

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: P641740

Luminaire Tested: GWS-SA6B-740-U-T2R-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P641740
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-11)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA6B-740-U-T2R-W
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II ROADWAY OPTICS
Light Source: (96) 4000K CCT, 70 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21589.2 lumens
Efficiency: N/A
Efficacy: 155.4 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G3

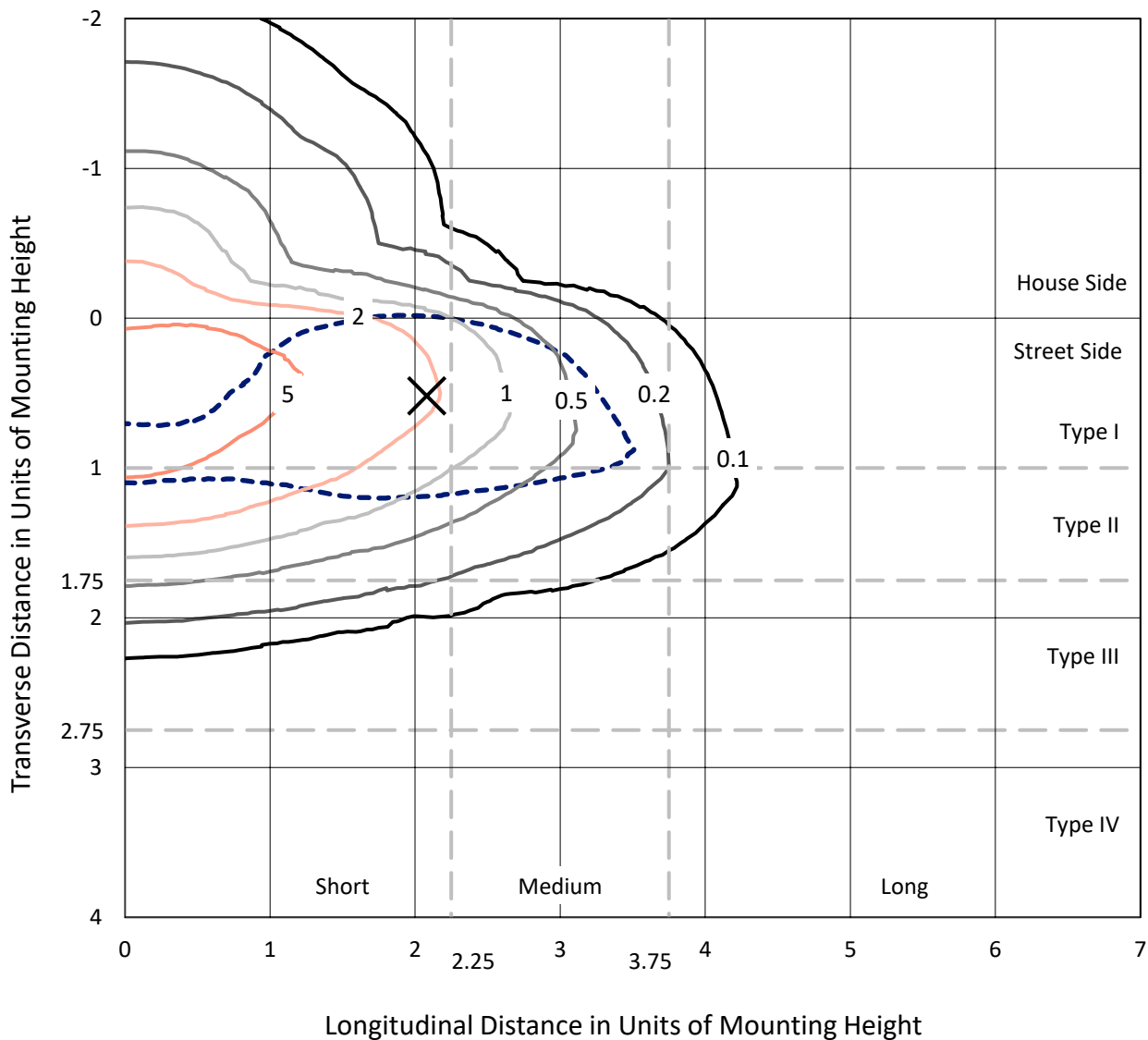
Input Watts (W): 138.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P641740
 CATALOG NUMBER: GWS-SA6B-740-U-T2R-W

