

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: P634255

Luminaire Tested: GWS-SA3B-735-U-T2-W-HSS

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P634255
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-22)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA3B-735-U-T2-W-HSS
Description: GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: (48) 3500K CCT, 70 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7684.5 lumens
Efficiency: N/A
Efficacy: 112.5 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 0.5' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G2

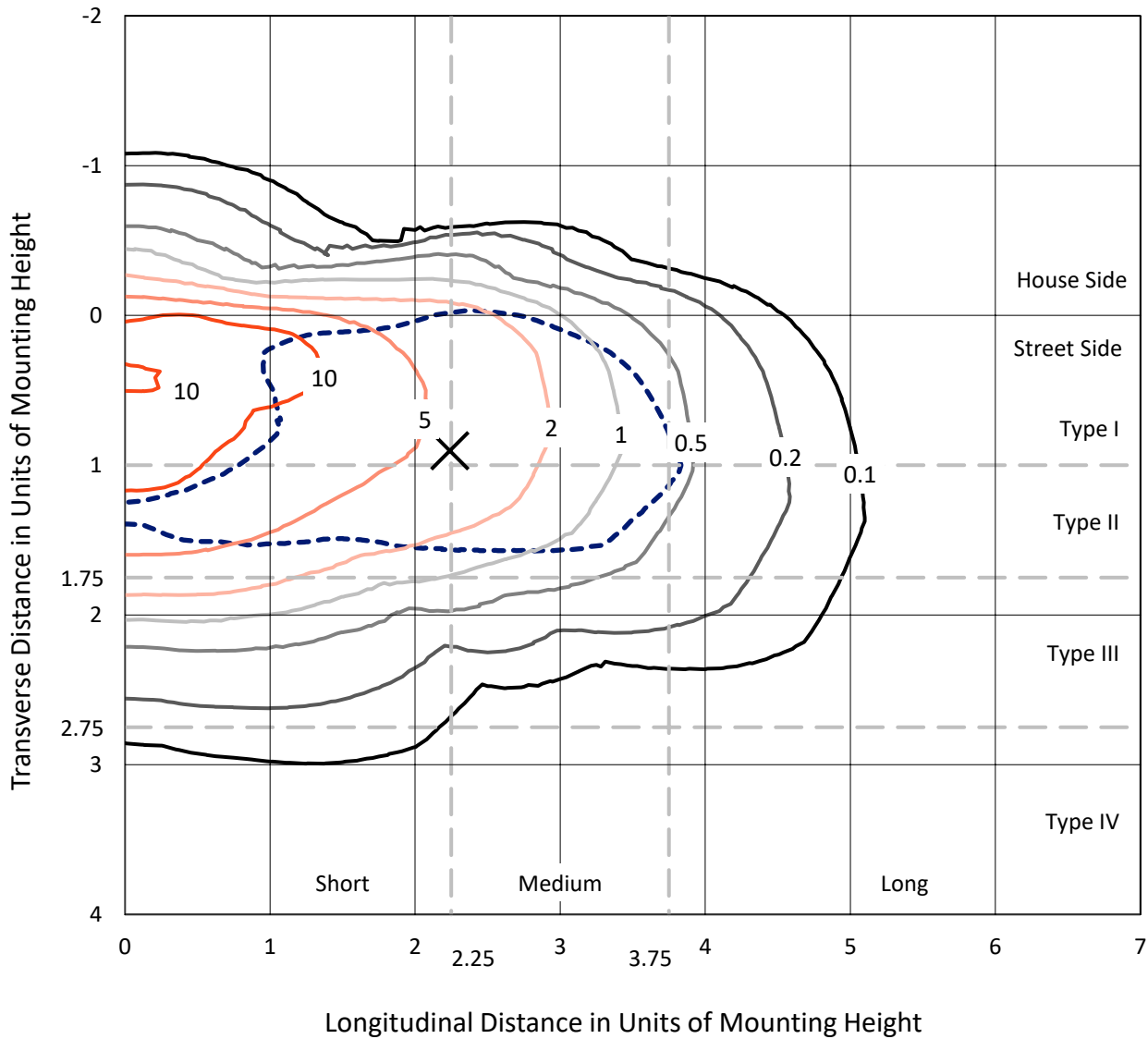
Input Watts (W): 68.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P634255
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Iso-Footcandle Lines of Horizontal Illumination

