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: P1500708

Luminaire Tested: GSS-SB2D-760-U-T4LG

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: | P1500708 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 7/20/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB2D-760-U-T4LG |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 2SQUARE 147W 70CRI 5700K FIXTURE w/ TYPE IV LOW GLARE DISTRIBUTION FIXTURE |
| Light Source: | (52) 5700K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 20142.6 lumens |
| Efficiency: | N/A |
| Efficacy: | 137.0 lumens/watt |
| Luminous Opening: | Rectangular (W 1' x L: 0.5' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B3 - U0 - G2 |

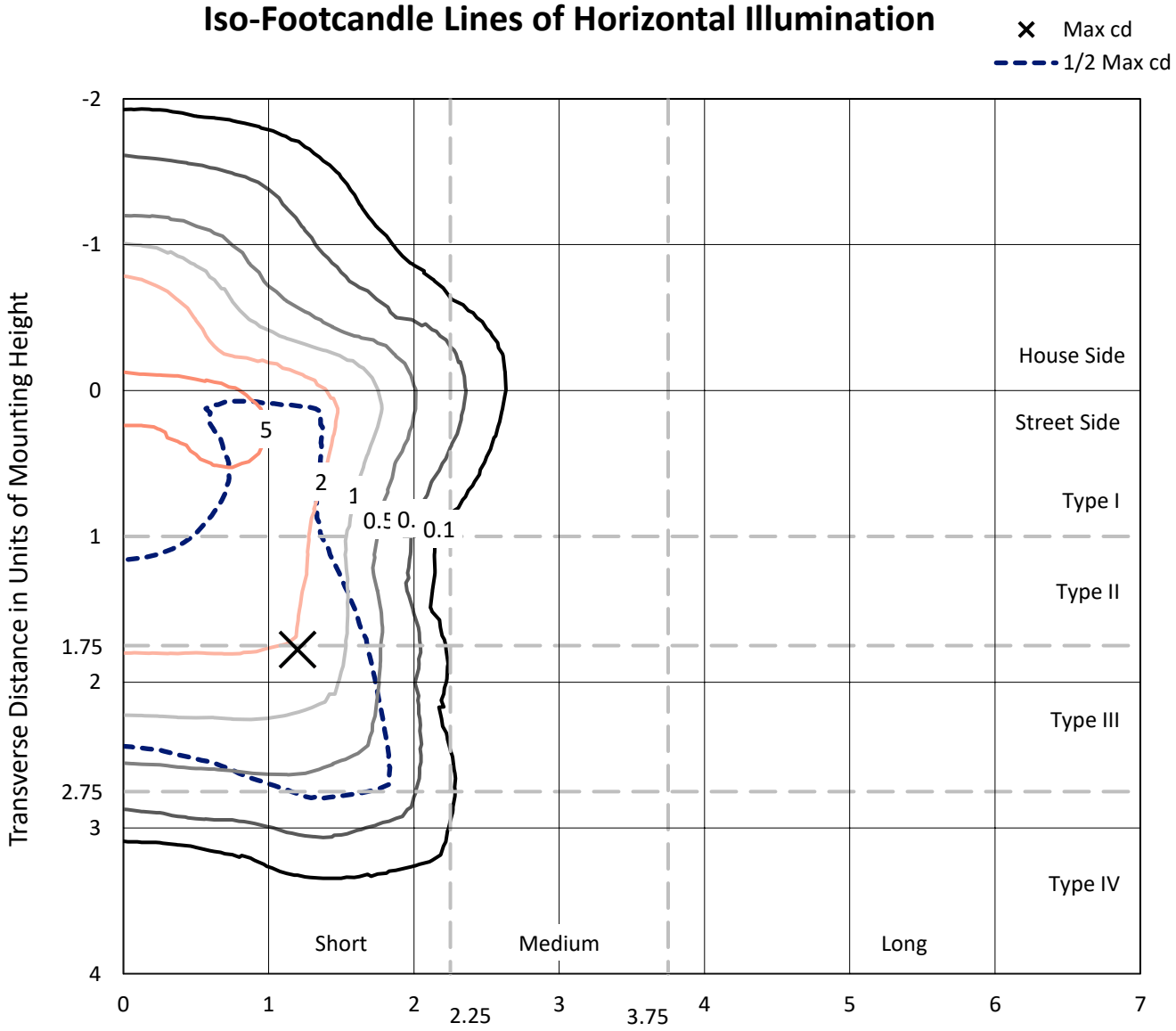
| | |
|---|---|
| Input Watts (W): | 147 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 3.1% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1500708
CATALOG NUMBER: GSS-SB2D-760-U-T4LG

## Iso-Footcandle Lines of Horizontal Illumination



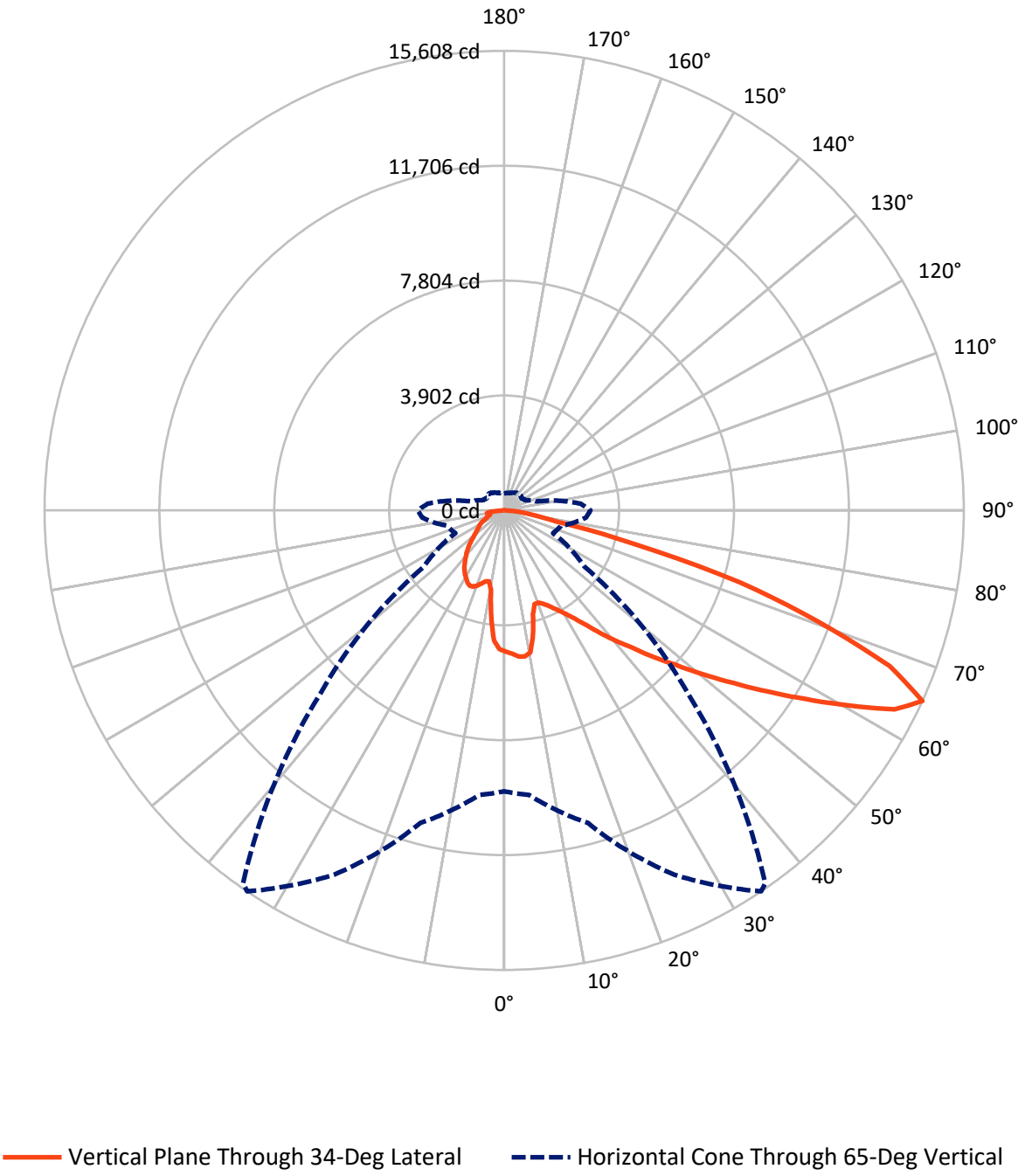

Based on 25 foot mounting height. Maximum calculated value = 8.1 fc
Type III - Short - N/A