Iso-Footcandle Lines of Horizontal Illumination

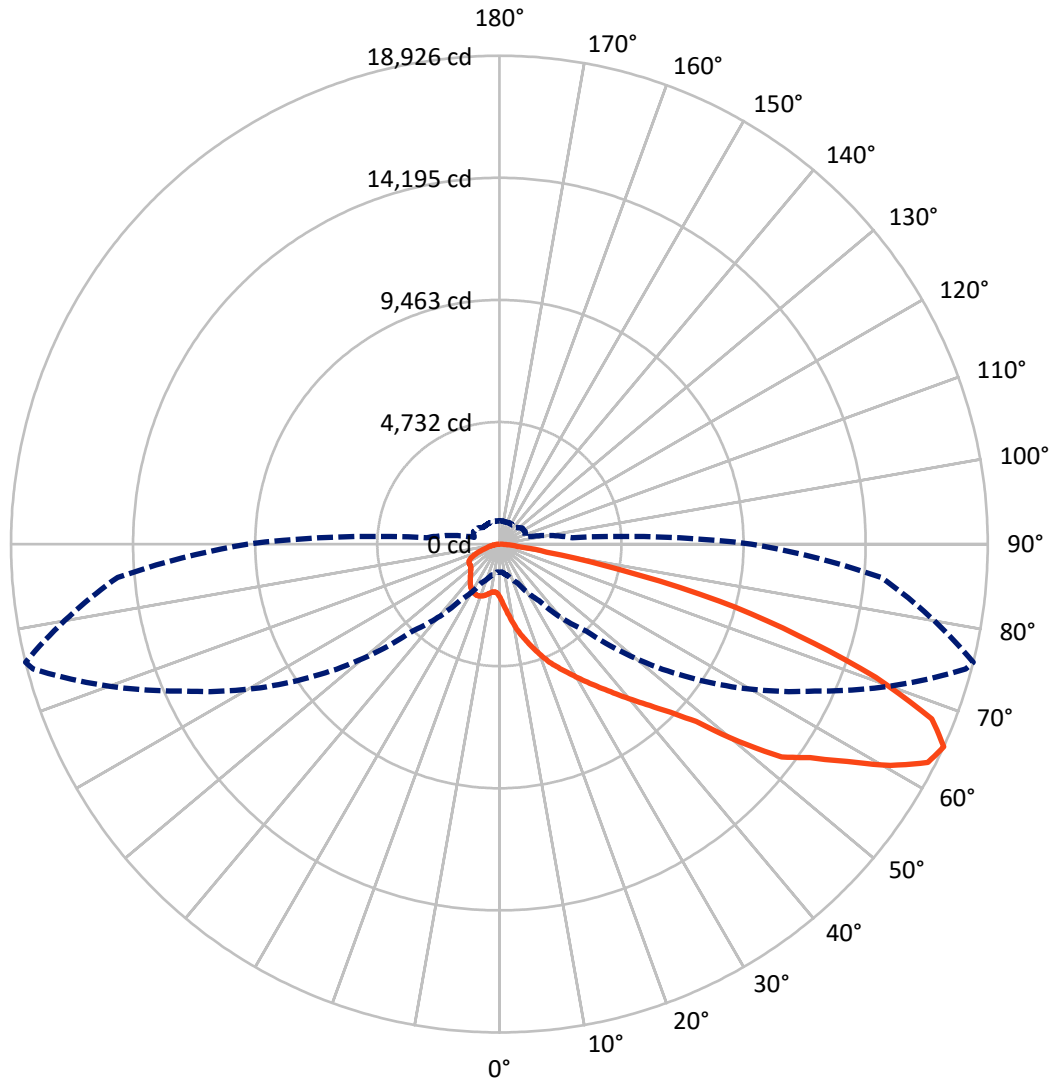
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.5 fc
 Type II - Short - N/A

