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: P879625

Luminaire Tested: **MEM2-HSN-VA-170-830-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:	P879625
Test Lab:	INNOVATION CENTER(G3)
Issue Date:	10/01/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	STREETWORKS
Catalog Number:	MEM2-HSN-VA-170-830-U-CQ
Description:	EPIC MODERN SHORT HOUSING 170W 80CRI 3000K VISUAL COMFORT FIXTURE w/ TYPE V CONCENTRATED DISTRIBUTION OPTIC
Light Source:	(1) 3000K CCT, 80 CRI LEDS
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	12627 lumens
Efficiency:	N/A
Efficacy:	74.3 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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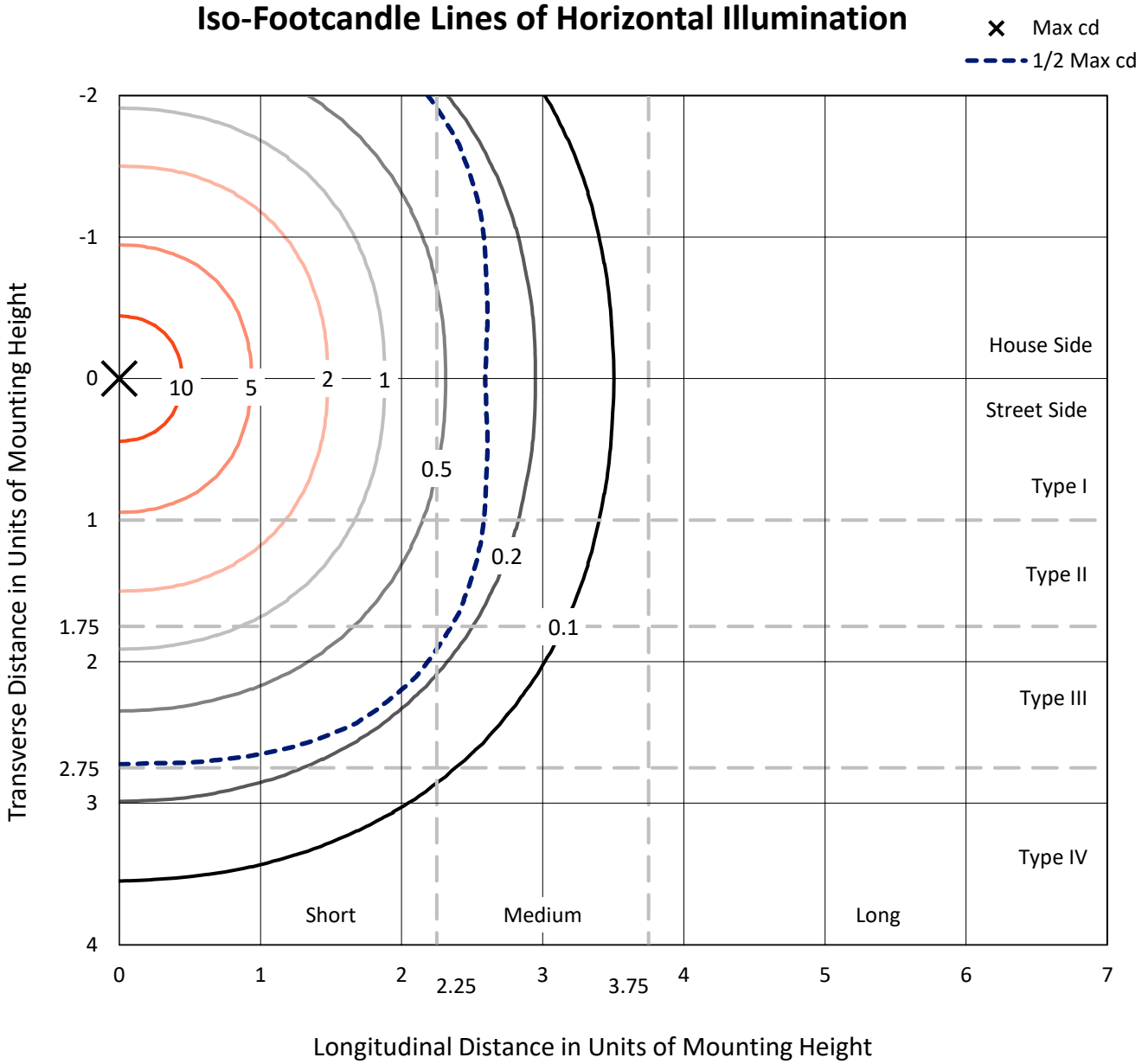
REPORT NUMBER: P879625
CATALOG NUMBER: MEM2-HSN-VA-170-830-U-CQ

Iso-Footcandle Lines of Horizontal Illumination



Based on 15 foot mounting height. Maximum calculated value = 14 fc
Type V - Short - N/A

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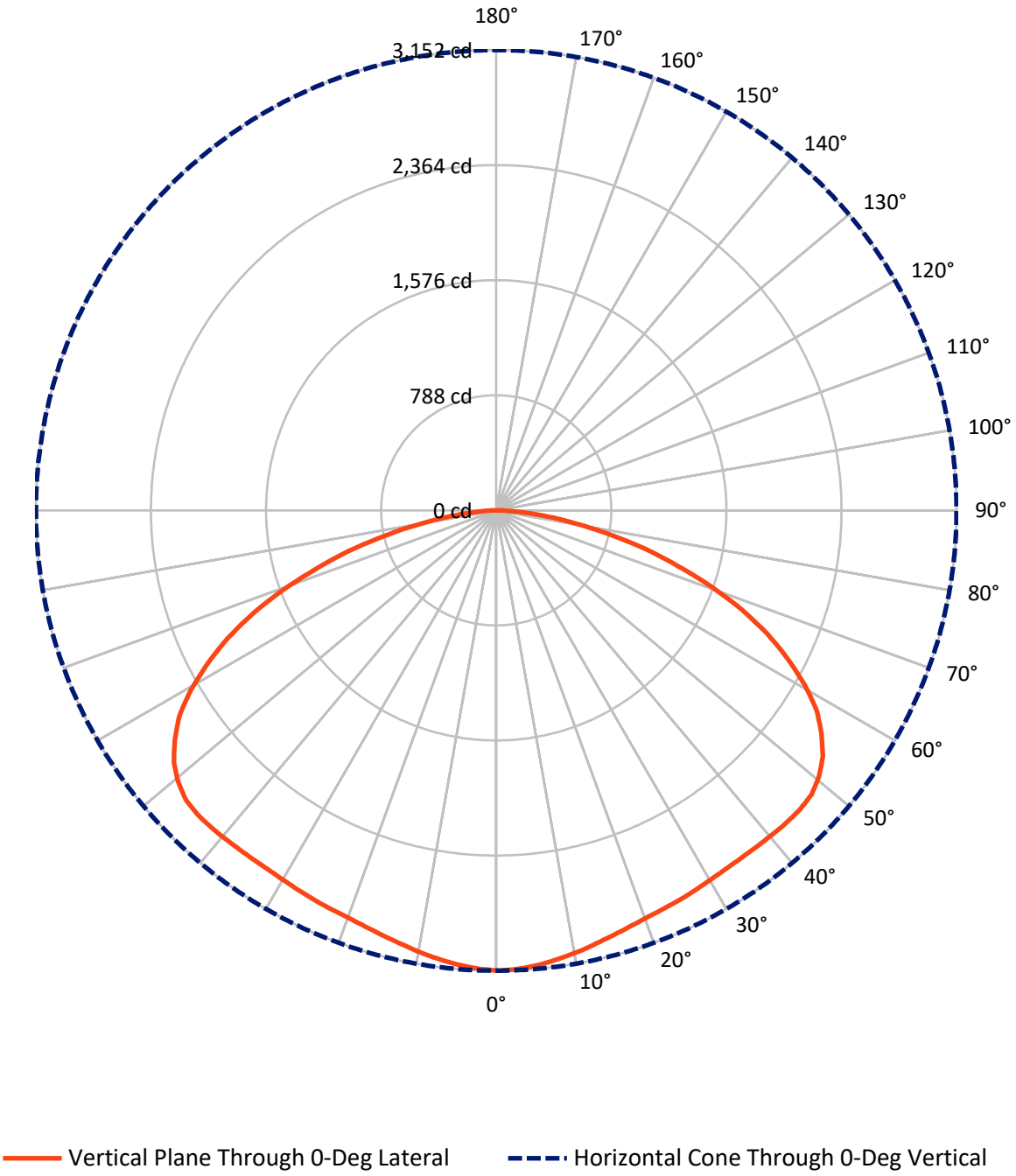
Luminous Intensity Polar Plot