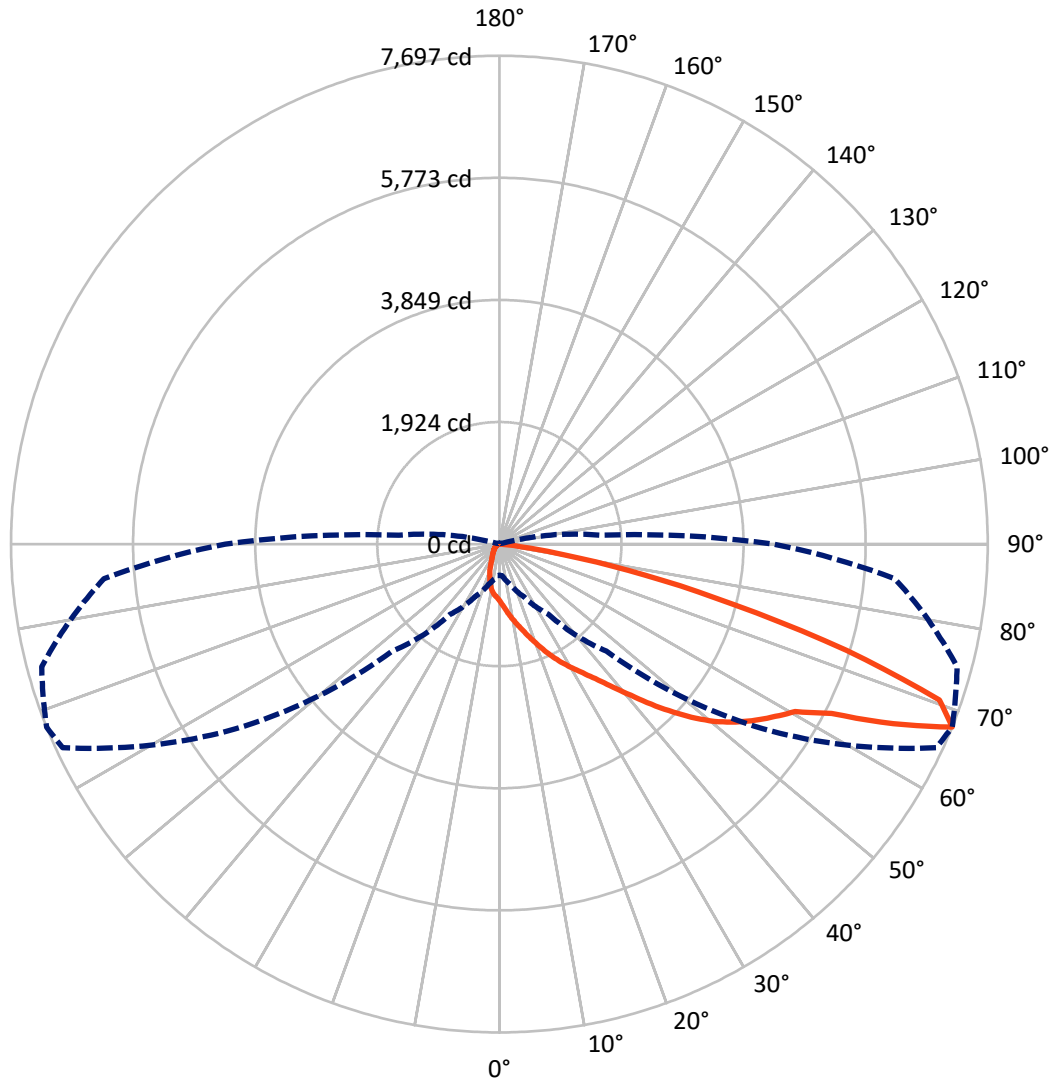
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.4 fc
 Type II - Short - N/A

REPORT NUMBER: P634255
CATALOG NUMBER: GWS-SA3B-735-U-T2-W-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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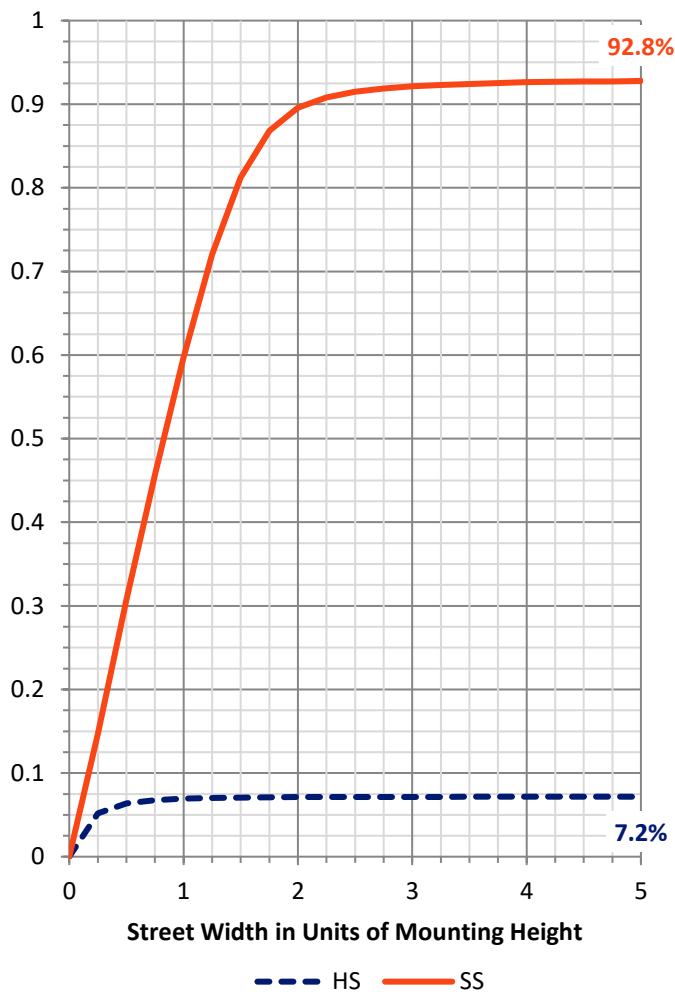
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 554.9 | 0.0 | 554.9 |
| | % Fixture | 7.2 | 0.0 | 7.2 |
| Street Side | Lumens | 7129.6 | 0.0 | 7129.6 |
| | % Fixture | 92.8 | 0.0 | 92.8 |
| Total | Lumens | 7684.5 | 0.0 | 7684.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 87.2 | 1.1 |
| 10°-20° | 250.5 | 3.3 |
| 20°-30° | 430.4 | 5.6 |
| 30°-40° | 748.4 | 9.7 |
| 40°-50° | 1305.8 | 17.0 |
| 50°-60° | 1969.5 | 25.6 |
| 60°-70° | 1974.9 | 25.7 |
| 70°-80° | 871.3 | 11.3 |
| 80°-90° | 46.5 | 0.6 |
| 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° | 7684.5 | 100.0 |
| 0°-180° | 7684.5 | 100.0 |

