

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: P879564

Luminaire Tested: **MEM2-HTN-VA-160-740-U-MQ**

Issue Date: 10/01/2024



Test Information

Test Method: LM-79-08
Report Number: P879564
Test Lab: INNOVATION CENTER(G3)
Issue Date: 10/01/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: MEM2-HTN-VA-160-740-U-MQ
Description: EPIC MODERN TALL HOUSING 160W 70CRI 4000K VISUAL COMFORT FIXTURE w/
TYPE V MEDIUM DISTRIBUTION OPTIC
Light Source: (1) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

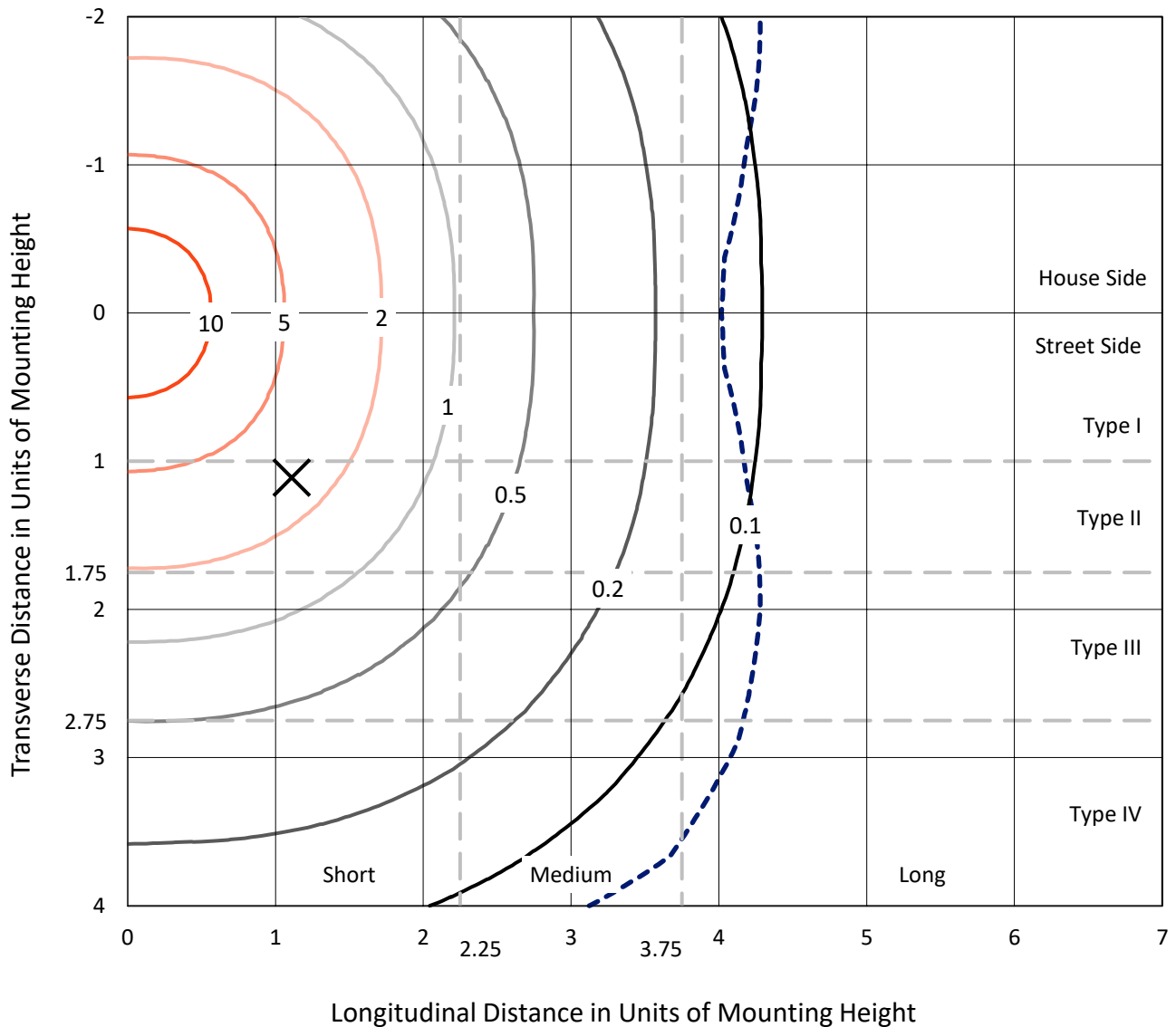
Lumens per Lamp: N/A
Luminaire Lumens: 18250.3 lumens
Efficiency: N/A
Efficacy: 117.0 lumens/watt
Luminous Opening: Circular (Dia: 1.12' x H: 0')
IES Classification: Type V - Short
BUG Rating: B4 - U0 - G3

Input Watts (W): 156
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.995
Total Harmonic Distortion (THDi): 6.6%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

REPORT NUMBER: P879564
 CATALOG NUMBER: MEM2-HTN-VA-160-740-U-MQ

Iso-Footcandle Lines of Horizontal Illumination

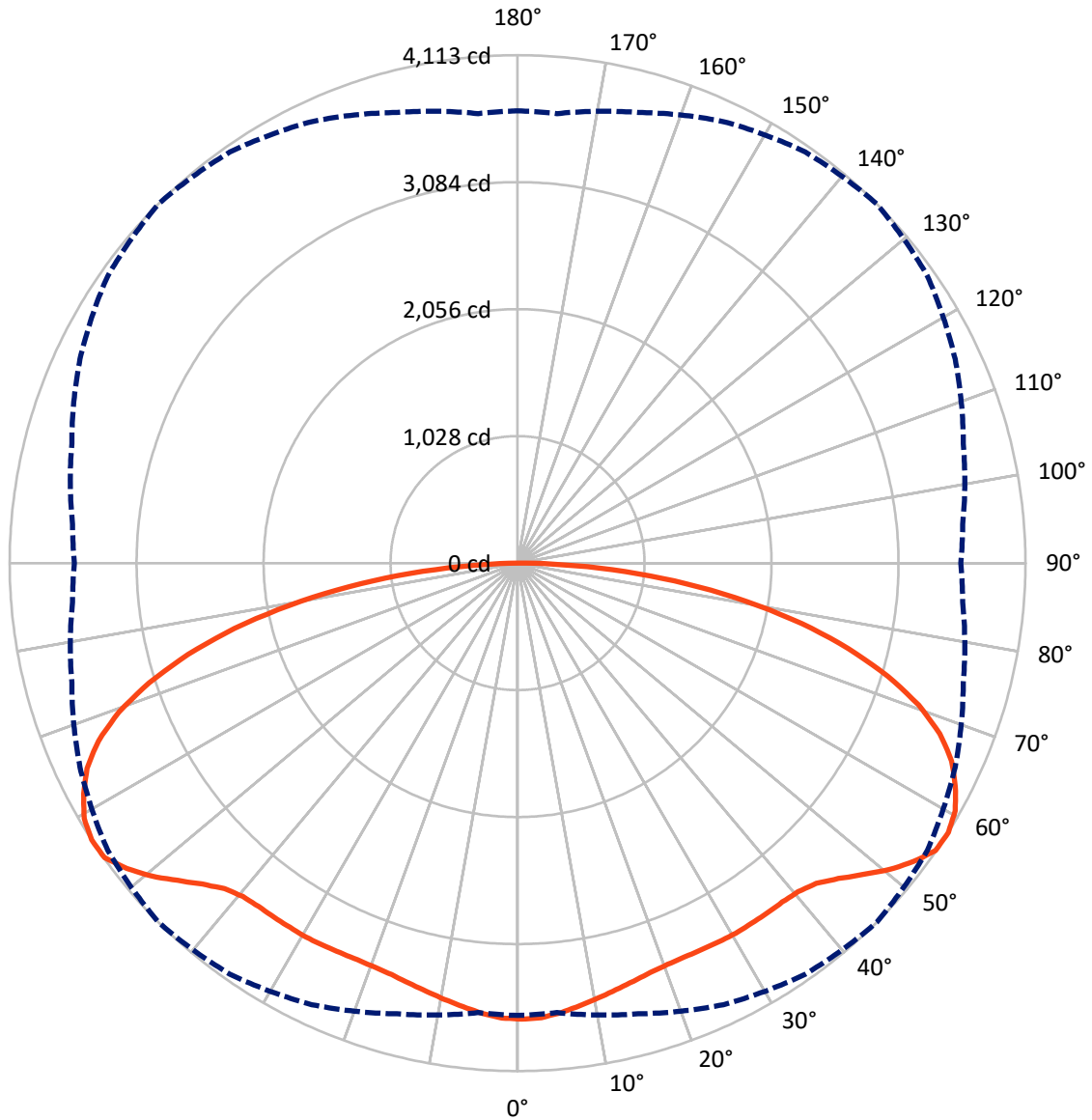
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 16.4 fc
 Type V - Short - N/A

