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: McGRAW-EDISON

Report Number: P1500819

Luminaire Tested: GSS-SB6C-840-U-T4LG

Issue Date: 07/20/2026

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: | P1500819 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 7/20/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB6C-840-U-T4LG |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 6SQUARE 300W 80CRI 4000K FIXTURE w/ TYPE IV LOW GLARE DISTRIBUTION FIXTURE |
| Light Source: | (156) 4000K CCT, 80 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 41614 lumens |
| Efficiency: | N/A |
| Efficacy: | 138.7 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B4 - U0 - G4 |

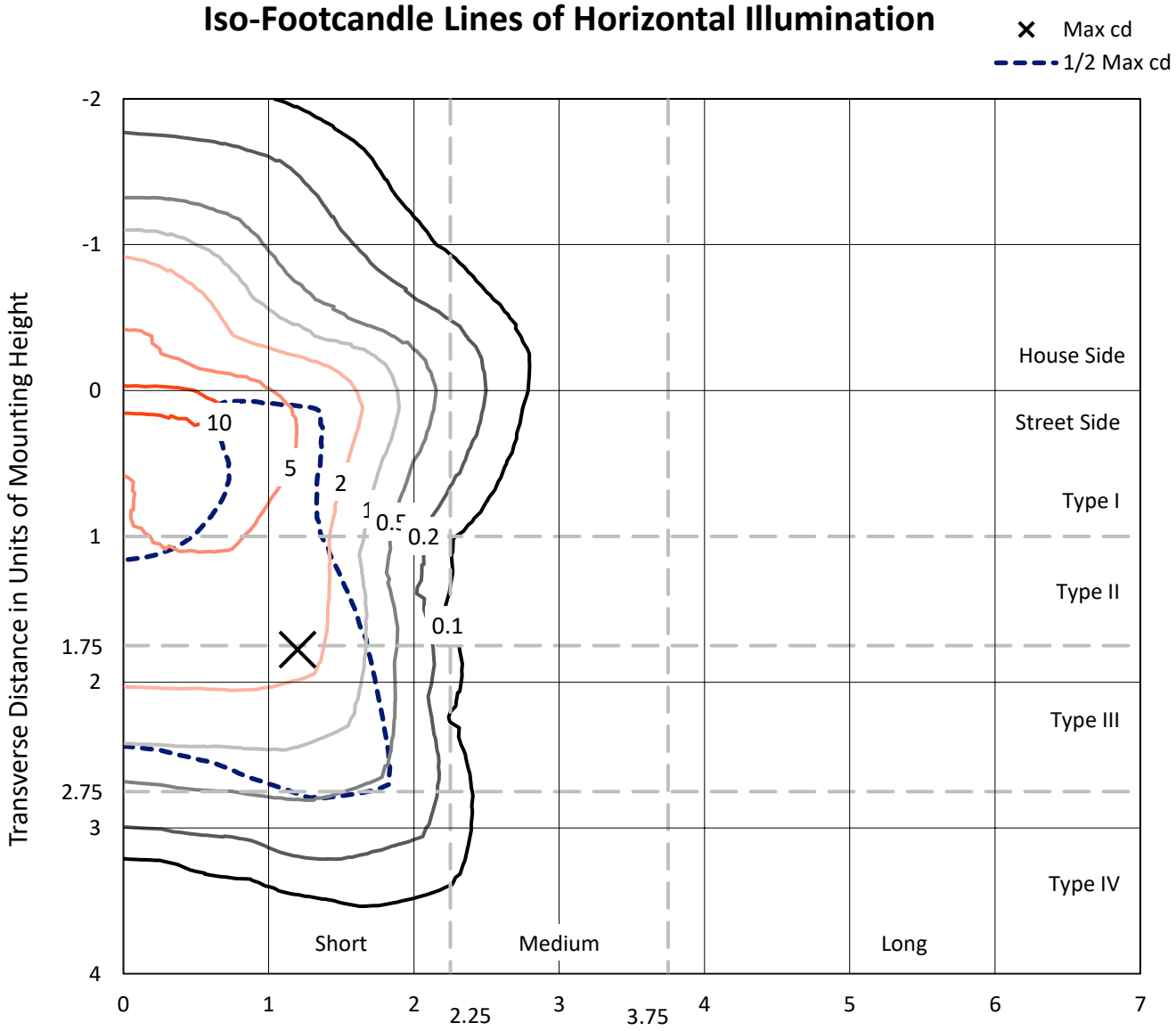
| | |
|---|---|
| Input Watts (W): | 300 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 6.3% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1500819
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## Iso-Footcandle Lines of Horizontal Illumination



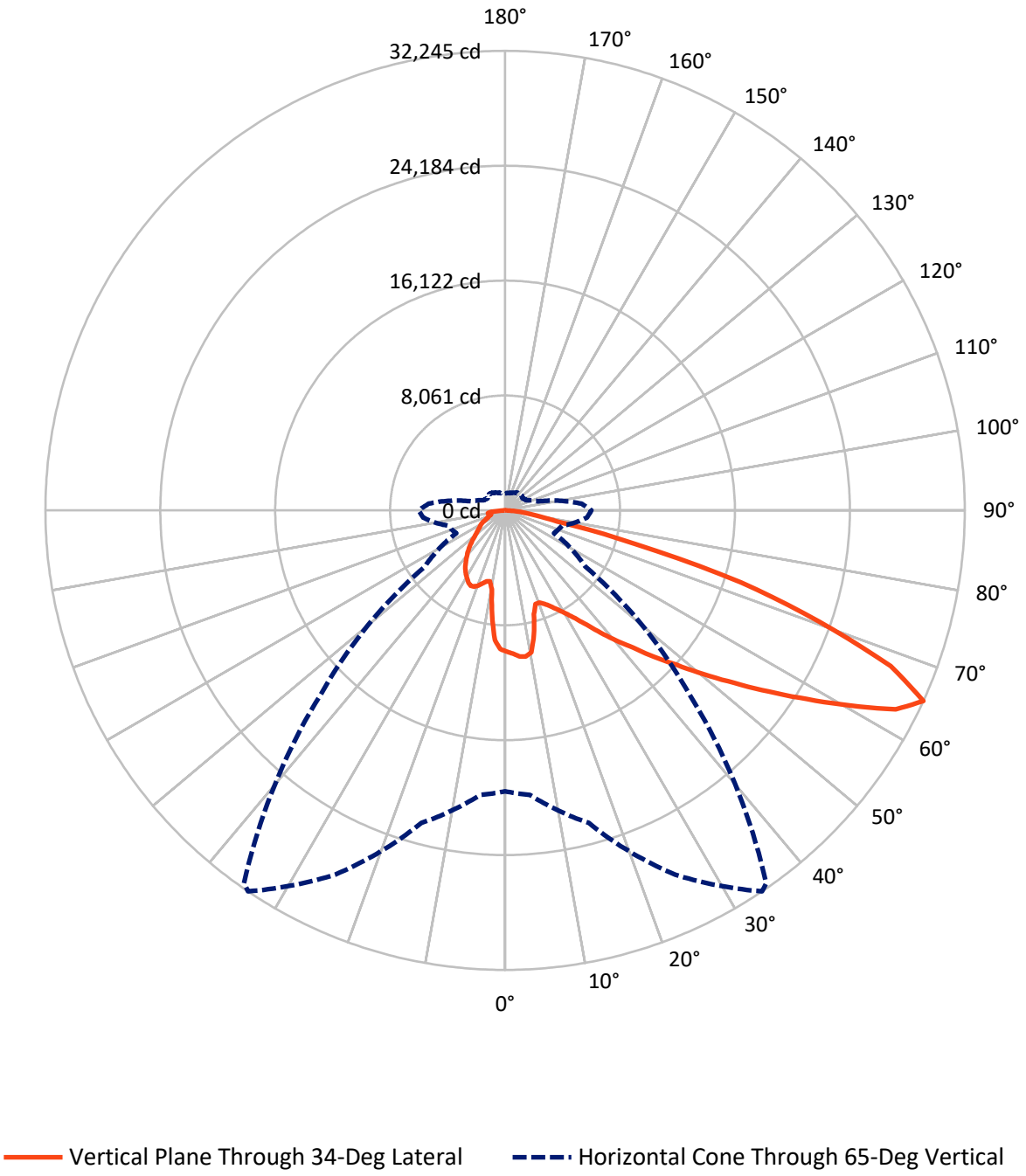

Based on 30 foot mounting height. Maximum calculated value = 11.7 fc
Type III - Short - N/A

