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: P1458787

Luminaire Tested: GLAN-SB3A-735-U-T4LG-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: | P1458787 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 5/21/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | STREETWORKS |
| Catalog Number: | GLAN-SB3A-735-U-T4LG-HSS |
| Description: | GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 350mA 3xLight Square PACKAGE 70CRI 3500K FIXTURE w/ TYPE IV LOW GLARE WITH HOUSE SIDE SHIELD |
| Light Source: | (78) 3500K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 9757.3 lumens |
| Efficiency: | N/A |
| Efficacy: | 115.2 lumens/watt |
| Luminous Opening: | Rectangular (W 1' x L: 1' x H: 0') |
| IES Classification: | Type IV - Short |
| BUG Rating: | B1 - U0 - G2 |

| | |
|---|---|
| Input Watts (W): | 84.7 |
| 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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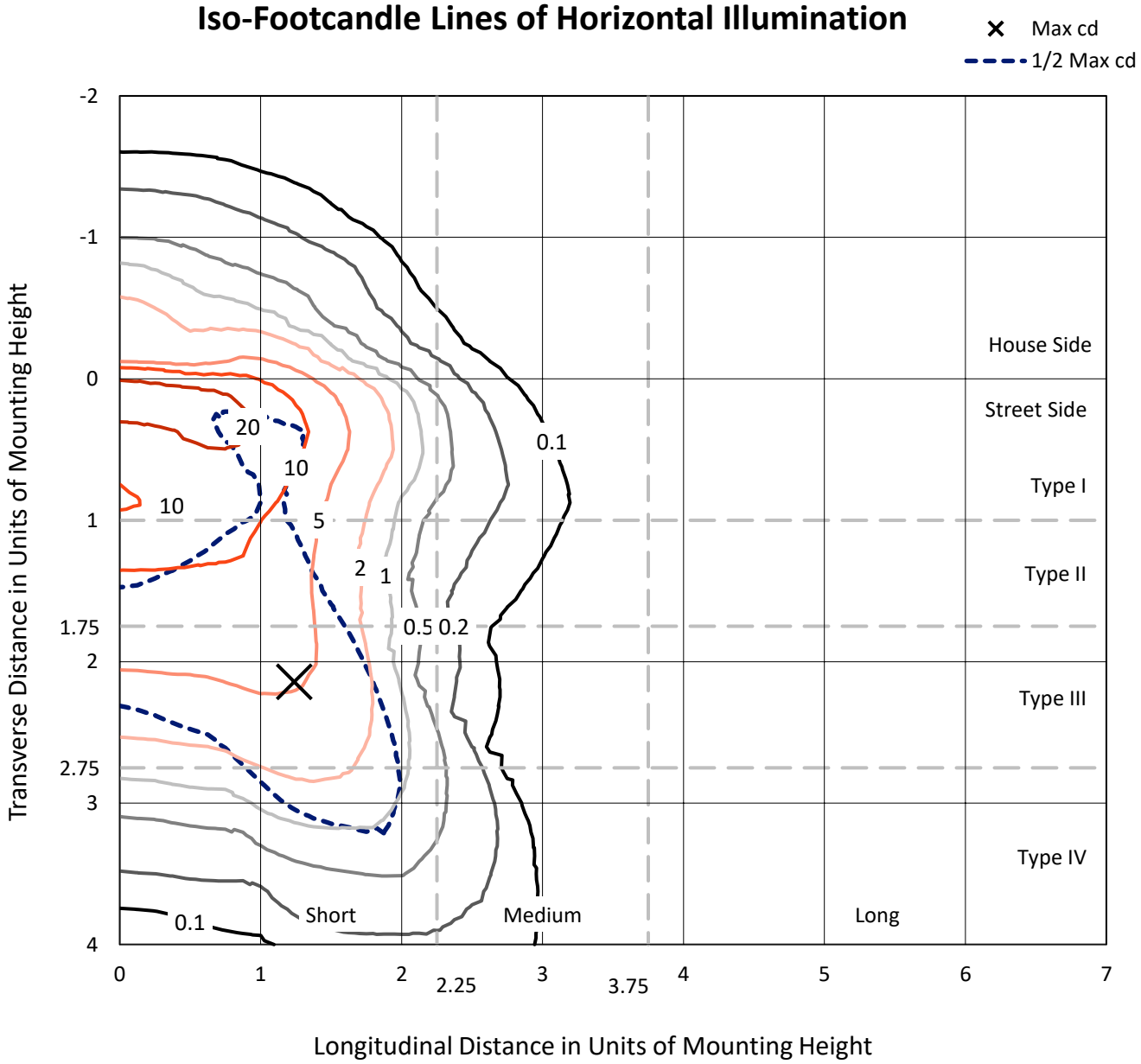
Scaled Data Report

REPORT NUMBER: P1458787
CATALOG NUMBER: GLAN-SB3A-735-U-T4LG-HSS

## Iso-Footcandle Lines of Horizontal Illumination




Based on 10 foot mounting height. Maximum calculated value = 29.4 fc
Type IV - Short - N/A

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REPORT NUMBER: P1458787
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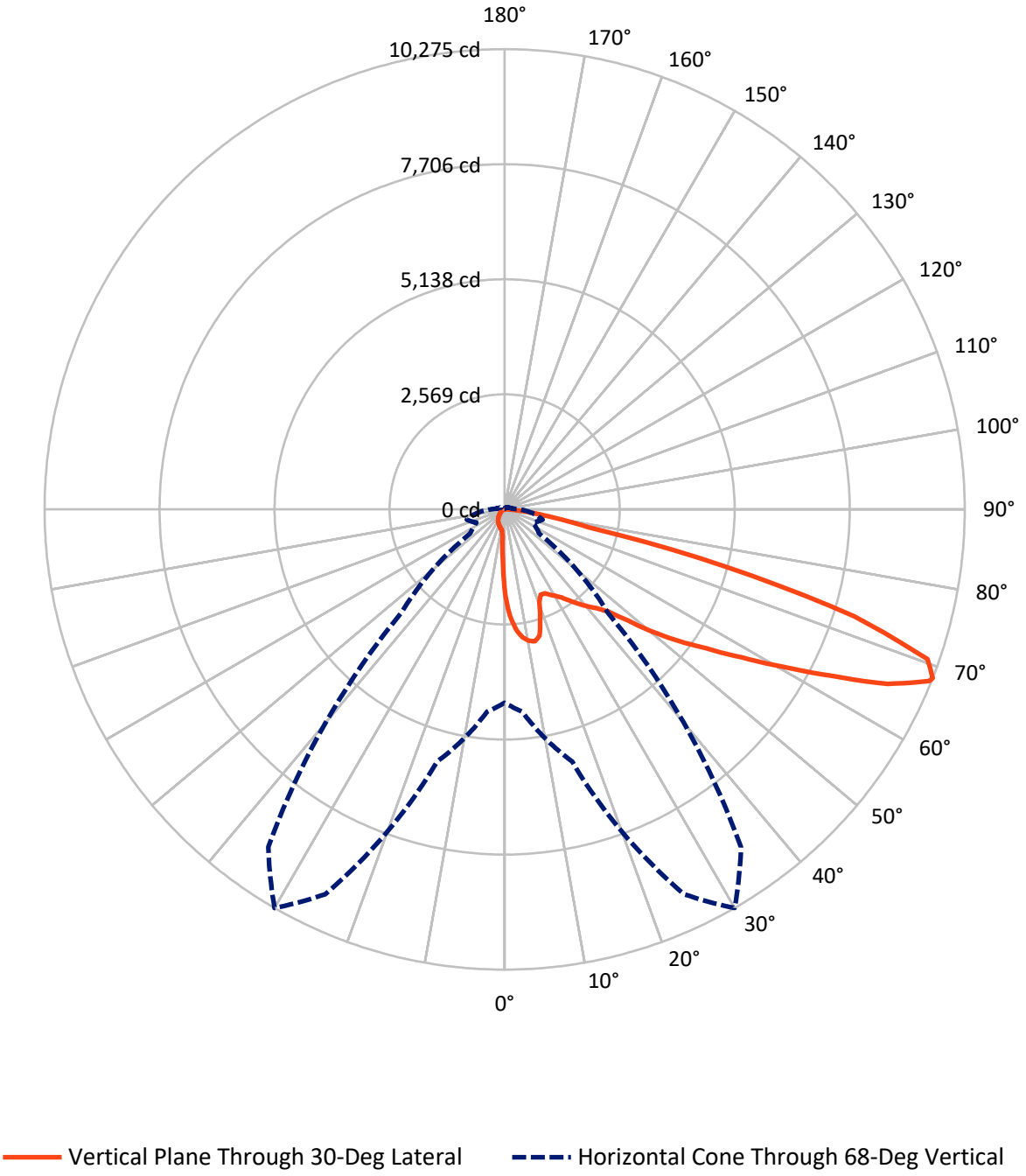
## Luminous Intensity Polar Plot



