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: P1362647

Luminaire Tested: **GSS-SB5A-727-U-SL2**

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: | P1362647 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB5A-727-U-SL2 |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 5SQUARE 143W 70CRI 2700K FIXTURE w/ TYPE II SPILL CONTROL DISTRIBUTION OPTIC |
| Light Source: | (130) 2700K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 19801.5 lumens |
| Efficiency: | N/A |
| Efficacy: | 138.5 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1' x H: 0') |
| IES Classification: | Type II - Medium |
| BUG Rating: | B3 - U0 - G3 |

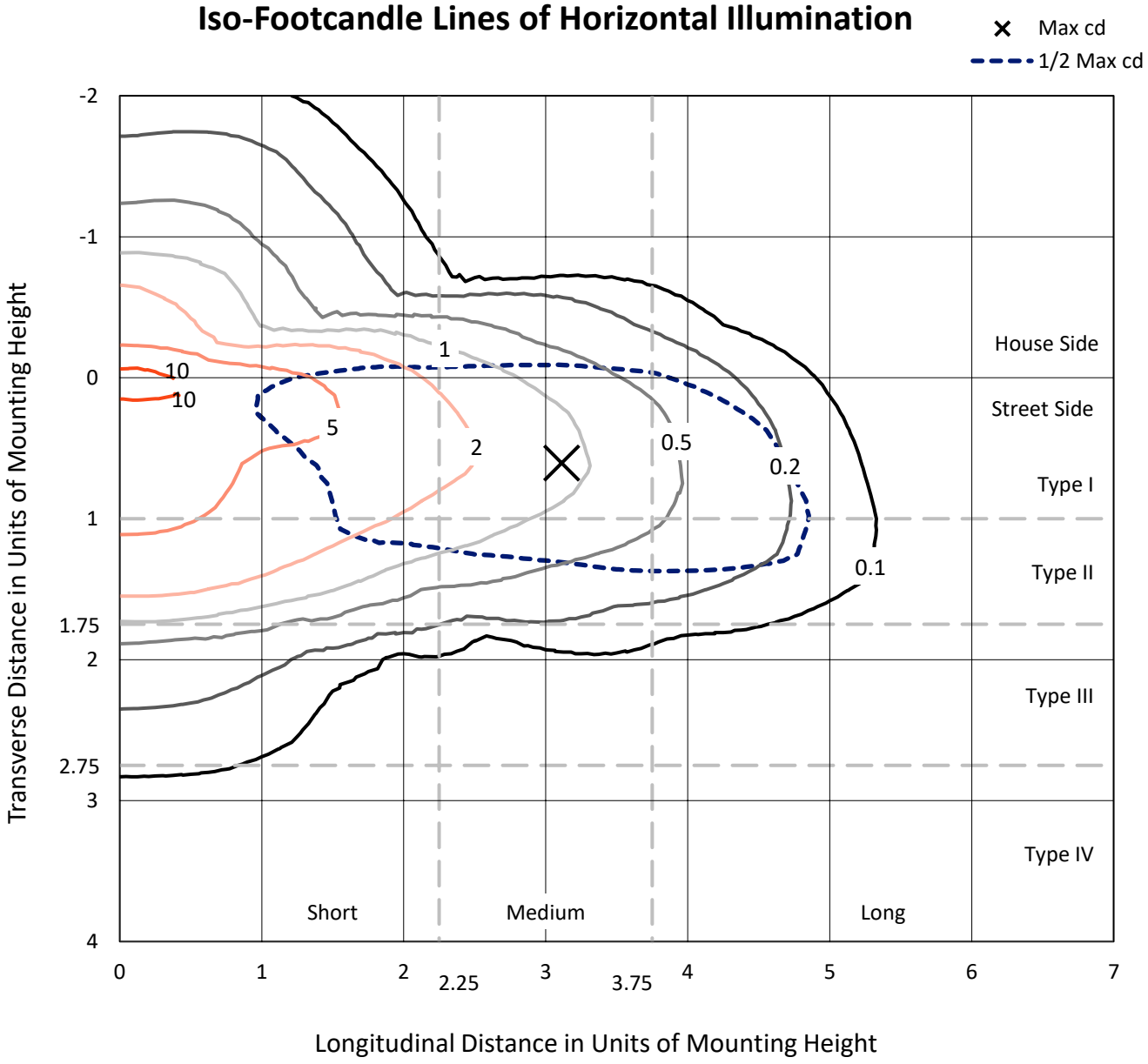
| | |
|---|---|
| Input Watts (W): | 143 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 10.5% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1362647
CATALOG NUMBER: GSS-SB5A-727-U-SL2

