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

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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: P1501179

Luminaire Tested: GSS-SB6C-835-U-T3LG

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: | P1501179 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 7/20/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB6C-835-U-T3LG |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 6SQUARE 300W 80CRI 3500K FIXTURE w/ TYPE III LOW GLARE DISTRIBUTION FIXTURE |
| Light Source: | (156) 3500K CCT, 80 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 41122.9 lumens |
| Efficiency: | N/A |
| Efficacy: | 137.1 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B4 - U0 - G4 |

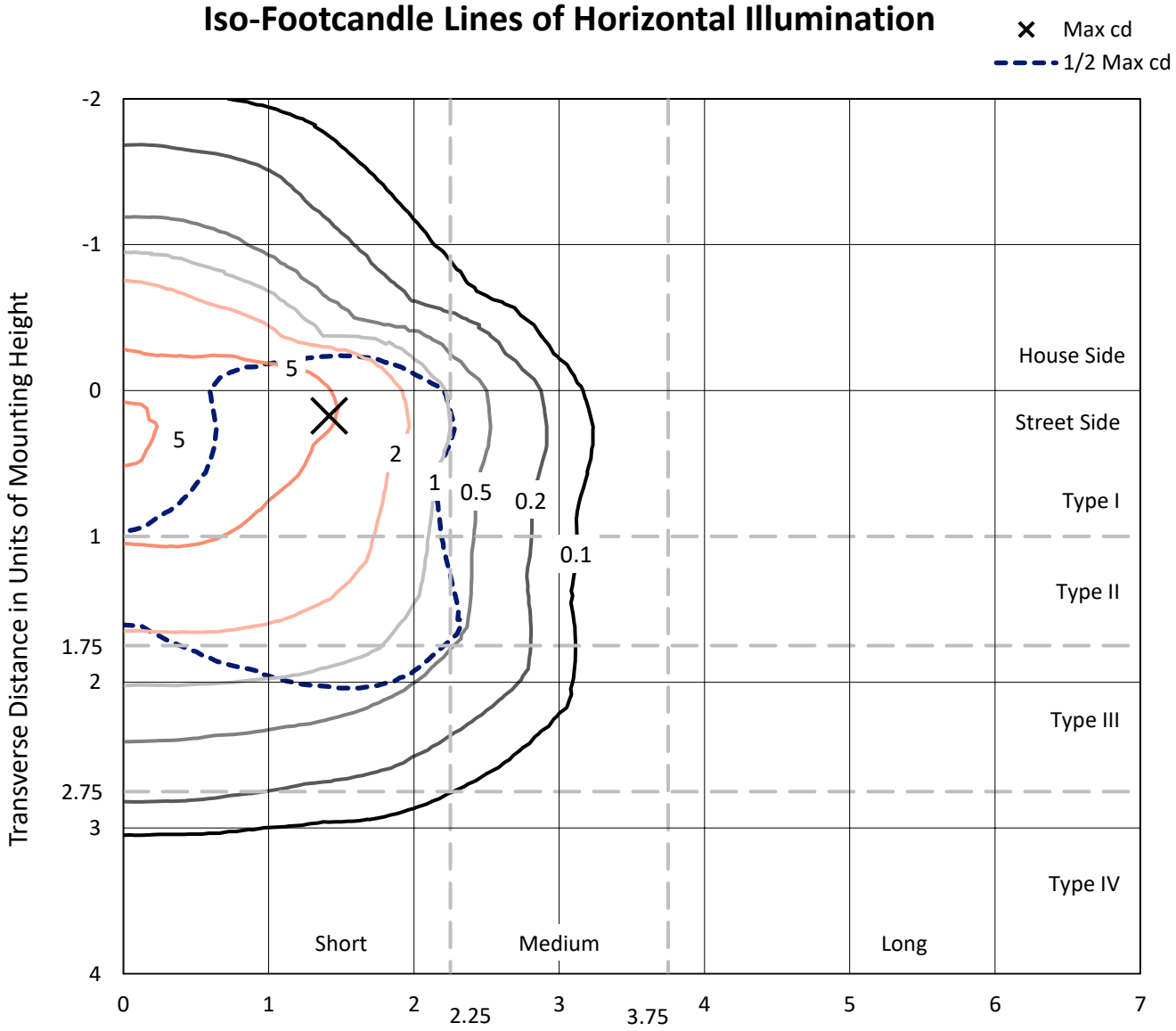
| | |
|---|---|
| Input Watts (W): | 300 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 6.3% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature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

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Scaled Data Report

REPORT NUMBER: P1501179
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## Iso-Footcandle Lines of Horizontal Illumination



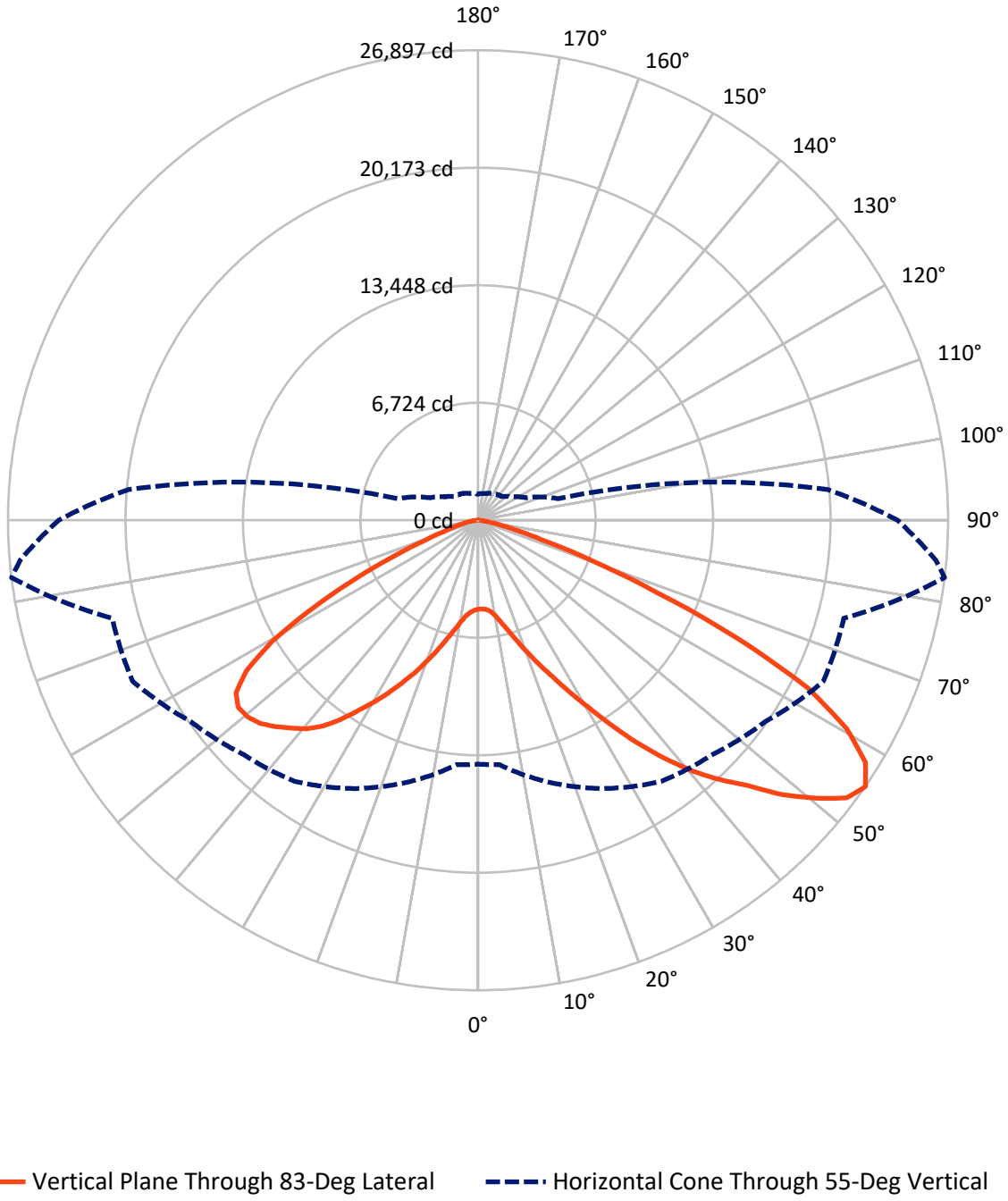

Based on 30 foot mounting height. Maximum calculated value = 9.6 fc
Type III - Short - N/A

