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: INVUE

Report Number: P880147

Luminaire Tested: **EMM2-HTN-VA6-727-U-RW**

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:	P880147
Test Lab:	INNOVATION CENTER(G3)
Issue Date:	10/01/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	INVUE
Catalog Number:	EMM2-HTN-VA6-727-U-RW
Description:	EPIC MODERN TALL HOUSING 6W 70CRI 2700K VISUAL COMFORT FIXTURE w/ RECTANGULAR WIDE DISTRIBUTION OPTIC
Light Source:	(1) 2700K CCT, 70 CRI LEDS
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	7189.2 lumens
Efficiency:	N/A
Efficacy:	67.8 lumens/watt
Luminous Opening:	Circular (Dia: 1.12' x H: 0')
IES Classification:	Type III - Short
BUG Rating:	B3 - U0 - G3

Input Watts (W):	106
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	0.99
Total Harmonic Distortion (THDi):	5%
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	24 FT

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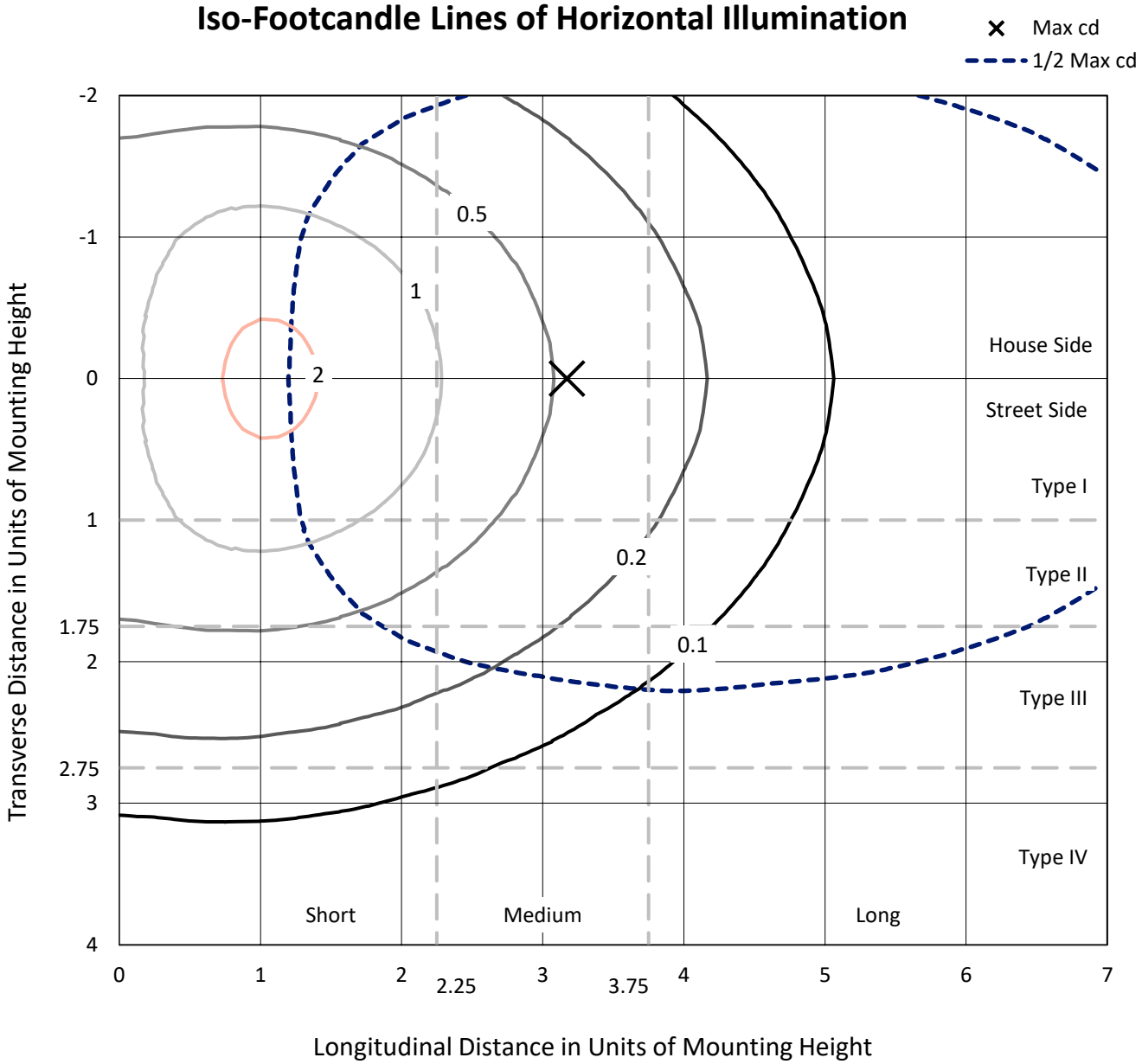
Scaled Data Report

REPORT NUMBER: P880147
CATALOG NUMBER: EMM2-HTN-VA6-727-U-RW

Iso-Footcandle Lines of Horizontal Illumination



Based on 15 foot mounting height. Maximum calculated value = 2.3 fc
Type III - Short - N/A

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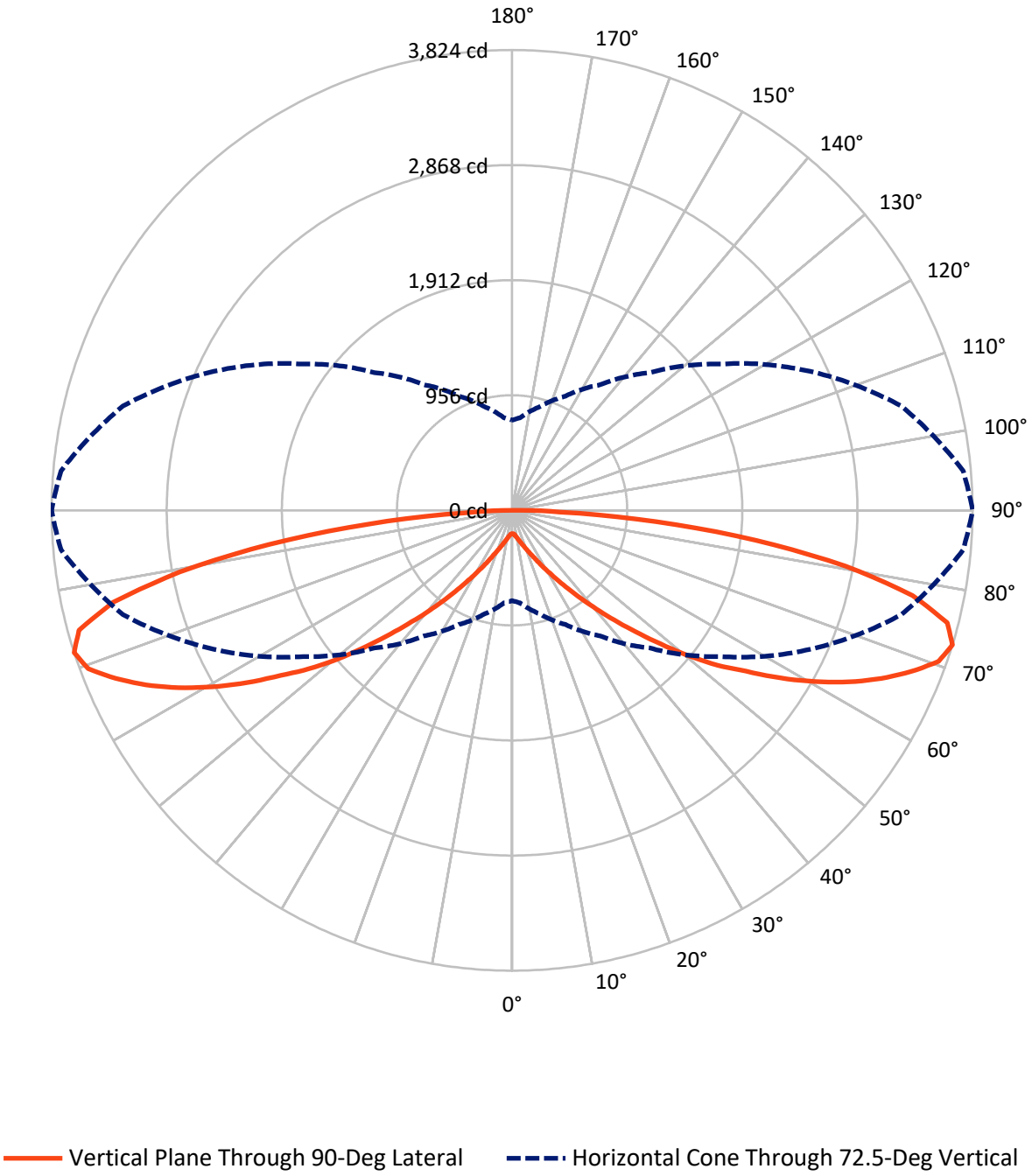
Luminous Intensity Polar Plot



