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: P1456297

Luminaire Tested: GLAN-SB1C-940-U-T2LG

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: | P1456297 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 5/22/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | STREETWORKS |
| Catalog Number: | GLAN-SB1C-940-U-T2LG |
| Description: | GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 615mA 1xLight Square PACKAGE 90CRI 4000K FIXTURE w/ TYPE II LOW GLARE |
| Light Source: | (26) 4000K CCT, 90 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 5252.3 lumens |
| Efficiency: | N/A |
| Efficacy: | 96.5 lumens/watt |
| Luminous Opening: | Rectangular (W 0.5' x L: 0.5' x H: 0') |
| IES Classification: | Type II - Short |
| BUG Rating: | B1 - U0 - G1 |

| | |
|---|---|
| Input Watts (W): | 54.4 |
| 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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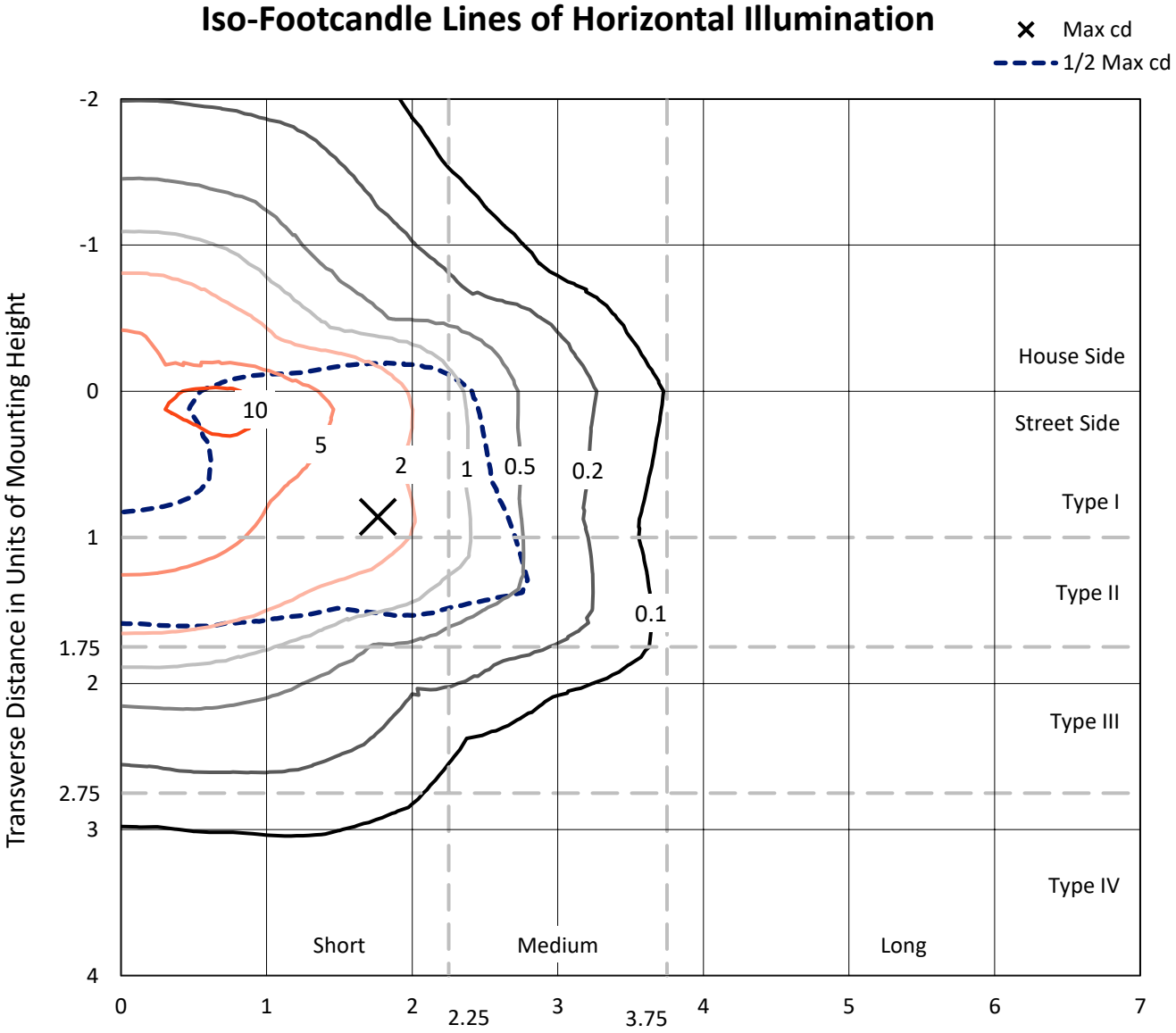
Scaled Data Report

REPORT NUMBER: P1456297
CATALOG NUMBER: GLAN-SB1C-940-U-T2LG

## Iso-Footcandle Lines of Horizontal Illumination




Based on 10 foot mounting height. Maximum calculated value = 12.3 fc
Type II - Short - N/A

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REPORT NUMBER: P1456297
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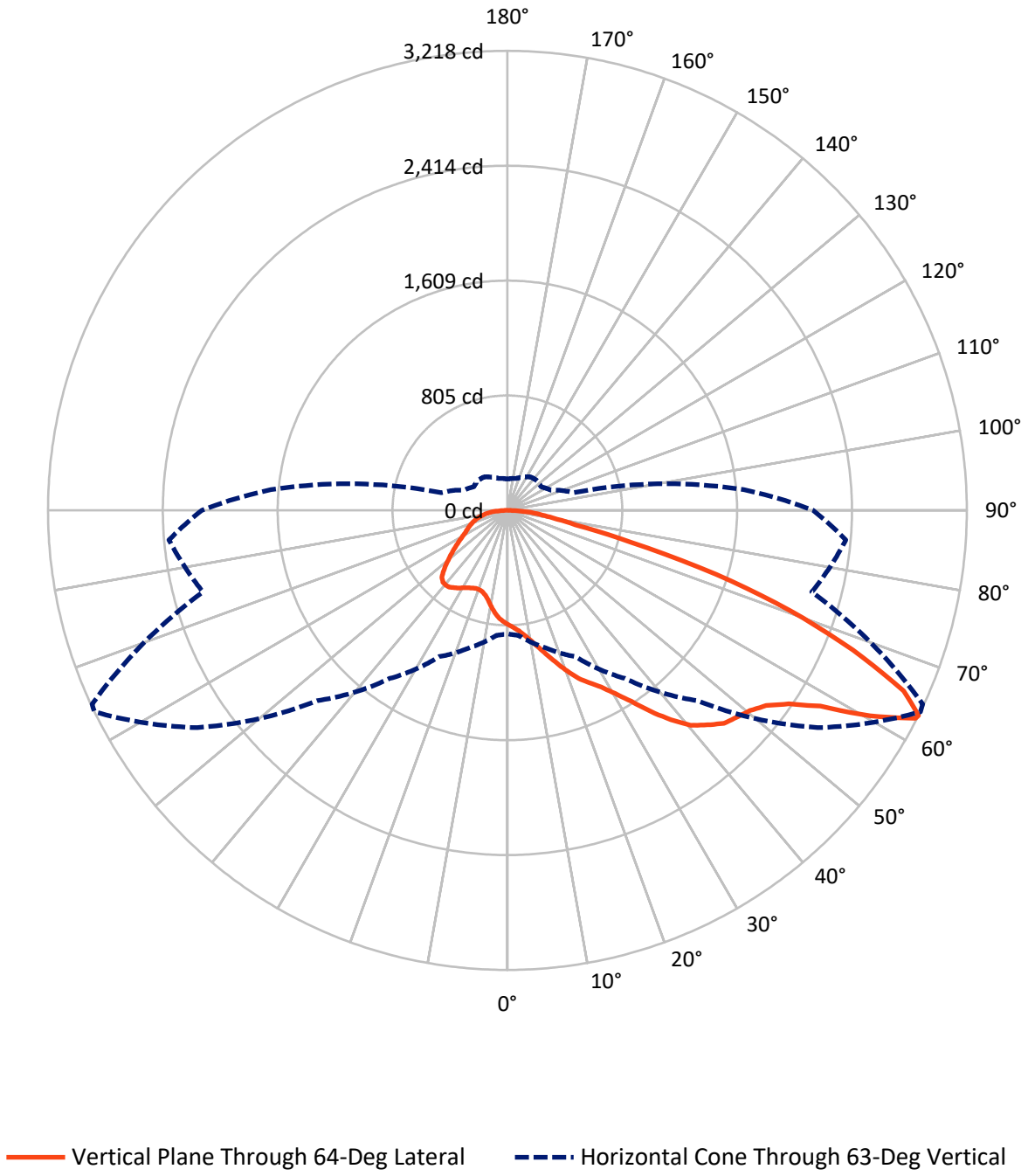
## Luminous Intensity Polar Plot



