

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: P642210

Luminaire Tested: GWS-SA6C-740-U-SL2-W-GRSWH

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P642210
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-29)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA6C-740-U-SL2-W-GRSWH
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH
Light Source: (96) 4000K CCT, 70 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24184.2 lumens
Efficiency: N/A
Efficacy: 127.8 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G3

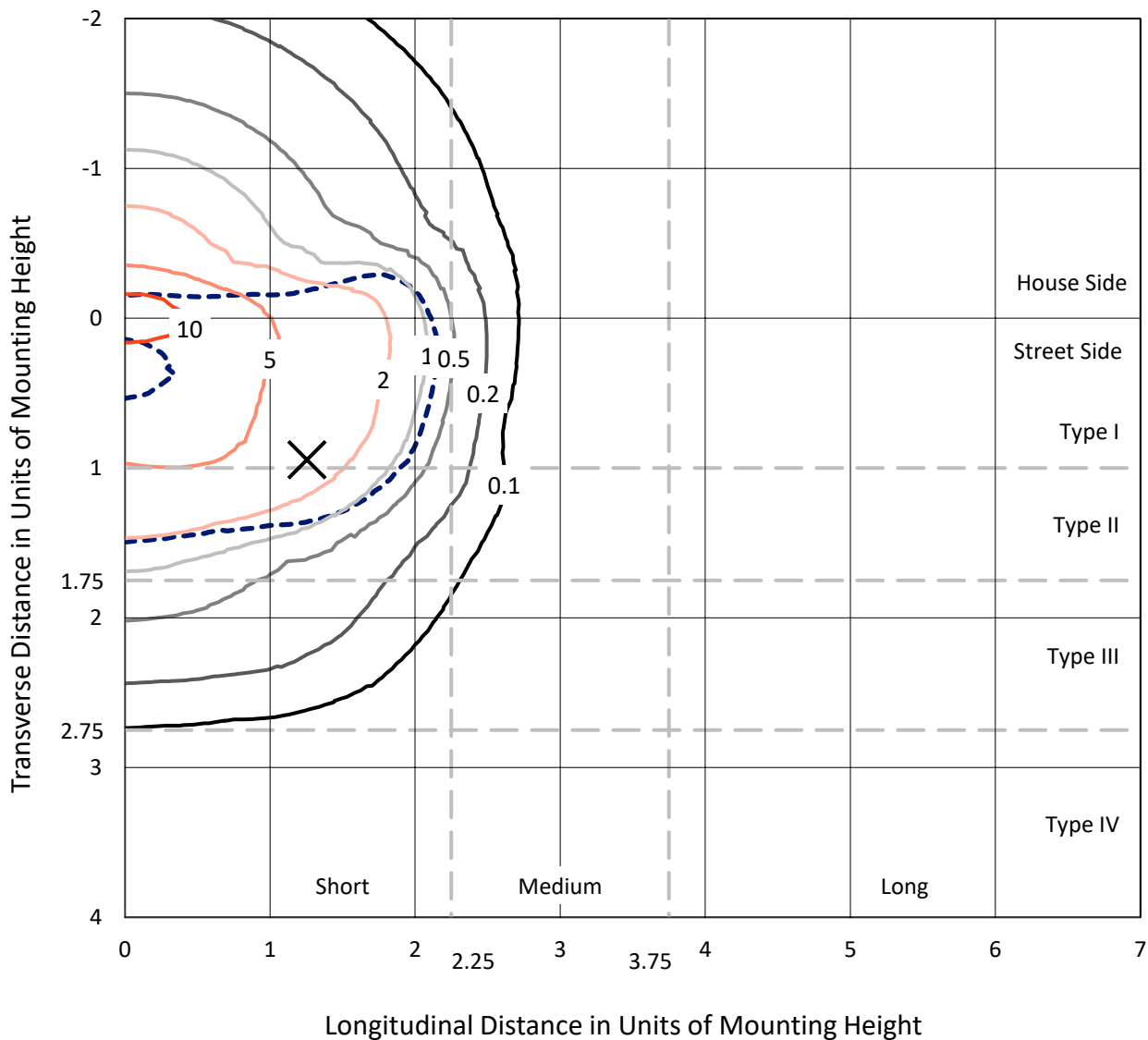
Input Watts (W): 189.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P642210
 CATALOG NUMBER: GWS-SA6C-740-U-SL2-W-GRSWH

