

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

Cooper Lighting Solutions Photometric Lab
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: P1456740

Luminaire Tested: GLAN-SB4B-850-U-T3LG

Issue Date: 05/20/2026

Test Information

Test Method: LM-79-2024
Report Number: P1456740
Test Lab: INNOVATION CENTER(G1)
Issue Date: 5/22/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: STREETWORKS
Catalog Number: GLAN-SB4B-850-U-T3LG
Description: GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 450mA 4xLight Square
PACKAGE 80CRI 5000K FIXTURE w/ TYPE III LOW GLARE
Light Source: (104) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21053.2 lumens
Efficiency: N/A
Efficacy: 143.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

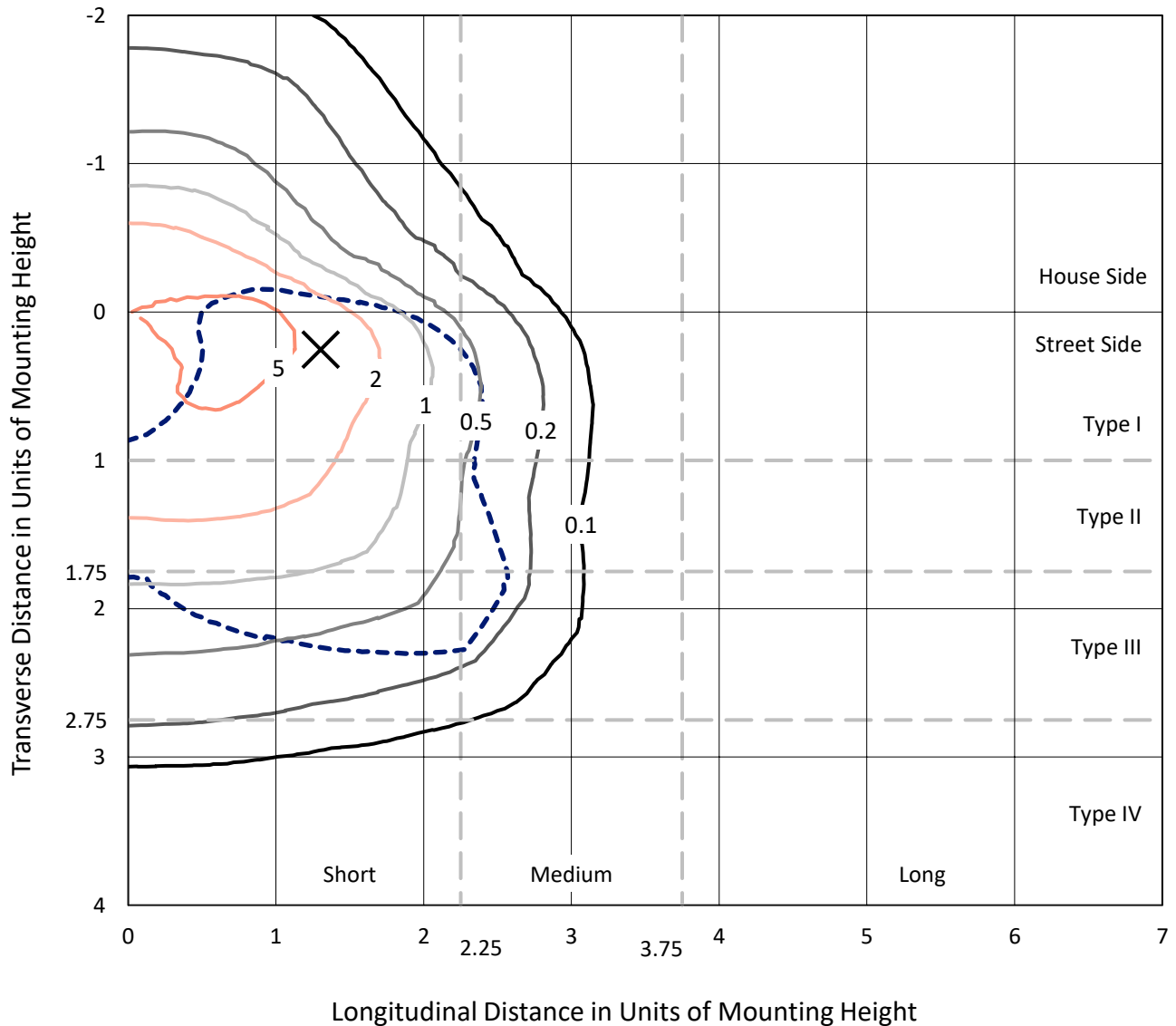
Input Watts (W): 147
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.97
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