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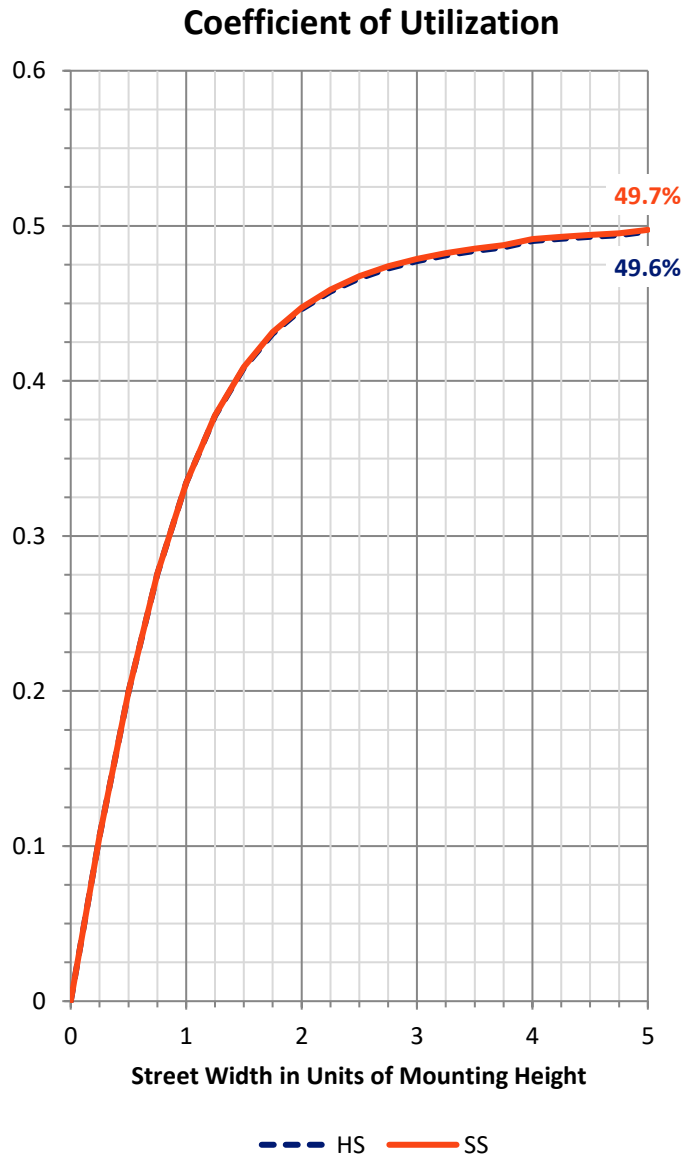
REPORT NUMBER: P879625
CATALOG NUMBER: MEM2-HSN-VA-170-830-U-CQ

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6313.5	0.0	6313.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6313.5	0.0	6313.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	12627.0	0.0	12627.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	297.0	2.4
10°-20°	857.0	6.8
20°-30°	1372.1	10.9
30°-40°	1858.7	14.7
40°-50°	2295.4	18.2
50°-60°	2466.1	19.5
60°-70°	2073.9	16.4
70°-80°	1158.0	9.2
80°-90°	248.8	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°	12627.0	100.0
0°-180°	12627.0	100.0



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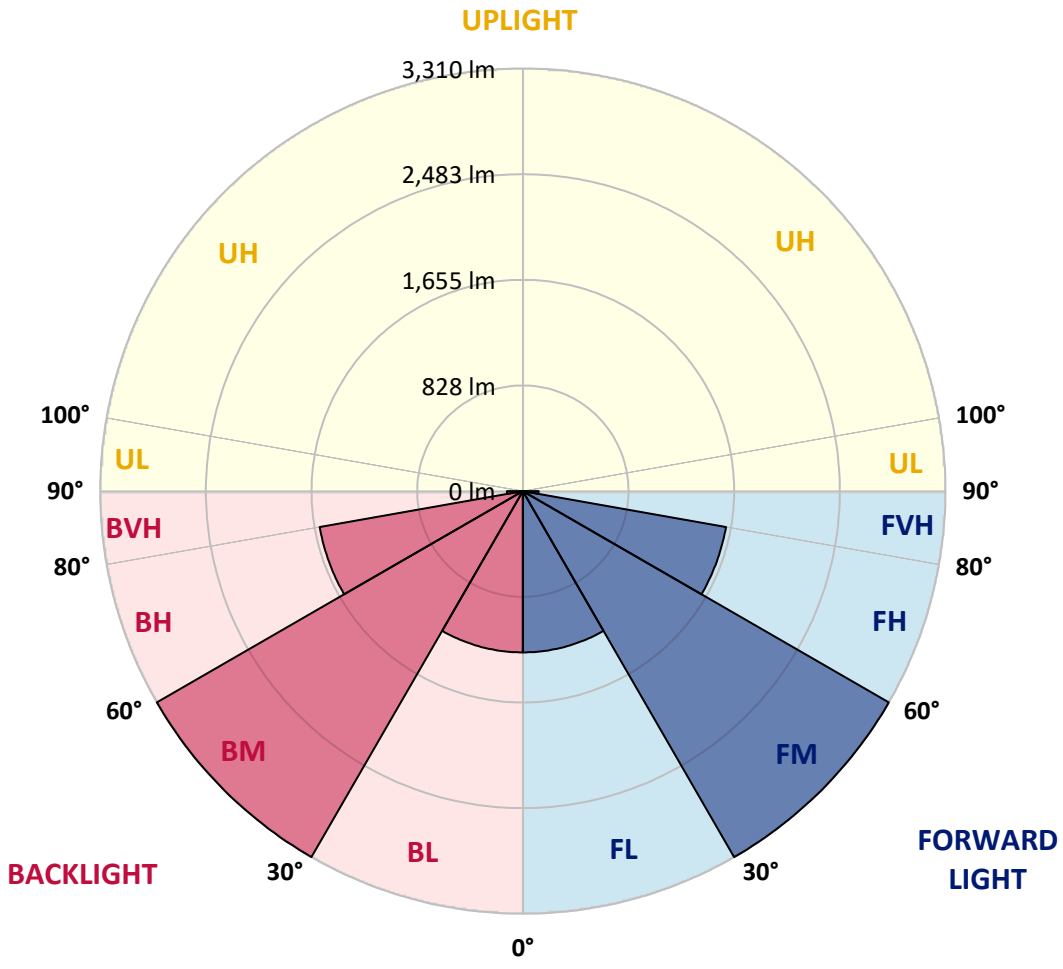
Scaled Data Report

