

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: P870059

Luminaire Tested: **MEM2-HTN-SA-110-840-U-T4W**

Issue Date: 08/21/2024

Test Information

Test Method: LM-79-08
Report Number: P870059
Test Lab: INNOVATION CENTER(G3)
Issue Date: 08/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: MEM2-HTN-SA-110-840-U-T4W
Description: EPIC MODERN TALL HOUSING DISCRETE LED ARRAYS 110W 80CRI 4000K
FIXTURE w/ TYPE IV WIDE DISTRIBUTION OPTIC
Light Source: (30) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15790.3 lumens
Efficiency: N/A
Efficacy: 139.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.33' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G3

Input Watts (W): 113
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 7.77%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

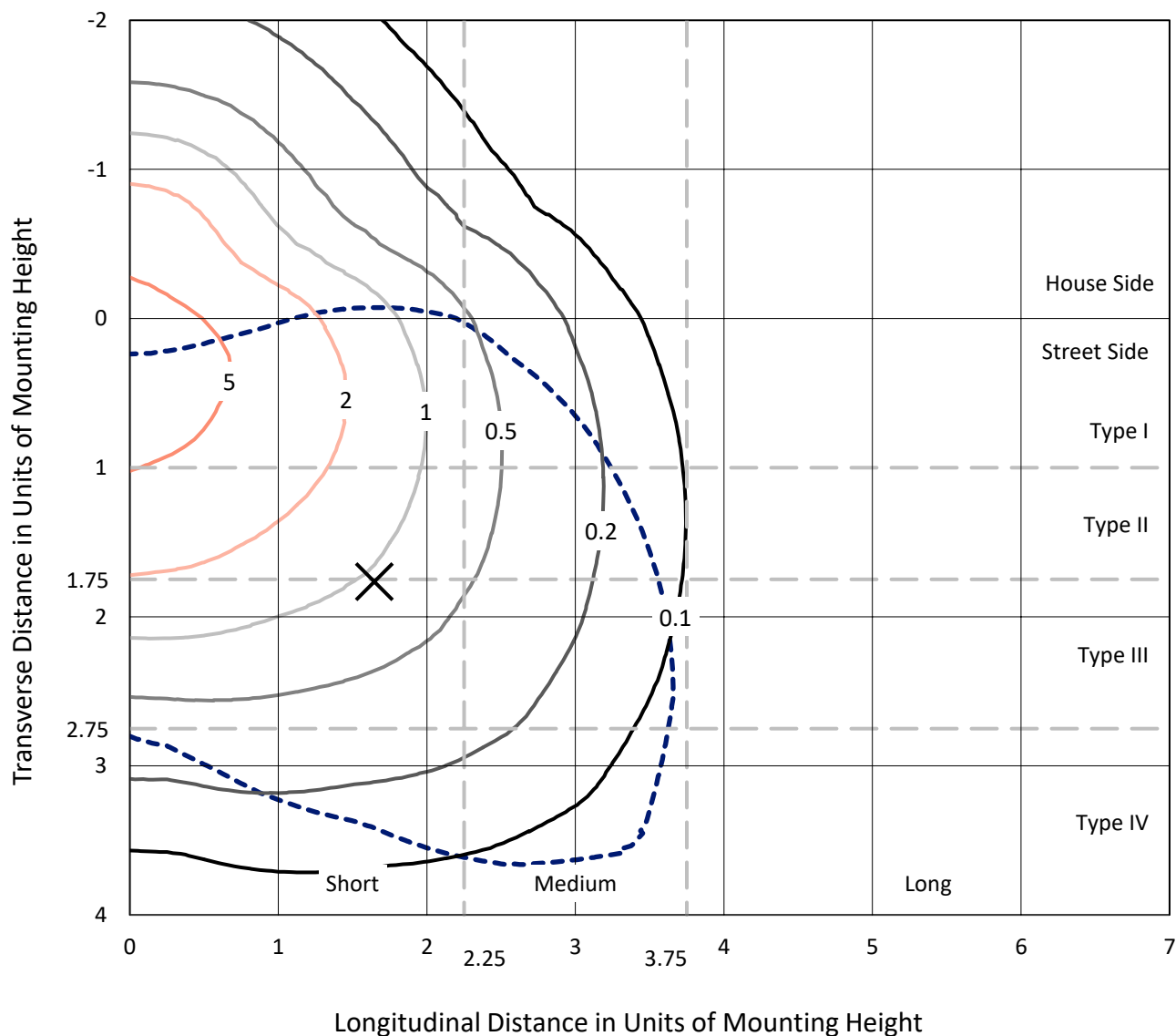
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

