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

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Peachtree City, GA 30269

Scaled data based on original data using

LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: STREETWORKS

Report Number: P1458483

Luminaire Tested: GLAN-SB8A-850-U-T3LG-HSS

Issue Date: 05/20/2026

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

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-2024 |
| Report Number: | P1458483 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 5/22/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | STREETWORKS |
| Catalog Number: | GLAN-SB8A-850-U-T3LG-HSS |
| Description: | GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 350mA 8xLight Square PACKAGE 80CRI 5000K FIXTURE w/ TYPE III LOW GLARE WITH HOUSE SIDE SHIELD |
| Light Source: | (208) 5000K CCT, 80 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 26515.1 lumens |
| Efficiency: | N/A |
| Efficacy: | 116.8 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1.5' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B2 - U0 - G4 |

| | |
|---|---|
| Input Watts (W): | 227.1 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.97 |
| Total Harmonic Distortion (THDi): | NR |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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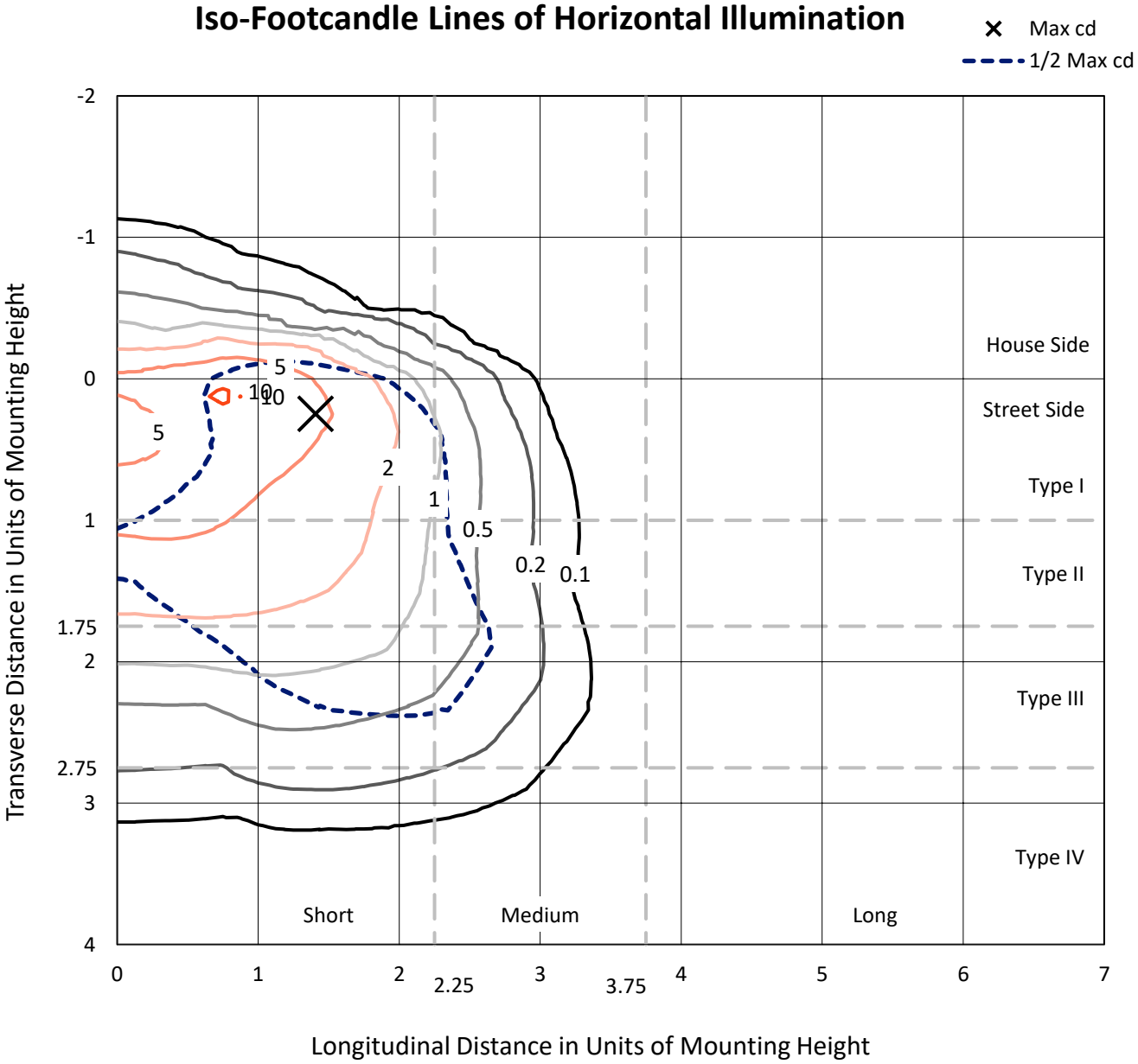
Scaled Data Report

REPORT NUMBER: P1458483
CATALOG NUMBER: GLAN-SB8A-850-U-T3LG-HSS

## Iso-Footcandle Lines of Horizontal Illumination




Based on 25 foot mounting height. Maximum calculated value = 10.5 fc
Type III - Short - N/A

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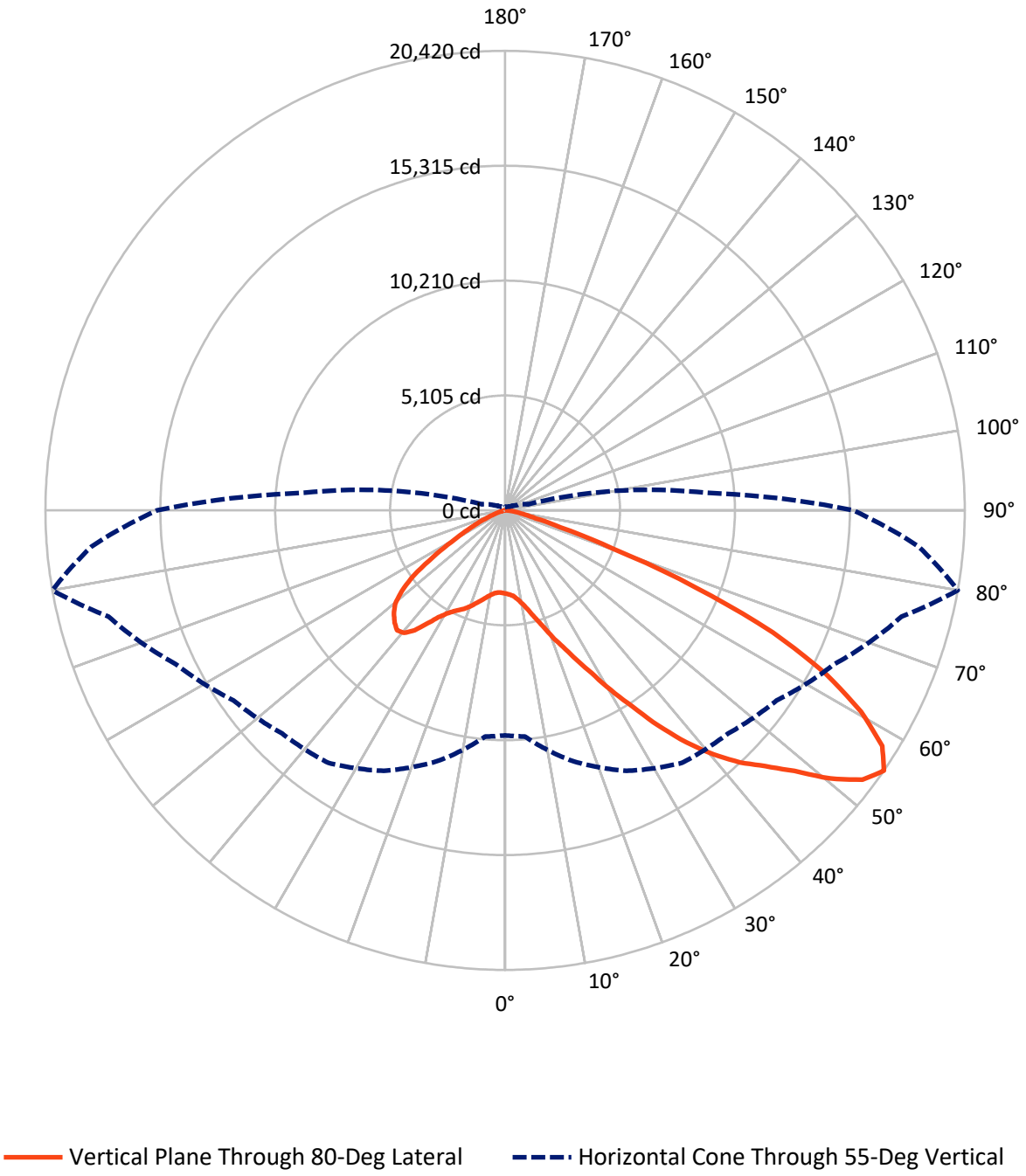
## Luminous Intensity Polar Plot



