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: P879533

Luminaire Tested: **MEM2-HTN-VA-130-830-U-WQ**

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:	P879533
Test Lab:	INNOVATION CENTER(G3)
Issue Date:	10/01/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	STREETWORKS
Catalog Number:	MEM2-HTN-VA-130-830-U-WQ
Description:	EPIC MODERN TALL HOUSING 130W 80CRI 3000K VISUAL COMFORT FIXTURE w/ TYPE V WIDE DISTRIBUTION OPTIC
Light Source:	(1) 3000K CCT, 80 CRI LEDS
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	12497.7 lumens
Efficiency:	N/A
Efficacy:	96.1 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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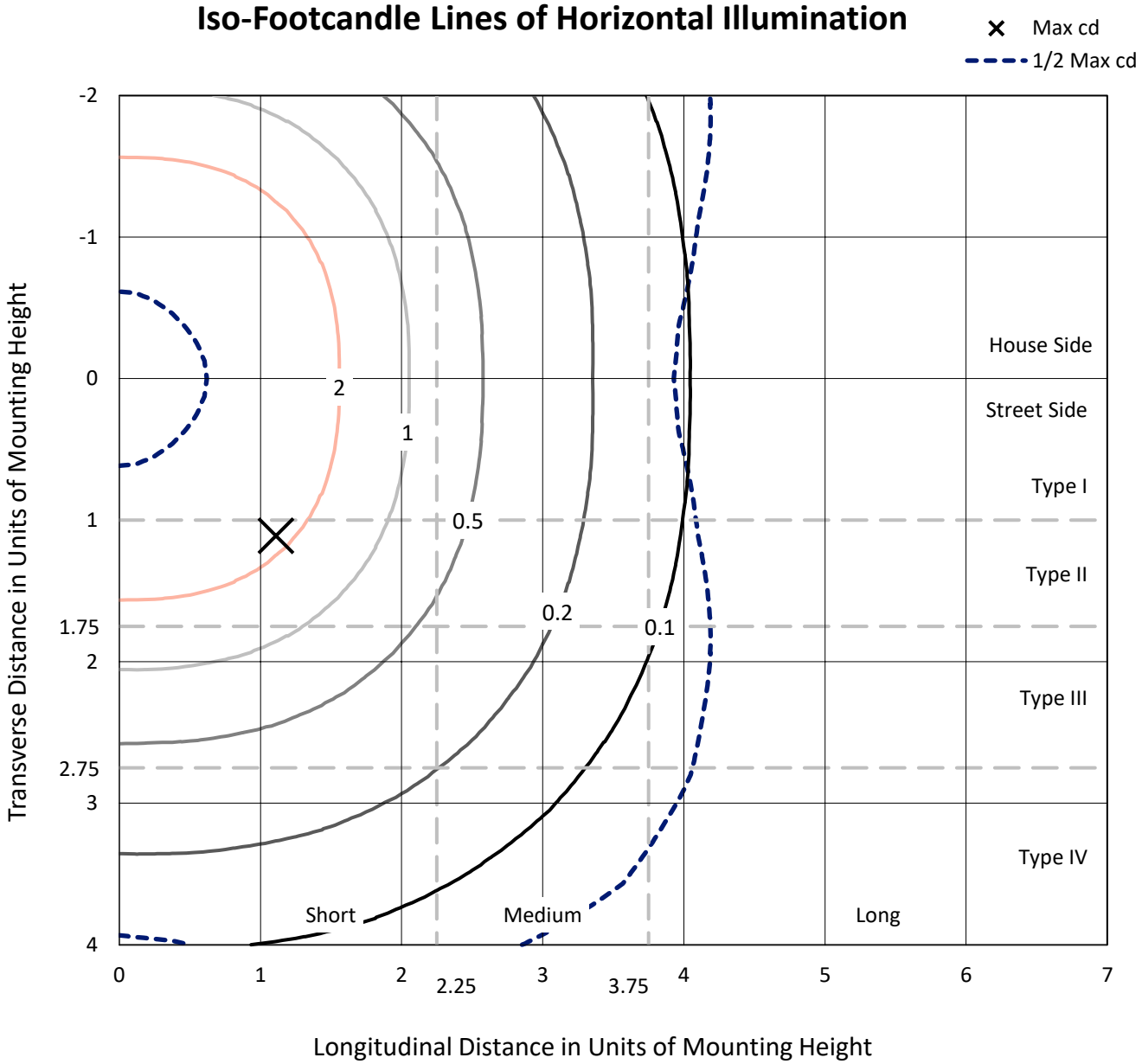
Scaled Data Report

REPORT NUMBER: P879533
CATALOG NUMBER: MEM2-HTN-VA-130-830-U-WQ

Iso-Footcandle Lines of Horizontal Illumination



Based on 15 foot mounting height. Maximum calculated value = 4.7 fc
Type V - Short - N/A

