

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P438363

Luminaire Tested: **IST-SA1C-735-U-T3**

Issue Date: 12/10/2020

Test Information

Test Method: LM-79-08
Report Number: P438363
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-8)
Test Lab: INNOVATION CENTER
Issue Date: 12/10/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: IST-SA1C-735-U-T3
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE
(1) 70 CRI, 3500K, 615mA LIGHTSQUARE WITH 16 LEDS AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4235 lumens
Efficiency: N/A
Efficacy: 123.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B1 - U0 - G1

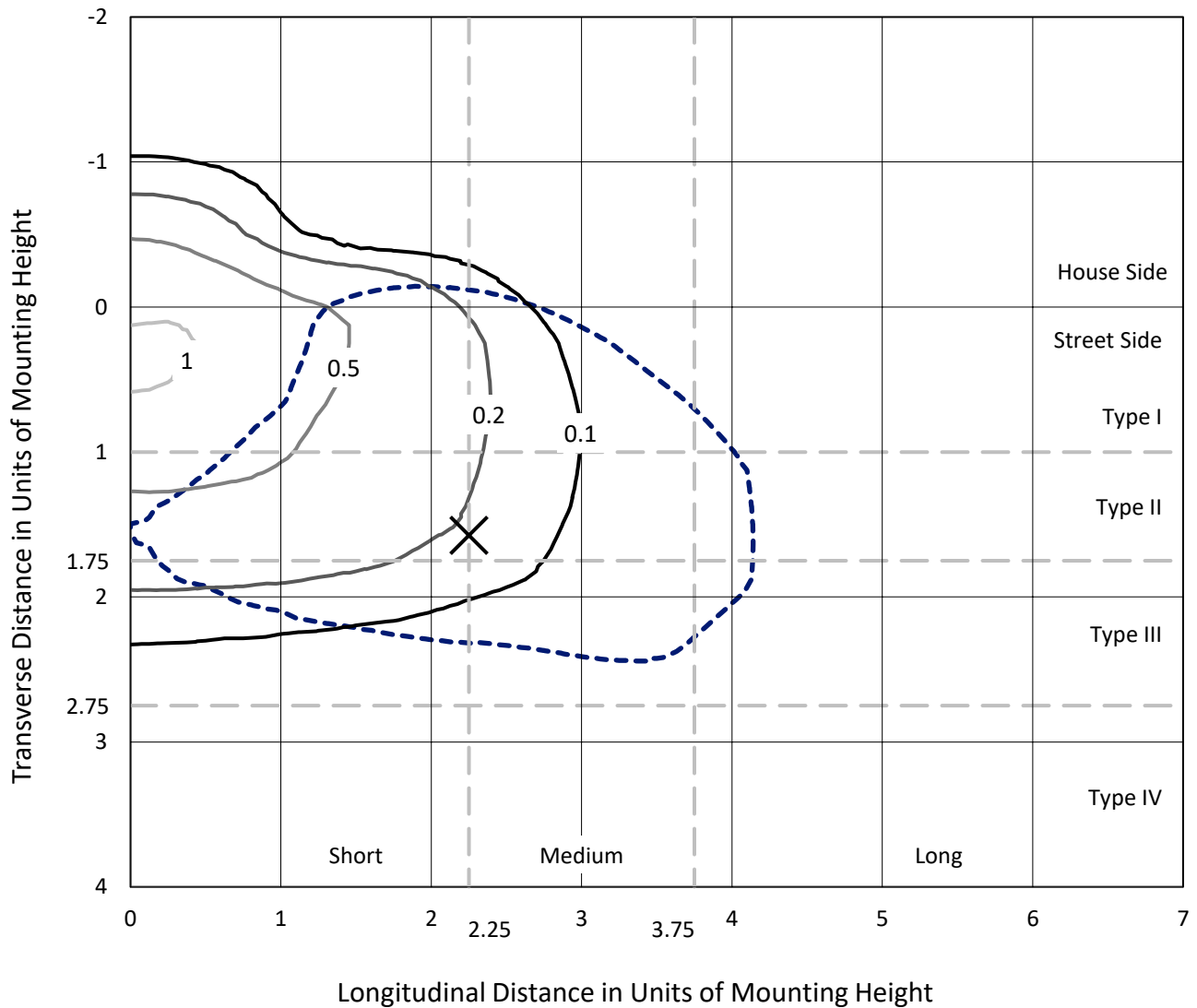
Input Watts (W): 34.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

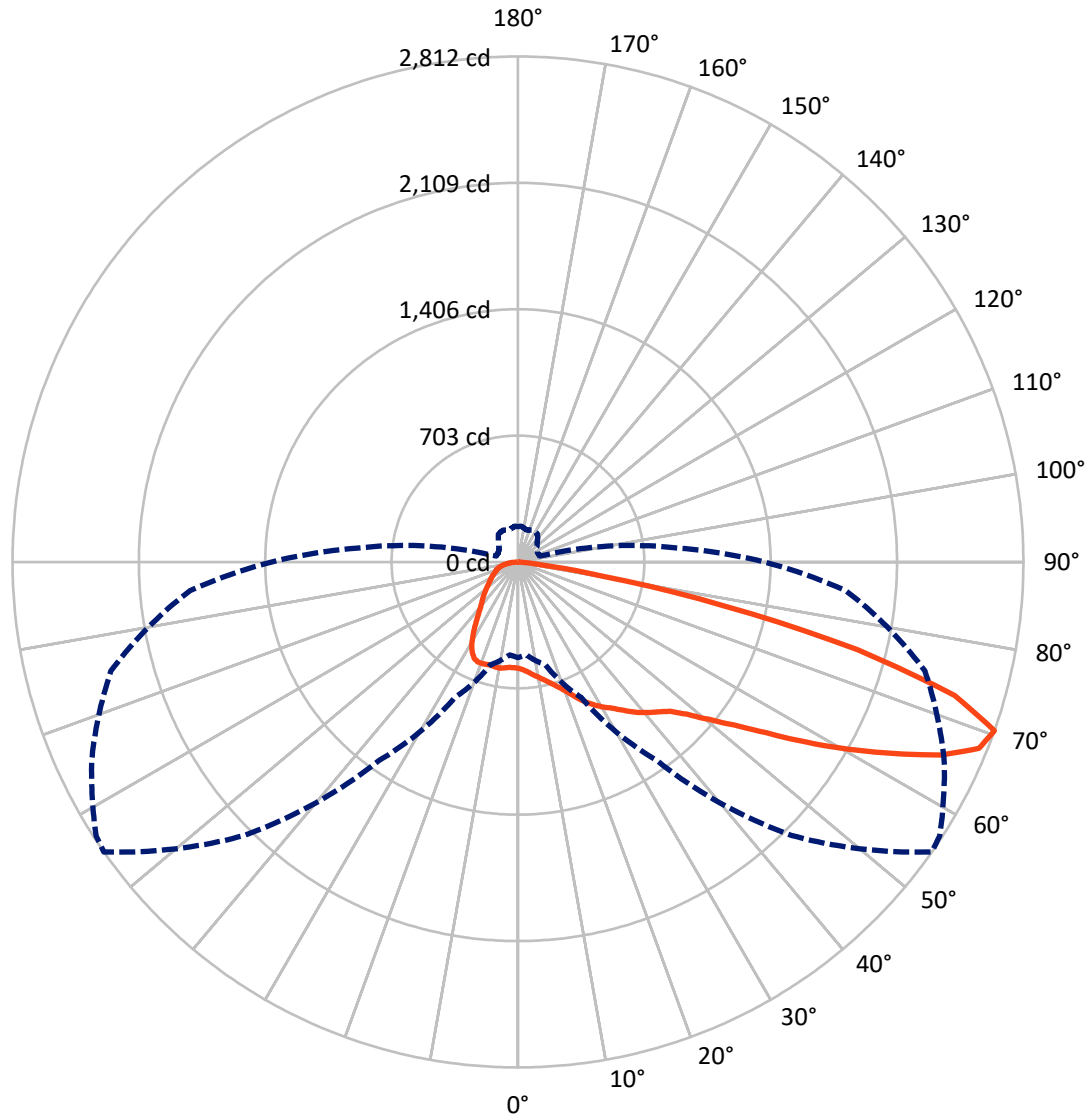
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 55-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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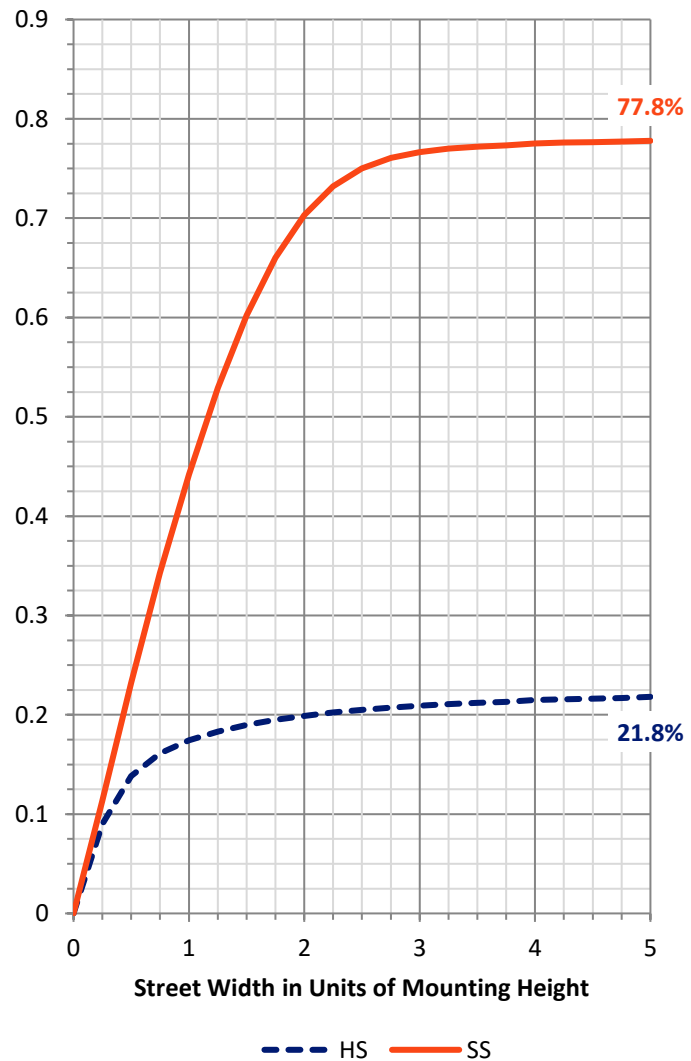
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 936.7 | 0.0 | 936.7 |
| | % Fixture | 22.1 | 0.0 | 22.1 |
| Street Side | Lumens | 3298.3 | 0.0 | 3298.3 |
| | % Fixture | 77.9 | 0.0 | 77.9 |
| Total | Lumens | 4235.0 | 0.0 | 4235.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 58.2 | 1.4 |
| 10°-20° | 185.4 | 4.4 |
| 20°-30° | 322.4 | 7.6 |
| 30°-40° | 454.5 | 10.7 |
