

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: P438194

Luminaire Tested: **IST-SA1B-735-U-T4FT**

Issue Date: 12/10/2020

Test Information

Test Method: LM-79-08
Report Number: P438194
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-10)
Test Lab: INNOVATION CENTER
Issue Date: 12/10/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: IST-SA1B-735-U-T4FT
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE
(1) 70 CRI, 3500K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD
THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3253 lumens
Efficiency: N/A
Efficacy: 128.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G1

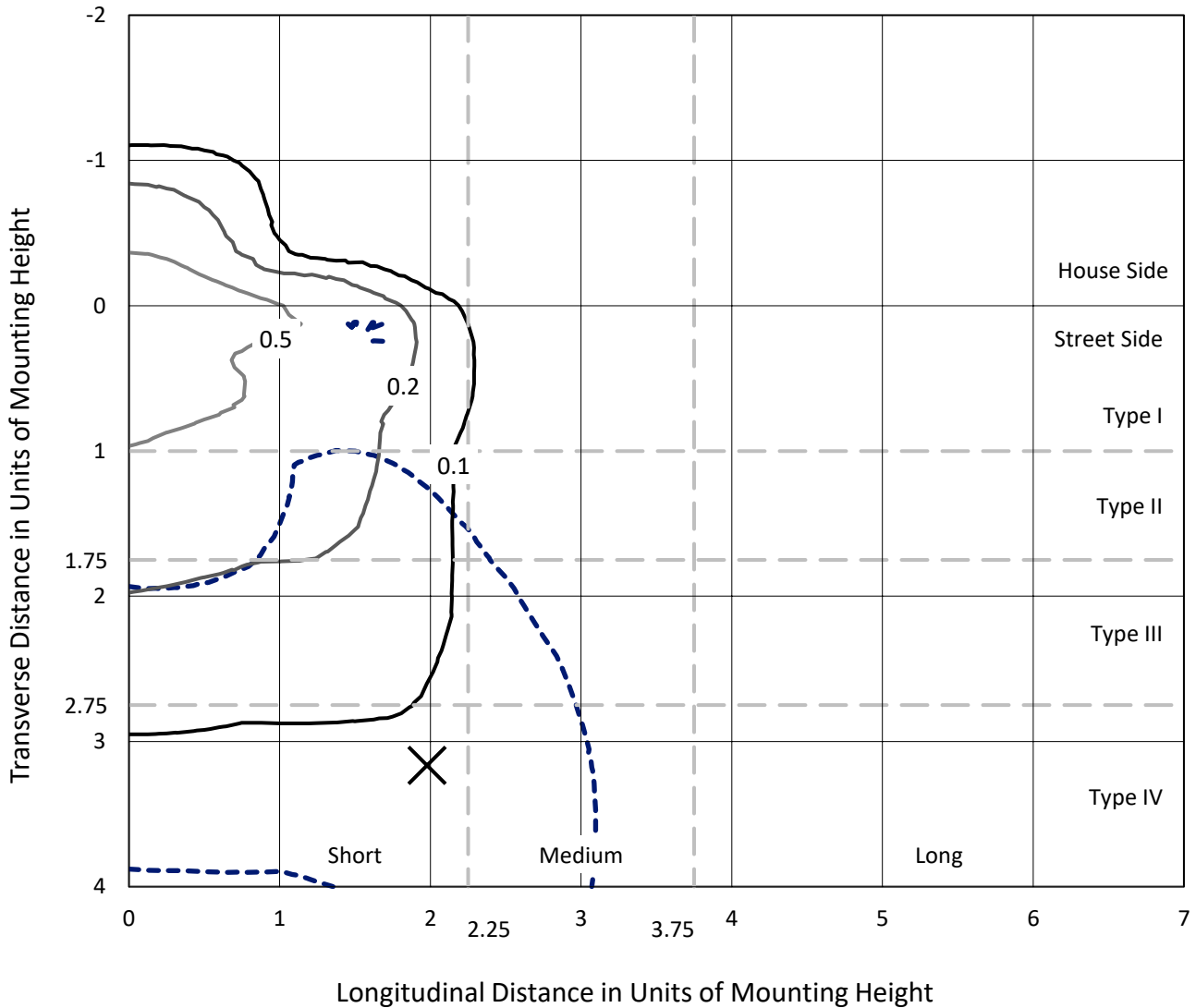
Input Watts (W): 25.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P438194
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Iso-Footcandle Lines of Horizontal Illumination

