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: P879610

Luminaire Tested: **MEM2-HSN-VA-170-727-U-CQ**

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:	P879610
Test Lab:	INNOVATION CENTER(G3)
Issue Date:	10/01/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	STREETWORKS
Catalog Number:	MEM2-HSN-VA-170-727-U-CQ
Description:	EPIC MODERN SHORT HOUSING 170W 70CRI 2700K VISUAL COMFORT FIXTURE w/ TYPE V CONCENTRATED DISTRIBUTION OPTIC
Light Source:	(1) 2700K CCT, 70 CRI LEDS
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	13405.4 lumens
Efficiency:	N/A
Efficacy:	78.9 lumens/watt
Luminous Opening:	Circular (Dia: 1.12' x H: 0')
IES Classification:	Type V - Short
BUG Rating:	B3 - U0 - G2

Input Watts (W):	170
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	0.995
Total Harmonic Distortion (THDi):	5.9%
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	24 FT

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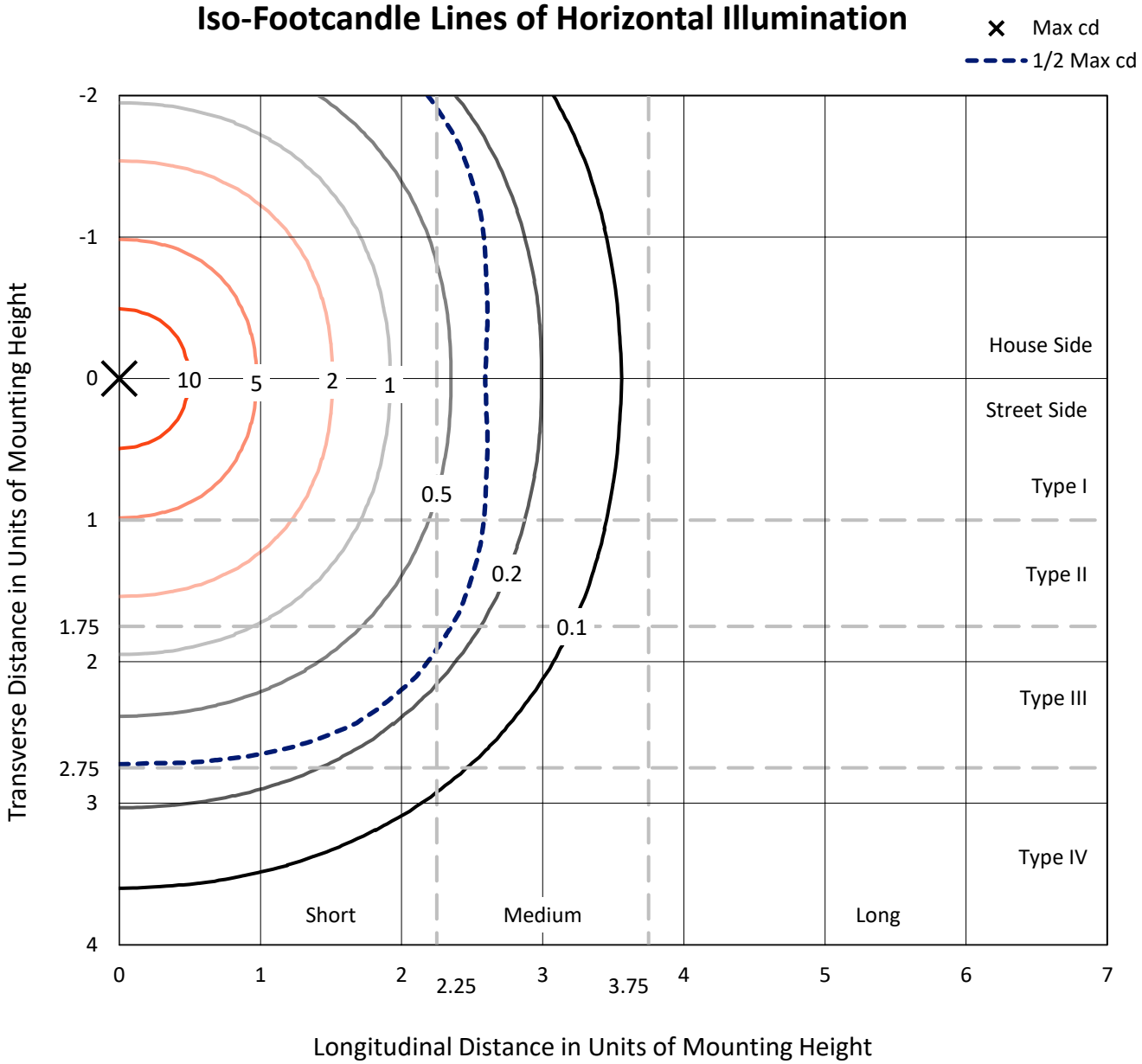
REPORT NUMBER: P879610
CATALOG NUMBER: MEM2-HSN-VA-170-727-U-CQ

Iso-Footcandle Lines of Horizontal Illumination



Based on 15 foot mounting height. Maximum calculated value = 14.9 fc
Type V - Short - N/A