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## Luminous Intensity Polar Plot



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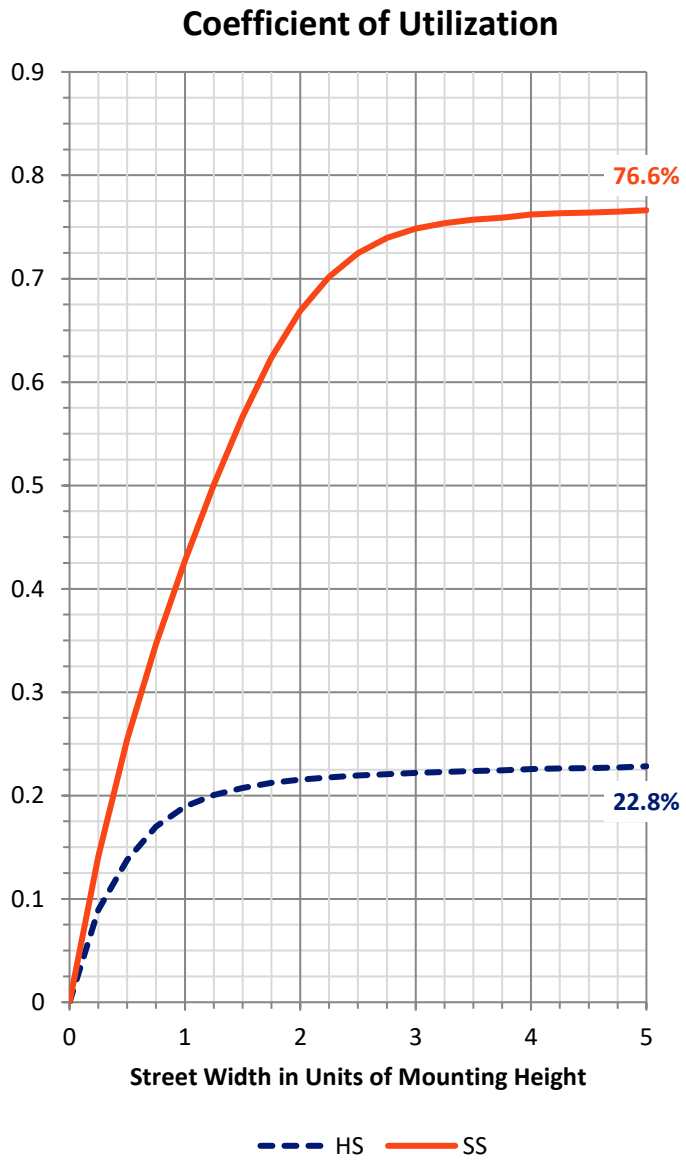
REPORT NUMBER: P1500708
CATALOG NUMBER: GSS-SB2D-760-U-T4LG

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 4686.3 | 0.0 | 4686.3 |
| | % Fixture | 23.3 | 0.0 | 23.3 |
| **Street Side** | Lumens | 15456.3 | 0.0 | 15456.3 |
| | % Fixture | 76.7 | 0.0 | 76.7 |
| **Total** | Lumens | 20142.6 | 0.0 | 20142.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 431.7 | 2.1 |
| 10°-20° | 1086.6 | 5.4 |
| 20°-30° | 1801.2 | 8.9 |
| 30°-40° | 2708.9 | 13.4 |
| 40°-50° | 3795.1 | 18.8 |
| 50°-60° | 4784.9 | 23.8 |
| 60°-70° | 4115.5 | 20.4 |
| 70°-80° | 1223.5 | 6.1 |
| 80°-90° | 195.2 | 1.0 |
| 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° | 20142.6 | 100.0 |
| 0°-180° | 20142.6 | 100.0 |



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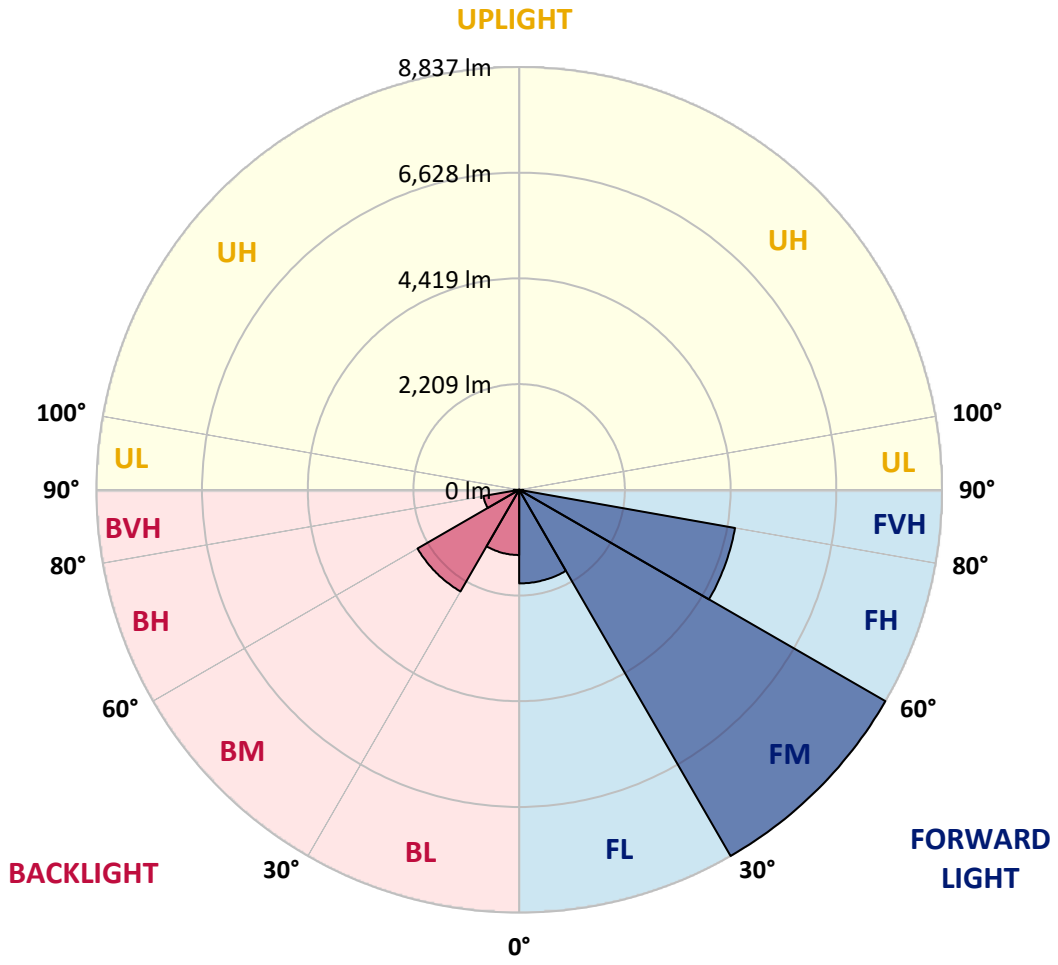
Scaled Data Report