REPORT NUMBER: P879625
CATALOG NUMBER: MEM2-HSN-VA-170-830-U-CQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	1263.1	10.0			
FM	(30°-60°)	3310.1	26.2			
FH	(60°-80°)	1615.9	12.8			G1/1800
FVH	(80°-90°)	124.4	1.0			G2/225
BL	(0°-30°)	1263.1	10.0	B3/2500		
BM	(30°-60°)	3310.1	26.2	B3/5000		
BH	(60°-80°)	1615.9	12.8	B3/2500		G1/1800
BVH	(80°-90°)	124.4	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°	3151.9	3151.9	3151.9	3151.9	3151.9	3151.9	3151.9	3151.9	3151.9	3151.9	3151.9
2.5°	3142.5	3145.6	3144.8	3144.8	3144.8	3146.4	3146.4	3146.4	3147.2	3147.2	3147.9
5°	3124.5	3126.8	3126.8	3126.8	3128.4	3129.2	3129.2	3129.9	3131.5	3130.7	3129.9
7.5°	3100.2	3102.5	3102.5	3102.5	3104.1	3105.7	3105.7	3104.9	3107.2	3107.2	3106.4
10°	3074.3	3075.1	3075.9	3077.5	3079.8	3080.6	3079.8	3079.8	3079.0	3079.8	3079.8
12.5°	3043.8	3047.7	3048.5	3050.1	3054.0	3054.8	3054.8	3054.0	3053.2	3053.2	3052.4
15°	3016.4	3018.0	3020.3	3023.5	3028.2	3029.7	3030.5	3028.2	3025.8	3025.0	3025.8
17.5°	2991.4	2993.7	2996.8	3000.0	3006.2	3009.4	3009.4	3006.2	3003.1	3001.5	3001.5
20°	2971.0	2973.4	2977.3	2982.0	2990.6	2994.5	2992.9	2989.8	2984.3	2982.0	2982.8
22.5°	2957.7	2960.8	2964.0	2971.0	2980.4	2985.1	2983.5	2978.1	2971.8	2967.9	2967.9
25°	2946.7	2949.1	2953.8	2963.2	2973.4	2978.8	2976.5	2969.4	2960.8	2956.1	2955.4
27.5°	2934.2	2937.3	2943.6	2956.1	2968.7	2973.4	2971.8	2961.6	2951.4	2945.2	2943.6
30°	2922.5	2925.6	2934.2	2948.3	2964.0	2971.0	2967.1	2956.1	2943.6	2935.8	2935.0
32.5°	2914.6	2918.6	2928.7	2946.7	2965.5	2975.7	2971.8	2958.5	2942.0	2931.9	2931.1
35°	2911.5	2915.4	2930.3	2952.2	2975.7	2989.8	2984.3	2967.9	2947.5	2935.0	2933.4
37.5°	2912.3	2917.0	2935.8	2964.7	2994.5	3009.4	3002.3	2981.2	2955.4	2938.1	2935.8
40°	2915.4	2920.9	2945.2	2981.2	3016.4	3030.5	3019.5	2988.2	2953.0	2928.7	2924.0
42.5°	2919.3	2928.0	2957.7	3000.0	3036.8	3048.5	3028.9	2982.8	2933.4	2902.1	2898.2
45°	2918.6	2925.6	2960.0	3010.2	3049.3	3055.6	3023.5	2965.5	2907.6	2866.9	2863.8
47.5°	2905.2	2912.3	2951.4	3007.0	3045.4	3046.9	3008.6	2942.0	2873.9	2827.0	2822.3
50°	2863.8	2873.2	2917.0	2978.1	3021.1	3021.9	2979.6	2906.0	2827.0	2772.2	2764.3
52.5°	2800.3	2807.4	2858.3	2924.0	2972.6	2978.8	2932.6	2847.3	2757.3	2698.6	2693.1
55°	2701.7	2715.8	2769.8	2838.7	2891.9	2899.0	2852.8	2760.4	2668.0	2600.7	2594.4
57.5°	2587.4	2589.7	2646.9	2722.1	2777.6	2785.5	2735.4	2641.4	2545.1	2482.5	2466.8
60°	2426.1	2435.5	2489.5	2563.1	2621.8	2632.0	2584.3	2493.5	2393.2	2322.0	2321.2
62.5°	2239.8	2250.8	2305.6	2383.9	2443.4	2453.5	2402.6	2314.2	2214.0	2152.9	2131.0
65°	2037.8	2041.0	2095.8	2173.3	2227.3	2232.8	2192.8	2109.1	2005.7	1943.1	1929.0
67.5°	1810.8	1813.9	1856.2	1929.0	1986.9	1994.8	1954.1	1877.3	1784.2	1718.4	1711.4
70°	1559.5	1560.3	1601.8	1661.3	1719.2	1735.6	1698.8	1625.2	1536.0	1483.5	1469.5
72.5°	1294.9	1301.9	1338.7	1400.6	1449.9	1453.8	1424.0	1360.6	1287.8	1244.8	1236.9
75°	1053.0	1048.3	1079.6	1117.2	1155.5	1168.0	1143.8	1100.7	1033.4	995.8	1003.6
77.5°	790.7	792.3	816.5	851.0	875.3	897.2	869.8	849.4	795.4	752.3	753.9
80°	559.0	557.4	580.1	596.6	624.0	627.1	612.2	584.8	550.4	532.4	530.8
82.5°	353.9	346.8	364.0	385.2	396.9	391.4	394.6	376.6	349.2	339.8	331.2
85°	180.8	179.3	188.7	196.5	205.1	205.1	200.4	186.3	180.8	169.9	166.8
87.5°	61.8	64.2	67.3	65.0	68.9	67.3	65.8	55.6	49.3	46.2	43.1
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: SP1-2407-176-11

Test Date: 09/26/2024

Luminaire Tested: MEM2-HTN-VA-130-830-U-RW

Data in this report applies to families of products including MEM2-HTN-VA-130-830-U-RW

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

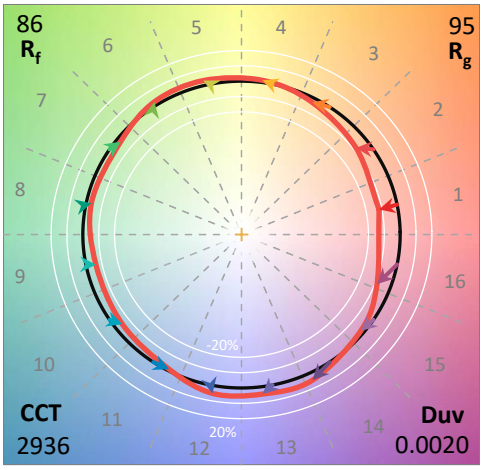
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2407-176-11
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-130-830-U-RW**
Description:	EPIC MODERN VISUAL COMFORT 130W WAVESTREAM RECTANGULAR WIDE

