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: P1501078

Luminaire Tested: GSS-SB5B-750-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: | P1501078 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 7/20/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB5B-750-U-T3LG |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 5SQUARE 184W 70CRI 5000K FIXTURE w/ TYPE III LOW GLARE DISTRIBUTION FIXTURE |
| Light Source: | (130) 5000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 29615.9 lumens |
| Efficiency: | N/A |
| Efficacy: | 161.0 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B3 - U0 - G3 |

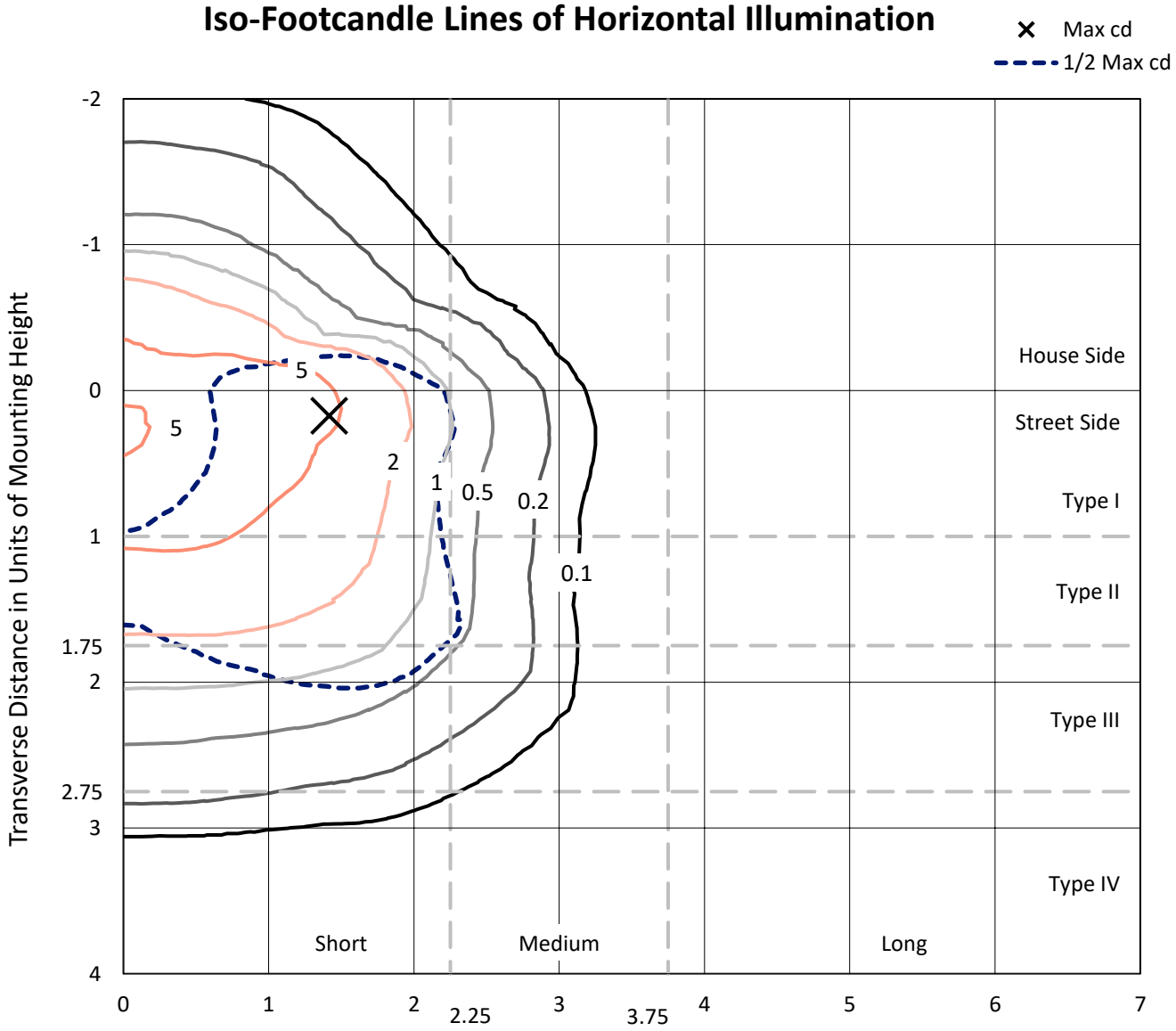
| | |
|---|---|
| Input Watts (W): | 184 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 11.1% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1501078
CATALOG NUMBER: GSS-SB5B-750-U-T3LG

## Iso-Footcandle Lines of Horizontal Illumination



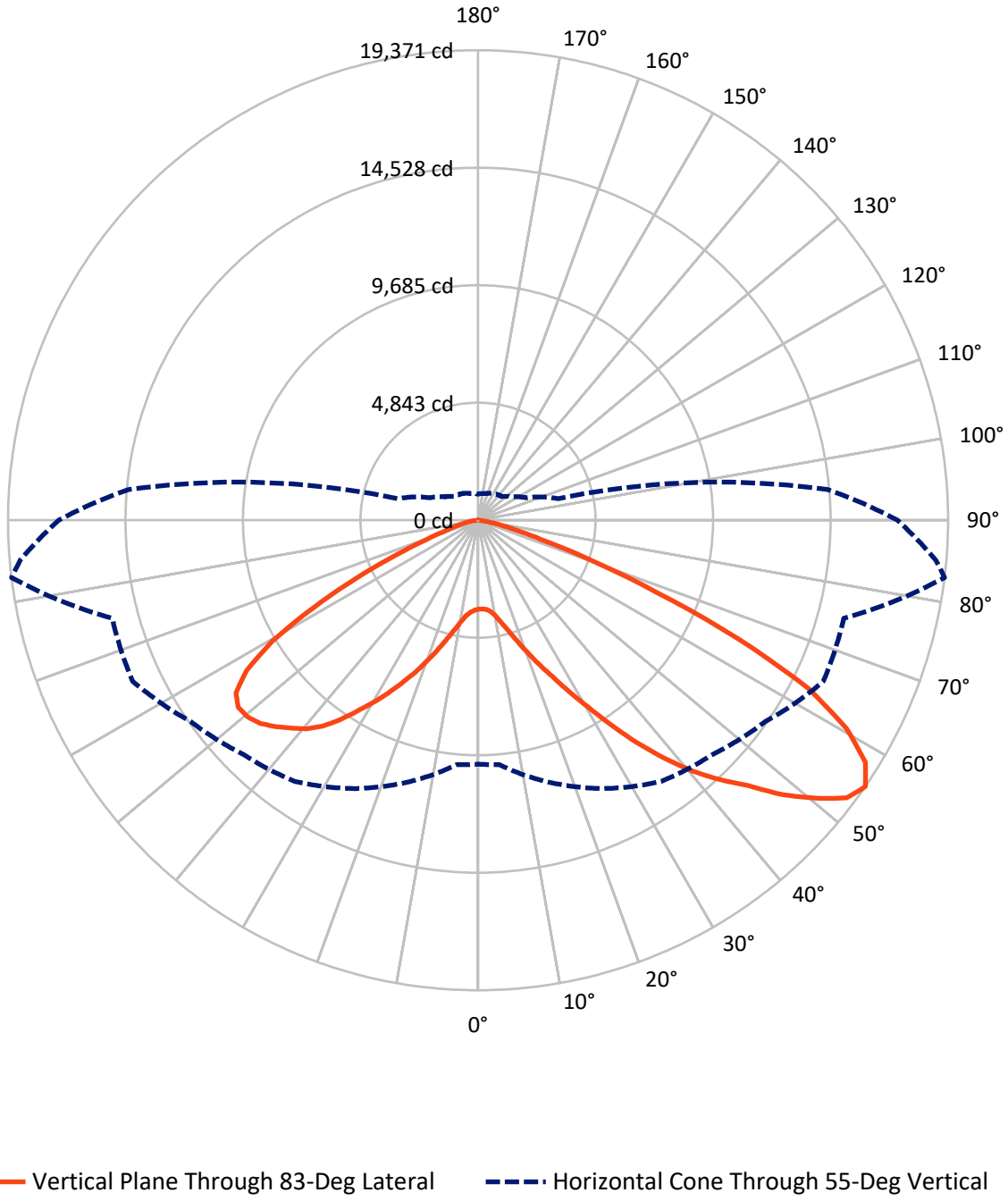

Based on 25 foot mounting height. Maximum calculated value = 9.9 fc
Type III - Short - N/A