Coefficient of Utilization

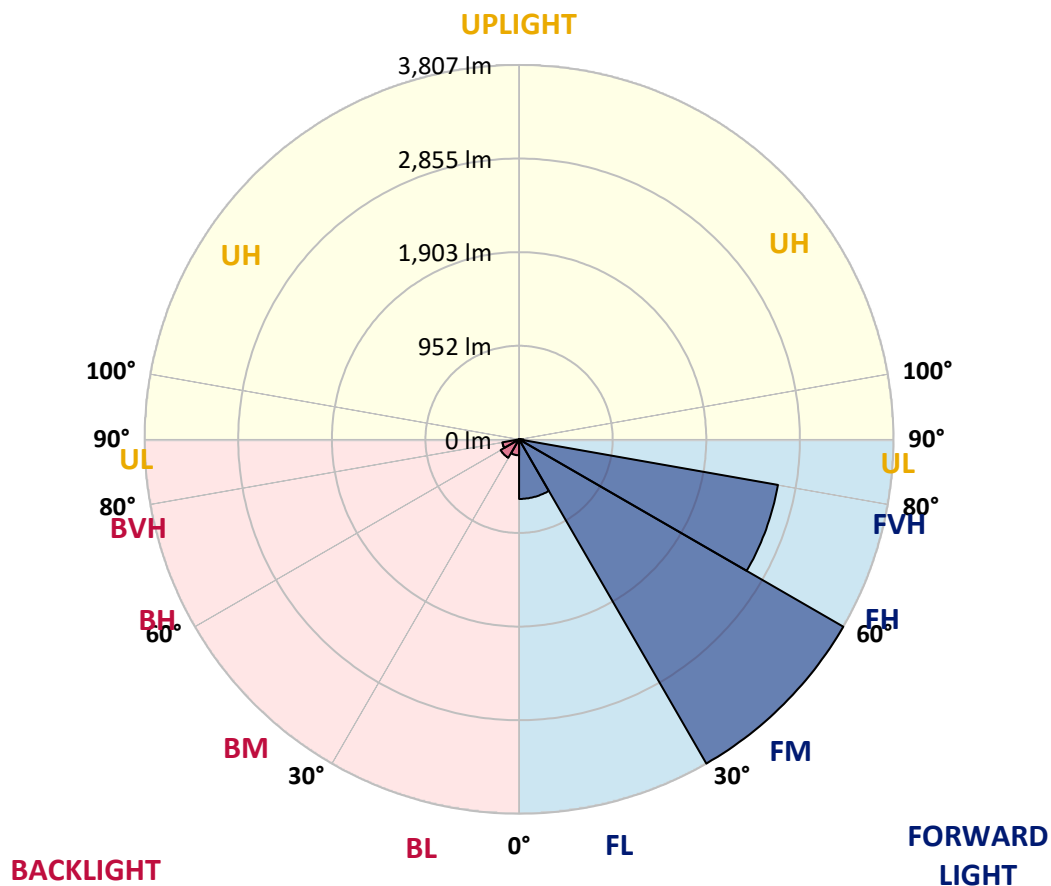


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 605.8 | 7.9 | | | |
| FM (30°-60°) | 3806.9 | 49.5 | | | |
| FH (60°-80°) | 2673.0 | 34.8 | | | G2/5000 |
| FVH (80°-90°) | 43.9 | 0.6 | | | G1/100 |
| BL (0°-30°) | 162.3 | 2.1 | B1/500 | | |
| BM (30°-60°) | 216.8 | 2.8 | B0/220 | | |
| BH (60°-80°) | 173.2 | 2.3 | B1/500 | | G1/500 |
| BVH (80°-90°) | 2.6 | 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 II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 68° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 894.3 | 894.3 | 894.3 | 894.3 | 894.3 | 894.3 | 894.3 | 894.3 | 894.3 | 894.3 | 894.3 |
| 2.5° | 1041.4 | 1048.0 | 1041.4 | 1042.8 | 1023.7 | 1014.9 | 995.8 | 969.3 | 962.7 | 945.8 | 920.0 |
| 5° | 1168.6 | 1174.5 | 1167.9 | 1166.4 | 1144.3 | 1128.1 | 1096.5 | 1050.9 | 1037.7 | 1004.6 | 953.9 |
| 7.5° | 1237.7 | 1241.4 | 1243.6 | 1247.3 | 1239.2 | 1226.0 | 1197.3 | 1140.6 | 1126.7 | 1073.0 | 1001.7 |
| 10° | 1245.1 | 1248.0 | 1259.1 | 1281.1 | 1297.3 | 1305.4 | 1289.2 | 1237.0 | 1214.9 | 1162.7 | 1060.5 |
| 12.5° | 1224.5 | 1228.9 | 1246.6 | 1283.3 | 1328.2 | 1369.4 | 1379.7 | 1334.1 | 1314.2 | 1247.3 | 1129.6 |
| 15° | 1197.3 | 1201.0 | 1225.2 | 1275.2 | 1342.9 | 1418.6 | 1461.3 | 1441.4 | 1419.4 | 1349.5 | 1206.1 |
| 17.5° | 1155.4 | 1160.5 | 1194.3 | 1262.0 | 1349.5 | 1457.6 | 1549.5 | 1556.2 | 1540.7 | 1465.0 | 1290.7 |
| 20° | 1131.8 | 1135.5 | 1165.7 | 1235.5 | 1345.1 | 1486.3 | 1631.9 | 1694.4 | 1677.5 | 1598.1 | 1387.8 |
| 22.5° | 1151.7 | 1154.6 | 1174.5 | 1228.9 | 1330.4 | 1502.5 | 1708.4 | 1832.7 | 1823.1 | 1740.8 | 1490.0 |
| 25° | 1256.1 | 1265.7 | 1253.9 | 1263.5 | 1337.0 | 1511.3 | 1770.2 | 1970.9 | 1973.2 | 1890.0 | 1595.9 |
| 27.5° | 1467.9 | 1455.4 | 1427.5 | 1379.7 | 1388.5 | 1534.8 | 1823.1 | 2101.1 | 2120.2 | 2035.7 | 1690.0 |
| 30° | 1683.4 | 1676.0 | 1659.1 | 1584.8 | 1523.1 | 1587.1 | 1868.0 | 2234.2 | 2264.4 | 2179.1 | 1773.9 |
| 32.5° | 1925.4 | 1932.7 | 1902.6 | 1813.6 | 1708.4 | 1693.0 | 1914.3 | 2360.7 | 2417.4 | 2341.6 | 1872.4 |
| 35° | 2214.4 | 2216.6 | 2157.0 | 2058.5 | 1939.3 | 1868.0 | 1997.4 | 2500.5 | 2604.9 | 2549.0 | 2004.0 |
