

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: P1458167

Luminaire Tested: GLAN-SB1A-730-U-T3LG-HSS

Issue Date: 05/20/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1458167  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 5/21/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: STREETWORKS  
Catalog Number: GLAN-SB1A-730-U-T3LG-HSS  
Description: GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 350mA 1xLight Square  
PACKAGE 70CRI 3000K FIXTURE w/ TYPE III LOW GLARE WITH HOUSE SIDE SHIELD  
Light Source: (26) 3000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

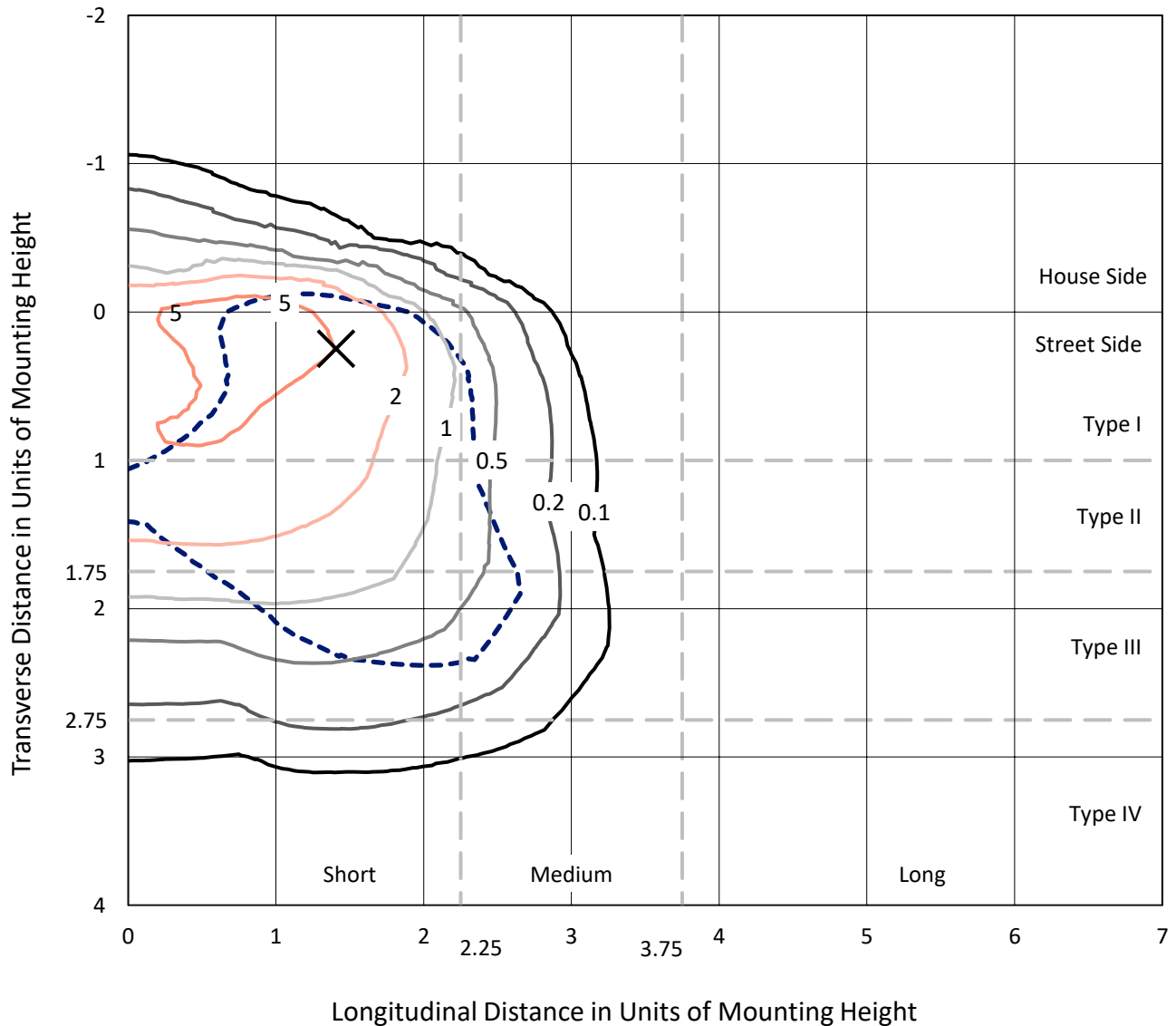
Lumens per Lamp: N/A  
Luminaire Lumens: 3428.9 lumens  
Efficiency: N/A  
Efficacy: 111.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G1

Input Watts (W): 30.9  
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: P1458167  
 CATALOG NUMBER: GLAN-SB1A-730-U-T3LG-HSS