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## Luminous Intensity Polar Plot



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Scaled Data Report

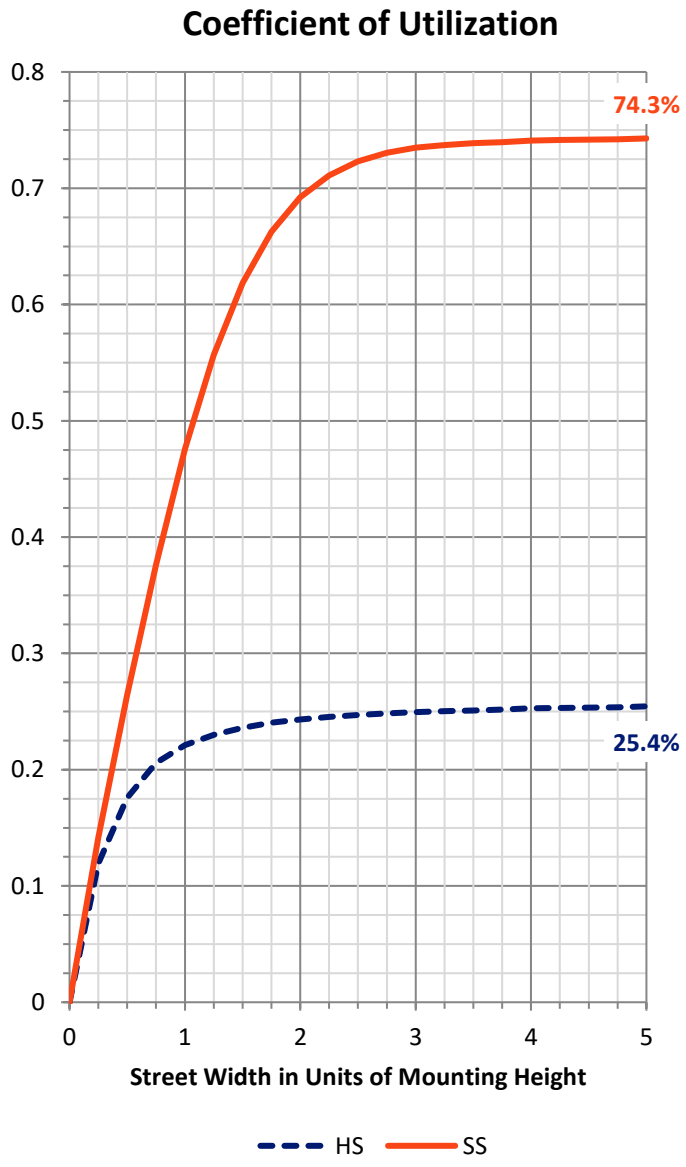
REPORT NUMBER: P1501078
CATALOG NUMBER: GSS-SB5B-750-U-T3LG

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 7600.1 | 0.0 | 7600.1 |
| | % Fixture | 25.7 | 0.0 | 25.7 |
| **Street Side** | Lumens | 22015.8 | 0.0 | 22015.8 |
| | % Fixture | 74.3 | 0.0 | 74.3 |
| **Total** | Lumens | 29615.9 | 0.0 | 29615.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 354.2 | 1.2 |
| 10°-20° | 1154.0 | 3.9 |
| 20°-30° | 2310.2 | 7.8 |
| 30°-40° | 4110.3 | 13.9 |
| 40°-50° | 6194.0 | 20.9 |
| 50°-60° | 7547.8 | 25.5 |
| 60°-70° | 6103.5 | 20.6 |
| 70°-80° | 1671.7 | 5.6 |
| 80°-90° | 170.3 | 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° | 29615.9 | 100.0 |
| 0°-180° | 29615.9 | 100.0 |



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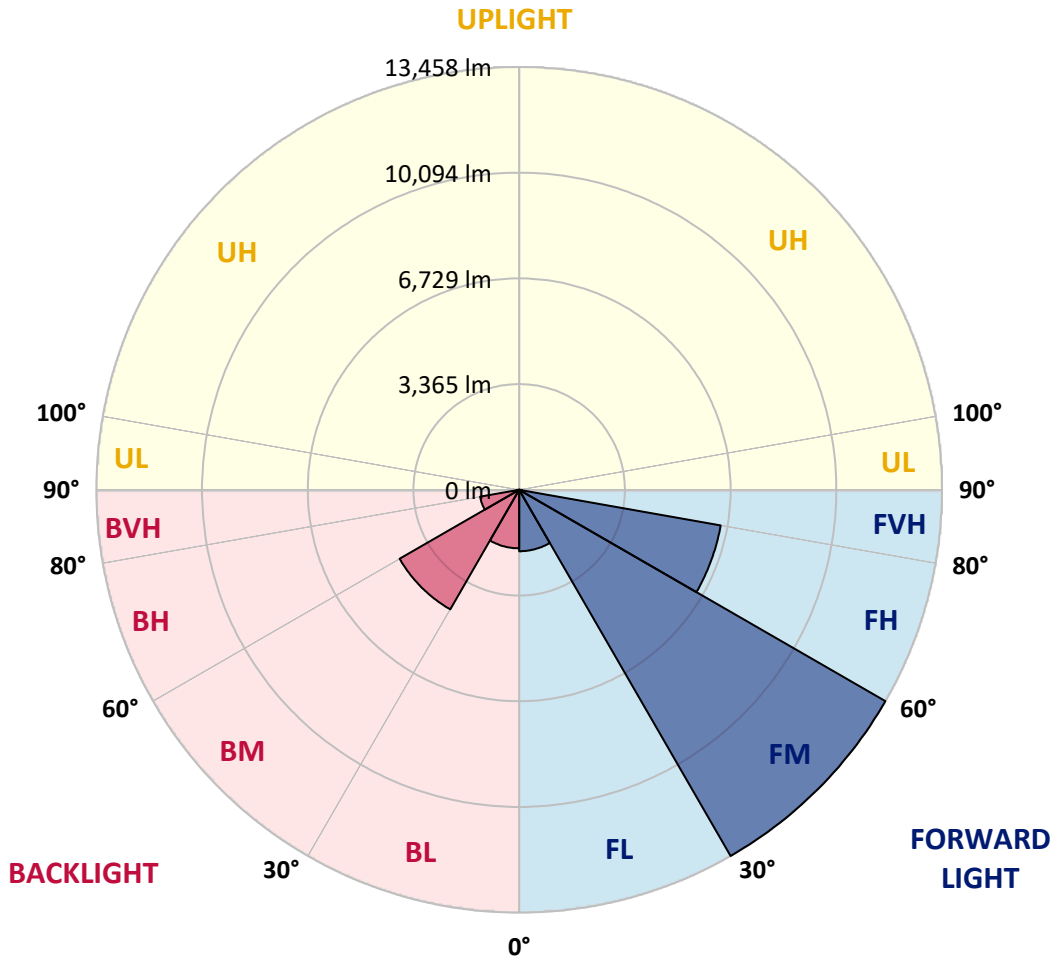
Scaled Data Report

REPORT NUMBER: P1501078
CATALOG NUMBER: GSS-SB5B-750-U-T3LG

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1955.5 | 6.6 | | | |
| FM | (30°-60°) | 13458.4 | 45.4 | | | |
| FH | (60°-80°) | 6513.3 | 22.0 | | | G3/7500 |
| FVH | (80°-90°) | 88.7 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 1863.0 | 6.3 | B3/2500 | | |
| BM | (30°-60°) | 4393.7 | 14.8 | B3/5000 | | |
| BH | (60°-80°) | 1261.8 | 4.3 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 81.6 | 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 III Short



