

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: P1457208

Luminaire Tested: GLAN-SB4B-830-U-T4LG

Issue Date: 05/20/2026

Test Information

Test Method: LM-79-2024
Report Number: P1457208
Test Lab: INNOVATION CENTER(G1)
Issue Date: 5/22/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: STREETWORKS
Catalog Number: GLAN-SB4B-830-U-T4LG
Description: GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 450mA 4xLight Square
PACKAGE 80CRI 3000K FIXTURE w/ TYPE IV LOW GLARE
Light Source: (104) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19838.4 lumens
Efficiency: N/A
Efficacy: 135.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G3

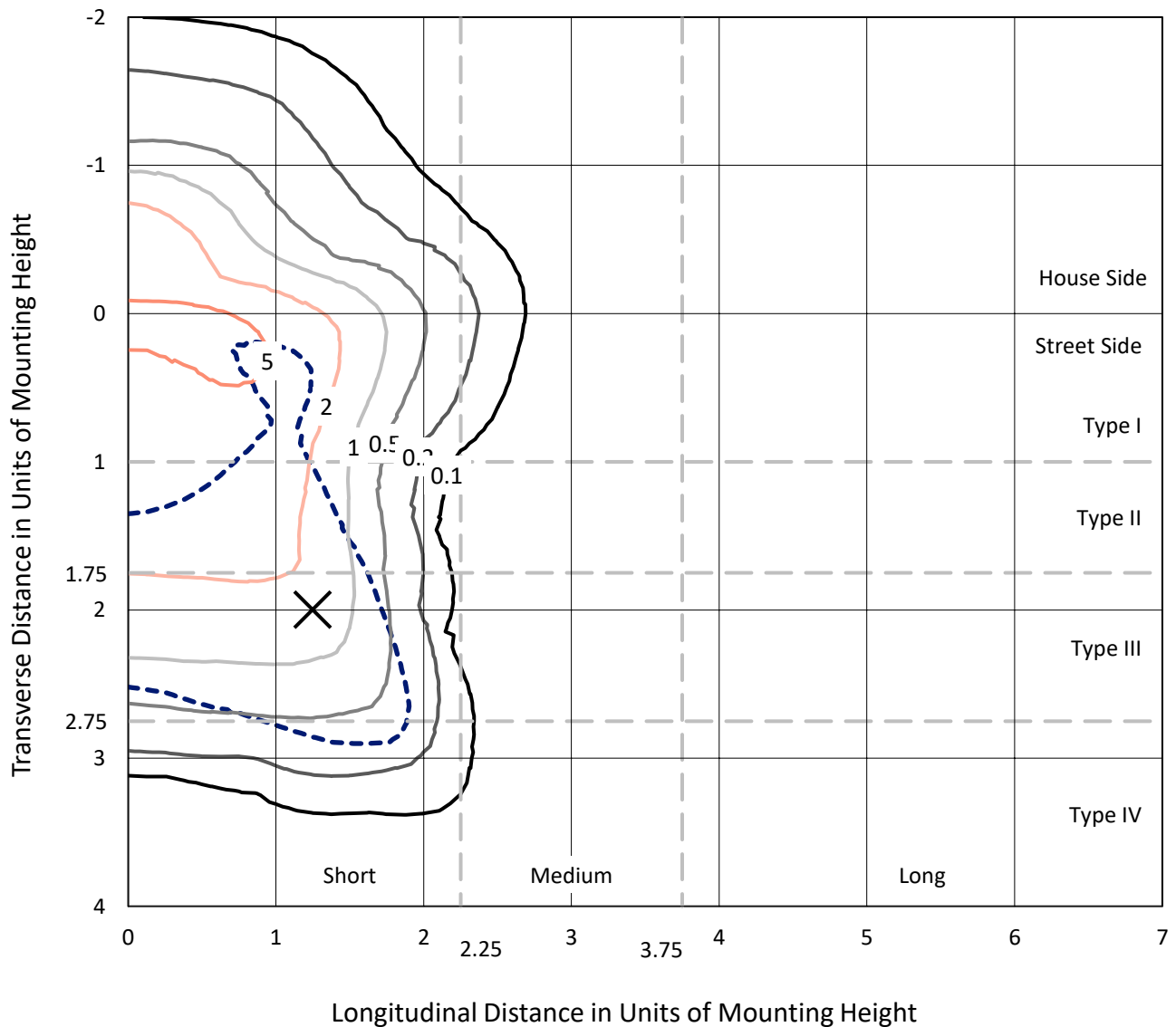
Input Watts (W): 147
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.97
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

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CATALOG NUMBER: GLAN-SB4B-830-U-T4LG

