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

Cooper Lighting Solutions Photometric Lab
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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: P1502617

Luminaire Tested: GSS-SB6A-750-U-T4LG-HSS

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: | P1502617 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 7/20/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB6A-750-U-T4LG-HSS |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 6SQUARE 170W 70CRI 5000K FIXTURE w/ TYPE IV LOW GLARE DISTRIBUTION FIXTURE W/ HOUSE SIDE SHIELD |
| Light Source: | (156) 5000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 22279.6 lumens |
| Efficiency: | N/A |
| Efficacy: | 131.1 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B2 - U0 - G3 |

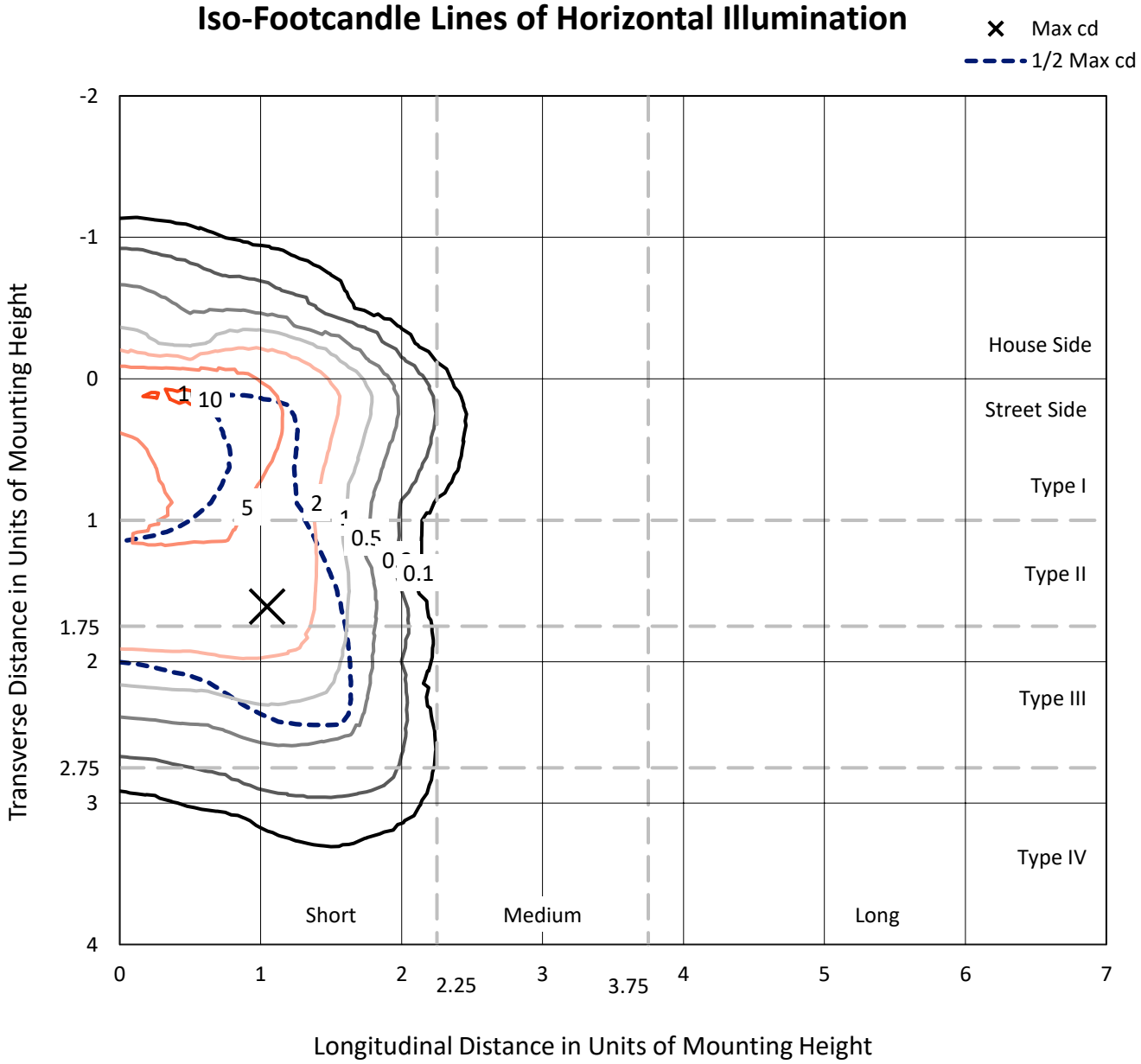
| | |
|---|---|
| Input Watts (W): | 170 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 12.0% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1502617
CATALOG NUMBER: GSS-SB6A-750-U-T4LG-HSS

