

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



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: STREETWORKS

Report Number: P358930

Luminaire Tested: NVN-SA6A-730-U-5WQ

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2019
Report Number: P358930
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-2)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: STREETWORKS
Catalog Number: NVN-SA6A-730-U-5WQ
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 26720 lumens
Efficiency: N/A
Efficacy: 138.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short
BUG Rating: B5 - U0 - G4

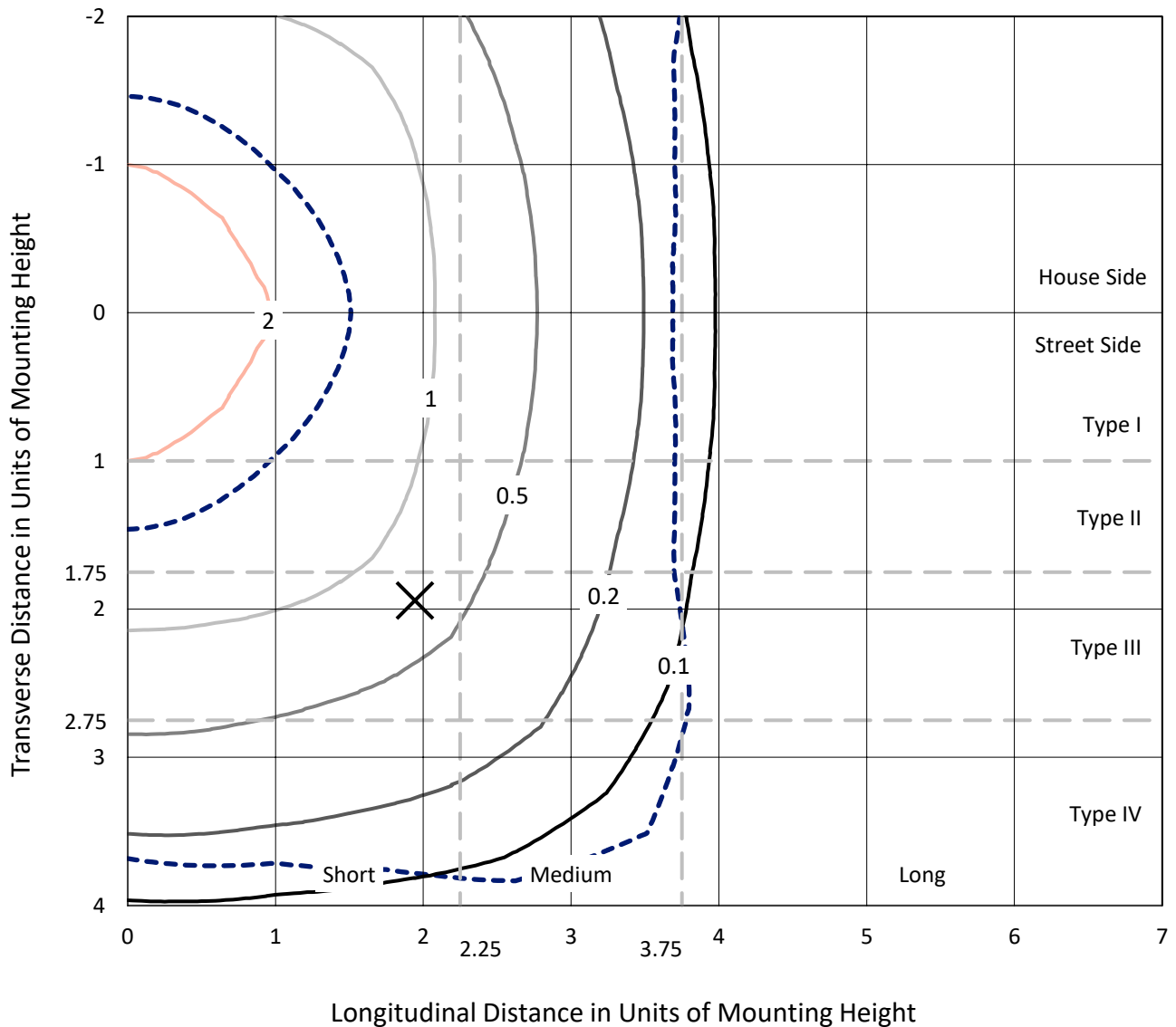
Input Watts (W): 193
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P358930
 CATALOG NUMBER: NVN-SA6A-730-U-5WQ

Iso-Footcandle Lines of Horizontal Illumination

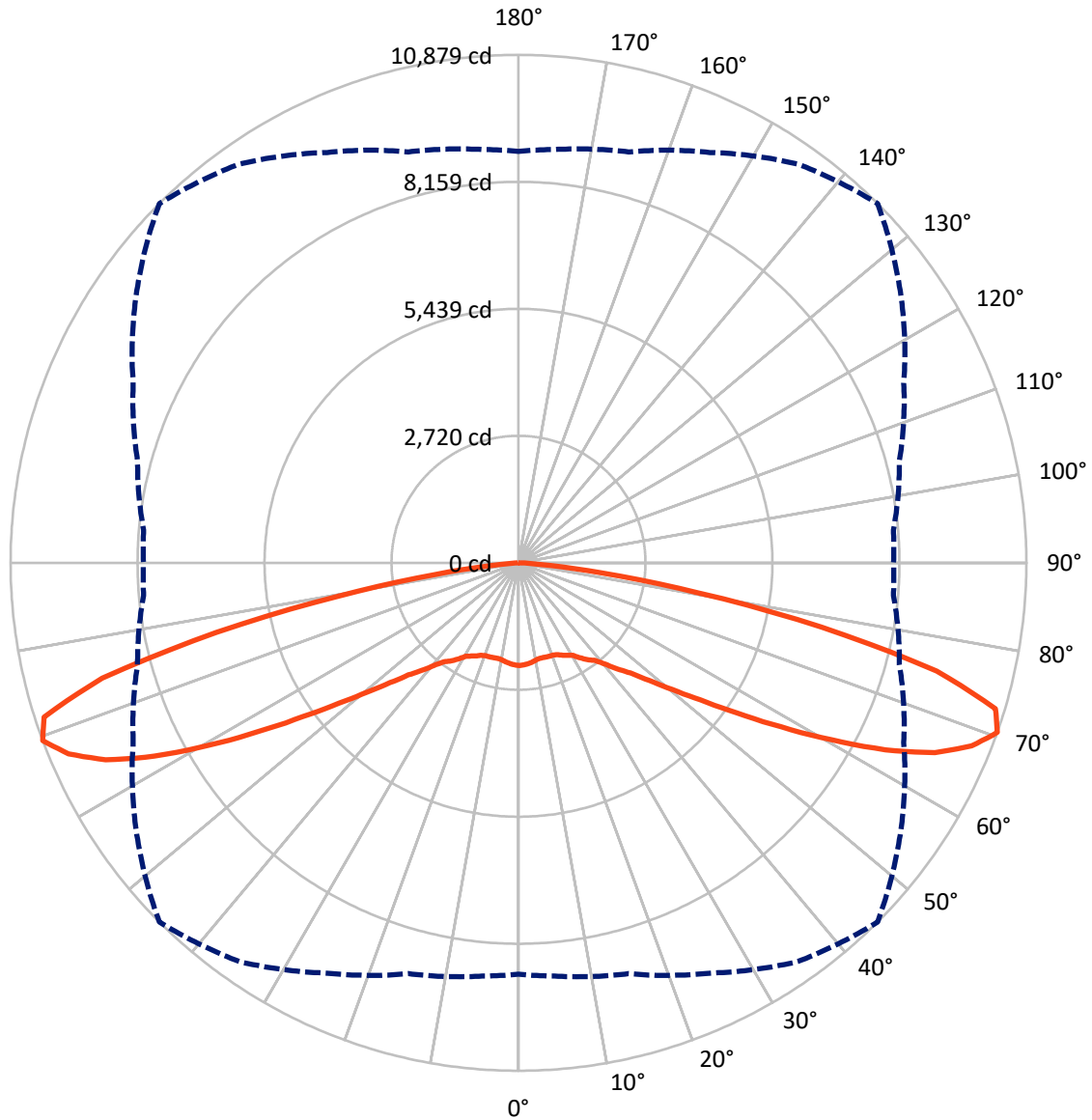
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.5 fc
 Type V - Short - N/A