Spectral Parameters

CCT (K):	2936
CIE u':	0.2522
CIE v':	0.5255
Duv:	0.0020
CIE x:	0.4446
CIE y:	0.4117
CIE z:	0.1436
Peak Wavelength (nm):	601
Dominant Wavelength (nm):	582
Purity:	57.05514
Rf:	85.6
Rg:	95.3

CRI (Ra):	82.0
R1:	79.9
R2:	90.0
R3:	96.9
R4:	80.9
R5:	80.4
R6:	88.8
R7:	82.7
R8:	56.8
R9:	1.5
R10:	78.0
R11:	80.9
R12:	73.9
R13:	82.1
R14:	98.8
R15:	71.1



Test Conditions

Stabilization Time:	54M
Operation Time:	1H 54M
Sphere Temperature (°C):	25.2

REPORT NUMBER: SP1-2407-176-11

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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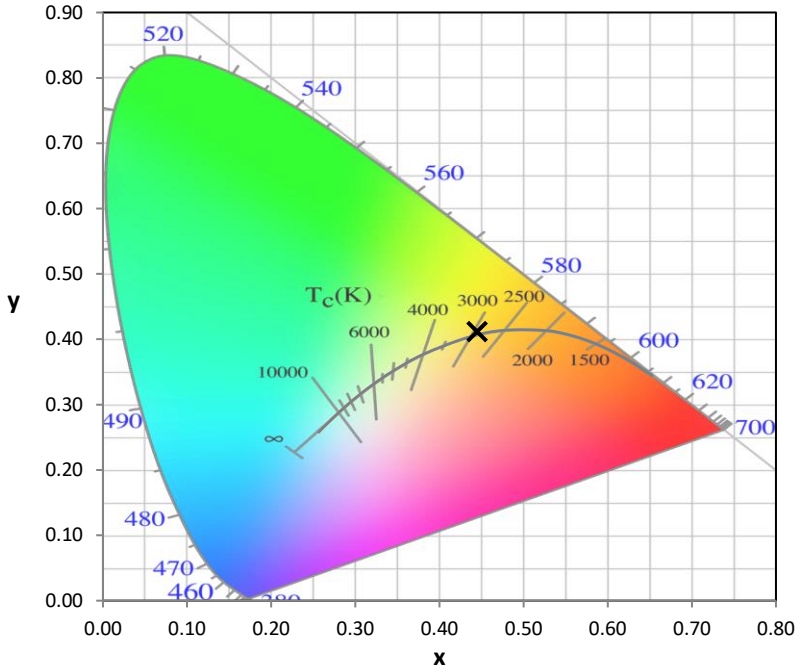
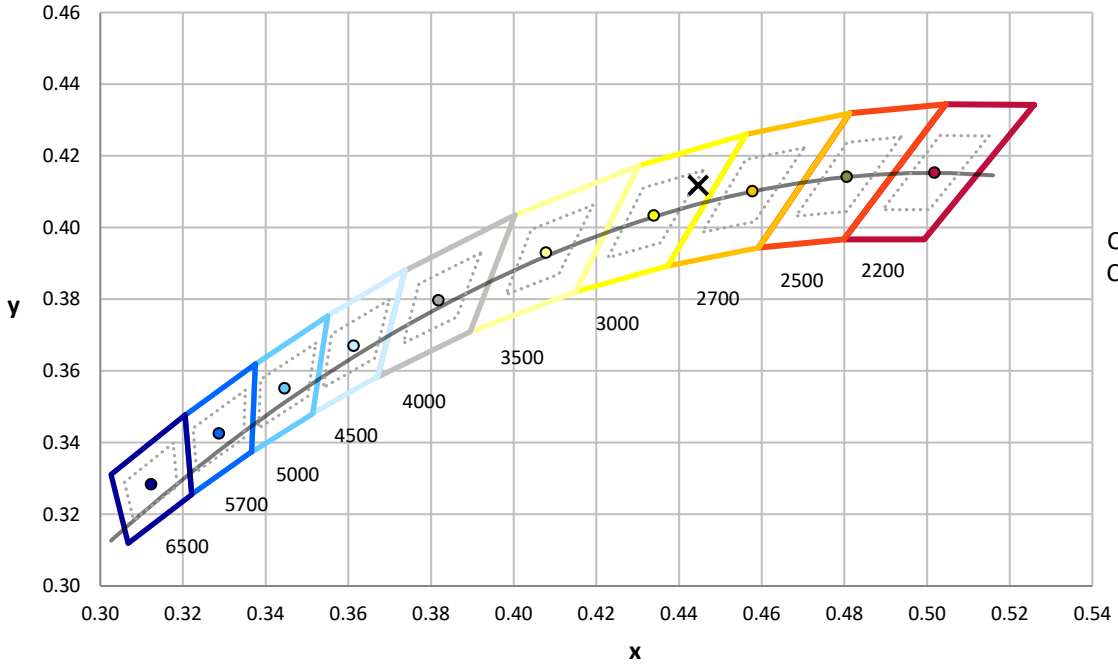
CIE 1931 Chromaticity Diagram



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



CCT = 2936K
CIE x = 0.4446
CIE y = 0.4117
Duv = 0.0020

Point lies inside the ANSI 3000K 7-step quadrangle

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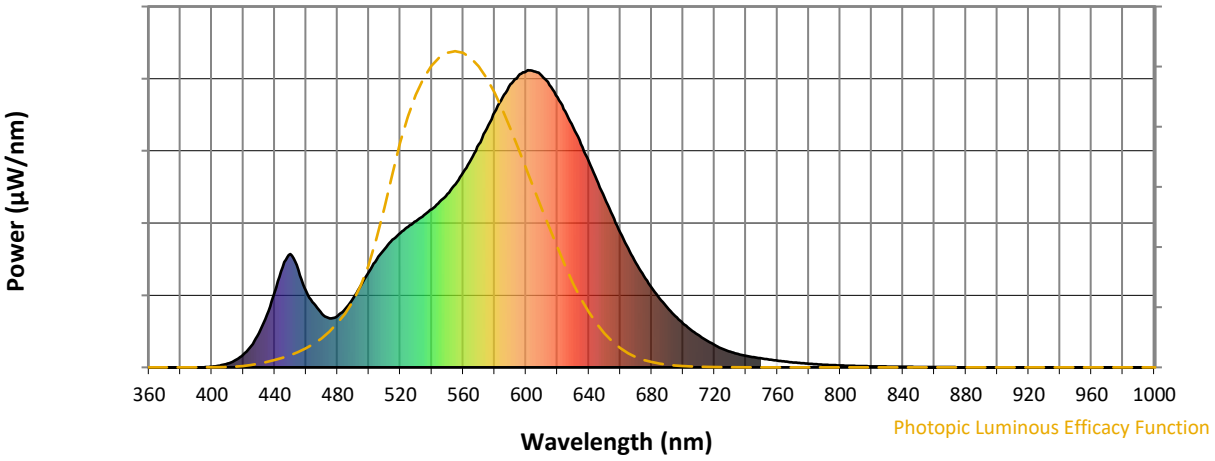
Photopic Flux vs. Wavelength

