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: P1457920

Luminaire Tested: GLAN-SB2B-927-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: | P1457920 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 5/22/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | STREETWORKS |
| Catalog Number: | GLAN-SB2B-927-U-T2LG-HSS |
| Description: | GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 450mA 2xLight Square PACKAGE 90CRI 2700K FIXTURE w/ TYPE II LOW GLARE WITH HOUSE SIDE SHIELD |
| Light Source: | (52) 2700K CCT, 90 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 4962.2 lumens |
| Efficiency: | N/A |
| Efficacy: | 67.1 lumens/watt |
| Luminous Opening: | Rectangular (W 1' x L: 1' x H: 0') |
| IES Classification: | Type II - Short |
| BUG Rating: | B1 - U0 - G1 |

| | |
|---|---|
| Input Watts (W): | 73.9 |
| 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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REPORT NUMBER: P1457920
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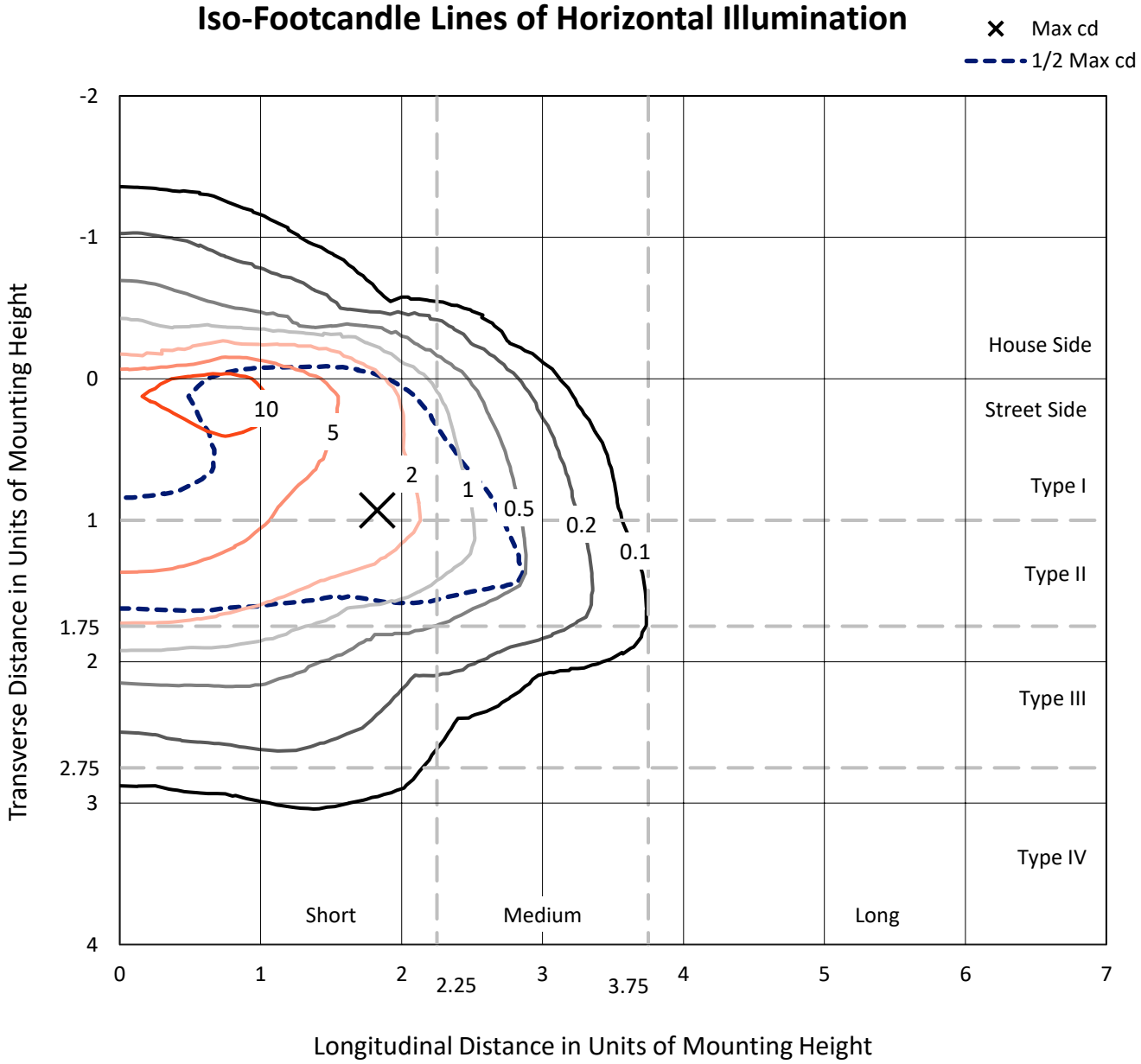
## Iso-Footcandle Lines of Horizontal Illumination




Based on 10 foot mounting height. Maximum calculated value = 14.2 fc
Type II - Short - N/A

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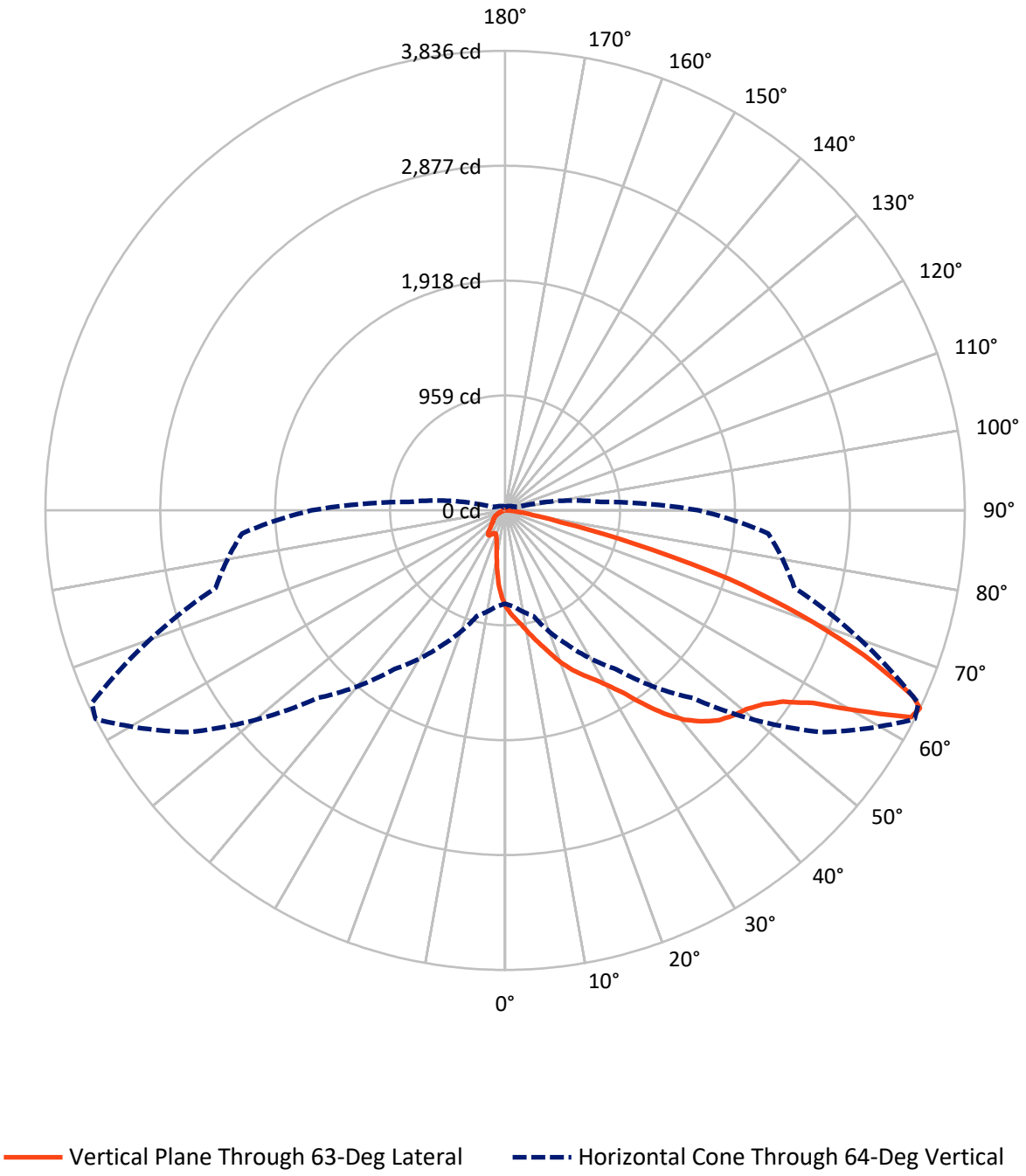
## Luminous Intensity Polar Plot



