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: P868219

Luminaire Tested: **MEM2-HSN-SA-30-740-U-5MQ**

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:	P868219
Test Lab:	INNOVATION CENTER(G3)
Issue Date:	08/21/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	STREETWORKS
Catalog Number:	MEM2-HSN-SA-30-740-U-5MQ
Description:	EPIC MODERN SHORT HOUSING DISCRETE LED ARRAYS 30W 70CRI 4000K FIXTURE w/ TYPE V SQUARE MEDIUM DISTRIBUTION OPTIC
Light Source:	(10) 4000K CCT, 70 CRI LEDS
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	5144.6 lumens
Efficiency:	N/A
Efficacy:	156.8 lumens/watt
Luminous Opening:	Rectangular (W 0.33' x L: 0.33' x H: 0')
IES Classification:	Type V - Short
BUG Rating:	B2 - 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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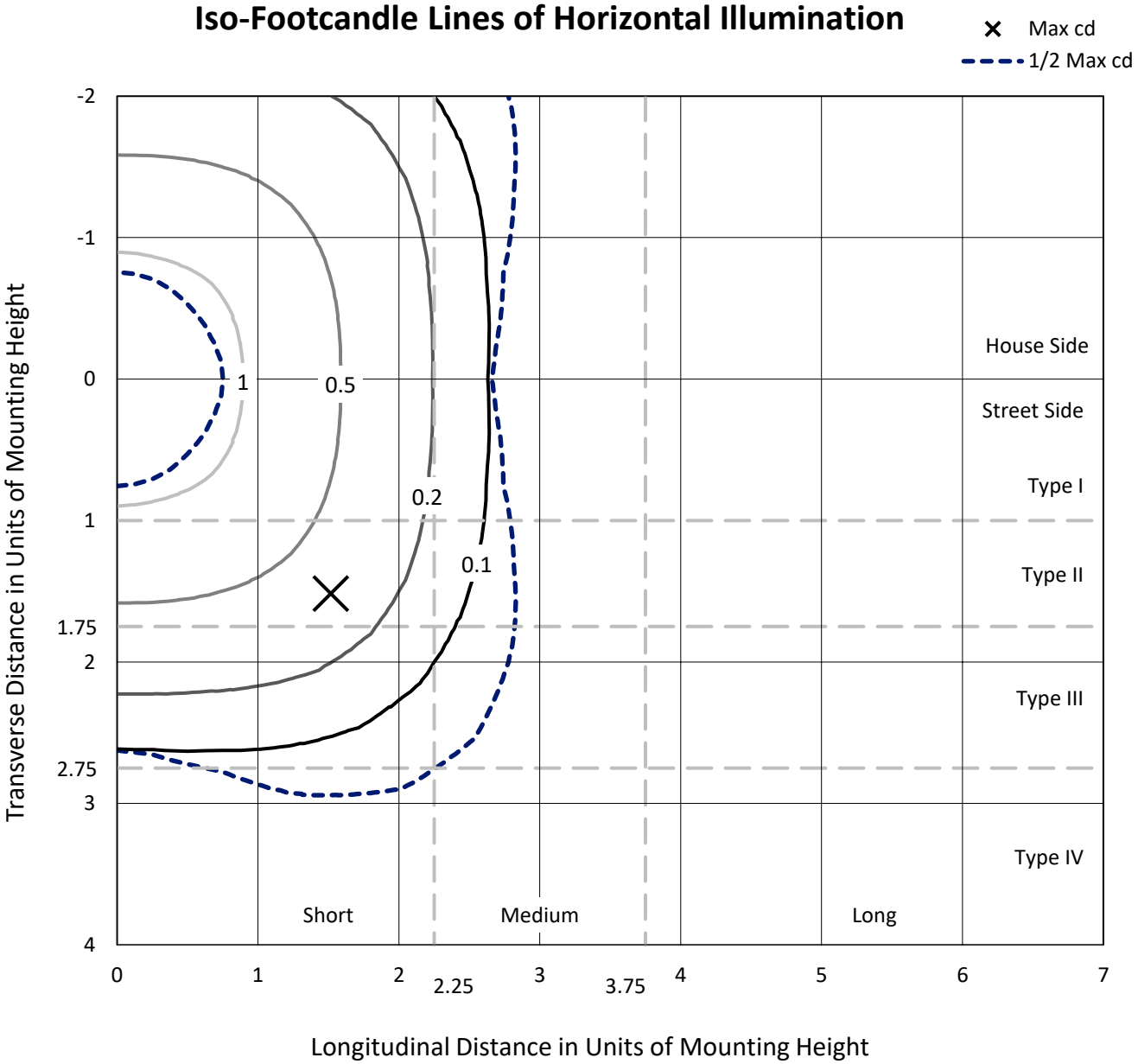
Scaled Data Report