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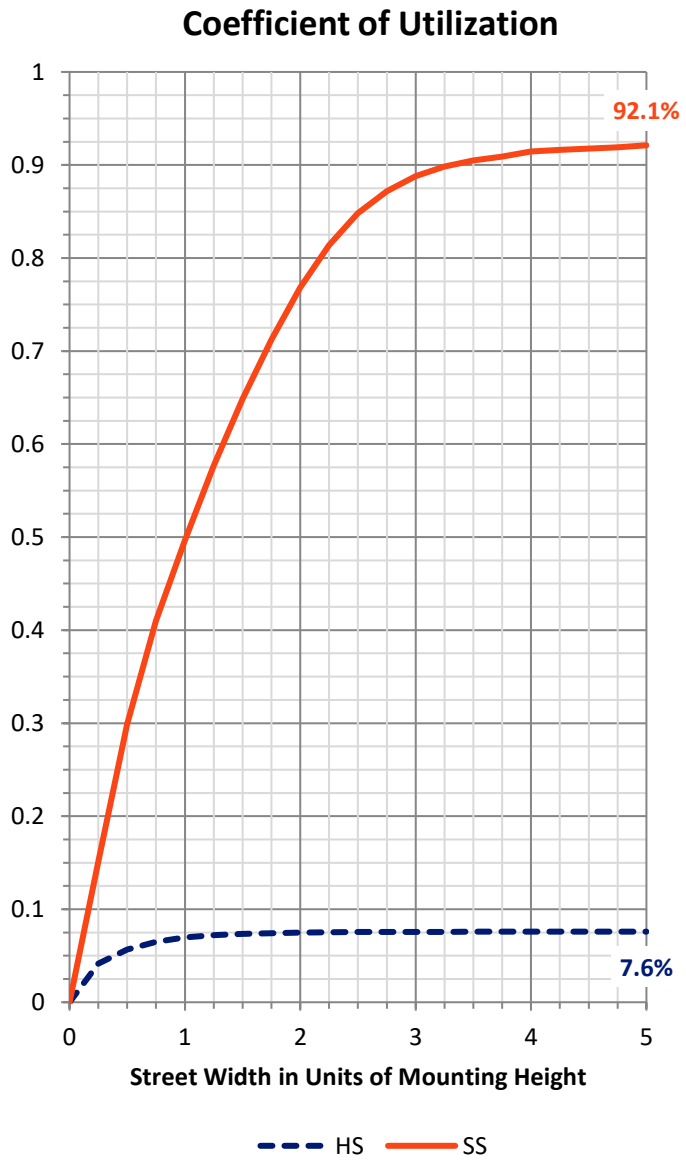
REPORT NUMBER: P1458787
CATALOG NUMBER: GLAN-SB3A-735-U-T4LG-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 744.7 | 0.0 | 744.7 |
| | % Fixture | 7.6 | 0.0 | 7.6 |
| **Street Side** | Lumens | 9012.6 | 0.0 | 9012.6 |
| | % Fixture | 92.4 | 0.0 | 92.4 |
| **Total** | Lumens | 9757.3 | 0.0 | 9757.3 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 166.0 | 1.7 |
| 10°-20° | 474.0 | 4.9 |
| 20°-30° | 744.8 | 7.6 |
| 30°-40° | 1168.2 | 12.0 |
| 40°-50° | 1746.2 | 17.9 |
| 50°-60° | 2323.0 | 23.8 |
| 60°-70° | 2245.6 | 23.0 |
| 70°-80° | 807.2 | 8.3 |
| 80°-90° | 82.4 | 0.8 |
| 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° | 9757.3 | 100.0 |
| 0°-180° | 9757.3 | 100.0 |



