

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: STREETWORKS

Report Number: P856083

Luminaire Tested: **FFX-CLB-100-740-U-FR-T5**

Issue Date: 07/16/2024



Test Information

Test Method: LM-79-08
Report Number: P856083
Test Lab: INNOVATION CENTER(G3)
Issue Date: 07/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: FFX-CLB-100-740-U-FR-T5
Description: FAIRFAX POST TOP FIXTURE w/ FAIRFAX REFRACTOR T5 DISTRIBUTION LENS
Light Source: (6) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

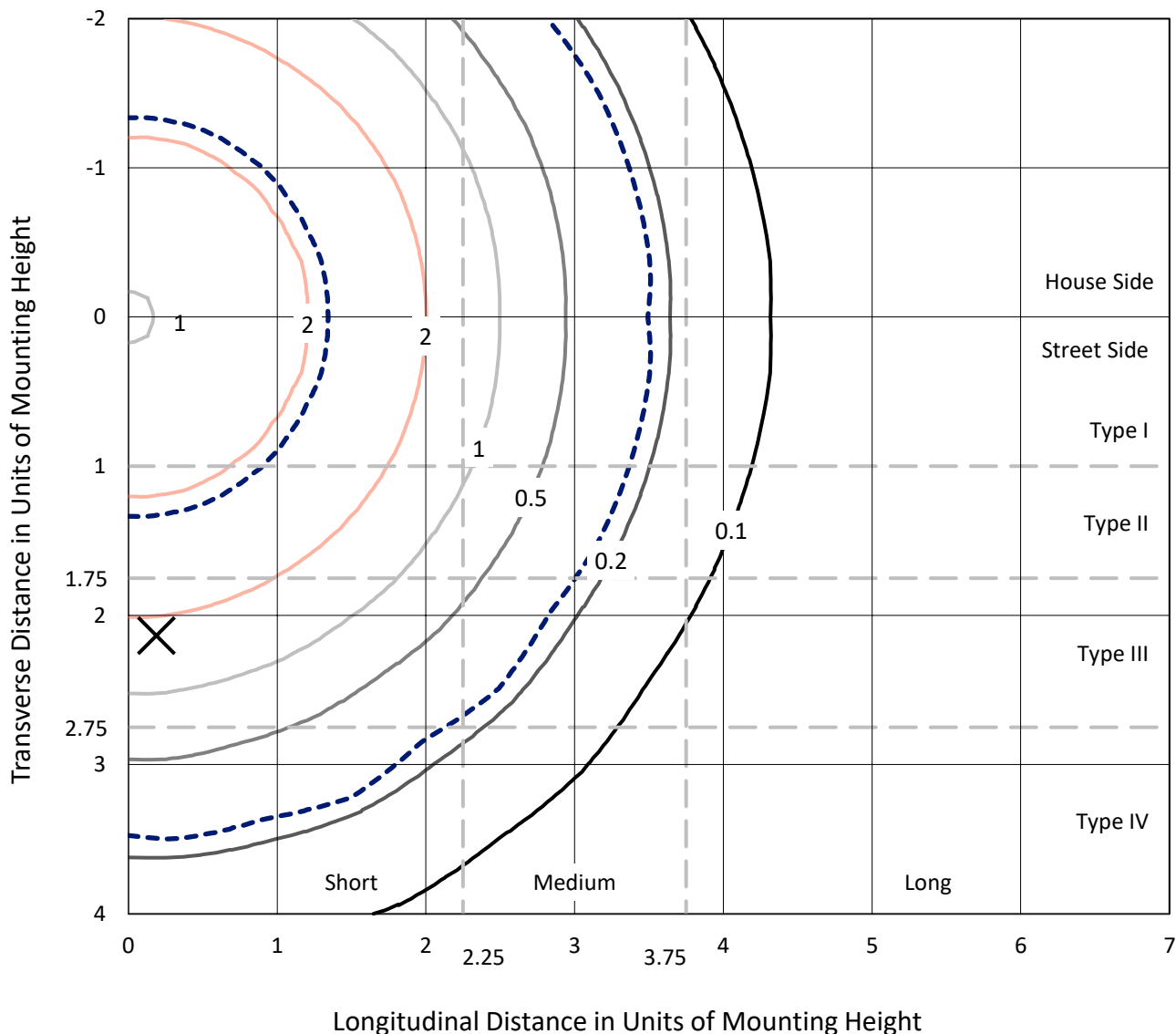
Lumens per Lamp: N/A
Luminaire Lumens: 15727.1 lumens
Efficiency: N/A
Efficacy: 163.1 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.17' x H: 1.67')
IES Classification: Type V - Short
BUG Rating: B4 - U5 - G3

Input Watts (W): 96.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 5.2%%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Iso-Footcandle Lines of Horizontal Illumination

