.5° | 2105.3 | 2108.1 | 2105.3 | 2094.4 | 2086.3 | 2086.3 | *2064.5* | 2053.6 | 2034.5 | 2001.8 | 1947.4 |
| 10° | 2170.7 | 2168.0 | 2159.8 | 2165.3 | 2181.6 | 2154.4 | *2138.0* | 2129.9 | 2097.2 | 2050.9 | 1999.1 |
| 12.5° | 2287.8 | 2268.8 | 2263.3 | 2255.1 | 2252.4 | 2236.1 | *2217.0* | 2219.7 | 2181.6 | 2110.8 | 2056.3 |
| 15° | 2388.6 | 2366.8 | 2391.3 | 2375.0 | 2353.2 | 2328.7 | *2309.6* | 2293.3 | 2249.7 | 2184.3 | 2116.2 |
| 17.5° | 2483.9 | 2473.0 | 2483.9 | 2483.9 | 2481.2 | 2440.3 | *2402.2* | 2388.6 | 2336.8 | 2263.3 | 2173.4 |
| 20° | 2557.5 | 2557.5 | 2576.5 | 2576.5 | 2568.3 | 2543.8 | *2519.3* | 2503.0 | 2429.4 | 2334.1 | 2230.6 |
| 22.5° | 2652.8 | 2609.2 | 2650.1 | 2652.8 | 2655.5 | 2636.4 | *2620.1* | 2598.3 | 2522.0 | 2407.7 | 2276.9 |
| 25° | 2742.7 | 2707.3 | 2731.8 | 2715.4 | 2726.3 | 2734.5 | *2726.3* | 2718.1 | 2633.7 | 2503.0 | 2345.0 |
| 27.5° | 2884.3 | 2848.9 | 2865.2 | 2827.1 | 2827.1 | 2818.9 | *2832.5* | 2843.4 | 2750.8 | 2595.6 | 2404.9 |
| 30° | 3096.7 | 3055.9 | 3042.3 | 2996.0 | 2949.7 | 2930.6 | *2936.0* | 2955.1 | 2892.5 | 2685.5 | 2464.9 |
| 32.5° | 3279.2 | 3257.4 | 3246.5 | 3208.4 | 3151.2 | 3064.0 | *3077.7* | 3077.7 | 3012.3 | 2750.8 | 2494.8 |
| 35° | 3429.0 | 3423.6 | 3426.3 | 3374.5 | 3363.6 | 3222.0 | *3222.0* | 3216.6 | 3096.7 | 2838.0 | 2573.8 |
| 37.5° | 3527.1 | 3497.1 | 3510.7 | 3529.8 | 3494.4 | 3399.0 | *3374.5* | 3360.9 | 3213.8 | 2930.6 | 2677.3 |
| 40° | 3505.3 | 3483.5 | 3535.2 | 3570.6 | 3543.4 | 3524.3 | *3521.6* | 3494.4 | 3331.0 | 3047.7 | 2829.8 |
| 42.5° | 3502.5 | 3483.5 | 3546.1 | 3584.2 | 3570.6 | 3600.6 | *3608.8* | 3627.8 | 3480.8 | 3232.9 | 3047.7 |
| 45° | 3513.4 | 3505.3 | 3608.8 | 3657.8 | 3625.1 | 3666.0 | *3712.3* | 3728.6 | 3671.4 | 3459.0 | 3320.1 |
| 47.5° | 3603.3 | 3592.4 | 3712.3 | 3769.5 | 3796.7 | 3867.5 | *3837.5* | 3864.8 | 3897.5 | 3780.3 | 3633.3 |
| 50° | 3690.5 | 3701.4 | 3862.1 | 3916.5 | 4050.0 | 4148.0 | *4044.5* | 4088.1 | 4197.1 | 4153.5 | 4052.7 |
| 52.5° | 3829.4 | 3832.1 | 3990.1 | 4126.2 | 4382.3 | 4474.9 | *4374.1* | 4379.5 | 4526.6 | 4608.3 | 4474.9 |
| 55° | 3864.8 | 3894.7 | 4107.2 | 4390.4 | 4758.1 | 4823.5 | *4777.2* | 4758.1 | 4932.4 | 5044.1 | 4899.7 |
| 57.5° | 3862.1 | 3845.7 | 4109.9 | 4502.1 | 5044.1 | 5275.6 | *5302.8* | 5251.1 | 5398.2 | 5444.5 | 5365.5 |
| 60° | 3761.3 | 3794.0 | 4082.7 | 4581.1 | 5311.0 | 5825.8 | *5891.1* | 5823.0 | 5893.9 | 5907.5 | 5686.9 |
| 62.5° | 3453.5 | 3464.4 | 3859.3 | 4583.8 | 5520.7 | 6283.3 | *6476.7* | 6400.4 | 6335.1 | 6166.2 | 5757.7 |
| 65° | 2952.4 | 2933.3 | 3311.9 | 4205.2 | 5558.9 | 6724.6 | *7002.4* | 7002.4 | 6577.5 | 6253.4 | 5607.9 |
| 67.5° | *2462.1* | *2432.2* | *2715.4* | *3429.0* | *4948.8* | *6917.9* | *7361.9* | *7217.5* | *6629.2* | *6313.3* | *5251.1* |
| 70° | 1187.5 | 1271.9 | 1705.0 | 2426.7 | 3783.1 | 5842.1 | *7095.0* | 7149.4 | 6588.4 | 6125.4 | 4559.3 |
| 72.5° | 424.9 | 405.8 | 612.8 | 1040.4 | 2094.4 | 3813.0 | *5940.2* | 6419.5 | 6302.4 | 5586.1 | 3734.0 |
| 75° | 196.1 | 198.8 | 256.0 | 362.2 | 678.2 | 1860.2 | *3777.6* | 4420.4 | 5398.2 | 4643.7 | 2794.4 |
| 77.5° | 152.5 | 152.5 | 174.3 | 207.0 | 280.5 | 601.9 | *1931.0* | 2481.2 | 3488.9 | 2876.1 | 1331.8 |
| 80° | 111.7 | 114.4 | 117.1 | 136.2 | 171.6 | 226.1 | *574.7* | 860.7 | 1271.9 | 923.3 | 433.1 |
| 82.5° | 79.0 | 79.0 | 76.3 | 76.3 | 92.6 | 100.8 | *155.2* | 217.9 | 373.1 | 253.3 | 114.4 |
| 85° | 32.7 | 38.1 | 32.7 | 32.7 | 32.7 | 40.9 | *49.0* | 57.2 | 81.7 | 70.8 | 49.0 |
| 87.5° | 5.4 | 5.4 | 5.4 | 8.2 | 10.9 | 13.6 | *16.3* | 19.1 | 21.8 | 21.8 | 21.8 |
| 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: P1359975
CATALOG NUMBER: GSS-SB3A-730-U-T3