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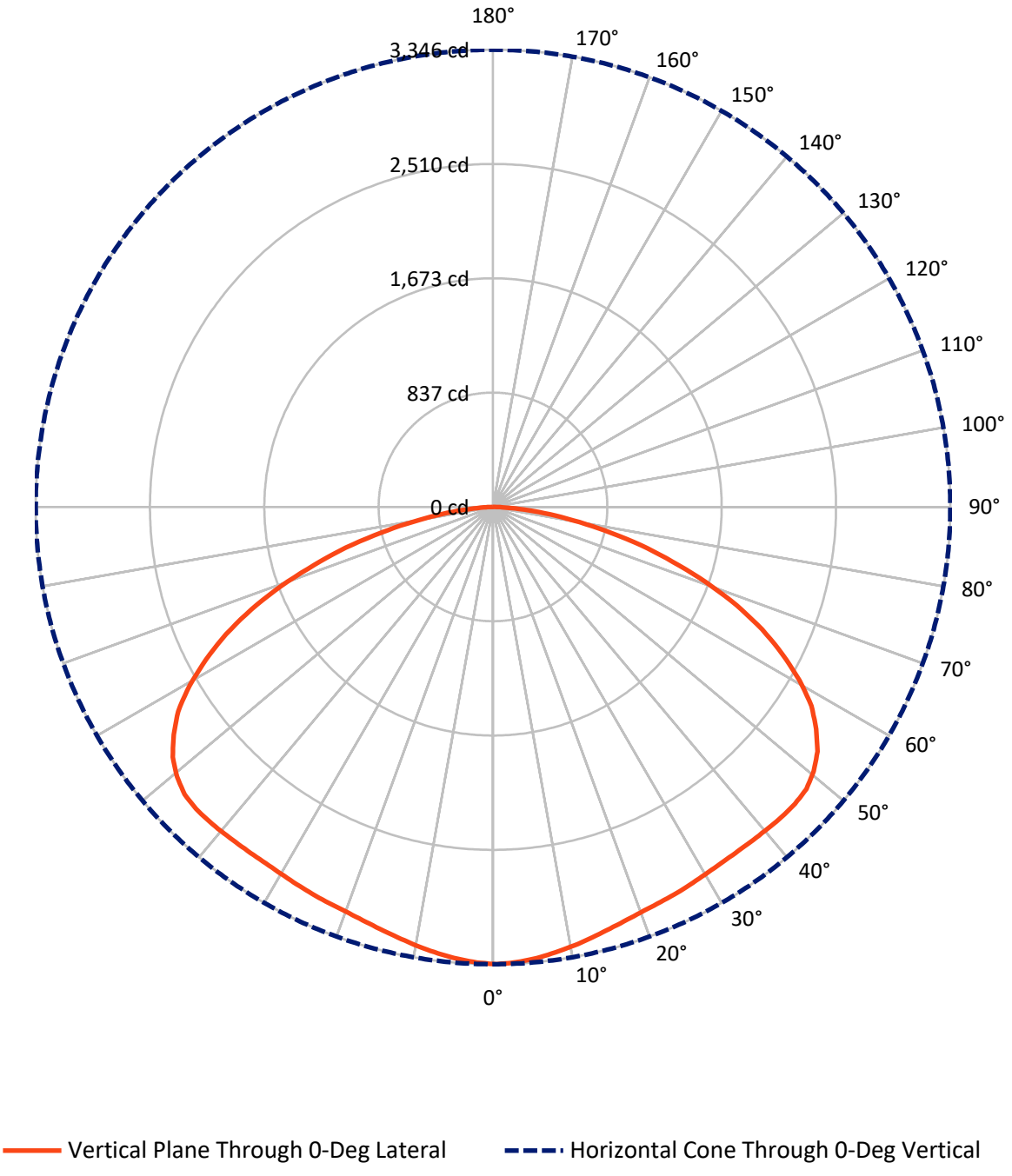
Luminous Intensity Polar Plot



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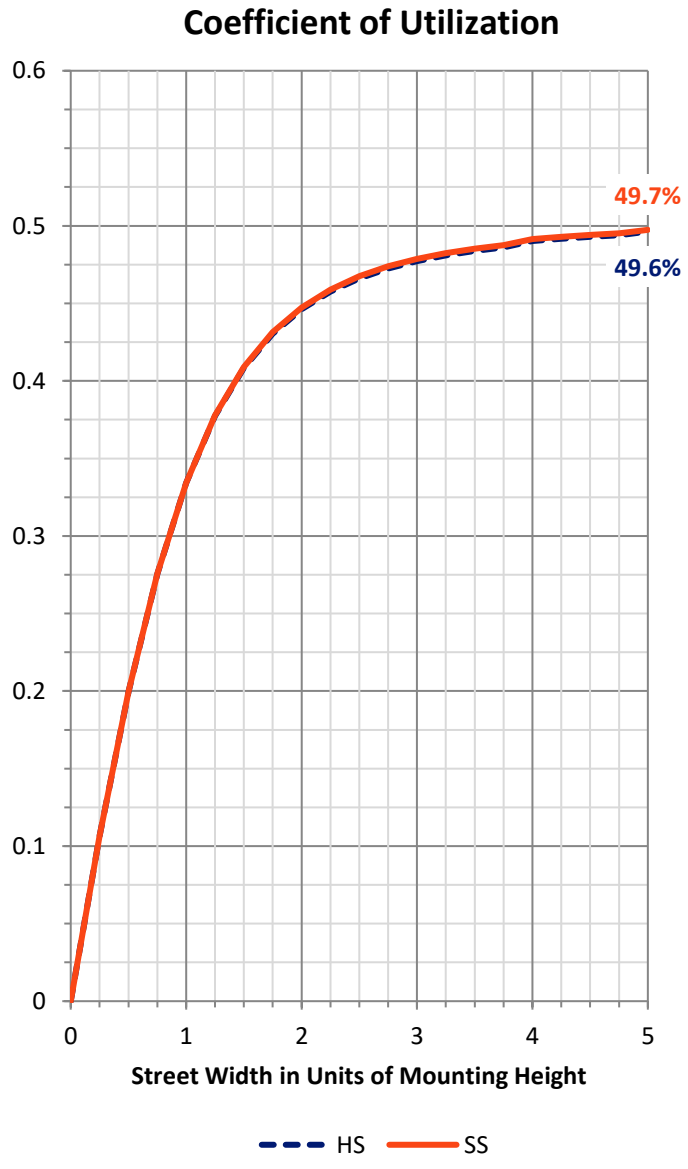
REPORT NUMBER: P879610
CATALOG NUMBER: MEM2-HSN-VA-170-727-U-CQ

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6702.7	0.0	6702.7
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6702.7	0.0	6702.7
	% Fixture	50.0	0.0	50.0
Total	Lumens	13405.4	0.0	13405.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	315.3	2.4
10°-20°	909.8	6.8
20°-30°	1456.7	10.9
30°-40°	1973.3	14.7
40°-50°	2436.9	18.2
50°-60°	2618.2	19.5
60°-70°	2201.7	16.4
70°-80°	1229.4	9.2
80°-90°	264.2	2.0
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°	13405.4	100.0
0°-180°	13405.4	100.0