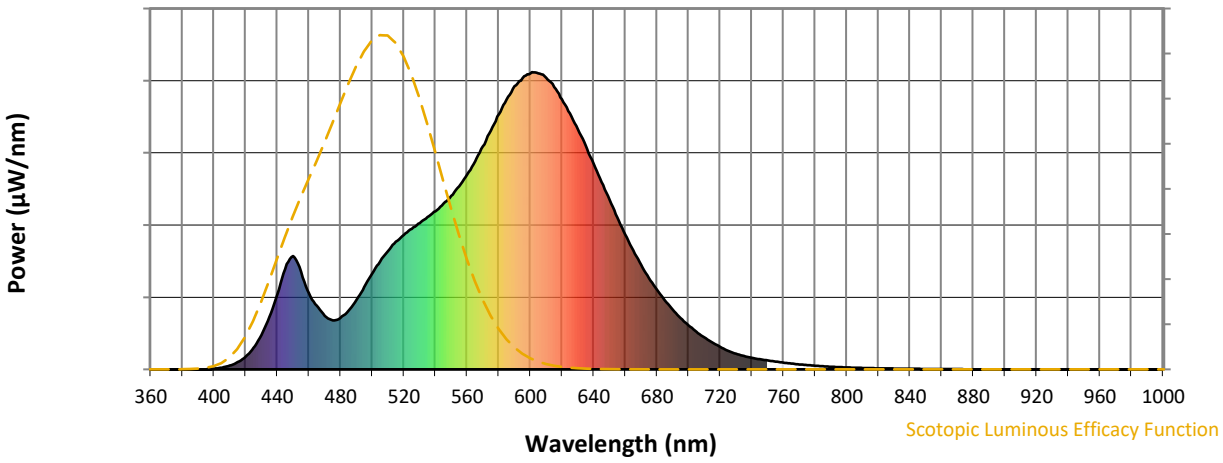


Photopic Lumens: NR

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	234	NR	620	908	NR	750	30	NR	880	0	NR
365	0	NR	495	276	NR	625	861	NR	755	26	NR	885	0	NR
370	0	NR	500	322	NR	630	808	NR	760	23	NR	890	0	NR
375	0	NR	505	363	NR	635	751	NR	765	20	NR	895	0	NR
380	0	NR	510	398	NR	640	692	NR	770	17	NR	900	0	NR
385	0	NR	515	429	NR	645	630	NR	775	14	NR	905	0	NR
390	0	NR	520	453	NR	650	570	NR	780	12	NR	910	0	NR
395	0	NR	525	473	NR	655	511	NR	785	10	NR	915	0	NR
400	2	NR	530	492	NR	660	453	NR	790	9	NR	920	0	NR
405	6	NR	535	512	NR	665	401	NR	795	8	NR	925	0	NR
410	13	NR	540	532	NR	670	351	NR	800	6	NR	930	0	NR
415	24	NR	545	557	NR	675	306	NR	805	5	NR	935	0	NR
420	43	NR	550	583	NR	680	268	NR	810	5	NR	940	0	NR
425	73	NR	555	616	NR	685	232	NR	815	4	NR	945	0	NR
430	115	NR	560	656	NR	690	201	NR	820	4	NR	950	0	NR
435	176	NR	565	700	NR	695	173	NR	825	3	NR	955	0	NR
440	254	NR	570	750	NR	700	148	NR	830	3	NR	960	0	NR
445	337	NR	575	803	NR	705	126	NR	835	2	NR	965	0	NR
450	381	NR	580	859	NR	710	107	NR	840	2	NR	970	0	NR
455	328	NR	585	907	NR	715	90	NR	845	2	NR	975	0	NR
460	257	NR	590	953	NR	720	76	NR	850	1	NR	980	0	NR
465	214	NR	595	980	NR	725	62	NR	855	1	NR	985	0	NR
470	180	NR	600	996	NR	730	53	NR	860	1	NR	990	0	NR
475	165	NR	605	995	NR	735	45	NR	865	1	NR	995	0	NR
480	173	NR	610	981	NR	740	39	NR	870	1	NR	1000	0	NR
485	197	NR	615	950	NR	745	34	NR	875	1	NR			

REPORT NUMBER: SP1-2407-176-11

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR **S/P: 1.3**

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	234	NR	620	908	NR	750	30	NR	880	0	NR
365	0	NR	495	276	NR	625	861	NR	755	26	NR	885	0	NR
370	0	NR	500	322	NR	630	808	NR	760	23	NR	890	0	NR
375	0	NR	505	363	NR	635	751	NR	765	20	NR	895	0	NR
380	0	NR	510	398	NR	640	692	NR	770	17	NR	900	0	NR
385	0	NR	515	429	NR	645	630	NR	775	14	NR	905	0	NR
390	0	NR	520	453	NR	650	570	NR	780	12	NR	910	0	NR
395	0	NR	525	473	NR	655	511	NR	785	10	NR	915	0	NR
400	2	NR	530	492	NR	660	453	NR	790	9	NR	920	0	NR
405	6	NR	535	512	NR	665	401	NR	795	8	NR	925	0	NR
410	13	NR	540	532	NR	670	351	NR	800	6	NR	930	0	NR
415	24	NR	545	557	NR	675	306	NR	805	5	NR	935	0	NR
420	43	NR	550	583	NR	680	268	NR	810	5	NR	940	0	NR
425	73	NR	555	616	NR	685	232	NR	815	4	NR	945	0	NR
430	115	NR	560	656	NR	690	201	NR	820	4	NR	950	0	NR
435	176	NR	565	700	NR	695	173	NR	825	3	NR	955	0	NR
440	254	NR	570	750	NR	700	148	NR	830	3	NR	960	0	NR
445	337	NR	575	803	NR	705	126	NR	835	2	NR	965	0	NR
450	381	NR	580	859	NR	710	107	NR	840	2	NR	970	0	NR
455	328	NR	585	907	NR	715	90	NR	845	2	NR	975	0	NR
460	257	NR	590	953	NR	720	76	NR	850	1	NR	980	0	NR
465	214	NR	595	980	NR	725	62	NR	855	1	NR	985	0	NR
470	180	NR	600	996	NR	730	53	NR	860	1	NR	990	0	NR
475	165	NR	605	995	NR	735	45	NR	865	1	NR	995	0	NR
480	173	NR	610	981	NR	740	39	NR	870	1	NR	1000	0	NR
485	197	NR	615	950	NR	745	34	NR	875	1	NR			