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1892.9 | 1892.9 | 1892.9 | 1892.9 | 1892.9 | 1892.9 | 1892.9 | 1892.9 | 1892.9 | 1892.9 | 1892.9 |
| 2.5° | 1901.1 | 1901.1 | 1892.9 | 1879.3 | 1873.8 | 1865.7 | 1862.9 | 1860.2 | 1854.8 | 1865.7 | 1860.2 |
| 5° | 1912.0 | 1901.1 | 1890.2 | 1868.4 | 1865.7 | 1852.0 | 1838.4 | 1835.7 | 1827.5 | 1835.7 | 1835.7 |
| 7.5° | 1936.5 | 1920.1 | 1895.6 | 1873.8 | 1854.8 | 1852.0 | 1827.5 | 1805.7 | 1805.7 | 1808.5 | 1805.7 |
| 10° | 1980.1 | 1961.0 | 1936.5 | 1895.6 | 1860.2 | 1827.5 | 1786.7 | 1759.4 | 1762.2 | 1762.2 | 1756.7 |
| 12.5° | 2037.2 | 2010.0 | 1966.4 | 1906.5 | 1852.0 | 1800.3 | 1751.3 | 1743.1 | 1740.4 | 1745.8 | 1729.5 |
| 15° | 2080.8 | 2056.3 | 1985.5 | 1917.4 | 1833.0 | 1781.2 | 1729.5 | 1710.4 | 1713.1 | 1707.7 | 1694.1 |
| 17.5° | 2135.3 | 2097.2 | 2010.0 | 1909.2 | 1811.2 | 1762.2 | 1702.2 | 1661.4 | 1639.6 | 1642.3 | 1639.6 |
| 20° | 2187.0 | 2132.6 | 2029.1 | 1909.2 | 1805.7 | 1718.6 | 1642.3 | 1587.9 | 1541.6 | 1533.4 | 1530.7 |
| 22.5° | 2225.2 | 2170.7 | 2050.9 | 1912.0 | 1773.1 | 1669.6 | 1557.9 | 1487.1 | 1419.0 | 1408.1 | 1405.4 |
| 25° | 2279.6 | 2208.8 | 2075.4 | 1892.9 | 1729.5 | 1587.9 | 1449.0 | 1370.0 | 1310.0 | 1299.2 | 1299.2 |
| 27.5° | 2325.9 | 2249.7 | 2108.1 | 1873.8 | 1658.7 | 1476.2 | 1345.5 | 1266.5 | 1228.3 | 1209.3 | 1209.3 |
| 30° | 2375.0 | 2290.5 | 2135.3 | 1816.6 | 1563.3 | 1364.5 | 1263.7 | 1212.0 | 1168.4 | 1149.4 | 1141.2 |
| 32.5° | 2429.4 | 2358.6 | 2140.7 | 1759.4 | 1468.0 | 1291.0 | 1206.6 | 1163.0 | 1116.7 | 1089.4 | 1086.7 |
| 35° | 2497.5 | 2445.8 | 2121.7 | 1675.0 | 1372.7 | 1233.8 | 1152.1 | 1103.1 | 1056.8 | 1029.5 | 1035.0 |
| 37.5° | 2606.5 | 2546.6 | 2064.5 | 1555.2 | 1293.7 | 1198.4 | 1108.5 | 1037.7 | 983.2 | 939.6 | 942.4 |
| 40° | 2767.2 | 2669.1 | 1980.1 | 1410.8 | 1236.5 | 1157.5 | 1056.8 | 975.0 | 896.1 | 830.7 | 830.7 |
| 42.5° | 2949.7 | 2778.1 | 1876.6 | 1277.4 | 1192.9 | 1105.8 | 1002.3 | 898.8 | 787.1 | 719.0 | 716.3 |
| 45° | 3153.9 | 2873.4 | 1756.7 | 1168.4 | 1122.1 | 1043.1 | 931.5 | 784.4 | 710.9 | 675.5 | 672.7 |
| 47.5° | 3426.3 | 2976.9 | 1615.1 | 1073.1 | 1040.4 | 980.5 | 825.2 | 719.0 | 675.5 | 648.2 | 645.5 |
| 50° | 3682.3 | 3088.6 | 1498.0 | 980.5 | 953.3 | 907.0 | 751.7 | 691.8 | 656.4 | 634.6 | 629.2 |
| 52.5° | 3979.2 | 3202.9 | 1367.2 | 890.6 | 855.2 | 792.6 | 735.4 | 678.2 | 645.5 | 629.2 | 623.7 |
| 55° | 4273.3 | 3363.6 | 1222.9 | 808.9 | 768.1 | 740.8 | 719.0 | 670.0 | 637.3 | 626.4 | 618.3 |
| 57.5° | 4608.3 | 3518.9 | 1045.9 | 721.8 | 705.4 | 702.7 | 716.3 | 667.3 | 640.0 | 621.0 | 610.1 |
| 60° | 4782.6 | 3587.0 | 860.7 | 642.8 | 645.5 | 661.8 | 705.4 | 667.3 | 623.7 | 591.0 | 577.4 |
| 62.5° | 4722.7 | 3448.1 | 680.9 | 563.8 | 588.3 | 618.3 | 686.3 | 642.8 | 588.3 | 563.8 | 547.4 |
| 65° | 4483.0 | 3211.1 | 531.1 | 495.7 | 536.5 | 563.8 | 640.0 | 607.4 | 552.9 | 528.4 | 525.7 |
| 67.5° | *4137.1* | *2799.9* | *430.3* | *435.8* | *476.6* | *512.0* | *599.2* | *585.6* | *522.9* | *506.6* | *506.6* |
| 70° | 3478.0 | 2249.7 | 354.1 | 381.3 | 416.7 | 454.8 | 569.2 | 550.2 | 484.8 | 476.6 | 476.6 |
| 72.5° | 2718.1 | 1587.9 | 302.3 | 335.0 | 345.9 | 400.4 | 528.4 | 509.3 | 471.2 | 490.2 | 493.0 |
| 75° | 1917.4 | 966.9 | 258.7 | 283.3 | 294.1 | 329.6 | 490.2 | 498.4 | 463.0 | 525.7 | 536.5 |
| 77.5° | 871.6 | 424.9 | 201.5 | 223.3 | 237.0 | 280.5 | 422.2 | 463.0 | 400.4 | 400.4 | 378.6 |
| 80° | 305.0 | 179.8 | 160.7 | 160.7 | 171.6 | 217.9 | 351.3 | 381.3 | 321.4 | 283.3 | 272.4 |
| 82.5° | 111.7 | 98.0 | 119.8 | 119.8 | 108.9 | 133.5 | 234.2 | 253.3 | 231.5 | 201.5 | 198.8 |
| 85° | 43.6 | 46.3 | 73.5 | 73.5 | 54.5 | 65.4 | 130.7 | 136.2 | 130.7 | 114.4 | 114.4 |
| 87.5° | 19.1 | 19.1 | 21.8 | 21.8 | 19.1 | 16.3 | 24.5 | 24.5 | 16.3 | 10.9 | 5.4 |
| 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: SP1-2407-184-4

