

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

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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: P1457108

Luminaire Tested: GLAN-SB6B-750-U-T4LG

Issue Date: 05/20/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1457108  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 5/21/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: STREETWORKS  
Catalog Number: GLAN-SB6B-750-U-T4LG  
Description: GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 450mA 6xLight Square  
PACKAGE 70CRI 5000K FIXTURE w/ TYPE IV LOW GLARE  
Light Source: (156) 5000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

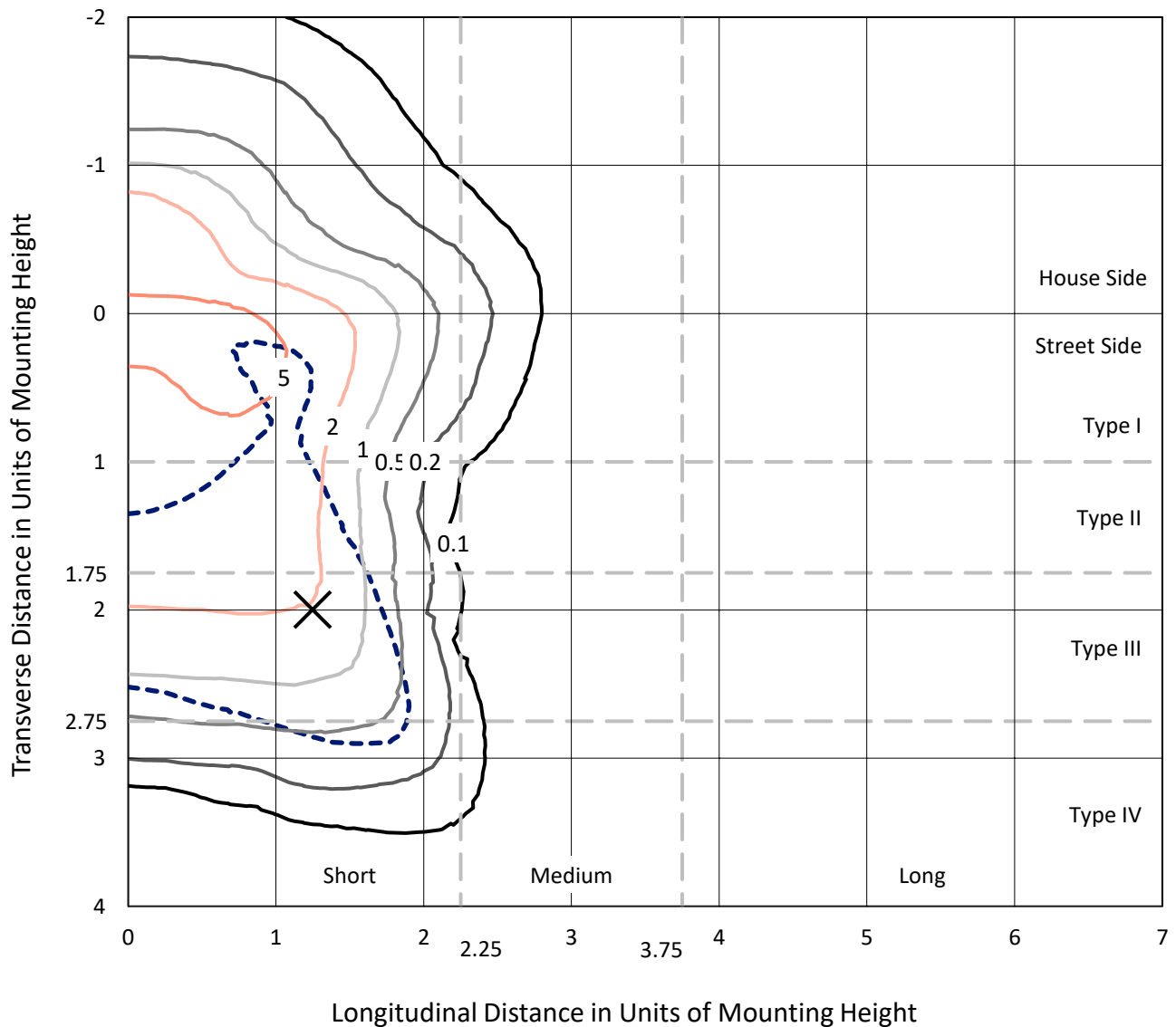
Lumens per Lamp: N/A  
Luminaire Lumens: 35355.5 lumens  
Efficiency: N/A  
Efficacy: 160.4 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U0 - G4  
  
Input Watts (W): 220.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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-SB6B-750-U-T4LG

