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

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1121 Highway 74 South
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: P1457752

Luminaire Tested: GLAN-SB5B-827-U-T2LG-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: | P1457752 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 5/21/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | STREETWORKS |
| Catalog Number: | GLAN-SB5B-827-U-T2LG-HSS |
| Description: | GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 450mA 5xLight Square PACKAGE 80CRI 2700K FIXTURE w/ TYPE II LOW GLARE WITH HOUSE SIDE SHIELD |
| Light Source: | (130) 2700K CCT, 80 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 17918.3 lumens |
| Efficiency: | N/A |
| Efficacy: | 98.1 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1' x H: 0') |
| IES Classification: | Type II - Short |
| BUG Rating: | B2 - U0 - G2 |

| | |
|---|---|
| Input Watts (W): | 182.7 |
| 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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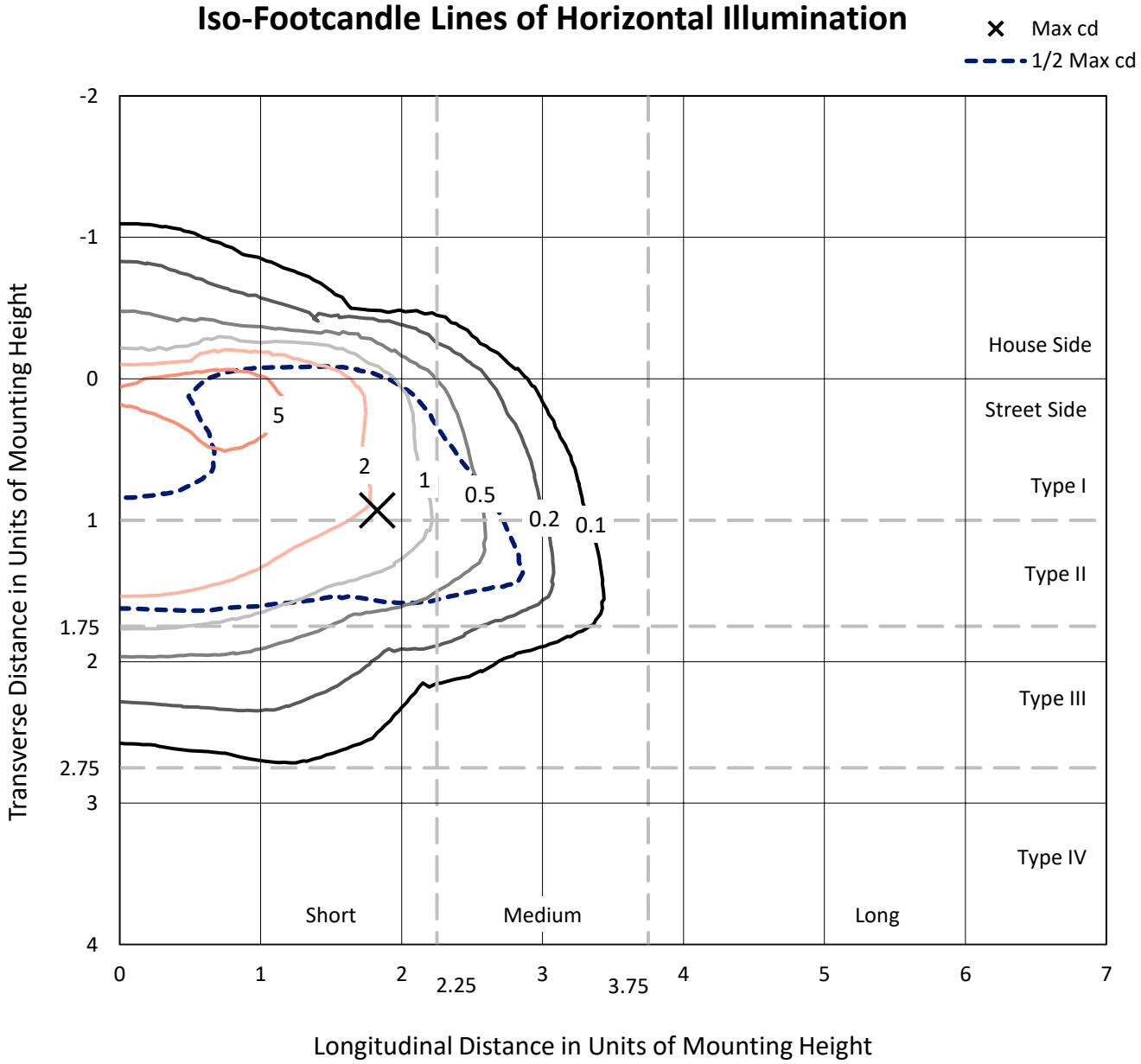
Scaled Data Report

REPORT NUMBER: P1457752
CATALOG NUMBER: GLAN-SB5B-827-U-T2LG-HSS

## Iso-Footcandle Lines of Horizontal Illumination




Based on 25 foot mounting height. Maximum calculated value = 8.2 fc
Type II - Short - N/A

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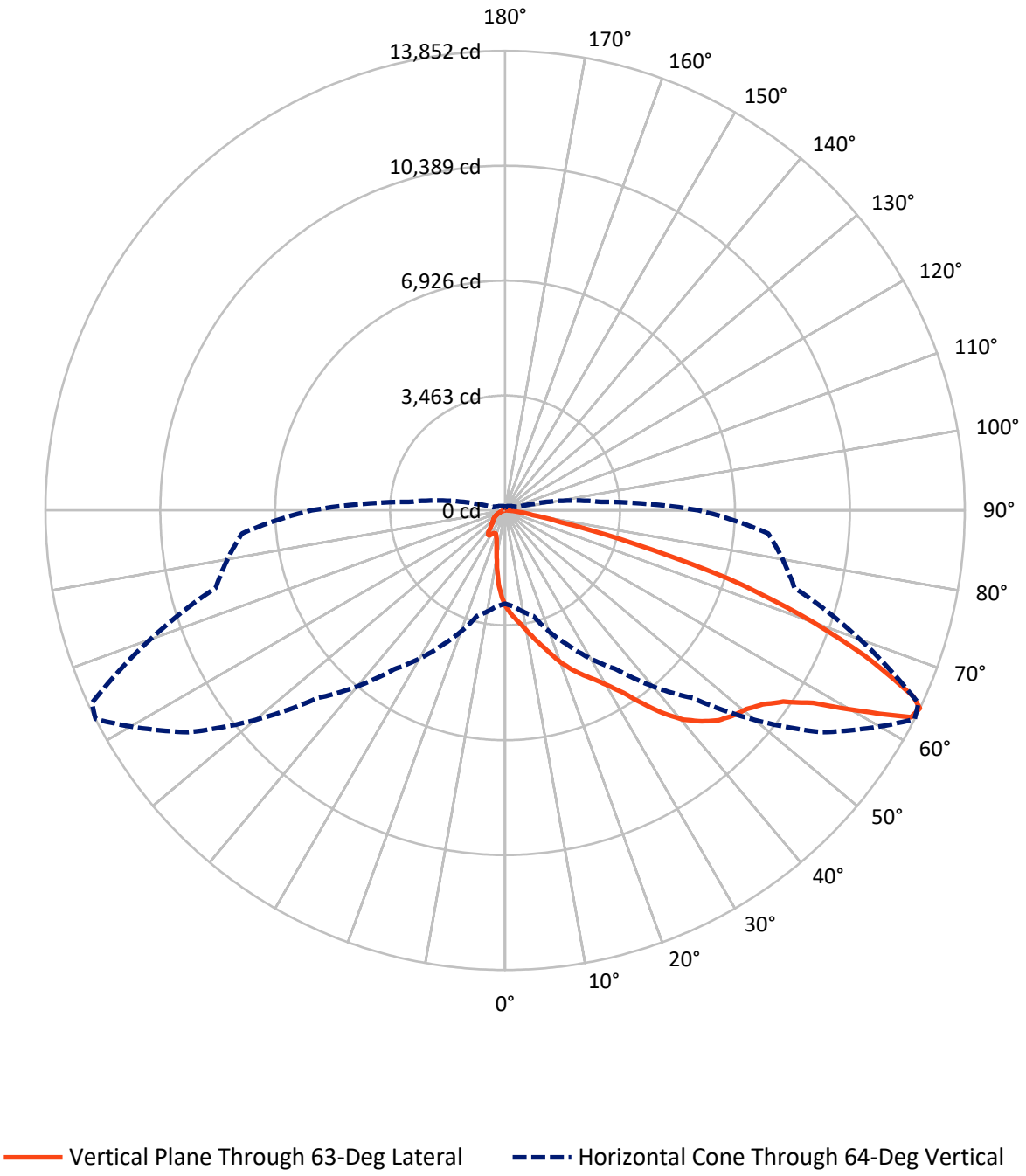
## Luminous Intensity Polar Plot



