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: P1502379

Luminaire Tested: GSS-SB6C-850-U-T3LG-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: | P1502379 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 7/20/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB6C-850-U-T3LG-HSS |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 6SQUARE 300W 80CRI 5000K FIXTURE w/ TYPE III LOW GLARE DISTRIBUTION FIXTURE W/ HOUSE SIDE SHIELD |
| Light Source: | (156) 5000K CCT, 80 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 34741.5 lumens |
| Efficiency: | N/A |
| Efficacy: | 115.8 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B3 - U0 - G4 |

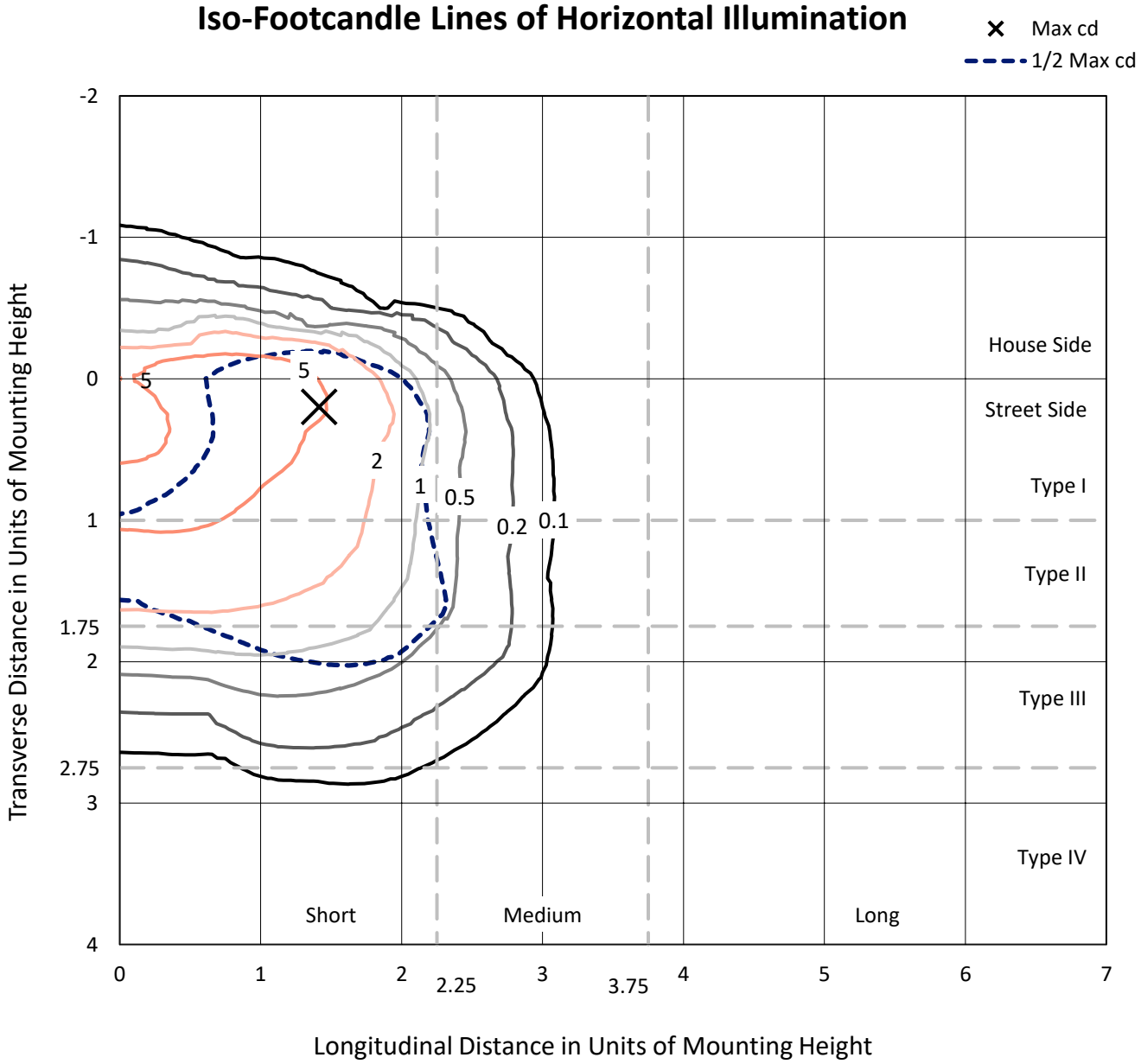
| | |
|---|---|
| Input Watts (W): | 300 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 6.3% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature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

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REPORT NUMBER: P1502379
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## Iso-Footcandle Lines of Horizontal Illumination



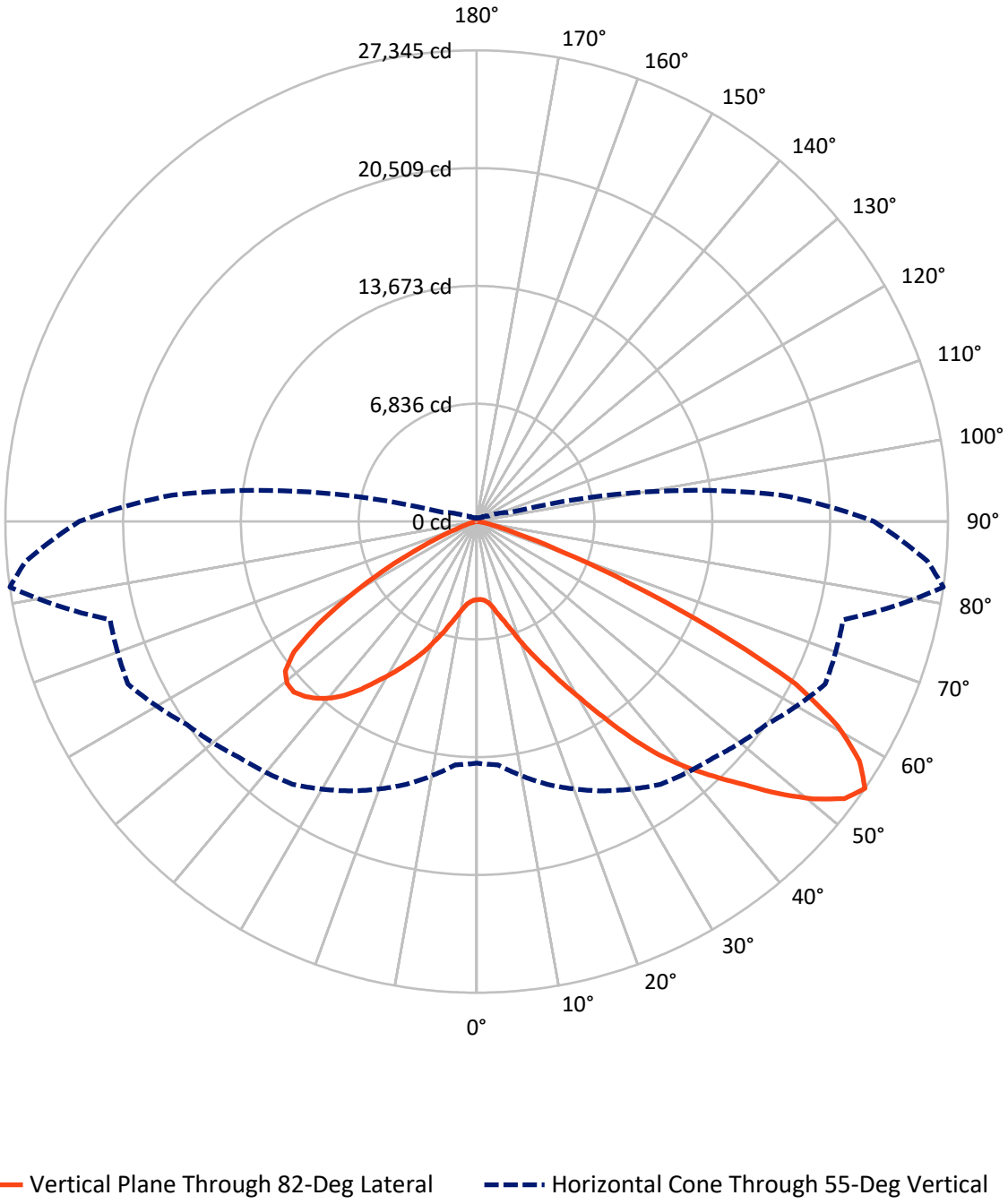

Based on 30 foot mounting height. Maximum calculated value = 9.4 fc
Type III - Short - N/A