REPORT NUMBER: P358930
CATALOG NUMBER: NVN-SA6A-730-U-5WQ

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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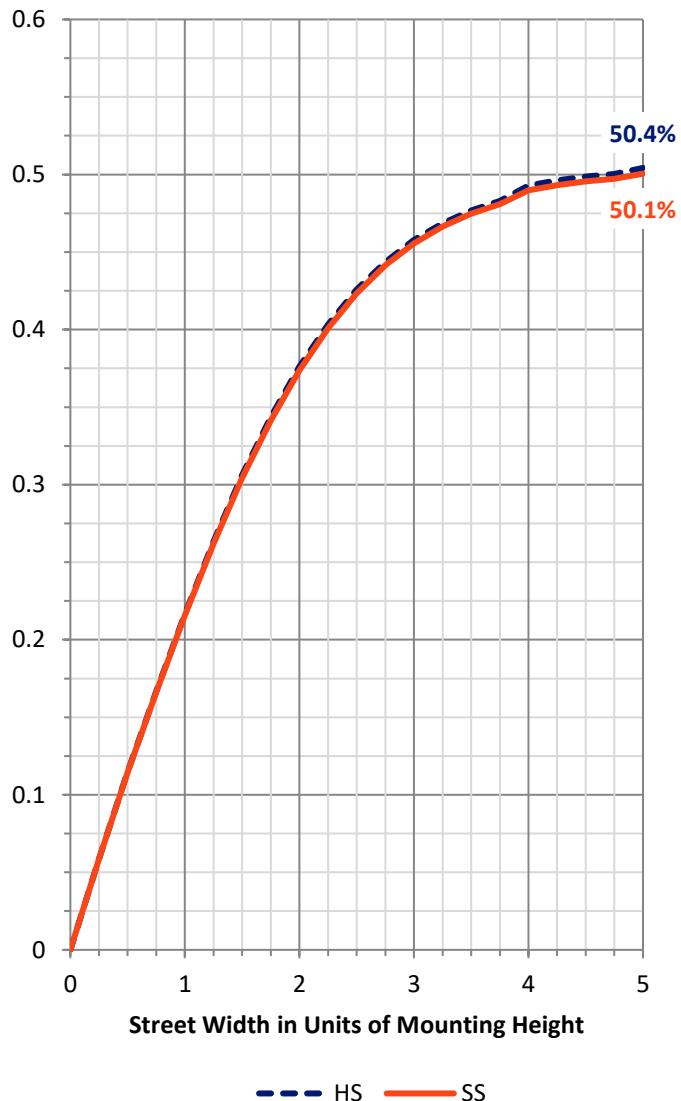
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 13360.0 | 0.0 | 13360.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 13360.0 | 0.0 | 13360.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 26720.0 | 0.0 | 26720.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 205.2 | 0.8 |
| 10°-20° | 599.5 | 2.2 |
| 20°-30° | 1022.2 | 3.8 |
| 30°-40° | 1597.2 | 6.0 |
| 40°-50° | 2706.9 | 10.1 |
| 50°-60° | 4936.2 | 18.5 |
| 60°-70° | 8497.9 | 31.8 |
| 70°-80° | 6661.0 | 24.9 |
| 80°-90° | 493.9 | 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° | 26720.0 | 100.0 |
| 0°-180° | 26720.0 | 100.0 |

Coefficient of Utilization

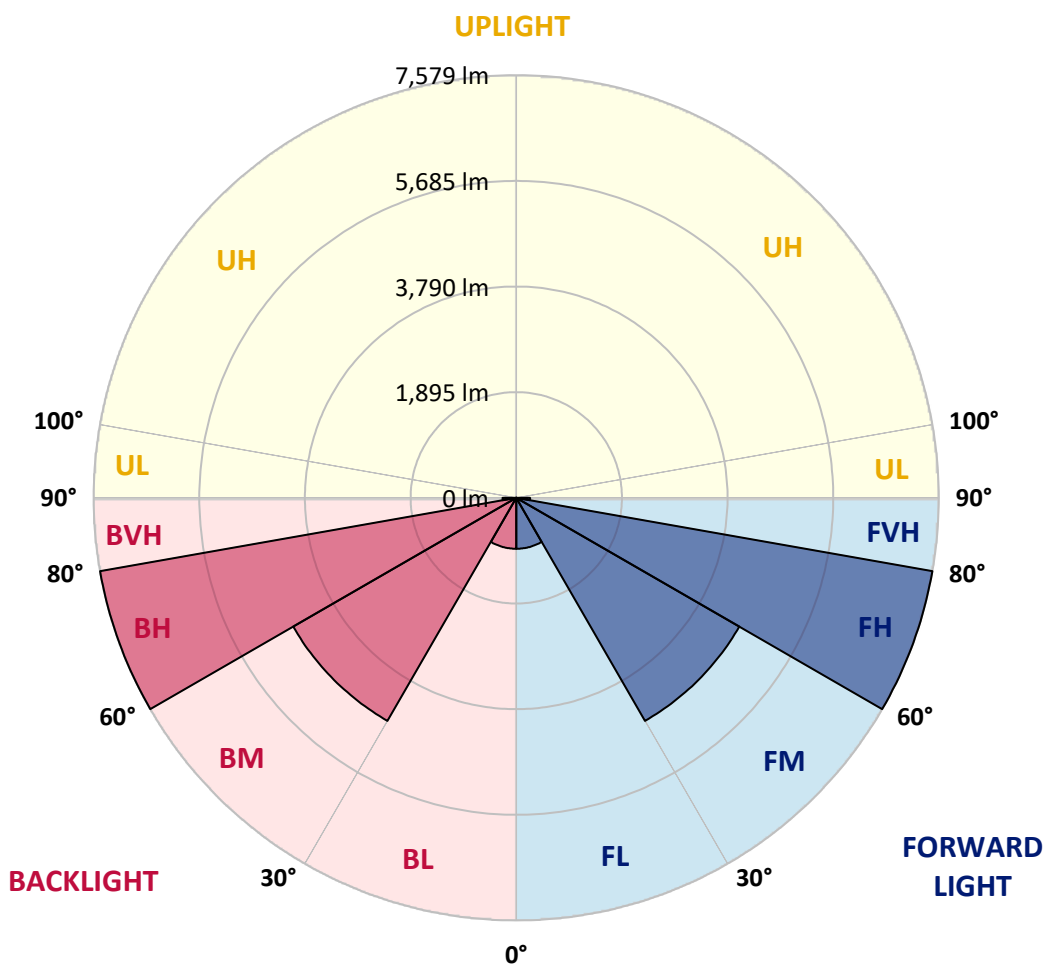


REPORT NUMBER: P358930
 CATALOG NUMBER: NVN-SA6A-730-U-5WQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 913.5 | 3.4 | | | |
| FM (30°-60°) | 4620.1 | 17.3 | | | |
| FH (60°-80°) | 7579.5 | 28.4 | | | G4/12000 |
| FVH (80°-90°) | 246.9 | 0.9 | | | G3/500 |
| BL (0°-30°) | 913.5 | 3.4 | B2/1000 | | |
| BM (30°-60°) | 4620.1 | 17.3 | B3/5000 | | |
| BH (60°-80°) | 7579.5 | 28.4 | B5 | | G4/12000 |
| BVH (80°-90°) | 246.9 | 0.9 | | | G3/500 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B5-U0-G4
 Type V Short





