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: P879554

Luminaire Tested: **MEM2-HTN-VA-130-727-U-MQ**

Issue Date: 10/01/2024

Report Generated By 670245763

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

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P879554
Test Lab:	INNOVATION CENTER(G3)
Issue Date:	10/01/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	STREETWORKS
Catalog Number:	MEM2-HTN-VA-130-727-U-MQ
Description:	EPIC MODERN TALL HOUSING 130W 70CRI 2700K VISUAL COMFORT FIXTURE w/ TYPE V MEDIUM DISTRIBUTION OPTIC
Light Source:	(1) 2700K CCT, 70 CRI LEDS
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	13050.3 lumens
Efficiency:	N/A
Efficacy:	100.4 lumens/watt
Luminous Opening:	Circular (Dia: 1.12' x H: 0')
IES Classification:	Type V - Short
BUG Rating:	B3 - U0 - G3

Input Watts (W):	130
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	0.995
Total Harmonic Distortion (THDi):	8.1%
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	24 FT

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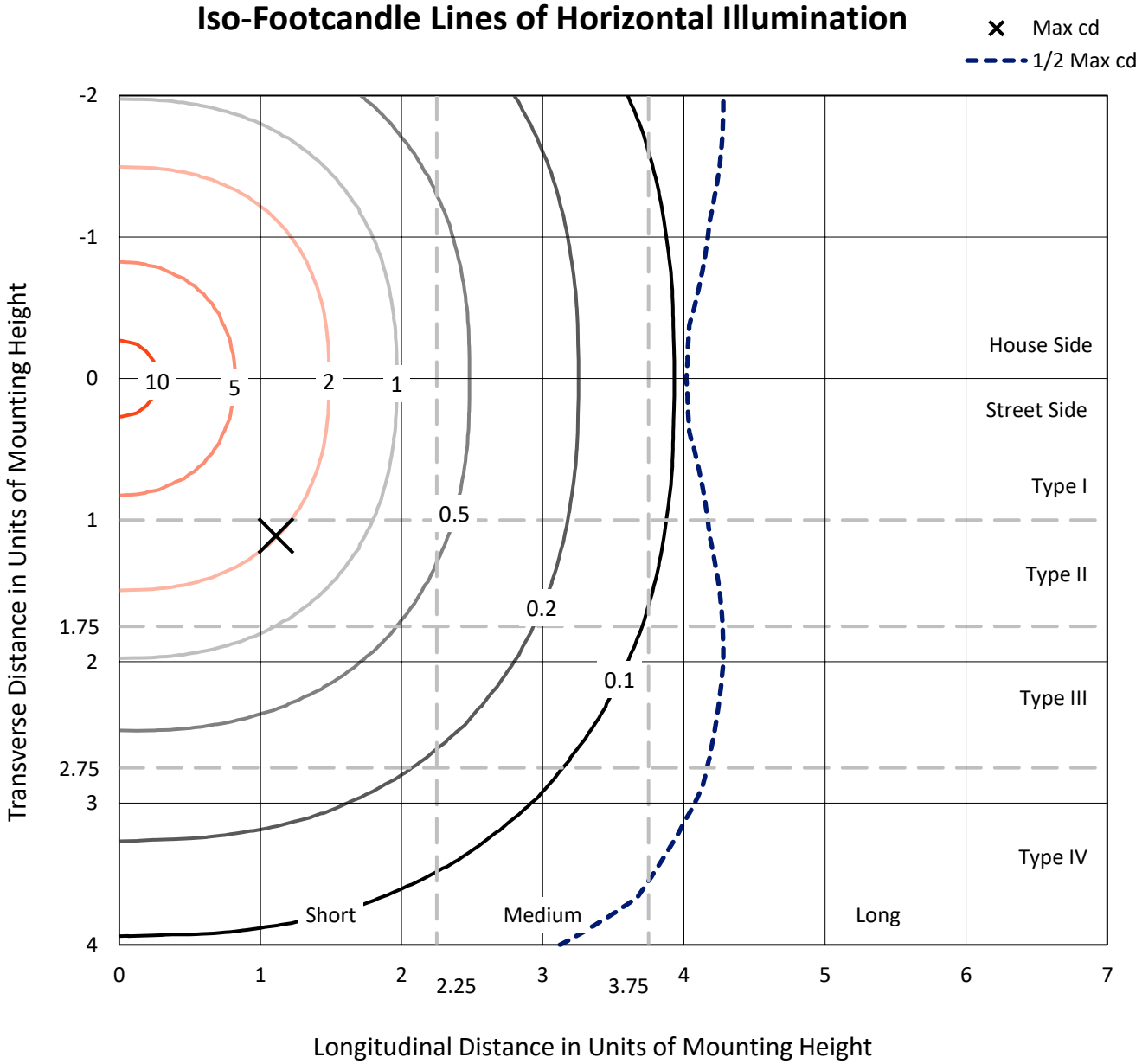
Scaled Data Report

REPORT NUMBER: P879554
CATALOG NUMBER: MEM2-HTN-VA-130-727-U-MQ

Iso-Footcandle Lines of Horizontal Illumination



Based on 15 foot mounting height. Maximum calculated value = 11.7 fc
Type V - Short - N/A

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REPORT NUMBER: P879554
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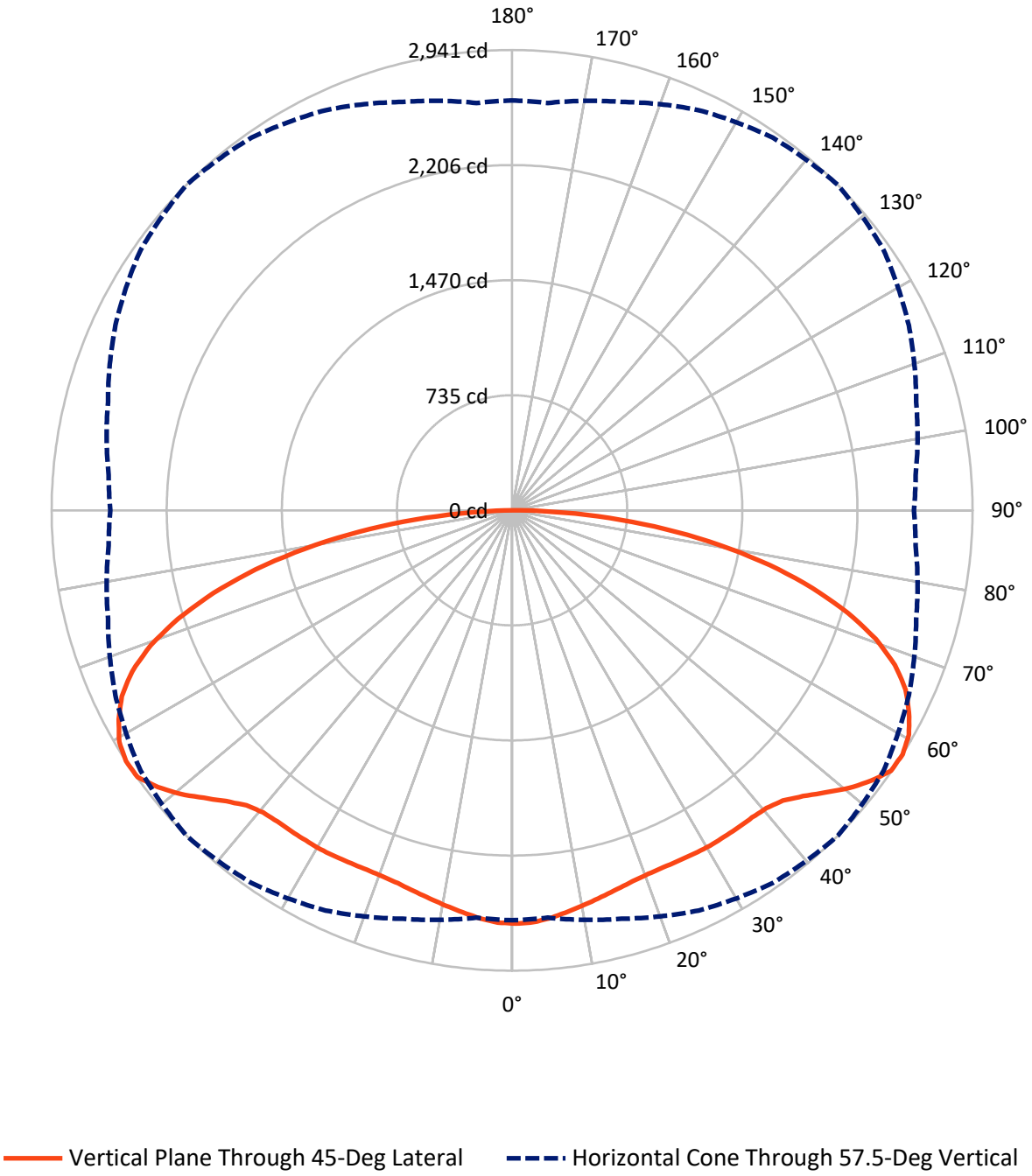
Luminous Intensity Polar Plot