## Iso-Footcandle Lines of Horizontal Illumination



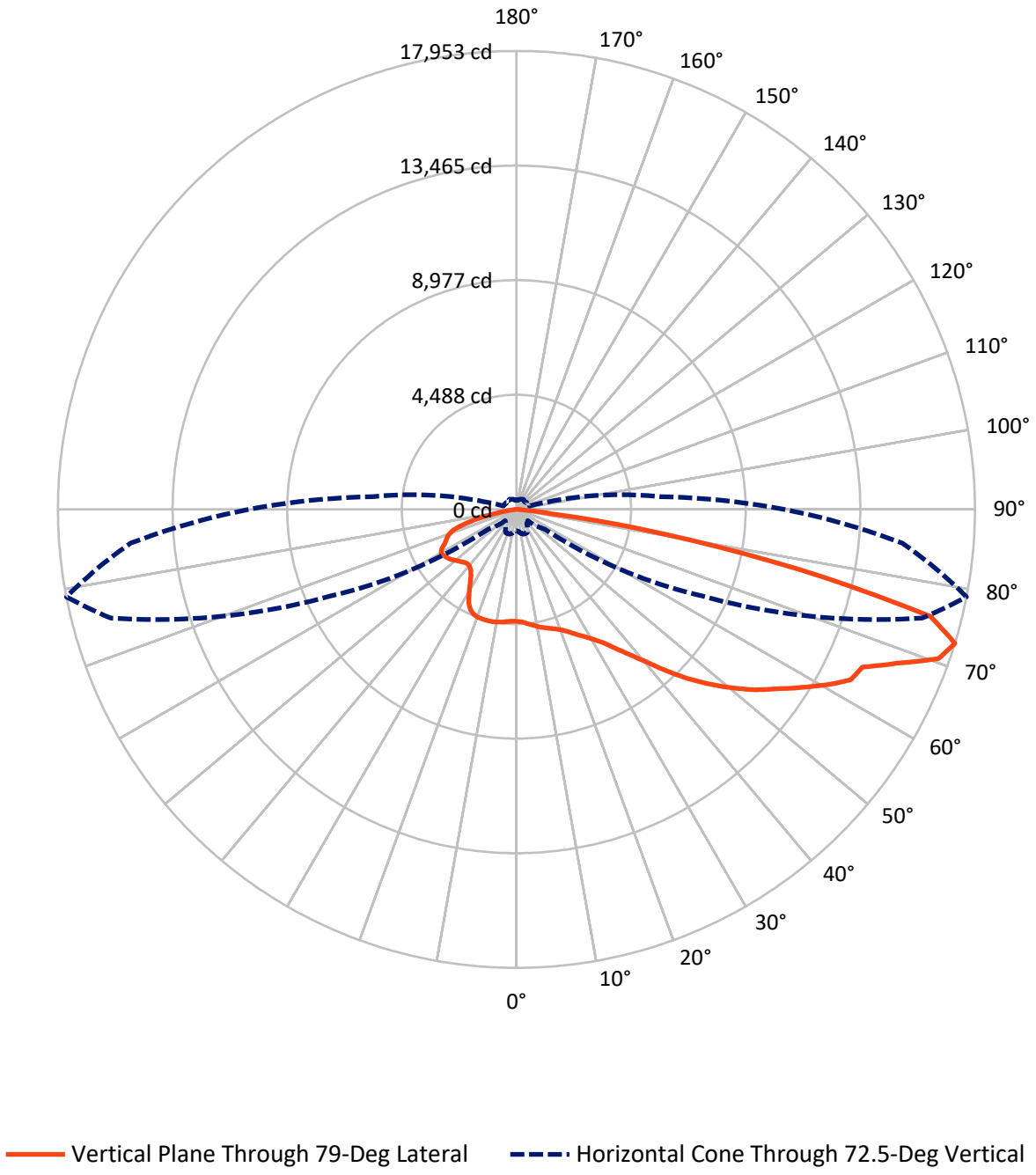

Based on 20 foot mounting height. Maximum calculated value = 11 fc
Type II - Medium - N/A

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## Luminous Intensity Polar Plot



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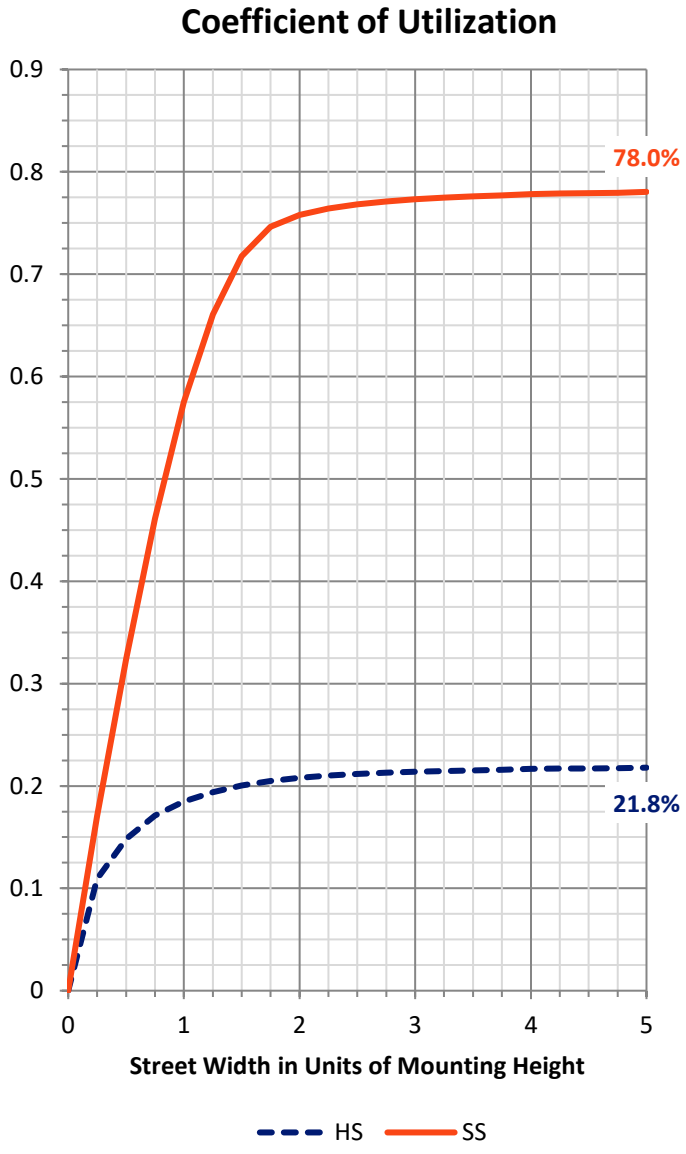
REPORT NUMBER: P1362647
CATALOG NUMBER: GSS-SB5A-727-U-SL2

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 4349.7 | 0.0 | 4349.7 |
| | % Fixture | 22.0 | 0.0 | 22.0 |
| **Street Side** | Lumens | 15451.8 | 0.0 | 15451.8 |
| | % Fixture | 78.0 | 0.0 | 78.0 |
| **Total** | Lumens | 19801.5 | 0.0 | 19801.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 407.1 | 2.1 |
| 10°-20° | 1011.0 | 5.1 |
| 20°-30° | 1591.8 | 8.0 |
| 30°-40° | 2375.4 | 12.0 |
| 40°-50° | 3377.5 | 17.1 |
| 50°-60° | 4266.5 | 21.5 |
| 60°-70° | 3993.5 | 20.2 |
| 70°-80° | 2536.7 | 12.8 |
| 80°-90° | 242.0 | 1.2 |
| 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° | 19801.5 | 100.0 |
| 0°-180° | 19801.5 | 100.0 |



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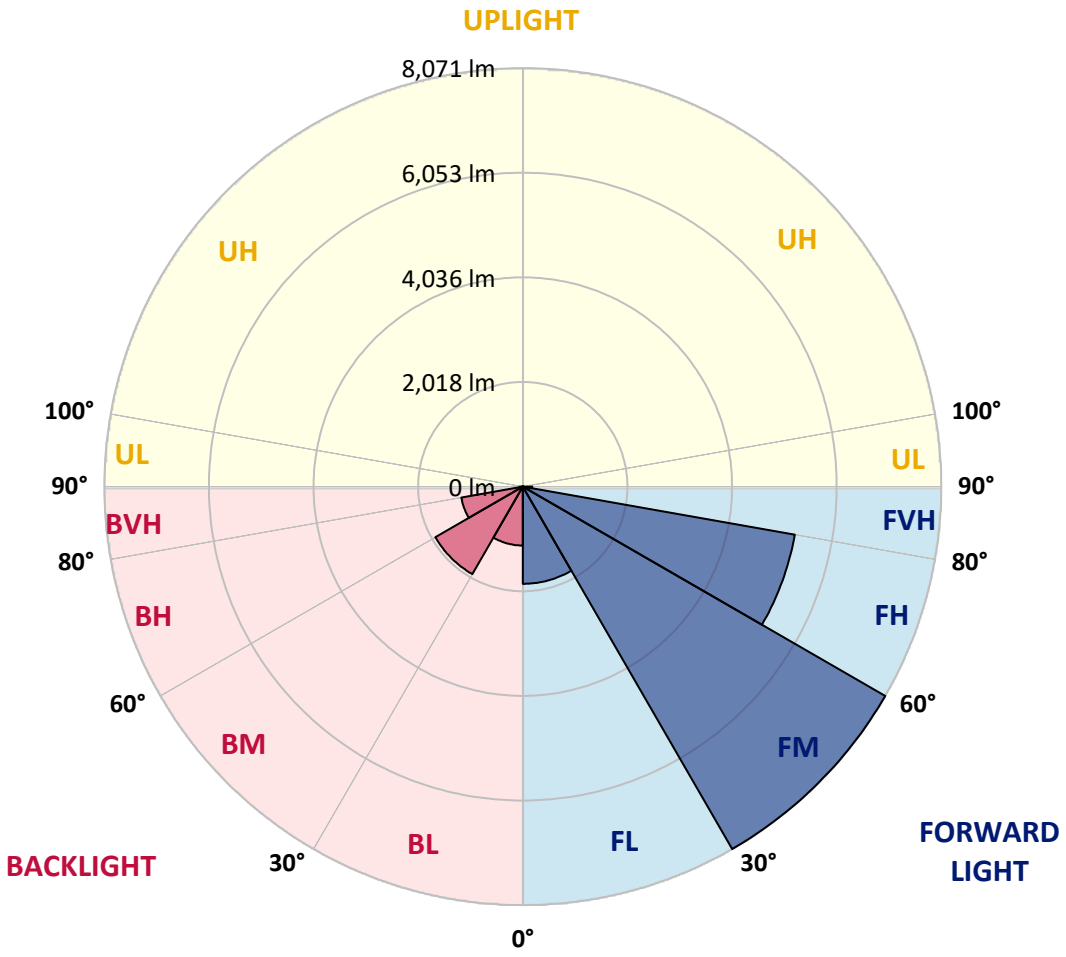
Scaled Data Report