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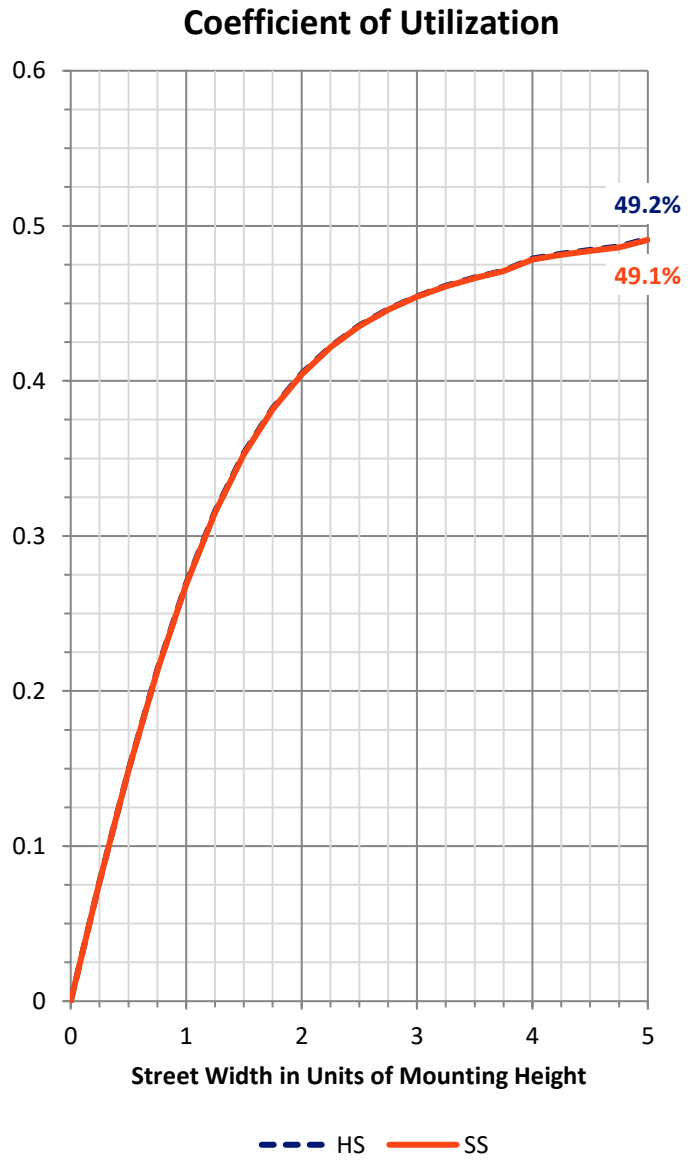
REPORT NUMBER: P880147
CATALOG NUMBER: EMM2-HTN-VA6-727-U-RW

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3594.6	0.0	3594.6
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	3594.6	0.0	3594.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	7189.2	0.0	7189.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	19.8	0.3
10°-20°	73.6	1.0
20°-30°	170.0	2.4
30°-40°	364.3	5.1
40°-50°	752.3	10.5
50°-60°	1381.8	19.2
60°-70°	1970.1	27.4
70°-80°	1832.5	25.5
80°-90°	624.8	8.7
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°	7189.2	100.0
0°-180°	7189.2	100.0



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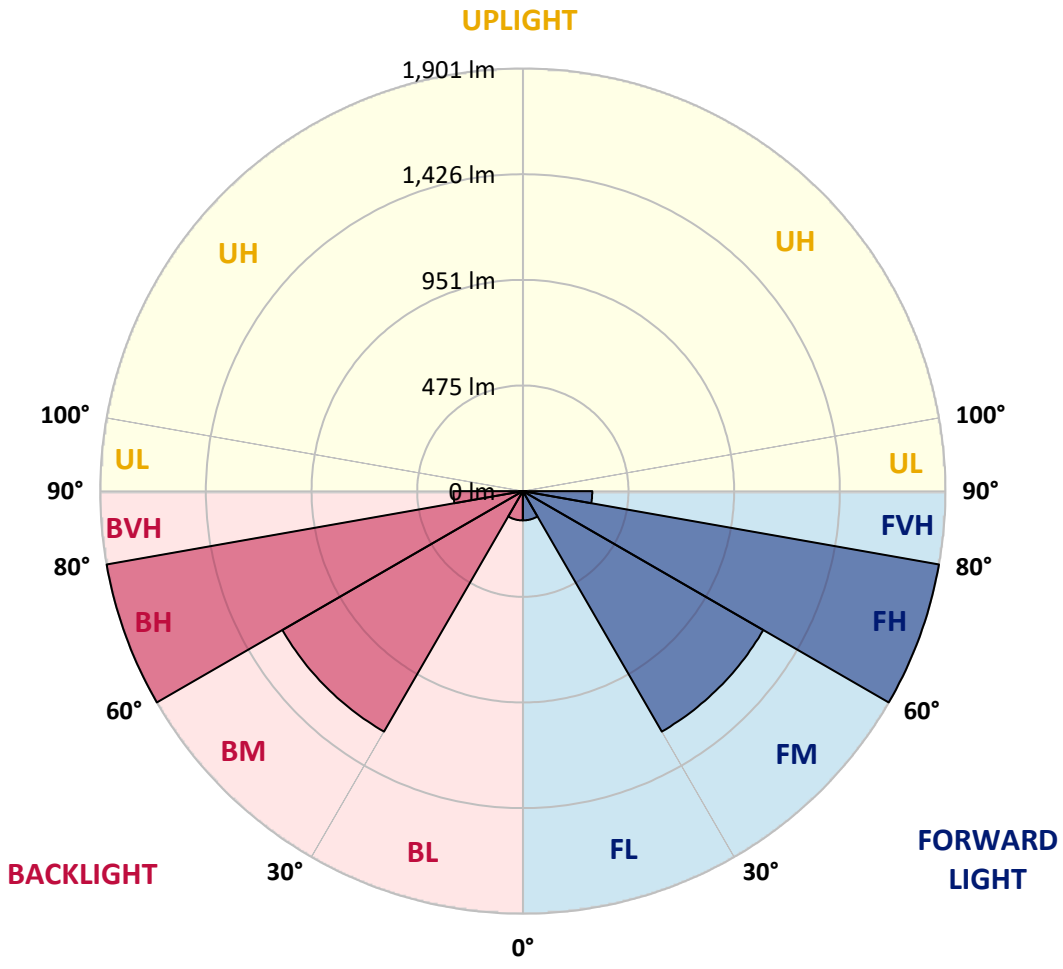
Scaled Data Report