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-730-U-5WQ

Data in this report applies to families of products including GSS-SB1A-730-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

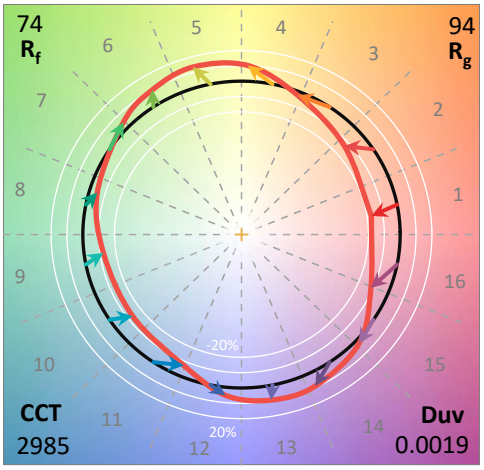
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-4 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/15/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGraw-Edison |
| Catalog Number: | **GSS-SB1A-730-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 3000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 2985 |
| CIE u': | 0.2504 |
| CIE v': | 0.5243 |
| Duv: | 0.0019 |
| CIE x: | 0.4408 |
| CIE y: | 0.4101 |
| CIE z: | 0.1491 |
| Peak Wavelength (nm): | 595 |
| Dominant Wavelength (nm): | 582 |
| Purity: | 55.41818 |
| Rf: | 73.8 |
| Rg: | 94.4 |

| | |
|---|---|
| CRI (Ra): | 70.8 |
| R1: | 66.3 |
| R2: | 80.6 |
| R3: | 94.5 |
| R4: | 68.2 |
| R5: | 66.5 |
| R6: | 74.7 |
| R7: | 76.2 |
| R8: | 39.6 |
| R9: | -43.2 |
| R10: | 57.6 |
| R11: | 64.8 |
| R12: | 53.5 |
| R13: | 68.7 |
| R14: | 97.0 |
| R15: | 56.4 |




## Test Conditions

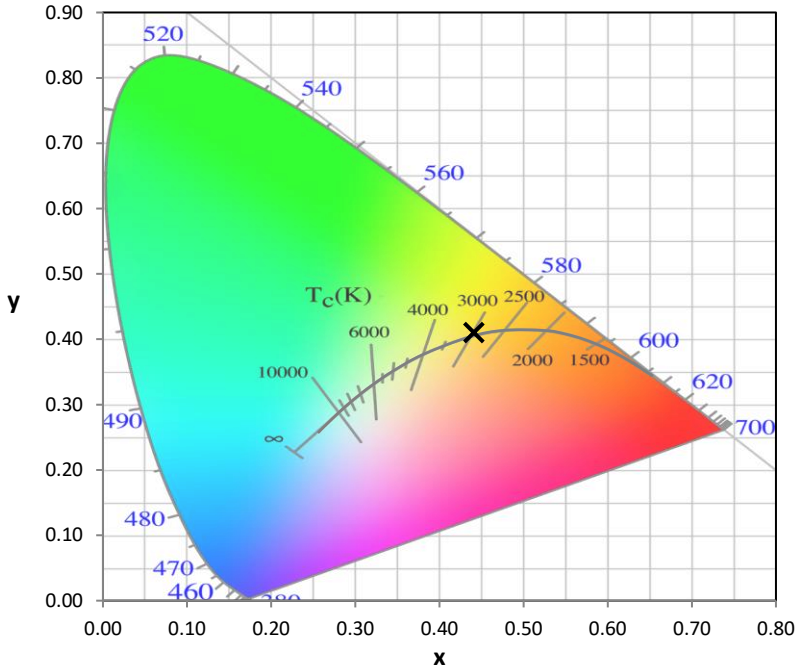
| | |
|---|---|
| Stabilization Time: | 36M |
| Operation Time: | 1H 36M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-4