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## Luminous Intensity Polar Plot



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Scaled Data Report

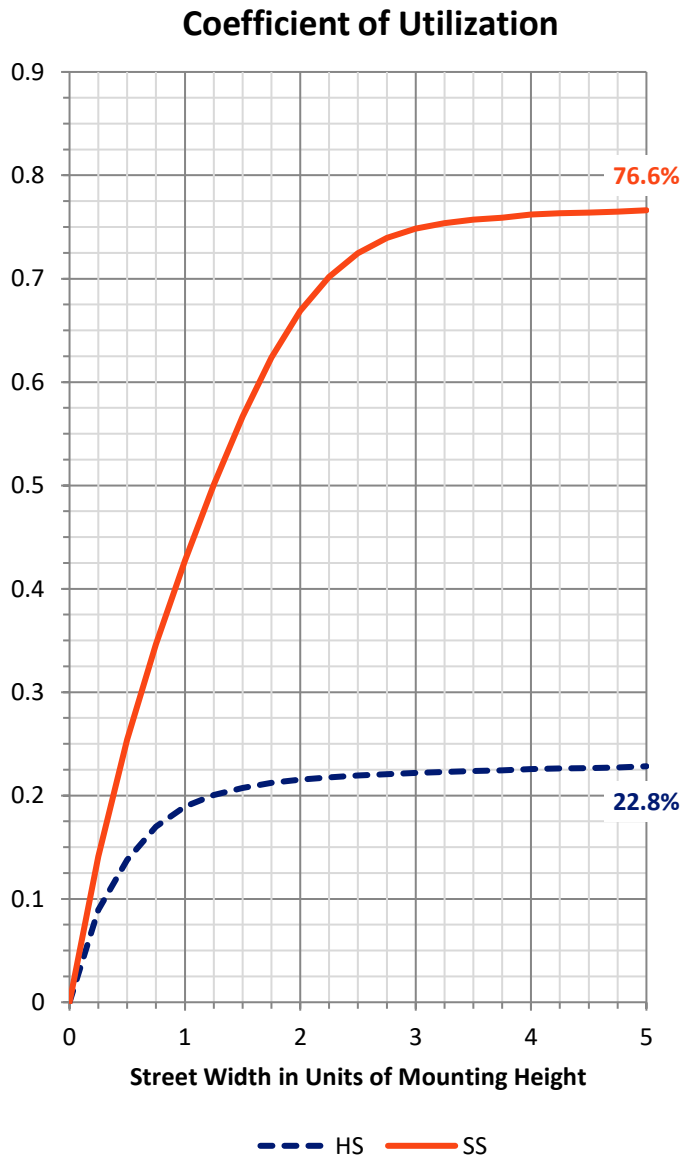
REPORT NUMBER: P1500819
CATALOG NUMBER: GSS-SB6C-840-U-T4LG

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 9681.8 | 0.0 | 9681.8 |
| | % Fixture | 23.3 | 0.0 | 23.3 |
| **Street Side** | Lumens | 31932.3 | 0.0 | 31932.3 |
| | % Fixture | 76.7 | 0.0 | 76.7 |
| **Total** | Lumens | 41614.0 | 0.0 | 41614.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 891.9 | 2.1 |
| 10°-20° | 2244.9 | 5.4 |
| 20°-30° | 3721.2 | 8.9 |
| 30°-40° | 5596.5 | 13.4 |
| 40°-50° | 7840.5 | 18.8 |
| 50°-60° | 9885.6 | 23.8 |
| 60°-70° | 8502.4 | 20.4 |
| 70°-80° | 2527.8 | 6.1 |
| 80°-90° | 403.3 | 1.0 |
| 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° | 41614.0 | 100.0 |
| 0°-180° | 41614.0 | 100.0 |



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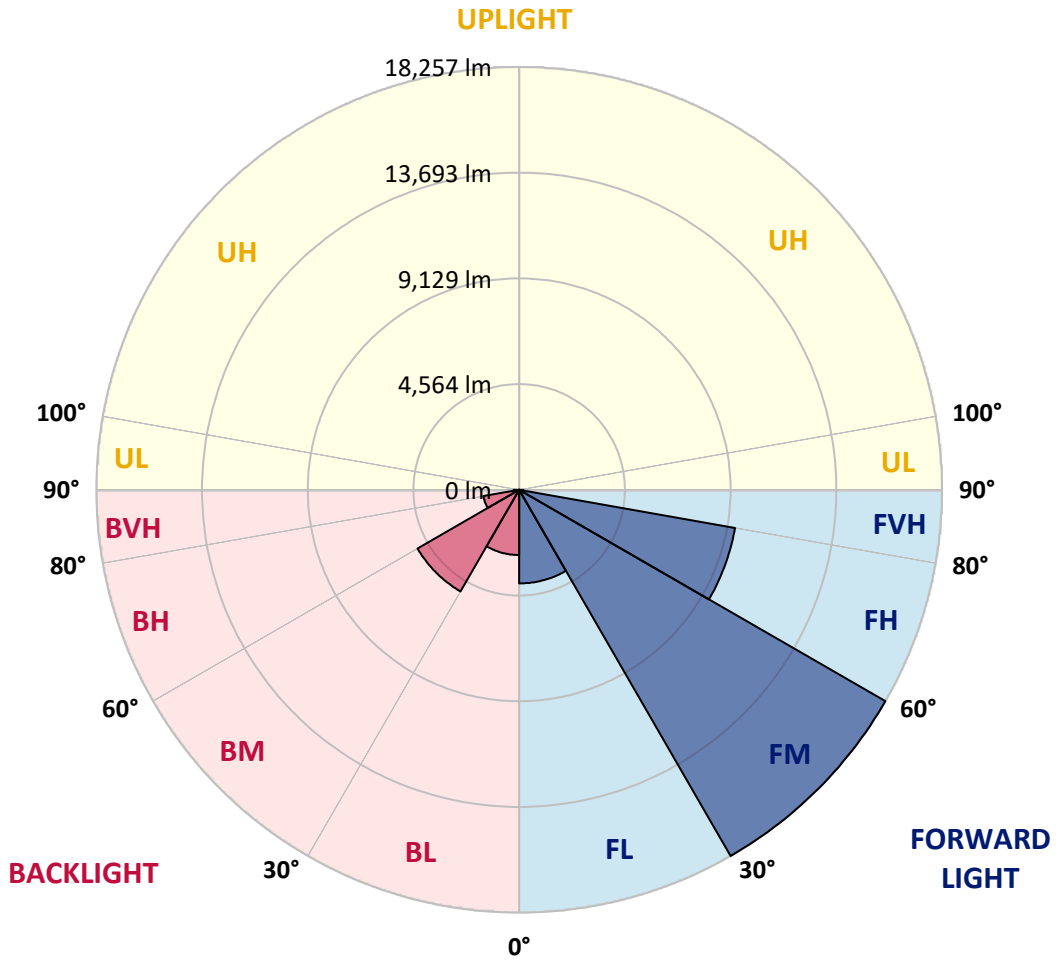
Scaled Data Report