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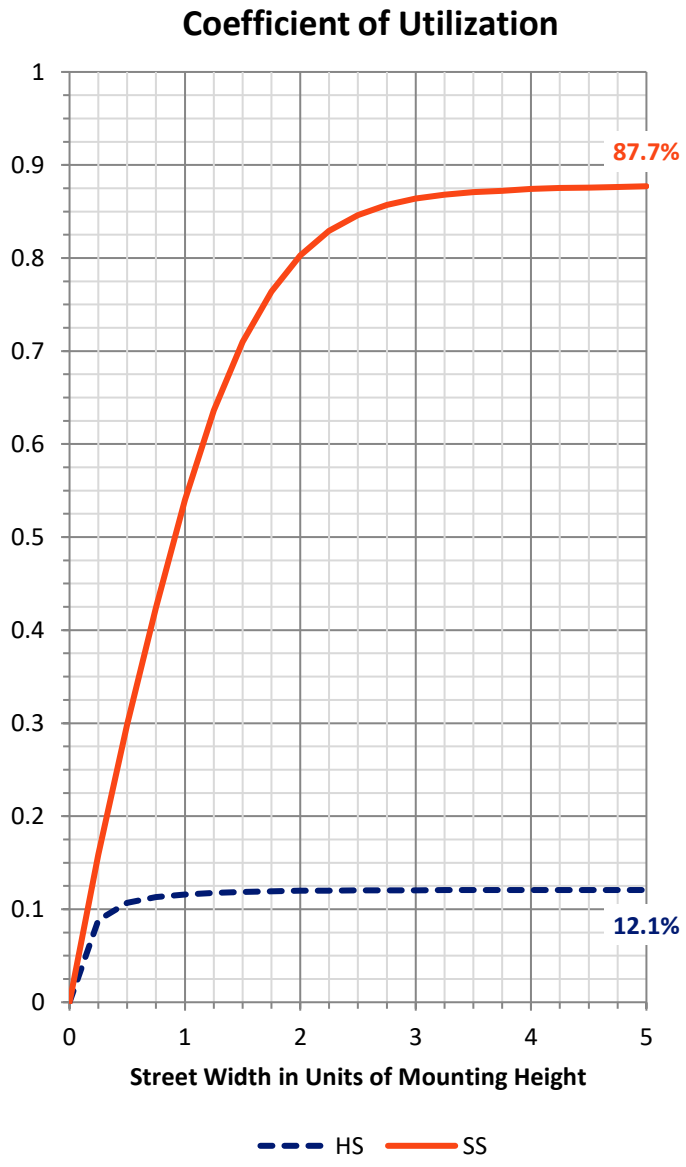
**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 3223.2 | 0.0 | 3223.2 |
| | % Fixture | 12.2 | 0.0 | 12.2 |
| **Street Side** | Lumens | 23291.9 | 0.0 | 23291.9 |
| | % Fixture | 87.8 | 0.0 | 87.8 |
| **Total** | Lumens | 26515.1 | 0.0 | 26515.1 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 310.0 | 1.2 |
| 10°-20° | 817.2 | 3.1 |
| 20°-30° | 1599.8 | 6.0 |
| 30°-40° | 3254.7 | 12.3 |
| 40°-50° | 5486.9 | 20.7 |
| 50°-60° | 7010.5 | 26.4 |
| 60°-70° | 5985.4 | 22.6 |
| 70°-80° | 1912.7 | 7.2 |
| 80°-90° | 138.1 | 0.5 |
| 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° | 26515.1 | 100.0 |
| 0°-180° | 26515.1 | 100.0 |



