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: P1500719

Luminaire Tested: GSS-SB5C-760-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: | P1500719 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 7/20/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB5C-760-U-T4LG |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 5SQUARE 252W 70CRI 5700K FIXTURE w/ TYPE IV LOW GLARE DISTRIBUTION FIXTURE |
| Light Source: | (130) 5700K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 38342 lumens |
| Efficiency: | N/A |
| Efficacy: | 152.2 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B4 - U0 - G4 |

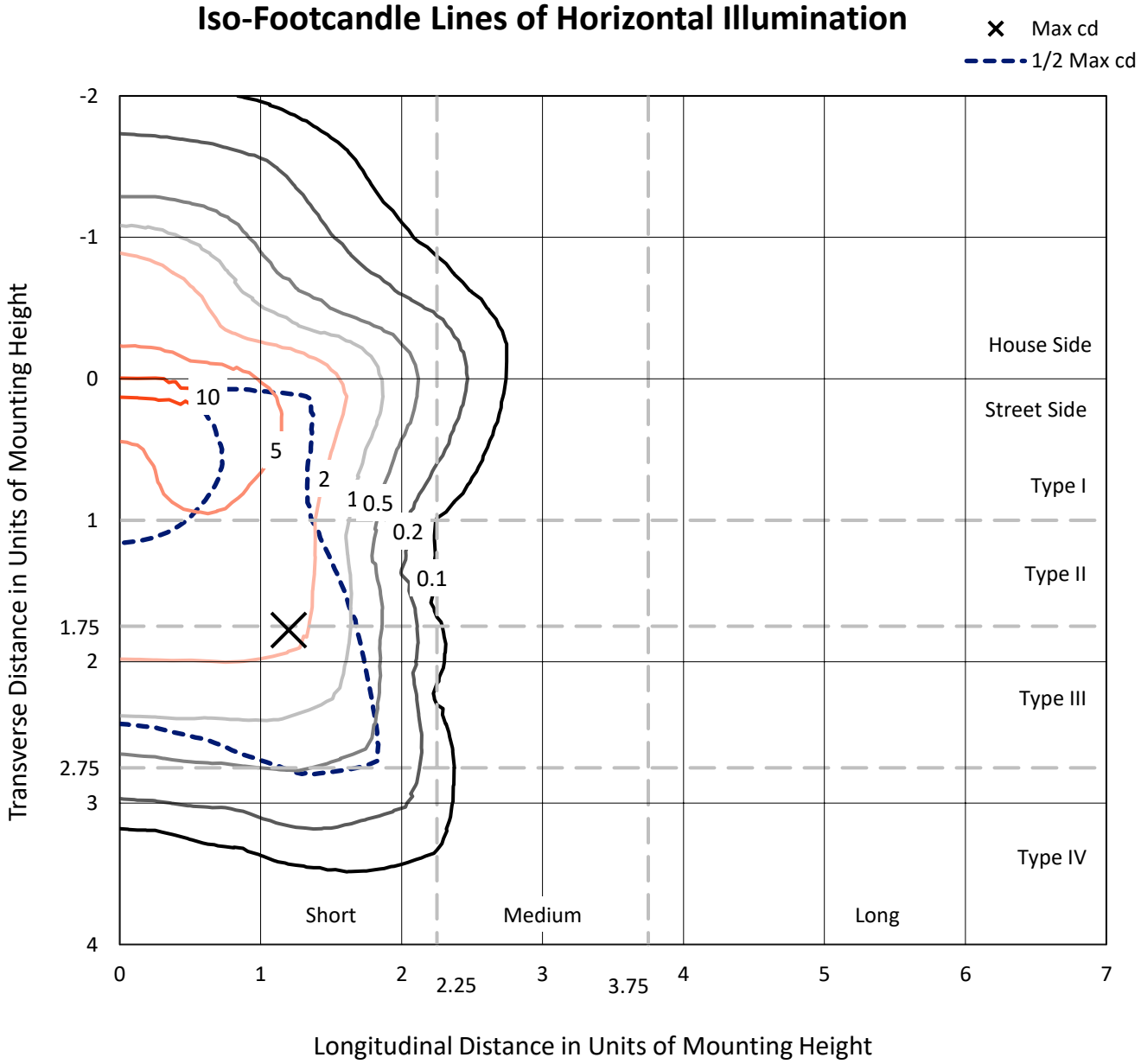
| | |
|---|---|
| Input Watts (W): | 252 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 7.9% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1500719
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## Iso-Footcandle Lines of Horizontal Illumination



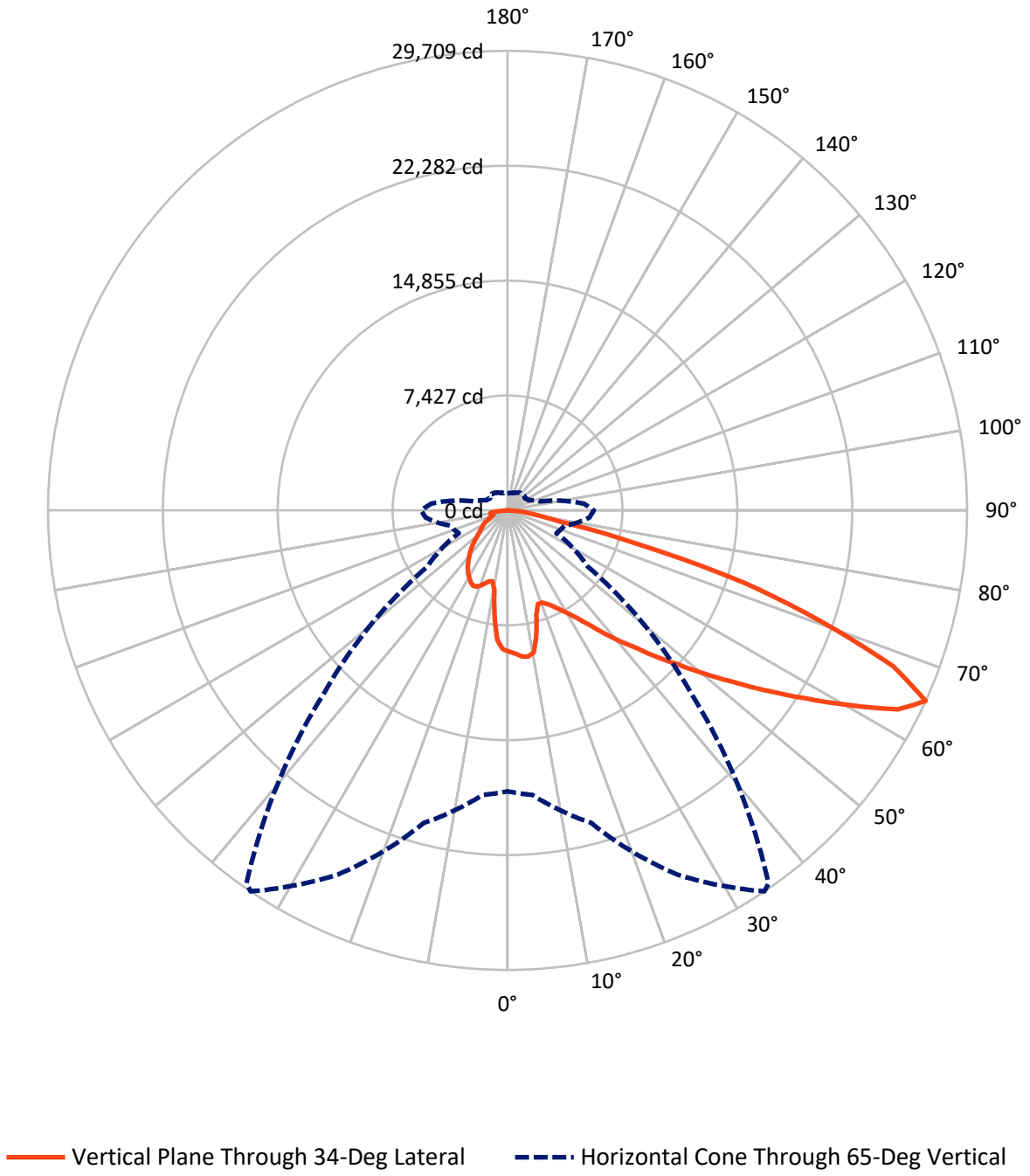

Based on 30 foot mounting height. Maximum calculated value = 10.8 fc
Type III - Short - N/A

