

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P630830

Luminaire Tested: GWS-SA1E-740-U-SL3-W-HSS

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P630830
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-34)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA1E-740-U-SL3-W-HSS
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: (16) 4000K CCT, 70 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6137.3 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

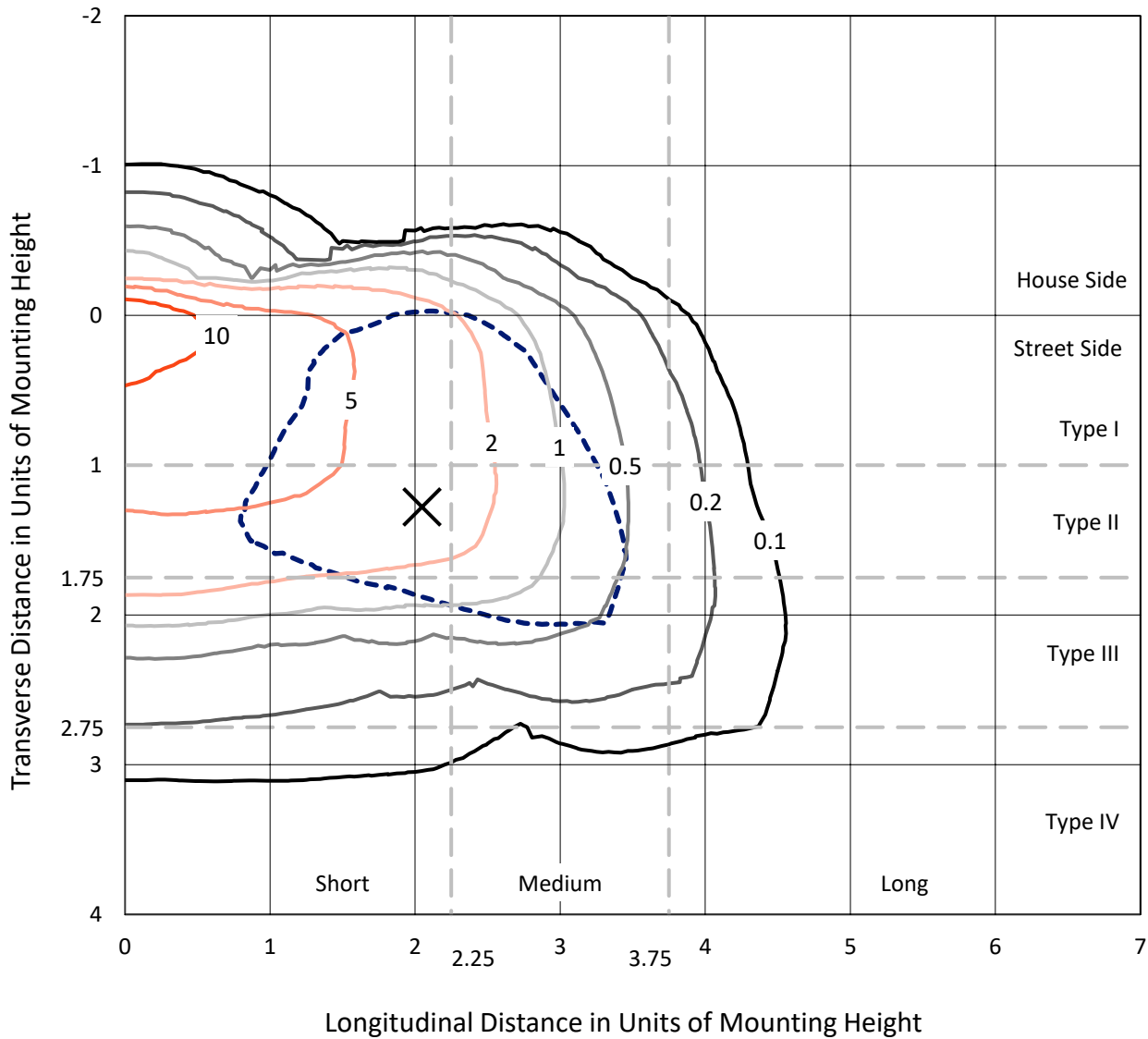
Input Watts (W): 58.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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 CATALOG NUMBER: GWS-SA1E-740-U-SL3-W-HSS

Iso-Footcandle Lines of Horizontal Illumination

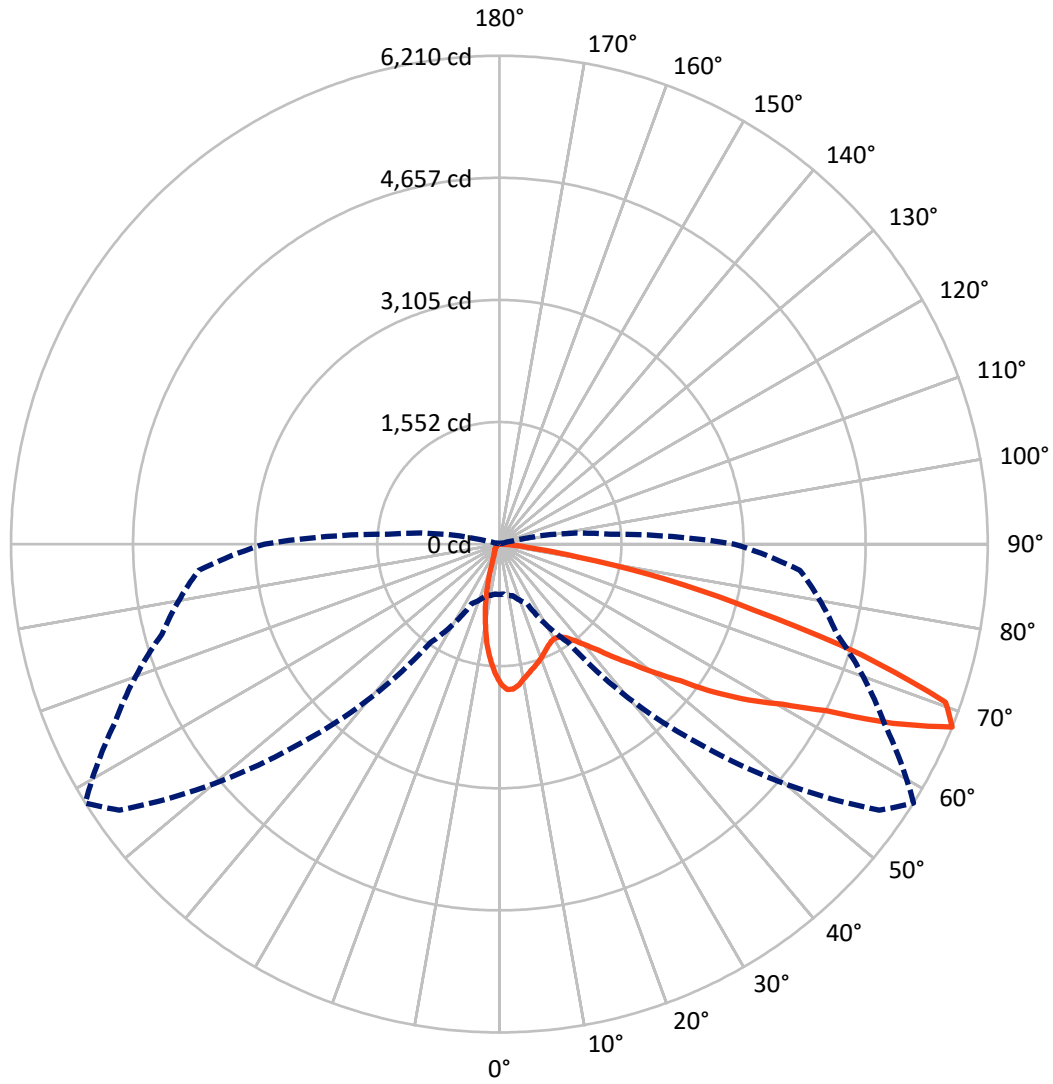
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 17.7 fc
 Type III - Short - N/A