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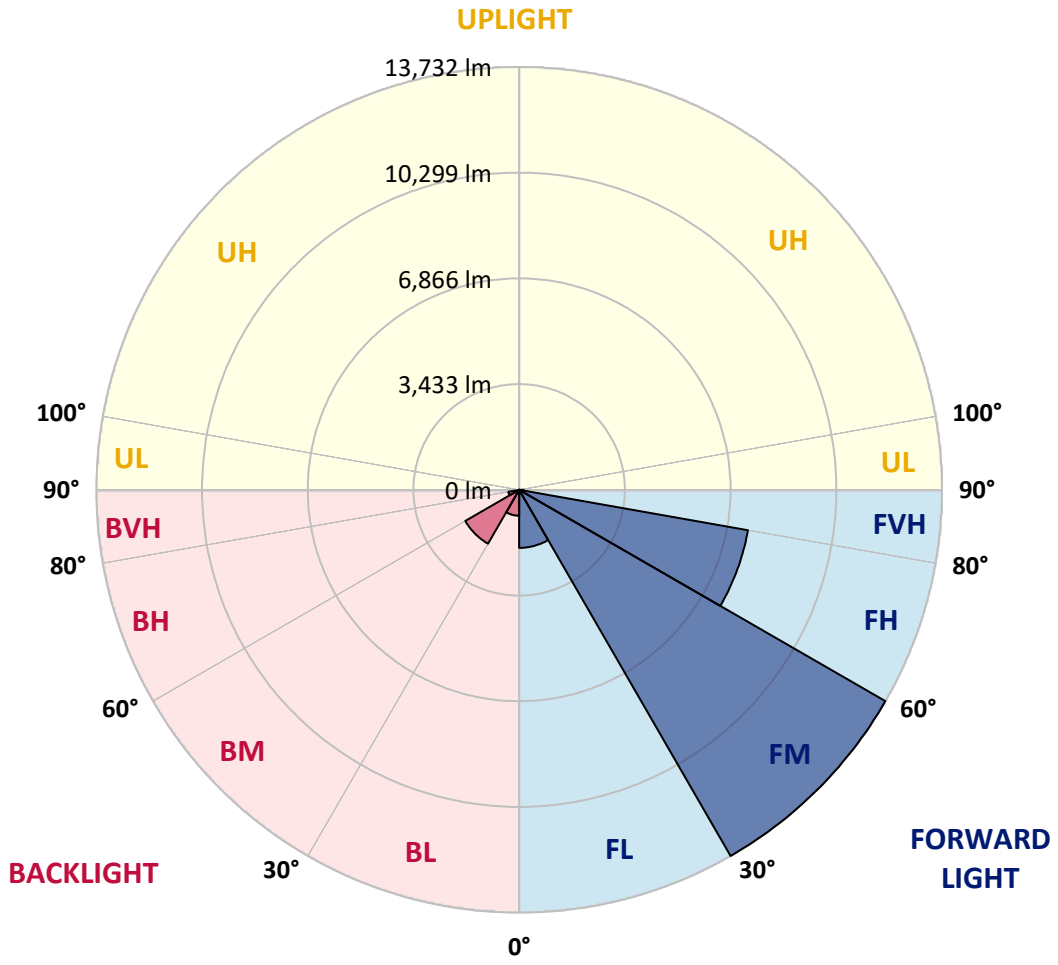
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1885.3 | 7.1 | | | |
| FM | (30°-60°) | 13732.0 | 51.8 | | | |
| FH | (60°-80°) | 7543.8 | 28.5 | | | G4/12000 |
| FVH | (80°-90°) | 130.9 | 0.5 | | | G2/225 |
| BL | (0°-30°) | 841.7 | 3.2 | B2/1000 | | |
| BM | (30°-60°) | 2020.1 | 7.6 | B2/2500 | | |
| BH | (60°-80°) | 354.3 | 1.3 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 7.2 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B2-U0-G4**
Type III Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 80° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 3693.5 | 3693.5 | 3693.5 | 3693.5 | 3693.5 | 3693.5 | 3693.5 | 3693.5 | 3693.5 | *3693.5* | 3693.5 |
| 2.5° | 3716.1 | 3723.7 | 3716.1 | 3723.7 | 3738.7 | 3731.2 | 3761.4 | 3753.8 | 3753.8 | *3746.3* | 3716.1 |
| 5° | 3505.1 | 3512.6 | 3527.7 | 3565.4 | 3618.1 | 3670.9 | 3738.7 | 3784.0 | 3829.2 | *3821.7* | 3791.5 |
| 7.5° | 3090.5 | 3105.6 | 3165.9 | 3241.2 | 3414.6 | 3572.9 | 3746.3 | 3859.3 | 3957.3 | *3987.5* | 3964.9 |
| 10° | 2856.8 | 2871.9 | 2909.6 | 2985.0 | 3143.3 | 3407.1 | 3746.3 | 3980.0 | 4153.3 | *4213.6* | 4221.2 |
| 12.5° | 2834.2 | 2841.7 | 2871.9 | 2954.8 | 3090.5 | 3316.6 | 3738.7 | 4138.2 | 4432.2 | *4522.7* | 4552.8 |
| 15° | 2849.3 | 2864.4 | 2894.5 | 2962.4 | 3120.6 | 3376.9 | 3799.0 | 4387.0 | 4801.6 | *4929.7* | 4937.3 |
| 17.5° | 2909.6 | 2924.7 | 2962.4 | 3037.7 | 3211.1 | 3535.2 | 3987.5 | 4643.3 | 5246.3 | *5389.5* | 5472.4 |
| 20° | 3030.2 | 3037.7 | 3083.0 | 3180.9 | 3376.9 | 3731.2 | 4266.4 | 4990.0 | 5781.5 | *5992.5* | 6052.8 |
| 22.5° | 3188.5 | 3211.1 | 3271.4 | 3392.0 | 3640.8 | 4002.6 | 4650.8 | 5412.1 | 6369.4 | *6588.0* | 6693.6 |
| 25° | 3361.9 | 3392.0 | 3482.5 | 3678.4 | 3995.0 | 4417.1 | 5125.7 | 5969.9 | 7062.9 | *7326.7* | 7469.9 |
| 27.5° | 3716.1 | 3723.7 | 3784.0 | 4032.7 | 4439.8 | 4959.9 | 5728.7 | 6686.0 | 7877.0 | *8186.0* | 8344.3 |
| 30° | 4492.5 | 4500.1 | 4447.3 | 4515.1 | 4929.7 | 5600.6 | 6437.3 | 7522.7 | 8826.8 | *9256.4* | 9384.5 |
| 32.5° | 5442.3 | 5480.0 | 5472.4 | 5427.2 | 5615.7 | 6241.3 | 7281.5 | 8525.2 | 9942.3 | *10394.6* | 10515.2 |
| 35° | 6520.2 | 6610.6 | 6588.0 | 6573.0 | 6595.6 | 7062.9 | 8246.3 | 9633.3 | 11208.7 | *11759.0* | 11856.9 |
| 37.5° | 7575.5 | 7598.1 | 7703.6 | 7831.8 | 7846.8 | 8171.0 | 9361.9 | 10809.2 | 12384.6 | *13085.6* | 13236.4 |
| 40° | 8389.6 | 8464.9 | 8728.8 | 8985.0 | 9248.9 | 9505.2 | 10281.5 | 11759.0 | 13319.3 | *14261.5* | 14329.3 |
| 42.5° | 9022.7 | 9203.6 | 9588.1 | 9987.6 | 10522.8 | 10809.2 | 11155.9 | 12429.8 | 14080.6 | *15309.2* | 15279.1 |
| 45° | 9791.6 | 9867.0 | 10409.7 | 10937.3 | 11480.1 | 11917.2 | 11909.7 | 12995.1 | 14676.1 | *16206.2* | 16017.8 |
| 47.5° | 10311.7 | 10402.1 | 11140.9 | 11759.0 | 12316.7 | 12535.3 | 12580.6 | 13605.7 | 15497.7 | *17291.7* | 16847.0 |
| 50° | 10590.6 | 10748.9 | 11555.4 | 12339.4 | 12942.4 | 13010.2 | 13213.7 | 14404.7 | 16575.6 | *18731.4* | 17894.7 |
| 52.5° | 10620.7 | 10771.5 | 11698.6 | 12708.7 | 13364.5 | 13500.2 | 13846.9 | 15309.2 | 17623.4 | *19884.7* | 18497.7 |
| 55° | *9995.1* | *10085.6* | *11525.3* | *12769.0* | *13696.2* | *14012.8* | *14721.3* | *16145.9* | *18233.9* | *20419.9* | *18445.0* |
| 57.5° | 9407.2 | 9497.6 | 10748.9 | 12663.5 | 14035.4 | 14683.6 | 15656.0 | 16718.8 | 17759.0 | *19756.5* | 17269.1 |
| 60° | 8902.1 | 8947.4 | 10085.6 | 12173.5 | 14163.5 | 15339.4 | 16462.5 | 16153.5 | 16530.4 | *18166.1* | 15256.5 |
| 62.5° | 7952.4 | 7982.5 | 9331.8 | 11291.6 | 13907.2 | 15844.4 | 16741.4 | 14955.0 | 15181.1 | *15972.6* | 12889.6 |
| 65° | 6007.6 | 6120.7 | 7356.9 | 10628.3 | 13485.1 | 16078.1 | 16093.2 | 13492.6 | 13259.0 | *13070.5* | 10138.3 |
| 67.5° | 4077.9 | 4206.1 | 4952.3 | 9557.9 | 12799.2 | 16176.1 | 14834.4 | 11600.7 | 10100.6 | *9128.3* | 6640.8 |
| 70° | 3256.3 | 3256.3 | 3512.6 | 7681.0 | 11171.0 | 14924.8 | 13274.0 | 8758.9 | 6414.7 | *5042.8* | 3557.8 |
| 72.5° | 2140.7 | 2148.3 | 2389.5 | 4876.9 | 7922.2 | 11382.1 | 10824.3 | 5065.4 | 3331.7 | *2570.4* | 1756.3 |
| 75° | 776.4 | 776.4 | 1047.8 | 1952.3 | 4191.0 | 6776.5 | 6595.6 | 2419.6 | 1809.1 | *1402.0* | 1062.8 |
| 77.5° | 414.6 | 429.7 | 505.0 | 806.5 | 1605.5 | 2758.8 | 2577.9 | 1236.2 | 1025.1 | *874.4* | 663.3 |
| 80° | 278.9 | 286.4 | 339.2 | 497.5 | 776.4 | 1062.8 | 829.2 | 693.5 | 693.5 | *587.9* | 444.7 |
| 82.5° | 150.8 | 158.3 | 226.1 | 324.1 | 414.6 | 497.5 | 399.5 | 407.0 | 490.0 | *399.5* | 256.3 |
| 85° | 105.5 | 105.5 | 173.4 | 233.7 | 233.7 | 241.2 | 173.4 | 256.3 | 286.4 | *248.7* | 173.4 |
| 87.5° | 60.3 | 60.3 | 98.0 | 113.1 | 113.1 | 105.5 | 52.8 | 90.5 | 113.1 | *128.1* | 75.4 |
| 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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Scaled Data Report

