

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: P438191

Luminaire Tested: **IST-SA1B-735-U-T3-HSS**

Issue Date: 12/10/2020

Test Information

Test Method: LM-79-08
Report Number: P438191
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-9)
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-T3-HSS
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE
(1) 70 CRI, 3500K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE III OPTICS
WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2296 lumens
Efficiency: N/A
Efficacy: 90.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B0 - U0 - G1

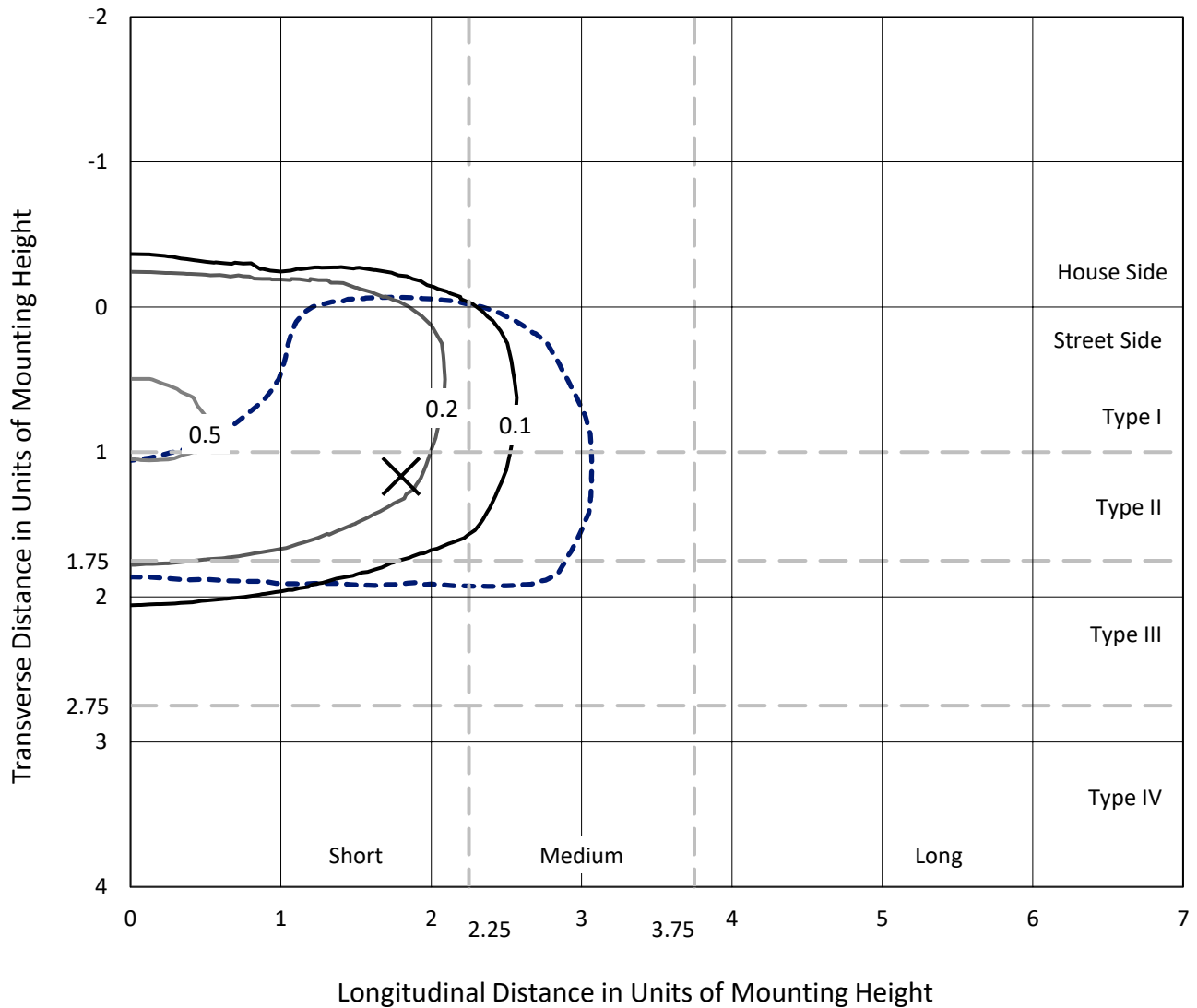
Input Watts (W): 25.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P438191
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Iso-Footcandle Lines of Horizontal Illumination

