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: P1363409

Luminaire Tested: **GSS-SB3C-727-U-SL3**

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: | P1363409 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB3C-727-U-SL3 |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 3SQUARE 150W 70CRI 2700K FIXTURE w/ TYPE III SPILL CONTROL DISTRIBUTION OPTIC |
| Light Source: | (78) 2700K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 18002.7 lumens |
| Efficiency: | N/A |
| Efficacy: | 120.0 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 0.5' x H: 0') |
| IES Classification: | Type III - Medium |
| BUG Rating: | B2 - U0 - G3 |

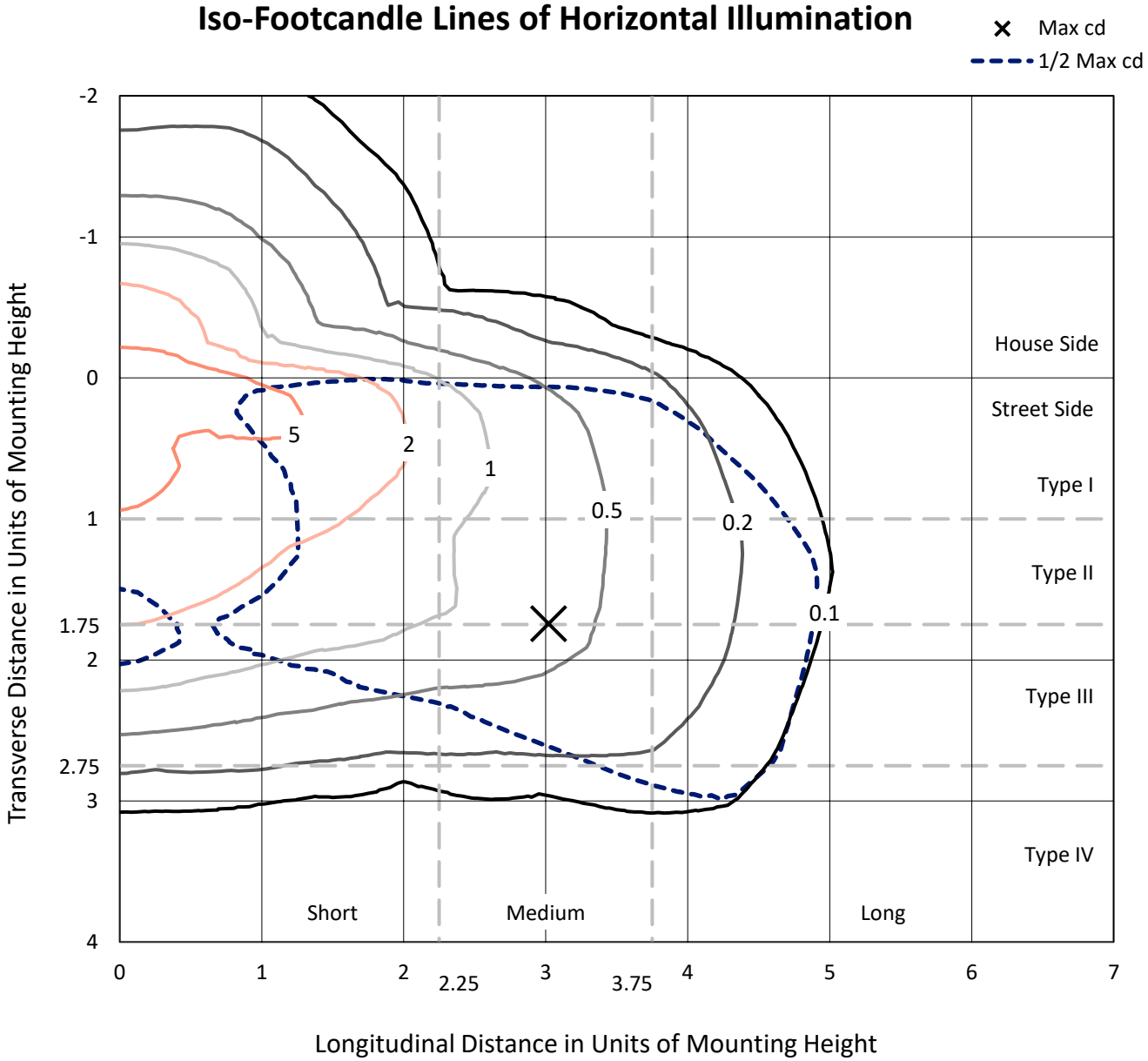
| | |
|---|---|
| Input Watts (W): | 150 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 6.3% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature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