### Iso-Footcandle Lines of Horizontal Illumination

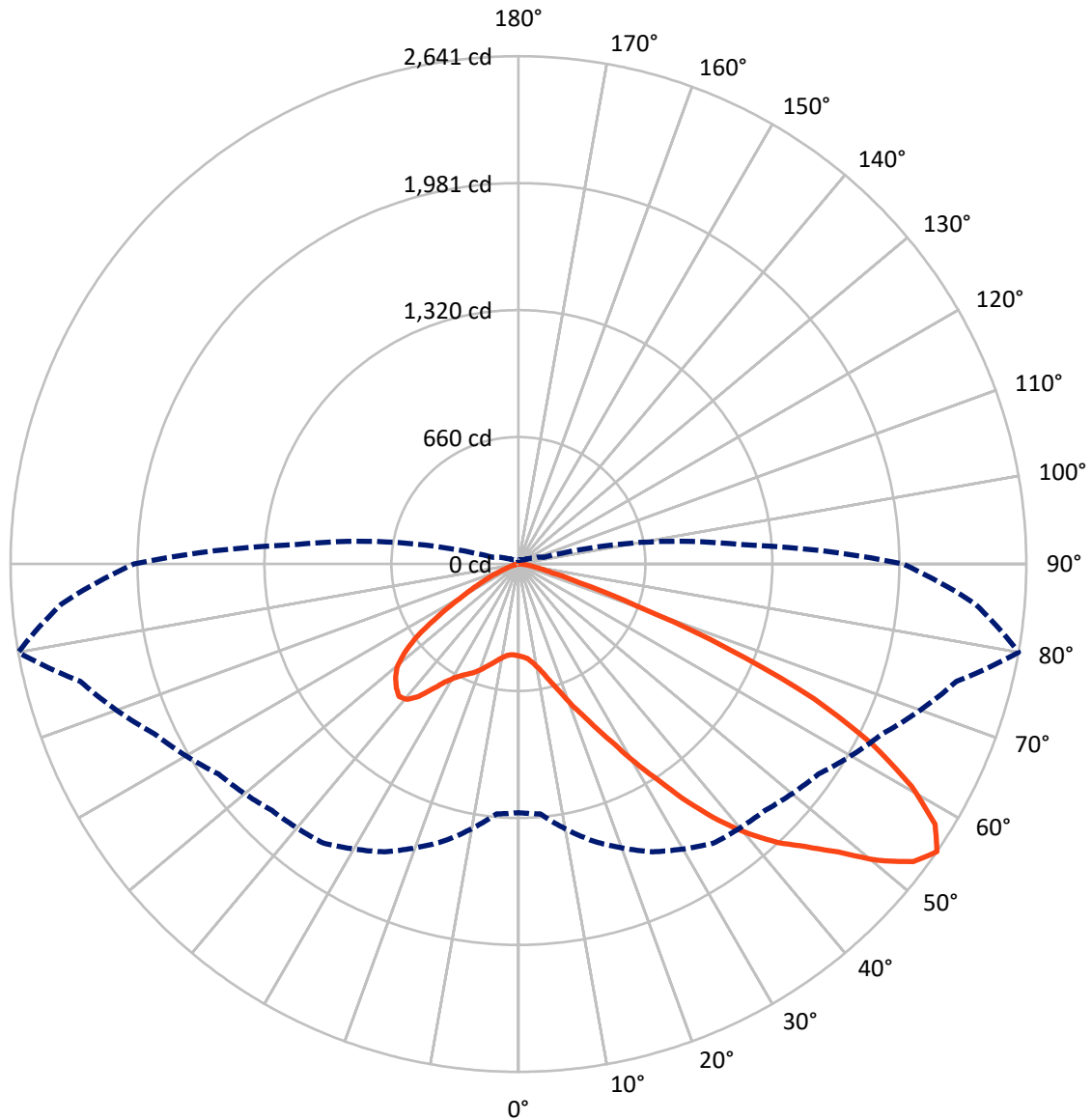
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.5 fc  
 Type III - Short - N/A

REPORT NUMBER: P1458167  
CATALOG NUMBER: GLAN-SB1A-730-U-T3LG-HSS

### Luminous Intensity Polar Plot



— Vertical Plane Through 80-Deg Lateral    - - - Horizontal Cone Through 55-Deg Vertical

REPORT NUMBER: P1458167

CATALOG NUMBER: GLAN-SB1A-730-U-T3LG-HSS

**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 416.8    | 0.0    | 416.8  |
|                    | % Fixture | 12.2     | 0.0    | 12.2   |
| <b>Street Side</b> | Lumens    | 3012.1   | 0.0    | 3012.1 |
|                    | % Fixture | 87.8     | 0.0    | 87.8   |
| <b>Total</b>       | Lumens    | 3428.9   | 0.0    | 3428.9 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 40.1   | 1.2       |
| 10°-20°   | 105.7  | 3.1       |
| 20°-30°   | 206.9  | 6.0       |
| 30°-40°   | 420.9  | 12.3      |
| 40°-50°   | 709.6  | 20.7      |
| 50°-60°   | 906.6  | 26.4      |
| 60°-70°   | 774.0  | 22.6      |
| 70°-80°   | 247.3  | 7.2       |
| 80°-90°   | 17.9   | 0.5       |
| 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°    | 3428.9 | 100.0     |
| 0°-180°   | 3428.9 | 100.0     |