REPORT NUMBER: P1456740

CATALOG NUMBER: GLAN-SB4B-850-U-T3LG

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

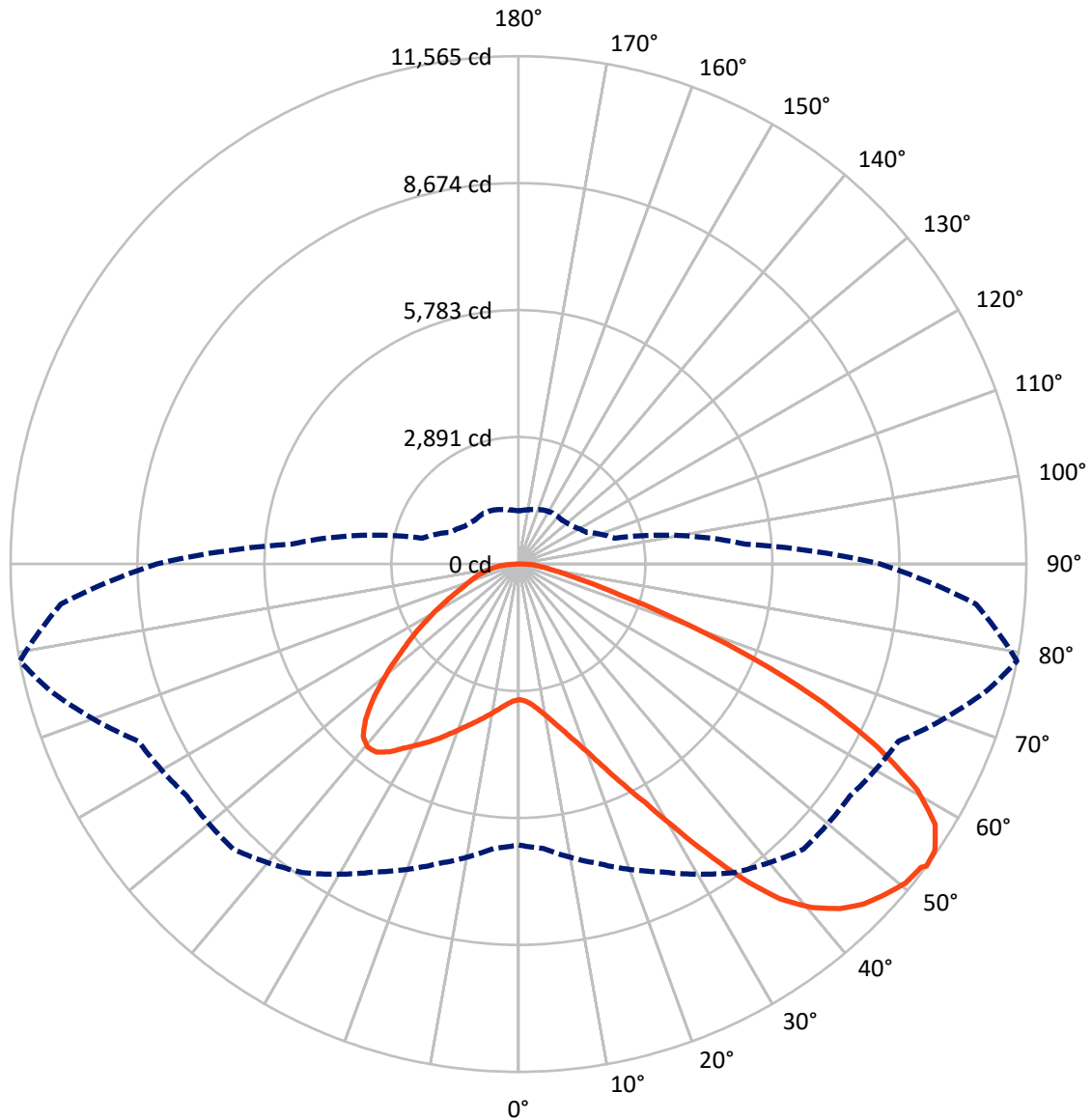


Based on 25 foot mounting height. Maximum calculated value = 7.7 fc
 Type III - Short - N/A

REPORT NUMBER: P1456740

CATALOG NUMBER: GLAN-SB4B-850-U-T3LG

Luminous Intensity Polar Plot



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

REPORT NUMBER: P1456740

CATALOG NUMBER: GLAN-SB4B-850-U-T3LG

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 5307.4 | 0.0 | 5307.4 |
| | % Fixture | 25.2 | 0.0 | 25.2 |
| Street Side | Lumens | 15745.8 | 0.0 | 15745.8 |
| | % Fixture | 74.8 | 0.0 | 74.8 |
| Total | Lumens | 21053.2 | 0.0 | 21053.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 294.5 | 1.4 |
| 10°-20° | 911.9 | 4.3 |
| 20°-30° | 1743.6 | 8.3 |
| 30°-40° | 2993.5 | 14.2 |
| 40°-50° | 4193.0 | 19.9 |
| 50°-60° | 4758.5 | 22.6 |
| 60°-70° | 4172.9 | 19.8 |
| 70°-80° | 1631.7 | 7.8 |
| 80°-90° | 353.5 | 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° | 21053.2 | 100.0 |
| 0°-180° | 21053.2 | 100.0 |



