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: P867841

Luminaire Tested: **MEM2-HTN-SA-40-750-U-5WQ**

Issue Date: 08/21/2024

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:	P867841
Test Lab:	INNOVATION CENTER(G3)
Issue Date:	08/21/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	STREETWORKS
Catalog Number:	MEM2-HTN-SA-40-750-U-5WQ
Description:	EPIC MODERN TALL HOUSING DISCRETE LED ARRAYS 40W 70CRI 5000K FIXTURE w/ TYPE V SQUARE WIDE DISTRIBUTION OPTIC
Light Source:	(10) 5000K CCT, 70 CRI LEDS
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	5051.9 lumens
Efficiency:	N/A
Efficacy:	154.0 lumens/watt
Luminous Opening:	Rectangular (W 0.33' x L: 0.33' x H: 0')
IES Classification:	Type V - Short
BUG Rating:	B3 - U0 - G1

Input Watts (W):	32.8
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	0.99
Total Harmonic Distortion (THDi):	9.76%
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	24 FT

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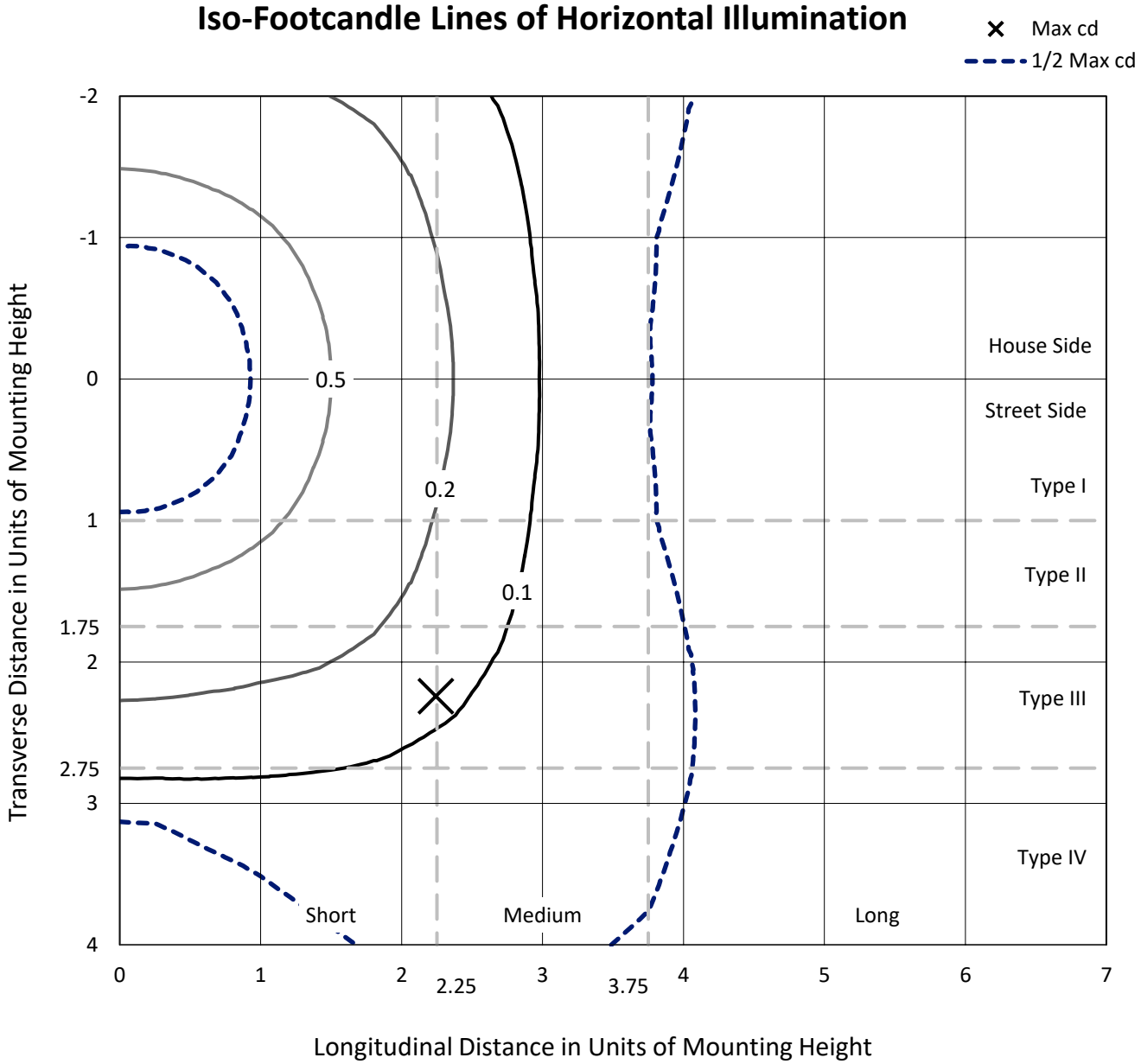
Scaled Data Report

REPORT NUMBER: P867841
CATALOG NUMBER: MEM2-HTN-SA-40-750-U-5WQ

Iso-Footcandle Lines of Horizontal Illumination



Based on 20 foot mounting height. Maximum calculated value = 0.9 fc
Type V - Short - N/A

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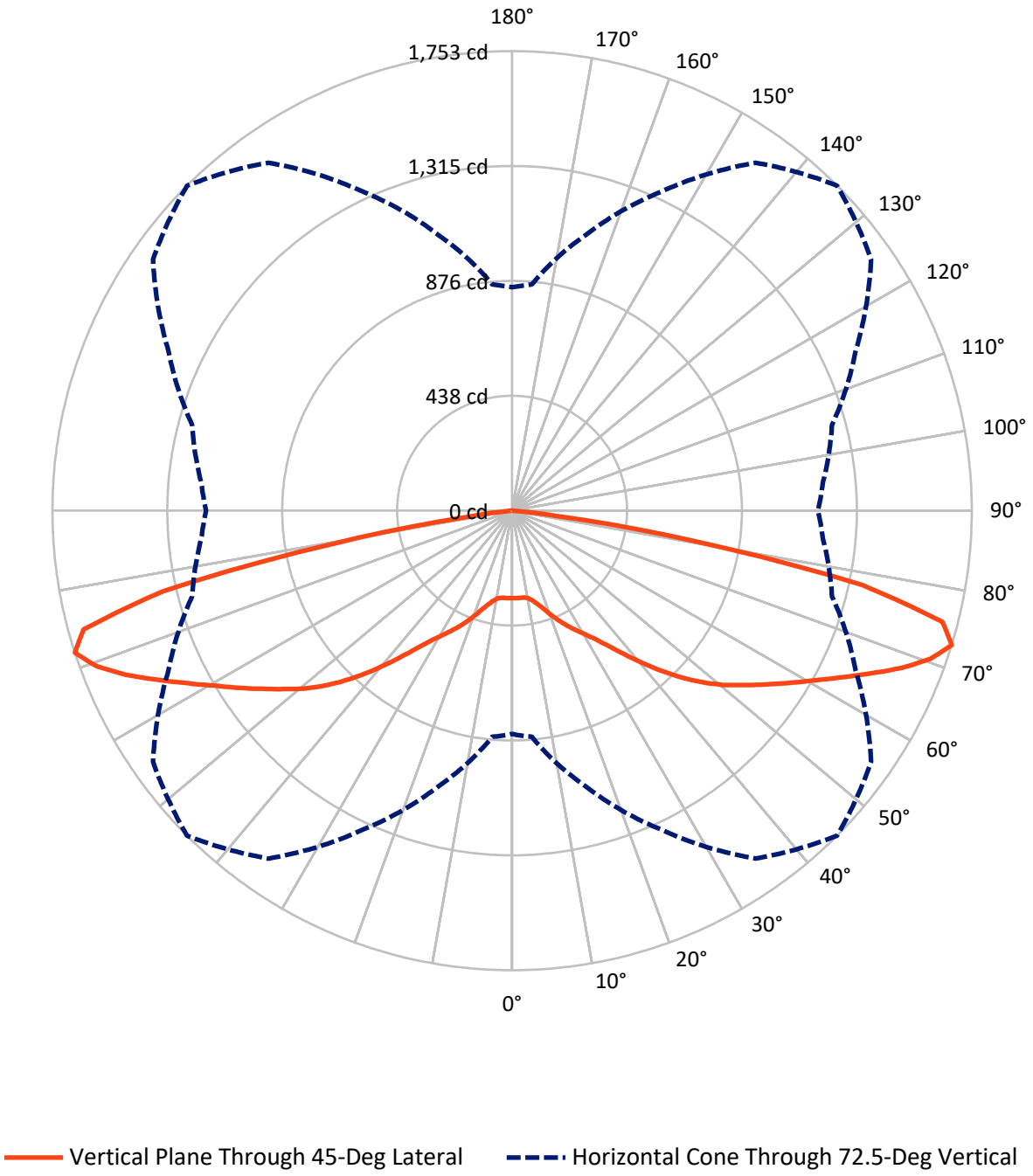
Scaled Data Report