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

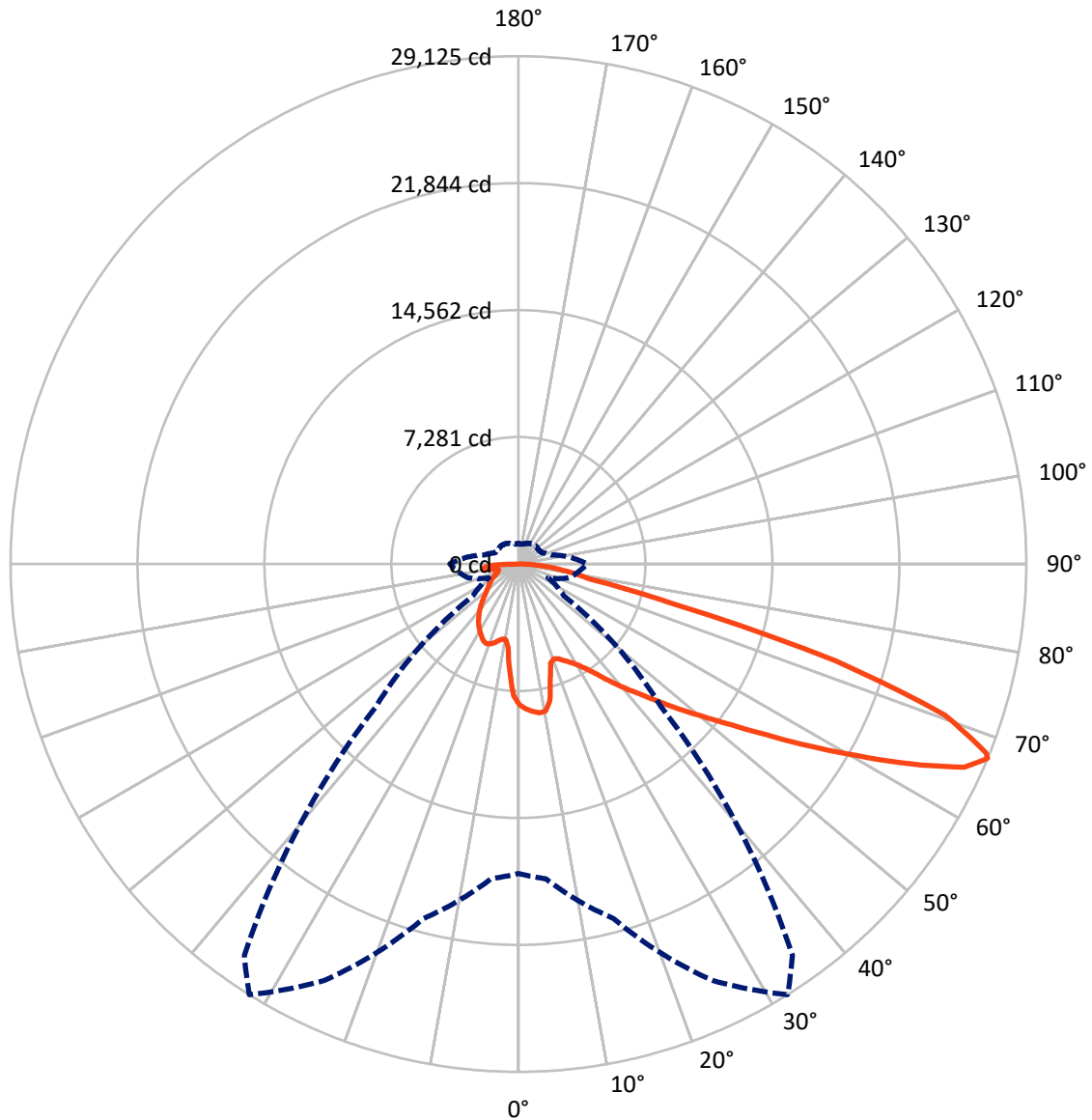


Based on 30 foot mounting height. Maximum calculated value = 9.7 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



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

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 8370.3   | 0.0    | 8370.3  |
|                    | % Fixture | 23.7     | 0.0    | 23.7    |
| <b>Street Side</b> | Lumens    | 26985.2  | 0.0    | 26985.2 |
|                    | % Fixture | 76.3     | 0.0    | 76.3    |
| <b>Total</b>       | Lumens    | 35355.5  | 0.0    | 35355.5 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 705.8   | 2.0       |
| 10°-20°   | 1874.0  | 5.3       |
| 20°-30°   | 3060.4  | 8.7       |
| 30°-40°   | 4510.7  | 12.8      |
| 40°-50°   | 6220.5  | 17.6      |
| 50°-60°   | 7858.3  | 22.2      |
| 60°-70°   | 7605.4  | 21.5      |
| 70°-80°   | 2714.3  | 7.7       |
| 80°-90°   | 806.0   | 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°    | 35355.5 | 100.0     |
| 0°-180°   | 35355.5 | 100.0     |



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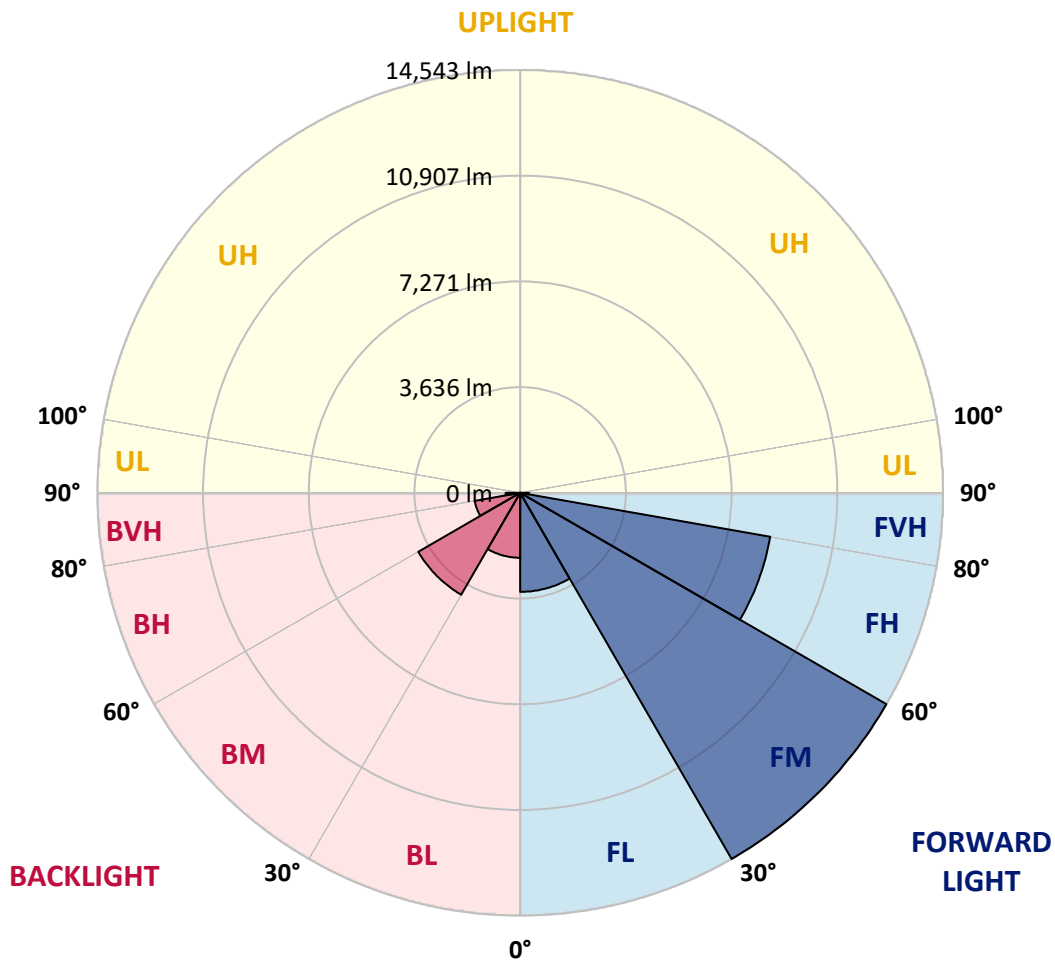
CATALOG NUMBER: GLAN-SB6B-750-U-T4LG

