

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P641862

Luminaire Tested: GWS-SA6B-760-U-T4W-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P641862
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-52)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA6B-760-U-T4W-W
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: (96) 5700K CCT, 70 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21177.9 lumens
Efficiency: N/A
Efficacy: 152.5 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G4

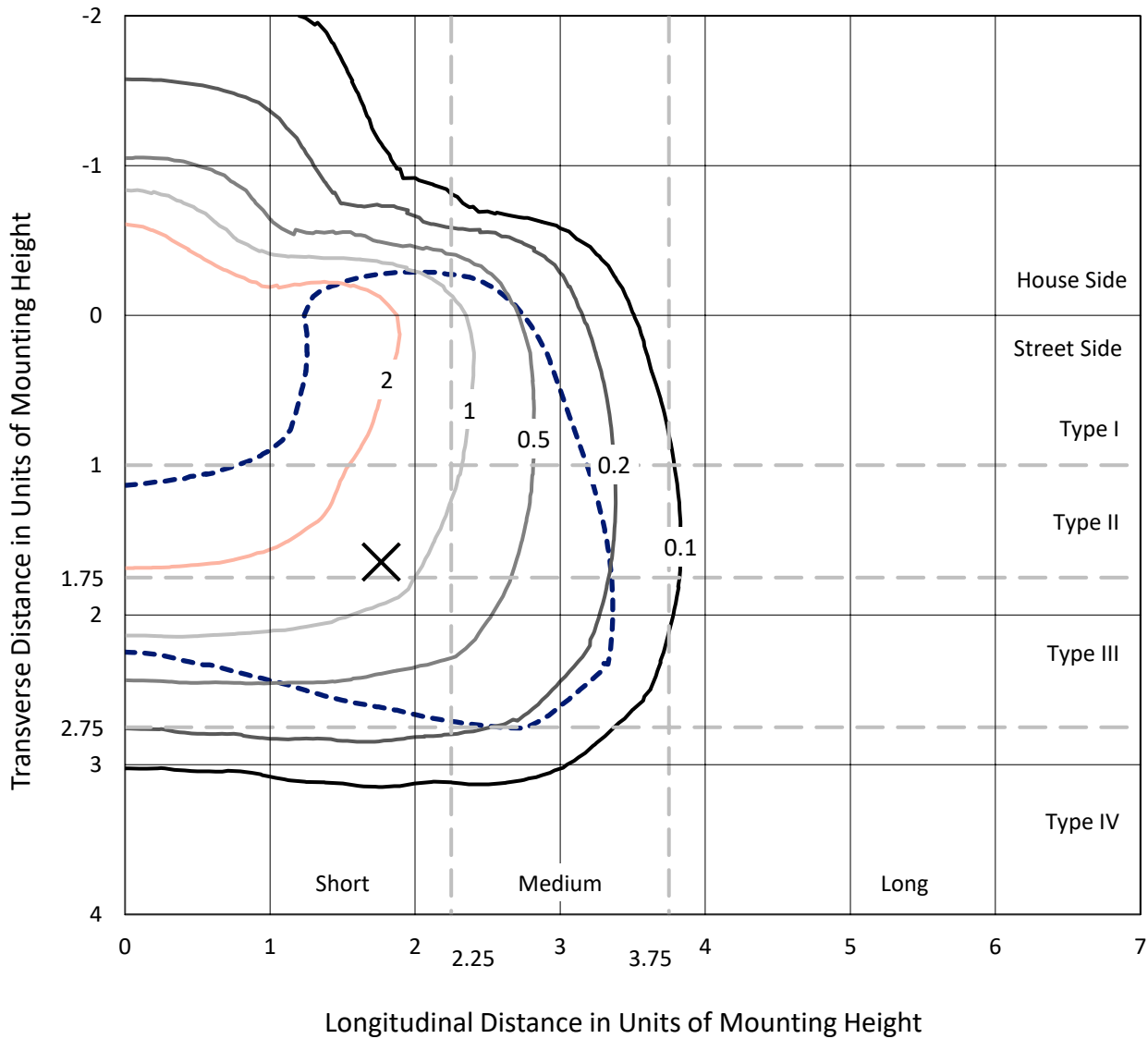
Input Watts (W): 138.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P641862
 CATALOG NUMBER: GWS-SA6B-760-U-T4W-W