Iso-Footcandle Lines of Horizontal Illumination

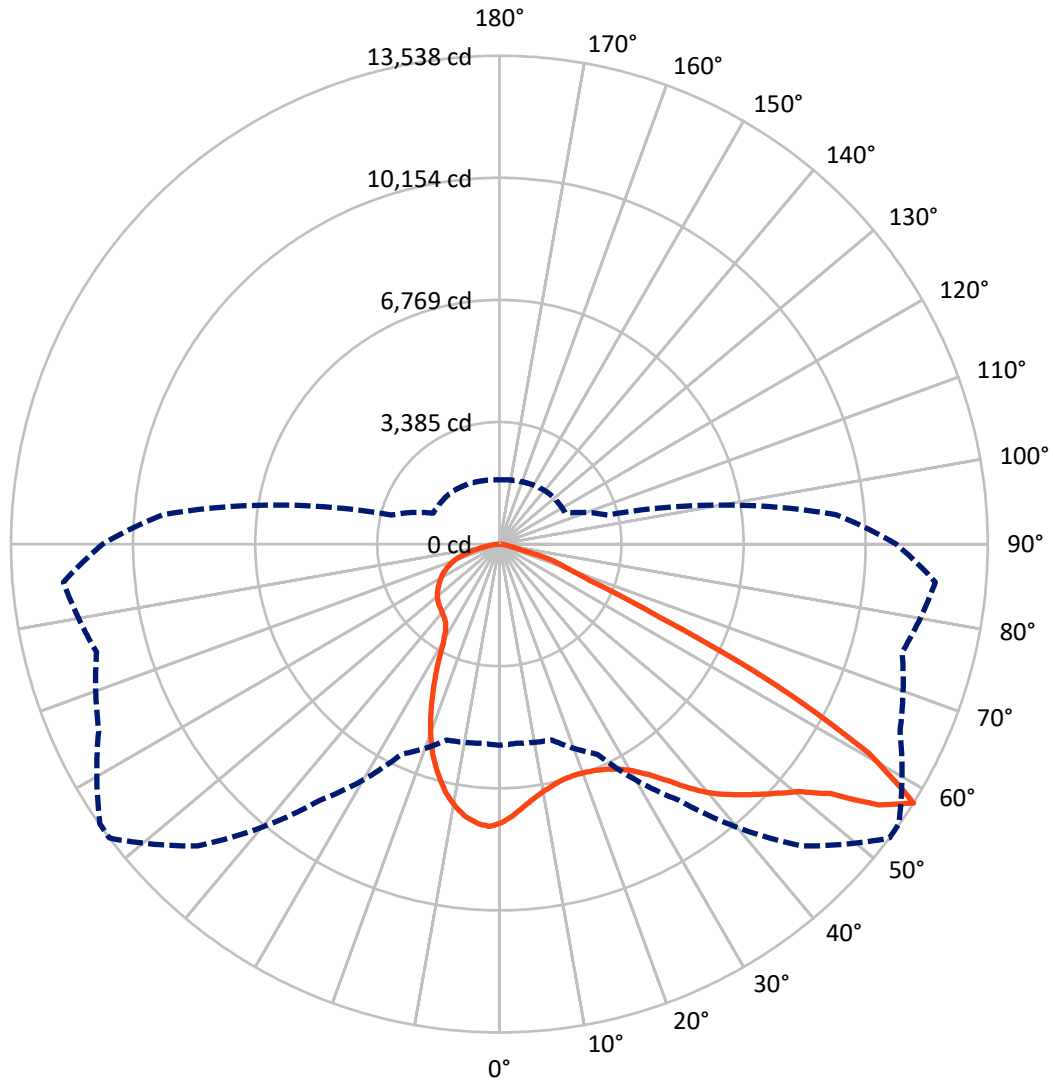
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12.4 fc
 Type II - Short - N/A