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |          |
|------|-------------|---------|-----------|-------------------------|------|----------|
|      |             |         |           | B                       | U    | G        |
| FL   | (0°-30°)    | 3406.6  | 9.6       |                         |      |          |
| FM   | (30°-60°)   | 14542.8 | 41.1      |                         |      |          |
| FH   | (60°-80°)   | 8732.1  | 24.7      |                         |      | G4/12000 |
| FVH  | (80°-90°)   | 303.7   | 0.9       |                         |      | G3/500   |
| BL   | (0°-30°)    | 2233.6  | 6.3       | B3/2500                 |      |          |
| BM   | (30°-60°)   | 4046.6  | 11.4      | B3/5000                 |      |          |
| BH   | (60°-80°)   | 1587.7  | 4.5       | B3/2500                 |      | G3/2500  |
| BVH  | (80°-90°)   | 502.3   | 1.4       |                         |      | G4/750   |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |          |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |          |

**BUG Rating: B3-U0-G4**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 32°     | 35°     | 45°     | 55°     | 65°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 8078.0  | 8078.0  | 8078.0  | 8078.0  | 8078.0  | 8078.0  | 8078.0  | 8078.0  | 8078.0  | 8078.0  | 8078.0  |
| 2.5°  | 8384.2  | 8360.6  | 8337.1  | 8352.8  | 8321.4  | 8313.5  | 8274.3  | 8258.6  | 8211.5  | 8203.6  | 8117.3  |
| 5°    | 8556.9  | 8509.8  | 8501.9  | 8517.6  | 8486.2  | 8486.2  | 8454.8  | 8431.3  | 8360.6  | 8321.4  | 8195.8  |
| 7.5°  | 8556.9  | 8549.0  | 8564.7  | 8619.7  | 8627.5  | 8627.5  | 8627.5  | 8635.4  | 8564.7  | 8509.8  | 8313.5  |
| 10°   | 8070.2  | 7991.7  | 8164.4  | 8439.1  | 8572.6  | 8651.1  | 8792.4  | 8878.8  | 8823.8  | 8784.6  | 8517.6  |
| 12.5° | 6617.9  | 6625.7  | 6900.5  | 7489.2  | 8023.1  | 8250.7  | 8839.5  | 9153.5  | 9177.1  | 9114.3  | 8776.7  |
| 15°   | 5613.0  | 5652.3  | 5793.6  | 6217.5  | 6829.8  | 7167.4  | 8564.7  | 9396.9  | 9585.3  | 9522.5  | 9090.7  |
| 17.5° | 5306.8  | 5330.4  | 5393.2  | 5636.6  | 5982.0  | 6256.7  | 7819.0  | 9553.9  | 10079.9 | 10001.4 | 9444.0  |
| 20°   | 5259.7  | 5275.4  | 5353.9  | 5558.1  | 5793.6  | 5950.6  | 7057.5  | 9428.3  | 10543.0 | 10511.6 | 9765.9  |
| 22.5° | 5267.6  | 5283.3  | 5385.3  | 5668.0  | 5911.3  | 6044.8  | 6814.1  | 9137.8  | 11029.8 | 11061.2 | 10095.6 |
| 25°   | 5283.3  | 5291.1  | 5448.2  | 5825.0  | 6131.1  | 6296.0  | 6971.1  | 8878.8  | 11438.0 | 11704.9 | 10456.7 |
| 27.5° | 5369.6  | 5393.2  | 5605.2  | 6029.1  | 6390.2  | 6578.6  | 7340.1  | 8965.1  | 11885.5 | 12435.0 | 10888.5 |
| 30°   | 5605.2  | 5620.9  | 5879.9  | 6319.5  | 6712.1  | 6908.3  | 7779.7  | 9310.5  | 12435.0 | 13188.6 | 11312.4 |
| 32.5° | 5974.1  | 5989.8  | 6288.1  | 6743.5  | 7167.4  | 7402.9  | 8352.8  | 9970.0  | 13047.3 | 13981.5 | 11736.3 |
