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: P1456685

Luminaire Tested: GLAN-SB8C-835-U-T3LG

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: | P1456685 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 5/22/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | STREETWORKS |
| Catalog Number: | GLAN-SB8C-835-U-T3LG |
| Description: | GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 615mA 8xLight Square PACKAGE 80CRI 3500K FIXTURE w/ TYPE III LOW GLARE |
| Light Source: | (208) 3500K CCT, 80 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 54806.1 lumens |
| Efficiency: | N/A |
| Efficacy: | 137.1 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1.5' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B4 - U0 - G5 |

| | |
|---|---|
| Input Watts (W): | 399.8 |
| 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: P1456685
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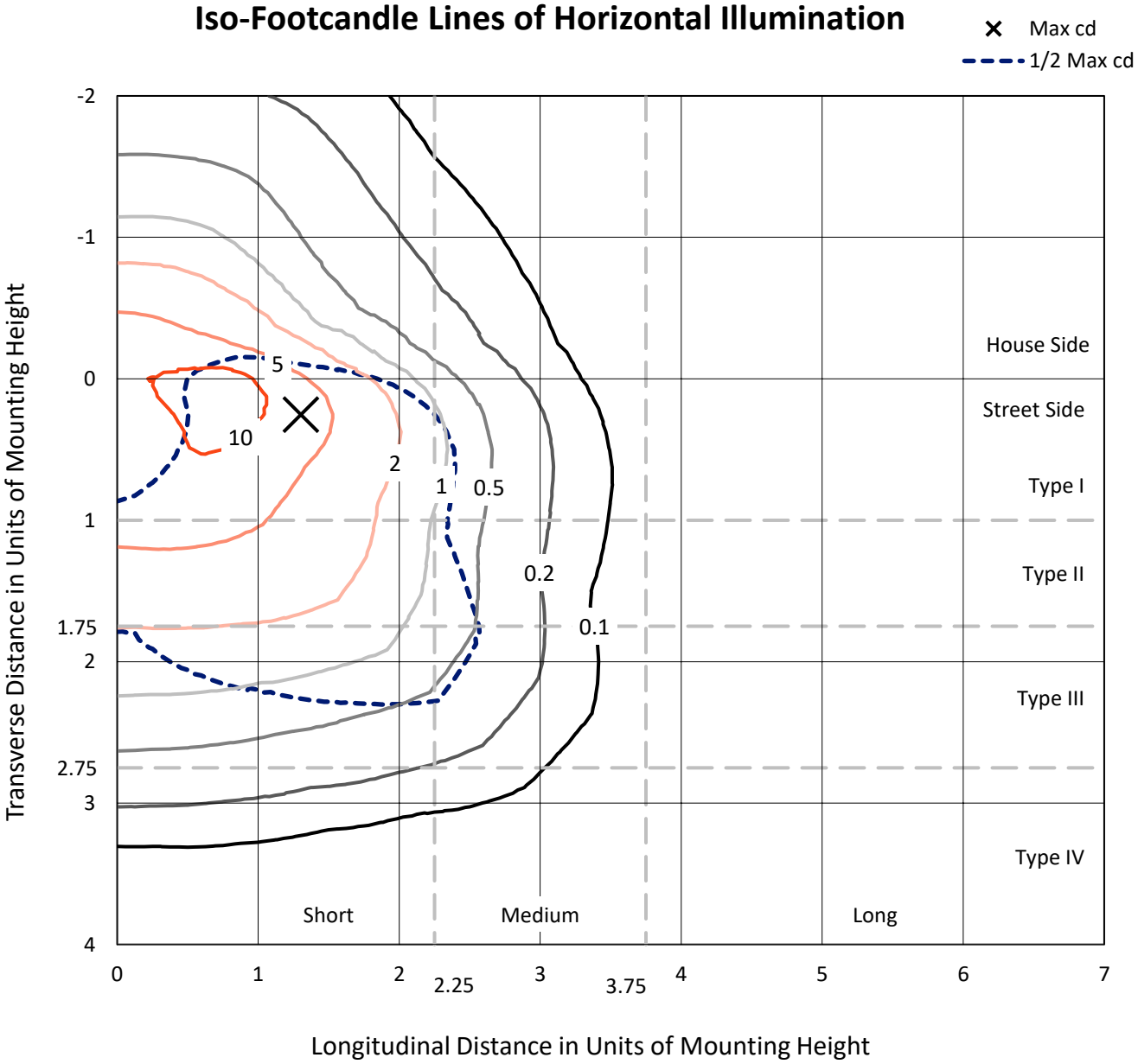
## Iso-Footcandle Lines of Horizontal Illumination




Based on 30 foot mounting height. Maximum calculated value = 13.9 fc
Type III - Short - N/A

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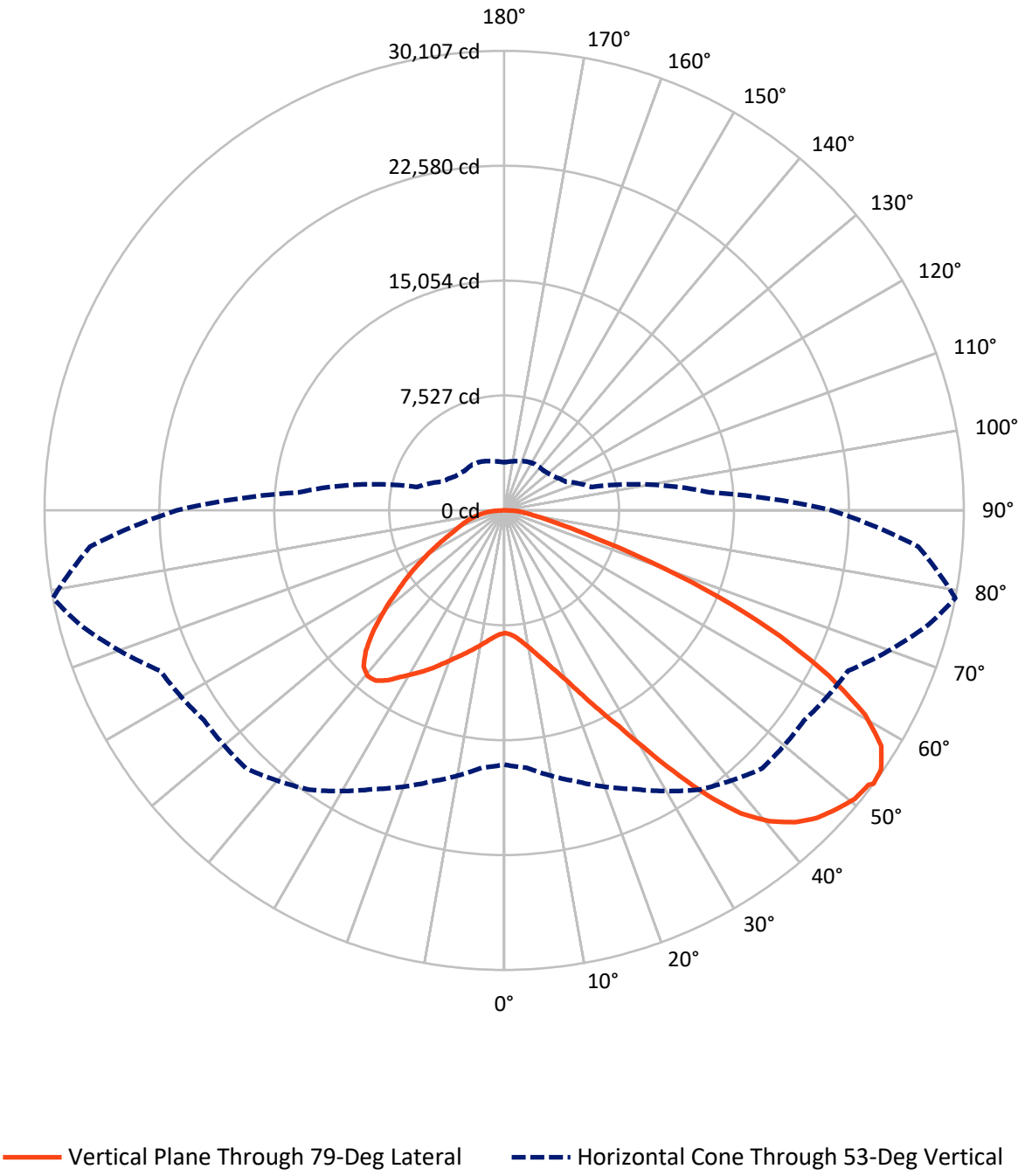
## Luminous Intensity Polar Plot