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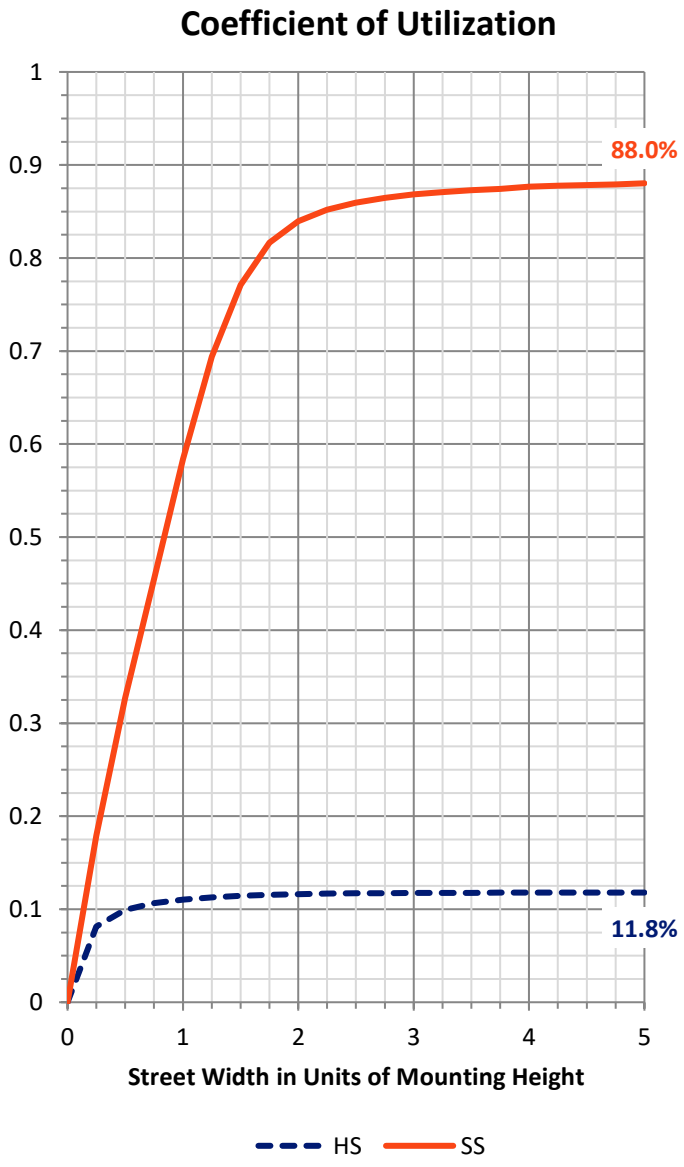
**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 588.8 | 0.0 | 588.8 |
| | % Fixture | 11.9 | 0.0 | 11.9 |
| **Street Side** | Lumens | 4373.3 | 0.0 | 4373.3 |
| | % Fixture | 88.1 | 0.0 | 88.1 |
| **Total** | Lumens | 4962.2 | 0.0 | 4962.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 67.6 | 1.4 |
| 10°-20° | 189.9 | 3.8 |
| 20°-30° | 338.1 | 6.8 |
| 30°-40° | 645.9 | 13.0 |
| 40°-50° | 1070.6 | 21.6 |
| 50°-60° | 1334.4 | 26.9 |
| 60°-70° | 995.1 | 20.1 |
| 70°-80° | 285.4 | 5.8 |
| 80°-90° | 35.3 | 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° | 4962.2 | 100.0 |
| 0°-180° | 4962.2 | 100.0 |



