

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: P643693

Luminaire Tested: GWS-SA6F-740-U-RW-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P643693
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-49)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA6F-740-U-RW-W
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: (96) 4000K CCT, 70 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 51234.6 lumens
Efficiency: N/A
Efficacy: 137.5 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B5 - U0 - G5

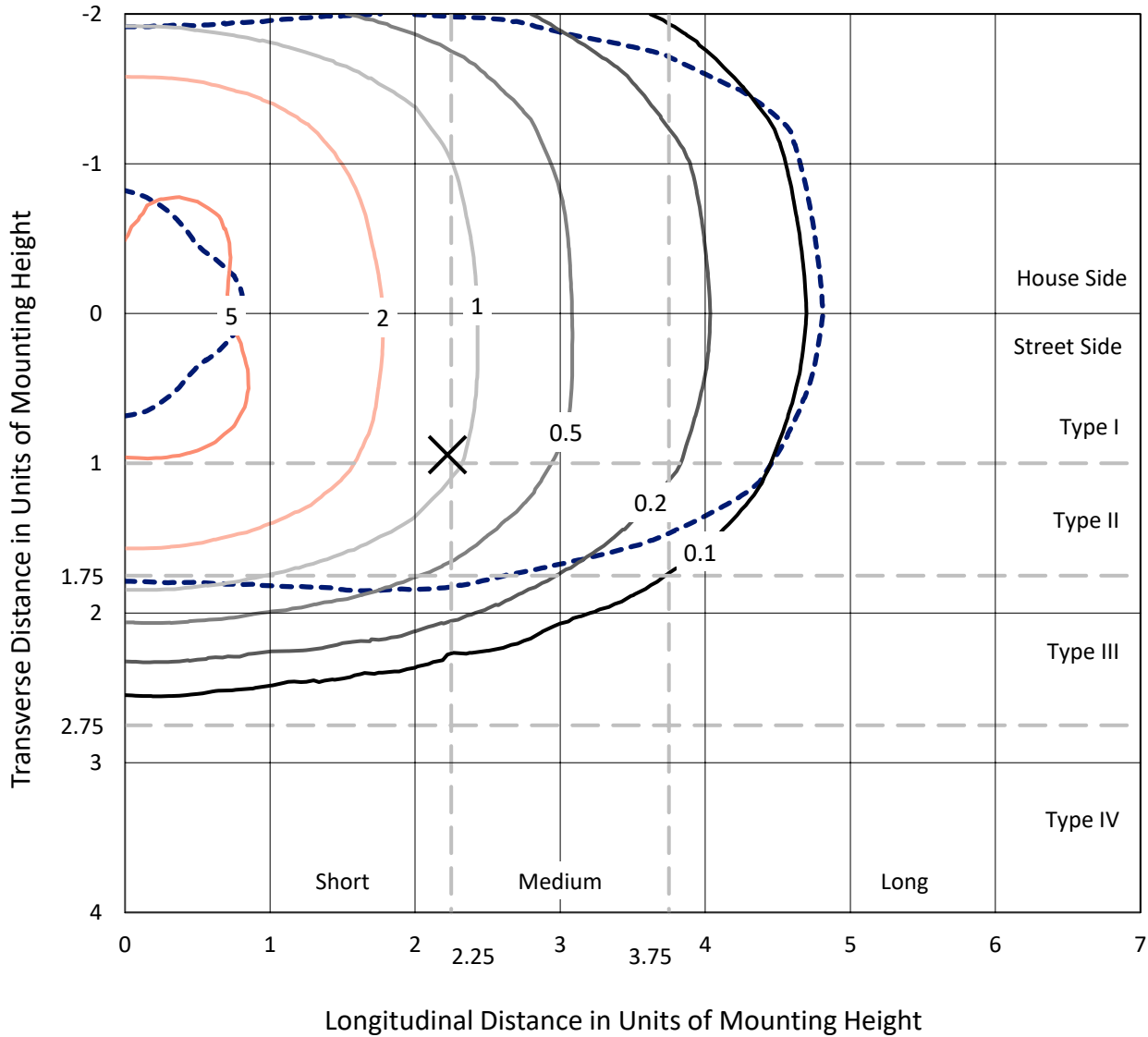
Input Watts (W): 372.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P643693
 CATALOG NUMBER: GWS-SA6F-740-U-RW-W