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

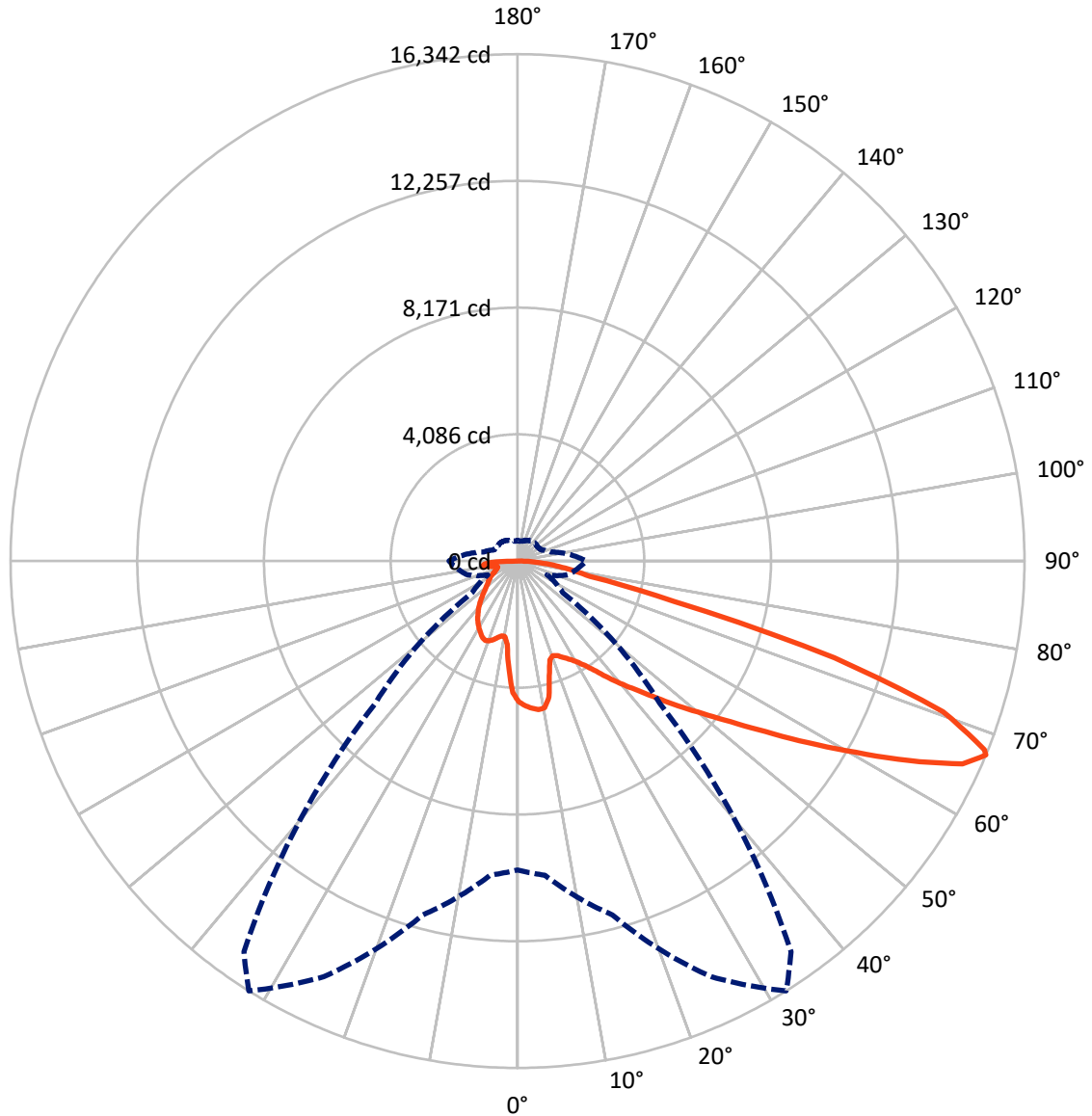


Based on 25 foot mounting height. Maximum calculated value = 7.8 fc
 Type IV - Short - N/A

REPORT NUMBER: P1457208

CATALOG NUMBER: GLAN-SB4B-830-U-T4LG

Luminous Intensity Polar Plot



— Vertical Plane Through 32-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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CATALOG NUMBER: GLAN-SB4B-830-U-T4LG

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 4696.7 | 0.0 | 4696.7 |
| | % Fixture | 23.7 | 0.0 | 23.7 |
| Street Side | Lumens | 15141.7 | 0.0 | 15141.7 |
| | % Fixture | 76.3 | 0.0 | 76.3 |
| Total | Lumens | 19838.4 | 0.0 | 19838.4 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 396.0 | 2.0 |
| 10°-20° | 1051.5 | 5.3 |
| 20°-30° | 1717.2 | 8.7 |
| 30°-40° | 2531.0 | 12.8 |
| 40°-50° | 3490.4 | 17.6 |
| 50°-60° | 4409.4 | 22.2 |
| 60°-70° | 4267.5 | 21.5 |
| 70°-80° | 1523.0 | 7.7 |
| 80°-90° | 452.3 | 2.3 |
| 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° | 19838.4 | 100.0 |
| 0°-180° | 19838.4 | 100.0 |