REPORT NUMBER: P1500819
CATALOG NUMBER: GSS-SB6C-840-U-T4LG

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 4041.1 | 9.7 | | | |
| FM | (30°-60°) | 18257.3 | 43.9 | | | |
| FH | (60°-80°) | 9463.3 | 22.7 | | | G4/12000 |
| FVH | (80°-90°) | 170.6 | 0.4 | | | G2/225 |
| BL | (0°-30°) | 2817.0 | 6.8 | B4/5000 | | |
| BM | (30°-60°) | 5065.2 | 12.2 | B4/8500 | | |
| BH | (60°-80°) | 1566.9 | 3.8 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 232.7 | 0.6 | | | G3/500 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B4-U0-G4**
Type III Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 34° | 35° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 9893.9 | 9893.9 | 9893.9 | 9893.9 | *9893.9* | 9893.9 | 9893.9 | 9893.9 | 9893.9 | 9893.9 | 9893.9 |
| 2.5° | 10082.4 | 10138.9 | 10072.9 | 10044.7 | *10054.1* | 10063.5 | 10016.4 | 10025.8 | 9969.3 | 9969.3 | 9922.2 |
| 5° | 10299.1 | 10308.5 | 10270.8 | 10299.1 | *10289.7* | 10280.2 | 10280.2 | 10270.8 | 10148.3 | 10120.1 | 10072.9 |
| 7.5° | 10176.6 | 10214.3 | 10233.1 | 10336.8 | *10365.0* | 10421.6 | 10459.3 | 10478.1 | 10383.9 | 10308.5 | 10186.0 |
| 10° | 9055.3 | 9083.6 | 9300.3 | 9771.4 | *10129.5* | 10195.4 | 10544.1 | 10742.0 | 10676.0 | 10638.3 | 10431.0 |
| 12.5° | 7236.7 | 7283.8 | 7528.8 | 8141.3 | *8979.9* | 9158.9 | 10270.8 | 10939.8 | 11090.6 | 11100.0 | 10798.5 |
| 15° | 6454.6 | 6454.6 | 6530.0 | 6878.6 | *7557.1* | 7698.4 | 9338.0 | 10996.4 | 11533.5 | 11599.4 | 11231.9 |
| 17.5° | 6294.4 | 6285.0 | 6332.1 | 6539.4 | *6897.5* | 6982.3 | 8263.8 | 10704.3 | 12061.1 | 12174.2 | 11703.1 |
| 20° | 6285.0 | 6256.7 | 6350.9 | 6586.5 | *6897.5* | 6972.9 | 7764.4 | 10195.4 | 12475.7 | 12833.8 | 12174.2 |
| 22.5° | 6294.4 | 6294.4 | 6426.3 | 6765.5 | *7123.6* | 7189.6 | 7858.6 | 9771.4 | 12815.0 | 13521.7 | 12673.6 |
| 25° | 6398.1 | 6379.2 | 6567.7 | 6982.3 | *7472.3* | 7519.4 | 8244.9 | 9752.6 | 13107.1 | 14294.3 | 13276.7 |
| 27.5° | 6567.7 | 6577.1 | 6831.5 | 7330.9 | *7886.9* | 7981.1 | 8782.0 | 10157.7 | 13465.1 | 15142.4 | 13860.9 |
| 30° | 6925.7 | 6935.2 | 7236.7 | 7745.5 | *8386.3* | 8508.8 | 9403.9 | 10760.8 | 13974.0 | 16056.4 | 14492.2 |
| 32.5° | 7330.9 | 7378.0 | 7745.5 | 8339.2 | *9027.0* | 9093.0 | 10167.2 | 11665.4 | 14737.2 | 16970.4 | 15170.7 |
| 35° | 8009.4 | 8056.5 | 8471.1 | 9093.0 | *9856.2* | 9950.4 | 11100.0 | 12711.3 | 15670.1 | 17893.8 | 15698.3 |
| 37.5° | 8885.7 | 8923.4 | 9328.5 | 10082.4 | *10892.7* | 10987.0 | 12136.5 | 13823.2 | 16612.3 | 18628.8 | 16169.5 |
| 40° | 9931.6 | 10016.4 | 10449.9 | 11184.8 | *12004.6* | 12061.1 | 13267.3 | 14897.4 | 17630.0 | 19137.6 | 16357.9 |
| 42.5° | 11071.8 | 11156.6 | 11599.4 | 12409.8 | *13163.6* | 13333.2 | 14492.2 | 16037.6 | 18459.2 | 19363.8 | 16207.2 |
| 45° | 12532.3 | 12513.4 | 12928.0 | 13776.1 | *14661.8* | 14727.8 | 15802.0 | 16979.8 | 18958.6 | 19175.3 | 16056.4 |
| 47.5° | 14303.8 | 14322.6 | 14586.4 | 15274.3 | *16188.3* | 16339.1 | 17168.3 | 17790.2 | 19250.7 | 19024.6 | 15886.8 |
| 50° | 16301.4 | 16348.5 | 16574.7 | 17074.1 | *18054.0* | 18157.7 | 18402.7 | 18355.6 | 19429.8 | 18704.2 | 15952.8 |
| 52.5° | 18299.0 | 18327.3 | 18628.8 | 19156.5 | *20108.2* | 20183.6 | 19646.5 | 18789.0 | 18760.7 | 17413.3 | 15811.4 |
| 55° | 19938.6 | 19929.2 | 20466.3 | 21276.6 | *22435.6* | 22388.5 | 20871.4 | 18459.2 | 16668.9 | 15406.2 | 15180.1 |
| 57.5° | 21361.4 | 21418.0 | 22115.2 | 23519.2 | *24979.8* | 24942.1 | 22181.2 | 16716.0 | 13615.9 | 13031.7 | 14153.0 |
| 60° | 22642.9 | 22774.8 | 24084.6 | 26185.9 | *27797.2* | 27571.0 | 22416.8 | 14087.0 | 10591.2 | 10204.9 | 12117.7 |
| 62.5° | 22087.0 | 22332.0 | 24433.2 | 28532.2 | *30746.5* | 30247.1 | 20965.7 | 10911.6 | 7170.7 | 6822.1 | 8565.3 |
| 65° | *19712.4* | *20042.2* | *22708.9* | *28192.9* | *32244.7* | *31933.8* | *18327.3* | *6859.8* | *3778.5* | *4146.0* | *5766.7* |
| 67.5° | 16555.8 | 16951.6 | 19834.9 | 25328.4 | *29172.9* | 28503.9 | 14237.8 | 3608.9 | 1762.1 | 2732.6 | 3580.7 |
| 70° | 9074.1 | 10054.1 | 14341.5 | 21540.5 | *23368.5* | 22435.6 | 8235.5 | 1705.5 | 1281.5 | 1705.5 | 2139.0 |
| 72.5° | 3411.0 | 3646.6 | 6219.0 | 14482.8 | *17309.6* | 16160.1 | 3128.4 | 1102.5 | 1074.2 | 1262.7 | 1545.3 |
| 75° | 1639.6 | 1752.6 | 2704.3 | 6586.5 | *9451.0* | 8810.3 | 1535.9 | 819.8 | 923.4 | 989.4 | 1121.3 |
| 77.5° | 980.0 | 1055.4 | 1686.7 | 3825.6 | *3722.0* | 3420.5 | 942.3 | 631.3 | 744.4 | 706.7 | 659.6 |
| 80° | 584.2 | 650.2 | 1027.1 | 2176.7 | *2242.6* | 1988.2 | 574.8 | 442.9 | 518.3 | 452.3 | 405.2 |
| 82.5° | 339.2 | 367.5 | 537.1 | 980.0 | *1422.8* | 1309.8 | 329.8 | 263.8 | 376.9 | 301.5 | 226.1 |
| 85° | 169.6 | 179.0 | 245.0 | 424.0 | *706.7* | 537.1 | 141.3 | 122.5 | 179.0 | 131.9 | 75.4 |
| 87.5° | 37.7 | 37.7 | 37.7 | 47.1 | *66.0* | 66.0 | 18.8 | 9.4 | 9.4 | 9.4 | 9.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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Scaled Data Report