REPORT NUMBER: P641740
CATALOG NUMBER: GWS-SA6B-740-U-T2R-W

Luminous Intensity Polar Plot



— Vertical Plane Through 76-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

REPORT NUMBER: P641740

CATALOG NUMBER: GWS-SA6B-740-U-T2R-W

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3608.6 | 0.0 | 3608.6 |
| | % Fixture | 16.7 | 0.0 | 16.7 |
| Street Side | Lumens | 17980.5 | 0.0 | 17980.5 |
| | % Fixture | 83.3 | 0.0 | 83.3 |
| Total | Lumens | 21589.2 | 0.0 | 21589.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 242.9 | 1.1 |
| 10°-20° | 925.1 | 4.3 |
| 20°-30° | 1803.0 | 8.4 |
| 30°-40° | 3015.3 | 14.0 |
| 40°-50° | 4317.4 | 20.0 |
| 50°-60° | 5111.2 | 23.7 |
| 60°-70° | 4250.0 | 19.7 |
| 70°-80° | 1739.2 | 8.1 |
| 80°-90° | 185.2 | 0.9 |
| 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° | 21589.2 | 100.0 |
| 0°-180° | 21589.2 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P641740

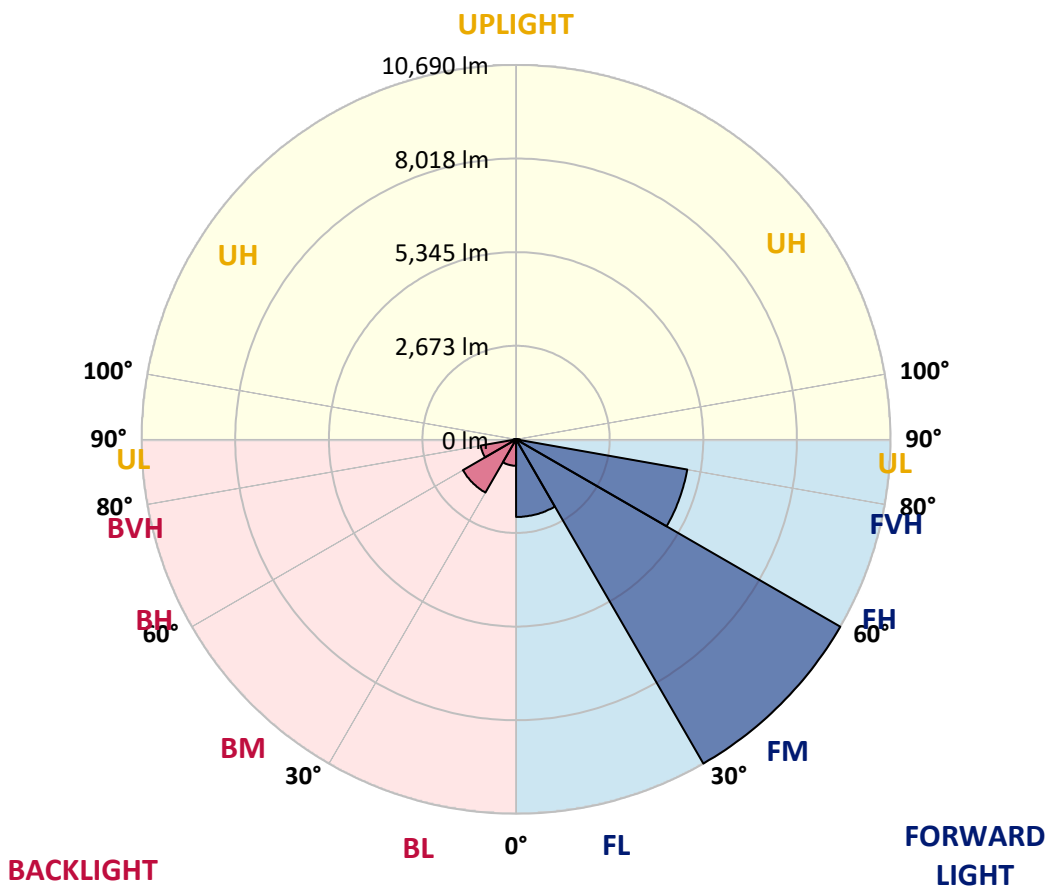
CATALOG NUMBER: GWS-SA6B-740-U-T2R-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 2216.0 | 10.3 | | | |
| FM (30°-60°) | 10690.2 | 49.5 | | | |
| FH (60°-80°) | 4963.9 | 23.0 | | | G2/5000 |
| FVH (80°-90°) | 110.4 | 0.5 | | | G2/225 |
| BL (0°-30°) | 754.9 | 3.5 | B2/1000 | | |
| BM (30°-60°) | 1753.7 | 8.1 | B2/2500 | | |
| BH (60°-80°) | 1025.3 | 4.7 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 74.7 | 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: P641740
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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 76° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 2044.4 | 2044.4 | 2044.4 | 2044.4 | 2044.4 | 2044.4 | 2044.4 | 2044.4 | 2044.4 | 2044.4 | 2044.4 |
| 2.5° | 2865.5 | 2876.1 | 2841.2 | 2829.1 | 2747.1 | 2636.3 | 2543.8 | 2404.1 | 2275.1 | 2255.4 | 2140.0 |