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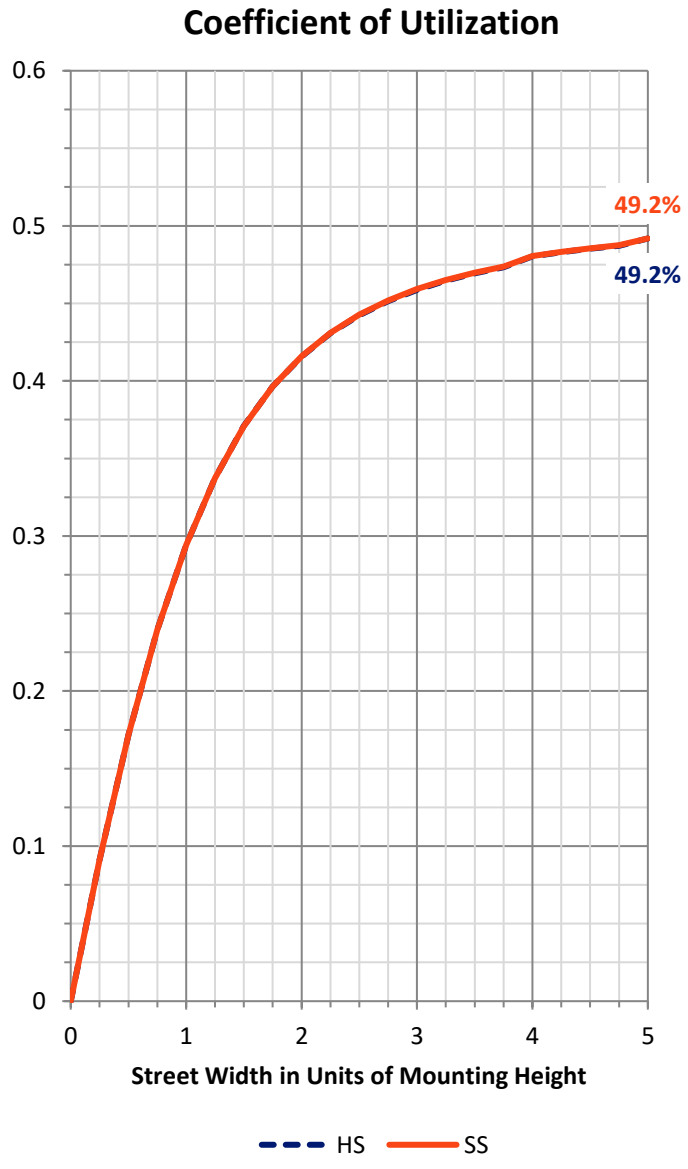
REPORT NUMBER: P879554
CATALOG NUMBER: MEM2-HTN-VA-130-727-U-MQ

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6525.2	0.0	6525.2
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6525.2	0.0	6525.2
	% Fixture	50.0	0.0	50.0
Total	Lumens	13050.3	0.0	13050.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	247.8	1.9
10°-20°	710.4	5.4
20°-30°	1141.6	8.7
30°-40°	1547.5	11.9
40°-50°	1976.4	15.1
50°-60°	2463.4	18.9
60°-70°	2510.2	19.2
70°-80°	1859.9	14.3
80°-90°	593.1	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°	13050.3	100.0
0°-180°	13050.3	100.0



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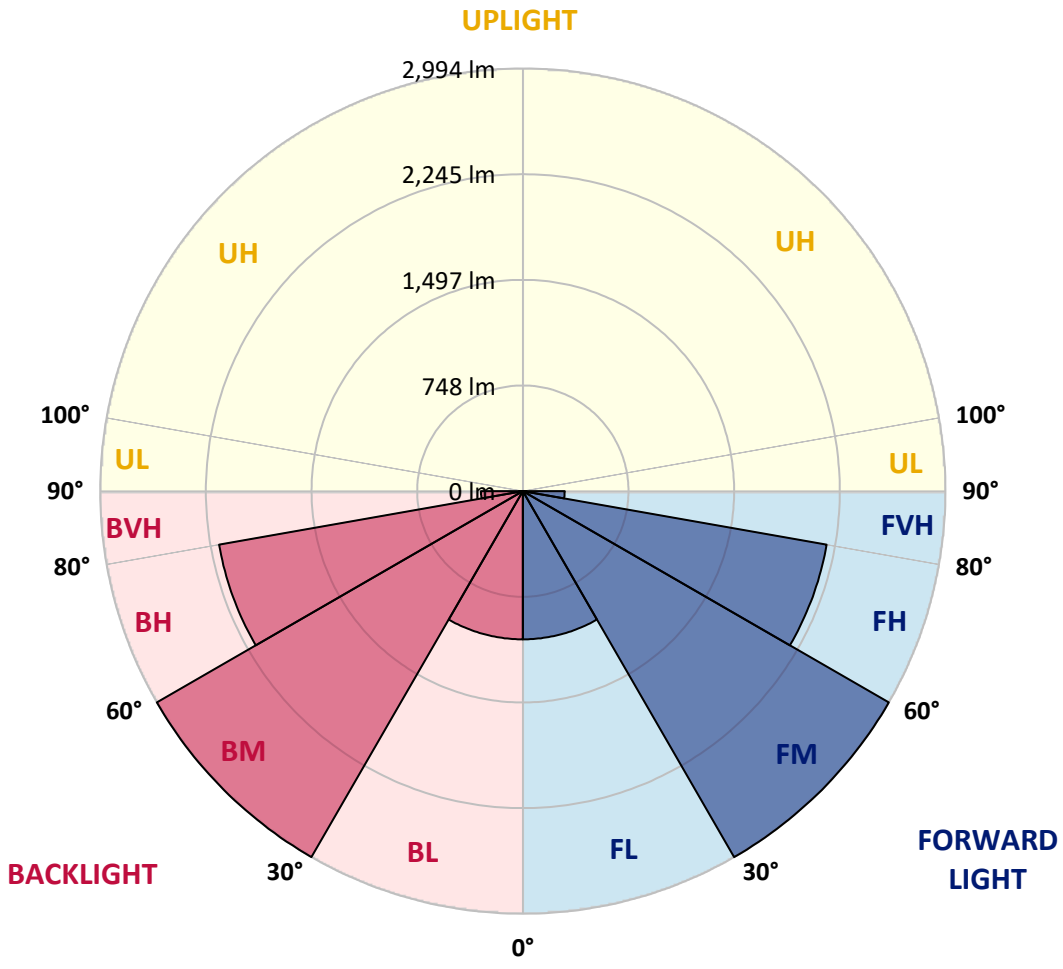
Scaled Data Report