REPORT NUMBER: P867841
CATALOG NUMBER: MEM2-HTN-SA-40-750-U-5WQ

Luminous Intensity Polar Plot



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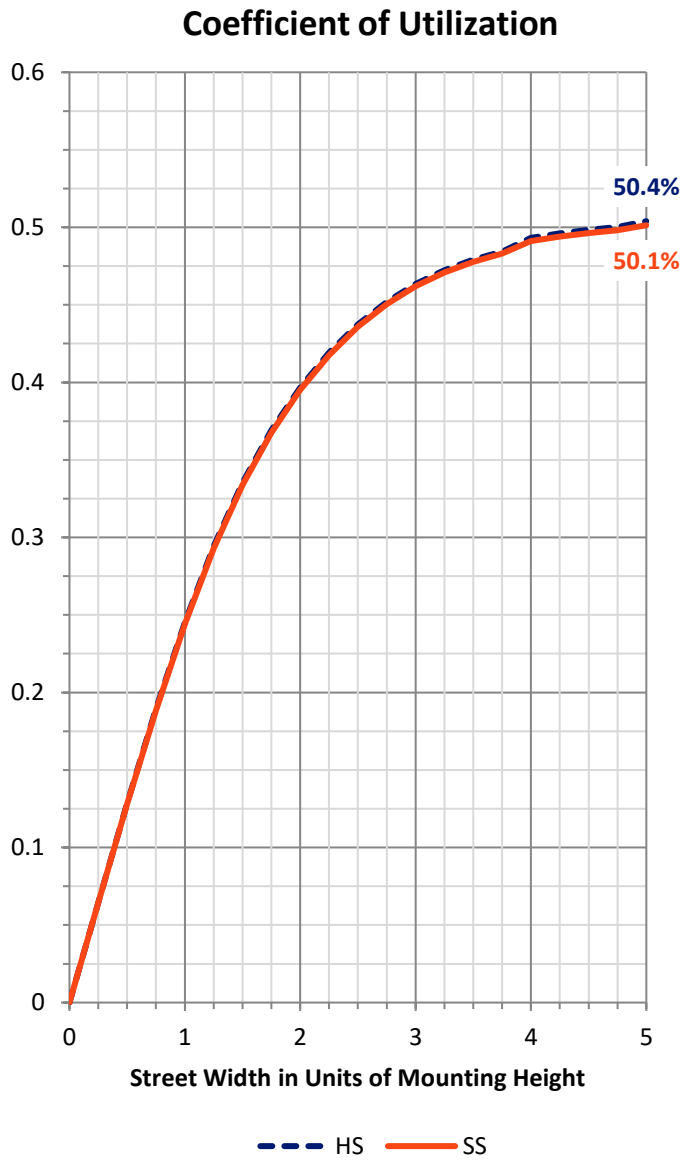
REPORT NUMBER: P867841
CATALOG NUMBER: MEM2-HTN-SA-40-750-U-5WQ

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2526.0	0.0	2526.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2526.0	0.0	2526.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	5051.9	0.0	5051.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.0	0.6
10°-20°	106.7	2.1
20°-30°	220.1	4.4
30°-40°	405.2	8.0
40°-50°	712.5	14.1
50°-60°	1033.4	20.5
60°-70°	1347.1	26.7
70°-80°	1119.8	22.2
80°-90°	75.2	1.5
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°	5051.9	100.0
0°-180°	5051.9	100.0



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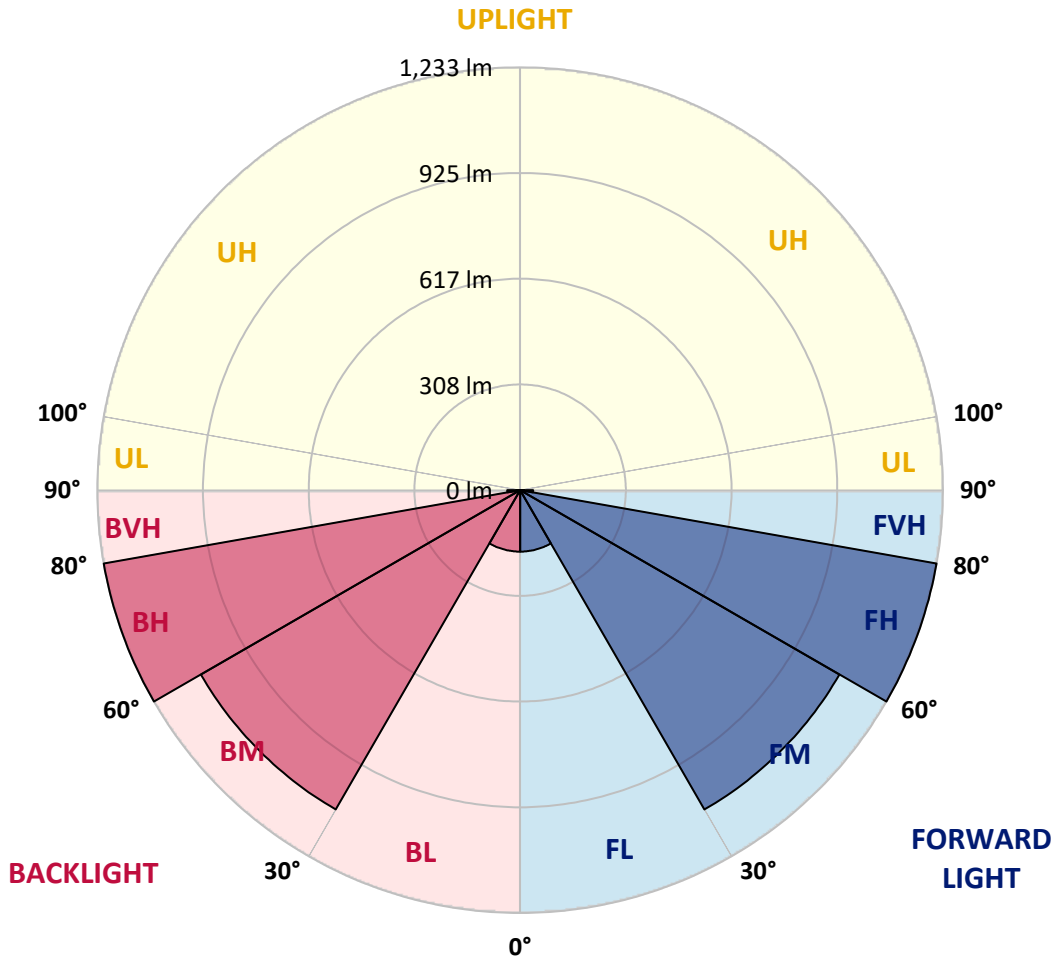
Scaled Data Report