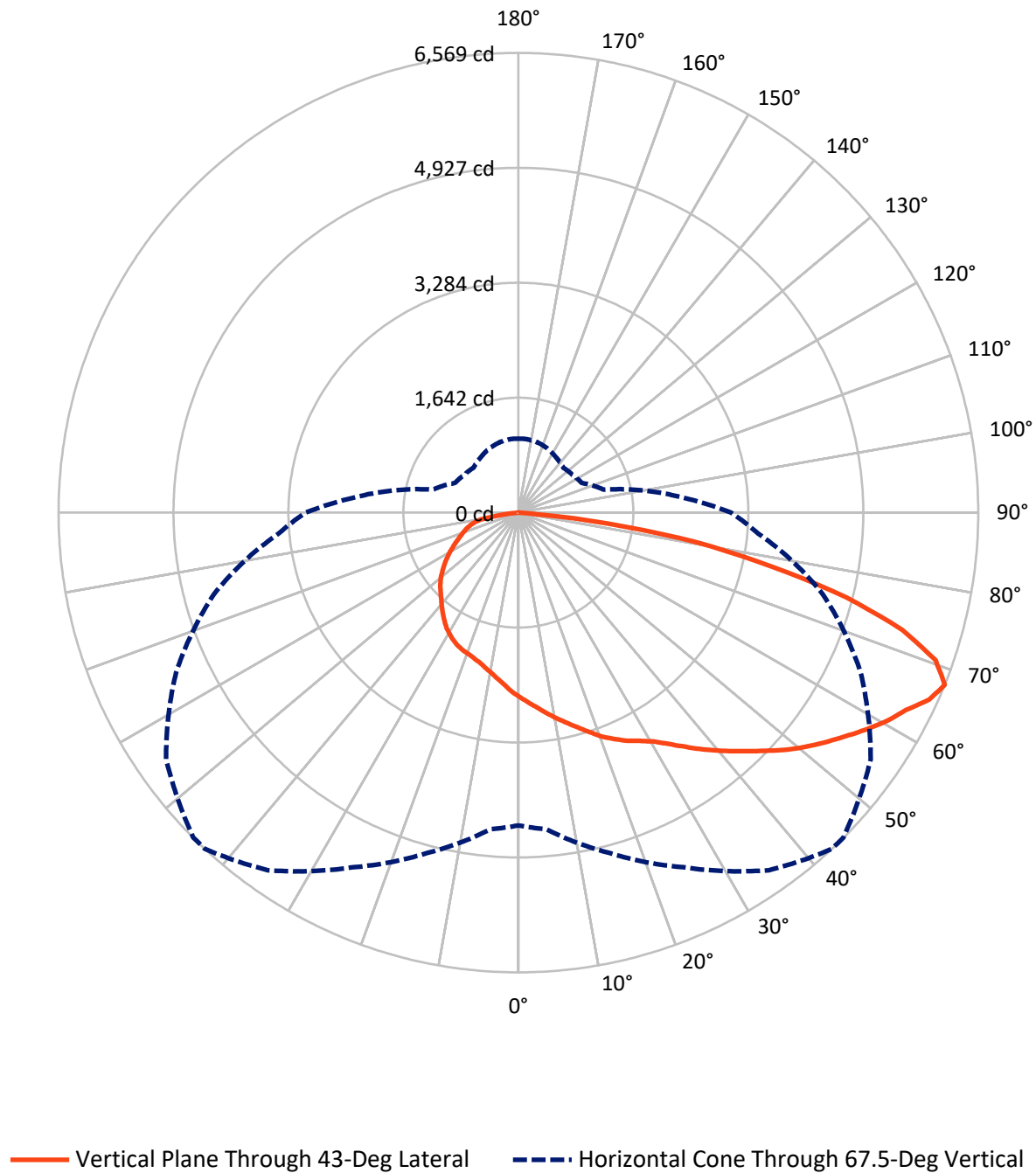


Based on 20 foot mounting height. Maximum calculated value = 7.5 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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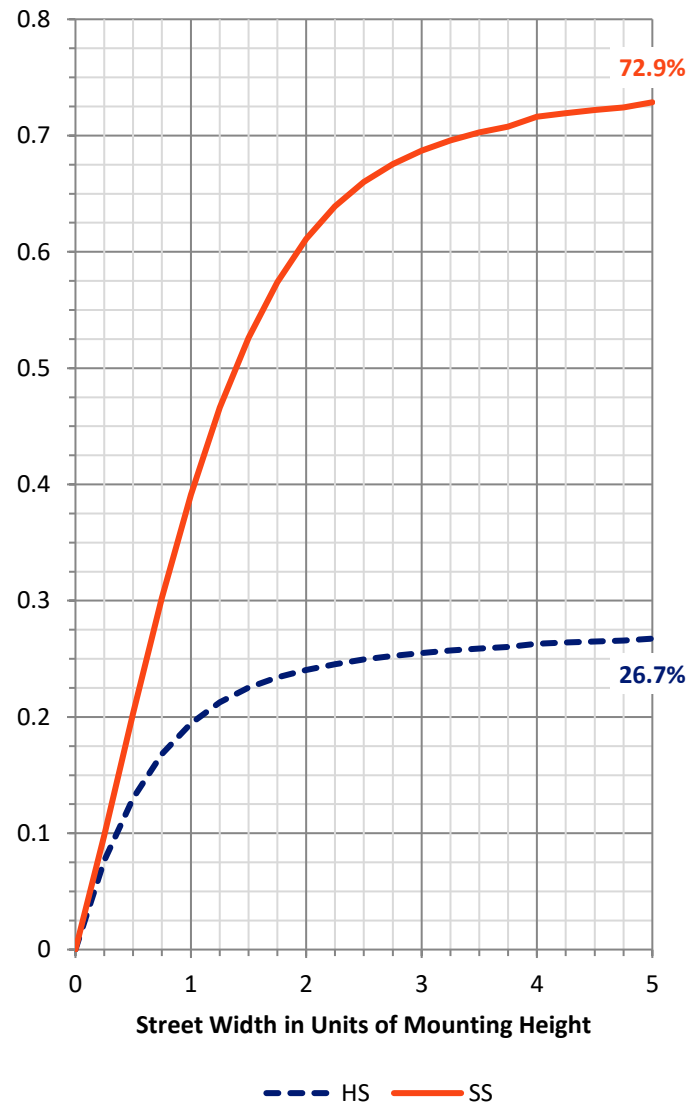
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4247.7	0.0	4247.7
	% Fixture	26.9	0.0	26.9
Street Side	Lumens	11542.7	0.0	11542.7
	% Fixture	73.1	0.0	73.1
Total	Lumens	15790.3	0.0	15790.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	252.3	1.6
10°-20°	770.3	4.9
20°-30°	1314.4	8.3
30°-40°	1917.0	12.1
40°-50°	2575.2	16.3
50°-60°	3152.5	20.0
60°-70°	3317.8	21.0
70°-80°	2166.0	13.7
80°-90°	324.9	2.1
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°	15790.3	100.0
0°-180°	15790.3	100.0

Coefficient of Utilization



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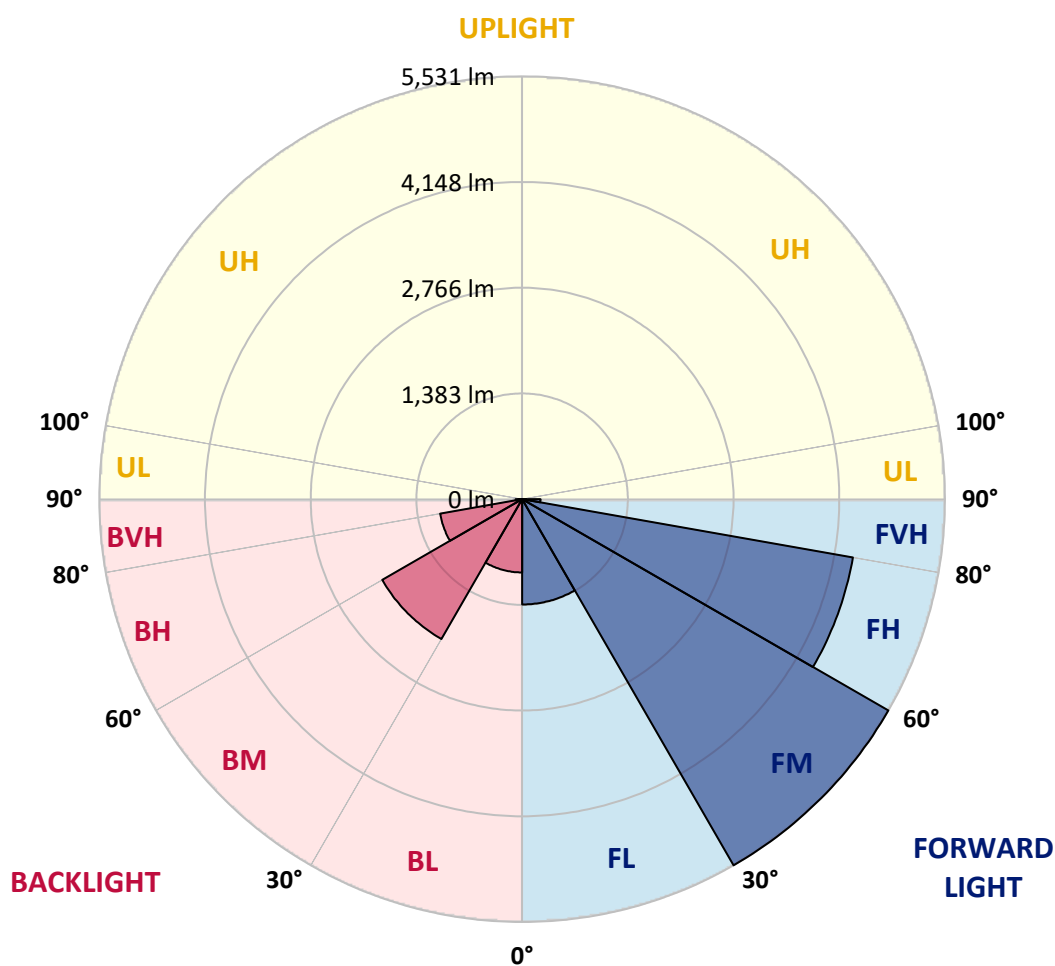
CATALOG NUMBER: MEM2-HTN-SA-110-840-U-T4W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1378.0	8.7			
FM	(30°-60°)	5531.2	35.0			
FH	(60°-80°)	4393.7	27.8			G2/5000
FVH	(80°-90°)	239.7	1.5			G3/500
BL	(0°-30°)	958.9	6.1	B2/1000		
BM	(30°-60°)	2113.4	13.4	B2/2500		
BH	(60°-80°)	1090.1	6.9	B3/2500		G3/2500
BVH	(80°-90°)	85.2	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type IV Short



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CATALOG NUMBER: MEM2-HTN-SA-110-840-U-T4W