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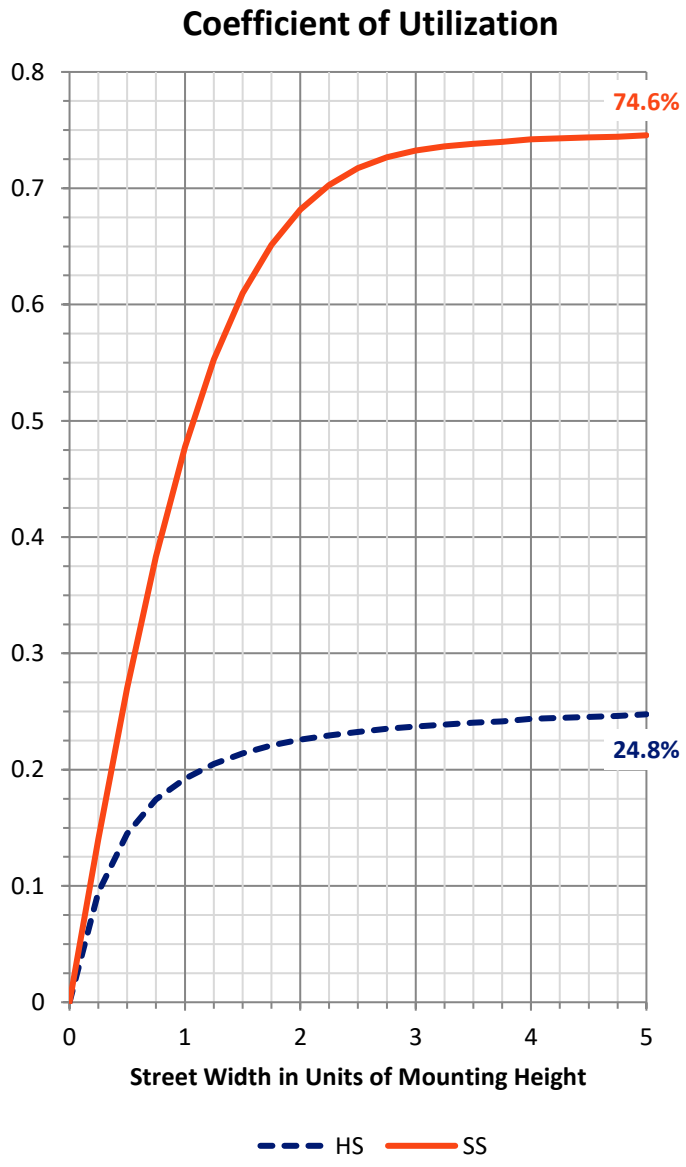
**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 13816.2 | 0.0 | 13816.2 |
| | % Fixture | 25.2 | 0.0 | 25.2 |
| **Street Side** | Lumens | 40989.9 | 0.0 | 40989.9 |
| | % Fixture | 74.8 | 0.0 | 74.8 |
| **Total** | Lumens | 54806.1 | 0.0 | 54806.1 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 766.6 | 1.4 |
| 10°-20° | 2374.0 | 4.3 |
| 20°-30° | 4538.9 | 8.3 |
| 30°-40° | 7792.8 | 14.2 |
| 40°-50° | 10915.4 | 19.9 |
| 50°-60° | 12387.5 | 22.6 |
| 60°-70° | 10863.1 | 19.8 |
| 70°-80° | 4247.6 | 7.8 |
| 80°-90° | 920.3 | 1.7 |
| 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° | 54806.1 | 100.0 |
| 0°-180° | 54806.1 | 100.0 |



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REPORT NUMBER: P1456685
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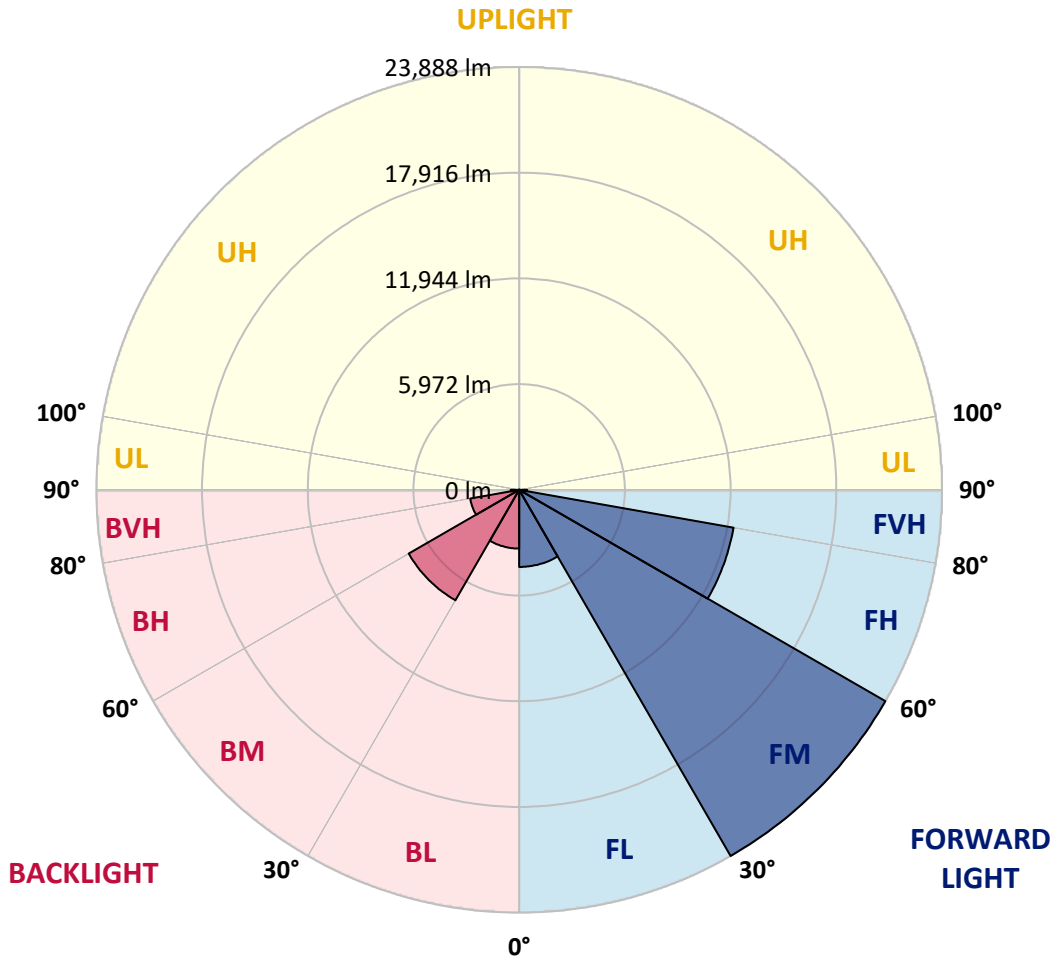
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 4356.6 | 7.9 | | | |
| FM | (30°-60°) | 23888.0 | 43.6 | | | |
| FH | (60°-80°) | 12298.9 | 22.4 | | | G5 |
| FVH | (80°-90°) | 446.4 | 0.8 | | | G3/500 |
| BL | (0°-30°) | 3322.9 | 6.1 | B4/5000 | | |
| BM | (30°-60°) | 7207.6 | 13.2 | B4/8500 | | |
| BH | (60°-80°) | 2811.8 | 5.1 | B4/5000 | | G4/5000 |
| BVH | (80°-90°) | 473.9 | 0.9 | | | G3/500 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B4-U0-G5**
Type III Short



