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: STREETWORKS

Report Number: P1458831

Luminaire Tested: GLAN-SB5A-750-U-T4LG-HSS

Issue Date: 05/20/2026

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: | P1458831 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 5/21/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | STREETWORKS |
| Catalog Number: | GLAN-SB5A-750-U-T4LG-HSS |
| Description: | GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 350mA 5xLight Square PACKAGE 70CRI 5000K FIXTURE w/ TYPE IV LOW GLARE WITH HOUSE SIDE SHIELD |
| Light Source: | (130) 5000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 17383.7 lumens |
| Efficiency: | N/A |
| Efficacy: | 122.7 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1' x H: 0') |
| IES Classification: | Type IV - Short |
| BUG Rating: | B1 - U0 - G3 |

| | |
|---|---|
| Input Watts (W): | 141.7 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.97 |
| Total Harmonic Distortion (THDi): | NR |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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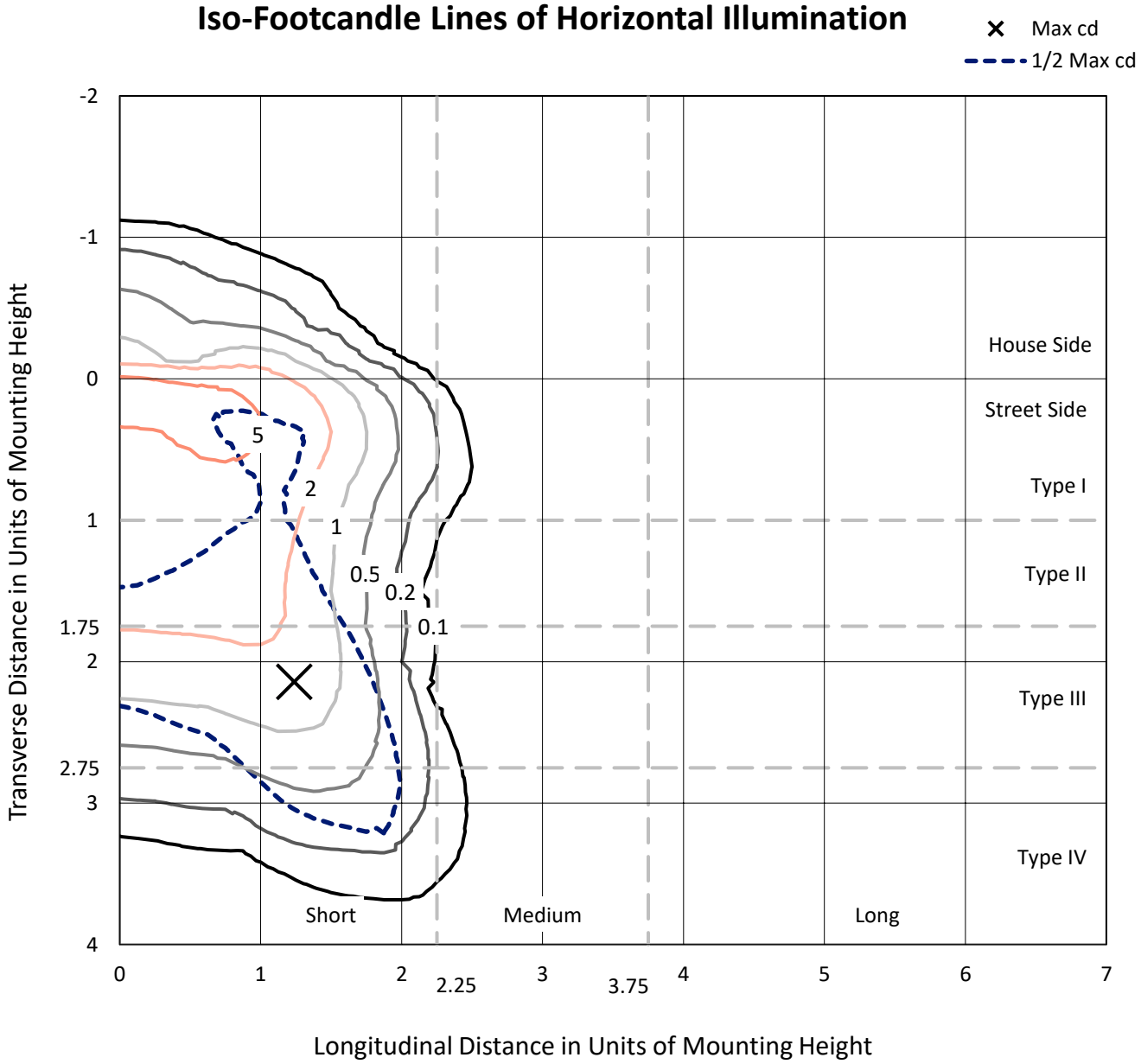
Scaled Data Report

REPORT NUMBER: P1458831
CATALOG NUMBER: GLAN-SB5A-750-U-T4LG-HSS

## Iso-Footcandle Lines of Horizontal Illumination




Based on 25 foot mounting height. Maximum calculated value = 8.4 fc
Type IV - Short - N/A

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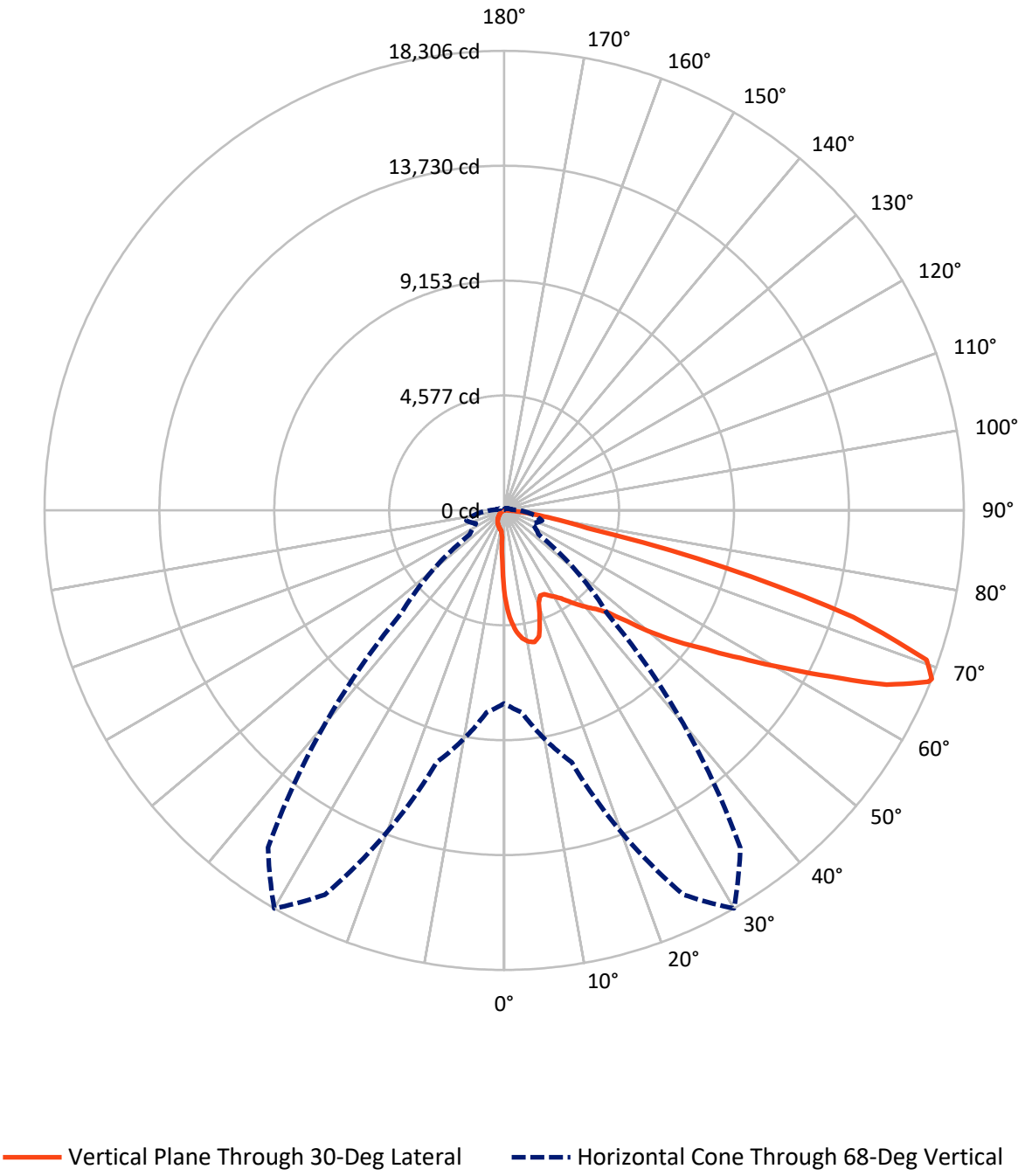
## Luminous Intensity Polar Plot