| 37.5° | 2496.0 | 2509.3 | 2476.9 | 2321.7 | 2215.8 | 2085.7 | 2134.9 | 2679.9 | 2827.0 | 2804.9 | 2169.5 |
| 40° | 2745.4 | 2765.9 | 2755.6 | 2605.6 | 2466.6 | 2357.0 | 2348.2 | 2890.2 | 3095.4 | 3120.4 | 2387.9 |
| 42.5° | 2943.9 | 2957.2 | 2965.2 | 2858.6 | 2735.8 | 2674.0 | 2611.5 | 3134.4 | 3412.4 | 3514.6 | 2655.6 |
| 45° | 3153.5 | 3157.9 | 3174.8 | 3102.8 | 2995.4 | 3000.5 | 2922.6 | 3430.8 | 3746.3 | 3951.5 | 2963.0 |
| 47.5° | 3420.5 | 3435.2 | 3427.1 | 3351.3 | 3254.3 | 3312.4 | 3244.0 | 3736.0 | 4075.7 | 4417.7 | 3277.8 |
| 50° | 3745.5 | 3761.0 | 3753.6 | 3665.4 | 3557.3 | 3581.5 | 3538.9 | 4032.4 | 4393.4 | 4857.5 | 3539.6 |
| 52.5° | 3913.2 | 3925.7 | 4016.9 | 4056.6 | 4000.0 | 3845.6 | 3790.4 | 4358.1 | 4661.9 | 5219.3 | 3780.1 |
| 55° | 3832.3 | 3841.1 | 4039.7 | 4207.4 | 4414.8 | 4260.3 | 4043.4 | 4609.7 | 4898.7 | 5501.7 | 3958.8 |
| 57.5° | 3497.0 | 3544.8 | 3814.7 | 4098.5 | 4534.6 | 4670.0 | 4453.8 | 4883.2 | 5126.7 | 5698.1 | 4134.6 |
| 60° | 2809.3 | 2807.1 | 3194.0 | 3703.6 | 4300.8 | 4782.5 | 5033.3 | 5253.2 | 5355.4 | 5848.9 | 4369.9 |
| 62.5° | 1552.5 | 1566.5 | 2081.3 | 2752.7 | 3650.7 | 4491.3 | 5467.9 | 5892.2 | 5876.8 | 6112.1 | 4738.4 |
| 65° | 772.9 | 800.9 | 1080.3 | 1576.8 | 2429.1 | 3711.7 | 5542.9 | 6867.4 | 6823.3 | 6732.1 | 5499.5 |
| 67.5° | 490.5 | 501.6 | 656.0 | 916.3 | 1350.2 | 2385.7 | 5075.9 | 7594.8 | 7697.0 | 7467.5 | 6254.8 |
| 70° | 317.7 | 336.1 | 456.0 | 626.6 | 814.9 | 1229.6 | 3718.3 | 7123.4 | 7358.0 | 7386.6 | 5784.1 |
| 72.5° | 172.8 | 186.1 | 291.2 | 447.1 | 588.3 | 614.8 | 2088.6 | 5345.8 | 5723.1 | 6265.8 | 4525.1 |
| 75° | 98.5 | 108.1 | 159.6 | 303.7 | 431.7 | 374.3 | 925.9 | 3578.6 | 3819.1 | 4478.0 | 3242.5 |
| 77.5° | 59.6 | 67.7 | 89.7 | 147.8 | 270.6 | 250.0 | 350.1 | 2178.3 | 2331.3 | 2671.8 | 1701.8 |
| 80° | 27.2 | 32.4 | 56.6 | 81.6 | 147.8 | 118.4 | 133.8 | 1015.6 | 1048.7 | 1096.5 | 563.3 |
| 82.5° | 12.5 | 14.7 | 25.7 | 48.5 | 83.8 | 68.4 | 51.5 | 234.6 | 330.2 | 312.6 | 143.4 |
| 85° | 1.5 | 1.5 | 9.6 | 19.9 | 23.5 | 17.7 | 21.3 | 53.0 | 66.9 | 94.1 | 41.2 |
| 87.5° | 0.0 | 0.0 | 0.7 | 0.7 | 1.5 | 2.2 | 4.4 | 6.6 | 9.6 | 15.4 | 10.3 |
| 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: P634255