REPORT NUMBER: P880147
CATALOG NUMBER: EMM2-HTN-VA6-727-U-RW

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	131.7	1.8			
FM	(30°-60°)	1249.2	17.4			
FH	(60°-80°)	1901.3	26.4			G2/5000
FVH	(80°-90°)	312.4	4.3			G3/500
BL	(0°-30°)	131.7	1.8	B1/500		
BM	(30°-60°)	1249.2	17.4	B2/2500		
BH	(60°-80°)	1901.3	26.4	B3/2500		G3/2500
BVH	(80°-90°)	312.4	4.3			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 III Short



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REPORT NUMBER: P880147
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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	193.5	193.5	193.5	193.5	193.5	193.5	193.5	193.5	193.5	193.5	*193.5*
2.5°	194.4	194.4	194.4	194.4	195.3	195.3	195.3	195.3	195.3	195.3	*195.3*
5°	197.1	197.1	197.1	198.1	199.9	200.8	201.7	201.7	202.6	202.6	*202.6*
7.5°	201.7	201.7	202.6	205.4	207.2	209.9	212.7	213.6	216.3	216.3	*216.3*
10°	208.1	208.1	209.9	212.7	217.2	222.7	227.3	230.9	232.7	233.7	*234.6*
12.5°	216.3	216.3	219.0	223.6	230.9	237.3	244.6	249.2	253.7	255.6	*255.6*
15°	226.3	226.3	230.0	236.4	244.6	253.7	263.8	272.0	278.4	281.1	*282.0*
17.5°	236.4	237.3	241.9	250.1	261.0	272.9	285.7	296.6	306.7	310.3	*312.1*
20°	249.2	249.2	254.6	265.6	279.3	295.7	313.1	327.7	340.4	347.7	*348.7*
22.5°	263.8	264.7	270.2	283.8	301.2	322.2	345.0	365.1	383.3	392.5	*391.5*
25°	278.4	279.3	287.5	303.9	325.8	355.0	384.2	410.7	435.4	446.3	*446.3*
27.5°	295.7	296.6	306.7	325.8	355.0	391.5	429.9	468.2	492.9	509.3	*514.8*
30°	316.7	317.6	329.5	354.1	387.9	433.5	484.6	533.9	566.8	590.5	*591.4*
32.5°	339.5	341.3	356.0	384.2	428.1	485.6	549.4	610.6	656.2	686.3	*685.4*
35°	370.6	372.4	392.5	424.4	477.3	545.8	623.4	706.4	759.4	794.0	*797.7*
37.5°	402.5	406.2	429.0	471.0	534.8	617.0	714.6	807.7	886.2	918.2	*927.3*
40°	439.9	443.6	471.9	523.0	596.9	701.9	822.3	936.4	1026.8	1070.6	*1077.0*
42.5°	482.8	489.2	522.1	581.4	674.5	795.9	936.4	1077.0	1191.1	1248.6	*1244.9*
45°	544.0	549.4	591.4	658.1	763.0	902.7	1073.3	1249.5	1372.7	1439.3	*1438.4*
47.5°	602.4	609.7	659.9	743.8	865.2	1027.7	1228.5	1429.3	1570.8	1644.7	*1657.5*
50°	662.6	672.7	736.5	830.6	974.8	1173.7	1399.2	1614.6	1786.2	1877.4	*1899.3*
52.5°	764.8	774.0	841.5	940.1	1094.3	1314.3	1573.5	1815.4	2005.2	2101.9	*2137.5*
55°	834.2	848.8	934.6	1057.8	1233.1	1465.8	1750.6	2029.8	2244.3	2339.2	*2359.3*
57.5°	857.0	872.5	975.7	1128.1	1345.3	1625.5	1935.8	2235.2	2467.9	2596.6	*2628.6*
60°	857.9	877.1	988.5	1153.7	1400.1	1737.8	2101.0	2456.1	2719.8	2861.3	*2888.7*
62.5°	887.1	909.0	1027.7	1181.9	1427.5	1789.8	2213.3	2643.2	2966.3	3109.6	*3139.7*
65°	920.0	945.6	1071.5	1243.1	1489.5	1845.5	2284.5	2778.3	3188.1	3355.1	*3369.7*
67.5°	886.2	908.1	1040.5	1218.5	1474.9	1856.4	2334.7	2862.2	3321.3	3563.2	*3575.0*
70°	830.6	853.4	979.3	1141.8	1393.7	1773.4	2277.2	2862.2	3399.8	3703.7	*3758.5*
72.5°	*749.3*	*772.1*	*891.7*	*1046.9*	*1273.2*	*1617.3*	*2117.5*	*2730.8*	*3346.0*	*3760.3*	*3824.2*
75°	649.8	670.8	781.3	922.7	1120.8	1432.0	1885.6	2480.7	3136.0	3655.4	*3732.0*
77.5°	542.1	561.3	655.3	769.4	937.3	1213.9	1602.7	2141.2	2769.1	3301.2	*3400.7*
80°	426.2	445.4	517.5	606.9	742.0	953.8	1276.0	1722.3	2265.3	2710.7	*2808.4*
82.5°	319.4	328.6	379.7	444.5	531.2	688.2	925.5	1273.2	1679.4	1998.8	*2042.6*
85°	200.8	209.0	243.7	288.4	340.4	422.6	570.4	779.4	1014.9	1194.7	*1197.5*
87.5°	62.1	72.1	83.1	109.5	125.0	150.6	180.7	254.6	335.0	422.6	*397.0*
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: SP1-2407-176-2

Test Date: 09/24/2024

Luminaire Tested: MEM2-HTN-VA-30-727-U-WQ

Data in this report applies to families of products including MEM2-HTN-VA-30-727-U-WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

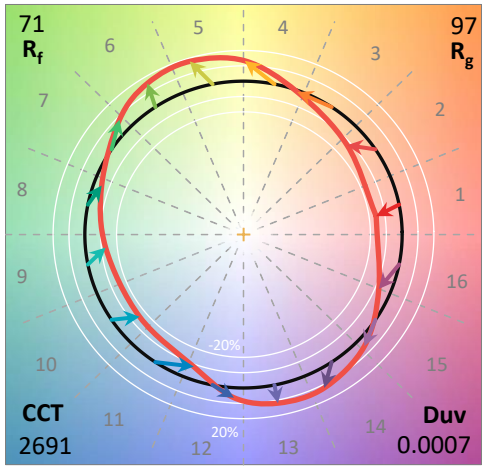
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2407-176-2
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-30-727-U-WQ**
Description:	EPIC MODERN VISUAL COMFORT 30W WAVESTREAM WIDE