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	43°	45°	55°	65°	75°	85°
0°	2635.9	2635.9	2635.9	2635.9	2635.9	2635.9	2635.9	2635.9	2635.9	2635.9	2635.9
2.5°	2757.3	2754.1	2744.5	2738.1	2718.9	2715.8	2715.8	2696.6	2674.2	2661.4	2648.7
5°	2881.9	2865.9	2859.5	2846.7	2814.8	2795.6	2802.0	2766.9	2722.1	2690.2	2655.0
7.5°	2993.7	2987.3	2965.0	2949.0	2910.6	2891.5	2885.1	2830.8	2773.3	2725.3	2667.8
10°	3127.9	3111.9	3099.2	3067.2	3016.1	2987.3	2977.7	2907.5	2834.0	2770.1	2693.4
12.5°	3249.3	3230.1	3214.2	3182.2	3131.1	3083.2	3070.4	2990.5	2897.9	2811.6	2715.8
15°	3342.0	3345.2	3329.2	3300.4	3242.9	3185.4	3175.8	3070.4	2958.6	2853.1	2738.1
17.5°	3428.2	3441.0	3431.4	3412.3	3354.8	3297.2	3287.7	3169.4	3035.3	2901.1	2763.7
20°	3511.3	3511.3	3508.1	3495.3	3453.8	3415.5	3396.3	3278.1	3108.7	2952.2	2798.8
22.5°	3559.2	3572.0	3572.0	3572.0	3546.5	3514.5	3508.1	3393.1	3207.8	3016.1	2830.8
25°	3632.7	3648.7	3648.7	3642.3	3619.9	3610.4	3600.8	3492.1	3303.6	3089.6	2865.9
27.5°	3789.3	3786.1	3760.5	3728.6	3696.6	3693.4	3680.6	3604.0	3415.5	3169.4	2913.8
30°	4006.5	4012.9	3981.0	3881.9	3808.4	3792.5	3795.7	3728.6	3546.5	3262.1	2968.2
32.5°	4338.8	4338.8	4214.2	4086.4	3981.0	3939.4	3929.9	3872.3	3680.6	3364.3	3028.9
35°	4588.0	4578.4	4508.1	4358.0	4227.0	4108.8	4092.8	4016.1	3830.8	3479.4	3096.0
37.5°	4776.5	4795.7	4741.4	4626.4	4498.6	4294.1	4262.1	4153.5	3968.2	3591.2	3163.1
40°	5140.8	5092.8	4961.8	4856.4	4703.0	4476.2	4447.4	4313.3	4108.8	3715.8	3246.1
42.5°	5405.9	5338.9	5188.7	5048.1	4856.4	4658.3	4632.8	4485.8	4271.7	3856.4	3332.4
45°	5786.2	5636.0	5428.3	5303.7	5032.1	4856.4	4824.5	4664.7	4441.1	4006.5	3441.0
47.5°	6153.6	5891.6	5671.1	5613.6	5223.8	5070.5	5044.9	4859.6	4623.2	4169.5	3546.5
50°	6105.7	5933.1	5859.6	5805.3	5390.0	5271.8	5246.2	5057.7	4808.5	4342.0	3651.9
52.5°	5984.2	6000.2	6003.4	5872.4	5546.5	5460.3	5434.7	5271.8	5000.2	4492.2	3754.1
55°	6112.0	6131.2	6128.0	5929.9	5728.6	5648.8	5632.8	5489.0	5185.5	4632.8	3827.6
57.5°	6306.9	6243.0	6233.5	6073.7	5923.5	5850.1	5830.9	5706.3	5342.0	4735.0	3885.1
60°	6342.1	6214.3	6255.8	6105.7	6070.5	6048.1	6041.8	5894.8	5489.0	4818.1	3907.5
62.5°	5949.1	5926.7	6089.7	6029.0	6147.2	6211.1	6214.3	6029.0	5568.9	4850.0	3885.1
65°	5278.1	5367.6	5719.1	5894.8	6262.2	6444.3	6437.9	6108.8	5559.3	4757.4	3747.7
67.5°	4469.8	4540.1	5035.3	5591.3	6236.6	6568.9	6565.7	6144.0	5393.2	4501.8	3437.8
70°	3389.9	3610.4	4313.3	5044.9	5891.6	6322.9	6377.2	5945.9	5013.0	4035.3	2968.2
72.5°	2578.4	2613.5	3463.4	4230.2	5275.0	5738.2	5728.6	5313.3	4377.2	3399.5	2472.9
75°	1830.7	1907.4	2607.1	3278.1	4322.8	4837.2	4814.9	4358.0	3492.1	2645.5	1891.4
77.5°	1364.3	1393.0	1907.4	2431.4	3233.3	3696.6	3687.0	3220.6	2568.8	1942.6	1409.0
80°	996.8	1044.8	1373.9	1696.5	2191.8	2591.1	2578.4	2137.5	1648.6	1357.9	1028.8
82.5°	559.1	594.3	798.8	1025.6	1156.6	1281.2	1226.9	1025.6	750.8	584.7	504.8
85°	16.0	19.2	28.8	35.1	60.7	102.2	111.8	99.0	118.2	73.5	79.9
87.5°	6.4	6.4	6.4	6.4	6.4	9.6	9.6	9.6	9.6	9.6	9.6
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: MEM2-HTN-SA-110-840-U-T4W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2635.9	2635.9	2635.9	2635.9	2635.9	2635.9	2635.9	2635.9	2635.9	2635.9	2635.9
2.5°	2642.3	2629.5	2603.9	2588.0	2578.4	2565.6	2546.4	2533.6	2524.1	2536.8	2533.6
5°	2639.1	2613.5	2568.8	2536.8	2504.9	2479.3	2450.6	2428.2	2415.4	2421.8	2418.6
7.5°	2639.1	2607.1	2536.8	2485.7	2437.8	2399.4	2367.5	2338.7	2326.0	2329.2	2326.0
10°	2651.9	2607.1	2514.5	2441.0	2377.1	2332.4	2297.2	2271.6	2262.1	2271.6	2274.8
12.5°	2664.6	2607.1	2495.3	2402.6	2319.6	2271.6	2239.7	2223.7	2230.1	2233.3	2236.5
15°	2671.0	2603.9	2476.1	2357.9	2265.3	2214.1	2195.0	2191.8	2207.7	2223.7	2226.9
17.5°	2687.0	2600.7	2447.4	2313.2	2217.3	2175.8	2166.2	2179.0	2210.9	2233.3	2239.7
20°	2706.2	2607.1	2415.4	2258.9	2169.4	2137.5	2153.4	2182.2	2220.5	2252.5	2258.9
22.5°	2725.3	2610.3	2386.7	2210.9	2118.3	2111.9	2147.0	2188.6	2233.3	2265.3	2271.6
25°	2747.7	2610.3	2348.3	2150.2	2067.2	2076.8	2131.1	2185.4	2226.9	2268.5	2274.8
27.5°	2770.1	2616.7	2306.8	2083.1	2003.3	2032.0	2099.1	2166.2	2210.9	2252.5	2262.1
30°	2808.4	2629.5	2271.6	2025.6	1939.4	1977.7	2057.6	2134.3	2182.2	2226.9	2236.5
32.5°	2846.7	2648.7	2242.9	1964.9	1875.5	1920.2	2009.7	2095.9	2147.0	2188.6	2195.0
35°	2897.9	2674.2	2220.5	1904.2	1811.6	1846.7	1942.6	2038.4	2095.9	2127.9	2143.8
37.5°	2952.2	2709.4	2201.4	1849.9	1741.3	1773.2	1875.5	1977.7	2038.4	2070.4	2076.8
40°	3019.3	2757.3	2188.6	1798.8	1674.2	1699.7	1802.0	1913.8	1971.3	1993.7	2006.5
42.5°	3092.8	2808.4	2179.0	1747.7	1600.7	1626.3	1734.9	1843.5	1901.0	1920.2	1929.8
45°	3185.4	2875.5	2172.6	1693.4	1540.0	1562.4	1671.0	1779.6	1827.5	1853.1	1862.7
47.5°	3271.7	2942.6	2153.4	1629.5	1472.9	1504.8	1603.9	1699.7	1754.1	1770.0	1779.6
50°	3357.9	3000.1	2115.1	1559.2	1412.2	1440.9	1530.4	1600.7	1642.2	1661.4	1667.8
52.5°	3441.0	3041.6	2054.4	1485.7	1348.3	1367.5	1440.9	1508.0	1536.8	1543.2	1562.4
55°	3495.3	3064.0	1968.1	1399.4	1284.4	1290.8	1345.1	1405.8	1421.8	1425.0	1425.0
57.5°	3533.7	3051.2	1865.9	1313.1	1220.5	1220.5	1252.4	1300.4	1306.8	1310.0	1316.3
60°	3540.1	3006.5	1734.9	1233.3	1150.2	1140.6	1172.6	1201.3	1204.5	1210.9	1217.3
62.5°	3492.1	2907.5	1594.3	1156.6	1083.1	1060.7	1089.5	1118.3	1134.2	1143.8	1150.2
65°	3345.2	2706.2	1434.6	1079.9	1019.2	980.9	1016.0	1063.9	1095.9	1099.1	1099.1
67.5°	3038.4	2380.3	1265.2	1000.0	942.5	907.4	952.1	1003.2	1041.6	1057.5	1054.4
70°	2575.2	2019.2	1108.7	917.0	865.8	843.5	891.4	948.9	980.9	993.6	1000.0
72.5°	2073.6	1616.7	971.3	833.9	798.8	786.0	833.9	891.4	936.1	955.3	958.5
75°	1613.5	1271.6	856.3	747.6	718.9	722.1	773.2	830.7	878.6	888.2	859.5
77.5°	1252.4	1012.8	747.6	645.4	629.4	651.8	702.9	763.6	792.4	801.9	782.8
80°	904.2	776.4	603.9	508.0	508.0	543.2	587.9	658.2	667.8	655.0	661.4
82.5°	428.1	377.0	297.1	246.0	230.0	255.6	271.6	293.9	319.5	325.9	309.9
85°	57.5	38.3	28.8	32.0	28.8	19.2	12.8	12.8	12.8	9.6	9.6
87.5°	9.6	9.6	6.4	6.4	6.4	6.4	6.4	6.4	3.2	3.2	3.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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