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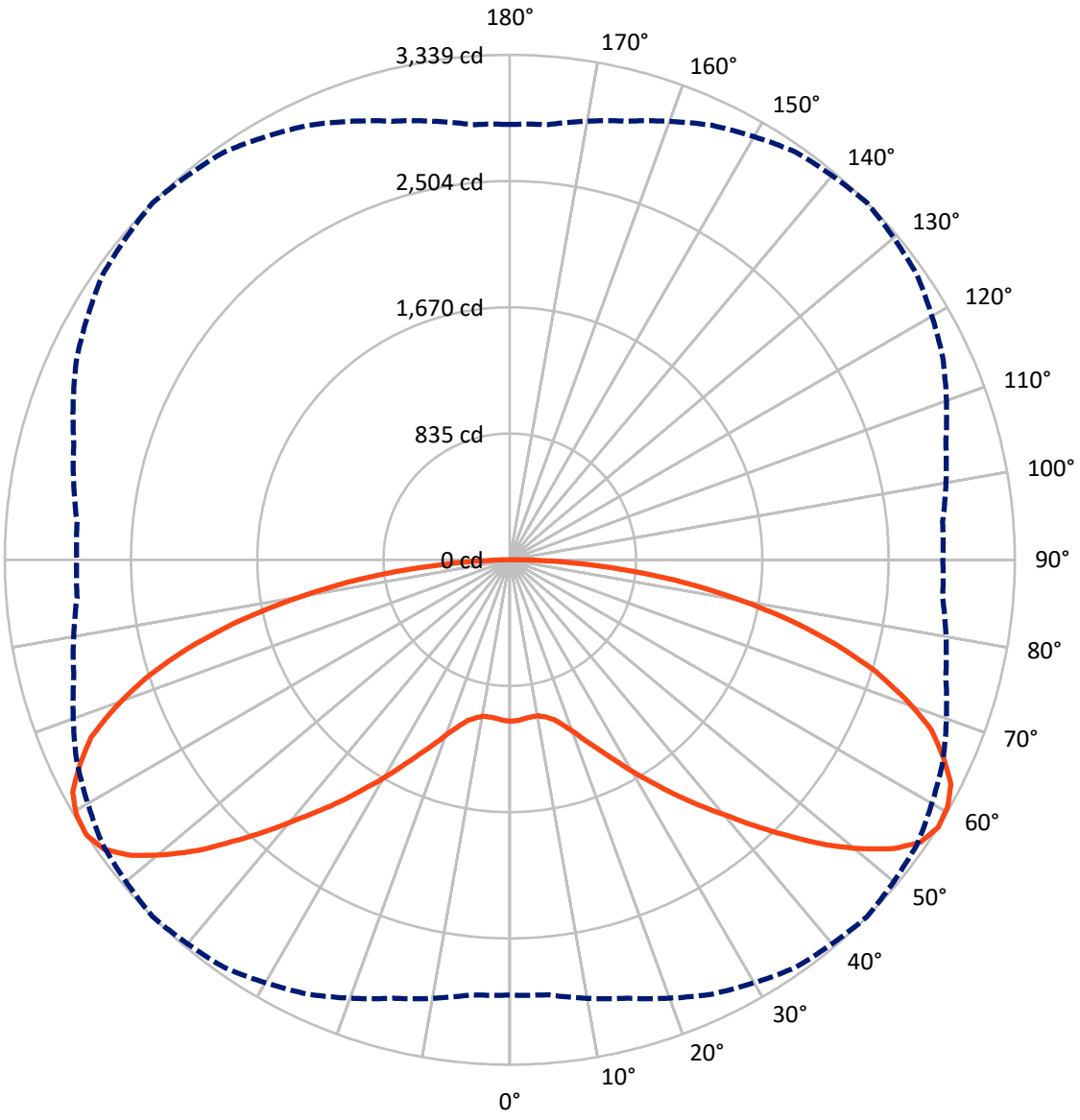
Luminous Intensity Polar Plot



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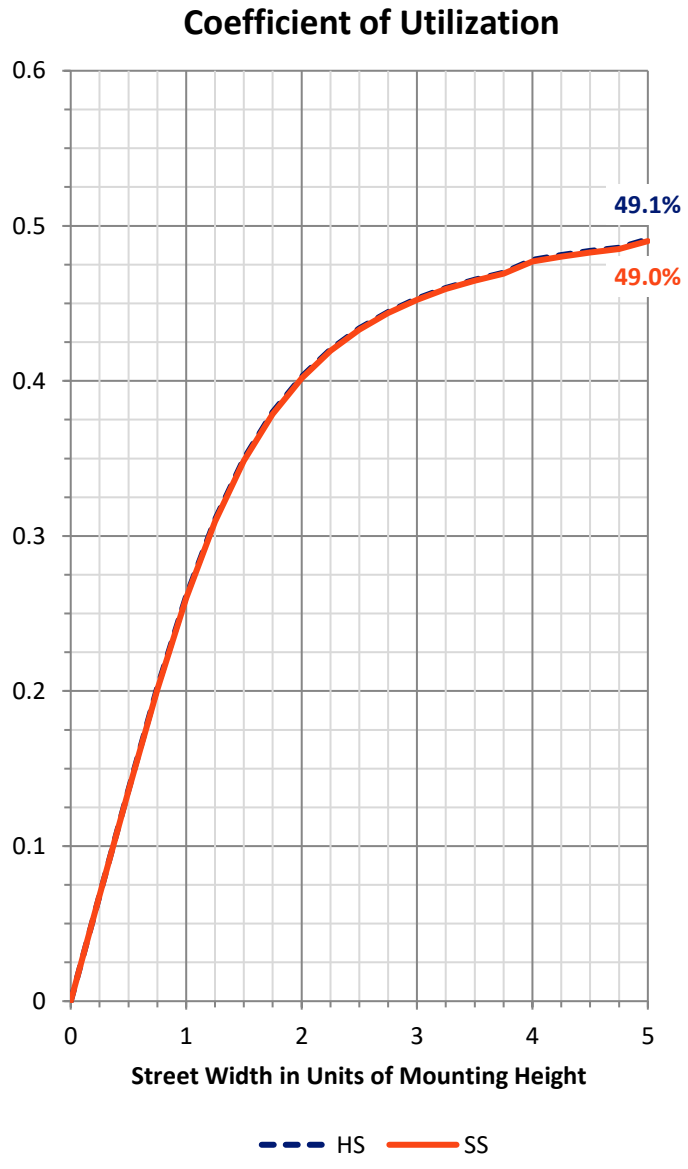
REPORT NUMBER: P879533
CATALOG NUMBER: MEM2-HTN-VA-130-830-U-WQ

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6248.9	0.0	6248.9
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6248.9	0.0	6248.9
	% Fixture	50.0	0.0	50.0
Total	Lumens	12497.7	0.0	12497.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.5	0.8
10°-20°	315.9	2.5
20°-30°	649.4	5.2
30°-40°	1184.9	9.5
40°-50°	1943.1	15.5
50°-60°	2722.9	21.8
60°-70°	2848.4	22.8
70°-80°	2081.1	16.7
80°-90°	651.4	5.2
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°	12497.7	100.0
0°-180°	12497.7	100.0



