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: McGRAW-EDISON

Report Number: P1501047

Luminaire Tested: GSS-SB3C-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: | P1501047 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 7/20/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB3C-735-U-T3LG |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 3SQUARE 150W 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: | 21250.1 lumens |
| Efficiency: | N/A |
| Efficacy: | 141.7 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 |

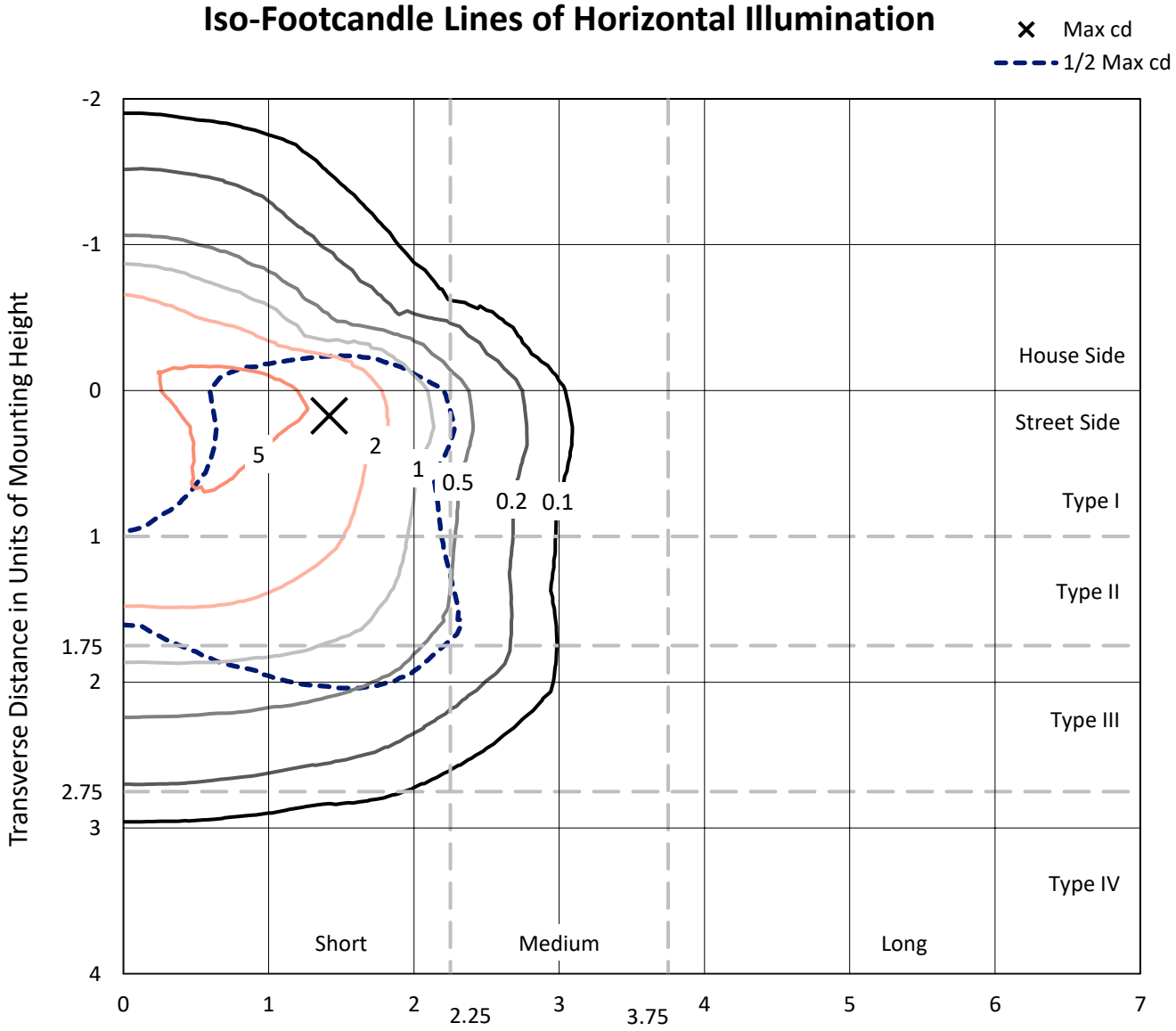
| | |
|---|---|
| Input Watts (W): | 150 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 6.3% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1501047
CATALOG NUMBER: GSS-SB3C-735-U-T3LG