Iso-Footcandle Lines of Horizontal Illumination

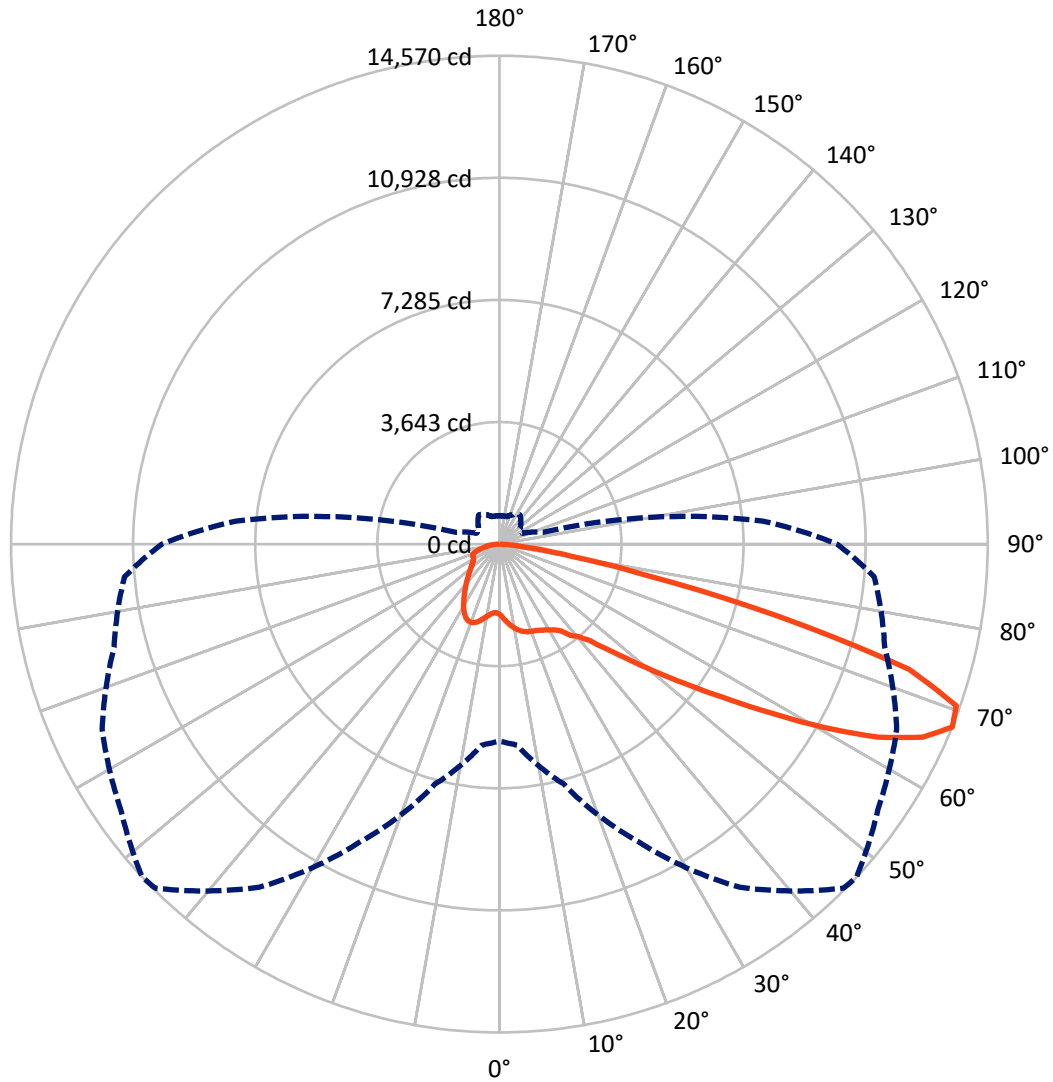
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.2 fc
 Type III - Short - N/A

REPORT NUMBER: P641862
CATALOG NUMBER: GWS-SA6B-760-U-T4W-W

Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P641862

CATALOG NUMBER: GWS-SA6B-760-U-T4W-W

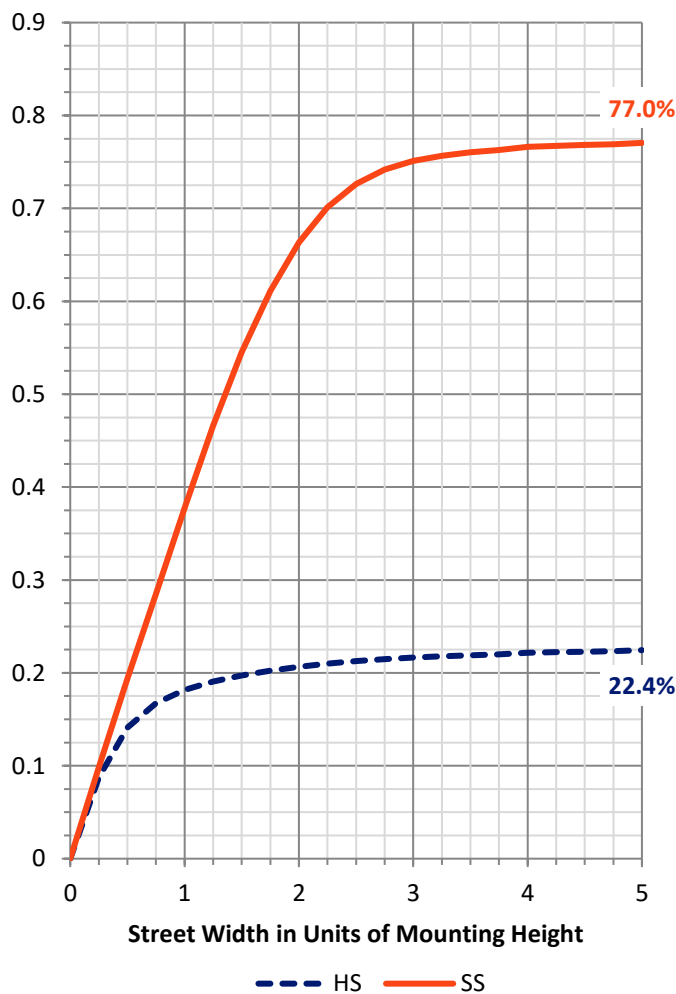
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 4826.6 | 0.0 | 4826.6 |
| | % Fixture | 22.8 | 0.0 | 22.8 |
| Street Side | Lumens | 16351.3 | 0.0 | 16351.3 |
| | % Fixture | 77.2 | 0.0 | 77.2 |
| Total | Lumens | 21177.9 | 0.0 | 21177.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 214.6 | 1.0 |
| 10°-20° | 714.8 | 3.4 |
| 20°-30° | 1215.0 | 5.7 |
| 30°-40° | 1779.9 | 8.4 |
| 40°-50° | 2711.9 | 12.8 |
| 50°-60° | 4852.1 | 22.9 |
| 60°-70° | 6474.7 | 30.6 |
| 70°-80° | 2928.0 | 13.8 |
| 80°-90° | 286.9 | 1.4 |
| 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° | 21177.9 | 100.0 |
| 0°-180° | 21177.9 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P641862