REPORT NUMBER: P867841
CATALOG NUMBER: MEM2-HTN-SA-40-750-U-5WQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	179.4	3.6			
FM	(30°-60°)	1075.5	21.3			
FH	(60°-80°)	1233.4	24.4			G1/1800
FVH	(80°-90°)	37.6	0.7			G1/100
BL	(0°-30°)	179.4	3.6	B1/500		
BM	(30°-60°)	1075.5	21.3	B2/2500		
BH	(60°-80°)	1233.4	24.4	B3/2500		G1/1800
BVH	(80°-90°)	37.6	0.7			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G1
Type V Short



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REPORT NUMBER: P867841
CATALOG NUMBER: MEM2-HTN-SA-40-750-U-5WQ

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	333.5	333.5	333.5	333.5	333.5	*333.5*	333.5	333.5	333.5	333.5	333.5
2.5°	332.5	333.0	333.0	333.0	333.5	*334.0*	334.6	335.1	336.1	336.7	336.7
5°	334.0	333.5	333.0	334.0	334.0	*334.0*	334.6	335.1	335.1	335.1	335.6
7.5°	332.5	333.0	332.5	332.5	334.0	*334.6*	334.0	333.5	333.5	334.0	334.0
10°	338.2	337.7	337.2	337.2	338.8	*339.3*	338.8	338.2	338.2	339.3	339.3
12.5°	351.3	352.4	349.2	349.2	351.3	*352.4*	350.8	350.3	350.8	351.8	351.8
15°	371.7	371.2	369.1	367.0	369.1	*370.7*	368.6	367.5	368.1	370.7	368.6
17.5°	394.2	394.8	392.7	390.6	392.2	*394.2*	391.1	388.5	389.0	390.1	389.0
20°	419.4	418.9	418.3	418.3	421.5	*424.1*	419.4	413.1	411.5	410.5	410.5
22.5°	437.7	439.3	439.8	444.5	451.8	*454.5*	448.2	439.8	433.5	430.4	428.3
25°	466.5	464.9	463.9	469.1	480.1	*484.8*	477.0	465.5	459.2	458.6	460.2
27.5°	492.7	492.7	494.8	500.0	510.5	*515.2*	508.4	496.9	493.7	493.7	492.2
30°	526.7	525.1	527.2	536.1	544.0	*547.1*	541.4	533.5	530.9	530.9	528.3
32.5°	566.5	567.0	570.2	575.9	583.8	*584.3*	582.2	578.5	577.0	575.4	578.0
35°	627.2	627.2	626.2	630.4	632.5	*633.5*	634.6	633.0	633.0	633.0	630.9
37.5°	702.6	698.4	697.9	694.3	691.6	*694.3*	699.0	704.2	708.4	705.8	704.7
40°	777.5	775.4	769.1	763.4	761.3	*762.3*	768.1	779.1	783.8	783.8	788.0
42.5°	858.1	853.9	846.1	839.3	833.5	*835.1*	840.3	853.9	864.4	869.1	867.0
45°	930.4	926.7	918.9	912.6	908.4	*907.9*	914.7	923.6	937.7	941.9	945.0
47.5°	992.2	989.6	982.7	976.5	978.0	*978.6*	980.6	988.5	1000.0	1005.8	1005.3
50°	1042.4	1040.3	1034.1	1036.7	1040.9	*1045.0*	1042.4	1047.7	1055.0	1057.6	1059.7
52.5°	1088.5	1085.4	1081.2	1085.9	1096.9	*1105.3*	1106.8	1103.2	1105.3	1106.8	1105.3
55°	1134.1	1130.4	1129.3	1137.7	1154.5	*1170.2*	1168.6	1158.1	1155.5	1152.4	1150.8
57.5°	1171.2	1168.6	1172.8	1186.9	1219.4	*1240.3*	1233.5	1209.5	1199.0	1191.6	1189.6
60°	1194.8	1194.3	1203.7	1236.7	1285.9	*1315.2*	1304.2	1262.9	1239.3	1232.5	1229.3
62.5°	1207.4	1207.9	1224.6	1283.3	1361.8	*1401.6*	1382.2	1318.9	1282.2	1275.4	1276.5
65°	1218.9	1217.3	1239.3	1322.5	1444.0	*1497.9*	1471.8	1386.4	1333.0	1319.4	1319.4
67.5°	1227.3	1228.8	1261.8	1361.8	1524.1	*1601.1*	1562.9	1458.1	1387.5	1367.0	1364.4
70°	1121.5	1136.7	1239.8	1388.0	1587.5	*1692.2*	1641.9	1502.1	1389.6	1331.4	1325.7
72.5°	*851.9*	*866.0*	*1089.0*	*1341.4*	*1619.9*	*1752.9*	*1671.2*	*1446.1*	*1262.9*	*1189.0*	*1167.0*
75°	561.8	571.7	811.5	1171.8	1529.9	*1695.3*	1522.0	1245.6	994.3	898.4	904.2
77.5°	250.3	282.2	517.3	914.2	1260.2	*1364.4*	1160.8	849.8	607.3	514.1	504.2
80°	104.7	114.7	195.3	487.4	730.4	*699.0*	494.3	284.8	181.2	140.8	136.1
82.5°	30.4	31.4	38.7	84.3	148.7	*174.9*	105.2	53.4	50.8	40.3	37.2
85°	2.1	2.1	3.1	5.2	7.3	*12.0*	13.6	15.7	17.8	15.2	15.2
87.5°	1.0	1.0	1.0	1.6	1.6	*2.1*	1.6	1.6	1.6	1.6	1.6
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: SP1-2407-157-6

Test Date: 08/07/2024

Luminaire Tested: MEM2-HTN-SA-40-750-U-5WQ-2

Data in this report applies to families of products including MEM2-HTN-SA-40-750-U-5WQ-2