REPORT NUMBER: P1456740

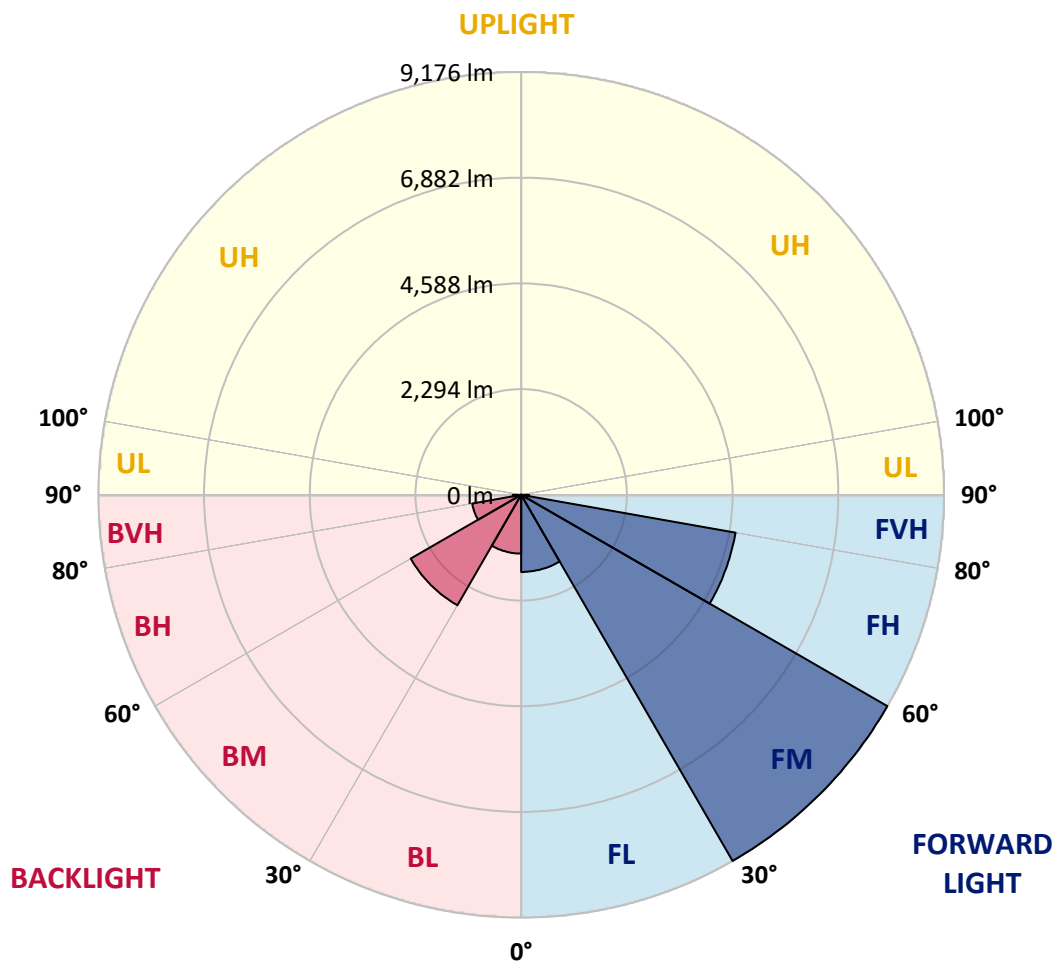
CATALOG NUMBER: GLAN-SB4B-850-U-T3LG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1673.5 | 7.9 | | | |
| FM (30°-60°) | 9176.3 | 43.6 | | | |
| FH (60°-80°) | 4724.5 | 22.4 | | | G2/5000 |
| FVH (80°-90°) | 171.5 | 0.8 | | | G2/225 |
| BL (0°-30°) | 1276.4 | 6.1 | B3/2500 | | |
| BM (30°-60°) | 2768.7 | 13.2 | B3/5000 | | |
| BH (60°-80°) | 1080.1 | 5.1 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 182.1 | 0.9 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G3