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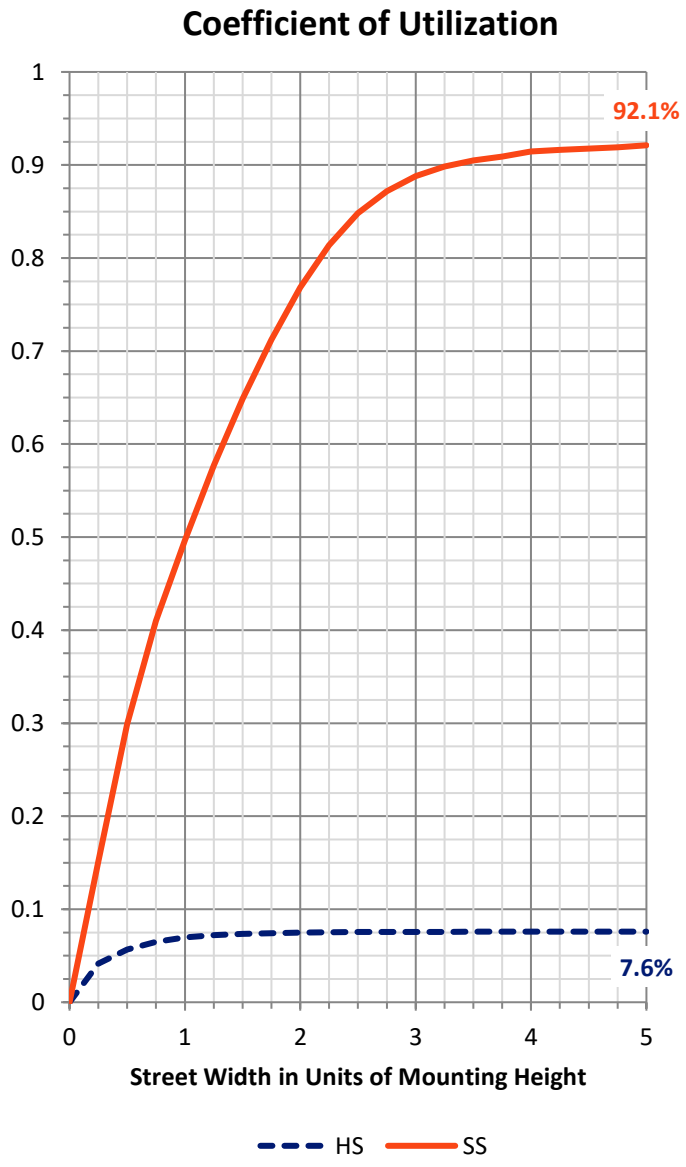
**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 1326.8 | 0.0 | 1326.8 |
| | % Fixture | 7.6 | 0.0 | 7.6 |
| **Street Side** | Lumens | 16056.8 | 0.0 | 16056.8 |
| | % Fixture | 92.4 | 0.0 | 92.4 |
| **Total** | Lumens | 17383.7 | 0.0 | 17383.7 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 295.8 | 1.7 |
| 10°-20° | 844.4 | 4.9 |
| 20°-30° | 1327.0 | 7.6 |
| 30°-40° | 2081.3 | 12.0 |
| 40°-50° | 3111.0 | 17.9 |
| 50°-60° | 4138.6 | 23.8 |
| 60°-70° | 4000.7 | 23.0 |
| 70°-80° | 1438.1 | 8.3 |
| 80°-90° | 146.8 | 0.8 |
| 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° | 17383.7 | 100.0 |
| 0°-180° | 17383.7 | 100.0 |