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REPORT NUMBER: P1456685
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 79° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 8045.7 | 8045.7 | 8045.7 | 8045.7 | 8045.7 | 8045.7 | 8045.7 | 8045.7 | 8045.7 | *8045.7* | 8045.7 |
| 2.5° | 8057.9 | 8057.9 | 8009.1 | 8057.9 | 8033.5 | 8070.1 | 8094.5 | 8094.5 | 8143.4 | *8131.1* | 8131.1 |
| 5° | 7923.6 | 7899.2 | 7887.0 | 7972.4 | 8021.3 | 8118.9 | 8228.8 | 8277.7 | 8363.1 | *8363.1* | 8375.3 |
| 7.5° | 7569.5 | 7557.3 | 7618.4 | 7789.3 | 7948.0 | 8192.2 | 8424.2 | 8558.5 | 8692.8 | *8717.2* | 8717.2 |
| 10° | 7349.8 | 7337.6 | 7410.8 | 7618.4 | 7874.8 | 8228.8 | 8595.1 | 8875.9 | 9095.6 | *9156.7* | 9156.7 |
| 12.5° | 7349.8 | 7349.8 | 7410.8 | 7618.4 | 7887.0 | 8314.3 | 8814.8 | 9291.0 | 9632.8 | *9706.1* | 9681.7 |
| 15° | 7557.3 | 7545.1 | 7618.4 | 7838.1 | 8094.5 | 8497.4 | 9107.9 | 9742.7 | 10206.7 | *10341.0* | 10353.2 |
| 17.5° | 7777.1 | 7764.9 | 7874.8 | 8155.6 | 8460.8 | 8863.7 | 9486.3 | 10267.7 | 10927.0 | *11097.9* | 11134.5 |
| 20° | 8118.9 | 8106.7 | 8241.0 | 8509.6 | 8888.1 | 9352.0 | 9999.1 | 10890.4 | 11806.0 | *11989.2* | 12038.0 |
| 22.5° | 8509.6 | 8521.8 | 8668.3 | 8998.0 | 9376.5 | 9986.9 | 10780.5 | 11769.4 | 12868.2 | *13149.0* | 13197.8 |
| 25° | 9327.6 | 9291.0 | 9413.1 | 9645.0 | 10047.9 | 10780.5 | 11757.2 | 12831.6 | 14137.9 | *14479.8* | 14540.8 |
| 27.5° | 10414.2 | 10353.2 | 10487.5 | 10719.4 | 11012.4 | 11696.1 | 12819.4 | 14015.8 | 15590.8 | *16018.1* | 16030.3 |
| 30° | 11390.9 | 11354.3 | 11537.4 | 12013.6 | 12318.8 | 12843.8 | 14040.3 | 15407.7 | 17385.5 | *18008.2* | 18032.6 |
| 32.5° | 12233.3 | 12221.1 | 12563.0 | 13173.4 | 13869.3 | 14430.9 | 15590.8 | 17165.7 | 19656.4 | *20376.7* | 20218.0 |
| 35° | 13039.1 | 13075.8 | 13503.1 | 14137.9 | 15065.8 | 16189.0 | 17361.1 | 19155.8 | 22049.3 | *22916.1* | 22659.8 |
| 37.5° | 13857.1 | 13881.5 | 14443.2 | 15261.2 | 16237.9 | 17702.9 | 19277.9 | 21316.8 | 24124.8 | *25199.2* | 24637.6 |
| 40° | 14614.1 | 14687.3 | 15444.3 | 16323.3 | 17593.1 | 19082.5 | 20840.6 | 22818.5 | 25724.2 | *26786.4* | 26175.9 |
| 42.5° | 15371.0 | 15480.9 | 16298.9 | 17507.6 | 18862.8 | 20413.3 | 21927.2 | 23734.1 | 26749.8 | *27934.0* | 26993.9 |
| 45° | 16152.4 | 16225.7 | 17239.0 | 18496.5 | 20034.8 | 21463.3 | 22549.9 | 24320.2 | 27457.9 | *28739.8* | 27457.9 |
| 47.5° | 16677.4 | 16823.9 | 17934.9 | 19387.8 | 20926.1 | 22269.1 | 23050.4 | 24564.4 | 27909.6 | *29264.8* | 27628.8 |
| 50° | 16884.9 | 17092.5 | 18289.0 | 19900.5 | 21658.6 | 23026.0 | 23441.1 | 24698.7 | 28410.2 | *29728.7* | 27592.2 |
| 52.5° | 16848.3 | 17043.7 | 18350.0 | 20132.5 | 22244.7 | 23721.9 | 23819.6 | 24845.2 | 28764.2 | *29887.4* | 27274.7 |
| 53° | *16653.0* | *16921.6* | *18386.6* | *20144.7* | *22330.1* | *23905.1* | *23990.5* | *24857.4* | *28813.1* | *30107.2* | *27225.9* |
| 55° | 15981.5 | 16128.0 | 18008.2 | 20132.5 | 22733.0 | 24588.8 | 24466.7 | 25223.6 | 28947.4 | *29960.7* | 26688.7 |
| 57.5° | 15371.0 | 15517.5 | 17153.5 | 19900.5 | 23062.7 | 25553.3 | 25235.8 | 25162.6 | 28214.8 | *29130.5* | 25333.5 |
| 60° | 14980.3 | 15029.2 | 16408.8 | 19168.0 | 22928.4 | 26224.8 | 25736.4 | 24442.3 | 26407.9 | *27164.9* | 22952.8 |
| 62.5° | 14650.7 | 14638.5 | 15859.4 | 18118.0 | 22415.6 | 26322.4 | 25834.1 | 22659.8 | 23758.6 | *23880.7* | 19778.5 |
| 65° | 13906.0 | 13820.5 | 15004.8 | 16933.8 | 21353.4 | 25882.9 | 24637.6 | 19961.6 | 20242.4 | *19839.5* | 15883.8 |
| 67.5° | 12428.7 | 12245.6 | 13295.5 | 15126.9 | 19192.4 | 24637.6 | 22354.5 | 16823.9 | 15957.1 | *15151.3* | 11964.7 |
| 70° | 8900.3 | 8900.3 | 9742.7 | 11574.1 | 15407.7 | 21292.4 | 19192.4 | 12733.9 | 10988.0 | *10267.7* | 7996.8 |
| 72.5° | 4358.6 | 4468.5 | 5347.5 | 6837.0 | 10328.7 | 15456.5 | 14699.5 | 8253.2 | 6666.1 | *6312.0* | 5127.7 |
| 75° | 1855.8 | 1868.0 | 2283.1 | 3027.8 | 5237.6 | 9144.5 | 9205.5 | 4761.5 | 4273.1 | *4102.2* | 3394.1 |
| 77.5° | 1294.1 | 1318.6 | 1501.7 | 1782.5 | 2490.6 | 4199.9 | 4785.9 | 2881.3 | 2869.1 | *2747.0* | 2417.4 |
| 80° | 988.9 | 1013.3 | 1135.4 | 1330.8 | 1672.6 | 2148.8 | 2478.4 | 1953.4 | 2051.1 | *1929.0* | 1745.9 |
| 82.5° | 744.7 | 769.2 | 854.6 | 1001.1 | 1196.5 | 1440.7 | 1391.8 | 1440.7 | 1513.9 | *1440.7* | 1257.5 |
| 85° | 500.6 | 512.8 | 573.8 | 695.9 | 769.2 | 866.8 | 866.8 | 1050.0 | 1098.8 | *1074.4* | 988.9 |
| 87.5° | 256.4 | 256.4 | 305.2 | 366.3 | 390.7 | 402.9 | 354.1 | 463.9 | 525.0 | *573.8* | 463.9 |
| 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: P1456685
CATALOG NUMBER: GLAN-SB8C-835-U-T3LG

