

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

Cooper Lighting Solutions Photometric Lab
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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: P1457410

Luminaire Tested: GLAN-SB9D-930-U-T4LG

Issue Date: 05/20/2026

Test Information

Test Method: LM-79-2024
Report Number: P1457410
Test Lab: INNOVATION CENTER(G1)
Issue Date: 5/22/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: STREETWORKS
Catalog Number: GLAN-SB9D-930-U-T4LG
Description: GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 900mA 9xLight Square
PACKAGE 90CRI 3000K FIXTURE w/ TYPE IV LOW GLARE
Light Source: (234) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

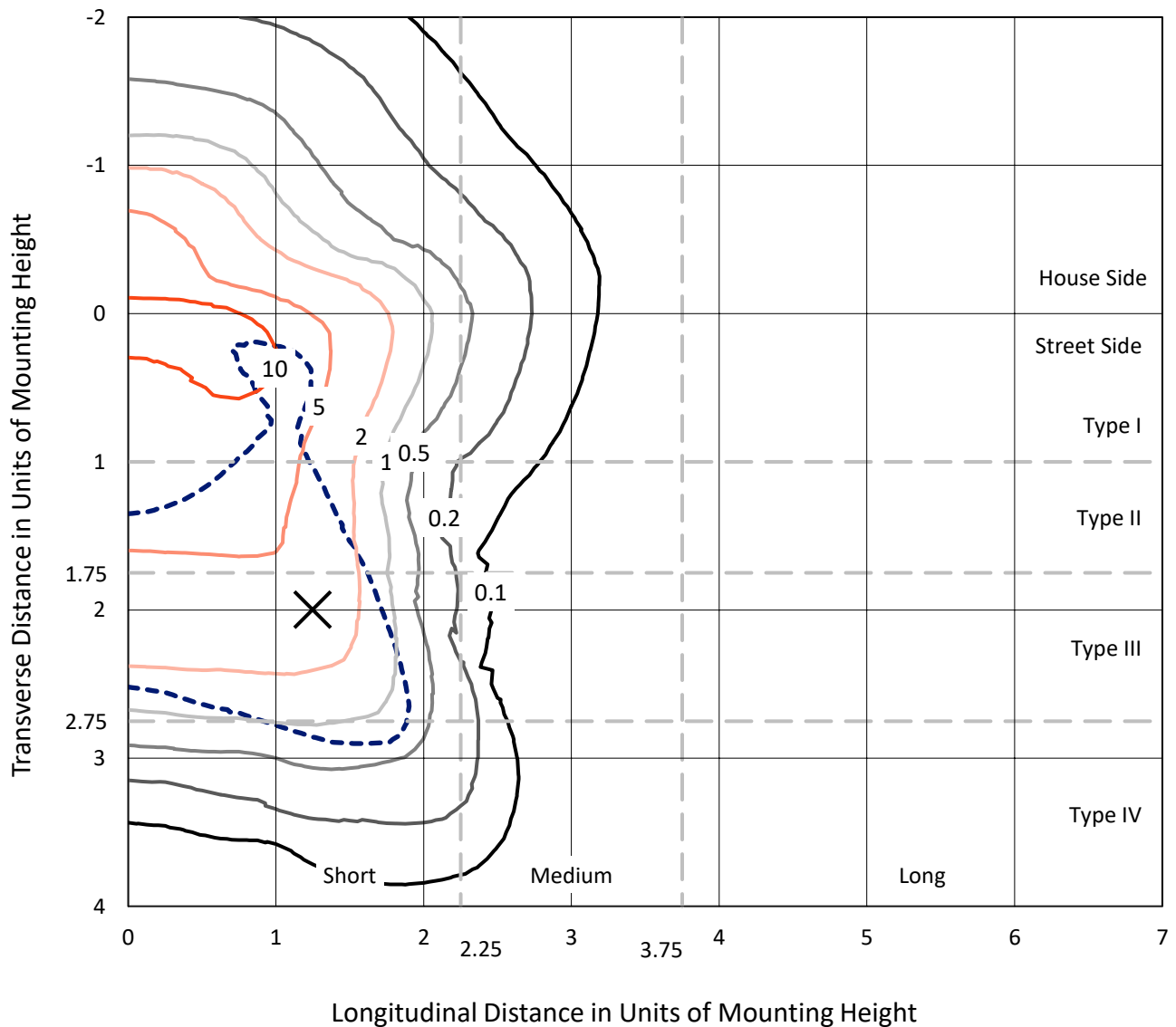
Lumens per Lamp: N/A
Luminaire Lumens: 63147.2 lumens
Efficiency: N/A
Efficacy: 96.0 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B4 - U0 - G5

Input Watts (W): 658
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-SB9D-930-U-T4LG