Report Prepared for

Cooper Lighting Solutions

Streetworks

Report Number: SP1-2407-157-8

Test Date: 09/05/2024

Luminaire Tested: MEM2-HTN-SA-30-840-U-5WQ

Data in this report applies to families of products including MEM2-HTN-SA-30-840-U-5WQ

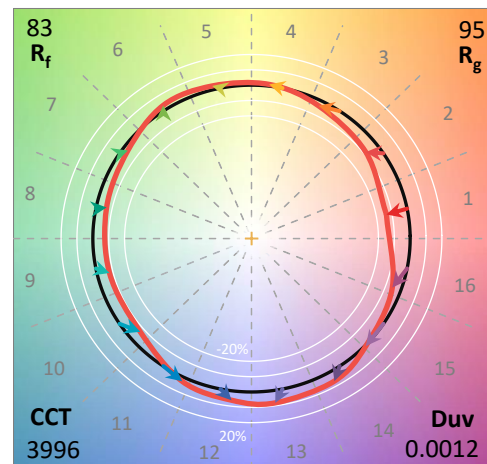
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-157-8
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 09/05/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Streetworks
 Catalog Number: **MEM2-HTN-SA-30-840-U-5WQ**
 Description: Epic Modern Light Square 30W 5WQ Optic

Spectral Parameters

CCT (K): 3996
 CIE u' : 0.2245
 CIE v' : 0.5031
 Duv: 0.0012
 CIE x: 0.3815
 CIE y: 0.3799
 CIE z: 0.2386
 Peak Wavelength (nm): 449
 Dominant Wavelength (nm): 578
 Purity: 28.49233
 R_f: 82.6
 R_g: 95.1

CRI (Ra): 80.6
 R1: 78.1
 R2: 87.1
 R3: 94.5
 R4: 79.7
 R5: 78.7
 R6: 82.7
 R7: 84.3
 R8: 59.5
 R9: -5.8
 R10: 70.3
 R11: 78.7
 R12: 60.5
 R13: 80.2
 R14: 97.2
 R15: 70.6



Test Conditions

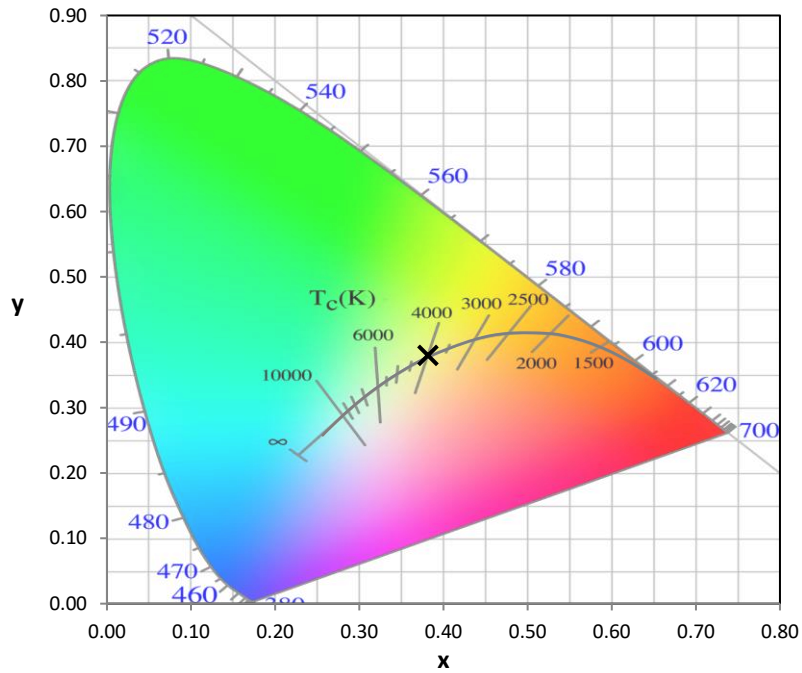
Stabilization Time: 29M
 Operation Time: 1H 29M
 Sphere Temperature (°C): 24.3

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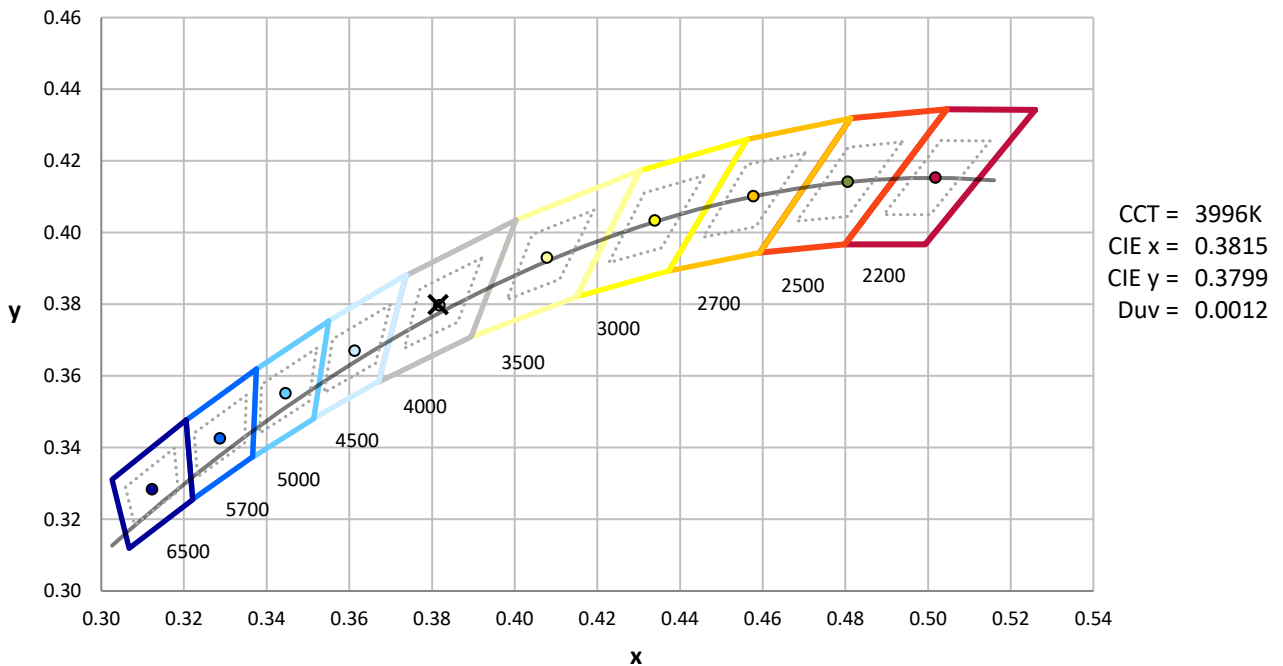
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



