

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: P1456875

Luminaire Tested: GLAN-SB2A-940-U-T3LG

Issue Date: 05/20/2026

Test Information

Test Method: LM-79-2024
Report Number: P1456875
Test Lab: INNOVATION CENTER(G1)
Issue Date: 5/22/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: STREETWORKS
Catalog Number: GLAN-SB2A-940-U-T3LG
Description: GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 350mA 2xLight Square
PACKAGE 90CRI 4000K FIXTURE w/ TYPE III LOW GLARE
Light Source: (52) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6341.3 lumens
Efficiency: N/A
Efficacy: 110.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G1

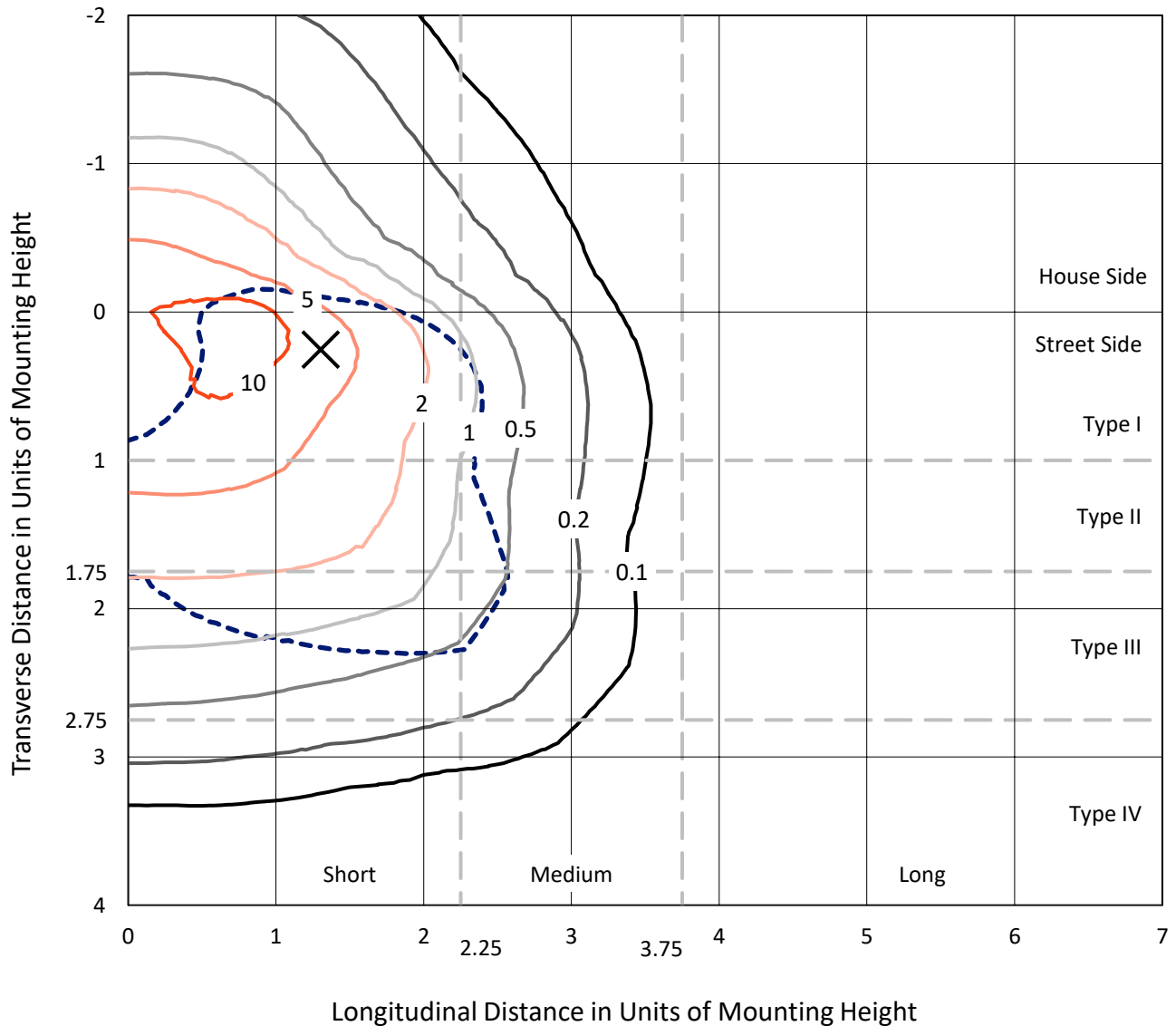
Input Watts (W): 57.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.97
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