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

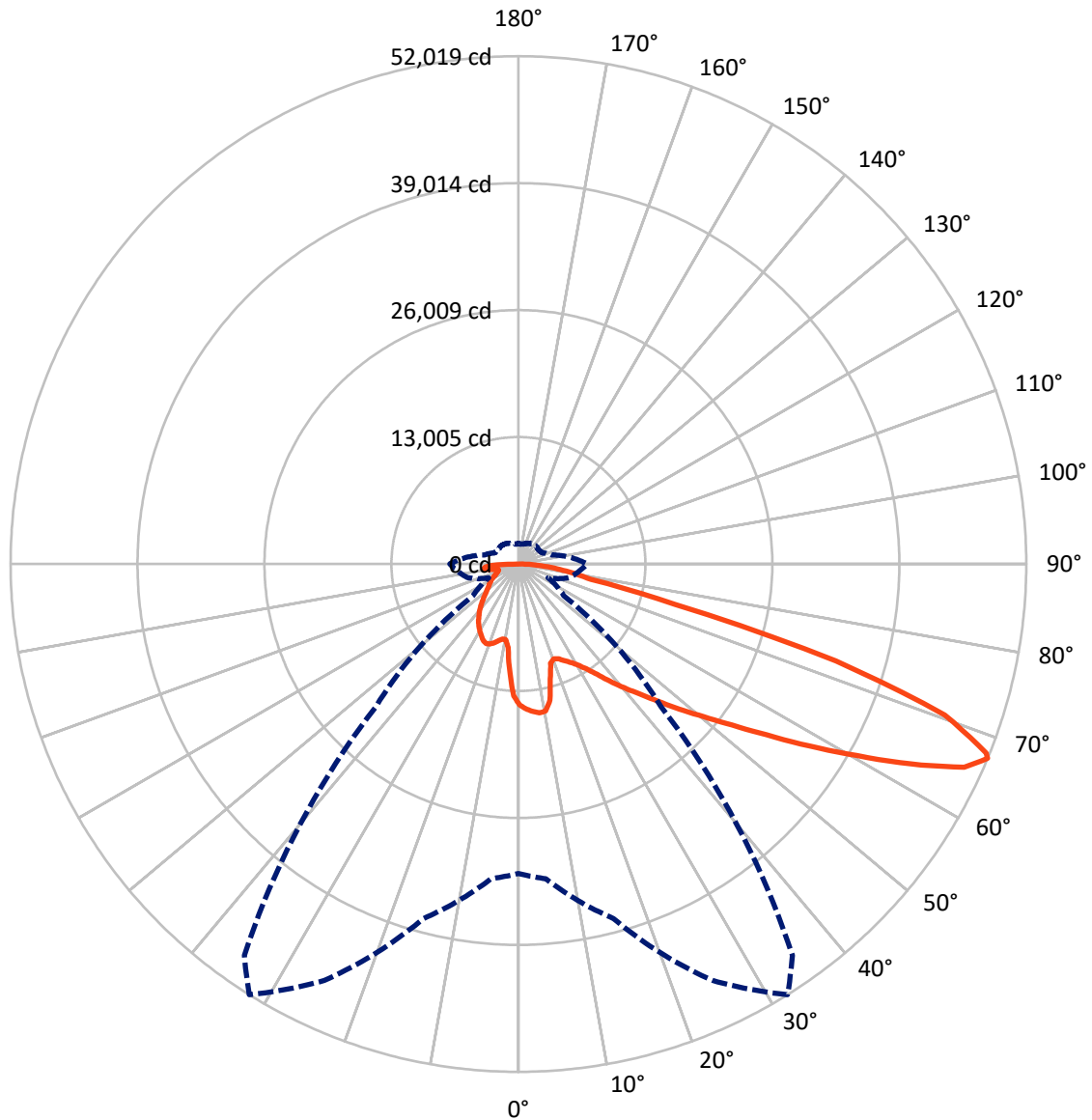


Based on 30 foot mounting height. Maximum calculated value = 17.3 fc
 Type IV - Short - N/A

REPORT NUMBER: P1457410

CATALOG NUMBER: GLAN-SB9D-930-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-SB9D-930-U-T4LG

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 14949.9 | 0.0 | 14949.9 |
| | % Fixture | 23.7 | 0.0 | 23.7 |
| Street Side | Lumens | 48197.3 | 0.0 | 48197.3 |
| | % Fixture | 76.3 | 0.0 | 76.3 |
| Total | Lumens | 63147.2 | 0.0 | 63147.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 1260.6 | 2.0 |
| 10°-20° | 3347.1 | 5.3 |
| 20°-30° | 5466.0 | 8.7 |
| 30°-40° | 8056.4 | 12.8 |
| 40°-50° | 11110.1 | 17.6 |
| 50°-60° | 14035.5 | 22.2 |
| 60°-70° | 13583.8 | 21.5 |
| 70°-80° | 4848.0 | 7.7 |
| 80°-90° | 1439.6 | 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° | 63147.2 | 100.0 |
| 0°-180° | 63147.2 | 100.0 |