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CATALOG NUMBER: MEM2-HTN-VA-160-740-U-MQ

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 57.5-Deg Vertical

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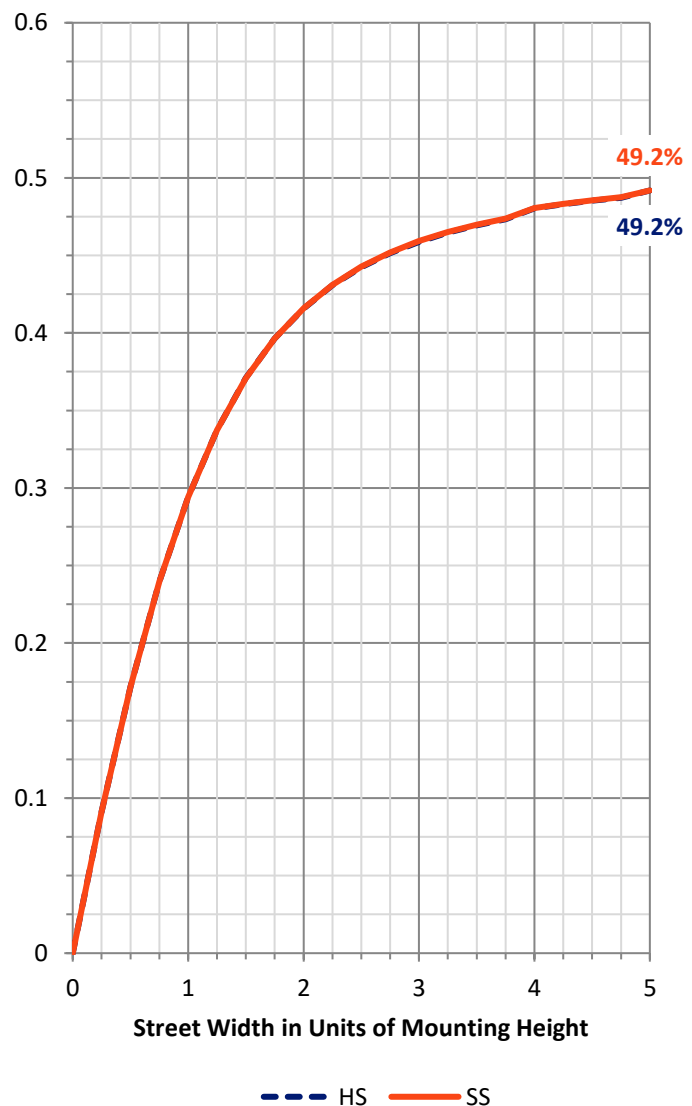
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 9125.1 | 0.0 | 9125.1 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 9125.1 | 0.0 | 9125.1 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 18250.3 | 0.0 | 18250.3 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 346.6 | 1.9 |
| 10°-20° | 993.5 | 5.4 |
| 20°-30° | 1596.5 | 8.7 |
| 30°-40° | 2164.1 | 11.9 |
| 40°-50° | 2763.8 | 15.1 |
| 50°-60° | 3445.0 | 18.9 |
| 60°-70° | 3510.4 | 19.2 |
| 70°-80° | 2601.0 | 14.3 |
| 80°-90° | 829.4 | 4.5 |
| 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° | 18250.3 | 100.0 |
| 0°-180° | 18250.3 | 100.0 |



REPORT NUMBER: P879564

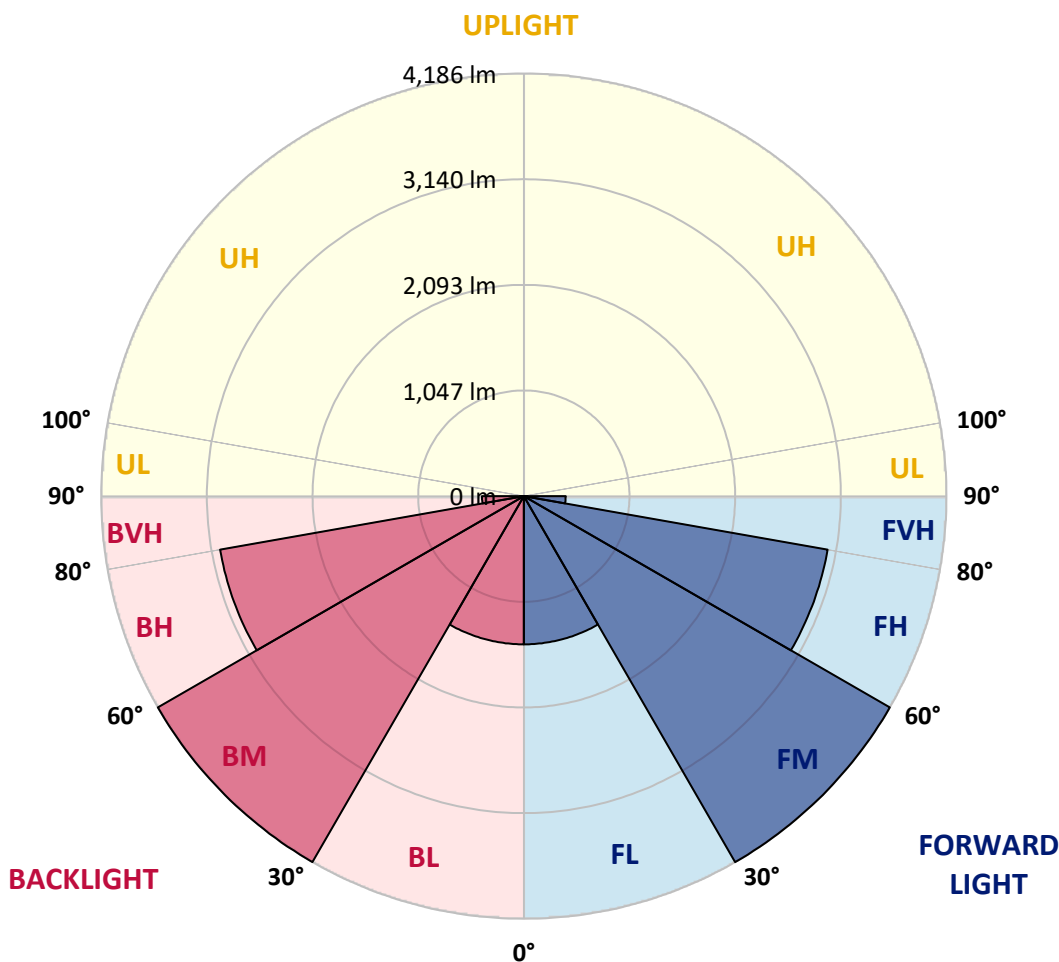
CATALOG NUMBER: MEM2-HTN-VA-160-740-U-MQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 1468.3 | 8.0 | | | |
| FM | (30°-60°) | 4186.5 | 22.9 | | | |
| FH | (60°-80°) | 3055.7 | 16.7 | | | G2/5000 |
| FVH | (80°-90°) | 414.7 | 2.3 | | | G3/500 |
| BL | (0°-30°) | 1468.3 | 8.0 | B3/2500 | | |
| BM | (30°-60°) | 4186.5 | 22.9 | B3/5000 | | |
| BH | (60°-80°) | 3055.7 | 16.7 | B4/5000 | | G2/5000 |
| BVH | (80°-90°) | 414.7 | 2.3 | | | G3/500 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B4-U0-G3