Type III Short





REPORT NUMBER: P1456740

CATALOG NUMBER: GLAN-SB4B-850-U-T3LG

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 79° | 85° |
|-------|--------|--------|--------|--------|--------|---------|--------|--------|---------|---------|---------|
| 0° | 3090.7 | 3090.7 | 3090.7 | 3090.7 | 3090.7 | 3090.7 | 3090.7 | 3090.7 | 3090.7 | 3090.7 | 3090.7 |
| 2.5° | 3095.4 | 3095.4 | 3076.6 | 3095.4 | 3086.0 | 3100.0 | 3109.4 | 3109.4 | 3128.2 | 3123.5 | 3123.5 |
| 5° | 3043.8 | 3034.4 | 3029.7 | 3062.5 | 3081.3 | 3118.8 | 3161.0 | 3179.8 | 3212.6 | 3212.6 | 3217.3 |
| 7.5° | 2907.8 | 2903.1 | 2926.5 | 2992.2 | 3053.1 | 3146.9 | 3236.0 | 3287.6 | 3339.2 | 3348.6 | 3348.6 |
| 10° | 2823.3 | 2818.6 | 2846.8 | 2926.5 | 3025.0 | 3161.0 | 3301.7 | 3409.6 | 3494.0 | 3517.4 | 3517.4 |
| 12.5° | 2823.3 | 2823.3 | 2846.8 | 2926.5 | 3029.7 | 3193.8 | 3386.1 | 3569.0 | 3700.4 | 3728.5 | 3719.1 |
| 15° | 2903.1 | 2898.4 | 2926.5 | 3010.9 | 3109.4 | 3264.2 | 3498.7 | 3742.6 | 3920.8 | 3972.4 | 3977.1 |
| 17.5° | 2987.5 | 2982.8 | 3025.0 | 3132.9 | 3250.1 | 3404.9 | 3644.1 | 3944.2 | 4197.5 | 4263.1 | 4277.2 |
| 20° | 3118.8 | 3114.1 | 3165.7 | 3268.9 | 3414.3 | 3592.5 | 3841.1 | 4183.4 | 4535.2 | 4605.5 | 4624.3 |
| 22.5° | 3268.9 | 3273.6 | 3329.8 | 3456.5 | 3601.9 | 3836.4 | 4141.2 | 4521.1 | 4943.2 | 5051.1 | 5069.8 |
| 25° | 3583.1 | 3569.0 | 3615.9 | 3705.0 | 3859.8 | 4141.2 | 4516.4 | 4929.1 | 5430.9 | 5562.3 | 5585.7 |
| 27.5° | 4000.5 | 3977.1 | 4028.6 | 4117.8 | 4230.3 | 4493.0 | 4924.4 | 5384.0 | 5989.0 | 6153.2 | 6157.9 |
| 30° | 4375.7 | 4361.6 | 4432.0 | 4614.9 | 4732.1 | 4933.8 | 5393.4 | 5918.7 | 6678.5 | 6917.6 | 6927.0 |
| 32.5° | 4699.3 | 4694.6 | 4825.9 | 5060.4 | 5327.8 | 5543.5 | 5989.0 | 6594.0 | 7550.8 | 7827.5 | 7766.5 |
| 35° | 5008.8 | 5022.9 | 5187.1 | 5430.9 | 5787.4 | 6218.8 | 6669.1 | 7358.5 | 8470.0 | 8803.0 | 8704.5 |
| 37.5° | 5323.1 | 5332.4 | 5548.2 | 5862.4 | 6237.6 | 6800.4 | 7405.4 | 8188.6 | 9267.3 | 9680.0 | 9464.3 |
| 40° | 5613.8 | 5642.0 | 5932.8 | 6270.4 | 6758.2 | 7330.4 | 8005.7 | 8765.5 | 9881.7 | 10289.7 | 10055.2 |