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REPORT NUMBER: P1501078
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 83° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 3666.1 | 3666.1 | 3666.1 | 3666.1 | 3666.1 | 3666.1 | 3666.1 | 3666.1 | 3666.1 | *3666.1* | 3666.1 |
| 2.5° | 3560.8 | 3554.2 | 3547.7 | 3541.1 | 3554.2 | 3574.0 | 3593.7 | 3606.9 | 3639.8 | *3666.1* | 3653.0 |
| 5° | 3277.8 | 3264.6 | 3277.8 | 3330.5 | 3376.5 | 3455.5 | 3534.5 | 3587.2 | 3659.6 | *3692.5* | 3705.6 |
| 7.5° | 3027.7 | 3014.5 | 3027.7 | 3093.5 | 3172.5 | 3297.5 | 3462.1 | 3593.7 | 3725.4 | *3804.4* | 3817.5 |
| 10° | 3027.7 | 3034.3 | 3034.3 | 3060.6 | 3100.1 | 3225.1 | 3422.6 | 3672.7 | 3903.1 | *4015.0* | 4041.3 |
| 12.5° | 3126.4 | 3126.4 | 3126.4 | 3159.3 | 3185.7 | 3284.4 | 3508.2 | 3817.5 | 4186.1 | *4350.7* | 4370.4 |
| 15° | 3258.1 | 3251.5 | 3271.2 | 3291.0 | 3337.0 | 3435.8 | 3659.6 | 4028.1 | 4495.5 | *4745.6* | 4771.9 |
| 17.5° | 3442.3 | 3429.2 | 3448.9 | 3495.0 | 3560.8 | 3672.7 | 3896.5 | 4317.7 | 4923.3 | *5239.2* | 5278.7 |
| 20° | 3646.4 | 3639.8 | 3679.3 | 3751.7 | 3843.8 | 3982.1 | 4238.8 | 4666.6 | 5410.3 | *5811.8* | 5884.2 |
| 22.5° | 3889.9 | 3876.8 | 3949.2 | 4080.8 | 4205.9 | 4363.8 | 4673.2 | 5120.7 | 5969.8 | *6450.3* | 6522.7 |
| 25° | 4166.4 | 4166.4 | 4265.1 | 4423.1 | 4613.9 | 4897.0 | 5206.3 | 5700.0 | 6628.0 | *7141.4* | 7253.3 |
| 27.5° | 4620.5 | 4653.4 | 4692.9 | 4857.5 | 5127.3 | 5509.1 | 5838.2 | 6397.6 | 7345.4 | *7990.5* | 8030.0 |
| 30° | 5357.7 | 5344.5 | 5410.3 | 5522.2 | 5746.0 | 6147.5 | 6641.2 | 7240.1 | 8253.7 | *8931.7* | 9030.4 |
| 32.5° | 6022.5 | 6042.2 | 6134.4 | 6345.0 | 6614.8 | 6957.1 | 7549.5 | 8286.6 | 9241.0 | *10024.3* | 10070.4 |
| 35° | 6693.8 | 6707.0 | 6884.7 | 7200.6 | 7602.1 | 7983.9 | 8628.9 | 9352.9 | 10313.9 | *11241.9* | 11367.0 |
| 37.5° | 7635.0 | 7621.9 | 7799.6 | 8069.4 | 8609.2 | 9201.5 | 9721.5 | 10412.6 | 11340.7 | *12426.7* | 12571.5 |
| 40° | 8339.3 | 8411.7 | 8747.4 | 9089.6 | 9596.5 | 10208.6 | 10649.6 | 11301.2 | 12183.2 | *13585.1* | 13716.7 |
| 42.5° | 9063.3 | 9122.6 | 9570.1 | 10083.5 | 10616.7 | 11031.3 | 11373.6 | 11979.1 | 12854.5 | *14611.9* | 14684.3 |
| 45° | 9662.3 | 9741.3 | 10254.6 | 10906.3 | 11459.1 | 11880.4 | 11998.9 | 12564.9 | 13539.0 | *15599.2* | 15711.1 |
| 47.5° | 10044.0 | 10129.6 | 10735.1 | 11498.6 | 12064.7 | 12512.2 | 12472.8 | 13269.2 | 14269.6 | *16909.0* | 16869.5 |
| 50° | 10307.3 | 10360.0 | 11018.1 | 11834.3 | 12571.5 | 12867.7 | 13038.8 | 14065.6 | 15020.0 | *18008.2* | 17863.4 |
| 52.5° | 10498.2 | 10583.7 | 11182.7 | 12077.8 | 12854.5 | 13242.8 | 13703.6 | 14987.1 | 15539.9 | *19015.2* | 18692.7 |
| 55° | *10050.6* | *10116.4* | *11169.5* | *12202.9* | *13144.1* | *13657.5* | *14460.5* | *15704.5* | *15605.8* | *19370.6* | *18936.2* |
| 57.5° | 9589.9 | 9642.5 | 10616.7 | 12170.0 | 13460.0 | 14170.9 | 15322.7 | 15796.6 | 15020.0 | *18824.3* | 18278.0 |
| 60° | 9010.7 | 9050.2 | 10024.3 | 11821.1 | 13466.6 | 14572.4 | 15763.7 | 15125.3 | 13933.9 | *17448.7* | 16928.7 |
| 62.5° | 7944.4 | 7944.4 | 9017.2 | 10879.9 | 13137.5 | 14776.4 | 15645.2 | 13855.0 | 12479.3 | *15283.2* | 14565.8 |
| 65° | 6891.3 | 6845.2 | 7569.2 | 9201.5 | 12262.1 | 14723.8 | 14756.7 | 12249.0 | 10221.7 | *11788.2* | 11228.8 |
| 67.5° | 5746.0 | 5752.6 | 6180.4 | 7470.5 | 9932.1 | 13624.6 | 12880.8 | 9464.8 | 7121.6 | *7937.8* | 7648.2 |
| 70° | 3889.9 | 3988.6 | 4423.1 | 5423.5 | 7490.2 | 9655.7 | 10254.6 | 6410.8 | 4442.8 | *4929.9* | 4692.9 |
| 72.5° | 1480.9 | 1500.7 | 2007.5 | 2843.4 | 4732.4 | 5805.3 | 7154.6 | 3587.2 | 2599.9 | *2718.3* | 2731.5 |
| 75° | 625.3 | 651.6 | 855.7 | 1197.9 | 2099.6 | 3165.9 | 3764.9 | 1816.6 | 1579.7 | *1625.7* | 1612.6 |
| 77.5° | 421.2 | 434.4 | 520.0 | 645.0 | 947.8 | 1270.3 | 1573.1 | 1026.8 | 967.5 | *908.3* | 882.0 |
| 80° | 315.9 | 315.9 | 375.2 | 434.4 | 533.1 | 651.6 | 684.5 | 520.0 | 579.2 | *480.5* | 467.3 |
| 82.5° | 204.0 | 217.2 | 236.9 | 256.7 | 302.8 | 322.5 | 276.4 | 283.0 | 335.7 | *250.1* | 236.9 |
| 85° | 98.7 | 105.3 | 111.9 | 118.5 | 118.5 | 111.9 | 98.7 | 125.1 | 171.1 | *105.3* | 98.7 |
| 87.5° | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 6.6 | 6.6 | 6.6 | *6.6* | 6.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 |