REPORT NUMBER: P879554
CATALOG NUMBER: MEM2-HTN-VA-130-727-U-MQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	1049.9	8.0			
FM	(30°-60°)	2993.7	22.9			
FH	(60°-80°)	2185.1	16.7			G2/5000
FVH	(80°-90°)	296.5	2.3			G3/500
BL	(0°-30°)	1049.9	8.0	B3/2500		
BM	(30°-60°)	2993.7	22.9	B3/5000		
BH	(60°-80°)	2185.1	16.7	B3/2500		G2/5000
BVH	(80°-90°)	296.5	2.3			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3
Type V Short



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REPORT NUMBER: P879554
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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2640.0	2640.0	2640.0	2640.0	2640.0	2640.0	2640.0	2640.0	2640.0	2640.0	2640.0
2.5°	2635.5	2635.5	2634.8	2634.8	2634.2	2634.8	2635.5	2635.5	2634.8	2634.2	2633.5
5°	2616.6	2617.3	2617.3	2616.0	2614.7	2614.7	2614.7	2615.3	2614.0	2614.7	2614.0
7.5°	2589.3	2587.4	2589.3	2588.7	2589.3	2587.4	2590.6	2589.3	2587.4	2588.7	2588.7
10°	2558.8	2559.5	2560.1	2559.5	2561.4	2560.8	2560.1	2559.5	2558.2	2559.5	2557.5
12.5°	2530.2	2530.9	2532.8	2533.5	2535.4	2534.8	2535.4	2534.1	2533.5	2530.9	2530.2
15°	2502.9	2504.2	2506.8	2508.8	2510.7	2511.4	2510.1	2509.4	2506.2	2504.2	2502.9
17.5°	2480.2	2480.2	2484.1	2487.4	2490.6	2491.2	2490.6	2487.4	2482.8	2478.3	2478.9
20°	2464.6	2464.6	2469.2	2474.4	2478.9	2480.2	2478.3	2472.4	2465.3	2462.0	2461.4
22.5°	2457.5	2458.1	2462.7	2468.5	2475.0	2476.3	2472.4	2465.3	2457.5	2451.6	2451.0
25°	2458.1	2456.8	2460.7	2469.8	2477.0	2478.3	2475.0	2465.3	2456.2	2451.0	2449.0
27.5°	2456.2	2456.8	2461.4	2470.5	2479.6	2482.2	2477.0	2465.3	2452.9	2448.4	2447.1
30°	2455.5	2456.2	2457.5	2472.4	2482.8	2487.4	2479.6	2464.0	2453.6	2446.4	2445.8
32.5°	2452.9	2449.7	2458.8	2467.9	2480.9	2486.7	2478.9	2464.6	2447.7	2442.5	2439.9
35°	2442.5	2445.8	2453.6	2469.2	2484.1	2488.0	2478.9	2461.4	2446.4	2436.0	2435.4
37.5°	2440.6	2440.6	2452.9	2469.2	2484.1	2489.9	2482.2	2462.7	2441.9	2428.9	2428.9
40°	2438.0	2437.3	2453.6	2473.7	2493.2	2501.0	2490.6	2466.6	2441.2	2428.9	2422.4
42.5°	2445.1	2449.0	2467.9	2497.1	2521.8	2534.8	2519.8	2493.2	2463.3	2439.9	2439.3
45°	2478.9	2487.4	2506.8	2556.2	2589.3	2604.9	2587.4	2541.3	2494.5	2463.3	2461.4
47.5°	2531.5	2528.9	2575.0	2627.0	2675.7	2692.6	2667.3	2613.4	2545.8	2508.1	2498.4
50°	2567.9	2574.4	2621.8	2697.2	2769.9	2789.4	2752.4	2682.9	2609.5	2557.5	2548.4
52.5°	2617.3	2618.6	2679.0	2774.5	2849.2	2870.6	2834.9	2748.5	2649.8	2584.8	2580.2
55°	2623.1	2644.6	2718.0	2821.9	2911.5	2936.9	2892.7	2800.5	2685.5	2604.9	2597.1
57.5°	2618.6	2612.1	2701.1	2820.6	2905.0	2940.8	2897.3	2795.3	2671.8	2586.7	2566.0
60°	2525.0	2552.3	2650.4	2767.3	2875.8	2911.5	2860.9	2756.9	2621.8	2528.3	2519.8
62.5°	2461.4	2473.1	2562.7	2719.9	2808.9	2844.6	2805.7	2683.5	2539.3	2441.9	2430.2
65°	2362.0	2371.1	2476.3	2605.6	2729.7	2761.5	2711.5	2608.8	2454.2	2347.0	2325.6
67.5°	2203.5	2228.2	2332.1	2496.4	2582.2	2636.8	2591.9	2447.7	2307.4	2202.2	2186.6
70°	2019.0	2052.1	2159.3	2293.8	2436.7	2464.0	2402.3	2304.2	2147.0	2034.6	2007.3
72.5°	1841.0	1843.6	1943.6	2101.5	2191.8	2242.4	2207.4	2078.1	1924.1	1828.6	1811.8
75°	1592.2	1592.8	1702.6	1831.9	1946.2	1979.4	1923.5	1832.5	1695.5	1588.3	1577.9
77.5°	1303.8	1321.3	1418.7	1543.5	1633.8	1681.8	1642.2	1539.6	1411.6	1320.0	1309.6
80°	1022.5	1044.6	1113.4	1225.2	1303.1	1345.3	1302.5	1212.8	1115.4	1025.7	1027.0
82.5°	721.7	738.0	802.9	878.9	954.9	986.1	967.9	901.7	812.7	734.1	712.6
85°	402.8	423.5	467.1	534.0	584.6	624.9	602.2	550.2	472.9	423.5	422.2
87.5°	118.2	128.0	145.5	190.3	238.4	255.9	250.7	237.8	208.5	187.1	173.4
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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LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

Streetworks

Report Number: SP1-2407-176-12

Test Date: 10/23/2024

Luminaire Tested: MEM2-HTN-VA-130-727-U-RW

Data in this report applies to families of products including MEM2-HTN-VA-130-727-U-RW