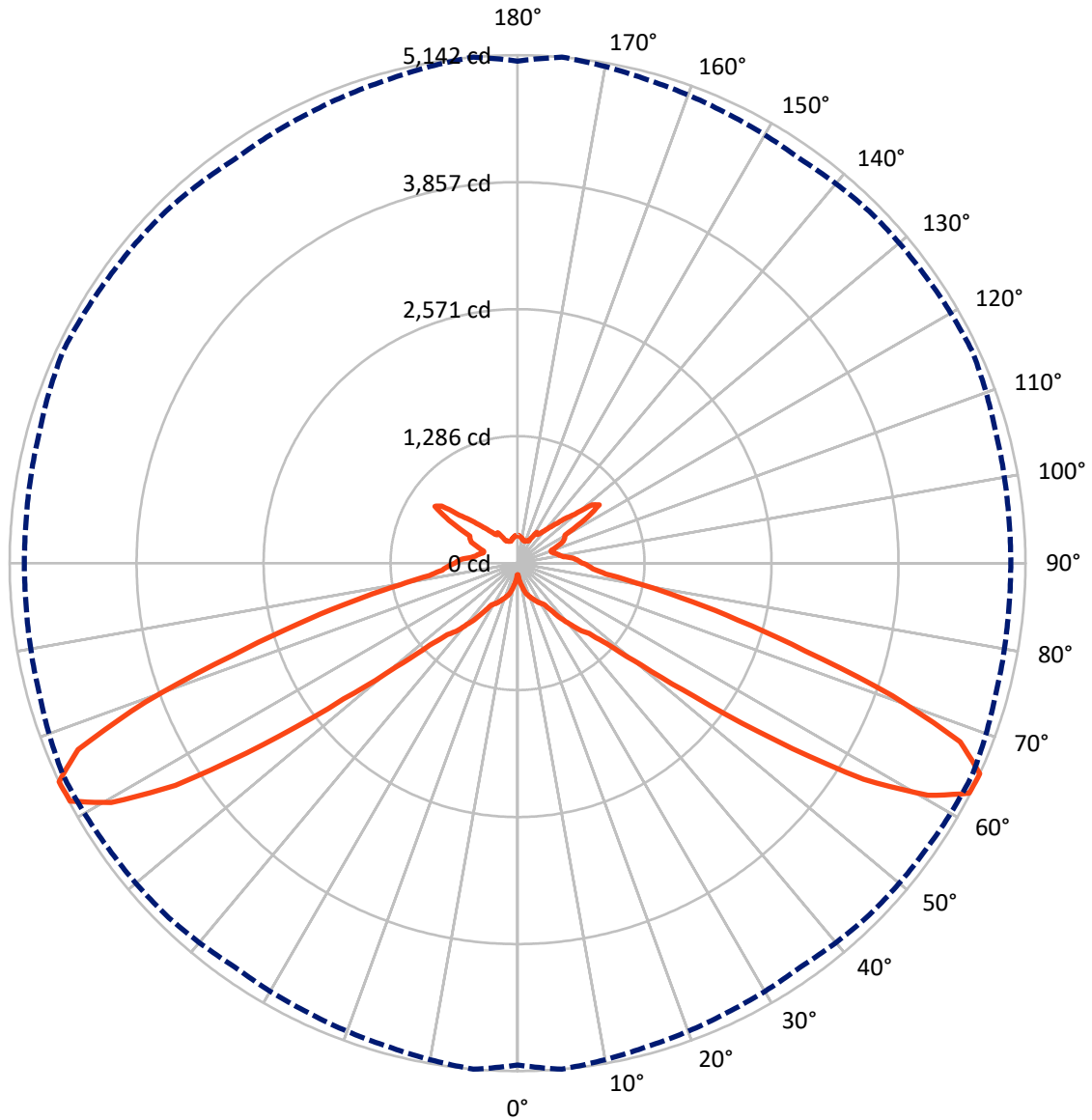
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 2.9 fc
 Type V - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 5-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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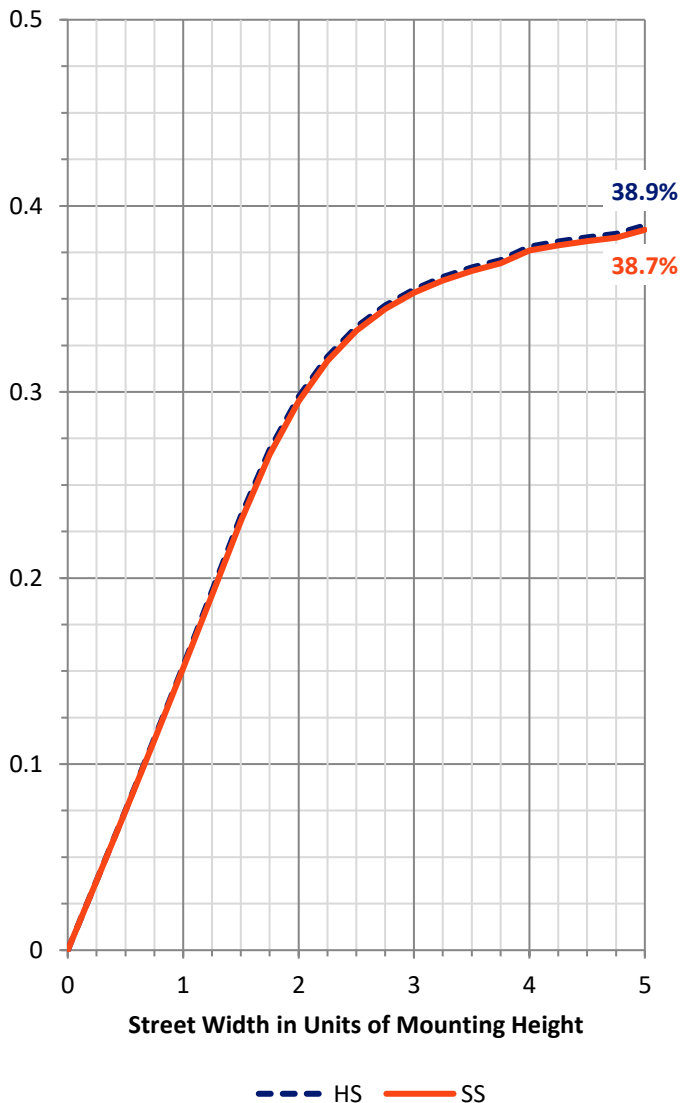
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 6337.3 | 1526.2 | 7863.5 |
| | % Fixture | 40.3 | 9.7 | 50.0 |
| Street Side | Lumens | 6337.3 | 1526.2 | 7863.5 |
| | % Fixture | 40.3 | 9.7 | 50.0 |
| Total | Lumens | 12674.7 | 3052.4 | 15727.1 |
| | % Fixture | 80.6 | 19.4 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 17.9 | 0.1 |
| 10°-20° | 89.8 | 0.6 |
| 20°-30° | 195.1 | 1.2 |
| 30°-40° | 387.2 | 2.5 |
| 40°-50° | 839.9 | 5.3 |
| 50°-60° | 2892.4 | 18.4 |
| 60°-70° | 4750.5 | 30.2 |
| 70°-80° | 2549.7 | 16.2 |
| 80°-90° | 952.1 | 6.1 |
| 90°-100° | 601.4 | 3.8 |
| 100°-110° | 402.7 | 2.6 |
| 110°-120° | 442.7 | 2.8 |
| 120°-130° | 732.5 | 4.7 |
| 130°-140° | 431.4 | 2.7 |
| 140°-150° | 228.2 | 1.5 |
| 150°-160° | 119.9 | 0.8 |
| 160°-170° | 68.0 | 0.4 |
| 170°-180° | 25.6 | 0.2 |
| 0°-90° | 12674.7 | 80.6 |
| 0°-180° | 15727.1 | 100.0 |



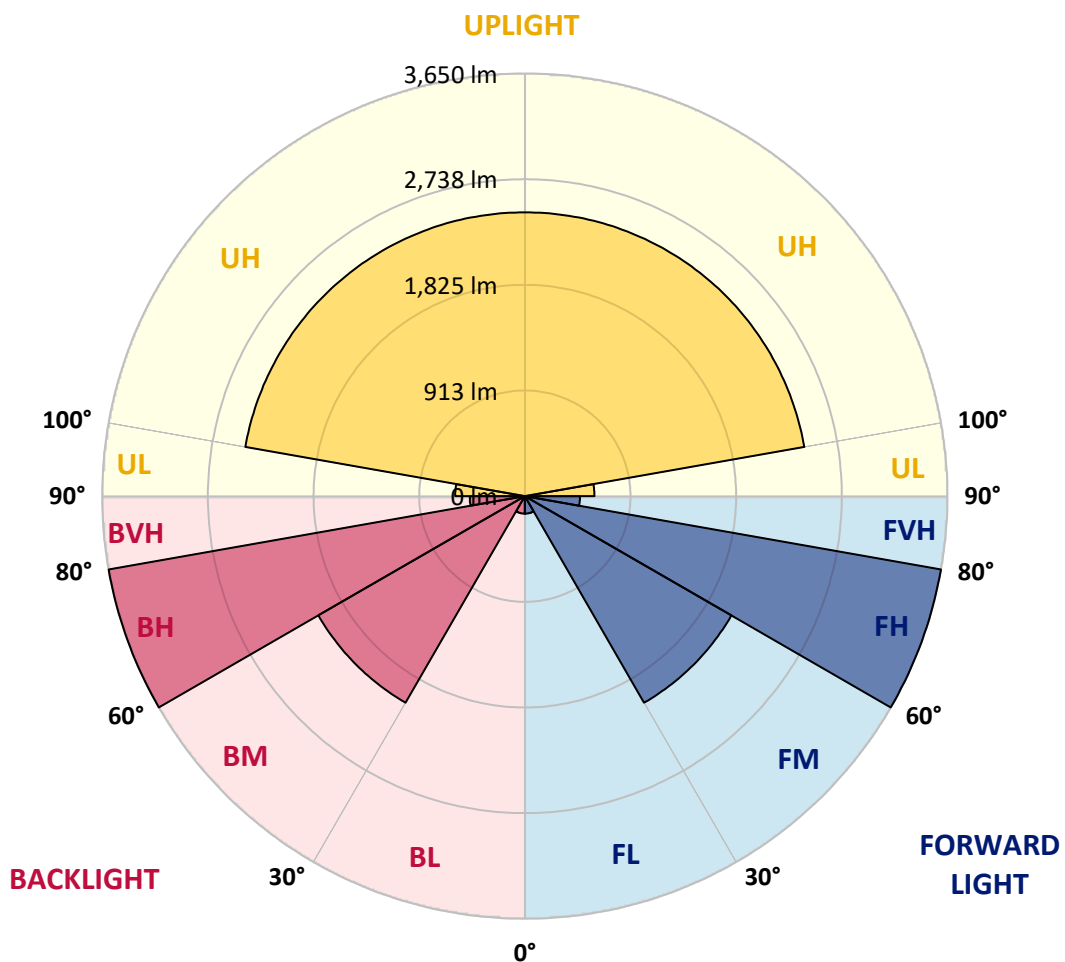
REPORT NUMBER: P856083
 CATALOG NUMBER: FFX-CLB-100-740-U-FR-T5