REPORT NUMBER: P630830
CATALOG NUMBER: GWS-SA1E-740-U-SL3-W-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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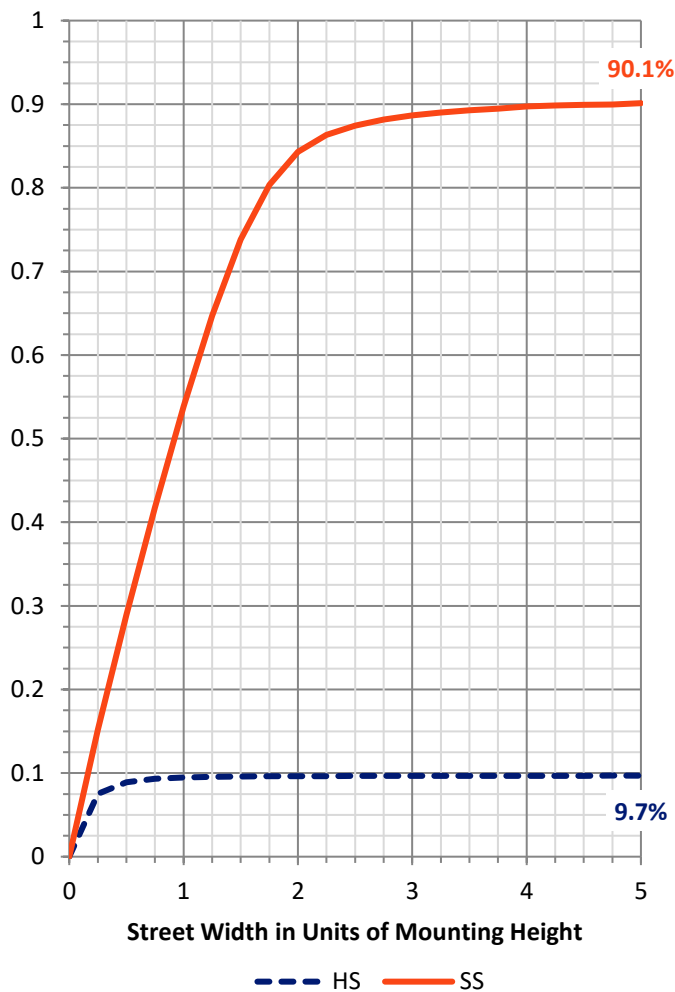
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 599.6 | 0.0 | 599.6 |
| | % Fixture | 9.8 | 0.0 | 9.8 |
| Street Side | Lumens | 5537.7 | 0.0 | 5537.7 |
| | % Fixture | 90.2 | 0.0 | 90.2 |
| Total | Lumens | 6137.3 | 0.0 | 6137.3 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 143.9 | 2.3 |
| 10°-20° | 299.4 | 4.9 |
| 20°-30° | 403.8 | 6.6 |
| 30°-40° | 567.5 | 9.2 |
| 40°-50° | 876.4 | 14.3 |
| 50°-60° | 1401.5 | 22.8 |
| 60°-70° | 1659.4 | 27.0 |
| 70°-80° | 734.1 | 12.0 |
| 80°-90° | 51.3 | 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° | 6137.3 | 100.0 |
| 0°-180° | 6137.3 | 100.0 |