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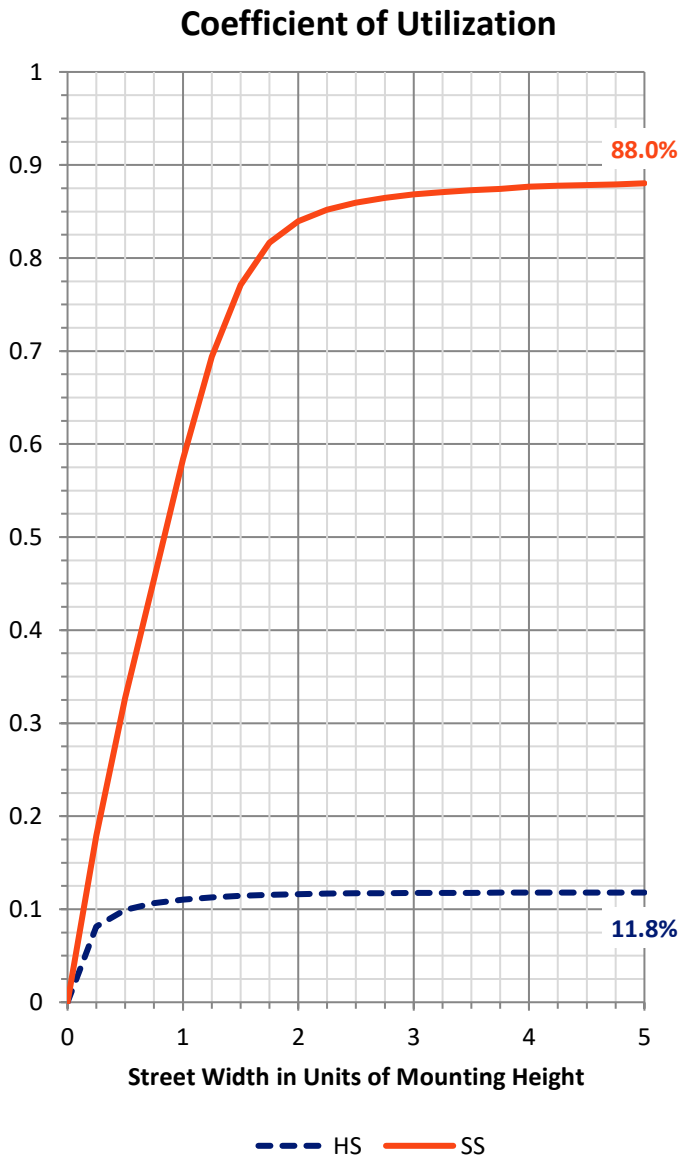
**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 2126.3 | 0.0 | 2126.3 |
| | % Fixture | 11.9 | 0.0 | 11.9 |
| **Street Side** | Lumens | 15792.0 | 0.0 | 15792.0 |
| | % Fixture | 88.1 | 0.0 | 88.1 |
| **Total** | Lumens | 17918.3 | 0.0 | 17918.3 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 244.0 | 1.4 |
| 10°-20° | 685.6 | 3.8 |
| 20°-30° | 1221.0 | 6.8 |
| 30°-40° | 2332.2 | 13.0 |
| 40°-50° | 3865.8 | 21.6 |
| 50°-60° | 4818.7 | 26.9 |
| 60°-70° | 3593.1 | 20.1 |
| 70°-80° | 1030.5 | 5.8 |
| 80°-90° | 127.4 | 0.7 |
| 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° | 17918.3 | 100.0 |
| 0°-180° | 17918.3 | 100.0 |



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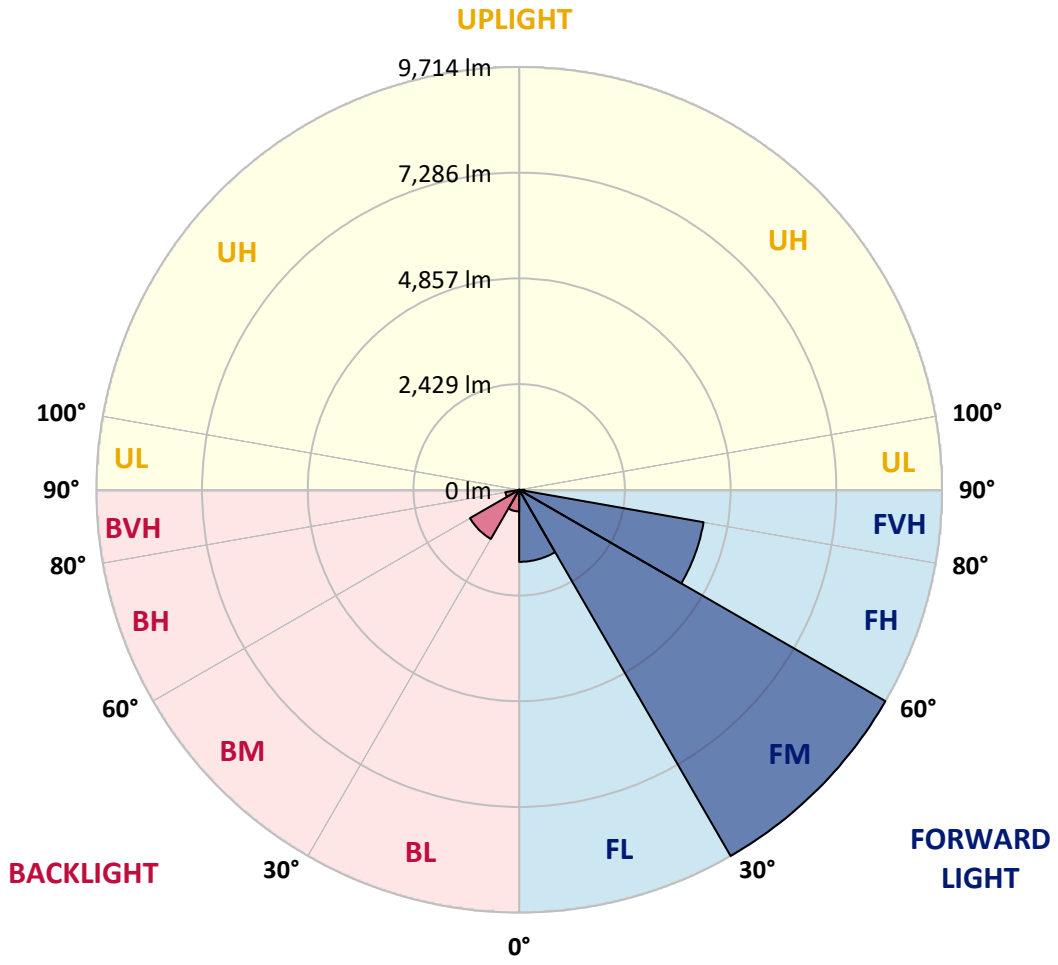
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1654.5 | 9.2 | | | |
| FM | (30°-60°) | 9714.2 | 54.2 | | | |
| FH | (60°-80°) | 4302.0 | 24.0 | | | G2/5000 |
| FVH | (80°-90°) | 121.2 | 0.7 | | | G2/225 |
| BL | (0°-30°) | 496.1 | 2.8 | B1/500 | | |
| BM | (30°-60°) | 1302.4 | 7.3 | B2/2500 | | |
| BH | (60°-80°) | 321.6 | 1.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 6.3 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B2-U0-G2**
Type II Short