Spectral Parameters

CCT (K):	2691	CRI (Ra):	70.6		
CIE u':	0.2627	R1:	67.7	R9:	-27.1
CIE v':	0.5285	R2:	79.8	R10:	53.1
Duv:	0.0007	R3:	90.6	R11:	61.9
CIE x:	0.4618	R4:	67.7	R12:	42.2
CIE y:	0.4129	R5:	65.3	R13:	69.4
CIE z:	0.1254	R6:	71.1	R14:	94.1
Peak Wavelength (nm):	601	R7:	78.1	R15:	60.4
Dominant Wavelength (nm):	584	R8:	44.7		
Purity:	62.54863				

Rf:	70.6
Rg:	97.2



Test Conditions

Stabilization Time:	28M
Operation Time:	1H 28M
Sphere Temperature (°C):	25.2

REPORT NUMBER: SP1-2407-176-2

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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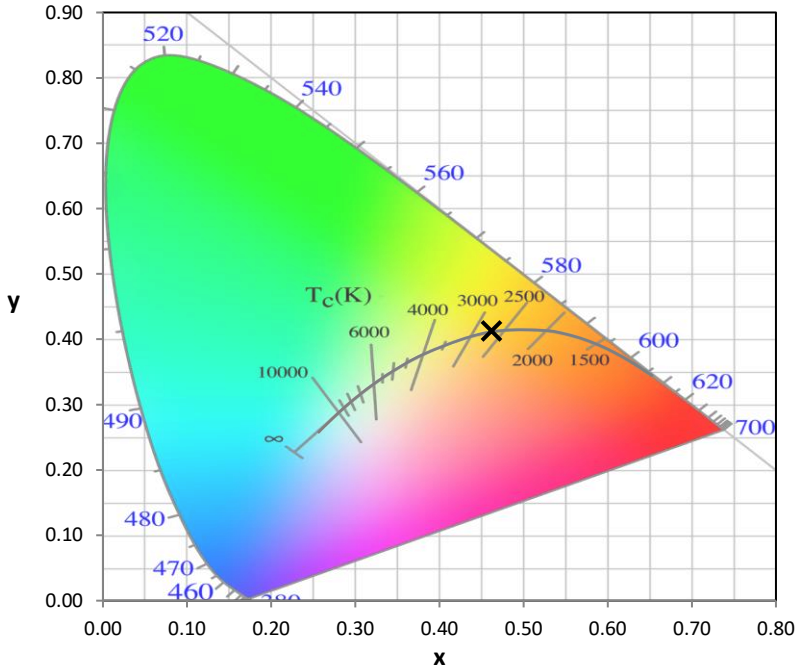
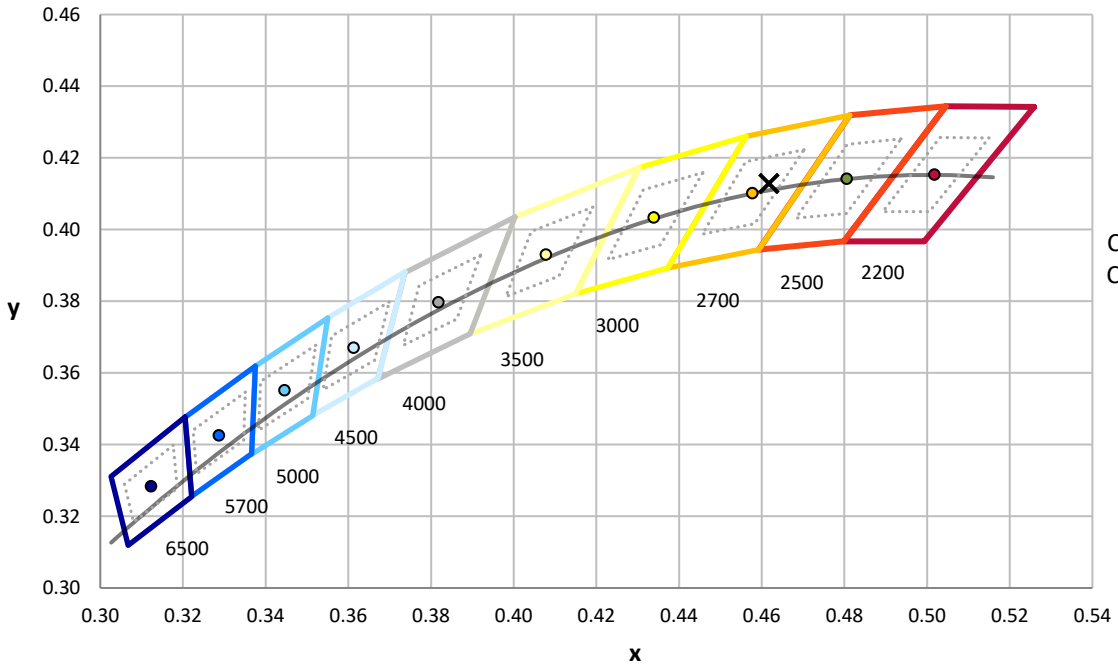
CIE 1931 Chromaticity Diagram