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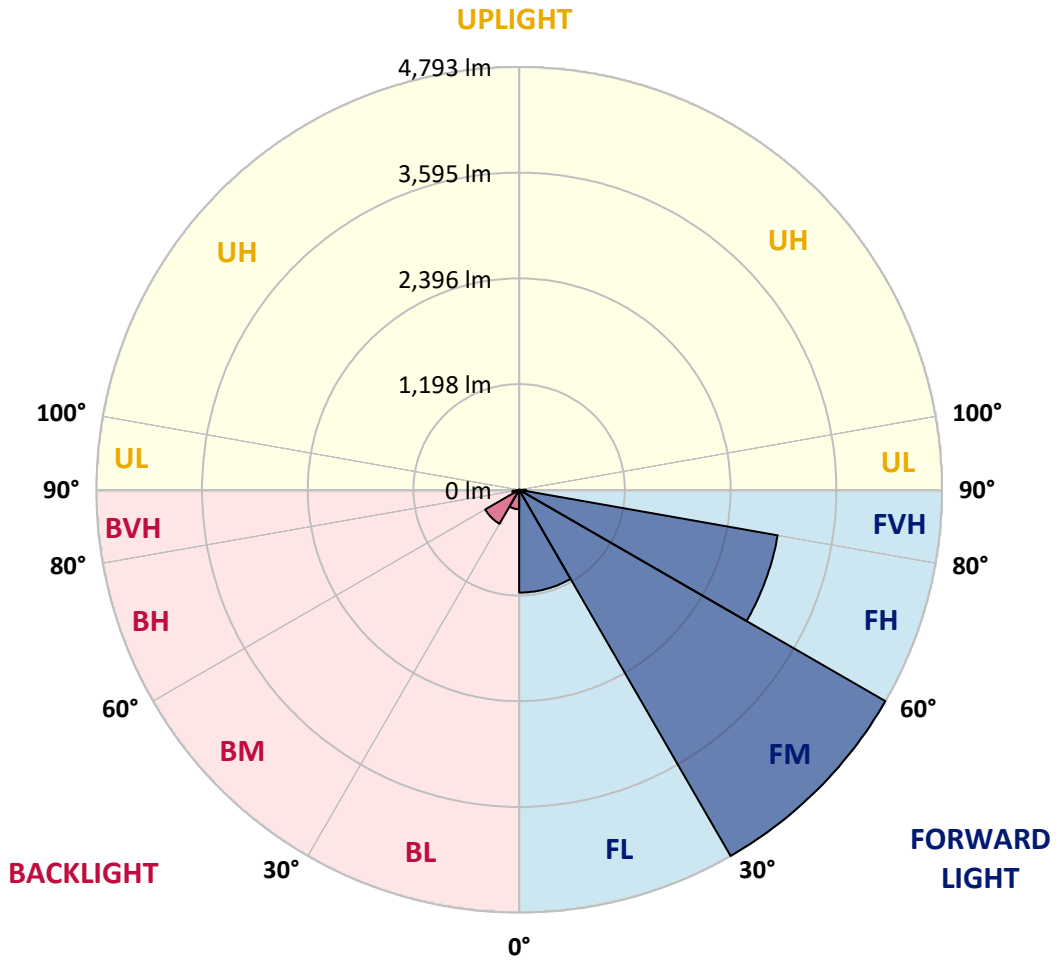
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1165.0 | 11.9 | | | |
| FM | (30°-60°) | 4792.8 | 49.1 | | | |
| FH | (60°-80°) | 2975.3 | 30.5 | | | G2/5000 |
| FVH | (80°-90°) | 79.5 | 0.8 | | | G1/100 |
| BL | (0°-30°) | 219.8 | 2.3 | B1/500 | | |
| BM | (30°-60°) | 444.5 | 4.6 | B1/1000 | | |
| BH | (60°-80°) | 77.5 | 0.8 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 2.9 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B1-U0-G2**
Type IV Short