REPORT NUMBER: P1456875

CATALOG NUMBER: GLAN-SB2A-940-U-T3LG

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

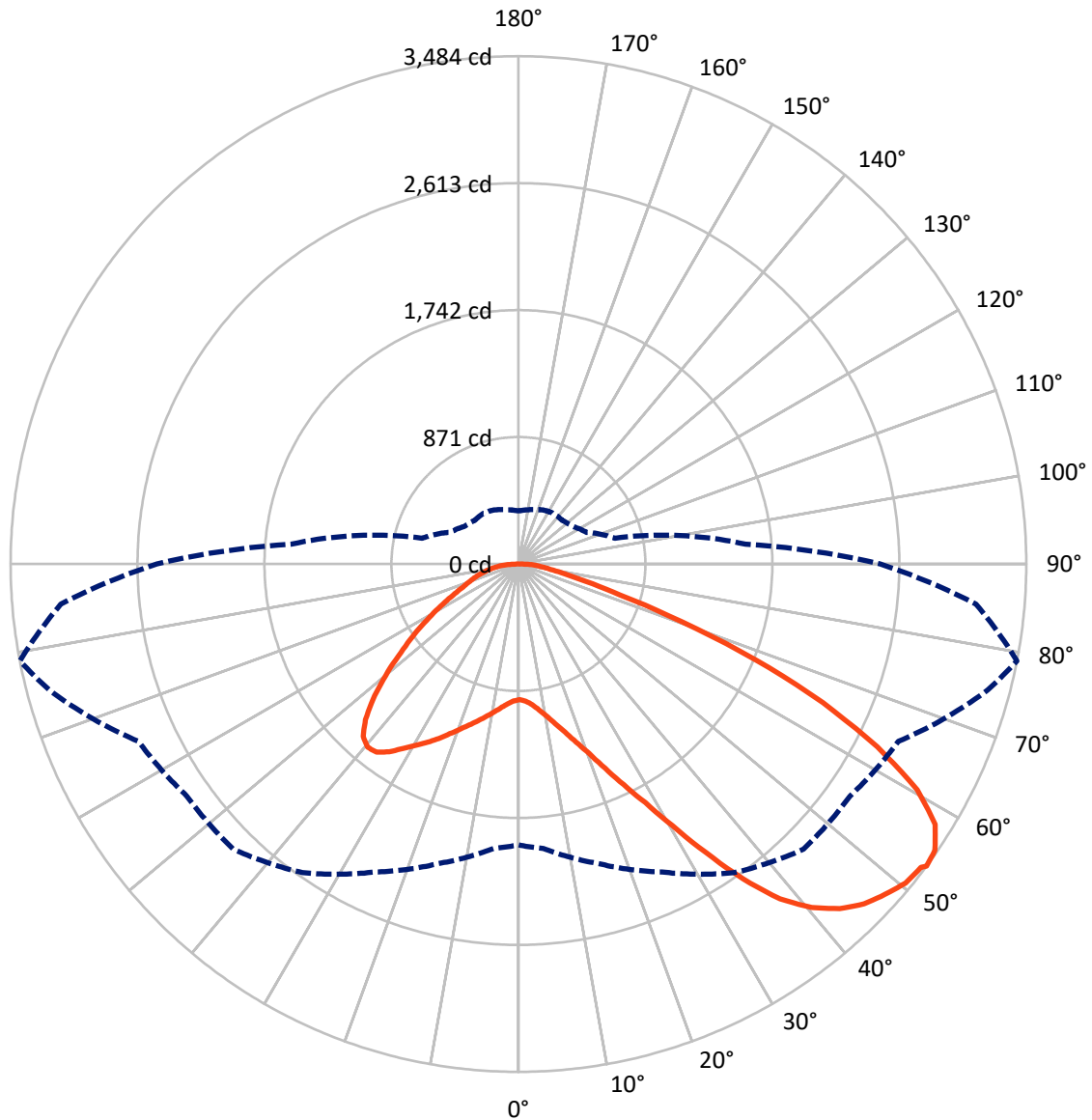


Based on 10 foot mounting height. Maximum calculated value = 14.5 fc
 Type III - Short - N/A