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Scaled Data Report

REPORT NUMBER: P1363409
CATALOG NUMBER: GSS-SB3C-727-U-SL3

## Iso-Footcandle Lines of Horizontal Illumination



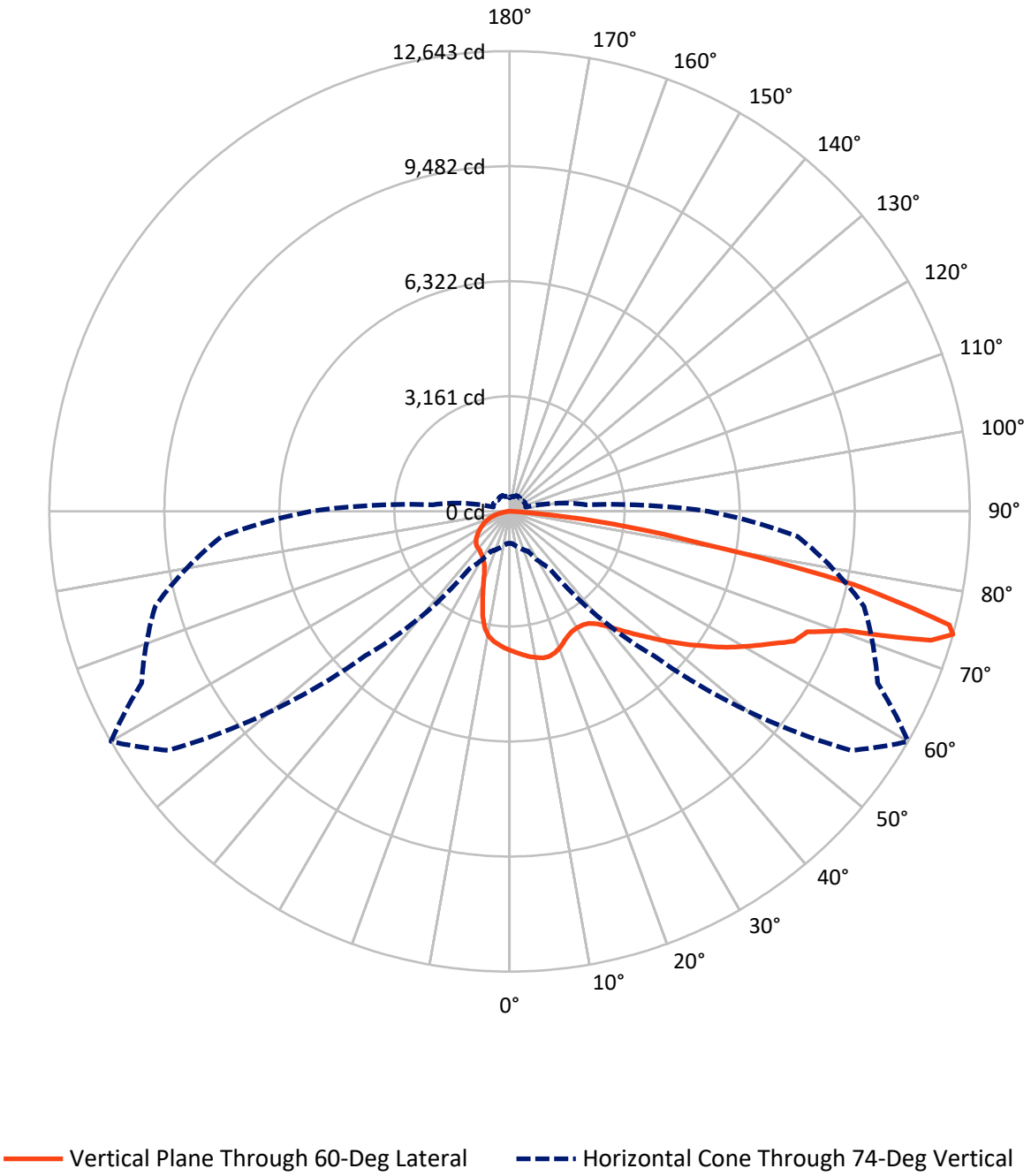

Based on 20 foot mounting height. Maximum calculated value = 9.5 fc
Type III - Medium - N/A

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## Luminous Intensity Polar Plot



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Scaled Data Report

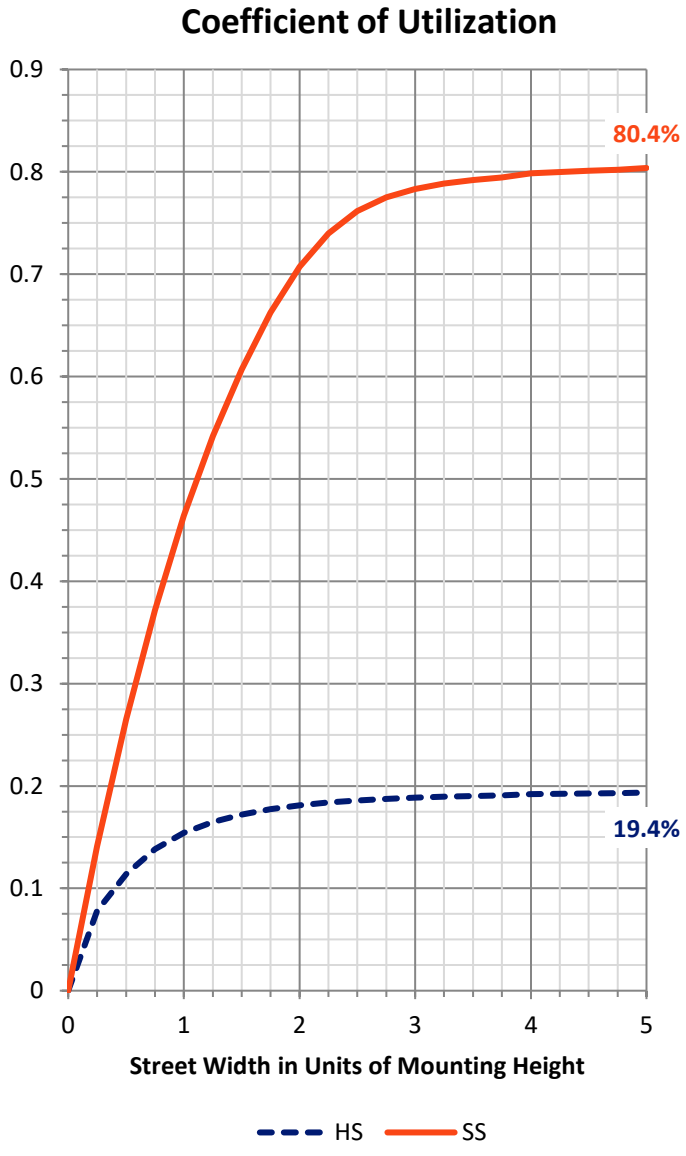
REPORT NUMBER: P1363409
CATALOG NUMBER: GSS-SB3C-727-U-SL3

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 3514.1 | 0.0 | 3514.1 |
| | % Fixture | 19.5 | 0.0 | 19.5 |
| **Street Side** | Lumens | 14488.6 | 0.0 | 14488.6 |
| | % Fixture | 80.5 | 0.0 | 80.5 |
| **Total** | Lumens | 18002.7 | 0.0 | 18002.7 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 351.4 | 2.0 |
| 10°-20° | 862.2 | 4.8 |
| 20°-30° | 1289.0 | 7.2 |
| 30°-40° | 1837.5 | 10.2 |
| 40°-50° | 2642.1 | 14.7 |
| 50°-60° | 3537.7 | 19.7 |
| 60°-70° | 4154.2 | 23.1 |
| 70°-80° | 2963.0 | 16.5 |
| 80°-90° | 365.7 | 2.0 |
| 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° | 18002.7 | 100.0 |
| 0°-180° | 18002.7 | 100.0 |



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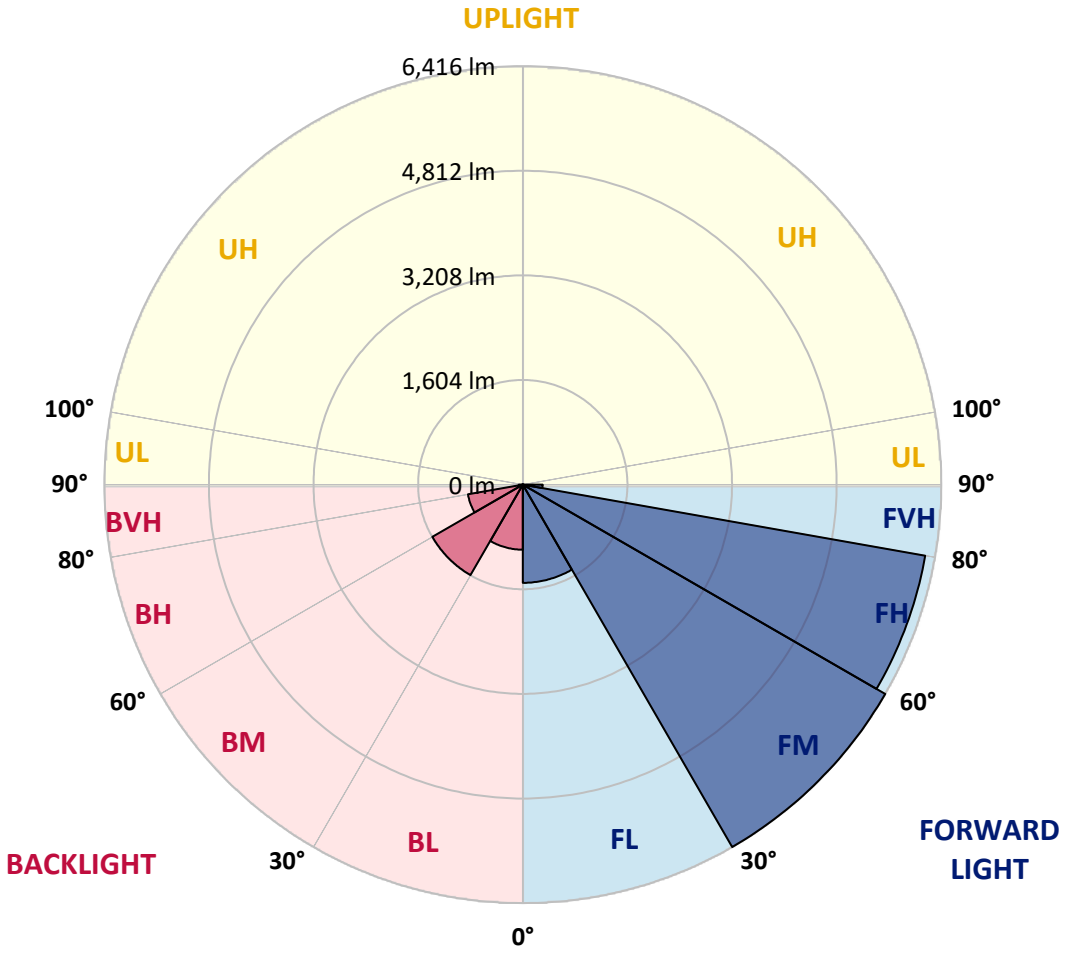
Scaled Data Report