REPORT NUMBER: P1500819
CATALOG NUMBER: GSS-SB6C-840-U-T4LG

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 9893.9 | 9893.9 | 9893.9 | 9893.9 | 9893.9 | 9893.9 | 9893.9 | 9893.9 | 9893.9 | 9893.9 | 9893.9 |
| 2.5° | 9912.8 | 9931.6 | 9865.6 | 9790.3 | 9771.4 | 9714.9 | 9733.7 | 9696.0 | 9639.5 | 9648.9 | 9658.3 |
| 5° | 10007.0 | 9969.3 | 9837.4 | 9667.8 | 9517.0 | 9347.4 | 9149.5 | 8923.4 | 8763.2 | 8697.2 | 8753.8 |
| 7.5° | 10091.8 | 10054.1 | 9828.0 | 9451.0 | 8942.2 | 8235.5 | 7500.5 | 6831.5 | 6369.8 | 6200.2 | 6237.9 |
| 10° | 10327.4 | 10176.6 | 9762.0 | 8942.2 | 7726.7 | 6388.6 | 5644.2 | 5229.6 | 5088.3 | 5012.9 | 5022.3 |
| 12.5° | 10638.3 | 10431.0 | 9639.5 | 8056.5 | 6219.0 | 5371.0 | 5107.1 | 5012.9 | 4965.8 | 4947.0 | 4965.8 |
| 15° | 11015.2 | 10694.8 | 9347.4 | 6944.6 | 5521.7 | 5191.9 | 5135.4 | 5144.8 | 5144.8 | 5154.3 | 5154.3 |
| 17.5° | 11345.0 | 10845.6 | 8819.7 | 6143.6 | 5380.4 | 5286.2 | 5342.7 | 5389.8 | 5389.8 | 5399.2 | 5389.8 |
| 20° | 11646.5 | 10921.0 | 8141.3 | 5804.4 | 5408.7 | 5455.8 | 5587.7 | 5634.8 | 5644.2 | 5634.8 | 5634.8 |
| 22.5° | 11966.9 | 10968.1 | 7462.8 | 5616.0 | 5474.6 | 5616.0 | 5757.3 | 5823.3 | 5842.1 | 5851.5 | 5861.0 |
| 25° | 12277.9 | 10873.9 | 6906.9 | 5465.2 | 5446.4 | 5644.2 | 5804.4 | 5889.2 | 5908.1 | 5908.1 | 5917.5 |
| 27.5° | 12588.8 | 10845.6 | 6530.0 | 5267.3 | 5314.4 | 5474.6 | 5663.1 | 5776.2 | 5851.5 | 5861.0 | 5870.4 |
| 30° | 12946.9 | 10760.8 | 6171.9 | 5003.5 | 5022.3 | 5220.2 | 5418.1 | 5616.0 | 5766.7 | 5832.7 | 5832.7 |
| 32.5° | 13191.9 | 10676.0 | 5851.5 | 4720.8 | 4720.8 | 4928.1 | 5173.1 | 5418.1 | 5634.8 | 5766.7 | 5795.0 |
| 35° | 13427.4 | 10600.6 | 5568.9 | 4438.1 | 4447.5 | 4645.4 | 4899.8 | 5163.7 | 5436.9 | 5597.1 | 5672.5 |
| 37.5° | 13549.9 | 10525.2 | 5371.0 | 4221.4 | 4183.7 | 4391.0 | 4560.6 | 4777.3 | 5069.5 | 5333.3 | 5399.2 |
| 40° | 13578.2 | 10525.2 | 5352.1 | 4070.6 | 3910.4 | 4146.0 | 4221.4 | 4372.2 | 4636.0 | 4918.7 | 5022.3 |
| 42.5° | 13389.8 | 10421.6 | 5446.4 | 3976.4 | 3627.8 | 3797.4 | 3882.2 | 3957.6 | 4127.2 | 4362.7 | 4447.5 |
| 45° | 13163.6 | 10280.2 | 5531.2 | 3844.5 | 3279.1 | 3411.0 | 3543.0 | 3552.4 | 3627.8 | 3684.3 | 3740.8 |
| 47.5° | 12975.2 | 10129.5 | 5380.4 | 3599.5 | 2921.1 | 3015.3 | 3156.6 | 3156.6 | 3118.9 | 3005.9 | 2968.2 |
| 50° | 13125.9 | 10176.6 | 5126.0 | 3250.9 | 2591.3 | 2657.2 | 2808.0 | 2723.2 | 2638.4 | 2402.8 | 2374.5 |
| 52.5° | 13257.8 | 10355.6 | 4824.5 | 2911.6 | 2308.6 | 2374.5 | 2525.3 | 2393.4 | 2223.8 | 2035.3 | 2007.1 |
| 55° | 13041.1 | 10365.0 | 4268.5 | 2534.7 | 2110.7 | 2167.2 | 2308.6 | 2148.4 | 1988.2 | 1875.1 | 1856.3 |
| 57.5° | 12390.9 | 10082.4 | 3684.3 | 2242.6 | 1941.1 | 1997.6 | 2129.5 | 1969.4 | 1818.6 | 1809.2 | 1856.3 |
| 60° | 10958.7 | 9093.0 | 3147.2 | 2054.2 | 1780.9 | 1846.9 | 1978.8 | 1809.2 | 1611.3 | 1526.5 | 1554.8 |
| 62.5° | 8273.2 | 6991.7 | 2694.9 | 1837.4 | 1630.1 | 1714.9 | 1809.2 | 1535.9 | 1366.3 | 1328.6 | 1290.9 |
| 65° | *6049.4* | *5371.0* | *2421.7* | *1667.8* | *1488.8* | *1592.4* | *1517.1* | *1366.3* | *1253.2* | *1215.5* | *1196.7* |
| 67.5° | 3910.4 | 3646.6 | 2082.4 | 1507.6 | 1356.9 | 1441.7 | 1338.0 | 1262.7 | 1140.2 | 1121.3 | 1149.6 |
| 70° | 2393.4 | 2478.2 | 1743.2 | 1328.6 | 1225.0 | 1206.1 | 1225.0 | 1149.6 | 1017.7 | 1045.9 | 1083.6 |
| 72.5° | 1696.1 | 1828.0 | 1498.2 | 1159.0 | 1045.9 | 1008.2 | 1093.0 | 1045.9 | 951.7 | 980.0 | 1017.7 |
| 75° | 1215.5 | 1356.9 | 1234.4 | 951.7 | 885.7 | 866.9 | 1017.7 | 1045.9 | 980.0 | 998.8 | 1027.1 |
| 77.5° | 716.1 | 866.9 | 876.3 | 735.0 | 669.0 | 772.7 | 1083.6 | 1206.1 | 1159.0 | 1102.5 | 1074.2 |
| 80° | 461.7 | 518.3 | 621.9 | 471.1 | 471.1 | 669.0 | 1187.3 | 1470.0 | 1262.7 | 1121.3 | 1102.5 |
| 82.5° | 235.6 | 273.3 | 405.2 | 301.5 | 282.7 | 499.4 | 1168.4 | 1404.0 | 1394.6 | 1243.8 | 1215.5 |
| 85° | 66.0 | 84.8 | 188.5 | 131.9 | 113.1 | 263.8 | 876.3 | 1055.4 | 942.3 | 687.9 | 697.3 |
| 87.5° | 9.4 | 9.4 | 0.0 | 0.0 | 9.4 | 37.7 | 103.7 | 18.8 | 18.8 | 18.8 | 18.8 |
| 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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# LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-11

Test Date: 10/11/2024

Luminaire Tested: GSS-SB1A-840-U-5WQ

Data in this report applies to families of products including GSS-SB1A-840-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

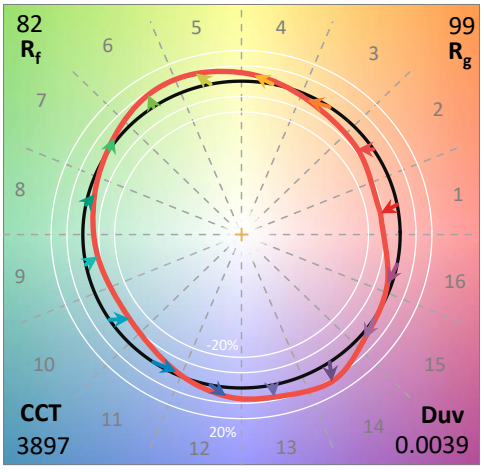
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-11 |
| 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-840-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 80 CRI 4000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 3897 |
| CIE u': | 0.2249 |
| CIE v': | 0.5084 |
| Duv: | 0.0039 |
| CIE x: | 0.3882 |
| CIE y: | 0.3900 |
| CIE z: | 0.2218 |
| Peak Wavelength (nm): | 445 |
| Dominant Wavelength (nm): | 577 |
| Purity: | 33.54925 |
| Rf: | 81.8 |
| Rg: | 98.6 |

| | |
|---|---|
| CRI (Ra): | 80.2 |
| R1: | 78.9 |
| R2: | 83.5 |
| R3: | 88.3 |
| R4: | 82.1 |
| R5: | 78.8 |
| R6: | 78.4 |
| R7: | 85.8 |
| R8: | 65.8 |
| R9: | 6.7 |
| R10: | 61.9 |
| R11: | 81.9 |
| R12: | 58.9 |
| R13: | 79.2 |
| R14: | 93.2 |
| R15: | 71.9 |