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

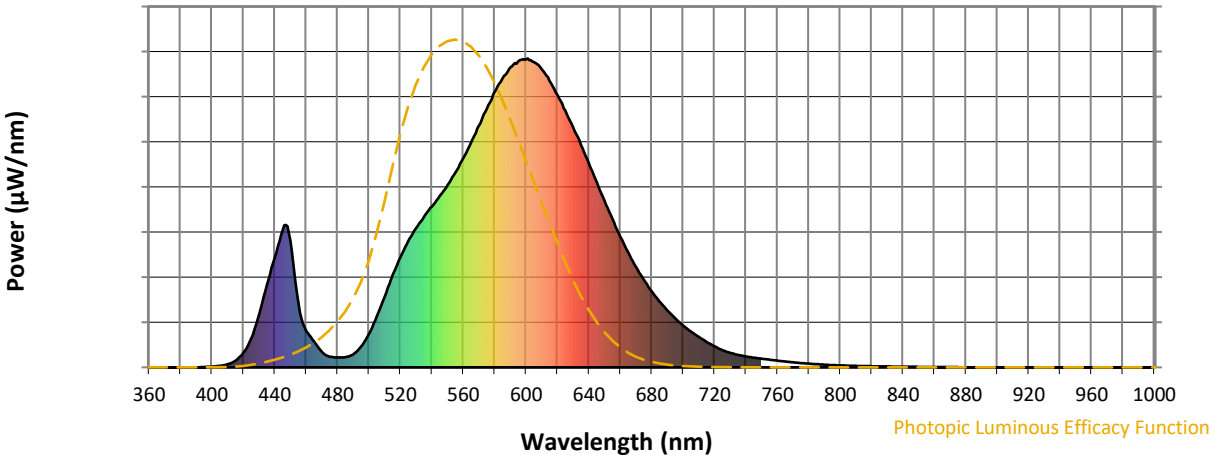


CCT = 2691K
CIE x = 0.4618
CIE y = 0.4129
Duv = 0.0007

Point lies inside the ANSI 2700K 4-step quadrangle

REPORT NUMBER: SP1-2407-176-2

Photopic Flux vs. Wavelength

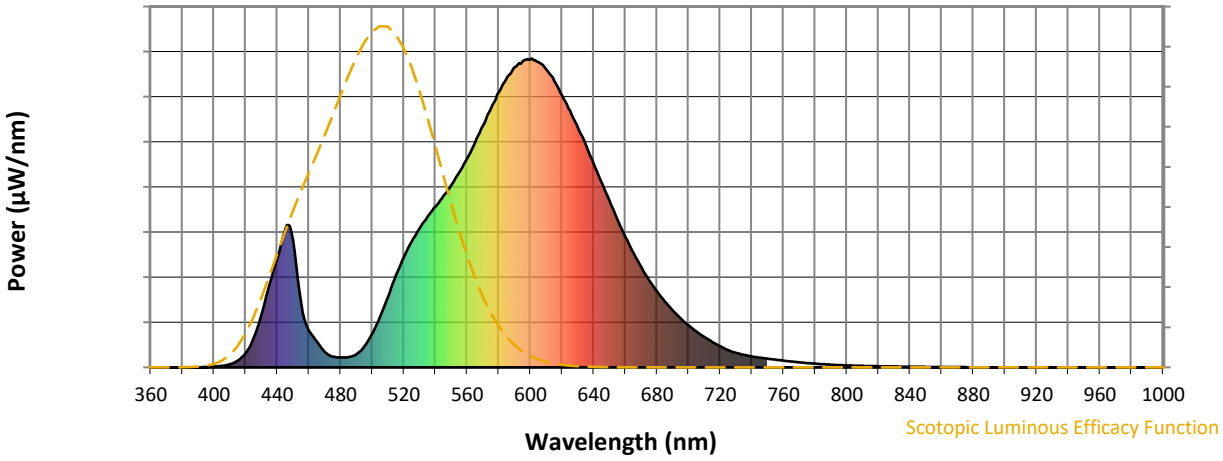


Photopic Lumens: NR

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	43	NR	620	881	NR	750	28	NR	880	0	NR
365	0	NR	495	67	NR	625	832	NR	755	25	NR	885	0	NR
370	0	NR	500	108	NR	630	776	NR	760	22	NR	890	0	NR
375	0	NR	505	165	NR	635	720	NR	765	19	NR	895	0	NR
380	0	NR	510	229	NR	640	660	NR	770	16	NR	900	0	NR
385	0	NR	515	297	NR	645	599	NR	775	14	NR	905	0	NR
390	0	NR	520	357	NR	650	538	NR	780	12	NR	910	0	NR
395	1	NR	525	408	NR	655	480	NR	785	10	NR	915	0	NR
400	3	NR	530	451	NR	660	423	NR	790	9	NR	920	0	NR
405	5	NR	535	488	NR	665	372	NR	795	7	NR	925	0	NR
410	10	NR	540	521	NR	670	325	NR	800	6	NR	930	0	NR
415	21	NR	545	555	NR	675	282	NR	805	5	NR	935	0	NR
420	46	NR	550	590	NR	680	246	NR	810	5	NR	940	0	NR
425	94	NR	555	631	NR	685	213	NR	815	4	NR	945	0	NR
430	169	NR	560	677	NR	690	185	NR	820	4	NR	950	0	NR
435	268	NR	565	728	NR	695	158	NR	825	3	NR	955	0	NR
440	354	NR	570	782	NR	700	136	NR	830	3	NR	960	0	NR
445	445	NR	575	838	NR	705	116	NR	835	2	NR	965	0	NR
450	411	NR	580	891	NR	710	98	NR	840	2	NR	970	0	NR
455	210	NR	585	935	NR	715	82	NR	845	2	NR	975	0	NR
460	119	NR	590	972	NR	720	68	NR	850	2	NR	980	0	NR
465	84	NR	595	991	NR	725	56	NR	855	1	NR	985	0	NR
470	50	NR	600	997	NR	730	47	NR	860	1	NR	990	0	NR
475	35	NR	605	988	NR	735	40	NR	865	1	NR	995	0	NR
480	32	NR	610	965	NR	740	35	NR	870	1	NR	1000	0	NR
485	33	NR	615	927	NR	745	31	NR	875	1	NR			