## Iso-Footcandle Lines of Horizontal Illumination



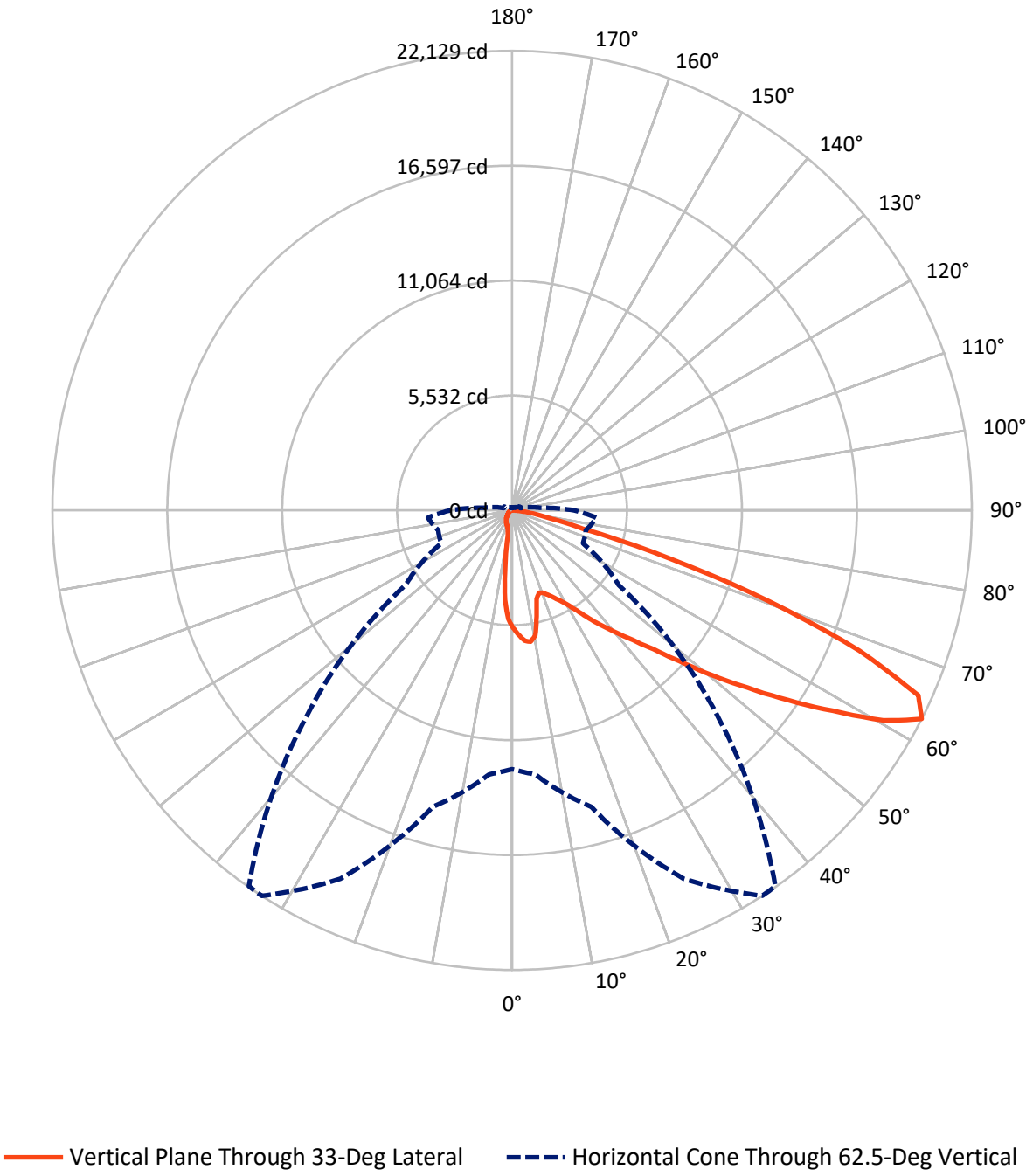

Based on 25 foot mounting height. Maximum calculated value = 10.8 fc
Type III - Short - N/A

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## Luminous Intensity Polar Plot



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Scaled Data Report

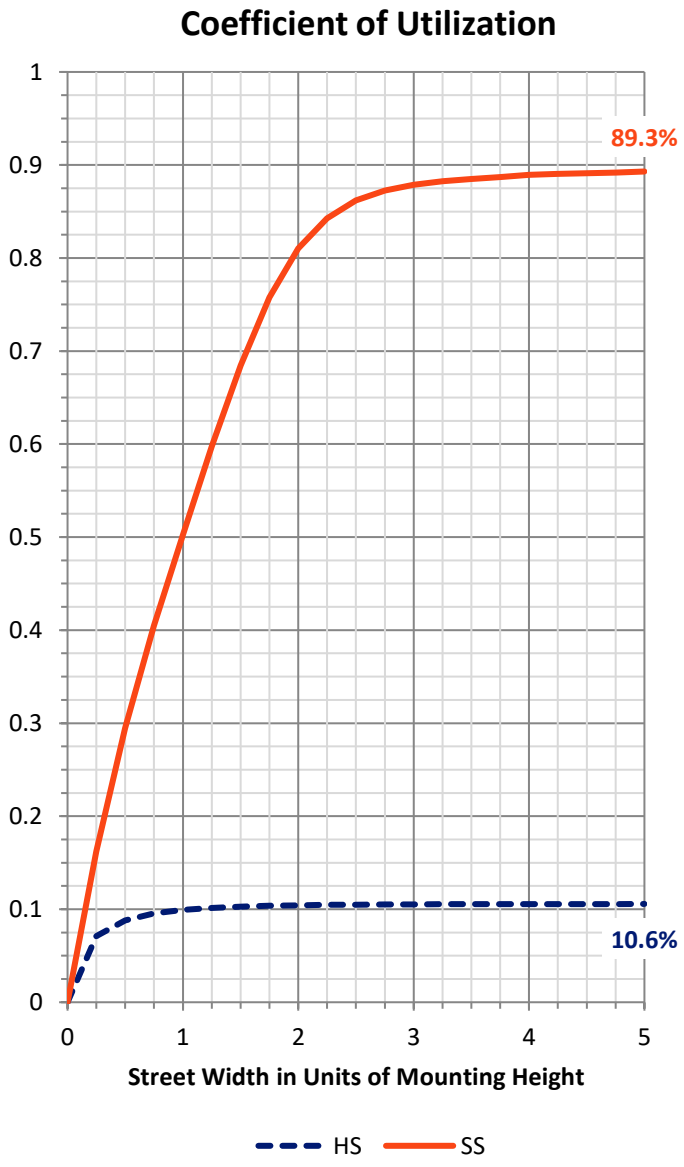
REPORT NUMBER: P1502617
CATALOG NUMBER: GSS-SB6A-750-U-T4LG-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 2370.7 | 0.0 | 2370.7 |
| | % Fixture | 10.6 | 0.0 | 10.6 |
| **Street Side** | Lumens | 19908.9 | 0.0 | 19908.9 |
| | % Fixture | 89.4 | 0.0 | 89.4 |
| **Total** | Lumens | 22279.6 | 0.0 | 22279.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 481.2 | 2.2 |
| 10°-20° | 1073.7 | 4.8 |
| 20°-30° | 1730.5 | 7.8 |
| 30°-40° | 2878.8 | 12.9 |
| 40°-50° | 4550.0 | 20.4 |
| 50°-60° | 6112.8 | 27.4 |
| 60°-70° | 4487.4 | 20.1 |
| 70°-80° | 888.1 | 4.0 |
| 80°-90° | 77.2 | 0.3 |
| 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° | 22279.6 | 100.0 |
| 0°-180° | 22279.6 | 100.0 |



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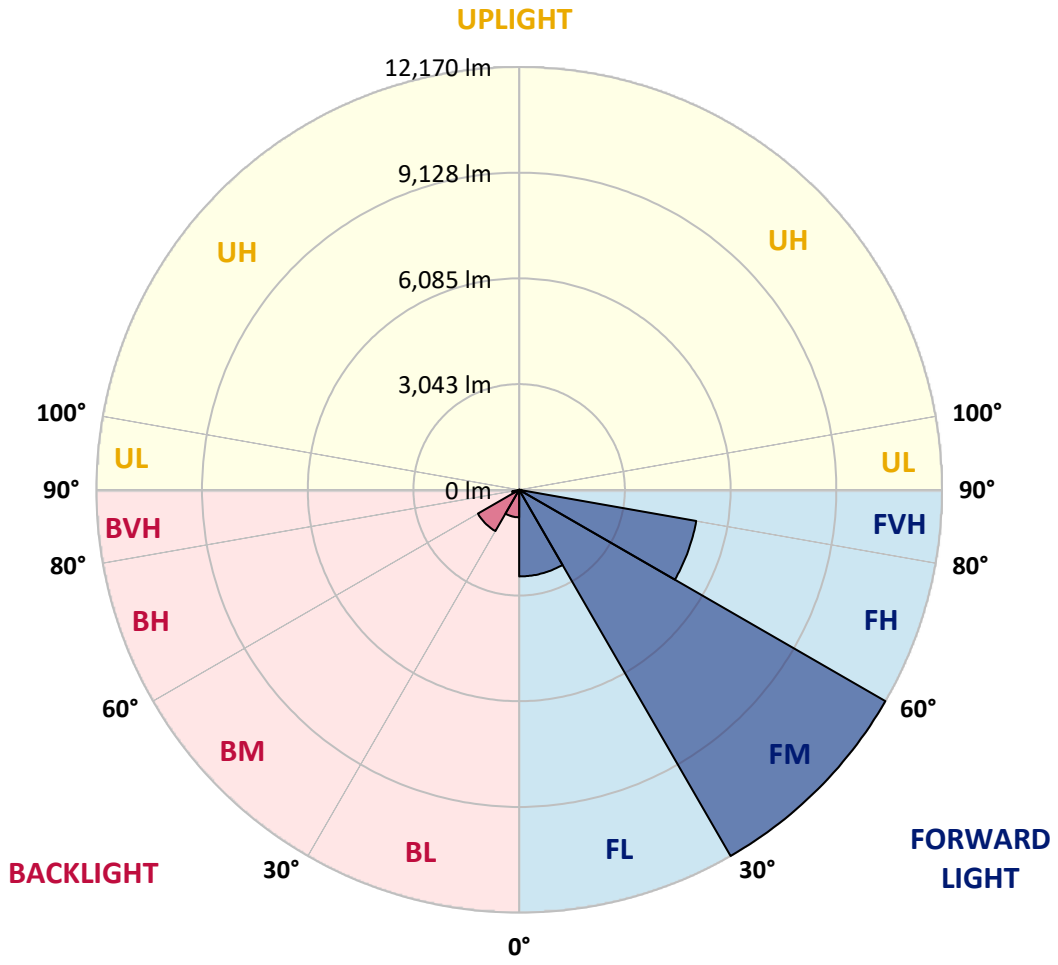
Scaled Data Report

