

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: P629363

Luminaire Tested: GWS-SA1B-740-U-T2-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P629363
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-19)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA1B-740-U-T2-W
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: (16) 4000K CCT, 70 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3555.9 lumens
Efficiency: N/A
Efficacy: 142.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G1

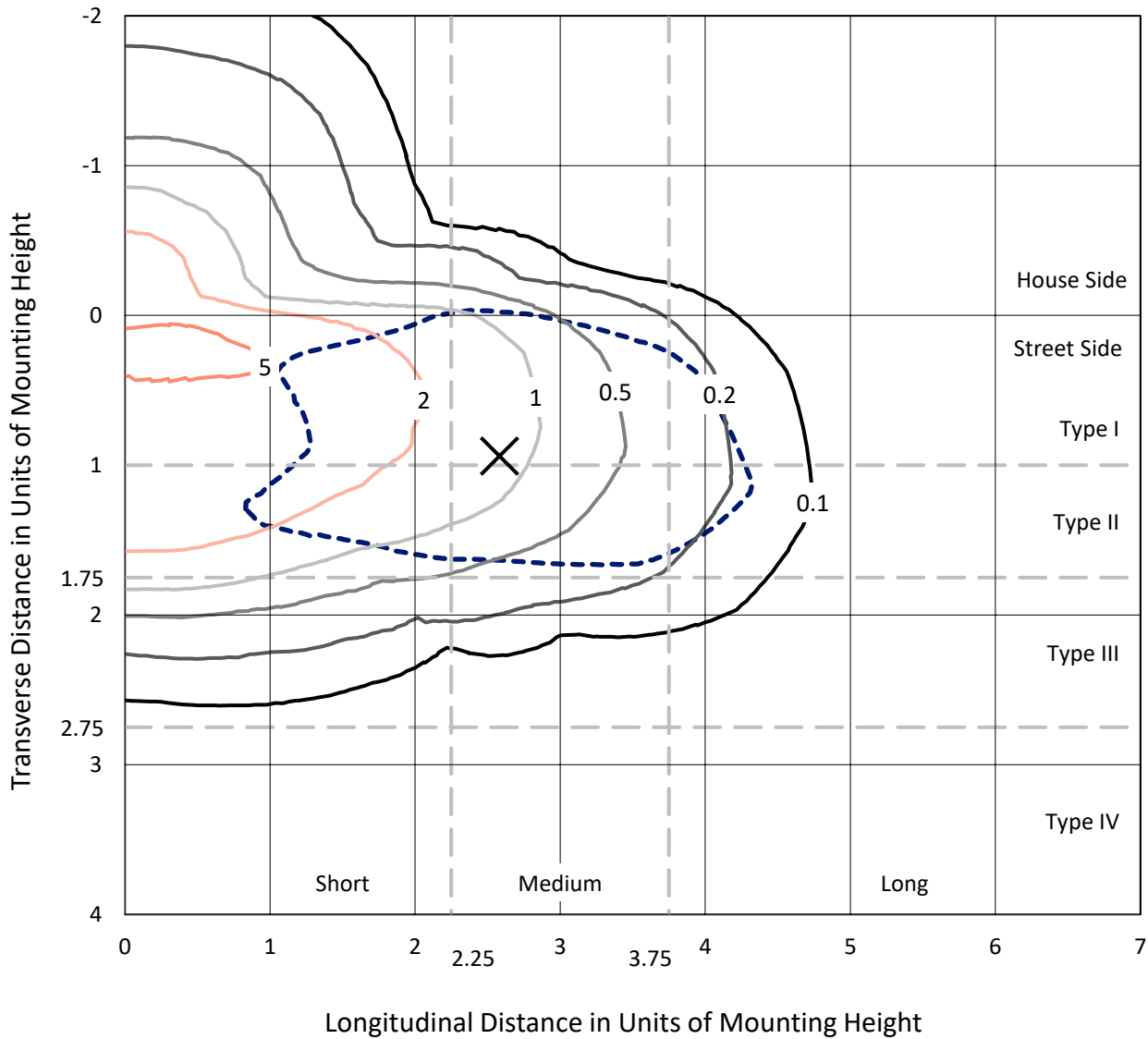
Input Watts (W): 25
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P629363
 CATALOG NUMBER: GWS-SA1B-740-U-T2-W