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## Luminous Intensity Polar Plot



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Scaled Data Report

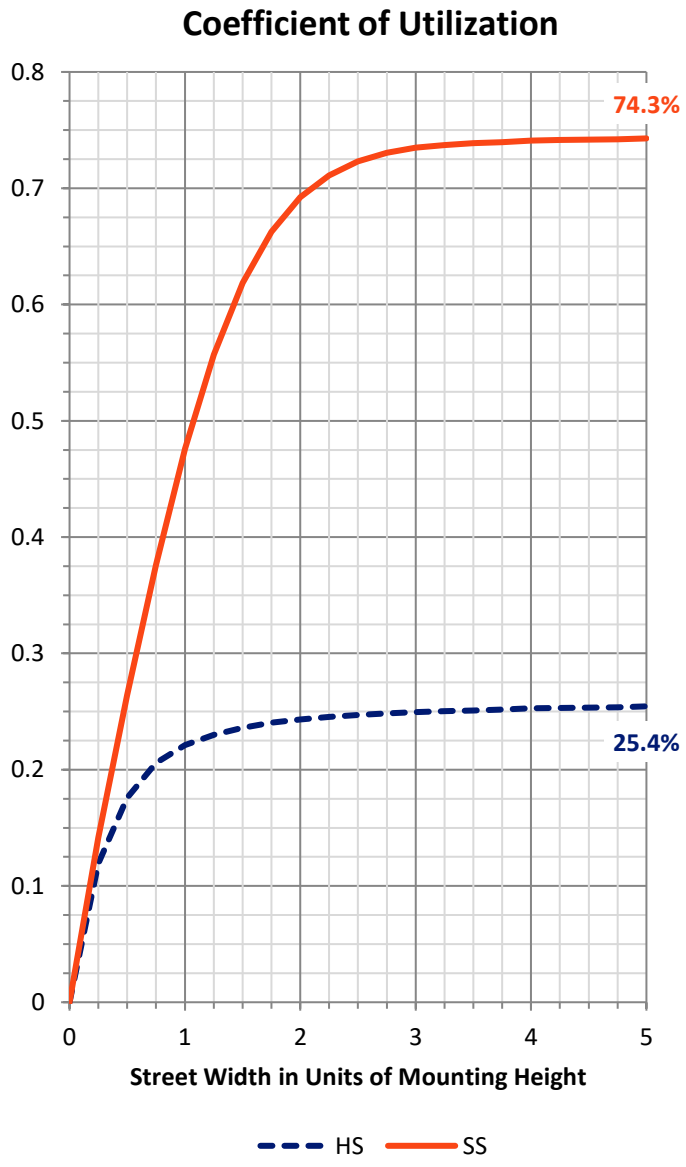
REPORT NUMBER: P1501179
CATALOG NUMBER: GSS-SB6C-835-U-T3LG

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 10553.0 | 0.0 | 10553.0 |
| | % Fixture | 25.7 | 0.0 | 25.7 |
| **Street Side** | Lumens | 30569.9 | 0.0 | 30569.9 |
| | % Fixture | 74.3 | 0.0 | 74.3 |
| **Total** | Lumens | 41122.9 | 0.0 | 41122.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 491.9 | 1.2 |
| 10°-20° | 1602.3 | 3.9 |
| 20°-30° | 3207.9 | 7.8 |
| 30°-40° | 5707.3 | 13.9 |
| 40°-50° | 8600.6 | 20.9 |
| 50°-60° | 10480.4 | 25.5 |
| 60°-70° | 8474.9 | 20.6 |
| 70°-80° | 2321.2 | 5.6 |
| 80°-90° | 236.4 | 0.6 |
| 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° | 41122.9 | 100.0 |
| 0°-180° | 41122.9 | 100.0 |



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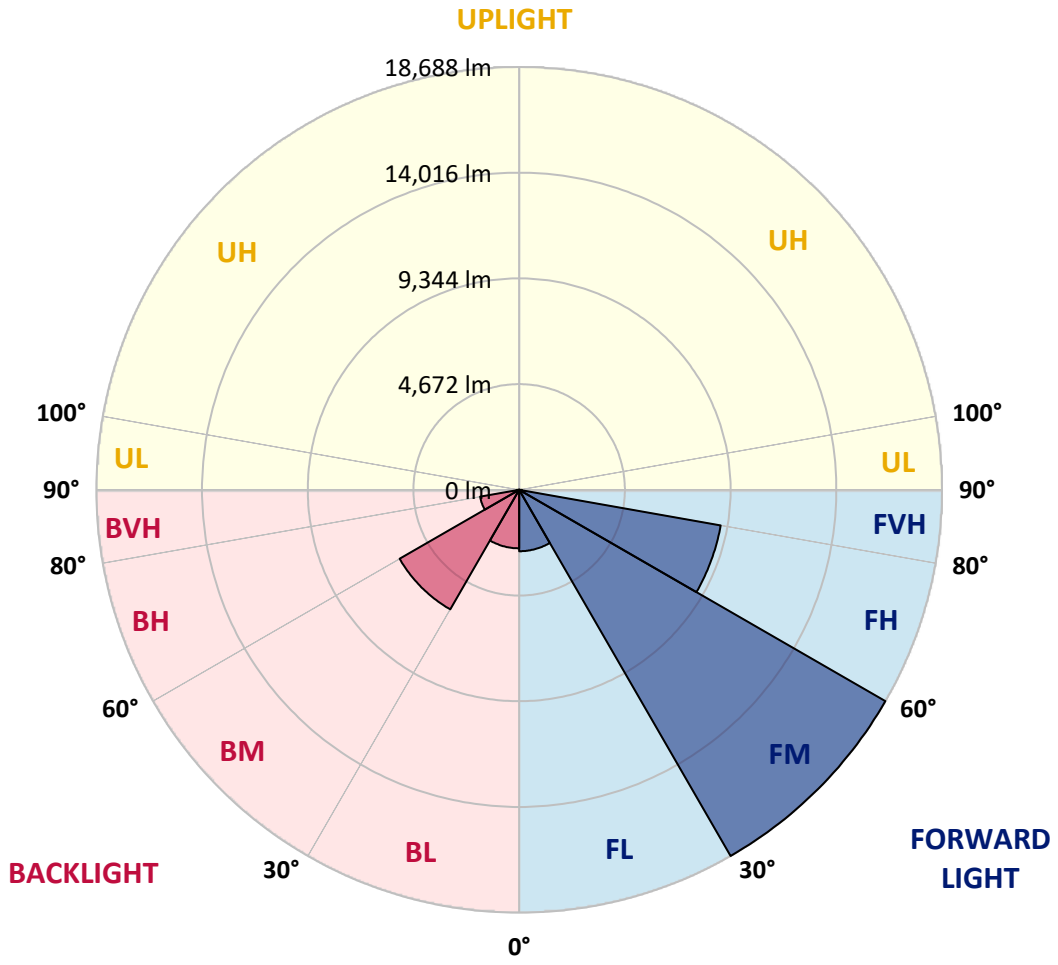
Scaled Data Report