Coefficient of Utilization



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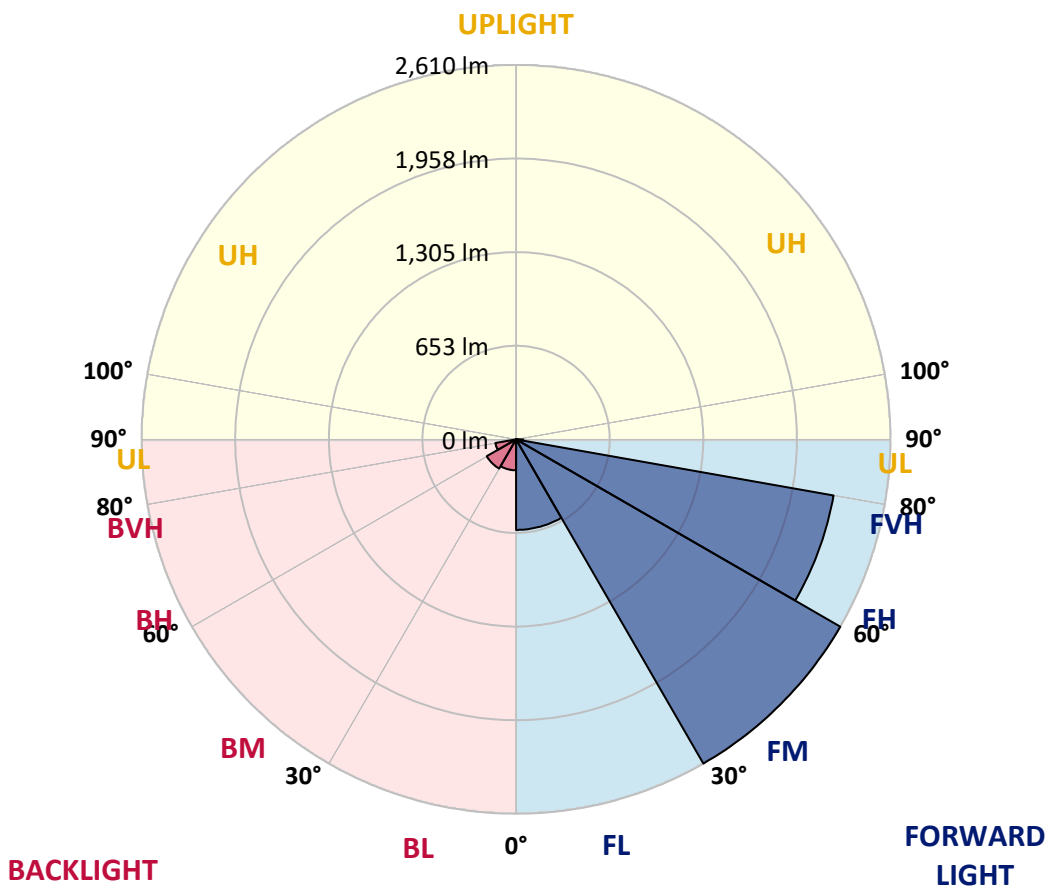
CATALOG NUMBER: GWS-SA1E-740-U-SL3-W-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 631.4 | 10.3 | | | |
| FM (30°-60°) | 2610.1 | 42.5 | | | |
| FH (60°-80°) | 2247.1 | 36.6 | | | G2/5000 |
| FVH (80°-90°) | 49.1 | 0.8 | | | G1/100 |
| BL (0°-30°) | 215.8 | 3.5 | B1/500 | | |
| BM (30°-60°) | 235.3 | 3.8 | B1/1000 | | |
| BH (60°-80°) | 146.4 | 2.4 | B1/500 | | G1/500 |
| BVH (80°-90°) | 2.2 | 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-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 58° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1770.3 | 1770.3 | 1770.3 | 1770.3 | 1770.3 | 1770.3 | 1770.3 | 1770.3 | 1770.3 | 1770.3 | 1770.3 |
| 2.5° | 1862.1 | 1865.3 | 1869.7 | 1875.1 | 1874.0 | 1869.1 | 1863.2 | 1849.6 | 1840.9 | 1813.7 | 1780.6 |
| 5° | 1802.3 | 1801.8 | 1812.7 | 1823.0 | 1841.4 | 1851.2 | 1864.8 | 1852.3 | 1848.0 | 1815.4 | 1761.6 |
| 7.5° | 1685.5 | 1691.5 | 1704.0 | 1720.3 | 1746.9 | 1775.7 | 1808.3 | 1804.5 | 1817.5 | 1795.8 | 1729.0 |
| 10° | 1570.9 | 1567.7 | 1587.2 | 1611.7 | 1652.4 | 1689.3 | 1736.6 | 1736.1 | 1770.3 | 1768.1 | 1692.1 |
| 12.5° | 1470.4 | 1469.9 | 1485.1 | 1512.8 | 1560.6 | 1612.2 | 1676.3 | 1677.9 | 1720.3 | 1737.7 | 1660.6 |
| 15° | 1385.7 | 1386.8 | 1401.5 | 1430.2 | 1479.7 | 1542.7 | 1617.1 | 1630.7 | 1678.5 | 1713.8 | 1629.6 |
| 17.5° | 1325.4 | 1325.9 | 1334.6 | 1359.6 | 1408.0 | 1475.3 | 1565.0 | 1583.4 | 1644.8 | 1695.9 | 1604.6 |
| 20° | 1297.7 | 1295.5 | 1297.2 | 1309.7 | 1347.1 | 1408.5 | 1511.7 | 1535.6 | 1613.8 | 1683.4 | 1581.8 |
| 22.5° | 1301.5 | 1298.2 | 1290.6 | 1289.0 | 1305.9 | 1352.6 | 1455.2 | 1484.6 | 1580.2 | 1675.8 | 1561.2 |
| 25° | 1335.2 | 1328.1 | 1317.3 | 1301.0 | 1294.4 | 1317.8 | 1405.8 | 1436.2 | 1548.7 | 1676.3 | 1545.4 |
| 27.5° | 1386.8 | 1379.2 | 1365.6 | 1343.9 | 1318.3 | 1308.6 | 1372.1 | 1400.9 | 1526.4 | 1688.8 | 1537.8 |
| 30° | 1452.5 | 1446.5 | 1433.5 | 1407.4 | 1373.2 | 1333.0 | 1365.1 | 1389.0 | 1515.5 | 1714.3 | 1541.1 |
| 32.5° | 1530.2 | 1525.8 | 1515.0 | 1491.1 | 1452.0 | 1390.6 | 1389.0 | 1407.4 | 1524.2 | 1751.3 | 1553.5 |
| 35° | 1605.2 | 1606.8 | 1607.3 | 1594.3 | 1552.5 | 1478.0 | 1454.7 | 1461.2 | 1560.1 | 1806.7 | 1581.8 |
| 37.5° | 1686.1 | 1682.3 | 1701.8 | 1711.1 | 1670.9 | 1591.6 | 1556.3 | 1556.8 | 1628.5 | 1888.7 | 1635.0 |
| 40° | 1747.5 | 1748.6 | 1790.9 | 1829.0 | 1812.1 | 1735.5 | 1685.0 | 1684.5 | 1733.9 | 2001.1 | 1720.9 |
| 42.5° | 1805.1 | 1812.1 | 1874.6 | 1939.8 | 1963.1 | 1895.2 | 1858.8 | 1845.2 | 1881.6 | 2153.2 | 1849.6 |
| 45° | 1866.4 | 1876.8 | 1964.2 | 2057.1 | 2118.5 | 2078.3 | 2049.5 | 2054.9 | 2059.3 | 2330.3 | 2022.9 |
| 47.5° | 1938.1 | 1944.7 | 2052.7 | 2183.7 | 2298.3 | 2288.0 | 2289.6 | 2283.1 | 2280.9 | 2553.6 | 2252.1 |
| 50° | 2025.0 | 2040.3 | 2164.6 | 2321.1 | 2477.5 | 2546.0 | 2568.8 | 2571.5 | 2536.2 | 2796.9 | 2489.5 |
| 52.5° | 2209.7 | 2228.2 | 2334.7 | 2471.6 | 2673.1 | 2817.0 | 2909.9 | 2891.4 | 2837.1 | 3032.7 | 2749.7 |
| 55° | 2427.6 | 2441.7 | 2544.3 | 2686.1 | 2912.1 | 3114.2 | 3334.7 | 3327.1 | 3194.0 | 3280.9 | 2963.7 |
| 57.5° | 2448.2 | 2464.0 | 2623.1 | 2840.4 | 3219.0 | 3481.4 | 3713.3 | 3737.8 | 3542.7 | 3456.9 | 3154.9 |
| 60° | 2216.3 | 2248.3 | 2465.6 | 2757.8 | 3336.3 | 3975.1 | 4128.3 | 4133.2 | 3798.6 | 3635.6 | 3388.5 |
| 62.5° | 1776.3 | 1791.5 | 2010.4 | 2391.7 | 3155.4 | 4263.0 | 4762.2 | 4659.0 | 4127.2 | 3912.1 | 3758.4 |
| 65° | 931.0 | 993.0 | 1183.6 | 1605.7 | 2559.0 | 4162.5 | 5524.9 | 5496.6 | 4718.2 | 4308.1 | 4046.3 |
| 67.5° | 638.8 | 638.3 | 683.3 | 837.1 | 1525.8 | 3584.0 | 5899.1 | 6209.9 | 5401.6 | 4443.9 | 3837.7 |
| 70° | 486.2 | 487.8 | 528.0 | 627.9 | 790.4 | 2385.7 | 5488.5 | 6019.7 | 5528.7 | 4034.9 | 3103.8 |
| 72.5° | 322.7 | 325.9 | 392.7 | 507.3 | 631.2 | 1169.5 | 4265.2 | 4816.5 | 4652.0 | 3240.7 | 2184.7 |
| 75° | 192.8 | 195.6 | 243.4 | 368.8 | 561.1 | 654.6 | 2710.0 | 3329.8 | 3202.2 | 2233.6 | 1171.1 |
| 77.5° | 79.3 | 81.5 | 124.9 | 229.8 | 410.7 | 508.4 | 1498.7 | 2178.8 | 1918.0 | 888.1 | 319.9 |
| 80° | 33.1 | 34.2 | 60.3 | 160.8 | 296.0 | 318.9 | 694.2 | 1023.9 | 786.0 | 191.2 | 97.8 |
| 82.5° | 12.0 | 12.5 | 22.3 | 88.5 | 184.1 | 240.1 | 350.4 | 404.7 | 221.6 | 62.5 | 52.7 |
| 85° | 0.5 | 0.5 | 5.4 | 29.9 | 70.1 | 67.9 | 200.4 | 193.9 | 73.3 | 26.1 | 31.5 |
| 87.5° | 0.0 | 0.0 | 0.5 | 0.5 | 1.1 | 2.7 | 19.0 | 33.7 | 15.8 | 6.5 | 13.6 |
| 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: P630830