REPORT NUMBER: P1458167

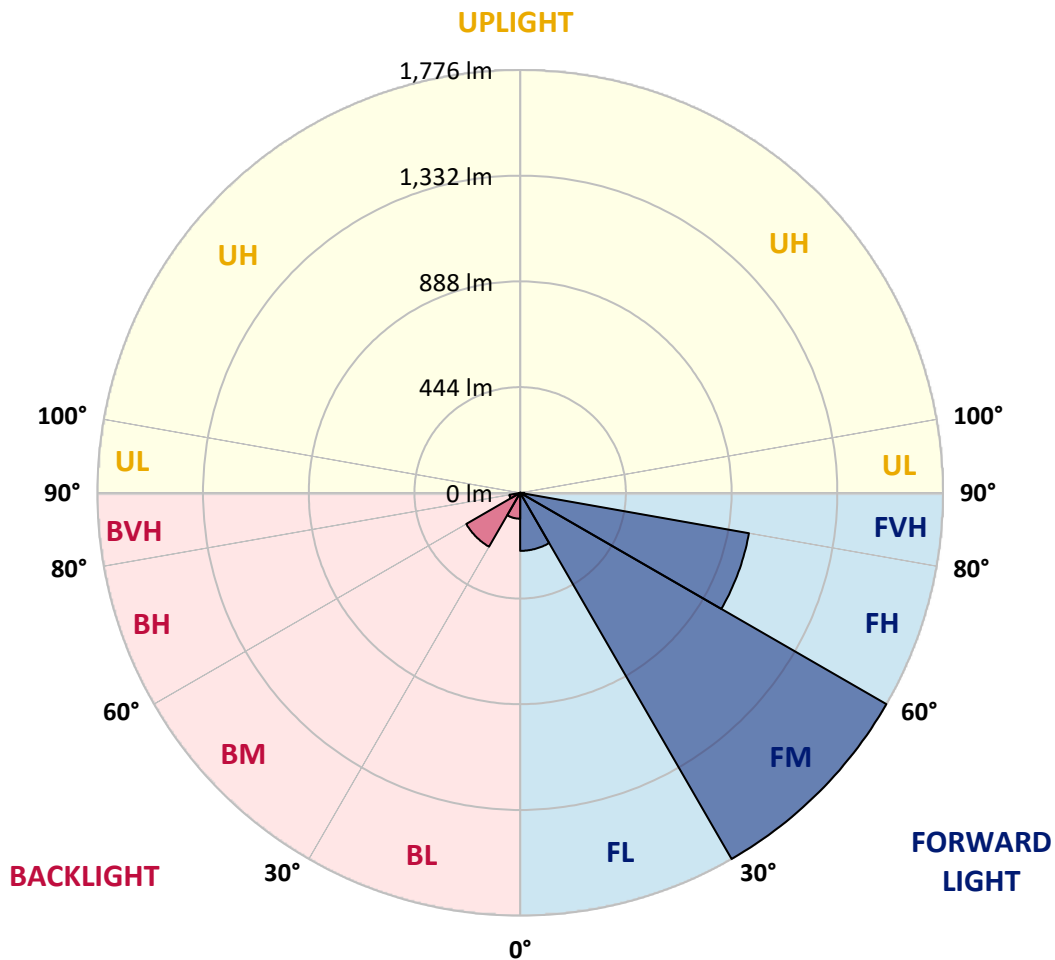
CATALOG NUMBER: GLAN-SB1A-730-U-T3LG-HSS

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 243.8  | 7.1       |                         |      |         |
| FM   | (30°-60°)   | 1775.8 | 51.8      |                         |      |         |
| FH   | (60°-80°)   | 975.6  | 28.5      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 16.9   | 0.5       |                         |      | G1/100  |
| BL   | (0°-30°)    | 108.8  | 3.2       | B0/110                  |      |         |
| BM   | (30°-60°)   | 261.2  | 7.6       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 45.8   | 1.3       | B0/110                  |      | G0/110  |
| BVH  | (80°-90°)   | 0.9    | 0.0       |                         |      | G0/10   |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G1**