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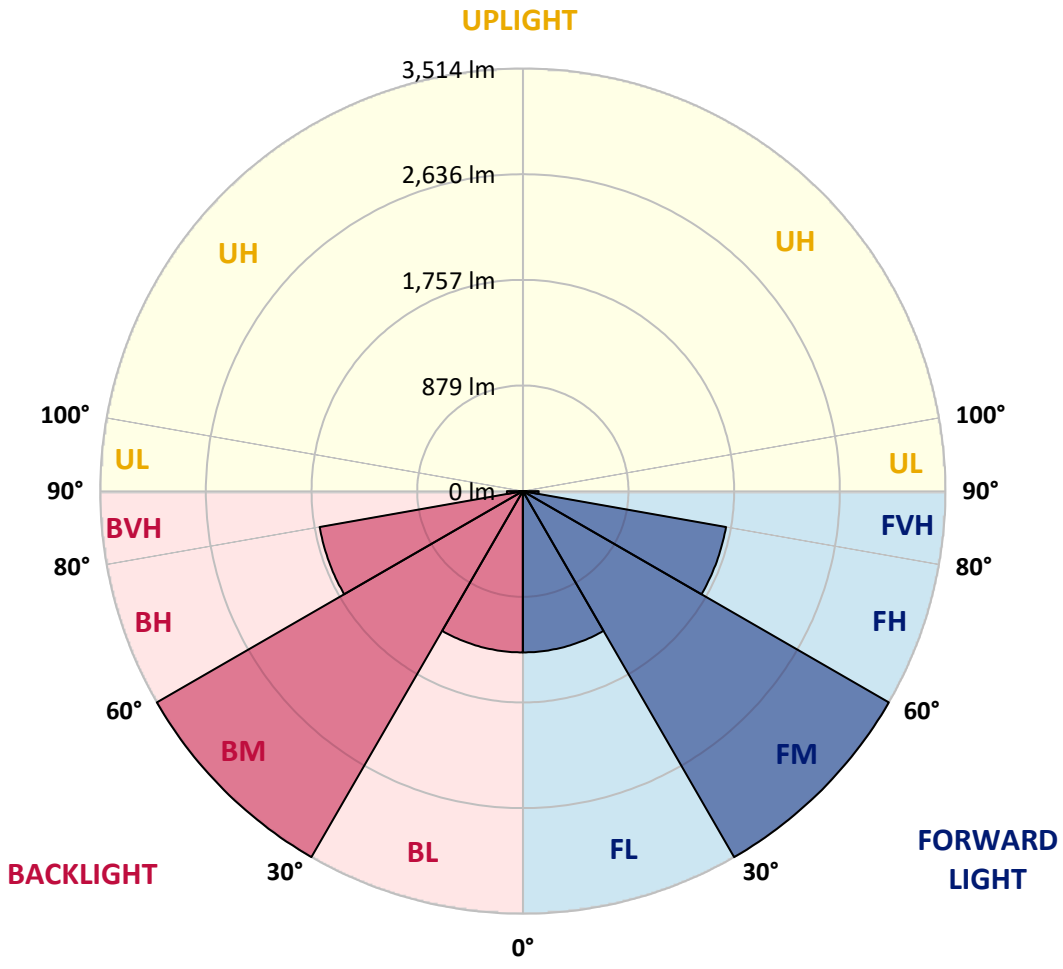
REPORT NUMBER: P879610
CATALOG NUMBER: MEM2-HSN-VA-170-727-U-CQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	1340.9	10.0			
FM	(30°-60°)	3514.2	26.2			
FH	(60°-80°)	1715.6	12.8			G1/1800
FVH	(80°-90°)	132.1	1.0			G2/225
BL	(0°-30°)	1340.9	10.0	B3/2500		
BM	(30°-60°)	3514.2	26.2	B3/5000		
BH	(60°-80°)	1715.6	12.8	B3/2500		G1/1800
BVH	(80°-90°)	132.1	1.0			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G2
Type V Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3346.2	3346.2	3346.2	3346.2	3346.2	3346.2	3346.2	3346.2	3346.2	3346.2	3346.2
2.5°	3336.2	3339.5	3338.7	3338.7	3338.7	3340.3	3340.3	3340.3	3341.2	3341.2	3342.0
5°	3317.1	3319.6	3319.6	3319.6	3321.2	3322.0	3322.0	3322.9	3324.5	3323.7	3322.9
7.5°	3291.3	3293.8	3293.8	3293.8	3295.5	3297.1	3297.1	3296.3	3298.8	3298.8	3297.9
10°	3263.9	3264.7	3265.5	3267.2	3269.7	3270.5	3269.7	3269.7	3268.9	3269.7	3269.7
12.5°	3231.5	3235.6	3236.4	3238.1	3242.3	3243.1	3243.1	3242.3	3241.4	3241.4	3240.6
15°	3202.4	3204.0	3206.5	3209.8	3214.8	3216.5	3217.3	3214.8	3212.3	3211.5	3212.3
17.5°	3175.8	3178.3	3181.6	3184.9	3191.6	3194.9	3194.9	3191.6	3188.2	3186.6	3186.6
20°	3154.2	3156.7	3160.8	3165.8	3174.9	3179.1	3177.4	3174.1	3168.3	3165.8	3166.6
22.5°	3140.0	3143.4	3146.7	3154.2	3164.1	3169.1	3167.5	3161.6	3155.0	3150.8	3150.8
25°	3128.4	3130.9	3135.9	3145.8	3156.7	3162.5	3160.0	3152.5	3143.4	3138.4	3137.5
27.5°	3115.1	3118.4	3125.1	3138.4	3151.7	3156.7	3155.0	3144.2	3133.4	3126.7	3125.1
30°	3102.6	3106.0	3115.1	3130.1	3146.7	3154.2	3150.0	3138.4	3125.1	3116.8	3115.9
32.5°	3094.3	3098.5	3109.3	3128.4	3148.3	3159.1	3155.0	3140.9	3123.4	3112.6	3111.8