REPORT NUMBER: P1363409
CATALOG NUMBER: GSS-SB3C-727-U-SL3

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1505.3 | 8.4 | | | |
| FM | (30°-60°) | 6415.7 | 35.6 | | | |
| FH | (60°-80°) | 6263.7 | 34.8 | | | G3/7500 |
| FVH | (80°-90°) | 303.9 | 1.7 | | | G3/500 |
| BL | (0°-30°) | 997.3 | 5.5 | B2/1000 | | |
| BM | (30°-60°) | 1601.6 | 8.9 | B2/2500 | | |
| BH | (60°-80°) | 853.5 | 4.7 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 61.8 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B2-U0-G3**
Type III Medium



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 60° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 3818.5 | 3818.5 | 3818.5 | 3818.5 | 3818.5 | 3818.5 | 3818.5 | 3818.5 | 3818.5 | 3818.5 | 3818.5 |
| 2.5° | 3939.5 | 3944.0 | 3926.0 | 3912.6 | 3912.6 | 3890.2 | 3890.2 | 3890.2 | 3867.8 | 3863.3 | 3831.9 |
| 5° | 3984.3 | 3979.8 | 3970.9 | 3975.3 | 3979.8 | 3970.9 | 3975.3 | 3961.9 | 3930.5 | 3921.6 | 3872.3 |
| 7.5° | 3858.8 | 3858.8 | 3881.2 | 3926.0 | 3988.8 | 4020.2 | 4038.1 | 4029.1 | 4015.7 | 3988.8 | 3917.1 |
| 10° | 3406.2 | 3437.5 | 3504.8 | 3652.7 | 3836.4 | 3988.8 | 4087.4 | 4082.9 | 4087.4 | 4051.5 | 3970.9 |
| 12.5° | 3007.3 | 3020.7 | 3083.5 | 3213.4 | 3477.9 | 3805.0 | 4078.4 | 4132.2 | 4145.7 | 4123.2 | 4024.6 |
| 15° | 2792.2 | 2787.7 | 2837.0 | 2940.1 | 3141.7 | 3500.3 | 3979.8 | 4127.7 | 4208.4 | 4203.9 | 4100.8 |
| 17.5° | 2698.0 | 2702.5 | 2729.4 | 2796.6 | 2944.5 | 3240.3 | 3805.0 | 4073.9 | 4239.8 | 4293.6 | 4172.5 |
| 20° | 2742.9 | 2729.4 | 2742.9 | 2756.3 | 2837.0 | 3070.0 | 3616.8 | 3979.8 | 4266.7 | 4378.7 | 4253.2 |
| 22.5° | 2837.0 | 2823.5 | 2819.0 | 2810.1 | 2828.0 | 2971.4 | 3446.5 | 3863.3 | 4289.1 | 4490.8 | 4347.3 |
| 25° | 3002.8 | 2989.4 | 2949.0 | 2899.7 | 2877.3 | 2940.1 | 3334.5 | 3764.7 | 4311.5 | 4647.6 | 4468.3 |
| 27.5° | 3240.3 | 3222.4 | 3164.1 | 3047.6 | 2975.9 | 2984.9 | 3298.6 | 3710.9 | 4351.8 | 4800.0 | 4584.9 |
| 30° | 3594.4 | 3585.4 | 3455.5 | 3267.2 | 3119.3 | 3065.5 | 3316.5 | 3697.5 | 4396.6 | 4974.8 | 4701.4 |
| 32.5° | 3912.6 | 3903.6 | 3805.0 | 3594.4 | 3347.9 | 3195.5 | 3361.3 | 3715.4 | 4454.9 | 5198.9 | 4871.7 |
| 35° | 4172.5 | 4154.6 | 4073.9 | 3912.6 | 3661.6 | 3392.7 | 3459.9 | 3778.1 | 4580.4 | 5494.7 | 5077.9 |
| 37.5° | 4437.0 | 4423.5 | 4311.5 | 4141.2 | 3984.3 | 3666.1 | 3625.8 | 3921.6 | 4750.7 | 5898.0 | 5378.1 |
| 40° | 4755.2 | 4737.2 | 4602.8 | 4401.1 | 4262.2 | 4038.1 | 3863.3 | 4150.1 | 5010.6 | 6359.7 | 5718.8 |
| 42.5° | 5059.9 | 5042.0 | 4885.1 | 4710.4 | 4535.6 | 4396.6 | 4199.4 | 4454.9 | 5333.3 | 6946.8 | 6122.1 |
| 45° | 5414.0 | 5414.0 | 5194.4 | 5001.7 | 4817.9 | 4647.6 | 4517.6 | 4804.5 | 5709.8 | 7610.1 | 6570.3 |
| 47.5° | 5745.7 | 5714.3 | 5499.2 | 5288.5 | 5109.2 | 4786.5 | 4822.4 | 5172.0 | 6131.1 | 8282.3 | 7054.3 |
| 50° | 5853.2 | 5844.3 | 5700.8 | 5512.6 | 5360.2 | 4956.9 | 5136.1 | 5611.2 | 6606.2 | 8923.2 | 7511.5 |
| 52.5° | 5978.7 | 5938.4 | 5732.2 | 5705.3 | 5530.5 | 5172.0 | 5521.6 | 6063.9 | 7040.9 | 9505.9 | 7879.0 |
| 55° | 6135.6 | 6090.7 | 5808.4 | 5754.6 | 5660.5 | 5414.0 | 5960.8 | 6530.0 | 7453.2 | 9958.5 | 8224.1 |
| 57.5° | 6422.4 | 6368.6 | 5969.7 | 5853.2 | 5777.0 | 5718.8 | 6458.3 | 7045.4 | 7870.0 | 10312.6 | 8519.9 |
| 60° | 6588.2 | 6543.4 | 6202.8 | 6117.6 | 6005.6 | 6140.0 | 6991.6 | 7520.4 | 8264.4 | 10586.0 | 8748.5 |
| 62.5° | 6503.1 | 6471.7 | 6234.2 | 6395.5 | 6485.1 | 6695.8 | 7601.1 | 8013.4 | 8578.1 | 10792.1 | 8757.4 |
| 65° | 6063.9 | 6001.1 | 5839.8 | 6328.3 | 7036.4 | 7632.5 | 8376.5 | 8591.6 | 8784.3 | 10236.4 | 8228.6 |
| 67.5° | 5010.6 | 4947.9 | 5042.0 | 5544.0 | 6722.7 | 9075.6 | 9443.1 | 8824.6 | 8412.3 | 9730.0 | 8152.4 |
| 70° | 2276.7 | 2173.7 | 2742.9 | 3921.6 | 5561.9 | 8761.9 | 10926.6 | 9792.7 | 8788.8 | 9685.1 | 8000.0 |
| 72.5° | 1116.0 | 1160.8 | 1340.1 | 1761.3 | 3401.7 | 6727.2 | 12047.0 | 12109.8 | 10066.1 | 9801.7 | 8107.6 |
| 74° | 873.9 | 887.4 | 1035.3 | 1210.1 | 1900.3 | 5615.7 | 11446.5 | 12643.1 | 11155.2 | 10079.5 | 7941.7 |
| 75° | 752.9 | 770.9 | 918.8 | 1008.4 | 1223.5 | 4728.3 | 10684.6 | 12481.8 | 11652.6 | 10025.8 | 7574.2 |
| 77.5° | 551.3 | 546.8 | 654.3 | 802.2 | 573.7 | 2106.4 | 8654.3 | 9671.7 | 9936.1 | 8165.8 | 5051.0 |
| 80° | 340.6 | 354.1 | 452.7 | 560.2 | 381.0 | 802.2 | 5086.8 | 5284.0 | 4701.4 | 4728.3 | 2451.5 |
| 82.5° | 206.2 | 215.1 | 242.0 | 291.3 | 210.6 | 282.4 | 2303.6 | 2872.8 | 2379.8 | 1546.2 | 412.3 |
| 85° | 62.7 | 67.2 | 80.7 | 103.1 | 76.2 | 103.1 | 775.3 | 699.2 | 497.5 | 206.2 | 121.0 |
| 87.5° | 4.5 | 4.5 | 9.0 | 9.0 | 13.4 | 22.4 | 31.4 | 35.9 | 40.3 | 44.8 | 44.8 |
| 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: P1363409
CATALOG NUMBER: GSS-SB3C-727-U-SL3