CATALOG NUMBER: GWS-SA3B-735-U-T2-W-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 894.3 | 894.3 | 894.3 | 894.3 | 894.3 | 894.3 | 894.3 | 894.3 | 894.3 | 894.3 | 894.3 |
| 2.5° | 908.3 | 887.7 | 869.3 | 842.1 | 823.7 | 803.1 | 789.1 | 772.2 | 765.6 | 760.4 | 753.1 |
| 5° | 928.8 | 895.8 | 850.9 | 800.9 | 759.7 | 720.7 | 684.7 | 661.1 | 640.6 | 637.6 | 627.3 |
| 7.5° | 962.7 | 913.4 | 837.7 | 756.0 | 686.2 | 621.4 | 570.7 | 529.5 | 508.9 | 502.3 | 490.5 |
| 10° | 1007.5 | 939.9 | 817.8 | 692.8 | 592.0 | 514.8 | 457.4 | 411.1 | 378.7 | 367.0 | 358.2 |
| 12.5° | 1057.5 | 964.1 | 786.2 | 614.8 | 500.1 | 411.8 | 339.0 | 289.8 | 269.2 | 261.8 | 255.2 |
| 15° | 1114.9 | 986.9 | 736.2 | 536.9 | 410.4 | 303.0 | 251.5 | 230.2 | 221.4 | 219.2 | 217.0 |
| 17.5° | 1170.1 | 1001.7 | 676.6 | 456.0 | 315.5 | 235.3 | 211.1 | 203.0 | 200.8 | 198.6 | 197.1 |
| 20° | 1232.6 | 1011.9 | 606.7 | 379.5 | 244.9 | 199.3 | 187.5 | 181.7 | 177.2 | 172.8 | 172.1 |
| 22.5° | 1296.6 | 1011.9 | 531.0 | 304.5 | 205.2 | 178.7 | 165.5 | 154.4 | 146.4 | 141.9 | 140.5 |
| 25° | 1357.6 | 998.0 | 456.0 | 243.4 | 180.9 | 158.9 | 141.9 | 129.4 | 118.4 | 113.3 | 111.8 |
| 27.5° | 1401.0 | 961.9 | 390.5 | 205.9 | 164.0 | 141.2 | 120.6 | 106.6 | 97.8 | 92.7 | 91.9 |
| 30° | 1428.2 | 908.3 | 330.2 | 183.9 | 149.3 | 122.8 | 102.2 | 90.5 | 83.8 | 80.2 | 78.7 |
| 32.5° | 1448.8 | 842.1 | 276.5 | 168.4 | 135.3 | 106.6 | 89.0 | 79.4 | 73.5 | 70.6 | 69.9 |
| 35° | 1490.0 | 779.6 | 236.8 | 154.4 | 120.6 | 93.4 | 78.0 | 70.6 | 66.2 | 62.5 | 61.8 |
| 37.5° | 1547.3 | 727.3 | 205.2 | 141.9 | 106.6 | 83.1 | 70.6 | 64.0 | 60.3 | 56.6 | 55.9 |
| 40° | 1631.9 | 694.2 | 181.7 | 129.4 | 94.1 | 75.0 | 64.7 | 58.8 | 53.7 | 50.0 | 49.3 |
| 42.5° | 1762.1 | 678.8 | 166.2 | 116.9 | 83.1 | 67.7 | 59.6 | 52.2 | 47.1 | 43.4 | 42.7 |
| 45° | 1917.3 | 686.9 | 153.0 | 104.4 | 75.7 | 62.5 | 53.0 | 45.6 | 40.4 | 36.8 | 36.0 |
| 47.5° | 2083.5 | 715.6 | 141.9 | 92.7 | 68.4 | 57.4 | 47.1 | 39.0 | 34.6 | 30.9 | 30.2 |
| 50° | 2257.0 | 762.6 | 132.4 | 81.6 | 62.5 | 51.5 | 40.4 | 33.8 | 29.4 | 26.5 | 25.7 |
| 52.5° | 2407.8 | 826.6 | 122.8 | 73.5 | 57.4 | 45.6 | 35.3 | 29.4 | 25.0 | 22.1 | 21.3 |
| 55° | 2551.9 | 886.9 | 115.5 | 66.2 | 51.5 | 39.7 | 30.9 | 25.0 | 21.3 | 18.4 | 17.7 |
| 57.5° | 2708.6 | 950.9 | 106.6 | 59.6 | 46.3 | 35.3 | 27.2 | 21.3 | 18.4 | 15.4 | 14.7 |
| 60° | 2936.6 | 1045.8 | 93.4 | 54.4 | 40.4 | 30.9 | 23.5 | 19.1 | 16.2 | 12.5 | 11.8 |
| 62.5° | 3265.3 | 1218.6 | 78.7 | 47.1 | 34.6 | 26.5 | 19.9 | 16.2 | 13.2 | 10.3 | 8.8 |
| 65° | 3880.1 | 1512.8 | 64.7 | 39.0 | 27.9 | 22.1 | 16.9 | 13.2 | 10.3 | 7.4 | 6.6 |
| 67.5° | 4322.8 | 1589.3 | 52.2 | 31.6 | 22.8 | 16.9 | 14.0 | 10.3 | 7.4 | 5.1 | 4.4 |
| 70° | 3779.4 | 1141.4 | 40.4 | 25.7 | 19.1 | 13.2 | 11.0 | 8.1 | 5.1 | 3.7 | 2.9 |
| 72.5° | 2847.6 | 745.7 | 30.2 | 19.9 | 14.7 | 11.0 | 8.1 | 6.6 | 4.4 | 2.9 | 2.2 |
| 75° | 2007.0 | 431.0 | 22.1 | 14.7 | 10.3 | 8.1 | 6.6 | 5.1 | 3.7 | 2.2 | 2.2 |
| 77.5° | 1028.9 | 178.0 | 15.4 | 10.3 | 7.4 | 5.1 | 4.4 | 2.9 | 2.9 | 2.2 | 1.5 |
| 80° | 312.6 | 58.8 | 8.8 | 6.6 | 5.1 | 3.7 | 2.2 | 2.2 | 2.2 | 1.5 | 0.7 |
| 82.5° | 71.3 | 19.1 | 5.1 | 5.1 | 3.7 | 2.9 | 2.2 | 0.7 | 0.7 | 0.0 | 0.0 |
| 85° | 18.4 | 5.9 | 4.4 | 3.7 | 3.7 | 2.9 | 1.5 | 0.7 | 0.0 | 0.0 | 0.0 |
| 87.5° | 6.6 | 3.7 | 3.7 | 3.7 | 2.9 | 2.2 | 1.5 | 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

All Brands

Data applicable to all product families using SA light engines

Report Number: SP1-2101-121-7

Luminaire Tested: IFLD-S-SA2A-735-U-T2

Test Date: 03/04/2021

Test Information

Test Method: LM-79-08
 Report Number: SP1-2101-121-7
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1
 Measurement Geometry: 4π
 Issue Date: 03/04/2021
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: STREETWORKS
 Catalog Number: **IFLD-S-SA2A-735-U-T2**
 Description: STREETWORKS INF FLOOD

PROGRAMMED @ 615mA.

