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

Scaled data based on original data using

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

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P1358041

Luminaire Tested: **GSS-SB5C-727-U-T4FT-HSS**

Issue Date: 02/18/2026

Report Generated By 670245763

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

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-08 |
| Report Number: | P1358041 |
| Test Lab: | INNOVATION CENTER(G3) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB5C-727-U-T4FT-HSS |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 5SQUARE 252W 70CRI 2700K FIXTURE w/ TYPE IV FORWARD THROW DISTRIBUTION OPTIC AND HOUSE SIDE SHIELD |
| Light Source: | (130) 2700K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 23236.2 lumens |
| Efficiency: | N/A |
| Efficacy: | 92.2 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1' x H: 0') |
| IES Classification: | Type IV - Short |
| BUG Rating: | B2 - U0 - G4 |

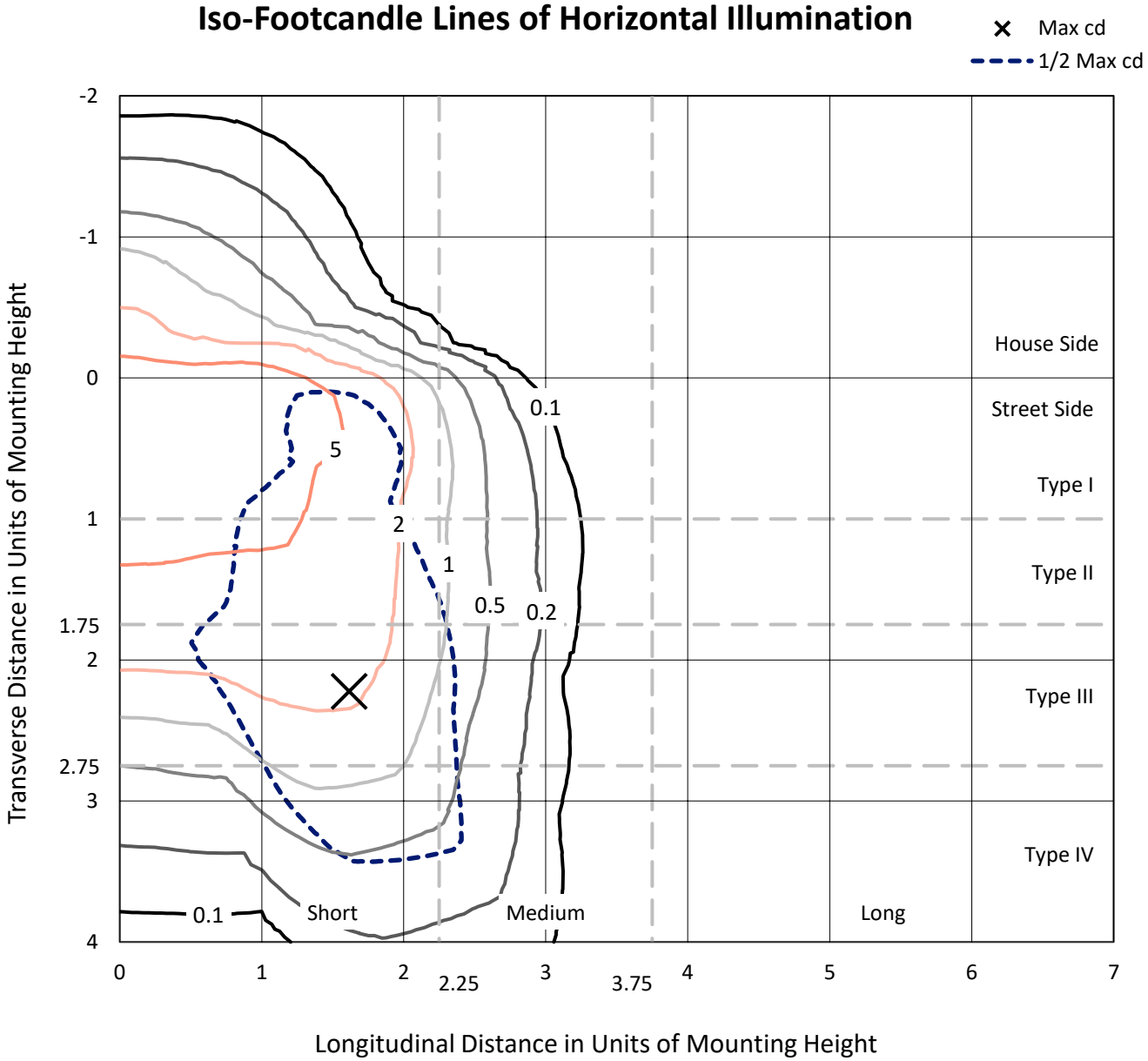
| | |
|---|---|
| Input Watts (W): | 252 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 7.9% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1358041
CATALOG NUMBER: GSS-SB5C-727-U-T4FT-HSS

## Iso-Footcandle Lines of Horizontal Illumination



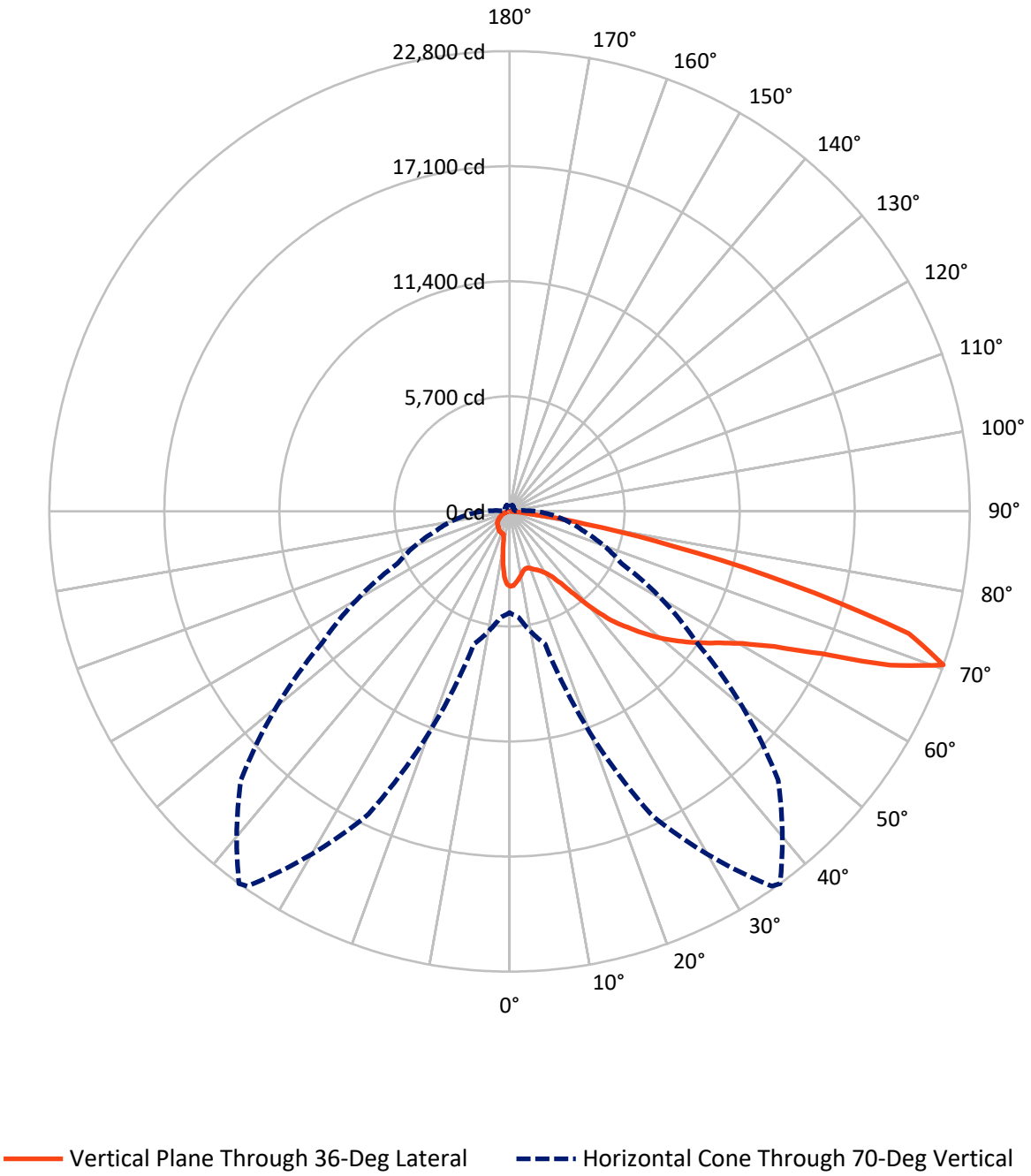

Based on 20 foot mounting height. Maximum calculated value = 9.3 fc
Type IV - Short - N/A

