

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: P1456698

Luminaire Tested: GLAN-SB2D-840-U-T3LG

Issue Date: 05/20/2026

Test Information

Test Method: LM-79-2024
Report Number: P1456698
Test Lab: INNOVATION CENTER(G1)
Issue Date: 5/22/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: STREETWORKS
Catalog Number: GLAN-SB2D-840-U-T3LG
Description: GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 900mA 2xLight Square
PACKAGE 80CRI 4000K FIXTURE w/ TYPE III LOW GLARE
Light Source: (52) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18984.6 lumens
Efficiency: N/A
Efficacy: 128.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G2

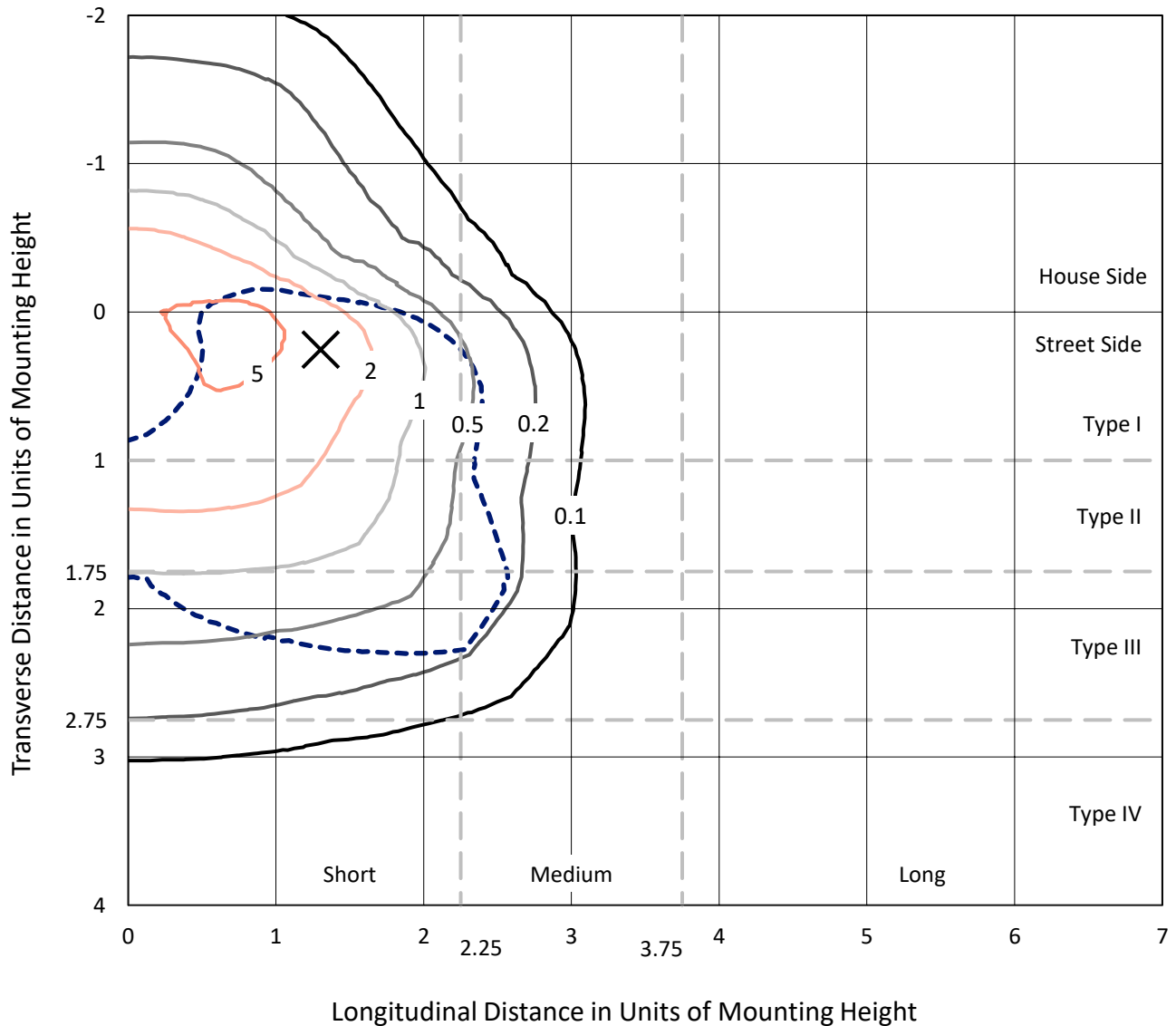
Input Watts (W): 147.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.97
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

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CATALOG NUMBER: GLAN-SB2D-840-U-T3LG