REPORT NUMBER: P1457208

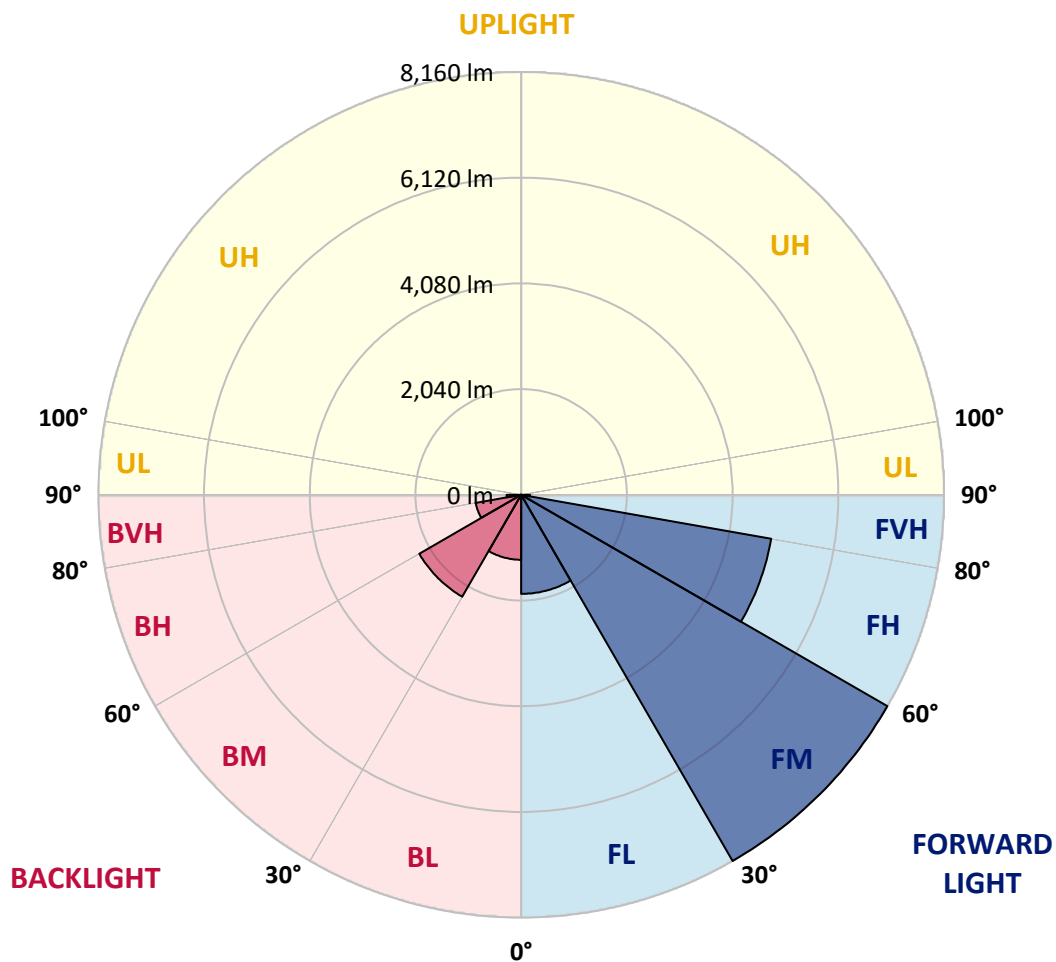
CATALOG NUMBER: GLAN-SB4B-830-U-T4LG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1911.5 | 9.6 | | | |
| FM (30°-60°) | 8160.2 | 41.1 | | | |
| FH (60°-80°) | 4899.7 | 24.7 | | | G2/5000 |
| FVH (80°-90°) | 170.4 | 0.9 | | | G2/225 |
| BL (0°-30°) | 1253.3 | 6.3 | B3/2500 | | |
| BM (30°-60°) | 2270.6 | 11.4 | B2/2500 | | |
| BH (60°-80°) | 890.9 | 4.5 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 281.9 | 1.4 | | | G3/500 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G3

Type IV Short





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CATALOG NUMBER: GLAN-SB4B-830-U-T4LG