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Scaled Data Report

REPORT NUMBER: P1501078
CATALOG NUMBER: GSS-SB5B-750-U-T3LG

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 3666.1 | 3666.1 | 3666.1 | 3666.1 | 3666.1 | 3666.1 | 3666.1 | 3666.1 | 3666.1 | 3666.1 | 3666.1 |
| 2.5° | 3672.7 | 3699.0 | 3718.8 | 3732.0 | 3764.9 | 3758.3 | 3778.0 | 3791.2 | 3804.4 | 3824.1 | 3797.8 |
| 5° | 3738.5 | 3784.6 | 3837.3 | 3876.8 | 3916.2 | 3936.0 | 3942.6 | 3955.7 | 3962.3 | 3975.5 | 3968.9 |
| 7.5° | 3883.3 | 3936.0 | 4015.0 | 4054.5 | 4087.4 | 4087.4 | 4067.6 | 4061.1 | 4041.3 | 4054.5 | 4054.5 |
| 10° | 4126.9 | 4205.9 | 4291.4 | 4298.0 | 4258.5 | 4212.4 | 4140.0 | 4100.5 | 4047.9 | 4034.7 | 4021.6 |
| 12.5° | 4482.3 | 4587.6 | 4653.4 | 4607.4 | 4469.1 | 4298.0 | 4107.1 | 3929.4 | 3791.2 | 3732.0 | 3718.8 |
| 15° | 4883.8 | 5015.4 | 5028.6 | 4897.0 | 4646.8 | 4232.2 | 3830.7 | 3633.2 | 3560.8 | 3560.8 | 3554.2 |
| 17.5° | 5436.7 | 5528.8 | 5476.2 | 5160.2 | 4600.8 | 3922.8 | 3633.2 | 3600.3 | 3620.1 | 3646.4 | 3646.4 |
| 20° | 6015.9 | 6121.2 | 5904.0 | 5344.5 | 4317.7 | 3738.5 | 3653.0 | 3679.3 | 3725.4 | 3751.7 | 3745.1 |
| 22.5° | 6707.0 | 6759.6 | 6338.4 | 5351.1 | 4015.0 | 3692.5 | 3692.5 | 3725.4 | 3758.3 | 3797.8 | 3797.8 |
| 25° | 7417.8 | 7398.1 | 6739.9 | 5107.6 | 3843.8 | 3679.3 | 3666.1 | 3692.5 | 3705.6 | 3725.4 | 3718.8 |
| 27.5° | 8214.2 | 8108.9 | 7049.2 | 4719.2 | 3791.2 | 3639.8 | 3574.0 | 3547.7 | 3560.8 | 3580.6 | 3587.2 |
| 30° | 9129.1 | 8879.0 | 7299.4 | 4475.7 | 3771.4 | 3547.7 | 3389.7 | 3317.3 | 3304.1 | 3330.5 | 3330.5 |
| 32.5° | 10188.8 | 9649.1 | 7450.7 | 4442.8 | 3751.7 | 3383.1 | 3172.5 | 3034.3 | 3007.9 | 3021.1 | 3054.0 |
| 35° | 11274.8 | 10577.2 | 7411.3 | 4528.4 | 3758.3 | 3251.5 | 2942.1 | 2757.8 | 2731.5 | 2744.7 | 2777.6 |
| 37.5° | 12413.5 | 11459.1 | 7259.9 | 4660.0 | 3705.6 | 3073.8 | 2731.5 | 2507.7 | 2468.2 | 2494.6 | 2507.7 |
| 40° | 13295.5 | 12202.9 | 6884.7 | 4712.7 | 3613.5 | 2850.0 | 2488.0 | 2297.1 | 2191.8 | 2185.2 | 2218.1 |
| 42.5° | 14111.7 | 12788.7 | 6476.6 | 4627.1 | 3422.6 | 2613.0 | 2237.9 | 2047.0 | 1882.4 | 1757.4 | 1757.4 |
| 45° | 14927.8 | 13381.1 | 6062.0 | 4383.6 | 3106.7 | 2362.9 | 1974.6 | 1717.9 | 1527.0 | 1434.9 | 1441.4 |
| 47.5° | 15744.0 | 13953.7 | 5568.3 | 4015.0 | 2790.7 | 2099.6 | 1691.6 | 1487.5 | 1355.9 | 1283.5 | 1283.5 |
| 50° | 16500.9 | 14368.4 | 4936.4 | 3429.2 | 2428.7 | 1836.4 | 1494.1 | 1375.6 | 1276.9 | 1211.1 | 1197.9 |
| 52.5° | 17165.7 | 14644.8 | 4080.8 | 2718.3 | 2033.8 | 1540.2 | 1388.8 | 1296.6 | 1224.2 | 1151.8 | 1132.1 |
| 55° | *17284.1* | *14460.5* | *3416.0* | *2185.2* | *1678.4* | *1382.2* | *1309.8* | *1230.8* | *1132.1* | *1099.2* | *1079.4* |
| 57.5° | 16553.6 | 13486.4 | 2882.9 | 1842.9 | 1434.9 | 1270.3 | 1244.0 | 1151.8 | 1072.9 | 1039.9 | 1020.2 |
| 60° | 15309.6 | 11715.8 | 2382.7 | 1579.7 | 1276.9 | 1165.0 | 1197.9 | 1105.8 | 980.7 | 961.0 | 941.2 |
| 62.5° | 13071.7 | 9142.3 | 1902.2 | 1329.5 | 1158.4 | 1086.0 | 1118.9 | 987.3 | 882.0 | 855.7 | 849.1 |
| 65° | 10162.5 | 6542.4 | 1599.4 | 1171.6 | 1066.3 | 1007.0 | 993.9 | 875.4 | 796.4 | 776.7 | 776.7 |
| 67.5° | 7095.3 | 4159.8 | 1336.1 | 1072.9 | 947.8 | 908.3 | 901.7 | 822.7 | 770.1 | 750.3 | 750.3 |
| 70° | 4344.1 | 2520.9 | 1125.5 | 980.7 | 835.9 | 763.5 | 809.6 | 796.4 | 717.4 | 697.7 | 691.1 |
| 72.5° | 2257.6 | 1507.3 | 987.3 | 901.7 | 704.3 | 651.6 | 724.0 | 730.6 | 664.8 | 691.1 | 684.5 |
| 75° | 1309.8 | 1046.5 | 862.2 | 796.4 | 559.5 | 546.3 | 631.9 | 697.7 | 645.0 | 664.8 | 651.6 |
| 77.5° | 750.3 | 671.4 | 664.8 | 651.6 | 441.0 | 447.6 | 566.0 | 625.3 | 552.9 | 572.6 | 526.6 |
| 80° | 414.7 | 434.4 | 460.7 | 408.1 | 309.4 | 348.8 | 454.2 | 500.2 | 421.2 | 414.7 | 381.8 |
| 82.5° | 217.2 | 269.9 | 309.4 | 263.3 | 177.7 | 210.6 | 309.4 | 309.4 | 269.9 | 256.7 | 250.1 |
| 85° | 98.7 | 111.9 | 144.8 | 131.6 | 65.8 | 79.0 | 144.8 | 158.0 | 138.2 | 125.1 | 118.5 |
| 87.5° | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 13.2 | 19.7 | 6.6 | 6.6 | 6.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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# LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-6

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-750-U-5WQ

Data in this report applies to families of products including GSS-SB1A-750-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

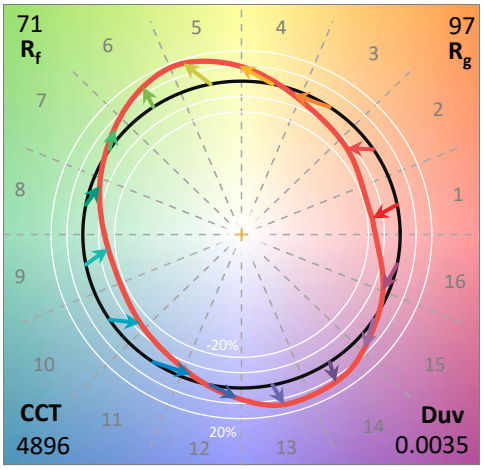
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-6 |
| 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-750-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 5000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 4896 |
| CIE u': | 0.2101 |
| CIE v': | 0.4901 |
| Duv: | 0.0035 |
| CIE x: | 0.3489 |
| CIE y: | 0.3618 |
| CIE z: | 0.2893 |
| Peak Wavelength (nm): | 443 |
| Dominant Wavelength (nm): | 570 |
| Purity: | 13.25435 |
| Rf: | 70.7 |
| Rg: | 96.8 |

| | |
|---|---|
| CRI (Ra): | 70.2 |
| R1: | 68.1 |
| R2: | 73.9 |
| R3: | 79.4 |
| R4: | 72.1 |
| R5: | 69.2 |
| R6: | 65.7 |
| R7: | 78.1 |
| R8: | 55.3 |
| R9: | -35.1 |
| R10: | 39.3 |
| R11: | 71.1 |
| R12: | 43.8 |
| R13: | 68.1 |
| R14: | 88.4 |
| R15: | 59.7 |