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

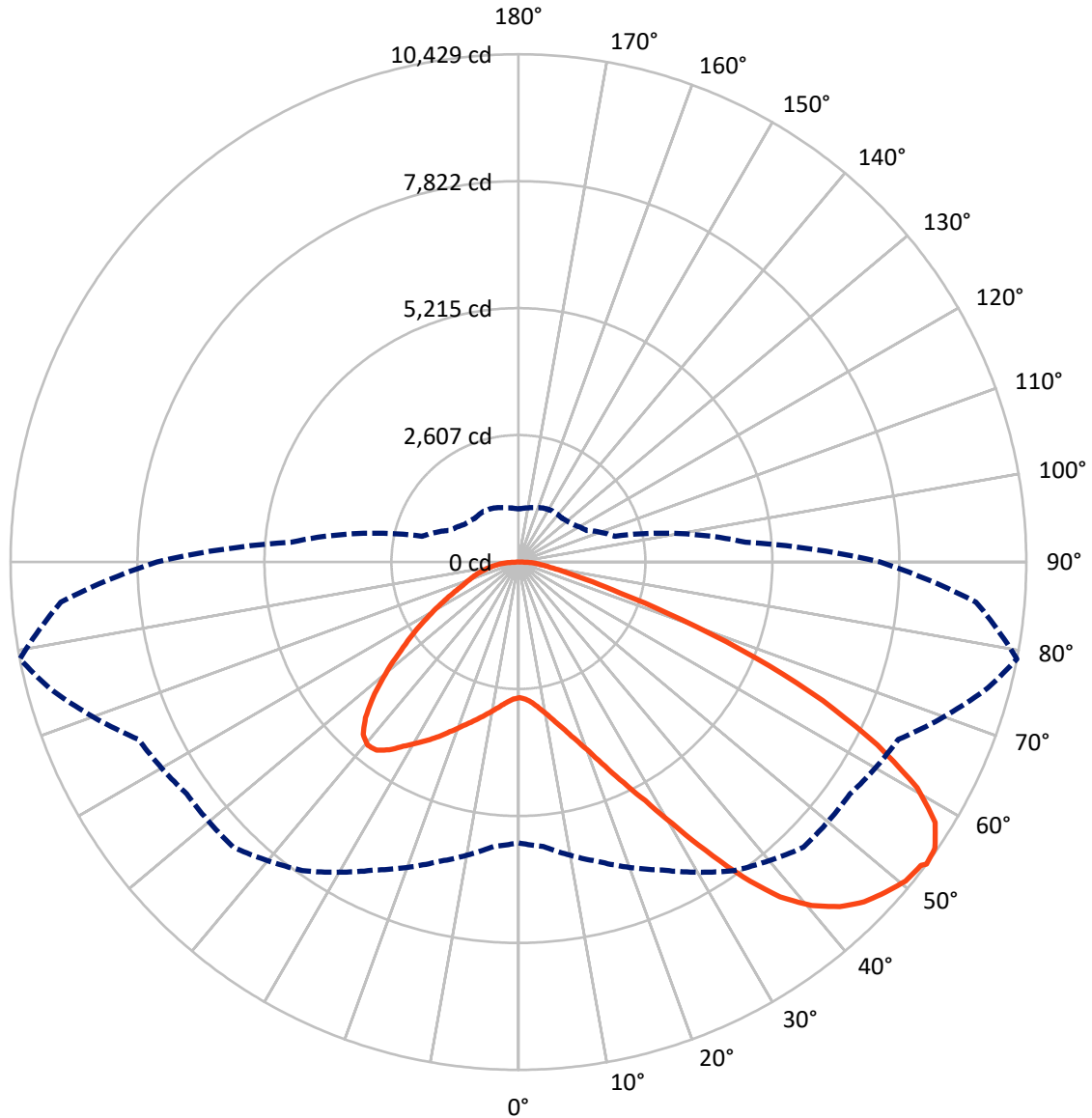


Based on 25 foot mounting height. Maximum calculated value = 6.9 fc
 Type III - Short - N/A

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CATALOG NUMBER: GLAN-SB2D-840-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-SB2D-840-U-T3LG

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 4785.9 | 0.0 | 4785.9 |
| | % Fixture | 25.2 | 0.0 | 25.2 |
| Street Side | Lumens | 14198.7 | 0.0 | 14198.7 |
| | % Fixture | 74.8 | 0.0 | 74.8 |
| Total | Lumens | 18984.6 | 0.0 | 18984.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 265.6 | 1.4 |
| 10°-20° | 822.3 | 4.3 |
| 20°-30° | 1572.2 | 8.3 |
| 30°-40° | 2699.4 | 14.2 |
| 40°-50° | 3781.0 | 19.9 |
| 50°-60° | 4291.0 | 22.6 |
| 60°-70° | 3762.9 | 19.8 |
| 70°-80° | 1471.4 | 7.8 |
| 80°-90° | 318.8 | 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° | 18984.6 | 100.0 |
| 0°-180° | 18984.6 | 100.0 |