Type V Short





REPORT NUMBER: P879564

CATALOG NUMBER: MEM2-HTN-VA-160-740-U-MQ

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3691.9 | 3691.9 | 3691.9 | 3691.9 | 3691.9 | 3691.9 | 3691.9 | 3691.9 | 3691.9 | 3691.9 | 3691.9 |
| 2.5° | 3685.6 | 3685.6 | 3684.7 | 3684.7 | 3683.8 | 3684.7 | 3685.6 | 3685.6 | 3684.7 | 3683.8 | 3682.8 |
| 5° | 3659.2 | 3660.1 | 3660.1 | 3658.3 | 3656.5 | 3656.5 | 3657.4 | 3655.6 | 3656.5 | 3656.5 | 3655.6 |
| 7.5° | 3621.1 | 3618.3 | 3621.1 | 3620.2 | 3621.1 | 3618.3 | 3622.9 | 3621.1 | 3618.3 | 3620.2 | 3620.2 |
| 10° | 3578.4 | 3579.3 | 3580.2 | 3579.3 | 3582.0 | 3581.1 | 3580.2 | 3579.3 | 3577.5 | 3579.3 | 3576.6 |
| 12.5° | 3538.4 | 3539.3 | 3542.0 | 3542.9 | 3545.7 | 3544.8 | 3545.7 | 3543.9 | 3542.9 | 3539.3 | 3538.4 |
| 15° | 3500.2 | 3502.1 | 3505.7 | 3508.4 | 3511.1 | 3512.1 | 3510.2 | 3509.3 | 3504.8 | 3502.1 | 3500.2 |
| 17.5° | 3468.5 | 3468.5 | 3473.9 | 3478.4 | 3483.0 | 3483.9 | 3483.0 | 3478.4 | 3472.1 | 3465.7 | 3466.6 |
| 20° | 3446.6 | 3446.6 | 3453.0 | 3460.3 | 3466.6 | 3468.5 | 3465.7 | 3457.5 | 3447.6 | 3443.0 | 3442.1 |
| 22.5° | 3436.7 | 3437.6 | 3443.9 | 3452.1 | 3461.2 | 3463.0 | 3457.5 | 3447.6 | 3436.7 | 3428.5 | 3427.6 |
| 25° | 3437.6 | 3435.7 | 3441.2 | 3453.9 | 3463.9 | 3465.7 | 3461.2 | 3447.6 | 3434.8 | 3427.6 | 3424.8 |
| 27.5° | 3434.8 | 3435.7 | 3442.1 | 3454.8 | 3467.5 | 3471.2 | 3463.9 | 3447.6 | 3430.3 | 3423.9 | 3422.1 |
| 30° | 3433.9 | 3434.8 | 3436.7 | 3457.5 | 3472.1 | 3478.4 | 3467.5 | 3445.7 | 3431.2 | 3421.2 | 3420.3 |
| 32.5° | 3430.3 | 3425.8 | 3438.5 | 3451.2 | 3469.4 | 3477.5 | 3466.6 | 3446.6 | 3423.0 | 3415.8 | 3412.1 |
| 35° | 3415.8 | 3420.3 | 3431.2 | 3453.0 | 3473.9 | 3479.4 | 3466.6 | 3442.1 | 3421.2 | 3406.7 | 3405.8 |
| 37.5° | 3413.0 | 3413.0 | 3430.3 | 3453.0 | 3473.9 | 3482.1 | 3471.2 | 3443.9 | 3414.9 | 3396.7 | 3396.7 |
| 40° | 3409.4 | 3408.5 | 3431.2 | 3459.4 | 3486.6 | 3497.5 | 3483.0 | 3449.4 | 3413.9 | 3396.7 | 3387.6 |
| 42.5° | 3419.4 | 3424.8 | 3451.2 | 3492.1 | 3526.6 | 3544.8 | 3523.9 | 3486.6 | 3444.8 | 3412.1 | 3411.2 |
| 45° | 3466.6 | 3478.4 | 3505.7 | 3574.7 | 3621.1 | 3642.9 | 3618.3 | 3553.8 | 3488.4 | 3444.8 | 3442.1 |
| 47.5° | 3540.2 | 3536.6 | 3601.1 | 3673.8 | 3741.9 | 3765.5 | 3730.1 | 3654.7 | 3560.2 | 3507.5 | 3493.9 |
| 50° | 3591.1 | 3600.2 | 3666.5 | 3771.9 | 3873.6 | 3900.9 | 3849.1 | 3751.9 | 3649.2 | 3576.6 | 3563.8 |
| 52.5° | 3660.1 | 3661.9 | 3746.4 | 3880.0 | 3984.4 | 4014.4 | 3964.5 | 3843.6 | 3705.6 | 3614.7 | 3608.4 |
| 55° | 3668.3 | 3698.3 | 3800.9 | 3946.3 | 4071.7 | 4107.1 | 4045.3 | 3916.3 | 3755.5 | 3642.9 | 3632.0 |
| 57.5° | 3661.9 | 3652.9 | 3777.3 | 3944.5 | 4062.6 | 4112.5 | 4051.7 | 3909.0 | 3736.4 | 3617.4 | 3588.4 |
| 60° | 3531.1 | 3569.3 | 3706.5 | 3870.0 | 4021.7 | 4071.7 | 4000.8 | 3855.4 | 3666.5 | 3535.7 | 3523.9 |
| 62.5° | 3442.1 | 3458.5 | 3583.8 | 3803.7 | 3928.1 | 3978.1 | 3923.6 | 3752.8 | 3551.1 | 3414.9 | 3398.5 |
| 65° | 3303.1 | 3315.8 | 3463.0 | 3643.8 | 3817.3 | 3861.8 | 3791.9 | 3648.3 | 3432.1 | 3282.2 | 3252.2 |
| 67.5° | 3081.5 | 3116.0 | 3261.3 | 3491.2 | 3611.1 | 3687.4 | 3624.7 | 3423.0 | 3226.8 | 3079.6 | 3057.8 |
| 70° | 2823.5 | 2869.8 | 3019.7 | 3207.7 | 3407.6 | 3445.7 | 3359.4 | 3222.3 | 3002.4 | 2845.3 | 2807.1 |
| 72.5° | 2574.5 | 2578.2 | 2718.1 | 2938.8 | 3065.1 | 3136.0 | 3086.9 | 2906.1 | 2690.8 | 2557.3 | 2533.7 |
| 75° | 2226.6 | 2227.5 | 2381.0 | 2561.8 | 2721.7 | 2768.0 | 2689.9 | 2562.7 | 2371.0 | 2221.2 | 2206.6 |
| 77.5° | 1823.3 | 1847.8 | 1984.0 | 2158.5 | 2284.7 | 2352.0 | 2296.6 | 2153.0 | 1974.1 | 1846.0 | 1831.4 |
| 80° | 1429.9 | 1460.8 | 1557.1 | 1713.3 | 1822.3 | 1881.4 | 1821.4 | 1696.1 | 1559.8 | 1434.4 | 1436.3 |
| 82.5° | 1009.3 | 1032.0 | 1122.8 | 1229.1 | 1335.4 | 1379.0 | 1353.6 | 1260.9 | 1136.5 | 1026.5 | 996.6 |
| 85° | 563.2 | 592.3 | 653.2 | 746.7 | 817.6 | 873.9 | 842.1 | 769.5 | 661.3 | 592.3 | 590.5 |
| 87.5° | 165.3 | 179.0 | 203.5 | 266.2 | 333.4 | 357.9 | 350.7 | 332.5 | 291.6 | 261.6 | 242.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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: SP1-2407-176-9