REPORT NUMBER: P1458483
CATALOG NUMBER: GLAN-SB8A-850-U-T3LG-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 3693.5 | 3693.5 | 3693.5 | 3693.5 | 3693.5 | 3693.5 | 3693.5 | 3693.5 | 3693.5 | 3693.5 | 3693.5 |
| 2.5° | 3708.6 | 3686.0 | 3640.8 | 3550.3 | 3505.1 | 3444.8 | 3392.0 | 3324.2 | 3309.1 | 3301.6 | 3271.4 |
| 5° | 3768.9 | 3723.7 | 3588.0 | 3392.0 | 3226.2 | 3067.9 | 2909.6 | 2819.1 | 2743.8 | 2706.1 | 2698.5 |
| 7.5° | 3919.7 | 3829.2 | 3580.4 | 3233.7 | 2924.7 | 2653.3 | 2419.6 | 2216.1 | 2110.6 | 2020.1 | 2027.7 |
| 10° | 4145.8 | 4002.6 | 3595.5 | 3083.0 | 2623.2 | 2186.0 | 1846.8 | 1552.8 | 1341.7 | 1243.7 | 1236.2 |
| 12.5° | 4447.3 | 4243.8 | 3648.3 | 2932.2 | 2253.8 | 1643.2 | 1213.6 | 1040.2 | 995.0 | 987.5 | 979.9 |
| 15° | 4816.6 | 4530.2 | 3701.1 | 2736.2 | 1756.3 | 1138.2 | 987.5 | 949.8 | 942.2 | 934.7 | 934.7 |
| 17.5° | 5261.4 | 4861.9 | 3731.2 | 2404.6 | 1281.4 | 979.9 | 927.1 | 904.5 | 897.0 | 889.5 | 889.5 |
| 20° | 5819.2 | 5231.2 | 3768.9 | 1982.4 | 1085.4 | 942.2 | 881.9 | 851.8 | 844.2 | 844.2 | 836.7 |
| 22.5° | 6369.4 | 5645.8 | 3738.7 | 1613.1 | 1047.8 | 897.0 | 829.2 | 799.0 | 783.9 | 783.9 | 776.4 |
| 25° | 7002.6 | 6067.9 | 3648.3 | 1454.8 | 1040.2 | 859.3 | 776.4 | 731.2 | 708.6 | 701.0 | 701.0 |
| 27.5° | 7726.2 | 6550.3 | 3505.1 | 1462.3 | 1040.2 | 829.2 | 708.6 | 648.2 | 633.2 | 618.1 | 618.1 |
| 30° | 8555.4 | 7138.3 | 3399.5 | 1560.3 | 1055.3 | 799.0 | 648.2 | 572.9 | 550.3 | 535.2 | 542.7 |
| 32.5° | 9505.2 | 7794.1 | 3392.0 | 1718.6 | 1077.9 | 753.8 | 580.4 | 497.5 | 474.9 | 467.3 | 474.9 |
| 35° | 10583.1 | 8608.2 | 3565.4 | 1839.2 | 1017.6 | 655.8 | 497.5 | 429.7 | 407.0 | 407.0 | 414.6 |
| 37.5° | 11781.6 | 9542.8 | 3799.0 | 1809.1 | 821.6 | 520.1 | 429.7 | 376.9 | 354.3 | 361.8 | 369.4 |
| 40° | 12874.5 | 10274.0 | 3836.7 | 1545.2 | 618.1 | 444.7 | 369.4 | 331.7 | 316.6 | 324.1 | 331.7 |
| 42.5° | 13703.7 | 10862.0 | 3474.9 | 1198.5 | 520.1 | 376.9 | 316.6 | 286.4 | 278.9 | 294.0 | 294.0 |
| 45° | 14374.6 | 11095.6 | 2902.0 | 889.5 | 459.8 | 324.1 | 278.9 | 263.8 | 248.7 | 256.3 | 256.3 |
| 47.5° | 15075.6 | 11133.3 | 2366.9 | 716.1 | 407.0 | 294.0 | 256.3 | 241.2 | 226.1 | 226.1 | 226.1 |
| 50° | 15754.0 | 11042.9 | 1809.1 | 633.2 | 376.9 | 263.8 | 233.7 | 218.6 | 203.5 | 196.0 | 196.0 |
| 52.5° | 15919.8 | 10319.2 | 1326.7 | 587.9 | 346.7 | 248.7 | 218.6 | 203.5 | 188.4 | 180.9 | 180.9 |
| 55° | *15460.0* | *8947.4* | *1040.2* | *527.6* | *316.6* | *226.1* | *203.5* | *188.4* | *165.8* | *158.3* | *158.3* |
| 57.5° | 13944.9 | 6821.7 | 829.2 | 452.3 | 286.4 | 218.6 | 188.4 | 173.4 | 150.8 | 143.2 | 143.2 |
| 60° | 11977.5 | 4839.3 | 670.9 | 369.4 | 263.8 | 196.0 | 173.4 | 150.8 | 135.7 | 120.6 | 120.6 |
| 62.5° | 9799.1 | 3474.9 | 542.7 | 309.0 | 248.7 | 173.4 | 158.3 | 135.7 | 105.5 | 82.9 | 82.9 |
| 65° | 7515.2 | 2495.0 | 422.1 | 248.7 | 226.1 | 150.8 | 135.7 | 113.1 | 82.9 | 60.3 | 60.3 |
| 67.5° | 4861.9 | 1613.1 | 316.6 | 218.6 | 173.4 | 128.1 | 105.5 | 90.5 | 75.4 | 52.8 | 45.2 |
| 70° | 2562.8 | 942.2 | 233.7 | 188.4 | 128.1 | 98.0 | 90.5 | 75.4 | 60.3 | 37.7 | 37.7 |
| 72.5° | 1326.7 | 618.1 | 173.4 | 165.8 | 98.0 | 67.8 | 75.4 | 60.3 | 45.2 | 22.6 | 22.6 |
| 75° | 851.8 | 414.6 | 128.1 | 135.7 | 60.3 | 52.8 | 52.8 | 37.7 | 22.6 | 15.1 | 7.5 |
| 77.5° | 550.3 | 278.9 | 90.5 | 113.1 | 37.7 | 30.2 | 30.2 | 15.1 | 7.5 | 0.0 | 0.0 |
| 80° | 324.1 | 173.4 | 60.3 | 75.4 | 15.1 | 15.1 | 7.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 165.8 | 90.5 | 30.2 | 30.2 | 7.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 105.5 | 45.2 | 7.5 | 7.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 52.8 | 15.1 | 7.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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# LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-12

Test Date: 10/11/2024

Luminaire Tested: GSS-SB1A-850-U-5WQ

Data in this report applies to families of products including GSS-SB1A-850-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

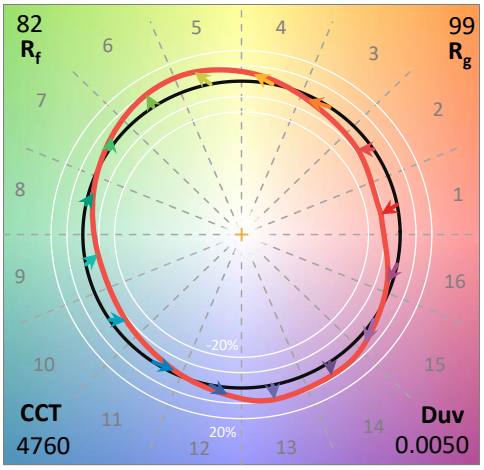
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-12 |
| 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-850-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 80 CRI 5000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 4760 |
| CIE u': | 0.2107 |
| CIE v': | 0.4939 |
| Duv: | 0.0050 |
| CIE x: | 0.3537 |
| CIE y: | 0.3685 |
| CIE z: | 0.2779 |
| Peak Wavelength (nm): | 443 |
| Dominant Wavelength (nm): | 571 |
| Purity: | 16.69598 |
| Rf: | 82 |
| Rg: | 99.4 |

| | |
|---|---|
| CRI (Ra): | 81.1 |
| R1: | 79.8 |
| R2: | 83.5 |
| R3: | 87.9 |
| R4: | 83.1 |
| R5: | 80.5 |
| R6: | 79.1 |
| R7: | 86.1 |
| R8: | 69.0 |
| R9: | 8.7 |
| R10: | 62.4 |
| R11: | 83.8 |
| R12: | 63.0 |
| R13: | 79.9 |
| R14: | 93.3 |
| R15: | 72.7 |