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## Luminous Intensity Polar Plot



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Scaled Data Report

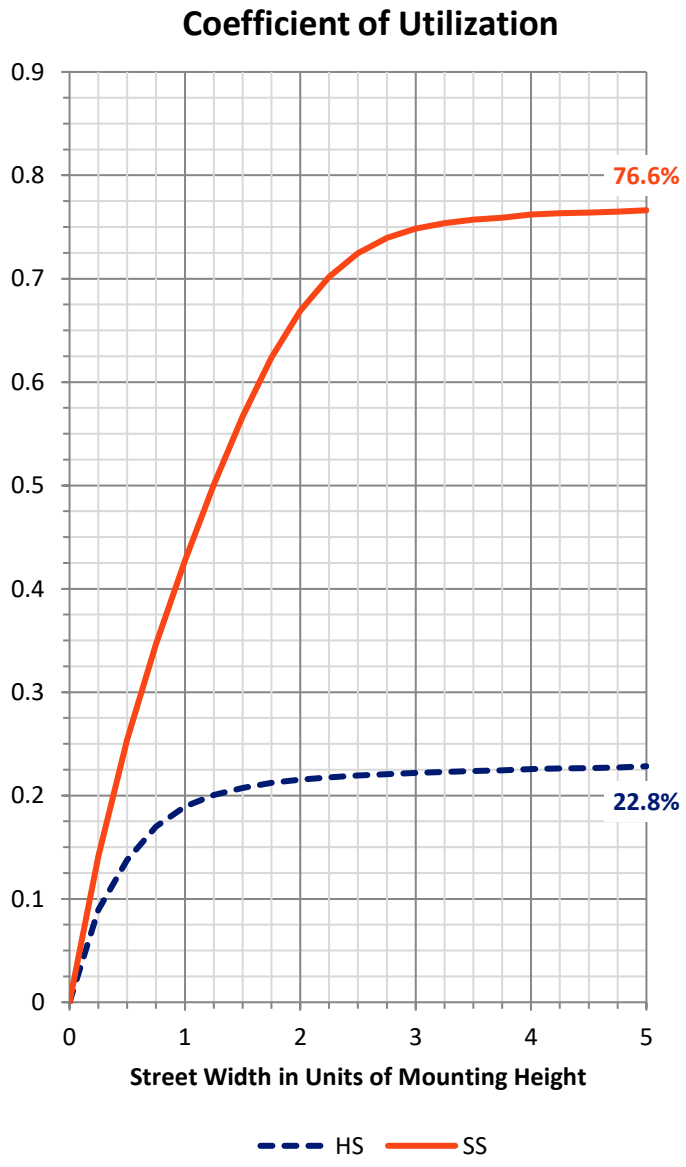
REPORT NUMBER: P1500719
CATALOG NUMBER: GSS-SB5C-760-U-T4LG

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 8920.5 | 0.0 | 8920.5 |
| | % Fixture | 23.3 | 0.0 | 23.3 |
| **Street Side** | Lumens | 29421.5 | 0.0 | 29421.5 |
| | % Fixture | 76.7 | 0.0 | 76.7 |
| **Total** | Lumens | 38342.0 | 0.0 | 38342.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 821.8 | 2.1 |
| 10°-20° | 2068.4 | 5.4 |
| 20°-30° | 3428.6 | 8.9 |
| 30°-40° | 5156.4 | 13.4 |
| 40°-50° | 7224.0 | 18.8 |
| 50°-60° | 9108.3 | 23.8 |
| 60°-70° | 7833.9 | 20.4 |
| 70°-80° | 2329.0 | 6.1 |
| 80°-90° | 371.6 | 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° | 38342.0 | 100.0 |
| 0°-180° | 38342.0 | 100.0 |



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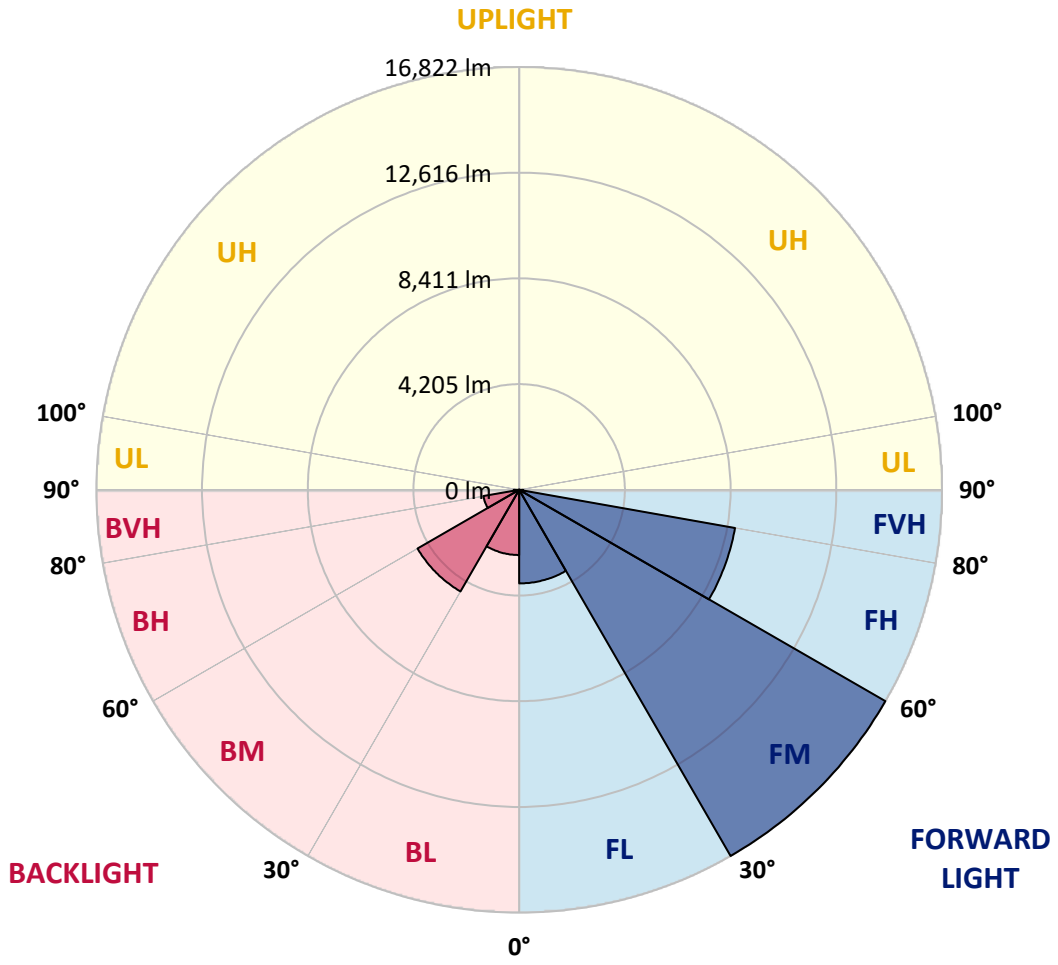
Scaled Data Report