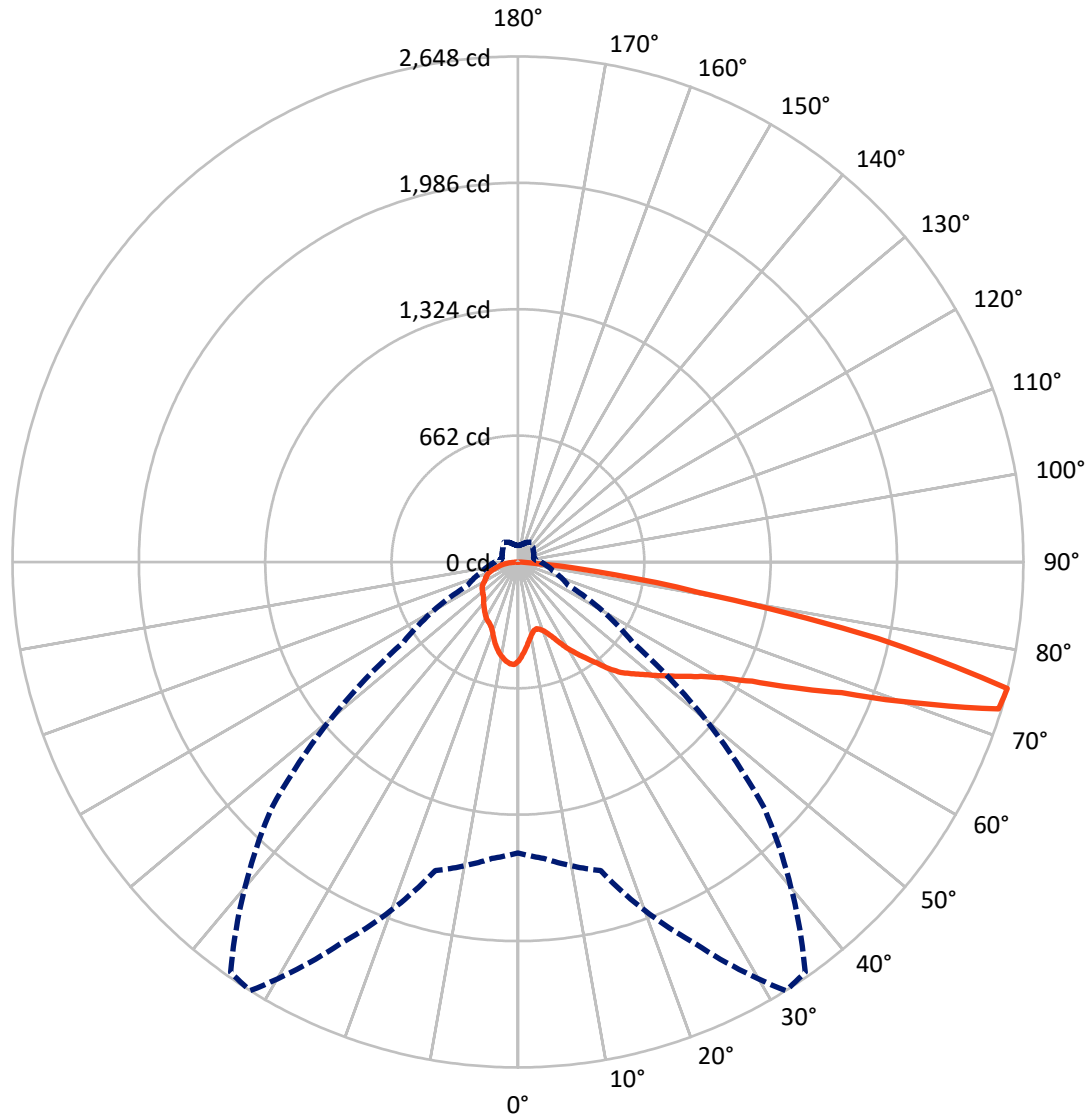
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.8 fc
 Type IV - Short - N/A

REPORT NUMBER: P438194
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Luminous Intensity Polar Plot