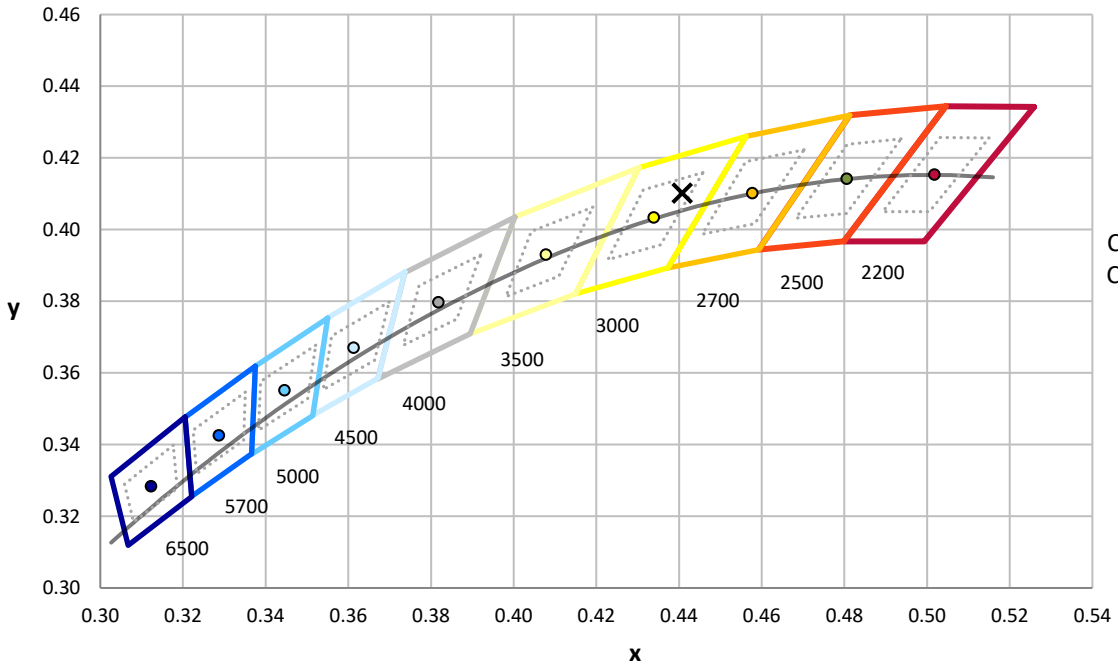
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC Power Source | IN0208 | 10/24/2023 | 10/24/2024 |
| Sphere Thermometer | IN0085 | 10/24/2023 | 10/24/2024 |
| Room Thermometer | IN0046 | 10/24/2023 | 10/24/2024 |

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## CIE 1931 Chromaticity Diagram




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

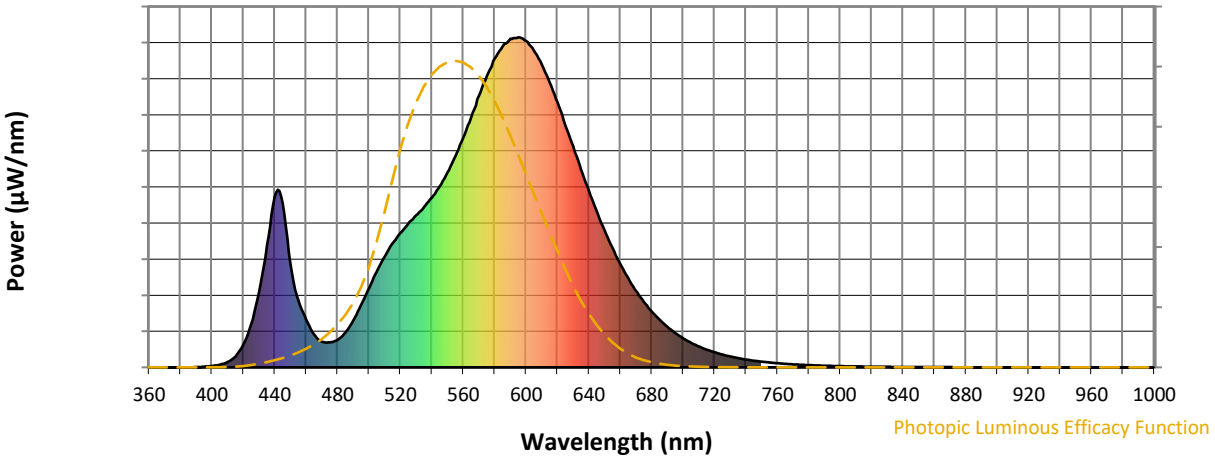



CCT = 2985K
CIE x = 0.4408
CIE y = 0.4101
Duv = 0.0019

Point lies inside the ANSI 3000K 4-step quadrangle

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## Photopic Flux vs. Wavelength