| 40°-50° | 602.4 | 14.2 |
| 50°-60° | 877.5 | 20.7 |
| 60°-70° | 1095.1 | 25.9 |
| 70°-80° | 583.2 | 13.8 |
| 80°-90° | 56.2 | 1.3 |
| 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° | 4235.0 | 100.0 |
| 0°-180° | 4235.0 | 100.0 |

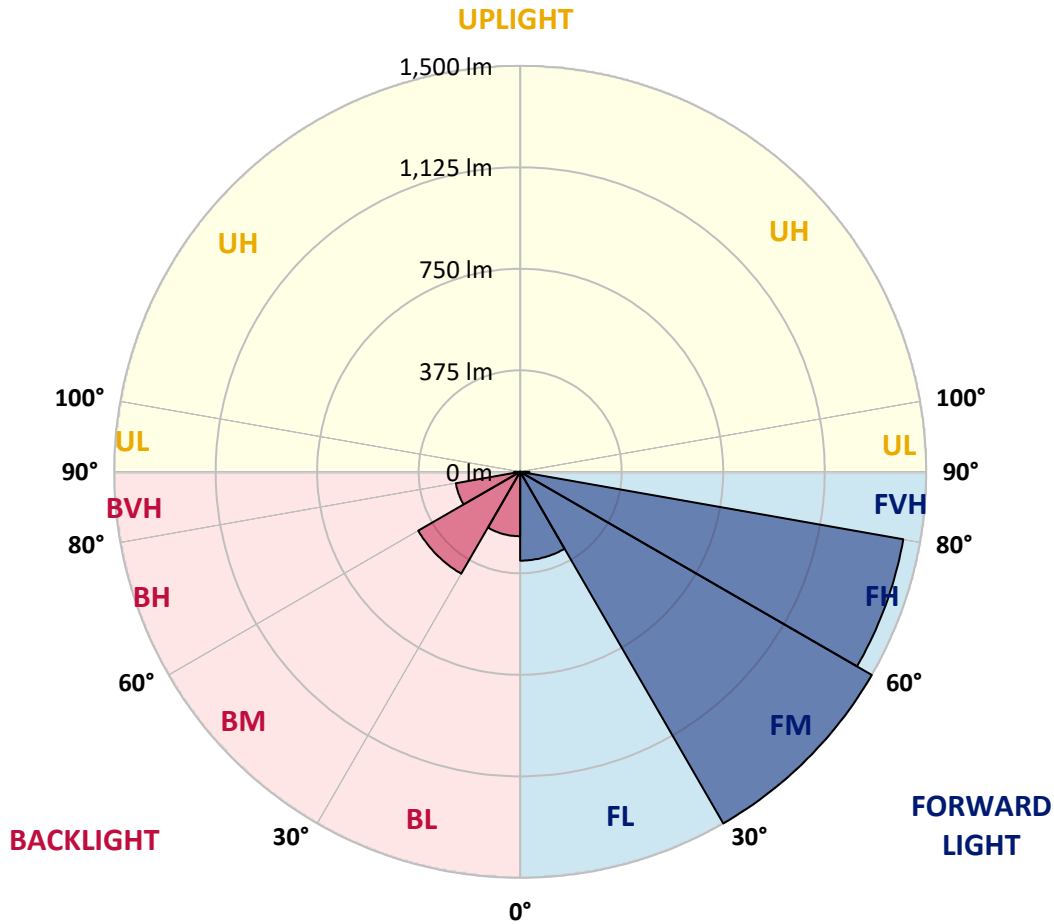


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 328.0 | 7.7 | | | |
| FM | (30°-60°) | 1499.8 | 35.4 | | | |
| FH | (60°-80°) | 1436.9 | 33.9 | | | G1/1800 |
| FVH | (80°-90°) | 33.5 | 0.8 | | | G1/100 |
| BL | (0°-30°) | 238.0 | 5.6 | B1/500 | | |
| BM | (30°-60°) | 434.6 | 10.3 | B1/1000 | | |
| BH | (60°-80°) | 241.4 | 5.7 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 22.6 | 0.5 | | | 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 III Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 57° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 591.4 | 591.4 | 591.4 | 591.4 | 591.4 | 591.4 | 591.4 | 591.4 | 591.4 | 591.4 | 591.4 |
| 2.5° | 611.3 | 609.7 | 609.7 | 608.2 | 606.7 | 605.2 | 602.1 | 599.1 | 599.1 | 596.0 | 596.0 |
| 5° | 626.5 | 623.4 | 625.0 | 623.4 | 623.4 | 620.4 | 615.8 | 615.8 | 614.3 | 606.7 | 600.6 |
| 7.5° | 641.7 | 640.2 | 640.2 | 641.7 | 640.2 | 637.2 | 635.6 | 634.1 | 628.0 | 618.9 | 609.7 |
| 10° | 663.1 | 663.1 | 663.1 | 661.6 | 661.6 | 658.5 | 653.9 | 653.9 | 646.3 | 635.6 | 625.0 |
| 12.5° | 695.1 | 693.6 | 692.0 | 692.0 | 687.5 | 681.4 | 676.8 | 676.8 | 672.2 | 655.5 | 641.7 |