CATALOG NUMBER: GWS-SA1E-740-U-SL3-W-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1770.3 | 1770.3 | 1770.3 | 1770.3 | 1770.3 | 1770.3 | 1770.3 | 1770.3 | 1770.3 | 1770.3 | 1770.3 |
| 2.5° | 1758.9 | 1730.1 | 1698.6 | 1669.3 | 1622.5 | 1594.8 | 1560.6 | 1545.4 | 1523.7 | 1518.2 | 1521.5 |
| 5° | 1723.0 | 1673.6 | 1598.1 | 1529.6 | 1441.1 | 1369.9 | 1298.2 | 1267.8 | 1228.7 | 1202.6 | 1191.8 |
| 7.5° | 1672.5 | 1607.9 | 1490.0 | 1365.6 | 1243.9 | 1114.1 | 1015.2 | 950.1 | 890.8 | 858.3 | 851.7 |
| 10° | 1621.4 | 1537.3 | 1368.3 | 1190.1 | 1001.7 | 846.3 | 712.7 | 613.8 | 533.4 | 497.0 | 468.8 |
| 12.5° | 1568.8 | 1463.9 | 1244.5 | 1012.0 | 793.1 | 581.2 | 416.1 | 319.9 | 262.4 | 239.6 | 243.4 |
| 15° | 1520.4 | 1393.3 | 1121.7 | 833.8 | 558.4 | 350.9 | 229.8 | 193.9 | 180.3 | 176.0 | 175.5 |
| 17.5° | 1474.2 | 1326.5 | 999.5 | 660.5 | 368.3 | 215.1 | 176.0 | 167.3 | 163.5 | 161.3 | 161.3 |
| 20° | 1432.4 | 1262.4 | 880.0 | 497.6 | 237.9 | 170.6 | 159.2 | 154.8 | 151.6 | 149.9 | 149.9 |
| 22.5° | 1393.3 | 1200.5 | 763.2 | 352.0 | 175.5 | 153.2 | 146.1 | 141.8 | 138.0 | 135.8 | 135.8 |
| 25° | 1358.0 | 1144.5 | 651.8 | 242.3 | 151.0 | 140.1 | 132.5 | 127.7 | 121.1 | 117.3 | 117.3 |
| 27.5° | 1332.5 | 1094.5 | 544.8 | 176.5 | 136.3 | 126.0 | 117.3 | 110.8 | 103.8 | 99.4 | 98.3 |
| 30° | 1317.3 | 1052.2 | 436.7 | 145.0 | 122.8 | 112.4 | 102.7 | 94.5 | 86.4 | 82.0 | 81.5 |
| 32.5° | 1308.6 | 1013.1 | 337.9 | 126.6 | 111.4 | 99.4 | 88.5 | 79.9 | 71.7 | 66.8 | 66.3 |
| 35° | 1311.8 | 982.6 | 253.1 | 114.1 | 100.5 | 88.0 | 76.0 | 67.4 | 60.3 | 55.9 | 54.9 |
| 37.5° | 1340.1 | 969.1 | 190.1 | 104.3 | 91.3 | 78.2 | 65.7 | 57.6 | 51.1 | 47.8 | 47.3 |
| 40° | 1394.9 | 971.8 | 149.4 | 96.7 | 83.7 | 68.4 | 56.5 | 48.9 | 44.0 | 41.3 | 40.7 |
| 42.5° | 1480.2 | 994.6 | 123.3 | 90.2 | 75.5 | 59.8 | 48.9 | 42.9 | 38.0 | 35.3 | 34.8 |
| 45° | 1607.3 | 1041.9 | 107.6 | 82.6 | 66.8 | 51.6 | 42.4 | 36.9 | 32.6 | 29.3 | 28.8 |
| 47.5° | 1791.5 | 1123.9 | 97.2 | 75.5 | 59.2 | 44.5 | 36.4 | 31.0 | 27.2 | 24.4 | 23.9 |
| 50° | 1987.6 | 1222.2 | 88.5 | 68.4 | 52.7 | 38.6 | 31.0 | 25.5 | 22.3 | 19.6 | 19.0 |
| 52.5° | 2196.7 | 1328.1 | 82.0 | 61.9 | 46.7 | 33.1 | 26.1 | 21.2 | 17.9 | 15.2 | 14.7 |
| 55° | 2397.7 | 1434.6 | 74.4 | 57.6 | 39.7 | 28.2 | 21.7 | 17.4 | 14.1 | 12.0 | 12.0 |
| 57.5° | 2593.2 | 1532.4 | 66.3 | 50.5 | 32.6 | 23.9 | 17.9 | 14.1 | 11.4 | 9.8 | 9.2 |
| 60° | 2826.8 | 1667.6 | 57.0 | 42.9 | 27.2 | 20.1 | 14.7 | 11.4 | 9.2 | 7.6 | 7.6 |
| 62.5° | 3173.9 | 1808.3 | 48.9 | 35.9 | 22.8 | 16.8 | 12.0 | 9.2 | 7.6 | 6.5 | 6.0 |
| 65° | 3287.4 | 1732.3 | 41.3 | 29.3 | 18.5 | 13.6 | 9.8 | 8.1 | 6.5 | 6.0 | 5.4 |
| 67.5° | 2984.3 | 1419.9 | 34.2 | 23.9 | 15.2 | 11.4 | 8.7 | 7.1 | 6.0 | 5.4 | 4.9 |
| 70° | 2328.7 | 1007.6 | 26.6 | 17.9 | 12.5 | 9.2 | 7.6 | 6.5 | 5.4 | 4.9 | 4.9 |
| 72.5° | 1584.0 | 595.9 | 21.2 | 13.6 | 10.3 | 8.1 | 6.5 | 6.0 | 5.4 | 4.9 | 4.3 |
| 75° | 780.0 | 211.8 | 16.3 | 10.3 | 8.1 | 7.1 | 6.0 | 5.4 | 4.9 | 4.3 | 4.3 |
| 77.5° | 210.2 | 58.7 | 12.5 | 8.1 | 6.5 | 5.4 | 5.4 | 5.4 | 4.9 | 3.8 | 3.8 |
| 80° | 71.2 | 24.4 | 9.2 | 6.0 | 5.4 | 4.3 | 3.8 | 4.9 | 4.3 | 3.8 | 3.3 |
| 82.5° | 39.1 | 12.0 | 6.5 | 4.9 | 3.8 | 3.3 | 3.3 | 3.3 | 3.3 | 2.7 | 2.7 |
| 85° | 25.0 | 6.5 | 4.3 | 3.8 | 3.8 | 2.7 | 2.2 | 2.2 | 1.6 | 1.6 | 1.6 |
| 87.5° | 11.4 | 3.8 | 3.8 | 3.3 | 3.3 | 2.7 | 1.6 | 1.1 | 0.5 | 0.5 | 0.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