REPORT NUMBER: P868219
CATALOG NUMBER: MEM2-HSN-SA-30-740-U-5MQ

Iso-Footcandle Lines of Horizontal Illumination



Based on 20 foot mounting height. Maximum calculated value = 1.6 fc
Type V - Short - N/A

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REPORT NUMBER: P868219
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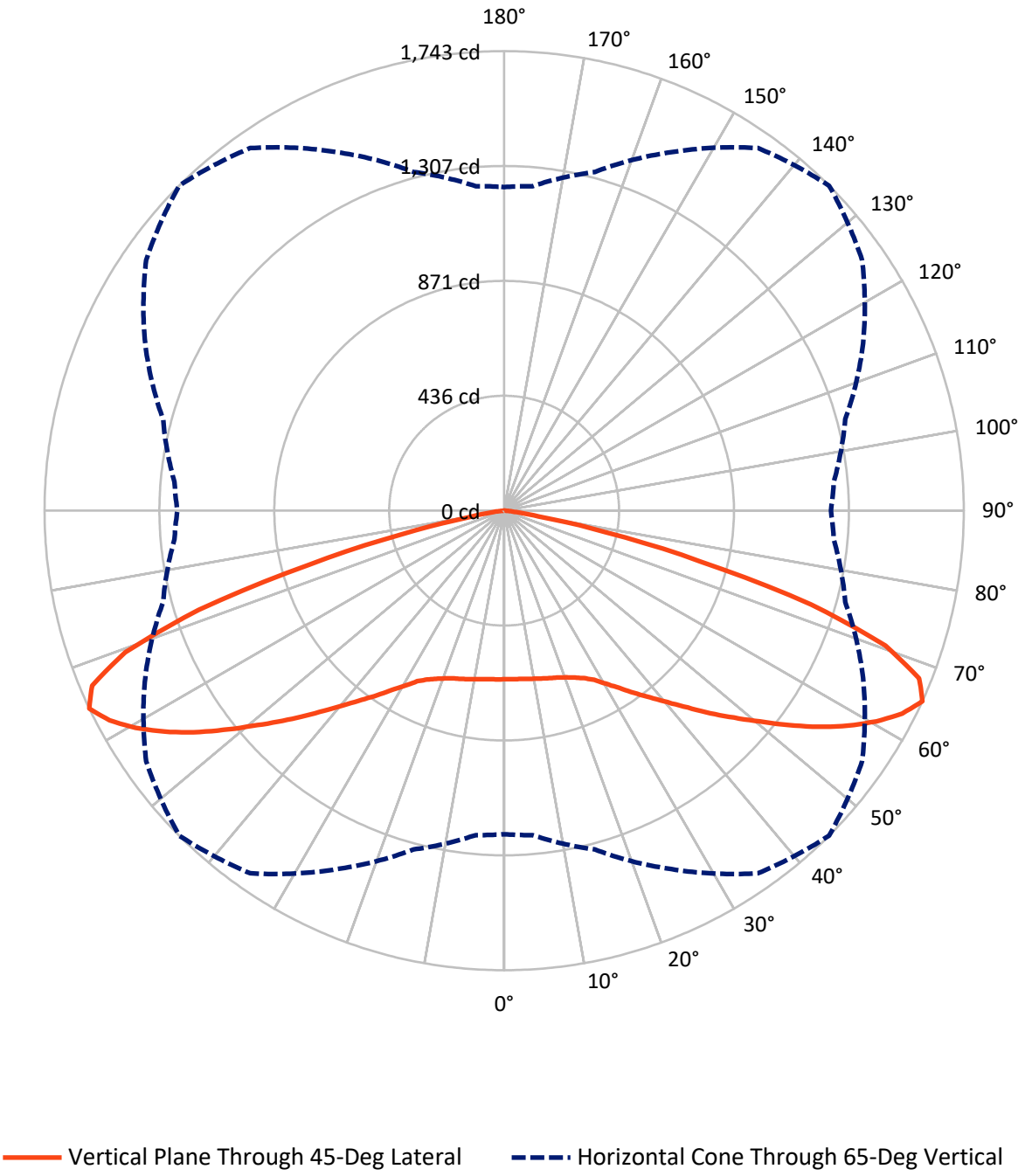
Luminous Intensity Polar Plot