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 32° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|--------|
| 0° | 4532.7 | 4532.7 | 4532.7 | 4532.7 | 4532.7 | 4532.7 | 4532.7 | 4532.7 | 4532.7 | 4532.7 | 4532.7 |
| 2.5° | 4704.5 | 4691.3 | 4678.0 | 4686.9 | 4669.2 | 4664.8 | 4642.8 | 4634.0 | 4607.6 | 4603.2 | 4554.7 |
| 5° | 4801.4 | 4775.0 | 4770.6 | 4779.4 | 4761.7 | 4761.7 | 4744.1 | 4730.9 | 4691.3 | 4669.2 | 4598.8 |
| 7.5° | 4801.4 | 4797.0 | 4805.8 | 4836.6 | 4841.0 | 4841.0 | 4841.0 | 4845.4 | 4805.8 | 4775.0 | 4664.8 |
| 10° | 4528.3 | 4484.2 | 4581.1 | 4735.3 | 4810.2 | 4854.2 | 4933.5 | 4982.0 | 4951.2 | 4929.1 | 4779.4 |
| 12.5° | 3713.4 | 3717.8 | 3871.9 | 4202.3 | 4501.9 | 4629.6 | 4960.0 | 5136.2 | 5149.4 | 5114.1 | 4924.7 |
| 15° | 3149.5 | 3171.6 | 3250.8 | 3488.7 | 3832.3 | 4021.7 | 4805.8 | 5272.7 | 5378.4 | 5343.2 | 5100.9 |
| 17.5° | 2977.7 | 2991.0 | 3026.2 | 3162.7 | 3356.6 | 3510.7 | 4387.3 | 5360.8 | 5655.9 | 5611.9 | 5299.1 |
| 20° | 2951.3 | 2960.1 | 3004.2 | 3118.7 | 3250.8 | 3338.9 | 3960.0 | 5290.3 | 5915.8 | 5898.2 | 5479.7 |
| 22.5° | 2955.7 | 2964.5 | 3021.8 | 3180.4 | 3316.9 | 3391.8 | 3823.5 | 5127.4 | 6188.9 | 6206.6 | 5664.8 |
| 25° | 2964.5 | 2968.9 | 3057.0 | 3268.5 | 3440.3 | 3532.8 | 3911.6 | 4982.0 | 6418.0 | 6567.8 | 5867.4 |
| 27.5° | 3013.0 | 3026.2 | 3145.1 | 3383.0 | 3585.6 | 3691.3 | 4118.6 | 5030.4 | 6669.1 | 6977.4 | 6109.7 |
| 30° | 3145.1 | 3153.9 | 3299.3 | 3546.0 | 3766.2 | 3876.3 | 4365.3 | 5224.3 | 6977.4 | 7400.3 | 6347.5 |
| 32.5° | 3352.2 | 3361.0 | 3528.4 | 3783.8 | 4021.7 | 4153.9 | 4686.9 | 5594.3 | 7321.0 | 7845.2 | 6585.4 |
| 35° | 3638.5 | 3642.9 | 3832.3 | 4105.4 | 4356.5 | 4506.3 | 5061.3 | 6012.7 | 7677.8 | 8224.0 | 6761.6 |
| 37.5° | 3977.7 | 4008.5 | 4202.3 | 4488.6 | 4783.8 | 4920.3 | 5501.8 | 6501.7 | 7995.0 | 8545.6 | 6862.9 |
| 40° | 4444.6 | 4453.4 | 4642.8 | 4920.3 | 5233.1 | 5365.2 | 5942.3 | 6964.2 | 8343.0 | 8735.0 | 6955.4 |
| 42.5° | 4924.7 | 4999.6 | 5158.2 | 5466.5 | 5700.0 | 5805.7 | 6444.4 | 7387.1 | 8620.5 | 8743.8 | 6915.8 |