| 35°   | 6484.4  | 6492.3  | 6829.8  | 7316.5  | 7764.0  | 8030.9  | 9020.1  | 10715.7 | 13683.2 | 14656.6 | 12050.3 |
| 37.5° | 7088.9  | 7143.8  | 7489.2  | 7999.5  | 8525.5  | 8768.9  | 9805.1  | 11587.1 | 14248.4 | 15229.7 | 12230.9 |
| 40°   | 7921.0  | 7936.7  | 8274.3  | 8768.9  | 9326.2  | 9561.7  | 10590.1 | 12411.4 | 14868.6 | 15567.3 | 12395.7 |
| 42.5° | 8776.7  | 8910.2  | 9192.8  | 9742.3  | 10158.4 | 10346.8 | 11485.1 | 13165.1 | 15363.2 | 15583.0 | 12325.1 |
| 45°   | 9922.9  | 10024.9 | 10307.5 | 10794.3 | 11210.3 | 11430.1 | 12450.7 | 13855.9 | 15614.4 | 15449.5 | 12168.1 |
| 47.5° | 11233.9 | 11296.7 | 11524.3 | 11964.0 | 12427.1 | 12584.1 | 13455.5 | 14248.4 | 15708.6 | 15355.3 | 12097.4 |
| 50°   | 12780.4 | 12780.4 | 12945.3 | 13322.1 | 13746.0 | 13965.8 | 14381.9 | 14483.9 | 15983.3 | 15190.5 | 12278.0 |
| 52.5° | 14083.6 | 14146.4 | 14366.2 | 14900.0 | 15323.9 | 15575.1 | 15104.1 | 14845.0 | 15426.0 | 14272.0 | 12332.9 |
| 55°   | 15331.8 | 15402.4 | 15897.0 | 16564.3 | 17286.5 | 17561.3 | 16006.9 | 14664.5 | 13549.7 | 12929.5 | 11956.1 |
| 57.5° | 16525.0 | 16674.2 | 17294.4 | 18597.5 | 19688.7 | 19665.2 | 17153.0 | 13047.3 | 11061.2 | 11445.8 | 11131.8 |
| 60°   | 18189.3 | 18346.3 | 19335.4 | 20976.2 | 22310.7 | 21753.4 | 17168.7 | 10857.1 | 8619.7  | 9137.8  | 9585.3  |
| 62.5° | 19578.8 | 19845.7 | 21298.0 | 24030.0 | 25254.6 | 24383.2 | 15747.8 | 8313.5  | 5722.9  | 6374.5  | 7410.7  |
| 65°   | 19453.2 | 19806.5 | 22059.5 | 26275.2 | 28104.3 | 27295.7 | 13667.5 | 5259.7  | 2951.7  | 4357.0  | 5189.1  |
| 67°   | 17741.8 | 18126.5 | 21046.8 | 26353.7 | 29124.9 | 27397.8 | 11540.0 | 3179.4  | 1876.2  | 3022.4  | 3603.3  |
| 67.5° | 16760.5 | 17325.8 | 20544.4 | 26204.5 | 28936.4 | 26966.0 | 10582.3 | 2661.3  | 1766.3  | 2810.4  | 3281.5  |
| 70°   | 10307.5 | 11218.2 | 15418.1 | 23166.4 | 25937.6 | 22569.8 | 5879.9  | 1507.3  | 1436.6  | 1884.1  | 2268.8  |
| 72.5° | 3100.9  | 3375.7  | 5950.6  | 14860.7 | 19037.1 | 16729.1 | 2645.6  | 1161.9  | 1287.5  | 1515.1  | 1750.6  |
| 75°   | 1507.3  | 1609.3  | 2457.2  | 6076.2  | 9271.3  | 9224.2  | 1475.9  | 997.0   | 1193.3  | 1271.8  | 1381.7  |
| 77.5° | 965.6   | 1028.4  | 1530.8  | 3399.2  | 4247.0  | 3783.9  | 1067.6  | 871.4   | 1059.8  | 1044.1  | 1028.4  |
| 80°   | 604.5   | 635.9   | 981.3   | 1970.4  | 3132.3  | 2614.2  | 785.0   | 714.4   | 910.6   | 808.6   | 730.1   |
| 82.5° | 392.5   | 431.8   | 628.0   | 1201.1  | 2237.4  | 1946.9  | 518.1   | 510.3   | 753.6   | 643.7   | 565.2   |
| 85°   | 259.1   | 290.5   | 400.4   | 706.5   | 1326.7  | 1389.5  | 337.6   | 353.3   | 580.9   | 486.7   | 431.8   |
| 87.5° | 94.2    | 117.8   | 204.1   | 314.0   | 620.2   | 769.3   | 141.3   | 133.5   | 282.6   | 227.7   | 180.6   |
| 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: P1457108