REPORT NUMBER: P1362647
CATALOG NUMBER: GSS-SB5A-727-U-SL2

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1874.3 | 9.5 | | | |
| FM | (30°-60°) | 8071.1 | 40.8 | | | |
| FH | (60°-80°) | 5326.1 | 26.9 | | | G3/7500 |
| FVH | (80°-90°) | 180.3 | 0.9 | | | G2/225 |
| BL | (0°-30°) | 1135.6 | 5.7 | B3/2500 | | |
| BM | (30°-60°) | 1948.3 | 9.8 | B2/2500 | | |
| BH | (60°-80°) | 1204.1 | 6.1 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 61.7 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B3-U0-G3**
Type II Medium



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 79° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 4385.3 | 4385.3 | 4385.3 | 4385.3 | 4385.3 | 4385.3 | 4385.3 | 4385.3 | 4385.3 | *4385.3* | 4385.3 |
| 2.5° | 4488.3 | 4493.0 | 4474.3 | 4474.3 | 4479.0 | 4460.2 | 4436.8 | 4432.1 | 4413.4 | *4413.4* | 4413.4 |
| 5° | 4511.8 | 4511.8 | 4507.1 | 4530.5 | 4539.9 | 4553.9 | 4535.2 | 4521.1 | 4493.0 | *4493.0* | 4455.6 |
| 7.5° | 4263.5 | 4254.1 | 4291.6 | 4399.3 | 4511.8 | 4572.7 | 4610.2 | 4610.2 | 4596.1 | *4572.7* | 4539.9 |
| 10° | 3795.0 | 3809.0 | 3865.2 | 4010.5 | 4216.6 | 4493.0 | 4643.0 | 4703.9 | 4680.4 | *4671.1* | 4614.8 |
| 12.5° | 3546.6 | 3542.0 | 3584.1 | 3691.9 | 3869.9 | 4207.2 | 4577.4 | 4769.5 | 4774.1 | *4750.7* | 4685.1 |
| 15° | 3518.5 | 3504.5 | 3523.2 | 3560.7 | 3677.8 | 3949.6 | 4380.6 | 4792.9 | 4839.7 | *4830.4* | 4755.4 |
| 17.5° | 3677.8 | 3673.1 | 3645.0 | 3635.7 | 3631.0 | 3780.9 | 4188.5 | 4774.1 | 4928.8 | *4919.4* | 4835.0 |
| 20° | 3954.2 | 3930.8 | 3879.3 | 3832.4 | 3734.0 | 3748.1 | 4038.6 | 4750.7 | 5050.6 | *5036.5* | 4952.2 |
| 22.5° | 4249.4 | 4258.8 | 4211.9 | 4099.5 | 3926.1 | 3846.5 | 3991.7 | 4717.9 | 5214.5 | *5205.2* | 5092.7 |
| 25° | 4610.2 | 4600.8 | 4544.6 | 4418.1 | 4188.5 | 4015.2 | 4043.3 | 4708.5 | 5401.9 | *5411.3* | 5275.4 |
| 27.5° | 4980.3 | 4970.9 | 4900.6 | 4741.3 | 4474.3 | 4221.3 | 4160.4 | 4746.0 | 5640.9 | *5636.2* | 5467.5 |
| 30° | 5392.6 | 5397.3 | 5308.2 | 5092.7 | 4769.5 | 4479.0 | 4347.8 | 4844.4 | 5879.8 | *5893.9* | 5687.7 |
| 32.5° | 5762.7 | 5786.1 | 5734.6 | 5533.1 | 5130.2 | 4746.0 | 4577.4 | 5003.7 | 6198.4 | *6221.8* | 5968.8 |
| 35° | 5997.0 | 6011.0 | 6006.3 | 5912.6 | 5514.4 | 5050.6 | 4806.9 | 5205.2 | 6582.6 | *6671.6* | 6343.7 |
| 37.5° | 6221.8 | 6254.6 | 6259.3 | 6189.0 | 5889.2 | 5411.3 | 5078.7 | 5486.3 | 7074.5 | *7219.8* | 6835.6 |
| 40° | 6465.5 | 6456.1 | 6521.7 | 6437.4 | 6226.5 | 5795.5 | 5359.8 | 5804.9 | 7618.0 | *7857.0* | 7411.9 |
| 42.5° | 6610.7 | 6634.1 | 6718.5 | 6699.7 | 6488.9 | 6151.6 | 5678.4 | 6160.9 | 8297.4 | *8648.7* | 8109.9 |
| 45° | 6704.4 | 6727.8 | 6849.7 | 6868.4 | 6755.9 | 6395.2 | 5978.2 | 6503.0 | 8920.5 | *9468.6* | 8859.6 |
| 47.5° | 6737.2 | 6751.3 | 6910.6 | 6985.5 | 6938.7 | 6549.8 | 6212.5 | 6891.8 | 9534.2 | *10241.7* | 9609.2 |
| 50° | 6606.0 | 6657.6 | 6863.7 | 7032.4 | 7065.2 | 6629.5 | 6413.9 | 7304.1 | 10194.8 | *10991.3* | 10363.5 |
| 52.5° | 6404.6 | 6432.7 | 6681.0 | 7041.7 | 7144.8 | 6760.6 | 6662.2 | 7739.8 | 10818.0 | *11740.9* | 11010.0 |
| 55° | 6011.0 | 6067.2 | 6376.5 | 6887.1 | 7191.7 | 6934.0 | 6985.5 | 8231.8 | 11464.5 | *12396.8* | 11712.8 |
| 57.5° | 4896.0 | 4994.3 | 5505.0 | 6226.5 | 7065.2 | 7276.0 | 7468.1 | 8840.8 | 12172.0 | *13155.8* | 12340.6 |
| 60° | 3068.8 | 3199.9 | 3734.0 | 4900.6 | 6348.3 | 7477.5 | 8236.4 | 9632.6 | 13015.3 | *13952.3* | 13038.7 |
| 62.5° | 1663.2 | 1658.5 | 1817.8 | 2506.5 | 4577.4 | 6952.7 | 8897.1 | 11005.4 | 14102.2 | *14692.5* | 13446.3 |
| 65° | 1443.0 | 1443.0 | 1461.8 | 1457.1 | 1977.1 | 5130.2 | 8241.1 | 11825.3 | 14851.8 | *14889.3* | 13099.6 |
| 67.5° | 1297.8 | 1297.8 | 1325.9 | 1255.6 | 1077.6 | 2295.7 | 6029.8 | 11338.0 | 16093.4 | *16070.0* | 13544.7 |
| 70° | 1143.2 | 1147.9 | 1194.7 | 1152.5 | 866.7 | 932.3 | 3298.3 | 10326.0 | 17021.1 | *17522.4* | 14430.2 |
| 72.5° | *838.6* | *866.7* | *1002.6* | *1002.6* | *712.1* | *627.8* | *1339.9* | *8006.9* | *16440.1* | *17953.4* | *15165.7* |
| 75° | 590.3 | 595.0 | 665.3 | 716.8 | 562.2 | 473.2 | 651.2 | 5359.8 | 15081.4 | *16749.3* | 14509.8 |
| 77.5° | 449.8 | 454.5 | 477.9 | 571.6 | 384.2 | 346.7 | 449.8 | 2928.2 | 10878.9 | *11309.9* | 9412.4 |
| 80° | 299.8 | 295.2 | 328.0 | 402.9 | 271.7 | 234.3 | 290.5 | 979.2 | 6104.7 | *5823.6* | 3930.8 |
| 82.5° | 149.9 | 154.6 | 178.0 | 210.8 | 159.3 | 140.6 | 168.7 | 506.0 | 2394.1 | *1391.5* | 571.6 |
| 85° | 42.2 | 51.5 | 60.9 | 84.3 | 65.6 | 60.9 | 79.6 | 178.0 | 304.5 | *224.9* | 154.6 |
| 87.5° | 4.7 | 4.7 | 9.4 | 9.4 | 9.4 | 14.1 | 23.4 | 37.5 | 51.5 | *51.5* | 51.5 |
| 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: P1362647
CATALOG NUMBER: GSS-SB5A-727-U-SL2