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

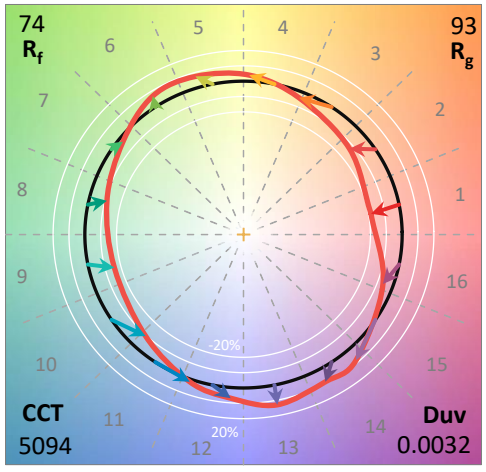
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2407-157-6
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	08/20/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	Streetworks
Catalog Number:	**MEM2-HTN-SA-40-750-U-5WQ-2**
Description:	Epic Modern Light Square 40W 5WQ Optic and Flare Trim

Spectral Parameters

CCT (K):	5094
CIE u':	0.2082
CIE v':	0.4867
Duv:	0.0032
CIE x:	0.3430
CIE y:	0.3564
CIE z:	0.3006
Peak Wavelength (nm):	451
Dominant Wavelength (nm):	568
Purity:	9.86439
Rf:	73.7
Rg:	93

CRI (Ra):	72.0
R1:	68.6
R2:	78.1
R3:	84.6
R4:	71.6
R5:	69.6
R6:	69.4
R7:	80.9
R8:	53.1
R9:	-39.6
R10:	47.6
R11:	68.2
R12:	41.4
R13:	70.4
R14:	91.4
R15:	61.4



Test Conditions

Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2407-157-6

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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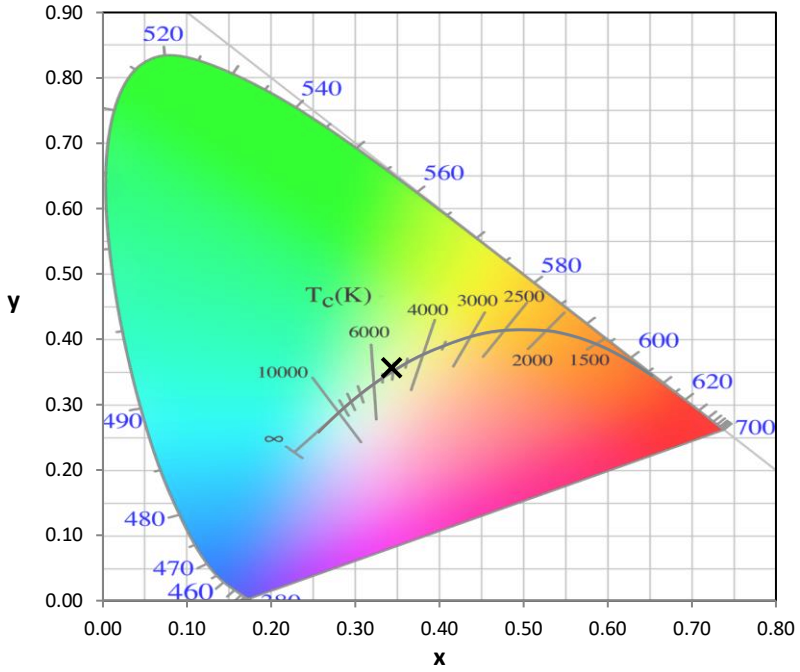
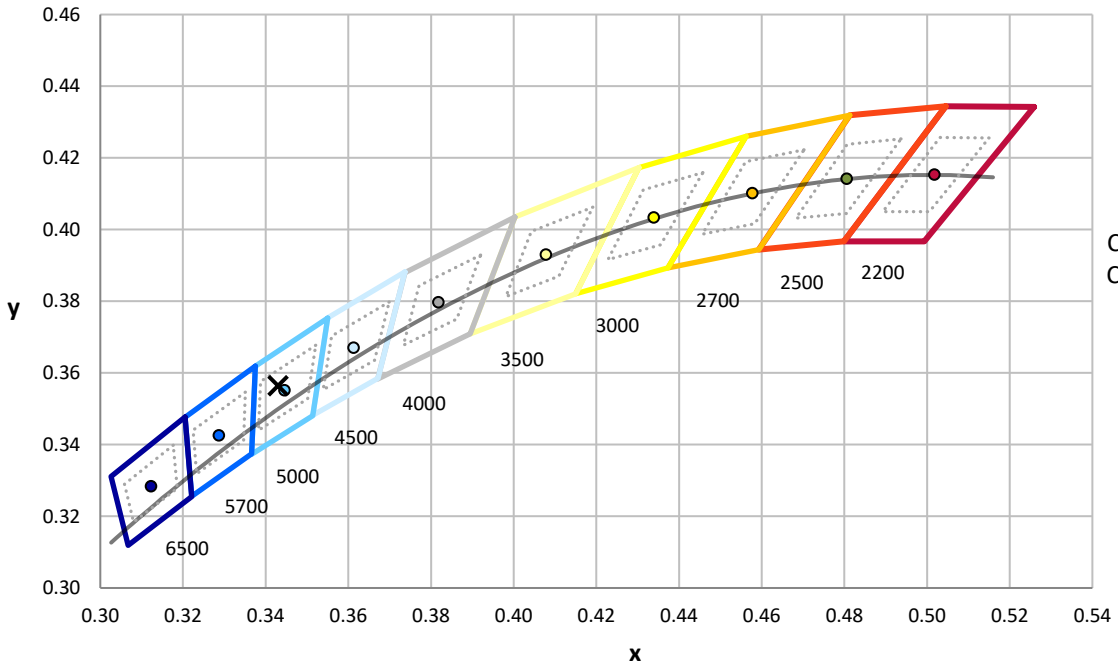
CIE 1931 Chromaticity Diagram



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



CCT = 5094K
CIE x = 0.3430
CIE y = 0.3564
Duv = 0.0032

Point lies inside the ANSI 5000K 4-step quadrangle

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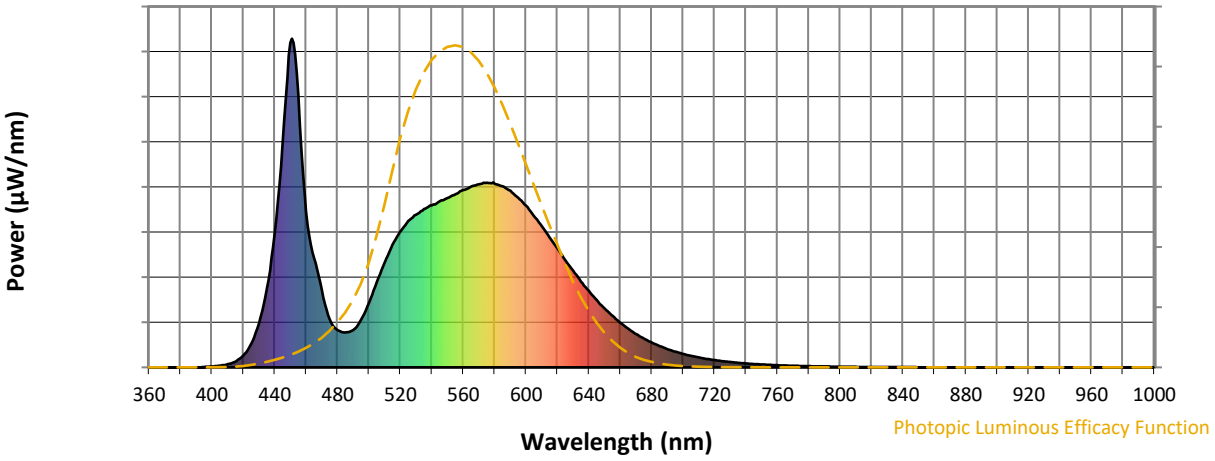
Photopic Flux vs. Wavelength