CATALOG NUMBER: GLAN-SB6B-750-U-T4LG

**CANDELA DISTRIBUTION (continued):**

|       | 90°     | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 8078.0  | 8078.0 | 8078.0 | 8078.0 | 8078.0 | 8078.0 | 8078.0 | 8078.0 | 8078.0 | 8078.0 | 8078.0 |
| 2.5°  | 8101.6  | 8078.0 | 7968.1 | 7873.9 | 7803.3 | 7709.1 | 7607.0 | 7489.2 | 7410.7 | 7426.4 | 7402.9 |
| 5°    | 8140.8  | 8078.0 | 7866.1 | 7544.2 | 7230.2 | 6837.7 | 6335.2 | 6036.9 | 5809.3 | 5691.5 | 5722.9 |
| 7.5°  | 8227.2  | 8117.3 | 7669.8 | 7018.2 | 6201.8 | 5401.1 | 4906.5 | 4623.9 | 4490.4 | 4435.5 | 4427.6 |
| 10°   | 8376.3  | 8187.9 | 7418.6 | 6201.8 | 5134.1 | 4592.5 | 4411.9 | 4333.4 | 4317.7 | 4317.7 | 4309.8 |
| 12.5° | 8556.9  | 8258.6 | 6994.7 | 5408.9 | 4623.9 | 4427.6 | 4396.2 | 4404.1 | 4427.6 | 4451.2 | 4411.9 |
| 15°   | 8776.7  | 8290.0 | 6468.7 | 4930.0 | 4521.8 | 4474.7 | 4521.8 | 4576.8 | 4616.0 | 4647.4 | 4608.2 |
| 17.5° | 8996.5  | 8258.6 | 5974.1 | 4702.4 | 4537.5 | 4600.3 | 4694.5 | 4780.9 | 4804.4 | 4851.5 | 4820.1 |
| 20°   | 9153.5  | 8148.7 | 5550.2 | 4616.0 | 4576.8 | 4718.1 | 4835.8 | 4930.0 | 4977.1 | 5008.5 | 4977.1 |
| 22.5° | 9271.3  | 8007.4 | 5244.0 | 4529.7 | 4576.8 | 4749.5 | 4890.8 | 5000.7 | 5055.6 | 5087.0 | 5047.8 |
| 25°   | 9373.3  | 7811.1 | 5008.5 | 4404.1 | 4482.6 | 4647.4 | 4804.4 | 4914.3 | 4992.8 | 5039.9 | 5016.4 |
| 27.5° | 9498.9  | 7654.1 | 4788.7 | 4215.6 | 4286.3 | 4443.3 | 4608.2 | 4741.6 | 4890.8 | 4969.3 | 4953.6 |
| 30°   | 9640.2  | 7575.6 | 4576.8 | 4011.5 | 4058.6 | 4215.6 | 4411.9 | 4592.5 | 4796.6 | 4898.6 | 4898.6 |
| 32.5° | 9805.1  | 7520.6 | 4380.5 | 3815.3 | 3854.5 | 4027.2 | 4215.6 | 4380.5 | 4600.3 | 4765.2 | 4757.3 |
| 35°   | 9875.8  | 7457.8 | 4223.5 | 3634.7 | 3713.2 | 3854.5 | 4003.7 | 4113.6 | 4341.3 | 4537.5 | 4553.2 |
| 37.5° | 9946.4  | 7434.3 | 4145.0 | 3493.4 | 3556.2 | 3666.1 | 3744.6 | 3799.6 | 4011.5 | 4215.6 | 4223.5 |
| 40°   | 10032.8 | 7544.2 | 4199.9 | 3399.2 | 3344.3 | 3454.2 | 3493.4 | 3524.8 | 3634.7 | 3768.2 | 3768.2 |
| 42.5° | 9977.8  | 7622.7 | 4325.6 | 3312.9 | 3085.2 | 3210.8 | 3226.5 | 3218.6 | 3226.5 | 3234.3 | 3226.5 |
| 45°   | 9836.5  | 7544.2 | 4325.6 | 3179.4 | 2810.4 | 2943.9 | 2936.0 | 2896.8 | 2834.0 | 2669.1 | 2645.6 |
| 47.5° | 9805.1  | 7497.1 | 4160.7 | 2959.6 | 2535.7 | 2645.6 | 2661.3 | 2582.8 | 2402.2 | 2229.5 | 2174.6 |
| 50°   | 9938.6  | 7583.5 | 3901.6 | 2692.7 | 2300.2 | 2394.4 | 2433.6 | 2300.2 | 2096.0 | 1915.5 | 1884.1 |
| 52.5° | 10134.8 | 7693.4 | 3524.8 | 2402.2 | 2103.9 | 2198.1 | 2245.2 | 2096.0 | 1884.1 | 1742.8 | 1727.1 |
| 55°   | 10111.3 | 7693.4 | 3100.9 | 2135.3 | 1954.7 | 2025.4 | 2103.9 | 1946.9 | 1782.0 | 1703.5 | 1695.7 |
| 57.5° | 9601.0  | 7402.9 | 2786.9 | 1946.9 | 1813.4 | 1876.2 | 1978.3 | 1829.1 | 1672.1 | 1687.8 | 1711.4 |
| 60°   | 8604.0  | 6649.3 | 2551.4 | 1821.3 | 1687.8 | 1750.6 | 1860.5 | 1687.8 | 1483.7 | 1428.8 | 1428.8 |
| 62.5° | 7088.9  | 5479.6 | 2363.0 | 1695.7 | 1570.1 | 1648.6 | 1703.5 | 1475.9 | 1342.4 | 1279.6 | 1279.6 |
| 65°   | 5314.7  | 4239.2 | 2166.7 | 1593.6 | 1468.0 | 1554.4 | 1491.6 | 1381.7 | 1248.2 | 1201.1 | 1209.0 |
| 67°   | 3940.9  | 3289.3 | 2001.8 | 1507.3 | 1405.2 | 1444.5 | 1397.4 | 1318.9 | 1185.4 | 1146.2 | 1185.4 |
| 67.5° | 3540.5  | 3124.4 | 1962.6 | 1483.7 | 1389.5 | 1420.9 | 1373.8 | 1311.0 | 1169.7 | 1130.5 | 1169.7 |
| 70°   | 2433.6  | 2402.2 | 1750.6 | 1373.8 | 1303.2 | 1271.8 | 1295.3 | 1216.8 | 1099.1 | 1083.4 | 1122.6 |
| 72.5° | 1852.7  | 1915.5 | 1570.1 | 1279.6 | 1209.0 | 1169.7 | 1224.7 | 1146.2 | 1028.4 | 1051.9 | 1091.2 |
| 75°   | 1452.3  | 1546.5 | 1405.2 | 1146.2 | 1099.1 | 1106.9 | 1216.8 | 1185.4 | 1091.2 | 1114.8 | 1122.6 |
| 77.5° | 1075.5  | 1248.2 | 1201.1 | 997.0  | 957.7  | 1067.6 | 1373.8 | 1468.0 | 1303.2 | 1263.9 | 1209.0 |
| 80°   | 785.0   | 894.9  | 1012.7 | 824.3  | 800.7  | 1028.4 | 1695.7 | 1876.2 | 1609.3 | 1452.3 | 1413.1 |
| 82.5° | 580.9   | 628.0  | 832.1  | 659.4  | 580.9  | 918.5  | 1884.1 | 2206.0 | 1915.5 | 1617.2 | 1570.1 |
| 85°   | 416.1   | 486.7  | 659.4  | 486.7  | 384.7  | 753.6  | 1844.8 | 2158.9 | 1899.8 | 1530.8 | 1491.6 |
| 87.5° | 149.2   | 212.0  | 282.6  | 219.8  | 196.3  | 518.1  | 1523.0 | 1554.4 | 1185.4 | 541.7  | 549.5  |
| 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: SP1-2407-184-6

