

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

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

Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: STREETWORKS

Report Number: P1459172

Luminaire Tested: GLAN-SB9B-935-U-T4LG-HSS

Issue Date: 05/20/2026

Test Information

Test Method: LM-79-2024
Report Number: P1459172
Test Lab: INNOVATION CENTER(G1)
Issue Date: 5/22/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: STREETWORKS
Catalog Number: GLAN-SB9B-935-U-T4LG-HSS
Description: GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 450mA 9xLight Square PACKAGE 90CRI 3500K FIXTURE w/ TYPE IV LOW GLARE WITH HOUSE SIDE SHIELD
Light Source: (234) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

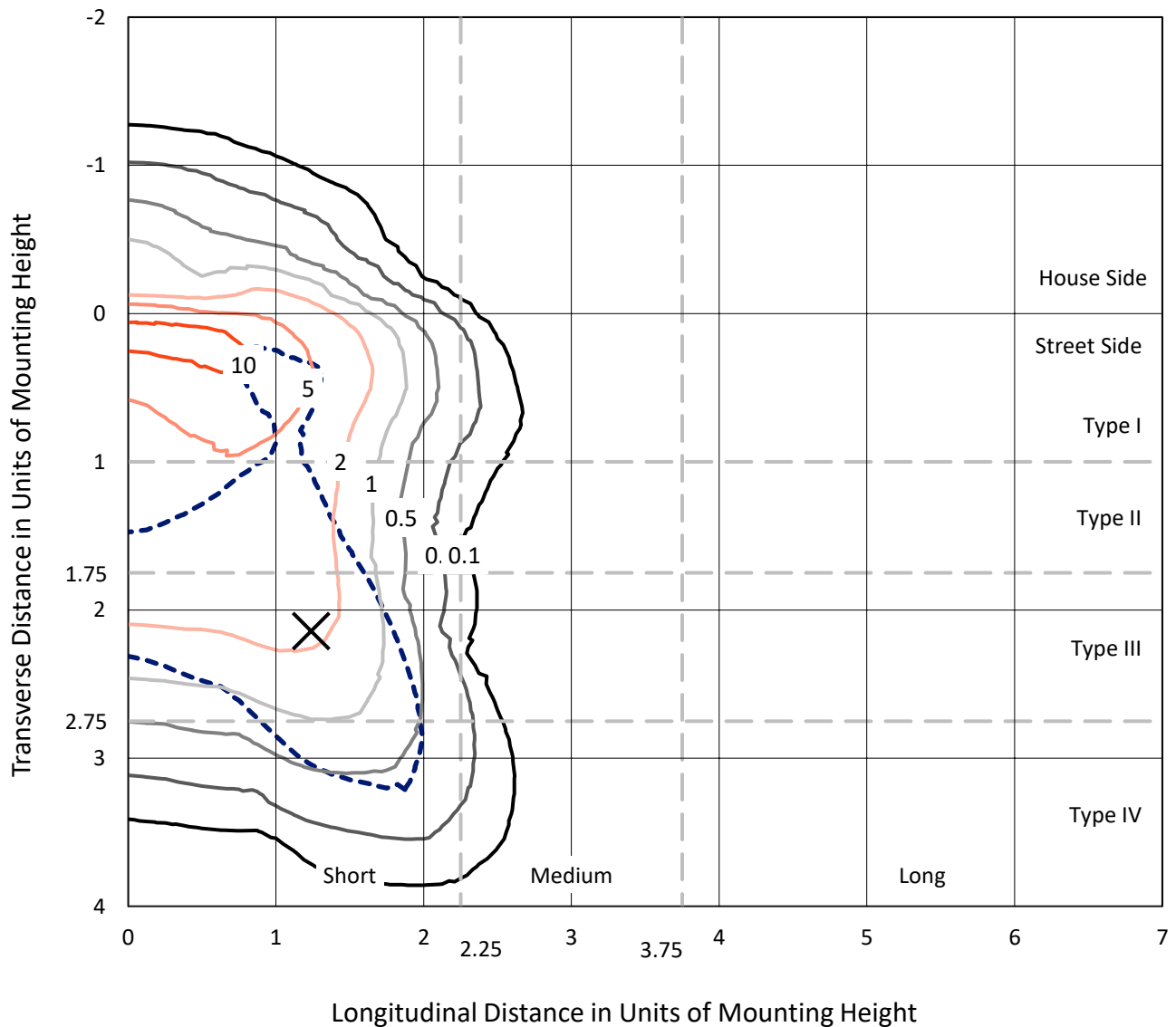
Lumens per Lamp: N/A
Luminaire Lumens: 25890.6 lumens
Efficiency: N/A
Efficacy: 78.6 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