— Vertical Plane Through 32-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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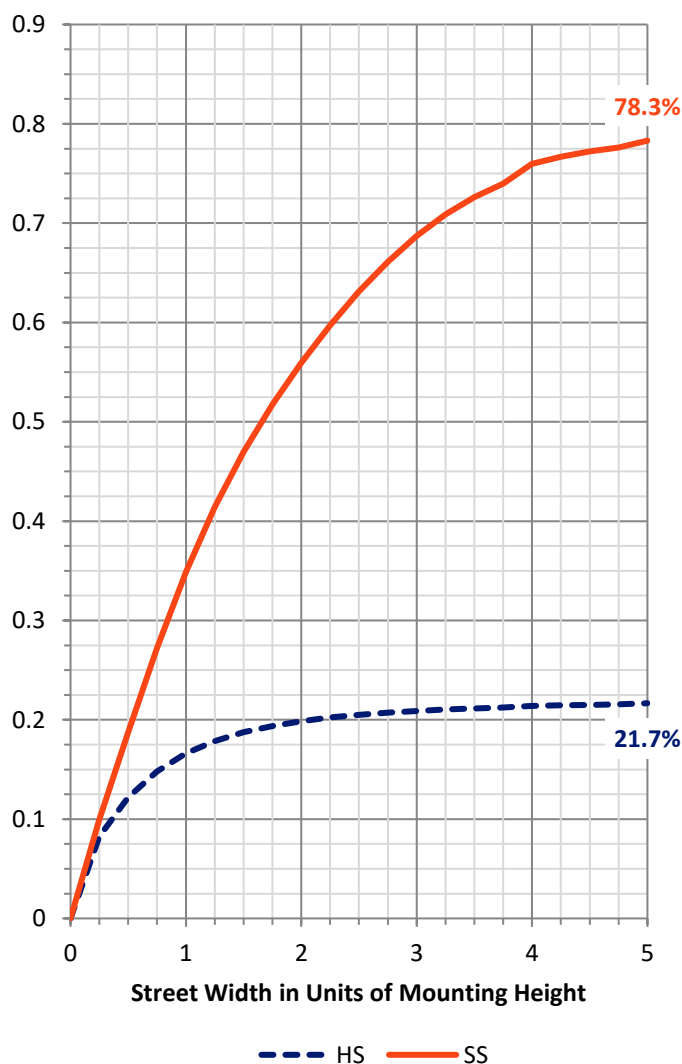
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 712.8 | 0.0 | 712.8 |
| | % Fixture | 21.9 | 0.0 | 21.9 |
| Street Side | Lumens | 2540.2 | 0.0 | 2540.2 |
| | % Fixture | 78.1 | 0.0 | 78.1 |
| Total | Lumens | 3253.0 | 0.0 | 3253.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 47.0 | 1.4 |
| 10°-20° | 128.5 | 4.0 |
| 20°-30° | 212.7 | 6.5 |
| 30°-40° | 317.1 | 9.7 |
| 40°-50° | 451.4 | 13.9 |
| 50°-60° | 621.1 | 19.1 |
| 60°-70° | 782.7 | 24.1 |
| 70°-80° | 632.7 | 19.5 |
| 80°-90° | 59.8 | 1.8 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-90° | 3253.0 | 100.0 |
| 0°-180° | 3253.0 | 100.0 |