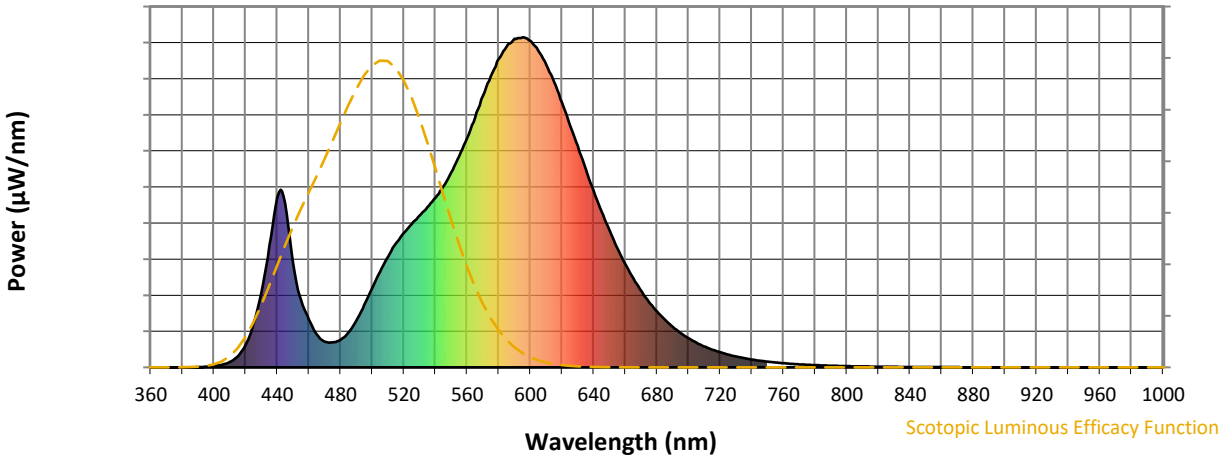



## Photopic Lumens: NR

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 142 | NR | 620 | 803 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 189 | NR | 625 | 734 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 240 | NR | 630 | 670 | NR | 760 | 13 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 290 | NR | 635 | 600 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 335 | NR | 640 | 535 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 375 | NR | 645 | 473 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 408 | NR | 650 | 415 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 434 | NR | 655 | 362 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 461 | NR | 660 | 313 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 486 | NR | 665 | 271 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 16 | NR | 540 | 514 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 33 | NR | 545 | 549 | NR | 675 | 198 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 69 | NR | 550 | 591 | NR | 680 | 169 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 640 | NR | 685 | 144 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 227 | NR | 560 | 695 | NR | 690 | 123 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 369 | NR | 565 | 757 | NR | 695 | 104 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 517 | NR | 570 | 822 | NR | 700 | 88 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 498 | NR | 575 | 882 | NR | 705 | 75 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 315 | NR | 580 | 935 | NR | 710 | 63 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 204 | NR | 585 | 972 | NR | 715 | 54 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 145 | NR | 590 | 996 | NR | 720 | 46 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 100 | NR | 595 | 1000 | NR | 725 | 39 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 78 | NR | 600 | 989 | NR | 730 | 33 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 76 | NR | 605 | 960 | NR | 735 | 28 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 83 | NR | 610 | 918 | NR | 740 | 24 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 105 | NR | 615 | 864 | NR | 745 | 20 | NR | 875 | 1 | NR | | | |

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## Scotopic Flux vs. Wavelength

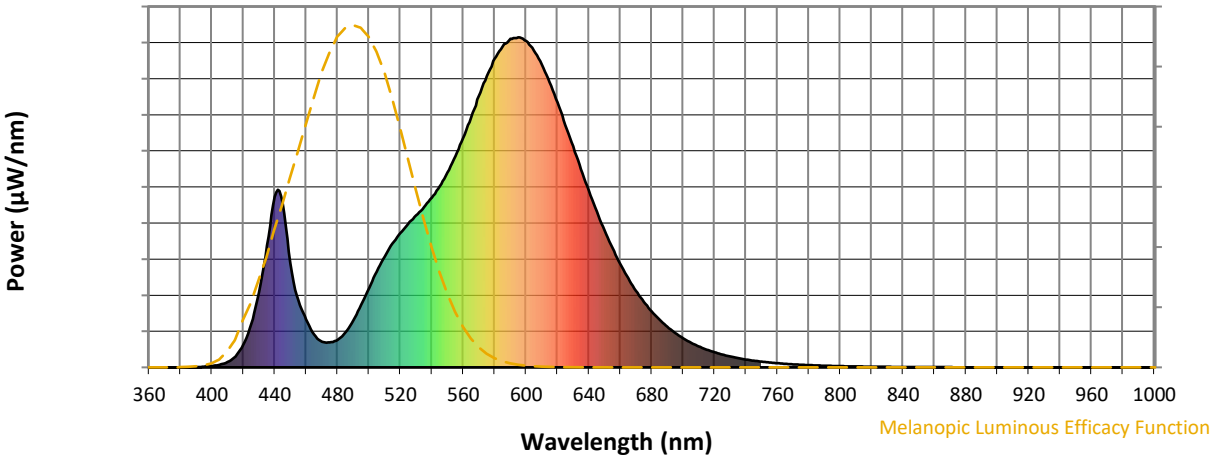



**Scotopic Lumens: NR** **S/P: 1.19**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 142 | NR | 620 | 803 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 189 | NR | 625 | 734 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 240 | NR | 630 | 670 | NR | 760 | 13 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 290 | NR | 635 | 600 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 335 | NR | 640 | 535 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 375 | NR | 645 | 473 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 408 | NR | 650 | 415 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 434 | NR | 655 | 362 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 461 | NR | 660 | 313 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 486 | NR | 665 | 271 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 16 | NR | 540 | 514 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 33 | NR | 545 | 549 | NR | 675 | 198 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 69 | NR | 550 | 591 | NR | 680 | 169 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 640 | NR | 685 | 144 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 227 | NR | 560 | 695 | NR | 690 | 123 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 369 | NR | 565 | 757 | NR | 695 | 104 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 517 | NR | 570 | 822 | NR | 700 | 88 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 498 | NR | 575 | 882 | NR | 705 | 75 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 315 | NR | 580 | 935 | NR | 710 | 63 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 204 | NR | 585 | 972 | NR | 715 | 54 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 145 | NR | 590 | 996 | NR | 720 | 46 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 100 | NR | 595 | 1000 | NR | 725 | 39 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 78 | NR | 600 | 989 | NR | 730 | 33 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 76 | NR | 605 | 960 | NR | 735 | 28 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 83 | NR | 610 | 918 | NR | 740 | 24 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 105 | NR | 615 | 864 | NR | 745 | 20 | NR | 875 | 1 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.13**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 142 | NR | 620 | 803 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 189 | NR | 625 | 734 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 240 | NR | 630 | 670 | NR | 760 | 13 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 290 | NR | 635 | 600 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 335 | NR | 640 | 535 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 375 | NR | 645 | 473 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 408 | NR | 650 | 415 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 434 | NR | 655 | 362 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 461 | NR | 660 | 313 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 486 | NR | 665 | 271 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 16 | NR | 540 | 514 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 33 | NR | 545 | 549 | NR | 675 | 198 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 69 | NR | 550 | 591 | NR | 680 | 169 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 640 | NR | 685 | 144 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 227 | NR | 560 | 695 | NR | 690 | 123 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 369 | NR | 565 | 757 | NR | 695 | 104 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 517 | NR | 570 | 822 | NR | 700 | 88 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 498 | NR | 575 | 882 | NR | 705 | 75 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 315 | NR | 580 | 935 | NR | 710 | 63 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 204 | NR | 585 | 972 | NR | 715 | 54 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 145 | NR | 590 | 996 | NR | 720 | 46 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 100 | NR | 595 | 1000 | NR | 725 | 39 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 78 | NR | 600 | 989 | NR | 730 | 33 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 76 | NR | 605 | 960 | NR | 735 | 28 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 83 | NR | 610 | 918 | NR | 740 | 24 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 105 | NR | 615 | 864 | NR | 745 | 20 | NR | 875 | 1 | NR | | | |