Input Watts (W): 329.5
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

REPORT NUMBER: P1459172
 CATALOG NUMBER: GLAN-SB9B-935-U-T4LG-HSS

Iso-Footcandle Lines of Horizontal Illumination

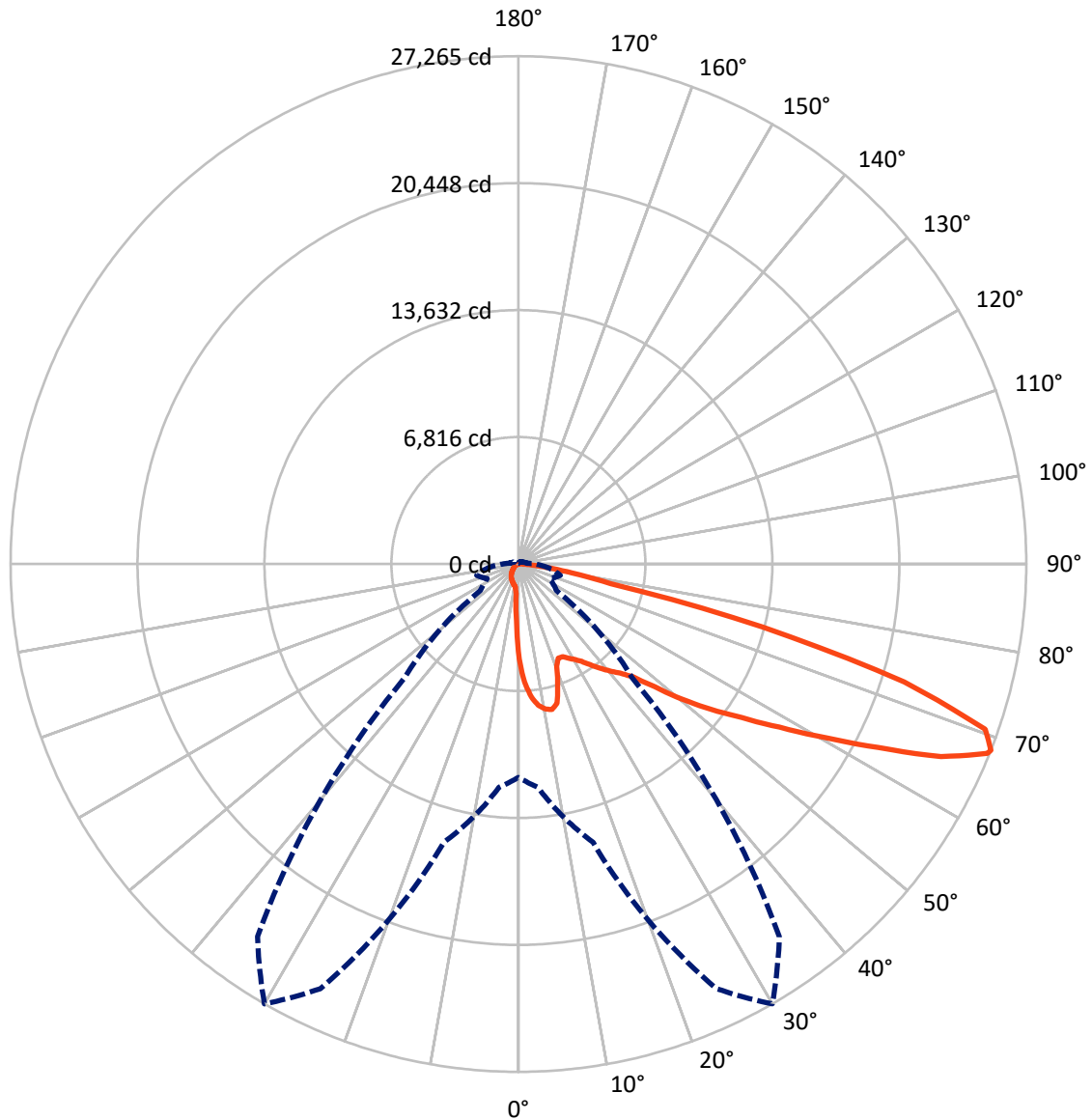
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12.5 fc
 Type IV - Short - N/A

REPORT NUMBER: P1459172
CATALOG NUMBER: GLAN-SB9B-935-U-T4LG-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 30-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

REPORT NUMBER: P1459172

CATALOG NUMBER: GLAN-SB9B-935-U-T4LG-HSS

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1976.1 | 0.0 | 1976.1 |
| | % Fixture | 7.6 | 0.0 | 7.6 |
| Street Side | Lumens | 23914.5 | 0.0 | 23914.5 |
| | % Fixture | 92.4 | 0.0 | 92.4 |
| Total | Lumens | 25890.6 | 0.0 | 25890.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 440.5 | 1.7 |
| 10°-20° | 1257.7 | 4.9 |
| 20°-30° | 1976.4 | 7.6 |
| 30°-40° | 3099.8 | 12.0 |
| 40°-50° | 4633.3 | 17.9 |
| 50°-60° | 6163.8 | 23.8 |
| 60°-70° | 5958.5 | 23.0 |
| 70°-80° | 2141.9 | 8.3 |
| 80°-90° | 218.6 | 0.8 |
| 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° | 25890.6 | 100.0 |
| 0°-180° | 25890.6 | 100.0 |