Test Date: 09/25/2024

Luminaire Tested: MEM2-HTN-VA-130-740-U-RW

Data in this report applies to families of products including MEM2-HTN-VA-130-740-U-RW

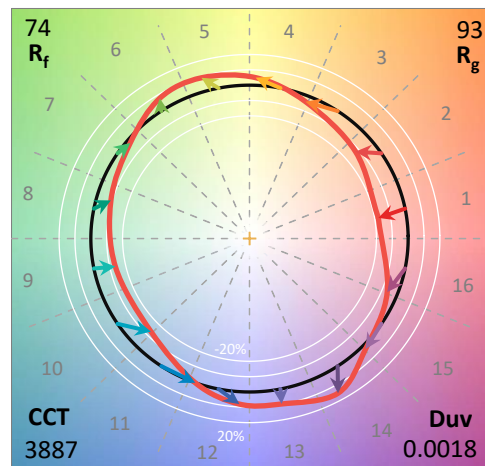
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-176-9
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 09/27/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Streetworks
 Catalog Number: **MEM2-HTN-VA-130-740-U-RW**
 Description: EPIC MODERN VISUAL COMFORT 130W WAVESTREAM RECTANGULAR WIDE

Spectral Parameters

CCT (K): 3887
 CIE u': 0.2262
 CIE v': 0.5060
 Duv: 0.0018
 CIE x: 0.3870
 CIE y: 0.3847
 CIE z: 0.2283
 Peak Wavelength (nm): 583
 Dominant Wavelength (nm): 578
 Purity: 31.59626
 Rf: 74.5
 Rg: 93.5

| | | | |
|-----------|------|------|-------|
| CRI (Ra): | 71.4 | | |
| R1: | 67.6 | R9: | -36.8 |
| R2: | 78.8 | R10: | 50.4 |
| R3: | 88.2 | R11: | 65.0 |
| R4: | 69.8 | R12: | 44.4 |
| R5: | 67.7 | R13: | 69.4 |
| R6: | 70.3 | R14: | 93.3 |
| R7: | 80.1 | R15: | 59.9 |
| R8: | 49.0 | | |



Test Conditions

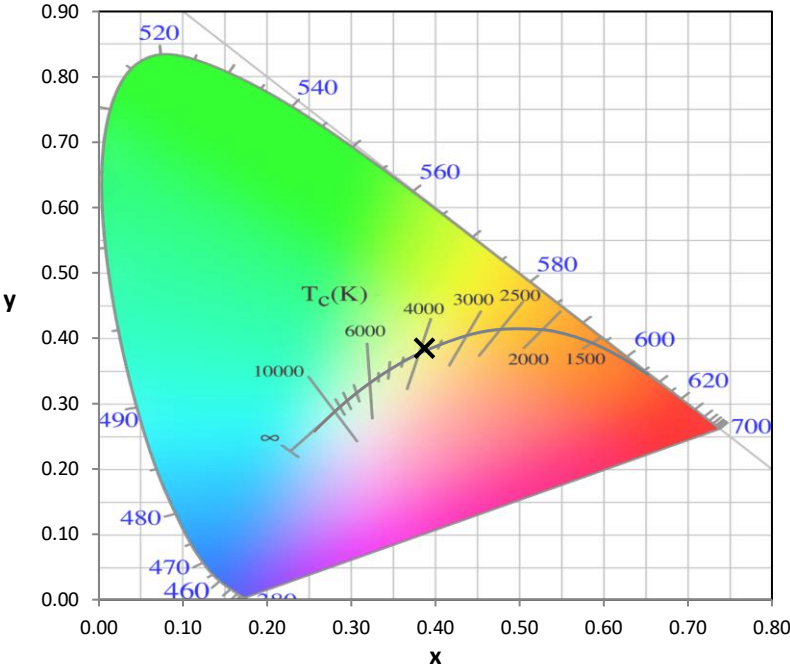
Stabilization Time: 50M
 Operation Time: 1H 50M
 Sphere Temperature (°C): 25.2

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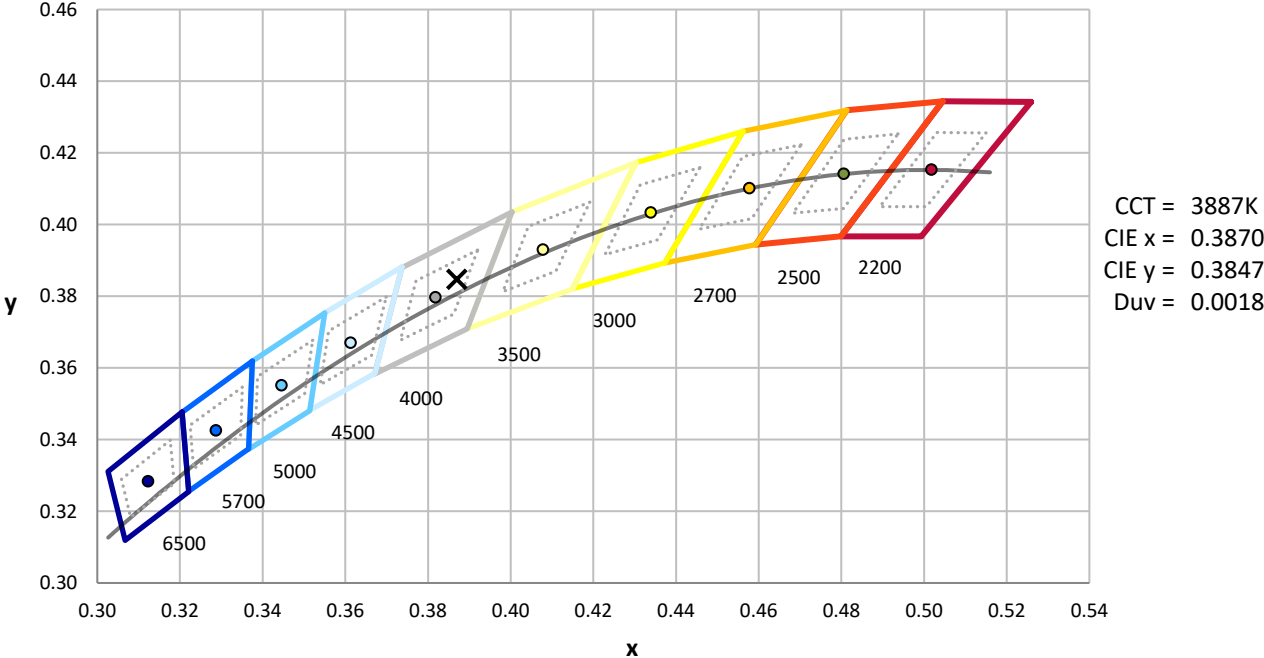
| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 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