REPORT NUMBER: P1500719
CATALOG NUMBER: GSS-SB5C-760-U-T4LG

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 3723.3 | 9.7 | | | |
| FM | (30°-60°) | 16821.8 | 43.9 | | | |
| FH | (60°-80°) | 8719.2 | 22.7 | | | G4/12000 |
| FVH | (80°-90°) | 157.2 | 0.4 | | | G2/225 |
| BL | (0°-30°) | 2595.5 | 6.8 | B4/5000 | | |
| BM | (30°-60°) | 4666.9 | 12.2 | B3/5000 | | |
| BH | (60°-80°) | 1443.7 | 3.8 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 214.4 | 0.6 | | | 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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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 34° | 35° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 9116.0 | 9116.0 | 9116.0 | 9116.0 | *9116.0* | 9116.0 | 9116.0 | 9116.0 | 9116.0 | 9116.0 | 9116.0 |
| 2.5° | 9289.6 | 9341.7 | 9280.9 | 9254.9 | *9263.6* | 9272.2 | 9228.8 | 9237.5 | 9185.4 | 9185.4 | 9142.0 |
| 5° | 9489.3 | 9498.0 | 9463.2 | 9489.3 | *9480.6* | 9471.9 | 9471.9 | 9463.2 | 9350.4 | 9324.3 | 9280.9 |
| 7.5° | 9376.4 | 9411.1 | 9428.5 | 9524.0 | *9550.1* | 9602.1 | 9636.9 | 9654.2 | 9567.4 | 9498.0 | 9385.1 |
| 10° | 8343.3 | 8369.3 | 8569.0 | 9003.1 | *9333.0* | 9393.8 | 9715.0 | 9897.3 | 9836.6 | 9801.8 | 9610.8 |
| 12.5° | 6667.7 | 6711.1 | 6936.8 | 7501.1 | *8273.8* | 8438.8 | 9463.2 | 10079.7 | 10218.6 | 10227.2 | 9949.4 |
| 15° | 5947.1 | 5947.1 | 6016.5 | 6337.8 | *6962.9* | 7093.1 | 8603.7 | 10131.7 | 10626.6 | 10687.4 | 10348.8 |
| 17.5° | 5799.5 | 5790.8 | 5834.2 | 6025.2 | *6355.1* | 6433.3 | 7614.0 | 9862.6 | 11112.8 | 11217.0 | 10782.9 |
| 20° | 5790.8 | 5764.8 | 5851.6 | 6068.6 | *6355.1* | 6424.6 | 7153.9 | 9393.8 | 11494.8 | 11824.7 | 11217.0 |
| 22.5° | 5799.5 | 5799.5 | 5921.0 | 6233.6 | *6563.5* | 6624.3 | 7240.7 | 9003.1 | 11807.3 | 12458.5 | 11677.1 |
| 25° | 5895.0 | 5877.6 | 6051.3 | 6433.3 | *6884.7* | 6928.1 | 7596.6 | 8985.7 | 12076.5 | 13170.4 | 12232.8 |
| 27.5° | 6051.3 | 6059.9 | 6294.4 | 6754.5 | *7266.7* | 7353.5 | 8091.5 | 9359.1 | 12406.4 | 13951.8 | 12771.0 |
| 30° | 6381.2 | 6389.9 | 6667.7 | 7136.5 | *7726.9* | 7839.7 | 8664.5 | 9914.7 | 12875.2 | 14793.9 | 13352.7 |
| 32.5° | 6754.5 | 6797.9 | 7136.5 | 7683.5 | *8317.2* | 8378.0 | 9367.7 | 10748.2 | 13578.4 | 15636.0 | 13977.8 |
| 35° | 7379.6 | 7423.0 | 7805.0 | 8378.0 | *9081.2* | 9168.1 | 10227.2 | 11711.8 | 14438.0 | 16486.9 | 14464.0 |
| 37.5° | 8187.0 | 8221.7 | 8595.1 | 9289.6 | *10036.2* | 10123.1 | 11182.2 | 12736.3 | 15306.1 | 17164.1 | 14898.1 |
| 40° | 9150.7 | 9228.8 | 9628.2 | 10305.4 | *11060.7* | 11112.8 | 12224.1 | 13726.0 | 16243.8 | 17632.9 | 15071.7 |
| 42.5° | 10201.2 | 10279.3 | 10687.4 | 11434.0 | *12128.6* | 12284.8 | 13352.7 | 14776.5 | 17007.8 | 17841.2 | 14932.8 |
| 45° | 11546.9 | 11529.5 | 11911.5 | 12692.9 | *13509.0* | 13569.8 | 14559.5 | 15644.7 | 17467.9 | 17667.6 | 14793.9 |
| 47.5° | 13179.1 | 13196.4 | 13439.5 | 14073.3 | *14915.5* | 15054.4 | 15818.4 | 16391.4 | 17737.1 | 17528.7 | 14637.6 |
| 50° | 15019.6 | 15063.0 | 15271.4 | 15731.6 | *16634.5* | 16730.0 | 16955.7 | 16912.3 | 17902.0 | 17233.5 | 14698.4 |
| 52.5° | 16860.2 | 16886.2 | 17164.1 | 17650.2 | *18527.1* | 18596.6 | 18101.7 | 17311.7 | 17285.6 | 16044.1 | 14568.2 |
| 55° | 18370.8 | 18362.2 | 18857.0 | 19603.7 | *20671.5* | 20628.1 | 19230.3 | 17007.8 | 15358.2 | 14194.9 | 13986.5 |
| 57.5° | 19681.8 | 19733.9 | 20376.4 | 21669.9 | *23015.6* | 22980.9 | 20437.1 | 15401.6 | 12545.3 | 12007.0 | 13040.2 |
| 60° | 20862.5 | 20984.1 | 22190.9 | 24126.9 | *25611.5* | 25403.2 | 20654.2 | 12979.4 | 9758.4 | 9402.5 | 11164.9 |
| 62.5° | 20350.3 | 20576.0 | 22512.1 | 26288.7 | *28328.9* | 27868.8 | 19317.2 | 10053.6 | 6606.9 | 6285.7 | 7891.8 |
| 65° | *18162.5* | *18466.3* | *20923.3* | *25976.2* | *29709.4* | *29422.9* | *16886.2* | *6320.4* | *3481.4* | *3820.0* | *5313.3* |
| 67.5° | 15254.0 | 15618.7 | 18275.3 | 23336.9 | *26879.1* | 26262.7 | 13118.3 | 3325.2 | 1623.5 | 2517.7 | 3299.1 |
| 70° | 8360.6 | 9263.6 | 13213.8 | 19846.8 | *21531.0* | 20671.5 | 7588.0 | 1571.4 | 1180.7 | 1571.4 | 1970.8 |
| 72.5° | 3142.8 | 3359.9 | 5730.0 | 13344.0 | *15948.6* | 14889.4 | 2882.4 | 1015.8 | 989.7 | 1163.4 | 1423.8 |
| 75° | 1510.6 | 1614.8 | 2491.7 | 6068.6 | *8707.9* | 8117.5 | 1415.1 | 755.3 | 850.8 | 911.6 | 1033.1 |
| 77.5° | 902.9 | 972.4 | 1554.1 | 3524.8 | *3429.3* | 3151.5 | 868.2 | 581.7 | 685.9 | 651.1 | 607.7 |
| 80° | 538.3 | 599.0 | 946.3 | 2005.5 | *2066.3* | 1831.9 | 529.6 | 408.0 | 477.5 | 416.7 | 373.3 |
| 82.5° | 312.5 | 338.6 | 494.9 | 902.9 | *1311.0* | 1206.8 | 303.9 | 243.1 | 347.3 | 277.8 | 208.4 |
| 85° | 156.3 | 165.0 | 225.7 | 390.7 | *651.1* | 494.9 | 130.2 | 112.9 | 165.0 | 121.5 | 69.5 |
| 87.5° | 34.7 | 34.7 | 34.7 | 43.4 | *60.8* | 60.8 | 17.4 | 8.7 | 8.7 | 8.7 | 8.7 |
| 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: P1500719
CATALOG NUMBER: GSS-SB5C-760-U-T4LG