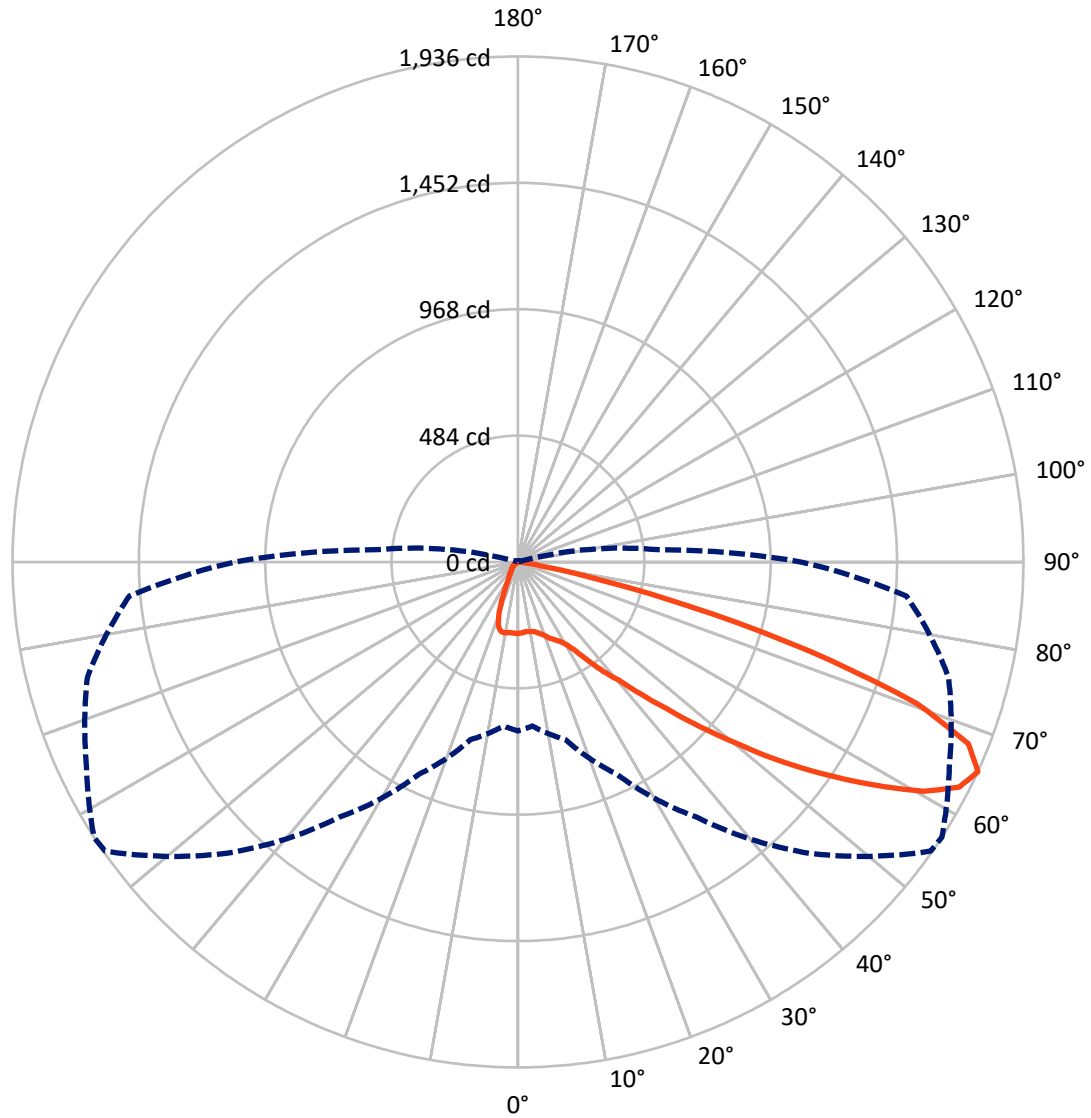
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.6 fc
 Type III - Short - N/A