REPORT NUMBER: P1501179
CATALOG NUMBER: GSS-SB6C-835-U-T3LG

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 2715.3 | 6.6 | | | |
| FM | (30°-60°) | 18687.5 | 45.4 | | | |
| FH | (60°-80°) | 9044.0 | 22.0 | | | G4/12000 |
| FVH | (80°-90°) | 123.1 | 0.3 | | | G2/225 |
| BL | (0°-30°) | 2586.8 | 6.3 | B4/5000 | | |
| BM | (30°-60°) | 6100.8 | 14.8 | B4/8500 | | |
| BH | (60°-80°) | 1752.1 | 4.3 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 113.3 | 0.3 | | | G2/225 |
| 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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REPORT NUMBER: P1501179
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 83° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 5090.6 | 5090.6 | 5090.6 | 5090.6 | 5090.6 | 5090.6 | 5090.6 | 5090.6 | 5090.6 | *5090.6* | 5090.6 |
| 2.5° | 4944.4 | 4935.2 | 4926.1 | 4916.9 | 4935.2 | 4962.6 | 4990.1 | 5008.3 | 5054.0 | *5090.6* | 5072.3 |
| 5° | 4551.4 | 4533.1 | 4551.4 | 4624.5 | 4688.5 | 4798.1 | 4907.8 | 4980.9 | 5081.4 | *5127.1* | 5145.4 |
| 7.5° | 4204.1 | 4185.8 | 4204.1 | 4295.5 | 4405.1 | 4578.8 | 4807.3 | 4990.1 | 5172.8 | *5282.5* | 5300.8 |
| 10° | 4204.1 | 4213.2 | 4213.2 | 4249.8 | 4304.6 | 4478.3 | 4752.4 | 5099.7 | 5419.6 | *5575.0* | 5611.5 |
| 12.5° | 4341.2 | 4341.2 | 4341.2 | 4386.9 | 4423.4 | 4560.5 | 4871.2 | 5300.8 | 5812.6 | *6041.1* | 6068.5 |
| 15° | 4523.9 | 4514.8 | 4542.2 | 4569.6 | 4633.6 | 4770.7 | 5081.4 | 5593.2 | 6242.1 | *6589.4* | 6626.0 |
| 17.5° | 4779.8 | 4761.6 | 4789.0 | 4853.0 | 4944.4 | 5099.7 | 5410.5 | 5995.4 | 6836.2 | *7274.9* | 7329.7 |
| 20° | 5063.2 | 5054.0 | 5108.9 | 5209.4 | 5337.3 | 5529.3 | 5885.7 | 6479.8 | 7512.5 | *8070.0* | 8170.5 |
| 22.5° | 5401.3 | 5383.0 | 5483.6 | 5666.4 | 5840.0 | 6059.3 | 6488.9 | 7110.4 | 8289.3 | *8956.5* | 9057.0 |
| 25° | 5785.2 | 5785.2 | 5922.3 | 6141.6 | 6406.6 | 6799.6 | 7229.2 | 7914.6 | 9203.3 | *9916.1* | 10071.5 |
| 27.5° | 6415.8 | 6461.5 | 6516.3 | 6744.8 | 7119.5 | 7649.6 | 8106.5 | 8883.4 | 10199.4 | *11095.1* | 11149.9 |
| 30° | 7439.4 | 7421.1 | 7512.5 | 7667.9 | 7978.6 | 8536.1 | 9221.5 | 10053.2 | 11460.7 | *12402.0* | 12539.1 |
| 32.5° | 8362.4 | 8389.9 | 8517.8 | 8810.3 | 9185.0 | 9660.2 | 10482.8 | 11506.4 | 12831.6 | *13919.1* | 13983.1 |
| 35° | 9294.7 | 9312.9 | 9559.7 | 9998.4 | 10555.9 | 11086.0 | 11981.6 | 12986.9 | 14321.3 | *15609.9* | 15783.6 |
| 37.5° | 10601.6 | 10583.3 | 10830.1 | 11204.8 | 11954.2 | 12776.7 | 13498.7 | 14458.4 | 15747.0 | *17255.0* | 17456.0 |
| 40° | 11579.5 | 11680.0 | 12146.1 | 12621.4 | 13325.1 | 14175.0 | 14787.4 | 15692.2 | 16916.8 | *18863.5* | 19046.3 |
| 42.5° | 12584.8 | 12667.1 | 13288.5 | 14001.4 | 14741.7 | 15317.4 | 15792.7 | 16633.5 | 17849.0 | *20289.2* | 20389.8 |
| 45° | 13416.5 | 13526.1 | 14239.0 | 15143.8 | 15911.5 | 16496.4 | 16660.9 | 17446.9 | 18799.5 | *21660.1* | 21815.5 |
| 47.5° | 13946.6 | 14065.4 | 14906.2 | 15966.3 | 16752.3 | 17373.8 | 17319.0 | 18424.8 | 19814.0 | *23478.8* | 23424.0 |
| 50° | 14312.1 | 14385.2 | 15299.2 | 16432.4 | 17456.0 | 17867.3 | 18104.9 | 19530.7 | 20855.9 | *25005.1* | 24804.0 |
| 52.5° | 14577.2 | 14696.0 | 15527.7 | 16770.6 | 17849.0 | 18388.2 | 19028.0 | 20810.2 | 21577.9 | *26403.4* | 25955.6 |
| 55° | *13955.7* | *14047.1* | *15509.4* | *16944.2* | *18251.2* | *18964.0* | *20079.0* | *21806.3* | *21669.3* | *26896.9* | *26293.7* |
| 57.5° | 13315.9 | 13389.1 | 14741.7 | 16898.5 | 18689.8 | 19676.9 | 21276.3 | 21934.3 | 20855.9 | *26138.4* | 25379.8 |
| 60° | 12511.7 | 12566.5 | 13919.1 | 16414.2 | 18699.0 | 20234.4 | 21888.6 | 21002.1 | 19347.9 | *24228.3* | 23506.3 |
| 62.5° | 11031.1 | 11031.1 | 12520.8 | 15107.2 | 18242.0 | 20517.7 | 21724.1 | 19238.2 | 17328.1 | *21221.4* | 20225.2 |
| 65° | 9568.8 | 9504.9 | 10510.2 | 12776.7 | 17026.5 | 20444.6 | 20490.3 | 17008.2 | 14193.3 | *16368.5* | 15591.6 |
| 67.5° | 7978.6 | 7987.7 | 8581.8 | 10373.1 | 13791.2 | 18918.3 | 17885.6 | 13142.3 | 9888.7 | *11022.0* | 10619.9 |
| 70° | 5401.3 | 5538.4 | 6141.6 | 7530.8 | 10400.5 | 13407.3 | 14239.0 | 8901.7 | 6169.0 | *6845.3* | 6516.3 |
| 72.5° | 2056.3 | 2083.8 | 2787.5 | 3948.2 | 6571.1 | 8060.9 | 9934.4 | 4980.9 | 3610.0 | *3774.5* | 3792.8 |
| 75° | 868.2 | 904.8 | 1188.1 | 1663.4 | 2915.4 | 4396.0 | 5227.7 | 2522.4 | 2193.4 | *2257.4* | 2239.1 |
| 77.5° | 584.9 | 603.2 | 722.0 | 895.7 | 1316.1 | 1763.9 | 2184.3 | 1425.7 | 1343.5 | *1261.2* | 1224.7 |
| 80° | 438.7 | 438.7 | 520.9 | 603.2 | 740.3 | 904.8 | 950.5 | 722.0 | 804.3 | *667.2* | 648.9 |
| 82.5° | 283.3 | 301.6 | 329.0 | 356.4 | 420.4 | 447.8 | 383.9 | 393.0 | 466.1 | *347.3* | 329.0 |
| 85° | 137.1 | 146.2 | 155.4 | 164.5 | 164.5 | 155.4 | 137.1 | 173.6 | 237.6 | *146.2* | 137.1 |
| 87.5° | 18.3 | 18.3 | 18.3 | 18.3 | 18.3 | 18.3 | 9.1 | 9.1 | 9.1 | *9.1* | 9.1 |
| 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: P1501179
CATALOG NUMBER: GSS-SB6C-835-U-T3LG