REPORT NUMBER: P1500708
CATALOG NUMBER: GSS-SB2D-760-U-T4LG

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1956.0 | 9.7 | | | |
| FM | (30°-60°) | 8837.2 | 43.9 | | | |
| FH | (60°-80°) | 4580.5 | 22.7 | | | G2/5000 |
| FVH | (80°-90°) | 82.6 | 0.4 | | | G1/100 |
| BL | (0°-30°) | 1363.5 | 6.8 | B3/2500 | | |
| BM | (30°-60°) | 2451.7 | 12.2 | B2/2500 | | |
| BH | (60°-80°) | 758.4 | 3.8 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 112.6 | 0.6 | | | G2/225 |
| 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° | 34° | 35° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 4789.0 | 4789.0 | 4789.0 | 4789.0 | 4789.0 | 4789.0 | 4789.0 | 4789.0 | 4789.0 | 4789.0 | 4789.0 |
| 2.5° | 4880.2 | 4907.6 | 4875.7 | 4862.0 | 4866.5 | 4871.1 | 4848.3 | 4852.8 | 4825.5 | 4825.5 | 4802.7 |
| 5° | 4985.1 | 4989.7 | 4971.4 | 4985.1 | 4980.6 | 4976.0 | 4976.0 | 4971.4 | 4912.1 | 4898.5 | 4875.7 |
| 7.5° | 4925.8 | 4944.1 | 4953.2 | 5003.4 | 5017.0 | 5044.4 | 5062.7 | 5071.8 | 5026.2 | 4989.7 | 4930.4 |
| 10° | 4383.1 | 4396.8 | 4501.7 | 4729.7 | 4903.0 | 4934.9 | 5103.7 | 5199.5 | 5167.6 | 5149.3 | 5049.0 |
| 12.5° | 3502.8 | 3525.6 | 3644.2 | 3940.7 | 4346.6 | 4433.2 | 4971.4 | 5295.3 | 5368.2 | 5372.8 | 5226.8 |
| 15° | 3124.2 | 3124.2 | 3160.7 | 3329.5 | 3657.9 | 3726.3 | 4519.9 | 5322.6 | 5582.6 | 5614.5 | 5436.6 |
| 17.5° | 3046.7 | 3042.2 | 3065.0 | 3165.3 | 3338.6 | 3379.7 | 4000.0 | 5181.2 | 5838.0 | 5892.7 | 5664.7 |
| 20° | 3042.2 | 3028.5 | 3074.1 | 3188.1 | 3338.6 | 3375.1 | 3758.2 | 4934.9 | 6038.7 | 6212.0 | 5892.7 |
| 22.5° | 3046.7 | 3046.7 | 3110.6 | 3274.8 | 3448.1 | 3480.0 | 3803.8 | 4729.7 | 6202.9 | 6545.0 | 6134.5 |
| 25° | 3096.9 | 3087.8 | 3179.0 | 3379.7 | 3616.8 | 3639.6 | 3990.8 | 4720.6 | 6344.3 | 6919.0 | 6426.4 |
| 27.5° | 3179.0 | 3183.5 | 3306.7 | 3548.4 | 3817.5 | 3863.1 | 4250.8 | 4916.7 | 6517.6 | 7329.4 | 6709.2 |
| 30° | 3352.3 | 3356.9 | 3502.8 | 3749.1 | 4059.2 | 4118.5 | 4551.8 | 5208.6 | 6763.9 | 7771.9 | 7014.7 |
| 32.5° | 3548.4 | 3571.2 | 3749.1 | 4036.4 | 4369.4 | 4401.3 | 4921.3 | 5646.5 | 7133.3 | 8214.3 | 7343.1 |
| 35° | 3876.8 | 3899.6 | 4100.3 | 4401.3 | 4770.8 | 4816.4 | 5372.8 | 6152.7 | 7584.9 | 8661.2 | 7598.5 |
| 37.5° | 4301.0 | 4319.2 | 4515.3 | 4880.2 | 5272.5 | 5318.1 | 5874.5 | 6690.9 | 8040.9 | 9017.0 | 7826.6 |
| 40° | 4807.2 | 4848.3 | 5058.1 | 5413.8 | 5810.6 | 5838.0 | 6421.8 | 7210.9 | 8533.5 | 9263.3 | 7917.8 |
| 42.5° | 5359.1 | 5400.2 | 5614.5 | 6006.8 | 6371.6 | 6453.7 | 7014.7 | 7762.7 | 8934.9 | 9372.7 | 7844.8 |
| 45° | 6066.1 | 6056.9 | 6257.6 | 6668.1 | 7096.8 | 7128.8 | 7648.7 | 8218.8 | 9176.6 | 9281.5 | 7771.9 |
| 47.5° | 6923.5 | 6932.6 | 7060.3 | 7393.3 | 7835.7 | 7908.7 | 8310.0 | 8611.1 | 9318.0 | 9208.6 | 7689.8 |
| 50° | 7890.4 | 7913.2 | 8022.7 | 8264.4 | 8738.8 | 8788.9 | 8907.5 | 8884.7 | 9404.7 | 9053.5 | 7721.7 |
| 52.5° | 8857.4 | 8871.0 | 9017.0 | 9272.4 | 9733.1 | 9769.5 | 9509.6 | 9094.5 | 9080.8 | 8428.6 | 7653.3 |
| 55° | 9651.0 | 9646.4 | 9906.4 | 10298.6 | 10859.6 | 10836.8 | 10102.5 | 8934.9 | 8068.3 | 7457.1 | 7347.7 |
| 57.5° | 10339.7 | 10367.0 | 10704.5 | 11384.1 | 12091.1 | 12072.8 | 10736.5 | 8091.1 | 6590.6 | 6307.8 | 6850.5 |
| 60° | 10960.0 | 11023.8 | 11657.8 | 12674.9 | 13454.8 | 13345.3 | 10850.5 | 6818.6 | 5126.5 | 4939.5 | 5865.4 |
| 62.5° | 10690.9 | 10809.4 | 11826.5 | 13810.5 | 14882.4 | 14640.6 | 10148.1 | 5281.6 | 3470.9 | 3302.1 | 4145.9 |
| 65° | 9541.5 | 9701.1 | 10991.9 | 13646.4 | 15607.6 | 15457.0 | 8871.0 | 3320.4 | 1828.9 | 2006.8 | 2791.3 |
| 67.5° | 8013.6 | 8205.1 | 9600.8 | 12259.8 | 14120.7 | 13796.9 | 6891.6 | 1746.8 | 852.9 | 1322.7 | 1733.2 |
| 70° | 4392.2 | 4866.5 | 6941.8 | 10426.3 | 11311.1 | 10859.6 | 3986.3 | 825.5 | 620.3 | 825.5 | 1035.3 |
| 72.5° | 1651.1 | 1765.1 | 3010.2 | 7010.2 | 8378.5 | 7822.0 | 1514.2 | 533.6 | 519.9 | 611.2 | 748.0 |
| 75° | 793.6 | 848.3 | 1309.0 | 3188.1 | 4574.6 | 4264.5 | 743.4 | 396.8 | 447.0 | 478.9 | 542.8 |
| 77.5° | 474.3 | 510.8 | 816.4 | 1851.7 | 1801.6 | 1655.6 | 456.1 | 305.6 | 360.3 | 342.1 | 319.3 |
| 80° | 282.8 | 314.7 | 497.1 | 1053.6 | 1085.5 | 962.4 | 278.2 | 214.4 | 250.9 | 218.9 | 196.1 |
| 82.5° | 164.2 | 177.9 | 260.0 | 474.3 | 688.7 | 634.0 | 159.6 | 127.7 | 182.4 | 146.0 | 109.5 |
| 85° | 82.1 | 86.7 | 118.6 | 205.2 | 342.1 | 260.0 | 68.4 | 59.3 | 86.7 | 63.9 | 36.5 |
| 87.5° | 18.2 | 18.2 | 18.2 | 22.8 | 31.9 | 31.9 | 9.1 | 4.6 | 4.6 | 4.6 | 4.6 |
| 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: P1500708
CATALOG NUMBER: GSS-SB2D-760-U-T4LG