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## Luminous Intensity Polar Plot



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Scaled Data Report

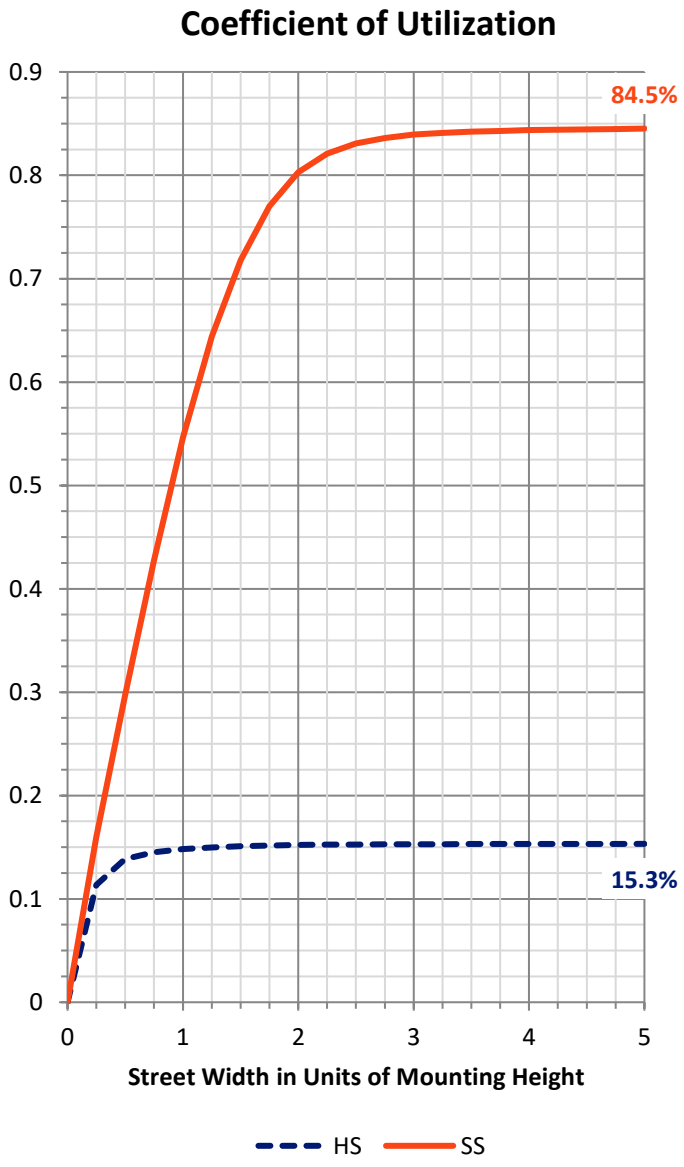
REPORT NUMBER: P1502379
CATALOG NUMBER: GSS-SB6C-850-U-T3LG-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 5369.9 | 0.0 | 5369.9 |
| | % Fixture | 15.5 | 0.0 | 15.5 |
| **Street Side** | Lumens | 29371.6 | 0.0 | 29371.6 |
| | % Fixture | 84.5 | 0.0 | 84.5 |
| **Total** | Lumens | 34741.5 | 0.0 | 34741.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 411.2 | 1.2 |
| 10°-20° | 1113.0 | 3.2 |
| 20°-30° | 2224.9 | 6.4 |
| 30°-40° | 4607.4 | 13.3 |
| 40°-50° | 7696.7 | 22.2 |
| 50°-60° | 9761.8 | 28.1 |
| 60°-70° | 7297.6 | 21.0 |
| 70°-80° | 1545.7 | 4.4 |
| 80°-90° | 83.2 | 0.2 |
| 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° | 34741.5 | 100.0 |
| 0°-180° | 34741.5 | 100.0 |



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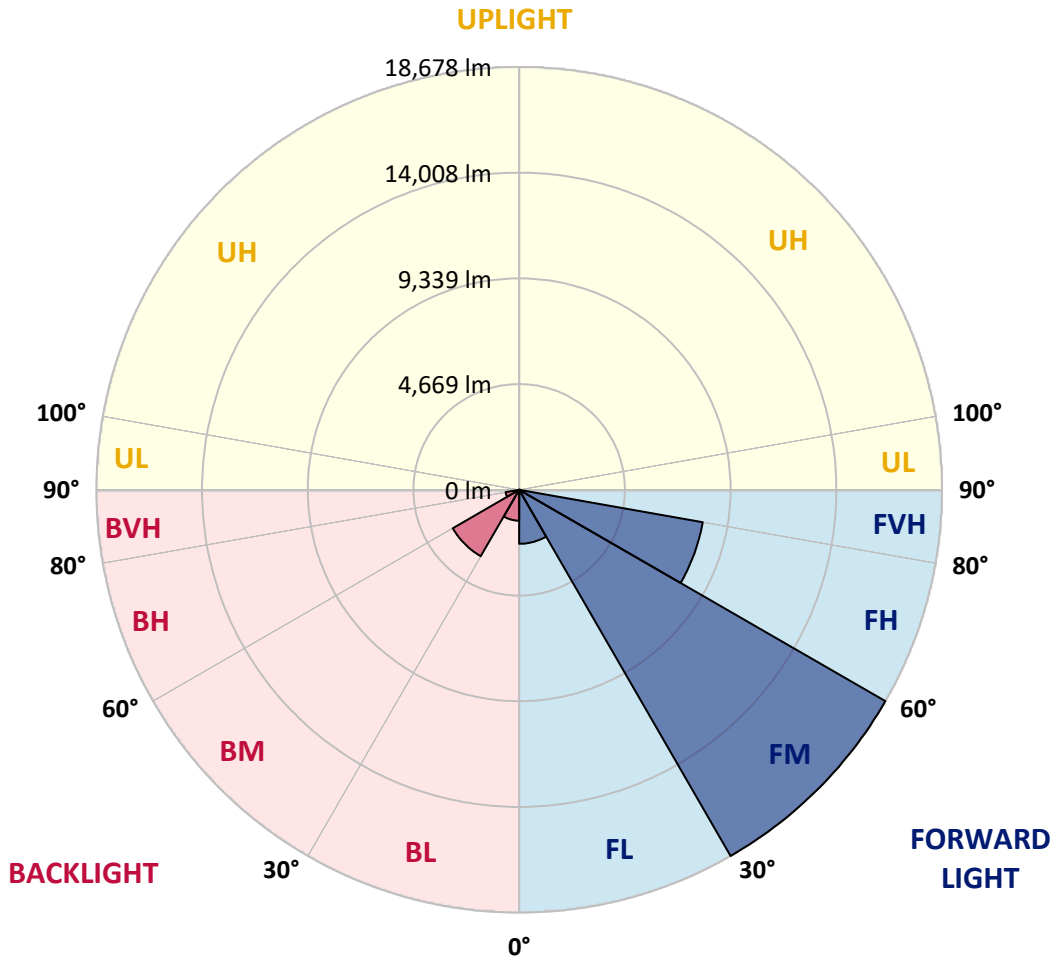
Scaled Data Report