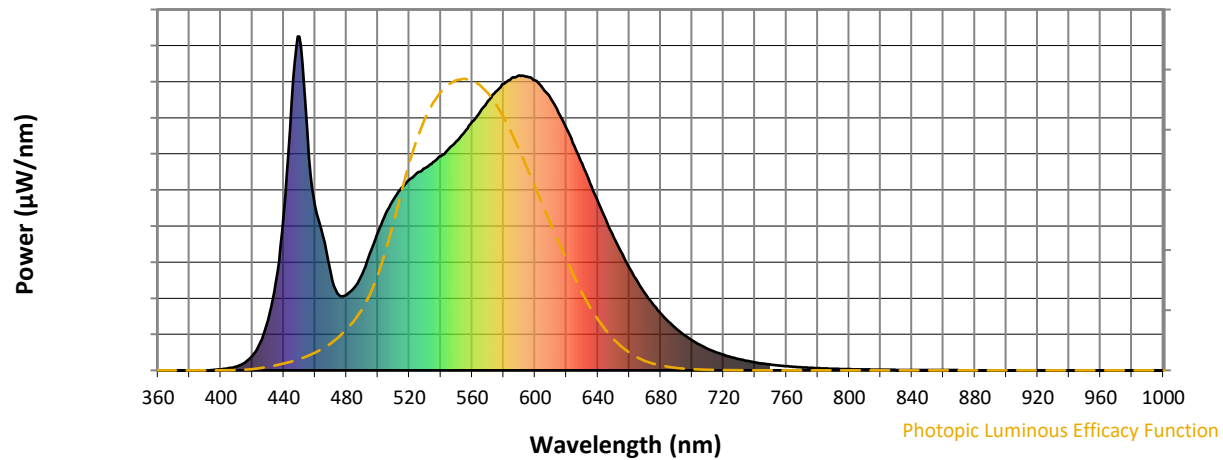
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 4-step quadrangle

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Photopic Flux vs. Wavelength

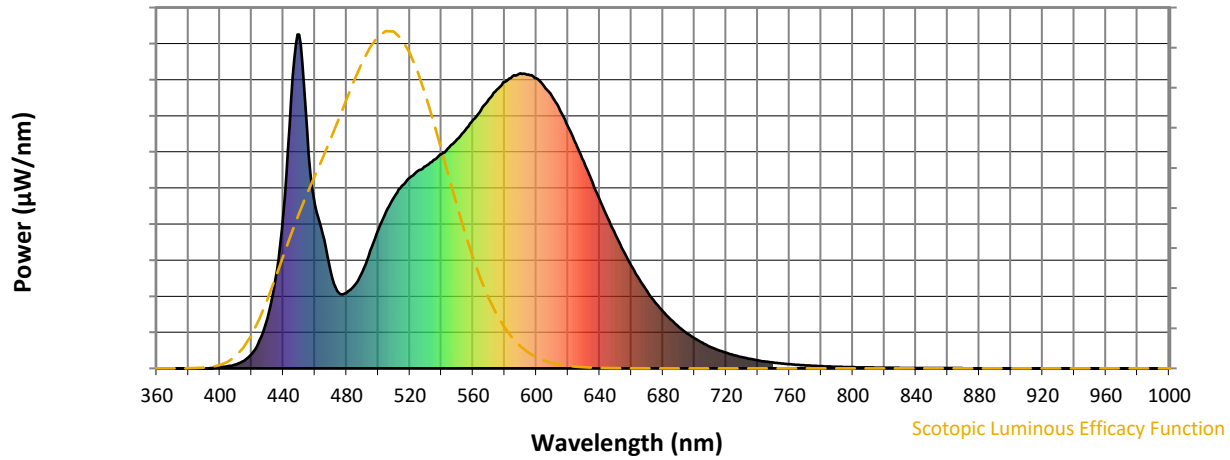


Photopic Lumens: NR

λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)
360	0	NR	490	289	NR	620	725	NR	750	17	NR	880	0	NR
365	0	NR	495	351	NR	625	673	NR	755	15	NR	885	0	NR
370	0	NR	500	414	NR	630	619	NR	760	13	NR	890	0	NR
375	0	NR	505	470	NR	635	562	NR	765	11	NR	895	0	NR
380	0	NR	510	513	NR	640	506	NR	770	9	NR	900	0	NR
385	0	NR	515	546	NR	645	452	NR	775	8	NR	905	0	NR
390	0	NR	520	571	NR	650	400	NR	780	7	NR	910	0	NR
395	1	NR	525	592	NR	655	352	NR	785	6	NR	915	0	NR
400	3	NR	530	606	NR	660	307	NR	790	5	NR	920	0	NR
405	6	NR	535	624	NR	665	267	NR	795	4	NR	925	0	NR
410	12	NR	540	642	NR	670	231	NR	800	4	NR	930	0	NR
415	22	NR	545	663	NR	675	199	NR	805	3	NR	935	0	NR
420	44	NR	550	686	NR	680	171	NR	810	3	NR	940	0	NR
425	83	NR	555	713	NR	685	146	NR	815	2	NR	945	0	NR
430	150	NR	560	745	NR	690	125	NR	820	2	NR	950	0	NR
435	267	NR	565	774	NR	695	106	NR	825	2	NR	955	0	NR
440	466	NR	570	806	NR	700	90	NR	830	1	NR	960	0	NR
445	804	NR	575	835	NR	705	76	NR	835	1	NR	965	0	NR
450	1000	NR	580	858	NR	710	65	NR	840	1	NR	970	0	NR
455	715	NR	585	875	NR	715	55	NR	845	1	NR	975	0	NR
460	492	NR	590	884	NR	720	47	NR	850	1	NR	980	0	NR
465	402	NR	595	880	NR	725	40	NR	855	1	NR	985	0	NR
470	288	NR	600	868	NR	730	34	NR	860	1	NR	990	0	NR
475	226	NR	605	844	NR	735	28	NR	865	1	NR	995	0	NR
480	227	NR	610	814	NR	740	24	NR	870	0	NR	1000	0	NR
485	248	NR	615	771	NR	745	20	NR	875	0	NR			

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Scotopic Flux vs. Wavelength