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 5090.6 | 5090.6 | 5090.6 | 5090.6 | 5090.6 | 5090.6 | 5090.6 | 5090.6 | 5090.6 | 5090.6 | 5090.6 |
| 2.5° | 5099.7 | 5136.3 | 5163.7 | 5182.0 | 5227.7 | 5218.5 | 5246.0 | 5264.2 | 5282.5 | 5309.9 | 5273.4 |
| 5° | 5191.1 | 5255.1 | 5328.2 | 5383.0 | 5437.9 | 5465.3 | 5474.4 | 5492.7 | 5501.9 | 5520.1 | 5511.0 |
| 7.5° | 5392.2 | 5465.3 | 5575.0 | 5629.8 | 5675.5 | 5675.5 | 5648.1 | 5638.9 | 5611.5 | 5629.8 | 5629.8 |
| 10° | 5730.3 | 5840.0 | 5958.8 | 5968.0 | 5913.1 | 5849.1 | 5748.6 | 5693.8 | 5620.7 | 5602.4 | 5584.1 |
| 12.5° | 6223.9 | 6370.1 | 6461.5 | 6397.5 | 6205.6 | 5968.0 | 5702.9 | 5456.2 | 5264.2 | 5182.0 | 5163.7 |
| 15° | 6781.4 | 6964.1 | 6982.4 | 6799.6 | 6452.3 | 5876.6 | 5319.1 | 5044.9 | 4944.4 | 4944.4 | 4935.2 |
| 17.5° | 7549.1 | 7677.0 | 7603.9 | 7165.2 | 6388.4 | 5447.0 | 5044.9 | 4999.2 | 5026.6 | 5063.2 | 5063.2 |
| 20° | 8353.3 | 8499.5 | 8197.9 | 7421.1 | 5995.4 | 5191.1 | 5072.3 | 5108.9 | 5172.8 | 5209.4 | 5200.3 |
| 22.5° | 9312.9 | 9386.0 | 8801.1 | 7430.2 | 5575.0 | 5127.1 | 5127.1 | 5172.8 | 5218.5 | 5273.4 | 5273.4 |
| 25° | 10300.0 | 10272.6 | 9358.6 | 7092.1 | 5337.3 | 5108.9 | 5090.6 | 5127.1 | 5145.4 | 5172.8 | 5163.7 |
| 27.5° | 11405.8 | 11259.6 | 9788.2 | 6552.9 | 5264.2 | 5054.0 | 4962.6 | 4926.1 | 4944.4 | 4971.8 | 4980.9 |
| 30° | 12676.2 | 12328.9 | 10135.5 | 6214.7 | 5236.8 | 4926.1 | 4706.7 | 4606.2 | 4587.9 | 4624.5 | 4624.5 |
| 32.5° | 14147.6 | 13398.2 | 10345.7 | 6169.0 | 5209.4 | 4697.6 | 4405.1 | 4213.2 | 4176.7 | 4194.9 | 4240.6 |
| 35° | 15655.6 | 14686.8 | 10290.8 | 6287.8 | 5218.5 | 4514.8 | 4085.3 | 3829.4 | 3792.8 | 3811.1 | 3856.8 |
| 37.5° | 17236.7 | 15911.5 | 10080.6 | 6470.6 | 5145.4 | 4268.0 | 3792.8 | 3482.1 | 3427.2 | 3463.8 | 3482.1 |
| 40° | 18461.4 | 16944.2 | 9559.7 | 6543.7 | 5017.5 | 3957.3 | 3454.7 | 3189.6 | 3043.4 | 3034.2 | 3079.9 |
| 42.5° | 19594.6 | 17757.6 | 8993.1 | 6424.9 | 4752.4 | 3628.3 | 3107.4 | 2842.3 | 2613.8 | 2440.2 | 2440.2 |
| 45° | 20727.9 | 18580.2 | 8417.3 | 6086.8 | 4313.7 | 3281.0 | 2741.8 | 2385.4 | 2120.3 | 1992.4 | 2001.5 |
| 47.5° | 21861.2 | 19375.3 | 7731.8 | 5575.0 | 3875.1 | 2915.4 | 2348.8 | 2065.5 | 1882.7 | 1782.2 | 1782.2 |
| 50° | 22912.2 | 19951.1 | 6854.5 | 4761.6 | 3372.4 | 2549.9 | 2074.6 | 1910.1 | 1773.0 | 1681.6 | 1663.4 |
| 52.5° | 23835.3 | 20334.9 | 5666.4 | 3774.5 | 2824.0 | 2138.6 | 1928.4 | 1800.4 | 1699.9 | 1599.4 | 1572.0 |
| 55° | *23999.8* | *20079.0* | *4743.3* | *3034.2* | *2330.5* | *1919.3* | *1818.7* | *1709.0* | *1572.0* | *1526.3* | *1498.8* |
| 57.5° | 22985.3 | 18726.4 | 4003.0 | 2559.0 | 1992.4 | 1763.9 | 1727.3 | 1599.4 | 1489.7 | 1444.0 | 1416.6 |
| 60° | 21258.0 | 16267.9 | 3308.4 | 2193.4 | 1773.0 | 1617.7 | 1663.4 | 1535.4 | 1361.8 | 1334.3 | 1306.9 |
| 62.5° | 18150.6 | 12694.5 | 2641.3 | 1846.1 | 1608.5 | 1508.0 | 1553.7 | 1370.9 | 1224.7 | 1188.1 | 1179.0 |
| 65° | 14111.1 | 9084.5 | 2220.8 | 1626.8 | 1480.6 | 1398.3 | 1380.0 | 1215.5 | 1105.9 | 1078.4 | 1078.4 |
| 67.5° | 9852.2 | 5776.0 | 1855.3 | 1489.7 | 1316.1 | 1261.2 | 1252.1 | 1142.4 | 1069.3 | 1041.9 | 1041.9 |
| 70° | 6031.9 | 3500.3 | 1562.8 | 1361.8 | 1160.7 | 1060.2 | 1124.1 | 1105.9 | 996.2 | 968.8 | 959.6 |
| 72.5° | 3134.8 | 2092.9 | 1370.9 | 1252.1 | 977.9 | 904.8 | 1005.3 | 1014.5 | 923.1 | 959.6 | 950.5 |
| 75° | 1818.7 | 1453.1 | 1197.2 | 1105.9 | 776.8 | 758.6 | 877.4 | 968.8 | 895.7 | 923.1 | 904.8 |
| 77.5° | 1041.9 | 932.2 | 923.1 | 904.8 | 612.3 | 621.5 | 786.0 | 868.2 | 767.7 | 795.1 | 731.1 |
| 80° | 575.8 | 603.2 | 639.8 | 566.6 | 429.5 | 484.4 | 630.6 | 694.6 | 584.9 | 575.8 | 530.1 |
| 82.5° | 301.6 | 374.7 | 429.5 | 365.6 | 246.8 | 292.5 | 429.5 | 429.5 | 374.7 | 356.4 | 347.3 |
| 85° | 137.1 | 155.4 | 201.1 | 182.8 | 91.4 | 109.7 | 201.1 | 219.3 | 191.9 | 173.6 | 164.5 |
| 87.5° | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 18.3 | 27.4 | 9.1 | 9.1 | 9.1 |
| 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: SP1-2407-184-10

Test Date: 10/11/2024

Luminaire Tested: GSS-SB1A-835-U-5WQ

Data in this report applies to families of products including GSS-SB1A-835-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

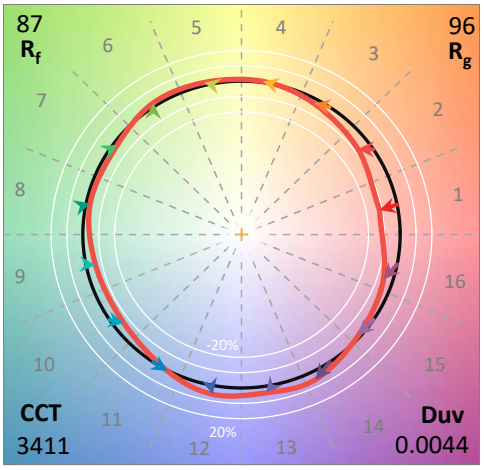
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-10 |
| 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-835-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 80 CRI 3500K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 3411 |
| CIE u': | 0.2360 |
| CIE v': | 0.5189 |
| Duv: | 0.0044 |
| CIE x: | 0.4154 |
| CIE y: | 0.4059 |
| CIE z: | 0.1787 |
| Peak Wavelength (nm): | 601 |
| Dominant Wavelength (nm): | 579 |
| Purity: | 46.51914 |
| Rf: | 86.6 |
| Rg: | 95.9 |

| | |
|---|---|
| CRI (Ra): | 83.5 |
| R1: | 81.1 |
| R2: | 88.9 |
| R3: | 97.2 |
| R4: | 83.8 |
| R5: | 81.7 |
| R6: | 86.9 |
| R7: | 86.1 |
| R8: | 62.2 |
| R9: | 6.3 |
| R10: | 75.4 |
| R11: | 84.1 |
| R12: | 69.7 |
| R13: | 82.8 |
| R14: | 98.5 |
| R15: | 72.6 |