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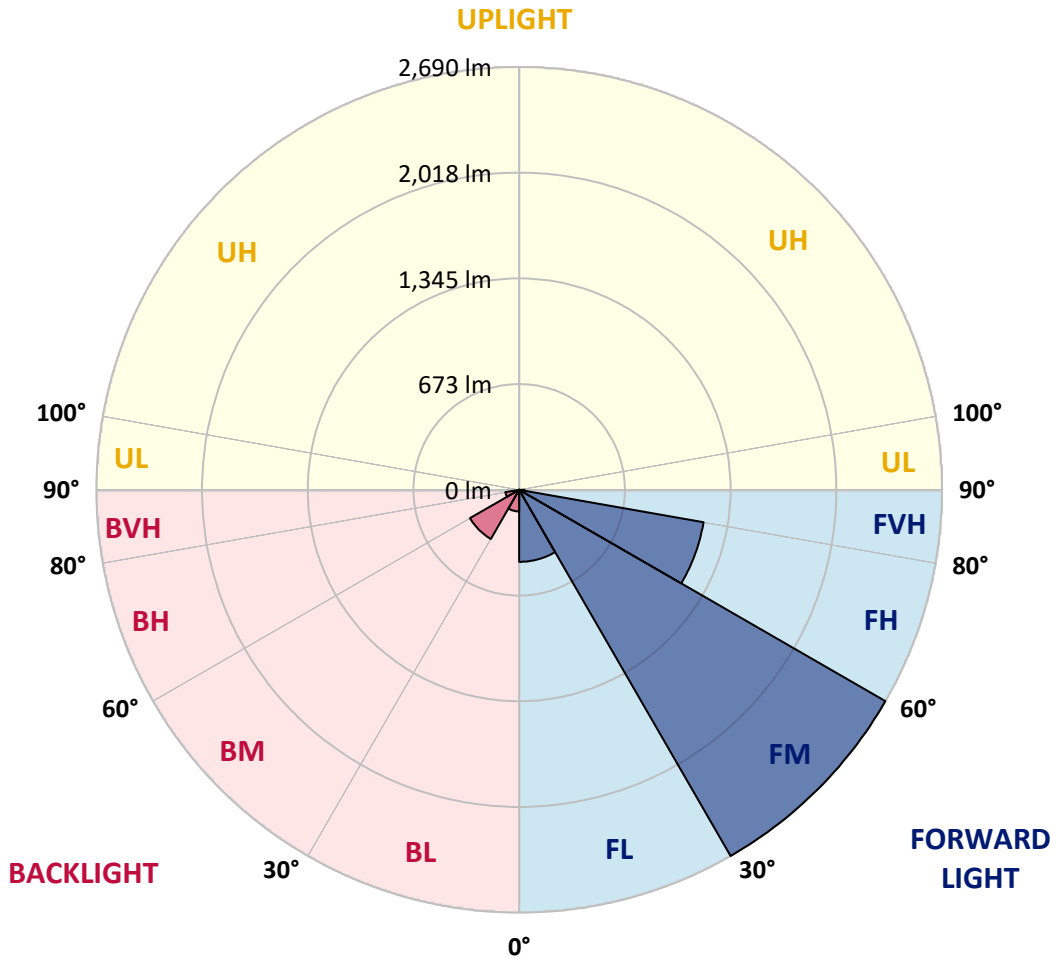
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 458.2 | 9.2 | | | |
| FM | (30°-60°) | 2690.2 | 54.2 | | | |
| FH | (60°-80°) | 1191.4 | 24.0 | | | G1/1800 |
| FVH | (80°-90°) | 33.5 | 0.7 | | | G1/100 |
| BL | (0°-30°) | 137.4 | 2.8 | B1/500 | | |
| BM | (30°-60°) | 360.7 | 7.3 | B1/1000 | | |
| BH | (60°-80°) | 89.1 | 1.8 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 1.7 | 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-G1**
Type II Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 63° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 802.3 | 802.3 | 802.3 | 802.3 | 802.3 | 802.3 | 802.3 | *802.3* | 802.3 | 802.3 | 802.3 |
| 2.5° | 899.1 | 896.1 | 893.1 | 888.7 | 882.7 | 876.7 | 869.3 | *858.9* | 854.4 | 839.5 | 821.7 |
| 5° | 945.2 | 945.2 | 943.7 | 940.8 | 937.8 | 931.8 | 922.9 | *909.5* | 903.5 | 882.7 | 851.4 |
| 7.5° | 957.1 | 958.6 | 963.1 | 969.0 | 978.0 | 976.5 | 976.5 | *961.6* | 958.6 | 936.3 | 894.6 |
| 10° | 936.3 | 937.8 | 949.7 | 966.1 | 992.9 | 1018.2 | 1036.0 | *1027.1* | 1022.6 | 1000.3 | 948.2 |
| 12.5° | 906.5 | 906.5 | 925.9 | 951.2 | 992.9 | 1040.5 | 1092.6 | *1101.5* | 1103.0 | 1077.7 | 1015.2 |
| 15° | 829.1 | 832.1 | 863.4 | 914.0 | 982.4 | 1056.9 | 1144.7 | *1178.9* | 1187.9 | 1171.5 | 1097.1 |
| 17.5° | 726.4 | 729.4 | 760.6 | 829.1 | 931.8 | 1056.9 | 1189.3 | *1268.2* | 1280.1 | 1283.1 | 1201.2 |
| 20° | 683.2 | 683.2 | 701.1 | 753.2 | 860.4 | 1028.6 | 1216.1 | *1363.5* | 1390.3 | 1423.0 | 1315.9 |
| 22.5° | 689.2 | 689.2 | 699.6 | 729.4 | 815.7 | 989.9 | 1232.5 | *1448.3* | 1503.4 | 1586.8 | 1463.2 |
| 25° | 721.9 | 721.9 | 730.9 | 750.2 | 820.2 | 983.9 | 1263.8 | *1524.3* | 1612.1 | 1769.9 | 1631.4 |
| 27.5° | 774.0 | 772.6 | 780.0 | 799.3 | 863.4 | 1012.2 | 1315.9 | *1600.2* | 1698.4 | 1975.3 | 1824.9 |
| 30° | 850.0 | 845.5 | 848.5 | 870.8 | 933.3 | 1077.7 | 1391.8 | *1696.9* | 1796.7 | 2200.1 | 2039.3 |
| 32.5° | 1025.6 | 1024.1 | 980.9 | 969.0 | 1036.0 | 1183.4 | 1496.0 | *1817.5* | 1929.1 | 2438.2 | 2259.6 |
| 35° | 1342.7 | 1363.5 | 1302.5 | 1146.2 | 1159.6 | 1324.8 | 1644.8 | *1981.2* | 2084.0 | 2691.3 | 2499.3 |
| 37.5° | 1664.2 | 1664.2 | 1638.9 | 1454.3 | 1360.5 | 1481.1 | 1805.6 | *2149.4* | 2256.6 | 2895.2 | 2730.0 |
| 40° | 1918.7 | 1932.1 | 1902.4 | 1763.9 | 1641.9 | 1659.7 | 1966.4 | *2296.8* | 2395.1 | 3020.2 | 2893.7 |
| 42.5° | 2107.8 | 2104.8 | 2092.9 | 2002.1 | 1933.6 | 1893.4 | 2112.2 | *2407.0* | 2500.7 | 3084.2 | 2996.4 |
| 45° | 2311.7 | 2311.7 | 2295.3 | 2220.9 | 2164.3 | 2130.1 | 2220.9 | *2499.3* | 2597.5 | 3123.0 | 3060.4 |
| 47.5° | 2524.6 | 2521.6 | 2505.2 | 2423.3 | 2362.3 | 2311.7 | 2331.0 | *2558.8* | 2657.0 | 3097.6 | 3070.9 |
| 50° | 2576.7 | 2573.7 | 2610.9 | 2613.9 | 2558.8 | 2462.0 | 2418.9 | *2609.4* | 2695.7 | 3099.1 | 3103.6 |
| 52.5° | 2515.6 | 2533.5 | 2588.6 | 2655.6 | 2718.1 | 2616.8 | 2512.7 | *2689.8* | 2779.1 | 3140.8 | 3185.5 |
| 55° | 2363.8 | 2371.2 | 2476.9 | 2584.1 | 2730.0 | 2765.7 | 2663.0 | *2817.8* | 2896.7 | 3181.0 | 3258.4 |
| 57.5° | 2081.0 | 2109.3 | 2222.4 | 2408.5 | 2630.2 | 2779.1 | 2925.0 | *3032.1* | 3091.7 | 3197.4 | 3218.2 |
| 60° | 1570.4 | 1585.3 | 1830.9 | 2072.0 | 2423.3 | 2671.9 | 3169.1 | *3395.4* | 3387.9 | 3012.8 | 2936.9 |
| 62.5° | 955.6 | 969.0 | 1144.7 | 1527.2 | 1969.3 | 2448.6 | 3251.0 | *3801.7* | 3761.5 | 2701.7 | 2472.5 |
| 64° | *778.5* | *803.8* | *912.5* | *1240.0* | *1619.5* | *2214.9* | *3227.1* | *3836.0* | *3804.7* | *2500.7* | *2203.0* |
| 65° | 665.4 | 699.6 | 811.3 | 1076.2 | 1376.9 | 1963.4 | 3161.7 | *3740.7* | 3719.9 | 2378.7 | 1979.8 |
| 67.5° | 418.3 | 434.7 | 599.9 | 836.6 | 948.2 | 1256.3 | 2718.1 | *3234.6* | 3271.8 | 2119.7 | 1460.3 |
| 70° | 311.1 | 318.5 | 412.3 | 647.5 | 739.8 | 730.9 | 1866.6 | *2619.8* | 2628.8 | 1695.4 | 881.2 |
| 72.5° | 226.3 | 227.7 | 288.8 | 479.3 | 579.0 | 498.7 | 983.9 | *1947.0* | 1883.0 | 992.9 | 480.8 |
| 75° | 150.3 | 156.3 | 202.4 | 337.9 | 451.0 | 366.2 | 448.0 | *1109.0* | 1089.6 | 485.3 | 275.4 |
| 77.5° | 110.2 | 111.6 | 136.9 | 226.3 | 354.3 | 269.4 | 270.9 | *477.8* | 492.7 | 288.8 | 174.2 |
| 80° | 62.5 | 65.5 | 89.3 | 138.4 | 230.7 | 184.6 | 151.8 | *230.7* | 265.0 | 196.5 | 116.1 |
| 82.5° | 37.2 | 40.2 | 64.0 | 90.8 | 157.8 | 75.9 | 77.4 | *126.5* | 157.8 | 141.4 | 62.5 |
| 85° | 22.3 | 23.8 | 40.2 | 49.1 | 93.8 | 50.6 | 28.3 | *62.5* | 81.9 | 83.4 | 34.2 |
| 87.5° | 14.9 | 14.9 | 22.3 | 20.8 | 26.8 | 23.8 | 11.9 | *16.4* | 20.8 | 28.3 | 13.4 |
| 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: P1457920
CATALOG NUMBER: GLAN-SB2B-927-U-T2LG-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 802.3 | 802.3 | 802.3 | 802.3 | 802.3 | 802.3 | 802.3 | 802.3 | 802.3 | 802.3 | 802.3 |
| 2.5° | 806.8 | 797.9 | 771.1 | 735.3 | 702.6 | 677.3 | 646.0 | 625.2 | 605.8 | 605.8 | 589.5 |
| 5° | 826.1 | 802.3 | 736.8 | 655.0 | 567.1 | 483.8 | 430.2 | 370.6 | 351.3 | 334.9 | 337.9 |
| 7.5° | 858.9 | 815.7 | 699.6 | 552.2 | 412.3 | 323.0 | 263.5 | 236.7 | 224.8 | 217.3 | 218.8 |
| 10° | 899.1 | 839.5 | 655.0 | 448.0 | 303.7 | 236.7 | 208.4 | 198.0 | 193.5 | 192.0 | 192.0 |
| 12.5° | 954.2 | 867.8 | 610.3 | 360.2 | 239.7 | 203.9 | 189.0 | 183.1 | 178.6 | 175.6 | 175.6 |
| 15° | 1019.6 | 903.5 | 558.2 | 296.2 | 209.9 | 187.6 | 175.6 | 169.7 | 163.7 | 162.3 | 162.3 |
| 17.5° | 1103.0 | 940.8 | 512.1 | 254.5 | 195.0 | 175.6 | 163.7 | 156.3 | 151.8 | 150.3 | 150.3 |
| 20° | 1195.3 | 986.9 | 465.9 | 230.7 | 184.6 | 163.7 | 151.8 | 145.9 | 141.4 | 138.4 | 139.9 |
| 22.5° | 1312.9 | 1045.0 | 436.1 | 218.8 | 175.6 | 153.3 | 141.4 | 135.5 | 131.0 | 128.0 | 129.5 |
| 25° | 1442.4 | 1117.9 | 419.8 | 218.8 | 169.7 | 145.9 | 132.5 | 126.5 | 122.1 | 119.1 | 119.1 |
| 27.5° | 1600.2 | 1199.8 | 421.3 | 227.7 | 168.2 | 139.9 | 125.0 | 119.1 | 114.6 | 110.2 | 110.2 |
| 30° | 1774.3 | 1296.5 | 437.6 | 244.1 | 171.2 | 134.0 | 119.1 | 110.2 | 107.2 | 102.7 | 102.7 |
| 32.5° | 1958.9 | 1408.2 | 479.3 | 265.0 | 168.2 | 126.5 | 110.2 | 102.7 | 98.2 | 95.3 | 95.3 |
| 35° | 2153.9 | 1534.7 | 531.4 | 273.9 | 153.3 | 116.1 | 102.7 | 95.3 | 92.3 | 90.8 | 89.3 |
| 37.5° | 2340.0 | 1644.8 | 559.7 | 256.0 | 134.0 | 107.2 | 93.8 | 86.3 | 84.8 | 81.9 | 81.9 |
| 40° | 2484.4 | 1735.6 | 543.3 | 218.8 | 123.5 | 98.2 | 86.3 | 78.9 | 75.9 | 72.9 | 72.9 |
| 42.5° | 2569.2 | 1768.4 | 483.8 | 186.1 | 116.1 | 89.3 | 78.9 | 71.4 | 68.5 | 67.0 | 67.0 |
| 45° | 2618.3 | 1763.9 | 413.8 | 166.7 | 108.7 | 81.9 | 71.4 | 67.0 | 62.5 | 61.0 | 59.5 |
| 47.5° | 2616.8 | 1717.8 | 363.2 | 150.3 | 101.2 | 75.9 | 67.0 | 62.5 | 58.1 | 56.6 | 56.6 |
| 50° | 2606.4 | 1649.3 | 306.6 | 138.4 | 95.3 | 71.4 | 62.5 | 59.5 | 55.1 | 53.6 | 52.1 |
| 52.5° | 2631.7 | 1610.6 | 256.0 | 131.0 | 87.8 | 68.5 | 61.0 | 56.6 | 50.6 | 49.1 | 49.1 |
| 55° | 2663.0 | 1588.3 | 205.4 | 123.5 | 81.9 | 67.0 | 58.1 | 53.6 | 47.6 | 46.1 | 46.1 |
| 57.5° | 2572.2 | 1503.4 | 169.7 | 111.6 | 74.4 | 64.0 | 55.1 | 52.1 | 46.1 | 41.7 | 41.7 |
| 60° | 2286.4 | 1242.9 | 139.9 | 98.2 | 68.5 | 59.5 | 52.1 | 47.6 | 41.7 | 35.7 | 35.7 |
| 62.5° | 1859.2 | 948.2 | 116.1 | 83.4 | 64.0 | 55.1 | 47.6 | 43.2 | 35.7 | 28.3 | 28.3 |
| 64° | *1615.1* | *805.3* | *104.2* | *72.9* | *61.0* | *50.6* | *43.2* | *38.7* | *31.3* | *23.8* | *22.3* |
| 65° | 1448.3 | 711.5 | 96.8 | 68.5 | 59.5 | 47.6 | 41.7 | 37.2 | 28.3 | 22.3 | 20.8 |
| 67.5° | 1019.6 | 477.8 | 77.4 | 56.6 | 52.1 | 40.2 | 35.7 | 31.3 | 25.3 | 19.4 | 17.9 |
| 70° | 593.9 | 270.9 | 61.0 | 47.6 | 40.2 | 31.3 | 29.8 | 28.3 | 22.3 | 14.9 | 14.9 |
| 72.5° | 323.0 | 135.5 | 46.1 | 38.7 | 31.3 | 22.3 | 25.3 | 22.3 | 17.9 | 11.9 | 10.4 |
| 75° | 198.0 | 83.4 | 34.2 | 28.3 | 20.8 | 16.4 | 19.4 | 16.4 | 10.4 | 7.4 | 6.0 |
| 77.5° | 132.5 | 53.6 | 25.3 | 19.4 | 13.4 | 10.4 | 13.4 | 8.9 | 4.5 | 1.5 | 1.5 |
| 80° | 81.9 | 37.2 | 16.4 | 11.9 | 7.4 | 4.5 | 3.0 | 1.5 | 1.5 | 0.0 | 0.0 |
| 82.5° | 35.7 | 23.8 | 8.9 | 6.0 | 3.0 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 19.4 | 7.4 | 3.0 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 6.0 | 3.0 | 1.5 | 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: SP1-2407-184-13