REPORT NUMBER: P1457410

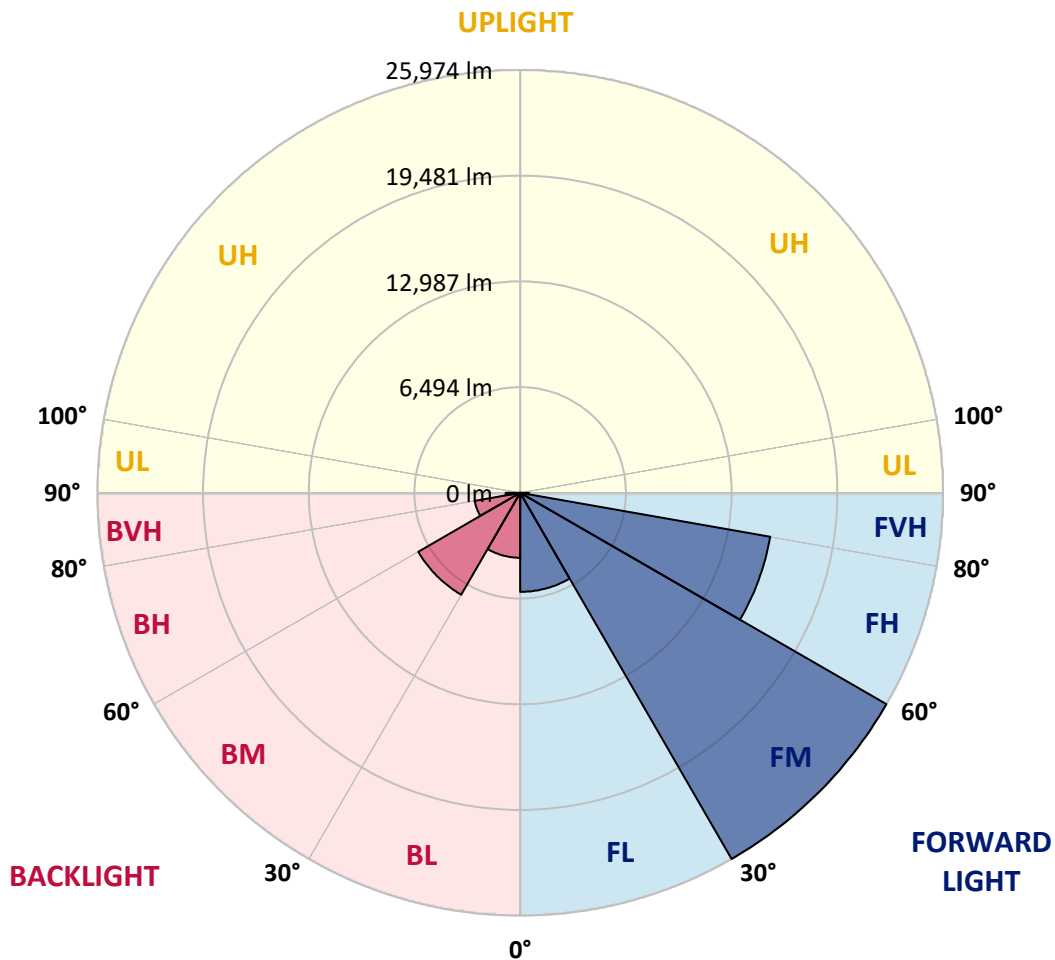
CATALOG NUMBER: GLAN-SB9D-930-U-T4LG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 6084.4 | 9.6 | | | |
| FM | (30°-60°) | 25974.4 | 41.1 | | | |
| FH | (60°-80°) | 15596.0 | 24.7 | | | G5 |
| FVH | (80°-90°) | 542.5 | 0.9 | | | G4/750 |
| BL | (0°-30°) | 3989.4 | 6.3 | B4/5000 | | |
| BM | (30°-60°) | 7227.6 | 11.4 | B4/8500 | | |
| BH | (60°-80°) | 2835.8 | 4.5 | B4/5000 | | G4/5000 |
| BVH | (80°-90°) | 897.2 | 1.4 | | | G5 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B4-U0-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 32° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 14427.9 | 14427.9 | 14427.9 | 14427.9 | 14427.9 | 14427.9 | 14427.9 | 14427.9 | 14427.9 | 14427.9 | 14427.9 |
| 2.5° | 14974.7 | 14932.6 | 14890.6 | 14918.6 | 14862.5 | 14848.5 | 14778.4 | 14750.4 | 14666.2 | 14652.2 | 14498.0 |
| 5° | 15283.2 | 15199.0 | 15185.0 | 15213.1 | 15157.0 | 15157.0 | 15100.9 | 15058.8 | 14932.6 | 14862.5 | 14638.2 |
| 7.5° | 15283.2 | 15269.1 | 15297.2 | 15395.3 | 15409.4 | 15409.4 | 15409.4 | 15423.4 | 15297.2 | 15199.0 | 14848.5 |
| 10° | 14413.8 | 14273.6 | 14582.1 | 15072.8 | 15311.2 | 15451.4 | 15703.8 | 15858.0 | 15759.9 | 15689.8 | 15213.1 |
| 12.5° | 11819.9 | 11833.9 | 12324.7 | 13376.3 | 14329.7 | 14736.3 | 15787.9 | 16348.8 | 16390.8 | 16278.7 | 15675.8 |
| 15° | 10025.2 | 10095.3 | 10347.7 | 11104.8 | 12198.5 | 12801.4 | 15297.2 | 16783.4 | 17120.0 | 17007.8 | 16236.6 |
| 17.5° | 9478.4 | 9520.4 | 9632.6 | 10067.3 | 10684.2 | 11174.9 | 13965.2 | 17063.9 | 18003.3 | 17863.1 | 16867.6 |
| 20° | 9394.2 | 9422.3 | 9562.5 | 9927.0 | 10347.7 | 10628.1 | 12605.1 | 16839.5 | 18830.5 | 18774.5 | 17442.4 |
| 22.5° | 9408.3 | 9436.3 | 9618.6 | 10123.3 | 10558.0 | 10796.4 | 12170.4 | 16320.7 | 19699.9 | 19755.9 | 18031.3 |
| 25° | 9436.3 | 9450.3 | 9730.8 | 10403.8 | 10950.6 | 11245.0 | 12450.9 | 15858.0 | 20429.0 | 20905.7 | 18676.3 |
| 27.5° | 9590.5 | 9632.6 | 10011.2 | 10768.3 | 11413.3 | 11749.8 | 13109.9 | 16012.3 | 21228.2 | 22209.7 | 19447.5 |
| 30° | 10011.2 | 10039.2 | 10501.9 | 11287.1 | 11988.2 | 12338.7 | 13895.1 | 16629.2 | 22209.7 | 23555.7 | 20204.6 |
| 32.5° | 10670.2 | 10698.2 | 11231.0 | 12044.3 | 12801.4 | 13222.0 | 14918.6 | 17807.0 | 23303.3 | 24971.9 | 20961.8 |
| 35° | 11581.6 | 11595.6 | 12198.5 | 13067.8 | 13867.0 | 14343.7 | 16110.4 | 19139.0 | 24439.0 | 26177.7 | 21522.6 |
| 37.5° | 12661.2 | 12759.3 | 13376.3 | 14287.7 | 15227.1 | 15661.7 | 17512.5 | 20695.4 | 25448.6 | 27201.2 | 21845.1 |