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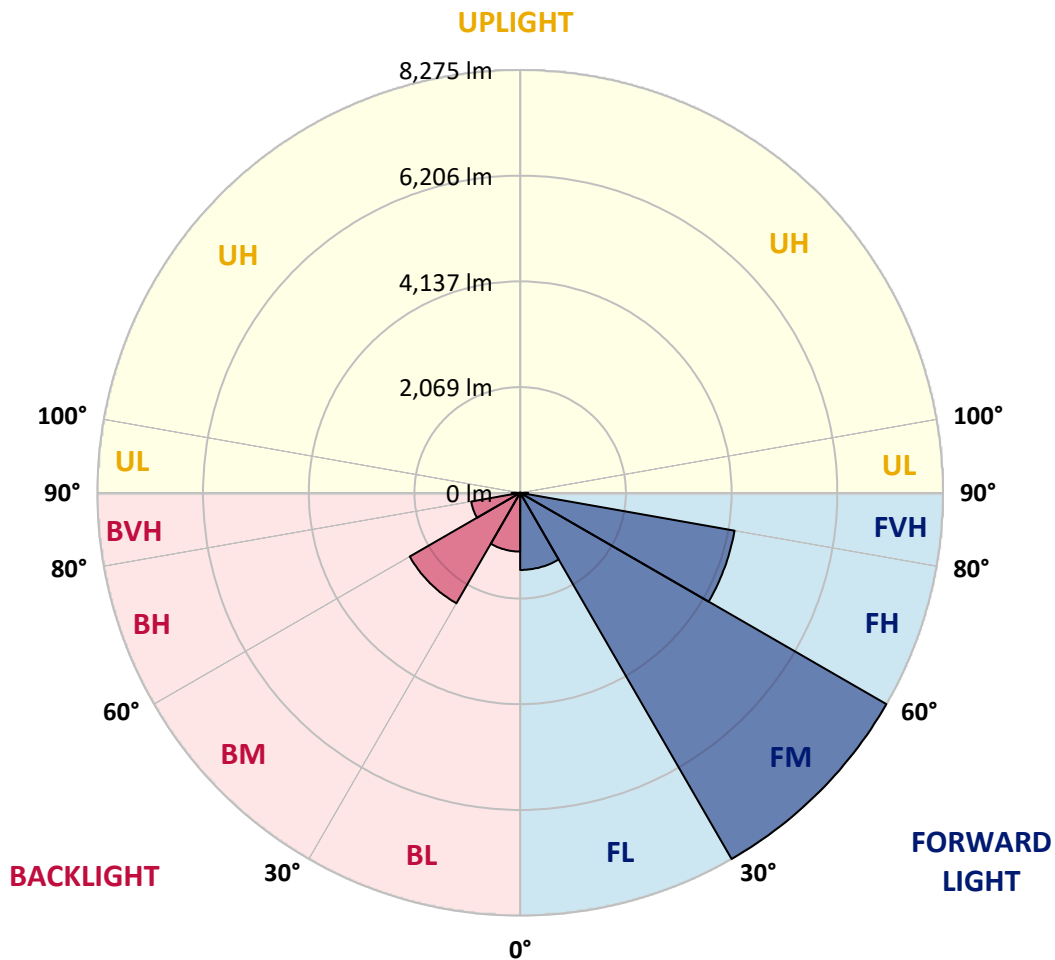
CATALOG NUMBER: GLAN-SB2D-840-U-T3LG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1509.1 | 7.9 | | | |
| FM (30°-60°) | 8274.7 | 43.6 | | | |
| FH (60°-80°) | 4260.3 | 22.4 | | | G2/5000 |
| FVH (80°-90°) | 154.6 | 0.8 | | | G2/225 |
| BL (0°-30°) | 1151.0 | 6.1 | B3/2500 | | |
| BM (30°-60°) | 2496.7 | 13.2 | B2/2500 | | |
| BH (60°-80°) | 974.0 | 5.1 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 164.2 | 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-G2

Type III Short





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CATALOG NUMBER: GLAN-SB2D-840-U-T3LG