Test Date: 10/11/2024

Luminaire Tested: GSS-SB1A-927-U-5WQ

Data in this report applies to families of products including GSS-SB1A-927-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

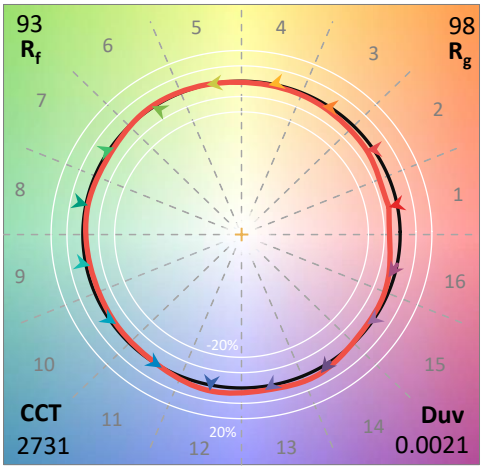
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-13 |
| 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-927-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 90 CRI 2700K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 2731 |
| CIE u': | 0.2605 |
| CIE v': | 0.5298 |
| Duv: | 0.0021 |
| CIE x: | 0.4610 |
| CIE y: | 0.4166 |
| CIE z: | 0.1224 |
| Peak Wavelength (nm): | 622 |
| Dominant Wavelength (nm): | 583 |
| Purity: | 63.43685 |
| Rf: | 92.6 |
| Rg: | 98 |

| | | | | | |
|---|---|---|---|---|---|
| CRI (Ra): | 91.8 | | | | |
| R1: | 91.4 | R9: | 54.7 | | |
| R2: | 95.1 | R10: | 87.7 | | |
| R3: | 97.6 | R11: | 92.9 | | |
| R4: | 92.3 | R12: | 84.0 | | |
| R5: | 91.1 | R13: | 92.2 | | |
| R6: | 94.7 | R14: | 97.8 | | |
| R7: | 92.3 | R15: | 86.8 | | |
| R8: | 80.0 | | | | |




## Test Conditions

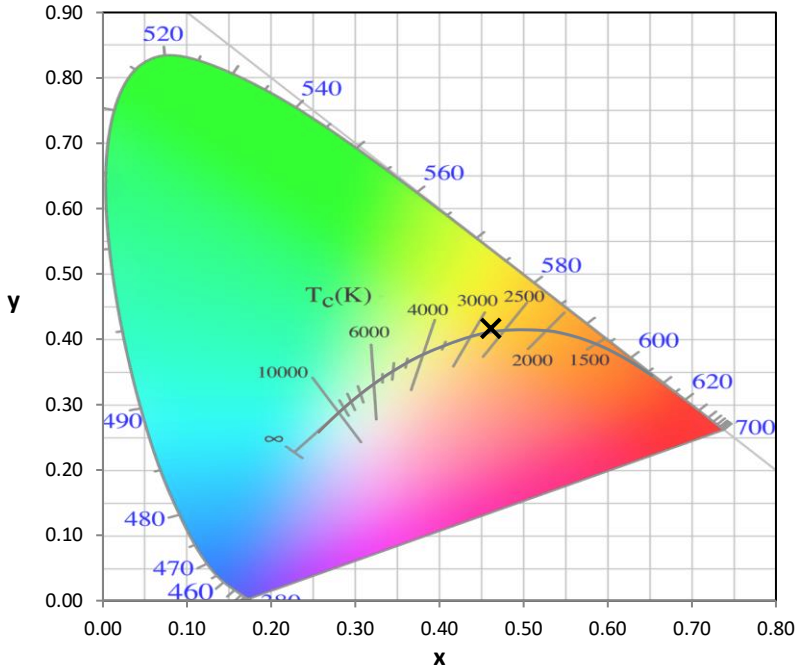
| | |
|---|---|
| Stabilization Time: | M |
| Operation Time: | 1H 0M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-13