REPORT NUMBER: P1459172

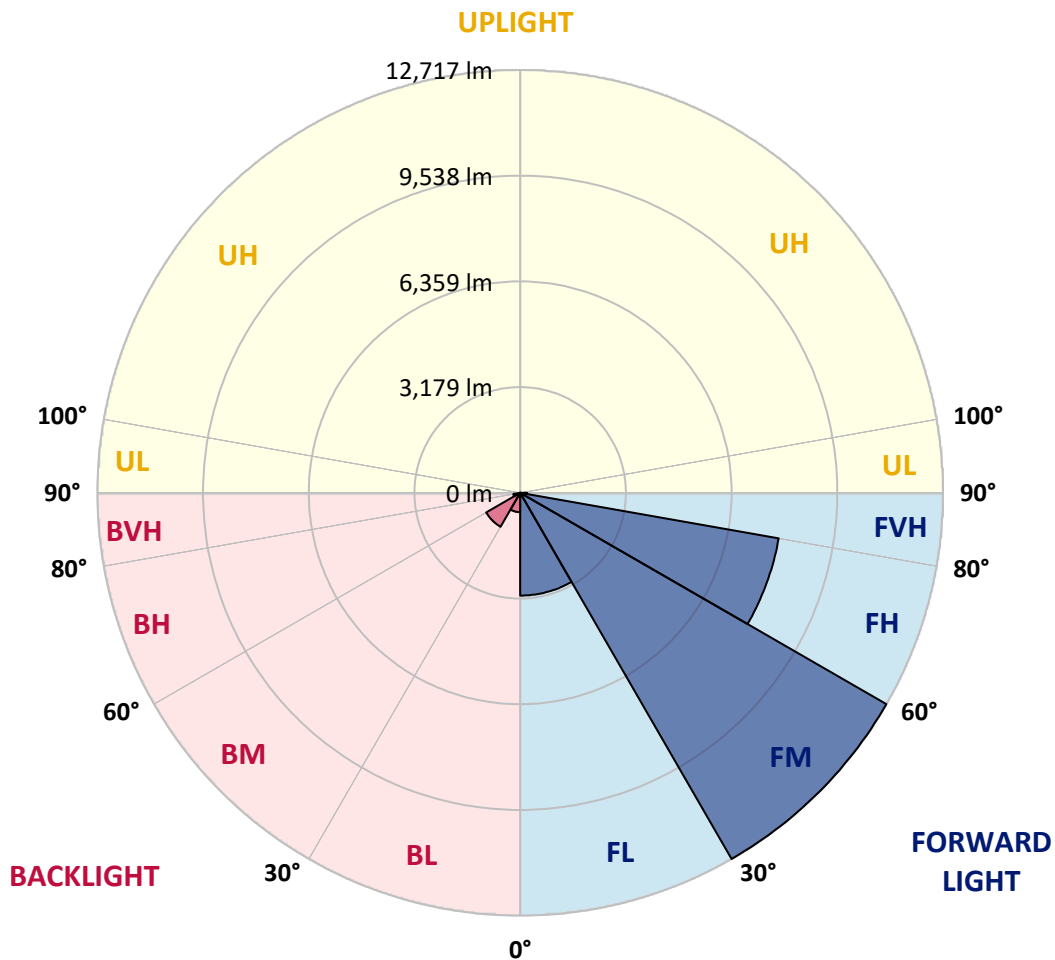
CATALOG NUMBER: GLAN-SB9B-935-U-T4LG-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 3091.3 | 11.9 | | | |
| FM | (30°-60°) | 12717.5 | 49.1 | | | |
| FH | (60°-80°) | 7894.9 | 30.5 | | | G4/12000 |
| FVH | (80°-90°) | 210.8 | 0.8 | | | G2/225 |
| BL | (0°-30°) | 583.3 | 2.3 | B2/1000 | | |
| BM | (30°-60°) | 1179.6 | 4.6 | B2/2500 | | |
| BH | (60°-80°) | 205.5 | 0.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 7.8 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G4