## Iso-Footcandle Lines of Horizontal Illumination



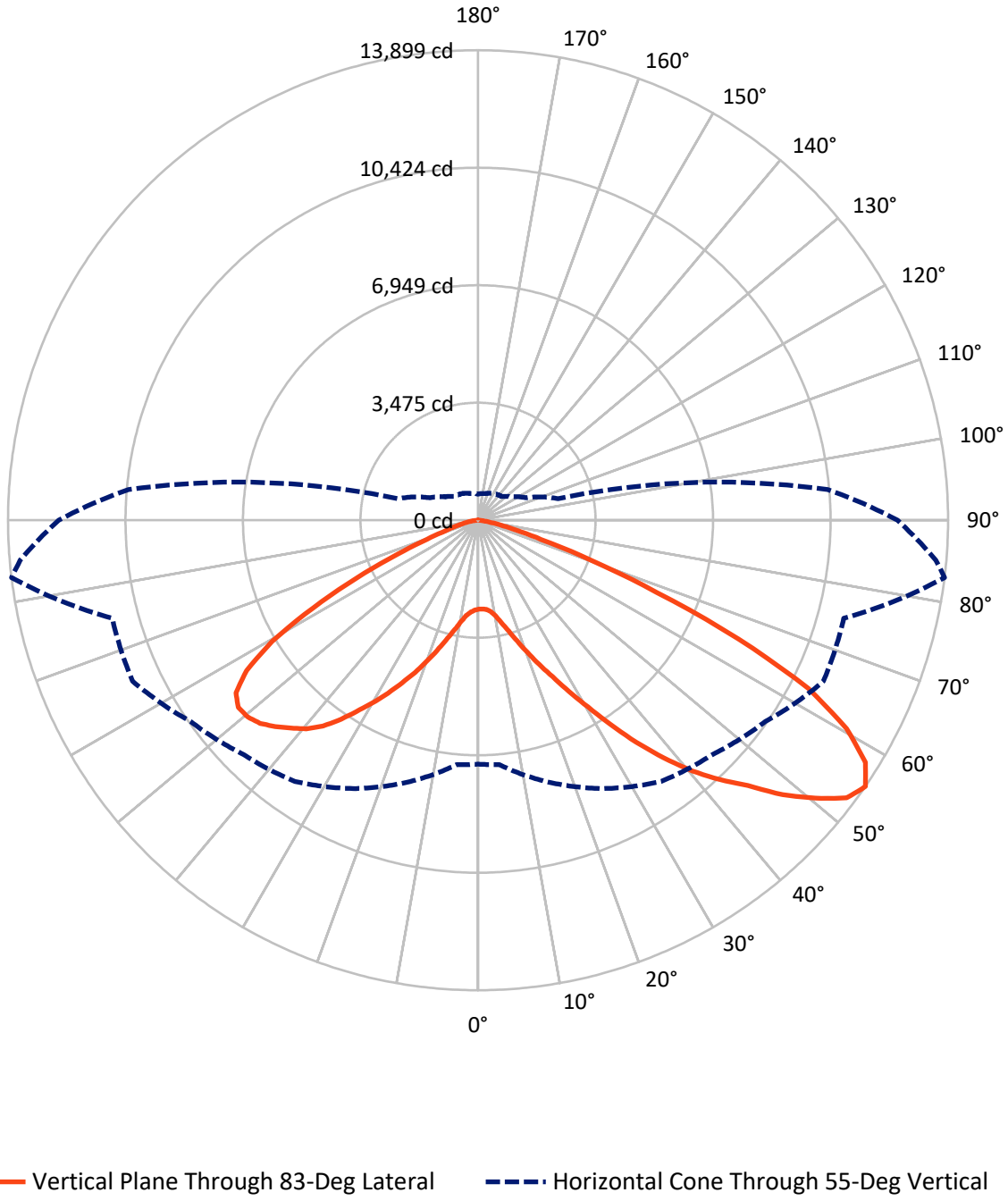

Based on 25 foot mounting height. Maximum calculated value = 7.1 fc
Type III - Short - N/A

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## Luminous Intensity Polar Plot



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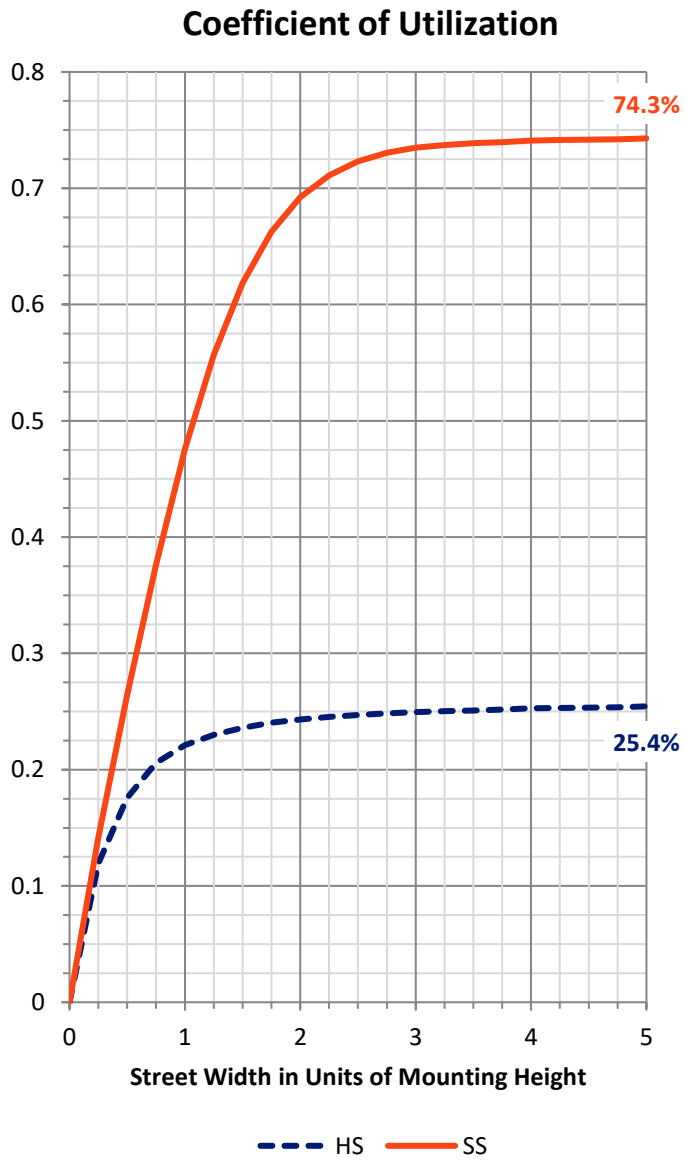
REPORT NUMBER: P1501047
CATALOG NUMBER: GSS-SB3C-735-U-T3LG

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 5453.2 | 0.0 | 5453.2 |
| | % Fixture | 25.7 | 0.0 | 25.7 |
| **Street Side** | Lumens | 15796.9 | 0.0 | 15796.9 |
| | % Fixture | 74.3 | 0.0 | 74.3 |
| **Total** | Lumens | 21250.1 | 0.0 | 21250.1 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 254.2 | 1.2 |
| 10°-20° | 828.0 | 3.9 |
| 20°-30° | 1657.7 | 7.8 |
| 30°-40° | 2949.2 | 13.9 |
| 40°-50° | 4444.3 | 20.9 |
| 50°-60° | 5415.7 | 25.5 |
| 60°-70° | 4379.4 | 20.6 |
| 70°-80° | 1199.5 | 5.6 |
| 80°-90° | 122.2 | 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° | 21250.1 | 100.0 |
| 0°-180° | 21250.1 | 100.0 |



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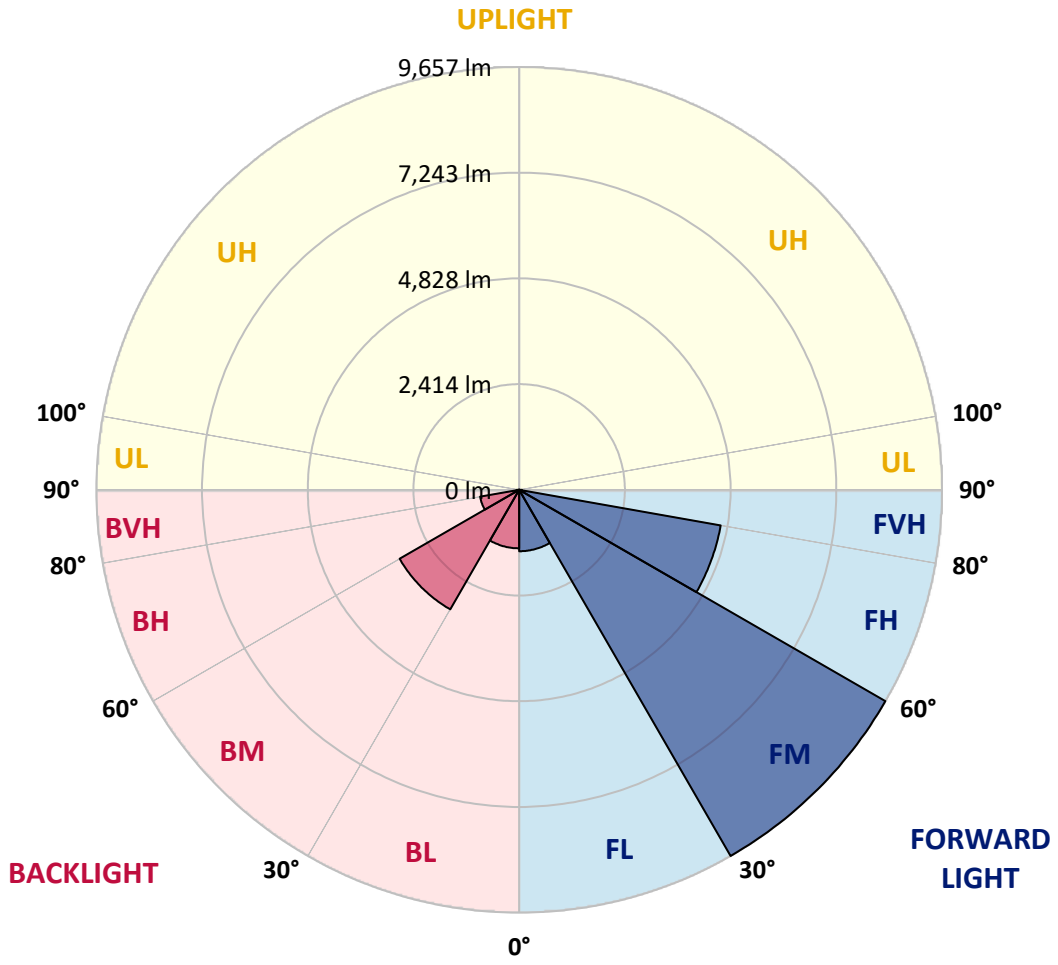
Scaled Data Report