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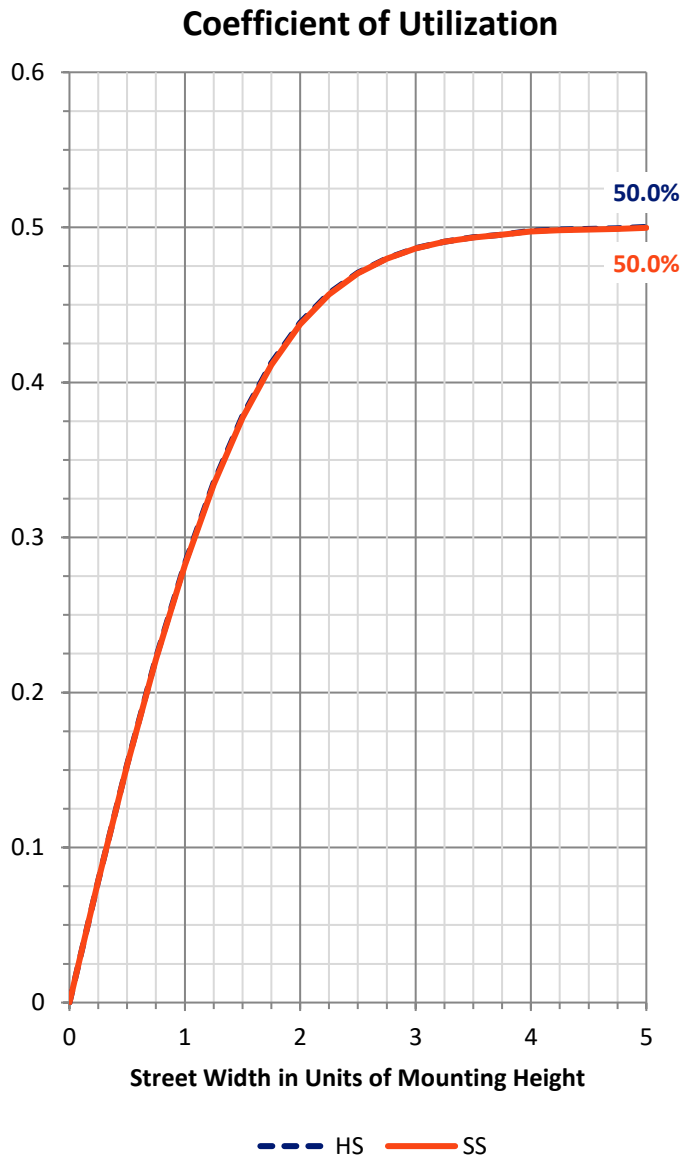
REPORT NUMBER: P868219
CATALOG NUMBER: MEM2-HSN-SA-30-740-U-5MQ

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2572.3	0.0	2572.3
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2572.3	0.0	2572.3
	% Fixture	50.0	0.0	50.0
Total	Lumens	5144.6	0.0	5144.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.5	1.2
10°-20°	187.1	3.6
20°-30°	329.1	6.4
30°-40°	532.2	10.3
40°-50°	829.1	16.1
50°-60°	1212.3	23.6
60°-70°	1396.0	27.1
70°-80°	570.1	11.1
80°-90°	27.3	0.5
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°	5144.6	100.0
0°-180°	5144.6	100.0



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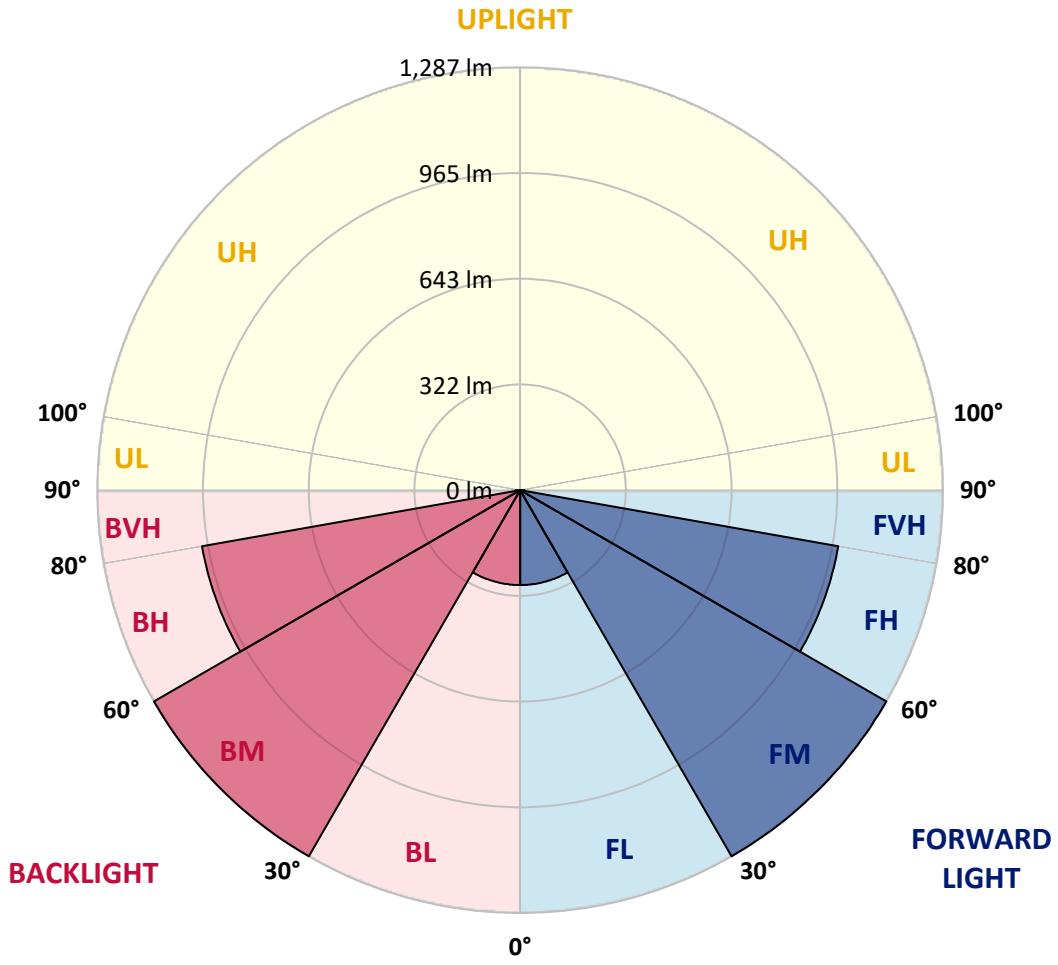
Scaled Data Report