REPORT NUMBER: P1502617
CATALOG NUMBER: GSS-SB6A-750-U-T4LG-HSS

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 2494.3 | 11.2 | | | |
| FM | (30°-60°) | 12170.2 | 54.6 | | | |
| FH | (60°-80°) | 5173.0 | 23.2 | | | G3/7500 |
| FVH | (80°-90°) | 71.4 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 791.0 | 3.6 | B2/1000 | | |
| BM | (30°-60°) | 1371.4 | 6.2 | B2/2500 | | |
| BH | (60°-80°) | 202.5 | 0.9 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 5.8 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

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



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 33° | 35° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 5659.3 | 5659.3 | 5659.3 | 5659.3 | *5659.3* | 5659.3 | 5659.3 | 5659.3 | 5659.3 | 5659.3 | 5659.3 |
| 2.5° | 6029.4 | 6054.5 | 6054.5 | 6004.3 | *5991.8* | 5966.7 | 5941.6 | 5935.3 | 5853.8 | 5791.0 | 5728.3 |
| 5° | 6336.9 | 6330.6 | 6324.3 | 6299.2 | *6305.5* | 6274.1 | 6255.3 | 6223.9 | 6085.9 | 5991.8 | 5822.4 |
| 7.5° | 6205.1 | 6261.6 | 6286.7 | 6355.7 | *6387.1* | 6380.8 | 6431.0 | 6443.5 | 6324.3 | 6192.6 | 5935.3 |
| 10° | 5345.6 | 5314.2 | 5540.1 | 5834.9 | *6129.8* | 6198.8 | 6468.6 | 6612.9 | 6569.0 | 6449.8 | 6117.3 |
| 12.5° | 4235.0 | 4266.4 | 4423.3 | 4768.3 | *5251.5* | 5402.0 | 6180.0 | 6751.0 | 6876.5 | 6801.2 | 6368.2 |
| 15° | 3877.4 | 3877.4 | 3959.0 | 4122.1 | *4410.7* | 4555.0 | 5515.0 | 6732.1 | 7202.7 | 7209.0 | 6682.0 |
| 17.5° | 3802.1 | 3814.7 | 3883.7 | 3990.3 | *4178.6* | 4241.3 | 4912.6 | 6456.1 | 7522.7 | 7635.6 | 7033.3 |
| 20° | 3814.7 | 3833.5 | 3908.8 | 4059.4 | *4241.3* | 4316.6 | 4755.8 | 6104.7 | 7792.5 | 8099.9 | 7403.5 |
| 22.5° | 3858.6 | 3852.3 | 3984.1 | 4184.8 | *4417.0* | 4486.0 | 4887.6 | 5960.4 | 8018.3 | 8633.2 | 7836.4 |
| 25° | 3908.8 | 3915.1 | 4084.5 | 4366.8 | *4649.1* | 4730.7 | 5182.4 | 6092.2 | 8181.5 | 9204.2 | 8275.6 |
| 27.5° | 4059.4 | 4078.2 | 4285.2 | 4592.7 | *4925.2* | 5031.9 | 5565.2 | 6437.3 | 8463.8 | 9756.3 | 8752.4 |
| 30° | 4291.5 | 4310.3 | 4548.7 | 4918.9 | *5276.5* | 5439.7 | 6042.0 | 6870.2 | 8884.2 | 10396.2 | 9241.8 |
| 32.5° | 4561.3 | 4586.4 | 4893.8 | 5320.5 | *5753.4* | 5910.2 | 6587.8 | 7529.0 | 9442.6 | 11048.8 | 9750.0 |
| 35° | 4900.1 | 4969.1 | 5301.6 | 5809.8 | *6393.3* | 6543.9 | 7259.2 | 8275.6 | 10170.4 | 11632.2 | 10182.9 |
| 37.5° | 5364.4 | 5420.9 | 5828.7 | 6462.4 | *7052.1* | 7252.9 | 8012.1 | 9059.9 | 10829.2 | 12153.0 | 10534.3 |
| 40° | 5929.1 | 5979.3 | 6437.3 | 7127.4 | *7742.3* | 7911.7 | 8802.6 | 9850.4 | 11538.1 | 12441.6 | 10609.6 |
| 42.5° | 6870.2 | 7008.2 | 7296.8 | 7880.3 | *8539.1* | 8752.4 | 9681.0 | 10615.8 | 12052.6 | 12498.1 | 10490.4 |
| 45° | 8514.0 | 8557.9 | 8620.7 | 8896.7 | *9530.4* | 9718.6 | 10609.6 | 11280.9 | 12360.0 | 12510.6 | 10383.7 |
| 47.5° | 10088.8 | 10239.4 | 10327.2 | 10452.7 | *10835.4* | 10904.4 | 11582.1 | 11876.9 | 12604.7 | 12466.7 | 10383.7 |
| 50° | 11663.6 | 11776.6 | 11927.1 | 12077.7 | *12485.5* | 12510.6 | 12611.0 | 12278.5 | 12617.3 | 12109.1 | 10321.0 |
| 52.5° | 13094.1 | 13131.8 | 13389.0 | 13677.6 | *14185.8* | 14323.8 | 13564.7 | 12573.4 | 11858.1 | 10979.7 | 10026.1 |
| 55° | 14374.0 | 14424.2 | 14813.2 | 15403.0 | *16130.8* | 16312.7 | 14731.7 | 12002.4 | 10233.1 | 9517.9 | 9342.2 |
| 57.5° | 15202.2 | 15321.4 | 16099.4 | 17398.2 | *18220.1* | 18138.5 | 15635.1 | 10666.0 | 8219.1 | 7786.2 | 8131.3 |
| 60° | 14788.1 | 14951.3 | 16588.8 | 19073.4 | *20535.2* | 20296.8 | 15384.2 | 8777.5 | 6073.4 | 5759.7 | 6437.3 |
| 62.5° | *12460.4* | *12761.6* | *14788.1* | *19569.0* | *22128.9* | *22091.2* | *13966.2* | *6261.6* | *3764.5* | *3682.9* | *4065.6* |
| 65° | 8664.6 | 9185.3 | 11588.3 | 17912.7 | *21488.9* | 21545.4 | 11757.7 | 3645.3 | 1744.2 | 2164.6 | 2377.9 |
| 67.5° | 5107.1 | 5477.3 | 7466.2 | 14625.0 | *18031.9* | 17511.1 | 7993.2 | 1687.7 | 872.1 | 1317.6 | 1261.1 |
| 70° | 2246.1 | 2497.1 | 4279.0 | 10132.7 | *13138.0* | 12297.3 | 3902.5 | 821.9 | 665.1 | 796.8 | 696.4 |
| 72.5° | 1236.0 | 1348.9 | 2252.4 | 5351.8 | *7993.2* | 7598.0 | 1317.6 | 545.8 | 570.9 | 596.0 | 501.9 |
| 75° | 690.2 | 740.3 | 1185.8 | 3093.1 | *3513.5* | 3268.8 | 640.0 | 357.6 | 483.1 | 483.1 | 370.2 |
| 77.5° | 401.5 | 445.5 | 740.3 | 1926.2 | *1926.2* | 1556.0 | 389.0 | 225.9 | 363.9 | 326.3 | 200.8 |
| 80° | 188.2 | 213.3 | 407.8 | 1066.6 | *1217.2* | 1003.9 | 219.6 | 156.9 | 238.4 | 207.0 | 131.8 |
| 82.5° | 56.5 | 69.0 | 200.8 | 414.1 | *690.2* | 589.8 | 112.9 | 100.4 | 175.7 | 131.8 | 75.3 |
| 85° | 37.6 | 43.9 | 100.4 | 169.4 | *338.8* | 294.9 | 37.6 | 31.4 | 75.3 | 62.7 | 31.4 |
| 87.5° | 6.3 | 6.3 | 12.5 | 12.5 | *12.5* | 12.5 | 6.3 | 6.3 | 0.0 | 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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Scaled Data Report