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 3818.5 | 3818.5 | 3818.5 | 3818.5 | 3818.5 | 3818.5 | 3818.5 | 3818.5 | 3818.5 | 3818.5 | 3818.5 |
| 2.5° | 3831.9 | 3818.5 | 3800.6 | 3769.2 | 3746.8 | 3724.4 | 3697.5 | 3657.1 | 3643.7 | 3648.2 | 3657.1 |
| 5° | 3863.3 | 3827.4 | 3773.7 | 3702.0 | 3648.2 | 3603.4 | 3531.6 | 3473.4 | 3437.5 | 3437.5 | 3419.6 |
| 7.5° | 3894.7 | 3845.4 | 3760.2 | 3639.2 | 3545.1 | 3419.6 | 3285.2 | 3150.7 | 3056.6 | 3016.2 | 2980.4 |
| 10° | 3948.5 | 3872.3 | 3733.3 | 3572.0 | 3370.3 | 3119.3 | 2845.9 | 2568.1 | 2393.3 | 2303.6 | 2299.2 |
| 12.5° | 3984.3 | 3908.1 | 3719.9 | 3459.9 | 3079.0 | 2603.9 | 2187.1 | 1958.5 | 1886.8 | 1855.5 | 1846.5 |
| 15° | 4042.6 | 3939.5 | 3688.5 | 3253.8 | 2630.8 | 2061.6 | 1833.1 | 1765.8 | 1761.3 | 1765.8 | 1770.3 |
| 17.5° | 4091.9 | 3966.4 | 3607.8 | 2926.6 | 2110.9 | 1792.7 | 1734.5 | 1730.0 | 1761.3 | 1774.8 | 1788.2 |
| 20° | 4145.7 | 3988.8 | 3464.4 | 2469.5 | 1819.6 | 1712.0 | 1703.1 | 1730.0 | 1774.8 | 1810.6 | 1815.1 |
| 22.5° | 4221.8 | 4006.7 | 3213.4 | 2016.8 | 1680.7 | 1667.2 | 1689.6 | 1716.5 | 1743.4 | 1774.8 | 1783.8 |
| 25° | 4302.5 | 4006.7 | 2868.3 | 1707.6 | 1609.0 | 1644.8 | 1667.2 | 1644.8 | 1635.9 | 1662.7 | 1662.7 |
| 27.5° | 4365.3 | 3975.3 | 2379.8 | 1541.7 | 1559.7 | 1617.9 | 1604.5 | 1555.2 | 1546.2 | 1564.1 | 1559.7 |
| 30° | 4410.1 | 3858.8 | 1886.8 | 1452.1 | 1510.4 | 1559.7 | 1523.8 | 1496.9 | 1479.0 | 1483.5 | 1488.0 |
| 32.5° | 4477.3 | 3679.5 | 1546.2 | 1389.4 | 1470.0 | 1465.5 | 1461.1 | 1434.2 | 1411.8 | 1416.2 | 1420.7 |
| 35° | 4558.0 | 3383.7 | 1353.5 | 1344.5 | 1434.2 | 1398.3 | 1402.8 | 1371.4 | 1344.5 | 1344.5 | 1349.0 |
| 37.5° | 4661.1 | 3029.7 | 1272.8 | 1326.6 | 1375.9 | 1371.4 | 1358.0 | 1317.6 | 1277.3 | 1268.3 | 1268.3 |
| 40° | 4773.1 | 2595.0 | 1232.5 | 1317.6 | 1349.0 | 1362.5 | 1335.6 | 1286.3 | 1178.7 | 1111.5 | 1107.0 |
| 42.5° | 4844.8 | 2236.4 | 1219.0 | 1304.2 | 1344.5 | 1358.0 | 1322.1 | 1169.7 | 1066.7 | 1021.8 | 1017.4 |
| 45° | 4947.9 | 2039.2 | 1219.0 | 1268.3 | 1326.6 | 1340.1 | 1214.6 | 1111.5 | 1053.2 | 1030.8 | 1035.3 |
| 47.5° | 5051.0 | 2039.2 | 1219.0 | 1241.5 | 1277.3 | 1295.2 | 1129.4 | 1084.6 | 1030.8 | 1030.8 | 1048.7 |
| 50° | 5194.4 | 2151.3 | 1210.1 | 1201.1 | 1214.6 | 1147.3 | 1075.6 | 1039.8 | 968.1 | 941.2 | 945.7 |
| 52.5° | 5409.5 | 2321.6 | 1174.2 | 1142.9 | 1147.3 | 1062.2 | 1039.8 | 986.0 | 914.3 | 860.5 | 847.1 |
| 55° | 5642.6 | 2505.3 | 1102.5 | 1075.6 | 1071.1 | 1008.4 | 999.4 | 941.2 | 873.9 | 802.2 | 788.8 |
| 57.5° | 5898.0 | 2653.2 | 1012.9 | 1008.4 | 995.0 | 954.6 | 968.1 | 927.7 | 833.6 | 739.5 | 726.0 |
| 60° | 6140.0 | 2819.0 | 927.7 | 936.7 | 914.3 | 905.3 | 923.2 | 896.4 | 779.8 | 676.7 | 667.8 |
| 62.5° | 6140.0 | 2814.6 | 851.5 | 860.5 | 856.0 | 833.6 | 865.0 | 847.1 | 708.1 | 623.0 | 614.0 |
| 65° | 5803.9 | 2689.1 | 761.9 | 784.3 | 802.2 | 757.4 | 797.8 | 766.4 | 645.4 | 578.2 | 564.7 |
| 67.5° | 5759.1 | 2639.8 | 672.3 | 694.7 | 726.0 | 676.7 | 703.6 | 672.3 | 587.1 | 528.9 | 519.9 |
| 70° | 5669.5 | 2527.7 | 591.6 | 618.5 | 631.9 | 578.2 | 614.0 | 591.6 | 528.9 | 484.0 | 475.1 |
| 72.5° | 5714.3 | 2429.1 | 506.4 | 537.8 | 542.3 | 493.0 | 528.9 | 519.9 | 466.1 | 434.7 | 416.8 |
| 74° | *5463.3* | *2102.0* | *457.1* | *484.0* | *475.1* | *439.2* | *470.6* | *470.6* | *421.3* | *398.9* | *376.5* |
| 75° | 5131.6 | 1864.4 | 421.3 | 448.2 | 425.8 | 403.4 | 434.7 | 439.2 | 389.9 | 389.9 | 354.1 |
| 77.5° | 3370.3 | 1250.4 | 331.7 | 349.6 | 340.6 | 327.2 | 345.1 | 340.6 | 304.8 | 295.8 | 273.4 |
| 80° | 1649.3 | 685.7 | 251.0 | 242.0 | 246.5 | 242.0 | 255.5 | 251.0 | 233.1 | 224.1 | 219.6 |
| 82.5° | 309.2 | 228.6 | 165.8 | 161.3 | 152.4 | 143.4 | 161.3 | 161.3 | 215.1 | 242.0 | 242.0 |
| 85° | 94.1 | 89.6 | 80.7 | 80.7 | 76.2 | 67.2 | 71.7 | 103.1 | 125.5 | 85.2 | 80.7 |
| 87.5° | 40.3 | 40.3 | 35.9 | 31.4 | 22.4 | 22.4 | 17.9 | 17.9 | 17.9 | 17.9 | 17.9 |
| 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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# 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