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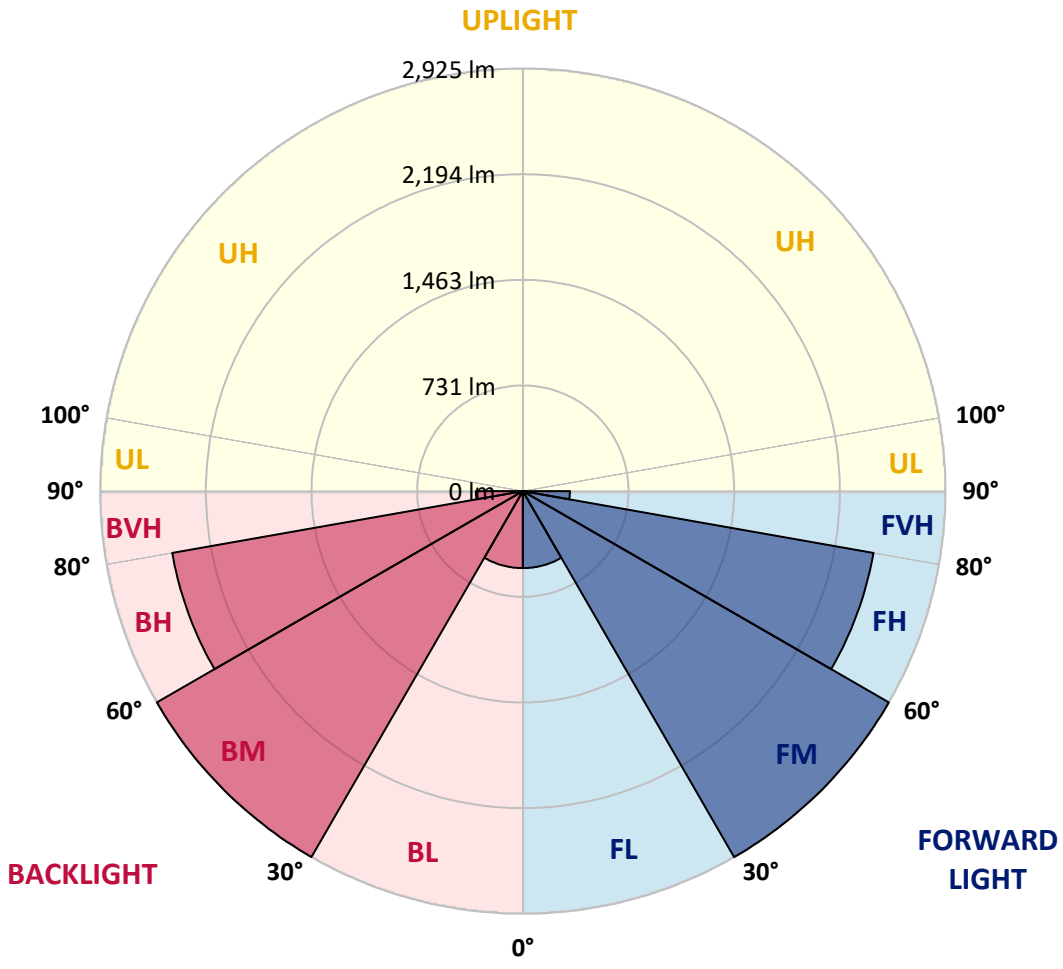
Scaled Data Report