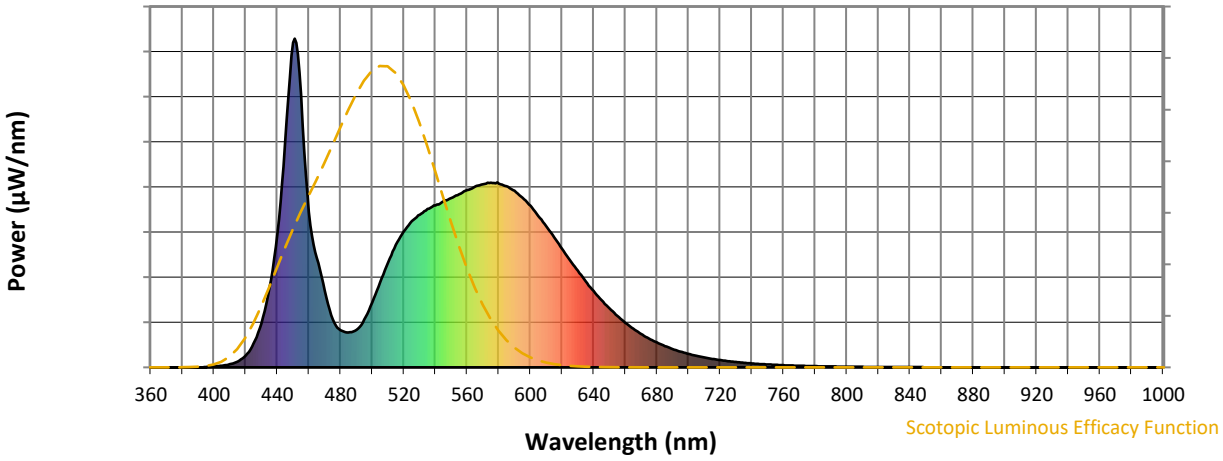


Photopic Lumens: NR

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	114	NR	620	361	NR	750	9	NR	880	0	NR
365	0	NR	495	145	NR	625	326	NR	755	8	NR	885	0	NR
370	0	NR	500	197	NR	630	294	NR	760	7	NR	890	0	NR
375	0	NR	505	259	NR	635	261	NR	765	6	NR	895	0	NR
380	0	NR	510	319	NR	640	232	NR	770	5	NR	900	0	NR
385	0	NR	515	373	NR	645	204	NR	775	4	NR	905	0	NR
390	0	NR	520	414	NR	650	179	NR	780	4	NR	910	0	NR
395	1	NR	525	445	NR	655	157	NR	785	3	NR	915	0	NR
400	3	NR	530	465	NR	660	136	NR	790	3	NR	920	0	NR
405	5	NR	535	482	NR	665	118	NR	795	2	NR	925	0	NR
410	9	NR	540	493	NR	670	102	NR	800	2	NR	930	0	NR
415	18	NR	545	505	NR	675	87	NR	805	2	NR	935	0	NR
420	36	NR	550	515	NR	680	75	NR	810	2	NR	940	0	NR
425	72	NR	555	527	NR	685	65	NR	815	1	NR	945	0	NR
430	134	NR	560	540	NR	690	56	NR	820	1	NR	950	0	NR
435	242	NR	565	550	NR	695	48	NR	825	1	NR	955	0	NR
440	407	NR	570	557	NR	700	41	NR	830	1	NR	960	0	NR
445	684	NR	575	561	NR	705	35	NR	835	1	NR	965	0	NR
450	988	NR	580	559	NR	710	30	NR	840	1	NR	970	0	NR
455	828	NR	585	551	NR	715	26	NR	845	1	NR	975	0	NR
460	473	NR	590	537	NR	720	22	NR	850	1	NR	980	0	NR
465	333	NR	595	516	NR	725	19	NR	855	0	NR	985	0	NR
470	232	NR	600	491	NR	730	16	NR	860	0	NR	990	0	NR
475	146	NR	605	461	NR	735	14	NR	865	0	NR	995	0	NR
480	113	NR	610	429	NR	740	12	NR	870	0	NR	1000	0	NR
485	106	NR	615	395	NR	745	10	NR	875	0	NR			