REPORT NUMBER: P1502379
CATALOG NUMBER: GSS-SB6C-850-U-T3LG-HSS

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 2385.9 | 6.9 | | | |
| FM | (30°-60°) | 18677.6 | 53.8 | | | |
| FH | (60°-80°) | 8233.6 | 23.7 | | | G4/12000 |
| FVH | (80°-90°) | 74.4 | 0.2 | | | G1/100 |
| BL | (0°-30°) | 1363.1 | 3.9 | B3/2500 | | |
| BM | (30°-60°) | 3388.2 | 9.8 | B3/5000 | | |
| BH | (60°-80°) | 609.7 | 1.8 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 8.8 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B3-U0-G4**
Type III Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 82° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 4535.5 | 4535.5 | 4535.5 | 4535.5 | 4535.5 | 4535.5 | 4535.5 | 4535.5 | 4535.5 | *4535.5* | 4535.5 |
| 2.5° | 4412.9 | 4422.3 | 4403.5 | 4412.9 | 4431.8 | 4422.3 | 4460.1 | 4488.3 | 4516.6 | *4526.1* | 4535.5 |
| 5° | 4026.3 | 4035.7 | 4045.2 | 4120.6 | 4167.7 | 4280.9 | 4384.6 | 4450.6 | 4544.9 | *4592.1* | 4601.5 |
| 7.5° | 3564.3 | 3564.3 | 3602.0 | 3696.3 | 3818.9 | 4035.7 | 4271.5 | 4460.1 | 4639.2 | *4733.5* | 4752.4 |
| 10° | 3479.4 | 3488.8 | 3488.8 | 3554.8 | 3658.6 | 3875.4 | 4177.2 | 4554.4 | 4874.9 | *5016.4* | 5063.5 |
| 12.5° | 3498.3 | 3507.7 | 3517.1 | 3583.1 | 3686.9 | 3875.4 | 4262.0 | 4752.4 | 5252.1 | *5487.9* | 5516.1 |
| 15° | 3545.4 | 3564.3 | 3592.6 | 3677.4 | 3790.6 | 4035.7 | 4441.2 | 5035.2 | 5704.7 | *6006.5* | 6081.9 |
| 17.5° | 3686.9 | 3696.3 | 3743.4 | 3837.7 | 4016.9 | 4262.0 | 4705.2 | 5403.0 | 6336.5 | *6666.5* | 6808.0 |
| 20° | 3903.7 | 3922.6 | 3988.6 | 4120.6 | 4328.0 | 4639.2 | 5129.5 | 5883.9 | 7015.4 | *7524.6* | 7637.7 |
| 22.5° | 4177.2 | 4177.2 | 4271.5 | 4478.9 | 4771.2 | 5120.1 | 5714.2 | 6525.1 | 7845.2 | *8439.2* | 8627.8 |
| 25° | 4629.8 | 4620.4 | 4695.8 | 4931.5 | 5280.4 | 5789.6 | 6393.1 | 7288.8 | 8712.7 | *9419.9* | 9617.9 |
| 27.5° | 5667.0 | 5638.7 | 5610.4 | 5619.9 | 5921.6 | 6572.2 | 7270.0 | 8250.6 | 9787.6 | *10617.4* | 10768.3 |
| 30° | 6874.0 | 6911.7 | 6874.0 | 6779.7 | 6826.8 | 7430.3 | 8297.8 | 9429.3 | 10994.6 | *11928.1* | 12126.1 |
| 32.5° | 7930.0 | 7948.9 | 8109.2 | 8212.9 | 8250.6 | 8533.5 | 9485.9 | 10853.1 | 12531.5 | *13549.9* | 13804.5 |
| 35° | 9080.4 | 9108.7 | 9287.9 | 9504.7 | 9844.2 | 10098.8 | 10975.7 | 12503.2 | 14096.8 | *15379.2* | 15567.8 |
| 37.5° | 10419.4 | 10466.5 | 10702.3 | 11013.4 | 11484.9 | 12069.5 | 12541.0 | 14002.5 | 15690.4 | *17170.8* | 17368.8 |
| 40° | 11598.0 | 11748.9 | 12154.4 | 12550.4 | 13050.1 | 13710.2 | 14021.4 | 15313.2 | 16869.0 | *18754.9* | 19084.9 |
| 42.5° | 12710.7 | 12795.6 | 13446.2 | 14059.1 | 14653.1 | 15190.6 | 15492.3 | 16341.0 | 17915.7 | *20225.8* | 20593.6 |
| 45° | 13634.8 | 13700.8 | 14426.8 | 15237.7 | 15973.2 | 16510.7 | 16557.8 | 17340.5 | 18952.9 | *21781.7* | 22064.6 |
| 47.5° | 14200.5 | 14304.2 | 15237.7 | 16161.8 | 16972.7 | 17472.5 | 17397.1 | 18613.4 | 20084.4 | *23592.1* | 23629.8 |
| 50° | 14540.0 | 14606.0 | 15558.3 | 16755.9 | 17755.4 | 18104.3 | 18264.6 | 19829.8 | 21112.2 | *25308.2* | 25081.9 |
| 52.5° | 14785.1 | 14888.9 | 15822.4 | 17095.3 | 18217.4 | 18688.9 | 19264.1 | 21197.1 | 21923.1 | *26713.2* | 26109.7 |
| 55° | *14021.4* | *14172.2* | *15784.6* | *17246.2* | *18613.4* | *19405.5* | *20537.0* | *22319.1* | *22017.4* | *27345.0* | *26241.7* |
| 57.5° | 13163.3 | 13191.6 | 14785.1 | 17199.0 | 19056.6 | 20159.8 | 21706.2 | 22404.0 | 21140.5 | *26194.6* | 24902.8 |
| 60° | 11899.8 | 12069.5 | 13700.8 | 16586.1 | 19132.0 | 20763.3 | 22498.3 | 21376.2 | 19537.5 | *24063.6* | 22121.1 |
| 62.5° | 8354.4 | 8618.4 | 10749.4 | 14973.7 | 18594.6 | 21093.3 | 22366.3 | 19584.7 | 17529.1 | *20772.7* | 18594.6 |
| 65° | 4676.9 | 4903.2 | 6647.7 | 12078.9 | 17114.2 | 21017.9 | 21008.5 | 17189.6 | 14304.2 | *15011.4* | 13295.3 |
| 67.5° | 2564.8 | 2743.9 | 3451.1 | 9089.8 | 13578.2 | 19405.5 | 18151.4 | 13116.2 | 9589.6 | *9533.0* | 8297.8 |
| 70° | 1791.6 | 1801.0 | 2178.2 | 6138.5 | 9759.3 | 13540.5 | 14191.1 | 8797.5 | 5949.9 | *5261.5* | 4441.2 |
| 72.5° | 876.9 | 886.4 | 1084.4 | 2894.8 | 5968.7 | 7505.7 | 9731.0 | 4573.2 | 3338.0 | *2611.9* | 2225.3 |
| 75° | 443.2 | 433.7 | 594.0 | 1084.4 | 2470.5 | 3658.6 | 4290.3 | 2291.3 | 1942.4 | *1433.3* | 1273.0 |
| 77.5° | 282.9 | 292.3 | 348.9 | 594.0 | 1112.7 | 1423.8 | 1320.1 | 1244.7 | 1140.9 | *839.2* | 726.1 |
| 80° | 188.6 | 188.6 | 235.7 | 377.2 | 546.9 | 678.9 | 405.5 | 575.2 | 669.5 | *490.3* | 424.3 |
| 82.5° | 56.6 | 56.6 | 141.4 | 207.4 | 264.0 | 273.4 | 179.2 | 264.0 | 377.2 | *273.4* | 207.4 |
| 85° | 37.7 | 37.7 | 75.4 | 103.7 | 113.2 | 94.3 | 56.6 | 113.2 | 179.2 | *122.6* | 103.7 |
| 87.5° | 0.0 | 0.0 | 0.0 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | *9.4* | 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: P1502379
CATALOG NUMBER: GSS-SB6C-850-U-T3LG-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 4535.5 | 4535.5 | 4535.5 | 4535.5 | 4535.5 | 4535.5 | 4535.5 | 4535.5 | 4535.5 | 4535.5 | 4535.5 |
| 2.5° | 4544.9 | 4554.4 | 4582.6 | 4592.1 | 4610.9 | 4620.4 | 4620.4 | 4620.4 | 4610.9 | 4620.4 | 4639.2 |
| 5° | 4620.4 | 4667.5 | 4705.2 | 4695.8 | 4695.8 | 4648.6 | 4610.9 | 4535.5 | 4497.8 | 4488.3 | 4497.8 |
| 7.5° | 4808.9 | 4846.7 | 4884.4 | 4827.8 | 4686.4 | 4469.5 | 4233.8 | 4045.2 | 3884.9 | 3809.4 | 3837.7 |
| 10° | 5148.4 | 5195.5 | 5195.5 | 4931.5 | 4535.5 | 4026.3 | 3602.0 | 3253.1 | 2989.1 | 2847.6 | 2913.7 |
| 12.5° | 5638.7 | 5676.4 | 5582.1 | 5025.8 | 4271.5 | 3432.3 | 2725.1 | 2140.5 | 1801.0 | 1631.3 | 1593.6 |
| 15° | 6204.5 | 6261.1 | 5940.5 | 5007.0 | 3856.6 | 2564.8 | 1697.3 | 1273.0 | 1150.4 | 1112.7 | 1122.1 |
| 17.5° | 6930.5 | 6958.8 | 6336.5 | 4856.1 | 3140.0 | 1678.4 | 1207.0 | 1084.4 | 1056.1 | 1037.2 | 1037.2 |
| 20° | 7826.3 | 7741.5 | 6657.1 | 4601.5 | 2291.3 | 1320.1 | 1112.7 | 1018.4 | 990.1 | 980.6 | 990.1 |
| 22.5° | 8788.1 | 8656.1 | 6921.1 | 4120.6 | 1735.0 | 1244.7 | 1065.5 | 961.8 | 924.1 | 914.6 | 914.6 |
| 25° | 9797.0 | 9495.3 | 7128.5 | 3413.4 | 1621.8 | 1225.8 | 1008.9 | 876.9 | 839.2 | 820.3 | 820.3 |
| 27.5° | 10947.4 | 10428.8 | 7241.7 | 2857.1 | 1650.1 | 1197.5 | 942.9 | 801.5 | 744.9 | 726.1 | 726.1 |
| 30° | 12220.4 | 11466.0 | 7251.1 | 2743.9 | 1706.7 | 1159.8 | 876.9 | 716.6 | 660.1 | 631.8 | 641.2 |
| 32.5° | 13766.8 | 12522.1 | 7222.8 | 2923.1 | 1744.4 | 1131.5 | 801.5 | 631.8 | 584.6 | 556.3 | 556.3 |
| 35° | 15369.8 | 13804.5 | 7109.7 | 3262.5 | 1763.3 | 1046.7 | 707.2 | 556.3 | 499.8 | 490.3 | 499.8 |
| 37.5° | 16963.3 | 15020.9 | 6949.4 | 3451.1 | 1669.0 | 858.1 | 575.2 | 480.9 | 443.2 | 443.2 | 443.2 |
| 40° | 18415.4 | 16077.0 | 6732.5 | 3290.8 | 1329.5 | 622.3 | 471.5 | 414.9 | 396.0 | 386.6 | 396.0 |
| 42.5° | 19499.8 | 17019.9 | 6336.5 | 2772.2 | 942.9 | 499.8 | 414.9 | 367.7 | 348.9 | 348.9 | 358.3 |
| 45° | 20687.9 | 17925.1 | 5572.7 | 2036.7 | 716.6 | 433.7 | 358.3 | 320.6 | 311.2 | 311.2 | 320.6 |
| 47.5° | 21885.4 | 18651.2 | 4837.2 | 1357.8 | 622.3 | 386.6 | 320.6 | 292.3 | 282.9 | 273.4 | 282.9 |
| 50° | 22800.0 | 19000.0 | 3875.4 | 990.1 | 565.8 | 348.9 | 292.3 | 273.4 | 254.6 | 245.2 | 245.2 |
| 52.5° | 23450.7 | 18905.7 | 2838.2 | 848.6 | 518.6 | 320.6 | 273.4 | 254.6 | 226.3 | 226.3 | 226.3 |
| 55° | *23054.6* | *17698.8* | *2046.2* | *763.8* | *480.9* | *301.7* | *264.0* | *235.7* | *216.9* | *207.4* | *207.4* |
| 57.5° | 21131.1 | 15086.9 | 1480.4 | 688.3 | 424.3 | 282.9 | 254.6 | 226.3 | 198.0 | 188.6 | 188.6 |
| 60° | 18368.3 | 11748.9 | 1103.2 | 603.5 | 367.7 | 273.4 | 226.3 | 216.9 | 188.6 | 169.7 | 169.7 |
| 62.5° | 15011.4 | 8552.4 | 858.1 | 518.6 | 330.0 | 235.7 | 216.9 | 198.0 | 169.7 | 150.9 | 141.4 |
| 65° | 10419.4 | 5459.6 | 660.1 | 424.3 | 311.2 | 207.4 | 198.0 | 169.7 | 141.4 | 113.2 | 113.2 |
| 67.5° | 6430.8 | 3243.7 | 509.2 | 330.0 | 245.2 | 179.2 | 169.7 | 150.9 | 122.6 | 94.3 | 94.3 |
| 70° | 3554.8 | 1716.1 | 348.9 | 245.2 | 188.6 | 141.4 | 132.0 | 132.0 | 103.7 | 84.9 | 75.4 |
| 72.5° | 1706.7 | 933.5 | 235.7 | 207.4 | 141.4 | 94.3 | 103.7 | 103.7 | 84.9 | 66.0 | 66.0 |
| 75° | 1027.8 | 556.3 | 160.3 | 160.3 | 94.3 | 75.4 | 75.4 | 84.9 | 66.0 | 47.1 | 47.1 |
| 77.5° | 584.6 | 330.0 | 94.3 | 122.6 | 66.0 | 47.1 | 56.6 | 47.1 | 37.7 | 28.3 | 28.3 |
| 80° | 330.0 | 188.6 | 56.6 | 84.9 | 37.7 | 28.3 | 28.3 | 18.9 | 18.9 | 9.4 | 9.4 |
| 82.5° | 160.3 | 103.7 | 28.3 | 28.3 | 18.9 | 9.4 | 9.4 | 9.4 | 9.4 | 0.0 | 0.0 |
| 85° | 75.4 | 18.9 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 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: SP1-2407-184-12