REPORT NUMBER: P868219
CATALOG NUMBER: MEM2-HSN-SA-30-740-U-5MQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	288.8	5.6			
FM	(30°-60°)	1286.8	25.0			
FH	(60°-80°)	983.0	19.1			G1/1800
FVH	(80°-90°)	13.6	0.3			G1/100
BL	(0°-30°)	288.8	5.6	B1/500		
BM	(30°-60°)	1286.8	25.0	B2/2500		
BH	(60°-80°)	983.0	19.1	B2/1000		G1/1800
BVH	(80°-90°)	13.6	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G1
Type V Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	639.2	639.2	639.2	639.2	639.2	639.2	639.2	639.2	639.2	639.2	639.2
2.5°	641.2	641.2	640.2	640.2	638.3	640.2	639.2	640.2	639.2	639.2	640.2
5°	643.2	643.2	641.2	642.2	640.2	641.2	640.2	642.2	641.2	640.2	642.2
7.5°	646.2	646.2	644.2	645.2	643.2	644.2	643.2	645.2	644.2	644.2	645.2
10°	649.1	650.1	648.1	647.1	647.1	648.1	649.1	650.1	649.1	649.1	651.1
12.5°	654.1	655.1	653.1	652.1	652.1	653.1	654.1	656.0	653.1	653.1	653.1
15°	659.0	659.0	658.0	657.0	658.0	659.0	659.0	661.0	659.0	657.0	657.0
17.5°	661.0	662.0	661.0	663.0	663.9	664.9	665.9	665.9	663.0	662.0	662.0
20°	667.9	668.9	666.9	667.9	670.9	674.8	674.8	674.8	674.8	671.9	671.9
22.5°	679.8	680.7	679.8	679.8	683.7	687.7	687.7	690.6	686.7	684.7	684.7
25°	699.5	699.5	698.5	699.5	701.5	703.5	707.4	709.4	709.4	708.4	709.4
27.5°	723.2	724.2	723.2	723.2	722.2	726.2	732.1	735.1	736.1	737.1	737.1
30°	754.8	756.8	755.8	756.8	758.8	761.8	763.7	764.7	764.7	762.7	762.7
32.5°	789.4	791.4	789.4	794.4	801.3	801.3	799.3	803.3	800.3	798.3	796.3
35°	829.9	829.9	831.9	833.9	843.8	848.7	848.7	846.7	840.8	837.8	839.8
37.5°	876.4	877.4	879.3	880.3	889.2	898.1	897.1	892.2	885.3	877.4	877.4
40°	931.7	929.7	930.7	937.6	944.5	955.4	956.4	949.5	937.6	929.7	929.7
42.5°	982.1	983.1	987.0	995.9	1011.7	1020.6	1015.7	1003.8	991.0	981.1	980.1
45°	1035.4	1034.5	1045.3	1064.1	1084.8	1095.7	1087.8	1071.0	1051.2	1038.4	1038.4
47.5°	1089.8	1088.8	1106.6	1137.2	1163.9	1172.8	1164.9	1143.1	1116.5	1097.7	1094.7
50°	1146.1	1150.0	1168.8	1212.3	1246.9	1256.8	1246.9	1218.2	1182.7	1158.0	1154.0
52.5°	1210.3	1213.3	1238.0	1285.4	1327.9	1350.6	1335.8	1293.3	1247.9	1218.2	1214.3
55°	1269.6	1271.6	1307.1	1364.4	1416.8	1447.4	1423.7	1369.4	1312.1	1274.5	1270.6
57.5°	1311.1	1316.0	1361.5	1435.6	1502.8	1538.3	1502.8	1444.5	1368.4	1322.0	1319.0
60°	1337.8	1345.7	1398.0	1490.9	1583.8	1622.3	1585.8	1504.7	1410.9	1350.6	1347.7
62.5°	1323.9	1334.8	1402.0	1523.5	1652.9	1694.4	1647.0	1533.4	1405.9	1329.9	1322.0
65°	1227.1	1235.0	1329.9	1499.8	1678.6	1742.9	1656.9	1501.8	1338.8	1254.8	1239.0
67.5°	1026.5	1040.4	1165.9	1385.2	1623.3	1697.4	1588.7	1388.2	1191.5	1088.8	1071.0
70°	788.4	813.1	950.5	1188.6	1450.4	1534.4	1414.8	1171.8	940.6	835.9	803.3
72.5°	455.5	494.0	695.6	927.7	1154.0	1217.2	1049.3	819.1	624.4	550.3	541.4
75°	151.2	165.0	331.0	534.5	736.1	767.7	656.0	516.7	411.0	351.7	354.7
77.5°	74.1	74.1	99.8	195.6	334.9	395.2	358.6	250.0	179.8	136.3	132.4
80°	59.3	59.3	69.2	95.8	112.6	132.4	112.6	82.0	67.2	61.3	64.2
82.5°	28.7	27.7	32.6	46.4	47.4	45.4	42.5	42.5	40.5	37.5	36.6
85°	2.0	2.0	4.0	8.9	14.8	19.8	22.7	21.7	20.7	17.8	19.8
87.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0	2.0
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: SP1-2407-157-5