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CATALOG NUMBER: IST-SA1B-735-U-T3-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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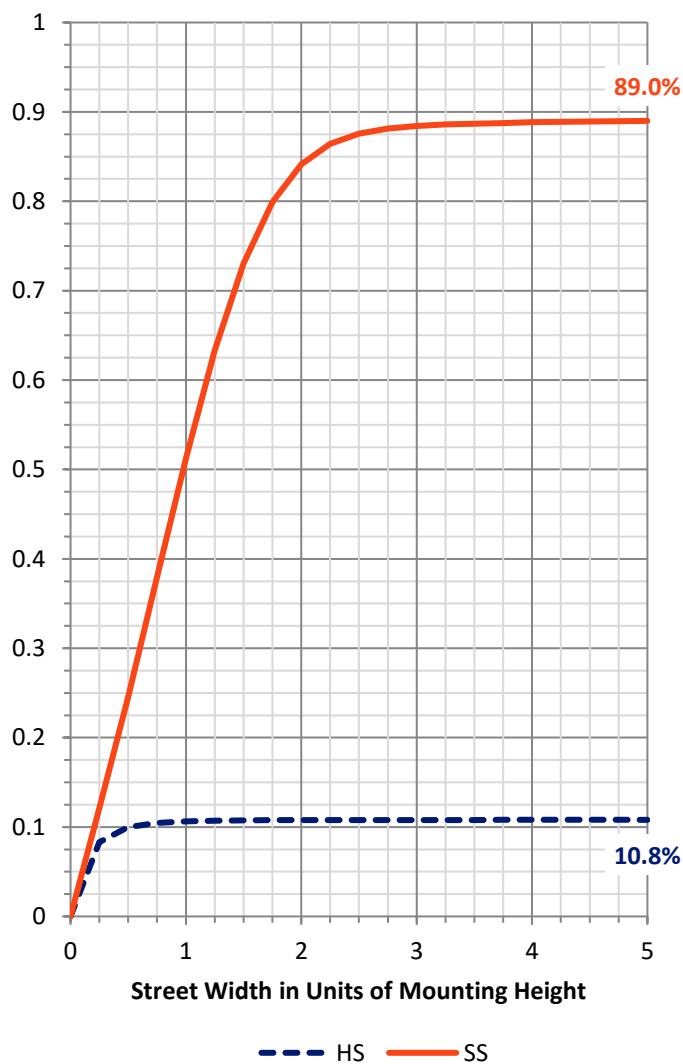
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 250.4 | 0.0 | 250.4 |
| | % Fixture | 10.9 | 0.0 | 10.9 |
| Street Side | Lumens | 2045.6 | 0.0 | 2045.6 |
| | % Fixture | 89.1 | 0.0 | 89.1 |
| Total | Lumens | 2296.0 | 0.0 | 2296.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 25.4 | 1.1 |
| 10°-20° | 68.7 | 3.0 |
| 20°-30° | 118.7 | 5.2 |
| 30°-40° | 210.2 | 9.2 |
| 40°-50° | 381.2 | 16.6 |
| 50°-60° | 642.1 | 28.0 |
| 60°-70° | 660.3 | 28.8 |
| 70°-80° | 183.0 | 8.0 |
| 80°-90° | 6.5 | 0.3 |
| 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° | 2296.0 | 100.0 |
| 0°-180° | 2296.0 | 100.0 |