Test Date: 10/11/2024

Luminaire Tested: GSS-SB1A-850-U-5WQ

Data in this report applies to families of products including GSS-SB1A-850-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

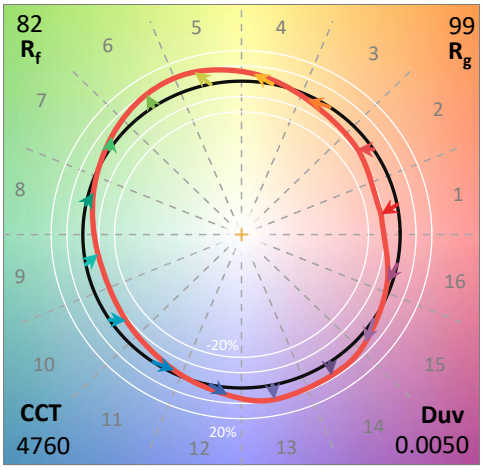
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-12 |
| 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-850-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 80 CRI 5000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 4760 |
| CIE u': | 0.2107 |
| CIE v': | 0.4939 |
| Duv: | 0.0050 |
| CIE x: | 0.3537 |
| CIE y: | 0.3685 |
| CIE z: | 0.2779 |
| Peak Wavelength (nm): | 443 |
| Dominant Wavelength (nm): | 571 |
| Purity: | 16.69598 |
| Rf: | 82 |
| Rg: | 99.4 |

| | | | | | |
|---|---|---|---|---|---|
| CRI (Ra): | 81.1 | | | | |
| R1: | 79.8 | R9: | 8.7 | | |
| R2: | 83.5 | R10: | 62.4 | | |
| R3: | 87.9 | R11: | 83.8 | | |
| R4: | 83.1 | R12: | 63.0 | | |
| R5: | 80.5 | R13: | 79.9 | | |
| R6: | 79.1 | R14: | 93.3 | | |
| R7: | 86.1 | R15: | 72.7 | | |
| R8: | 69.0 | | | | |