REPORT NUMBER: P642210
CATALOG NUMBER: GWS-SA6C-740-U-SL2-W-GRSWH

Luminous Intensity Polar Plot



— Vertical Plane Through 53-Deg Lateral - - - Horizontal Cone Through 57.5-Deg Vertical

REPORT NUMBER: P642210

CATALOG NUMBER: GWS-SA6C-740-U-SL2-W-GRSWH

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 7561.5 | 0.0 | 7561.5 |
| | % Fixture | 31.3 | 0.0 | 31.3 |
| Street Side | Lumens | 16622.7 | 0.0 | 16622.7 |
| | % Fixture | 68.7 | 0.0 | 68.7 |
| Total | Lumens | 24184.2 | 0.0 | 24184.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 698.4 | 2.9 |
| 10°-20° | 1832.2 | 7.6 |
| 20°-30° | 2699.4 | 11.2 |
| 30°-40° | 3778.5 | 15.6 |
| 40°-50° | 4967.1 | 20.5 |
| 50°-60° | 5824.0 | 24.1 |
| 60°-70° | 3431.0 | 14.2 |
| 70°-80° | 853.5 | 3.5 |
| 80°-90° | 100.1 | 0.4 |
| 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° | 24184.2 | 100.0 |
| 0°-180° | 24184.2 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P642210

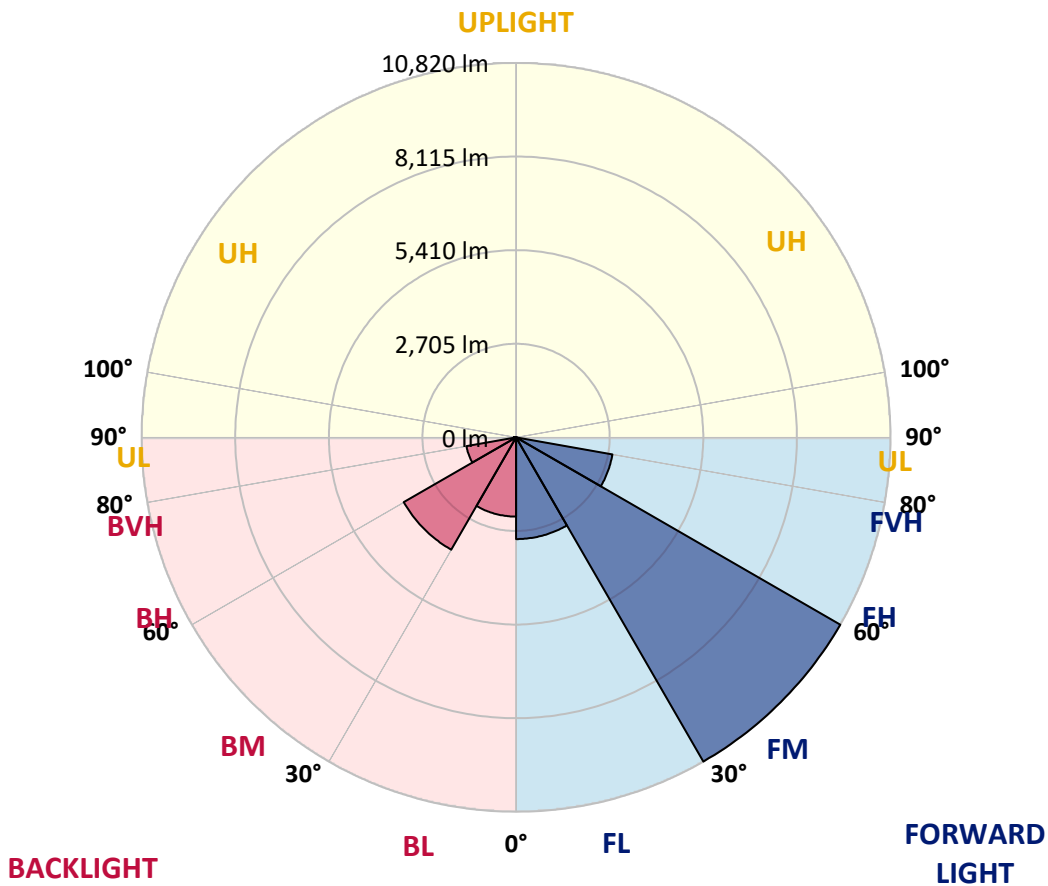
CATALOG NUMBER: GWS-SA6C-740-U-SL2-W-GRSWH