Type III Short





REPORT NUMBER: P1458167

CATALOG NUMBER: GLAN-SB1A-730-U-T3LG-HSS

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 80°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 477.6  | 477.6  | 477.6  | 477.6  | 477.6  | 477.6  | 477.6  | 477.6  | 477.6  | 477.6  | 477.6  |
| 2.5°  | 480.6  | 481.5  | 480.6  | 481.5  | 483.5  | 482.5  | 486.4  | 485.4  | 485.4  | 484.5  | 480.6  |
| 5°    | 453.3  | 454.2  | 456.2  | 461.1  | 467.9  | 474.7  | 483.5  | 489.3  | 495.2  | 494.2  | 490.3  |
| 7.5°  | 399.7  | 401.6  | 409.4  | 419.2  | 441.6  | 462.0  | 484.5  | 499.1  | 511.8  | 515.7  | 512.7  |
| 10°   | 369.4  | 371.4  | 376.3  | 386.0  | 406.5  | 440.6  | 484.5  | 514.7  | 537.1  | 544.9  | 545.9  |
| 12.5° | 366.5  | 367.5  | 371.4  | 382.1  | 399.7  | 428.9  | 483.5  | 535.2  | 573.2  | 584.9  | 588.8  |
| 15°   | 368.5  | 370.4  | 374.3  | 383.1  | 403.6  | 436.7  | 491.3  | 567.3  | 620.9  | 637.5  | 638.5  |
| 17.5° | 376.3  | 378.2  | 383.1  | 392.8  | 415.3  | 457.2  | 515.7  | 600.5  | 678.4  | 697.0  | 707.7  |
| 20°   | 391.9  | 392.8  | 398.7  | 411.4  | 436.7  | 482.5  | 551.7  | 645.3  | 747.7  | 775.0  | 782.8  |
| 22.5° | 412.3  | 415.3  | 423.1  | 438.7  | 470.8  | 517.6  | 601.4  | 699.9  | 823.7  | 852.0  | 865.6  |
| 25°   | 434.8  | 438.7  | 450.3  | 475.7  | 516.6  | 571.2  | 662.9  | 772.0  | 913.4  | 947.5  | 966.0  |
| 27.5° | 480.6  | 481.5  | 489.3  | 521.5  | 574.1  | 641.4  | 740.8  | 864.6  | 1018.6 | 1058.6 | 1079.1 |
| 30°   | 581.0  | 581.9  | 575.1  | 583.9  | 637.5  | 724.3  | 832.5  | 972.8  | 1141.5 | 1197.0 | 1213.6 |
| 32.5° | 703.8  | 708.7  | 707.7  | 701.8  | 726.2  | 807.1  | 941.6  | 1102.5 | 1285.7 | 1344.2 | 1359.8 |
| 35°   | 843.2  | 854.9  | 852.0  | 850.0  | 852.9  | 913.4  | 1066.4 | 1245.8 | 1449.5 | 1520.7 | 1533.3 |
| 37.5° | 979.7  | 982.6  | 996.2  | 1012.8 | 1014.7 | 1056.7 | 1210.7 | 1397.8 | 1601.6 | 1692.2 | 1711.7 |
| 40°   | 1084.9 | 1094.7 | 1128.8 | 1161.9 | 1196.1 | 1229.2 | 1329.6 | 1520.7 | 1722.4 | 1844.3 | 1853.1 |
| 42.5° | 1166.8 | 1190.2 | 1239.9 | 1291.6 | 1360.8 | 1397.8 | 1442.7 | 1607.4 | 1820.9 | 1979.8 | 1975.9 |
| 45°   | 1266.2 | 1276.0 | 1346.2 | 1414.4 | 1484.6 | 1541.1 | 1540.2 | 1680.5 | 1897.9 | 2095.8 | 2071.4 |
| 47.5° | 1333.5 | 1345.2 | 1440.7 | 1520.7 | 1592.8 | 1621.1 | 1626.9 | 1759.5 | 2004.2 | 2236.2 | 2178.6 |
| 50°   | 1369.6 | 1390.0 | 1494.3 | 1595.7 | 1673.7 | 1682.5 | 1708.8 | 1862.8 | 2143.5 | 2422.3 | 2314.1 |
| 52.5° | 1373.5 | 1393.0 | 1512.9 | 1643.5 | 1728.3 | 1745.8 | 1790.7 | 1979.8 | 2279.0 | 2571.5 | 2392.1 |
| 55°   | 1292.6 | 1304.3 | 1490.4 | 1651.3 | 1771.2 | 1812.1 | 1903.7 | 2088.0 | 2358.0 | 2640.7 | 2385.3 |
| 57.5° | 1216.5 | 1228.2 | 1390.0 | 1637.6 | 1815.0 | 1898.9 | 2024.6 | 2162.1 | 2296.6 | 2554.9 | 2233.2 |
| 60°   | 1151.2 | 1157.1 | 1304.3 | 1574.3 | 1831.6 | 1983.7 | 2128.9 | 2089.0 | 2137.7 | 2349.2 | 1973.0 |
| 62.5° | 1028.4 | 1032.3 | 1206.8 | 1460.2 | 1798.5 | 2049.0 | 2165.0 | 1934.0 | 1963.2 | 2065.6 | 1666.9 |
| 65°   | 776.9  | 791.5  | 951.4  | 1374.4 | 1743.9 | 2079.2 | 2081.2 | 1744.9 | 1714.6 | 1690.3 | 1311.1 |
| 67.5° | 527.4  | 543.9  | 640.4  | 1236.0 | 1655.2 | 2091.9 | 1918.4 | 1500.2 | 1306.2 | 1180.5 | 858.8  |
| 70°   | 421.1  | 421.1  | 454.2  | 993.3  | 1444.6 | 1930.1 | 1716.6 | 1132.7 | 829.5  | 652.1  | 460.1  |
| 72.5° | 276.8  | 277.8  | 309.0  | 630.7  | 1024.5 | 1471.9 | 1399.8 | 655.1  | 430.9  | 332.4  | 227.1  |
| 75°   | 100.4  | 100.4  | 135.5  | 252.5  | 542.0  | 876.3  | 852.9  | 312.9  | 233.9  | 181.3  | 137.4  |
| 77.5° | 53.6   | 55.6   | 65.3   | 104.3  | 207.6  | 356.8  | 333.4  | 159.9  | 132.6  | 113.1  | 85.8   |
| 80°   | 36.1   | 37.0   | 43.9   | 64.3   | 100.4  | 137.4  | 107.2  | 89.7   | 89.7   | 76.0   | 57.5   |
| 82.5° | 19.5   | 20.5   | 29.2   | 41.9   | 53.6   | 64.3   | 51.7   | 52.6   | 63.4   | 51.7   | 33.1   |
| 85°   | 13.6   | 13.6   | 22.4   | 30.2   | 30.2   | 31.2   | 22.4   | 33.1   | 37.0   | 32.2   | 22.4   |
| 87.5° | 7.8    | 7.8    | 12.7   | 14.6   | 14.6   | 13.6   | 6.8    | 11.7   | 14.6   | 16.6   | 9.7    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |



REPORT NUMBER: P1458167

CATALOG NUMBER: GLAN-SB1A-730-U-T3LG-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°  | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 477.6  | 477.6  | 477.6 | 477.6 | 477.6 | 477.6 | 477.6 | 477.6 | 477.6 | 477.6 | 477.6 |
| 2.5°  | 479.6  | 476.7  | 470.8 | 459.1 | 453.3 | 445.5 | 438.7 | 429.9 | 427.9 | 427.0 | 423.1 |
| 5°    | 487.4  | 481.5  | 464.0 | 438.7 | 417.2 | 396.7 | 376.3 | 364.6 | 354.8 | 349.9 | 349.0 |
| 7.5°  | 506.9  | 495.2  | 463.0 | 418.2 | 378.2 | 343.1 | 312.9 | 286.6 | 272.9 | 261.2 | 262.2 |
| 10°   | 536.1  | 517.6  | 465.0 | 398.7 | 339.2 | 282.7 | 238.8 | 200.8 | 173.5 | 160.8 | 159.9 |
| 12.5° | 575.1  | 548.8  | 471.8 | 379.2 | 291.5 | 212.5 | 156.9 | 134.5 | 128.7 | 127.7 | 126.7 |
| 15°   | 622.9  | 585.8  | 478.6 | 353.8 | 227.1 | 147.2 | 127.7 | 122.8 | 121.8 | 120.9 | 120.9 |
| 17.5° | 680.4  | 628.7  | 482.5 | 311.0 | 165.7 | 126.7 | 119.9 | 117.0 | 116.0 | 115.0 | 115.0 |
| 20°   | 752.5  | 676.5  | 487.4 | 256.4 | 140.4 | 121.8 | 114.0 | 110.2 | 109.2 | 109.2 | 108.2 |
| 22.5° | 823.7  | 730.1  | 483.5 | 208.6 | 135.5 | 116.0 | 107.2 | 103.3 | 101.4 | 101.4 | 100.4 |
| 25°   | 905.6  | 784.7  | 471.8 | 188.1 | 134.5 | 111.1 | 100.4 | 94.6  | 91.6  | 90.7  | 90.7  |
| 27.5° | 999.2  | 847.1  | 453.3 | 189.1 | 134.5 | 107.2 | 91.6  | 83.8  | 81.9  | 79.9  | 79.9  |
| 30°   | 1106.4 | 923.1  | 439.6 | 201.8 | 136.5 | 103.3 | 83.8  | 74.1  | 71.2  | 69.2  | 70.2  |
| 32.5° | 1229.2 | 1007.9 | 438.7 | 222.3 | 139.4 | 97.5  | 75.1  | 64.3  | 61.4  | 60.4  | 61.4  |
| 35°   | 1368.6 | 1113.2 | 461.1 | 237.8 | 131.6 | 84.8  | 64.3  | 55.6  | 52.6  | 52.6  | 53.6  |
| 37.5° | 1523.6 | 1234.1 | 491.3 | 233.9 | 106.3 | 67.3  | 55.6  | 48.7  | 45.8  | 46.8  | 47.8  |
| 40°   | 1664.9 | 1328.6 | 496.2 | 199.8 | 79.9  | 57.5  | 47.8  | 42.9  | 40.9  | 41.9  | 42.9  |
| 42.5° | 1772.2 | 1404.7 | 449.4 | 155.0 | 67.3  | 48.7  | 40.9  | 37.0  | 36.1  | 38.0  | 38.0  |
| 45°   | 1858.9 | 1434.9 | 375.3 | 115.0 | 59.5  | 41.9  | 36.1  | 34.1  | 32.2  | 33.1  | 33.1  |
| 47.5° | 1949.6 | 1439.8 | 306.1 | 92.6  | 52.6  | 38.0  | 33.1  | 31.2  | 29.2  | 29.2  | 29.2  |
| 50°   | 2037.3 | 1428.1 | 233.9 | 81.9  | 48.7  | 34.1  | 30.2  | 28.3  | 26.3  | 25.3  | 25.3  |
| 52.5° | 2058.7 | 1334.5 | 171.6 | 76.0  | 44.8  | 32.2  | 28.3  | 26.3  | 24.4  | 23.4  | 23.4  |
| 55°   | 1999.3 | 1157.1 | 134.5 | 68.2  | 40.9  | 29.2  | 26.3  | 24.4  | 21.4  | 20.5  | 20.5  |
| 57.5° | 1803.3 | 882.2  | 107.2 | 58.5  | 37.0  | 28.3  | 24.4  | 22.4  | 19.5  | 18.5  | 18.5  |
| 60°   | 1548.9 | 625.8  | 86.8  | 47.8  | 34.1  | 25.3  | 22.4  | 19.5  | 17.5  | 15.6  | 15.6  |
| 62.5° | 1267.2 | 449.4  | 70.2  | 40.0  | 32.2  | 22.4  | 20.5  | 17.5  | 13.6  | 10.7  | 10.7  |
| 65°   | 971.9  | 322.7  | 54.6  | 32.2  | 29.2  | 19.5  | 17.5  | 14.6  | 10.7  | 7.8   | 7.8   |
| 67.5° | 628.7  | 208.6  | 40.9  | 28.3  | 22.4  | 16.6  | 13.6  | 11.7  | 9.7   | 6.8   | 5.8   |
| 70°   | 331.4  | 121.8  | 30.2  | 24.4  | 16.6  | 12.7  | 11.7  | 9.7   | 7.8   | 4.9   | 4.9   |
| 72.5° | 171.6  | 79.9   | 22.4  | 21.4  | 12.7  | 8.8   | 9.7   | 7.8   | 5.8   | 2.9   | 2.9   |
| 75°   | 110.2  | 53.6   | 16.6  | 17.5  | 7.8   | 6.8   | 6.8   | 4.9   | 2.9   | 1.9   | 1.0   |
| 77.5° | 71.2   | 36.1   | 11.7  | 14.6  | 4.9   | 3.9   | 3.9   | 1.9   | 1.0   | 0.0   | 0.0   |
| 80°   | 41.9   | 22.4   | 7.8   | 9.7   | 1.9   | 1.9   | 1.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 82.5° | 21.4   | 11.7   | 3.9   | 3.9   | 1.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 85°   | 13.6   | 5.8    | 1.0   | 1.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 87.5° | 6.8    | 1.9    | 1.0   | 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: SP1-2407-184-4