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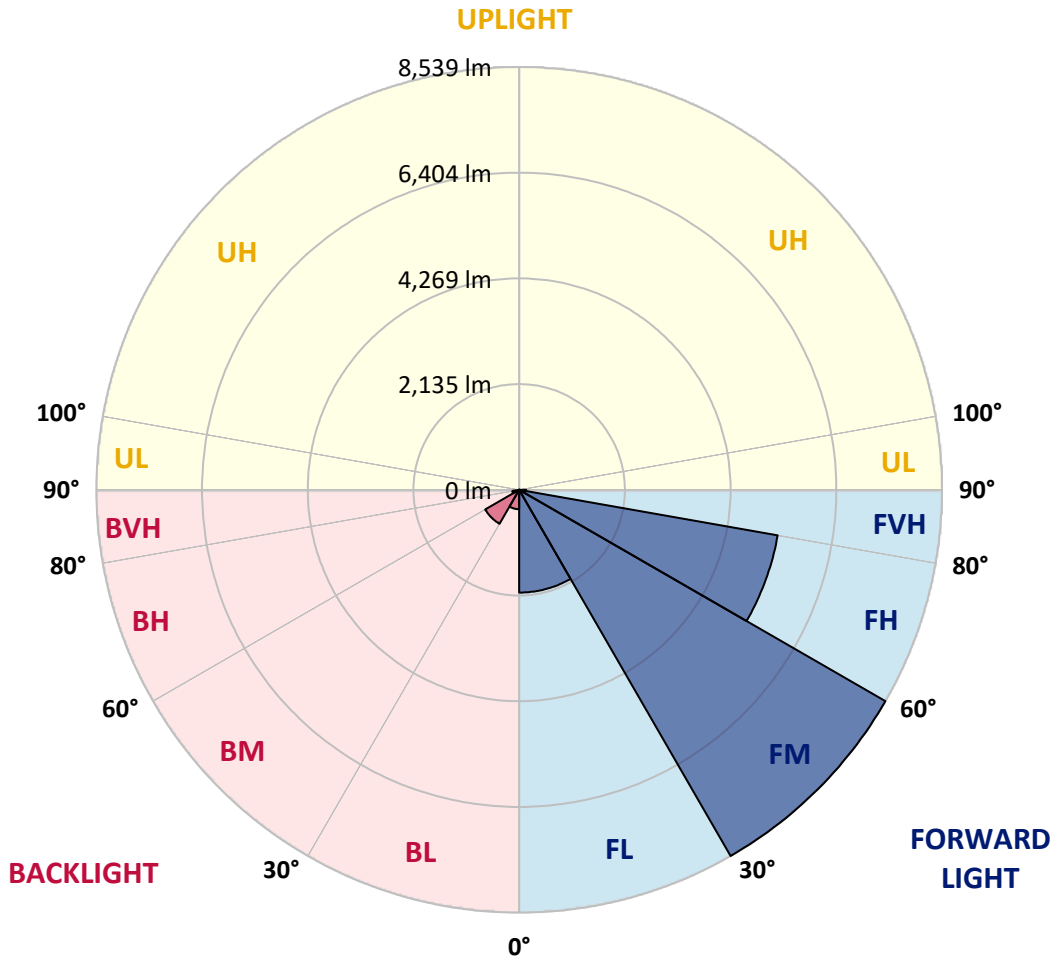
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 2075.6 | 11.9 | | | |
| FM | (30°-60°) | 8538.9 | 49.1 | | | |
| FH | (60°-80°) | 5300.8 | 30.5 | | | G3/7500 |
| FVH | (80°-90°) | 141.5 | 0.8 | | | G2/225 |
| BL | (0°-30°) | 391.6 | 2.3 | B1/500 | | |
| BM | (30°-60°) | 792.0 | 4.6 | B1/1000 | | |
| BH | (60°-80°) | 138.0 | 0.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 5.2 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B1-U0-G3**
Type IV Short