## Test Conditions

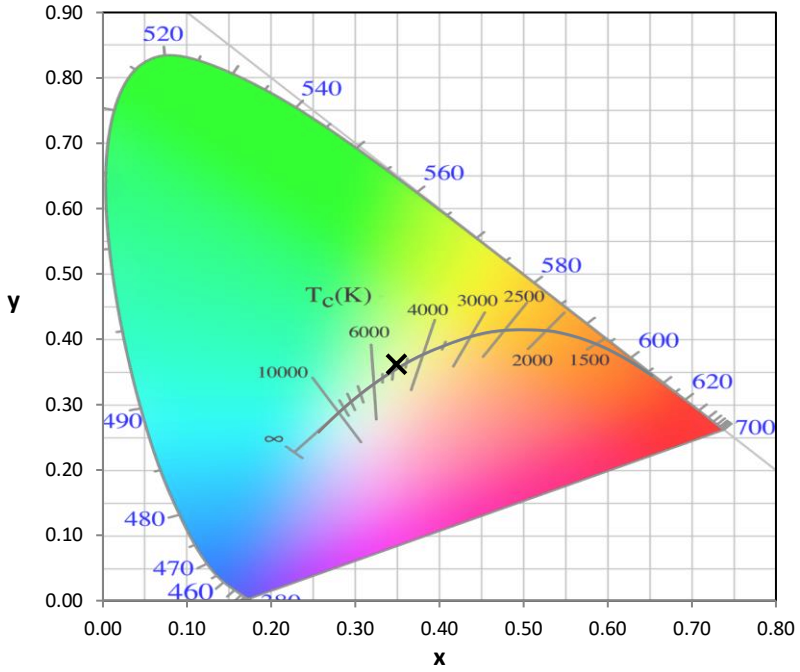
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

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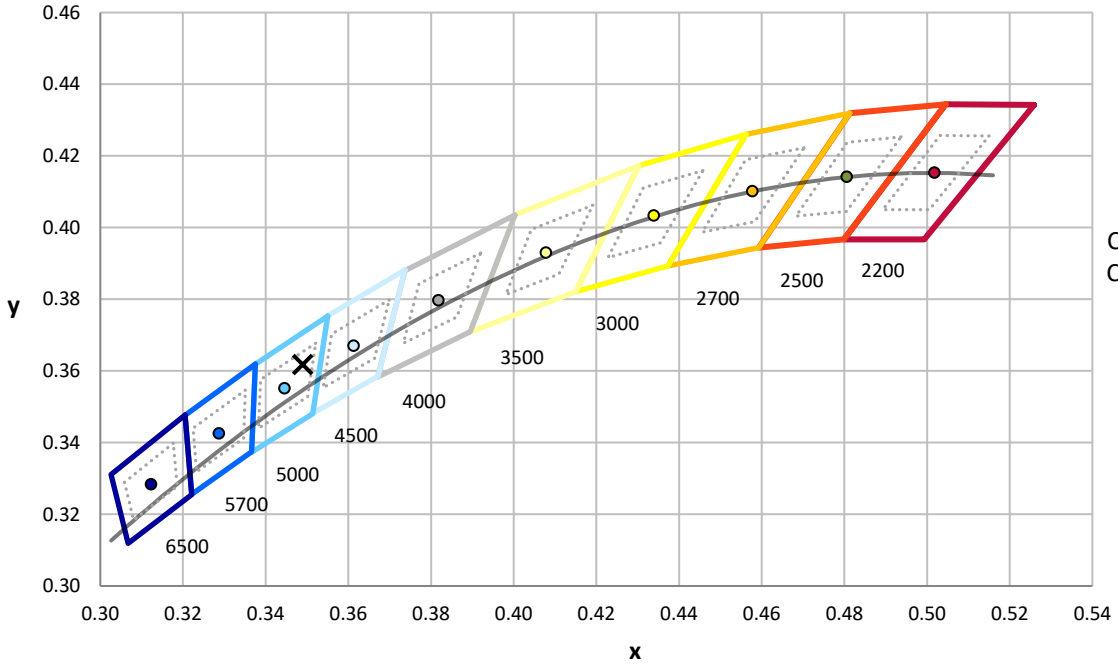
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

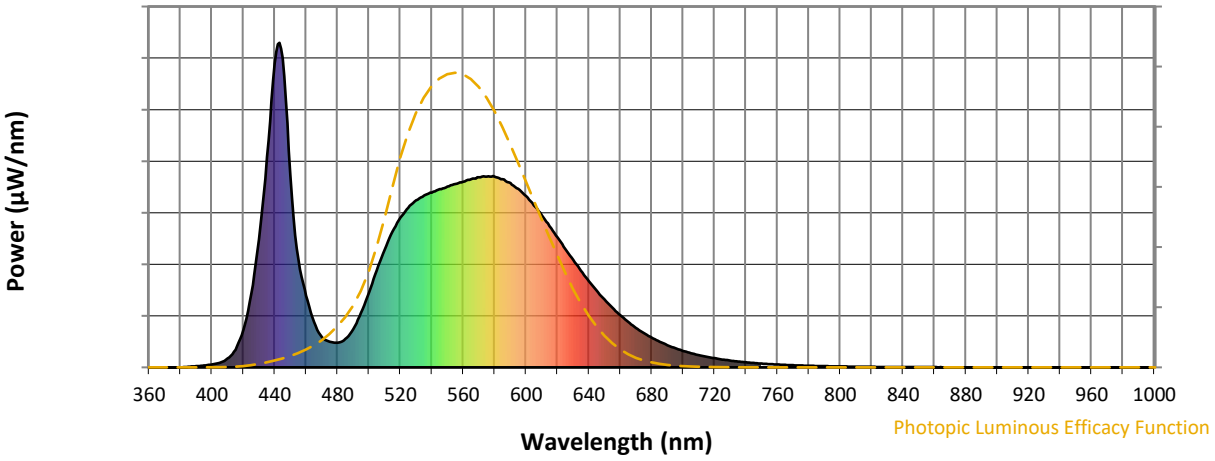



CCT = 4896K
CIE x = 0.3489
CIE y = 0.3618
Duv = 0.0035

Point lies inside the ANSI 5000K 4-step quadrangle

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## Photopic Flux vs. Wavelength

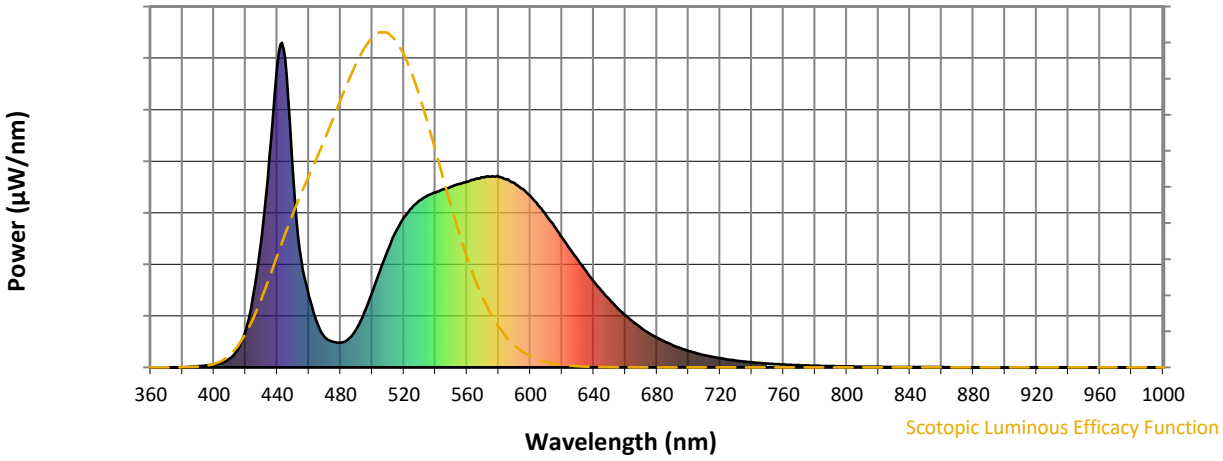



## Photopic Lumens: NR

| 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 | 118 | NR | 620 | 401 | NR | 750 | 12 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 168 | NR | 625 | 365 | NR | 755 | 10 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 230 | NR | 630 | 331 | NR | 760 | 9 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 299 | NR | 635 | 298 | NR | 765 | 8 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 362 | NR | 640 | 266 | NR | 770 | 6 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 418 | NR | 645 | 236 | NR | 775 | 6 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 461 | NR | 650 | 209 | NR | 780 | 5 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 491 | NR | 655 | 184 | NR | 785 | 4 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 514 | NR | 660 | 160 | NR | 790 | 4 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 530 | NR | 665 | 140 | NR | 795 | 3 | NR | 925 | 0 | NR |
| 410 | 27 | NR | 540 | 539 | NR | 670 | 122 | NR | 800 | 3 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 549 | NR | 675 | 106 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 115 | NR | 550 | 557 | NR | 680 | 92 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 226 | NR | 555 | 565 | NR | 685 | 79 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 395 | NR | 560 | 572 | NR | 690 | 68 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 648 | NR | 565 | 580 | NR | 695 | 59 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 937 | NR | 570 | 586 | NR | 700 | 51 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 953 | NR | 575 | 588 | NR | 705 | 44 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 591 | NR | 580 | 588 | NR | 710 | 38 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 334 | NR | 585 | 580 | NR | 715 | 32 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 221 | NR | 590 | 568 | NR | 720 | 28 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 140 | NR | 595 | 550 | NR | 725 | 24 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 93 | NR | 600 | 527 | NR | 730 | 21 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 79 | NR | 605 | 499 | NR | 735 | 18 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 469 | NR | 740 | 15 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 87 | NR | 615 | 435 | NR | 745 | 13 | NR | 875 | 0 | NR | | | |