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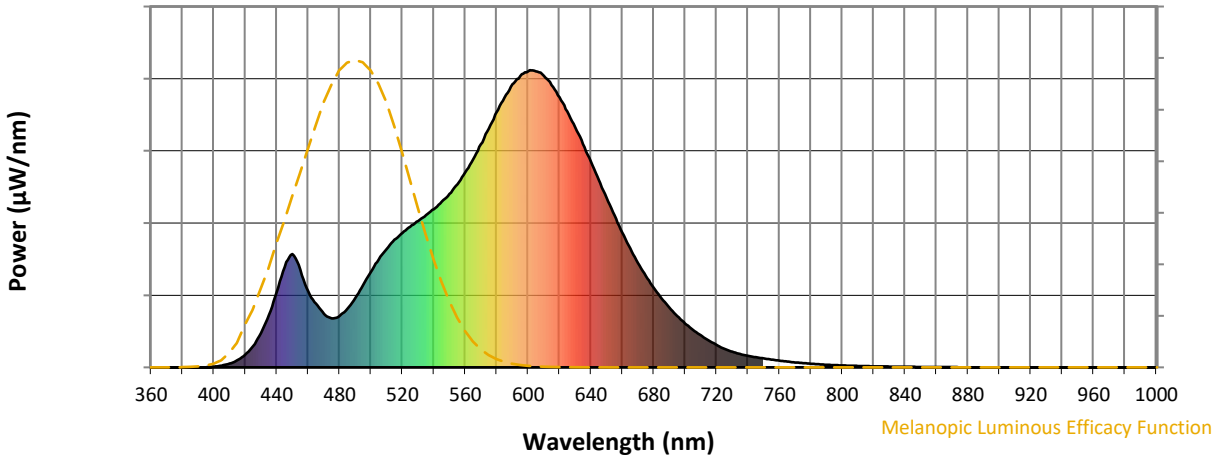
Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.46**

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	234	NR	620	908	NR	750	30	NR	880	0	NR
365	0	NR	495	276	NR	625	861	NR	755	26	NR	885	0	NR
370	0	NR	500	322	NR	630	808	NR	760	23	NR	890	0	NR
375	0	NR	505	363	NR	635	751	NR	765	20	NR	895	0	NR
380	0	NR	510	398	NR	640	692	NR	770	17	NR	900	0	NR
385	0	NR	515	429	NR	645	630	NR	775	14	NR	905	0	NR
390	0	NR	520	453	NR	650	570	NR	780	12	NR	910	0	NR
395	0	NR	525	473	NR	655	511	NR	785	10	NR	915	0	NR
400	2	NR	530	492	NR	660	453	NR	790	9	NR	920	0	NR
405	6	NR	535	512	NR	665	401	NR	795	8	NR	925	0	NR
410	13	NR	540	532	NR	670	351	NR	800	6	NR	930	0	NR
415	24	NR	545	557	NR	675	306	NR	805	5	NR	935	0	NR
420	43	NR	550	583	NR	680	268	NR	810	5	NR	940	0	NR
425	73	NR	555	616	NR	685	232	NR	815	4	NR	945	0	NR
430	115	NR	560	656	NR	690	201	NR	820	4	NR	950	0	NR
435	176	NR	565	700	NR	695	173	NR	825	3	NR	955	0	NR
440	254	NR	570	750	NR	700	148	NR	830	3	NR	960	0	NR
445	337	NR	575	803	NR	705	126	NR	835	2	NR	965	0	NR
450	381	NR	580	859	NR	710	107	NR	840	2	NR	970	0	NR
455	328	NR	585	907	NR	715	90	NR	845	2	NR	975	0	NR
460	257	NR	590	953	NR	720	76	NR	850	1	NR	980	0	NR
465	214	NR	595	980	NR	725	62	NR	855	1	NR	985	0	NR
470	180	NR	600	996	NR	730	53	NR	860	1	NR	990	0	NR
475	165	NR	605	995	NR	735	45	NR	865	1	NR	995	0	NR
480	173	NR	610	981	NR	740	39	NR	870	1	NR	1000	0	NR
485	197	NR	615	950	NR	745	34	NR	875	1	NR			

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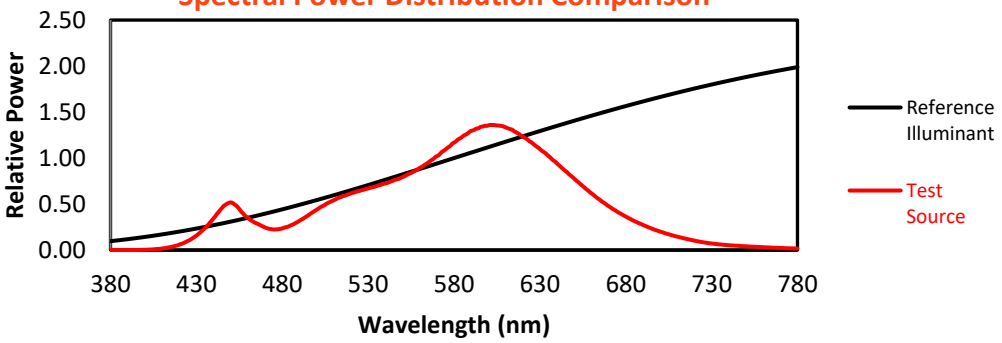
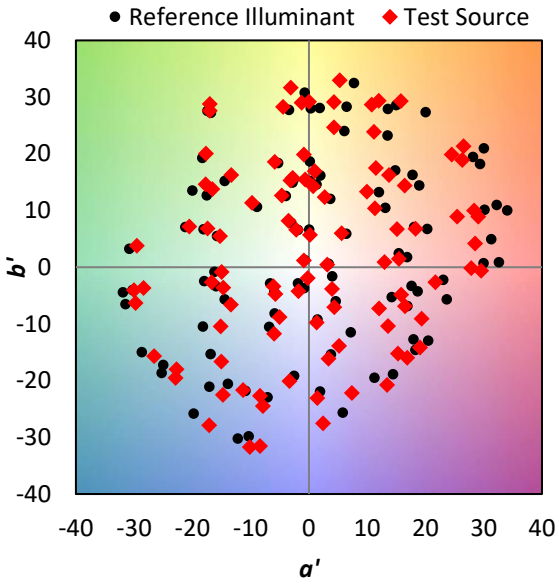
Summary

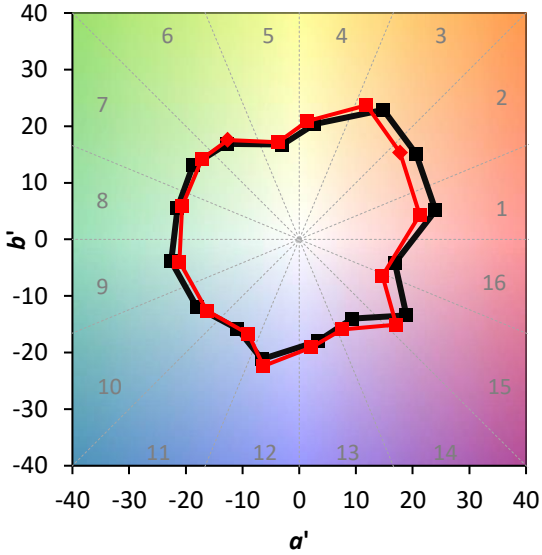
R_f = 85.6
R_g = 95.3
CIE R_a = 82.0
R_9 = 1.5