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 9116.0 | 9116.0 | 9116.0 | 9116.0 | 9116.0 | 9116.0 | 9116.0 | 9116.0 | 9116.0 | 9116.0 | 9116.0 |
| 2.5° | 9133.3 | 9150.7 | 9089.9 | 9020.5 | 9003.1 | 8951.0 | 8968.4 | 8933.6 | 8881.6 | 8890.2 | 8898.9 |
| 5° | 9220.1 | 9185.4 | 9063.9 | 8907.6 | 8768.7 | 8612.4 | 8430.1 | 8221.7 | 8074.1 | 8013.4 | 8065.5 |
| 7.5° | 9298.3 | 9263.6 | 9055.2 | 8707.9 | 8239.1 | 7588.0 | 6910.8 | 6294.4 | 5868.9 | 5712.7 | 5747.4 |
| 10° | 9515.3 | 9376.4 | 8994.4 | 8239.1 | 7119.1 | 5886.3 | 5200.4 | 4818.4 | 4688.2 | 4618.8 | 4627.4 |
| 12.5° | 9801.8 | 9610.8 | 8881.6 | 7423.0 | 5730.0 | 4948.7 | 4705.6 | 4618.8 | 4575.3 | 4558.0 | 4575.3 |
| 15° | 10149.1 | 9853.9 | 8612.4 | 6398.5 | 5087.6 | 4783.7 | 4731.6 | 4740.3 | 4740.3 | 4749.0 | 4749.0 |
| 17.5° | 10453.0 | 9992.8 | 8126.2 | 5660.6 | 4957.3 | 4870.5 | 4922.6 | 4966.0 | 4966.0 | 4974.7 | 4966.0 |
| 20° | 10730.8 | 10062.3 | 7501.1 | 5348.0 | 4983.4 | 5026.8 | 5148.3 | 5191.8 | 5200.4 | 5191.8 | 5191.8 |
| 22.5° | 11026.0 | 10105.7 | 6876.0 | 5174.4 | 5044.2 | 5174.4 | 5304.6 | 5365.4 | 5382.8 | 5391.4 | 5400.1 |
| 25° | 11312.5 | 10018.9 | 6363.8 | 5035.5 | 5018.1 | 5200.4 | 5348.0 | 5426.2 | 5443.5 | 5443.5 | 5452.2 |
| 27.5° | 11599.0 | 9992.8 | 6016.5 | 4853.2 | 4896.6 | 5044.2 | 5217.8 | 5322.0 | 5391.4 | 5400.1 | 5408.8 |
| 30° | 11928.9 | 9914.7 | 5686.6 | 4610.1 | 4627.4 | 4809.8 | 4992.1 | 5174.4 | 5313.3 | 5374.1 | 5374.1 |
| 32.5° | 12154.6 | 9836.6 | 5391.4 | 4349.6 | 4349.6 | 4540.6 | 4766.3 | 4992.1 | 5191.8 | 5313.3 | 5339.4 |
| 35° | 12371.7 | 9767.1 | 5131.0 | 4089.2 | 4097.8 | 4280.2 | 4514.6 | 4757.7 | 5009.4 | 5157.0 | 5226.5 |
| 37.5° | 12484.5 | 9697.6 | 4948.7 | 3889.5 | 3854.8 | 4045.8 | 4202.0 | 4401.7 | 4670.8 | 4913.9 | 4974.7 |
| 40° | 12510.6 | 9697.6 | 4931.3 | 3750.6 | 3603.0 | 3820.0 | 3889.5 | 4028.4 | 4271.5 | 4531.9 | 4627.4 |
| 42.5° | 12336.9 | 9602.1 | 5018.1 | 3663.7 | 3342.5 | 3498.8 | 3576.9 | 3646.4 | 3802.7 | 4019.7 | 4097.8 |
| 45° | 12128.6 | 9471.9 | 5096.3 | 3542.2 | 3021.3 | 3142.8 | 3264.4 | 3273.1 | 3342.5 | 3394.6 | 3446.7 |
| 47.5° | 11954.9 | 9333.0 | 4957.3 | 3316.5 | 2691.4 | 2778.2 | 2908.4 | 2908.4 | 2873.7 | 2769.5 | 2734.8 |
| 50° | 12093.8 | 9376.4 | 4722.9 | 2995.2 | 2387.5 | 2448.3 | 2587.2 | 2509.1 | 2430.9 | 2213.9 | 2187.8 |
| 52.5° | 12215.4 | 9541.4 | 4445.1 | 2682.7 | 2127.1 | 2187.8 | 2326.7 | 2205.2 | 2048.9 | 1875.3 | 1849.2 |
| 55° | 12015.7 | 9550.1 | 3932.9 | 2335.4 | 1944.7 | 1996.8 | 2127.1 | 1979.5 | 1831.9 | 1727.7 | 1710.3 |
| 57.5° | 11416.7 | 9289.6 | 3394.6 | 2066.3 | 1788.5 | 1840.6 | 1962.1 | 1814.5 | 1675.6 | 1666.9 | 1710.3 |
| 60° | 10097.0 | 8378.0 | 2899.7 | 1892.6 | 1640.9 | 1701.6 | 1823.2 | 1666.9 | 1484.6 | 1406.5 | 1432.5 |
| 62.5° | 7622.7 | 6441.9 | 2483.0 | 1693.0 | 1502.0 | 1580.1 | 1666.9 | 1415.1 | 1258.9 | 1224.1 | 1189.4 |
| 65° | *5573.8* | *4948.7* | *2231.2* | *1536.7* | *1371.7* | *1467.2* | *1397.8* | *1258.9* | *1154.7* | *1120.0* | *1102.6* |
| 67.5° | 3603.0 | 3359.9 | 1918.7 | 1389.1 | 1250.2 | 1328.3 | 1232.8 | 1163.4 | 1050.5 | 1033.1 | 1059.2 |
| 70° | 2205.2 | 2283.3 | 1606.1 | 1224.1 | 1128.6 | 1111.3 | 1128.6 | 1059.2 | 937.6 | 963.7 | 998.4 |
| 72.5° | 1562.7 | 1684.3 | 1380.4 | 1067.9 | 963.7 | 929.0 | 1007.1 | 963.7 | 876.9 | 902.9 | 937.6 |
| 75° | 1120.0 | 1250.2 | 1137.3 | 876.9 | 816.1 | 798.7 | 937.6 | 963.7 | 902.9 | 920.3 | 946.3 |
| 77.5° | 659.8 | 798.7 | 807.4 | 677.2 | 616.4 | 711.9 | 998.4 | 1111.3 | 1067.9 | 1015.8 | 989.7 |
| 80° | 425.4 | 477.5 | 573.0 | 434.1 | 434.1 | 616.4 | 1093.9 | 1354.4 | 1163.4 | 1033.1 | 1015.8 |
| 82.5° | 217.0 | 251.8 | 373.3 | 277.8 | 260.5 | 460.1 | 1076.6 | 1293.6 | 1284.9 | 1146.0 | 1120.0 |
| 85° | 60.8 | 78.1 | 173.6 | 121.5 | 104.2 | 243.1 | 807.4 | 972.4 | 868.2 | 633.8 | 642.5 |
| 87.5° | 8.7 | 8.7 | 0.0 | 0.0 | 8.7 | 34.7 | 95.5 | 17.4 | 17.4 | 17.4 | 17.4 |
| 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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# LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-7

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-757-U-5WQ

Data in this report applies to families of products including GSS-SB1A-757-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

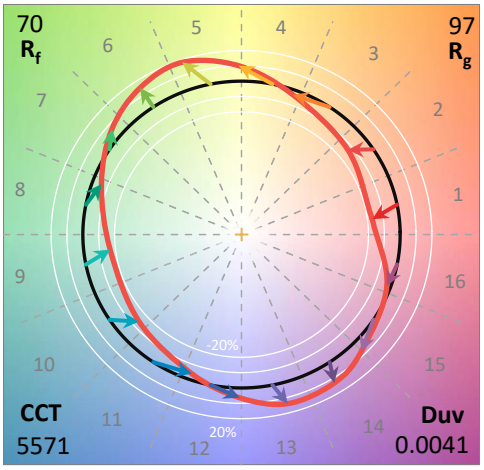
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-7 |
| 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-757-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 5700K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 5571 |
| CIE u': | 0.2033 |
| CIE v': | 0.4806 |
| Duv: | 0.0041 |
| CIE x: | 0.3308 |
| CIE y: | 0.3476 |
| CIE z: | 0.3216 |
| Peak Wavelength (nm): | 442 |
| Dominant Wavelength (nm): | 544 |
| Purity: | 3.635698 |
| Rf: | 70.4 |
| Rg: | 97.1 |

| | |
|---|---|
| CRI (Ra): | 69.9 |
| R1: | 68.8 |
| R2: | 72.5 |
| R3: | 76.8 |
| R4: | 72.0 |
| R5: | 70.9 |
| R6: | 65.6 |
| R7: | 75.5 |
| R8: | 56.8 |
| R9: | -35.4 |
| R10: | 36.7 |
| R11: | 73.9 |
| R12: | 47.8 |
| R13: | 68.0 |
| R14: | 87.0 |
| R15: | 59.8 |