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## Luminous Intensity Polar Plot



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Scaled Data Report

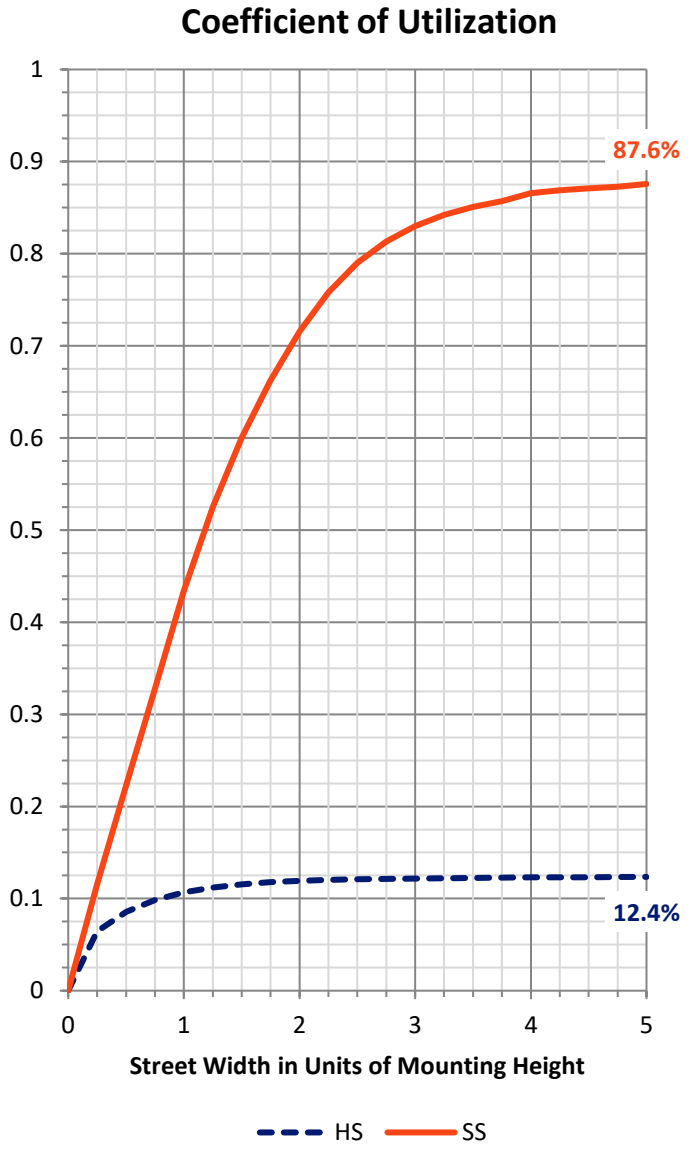
REPORT NUMBER: P1358041
CATALOG NUMBER: GSS-SB5C-727-U-T4FT-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 2894.3 | 0.0 | 2894.3 |
| | % Fixture | 12.5 | 0.0 | 12.5 |
| **Street Side** | Lumens | 20341.9 | 0.0 | 20341.9 |
| | % Fixture | 87.5 | 0.0 | 87.5 |
| **Total** | Lumens | 23236.2 | 0.0 | 23236.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 313.3 | 1.3 |
| 10°-20° | 740.7 | 3.2 |
| 20°-30° | 1209.8 | 5.2 |
| 30°-40° | 2162.3 | 9.3 |
| 40°-50° | 3871.3 | 16.7 |
| 50°-60° | 5622.1 | 24.2 |
| 60°-70° | 6270.2 | 27.0 |
| 70°-80° | 2886.2 | 12.4 |
| 80°-90° | 160.3 | 0.7 |
| 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° | 23236.2 | 100.0 |
| 0°-180° | 23236.2 | 100.0 |



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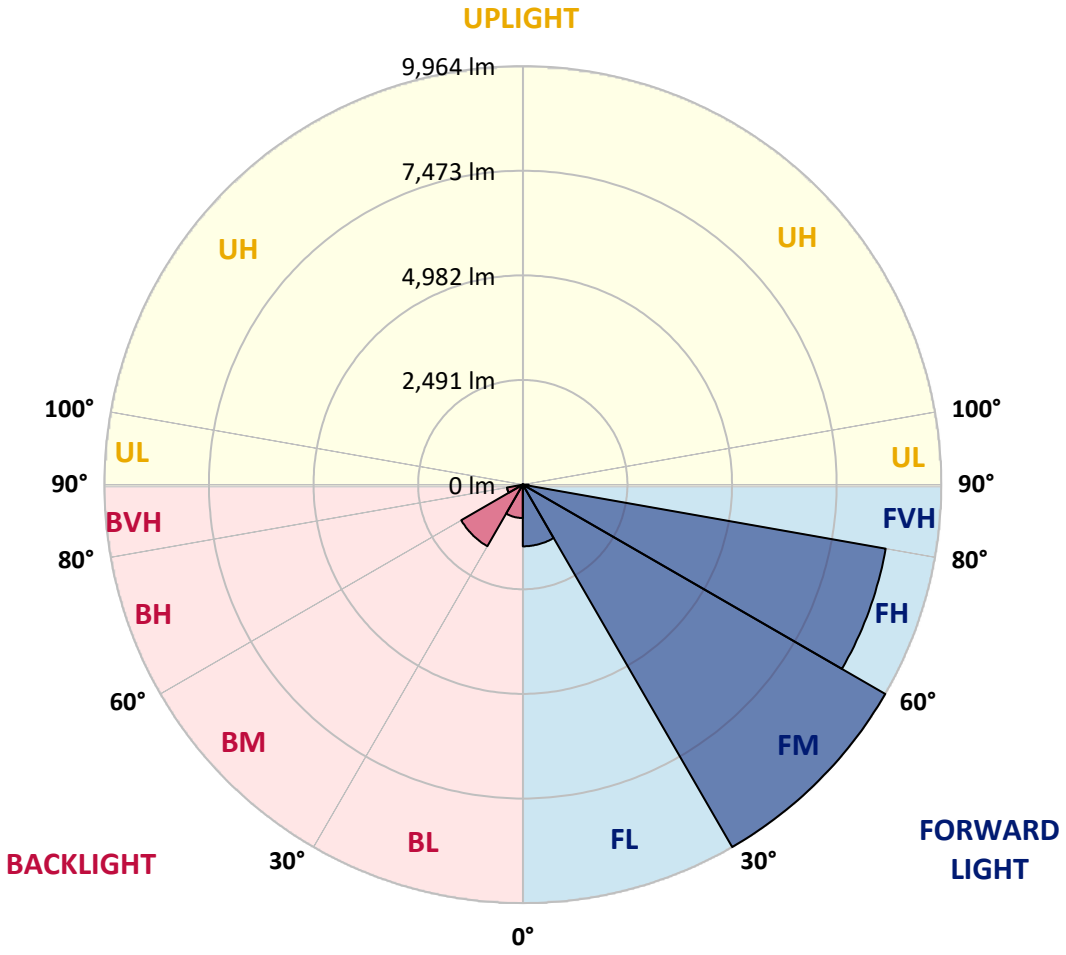
Scaled Data Report

REPORT NUMBER: P1358041
CATALOG NUMBER: GSS-SB5C-727-U-T4FT-HSS

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1468.6 | 6.3 | | | |
| FM | (30°-60°) | 9963.8 | 42.9 | | | |
| FH | (60°-80°) | 8772.5 | 37.8 | | | G4/12000 |
| FVH | (80°-90°) | 137.0 | 0.6 | | | G2/225 |
| BL | (0°-30°) | 795.2 | 3.4 | B2/1000 | | |
| BM | (30°-60°) | 1692.0 | 7.3 | B2/2500 | | |
| BH | (60°-80°) | 383.8 | 1.7 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 23.3 | 0.1 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