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REPORT NUMBER: P1457752
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 63° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 2897.2 | 2897.2 | 2897.2 | 2897.2 | 2897.2 | 2897.2 | 2897.2 | *2897.2* | 2897.2 | 2897.2 | 2897.2 |
| 2.5° | 3246.6 | 3235.8 | 3225.0 | 3208.9 | 3187.4 | 3165.9 | 3139.0 | *3101.4* | 3085.3 | 3031.5 | 2967.0 |
| 5° | 3413.2 | 3413.2 | 3407.8 | 3397.1 | 3386.3 | 3364.8 | 3332.6 | *3284.2* | 3262.7 | 3187.4 | 3074.5 |
| 7.5° | 3456.2 | 3461.6 | 3477.7 | 3499.2 | 3531.4 | 3526.1 | 3526.1 | *3472.3* | 3461.6 | 3380.9 | 3230.4 |
| 10° | 3380.9 | 3386.3 | 3429.3 | 3488.4 | 3585.2 | 3676.6 | 3741.1 | *3708.8* | 3692.7 | 3612.1 | 3423.9 |
| 12.5° | 3273.4 | 3273.4 | 3343.3 | 3434.7 | 3585.2 | 3757.2 | 3945.3 | *3977.6* | 3982.9 | 3891.6 | 3665.8 |
| 15° | 2993.9 | 3004.7 | 3117.5 | 3300.3 | 3547.6 | 3816.3 | 4133.4 | *4257.1* | 4289.3 | 4230.2 | 3961.4 |
| 17.5° | 2623.0 | 2633.8 | 2746.7 | 2993.9 | 3364.8 | 3816.3 | 4294.7 | *4579.6* | 4622.6 | 4633.3 | 4337.7 |
| 20° | 2467.2 | 2467.2 | 2531.7 | 2719.8 | 3106.8 | 3714.2 | 4391.4 | *4923.6* | 5020.3 | 5138.6 | 4751.6 |
| 22.5° | 2488.7 | 2488.7 | 2526.3 | 2633.8 | 2945.5 | 3574.4 | 4450.6 | *5230.0* | 5428.8 | 5729.8 | 5283.7 |
| 25° | 2606.9 | 2606.9 | 2639.2 | 2709.0 | 2961.7 | 3552.9 | 4563.4 | *5504.1* | 5821.2 | 6391.0 | 5891.1 |
| 27.5° | 2795.0 | 2789.7 | 2816.5 | 2886.4 | 3117.5 | 3655.1 | 4751.6 | *5778.2* | 6133.0 | 7132.7 | 6589.9 |
| 30° | 3069.2 | 3053.0 | 3063.8 | 3144.4 | 3370.2 | 3891.6 | 5025.7 | *6127.6* | 6487.7 | 7944.4 | 7363.9 |
| 32.5° | 3703.4 | 3698.1 | 3542.2 | 3499.2 | 3741.1 | 4273.2 | 5402.0 | *6563.0* | 6966.1 | 8804.4 | 8159.4 |
| 35° | 4848.3 | 4923.6 | 4703.2 | 4138.8 | 4187.2 | 4783.8 | 5939.5 | *7154.2* | 7525.1 | 9718.2 | 9024.8 |
| 37.5° | 6009.3 | 6009.3 | 5918.0 | 5251.5 | 4912.8 | 5348.2 | 6520.0 | *7761.6* | 8148.6 | 10454.5 | 9857.9 |
| 40° | 6928.5 | 6976.9 | 6869.4 | 6369.5 | 5928.7 | 5993.2 | 7100.5 | *8293.8* | 8648.5 | 10906.0 | 10449.2 |
| 42.5° | 7611.1 | 7600.4 | 7557.4 | 7229.5 | 6982.2 | 6837.1 | 7627.2 | *8691.5* | 9030.1 | 11137.2 | 10820.0 |
| 45° | 8347.5 | 8347.5 | 8288.4 | 8019.6 | 7815.4 | 7691.7 | 8019.6 | *9024.8* | 9379.5 | 11276.9 | 11051.2 |
| 47.5° | 9116.1 | 9105.4 | 9046.3 | 8750.6 | 8530.3 | 8347.5 | 8417.4 | *9239.8* | 9594.5 | 11185.5 | 11088.8 |
| 50° | 9304.3 | 9293.5 | 9427.9 | 9438.6 | 9239.8 | 8890.4 | 8734.5 | *9422.5* | 9734.3 | 11190.9 | 11207.0 |
| 52.5° | 9083.9 | 9148.4 | 9347.3 | 9589.1 | 9814.9 | 9449.4 | 9073.1 | *9712.8* | 10035.3 | 11341.4 | 11502.7 |
| 55° | 8535.6 | 8562.5 | 8944.1 | 9331.1 | 9857.9 | 9986.9 | 9616.0 | *10175.0* | 10459.9 | 11486.6 | 11766.1 |
| 57.5° | 7514.4 | 7616.5 | 8025.0 | 8696.9 | 9497.8 | 10035.3 | 10562.0 | *10949.0* | 11164.0 | 11545.7 | 11620.9 |
| 60° | 5670.7 | 5724.5 | 6611.4 | 7482.1 | 8750.6 | 9648.3 | 11443.6 | *12260.6* | 12233.7 | 10879.2 | 10605.0 |
| 62.5° | 3450.8 | 3499.2 | 4133.4 | 5514.8 | 7111.2 | 8842.0 | 11739.2 | *13728.0* | 13582.8 | 9755.8 | 8928.0 |
| 64° | *2811.2* | *2902.5* | *3294.9* | *4477.4* | *5848.1* | *7998.1* | *11653.2* | *13851.6* | *13738.7* | *9030.1* | *7955.1* |
| 65° | 2402.7 | 2526.3 | 2929.4 | 3886.2 | 4972.0 | 7089.7 | 11416.7 | *13507.6* | 13432.3 | 8589.4 | 7148.9 |
| 67.5° | 1510.4 | 1569.5 | 2166.2 | 3020.8 | 3423.9 | 4536.6 | 9814.9 | *11680.1* | 11814.4 | 7654.1 | 5273.0 |
| 70° | 1123.4 | 1150.3 | 1488.9 | 2338.2 | 2671.4 | 2639.2 | 6740.4 | *9460.1* | 9492.4 | 6122.2 | 3182.0 |
| 72.5° | 817.0 | 822.4 | 1042.8 | 1730.8 | 2090.9 | 1800.7 | 3552.9 | *7030.6* | 6799.5 | 3585.2 | 1736.2 |
| 75° | 542.9 | 564.4 | 731.0 | 1220.1 | 1628.7 | 1322.3 | 1617.9 | *4004.4* | 3934.6 | 1752.3 | 994.4 |
| 77.5° | 397.8 | 403.1 | 494.5 | 817.0 | 1279.3 | 972.9 | 978.3 | *1725.4* | 1779.2 | 1042.8 | 628.9 |
| 80° | 225.8 | 236.5 | 322.5 | 499.9 | 833.1 | 666.5 | 548.3 | *833.1* | 956.8 | 709.5 | 419.3 |
| 82.5° | 134.4 | 145.1 | 231.1 | 327.9 | 569.8 | 274.1 | 279.5 | *456.9* | 569.8 | 510.6 | 225.8 |
| 85° | 80.6 | 86.0 | 145.1 | 177.4 | 338.6 | 182.8 | 102.1 | *225.8* | 295.6 | 301.0 | 123.6 |
| 87.5° | 53.8 | 53.8 | 80.6 | 75.3 | 96.8 | 86.0 | 43.0 | *59.1* | 75.3 | 102.1 | 48.4 |
| 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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Scaled Data Report