Spectral Parameters

CCT (K): 3388
 CIE u': 0.2371
 CIE v': 0.5177
 Duv: 0.0032
 CIE x: 0.4153
 CIE y: 0.4030
 CIE z: 0.1817
 Peak Wavelength (nm): 590
 Dominant Wavelength (nm): 580
 Purity: 45.7

 Rf: 76.9
 Rg: 94.4

| | | | |
|-----------|------|------|-------|
| CRI (Ra): | 73.1 | | |
| R1: | 68.9 | R9: | -34.6 |
| R2: | 81.1 | R10: | 57.8 |
| R3: | 93.1 | R11: | 68.6 |
| R4: | 71.6 | R12: | 53.9 |
| R5: | 69.4 | R13: | 70.9 |
| R6: | 75.0 | R14: | 96.2 |
| R7: | 79.5 | | |
| R8: | 46.4 | | |

Test Conditions

Stabilization Time: 81M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 25.0/30%
 Sphere Temperature (°C): 24.1



REPORT NUMBER: SP1-2101-121-7

| 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 |

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CIE 1931 Chromaticity Diagram



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



CCT = 3388K
 CIE x = 0.4153
 CIE y = 0.4030
 Duv = 0.0032

Point lies inside the ANSI 3500K 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 | 2672 | 0.0 | 490 | 34553 | 4.9 | 620 | 136720 | 35.6 | 750 | 5870 | 0.0 | 880 | 4216 | 0.0 |
| 365 | 2252 | 0.0 | 495 | 44336 | 8.0 | 625 | 126308 | 27.9 | 755 | 5421 | 0.0 | 885 | 4132 | 0.0 |
| 370 | 2217 | 0.0 | 500 | 54643 | 12.1 | 630 | 114625 | 20.7 | 760 | 5097 | 0.0 | 890 | 3992 | 0.0 |
| 375 | 2697 | 0.0 | 505 | 64676 | 18.1 | 635 | 103216 | 15.5 | 765 | 4626 | 0.0 | 895 | 3214 | 0.0 |
| 380 | 3039 | 0.0 | 510 | 73825 | 25.4 | 640 | 92605 | 11.1 | 770 | 3782 | 0.0 | 900 | 2580 | 0.0 |
| 385 | 2655 | 0.0 | 515 | 81872 | 33.9 | 645 | 83234 | 8.0 | 775 | 3506 | 0.0 | 905 | 1776 | 0.0 |
| 390 | 2357 | 0.0 | 520 | 88574 | 43.0 | 650 | 73263 | 5.4 | 780 | 3507 | 0.0 | 910 | 3995 | 0.0 |
| 395 | 2186 | 0.0 | 525 | 93289 | 50.1 | 655 | 64627 | 3.7 | 785 | 3267 | 0.0 | 915 | 4288 | 0.0 |
| 400 | 2015 | 0.0 | 530 | 98393 | 57.9 | 660 | 56614 | 2.4 | 790 | 2849 | 0.0 | 920 | 2446 | 0.0 |
| 405 | 2234 | 0.0 | 535 | 103269 | 64.0 | 665 | 49537 | 1.6 | 795 | 3037 | 0.0 | 925 | 3009 | 0.0 |
| 410 | 3412 | 0.0 | 540 | 107316 | 69.9 | 670 | 42866 | 0.9 | 800 | 2716 | 0.0 | 930 | 3026 | 0.0 |
| 415 | 6135 | 0.0 | 545 | 113101 | 75.3 | 675 | 36708 | 0.6 | 805 | 2648 | 0.0 | 935 | 4734 | 0.0 |
| 420 | 12146 | 0.0 | 550 | 120690 | 82.0 | 680 | 31814 | 0.4 | 810 | 3187 | 0.0 | 940 | 3719 | 0.0 |
| 425 | 23983 | 0.1 | 555 | 128583 | 87.8 | 685 | 27485 | 0.2 | 815 | 2931 | 0.0 | 945 | 1480 | 0.0 |
| 430 | 42142 | 0.3 | 560 | 137796 | 93.6 | 690 | 23698 | 0.1 | 820 | 2717 | 0.0 | 950 | 3450 | 0.0 |
| 435 | 68228 | 0.8 | 565 | 146577 | 97.5 | 695 | 20309 | 0.1 | 825 | 2236 | 0.0 | 955 | 5051 | 0.0 |
| 440 | 99323 | 1.6 | 570 | 154581 | 100.5 | 700 | 17890 | 0.1 | 830 | 2628 | 0.0 | 960 | 3176 | 0.0 |
| 445 | 115584 | 2.4 | 575 | 162633 | 101.2 | 705 | 15500 | 0.0 | 835 | 3140 | 0.0 | 965 | 5178 | 0.0 |
| 450 | 94997 | 2.5 | 580 | 168101 | 99.9 | 710 | 13699 | 0.0 | 840 | 3675 | 0.0 | 970 | 6385 | 0.0 |
| 455 | 61433 | 2.1 | 585 | 173145 | 96.2 | 715 | 12398 | 0.0 | 845 | 3283 | 0.0 | 975 | 3810 | 0.0 |
| 460 | 43373 | 1.8 | 590 | 174675 | 90.3 | 720 | 11147 | 0.0 | 850 | 3055 | 0.0 | 980 | 4322 | 0.0 |
| 465 | 32472 | 1.7 | 595 | 173724 | 82.3 | 725 | 9761 | 0.0 | 855 | 2932 | 0.0 | 985 | 4200 | 0.0 |
| 470 | 24257 | 1.5 | 600 | 171241 | 73.8 | 730 | 8651 | 0.0 | 860 | 3382 | 0.0 | 990 | 4661 | 0.0 |
| 475 | 21690 | 1.7 | 605 | 165134 | 64.0 | 735 | 7730 | 0.0 | 865 | 2605 | 0.0 | 995 | 6746 | 0.0 |
| 480 | 23173 | 2.2 | 610 | 156652 | 53.8 | 740 | 6847 | 0.0 | 870 | 3325 | 0.0 | 1000 | 4150 | 0.0 |
| 485 | 27564 | 3.3 | 615 | 147879 | 44.6 | 745 | 6124 | 0.0 | 875 | 3325 | 0.0 | | | |