| 40° | 14147.4 | 14175.5 | 14778.4 | 15661.7 | 16657.3 | 17077.9 | 18914.7 | 22167.6 | 26556.3 | 27804.1 | 22139.6 |
| 42.5° | 15675.8 | 15914.1 | 16418.9 | 17400.4 | 18143.5 | 18480.0 | 20513.1 | 23513.6 | 27439.6 | 27832.2 | 22013.4 |
| 45° | 17722.9 | 17905.1 | 18409.9 | 19279.2 | 20022.4 | 20414.9 | 22237.7 | 24747.5 | 27888.3 | 27593.8 | 21732.9 |
| 47.5° | 20064.4 | 20176.6 | 20583.2 | 21368.4 | 22195.6 | 22476.1 | 24032.4 | 25448.6 | 28056.5 | 27425.6 | 21606.8 |
| 50° | 22826.6 | 22826.6 | 23121.0 | 23794.1 | 24551.2 | 24943.8 | 25686.9 | 25869.2 | 28547.3 | 27131.1 | 21929.2 |
| 52.5° | 25154.1 | 25266.3 | 25658.9 | 26612.3 | 27369.5 | 27818.2 | 26976.9 | 26514.2 | 27551.8 | 25490.6 | 22027.4 |
| 55° | 27383.5 | 27509.7 | 28393.0 | 29584.8 | 30874.8 | 31365.5 | 28589.3 | 26191.7 | 24200.7 | 23093.0 | 21354.4 |
| 57.5° | 29514.7 | 29781.1 | 30888.8 | 33216.4 | 35165.3 | 35123.2 | 30636.4 | 23303.3 | 19755.9 | 20443.0 | 19882.1 |
| 60° | 32487.2 | 32767.7 | 34534.4 | 37464.8 | 39848.4 | 38852.9 | 30664.5 | 19391.4 | 15395.3 | 16320.7 | 17120.0 |
| 62.5° | 34969.0 | 35445.7 | 38039.7 | 42919.1 | 45106.4 | 43550.0 | 28126.6 | 14848.5 | 10221.5 | 11385.3 | 13236.1 |
| 65° | 34744.7 | 35375.6 | 39399.7 | 46929.1 | 50196.1 | 48751.9 | 24411.0 | 9394.2 | 5272.0 | 7781.8 | 9268.0 |
| 67° | 31688.0 | 32375.1 | 37591.0 | 47069.4 | 52018.9 | 48934.2 | 20611.2 | 5678.6 | 3351.1 | 5398.2 | 6435.8 |
| 67.5° | 29935.4 | 30944.9 | 36693.6 | 46802.9 | 51682.3 | 48163.0 | 18900.7 | 4753.2 | 3154.8 | 5019.6 | 5860.9 |
| 70° | 18409.9 | 20036.4 | 27537.7 | 41376.7 | 46326.2 | 40311.1 | 10501.9 | 2692.1 | 2565.9 | 3365.1 | 4052.1 |
| 72.5° | 5538.4 | 6029.1 | 10628.1 | 26542.2 | 34001.5 | 29879.3 | 4725.2 | 2075.1 | 2299.5 | 2706.1 | 3126.7 |
| 75° | 2692.1 | 2874.4 | 4388.7 | 10852.5 | 16559.1 | 16475.0 | 2636.0 | 1780.7 | 2131.2 | 2271.4 | 2467.7 |
| 77.5° | 1724.6 | 1836.8 | 2734.1 | 6071.2 | 7585.5 | 6758.2 | 1906.9 | 1556.4 | 1892.9 | 1864.8 | 1836.8 |
| 80° | 1079.6 | 1135.7 | 1752.7 | 3519.3 | 5594.5 | 4669.1 | 1402.1 | 1275.9 | 1626.5 | 1444.2 | 1304.0 |
| 82.5° | 701.1 | 771.2 | 1121.7 | 2145.3 | 3996.1 | 3477.3 | 925.4 | 911.4 | 1346.0 | 1149.7 | 1009.5 |
| 85° | 462.7 | 518.8 | 715.1 | 1261.9 | 2369.6 | 2481.8 | 602.9 | 631.0 | 1037.6 | 869.3 | 771.2 |
| 87.5° | 168.3 | 210.3 | 364.6 | 560.9 | 1107.7 | 1374.1 | 252.4 | 238.4 | 504.8 | 406.6 | 322.5 |
| 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: P1457410