Coefficient of Utilization

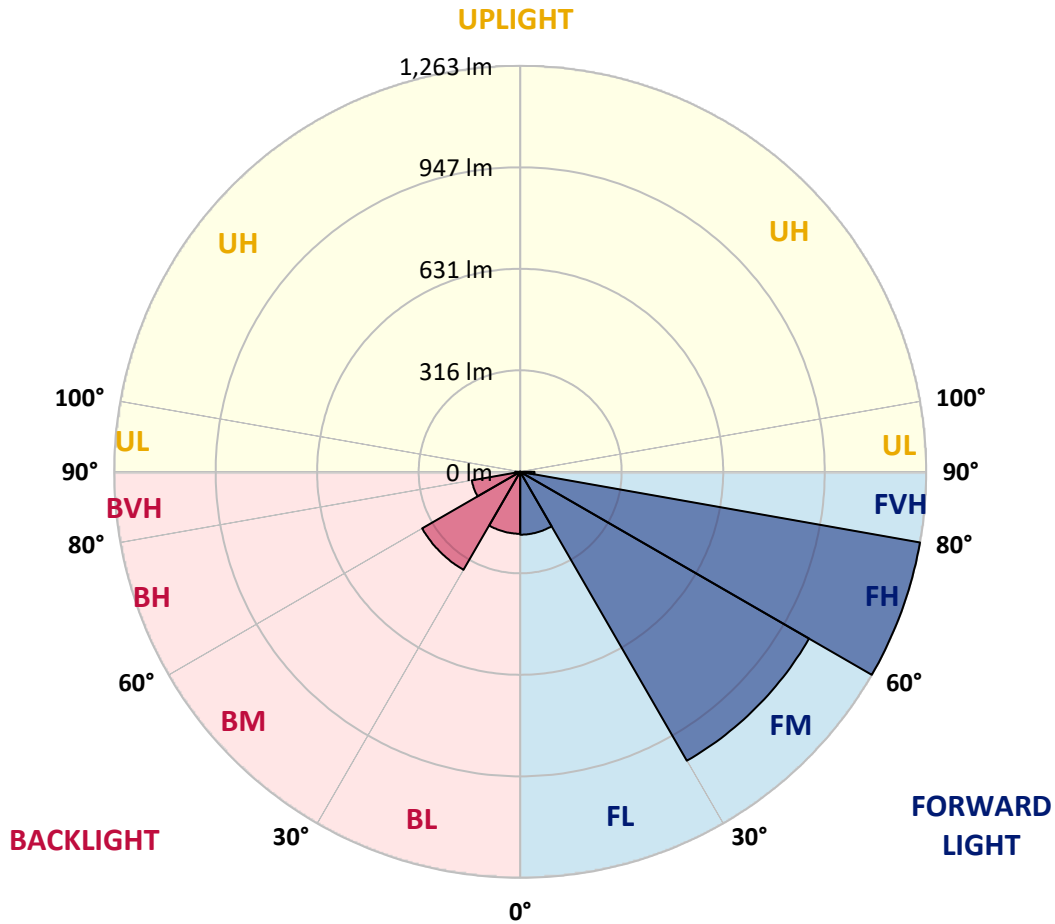


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 CATALOG NUMBER: IST-SA1B-735-U-T4FT