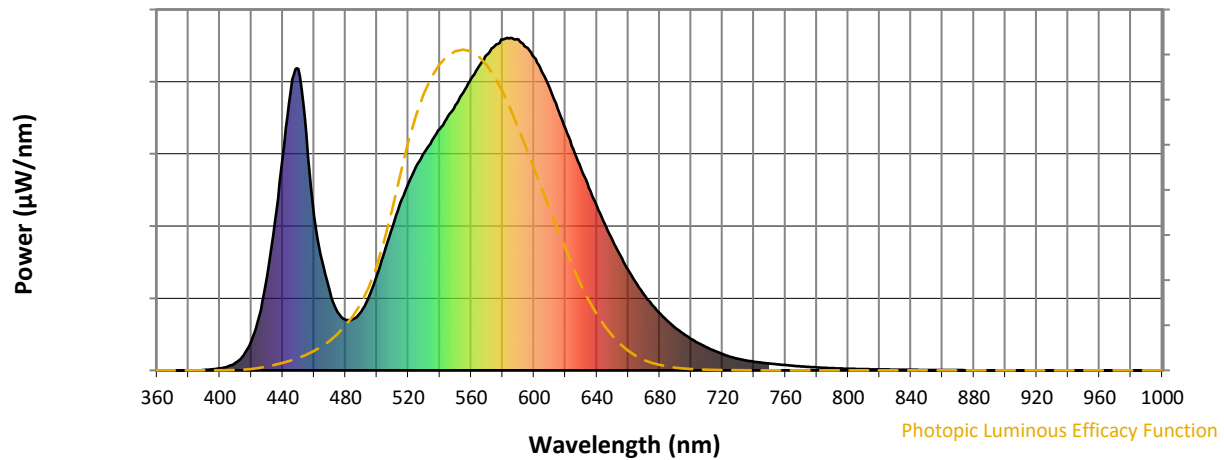
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 4-step quadrangle

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Photopic Flux vs. Wavelength

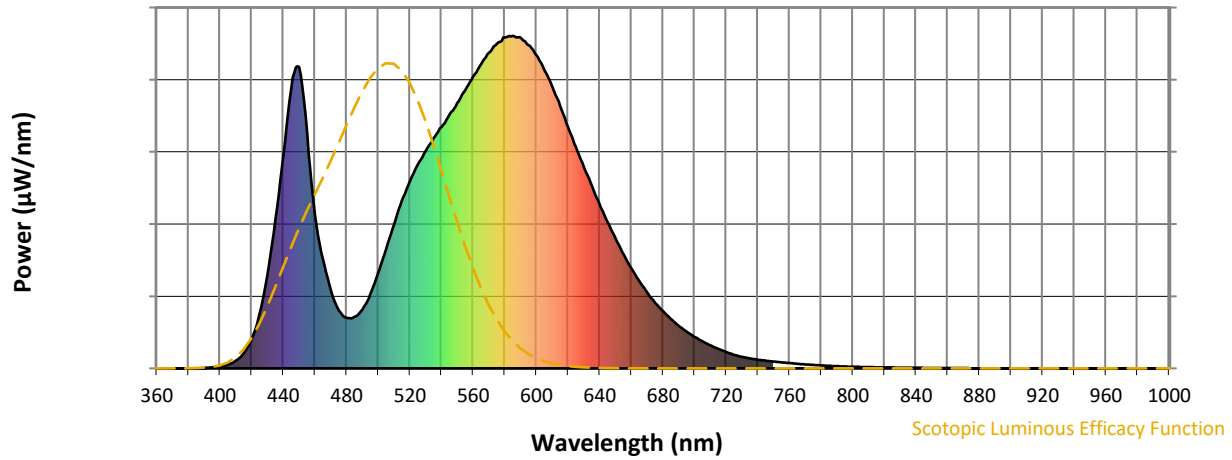


Photopic Lumens: NR

| λ (nm) | Power 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 | 177 | NR | 620 | 727 | NR | 750 | 21 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 222 | NR | 625 | 666 | NR | 755 | 18 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 286 | NR | 630 | 606 | NR | 760 | 16 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 359 | NR | 635 | 549 | NR | 765 | 14 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 433 | NR | 640 | 493 | NR | 770 | 12 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 505 | NR | 645 | 440 | NR | 775 | 10 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 562 | NR | 650 | 390 | NR | 780 | 9 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 613 | NR | 655 | 344 | NR | 785 | 8 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 654 | NR | 660 | 301 | NR | 790 | 7 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 692 | NR | 665 | 263 | NR | 795 | 6 | NR | 925 | 0 | NR |
| 410 | 23 | NR | 540 | 726 | NR | 670 | 228 | NR | 800 | 5 | NR | 930 | 0 | NR |
| 415 | 45 | NR | 545 | 763 | NR | 675 | 198 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 88 | NR | 550 | 798 | NR | 680 | 172 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 164 | NR | 555 | 837 | NR | 685 | 148 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 281 | NR | 560 | 878 | NR | 690 | 128 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 447 | NR | 565 | 915 | NR | 695 | 110 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 642 | NR | 570 | 948 | NR | 700 | 95 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 838 | NR | 575 | 976 | NR | 705 | 81 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 907 | NR | 580 | 995 | NR | 710 | 69 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 710 | NR | 585 | 1000 | NR | 715 | 58 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 465 | NR | 590 | 995 | NR | 720 | 49 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 330 | NR | 595 | 972 | NR | 725 | 41 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 236 | NR | 600 | 941 | NR | 730 | 35 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 174 | NR | 605 | 898 | NR | 735 | 30 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 152 | NR | 610 | 848 | NR | 740 | 26 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 155 | NR | 615 | 788 | NR | 745 | 23 | NR | 875 | 0 | NR | | | |

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Scotopic Flux vs. Wavelength