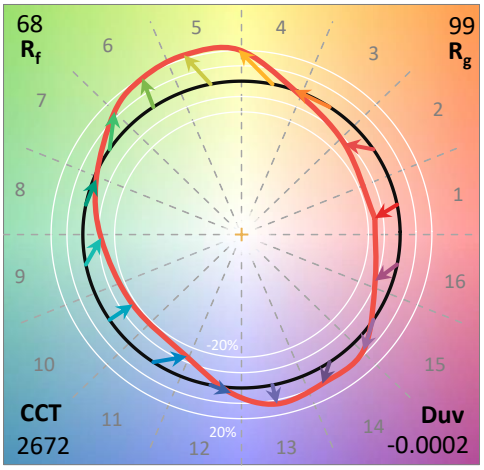
## Test Information

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

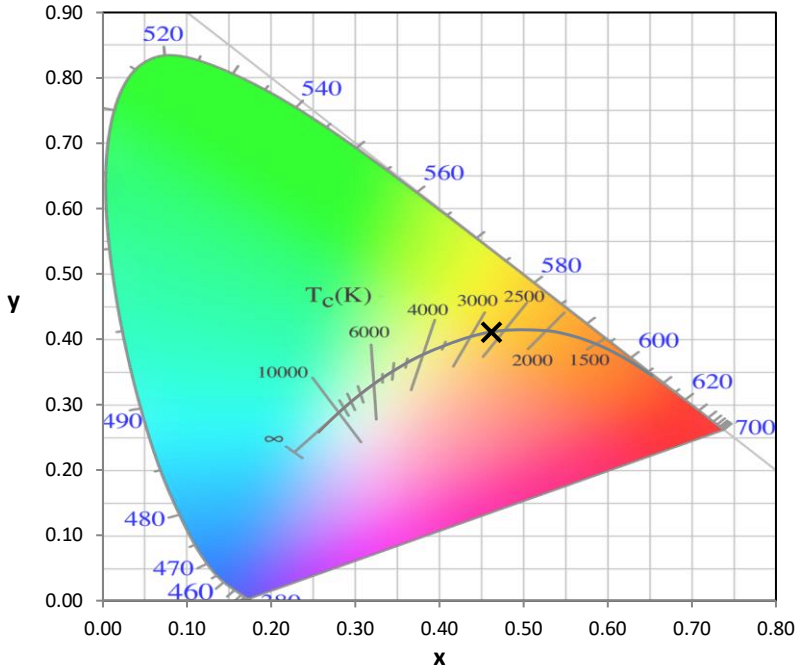
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

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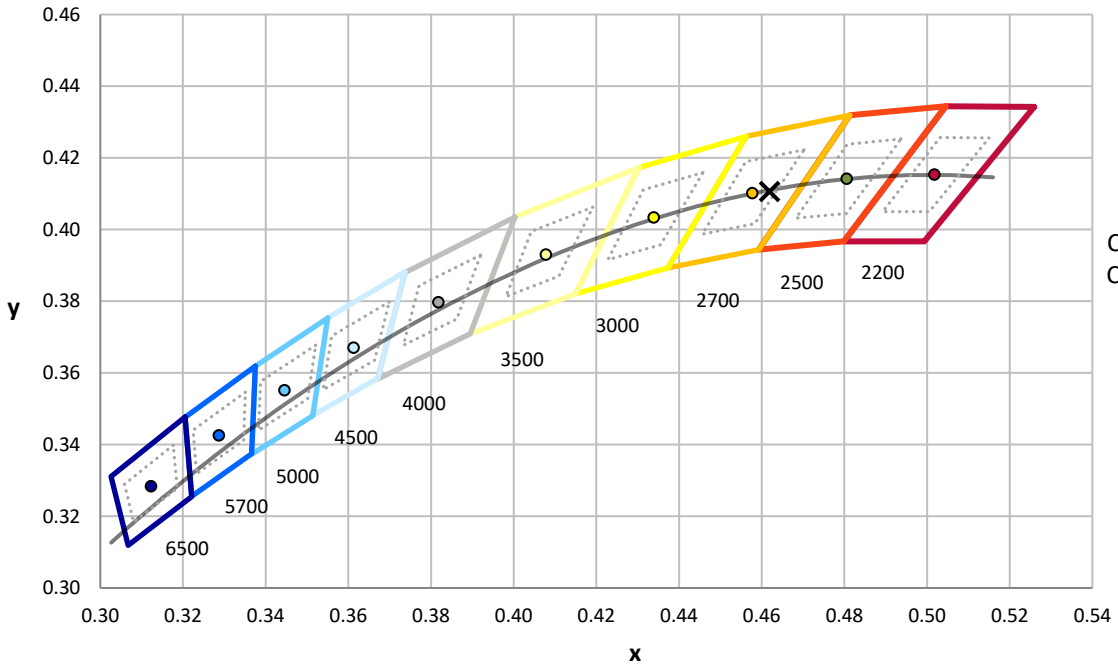
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC Power Source | IN0208 | 10/24/2023 | 10/24/2024 |
| Sphere Thermometer | IN0085 | 10/24/2023 | 10/24/2024 |
| Room Thermometer | IN0046 | 10/24/2023 | 10/24/2024 |

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## CIE 1931 Chromaticity Diagram