REPORT NUMBER: P1502617
CATALOG NUMBER: GSS-SB6A-750-U-T4LG-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 5659.3 | 5659.3 | 5659.3 | 5659.3 | 5659.3 | 5659.3 | 5659.3 | 5659.3 | 5659.3 | 5659.3 | 5659.3 |
| 2.5° | 5690.6 | 5646.7 | 5546.3 | 5452.2 | 5402.0 | 5289.1 | 5245.2 | 5195.0 | 5169.9 | 5163.6 | 5126.0 |
| 5° | 5715.7 | 5634.2 | 5383.2 | 5132.2 | 4868.7 | 4617.8 | 4360.5 | 4134.7 | 3952.7 | 3959.0 | 3965.3 |
| 7.5° | 5791.0 | 5627.9 | 5188.7 | 4686.8 | 4122.1 | 3469.6 | 2773.2 | 2252.4 | 1919.9 | 1850.9 | 1788.1 |
| 10° | 5891.4 | 5653.0 | 4950.3 | 4021.7 | 2911.2 | 1832.0 | 1292.5 | 1104.2 | 1022.7 | 1003.9 | 1010.1 |
| 12.5° | 6079.6 | 5715.7 | 4649.1 | 3105.7 | 1612.5 | 1054.1 | 934.8 | 903.5 | 890.9 | 890.9 | 890.9 |
| 15° | 6311.8 | 5803.6 | 4178.6 | 2032.8 | 1054.1 | 878.4 | 853.3 | 847.0 | 834.5 | 834.5 | 840.7 |
| 17.5° | 6506.3 | 5803.6 | 3557.4 | 1323.8 | 865.8 | 815.6 | 796.8 | 790.5 | 790.5 | 796.8 | 790.5 |
| 20° | 6719.6 | 5759.7 | 2861.0 | 997.6 | 803.1 | 759.2 | 746.6 | 746.6 | 746.6 | 752.9 | 752.9 |
| 22.5° | 6939.2 | 5684.4 | 2214.8 | 853.3 | 746.6 | 709.0 | 702.7 | 709.0 | 715.3 | 721.5 | 721.5 |
| 25° | 7183.9 | 5590.3 | 1750.5 | 790.5 | 696.4 | 665.1 | 665.1 | 665.1 | 671.3 | 683.9 | 690.2 |
| 27.5° | 7453.7 | 5508.7 | 1499.5 | 752.9 | 652.5 | 621.1 | 621.1 | 627.4 | 640.0 | 646.2 | 652.5 |
| 30° | 7704.6 | 5508.7 | 1418.0 | 771.7 | 633.7 | 596.0 | 583.5 | 589.8 | 602.3 | 614.9 | 614.9 |
| 32.5° | 8018.3 | 5571.4 | 1461.9 | 853.3 | 627.4 | 558.4 | 545.8 | 545.8 | 558.4 | 564.7 | 564.7 |
| 35° | 8281.9 | 5690.6 | 1612.5 | 966.2 | 652.5 | 527.0 | 501.9 | 495.7 | 508.2 | 501.9 | 508.2 |
| 37.5° | 8495.2 | 5853.8 | 1888.5 | 1116.8 | 702.7 | 489.4 | 458.0 | 439.2 | 439.2 | 439.2 | 439.2 |
| 40° | 8557.9 | 6016.9 | 2239.9 | 1217.2 | 696.4 | 445.5 | 401.5 | 382.7 | 376.4 | 370.2 | 370.2 |
| 42.5° | 8470.1 | 6092.2 | 2522.2 | 1210.9 | 621.1 | 414.1 | 357.6 | 332.5 | 313.7 | 307.4 | 307.4 |
| 45° | 8401.1 | 6129.8 | 2622.6 | 1054.1 | 564.7 | 376.4 | 320.0 | 288.6 | 269.8 | 263.5 | 257.2 |
| 47.5° | 8407.3 | 6167.5 | 2472.0 | 859.6 | 514.5 | 345.1 | 288.6 | 257.2 | 238.4 | 232.1 | 225.9 |
| 50° | 8432.4 | 6104.7 | 2095.6 | 715.3 | 470.6 | 313.7 | 257.2 | 232.1 | 213.3 | 207.0 | 200.8 |
| 52.5° | 8168.9 | 5772.2 | 1474.4 | 627.4 | 432.9 | 294.9 | 232.1 | 213.3 | 194.5 | 188.2 | 188.2 |
| 55° | 7478.8 | 4975.4 | 997.6 | 558.4 | 401.5 | 269.8 | 213.3 | 200.8 | 181.9 | 169.4 | 169.4 |
| 57.5° | 6374.5 | 3751.9 | 690.2 | 508.2 | 351.4 | 244.7 | 200.8 | 181.9 | 163.1 | 150.6 | 150.6 |
| 60° | 4875.0 | 2446.9 | 501.9 | 464.3 | 288.6 | 225.9 | 188.2 | 175.7 | 150.6 | 138.0 | 131.8 |
| 62.5° | *2967.7* | *1374.0* | *407.8* | *407.8* | *244.7* | *213.3* | *169.4* | *156.9* | *131.8* | *112.9* | *106.7* |
| 65° | 1719.1 | 809.4 | 332.5 | 345.1 | 213.3 | 194.5 | 150.6 | 131.8 | 106.7 | 87.8 | 81.6 |
| 67.5° | 828.2 | 470.6 | 263.5 | 244.7 | 188.2 | 163.1 | 131.8 | 112.9 | 94.1 | 75.3 | 69.0 |
| 70° | 508.2 | 363.9 | 200.8 | 175.7 | 150.6 | 125.5 | 106.7 | 100.4 | 81.6 | 62.7 | 62.7 |
| 72.5° | 414.1 | 294.9 | 156.9 | 125.5 | 112.9 | 87.8 | 87.8 | 81.6 | 62.7 | 50.2 | 43.9 |
| 75° | 326.3 | 219.6 | 119.2 | 87.8 | 69.0 | 69.0 | 62.7 | 56.5 | 50.2 | 37.6 | 37.6 |
| 77.5° | 175.7 | 150.6 | 87.8 | 50.2 | 37.6 | 43.9 | 43.9 | 37.6 | 31.4 | 25.1 | 25.1 |
| 80° | 112.9 | 87.8 | 50.2 | 25.1 | 25.1 | 25.1 | 25.1 | 18.8 | 18.8 | 12.5 | 12.5 |
| 82.5° | 56.5 | 43.9 | 25.1 | 6.3 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 6.3 | 6.3 |
| 85° | 12.5 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| 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