## Test Conditions

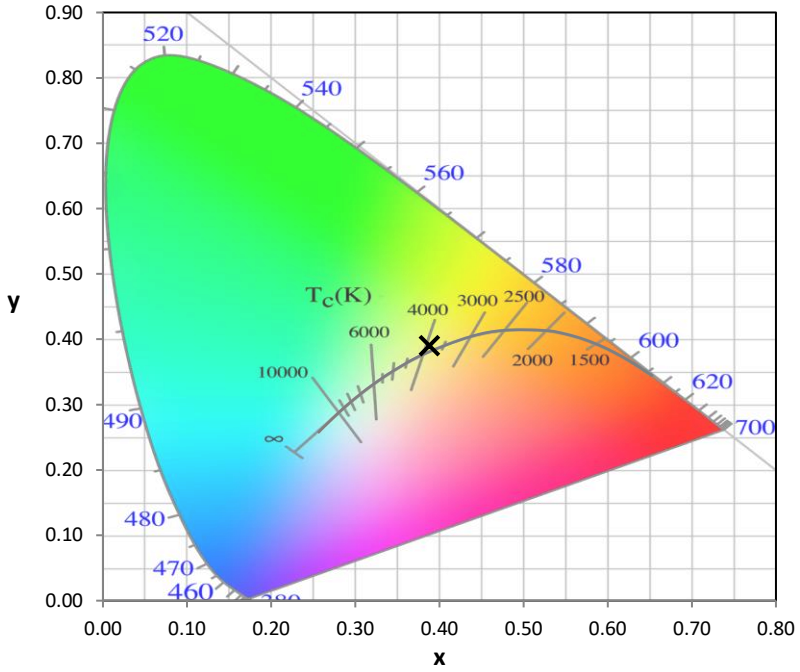
| | |
|---|---|
| Stabilization Time: | 24M |
| Operation Time: | 1H 24M |
| Sphere Temperature (°C): | 25.2 |

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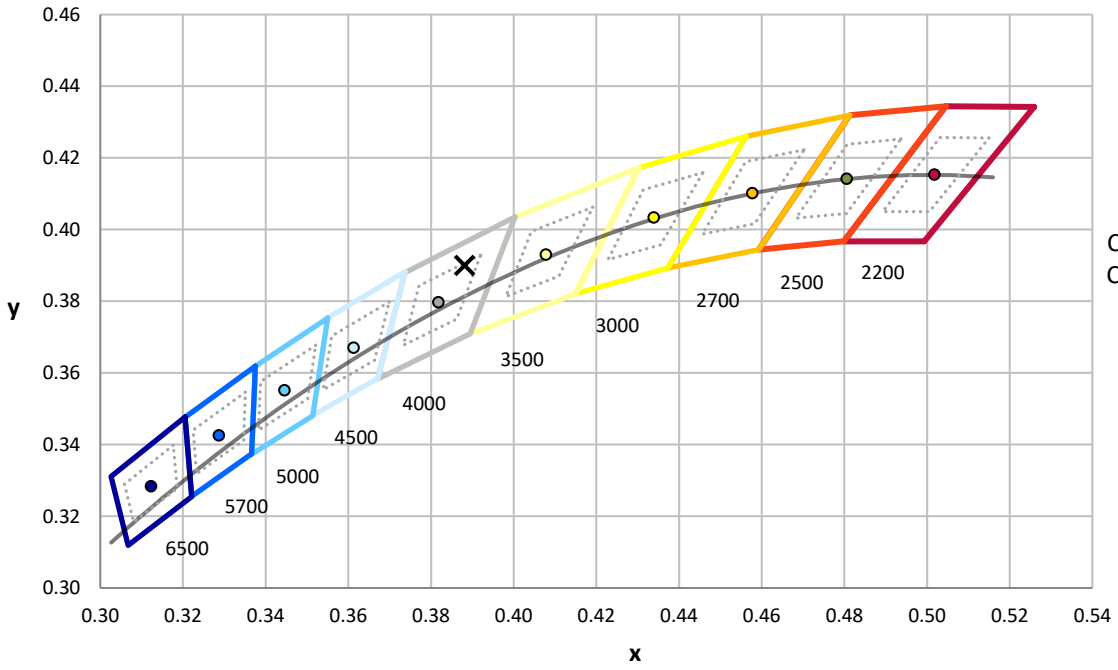
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

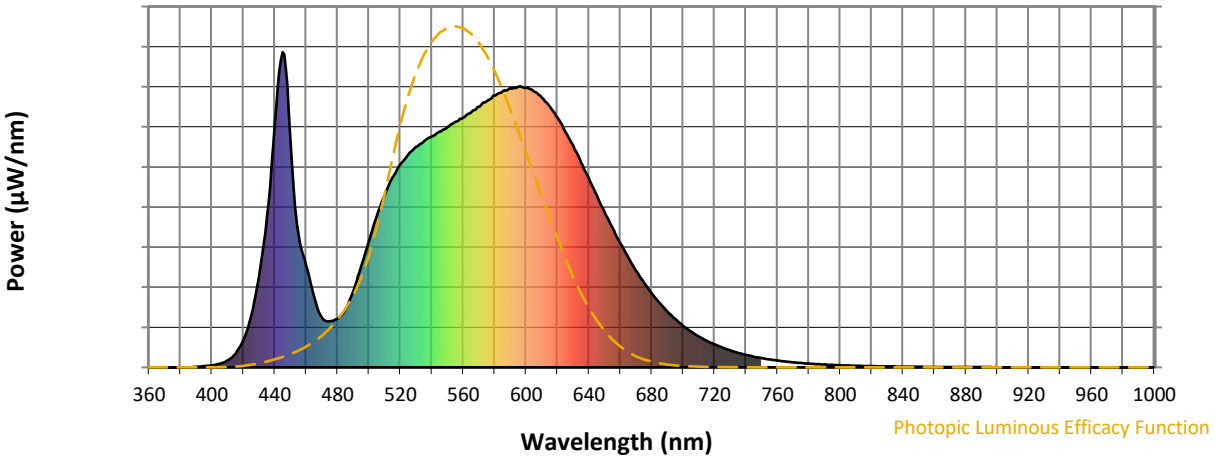



CCT = 3897K
CIE x = 0.3882
CIE y = 0.3900
Duv = 0.0039

Point lies inside the ANSI 4000K 4-step quadrangle

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## Photopic Flux vs. Wavelength

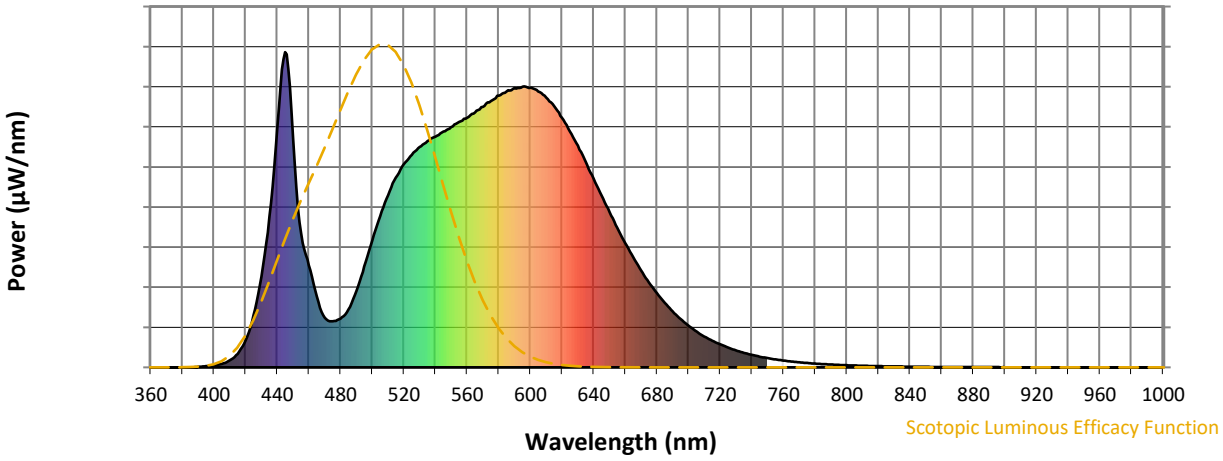



## Photopic Lumens: NR

| 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 | 242 | NR | 620 | 792 | NR | 750 | 29 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 320 | NR | 625 | 748 | NR | 755 | 25 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 401 | NR | 630 | 703 | NR | 760 | 22 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 479 | NR | 635 | 651 | NR | 765 | 19 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 546 | NR | 640 | 599 | NR | 770 | 16 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 602 | NR | 645 | 545 | NR | 775 | 14 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 645 | NR | 650 | 493 | NR | 780 | 12 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 674 | NR | 655 | 443 | NR | 785 | 10 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 699 | NR | 660 | 394 | NR | 790 | 9 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 718 | NR | 665 | 349 | NR | 795 | 8 | NR | 925 | 0 | NR |
| 410 | 22 | NR | 540 | 732 | NR | 670 | 307 | NR | 800 | 7 | NR | 930 | 0 | NR |
| 415 | 43 | NR | 545 | 749 | NR | 675 | 269 | NR | 805 | 6 | NR | 935 | 0 | NR |
| 420 | 86 | NR | 550 | 762 | NR | 680 | 235 | NR | 810 | 5 | NR | 940 | 0 | NR |
| 425 | 164 | NR | 555 | 778 | NR | 685 | 204 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 288 | NR | 560 | 792 | NR | 690 | 178 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 478 | NR | 565 | 809 | NR | 695 | 153 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 766 | NR | 570 | 827 | NR | 700 | 132 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 1000 | NR | 575 | 845 | NR | 705 | 114 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 726 | NR | 580 | 862 | NR | 710 | 98 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 425 | NR | 585 | 875 | NR | 715 | 84 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 324 | NR | 590 | 887 | NR | 720 | 73 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 225 | NR | 595 | 890 | NR | 725 | 63 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 157 | NR | 600 | 887 | NR | 730 | 54 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 147 | NR | 605 | 875 | NR | 735 | 46 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 154 | NR | 610 | 856 | NR | 740 | 40 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 184 | NR | 615 | 828 | NR | 745 | 34 | NR | 875 | 1 | NR | | | |