## Test Conditions

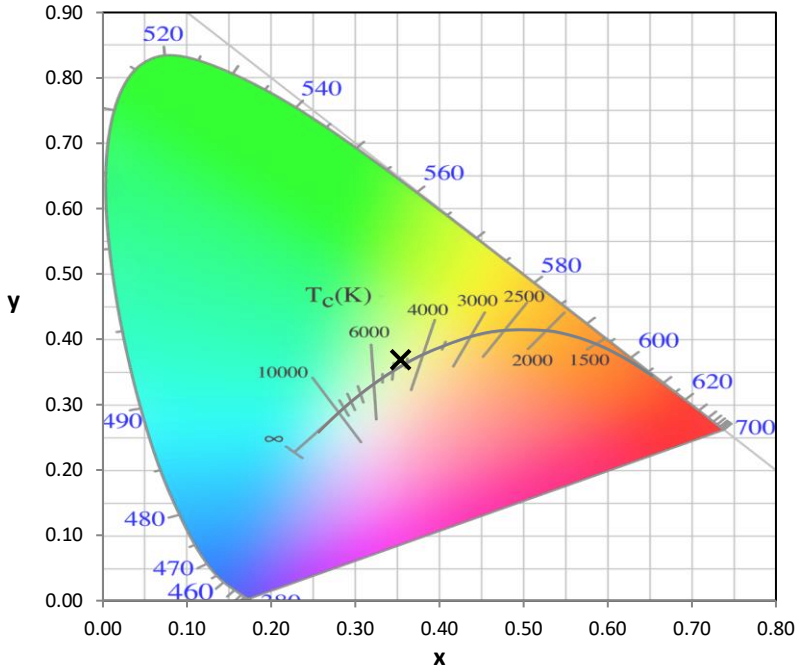
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

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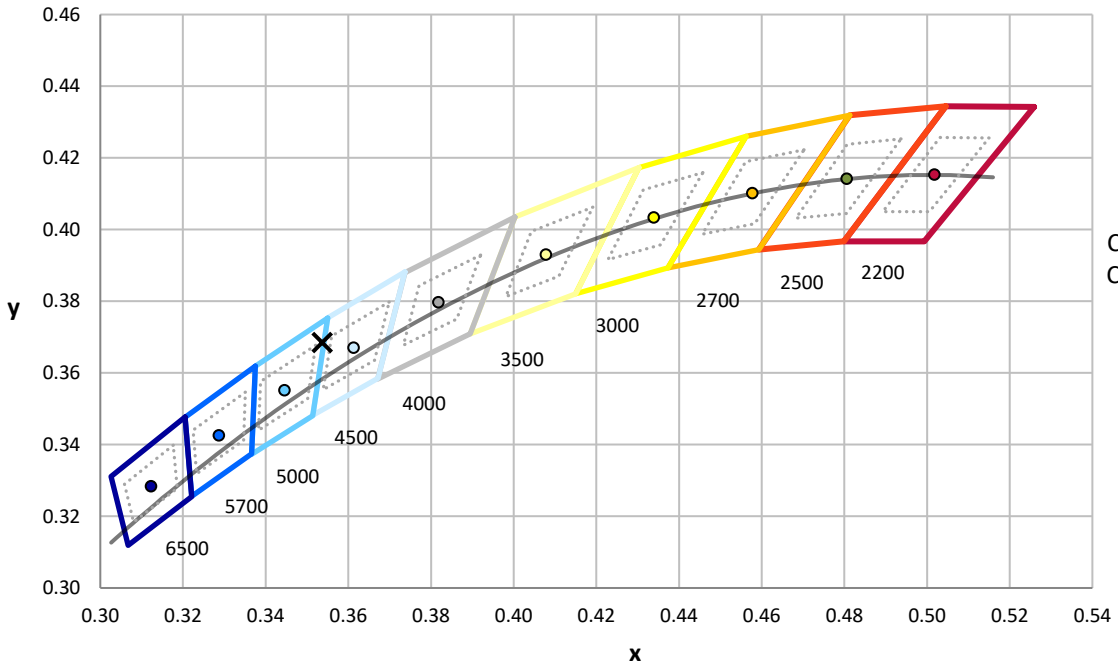
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

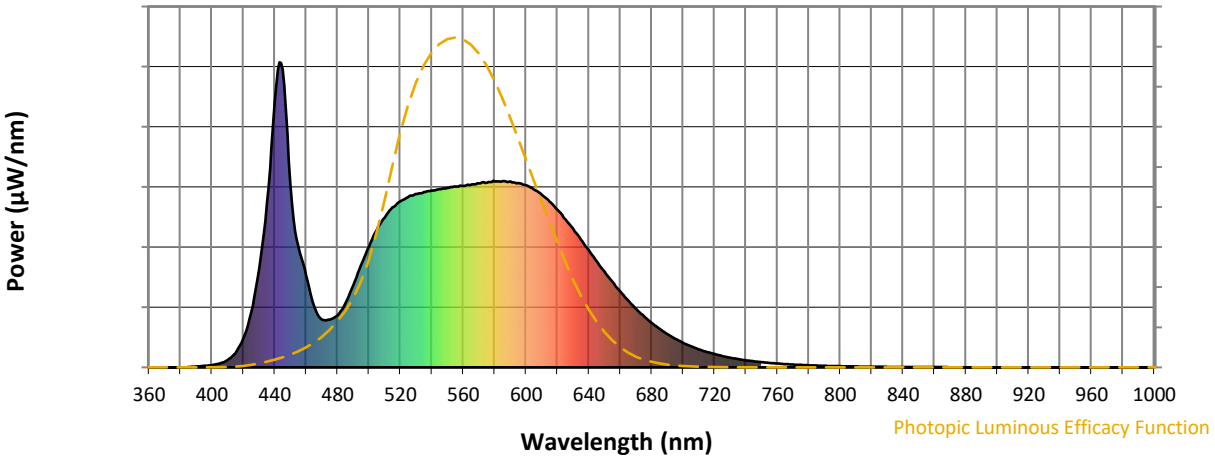



CCT = 4760K
CIE x = 0.3537
CIE y = 0.3685
Duv = 0.0050

Point lies inside the ANSI 5000K 7-step quadrangle

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## Photopic Flux vs. Wavelength

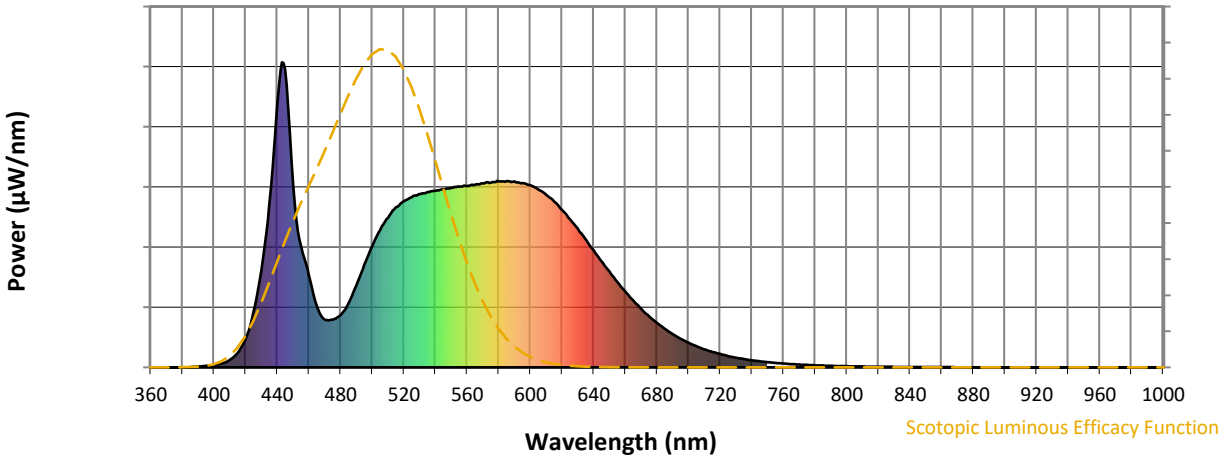



## Photopic Lumens: NR

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 270 | NR | 620 | 517 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 335 | NR | 625 | 486 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 397 | NR | 630 | 454 | NR | 760 | 12 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 451 | NR | 635 | 419 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 492 | NR | 640 | 384 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 524 | NR | 645 | 347 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 545 | NR | 650 | 313 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 558 | NR | 655 | 280 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 7 | NR | 530 | 568 | NR | 660 | 248 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 13 | NR | 535 | 575 | NR | 665 | 219 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 24 | NR | 540 | 579 | NR | 670 | 192 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 47 | NR | 545 | 585 | NR | 675 | 167 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 95 | NR | 550 | 588 | NR | 680 | 146 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 181 | NR | 555 | 593 | NR | 685 | 126 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 319 | NR | 560 | 595 | NR | 690 | 109 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 539 | NR | 565 | 600 | NR | 695 | 94 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 868 | NR | 570 | 603 | NR | 700 | 80 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 977 | NR | 575 | 606 | NR | 705 | 69 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 601 | NR | 580 | 609 | NR | 710 | 59 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 397 | NR | 585 | 611 | NR | 715 | 51 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 302 | NR | 590 | 610 | NR | 720 | 44 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 201 | NR | 595 | 604 | NR | 725 | 37 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 157 | NR | 600 | 596 | NR | 730 | 32 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 157 | NR | 605 | 583 | NR | 735 | 27 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 171 | NR | 610 | 566 | NR | 740 | 23 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 210 | NR | 615 | 543 | NR | 745 | 20 | NR | 875 | 0 | NR | | | |