REPORT NUMBER: P1501047
CATALOG NUMBER: GSS-SB3C-735-U-T3LG

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1403.1 | 6.6 | | | |
| FM | (30°-60°) | 9656.7 | 45.4 | | | |
| FH | (60°-80°) | 4673.5 | 22.0 | | | G2/5000 |
| FVH | (80°-90°) | 63.6 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 1336.7 | 6.3 | B3/2500 | | |
| BM | (30°-60°) | 3152.6 | 14.8 | B3/5000 | | |
| BH | (60°-80°) | 905.4 | 4.3 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 58.5 | 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° | 2630.5 | 2630.5 | 2630.5 | 2630.5 | 2630.5 | 2630.5 | 2630.5 | 2630.5 | 2630.5 | *2630.5* | 2630.5 |
| 2.5° | 2555.0 | 2550.3 | 2545.5 | 2540.8 | 2550.3 | 2564.4 | 2578.6 | 2588.0 | 2611.6 | *2630.5* | 2621.1 |
| 5° | 2351.9 | 2342.5 | 2351.9 | 2389.7 | 2422.7 | 2479.4 | 2536.1 | 2573.9 | 2625.8 | *2649.4* | 2658.9 |
| 7.5° | 2172.4 | 2163.0 | 2172.4 | 2219.7 | 2276.3 | 2366.1 | 2484.1 | 2578.6 | 2673.0 | *2729.7* | 2739.2 |
| 10° | 2172.4 | 2177.2 | 2177.2 | 2196.1 | 2224.4 | 2314.1 | 2455.8 | 2635.3 | 2800.6 | *2880.8* | 2899.7 |
| 12.5° | 2243.3 | 2243.3 | 2243.3 | 2266.9 | 2285.8 | 2356.6 | 2517.2 | 2739.2 | 3003.6 | *3121.7* | 3135.9 |
| 15° | 2337.7 | 2333.0 | 2347.2 | 2361.3 | 2394.4 | 2465.2 | 2625.8 | 2890.3 | 3225.6 | *3405.1* | 3424.0 |
| 17.5° | 2470.0 | 2460.5 | 2474.7 | 2507.8 | 2555.0 | 2635.3 | 2795.8 | 3098.1 | 3532.6 | *3759.3* | 3787.6 |
| 20° | 2616.4 | 2611.6 | 2640.0 | 2691.9 | 2758.1 | 2857.2 | 3041.4 | 3348.4 | 3882.1 | *4170.1* | 4222.1 |
| 22.5° | 2791.1 | 2781.7 | 2833.6 | 2928.1 | 3017.8 | 3131.1 | 3353.1 | 3674.3 | 4283.5 | *4628.2* | 4680.2 |
| 25° | 2989.5 | 2989.5 | 3060.3 | 3173.7 | 3310.6 | 3513.7 | 3735.7 | 4089.9 | 4755.8 | *5124.1* | 5204.4 |
| 27.5° | 3315.3 | 3338.9 | 3367.3 | 3485.3 | 3679.0 | 3952.9 | 4189.0 | 4590.5 | 5270.5 | *5733.4* | 5761.7 |
| 30° | 3844.3 | 3834.8 | 3882.1 | 3962.3 | 4122.9 | 4411.0 | 4765.2 | 5195.0 | 5922.3 | *6408.7* | 6479.5 |
| 32.5° | 4321.3 | 4335.4 | 4401.6 | 4552.7 | 4746.3 | 4991.9 | 5416.9 | 5945.9 | 6630.7 | *7192.7* | 7225.7 |
| 35° | 4803.0 | 4812.4 | 4939.9 | 5166.6 | 5454.7 | 5728.6 | 6191.5 | 6710.9 | 7400.5 | *8066.4* | 8156.1 |
| 37.5° | 5478.3 | 5468.9 | 5596.4 | 5790.0 | 6177.3 | 6602.3 | 6975.4 | 7471.3 | 8137.2 | *8916.4* | 9020.3 |
| 40° | 5983.7 | 6035.6 | 6276.5 | 6522.0 | 6885.7 | 7324.9 | 7641.3 | 8108.9 | 8741.7 | *9747.6* | 9842.1 |
| 42.5° | 6503.1 | 6545.7 | 6866.8 | 7235.2 | 7617.7 | 7915.2 | 8160.8 | 8595.3 | 9223.4 | *10484.4* | 10536.3 |
| 45° | 6932.9 | 6989.6 | 7358.0 | 7825.5 | 8222.2 | 8524.5 | 8609.5 | 9015.6 | 9714.6 | *11192.8* | 11273.1 |
| 47.5° | 7206.8 | 7268.2 | 7702.7 | 8250.5 | 8656.7 | 8977.8 | 8949.5 | 9521.0 | 10238.8 | *12132.6* | 12104.3 |
| 50° | 7395.7 | 7433.5 | 7905.8 | 8491.4 | 9020.3 | 9232.9 | 9355.7 | 10092.4 | 10777.2 | *12921.3* | 12817.4 |
| 52.5° | 7532.7 | 7594.1 | 8023.9 | 8666.1 | 9223.4 | 9502.1 | 9832.6 | 10753.6 | 11150.3 | *13643.9* | 13412.5 |
| 55° | *7211.6* | *7258.8* | *8014.4* | *8755.9* | *9431.2* | *9799.6* | *10375.8* | *11268.3* | *11197.5* | *13898.9* | *13587.2* |
| 57.5° | 6881.0 | 6918.7 | 7617.7 | 8732.3 | 9657.9 | 10168.0 | 10994.4 | 11334.5 | 10777.2 | *13506.9* | 13114.9 |
| 60° | 6465.4 | 6493.7 | 7192.7 | 8482.0 | 9662.6 | 10456.0 | 11310.9 | 10852.8 | 9997.9 | *12519.9* | 12146.8 |
| 62.5° | 5700.3 | 5700.3 | 6470.1 | 7806.6 | 9426.5 | 10602.4 | 11225.8 | 9941.3 | 8954.2 | *10966.1* | 10451.3 |
| 65° | 4944.7 | 4911.6 | 5431.1 | 6602.3 | 8798.4 | 10564.7 | 10588.3 | 8788.9 | 7334.3 | *8458.3* | 8056.9 |
| 67.5° | 4122.9 | 4127.6 | 4434.6 | 5360.3 | 7126.5 | 9776.0 | 9242.3 | 6791.2 | 5110.0 | *5695.6* | 5487.8 |
| 70° | 2791.1 | 2862.0 | 3173.7 | 3891.5 | 5374.4 | 6928.2 | 7358.0 | 4599.9 | 3187.8 | *3537.3* | 3367.3 |
| 72.5° | 1062.6 | 1076.8 | 1440.4 | 2040.2 | 3395.6 | 4165.4 | 5133.6 | 2573.9 | 1865.5 | *1950.5* | 1959.9 |
| 75° | 448.7 | 467.5 | 614.0 | 859.5 | 1506.5 | 2271.6 | 2701.4 | 1303.5 | 1133.4 | *1166.5* | 1157.1 |
| 77.5° | 302.3 | 311.7 | 373.1 | 462.8 | 680.1 | 911.5 | 1128.7 | 736.7 | 694.2 | *651.7* | 632.8 |
| 80° | 226.7 | 226.7 | 269.2 | 311.7 | 382.5 | 467.5 | 491.2 | 373.1 | 415.6 | *344.8* | 335.3 |
| 82.5° | 146.4 | 155.8 | 170.0 | 184.2 | 217.2 | 231.4 | 198.4 | 203.1 | 240.9 | *179.5* | 170.0 |
| 85° | 70.8 | 75.6 | 80.3 | 85.0 | 85.0 | 80.3 | 70.8 | 89.7 | 122.8 | *75.6* | 70.8 |
| 87.5° | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 4.7 | 4.7 | 4.7 | *4.7* | 4.7 |
| 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: P1501047
CATALOG NUMBER: GSS-SB3C-735-U-T3LG