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

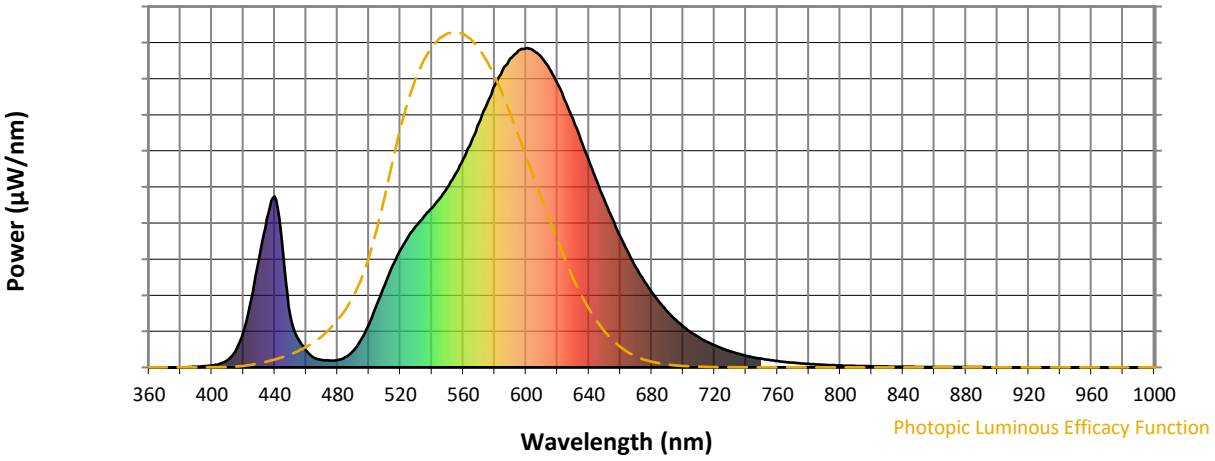



CCT = 2672K
CIE x = 0.4619
CIE y = 0.4106
Duv = -0.0002

Point lies inside the ANSI 2700K 4-step quadrangle

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## Photopic Flux vs. Wavelength

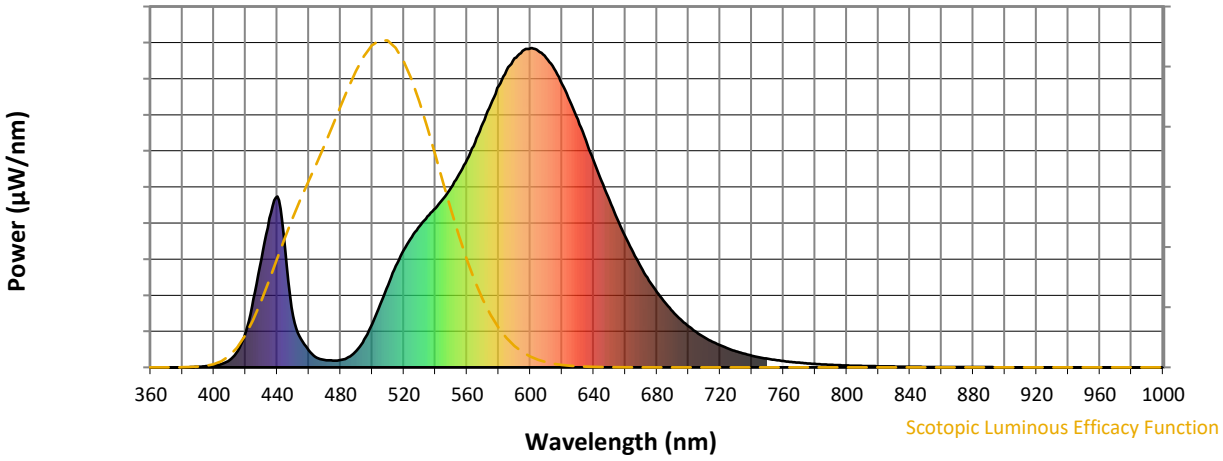



## Photopic Lumens: NR

| 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

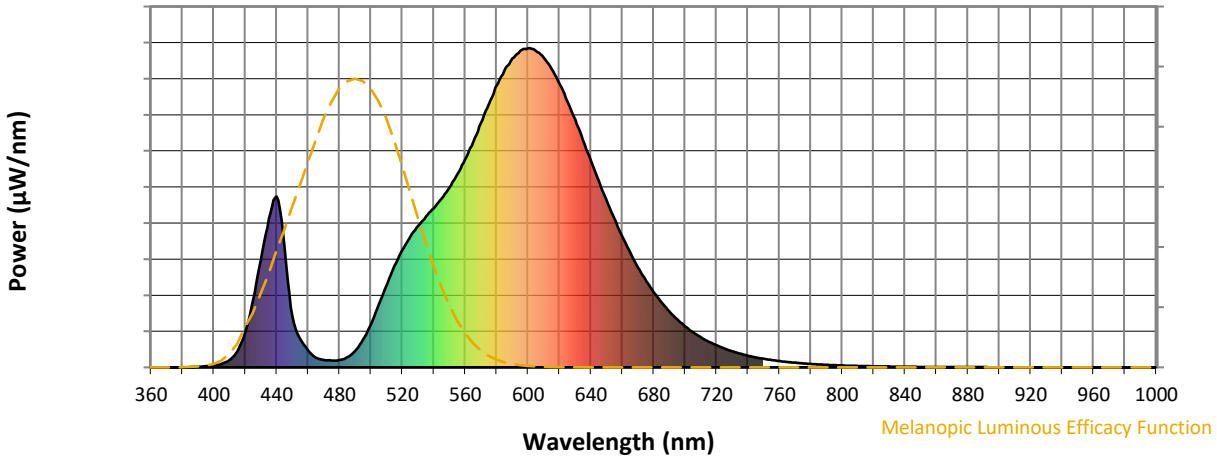



**Scotopic Lumens: NR** **S/P: 1.02**

| 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 | | | |

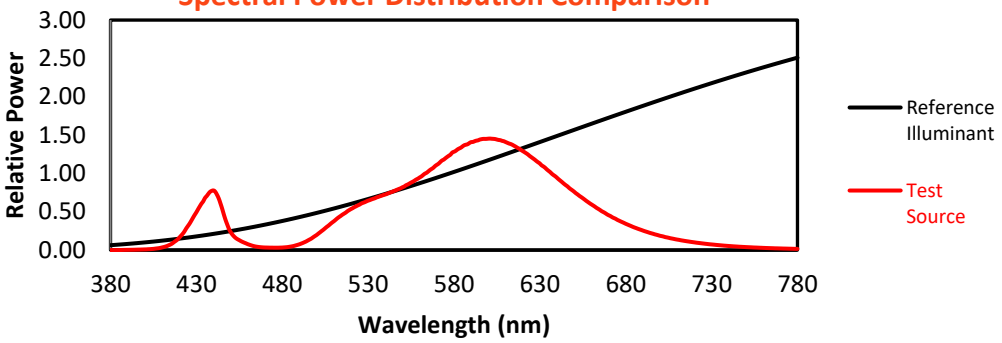
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# TM-30-18