| 42.5° | 5904.6 | 5946.8 | 6261.1 | 6725.4 | 7245.9 | 7841.6 | 8423.1 | 9117.2 | 10275.6 | 10730.6 | 10369.4 |
| 45° | 6204.8 | 6232.9 | 6622.2 | 7105.2 | 7696.2 | 8244.9 | 8662.3 | 9342.3 | 10547.6 | 11040.1 | 10547.6 |
| 47.5° | 6406.4 | 6462.7 | 6889.5 | 7447.6 | 8038.5 | 8554.4 | 8854.6 | 9436.1 | 10721.2 | 11241.8 | 10613.3 |
| 50° | 6486.2 | 6565.9 | 7025.5 | 7644.6 | 8319.9 | 8845.2 | 9004.7 | 9487.7 | 10913.5 | 11420.0 | 10599.2 |
| 52.5° | 6472.1 | 6547.1 | 7049.0 | 7733.7 | 8545.0 | 9112.5 | 9150.0 | 9544.0 | 11049.5 | 11480.9 | 10477.3 |
| 53° | 6397.1 | 6500.2 | 7063.0 | 7738.4 | 8577.9 | 9182.9 | 9215.7 | 9548.7 | 11068.2 | 11565.4 | 10458.5 |
| 55° | 6139.1 | 6195.4 | 6917.6 | 7733.7 | 8732.6 | 9445.5 | 9398.6 | 9689.4 | 11119.8 | 11509.1 | 10252.2 |
| 57.5° | 5904.6 | 5960.9 | 6589.3 | 7644.6 | 8859.3 | 9816.0 | 9694.1 | 9665.9 | 10838.4 | 11190.2 | 9731.6 |
| 60° | 5754.5 | 5773.3 | 6303.3 | 7363.2 | 8807.7 | 10074.0 | 9886.4 | 9389.2 | 10144.3 | 10435.1 | 8817.1 |
| 62.5° | 5627.9 | 5623.2 | 6092.2 | 6959.9 | 8610.7 | 10111.5 | 9923.9 | 8704.5 | 9126.6 | 9173.5 | 7597.7 |
| 65° | 5341.8 | 5309.0 | 5763.9 | 6504.9 | 8202.7 | 9942.6 | 9464.3 | 7668.0 | 7775.9 | 7621.1 | 6101.6 |
| 67.5° | 4774.3 | 4704.0 | 5107.3 | 5810.8 | 7372.6 | 9464.3 | 8587.3 | 6462.7 | 6129.7 | 5820.2 | 4596.1 |
| 70° | 3419.0 | 3419.0 | 3742.6 | 4446.1 | 5918.7 | 8179.2 | 7372.6 | 4891.6 | 4220.9 | 3944.2 | 3071.9 |
| 72.5° | 1674.3 | 1716.5 | 2054.2 | 2626.4 | 3967.7 | 5937.4 | 5646.7 | 3170.4 | 2560.7 | 2424.7 | 1969.8 |
| 75° | 712.9 | 717.6 | 877.0 | 1163.1 | 2012.0 | 3512.8 | 3536.2 | 1829.1 | 1641.5 | 1575.8 | 1303.8 |
| 77.5° | 497.1 | 506.5 | 576.9 | 684.7 | 956.7 | 1613.3 | 1838.5 | 1106.8 | 1102.1 | 1055.2 | 928.6 |
| 80° | 379.9 | 389.3 | 436.2 | 511.2 | 642.5 | 825.4 | 952.1 | 750.4 | 787.9 | 741.0 | 670.7 |
| 82.5° | 286.1 | 295.5 | 328.3 | 384.6 | 459.6 | 553.4 | 534.7 | 553.4 | 581.6 | 553.4 | 483.1 |
| 85° | 192.3 | 197.0 | 220.4 | 267.3 | 295.5 | 333.0 | 333.0 | 403.3 | 422.1 | 412.7 | 379.9 |
| 87.5° | 98.5 | 98.5 | 117.2 | 140.7 | 150.1 | 154.8 | 136.0 | 178.2 | 201.7 | 220.4 | 178.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P1456740