CATALOG NUMBER: GLAN-SB9D-930-U-T4LG

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 14427.9 | 14427.9 | 14427.9 | 14427.9 | 14427.9 | 14427.9 | 14427.9 | 14427.9 | 14427.9 | 14427.9 | 14427.9 |
| 2.5° | 14469.9 | 14427.9 | 14231.6 | 14063.3 | 13937.1 | 13768.9 | 13586.6 | 13376.3 | 13236.1 | 13264.1 | 13222.0 |
| 5° | 14540.0 | 14427.9 | 14049.3 | 13474.4 | 12913.6 | 12212.5 | 11315.2 | 10782.3 | 10375.7 | 10165.4 | 10221.5 |
| 7.5° | 14694.3 | 14498.0 | 13698.8 | 12535.0 | 11076.8 | 9646.6 | 8763.3 | 8258.5 | 8020.2 | 7922.0 | 7908.0 |
| 10° | 14960.7 | 14624.2 | 13250.1 | 11076.8 | 9169.9 | 8202.4 | 7879.9 | 7739.7 | 7711.7 | 7711.7 | 7697.7 |
| 12.5° | 15283.2 | 14750.4 | 12492.9 | 9660.6 | 8258.5 | 7908.0 | 7851.9 | 7865.9 | 7908.0 | 7950.1 | 7879.9 |
| 15° | 15675.8 | 14806.4 | 11553.5 | 8805.3 | 8076.2 | 7992.1 | 8076.2 | 8174.4 | 8244.5 | 8300.6 | 8230.5 |
| 17.5° | 16068.4 | 14750.4 | 10670.2 | 8398.7 | 8104.3 | 8216.5 | 8384.7 | 8538.9 | 8581.0 | 8665.1 | 8609.1 |
| 20° | 16348.8 | 14554.1 | 9913.0 | 8244.5 | 8174.4 | 8426.8 | 8637.1 | 8805.3 | 8889.5 | 8945.6 | 8889.5 |
| 22.5° | 16559.1 | 14301.7 | 9366.2 | 8090.3 | 8174.4 | 8482.9 | 8735.2 | 8931.5 | 9029.7 | 9085.8 | 9015.7 |
| 25° | 16741.4 | 13951.1 | 8945.6 | 7865.9 | 8006.1 | 8300.6 | 8581.0 | 8777.3 | 8917.5 | 9001.6 | 8959.6 |
| 27.5° | 16965.7 | 13670.7 | 8553.0 | 7529.4 | 7655.6 | 7936.0 | 8230.5 | 8468.8 | 8735.2 | 8875.5 | 8847.4 |
| 30° | 17218.1 | 13530.5 | 8174.4 | 7164.9 | 7249.0 | 7529.4 | 7879.9 | 8202.4 | 8567.0 | 8749.3 | 8749.3 |
| 32.5° | 17512.5 | 13432.4 | 7823.9 | 6814.3 | 6884.4 | 7192.9 | 7529.4 | 7823.9 | 8216.5 | 8510.9 | 8496.9 |
| 35° | 17638.7 | 13320.2 | 7543.4 | 6491.8 | 6632.1 | 6884.4 | 7150.8 | 7347.1 | 7753.8 | 8104.3 | 8132.3 |
| 37.5° | 17764.9 | 13278.1 | 7403.2 | 6239.5 | 6351.6 | 6547.9 | 6688.1 | 6786.3 | 7164.9 | 7529.4 | 7543.4 |
| 40° | 17919.2 | 13474.4 | 7501.4 | 6071.2 | 5973.1 | 6169.4 | 6239.5 | 6295.5 | 6491.8 | 6730.2 | 6730.2 |
| 42.5° | 17821.0 | 13614.6 | 7725.7 | 5917.0 | 5510.4 | 5734.7 | 5762.7 | 5748.7 | 5762.7 | 5776.8 | 5762.7 |
| 45° | 17568.6 | 13474.4 | 7725.7 | 5678.6 | 5019.6 | 5258.0 | 5243.9 | 5173.8 | 5061.7 | 4767.2 | 4725.2 |
| 47.5° | 17512.5 | 13390.3 | 7431.3 | 5286.0 | 4528.9 | 4725.2 | 4753.2 | 4613.0 | 4290.5 | 3982.0 | 3883.9 |
| 50° | 17750.9 | 13544.5 | 6968.6 | 4809.3 | 4108.2 | 4276.5 | 4346.6 | 4108.2 | 3743.7 | 3421.2 | 3365.1 |
| 52.5° | 18101.4 | 13740.8 | 6295.5 | 4290.5 | 3757.7 | 3926.0 | 4010.1 | 3743.7 | 3365.1 | 3112.7 | 3084.7 |
| 55° | 18059.4 | 13740.8 | 5538.4 | 3813.8 | 3491.3 | 3617.5 | 3757.7 | 3477.3 | 3182.8 | 3042.6 | 3028.6 |
| 57.5° | 17148.0 | 13222.0 | 4977.5 | 3477.3 | 3238.9 | 3351.1 | 3533.4 | 3267.0 | 2986.5 | 3014.6 | 3056.6 |
| 60° | 15367.3 | 11876.0 | 4556.9 | 3252.9 | 3014.6 | 3126.7 | 3323.0 | 3014.6 | 2650.0 | 2551.9 | 2551.9 |
| 62.5° | 12661.2 | 9786.8 | 4220.4 | 3028.6 | 2804.3 | 2944.5 | 3042.6 | 2636.0 | 2397.6 | 2285.5 | 2285.5 |
| 65° | 9492.4 | 7571.5 | 3869.9 | 2846.3 | 2622.0 | 2776.2 | 2664.0 | 2467.7 | 2229.4 | 2145.3 | 2159.3 |
| 67° | 7038.7 | 5874.9 | 3575.4 | 2692.1 | 2509.8 | 2579.9 | 2495.8 | 2355.6 | 2117.2 | 2047.1 | 2117.2 |
| 67.5° | 6323.6 | 5580.5 | 3505.3 | 2650.0 | 2481.8 | 2537.8 | 2453.7 | 2341.5 | 2089.2 | 2019.1 | 2089.2 |
| 70° | 4346.6 | 4290.5 | 3126.7 | 2453.7 | 2327.5 | 2271.4 | 2313.5 | 2173.3 | 1963.0 | 1934.9 | 2005.0 |
| 72.5° | 3309.0 | 3421.2 | 2804.3 | 2285.5 | 2159.3 | 2089.2 | 2187.3 | 2047.1 | 1836.8 | 1878.8 | 1949.0 |
| 75° | 2593.9 | 2762.2 | 2509.8 | 2047.1 | 1963.0 | 1977.0 | 2173.3 | 2117.2 | 1949.0 | 1991.0 | 2005.0 |
| 77.5° | 1920.9 | 2229.4 | 2145.3 | 1780.7 | 1710.6 | 1906.9 | 2453.7 | 2622.0 | 2327.5 | 2257.4 | 2159.3 |
| 80° | 1402.1 | 1598.4 | 1808.7 | 1472.2 | 1430.2 | 1836.8 | 3028.6 | 3351.1 | 2874.4 | 2593.9 | 2523.8 |
| 82.5° | 1037.6 | 1121.7 | 1486.3 | 1177.8 | 1037.6 | 1640.5 | 3365.1 | 3940.0 | 3421.2 | 2888.4 | 2804.3 |
| 85° | 743.1 | 869.3 | 1177.8 | 869.3 | 687.0 | 1346.0 | 3295.0 | 3855.8 | 3393.1 | 2734.1 | 2664.0 |
| 87.5° | 266.4 | 378.6 | 504.8 | 392.6 | 350.5 | 925.4 | 2720.1 | 2776.2 | 2117.2 | 967.5 | 981.5 |
| 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: SP1-2407-184-14