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-730-U-5WQ

Data in this report applies to families of products including GSS-SB1A-730-U-5WQ

**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2407-184-4  
 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-730-U-5WQ**  
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 3000K CCT 26 LEDS

**Spectral Parameters**

CCT (K): 2985  
 CIE u': 0.2504  
 CIE v': 0.5243  
 Duv: 0.0019  
 CIE x: 0.4408  
 CIE y: 0.4101  
 CIE z: 0.1491  
 Peak Wavelength (nm): 595  
 Dominant Wavelength (nm): 582  
 Purity: 55.41818  
 Rf: 73.8  
 Rg: 94.4

|           |      |      |       |
|-----------|------|------|-------|
| CRI (Ra): | 70.8 |      |       |
| R1:       | 66.3 | R9:  | -43.2 |
| R2:       | 80.6 | R10: | 57.6  |
| R3:       | 94.5 | R11: | 64.8  |
| R4:       | 68.2 | R12: | 53.5  |
| R5:       | 66.5 | R13: | 68.7  |
| R6:       | 74.7 | R14: | 97.0  |
| R7:       | 76.2 | R15: | 56.4  |
| R8:       | 39.6 |      |       |



**Test Conditions**

Stabilization Time: 36M  
 Operation Time: 1H 36M  
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-4

| 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: SP1-2407-184-4

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-4

**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    | 142                      | NR            | 620    | 803                      | NR            | 750    | 17                       | NR            | 880    | 0                        | NR            |
| 365    | 0                        | NR            | 495    | 189                      | NR            | 625    | 734                      | NR            | 755    | 15                       | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 240                      | NR            | 630    | 670                      | NR            | 760    | 13                       | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 290                      | NR            | 635    | 600                      | NR            | 765    | 11                       | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 335                      | NR            | 640    | 535                      | NR            | 770    | 9                        | NR            | 900    | 0                        | NR            |
| 385    | 0                        | NR            | 515    | 375                      | NR            | 645    | 473                      | NR            | 775    | 8                        | NR            | 905    | 0                        | NR            |
| 390    | 1                        | NR            | 520    | 408                      | NR            | 650    | 415                      | NR            | 780    | 7                        | NR            | 910    | 0                        | NR            |
| 395    | 2                        | NR            | 525    | 434                      | NR            | 655    | 362                      | NR            | 785    | 6                        | NR            | 915    | 0                        | NR            |
| 400    | 4                        | NR            | 530    | 461                      | NR            | 660    | 313                      | NR            | 790    | 5                        | NR            | 920    | 0                        | NR            |
| 405    | 8                        | NR            | 535    | 486                      | NR            | 665    | 271                      | NR            | 795    | 4                        | NR            | 925    | 0                        | NR            |
| 410    | 16                       | NR            | 540    | 514                      | NR            | 670    | 231                      | NR            | 800    | 4                        | NR            | 930    | 0                        | NR            |
| 415    | 33                       | NR            | 545    | 549                      | NR            | 675    | 198                      | NR            | 805    | 3                        | NR            | 935    | 0                        | NR            |
| 420    | 69                       | NR            | 550    | 591                      | NR            | 680    | 169                      | NR            | 810    | 3                        | NR            | 940    | 0                        | NR            |
| 425    | 131                      | NR            | 555    | 640                      | NR            | 685    | 144                      | NR            | 815    | 2                        | NR            | 945    | 0                        | NR            |
| 430    | 227                      | NR            | 560    | 695                      | NR            | 690    | 123                      | NR            | 820    | 2                        | NR            | 950    | 0                        | NR            |
| 435    | 369                      | NR            | 565    | 757                      | NR            | 695    | 104                      | NR            | 825    | 2                        | NR            | 955    | 0                        | NR            |
| 440    | 517                      | NR            | 570    | 822                      | NR            | 700    | 88                       | NR            | 830    | 2                        | NR            | 960    | 0                        | NR            |
| 445    | 498                      | NR            | 575    | 882                      | NR            | 705    | 75                       | NR            | 835    | 1                        | NR            | 965    | 0                        | NR            |
| 450    | 315                      | NR            | 580    | 935                      | NR            | 710    | 63                       | NR            | 840    | 1                        | NR            | 970    | 0                        | NR            |
| 455    | 204                      | NR            | 585    | 972                      | NR            | 715    | 54                       | NR            | 845    | 1                        | NR            | 975    | 0                        | NR            |
| 460    | 145                      | NR            | 590    | 996                      | NR            | 720    | 46                       | NR            | 850    | 1                        | NR            | 980    | 0                        | NR            |
| 465    | 100                      | NR            | 595    | 1000                     | NR            | 725    | 39                       | NR            | 855    | 1                        | NR            | 985    | 0                        | NR            |
| 470    | 78                       | NR            | 600    | 989                      | NR            | 730    | 33                       | NR            | 860    | 1                        | NR            | 990    | 0                        | NR            |
| 475    | 76                       | NR            | 605    | 960                      | NR            | 735    | 28                       | NR            | 865    | 1                        | NR            | 995    | 0                        | NR            |
| 480    | 83                       | NR            | 610    | 918                      | NR            | 740    | 24                       | NR            | 870    | 1                        | NR            | 1000   | 0                        | NR            |
| 485    | 105                      | NR            | 615    | 864                      | NR            | 745    | 20                       | NR            | 875    | 1                        | NR            |        |                          |               |