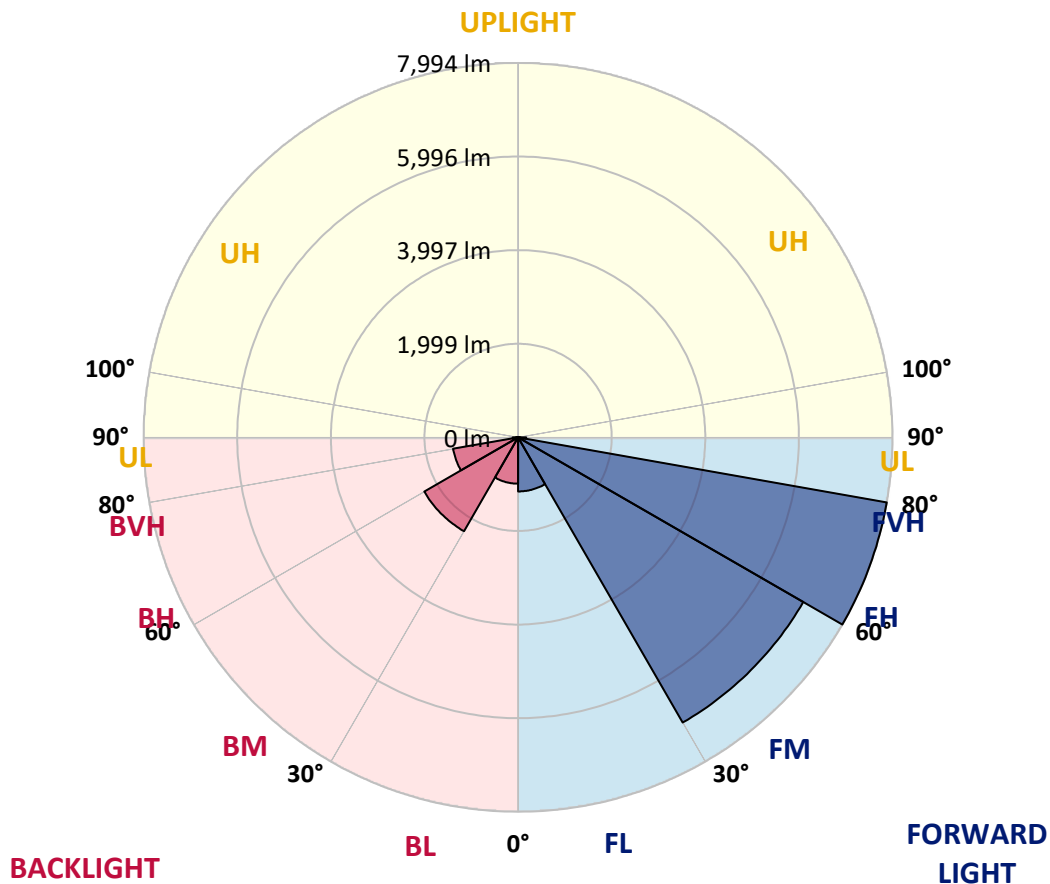
CATALOG NUMBER: GWS-SA6B-760-U-T4W-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 1155.0 | 5.5 | | | |
| FM (30°-60°) | 7031.3 | 33.2 | | | |
| FH (60°-80°) | 7994.4 | 37.7 | | | G4/12000 |
| FVH (80°-90°) | 170.6 | 0.8 | | | G2/225 |
| BL (0°-30°) | 989.5 | 4.7 | B2/1000 | | |
| BM (30°-60°) | 2312.7 | 10.9 | B2/2500 | | |
| BH (60°-80°) | 1408.2 | 6.6 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 116.2 | 0.5 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G4