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|---------|---------|
| | | | B | U | G |
| FL (0°-30°) | 151.4 | 1.0 | | | |
| FM (30°-60°) | 2059.8 | 13.1 | | | |
| FH (60°-80°) | 3650.1 | 23.2 | | | G2/5000 |
| FVH (80°-90°) | 476.1 | 3.0 | | | G3/500 |
| BL (0°-30°) | 151.4 | 1.0 | B1/500 | | |
| BM (30°-60°) | 2059.8 | 13.1 | B2/2500 | | |
| BH (60°-80°) | 3650.1 | 23.2 | B4/5000 | | G2/5000 |
| BVH (80°-90°) | 476.1 | 3.0 | | | G3/500 |
| UL (90°-100°) | 601.4 | 3.8 | | U4/1000 | |
| UH (100°-180°) | 2451.1 | 15.6 | | U5 | |

BUG Rating: B4-U5-G3

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 117.0 | 117.0 | 117.0 | 117.0 | 117.0 | 117.0 | 117.0 | 117.0 | 117.0 | 117.0 | 117.0 |
| 2.5° | 123.4 | 123.4 | 121.8 | 120.2 | 121.8 | 123.4 | 123.4 | 125.0 | 121.8 | 121.8 | 123.4 |
| 5° | 165.1 | 165.1 | 165.1 | 163.5 | 160.3 | 160.3 | 158.7 | 163.5 | 165.1 | 166.7 | 166.7 |
| 7.5° | 205.2 | 203.6 | 206.8 | 208.4 | 200.4 | 197.2 | 197.2 | 198.8 | 202.0 | 205.2 | 208.4 |
| 10° | 232.4 | 230.8 | 232.4 | 238.8 | 237.2 | 232.4 | 232.4 | 232.4 | 237.2 | 245.3 | 246.9 |
| 12.5° | 274.1 | 274.1 | 277.3 | 282.1 | 283.7 | 278.9 | 275.7 | 275.7 | 282.1 | 283.7 | 282.1 |
| 15° | 319.0 | 319.0 | 317.4 | 315.8 | 317.4 | 315.8 | 315.8 | 317.4 | 322.2 | 320.6 | 320.6 |
| 17.5° | 343.0 | 341.4 | 339.8 | 341.4 | 341.4 | 339.8 | 341.4 | 344.6 | 343.0 | 347.9 | 349.5 |
| 20° | 368.7 | 368.7 | 365.5 | 365.5 | 365.5 | 367.1 | 368.7 | 367.1 | 368.7 | 370.3 | 371.9 |
| 22.5° | 392.7 | 392.7 | 391.1 | 389.5 | 391.1 | 392.7 | 394.3 | 391.1 | 391.1 | 394.3 | 394.3 |
| 25° | 420.0 | 420.0 | 420.0 | 415.2 | 416.8 | 418.4 | 416.8 | 415.2 | 416.8 | 418.4 | 420.0 |
| 27.5° | 450.4 | 450.4 | 447.2 | 442.4 | 444.0 | 444.0 | 445.6 | 442.4 | 445.6 | 445.6 | 445.6 |
| 30° | 476.1 | 472.9 | 471.3 | 468.1 | 468.1 | 471.3 | 474.5 | 469.7 | 471.3 | 471.3 | 472.9 |
| 32.5° | 500.1 | 500.1 | 498.5 | 492.1 | 490.5 | 500.1 | 503.3 | 501.7 | 495.3 | 496.9 | 498.5 |
| 35° | 589.9 | 589.9 | 578.7 | 567.5 | 577.1 | 575.5 | 588.3 | 588.3 | 588.3 | 591.5 | 597.9 |
| 37.5° | 702.1 | 706.9 | 724.6 | 750.2 | 750.2 | 713.3 | 694.1 | 692.5 | 718.1 | 740.6 | 739.0 |
| 40° | 801.5 | 806.3 | 801.5 | 804.7 | 801.5 | 803.1 | 804.7 | 801.5 | 787.1 | 782.3 | 772.6 |
| 42.5° | 924.9 | 926.5 | 896.1 | 860.8 | 864.0 | 881.6 | 902.5 | 904.1 | 873.6 | 859.2 | 856.0 |
| 45° | 1011.5 | 1014.7 | 1003.5 | 998.7 | 998.7 | 1005.1 | 1003.5 | 1003.5 | 992.3 | 990.7 | 987.4 |
| 47.5° | 1223.1 | 1216.7 | 1194.2 | 1186.2 | 1195.8 | 1191.0 | 1221.5 | 1213.5 | 1200.6 | 1200.6 | 1211.9 |
| 50° | 1622.2 | 1615.8 | 1617.4 | 1609.4 | 1635.1 | 1598.2 | 1635.1 | 1625.4 | 1606.2 | 1615.8 | 1623.8 |
| 52.5° | 2274.7 | 2234.6 | 2239.4 | 2223.4 | 2268.2 | 2234.6 | 2295.5 | 2287.5 | 2225.0 | 2252.2 | 2253.8 |
| 55° | 3214.0 | 3162.7 | 3159.5 | 3052.1 | 3135.5 | 3146.7 | 3223.6 | 3242.9 | 3121.0 | 3122.6 | 3130.7 |
| 57.5° | 4145.3 | 4129.3 | 4180.6 | 4113.3 | 4172.6 | 4145.3 | 4143.7 | 4179.0 | 4108.5 | 4118.1 | 4143.7 |
| 60° | 4762.5 | 4775.3 | 4833.0 | 4850.7 | 4871.5 | 4833.0 | 4754.5 | 4770.5 | 4765.7 | 4847.5 | 4853.9 |
| 62.5° | 5092.7 | 5131.2 | 5089.5 | 5076.7 | 5059.1 | 5073.5 | 5063.9 | 5073.5 | 5044.6 | 5083.1 | 5084.7 |
| 65° | 5081.5 | 5142.4 | 5067.1 | 5020.6 | 4991.7 | 5036.6 | 5049.4 | 5078.3 | 5017.4 | 4993.3 | 4993.3 |
| 67.5° | 4759.3 | 4833.0 | 4714.4 | 4709.6 | 4639.1 | 4714.4 | 4693.6 | 4716.0 | 4667.9 | 4634.3 | 4602.2 |
| 70° | 3959.4 | 4026.7 | 3884.1 | 3901.7 | 3779.9 | 3903.3 | 3871.2 | 3912.9 | 3874.4 | 3808.7 | 3770.2 |
| 72.5° | 2983.2 | 3042.5 | 2936.7 | 2963.9 | 2883.8 | 2976.8 | 2927.1 | 2997.6 | 2973.6 | 2944.7 | 2912.6 |
| 75° | 2257.0 | 2303.5 | 2309.9 | 2401.3 | 2305.1 | 2350.0 | 2260.2 | 2301.9 | 2342.0 | 2375.6 | 2340.4 |
| 77.5° | 1660.7 | 1692.8 | 1788.9 | 1889.9 | 1795.4 | 1827.4 | 1737.6 | 1777.7 | 1814.6 | 1872.3 | 1846.7 |
| 80° | 1173.4 | 1210.3 | 1298.4 | 1373.8 | 1304.8 | 1333.7 | 1276.0 | 1298.4 | 1327.3 | 1369.0 | 1341.7 |
| 82.5° | 913.7 | 900.9 | 897.7 | 878.4 | 857.6 | 929.7 | 944.2 | 957.0 | 929.7 | 918.5 | 905.7 |
| 85° | 766.2 | 769.4 | 788.7 | 812.7 | 812.7 | 814.3 | 799.9 | 806.3 | 817.5 | 838.4 | 840.0 |
| 87.5° | 703.7 | 713.3 | 767.8 | 787.1 | 779.1 | 782.3 | 769.4 | 772.6 | 780.7 | 791.9 | 788.7 |
| 90° | 620.4 | 644.4 | 695.7 | 714.9 | 702.1 | 708.5 | 702.1 | 706.9 | 700.5 | 703.7 | 697.3 |
| 92.5° | 605.9 | 604.3 | 620.4 | 618.8 | 610.7 | 630.0 | 630.0 | 633.2 | 625.2 | 620.4 | 617.2 |
| 95° | 561.0 | 557.8 | 556.2 | 561.0 | 543.4 | 557.8 | 554.6 | 561.0 | 557.8 | 557.8 | 551.4 |
| 97.5° | 469.7 | 469.7 | 466.5 | 471.3 | 460.1 | 466.5 | 458.5 | 463.3 | 461.7 | 463.3 | 458.5 |
| 100° | 432.8 | 432.8 | 429.6 | 429.6 | 424.8 | 426.4 | 423.2 | 423.2 | 421.6 | 420.0 | 420.0 |
| 102.5° | 407.2 | 410.4 | 405.6 | 407.2 | 400.7 | 400.7 | 397.5 | 399.1 | 397.5 | 397.5 | 395.9 |
| 105° | 383.1 | 384.7 | 381.5 | 381.5 | 376.7 | 375.1 | 371.9 | 373.5 | 375.1 | 371.9 | 371.9 |
| 107.5° | 359.1 | 360.7 | 359.1 | 359.1 | 354.3 | 351.1 | 346.2 | 346.2 | 347.9 | 349.5 | 349.5 |
| 110° | 368.7 | 363.9 | 359.1 | 355.9 | 362.3 | 352.7 | 349.5 | 347.9 | 349.5 | 354.3 | 355.9 |