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REPORT NUMBER: P1458831
CATALOG NUMBER: GLAN-SB5A-750-U-T4LG-HSS

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 30° | 35° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 3427.9 | 3427.9 | 3427.9 | 3427.9 | *3427.9* | 3427.9 | 3427.9 | 3427.9 | 3427.9 | 3427.9 | 3427.9 |
| 2.5° | 4381.2 | 4381.2 | 4349.9 | 4308.3 | *4261.4* | 4245.7 | 4157.2 | 4032.2 | 3901.9 | 3750.8 | 3532.0 |
| 5° | 4943.8 | 4938.6 | 4876.1 | 4876.1 | *4813.6* | 4756.3 | 4667.7 | 4485.4 | 4277.0 | 4006.1 | 3625.8 |
| 7.5° | 5193.9 | 5204.3 | 5178.2 | 5178.2 | *5141.8* | 5100.1 | 5048.0 | 4870.9 | 4626.0 | 4261.4 | 3719.6 |
| 10° | 5282.4 | 5287.6 | 5287.6 | 5324.1 | *5313.7* | 5308.5 | 5303.3 | 5204.3 | 4949.0 | 4521.8 | 3818.6 |
| 12.5° | 5068.8 | 5094.9 | 5167.8 | 5329.3 | *5381.4* | 5438.7 | 5516.9 | 5485.6 | 5308.5 | 4850.0 | 3969.6 |
| 15° | 4381.2 | 4386.4 | 4589.6 | 4990.7 | *5204.3* | 5423.1 | 5725.2 | 5787.8 | 5673.1 | 5204.3 | 4125.9 |
| 17.5° | 3615.4 | 3631.0 | 3792.5 | 4240.5 | *4584.4* | 5089.7 | 5845.1 | 6100.3 | 6058.7 | 5553.3 | 4271.8 |
| 20° | 3297.6 | 3318.5 | 3396.6 | 3677.9 | *3938.4* | 4407.2 | 5725.2 | 6397.3 | 6412.9 | 5902.4 | 4407.2 |
| 22.5° | 3224.7 | 3240.3 | 3302.8 | 3521.6 | *3683.1* | 3995.7 | 5318.9 | 6631.7 | 6814.0 | 6303.5 | 4568.7 |
| 25° | 3203.8 | 3219.5 | 3313.2 | 3552.9 | *3704.0* | 3964.4 | 4949.0 | 6756.7 | 7288.1 | 6720.3 | 4725.0 |
| 27.5° | 3188.2 | 3209.1 | 3360.1 | 3667.5 | *3844.6* | 4094.7 | 4881.3 | 6782.8 | 7741.3 | 7163.1 | 4980.3 |
| 30° | 3209.1 | 3240.3 | 3438.3 | 3787.3 | *3990.5* | 4271.8 | 5042.8 | 6808.8 | 8241.4 | 7668.4 | 5303.3 |
| 32.5° | 3292.4 | 3318.5 | 3558.1 | 3948.8 | *4183.2* | 4501.0 | 5318.9 | 6965.1 | 8715.5 | 8184.1 | 5610.6 |
| 35° | 3386.2 | 3422.6 | 3709.2 | 4178.0 | *4459.3* | 4818.8 | 5694.0 | 7272.5 | 9168.7 | 8673.8 | 5928.4 |
| 37.5° | 3500.8 | 3542.5 | 3886.3 | 4438.5 | *4761.5* | 5167.8 | 6100.3 | 7699.6 | 9569.9 | 9075.0 | 6246.2 |
| 40° | 3657.1 | 3704.0 | 4089.5 | 4714.6 | *5063.6* | 5470.0 | 6501.5 | 8121.6 | 9877.2 | 9314.6 | 6454.6 |
| 42.5° | 4271.8 | 4334.3 | 4495.8 | 4985.5 | *5376.2* | 5793.0 | 6897.4 | 8522.7 | 9991.8 | 9392.7 | 6496.2 |
| 45° | 5417.9 | 5480.4 | 5438.7 | 5532.5 | *5793.0* | 6183.7 | 7329.8 | 8908.2 | 10007.5 | 9371.9 | 6475.4 |
| 47.5° | 6569.2 | 6642.1 | 6605.6 | 6553.6 | *6610.9* | 6798.4 | 7814.3 | 9153.1 | 9924.1 | 9361.5 | 6475.4 |
| 50° | 7668.4 | 7626.7 | 7631.9 | 7616.3 | *7668.4* | 7767.4 | 8283.1 | 9200.0 | 9903.3 | 9460.5 | 6532.7 |
| 52.5° | 8257.1 | 8277.9 | 8408.1 | 8600.9 | *8715.5* | 8814.5 | 8819.7 | 9272.9 | 9752.2 | 9293.8 | 6465.0 |
| 55° | 8835.3 | 8877.0 | 9179.1 | 9507.3 | *9762.6* | 9950.1 | 9356.3 | 9226.0 | 8850.9 | 8736.3 | 6110.7 |
| 57.5° | 9486.5 | 9543.8 | 9971.0 | 10648.2 | *11096.2* | 11195.2 | 9887.6 | 8350.8 | 7491.3 | 7939.3 | 5423.1 |
| 60° | 10382.5 | 10450.3 | 11018.1 | 12033.9 | *12700.8* | 12497.6 | 9929.3 | 6959.9 | 5949.3 | 6590.0 | 4475.0 |
| 62.5° | 11085.8 | 11221.3 | 12247.5 | 13831.2 | *14565.8* | 13919.8 | 9153.1 | 5334.5 | 4157.2 | 4631.2 | 3266.4 |
| 65° | 10335.7 | 10596.1 | 12268.4 | 15889.0 | *16738.1* | 15592.0 | 7934.1 | 3641.4 | 2344.3 | 2995.5 | 2089.0 |
| 67.5° | 8356.0 | 8720.7 | 10893.1 | 16889.2 | *18228.0* | 16472.4 | 6246.2 | 1932.7 | 1344.1 | 1740.0 | 1099.2 |
| 68° | *7689.2* | *8085.1* | *10387.7* | *16889.2* | *18306.2* | *16394.3* | *5798.2* | *1672.3* | *1239.9* | *1562.9* | *953.3* |
| 70° | 5313.7 | 5595.0 | 7986.2 | 15941.1 | *17847.8* | 14946.1 | 3818.6 | 958.5 | 932.5 | 1073.2 | 630.3 |
| 72.5° | 2604.8 | 2906.9 | 4271.8 | 12633.0 | *14539.7* | 11487.0 | 1740.0 | 635.6 | 708.5 | 786.6 | 494.9 |
| 75° | 1036.7 | 1099.2 | 1682.7 | 6230.6 | *9085.4* | 7329.8 | 911.7 | 479.3 | 609.5 | 614.7 | 390.7 |
| 77.5° | 593.9 | 630.3 | 932.5 | 2292.2 | *3407.0* | 3276.8 | 588.7 | 343.8 | 484.5 | 442.8 | 255.3 |
| 80° | 333.4 | 338.6 | 526.2 | 1208.6 | *1948.4* | 1745.2 | 401.1 | 250.1 | 369.9 | 312.6 | 171.9 |
| 82.5° | 166.7 | 187.5 | 333.4 | 666.8 | *1083.6* | 1109.6 | 213.6 | 177.1 | 296.9 | 224.0 | 140.7 |
| 85° | 119.8 | 130.2 | 239.6 | 369.9 | *500.1* | 750.2 | 130.2 | 88.6 | 224.0 | 151.1 | 99.0 |
| 87.5° | 62.5 | 78.1 | 151.1 | 182.3 | *203.2* | 255.3 | 62.5 | 41.7 | 125.0 | 88.6 | 52.1 |
| 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: P1458831
CATALOG NUMBER: GLAN-SB5A-750-U-T4LG-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 3427.9 | 3427.9 | 3427.9 | 3427.9 | 3427.9 | 3427.9 | 3427.9 | 3427.9 | 3427.9 | 3427.9 | 3427.9 |
| 2.5° | 3427.9 | 3308.0 | 3063.2 | 2776.7 | 2552.7 | 2323.4 | 2135.9 | 1958.8 | 1875.4 | 1865.0 | 1885.8 |
| 5° | 3412.2 | 3151.7 | 2594.3 | 2047.3 | 1599.3 | 1286.7 | 1114.8 | 1026.3 | 979.4 | 958.5 | 963.8 |
| 7.5° | 3381.0 | 2985.0 | 2094.2 | 1385.7 | 1036.7 | 901.2 | 859.6 | 843.9 | 838.7 | 838.7 | 838.7 |
| 10° | 3349.7 | 2761.0 | 1604.5 | 1015.9 | 849.1 | 812.7 | 802.3 | 802.3 | 797.1 | 797.1 | 802.3 |
| 12.5° | 3334.1 | 2552.7 | 1245.1 | 849.1 | 791.8 | 776.2 | 765.8 | 760.6 | 760.6 | 760.6 | 765.8 |
| 15° | 3297.6 | 2323.4 | 1005.4 | 786.6 | 755.4 | 734.5 | 729.3 | 724.1 | 724.1 | 724.1 | 724.1 |
| 17.5° | 3266.4 | 2099.4 | 875.2 | 745.0 | 718.9 | 698.1 | 692.9 | 687.7 | 687.7 | 692.9 | 692.9 |
| 20° | 3219.5 | 1885.8 | 786.6 | 703.3 | 682.4 | 661.6 | 656.4 | 651.2 | 656.4 | 656.4 | 656.4 |
| 22.5° | 3162.2 | 1708.7 | 734.5 | 672.0 | 646.0 | 625.1 | 625.1 | 625.1 | 625.1 | 625.1 | 630.3 |
| 25° | 3125.7 | 1583.7 | 698.1 | 635.6 | 609.5 | 593.9 | 588.7 | 588.7 | 599.1 | 599.1 | 604.3 |
| 27.5° | 3183.0 | 1552.4 | 703.3 | 625.1 | 578.3 | 562.6 | 557.4 | 557.4 | 567.8 | 573.0 | 578.3 |
| 30° | 3354.9 | 1609.7 | 765.8 | 656.4 | 557.4 | 531.4 | 526.2 | 526.2 | 541.8 | 547.0 | 552.2 |
| 32.5° | 3552.9 | 1729.6 | 859.6 | 698.1 | 541.8 | 500.1 | 489.7 | 489.7 | 505.3 | 510.5 | 515.7 |
| 35° | 3823.8 | 1917.1 | 984.6 | 734.5 | 552.2 | 468.9 | 448.0 | 448.0 | 458.4 | 468.9 | 474.1 |
| 37.5° | 4172.8 | 2224.5 | 1130.5 | 760.6 | 552.2 | 432.4 | 406.3 | 401.1 | 411.6 | 411.6 | 416.8 |
| 40° | 4537.5 | 2625.6 | 1281.5 | 760.6 | 526.2 | 395.9 | 369.9 | 354.2 | 359.5 | 354.2 | 359.5 |
| 42.5° | 4740.6 | 2948.6 | 1411.8 | 713.7 | 494.9 | 359.5 | 333.4 | 312.6 | 307.4 | 296.9 | 302.2 |
| 45° | 4855.3 | 3094.4 | 1375.3 | 661.6 | 463.6 | 333.4 | 302.2 | 276.1 | 265.7 | 250.1 | 250.1 |
| 47.5° | 4855.3 | 3110.1 | 1177.3 | 619.9 | 432.4 | 312.6 | 270.9 | 244.8 | 229.2 | 213.6 | 218.8 |
| 50° | 4798.0 | 2969.4 | 932.5 | 578.3 | 395.9 | 291.7 | 244.8 | 224.0 | 203.2 | 192.8 | 192.8 |
| 52.5° | 4558.3 | 2511.0 | 713.7 | 526.2 | 354.2 | 265.7 | 218.8 | 198.0 | 177.1 | 171.9 | 171.9 |
| 55° | 4146.8 | 1844.2 | 578.3 | 474.1 | 317.8 | 244.8 | 198.0 | 182.3 | 161.5 | 151.1 | 151.1 |
| 57.5° | 3370.5 | 1260.7 | 479.3 | 427.2 | 281.3 | 218.8 | 177.1 | 161.5 | 135.4 | 125.0 | 125.0 |
| 60° | 2500.6 | 823.1 | 406.3 | 375.1 | 239.6 | 198.0 | 156.3 | 135.4 | 114.6 | 104.2 | 99.0 |
| 62.5° | 1687.9 | 557.4 | 338.6 | 296.9 | 203.2 | 171.9 | 135.4 | 114.6 | 88.6 | 67.7 | 67.7 |
| 65° | 1052.3 | 432.4 | 281.3 | 234.4 | 177.1 | 151.1 | 114.6 | 88.6 | 62.5 | 46.9 | 41.7 |
| 67.5° | 604.3 | 349.0 | 229.2 | 182.3 | 151.1 | 119.8 | 88.6 | 72.9 | 52.1 | 36.5 | 31.3 |
| 68° | *557.4* | *333.4* | *213.6* | *171.9* | *140.7* | *114.6* | *83.4* | *67.7* | *46.9* | *31.3* | *31.3* |
| 70° | 453.2 | 296.9 | 182.3 | 140.7 | 119.8 | 93.8 | 72.9 | 57.3 | 36.5 | 20.8 | 20.8 |
| 72.5° | 401.1 | 250.1 | 156.3 | 109.4 | 83.4 | 78.1 | 57.3 | 41.7 | 26.0 | 15.6 | 10.4 |
| 75° | 328.2 | 198.0 | 125.0 | 83.4 | 57.3 | 57.3 | 41.7 | 26.0 | 10.4 | 0.0 | 0.0 |
| 77.5° | 213.6 | 145.9 | 99.0 | 52.1 | 31.3 | 36.5 | 26.0 | 10.4 | 0.0 | 0.0 | 0.0 |
| 80° | 140.7 | 109.4 | 67.7 | 26.0 | 15.6 | 15.6 | 5.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 99.0 | 72.9 | 41.7 | 10.4 | 5.2 | 5.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 62.5 | 31.3 | 15.6 | 5.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 26.0 | 10.4 | 5.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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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# 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