## Test Conditions

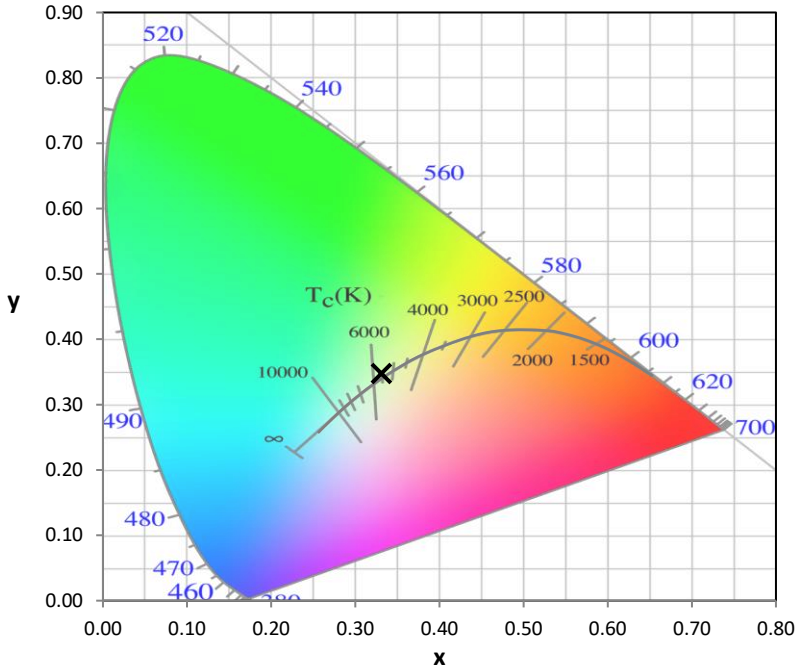
| | |
|---|---|
| Stabilization Time: | 20M |
| Operation Time: | 1H 20M |
| Sphere Temperature (°C): | 25.2 |

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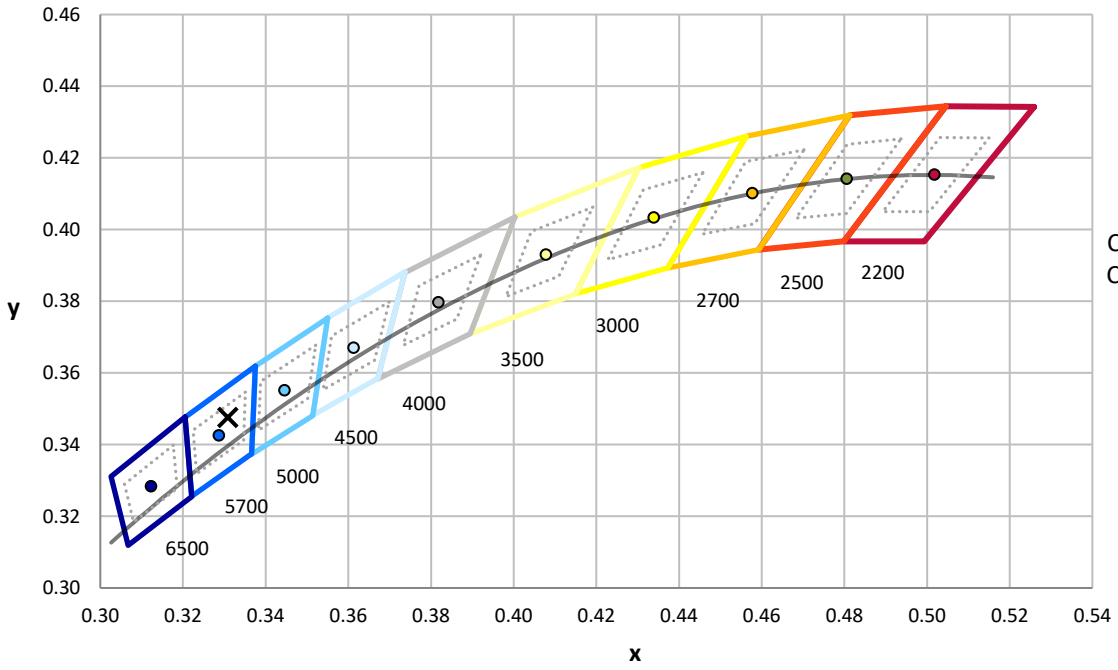
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

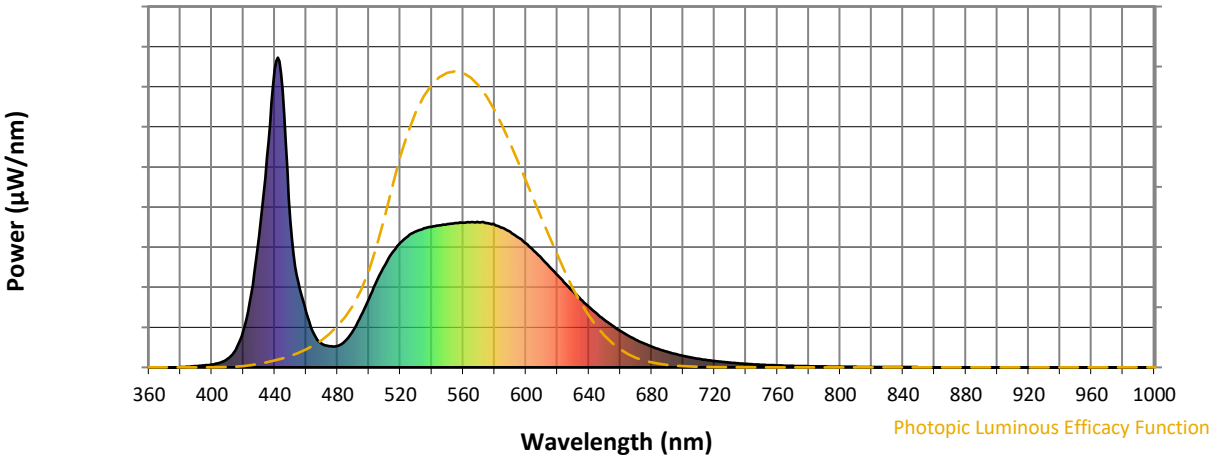



CCT = 5571K
CIE x = 0.3308
CIE y = 0.3476
Duv = 0.0041

Point lies inside the ANSI 5700K 4-step quadrangle

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## Photopic Flux vs. Wavelength

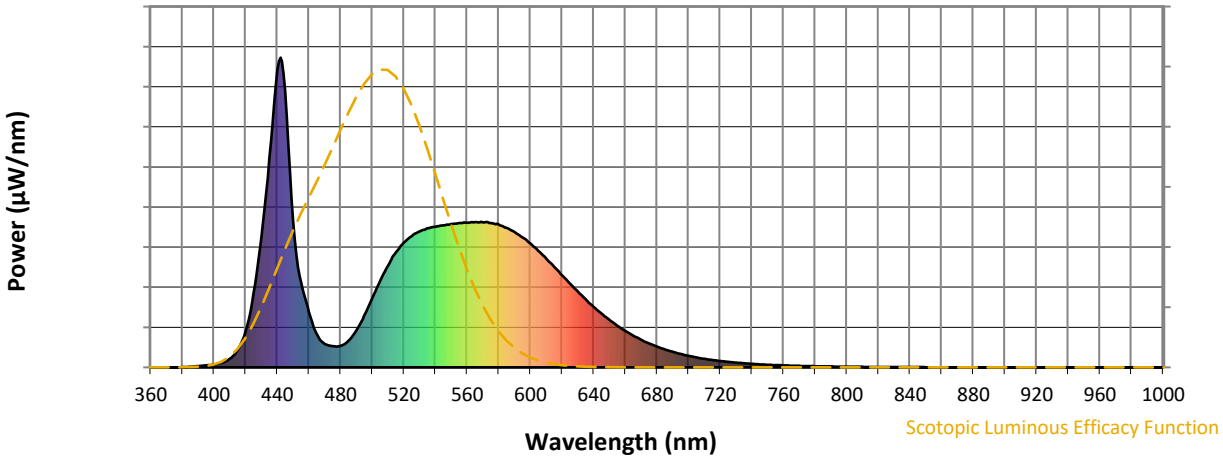



## Photopic Lumens: NR

| 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 | 120 | NR | 620 | 298 | NR | 750 | 9 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 167 | NR | 625 | 270 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 222 | NR | 630 | 245 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 279 | NR | 635 | 219 | NR | 765 | 6 | NR | 895 | 0 | NR |
| 380 | 1 | NR | 510 | 329 | NR | 640 | 196 | NR | 770 | 5 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 371 | NR | 645 | 173 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 403 | NR | 650 | 153 | NR | 780 | 4 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 424 | NR | 655 | 135 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 439 | NR | 660 | 117 | NR | 790 | 3 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 449 | NR | 665 | 103 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 28 | NR | 540 | 454 | NR | 670 | 89 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 459 | NR | 675 | 77 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 118 | NR | 550 | 463 | NR | 680 | 67 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 237 | NR | 555 | 466 | NR | 685 | 58 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 420 | NR | 560 | 467 | NR | 690 | 50 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 677 | NR | 565 | 469 | NR | 695 | 43 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 962 | NR | 570 | 469 | NR | 700 | 37 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 894 | NR | 575 | 466 | NR | 705 | 32 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 472 | NR | 580 | 461 | NR | 710 | 28 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 275 | NR | 585 | 450 | NR | 715 | 24 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 180 | NR | 590 | 437 | NR | 720 | 21 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 107 | NR | 595 | 420 | NR | 725 | 18 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 76 | NR | 600 | 400 | NR | 730 | 15 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 68 | NR | 605 | 376 | NR | 735 | 13 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 69 | NR | 610 | 352 | NR | 740 | 11 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 86 | NR | 615 | 325 | NR | 745 | 10 | NR | 875 | 0 | NR | | | |