| 15° | 731.7 | 727.1 | 724.0 | 724.0 | 718.0 | 707.3 | 702.7 | 704.2 | 699.7 | 679.8 | 660.0 |
| 17.5° | 768.3 | 768.3 | 765.2 | 757.6 | 750.0 | 742.3 | 731.7 | 734.7 | 730.1 | 710.3 | 684.4 |
| 20° | 801.8 | 798.7 | 798.7 | 794.2 | 783.5 | 774.4 | 768.3 | 766.7 | 763.7 | 742.3 | 711.9 |
| 22.5° | 838.4 | 836.8 | 832.3 | 829.2 | 821.6 | 817.0 | 814.0 | 814.0 | 801.8 | 772.8 | 733.2 |
| 25° | 882.6 | 881.1 | 881.1 | 868.9 | 862.8 | 855.1 | 859.7 | 855.1 | 849.0 | 806.4 | 756.1 |
| 27.5° | 926.8 | 926.8 | 925.3 | 919.2 | 902.4 | 897.8 | 900.9 | 897.8 | 896.3 | 838.4 | 777.4 |
| 30° | 974.0 | 972.5 | 967.9 | 966.4 | 949.6 | 937.5 | 935.9 | 929.8 | 929.8 | 867.3 | 792.6 |
| 32.5° | 1013.7 | 1012.1 | 1015.2 | 1009.1 | 998.4 | 981.7 | 971.0 | 971.0 | 960.3 | 896.3 | 810.9 |
| 35° | 1050.3 | 1053.3 | 1053.3 | 1050.3 | 1041.1 | 1024.3 | 1013.7 | 1016.7 | 1001.5 | 922.2 | 833.8 |
| 37.5° | 1091.4 | 1088.4 | 1083.8 | 1080.7 | 1068.5 | 1060.9 | 1060.9 | 1064.0 | 1041.1 | 949.6 | 864.3 |
| 40° | 1100.6 | 1108.2 | 1118.8 | 1106.7 | 1100.6 | 1099.0 | 1102.1 | 1094.5 | 1071.6 | 992.3 | 916.1 |
| 42.5° | 1118.8 | 1124.9 | 1144.8 | 1140.2 | 1135.6 | 1140.2 | 1140.2 | 1129.5 | 1118.8 | 1050.3 | 986.2 |
| 45° | 1164.6 | 1175.2 | 1190.5 | 1192.0 | 1190.5 | 1198.1 | 1184.4 | 1182.9 | 1181.3 | 1134.1 | 1080.7 |