## Test Conditions

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

| 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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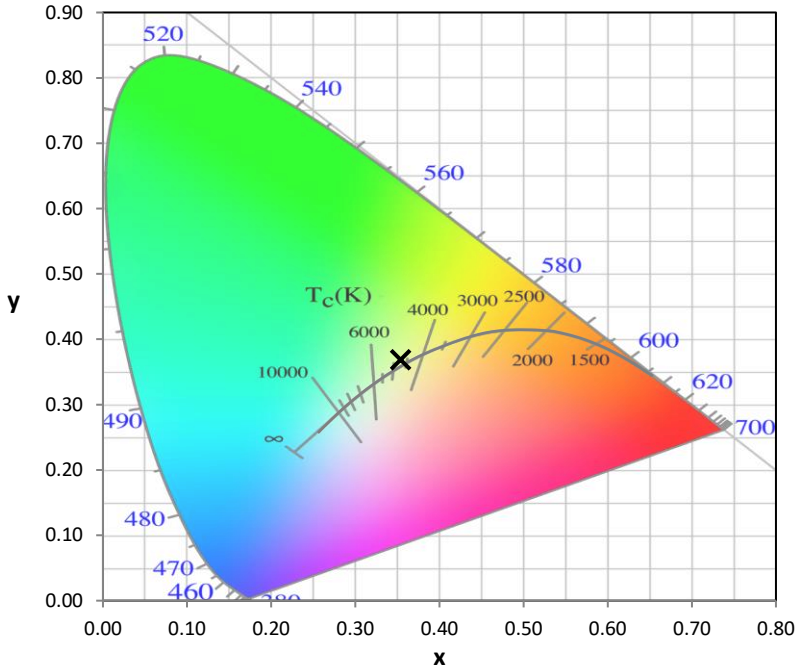
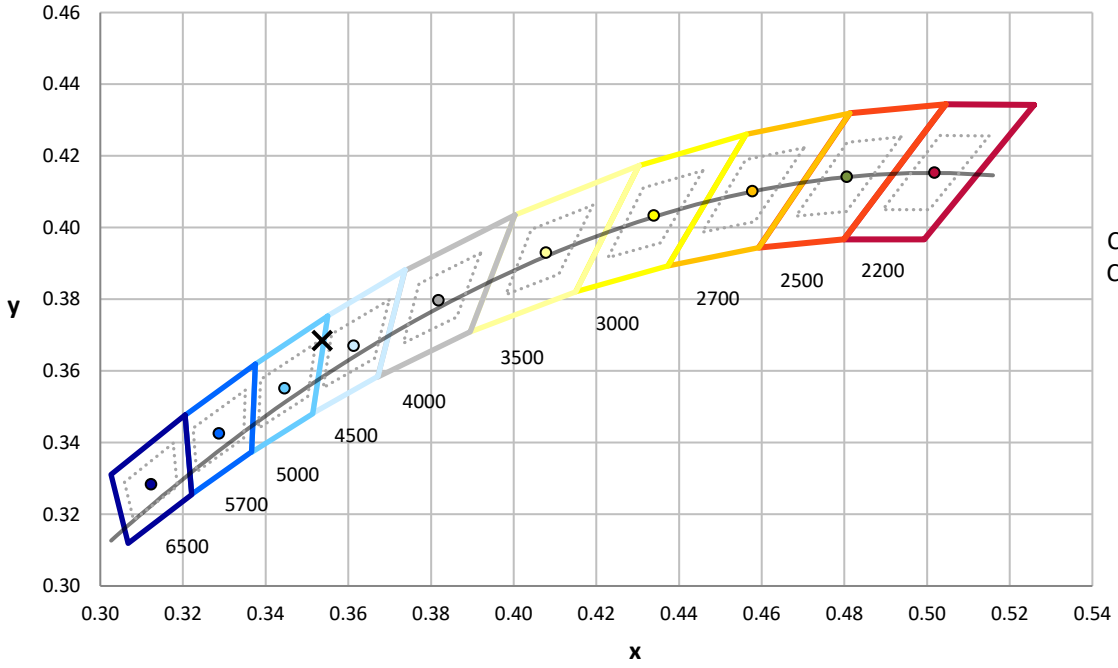
## CIE 1931 Chromaticity Diagram




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




CCT = 4760K
CIE x = 0.3537
CIE y = 0.3685
Duv = 0.0050

Point lies inside the ANSI 5000K 7-step quadrangle

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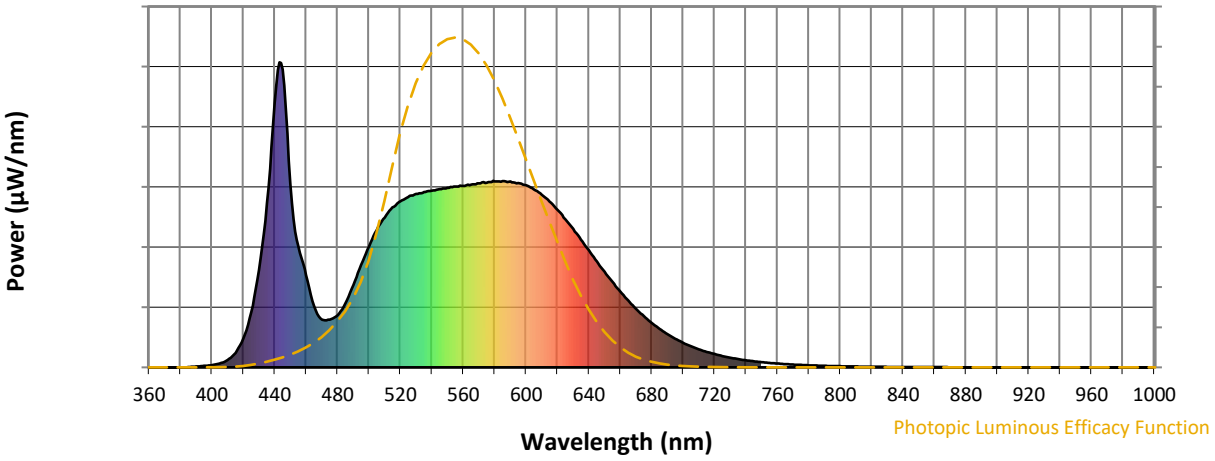
## Photopic Flux vs. Wavelength




## 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 | 270 | NR | 620 | 517 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 335 | NR | 625 | 486 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 397 | NR | 630 | 454 | NR | 760 | 12 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 451 | NR | 635 | 419 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 492 | NR | 640 | 384 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 524 | NR | 645 | 347 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 545 | NR | 650 | 313 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 558 | NR | 655 | 280 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 7 | NR | 530 | 568 | NR | 660 | 248 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 13 | NR | 535 | 575 | NR | 665 | 219 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 24 | NR | 540 | 579 | NR | 670 | 192 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 47 | NR | 545 | 585 | NR | 675 | 167 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 95 | NR | 550 | 588 | NR | 680 | 146 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 181 | NR | 555 | 593 | NR | 685 | 126 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 319 | NR | 560 | 595 | NR | 690 | 109 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 539 | NR | 565 | 600 | NR | 695 | 94 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 868 | NR | 570 | 603 | NR | 700 | 80 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 977 | NR | 575 | 606 | NR | 705 | 69 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 601 | NR | 580 | 609 | NR | 710 | 59 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 397 | NR | 585 | 611 | NR | 715 | 51 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 302 | NR | 590 | 610 | NR | 720 | 44 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 201 | NR | 595 | 604 | NR | 725 | 37 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 157 | NR | 600 | 596 | NR | 730 | 32 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 157 | NR | 605 | 583 | NR | 735 | 27 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 171 | NR | 610 | 566 | NR | 740 | 23 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 210 | NR | 615 | 543 | NR | 745 | 20 | NR | 875 | 0 | NR | | | |