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 195.6 | 6.0 | | | |
| FM (30°-60°) | 1037.5 | 31.9 | | | |
| FH (60°-80°) | 1262.8 | 38.8 | | | G1/1800 |
| FVH (80°-90°) | 44.4 | 1.4 | | | G1/100 |
| BL (0°-30°) | 192.7 | 5.9 | B1/500 | | |
| BM (30°-60°) | 352.1 | 10.8 | B1/1000 | | |
| BH (60°-80°) | 152.6 | 4.7 | B1/500 | | G1/500 |
| BVH (80°-90°) | 15.4 | 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 IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 32° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 517.8 | 517.8 | 517.8 | 517.8 | 517.8 | 517.8 | 517.8 | 517.8 | 517.8 | 517.8 | 517.8 |
| 2.5° | 472.9 | 476.5 | 477.6 | 480.0 | 484.7 | 482.4 | 488.3 | 495.4 | 504.8 | 509.6 | 519.0 |
| 5° | 432.7 | 432.7 | 436.3 | 442.2 | 450.5 | 450.5 | 461.1 | 474.1 | 490.7 | 503.7 | 520.2 |
| 7.5° | 397.3 | 397.3 | 400.8 | 407.9 | 416.2 | 422.1 | 435.1 | 455.2 | 477.6 | 502.5 | 523.8 |
| 10° | 367.7 | 368.9 | 371.2 | 378.3 | 389.0 | 394.9 | 413.8 | 436.3 | 465.8 | 497.7 | 527.3 |
| 12.5° | 357.1 | 355.9 | 354.7 | 360.6 | 368.9 | 373.6 | 394.9 | 423.3 | 457.5 | 496.6 | 534.4 |
| 15° | 365.3 | 363.0 | 359.4 | 359.4 | 363.0 | 365.3 | 383.1 | 412.6 | 450.5 | 495.4 | 542.7 |
| 17.5° | 386.6 | 384.2 | 376.0 | 367.7 | 370.1 | 371.2 | 383.1 | 406.7 | 446.9 | 500.1 | 554.5 |
| 20° | 416.2 | 412.6 | 398.4 | 387.8 | 385.4 | 385.4 | 392.5 | 410.3 | 449.3 | 509.6 | 569.9 |
| 22.5° | 451.6 | 448.1 | 431.5 | 412.6 | 410.3 | 409.1 | 412.6 | 424.4 | 456.4 | 520.2 | 593.5 |
| 25° | 498.9 | 495.4 | 475.3 | 451.6 | 443.4 | 442.2 | 438.6 | 445.7 | 468.2 | 534.4 | 610.1 |
| 27.5° | 549.8 | 550.9 | 527.3 | 495.4 | 487.1 | 483.6 | 474.1 | 472.9 | 482.4 | 546.2 | 638.4 |
| 30° | 597.1 | 594.7 | 569.9 | 543.9 | 532.0 | 527.3 | 511.9 | 504.8 | 498.9 | 564.0 | 671.5 |
| 32.5° | 619.5 | 623.1 | 611.2 | 586.4 | 577.0 | 568.7 | 550.9 | 539.1 | 530.8 | 591.1 | 711.7 |
| 35° | 657.4 | 658.5 | 653.8 | 638.4 | 619.5 | 613.6 | 597.1 | 588.8 | 571.0 | 624.3 | 760.2 |
| 37.5° | 695.2 | 698.7 | 697.6 | 688.1 | 671.5 | 665.6 | 651.4 | 647.9 | 612.4 | 665.6 | 820.5 |
| 40° | 751.9 | 746.0 | 737.8 | 741.3 | 735.4 | 731.8 | 725.9 | 714.1 | 670.4 | 710.6 | 879.6 |
| 42.5° | 813.4 | 802.8 | 773.2 | 782.7 | 791.0 | 794.5 | 802.8 | 789.8 | 730.7 | 777.9 | 928.1 |
| 45° | 863.1 | 854.8 | 815.8 | 818.1 | 834.7 | 846.5 | 885.5 | 878.4 | 808.7 | 851.3 | 993.1 |
| 47.5° | 891.4 | 884.4 | 857.2 | 869.0 | 879.6 | 896.2 | 971.8 | 965.9 | 882.0 | 930.5 | 1071.2 |
| 50° | 931.6 | 919.8 | 893.8 | 915.1 | 934.0 | 947.0 | 1055.8 | 1053.4 | 944.7 | 1012.0 | 1159.8 |
| 52.5° | 954.1 | 942.3 | 939.9 | 969.5 | 991.9 | 1009.7 | 1145.6 | 1138.5 | 1006.1 | 1093.6 | 1243.8 |
| 55° | 984.9 | 987.2 | 1002.6 | 1025.0 | 1057.0 | 1086.5 | 1233.1 | 1197.7 | 1062.9 | 1174.0 | 1326.5 |