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 2940.3 | 12.2 | | | |
| FM (30°-60°) | 10820.2 | 44.7 | | | |
| FH (60°-80°) | 2828.6 | 11.7 | | | G2/5000 |
| FVH (80°-90°) | 33.5 | 0.1 | | | G1/100 |
| BL (0°-30°) | 2289.7 | 9.5 | B3/2500 | | |
| BM (30°-60°) | 3749.4 | 15.5 | B3/5000 | | |
| BH (60°-80°) | 1455.8 | 6.0 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 66.6 | 0.3 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G3

Type II Short





REPORT NUMBER: P642210

CATALOG NUMBER: GWS-SA6C-740-U-SL2-W-GRSWH

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 53° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 7722.7 | 7722.7 | 7722.7 | 7722.7 | 7722.7 | 7722.7 | 7722.7 | 7722.7 | 7722.7 | 7722.7 | 7722.7 |
| 2.5° | 7278.9 | 7299.3 | 7303.4 | 7366.5 | 7370.5 | 7462.1 | 7523.2 | 7511.0 | 7574.1 | 7651.4 | 7712.5 |
| 5° | 6930.9 | 6932.9 | 6953.3 | 7028.6 | 7069.3 | 7189.4 | 7291.1 | 7291.1 | 7413.3 | 7572.0 | 7708.4 |
| 7.5° | 6643.9 | 6641.8 | 6660.1 | 6743.6 | 6810.8 | 6955.3 | 7093.7 | 7110.0 | 7281.0 | 7513.0 | 7734.9 |
| 10° | 6377.2 | 6391.5 | 6411.8 | 6513.6 | 6599.1 | 6778.2 | 6943.1 | 6969.5 | 7185.3 | 7472.3 | 7771.5 |
| 12.5° | 6206.2 | 6208.3 | 6238.8 | 6352.8 | 6462.7 | 6654.0 | 6827.1 | 6859.6 | 7107.9 | 7433.6 | 7798.0 |
| 15° | 6096.3 | 6098.3 | 6130.9 | 6257.1 | 6385.3 | 6578.7 | 6755.8 | 6792.4 | 7063.2 | 7427.5 | 7848.9 |
| 17.5° | 6047.5 | 6045.4 | 6076.0 | 6202.2 | 6342.6 | 6544.1 | 6733.4 | 6778.2 | 7083.5 | 7474.3 | 7938.4 |
| 20° | 6047.5 | 6049.5 | 6065.8 | 6179.8 | 6322.2 | 6536.0 | 6755.8 | 6810.8 | 7162.9 | 7580.2 | 8076.8 |
| 22.5° | 6132.9 | 6141.1 | 6149.2 | 6226.6 | 6338.5 | 6548.2 | 6814.8 | 6888.1 | 7333.9 | 7757.3 | 8258.0 |
| 25° | 6299.9 | 6301.9 | 6310.0 | 6373.1 | 6424.0 | 6582.8 | 6912.5 | 7022.5 | 7600.5 | 8015.8 | 8486.0 |
| 27.5° | 6523.8 | 6552.3 | 6560.4 | 6601.1 | 6601.1 | 6668.3 | 7065.2 | 7224.0 | 7960.8 | 8388.3 | 8777.1 |
| 30° | 6837.2 | 6847.4 | 6861.7 | 6906.4 | 6857.6 | 6829.1 | 7289.1 | 7492.7 | 8378.1 | 8838.1 | 9127.2 |
| 32.5° | 7112.0 | 7134.4 | 7211.8 | 7285.0 | 7197.5 | 7107.9 | 7618.9 | 7859.0 | 8779.1 | 9306.3 | 9499.7 |
| 35° | 7346.1 | 7401.1 | 7549.7 | 7712.5 | 7651.4 | 7561.9 | 8056.5 | 8306.9 | 9108.8 | 9642.1 | 9829.4 |