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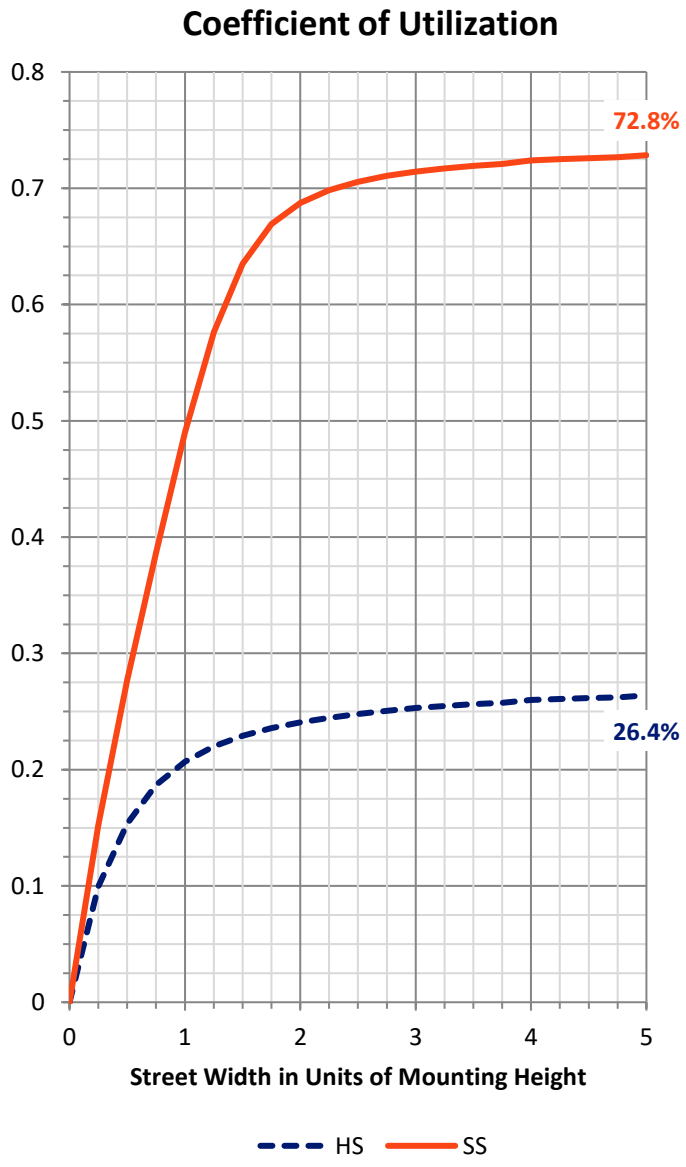
CATALOG NUMBER: GLAN-SB1C-940-U-T2LG

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 1411.1 | 0.0 | 1411.1 |
| | % Fixture | 26.9 | 0.0 | 26.9 |
| **Street Side** | Lumens | 3841.1 | 0.0 | 3841.1 |
| | % Fixture | 73.1 | 0.0 | 73.1 |
| **Total** | Lumens | 5252.3 | 0.0 | 5252.3 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 73.4 | 1.4 |
| 10°-20° | 226.1 | 4.3 |
| 20°-30° | 413.4 | 7.9 |
| 30°-40° | 711.2 | 13.5 |
| 40°-50° | 1048.8 | 20.0 |
| 50°-60° | 1257.0 | 23.9 |
| 60°-70° | 1008.9 | 19.2 |
| 70°-80° | 405.4 | 7.7 |
| 80°-90° | 108.1 | 2.1 |
| 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° | 5252.3 | 100.0 |
| 0°-180° | 5252.3 | 100.0 |