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 2630.5 | 2630.5 | 2630.5 | 2630.5 | 2630.5 | 2630.5 | 2630.5 | 2630.5 | 2630.5 | 2630.5 | 2630.5 |
| 2.5° | 2635.3 | 2654.2 | 2668.3 | 2677.8 | 2701.4 | 2696.7 | 2710.8 | 2720.3 | 2729.7 | 2743.9 | 2725.0 |
| 5° | 2682.5 | 2715.5 | 2753.3 | 2781.7 | 2810.0 | 2824.2 | 2828.9 | 2838.3 | 2843.1 | 2852.5 | 2847.8 |
| 7.5° | 2786.4 | 2824.2 | 2880.8 | 2909.2 | 2932.8 | 2932.8 | 2918.6 | 2913.9 | 2899.7 | 2909.2 | 2909.2 |
| 10° | 2961.1 | 3017.8 | 3079.2 | 3083.9 | 3055.6 | 3022.5 | 2970.6 | 2942.2 | 2904.5 | 2895.0 | 2885.6 |
| 12.5° | 3216.2 | 3291.7 | 3338.9 | 3305.9 | 3206.7 | 3083.9 | 2947.0 | 2819.4 | 2720.3 | 2677.8 | 2668.3 |
| 15° | 3504.2 | 3598.7 | 3608.1 | 3513.7 | 3334.2 | 3036.7 | 2748.6 | 2606.9 | 2555.0 | 2555.0 | 2550.3 |
| 17.5° | 3900.9 | 3967.1 | 3929.3 | 3702.6 | 3301.2 | 2814.7 | 2606.9 | 2583.3 | 2597.5 | 2616.4 | 2616.4 |
| 20° | 4316.5 | 4392.1 | 4236.3 | 3834.8 | 3098.1 | 2682.5 | 2621.1 | 2640.0 | 2673.0 | 2691.9 | 2687.2 |
| 22.5° | 4812.4 | 4850.2 | 4548.0 | 3839.6 | 2880.8 | 2649.4 | 2649.4 | 2673.0 | 2696.7 | 2725.0 | 2725.0 |
| 25° | 5322.5 | 5308.3 | 4836.0 | 3664.8 | 2758.1 | 2640.0 | 2630.5 | 2649.4 | 2658.9 | 2673.0 | 2668.3 |
| 27.5° | 5893.9 | 5818.4 | 5058.0 | 3386.2 | 2720.3 | 2611.6 | 2564.4 | 2545.5 | 2555.0 | 2569.1 | 2573.9 |
| 30° | 6550.4 | 6370.9 | 5237.5 | 3211.4 | 2706.1 | 2545.5 | 2432.2 | 2380.2 | 2370.8 | 2389.7 | 2389.7 |
| 32.5° | 7310.7 | 6923.5 | 5346.1 | 3187.8 | 2691.9 | 2427.5 | 2276.3 | 2177.2 | 2158.3 | 2167.7 | 2191.3 |
| 35° | 8090.0 | 7589.4 | 5317.8 | 3249.2 | 2696.7 | 2333.0 | 2111.0 | 1978.8 | 1959.9 | 1969.4 | 1993.0 |
| 37.5° | 8907.0 | 8222.2 | 5209.1 | 3343.7 | 2658.9 | 2205.5 | 1959.9 | 1799.3 | 1771.0 | 1789.9 | 1799.3 |
| 40° | 9539.8 | 8755.9 | 4939.9 | 3381.4 | 2592.8 | 2044.9 | 1785.2 | 1648.2 | 1572.7 | 1567.9 | 1591.5 |
| 42.5° | 10125.5 | 9176.2 | 4647.1 | 3320.1 | 2455.8 | 1874.9 | 1605.7 | 1468.8 | 1350.7 | 1261.0 | 1261.0 |
| 45° | 10711.1 | 9601.2 | 4349.6 | 3145.3 | 2229.1 | 1695.4 | 1416.8 | 1232.6 | 1095.7 | 1029.5 | 1034.3 |
| 47.5° | 11296.7 | 10012.1 | 3995.4 | 2880.8 | 2002.4 | 1506.5 | 1213.7 | 1067.3 | 972.9 | 920.9 | 920.9 |
| 50° | 11839.8 | 10309.6 | 3542.0 | 2460.5 | 1742.7 | 1317.6 | 1072.1 | 987.0 | 916.2 | 869.0 | 859.5 |
| 52.5° | 12316.8 | 10508.0 | 2928.1 | 1950.5 | 1459.3 | 1105.1 | 996.5 | 930.4 | 878.4 | 826.5 | 812.3 |
| 55° | *12401.8* | *10375.8* | *2451.1* | *1567.9* | *1204.3* | *991.8* | *939.8* | *883.1* | *812.3* | *788.7* | *774.5* |
| 57.5° | 11877.6 | 9676.8 | 2068.5 | 1322.4 | 1029.5 | 911.5 | 892.6 | 826.5 | 769.8 | 746.2 | 732.0 |
| 60° | 10985.0 | 8406.4 | 1709.6 | 1133.4 | 916.2 | 835.9 | 859.5 | 793.4 | 703.7 | 689.5 | 675.3 |
| 62.5° | 9379.3 | 6559.8 | 1364.9 | 954.0 | 831.2 | 779.2 | 802.9 | 708.4 | 632.8 | 614.0 | 609.2 |
| 65° | 7291.8 | 4694.4 | 1147.6 | 840.6 | 765.1 | 722.6 | 713.1 | 628.1 | 571.4 | 557.3 | 557.3 |
| 67.5° | 5091.1 | 2984.7 | 958.7 | 769.8 | 680.1 | 651.7 | 647.0 | 590.3 | 552.6 | 538.4 | 538.4 |
| 70° | 3117.0 | 1808.8 | 807.6 | 703.7 | 599.8 | 547.8 | 580.9 | 571.4 | 514.8 | 500.6 | 495.9 |
| 72.5° | 1619.9 | 1081.5 | 708.4 | 647.0 | 505.3 | 467.5 | 519.5 | 524.2 | 477.0 | 495.9 | 491.2 |
| 75° | 939.8 | 750.9 | 618.7 | 571.4 | 401.4 | 392.0 | 453.4 | 500.6 | 462.8 | 477.0 | 467.5 |
| 77.5° | 538.4 | 481.7 | 477.0 | 467.5 | 316.4 | 321.1 | 406.2 | 448.7 | 396.7 | 410.9 | 377.8 |
| 80° | 297.5 | 311.7 | 330.6 | 292.8 | 222.0 | 250.3 | 325.9 | 358.9 | 302.3 | 297.5 | 273.9 |
| 82.5° | 155.8 | 193.6 | 222.0 | 188.9 | 127.5 | 151.1 | 222.0 | 222.0 | 193.6 | 184.2 | 179.5 |
| 85° | 70.8 | 80.3 | 103.9 | 94.5 | 47.2 | 56.7 | 103.9 | 113.3 | 99.2 | 89.7 | 85.0 |
| 87.5° | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 9.4 | 14.2 | 4.7 | 4.7 | 4.7 |
| 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