REPORT NUMBER: SP1-2407-176-2

Scotopic Flux vs. Wavelength

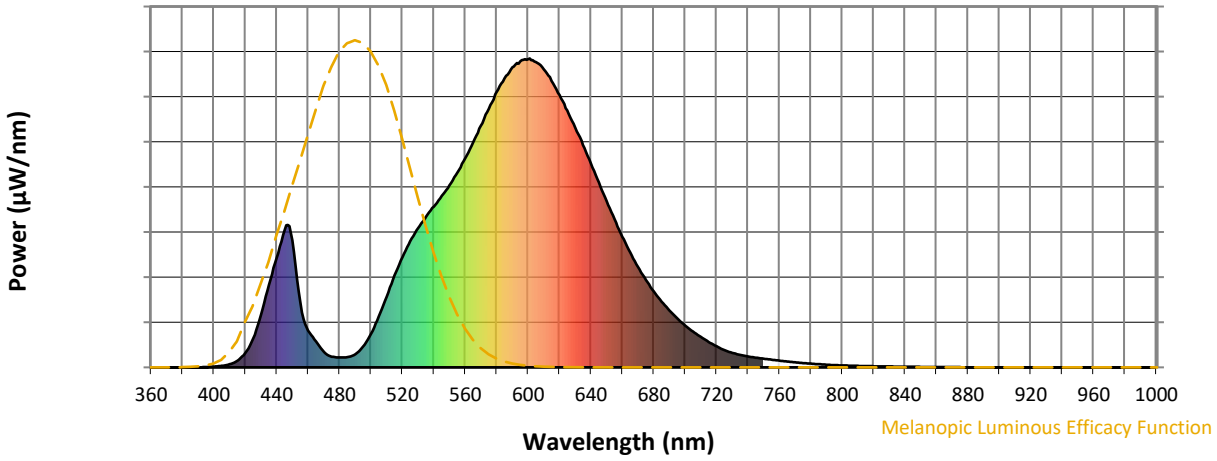


Scotopic Lumens: NR **S/P: 1.03**

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	43	NR	620	881	NR	750	28	NR	880	0	NR
365	0	NR	495	67	NR	625	832	NR	755	25	NR	885	0	NR
370	0	NR	500	108	NR	630	776	NR	760	22	NR	890	0	NR
375	0	NR	505	165	NR	635	720	NR	765	19	NR	895	0	NR
380	0	NR	510	229	NR	640	660	NR	770	16	NR	900	0	NR
385	0	NR	515	297	NR	645	599	NR	775	14	NR	905	0	NR
390	0	NR	520	357	NR	650	538	NR	780	12	NR	910	0	NR
395	1	NR	525	408	NR	655	480	NR	785	10	NR	915	0	NR
400	3	NR	530	451	NR	660	423	NR	790	9	NR	920	0	NR
405	5	NR	535	488	NR	665	372	NR	795	7	NR	925	0	NR
410	10	NR	540	521	NR	670	325	NR	800	6	NR	930	0	NR
415	21	NR	545	555	NR	675	282	NR	805	5	NR	935	0	NR
420	46	NR	550	590	NR	680	246	NR	810	5	NR	940	0	NR
425	94	NR	555	631	NR	685	213	NR	815	4	NR	945	0	NR
430	169	NR	560	677	NR	690	185	NR	820	4	NR	950	0	NR
435	268	NR	565	728	NR	695	158	NR	825	3	NR	955	0	NR
440	354	NR	570	782	NR	700	136	NR	830	3	NR	960	0	NR
445	445	NR	575	838	NR	705	116	NR	835	2	NR	965	0	NR
450	411	NR	580	891	NR	710	98	NR	840	2	NR	970	0	NR
455	210	NR	585	935	NR	715	82	NR	845	2	NR	975	0	NR
460	119	NR	590	972	NR	720	68	NR	850	2	NR	980	0	NR
465	84	NR	595	991	NR	725	56	NR	855	1	NR	985	0	NR
470	50	NR	600	997	NR	730	47	NR	860	1	NR	990	0	NR
475	35	NR	605	988	NR	735	40	NR	865	1	NR	995	0	NR
480	32	NR	610	965	NR	740	35	NR	870	1	NR	1000	0	NR
485	33	NR	615	927	NR	745	31	NR	875	1	NR			

REPORT NUMBER: SP1-2407-176-2

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 1.73**

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	43	NR	620	881	NR	750	28	NR	880	0	NR
365	0	NR	495	67	NR	625	832	NR	755	25	NR	885	0	NR
370	0	NR	500	108	NR	630	776	NR	760	22	NR	890	0	NR
375	0	NR	505	165	NR	635	720	NR	765	19	NR	895	0	NR
380	0	NR	510	229	NR	640	660	NR	770	16	NR	900	0	NR
385	0	NR	515	297	NR	645	599	NR	775	14	NR	905	0	NR
390	0	NR	520	357	NR	650	538	NR	780	12	NR	910	0	NR
395	1	NR	525	408	NR	655	480	NR	785	10	NR	915	0	NR
400	3	NR	530	451	NR	660	423	NR	790	9	NR	920	0	NR
405	5	NR	535	488	NR	665	372	NR	795	7	NR	925	0	NR
410	10	NR	540	521	NR	670	325	NR	800	6	NR	930	0	NR
415	21	NR	545	555	NR	675	282	NR	805	5	NR	935	0	NR
420	46	NR	550	590	NR	680	246	NR	810	5	NR	940	0	NR
425	94	NR	555	631	NR	685	213	NR	815	4	NR	945	0	NR
430	169	NR	560	677	NR	690	185	NR	820	4	NR	950	0	NR
435	268	NR	565	728	NR	695	158	NR	825	3	NR	955	0	NR
440	354	NR	570	782	NR	700	136	NR	830	3	NR	960	0	NR
445	445	NR	575	838	NR	705	116	NR	835	2	NR	965	0	NR
450	411	NR	580	891	NR	710	98	NR	840	2	NR	970	0	NR
455	210	NR	585	935	NR	715	82	NR	845	2	NR	975	0	NR
460	119	NR	590	972	NR	720	68	NR	850	2	NR	980	0	NR
465	84	NR	595	991	NR	725	56	NR	855	1	NR	985	0	NR
470	50	NR	600	997	NR	730	47	NR	860	1	NR	990	0	NR
475	35	NR	605	988	NR	735	40	NR	865	1	NR	995	0	NR
480	32	NR	610	965	NR	740	35	NR	870	1	NR	1000	0	NR
485	33	NR	615	927	NR	745	31	NR	875	1	NR			

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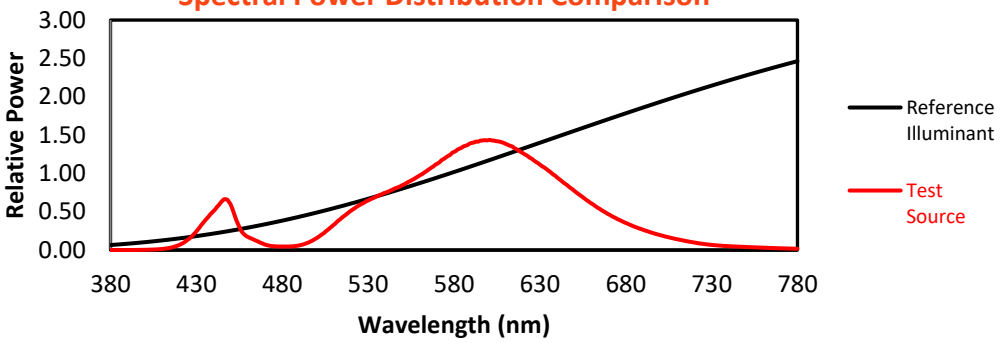
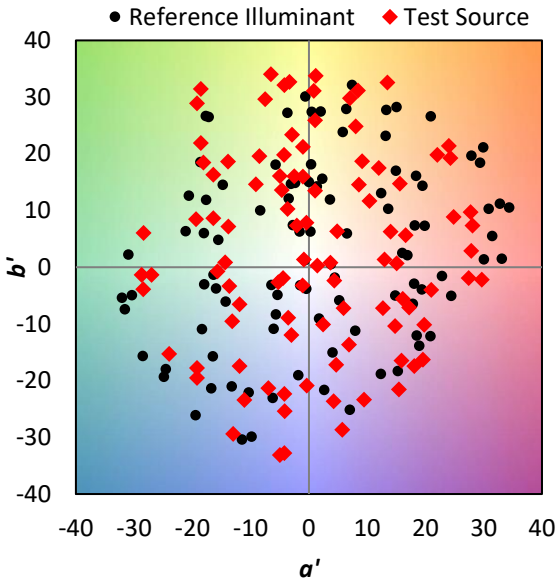
Summary

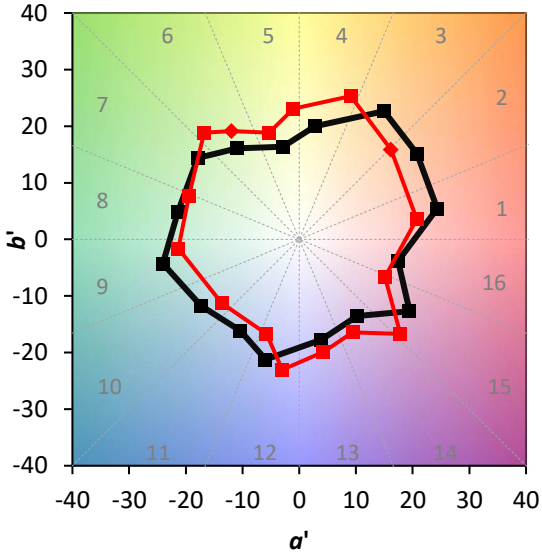
R_f = 70.6
R_g = 97.2
CIE R_a = 70.6
R_9 = -27.1