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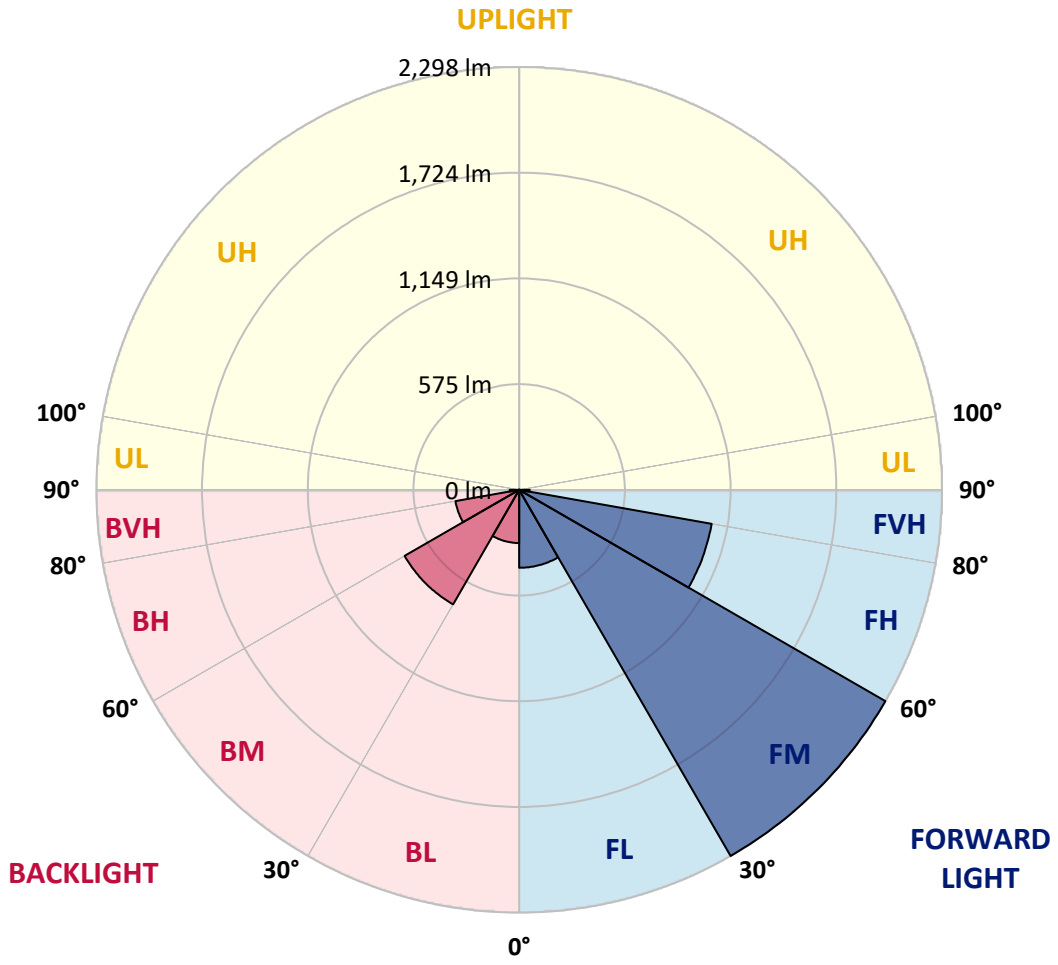
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 423.8 | 8.1 | | | |
| FM | (30°-60°) | 2298.2 | 43.8 | | | |
| FH | (60°-80°) | 1062.4 | 20.2 | | | G1/1800 |
| FVH | (80°-90°) | 56.8 | 1.1 | | | G1/100 |
| BL | (0°-30°) | 289.2 | 5.5 | B1/500 | | |
| BM | (30°-60°) | 718.8 | 13.7 | B1/1000 | | |
| BH | (60°-80°) | 351.8 | 6.7 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 51.3 | 1.0 | | | G1/100 |
| 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° | 64° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 799.9 | 799.9 | 799.9 | 799.9 | 799.9 | 799.9 | 799.9 | *799.9* | 799.9 | 799.9 | 799.9 |
| 2.5° | 832.9 | 834.1 | 830.5 | 829.4 | 831.7 | 827.0 | 825.8 | *821.1* | 818.7 | 814.0 | 808.1 |
| 5° | 856.5 | 857.7 | 855.3 | 855.3 | 857.7 | 854.1 | 853.0 | *848.2* | 845.9 | 841.2 | 829.4 |
| 7.5° | 855.3 | 856.5 | 858.9 | 868.3 | 880.1 | 884.8 | 888.3 | *884.8* | 883.6 | 876.5 | 864.8 |
| 10° | 836.4 | 837.6 | 843.5 | 857.7 | 887.2 | 908.4 | 930.8 | *930.8* | 933.2 | 927.3 | 906.0 |
| 12.5° | 810.5 | 811.7 | 825.8 | 848.2 | 887.2 | 923.7 | 969.7 | *988.6* | 987.4 | 983.9 | 959.1 |
| 15° | 748.0 | 748.0 | 769.2 | 811.7 | 874.2 | 934.4 | 1002.8 | *1053.5* | 1054.7 | 1058.2 | 1028.7 |
| 17.5° | 694.9 | 696.0 | 713.7 | 751.5 | 832.9 | 928.5 | 1038.2 | *1125.5* | 1129.0 | 1149.1 | 1106.6 |
| 20° | 699.6 | 699.6 | 705.5 | 722.0 | 788.1 | 904.9 | 1058.2 | *1202.2* | 1214.0 | 1261.1 | 1208.1 |
| 22.5° | 736.2 | 736.2 | 740.9 | 739.7 | 779.8 | 889.5 | 1071.2 | *1278.8* | 1300.1 | 1398.0 | 1329.6 |
| 25° | 803.4 | 802.2 | 797.5 | 790.4 | 814.0 | 906.0 | 1100.7 | *1337.8* | 1379.1 | 1549.0 | 1470.0 |
| 27.5° | 886.0 | 883.6 | 876.5 | 864.8 | 881.3 | 955.6 | 1151.4 | *1400.4* | 1445.2 | 1714.2 | 1618.6 |
| 30° | 988.6 | 981.5 | 974.5 | 959.1 | 976.8 | 1037.0 | 1226.9 | *1488.8* | 1531.3 | 1901.7 | 1797.9 |
| 32.5° | 1110.1 | 1118.4 | 1094.8 | 1073.6 | 1092.4 | 1147.9 | 1339.0 | *1593.8* | 1639.8 | 2097.6 | 1984.3 |
| 35° | 1291.8 | 1316.6 | 1309.5 | 1202.2 | 1219.9 | 1281.2 | 1470.0 | *1729.5* | 1770.8 | 2275.7 | 2175.4 |
| 37.5° | 1471.1 | 1465.2 | 1471.1 | 1381.5 | 1353.2 | 1427.5 | 1610.3 | *1859.3* | 1899.4 | 2420.8 | 2344.1 |
| 40° | 1615.1 | 1632.8 | 1632.8 | 1559.6 | 1523.0 | 1572.6 | 1737.8 | *1978.4* | 2017.4 | 2501.1 | 2465.7 |
| 42.5° | 1772.0 | 1774.3 | 1769.6 | 1705.9 | 1691.7 | 1704.7 | 1849.8 | *2053.9* | 2085.8 | 2542.3 | 2548.2 |
| 45° | 1948.9 | 1947.8 | 1927.7 | 1874.6 | 1853.4 | 1841.6 | 1919.4 | *2127.1* | 2158.9 | 2561.2 | 2593.1 |
| 47.5° | 2095.2 | 2101.1 | 2102.3 | 2045.7 | 2010.3 | 1959.6 | 1979.6 | *2163.6* | 2200.2 | 2540.0 | 2602.5 |
| 50° | 2103.5 | 2112.9 | 2157.7 | 2174.3 | 2167.2 | 2085.8 | 2035.1 | *2202.6* | 2239.1 | 2544.7 | 2636.7 |
| 52.5° | 2051.6 | 2061.0 | 2118.8 | 2187.2 | 2269.8 | 2230.9 | 2122.4 | *2269.8* | 2307.6 | 2590.7 | 2714.6 |
| 55° | 1912.4 | 1927.7 | 2013.8 | 2109.4 | 2256.8 | 2312.3 | 2276.9 | *2391.3* | 2426.7 | 2627.3 | 2805.4 |
| 57.5° | 1664.6 | 1683.5 | 1802.6 | 1954.8 | 2156.6 | 2293.4 | 2501.1 | *2586.0* | 2615.5 | 2653.2 | 2806.6 |
| 60° | 1244.6 | 1260.0 | 1446.4 | 1651.6 | 1954.8 | 2175.4 | 2634.4 | *2919.9* | 2936.4 | 2512.8 | 2647.3 |
| 62.5° | 916.7 | 932.0 | 1057.0 | 1204.5 | 1536.0 | 1958.4 | 2660.3 | *3208.9* | 3211.3 | 2259.2 | 2427.9 |
| 63° | *863.6* | *878.9* | *992.2* | *1130.2* | *1436.9* | *1885.2* | *2652.1* | *3218.3* | *3210.1* | *2207.3* | *2379.5* |
| 65° | 672.5 | 699.6 | 817.6 | 922.6 | 1077.1 | 1500.6 | 2545.9 | *3050.8* | 3062.6 | 2053.9 | 2136.5 |
| 67.5° | 457.7 | 477.8 | 627.6 | 749.1 | 814.0 | 955.6 | 2088.1 | *2610.8* | 2629.6 | 1894.7 | 1704.7 |
| 70° | 353.9 | 363.4 | 450.7 | 593.4 | 658.3 | 607.6 | 1361.4 | *2102.3* | 2102.3 | 1479.4 | 1208.1 |
| 72.5° | 277.2 | 280.8 | 339.8 | 463.6 | 529.7 | 467.2 | 758.6 | *1528.9* | 1472.3 | 877.7 | 805.8 |
| 75° | 198.2 | 202.9 | 256.0 | 345.7 | 422.3 | 368.1 | 484.9 | *890.7* | 856.5 | 504.9 | 538.0 |
| 77.5° | 156.9 | 159.3 | 191.1 | 254.8 | 342.1 | 280.8 | 369.3 | *486.1* | 481.3 | 355.1 | 345.7 |
| 80° | 123.9 | 128.6 | 149.8 | 182.9 | 264.3 | 219.4 | 274.9 | *320.9* | 311.5 | 244.2 | 221.8 |
| 82.5° | 88.5 | 96.7 | 115.6 | 139.2 | 195.8 | 156.9 | 180.5 | *226.5* | 226.5 | 184.0 | 146.3 |
| 85° | 54.3 | 61.3 | 68.4 | 86.1 | 139.2 | 101.5 | 95.6 | *146.3* | 149.8 | 138.0 | 94.4 |
| 87.5° | 26.0 | 28.3 | 33.0 | 36.6 | 50.7 | 46.0 | 37.8 | *55.4* | 56.6 | 61.3 | 38.9 |
| 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: P1456297
CATALOG NUMBER: GLAN-SB1C-940-U-T2LG