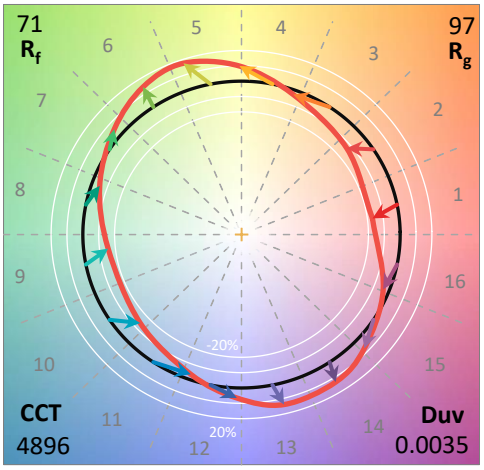
## Test Information

| | |
|---|---|
| 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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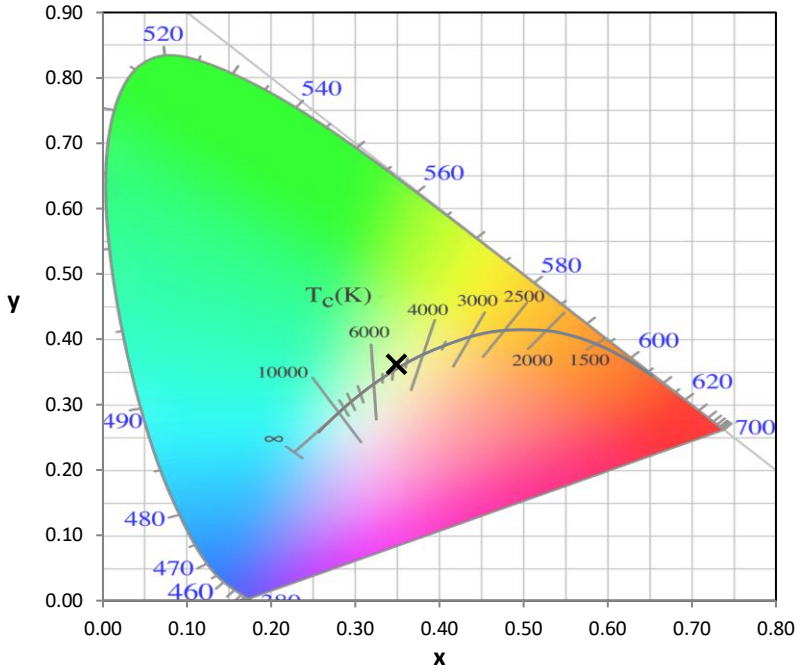
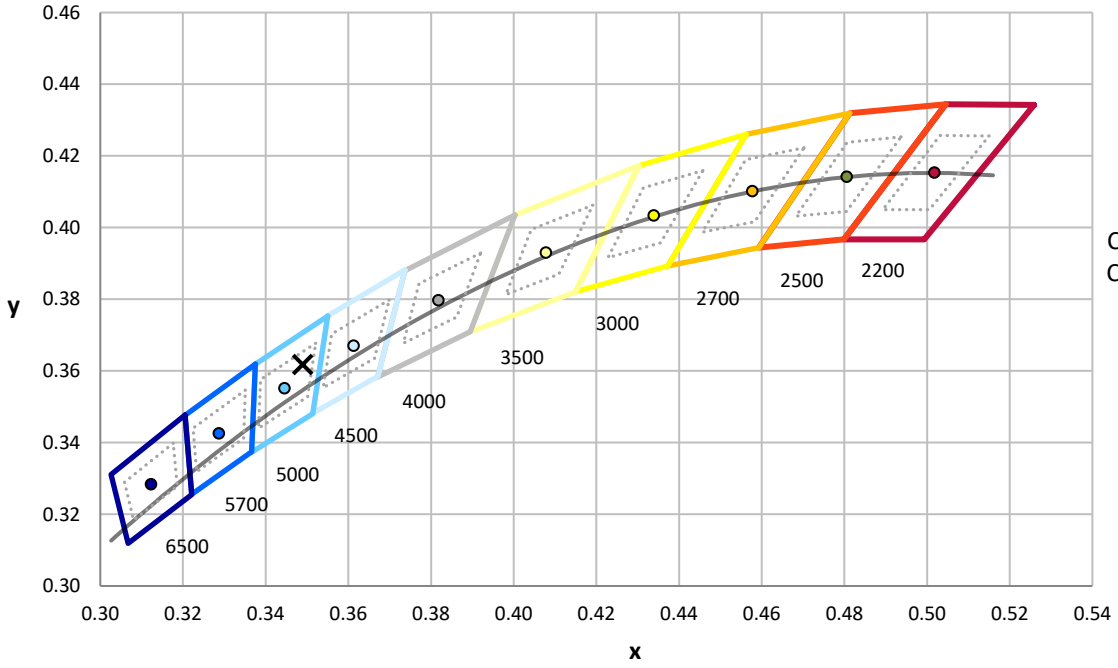
## CIE 1931 Chromaticity Diagram