LM-79-08: Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Report Prepared for

Cooper Lighting Solutions

MCGRAW, INVUE, LUMARK AND STREETWORKS

DATA VALID FOR LUMINIAIRES UTILIZING SA LIGHT ENGINES

Report Number: SP1-2101-121-2

Luminaire Tested: IFLD-S-SA2A-740-U-T3R-HSS

Test Date: 03/05/2021

Test Information

Test Method: LM-79-08
 Report Number: SP1-2101-121-2
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1
 Measurement Geometry: 4π
 Issue Date: 03/05/2021
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: STREETWORKS
 Catalog Number: **IFLD-S-SA2A-740-U-T3R-HSS**
 Description: STREETWORKS INF FLOOD

SHIELD, DRIVER PROGRAMMED @ 615mA.

Spectral Parameters

| | | | | | |
|---------------------------|---------|-----------|------|------|-------|
| CCT (K): | 3905 | CRI (Ra): | 71.2 | R9: | -29.7 |
| CIE u': | 0.2273 | R1: | 68.9 | R10: | 46.2 |
| CIE v': | 0.5024 | R2: | 77.0 | R11: | 68.8 |
| Duv: | -0.0008 | R3: | 84.0 | R12: | 45.6 |
| CIE x: | 0.3841 | R4: | 71.6 | R13: | 69.5 |
| CIE y: | 0.3774 | R5: | 68.9 | R14: | 90.7 |
| CIE z: | 0.2385 | R6: | 68.3 | | |
| Peak Wavelength (nm): | 443 | R7: | 78.7 | | |
| Dominant Wavelength (nm): | 579 | R8: | 52.2 | | |
| Purity: | 28.7 | | | | |
| Rf: | 71.7 | | | | |
| Rg: | 96.9 | | | | |



Test Conditions

Stabilization Time: 211M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 24.8/312%
 Sphere Temperature (°C): 24.1