REPORT NUMBER: P358930
 CATALOG NUMBER: NVN-SA6A-730-U-5WQ

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|--------|--------|--------|--------|---------|---------|--------|--------|--------|--------|--------|
| 0° | 2199.1 | 2199.1 | 2199.1 | 2199.1 | 2199.1 | 2199.1 | 2199.1 | 2199.1 | 2199.1 | 2199.1 | 2199.1 |
| 2.5° | 2189.3 | 2192.0 | 2189.3 | 2191.1 | 2186.7 | 2188.5 | 2188.5 | 2188.5 | 2187.6 | 2188.5 | 2186.7 |
| 5° | 2169.9 | 2171.7 | 2168.1 | 2169.9 | 2167.2 | 2169.9 | 2170.8 | 2169.9 | 2168.1 | 2169.0 | 2165.5 |
| 7.5° | 2140.7 | 2142.5 | 2139.8 | 2142.5 | 2139.0 | 2143.4 | 2142.5 | 2139.8 | 2137.2 | 2137.2 | 2133.7 |
| 10° | 2124.8 | 2125.7 | 2118.6 | 2116.0 | 2108.0 | 2109.8 | 2112.4 | 2115.1 | 2117.7 | 2123.0 | 2122.2 |
| 12.5° | 2125.7 | 2125.7 | 2115.1 | 2103.6 | 2092.1 | 2094.8 | 2099.2 | 2108.9 | 2119.5 | 2129.2 | 2130.1 |
| 15° | 2134.5 | 2133.7 | 2117.7 | 2099.2 | 2091.2 | 2099.2 | 2101.8 | 2108.0 | 2124.8 | 2141.6 | 2142.5 |
| 17.5° | 2140.7 | 2140.7 | 2116.0 | 2094.8 | 2093.9 | 2106.3 | 2105.4 | 2108.0 | 2126.6 | 2151.3 | 2152.2 |
| 20° | 2152.2 | 2152.2 | 2120.4 | 2097.4 | 2097.4 | 2110.7 | 2111.6 | 2116.0 | 2134.5 | 2161.9 | 2166.4 |
| 22.5° | 2177.8 | 2178.7 | 2145.1 | 2126.6 | 2128.4 | 2136.3 | 2139.0 | 2146.0 | 2162.8 | 2192.9 | 2198.2 |
| 25° | 2214.1 | 2215.9 | 2181.4 | 2170.8 | 2177.0 | 2192.0 | 2190.2 | 2195.5 | 2214.1 | 2243.3 | 2248.6 |
| 27.5° | 2264.5 | 2260.0 | 2228.2 | 2223.8 | 2230.0 | 2240.6 | 2239.7 | 2240.6 | 2255.6 | 2282.1 | 2288.3 |
| 30° | 2329.9 | 2328.1 | 2305.1 | 2307.8 | 2305.1 | 2301.6 | 2302.5 | 2309.5 | 2317.5 | 2338.7 | 2344.9 |
| 32.5° | 2393.5 | 2395.3 | 2381.1 | 2394.4 | 2413.8 | 2427.1 | 2406.8 | 2387.3 | 2378.5 | 2390.0 | 2395.3 |
| 35° | 2508.4 | 2512.8 | 2490.7 | 2481.9 | 2508.4 | 2547.3 | 2489.9 | 2458.0 | 2475.7 | 2490.7 | 2495.2 |
| 37.5° | 2703.7 | 2706.4 | 2669.3 | 2633.9 | 2614.5 | 2651.6 | 2594.1 | 2596.8 | 2658.7 | 2687.0 | 2686.1 |
| 40° | 2926.5 | 2927.4 | 2902.6 | 2871.7 | 2838.1 | 2846.9 | 2824.0 | 2831.0 | 2871.7 | 2897.3 | 2904.4 |
| 42.5° | 3191.6 | 3189.0 | 3150.1 | 3105.9 | 3096.2 | 3105.0 | 3066.1 | 3060.8 | 3107.7 | 3153.6 | 3154.5 |
| 45° | 3535.5 | 3529.3 | 3478.9 | 3430.3 | 3383.4 | 3364.0 | 3354.3 | 3379.9 | 3444.4 | 3486.9 | 3487.7 |
| 47.5° | 3905.8 | 3889.0 | 3862.5 | 3823.6 | 3782.9 | 3763.5 | 3747.6 | 3760.0 | 3806.8 | 3823.6 | 3825.4 |
| 50° | 4286.8 | 4290.3 | 4295.6 | 4280.6 | 4265.5 | 4259.4 | 4217.8 | 4193.9 | 4208.1 | 4177.2 | 4172.7 |
| 52.5° | 4738.4 | 4745.5 | 4796.7 | 4840.1 | 4865.7 | 4878.9 | 4800.3 | 4718.1 | 4672.1 | 4612.0 | 4594.3 |
| 55° | 5271.4 | 5282.9 | 5358.0 | 5478.2 | 5601.9 | 5667.4 | 5525.0 | 5371.3 | 5229.0 | 5116.7 | 5080.5 |
| 57.5° | 5865.3 | 5885.7 | 5989.1 | 6219.8 | 6473.4 | 6628.1 | 6387.7 | 6108.4 | 5833.5 | 5671.8 | 5643.5 |
| 60° | 6561.8 | 6581.3 | 6724.5 | 7055.0 | 7466.0 | 7698.5 | 7334.3 | 6877.4 | 6535.3 | 6380.6 | 6328.5 |
| 62.5° | 7390.9 | 7392.7 | 7568.5 | 7954.8 | 8497.5 | 8821.0 | 8327.8 | 7717.0 | 7364.4 | 7177.9 | 7127.5 |
| 65° | 8282.7 | 8287.1 | 8469.2 | 8886.4 | 9447.6 | 9799.4 | 9242.6 | 8606.2 | 8174.9 | 7900.0 | 7861.1 |
| 67.5° | 8912.9 | 8931.5 | 9123.3 | 9625.3 | 10150.3 | 10467.6 | 9891.3 | 9171.9 | 8673.4 | 8345.5 | 8312.8 |
| 70° | 8812.1 | 8884.6 | 9110.0 | 9696.0 | 10426.1 | 10878.6 | 9996.5 | 9104.7 | 8447.1 | 8060.0 | 8032.6 |
| 72.5° | 7685.2 | 7824.0 | 8124.5 | 8893.5 | 10061.1 | 10684.2 | 9422.9 | 8154.6 | 7410.3 | 7080.7 | 7031.2 |
| 75° | 5233.4 | 5458.8 | 5912.2 | 7021.4 | 8595.6 | 9250.5 | 7932.7 | 6501.7 | 5801.7 | 5345.6 | 5312.0 |
| 77.5° | 2333.4 | 2384.7 | 2959.2 | 4236.4 | 5931.6 | 6643.1 | 5763.7 | 4253.2 | 3192.5 | 2546.4 | 2410.3 |
| 80° | 650.5 | 658.5 | 878.6 | 1577.7 | 2968.9 | 3903.2 | 3187.2 | 1657.2 | 931.6 | 656.7 | 618.7 |
| 82.5° | 206.8 | 224.5 | 274.0 | 409.2 | 997.9 | 1781.0 | 1024.4 | 441.9 | 314.7 | 251.0 | 226.3 |
| 85° | 100.8 | 99.9 | 138.8 | 166.2 | 254.6 | 394.2 | 271.3 | 205.1 | 179.4 | 119.3 | 107.8 |
| 87.5° | 42.4 | 43.3 | 64.5 | 58.3 | 74.2 | 63.6 | 87.5 | 91.9 | 96.3 | 53.0 | 46.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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



LM-79-2008: Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGRAW-EDISON

Report Number: SP1-1908-441-2-R4

Test Date: 10/03/2019

Luminaire Tested: SA1C-730-U-5WQ

Data in this report applies to families of products SA1C-730-U-5WQ .

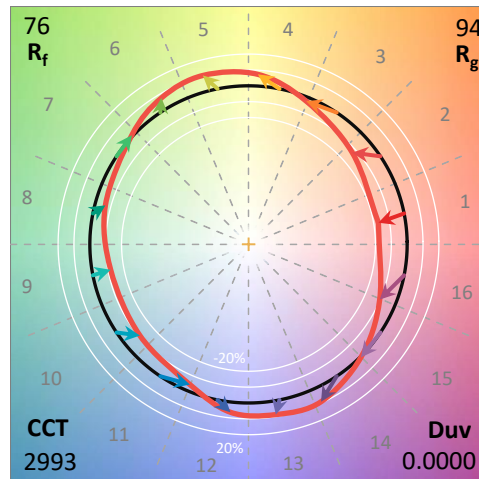
Test Information

Test Method: LM-79-2008
 Report Number: SP1-1908-441-2-R4
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 10/28/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: McGRAW-EDISON
 Catalog Number: **SA1C-730-U-5WQ**
 Description: McGRAW EDISON ROADWAY AND AREA LUMINAIRE

THIS IS A REVISION OF SP1-1908-441-2-R3. TO UPDATE THE CATALOG INFORMATION.TESTED IN SITU. (1) 70 CRI, 3000K, 1050MA LIGHTSQUARE WITH 16 LEDS AND TYPE V WIDE OPTICS.