| 57.5° | 1052.2 | 1049.9 | 1079.4 | 1090.1 | 1131.5 | 1169.3 | 1337.2 | 1260.3 | 1110.2 | 1231.9 | 1365.5 |
| 60° | 1142.1 | 1146.8 | 1157.5 | 1184.7 | 1229.6 | 1287.5 | 1437.7 | 1325.4 | 1140.9 | 1273.3 | 1358.5 |
| 62.5° | 1312.3 | 1285.2 | 1280.4 | 1287.5 | 1376.2 | 1443.6 | 1535.8 | 1383.3 | 1153.9 | 1274.5 | 1284.0 |
| 65° | 1485.0 | 1474.3 | 1437.7 | 1455.4 | 1584.3 | 1645.8 | 1662.3 | 1421.1 | 1127.9 | 1201.2 | 1118.4 |
| 67.5° | 1663.5 | 1662.3 | 1623.3 | 1674.1 | 1829.0 | 1901.1 | 1803.0 | 1414.0 | 1042.8 | 1029.8 | 859.5 |
| 70° | 1846.7 | 1855.0 | 1855.0 | 1999.3 | 2210.9 | 2229.8 | 1960.2 | 1346.6 | 873.7 | 729.5 | 502.5 |
| 72.5° | 1927.1 | 1931.9 | 1974.4 | 2294.8 | 2633.0 | 2638.9 | 2050.1 | 1143.3 | 595.9 | 389.0 | 253.0 |
| 75° | 1524.0 | 1559.4 | 1674.1 | 2209.7 | 2648.3 | 2624.7 | 1826.6 | 731.8 | 290.8 | 193.9 | 140.7 |
| 77.5° | 598.2 | 611.2 | 844.2 | 1406.9 | 1929.5 | 1953.1 | 1182.3 | 292.0 | 147.8 | 123.0 | 101.7 |
| 80° | 169.1 | 177.3 | 299.1 | 559.2 | 952.9 | 1053.4 | 470.6 | 126.5 | 99.3 | 89.9 | 73.3 |
| 82.5° | 60.3 | 68.6 | 111.1 | 214.0 | 406.7 | 429.2 | 127.7 | 62.7 | 63.8 | 57.9 | 44.9 |
| 85° | 8.3 | 7.1 | 15.4 | 39.0 | 89.9 | 75.7 | 21.3 | 16.6 | 26.0 | 27.2 | 18.9 |
| 87.5° | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 | 1.2 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 |
| 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: P438194
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CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 517.8 | 517.8 | 517.8 | 517.8 | 517.8 | 517.8 | 517.8 | 517.8 | 517.8 | 517.8 | 517.8 |
| 2.5° | 521.4 | 523.8 | 528.5 | 530.8 | 533.2 | 537.9 | 536.8 | 539.1 | 539.1 | 537.9 | 540.3 |
| 5° | 526.1 | 532.0 | 537.9 | 540.3 | 541.5 | 541.5 | 535.6 | 532.0 | 530.8 | 529.7 | 530.8 |
| 7.5° | 530.8 | 539.1 | 545.0 | 543.9 | 539.1 | 530.8 | 523.8 | 517.8 | 511.9 | 509.6 | 511.9 |
| 10° | 539.1 | 547.4 | 550.9 | 542.7 | 529.7 | 516.7 | 506.0 | 497.7 | 488.3 | 487.1 | 488.3 |
| 12.5° | 546.2 | 556.9 | 556.9 | 537.9 | 520.2 | 502.5 | 485.9 | 472.9 | 461.1 | 457.5 | 457.5 |
| 15° | 558.0 | 566.3 | 558.0 | 532.0 | 507.2 | 484.7 | 461.1 | 444.5 | 430.4 | 424.4 | 425.6 |
| 17.5° | 571.0 | 577.0 | 555.7 | 522.6 | 493.0 | 463.5 | 432.7 | 410.3 | 399.6 | 393.7 | 394.9 |
| 20° | 586.4 | 587.6 | 555.7 | 510.8 | 471.7 | 432.7 | 399.6 | 383.1 | 376.0 | 372.4 | 373.6 |
| 22.5° | 606.5 | 601.8 | 552.1 | 495.4 | 444.5 | 402.0 | 371.2 | 366.5 | 366.5 | 366.5 | 370.1 |
| 25° | 627.8 | 614.8 | 546.2 | 475.3 | 409.1 | 365.3 | 353.5 | 359.4 | 364.1 | 364.1 | 366.5 |
| 27.5° | 649.1 | 627.8 | 534.4 | 445.7 | 367.7 | 339.3 | 344.0 | 353.5 | 358.2 | 358.2 | 360.6 |
| 30° | 675.1 | 643.2 | 520.2 | 405.5 | 328.7 | 321.6 | 333.4 | 345.2 | 352.3 | 352.3 | 354.7 |