| 45° | 5567.8 | 5625.1 | 5783.7 | 6056.8 | 6290.3 | 6413.6 | 6986.2 | 7774.7 | 8761.4 | 8668.9 | 6827.7 |
| 47.5° | 6303.5 | 6338.7 | 6466.5 | 6713.1 | 6973.0 | 7061.1 | 7550.1 | 7995.0 | 8814.3 | 8616.1 | 6788.0 |
| 50° | 7171.2 | 7171.2 | 7263.8 | 7475.2 | 7713.1 | 7836.4 | 8069.9 | 8127.1 | 8968.5 | 8523.6 | 6889.3 |
| 52.5° | 7902.5 | 7937.7 | 8061.0 | 8360.6 | 8598.4 | 8739.4 | 8475.1 | 8329.7 | 8655.7 | 8008.2 | 6920.2 |
| 55° | 8602.9 | 8642.5 | 8920.0 | 9294.4 | 9699.7 | 9853.9 | 8981.7 | 8228.4 | 7602.9 | 7254.9 | 6708.7 |
| 57.5° | 9272.4 | 9356.1 | 9704.1 | 10435.3 | 11047.6 | 11034.4 | 9624.8 | 7321.0 | 6206.6 | 6422.4 | 6246.2 |
| 60° | 10206.3 | 10294.4 | 10849.4 | 11770.0 | 12518.8 | 12206.1 | 9633.6 | 6092.0 | 4836.6 | 5127.4 | 5378.4 |
| 62.5° | 10985.9 | 11135.7 | 11950.6 | 13483.5 | 14170.7 | 13681.8 | 8836.3 | 4664.8 | 3211.2 | 3576.8 | 4158.3 |
| 65° | 10915.4 | 11113.7 | 12377.9 | 14743.3 | 15769.7 | 15316.0 | 7669.0 | 2951.3 | 1656.3 | 2444.7 | 2911.7 |
| 67° | 9955.2 | 10171.0 | 11809.7 | 14787.4 | 16342.3 | 15373.3 | 6475.3 | 1784.0 | 1052.8 | 1695.9 | 2021.9 |
| 67.5° | 9404.6 | 9721.7 | 11527.7 | 14703.7 | 16236.6 | 15131.0 | 5937.9 | 1493.3 | 991.1 | 1577.0 | 1841.3 |
| 70° | 5783.7 | 6294.7 | 8651.3 | 12999.0 | 14553.9 | 12664.2 | 3299.3 | 845.7 | 806.1 | 1057.2 | 1273.0 |
| 72.5° | 1740.0 | 1894.1 | 3338.9 | 8338.6 | 10682.0 | 9386.9 | 1484.5 | 651.9 | 722.4 | 850.2 | 982.3 |
| 75° | 845.7 | 903.0 | 1378.7 | 3409.4 | 5202.2 | 5175.8 | 828.1 | 559.4 | 669.6 | 713.6 | 775.3 |
| 77.5° | 541.8 | 577.0 | 859.0 | 1907.3 | 2383.1 | 2123.2 | 599.1 | 488.9 | 594.7 | 585.9 | 577.0 |
| 80° | 339.2 | 356.8 | 550.6 | 1105.6 | 1757.6 | 1466.8 | 440.5 | 400.8 | 511.0 | 453.7 | 409.7 |
| 82.5° | 220.2 | 242.3 | 352.4 | 674.0 | 1255.4 | 1092.4 | 290.7 | 286.3 | 422.9 | 361.2 | 317.2 |
| 85° | 145.4 | 163.0 | 224.7 | 396.4 | 744.4 | 779.7 | 189.4 | 198.2 | 326.0 | 273.1 | 242.3 |
| 87.5° | 52.9 | 66.1 | 114.5 | 176.2 | 348.0 | 431.7 | 79.3 | 74.9 | 158.6 | 127.7 | 101.3 |
| 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: P1457208