Test Date: 10/11/2024

Luminaire Tested: GSS-SB1A-930-U-5WQ

Data in this report applies to families of products including GSS-SB1A-930-U-5WQ

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-184-14
 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-930-U-5WQ**
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 90 CRI 3000K CCT 26 LEDS

Spectral Parameters

CCT (K): 2993
 CIE u': 0.2501
 CIE v': 0.5245
 Duv: 0.0021
 CIE x: 0.4406
 CIE y: 0.4107
 CIE z: 0.1487
 Peak Wavelength (nm): 621
 Dominant Wavelength (nm): 582
 Purity: 55.53327
 Rf: 92.6
 Rg: 98.5

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 92.4 | | |
| R1: | 92.2 | R9: | 58.2 |
| R2: | 95.2 | R10: | 87.7 |
| R3: | 97.0 | R11: | 93.5 |
| R4: | 93.1 | R12: | 81.7 |
| R5: | 91.7 | R13: | 92.9 |
| R6: | 94.2 | R14: | 97.6 |
| R7: | 93.3 | R15: | 88.1 |
| R8: | 82.3 | | |



Test Conditions

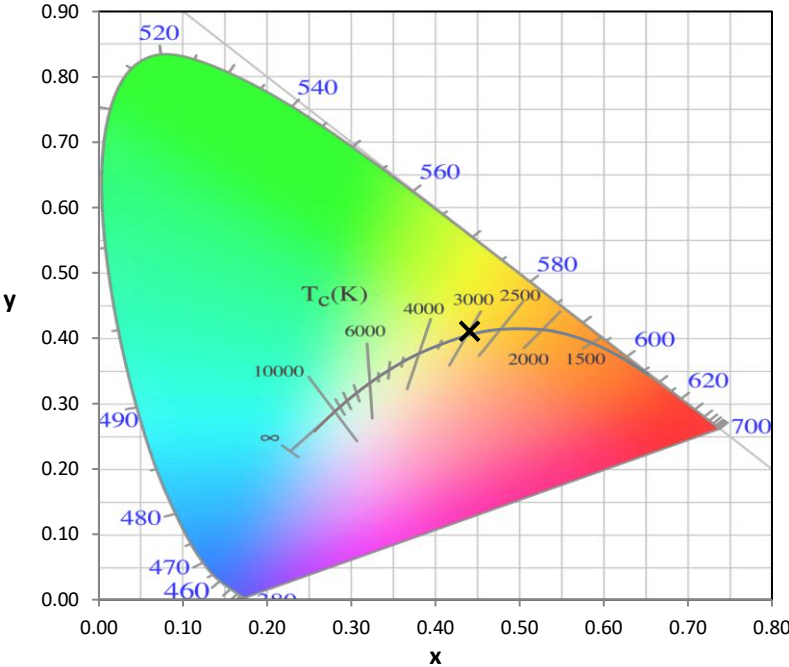
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-14

| 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 = 2993K
 CIE x = 0.4406
 CIE y = 0.4107
 Duv = 0.0021

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-14

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 | 310 | NR | 620 | 998 | NR | 750 | 77 | NR | 880 | 2 | NR |
| 365 | 0 | NR | 495 | 347 | NR | 625 | 993 | NR | 755 | 66 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 379 | NR | 630 | 983 | NR | 760 | 56 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 412 | NR | 635 | 960 | NR | 765 | 48 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 442 | NR | 640 | 930 | NR | 770 | 41 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 475 | NR | 645 | 889 | NR | 775 | 35 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 506 | NR | 650 | 846 | NR | 780 | 30 | NR | 910 | 1 | NR |
| 395 | 0 | NR | 525 | 535 | NR | 655 | 794 | NR | 785 | 26 | NR | 915 | 1 | NR |
| 400 | 1 | NR | 530 | 565 | NR | 660 | 740 | NR | 790 | 22 | NR | 920 | 1 | NR |
| 405 | 2 | NR | 535 | 592 | NR | 665 | 684 | NR | 795 | 19 | NR | 925 | 1 | NR |
| 410 | 6 | NR | 540 | 615 | NR | 670 | 624 | NR | 800 | 16 | NR | 930 | 0 | NR |
| 415 | 10 | NR | 545 | 638 | NR | 675 | 567 | NR | 805 | 14 | NR | 935 | 0 | NR |
| 420 | 20 | NR | 550 | 658 | NR | 680 | 513 | NR | 810 | 12 | NR | 940 | 0 | NR |
| 425 | 38 | NR | 555 | 678 | NR | 685 | 459 | NR | 815 | 10 | NR | 945 | 0 | NR |
| 430 | 70 | NR | 560 | 695 | NR | 690 | 412 | NR | 820 | 9 | NR | 950 | 0 | NR |
| 435 | 136 | NR | 565 | 716 | NR | 695 | 363 | NR | 825 | 8 | NR | 955 | 0 | NR |
| 440 | 262 | NR | 570 | 740 | NR | 700 | 320 | NR | 830 | 7 | NR | 960 | 0 | NR |
| 445 | 424 | NR | 575 | 765 | NR | 705 | 281 | NR | 835 | 6 | NR | 965 | 0 | NR |
| 450 | 406 | NR | 580 | 796 | NR | 710 | 245 | NR | 840 | 5 | NR | 970 | 0 | NR |
| 455 | 313 | NR | 585 | 827 | NR | 715 | 215 | NR | 845 | 4 | NR | 975 | 0 | NR |
| 460 | 294 | NR | 590 | 861 | NR | 720 | 188 | NR | 850 | 4 | NR | 980 | 0 | NR |
| 465 | 250 | NR | 595 | 894 | NR | 725 | 162 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 217 | NR | 600 | 927 | NR | 730 | 140 | NR | 860 | 3 | NR | 990 | 0 | NR |
| 475 | 228 | NR | 605 | 954 | NR | 735 | 121 | NR | 865 | 2 | NR | 995 | 0 | NR |
| 480 | 249 | NR | 610 | 976 | NR | 740 | 104 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 276 | NR | 615 | 992 | NR | 745 | 89 | NR | 875 | 2 | NR | | | |