REPORT NUMBER: P1456875

CATALOG NUMBER: GLAN-SB2A-940-U-T3LG

Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 53-Deg Vertical

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CATALOG NUMBER: GLAN-SB2A-940-U-T3LG

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1598.6 | 0.0 | 1598.6 |
| | % Fixture | 25.2 | 0.0 | 25.2 |
| Street Side | Lumens | 4742.7 | 0.0 | 4742.7 |
| | % Fixture | 74.8 | 0.0 | 74.8 |
| Total | Lumens | 6341.3 | 0.0 | 6341.3 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 88.7 | 1.4 |
| 10°-20° | 274.7 | 4.3 |
| 20°-30° | 525.2 | 8.3 |
| 30°-40° | 901.7 | 14.2 |
| 40°-50° | 1262.9 | 19.9 |
| 50°-60° | 1433.3 | 22.6 |
| 60°-70° | 1256.9 | 19.8 |
| 70°-80° | 491.5 | 7.8 |
| 80°-90° | 106.5 | 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° | 6341.3 | 100.0 |
| 0°-180° | 6341.3 | 100.0 |



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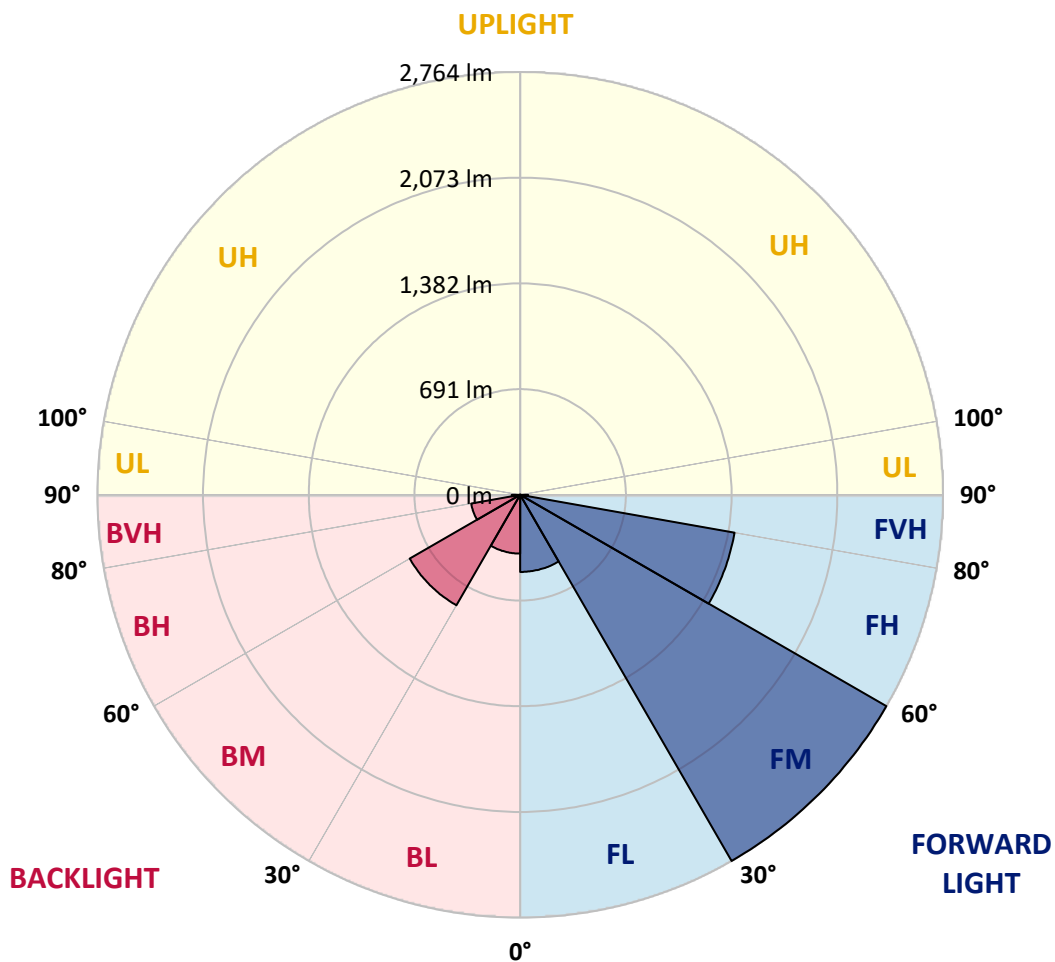
CATALOG NUMBER: GLAN-SB2A-940-U-T3LG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 504.1 | 7.9 | | | |
| FM | (30°-60°) | 2763.9 | 43.6 | | | |
| FH | (60°-80°) | 1423.0 | 22.4 | | | G1/1800 |
| FVH | (80°-90°) | 51.6 | 0.8 | | | G1/100 |
| BL | (0°-30°) | 384.5 | 6.1 | B1/500 | | |
| BM | (30°-60°) | 833.9 | 13.2 | B1/1000 | | |
| BH | (60°-80°) | 325.3 | 5.1 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 54.8 | 0.9 | | | 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 III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 79° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 930.9 | 930.9 | 930.9 | 930.9 | 930.9 | 930.9 | 930.9 | 930.9 | 930.9 | 930.9 | 930.9 |
| 2.5° | 932.3 | 932.3 | 926.7 | 932.3 | 929.5 | 933.7 | 936.6 | 936.6 | 942.2 | 940.8 | 940.8 |
| 5° | 916.8 | 914.0 | 912.6 | 922.4 | 928.1 | 939.4 | 952.1 | 957.8 | 967.6 | 967.6 | 969.1 |