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

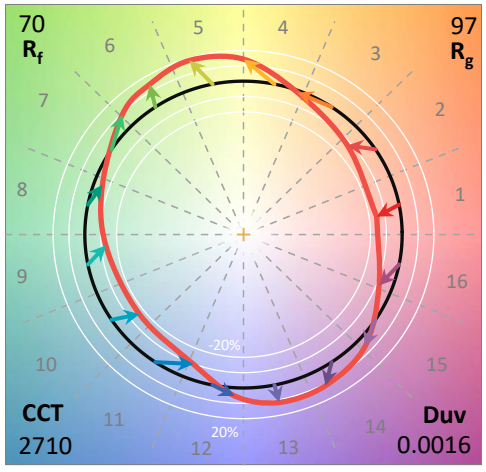
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2407-176-12
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	10/24/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	Streetworks
Catalog Number:	**MEM2-HTN-VA-130-727-U-RW**
Description:	EPIC MODERN VISUAL COMFORT 130W WAVESTREAM RECTANGULAR WIDE

Spectral Parameters

CCT (K):	2710	CRI (Ra):	70.4		
CIE u':	0.2616	R1:	67.3	R9:	-24.6
CIE v':	0.5295	R2:	79.1	R10:	51.3
Duv:	0.0016	R3:	89.5	R11:	61.0
CIE x:	0.4619	R4:	67.6	R12:	41.2
CIE y:	0.4154	R5:	64.7	R13:	68.7
CIE z:	0.1227	R6:	69.6	R14:	93.5
Peak Wavelength (nm):	601	R7:	78.9	R15:	60.6
Dominant Wavelength (nm):	583	R8:	46.2		
Purity:	63.3407				

Rf:	70.4
Rg:	96.7



Test Conditions

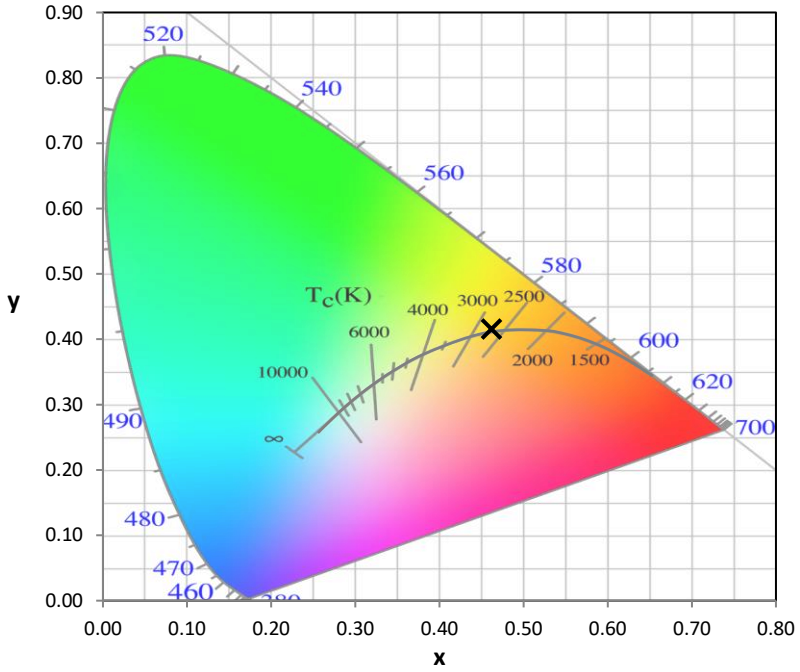
Stabilization Time:	47M
Operation Time:	1H 47M
Sphere Temperature (°C):	24.4

REPORT NUMBER: SP1-2407-176-12

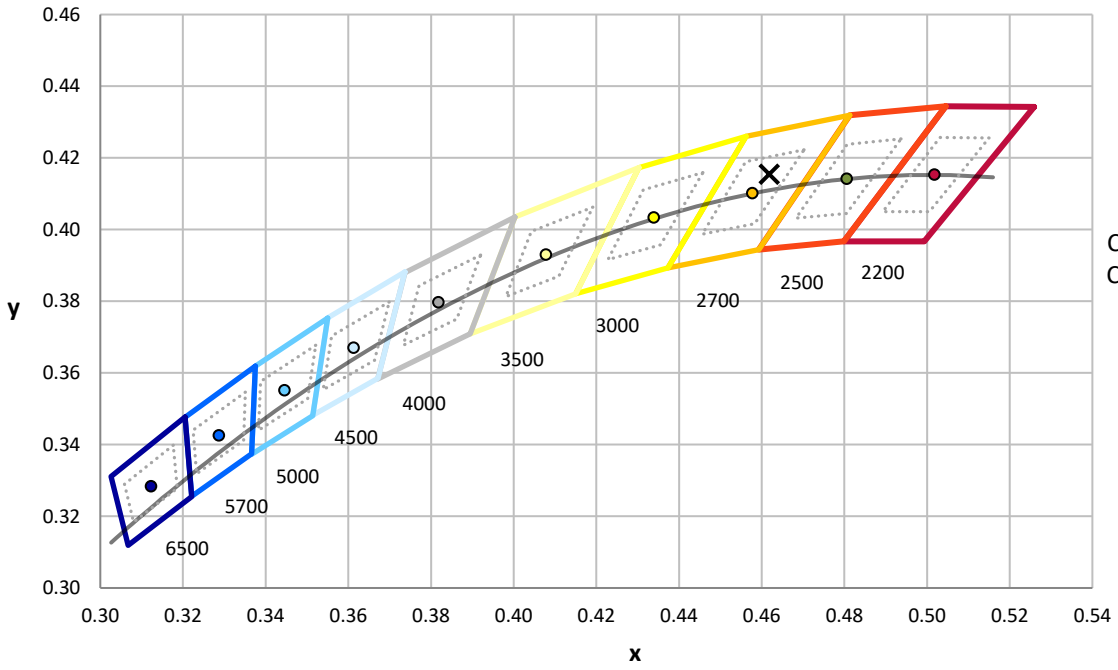
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/22/2024	10/22/2025
DC Power Source	IN0208	10/22/2024	10/22/2025
Sphere Thermometer	IN0085	10/22/2024	10/22/2025
Room Thermometer	IN0046	10/22/2024	10/22/2025

REPORT NUMBER: SP1-2407-176-12

CIE 1931 Chromaticity Diagram



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



CCT = 2710K
CIE x = 0.4619
CIE y = 0.4154
Duv = 0.0016

Point lies inside the ANSI 2700K 4-step quadrangle

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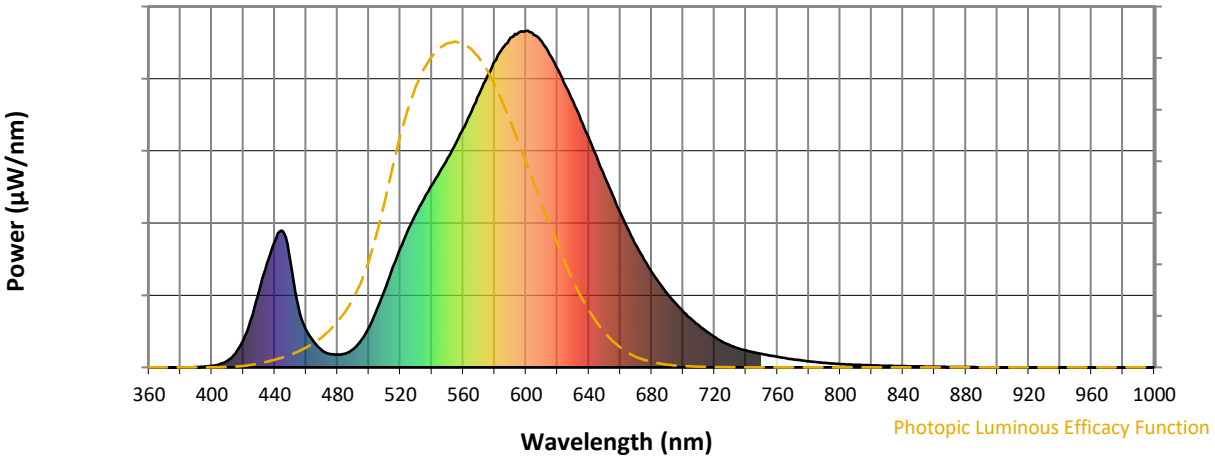
Photopic Flux vs. Wavelength