Spectral Parameters

| | | | | | |
|---------------------------|--------|-----------|------|------|-------|
| CCT (K): | 2993 | CRI (Ra): | 71.8 | R9: | -38.3 |
| CIE u': | 0.2508 | R1: | 67.5 | R10: | 62.5 |
| CIE v': | 0.5215 | R2: | 82.9 | R11: | 63.7 |
| Duv: | 0.0000 | R3: | 94.7 | R12: | 57.8 |
| CIE x: | 0.4374 | R4: | 67.7 | R13: | 70.4 |
| CIE y: | 0.4043 | R5: | 67.9 | R14: | 97.3 |
| CIE z: | 0.1583 | R6: | 77.6 | | |
| Peak Wavelength (nm): | 593 | R7: | 76.0 | | |
| Dominant Wavelength (nm): | 582 | R8: | 40.5 | | |
| Purity: | 53 | | | | |
| Rf: | 75.7 | | | | |
| Rg: | 93.9 | | | | |



Test Conditions

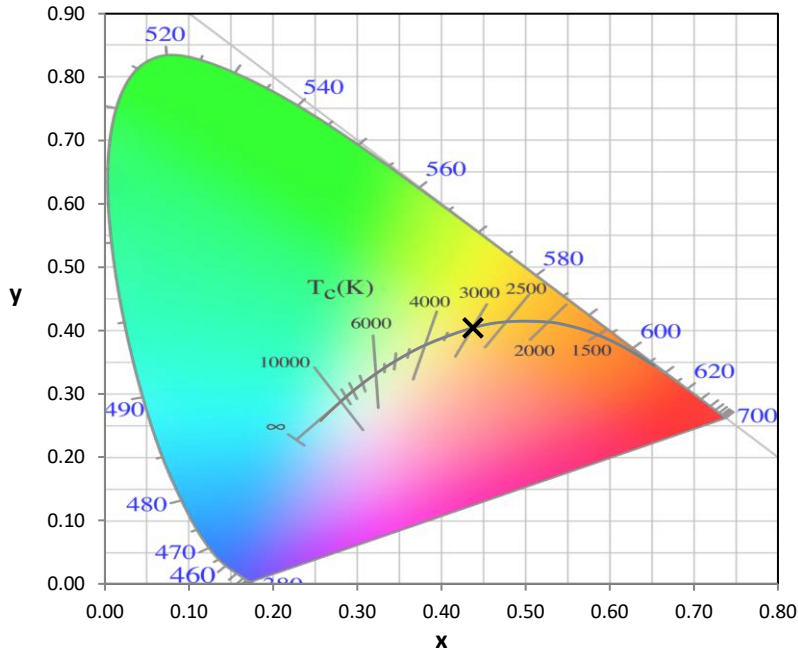
Stabilization Time: 53M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 25.0./44%
 Sphere Temperature (°C): 25.7

REPORT NUMBER: SP1-1908-441-2-R4

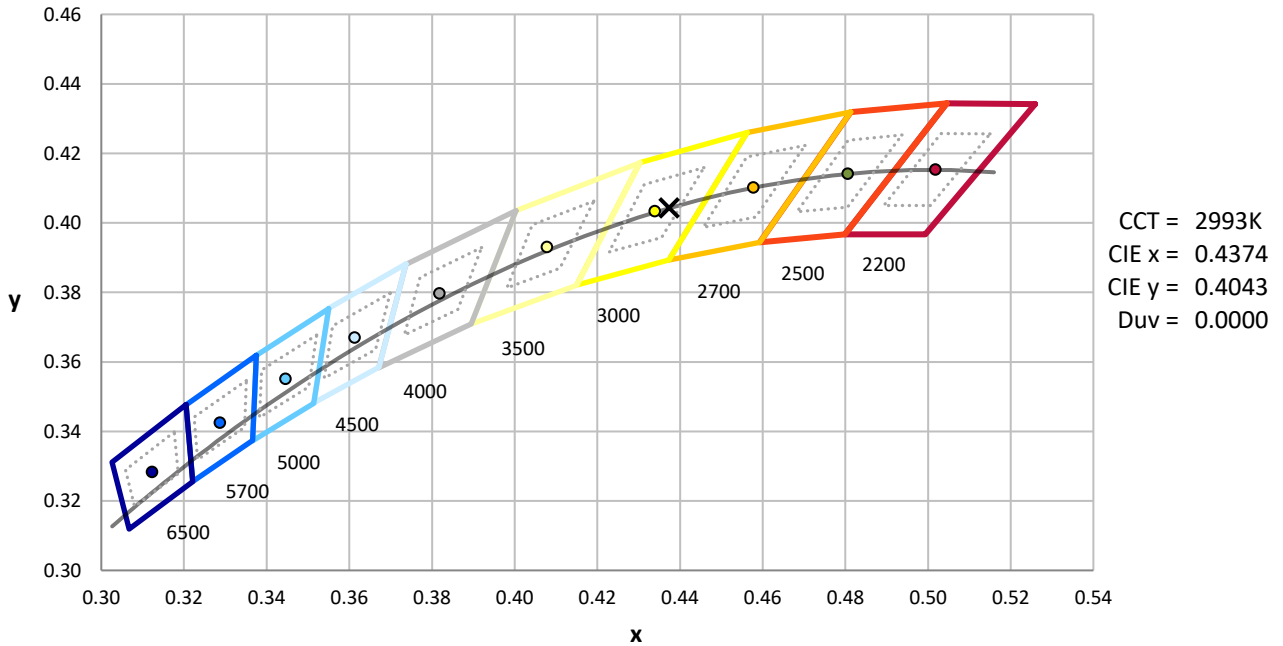
| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/28/2019 | 12/28/2019 |
| Power Meter | IN0071 | 12/5/2018 | 12/5/2019 |
| AC Power Source | IN0063 | 12/5/2018 | 12/5/2019 |
| DC Power Source | IN0208 | 12/5/2018 | 12/5/2019 |
| Sphere Thermometer | IN0085 | 12/5/2018 | 12/5/2019 |
| Room Thermometer | IN0046 | 12/5/2018 | 12/5/2019 |

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CIE 1931 Chromaticity Diagram



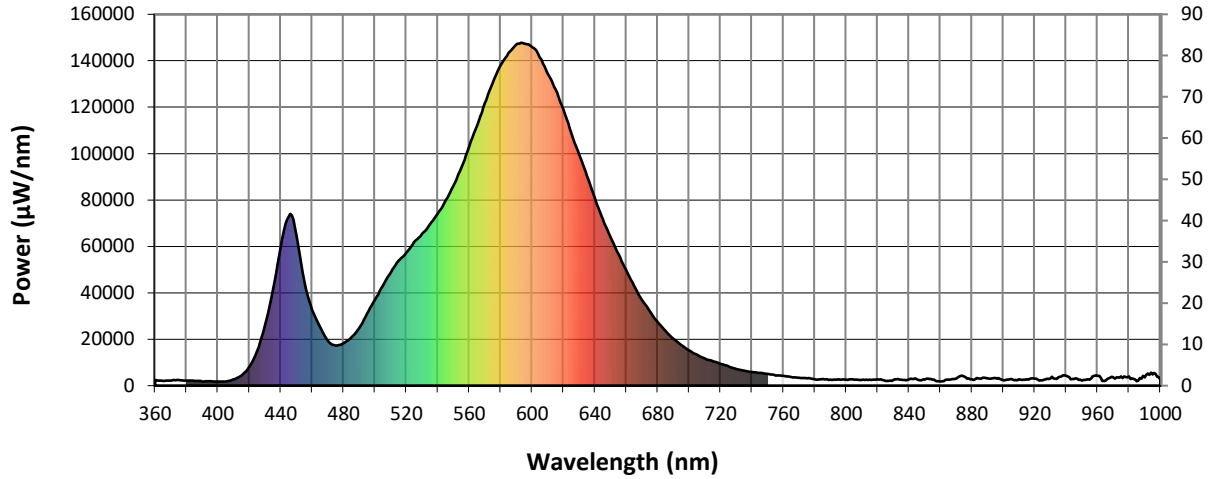
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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Photopic Flux vs. Wavelength