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## Scotopic Flux vs. Wavelength

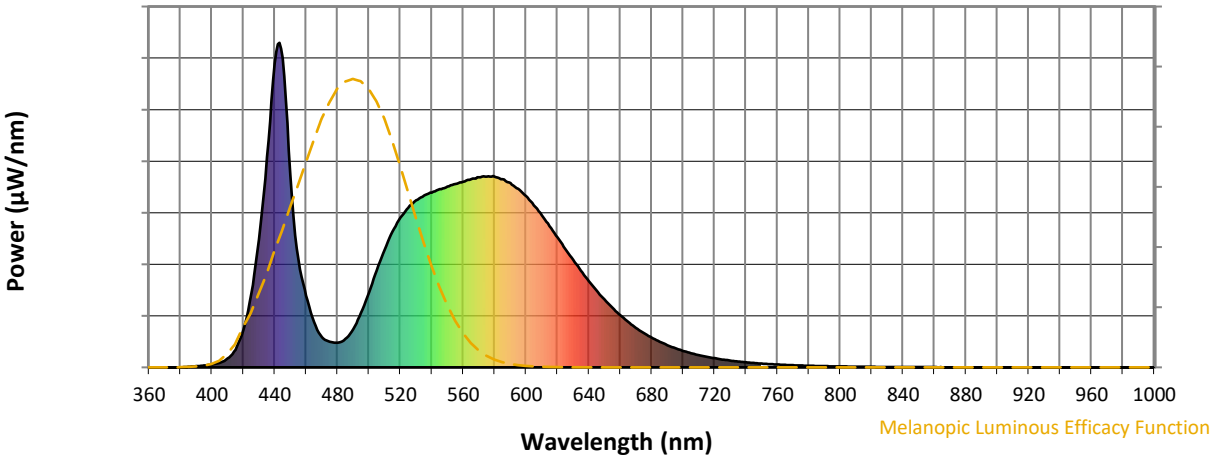



**Scotopic Lumens: NR** **S/P: 1.7**

| 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 | 118 | NR | 620 | 401 | NR | 750 | 12 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 168 | NR | 625 | 365 | NR | 755 | 10 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 230 | NR | 630 | 331 | NR | 760 | 9 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 299 | NR | 635 | 298 | NR | 765 | 8 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 362 | NR | 640 | 266 | NR | 770 | 6 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 418 | NR | 645 | 236 | NR | 775 | 6 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 461 | NR | 650 | 209 | NR | 780 | 5 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 491 | NR | 655 | 184 | NR | 785 | 4 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 514 | NR | 660 | 160 | NR | 790 | 4 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 530 | NR | 665 | 140 | NR | 795 | 3 | NR | 925 | 0 | NR |
| 410 | 27 | NR | 540 | 539 | NR | 670 | 122 | NR | 800 | 3 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 549 | NR | 675 | 106 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 115 | NR | 550 | 557 | NR | 680 | 92 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 226 | NR | 555 | 565 | NR | 685 | 79 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 395 | NR | 560 | 572 | NR | 690 | 68 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 648 | NR | 565 | 580 | NR | 695 | 59 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 937 | NR | 570 | 586 | NR | 700 | 51 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 953 | NR | 575 | 588 | NR | 705 | 44 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 591 | NR | 580 | 588 | NR | 710 | 38 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 334 | NR | 585 | 580 | NR | 715 | 32 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 221 | NR | 590 | 568 | NR | 720 | 28 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 140 | NR | 595 | 550 | NR | 725 | 24 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 93 | NR | 600 | 527 | NR | 730 | 21 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 79 | NR | 605 | 499 | NR | 735 | 18 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 469 | NR | 740 | 15 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 87 | NR | 615 | 435 | NR | 745 | 13 | NR | 875 | 0 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 3.37**

| 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 | 118 | NR | 620 | 401 | NR | 750 | 12 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 168 | NR | 625 | 365 | NR | 755 | 10 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 230 | NR | 630 | 331 | NR | 760 | 9 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 299 | NR | 635 | 298 | NR | 765 | 8 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 362 | NR | 640 | 266 | NR | 770 | 6 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 418 | NR | 645 | 236 | NR | 775 | 6 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 461 | NR | 650 | 209 | NR | 780 | 5 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 491 | NR | 655 | 184 | NR | 785 | 4 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 514 | NR | 660 | 160 | NR | 790 | 4 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 530 | NR | 665 | 140 | NR | 795 | 3 | NR | 925 | 0 | NR |
| 410 | 27 | NR | 540 | 539 | NR | 670 | 122 | NR | 800 | 3 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 549 | NR | 675 | 106 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 115 | NR | 550 | 557 | NR | 680 | 92 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 226 | NR | 555 | 565 | NR | 685 | 79 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 395 | NR | 560 | 572 | NR | 690 | 68 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 648 | NR | 565 | 580 | NR | 695 | 59 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 937 | NR | 570 | 586 | NR | 700 | 51 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 953 | NR | 575 | 588 | NR | 705 | 44 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 591 | NR | 580 | 588 | NR | 710 | 38 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 334 | NR | 585 | 580 | NR | 715 | 32 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 221 | NR | 590 | 568 | NR | 720 | 28 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 140 | NR | 595 | 550 | NR | 725 | 24 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 93 | NR | 600 | 527 | NR | 730 | 21 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 79 | NR | 605 | 499 | NR | 735 | 18 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 469 | NR | 740 | 15 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 87 | NR | 615 | 435 | NR | 745 | 13 | NR | 875 | 0 | NR | | | |

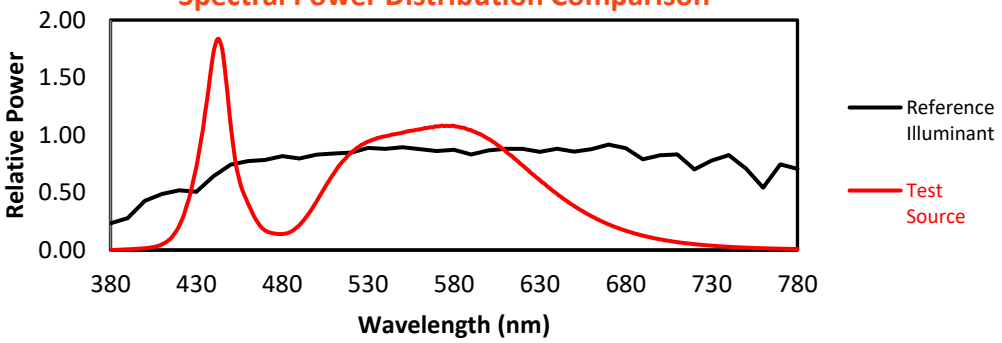
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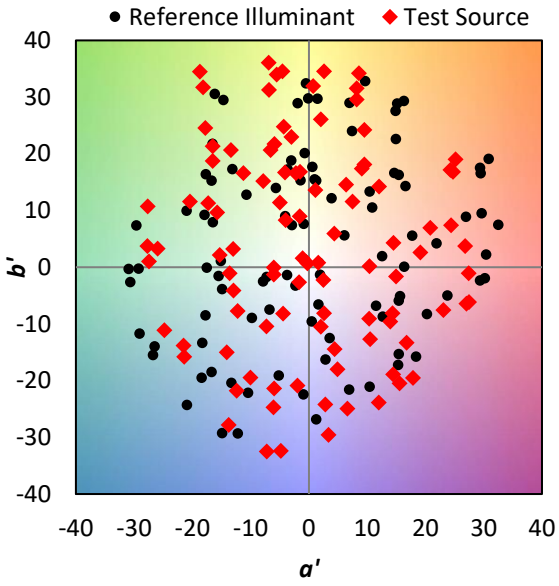
## Summary