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## Scotopic Flux vs. Wavelength

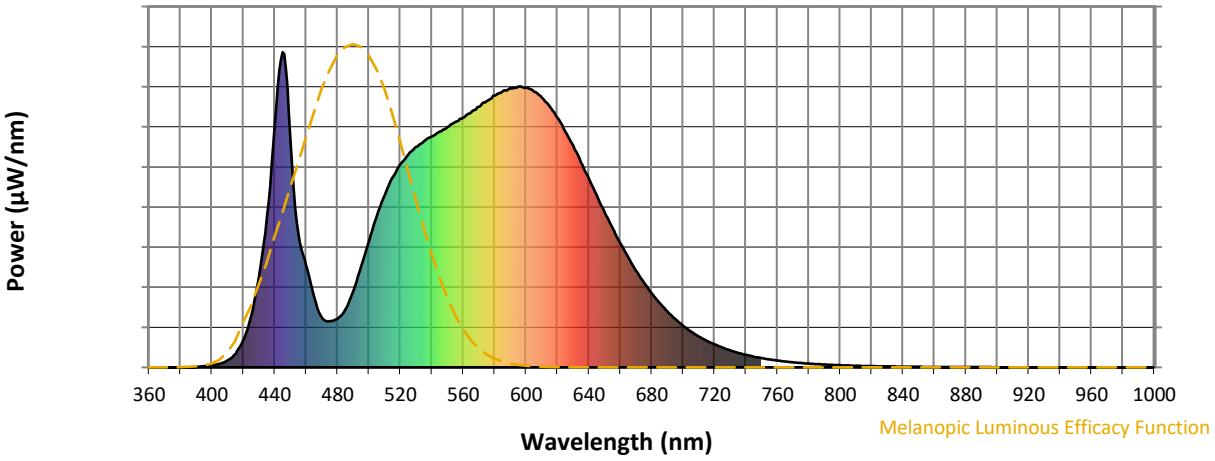



**Scotopic Lumens: NR** **S/P: 1.57**

| 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 | 242 | NR | 620 | 792 | NR | 750 | 29 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 320 | NR | 625 | 748 | NR | 755 | 25 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 401 | NR | 630 | 703 | NR | 760 | 22 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 479 | NR | 635 | 651 | NR | 765 | 19 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 546 | NR | 640 | 599 | NR | 770 | 16 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 602 | NR | 645 | 545 | NR | 775 | 14 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 645 | NR | 650 | 493 | NR | 780 | 12 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 674 | NR | 655 | 443 | NR | 785 | 10 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 699 | NR | 660 | 394 | NR | 790 | 9 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 718 | NR | 665 | 349 | NR | 795 | 8 | NR | 925 | 0 | NR |
| 410 | 22 | NR | 540 | 732 | NR | 670 | 307 | NR | 800 | 7 | NR | 930 | 0 | NR |
| 415 | 43 | NR | 545 | 749 | NR | 675 | 269 | NR | 805 | 6 | NR | 935 | 0 | NR |
| 420 | 86 | NR | 550 | 762 | NR | 680 | 235 | NR | 810 | 5 | NR | 940 | 0 | NR |
| 425 | 164 | NR | 555 | 778 | NR | 685 | 204 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 288 | NR | 560 | 792 | NR | 690 | 178 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 478 | NR | 565 | 809 | NR | 695 | 153 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 766 | NR | 570 | 827 | NR | 700 | 132 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 1000 | NR | 575 | 845 | NR | 705 | 114 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 726 | NR | 580 | 862 | NR | 710 | 98 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 425 | NR | 585 | 875 | NR | 715 | 84 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 324 | NR | 590 | 887 | NR | 720 | 73 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 225 | NR | 595 | 890 | NR | 725 | 63 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 157 | NR | 600 | 887 | NR | 730 | 54 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 147 | NR | 605 | 875 | NR | 735 | 46 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 154 | NR | 610 | 856 | NR | 740 | 40 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 184 | NR | 615 | 828 | NR | 745 | 34 | NR | 875 | 1 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 3.06**

| 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 | 242 | NR | 620 | 792 | NR | 750 | 29 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 320 | NR | 625 | 748 | NR | 755 | 25 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 401 | NR | 630 | 703 | NR | 760 | 22 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 479 | NR | 635 | 651 | NR | 765 | 19 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 546 | NR | 640 | 599 | NR | 770 | 16 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 602 | NR | 645 | 545 | NR | 775 | 14 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 645 | NR | 650 | 493 | NR | 780 | 12 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 674 | NR | 655 | 443 | NR | 785 | 10 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 699 | NR | 660 | 394 | NR | 790 | 9 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 718 | NR | 665 | 349 | NR | 795 | 8 | NR | 925 | 0 | NR |
| 410 | 22 | NR | 540 | 732 | NR | 670 | 307 | NR | 800 | 7 | NR | 930 | 0 | NR |
| 415 | 43 | NR | 545 | 749 | NR | 675 | 269 | NR | 805 | 6 | NR | 935 | 0 | NR |
| 420 | 86 | NR | 550 | 762 | NR | 680 | 235 | NR | 810 | 5 | NR | 940 | 0 | NR |
| 425 | 164 | NR | 555 | 778 | NR | 685 | 204 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 288 | NR | 560 | 792 | NR | 690 | 178 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 478 | NR | 565 | 809 | NR | 695 | 153 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 766 | NR | 570 | 827 | NR | 700 | 132 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 1000 | NR | 575 | 845 | NR | 705 | 114 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 726 | NR | 580 | 862 | NR | 710 | 98 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 425 | NR | 585 | 875 | NR | 715 | 84 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 324 | NR | 590 | 887 | NR | 720 | 73 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 225 | NR | 595 | 890 | NR | 725 | 63 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 157 | NR | 600 | 887 | NR | 730 | 54 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 147 | NR | 605 | 875 | NR | 735 | 46 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 154 | NR | 610 | 856 | NR | 740 | 40 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 184 | NR | 615 | 828 | NR | 745 | 34 | NR | 875 | 1 | NR | | | |

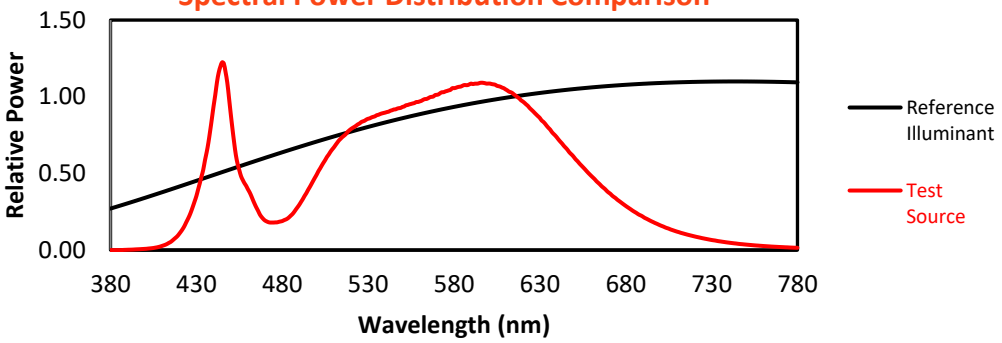
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# TM-30-18