REPORT NUMBER: P1457752
CATALOG NUMBER: GLAN-SB5B-827-U-T2LG-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 2897.2 | 2897.2 | 2897.2 | 2897.2 | 2897.2 | 2897.2 | 2897.2 | 2897.2 | 2897.2 | 2897.2 | 2897.2 |
| 2.5° | 2913.3 | 2881.0 | 2784.3 | 2655.3 | 2537.0 | 2445.7 | 2332.8 | 2257.5 | 2187.7 | 2187.7 | 2128.5 |
| 5° | 2983.2 | 2897.2 | 2660.7 | 2365.0 | 2047.9 | 1746.9 | 1553.4 | 1338.4 | 1268.5 | 1209.4 | 1220.1 |
| 7.5° | 3101.4 | 2945.5 | 2526.3 | 1994.2 | 1488.9 | 1166.4 | 951.4 | 854.6 | 811.6 | 784.8 | 790.1 |
| 10° | 3246.6 | 3031.5 | 2365.0 | 1617.9 | 1096.5 | 854.6 | 752.5 | 714.9 | 698.8 | 693.4 | 693.4 |
| 12.5° | 3445.4 | 3133.7 | 2203.8 | 1300.8 | 865.4 | 736.4 | 682.6 | 661.1 | 645.0 | 634.3 | 634.3 |
| 15° | 3681.9 | 3262.7 | 2015.7 | 1069.6 | 757.9 | 677.3 | 634.3 | 612.8 | 591.3 | 585.9 | 585.9 |
| 17.5° | 3982.9 | 3397.1 | 1849.0 | 919.1 | 704.1 | 634.3 | 591.3 | 564.4 | 548.3 | 542.9 | 542.9 |
| 20° | 4316.2 | 3563.7 | 1682.4 | 833.1 | 666.5 | 591.3 | 548.3 | 526.8 | 510.6 | 499.9 | 505.3 |
| 22.5° | 4740.8 | 3773.3 | 1574.9 | 790.1 | 634.3 | 553.6 | 510.6 | 489.1 | 473.0 | 462.3 | 467.6 |
| 25° | 5208.5 | 4036.7 | 1515.8 | 790.1 | 612.8 | 526.8 | 478.4 | 456.9 | 440.8 | 430.0 | 430.0 |
| 27.5° | 5778.2 | 4332.3 | 1521.1 | 822.4 | 607.4 | 505.3 | 451.5 | 430.0 | 413.9 | 397.8 | 397.8 |
| 30° | 6407.1 | 4681.7 | 1580.3 | 881.5 | 618.1 | 483.8 | 430.0 | 397.8 | 387.0 | 370.9 | 370.9 |
| 32.5° | 7073.6 | 5084.8 | 1730.8 | 956.8 | 607.4 | 456.9 | 397.8 | 370.9 | 354.8 | 344.0 | 344.0 |
| 35° | 7777.7 | 5541.7 | 1918.9 | 989.0 | 553.6 | 419.3 | 370.9 | 344.0 | 333.3 | 327.9 | 322.5 |
| 37.5° | 8449.6 | 5939.5 | 2021.0 | 924.5 | 483.8 | 387.0 | 338.6 | 311.8 | 306.4 | 295.6 | 295.6 |
| 40° | 8971.0 | 6267.3 | 1961.9 | 790.1 | 446.1 | 354.8 | 311.8 | 284.9 | 274.1 | 263.4 | 263.4 |
| 42.5° | 9277.4 | 6385.6 | 1746.9 | 671.9 | 419.3 | 322.5 | 284.9 | 258.0 | 247.3 | 241.9 | 241.9 |
| 45° | 9454.8 | 6369.5 | 1494.3 | 602.0 | 392.4 | 295.6 | 258.0 | 241.9 | 225.8 | 220.4 | 215.0 |
| 47.5° | 9449.4 | 6202.8 | 1311.5 | 542.9 | 365.5 | 274.1 | 241.9 | 225.8 | 209.6 | 204.3 | 204.3 |
| 50° | 9411.8 | 5955.6 | 1107.3 | 499.9 | 344.0 | 258.0 | 225.8 | 215.0 | 198.9 | 193.5 | 188.1 |
| 52.5° | 9503.1 | 5815.8 | 924.5 | 473.0 | 317.1 | 247.3 | 220.4 | 204.3 | 182.8 | 177.4 | 177.4 |
| 55° | 9616.0 | 5735.2 | 741.8 | 446.1 | 295.6 | 241.9 | 209.6 | 193.5 | 172.0 | 166.6 | 166.6 |
| 57.5° | 9288.1 | 5428.8 | 612.8 | 403.1 | 268.8 | 231.1 | 198.9 | 188.1 | 166.6 | 150.5 | 150.5 |
| 60° | 8256.1 | 4488.2 | 505.3 | 354.8 | 247.3 | 215.0 | 188.1 | 172.0 | 150.5 | 129.0 | 129.0 |
| 62.5° | 6713.5 | 3423.9 | 419.3 | 301.0 | 231.1 | 198.9 | 172.0 | 155.9 | 129.0 | 102.1 | 102.1 |
| 64° | *5832.0* | *2907.9* | *376.3* | *263.4* | *220.4* | *182.8* | *155.9* | *139.8* | *112.9* | *86.0* | *80.6* |
| 65° | 5230.0 | 2569.3 | 349.4 | 247.3 | 215.0 | 172.0 | 150.5 | 134.4 | 102.1 | 80.6 | 75.3 |
| 67.5° | 3681.9 | 1725.4 | 279.5 | 204.3 | 188.1 | 145.1 | 129.0 | 112.9 | 91.4 | 69.9 | 64.5 |
| 70° | 2144.7 | 978.3 | 220.4 | 172.0 | 145.1 | 112.9 | 107.5 | 102.1 | 80.6 | 53.8 | 53.8 |
| 72.5° | 1166.4 | 489.1 | 166.6 | 139.8 | 112.9 | 80.6 | 91.4 | 80.6 | 64.5 | 43.0 | 37.6 |
| 75° | 714.9 | 301.0 | 123.6 | 102.1 | 75.3 | 59.1 | 69.9 | 59.1 | 37.6 | 26.9 | 21.5 |
| 77.5° | 478.4 | 193.5 | 91.4 | 69.9 | 48.4 | 37.6 | 48.4 | 32.3 | 16.1 | 5.4 | 5.4 |
| 80° | 295.6 | 134.4 | 59.1 | 43.0 | 26.9 | 16.1 | 10.8 | 5.4 | 5.4 | 0.0 | 0.0 |
| 82.5° | 129.0 | 86.0 | 32.3 | 21.5 | 10.8 | 5.4 | 5.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 69.9 | 26.9 | 10.8 | 5.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 21.5 | 10.8 | 5.4 | 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: SP1-2407-184-8

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-827-U-5WQ

Data in this report applies to families of products including GSS-SB1A-827-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

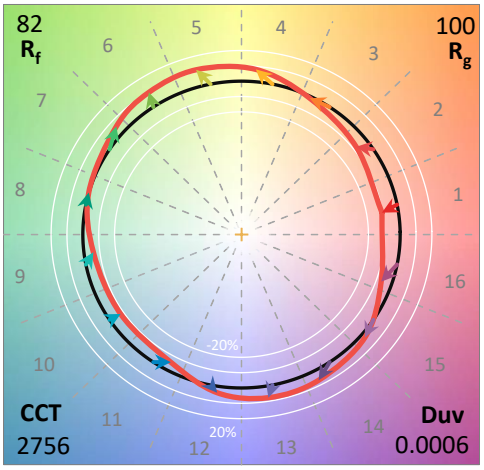
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-8 |
| 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-827-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 80 CRI 2700K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 2756 |
| CIE u': | 0.2599 |
| CIE v': | 0.5271 |
| Duv: | 0.0006 |
| CIE x: | 0.4563 |
| CIE y: | 0.4112 |
| CIE z: | 0.1325 |
| Peak Wavelength (nm): | 609 |
| Dominant Wavelength (nm): | 583 |
| Purity: | 60.41121 |
| Rf: | 82.2 |
| Rg: | 99.9 |

| | |
|---|---|
| CRI (Ra): | 82.9 |
| R1: | 81.6 |
| R2: | 88.8 |
| R3: | 96.0 |
| R4: | 83.4 |
| R5: | 81.4 |
| R6: | 87.0 |
| R7: | 84.0 |
| R8: | 60.8 |
| R9: | 10.8 |
| R10: | 74.8 |
| R11: | 84.3 |
| R12: | 72.1 |
| R13: | 82.9 |
| R14: | 97.3 |
| R15: | 73.7 |