REPORT NUMBER: SP1-2101-121-2

| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 1/31/2021 | 7/31/2021 |
| Power Meter | IN0071 | 12/1/2020 | 12/1/2021 |
| AC Power Source | IN0063 | 12/1/2020 | 12/1/2021 |
| DC Power Source | IN0208 | 12/1/2020 | 12/1/2021 |
| Sphere Thermometer | IN0085 | 12/1/2020 | 12/1/2021 |
| Room Thermometer | IN0046 | 12/1/2020 | 12/1/2021 |

REPORT NUMBER: SP1-2101-121-2

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 4000K 4-step quadrangle

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Photopic Flux vs. Wavelength



#####

| λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360 | 2304 | 0.0 | 490 | 19043 | 2.7 | 620 | 97577 | 25.4 | 750 | 4830 | 0.0 | 880 | 3505 | 0.0 |
| 365 | 2150 | 0.0 | 495 | 26606 | 4.8 | 625 | 90158 | 19.9 | 755 | 4664 | 0.0 | 885 | 2991 | 0.0 |
| 370 | 2146 | 0.0 | 500 | 36376 | 8.0 | 630 | 82240 | 14.9 | 760 | 4006 | 0.0 | 890 | 2327 | 0.0 |
| 375 | 2332 | 0.0 | 505 | 47714 | 13.3 | 635 | 74361 | 11.2 | 765 | 3715 | 0.0 | 895 | 2775 | 0.0 |
| 380 | 2527 | 0.0 | 510 | 58741 | 20.2 | 640 | 66994 | 8.0 | 770 | 3696 | 0.0 | 900 | 2141 | 0.0 |
| 385 | 2304 | 0.0 | 515 | 68716 | 28.5 | 645 | 60405 | 5.8 | 775 | 3117 | 0.0 | 905 | 2421 | 0.0 |
| 390 | 2064 | 0.0 | 520 | 77136 | 37.4 | 650 | 53806 | 3.9 | 780 | 3062 | 0.0 | 910 | 2200 | 0.0 |
| 395 | 1856 | 0.0 | 525 | 83567 | 44.9 | 655 | 47610 | 2.7 | 785 | 2907 | 0.0 | 915 | 2716 | 0.0 |
| 400 | 1856 | 0.0 | 530 | 89283 | 52.6 | 660 | 42018 | 1.8 | 790 | 2655 | 0.0 | 920 | 2656 | 0.0 |
| 405 | 2374 | 0.0 | 535 | 94097 | 58.4 | 665 | 36742 | 1.2 | 795 | 2467 | 0.0 | 925 | 2671 | 0.0 |
| 410 | 4084 | 0.0 | 540 | 96845 | 63.1 | 670 | 32105 | 0.7 | 800 | 2609 | 0.0 | 930 | 3292 | 0.0 |
| 415 | 8543 | 0.0 | 545 | 100829 | 67.1 | 675 | 27946 | 0.5 | 805 | 2293 | 0.0 | 935 | 3188 | 0.0 |
| 420 | 18394 | 0.1 | 550 | 105648 | 71.8 | 680 | 24146 | 0.3 | 810 | 2188 | 0.0 | 940 | 1997 | 0.0 |
| 425 | 37987 | 0.2 | 555 | 110017 | 75.1 | 685 | 21191 | 0.2 | 815 | 2386 | 0.0 | 945 | 2623 | 0.0 |
| 430 | 67605 | 0.5 | 560 | 114586 | 77.9 | 690 | 18544 | 0.1 | 820 | 2712 | 0.0 | 950 | 2969 | 0.0 |
| 435 | 102160 | 1.2 | 565 | 118987 | 79.1 | 695 | 16058 | 0.1 | 825 | 2473 | 0.0 | 955 | 2277 | 0.0 |
| 440 | 135103 | 2.1 | 570 | 122326 | 79.5 | 700 | 14133 | 0.0 | 830 | 1969 | 0.0 | 960 | 4267 | 0.0 |
| 445 | 140126 | 2.9 | 575 | 125968 | 78.4 | 705 | 12309 | 0.0 | 835 | 1917 | 0.0 | 965 | 2034 | 0.0 |
| 450 | 102339 | 2.7 | 580 | 127613 | 75.8 | 710 | 11142 | 0.0 | 840 | 2248 | 0.0 | 970 | 3586 | 0.0 |
| 455 | 58751 | 2.0 | 585 | 129466 | 71.9 | 715 | 10143 | 0.0 | 845 | 2266 | 0.0 | 975 | 2505 | 0.0 |
| 460 | 36892 | 1.5 | 590 | 128813 | 66.6 | 720 | 9072 | 0.0 | 850 | 2558 | 0.0 | 980 | 2666 | 0.0 |
| 465 | 24637 | 1.3 | 595 | 126387 | 59.9 | 725 | 8130 | 0.0 | 855 | 2767 | 0.0 | 985 | 2934 | 0.0 |
| 470 | 16738 | 1.0 | 600 | 123477 | 53.2 | 730 | 7149 | 0.0 | 860 | 2826 | 0.0 | 990 | 4120 | 0.0 |
| 475 | 13456 | 1.1 | 605 | 118718 | 46.0 | 735 | 6311 | 0.0 | 865 | 2385 | 0.0 | 995 | 3858 | 0.0 |
| 480 | 13081 | 1.2 | 610 | 112091 | 38.5 | 740 | 5711 | 0.0 | 870 | 3194 | 0.0 | 1000 | 3405 | 0.0 |
| 485 | 14734 | 1.7 | 615 | 105039 | 31.7 | 745 | 5111 | 0.0 | 875 | 3189 | 0.0 | | | |