| 7.5° | 875.8 | 874.4 | 881.5 | 901.2 | 919.6 | 947.9 | 974.7 | 990.2 | 1005.8 | 1008.6 | 1008.6 |
| 10° | 850.4 | 849.0 | 857.5 | 881.5 | 911.1 | 952.1 | 994.5 | 1027.0 | 1052.4 | 1059.5 | 1059.5 |
| 12.5° | 850.4 | 850.4 | 857.5 | 881.5 | 912.6 | 962.0 | 1019.9 | 1075.0 | 1114.6 | 1123.0 | 1120.2 |
| 15° | 874.4 | 873.0 | 881.5 | 906.9 | 936.6 | 983.2 | 1053.8 | 1127.3 | 1180.9 | 1196.5 | 1197.9 |
| 17.5° | 899.8 | 898.4 | 911.1 | 943.6 | 978.9 | 1025.6 | 1097.6 | 1188.0 | 1264.3 | 1284.1 | 1288.3 |
| 20° | 939.4 | 938.0 | 953.5 | 984.6 | 1028.4 | 1082.1 | 1156.9 | 1260.1 | 1366.0 | 1387.2 | 1392.8 |
| 22.5° | 984.6 | 986.0 | 1003.0 | 1041.1 | 1084.9 | 1155.5 | 1247.3 | 1361.8 | 1488.9 | 1521.4 | 1527.0 |
| 25° | 1079.2 | 1075.0 | 1089.1 | 1116.0 | 1162.6 | 1247.3 | 1360.3 | 1484.7 | 1635.8 | 1675.4 | 1682.4 |
| 27.5° | 1205.0 | 1197.9 | 1213.4 | 1240.3 | 1274.2 | 1353.3 | 1483.2 | 1621.7 | 1803.9 | 1853.4 | 1854.8 |
| 30° | 1318.0 | 1313.7 | 1334.9 | 1390.0 | 1425.3 | 1486.1 | 1624.5 | 1782.7 | 2011.6 | 2083.6 | 2086.4 |
| 32.5° | 1415.4 | 1414.0 | 1453.6 | 1524.2 | 1604.7 | 1669.7 | 1803.9 | 1986.1 | 2274.3 | 2357.7 | 2339.3 |
| 35° | 1508.7 | 1512.9 | 1562.4 | 1635.8 | 1743.2 | 1873.1 | 2008.7 | 2216.4 | 2551.2 | 2651.5 | 2621.8 |
| 37.5° | 1603.3 | 1606.1 | 1671.1 | 1765.8 | 1878.8 | 2048.3 | 2230.5 | 2466.4 | 2791.3 | 2915.6 | 2850.7 |
| 40° | 1690.9 | 1699.4 | 1787.0 | 1888.7 | 2035.6 | 2207.9 | 2411.3 | 2640.2 | 2976.4 | 3099.3 | 3028.7 |
| 42.5° | 1778.5 | 1791.2 | 1885.8 | 2025.7 | 2182.5 | 2361.9 | 2537.1 | 2746.1 | 3095.0 | 3232.1 | 3123.3 |
| 45° | 1868.9 | 1877.4 | 1994.6 | 2140.1 | 2318.1 | 2483.4 | 2609.1 | 2813.9 | 3177.0 | 3325.3 | 3177.0 |
| 47.5° | 1929.6 | 1946.6 | 2075.1 | 2243.2 | 2421.2 | 2576.6 | 2667.0 | 2842.2 | 3229.2 | 3386.0 | 3196.8 |