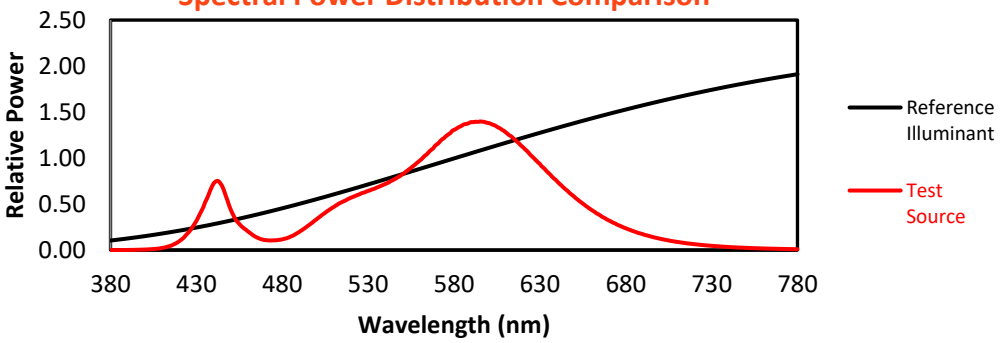
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# TM-30-18

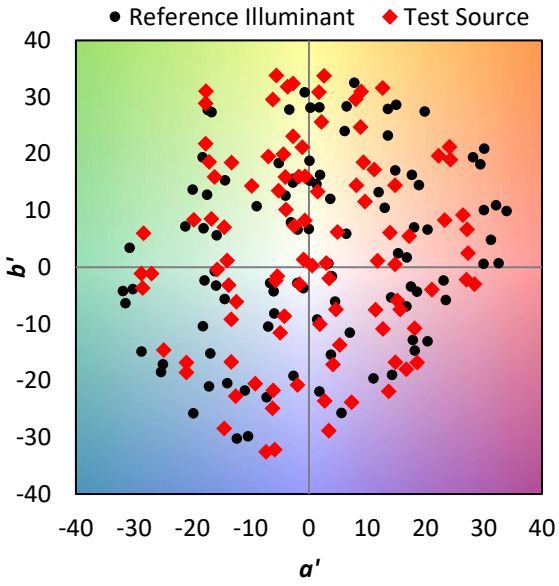
## Summary

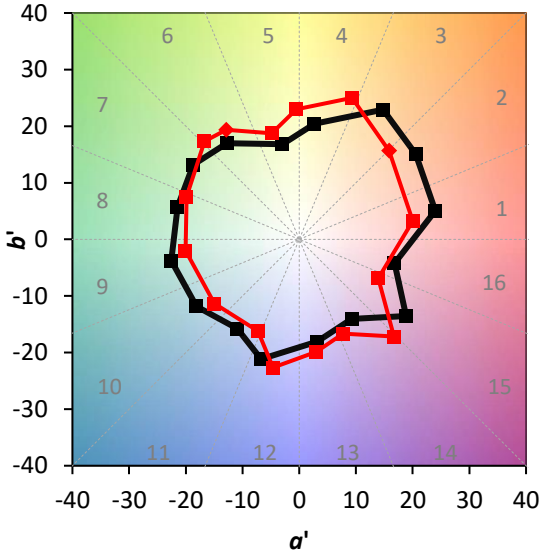
$R_f$ = 73.8
$R_g$ = 94.4
CIE $R_a$ = 70.8
$R_9$ = -43.2

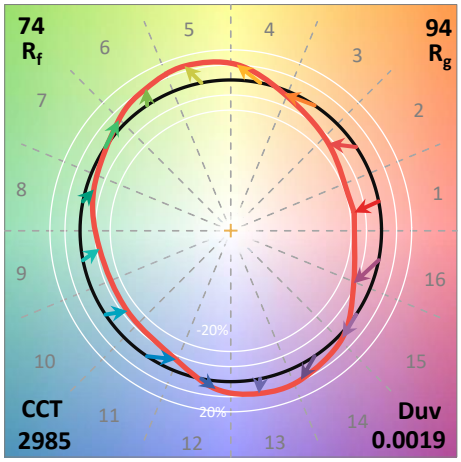
## Spectral Power Distribution Comparison