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 4385.3 | 4385.3 | 4385.3 | 4385.3 | 4385.3 | 4385.3 | 4385.3 | 4385.3 | 4385.3 | 4385.3 | 4385.3 |
| 2.5° | 4404.0 | 4390.0 | 4371.2 | 4343.1 | 4343.1 | 4310.3 | 4291.6 | 4254.1 | 4268.1 | 4249.4 | 4240.0 |
| 5° | 4446.2 | 4427.4 | 4385.3 | 4338.4 | 4291.6 | 4221.3 | 4165.1 | 4085.4 | 4076.1 | 4057.3 | 4029.2 |
| 7.5° | 4521.1 | 4474.3 | 4422.8 | 4315.0 | 4226.0 | 4066.7 | 3940.2 | 3780.9 | 3691.9 | 3635.7 | 3640.3 |
| 10° | 4596.1 | 4535.2 | 4427.4 | 4286.9 | 4094.8 | 3832.4 | 3504.5 | 3190.6 | 2951.6 | 2815.8 | 2843.9 |
| 12.5° | 4647.6 | 4582.1 | 4436.8 | 4211.9 | 3855.9 | 3331.1 | 2722.1 | 2277.0 | 2103.6 | 2014.6 | 2014.6 |
| 15° | 4699.2 | 4614.8 | 4422.8 | 4052.6 | 3406.1 | 2511.2 | 2028.7 | 1860.0 | 1813.1 | 1785.0 | 1775.7 |
| 17.5° | 4764.8 | 4666.4 | 4380.6 | 3757.5 | 2684.6 | 1963.1 | 1794.4 | 1742.9 | 1742.9 | 1738.2 | 1728.8 |
| 20° | 4844.4 | 4727.3 | 4329.1 | 3289.0 | 2061.5 | 1761.6 | 1714.8 | 1705.4 | 1714.8 | 1710.1 | 1705.4 |
| 22.5° | 4966.2 | 4802.3 | 4197.9 | 2642.4 | 1771.0 | 1667.9 | 1663.2 | 1616.4 | 1625.7 | 1635.1 | 1630.4 |
| 25° | 5120.8 | 4896.0 | 3949.6 | 2019.3 | 1625.7 | 1607.0 | 1560.1 | 1518.0 | 1513.3 | 1518.0 | 1518.0 |
| 27.5° | 5266.1 | 4966.2 | 3546.6 | 1663.2 | 1522.7 | 1518.0 | 1475.8 | 1438.3 | 1438.3 | 1443.0 | 1443.0 |
| 30° | 5425.4 | 5008.4 | 2928.2 | 1480.5 | 1461.8 | 1438.3 | 1424.3 | 1410.2 | 1414.9 | 1429.0 | 1429.0 |
| 32.5° | 5636.2 | 5050.6 | 2323.8 | 1377.4 | 1400.9 | 1368.1 | 1377.4 | 1372.7 | 1382.1 | 1405.5 | 1410.2 |
| 35° | 5893.9 | 5069.3 | 1860.0 | 1316.5 | 1316.5 | 1288.4 | 1293.1 | 1274.4 | 1274.4 | 1288.4 | 1297.8 |
| 37.5° | 6235.9 | 5078.7 | 1564.8 | 1283.7 | 1250.9 | 1236.9 | 1227.5 | 1204.1 | 1171.3 | 1147.9 | 1152.5 |
| 40° | 6606.0 | 5102.1 | 1405.5 | 1260.3 | 1222.8 | 1218.1 | 1199.4 | 1166.6 | 1072.9 | 997.9 | 993.2 |
| 42.5° | 7098.0 | 5167.7 | 1325.9 | 1222.8 | 1222.8 | 1222.8 | 1194.7 | 1049.5 | 974.5 | 923.0 | 918.3 |
| 45° | 7594.6 | 5341.0 | 1283.7 | 1190.0 | 1218.1 | 1222.8 | 1096.3 | 1007.3 | 946.4 | 890.2 | 876.1 |
| 47.5° | 8147.4 | 5589.4 | 1265.0 | 1171.3 | 1185.3 | 1194.7 | 1030.7 | 988.6 | 918.3 | 852.7 | 838.6 |
| 50° | 8695.6 | 5851.7 | 1246.2 | 1138.5 | 1138.5 | 1077.6 | 1016.7 | 969.8 | 899.5 | 829.3 | 819.9 |
| 52.5° | 9276.5 | 6156.3 | 1227.5 | 1082.3 | 1077.6 | 1012.0 | 1002.6 | 965.1 | 890.2 | 801.2 | 782.4 |
| 55° | 9782.5 | 6432.7 | 1194.7 | 1016.7 | 1012.0 | 946.4 | 993.2 | 946.4 | 834.0 | 730.9 | 712.1 |
| 57.5° | 10265.1 | 6657.6 | 1152.5 | 946.4 | 955.8 | 894.9 | 955.8 | 908.9 | 782.4 | 679.3 | 670.0 |
| 60° | 10724.2 | 6891.8 | 1096.3 | 885.5 | 885.5 | 848.0 | 908.9 | 848.0 | 730.9 | 627.8 | 613.8 |
| 62.5° | 10860.1 | 6816.9 | 1002.6 | 819.9 | 815.2 | 787.1 | 848.0 | 777.7 | 665.3 | 571.6 | 557.5 |
| 65° | 10391.6 | 6432.7 | 890.2 | 754.3 | 740.2 | 716.8 | 759.0 | 693.4 | 590.3 | 515.4 | 510.7 |
| 67.5° | 10457.2 | 6282.8 | 763.7 | 670.0 | 655.9 | 637.2 | 651.2 | 599.7 | 520.0 | 463.8 | 459.1 |
| 70° | 10541.5 | 6118.8 | 646.5 | 590.3 | 557.5 | 524.7 | 557.5 | 515.4 | 459.1 | 412.3 | 407.6 |
| 72.5° | *10475.9* | *5664.3* | *534.1* | *496.6* | *473.2* | *435.7* | *477.9* | *445.1* | *398.2* | *360.8* | *351.4* |
| 75° | 9529.5 | 4553.9 | 435.7 | 407.6 | 379.5 | 356.1 | 384.2 | 374.8 | 337.3 | 332.6 | 299.8 |
| 77.5° | 6409.2 | 2918.8 | 337.3 | 313.9 | 304.5 | 281.1 | 299.8 | 285.8 | 267.1 | 248.3 | 234.3 |
| 80° | 2778.3 | 1307.1 | 243.6 | 220.2 | 210.8 | 196.8 | 215.5 | 210.8 | 201.5 | 187.4 | 182.7 |
| 82.5° | 398.2 | 309.2 | 164.0 | 149.9 | 126.5 | 117.1 | 126.5 | 135.9 | 196.8 | 238.9 | 234.3 |
| 85° | 112.4 | 93.7 | 79.6 | 70.3 | 56.2 | 46.9 | 51.5 | 84.3 | 112.4 | 70.3 | 60.9 |
| 87.5° | 51.5 | 46.9 | 37.5 | 23.4 | 14.1 | 14.1 | 9.4 | 4.7 | 4.7 | 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: SP1-2407-184-3