REPORT NUMBER: P856083
 CATALOG NUMBER: FFX-CLB-100-740-U-FR-T5

CANDELA DISTRIBUTION (continued):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|--------|--------|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| 112.5° | 440.8 | 437.6 | 437.6 | 423.2 | 439.2 | 429.6 | 423.2 | 412.0 | 416.8 | 420.0 | 420.0 |
| 115° | 511.4 | 513.0 | 493.7 | 487.3 | 477.7 | 476.1 | 480.9 | 468.1 | 466.5 | 468.1 | 464.9 |
| 117.5° | 573.9 | 540.2 | 468.1 | 448.8 | 444.0 | 440.8 | 437.6 | 434.4 | 431.2 | 450.4 | 429.6 |
| 120° | 613.9 | 556.2 | 503.3 | 492.1 | 519.4 | 480.9 | 455.3 | 450.4 | 460.1 | 493.7 | 488.9 |
| 122.5° | 870.4 | 820.7 | 782.3 | 714.9 | 782.3 | 743.8 | 753.4 | 735.8 | 726.2 | 706.9 | 710.1 |
| 125° | 1017.9 | 1016.3 | 998.7 | 985.8 | 1001.9 | 987.4 | 971.4 | 965.0 | 955.4 | 960.2 | 952.2 |
| 127.5° | 945.8 | 960.2 | 937.8 | 963.4 | 905.7 | 921.7 | 918.5 | 929.7 | 920.1 | 923.3 | 910.5 |
| 130° | 748.6 | 759.8 | 739.0 | 726.2 | 700.5 | 729.4 | 731.0 | 748.6 | 729.4 | 703.7 | 700.5 |
| 132.5° | 654.0 | 662.0 | 630.0 | 613.9 | 596.3 | 622.0 | 633.2 | 642.8 | 630.0 | 602.7 | 596.3 |
| 135° | 556.2 | 559.4 | 537.0 | 540.2 | 529.0 | 529.0 | 527.4 | 532.2 | 538.6 | 533.8 | 530.6 |
| 137.5° | 477.7 | 485.7 | 477.7 | 487.3 | 477.7 | 469.7 | 456.9 | 461.7 | 476.1 | 487.3 | 485.7 |
| 140° | 413.6 | 421.6 | 423.2 | 432.8 | 413.6 | 416.8 | 408.8 | 412.0 | 420.0 | 431.2 | 436.0 |
| 142.5° | 367.1 | 373.5 | 359.1 | 351.1 | 344.6 | 363.9 | 378.3 | 379.9 | 370.3 | 357.5 | 362.3 |
| 145° | 357.5 | 351.1 | 357.5 | 351.1 | 357.5 | 354.3 | 355.9 | 354.3 | 354.3 | 354.3 | 354.3 |
| 147.5° | 362.3 | 368.7 | 368.7 | 368.7 | 359.1 | 360.7 | 362.3 | 363.9 | 363.9 | 370.3 | 368.7 |
| 150° | 301.4 | 309.4 | 307.8 | 315.8 | 301.4 | 304.6 | 306.2 | 309.4 | 311.0 | 312.6 | 314.2 |
| 152.5° | 254.9 | 256.5 | 261.3 | 264.5 | 262.9 | 261.3 | 259.7 | 259.7 | 262.9 | 266.1 | 267.7 |
| 155° | 248.5 | 248.5 | 253.3 | 258.1 | 253.3 | 253.3 | 251.7 | 251.7 | 253.3 | 258.1 | 258.1 |
| 157.5° | 238.8 | 240.4 | 240.4 | 243.7 | 240.4 | 242.1 | 240.4 | 240.4 | 242.1 | 243.7 | 245.3 |
| 160° | 234.0 | 235.6 | 235.6 | 235.6 | 235.6 | 235.6 | 235.6 | 235.6 | 235.6 | 237.2 | 237.2 |
| 162.5° | 234.0 | 234.0 | 234.0 | 232.4 | 232.4 | 234.0 | 234.0 | 234.0 | 234.0 | 232.4 | 234.0 |
| 165° | 238.8 | 237.2 | 235.6 | 234.0 | 235.6 | 238.8 | 240.4 | 240.4 | 238.8 | 235.6 | 237.2 |
| 167.5° | 248.5 | 248.5 | 246.9 | 245.3 | 246.9 | 248.5 | 250.1 | 250.1 | 248.5 | 246.9 | 246.9 |
| 170° | 258.1 | 256.5 | 256.5 | 256.5 | 256.5 | 256.5 | 256.5 | 256.5 | 256.5 | 256.5 | 256.5 |
| 172.5° | 264.5 | 264.5 | 266.1 | 264.5 | 266.1 | 266.1 | 264.5 | 264.5 | 264.5 | 264.5 | 266.1 |
| 175° | 274.1 | 274.1 | 274.1 | 274.1 | 275.7 | 275.7 | 275.7 | 275.7 | 275.7 | 275.7 | 275.7 |
| 177.5° | 280.5 | 280.5 | 280.5 | 280.5 | 280.5 | 280.5 | 280.5 | 280.5 | 280.5 | 280.5 | 280.5 |
| 180° | 282.1 | 282.1 | 282.1 | 282.1 | 282.1 | 282.1 | 282.1 | 282.1 | 282.1 | 282.1 | 282.1 |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