Type III Short





REPORT NUMBER: P641862
 CATALOG NUMBER: GWS-SA6B-760-U-T4W-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 47° | 55° | 65° | 75° | 85° |
|-------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 2099.4 | 2099.4 | 2099.4 | 2099.4 | 2099.4 | 2099.4 | 2099.4 | 2099.4 | 2099.4 | 2099.4 | 2099.4 |
| 2.5° | 2238.7 | 2246.4 | 2244.9 | 2232.6 | 2225.0 | 2211.2 | 2212.7 | 2191.3 | 2159.1 | 2137.7 | 2113.2 |
| 5° | 2436.3 | 2448.5 | 2433.2 | 2413.3 | 2382.7 | 2338.3 | 2333.7 | 2284.7 | 2223.4 | 2180.6 | 2136.2 |
| 7.5° | 2607.8 | 2615.4 | 2597.1 | 2563.4 | 2519.0 | 2459.3 | 2448.5 | 2390.3 | 2313.8 | 2246.4 | 2182.1 |
| 10° | 2741.0 | 2750.2 | 2725.7 | 2681.3 | 2623.1 | 2563.4 | 2555.7 | 2496.0 | 2414.8 | 2335.2 | 2254.1 |
| 12.5° | 2854.3 | 2857.4 | 2831.4 | 2771.6 | 2708.9 | 2647.6 | 2639.9 | 2584.8 | 2509.8 | 2428.6 | 2339.8 |
| 15° | 2920.2 | 2921.7 | 2889.5 | 2823.7 | 2764.0 | 2710.4 | 2705.8 | 2658.3 | 2589.4 | 2512.8 | 2417.9 |
| 17.5° | 2915.6 | 2918.6 | 2895.7 | 2837.5 | 2785.4 | 2753.3 | 2748.7 | 2718.0 | 2664.4 | 2595.5 | 2500.6 |
| 20° | 2858.9 | 2862.0 | 2846.7 | 2808.4 | 2780.8 | 2771.6 | 2773.2 | 2764.0 | 2731.8 | 2675.2 | 2578.7 |
| 22.5° | 2814.5 | 2819.1 | 2805.3 | 2777.8 | 2774.7 | 2796.1 | 2800.7 | 2805.3 | 2790.0 | 2739.5 | 2646.1 |
| 25° | 2836.0 | 2843.6 | 2822.2 | 2783.9 | 2790.0 | 2837.5 | 2846.7 | 2862.0 | 2849.7 | 2806.9 | 2725.7 |
| 27.5° | 2984.5 | 2989.1 | 2934.0 | 2855.9 | 2837.5 | 2888.0 | 2901.8 | 2926.3 | 2917.1 | 2877.3 | 2814.5 |
| 30° | 3329.0 | 3326.0 | 3208.1 | 3016.6 | 2940.1 | 2960.0 | 2970.7 | 3005.9 | 3009.0 | 2983.0 | 2923.2 |
| 32.5° | 3814.4 | 3799.1 | 3616.9 | 3312.2 | 3090.1 | 3041.1 | 3053.4 | 3100.9 | 3136.1 | 3108.5 | 3027.4 |
| 35° | 4327.4 | 4313.6 | 4113.0 | 3756.3 | 3367.3 | 3197.3 | 3183.6 | 3220.3 | 3273.9 | 3197.3 | 3081.0 |
| 37.5° | 4815.9 | 4794.5 | 4589.3 | 4148.3 | 3708.8 | 3471.4 | 3451.5 | 3414.8 | 3382.6 | 3235.6 | 3146.8 |
| 40° | 5358.0 | 5333.5 | 5154.3 | 4655.1 | 4085.5 | 3681.2 | 3630.7 | 3485.2 | 3456.1 | 3362.7 | 3318.3 |
| 42.5° | 5936.8 | 5936.8 | 5788.3 | 5296.7 | 4540.3 | 3981.4 | 3915.5 | 3696.5 | 3727.2 | 3665.9 | 3613.8 |
| 45° | 6515.6 | 6532.5 | 6414.6 | 5942.9 | 5148.2 | 4547.9 | 4442.3 | 4131.4 | 4204.9 | 4177.4 | 4151.3 |
| 47.5° | 7008.7 | 7040.9 | 7017.9 | 6602.9 | 5892.4 | 5237.0 | 5076.2 | 4753.1 | 4910.9 | 4976.7 | 5050.2 |
| 50° | 7540.1 | 7575.3 | 7552.3 | 7388.5 | 6763.7 | 6071.6 | 5927.6 | 5593.8 | 5864.8 | 6062.4 | 6302.8 |
| 52.5° | 8328.7 | 8379.2 | 8187.8 | 8125.0 | 7821.8 | 7019.4 | 6890.8 | 6511.0 | 7002.6 | 7330.3 | 7866.2 |
| 55° | 8994.8 | 8993.3 | 8925.9 | 9069.8 | 8958.1 | 8178.6 | 8036.2 | 7691.7 | 8319.5 | 8667.1 | 9451.1 |
| 57.5° | 9304.1 | 9340.9 | 9572.1 | 9979.4 | 10203.0 | 9595.1 | 9458.8 | 9106.6 | 9732.9 | 9913.6 | 10760.4 |
| 60° | 9463.4 | 9509.3 | 9956.5 | 10761.9 | 11363.7 | 11141.7 | 11088.1 | 10639.4 | 10991.6 | 10970.2 | 11864.4 |
| 62.5° | 9239.8 | 9331.7 | 10049.9 | 11120.2 | 12192.1 | 12695.9 | 12679.1 | 12000.7 | 12062.0 | 11852.2 | 12548.9 |
| 65° | 8213.8 | 8313.4 | 9440.4 | 10941.1 | 12665.3 | 13878.1 | 13882.7 | 13233.4 | 12884.3 | 12281.0 | 12434.1 |
| 67.5° | 5874.0 | 6016.4 | 7409.9 | 9789.5 | 12498.4 | 14516.6 | 14570.2 | 13792.3 | 13077.2 | 11901.2 | 11227.4 |
| 70° | 3201.9 | 3306.1 | 4397.9 | 7115.9 | 10994.7 | 14363.5 | 14463.0 | 13522.8 | 12225.8 | 10294.9 | 8642.6 |
| 72.5° | 1454.7 | 1488.4 | 2045.8 | 3904.8 | 7511.0 | 12363.6 | 12780.2 | 12068.1 | 10040.7 | 7604.4 | 5495.8 |
| 75° | 666.1 | 681.4 | 891.2 | 1868.2 | 3924.7 | 8273.6 | 8566.0 | 8988.7 | 6987.3 | 4802.1 | 2865.0 |
| 77.5° | 418.0 | 422.6 | 506.9 | 854.5 | 1957.0 | 4129.9 | 4437.7 | 5351.9 | 4091.6 | 2376.6 | 1197.5 |
| 80° | 246.5 | 251.1 | 315.4 | 462.4 | 918.8 | 1889.6 | 2182.1 | 2116.2 | 1923.3 | 1026.0 | 545.1 |
| 82.5° | 124.0 | 128.6 | 182.2 | 263.4 | 500.7 | 751.9 | 885.1 | 889.7 | 716.6 | 555.9 | 307.8 |
| 85° | 44.4 | 45.9 | 59.7 | 104.1 | 212.8 | 248.1 | 277.2 | 338.4 | 350.7 | 323.1 | 148.5 |
| 87.5° | 0.0 | 0.0 | 1.5 | 3.1 | 6.1 | 24.5 | 26.0 | 49.0 | 102.6 | 114.8 | 59.7 |
| 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: P641862
 CATALOG NUMBER: GWS-SA6B-760-U-T4W-W