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

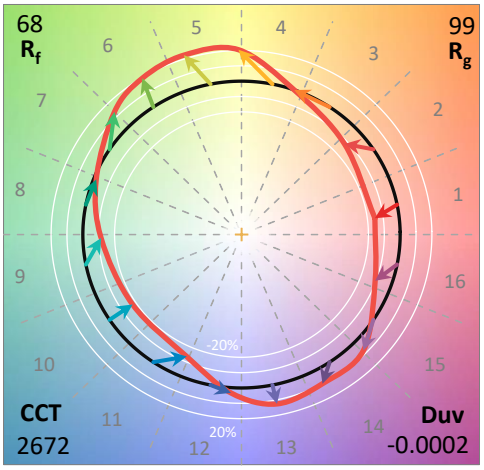
## Test Information

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

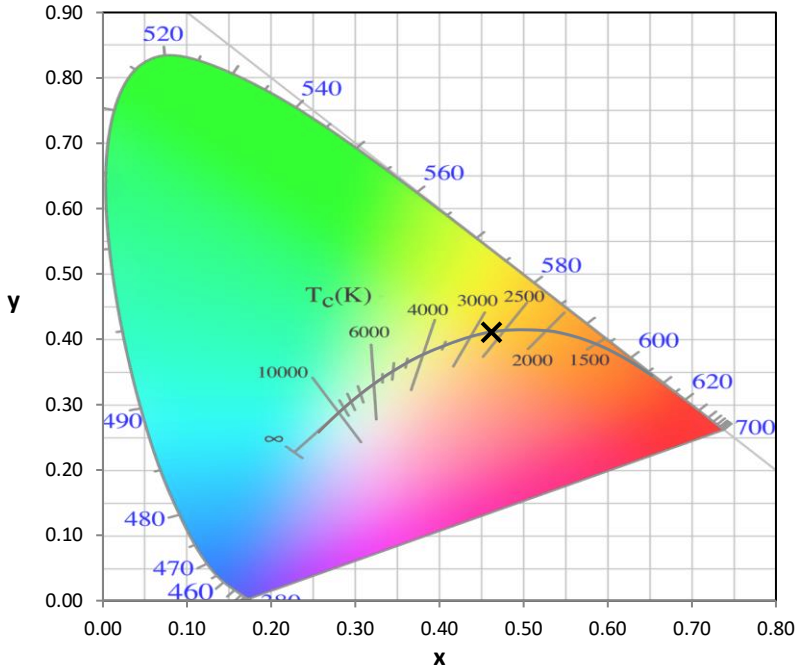
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

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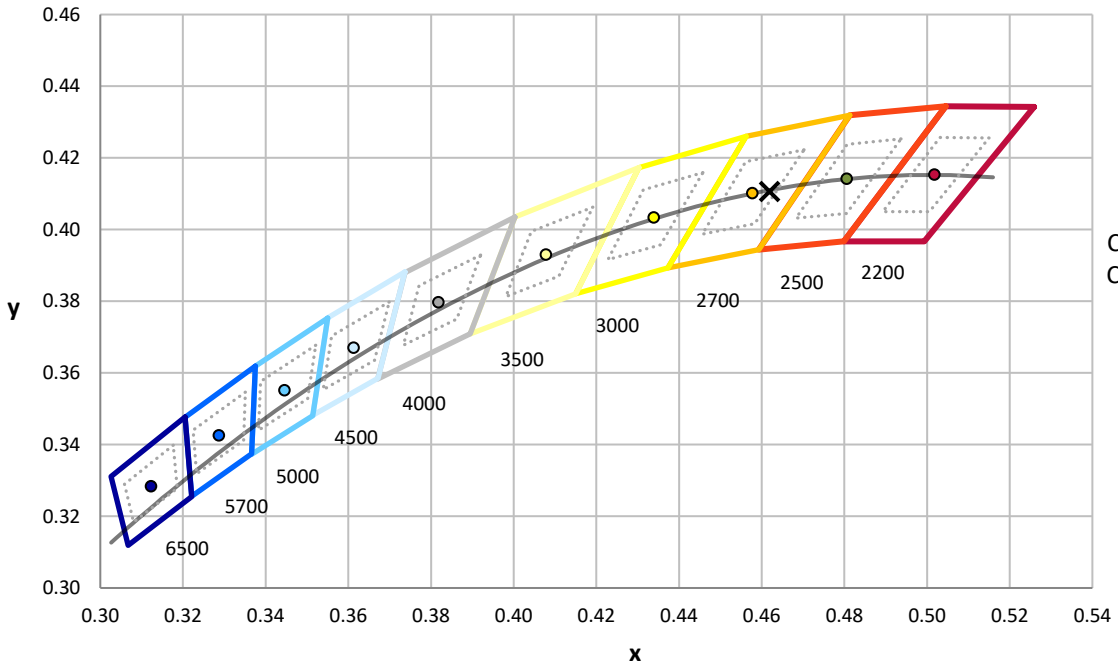
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