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 79° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|--------|
| 0° | 2787.0 | 2787.0 | 2787.0 | 2787.0 | 2787.0 | 2787.0 | 2787.0 | 2787.0 | 2787.0 | 2787.0 | 2787.0 |
| 2.5° | 2791.2 | 2791.2 | 2774.3 | 2791.2 | 2782.8 | 2795.4 | 2803.9 | 2803.9 | 2820.8 | 2816.6 | 2816.6 |
| 5° | 2744.7 | 2736.2 | 2732.0 | 2761.6 | 2778.5 | 2812.4 | 2850.4 | 2867.3 | 2896.9 | 2896.9 | 2901.2 |
| 7.5° | 2622.0 | 2617.8 | 2639.0 | 2698.2 | 2753.2 | 2837.7 | 2918.1 | 2964.6 | 3011.1 | 3019.6 | 3019.6 |
| 10° | 2545.9 | 2541.7 | 2567.1 | 2639.0 | 2727.8 | 2850.4 | 2977.3 | 3074.6 | 3150.7 | 3171.8 | 3171.8 |
| 12.5° | 2545.9 | 2545.9 | 2567.1 | 2639.0 | 2732.0 | 2880.0 | 3053.4 | 3218.4 | 3336.8 | 3362.1 | 3353.7 |
| 15° | 2617.8 | 2613.6 | 2639.0 | 2715.1 | 2803.9 | 2943.5 | 3154.9 | 3374.8 | 3535.5 | 3582.1 | 3586.3 |
| 17.5° | 2693.9 | 2689.7 | 2727.8 | 2825.0 | 2930.8 | 3070.3 | 3286.0 | 3556.7 | 3785.1 | 3844.3 | 3856.9 |
| 20° | 2812.4 | 2808.1 | 2854.6 | 2947.7 | 3078.8 | 3239.5 | 3463.6 | 3772.4 | 4089.5 | 4153.0 | 4169.9 |
| 22.5° | 2947.7 | 2951.9 | 3002.7 | 3116.9 | 3248.0 | 3459.4 | 3734.3 | 4076.9 | 4457.5 | 4554.8 | 4571.7 |
| 25° | 3231.0 | 3218.4 | 3260.6 | 3341.0 | 3480.6 | 3734.3 | 4072.6 | 4444.8 | 4897.3 | 5015.7 | 5036.9 |
| 27.5° | 3607.4 | 3586.3 | 3632.8 | 3713.2 | 3814.7 | 4051.5 | 4440.6 | 4855.0 | 5400.6 | 5548.6 | 5552.8 |
| 30° | 3945.8 | 3933.1 | 3996.5 | 4161.4 | 4267.2 | 4449.0 | 4863.5 | 5337.1 | 6022.3 | 6237.9 | 6246.4 |
| 32.5° | 4237.6 | 4233.3 | 4351.8 | 4563.2 | 4804.3 | 4998.8 | 5400.6 | 5946.1 | 6808.9 | 7058.4 | 7003.4 |
| 35° | 4516.7 | 4529.4 | 4677.4 | 4897.3 | 5218.7 | 5607.8 | 6013.8 | 6635.5 | 7637.8 | 7938.0 | 7849.2 |
| 37.5° | 4800.0 | 4808.5 | 5003.0 | 5286.4 | 5624.7 | 6132.2 | 6677.8 | 7384.0 | 8356.7 | 8728.9 | 8534.3 |
| 40° | 5062.2 | 5087.6 | 5349.8 | 5654.3 | 6094.1 | 6610.1 | 7219.1 | 7904.2 | 8910.7 | 9278.7 | 9067.2 |
| 42.5° | 5324.4 | 5362.5 | 5645.9 | 6064.5 | 6534.0 | 7071.1 | 7595.5 | 8221.4 | 9266.0 | 9676.2 | 9350.6 |