Coefficient of Utilization

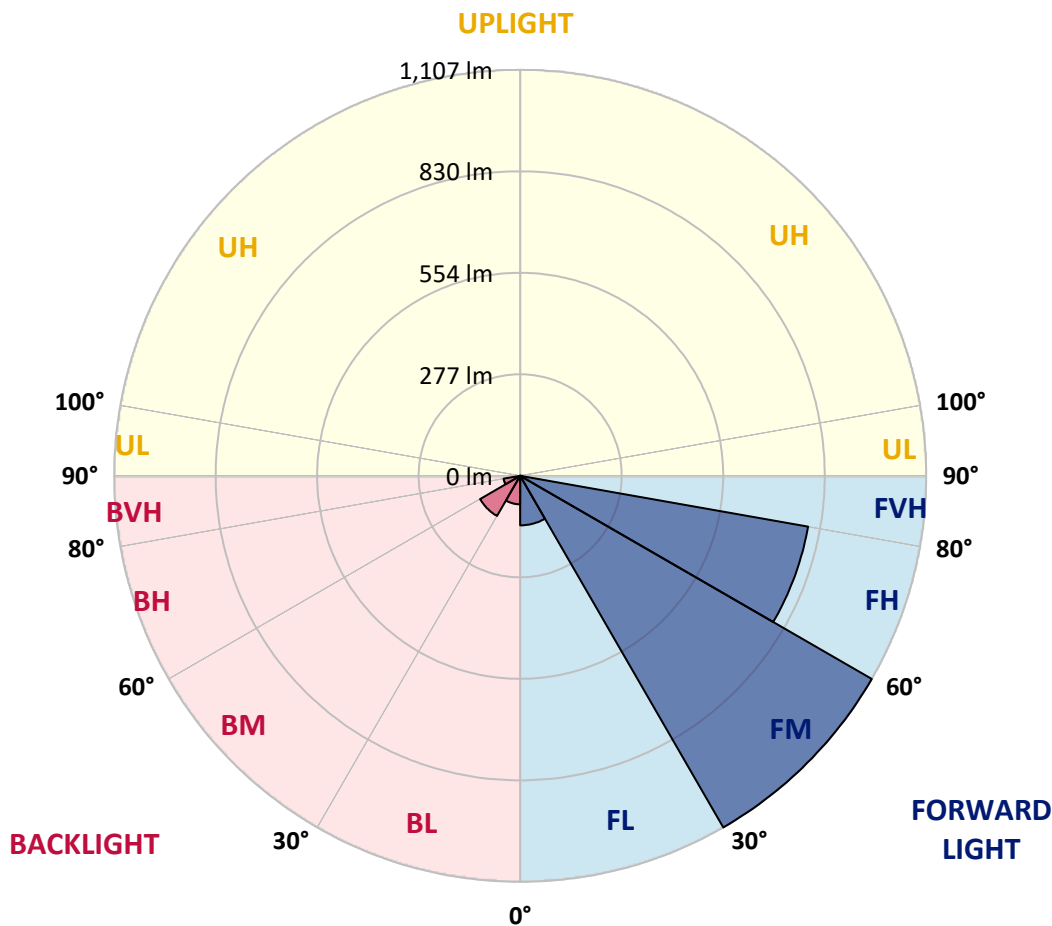


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 135.0 | 5.9 | | | |
| FM (30°-60°) | 1107.3 | 48.2 | | | |
| FH (60°-80°) | 797.3 | 34.7 | | | G1/1800 |
| FVH (80°-90°) | 6.0 | 0.3 | | | G0/10 |
| BL (0°-30°) | 77.8 | 3.4 | B0/110 | | |
| BM (30°-60°) | 126.3 | 5.5 | B0/220 | | |
| BH (60°-80°) | 45.9 | 2.0 | B0/110 | | G0/110 |
| BVH (80°-90°) | 0.5 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B0-U0-G1
 Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 57° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 273.2 | 273.2 | 273.2 | 273.2 | 273.2 | 273.2 | 273.2 | 273.2 | 273.2 | 273.2 | 273.2 |
| 2.5° | 265.4 | 265.4 | 267.6 | 268.7 | 268.7 | 269.8 | 271.0 | 272.1 | 272.1 | 272.1 | 274.3 |
| 5° | 251.9 | 250.8 | 253.0 | 255.3 | 258.6 | 263.1 | 266.5 | 268.7 | 272.1 | 275.4 | 276.6 |
| 7.5° | 239.6 | 239.6 | 241.8 | 245.2 | 251.9 | 258.6 | 265.4 | 268.7 | 274.3 | 281.0 | 283.3 |
| 10° | 236.2 | 235.1 | 238.5 | 241.8 | 248.6 | 256.4 | 266.5 | 271.0 | 278.8 | 287.7 | 291.1 |
| 12.5° | 234.0 | 234.0 | 235.1 | 240.7 | 247.4 | 257.5 | 269.8 | 273.2 | 285.5 | 295.6 | 303.4 |
| 15° | 232.9 | 232.9 | 235.1 | 239.6 | 247.4 | 258.6 | 275.4 | 281.0 | 295.6 | 310.1 | 316.9 |
| 17.5° | 241.8 | 240.7 | 239.6 | 241.8 | 249.7 | 262.0 | 284.4 | 290.0 | 307.9 | 325.8 | 333.7 |
| 20° | 268.7 | 267.6 | 264.2 | 256.4 | 256.4 | 271.0 | 295.6 | 302.3 | 325.8 | 343.7 | 348.2 |
| 22.5° | 319.1 | 322.5 | 310.1 | 290.0 | 275.4 | 282.1 | 310.1 | 318.0 | 344.8 | 363.9 | 363.9 |
| 25° | 391.9 | 387.4 | 376.2 | 342.6 | 313.5 | 300.1 | 322.5 | 330.3 | 362.8 | 385.2 | 380.7 |
| 27.5° | 468.0 | 469.1 | 453.5 | 415.4 | 368.4 | 332.5 | 335.9 | 344.8 | 381.8 | 407.5 | 397.5 |
| 30° | 528.5 | 524.0 | 516.2 | 484.8 | 433.3 | 384.0 | 361.6 | 367.2 | 403.1 | 432.2 | 423.2 |