| 5° | 3639.6 | 3594.0 | 3554.6 | 3528.8 | 3415.0 | 3289.0 | 3093.2 | 2830.6 | 2555.9 | 2522.5 | 2273.6 |
| 7.5° | 4099.5 | 4091.9 | 4043.3 | 4028.1 | 3940.1 | 3814.1 | 3612.3 | 3285.9 | 2886.8 | 2832.1 | 2454.2 |
| 10° | 4468.3 | 4463.7 | 4439.4 | 4453.1 | 4372.7 | 4249.7 | 4053.9 | 3717.0 | 3249.5 | 3194.9 | 2656.1 |
| 12.5° | 4790.0 | 4797.6 | 4793.1 | 4843.2 | 4802.2 | 4706.6 | 4503.2 | 4132.8 | 3612.3 | 3553.1 | 2901.9 |
| 15° | 5025.3 | 5031.4 | 5054.1 | 5163.4 | 5186.2 | 5166.4 | 4960.0 | 4541.1 | 3970.4 | 3885.5 | 3155.4 |
| 17.5° | 5092.1 | 5104.2 | 5158.9 | 5334.9 | 5457.9 | 5539.8 | 5386.5 | 4957.0 | 4322.6 | 4230.0 | 3413.4 |
| 20° | 5181.6 | 5195.3 | 5249.9 | 5433.6 | 5614.2 | 5800.9 | 5773.5 | 5378.9 | 4677.7 | 4601.8 | 3674.5 |
| 22.5° | 5596.0 | 5585.3 | 5561.1 | 5649.1 | 5778.1 | 6010.3 | 6078.6 | 5784.2 | 5045.0 | 4972.2 | 3962.9 |
| 25° | 6394.3 | 6374.6 | 6219.8 | 6139.3 | 6096.8 | 6238.0 | 6359.4 | 6153.0 | 5403.2 | 5293.9 | 4231.5 |
| 27.5° | 7274.6 | 7264.0 | 7066.7 | 6875.4 | 6614.4 | 6553.7 | 6625.0 | 6474.7 | 5750.8 | 5640.0 | 4465.2 |
| 30° | 8107.9 | 8076.0 | 7869.6 | 7629.8 | 7280.7 | 7019.6 | 6914.9 | 6790.4 | 6131.7 | 6016.4 | 4738.4 |
| 32.5° | 8853.1 | 8812.1 | 8569.3 | 8303.6 | 7937.9 | 7629.8 | 7317.1 | 7125.9 | 6562.8 | 6429.2 | 5017.7 |
| 35° | 9464.7 | 9423.7 | 9174.8 | 8892.5 | 8490.3 | 8262.7 | 7834.7 | 7490.1 | 7001.4 | 6866.3 | 5347.1 |
| 37.5° | 9938.3 | 9900.3 | 9640.8 | 9363.0 | 9012.4 | 8831.8 | 8460.0 | 7899.9 | 7506.8 | 7365.7 | 5696.1 |
| 40° | 10203.9 | 10176.6 | 9968.6 | 9748.5 | 9454.1 | 9297.8 | 9130.8 | 8417.5 | 8072.9 | 7931.8 | 6107.5 |
| 42.5° | 10284.3 | 10266.1 | 10120.4 | 10006.6 | 9807.7 | 9689.4 | 9785.0 | 9026.1 | 8677.0 | 8554.1 | 6570.4 |
| 45° | 10082.5 | 10082.5 | 10040.0 | 10097.6 | 10106.7 | 10105.2 | 10440.6 | 9713.6 | 9419.2 | 9284.1 | 7223.0 |