CATALOG NUMBER: GLAN-SB4B-830-U-T4LG

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 4532.7 | 4532.7 | 4532.7 | 4532.7 | 4532.7 | 4532.7 | 4532.7 | 4532.7 | 4532.7 | 4532.7 | 4532.7 |
| 2.5° | 4545.9 | 4532.7 | 4471.0 | 4418.2 | 4378.5 | 4325.7 | 4268.4 | 4202.3 | 4158.3 | 4167.1 | 4153.9 |
| 5° | 4567.9 | 4532.7 | 4413.8 | 4233.2 | 4057.0 | 3836.7 | 3554.8 | 3387.4 | 3259.7 | 3193.6 | 3211.2 |
| 7.5° | 4616.4 | 4554.7 | 4303.6 | 3938.0 | 3479.9 | 3030.6 | 2753.1 | 2594.5 | 2519.6 | 2488.8 | 2484.4 |
| 10° | 4700.1 | 4594.4 | 4162.7 | 3479.9 | 2880.8 | 2576.9 | 2475.6 | 2431.5 | 2422.7 | 2422.7 | 2418.3 |
| 12.5° | 4801.4 | 4634.0 | 3924.8 | 3035.0 | 2594.5 | 2484.4 | 2466.8 | 2471.2 | 2484.4 | 2497.6 | 2475.6 |
| 15° | 4924.7 | 4651.6 | 3629.7 | 2766.3 | 2537.2 | 2510.8 | 2537.2 | 2568.1 | 2590.1 | 2607.7 | 2585.7 |
| 17.5° | 5048.1 | 4634.0 | 3352.2 | 2638.6 | 2546.1 | 2581.3 | 2634.2 | 2682.6 | 2695.8 | 2722.3 | 2704.6 |
| 20° | 5136.2 | 4572.3 | 3114.3 | 2590.1 | 2568.1 | 2647.4 | 2713.4 | 2766.3 | 2792.7 | 2810.4 | 2792.7 |
| 22.5° | 5202.2 | 4493.0 | 2942.5 | 2541.7 | 2568.1 | 2665.0 | 2744.3 | 2805.9 | 2836.8 | 2854.4 | 2832.4 |
| 25° | 5259.5 | 4382.9 | 2810.4 | 2471.2 | 2515.2 | 2607.7 | 2695.8 | 2757.5 | 2801.5 | 2828.0 | 2814.8 |
| 27.5° | 5330.0 | 4294.8 | 2687.0 | 2365.5 | 2405.1 | 2493.2 | 2585.7 | 2660.6 | 2744.3 | 2788.3 | 2779.5 |
| 30° | 5409.3 | 4250.8 | 2568.1 | 2250.9 | 2277.4 | 2365.5 | 2475.6 | 2576.9 | 2691.4 | 2748.7 | 2748.7 |
| 32.5° | 5501.8 | 4219.9 | 2458.0 | 2140.8 | 2162.8 | 2259.7 | 2365.5 | 2458.0 | 2581.3 | 2673.8 | 2669.4 |
| 35° | 5541.4 | 4184.7 | 2369.9 | 2039.5 | 2083.5 | 2162.8 | 2246.5 | 2308.2 | 2435.9 | 2546.1 | 2554.9 |
| 37.5° | 5581.1 | 4171.5 | 2325.8 | 1960.2 | 1995.4 | 2057.1 | 2101.2 | 2132.0 | 2250.9 | 2365.5 | 2369.9 |
| 40° | 5629.5 | 4233.2 | 2356.6 | 1907.3 | 1876.5 | 1938.2 | 1960.2 | 1977.8 | 2039.5 | 2114.4 | 2114.4 |
| 42.5° | 5598.7 | 4277.2 | 2427.1 | 1858.9 | 1731.1 | 1801.6 | 1810.4 | 1806.0 | 1810.4 | 1814.8 | 1810.4 |
| 45° | 5519.4 | 4233.2 | 2427.1 | 1784.0 | 1577.0 | 1651.9 | 1647.4 | 1625.4 | 1590.2 | 1497.7 | 1484.5 |
| 47.5° | 5501.8 | 4206.7 | 2334.6 | 1660.7 | 1422.8 | 1484.5 | 1493.3 | 1449.2 | 1347.9 | 1251.0 | 1220.2 |
| 50° | 5576.7 | 4255.2 | 2189.3 | 1510.9 | 1290.6 | 1343.5 | 1365.5 | 1290.6 | 1176.1 | 1074.8 | 1057.2 |
| 52.5° | 5686.8 | 4316.8 | 1977.8 | 1347.9 | 1180.5 | 1233.4 | 1259.8 | 1176.1 | 1057.2 | 977.9 | 969.1 |
| 55° | 5673.6 | 4316.8 | 1740.0 | 1198.1 | 1096.8 | 1136.5 | 1180.5 | 1092.4 | 999.9 | 955.9 | 951.5 |
| 57.5° | 5387.2 | 4153.9 | 1563.8 | 1092.4 | 1017.5 | 1052.8 | 1110.0 | 1026.4 | 938.3 | 947.1 | 960.3 |
| 60° | 4827.8 | 3731.0 | 1431.6 | 1021.9 | 947.1 | 982.3 | 1044.0 | 947.1 | 832.5 | 801.7 | 801.7 |
| 62.5° | 3977.7 | 3074.7 | 1325.9 | 951.5 | 881.0 | 925.0 | 955.9 | 828.1 | 753.2 | 718.0 | 718.0 |
| 65° | 2982.1 | 2378.7 | 1215.8 | 894.2 | 823.7 | 872.2 | 836.9 | 775.3 | 700.4 | 674.0 | 678.4 |
| 67° | 2211.3 | 1845.7 | 1123.3 | 845.7 | 788.5 | 810.5 | 784.1 | 740.0 | 665.1 | 643.1 | 665.1 |
| 67.5° | 1986.6 | 1753.2 | 1101.2 | 832.5 | 779.7 | 797.3 | 770.9 | 735.6 | 656.3 | 634.3 | 656.3 |
| 70° | 1365.5 | 1347.9 | 982.3 | 770.9 | 731.2 | 713.6 | 726.8 | 682.8 | 616.7 | 607.9 | 629.9 |
| 72.5° | 1039.6 | 1074.8 | 881.0 | 718.0 | 678.4 | 656.3 | 687.2 | 643.1 | 577.0 | 590.3 | 612.3 |
| 75° | 814.9 | 867.8 | 788.5 | 643.1 | 616.7 | 621.1 | 682.8 | 665.1 | 612.3 | 625.5 | 629.9 |
| 77.5° | 603.5 | 700.4 | 674.0 | 559.4 | 537.4 | 599.1 | 770.9 | 823.7 | 731.2 | 709.2 | 678.4 |
| 80° | 440.5 | 502.2 | 568.2 | 462.5 | 449.3 | 577.0 | 951.5 | 1052.8 | 903.0 | 814.9 | 792.9 |
| 82.5° | 326.0 | 352.4 | 466.9 | 370.0 | 326.0 | 515.4 | 1057.2 | 1237.8 | 1074.8 | 907.4 | 881.0 |
| 85° | 233.5 | 273.1 | 370.0 | 273.1 | 215.8 | 422.9 | 1035.2 | 1211.4 | 1066.0 | 859.0 | 836.9 |
| 87.5° | 83.7 | 118.9 | 158.6 | 123.3 | 110.1 | 290.7 | 854.6 | 872.2 | 665.1 | 303.9 | 308.3 |
| 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: SP1-2407-184-9