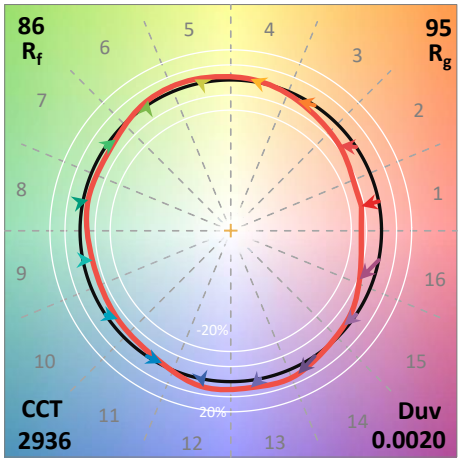
Spectral Power Distribution Comparison

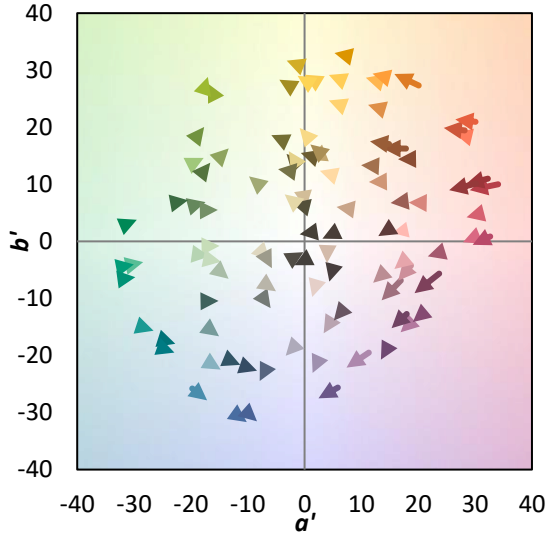


Color Vector Graphics









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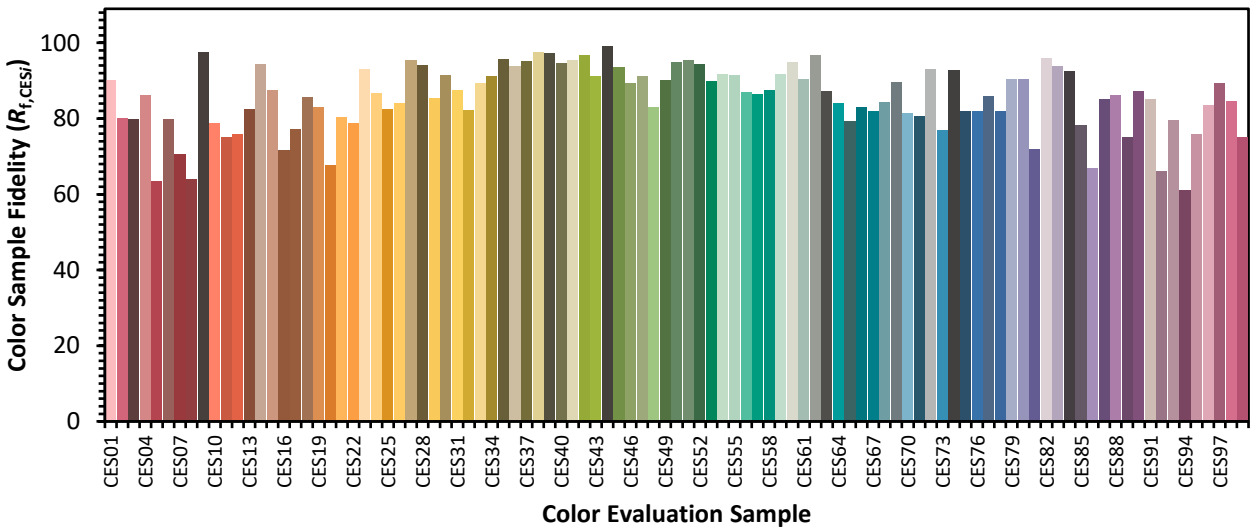
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 84	CES51 = 95	CES76 = 82
CES02 = 63	CES27 = 95	CES52 = 94	CES77 = 86
CES03 = 31	CES28 = 94	CES53 = 90	CES78 = 82
CES04 = 71	CES29 = 85	CES54 = 92	CES79 = 90
CES05 = 50	CES30 = 91	CES55 = 92	CES80 = 90
CES06 = 51	CES31 = 87	CES56 = 87	CES81 = 72
CES07 = 42	CES32 = 82	CES57 = 87	CES82 = 96
CES08 = 41	CES33 = 89	CES58 = 88	CES83 = 94
CES09 = 29	CES34 = 91	CES59 = 92	CES84 = 93
CES10 = 76	CES35 = 96	CES60 = 95	CES85 = 78
CES11 = 59	CES36 = 94	CES61 = 90	CES86 = 67
CES12 = 65	CES37 = 95	CES62 = 97	CES87 = 85
CES13 = 44	CES38 = 98	CES63 = 87	CES88 = 86
CES14 = 74	CES39 = 97	CES64 = 84	CES89 = 75
CES15 = 72	CES40 = 95	CES65 = 79	CES90 = 87
CES16 = 48	CES41 = 95	CES66 = 83	CES91 = 85
CES17 = 50	CES42 = 97	CES67 = 82	CES92 = 66
CES18 = 57	CES43 = 91	CES68 = 84	CES93 = 80
CES19 = 72	CES44 = 99	CES69 = 90	CES94 = 61
CES20 = 67	CES45 = 93	CES70 = 81	CES95 = 76
CES21 = 87	CES46 = 89	CES71 = 81	CES96 = 84
CES22 = 79	CES47 = 91	CES72 = 93	CES97 = 89
CES23 = 92	CES48 = 83	CES73 = 77	CES98 = 85
CES24 = 91	CES49 = 90	CES74 = 93	CES99 = 75
CES25 = 72	CES50 = 95	CES75 = 82	