| 50° | 1953.6 | 1977.7 | 2116.1 | 2302.6 | 2506.0 | 2664.2 | 2712.2 | 2857.7 | 3287.2 | 3439.7 | 3192.5 |
| 52.5° | 1949.4 | 1972.0 | 2123.2 | 2329.4 | 2573.8 | 2744.7 | 2756.0 | 2874.7 | 3328.1 | 3458.1 | 3155.8 |
| 53° | 1926.8 | 1957.9 | 2127.4 | 2330.8 | 2583.7 | 2765.9 | 2775.8 | 2876.1 | 3333.8 | 3483.5 | 3150.1 |
| 55° | 1849.1 | 1866.1 | 2083.6 | 2329.4 | 2630.3 | 2845.0 | 2830.9 | 2918.5 | 3349.3 | 3466.6 | 3088.0 |
| 57.5° | 1778.5 | 1795.4 | 1984.7 | 2302.6 | 2668.4 | 2956.6 | 2919.9 | 2911.4 | 3264.6 | 3370.5 | 2931.2 |
| 60° | 1733.3 | 1738.9 | 1898.6 | 2217.8 | 2652.9 | 3034.3 | 2977.8 | 2828.1 | 3055.5 | 3143.1 | 2655.7 |
| 62.5° | 1695.1 | 1693.7 | 1835.0 | 2096.3 | 2593.6 | 3045.6 | 2989.1 | 2621.8 | 2749.0 | 2763.1 | 2288.4 |
| 65° | 1609.0 | 1599.1 | 1736.1 | 1959.3 | 2470.7 | 2994.7 | 2850.7 | 2309.6 | 2342.1 | 2295.5 | 1837.8 |
| 67.5° | 1438.0 | 1416.9 | 1538.3 | 1750.2 | 2220.6 | 2850.7 | 2586.5 | 1946.6 | 1846.3 | 1753.1 | 1384.4 |
| 70° | 1029.8 | 1029.8 | 1127.3 | 1339.2 | 1782.7 | 2463.6 | 2220.6 | 1473.4 | 1271.4 | 1188.0 | 925.3 |
| 72.5° | 504.3 | 517.0 | 618.7 | 791.1 | 1195.1 | 1788.4 | 1700.8 | 954.9 | 771.3 | 730.3 | 593.3 |
| 75° | 214.7 | 216.1 | 264.2 | 350.3 | 606.0 | 1058.0 | 1065.1 | 550.9 | 494.4 | 474.6 | 392.7 |
| 77.5° | 149.7 | 152.6 | 173.8 | 206.2 | 288.2 | 485.9 | 553.7 | 333.4 | 332.0 | 317.8 | 279.7 |
| 80° | 114.4 | 117.2 | 131.4 | 154.0 | 193.5 | 248.6 | 286.8 | 226.0 | 237.3 | 223.2 | 202.0 |
| 82.5° | 86.2 | 89.0 | 98.9 | 115.8 | 138.4 | 166.7 | 161.0 | 166.7 | 175.2 | 166.7 | 145.5 |
| 85° | 57.9 | 59.3 | 66.4 | 80.5 | 89.0 | 100.3 | 100.3 | 121.5 | 127.1 | 124.3 | 114.4 |
| 87.5° | 29.7 | 29.7 | 35.3 | 42.4 | 45.2 | 46.6 | 41.0 | 53.7 | 60.7 | 66.4 | 53.7 |
| 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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CATALOG NUMBER: GLAN-SB2A-940-U-T3LG