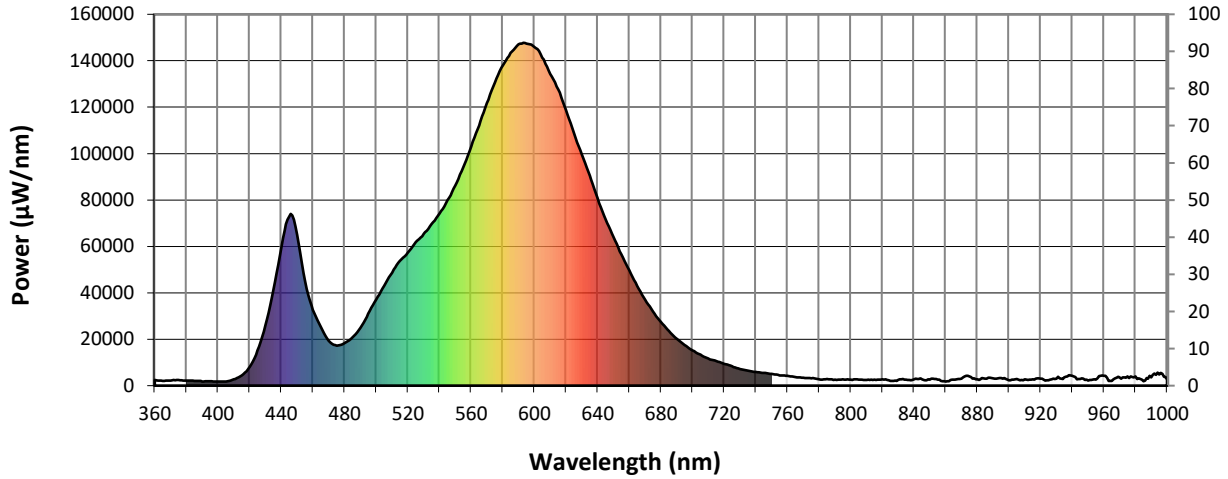


#####

| 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 | 2397 | NR | 490 | 24908 | NR | 620 | 118784 | NR | 750 | 5037 | NR | 880 | 2677 | NR |
| 365 | 2084 | NR | 495 | 30998 | NR | 625 | 108951 | NR | 755 | 4413 | NR | 885 | 2940 | NR |
| 370 | 2143 | NR | 500 | 37103 | NR | 630 | 99573 | NR | 760 | 4189 | NR | 890 | 3116 | NR |
| 375 | 2413 | NR | 505 | 42987 | NR | 635 | 90444 | NR | 765 | 3677 | NR | 895 | 3345 | NR |
| 380 | 2172 | NR | 510 | 48702 | NR | 640 | 80749 | NR | 770 | 3366 | NR | 900 | 2312 | NR |
| 385 | 1997 | NR | 515 | 53741 | NR | 645 | 71664 | NR | 775 | 3211 | NR | 905 | 2829 | NR |
| 390 | 1830 | NR | 520 | 57283 | NR | 650 | 63936 | NR | 780 | 2682 | NR | 910 | 2783 | NR |
| 395 | 1861 | NR | 525 | 61876 | NR | 655 | 56611 | NR | 785 | 2804 | NR | 915 | 2662 | NR |
| 400 | 1717 | NR | 530 | 65398 | NR | 660 | 49763 | NR | 790 | 2581 | NR | 920 | 3047 | NR |
| 405 | 1761 | NR | 535 | 69597 | NR | 665 | 42891 | NR | 795 | 2711 | NR | 925 | 2256 | NR |
| 410 | 2680 | NR | 540 | 74214 | NR | 670 | 36939 | NR | 800 | 2609 | NR | 930 | 2976 | NR |
| 415 | 4374 | NR | 545 | 79911 | NR | 675 | 31946 | NR | 805 | 2581 | NR | 935 | 3503 | NR |
| 420 | 8071 | NR | 550 | 86153 | NR | 680 | 27385 | NR | 810 | 2404 | NR | 940 | 4226 | NR |
| 425 | 15169 | NR | 555 | 93952 | NR | 685 | 23504 | NR | 815 | 2556 | NR | 945 | 2930 | NR |
| 430 | 26038 | NR | 560 | 102904 | NR | 690 | 20210 | NR | 820 | 2742 | NR | 950 | 2115 | NR |
| 435 | 41316 | NR | 565 | 112009 | NR | 695 | 17459 | NR | 825 | 2014 | NR | 955 | 2634 | NR |
| 440 | 59674 | NR | 570 | 121662 | NR | 700 | 15207 | NR | 830 | 2488 | NR | 960 | 4200 | NR |
| 445 | 72751 | NR | 575 | 130476 | NR | 705 | 13322 | NR | 835 | 2625 | NR | 965 | 1982 | NR |
| 450 | 65091 | NR | 580 | 137926 | NR | 710 | 11676 | NR | 840 | 2754 | NR | 970 | 3613 | NR |
| 455 | 44894 | NR | 585 | 143406 | NR | 715 | 10626 | NR | 845 | 2708 | NR | 975 | 4034 | NR |
| 460 | 32712 | NR | 590 | 147039 | NR | 720 | 9416 | NR | 850 | 2608 | NR | 980 | 3922 | NR |
| 465 | 25296 | NR | 595 | 147365 | NR | 725 | 8333 | NR | 855 | 2605 | NR | 985 | 1909 | NR |
| 470 | 19318 | NR | 600 | 145800 | NR | 730 | 7134 | NR | 860 | 1765 | NR | 990 | 3617 | NR |
| 475 | 17265 | NR | 605 | 141363 | NR | 735 | 6437 | NR | 865 | 2581 | NR | 995 | 4767 | NR |
| 480 | 18260 | NR | 610 | 134199 | NR | 740 | 5834 | NR | 870 | 3016 | NR | 1000 | 2528 | NR |
| 485 | 20845 | NR | 615 | 127683 | NR | 745 | 5500 | NR | 875 | 3952 | NR | | | |

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Scotopic Flux vs. Wavelength