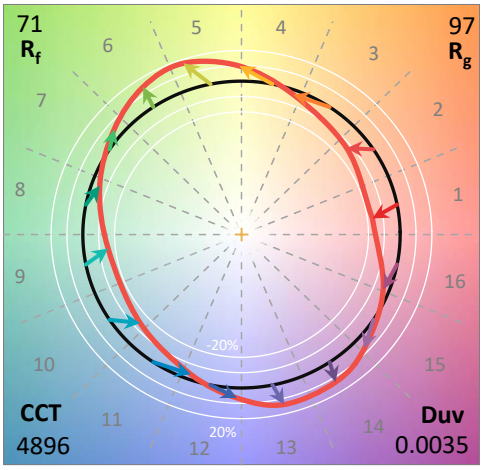
## Test Information

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

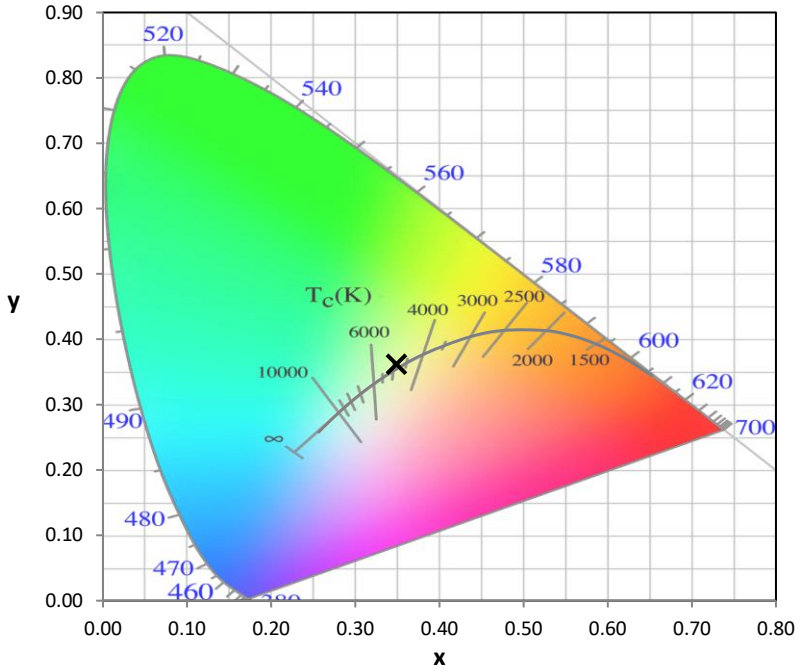
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-6

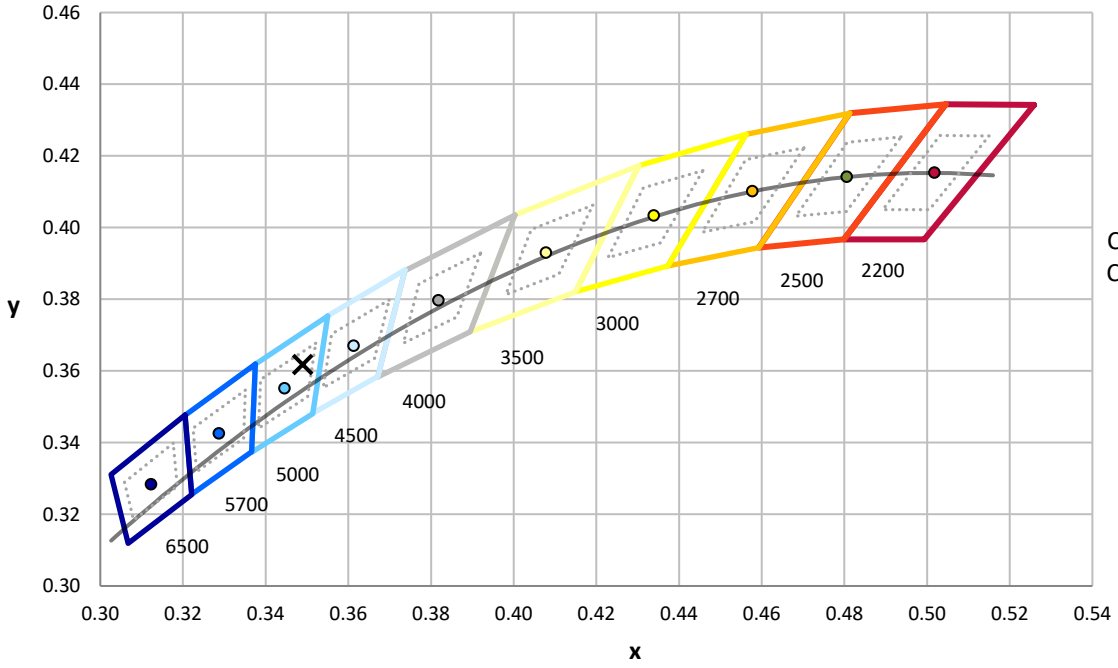
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