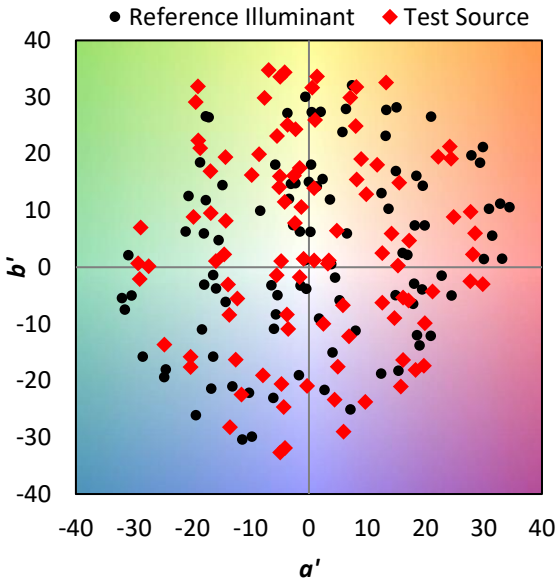
## Summary

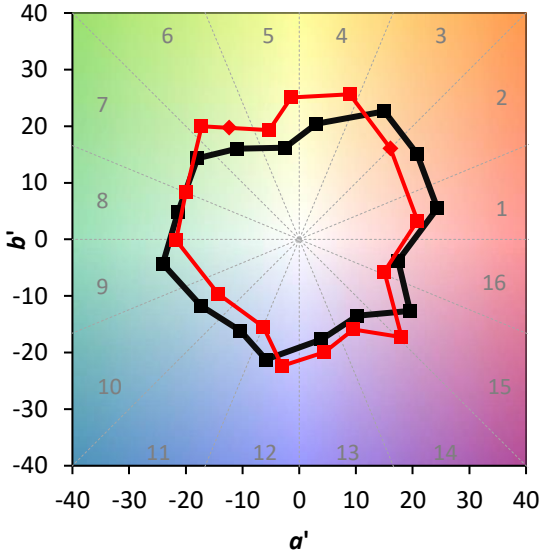
$R_f$ = 67.9
$R_g$ = 98.6
CIE $R_a$ = 71.1
$R_9$ = -27.8

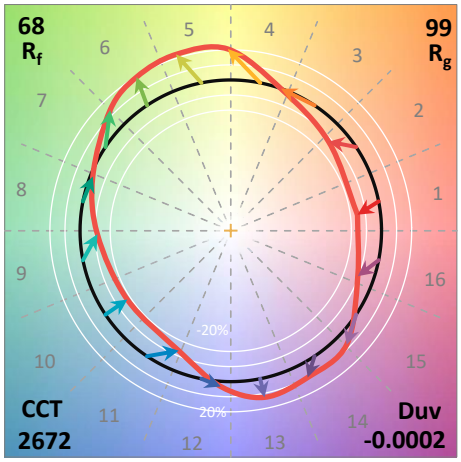
## Spectral Power Distribution Comparison

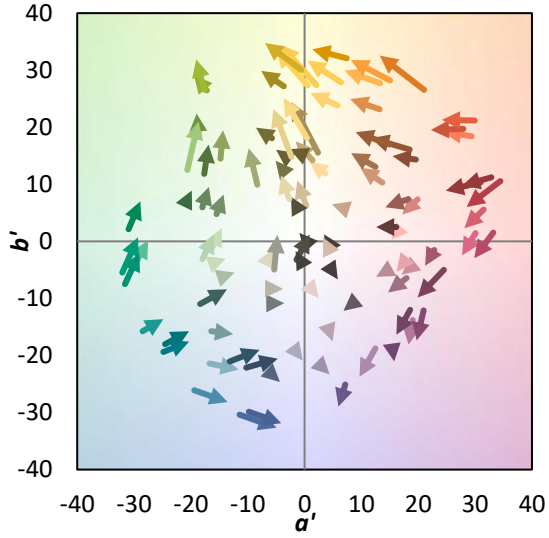



## Color Vector Graphics



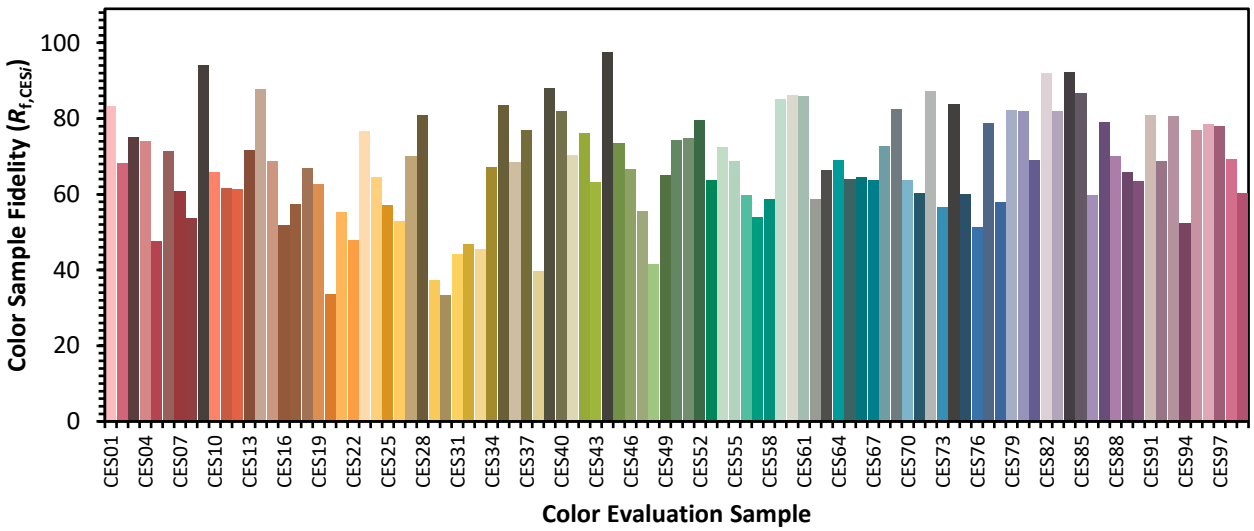



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**Individual Sample Fidelity Index ($R_{f,i}$)**

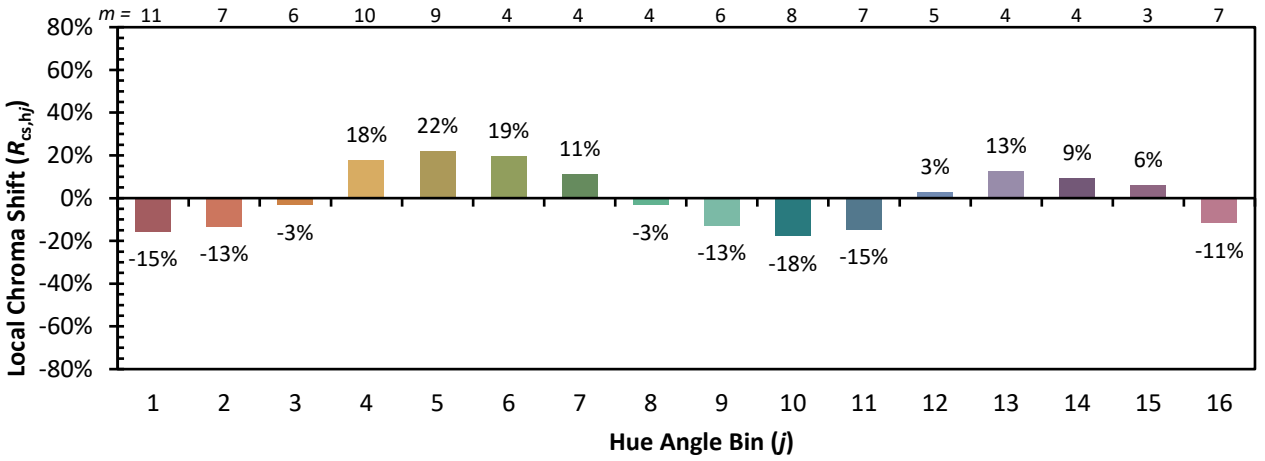
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 53 | CES51 = 75 | CES76 = 51 |
| CES02 = 63 | CES27 = 70 | CES52 = 80 | CES77 = 79 |
| CES03 = 31 | CES28 = 81 | CES53 = 64 | CES78 = 58 |
| CES04 = 71 | CES29 = 37 | CES54 = 73 | CES79 = 82 |
| CES05 = 50 | CES30 = 33 | CES55 = 69 | CES80 = 82 |
| CES06 = 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 | |