| 37.5° | 7629.0 | 7671.8 | 7875.3 | 8139.9 | 8194.9 | 8152.2 | 8589.8 | 8768.9 | 9328.7 | 9727.6 | 10008.5 |
| 40° | 7916.0 | 7981.2 | 8243.8 | 8610.1 | 8819.8 | 8850.3 | 9082.4 | 9202.5 | 9404.0 | 9560.7 | 9973.9 |
| 42.5° | 8209.2 | 8321.1 | 8681.4 | 9108.8 | 9481.3 | 9550.5 | 9497.6 | 9548.5 | 9379.6 | 9330.7 | 9813.1 |
| 45° | 8567.4 | 8699.7 | 9106.8 | 9652.3 | 10142.9 | 10250.8 | 9904.7 | 9857.9 | 9375.5 | 9243.2 | 9713.4 |
| 47.5° | 8990.8 | 9123.1 | 9511.9 | 10146.9 | 10773.9 | 10853.3 | 10322.0 | 10236.5 | 9518.0 | 9377.5 | 9847.7 |
| 50° | 9365.3 | 9456.9 | 9805.0 | 10515.4 | 11362.1 | 11409.0 | 10782.0 | 10678.2 | 9872.2 | 9750.0 | 10267.0 |
| 52.5° | 8984.7 | 8974.5 | 9340.9 | 10216.1 | 11667.5 | 12231.3 | 11490.4 | 11390.6 | 10556.1 | 10368.8 | 10916.4 |
| 55° | 7622.9 | 7506.9 | 7834.6 | 8695.6 | 10814.6 | 12962.0 | 12760.5 | 12561.0 | 11468.0 | 10991.7 | 11525.0 |
| 57.5° | 5573.2 | 5540.6 | 5620.0 | 6428.1 | 8663.1 | 11830.3 | 13538.1 | 13519.8 | 12255.7 | 11561.6 | 12131.6 |
| 60° | 4358.0 | 4309.1 | 4097.5 | 4119.8 | 5905.0 | 9241.1 | 11748.9 | 12288.3 | 12744.2 | 11903.6 | 12554.9 |
| 62.5° | 3869.5 | 3832.8 | 3722.9 | 3419.6 | 3517.3 | 6196.0 | 8612.2 | 9106.8 | 11136.2 | 10513.3 | 10784.1 |
| 65° | 3203.9 | 3193.7 | 3285.3 | 3273.1 | 2947.4 | 3421.7 | 4860.8 | 5359.5 | 7002.1 | 7089.6 | 7002.1 |
| 67.5° | 2328.6 | 2310.3 | 2542.3 | 3000.3 | 2837.5 | 2583.0 | 2709.2 | 2882.3 | 3590.6 | 3224.2 | 2902.6 |
| 70° | 1514.4 | 1487.9 | 1622.3 | 2167.8 | 2540.3 | 2251.3 | 1952.0 | 1923.5 | 1974.4 | 1227.4 | 1327.1 |
| 72.5° | 1015.7 | 985.2 | 983.1 | 1192.8 | 1534.8 | 1516.4 | 1512.4 | 1498.1 | 1337.3 | 968.9 | 1074.7 |
| 75° | 565.9 | 541.4 | 535.3 | 515.0 | 549.6 | 559.8 | 596.4 | 616.8 | 667.6 | 734.8 | 814.2 |
| 77.5° | 95.7 | 93.6 | 118.1 | 150.6 | 207.6 | 266.6 | 329.8 | 348.1 | 429.5 | 508.9 | 559.8 |
| 80° | 52.9 | 55.0 | 71.2 | 87.5 | 116.0 | 158.8 | 203.5 | 215.8 | 264.6 | 307.4 | 348.1 |
| 82.5° | 28.5 | 28.5 | 36.6 | 46.8 | 63.1 | 83.5 | 109.9 | 120.1 | 152.7 | 179.1 | 207.6 |
| 85° | 10.2 | 10.2 | 14.2 | 18.3 | 26.5 | 34.6 | 42.7 | 48.9 | 67.2 | 91.6 | 103.8 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 4.1 | 8.1 | 8.1 | 10.2 | 18.3 | 26.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P642210