| 47.5° | 9566.4 | 9599.8 | 9662.0 | 9945.9 | 10244.9 | 10495.3 | 11207.1 | 10630.4 | 10373.9 | 10263.1 | 8147.3 |
| 50° | 8622.4 | 8713.4 | 8925.9 | 9479.9 | 10115.8 | 10753.3 | 11932.6 | 11985.7 | 12230.1 | 12034.3 | 9507.2 |
| 52.5° | 7239.7 | 7226.0 | 7767.9 | 8557.1 | 9527.0 | 10763.9 | 12331.8 | 13181.7 | 13838.9 | 13703.8 | 10518.0 |
| 55° | 5753.8 | 5731.0 | 6236.5 | 7324.7 | 8623.9 | 10357.2 | 12571.6 | 13729.6 | 14731.3 | 14609.9 | 11427.2 |
| 57.5° | 4406.0 | 4377.2 | 4826.5 | 5808.5 | 7349.0 | 9493.6 | 12526.0 | 14382.3 | 15959.2 | 15897.0 | 12662.6 |
| 60° | 3032.5 | 2997.6 | 3418.0 | 4277.0 | 5840.3 | 8173.1 | 12022.1 | 14717.7 | 17396.5 | 17417.8 | 13984.6 |
| 62.5° | 1821.3 | 1801.6 | 2106.6 | 2772.9 | 4201.1 | 6537.0 | 10842.8 | 14514.3 | 18540.9 | 18636.5 | 14834.5 |
| 65° | 1098.9 | 1085.2 | 1264.3 | 1654.4 | 2665.2 | 4770.3 | 9024.6 | 13474.6 | 18706.3 | 18926.4 | 14854.3 |
| 67.5° | 799.9 | 801.4 | 853.0 | 1007.8 | 1554.2 | 3081.0 | 6772.2 | 11610.8 | 17844.3 | 18071.9 | 13917.8 |
| 70° | 695.1 | 698.2 | 725.5 | 760.4 | 939.5 | 1763.6 | 4403.0 | 9165.7 | 15295.9 | 15472.0 | 11673.1 |
| 72.5° | 617.7 | 617.7 | 635.9 | 654.2 | 734.6 | 1074.6 | 2358.6 | 6406.4 | 12072.2 | 12119.3 | 8909.2 |
| 75° | 543.4 | 538.8 | 547.9 | 557.0 | 637.5 | 751.3 | 1147.4 | 4463.7 | 8916.8 | 8807.5 | 5758.4 |
| 77.5° | 432.6 | 428.0 | 429.5 | 438.6 | 511.5 | 537.3 | 581.3 | 2788.1 | 5025.3 | 4743.0 | 2543.8 |
| 80° | 308.1 | 305.1 | 321.8 | 344.5 | 377.9 | 329.4 | 364.3 | 1349.3 | 1992.8 | 1854.7 | 986.5 |
| 82.5° | 183.6 | 189.7 | 215.5 | 233.7 | 261.1 | 206.4 | 235.3 | 450.8 | 705.8 | 687.5 | 400.7 |
| 85° | 25.8 | 27.3 | 77.4 | 89.5 | 112.3 | 80.4 | 124.5 | 203.4 | 282.3 | 302.0 | 141.2 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.6 | 36.4 | 80.4 | 82.0 | 34.9 |
| 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: P641740
 CATALOG NUMBER: GWS-SA6B-740-U-T2R-W