| 32.5° | 708.2 | 656.2 | 498.9 | 364.1 | 302.7 | 306.2 | 319.2 | 332.2 | 340.5 | 342.9 | 344.0 |
| 35° | 744.8 | 673.9 | 469.4 | 318.0 | 284.9 | 294.4 | 305.0 | 316.9 | 323.9 | 326.3 | 326.3 |
| 37.5° | 782.7 | 691.6 | 430.4 | 279.0 | 269.6 | 282.6 | 293.2 | 299.1 | 303.8 | 303.8 | 303.8 |
| 40° | 820.5 | 701.1 | 379.5 | 248.3 | 254.2 | 273.1 | 282.6 | 280.2 | 279.0 | 275.5 | 276.7 |
| 42.5° | 859.5 | 708.2 | 325.1 | 225.8 | 238.8 | 262.5 | 269.6 | 263.7 | 254.2 | 248.3 | 249.5 |
| 45° | 902.1 | 718.8 | 280.2 | 209.3 | 223.5 | 253.0 | 260.1 | 248.3 | 236.5 | 227.0 | 224.6 |
| 47.5° | 950.6 | 736.6 | 240.0 | 193.9 | 214.0 | 247.1 | 254.2 | 237.6 | 222.3 | 209.3 | 206.9 |
| 50° | 1016.8 | 763.8 | 209.3 | 183.3 | 208.1 | 243.6 | 249.5 | 228.2 | 210.4 | 193.9 | 192.7 |
| 52.5° | 1084.2 | 783.9 | 188.0 | 173.8 | 201.0 | 236.5 | 243.6 | 221.1 | 199.8 | 182.1 | 179.7 |
| 55° | 1133.8 | 781.5 | 169.1 | 164.3 | 191.5 | 227.0 | 237.6 | 212.8 | 185.6 | 169.1 | 166.7 |
| 57.5° | 1155.1 | 733.0 | 153.7 | 156.1 | 180.9 | 215.2 | 228.2 | 199.8 | 175.0 | 160.8 | 159.6 |
| 60° | 1118.4 | 655.0 | 143.1 | 146.6 | 169.1 | 199.8 | 210.4 | 190.3 | 167.9 | 154.9 | 153.7 |
| 62.5° | 1054.6 | 567.5 | 134.8 | 139.5 | 157.2 | 185.6 | 199.8 | 178.5 | 158.4 | 149.0 | 147.8 |
| 65° | 903.3 | 471.7 | 126.5 | 131.2 | 146.6 | 171.4 | 190.3 | 171.4 | 151.3 | 141.9 | 140.7 |
| 67.5° | 682.2 | 339.3 | 118.2 | 123.0 | 137.1 | 160.8 | 182.1 | 162.0 | 140.7 | 133.6 | 133.6 |
| 70° | 406.7 | 208.1 | 107.6 | 114.7 | 125.3 | 147.8 | 169.1 | 149.0 | 127.7 | 125.3 | 123.0 |
| 72.5° | 198.6 | 132.4 | 98.1 | 104.0 | 112.3 | 131.2 | 150.2 | 132.4 | 111.1 | 105.2 | 104.0 |
| 75° | 119.4 | 95.8 | 85.1 | 92.2 | 98.1 | 110.0 | 126.5 | 113.5 | 96.9 | 87.5 | 86.3 |
| 77.5° | 86.3 | 72.1 | 72.1 | 79.2 | 79.2 | 91.0 | 108.8 | 96.9 | 81.6 | 75.7 | 74.5 |
| 80° | 61.5 | 54.4 | 59.1 | 63.8 | 61.5 | 76.8 | 92.2 | 81.6 | 66.2 | 61.5 | 60.3 |
| 82.5° | 40.2 | 37.8 | 44.9 | 43.7 | 43.7 | 59.1 | 75.7 | 61.5 | 48.5 | 40.2 | 37.8 |
| 85° | 16.6 | 18.9 | 26.0 | 24.8 | 24.8 | 33.1 | 39.0 | 31.9 | 22.5 | 17.7 | 17.7 |
| 87.5° | 0.0 | 1.2 | 3.5 | 2.4 | 2.4 | 3.5 | 1.2 | 1.2 | 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 | CRI (Ra): | 73.1 | R9: | -34.6 |
| CIE u': | 0.2371 | R1: | 68.9 | R10: | 57.8 |
| CIE v': | 0.5177 | R2: | 81.1 | R11: | 68.6 |
| Duv: | 0.0032 | R3: | 93.1 | R12: | 53.9 |
| CIE x: | 0.4153 | R4: | 71.6 | R13: | 70.9 |
| CIE y: | 0.4030 | R5: | 69.4 | R14: | 96.2 |
| CIE z: | 0.1817 | R6: | 75.0 | | |
| Peak Wavelength (nm): | 590 | R7: | 79.5 | | |
| Dominant Wavelength (nm): | 580 | R8: | 46.4 | | |
| Purity: | 45.7 | | | | |
| Rf: | 76.9 | | | | |
| Rg: | 94.4 | | | | |



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 (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)