REPORT NUMBER: P879533
CATALOG NUMBER: MEM2-HTN-VA-130-830-U-WQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	532.9	4.3			
FM	(30°-60°)	2925.5	23.4			
FH	(60°-80°)	2464.8	19.7			G2/5000
FVH	(80°-90°)	325.7	2.6			G3/500
BL	(0°-30°)	532.9	4.3	B2/1000		
BM	(30°-60°)	2925.5	23.4	B3/5000		
BH	(60°-80°)	2464.8	19.7	B3/2500		G2/5000
BVH	(80°-90°)	325.7	2.6			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: P879533
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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1067.1	1067.1	1067.1	1067.1	1067.1	1067.1	1067.1	1067.1	1067.1	1067.1	1067.1
2.5°	1063.1	1064.7	1063.9	1063.9	1063.1	1063.9	1065.5	1066.3	1065.5	1066.3	1065.5
5°	1056.1	1056.1	1055.3	1054.5	1054.5	1054.5	1054.5	1054.5	1055.3	1055.3	1056.1
7.5°	1047.5	1047.5	1047.5	1049.1	1048.3	1049.1	1049.1	1048.3	1047.5	1047.5	1048.3
10°	1049.1	1048.3	1047.5	1049.1	1048.3	1049.1	1049.1	1047.5	1048.3	1049.1	1049.8
12.5°	1062.4	1060.8	1063.1	1065.5	1067.1	1068.6	1067.8	1067.1	1064.7	1062.4	1062.4
15°	1091.3	1089.8	1092.1	1095.2	1096.0	1096.8	1099.2	1096.0	1095.2	1091.3	1090.5
17.5°	1132.8	1132.0	1136.7	1143.0	1146.1	1150.0	1146.1	1143.0	1134.4	1132.8	1135.2
20°	1192.3	1190.0	1199.4	1209.5	1212.7	1217.4	1214.2	1208.0	1199.4	1190.0	1190.0
22.5°	1268.3	1273.7	1278.4	1286.3	1298.8	1306.6	1296.4	1285.5	1273.0	1267.5	1263.6
25°	1366.9	1366.1	1370.8	1386.5	1394.3	1399.8	1398.2	1383.3	1372.4	1364.5	1363.8
27.5°	1461.6	1471.0	1480.4	1490.6	1510.2	1512.5	1510.2	1492.2	1474.9	1468.7	1466.3
30°	1587.7	1586.1	1594.7	1619.0	1638.6	1640.1	1633.9	1611.9	1592.4	1580.6	1582.2
32.5°	1710.6	1698.1	1720.8	1737.2	1753.6	1770.9	1754.4	1737.2	1720.8	1695.7	1703.5
35°	1822.5	1832.7	1845.2	1878.9	1912.6	1919.6	1908.6	1873.4	1841.3	1829.6	1816.3
37.5°	1959.5	1959.5	1980.7	2030.0	2060.5	2071.5	2055.8	2020.6	1976.0	1958.8	1952.5
40°	2097.3	2097.3	2129.4	2170.9	2216.3	2232.0	2214.8	2168.6	2131.8	2087.1	2094.2
42.5°	2231.2	2242.2	2284.4	2335.3	2398.7	2419.9	2395.6	2333.7	2280.5	2238.2	2232.0
45°	2379.2	2396.4	2442.6	2526.3	2580.4	2610.9	2577.2	2524.0	2430.0	2389.3	2367.4
47.5°	2540.4	2552.2	2618.7	2698.6	2786.2	2818.3	2778.4	2691.5	2611.7	2539.6	2536.5
50°	2680.6	2678.2	2763.5	2873.9	2973.4	3003.9	2971.8	2877.8	2747.9	2668.0	2675.9
52.5°	2785.5	2798.8	2888.8	3025.0	3130.7	3175.3	3122.9	3010.2	2874.7	2791.7	2766.7
55°	2853.6	2875.5	2980.4	3127.6	3248.1	3295.9	3244.2	3114.3	2966.3	2859.1	2844.2
57.5°	2878.6	2888.0	3002.3	3169.1	3292.0	3339.0	3285.7	3158.9	2984.3	2872.4	2863.0
60°	2840.3	2849.7	2973.4	3144.0	3284.9	3324.9	3282.6	3133.8	2956.1	2841.8	2826.2
62.5°	2746.3	2772.2	2909.2	3078.3	3239.5	3273.2	3229.4	3066.5	2902.1	2764.3	2741.6
65°	2633.6	2661.0	2777.6	2966.3	3112.7	3148.7	3114.3	2957.7	2778.4	2646.1	2624.2
67.5°	2476.2	2480.9	2617.9	2809.0	2964.0	3007.8	2948.3	2805.8	2610.9	2485.6	2468.4
70°	2279.7	2282.9	2428.5	2605.4	2747.9	2783.9	2744.8	2592.9	2418.3	2282.1	2270.3
72.5°	2027.6	2056.6	2177.2	2352.5	2485.6	2527.9	2477.0	2347.8	2186.6	2051.9	2025.3
75°	1759.9	1777.9	1882.8	2052.7	2167.0	2219.4	2178.0	2052.7	1882.8	1771.6	1748.2
77.5°	1446.8	1471.0	1573.6	1716.8	1811.6	1867.9	1822.5	1711.4	1573.6	1471.8	1471.0
80°	1143.0	1136.7	1229.9	1353.6	1447.5	1480.4	1452.2	1344.2	1220.5	1141.4	1130.5
82.5°	793.1	791.5	892.5	975.5	1054.5	1092.1	1049.1	979.4	883.9	813.4	790.7
85°	450.9	461.1	527.7	579.3	646.7	669.4	654.5	588.7	503.4	441.5	437.6
87.5°	156.6	170.7	183.2	220.8	264.6	284.2	263.0	252.9	224.7	194.9	196.5
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