REPORT NUMBER: SP1-2407-157-6

Scotopic Flux vs. Wavelength

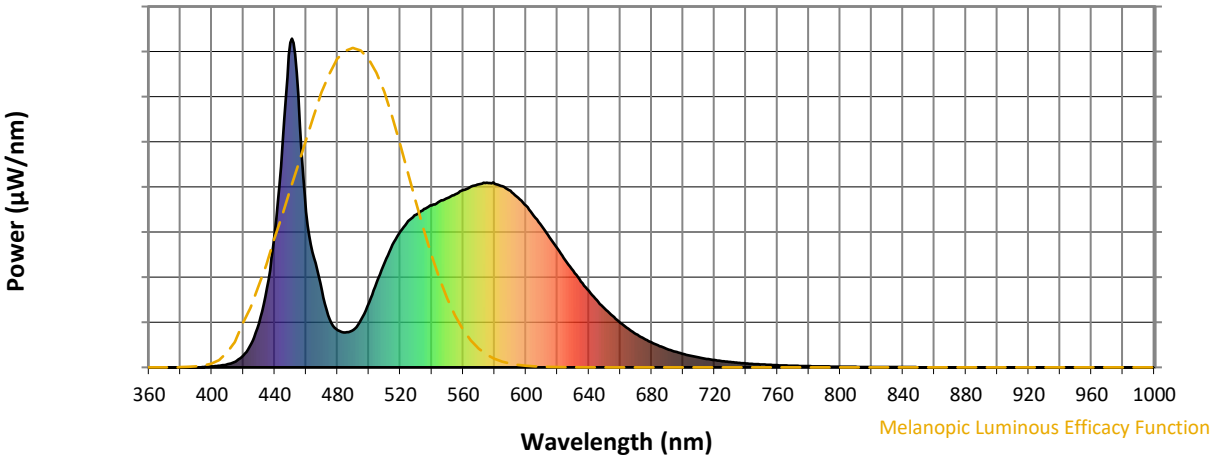


Scotopic Lumens: NR **S/P: 1.81**

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	114	NR	620	361	NR	750	9	NR	880	0	NR
365	0	NR	495	145	NR	625	326	NR	755	8	NR	885	0	NR
370	0	NR	500	197	NR	630	294	NR	760	7	NR	890	0	NR
375	0	NR	505	259	NR	635	261	NR	765	6	NR	895	0	NR
380	0	NR	510	319	NR	640	232	NR	770	5	NR	900	0	NR
385	0	NR	515	373	NR	645	204	NR	775	4	NR	905	0	NR
390	0	NR	520	414	NR	650	179	NR	780	4	NR	910	0	NR
395	1	NR	525	445	NR	655	157	NR	785	3	NR	915	0	NR
400	3	NR	530	465	NR	660	136	NR	790	3	NR	920	0	NR
405	5	NR	535	482	NR	665	118	NR	795	2	NR	925	0	NR
410	9	NR	540	493	NR	670	102	NR	800	2	NR	930	0	NR
415	18	NR	545	505	NR	675	87	NR	805	2	NR	935	0	NR
420	36	NR	550	515	NR	680	75	NR	810	2	NR	940	0	NR
425	72	NR	555	527	NR	685	65	NR	815	1	NR	945	0	NR
430	134	NR	560	540	NR	690	56	NR	820	1	NR	950	0	NR
435	242	NR	565	550	NR	695	48	NR	825	1	NR	955	0	NR
440	407	NR	570	557	NR	700	41	NR	830	1	NR	960	0	NR
445	684	NR	575	561	NR	705	35	NR	835	1	NR	965	0	NR
450	988	NR	580	559	NR	710	30	NR	840	1	NR	970	0	NR
455	828	NR	585	551	NR	715	26	NR	845	1	NR	975	0	NR
460	473	NR	590	537	NR	720	22	NR	850	1	NR	980	0	NR
465	333	NR	595	516	NR	725	19	NR	855	0	NR	985	0	NR
470	232	NR	600	491	NR	730	16	NR	860	0	NR	990	0	NR
475	146	NR	605	461	NR	735	14	NR	865	0	NR	995	0	NR
480	113	NR	610	429	NR	740	12	NR	870	0	NR	1000	0	NR
485	106	NR	615	395	NR	745	10	NR	875	0	NR			

REPORT NUMBER: SP1-2407-157-6

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 3.73**

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	114	NR	620	361	NR	750	9	NR	880	0	NR
365	0	NR	495	145	NR	625	326	NR	755	8	NR	885	0	NR
370	0	NR	500	197	NR	630	294	NR	760	7	NR	890	0	NR
375	0	NR	505	259	NR	635	261	NR	765	6	NR	895	0	NR
380	0	NR	510	319	NR	640	232	NR	770	5	NR	900	0	NR
385	0	NR	515	373	NR	645	204	NR	775	4	NR	905	0	NR
390	0	NR	520	414	NR	650	179	NR	780	4	NR	910	0	NR
395	1	NR	525	445	NR	655	157	NR	785	3	NR	915	0	NR
400	3	NR	530	465	NR	660	136	NR	790	3	NR	920	0	NR
405	5	NR	535	482	NR	665	118	NR	795	2	NR	925	0	NR
410	9	NR	540	493	NR	670	102	NR	800	2	NR	930	0	NR
415	18	NR	545	505	NR	675	87	NR	805	2	NR	935	0	NR
420	36	NR	550	515	NR	680	75	NR	810	2	NR	940	0	NR
425	72	NR	555	527	NR	685	65	NR	815	1	NR	945	0	NR
430	134	NR	560	540	NR	690	56	NR	820	1	NR	950	0	NR
435	242	NR	565	550	NR	695	48	NR	825	1	NR	955	0	NR
440	407	NR	570	557	NR	700	41	NR	830	1	NR	960	0	NR
445	684	NR	575	561	NR	705	35	NR	835	1	NR	965	0	NR
450	988	NR	580	559	NR	710	30	NR	840	1	NR	970	0	NR
455	828	NR	585	551	NR	715	26	NR	845	1	NR	975	0	NR
460	473	NR	590	537	NR	720	22	NR	850	1	NR	980	0	NR
465	333	NR	595	516	NR	725	19	NR	855	0	NR	985	0	NR
470	232	NR	600	491	NR	730	16	NR	860	0	NR	990	0	NR
475	146	NR	605	461	NR	735	14	NR	865	0	NR	995	0	NR
480	113	NR	610	429	NR	740	12	NR	870	0	NR	1000	0	NR
485	106	NR	615	395	NR	745	10	NR	875	0	NR			

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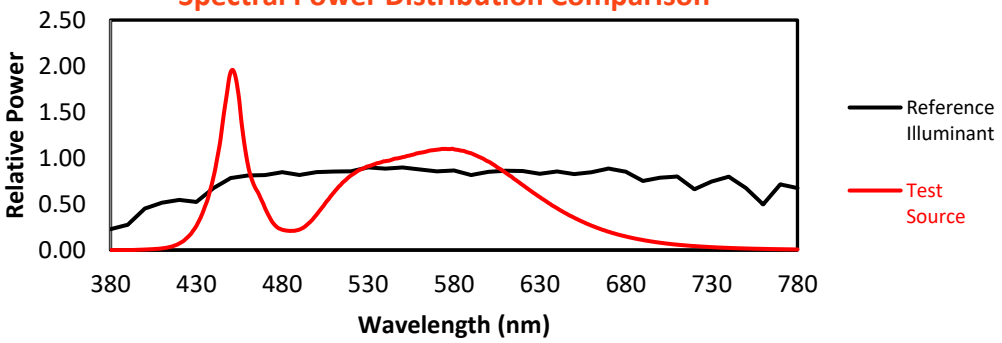
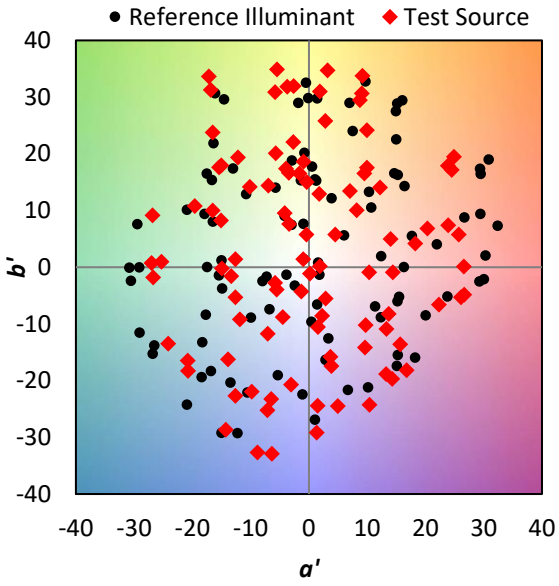
Summary

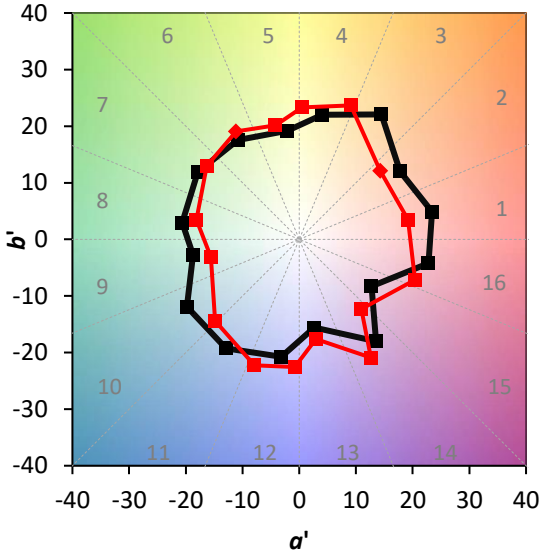
R_f = 73.7
R_g = 93
CIE R_a = 72.0
R_9 = -39.6