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-830-U-5WQ

Data in this report applies to families of products including GSS-SB1A-830-U-5WQ

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-184-9
 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-830-U-5WQ**
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 80 CRI 3000K CCT 26 LEDS

Spectral Parameters

CCT (K): 3055
 CIE u': 0.2475
 CIE v': 0.5247
 Duv: 0.0032
 CIE x: 0.4377
 CIE y: 0.4124
 CIE z: 0.1499
 Peak Wavelength (nm): 604
 Dominant Wavelength (nm): 581
 Purity: 55.16339
 Rf: 81.5
 Rg: 99.2

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 80.9 | | |
| R1: | 79.5 | R9: | 6.8 |
| R2: | 85.6 | R10: | 67.1 |
| R3: | 92.1 | R11: | 82.5 |
| R4: | 82.4 | R12: | 63.4 |
| R5: | 78.9 | R13: | 80.2 |
| R6: | 81.7 | R14: | 95.1 |
| R7: | 85.1 | R15: | 71.7 |
| R8: | 61.9 | | |



Test Conditions

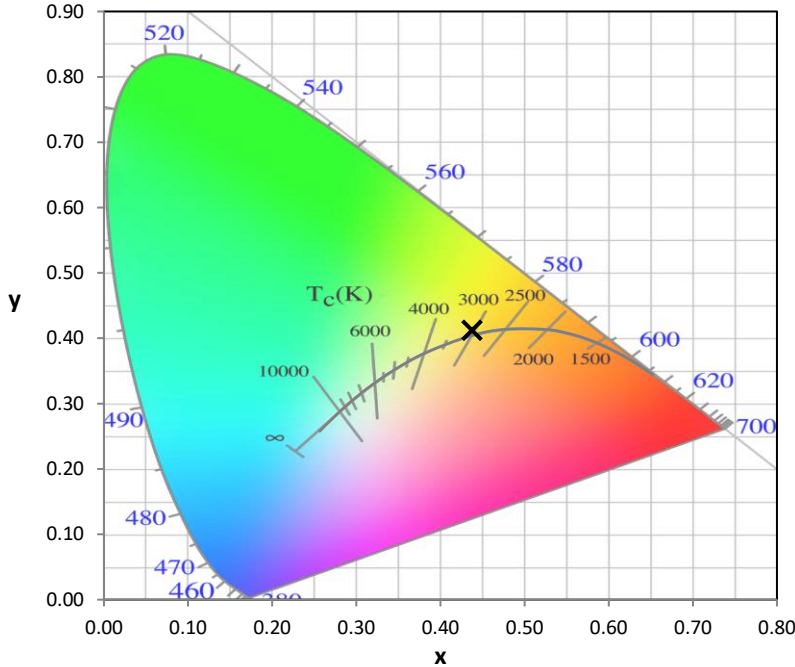
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-9

| 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



Point lies inside the ANSI 3000K 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 | 170 | NR | 620 | 938 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 234 | NR | 625 | 894 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 302 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 371 | NR | 635 | 788 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 431 | NR | 640 | 728 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 482 | NR | 645 | 665 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 523 | NR | 650 | 603 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 553 | NR | 655 | 542 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 580 | NR | 660 | 484 | NR | 790 | 11 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 603 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 18 | NR | 540 | 622 | NR | 670 | 377 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 36 | NR | 545 | 644 | NR | 675 | 330 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 71 | NR | 550 | 668 | NR | 680 | 289 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 693 | NR | 685 | 250 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 215 | NR | 560 | 720 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 341 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 514 | NR | 570 | 792 | NR | 700 | 161 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 576 | NR | 575 | 832 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 358 | NR | 580 | 875 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 222 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 170 | NR | 590 | 950 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 115 | NR | 595 | 977 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 88 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 87 | NR | 605 | 997 | NR | 735 | 56 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 96 | NR | 610 | 990 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 122 | NR | 615 | 971 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-9