| 47.5° | 1214.9 | 1227.1 | 1262.1 | 1257.6 | 1274.3 | 1289.6 | 1265.2 | 1263.7 | 1268.2 | 1245.4 | 1201.2 |
| 50° | 1274.3 | 1286.5 | 1330.7 | 1347.5 | 1393.2 | 1420.7 | 1376.5 | 1356.6 | 1388.7 | 1387.1 | 1353.6 |
| 52.5° | 1342.9 | 1358.2 | 1388.7 | 1446.6 | 1524.3 | 1553.3 | 1506.0 | 1489.3 | 1527.4 | 1545.7 | 1515.2 |
| 55° | 1390.2 | 1402.4 | 1449.6 | 1539.6 | 1666.1 | 1704.2 | 1676.7 | 1661.5 | 1702.7 | 1717.9 | 1685.9 |
| 57.5° | 1406.9 | 1410.0 | 1480.1 | 1621.9 | 1797.2 | 1894.7 | 1890.2 | 1879.5 | 1862.7 | 1900.8 | 1891.7 |
| 60° | 1378.0 | 1394.7 | 1484.7 | 1658.5 | 1914.5 | 2099.0 | 2115.8 | 2091.4 | 2070.0 | 2079.2 | 2048.7 |
| 62.5° | 1339.9 | 1353.6 | 1448.1 | 1663.0 | 1993.8 | 2283.4 | 2345.9 | 2318.5 | 2265.1 | 2240.7 | 2169.1 |
| 65° | 1205.7 | 1205.7 | 1298.7 | 1570.0 | 1980.1 | 2434.3 | 2588.3 | 2541.0 | 2443.5 | 2356.6 | 2164.5 |
| 67.5° | 922.2 | 917.6 | 1007.6 | 1289.6 | 1786.5 | 2449.6 | 2766.6 | 2742.2 | 2585.2 | 2400.8 | 2079.2 |
| 70° | 532.0 | 518.3 | 593.0 | 832.3 | 1349.0 | 2150.8 | 2812.4 | 2798.6 | 2617.3 | 2344.4 | 1830.7 |
| 72.5° | 184.4 | 196.6 | 245.4 | 353.6 | 742.3 | 1548.7 | 2541.0 | 2570.0 | 2464.8 | 2129.5 | 1471.0 |
| 75° | 96.0 | 96.0 | 112.8 | 154.0 | 314.0 | 798.7 | 1952.6 | 2042.6 | 2065.4 | 1781.9 | 1050.3 |
| 77.5° | 70.1 | 71.6 | 80.8 | 99.1 | 149.4 | 306.4 | 1172.2 | 1257.6 | 1429.8 | 1227.1 | 606.7 |
| 80° | 47.3 | 48.8 | 57.9 | 65.5 | 91.5 | 118.9 | 468.0 | 513.7 | 708.8 | 548.8 | 234.7 |