35°	3091.0	3095.1	3110.9	3134.2	3159.1	3174.1	3168.3	3150.8	3129.2	3115.9	3114.3
37.5°	3091.8	3096.8	3116.8	3147.5	3179.1	3194.9	3187.4	3165.0	3137.5	3119.3	3116.8
40°	3095.1	3101.0	3126.7	3165.0	3202.4	3217.3	3205.7	3172.4	3135.0	3109.3	3104.3
42.5°	3099.3	3108.4	3140.0	3184.9	3224.0	3236.4	3215.7	3166.6	3114.3	3081.0	3076.9
45°	3098.5	3106.0	3142.5	3195.7	3237.3	3243.9	3209.8	3148.3	3086.8	3043.6	3040.3
47.5°	3084.3	3091.8	3133.4	3192.4	3233.1	3234.8	3194.1	3123.4	3051.1	3001.2	2996.2
50°	3040.3	3050.3	3096.8	3161.6	3207.4	3208.2	3163.3	3085.2	3001.2	2943.1	2934.7
52.5°	2973.0	2980.5	3034.5	3104.3	3155.8	3162.5	3113.4	3022.8	2927.3	2864.9	2859.1
55°	2868.2	2883.2	2940.6	3013.7	3070.2	3077.7	3028.7	2930.6	2832.5	2761.0	2754.4
57.5°	2746.9	2749.4	2810.1	2889.9	2948.9	2957.2	2904.0	2804.3	2702.0	2635.5	2618.9
60°	2575.7	2585.7	2643.0	2721.1	2783.5	2794.3	2743.6	2647.2	2540.8	2465.1	2464.3
62.5°	2377.9	2389.5	2447.7	2530.8	2594.0	2604.8	2550.8	2456.8	2350.5	2285.6	2262.4
65°	2163.4	2166.8	2224.9	2307.2	2364.6	2370.4	2328.0	2239.1	2129.4	2062.9	2047.9
67.5°	1922.4	1925.7	1970.6	2047.9	2109.4	2117.7	2074.5	1993.1	1894.2	1824.3	1816.9
70°	1655.6	1656.5	1700.5	1763.7	1825.2	1842.6	1803.6	1725.4	1630.7	1575.0	1560.0
72.5°	1374.7	1382.2	1421.2	1486.9	1539.3	1543.4	1511.8	1444.5	1367.2	1321.5	1313.2
75°	1117.9	1112.9	1146.1	1186.0	1226.8	1240.1	1214.3	1168.6	1097.1	1057.2	1065.5
77.5°	839.4	841.1	866.9	903.4	929.2	952.5	923.4	901.8	844.4	798.7	800.4
80°	593.4	591.8	615.9	633.3	662.4	665.7	649.9	620.9	584.3	565.2	563.5
82.5°	375.7	368.2	386.5	408.9	421.4	415.6	418.9	399.8	370.7	360.7	351.6
85°	192.0	190.3	200.3	208.6	217.8	217.8	212.8	197.8	192.0	180.4	177.0
87.5°	65.7	68.2	71.5	69.0	73.1	71.5	69.8	59.0	52.4	49.0	45.7
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