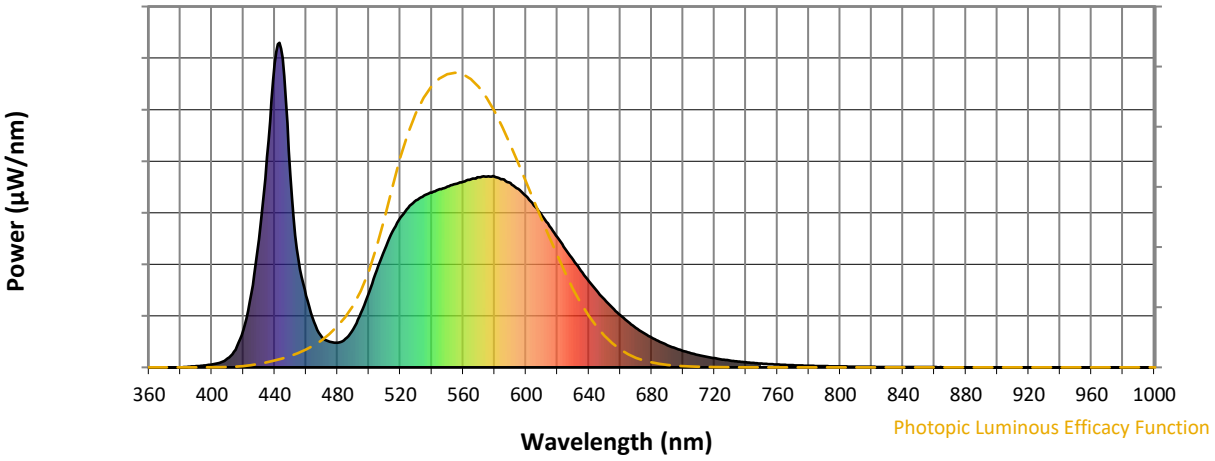



CCT = 4896K
CIE x = 0.3489
CIE y = 0.3618
Duv = 0.0035

Point lies inside the ANSI 5000K 4-step quadrangle

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## Photopic Flux vs. Wavelength

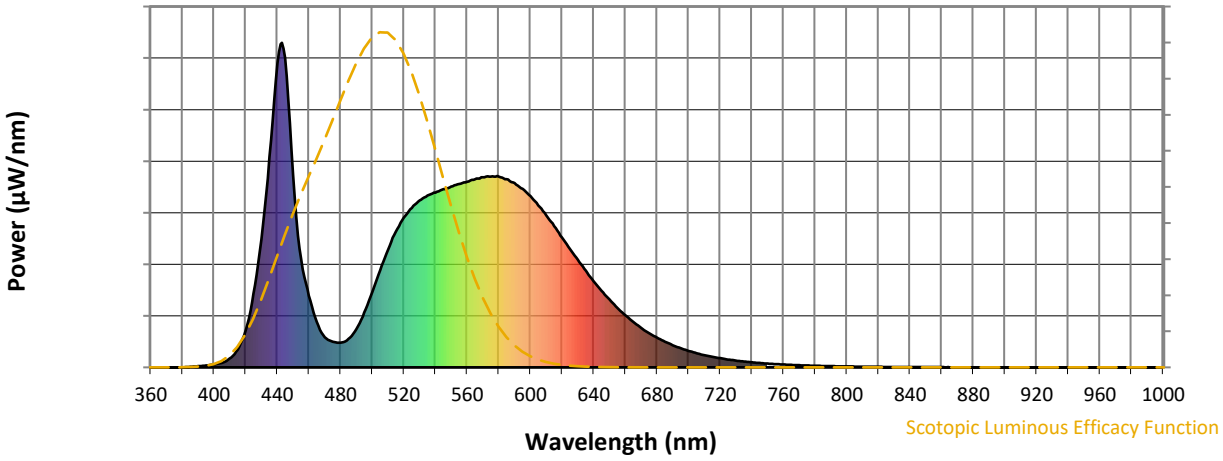



## Photopic Lumens: NR

| 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

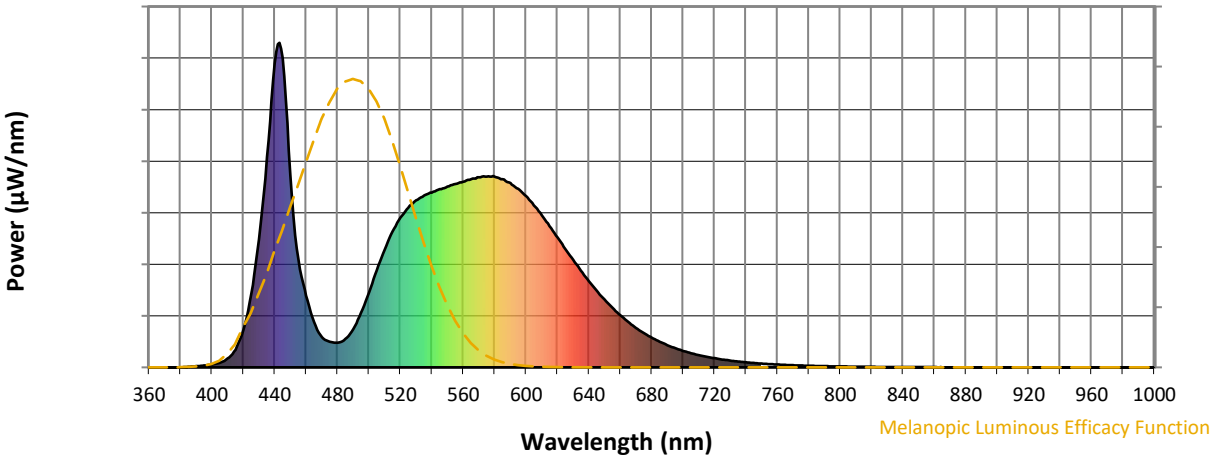



**Scotopic Lumens: NR** **S/P: 1.7**

| 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 | | | |

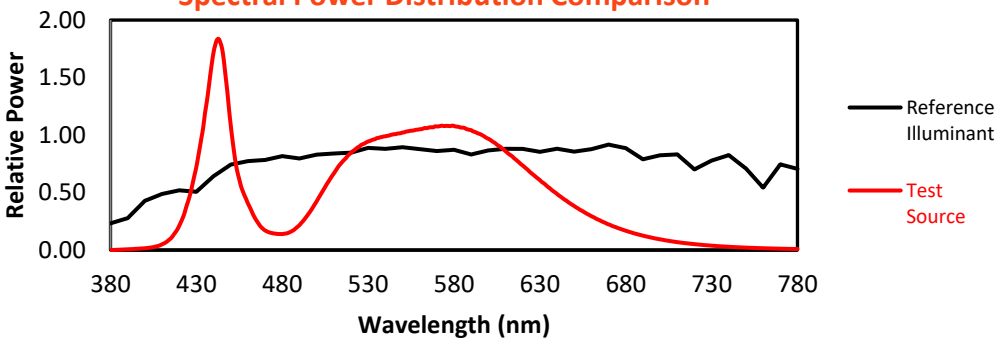
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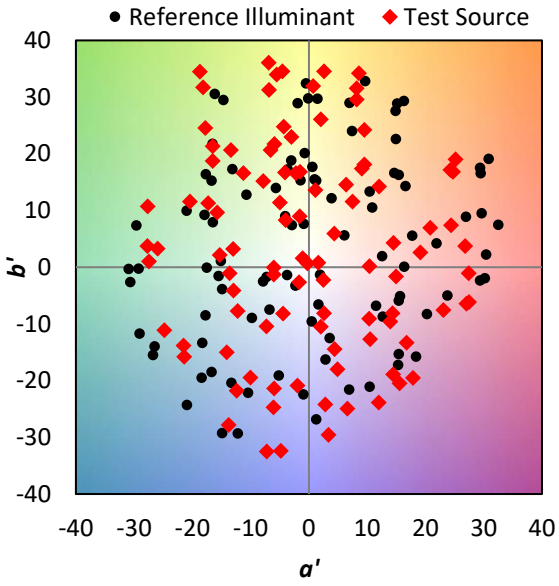
## Summary