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 930.9 | 930.9 | 930.9 | 930.9 | 930.9 | 930.9 | 930.9 | 930.9 | 930.9 | 930.9 | 930.9 |
| 2.5° | 940.8 | 942.2 | 938.0 | 936.6 | 935.2 | 928.1 | 928.1 | 921.0 | 919.6 | 921.0 | 916.8 |
| 5° | 971.9 | 969.1 | 957.8 | 949.3 | 939.4 | 919.6 | 908.3 | 892.8 | 888.5 | 884.3 | 880.1 |
| 7.5° | 1010.0 | 1005.8 | 986.0 | 963.4 | 936.6 | 898.4 | 877.2 | 851.8 | 843.3 | 836.3 | 833.4 |
| 10° | 1058.0 | 1049.6 | 1018.5 | 970.5 | 921.0 | 874.4 | 844.7 | 813.7 | 799.5 | 796.7 | 789.7 |
| 12.5° | 1120.2 | 1104.7 | 1046.7 | 971.9 | 906.9 | 846.2 | 813.7 | 789.7 | 784.0 | 782.6 | 775.5 |
| 15° | 1189.4 | 1166.8 | 1073.6 | 973.3 | 888.5 | 822.1 | 802.4 | 789.7 | 789.7 | 788.2 | 784.0 |
| 17.5° | 1274.2 | 1237.5 | 1099.0 | 967.6 | 865.9 | 815.1 | 805.2 | 793.9 | 791.1 | 792.5 | 786.8 |
| 20° | 1375.9 | 1315.1 | 1125.9 | 960.6 | 856.0 | 816.5 | 805.2 | 789.7 | 782.6 | 781.2 | 776.9 |
| 22.5° | 1493.1 | 1404.1 | 1155.5 | 949.3 | 856.0 | 815.1 | 796.7 | 775.5 | 761.4 | 755.7 | 750.1 |
| 25° | 1627.3 | 1507.3 | 1186.6 | 945.0 | 858.9 | 809.4 | 779.8 | 745.9 | 723.3 | 714.8 | 710.5 |
| 27.5° | 1789.8 | 1616.0 | 1209.2 | 949.3 | 857.5 | 796.7 | 750.1 | 706.3 | 680.9 | 666.8 | 663.9 |
| 30° | 1969.2 | 1733.3 | 1224.7 | 956.3 | 849.0 | 772.7 | 714.8 | 665.3 | 630.0 | 613.1 | 608.8 |
| 32.5° | 2181.1 | 1864.7 | 1240.3 | 956.3 | 827.8 | 738.8 | 673.8 | 620.1 | 583.4 | 563.6 | 560.8 |
| 35° | 2415.6 | 2025.7 | 1254.4 | 954.9 | 802.4 | 702.1 | 632.9 | 577.8 | 539.6 | 519.8 | 518.4 |
| 37.5° | 2614.8 | 2147.2 | 1261.5 | 940.8 | 767.1 | 659.7 | 594.7 | 539.6 | 500.1 | 478.9 | 477.5 |
| 40° | 2737.7 | 2198.0 | 1247.3 | 912.6 | 724.7 | 615.9 | 552.3 | 501.5 | 461.9 | 436.5 | 430.8 |
| 42.5° | 2784.3 | 2174.0 | 1202.1 | 865.9 | 673.8 | 572.1 | 517.0 | 463.3 | 411.1 | 389.9 | 385.6 |
| 45° | 2768.7 | 2080.8 | 1106.1 | 799.5 | 617.3 | 532.6 | 485.9 | 425.2 | 391.3 | 372.9 | 371.5 |