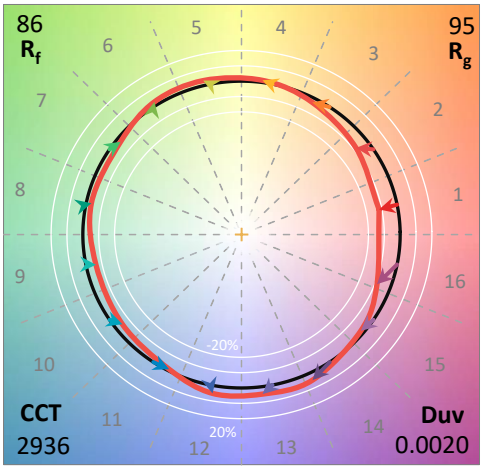
Test Information

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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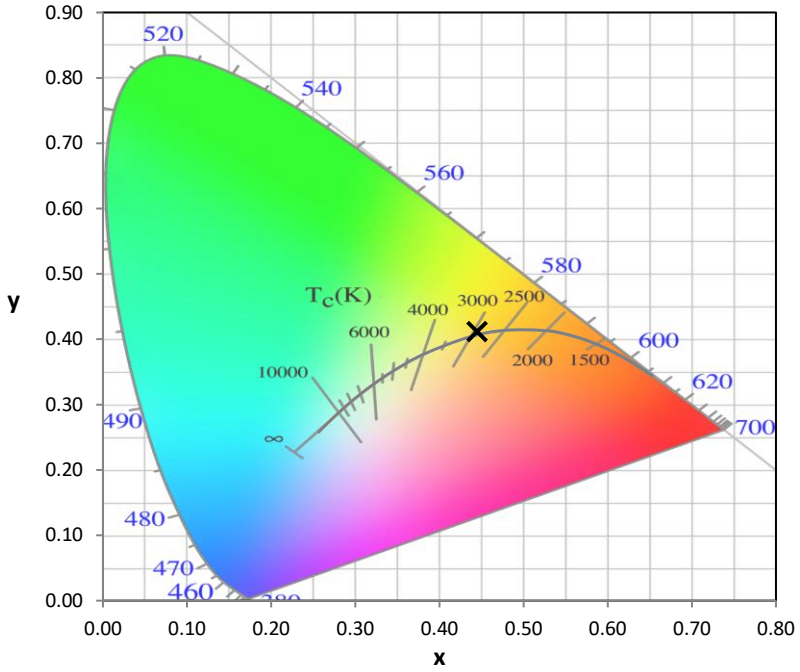
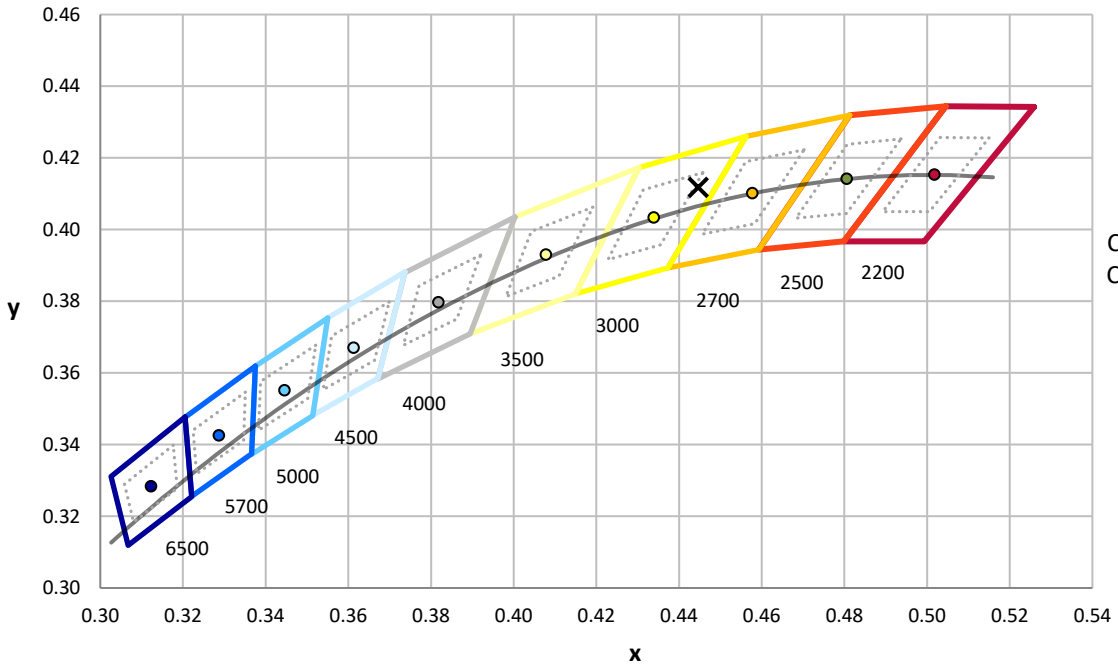
CIE 1931 Chromaticity Diagram



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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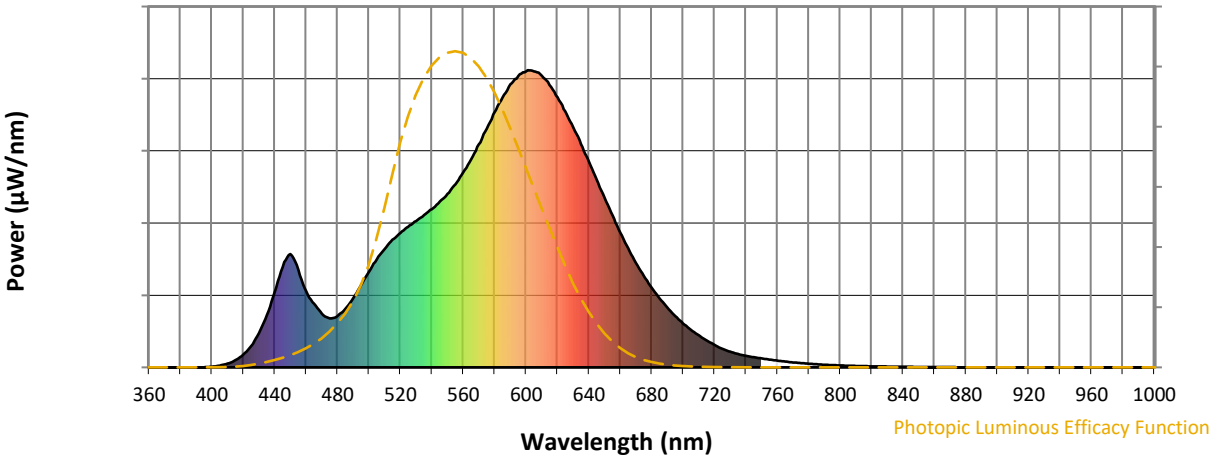
Photopic Flux vs. Wavelength