Iso-Footcandle Lines of Horizontal Illumination

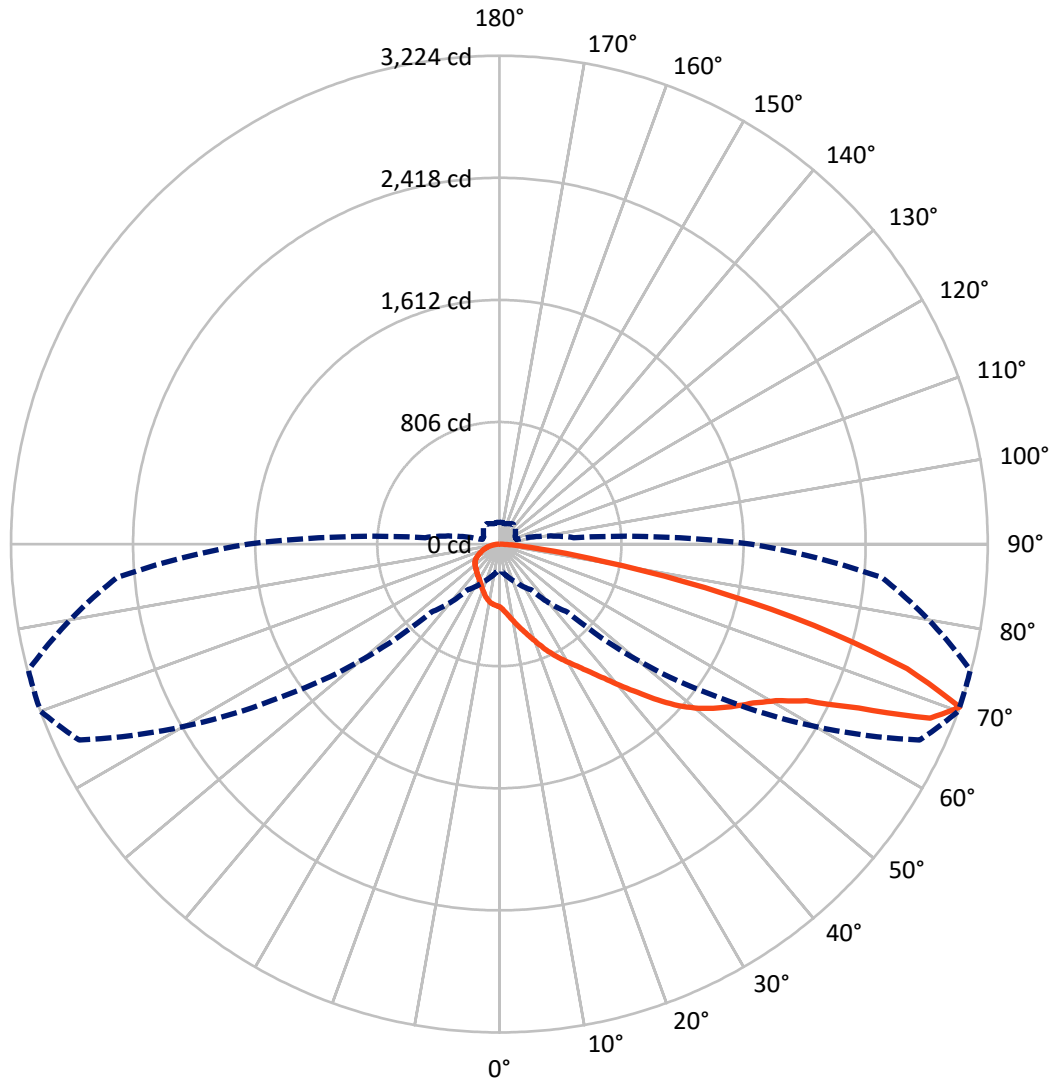
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 70-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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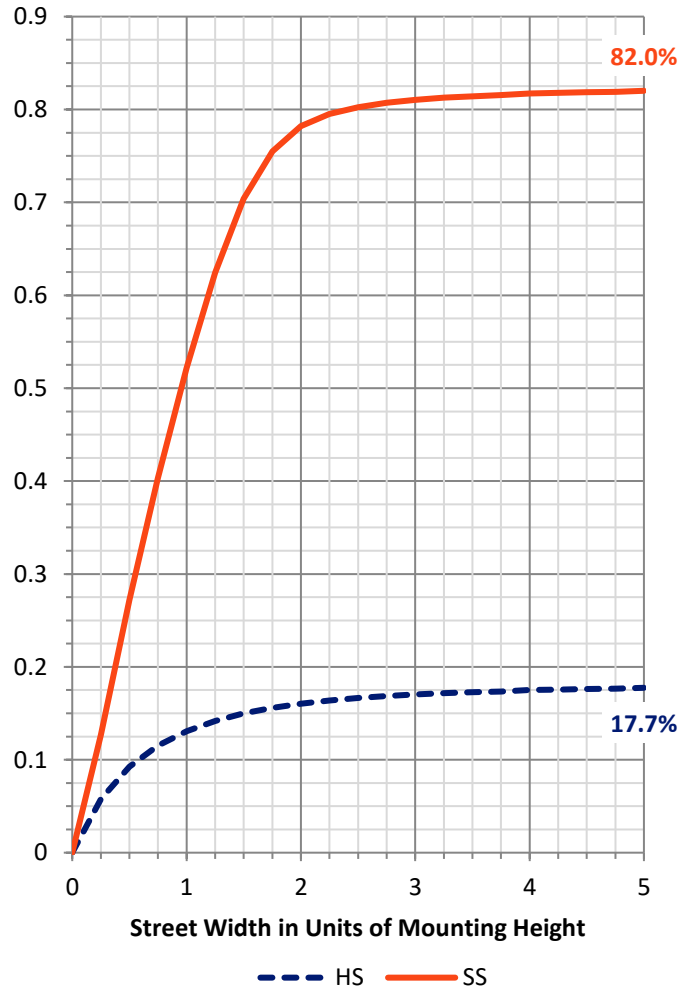
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 637.2 | 0.0 | 637.2 |
| | % Fixture | 17.9 | 0.0 | 17.9 |
| Street Side | Lumens | 2918.7 | 0.0 | 2918.7 |
| | % Fixture | 82.1 | 0.0 | 82.1 |
| Total | Lumens | 3555.9 | 0.0 | 3555.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 42.1 | 1.2 |
| 10°-20° | 137.1 | 3.9 |
| 20°-30° | 242.9 | 6.8 |
| 30°-40° | 365.6 | 10.3 |
| 40°-50° | 553.0 | 15.6 |
| 50°-60° | 792.3 | 22.3 |
| 60°-70° | 875.8 | 24.6 |
| 70°-80° | 494.2 | 13.9 |
| 80°-90° | 52.9 | 1.5 |
| 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° | 3555.9 | 100.0 |
| 0°-180° | 3555.9 | 100.0 |