REPORT NUMBER: SP1-2407-184-14

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.39

| 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 | 310 | NR | 620 | 998 | NR | 750 | 77 | NR | 880 | 2 | NR |
| 365 | 0 | NR | 495 | 347 | NR | 625 | 993 | NR | 755 | 66 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 379 | NR | 630 | 983 | NR | 760 | 56 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 412 | NR | 635 | 960 | NR | 765 | 48 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 442 | NR | 640 | 930 | NR | 770 | 41 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 475 | NR | 645 | 889 | NR | 775 | 35 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 506 | NR | 650 | 846 | NR | 780 | 30 | NR | 910 | 1 | NR |
| 395 | 0 | NR | 525 | 535 | NR | 655 | 794 | NR | 785 | 26 | NR | 915 | 1 | NR |
| 400 | 1 | NR | 530 | 565 | NR | 660 | 740 | NR | 790 | 22 | NR | 920 | 1 | NR |
| 405 | 2 | NR | 535 | 592 | NR | 665 | 684 | NR | 795 | 19 | NR | 925 | 1 | NR |
| 410 | 6 | NR | 540 | 615 | NR | 670 | 624 | NR | 800 | 16 | NR | 930 | 0 | NR |
| 415 | 10 | NR | 545 | 638 | NR | 675 | 567 | NR | 805 | 14 | NR | 935 | 0 | NR |
| 420 | 20 | NR | 550 | 658 | NR | 680 | 513 | NR | 810 | 12 | NR | 940 | 0 | NR |
| 425 | 38 | NR | 555 | 678 | NR | 685 | 459 | NR | 815 | 10 | NR | 945 | 0 | NR |
| 430 | 70 | NR | 560 | 695 | NR | 690 | 412 | NR | 820 | 9 | NR | 950 | 0 | NR |
| 435 | 136 | NR | 565 | 716 | NR | 695 | 363 | NR | 825 | 8 | NR | 955 | 0 | NR |
| 440 | 262 | NR | 570 | 740 | NR | 700 | 320 | NR | 830 | 7 | NR | 960 | 0 | NR |
| 445 | 424 | NR | 575 | 765 | NR | 705 | 281 | NR | 835 | 6 | NR | 965 | 0 | NR |
| 450 | 406 | NR | 580 | 796 | NR | 710 | 245 | NR | 840 | 5 | NR | 970 | 0 | NR |
| 455 | 313 | NR | 585 | 827 | NR | 715 | 215 | NR | 845 | 4 | NR | 975 | 0 | NR |
| 460 | 294 | NR | 590 | 861 | NR | 720 | 188 | NR | 850 | 4 | NR | 980 | 0 | NR |
| 465 | 250 | NR | 595 | 894 | NR | 725 | 162 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 217 | NR | 600 | 927 | NR | 730 | 140 | NR | 860 | 3 | NR | 990 | 0 | NR |
| 475 | 228 | NR | 605 | 954 | NR | 735 | 121 | NR | 865 | 2 | NR | 995 | 0 | NR |
| 480 | 249 | NR | 610 | 976 | NR | 740 | 104 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 276 | NR | 615 | 992 | NR | 745 | 89 | NR | 875 | 2 | NR | | | |

REPORT NUMBER: SP1-2407-184-14

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.69

| 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 | 310 | NR | 620 | 998 | NR | 750 | 77 | NR | 880 | 2 | NR |
| 365 | 0 | NR | 495 | 347 | NR | 625 | 993 | NR | 755 | 66 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 379 | NR | 630 | 983 | NR | 760 | 56 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 412 | NR | 635 | 960 | NR | 765 | 48 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 442 | NR | 640 | 930 | NR | 770 | 41 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 475 | NR | 645 | 889 | NR | 775 | 35 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 506 | NR | 650 | 846 | NR | 780 | 30 | NR | 910 | 1 | NR |
| 395 | 0 | NR | 525 | 535 | NR | 655 | 794 | NR | 785 | 26 | NR | 915 | 1 | NR |
| 400 | 1 | NR | 530 | 565 | NR | 660 | 740 | NR | 790 | 22 | NR | 920 | 1 | NR |
| 405 | 2 | NR | 535 | 592 | NR | 665 | 684 | NR | 795 | 19 | NR | 925 | 1 | NR |
| 410 | 6 | NR | 540 | 615 | NR | 670 | 624 | NR | 800 | 16 | NR | 930 | 0 | NR |
| 415 | 10 | NR | 545 | 638 | NR | 675 | 567 | NR | 805 | 14 | NR | 935 | 0 | NR |
| 420 | 20 | NR | 550 | 658 | NR | 680 | 513 | NR | 810 | 12 | NR | 940 | 0 | NR |
| 425 | 38 | NR | 555 | 678 | NR | 685 | 459 | NR | 815 | 10 | NR | 945 | 0 | NR |
| 430 | 70 | NR | 560 | 695 | NR | 690 | 412 | NR | 820 | 9 | NR | 950 | 0 | NR |
| 435 | 136 | NR | 565 | 716 | NR | 695 | 363 | NR | 825 | 8 | NR | 955 | 0 | NR |
| 440 | 262 | NR | 570 | 740 | NR | 700 | 320 | NR | 830 | 7 | NR | 960 | 0 | NR |
| 445 | 424 | NR | 575 | 765 | NR | 705 | 281 | NR | 835 | 6 | NR | 965 | 0 | NR |
| 450 | 406 | NR | 580 | 796 | NR | 710 | 245 | NR | 840 | 5 | NR | 970 | 0 | NR |
| 455 | 313 | NR | 585 | 827 | NR | 715 | 215 | NR | 845 | 4 | NR | 975 | 0 | NR |
| 460 | 294 | NR | 590 | 861 | NR | 720 | 188 | NR | 850 | 4 | NR | 980 | 0 | NR |
| 465 | 250 | NR | 595 | 894 | NR | 725 | 162 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 217 | NR | 600 | 927 | NR | 730 | 140 | NR | 860 | 3 | NR | 990 | 0 | NR |
| 475 | 228 | NR | 605 | 954 | NR | 735 | 121 | NR | 865 | 2 | NR | 995 | 0 | NR |
| 480 | 249 | NR | 610 | 976 | NR | 740 | 104 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 276 | NR | 615 | 992 | NR | 745 | 89 | NR | 875 | 2 | NR | | | |