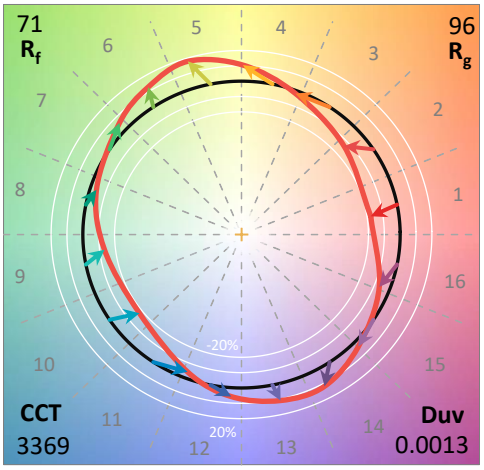
## Test Information

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

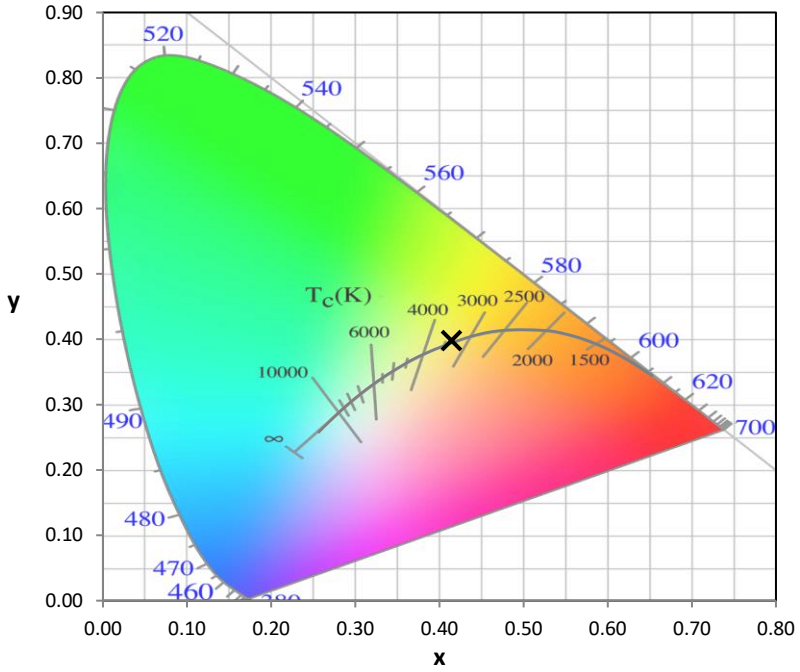
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

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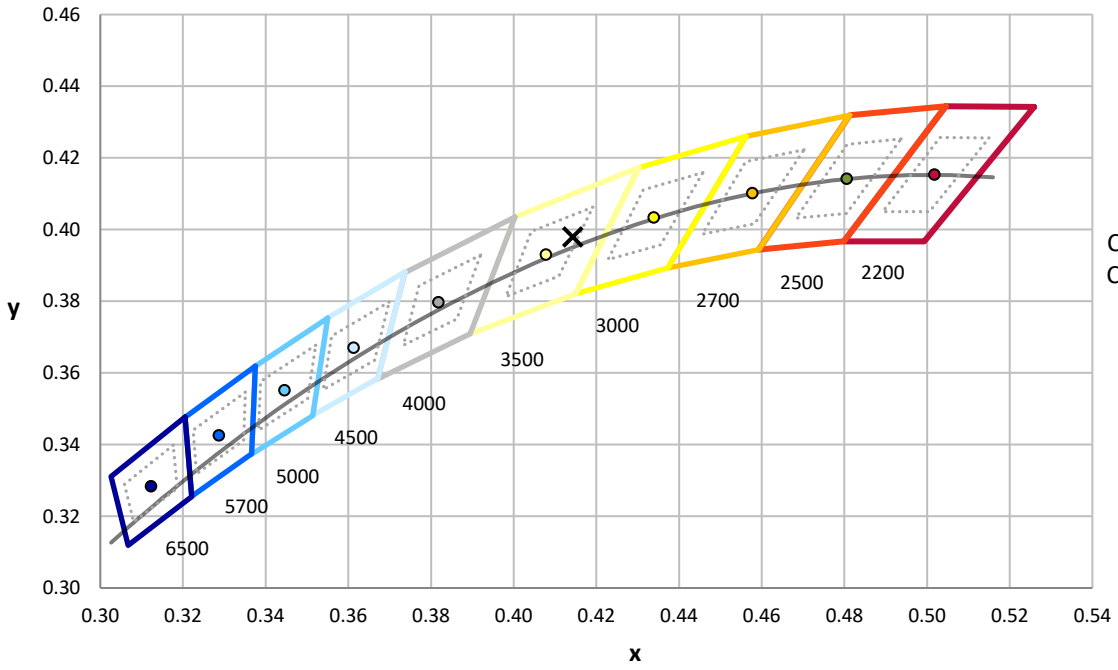
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