Coefficient of Utilization



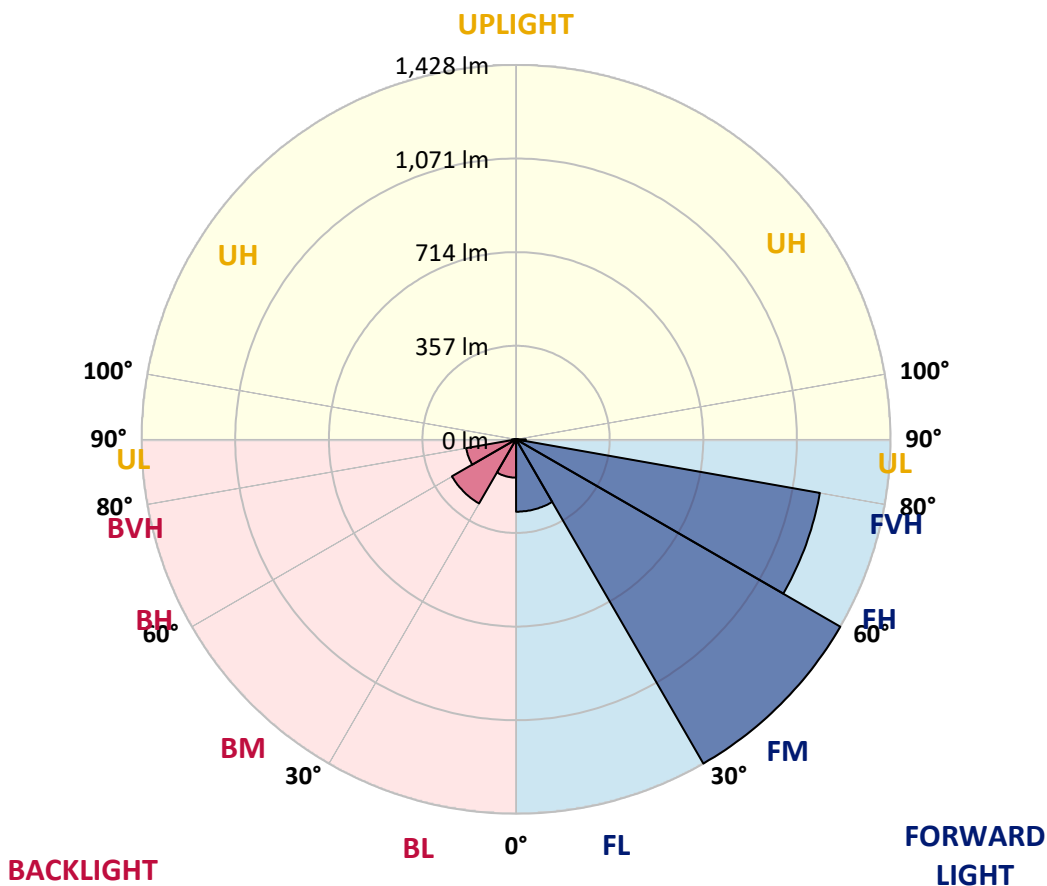
REPORT NUMBER: P629363

CATALOG NUMBER: GWS-SA1B-740-U-T2-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 276.0 | 7.8 | | | |
| FM (30°-60°) | 1428.4 | 40.2 | | | |
| FH (60°-80°) | 1176.9 | 33.1 | | | G1/1800 |
| FVH (80°-90°) | 37.4 | 1.1 | | | G1/100 |
| BL (0°-30°) | 146.1 | 4.1 | B1/500 | | |
| BM (30°-60°) | 282.5 | 7.9 | B1/1000 | | |
| BH (60°-80°) | 193.1 | 5.4 | B1/500 | | G1/500 |
| BVH (80°-90°) | 15.5 | 0.4 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G1
 Type II Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 70° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 414.7 | 414.7 | 414.7 | 414.7 | 414.7 | 414.7 | 414.7 | 414.7 | 414.7 | 414.7 | 414.7 |
| 2.5° | 459.4 | 458.6 | 459.1 | 458.6 | 455.8 | 448.9 | 443.2 | 436.0 | 431.1 | 428.3 | 421.6 |
| 5° | 513.4 | 512.6 | 510.8 | 508.2 | 503.1 | 493.6 | 479.4 | 463.8 | 454.3 | 447.1 | 432.9 |
| 7.5° | 552.2 | 552.2 | 551.9 | 548.8 | 545.2 | 535.2 | 518.5 | 497.9 | 484.1 | 471.7 | 448.6 |
| 10° | 571.9 | 573.2 | 575.0 | 579.4 | 578.6 | 573.2 | 557.5 | 535.5 | 518.0 | 503.6 | 469.2 |
| 12.5° | 582.7 | 583.5 | 586.6 | 595.6 | 604.8 | 606.1 | 596.9 | 573.7 | 554.7 | 535.5 | 492.0 |
| 15° | 596.6 | 596.9 | 601.0 | 611.8 | 625.4 | 639.0 | 636.7 | 613.6 | 594.0 | 572.7 | 517.5 |
| 17.5° | 607.4 | 609.2 | 616.6 | 629.2 | 646.2 | 664.9 | 676.3 | 661.9 | 637.7 | 613.3 | 545.2 |
| 20° | 611.2 | 612.5 | 622.3 | 641.6 | 664.7 | 691.2 | 716.3 | 712.5 | 688.1 | 659.3 | 576.6 |
| 22.5° | 625.1 | 625.1 | 632.3 | 648.5 | 675.7 | 714.3 | 755.1 | 765.1 | 743.6 | 709.9 | 610.2 |
| 25° | 655.7 | 654.7 | 658.0 | 664.7 | 685.2 | 732.8 | 793.4 | 823.5 | 799.3 | 761.6 | 643.9 |
| 27.5° | 697.6 | 697.1 | 696.8 | 697.8 | 704.8 | 749.0 | 825.8 | 877.9 | 853.8 | 811.1 | 673.9 |
| 30° | 743.1 | 741.5 | 744.9 | 741.8 | 740.2 | 768.2 | 853.3 | 926.8 | 908.0 | 860.2 | 698.9 |
| 32.5° | 805.0 | 802.1 | 801.4 | 791.4 | 785.2 | 798.3 | 875.4 | 982.3 | 967.4 | 913.1 | 726.9 |
| 35° | 886.7 | 884.1 | 871.0 | 855.1 | 836.8 | 843.0 | 902.9 | 1036.5 | 1037.5 | 979.4 | 763.6 |
| 37.5° | 969.2 | 969.7 | 959.4 | 921.9 | 903.1 | 899.5 | 944.7 | 1102.5 | 1124.6 | 1058.6 | 811.1 |