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2044.4 | 2044.4 | 2044.4 | 2044.4 | 2044.4 | 2044.4 | 2044.4 | 2044.4 | 2044.4 | 2044.4 | 2044.4 |
| 2.5° | 2080.8 | 2009.5 | 1907.8 | 1822.8 | 1751.5 | 1693.8 | 1645.2 | 1608.8 | 1598.2 | 1583.0 | 1583.0 |
| 5° | 2156.7 | 2027.7 | 1845.6 | 1716.6 | 1642.2 | 1598.2 | 1567.8 | 1552.7 | 1545.1 | 1536.0 | 1531.4 |
| 7.5° | 2261.5 | 2080.8 | 1835.0 | 1704.4 | 1646.8 | 1619.4 | 1599.7 | 1590.6 | 1584.5 | 1575.4 | 1575.4 |
| 10° | 2405.6 | 2159.8 | 1868.4 | 1746.9 | 1701.4 | 1674.1 | 1651.3 | 1636.1 | 1622.5 | 1608.8 | 1605.8 |
| 12.5° | 2562.0 | 2263.0 | 1929.1 | 1804.6 | 1756.0 | 1722.7 | 1690.8 | 1668.0 | 1651.3 | 1634.6 | 1630.1 |
| 15° | 2735.0 | 2369.2 | 1994.3 | 1860.8 | 1800.1 | 1754.5 | 1716.6 | 1681.7 | 1658.9 | 1634.6 | 1631.6 |
| 17.5° | 2905.0 | 2477.0 | 2049.0 | 1898.7 | 1821.3 | 1765.2 | 1710.5 | 1665.0 | 1636.1 | 1608.8 | 1601.2 |
| 20° | 3108.4 | 2584.7 | 2086.9 | 1909.3 | 1816.8 | 1742.4 | 1677.1 | 1619.4 | 1587.6 | 1555.7 | 1551.1 |
| 22.5° | 3295.0 | 2684.9 | 2105.1 | 1894.2 | 1781.8 | 1693.8 | 1617.9 | 1555.7 | 1520.8 | 1488.9 | 1482.8 |
| 25° | 3475.7 | 2772.9 | 2097.5 | 1857.7 | 1728.7 | 1627.0 | 1548.1 | 1485.9 | 1452.5 | 1419.1 | 1410.0 |
| 27.5° | 3650.2 | 2832.1 | 2067.2 | 1801.6 | 1661.9 | 1552.7 | 1476.8 | 1420.6 | 1391.8 | 1362.9 | 1350.8 |
| 30° | 3821.7 | 2886.8 | 2020.1 | 1728.7 | 1576.9 | 1475.3 | 1413.0 | 1373.6 | 1344.7 | 1314.4 | 1305.3 |
| 32.5° | 3994.7 | 2926.2 | 1948.8 | 1643.7 | 1490.4 | 1407.0 | 1369.0 | 1340.2 | 1309.8 | 1279.5 | 1270.4 |
| 35° | 4169.3 | 2942.9 | 1862.3 | 1546.6 | 1417.6 | 1362.9 | 1349.3 | 1315.9 | 1274.9 | 1238.5 | 1226.3 |
| 37.5° | 4377.2 | 2958.1 | 1754.5 | 1451.0 | 1353.8 | 1341.7 | 1338.7 | 1288.6 | 1240.0 | 1189.9 | 1176.3 |
| 40° | 4627.6 | 2977.8 | 1643.7 | 1364.5 | 1302.2 | 1334.1 | 1322.0 | 1253.7 | 1156.5 | 1108.0 | 1092.8 |
| 42.5° | 4934.2 | 3014.3 | 1528.4 | 1285.5 | 1264.3 | 1305.3 | 1291.6 | 1168.7 | 1103.4 | 1076.1 | 1068.5 |