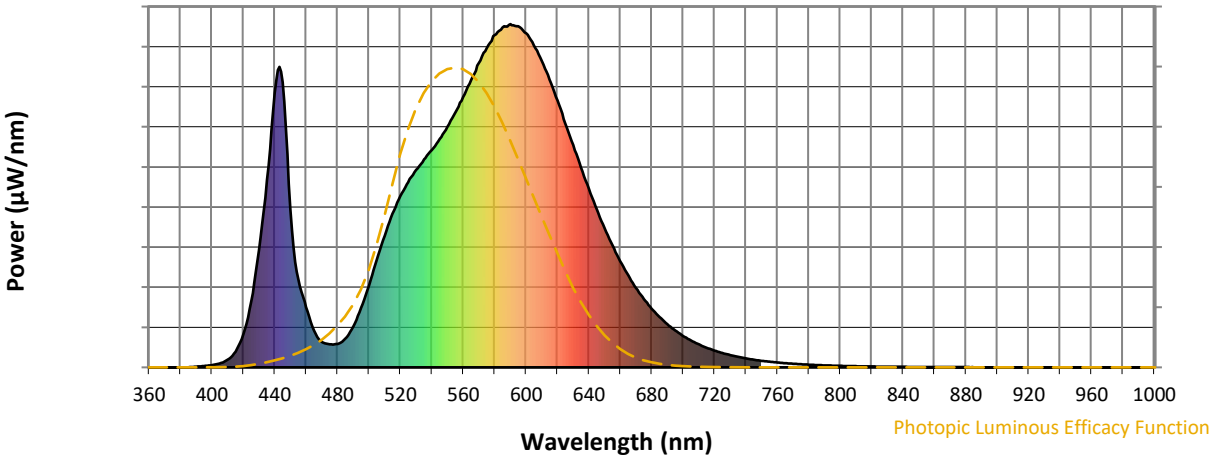



CCT = 3369K
CIE x = 0.4143
CIE y = 0.3980
Duv = 0.0013

Point lies inside the ANSI 3500K 4-step quadrangle

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## Photopic Flux vs. Wavelength

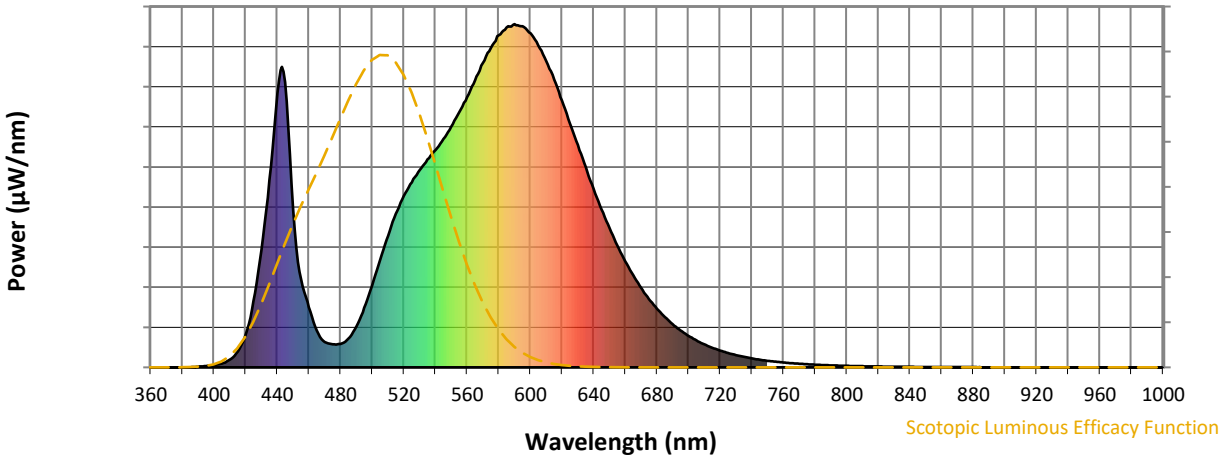



## Photopic Lumens: NR

| 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

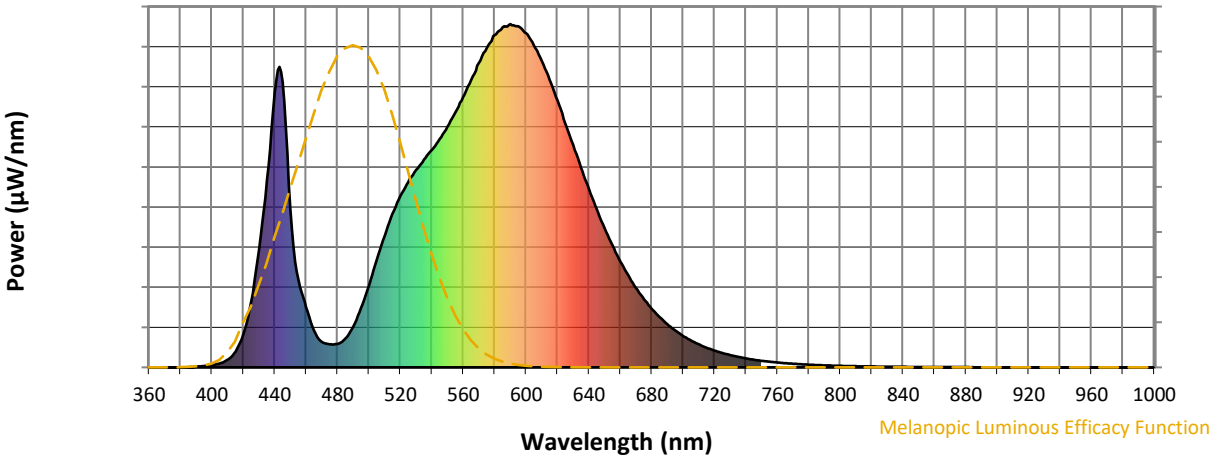



**Scotopic Lumens: NR** **S/P: 1.29**

| 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 | | | |

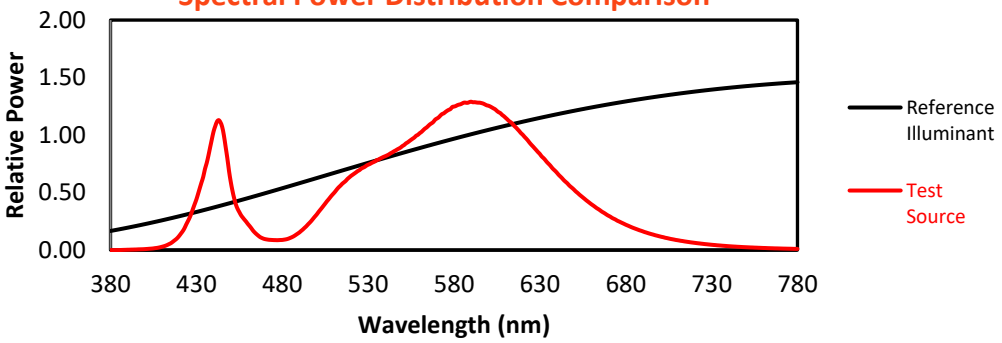
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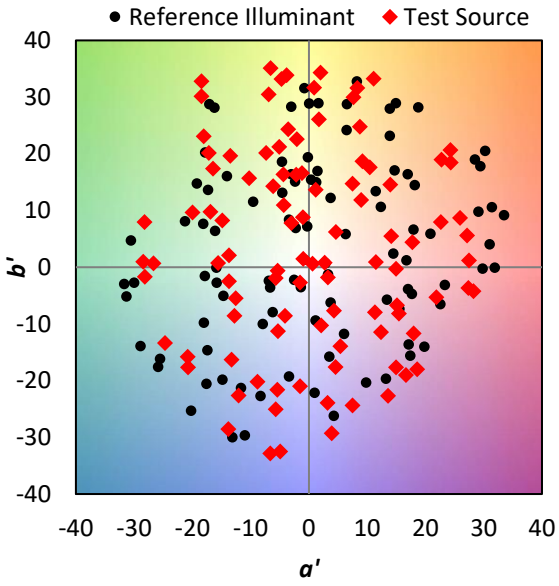
## Summary