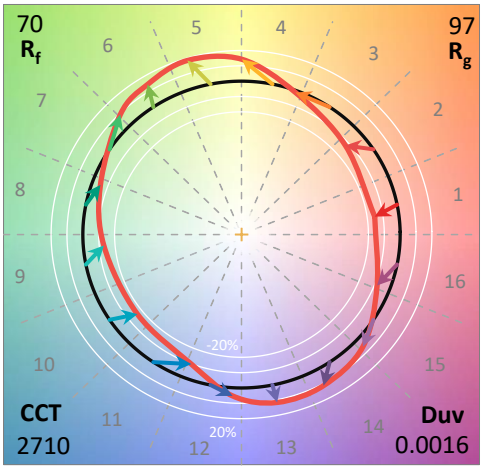
Test Information

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

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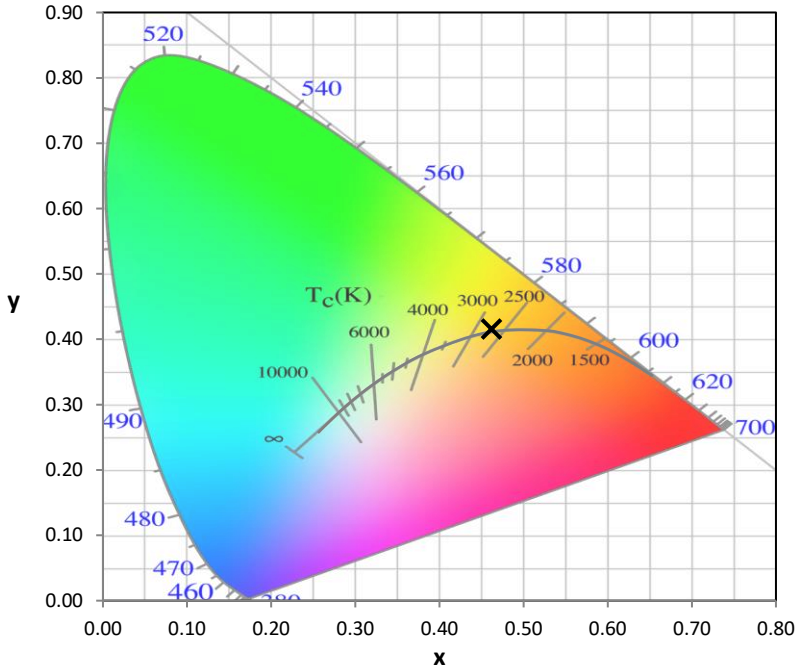
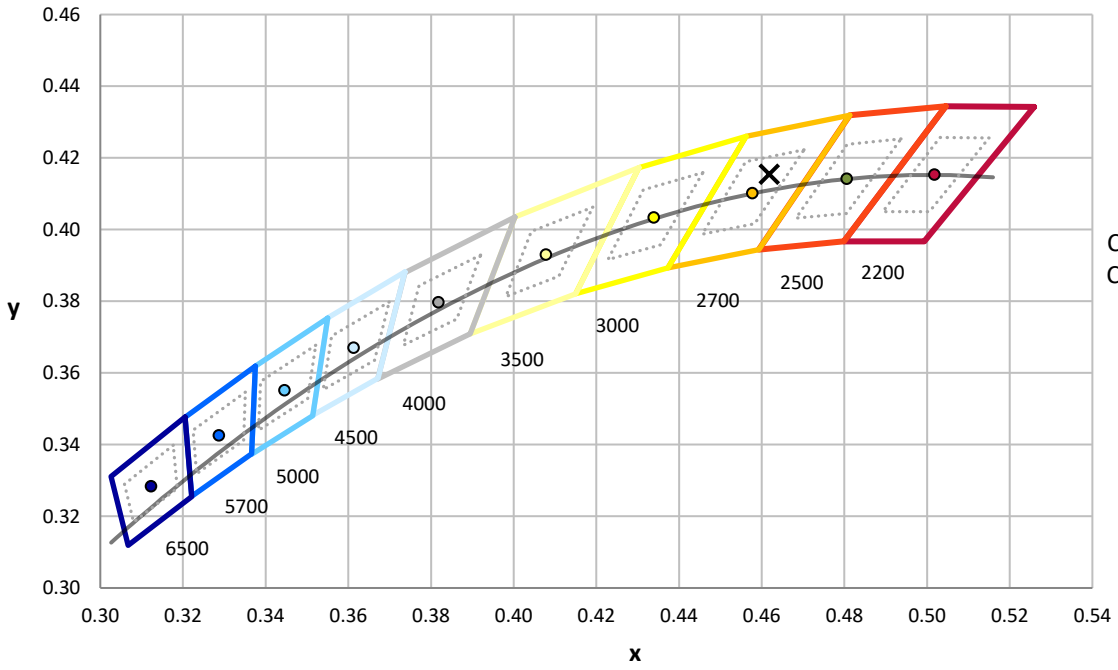
CIE 1931 Chromaticity Diagram



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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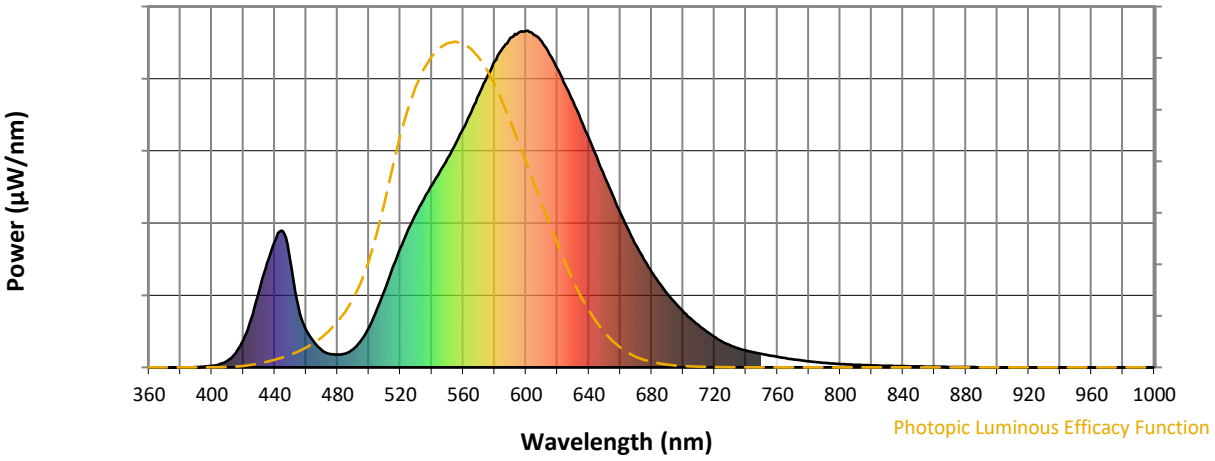
Photopic Flux vs. Wavelength