| 32.5° | 582.2 | 580.0 | 569.9 | 543.0 | 497.1 | 444.5 | 404.2 | 405.3 | 433.3 | 469.1 | 457.9 |
| 35° | 630.4 | 632.6 | 628.1 | 597.9 | 556.5 | 507.2 | 461.3 | 464.6 | 485.9 | 522.9 | 500.5 |
| 37.5° | 690.8 | 690.8 | 683.0 | 655.0 | 623.6 | 574.4 | 530.7 | 531.8 | 543.0 | 573.3 | 545.3 |
| 40° | 743.4 | 745.7 | 744.6 | 723.3 | 693.1 | 648.3 | 595.6 | 595.6 | 599.0 | 634.8 | 620.3 |
| 42.5° | 815.1 | 818.5 | 817.3 | 797.2 | 773.7 | 741.2 | 696.4 | 693.1 | 690.8 | 735.6 | 719.9 |
| 45° | 906.9 | 914.7 | 918.1 | 893.5 | 872.2 | 853.2 | 818.5 | 805.0 | 810.6 | 852.0 | 839.7 |
| 47.5° | 994.2 | 1003.2 | 1018.9 | 1006.6 | 996.5 | 996.5 | 949.5 | 947.2 | 938.3 | 986.4 | 952.8 |
| 50° | 1077.1 | 1078.2 | 1100.6 | 1119.6 | 1149.9 | 1144.3 | 1112.9 | 1099.5 | 1086.0 | 1118.5 | 1058.1 |
| 52.5° | 1124.1 | 1137.6 | 1166.7 | 1221.5 | 1287.6 | 1314.5 | 1282.0 | 1274.1 | 1247.3 | 1242.8 | 1159.9 |
| 55° | 1167.8 | 1167.8 | 1213.7 | 1308.9 | 1420.8 | 1477.9 | 1451.1 | 1442.1 | 1388.4 | 1372.7 | 1265.2 |
| 57.5° | 1182.3 | 1177.9 | 1239.4 | 1360.4 | 1528.3 | 1628.0 | 1633.6 | 1613.4 | 1538.4 | 1490.2 | 1372.7 |
| 60° | 1109.6 | 1101.7 | 1166.7 | 1326.8 | 1557.4 | 1736.6 | 1797.0 | 1783.6 | 1668.3 | 1604.4 | 1485.8 |
| 62.5° | 900.2 | 910.3 | 993.1 | 1166.7 | 1454.4 | 1725.4 | 1905.6 | 1897.8 | 1764.5 | 1681.7 | 1530.5 |
| 65° | 647.2 | 630.4 | 704.3 | 896.8 | 1193.5 | 1577.6 | 1930.3 | 1935.9 | 1823.9 | 1707.4 | 1493.6 |
| 67.5° | 362.8 | 347.1 | 408.7 | 555.3 | 848.7 | 1294.3 | 1829.5 | 1860.8 | 1781.3 | 1643.6 | 1334.6 |
| 70° | 138.8 | 147.8 | 190.3 | 274.3 | 500.5 | 893.5 | 1574.2 | 1619.0 | 1561.9 | 1371.6 | 994.2 |
| 72.5° | 49.3 | 56.0 | 78.4 | 122.0 | 231.8 | 481.4 | 1100.6 | 1167.8 | 1151.0 | 952.8 | 568.8 |
| 75° | 29.1 | 30.2 | 40.3 | 59.3 | 101.9 | 188.1 | 621.4 | 677.4 | 650.5 | 471.4 | 235.1 |
| 77.5° | 20.2 | 20.2 | 25.8 | 35.8 | 58.2 | 75.0 | 243.0 | 275.4 | 283.3 | 170.2 | 69.4 |