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 8045.7 | 8045.7 | 8045.7 | 8045.7 | 8045.7 | 8045.7 | 8045.7 | 8045.7 | 8045.7 | 8045.7 | 8045.7 |
| 2.5° | 8131.1 | 8143.4 | 8106.7 | 8094.5 | 8082.3 | 8021.3 | 8021.3 | 7960.2 | 7948.0 | 7960.2 | 7923.6 |
| 5° | 8399.7 | 8375.3 | 8277.7 | 8204.4 | 8118.9 | 7948.0 | 7850.3 | 7716.0 | 7679.4 | 7642.8 | 7606.2 |
| 7.5° | 8729.4 | 8692.8 | 8521.8 | 8326.5 | 8094.5 | 7764.9 | 7581.7 | 7362.0 | 7288.7 | 7227.7 | 7203.3 |
| 10° | 9144.5 | 9071.2 | 8802.6 | 8387.5 | 7960.2 | 7557.3 | 7300.9 | 7032.3 | 6910.3 | 6885.8 | 6824.8 |
| 12.5° | 9681.7 | 9547.4 | 9046.8 | 8399.7 | 7838.1 | 7313.1 | 7032.3 | 6824.8 | 6776.0 | 6763.7 | 6702.7 |
| 15° | 10279.9 | 10084.6 | 9278.8 | 8411.9 | 7679.4 | 7105.6 | 6934.7 | 6824.8 | 6824.8 | 6812.6 | 6776.0 |
| 17.5° | 11012.4 | 10695.0 | 9498.5 | 8363.1 | 7484.1 | 7044.5 | 6959.1 | 6861.4 | 6837.0 | 6849.2 | 6800.4 |
| 20° | 11891.5 | 11366.5 | 9730.5 | 8302.1 | 7398.6 | 7056.8 | 6959.1 | 6824.8 | 6763.7 | 6751.5 | 6714.9 |
| 22.5° | 12904.8 | 12135.7 | 9986.9 | 8204.4 | 7398.6 | 7044.5 | 6885.8 | 6702.7 | 6580.6 | 6531.8 | 6482.9 |
| 25° | 14064.7 | 13026.9 | 10255.5 | 8167.8 | 7423.0 | 6995.7 | 6739.3 | 6446.3 | 6251.0 | 6177.7 | 6141.1 |
| 27.5° | 15468.7 | 13967.0 | 10450.8 | 8204.4 | 7410.8 | 6885.8 | 6482.9 | 6104.5 | 5884.7 | 5762.6 | 5738.2 |
| 30° | 17019.2 | 14980.3 | 10585.1 | 8265.4 | 7337.6 | 6678.3 | 6177.7 | 5750.4 | 5445.2 | 5298.7 | 5262.0 |
| 32.5° | 18850.6 | 16115.8 | 10719.4 | 8265.4 | 7154.4 | 6385.3 | 5823.7 | 5359.7 | 5042.3 | 4871.4 | 4846.9 |
| 35° | 20877.3 | 17507.6 | 10841.5 | 8253.2 | 6934.7 | 6067.8 | 5469.6 | 4993.4 | 4663.8 | 4492.9 | 4480.7 |
| 37.5° | 22598.7 | 18557.6 | 10902.6 | 8131.1 | 6629.4 | 5701.6 | 5140.0 | 4663.8 | 4322.0 | 4138.8 | 4126.6 |
| 40° | 23660.9 | 18997.1 | 10780.5 | 7887.0 | 6263.2 | 5323.1 | 4773.7 | 4334.2 | 3992.3 | 3772.6 | 3723.7 |
| 42.5° | 24063.8 | 18789.5 | 10389.8 | 7484.1 | 5823.7 | 4944.6 | 4468.5 | 4004.5 | 3552.8 | 3369.7 | 3333.0 |
| 45° | 23929.5 | 17983.7 | 9559.6 | 6910.3 | 5335.3 | 4602.8 | 4199.9 | 3674.9 | 3381.9 | 3223.2 | 3210.9 |
| 47.5° | 23477.8 | 16738.4 | 8521.8 | 6189.9 | 4822.5 | 4297.5 | 3845.8 | 3589.4 | 3320.8 | 3149.9 | 3137.7 |
| 50° | 22684.2 | 15407.7 | 7276.5 | 5371.9 | 4358.6 | 3980.1 | 3760.3 | 3552.8 | 3333.0 | 3198.7 | 3174.3 |
| 52.5° | 21670.8 | 13906.0 | 6128.9 | 4578.3 | 3955.7 | 3699.3 | 3674.9 | 3528.4 | 3357.5 | 3210.9 | 3149.9 |
| 53° | *21438.9* | *13515.3* | *5909.1* | *4444.0* | *3894.6* | *3662.7* | *3650.5* | *3528.4* | *3333.0* | *3198.7* | *3149.9* |
| 55° | 20327.9 | 12306.6 | 5213.2 | 3967.9 | 3589.4 | 3540.6 | 3650.5 | 3516.2 | 3272.0 | 3162.1 | 3125.5 |
| 57.5° | 18545.4 | 10719.4 | 4541.7 | 3528.4 | 3272.0 | 3394.1 | 3613.8 | 3467.3 | 3198.7 | 3003.4 | 2942.4 |
| 60° | 16396.6 | 8900.3 | 4028.9 | 3235.4 | 3040.0 | 3210.9 | 3467.3 | 3296.4 | 2930.1 | 2832.5 | 2820.3 |
| 62.5° | 13832.7 | 7203.3 | 3638.3 | 2991.2 | 2844.7 | 3015.6 | 3247.6 | 2954.6 | 2686.0 | 2612.7 | 2588.3 |
| 65° | 10804.9 | 5726.0 | 3333.0 | 2808.1 | 2649.3 | 2783.6 | 2942.4 | 2759.2 | 2588.3 | 2527.2 | 2515.0 |
| 67.5° | 8033.5 | 4492.9 | 3088.9 | 2649.3 | 2454.0 | 2539.5 | 2722.6 | 2673.8 | 2527.2 | 2490.6 | 2478.4 |
| 70° | 5542.9 | 3650.5 | 2869.1 | 2502.8 | 2209.8 | 2307.5 | 2588.3 | 2624.9 | 2478.4 | 2454.0 | 2441.8 |
| 72.5° | 3882.4 | 3088.9 | 2637.1 | 2344.1 | 2014.5 | 2112.1 | 2527.2 | 2527.2 | 2368.5 | 2405.2 | 2380.7 |
| 75° | 2917.9 | 2600.5 | 2368.5 | 2148.8 | 1770.3 | 1916.8 | 2441.8 | 2417.4 | 2258.7 | 2417.4 | 2356.3 |
| 77.5° | 2197.6 | 2099.9 | 2051.1 | 1904.6 | 1550.5 | 1697.0 | 2270.9 | 2222.0 | 2014.5 | 2026.7 | 1916.8 |
| 80° | 1599.4 | 1623.8 | 1758.1 | 1623.8 | 1294.1 | 1404.0 | 1916.8 | 1892.4 | 1636.0 | 1684.8 | 1550.5 |
| 82.5° | 1147.6 | 1208.7 | 1501.7 | 1306.4 | 940.1 | 1001.1 | 1318.6 | 1428.4 | 1281.9 | 1208.7 | 1233.1 |
| 85° | 866.8 | 903.5 | 1208.7 | 964.5 | 586.0 | 659.3 | 903.5 | 1025.5 | 1001.1 | 927.9 | 940.1 |
| 87.5° | 366.3 | 415.1 | 561.6 | 451.7 | 341.8 | 341.8 | 561.6 | 720.3 | 647.1 | 549.4 | 573.8 |
| 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: SP1-2407-184-10

Test Date: 10/11/2024

Luminaire Tested: GSS-SB1A-835-U-5WQ

Data in this report applies to families of products including GSS-SB1A-835-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

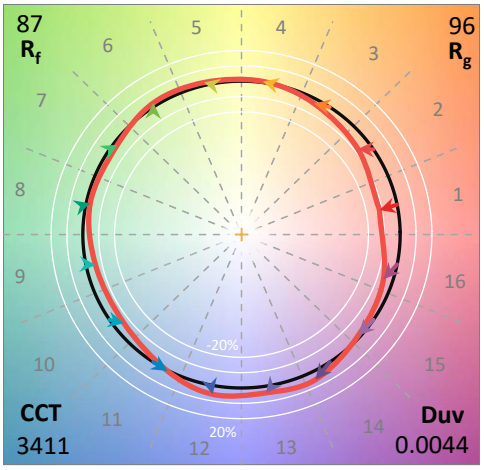
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-10 |
| 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-835-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 80 CRI 3500K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 3411 |
| CIE u': | 0.2360 |
| CIE v': | 0.5189 |
| Duv: | 0.0044 |
| CIE x: | 0.4154 |
| CIE y: | 0.4059 |
| CIE z: | 0.1787 |
| Peak Wavelength (nm): | 601 |
| Dominant Wavelength (nm): | 579 |
| Purity: | 46.51914 |
| Rf: | 86.6 |
| Rg: | 95.9 |

| | |
|---|---|
| CRI (Ra): | 83.5 |
| R1: | 81.1 |
| R2: | 88.9 |
| R3: | 97.2 |
| R4: | 83.8 |
| R5: | 81.7 |
| R6: | 86.9 |
| R7: | 86.1 |
| R8: | 62.2 |
| R9: | 6.3 |
| R10: | 75.4 |
| R11: | 84.1 |
| R12: | 69.7 |
| R13: | 82.8 |
| R14: | 98.5 |
| R15: | 72.6 |