Streetworks

Report Number: SP1-2406-133-1

Test Date: 07/11/2024

Luminaire Tested: FFX-CLB-100-740-U-FR-T5

Data in this report applies to families of products including FFX-CLB-100-740-U-FR-T5.

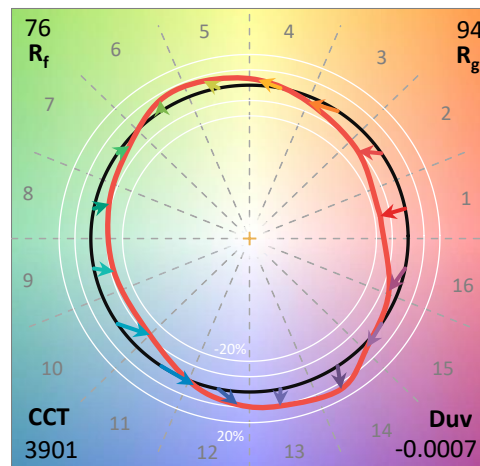
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2406-133-1
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 07/12/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Streetworks
 Catalog Number: **FFX-CLB-100-740-U-FR-T5**
 Description: FAIRFAX ACORN W/ FAIRFAX REFRACTOR 100W T5

Spectral Parameters

CCT (K): 3901
 CIE u': 0.2273
 CIE v': 0.5026
 Duv: -0.0007
 CIE x: 0.3844
 CIE y: 0.3776
 CIE z: 0.2380
 Peak Wavelength (nm): 451
 Dominant Wavelength (nm): 579
 Purity: 28.6799
 Rf: 76.2
 Rg: 94.4

| | | | |
|-----------|------|------|-------|
| CRI (Ra): | 74.5 | | |
| R1: | 71.8 | R9: | -23.4 |
| R2: | 81.9 | R10: | 56.6 |
| R3: | 89.3 | R11: | 68.4 |
| R4: | 72.6 | R12: | 46.6 |
| R5: | 71.3 | R13: | 73.7 |
| R6: | 74.0 | R14: | 93.9 |
| R7: | 81.5 | R15: | 65.1 |
| R8: | 53.3 | | |



Test Conditions

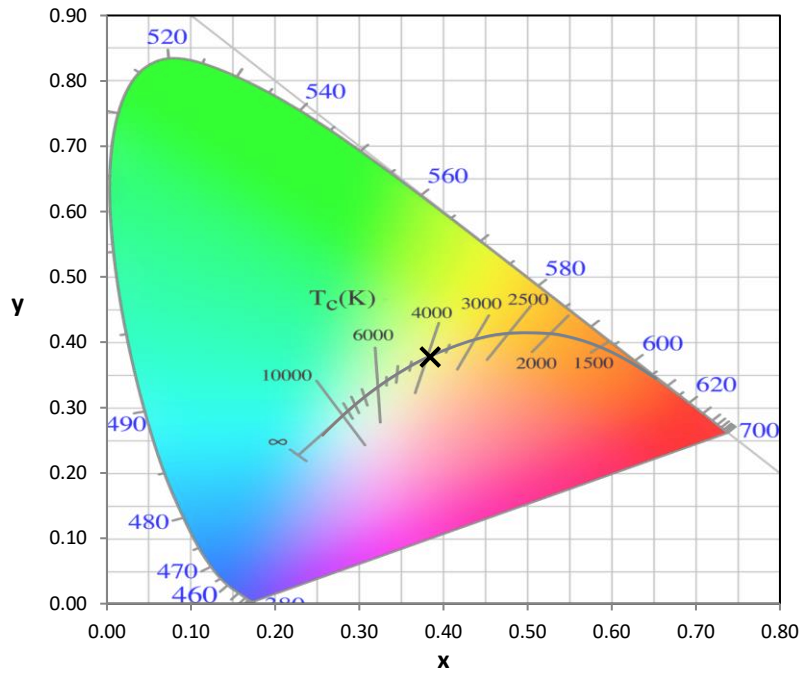
Stabilization Time: 0.818109M
 Operation Time: 1H
 Sphere Temperature (°C): 24.6

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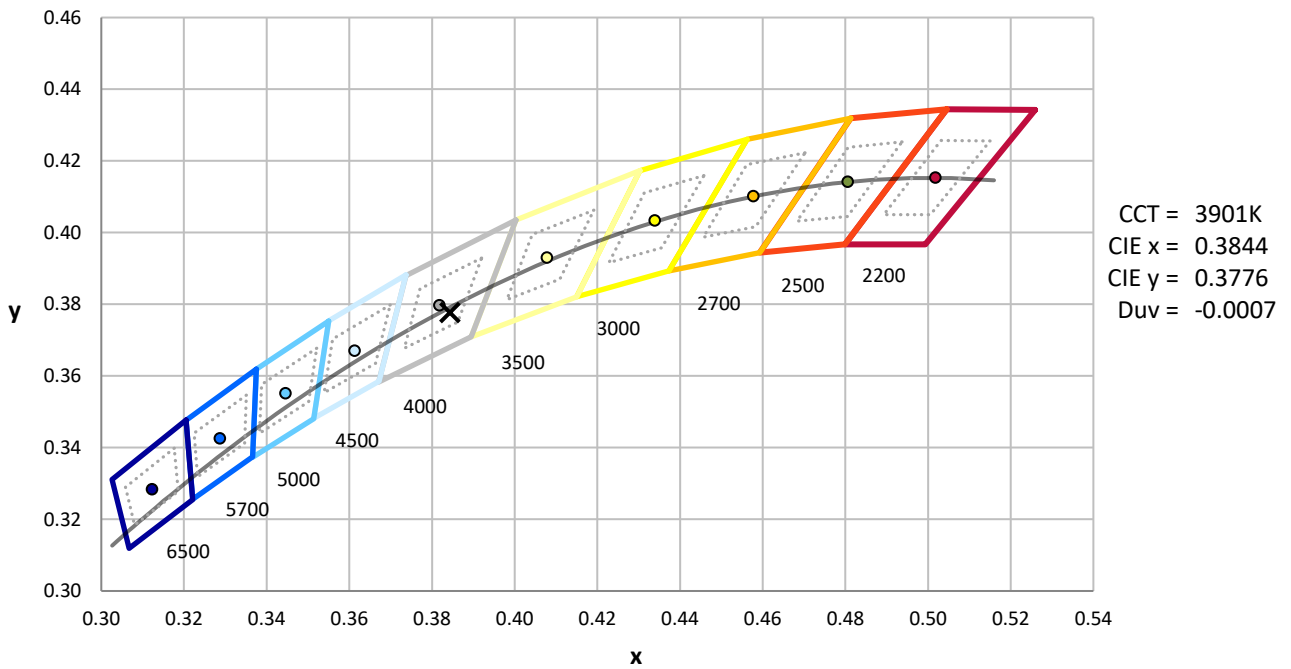
| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC Power Source | IN0208 | 10/24/2023 | 10/24/2024 |
| Sphere Thermometer | IN0085 | 10/24/2023 | 10/24/2024 |
| Room Thermometer | IN0046 | 10/24/2023 | 10/24/2024 |