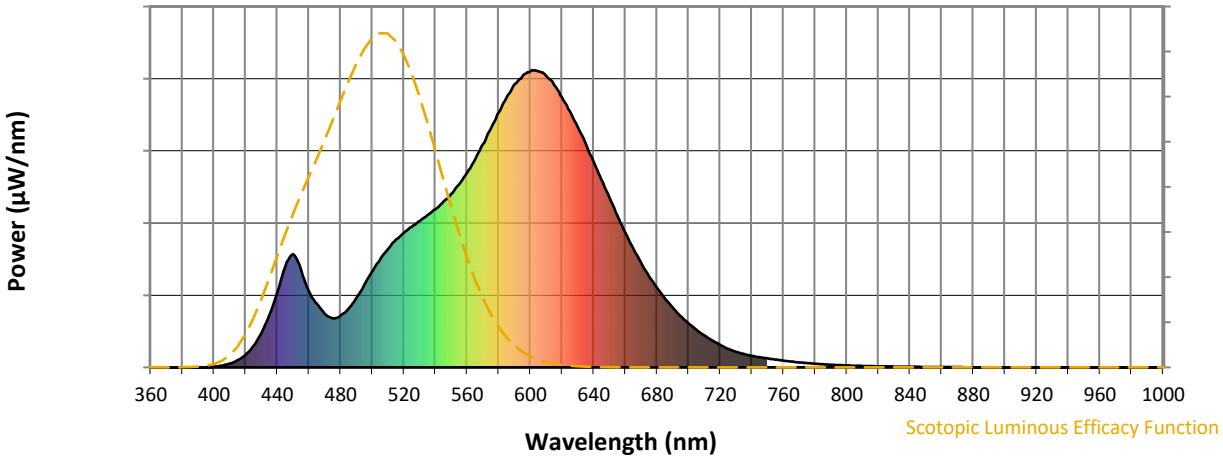


Photopic Lumens: NR

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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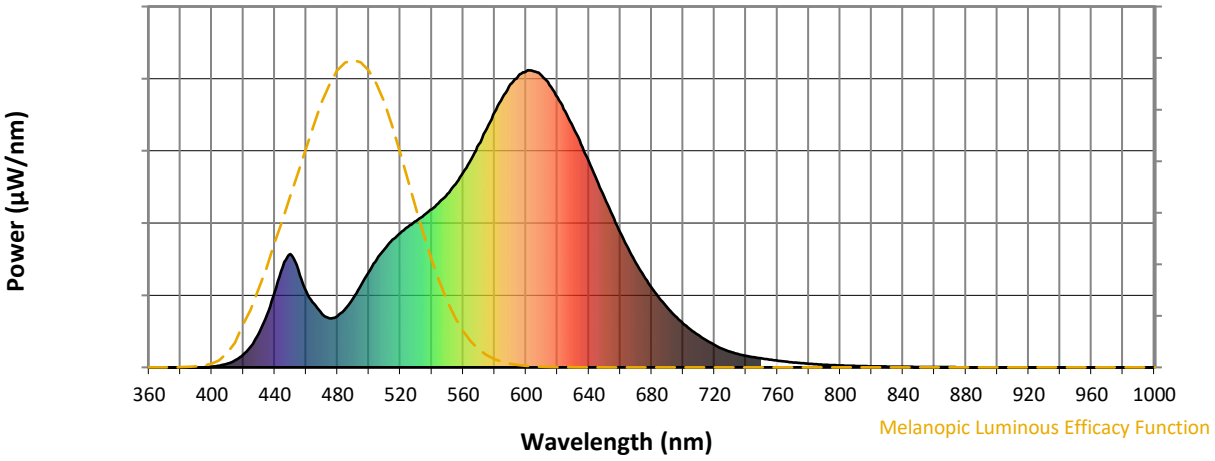
Melanopic Flux vs. Wavelength



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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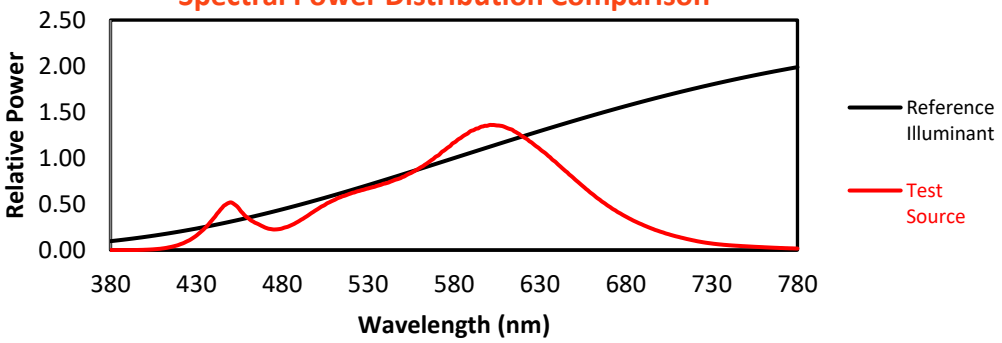
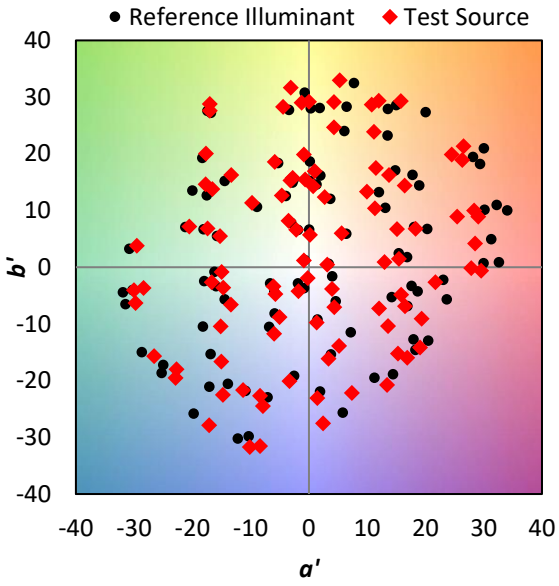
Summary

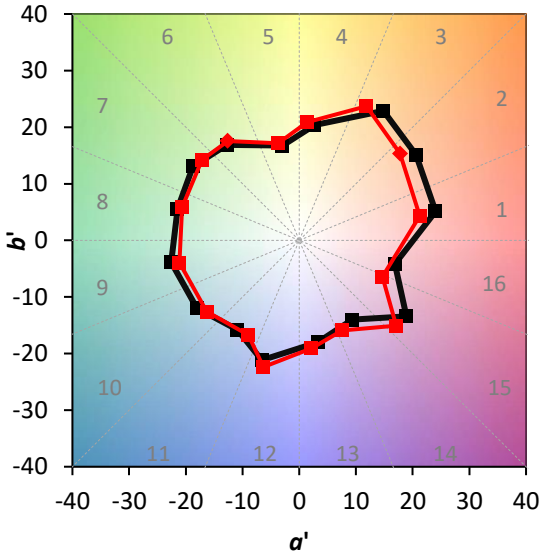
R_f = 85.6
R_g = 95.3
CIE R_a = 82.0
R_9 = 1.5