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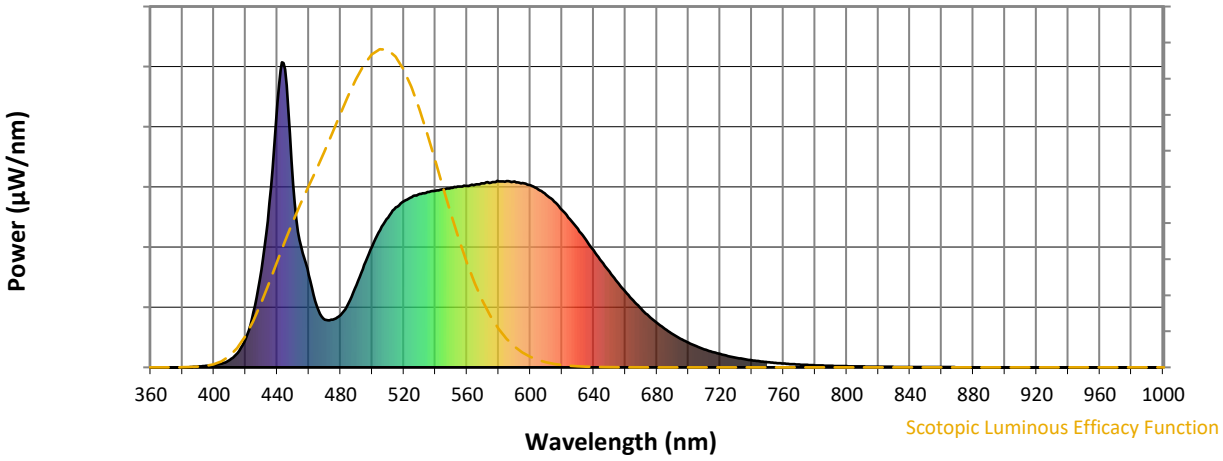
## Scotopic Flux vs. Wavelength




**Scotopic Lumens: NR** **S/P: 1.83**

| 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 | 270 | NR | 620 | 517 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 335 | NR | 625 | 486 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 397 | NR | 630 | 454 | NR | 760 | 12 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 451 | NR | 635 | 419 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 492 | NR | 640 | 384 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 524 | NR | 645 | 347 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 545 | NR | 650 | 313 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 558 | NR | 655 | 280 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 7 | NR | 530 | 568 | NR | 660 | 248 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 13 | NR | 535 | 575 | NR | 665 | 219 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 24 | NR | 540 | 579 | NR | 670 | 192 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 47 | NR | 545 | 585 | NR | 675 | 167 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 95 | NR | 550 | 588 | NR | 680 | 146 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 181 | NR | 555 | 593 | NR | 685 | 126 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 319 | NR | 560 | 595 | NR | 690 | 109 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 539 | NR | 565 | 600 | NR | 695 | 94 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 868 | NR | 570 | 603 | NR | 700 | 80 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 977 | NR | 575 | 606 | NR | 705 | 69 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 601 | NR | 580 | 609 | NR | 710 | 59 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 397 | NR | 585 | 611 | NR | 715 | 51 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 302 | NR | 590 | 610 | NR | 720 | 44 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 201 | NR | 595 | 604 | NR | 725 | 37 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 157 | NR | 600 | 596 | NR | 730 | 32 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 157 | NR | 605 | 583 | NR | 735 | 27 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 171 | NR | 610 | 566 | NR | 740 | 23 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 210 | NR | 615 | 543 | NR | 745 | 20 | NR | 875 | 0 | NR | | | |

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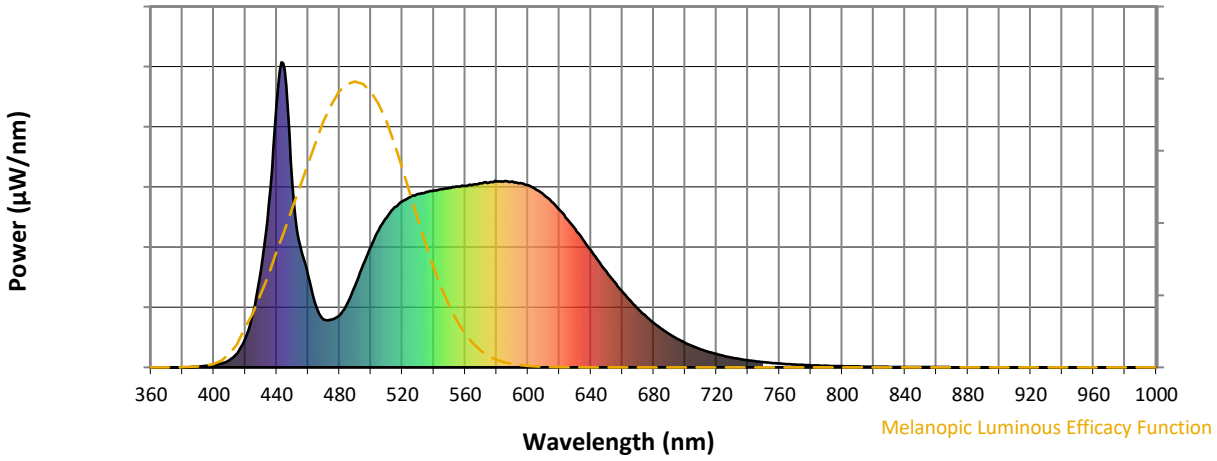
## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 3.74**

| 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 | 270 | NR | 620 | 517 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 335 | NR | 625 | 486 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 397 | NR | 630 | 454 | NR | 760 | 12 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 451 | NR | 635 | 419 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 492 | NR | 640 | 384 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 524 | NR | 645 | 347 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 545 | NR | 650 | 313 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 558 | NR | 655 | 280 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 7 | NR | 530 | 568 | NR | 660 | 248 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 13 | NR | 535 | 575 | NR | 665 | 219 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 24 | NR | 540 | 579 | NR | 670 | 192 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 47 | NR | 545 | 585 | NR | 675 | 167 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 95 | NR | 550 | 588 | NR | 680 | 146 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 181 | NR | 555 | 593 | NR | 685 | 126 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 319 | NR | 560 | 595 | NR | 690 | 109 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 539 | NR | 565 | 600 | NR | 695 | 94 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 868 | NR | 570 | 603 | NR | 700 | 80 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 977 | NR | 575 | 606 | NR | 705 | 69 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 601 | NR | 580 | 609 | NR | 710 | 59 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 397 | NR | 585 | 611 | NR | 715 | 51 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 302 | NR | 590 | 610 | NR | 720 | 44 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 201 | NR | 595 | 604 | NR | 725 | 37 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 157 | NR | 600 | 596 | NR | 730 | 32 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 157 | NR | 605 | 583 | NR | 735 | 27 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 171 | NR | 610 | 566 | NR | 740 | 23 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 210 | NR | 615 | 543 | NR | 745 | 20 | NR | 875 | 0 | NR | | | |

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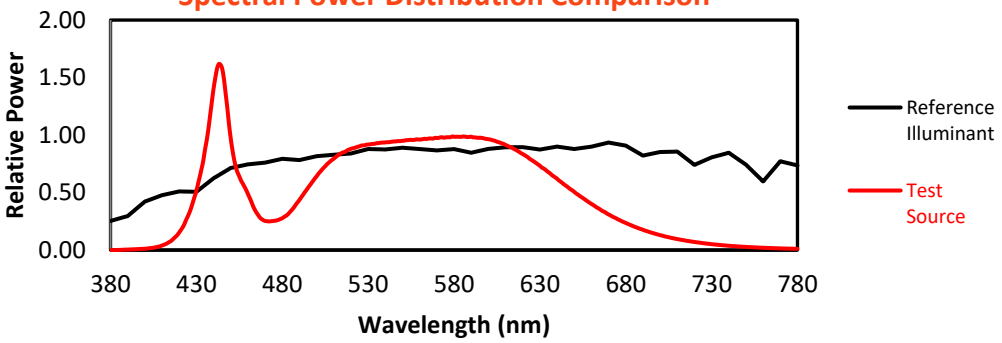
# TM-30-18