Test Date: 08/07/2024

Luminaire Tested: MEM2-HTN-SA-30-740-U-5WQ-2

Data in this report applies to families of products including MEM2-HTN-SA-30-740-U-5WQ-2

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

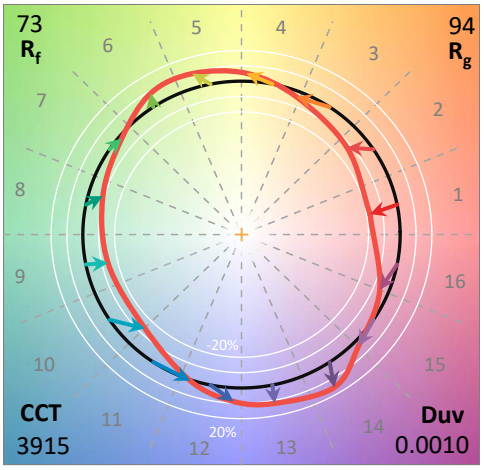
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2407-157-5
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-30-740-U-5WQ-2**
Description:	Epic Modern Light Square 30W 5WQ Optic and Flare Trim

Spectral Parameters

CCT (K):	3915
CIE u':	0.2262
CIE v':	0.5044
Duv:	0.0010
CIE x:	0.3850
CIE y:	0.3816
CIE z:	0.2334
Peak Wavelength (nm):	449
Dominant Wavelength (nm):	578
Purity:	30.05482
Rf:	73.2
Rg:	93.9

CRI (Ra):	71.0
R1:	67.6
R2:	78.3
R3:	87.1
R4:	69.7
R5:	67.4
R6:	69.3
R7:	79.7
R8:	48.7
R9:	-38.4
R10:	48.9
R11:	65.3
R12:	40.4
R13:	69.3
R14:	92.6
R15:	59.9



Test Conditions

Stabilization Time:	21M
Operation Time:	1H 21M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2407-157-5