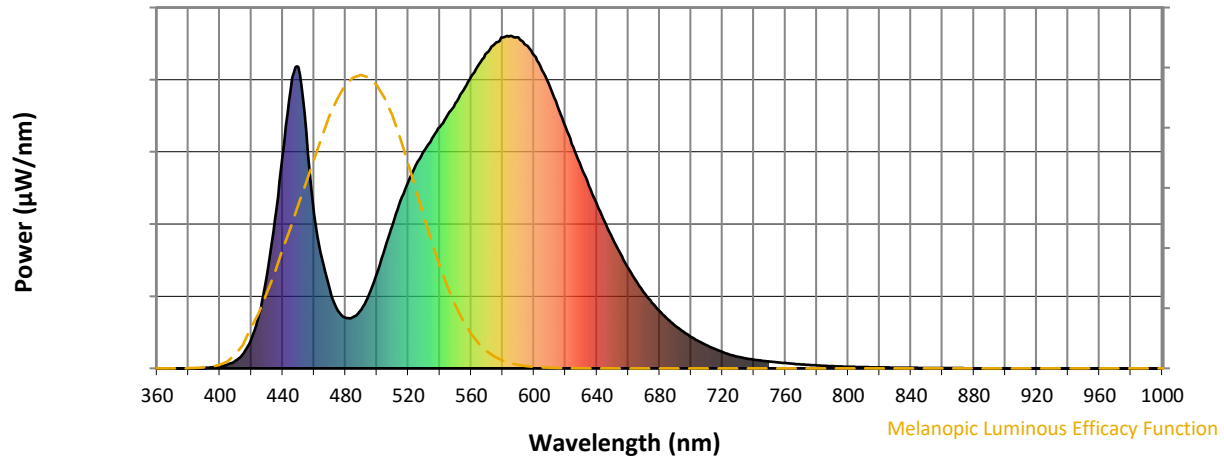
Scotopic Lumens: NR

S/P: 1.49

| 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 | 177 | NR | 620 | 727 | NR | 750 | 21 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 222 | NR | 625 | 666 | NR | 755 | 18 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 286 | NR | 630 | 606 | NR | 760 | 16 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 359 | NR | 635 | 549 | NR | 765 | 14 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 433 | NR | 640 | 493 | NR | 770 | 12 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 505 | NR | 645 | 440 | NR | 775 | 10 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 562 | NR | 650 | 390 | NR | 780 | 9 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 613 | NR | 655 | 344 | NR | 785 | 8 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 654 | NR | 660 | 301 | NR | 790 | 7 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 692 | NR | 665 | 263 | NR | 795 | 6 | NR | 925 | 0 | NR |
| 410 | 23 | NR | 540 | 726 | NR | 670 | 228 | NR | 800 | 5 | NR | 930 | 0 | NR |
| 415 | 45 | NR | 545 | 763 | NR | 675 | 198 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 88 | NR | 550 | 798 | NR | 680 | 172 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 164 | NR | 555 | 837 | NR | 685 | 148 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 281 | NR | 560 | 878 | NR | 690 | 128 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 447 | NR | 565 | 915 | NR | 695 | 110 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 642 | NR | 570 | 948 | NR | 700 | 95 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 838 | NR | 575 | 976 | NR | 705 | 81 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 907 | NR | 580 | 995 | NR | 710 | 69 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 710 | NR | 585 | 1000 | NR | 715 | 58 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 465 | NR | 590 | 995 | NR | 720 | 49 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 330 | NR | 595 | 972 | NR | 725 | 41 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 236 | NR | 600 | 941 | NR | 730 | 35 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 174 | NR | 605 | 898 | NR | 735 | 30 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 152 | NR | 610 | 848 | NR | 740 | 26 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 155 | NR | 615 | 788 | NR | 745 | 23 | NR | 875 | 0 | NR | | | |

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Melanopic Flux vs. Wavelength



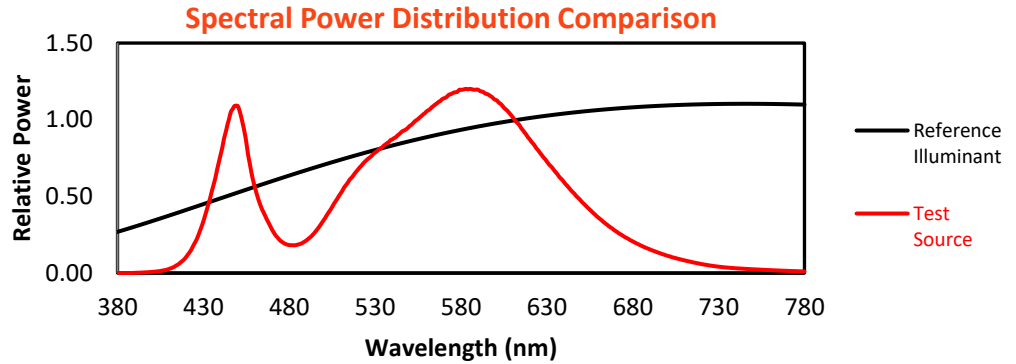
Melanopic Lumens: NR

M/P: 2.89

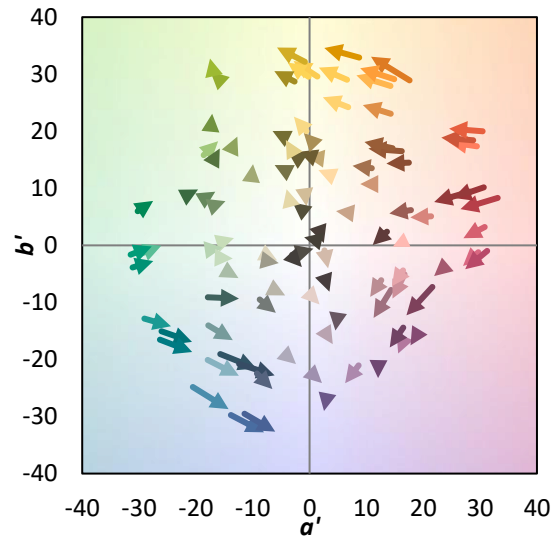
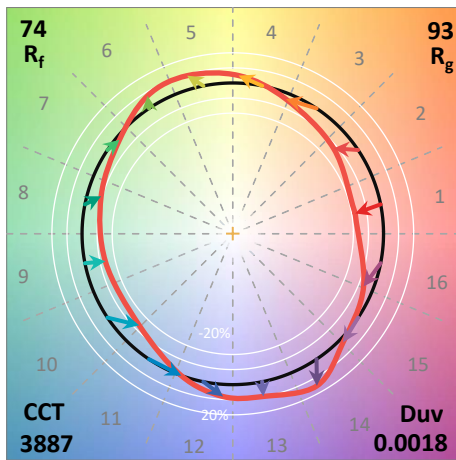
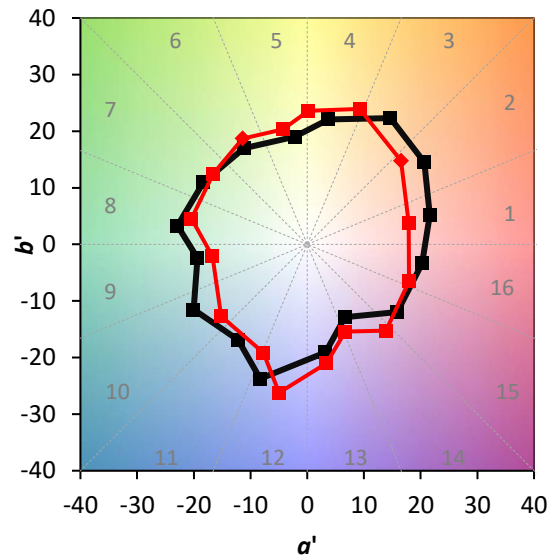
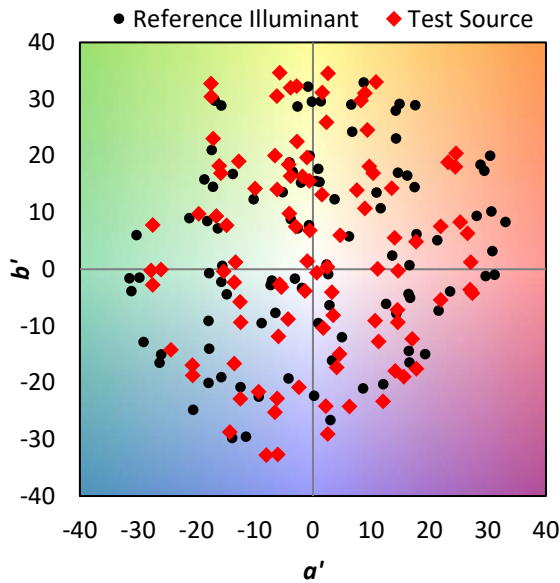
| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 177 | NR | 620 | 727 | NR | 750 | 21 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 222 | NR | 625 | 666 | NR | 755 | 18 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 286 | NR | 630 | 606 | NR | 760 | 16 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 359 | NR | 635 | 549 | NR | 765 | 14 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 433 | NR | 640 | 493 | NR | 770 | 12 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 505 | NR | 645 | 440 | NR | 775 | 10 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 562 | NR | 650 | 390 | NR | 780 | 9 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 613 | NR | 655 | 344 | NR | 785 | 8 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 654 | NR | 660 | 301 | NR | 790 | 7 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 692 | NR | 665 | 263 | NR | 795 | 6 | NR | 925 | 0 | NR |
| 410 | 23 | NR | 540 | 726 | NR | 670 | 228 | NR | 800 | 5 | NR | 930 | 0 | NR |
| 415 | 45 | NR | 545 | 763 | NR | 675 | 198 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 88 | NR | 550 | 798 | NR | 680 | 172 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 164 | NR | 555 | 837 | NR | 685 | 148 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 281 | NR | 560 | 878 | NR | 690 | 128 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 447 | NR | 565 | 915 | NR | 695 | 110 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 642 | NR | 570 | 948 | NR | 700 | 95 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 838 | NR | 575 | 976 | NR | 705 | 81 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 907 | NR | 580 | 995 | NR | 710 | 69 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 710 | NR | 585 | 1000 | NR | 715 | 58 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 465 | NR | 590 | 995 | NR | 720 | 49 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 330 | NR | 595 | 972 | NR | 725 | 41 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 236 | NR | 600 | 941 | NR | 730 | 35 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 174 | NR | 605 | 898 | NR | 735 | 30 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 152 | NR | 610 | 848 | NR | 740 | 26 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 155 | NR | 615 | 788 | NR | 745 | 23 | NR | 875 | 0 | NR | | | |