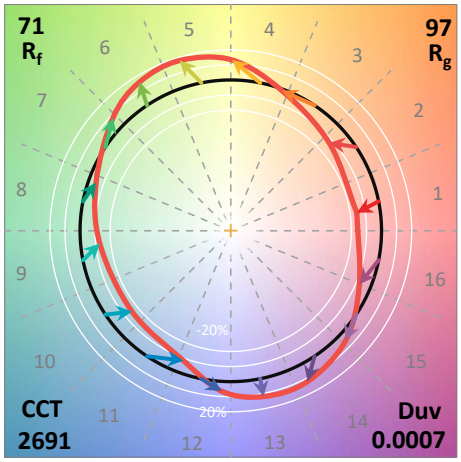
Spectral Power Distribution Comparison

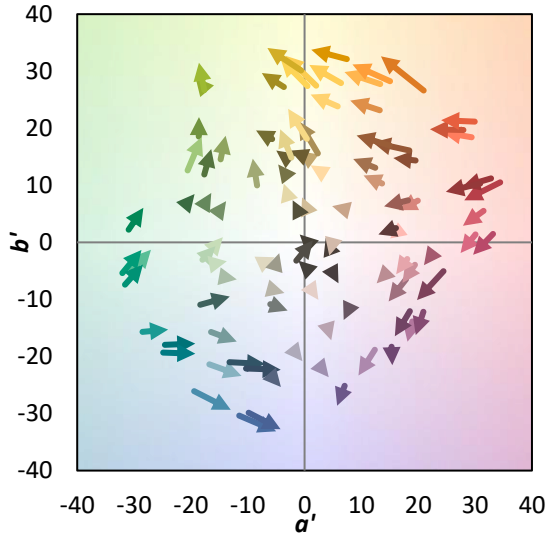


Color Vector Graphics









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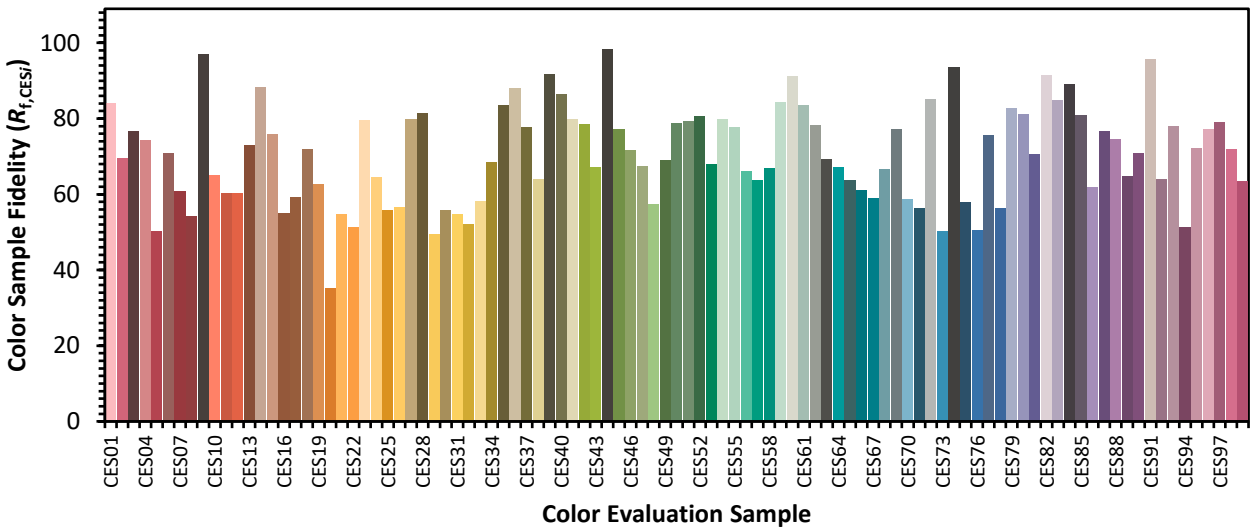
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 57	CES51 = 79	CES76 = 50
CES02 = 63	CES27 = 80	CES52 = 81	CES77 = 76
CES03 = 31	CES28 = 81	CES53 = 68	CES78 = 56
CES04 = 71	CES29 = 49	CES54 = 80	CES79 = 83
CES05 = 50	CES30 = 56	CES55 = 78	CES80 = 81
CES06 = 52	CES31 = 55	CES56 = 66	CES81 = 71
CES07 = 42	CES32 = 52	CES57 = 64	CES82 = 92
CES08 = 41	CES33 = 58	CES58 = 67	CES83 = 85
CES09 = 29	CES34 = 69	CES59 = 84	CES84 = 89
CES10 = 77	CES35 = 84	CES60 = 91	CES85 = 81
CES11 = 60	CES36 = 88	CES61 = 84	CES86 = 62
CES12 = 66	CES37 = 78	CES62 = 78	CES87 = 77
CES13 = 44	CES38 = 64	CES63 = 69	CES88 = 75
CES14 = 74	CES39 = 92	CES64 = 67	CES89 = 65
CES15 = 72	CES40 = 86	CES65 = 64	CES90 = 71
CES16 = 48	CES41 = 80	CES66 = 61	CES91 = 96
CES17 = 51	CES42 = 79	CES67 = 59	CES92 = 64
CES18 = 57	CES43 = 67	CES68 = 67	CES93 = 78
CES19 = 73	CES44 = 98	CES69 = 77	CES94 = 51
CES20 = 67	CES45 = 77	CES70 = 59	CES95 = 72
CES21 = 88	CES46 = 72	CES71 = 56	CES96 = 77
CES22 = 80	CES47 = 67	CES72 = 85	CES97 = 79
CES23 = 92	CES48 = 57	CES73 = 50	CES98 = 72
CES24 = 92	CES49 = 69	CES74 = 94	CES99 = 63
CES25 = 73	CES50 = 79	CES75 = 58	