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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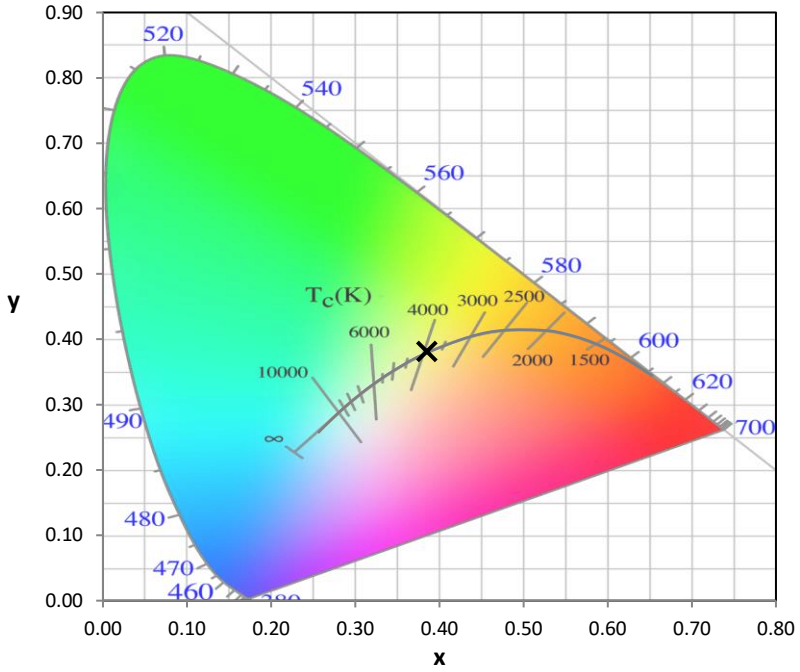
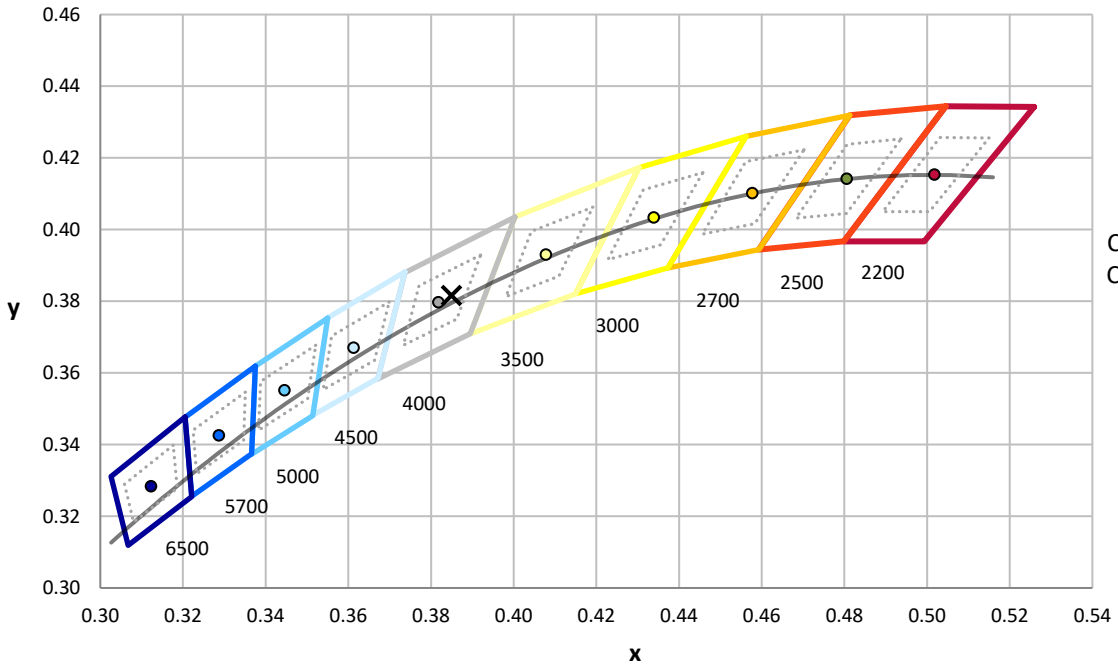
CIE 1931 Chromaticity Diagram



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



CCT = 3915K
CIE x = 0.3850
CIE y = 0.3816
Duv = 0.0010

Point lies inside the ANSI 4000K 4-step quadrangle

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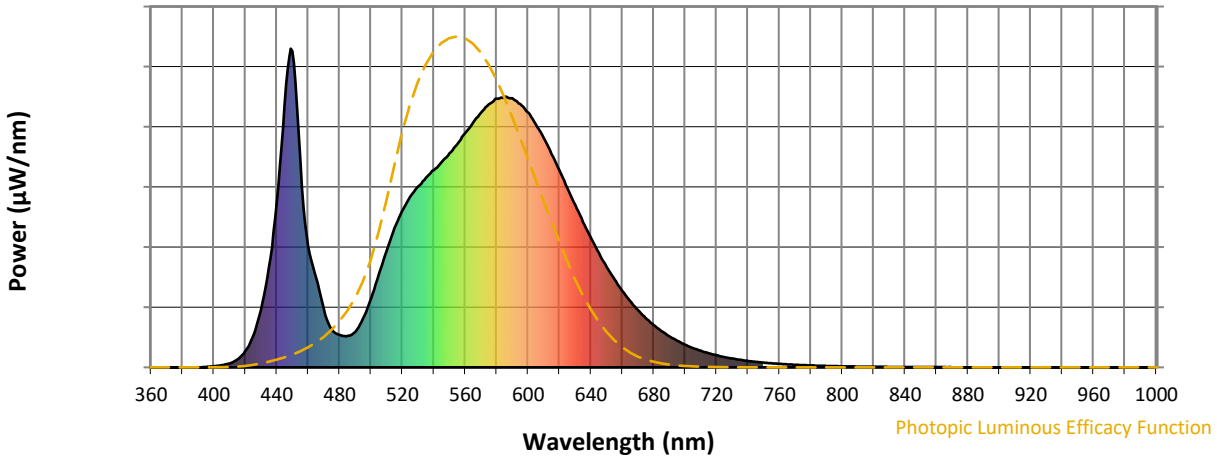
Photopic Flux vs. Wavelength