Iso-Footcandle Lines of Horizontal Illumination

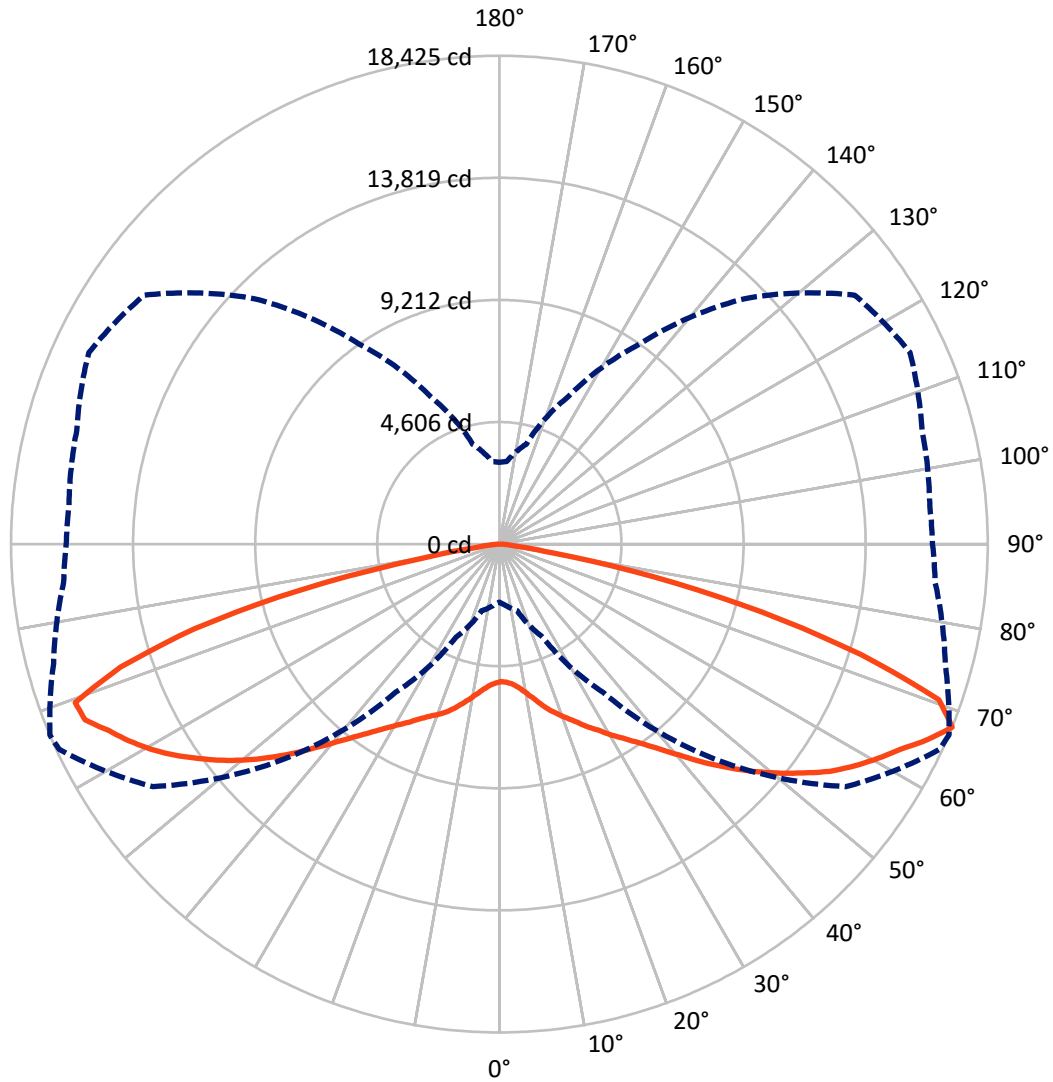
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6.7 fc
 Type III - Short - N/A