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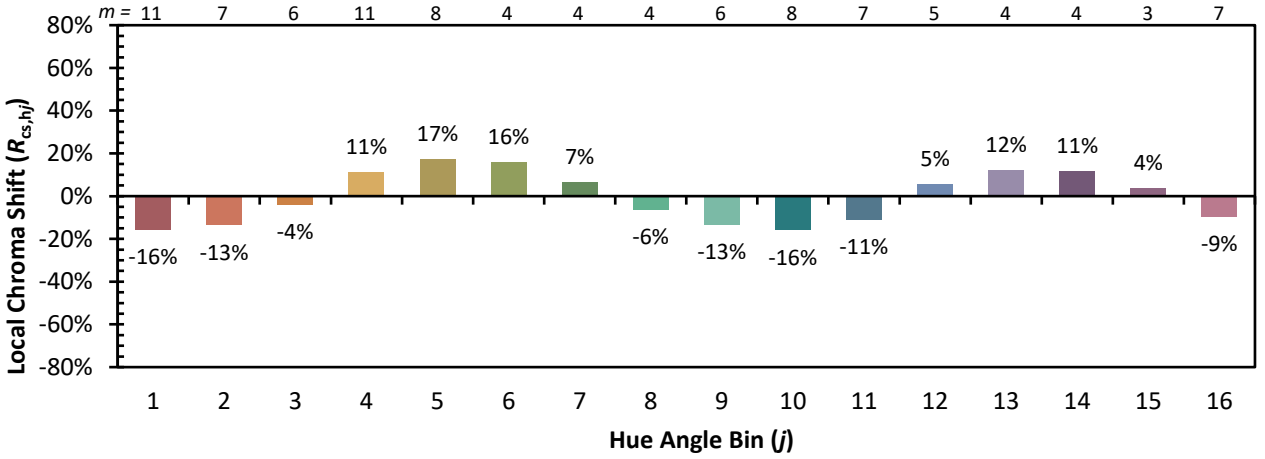
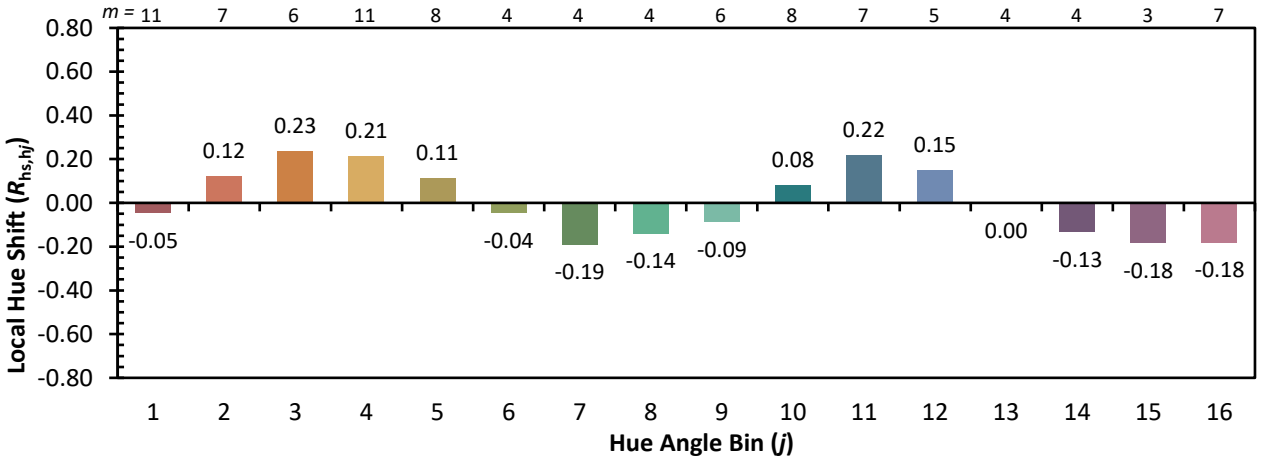
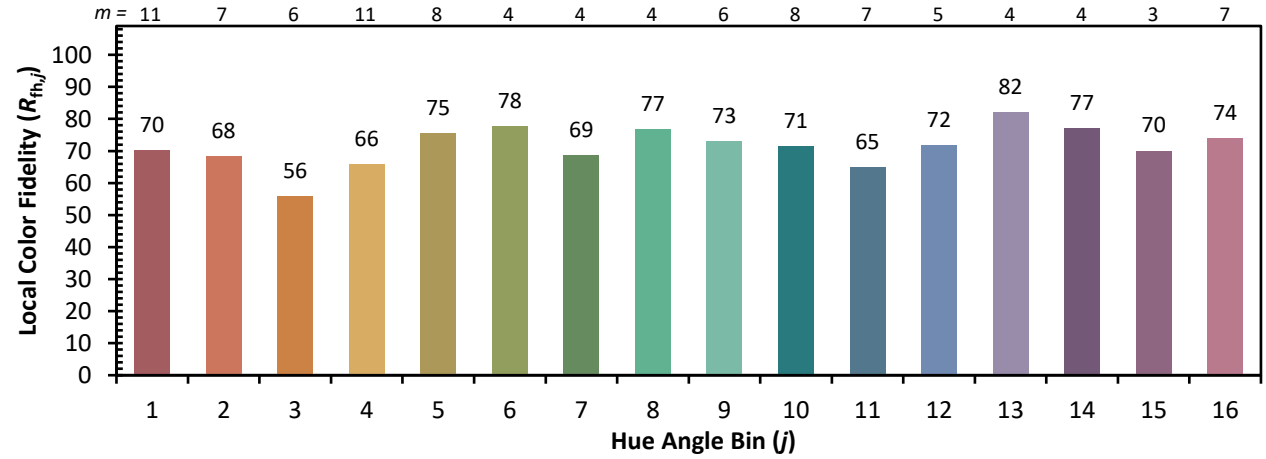
Color Rendition by Hue-Angle Bin







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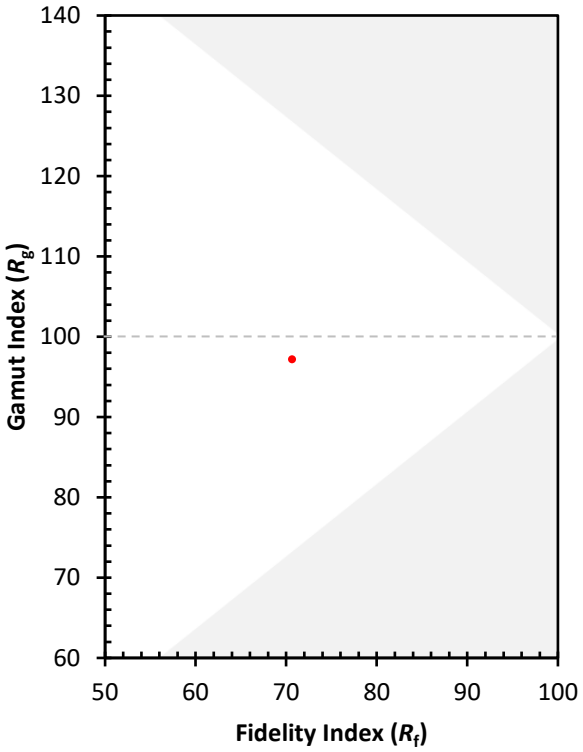
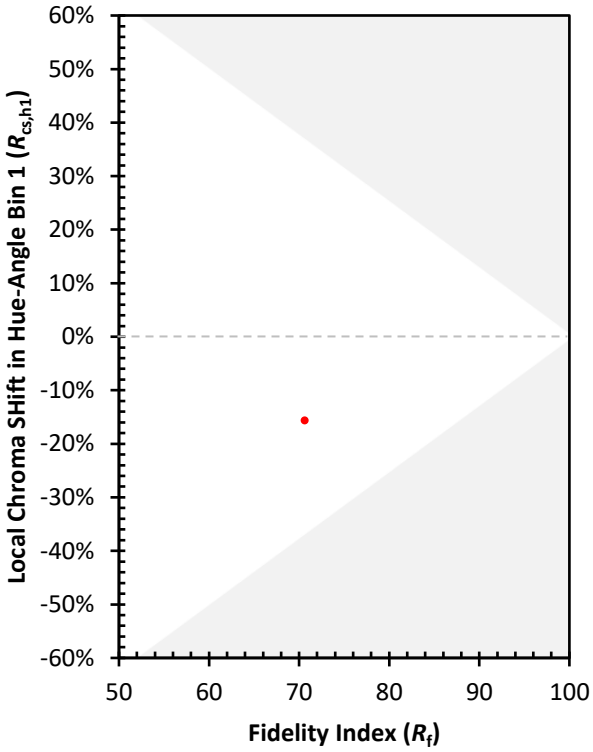
Measure Comparisons





(END OF REPORT)