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## Scotopic Flux vs. Wavelength

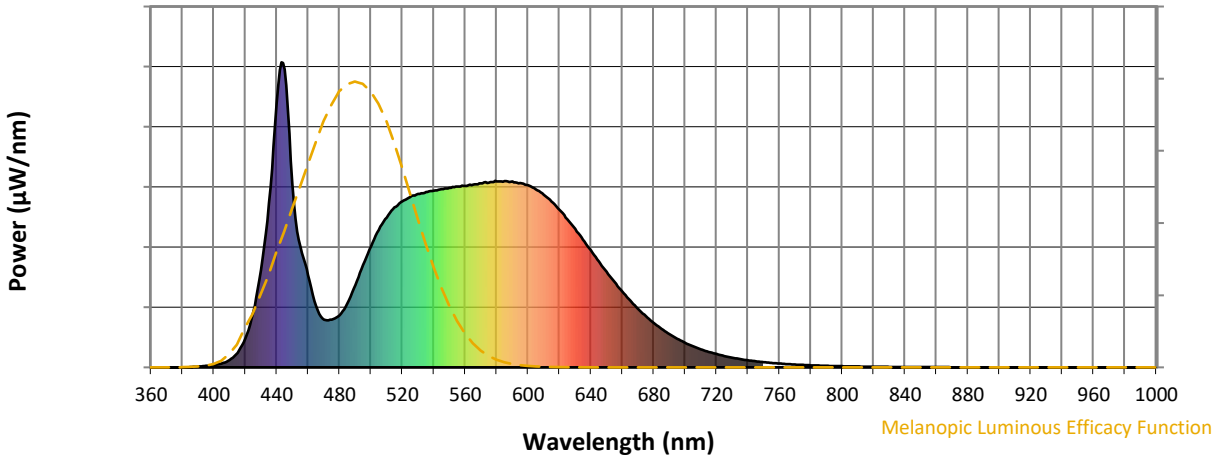



**Scotopic Lumens: NR** **S/P: 1.83**

| 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 | 270 | NR | 620 | 517 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 335 | NR | 625 | 486 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 397 | NR | 630 | 454 | NR | 760 | 12 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 451 | NR | 635 | 419 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 492 | NR | 640 | 384 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 524 | NR | 645 | 347 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 545 | NR | 650 | 313 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 558 | NR | 655 | 280 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 7 | NR | 530 | 568 | NR | 660 | 248 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 13 | NR | 535 | 575 | NR | 665 | 219 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 24 | NR | 540 | 579 | NR | 670 | 192 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 47 | NR | 545 | 585 | NR | 675 | 167 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 95 | NR | 550 | 588 | NR | 680 | 146 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 181 | NR | 555 | 593 | NR | 685 | 126 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 319 | NR | 560 | 595 | NR | 690 | 109 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 539 | NR | 565 | 600 | NR | 695 | 94 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 868 | NR | 570 | 603 | NR | 700 | 80 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 977 | NR | 575 | 606 | NR | 705 | 69 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 601 | NR | 580 | 609 | NR | 710 | 59 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 397 | NR | 585 | 611 | NR | 715 | 51 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 302 | NR | 590 | 610 | NR | 720 | 44 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 201 | NR | 595 | 604 | NR | 725 | 37 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 157 | NR | 600 | 596 | NR | 730 | 32 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 157 | NR | 605 | 583 | NR | 735 | 27 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 171 | NR | 610 | 566 | NR | 740 | 23 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 210 | NR | 615 | 543 | NR | 745 | 20 | NR | 875 | 0 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 3.74**

| 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 | 270 | NR | 620 | 517 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 335 | NR | 625 | 486 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 397 | NR | 630 | 454 | NR | 760 | 12 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 451 | NR | 635 | 419 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 492 | NR | 640 | 384 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 524 | NR | 645 | 347 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 545 | NR | 650 | 313 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 558 | NR | 655 | 280 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 7 | NR | 530 | 568 | NR | 660 | 248 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 13 | NR | 535 | 575 | NR | 665 | 219 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 24 | NR | 540 | 579 | NR | 670 | 192 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 47 | NR | 545 | 585 | NR | 675 | 167 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 95 | NR | 550 | 588 | NR | 680 | 146 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 181 | NR | 555 | 593 | NR | 685 | 126 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 319 | NR | 560 | 595 | NR | 690 | 109 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 539 | NR | 565 | 600 | NR | 695 | 94 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 868 | NR | 570 | 603 | NR | 700 | 80 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 977 | NR | 575 | 606 | NR | 705 | 69 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 601 | NR | 580 | 609 | NR | 710 | 59 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 397 | NR | 585 | 611 | NR | 715 | 51 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 302 | NR | 590 | 610 | NR | 720 | 44 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 201 | NR | 595 | 604 | NR | 725 | 37 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 157 | NR | 600 | 596 | NR | 730 | 32 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 157 | NR | 605 | 583 | NR | 735 | 27 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 171 | NR | 610 | 566 | NR | 740 | 23 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 210 | NR | 615 | 543 | NR | 745 | 20 | NR | 875 | 0 | NR | | | |