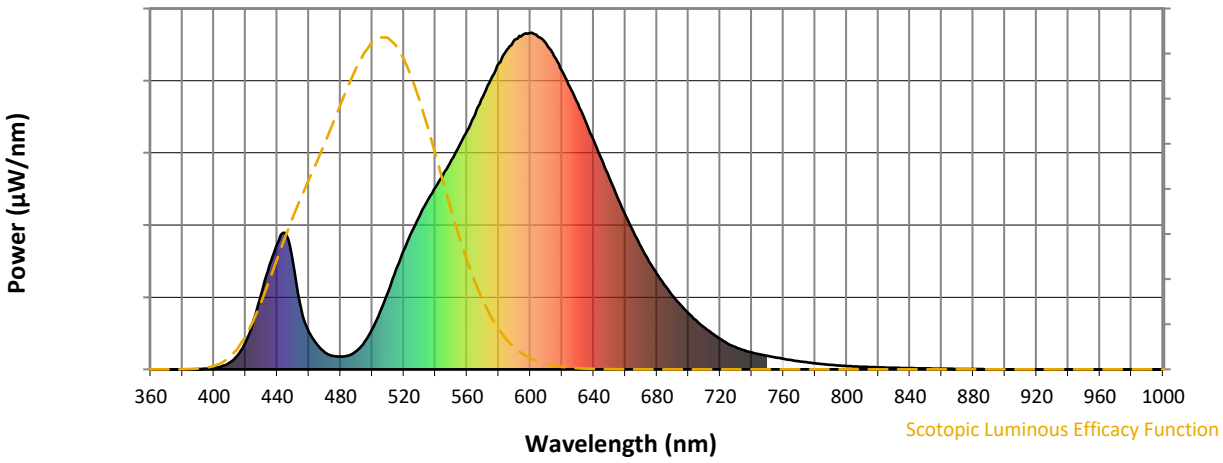


Photopic Lumens: NR

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

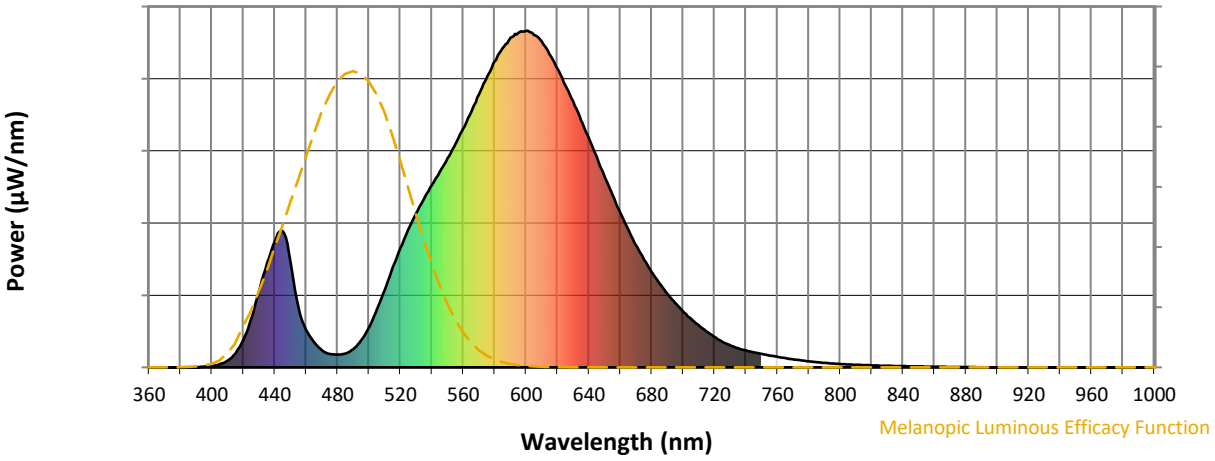


Scotopic Lumens: NR **S/P: 1.02**

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			

REPORT NUMBER: SP1-2407-176-12

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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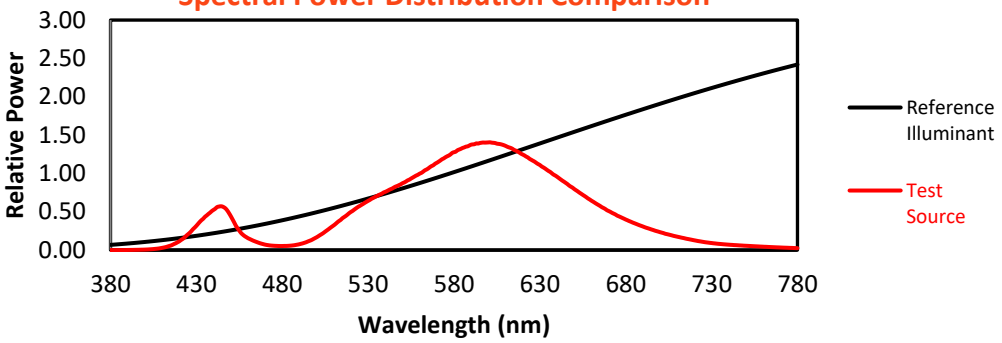
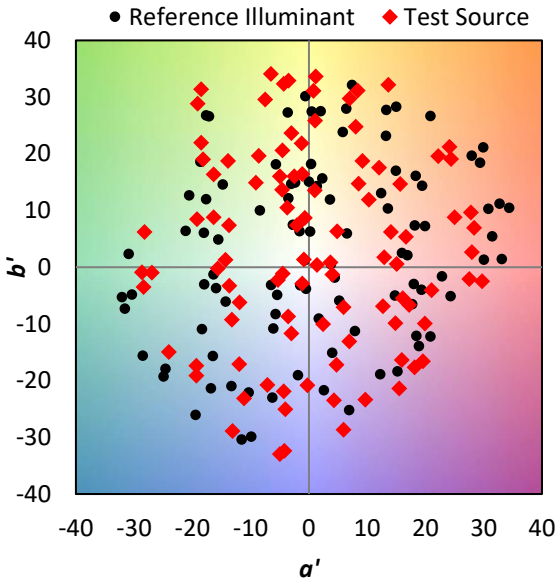
Summary

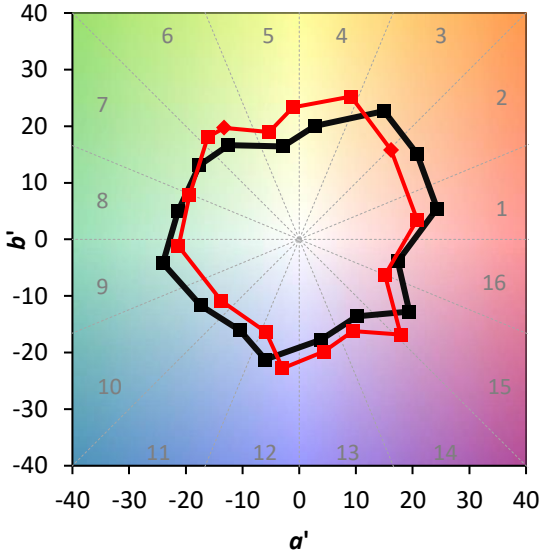
R_f = 70.4
R_g = 96.7
CIE R_a = 70.4
R_9 = -24.6