REPORT NUMBER: SP1-2407-184-4

**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 1.19**

| 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    | 142                      | NR            | 620    | 803                      | NR            | 750    | 17                       | NR            | 880    | 0                        | NR            |
| 365    | 0                        | NR            | 495    | 189                      | NR            | 625    | 734                      | NR            | 755    | 15                       | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 240                      | NR            | 630    | 670                      | NR            | 760    | 13                       | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 290                      | NR            | 635    | 600                      | NR            | 765    | 11                       | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 335                      | NR            | 640    | 535                      | NR            | 770    | 9                        | NR            | 900    | 0                        | NR            |
| 385    | 0                        | NR            | 515    | 375                      | NR            | 645    | 473                      | NR            | 775    | 8                        | NR            | 905    | 0                        | NR            |
| 390    | 1                        | NR            | 520    | 408                      | NR            | 650    | 415                      | NR            | 780    | 7                        | NR            | 910    | 0                        | NR            |
| 395    | 2                        | NR            | 525    | 434                      | NR            | 655    | 362                      | NR            | 785    | 6                        | NR            | 915    | 0                        | NR            |
| 400    | 4                        | NR            | 530    | 461                      | NR            | 660    | 313                      | NR            | 790    | 5                        | NR            | 920    | 0                        | NR            |
| 405    | 8                        | NR            | 535    | 486                      | NR            | 665    | 271                      | NR            | 795    | 4                        | NR            | 925    | 0                        | NR            |
| 410    | 16                       | NR            | 540    | 514                      | NR            | 670    | 231                      | NR            | 800    | 4                        | NR            | 930    | 0                        | NR            |
| 415    | 33                       | NR            | 545    | 549                      | NR            | 675    | 198                      | NR            | 805    | 3                        | NR            | 935    | 0                        | NR            |
| 420    | 69                       | NR            | 550    | 591                      | NR            | 680    | 169                      | NR            | 810    | 3                        | NR            | 940    | 0                        | NR            |
| 425    | 131                      | NR            | 555    | 640                      | NR            | 685    | 144                      | NR            | 815    | 2                        | NR            | 945    | 0                        | NR            |
| 430    | 227                      | NR            | 560    | 695                      | NR            | 690    | 123                      | NR            | 820    | 2                        | NR            | 950    | 0                        | NR            |
| 435    | 369                      | NR            | 565    | 757                      | NR            | 695    | 104                      | NR            | 825    | 2                        | NR            | 955    | 0                        | NR            |
| 440    | 517                      | NR            | 570    | 822                      | NR            | 700    | 88                       | NR            | 830    | 2                        | NR            | 960    | 0                        | NR            |
| 445    | 498                      | NR            | 575    | 882                      | NR            | 705    | 75                       | NR            | 835    | 1                        | NR            | 965    | 0                        | NR            |
| 450    | 315                      | NR            | 580    | 935                      | NR            | 710    | 63                       | NR            | 840    | 1                        | NR            | 970    | 0                        | NR            |
| 455    | 204                      | NR            | 585    | 972                      | NR            | 715    | 54                       | NR            | 845    | 1                        | NR            | 975    | 0                        | NR            |
| 460    | 145                      | NR            | 590    | 996                      | NR            | 720    | 46                       | NR            | 850    | 1                        | NR            | 980    | 0                        | NR            |
| 465    | 100                      | NR            | 595    | 1000                     | NR            | 725    | 39                       | NR            | 855    | 1                        | NR            | 985    | 0                        | NR            |
| 470    | 78                       | NR            | 600    | 989                      | NR            | 730    | 33                       | NR            | 860    | 1                        | NR            | 990    | 0                        | NR            |
| 475    | 76                       | NR            | 605    | 960                      | NR            | 735    | 28                       | NR            | 865    | 1                        | NR            | 995    | 0                        | NR            |
| 480    | 83                       | NR            | 610    | 918                      | NR            | 740    | 24                       | NR            | 870    | 1                        | NR            | 1000   | 0                        | NR            |
| 485    | 105                      | NR            | 615    | 864                      | NR            | 745    | 20                       | NR            | 875    | 1                        | NR            |        |                          |               |