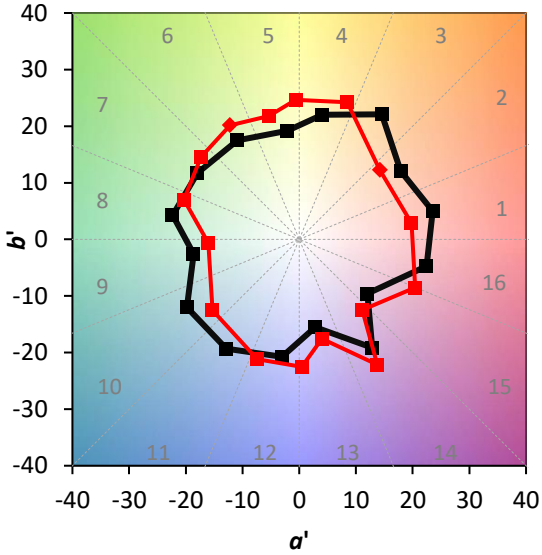
$R_f$ = 70.7
$R_g$ = 96.8
CIE $R_a$ = 70.2
$R_9$ = -35.1

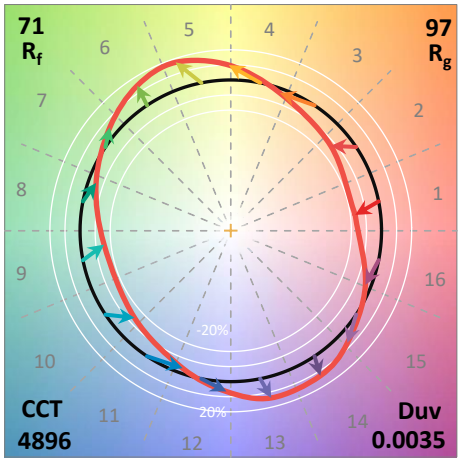
## Spectral Power Distribution Comparison

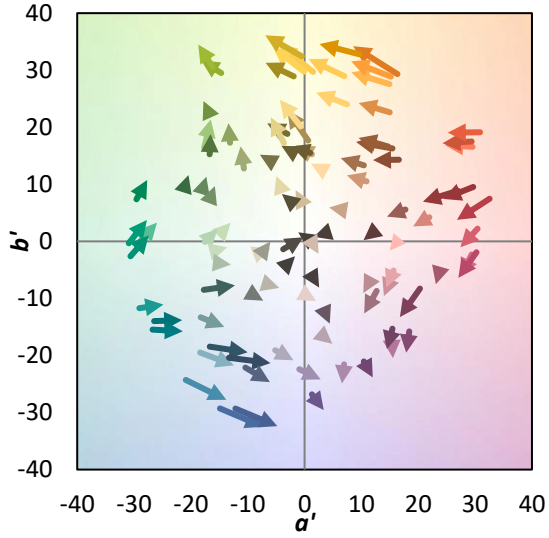



## Color Vector Graphics



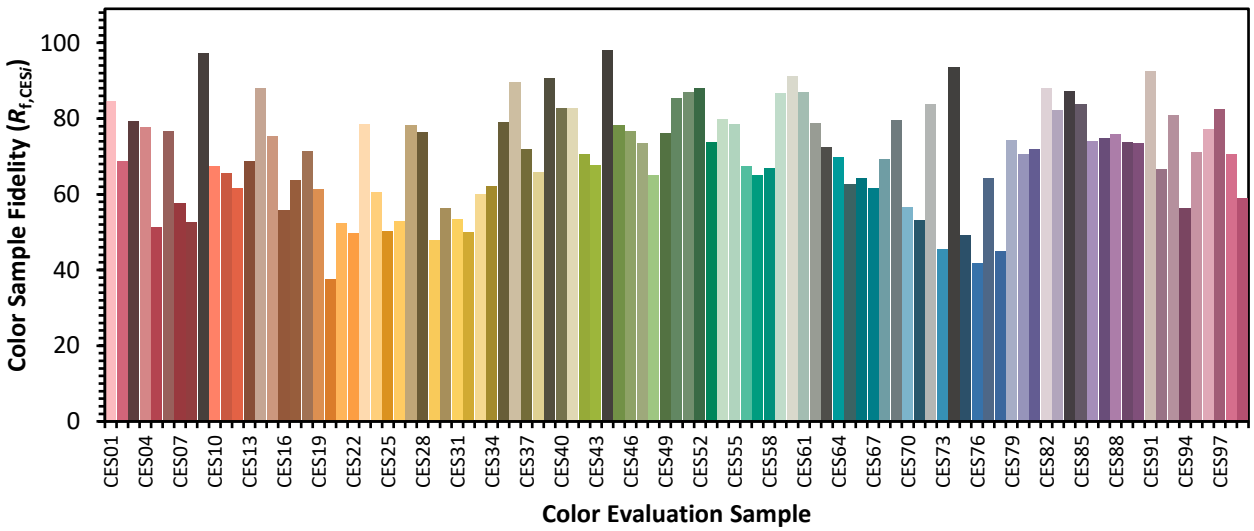



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## Individual Sample Fidelity Index ($R_{f,i}$)

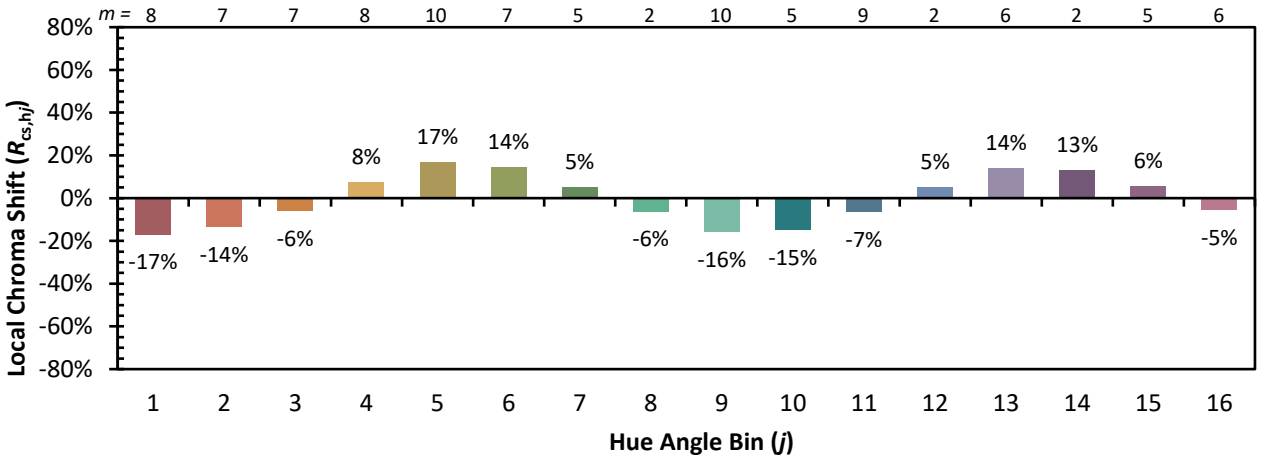
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 53 | CES51 = 87 | CES76 = 42 |
| CES02 = 59 | CES27 = 78 | CES52 = 88 | CES77 = 64 |
| CES03 = 30 | CES28 = 76 | CES53 = 74 | CES78 = 45 |
| CES04 = 69 | CES29 = 48 | CES54 = 80 | CES79 = 74 |
| CES05 = 46 | CES30 = 56 | CES55 = 79 | CES80 = 71 |
| CES06 = 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 | |