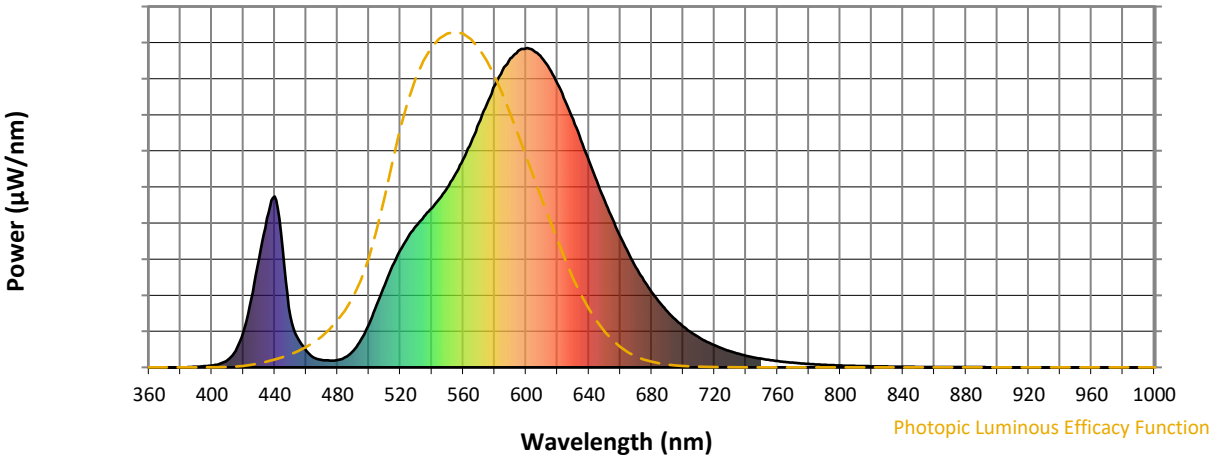



CCT = 2672K
CIE x = 0.4619
CIE y = 0.4106
Duv = -0.0002

Point lies inside the ANSI 2700K 4-step quadrangle

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## Photopic Flux vs. Wavelength

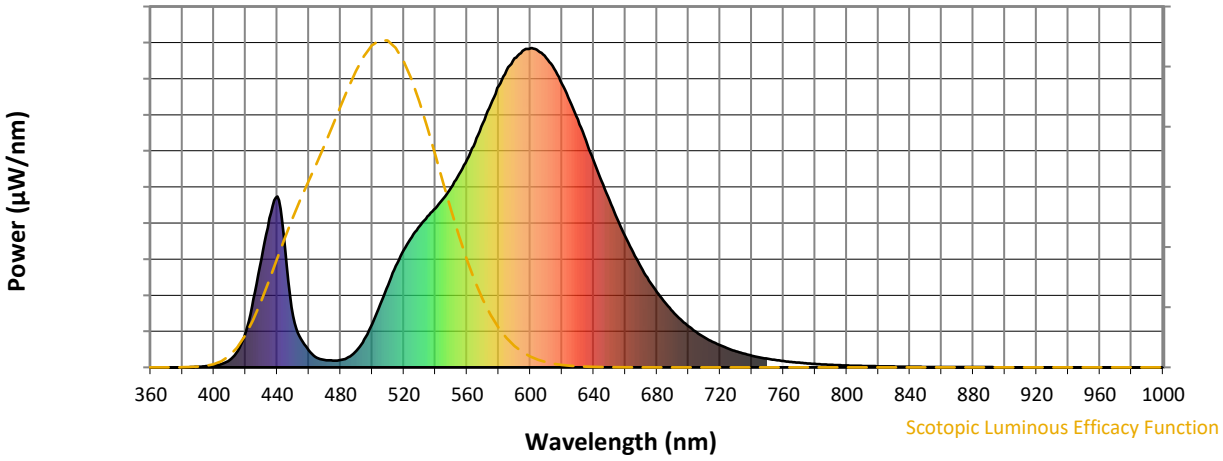



## Photopic Lumens: NR

| 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

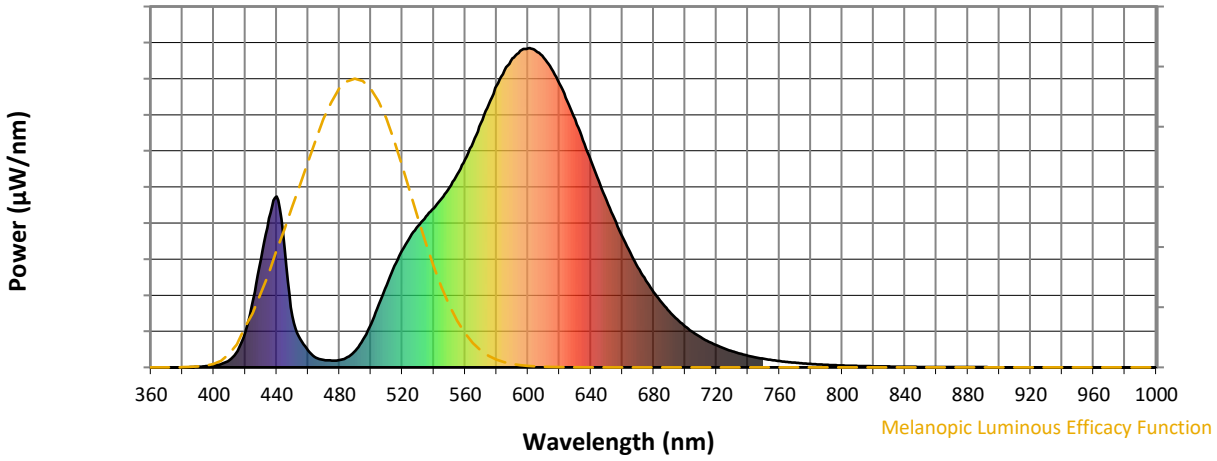



**Scotopic Lumens: NR** **S/P: 1.02**

| 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 | | | |

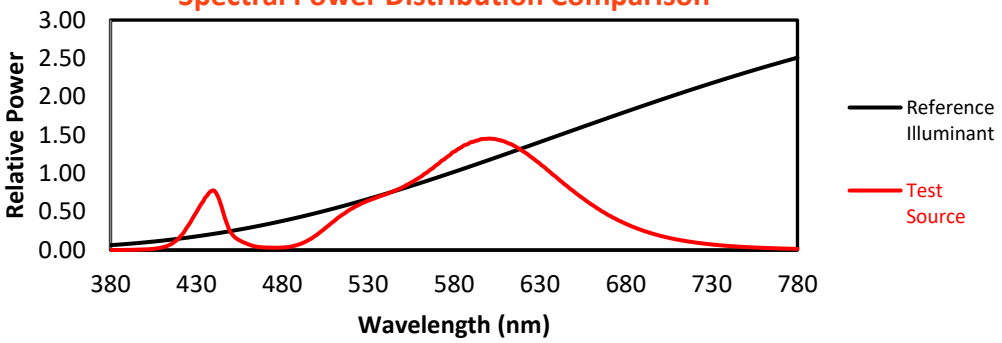
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# TM-30-18