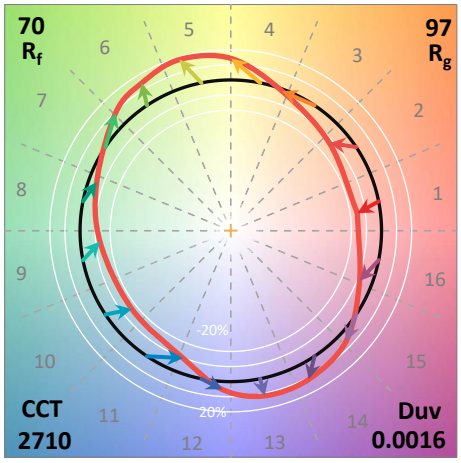
Spectral Power Distribution Comparison

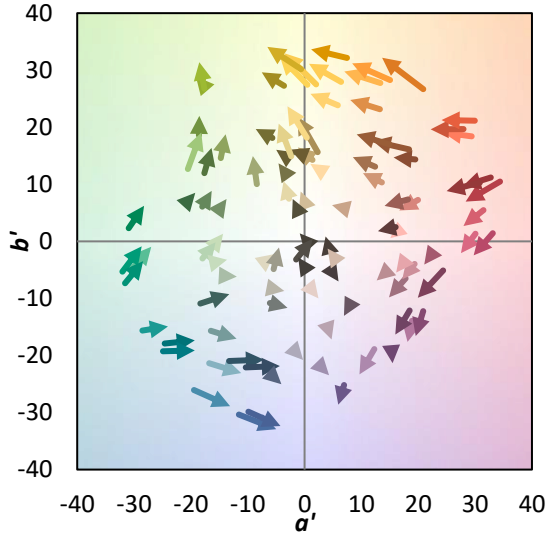


Color Vector Graphics









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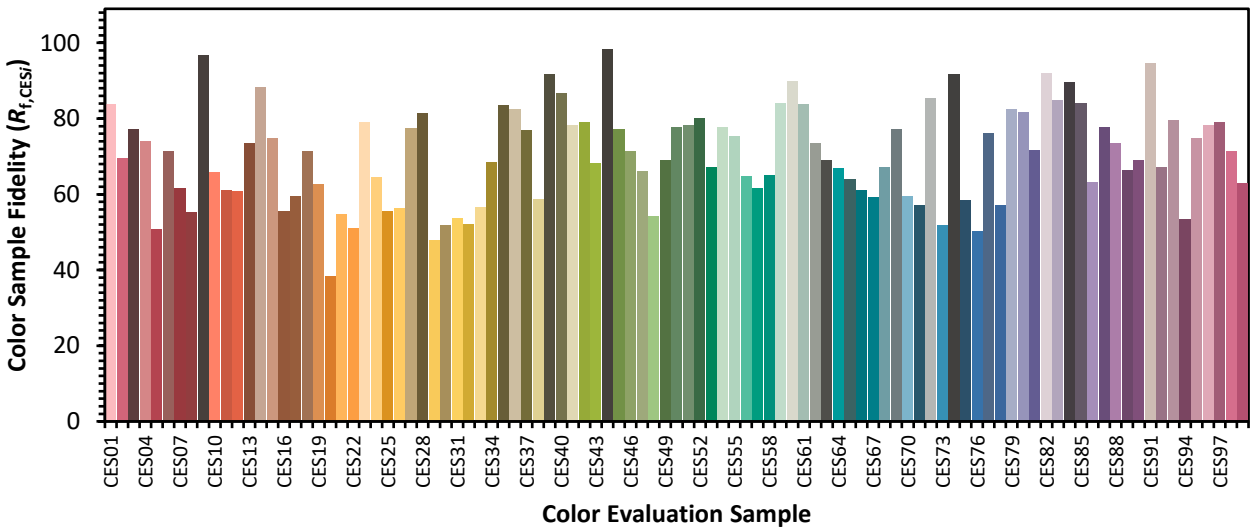
Individual Sample Fidelity Index ($R_{f,i}$)