| 40° | 1037.8 | 1040.8 | 1040.8 | 1001.3 | 973.3 | 969.9 | 1003.6 | 1180.9 | 1224.8 | 1155.7 | 871.3 |
| 42.5° | 1089.9 | 1092.7 | 1101.7 | 1073.2 | 1043.7 | 1055.2 | 1075.0 | 1259.5 | 1338.4 | 1275.7 | 947.3 |
| 45° | 1147.2 | 1149.5 | 1154.4 | 1138.0 | 1120.7 | 1151.6 | 1155.9 | 1353.5 | 1468.4 | 1410.3 | 1035.7 |
| 47.5° | 1223.3 | 1221.2 | 1221.7 | 1209.6 | 1196.3 | 1246.1 | 1245.1 | 1432.7 | 1594.0 | 1557.8 | 1131.5 |
| 50° | 1317.8 | 1321.7 | 1318.1 | 1294.2 | 1278.5 | 1324.0 | 1329.9 | 1520.3 | 1704.5 | 1703.7 | 1228.1 |
| 52.5° | 1408.8 | 1410.3 | 1429.3 | 1430.4 | 1398.2 | 1388.7 | 1404.1 | 1608.7 | 1797.8 | 1837.3 | 1320.9 |
| 55° | 1413.4 | 1419.3 | 1476.3 | 1517.5 | 1569.4 | 1493.0 | 1479.2 | 1692.9 | 1888.0 | 1968.1 | 1417.2 |
| 57.5° | 1315.0 | 1324.5 | 1421.4 | 1510.0 | 1654.4 | 1672.1 | 1607.6 | 1801.9 | 1978.1 | 2096.8 | 1528.8 |
| 60° | 1104.8 | 1124.6 | 1256.2 | 1391.8 | 1616.1 | 1800.9 | 1870.5 | 1949.9 | 2096.6 | 2228.4 | 1664.2 |
| 62.5° | 705.5 | 713.2 | 897.7 | 1124.9 | 1443.7 | 1788.3 | 2156.7 | 2210.7 | 2276.9 | 2399.8 | 1872.8 |
| 65° | 353.3 | 378.0 | 486.1 | 671.4 | 1041.1 | 1575.8 | 2301.4 | 2688.3 | 2607.1 | 2693.2 | 2210.9 |
| 67.5° | 239.7 | 247.7 | 302.4 | 403.4 | 610.5 | 1116.4 | 2211.7 | 3090.7 | 3066.8 | 3080.9 | 2571.4 |
| 70° | 176.8 | 181.9 | 225.1 | 285.7 | 369.2 | 633.9 | 1760.8 | 3060.3 | 3223.5 | 3218.4 | 2533.6 |
| 72.5° | 129.0 | 131.6 | 164.2 | 218.1 | 273.6 | 327.8 | 1075.3 | 2472.2 | 2813.9 | 2962.2 | 2215.8 |
| 75° | 93.8 | 96.9 | 114.1 | 163.2 | 212.7 | 204.5 | 530.8 | 1785.7 | 2145.9 | 2431.1 | 1805.2 |
| 77.5° | 69.9 | 73.7 | 81.7 | 102.3 | 149.0 | 146.5 | 229.4 | 1159.5 | 1388.0 | 1587.9 | 1096.6 |
| 80° | 50.4 | 51.1 | 55.8 | 65.5 | 94.6 | 85.8 | 109.2 | 604.6 | 693.2 | 759.5 | 429.9 |
| 82.5° | 30.6 | 31.3 | 37.3 | 40.3 | 58.6 | 54.0 | 56.8 | 195.8 | 280.6 | 297.8 | 160.6 |
| 85° | 9.0 | 9.5 | 17.0 | 18.5 | 24.4 | 23.1 | 22.9 | 79.6 | 95.1 | 121.5 | 63.2 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 1.5 | 2.8 | 14.1 | 21.3 | 29.5 | 15.4 |
| 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: P629363
 CATALOG NUMBER: GWS-SA1B-740-U-T2-W