| 80° | 12.3 | 13.4 | 17.9 | 23.5 | 33.6 | 34.7 | 75.0 | 88.5 | 82.9 | 60.5 | 24.6 |
| 82.5° | 5.6 | 5.6 | 10.1 | 15.7 | 16.8 | 14.6 | 23.5 | 25.8 | 30.2 | 26.9 | 11.2 |
| 85° | 0.0 | 0.0 | 3.4 | 5.6 | 4.5 | 3.4 | 7.8 | 7.8 | 10.1 | 12.3 | 5.6 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 2.2 | 1.1 |
| 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-SA1B-735-U-T3-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 273.2 | 273.2 | 273.2 | 273.2 | 273.2 | 273.2 | 273.2 | 273.2 | 273.2 | 273.2 | 273.2 |
| 2.5° | 274.3 | 275.4 | 274.3 | 273.2 | 273.2 | 272.1 | 272.1 | 272.1 | 272.1 | 272.1 | 272.1 |
| 5° | 276.6 | 277.7 | 276.6 | 274.3 | 272.1 | 269.8 | 267.6 | 267.6 | 267.6 | 267.6 | 269.8 |
| 7.5° | 283.3 | 283.3 | 281.0 | 276.6 | 271.0 | 268.7 | 264.2 | 263.1 | 260.9 | 259.8 | 260.9 |
| 10° | 293.3 | 293.3 | 288.9 | 282.1 | 273.2 | 264.2 | 256.4 | 245.2 | 238.5 | 234.0 | 232.9 |
| 12.5° | 303.4 | 302.3 | 296.7 | 287.7 | 273.2 | 253.0 | 227.3 | 199.3 | 182.5 | 170.2 | 167.9 |
| 15° | 316.9 | 315.7 | 306.8 | 291.1 | 266.5 | 223.9 | 173.5 | 135.5 | 115.3 | 106.4 | 105.2 |
| 17.5° | 331.4 | 329.2 | 316.9 | 293.3 | 245.2 | 169.1 | 114.2 | 88.5 | 80.6 | 78.4 | 78.4 |
| 20° | 347.1 | 343.7 | 324.7 | 290.0 | 202.7 | 115.3 | 79.5 | 73.9 | 72.8 | 71.7 | 71.7 |
| 22.5° | 359.4 | 353.8 | 330.3 | 273.2 | 151.2 | 79.5 | 70.5 | 69.4 | 68.3 | 67.2 | 67.2 |
| 25° | 372.8 | 363.9 | 334.8 | 236.2 | 99.6 | 68.3 | 66.1 | 64.9 | 62.7 | 61.6 | 61.6 |
| 27.5° | 388.5 | 375.1 | 341.5 | 185.9 | 69.4 | 61.6 | 59.3 | 58.2 | 54.9 | 52.6 | 52.6 |
| 30° | 408.7 | 391.9 | 344.8 | 135.5 | 58.2 | 53.7 | 51.5 | 49.3 | 44.8 | 42.5 | 42.5 |
| 32.5° | 441.1 | 426.6 | 338.1 | 90.7 | 52.6 | 48.1 | 44.8 | 40.3 | 35.8 | 33.6 | 32.5 |
| 35° | 482.6 | 462.4 | 314.6 | 63.8 | 47.0 | 42.5 | 36.9 | 31.3 | 28.0 | 26.9 | 26.9 |