| 45° | 5595.1 | 5620.5 | 5971.5 | 6407.1 | 6940.0 | 7434.8 | 7811.2 | 8424.4 | 9511.3 | 9955.3 | 9511.3 |
| 47.5° | 5777.0 | 5827.7 | 6212.6 | 6715.8 | 7248.7 | 7713.9 | 7984.6 | 8509.0 | 9667.7 | 10137.2 | 9570.5 |
| 50° | 5848.9 | 5920.8 | 6335.2 | 6893.4 | 7502.4 | 7976.1 | 8119.9 | 8555.5 | 9841.1 | 10297.9 | 9557.8 |
| 52.5° | 5836.2 | 5903.8 | 6356.4 | 6973.8 | 7705.4 | 8217.2 | 8251.0 | 8606.2 | 9963.8 | 10352.9 | 9447.8 |
| 53° | 5768.5 | 5861.5 | 6369.0 | 6978.0 | 7735.0 | 8280.6 | 8310.2 | 8610.5 | 9980.7 | 10429.0 | 9430.9 |
| 55° | 5535.9 | 5586.7 | 6237.9 | 6973.8 | 7874.6 | 8517.4 | 8475.1 | 8737.3 | 10027.2 | 10378.2 | 9244.8 |
| 57.5° | 5324.4 | 5375.2 | 5941.9 | 6893.4 | 7988.8 | 8851.5 | 8741.6 | 8716.2 | 9773.5 | 10090.7 | 8775.4 |
| 60° | 5189.1 | 5206.0 | 5683.9 | 6639.7 | 7942.3 | 9084.1 | 8915.0 | 8466.7 | 9147.6 | 9409.8 | 7950.7 |
| 62.5° | 5074.9 | 5070.7 | 5493.6 | 6276.0 | 7764.6 | 9118.0 | 8948.8 | 7849.2 | 8229.8 | 8272.1 | 6851.2 |
| 65° | 4817.0 | 4787.4 | 5197.6 | 5865.8 | 7396.7 | 8965.7 | 8534.3 | 6914.6 | 7011.9 | 6872.3 | 5502.1 |
| 67.5° | 4305.2 | 4241.8 | 4605.5 | 5239.9 | 6648.2 | 8534.3 | 7743.5 | 5827.7 | 5527.4 | 5248.3 | 4144.5 |
| 70° | 3083.0 | 3083.0 | 3374.8 | 4009.2 | 5337.1 | 7375.6 | 6648.2 | 4411.0 | 3806.2 | 3556.7 | 2770.1 |
| 72.5° | 1509.8 | 1547.9 | 1852.4 | 2368.3 | 3577.8 | 5354.1 | 5091.8 | 2858.9 | 2309.1 | 2186.4 | 1776.2 |
| 75° | 642.8 | 647.1 | 790.8 | 1048.8 | 1814.3 | 3167.6 | 3188.7 | 1649.4 | 1480.2 | 1421.0 | 1175.7 |
| 77.5° | 448.3 | 456.7 | 520.2 | 617.5 | 862.7 | 1454.8 | 1657.8 | 998.1 | 993.8 | 951.5 | 837.4 |
| 80° | 342.6 | 351.0 | 393.3 | 461.0 | 579.4 | 744.3 | 858.5 | 676.7 | 710.5 | 668.2 | 604.8 |
| 82.5° | 258.0 | 266.4 | 296.0 | 346.8 | 414.5 | 499.0 | 482.1 | 499.0 | 524.4 | 499.0 | 435.6 |
| 85° | 173.4 | 177.6 | 198.8 | 241.1 | 266.4 | 300.3 | 300.3 | 363.7 | 380.6 | 372.2 | 342.6 |
| 87.5° | 88.8 | 88.8 | 105.7 | 126.9 | 135.3 | 139.6 | 122.6 | 160.7 | 181.9 | 198.8 | 160.7 |
| 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-SB2D-840-U-T3LG