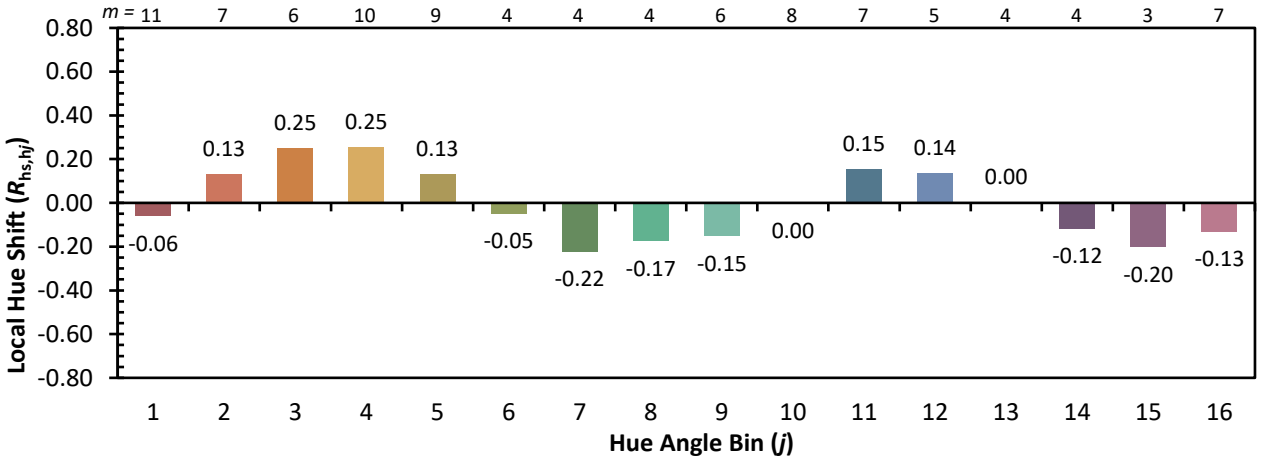


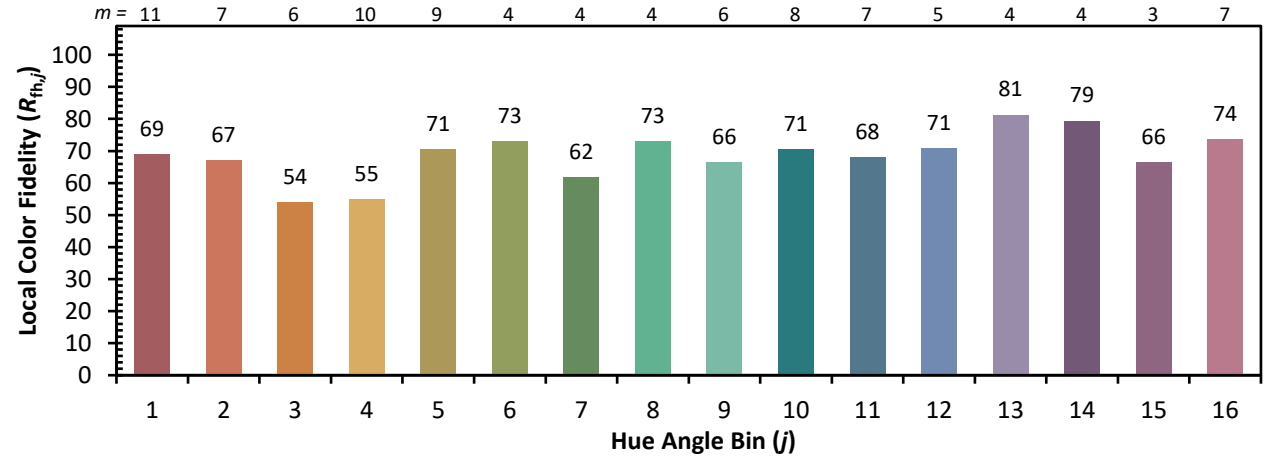
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## Color Rendition by Hue-Angle Bin



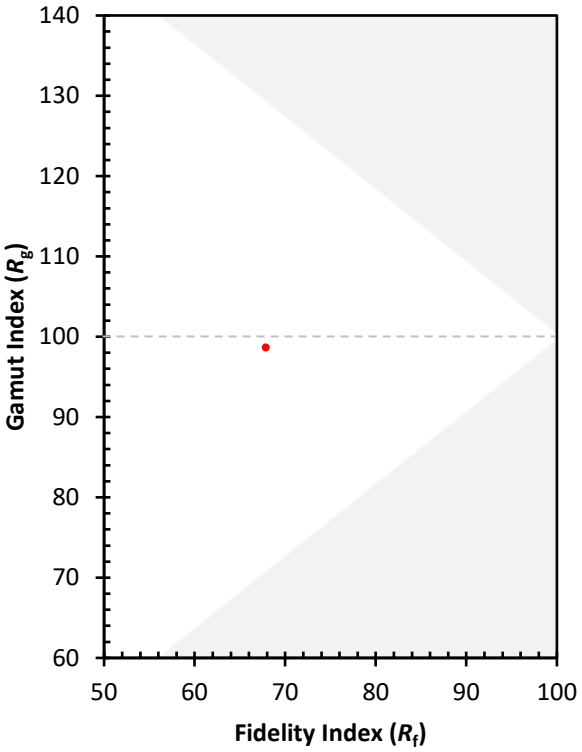



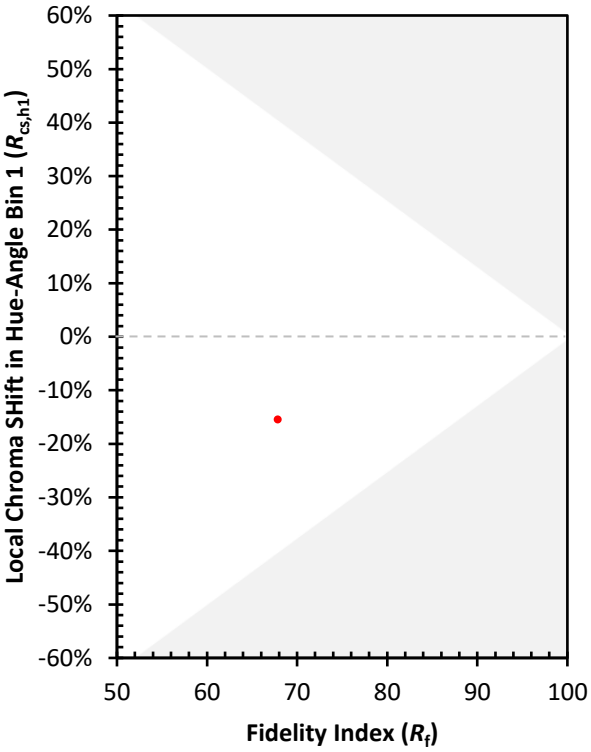



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## Measure Comparisons




(END OF REPORT)