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 799.9 | 799.9 | 799.9 | 799.9 | 799.9 | 799.9 | 799.9 | 799.9 | 799.9 | 799.9 | 799.9 |
| 2.5° | 806.9 | 804.6 | 792.8 | 781.0 | 768.0 | 756.2 | 744.4 | 735.0 | 724.4 | 726.7 | 727.9 |
| 5° | 822.3 | 816.4 | 790.4 | 759.8 | 719.6 | 681.9 | 645.3 | 619.4 | 602.8 | 598.1 | 588.7 |
| 7.5° | 855.3 | 841.2 | 794.0 | 729.1 | 654.8 | 595.8 | 561.6 | 546.2 | 541.5 | 542.7 | 540.3 |
| 10° | 893.1 | 871.8 | 798.7 | 692.5 | 598.1 | 558.0 | 553.3 | 562.7 | 567.5 | 572.2 | 573.4 |
| 12.5° | 942.6 | 908.4 | 796.3 | 652.4 | 571.0 | 563.9 | 581.6 | 599.3 | 609.9 | 617.0 | 615.8 |
| 15° | 1000.4 | 954.4 | 789.2 | 619.4 | 567.5 | 586.3 | 608.7 | 628.8 | 641.8 | 648.9 | 645.3 |
| 17.5° | 1070.0 | 1008.7 | 781.0 | 598.1 | 578.1 | 600.5 | 624.1 | 644.1 | 658.3 | 663.0 | 659.5 |
| 20° | 1156.1 | 1070.0 | 766.8 | 588.7 | 586.3 | 606.4 | 627.6 | 646.5 | 658.3 | 663.0 | 658.3 |
| 22.5° | 1257.6 | 1143.2 | 755.0 | 588.7 | 589.9 | 606.4 | 621.7 | 635.9 | 646.5 | 650.0 | 644.1 |
| 25° | 1387.4 | 1228.1 | 750.3 | 598.1 | 591.1 | 600.5 | 608.7 | 617.0 | 622.9 | 625.3 | 622.9 |
| 27.5° | 1519.5 | 1326.0 | 752.7 | 609.9 | 589.9 | 592.2 | 592.2 | 593.4 | 594.6 | 595.8 | 594.6 |
| 30° | 1671.7 | 1425.1 | 762.1 | 625.3 | 592.2 | 580.4 | 576.9 | 569.8 | 563.9 | 559.2 | 554.5 |
| 32.5° | 1819.2 | 1519.5 | 778.6 | 647.7 | 589.9 | 567.5 | 560.4 | 542.7 | 526.2 | 512.0 | 512.0 |
| 35° | 1978.4 | 1617.4 | 808.1 | 664.2 | 587.5 | 555.7 | 535.6 | 515.5 | 497.9 | 477.8 | 477.8 |
| 37.5° | 2115.3 | 1701.2 | 831.7 | 683.1 | 585.2 | 541.5 | 509.6 | 487.2 | 468.4 | 448.3 | 445.9 |
| 40° | 2210.8 | 1749.6 | 845.9 | 690.1 | 576.9 | 522.6 | 484.9 | 456.6 | 429.4 | 402.3 | 401.1 |
| 42.5° | 2256.8 | 1747.2 | 837.6 | 687.8 | 561.6 | 499.0 | 463.6 | 425.9 | 389.3 | 364.5 | 362.2 |
| 45° | 2281.6 | 1731.9 | 805.8 | 667.7 | 536.8 | 474.3 | 436.5 | 396.4 | 359.8 | 337.4 | 332.7 |
| 47.5° | 2276.9 | 1694.1 | 762.1 | 618.2 | 503.7 | 447.1 | 409.4 | 368.1 | 338.6 | 325.6 | 325.6 |
| 50° | 2289.9 | 1664.6 | 712.6 | 561.6 | 458.9 | 415.3 | 384.6 | 346.8 | 329.1 | 312.6 | 306.7 |
| 52.5° | 2347.7 | 1689.4 | 670.1 | 508.5 | 416.4 | 384.6 | 363.4 | 331.5 | 309.1 | 298.5 | 294.9 |
| 55° | 2424.4 | 1742.5 | 630.0 | 461.3 | 375.2 | 357.5 | 346.8 | 317.4 | 291.4 | 280.8 | 274.9 |
| 57.5° | 2438.5 | 1779.1 | 591.1 | 415.3 | 340.9 | 336.2 | 332.7 | 292.6 | 271.3 | 263.1 | 258.4 |
| 60° | 2340.6 | 1751.9 | 540.3 | 374.0 | 313.8 | 316.2 | 306.7 | 277.2 | 252.5 | 244.2 | 239.5 |
| 62.5° | 2174.3 | 1681.1 | 489.6 | 338.6 | 292.6 | 297.3 | 287.9 | 258.4 | 233.6 | 225.3 | 223.0 |
| 63° | *2141.2* | *1662.3* | *477.8* | *335.0* | *287.9* | *293.8* | *285.5* | *256.0* | *231.2* | *223.0* | *219.4* |
| 65° | 1944.2 | 1549.0 | 436.5 | 316.2 | 272.5 | 272.5 | 273.7 | 244.2 | 223.0 | 219.4 | 217.1 |
| 67.5° | 1585.6 | 1293.0 | 391.7 | 293.8 | 256.0 | 259.5 | 265.4 | 248.9 | 240.7 | 238.3 | 235.9 |
| 70° | 1198.6 | 973.3 | 352.7 | 272.5 | 238.3 | 250.1 | 290.2 | 283.1 | 252.5 | 231.2 | 226.5 |
| 72.5° | 849.4 | 663.0 | 318.5 | 251.3 | 217.1 | 246.6 | 300.8 | 270.2 | 227.7 | 202.9 | 198.2 |
| 75° | 568.6 | 427.1 | 284.3 | 228.9 | 193.5 | 227.7 | 284.3 | 246.6 | 198.2 | 192.3 | 185.2 |
| 77.5° | 357.5 | 304.4 | 250.1 | 202.9 | 167.5 | 202.9 | 258.4 | 219.4 | 171.1 | 173.4 | 162.8 |
| 80° | 218.3 | 217.1 | 210.0 | 172.2 | 134.5 | 161.6 | 217.1 | 185.2 | 136.9 | 136.9 | 121.5 |
| 82.5° | 129.8 | 156.9 | 178.1 | 142.7 | 97.9 | 115.6 | 156.9 | 139.2 | 114.4 | 110.9 | 103.8 |
| 85° | 87.3 | 106.2 | 141.6 | 109.7 | 62.5 | 70.8 | 108.5 | 116.8 | 105.0 | 92.0 | 86.1 |
| 87.5° | 31.9 | 42.5 | 64.9 | 44.8 | 27.1 | 42.5 | 81.4 | 84.9 | 63.7 | 49.5 | 44.8 |
| 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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Peachtree City, GA 30269

# LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-16

Test Date: 10/11/2024

Luminaire Tested: GSS-SB1A-940-U-5WQ

Data in this report applies to families of products including GSS-SB1A-940-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

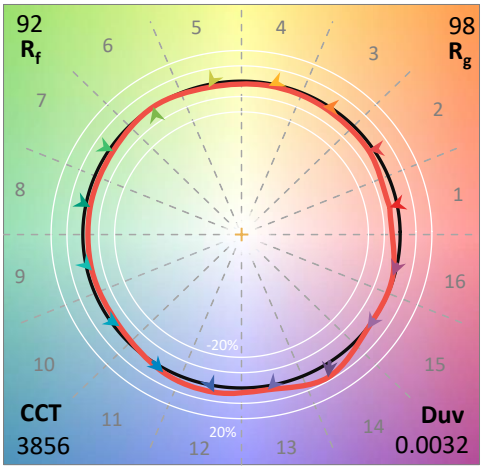
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-16 |
| 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-940-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 90 CRI 4000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 3856 |
| CIE u': | 0.2261 |
| CIE v': | 0.5084 |
| Duv: | 0.0032 |
| CIE x: | 0.3896 |
| CIE y: | 0.3894 |
| CIE z: | 0.2211 |
| Peak Wavelength (nm): | 614 |
| Dominant Wavelength (nm): | 578 |
| Purity: | 33.77304 |
| Rf: | 91.8 |
| Rg: | 98.4 |

| | |
|---|---|
| CRI (Ra): | 92.1 |
| R1: | 91.8 |
| R2: | 94.1 |
| R3: | 95.3 |
| R4: | 92.8 |
| R5: | 91.0 |
| R6: | 91.6 |
| R7: | 95.0 |
| R8: | 85.2 |
| R9: | 60.7 |
| R10: | 85.2 |
| R11: | 92.4 |
| R12: | 74.5 |
| R13: | 92.3 |
| R14: | 97.0 |
| R15: | 88.5 |




## Test Conditions

| | |
|---|---|
| Stabilization Time: | 23M |
| Operation Time: | 1H 23M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-16

| 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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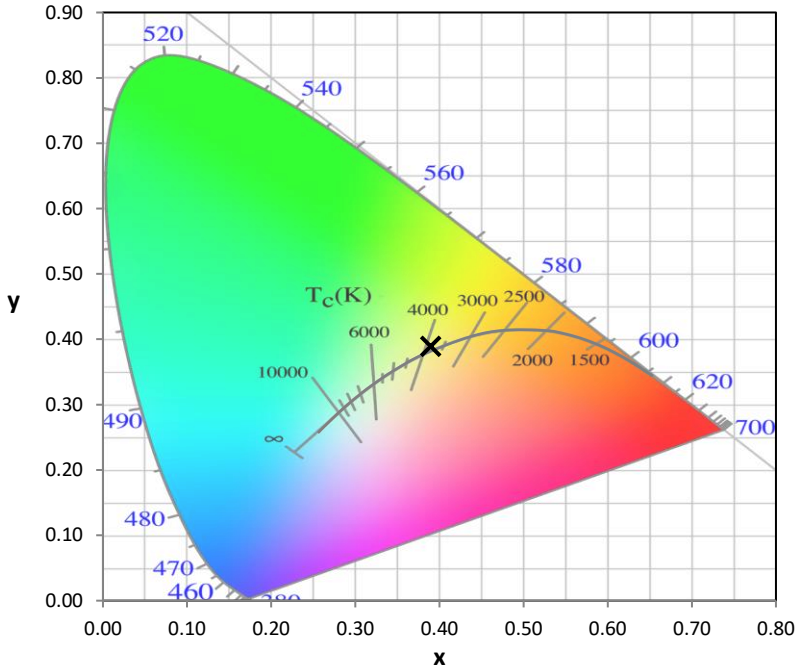
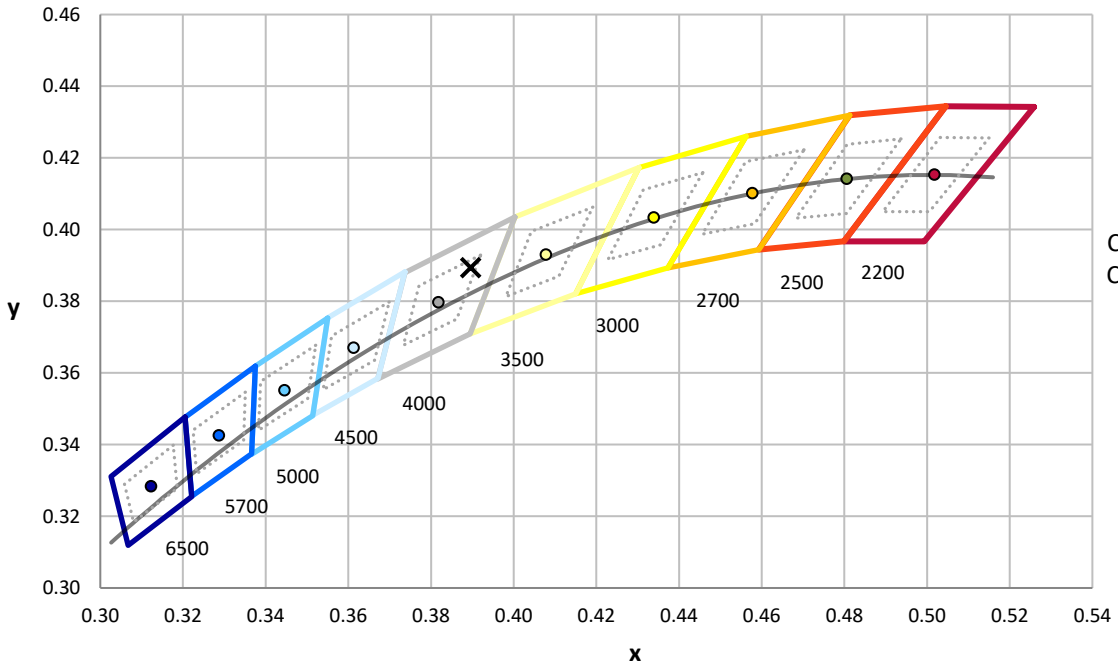
## CIE 1931 Chromaticity Diagram