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2787.0 | 2787.0 | 2787.0 | 2787.0 | 2787.0 | 2787.0 | 2787.0 | 2787.0 | 2787.0 | 2787.0 | 2787.0 |
| 2.5° | 2816.6 | 2820.8 | 2808.1 | 2803.9 | 2799.7 | 2778.5 | 2778.5 | 2757.4 | 2753.2 | 2757.4 | 2744.7 |
| 5° | 2909.6 | 2901.2 | 2867.3 | 2842.0 | 2812.4 | 2753.2 | 2719.3 | 2672.8 | 2660.1 | 2647.4 | 2634.7 |
| 7.5° | 3023.8 | 3011.1 | 2951.9 | 2884.3 | 2803.9 | 2689.7 | 2626.3 | 2550.2 | 2524.8 | 2503.6 | 2495.2 |
| 10° | 3167.6 | 3142.2 | 3049.2 | 2905.4 | 2757.4 | 2617.8 | 2529.0 | 2436.0 | 2393.7 | 2385.2 | 2364.1 |
| 12.5° | 3353.7 | 3307.2 | 3133.8 | 2909.6 | 2715.1 | 2533.2 | 2436.0 | 2364.1 | 2347.2 | 2342.9 | 2321.8 |
| 15° | 3560.9 | 3493.2 | 3214.1 | 2913.9 | 2660.1 | 2461.3 | 2402.1 | 2364.1 | 2364.1 | 2359.8 | 2347.2 |
| 17.5° | 3814.7 | 3704.7 | 3290.2 | 2896.9 | 2592.4 | 2440.2 | 2410.6 | 2376.8 | 2368.3 | 2372.5 | 2355.6 |
| 20° | 4119.2 | 3937.3 | 3370.6 | 2875.8 | 2562.8 | 2444.4 | 2410.6 | 2364.1 | 2342.9 | 2338.7 | 2326.0 |
| 22.5° | 4470.2 | 4203.7 | 3459.4 | 2842.0 | 2562.8 | 2440.2 | 2385.2 | 2321.8 | 2279.5 | 2262.6 | 2245.7 |
| 25° | 4871.9 | 4512.5 | 3552.5 | 2829.3 | 2571.3 | 2423.3 | 2334.5 | 2233.0 | 2165.3 | 2139.9 | 2127.2 |
| 27.5° | 5358.3 | 4838.1 | 3620.1 | 2842.0 | 2567.1 | 2385.2 | 2245.7 | 2114.6 | 2038.4 | 1996.1 | 1987.7 |
| 30° | 5895.4 | 5189.1 | 3666.6 | 2863.1 | 2541.7 | 2313.3 | 2139.9 | 1991.9 | 1886.2 | 1835.4 | 1822.7 |
| 32.5° | 6529.7 | 5582.4 | 3713.2 | 2863.1 | 2478.3 | 2211.8 | 2017.3 | 1856.6 | 1746.6 | 1687.4 | 1679.0 |
| 35° | 7231.8 | 6064.5 | 3755.4 | 2858.9 | 2402.1 | 2101.9 | 1894.6 | 1729.7 | 1615.5 | 1556.3 | 1552.1 |
| 37.5° | 7828.1 | 6428.2 | 3776.6 | 2816.6 | 2296.4 | 1975.0 | 1780.5 | 1615.5 | 1497.1 | 1433.7 | 1429.4 |
| 40° | 8196.0 | 6580.5 | 3734.3 | 2732.0 | 2169.5 | 1843.9 | 1653.6 | 1501.3 | 1382.9 | 1306.8 | 1289.9 |
| 42.5° | 8335.6 | 6508.6 | 3599.0 | 2592.4 | 2017.3 | 1712.8 | 1547.9 | 1387.1 | 1230.7 | 1167.2 | 1154.5 |
| 45° | 8289.1 | 6229.5 | 3311.4 | 2393.7 | 1848.1 | 1594.4 | 1454.8 | 1273.0 | 1171.5 | 1116.5 | 1112.3 |
| 47.5° | 8132.6 | 5798.1 | 2951.9 | 2144.2 | 1670.5 | 1488.6 | 1332.2 | 1243.4 | 1150.3 | 1091.1 | 1086.9 |
| 50° | 7857.7 | 5337.1 | 2520.5 | 1860.8 | 1509.8 | 1378.7 | 1302.6 | 1230.7 | 1154.5 | 1108.0 | 1099.6 |
| 52.5° | 7506.7 | 4817.0 | 2123.0 | 1585.9 | 1370.2 | 1281.4 | 1273.0 | 1222.2 | 1163.0 | 1112.3 | 1091.1 |
| 53° | 7426.3 | 4681.6 | 2046.9 | 1539.4 | 1349.1 | 1268.7 | 1264.5 | 1222.2 | 1154.5 | 1108.0 | 1091.1 |
| 55° | 7041.5 | 4262.9 | 1805.8 | 1374.5 | 1243.4 | 1226.4 | 1264.5 | 1218.0 | 1133.4 | 1095.3 | 1082.7 |
| 57.5° | 6424.0 | 3713.2 | 1573.2 | 1222.2 | 1133.4 | 1175.7 | 1251.8 | 1201.1 | 1108.0 | 1040.4 | 1019.2 |
| 60° | 5679.7 | 3083.0 | 1395.6 | 1120.7 | 1053.0 | 1112.3 | 1201.1 | 1141.9 | 1015.0 | 981.2 | 976.9 |
| 62.5° | 4791.6 | 2495.2 | 1260.3 | 1036.1 | 985.4 | 1044.6 | 1124.9 | 1023.4 | 930.4 | 905.0 | 896.6 |
| 65° | 3742.8 | 1983.5 | 1154.5 | 972.7 | 917.7 | 964.2 | 1019.2 | 955.8 | 896.6 | 875.4 | 871.2 |
| 67.5° | 2782.8 | 1556.3 | 1070.0 | 917.7 | 850.1 | 879.7 | 943.1 | 926.2 | 875.4 | 862.7 | 858.5 |
| 70° | 1920.0 | 1264.5 | 993.8 | 867.0 | 765.5 | 799.3 | 896.6 | 909.3 | 858.5 | 850.1 | 845.8 |
| 72.5° | 1344.9 | 1070.0 | 913.5 | 812.0 | 697.8 | 731.6 | 875.4 | 875.4 | 820.4 | 833.1 | 824.7 |
| 75° | 1010.8 | 900.8 | 820.4 | 744.3 | 613.2 | 664.0 | 845.8 | 837.4 | 782.4 | 837.4 | 816.2 |
| 77.5° | 761.2 | 727.4 | 710.5 | 659.7 | 537.1 | 587.8 | 786.6 | 769.7 | 697.8 | 702.0 | 664.0 |
| 80° | 554.0 | 562.5 | 609.0 | 562.5 | 448.3 | 486.3 | 664.0 | 655.5 | 566.7 | 583.6 | 537.1 |
| 82.5° | 397.5 | 418.7 | 520.2 | 452.5 | 325.6 | 346.8 | 456.7 | 494.8 | 444.1 | 418.7 | 427.1 |
| 85° | 300.3 | 313.0 | 418.7 | 334.1 | 203.0 | 228.4 | 313.0 | 355.2 | 346.8 | 321.4 | 325.6 |
| 87.5° | 126.9 | 143.8 | 194.5 | 156.5 | 118.4 | 118.4 | 194.5 | 249.5 | 224.1 | 190.3 | 198.8 |
| 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: SP1-2407-184-11