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-750-U-5WQ

Data in this report applies to families of products including GSS-SB1A-750-U-5WQ

**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2407-184-6  
 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-750-U-5WQ**  
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 5000K CCT 26 LEDS

**Spectral Parameters**

CCT (K): 4896  
 CIE u': 0.2101  
 CIE v': 0.4901  
 Duv: 0.0035  
 CIE x: 0.3489  
 CIE y: 0.3618  
 CIE z: 0.2893  
 Peak Wavelength (nm): 443  
 Dominant Wavelength (nm): 570  
 Purity: 13.25435  
 Rf: 70.7  
 Rg: 96.8

|           |      |      |       |
|-----------|------|------|-------|
| CRI (Ra): | 70.2 |      |       |
| R1:       | 68.1 | R9:  | -35.1 |
| R2:       | 73.9 | R10: | 39.3  |
| R3:       | 79.4 | R11: | 71.1  |
| R4:       | 72.1 | R12: | 43.8  |
| R5:       | 69.2 | R13: | 68.1  |
| R6:       | 65.7 | R14: | 88.4  |
| R7:       | 78.1 | R15: | 59.7  |
| R8:       | 55.3 |      |       |



**Test Conditions**

Stabilization Time: 21M  
 Operation Time: 1H 21M  
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-6

| 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 = 4896K  
 CIE x = 0.3489  
 CIE y = 0.3618  
 Duv = 0.0035

Point lies inside the ANSI 5000K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-6

**Photopic Flux vs. Wavelength**



**Photopic Lumens: NR**

| λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360    | 0                        | NR            | 490    | 118                      | NR            | 620    | 401                      | NR            | 750    | 12                       | NR            | 880    | 0                        | NR            |
| 365    | 0                        | NR            | 495    | 168                      | NR            | 625    | 365                      | NR            | 755    | 10                       | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 230                      | NR            | 630    | 331                      | NR            | 760    | 9                        | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 299                      | NR            | 635    | 298                      | NR            | 765    | 8                        | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 362                      | NR            | 640    | 266                      | NR            | 770    | 6                        | NR            | 900    | 0                        | NR            |
| 385    | 2                        | NR            | 515    | 418                      | NR            | 645    | 236                      | NR            | 775    | 6                        | NR            | 905    | 0                        | NR            |
| 390    | 4                        | NR            | 520    | 461                      | NR            | 650    | 209                      | NR            | 780    | 5                        | NR            | 910    | 0                        | NR            |
| 395    | 6                        | NR            | 525    | 491                      | NR            | 655    | 184                      | NR            | 785    | 4                        | NR            | 915    | 0                        | NR            |
| 400    | 9                        | NR            | 530    | 514                      | NR            | 660    | 160                      | NR            | 790    | 4                        | NR            | 920    | 0                        | NR            |
| 405    | 14                       | NR            | 535    | 530                      | NR            | 665    | 140                      | NR            | 795    | 3                        | NR            | 925    | 0                        | NR            |
| 410    | 27                       | NR            | 540    | 539                      | NR            | 670    | 122                      | NR            | 800    | 3                        | NR            | 930    | 0                        | NR            |
| 415    | 55                       | NR            | 545    | 549                      | NR            | 675    | 106                      | NR            | 805    | 2                        | NR            | 935    | 0                        | NR            |
| 420    | 115                      | NR            | 550    | 557                      | NR            | 680    | 92                       | NR            | 810    | 2                        | NR            | 940    | 0                        | NR            |
| 425    | 226                      | NR            | 555    | 565                      | NR            | 685    | 79                       | NR            | 815    | 2                        | NR            | 945    | 0                        | NR            |
| 430    | 395                      | NR            | 560    | 572                      | NR            | 690    | 68                       | NR            | 820    | 2                        | NR            | 950    | 0                        | NR            |
| 435    | 648                      | NR            | 565    | 580                      | NR            | 695    | 59                       | NR            | 825    | 1                        | NR            | 955    | 0                        | NR            |
| 440    | 937                      | NR            | 570    | 586                      | NR            | 700    | 51                       | NR            | 830    | 1                        | NR            | 960    | 0                        | NR            |
| 445    | 953                      | NR            | 575    | 588                      | NR            | 705    | 44                       | NR            | 835    | 1                        | NR            | 965    | 0                        | NR            |
| 450    | 591                      | NR            | 580    | 588                      | NR            | 710    | 38                       | NR            | 840    | 1                        | NR            | 970    | 0                        | NR            |
| 455    | 334                      | NR            | 585    | 580                      | NR            | 715    | 32                       | NR            | 845    | 1                        | NR            | 975    | 0                        | NR            |
| 460    | 221                      | NR            | 590    | 568                      | NR            | 720    | 28                       | NR            | 850    | 1                        | NR            | 980    | 0                        | NR            |
| 465    | 140                      | NR            | 595    | 550                      | NR            | 725    | 24                       | NR            | 855    | 1                        | NR            | 985    | 0                        | NR            |
| 470    | 93                       | NR            | 600    | 527                      | NR            | 730    | 21                       | NR            | 860    | 1                        | NR            | 990    | 0                        | NR            |
| 475    | 79                       | NR            | 605    | 499                      | NR            | 735    | 18                       | NR            | 865    | 0                        | NR            | 995    | 0                        | NR            |
| 480    | 76                       | NR            | 610    | 469                      | NR            | 740    | 15                       | NR            | 870    | 0                        | NR            | 1000   | 0                        | NR            |
| 485    | 87                       | NR            | 615    | 435                      | NR            | 745    | 13                       | NR            | 875    | 0                        | NR            |        |                          |               |