CATALOG NUMBER: GLAN-SB4B-850-U-T3LG

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3090.7 | 3090.7 | 3090.7 | 3090.7 | 3090.7 | 3090.7 | 3090.7 | 3090.7 | 3090.7 | 3090.7 | 3090.7 |
| 2.5° | 3123.5 | 3128.2 | 3114.1 | 3109.4 | 3104.7 | 3081.3 | 3081.3 | 3057.8 | 3053.1 | 3057.8 | 3043.8 |
| 5° | 3226.7 | 3217.3 | 3179.8 | 3151.6 | 3118.8 | 3053.1 | 3015.6 | 2964.0 | 2950.0 | 2935.9 | 2921.8 |
| 7.5° | 3353.3 | 3339.2 | 3273.6 | 3198.5 | 3109.4 | 2982.8 | 2912.4 | 2828.0 | 2799.9 | 2776.4 | 2767.1 |
| 10° | 3512.8 | 3484.6 | 3381.4 | 3222.0 | 3057.8 | 2903.1 | 2804.6 | 2701.4 | 2654.5 | 2645.1 | 2621.7 |
| 12.5° | 3719.1 | 3667.5 | 3475.2 | 3226.7 | 3010.9 | 2809.3 | 2701.4 | 2621.7 | 2602.9 | 2598.2 | 2574.8 |
| 15° | 3948.9 | 3873.9 | 3564.3 | 3231.4 | 2950.0 | 2729.5 | 2663.9 | 2621.7 | 2621.7 | 2617.0 | 2602.9 |
| 17.5° | 4230.3 | 4108.4 | 3648.8 | 3212.6 | 2874.9 | 2706.1 | 2673.3 | 2635.7 | 2626.4 | 2631.0 | 2612.3 |
| 20° | 4568.0 | 4366.3 | 3737.9 | 3189.2 | 2842.1 | 2710.8 | 2673.3 | 2621.7 | 2598.2 | 2593.5 | 2579.5 |
| 22.5° | 4957.3 | 4661.8 | 3836.4 | 3151.6 | 2842.1 | 2706.1 | 2645.1 | 2574.8 | 2527.9 | 2509.1 | 2490.4 |
| 25° | 5402.8 | 5004.2 | 3939.5 | 3137.6 | 2851.5 | 2687.3 | 2588.8 | 2476.3 | 2401.2 | 2373.1 | 2359.0 |
| 27.5° | 5942.1 | 5365.3 | 4014.6 | 3151.6 | 2846.8 | 2645.1 | 2490.4 | 2345.0 | 2260.5 | 2213.6 | 2204.3 |
| 30° | 6537.8 | 5754.5 | 4066.2 | 3175.1 | 2818.6 | 2565.4 | 2373.1 | 2209.0 | 2091.7 | 2035.4 | 2021.4 |
| 32.5° | 7241.2 | 6190.7 | 4117.8 | 3175.1 | 2748.3 | 2452.8 | 2237.1 | 2058.9 | 1936.9 | 1871.3 | 1861.9 |
| 35° | 8019.8 | 6725.4 | 4164.7 | 3170.4 | 2663.9 | 2330.9 | 2101.1 | 1918.2 | 1791.6 | 1725.9 | 1721.2 |
| 37.5° | 8681.1 | 7128.7 | 4188.1 | 3123.5 | 2546.6 | 2190.2 | 1974.5 | 1791.6 | 1660.2 | 1589.9 | 1585.2 |
| 40° | 9089.1 | 7297.5 | 4141.2 | 3029.7 | 2405.9 | 2044.8 | 1833.8 | 1664.9 | 1533.6 | 1449.2 | 1430.4 |
| 42.5° | 9243.8 | 7217.8 | 3991.1 | 2874.9 | 2237.1 | 1899.4 | 1716.5 | 1538.3 | 1364.8 | 1294.4 | 1280.4 |
| 45° | 9192.3 | 6908.3 | 3672.2 | 2654.5 | 2049.5 | 1768.1 | 1613.3 | 1411.7 | 1299.1 | 1238.1 | 1233.5 |
| 47.5° | 9018.7 | 6429.9 | 3273.6 | 2377.8 | 1852.5 | 1650.9 | 1477.3 | 1378.8 | 1275.7 | 1210.0 | 1205.3 |
| 50° | 8713.9 | 5918.7 | 2795.2 | 2063.6 | 1674.3 | 1528.9 | 1444.5 | 1364.8 | 1280.4 | 1228.8 | 1219.4 |
| 52.5° | 8324.6 | 5341.8 | 2354.3 | 1758.7 | 1519.5 | 1421.0 | 1411.7 | 1355.4 | 1289.7 | 1233.5 | 1210.0 |
| 53° | 8235.5 | 5191.7 | 2269.9 | 1707.1 | 1496.1 | 1407.0 | 1402.3 | 1355.4 | 1280.4 | 1228.8 | 1210.0 |
| 55° | 7808.7 | 4727.4 | 2002.6 | 1524.2 | 1378.8 | 1360.1 | 1402.3 | 1350.7 | 1256.9 | 1214.7 | 1200.6 |
| 57.5° | 7124.0 | 4117.8 | 1744.7 | 1355.4 | 1256.9 | 1303.8 | 1388.2 | 1331.9 | 1228.8 | 1153.7 | 1130.3 |
| 60° | 6298.6 | 3419.0 | 1547.7 | 1242.8 | 1167.8 | 1233.5 | 1331.9 | 1266.3 | 1125.6 | 1088.1 | 1083.4 |
| 62.5° | 5313.7 | 2767.1 | 1397.6 | 1149.0 | 1092.8 | 1158.4 | 1247.5 | 1135.0 | 1031.8 | 1003.6 | 994.3 |
| 65° | 4150.6 | 2199.6 | 1280.4 | 1078.7 | 1017.7 | 1069.3 | 1130.3 | 1059.9 | 994.3 | 970.8 | 966.1 |
| 67.5° | 3086.0 | 1725.9 | 1186.6 | 1017.7 | 942.7 | 975.5 | 1045.9 | 1027.1 | 970.8 | 956.7 | 952.1 |
| 70° | 2129.2 | 1402.3 | 1102.1 | 961.4 | 848.9 | 886.4 | 994.3 | 1008.3 | 952.1 | 942.7 | 938.0 |
| 72.5° | 1491.4 | 1186.6 | 1013.0 | 900.5 | 773.8 | 811.4 | 970.8 | 970.8 | 909.8 | 923.9 | 914.5 |
| 75° | 1120.9 | 999.0 | 909.8 | 825.4 | 680.0 | 736.3 | 938.0 | 928.6 | 867.6 | 928.6 | 905.2 |
| 77.5° | 844.2 | 806.7 | 787.9 | 731.6 | 595.6 | 651.9 | 872.3 | 853.6 | 773.8 | 778.5 | 736.3 |
| 80° | 614.4 | 623.8 | 675.3 | 623.8 | 497.1 | 539.3 | 736.3 | 726.9 | 628.5 | 647.2 | 595.6 |
| 82.5° | 440.9 | 464.3 | 576.9 | 501.8 | 361.1 | 384.6 | 506.5 | 548.7 | 492.4 | 464.3 | 473.7 |
| 85° | 333.0 | 347.1 | 464.3 | 370.5 | 225.1 | 253.3 | 347.1 | 394.0 | 384.6 | 356.4 | 361.1 |
| 87.5° | 140.7 | 159.5 | 215.7 | 173.5 | 131.3 | 131.3 | 215.7 | 276.7 | 248.6 | 211.0 | 220.4 |
| 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: SP1-2407-184-12