REPORT NUMBER: P643693
CATALOG NUMBER: GWS-SA6F-740-U-RW-W

Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P643693

CATALOG NUMBER: GWS-SA6F-740-U-RW-W

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 25334.6 | 0.0 | 25334.6 |
| | % Fixture | 49.4 | 0.0 | 49.4 |
| Street Side | Lumens | 25900.0 | 0.0 | 25900.0 |
| | % Fixture | 50.6 | 0.0 | 50.6 |
| Total | Lumens | 51234.6 | 0.0 | 51234.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 509.0 | 1.0 |
| 10°-20° | 1719.6 | 3.4 |
| 20°-30° | 3373.7 | 6.6 |
| 30°-40° | 5747.8 | 11.2 |
| 40°-50° | 9229.7 | 18.0 |
| 50°-60° | 12541.3 | 24.5 |
| 60°-70° | 11996.6 | 23.4 |
| 70°-80° | 5703.6 | 11.1 |
| 80°-90° | 413.3 | 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° | 51234.6 | 100.0 |
| 0°-180° | 51234.6 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P643693

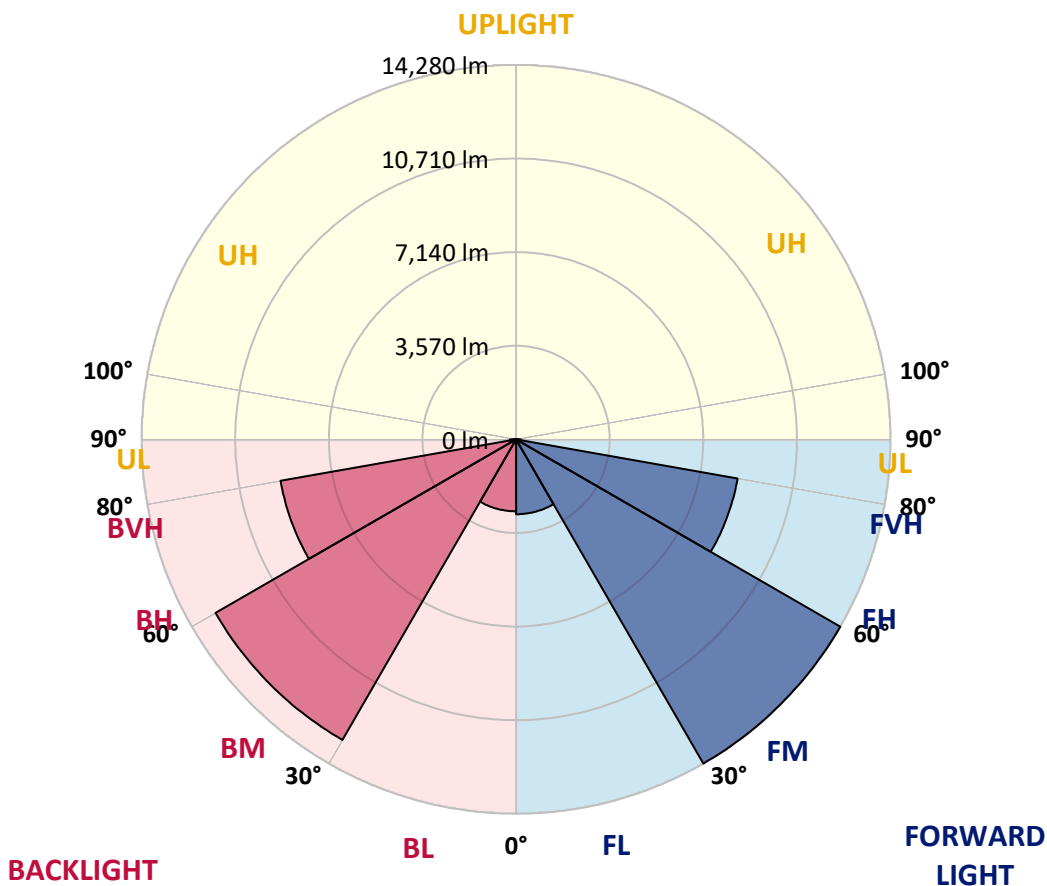
CATALOG NUMBER: GWS-SA6F-740-U-RW-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 2856.7 | 5.6 | | | |
| FM (30°-60°) | 14279.5 | 27.9 | | | |
| FH (60°-80°) | 8578.0 | 16.7 | | | G4/12000 |
| FVH (80°-90°) | 185.8 | 0.4 | | | G2/225 |
| BL (0°-30°) | 2745.6 | 5.4 | B4/5000 | | |
| BM (30°-60°) | 13239.3 | 25.8 | B5 | | |
| BH (60°-80°) | 9122.2 | 17.8 | B5 | | G5 |
| BVH (80°-90°) | 227.5 | 0.4 | | | G3/500 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B5-U0-G5