REPORT NUMBER: SP1-2101-121-7

Scotopic Flux vs. Wavelength



Scotopic Lumens: 12126

S/P: 1.36

| 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 | 2672 | 0.0 | 490 | 34553 | 53.2 | 620 | 136720 | 1.7 | 750 | 5870 | 0.0 | 880 | 4216 | 0.0 |
| 365 | 2252 | 0.0 | 495 | 44336 | 71.7 | 625 | 126308 | 1.1 | 755 | 5421 | 0.0 | 885 | 4132 | 0.0 |
| 370 | 2217 | 0.0 | 500 | 54643 | 91.4 | 630 | 114625 | 0.6 | 760 | 5097 | 0.0 | 890 | 3992 | 0.0 |
| 375 | 2697 | 0.0 | 505 | 64676 | 110.0 | 635 | 103216 | 0.4 | 765 | 4626 | 0.0 | 895 | 3214 | 0.0 |
| 380 | 3039 | 0.0 | 510 | 73825 | 125.1 | 640 | 92605 | 0.2 | 770 | 3782 | 0.0 | 900 | 2580 | 0.0 |
| 385 | 2655 | 0.0 | 515 | 81872 | 135.7 | 645 | 83234 | 0.1 | 775 | 3506 | 0.0 | 905 | 1776 | 0.0 |
| 390 | 2357 | 0.0 | 520 | 88574 | 140.8 | 650 | 73263 | 0.1 | 780 | 3507 | 0.0 | 910 | 3995 | 0.0 |
| 395 | 2186 | 0.0 | 525 | 93289 | 139.6 | 655 | 64627 | 0.1 | 785 | 3267 | 0.0 | 915 | 4288 | 0.0 |
| 400 | 2015 | 0.0 | 530 | 98393 | 135.7 | 660 | 56614 | 0.0 | 790 | 2849 | 0.0 | 920 | 2446 | 0.0 |
| 405 | 2234 | 0.1 | 535 | 103269 | 128.7 | 665 | 49537 | 0.0 | 795 | 3037 | 0.0 | 925 | 3009 | 0.0 |
| 410 | 3412 | 0.2 | 540 | 107316 | 118.6 | 670 | 42866 | 0.0 | 800 | 2716 | 0.0 | 930 | 3026 | 0.0 |
| 415 | 6135 | 0.6 | 545 | 113101 | 108.4 | 675 | 36708 | 0.0 | 805 | 2648 | 0.0 | 935 | 4734 | 0.0 |
| 420 | 12146 | 2.0 | 550 | 120690 | 98.7 | 680 | 31814 | 0.0 | 810 | 3187 | 0.0 | 940 | 3719 | 0.0 |
| 425 | 23983 | 5.9 | 555 | 128583 | 87.9 | 685 | 27485 | 0.0 | 815 | 2931 | 0.0 | 945 | 1480 | 0.0 |
| 430 | 42142 | 14.3 | 560 | 137796 | 77.0 | 690 | 23698 | 0.0 | 820 | 2717 | 0.0 | 950 | 3450 | 0.0 |
| 435 | 68228 | 30.5 | 565 | 146577 | 65.8 | 695 | 20309 | 0.0 | 825 | 2236 | 0.0 | 955 | 5051 | 0.0 |
| 440 | 99323 | 55.5 | 570 | 154581 | 54.6 | 700 | 17890 | 0.0 | 830 | 2628 | 0.0 | 960 | 3176 | 0.0 |
| 445 | 115584 | 77.4 | 575 | 162633 | 44.3 | 705 | 15500 | 0.0 | 835 | 3140 | 0.0 | 965 | 5178 | 0.0 |
| 450 | 94997 | 73.6 | 580 | 168101 | 34.6 | 710 | 13699 | 0.0 | 840 | 3675 | 0.0 | 970 | 6385 | 0.0 |
| 455 | 61433 | 53.7 | 585 | 173145 | 26.5 | 715 | 12398 | 0.0 | 845 | 3283 | 0.0 | 975 | 3810 | 0.0 |
| 460 | 43373 | 41.9 | 590 | 174675 | 19.5 | 720 | 11147 | 0.0 | 850 | 3055 | 0.0 | 980 | 4322 | 0.0 |
| 465 | 32472 | 34.3 | 595 | 173724 | 13.9 | 725 | 9761 | 0.0 | 855 | 2932 | 0.0 | 985 | 4200 | 0.0 |
| 470 | 24257 | 27.9 | 600 | 171241 | 9.7 | 730 | 8651 | 0.0 | 860 | 3382 | 0.0 | 990 | 4661 | 0.0 |
| 475 | 21690 | 27.1 | 605 | 165134 | 6.5 | 735 | 7730 | 0.0 | 865 | 2605 | 0.0 | 995 | 6746 | 0.0 |
| 480 | 23173 | 31.3 | 610 | 156652 | 4.2 | 740 | 6847 | 0.0 | 870 | 3325 | 0.0 | 1000 | 4150 | 0.0 |
| 485 | 27564 | 40.0 | 615 | 147879 | 2.7 | 745 | 6124 | 0.0 | 875 | 3325 | 0.0 | | | |