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2099.4 | 2099.4 | 2099.4 | 2099.4 | 2099.4 | 2099.4 | 2099.4 | 2099.4 | 2099.4 | 2099.4 | 2099.4 |
| 2.5° | 2105.5 | 2082.6 | 2074.9 | 2067.2 | 2055.0 | 2050.4 | 2041.2 | 2032.0 | 2032.0 | 2022.8 | 2018.2 |
| 5° | 2116.2 | 2085.6 | 2065.7 | 2056.5 | 2048.9 | 2053.5 | 2053.5 | 2056.5 | 2067.2 | 2061.1 | 2064.2 |
| 7.5° | 2154.5 | 2119.3 | 2091.7 | 2084.1 | 2084.1 | 2102.5 | 2114.7 | 2130.0 | 2149.9 | 2153.0 | 2153.0 |
| 10° | 2221.9 | 2180.6 | 2151.5 | 2146.9 | 2154.5 | 2180.6 | 2198.9 | 2217.3 | 2241.8 | 2243.3 | 2246.4 |
| 12.5° | 2295.4 | 2254.1 | 2225.0 | 2231.1 | 2238.7 | 2272.4 | 2292.3 | 2307.7 | 2332.2 | 2332.2 | 2330.6 |
| 15° | 2372.0 | 2326.0 | 2301.5 | 2313.8 | 2336.8 | 2375.0 | 2378.1 | 2379.6 | 2391.9 | 2388.8 | 2387.3 |
| 17.5° | 2451.6 | 2402.6 | 2384.2 | 2402.6 | 2427.1 | 2445.5 | 2430.2 | 2408.7 | 2404.1 | 2398.0 | 2394.9 |
| 20° | 2529.7 | 2479.2 | 2471.5 | 2485.3 | 2492.9 | 2477.6 | 2430.2 | 2390.3 | 2372.0 | 2362.8 | 2359.7 |
| 22.5° | 2597.1 | 2554.2 | 2549.6 | 2549.6 | 2511.3 | 2457.7 | 2387.3 | 2333.7 | 2309.2 | 2296.9 | 2293.9 |
| 25° | 2676.7 | 2636.9 | 2629.2 | 2587.9 | 2489.9 | 2391.9 | 2296.9 | 2247.9 | 2228.0 | 2221.9 | 2223.4 |
| 27.5° | 2770.1 | 2742.5 | 2718.0 | 2600.1 | 2428.6 | 2275.5 | 2168.3 | 2146.9 | 2139.2 | 2146.9 | 2151.5 |
| 30° | 2885.0 | 2857.4 | 2802.3 | 2584.8 | 2330.6 | 2123.9 | 2021.3 | 2019.8 | 2042.7 | 2062.6 | 2065.7 |
| 32.5° | 2978.4 | 2966.1 | 2875.8 | 2535.8 | 2192.8 | 1957.0 | 1869.7 | 1875.8 | 1917.2 | 1944.7 | 1949.3 |
| 35° | 3051.9 | 3071.8 | 2937.0 | 2454.7 | 2029.0 | 1799.3 | 1730.4 | 1733.4 | 1756.4 | 1794.7 | 1796.2 |
| 37.5° | 3156.0 | 3223.4 | 2992.1 | 2330.6 | 1840.6 | 1663.0 | 1600.2 | 1577.2 | 1574.2 | 1584.9 | 1587.9 |
| 40° | 3365.8 | 3466.8 | 3032.0 | 2149.9 | 1658.4 | 1540.5 | 1470.0 | 1425.6 | 1387.3 | 1358.3 | 1349.1 |
| 42.5° | 3682.8 | 3799.1 | 3054.9 | 1931.0 | 1496.1 | 1419.5 | 1339.9 | 1283.2 | 1215.8 | 1154.6 | 1133.2 |
| 45° | 4264.6 | 4302.9 | 3054.9 | 1698.2 | 1352.1 | 1306.2 | 1226.6 | 1159.2 | 1073.4 | 1001.5 | 986.2 |
| 47.5° | 5195.7 | 5073.2 | 3058.0 | 1473.1 | 1225.0 | 1206.7 | 1137.7 | 1061.2 | 966.2 | 906.5 | 897.3 |
| 50° | 6598.3 | 6168.0 | 3120.8 | 1286.3 | 1119.4 | 1122.4 | 1071.9 | 987.7 | 901.9 | 857.5 | 849.9 |
| 52.5° | 8187.8 | 7517.1 | 3289.2 | 1148.5 | 1030.6 | 1053.5 | 1026.0 | 944.8 | 868.2 | 830.0 | 822.3 |
| 55° | 9682.4 | 8757.5 | 3433.2 | 1050.5 | 955.5 | 995.3 | 993.8 | 918.8 | 849.9 | 811.6 | 807.0 |
| 57.5° | 10953.3 | 9607.3 | 3411.7 | 970.8 | 891.2 | 941.7 | 964.7 | 901.9 | 837.6 | 805.5 | 800.9 |
| 60° | 11743.5 | 10057.5 | 3107.0 | 897.3 | 842.2 | 903.5 | 947.9 | 897.3 | 843.7 | 836.1 | 837.6 |
| 62.5° | 12086.5 | 9974.8 | 2522.0 | 842.2 | 810.1 | 885.1 | 966.2 | 929.5 | 900.4 | 918.8 | 929.5 |
| 65° | 11553.6 | 9264.3 | 1855.9 | 800.9 | 779.4 | 889.7 | 1009.1 | 980.0 | 900.4 | 912.6 | 917.2 |
| 67.5° | 10074.4 | 7886.1 | 1341.4 | 759.5 | 741.1 | 903.5 | 1070.4 | 972.4 | 848.3 | 848.3 | 839.1 |
| 70° | 7259.9 | 5671.9 | 973.9 | 718.2 | 702.9 | 883.6 | 1073.4 | 920.3 | 788.6 | 784.0 | 761.1 |
| 72.5° | 4368.8 | 3345.9 | 759.5 | 672.2 | 644.7 | 784.0 | 1006.1 | 859.1 | 730.4 | 692.1 | 664.6 |
| 75° | 2269.4 | 1676.8 | 637.0 | 621.7 | 552.8 | 664.6 | 920.3 | 764.1 | 624.8 | 591.1 | 575.8 |
| 77.5° | 972.4 | 784.0 | 546.7 | 554.3 | 459.4 | 558.9 | 742.7 | 661.5 | 554.3 | 511.5 | 497.7 |
| 80° | 479.3 | 445.6 | 431.8 | 444.1 | 367.5 | 431.8 | 640.1 | 578.8 | 470.1 | 421.1 | 401.2 |
| 82.5° | 274.1 | 260.3 | 310.9 | 315.4 | 261.9 | 361.4 | 540.5 | 490.0 | 388.9 | 335.4 | 303.2 |
| 85° | 127.1 | 136.3 | 188.3 | 189.9 | 162.3 | 248.1 | 353.7 | 275.6 | 206.7 | 171.5 | 163.8 |
| 87.5° | 50.5 | 59.7 | 82.7 | 81.2 | 47.5 | 45.9 | 30.6 | 16.8 | 13.8 | 12.3 | 10.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



LM-79-2008: Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGRAW-EDISON

Report Number: SP1-1908-441-9-R4

Test Date: 10/23/2019

Luminaire Tested: SA1C-760-U-5WQ

Data in this report applies to families of products SA1C-760-U-5WQ .