Type III Short





REPORT NUMBER: P643693
 CATALOG NUMBER: GWS-SA6F-740-U-RW-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 67° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 5187.8 | 5187.8 | 5187.8 | 5187.8 | 5187.8 | 5187.8 | 5187.8 | 5187.8 | 5187.8 | 5187.8 | 5187.8 |
| 2.5° | 5080.8 | 5087.9 | 5098.6 | 5120.0 | 5141.4 | 5173.5 | 5205.6 | 5202.1 | 5216.3 | 5227.0 | 5237.7 |
| 5° | 5052.2 | 5059.3 | 5077.2 | 5105.7 | 5137.8 | 5191.4 | 5259.1 | 5287.7 | 5309.1 | 5348.3 | 5384.0 |
| 7.5° | 5112.9 | 5127.1 | 5152.1 | 5191.4 | 5241.3 | 5309.1 | 5401.9 | 5451.8 | 5483.9 | 5555.3 | 5615.9 |
| 10° | 5194.9 | 5212.8 | 5262.7 | 5337.6 | 5412.6 | 5516.0 | 5633.8 | 5708.7 | 5730.1 | 5822.9 | 5937.1 |
| 12.5° | 5273.4 | 5294.8 | 5376.9 | 5512.5 | 5648.1 | 5787.2 | 5926.4 | 6019.1 | 6026.3 | 6151.1 | 6279.6 |
| 15° | 5398.3 | 5416.1 | 5526.7 | 5701.6 | 5908.5 | 6101.2 | 6272.4 | 6336.7 | 6365.2 | 6454.4 | 6615.0 |
| 17.5° | 5673.0 | 5694.4 | 5837.2 | 6026.3 | 6243.9 | 6447.3 | 6618.5 | 6672.1 | 6672.1 | 6747.0 | 6879.0 |
| 20° | 5969.2 | 5990.6 | 6179.7 | 6422.3 | 6686.3 | 6893.3 | 7025.3 | 6975.3 | 6957.5 | 6978.9 | 7071.7 |
| 22.5° | 6301.0 | 6340.2 | 6522.2 | 6804.1 | 7128.7 | 7382.1 | 7449.9 | 7300.0 | 7250.1 | 7200.1 | 7221.5 |
| 25° | 6725.6 | 6772.0 | 6950.4 | 7250.1 | 7567.6 | 7835.2 | 7874.4 | 7642.5 | 7614.0 | 7439.2 | 7374.9 |
| 27.5° | 7214.4 | 7250.1 | 7471.3 | 7767.4 | 8063.6 | 8288.3 | 8331.1 | 8045.7 | 7949.4 | 7706.8 | 7556.9 |
| 30° | 7845.9 | 7878.0 | 8070.7 | 8363.3 | 8620.1 | 8777.1 | 8830.7 | 8438.2 | 8363.3 | 7992.2 | 7760.3 |
| 32.5° | 8534.5 | 8548.8 | 8745.0 | 9026.9 | 9255.2 | 9405.1 | 9330.2 | 8873.5 | 8762.9 | 8345.4 | 8027.9 |
| 35° | 9323.0 | 9323.0 | 9576.4 | 9804.7 | 9986.7 | 10029.5 | 9886.8 | 9365.8 | 9237.4 | 8784.3 | 8388.2 |
| 37.5° | 10097.3 | 10118.7 | 10354.2 | 10625.3 | 10785.9 | 10778.8 | 10518.3 | 9947.4 | 9801.1 | 9308.8 | 8869.9 |
| 40° | 10935.7 | 10982.1 | 11217.6 | 11520.9 | 11674.3 | 11652.9 | 11253.3 | 10618.2 | 10468.3 | 9886.8 | 9458.6 |
| 42.5° | 11706.4 | 11781.3 | 12056.1 | 12366.5 | 12534.2 | 12519.9 | 12102.5 | 11388.9 | 11242.6 | 10586.1 | 10157.9 |