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REPORT NUMBER: P1458787
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 30° | 35° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1924.0 | 1924.0 | 1924.0 | 1924.0 | *1924.0* | 1924.0 | 1924.0 | 1924.0 | 1924.0 | 1924.0 | 1924.0 |
| 2.5° | 2459.1 | 2459.1 | 2441.6 | 2418.2 | *2391.9* | 2383.1 | 2333.4 | 2263.2 | 2190.1 | 2105.3 | 1982.5 |
| 5° | 2774.9 | 2772.0 | 2736.9 | 2736.9 | *2701.8* | 2669.7 | 2620.0 | 2517.6 | 2400.7 | 2248.6 | 2035.1 |
| 7.5° | 2915.3 | 2921.1 | 2906.5 | 2906.5 | *2886.1* | 2862.7 | 2833.4 | 2734.0 | 2596.6 | 2391.9 | 2087.8 |
| 10° | 2965.0 | 2967.9 | 2967.9 | 2988.4 | *2982.5* | 2979.6 | 2976.7 | 2921.1 | 2777.9 | 2538.1 | 2143.3 |
| 12.5° | 2845.1 | 2859.7 | 2900.7 | 2991.3 | *3020.6* | 3052.7 | 3096.6 | 3079.0 | 2979.6 | 2722.3 | 2228.1 |
| 15° | 2459.1 | 2462.1 | 2576.1 | 2801.3 | *2921.1* | 3044.0 | 3213.5 | 3248.6 | 3184.3 | 2921.1 | 2315.9 |
| 17.5° | 2029.3 | 2038.1 | 2128.7 | 2380.2 | *2573.2* | 2856.8 | 3280.8 | 3424.1 | 3400.7 | 3117.1 | 2397.7 |
| 20° | 1850.9 | 1862.6 | 1906.5 | 2064.4 | *2210.6* | 2473.8 | 3213.5 | 3590.8 | 3599.5 | 3313.0 | 2473.8 |
| 22.5° | 1810.0 | 1818.8 | 1853.9 | 1976.7 | *2067.3* | 2242.8 | 2985.5 | 3722.3 | 3824.7 | 3538.1 | 2564.4 |
| 25° | 1798.3 | 1807.1 | 1859.7 | 1994.2 | *2079.0* | 2225.2 | 2777.9 | 3792.5 | 4090.8 | 3772.0 | 2652.1 |
| 27.5° | 1789.5 | 1801.2 | 1886.0 | 2058.5 | *2158.0* | 2298.3 | 2739.8 | 3807.1 | 4345.2 | 4020.6 | 2795.4 |
| 30° | 1801.2 | 1818.8 | 1929.9 | 2125.8 | *2239.8* | 2397.7 | 2830.5 | 3821.8 | 4625.9 | 4304.2 | 2976.7 |
| 32.5° | 1848.0 | 1862.6 | 1997.1 | 2216.4 | *2348.0* | 2526.4 | 2985.5 | 3909.5 | 4892.0 | 4593.7 | 3149.2 |
| 35° | 1900.6 | 1921.1 | 2081.9 | 2345.1 | *2503.0* | 2704.8 | 3196.0 | 4082.0 | 5146.4 | 4868.6 | 3327.6 |
| 37.5° | 1965.0 | 1988.4 | 2181.4 | 2491.3 | *2672.6* | 2900.7 | 3424.1 | 4321.8 | 5371.5 | 5093.7 | 3506.0 |
| 40° | 2052.7 | 2079.0 | 2295.4 | 2646.3 | *2842.2* | 3070.3 | 3649.2 | 4558.6 | 5544.0 | 5228.2 | 3622.9 |
| 42.5° | 2397.7 | 2432.8 | 2523.5 | 2798.3 | *3017.6* | 3251.6 | 3871.5 | 4783.8 | 5608.4 | 5272.1 | 3646.3 |
| 45° | 3041.0 | 3076.1 | 3052.7 | 3105.4 | *3251.6* | 3470.9 | 4114.2 | 5000.2 | 5617.1 | 5260.4 | 3634.6 |
| 47.5° | 3687.2 | 3728.2 | 3707.7 | 3678.5 | *3710.6* | 3815.9 | 4386.1 | 5137.6 | 5570.3 | 5254.5 | 3634.6 |
| 50° | 4304.2 | 4280.8 | 4283.8 | 4275.0 | *4304.2* | 4359.8 | 4649.3 | 5163.9 | 5558.6 | 5310.1 | 3666.8 |
| 52.5° | 4634.6 | 4646.3 | 4719.4 | 4827.6 | *4892.0* | 4947.5 | 4950.4 | 5204.8 | 5473.9 | 5216.5 | 3628.8 |
| 55° | 4959.2 | 4982.6 | 5152.2 | 5336.4 | *5479.7* | 5585.0 | 5251.6 | 5178.5 | 4968.0 | 4903.7 | 3429.9 |
| 57.5° | 5324.7 | 5356.9 | 5596.7 | 5976.8 | *6228.3* | 6283.8 | 5549.9 | 4687.3 | 4204.8 | 4456.3 | 3044.0 |
| 60° | 5827.7 | 5865.7 | 6184.4 | 6754.6 | *7128.9* | 7014.8 | 5573.3 | 3906.6 | 3339.3 | 3698.9 | 2511.8 |
| 62.5° | 6222.4 | 6298.4 | 6874.5 | 7763.4 | *8175.7* | 7813.1 | 5137.6 | 2994.2 | 2333.4 | 2599.5 | 1833.4 |
| 65° | 5801.3 | 5947.5 | 6886.2 | 8918.4 | *9395.0* | 8751.7 | 4453.4 | 2043.9 | 1315.8 | 1681.3 | 1172.6 |
| 67.5° | 4690.2 | 4894.9 | 6114.2 | 9479.8 | *10231.3* | 9245.9 | 3506.0 | 1084.8 | 754.4 | 976.6 | 617.0 |
| 68° | *4315.9* | *4538.2* | *5830.6* | *9479.8* | *10275.2* | *9202.0* | *3254.5* | *938.6* | *695.9* | *877.2* | *535.1* |
| 70° | 2982.5 | 3140.4 | 4482.6 | 8947.6 | *10017.8* | 8389.1 | 2143.3 | 538.0 | 523.4 | 602.4 | 353.8 |
| 72.5° | 1462.0 | 1631.6 | 2397.7 | 7090.9 | *8161.1* | 6447.6 | 976.6 | 356.7 | 397.7 | 441.5 | 277.8 |
| 75° | 581.9 | 617.0 | 944.5 | 3497.2 | *5099.6* | 4114.2 | 511.7 | 269.0 | 342.1 | 345.0 | 219.3 |
| 77.5° | 333.3 | 353.8 | 523.4 | 1286.6 | *1912.3* | 1839.2 | 330.4 | 193.0 | 271.9 | 248.5 | 143.3 |
| 80° | 187.1 | 190.1 | 295.3 | 678.4 | *1093.6* | 979.6 | 225.2 | 140.4 | 207.6 | 175.4 | 96.5 |
| 82.5° | 93.6 | 105.3 | 187.1 | 374.3 | *608.2* | 622.8 | 119.9 | 99.4 | 166.7 | 125.7 | 78.9 |
| 85° | 67.3 | 73.1 | 134.5 | 207.6 | *280.7* | 421.1 | 73.1 | 49.7 | 125.7 | 84.8 | 55.6 |
| 87.5° | 35.1 | 43.9 | 84.8 | 102.3 | *114.0* | 143.3 | 35.1 | 23.4 | 70.2 | 49.7 | 29.2 |
| 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: P1458787
CATALOG NUMBER: GLAN-SB3A-735-U-T4LG-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1924.0 | 1924.0 | 1924.0 | 1924.0 | 1924.0 | 1924.0 | 1924.0 | 1924.0 | 1924.0 | 1924.0 | 1924.0 |
| 2.5° | 1924.0 | 1856.8 | 1719.4 | 1558.5 | 1432.8 | 1304.1 | 1198.9 | 1099.4 | 1052.7 | 1046.8 | 1058.5 |
| 5° | 1915.3 | 1769.1 | 1456.2 | 1149.2 | 897.7 | 722.2 | 625.8 | 576.0 | 549.7 | 538.0 | 541.0 |
| 7.5° | 1897.7 | 1675.5 | 1175.5 | 777.8 | 581.9 | 505.9 | 482.5 | 473.7 | 470.8 | 470.8 | 470.8 |
| 10° | 1880.2 | 1549.8 | 900.6 | 570.2 | 476.6 | 456.2 | 450.3 | 450.3 | 447.4 | 447.4 | 450.3 |
| 12.5° | 1871.4 | 1432.8 | 698.9 | 476.6 | 444.5 | 435.7 | 429.8 | 426.9 | 426.9 | 426.9 | 429.8 |
| 15° | 1850.9 | 1304.1 | 564.3 | 441.5 | 424.0 | 412.3 | 409.4 | 406.4 | 406.4 | 406.4 | 406.4 |
| 17.5° | 1833.4 | 1178.4 | 491.2 | 418.1 | 403.5 | 391.8 | 388.9 | 386.0 | 386.0 | 388.9 | 388.9 |
| 20° | 1807.1 | 1058.5 | 441.5 | 394.7 | 383.1 | 371.4 | 368.4 | 365.5 | 368.4 | 368.4 | 368.4 |
| 22.5° | 1774.9 | 959.1 | 412.3 | 377.2 | 362.6 | 350.9 | 350.9 | 350.9 | 350.9 | 350.9 | 353.8 |
| 25° | 1754.4 | 888.9 | 391.8 | 356.7 | 342.1 | 333.3 | 330.4 | 330.4 | 336.3 | 336.3 | 339.2 |
| 27.5° | 1786.6 | 871.4 | 394.7 | 350.9 | 324.6 | 315.8 | 312.9 | 312.9 | 318.7 | 321.6 | 324.6 |
| 30° | 1883.1 | 903.5 | 429.8 | 368.4 | 312.9 | 298.3 | 295.3 | 295.3 | 304.1 | 307.0 | 310.0 |
| 32.5° | 1994.2 | 970.8 | 482.5 | 391.8 | 304.1 | 280.7 | 274.9 | 274.9 | 283.6 | 286.6 | 289.5 |
| 35° | 2146.3 | 1076.1 | 552.6 | 412.3 | 310.0 | 263.2 | 251.5 | 251.5 | 257.3 | 263.2 | 266.1 |
| 37.5° | 2342.2 | 1248.6 | 634.5 | 426.9 | 310.0 | 242.7 | 228.1 | 225.2 | 231.0 | 231.0 | 233.9 |
| 40° | 2546.9 | 1473.7 | 719.3 | 426.9 | 295.3 | 222.2 | 207.6 | 198.8 | 201.8 | 198.8 | 201.8 |
| 42.5° | 2660.9 | 1655.0 | 792.4 | 400.6 | 277.8 | 201.8 | 187.1 | 175.4 | 172.5 | 166.7 | 169.6 |
| 45° | 2725.2 | 1736.9 | 772.0 | 371.4 | 260.2 | 187.1 | 169.6 | 155.0 | 149.1 | 140.4 | 140.4 |
| 47.5° | 2725.2 | 1745.7 | 660.8 | 348.0 | 242.7 | 175.4 | 152.1 | 137.4 | 128.7 | 119.9 | 122.8 |
| 50° | 2693.1 | 1666.7 | 523.4 | 324.6 | 222.2 | 163.7 | 137.4 | 125.7 | 114.0 | 108.2 | 108.2 |
| 52.5° | 2558.6 | 1409.4 | 400.6 | 295.3 | 198.8 | 149.1 | 122.8 | 111.1 | 99.4 | 96.5 | 96.5 |
| 55° | 2327.6 | 1035.1 | 324.6 | 266.1 | 178.4 | 137.4 | 111.1 | 102.3 | 90.6 | 84.8 | 84.8 |
| 57.5° | 1891.9 | 707.6 | 269.0 | 239.8 | 157.9 | 122.8 | 99.4 | 90.6 | 76.0 | 70.2 | 70.2 |
| 60° | 1403.6 | 462.0 | 228.1 | 210.5 | 134.5 | 111.1 | 87.7 | 76.0 | 64.3 | 58.5 | 55.6 |
| 62.5° | 947.4 | 312.9 | 190.1 | 166.7 | 114.0 | 96.5 | 76.0 | 64.3 | 49.7 | 38.0 | 38.0 |
| 65° | 590.7 | 242.7 | 157.9 | 131.6 | 99.4 | 84.8 | 64.3 | 49.7 | 35.1 | 26.3 | 23.4 |
| 67.5° | 339.2 | 195.9 | 128.7 | 102.3 | 84.8 | 67.3 | 49.7 | 40.9 | 29.2 | 20.5 | 17.5 |
| 68° | *312.9* | *187.1* | *119.9* | *96.5* | *78.9* | *64.3* | *46.8* | *38.0* | *26.3* | *17.5* | *17.5* |
| 70° | 254.4 | 166.7 | 102.3 | 78.9 | 67.3 | 52.6 | 40.9 | 32.2 | 20.5 | 11.7 | 11.7 |
| 72.5° | 225.2 | 140.4 | 87.7 | 61.4 | 46.8 | 43.9 | 32.2 | 23.4 | 14.6 | 8.8 | 5.8 |
| 75° | 184.2 | 111.1 | 70.2 | 46.8 | 32.2 | 32.2 | 23.4 | 14.6 | 5.8 | 0.0 | 0.0 |
| 77.5° | 119.9 | 81.9 | 55.6 | 29.2 | 17.5 | 20.5 | 14.6 | 5.8 | 0.0 | 0.0 | 0.0 |
| 80° | 78.9 | 61.4 | 38.0 | 14.6 | 8.8 | 8.8 | 2.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 55.6 | 40.9 | 23.4 | 5.8 | 2.9 | 2.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 35.1 | 17.5 | 8.8 | 2.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 14.6 | 5.8 | 2.9 | 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: SP1-2407-184-5