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



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REPORT NUMBER: P1358041
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 36° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 3712.4 | 3712.4 | 3712.4 | 3712.4 | 3712.4 | 3712.4 | 3712.4 | 3712.4 | 3712.4 | 3712.4 | 3712.4 |
| 2.5° | 3668.6 | 3654.0 | 3654.0 | 3668.6 | 3705.1 | 3683.2 | 3668.6 | 3690.5 | 3697.8 | 3719.7 | 3727.0 |
| 5° | 3449.8 | 3457.1 | 3435.2 | 3486.3 | 3522.8 | 3530.1 | 3581.1 | 3646.7 | 3683.2 | 3756.2 | 3763.4 |
| 7.5° | 3165.4 | 3194.6 | 3209.1 | 3282.1 | 3355.0 | 3362.3 | 3457.1 | 3559.2 | 3668.6 | 3770.7 | 3821.8 |
| 10° | 2939.3 | 2946.6 | 2961.2 | 3041.4 | 3172.7 | 3187.3 | 3318.5 | 3486.3 | 3646.7 | 3814.5 | 3872.8 |
| 12.5° | 2793.4 | 2808.0 | 2808.0 | 2873.6 | 3004.9 | 3019.5 | 3172.7 | 3398.8 | 3632.2 | 3829.1 | 3938.5 |
| 15° | 2793.4 | 2778.8 | 2778.8 | 2829.9 | 2932.0 | 2946.6 | 3092.4 | 3333.1 | 3595.7 | 3872.8 | 4047.9 |
| 17.5° | 2808.0 | 2815.3 | 2800.7 | 2837.2 | 2924.7 | 2939.3 | 3070.6 | 3296.7 | 3603.0 | 3938.5 | 4135.4 |
| 20° | 2866.3 | 2866.3 | 2851.8 | 2910.1 | 2990.3 | 3012.2 | 3121.6 | 3311.2 | 3632.2 | 4033.3 | 4259.4 |
| 22.5° | 2946.6 | 2924.7 | 2917.4 | 2983.0 | 3085.1 | 3121.6 | 3216.4 | 3384.2 | 3675.9 | 4150.0 | 4390.7 |
| 25° | 3063.3 | 3041.4 | 3026.8 | 3099.7 | 3194.6 | 3209.1 | 3376.9 | 3508.2 | 3792.6 | 4303.2 | 4609.5 |
| 27.5° | 3282.1 | 3252.9 | 3180.0 | 3231.0 | 3347.7 | 3362.3 | 3530.1 | 3690.5 | 3953.1 | 4478.2 | 4857.5 |
| 30° | 3953.1 | 3909.3 | 3697.8 | 3486.3 | 3530.1 | 3551.9 | 3719.7 | 3923.9 | 4171.9 | 4748.1 | 5229.4 |
| 32.5° | 4748.1 | 4762.7 | 4492.8 | 4091.7 | 3829.1 | 3836.4 | 3945.8 | 4230.2 | 4492.8 | 5127.3 | 5688.9 |
| 35° | 5769.2 | 5725.4 | 5360.7 | 4893.9 | 4398.0 | 4376.1 | 4346.9 | 4660.5 | 4959.6 | 5601.4 | 6265.1 |
| 37.5° | 6746.5 | 6731.9 | 6432.9 | 5849.4 | 5273.2 | 5185.7 | 4981.5 | 5229.4 | 5506.6 | 6199.5 | 6906.9 |
| 40° | 7475.8 | 7402.9 | 7227.9 | 6841.3 | 6352.6 | 6301.6 | 5871.3 | 5929.6 | 6192.2 | 7001.8 | 7577.9 |
| 42.5° | 7949.9 | 7935.3 | 7731.1 | 7614.4 | 7388.3 | 7366.4 | 6855.9 | 6885.1 | 7030.9 | 7913.4 | 8365.6 |
| 45° | 8416.7 | 8380.2 | 8205.2 | 8132.2 | 8146.8 | 8197.9 | 8125.0 | 7957.2 | 8066.6 | 8927.2 | 9211.7 |
| 47.5° | 8883.5 | 8796.0 | 8664.7 | 8693.8 | 9000.2 | 9065.8 | 9306.5 | 9175.2 | 9036.6 | 10086.9 | 10006.7 |
| 50° | 9058.5 | 9065.8 | 9102.3 | 9277.3 | 9780.6 | 9933.7 | 10495.3 | 10232.8 | 10014.0 | 11304.9 | 10925.7 |
| 52.5° | 9124.2 | 9160.6 | 9408.6 | 9714.9 | 10517.2 | 10706.9 | 11800.9 | 11472.7 | 10867.3 | 12486.5 | 11523.7 |
| 55° | 9197.1 | 9175.2 | 9671.2 | 10065.0 | 11290.3 | 11494.6 | 12997.0 | 12464.6 | 11669.6 | 13376.3 | 12034.3 |
| 57.5° | 9569.1 | 9576.4 | 9962.9 | 10385.9 | 12012.4 | 12289.5 | 14091.0 | 13427.3 | 12114.5 | 14047.3 | 12180.1 |
| 60° | 10159.8 | 10298.4 | 10561.0 | 11020.5 | 12873.0 | 13266.9 | 15170.5 | 14127.5 | 12566.7 | 14061.9 | 11545.6 |
| 62.5° | 10502.6 | 10582.9 | 11326.8 | 12223.9 | 14346.3 | 14740.2 | 16315.6 | 14674.5 | 12333.3 | 12763.6 | 9919.2 |
| 65° | 9321.1 | 9386.7 | 11056.9 | 14047.3 | 16643.8 | 16972.0 | 17577.3 | 14718.3 | 11100.7 | 10604.7 | 7701.9 |
| 67.5° | 6958.0 | 7133.0 | 9124.2 | 15965.5 | 20166.5 | 20327.0 | 19109.0 | 13638.8 | 9124.2 | 7417.5 | 4522.0 |
| 70° | 5017.9 | 5280.5 | 6804.8 | 16556.2 | 22668.2 | 22799.5 | 18817.2 | 11312.2 | 6141.1 | 3807.2 | 2129.7 |
| 72.5° | 3632.2 | 3770.7 | 4857.5 | 15527.9 | 21333.5 | 20677.1 | 13274.2 | 7074.7 | 3238.3 | 1940.1 | 977.3 |
| 75° | 2509.0 | 2611.1 | 3092.4 | 11684.2 | 14535.9 | 14404.7 | 6695.4 | 2567.3 | 1575.4 | 1123.2 | 590.8 |
| 77.5° | 1035.7 | 1035.7 | 1385.8 | 6578.7 | 8132.2 | 8263.5 | 3041.4 | 700.2 | 831.5 | 649.1 | 342.8 |
| 80° | 335.5 | 335.5 | 554.3 | 2333.9 | 3763.4 | 3807.2 | 1094.0 | 342.8 | 444.9 | 393.8 | 182.3 |
| 82.5° | 124.0 | 116.7 | 284.4 | 773.1 | 933.6 | 991.9 | 299.0 | 167.8 | 269.9 | 233.4 | 87.5 |
| 85° | 43.8 | 43.8 | 102.1 | 160.5 | 175.0 | 153.2 | 80.2 | 80.2 | 131.3 | 109.4 | 36.5 |
| 87.5° | 0.0 | 0.0 | 7.3 | 14.6 | 21.9 | 21.9 | 21.9 | 21.9 | 29.2 | 21.9 | 21.9 |
| 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: P1358041
CATALOG NUMBER: GSS-SB5C-727-U-T4FT-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 3712.4 | 3712.4 | 3712.4 | 3712.4 | 3712.4 | 3712.4 | 3712.4 | 3712.4 | 3712.4 | 3712.4 | 3712.4 |
| 2.5° | 3712.4 | 3727.0 | 3697.8 | 3668.6 | 3661.3 | 3624.9 | 3603.0 | 3573.8 | 3566.5 | 3559.2 | 3573.8 |
| 5° | 3756.2 | 3756.2 | 3683.2 | 3603.0 | 3508.2 | 3376.9 | 3238.3 | 3114.3 | 3063.3 | 3004.9 | 3012.2 |
| 7.5° | 3807.2 | 3770.7 | 3661.3 | 3449.8 | 3165.4 | 2851.8 | 2589.2 | 2392.3 | 2275.6 | 2173.5 | 2202.6 |
| 10° | 3851.0 | 3814.5 | 3588.4 | 3180.0 | 2705.9 | 2282.9 | 1903.6 | 1684.8 | 1546.2 | 1466.0 | 1502.5 |
| 12.5° | 3916.6 | 3843.7 | 3464.4 | 2837.2 | 2188.0 | 1670.2 | 1378.5 | 1261.8 | 1225.3 | 1203.4 | 1203.4 |
| 15° | 3989.5 | 3865.6 | 3274.8 | 2450.6 | 1692.1 | 1261.8 | 1181.5 | 1181.5 | 1188.8 | 1188.8 | 1196.1 |
| 17.5° | 4062.5 | 3872.8 | 3070.6 | 2005.7 | 1312.8 | 1152.4 | 1159.7 | 1167.0 | 1181.5 | 1167.0 | 1167.0 |
| 20° | 4150.0 | 3923.9 | 2808.0 | 1611.9 | 1152.4 | 1130.5 | 1137.8 | 1152.4 | 1167.0 | 1152.4 | 1159.7 |
| 22.5° | 4295.9 | 3975.0 | 2581.9 | 1356.6 | 1130.5 | 1115.9 | 1115.9 | 1137.8 | 1145.1 | 1123.2 | 1130.5 |
| 25° | 4463.6 | 4040.6 | 2341.2 | 1254.5 | 1145.1 | 1094.0 | 1108.6 | 1123.2 | 1130.5 | 1115.9 | 1115.9 |
| 27.5° | 4675.1 | 4150.0 | 2107.8 | 1254.5 | 1159.7 | 1079.4 | 1086.7 | 1108.6 | 1123.2 | 1101.3 | 1115.9 |
| 30° | 4981.5 | 4281.3 | 1962.0 | 1290.9 | 1174.3 | 1050.3 | 1057.6 | 1086.7 | 1108.6 | 1094.0 | 1101.3 |
| 32.5° | 5360.7 | 4507.4 | 1838.0 | 1320.1 | 1167.0 | 1021.1 | 1013.8 | 1057.6 | 1094.0 | 1086.7 | 1101.3 |
| 35° | 5827.5 | 4769.9 | 1757.7 | 1349.3 | 1152.4 | 999.2 | 970.0 | 1028.4 | 1086.7 | 1086.7 | 1094.0 |
| 37.5° | 6294.3 | 5047.1 | 1794.2 | 1342.0 | 1115.9 | 984.6 | 933.6 | 984.6 | 1050.3 | 1072.1 | 1086.7 |
| 40° | 6848.6 | 5353.4 | 1881.7 | 1298.2 | 1094.0 | 940.9 | 904.4 | 940.9 | 1006.5 | 1043.0 | 1057.6 |
| 42.5° | 7344.6 | 5645.2 | 1969.2 | 1247.2 | 1064.9 | 897.1 | 875.2 | 904.4 | 940.9 | 977.3 | 999.2 |
| 45° | 7928.0 | 5871.3 | 1940.1 | 1188.8 | 1035.7 | 860.6 | 853.3 | 860.6 | 875.2 | 889.8 | 904.4 |
| 47.5° | 8343.8 | 5944.2 | 1808.8 | 1137.8 | 970.0 | 831.5 | 816.9 | 809.6 | 795.0 | 795.0 | 802.3 |
| 50° | 8796.0 | 5740.0 | 1546.2 | 1079.4 | 875.2 | 795.0 | 765.8 | 743.9 | 722.1 | 707.5 | 714.8 |
| 52.5° | 8992.9 | 5214.9 | 1298.2 | 977.3 | 765.8 | 743.9 | 707.5 | 678.3 | 649.1 | 641.8 | 634.5 |
| 55° | 8912.7 | 4492.8 | 1072.1 | 824.2 | 685.6 | 685.6 | 649.1 | 619.9 | 590.8 | 568.9 | 561.6 |
| 57.5° | 8606.3 | 3748.9 | 860.6 | 612.7 | 605.4 | 619.9 | 590.8 | 561.6 | 532.4 | 503.3 | 503.3 |
| 60° | 7891.6 | 2873.6 | 663.7 | 496.0 | 525.1 | 547.0 | 539.7 | 517.8 | 466.8 | 423.0 | 423.0 |
| 62.5° | 6659.0 | 1947.4 | 474.1 | 401.1 | 444.9 | 481.4 | 488.7 | 466.8 | 408.4 | 357.4 | 350.1 |
| 65° | 5061.7 | 1145.1 | 364.7 | 342.8 | 379.3 | 415.7 | 430.3 | 408.4 | 342.8 | 284.4 | 269.9 |
| 67.5° | 3077.9 | 619.9 | 284.4 | 291.7 | 328.2 | 350.1 | 372.0 | 357.4 | 299.0 | 240.7 | 233.4 |
| 70° | *1312.8* | *313.6* | *233.4* | *240.7* | *262.6* | *269.9* | *313.6* | *320.9* | *269.9* | *211.5* | *204.2* |
| 72.5° | 605.4 | 233.4 | 189.6 | 204.2 | 196.9 | 204.2 | 269.9 | 284.4 | 233.4 | 167.8 | 167.8 |
| 75° | 350.1 | 175.0 | 145.9 | 160.5 | 131.3 | 153.2 | 218.8 | 233.4 | 196.9 | 138.6 | 131.3 |
| 77.5° | 189.6 | 124.0 | 102.1 | 109.4 | 94.8 | 116.7 | 175.0 | 182.3 | 145.9 | 109.4 | 109.4 |
| 80° | 109.4 | 80.2 | 72.9 | 65.6 | 65.6 | 80.2 | 124.0 | 116.7 | 94.8 | 94.8 | 94.8 |
| 82.5° | 58.3 | 43.8 | 43.8 | 43.8 | 43.8 | 51.1 | 65.6 | 72.9 | 80.2 | 80.2 | 80.2 |
| 85° | 29.2 | 21.9 | 21.9 | 21.9 | 29.2 | 36.5 | 51.1 | 58.3 | 65.6 | 65.6 | 65.6 |
| 87.5° | 14.6 | 14.6 | 14.6 | 14.6 | 14.6 | 21.9 | 36.5 | 43.8 | 51.1 | 29.2 | 14.6 |
| 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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# LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-3