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 4789.0 | 4789.0 | 4789.0 | 4789.0 | 4789.0 | 4789.0 | 4789.0 | 4789.0 | 4789.0 | 4789.0 | 4789.0 |
| 2.5° | 4798.1 | 4807.2 | 4775.3 | 4738.8 | 4729.7 | 4702.3 | 4711.5 | 4693.2 | 4665.8 | 4670.4 | 4675.0 |
| 5° | 4843.7 | 4825.5 | 4761.6 | 4679.5 | 4606.6 | 4524.5 | 4428.7 | 4319.2 | 4241.7 | 4209.8 | 4237.1 |
| 7.5° | 4884.8 | 4866.5 | 4757.1 | 4574.6 | 4328.3 | 3986.3 | 3630.5 | 3306.7 | 3083.2 | 3001.1 | 3019.3 |
| 10° | 4998.8 | 4925.8 | 4725.1 | 4328.3 | 3740.0 | 3092.3 | 2732.0 | 2531.3 | 2462.9 | 2426.4 | 2431.0 |
| 12.5° | 5149.3 | 5049.0 | 4665.8 | 3899.6 | 3010.2 | 2599.7 | 2472.0 | 2426.4 | 2403.6 | 2394.5 | 2403.6 |
| 15° | 5331.7 | 5176.7 | 4524.5 | 3361.4 | 2672.7 | 2513.1 | 2485.7 | 2490.3 | 2490.3 | 2494.8 | 2494.8 |
| 17.5° | 5491.4 | 5249.7 | 4269.0 | 2973.7 | 2604.3 | 2558.7 | 2586.1 | 2608.9 | 2608.9 | 2613.4 | 2608.9 |
| 20° | 5637.3 | 5286.1 | 3940.7 | 2809.5 | 2618.0 | 2640.8 | 2704.6 | 2727.4 | 2732.0 | 2727.4 | 2727.4 |
| 22.5° | 5792.4 | 5308.9 | 3612.3 | 2718.3 | 2649.9 | 2718.3 | 2786.7 | 2818.7 | 2827.8 | 2832.3 | 2836.9 |
| 25° | 5942.9 | 5263.3 | 3343.2 | 2645.3 | 2636.2 | 2732.0 | 2809.5 | 2850.6 | 2859.7 | 2859.7 | 2864.3 |
| 27.5° | 6093.4 | 5249.7 | 3160.7 | 2549.6 | 2572.4 | 2649.9 | 2741.1 | 2795.9 | 2832.3 | 2836.9 | 2841.5 |
| 30° | 6266.7 | 5208.6 | 2987.4 | 2421.9 | 2431.0 | 2526.8 | 2622.5 | 2718.3 | 2791.3 | 2823.2 | 2823.2 |
| 32.5° | 6385.3 | 5167.6 | 2832.3 | 2285.0 | 2285.0 | 2385.4 | 2504.0 | 2622.5 | 2727.4 | 2791.3 | 2805.0 |
| 35° | 6499.3 | 5131.1 | 2695.5 | 2148.2 | 2152.8 | 2248.5 | 2371.7 | 2499.4 | 2631.7 | 2709.2 | 2745.7 |
| 37.5° | 6558.6 | 5094.6 | 2599.7 | 2043.3 | 2025.1 | 2125.4 | 2207.5 | 2312.4 | 2453.8 | 2581.5 | 2613.4 |
| 40° | 6572.3 | 5094.6 | 2590.6 | 1970.3 | 1892.8 | 2006.8 | 2043.3 | 2116.3 | 2244.0 | 2380.8 | 2431.0 |
| 42.5° | 6481.1 | 5044.4 | 2636.2 | 1924.7 | 1756.0 | 1838.1 | 1879.1 | 1915.6 | 1997.7 | 2111.7 | 2152.8 |
| 45° | 6371.6 | 4976.0 | 2677.3 | 1860.9 | 1587.2 | 1651.1 | 1714.9 | 1719.5 | 1756.0 | 1783.3 | 1810.7 |
| 47.5° | 6280.4 | 4903.0 | 2604.3 | 1742.3 | 1413.9 | 1459.5 | 1527.9 | 1527.9 | 1509.7 | 1454.9 | 1436.7 |
| 50° | 6353.4 | 4925.8 | 2481.2 | 1573.5 | 1254.3 | 1286.2 | 1359.2 | 1318.1 | 1277.1 | 1163.0 | 1149.4 |
| 52.5° | 6417.3 | 5012.5 | 2335.2 | 1409.3 | 1117.4 | 1149.4 | 1222.3 | 1158.5 | 1076.4 | 985.2 | 971.5 |
| 55° | 6312.4 | 5017.0 | 2066.1 | 1226.9 | 1021.7 | 1049.0 | 1117.4 | 1039.9 | 962.4 | 907.6 | 898.5 |
| 57.5° | 5997.6 | 4880.2 | 1783.3 | 1085.5 | 939.6 | 966.9 | 1030.8 | 953.2 | 880.3 | 875.7 | 898.5 |
| 60° | 5304.4 | 4401.3 | 1523.4 | 994.3 | 862.0 | 893.9 | 957.8 | 875.7 | 779.9 | 738.9 | 752.6 |
| 62.5° | 4004.5 | 3384.2 | 1304.4 | 889.4 | 789.0 | 830.1 | 875.7 | 743.4 | 661.3 | 643.1 | 624.8 |
| 65° | *2928.1* | *2599.7* | *1172.2* | *807.3* | *720.6* | *770.8* | *734.3* | *661.3* | *606.6* | *588.4* | *579.2* |
| 67.5° | 1892.8 | 1765.1 | 1008.0 | 729.8 | 656.8 | 697.8 | 647.7 | 611.2 | 551.9 | 542.8 | 556.4 |
| 70° | 1158.5 | 1199.5 | 843.8 | 643.1 | 592.9 | 583.8 | 592.9 | 556.4 | 492.6 | 506.3 | 524.5 |
| 72.5° | 821.0 | 884.8 | 725.2 | 561.0 | 506.3 | 488.0 | 529.1 | 506.3 | 460.7 | 474.3 | 492.6 |
| 75° | 588.4 | 656.8 | 597.5 | 460.7 | 428.7 | 419.6 | 492.6 | 506.3 | 474.3 | 483.5 | 497.1 |
| 77.5° | 346.6 | 419.6 | 424.2 | 355.8 | 323.8 | 374.0 | 524.5 | 583.8 | 561.0 | 533.6 | 519.9 |
| 80° | 223.5 | 250.9 | 301.0 | 228.0 | 228.0 | 323.8 | 574.7 | 711.5 | 611.2 | 542.8 | 533.6 |
| 82.5° | 114.0 | 132.3 | 196.1 | 146.0 | 136.8 | 241.7 | 565.6 | 679.6 | 675.0 | 602.0 | 588.4 |
| 85° | 31.9 | 41.0 | 91.2 | 63.9 | 54.7 | 127.7 | 424.2 | 510.8 | 456.1 | 332.9 | 337.5 |
| 87.5° | 4.6 | 4.6 | 0.0 | 0.0 | 4.6 | 18.2 | 50.2 | 9.1 | 9.1 | 9.1 | 9.1 |
| 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: SP1-2407-184-7

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-757-U-5WQ

Data in this report applies to families of products including GSS-SB1A-757-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

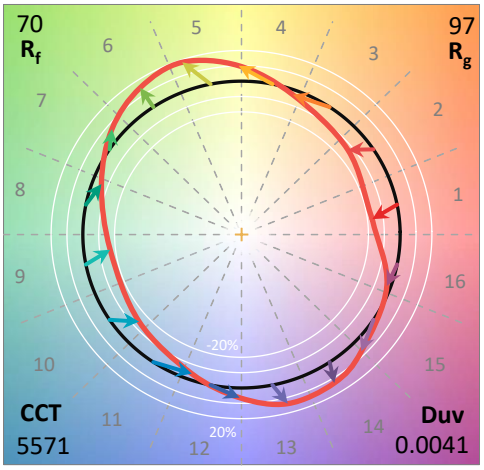
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-7 |
| 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-757-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 5700K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 5571 |
| CIE u': | 0.2033 |
| CIE v': | 0.4806 |
| Duv: | 0.0041 |
| CIE x: | 0.3308 |
| CIE y: | 0.3476 |
| CIE z: | 0.3216 |
| Peak Wavelength (nm): | 442 |
| Dominant Wavelength (nm): | 544 |
| Purity: | 3.635698 |
| Rf: | 70.4 |
| Rg: | 97.1 |

| | |
|---|---|
| CRI (Ra): | 69.9 |
| R1: | 68.8 |
| R2: | 72.5 |
| R3: | 76.8 |
| R4: | 72.0 |
| R5: | 70.9 |
| R6: | 65.6 |
| R7: | 75.5 |
| R8: | 56.8 |
| R9: | -35.4 |
| R10: | 36.7 |
| R11: | 73.9 |
| R12: | 47.8 |
| R13: | 68.0 |
| R14: | 87.0 |
| R15: | 59.8 |