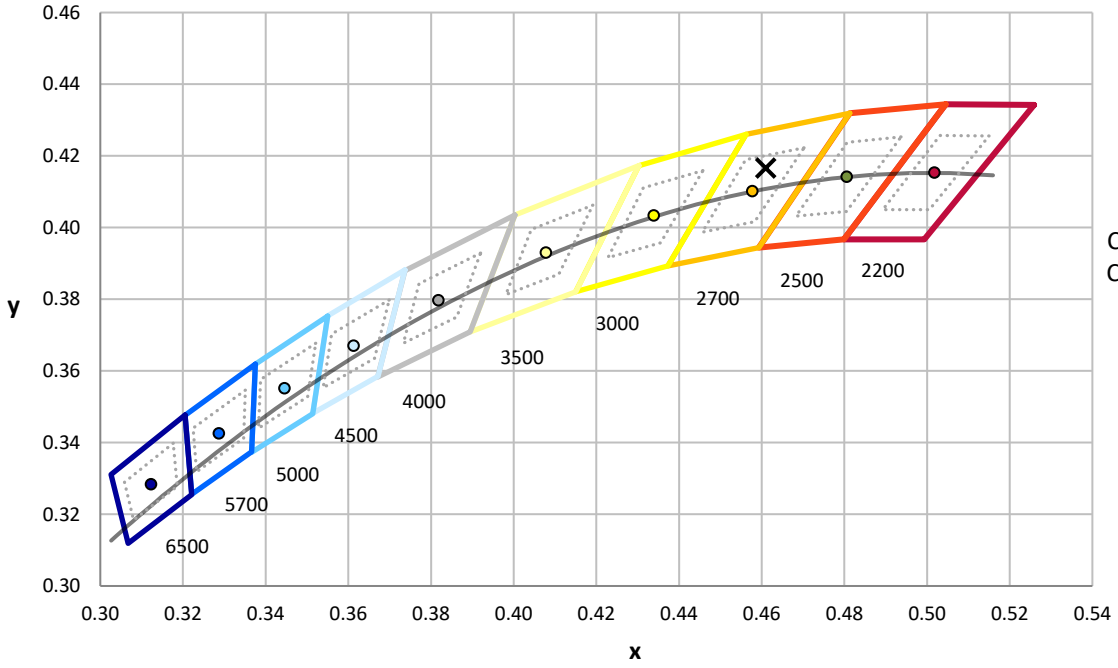
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

REPORT NUMBER: SP1-2407-184-13

## CIE 1931 Chromaticity Diagram




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




CCT = 2731K
CIE x = 0.4610
CIE y = 0.4166
Duv = 0.0021

Point lies inside the ANSI 2700K 4-step quadrangle

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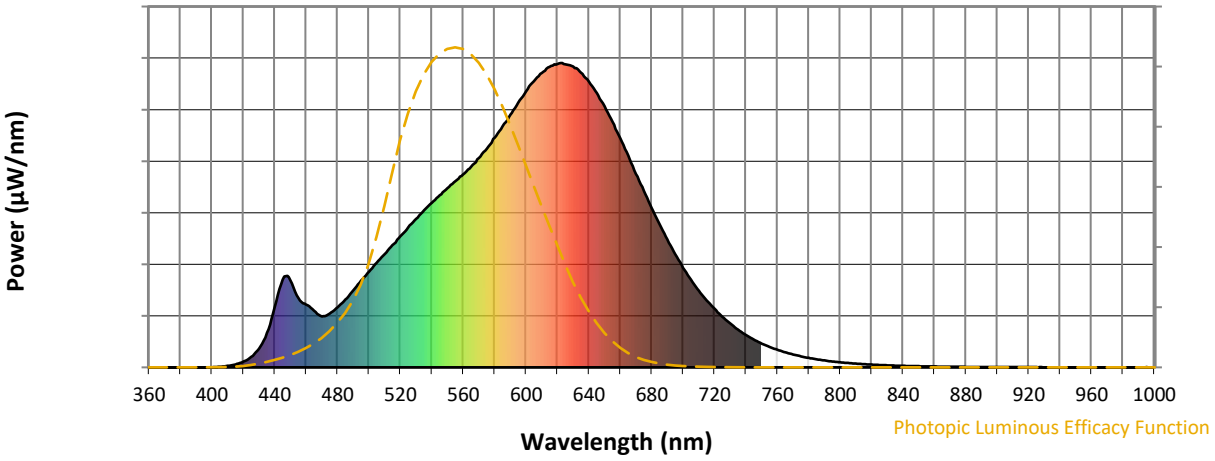
## Photopic Flux vs. Wavelength




## 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 | 253 | NR | 620 | 997 | NR | 750 | 78 | NR | 880 | 2 | NR |
| 365 | 0 | NR | 495 | 285 | NR | 625 | 996 | NR | 755 | 67 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 314 | NR | 630 | 989 | NR | 760 | 58 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 969 | NR | 765 | 50 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 372 | NR | 640 | 939 | NR | 770 | 42 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 401 | NR | 645 | 901 | NR | 775 | 36 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 431 | NR | 650 | 858 | NR | 780 | 31 | NR | 910 | 1 | NR |
| 395 | 0 | NR | 525 | 459 | NR | 655 | 806 | NR | 785 | 26 | NR | 915 | 1 | NR |
| 400 | 0 | NR | 530 | 488 | NR | 660 | 752 | NR | 790 | 23 | NR | 920 | 1 | NR |
| 405 | 2 | NR | 535 | 516 | NR | 665 | 696 | NR | 795 | 19 | NR | 925 | 1 | NR |
| 410 | 5 | NR | 540 | 540 | NR | 670 | 636 | NR | 800 | 17 | NR | 930 | 0 | NR |
| 415 | 10 | NR | 545 | 566 | NR | 675 | 579 | NR | 805 | 14 | NR | 935 | 0 | NR |
| 420 | 19 | NR | 550 | 589 | NR | 680 | 524 | NR | 810 | 12 | NR | 940 | 0 | NR |
| 425 | 34 | NR | 555 | 612 | NR | 685 | 470 | NR | 815 | 11 | NR | 945 | 0 | NR |
| 430 | 61 | NR | 560 | 634 | NR | 690 | 421 | NR | 820 | 9 | NR | 950 | 0 | NR |
| 435 | 113 | NR | 565 | 660 | NR | 695 | 371 | NR | 825 | 8 | NR | 955 | 0 | NR |
| 440 | 198 | NR | 570 | 688 | NR | 700 | 327 | NR | 830 | 7 | NR | 960 | 0 | NR |
| 445 | 288 | NR | 575 | 719 | NR | 705 | 288 | NR | 835 | 6 | NR | 965 | 0 | NR |
| 450 | 286 | NR | 580 | 754 | NR | 710 | 251 | NR | 840 | 5 | NR | 970 | 0 | NR |
| 455 | 228 | NR | 585 | 791 | NR | 715 | 220 | NR | 845 | 4 | NR | 975 | 0 | NR |
| 460 | 207 | NR | 590 | 831 | NR | 720 | 192 | NR | 850 | 4 | NR | 980 | 0 | NR |
| 465 | 186 | NR | 595 | 870 | NR | 725 | 166 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 168 | NR | 600 | 907 | NR | 730 | 144 | NR | 860 | 3 | NR | 990 | 1 | NR |
| 475 | 177 | NR | 605 | 940 | NR | 735 | 124 | NR | 865 | 2 | NR | 995 | 1 | NR |
| 480 | 198 | NR | 610 | 967 | NR | 740 | 106 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 223 | NR | 615 | 988 | NR | 745 | 91 | NR | 875 | 2 | NR | | | |

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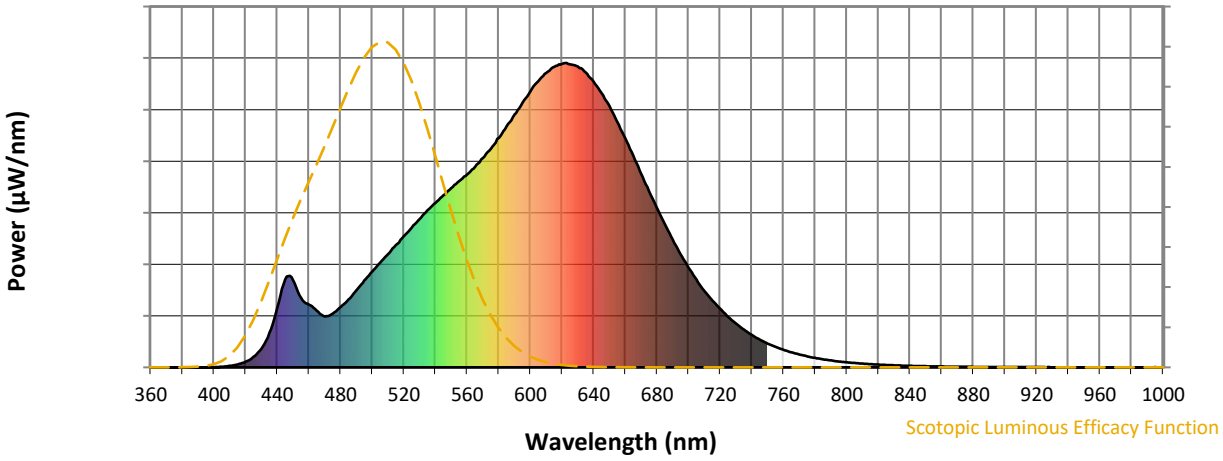
## Scotopic Flux vs. Wavelength