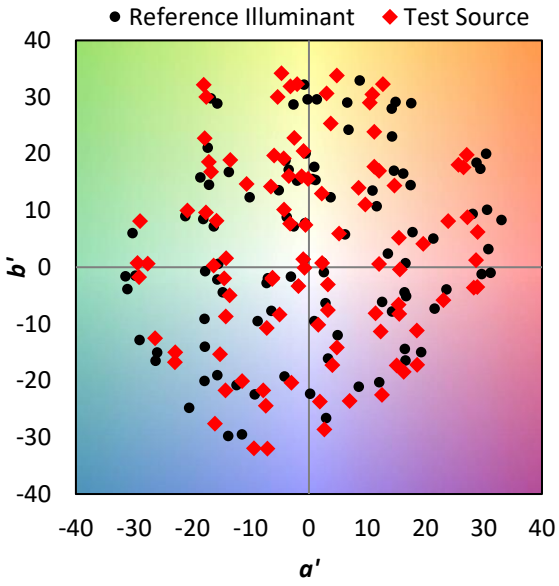
## Summary

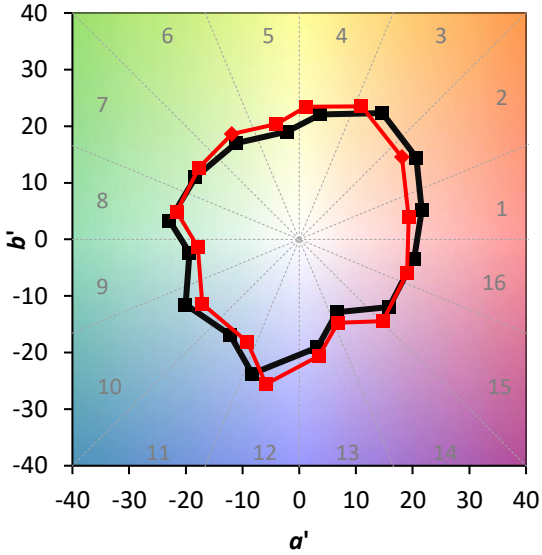
$R_f$ = 81.8
$R_g$ = 98.6
CIE $R_a$ = 80.2
$R_9$ = 6.7

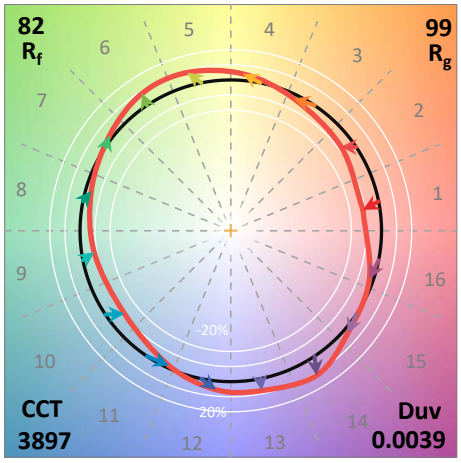
## Spectral Power Distribution Comparison

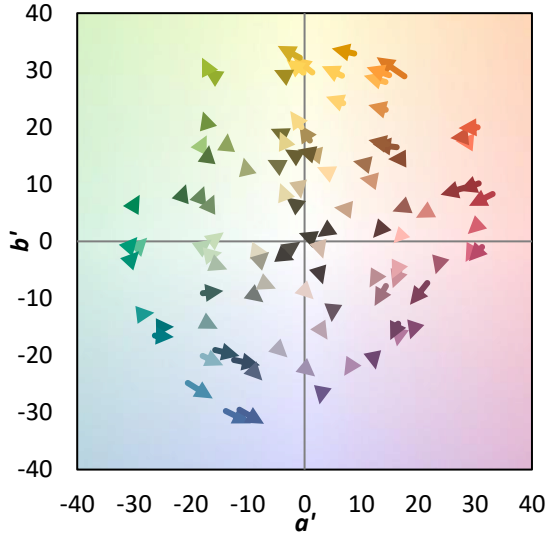



## Color Vector Graphics



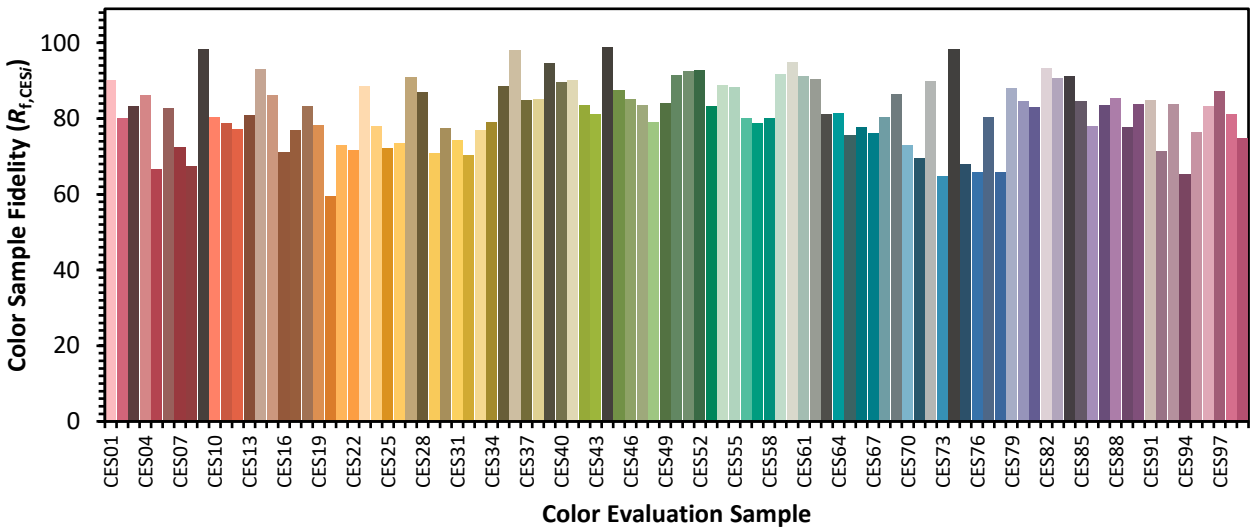



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**Individual Sample Fidelity Index ($R_{f,i}$)**

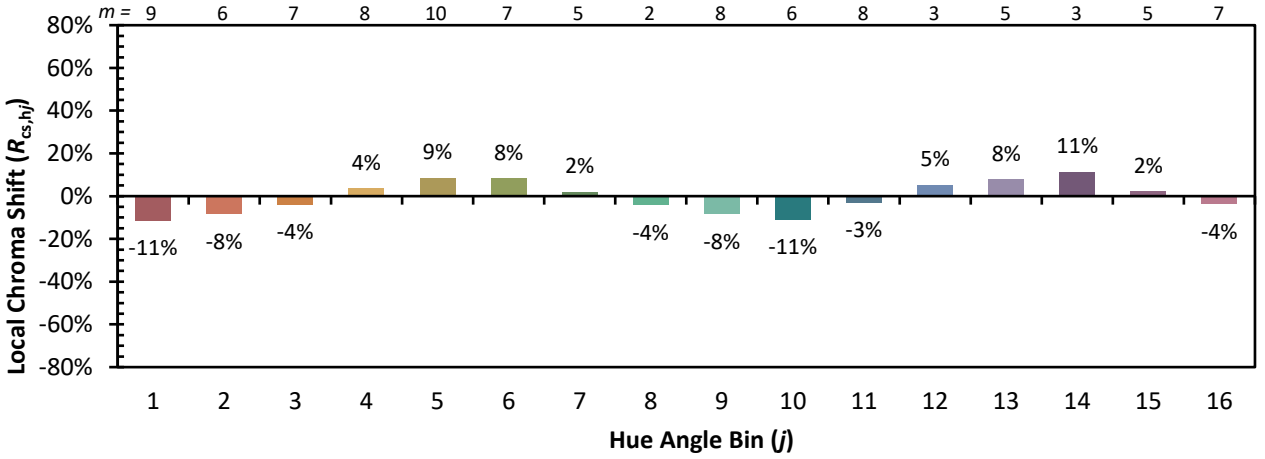
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 73 | CES51 = 93 | CES76 = 66 |
| CES02 = 61 | CES27 = 91 | CES52 = 93 | CES77 = 80 |
| CES03 = 31 | CES28 = 87 | CES53 = 83 | CES78 = 66 |
| CES04 = 69 | CES29 = 71 | CES54 = 89 | CES79 = 88 |
| CES05 = 48 | CES30 = 77 | CES55 = 88 | CES80 = 85 |
| CES06 = 50 | CES31 = 74 | CES56 = 80 | CES81 = 83 |
| CES07 = 41 | CES32 = 70 | CES57 = 79 | CES82 = 93 |
| CES08 = 40 | CES33 = 77 | CES58 = 80 | CES83 = 91 |
| CES09 = 29 | CES34 = 79 | CES59 = 92 | CES84 = 91 |
| CES10 = 74 | CES35 = 88 | CES60 = 95 | CES85 = 84 |
| CES11 = 57 | CES36 = 98 | CES61 = 91 | CES86 = 78 |
| CES12 = 63 | CES37 = 85 | CES62 = 90 | CES87 = 84 |
| CES13 = 42 | CES38 = 85 | CES63 = 81 | CES88 = 85 |
| CES14 = 74 | CES39 = 95 | CES64 = 81 | CES89 = 78 |
| CES15 = 71 | CES40 = 90 | CES65 = 76 | CES90 = 84 |
| CES16 = 47 | CES41 = 90 | CES66 = 78 | CES91 = 85 |
| CES17 = 49 | CES42 = 84 | CES67 = 76 | CES92 = 71 |
| CES18 = 56 | CES43 = 81 | CES68 = 80 | CES93 = 84 |
| CES19 = 71 | CES44 = 99 | CES69 = 86 | CES94 = 65 |
| CES20 = 65 | CES45 = 87 | CES70 = 73 | CES95 = 77 |
| CES21 = 86 | CES46 = 85 | CES71 = 70 | CES96 = 83 |
| CES22 = 78 | CES47 = 84 | CES72 = 90 | CES97 = 87 |
| CES23 = 91 | CES48 = 79 | CES73 = 65 | CES98 = 81 |
| CES24 = 90 | CES49 = 84 | CES74 = 98 | CES99 = 75 |
| CES25 = 71 | CES50 = 91 | CES75 = 68 | |