## Test Conditions

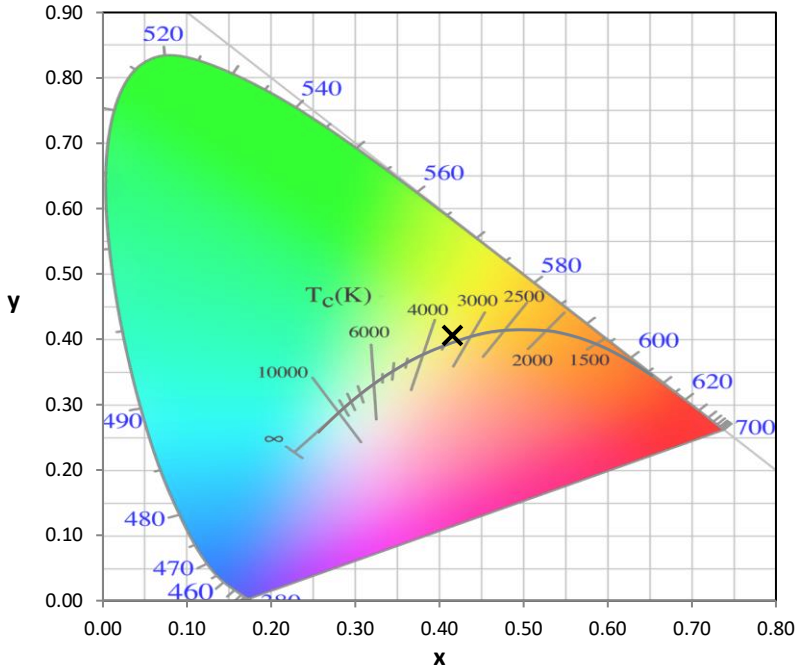
| | |
|---|---|
| Stabilization Time: | 35M |
| Operation Time: | 1H 35M |
| Sphere Temperature (°C): | 25.2 |

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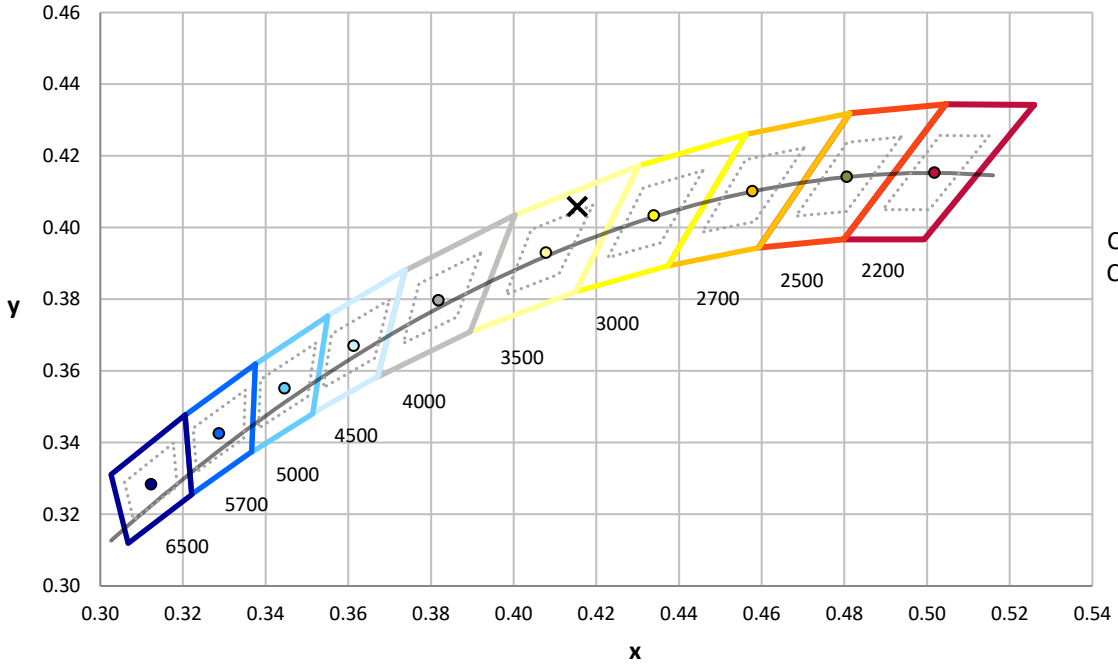
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

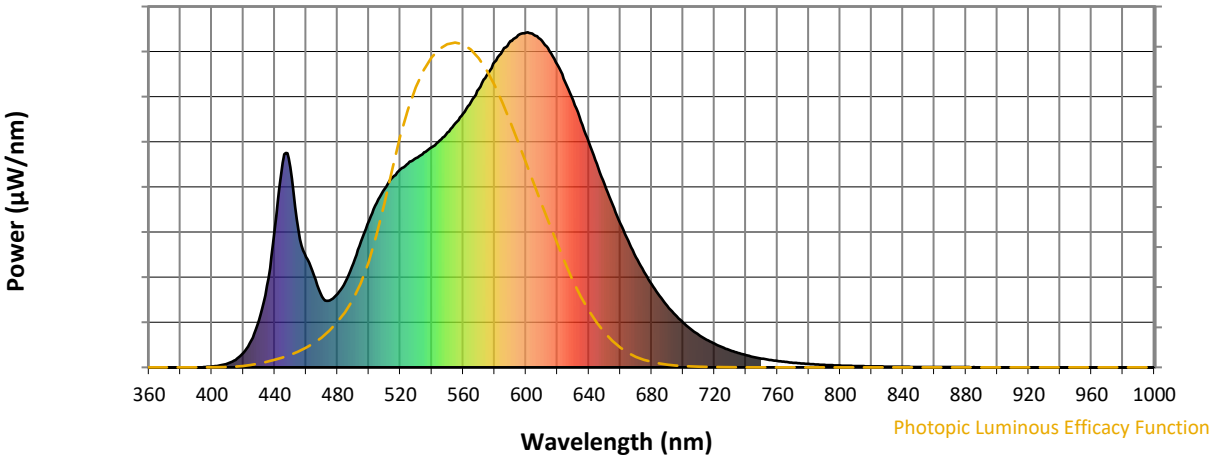



CCT = 3411K
CIE x = 0.4154
CIE y = 0.4059
Duv = 0.0044

Point lies inside the ANSI 3500K 7-step quadrangle

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## Photopic Flux vs. Wavelength

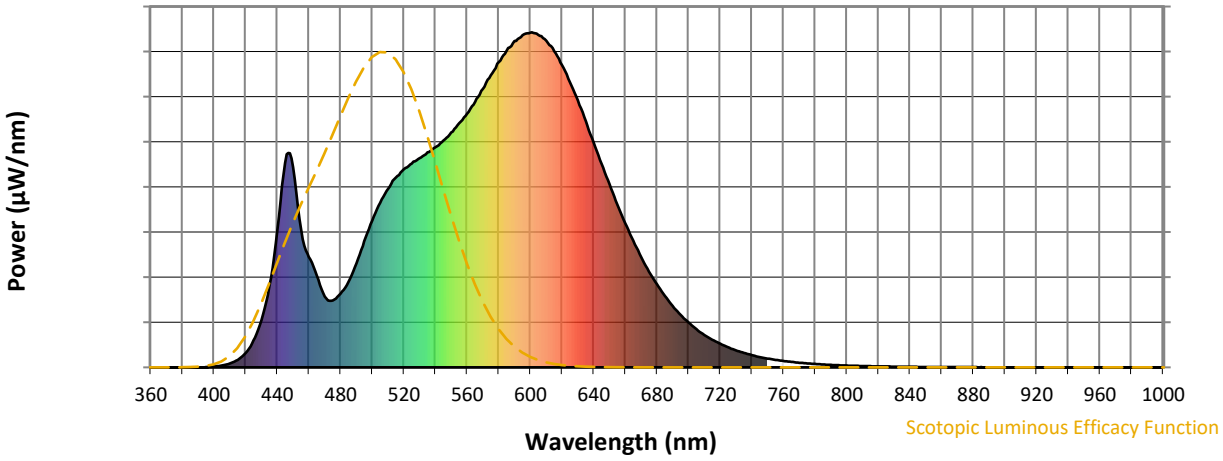



## Photopic Lumens: NR

| 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 | 311 | NR | 620 | 903 | NR | 750 | 26 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 376 | NR | 625 | 851 | NR | 755 | 22 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 438 | NR | 630 | 797 | NR | 760 | 19 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 491 | NR | 635 | 735 | NR | 765 | 16 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 533 | NR | 640 | 672 | NR | 770 | 14 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 566 | NR | 645 | 607 | NR | 775 | 12 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 592 | NR | 650 | 546 | NR | 780 | 10 | NR | 910 | 0 | NR |
| 395 | 1 | NR | 525 | 608 | NR | 655 | 487 | NR | 785 | 9 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 625 | NR | 660 | 429 | NR | 790 | 7 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 642 | NR | 665 | 378 | NR | 795 | 6 | NR | 925 | 0 | NR |
| 410 | 12 | NR | 540 | 657 | NR | 670 | 329 | NR | 800 | 5 | NR | 930 | 0 | NR |
| 415 | 22 | NR | 545 | 677 | NR | 675 | 286 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 43 | NR | 550 | 701 | NR | 680 | 248 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 80 | NR | 555 | 728 | NR | 685 | 213 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 140 | NR | 560 | 757 | NR | 690 | 184 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 243 | NR | 565 | 793 | NR | 695 | 156 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 412 | NR | 570 | 831 | NR | 700 | 134 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 610 | NR | 575 | 872 | NR | 705 | 114 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 597 | NR | 580 | 911 | NR | 710 | 97 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 412 | NR | 585 | 944 | NR | 715 | 83 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 330 | NR | 590 | 974 | NR | 720 | 70 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 274 | NR | 595 | 992 | NR | 725 | 60 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 211 | NR | 600 | 999 | NR | 730 | 51 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 200 | NR | 605 | 992 | NR | 735 | 43 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 220 | NR | 610 | 975 | NR | 740 | 36 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 255 | NR | 615 | 944 | NR | 745 | 31 | NR | 875 | 1 | NR | | | |