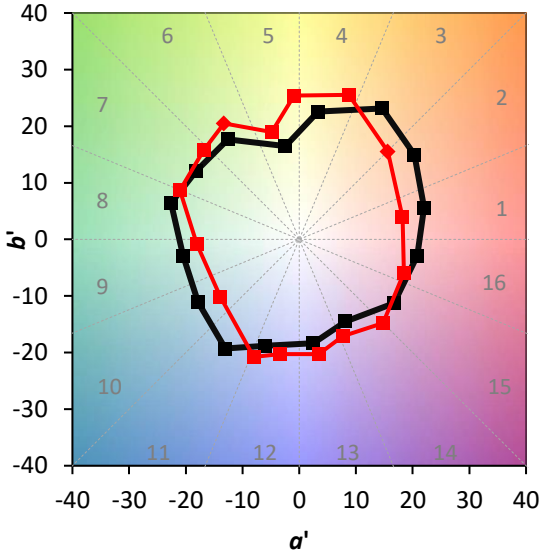
$R_f$ = 71.4
$R_g$ = 96
CIE $R_a$ = 70.1
$R_9$ = -40.2

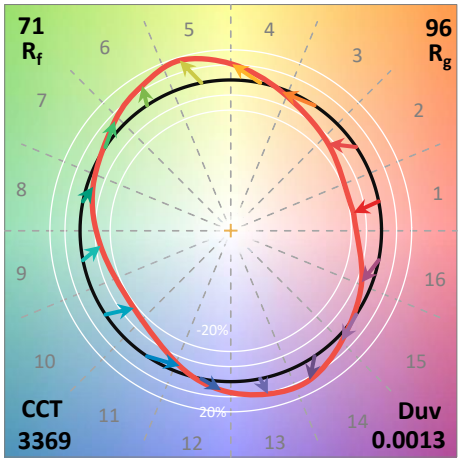
## Spectral Power Distribution Comparison

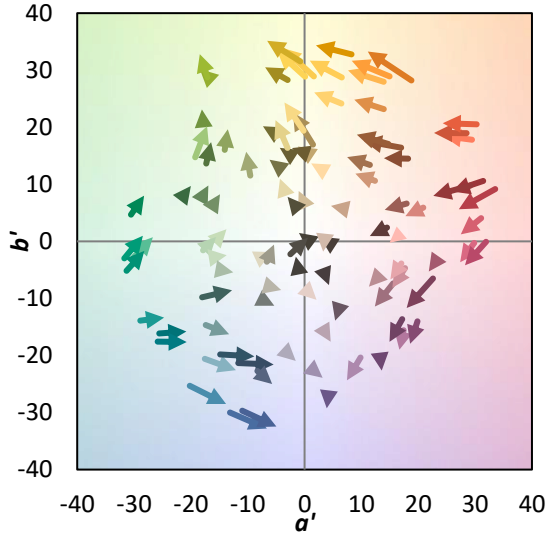



## Color Vector Graphics



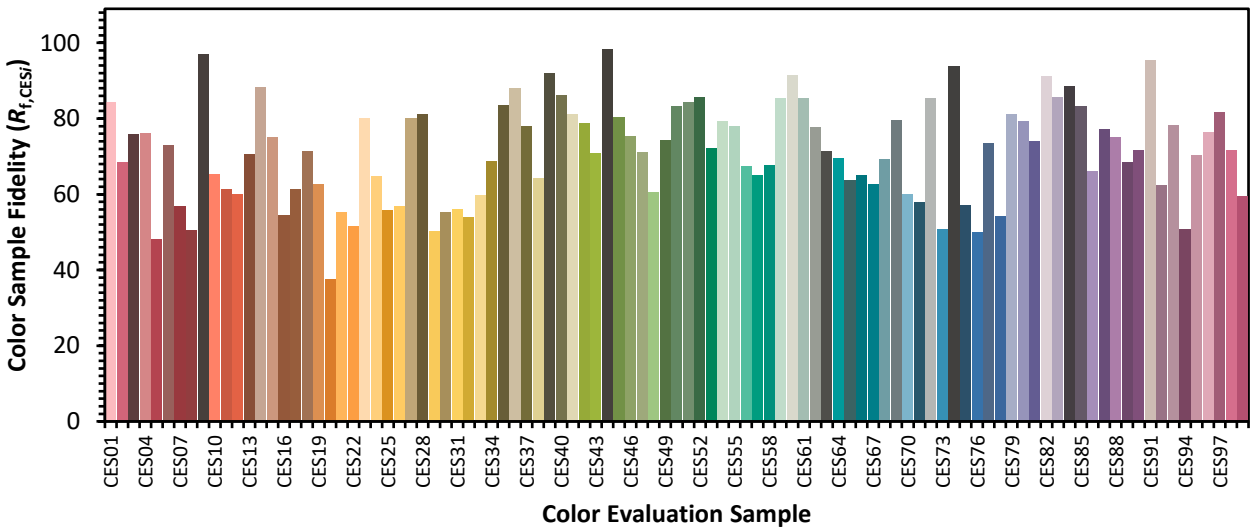



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## Individual Sample Fidelity Index ($R_{f,i}$)

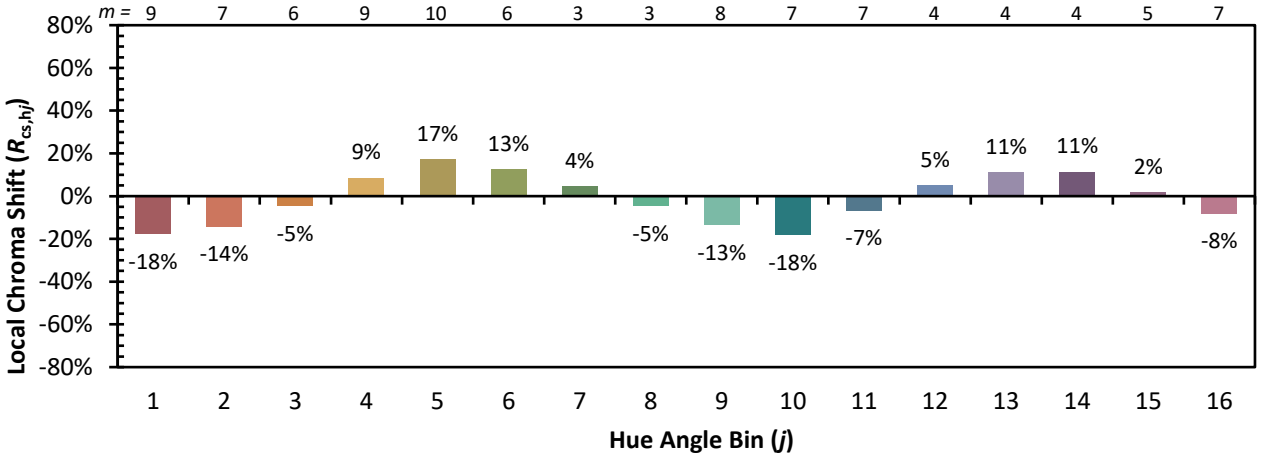
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 57 | CES51 = 84 | CES76 = 50 |
| CES02 = 62 | CES27 = 80 | CES52 = 86 | CES77 = 74 |
| CES03 = 31 | CES28 = 81 | CES53 = 72 | CES78 = 54 |
| CES04 = 70 | CES29 = 50 | CES54 = 79 | CES79 = 81 |
| CES05 = 48 | CES30 = 55 | CES55 = 78 | CES80 = 79 |
| CES06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