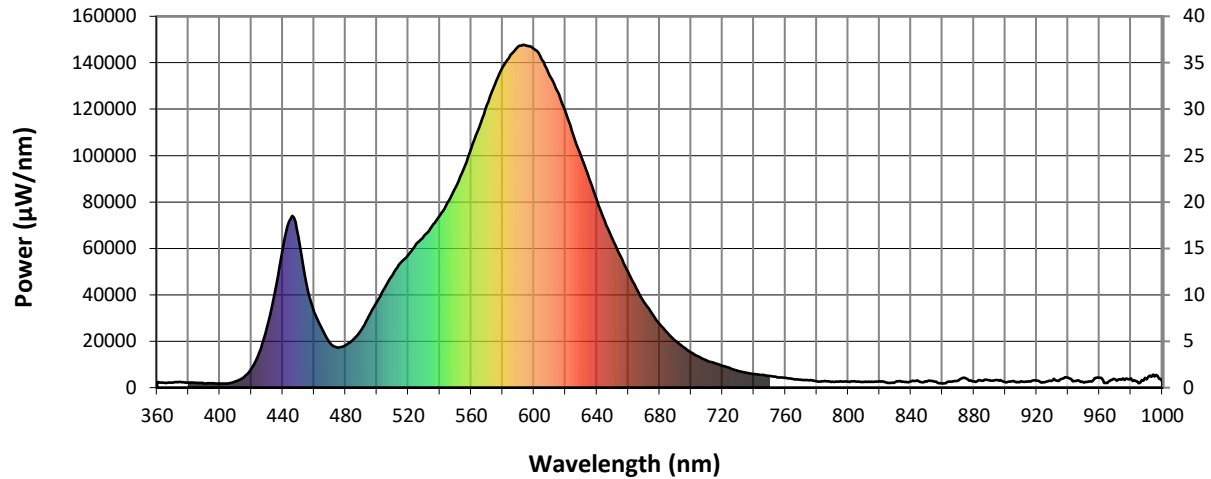
Scotopic Lumens: 8494.8

S/P: 1.23

| 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 | 2397 | NR | 490 | 24908 | NR | 620 | 118784 | NR | 750 | 5037 | NR | 880 | 2677 | NR |
| 365 | 2084 | NR | 495 | 30998 | NR | 625 | 108951 | NR | 755 | 4413 | NR | 885 | 2940 | NR |
| 370 | 2143 | NR | 500 | 37103 | NR | 630 | 99573 | NR | 760 | 4189 | NR | 890 | 3116 | NR |
| 375 | 2413 | NR | 505 | 42987 | NR | 635 | 90444 | NR | 765 | 3677 | NR | 895 | 3345 | NR |
| 380 | 2172 | NR | 510 | 48702 | NR | 640 | 80749 | NR | 770 | 3366 | NR | 900 | 2312 | NR |
| 385 | 1997 | NR | 515 | 53741 | NR | 645 | 71664 | NR | 775 | 3211 | NR | 905 | 2829 | NR |
| 390 | 1830 | NR | 520 | 57283 | NR | 650 | 63936 | NR | 780 | 2682 | NR | 910 | 2783 | NR |
| 395 | 1861 | NR | 525 | 61876 | NR | 655 | 56611 | NR | 785 | 2804 | NR | 915 | 2662 | NR |
| 400 | 1717 | NR | 530 | 65398 | NR | 660 | 49763 | NR | 790 | 2581 | NR | 920 | 3047 | NR |
| 405 | 1761 | NR | 535 | 69597 | NR | 665 | 42891 | NR | 795 | 2711 | NR | 925 | 2256 | NR |
| 410 | 2680 | NR | 540 | 74214 | NR | 670 | 36939 | NR | 800 | 2609 | NR | 930 | 2976 | NR |
| 415 | 4374 | NR | 545 | 79911 | NR | 675 | 31946 | NR | 805 | 2581 | NR | 935 | 3503 | NR |
| 420 | 8071 | NR | 550 | 86153 | NR | 680 | 27385 | NR | 810 | 2404 | NR | 940 | 4226 | NR |
| 425 | 15169 | NR | 555 | 93952 | NR | 685 | 23504 | NR | 815 | 2556 | NR | 945 | 2930 | NR |
| 430 | 26038 | NR | 560 | 102904 | NR | 690 | 20210 | NR | 820 | 2742 | NR | 950 | 2115 | NR |
| 435 | 41316 | NR | 565 | 112009 | NR | 695 | 17459 | NR | 825 | 2014 | NR | 955 | 2634 | NR |
| 440 | 59674 | NR | 570 | 121662 | NR | 700 | 15207 | NR | 830 | 2488 | NR | 960 | 4200 | NR |
| 445 | 72751 | NR | 575 | 130476 | NR | 705 | 13322 | NR | 835 | 2625 | NR | 965 | 1982 | NR |
| 450 | 65091 | NR | 580 | 137926 | NR | 710 | 11676 | NR | 840 | 2754 | NR | 970 | 3613 | NR |
| 455 | 44894 | NR | 585 | 143406 | NR | 715 | 10626 | NR | 845 | 2708 | NR | 975 | 4034 | NR |
| 460 | 32712 | NR | 590 | 147039 | NR | 720 | 9416 | NR | 850 | 2608 | NR | 980 | 3922 | NR |
| 465 | 25296 | NR | 595 | 147365 | NR | 725 | 8333 | NR | 855 | 2605 | NR | 985 | 1909 | NR |
| 470 | 19318 | NR | 600 | 145800 | NR | 730 | 7134 | NR | 860 | 1765 | NR | 990 | 3617 | NR |
| 475 | 17265 | NR | 605 | 141363 | NR | 735 | 6437 | NR | 865 | 2581 | NR | 995 | 4767 | NR |
| 480 | 18260 | NR | 610 | 134199 | NR | 740 | 5834 | NR | 870 | 3016 | NR | 1000 | 2528 | NR |
| 485 | 20845 | NR | 615 | 127683 | NR | 745 | 5500 | NR | 875 | 3952 | NR | | | |

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Melanopic Flux vs. Wavelength



Melanopic Lumens: 3101.5 M/P: 0.45

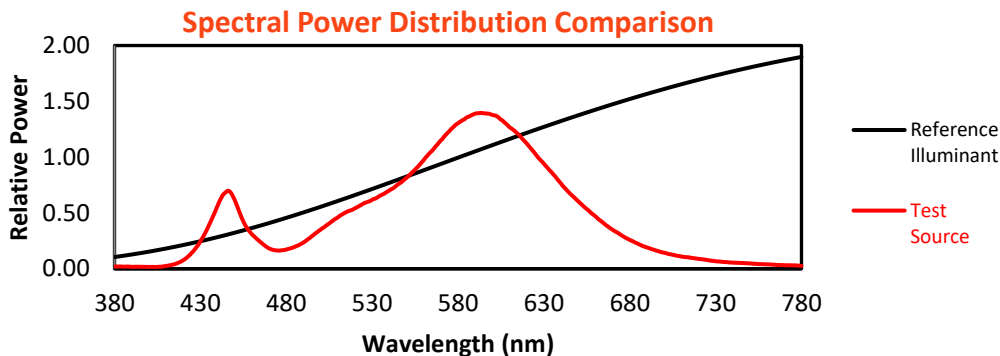
| λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360 | 2397 | NR | 490 | 24908 | NR | 620 | 118784 | NR | 750 | 5037 | NR | 880 | 2677 | NR |
| 365 | 2084 | NR | 495 | 30998 | NR | 625 | 108951 | NR | 755 | 4413 | NR | 885 | 2940 | NR |
| 370 | 2143 | NR | 500 | 37103 | NR | 630 | 99573 | NR | 760 | 4189 | NR | 890 | 3116 | NR |
| 375 | 2413 | NR | 505 | 42987 | NR | 635 | 90444 | NR | 765 | 3677 | NR | 895 | 3345 | NR |
| 380 | 2172 | NR | 510 | 48702 | NR | 640 | 80749 | NR | 770 | 3366 | NR | 900 | 2312 | NR |
| 385 | 1997 | NR | 515 | 53741 | NR | 645 | 71664 | NR | 775 | 3211 | NR | 905 | 2829 | NR |
| 390 | 1830 | NR | 520 | 57283 | NR | 650 | 63936 | NR | 780 | 2682 | NR | 910 | 2783 | NR |
| 395 | 1861 | NR | 525 | 61876 | NR | 655 | 56611 | NR | 785 | 2804 | NR | 915 | 2662 | NR |
| 400 | 1717 | NR | 530 | 65398 | NR | 660 | 49763 | NR | 790 | 2581 | NR | 920 | 3047 | NR |
| 405 | 1761 | NR | 535 | 69597 | NR | 665 | 42891 | NR | 795 | 2711 | NR | 925 | 2256 | NR |
| 410 | 2680 | NR | 540 | 74214 | NR | 670 | 36939 | NR | 800 | 2609 | NR | 930 | 2976 | NR |
| 415 | 4374 | NR | 545 | 79911 | NR | 675 | 31946 | NR | 805 | 2581 | NR | 935 | 3503 | NR |
| 420 | 8071 | NR | 550 | 86153 | NR | 680 | 27385 | NR | 810 | 2404 | NR | 940 | 4226 | NR |
| 425 | 15169 | NR | 555 | 93952 | NR | 685 | 23504 | NR | 815 | 2556 | NR | 945 | 2930 | NR |
| 430 | 26038 | NR | 560 | 102904 | NR | 690 | 20210 | NR | 820 | 2742 | NR | 950 | 2115 | NR |
| 435 | 41316 | NR | 565 | 112009 | NR | 695 | 17459 | NR | 825 | 2014 | NR | 955 | 2634 | NR |
| 440 | 59674 | NR | 570 | 121662 | NR | 700 | 15207 | NR | 830 | 2488 | NR | 960 | 4200 | NR |
| 445 | 72751 | NR | 575 | 130476 | NR | 705 | 13322 | NR | 835 | 2625 | NR | 965 | 1982 | NR |
| 450 | 65091 | NR | 580 | 137926 | NR | 710 | 11676 | NR | 840 | 2754 | NR | 970 | 3613 | NR |
| 455 | 44894 | NR | 585 | 143406 | NR | 715 | 10626 | NR | 845 | 2708 | NR | 975 | 4034 | NR |
| 460 | 32712 | NR | 590 | 147039 | NR | 720 | 9416 | NR | 850 | 2608 | NR | 980 | 3922 | NR |
| 465 | 25296 | NR | 595 | 147365 | NR | 725 | 8333 | NR | 855 | 2605 | NR | 985 | 1909 | NR |
| 470 | 19318 | NR | 600 | 145800 | NR | 730 | 7134 | NR | 860 | 1765 | NR | 990 | 3617 | NR |
| 475 | 17265 | NR | 605 | 141363 | NR | 735 | 6437 | NR | 865 | 2581 | NR | 995 | 4767 | NR |
| 480 | 18260 | NR | 610 | 134199 | NR | 740 | 5834 | NR | 870 | 3016 | NR | 1000 | 2528 | NR |
| 485 | 20845 | NR | 615 | 127683 | NR | 745 | 5500 | NR | 875 | 3952 | NR | | | |