## Test Conditions

| | |
|---|---|
| Stabilization Time: | 35M |
| Operation Time: | 1H 35M |
| 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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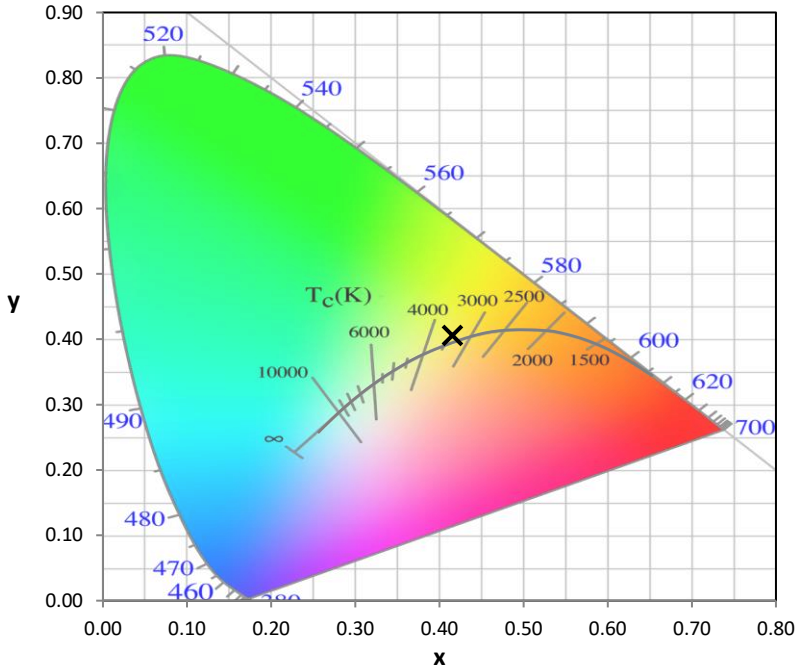
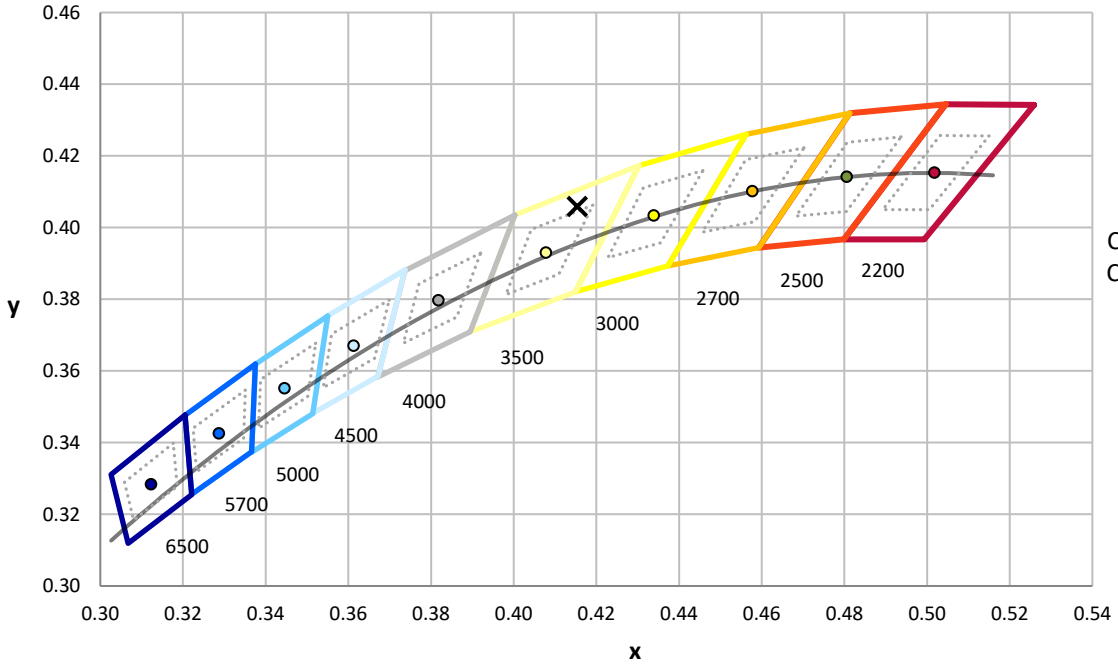
## CIE 1931 Chromaticity Diagram




## CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles




CCT = 3411K
CIE x = 0.4154
CIE y = 0.4059
Duv = 0.0044

Point lies inside the ANSI 3500K 7-step quadrangle

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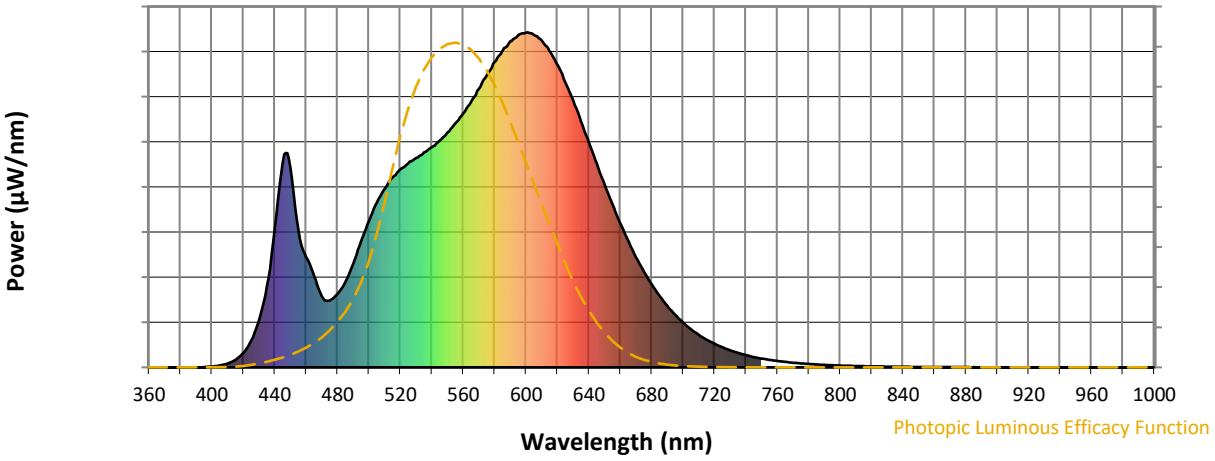
## Photopic Flux vs. Wavelength




## 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 | 311 | NR | 620 | 903 | NR | 750 | 26 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 376 | NR | 625 | 851 | NR | 755 | 22 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 438 | NR | 630 | 797 | NR | 760 | 19 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 491 | NR | 635 | 735 | NR | 765 | 16 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 533 | NR | 640 | 672 | NR | 770 | 14 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 566 | NR | 645 | 607 | NR | 775 | 12 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 592 | NR | 650 | 546 | NR | 780 | 10 | NR | 910 | 0 | NR |
| 395 | 1 | NR | 525 | 608 | NR | 655 | 487 | NR | 785 | 9 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 625 | NR | 660 | 429 | NR | 790 | 7 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 642 | NR | 665 | 378 | NR | 795 | 6 | NR | 925 | 0 | NR |
| 410 | 12 | NR | 540 | 657 | NR | 670 | 329 | NR | 800 | 5 | NR | 930 | 0 | NR |
| 415 | 22 | NR | 545 | 677 | NR | 675 | 286 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 43 | NR | 550 | 701 | NR | 680 | 248 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 80 | NR | 555 | 728 | NR | 685 | 213 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 140 | NR | 560 | 757 | NR | 690 | 184 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 243 | NR | 565 | 793 | NR | 695 | 156 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 412 | NR | 570 | 831 | NR | 700 | 134 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 610 | NR | 575 | 872 | NR | 705 | 114 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 597 | NR | 580 | 911 | NR | 710 | 97 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 412 | NR | 585 | 944 | NR | 715 | 83 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 330 | NR | 590 | 974 | NR | 720 | 70 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 274 | NR | 595 | 992 | NR | 725 | 60 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 211 | NR | 600 | 999 | NR | 730 | 51 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 200 | NR | 605 | 992 | NR | 735 | 43 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 220 | NR | 610 | 975 | NR | 740 | 36 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 255 | NR | 615 | 944 | NR | 745 | 31 | NR | 875 | 1 | NR | | | |