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.28

| 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 | 170 | NR | 620 | 938 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 234 | NR | 625 | 894 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 302 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 371 | NR | 635 | 788 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 431 | NR | 640 | 728 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 482 | NR | 645 | 665 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 523 | NR | 650 | 603 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 553 | NR | 655 | 542 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 580 | NR | 660 | 484 | NR | 790 | 11 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 603 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 18 | NR | 540 | 622 | NR | 670 | 377 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 36 | NR | 545 | 644 | NR | 675 | 330 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 71 | NR | 550 | 668 | NR | 680 | 289 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 693 | NR | 685 | 250 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 215 | NR | 560 | 720 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 341 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 514 | NR | 570 | 792 | NR | 700 | 161 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 576 | NR | 575 | 832 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 358 | NR | 580 | 875 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 222 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 170 | NR | 590 | 950 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 115 | NR | 595 | 977 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 88 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 87 | NR | 605 | 997 | NR | 735 | 56 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 96 | NR | 610 | 990 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 122 | NR | 615 | 971 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-9

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.33

| 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 | 170 | NR | 620 | 938 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 234 | NR | 625 | 894 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 302 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 371 | NR | 635 | 788 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 431 | NR | 640 | 728 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 482 | NR | 645 | 665 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 523 | NR | 650 | 603 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 553 | NR | 655 | 542 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 580 | NR | 660 | 484 | NR | 790 | 11 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 603 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 18 | NR | 540 | 622 | NR | 670 | 377 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 36 | NR | 545 | 644 | NR | 675 | 330 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 71 | NR | 550 | 668 | NR | 680 | 289 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 693 | NR | 685 | 250 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 215 | NR | 560 | 720 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 341 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 514 | NR | 570 | 792 | NR | 700 | 161 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 576 | NR | 575 | 832 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 358 | NR | 580 | 875 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 222 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 170 | NR | 590 | 950 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 115 | NR | 595 | 977 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 88 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 87 | NR | 605 | 997 | NR | 735 | 56 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 96 | NR | 610 | 990 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 122 | NR | 615 | 971 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

Summary

$R_f = 81.5$
 $R_g = 99.2$
 $CIE R_a = 80.9$
 $R_9 = 6.8$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 74 | CES51 = 89 | CES76 = 70 |
| CES02 = 63 | CES27 = 88 | CES52 = 91 | CES77 = 86 |
| CES03 = 31 | CES28 = 89 | CES53 = 81 | CES78 = 72 |
| CES04 = 70 | CES29 = 67 | CES54 = 87 | CES79 = 90 |
| CES05 = 50 | CES30 = 68 | CES55 = 85 | CES80 = 88 |
| CES06 = 51 | CES31 = 71 | CES56 = 78 | CES81 = 78 |
| CES07 = 42 | CES32 = 70 | CES57 = 76 | CES82 = 95 |
| CES08 = 41 | CES33 = 71 | CES58 = 78 | CES83 = 90 |
| CES09 = 29 | CES34 = 82 | CES59 = 92 | CES84 = 93 |
| CES10 = 76 | CES35 = 90 | CES60 = 95 | CES85 = 86 |
| CES11 = 59 | CES36 = 93 | CES61 = 93 | CES86 = 72 |
| CES12 = 65 | CES37 = 87 | CES62 = 83 | CES87 = 85 |
| CES13 = 43 | CES38 = 75 | CES63 = 77 | CES88 = 83 |
| CES14 = 74 | CES39 = 94 | CES64 = 83 | CES89 = 75 |
| CES15 = 71 | CES40 = 89 | CES65 = 77 | CES90 = 81 |
| CES16 = 47 | CES41 = 85 | CES66 = 80 | CES91 = 96 |
| CES17 = 50 | CES42 = 86 | CES67 = 79 | CES92 = 73 |
| CES18 = 56 | CES43 = 81 | CES68 = 84 | CES93 = 84 |
| CES19 = 72 | CES44 = 99 | CES69 = 90 | CES94 = 64 |
| CES20 = 66 | CES45 = 87 | CES70 = 77 | CES95 = 80 |
| CES21 = 87 | CES46 = 82 | CES71 = 76 | CES96 = 84 |
| CES22 = 79 | CES47 = 77 | CES72 = 92 | CES97 = 87 |
| CES23 = 92 | CES48 = 71 | CES73 = 71 | CES98 = 81 |
| CES24 = 91 | CES49 = 81 | CES74 = 93 | CES99 = 74 |
| CES25 = 72 | CES50 = 89 | CES75 = 74 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)