CATALOG NUMBER: GWS-SA6C-740-U-SL2-W-GRSWH

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 7722.7 | 7722.7 | 7722.7 | 7722.7 | 7722.7 | 7722.7 | 7722.7 | 7722.7 | 7722.7 | 7722.7 | 7722.7 |
| 2.5° | 7763.4 | 7708.4 | 7783.7 | 7818.3 | 7830.5 | 7838.7 | 7785.8 | 7749.1 | 7736.9 | 7698.2 | 7675.9 |
| 5° | 7791.9 | 7755.2 | 7826.5 | 7826.5 | 7775.6 | 7722.7 | 7614.8 | 7539.5 | 7486.6 | 7423.5 | 7413.3 |
| 7.5° | 7840.7 | 7814.3 | 7852.9 | 7773.6 | 7645.3 | 7502.8 | 7315.6 | 7169.0 | 7051.0 | 6973.6 | 6975.6 |
| 10° | 7905.9 | 7873.3 | 7842.8 | 7665.7 | 7431.6 | 7169.0 | 6882.0 | 6668.3 | 6472.9 | 6383.3 | 6334.5 |
| 12.5° | 7948.6 | 7901.8 | 7773.6 | 7480.4 | 7136.4 | 6784.3 | 6379.2 | 6061.7 | 5778.8 | 5650.5 | 5640.4 |
| 15° | 8001.5 | 7916.0 | 7659.6 | 7240.3 | 6761.9 | 6281.5 | 5760.5 | 5318.7 | 4936.1 | 4736.6 | 4726.4 |
| 17.5° | 8070.7 | 7930.3 | 7523.2 | 6965.5 | 6367.0 | 5658.7 | 5003.2 | 4447.6 | 4040.5 | 3885.8 | 3912.2 |
| 20° | 8168.4 | 7946.6 | 7368.5 | 6660.1 | 5876.5 | 4950.3 | 4134.1 | 3623.2 | 3466.4 | 3456.3 | 3435.9 |
| 22.5° | 8278.4 | 7956.8 | 7197.5 | 6318.2 | 5282.1 | 4195.2 | 3415.6 | 3197.8 | 3195.7 | 3246.6 | 3258.8 |
| 25° | 8402.5 | 7964.9 | 7004.1 | 5919.2 | 4638.9 | 3442.0 | 3020.7 | 2955.5 | 3006.4 | 3102.1 | 3114.3 |
| 27.5° | 8561.3 | 7981.2 | 6770.1 | 5481.6 | 3955.0 | 2973.9 | 2802.9 | 2786.6 | 2847.7 | 2937.2 | 2933.1 |
| 30° | 8795.4 | 8040.2 | 6521.7 | 4978.8 | 3252.7 | 2752.0 | 2670.6 | 2672.6 | 2697.0 | 2739.8 | 2745.9 |
| 32.5° | 9033.5 | 8131.8 | 6279.5 | 4413.0 | 2849.7 | 2625.8 | 2589.1 | 2585.1 | 2585.1 | 2603.4 | 2607.5 |
| 35° | 9259.5 | 8235.6 | 6016.9 | 3822.7 | 2654.3 | 2552.5 | 2528.1 | 2515.9 | 2509.8 | 2505.7 | 2499.6 |
| 37.5° | 9385.7 | 8286.5 | 5760.5 | 3240.5 | 2550.5 | 2503.7 | 2479.2 | 2462.9 | 2440.6 | 2424.3 | 2420.2 |
| 40° | 9330.7 | 8227.5 | 5463.3 | 2804.9 | 2487.4 | 2456.8 | 2428.3 | 2406.0 | 2375.4 | 2361.2 | 2353.0 |
| 42.5° | 9147.5 | 8044.3 | 5139.6 | 2599.3 | 2436.5 | 2406.0 | 2371.4 | 2334.7 | 2314.4 | 2302.1 | 2300.1 |
| 45° | 8954.1 | 7822.4 | 4748.8 | 2479.2 | 2387.6 | 2351.0 | 2310.3 | 2269.6 | 2247.2 | 2241.1 | 2239.0 |