| 37.5° | 528.5 | 501.6 | 278.8 | 51.5 | 42.5 | 36.9 | 31.3 | 25.8 | 22.4 | 21.3 | 21.3 |
| 40° | 593.4 | 552.0 | 229.5 | 44.8 | 36.9 | 31.3 | 25.8 | 21.3 | 19.0 | 17.9 | 17.9 |
| 42.5° | 678.5 | 615.8 | 173.5 | 41.4 | 33.6 | 26.9 | 21.3 | 17.9 | 15.7 | 14.6 | 14.6 |
| 45° | 773.7 | 683.0 | 126.5 | 36.9 | 29.1 | 22.4 | 16.8 | 14.6 | 12.3 | 11.2 | 11.2 |
| 47.5° | 868.8 | 731.1 | 87.3 | 33.6 | 24.6 | 19.0 | 14.6 | 11.2 | 9.0 | 9.0 | 7.8 |
| 50° | 951.7 | 756.9 | 62.7 | 29.1 | 22.4 | 15.7 | 11.2 | 9.0 | 7.8 | 6.7 | 6.7 |
| 52.5° | 1024.5 | 768.1 | 48.1 | 25.8 | 19.0 | 13.4 | 9.0 | 7.8 | 6.7 | 6.7 | 6.7 |
| 55° | 1086.0 | 759.1 | 38.1 | 22.4 | 16.8 | 11.2 | 7.8 | 6.7 | 5.6 | 5.6 | 5.6 |
| 57.5° | 1146.5 | 732.2 | 30.2 | 19.0 | 13.4 | 7.8 | 6.7 | 5.6 | 4.5 | 4.5 | 4.5 |
| 60° | 1177.9 | 697.5 | 24.6 | 15.7 | 11.2 | 6.7 | 5.6 | 4.5 | 4.5 | 3.4 | 3.4 |
| 62.5° | 1156.6 | 627.0 | 20.2 | 13.4 | 7.8 | 5.6 | 4.5 | 3.4 | 3.4 | 2.2 | 2.2 |
| 65° | 1084.9 | 537.4 | 15.7 | 10.1 | 5.6 | 4.5 | 3.4 | 3.4 | 2.2 | 1.1 | 1.1 |
| 67.5° | 914.7 | 421.0 | 12.3 | 7.8 | 4.5 | 3.4 | 2.2 | 2.2 | 1.1 | 0.0 | 0.0 |
| 70° | 653.9 | 277.7 | 10.1 | 5.6 | 3.4 | 3.4 | 2.2 | 1.1 | 0.0 | 0.0 | 0.0 |
| 72.5° | 377.3 | 134.4 | 7.8 | 3.4 | 2.2 | 2.2 | 1.1 | 1.1 | 0.0 | 0.0 | 0.0 |
| 75° | 141.1 | 47.0 | 6.7 | 3.4 | 2.2 | 1.1 | 1.1 | 1.1 | 0.0 | 0.0 | 0.0 |
| 77.5° | 47.0 | 19.0 | 5.6 | 4.5 | 3.4 | 1.1 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 14.6 | 9.0 | 2.2 | 2.2 | 2.2 | 2.2 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 7.8 | 4.5 | 1.1 | 1.1 | 1.1 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 3.4 | 2.2 | 1.1 | 1.1 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

LM-79-08: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

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



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)