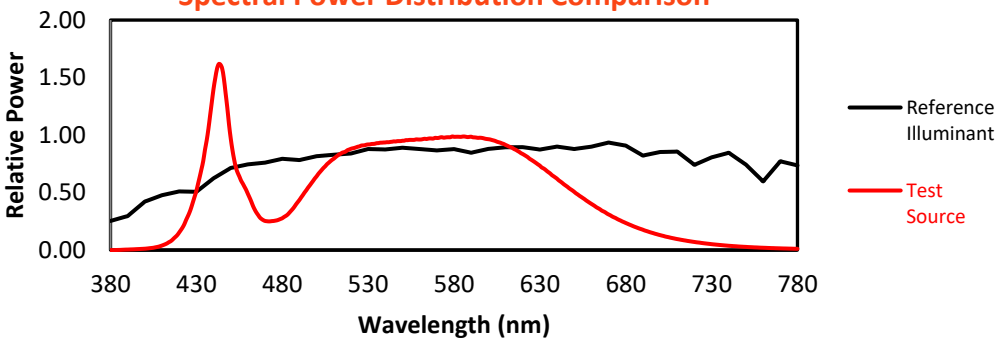
REPORT NUMBER: SP1-2407-184-12

# TM-30-18

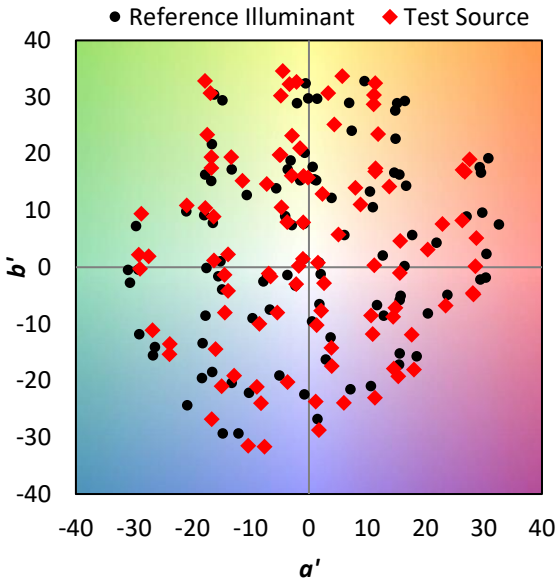
## Summary

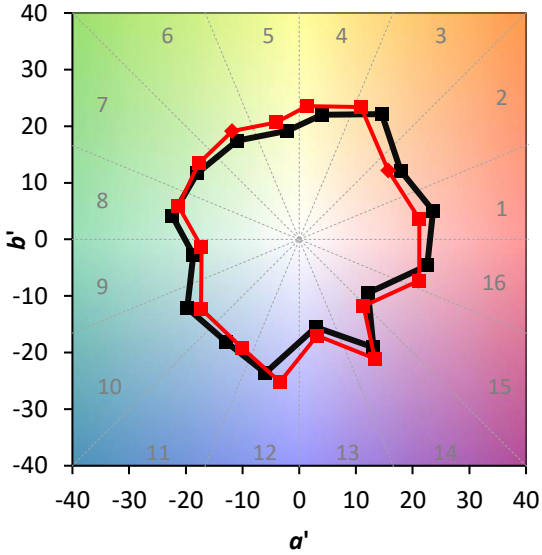
$R_f$ = 82
$R_g$ = 99.4
CIE $R_a$ = 81.1
$R_9$ = 8.7

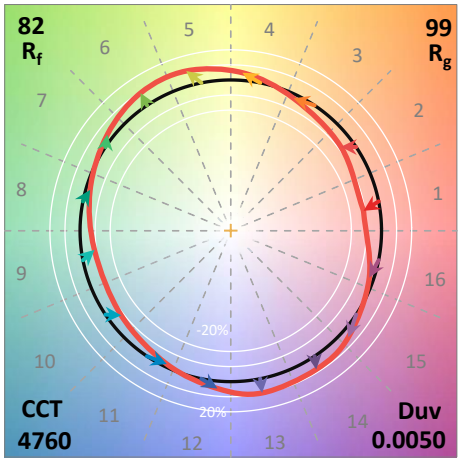
## Spectral Power Distribution Comparison

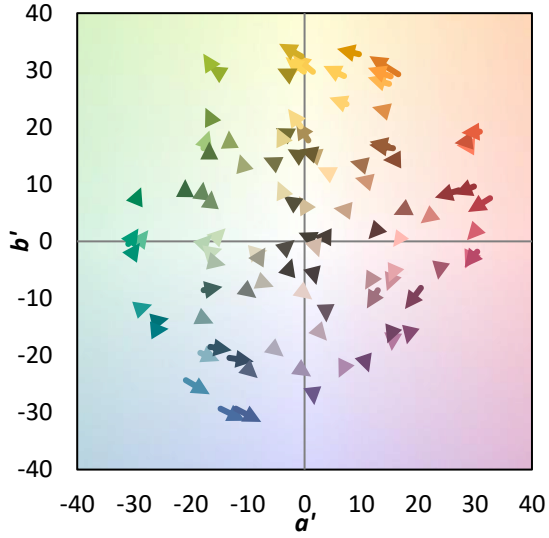



## Color Vector Graphics



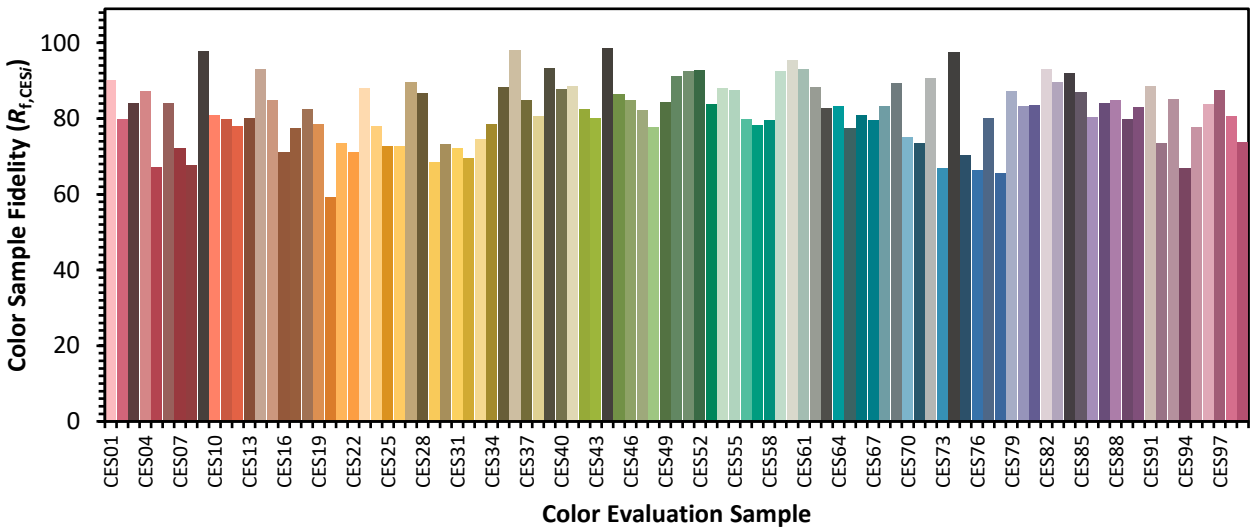



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**Individual Sample Fidelity Index ($R_{f,i}$)**

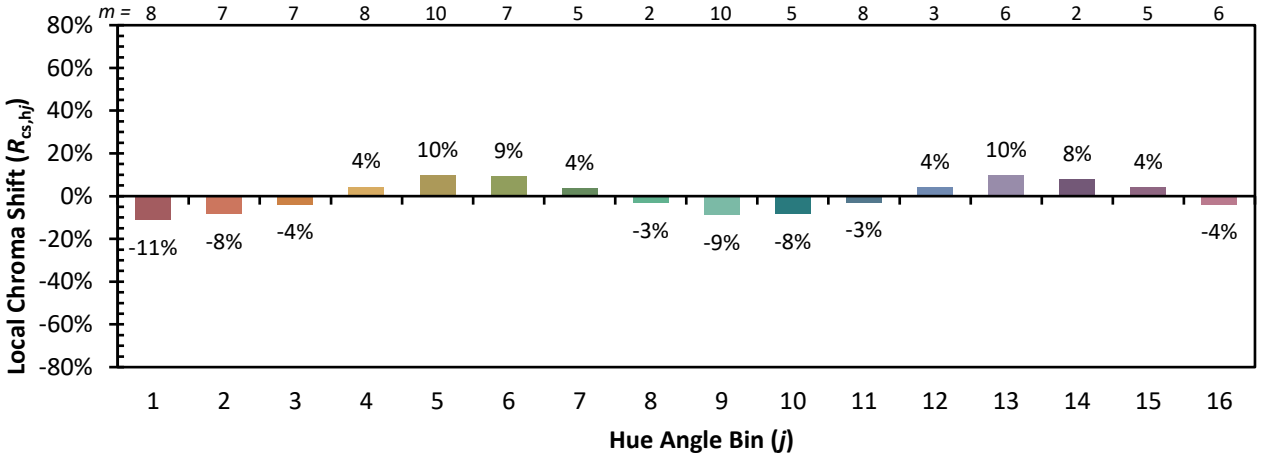
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 73 | CES51 = 92 | CES76 = 66 |
| CES02 = 60 | CES27 = 90 | CES52 = 93 | CES77 = 80 |
| CES03 = 30 | CES28 = 87 | CES53 = 84 | CES78 = 65 |
| CES04 = 69 | CES29 = 69 | CES54 = 88 | CES79 = 87 |
| CES05 = 47 | CES30 = 73 | CES55 = 88 | CES80 = 83 |
| CES06 = 50 | CES31 = 72 | CES56 = 80 | CES81 = 84 |
| CES07 = 40 | CES32 = 69 | CES57 = 78 | CES82 = 93 |
| CES08 = 39 | CES33 = 75 | CES58 = 80 | CES83 = 90 |
| CES09 = 29 | CES34 = 78 | CES59 = 93 | CES84 = 92 |
| CES10 = 73 | CES35 = 88 | CES60 = 95 | CES85 = 87 |
| CES11 = 56 | CES36 = 98 | CES61 = 93 | CES86 = 80 |
| CES12 = 62 | CES37 = 85 | CES62 = 88 | CES87 = 84 |
| CES13 = 42 | CES38 = 81 | CES63 = 83 | CES88 = 85 |
| CES14 = 74 | CES39 = 93 | CES64 = 83 | CES89 = 80 |
| CES15 = 71 | CES40 = 88 | CES65 = 77 | CES90 = 83 |
| CES16 = 46 | CES41 = 89 | CES66 = 81 | CES91 = 89 |
| CES17 = 48 | CES42 = 82 | CES67 = 80 | CES92 = 73 |
| CES18 = 55 | CES43 = 80 | CES68 = 83 | CES93 = 85 |
| CES19 = 70 | CES44 = 99 | CES69 = 89 | CES94 = 67 |
| CES20 = 64 | CES45 = 87 | CES70 = 75 | CES95 = 78 |
| CES21 = 85 | CES46 = 85 | CES71 = 73 | CES96 = 84 |
| CES22 = 77 | CES47 = 82 | CES72 = 91 | CES97 = 87 |
| CES23 = 91 | CES48 = 78 | CES73 = 67 | CES98 = 81 |
| CES24 = 90 | CES49 = 84 | CES74 = 98 | CES99 = 74 |
| CES25 = 71 | CES50 = 91 | CES75 = 70 | |