| 45° | 12320.1 | 12398.6 | 12741.1 | 13172.8 | 13440.4 | 13415.5 | 12994.4 | 12188.1 | 12009.7 | 11321.1 | 10850.1 |
| 47.5° | 12858.9 | 12940.9 | 13322.7 | 13779.4 | 14204.0 | 14246.8 | 13861.5 | 12994.4 | 12805.3 | 12109.6 | 11578.0 |
| 50° | 13272.7 | 13312.0 | 13740.1 | 14239.7 | 14732.0 | 14971.1 | 14635.7 | 13804.4 | 13576.0 | 12887.4 | 12288.0 |
| 52.5° | 13240.6 | 13294.2 | 13822.2 | 14500.1 | 15160.2 | 15552.7 | 15320.7 | 14567.9 | 14346.7 | 13597.4 | 13012.3 |
| 55° | 12587.7 | 12641.2 | 13269.2 | 14257.5 | 15399.2 | 15977.2 | 15952.3 | 15295.8 | 15135.2 | 14321.7 | 13765.1 |
| 57.5° | 11635.1 | 11752.8 | 12377.2 | 13444.0 | 15085.3 | 16316.2 | 16416.1 | 15959.4 | 15791.7 | 15031.7 | 14510.8 |
| 60° | 9929.6 | 10086.6 | 10807.3 | 12191.7 | 14079.1 | 16202.0 | 16912.0 | 16519.6 | 16416.1 | 15691.8 | 15185.2 |
| 62.5° | 7214.4 | 7328.6 | 8288.3 | 10104.4 | 12587.7 | 15388.5 | 17329.5 | 17097.6 | 17019.1 | 16284.1 | 15795.3 |
| 65° | 4320.8 | 4581.2 | 5351.9 | 7146.6 | 10154.4 | 13854.3 | 17101.1 | 17854.0 | 17771.9 | 16894.2 | 16316.2 |
| 67.5° | 2187.1 | 2304.9 | 2608.2 | 3874.8 | 6829.0 | 11463.8 | 15955.8 | 18325.0 | 18424.9 | 17415.1 | 16501.7 |
| 70° | 1355.8 | 1387.9 | 1473.6 | 1912.4 | 3411.0 | 7531.9 | 13048.0 | 17097.6 | 17586.4 | 17333.1 | 16020.1 |
| 72.5° | 1088.2 | 1095.4 | 1109.6 | 1191.7 | 1637.7 | 3521.6 | 8249.1 | 13390.5 | 14271.8 | 16187.8 | 15331.5 |
| 75° | 902.7 | 906.3 | 909.8 | 934.8 | 1020.4 | 1437.9 | 4013.9 | 9201.7 | 10232.9 | 13758.0 | 14214.7 |
| 77.5° | 724.3 | 706.5 | 720.7 | 731.4 | 752.8 | 802.8 | 1384.4 | 4909.5 | 5954.9 | 9030.5 | 10992.8 |
| 80° | 471.0 | 463.8 | 492.4 | 503.1 | 524.5 | 556.6 | 738.6 | 1666.2 | 2023.0 | 3286.1 | 3496.6 |
| 82.5° | 253.3 | 239.1 | 299.7 | 289.0 | 299.7 | 324.7 | 435.3 | 610.1 | 685.0 | 991.9 | 838.5 |
| 85° | 78.5 | 78.5 | 82.1 | 96.3 | 117.7 | 114.2 | 189.1 | 299.7 | 331.8 | 424.6 | 314.0 |
| 87.5° | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 17.8 | 39.2 | 60.7 | 82.1 | 146.3 | 110.6 |
| 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: P643693
 CATALOG NUMBER: GWS-SA6F-740-U-RW-W