**Scotopic Lumens: NR** **S/P: 1.27**

| 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 | 253 | NR | 620 | 997 | NR | 750 | 78 | NR | 880 | 2 | NR |
| 365 | 0 | NR | 495 | 285 | NR | 625 | 996 | NR | 755 | 67 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 314 | NR | 630 | 989 | NR | 760 | 58 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 969 | NR | 765 | 50 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 372 | NR | 640 | 939 | NR | 770 | 42 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 401 | NR | 645 | 901 | NR | 775 | 36 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 431 | NR | 650 | 858 | NR | 780 | 31 | NR | 910 | 1 | NR |
| 395 | 0 | NR | 525 | 459 | NR | 655 | 806 | NR | 785 | 26 | NR | 915 | 1 | NR |
| 400 | 0 | NR | 530 | 488 | NR | 660 | 752 | NR | 790 | 23 | NR | 920 | 1 | NR |
| 405 | 2 | NR | 535 | 516 | NR | 665 | 696 | NR | 795 | 19 | NR | 925 | 1 | NR |
| 410 | 5 | NR | 540 | 540 | NR | 670 | 636 | NR | 800 | 17 | NR | 930 | 0 | NR |
| 415 | 10 | NR | 545 | 566 | NR | 675 | 579 | NR | 805 | 14 | NR | 935 | 0 | NR |
| 420 | 19 | NR | 550 | 589 | NR | 680 | 524 | NR | 810 | 12 | NR | 940 | 0 | NR |
| 425 | 34 | NR | 555 | 612 | NR | 685 | 470 | NR | 815 | 11 | NR | 945 | 0 | NR |
| 430 | 61 | NR | 560 | 634 | NR | 690 | 421 | NR | 820 | 9 | NR | 950 | 0 | NR |
| 435 | 113 | NR | 565 | 660 | NR | 695 | 371 | NR | 825 | 8 | NR | 955 | 0 | NR |
| 440 | 198 | NR | 570 | 688 | NR | 700 | 327 | NR | 830 | 7 | NR | 960 | 0 | NR |
| 445 | 288 | NR | 575 | 719 | NR | 705 | 288 | NR | 835 | 6 | NR | 965 | 0 | NR |
| 450 | 286 | NR | 580 | 754 | NR | 710 | 251 | NR | 840 | 5 | NR | 970 | 0 | NR |
| 455 | 228 | NR | 585 | 791 | NR | 715 | 220 | NR | 845 | 4 | NR | 975 | 0 | NR |
| 460 | 207 | NR | 590 | 831 | NR | 720 | 192 | NR | 850 | 4 | NR | 980 | 0 | NR |
| 465 | 186 | NR | 595 | 870 | NR | 725 | 166 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 168 | NR | 600 | 907 | NR | 730 | 144 | NR | 860 | 3 | NR | 990 | 1 | NR |
| 475 | 177 | NR | 605 | 940 | NR | 735 | 124 | NR | 865 | 2 | NR | 995 | 1 | NR |
| 480 | 198 | NR | 610 | 967 | NR | 740 | 106 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 223 | NR | 615 | 988 | NR | 745 | 91 | NR | 875 | 2 | NR | | | |

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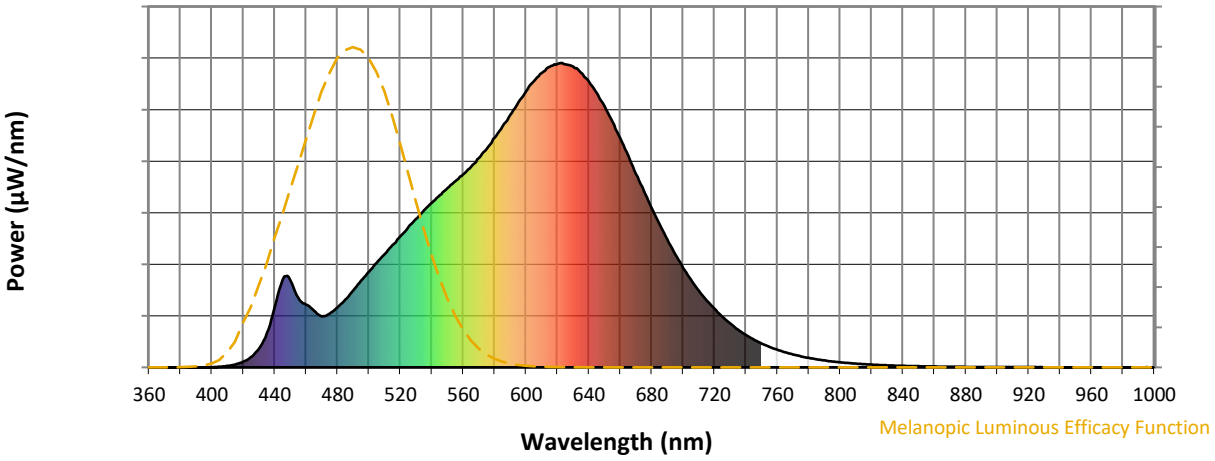
## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.38**

| 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 | 253 | NR | 620 | 997 | NR | 750 | 78 | NR | 880 | 2 | NR |
| 365 | 0 | NR | 495 | 285 | NR | 625 | 996 | NR | 755 | 67 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 314 | NR | 630 | 989 | NR | 760 | 58 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 969 | NR | 765 | 50 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 372 | NR | 640 | 939 | NR | 770 | 42 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 401 | NR | 645 | 901 | NR | 775 | 36 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 431 | NR | 650 | 858 | NR | 780 | 31 | NR | 910 | 1 | NR |
| 395 | 0 | NR | 525 | 459 | NR | 655 | 806 | NR | 785 | 26 | NR | 915 | 1 | NR |
| 400 | 0 | NR | 530 | 488 | NR | 660 | 752 | NR | 790 | 23 | NR | 920 | 1 | NR |
| 405 | 2 | NR | 535 | 516 | NR | 665 | 696 | NR | 795 | 19 | NR | 925 | 1 | NR |
| 410 | 5 | NR | 540 | 540 | NR | 670 | 636 | NR | 800 | 17 | NR | 930 | 0 | NR |
| 415 | 10 | NR | 545 | 566 | NR | 675 | 579 | NR | 805 | 14 | NR | 935 | 0 | NR |
| 420 | 19 | NR | 550 | 589 | NR | 680 | 524 | NR | 810 | 12 | NR | 940 | 0 | NR |
| 425 | 34 | NR | 555 | 612 | NR | 685 | 470 | NR | 815 | 11 | NR | 945 | 0 | NR |
| 430 | 61 | NR | 560 | 634 | NR | 690 | 421 | NR | 820 | 9 | NR | 950 | 0 | NR |
| 435 | 113 | NR | 565 | 660 | NR | 695 | 371 | NR | 825 | 8 | NR | 955 | 0 | NR |
| 440 | 198 | NR | 570 | 688 | NR | 700 | 327 | NR | 830 | 7 | NR | 960 | 0 | NR |
| 445 | 288 | NR | 575 | 719 | NR | 705 | 288 | NR | 835 | 6 | NR | 965 | 0 | NR |
| 450 | 286 | NR | 580 | 754 | NR | 710 | 251 | NR | 840 | 5 | NR | 970 | 0 | NR |
| 455 | 228 | NR | 585 | 791 | NR | 715 | 220 | NR | 845 | 4 | NR | 975 | 0 | NR |
| 460 | 207 | NR | 590 | 831 | NR | 720 | 192 | NR | 850 | 4 | NR | 980 | 0 | NR |
| 465 | 186 | NR | 595 | 870 | NR | 725 | 166 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 168 | NR | 600 | 907 | NR | 730 | 144 | NR | 860 | 3 | NR | 990 | 1 | NR |
| 475 | 177 | NR | 605 | 940 | NR | 735 | 124 | NR | 865 | 2 | NR | 995 | 1 | NR |
| 480 | 198 | NR | 610 | 967 | NR | 740 | 106 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 223 | NR | 615 | 988 | NR | 745 | 91 | NR | 875 | 2 | NR | | | |

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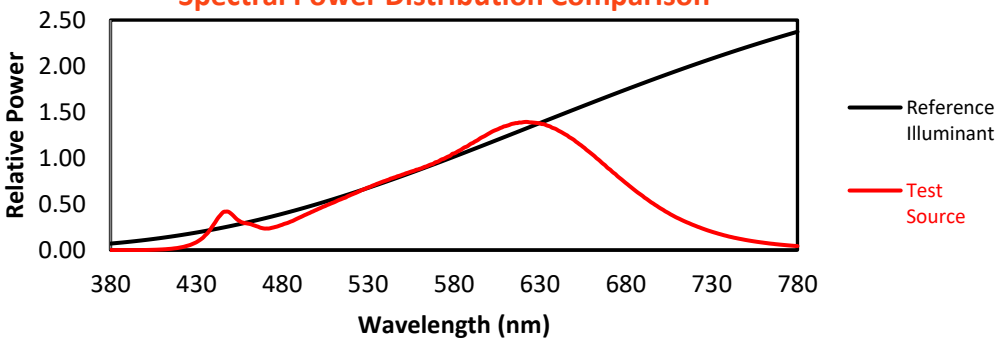
# TM-30-18