## 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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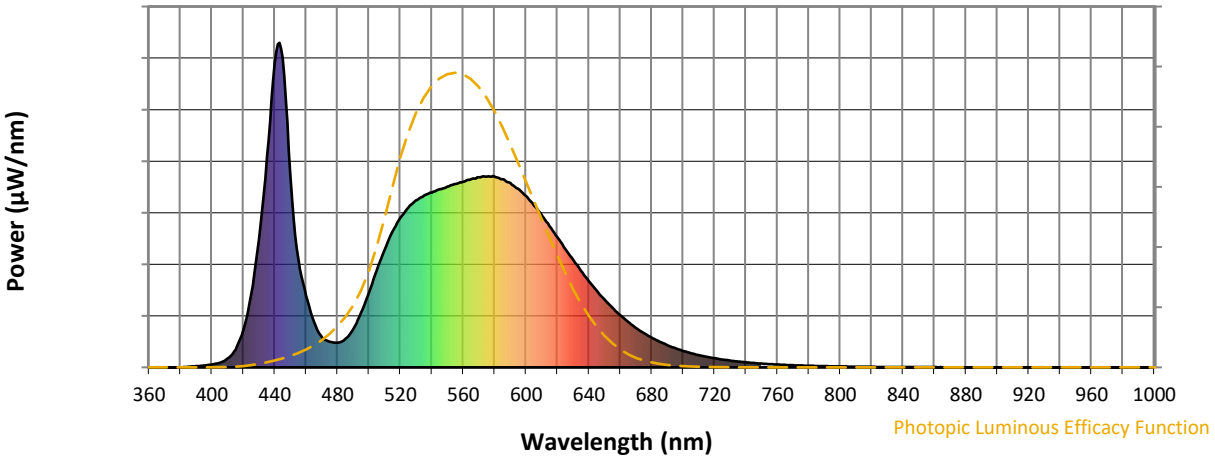
## Photopic Flux vs. Wavelength




## 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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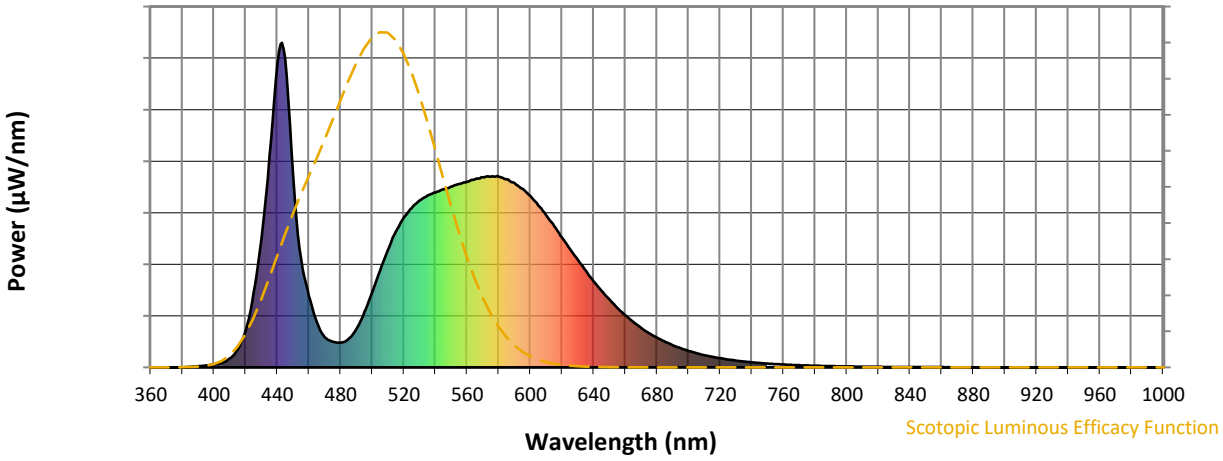
## Scotopic Flux vs. Wavelength




**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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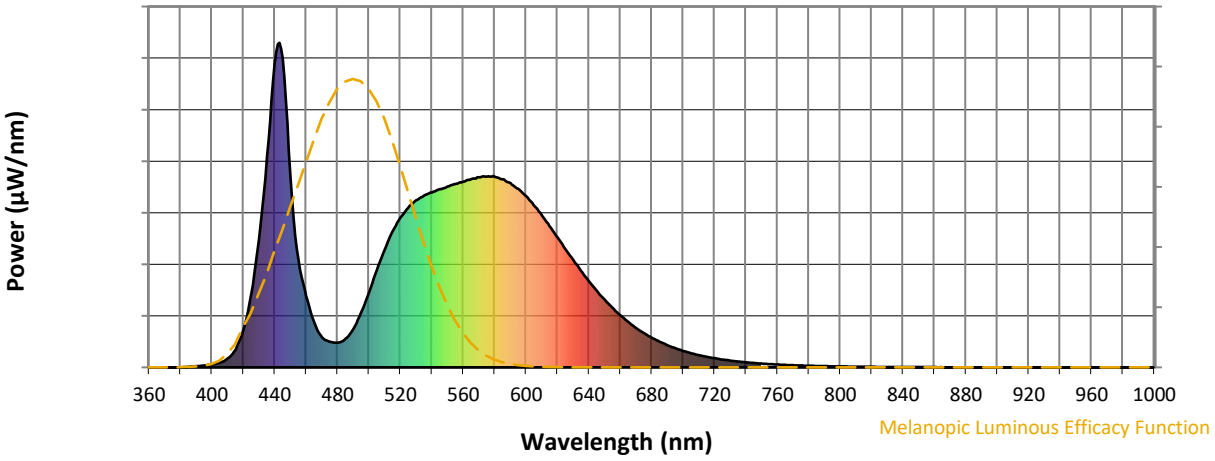
## Melanopic Flux vs. Wavelength




**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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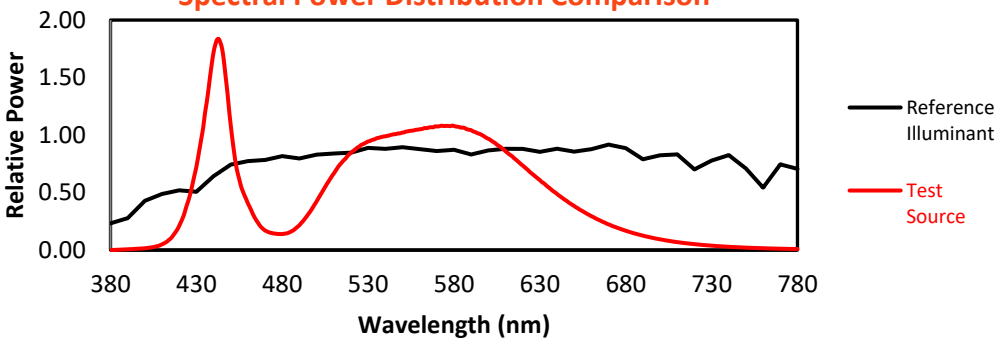
# TM-30-18