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 5187.8 | 5187.8 | 5187.8 | 5187.8 | 5187.8 | 5187.8 | 5187.8 | 5187.8 | 5187.8 | 5187.8 | 5187.8 |
| 2.5° | 5259.1 | 5227.0 | 5244.9 | 5255.6 | 5252.0 | 5244.9 | 5209.2 | 5202.1 | 5184.2 | 5155.7 | 5148.5 |
| 5° | 5416.1 | 5380.5 | 5384.0 | 5373.3 | 5337.6 | 5291.3 | 5212.8 | 5173.5 | 5141.4 | 5105.7 | 5102.2 |
| 7.5° | 5662.3 | 5623.1 | 5612.4 | 5562.4 | 5462.5 | 5355.5 | 5230.6 | 5159.2 | 5105.7 | 5059.3 | 5052.2 |
| 10° | 5976.3 | 5937.1 | 5901.4 | 5783.6 | 5619.5 | 5476.8 | 5312.7 | 5209.2 | 5130.7 | 5073.6 | 5062.9 |
| 12.5° | 6326.0 | 6293.9 | 6204.7 | 6033.4 | 5837.2 | 5669.5 | 5501.8 | 5373.3 | 5259.1 | 5173.5 | 5162.8 |
| 15° | 6714.9 | 6643.5 | 6507.9 | 6286.7 | 6101.2 | 5965.6 | 5762.2 | 5587.4 | 5405.4 | 5291.3 | 5266.3 |
| 17.5° | 6986.0 | 6925.4 | 6764.8 | 6550.7 | 6404.5 | 6286.7 | 6047.7 | 5797.9 | 5551.7 | 5384.0 | 5348.3 |
| 20° | 7178.7 | 7114.5 | 6932.5 | 6775.5 | 6729.1 | 6629.2 | 6350.9 | 6061.9 | 5776.5 | 5569.6 | 5523.2 |
| 22.5° | 7317.9 | 7250.1 | 7064.5 | 6986.0 | 7050.3 | 7032.4 | 6761.3 | 6433.0 | 6094.0 | 5847.9 | 5790.8 |
| 25° | 7449.9 | 7385.6 | 7221.5 | 7250.1 | 7421.3 | 7474.8 | 7182.3 | 6800.5 | 6415.2 | 6126.2 | 6058.4 |
| 27.5° | 7574.7 | 7492.7 | 7417.8 | 7574.7 | 7817.4 | 7917.3 | 7606.9 | 7175.1 | 6757.7 | 6461.5 | 6408.0 |
| 30° | 7767.4 | 7671.1 | 7660.4 | 7888.7 | 8274.1 | 8359.7 | 8017.2 | 7585.4 | 7171.6 | 6871.9 | 6804.1 |
| 32.5° | 8010.0 | 7920.8 | 7928.0 | 8270.5 | 8716.5 | 8787.8 | 8495.3 | 8092.1 | 7678.2 | 7378.5 | 7285.7 |
| 35° | 8338.3 | 8227.7 | 8288.3 | 8709.3 | 9158.9 | 9290.9 | 9055.4 | 8720.1 | 8316.9 | 8010.0 | 7906.6 |
| 37.5° | 8791.4 | 8630.9 | 8755.7 | 9198.2 | 9651.3 | 9847.5 | 9665.6 | 9415.8 | 9016.2 | 8705.8 | 8609.4 |
| 40° | 9369.4 | 9237.4 | 9287.4 | 9776.2 | 10243.6 | 10479.0 | 10364.9 | 10118.7 | 9722.6 | 9398.0 | 9287.4 |
| 42.5° | 10054.5 | 9922.4 | 9904.6 | 10425.5 | 10892.9 | 11249.7 | 11139.1 | 10914.3 | 10504.0 | 10133.0 | 10025.9 |
| 45° | 10725.2 | 10603.9 | 10628.9 | 11160.5 | 11685.0 | 12073.9 | 11963.3 | 11699.3 | 11253.3 | 10825.1 | 10739.5 |