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 414.7 | 414.7 | 414.7 | 414.7 | 414.7 | 414.7 | 414.7 | 414.7 | 414.7 | 414.7 | 414.7 |
| 2.5° | 419.1 | 413.1 | 410.1 | 404.7 | 400.8 | 397.0 | 393.1 | 389.5 | 388.0 | 385.7 | 386.2 |
| 5° | 426.5 | 417.3 | 408.0 | 397.5 | 388.5 | 381.0 | 374.4 | 368.4 | 365.9 | 363.6 | 364.6 |
| 7.5° | 437.8 | 423.9 | 406.2 | 386.9 | 372.8 | 362.5 | 355.6 | 351.5 | 350.2 | 348.4 | 348.4 |
| 10° | 452.2 | 431.4 | 400.3 | 372.8 | 355.9 | 347.6 | 344.5 | 344.3 | 345.6 | 345.8 | 345.3 |
| 12.5° | 468.1 | 438.6 | 391.6 | 356.1 | 341.7 | 339.2 | 341.5 | 345.8 | 350.2 | 352.5 | 352.0 |
| 15° | 484.6 | 443.2 | 376.7 | 340.2 | 331.4 | 334.8 | 342.2 | 351.0 | 359.5 | 363.8 | 363.6 |
| 17.5° | 500.0 | 444.2 | 357.4 | 324.8 | 322.5 | 330.9 | 343.8 | 357.4 | 369.0 | 375.1 | 375.4 |
| 20° | 517.2 | 442.4 | 337.6 | 310.9 | 313.5 | 327.3 | 344.3 | 360.7 | 374.4 | 380.5 | 382.1 |
| 22.5° | 532.9 | 436.3 | 318.3 | 297.8 | 305.8 | 323.0 | 340.2 | 355.6 | 367.7 | 373.6 | 375.6 |
| 25° | 547.0 | 424.5 | 297.3 | 286.7 | 299.8 | 316.8 | 329.9 | 340.7 | 349.2 | 352.8 | 355.6 |
| 27.5° | 554.7 | 406.7 | 281.3 | 278.0 | 294.2 | 308.1 | 315.3 | 318.6 | 321.4 | 320.4 | 322.5 |
| 30° | 556.3 | 384.6 | 267.5 | 271.1 | 285.7 | 296.0 | 297.5 | 294.2 | 289.3 | 281.3 | 283.1 |
| 32.5° | 554.7 | 359.2 | 255.9 | 263.6 | 276.2 | 282.4 | 280.3 | 271.6 | 259.8 | 247.4 | 248.2 |
| 35° | 555.2 | 333.5 | 246.4 | 255.4 | 265.2 | 268.5 | 263.4 | 251.3 | 238.7 | 227.4 | 226.9 |
| 37.5° | 560.9 | 311.9 | 238.4 | 247.4 | 254.4 | 254.9 | 249.2 | 236.6 | 230.2 | 221.7 | 220.7 |
| 40° | 576.6 | 296.0 | 231.2 | 239.5 | 243.8 | 243.6 | 237.2 | 228.2 | 232.5 | 229.7 | 228.9 |
| 42.5° | 602.3 | 286.2 | 225.3 | 231.0 | 234.1 | 234.6 | 229.4 | 223.8 | 233.3 | 229.7 | 228.4 |
| 45° | 643.6 | 285.7 | 221.2 | 222.5 | 227.4 | 231.0 | 227.4 | 221.0 | 224.6 | 207.1 | 203.7 |
| 47.5° | 692.7 | 294.4 | 218.1 | 215.1 | 223.5 | 230.0 | 224.3 | 214.0 | 206.6 | 190.6 | 188.3 |
| 50° | 751.8 | 312.2 | 215.3 | 207.1 | 217.9 | 226.1 | 220.4 | 206.3 | 195.0 | 186.5 | 185.2 |
| 52.5° | 821.9 | 335.6 | 211.7 | 198.1 | 209.4 | 224.0 | 220.4 | 205.5 | 190.6 | 182.9 | 181.7 |