Test Information

Test Method: LM-79-2008
 Report Number: SP1-1908-441-9-R4
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 10/28/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: McGRAW-EDISON
 Catalog Number: **SA1C-760-U-5WQ**
 Description: McGRAW EDISON ROADWAY AND AREA LUMINAIRE

THIS IS A REVISION OF SP1-1908-441-4-R3. TO UPDATE THE CATALOG INFORMATION.TESTED IN SITU. ROADWAY AND AREA LUMINAIRE. (1) 70 CRI, 5000K, 1050MA LIGHTSQUARE WITH 16 LEDS AND TYPE V WIDE OPTICS.

Spectral Parameters

CCT (K): 5474
 CIE u': 0.2052
 CIE v': 0.4804
 Duv: 0.0025
 CIE x: 0.3330
 CIE y: 0.3466
 CIE z: 0.3204
 Peak Wavelength (nm): 442
 Dominant Wavelength (nm): 554
 Purity: 4.1

| | | | |
|-----------|------|------|-------|
| CRI (Ra): | 71.7 | | |
| R1: | 70.6 | R9: | -27.1 |
| R2: | 74.6 | R10: | 40.8 |
| R3: | 78.3 | R11: | 74.6 |
| R4: | 73.8 | R12: | 50.4 |
| R5: | 72.4 | R13: | 70.0 |
| R6: | 67.5 | R14: | 87.8 |
| R7: | 77.5 | | |
| R8: | 58.9 | | |

Rf: 72.1
 Rg: 97.2



Test Conditions

Stabilization Time: 240M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 24.6/31%
 Sphere Temperature (°C): 25.9

REPORT NUMBER: SP1-1908-441-9-R4

| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/28/2019 | 12/28/2019 |
| Power Meter | IN0071 | 12/5/2018 | 12/5/2019 |
| AC Power Source | IN0063 | 12/5/2018 | 12/5/2019 |
| DC Power Source | IN0208 | 12/5/2018 | 12/5/2019 |
| Sphere Thermometer | IN0085 | 12/5/2018 | 12/5/2019 |
| Room Thermometer | IN0046 | 12/5/2018 | 12/5/2019 |

REPORT NUMBER: SP1-1908-441-9-R4

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 5700K 4-step quadrangle

REPORT NUMBER: SP1-1908-441-9-R4

Photopic Flux vs. Wavelength



#####

| λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360 | 3540 | NR | 490 | 33363 | NR | 620 | 80193 | NR | 750 | 4663 | NR | 880 | 4678 | NR |
| 365 | 2862 | NR | 495 | 44177 | NR | 625 | 73091 | NR | 755 | 4147 | NR | 885 | 4128 | NR |
| 370 | 2865 | NR | 500 | 57019 | NR | 630 | 66269 | NR | 760 | 4040 | NR | 890 | 4504 | NR |
| 375 | 3254 | NR | 505 | 70030 | NR | 635 | 60012 | NR | 765 | 3474 | NR | 895 | 4371 | NR |
| 380 | 3076 | NR | 510 | 81972 | NR | 640 | 53914 | NR | 770 | 3469 | NR | 900 | 4082 | NR |
| 385 | 2904 | NR | 515 | 92590 | NR | 645 | 48385 | NR | 775 | 3181 | NR | 905 | 2982 | NR |
| 390 | 2689 | NR | 520 | 100305 | NR | 650 | 43219 | NR | 780 | 2969 | NR | 910 | 4351 | NR |
| 395 | 2619 | NR | 525 | 107452 | NR | 655 | 38562 | NR | 785 | 3132 | NR | 915 | 3365 | NR |
| 400 | 2679 | NR | 530 | 111373 | NR | 660 | 34110 | NR | 790 | 2507 | NR | 920 | 3430 | NR |
| 405 | 3515 | NR | 535 | 114505 | NR | 665 | 30085 | NR | 795 | 2968 | NR | 925 | 4264 | NR |
| 410 | 6934 | NR | 540 | 116408 | NR | 670 | 26205 | NR | 800 | 2758 | NR | 930 | 4095 | NR |
| 415 | 14943 | NR | 545 | 118700 | NR | 675 | 22906 | NR | 805 | 2872 | NR | 935 | 5048 | NR |
| 420 | 31939 | NR | 550 | 119209 | NR | 680 | 20058 | NR | 810 | 3094 | NR | 940 | 4074 | NR |
| 425 | 64701 | NR | 555 | 120742 | NR | 685 | 17413 | NR | 815 | 3222 | NR | 945 | 4949 | NR |
| 430 | 110939 | NR | 560 | 121594 | NR | 690 | 15447 | NR | 820 | 3238 | NR | 950 | 4387 | NR |
| 435 | 164597 | NR | 565 | 121913 | NR | 695 | 13398 | NR | 825 | 3524 | NR | 955 | 4978 | NR |
| 440 | 207696 | NR | 570 | 122147 | NR | 700 | 11777 | NR | 830 | 2921 | NR | 960 | 4706 | NR |
| 445 | 201830 | NR | 575 | 121605 | NR | 705 | 10412 | NR | 835 | 3595 | NR | 965 | 5083 | NR |
| 450 | 145410 | NR | 580 | 120248 | NR | 710 | 9544 | NR | 840 | 3016 | NR | 970 | 4522 | NR |
| 455 | 89594 | NR | 585 | 117717 | NR | 715 | 8940 | NR | 845 | 4032 | NR | 975 | 4740 | NR |
| 460 | 58321 | NR | 590 | 114359 | NR | 720 | 7897 | NR | 850 | 3579 | NR | 980 | 6122 | NR |
| 465 | 39318 | NR | 595 | 109974 | NR | 725 | 7045 | NR | 855 | 4571 | NR | 985 | 6450 | NR |
| 470 | 27693 | NR | 600 | 105269 | NR | 730 | 6483 | NR | 860 | 4485 | NR | 990 | 4875 | NR |
| 475 | 23081 | NR | 605 | 99453 | NR | 735 | 5838 | NR | 865 | 3978 | NR | 995 | 4764 | NR |
| 480 | 23002 | NR | 610 | 92921 | NR | 740 | 5261 | NR | 870 | 4298 | NR | 1000 | 3640 | NR |
| 485 | 26201 | NR | 615 | 86989 | NR | 745 | 4760 | NR | 875 | 4356 | NR | | | |