| 82.5° | 35.1 | 36.6 | 36.6 | 38.1 | 50.3 | 54.9 | 123.5 | 152.4 | 243.9 | 163.1 | 83.8 |
| 85° | 7.6 | 7.6 | 15.2 | 15.2 | 15.2 | 15.2 | 27.4 | 30.5 | 45.7 | 48.8 | 27.4 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 1.5 | 3.0 | 3.0 | 3.0 | 4.6 | 4.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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 CATALOG NUMBER: IST-SA1C-735-U-T3

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 591.4 | 591.4 | 591.4 | 591.4 | 591.4 | 591.4 | 591.4 | 591.4 | 591.4 | 591.4 | 591.4 |
| 2.5° | 594.5 | 593.0 | 591.4 | 589.9 | 588.4 | 586.9 | 585.3 | 586.9 | 586.9 | 589.9 | 591.4 |
| 5° | 599.1 | 594.5 | 593.0 | 589.9 | 588.4 | 588.4 | 588.4 | 589.9 | 591.4 | 593.0 | 594.5 |
| 7.5° | 606.7 | 605.2 | 600.6 | 594.5 | 593.0 | 593.0 | 589.9 | 589.9 | 589.9 | 593.0 | 593.0 |
| 10° | 620.4 | 615.8 | 609.7 | 603.6 | 599.1 | 589.9 | 582.3 | 576.2 | 579.2 | 583.8 | 583.8 |
| 12.5° | 635.6 | 628.0 | 620.4 | 609.7 | 597.5 | 582.3 | 574.7 | 576.2 | 576.2 | 580.8 | 582.3 |
| 15° | 655.5 | 649.4 | 632.6 | 614.3 | 593.0 | 580.8 | 577.7 | 574.7 | 574.7 | 577.7 | 580.8 |
| 17.5° | 676.8 | 666.1 | 644.8 | 617.3 | 596.0 | 582.3 | 576.2 | 564.0 | 557.9 | 556.4 | 559.4 |
| 20° | 696.6 | 684.4 | 655.5 | 620.4 | 599.1 | 580.8 | 559.4 | 539.6 | 524.4 | 521.3 | 518.3 |