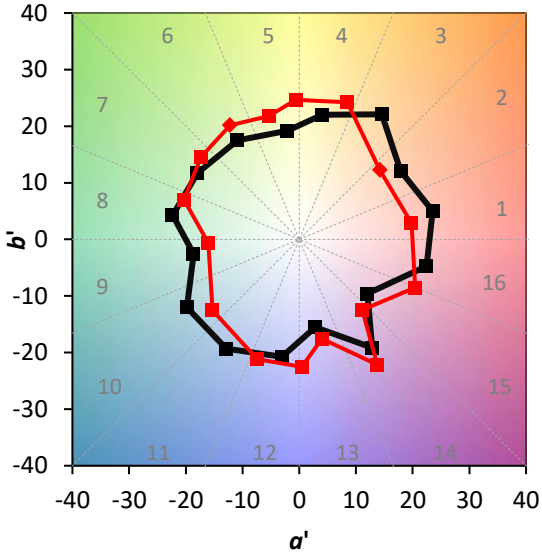
$R_f$ = 70.7
$R_g$ = 96.8
CIE $R_a$ = 70.2
$R_9$ = -35.1

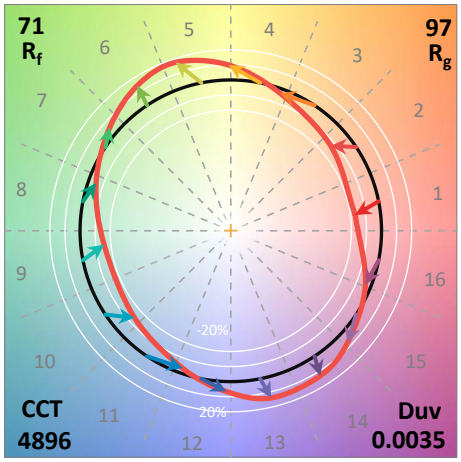
## Spectral Power Distribution Comparison

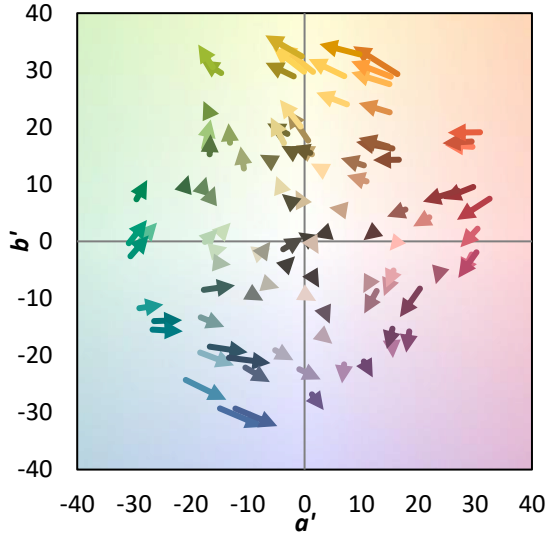



## Color Vector Graphics



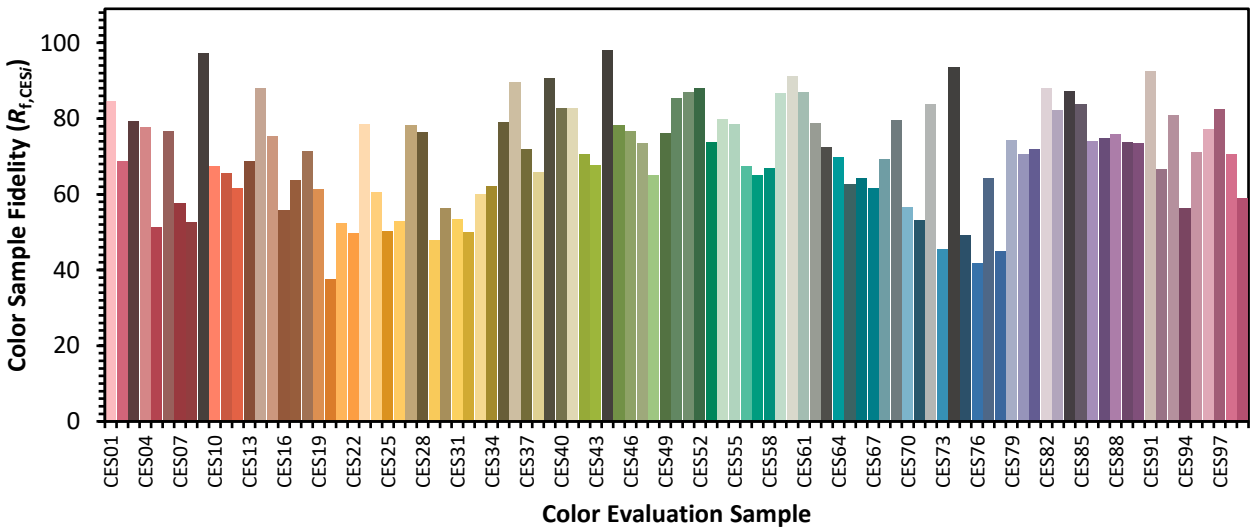



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## Individual Sample Fidelity Index ($R_{f,i}$)

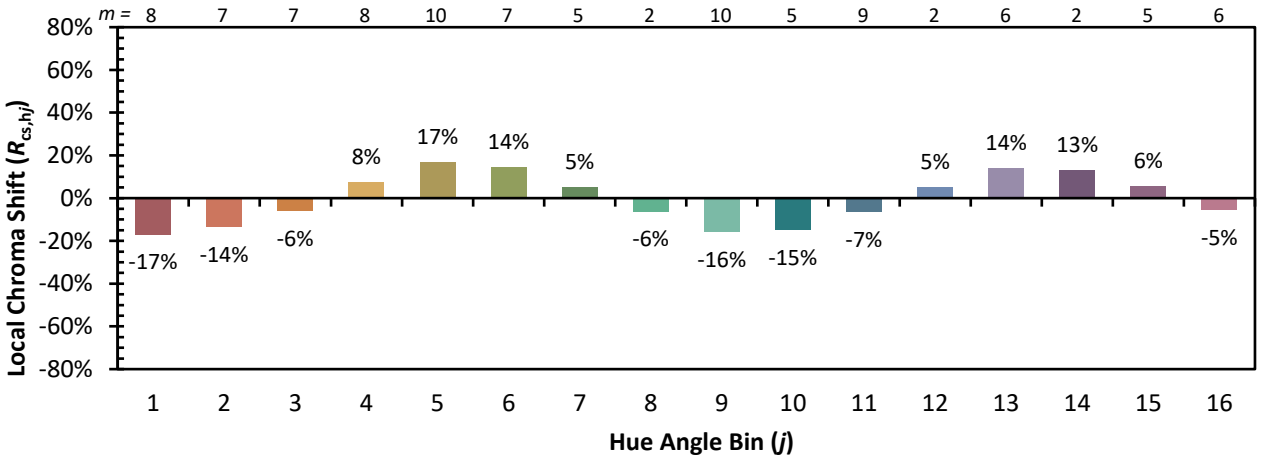
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 53 | CES51 = 87 | CES76 = 42 |
| CES02 = 59 | CES27 = 78 | CES52 = 88 | CES77 = 64 |
| CES03 = 30 | CES28 = 76 | CES53 = 74 | CES78 = 45 |
| CES04 = 69 | CES29 = 48 | CES54 = 80 | CES79 = 74 |
| CES05 = 46 | CES30 = 56 | CES55 = 79 | CES80 = 71 |
| CES06 = 50 | CES31 = 54 | CES56 = 68 | CES81 = 72 |
| CES07 = 39 | CES32 = 50 | CES57 = 65 | CES82 = 88 |
| CES08 = 38 | CES33 = 60 | CES58 = 67 | CES83 = 82 |
| CES09 = 29 | CES34 = 62 | CES59 = 87 | CES84 = 87 |
| CES10 = 72 | CES35 = 79 | CES60 = 91 | CES85 = 84 |
| CES11 = 56 | CES36 = 90 | CES61 = 87 | CES86 = 74 |
| CES12 = 61 | CES37 = 72 | CES62 = 79 | CES87 = 75 |
| CES13 = 41 | CES38 = 66 | CES63 = 72 | CES88 = 76 |
| CES14 = 74 | CES39 = 91 | CES64 = 70 | CES89 = 74 |
| CES15 = 70 | CES40 = 83 | CES65 = 63 | CES90 = 73 |
| CES16 = 46 | CES41 = 83 | CES66 = 64 | CES91 = 92 |
| CES17 = 49 | CES42 = 70 | CES67 = 62 | CES92 = 67 |
| CES18 = 55 | CES43 = 68 | CES68 = 69 | CES93 = 81 |
| CES19 = 71 | CES44 = 98 | CES69 = 80 | CES94 = 56 |
| CES20 = 64 | CES45 = 78 | CES70 = 56 | CES95 = 71 |
| CES21 = 85 | CES46 = 77 | CES71 = 53 | CES96 = 77 |
| CES22 = 77 | CES47 = 73 | CES72 = 84 | CES97 = 82 |
| CES23 = 91 | CES48 = 65 | CES73 = 46 | CES98 = 71 |
| CES24 = 90 | CES49 = 76 | CES74 = 94 | CES99 = 59 |
| CES25 = 71 | CES50 = 85 | CES75 = 49 | |