Type IV Short





REPORT NUMBER: P1459172

CATALOG NUMBER: GLAN-SB9B-935-U-T4LG-HSS

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 30° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| 0° | 5105.3 | 5105.3 | 5105.3 | 5105.3 | 5105.3 | 5105.3 | 5105.3 | 5105.3 | 5105.3 | 5105.3 | 5105.3 |
| 2.5° | 6525.2 | 6525.2 | 6478.6 | 6416.6 | 6346.7 | 6323.5 | 6191.6 | 6005.4 | 5811.4 | 5586.4 | 5260.5 |
| 5° | 7363.2 | 7355.4 | 7262.3 | 7262.3 | 7169.2 | 7083.8 | 6951.9 | 6680.4 | 6370.0 | 5966.6 | 5400.2 |
| 7.5° | 7735.6 | 7751.1 | 7712.3 | 7712.3 | 7658.0 | 7595.9 | 7518.3 | 7254.5 | 6889.9 | 6346.7 | 5539.8 |
| 10° | 7867.5 | 7875.2 | 7875.2 | 7929.6 | 7914.0 | 7906.3 | 7898.5 | 7751.1 | 7370.9 | 6734.7 | 5687.2 |
| 12.5° | 7549.4 | 7588.2 | 7696.8 | 7937.3 | 8014.9 | 8100.2 | 8216.6 | 8170.1 | 7906.3 | 7223.5 | 5912.2 |
| 15° | 6525.2 | 6533.0 | 6835.6 | 7433.0 | 7751.1 | 8077.0 | 8527.0 | 8620.1 | 8449.4 | 7751.1 | 6145.0 |
| 17.5° | 5384.6 | 5407.9 | 5648.4 | 6315.7 | 6827.8 | 7580.4 | 8705.4 | 9085.6 | 9023.6 | 8270.9 | 6362.3 |
| 20° | 4911.4 | 4942.4 | 5058.8 | 5477.8 | 5865.7 | 6564.0 | 8527.0 | 9527.9 | 9551.2 | 8790.8 | 6564.0 |
| 22.5° | 4802.7 | 4826.0 | 4919.1 | 5245.0 | 5485.5 | 5951.0 | 7921.8 | 9877.0 | 10148.6 | 9388.2 | 6804.5 |
| 25° | 4771.7 | 4795.0 | 4934.6 | 5291.5 | 5516.5 | 5904.5 | 7370.9 | 10063.2 | 10854.6 | 10008.9 | 7037.3 |
| 27.5° | 4748.4 | 4779.5 | 5004.5 | 5462.2 | 5726.0 | 6098.5 | 7270.0 | 10102.0 | 11529.7 | 10668.4 | 7417.5 |
| 30° | 4779.5 | 4826.0 | 5120.8 | 5640.7 | 5943.3 | 6362.3 | 7510.6 | 10140.8 | 12274.5 | 11421.0 | 7898.5 |
| 32.5° | 4903.6 | 4942.4 | 5299.3 | 5881.2 | 6230.4 | 6703.7 | 7921.8 | 10373.6 | 12980.6 | 12189.2 | 8356.3 |
| 35° | 5043.3 | 5097.6 | 5524.3 | 6222.6 | 6641.6 | 7176.9 | 8480.4 | 10831.4 | 13655.6 | 12918.5 | 8829.6 |
| 37.5° | 5214.0 | 5276.0 | 5788.1 | 6610.5 | 7091.6 | 7696.8 | 9085.6 | 11467.6 | 14253.0 | 13515.9 | 9302.9 |
| 40° | 5446.7 | 5516.5 | 6090.7 | 7021.8 | 7541.6 | 8146.8 | 9683.1 | 12096.1 | 14710.8 | 13872.8 | 9613.2 |
| 42.5° | 6362.3 | 6455.4 | 6695.9 | 7425.2 | 8007.1 | 8627.8 | 10272.7 | 12693.5 | 14881.5 | 13989.2 | 9675.3 |
| 45° | 8069.2 | 8162.3 | 8100.2 | 8239.9 | 8627.8 | 9209.8 | 10916.7 | 13267.6 | 14904.8 | 13958.2 | 9644.3 |
| 47.5° | 9783.9 | 9892.5 | 9838.2 | 9760.6 | 9846.0 | 10125.3 | 11638.3 | 13632.3 | 14780.6 | 13942.7 | 9644.3 |
| 50° | 11421.0 | 11359.0 | 11366.7 | 11343.4 | 11421.0 | 11568.5 | 12336.6 | 13702.1 | 14749.6 | 14090.1 | 9729.6 |
| 52.5° | 12297.8 | 12328.8 | 12522.8 | 12809.9 | 12980.6 | 13128.0 | 13135.7 | 13810.8 | 14524.6 | 13841.8 | 9628.7 |
| 55° | 13159.0 | 13221.1 | 13671.1 | 14159.9 | 14540.1 | 14819.4 | 13934.9 | 13740.9 | 13182.3 | 13011.6 | 9101.1 |
| 57.5° | 14128.9 | 14214.2 | 14850.5 | 15859.1 | 16526.4 | 16673.8 | 14726.3 | 12437.4 | 11157.2 | 11824.5 | 8077.0 |
| 60° | 15463.4 | 15564.3 | 16410.0 | 17923.0 | 18916.1 | 18613.5 | 14788.4 | 10365.8 | 8860.6 | 9815.0 | 6664.9 |
| 62.5° | 16510.8 | 16712.6 | 18241.1 | 20599.8 | 21693.8 | 20731.7 | 13632.3 | 7945.1 | 6191.6 | 6897.6 | 4864.8 |
| 65° | 15393.6 | 15781.5 | 18272.1 | 23664.5 | 24929.2 | 23222.3 | 11816.7 | 5423.4 | 3491.5 | 4461.3 | 3111.3 |
| 67.5° | 12445.2 | 12988.3 | 16223.8 | 25154.2 | 27148.2 | 24533.5 | 9302.9 | 2878.5 | 2001.8 | 2591.5 | 1637.1 |
| 68° | 11452.1 | 12041.7 | 15471.2 | 25154.2 | 27264.6 | 24417.1 | 8635.6 | 2490.6 | 1846.6 | 2327.7 | 1419.9 |
| 70° | 7914.0 | 8333.0 | 11894.3 | 23742.1 | 26581.8 | 22260.2 | 5687.2 | 1427.6 | 1388.8 | 1598.3 | 938.8 |
| 72.5° | 3879.4 | 4329.4 | 6362.3 | 18815.2 | 21655.0 | 17108.3 | 2591.5 | 946.6 | 1055.2 | 1171.6 | 737.1 |
| 75° | 1544.0 | 1637.1 | 2506.1 | 9279.6 | 13531.4 | 10916.7 | 1357.8 | 713.8 | 907.8 | 915.5 | 581.9 |
| 77.5° | 884.5 | 938.8 | 1388.8 | 3413.9 | 5074.3 | 4880.3 | 876.8 | 512.1 | 721.6 | 659.5 | 380.2 |
| 80° | 496.6 | 504.3 | 783.6 | 1800.1 | 2901.8 | 2599.2 | 597.4 | 372.4 | 550.9 | 465.5 | 256.0 |
| 82.5° | 248.3 | 279.3 | 496.6 | 993.1 | 1613.8 | 1652.6 | 318.1 | 263.8 | 442.3 | 333.6 | 209.5 |
| 85° | 178.5 | 194.0 | 356.9 | 550.9 | 744.9 | 1117.3 | 194.0 | 131.9 | 333.6 | 225.0 | 147.4 |
| 87.5° | 93.1 | 116.4 | 225.0 | 271.6 | 302.6 | 380.2 | 93.1 | 62.1 | 186.2 | 131.9 | 77.6 |
| 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: P1459172