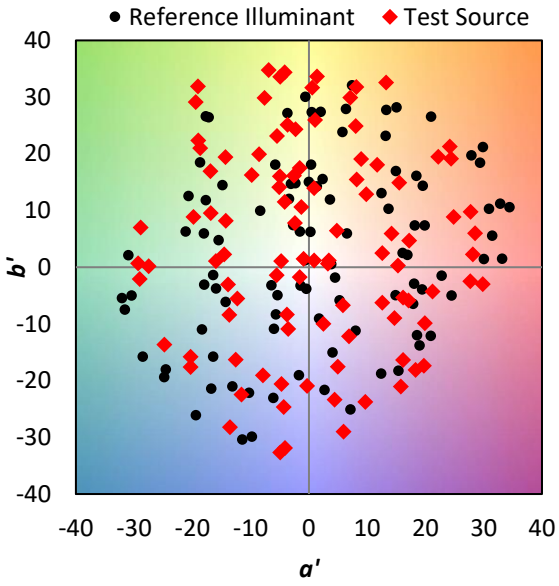
## Summary

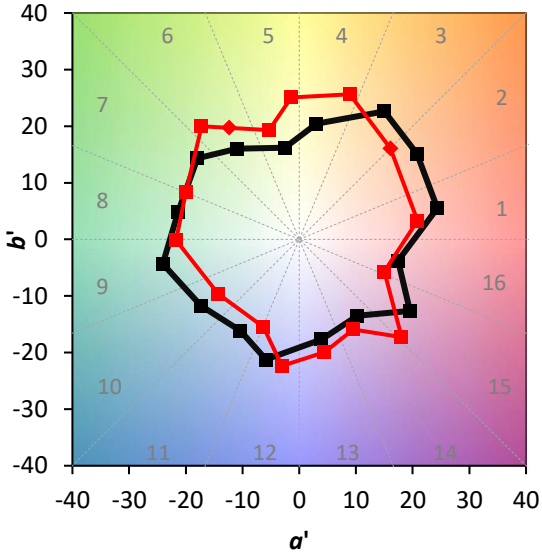
$R_f$ = 67.9
$R_g$ = 98.6
CIE $R_a$ = 71.1
$R_9$ = -27.8

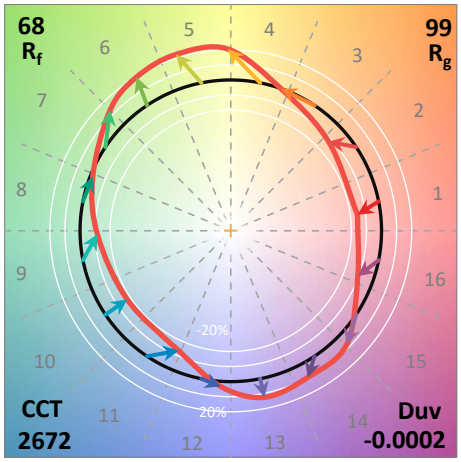
## Spectral Power Distribution Comparison

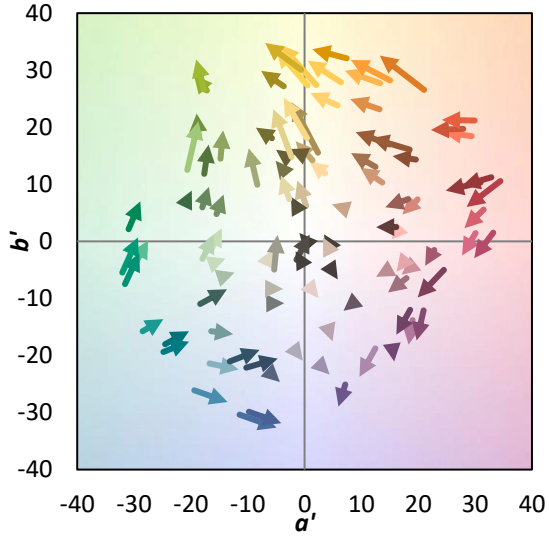



## Color Vector Graphics



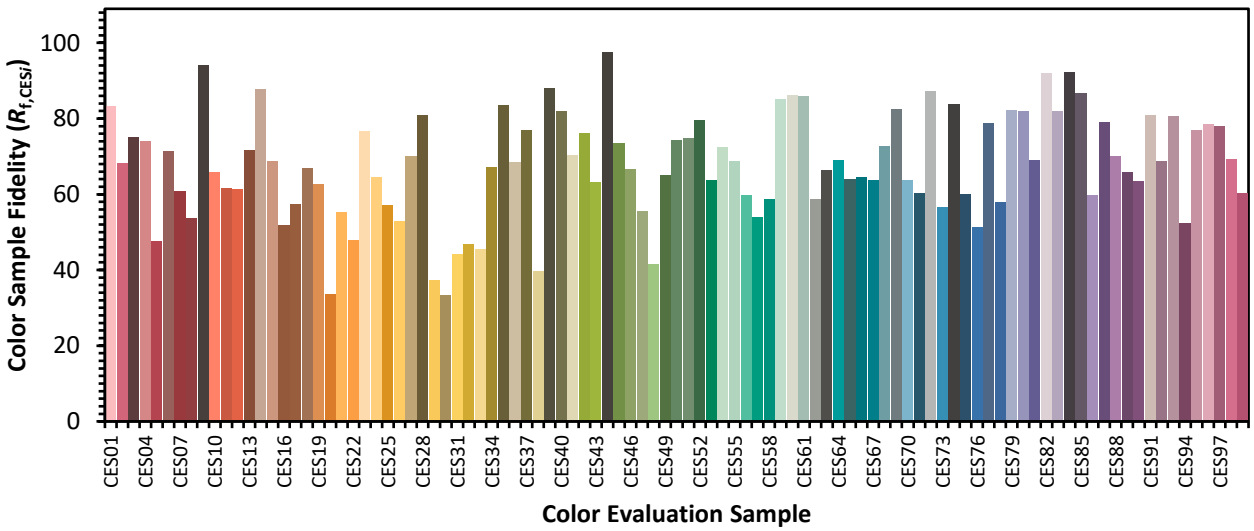



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**Individual Sample Fidelity Index ($R_{f,i}$)**

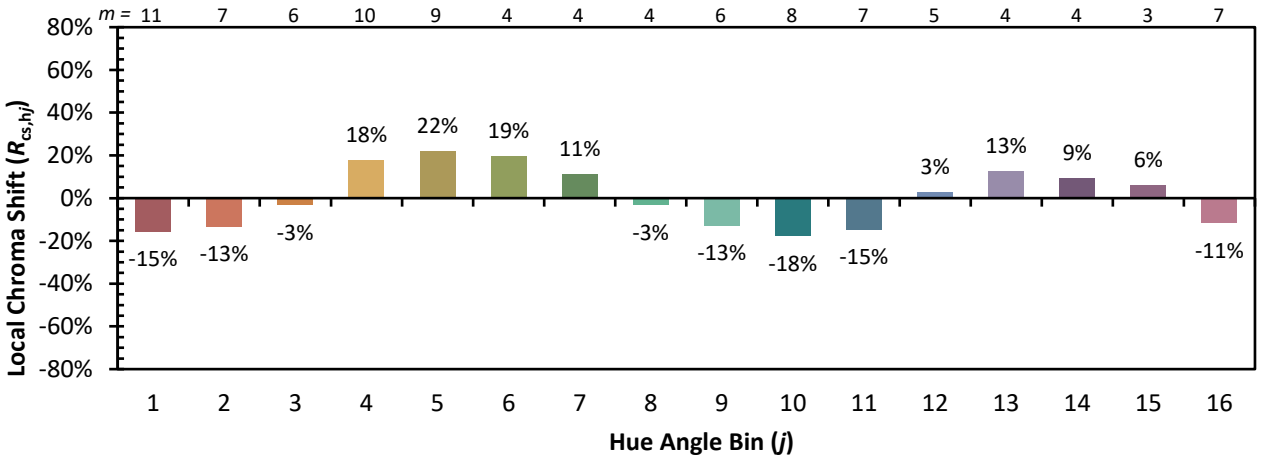
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 53 | CES51 = 75 | CES76 = 51 |
| CES02 = 63 | CES27 = 70 | CES52 = 80 | CES77 = 79 |
| CES03 = 31 | CES28 = 81 | CES53 = 64 | CES78 = 58 |
| CES04 = 71 | CES29 = 37 | CES54 = 73 | CES79 = 82 |
| CES05 = 50 | CES30 = 33 | CES55 = 69 | CES80 = 82 |
| CES06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