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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

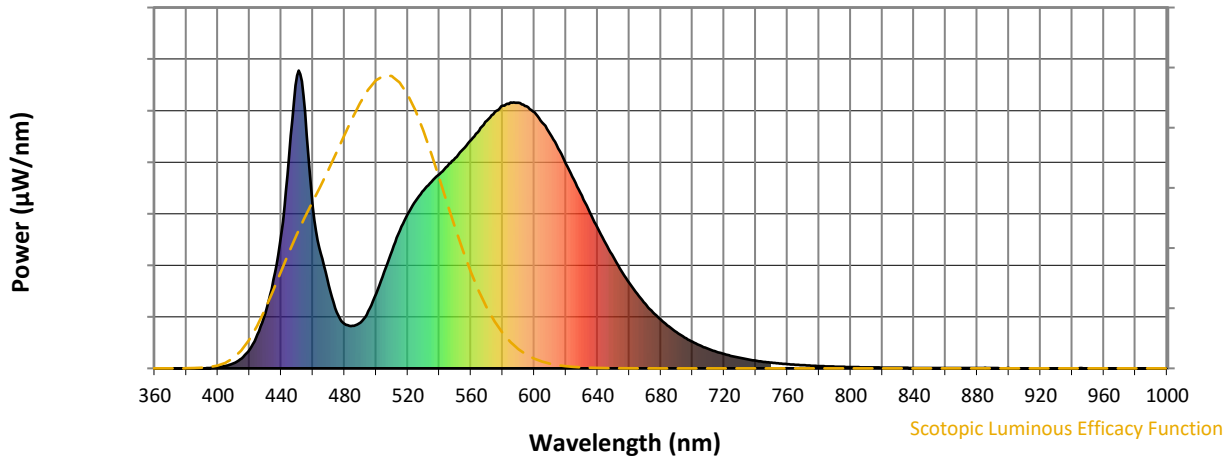


Photopic Lumens: NR

| λ (nm) | Power $\text{W}^{\wedge}/\text{nm}$ | Lumens (ϕ/nm) | λ (nm) | Power $\text{W}^{\wedge}/\text{nm}$ | Lumens (ϕ/nm) | λ (nm) | Power $\text{W}^{\wedge}/\text{nm}$ | Lumens (ϕ/nm) | λ (nm) | Power $\text{W}^{\wedge}/\text{nm}$ | Lumens (ϕ/nm) | λ (nm) | Power $\text{W}^{\wedge}/\text{nm}$ | Lumens (ϕ/nm) |
|-------------------|--|------------------------------|-------------------|--|------------------------------|-------------------|--|------------------------------|-------------------|--|------------------------------|-------------------|--|------------------------------|
| 360 | 0 | NR | 490 | 154 | NR | 620 | 687 | NR | 750 | 19 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 191 | NR | 625 | 634 | NR | 755 | 17 | NR | 885 | 2 | NR |
| 370 | 0 | NR | 500 | 251 | NR | 630 | 581 | NR | 760 | 14 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 323 | NR | 635 | 524 | NR | 765 | 12 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 395 | NR | 640 | 471 | NR | 770 | 11 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 462 | NR | 645 | 420 | NR | 775 | 9 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 520 | NR | 650 | 373 | NR | 780 | 8 | NR | 910 | 0 | NR |
| 395 | 1 | NR | 525 | 563 | NR | 655 | 328 | NR | 785 | 7 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 599 | NR | 660 | 286 | NR | 790 | 6 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 627 | NR | 665 | 250 | NR | 795 | 5 | NR | 925 | 0 | NR |
| 410 | 17 | NR | 540 | 653 | NR | 670 | 217 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 34 | NR | 545 | 679 | NR | 675 | 188 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 63 | NR | 550 | 706 | NR | 680 | 163 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 114 | NR | 555 | 737 | NR | 685 | 140 | NR | 815 | 3 | NR | 945 | 1 | NR |
| 430 | 186 | NR | 560 | 768 | NR | 690 | 121 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 297 | NR | 565 | 798 | NR | 695 | 104 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 454 | NR | 570 | 831 | NR | 700 | 89 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 713 | NR | 575 | 860 | NR | 705 | 77 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 983 | NR | 580 | 882 | NR | 710 | 65 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 861 | NR | 585 | 893 | NR | 715 | 56 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 540 | NR | 590 | 892 | NR | 720 | 48 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 386 | NR | 595 | 880 | NR | 725 | 41 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 279 | NR | 600 | 859 | NR | 730 | 35 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 188 | NR | 605 | 825 | NR | 735 | 30 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 149 | NR | 610 | 787 | NR | 740 | 26 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 143 | NR | 615 | 738 | NR | 745 | 22 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2406-133-1

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.53

| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 154 | NR | 620 | 687 | NR | 750 | 19 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 191 | NR | 625 | 634 | NR | 755 | 17 | NR | 885 | 2 | NR |
| 370 | 0 | NR | 500 | 251 | NR | 630 | 581 | NR | 760 | 14 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 323 | NR | 635 | 524 | NR | 765 | 12 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 395 | NR | 640 | 471 | NR | 770 | 11 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 462 | NR | 645 | 420 | NR | 775 | 9 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 520 | NR | 650 | 373 | NR | 780 | 8 | NR | 910 | 0 | NR |
| 395 | 1 | NR | 525 | 563 | NR | 655 | 328 | NR | 785 | 7 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 599 | NR | 660 | 286 | NR | 790 | 6 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 627 | NR | 665 | 250 | NR | 795 | 5 | NR | 925 | 0 | NR |
| 410 | 17 | NR | 540 | 653 | NR | 670 | 217 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 34 | NR | 545 | 679 | NR | 675 | 188 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 63 | NR | 550 | 706 | NR | 680 | 163 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 114 | NR | 555 | 737 | NR | 685 | 140 | NR | 815 | 3 | NR | 945 | 1 | NR |
| 430 | 186 | NR | 560 | 768 | NR | 690 | 121 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 297 | NR | 565 | 798 | NR | 695 | 104 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 454 | NR | 570 | 831 | NR | 700 | 89 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 713 | NR | 575 | 860 | NR | 705 | 77 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 983 | NR | 580 | 882 | NR | 710 | 65 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 861 | NR | 585 | 893 | NR | 715 | 56 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 540 | NR | 590 | 892 | NR | 720 | 48 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 386 | NR | 595 | 880 | NR | 725 | 41 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 279 | NR | 600 | 859 | NR | 730 | 35 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 188 | NR | 605 | 825 | NR | 735 | 30 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 149 | NR | 610 | 787 | NR | 740 | 26 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 143 | NR | 615 | 738 | NR | 745 | 22 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2406-133-1