Test Date: 10/09/2024

Luminaire Tested: GSS-SB1A-727-U-5WQ

Data in this report applies to families of products including GSS-SB1A-727-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

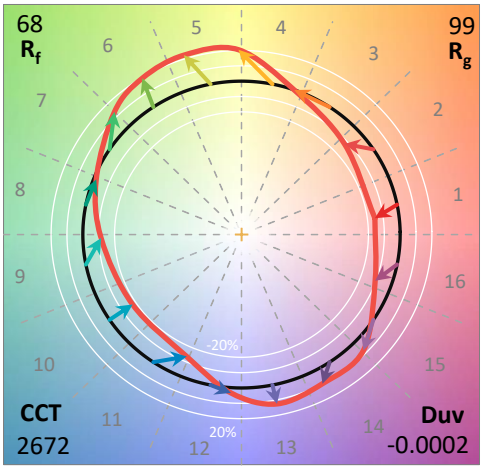
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-3 |
| 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-727-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 2700K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 2672 |
| CIE u': | 0.2638 |
| CIE v': | 0.5276 |
| Duv: | -0.0002 |
| CIE x: | 0.4619 |
| CIE y: | 0.4106 |
| CIE z: | 0.1275 |
| Peak Wavelength (nm): | 601 |
| Dominant Wavelength (nm): | 584 |
| Purity: | 61.88407 |
| Rf: | 67.9 |
| Rg: | 98.6 |

| | |
|---|---|
| CRI (Ra): | 71.1 |
| R1: | 68.3 |
| R2: | 79.8 |
| R3: | 91.2 |
| R4: | 69.4 |
| R5: | 66.5 |
| R6: | 72.6 |
| R7: | 77.0 |
| R8: | 44.1 |
| R9: | -27.8 |
| R10: | 54.4 |
| R11: | 65.8 |
| R12: | 45.6 |
| R13: | 69.8 |
| R14: | 94.5 |
| R15: | 60.1 |