| 22.5° | 713.4 | 698.1 | 663.1 | 626.5 | 599.1 | 565.5 | 528.9 | 500.0 | 478.6 | 472.5 | 475.6 |
| 25° | 731.7 | 708.8 | 672.2 | 632.6 | 588.4 | 535.0 | 484.7 | 449.7 | 428.3 | 419.2 | 419.2 |
| 27.5° | 746.9 | 724.0 | 681.4 | 628.0 | 560.9 | 493.9 | 436.0 | 400.9 | 384.1 | 375.0 | 373.5 |
| 30° | 760.6 | 736.2 | 699.7 | 614.3 | 521.3 | 437.5 | 387.2 | 362.8 | 352.1 | 341.4 | 343.0 |
| 32.5° | 778.9 | 757.6 | 713.4 | 585.3 | 468.0 | 385.7 | 347.5 | 335.3 | 324.7 | 317.1 | 320.1 |
| 35° | 804.8 | 792.6 | 718.0 | 548.8 | 413.1 | 349.1 | 323.2 | 309.4 | 300.3 | 289.6 | 289.6 |
| 37.5° | 841.4 | 830.8 | 702.7 | 493.9 | 364.3 | 321.6 | 303.3 | 285.0 | 269.8 | 257.6 | 254.6 |
| 40° | 885.6 | 870.4 | 676.8 | 432.9 | 326.2 | 303.3 | 286.6 | 263.7 | 242.4 | 225.6 | 222.6 |
| 42.5° | 955.7 | 911.5 | 638.7 | 370.4 | 298.8 | 288.1 | 265.2 | 236.3 | 214.9 | 202.7 | 199.7 |
| 45° | 1030.4 | 958.8 | 583.8 | 317.1 | 277.4 | 269.8 | 243.9 | 214.9 | 199.7 | 190.5 | 189.0 |
| 47.5° | 1124.9 | 1010.6 | 532.0 | 277.4 | 253.0 | 251.5 | 221.0 | 202.7 | 190.5 | 184.4 | 182.9 |
| 50° | 1249.9 | 1076.2 | 480.2 | 246.9 | 231.7 | 227.1 | 210.4 | 195.1 | 186.0 | 181.4 | 179.9 |
| 52.5° | 1394.7 | 1152.4 | 439.0 | 224.1 | 211.9 | 208.8 | 204.3 | 192.1 | 186.0 | 181.4 | 179.9 |
| 55° | 1531.9 | 1231.6 | 394.8 | 202.7 | 195.1 | 198.2 | 201.2 | 192.1 | 187.5 | 184.4 | 181.4 |