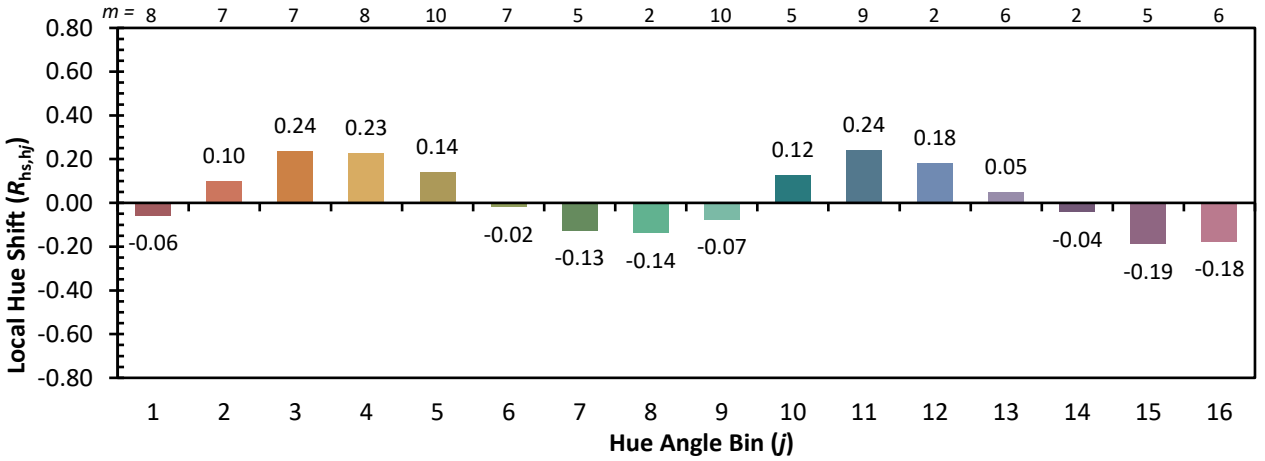


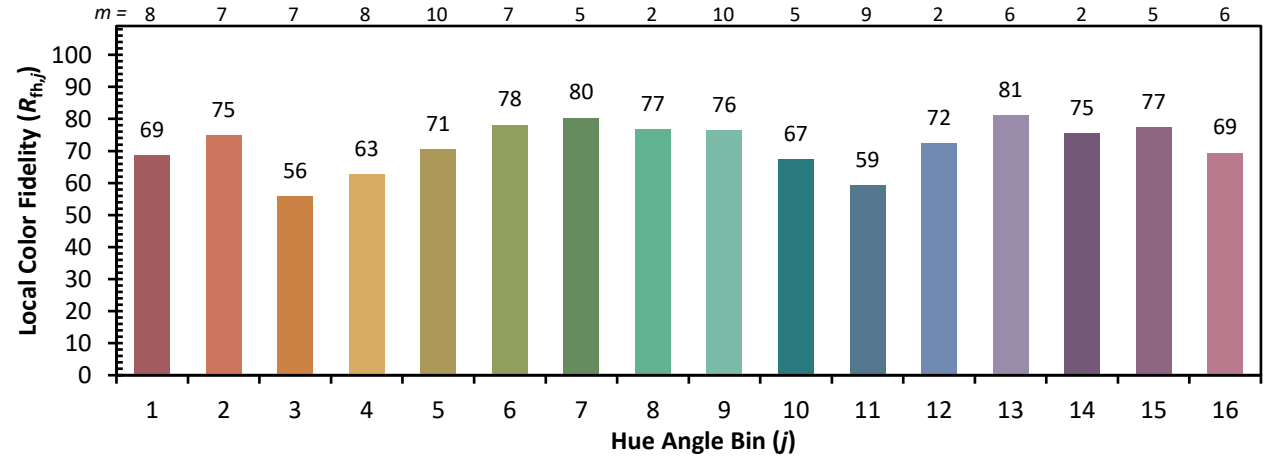
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## Color Rendition by Hue-Angle Bin



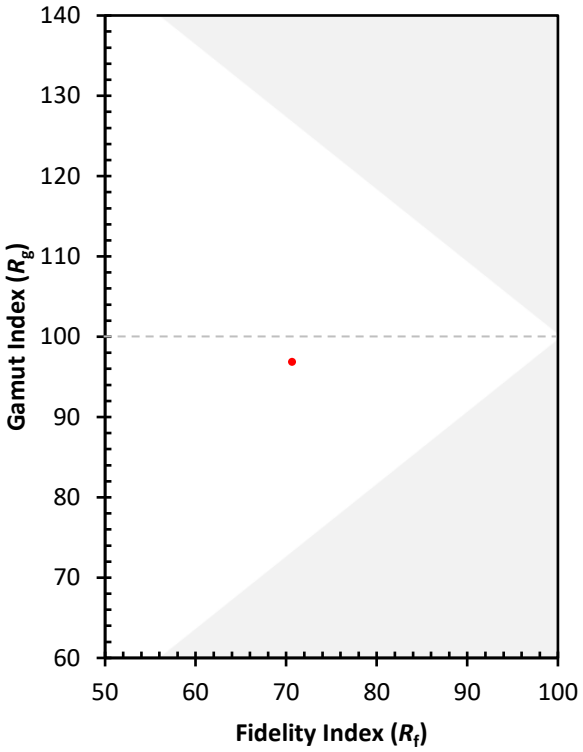



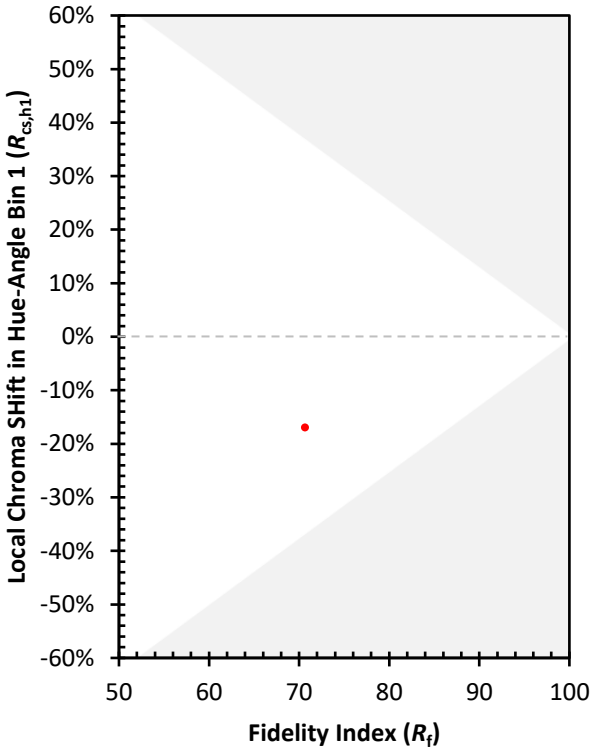



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## Measure Comparisons




(END OF REPORT)