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




CCT = 3856K
CIE x = 0.3896
CIE y = 0.3894
Duv = 0.0032

Point lies inside the ANSI 4000K 4-step quadrangle

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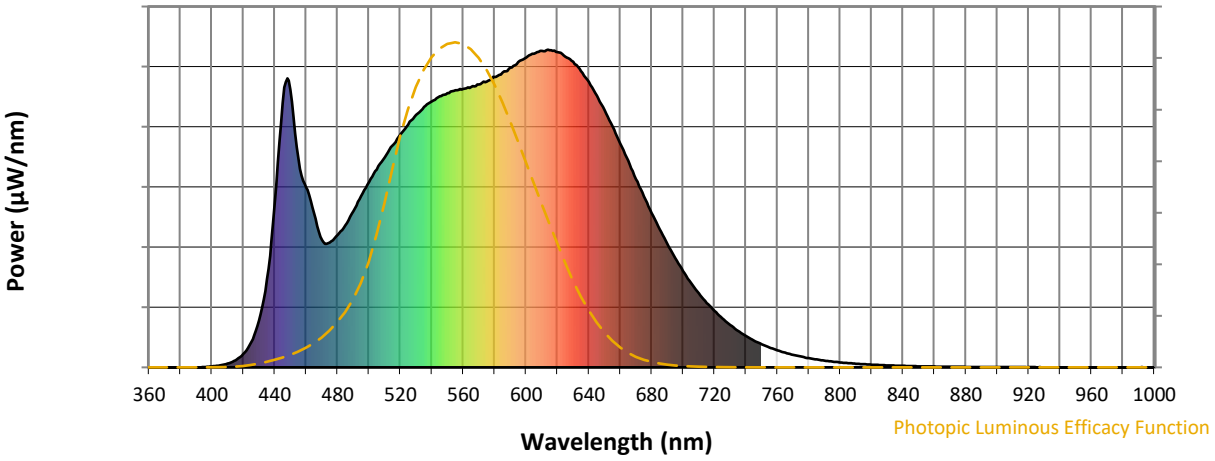
## Photopic Flux vs. Wavelength




## 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 | 492 | NR | 620 | 993 | NR | 750 | 73 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 539 | NR | 625 | 978 | NR | 755 | 62 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 583 | NR | 630 | 962 | NR | 760 | 54 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 623 | NR | 635 | 933 | NR | 765 | 46 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 661 | NR | 640 | 898 | NR | 770 | 39 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 698 | NR | 645 | 855 | NR | 775 | 34 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 733 | NR | 650 | 810 | NR | 780 | 29 | NR | 910 | 1 | NR |
| 395 | 1 | NR | 525 | 764 | NR | 655 | 759 | NR | 785 | 25 | NR | 915 | 1 | NR |
| 400 | 3 | NR | 530 | 794 | NR | 660 | 704 | NR | 790 | 21 | NR | 920 | 1 | NR |
| 405 | 6 | NR | 535 | 820 | NR | 665 | 651 | NR | 795 | 18 | NR | 925 | 1 | NR |
| 410 | 12 | NR | 540 | 837 | NR | 670 | 592 | NR | 800 | 16 | NR | 930 | 1 | NR |
| 415 | 22 | NR | 545 | 853 | NR | 675 | 538 | NR | 805 | 13 | NR | 935 | 0 | NR |
| 420 | 42 | NR | 550 | 864 | NR | 680 | 486 | NR | 810 | 12 | NR | 940 | 0 | NR |
| 425 | 79 | NR | 555 | 872 | NR | 685 | 435 | NR | 815 | 10 | NR | 945 | 0 | NR |
| 430 | 147 | NR | 560 | 876 | NR | 690 | 389 | NR | 820 | 9 | NR | 950 | 0 | NR |
| 435 | 278 | NR | 565 | 883 | NR | 695 | 344 | NR | 825 | 7 | NR | 955 | 0 | NR |
| 440 | 515 | NR | 570 | 891 | NR | 700 | 303 | NR | 830 | 6 | NR | 960 | 0 | NR |
| 445 | 832 | NR | 575 | 900 | NR | 705 | 266 | NR | 835 | 5 | NR | 965 | 0 | NR |
| 450 | 874 | NR | 580 | 914 | NR | 710 | 233 | NR | 840 | 5 | NR | 970 | 0 | NR |
| 455 | 659 | NR | 585 | 927 | NR | 715 | 203 | NR | 845 | 4 | NR | 975 | 0 | NR |
| 460 | 567 | NR | 590 | 944 | NR | 720 | 178 | NR | 850 | 4 | NR | 980 | 0 | NR |
| 465 | 485 | NR | 595 | 961 | NR | 725 | 154 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 401 | NR | 600 | 975 | NR | 730 | 133 | NR | 860 | 3 | NR | 990 | 0 | NR |
| 475 | 393 | NR | 605 | 988 | NR | 735 | 115 | NR | 865 | 2 | NR | 995 | 1 | NR |
| 480 | 417 | NR | 610 | 996 | NR | 740 | 98 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 448 | NR | 615 | 998 | NR | 745 | 85 | NR | 875 | 2 | NR | | | |

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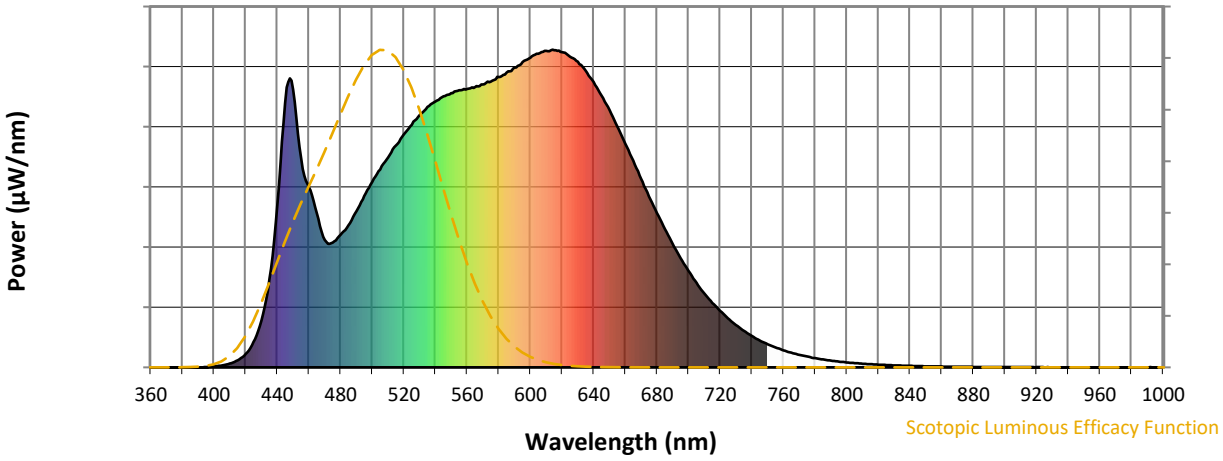
## Scotopic Flux vs. Wavelength