## Test Conditions

| | |
|---|---|
| Stabilization Time: | 29M |
| Operation Time: | 1H 29M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-8

| 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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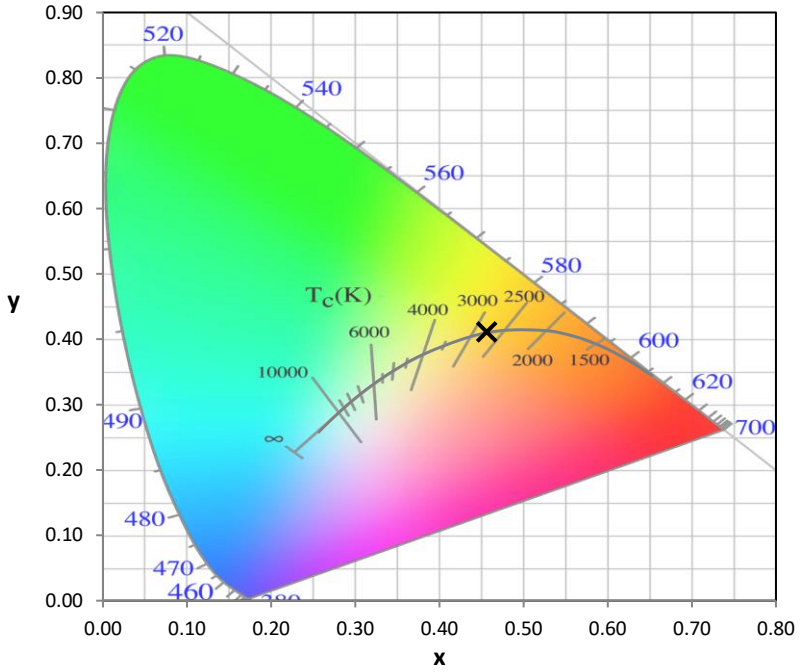
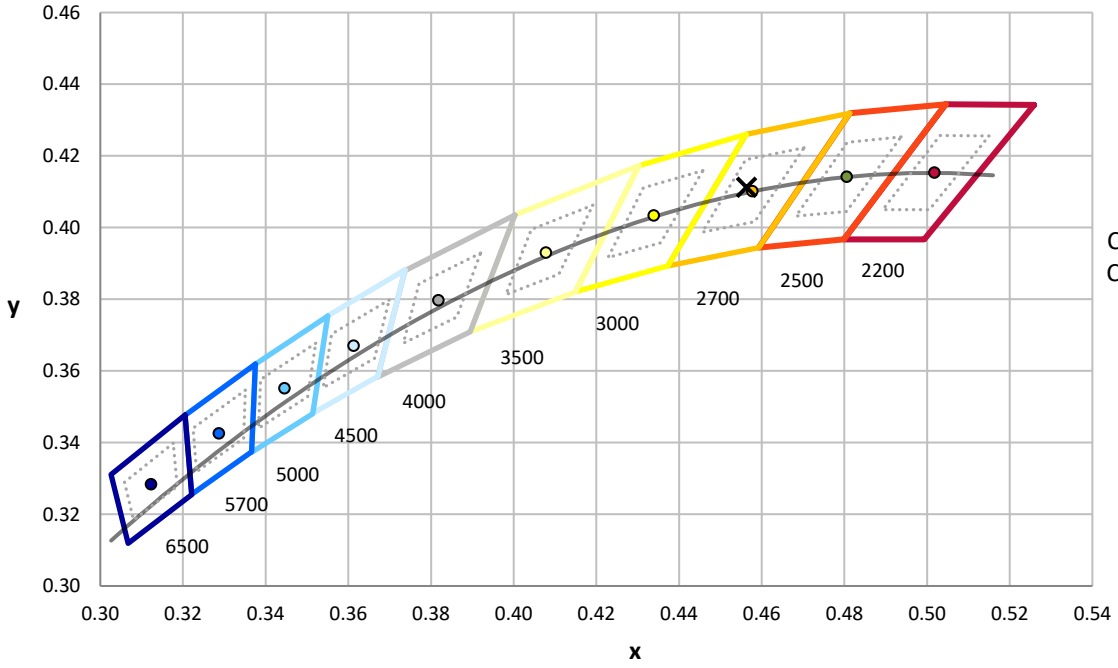
## CIE 1931 Chromaticity Diagram




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




CCT = 2756K
CIE x = 0.4563
CIE y = 0.4112
Duv = 0.0006

Point lies inside the ANSI 2700K 4-step quadrangle

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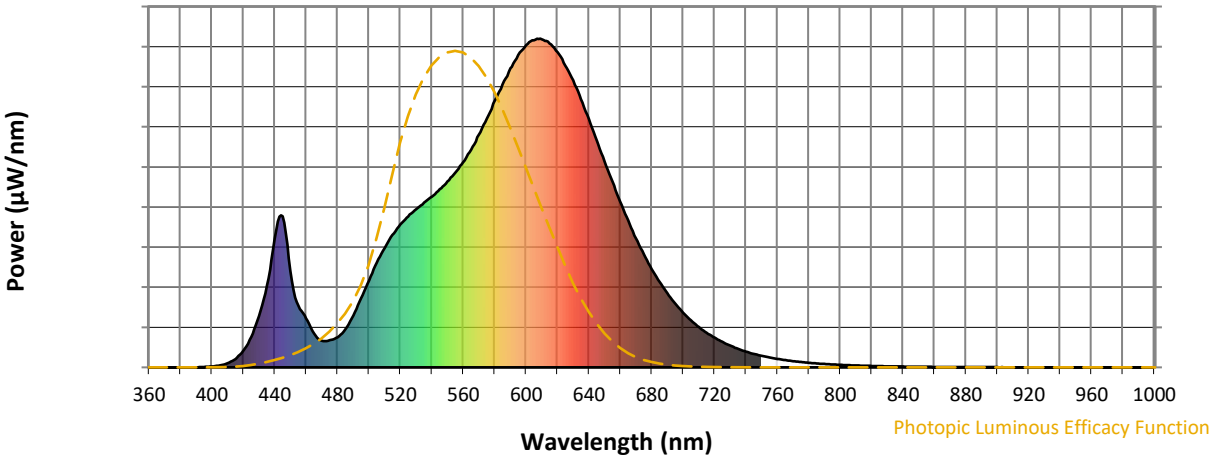
## Photopic Flux vs. Wavelength




## 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 | 158 | NR | 620 | 959 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 211 | NR | 625 | 918 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 264 | NR | 630 | 873 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 318 | NR | 635 | 816 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 363 | NR | 640 | 755 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 403 | NR | 645 | 689 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 435 | NR | 650 | 626 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 1 | NR | 525 | 459 | NR | 655 | 564 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 481 | NR | 660 | 503 | NR | 790 | 10 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 501 | NR | 665 | 447 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 13 | NR | 540 | 519 | NR | 670 | 392 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 26 | NR | 545 | 542 | NR | 675 | 343 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 51 | NR | 550 | 565 | NR | 680 | 299 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 93 | NR | 555 | 593 | NR | 685 | 260 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 156 | NR | 560 | 624 | NR | 690 | 225 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 250 | NR | 565 | 662 | NR | 695 | 194 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 391 | NR | 570 | 707 | NR | 700 | 166 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 460 | NR | 575 | 756 | NR | 705 | 143 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 293 | NR | 580 | 810 | NR | 710 | 122 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 188 | NR | 585 | 860 | NR | 715 | 105 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 149 | NR | 590 | 910 | NR | 720 | 90 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 103 | NR | 595 | 950 | NR | 725 | 77 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 80 | NR | 600 | 980 | NR | 730 | 66 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 82 | NR | 605 | 995 | NR | 735 | 56 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 92 | NR | 610 | 998 | NR | 740 | 48 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 116 | NR | 615 | 985 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