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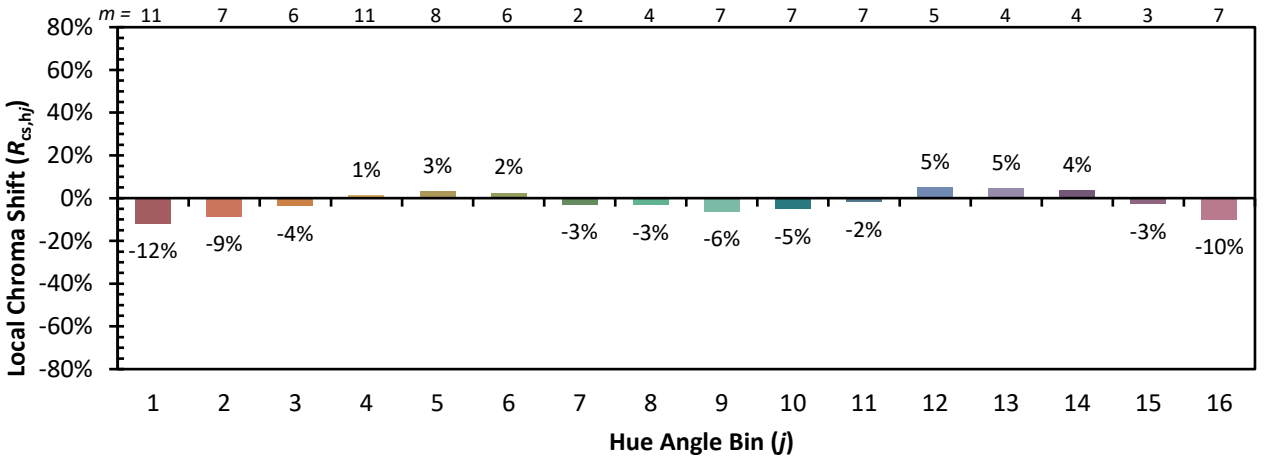
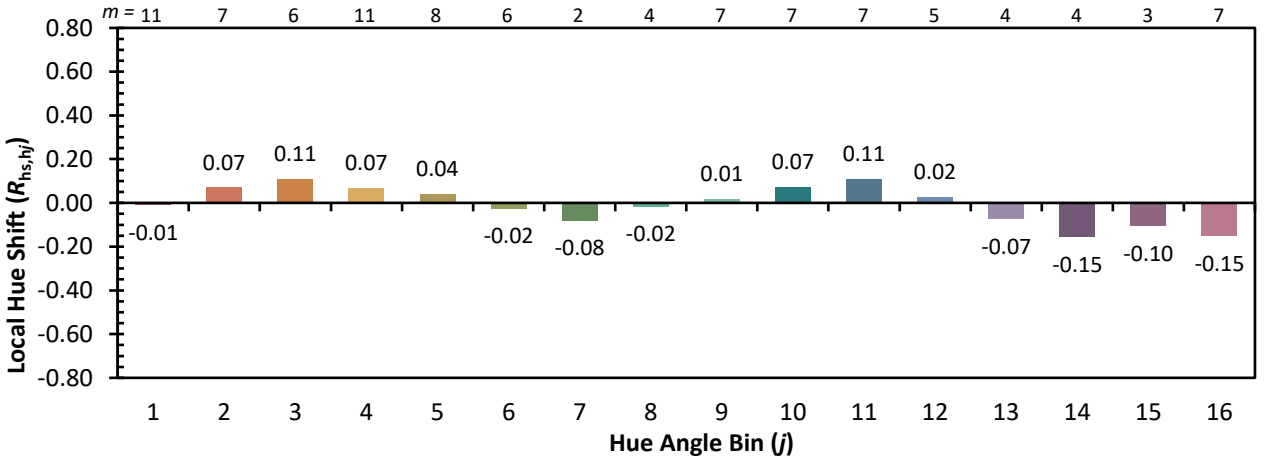
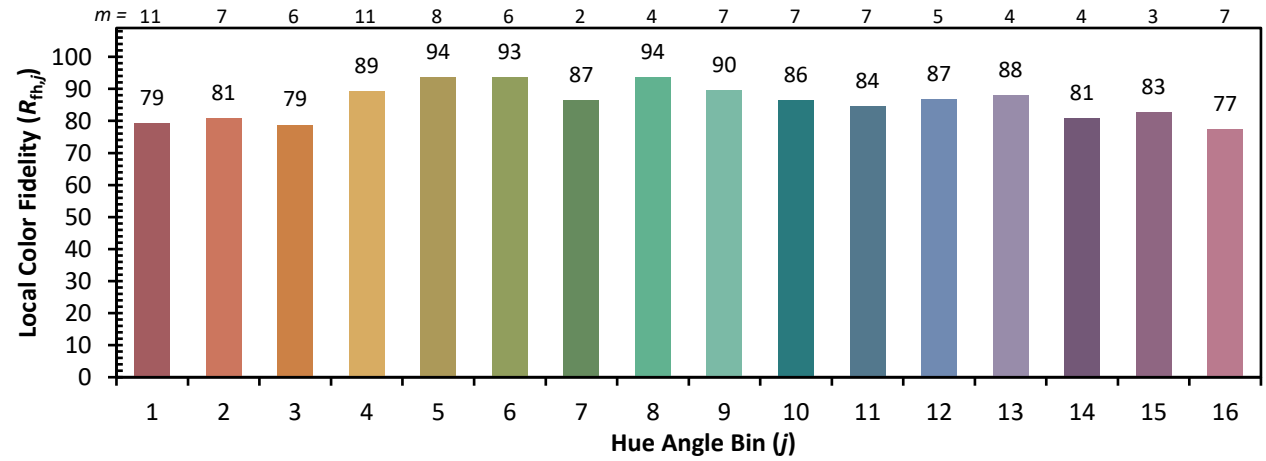
Color Rendition by Hue-Angle Bin







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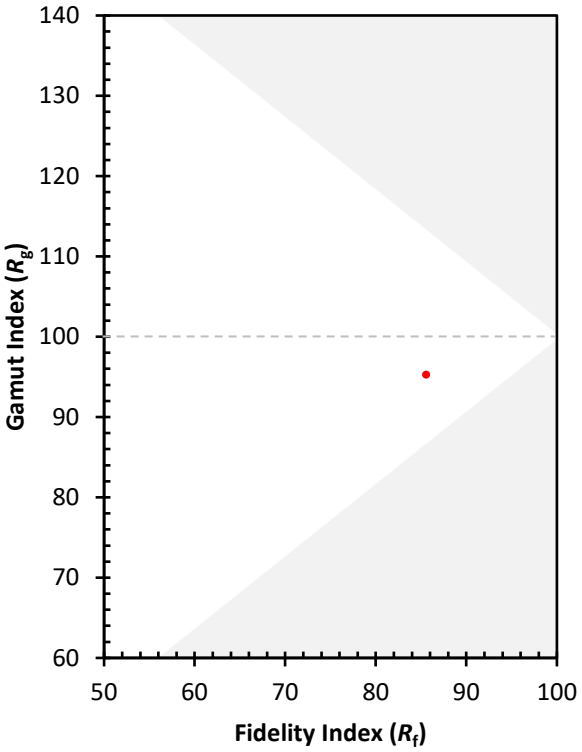
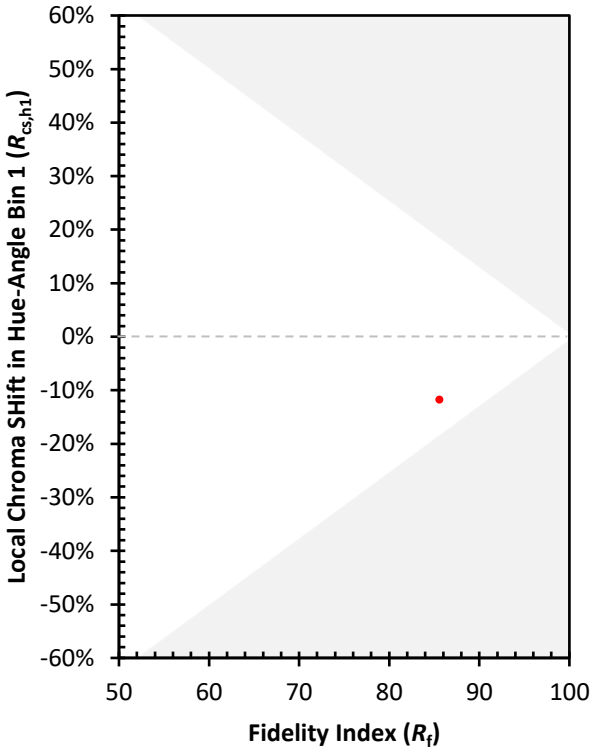
Measure Comparisons





(END OF REPORT)