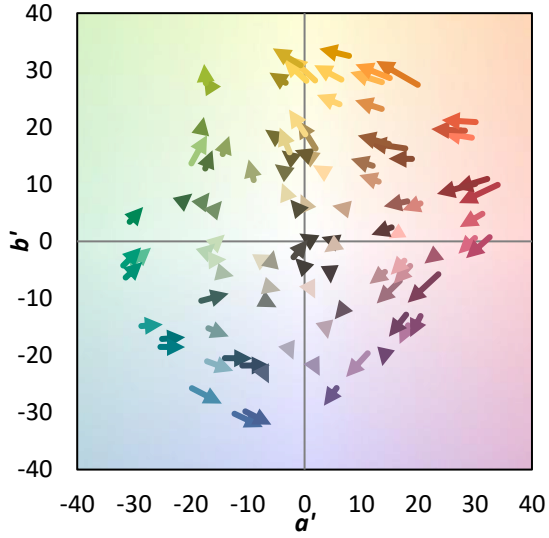



## Color Vector Graphics



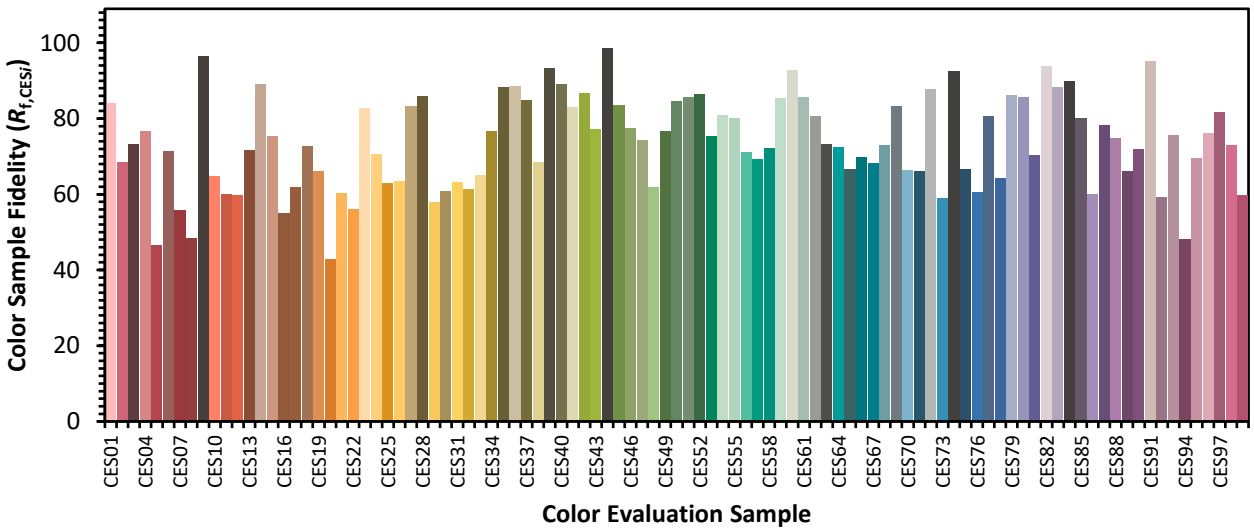



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**Individual Sample Fidelity Index ($R_{f,i}$)**

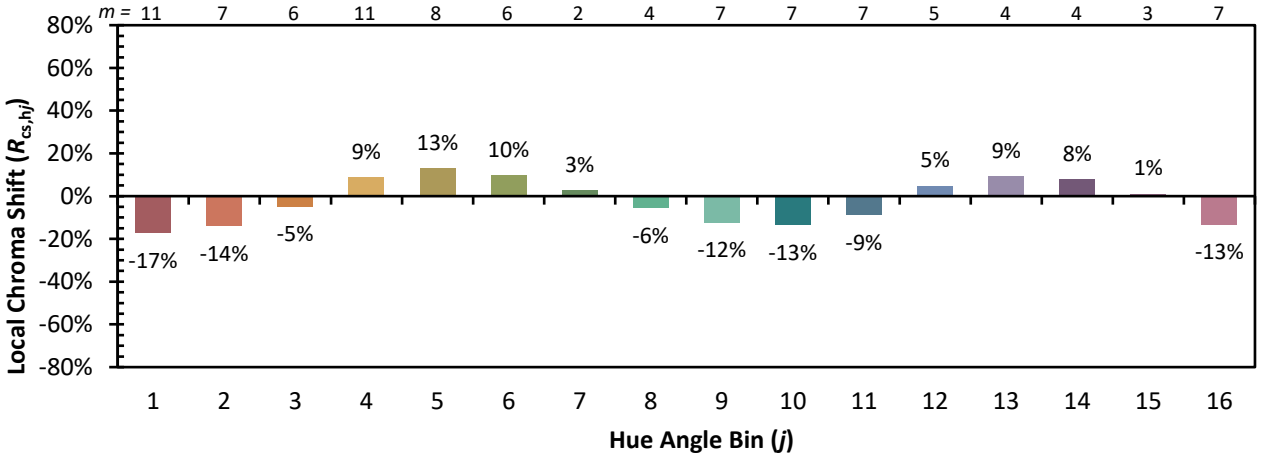
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 63 | CES51 = 86 | CES76 = 61 |
| CES02 = 62 | CES27 = 83 | CES52 = 86 | CES77 = 81 |
| CES03 = 31 | CES28 = 86 | CES53 = 75 | CES78 = 64 |
| CES04 = 71 | CES29 = 58 | CES54 = 81 | CES79 = 86 |
| CES05 = 49 | CES30 = 61 | CES55 = 80 | CES80 = 86 |
| CES06 = 51 | CES31 = 63 | CES56 = 71 | CES81 = 70 |
| CES07 = 41 | CES32 = 61 | CES57 = 69 | CES82 = 94 |
| CES08 = 40 | CES33 = 65 | CES58 = 72 | CES83 = 88 |
| CES09 = 29 | CES34 = 77 | CES59 = 85 | CES84 = 90 |
| CES10 = 76 | CES35 = 88 | CES60 = 93 | CES85 = 80 |
| CES11 = 59 | CES36 = 89 | CES61 = 86 | CES86 = 60 |
| CES12 = 65 | CES37 = 85 | CES62 = 81 | CES87 = 78 |
| CES13 = 43 | CES38 = 69 | CES63 = 73 | CES88 = 75 |
| CES14 = 74 | CES39 = 93 | CES64 = 72 | CES89 = 66 |
| CES15 = 71 | CES40 = 89 | CES65 = 67 | CES90 = 72 |
| CES16 = 47 | CES41 = 83 | CES66 = 70 | CES91 = 95 |
| CES17 = 50 | CES42 = 87 | CES67 = 68 | CES92 = 59 |
| CES18 = 56 | CES43 = 77 | CES68 = 73 | CES93 = 76 |
| CES19 = 73 | CES44 = 99 | CES69 = 83 | CES94 = 48 |
| CES20 = 66 | CES45 = 83 | CES70 = 66 | CES95 = 70 |
| CES21 = 87 | CES46 = 77 | CES71 = 66 | CES96 = 76 |
| CES22 = 79 | CES47 = 74 | CES72 = 88 | CES97 = 82 |
| CES23 = 92 | CES48 = 62 | CES73 = 59 | CES98 = 73 |
| CES24 = 91 | CES49 = 77 | CES74 = 93 | CES99 = 60 |
| CES25 = 73 | CES50 = 85 | CES75 = 67 | |