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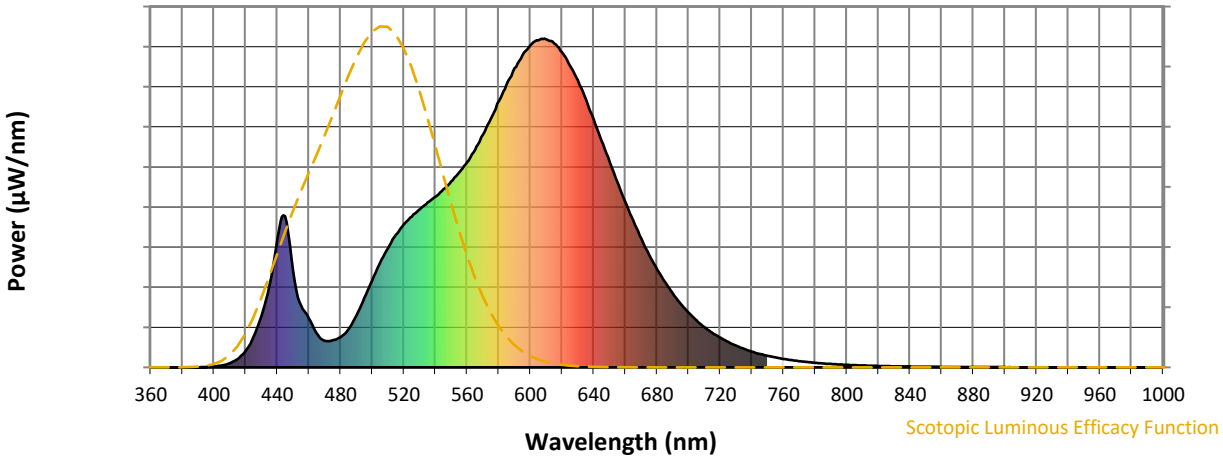
## Scotopic Flux vs. Wavelength




**Scotopic Lumens: NR** **S/P: 1.2**

| 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 | 158 | NR | 620 | 959 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 211 | NR | 625 | 918 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 264 | NR | 630 | 873 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 318 | NR | 635 | 816 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 363 | NR | 640 | 755 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 403 | NR | 645 | 689 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 435 | NR | 650 | 626 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 1 | NR | 525 | 459 | NR | 655 | 564 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 481 | NR | 660 | 503 | NR | 790 | 10 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 501 | NR | 665 | 447 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 13 | NR | 540 | 519 | NR | 670 | 392 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 26 | NR | 545 | 542 | NR | 675 | 343 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 51 | NR | 550 | 565 | NR | 680 | 299 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 93 | NR | 555 | 593 | NR | 685 | 260 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 156 | NR | 560 | 624 | NR | 690 | 225 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 250 | NR | 565 | 662 | NR | 695 | 194 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 391 | NR | 570 | 707 | NR | 700 | 166 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 460 | NR | 575 | 756 | NR | 705 | 143 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 293 | NR | 580 | 810 | NR | 710 | 122 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 188 | NR | 585 | 860 | NR | 715 | 105 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 149 | NR | 590 | 910 | NR | 720 | 90 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 103 | NR | 595 | 950 | NR | 725 | 77 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 80 | NR | 600 | 980 | NR | 730 | 66 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 82 | NR | 605 | 995 | NR | 735 | 56 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 92 | NR | 610 | 998 | NR | 740 | 48 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 116 | NR | 615 | 985 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

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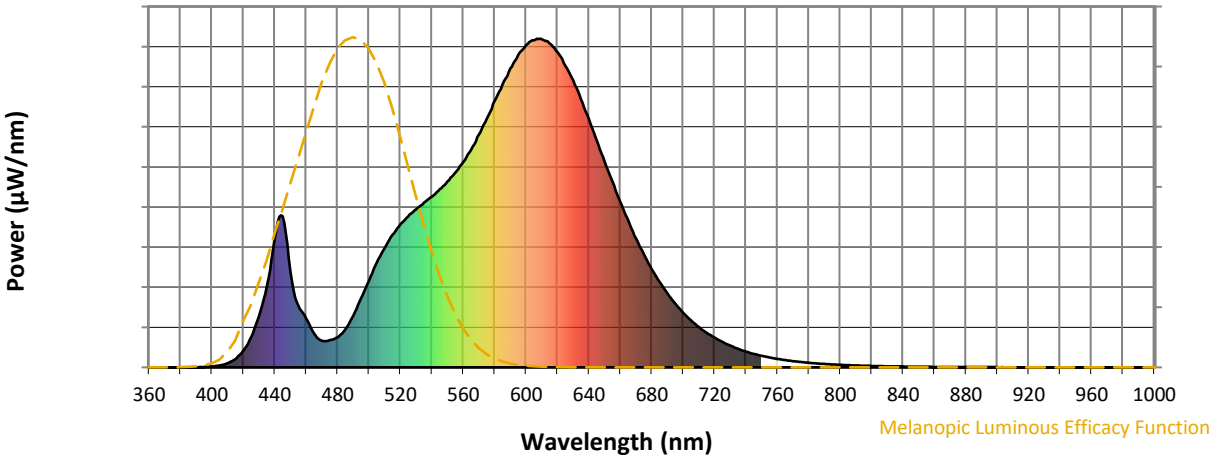
## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.16**

| 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 | 158 | NR | 620 | 959 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 211 | NR | 625 | 918 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 264 | NR | 630 | 873 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 318 | NR | 635 | 816 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 363 | NR | 640 | 755 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 403 | NR | 645 | 689 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 435 | NR | 650 | 626 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 1 | NR | 525 | 459 | NR | 655 | 564 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 481 | NR | 660 | 503 | NR | 790 | 10 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 501 | NR | 665 | 447 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 13 | NR | 540 | 519 | NR | 670 | 392 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 26 | NR | 545 | 542 | NR | 675 | 343 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 51 | NR | 550 | 565 | NR | 680 | 299 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 93 | NR | 555 | 593 | NR | 685 | 260 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 156 | NR | 560 | 624 | NR | 690 | 225 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 250 | NR | 565 | 662 | NR | 695 | 194 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 391 | NR | 570 | 707 | NR | 700 | 166 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 460 | NR | 575 | 756 | NR | 705 | 143 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 293 | NR | 580 | 810 | NR | 710 | 122 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 188 | NR | 585 | 860 | NR | 715 | 105 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 149 | NR | 590 | 910 | NR | 720 | 90 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 103 | NR | 595 | 950 | NR | 725 | 77 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 80 | NR | 600 | 980 | NR | 730 | 66 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 82 | NR | 605 | 995 | NR | 735 | 56 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 92 | NR | 610 | 998 | NR | 740 | 48 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 116 | NR | 615 | 985 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

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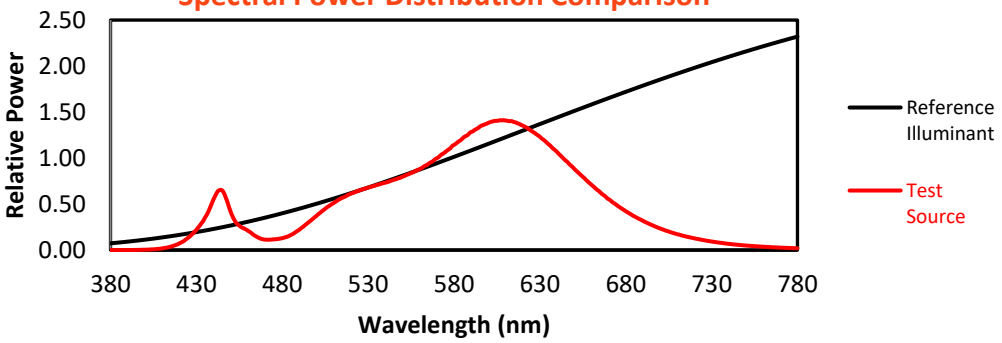
## TM-30-18