**Scotopic Lumens: NR** **S/P: 1.72**

| 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 | 492 | NR | 620 | 993 | NR | 750 | 73 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 539 | NR | 625 | 978 | NR | 755 | 62 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 583 | NR | 630 | 962 | NR | 760 | 54 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 623 | NR | 635 | 933 | NR | 765 | 46 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 661 | NR | 640 | 898 | NR | 770 | 39 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 698 | NR | 645 | 855 | NR | 775 | 34 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 733 | NR | 650 | 810 | NR | 780 | 29 | NR | 910 | 1 | NR |
| 395 | 1 | NR | 525 | 764 | NR | 655 | 759 | NR | 785 | 25 | NR | 915 | 1 | NR |
| 400 | 3 | NR | 530 | 794 | NR | 660 | 704 | NR | 790 | 21 | NR | 920 | 1 | NR |
| 405 | 6 | NR | 535 | 820 | NR | 665 | 651 | NR | 795 | 18 | NR | 925 | 1 | NR |
| 410 | 12 | NR | 540 | 837 | NR | 670 | 592 | NR | 800 | 16 | NR | 930 | 1 | NR |
| 415 | 22 | NR | 545 | 853 | NR | 675 | 538 | NR | 805 | 13 | NR | 935 | 0 | NR |
| 420 | 42 | NR | 550 | 864 | NR | 680 | 486 | NR | 810 | 12 | NR | 940 | 0 | NR |
| 425 | 79 | NR | 555 | 872 | NR | 685 | 435 | NR | 815 | 10 | NR | 945 | 0 | NR |
| 430 | 147 | NR | 560 | 876 | NR | 690 | 389 | NR | 820 | 9 | NR | 950 | 0 | NR |
| 435 | 278 | NR | 565 | 883 | NR | 695 | 344 | NR | 825 | 7 | NR | 955 | 0 | NR |
| 440 | 515 | NR | 570 | 891 | NR | 700 | 303 | NR | 830 | 6 | NR | 960 | 0 | NR |
| 445 | 832 | NR | 575 | 900 | NR | 705 | 266 | NR | 835 | 5 | NR | 965 | 0 | NR |
| 450 | 874 | NR | 580 | 914 | NR | 710 | 233 | NR | 840 | 5 | NR | 970 | 0 | NR |
| 455 | 659 | NR | 585 | 927 | NR | 715 | 203 | NR | 845 | 4 | NR | 975 | 0 | NR |
| 460 | 567 | NR | 590 | 944 | NR | 720 | 178 | NR | 850 | 4 | NR | 980 | 0 | NR |
| 465 | 485 | NR | 595 | 961 | NR | 725 | 154 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 401 | NR | 600 | 975 | NR | 730 | 133 | NR | 860 | 3 | NR | 990 | 0 | NR |
| 475 | 393 | NR | 605 | 988 | NR | 735 | 115 | NR | 865 | 2 | NR | 995 | 1 | NR |
| 480 | 417 | NR | 610 | 996 | NR | 740 | 98 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 448 | NR | 615 | 998 | NR | 745 | 85 | NR | 875 | 2 | NR | | | |

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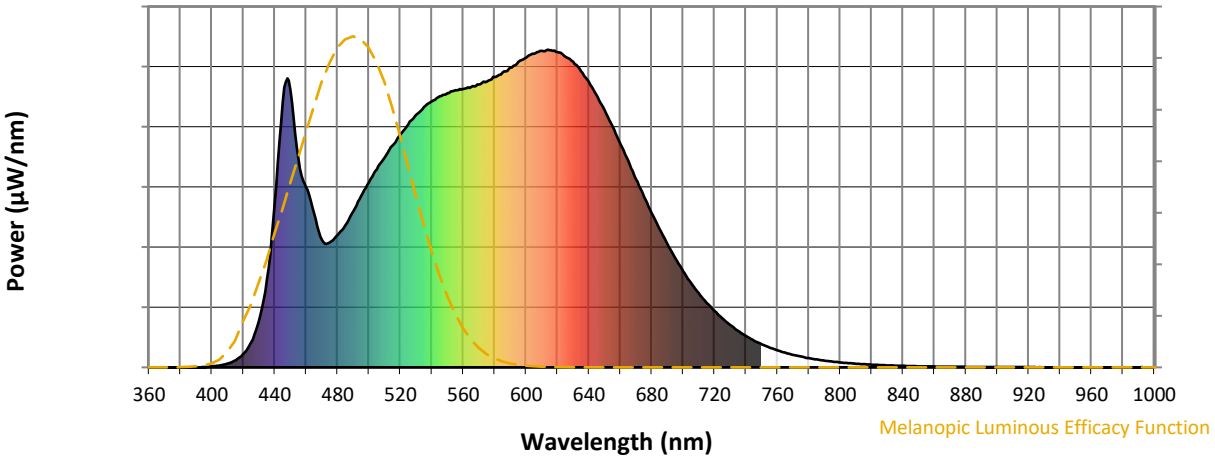
## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 3.52**

| 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 | 492 | NR | 620 | 993 | NR | 750 | 73 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 539 | NR | 625 | 978 | NR | 755 | 62 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 583 | NR | 630 | 962 | NR | 760 | 54 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 623 | NR | 635 | 933 | NR | 765 | 46 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 661 | NR | 640 | 898 | NR | 770 | 39 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 698 | NR | 645 | 855 | NR | 775 | 34 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 733 | NR | 650 | 810 | NR | 780 | 29 | NR | 910 | 1 | NR |
| 395 | 1 | NR | 525 | 764 | NR | 655 | 759 | NR | 785 | 25 | NR | 915 | 1 | NR |
| 400 | 3 | NR | 530 | 794 | NR | 660 | 704 | NR | 790 | 21 | NR | 920 | 1 | NR |
| 405 | 6 | NR | 535 | 820 | NR | 665 | 651 | NR | 795 | 18 | NR | 925 | 1 | NR |
| 410 | 12 | NR | 540 | 837 | NR | 670 | 592 | NR | 800 | 16 | NR | 930 | 1 | NR |
| 415 | 22 | NR | 545 | 853 | NR | 675 | 538 | NR | 805 | 13 | NR | 935 | 0 | NR |
| 420 | 42 | NR | 550 | 864 | NR | 680 | 486 | NR | 810 | 12 | NR | 940 | 0 | NR |
| 425 | 79 | NR | 555 | 872 | NR | 685 | 435 | NR | 815 | 10 | NR | 945 | 0 | NR |
| 430 | 147 | NR | 560 | 876 | NR | 690 | 389 | NR | 820 | 9 | NR | 950 | 0 | NR |
| 435 | 278 | NR | 565 | 883 | NR | 695 | 344 | NR | 825 | 7 | NR | 955 | 0 | NR |
| 440 | 515 | NR | 570 | 891 | NR | 700 | 303 | NR | 830 | 6 | NR | 960 | 0 | NR |
| 445 | 832 | NR | 575 | 900 | NR | 705 | 266 | NR | 835 | 5 | NR | 965 | 0 | NR |
| 450 | 874 | NR | 580 | 914 | NR | 710 | 233 | NR | 840 | 5 | NR | 970 | 0 | NR |
| 455 | 659 | NR | 585 | 927 | NR | 715 | 203 | NR | 845 | 4 | NR | 975 | 0 | NR |
| 460 | 567 | NR | 590 | 944 | NR | 720 | 178 | NR | 850 | 4 | NR | 980 | 0 | NR |
| 465 | 485 | NR | 595 | 961 | NR | 725 | 154 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 401 | NR | 600 | 975 | NR | 730 | 133 | NR | 860 | 3 | NR | 990 | 0 | NR |
| 475 | 393 | NR | 605 | 988 | NR | 735 | 115 | NR | 865 | 2 | NR | 995 | 1 | NR |
| 480 | 417 | NR | 610 | 996 | NR | 740 | 98 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 448 | NR | 615 | 998 | NR | 745 | 85 | NR | 875 | 2 | NR | | | |

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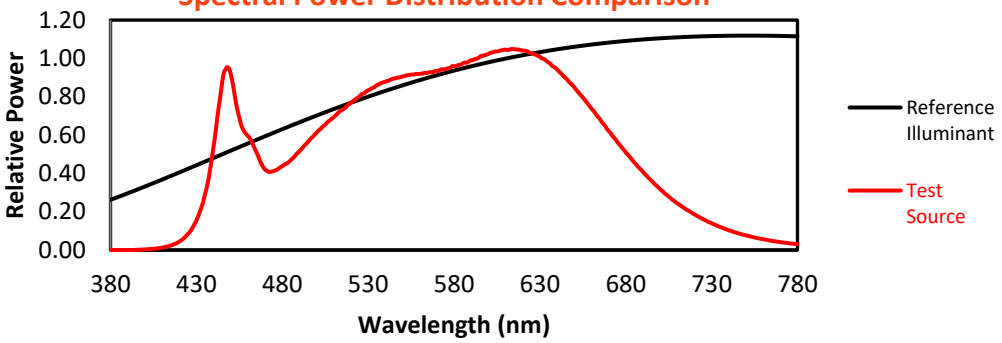
# TM-30-18