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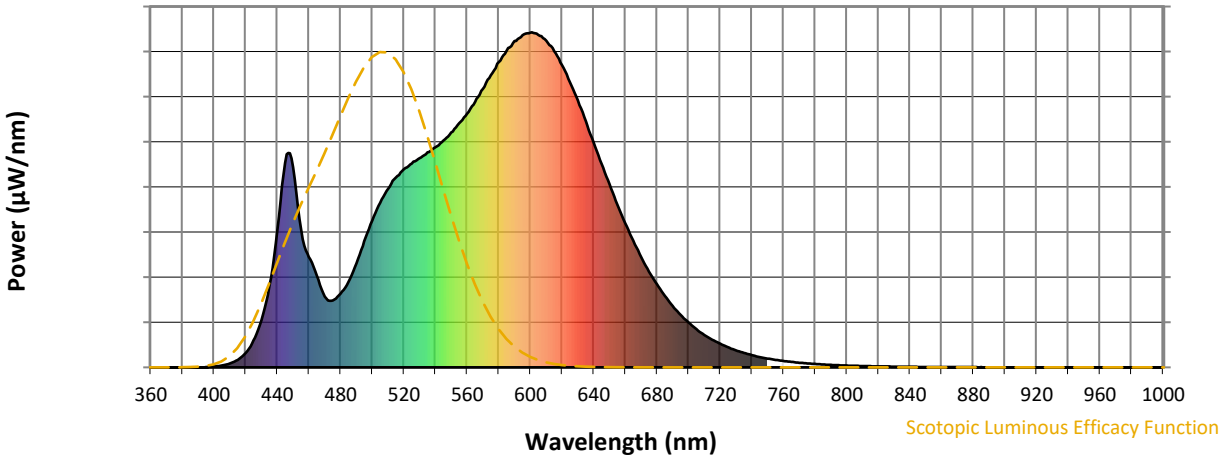
## Scotopic Flux vs. Wavelength




**Scotopic Lumens: NR** **S/P: 1.48**

| 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 | 311 | NR | 620 | 903 | NR | 750 | 26 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 376 | NR | 625 | 851 | NR | 755 | 22 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 438 | NR | 630 | 797 | NR | 760 | 19 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 491 | NR | 635 | 735 | NR | 765 | 16 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 533 | NR | 640 | 672 | NR | 770 | 14 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 566 | NR | 645 | 607 | NR | 775 | 12 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 592 | NR | 650 | 546 | NR | 780 | 10 | NR | 910 | 0 | NR |
| 395 | 1 | NR | 525 | 608 | NR | 655 | 487 | NR | 785 | 9 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 625 | NR | 660 | 429 | NR | 790 | 7 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 642 | NR | 665 | 378 | NR | 795 | 6 | NR | 925 | 0 | NR |
| 410 | 12 | NR | 540 | 657 | NR | 670 | 329 | NR | 800 | 5 | NR | 930 | 0 | NR |
| 415 | 22 | NR | 545 | 677 | NR | 675 | 286 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 43 | NR | 550 | 701 | NR | 680 | 248 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 80 | NR | 555 | 728 | NR | 685 | 213 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 140 | NR | 560 | 757 | NR | 690 | 184 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 243 | NR | 565 | 793 | NR | 695 | 156 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 412 | NR | 570 | 831 | NR | 700 | 134 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 610 | NR | 575 | 872 | NR | 705 | 114 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 597 | NR | 580 | 911 | NR | 710 | 97 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 412 | NR | 585 | 944 | NR | 715 | 83 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 330 | NR | 590 | 974 | NR | 720 | 70 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 274 | NR | 595 | 992 | NR | 725 | 60 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 211 | NR | 600 | 999 | NR | 730 | 51 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 200 | NR | 605 | 992 | NR | 735 | 43 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 220 | NR | 610 | 975 | NR | 740 | 36 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 255 | NR | 615 | 944 | NR | 745 | 31 | NR | 875 | 1 | NR | | | |

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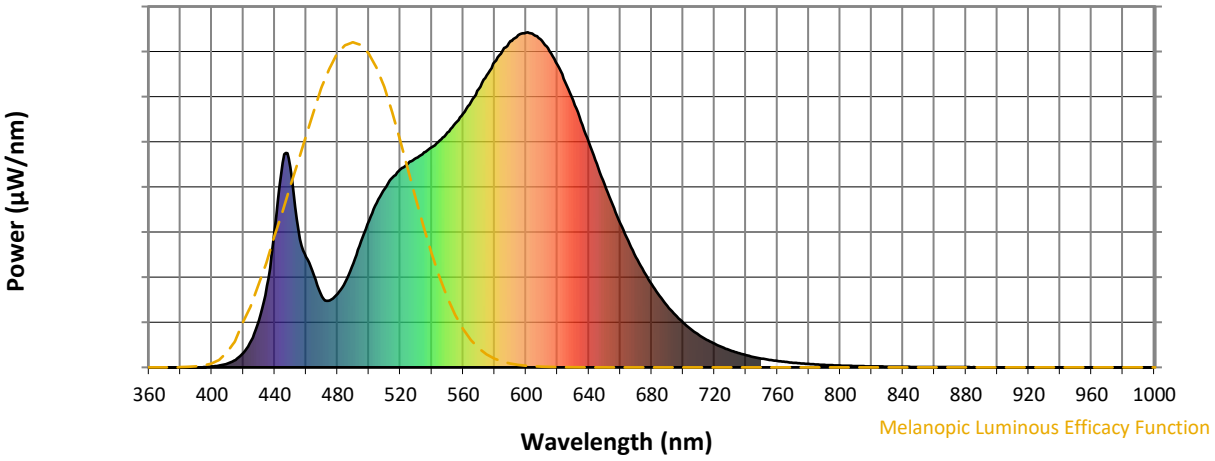
## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.88**

| 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 | 311 | NR | 620 | 903 | NR | 750 | 26 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 376 | NR | 625 | 851 | NR | 755 | 22 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 438 | NR | 630 | 797 | NR | 760 | 19 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 491 | NR | 635 | 735 | NR | 765 | 16 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 533 | NR | 640 | 672 | NR | 770 | 14 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 566 | NR | 645 | 607 | NR | 775 | 12 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 592 | NR | 650 | 546 | NR | 780 | 10 | NR | 910 | 0 | NR |
| 395 | 1 | NR | 525 | 608 | NR | 655 | 487 | NR | 785 | 9 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 625 | NR | 660 | 429 | NR | 790 | 7 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 642 | NR | 665 | 378 | NR | 795 | 6 | NR | 925 | 0 | NR |
| 410 | 12 | NR | 540 | 657 | NR | 670 | 329 | NR | 800 | 5 | NR | 930 | 0 | NR |
| 415 | 22 | NR | 545 | 677 | NR | 675 | 286 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 43 | NR | 550 | 701 | NR | 680 | 248 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 80 | NR | 555 | 728 | NR | 685 | 213 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 140 | NR | 560 | 757 | NR | 690 | 184 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 243 | NR | 565 | 793 | NR | 695 | 156 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 412 | NR | 570 | 831 | NR | 700 | 134 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 610 | NR | 575 | 872 | NR | 705 | 114 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 597 | NR | 580 | 911 | NR | 710 | 97 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 412 | NR | 585 | 944 | NR | 715 | 83 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 330 | NR | 590 | 974 | NR | 720 | 70 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 274 | NR | 595 | 992 | NR | 725 | 60 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 211 | NR | 600 | 999 | NR | 730 | 51 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 200 | NR | 605 | 992 | NR | 735 | 43 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 220 | NR | 610 | 975 | NR | 740 | 36 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 255 | NR | 615 | 944 | NR | 745 | 31 | NR | 875 | 1 | NR | | | |

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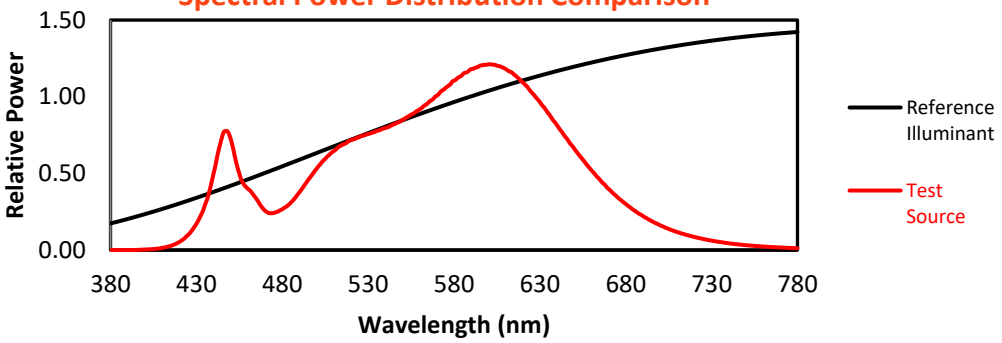
## TM-30-18