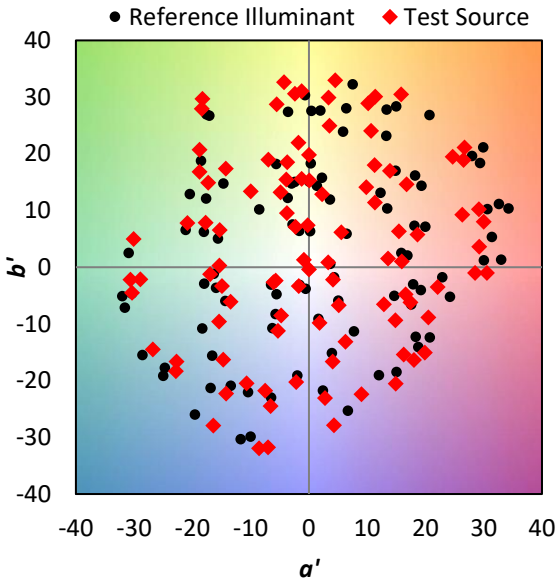
### Summary

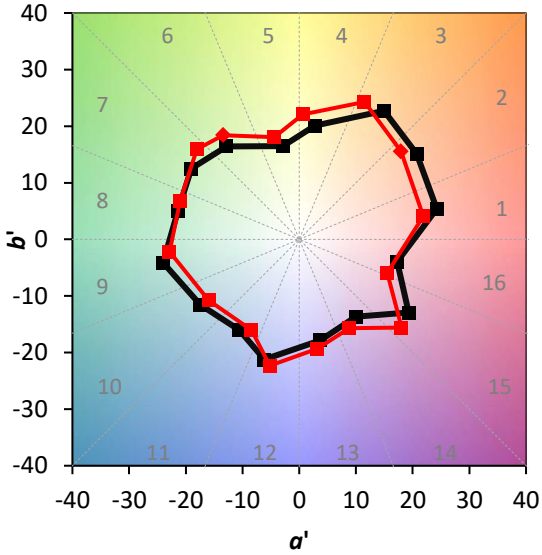
$R_f$ = 82.2
$R_g$ = 99.9
CIE $R_a$ = 82.9
$R_9$ = 10.8

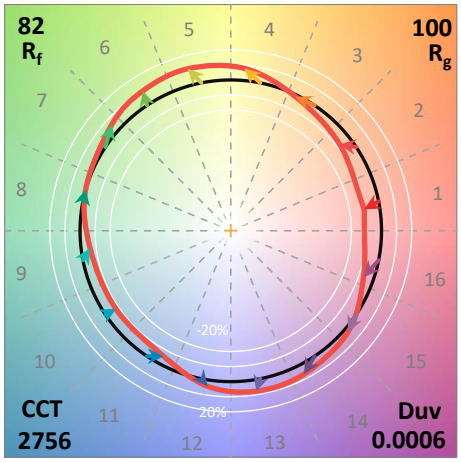
### Spectral Power Distribution Comparison

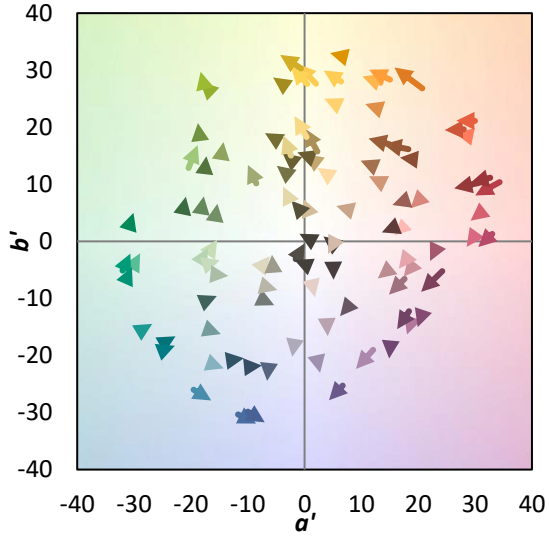



### Color Vector Graphics



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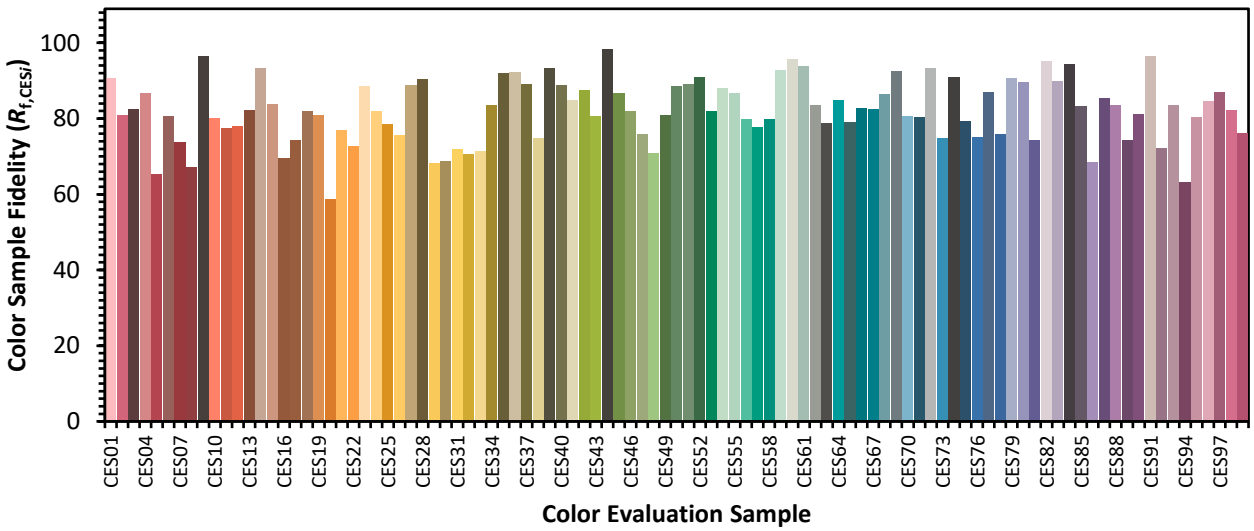
# TM-30-18

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

| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 76 | CES51 = 89 | CES76 = 75 |
| CES02 = 63 | CES27 = 89 | CES52 = 91 | CES77 = 87 |
| CES03 = 31 | CES28 = 90 | CES53 = 82 | CES78 = 76 |
| CES04 = 71 | CES29 = 68 | CES54 = 88 | CES79 = 91 |
| CES05 = 50 | CES30 = 69 | CES55 = 87 | CES80 = 90 |
| CES06 = 52 | CES31 = 72 | CES56 = 80 | CES81 = 74 |
| CES07 = 43 | CES32 = 71 | CES57 = 78 | CES82 = 95 |
| CES08 = 42 | CES33 = 71 | CES58 = 80 | CES83 = 90 |
| CES09 = 29 | CES34 = 84 | CES59 = 93 | CES84 = 94 |
| CES10 = 77 | CES35 = 92 | CES60 = 96 | CES85 = 83 |
| CES11 = 59 | CES36 = 92 | CES61 = 94 | CES86 = 69 |
| CES12 = 66 | CES37 = 89 | CES62 = 84 | CES87 = 85 |
| CES13 = 44 | CES38 = 75 | CES63 = 79 | CES88 = 84 |
| CES14 = 74 | CES39 = 93 | CES64 = 85 | CES89 = 74 |
| CES15 = 72 | CES40 = 89 | CES65 = 79 | CES90 = 81 |
| CES16 = 48 | CES41 = 85 | CES66 = 83 | CES91 = 96 |
| CES17 = 50 | CES42 = 88 | CES67 = 82 | CES92 = 72 |
| CES18 = 57 | CES43 = 81 | CES68 = 86 | CES93 = 84 |
| CES19 = 73 | CES44 = 98 | CES69 = 92 | CES94 = 63 |
| CES20 = 67 | CES45 = 87 | CES70 = 81 | CES95 = 80 |
| CES21 = 87 | CES46 = 82 | CES71 = 81 | CES96 = 85 |
| CES22 = 79 | CES47 = 76 | CES72 = 93 | CES97 = 87 |
| CES23 = 92 | CES48 = 71 | CES73 = 75 | CES98 = 82 |
| CES24 = 91 | CES49 = 81 | CES74 = 91 | CES99 = 76 |
| CES25 = 72 | CES50 = 88 | CES75 = 79 | |