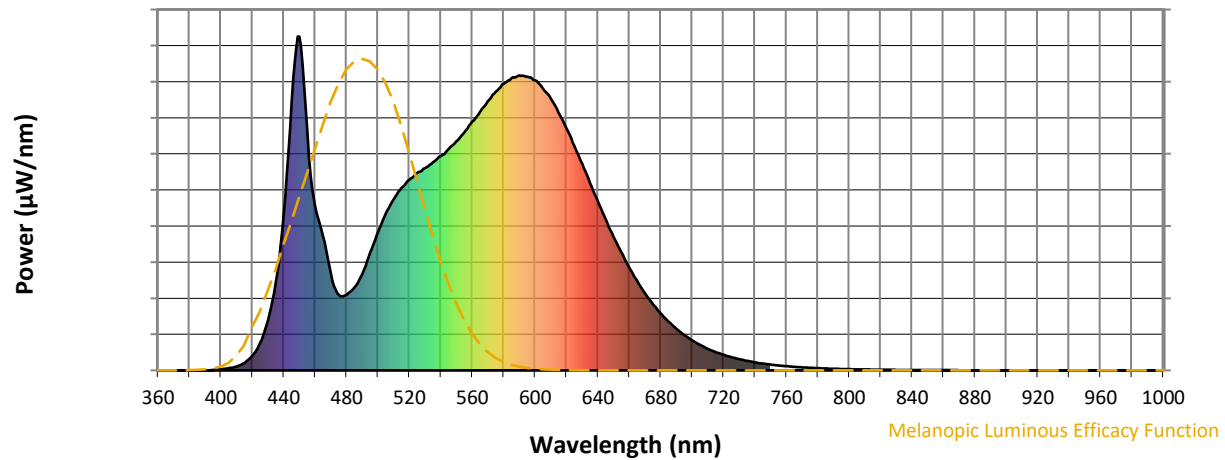
Scotopic Lumens: NR

S/P: 1.66

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	289	NR	620	725	NR	750	17	NR	880	0	NR
365	0	NR	495	351	NR	625	673	NR	755	15	NR	885	0	NR
370	0	NR	500	414	NR	630	619	NR	760	13	NR	890	0	NR
375	0	NR	505	470	NR	635	562	NR	765	11	NR	895	0	NR
380	0	NR	510	513	NR	640	506	NR	770	9	NR	900	0	NR
385	0	NR	515	546	NR	645	452	NR	775	8	NR	905	0	NR
390	0	NR	520	571	NR	650	400	NR	780	7	NR	910	0	NR
395	1	NR	525	592	NR	655	352	NR	785	6	NR	915	0	NR
400	3	NR	530	606	NR	660	307	NR	790	5	NR	920	0	NR
405	6	NR	535	624	NR	665	267	NR	795	4	NR	925	0	NR
410	12	NR	540	642	NR	670	231	NR	800	4	NR	930	0	NR
415	22	NR	545	663	NR	675	199	NR	805	3	NR	935	0	NR
420	44	NR	550	686	NR	680	171	NR	810	3	NR	940	0	NR
425	83	NR	555	713	NR	685	146	NR	815	2	NR	945	0	NR
430	150	NR	560	745	NR	690	125	NR	820	2	NR	950	0	NR
435	267	NR	565	774	NR	695	106	NR	825	2	NR	955	0	NR
440	466	NR	570	806	NR	700	90	NR	830	1	NR	960	0	NR
445	804	NR	575	835	NR	705	76	NR	835	1	NR	965	0	NR
450	1000	NR	580	858	NR	710	65	NR	840	1	NR	970	0	NR
455	715	NR	585	875	NR	715	55	NR	845	1	NR	975	0	NR
460	492	NR	590	884	NR	720	47	NR	850	1	NR	980	0	NR
465	402	NR	595	880	NR	725	40	NR	855	1	NR	985	0	NR
470	288	NR	600	868	NR	730	34	NR	860	1	NR	990	0	NR
475	226	NR	605	844	NR	735	28	NR	865	1	NR	995	0	NR
480	227	NR	610	814	NR	740	24	NR	870	0	NR	1000	0	NR
485	248	NR	615	771	NR	745	20	NR	875	0	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.37

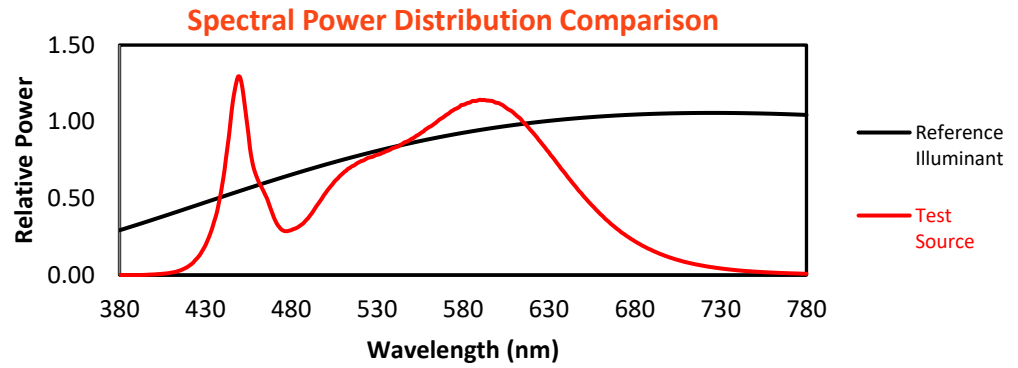
λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)
360	0	NR	490	289	NR	620	725	NR	750	17	NR	880	0	NR
365	0	NR	495	351	NR	625	673	NR	755	15	NR	885	0	NR
370	0	NR	500	414	NR	630	619	NR	760	13	NR	890	0	NR
375	0	NR	505	470	NR	635	562	NR	765	11	NR	895	0	NR
380	0	NR	510	513	NR	640	506	NR	770	9	NR	900	0	NR
385	0	NR	515	546	NR	645	452	NR	775	8	NR	905	0	NR
390	0	NR	520	571	NR	650	400	NR	780	7	NR	910	0	NR
395	1	NR	525	592	NR	655	352	NR	785	6	NR	915	0	NR
400	3	NR	530	606	NR	660	307	NR	790	5	NR	920	0	NR
405	6	NR	535	624	NR	665	267	NR	795	4	NR	925	0	NR
410	12	NR	540	642	NR	670	231	NR	800	4	NR	930	0	NR
415	22	NR	545	663	NR	675	199	NR	805	3	NR	935	0	NR
420	44	NR	550	686	NR	680	171	NR	810	3	NR	940	0	NR
425	83	NR	555	713	NR	685	146	NR	815	2	NR	945	0	NR
430	150	NR	560	745	NR	690	125	NR	820	2	NR	950	0	NR
435	267	NR	565	774	NR	695	106	NR	825	2	NR	955	0	NR
440	466	NR	570	806	NR	700	90	NR	830	1	NR	960	0	NR
445	804	NR	575	835	NR	705	76	NR	835	1	NR	965	0	NR
450	1000	NR	580	858	NR	710	65	NR	840	1	NR	970	0	NR
455	715	NR	585	875	NR	715	55	NR	845	1	NR	975	0	NR
460	492	NR	590	884	NR	720	47	NR	850	1	NR	980	0	NR
465	402	NR	595	880	NR	725	40	NR	855	1	NR	985	0	NR
470	288	NR	600	868	NR	730	34	NR	860	1	NR	990	0	NR
475	226	NR	605	844	NR	735	28	NR	865	1	NR	995	0	NR
480	227	NR	610	814	NR	740	24	NR	870	0	NR	1000	0	NR
485	248	NR	615	771	NR	745	20	NR	875	0	NR			