REPORT NUMBER: SP1-2101-121-7

Melanopic Flux vs. Wavelength



Melanopic Lumens: 4490.7 M/P: 0.5

| 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 | 2672 | 0.0 | 490 | 34553 | 28.8 | 620 | 136720 | 0.1 | 750 | 5870 | 0.0 | 880 | 4216 | 0.0 |
| 365 | 2252 | 0.0 | 495 | 44336 | 36.6 | 625 | 126308 | 0.1 | 755 | 5421 | 0.0 | 885 | 4132 | 0.0 |
| 370 | 2217 | 0.0 | 500 | 54643 | 43.9 | 630 | 114625 | 0.0 | 760 | 5097 | 0.0 | 890 | 3992 | 0.0 |
| 375 | 2697 | 0.0 | 505 | 64676 | 49.6 | 635 | 103216 | 0.0 | 765 | 4626 | 0.0 | 895 | 3214 | 0.0 |
| 380 | 3039 | 0.0 | 510 | 73825 | 53.0 | 640 | 92605 | 0.0 | 770 | 3782 | 0.0 | 900 | 2580 | 0.0 |
| 385 | 2655 | 0.0 | 515 | 81872 | 53.5 | 645 | 83234 | 0.0 | 775 | 3506 | 0.0 | 905 | 1776 | 0.0 |
| 390 | 2357 | 0.0 | 520 | 88574 | 51.6 | 650 | 73263 | 0.0 | 780 | 3507 | 0.0 | 910 | 3995 | 0.0 |
| 395 | 2186 | 0.0 | 525 | 93289 | 47.3 | 655 | 64627 | 0.0 | 785 | 3267 | 0.0 | 915 | 4288 | 0.0 |
| 400 | 2015 | 0.0 | 530 | 98393 | 42.5 | 660 | 56614 | 0.0 | 790 | 2849 | 0.0 | 920 | 2446 | 0.0 |
| 405 | 2234 | 0.0 | 535 | 103269 | 37.2 | 665 | 49537 | 0.0 | 795 | 3037 | 0.0 | 925 | 3009 | 0.0 |
| 410 | 3412 | 0.1 | 540 | 107316 | 31.4 | 670 | 42866 | 0.0 | 800 | 2716 | 0.0 | 930 | 3026 | 0.0 |
| 415 | 6135 | 0.4 | 545 | 113101 | 26.3 | 675 | 36708 | 0.0 | 805 | 2648 | 0.0 | 935 | 4734 | 0.0 |
| 420 | 12146 | 1.4 | 550 | 120690 | 21.7 | 680 | 31814 | 0.0 | 810 | 3187 | 0.0 | 940 | 3719 | 0.0 |
| 425 | 23983 | 3.7 | 555 | 128583 | 17.3 | 685 | 27485 | 0.0 | 815 | 2931 | 0.0 | 945 | 1480 | 0.0 |
| 430 | 42142 | 8.9 | 560 | 137796 | 13.6 | 690 | 23698 | 0.0 | 820 | 2717 | 0.0 | 950 | 3450 | 0.0 |
| 435 | 68228 | 18.2 | 565 | 146577 | 10.3 | 695 | 20309 | 0.0 | 825 | 2236 | 0.0 | 955 | 5051 | 0.0 |
| 440 | 99323 | 33.2 | 570 | 154581 | 7.6 | 700 | 17890 | 0.0 | 830 | 2628 | 0.0 | 960 | 3176 | 0.0 |
| 445 | 115584 | 45.6 | 575 | 162633 | 5.4 | 705 | 15500 | 0.0 | 835 | 3140 | 0.0 | 965 | 5178 | 0.0 |
| 450 | 94997 | 43.8 | 580 | 168101 | 3.8 | 710 | 13699 | 0.0 | 840 | 3675 | 0.0 | 970 | 6385 | 0.0 |
| 455 | 61433 | 32.2 | 585 | 173145 | 2.6 | 715 | 12398 | 0.0 | 845 | 3283 | 0.0 | 975 | 3810 | 0.0 |
| 460 | 43373 | 25.6 | 590 | 174675 | 1.7 | 720 | 11147 | 0.0 | 850 | 3055 | 0.0 | 980 | 4322 | 0.0 |
| 465 | 32472 | 21.2 | 595 | 173724 | 1.1 | 725 | 9761 | 0.0 | 855 | 2932 | 0.0 | 985 | 4200 | 0.0 |
| 470 | 24257 | 17.4 | 600 | 171241 | 0.7 | 730 | 8651 | 0.0 | 860 | 3382 | 0.0 | 990 | 4661 | 0.0 |
| 475 | 21690 | 16.6 | 605 | 165134 | 0.5 | 735 | 7730 | 0.0 | 865 | 2605 | 0.0 | 995 | 6746 | 0.0 |
| 480 | 23173 | 18.6 | 610 | 156652 | 0.3 | 740 | 6847 | 0.0 | 870 | 3325 | 0.0 | 1000 | 4150 | 0.0 |
| 485 | 27564 | 22.7 | 615 | 147879 | 0.2 | 745 | 6124 | 0.0 | 875 | 3325 | 0.0 | | | |

Summary

$R_f = 76.9$
 $R_g = 94.4$
 $CIE R_a = 73.1$
 $R_g = -34.6$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 68 | CES51 = 90 | CES76 = 63 |
| CES02 = 62 | CES27 = 88 | CES52 = 89 | CES77 = 80 |
| CES03 = 31 | CES28 = 87 | CES53 = 80 | CES78 = 65 |
| CES04 = 70 | CES29 = 67 | CES54 = 84 | CES79 = 87 |
| CES05 = 48 | CES30 = 74 | CES55 = 84 | CES80 = 86 |
| CES06 = 51 | CES31 = 71 | CES56 = 75 | CES81 = 75 |
| CES07 = 40 | CES32 = 67 | CES57 = 74 | CES82 = 94 |
| CES08 = 39 | CES33 = 74 | CES58 = 76 | CES83 = 91 |
| CES09 = 29 | CES34 = 78 | CES59 = 87 | CES84 = 89 |
| CES10 = 75 | CES35 = 89 | CES60 = 93 | CES85 = 80 |
| CES11 = 58 | CES36 = 98 | CES61 = 86 | CES86 = 66 |
| CES12 = 64 | CES37 = 86 | CES62 = 89 | CES87 = 79 |
| CES13 = 43 | CES38 = 82 | CES63 = 77 | CES88 = 79 |
| CES14 = 74 | CES39 = 95 | CES64 = 74 | CES89 = 70 |
| CES15 = 71 | CES40 = 91 | CES65 = 68 | CES90 = 77 |
| CES16 = 47 | CES41 = 89 | CES66 = 71 | CES91 = 88 |
| CES17 = 50 | CES42 = 88 | CES67 = 69 | CES92 = 60 |
| CES18 = 56 | CES43 = 82 | CES68 = 74 | CES93 = 77 |
| CES19 = 72 | CES44 = 99 | CES69 = 82 | CES94 = 52 |
| CES20 = 65 | CES45 = 87 | CES70 = 67 | CES95 = 69 |
| CES21 = 86 | CES46 = 82 | CES71 = 66 | CES96 = 78 |
| CES22 = 79 | CES47 = 82 | CES72 = 88 | CES97 = 85 |
| CES23 = 92 | CES48 = 72 | CES73 = 59 | CES98 = 76 |
| CES24 = 91 | CES49 = 82 | CES74 = 97 | CES99 = 63 |
| CES25 = 72 | CES50 = 88 | CES75 = 66 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)