## Test Conditions

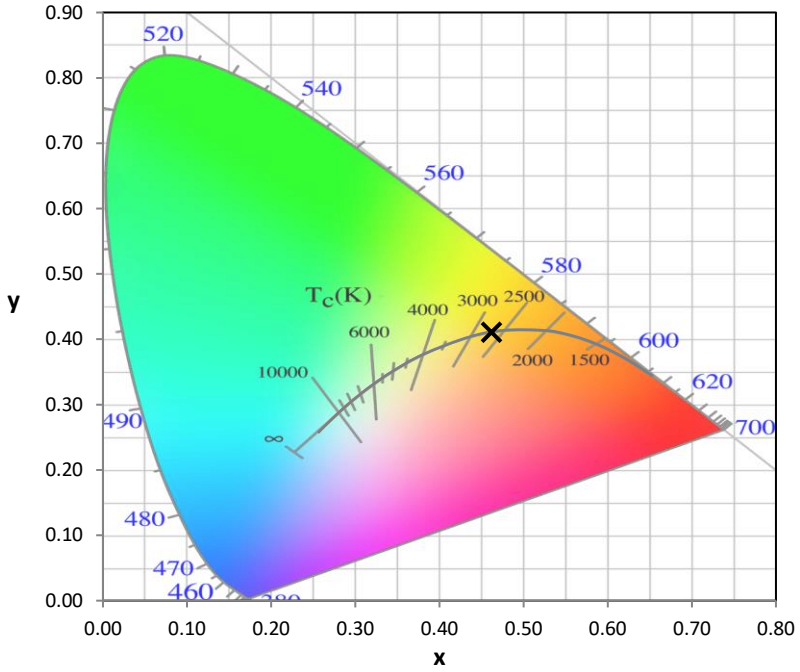
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-3

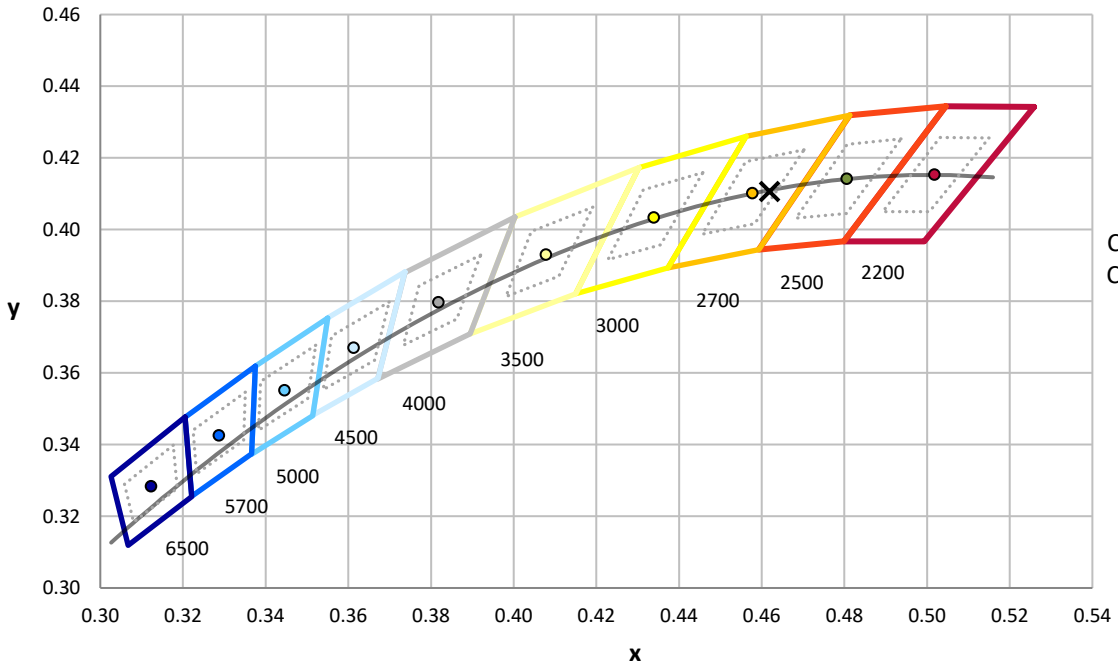
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

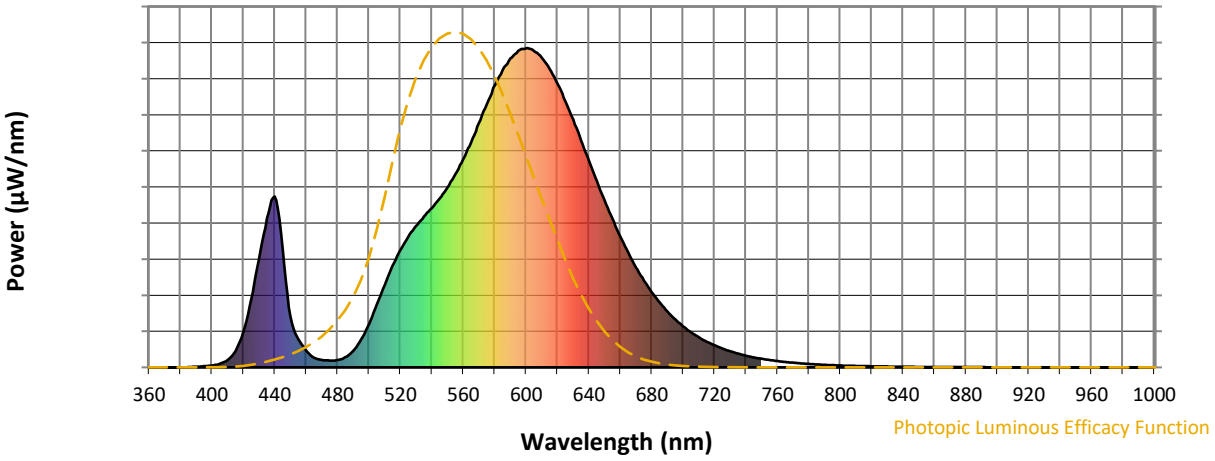



CCT = 2672K
CIE x = 0.4619
CIE y = 0.4106
Duv = -0.0002

Point lies inside the ANSI 2700K 4-step quadrangle

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## Photopic Flux vs. Wavelength

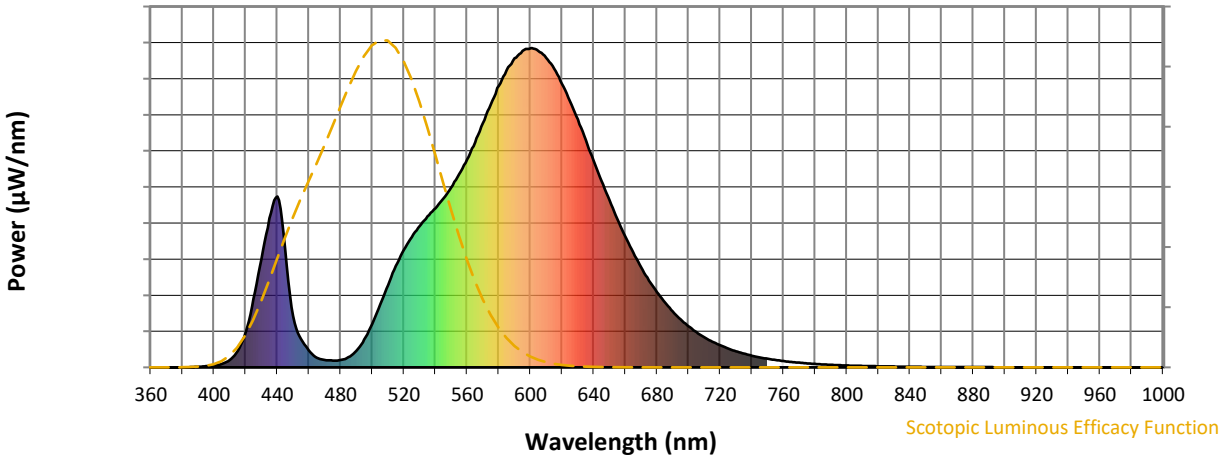



## Photopic Lumens: NR

| 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 | 52 | NR | 620 | 888 | NR | 750 | 27 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 87 | NR | 625 | 834 | NR | 755 | 23 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 135 | NR | 630 | 776 | NR | 760 | 20 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 196 | NR | 635 | 712 | NR | 765 | 17 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 258 | NR | 640 | 648 | NR | 770 | 15 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 317 | NR | 645 | 583 | NR | 775 | 12 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 368 | NR | 650 | 523 | NR | 780 | 11 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 408 | NR | 655 | 465 | NR | 785 | 9 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 443 | NR | 660 | 410 | NR | 790 | 8 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 473 | NR | 665 | 360 | NR | 795 | 7 | NR | 925 | 0 | NR |
| 410 | 23 | NR | 540 | 498 | NR | 670 | 313 | NR | 800 | 6 | NR | 930 | 0 | NR |
| 415 | 51 | NR | 545 | 530 | NR | 675 | 272 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 111 | NR | 550 | 563 | NR | 680 | 236 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 214 | NR | 555 | 605 | NR | 685 | 203 | NR | 815 | 4 | NR | 945 | 0 | NR |
| 430 | 339 | NR | 560 | 651 | NR | 690 | 175 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 467 | NR | 565 | 705 | NR | 695 | 150 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 535 | NR | 570 | 765 | NR | 700 | 128 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 372 | NR | 575 | 824 | NR | 705 | 110 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 160 | NR | 580 | 882 | NR | 710 | 94 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 89 | NR | 585 | 930 | NR | 715 | 80 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 53 | NR | 590 | 968 | NR | 720 | 69 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 31 | NR | 595 | 991 | NR | 725 | 59 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 23 | NR | 600 | 999 | NR | 730 | 50 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 21 | NR | 605 | 992 | NR | 735 | 43 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 23 | NR | 610 | 969 | NR | 740 | 36 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 32 | NR | 615 | 935 | NR | 745 | 31 | NR | 875 | 1 | NR | | | |