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.04

| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 154 | NR | 620 | 687 | NR | 750 | 19 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 191 | NR | 625 | 634 | NR | 755 | 17 | NR | 885 | 2 | NR |
| 370 | 0 | NR | 500 | 251 | NR | 630 | 581 | NR | 760 | 14 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 323 | NR | 635 | 524 | NR | 765 | 12 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 395 | NR | 640 | 471 | NR | 770 | 11 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 462 | NR | 645 | 420 | NR | 775 | 9 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 520 | NR | 650 | 373 | NR | 780 | 8 | NR | 910 | 0 | NR |
| 395 | 1 | NR | 525 | 563 | NR | 655 | 328 | NR | 785 | 7 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 599 | NR | 660 | 286 | NR | 790 | 6 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 627 | NR | 665 | 250 | NR | 795 | 5 | NR | 925 | 0 | NR |
| 410 | 17 | NR | 540 | 653 | NR | 670 | 217 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 34 | NR | 545 | 679 | NR | 675 | 188 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 63 | NR | 550 | 706 | NR | 680 | 163 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 114 | NR | 555 | 737 | NR | 685 | 140 | NR | 815 | 3 | NR | 945 | 1 | NR |
| 430 | 186 | NR | 560 | 768 | NR | 690 | 121 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 297 | NR | 565 | 798 | NR | 695 | 104 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 454 | NR | 570 | 831 | NR | 700 | 89 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 713 | NR | 575 | 860 | NR | 705 | 77 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 983 | NR | 580 | 882 | NR | 710 | 65 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 861 | NR | 585 | 893 | NR | 715 | 56 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 540 | NR | 590 | 892 | NR | 720 | 48 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 386 | NR | 595 | 880 | NR | 725 | 41 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 279 | NR | 600 | 859 | NR | 730 | 35 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 188 | NR | 605 | 825 | NR | 735 | 30 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 149 | NR | 610 | 787 | NR | 740 | 26 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 143 | NR | 615 | 738 | NR | 745 | 22 | NR | 875 | 1 | NR | | | |

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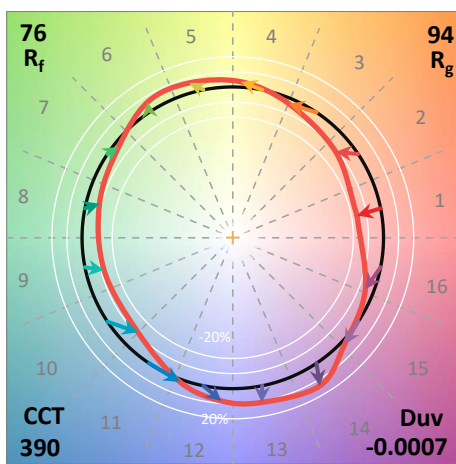
TM-30-18

Summary

$R_f = 76.2$
 $R_g = 94.4$
 CIE $R_a = 74.5$
 $R_g = -23.4$



Color Vector Graphics

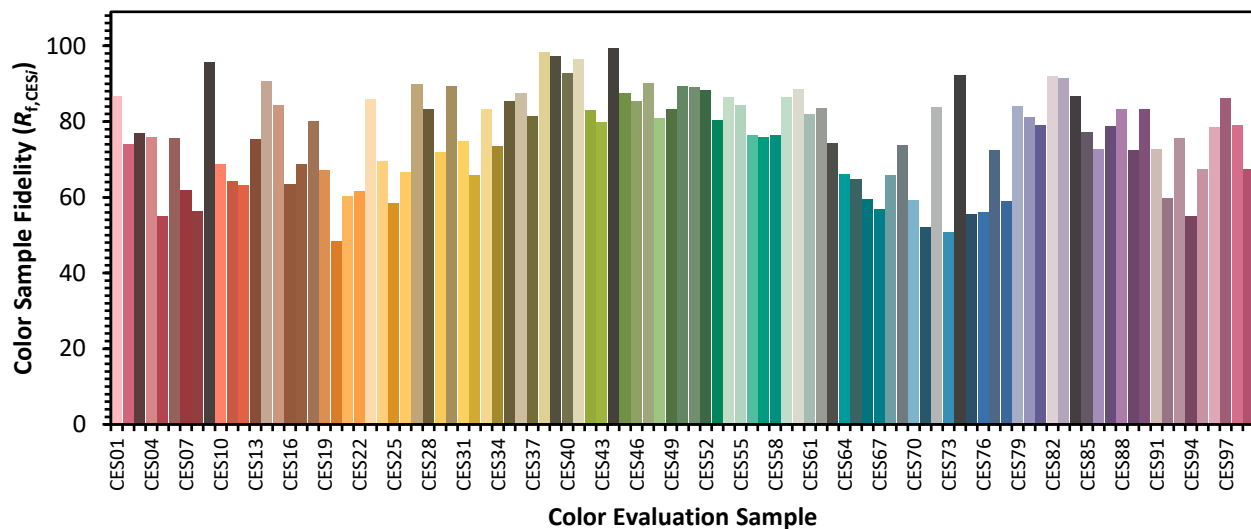


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Individual Sample Fidelity Index ($R_{f,i}$)