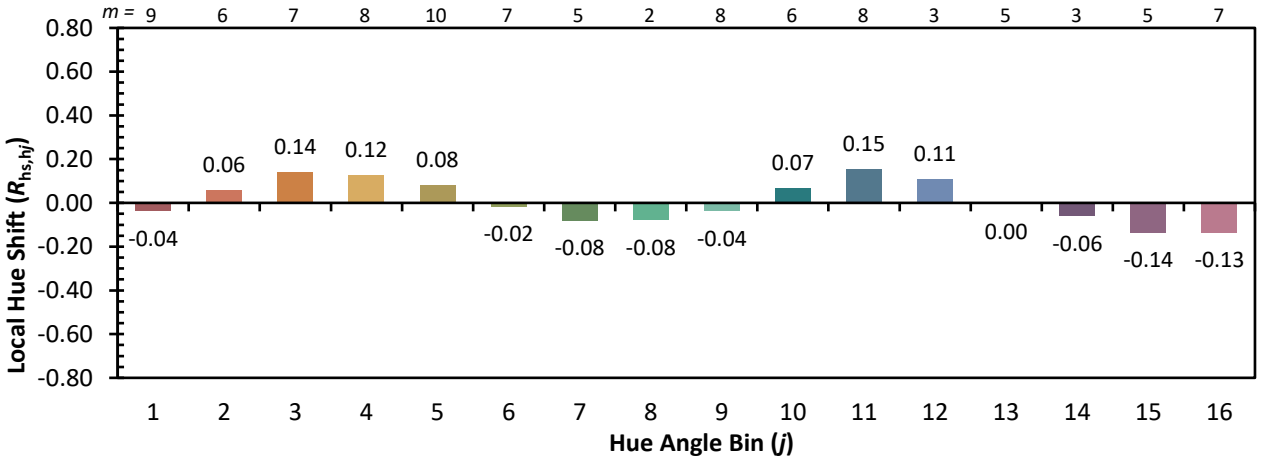


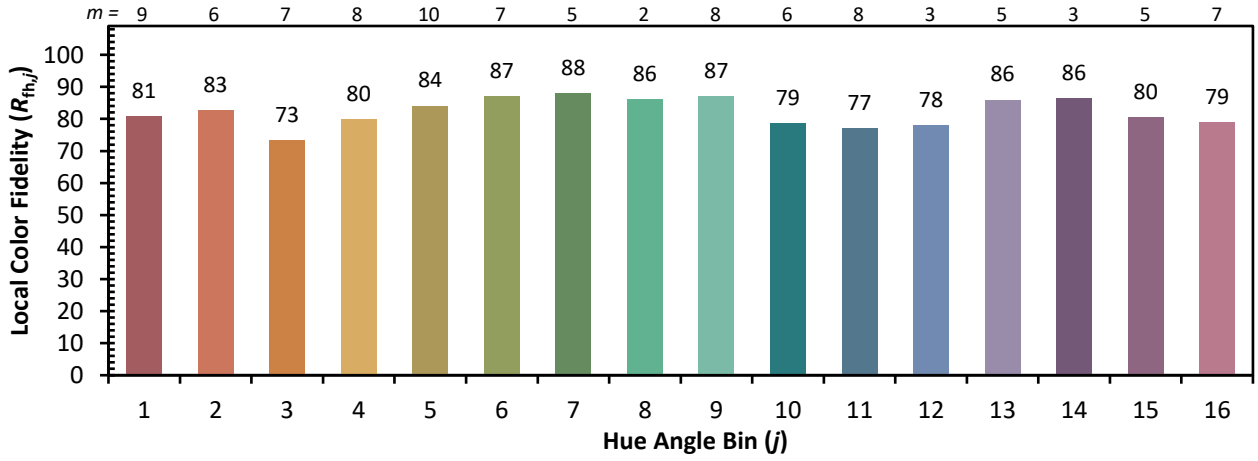
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## Color Rendition by Hue-Angle Bin



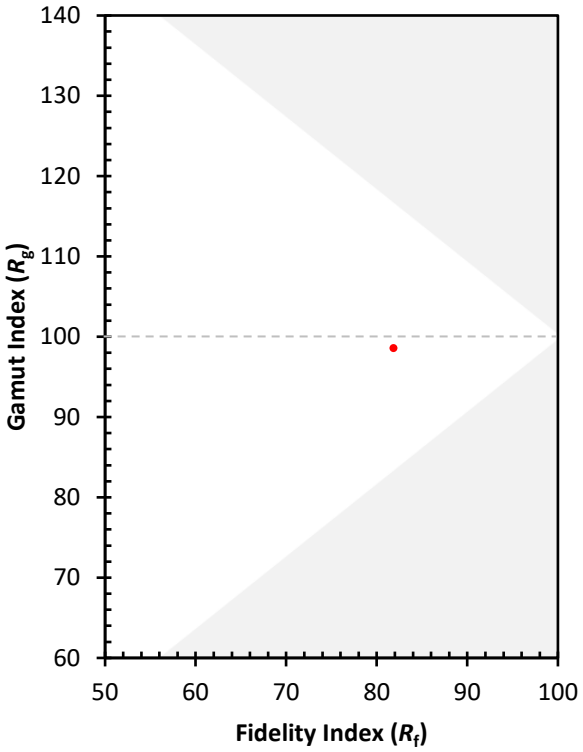



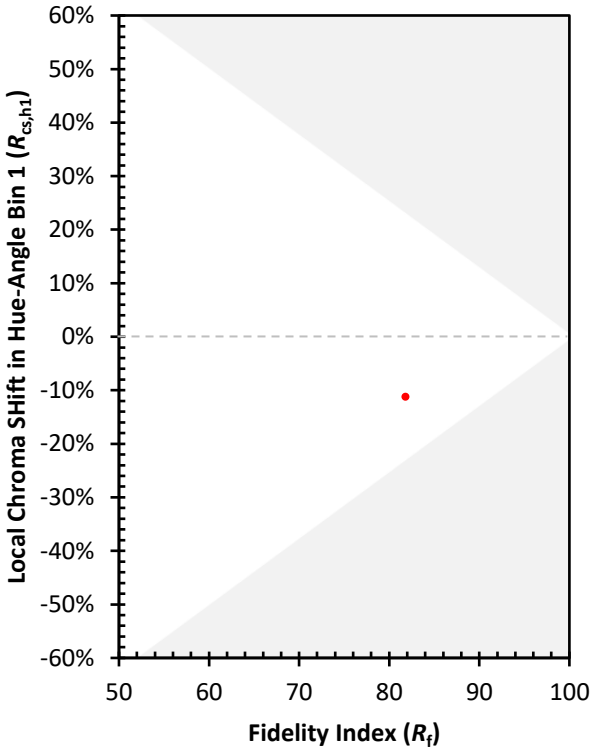



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## Measure Comparisons




(END OF REPORT)