## Test Conditions

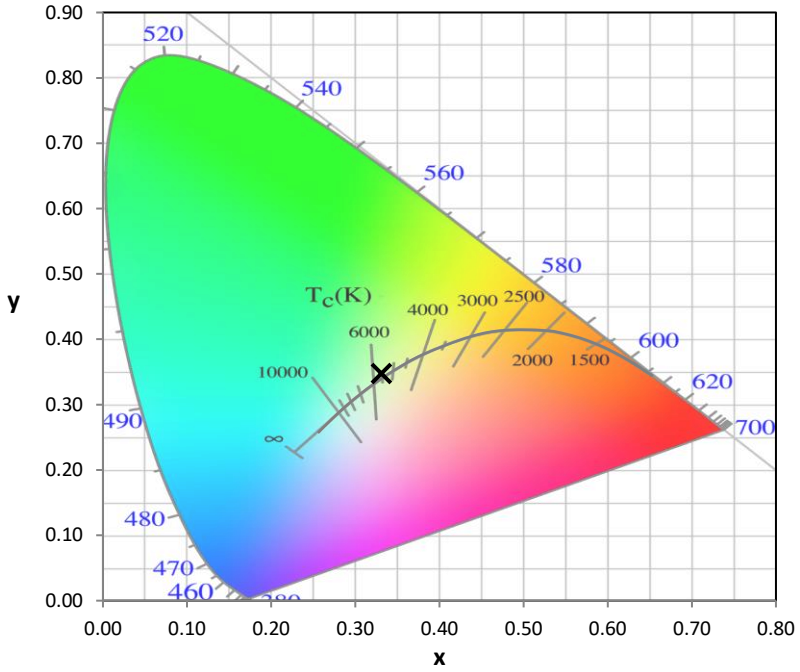
| | |
|---|---|
| Stabilization Time: | 20M |
| Operation Time: | 1H 20M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-7

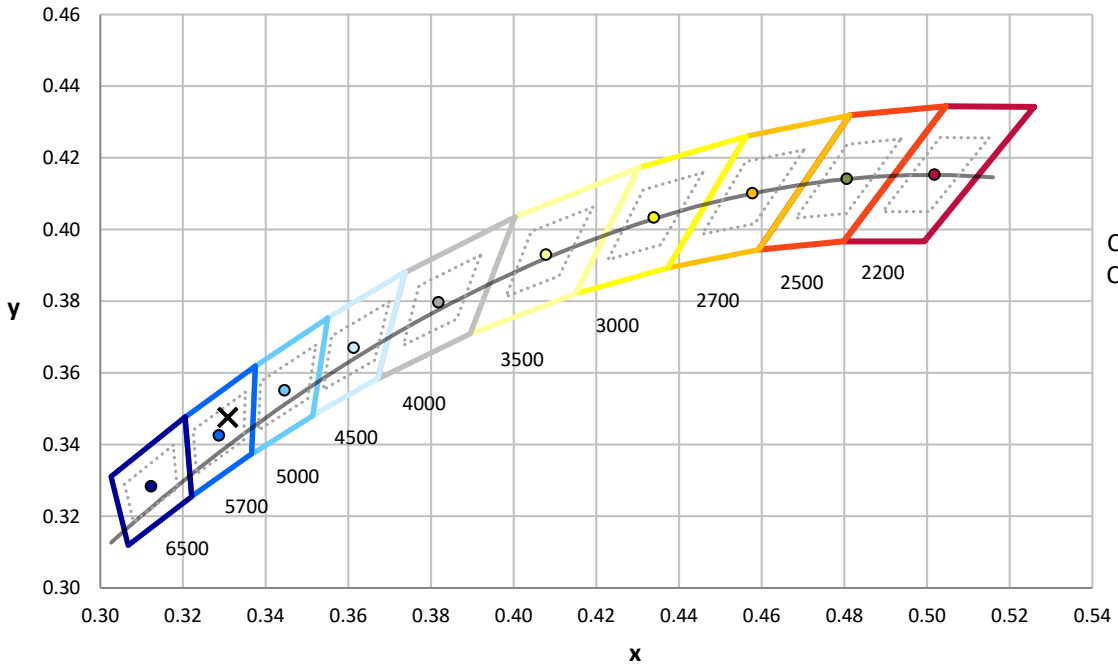
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

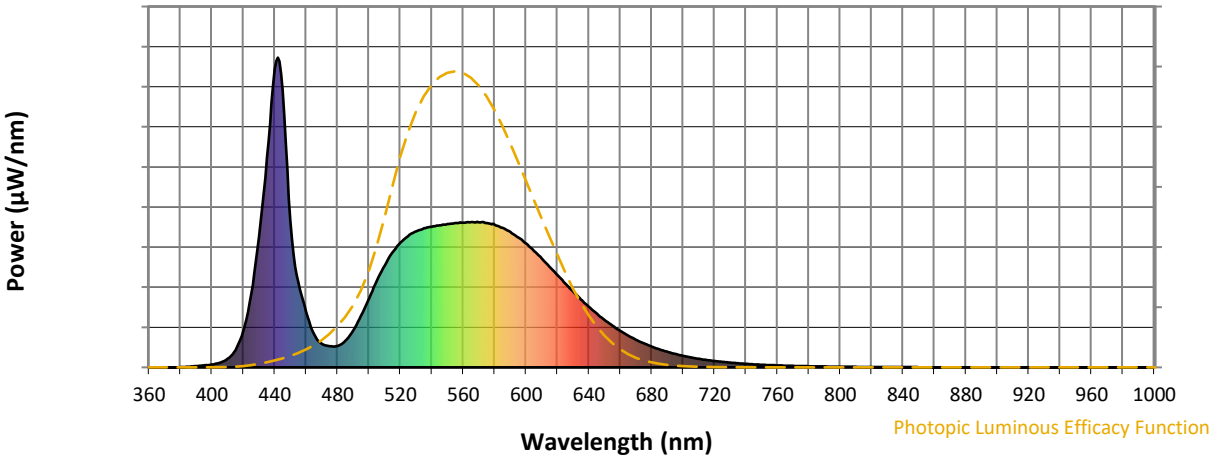



CCT = 5571K
CIE x = 0.3308
CIE y = 0.3476
Duv = 0.0041

Point lies inside the ANSI 5700K 4-step quadrangle

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## Photopic Flux vs. Wavelength

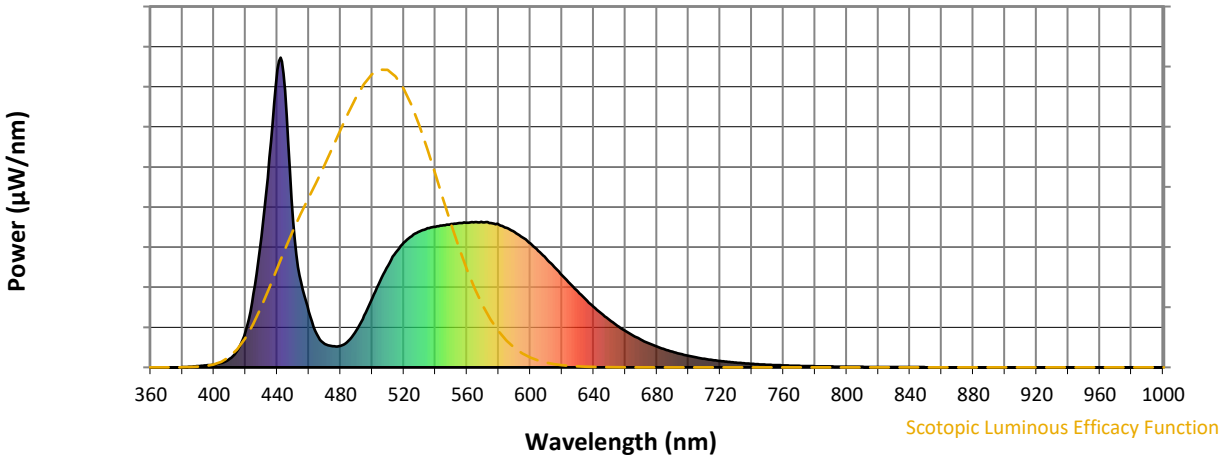



## Photopic Lumens: NR

| 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 | 120 | NR | 620 | 298 | NR | 750 | 9 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 167 | NR | 625 | 270 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 222 | NR | 630 | 245 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 279 | NR | 635 | 219 | NR | 765 | 6 | NR | 895 | 0 | NR |
| 380 | 1 | NR | 510 | 329 | NR | 640 | 196 | NR | 770 | 5 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 371 | NR | 645 | 173 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 403 | NR | 650 | 153 | NR | 780 | 4 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 424 | NR | 655 | 135 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 439 | NR | 660 | 117 | NR | 790 | 3 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 449 | NR | 665 | 103 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 28 | NR | 540 | 454 | NR | 670 | 89 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 459 | NR | 675 | 77 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 118 | NR | 550 | 463 | NR | 680 | 67 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 237 | NR | 555 | 466 | NR | 685 | 58 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 420 | NR | 560 | 467 | NR | 690 | 50 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 677 | NR | 565 | 469 | NR | 695 | 43 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 962 | NR | 570 | 469 | NR | 700 | 37 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 894 | NR | 575 | 466 | NR | 705 | 32 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 472 | NR | 580 | 461 | NR | 710 | 28 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 275 | NR | 585 | 450 | NR | 715 | 24 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 180 | NR | 590 | 437 | NR | 720 | 21 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 107 | NR | 595 | 420 | NR | 725 | 18 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 76 | NR | 600 | 400 | NR | 730 | 15 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 68 | NR | 605 | 376 | NR | 735 | 13 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 69 | NR | 610 | 352 | NR | 740 | 11 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 86 | NR | 615 | 325 | NR | 745 | 10 | NR | 875 | 0 | NR | | | |