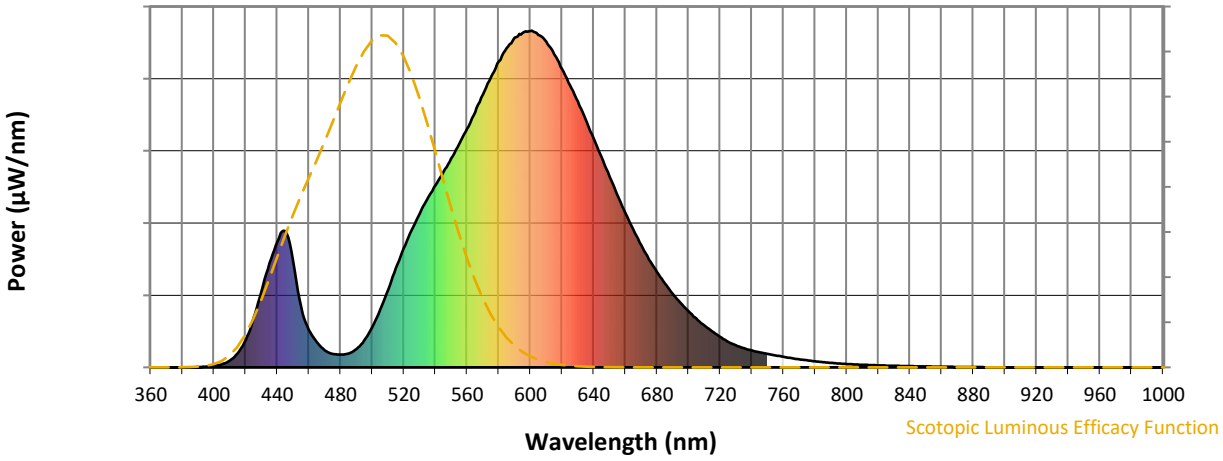


Photopic Lumens: NR

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	54	NR	620	887	NR	750	40	NR	880	1	NR
365	0	NR	495	80	NR	625	838	NR	755	35	NR	885	1	NR
370	0	NR	500	119	NR	630	790	NR	760	31	NR	890	0	NR
375	0	NR	505	171	NR	635	735	NR	765	27	NR	895	0	NR
380	0	NR	510	230	NR	640	681	NR	770	24	NR	900	0	NR
385	0	NR	515	295	NR	645	624	NR	775	21	NR	905	0	NR
390	1	NR	520	354	NR	650	567	NR	780	18	NR	910	0	NR
395	2	NR	525	408	NR	655	512	NR	785	15	NR	915	0	NR
400	5	NR	530	457	NR	660	459	NR	790	13	NR	920	0	NR
405	9	NR	535	500	NR	665	410	NR	795	12	NR	925	0	NR
410	20	NR	540	541	NR	670	363	NR	800	10	NR	930	0	NR
415	42	NR	545	581	NR	675	320	NR	805	9	NR	935	0	NR
420	81	NR	550	620	NR	680	283	NR	810	8	NR	940	0	NR
425	145	NR	555	664	NR	685	249	NR	815	7	NR	945	0	NR
430	225	NR	560	709	NR	690	219	NR	820	6	NR	950	0	NR
435	309	NR	565	758	NR	695	191	NR	825	5	NR	955	0	NR
440	373	NR	570	810	NR	700	166	NR	830	5	NR	960	0	NR
445	405	NR	575	861	NR	705	144	NR	835	4	NR	965	0	NR
450	316	NR	580	908	NR	710	124	NR	840	4	NR	970	0	NR
455	180	NR	585	948	NR	715	106	NR	845	3	NR	975	0	NR
460	111	NR	590	978	NR	720	90	NR	850	3	NR	980	0	NR
465	75	NR	595	993	NR	725	76	NR	855	2	NR	985	0	NR
470	50	NR	600	999	NR	730	65	NR	860	2	NR	990	0	NR
475	40	NR	605	988	NR	735	57	NR	865	2	NR	995	0	NR
480	38	NR	610	967	NR	740	50	NR	870	1	NR	1000	0	NR
485	41	NR	615	930	NR	745	45	NR	875	1	NR			

REPORT NUMBER: SP1-2407-176-12

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR **S/P: 1.02**

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	54	NR	620	887	NR	750	40	NR	880	1	NR
365	0	NR	495	80	NR	625	838	NR	755	35	NR	885	1	NR
370	0	NR	500	119	NR	630	790	NR	760	31	NR	890	0	NR
375	0	NR	505	171	NR	635	735	NR	765	27	NR	895	0	NR
380	0	NR	510	230	NR	640	681	NR	770	24	NR	900	0	NR
385	0	NR	515	295	NR	645	624	NR	775	21	NR	905	0	NR
390	1	NR	520	354	NR	650	567	NR	780	18	NR	910	0	NR
395	2	NR	525	408	NR	655	512	NR	785	15	NR	915	0	NR
400	5	NR	530	457	NR	660	459	NR	790	13	NR	920	0	NR
405	9	NR	535	500	NR	665	410	NR	795	12	NR	925	0	NR
410	20	NR	540	541	NR	670	363	NR	800	10	NR	930	0	NR
415	42	NR	545	581	NR	675	320	NR	805	9	NR	935	0	NR
420	81	NR	550	620	NR	680	283	NR	810	8	NR	940	0	NR
425	145	NR	555	664	NR	685	249	NR	815	7	NR	945	0	NR
430	225	NR	560	709	NR	690	219	NR	820	6	NR	950	0	NR
435	309	NR	565	758	NR	695	191	NR	825	5	NR	955	0	NR
440	373	NR	570	810	NR	700	166	NR	830	5	NR	960	0	NR
445	405	NR	575	861	NR	705	144	NR	835	4	NR	965	0	NR
450	316	NR	580	908	NR	710	124	NR	840	4	NR	970	0	NR
455	180	NR	585	948	NR	715	106	NR	845	3	NR	975	0	NR
460	111	NR	590	978	NR	720	90	NR	850	3	NR	980	0	NR
465	75	NR	595	993	NR	725	76	NR	855	2	NR	985	0	NR
470	50	NR	600	999	NR	730	65	NR	860	2	NR	990	0	NR
475	40	NR	605	988	NR	735	57	NR	865	2	NR	995	0	NR
480	38	NR	610	967	NR	740	50	NR	870	1	NR	1000	0	NR
485	41	NR	615	930	NR	745	45	NR	875	1	NR			