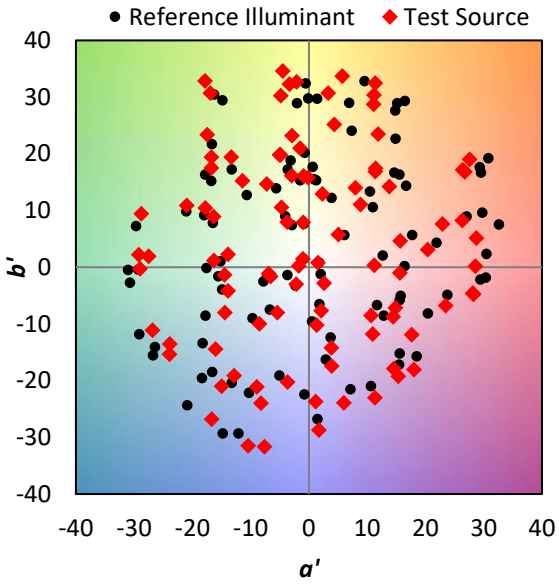
## Summary

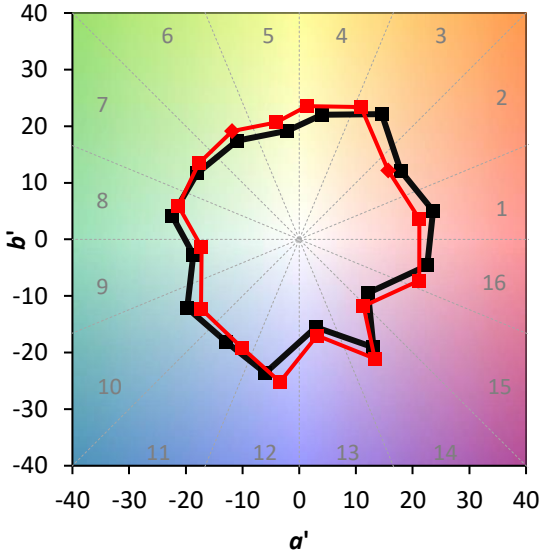
$R_f$ = 82
$R_g$ = 99.4
CIE $R_a$ = 81.1
$R_9$ = 8.7

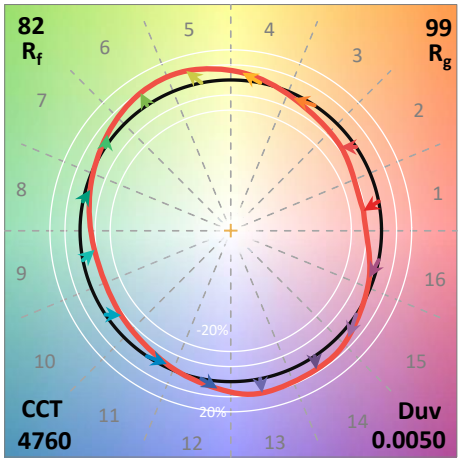
## Spectral Power Distribution Comparison

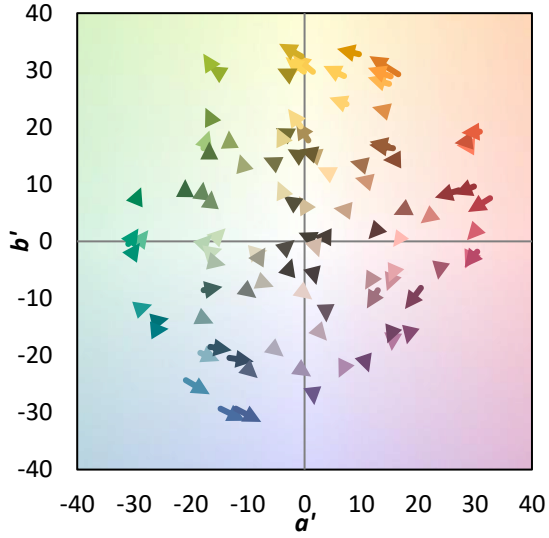



## Color Vector Graphics



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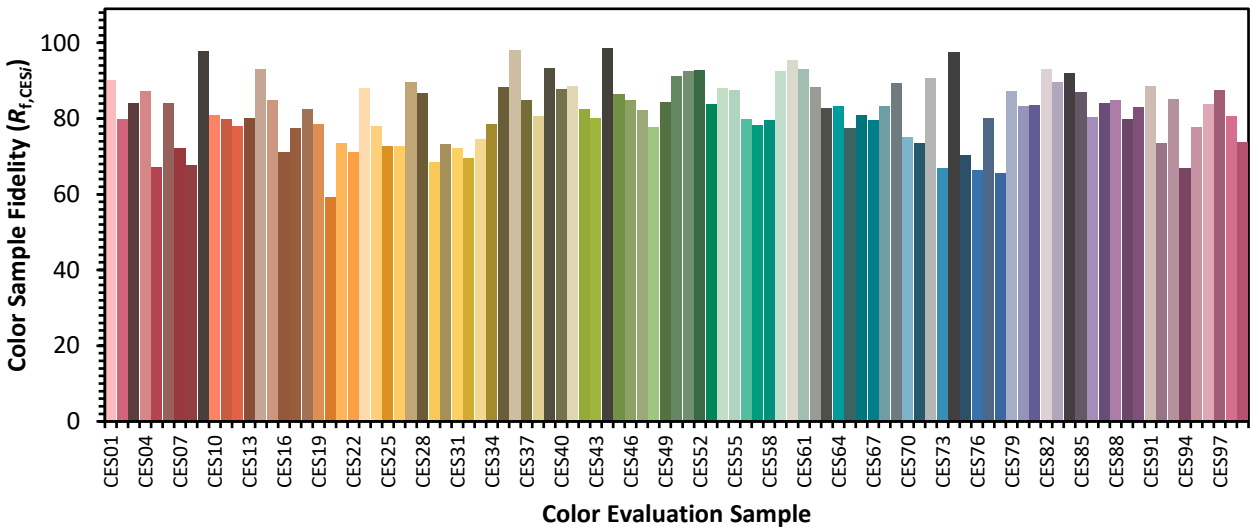
**Individual Sample Fidelity Index ($R_{f,i}$)**

| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 73 | CES51 = 92 | CES76 = 66 |
| CES02 = 60 | CES27 = 90 | CES52 = 93 | CES77 = 80 |
| CES03 = 30 | CES28 = 87 | CES53 = 84 | CES78 = 65 |
| CES04 = 69 | CES29 = 69 | CES54 = 88 | CES79 = 87 |
| CES05 = 47 | CES30 = 73 | CES55 = 88 | CES80 = 83 |
| CES06 = 50 | CES31 = 72 | CES56 = 80 | CES81 = 84 |
| CES07 = 40 | CES32 = 69 | CES57 = 78 | CES82 = 93 |
| CES08 = 39 | CES33 = 75 | CES58 = 80 | CES83 = 90 |
| CES09 = 29 | CES34 = 78 | CES59 = 93 | CES84 = 92 |
| CES10 = 73 | CES35 = 88 | CES60 = 95 | CES85 = 87 |
| CES11 = 56 | CES36 = 98 | CES61 = 93 | CES86 = 80 |
| CES12 = 62 | CES37 = 85 | CES62 = 88 | CES87 = 84 |
| CES13 = 42 | CES38 = 81 | CES63 = 83 | CES88 = 85 |
| CES14 = 74 | CES39 = 93 | CES64 = 83 | CES89 = 80 |
| CES15 = 71 | CES40 = 88 | CES65 = 77 | CES90 = 83 |
| CES16 = 46 | CES41 = 89 | CES66 = 81 | CES91 = 89 |
| CES17 = 48 | CES42 = 82 | CES67 = 80 | CES92 = 73 |
| CES18 = 55 | CES43 = 80 | CES68 = 83 | CES93 = 85 |
| CES19 = 70 | CES44 = 99 | CES69 = 89 | CES94 = 67 |
| CES20 = 64 | CES45 = 87 | CES70 = 75 | CES95 = 78 |
| CES21 = 85 | CES46 = 85 | CES71 = 73 | CES96 = 84 |
| CES22 = 77 | CES47 = 82 | CES72 = 91 | CES97 = 87 |
| CES23 = 91 | CES48 = 78 | CES73 = 67 | CES98 = 81 |
| CES24 = 90 | CES49 = 84 | CES74 = 98 | CES99 = 74 |
| CES25 = 71 | CES50 = 91 | CES75 = 70 | |