Test Date: 10/11/2024

Luminaire Tested: GSS-SB1A-850-U-5WQ

Data in this report applies to families of products including GSS-SB1A-850-U-5WQ

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-184-12
 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-850-U-5WQ**
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 80 CRI 5000K CCT 26 LEDS

Spectral Parameters

CCT (K): 4760
 CIE u': 0.2107
 CIE v': 0.4939
 Duv: 0.0050
 CIE x: 0.3537
 CIE y: 0.3685
 CIE z: 0.2779
 Peak Wavelength (nm): 443
 Dominant Wavelength (nm): 571
 Purity: 16.69598
 R_f: 82
 R_g: 99.4

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 81.1 | | |
| R1: | 79.8 | R9: | 8.7 |
| R2: | 83.5 | R10: | 62.4 |
| R3: | 87.9 | R11: | 83.8 |
| R4: | 83.1 | R12: | 63.0 |
| R5: | 80.5 | R13: | 79.9 |
| R6: | 79.1 | R14: | 93.3 |
| R7: | 86.1 | R15: | 72.7 |
| R8: | 69.0 | | |



Test Conditions

Stabilization Time: 21M
 Operation Time: 1H 21M
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-12

| 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: SP1-2407-184-12

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 5000K 7-step quadrangle

REPORT NUMBER: SP1-2407-184-12

Photopic Flux vs. Wavelength

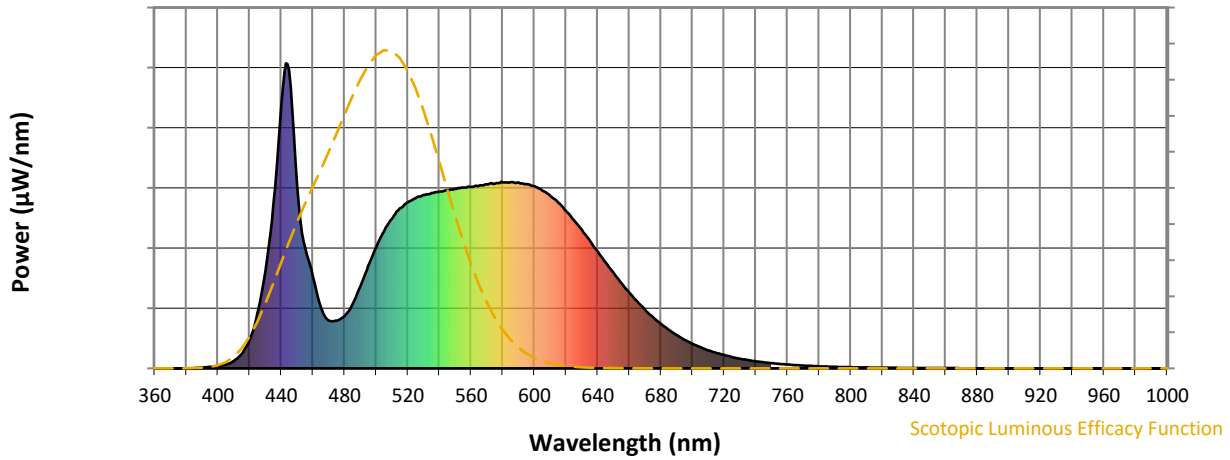


Photopic Lumens: NR

| 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 | 270 | NR | 620 | 517 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 335 | NR | 625 | 486 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 397 | NR | 630 | 454 | NR | 760 | 12 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 451 | NR | 635 | 419 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 492 | NR | 640 | 384 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 524 | NR | 645 | 347 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 545 | NR | 650 | 313 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 558 | NR | 655 | 280 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 7 | NR | 530 | 568 | NR | 660 | 248 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 13 | NR | 535 | 575 | NR | 665 | 219 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 24 | NR | 540 | 579 | NR | 670 | 192 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 47 | NR | 545 | 585 | NR | 675 | 167 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 95 | NR | 550 | 588 | NR | 680 | 146 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 181 | NR | 555 | 593 | NR | 685 | 126 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 319 | NR | 560 | 595 | NR | 690 | 109 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 539 | NR | 565 | 600 | NR | 695 | 94 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 868 | NR | 570 | 603 | NR | 700 | 80 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 977 | NR | 575 | 606 | NR | 705 | 69 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 601 | NR | 580 | 609 | NR | 710 | 59 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 397 | NR | 585 | 611 | NR | 715 | 51 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 302 | NR | 590 | 610 | NR | 720 | 44 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 201 | NR | 595 | 604 | NR | 725 | 37 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 157 | NR | 600 | 596 | NR | 730 | 32 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 157 | NR | 605 | 583 | NR | 735 | 27 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 171 | NR | 610 | 566 | NR | 740 | 23 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 210 | NR | 615 | 543 | NR | 745 | 20 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2407-184-12

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.83

| 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 | 270 | NR | 620 | 517 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 335 | NR | 625 | 486 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 397 | NR | 630 | 454 | NR | 760 | 12 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 451 | NR | 635 | 419 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 492 | NR | 640 | 384 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 524 | NR | 645 | 347 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 545 | NR | 650 | 313 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 558 | NR | 655 | 280 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 7 | NR | 530 | 568 | NR | 660 | 248 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 13 | NR | 535 | 575 | NR | 665 | 219 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 24 | NR | 540 | 579 | NR | 670 | 192 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 47 | NR | 545 | 585 | NR | 675 | 167 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 95 | NR | 550 | 588 | NR | 680 | 146 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 181 | NR | 555 | 593 | NR | 685 | 126 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 319 | NR | 560 | 595 | NR | 690 | 109 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 539 | NR | 565 | 600 | NR | 695 | 94 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 868 | NR | 570 | 603 | NR | 700 | 80 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 977 | NR | 575 | 606 | NR | 705 | 69 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 601 | NR | 580 | 609 | NR | 710 | 59 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 397 | NR | 585 | 611 | NR | 715 | 51 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 302 | NR | 590 | 610 | NR | 720 | 44 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 201 | NR | 595 | 604 | NR | 725 | 37 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 157 | NR | 600 | 596 | NR | 730 | 32 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 157 | NR | 605 | 583 | NR | 735 | 27 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 171 | NR | 610 | 566 | NR | 740 | 23 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 210 | NR | 615 | 543 | NR | 745 | 20 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2407-184-12