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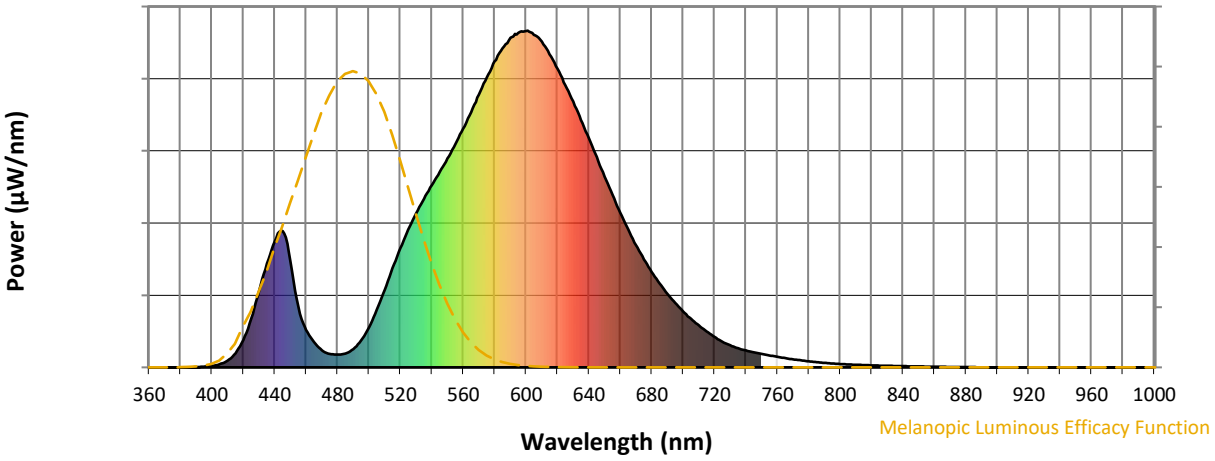
Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 1.71**

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	54	NR	620	887	NR	750	40	NR	880	1	NR
365	0	NR	495	80	NR	625	838	NR	755	35	NR	885	1	NR
370	0	NR	500	119	NR	630	790	NR	760	31	NR	890	0	NR
375	0	NR	505	171	NR	635	735	NR	765	27	NR	895	0	NR
380	0	NR	510	230	NR	640	681	NR	770	24	NR	900	0	NR
385	0	NR	515	295	NR	645	624	NR	775	21	NR	905	0	NR
390	1	NR	520	354	NR	650	567	NR	780	18	NR	910	0	NR
395	2	NR	525	408	NR	655	512	NR	785	15	NR	915	0	NR
400	5	NR	530	457	NR	660	459	NR	790	13	NR	920	0	NR
405	9	NR	535	500	NR	665	410	NR	795	12	NR	925	0	NR
410	20	NR	540	541	NR	670	363	NR	800	10	NR	930	0	NR
415	42	NR	545	581	NR	675	320	NR	805	9	NR	935	0	NR
420	81	NR	550	620	NR	680	283	NR	810	8	NR	940	0	NR
425	145	NR	555	664	NR	685	249	NR	815	7	NR	945	0	NR
430	225	NR	560	709	NR	690	219	NR	820	6	NR	950	0	NR
435	309	NR	565	758	NR	695	191	NR	825	5	NR	955	0	NR
440	373	NR	570	810	NR	700	166	NR	830	5	NR	960	0	NR
445	405	NR	575	861	NR	705	144	NR	835	4	NR	965	0	NR
450	316	NR	580	908	NR	710	124	NR	840	4	NR	970	0	NR
455	180	NR	585	948	NR	715	106	NR	845	3	NR	975	0	NR
460	111	NR	590	978	NR	720	90	NR	850	3	NR	980	0	NR
465	75	NR	595	993	NR	725	76	NR	855	2	NR	985	0	NR
470	50	NR	600	999	NR	730	65	NR	860	2	NR	990	0	NR
475	40	NR	605	988	NR	735	57	NR	865	2	NR	995	0	NR
480	38	NR	610	967	NR	740	50	NR	870	1	NR	1000	0	NR
485	41	NR	615	930	NR	745	45	NR	875	1	NR			

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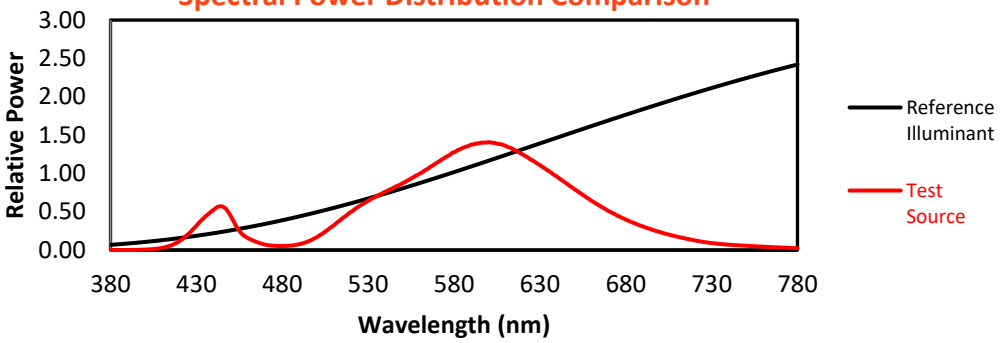
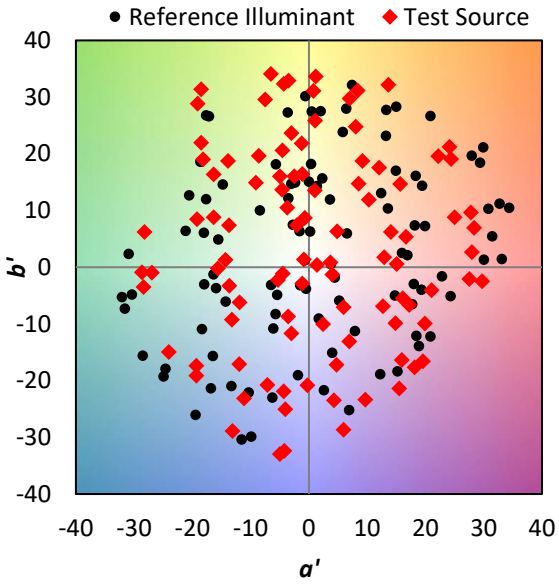
Summary

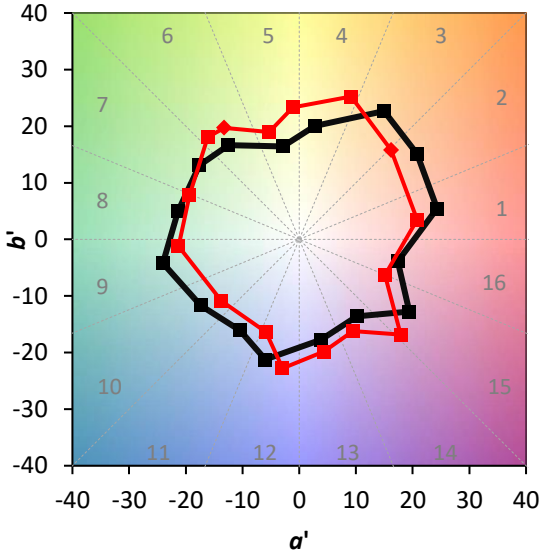
R_f = 70.4
R_g = 96.7
CIE R_a = 70.4
R_9 = -24.6