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## Scotopic Flux vs. Wavelength

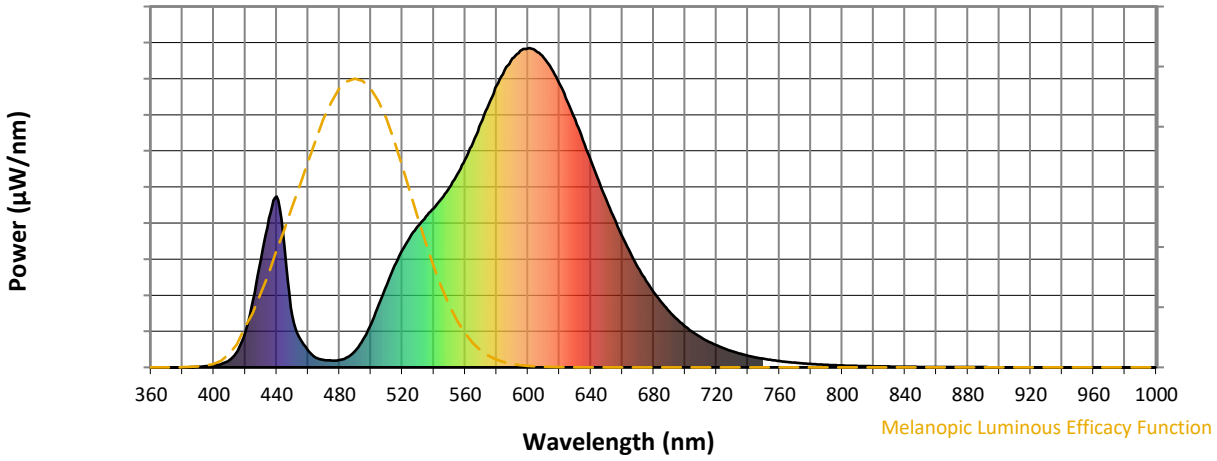



**Scotopic Lumens: NR** **S/P: 1.02**

| 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 | 52 | NR | 620 | 888 | NR | 750 | 27 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 87 | NR | 625 | 834 | NR | 755 | 23 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 135 | NR | 630 | 776 | NR | 760 | 20 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 196 | NR | 635 | 712 | NR | 765 | 17 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 258 | NR | 640 | 648 | NR | 770 | 15 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 317 | NR | 645 | 583 | NR | 775 | 12 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 368 | NR | 650 | 523 | NR | 780 | 11 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 408 | NR | 655 | 465 | NR | 785 | 9 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 443 | NR | 660 | 410 | NR | 790 | 8 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 473 | NR | 665 | 360 | NR | 795 | 7 | NR | 925 | 0 | NR |
| 410 | 23 | NR | 540 | 498 | NR | 670 | 313 | NR | 800 | 6 | NR | 930 | 0 | NR |
| 415 | 51 | NR | 545 | 530 | NR | 675 | 272 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 111 | NR | 550 | 563 | NR | 680 | 236 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 214 | NR | 555 | 605 | NR | 685 | 203 | NR | 815 | 4 | NR | 945 | 0 | NR |
| 430 | 339 | NR | 560 | 651 | NR | 690 | 175 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 467 | NR | 565 | 705 | NR | 695 | 150 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 535 | NR | 570 | 765 | NR | 700 | 128 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 372 | NR | 575 | 824 | NR | 705 | 110 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 160 | NR | 580 | 882 | NR | 710 | 94 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 89 | NR | 585 | 930 | NR | 715 | 80 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 53 | NR | 590 | 968 | NR | 720 | 69 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 31 | NR | 595 | 991 | NR | 725 | 59 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 23 | NR | 600 | 999 | NR | 730 | 50 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 21 | NR | 605 | 992 | NR | 735 | 43 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 23 | NR | 610 | 969 | NR | 740 | 36 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 32 | NR | 615 | 935 | NR | 745 | 31 | NR | 875 | 1 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 1.71**

| 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 | 52 | NR | 620 | 888 | NR | 750 | 27 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 87 | NR | 625 | 834 | NR | 755 | 23 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 135 | NR | 630 | 776 | NR | 760 | 20 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 196 | NR | 635 | 712 | NR | 765 | 17 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 258 | NR | 640 | 648 | NR | 770 | 15 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 317 | NR | 645 | 583 | NR | 775 | 12 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 368 | NR | 650 | 523 | NR | 780 | 11 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 408 | NR | 655 | 465 | NR | 785 | 9 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 443 | NR | 660 | 410 | NR | 790 | 8 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 473 | NR | 665 | 360 | NR | 795 | 7 | NR | 925 | 0 | NR |
| 410 | 23 | NR | 540 | 498 | NR | 670 | 313 | NR | 800 | 6 | NR | 930 | 0 | NR |
| 415 | 51 | NR | 545 | 530 | NR | 675 | 272 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 111 | NR | 550 | 563 | NR | 680 | 236 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 214 | NR | 555 | 605 | NR | 685 | 203 | NR | 815 | 4 | NR | 945 | 0 | NR |
| 430 | 339 | NR | 560 | 651 | NR | 690 | 175 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 467 | NR | 565 | 705 | NR | 695 | 150 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 535 | NR | 570 | 765 | NR | 700 | 128 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 372 | NR | 575 | 824 | NR | 705 | 110 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 160 | NR | 580 | 882 | NR | 710 | 94 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 89 | NR | 585 | 930 | NR | 715 | 80 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 53 | NR | 590 | 968 | NR | 720 | 69 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 31 | NR | 595 | 991 | NR | 725 | 59 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 23 | NR | 600 | 999 | NR | 730 | 50 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 21 | NR | 605 | 992 | NR | 735 | 43 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 23 | NR | 610 | 969 | NR | 740 | 36 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 32 | NR | 615 | 935 | NR | 745 | 31 | NR | 875 | 1 | NR | | | |

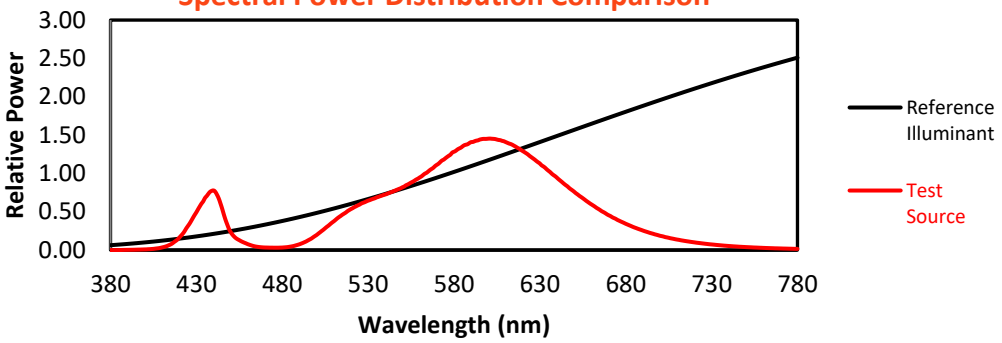
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# TM-30-18