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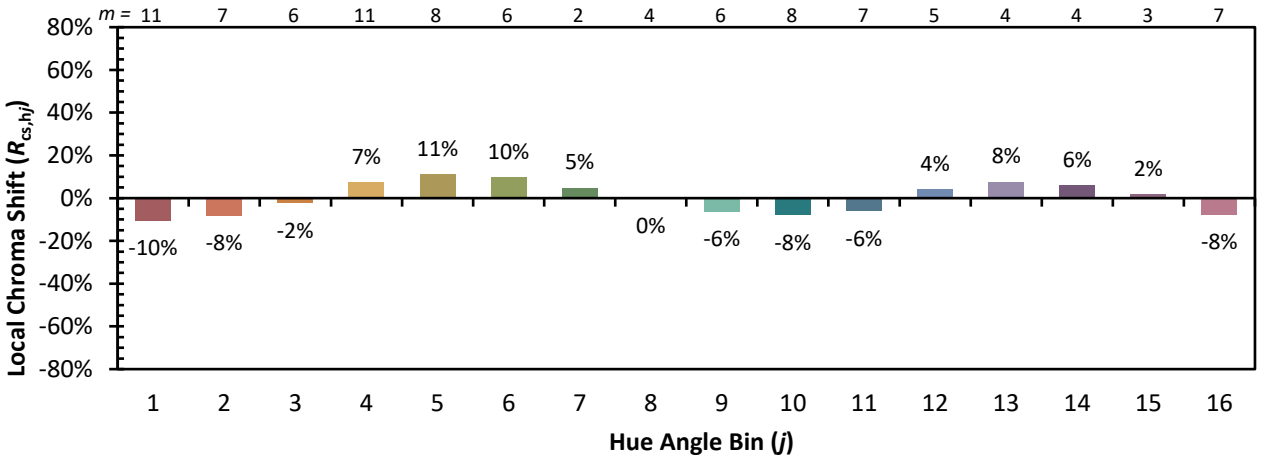
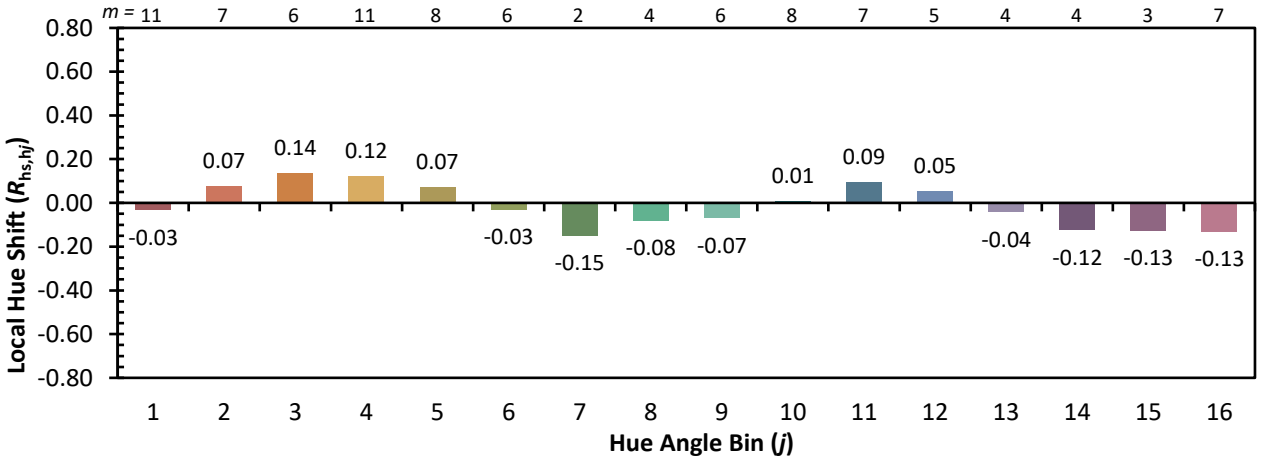
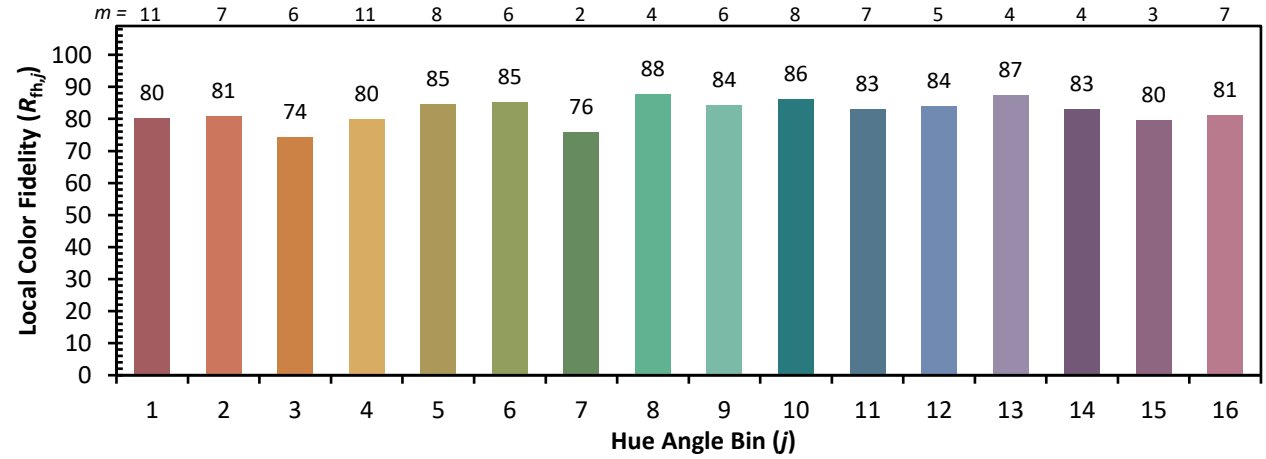
# TM-30-18

## Color Rendition by Hue-Angle Bin



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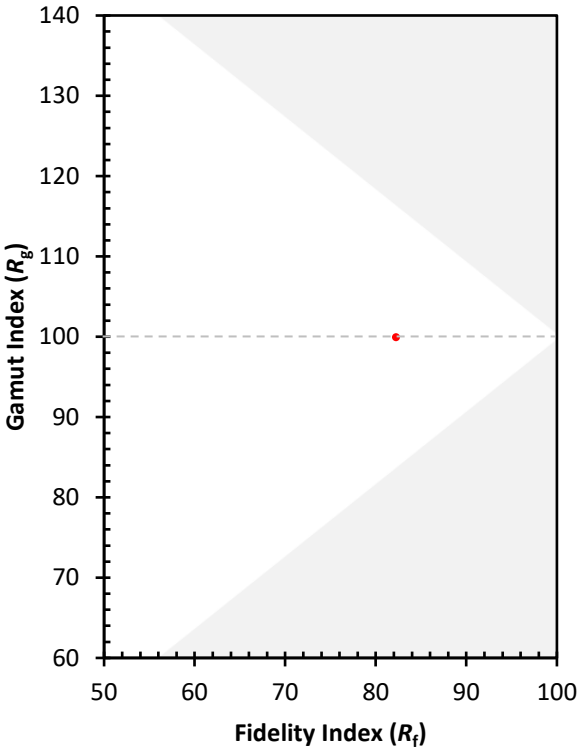
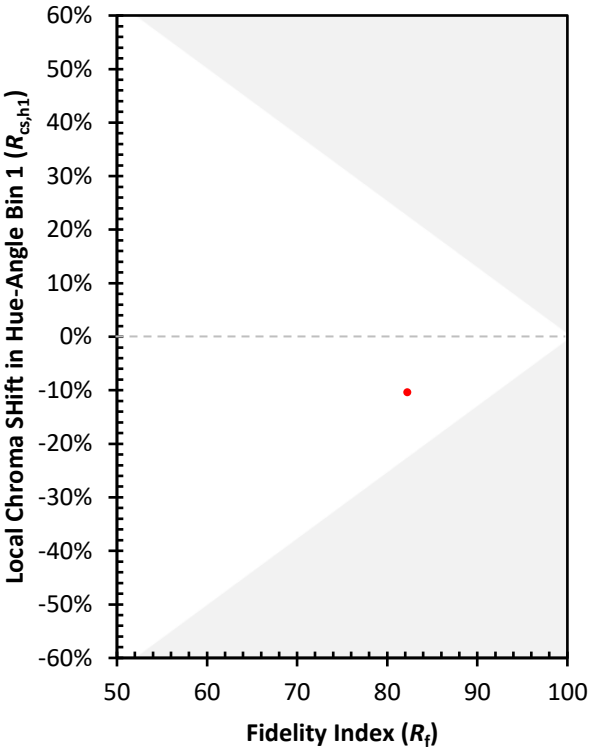
# TM-30-18

## Measure Comparisons




(END OF REPORT)