CATALOG NUMBER: GLAN-SB9B-935-U-T4LG-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 5105.3 | 5105.3 | 5105.3 | 5105.3 | 5105.3 | 5105.3 | 5105.3 | 5105.3 | 5105.3 | 5105.3 | 5105.3 |
| 2.5° | 5105.3 | 4926.9 | 4562.2 | 4135.5 | 3801.8 | 3460.5 | 3181.1 | 2917.3 | 2793.2 | 2777.7 | 2808.7 |
| 5° | 5082.1 | 4694.1 | 3863.9 | 3049.2 | 2382.0 | 1916.4 | 1660.4 | 1528.5 | 1458.7 | 1427.6 | 1435.4 |
| 7.5° | 5035.5 | 4445.8 | 3119.1 | 2063.9 | 1544.0 | 1342.3 | 1280.2 | 1256.9 | 1249.2 | 1249.2 | 1249.2 |
| 10° | 4988.9 | 4112.2 | 2389.7 | 1513.0 | 1264.7 | 1210.4 | 1194.9 | 1194.9 | 1187.1 | 1187.1 | 1194.9 |
| 12.5° | 4965.7 | 3801.8 | 1854.4 | 1264.7 | 1179.3 | 1156.1 | 1140.6 | 1132.8 | 1132.8 | 1132.8 | 1140.6 |
| 15° | 4911.4 | 3460.5 | 1497.5 | 1171.6 | 1125.0 | 1094.0 | 1086.2 | 1078.5 | 1078.5 | 1078.5 | 1078.5 |
| 17.5° | 4864.8 | 3126.8 | 1303.5 | 1109.5 | 1070.7 | 1039.7 | 1031.9 | 1024.2 | 1024.2 | 1031.9 | 1031.9 |
| 20° | 4795.0 | 2808.7 | 1171.6 | 1047.4 | 1016.4 | 985.4 | 977.6 | 969.9 | 977.6 | 977.6 | 977.6 |
| 22.5° | 4709.6 | 2544.9 | 1094.0 | 1000.9 | 962.1 | 931.1 | 931.1 | 931.1 | 931.1 | 931.1 | 938.8 |
| 25° | 4655.3 | 2358.7 | 1039.7 | 946.6 | 907.8 | 884.5 | 876.8 | 876.8 | 892.3 | 892.3 | 900.0 |
| 27.5° | 4740.7 | 2312.1 | 1047.4 | 931.1 | 861.2 | 838.0 | 830.2 | 830.2 | 845.7 | 853.5 | 861.2 |
| 30° | 4996.7 | 2397.5 | 1140.6 | 977.6 | 830.2 | 791.4 | 783.6 | 783.6 | 806.9 | 814.7 | 822.4 |
| 32.5° | 5291.5 | 2575.9 | 1280.2 | 1039.7 | 806.9 | 744.9 | 729.3 | 729.3 | 752.6 | 760.4 | 768.1 |
| 35° | 5695.0 | 2855.3 | 1466.4 | 1094.0 | 822.4 | 698.3 | 667.3 | 667.3 | 682.8 | 698.3 | 706.1 |
| 37.5° | 6214.8 | 3313.0 | 1683.7 | 1132.8 | 822.4 | 644.0 | 605.2 | 597.4 | 612.9 | 612.9 | 620.7 |
| 40° | 6758.0 | 3910.5 | 1908.7 | 1132.8 | 783.6 | 589.7 | 550.9 | 527.6 | 535.4 | 527.6 | 535.4 |
| 42.5° | 7060.6 | 4391.5 | 2102.7 | 1063.0 | 737.1 | 535.4 | 496.6 | 465.5 | 457.8 | 442.3 | 450.0 |
| 45° | 7231.3 | 4608.8 | 2048.3 | 985.4 | 690.5 | 496.6 | 450.0 | 411.2 | 395.7 | 372.4 | 372.4 |
| 47.5° | 7231.3 | 4632.0 | 1753.5 | 923.3 | 644.0 | 465.5 | 403.5 | 364.7 | 341.4 | 318.1 | 325.9 |
| 50° | 7145.9 | 4422.5 | 1388.8 | 861.2 | 589.7 | 434.5 | 364.7 | 333.6 | 302.6 | 287.1 | 287.1 |
| 52.5° | 6789.0 | 3739.8 | 1063.0 | 783.6 | 527.6 | 395.7 | 325.9 | 294.8 | 263.8 | 256.0 | 256.0 |
| 55° | 6176.1 | 2746.6 | 861.2 | 706.1 | 473.3 | 364.7 | 294.8 | 271.6 | 240.5 | 225.0 | 225.0 |
| 57.5° | 5020.0 | 1877.6 | 713.8 | 636.2 | 419.0 | 325.9 | 263.8 | 240.5 | 201.7 | 186.2 | 186.2 |
| 60° | 3724.3 | 1225.9 | 605.2 | 558.6 | 356.9 | 294.8 | 232.8 | 201.7 | 170.7 | 155.2 | 147.4 |
| 62.5° | 2513.9 | 830.2 | 504.3 | 442.3 | 302.6 | 256.0 | 201.7 | 170.7 | 131.9 | 100.9 | 100.9 |
| 65° | 1567.3 | 644.0 | 419.0 | 349.1 | 263.8 | 225.0 | 170.7 | 131.9 | 93.1 | 69.8 | 62.1 |
| 67.5° | 900.0 | 519.8 | 341.4 | 271.6 | 225.0 | 178.5 | 131.9 | 108.6 | 77.6 | 54.3 | 46.6 |
| 68° | 830.2 | 496.6 | 318.1 | 256.0 | 209.5 | 170.7 | 124.1 | 100.9 | 69.8 | 46.6 | 46.6 |
| 70° | 675.0 | 442.3 | 271.6 | 209.5 | 178.5 | 139.7 | 108.6 | 85.3 | 54.3 | 31.0 | 31.0 |
| 72.5° | 597.4 | 372.4 | 232.8 | 162.9 | 124.1 | 116.4 | 85.3 | 62.1 | 38.8 | 23.3 | 15.5 |
| 75° | 488.8 | 294.8 | 186.2 | 124.1 | 85.3 | 85.3 | 62.1 | 38.8 | 15.5 | 0.0 | 0.0 |
| 77.5° | 318.1 | 217.2 | 147.4 | 77.6 | 46.6 | 54.3 | 38.8 | 15.5 | 0.0 | 0.0 | 0.0 |
| 80° | 209.5 | 162.9 | 100.9 | 38.8 | 23.3 | 23.3 | 7.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 147.4 | 108.6 | 62.1 | 15.5 | 7.8 | 7.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 93.1 | 46.6 | 23.3 | 7.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 38.8 | 15.5 | 7.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 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: SP1-2407-184-15