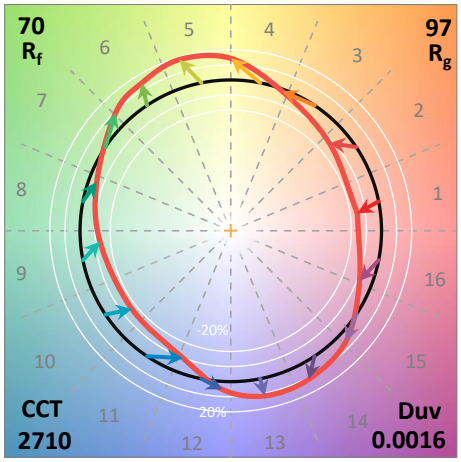
Spectral Power Distribution Comparison

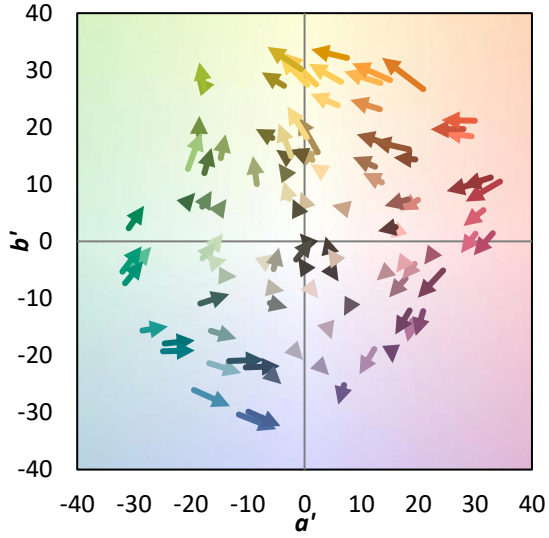


Color Vector Graphics









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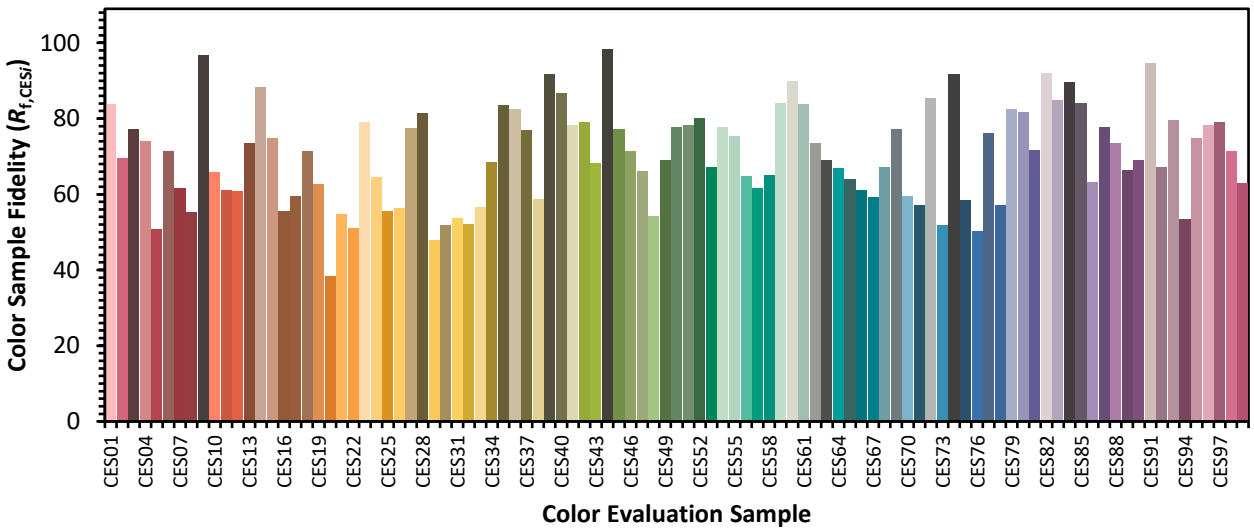
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 56	CES51 = 78	CES76 = 50
CES02 = 63	CES27 = 77	CES52 = 80	CES77 = 76
CES03 = 31	CES28 = 81	CES53 = 67	CES78 = 57
CES04 = 71	CES29 = 48	CES54 = 78	CES79 = 82
CES05 = 50	CES30 = 52	CES55 = 75	CES80 = 82
CES06 = 52	CES31 = 54	CES56 = 65	CES81 = 72
CES07 = 42	CES32 = 52	CES57 = 62	CES82 = 92
CES08 = 41	CES33 = 57	CES58 = 65	CES83 = 85
CES09 = 29	CES34 = 69	CES59 = 84	CES84 = 90
CES10 = 77	CES35 = 84	CES60 = 90	CES85 = 84
CES11 = 60	CES36 = 82	CES61 = 84	CES86 = 63
CES12 = 66	CES37 = 77	CES62 = 73	CES87 = 78
CES13 = 43	CES38 = 59	CES63 = 69	CES88 = 74
CES14 = 74	CES39 = 92	CES64 = 67	CES89 = 66
CES15 = 71	CES40 = 87	CES65 = 64	CES90 = 69
CES16 = 48	CES41 = 78	CES66 = 61	CES91 = 95
CES17 = 51	CES42 = 79	CES67 = 59	CES92 = 67
CES18 = 57	CES43 = 68	CES68 = 67	CES93 = 80
CES19 = 73	CES44 = 98	CES69 = 77	CES94 = 54
CES20 = 67	CES45 = 77	CES70 = 60	CES95 = 75
CES21 = 88	CES46 = 71	CES71 = 57	CES96 = 78
CES22 = 80	CES47 = 66	CES72 = 85	CES97 = 79
CES23 = 92	CES48 = 54	CES73 = 52	CES98 = 71
CES24 = 92	CES49 = 69	CES74 = 92	CES99 = 63
CES25 = 73	CES50 = 78	CES75 = 58	