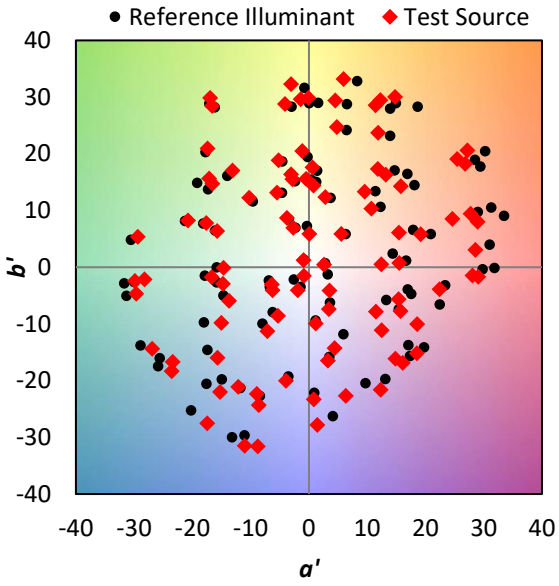
### Summary

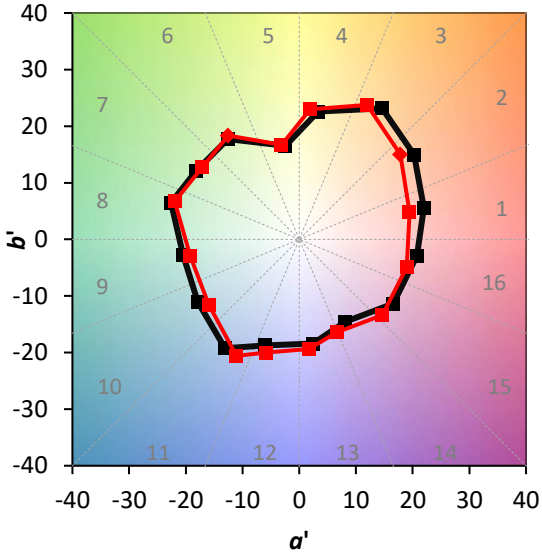
$R_f$ = 86.6
$R_g$ = 95.9
CIE $R_a$ = 83.5
$R_9$ = 6.3

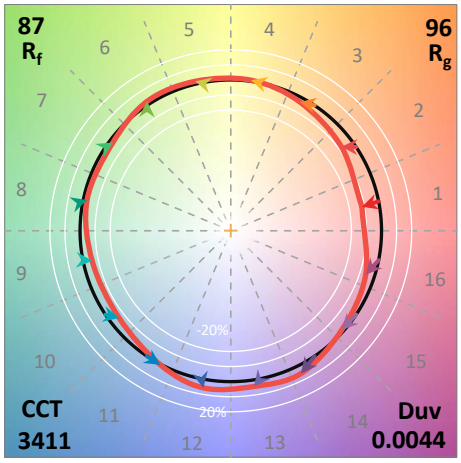
### Spectral Power Distribution Comparison

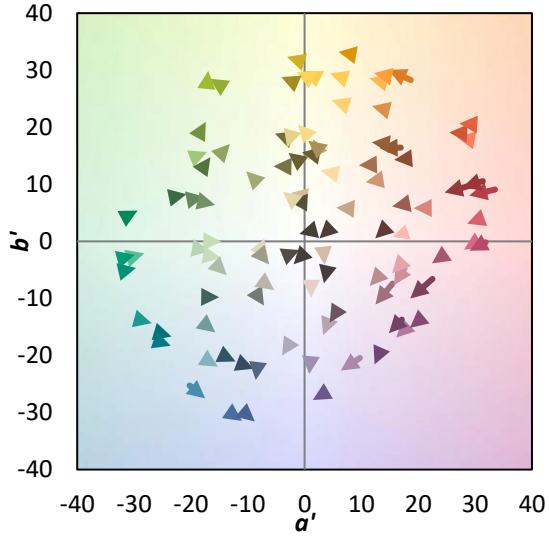



### Color Vector Graphics



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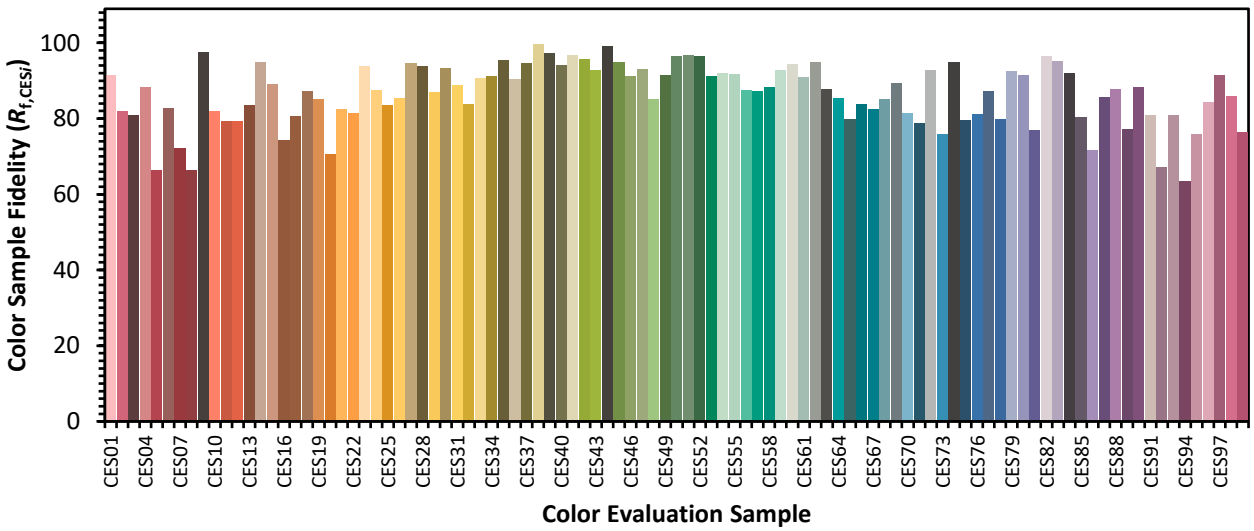
# TM-30-18

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

| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 85 | CES51 = 97 | CES76 = 81 |
| CES02 = 62 | CES27 = 95 | CES52 = 96 | CES77 = 87 |
| CES03 = 31 | CES28 = 94 | CES53 = 91 | CES78 = 80 |
| CES04 = 70 | CES29 = 87 | CES54 = 92 | CES79 = 93 |
| CES05 = 49 | CES30 = 93 | CES55 = 92 | CES80 = 91 |
| CES06 = 51 | CES31 = 89 | CES56 = 88 | CES81 = 77 |
| CES07 = 41 | CES32 = 84 | CES57 = 87 | CES82 = 96 |
| CES08 = 40 | CES33 = 91 | CES58 = 88 | CES83 = 95 |
| CES09 = 29 | CES34 = 91 | CES59 = 93 | CES84 = 92 |
| CES10 = 75 | CES35 = 95 | CES60 = 94 | CES85 = 80 |
| CES11 = 58 | CES36 = 90 | CES61 = 91 | CES86 = 72 |
| CES12 = 64 | CES37 = 95 | CES62 = 95 | CES87 = 86 |
| CES13 = 43 | CES38 = 100 | CES63 = 88 | CES88 = 88 |
| CES14 = 74 | CES39 = 97 | CES64 = 85 | CES89 = 77 |
| CES15 = 71 | CES40 = 94 | CES65 = 80 | CES90 = 88 |
| CES16 = 47 | CES41 = 97 | CES66 = 84 | CES91 = 81 |
| CES17 = 49 | CES42 = 96 | CES67 = 82 | CES92 = 67 |
| CES18 = 56 | CES43 = 93 | CES68 = 85 | CES93 = 81 |
| CES19 = 72 | CES44 = 99 | CES69 = 89 | CES94 = 63 |
| CES20 = 66 | CES45 = 95 | CES70 = 81 | CES95 = 76 |
| CES21 = 86 | CES46 = 91 | CES71 = 79 | CES96 = 84 |
| CES22 = 78 | CES47 = 93 | CES72 = 93 | CES97 = 92 |
| CES23 = 91 | CES48 = 85 | CES73 = 76 | CES98 = 86 |
| CES24 = 90 | CES49 = 92 | CES74 = 95 | CES99 = 77 |
| CES25 = 72 | CES50 = 96 | CES75 = 80 | |