| 57.5° | 1682.8 | 1298.7 | 344.5 | 186.0 | 181.4 | 189.0 | 198.2 | 193.6 | 190.5 | 186.0 | 184.4 |
| 60° | 1775.8 | 1346.0 | 277.4 | 170.7 | 170.7 | 181.4 | 193.6 | 190.5 | 184.4 | 184.4 | 184.4 |
| 62.5° | 1817.0 | 1338.3 | 219.5 | 155.5 | 158.5 | 172.2 | 186.0 | 182.9 | 178.3 | 186.0 | 186.0 |
| 65° | 1763.6 | 1251.5 | 178.3 | 141.8 | 146.3 | 160.1 | 178.3 | 178.3 | 178.3 | 190.5 | 190.5 |
| 67.5° | 1624.9 | 1120.4 | 146.3 | 129.6 | 134.1 | 150.9 | 178.3 | 189.0 | 187.5 | 201.2 | 201.2 |
| 70° | 1371.9 | 888.7 | 126.5 | 120.4 | 126.5 | 150.9 | 189.0 | 195.1 | 184.4 | 199.7 | 196.6 |
| 72.5° | 1045.7 | 620.4 | 112.8 | 111.3 | 118.9 | 146.3 | 190.5 | 187.5 | 173.8 | 178.3 | 173.8 |
| 75° | 687.5 | 376.5 | 99.1 | 102.1 | 105.2 | 129.6 | 181.4 | 175.3 | 158.5 | 155.5 | 152.4 |
| 77.5° | 378.0 | 189.0 | 86.9 | 91.5 | 91.5 | 109.8 | 164.6 | 150.9 | 137.2 | 129.6 | 126.5 |
| 80° | 150.9 | 96.0 | 76.2 | 80.8 | 74.7 | 88.4 | 123.5 | 117.4 | 105.2 | 99.1 | 96.0 |
| 82.5° | 68.6 | 53.4 | 64.0 | 67.1 | 56.4 | 65.5 | 91.5 | 88.4 | 79.3 | 68.6 | 65.5 |
| 85° | 25.9 | 30.5 | 48.8 | 45.7 | 39.6 | 38.1 | 51.8 | 47.3 | 38.1 | 30.5 | 30.5 |
| 87.5° | 3.0 | 6.1 | 12.2 | 16.8 | 9.1 | 6.1 | 3.0 | 1.5 | 1.5 | 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



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 ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | 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)