Test Date: 10/11/2024

Luminaire Tested: GSS-SB1A-935-U-5WQ

Data in this report applies to families of products including GSS-SB1A-935-U-5WQ

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-184-15
 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-935-U-5WQ**
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 90 CRI 3500K CCT 26 LEDS

Spectral Parameters

CCT (K): 3455
 CIE u': 0.2356
 CIE v': 0.5159
 Duv: 0.0028
 CIE x: 0.4109
 CIE y: 0.3999
 CIE z: 0.1892
 Peak Wavelength (nm): 616
 Dominant Wavelength (nm): 579
 Purity: 43.35383
 Rf: 92.3
 Rg: 98.5

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 92.2 | | |
| R1: | 92.0 | R9: | 59.8 |
| R2: | 94.4 | R10: | 85.8 |
| R3: | 95.6 | R11: | 93.2 |
| R4: | 93.2 | R12: | 78.0 |
| R5: | 91.4 | R13: | 92.5 |
| R6: | 92.5 | R14: | 97.0 |
| R7: | 94.5 | R15: | 88.4 |
| R8: | 84.2 | | |



Test Conditions

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

REPORT NUMBER: SP1-2407-184-15

| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC Power Source | IN0208 | 10/24/2023 | 10/24/2024 |
| Sphere Thermometer | IN0085 | 10/24/2023 | 10/24/2024 |
| Room Thermometer | IN0046 | 10/24/2023 | 10/24/2024 |

REPORT NUMBER: SP1-2407-184-15

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-15

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 | 410 | NR | 620 | 997 | NR | 750 | 74 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 454 | NR | 625 | 988 | NR | 755 | 64 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 493 | NR | 630 | 973 | NR | 760 | 54 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 530 | NR | 635 | 946 | NR | 765 | 47 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 564 | NR | 640 | 913 | NR | 770 | 40 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 599 | NR | 645 | 870 | NR | 775 | 34 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 634 | NR | 650 | 826 | NR | 780 | 29 | NR | 910 | 1 | NR |
| 395 | 0 | NR | 525 | 664 | NR | 655 | 774 | NR | 785 | 25 | NR | 915 | 1 | NR |
| 400 | 2 | NR | 530 | 695 | NR | 660 | 720 | NR | 790 | 21 | NR | 920 | 1 | NR |
| 405 | 4 | NR | 535 | 722 | NR | 665 | 664 | NR | 795 | 18 | NR | 925 | 1 | NR |
| 410 | 9 | NR | 540 | 741 | NR | 670 | 605 | NR | 800 | 16 | NR | 930 | 0 | NR |
| 415 | 17 | NR | 545 | 762 | NR | 675 | 550 | NR | 805 | 13 | NR | 935 | 0 | NR |
| 420 | 32 | NR | 550 | 777 | NR | 680 | 497 | NR | 810 | 12 | NR | 940 | 0 | NR |
| 425 | 61 | NR | 555 | 789 | NR | 685 | 445 | NR | 815 | 10 | NR | 945 | 0 | NR |
| 430 | 114 | NR | 560 | 800 | NR | 690 | 398 | NR | 820 | 9 | NR | 950 | 0 | NR |
| 435 | 218 | NR | 565 | 813 | NR | 695 | 352 | NR | 825 | 7 | NR | 955 | 0 | NR |
| 440 | 427 | NR | 570 | 828 | NR | 700 | 309 | NR | 830 | 6 | NR | 960 | 0 | NR |
| 445 | 684 | NR | 575 | 846 | NR | 705 | 273 | NR | 835 | 5 | NR | 965 | 0 | NR |
| 450 | 611 | NR | 580 | 866 | NR | 710 | 237 | NR | 840 | 5 | NR | 970 | 0 | NR |
| 455 | 461 | NR | 585 | 888 | NR | 715 | 208 | NR | 845 | 4 | NR | 975 | 0 | NR |
| 460 | 427 | NR | 590 | 913 | NR | 720 | 181 | NR | 850 | 4 | NR | 980 | 0 | NR |
| 465 | 349 | NR | 595 | 936 | NR | 725 | 157 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 298 | NR | 600 | 957 | NR | 730 | 136 | NR | 860 | 3 | NR | 990 | 1 | NR |
| 475 | 312 | NR | 605 | 976 | NR | 735 | 117 | NR | 865 | 2 | NR | 995 | 0 | NR |
| 480 | 335 | NR | 610 | 990 | NR | 740 | 100 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 367 | NR | 615 | 999 | NR | 745 | 86 | NR | 875 | 2 | NR | | | |