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**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 1.7**

| λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360    | 0                        | NR            | 490    | 118                      | NR            | 620    | 401                      | NR            | 750    | 12                       | NR            | 880    | 0                        | NR            |
| 365    | 0                        | NR            | 495    | 168                      | NR            | 625    | 365                      | NR            | 755    | 10                       | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 230                      | NR            | 630    | 331                      | NR            | 760    | 9                        | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 299                      | NR            | 635    | 298                      | NR            | 765    | 8                        | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 362                      | NR            | 640    | 266                      | NR            | 770    | 6                        | NR            | 900    | 0                        | NR            |
| 385    | 2                        | NR            | 515    | 418                      | NR            | 645    | 236                      | NR            | 775    | 6                        | NR            | 905    | 0                        | NR            |
| 390    | 4                        | NR            | 520    | 461                      | NR            | 650    | 209                      | NR            | 780    | 5                        | NR            | 910    | 0                        | NR            |
| 395    | 6                        | NR            | 525    | 491                      | NR            | 655    | 184                      | NR            | 785    | 4                        | NR            | 915    | 0                        | NR            |
| 400    | 9                        | NR            | 530    | 514                      | NR            | 660    | 160                      | NR            | 790    | 4                        | NR            | 920    | 0                        | NR            |
| 405    | 14                       | NR            | 535    | 530                      | NR            | 665    | 140                      | NR            | 795    | 3                        | NR            | 925    | 0                        | NR            |
| 410    | 27                       | NR            | 540    | 539                      | NR            | 670    | 122                      | NR            | 800    | 3                        | NR            | 930    | 0                        | NR            |
| 415    | 55                       | NR            | 545    | 549                      | NR            | 675    | 106                      | NR            | 805    | 2                        | NR            | 935    | 0                        | NR            |
| 420    | 115                      | NR            | 550    | 557                      | NR            | 680    | 92                       | NR            | 810    | 2                        | NR            | 940    | 0                        | NR            |
| 425    | 226                      | NR            | 555    | 565                      | NR            | 685    | 79                       | NR            | 815    | 2                        | NR            | 945    | 0                        | NR            |
| 430    | 395                      | NR            | 560    | 572                      | NR            | 690    | 68                       | NR            | 820    | 2                        | NR            | 950    | 0                        | NR            |
| 435    | 648                      | NR            | 565    | 580                      | NR            | 695    | 59                       | NR            | 825    | 1                        | NR            | 955    | 0                        | NR            |
| 440    | 937                      | NR            | 570    | 586                      | NR            | 700    | 51                       | NR            | 830    | 1                        | NR            | 960    | 0                        | NR            |
| 445    | 953                      | NR            | 575    | 588                      | NR            | 705    | 44                       | NR            | 835    | 1                        | NR            | 965    | 0                        | NR            |
| 450    | 591                      | NR            | 580    | 588                      | NR            | 710    | 38                       | NR            | 840    | 1                        | NR            | 970    | 0                        | NR            |
| 455    | 334                      | NR            | 585    | 580                      | NR            | 715    | 32                       | NR            | 845    | 1                        | NR            | 975    | 0                        | NR            |
| 460    | 221                      | NR            | 590    | 568                      | NR            | 720    | 28                       | NR            | 850    | 1                        | NR            | 980    | 0                        | NR            |
| 465    | 140                      | NR            | 595    | 550                      | NR            | 725    | 24                       | NR            | 855    | 1                        | NR            | 985    | 0                        | NR            |
| 470    | 93                       | NR            | 600    | 527                      | NR            | 730    | 21                       | NR            | 860    | 1                        | NR            | 990    | 0                        | NR            |
| 475    | 79                       | NR            | 605    | 499                      | NR            | 735    | 18                       | NR            | 865    | 0                        | NR            | 995    | 0                        | NR            |
| 480    | 76                       | NR            | 610    | 469                      | NR            | 740    | 15                       | NR            | 870    | 0                        | NR            | 1000   | 0                        | NR            |
| 485    | 87                       | NR            | 615    | 435                      | NR            | 745    | 13                       | NR            | 875    | 0                        | NR            |        |                          |               |

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**Melanopic Flux vs. Wavelength**



**Melanopic Lumens: NR**

**M/P: 3.37**

| λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360    | 0                        | NR            | 490    | 118                      | NR            | 620    | 401                      | NR            | 750    | 12                       | NR            | 880    | 0                        | NR            |
| 365    | 0                        | NR            | 495    | 168                      | NR            | 625    | 365                      | NR            | 755    | 10                       | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 230                      | NR            | 630    | 331                      | NR            | 760    | 9                        | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 299                      | NR            | 635    | 298                      | NR            | 765    | 8                        | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 362                      | NR            | 640    | 266                      | NR            | 770    | 6                        | NR            | 900    | 0                        | NR            |
| 385    | 2                        | NR            | 515    | 418                      | NR            | 645    | 236                      | NR            | 775    | 6                        | NR            | 905    | 0                        | NR            |
| 390    | 4                        | NR            | 520    | 461                      | NR            | 650    | 209                      | NR            | 780    | 5                        | NR            | 910    | 0                        | NR            |
| 395    | 6                        | NR            | 525    | 491                      | NR            | 655    | 184                      | NR            | 785    | 4                        | NR            | 915    | 0                        | NR            |
| 400    | 9                        | NR            | 530    | 514                      | NR            | 660    | 160                      | NR            | 790    | 4                        | NR            | 920    | 0                        | NR            |
| 405    | 14                       | NR            | 535    | 530                      | NR            | 665    | 140                      | NR            | 795    | 3                        | NR            | 925    | 0                        | NR            |
| 410    | 27                       | NR            | 540    | 539                      | NR            | 670    | 122                      | NR            | 800    | 3                        | NR            | 930    | 0                        | NR            |
| 415    | 55                       | NR            | 545    | 549                      | NR            | 675    | 106                      | NR            | 805    | 2                        | NR            | 935    | 0                        | NR            |
| 420    | 115                      | NR            | 550    | 557                      | NR            | 680    | 92                       | NR            | 810    | 2                        | NR            | 940    | 0                        | NR            |
| 425    | 226                      | NR            | 555    | 565                      | NR            | 685    | 79                       | NR            | 815    | 2                        | NR            | 945    | 0                        | NR            |
| 430    | 395                      | NR            | 560    | 572                      | NR            | 690    | 68                       | NR            | 820    | 2                        | NR            | 950    | 0                        | NR            |
| 435    | 648                      | NR            | 565    | 580                      | NR            | 695    | 59                       | NR            | 825    | 1                        | NR            | 955    | 0                        | NR            |
| 440    | 937                      | NR            | 570    | 586                      | NR            | 700    | 51                       | NR            | 830    | 1                        | NR            | 960    | 0                        | NR            |
| 445    | 953                      | NR            | 575    | 588                      | NR            | 705    | 44                       | NR            | 835    | 1                        | NR            | 965    | 0                        | NR            |
| 450    | 591                      | NR            | 580    | 588                      | NR            | 710    | 38                       | NR            | 840    | 1                        | NR            | 970    | 0                        | NR            |
| 455    | 334                      | NR            | 585    | 580                      | NR            | 715    | 32                       | NR            | 845    | 1                        | NR            | 975    | 0                        | NR            |
| 460    | 221                      | NR            | 590    | 568                      | NR            | 720    | 28                       | NR            | 850    | 1                        | NR            | 980    | 0                        | NR            |
| 465    | 140                      | NR            | 595    | 550                      | NR            | 725    | 24                       | NR            | 855    | 1                        | NR            | 985    | 0                        | NR            |
| 470    | 93                       | NR            | 600    | 527                      | NR            | 730    | 21                       | NR            | 860    | 1                        | NR            | 990    | 0                        | NR            |
| 475    | 79                       | NR            | 605    | 499                      | NR            | 735    | 18                       | NR            | 865    | 0                        | NR            | 995    | 0                        | NR            |
| 480    | 76                       | NR            | 610    | 469                      | NR            | 740    | 15                       | NR            | 870    | 0                        | NR            | 1000   | 0                        | NR            |
| 485    | 87                       | NR            | 615    | 435                      | NR            | 745    | 13                       | NR            | 875    | 0                        | NR            |        |                          |               |