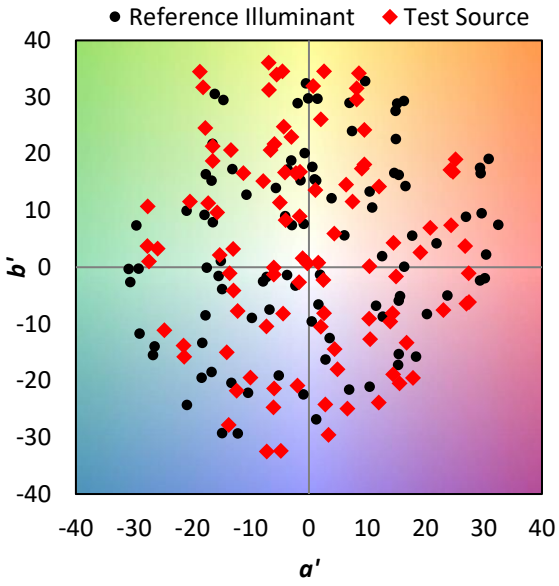
## Summary

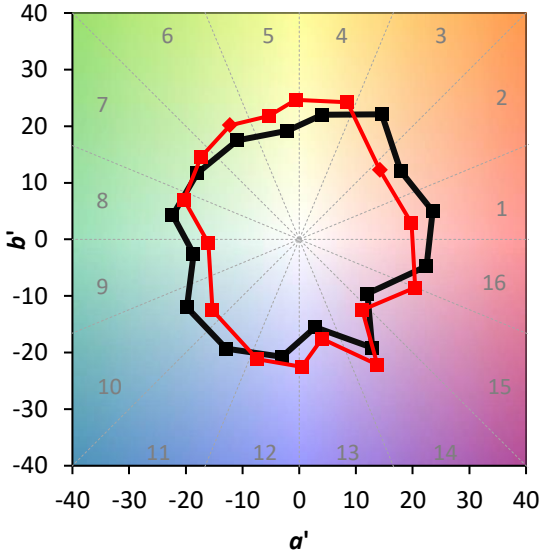
$R_f$ = 70.7
$R_g$ = 96.8
CIE $R_a$ = 70.2
$R_9$ = -35.1

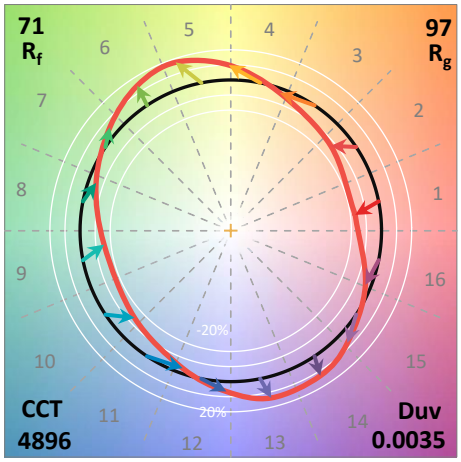
## Spectral Power Distribution Comparison

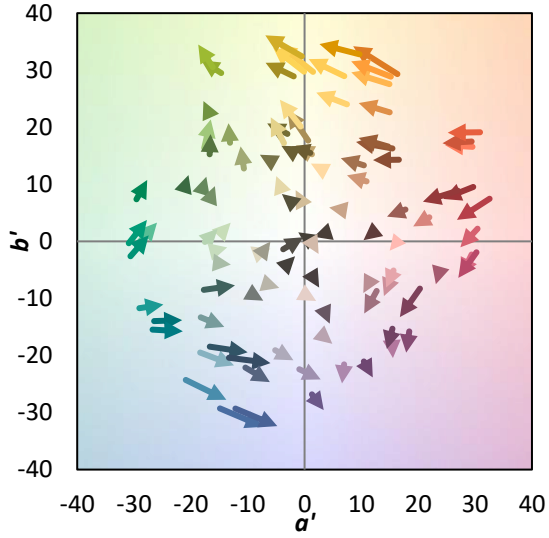



## Color Vector Graphics



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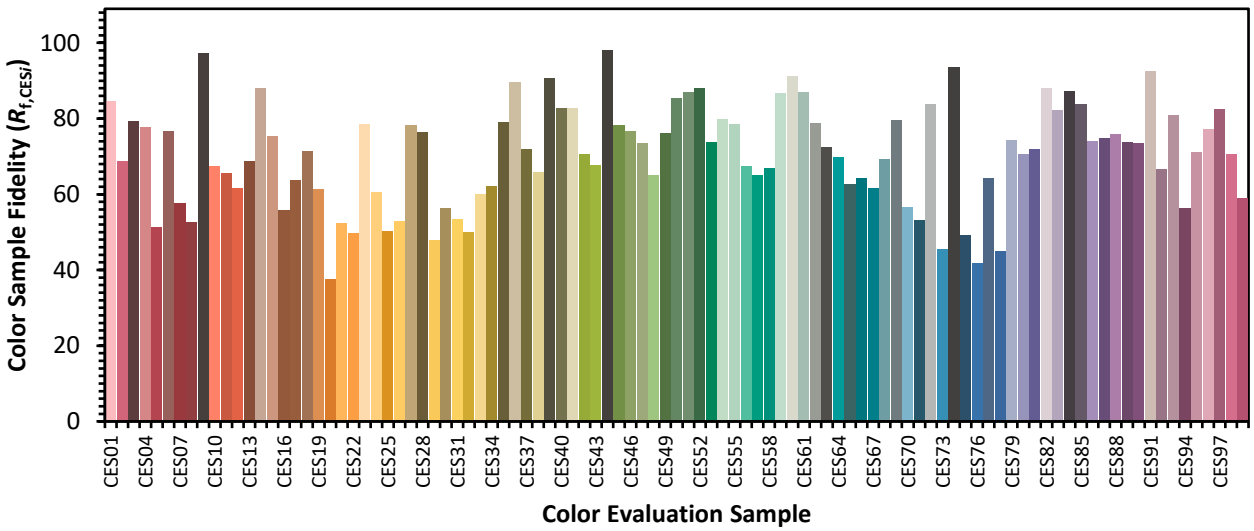
**Individual Sample Fidelity Index ($R_{f,i}$)**