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## Scotopic Flux vs. Wavelength

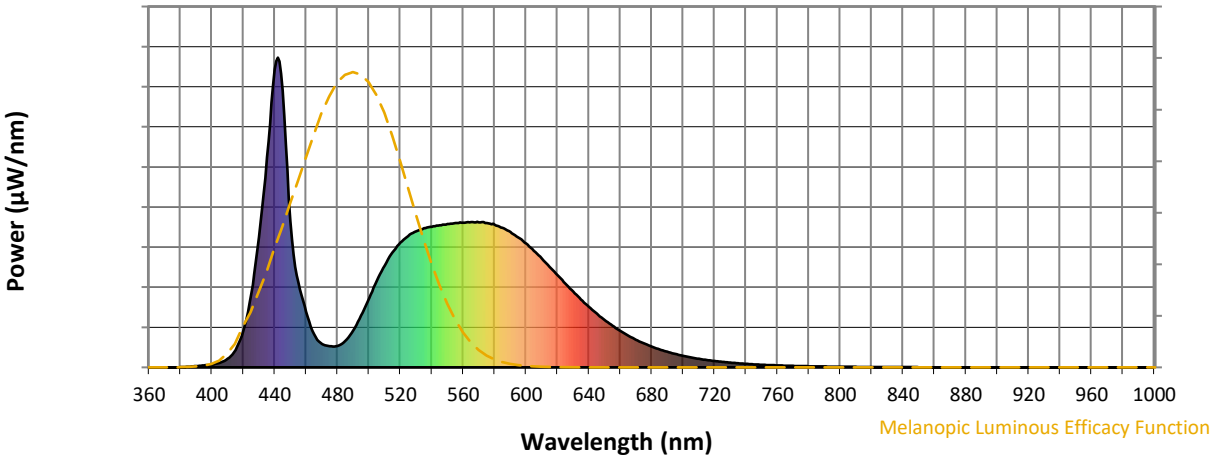



**Scotopic Lumens: NR** **S/P: 1.84**

| 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 | 120 | NR | 620 | 298 | NR | 750 | 9 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 167 | NR | 625 | 270 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 222 | NR | 630 | 245 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 279 | NR | 635 | 219 | NR | 765 | 6 | NR | 895 | 0 | NR |
| 380 | 1 | NR | 510 | 329 | NR | 640 | 196 | NR | 770 | 5 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 371 | NR | 645 | 173 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 403 | NR | 650 | 153 | NR | 780 | 4 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 424 | NR | 655 | 135 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 439 | NR | 660 | 117 | NR | 790 | 3 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 449 | NR | 665 | 103 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 28 | NR | 540 | 454 | NR | 670 | 89 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 459 | NR | 675 | 77 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 118 | NR | 550 | 463 | NR | 680 | 67 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 237 | NR | 555 | 466 | NR | 685 | 58 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 420 | NR | 560 | 467 | NR | 690 | 50 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 677 | NR | 565 | 469 | NR | 695 | 43 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 962 | NR | 570 | 469 | NR | 700 | 37 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 894 | NR | 575 | 466 | NR | 705 | 32 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 472 | NR | 580 | 461 | NR | 710 | 28 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 275 | NR | 585 | 450 | NR | 715 | 24 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 180 | NR | 590 | 437 | NR | 720 | 21 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 107 | NR | 595 | 420 | NR | 725 | 18 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 76 | NR | 600 | 400 | NR | 730 | 15 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 68 | NR | 605 | 376 | NR | 735 | 13 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 69 | NR | 610 | 352 | NR | 740 | 11 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 86 | NR | 615 | 325 | NR | 745 | 10 | NR | 875 | 0 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 3.71**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 120 | NR | 620 | 298 | NR | 750 | 9 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 167 | NR | 625 | 270 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 222 | NR | 630 | 245 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 279 | NR | 635 | 219 | NR | 765 | 6 | NR | 895 | 0 | NR |
| 380 | 1 | NR | 510 | 329 | NR | 640 | 196 | NR | 770 | 5 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 371 | NR | 645 | 173 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 403 | NR | 650 | 153 | NR | 780 | 4 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 424 | NR | 655 | 135 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 439 | NR | 660 | 117 | NR | 790 | 3 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 449 | NR | 665 | 103 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 28 | NR | 540 | 454 | NR | 670 | 89 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 459 | NR | 675 | 77 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 118 | NR | 550 | 463 | NR | 680 | 67 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 237 | NR | 555 | 466 | NR | 685 | 58 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 420 | NR | 560 | 467 | NR | 690 | 50 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 677 | NR | 565 | 469 | NR | 695 | 43 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 962 | NR | 570 | 469 | NR | 700 | 37 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 894 | NR | 575 | 466 | NR | 705 | 32 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 472 | NR | 580 | 461 | NR | 710 | 28 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 275 | NR | 585 | 450 | NR | 715 | 24 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 180 | NR | 590 | 437 | NR | 720 | 21 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 107 | NR | 595 | 420 | NR | 725 | 18 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 76 | NR | 600 | 400 | NR | 730 | 15 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 68 | NR | 605 | 376 | NR | 735 | 13 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 69 | NR | 610 | 352 | NR | 740 | 11 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 86 | NR | 615 | 325 | NR | 745 | 10 | NR | 875 | 0 | NR | | | |

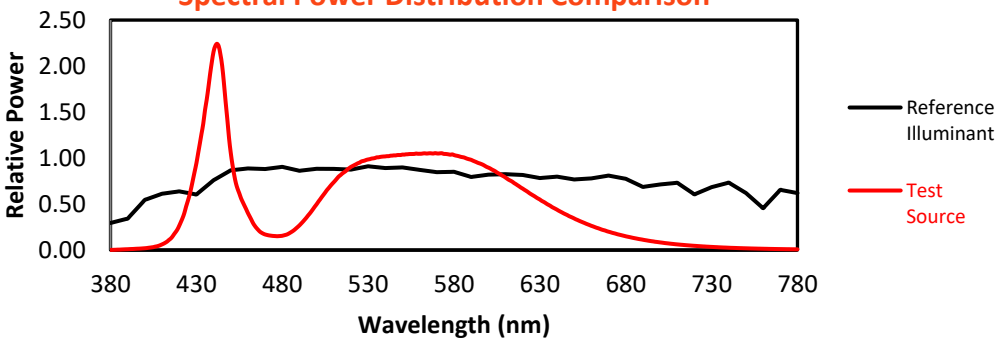
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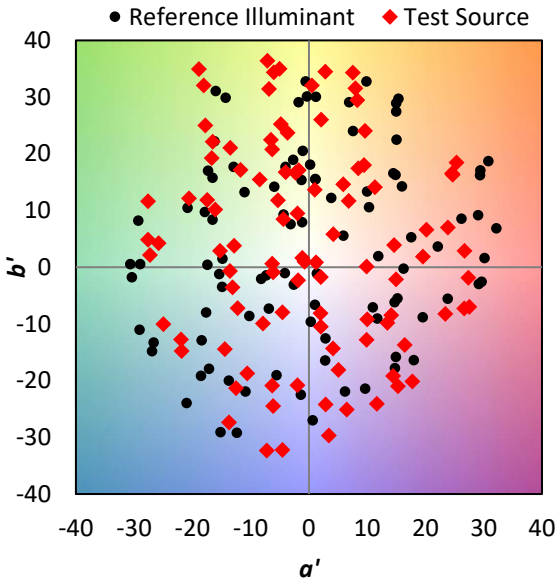
## Summary