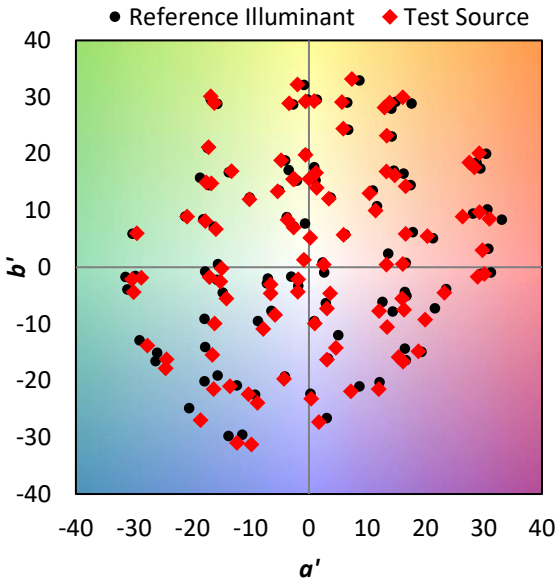
## Summary

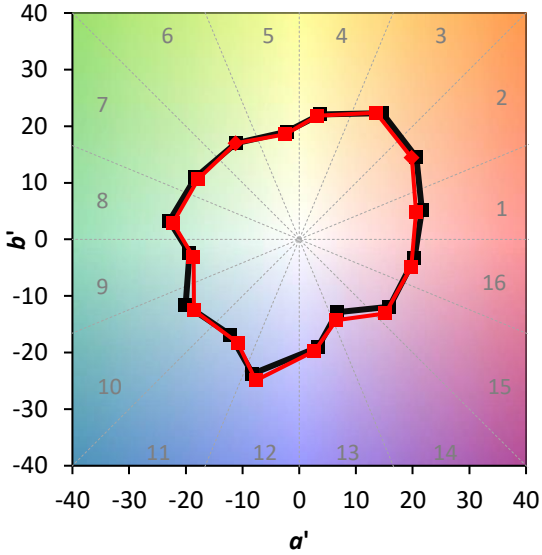
$R_f$ = 91.8
$R_g$ = 98.4
CIE $R_a$ = 92.1
$R_9$ = 60.7

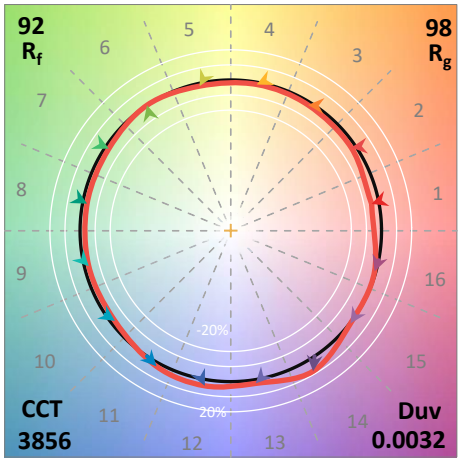
## Spectral Power Distribution Comparison

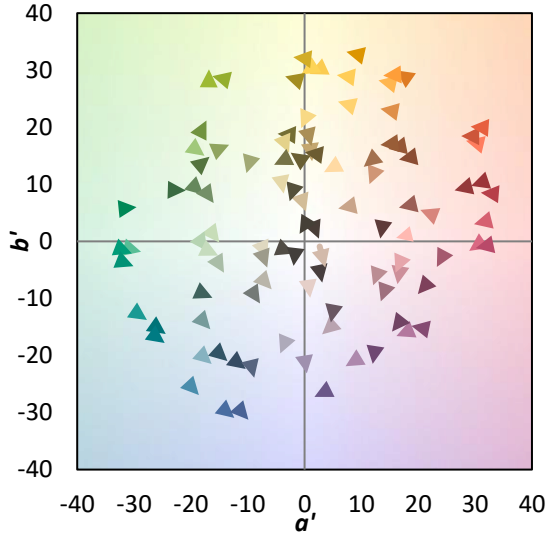



## Color Vector Graphics



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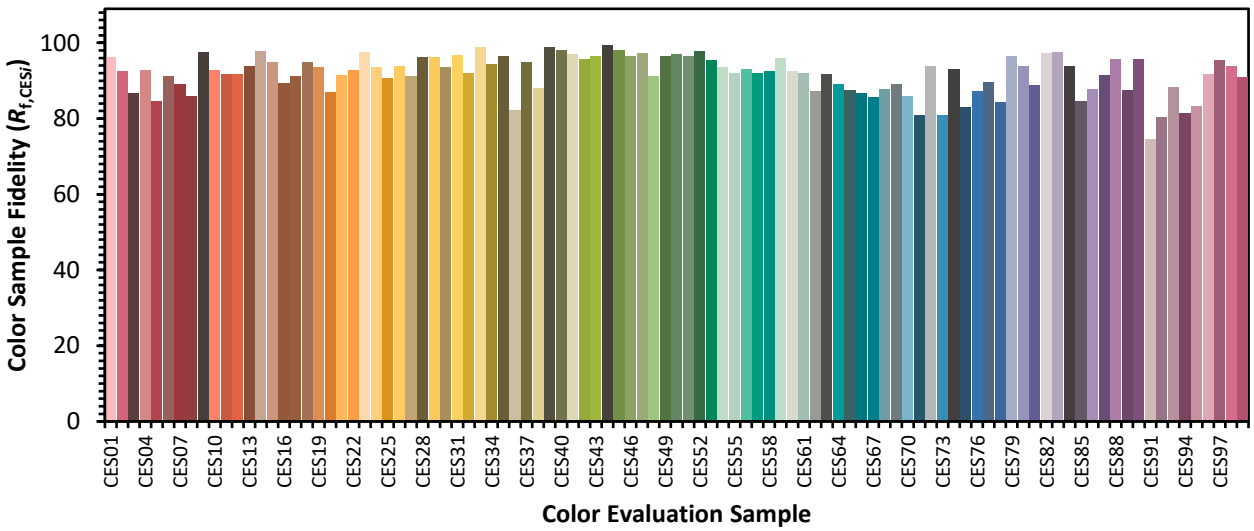
# TM-30-18

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

| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 94 | CES51 = 96 | CES76 = 87 |
| CES02 = 62 | CES27 = 91 | CES52 = 98 | CES77 = 90 |
| CES03 = 31 | CES28 = 96 | CES53 = 95 | CES78 = 84 |
| CES04 = 69 | CES29 = 96 | CES54 = 94 | CES79 = 96 |
| CES05 = 49 | CES30 = 93 | CES55 = 92 | CES80 = 94 |
| CES06 = 50 | CES31 = 97 | CES56 = 93 | CES81 = 89 |
| CES07 = 42 | CES32 = 92 | CES57 = 92 | CES82 = 97 |
| CES08 = 41 | CES33 = 99 | CES58 = 92 | CES83 = 98 |
| CES09 = 29 | CES34 = 94 | CES59 = 96 | CES84 = 94 |
| CES10 = 74 | CES35 = 96 | CES60 = 93 | CES85 = 85 |
| CES11 = 57 | CES36 = 82 | CES61 = 92 | CES86 = 88 |
| CES12 = 63 | CES37 = 95 | CES62 = 87 | CES87 = 92 |
| CES13 = 43 | CES38 = 88 | CES63 = 92 | CES88 = 96 |
| CES14 = 74 | CES39 = 99 | CES64 = 89 | CES89 = 87 |
| CES15 = 71 | CES40 = 98 | CES65 = 88 | CES90 = 96 |
| CES16 = 47 | CES41 = 97 | CES66 = 87 | CES91 = 74 |
| CES17 = 49 | CES42 = 96 | CES67 = 86 | CES92 = 80 |
| CES18 = 56 | CES43 = 96 | CES68 = 88 | CES93 = 88 |
| CES19 = 71 | CES44 = 99 | CES69 = 89 | CES94 = 82 |
| CES20 = 66 | CES45 = 98 | CES70 = 86 | CES95 = 83 |
| CES21 = 85 | CES46 = 97 | CES71 = 81 | CES96 = 92 |
| CES22 = 78 | CES47 = 97 | CES72 = 94 | CES97 = 95 |
| CES23 = 91 | CES48 = 91 | CES73 = 81 | CES98 = 94 |
| CES24 = 90 | CES49 = 96 | CES74 = 93 | CES99 = 91 |
| CES25 = 71 | CES50 = 97 | CES75 = 83 | |