REPORT NUMBER: SP1-2101-121-2

Scotopic Flux vs. Wavelength



Scotopic Lumens: 10425.8 S/P: 1.47

| λ (nm) | Power (µW/nm) | Lumens (Φ/nm) | λ (nm) | Power (µW/nm) | Lumens (Φ/nm) | λ (nm) | Power (µW/nm) | Lumens (Φ/nm) | λ (nm) | Power (µW/nm) | Lumens (Φ/nm) | λ (nm) | Power (µW/nm) | Lumens (Φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360 | 2304 | 0.0 | 490 | 19043 | 29.3 | 620 | 97577 | 1.2 | 750 | 4830 | 0.0 | 880 | 3505 | 0.0 |
| 365 | 2150 | 0.0 | 495 | 26606 | 43.0 | 625 | 90158 | 0.8 | 755 | 4664 | 0.0 | 885 | 2991 | 0.0 |
| 370 | 2146 | 0.0 | 500 | 36376 | 60.8 | 630 | 82240 | 0.5 | 760 | 4006 | 0.0 | 890 | 2327 | 0.0 |
| 375 | 2332 | 0.0 | 505 | 47714 | 81.1 | 635 | 74361 | 0.3 | 765 | 3715 | 0.0 | 895 | 2775 | 0.0 |
| 380 | 2527 | 0.0 | 510 | 58741 | 99.6 | 640 | 66994 | 0.2 | 770 | 3696 | 0.0 | 900 | 2141 | 0.0 |
| 385 | 2304 | 0.0 | 515 | 68716 | 113.9 | 645 | 60405 | 0.1 | 775 | 3117 | 0.0 | 905 | 2421 | 0.0 |
| 390 | 2064 | 0.0 | 520 | 77136 | 122.6 | 650 | 53806 | 0.1 | 780 | 3062 | 0.0 | 910 | 2200 | 0.0 |
| 395 | 1856 | 0.0 | 525 | 83567 | 125.0 | 655 | 47610 | 0.0 | 785 | 2907 | 0.0 | 915 | 2716 | 0.0 |
| 400 | 1856 | 0.0 | 530 | 89283 | 123.1 | 660 | 42018 | 0.0 | 790 | 2655 | 0.0 | 920 | 2656 | 0.0 |
| 405 | 2374 | 0.1 | 535 | 94097 | 117.3 | 665 | 36742 | 0.0 | 795 | 2467 | 0.0 | 925 | 2671 | 0.0 |
| 410 | 4084 | 0.2 | 540 | 96845 | 107.0 | 670 | 32105 | 0.0 | 800 | 2609 | 0.0 | 930 | 3292 | 0.0 |
| 415 | 8543 | 0.9 | 545 | 100829 | 96.7 | 675 | 27946 | 0.0 | 805 | 2293 | 0.0 | 935 | 3188 | 0.0 |
| 420 | 18394 | 3.0 | 550 | 105648 | 86.4 | 680 | 24146 | 0.0 | 810 | 2188 | 0.0 | 940 | 1997 | 0.0 |
| 425 | 37987 | 9.3 | 555 | 110017 | 75.2 | 685 | 21191 | 0.0 | 815 | 2386 | 0.0 | 945 | 2623 | 0.0 |
| 430 | 67605 | 23.0 | 560 | 114586 | 64.0 | 690 | 18544 | 0.0 | 820 | 2712 | 0.0 | 950 | 2969 | 0.0 |
| 435 | 102160 | 45.7 | 565 | 118987 | 53.4 | 695 | 16058 | 0.0 | 825 | 2473 | 0.0 | 955 | 2277 | 0.0 |
| 440 | 135103 | 75.5 | 570 | 122326 | 43.2 | 700 | 14133 | 0.0 | 830 | 1969 | 0.0 | 960 | 4267 | 0.0 |
| 445 | 140126 | 93.8 | 575 | 125968 | 34.3 | 705 | 12309 | 0.0 | 835 | 1917 | 0.0 | 965 | 2034 | 0.0 |
| 450 | 102339 | 79.3 | 580 | 127613 | 26.3 | 710 | 11142 | 0.0 | 840 | 2248 | 0.0 | 970 | 3586 | 0.0 |
| 455 | 58751 | 51.3 | 585 | 129466 | 19.8 | 715 | 10143 | 0.0 | 845 | 2266 | 0.0 | 975 | 2505 | 0.0 |
| 460 | 36892 | 35.6 | 590 | 128813 | 14.3 | 720 | 9072 | 0.0 | 850 | 2558 | 0.0 | 980 | 2666 | 0.0 |
| 465 | 24637 | 26.0 | 595 | 126387 | 10.1 | 725 | 8130 | 0.0 | 855 | 2767 | 0.0 | 985 | 2934 | 0.0 |
| 470 | 16738 | 19.3 | 600 | 123477 | 7.0 | 730 | 7149 | 0.0 | 860 | 2826 | 0.0 | 990 | 4120 | 0.0 |
| 475 | 13456 | 16.8 | 605 | 118718 | 4.7 | 735 | 6311 | 0.0 | 865 | 2385 | 0.0 | 995 | 3858 | 0.0 |
| 480 | 13081 | 17.7 | 610 | 112091 | 3.0 | 740 | 5711 | 0.0 | 870 | 3194 | 0.0 | 1000 | 3405 | 0.0 |
| 485 | 14734 | 21.4 | 615 | 105039 | 1.9 | 745 | 5111 | 0.0 | 875 | 3189 | 0.0 | | | |