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## Scotopic Flux vs. Wavelength

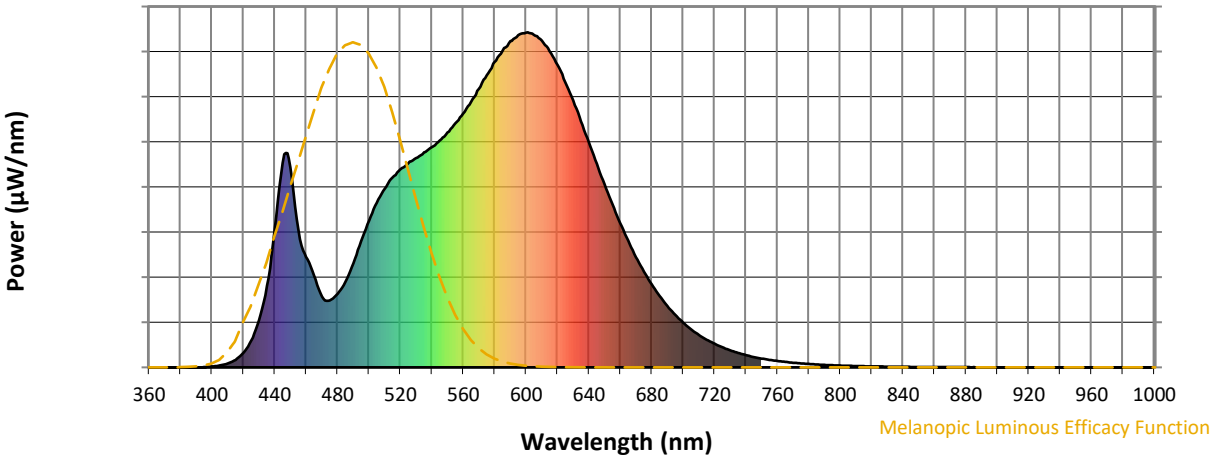



**Scotopic Lumens: NR** **S/P: 1.48**

| 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 | 311 | NR | 620 | 903 | NR | 750 | 26 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 376 | NR | 625 | 851 | NR | 755 | 22 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 438 | NR | 630 | 797 | NR | 760 | 19 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 491 | NR | 635 | 735 | NR | 765 | 16 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 533 | NR | 640 | 672 | NR | 770 | 14 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 566 | NR | 645 | 607 | NR | 775 | 12 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 592 | NR | 650 | 546 | NR | 780 | 10 | NR | 910 | 0 | NR |
| 395 | 1 | NR | 525 | 608 | NR | 655 | 487 | NR | 785 | 9 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 625 | NR | 660 | 429 | NR | 790 | 7 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 642 | NR | 665 | 378 | NR | 795 | 6 | NR | 925 | 0 | NR |
| 410 | 12 | NR | 540 | 657 | NR | 670 | 329 | NR | 800 | 5 | NR | 930 | 0 | NR |
| 415 | 22 | NR | 545 | 677 | NR | 675 | 286 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 43 | NR | 550 | 701 | NR | 680 | 248 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 80 | NR | 555 | 728 | NR | 685 | 213 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 140 | NR | 560 | 757 | NR | 690 | 184 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 243 | NR | 565 | 793 | NR | 695 | 156 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 412 | NR | 570 | 831 | NR | 700 | 134 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 610 | NR | 575 | 872 | NR | 705 | 114 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 597 | NR | 580 | 911 | NR | 710 | 97 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 412 | NR | 585 | 944 | NR | 715 | 83 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 330 | NR | 590 | 974 | NR | 720 | 70 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 274 | NR | 595 | 992 | NR | 725 | 60 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 211 | NR | 600 | 999 | NR | 730 | 51 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 200 | NR | 605 | 992 | NR | 735 | 43 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 220 | NR | 610 | 975 | NR | 740 | 36 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 255 | NR | 615 | 944 | NR | 745 | 31 | NR | 875 | 1 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.88**

| 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 | 311 | NR | 620 | 903 | NR | 750 | 26 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 376 | NR | 625 | 851 | NR | 755 | 22 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 438 | NR | 630 | 797 | NR | 760 | 19 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 491 | NR | 635 | 735 | NR | 765 | 16 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 533 | NR | 640 | 672 | NR | 770 | 14 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 566 | NR | 645 | 607 | NR | 775 | 12 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 592 | NR | 650 | 546 | NR | 780 | 10 | NR | 910 | 0 | NR |
| 395 | 1 | NR | 525 | 608 | NR | 655 | 487 | NR | 785 | 9 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 625 | NR | 660 | 429 | NR | 790 | 7 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 642 | NR | 665 | 378 | NR | 795 | 6 | NR | 925 | 0 | NR |
| 410 | 12 | NR | 540 | 657 | NR | 670 | 329 | NR | 800 | 5 | NR | 930 | 0 | NR |
| 415 | 22 | NR | 545 | 677 | NR | 675 | 286 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 43 | NR | 550 | 701 | NR | 680 | 248 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 80 | NR | 555 | 728 | NR | 685 | 213 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 140 | NR | 560 | 757 | NR | 690 | 184 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 243 | NR | 565 | 793 | NR | 695 | 156 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 412 | NR | 570 | 831 | NR | 700 | 134 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 610 | NR | 575 | 872 | NR | 705 | 114 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 597 | NR | 580 | 911 | NR | 710 | 97 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 412 | NR | 585 | 944 | NR | 715 | 83 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 330 | NR | 590 | 974 | NR | 720 | 70 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 274 | NR | 595 | 992 | NR | 725 | 60 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 211 | NR | 600 | 999 | NR | 730 | 51 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 200 | NR | 605 | 992 | NR | 735 | 43 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 220 | NR | 610 | 975 | NR | 740 | 36 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 255 | NR | 615 | 944 | NR | 745 | 31 | NR | 875 | 1 | NR | | | |

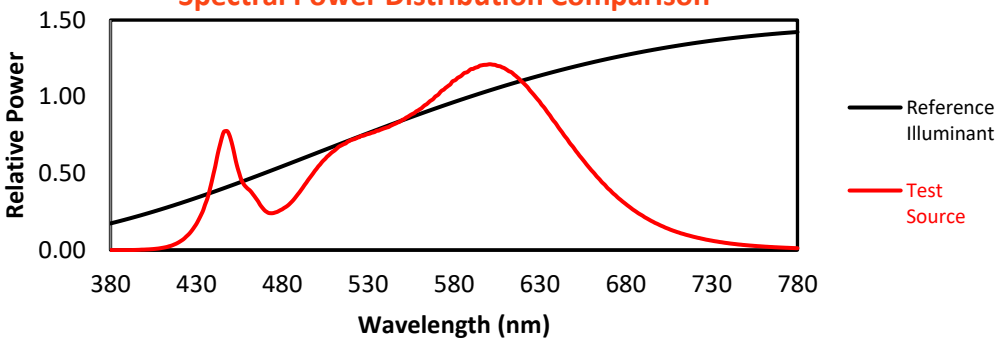
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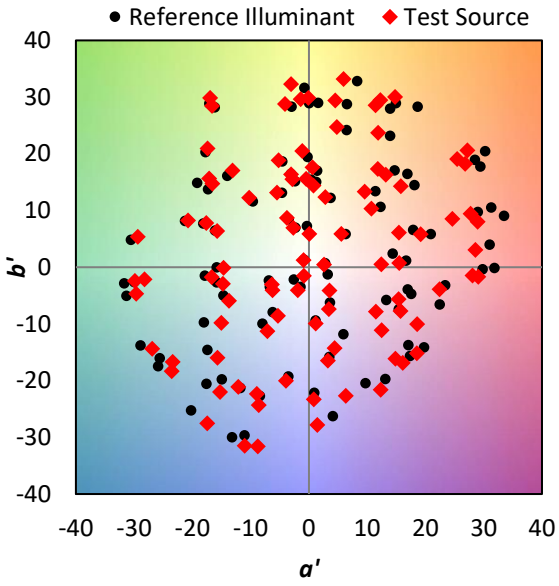
## Summary