REPORT NUMBER: SP1-1908-441-9-R4

Scotopic Flux vs. Wavelength



Scotopic Lumens: 13759.3 S/P: 1.85

| λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360 | 3540 | NR | 490 | 33363 | NR | 620 | 80193 | NR | 750 | 4663 | NR | 880 | 4678 | NR |
| 365 | 2862 | NR | 495 | 44177 | NR | 625 | 73091 | NR | 755 | 4147 | NR | 885 | 4128 | NR |
| 370 | 2865 | NR | 500 | 57019 | NR | 630 | 66269 | NR | 760 | 4040 | NR | 890 | 4504 | NR |
| 375 | 3254 | NR | 505 | 70030 | NR | 635 | 60012 | NR | 765 | 3474 | NR | 895 | 4371 | NR |
| 380 | 3076 | NR | 510 | 81972 | NR | 640 | 53914 | NR | 770 | 3469 | NR | 900 | 4082 | NR |
| 385 | 2904 | NR | 515 | 92590 | NR | 645 | 48385 | NR | 775 | 3181 | NR | 905 | 2982 | NR |
| 390 | 2689 | NR | 520 | 100305 | NR | 650 | 43219 | NR | 780 | 2969 | NR | 910 | 4351 | NR |
| 395 | 2619 | NR | 525 | 107452 | NR | 655 | 38562 | NR | 785 | 3132 | NR | 915 | 3365 | NR |
| 400 | 2679 | NR | 530 | 111373 | NR | 660 | 34110 | NR | 790 | 2507 | NR | 920 | 3430 | NR |
| 405 | 3515 | NR | 535 | 114505 | NR | 665 | 30085 | NR | 795 | 2968 | NR | 925 | 4264 | NR |
| 410 | 6934 | NR | 540 | 116408 | NR | 670 | 26205 | NR | 800 | 2758 | NR | 930 | 4095 | NR |
| 415 | 14943 | NR | 545 | 118700 | NR | 675 | 22906 | NR | 805 | 2872 | NR | 935 | 5048 | NR |
| 420 | 31939 | NR | 550 | 119209 | NR | 680 | 20058 | NR | 810 | 3094 | NR | 940 | 4074 | NR |
| 425 | 64701 | NR | 555 | 120742 | NR | 685 | 17413 | NR | 815 | 3222 | NR | 945 | 4949 | NR |
| 430 | 110939 | NR | 560 | 121594 | NR | 690 | 15447 | NR | 820 | 3238 | NR | 950 | 4387 | NR |
| 435 | 164597 | NR | 565 | 121913 | NR | 695 | 13398 | NR | 825 | 3524 | NR | 955 | 4978 | NR |
| 440 | 207696 | NR | 570 | 122147 | NR | 700 | 11777 | NR | 830 | 2921 | NR | 960 | 4706 | NR |
| 445 | 201830 | NR | 575 | 121605 | NR | 705 | 10412 | NR | 835 | 3595 | NR | 965 | 5083 | NR |
| 450 | 145410 | NR | 580 | 120248 | NR | 710 | 9544 | NR | 840 | 3016 | NR | 970 | 4522 | NR |
| 455 | 89594 | NR | 585 | 117717 | NR | 715 | 8940 | NR | 845 | 4032 | NR | 975 | 4740 | NR |
| 460 | 58321 | NR | 590 | 114359 | NR | 720 | 7897 | NR | 850 | 3579 | NR | 980 | 6122 | NR |
| 465 | 39318 | NR | 595 | 109974 | NR | 725 | 7045 | NR | 855 | 4571 | NR | 985 | 6450 | NR |
| 470 | 27693 | NR | 600 | 105269 | NR | 730 | 6483 | NR | 860 | 4485 | NR | 990 | 4875 | NR |
| 475 | 23081 | NR | 605 | 99453 | NR | 735 | 5838 | NR | 865 | 3978 | NR | 995 | 4764 | NR |
| 480 | 23002 | NR | 610 | 92921 | NR | 740 | 5261 | NR | 870 | 4298 | NR | 1000 | 3640 | NR |
| 485 | 26201 | NR | 615 | 86989 | NR | 745 | 4760 | NR | 875 | 4356 | NR | | | |