**Summary**

$R_f = 70.7$   
 $R_g = 96.8$   
 $CIE R_a = 70.2$   
 $R_g = -35.1$



**Color Vector Graphics**



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

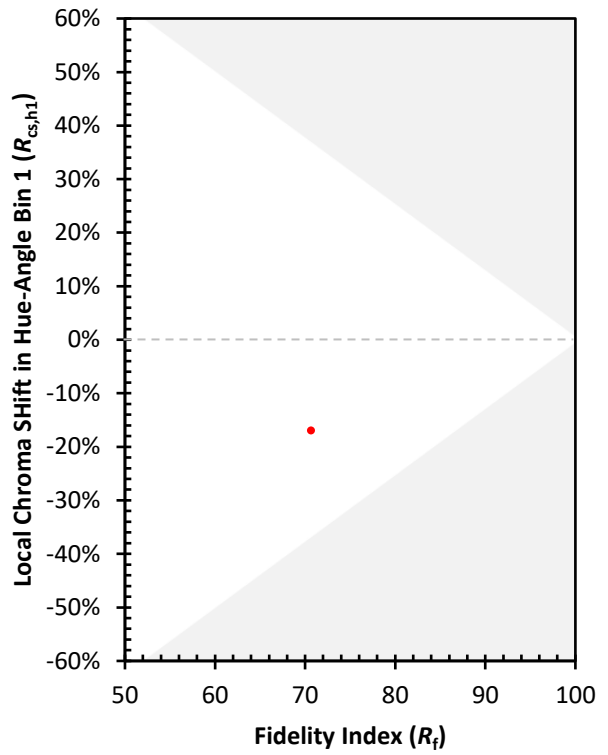
|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 53 | CES51 = 87 | CES76 = 42 |
| CES02 = 59 | CES27 = 78 | CES52 = 88 | CES77 = 64 |
| CES03 = 30 | CES28 = 76 | CES53 = 74 | CES78 = 45 |
| CES04 = 69 | CES29 = 48 | CES54 = 80 | CES79 = 74 |
| CES05 = 46 | CES30 = 56 | CES55 = 79 | CES80 = 71 |
| CES06 = 50 | CES31 = 54 | CES56 = 68 | CES81 = 72 |
| CES07 = 39 | CES32 = 50 | CES57 = 65 | CES82 = 88 |
| CES08 = 38 | CES33 = 60 | CES58 = 67 | CES83 = 82 |
| CES09 = 29 | CES34 = 62 | CES59 = 87 | CES84 = 87 |
| CES10 = 72 | CES35 = 79 | CES60 = 91 | CES85 = 84 |
| CES11 = 56 | CES36 = 90 | CES61 = 87 | CES86 = 74 |
| CES12 = 61 | CES37 = 72 | CES62 = 79 | CES87 = 75 |
| CES13 = 41 | CES38 = 66 | CES63 = 72 | CES88 = 76 |
| CES14 = 74 | CES39 = 91 | CES64 = 70 | CES89 = 74 |
| CES15 = 70 | CES40 = 83 | CES65 = 63 | CES90 = 73 |
| CES16 = 46 | CES41 = 83 | CES66 = 64 | CES91 = 92 |
| CES17 = 49 | CES42 = 70 | CES67 = 62 | CES92 = 67 |
| CES18 = 55 | CES43 = 68 | CES68 = 69 | CES93 = 81 |
| CES19 = 71 | CES44 = 98 | CES69 = 80 | CES94 = 56 |
| CES20 = 64 | CES45 = 78 | CES70 = 56 | CES95 = 71 |
| CES21 = 85 | CES46 = 77 | CES71 = 53 | CES96 = 77 |
| CES22 = 77 | CES47 = 73 | CES72 = 84 | CES97 = 82 |
| CES23 = 91 | CES48 = 65 | CES73 = 46 | CES98 = 71 |
| CES24 = 90 | CES49 = 76 | CES74 = 94 | CES99 = 59 |
| CES25 = 71 | CES50 = 85 | CES75 = 49 |            |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)