Test Date: 10/11/2024

Luminaire Tested: GSS-SB1A-840-U-5WQ

Data in this report applies to families of products including GSS-SB1A-840-U-5WQ

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-184-11
 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-840-U-5WQ**
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 80 CRI 4000K CCT 26 LEDS

Spectral Parameters

CCT (K): 3897
 CIE u': 0.2249
 CIE v': 0.5084
 Duv: 0.0039
 CIE x: 0.3882
 CIE y: 0.3900
 CIE z: 0.2218
 Peak Wavelength (nm): 445
 Dominant Wavelength (nm): 577
 Purity: 33.54925
 Rf: 81.8
 Rg: 98.6

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 80.2 | | |
| R1: | 78.9 | R9: | 6.7 |
| R2: | 83.5 | R10: | 61.9 |
| R3: | 88.3 | R11: | 81.9 |
| R4: | 82.1 | R12: | 58.9 |
| R5: | 78.8 | R13: | 79.2 |
| R6: | 78.4 | R14: | 93.2 |
| R7: | 85.8 | R15: | 71.9 |
| R8: | 65.8 | | |



Test Conditions

Stabilization Time: 24M
 Operation Time: 1H 24M
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-11

| 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 = 3897K
 CIE x = 0.3882
 CIE y = 0.3900
 Duv = 0.0039

Point lies inside the ANSI 4000K 4-step quadrangle

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Photopic Flux vs. Wavelength



Photopic Lumens: NR

| λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) |
|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|
| 360 | 0 | NR | 490 | 242 | NR | 620 | 792 | NR | 750 | 29 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 320 | NR | 625 | 748 | NR | 755 | 25 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 401 | NR | 630 | 703 | NR | 760 | 22 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 479 | NR | 635 | 651 | NR | 765 | 19 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 546 | NR | 640 | 599 | NR | 770 | 16 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 602 | NR | 645 | 545 | NR | 775 | 14 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 645 | NR | 650 | 493 | NR | 780 | 12 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 674 | NR | 655 | 443 | NR | 785 | 10 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 699 | NR | 660 | 394 | NR | 790 | 9 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 718 | NR | 665 | 349 | NR | 795 | 8 | NR | 925 | 0 | NR |
| 410 | 22 | NR | 540 | 732 | NR | 670 | 307 | NR | 800 | 7 | NR | 930 | 0 | NR |
| 415 | 43 | NR | 545 | 749 | NR | 675 | 269 | NR | 805 | 6 | NR | 935 | 0 | NR |
| 420 | 86 | NR | 550 | 762 | NR | 680 | 235 | NR | 810 | 5 | NR | 940 | 0 | NR |
| 425 | 164 | NR | 555 | 778 | NR | 685 | 204 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 288 | NR | 560 | 792 | NR | 690 | 178 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 478 | NR | 565 | 809 | NR | 695 | 153 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 766 | NR | 570 | 827 | NR | 700 | 132 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 1000 | NR | 575 | 845 | NR | 705 | 114 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 726 | NR | 580 | 862 | NR | 710 | 98 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 425 | NR | 585 | 875 | NR | 715 | 84 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 324 | NR | 590 | 887 | NR | 720 | 73 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 225 | NR | 595 | 890 | NR | 725 | 63 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 157 | NR | 600 | 887 | NR | 730 | 54 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 147 | NR | 605 | 875 | NR | 735 | 46 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 154 | NR | 610 | 856 | NR | 740 | 40 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 184 | NR | 615 | 828 | NR | 745 | 34 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-11

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR S/P: 1.57

| 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 | 242 | NR | 620 | 792 | NR | 750 | 29 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 320 | NR | 625 | 748 | NR | 755 | 25 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 401 | NR | 630 | 703 | NR | 760 | 22 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 479 | NR | 635 | 651 | NR | 765 | 19 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 546 | NR | 640 | 599 | NR | 770 | 16 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 602 | NR | 645 | 545 | NR | 775 | 14 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 645 | NR | 650 | 493 | NR | 780 | 12 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 674 | NR | 655 | 443 | NR | 785 | 10 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 699 | NR | 660 | 394 | NR | 790 | 9 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 718 | NR | 665 | 349 | NR | 795 | 8 | NR | 925 | 0 | NR |
| 410 | 22 | NR | 540 | 732 | NR | 670 | 307 | NR | 800 | 7 | NR | 930 | 0 | NR |
| 415 | 43 | NR | 545 | 749 | NR | 675 | 269 | NR | 805 | 6 | NR | 935 | 0 | NR |
| 420 | 86 | NR | 550 | 762 | NR | 680 | 235 | NR | 810 | 5 | NR | 940 | 0 | NR |
| 425 | 164 | NR | 555 | 778 | NR | 685 | 204 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 288 | NR | 560 | 792 | NR | 690 | 178 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 478 | NR | 565 | 809 | NR | 695 | 153 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 766 | NR | 570 | 827 | NR | 700 | 132 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 1000 | NR | 575 | 845 | NR | 705 | 114 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 726 | NR | 580 | 862 | NR | 710 | 98 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 425 | NR | 585 | 875 | NR | 715 | 84 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 324 | NR | 590 | 887 | NR | 720 | 73 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 225 | NR | 595 | 890 | NR | 725 | 63 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 157 | NR | 600 | 887 | NR | 730 | 54 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 147 | NR | 605 | 875 | NR | 735 | 46 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 154 | NR | 610 | 856 | NR | 740 | 40 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 184 | NR | 615 | 828 | NR | 745 | 34 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-11