REPORT NUMBER: SP1-1908-441-9-R4

Melanopic Flux vs. Wavelength



Melanopic Lumens: 5527.6 M/P: 0.74

| λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360 | 3540 | NR | 490 | 33363 | NR | 620 | 80193 | NR | 750 | 4663 | NR | 880 | 4678 | NR |
| 365 | 2862 | NR | 495 | 44177 | NR | 625 | 73091 | NR | 755 | 4147 | NR | 885 | 4128 | NR |
| 370 | 2865 | NR | 500 | 57019 | NR | 630 | 66269 | NR | 760 | 4040 | NR | 890 | 4504 | NR |
| 375 | 3254 | NR | 505 | 70030 | NR | 635 | 60012 | NR | 765 | 3474 | NR | 895 | 4371 | NR |
| 380 | 3076 | NR | 510 | 81972 | NR | 640 | 53914 | NR | 770 | 3469 | NR | 900 | 4082 | NR |
| 385 | 2904 | NR | 515 | 92590 | NR | 645 | 48385 | NR | 775 | 3181 | NR | 905 | 2982 | NR |
| 390 | 2689 | NR | 520 | 100305 | NR | 650 | 43219 | NR | 780 | 2969 | NR | 910 | 4351 | NR |
| 395 | 2619 | NR | 525 | 107452 | NR | 655 | 38562 | NR | 785 | 3132 | NR | 915 | 3365 | NR |
| 400 | 2679 | NR | 530 | 111373 | NR | 660 | 34110 | NR | 790 | 2507 | NR | 920 | 3430 | NR |
| 405 | 3515 | NR | 535 | 114505 | NR | 665 | 30085 | NR | 795 | 2968 | NR | 925 | 4264 | NR |
| 410 | 6934 | NR | 540 | 116408 | NR | 670 | 26205 | NR | 800 | 2758 | NR | 930 | 4095 | NR |
| 415 | 14943 | NR | 545 | 118700 | NR | 675 | 22906 | NR | 805 | 2872 | NR | 935 | 5048 | NR |
| 420 | 31939 | NR | 550 | 119209 | NR | 680 | 20058 | NR | 810 | 3094 | NR | 940 | 4074 | NR |
| 425 | 64701 | NR | 555 | 120742 | NR | 685 | 17413 | NR | 815 | 3222 | NR | 945 | 4949 | NR |
| 430 | 110939 | NR | 560 | 121594 | NR | 690 | 15447 | NR | 820 | 3238 | NR | 950 | 4387 | NR |
| 435 | 164597 | NR | 565 | 121913 | NR | 695 | 13398 | NR | 825 | 3524 | NR | 955 | 4978 | NR |
| 440 | 207696 | NR | 570 | 122147 | NR | 700 | 11777 | NR | 830 | 2921 | NR | 960 | 4706 | NR |
| 445 | 201830 | NR | 575 | 121605 | NR | 705 | 10412 | NR | 835 | 3595 | NR | 965 | 5083 | NR |
| 450 | 145410 | NR | 580 | 120248 | NR | 710 | 9544 | NR | 840 | 3016 | NR | 970 | 4522 | NR |
| 455 | 89594 | NR | 585 | 117717 | NR | 715 | 8940 | NR | 845 | 4032 | NR | 975 | 4740 | NR |
| 460 | 58321 | NR | 590 | 114359 | NR | 720 | 7897 | NR | 850 | 3579 | NR | 980 | 6122 | NR |
| 465 | 39318 | NR | 595 | 109974 | NR | 725 | 7045 | NR | 855 | 4571 | NR | 985 | 6450 | NR |
| 470 | 27693 | NR | 600 | 105269 | NR | 730 | 6483 | NR | 860 | 4485 | NR | 990 | 4875 | NR |
| 475 | 23081 | NR | 605 | 99453 | NR | 735 | 5838 | NR | 865 | 3978 | NR | 995 | 4764 | NR |
| 480 | 23002 | NR | 610 | 92921 | NR | 740 | 5261 | NR | 870 | 4298 | NR | 1000 | 3640 | NR |
| 485 | 26201 | NR | 615 | 86989 | NR | 745 | 4760 | NR | 875 | 4356 | NR | | | |

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Summary

$R_f = 72.1$
 $R_g = 97.2$
 CIE $R_a = 71.7$
 $R_g = -27.1$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 54 | CES51 = 88 | CES76 = 43 |
| CES02 = 59 | CES27 = 79 | CES52 = 90 | CES77 = 64 |
| CES03 = 30 | CES28 = 77 | CES53 = 77 | CES78 = 46 |
| CES04 = 69 | CES29 = 50 | CES54 = 81 | CES79 = 74 |
| CES05 = 46 | CES30 = 59 | CES55 = 80 | CES80 = 70 |
| CES06 = 50 | CES31 = 55 | CES56 = 70 | CES81 = 71 |
| CES07 = 38 | CES32 = 52 | CES57 = 68 | CES82 = 88 |
| CES08 = 38 | CES33 = 63 | CES58 = 70 | CES83 = 82 |
| CES09 = 29 | CES34 = 63 | CES59 = 88 | CES84 = 87 |
| CES10 = 72 | CES35 = 79 | CES60 = 92 | CES85 = 84 |
| CES11 = 55 | CES36 = 90 | CES61 = 88 | CES86 = 76 |
| CES12 = 61 | CES37 = 72 | CES62 = 81 | CES87 = 75 |
| CES13 = 41 | CES38 = 68 | CES63 = 75 | CES88 = 77 |
| CES14 = 74 | CES39 = 91 | CES64 = 72 | CES89 = 76 |
| CES15 = 70 | CES40 = 83 | CES65 = 65 | CES90 = 76 |
| CES16 = 46 | CES41 = 84 | CES66 = 66 | CES91 = 92 |
| CES17 = 48 | CES42 = 70 | CES67 = 64 | CES92 = 70 |
| CES18 = 55 | CES43 = 69 | CES68 = 71 | CES93 = 83 |
| CES19 = 70 | CES44 = 98 | CES69 = 80 | CES94 = 60 |
| CES20 = 64 | CES45 = 79 | CES70 = 58 | CES95 = 73 |
| CES21 = 85 | CES46 = 78 | CES71 = 55 | CES96 = 79 |
| CES22 = 77 | CES47 = 76 | CES72 = 84 | CES97 = 84 |
| CES23 = 91 | CES48 = 68 | CES73 = 47 | CES98 = 73 |
| CES24 = 90 | CES49 = 78 | CES74 = 94 | CES99 = 62 |
| CES25 = 71 | CES50 = 87 | CES75 = 51 | |



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Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)