| 47.5° | 11424.6 | 11324.7 | 11346.1 | 11909.8 | 12487.8 | 12876.7 | 12737.6 | 12416.4 | 11895.5 | 11438.8 | 11335.4 |
| 50° | 12141.7 | 12027.5 | 12059.6 | 12651.9 | 13276.3 | 13643.8 | 13429.7 | 12955.2 | 12380.8 | 11934.8 | 11845.6 |
| 52.5° | 12855.3 | 12719.7 | 12801.8 | 13361.9 | 14007.7 | 14300.3 | 13904.3 | 13329.8 | 12773.2 | 12330.8 | 12230.9 |
| 55° | 13675.9 | 13533.2 | 13444.0 | 14043.4 | 14682.1 | 14803.4 | 14261.1 | 13590.3 | 12930.2 | 12427.1 | 12366.5 |
| 57.5° | 14425.2 | 14303.9 | 14136.2 | 14735.6 | 15206.6 | 15117.4 | 14535.8 | 13518.9 | 12548.5 | 11902.7 | 11817.0 |
| 60° | 15096.0 | 14992.5 | 14846.2 | 15356.4 | 15570.5 | 15370.7 | 14314.6 | 12673.3 | 11606.5 | 10932.2 | 10892.9 |
| 62.5° | 15713.2 | 15602.6 | 15467.0 | 15902.3 | 15873.8 | 15409.9 | 13308.4 | 11374.6 | 9947.4 | 9223.1 | 9158.9 |
| 65° | 16202.0 | 16102.1 | 16062.9 | 16405.4 | 16359.0 | 14642.8 | 11742.1 | 9248.1 | 7267.9 | 6450.8 | 6425.9 |
| 67.5° | 16341.2 | 16301.9 | 16512.4 | 17094.0 | 16369.7 | 13101.5 | 9208.9 | 6133.3 | 3903.3 | 3129.1 | 3082.7 |
| 70° | 15820.3 | 15816.7 | 16419.7 | 17251.0 | 14885.5 | 10008.1 | 5434.0 | 2765.2 | 1962.4 | 1741.2 | 1712.6 |
| 72.5° | 15142.3 | 15131.6 | 15609.7 | 14881.9 | 11039.2 | 5476.8 | 2287.1 | 1480.7 | 1227.4 | 1166.7 | 1166.7 |
| 75° | 14029.2 | 14000.6 | 14361.0 | 11321.1 | 6208.2 | 2062.3 | 1213.1 | 1016.9 | 963.3 | 952.6 | 952.6 |
| 77.5° | 11435.3 | 11196.2 | 10628.9 | 6996.7 | 2165.7 | 1013.3 | 802.8 | 799.2 | 767.1 | 763.5 | 763.5 |
| 80° | 3760.6 | 3760.6 | 4370.7 | 2668.8 | 956.2 | 624.4 | 567.3 | 595.8 | 563.7 | 542.3 | 538.8 |
| 82.5° | 613.7 | 845.6 | 1202.4 | 763.5 | 517.4 | 388.9 | 349.7 | 371.1 | 388.9 | 310.4 | 310.4 |
| 85° | 242.6 | 317.5 | 463.8 | 356.8 | 239.1 | 157.0 | 167.7 | 185.5 | 164.1 | 142.7 | 139.1 |
| 87.5° | 92.8 | 114.2 | 164.1 | 85.6 | 50.0 | 28.5 | 17.8 | 17.8 | 14.3 | 14.3 | 14.3 |
| 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 $R_a = 71.2$
 $R_g = -29.7$



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)