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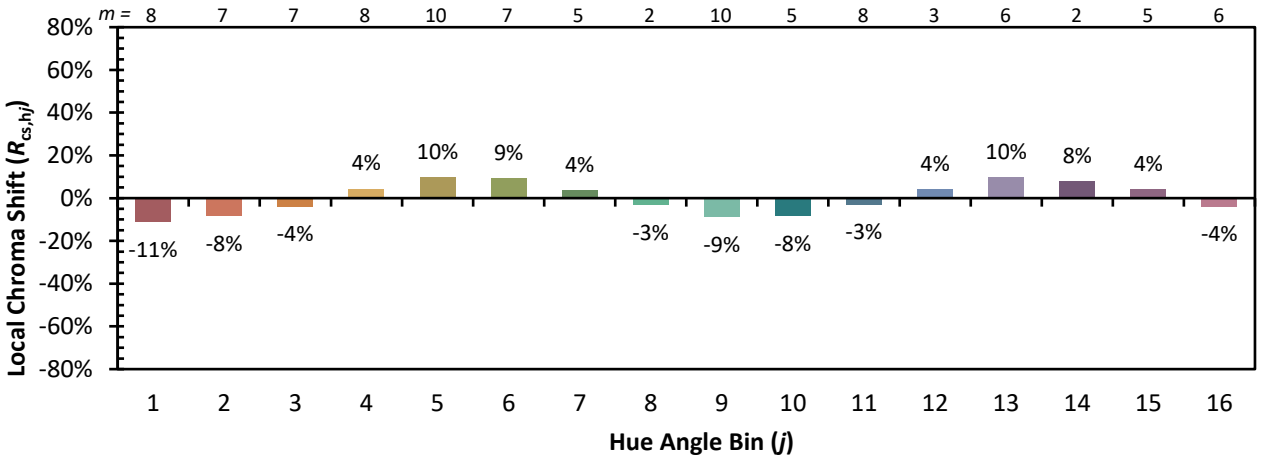
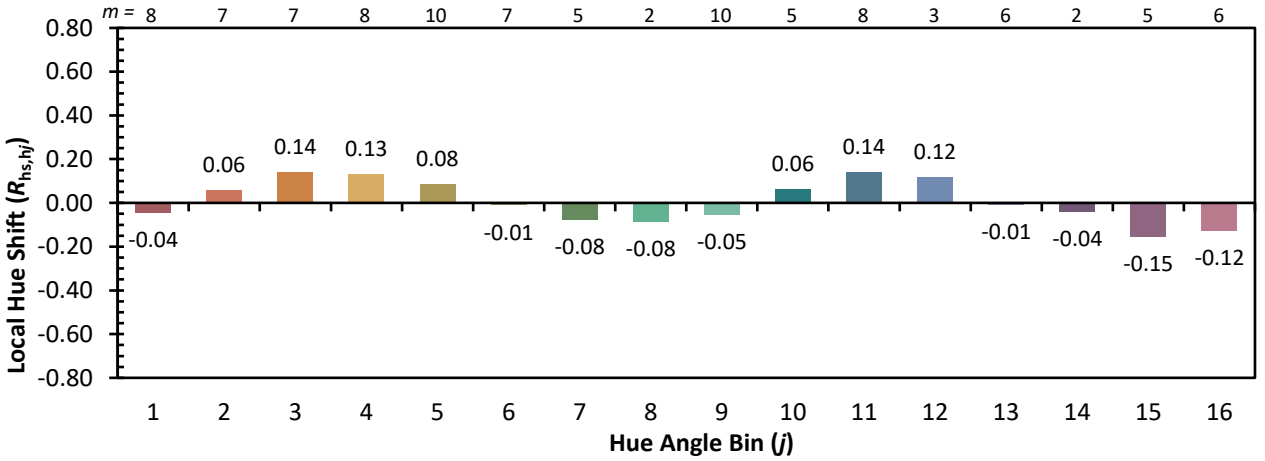
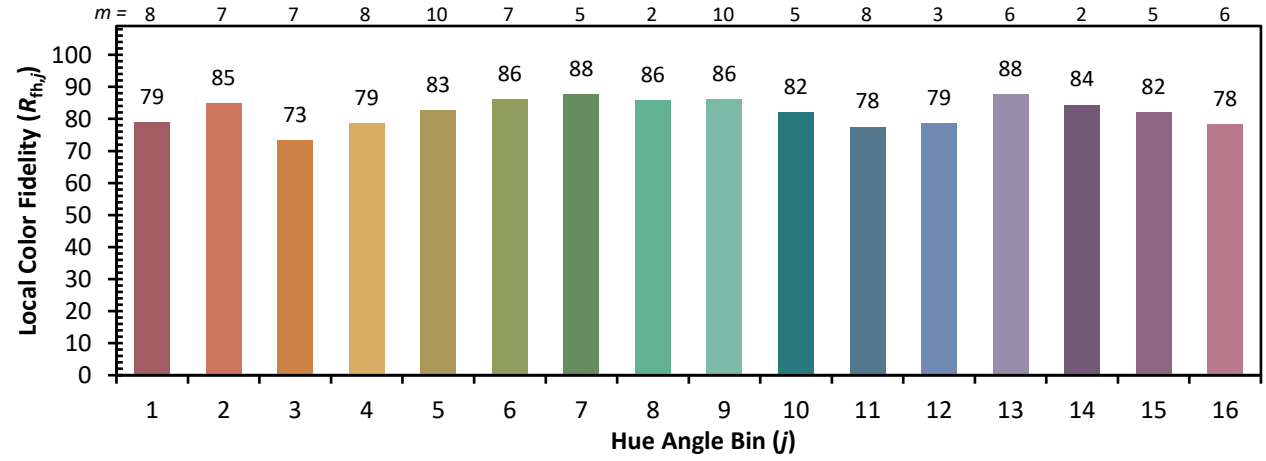
## Color Rendition by Hue-Angle Bin



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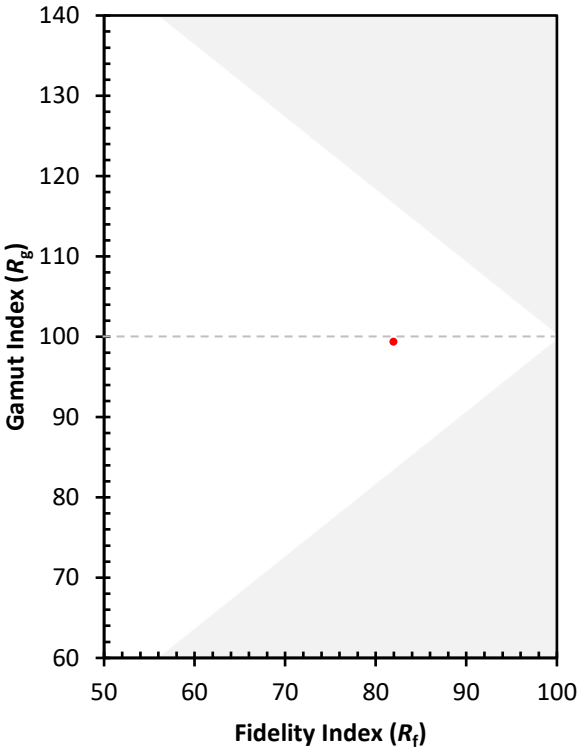
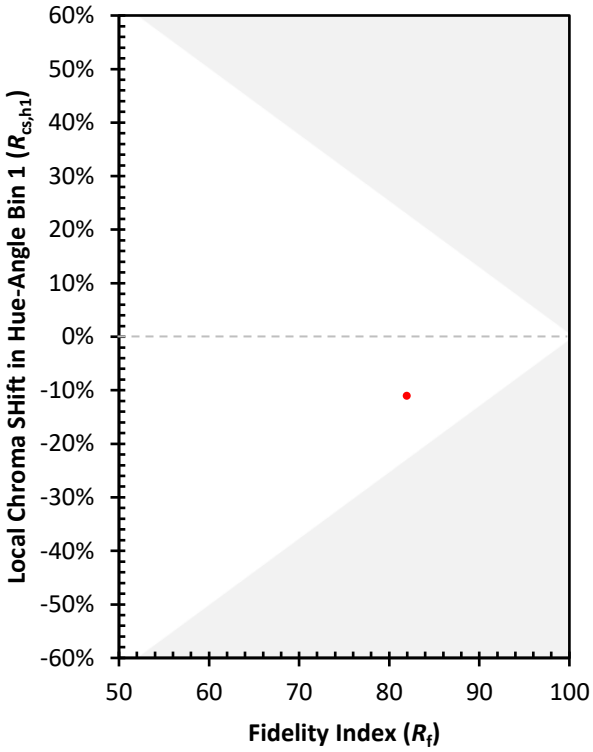
## Measure Comparisons

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