REPORT NUMBER: SP1-2101-121-2

Melanopic Flux vs. Wavelength



Melanopic Lumens: 3927.2 M/P: 0.55

| λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360 | 2304 | 0.0 | 490 | 19043 | 15.8 | 620 | 97577 | 0.1 | 750 | 4830 | 0.0 | 880 | 3505 | 0.0 |
| 365 | 2150 | 0.0 | 495 | 26606 | 22.0 | 625 | 90158 | 0.0 | 755 | 4664 | 0.0 | 885 | 2991 | 0.0 |
| 370 | 2146 | 0.0 | 500 | 36376 | 29.2 | 630 | 82240 | 0.0 | 760 | 4006 | 0.0 | 890 | 2327 | 0.0 |
| 375 | 2332 | 0.0 | 505 | 47714 | 36.6 | 635 | 74361 | 0.0 | 765 | 3715 | 0.0 | 895 | 2775 | 0.0 |
| 380 | 2527 | 0.0 | 510 | 58741 | 42.2 | 640 | 66994 | 0.0 | 770 | 3696 | 0.0 | 900 | 2141 | 0.0 |
| 385 | 2304 | 0.0 | 515 | 68716 | 44.9 | 645 | 60405 | 0.0 | 775 | 3117 | 0.0 | 905 | 2421 | 0.0 |
| 390 | 2064 | 0.0 | 520 | 77136 | 44.9 | 650 | 53806 | 0.0 | 780 | 3062 | 0.0 | 910 | 2200 | 0.0 |
| 395 | 1856 | 0.0 | 525 | 83567 | 42.4 | 655 | 47610 | 0.0 | 785 | 2907 | 0.0 | 915 | 2716 | 0.0 |
| 400 | 1856 | 0.0 | 530 | 89283 | 38.6 | 660 | 42018 | 0.0 | 790 | 2655 | 0.0 | 920 | 2656 | 0.0 |
| 405 | 2374 | 0.0 | 535 | 94097 | 33.9 | 665 | 36742 | 0.0 | 795 | 2467 | 0.0 | 925 | 2671 | 0.0 |
| 410 | 4084 | 0.2 | 540 | 96845 | 28.3 | 670 | 32105 | 0.0 | 800 | 2609 | 0.0 | 930 | 3292 | 0.0 |
| 415 | 8543 | 0.6 | 545 | 100829 | 23.4 | 675 | 27946 | 0.0 | 805 | 2293 | 0.0 | 935 | 3188 | 0.0 |
| 420 | 18394 | 2.1 | 550 | 105648 | 19.0 | 680 | 24146 | 0.0 | 810 | 2188 | 0.0 | 940 | 1997 | 0.0 |
| 425 | 37987 | 5.9 | 555 | 110017 | 14.8 | 685 | 21191 | 0.0 | 815 | 2386 | 0.0 | 945 | 2623 | 0.0 |
| 430 | 67605 | 14.3 | 560 | 114586 | 11.3 | 690 | 18544 | 0.0 | 820 | 2712 | 0.0 | 950 | 2969 | 0.0 |
| 435 | 102160 | 27.3 | 565 | 118987 | 8.4 | 695 | 16058 | 0.0 | 825 | 2473 | 0.0 | 955 | 2277 | 0.0 |
| 440 | 135103 | 45.1 | 570 | 122326 | 6.0 | 700 | 14133 | 0.0 | 830 | 1969 | 0.0 | 960 | 4267 | 0.0 |
| 445 | 140126 | 55.3 | 575 | 125968 | 4.2 | 705 | 12309 | 0.0 | 835 | 1917 | 0.0 | 965 | 2034 | 0.0 |
| 450 | 102339 | 47.2 | 580 | 127613 | 2.9 | 710 | 11142 | 0.0 | 840 | 2248 | 0.0 | 970 | 3586 | 0.0 |
| 455 | 58751 | 30.8 | 585 | 129466 | 1.9 | 715 | 10143 | 0.0 | 845 | 2266 | 0.0 | 975 | 2505 | 0.0 |
| 460 | 36892 | 21.7 | 590 | 128813 | 1.3 | 720 | 9072 | 0.0 | 850 | 2558 | 0.0 | 980 | 2666 | 0.0 |
| 465 | 24637 | 16.1 | 595 | 126387 | 0.8 | 725 | 8130 | 0.0 | 855 | 2767 | 0.0 | 985 | 2934 | 0.0 |
| 470 | 16738 | 12.0 | 600 | 123477 | 0.5 | 730 | 7149 | 0.0 | 860 | 2826 | 0.0 | 990 | 4120 | 0.0 |
| 475 | 13456 | 10.3 | 605 | 118718 | 0.3 | 735 | 6311 | 0.0 | 865 | 2385 | 0.0 | 995 | 3858 | 0.0 |
| 480 | 13081 | 10.5 | 610 | 112091 | 0.2 | 740 | 5711 | 0.0 | 870 | 3194 | 0.0 | 1000 | 3405 | 0.0 |
| 485 | 14734 | 12.1 | 615 | 105039 | 0.1 | 745 | 5111 | 0.0 | 875 | 3189 | 0.0 | | | |

Summary

$R_f = 71.7$
 $R_g = 96.9$
 CIE $R_a = 71.2$
 $R_g = -29.7$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 55 | CES51 = 86 | CES76 = 45 |
| CES02 = 61 | CES27 = 80 | CES52 = 87 | CES77 = 68 |
| CES03 = 30 | CES28 = 79 | CES53 = 74 | CES78 = 49 |
| CES04 = 70 | CES29 = 51 | CES54 = 81 | CES79 = 77 |
| CES05 = 47 | CES30 = 60 | CES55 = 80 | CES80 = 75 |
| CES06 = 50 | CES31 = 56 | CES56 = 69 | CES81 = 75 |
| CES07 = 40 | CES32 = 52 | CES57 = 67 | CES82 = 90 |
| CES08 = 39 | CES33 = 62 | CES58 = 69 | CES83 = 85 |
| CES09 = 29 | CES34 = 65 | CES59 = 86 | CES84 = 87 |
| CES10 = 74 | CES35 = 81 | CES60 = 91 | CES85 = 83 |
| CES11 = 57 | CES36 = 92 | CES61 = 85 | CES86 = 72 |
| CES12 = 63 | CES37 = 74 | CES62 = 81 | CES87 = 77 |
| CES13 = 42 | CES38 = 69 | CES63 = 72 | CES88 = 77 |
| CES14 = 74 | CES39 = 92 | CES64 = 69 | CES89 = 72 |
| CES15 = 71 | CES40 = 86 | CES65 = 64 | CES90 = 75 |
| CES16 = 46 | CES41 = 84 | CES66 = 63 | CES91 = 91 |
| CES17 = 49 | CES42 = 75 | CES67 = 60 | CES92 = 66 |
| CES18 = 56 | CES43 = 70 | CES68 = 67 | CES93 = 80 |
| CES19 = 72 | CES44 = 98 | CES69 = 77 | CES94 = 56 |
| CES20 = 65 | CES45 = 80 | CES70 = 57 | CES95 = 72 |
| CES21 = 86 | CES46 = 77 | CES71 = 53 | CES96 = 78 |
| CES22 = 78 | CES47 = 74 | CES72 = 84 | CES97 = 83 |
| CES23 = 92 | CES48 = 66 | CES73 = 47 | CES98 = 73 |
| CES24 = 91 | CES49 = 76 | CES74 = 96 | CES99 = 63 |
| CES25 = 72 | CES50 = 85 | CES75 = 52 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)