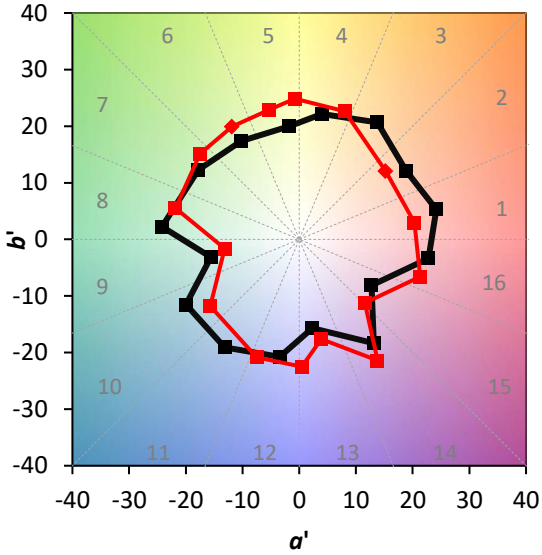
$R_f$ = 70.4
$R_g$ = 97.1
CIE $R_a$ = 69.9
$R_9$ = -35.4

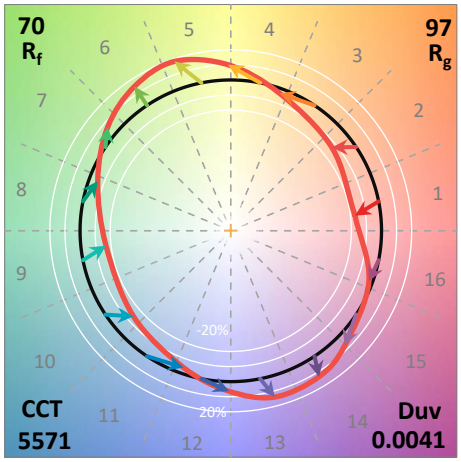
## Spectral Power Distribution Comparison

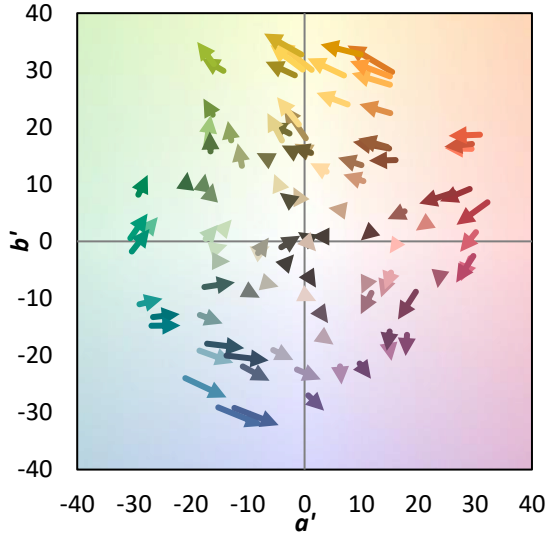



## Color Vector Graphics



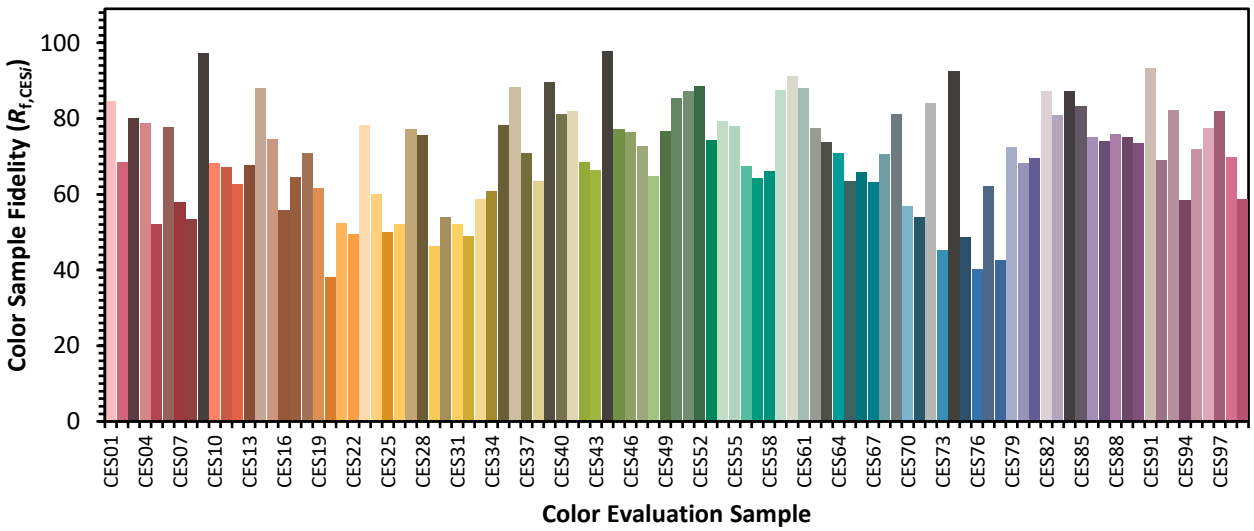



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**Individual Sample Fidelity Index ($R_{f,i}$)**

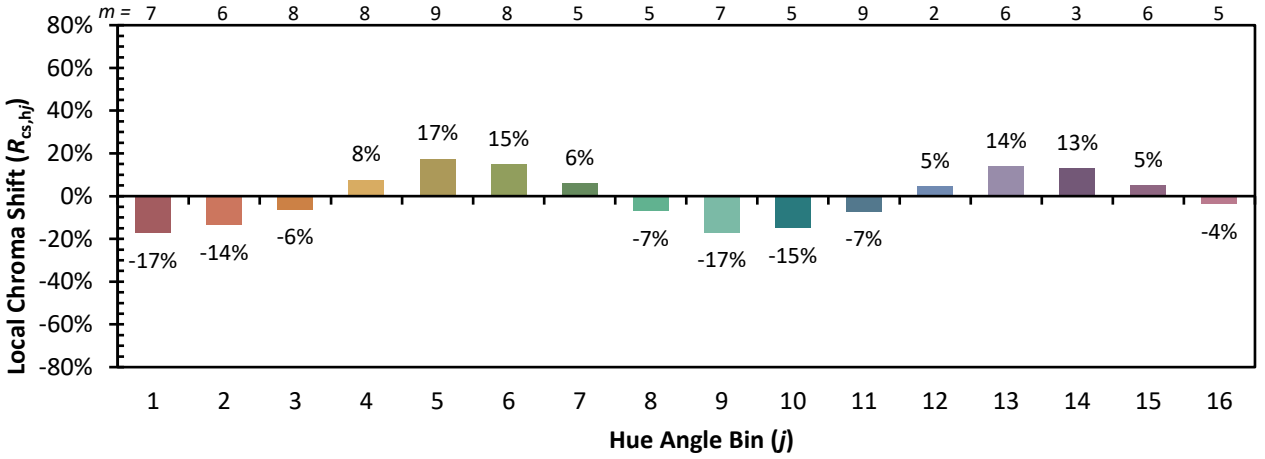
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 52 | CES51 = 87 | CES76 = 40 |
| CES02 = 59 | CES27 = 77 | CES52 = 88 | CES77 = 62 |
| CES03 = 30 | CES28 = 76 | CES53 = 74 | CES78 = 43 |
| CES04 = 68 | CES29 = 46 | CES54 = 79 | CES79 = 72 |
| CES05 = 45 | CES30 = 54 | CES55 = 78 | CES80 = 68 |
| CES06 = 49 | CES31 = 52 | CES56 = 67 | CES81 = 70 |
| CES07 = 38 | CES32 = 49 | CES57 = 64 | CES82 = 87 |
| CES08 = 37 | CES33 = 59 | CES58 = 66 | CES83 = 81 |
| CES09 = 29 | CES34 = 61 | CES59 = 87 | CES84 = 87 |
| CES10 = 72 | CES35 = 78 | CES60 = 91 | CES85 = 83 |
| CES11 = 55 | CES36 = 88 | CES61 = 88 | CES86 = 75 |
| CES12 = 61 | CES37 = 71 | CES62 = 77 | CES87 = 74 |
| CES13 = 41 | CES38 = 64 | CES63 = 74 | CES88 = 76 |
| CES14 = 74 | CES39 = 90 | CES64 = 71 | CES89 = 75 |
| CES15 = 70 | CES40 = 81 | CES65 = 63 | CES90 = 73 |
| CES16 = 46 | CES41 = 82 | CES66 = 66 | CES91 = 93 |
| CES17 = 48 | CES42 = 69 | CES67 = 63 | CES92 = 69 |
| CES18 = 55 | CES43 = 67 | CES68 = 71 | CES93 = 82 |
| CES19 = 70 | CES44 = 98 | CES69 = 81 | CES94 = 58 |
| CES20 = 63 | CES45 = 77 | CES70 = 57 | CES95 = 72 |
| CES21 = 85 | CES46 = 76 | CES71 = 54 | CES96 = 78 |
| CES22 = 77 | CES47 = 73 | CES72 = 84 | CES97 = 82 |
| CES23 = 91 | CES48 = 65 | CES73 = 45 | CES98 = 70 |
| CES24 = 90 | CES49 = 77 | CES74 = 92 | CES99 = 59 |
| CES25 = 71 | CES50 = 85 | CES75 = 49 | |