Summary

$R_f = 74.5$
 $R_g = 93.5$
 $CIE R_a = 71.4$
 $R_g = -36.8$

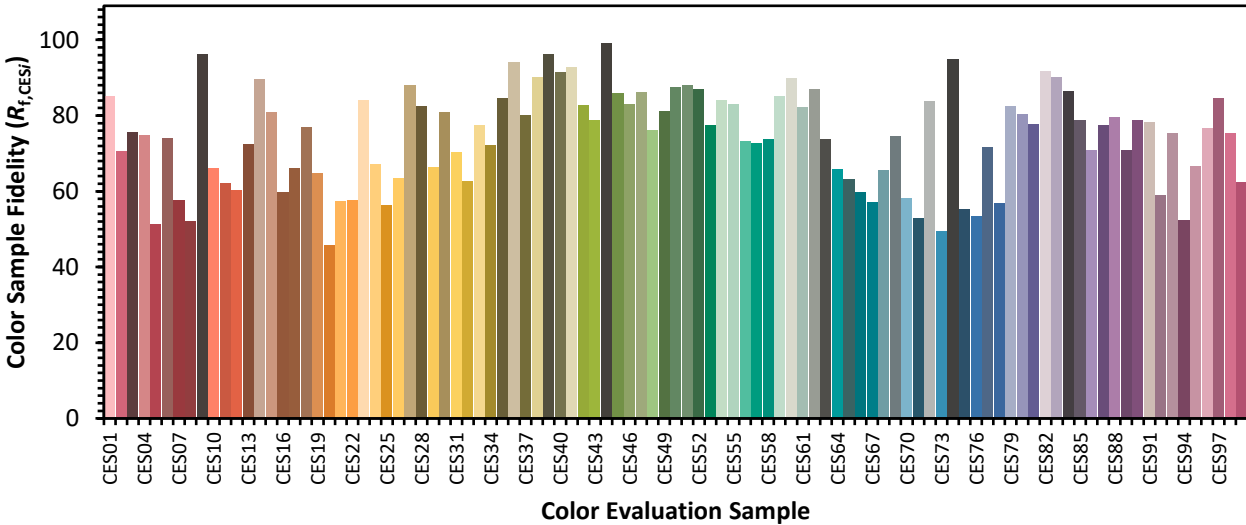


Color Vector Graphics

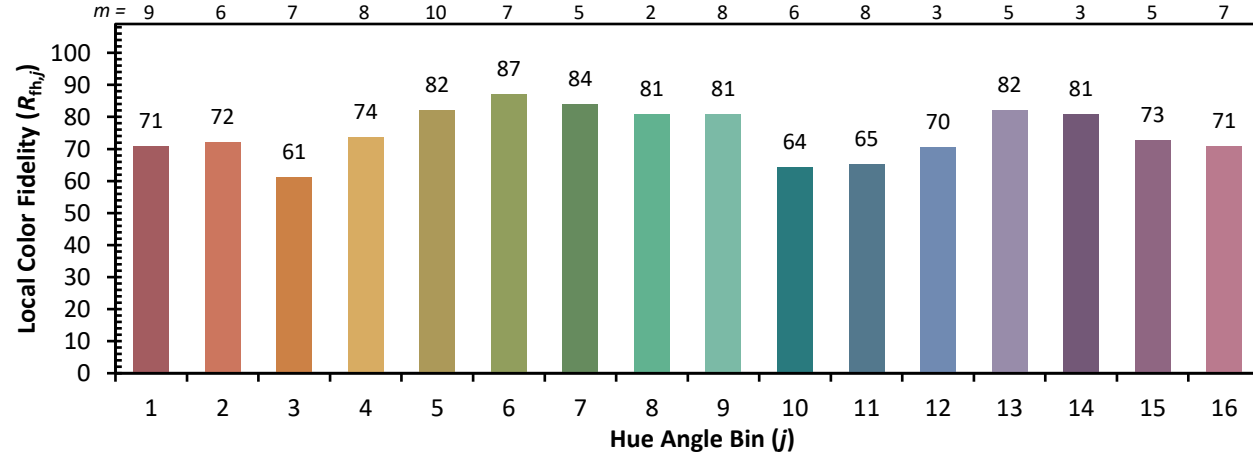
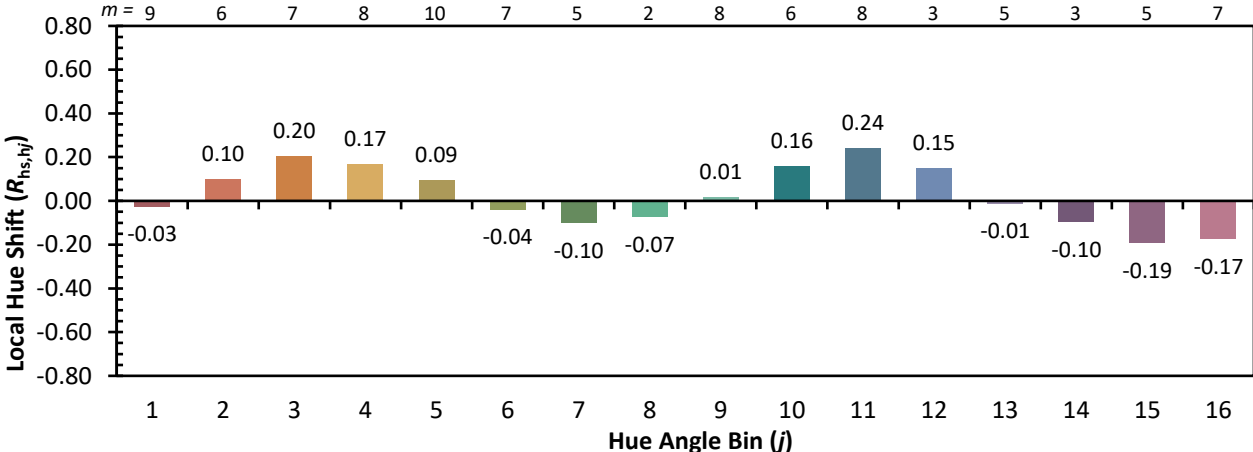
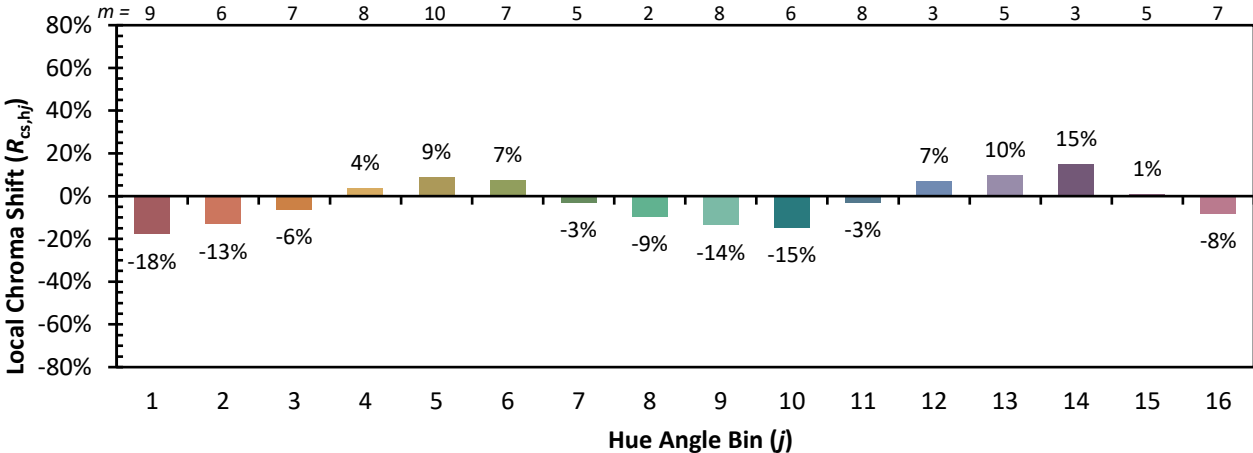