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

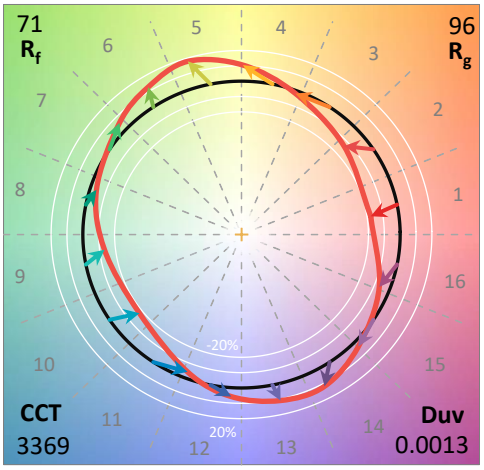
## Test Information

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



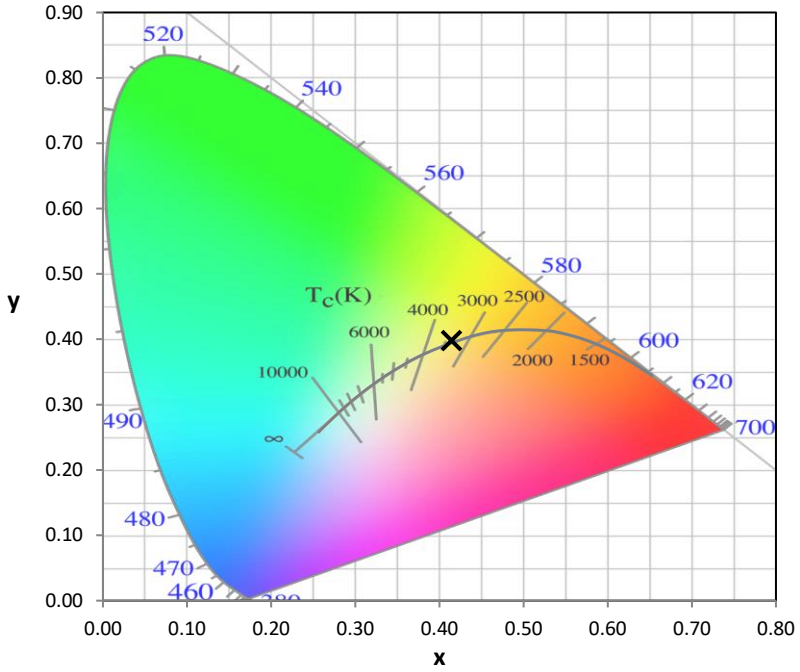

## Test Conditions

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

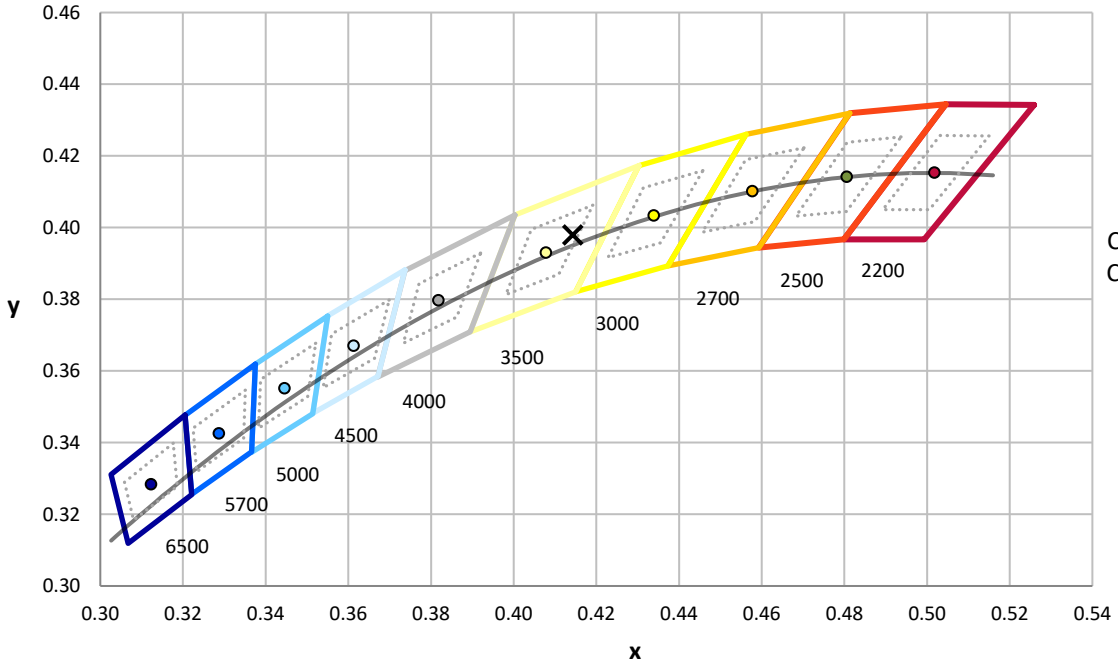
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