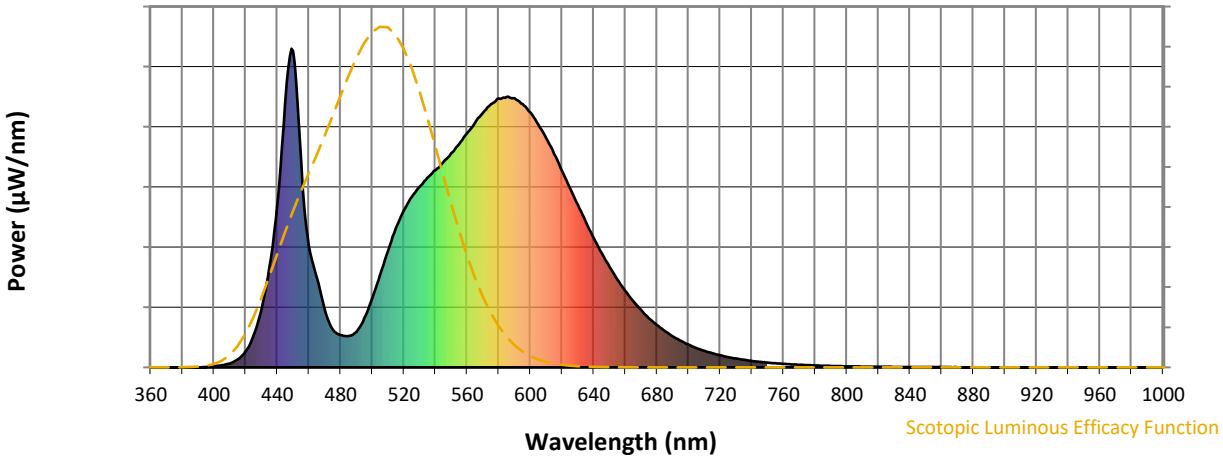


Photopic Lumens: NR

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	112	NR	620	618	NR	750	15	NR	880	0	NR
365	0	NR	495	153	NR	625	563	NR	755	13	NR	885	0	NR
370	0	NR	500	216	NR	630	510	NR	760	11	NR	890	0	NR
375	0	NR	505	291	NR	635	456	NR	765	9	NR	895	0	NR
380	0	NR	510	366	NR	640	407	NR	770	8	NR	900	0	NR
385	0	NR	515	436	NR	645	359	NR	775	7	NR	905	0	NR
390	0	NR	520	492	NR	650	316	NR	780	6	NR	910	0	NR
395	2	NR	525	536	NR	655	277	NR	785	5	NR	915	0	NR
400	4	NR	530	567	NR	660	240	NR	790	4	NR	920	0	NR
405	7	NR	535	596	NR	665	208	NR	795	4	NR	925	0	NR
410	12	NR	540	619	NR	670	179	NR	800	3	NR	930	0	NR
415	25	NR	545	644	NR	675	154	NR	805	3	NR	935	0	NR
420	51	NR	550	671	NR	680	133	NR	810	3	NR	940	0	NR
425	100	NR	555	701	NR	685	114	NR	815	2	NR	945	0	NR
430	180	NR	560	735	NR	690	98	NR	820	2	NR	950	0	NR
435	315	NR	565	768	NR	695	83	NR	825	2	NR	955	0	NR
440	514	NR	570	798	NR	700	71	NR	830	1	NR	960	0	NR
445	828	NR	575	825	NR	705	61	NR	835	1	NR	965	0	NR
450	992	NR	580	843	NR	710	52	NR	840	1	NR	970	0	NR
455	652	NR	585	848	NR	715	44	NR	845	1	NR	975	0	NR
460	382	NR	590	844	NR	720	38	NR	850	1	NR	980	0	NR
465	282	NR	595	826	NR	725	32	NR	855	1	NR	985	0	NR
470	180	NR	600	800	NR	730	28	NR	860	1	NR	990	0	NR
475	119	NR	605	762	NR	735	24	NR	865	1	NR	995	0	NR
480	101	NR	610	719	NR	740	20	NR	870	1	NR	1000	0	NR
485	98	NR	615	669	NR	745	17	NR	875	0	NR			