| 47.5° | 2716.5 | 1936.7 | 986.0 | 716.2 | 558.0 | 497.2 | 445.0 | 415.3 | 384.2 | 364.5 | 363.0 |
| 50° | 2624.6 | 1782.7 | 841.9 | 621.6 | 504.3 | 460.5 | 435.1 | 411.1 | 385.6 | 370.1 | 367.3 |
| 52.5° | 2507.4 | 1609.0 | 709.1 | 529.7 | 457.7 | 428.0 | 425.2 | 408.2 | 388.5 | 371.5 | 364.5 |
| 53° | 2480.6 | 1563.8 | 683.7 | 514.2 | 450.6 | 423.8 | 422.4 | 408.2 | 385.6 | 370.1 | 364.5 |
| 55° | 2352.0 | 1423.9 | 603.2 | 459.1 | 415.3 | 409.7 | 422.4 | 406.8 | 378.6 | 365.9 | 361.6 |
| 57.5° | 2145.8 | 1240.3 | 525.5 | 408.2 | 378.6 | 392.7 | 418.1 | 401.2 | 370.1 | 347.5 | 340.4 |
| 60° | 1897.1 | 1029.8 | 466.2 | 374.3 | 351.7 | 371.5 | 401.2 | 381.4 | 339.0 | 327.7 | 326.3 |
| 62.5° | 1600.5 | 833.4 | 421.0 | 346.1 | 329.1 | 348.9 | 375.8 | 341.9 | 310.8 | 302.3 | 299.5 |
| 65° | 1250.2 | 662.5 | 385.6 | 324.9 | 306.5 | 322.1 | 340.4 | 319.3 | 299.5 | 292.4 | 291.0 |
| 67.5° | 929.5 | 519.8 | 357.4 | 306.5 | 283.9 | 293.8 | 315.0 | 309.4 | 292.4 | 288.2 | 286.8 |
| 70° | 641.3 | 422.4 | 332.0 | 289.6 | 255.7 | 267.0 | 299.5 | 303.7 | 286.8 | 283.9 | 282.5 |
| 72.5° | 449.2 | 357.4 | 305.1 | 271.2 | 233.1 | 244.4 | 292.4 | 292.4 | 274.0 | 278.3 | 275.5 |
| 75° | 337.6 | 300.9 | 274.0 | 248.6 | 204.8 | 221.8 | 282.5 | 279.7 | 261.3 | 279.7 | 272.6 |
| 77.5° | 254.3 | 243.0 | 237.3 | 220.4 | 179.4 | 196.4 | 262.7 | 257.1 | 233.1 | 234.5 | 221.8 |
| 80° | 185.1 | 187.9 | 203.4 | 187.9 | 149.7 | 162.5 | 221.8 | 219.0 | 189.3 | 194.9 | 179.4 |
| 82.5° | 132.8 | 139.8 | 173.8 | 151.1 | 108.8 | 115.8 | 152.6 | 165.3 | 148.3 | 139.8 | 142.7 |
| 85° | 100.3 | 104.5 | 139.8 | 111.6 | 67.8 | 76.3 | 104.5 | 118.7 | 115.8 | 107.4 | 108.8 |
| 87.5° | 42.4 | 48.0 | 65.0 | 52.3 | 39.6 | 39.6 | 65.0 | 83.3 | 74.9 | 63.6 | 66.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
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