REPORT NUMBER: SP1-2407-184-5

## 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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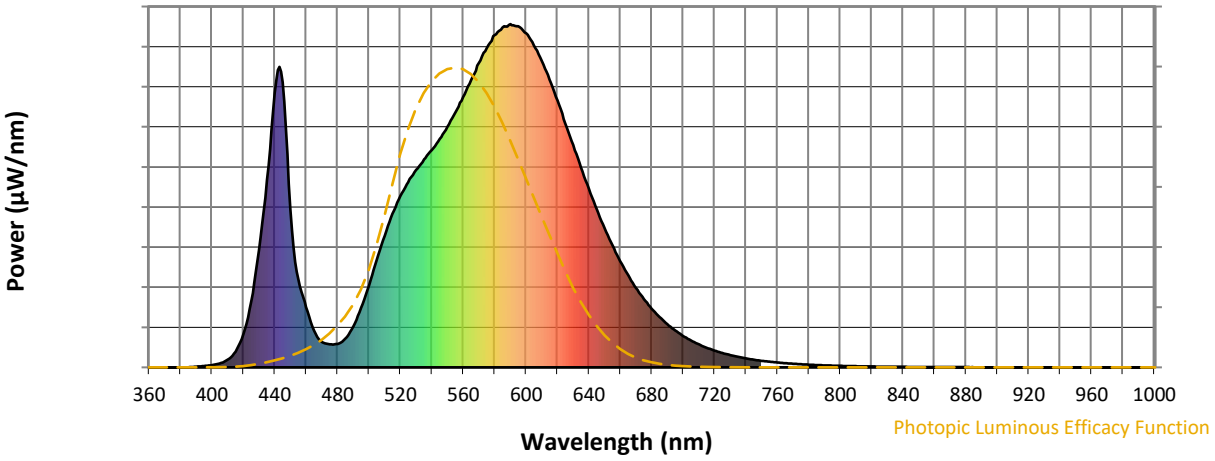
## Photopic Flux vs. Wavelength




## 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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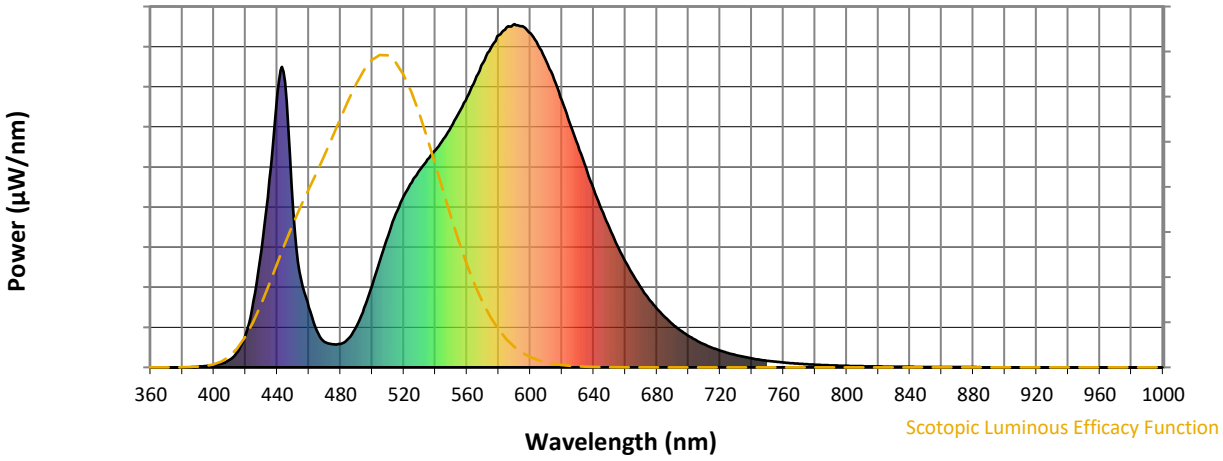
## Scotopic Flux vs. Wavelength




**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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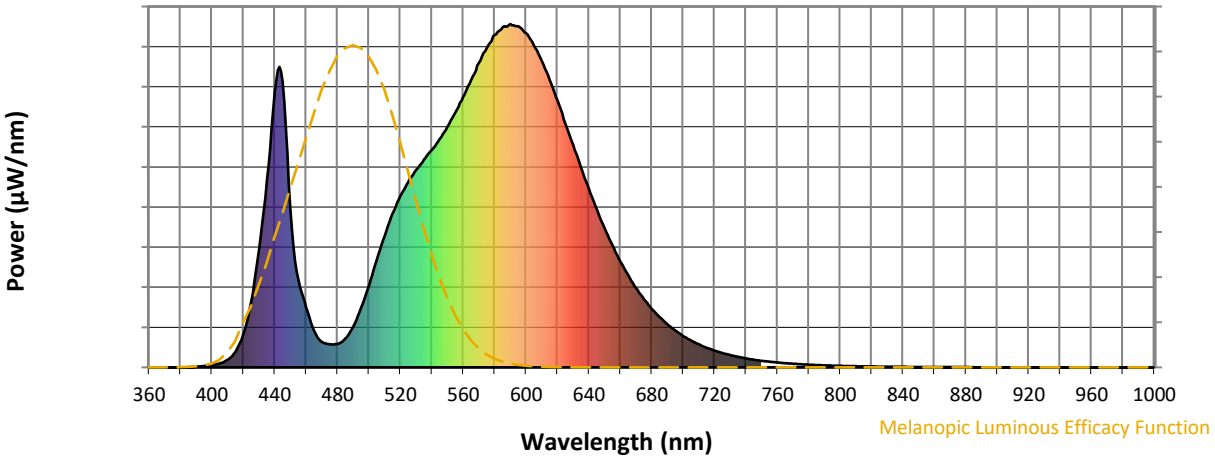
## Melanopic Flux vs. Wavelength




**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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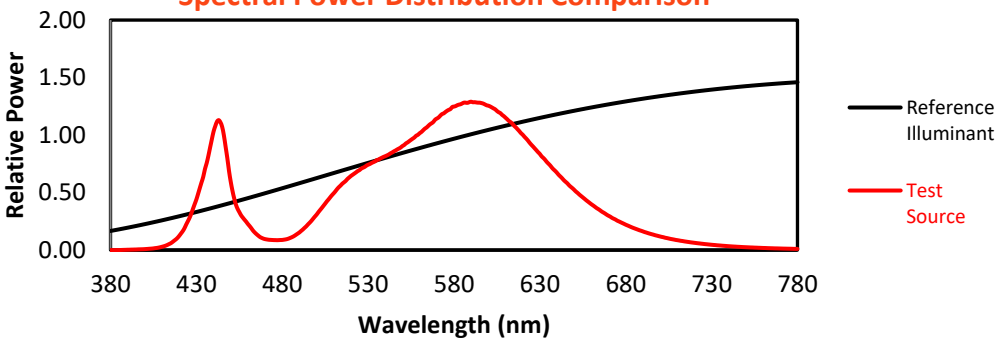
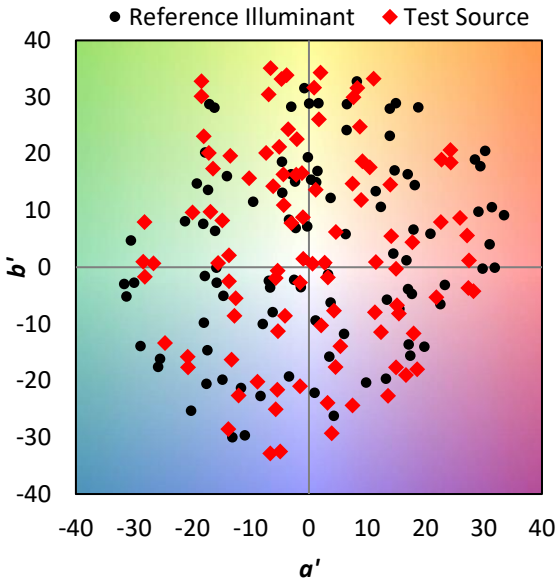
## Summary