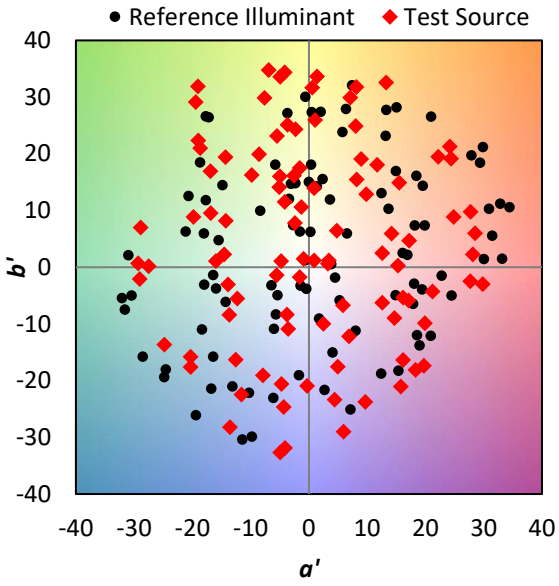
## Summary

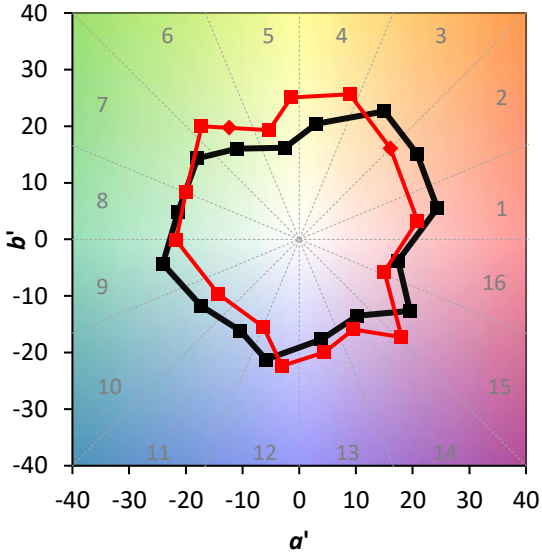
$R_f$ = 67.9
$R_g$ = 98.6
CIE $R_a$ = 71.1
$R_9$ = -27.8

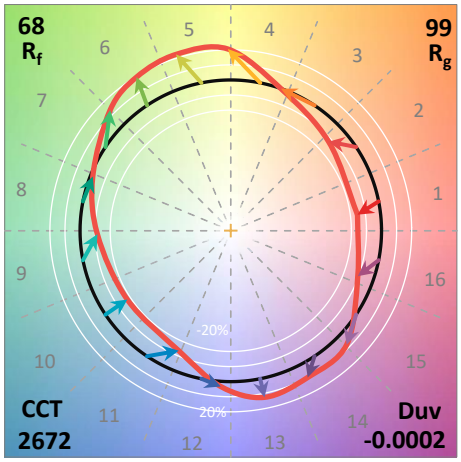
## Spectral Power Distribution Comparison

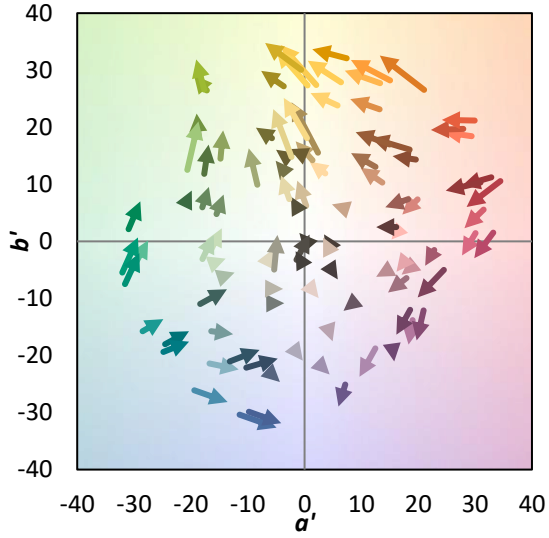



## Color Vector Graphics



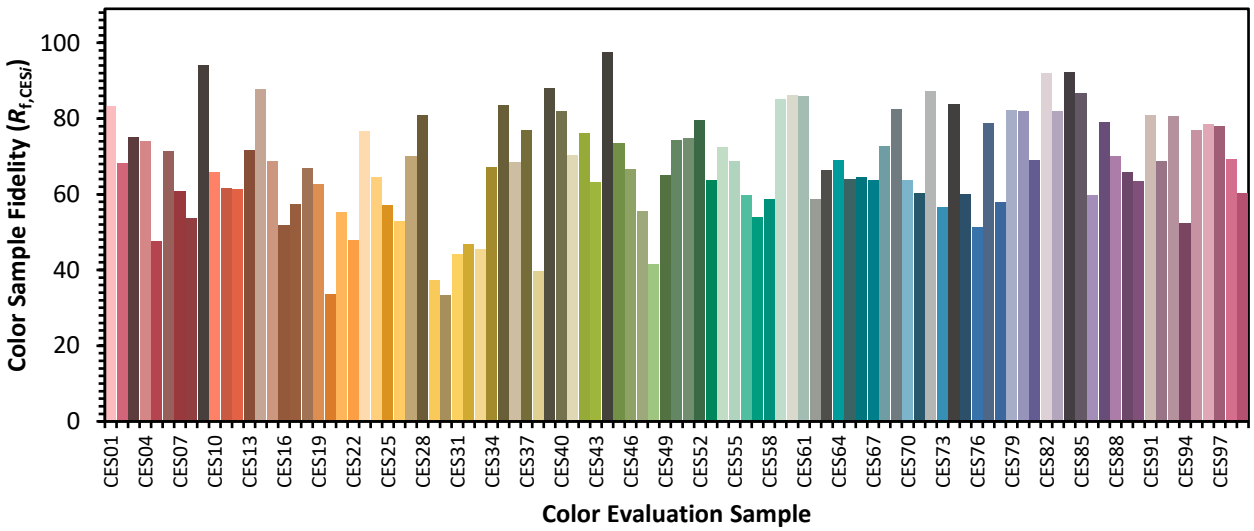



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**Individual Sample Fidelity Index ($R_{f,i}$)**

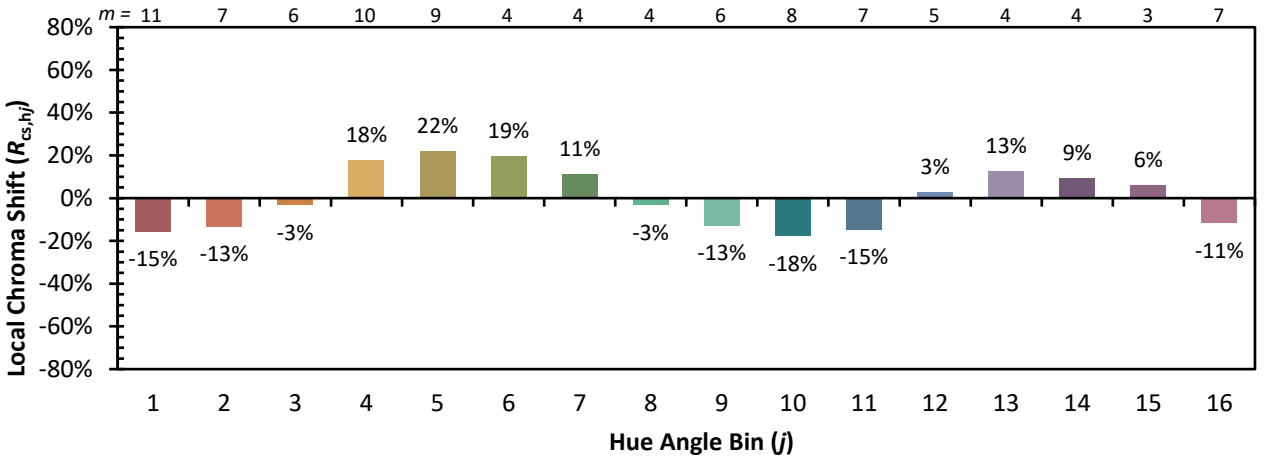
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 53 | CES51 = 75 | CES76 = 51 |
| CES02 = 63 | CES27 = 70 | CES52 = 80 | CES77 = 79 |
| CES03 = 31 | CES28 = 81 | CES53 = 64 | CES78 = 58 |
| CES04 = 71 | CES29 = 37 | CES54 = 73 | CES79 = 82 |
| CES05 = 50 | CES30 = 33 | CES55 = 69 | CES80 = 82 |
| CES06 = 52 | CES31 = 44 | CES56 = 60 | CES81 = 69 |
| CES07 = 42 | CES32 = 47 | CES57 = 54 | CES82 = 92 |
| CES08 = 41 | CES33 = 45 | CES58 = 59 | CES83 = 82 |
| CES09 = 29 | CES34 = 67 | CES59 = 85 | CES84 = 92 |
| CES10 = 77 | CES35 = 84 | CES60 = 86 | CES85 = 87 |
| CES11 = 60 | CES36 = 68 | CES61 = 86 | CES86 = 60 |
| CES12 = 66 | CES37 = 77 | CES62 = 59 | CES87 = 79 |
| CES13 = 44 | CES38 = 40 | CES63 = 66 | CES88 = 70 |
| CES14 = 74 | CES39 = 88 | CES64 = 69 | CES89 = 66 |
| CES15 = 72 | CES40 = 82 | CES65 = 64 | CES90 = 64 |
| CES16 = 48 | CES41 = 70 | CES66 = 65 | CES91 = 81 |
| CES17 = 51 | CES42 = 76 | CES67 = 64 | CES92 = 69 |
| CES18 = 57 | CES43 = 63 | CES68 = 73 | CES93 = 81 |
| CES19 = 73 | CES44 = 97 | CES69 = 83 | CES94 = 53 |
| CES20 = 67 | CES45 = 74 | CES70 = 64 | CES95 = 77 |
| CES21 = 88 | CES46 = 67 | CES71 = 60 | CES96 = 79 |
| CES22 = 80 | CES47 = 55 | CES72 = 87 | CES97 = 78 |
| CES23 = 92 | CES48 = 42 | CES73 = 57 | CES98 = 69 |
| CES24 = 92 | CES49 = 65 | CES74 = 84 | CES99 = 60 |
| CES25 = 73 | CES50 = 74 | CES75 = 60 | |