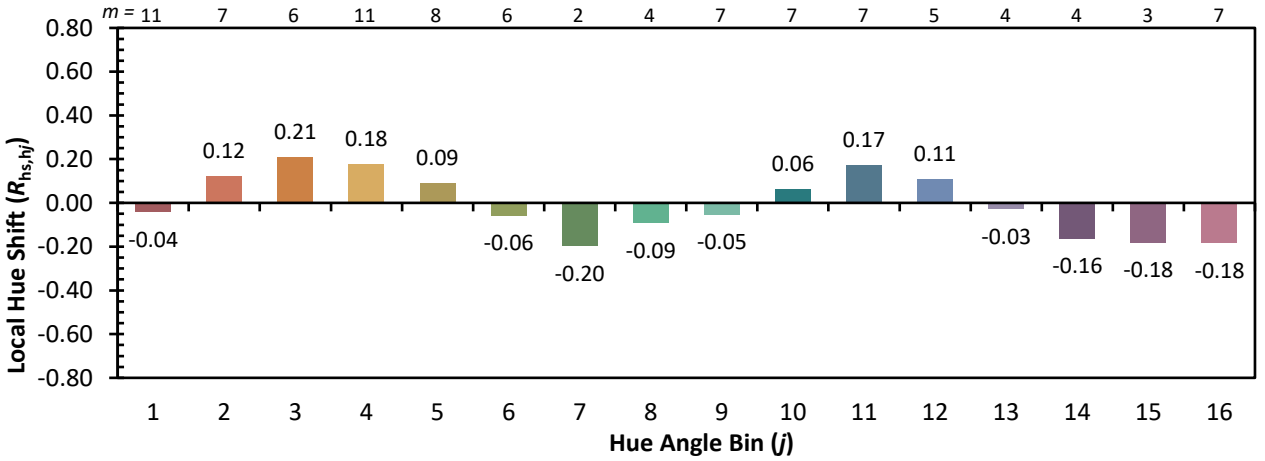


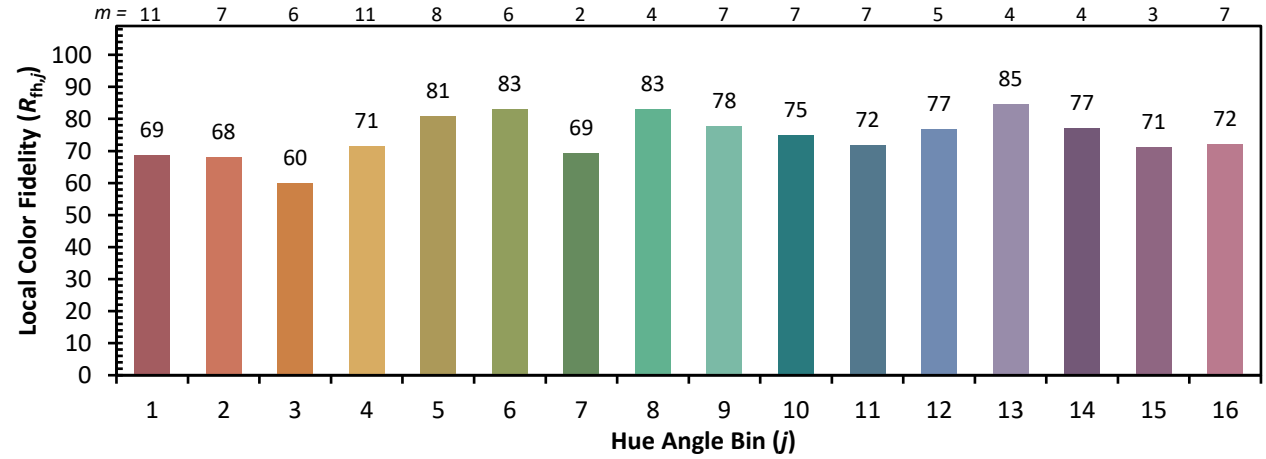
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## Color Rendition by Hue-Angle Bin



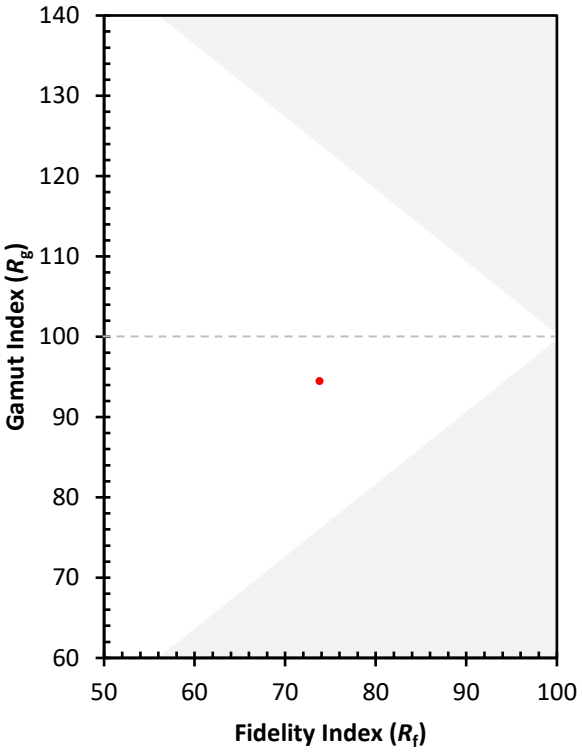



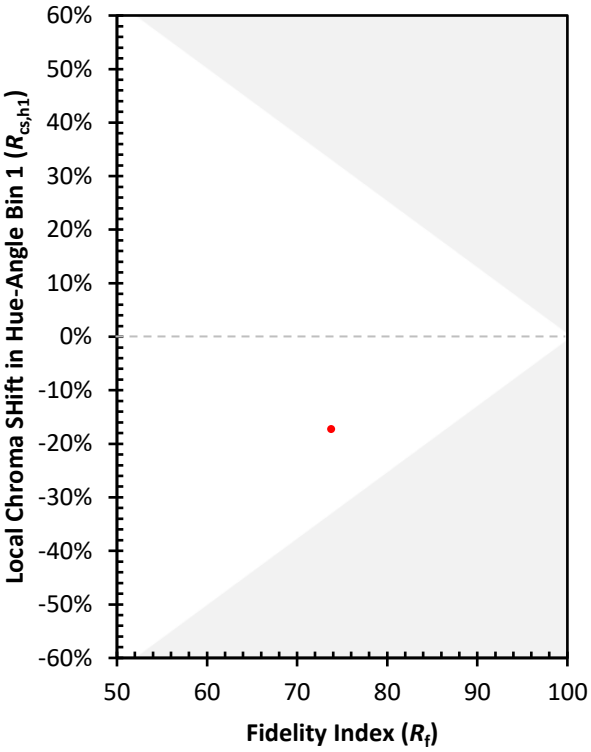



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## Measure Comparisons




(END OF REPORT)