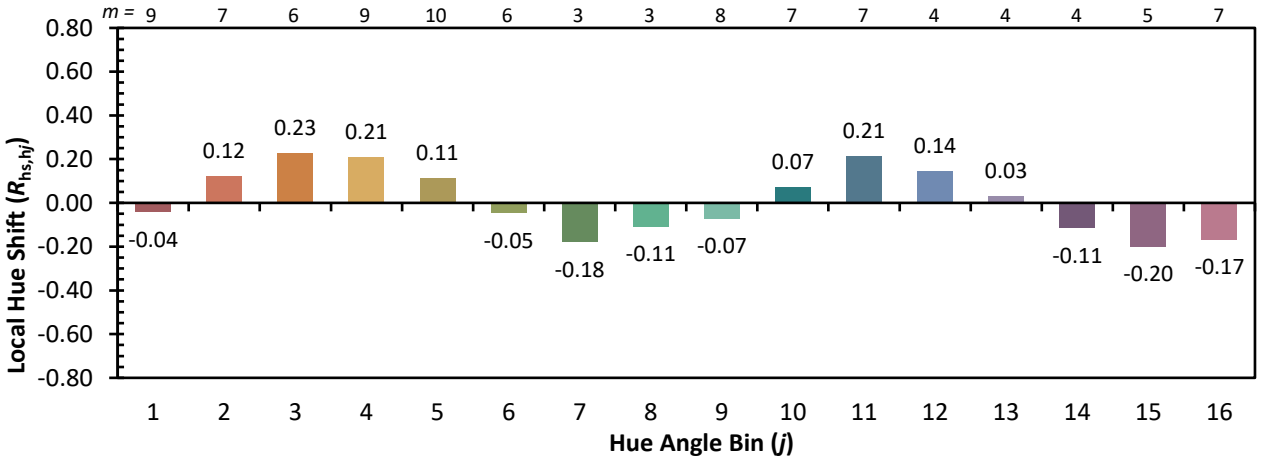


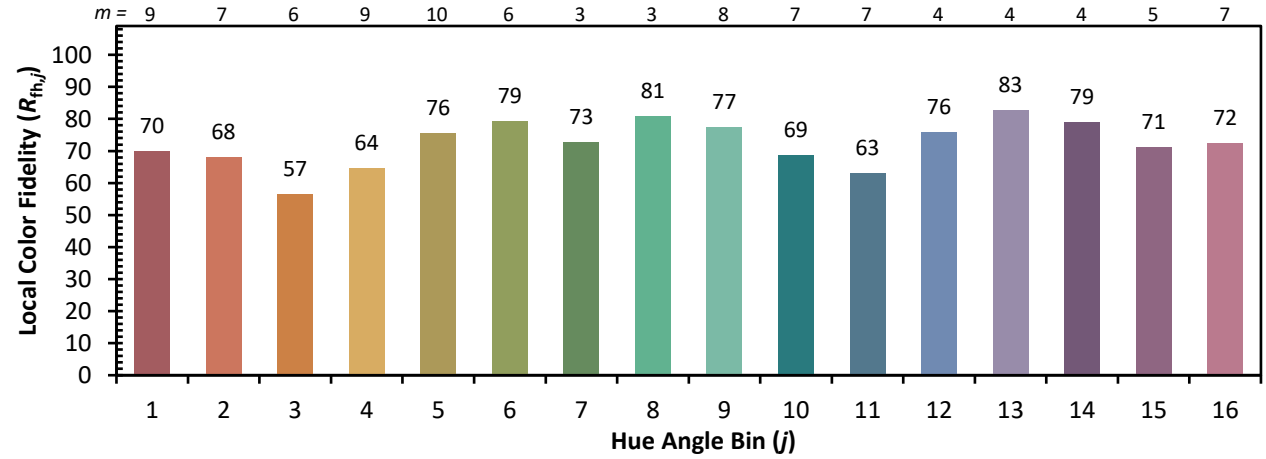
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## Color Rendition by Hue-Angle Bin



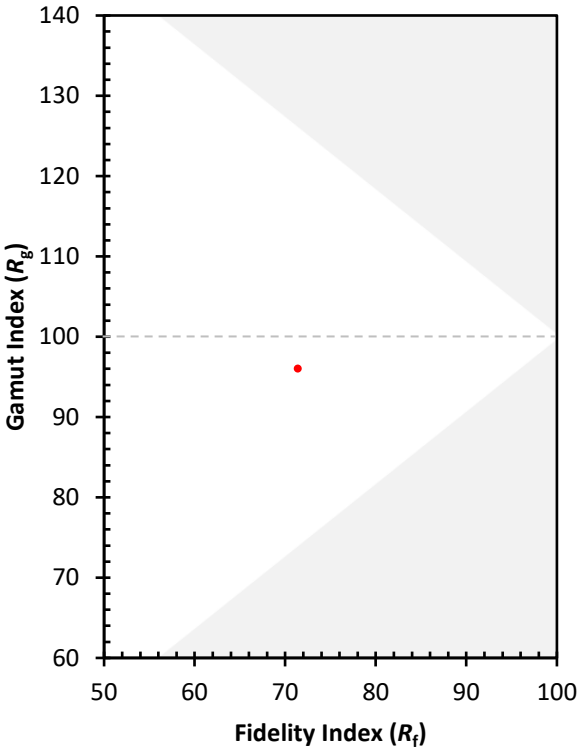



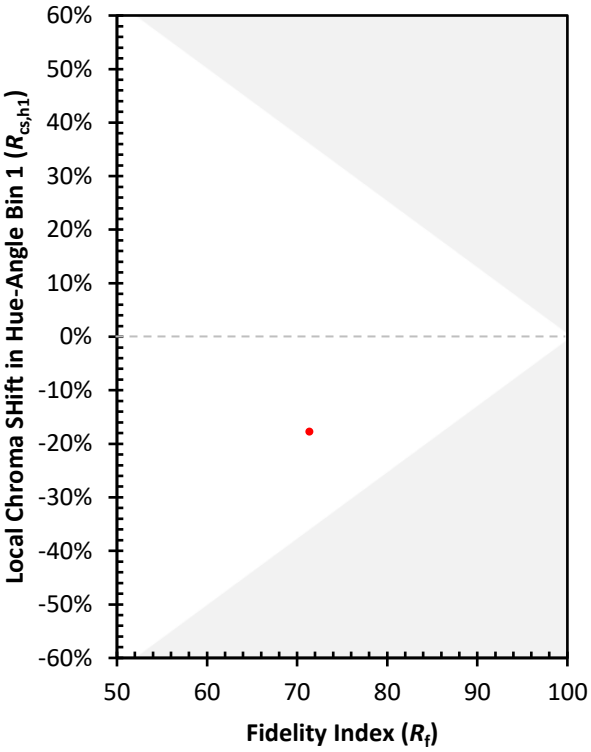



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## Measure Comparisons




(END OF REPORT)