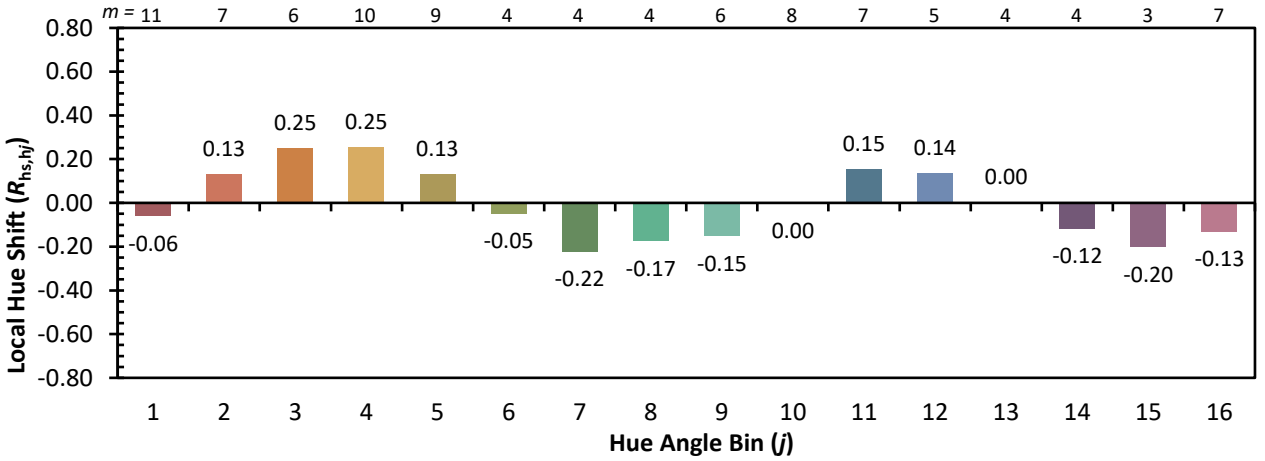


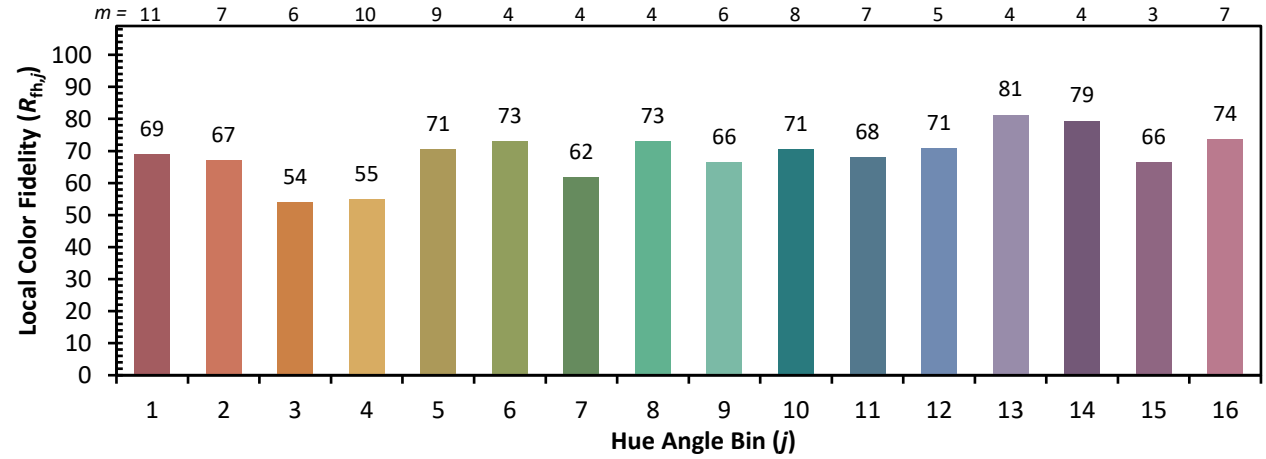
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## Color Rendition by Hue-Angle Bin



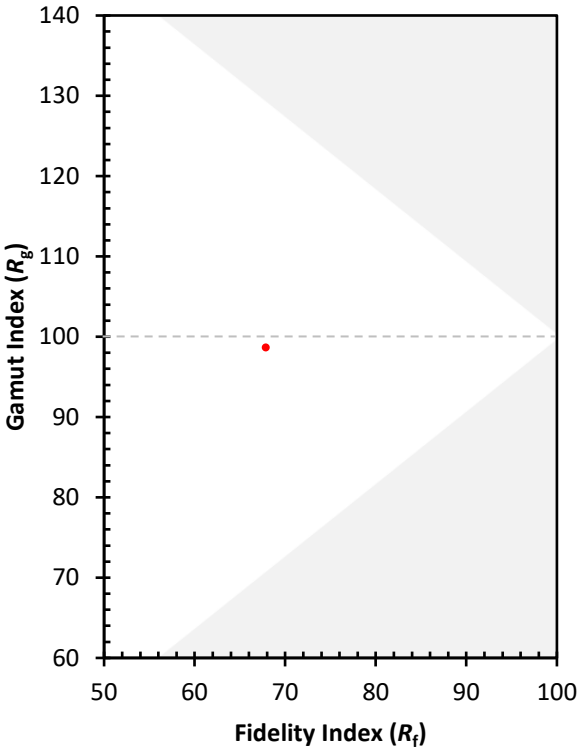



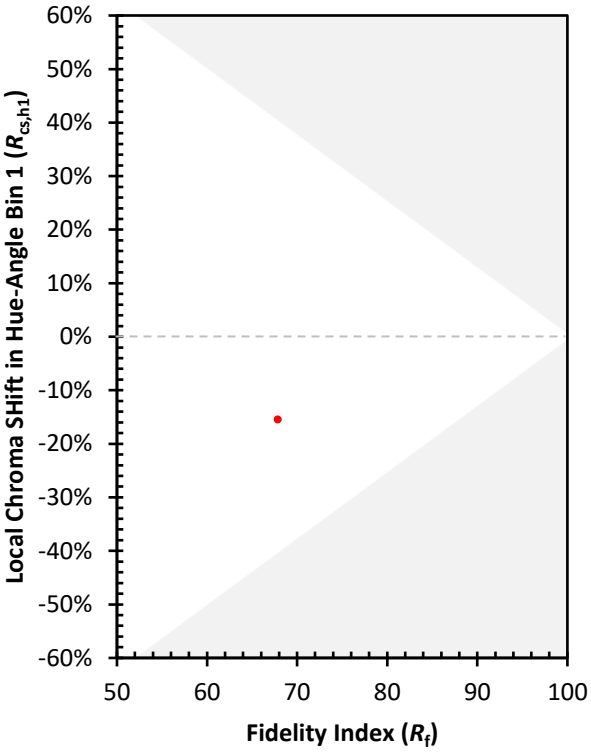



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## Measure Comparisons




(END OF REPORT)