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.06

| 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 | 242 | NR | 620 | 792 | NR | 750 | 29 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 320 | NR | 625 | 748 | NR | 755 | 25 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 401 | NR | 630 | 703 | NR | 760 | 22 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 479 | NR | 635 | 651 | NR | 765 | 19 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 546 | NR | 640 | 599 | NR | 770 | 16 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 602 | NR | 645 | 545 | NR | 775 | 14 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 645 | NR | 650 | 493 | NR | 780 | 12 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 674 | NR | 655 | 443 | NR | 785 | 10 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 699 | NR | 660 | 394 | NR | 790 | 9 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 718 | NR | 665 | 349 | NR | 795 | 8 | NR | 925 | 0 | NR |
| 410 | 22 | NR | 540 | 732 | NR | 670 | 307 | NR | 800 | 7 | NR | 930 | 0 | NR |
| 415 | 43 | NR | 545 | 749 | NR | 675 | 269 | NR | 805 | 6 | NR | 935 | 0 | NR |
| 420 | 86 | NR | 550 | 762 | NR | 680 | 235 | NR | 810 | 5 | NR | 940 | 0 | NR |
| 425 | 164 | NR | 555 | 778 | NR | 685 | 204 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 288 | NR | 560 | 792 | NR | 690 | 178 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 478 | NR | 565 | 809 | NR | 695 | 153 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 766 | NR | 570 | 827 | NR | 700 | 132 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 1000 | NR | 575 | 845 | NR | 705 | 114 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 726 | NR | 580 | 862 | NR | 710 | 98 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 425 | NR | 585 | 875 | NR | 715 | 84 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 324 | NR | 590 | 887 | NR | 720 | 73 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 225 | NR | 595 | 890 | NR | 725 | 63 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 157 | NR | 600 | 887 | NR | 730 | 54 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 147 | NR | 605 | 875 | NR | 735 | 46 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 154 | NR | 610 | 856 | NR | 740 | 40 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 184 | NR | 615 | 828 | NR | 745 | 34 | NR | 875 | 1 | NR | | | |

Summary

$R_f = 81.8$
 $R_g = 98.6$
 CIE $R_a = 80.2$
 $R_9 = 6.7$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 73 | CES51 = 93 | CES76 = 66 |
| CES02 = 61 | CES27 = 91 | CES52 = 93 | CES77 = 80 |
| CES03 = 31 | CES28 = 87 | CES53 = 83 | CES78 = 66 |
| CES04 = 69 | CES29 = 71 | CES54 = 89 | CES79 = 88 |
| CES05 = 48 | CES30 = 77 | CES55 = 88 | CES80 = 85 |
| CES06 = 50 | CES31 = 74 | CES56 = 80 | CES81 = 83 |
| CES07 = 41 | CES32 = 70 | CES57 = 79 | CES82 = 93 |
| CES08 = 40 | CES33 = 77 | CES58 = 80 | CES83 = 91 |
| CES09 = 29 | CES34 = 79 | CES59 = 92 | CES84 = 91 |
| CES10 = 74 | CES35 = 88 | CES60 = 95 | CES85 = 84 |
| CES11 = 57 | CES36 = 98 | CES61 = 91 | CES86 = 78 |
| CES12 = 63 | CES37 = 85 | CES62 = 90 | CES87 = 84 |
| CES13 = 42 | CES38 = 85 | CES63 = 81 | CES88 = 85 |
| CES14 = 74 | CES39 = 95 | CES64 = 81 | CES89 = 78 |
| CES15 = 71 | CES40 = 90 | CES65 = 76 | CES90 = 84 |
| CES16 = 47 | CES41 = 90 | CES66 = 78 | CES91 = 85 |
| CES17 = 49 | CES42 = 84 | CES67 = 76 | CES92 = 71 |
| CES18 = 56 | CES43 = 81 | CES68 = 80 | CES93 = 84 |
| CES19 = 71 | CES44 = 99 | CES69 = 86 | CES94 = 65 |
| CES20 = 65 | CES45 = 87 | CES70 = 73 | CES95 = 77 |
| CES21 = 86 | CES46 = 85 | CES71 = 70 | CES96 = 83 |
| CES22 = 78 | CES47 = 84 | CES72 = 90 | CES97 = 87 |
| CES23 = 91 | CES48 = 79 | CES73 = 65 | CES98 = 81 |
| CES24 = 90 | CES49 = 84 | CES74 = 98 | CES99 = 75 |
| CES25 = 71 | CES50 = 91 | CES75 = 68 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)