REPORT NUMBER: SP1-2407-184-15

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.58

| 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 | 410 | NR | 620 | 997 | NR | 750 | 74 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 454 | NR | 625 | 988 | NR | 755 | 64 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 493 | NR | 630 | 973 | NR | 760 | 54 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 530 | NR | 635 | 946 | NR | 765 | 47 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 564 | NR | 640 | 913 | NR | 770 | 40 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 599 | NR | 645 | 870 | NR | 775 | 34 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 634 | NR | 650 | 826 | NR | 780 | 29 | NR | 910 | 1 | NR |
| 395 | 0 | NR | 525 | 664 | NR | 655 | 774 | NR | 785 | 25 | NR | 915 | 1 | NR |
| 400 | 2 | NR | 530 | 695 | NR | 660 | 720 | NR | 790 | 21 | NR | 920 | 1 | NR |
| 405 | 4 | NR | 535 | 722 | NR | 665 | 664 | NR | 795 | 18 | NR | 925 | 1 | NR |
| 410 | 9 | NR | 540 | 741 | NR | 670 | 605 | NR | 800 | 16 | NR | 930 | 0 | NR |
| 415 | 17 | NR | 545 | 762 | NR | 675 | 550 | NR | 805 | 13 | NR | 935 | 0 | NR |
| 420 | 32 | NR | 550 | 777 | NR | 680 | 497 | NR | 810 | 12 | NR | 940 | 0 | NR |
| 425 | 61 | NR | 555 | 789 | NR | 685 | 445 | NR | 815 | 10 | NR | 945 | 0 | NR |
| 430 | 114 | NR | 560 | 800 | NR | 690 | 398 | NR | 820 | 9 | NR | 950 | 0 | NR |
| 435 | 218 | NR | 565 | 813 | NR | 695 | 352 | NR | 825 | 7 | NR | 955 | 0 | NR |
| 440 | 427 | NR | 570 | 828 | NR | 700 | 309 | NR | 830 | 6 | NR | 960 | 0 | NR |
| 445 | 684 | NR | 575 | 846 | NR | 705 | 273 | NR | 835 | 5 | NR | 965 | 0 | NR |
| 450 | 611 | NR | 580 | 866 | NR | 710 | 237 | NR | 840 | 5 | NR | 970 | 0 | NR |
| 455 | 461 | NR | 585 | 888 | NR | 715 | 208 | NR | 845 | 4 | NR | 975 | 0 | NR |
| 460 | 427 | NR | 590 | 913 | NR | 720 | 181 | NR | 850 | 4 | NR | 980 | 0 | NR |
| 465 | 349 | NR | 595 | 936 | NR | 725 | 157 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 298 | NR | 600 | 957 | NR | 730 | 136 | NR | 860 | 3 | NR | 990 | 1 | NR |
| 475 | 312 | NR | 605 | 976 | NR | 735 | 117 | NR | 865 | 2 | NR | 995 | 0 | NR |
| 480 | 335 | NR | 610 | 990 | NR | 740 | 100 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 367 | NR | 615 | 999 | NR | 745 | 86 | NR | 875 | 2 | NR | | | |

REPORT NUMBER: SP1-2407-184-15

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.14

| 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 | 410 | NR | 620 | 997 | NR | 750 | 74 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 454 | NR | 625 | 988 | NR | 755 | 64 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 493 | NR | 630 | 973 | NR | 760 | 54 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 530 | NR | 635 | 946 | NR | 765 | 47 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 564 | NR | 640 | 913 | NR | 770 | 40 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 599 | NR | 645 | 870 | NR | 775 | 34 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 634 | NR | 650 | 826 | NR | 780 | 29 | NR | 910 | 1 | NR |
| 395 | 0 | NR | 525 | 664 | NR | 655 | 774 | NR | 785 | 25 | NR | 915 | 1 | NR |
| 400 | 2 | NR | 530 | 695 | NR | 660 | 720 | NR | 790 | 21 | NR | 920 | 1 | NR |
| 405 | 4 | NR | 535 | 722 | NR | 665 | 664 | NR | 795 | 18 | NR | 925 | 1 | NR |
| 410 | 9 | NR | 540 | 741 | NR | 670 | 605 | NR | 800 | 16 | NR | 930 | 0 | NR |
| 415 | 17 | NR | 545 | 762 | NR | 675 | 550 | NR | 805 | 13 | NR | 935 | 0 | NR |
| 420 | 32 | NR | 550 | 777 | NR | 680 | 497 | NR | 810 | 12 | NR | 940 | 0 | NR |
| 425 | 61 | NR | 555 | 789 | NR | 685 | 445 | NR | 815 | 10 | NR | 945 | 0 | NR |
| 430 | 114 | NR | 560 | 800 | NR | 690 | 398 | NR | 820 | 9 | NR | 950 | 0 | NR |
| 435 | 218 | NR | 565 | 813 | NR | 695 | 352 | NR | 825 | 7 | NR | 955 | 0 | NR |
| 440 | 427 | NR | 570 | 828 | NR | 700 | 309 | NR | 830 | 6 | NR | 960 | 0 | NR |
| 445 | 684 | NR | 575 | 846 | NR | 705 | 273 | NR | 835 | 5 | NR | 965 | 0 | NR |
| 450 | 611 | NR | 580 | 866 | NR | 710 | 237 | NR | 840 | 5 | NR | 970 | 0 | NR |
| 455 | 461 | NR | 585 | 888 | NR | 715 | 208 | NR | 845 | 4 | NR | 975 | 0 | NR |
| 460 | 427 | NR | 590 | 913 | NR | 720 | 181 | NR | 850 | 4 | NR | 980 | 0 | NR |
| 465 | 349 | NR | 595 | 936 | NR | 725 | 157 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 298 | NR | 600 | 957 | NR | 730 | 136 | NR | 860 | 3 | NR | 990 | 1 | NR |
| 475 | 312 | NR | 605 | 976 | NR | 735 | 117 | NR | 865 | 2 | NR | 995 | 0 | NR |
| 480 | 335 | NR | 610 | 990 | NR | 740 | 100 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 367 | NR | 615 | 999 | NR | 745 | 86 | NR | 875 | 2 | NR | | | |