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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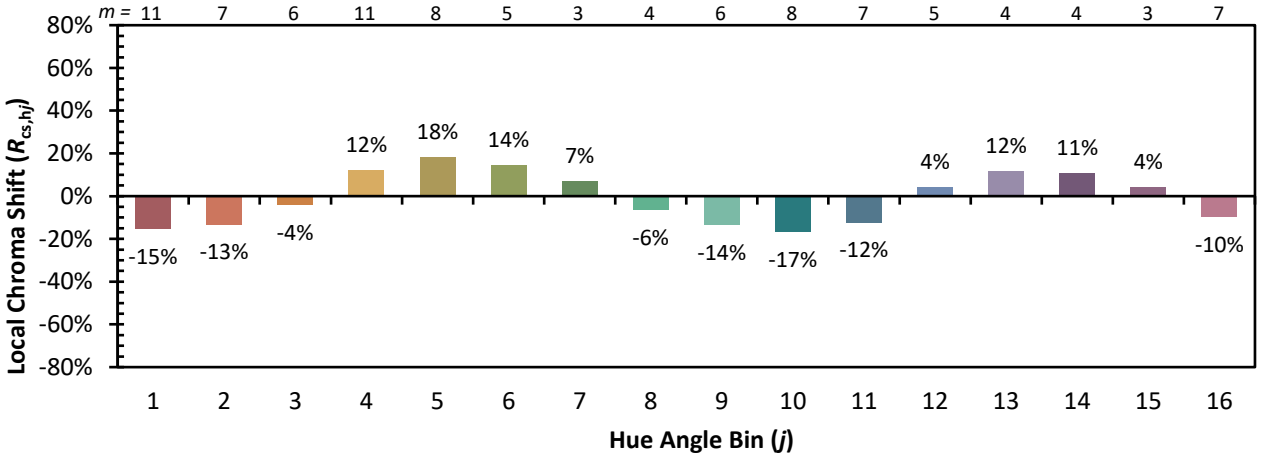
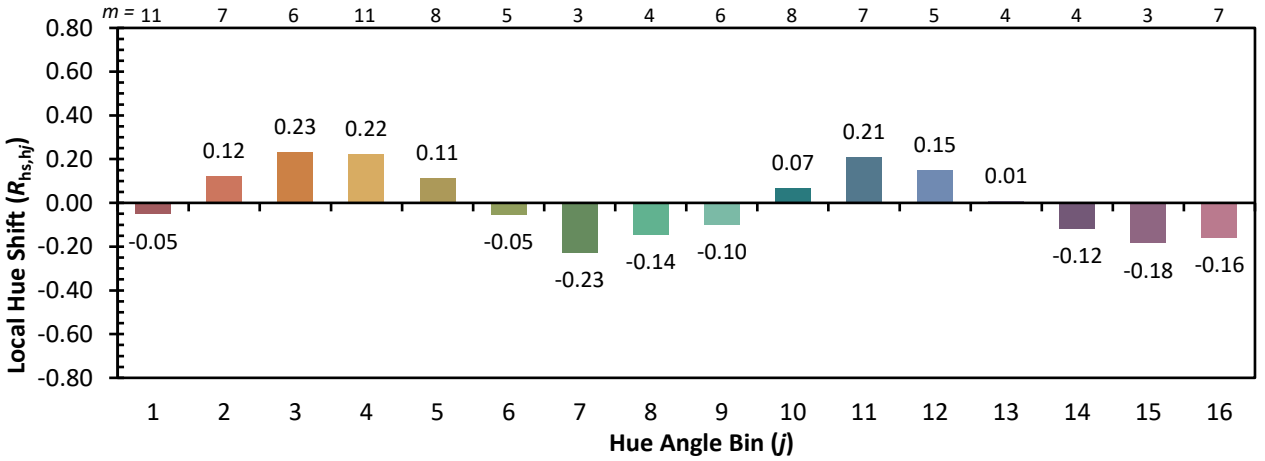
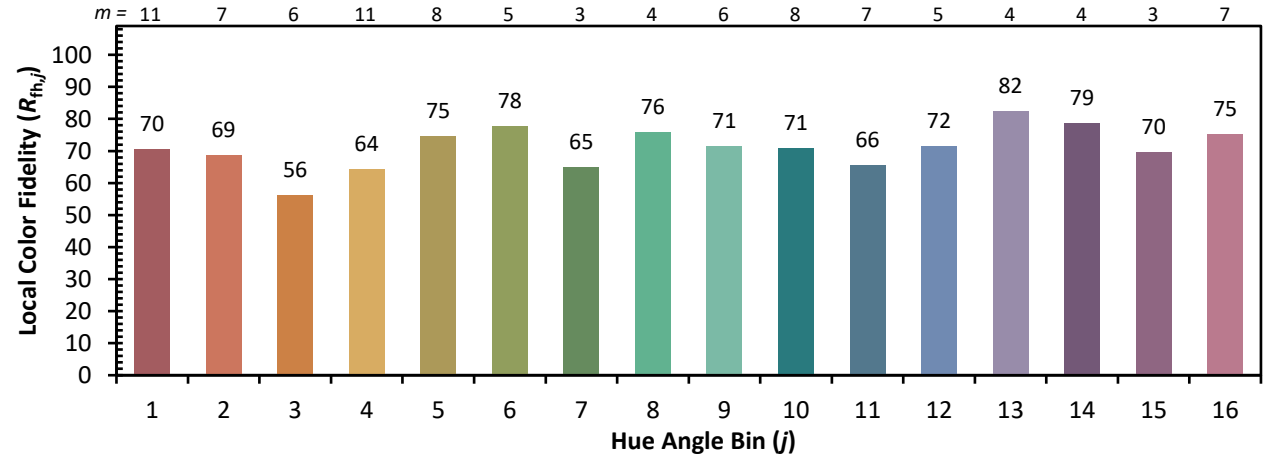
Color Rendition by Hue-Angle Bin







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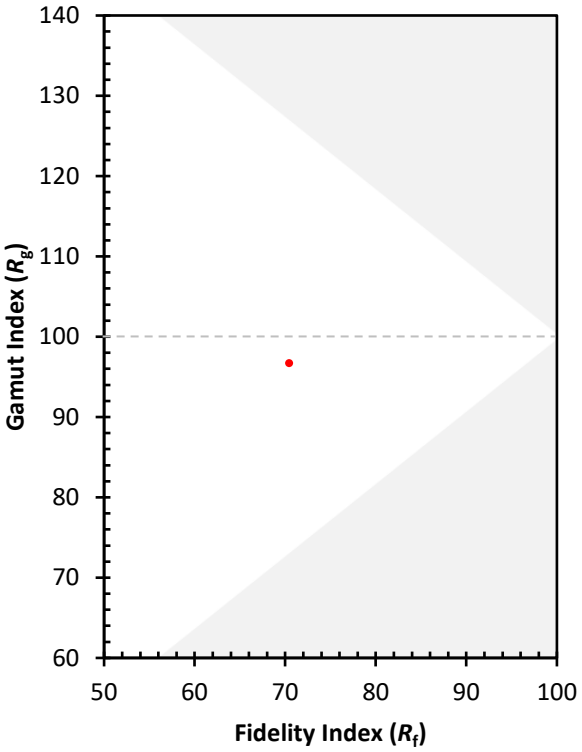
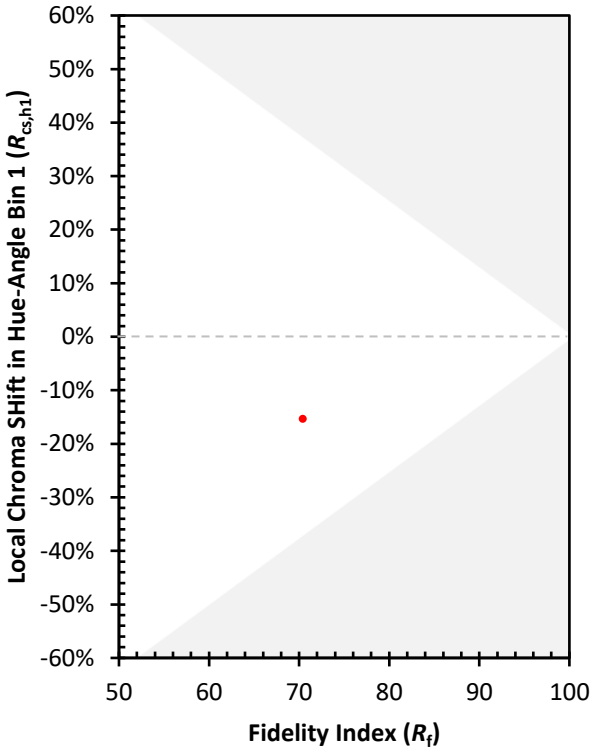
Measure Comparisons





(END OF REPORT)