| 55° | 895.4 | 362.5 | 207.6 | 187.3 | 199.9 | 224.6 | 222.2 | 200.2 | 187.3 | 183.2 | 182.2 |
| 57.5° | 986.6 | 394.9 | 200.2 | 174.7 | 191.4 | 219.9 | 215.1 | 197.1 | 185.0 | 181.7 | 180.6 |
| 60° | 1105.1 | 443.0 | 186.0 | 161.9 | 181.7 | 211.7 | 208.6 | 191.9 | 178.8 | 176.0 | 175.2 |
| 62.5° | 1292.6 | 524.4 | 168.8 | 149.5 | 170.1 | 194.5 | 199.1 | 182.2 | 171.1 | 170.9 | 170.6 |
| 65° | 1598.4 | 622.3 | 148.5 | 138.5 | 158.0 | 180.4 | 186.5 | 172.1 | 163.2 | 166.0 | 165.7 |
| 67.5° | 1812.7 | 630.8 | 131.8 | 126.9 | 143.9 | 165.0 | 173.9 | 161.9 | 152.1 | 157.5 | 157.2 |
| 70° | 1660.3 | 492.0 | 117.4 | 114.8 | 128.7 | 148.3 | 160.3 | 149.0 | 139.3 | 144.4 | 143.4 |
| 72.5° | 1400.3 | 377.2 | 103.8 | 102.3 | 113.3 | 130.8 | 142.9 | 136.2 | 125.9 | 125.9 | 123.6 |
| 75° | 1125.4 | 311.1 | 89.4 | 88.6 | 96.1 | 113.1 | 126.7 | 115.4 | 105.9 | 105.3 | 103.8 |
| 77.5° | 645.4 | 204.0 | 75.0 | 74.5 | 76.8 | 94.6 | 98.4 | 96.1 | 88.9 | 85.6 | 84.5 |
| 80° | 257.2 | 106.1 | 59.1 | 55.8 | 58.1 | 69.4 | 77.6 | 73.7 | 67.6 | 63.5 | 61.2 |
| 82.5° | 99.7 | 53.2 | 41.6 | 36.5 | 39.8 | 50.1 | 56.3 | 55.0 | 50.9 | 41.6 | 39.1 |
| 85° | 40.6 | 26.0 | 24.9 | 21.1 | 23.1 | 27.0 | 32.4 | 28.0 | 23.1 | 16.4 | 15.7 |
| 87.5° | 10.8 | 9.5 | 9.2 | 5.7 | 4.4 | 1.3 | 0.3 | 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 |

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CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 4000K 4-step quadrangle

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Photopic Flux vs. Wavelength



#####

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

REPORT NUMBER: SP1-2101-121-2

Scotopic Flux vs. Wavelength



Scotopic Lumens: 10425.8 S/P: 1.47

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

REPORT NUMBER: SP1-2101-121-2

Melanopic Flux vs. Wavelength



Melanopic Lumens: 3927.2 M/P: 0.55

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

Summary

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



Color Vector Graphics



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

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



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)