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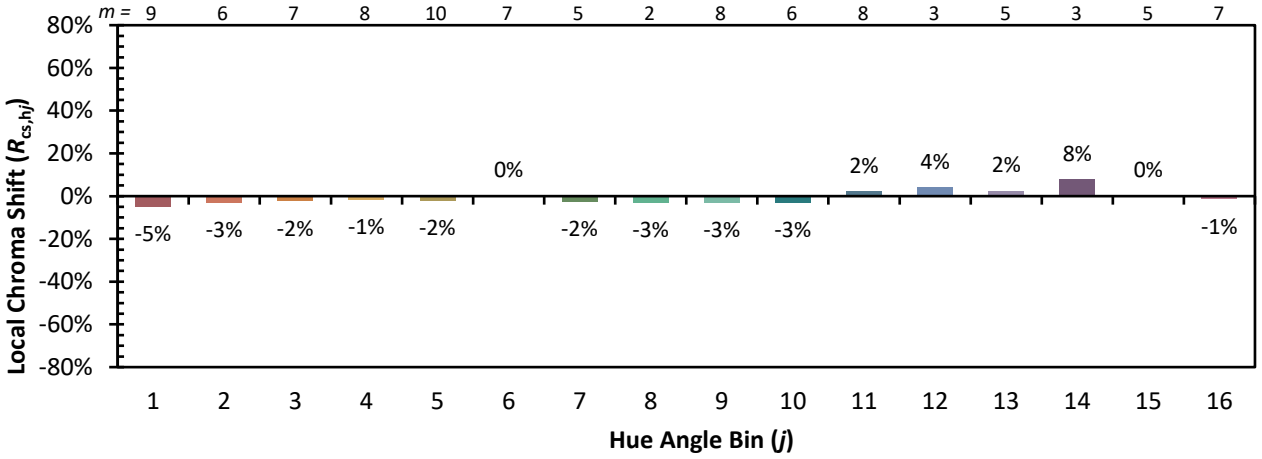
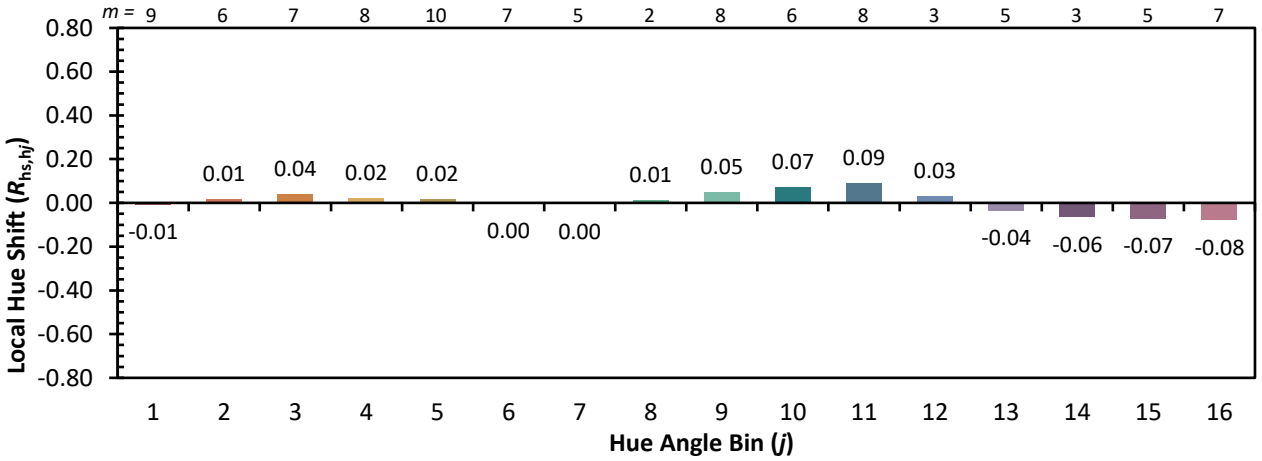
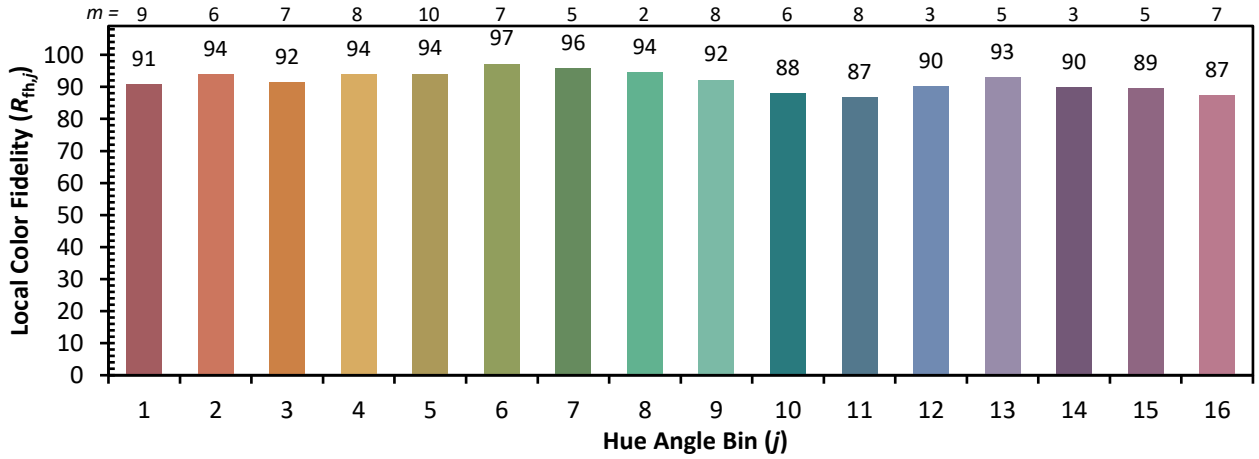
## Color Rendition by Hue-Angle Bin



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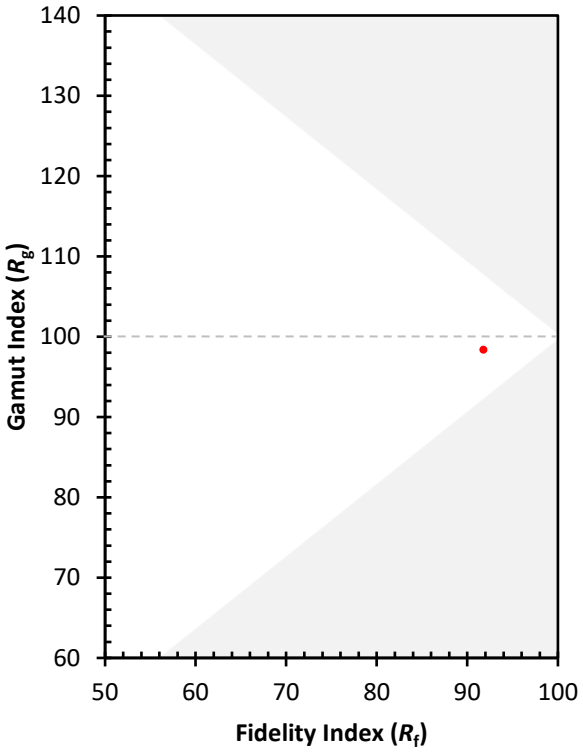
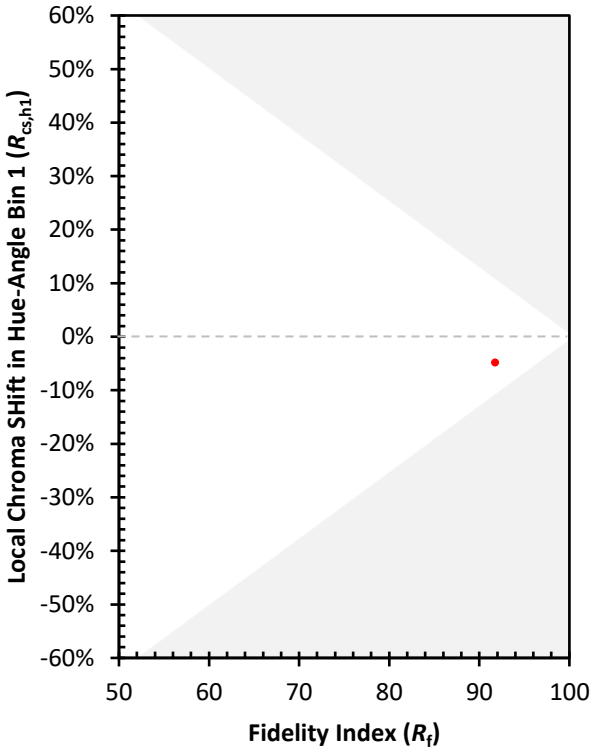
## Measure Comparisons

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