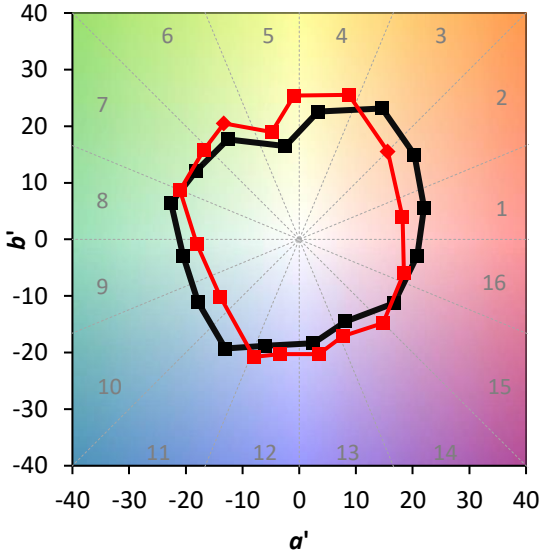
$R_f$ = 71.4
$R_g$ = 96
CIE $R_a$ = 70.1
$R_9$ = -40.2

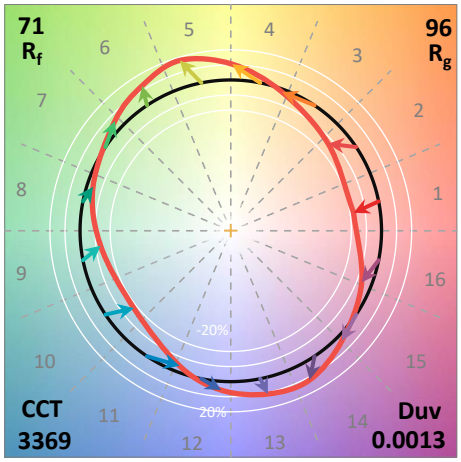
## Spectral Power Distribution Comparison

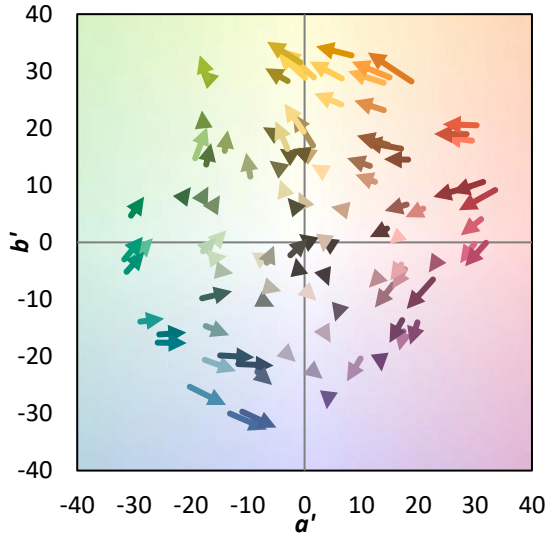



## Color Vector Graphics



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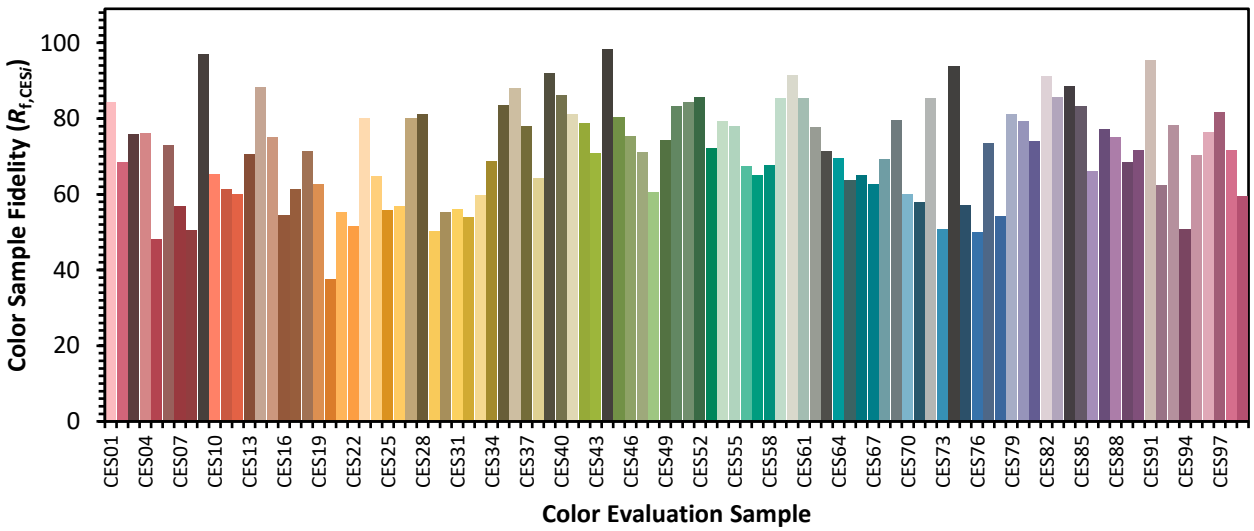
## Individual Sample Fidelity Index ($R_{f,i}$)