| | | | |
|---|---|---|---|
| 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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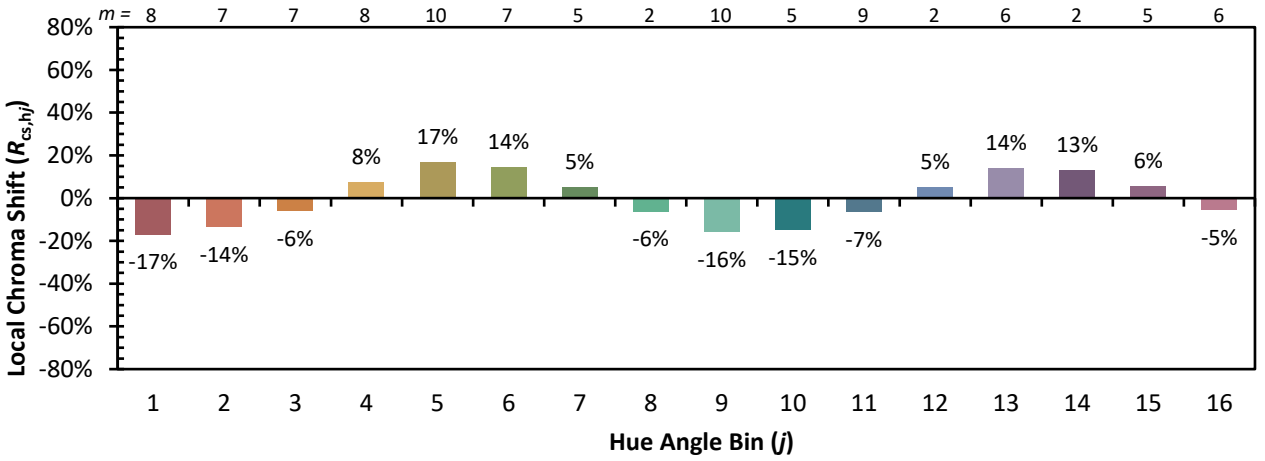
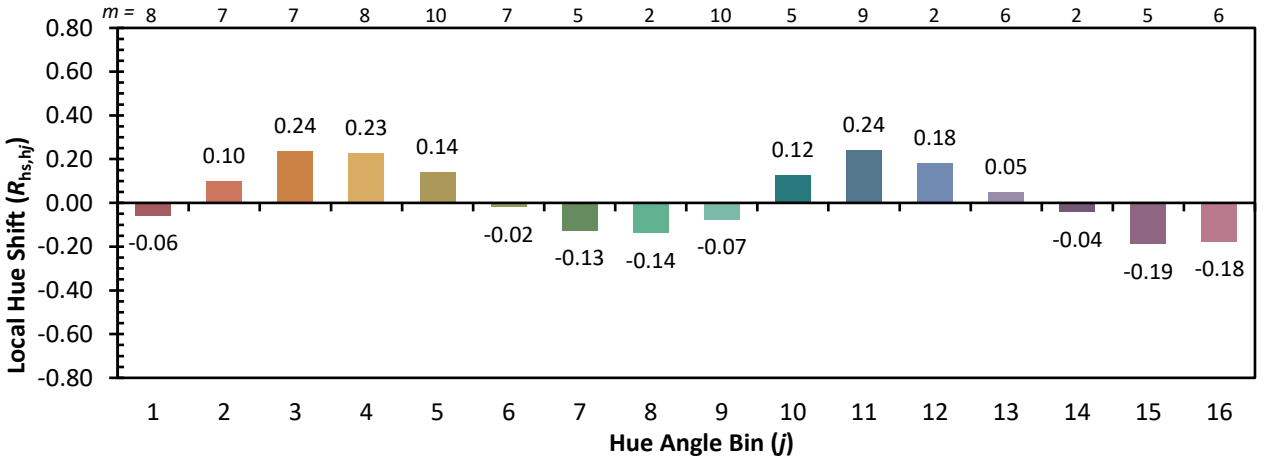
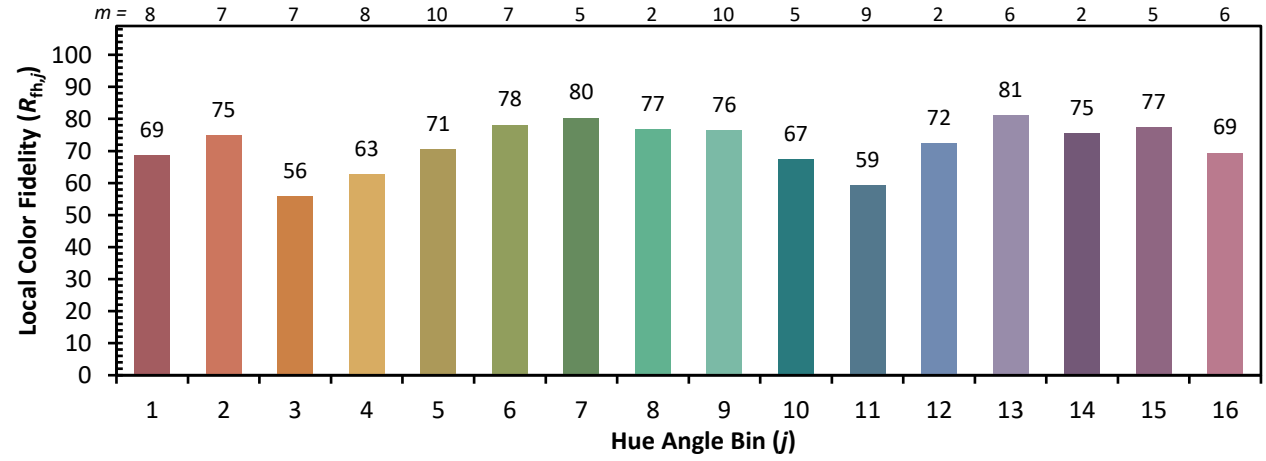
## Color Rendition by Hue-Angle Bin



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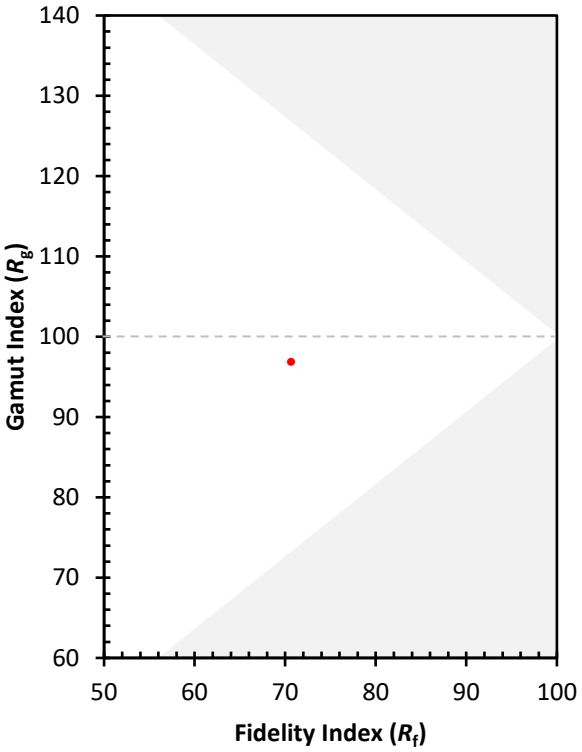
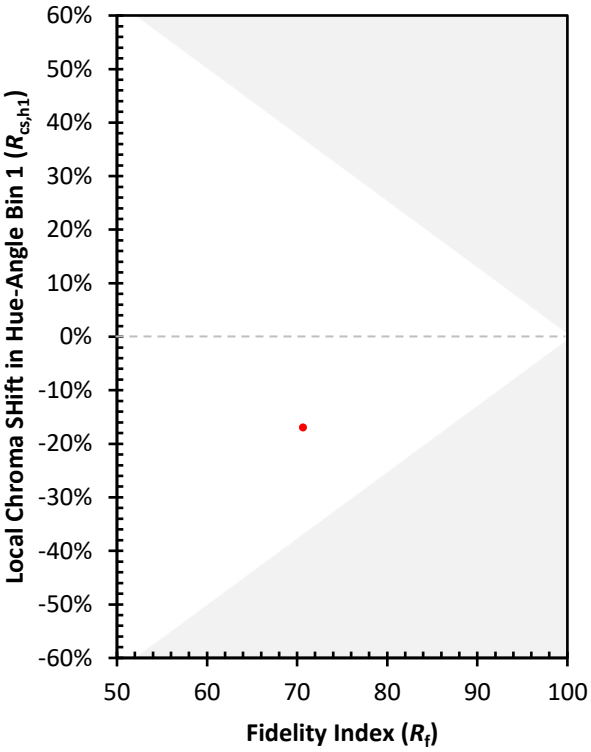
## Measure Comparisons




(END OF REPORT)