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## Scotopic Flux vs. Wavelength

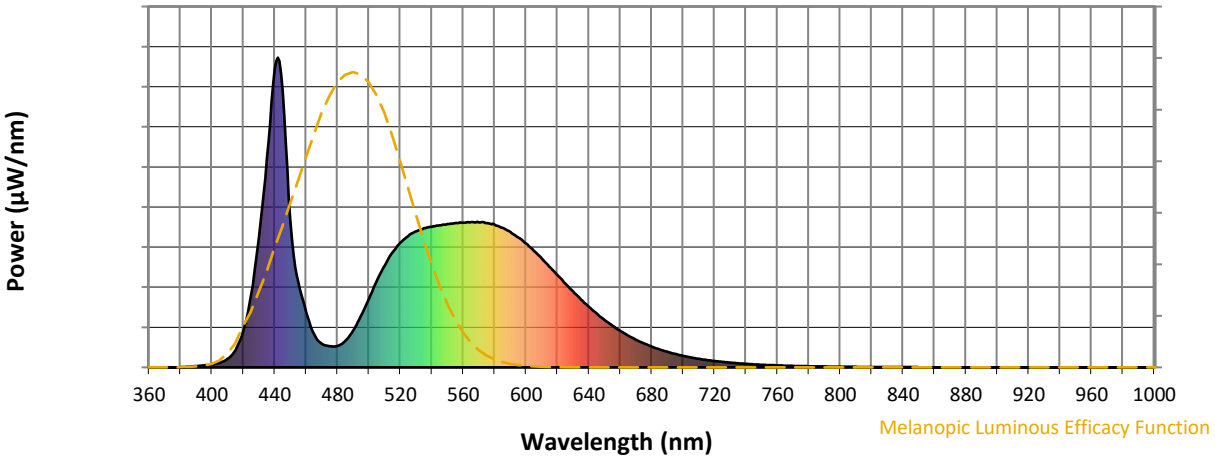



**Scotopic Lumens: NR** **S/P: 1.84**

| 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 | 120 | NR | 620 | 298 | NR | 750 | 9 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 167 | NR | 625 | 270 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 222 | NR | 630 | 245 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 279 | NR | 635 | 219 | NR | 765 | 6 | NR | 895 | 0 | NR |
| 380 | 1 | NR | 510 | 329 | NR | 640 | 196 | NR | 770 | 5 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 371 | NR | 645 | 173 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 403 | NR | 650 | 153 | NR | 780 | 4 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 424 | NR | 655 | 135 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 439 | NR | 660 | 117 | NR | 790 | 3 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 449 | NR | 665 | 103 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 28 | NR | 540 | 454 | NR | 670 | 89 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 459 | NR | 675 | 77 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 118 | NR | 550 | 463 | NR | 680 | 67 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 237 | NR | 555 | 466 | NR | 685 | 58 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 420 | NR | 560 | 467 | NR | 690 | 50 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 677 | NR | 565 | 469 | NR | 695 | 43 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 962 | NR | 570 | 469 | NR | 700 | 37 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 894 | NR | 575 | 466 | NR | 705 | 32 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 472 | NR | 580 | 461 | NR | 710 | 28 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 275 | NR | 585 | 450 | NR | 715 | 24 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 180 | NR | 590 | 437 | NR | 720 | 21 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 107 | NR | 595 | 420 | NR | 725 | 18 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 76 | NR | 600 | 400 | NR | 730 | 15 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 68 | NR | 605 | 376 | NR | 735 | 13 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 69 | NR | 610 | 352 | NR | 740 | 11 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 86 | NR | 615 | 325 | NR | 745 | 10 | NR | 875 | 0 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 3.71**

| 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 | 120 | NR | 620 | 298 | NR | 750 | 9 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 167 | NR | 625 | 270 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 222 | NR | 630 | 245 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 279 | NR | 635 | 219 | NR | 765 | 6 | NR | 895 | 0 | NR |
| 380 | 1 | NR | 510 | 329 | NR | 640 | 196 | NR | 770 | 5 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 371 | NR | 645 | 173 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 403 | NR | 650 | 153 | NR | 780 | 4 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 424 | NR | 655 | 135 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 439 | NR | 660 | 117 | NR | 790 | 3 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 449 | NR | 665 | 103 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 28 | NR | 540 | 454 | NR | 670 | 89 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 459 | NR | 675 | 77 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 118 | NR | 550 | 463 | NR | 680 | 67 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 237 | NR | 555 | 466 | NR | 685 | 58 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 420 | NR | 560 | 467 | NR | 690 | 50 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 677 | NR | 565 | 469 | NR | 695 | 43 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 962 | NR | 570 | 469 | NR | 700 | 37 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 894 | NR | 575 | 466 | NR | 705 | 32 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 472 | NR | 580 | 461 | NR | 710 | 28 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 275 | NR | 585 | 450 | NR | 715 | 24 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 180 | NR | 590 | 437 | NR | 720 | 21 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 107 | NR | 595 | 420 | NR | 725 | 18 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 76 | NR | 600 | 400 | NR | 730 | 15 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 68 | NR | 605 | 376 | NR | 735 | 13 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 69 | NR | 610 | 352 | NR | 740 | 11 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 86 | NR | 615 | 325 | NR | 745 | 10 | NR | 875 | 0 | NR | | | |

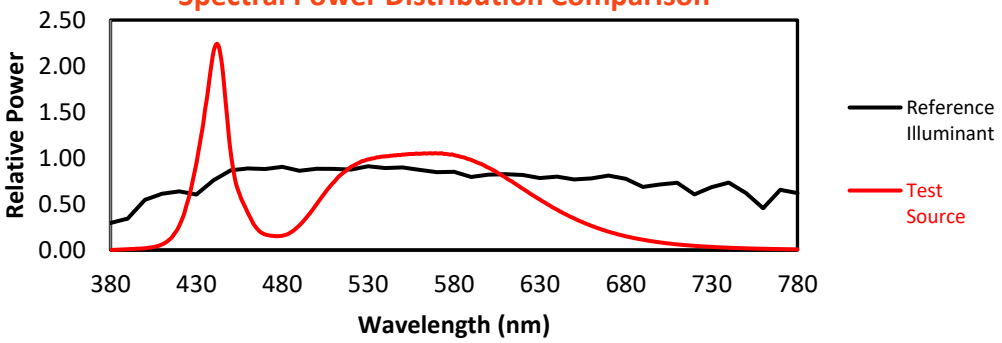
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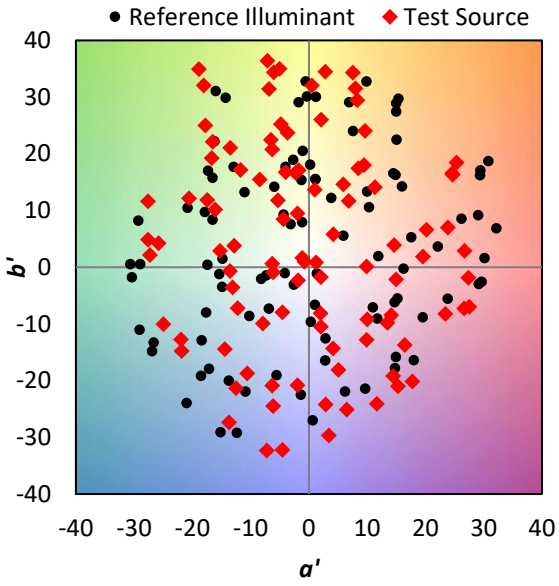
## Summary