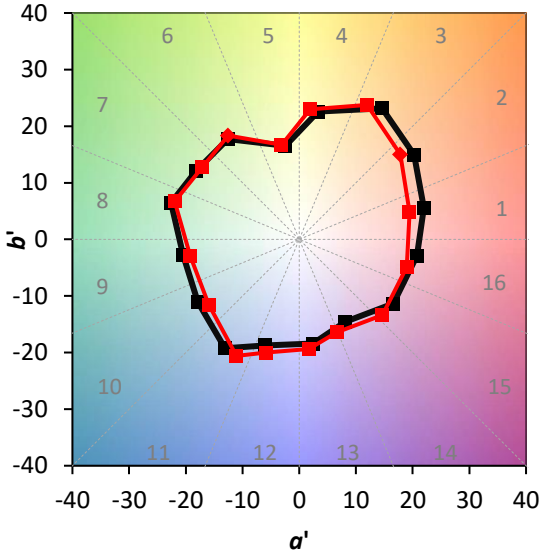
$R_f$ = 86.6
$R_g$ = 95.9
CIE $R_a$ = 83.5
$R_9$ = 6.3

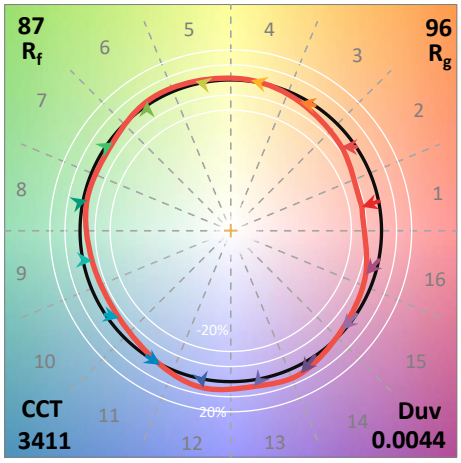
## Spectral Power Distribution Comparison

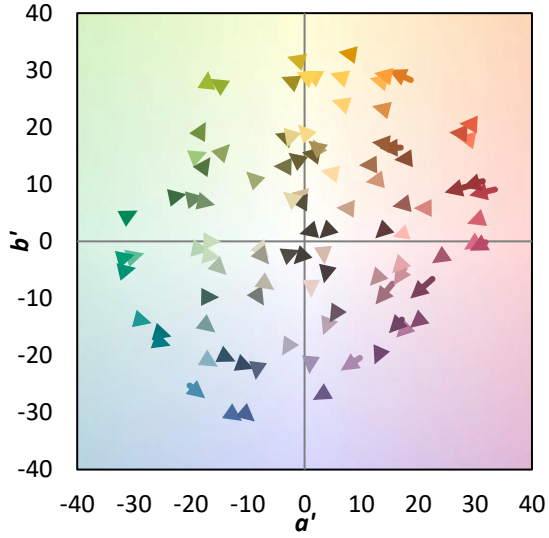



## Color Vector Graphics



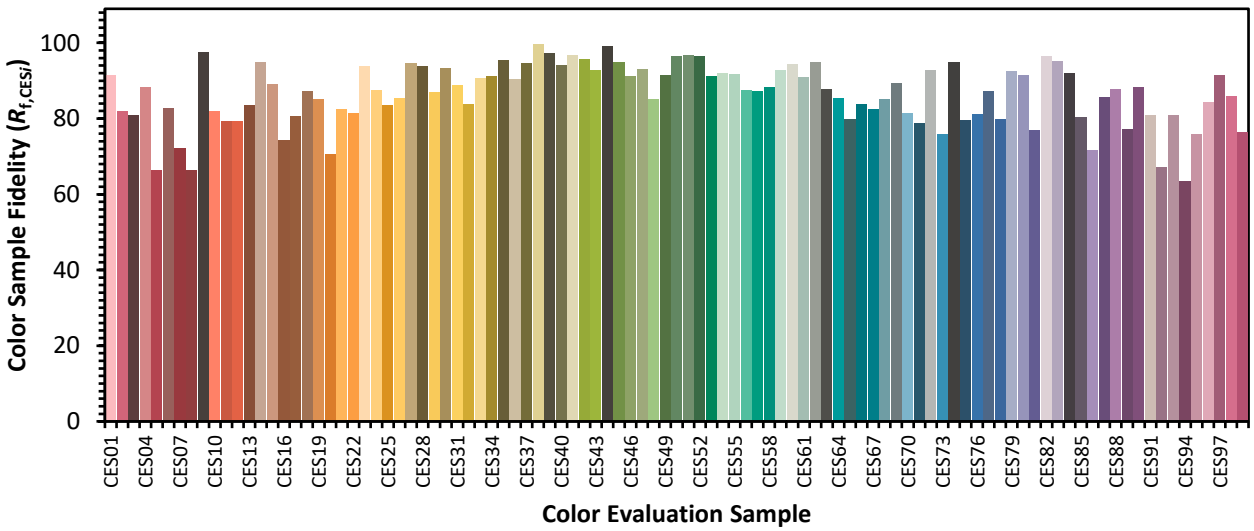



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**Individual Sample Fidelity Index ($R_{f,i}$)**

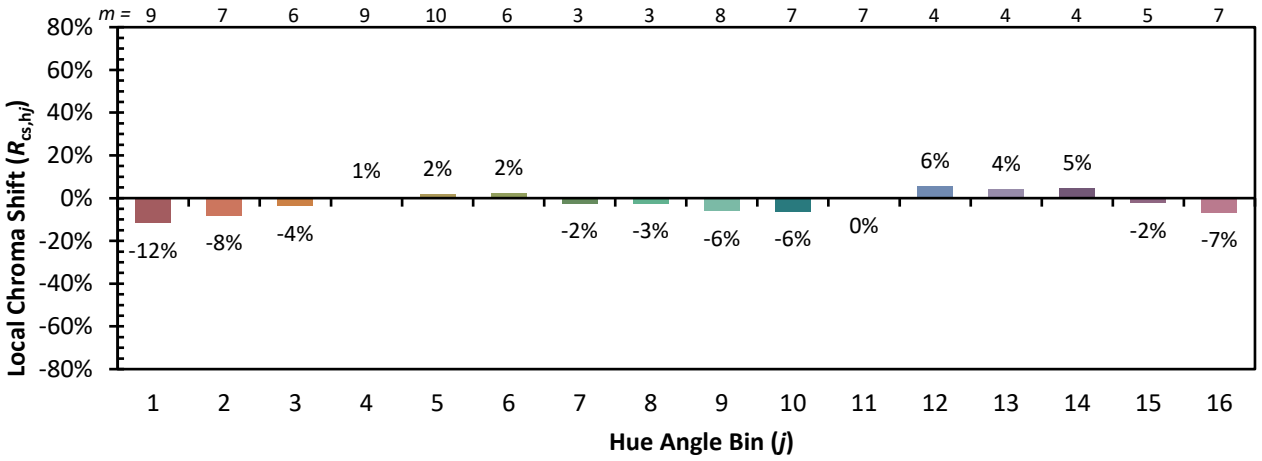
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 85 | CES51 = 97 | CES76 = 81 |
| CES02 = 62 | CES27 = 95 | CES52 = 96 | CES77 = 87 |
| CES03 = 31 | CES28 = 94 | CES53 = 91 | CES78 = 80 |
| CES04 = 70 | CES29 = 87 | CES54 = 92 | CES79 = 93 |
| CES05 = 49 | CES30 = 93 | CES55 = 92 | CES80 = 91 |
| CES06 = 51 | CES31 = 89 | CES56 = 88 | CES81 = 77 |
| CES07 = 41 | CES32 = 84 | CES57 = 87 | CES82 = 96 |
| CES08 = 40 | CES33 = 91 | CES58 = 88 | CES83 = 95 |
| CES09 = 29 | CES34 = 91 | CES59 = 93 | CES84 = 92 |
| CES10 = 75 | CES35 = 95 | CES60 = 94 | CES85 = 80 |
| CES11 = 58 | CES36 = 90 | CES61 = 91 | CES86 = 72 |
| CES12 = 64 | CES37 = 95 | CES62 = 95 | CES87 = 86 |
| CES13 = 43 | CES38 = 100 | CES63 = 88 | CES88 = 88 |
| CES14 = 74 | CES39 = 97 | CES64 = 85 | CES89 = 77 |
| CES15 = 71 | CES40 = 94 | CES65 = 80 | CES90 = 88 |
| CES16 = 47 | CES41 = 97 | CES66 = 84 | CES91 = 81 |
| CES17 = 49 | CES42 = 96 | CES67 = 82 | CES92 = 67 |
| CES18 = 56 | CES43 = 93 | CES68 = 85 | CES93 = 81 |
| CES19 = 72 | CES44 = 99 | CES69 = 89 | CES94 = 63 |
| CES20 = 66 | CES45 = 95 | CES70 = 81 | CES95 = 76 |
| CES21 = 86 | CES46 = 91 | CES71 = 79 | CES96 = 84 |
| CES22 = 78 | CES47 = 93 | CES72 = 93 | CES97 = 92 |
| CES23 = 91 | CES48 = 85 | CES73 = 76 | CES98 = 86 |
| CES24 = 90 | CES49 = 92 | CES74 = 95 | CES99 = 77 |
| CES25 = 72 | CES50 = 96 | CES75 = 80 | |