| 47.5° | 8948.0 | 7712.5 | 4333.6 | 2383.6 | 2328.6 | 2292.0 | 2241.1 | 2200.4 | 2175.9 | 2167.8 | 2159.7 |
| 50° | 9216.7 | 7824.4 | 3865.4 | 2300.1 | 2267.5 | 2228.9 | 2171.9 | 2127.1 | 2096.6 | 2086.4 | 2084.3 |
| 52.5° | 9774.4 | 8245.8 | 3446.1 | 2216.7 | 2186.1 | 2141.3 | 2094.5 | 2049.7 | 2013.1 | 1994.8 | 1992.7 |
| 55° | 10377.0 | 8781.1 | 3185.5 | 2131.2 | 2090.5 | 2051.8 | 2009.0 | 1960.2 | 1919.5 | 1891.0 | 1886.9 |
| 57.5° | 10999.8 | 9365.3 | 3106.2 | 2023.3 | 1992.7 | 1966.3 | 1915.4 | 1862.5 | 1815.7 | 1789.2 | 1783.1 |
| 60° | 11512.8 | 9868.1 | 3254.8 | 1909.3 | 1893.0 | 1858.4 | 1811.6 | 1760.7 | 1728.1 | 1707.8 | 1703.7 |
| 62.5° | 9638.1 | 8034.1 | 2627.8 | 1785.1 | 1785.1 | 1748.5 | 1695.6 | 1658.9 | 1636.5 | 1622.3 | 1618.2 |
| 65° | 6116.7 | 4974.8 | 1793.3 | 1661.0 | 1658.9 | 1610.1 | 1565.3 | 1540.9 | 1530.7 | 1508.3 | 1504.2 |
| 67.5° | 2664.5 | 2273.6 | 1532.7 | 1534.8 | 1526.6 | 1473.7 | 1428.9 | 1410.6 | 1390.2 | 1365.8 | 1363.8 |
| 70° | 1382.1 | 1408.6 | 1371.9 | 1394.3 | 1380.1 | 1317.0 | 1274.2 | 1245.7 | 1203.0 | 1178.6 | 1180.6 |
| 72.5° | 1115.5 | 1143.9 | 1184.7 | 1219.3 | 1188.7 | 1137.8 | 1070.7 | 1036.1 | 981.1 | 954.6 | 956.7 |
| 75° | 850.8 | 881.4 | 920.0 | 956.7 | 932.3 | 869.2 | 826.4 | 791.8 | 728.7 | 698.2 | 704.3 |
| 77.5° | 586.2 | 602.5 | 649.3 | 647.3 | 639.1 | 620.8 | 557.7 | 517.0 | 451.9 | 415.2 | 419.3 |
| 80° | 364.4 | 374.5 | 396.9 | 407.1 | 403.0 | 378.6 | 327.7 | 297.2 | 258.5 | 236.1 | 238.2 |
| 82.5° | 219.8 | 225.9 | 246.3 | 248.3 | 246.3 | 228.0 | 189.3 | 166.9 | 142.5 | 130.3 | 130.3 |
| 85° | 112.0 | 116.0 | 128.2 | 128.2 | 116.0 | 97.7 | 87.5 | 77.3 | 63.1 | 57.0 | 57.0 |
| 87.5° | 30.5 | 30.5 | 38.7 | 32.6 | 26.5 | 24.4 | 12.2 | 10.2 | 4.1 | 2.0 | 2.0 |
| 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 LUMINAIRES 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



CCT = 3905K
 CIE x = 0.3841
 CIE y = 0.3774
 Duv = -0.0008

Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2101-121-2

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 $R_a = 71.2$
 $R_9 = -29.7$



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)