| | | | |
|---|---|---|---|
| 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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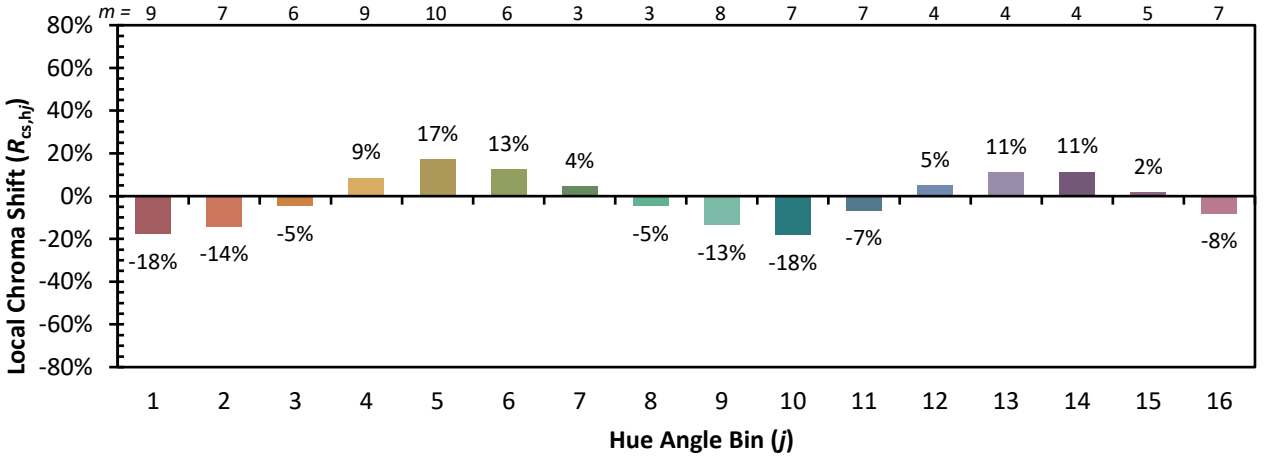
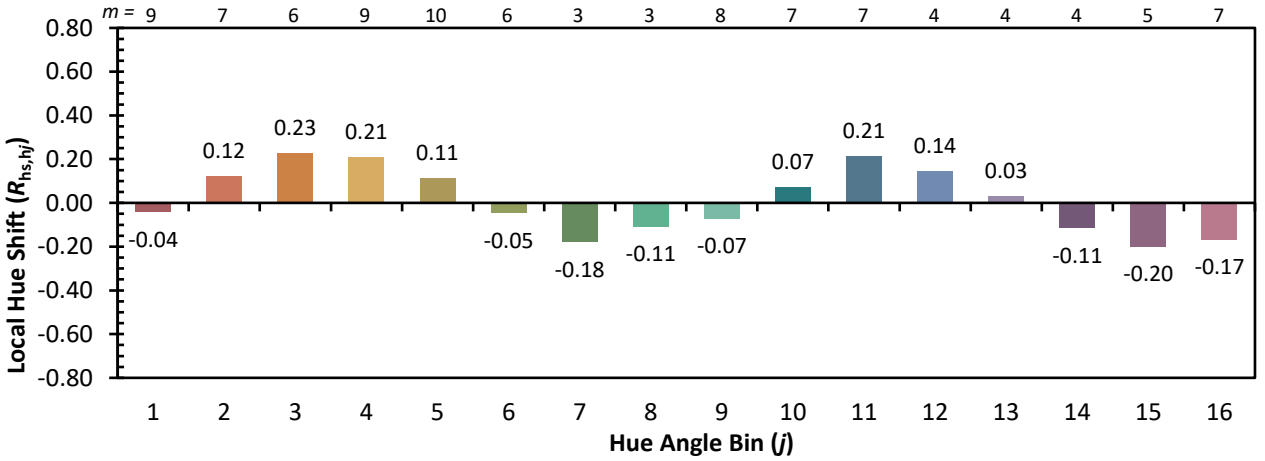
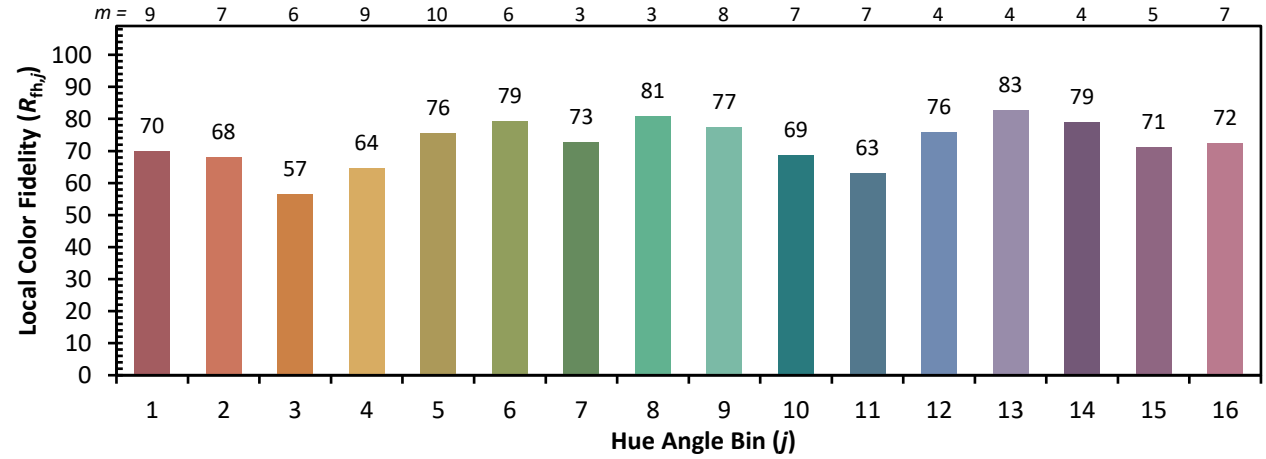
## Color Rendition by Hue-Angle Bin



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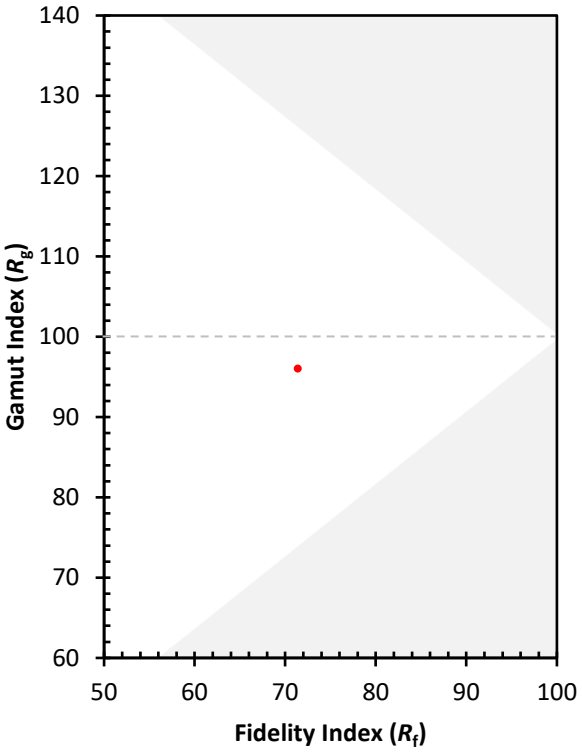
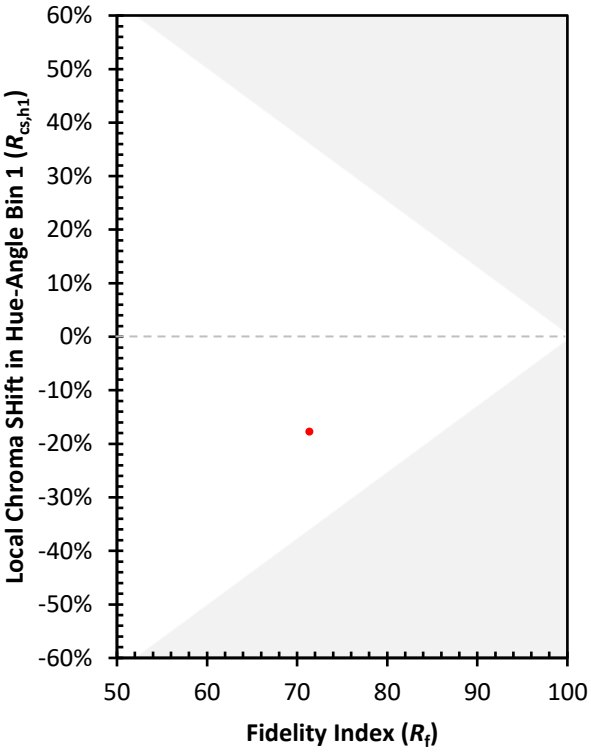
## Measure Comparisons

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