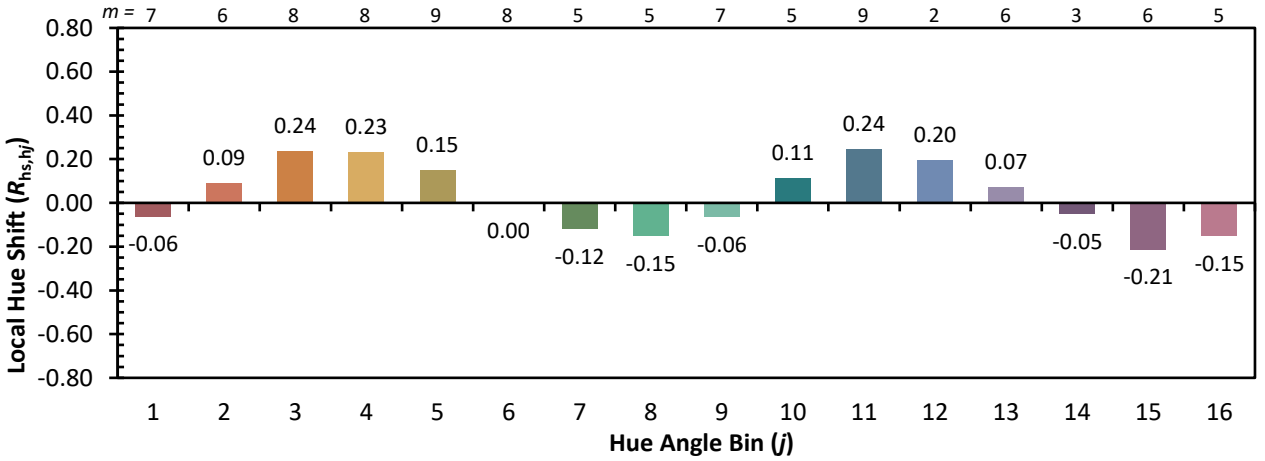


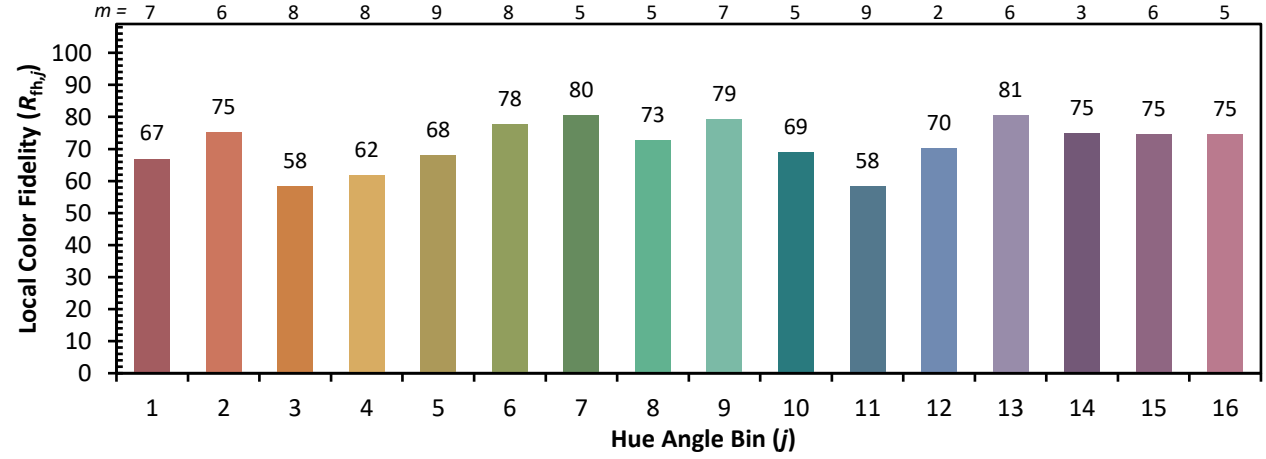
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## Color Rendition by Hue-Angle Bin



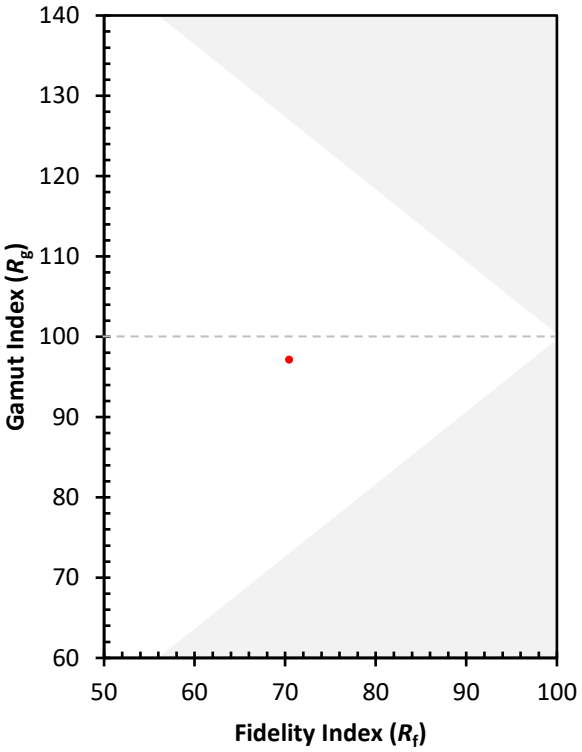



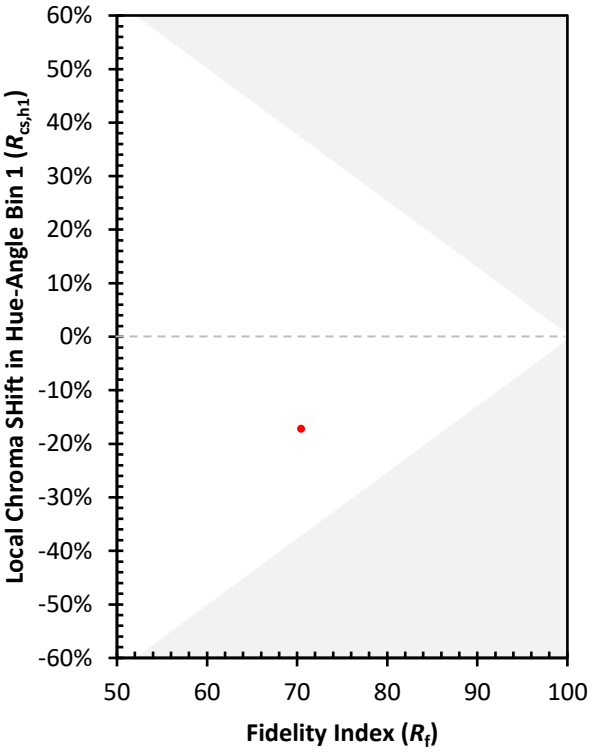



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## Measure Comparisons




(END OF REPORT)