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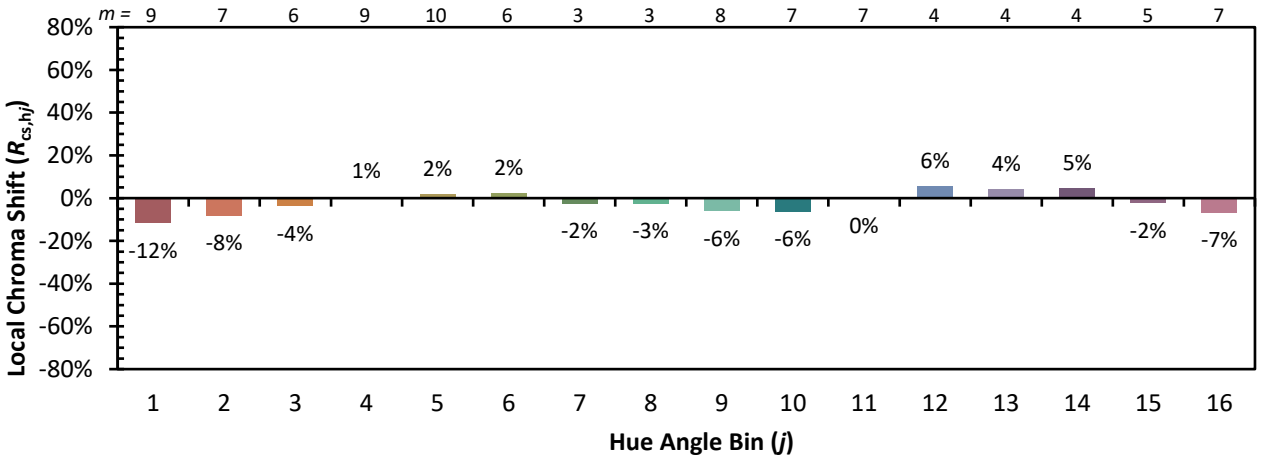
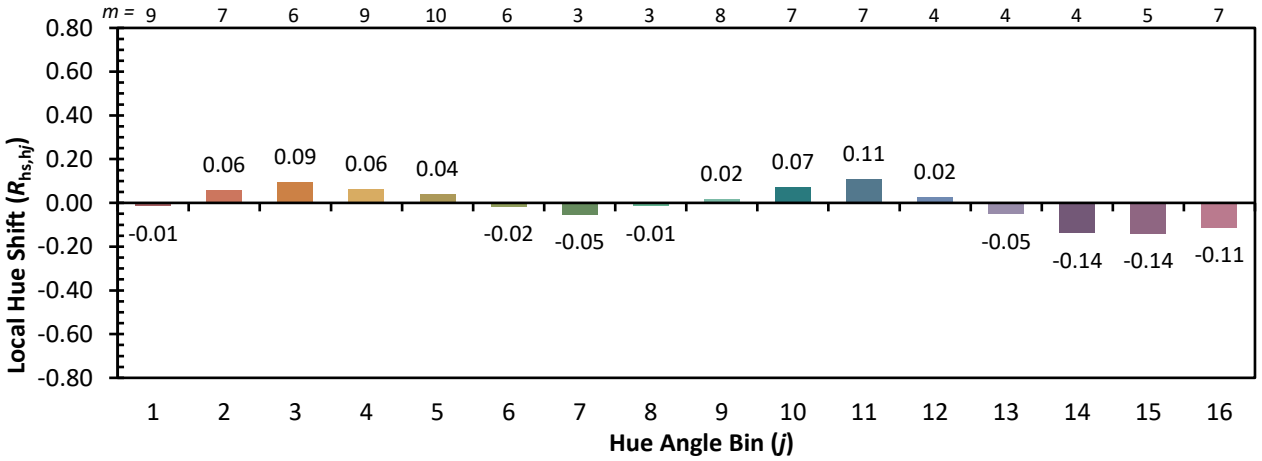
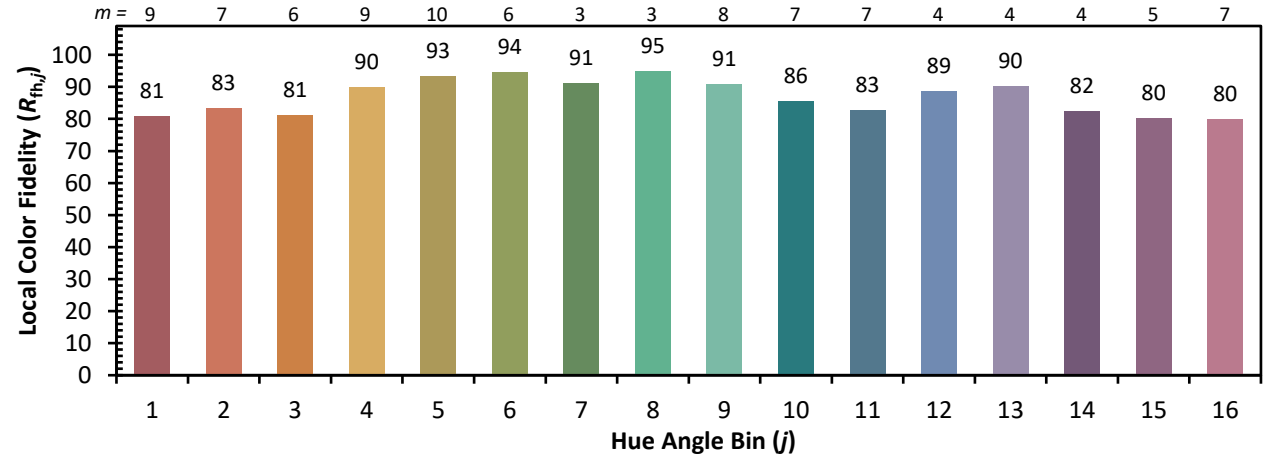
## Color Rendition by Hue-Angle Bin



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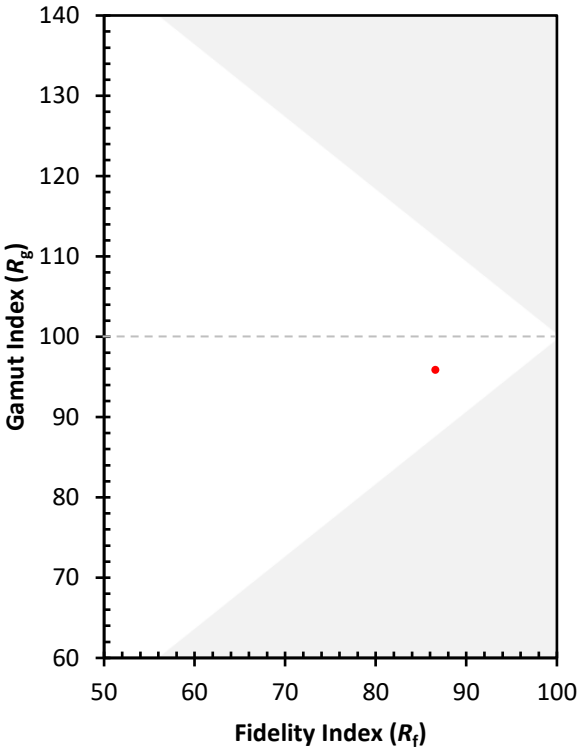
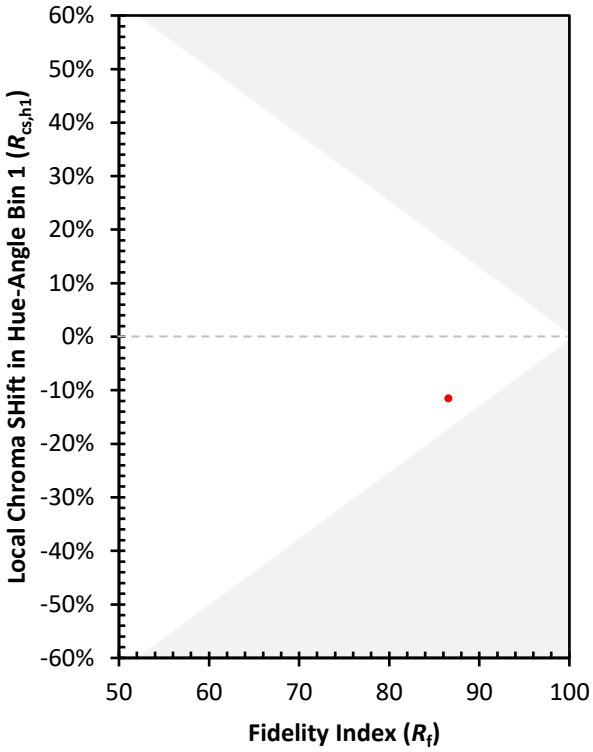
## TM-30-18

### Measure Comparisons




(END OF REPORT)