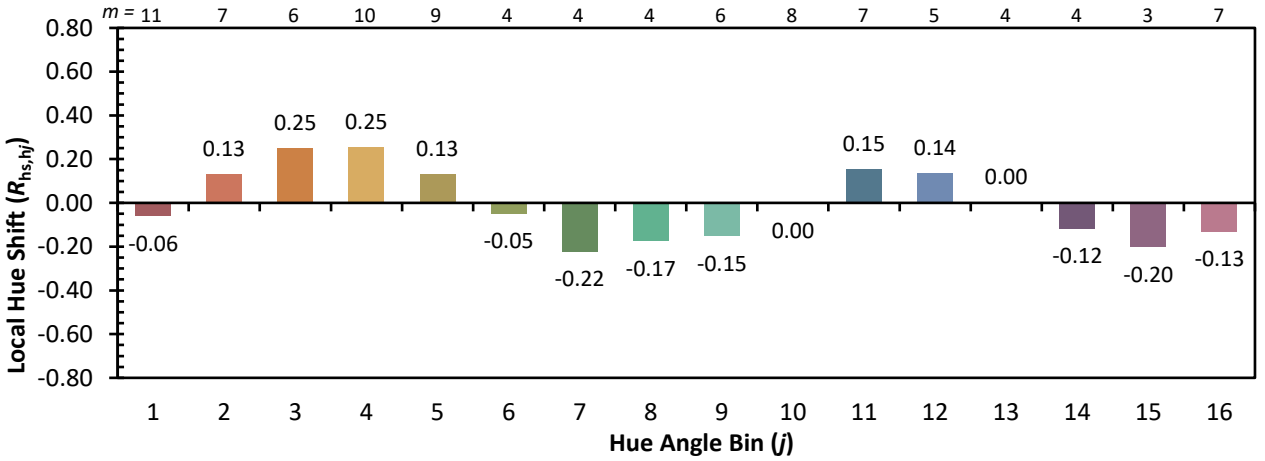


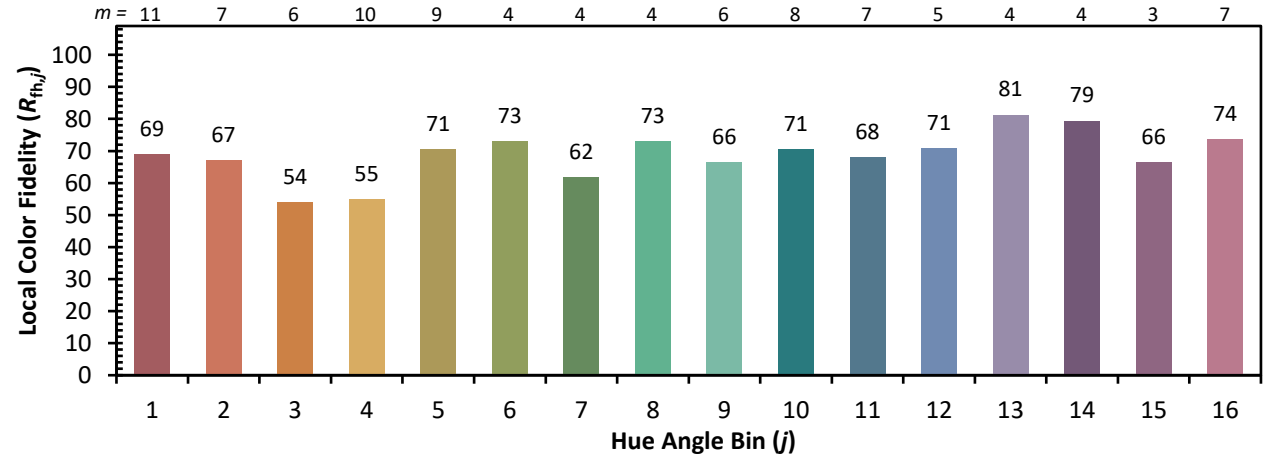
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## Color Rendition by Hue-Angle Bin



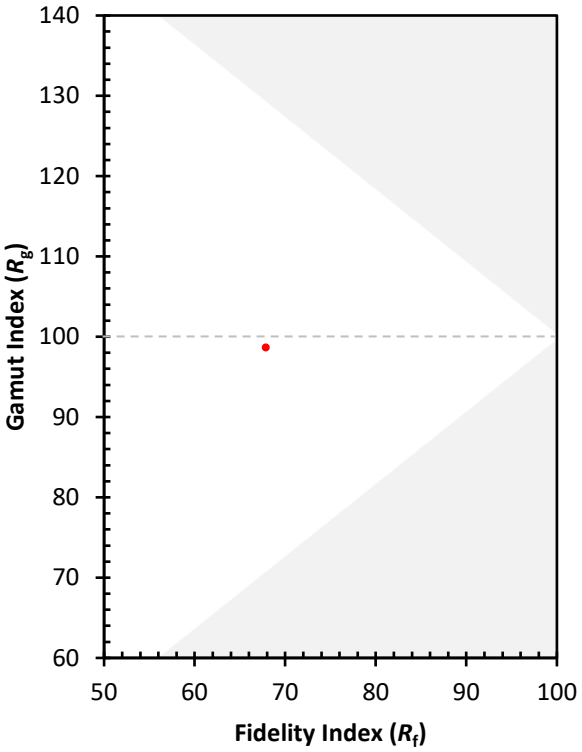



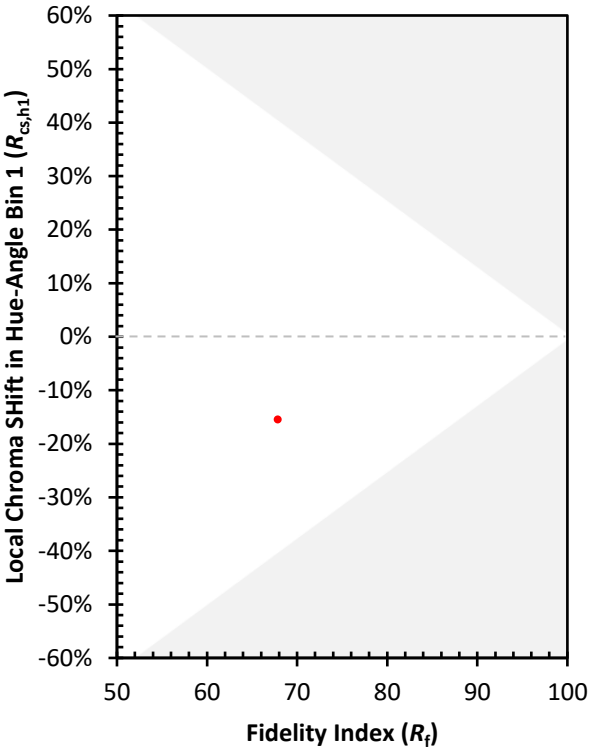



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## Measure Comparisons




(END OF REPORT)