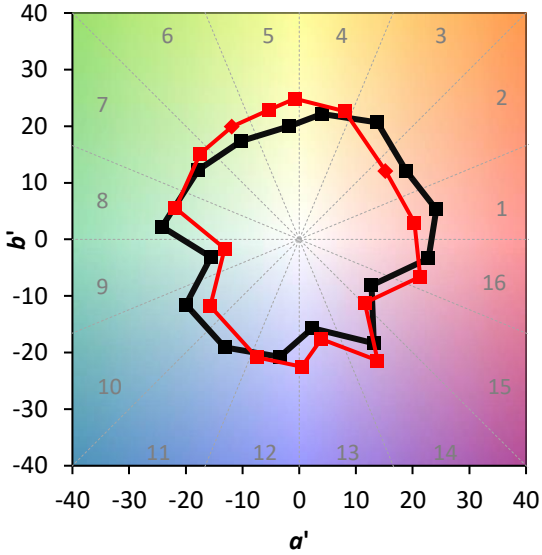
$R_f$ = 70.4
$R_g$ = 97.1
CIE $R_a$ = 69.9
$R_9$ = -35.4

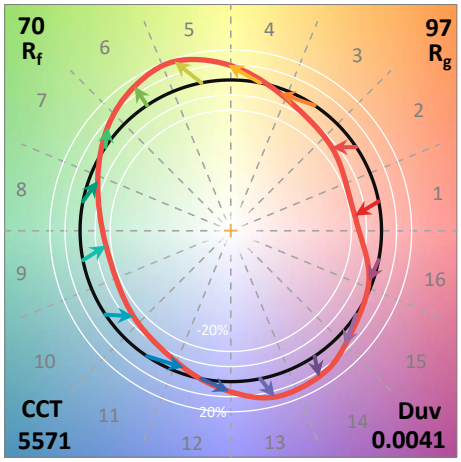
## Spectral Power Distribution Comparison

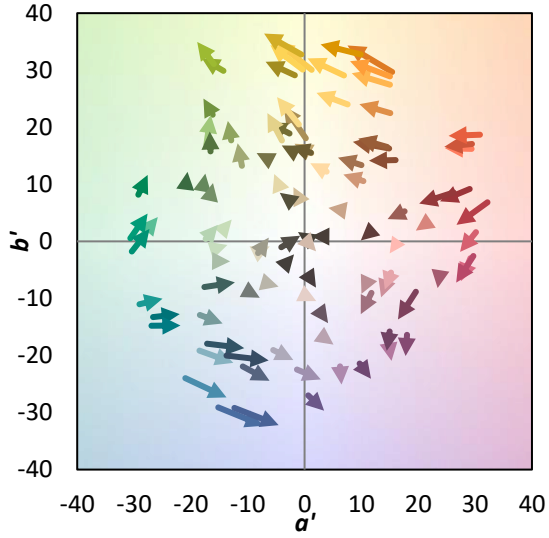



## Color Vector Graphics



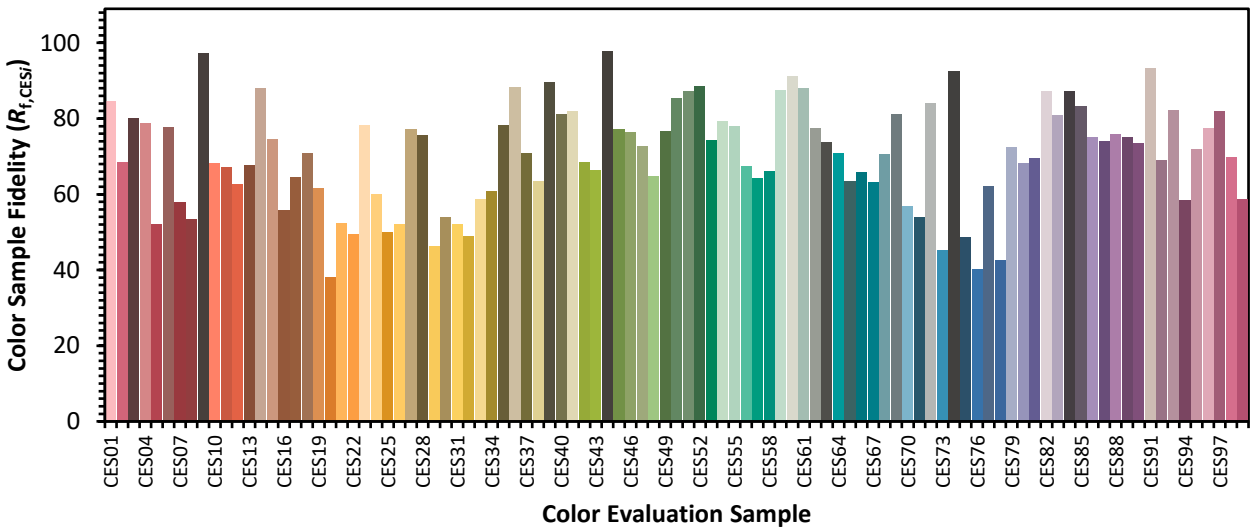



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**Individual Sample Fidelity Index ($R_{f,i}$)**

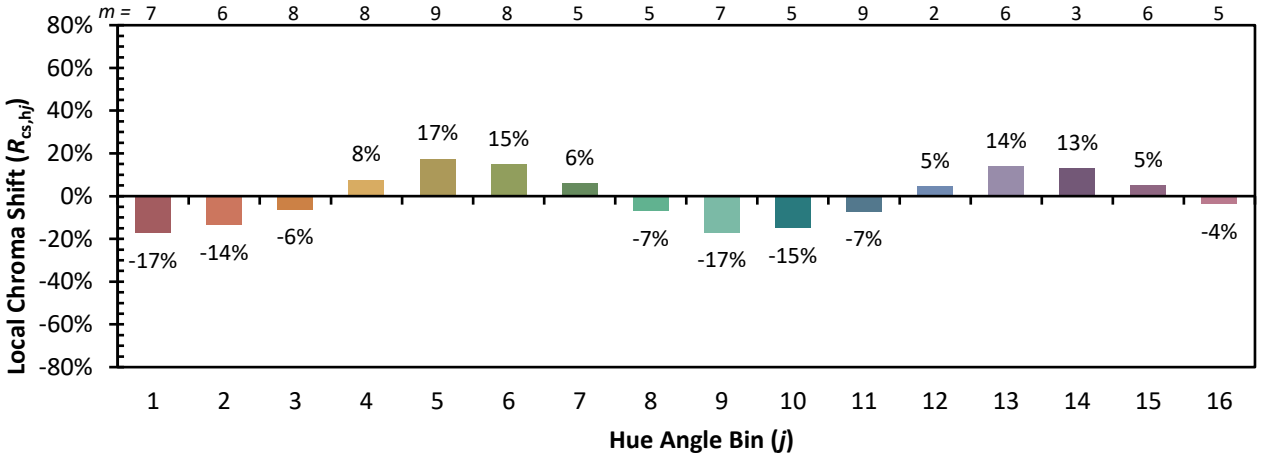
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 52 | CES51 = 87 | CES76 = 40 |
| CES02 = 59 | CES27 = 77 | CES52 = 88 | CES77 = 62 |
| CES03 = 30 | CES28 = 76 | CES53 = 74 | CES78 = 43 |
| CES04 = 68 | CES29 = 46 | CES54 = 79 | CES79 = 72 |
| CES05 = 45 | CES30 = 54 | CES55 = 78 | CES80 = 68 |
| CES06 = 49 | CES31 = 52 | CES56 = 67 | CES81 = 70 |
| CES07 = 38 | CES32 = 49 | CES57 = 64 | CES82 = 87 |
| CES08 = 37 | CES33 = 59 | CES58 = 66 | CES83 = 81 |
| CES09 = 29 | CES34 = 61 | CES59 = 87 | CES84 = 87 |
| CES10 = 72 | CES35 = 78 | CES60 = 91 | CES85 = 83 |
| CES11 = 55 | CES36 = 88 | CES61 = 88 | CES86 = 75 |
| CES12 = 61 | CES37 = 71 | CES62 = 77 | CES87 = 74 |
| CES13 = 41 | CES38 = 64 | CES63 = 74 | CES88 = 76 |
| CES14 = 74 | CES39 = 90 | CES64 = 71 | CES89 = 75 |
| CES15 = 70 | CES40 = 81 | CES65 = 63 | CES90 = 73 |
| CES16 = 46 | CES41 = 82 | CES66 = 66 | CES91 = 93 |
| CES17 = 48 | CES42 = 69 | CES67 = 63 | CES92 = 69 |
| CES18 = 55 | CES43 = 67 | CES68 = 71 | CES93 = 82 |
| CES19 = 70 | CES44 = 98 | CES69 = 81 | CES94 = 58 |
| CES20 = 63 | CES45 = 77 | CES70 = 57 | CES95 = 72 |
| CES21 = 85 | CES46 = 76 | CES71 = 54 | CES96 = 78 |
| CES22 = 77 | CES47 = 73 | CES72 = 84 | CES97 = 82 |
| CES23 = 91 | CES48 = 65 | CES73 = 45 | CES98 = 70 |
| CES24 = 90 | CES49 = 77 | CES74 = 92 | CES99 = 59 |
| CES25 = 71 | CES50 = 85 | CES75 = 49 | |