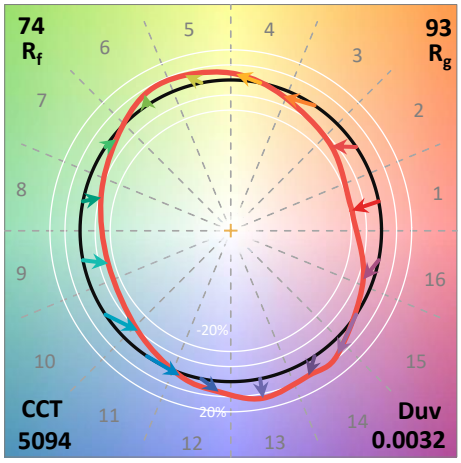
Spectral Power Distribution Comparison

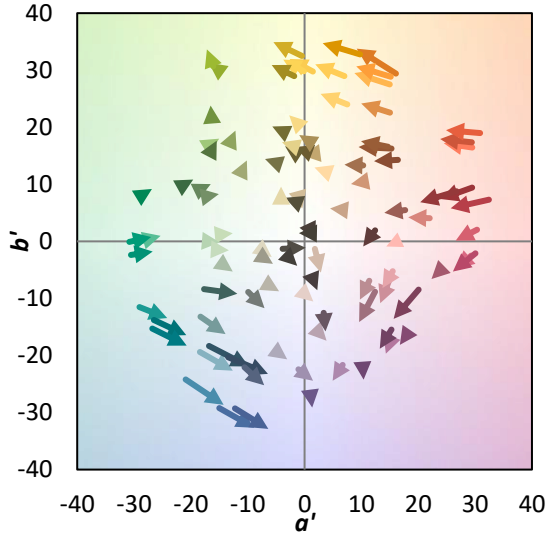


Color Vector Graphics









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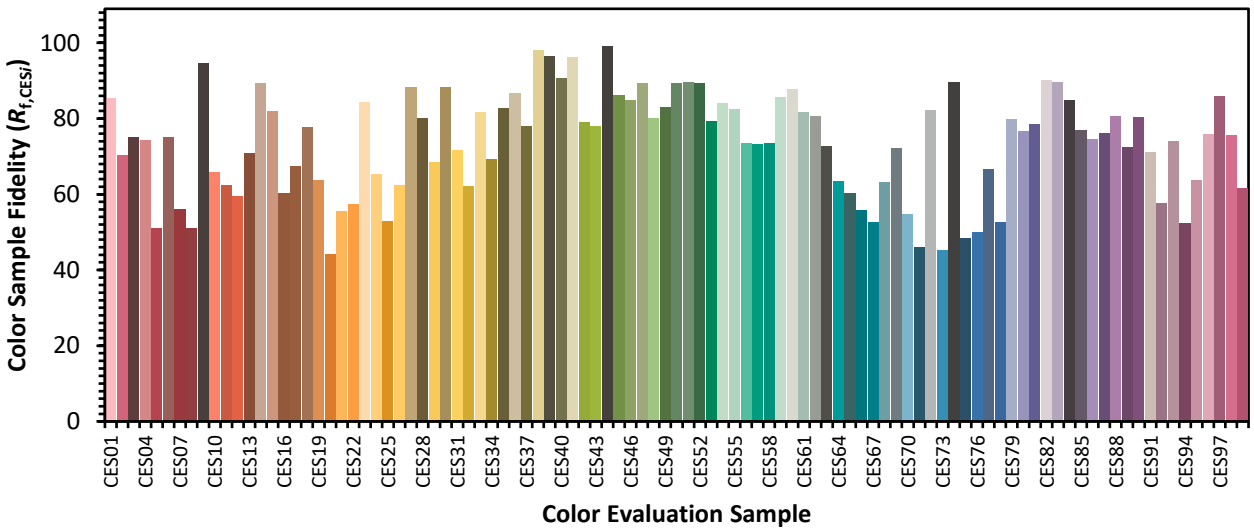
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 85	CES26 = 62	CES51 = 90	CES76 = 50
CES02 = 59	CES27 = 88	CES52 = 89	CES77 = 67
CES03 = 30	CES28 = 80	CES53 = 79	CES78 = 53
CES04 = 69	CES29 = 69	CES54 = 84	CES79 = 80
CES05 = 46	CES30 = 88	CES55 = 83	CES80 = 77
CES06 = 50	CES31 = 72	CES56 = 74	CES81 = 78
CES07 = 38	CES32 = 62	CES57 = 73	CES82 = 90
CES08 = 38	CES33 = 82	CES58 = 73	CES83 = 90
CES09 = 29	CES34 = 69	CES59 = 86	CES84 = 85
CES10 = 72	CES35 = 83	CES60 = 88	CES85 = 77
CES11 = 56	CES36 = 87	CES61 = 82	CES86 = 75
CES12 = 61	CES37 = 78	CES62 = 81	CES87 = 76
CES13 = 41	CES38 = 98	CES63 = 73	CES88 = 81
CES14 = 74	CES39 = 96	CES64 = 63	CES89 = 72
CES15 = 70	CES40 = 91	CES65 = 60	CES90 = 80
CES16 = 46	CES41 = 96	CES66 = 56	CES91 = 71
CES17 = 49	CES42 = 79	CES67 = 53	CES92 = 58
CES18 = 55	CES43 = 78	CES68 = 63	CES93 = 74
CES19 = 71	CES44 = 99	CES69 = 72	CES94 = 52
CES20 = 63	CES45 = 86	CES70 = 55	CES95 = 64
CES21 = 85	CES46 = 85	CES71 = 46	CES96 = 76
CES22 = 77	CES47 = 89	CES72 = 82	CES97 = 86
CES23 = 91	CES48 = 80	CES73 = 45	CES98 = 76
CES24 = 90	CES49 = 83	CES74 = 90	CES99 = 62
CES25 = 71	CES50 = 89	CES75 = 48	