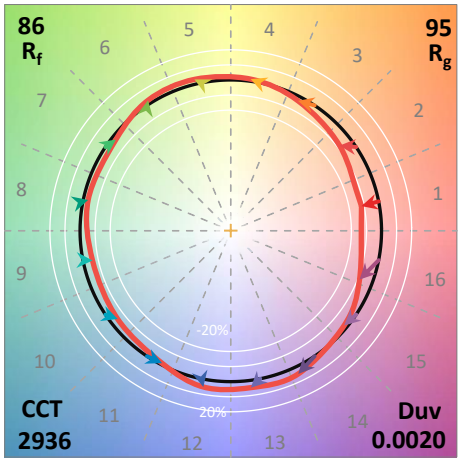
Spectral Power Distribution Comparison

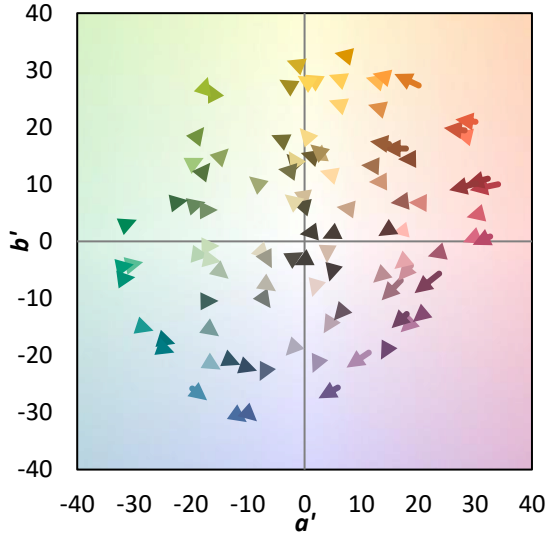


Color Vector Graphics









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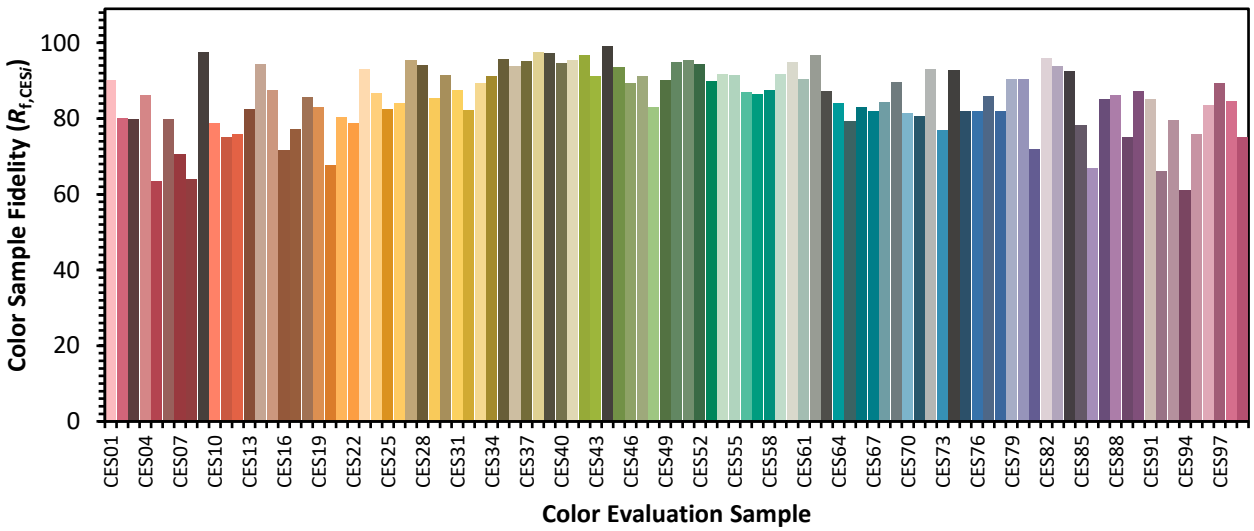
Individual Sample Fidelity Index ($R_{f,i}$)