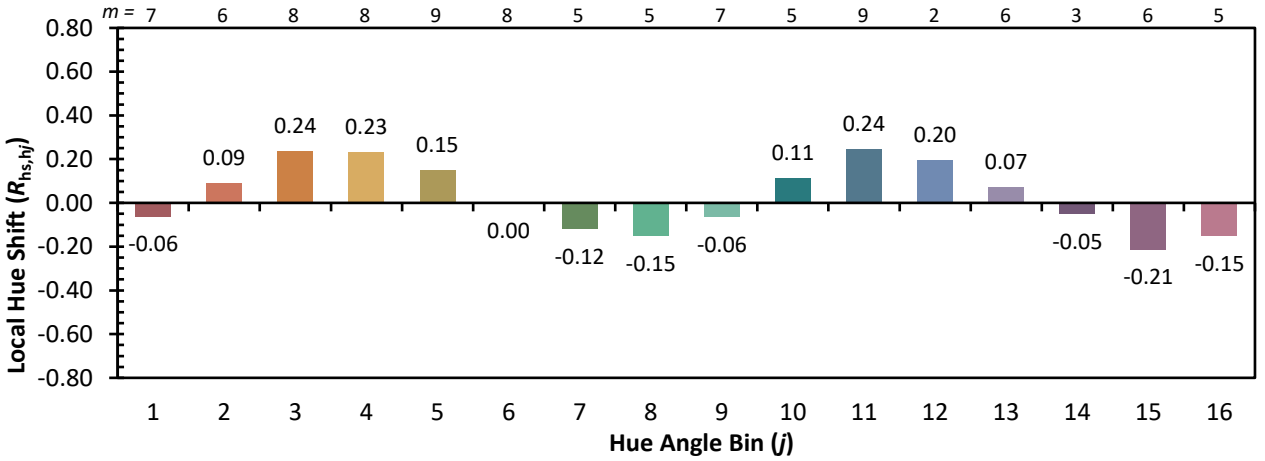


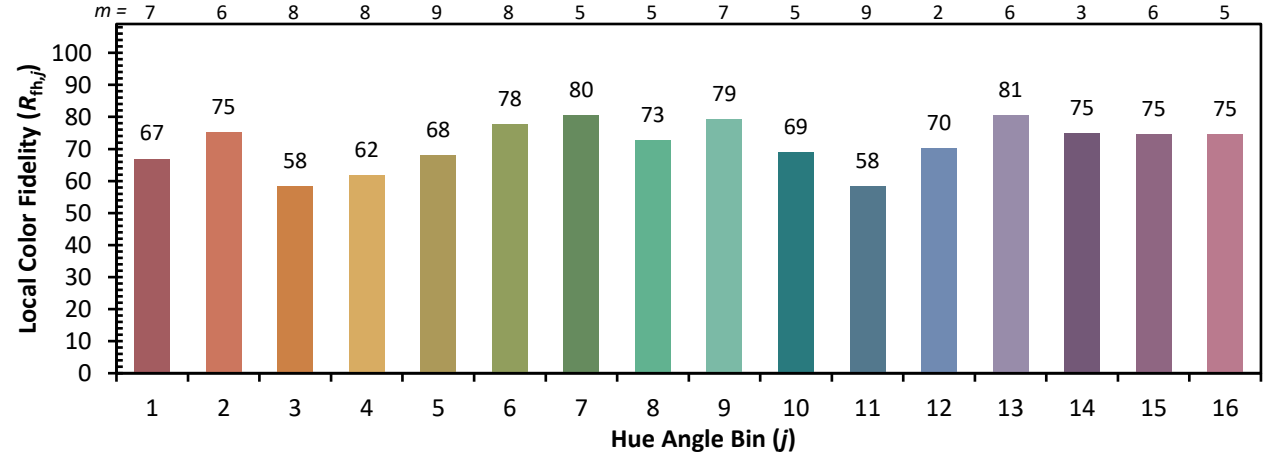
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## Color Rendition by Hue-Angle Bin



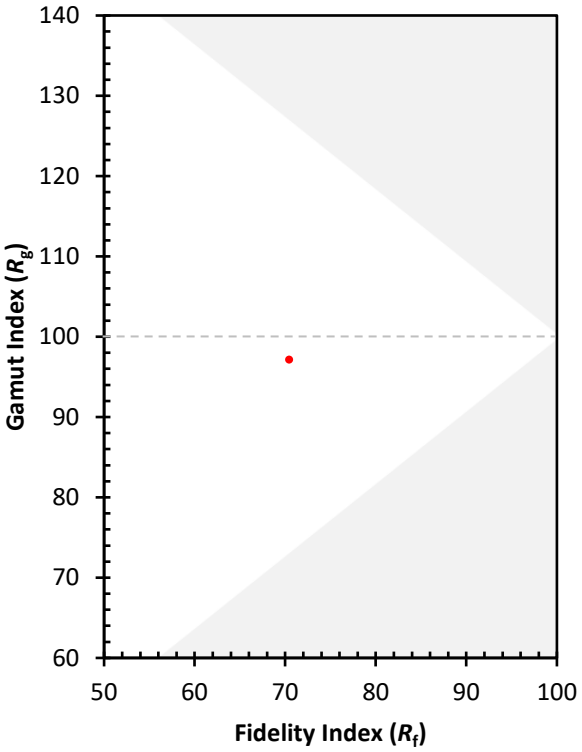



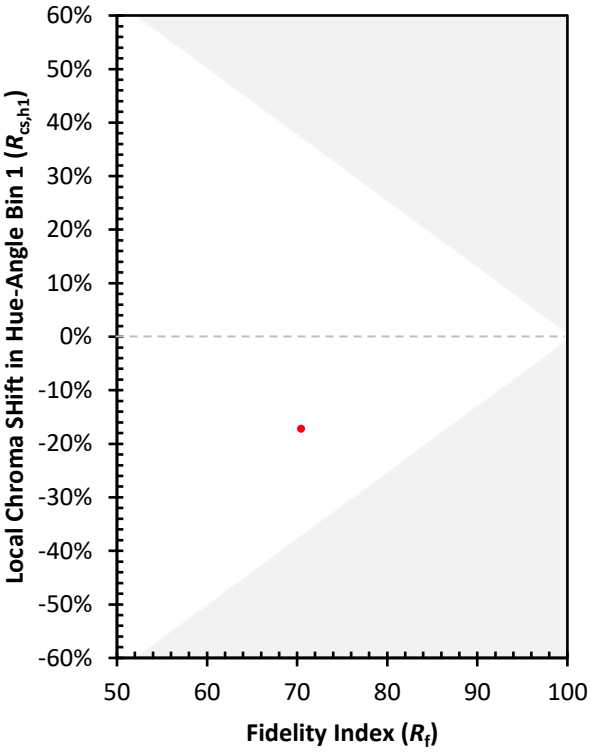



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## Measure Comparisons




(END OF REPORT)