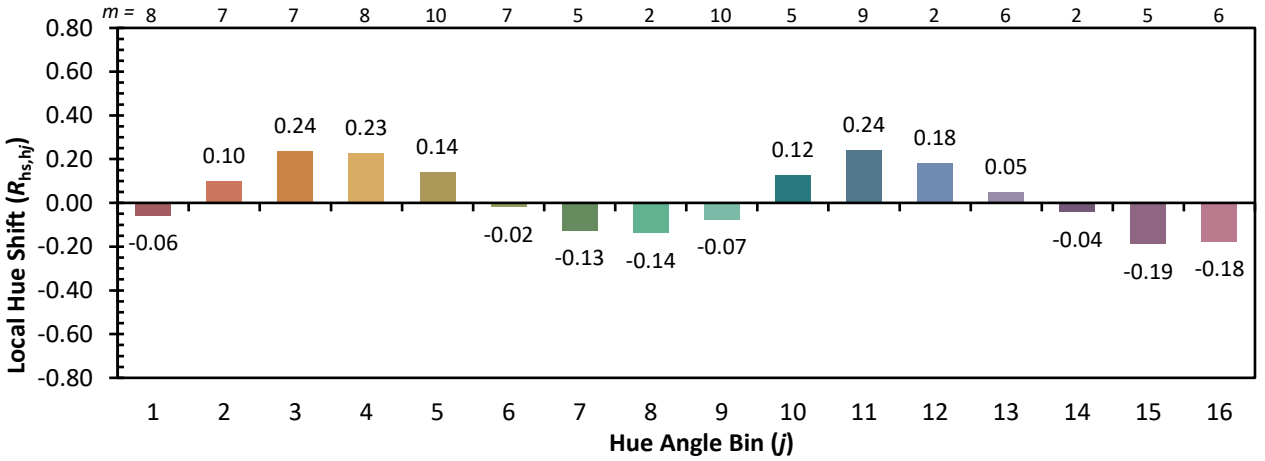


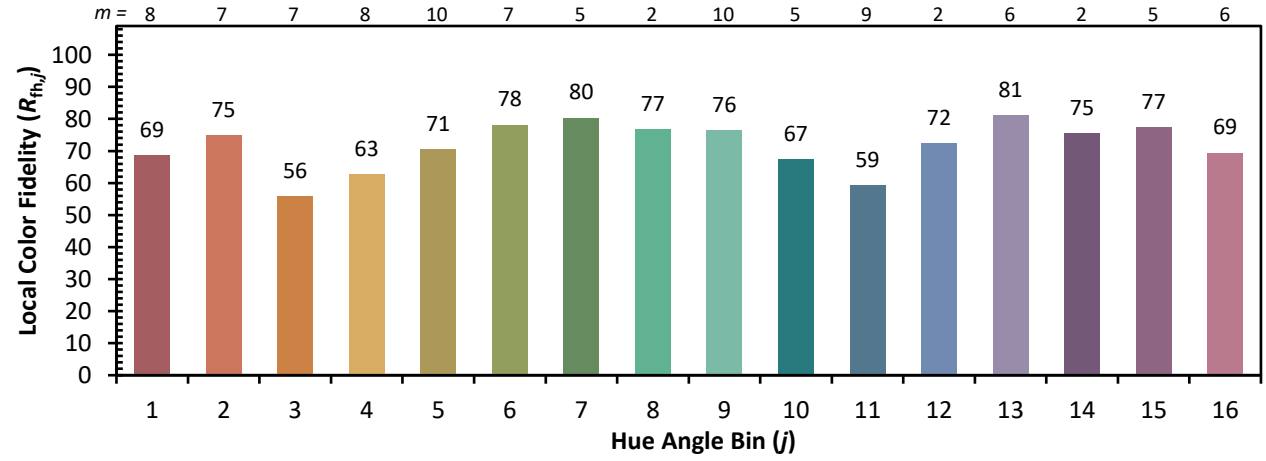
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## Color Rendition by Hue-Angle Bin



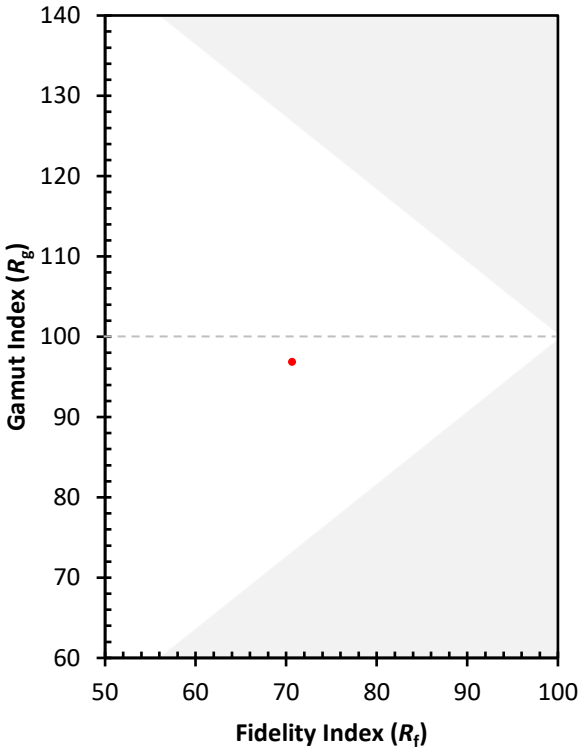



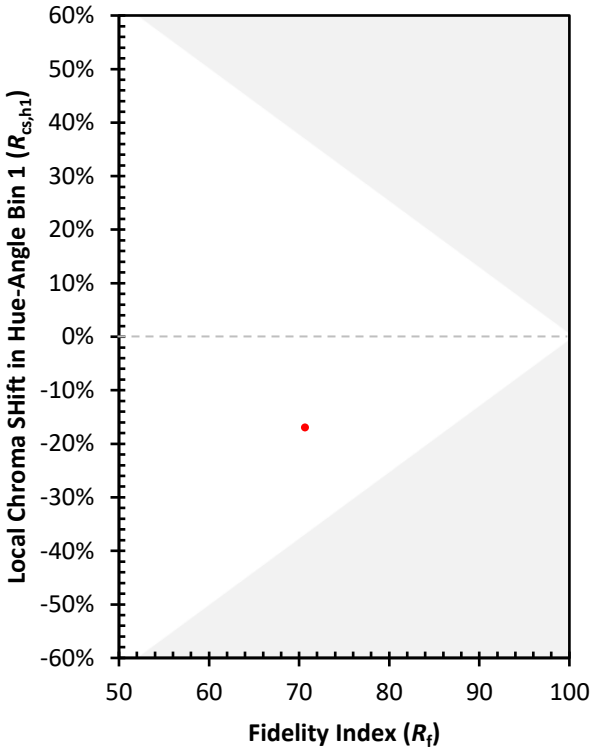



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## Measure Comparisons




(END OF REPORT)