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 | R9: | 60.7 |
| R2: | 94.1 | R10: | 85.2 |
| R3: | 95.3 | R11: | 92.4 |
| R4: | 92.8 | R12: | 74.5 |
| R5: | 91.0 | R13: | 92.3 |
| R6: | 91.6 | R14: | 97.0 |
| R7: | 95.0 | R15: | 88.5 |
| R8: | 85.2 | | |



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

REPORT NUMBER: SP1-2407-184-16

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 | | | |

REPORT NUMBER: SP1-2407-184-16

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 | | | |

REPORT NUMBER: SP1-2407-184-16

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 | | | |

Summary

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



Color Vector Graphics

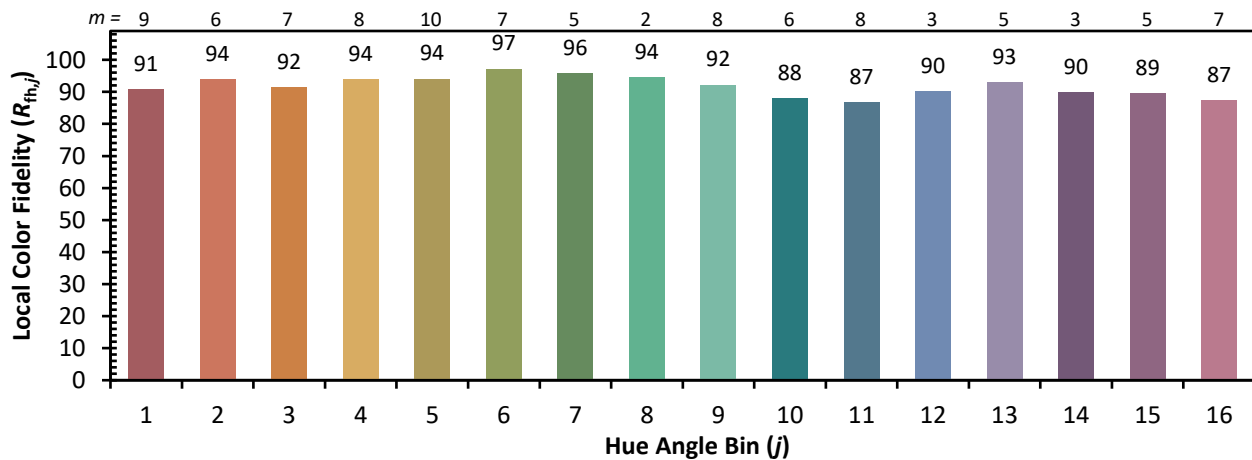
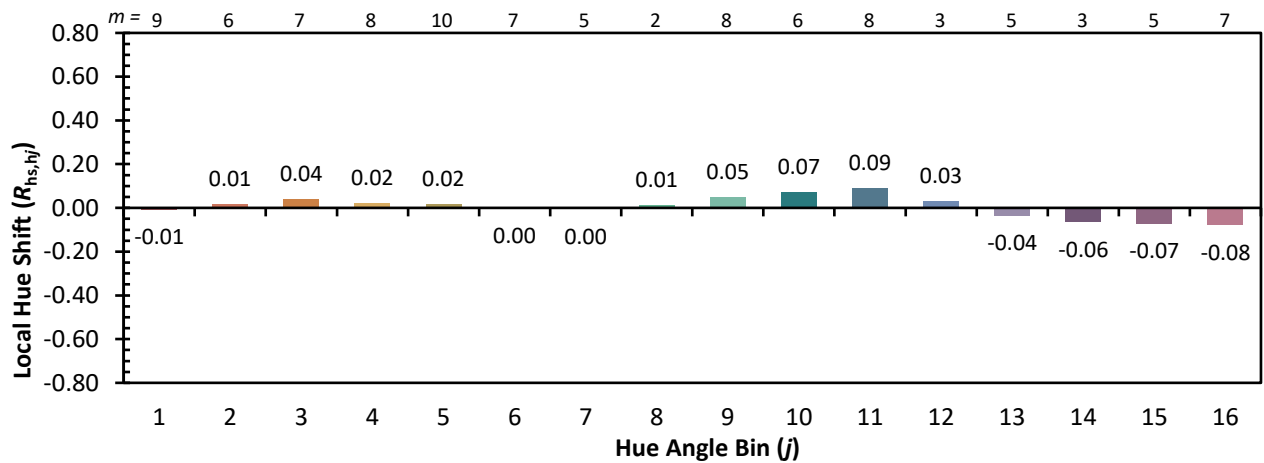
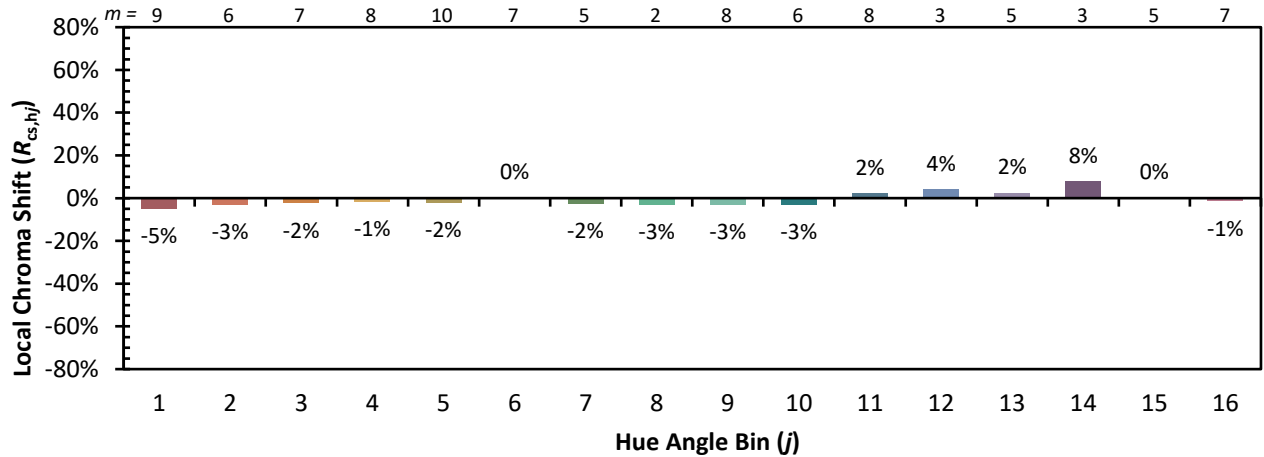


Individual Sample Fidelity Index ($R_{f,i}$)

| | | | |
|------------|------------|------------|------------|
| 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 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)