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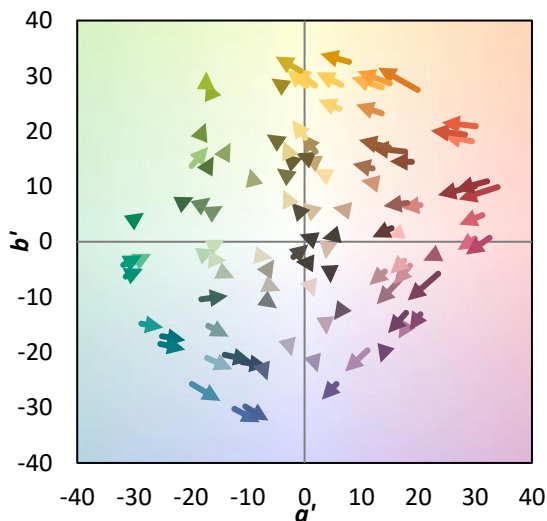
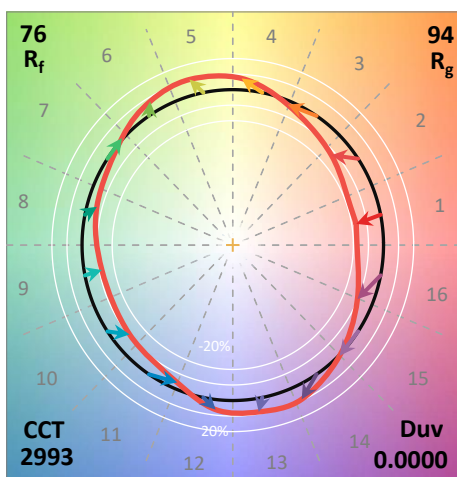
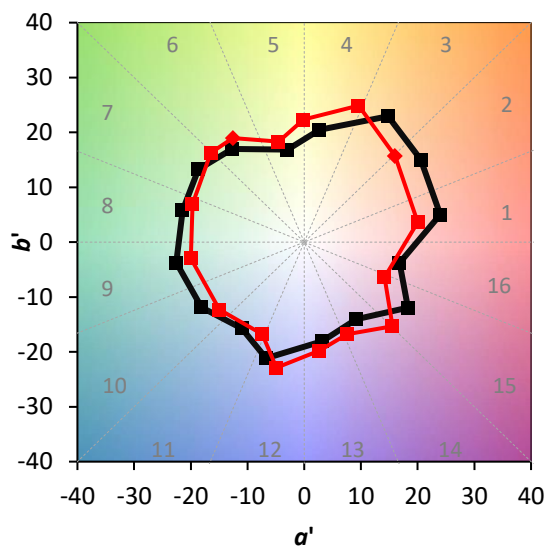
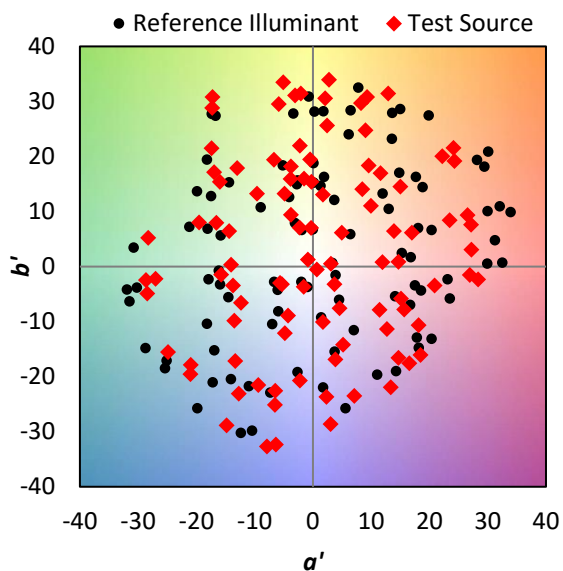
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Summary

$R_f = 75.7$
 $R_g = 93.9$
 CIE $R_a = 71.8$
 $R_9 = -38.3$



Color Vector Graphics

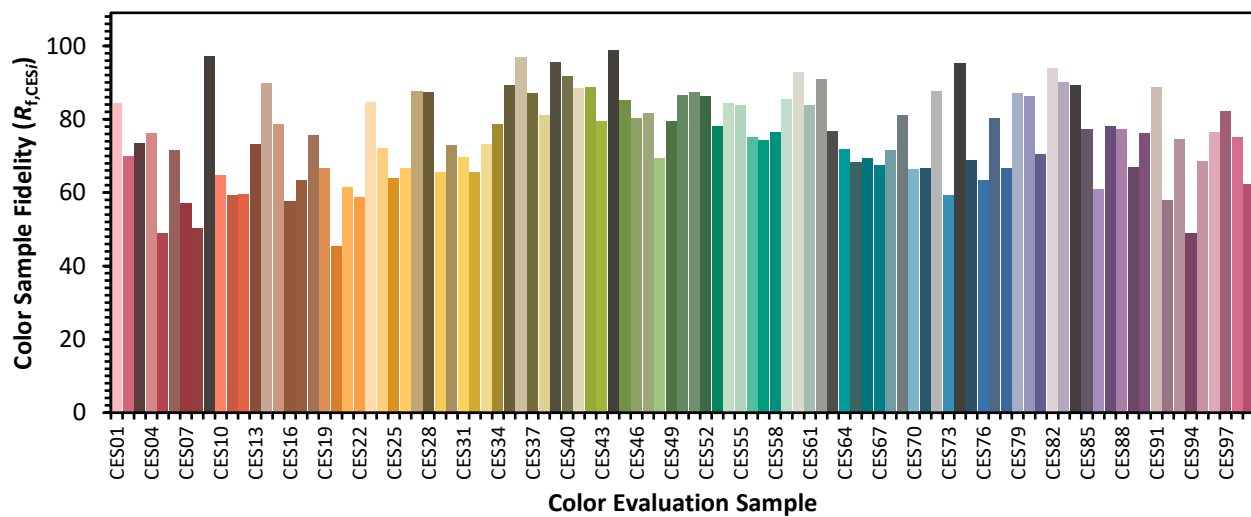


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Individual Sample Fidelity Index ($R_{f,i}$)