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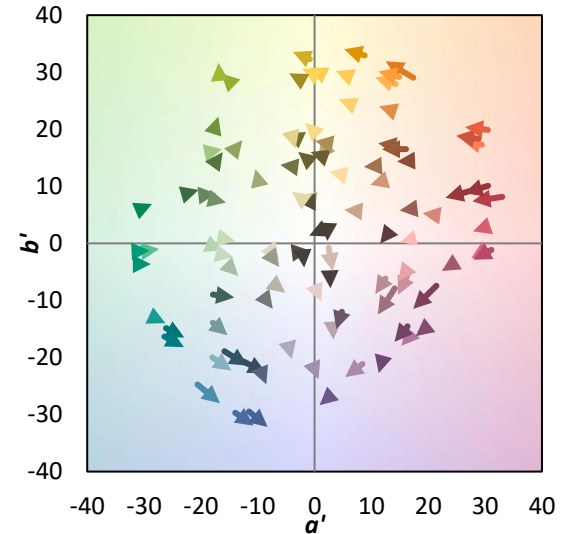
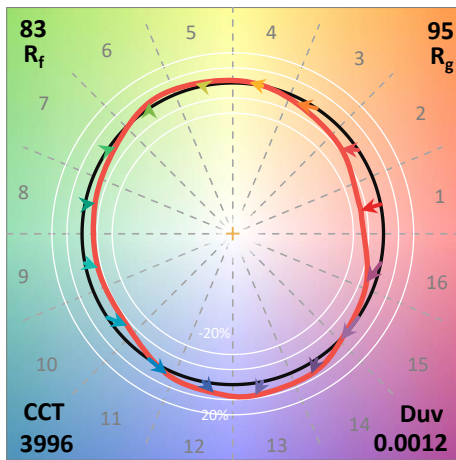
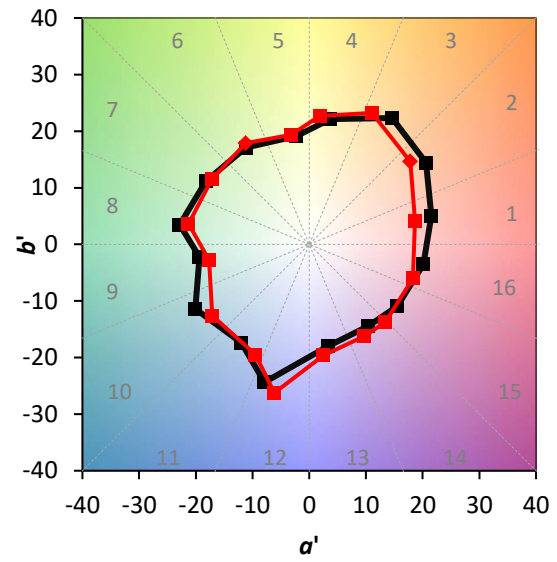
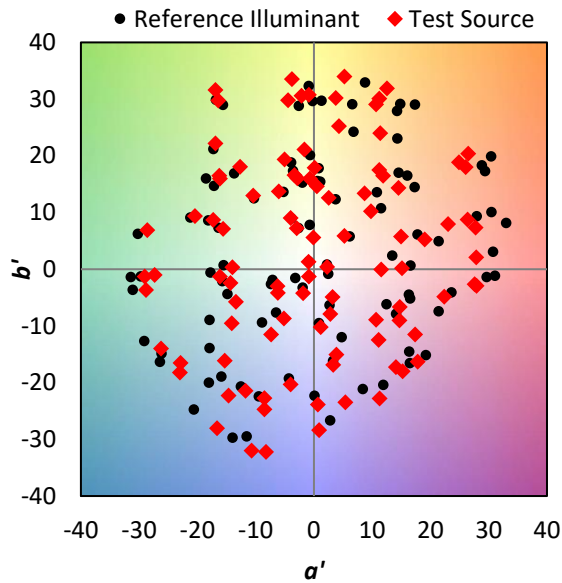
TM-30-18

Summary

$R_f = 82.6$
 $R_g = 95.1$
 $CIE R_a = 80.6$
 $R_g = -5.8$

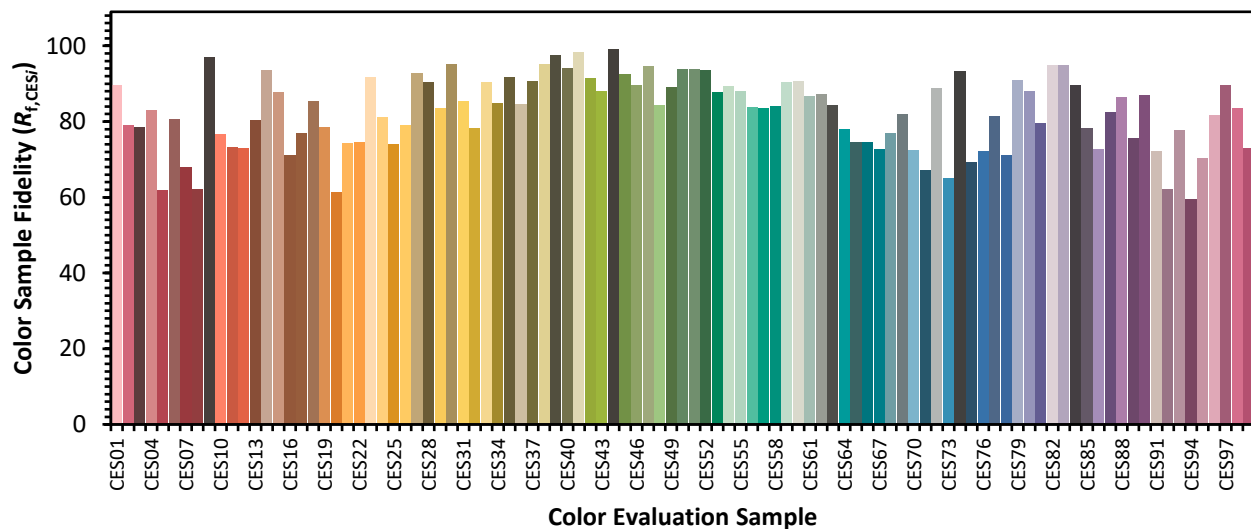


Color Vector Graphics

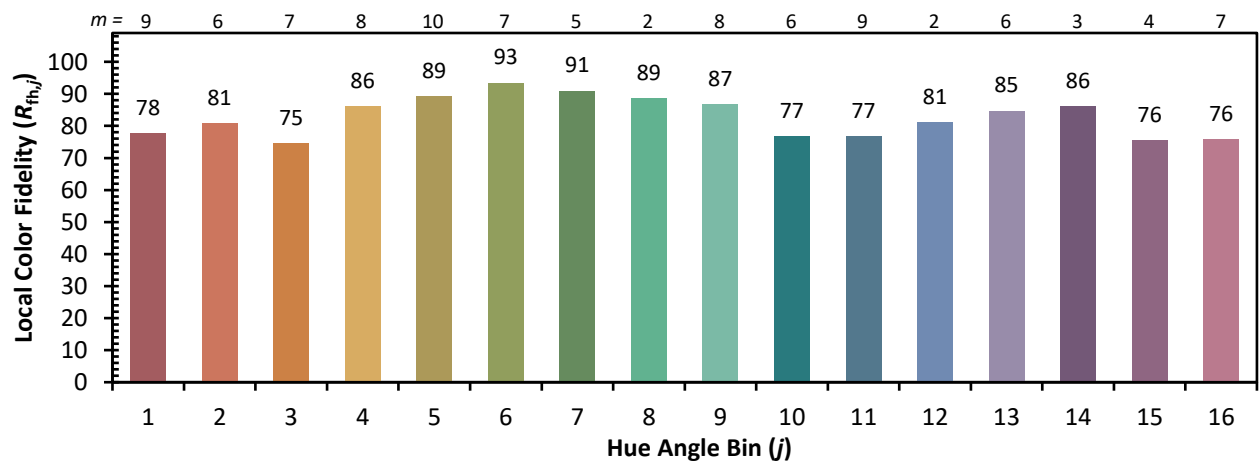
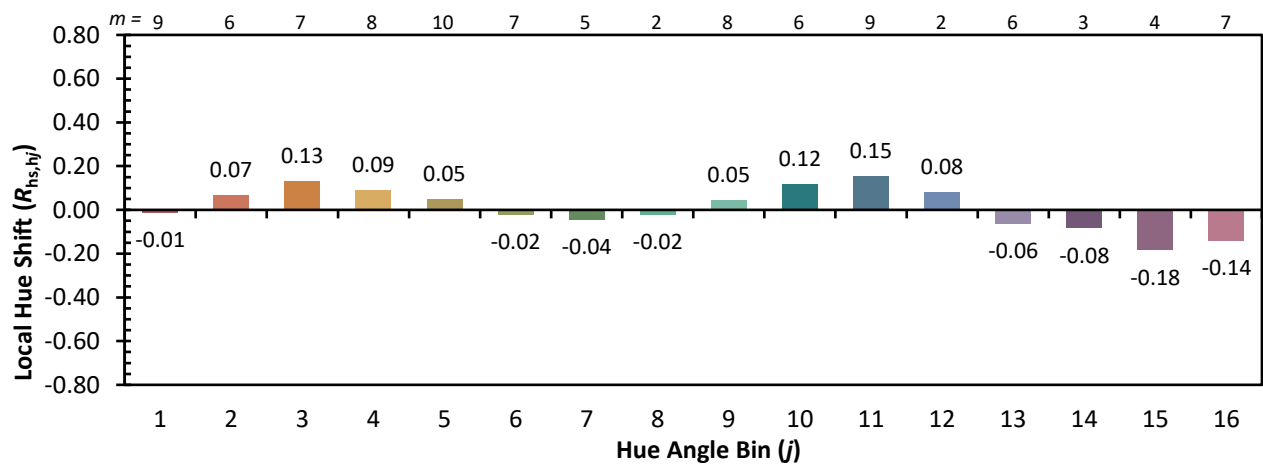
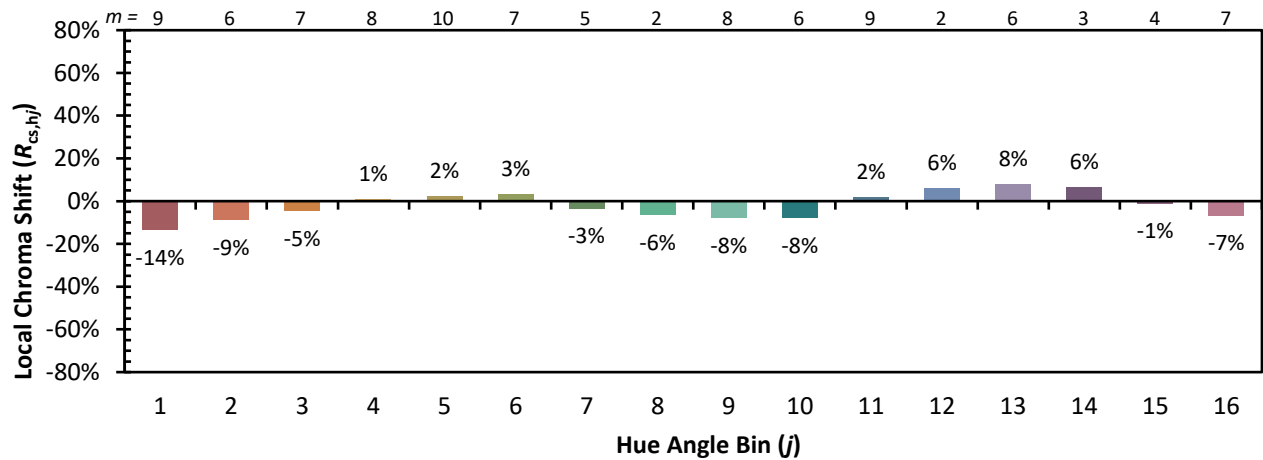