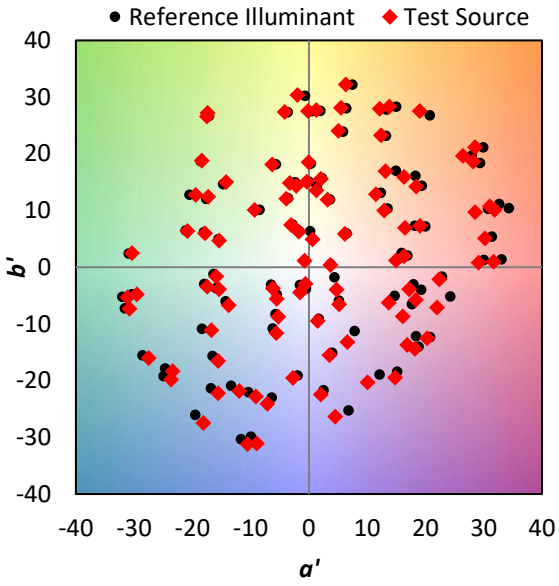
## Summary

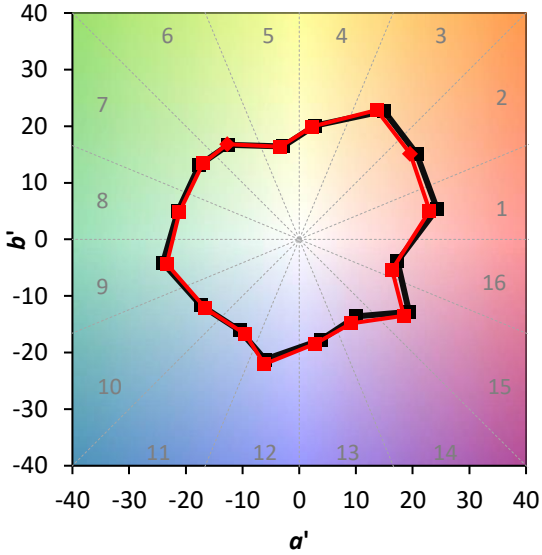
$R_f$ = 92.6
$R_g$ = 98
CIE $R_a$ = 91.8
$R_9$ = 54.7

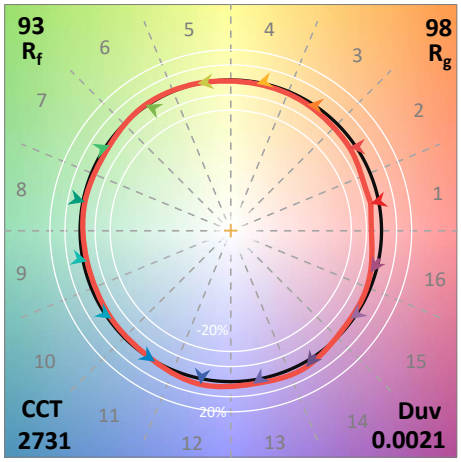
## Spectral Power Distribution Comparison

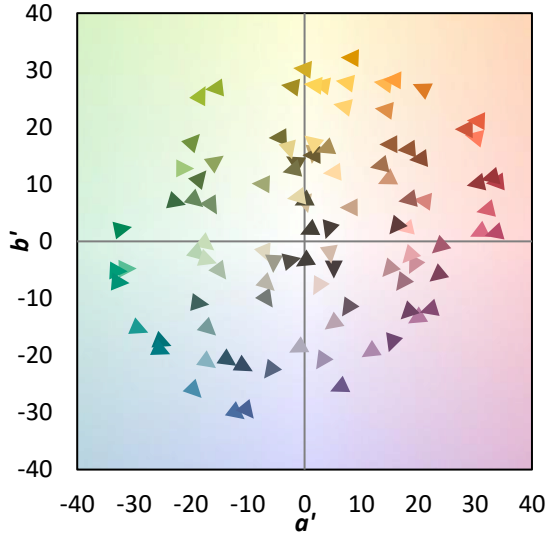



## Color Vector Graphics



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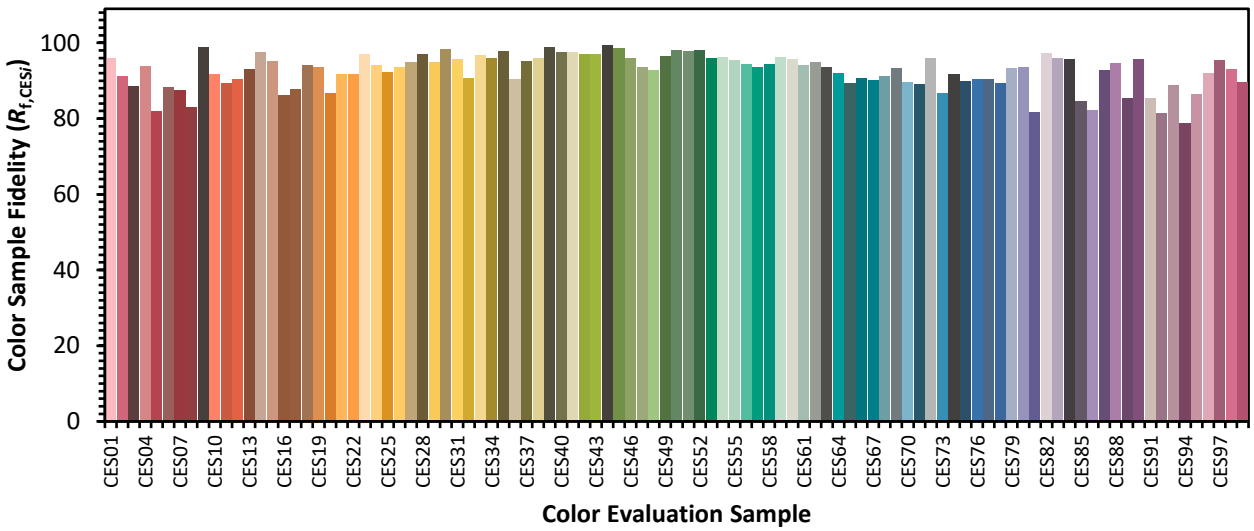
**Individual Sample Fidelity Index ($R_{f,i}$)**

| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 94 | CES51 = 98 | CES76 = 90 |
| CES02 = 64 | CES27 = 95 | CES52 = 98 | CES77 = 90 |
| CES03 = 32 | CES28 = 97 | CES53 = 96 | CES78 = 89 |
| CES04 = 71 | CES29 = 95 | CES54 = 96 | CES79 = 93 |
| CES05 = 51 | CES30 = 98 | CES55 = 95 | CES80 = 94 |
| CES06 = 52 | CES31 = 96 | CES56 = 94 | CES81 = 82 |
| CES07 = 44 | CES32 = 91 | CES57 = 94 | CES82 = 97 |
| CES08 = 43 | CES33 = 97 | CES58 = 94 | CES83 = 96 |
| CES09 = 29 | CES34 = 96 | CES59 = 96 | CES84 = 96 |
| CES10 = 77 | CES35 = 98 | CES60 = 96 | CES85 = 85 |
| CES11 = 59 | CES36 = 90 | CES61 = 94 | CES86 = 82 |
| CES12 = 66 | CES37 = 95 | CES62 = 95 | CES87 = 93 |
| CES13 = 44 | CES38 = 96 | CES63 = 94 | CES88 = 95 |
| CES14 = 74 | CES39 = 99 | CES64 = 92 | CES89 = 85 |
| CES15 = 72 | CES40 = 98 | CES65 = 89 | CES90 = 96 |
| CES16 = 48 | CES41 = 98 | CES66 = 91 | CES91 = 85 |
| CES17 = 50 | CES42 = 97 | CES67 = 90 | CES92 = 82 |
| CES18 = 57 | CES43 = 97 | CES68 = 91 | CES93 = 89 |
| CES19 = 72 | CES44 = 99 | CES69 = 93 | CES94 = 79 |
| CES20 = 68 | CES45 = 99 | CES70 = 90 | CES95 = 87 |
| CES21 = 87 | CES46 = 96 | CES71 = 89 | CES96 = 92 |
| CES22 = 79 | CES47 = 94 | CES72 = 96 | CES97 = 96 |
| CES23 = 92 | CES48 = 93 | CES73 = 87 | CES98 = 93 |
| CES24 = 91 | CES49 = 96 | CES74 = 92 | CES99 = 90 |
| CES25 = 72 | CES50 = 98 | CES75 = 90 | |