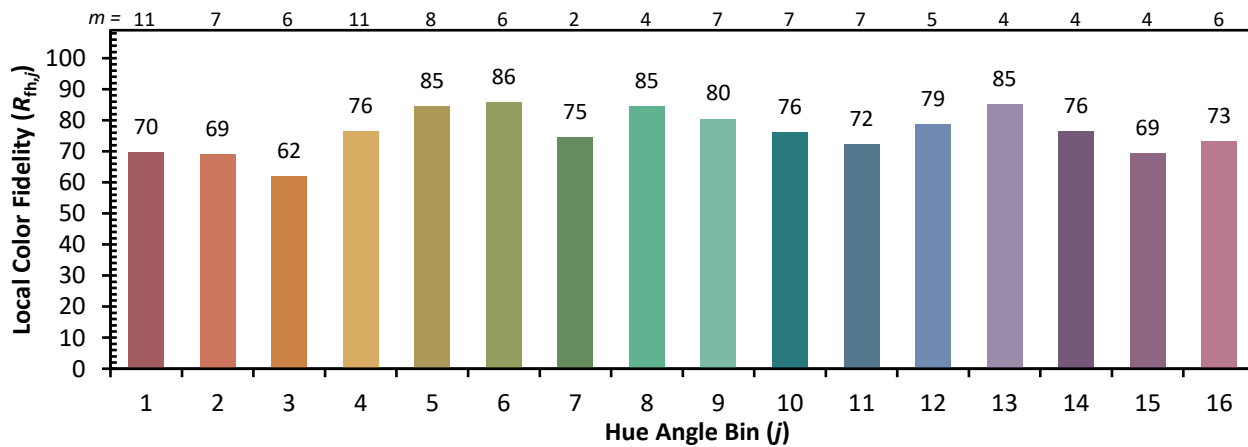
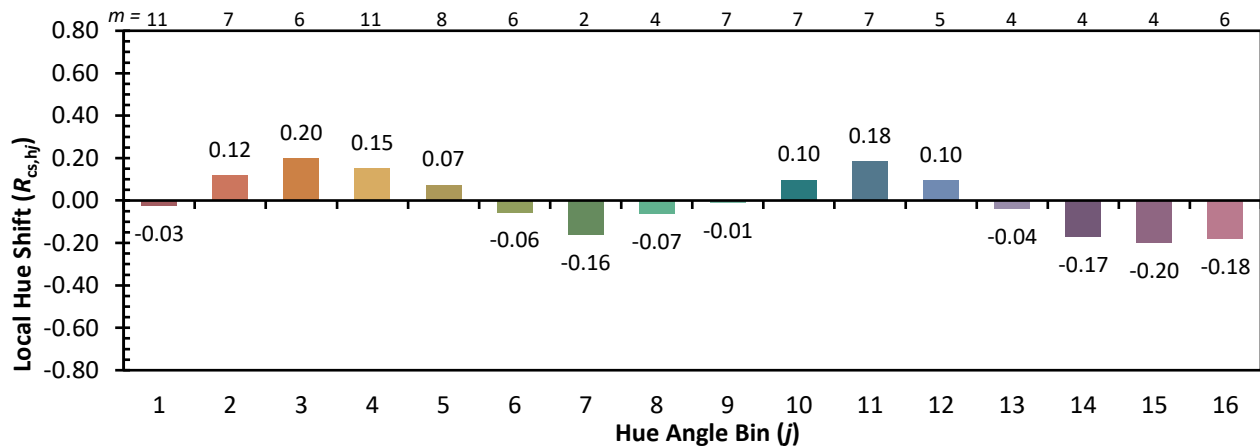
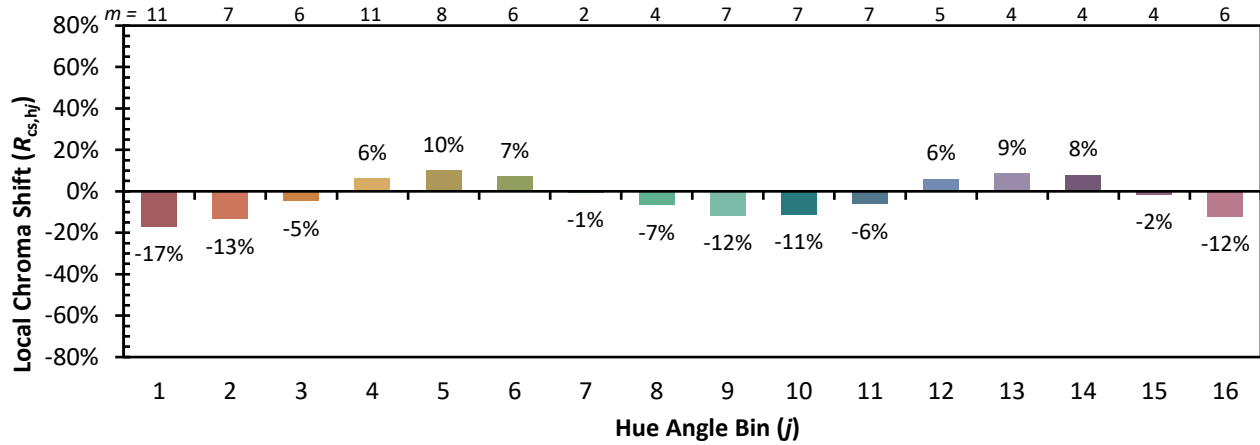
| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 67 | CES51 = 87 | CES76 = 63 |
| CES02 = 63 | CES27 = 88 | CES52 = 86 | CES77 = 80 |
| CES03 = 31 | CES28 = 87 | CES53 = 78 | CES78 = 67 |
| CES04 = 71 | CES29 = 66 | CES54 = 84 | CES79 = 87 |
| CES05 = 49 | CES30 = 73 | CES55 = 84 | CES80 = 86 |
| CES06 = 51 | CES31 = 70 | CES56 = 75 | CES81 = 71 |
| CES07 = 41 | CES32 = 65 | CES57 = 74 | CES82 = 94 |
| CES08 = 40 | CES33 = 73 | CES58 = 76 | CES83 = 90 |
| CES09 = 29 | CES34 = 79 | CES59 = 85 | CES84 = 89 |
| CES10 = 76 | CES35 = 89 | CES60 = 93 | CES85 = 77 |
| CES11 = 59 | CES36 = 97 | CES61 = 84 | CES86 = 61 |
| CES12 = 65 | CES37 = 87 | CES62 = 91 | CES87 = 78 |
| CES13 = 43 | CES38 = 81 | CES63 = 77 | CES88 = 77 |
| CES14 = 74 | CES39 = 95 | CES64 = 72 | CES89 = 67 |
| CES15 = 71 | CES40 = 92 | CES65 = 68 | CES90 = 76 |
| CES16 = 47 | CES41 = 88 | CES66 = 69 | CES91 = 89 |
| CES17 = 50 | CES42 = 89 | CES67 = 67 | CES92 = 58 |
| CES18 = 56 | CES43 = 79 | CES68 = 72 | CES93 = 74 |
| CES19 = 73 | CES44 = 99 | CES69 = 81 | CES94 = 49 |
| CES20 = 66 | CES45 = 85 | CES70 = 66 | CES95 = 68 |
| CES21 = 87 | CES46 = 80 | CES71 = 67 | CES96 = 76 |
| CES22 = 79 | CES47 = 82 | CES72 = 88 | CES97 = 82 |
| CES23 = 92 | CES48 = 69 | CES73 = 59 | CES98 = 75 |
| CES24 = 91 | CES49 = 80 | CES74 = 95 | CES99 = 62 |
| CES25 = 73 | CES50 = 87 | CES75 = 69 | |



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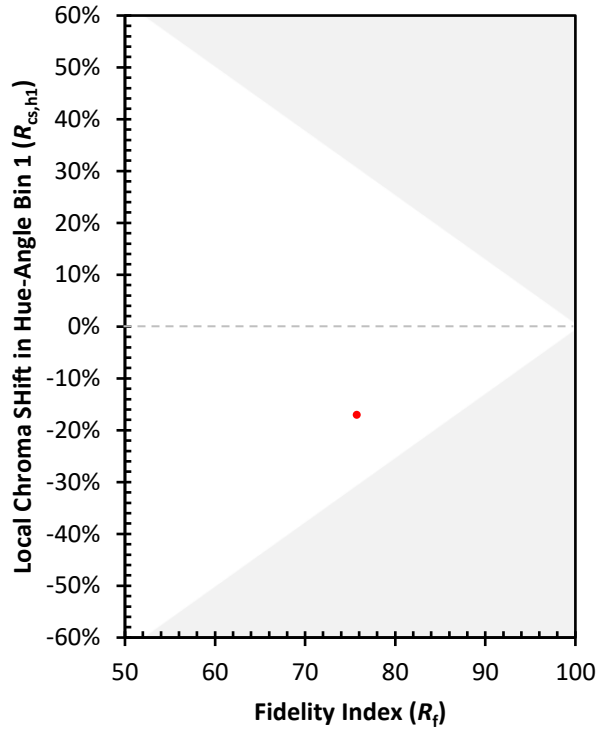
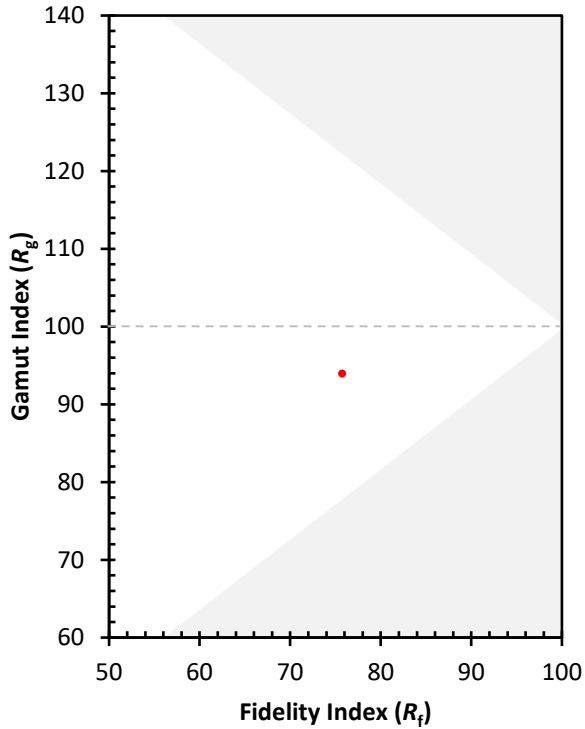
Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)