Summary

$R_f = 92.3$
 $R_g = 98.5$
 CIE $R_a = 92.2$
 $R_9 = 59.8$



Color Vector Graphics

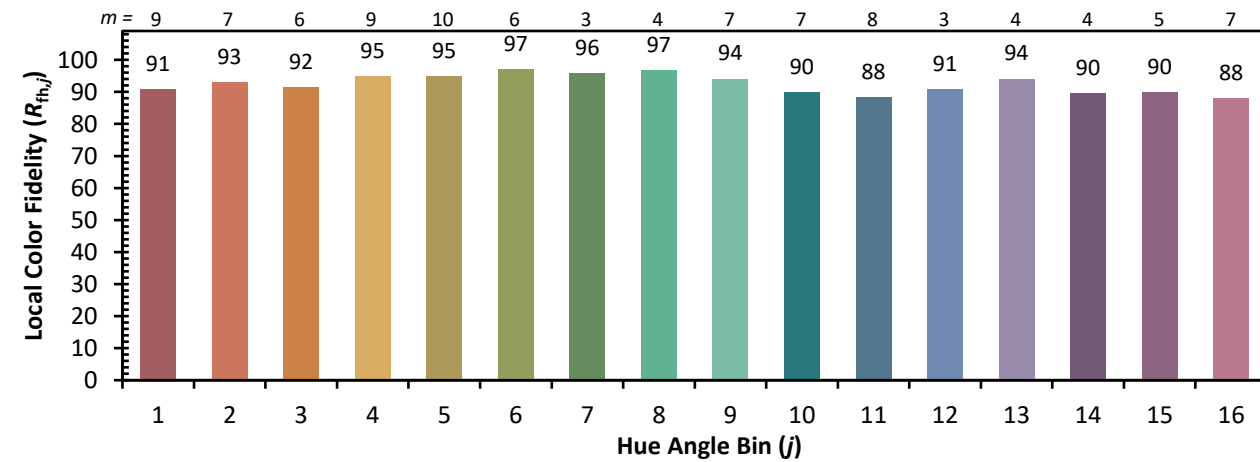


Individual Sample Fidelity Index ($R_{f,i}$)

| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 93 | CES51 = 97 | CES76 = 88 |
| CES02 = 62 | CES27 = 93 | CES52 = 98 | CES77 = 91 |
| CES03 = 31 | CES28 = 96 | CES53 = 96 | CES78 = 85 |
| CES04 = 70 | CES29 = 95 | CES54 = 95 | CES79 = 96 |
| CES05 = 50 | CES30 = 97 | CES55 = 94 | CES80 = 94 |
| CES06 = 51 | CES31 = 96 | CES56 = 94 | CES81 = 87 |
| CES07 = 42 | CES32 = 91 | CES57 = 93 | CES82 = 97 |
| CES08 = 41 | CES33 = 98 | CES58 = 94 | CES83 = 97 |
| CES09 = 29 | CES34 = 94 | CES59 = 96 | CES84 = 94 |
| CES10 = 75 | CES35 = 97 | CES60 = 94 | CES85 = 85 |
| CES11 = 58 | CES36 = 86 | CES61 = 93 | CES86 = 87 |
| CES12 = 64 | CES37 = 95 | CES62 = 91 | CES87 = 92 |
| CES13 = 43 | CES38 = 92 | CES63 = 93 | CES88 = 96 |
| CES14 = 74 | CES39 = 99 | CES64 = 91 | CES89 = 87 |
| CES15 = 71 | CES40 = 98 | CES65 = 89 | CES90 = 96 |
| CES16 = 47 | CES41 = 98 | CES66 = 89 | CES91 = 78 |
| CES17 = 49 | CES42 = 96 | CES67 = 88 | CES92 = 81 |
| CES18 = 56 | CES43 = 96 | CES68 = 89 | CES93 = 89 |
| CES19 = 71 | CES44 = 99 | CES69 = 91 | CES94 = 81 |
| CES20 = 66 | CES45 = 98 | CES70 = 87 | CES95 = 85 |
| CES21 = 86 | CES46 = 97 | CES71 = 84 | CES96 = 92 |
| CES22 = 78 | CES47 = 97 | CES72 = 95 | CES97 = 95 |
| CES23 = 91 | CES48 = 93 | CES73 = 83 | CES98 = 94 |
| CES24 = 90 | CES49 = 96 | CES74 = 94 | CES99 = 91 |
| CES25 = 71 | CES50 = 98 | CES75 = 85 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)