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.74

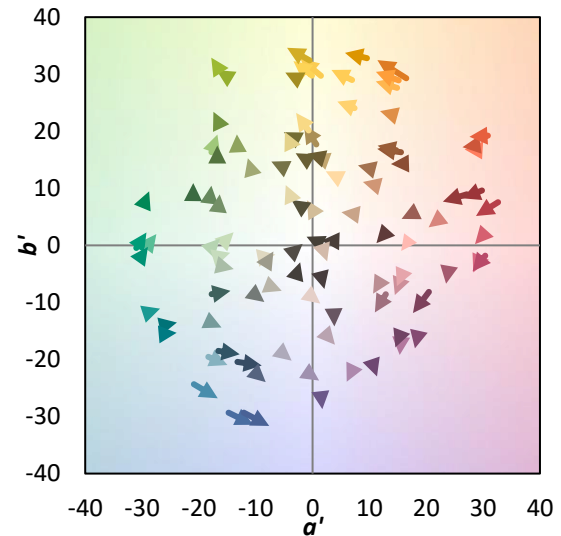
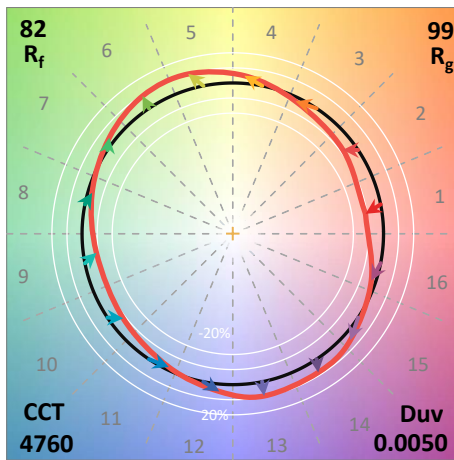
| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 270 | NR | 620 | 517 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 335 | NR | 625 | 486 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 397 | NR | 630 | 454 | NR | 760 | 12 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 451 | NR | 635 | 419 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 492 | NR | 640 | 384 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 524 | NR | 645 | 347 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 545 | NR | 650 | 313 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 558 | NR | 655 | 280 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 7 | NR | 530 | 568 | NR | 660 | 248 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 13 | NR | 535 | 575 | NR | 665 | 219 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 24 | NR | 540 | 579 | NR | 670 | 192 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 47 | NR | 545 | 585 | NR | 675 | 167 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 95 | NR | 550 | 588 | NR | 680 | 146 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 181 | NR | 555 | 593 | NR | 685 | 126 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 319 | NR | 560 | 595 | NR | 690 | 109 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 539 | NR | 565 | 600 | NR | 695 | 94 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 868 | NR | 570 | 603 | NR | 700 | 80 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 977 | NR | 575 | 606 | NR | 705 | 69 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 601 | NR | 580 | 609 | NR | 710 | 59 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 397 | NR | 585 | 611 | NR | 715 | 51 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 302 | NR | 590 | 610 | NR | 720 | 44 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 201 | NR | 595 | 604 | NR | 725 | 37 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 157 | NR | 600 | 596 | NR | 730 | 32 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 157 | NR | 605 | 583 | NR | 735 | 27 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 171 | NR | 610 | 566 | NR | 740 | 23 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 210 | NR | 615 | 543 | NR | 745 | 20 | NR | 875 | 0 | NR | | | |

Summary

$R_f = 82$
 $R_g = 99.4$
 $CIE R_a = 81.1$
 $R_9 = 8.7$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 73 | CES51 = 92 | CES76 = 66 |
| CES02 = 60 | CES27 = 90 | CES52 = 93 | CES77 = 80 |
| CES03 = 30 | CES28 = 87 | CES53 = 84 | CES78 = 65 |
| CES04 = 69 | CES29 = 69 | CES54 = 88 | CES79 = 87 |
| CES05 = 47 | CES30 = 73 | CES55 = 88 | CES80 = 83 |
| CES06 = 50 | CES31 = 72 | CES56 = 80 | CES81 = 84 |
| CES07 = 40 | CES32 = 69 | CES57 = 78 | CES82 = 93 |
| CES08 = 39 | CES33 = 75 | CES58 = 80 | CES83 = 90 |
| CES09 = 29 | CES34 = 78 | CES59 = 93 | CES84 = 92 |
| CES10 = 73 | CES35 = 88 | CES60 = 95 | CES85 = 87 |
| CES11 = 56 | CES36 = 98 | CES61 = 93 | CES86 = 80 |
| CES12 = 62 | CES37 = 85 | CES62 = 88 | CES87 = 84 |
| CES13 = 42 | CES38 = 81 | CES63 = 83 | CES88 = 85 |
| CES14 = 74 | CES39 = 93 | CES64 = 83 | CES89 = 80 |
| CES15 = 71 | CES40 = 88 | CES65 = 77 | CES90 = 83 |
| CES16 = 46 | CES41 = 89 | CES66 = 81 | CES91 = 89 |
| CES17 = 48 | CES42 = 82 | CES67 = 80 | CES92 = 73 |
| CES18 = 55 | CES43 = 80 | CES68 = 83 | CES93 = 85 |
| CES19 = 70 | CES44 = 99 | CES69 = 89 | CES94 = 67 |
| CES20 = 64 | CES45 = 87 | CES70 = 75 | CES95 = 78 |
| CES21 = 85 | CES46 = 85 | CES71 = 73 | CES96 = 84 |
| CES22 = 77 | CES47 = 82 | CES72 = 91 | CES97 = 87 |
| CES23 = 91 | CES48 = 78 | CES73 = 67 | CES98 = 81 |
| CES24 = 90 | CES49 = 84 | CES74 = 98 | CES99 = 74 |
| CES25 = 71 | CES50 = 91 | CES75 = 70 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)