Individual Sample Fidelity Index ($R_{f,i}$)

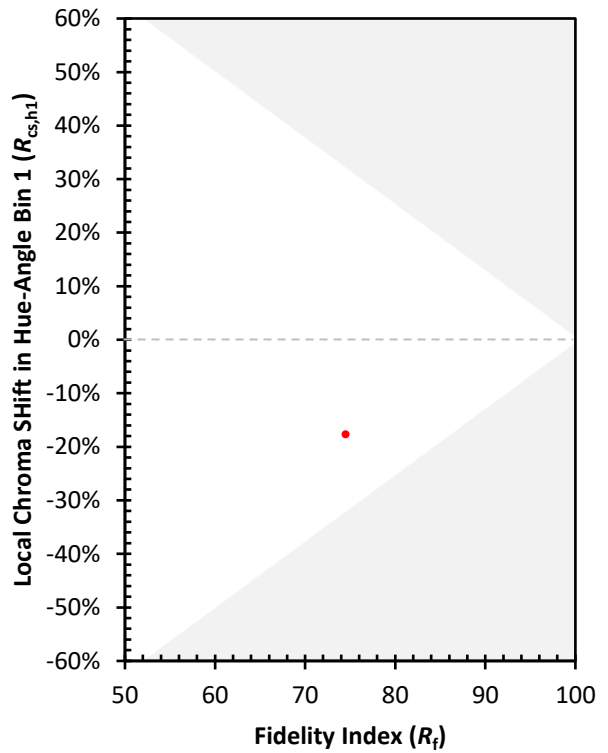
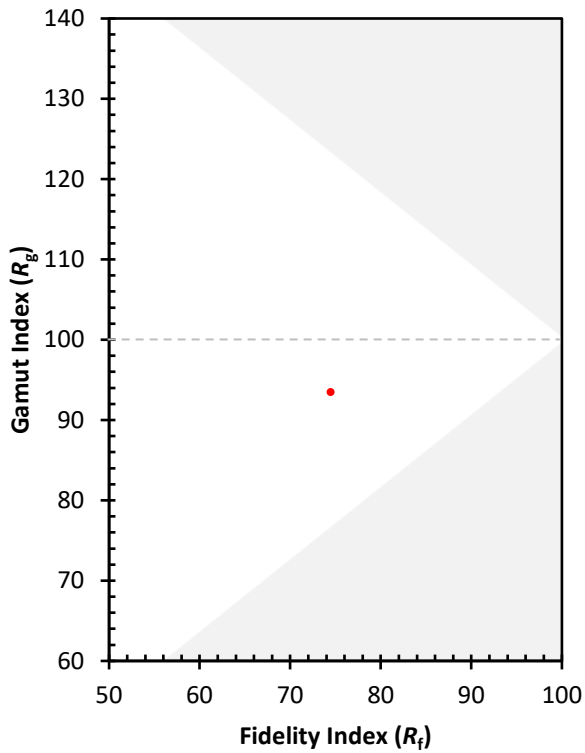
| | | | |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 63 | CES51 = 88 | CES76 = 54 |
| CES02 = 61 | CES27 = 88 | CES52 = 87 | CES77 = 72 |
| CES03 = 30 | CES28 = 82 | CES53 = 77 | CES78 = 57 |
| CES04 = 70 | CES29 = 66 | CES54 = 84 | CES79 = 83 |
| CES05 = 47 | CES30 = 81 | CES55 = 83 | CES80 = 80 |
| CES06 = 50 | CES31 = 70 | CES56 = 73 | CES81 = 78 |
| CES07 = 40 | CES32 = 63 | CES57 = 73 | CES82 = 92 |
| CES08 = 39 | CES33 = 77 | CES58 = 74 | CES83 = 90 |
| CES09 = 29 | CES34 = 72 | CES59 = 85 | CES84 = 87 |
| CES10 = 74 | CES35 = 85 | CES60 = 90 | CES85 = 79 |
| CES11 = 57 | CES36 = 94 | CES61 = 82 | CES86 = 71 |
| CES12 = 63 | CES37 = 80 | CES62 = 87 | CES87 = 77 |
| CES13 = 42 | CES38 = 90 | CES63 = 74 | CES88 = 80 |
| CES14 = 74 | CES39 = 96 | CES64 = 66 | CES89 = 71 |
| CES15 = 71 | CES40 = 92 | CES65 = 63 | CES90 = 79 |
| CES16 = 46 | CES41 = 93 | CES66 = 60 | CES91 = 78 |
| CES17 = 49 | CES42 = 83 | CES67 = 57 | CES92 = 59 |
| CES18 = 56 | CES43 = 79 | CES68 = 65 | CES93 = 75 |
| CES19 = 72 | CES44 = 99 | CES69 = 74 | CES94 = 52 |
| CES20 = 65 | CES45 = 86 | CES70 = 58 | CES95 = 67 |
| CES21 = 86 | CES46 = 83 | CES71 = 53 | CES96 = 77 |
| CES22 = 78 | CES47 = 86 | CES72 = 84 | CES97 = 85 |
| CES23 = 92 | CES48 = 76 | CES73 = 49 | CES98 = 75 |
| CES24 = 91 | CES49 = 81 | CES74 = 95 | CES99 = 62 |
| CES25 = 72 | CES50 = 88 | CES75 = 55 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)