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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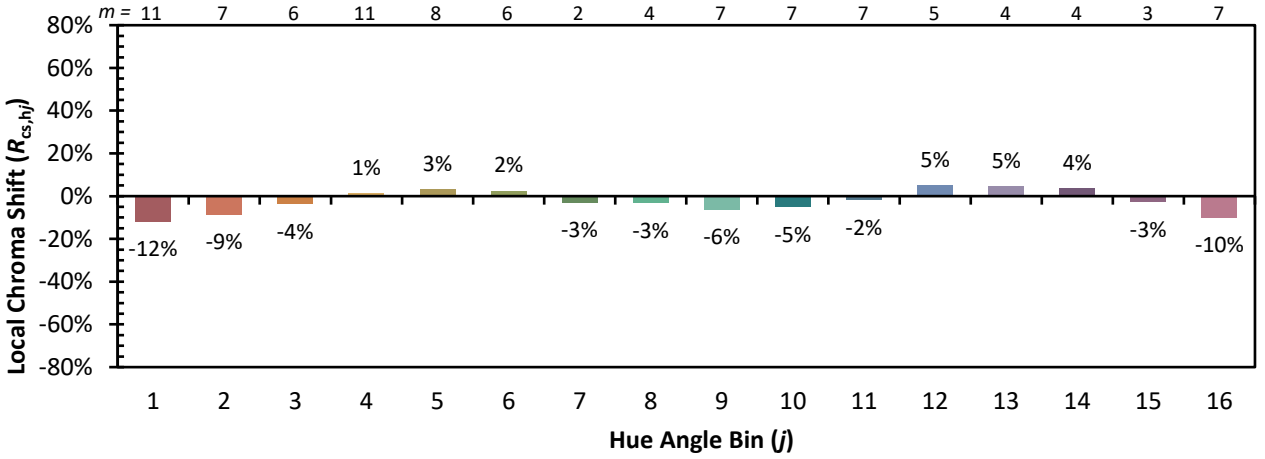
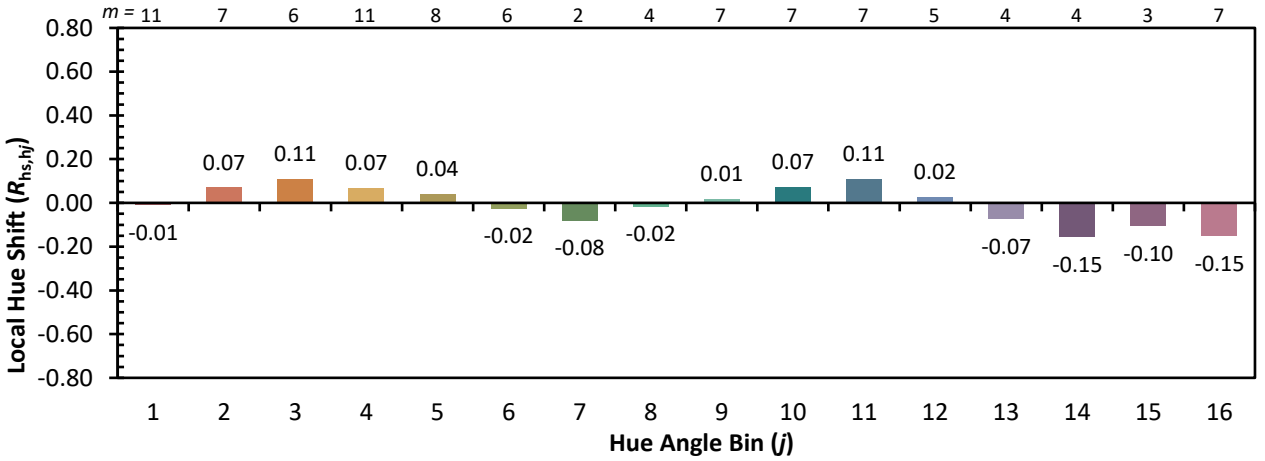
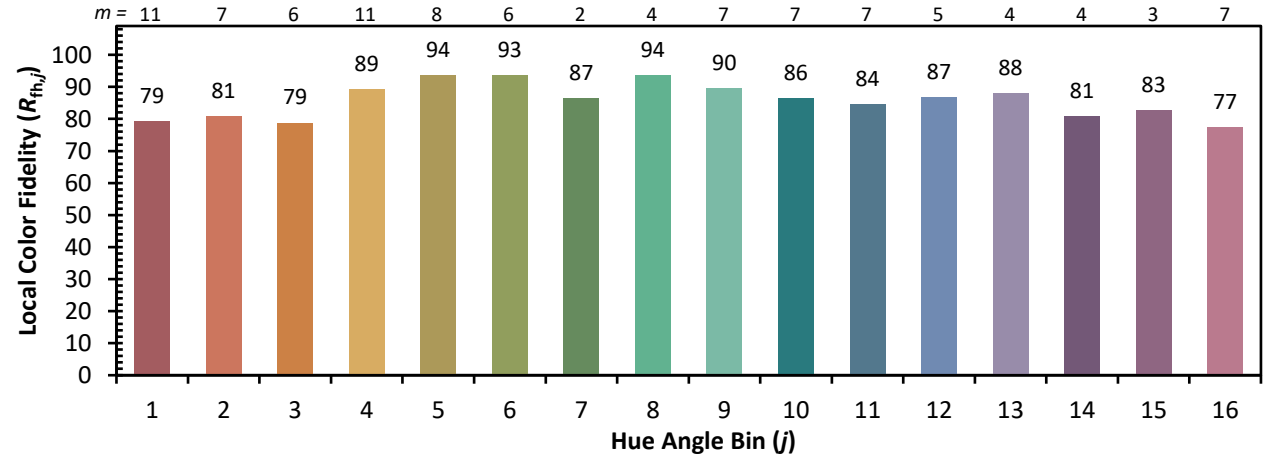
Color Rendition by Hue-Angle Bin







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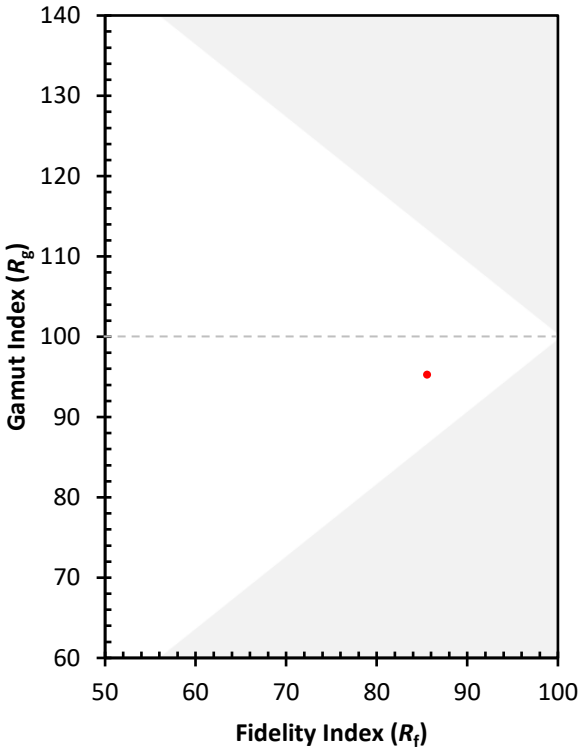
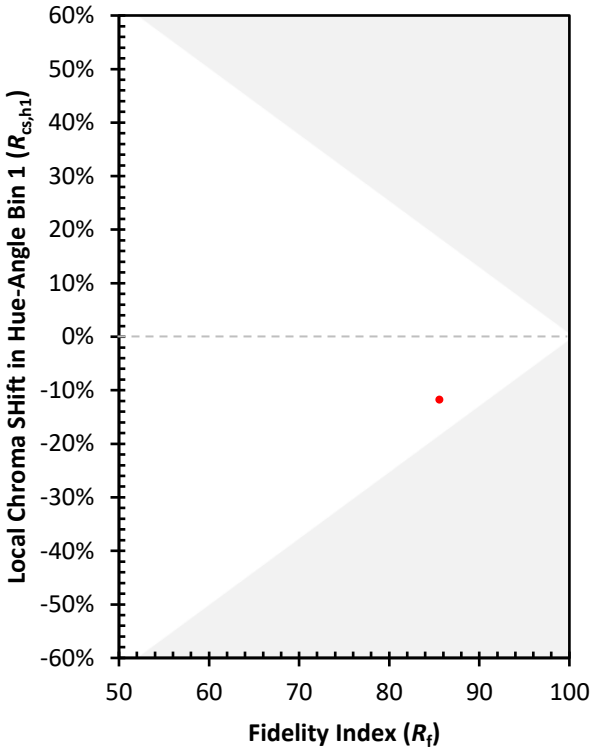
Measure Comparisons





(END OF REPORT)