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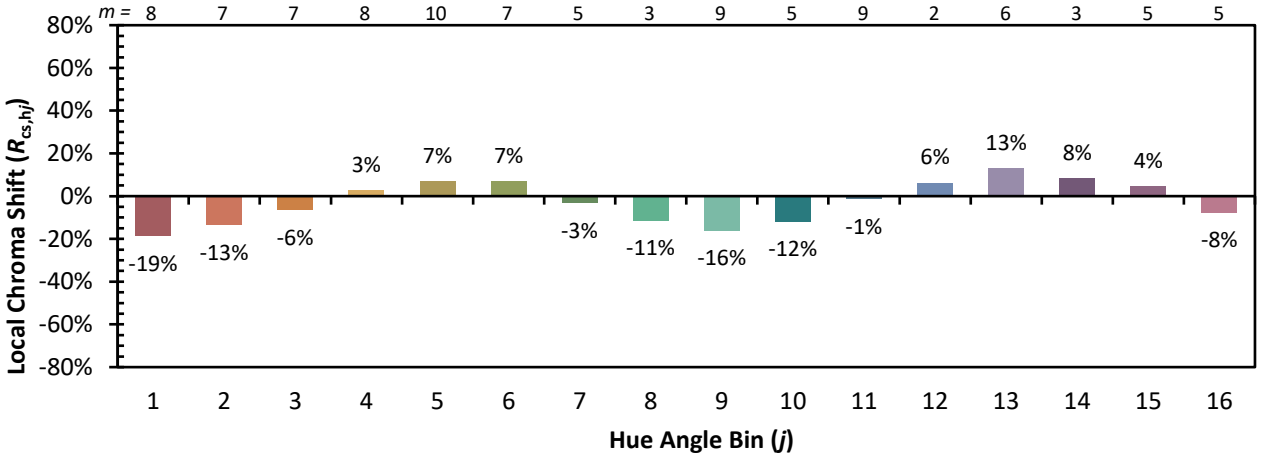
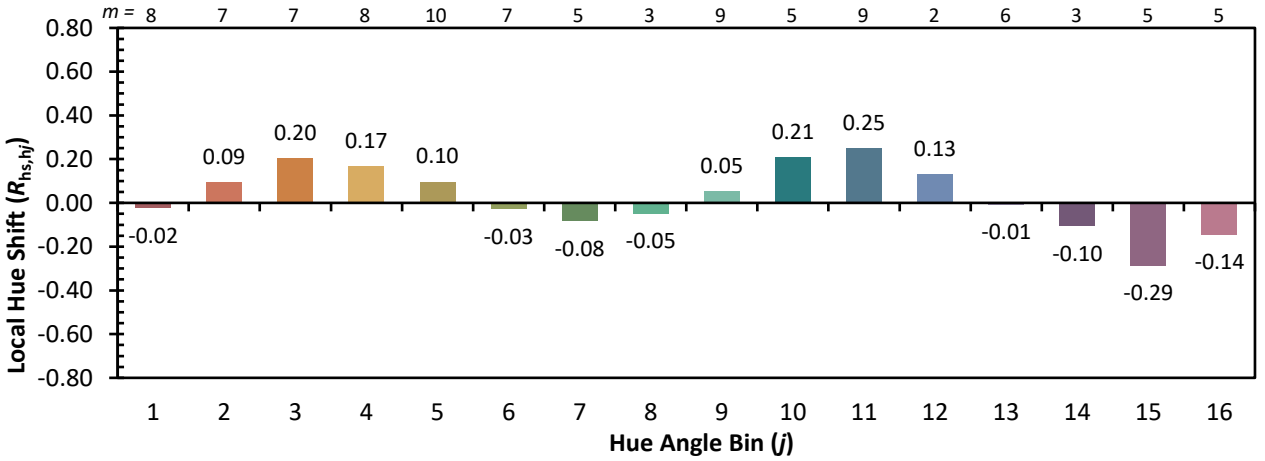
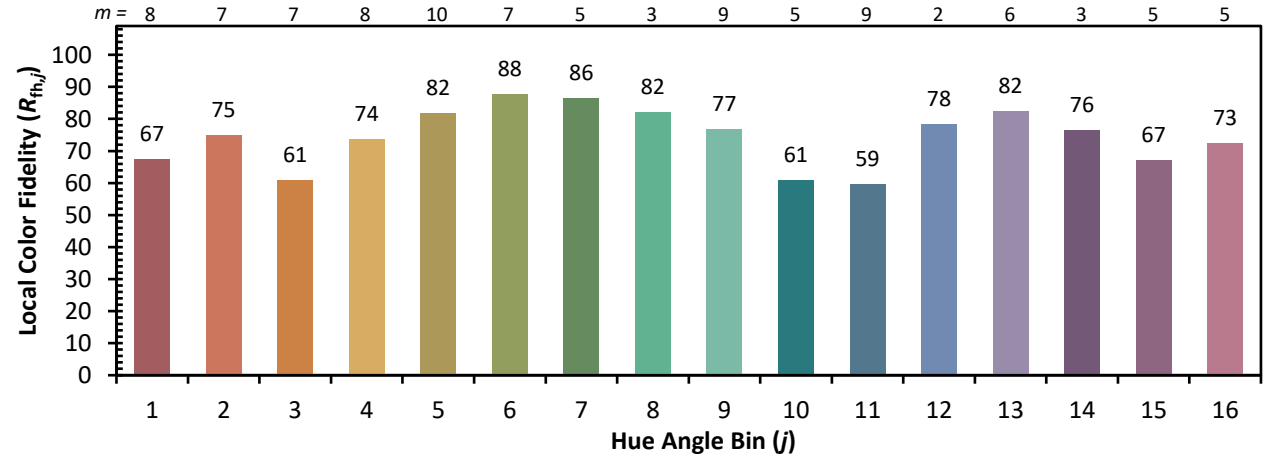
Color Rendition by Hue-Angle Bin







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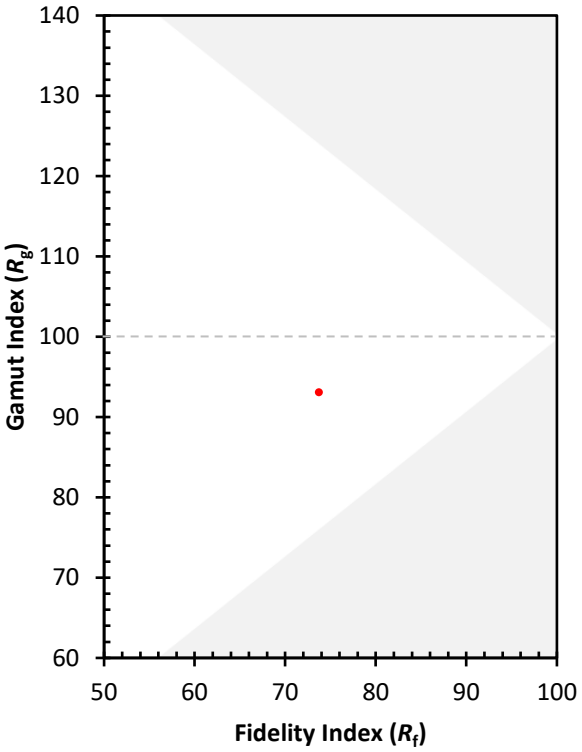
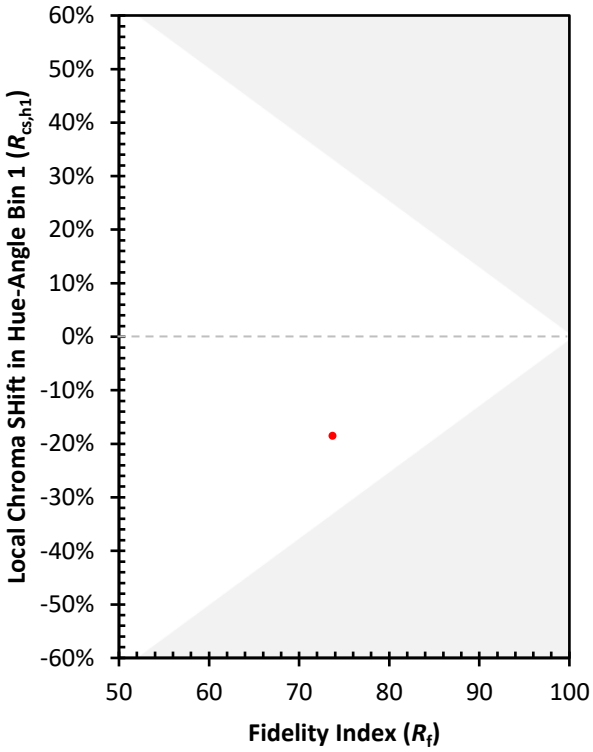
Measure Comparisons





(END OF REPORT)