Individual Sample Fidelity Index ($R_{f,i}$)

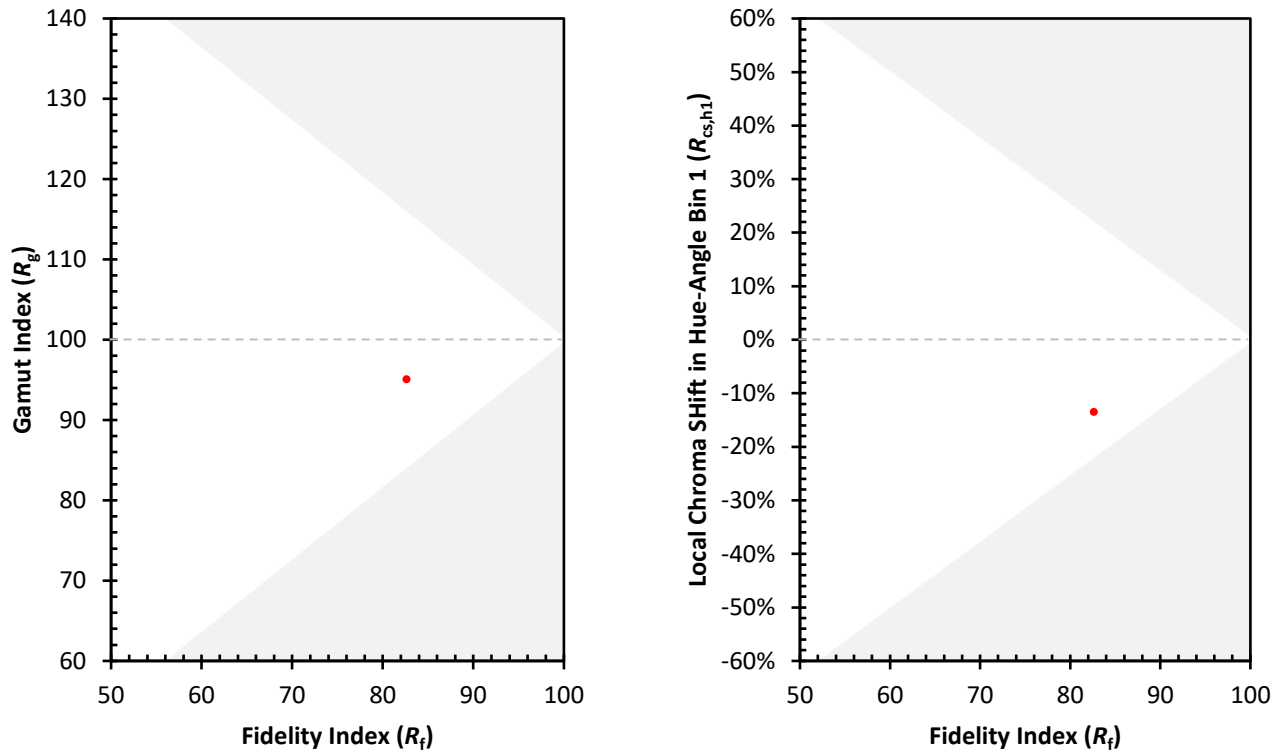
CES01 = 85	CES26 = 79	CES51 = 94	CES76 = 72
CES02 = 61	CES27 = 93	CES52 = 94	CES77 = 82
CES03 = 31	CES28 = 90	CES53 = 88	CES78 = 71
CES04 = 69	CES29 = 83	CES54 = 89	CES79 = 91
CES05 = 48	CES30 = 95	CES55 = 88	CES80 = 88
CES06 = 50	CES31 = 86	CES56 = 84	CES81 = 80
CES07 = 40	CES32 = 78	CES57 = 84	CES82 = 95
CES08 = 39	CES33 = 90	CES58 = 84	CES83 = 95
CES09 = 29	CES34 = 85	CES59 = 90	CES84 = 90
CES10 = 74	CES35 = 92	CES60 = 91	CES85 = 78
CES11 = 57	CES36 = 85	CES61 = 87	CES86 = 73
CES12 = 63	CES37 = 91	CES62 = 87	CES87 = 83
CES13 = 42	CES38 = 95	CES63 = 84	CES88 = 86
CES14 = 74	CES39 = 98	CES64 = 78	CES89 = 76
CES15 = 71	CES40 = 94	CES65 = 75	CES90 = 87
CES16 = 46	CES41 = 98	CES66 = 75	CES91 = 72
CES17 = 49	CES42 = 92	CES67 = 73	CES92 = 62
CES18 = 56	CES43 = 88	CES68 = 77	CES93 = 78
CES19 = 71	CES44 = 99	CES69 = 82	CES94 = 60
CES20 = 65	CES45 = 93	CES70 = 72	CES95 = 70
CES21 = 86	CES46 = 90	CES71 = 67	CES96 = 82
CES22 = 78	CES47 = 95	CES72 = 89	CES97 = 90
CES23 = 91	CES48 = 84	CES73 = 65	CES98 = 84
CES24 = 90	CES49 = 89	CES74 = 93	CES99 = 73
CES25 = 71	CES50 = 94	CES75 = 69	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)