Summary

$R_f = 92.6$
 $R_g = 98.5$
 $CIE R_a = 92.4$
 $R_9 = 58.2$

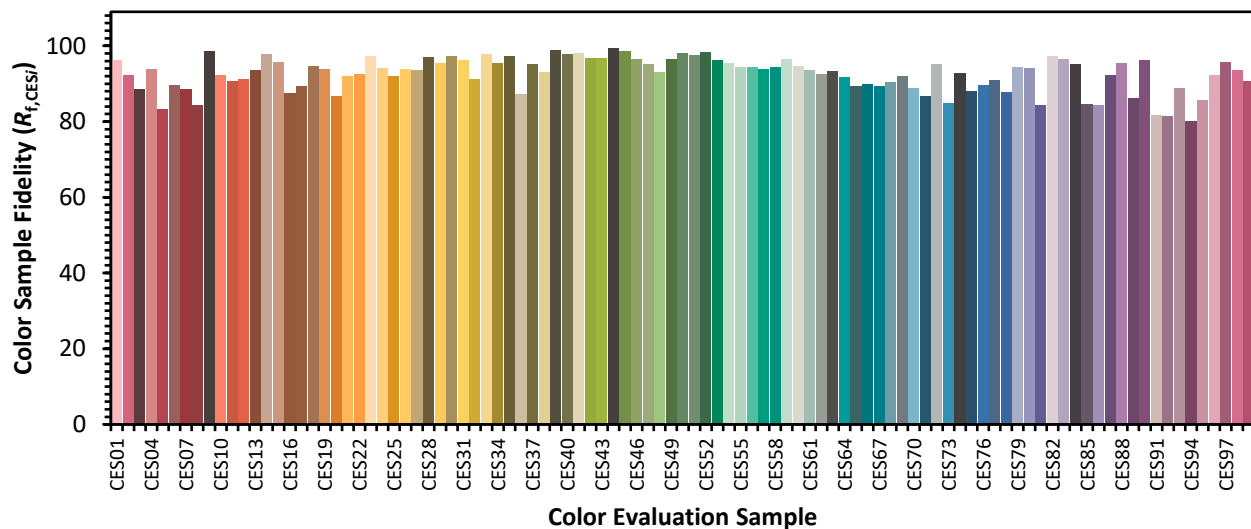


Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 94 | CES51 = 98 | CES76 = 90 |
| CES02 = 63 | CES27 = 94 | CES52 = 98 | CES77 = 91 |
| CES03 = 32 | CES28 = 97 | CES53 = 96 | CES78 = 88 |
| CES04 = 70 | CES29 = 95 | CES54 = 95 | CES79 = 94 |
| CES05 = 51 | CES30 = 97 | CES55 = 94 | CES80 = 94 |
| CES06 = 51 | CES31 = 96 | CES56 = 94 | CES81 = 84 |
| CES07 = 43 | CES32 = 91 | CES57 = 94 | CES82 = 97 |
| CES08 = 42 | CES33 = 98 | CES58 = 94 | CES83 = 97 |
| CES09 = 29 | CES34 = 96 | CES59 = 97 | CES84 = 95 |
| CES10 = 76 | CES35 = 97 | CES60 = 95 | CES85 = 85 |
| CES11 = 59 | CES36 = 87 | CES61 = 94 | CES86 = 84 |
| CES12 = 65 | CES37 = 95 | CES62 = 92 | CES87 = 92 |
| CES13 = 44 | CES38 = 93 | CES63 = 93 | CES88 = 95 |
| CES14 = 74 | CES39 = 99 | CES64 = 92 | CES89 = 86 |
| CES15 = 72 | CES40 = 98 | CES65 = 89 | CES90 = 96 |
| CES16 = 48 | CES41 = 98 | CES66 = 90 | CES91 = 82 |
| CES17 = 50 | CES42 = 97 | CES67 = 89 | CES92 = 81 |
| CES18 = 57 | CES43 = 97 | CES68 = 90 | CES93 = 89 |
| CES19 = 72 | CES44 = 99 | CES69 = 92 | CES94 = 80 |
| CES20 = 67 | CES45 = 99 | CES70 = 89 | CES95 = 86 |
| CES21 = 86 | CES46 = 96 | CES71 = 87 | CES96 = 92 |
| CES22 = 79 | CES47 = 95 | CES72 = 95 | CES97 = 96 |
| CES23 = 92 | CES48 = 93 | CES73 = 85 | CES98 = 94 |
| CES24 = 91 | CES49 = 97 | CES74 = 93 | CES99 = 91 |
| CES25 = 72 | CES50 = 98 | CES75 = 88 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)