REPORT NUMBER: SP1-2407-184-4

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.13

| 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    | 142                      | NR            | 620    | 803                      | NR            | 750    | 17                       | NR            | 880    | 0                        | NR            |
| 365    | 0                        | NR            | 495    | 189                      | NR            | 625    | 734                      | NR            | 755    | 15                       | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 240                      | NR            | 630    | 670                      | NR            | 760    | 13                       | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 290                      | NR            | 635    | 600                      | NR            | 765    | 11                       | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 335                      | NR            | 640    | 535                      | NR            | 770    | 9                        | NR            | 900    | 0                        | NR            |
| 385    | 0                        | NR            | 515    | 375                      | NR            | 645    | 473                      | NR            | 775    | 8                        | NR            | 905    | 0                        | NR            |
| 390    | 1                        | NR            | 520    | 408                      | NR            | 650    | 415                      | NR            | 780    | 7                        | NR            | 910    | 0                        | NR            |
| 395    | 2                        | NR            | 525    | 434                      | NR            | 655    | 362                      | NR            | 785    | 6                        | NR            | 915    | 0                        | NR            |
| 400    | 4                        | NR            | 530    | 461                      | NR            | 660    | 313                      | NR            | 790    | 5                        | NR            | 920    | 0                        | NR            |
| 405    | 8                        | NR            | 535    | 486                      | NR            | 665    | 271                      | NR            | 795    | 4                        | NR            | 925    | 0                        | NR            |
| 410    | 16                       | NR            | 540    | 514                      | NR            | 670    | 231                      | NR            | 800    | 4                        | NR            | 930    | 0                        | NR            |
| 415    | 33                       | NR            | 545    | 549                      | NR            | 675    | 198                      | NR            | 805    | 3                        | NR            | 935    | 0                        | NR            |
| 420    | 69                       | NR            | 550    | 591                      | NR            | 680    | 169                      | NR            | 810    | 3                        | NR            | 940    | 0                        | NR            |
| 425    | 131                      | NR            | 555    | 640                      | NR            | 685    | 144                      | NR            | 815    | 2                        | NR            | 945    | 0                        | NR            |
| 430    | 227                      | NR            | 560    | 695                      | NR            | 690    | 123                      | NR            | 820    | 2                        | NR            | 950    | 0                        | NR            |
| 435    | 369                      | NR            | 565    | 757                      | NR            | 695    | 104                      | NR            | 825    | 2                        | NR            | 955    | 0                        | NR            |
| 440    | 517                      | NR            | 570    | 822                      | NR            | 700    | 88                       | NR            | 830    | 2                        | NR            | 960    | 0                        | NR            |
| 445    | 498                      | NR            | 575    | 882                      | NR            | 705    | 75                       | NR            | 835    | 1                        | NR            | 965    | 0                        | NR            |
| 450    | 315                      | NR            | 580    | 935                      | NR            | 710    | 63                       | NR            | 840    | 1                        | NR            | 970    | 0                        | NR            |
| 455    | 204                      | NR            | 585    | 972                      | NR            | 715    | 54                       | NR            | 845    | 1                        | NR            | 975    | 0                        | NR            |
| 460    | 145                      | NR            | 590    | 996                      | NR            | 720    | 46                       | NR            | 850    | 1                        | NR            | 980    | 0                        | NR            |
| 465    | 100                      | NR            | 595    | 1000                     | NR            | 725    | 39                       | NR            | 855    | 1                        | NR            | 985    | 0                        | NR            |
| 470    | 78                       | NR            | 600    | 989                      | NR            | 730    | 33                       | NR            | 860    | 1                        | NR            | 990    | 0                        | NR            |
| 475    | 76                       | NR            | 605    | 960                      | NR            | 735    | 28                       | NR            | 865    | 1                        | NR            | 995    | 0                        | NR            |
| 480    | 83                       | NR            | 610    | 918                      | NR            | 740    | 24                       | NR            | 870    | 1                        | NR            | 1000   | 0                        | NR            |
| 485    | 105                      | NR            | 615    | 864                      | NR            | 745    | 20                       | NR            | 875    | 1                        | NR            |        |                          |               |

**Summary**

$R_f = 73.8$   
 $R_g = 94.4$   
 $CIE R_a = 70.8$   
 $R_g = -43.2$



**Color Vector Graphics**



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

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 63 | CES51 = 86 | CES76 = 61 |
| CES02 = 62 | CES27 = 83 | CES52 = 86 | CES77 = 81 |
| CES03 = 31 | CES28 = 86 | CES53 = 75 | CES78 = 64 |
| CES04 = 71 | CES29 = 58 | CES54 = 81 | CES79 = 86 |
| CES05 = 49 | CES30 = 61 | CES55 = 80 | CES80 = 86 |
| CES06 = 51 | CES31 = 63 | CES56 = 71 | CES81 = 70 |
| CES07 = 41 | CES32 = 61 | CES57 = 69 | CES82 = 94 |
| CES08 = 40 | CES33 = 65 | CES58 = 72 | CES83 = 88 |
| CES09 = 29 | CES34 = 77 | CES59 = 85 | CES84 = 90 |
| CES10 = 76 | CES35 = 88 | CES60 = 93 | CES85 = 80 |
| CES11 = 59 | CES36 = 89 | CES61 = 86 | CES86 = 60 |
| CES12 = 65 | CES37 = 85 | CES62 = 81 | CES87 = 78 |
| CES13 = 43 | CES38 = 69 | CES63 = 73 | CES88 = 75 |
| CES14 = 74 | CES39 = 93 | CES64 = 72 | CES89 = 66 |
| CES15 = 71 | CES40 = 89 | CES65 = 67 | CES90 = 72 |
| CES16 = 47 | CES41 = 83 | CES66 = 70 | CES91 = 95 |
| CES17 = 50 | CES42 = 87 | CES67 = 68 | CES92 = 59 |
| CES18 = 56 | CES43 = 77 | CES68 = 73 | CES93 = 76 |
| CES19 = 73 | CES44 = 99 | CES69 = 83 | CES94 = 48 |
| CES20 = 66 | CES45 = 83 | CES70 = 66 | CES95 = 70 |
| CES21 = 87 | CES46 = 77 | CES71 = 66 | CES96 = 76 |
| CES22 = 79 | CES47 = 74 | CES72 = 88 | CES97 = 82 |
| CES23 = 92 | CES48 = 62 | CES73 = 59 | CES98 = 73 |
| CES24 = 91 | CES49 = 77 | CES74 = 93 | CES99 = 60 |
| CES25 = 73 | CES50 = 85 | CES75 = 67 |            |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)