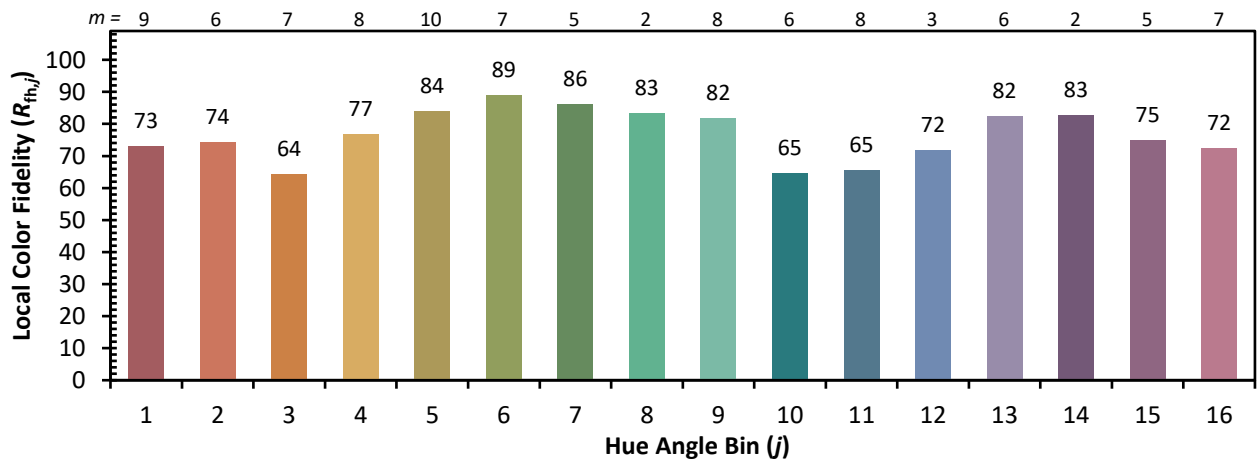
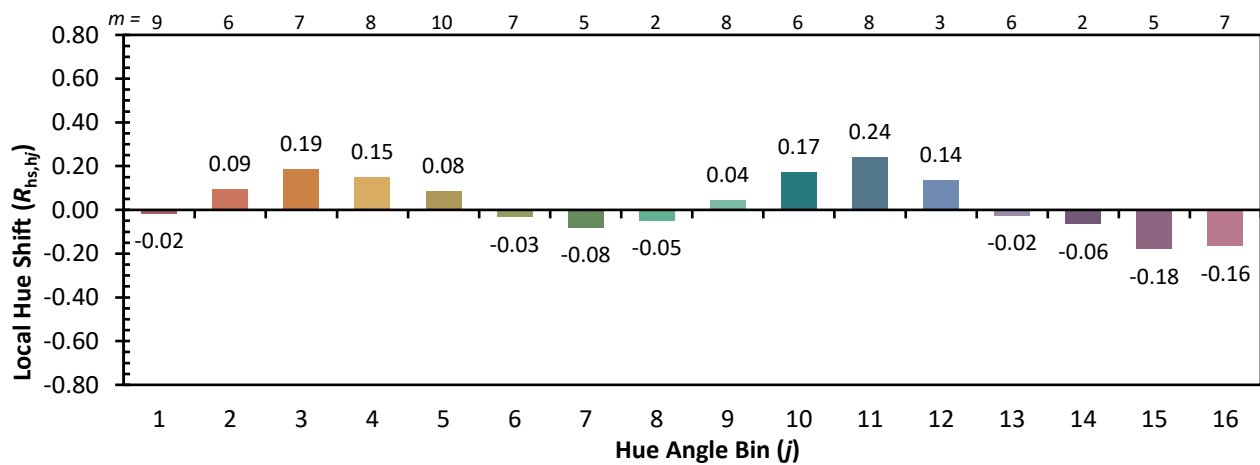
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|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 67 | CES51 = 89 | CES76 = 56 |
| CES02 = 61 | CES27 = 90 | CES52 = 88 | CES77 = 72 |
| CES03 = 30 | CES28 = 83 | CES53 = 80 | CES78 = 59 |
| CES04 = 70 | CES29 = 72 | CES54 = 86 | CES79 = 84 |
| CES05 = 48 | CES30 = 89 | CES55 = 84 | CES80 = 81 |
| CES06 = 51 | CES31 = 75 | CES56 = 77 | CES81 = 79 |
| CES07 = 40 | CES32 = 66 | CES57 = 76 | CES82 = 92 |
| CES08 = 39 | CES33 = 83 | CES58 = 76 | CES83 = 92 |
| CES09 = 29 | CES34 = 74 | CES59 = 86 | CES84 = 87 |
| CES10 = 74 | CES35 = 85 | CES60 = 89 | CES85 = 77 |
| CES11 = 57 | CES36 = 87 | CES61 = 82 | CES86 = 73 |
| CES12 = 63 | CES37 = 81 | CES62 = 84 | CES87 = 79 |
| CES13 = 42 | CES38 = 98 | CES63 = 74 | CES88 = 83 |
| CES14 = 74 | CES39 = 97 | CES64 = 66 | CES89 = 72 |
| CES15 = 71 | CES40 = 93 | CES65 = 65 | CES90 = 83 |
| CES16 = 46 | CES41 = 96 | CES66 = 59 | CES91 = 73 |
| CES17 = 49 | CES42 = 83 | CES67 = 57 | CES92 = 60 |
| CES18 = 56 | CES43 = 80 | CES68 = 66 | CES93 = 75 |
| CES19 = 72 | CES44 = 99 | CES69 = 74 | CES94 = 55 |
| CES20 = 65 | CES45 = 87 | CES70 = 59 | CES95 = 67 |
| CES21 = 86 | CES46 = 85 | CES71 = 52 | CES96 = 78 |
| CES22 = 78 | CES47 = 90 | CES72 = 84 | CES97 = 86 |
| CES23 = 92 | CES48 = 81 | CES73 = 51 | CES98 = 79 |
| CES24 = 91 | CES49 = 83 | CES74 = 92 | CES99 = 68 |
| CES25 = 72 | CES50 = 89 | CES75 = 56 | |



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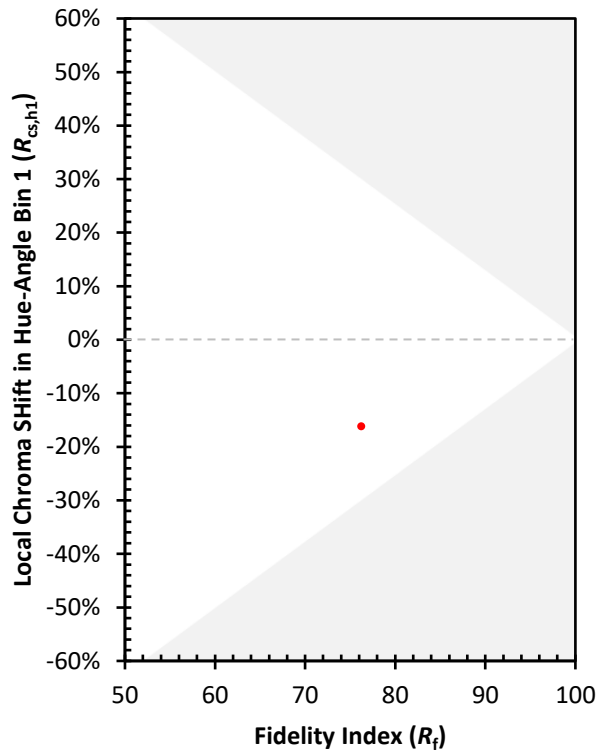
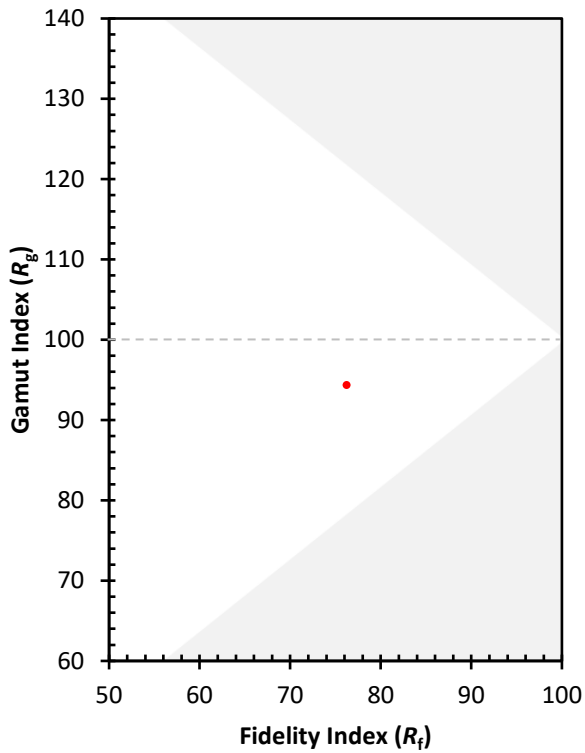
Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)