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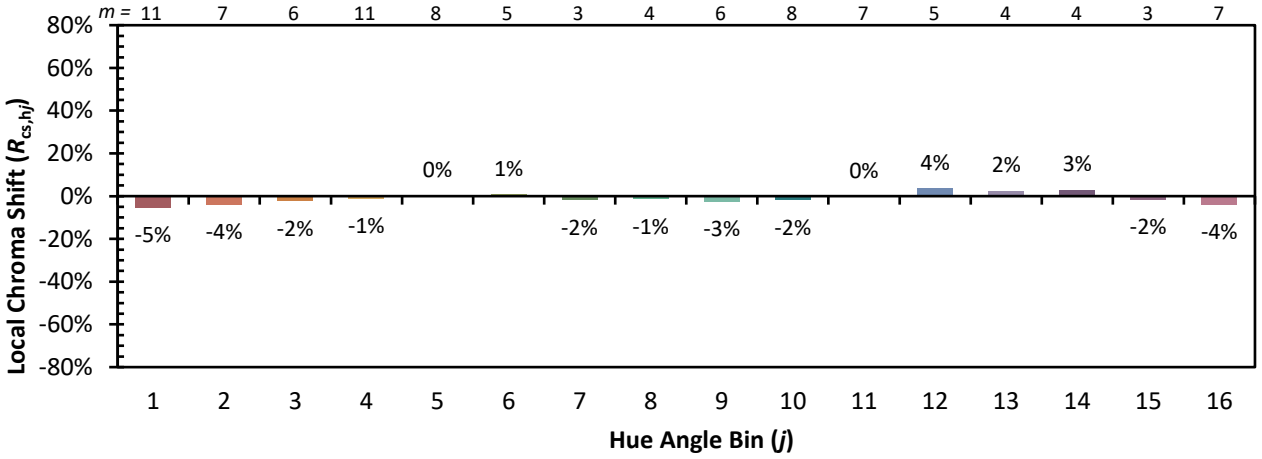
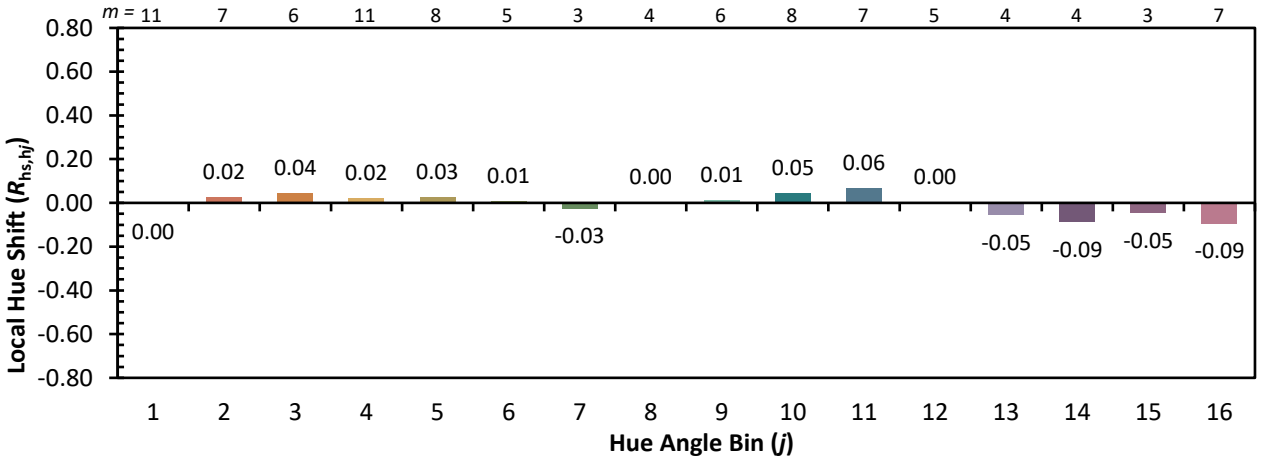
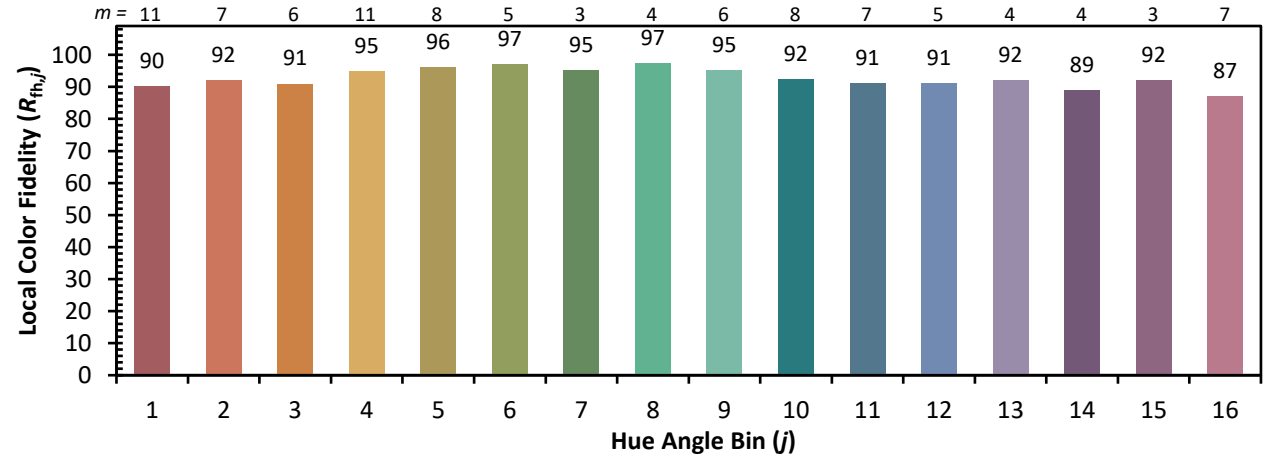
## Color Rendition by Hue-Angle Bin



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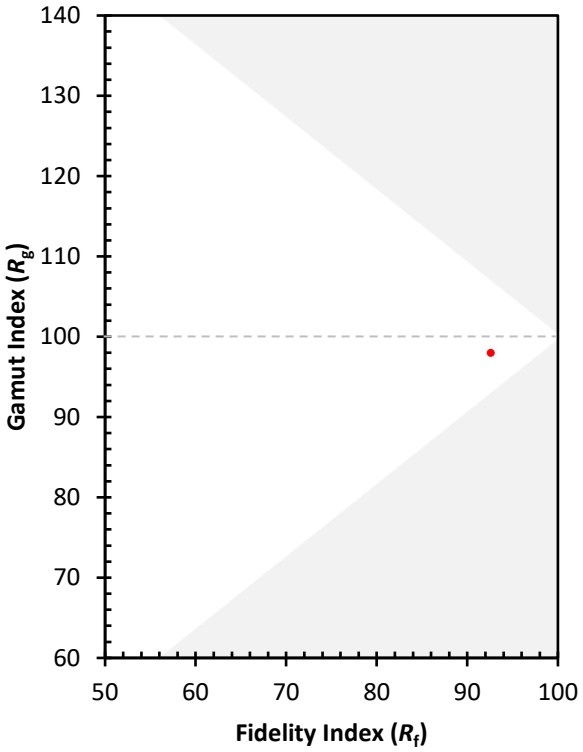
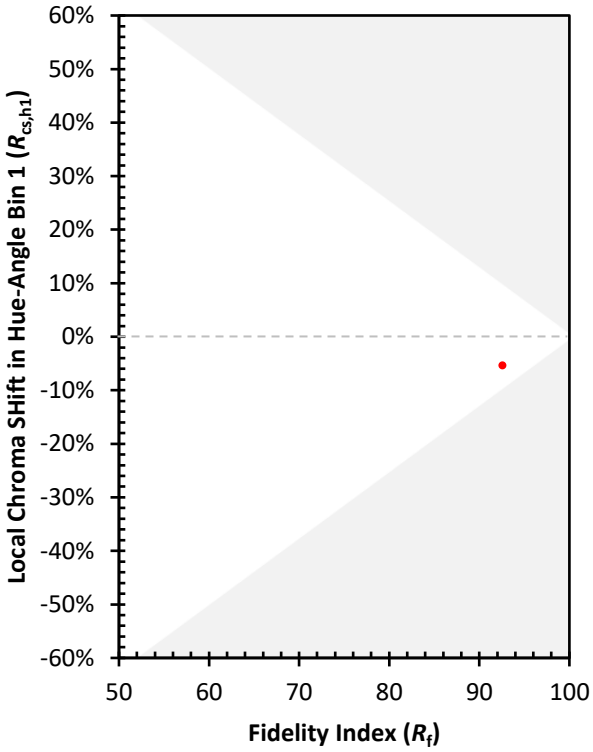
## Measure Comparisons

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