| 45° | 5385.0 | 3147.8 | 1413.0 | 1223.3 | 1235.5 | 1264.3 | 1243.0 | 1118.6 | 1092.8 | 1074.6 | 1065.5 |
| 47.5° | 6187.9 | 3352.7 | 1312.9 | 1176.3 | 1212.7 | 1227.9 | 1145.9 | 1104.9 | 1085.2 | 1060.9 | 1050.3 |
| 50° | 7022.7 | 3442.3 | 1232.4 | 1147.4 | 1186.9 | 1194.5 | 1092.8 | 1086.7 | 1073.1 | 1047.3 | 1036.6 |
| 52.5° | 7587.3 | 3430.1 | 1183.8 | 1136.8 | 1165.6 | 1136.8 | 1068.5 | 1067.0 | 1057.9 | 1027.5 | 1015.4 |
| 55° | 8224.7 | 3451.4 | 1162.6 | 1139.8 | 1156.5 | 1039.7 | 1038.1 | 1042.7 | 1038.1 | 1004.8 | 998.7 |
| 57.5° | 9085.3 | 3516.6 | 1152.0 | 1150.5 | 1150.5 | 992.6 | 1009.3 | 1015.4 | 1006.3 | 991.1 | 986.5 |
| 60° | 9912.5 | 3521.2 | 1132.2 | 1162.6 | 1145.9 | 963.8 | 975.9 | 982.0 | 971.4 | 968.3 | 966.8 |
| 62.5° | 10223.6 | 3302.6 | 1088.2 | 1153.5 | 1127.7 | 931.9 | 941.0 | 944.0 | 933.4 | 941.0 | 939.5 |
| 65° | 9760.7 | 2838.2 | 1015.4 | 1109.5 | 1071.5 | 903.1 | 897.0 | 904.6 | 886.4 | 906.1 | 907.6 |
| 67.5° | 8666.4 | 2255.4 | 904.6 | 1026.0 | 992.6 | 871.2 | 859.0 | 859.0 | 828.7 | 859.0 | 857.5 |
| 70° | 6987.7 | 1593.6 | 742.2 | 892.4 | 906.1 | 833.2 | 827.2 | 792.3 | 743.7 | 789.2 | 784.7 |
| 72.5° | 5297.0 | 1144.4 | 584.3 | 705.8 | 780.1 | 780.1 | 781.6 | 722.5 | 666.3 | 687.5 | 669.3 |
| 75° | 3355.8 | 805.9 | 467.5 | 540.3 | 611.7 | 684.5 | 719.4 | 610.1 | 560.1 | 550.9 | 541.8 |
| 77.5° | 1511.7 | 529.7 | 364.3 | 414.3 | 434.1 | 540.3 | 657.2 | 525.1 | 456.8 | 437.1 | 431.0 |
| 80° | 632.9 | 329.4 | 259.5 | 292.9 | 267.1 | 453.8 | 579.8 | 408.3 | 335.4 | 308.1 | 288.4 |
| 82.5° | 277.7 | 195.8 | 165.4 | 157.8 | 167.0 | 336.9 | 432.6 | 271.7 | 209.5 | 283.8 | 286.9 |
| 85° | 116.9 | 103.2 | 85.0 | 77.4 | 68.3 | 129.0 | 203.4 | 106.2 | 130.5 | 74.4 | 60.7 |
| 87.5° | 27.3 | 30.4 | 22.8 | 15.2 | 9.1 | 1.5 | 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 |

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



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)