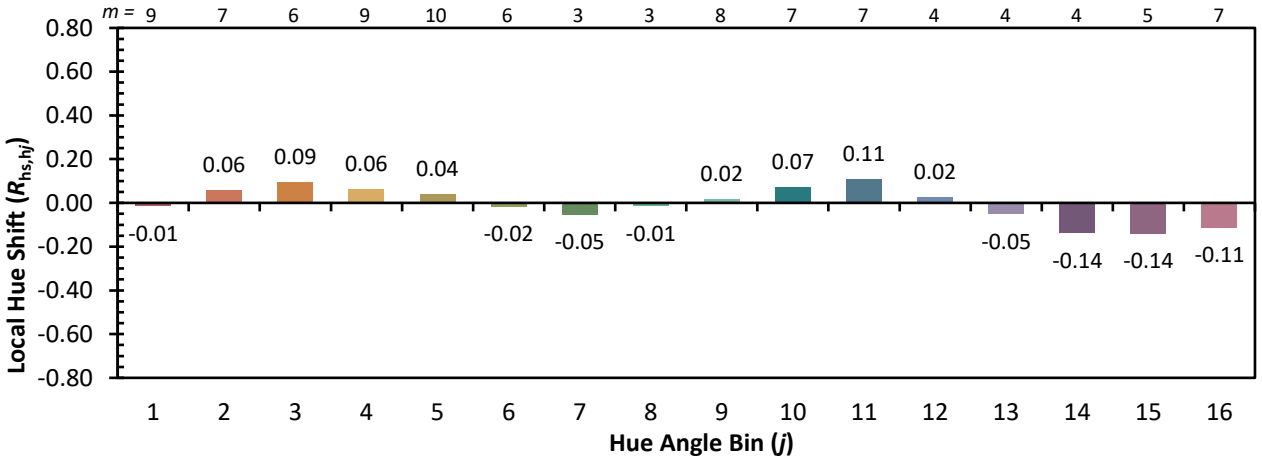


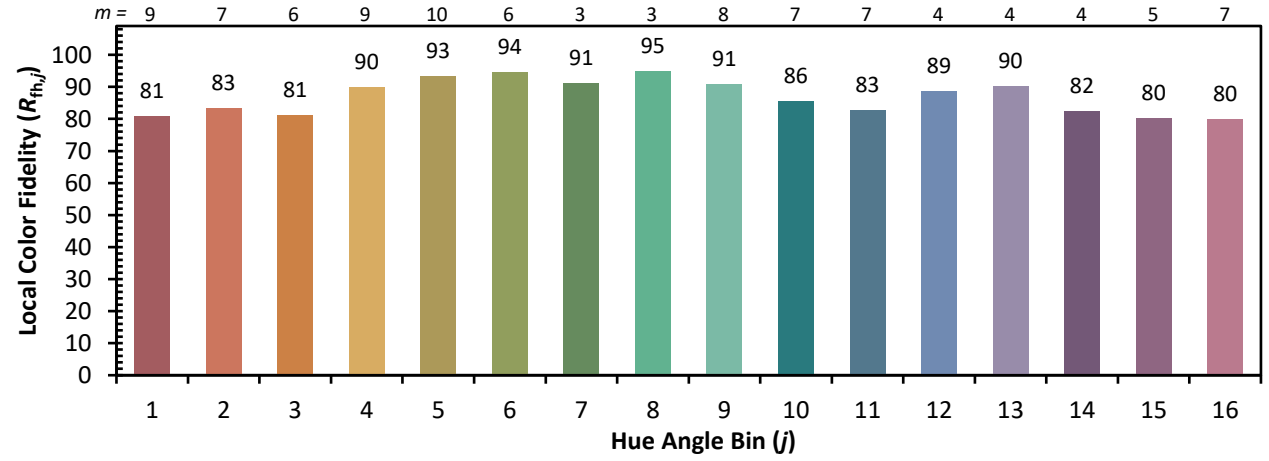
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## Color Rendition by Hue-Angle Bin



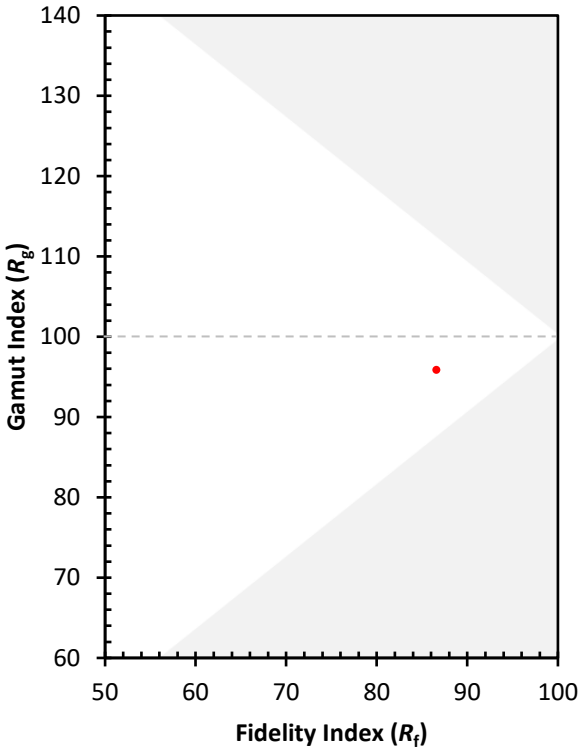



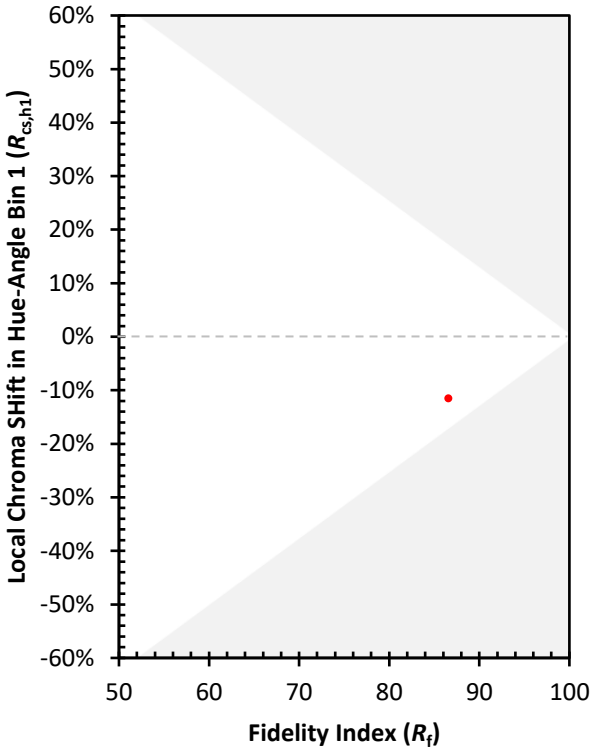



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## Measure Comparisons




(END OF REPORT)