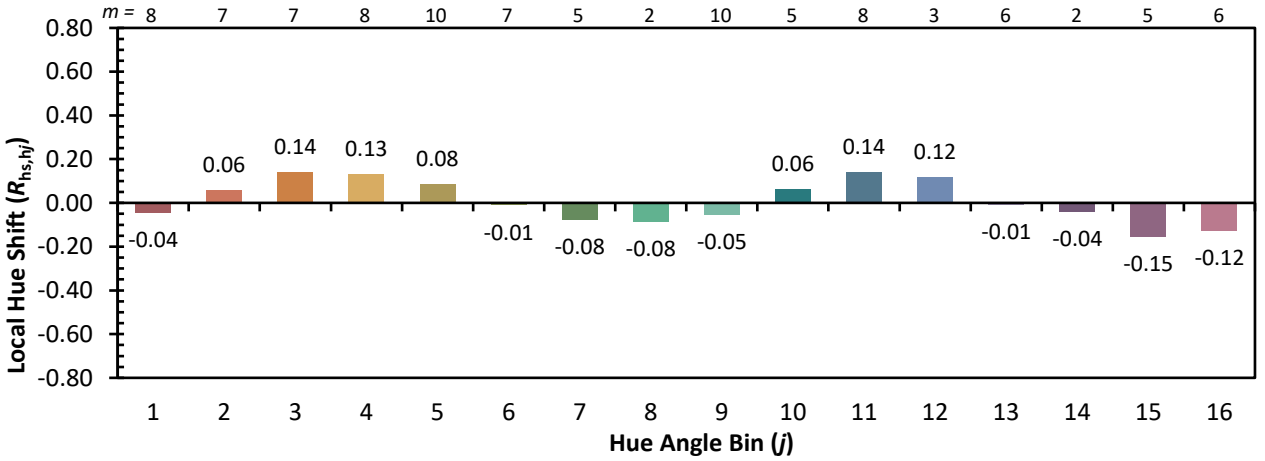


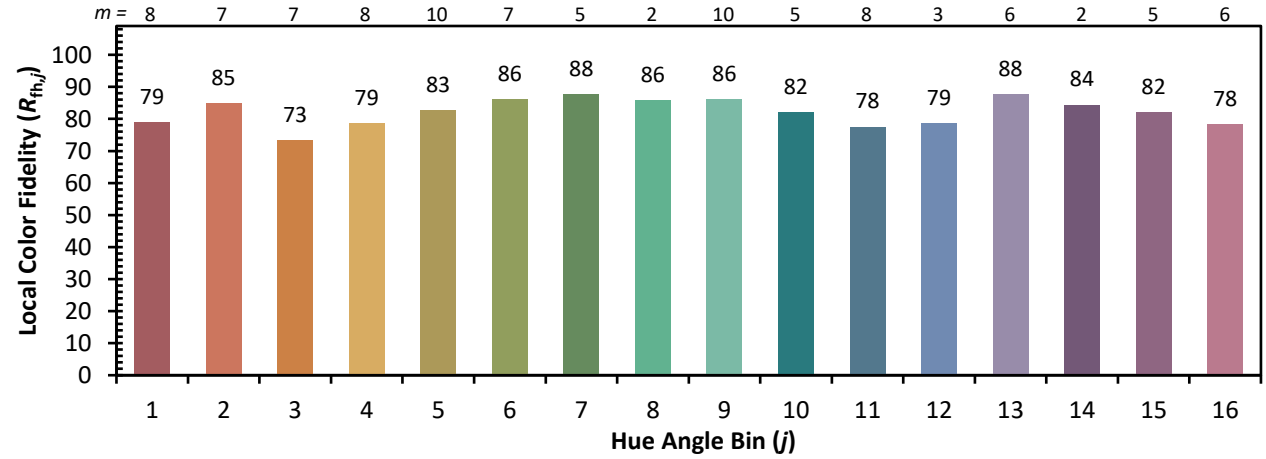
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## Color Rendition by Hue-Angle Bin



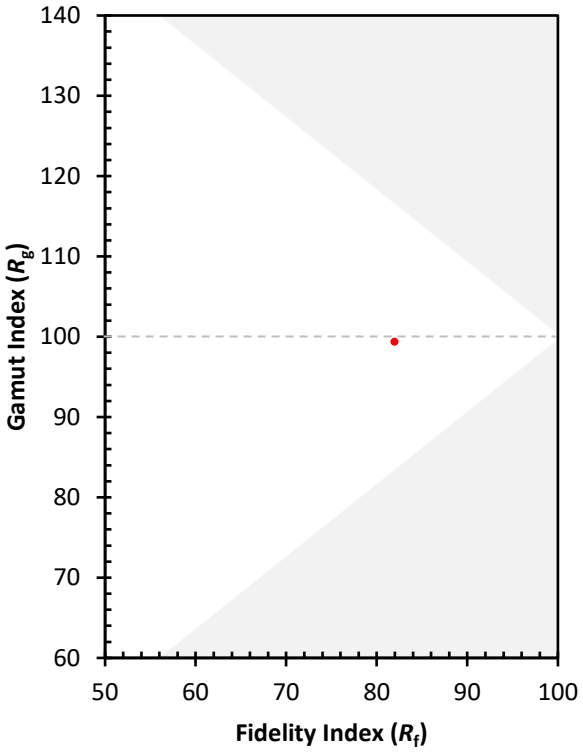



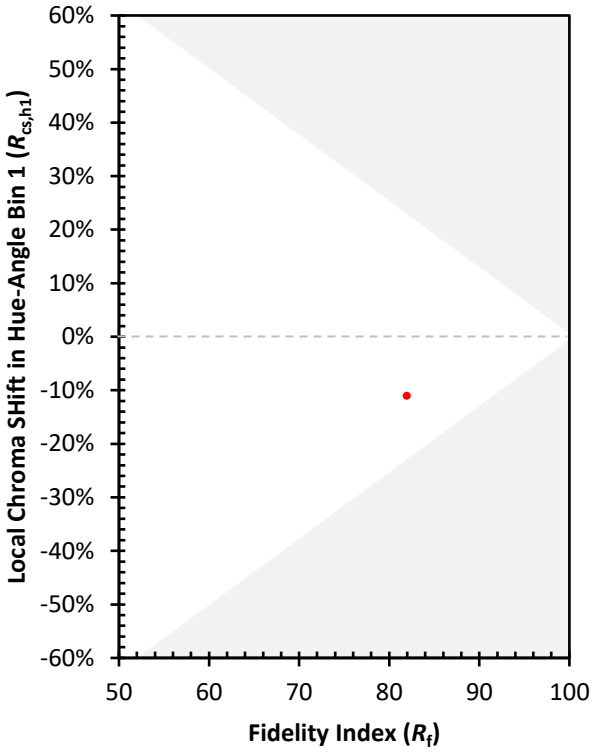



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## Measure Comparisons




(END OF REPORT)