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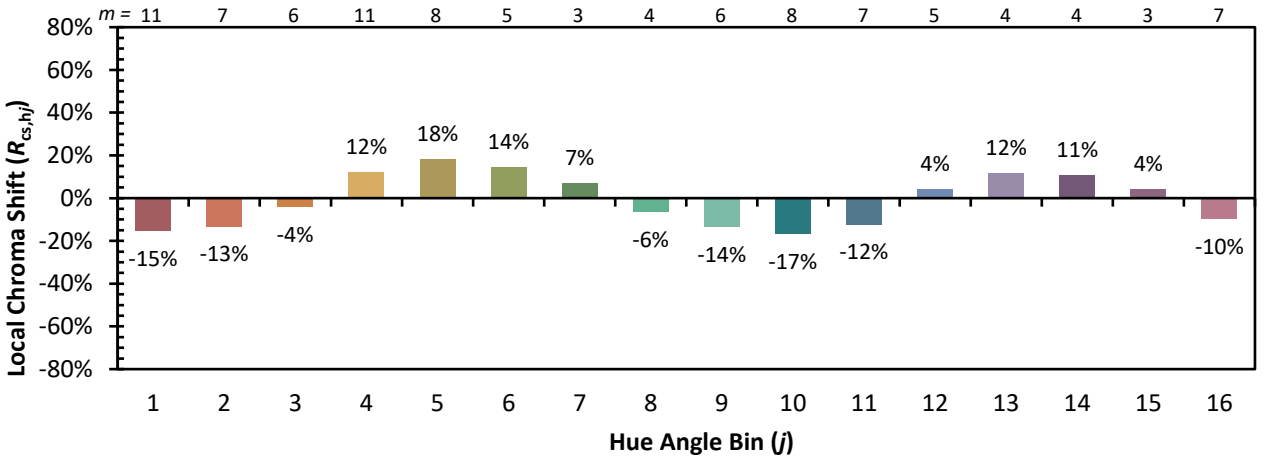
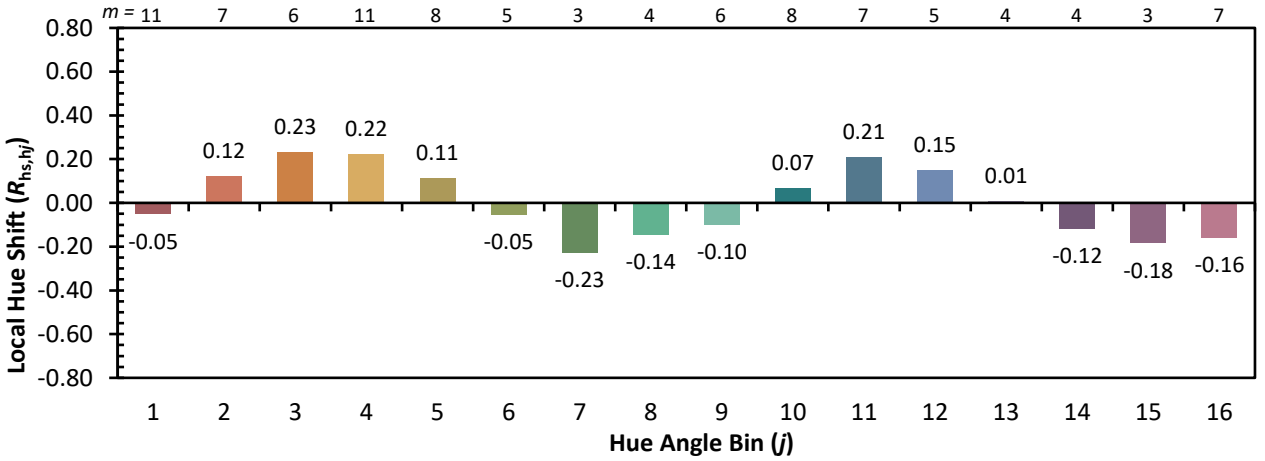
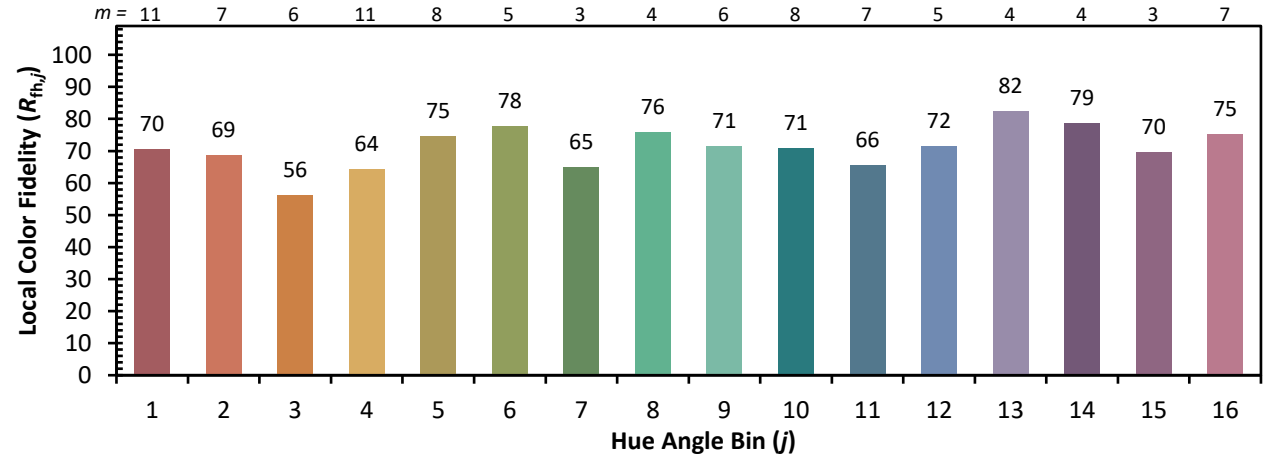
Color Rendition by Hue-Angle Bin







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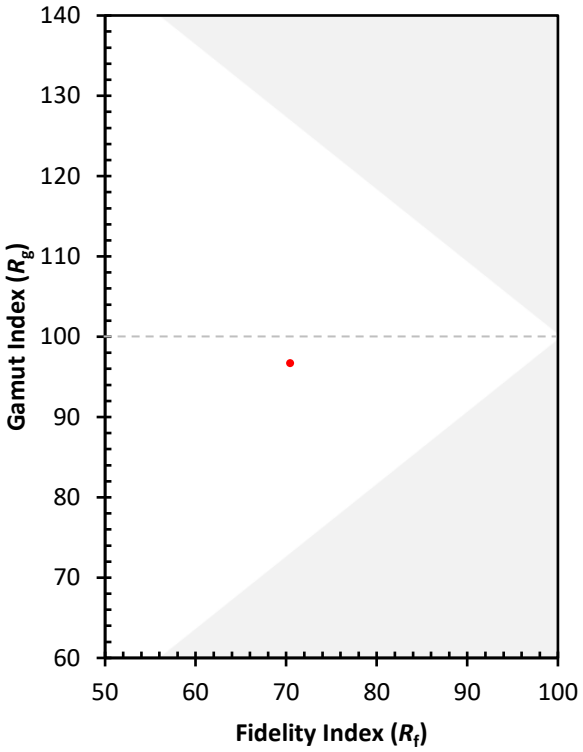
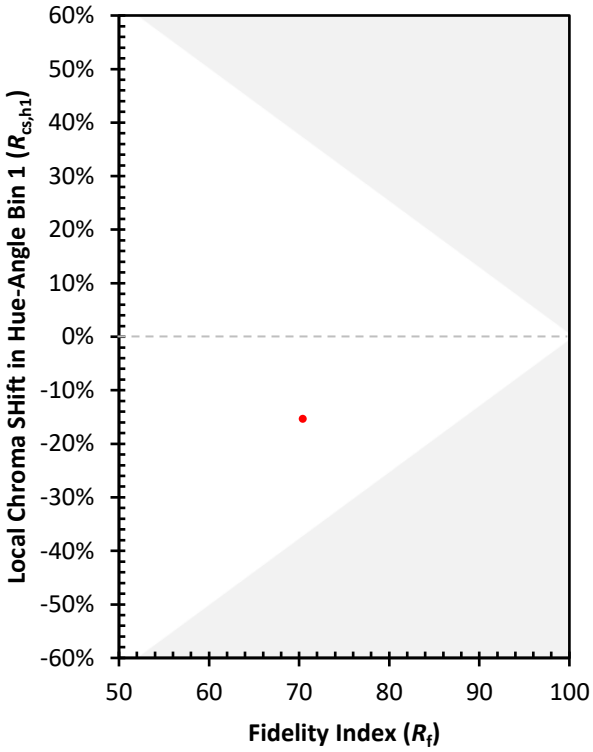
Measure Comparisons





(END OF REPORT)