REPORT NUMBER: SP1-2407-157-5

Scotopic Flux vs. Wavelength

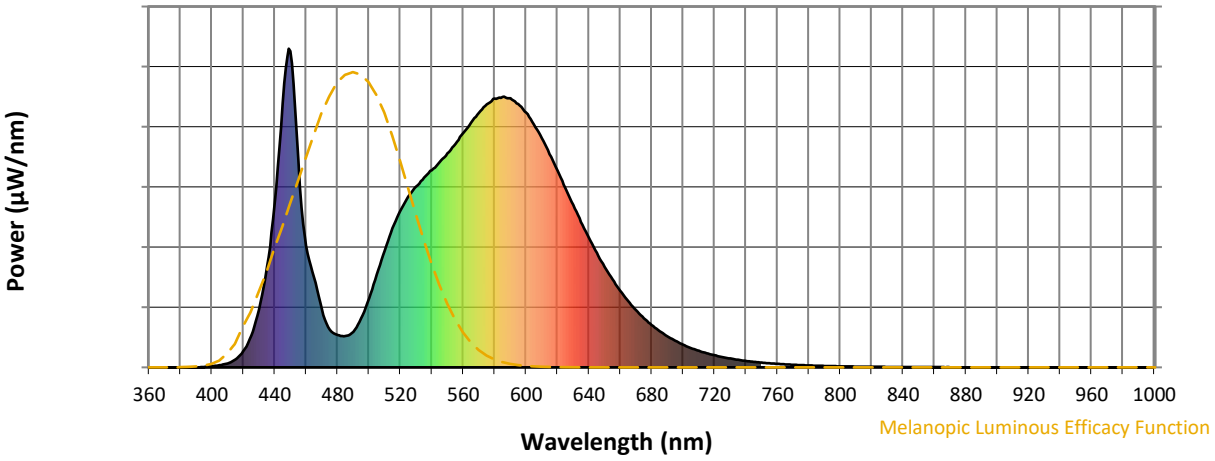


Scotopic Lumens: NR **S/P: 1.49**

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	112	NR	620	618	NR	750	15	NR	880	0	NR
365	0	NR	495	153	NR	625	563	NR	755	13	NR	885	0	NR
370	0	NR	500	216	NR	630	510	NR	760	11	NR	890	0	NR
375	0	NR	505	291	NR	635	456	NR	765	9	NR	895	0	NR
380	0	NR	510	366	NR	640	407	NR	770	8	NR	900	0	NR
385	0	NR	515	436	NR	645	359	NR	775	7	NR	905	0	NR
390	0	NR	520	492	NR	650	316	NR	780	6	NR	910	0	NR
395	2	NR	525	536	NR	655	277	NR	785	5	NR	915	0	NR
400	4	NR	530	567	NR	660	240	NR	790	4	NR	920	0	NR
405	7	NR	535	596	NR	665	208	NR	795	4	NR	925	0	NR
410	12	NR	540	619	NR	670	179	NR	800	3	NR	930	0	NR
415	25	NR	545	644	NR	675	154	NR	805	3	NR	935	0	NR
420	51	NR	550	671	NR	680	133	NR	810	3	NR	940	0	NR
425	100	NR	555	701	NR	685	114	NR	815	2	NR	945	0	NR
430	180	NR	560	735	NR	690	98	NR	820	2	NR	950	0	NR
435	315	NR	565	768	NR	695	83	NR	825	2	NR	955	0	NR
440	514	NR	570	798	NR	700	71	NR	830	1	NR	960	0	NR
445	828	NR	575	825	NR	705	61	NR	835	1	NR	965	0	NR
450	992	NR	580	843	NR	710	52	NR	840	1	NR	970	0	NR
455	652	NR	585	848	NR	715	44	NR	845	1	NR	975	0	NR
460	382	NR	590	844	NR	720	38	NR	850	1	NR	980	0	NR
465	282	NR	595	826	NR	725	32	NR	855	1	NR	985	0	NR
470	180	NR	600	800	NR	730	28	NR	860	1	NR	990	0	NR
475	119	NR	605	762	NR	735	24	NR	865	1	NR	995	0	NR
480	101	NR	610	719	NR	740	20	NR	870	1	NR	1000	0	NR
485	98	NR	615	669	NR	745	17	NR	875	0	NR			

REPORT NUMBER: SP1-2407-157-5

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.88**

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	112	NR	620	618	NR	750	15	NR	880	0	NR
365	0	NR	495	153	NR	625	563	NR	755	13	NR	885	0	NR
370	0	NR	500	216	NR	630	510	NR	760	11	NR	890	0	NR
375	0	NR	505	291	NR	635	456	NR	765	9	NR	895	0	NR
380	0	NR	510	366	NR	640	407	NR	770	8	NR	900	0	NR
385	0	NR	515	436	NR	645	359	NR	775	7	NR	905	0	NR
390	0	NR	520	492	NR	650	316	NR	780	6	NR	910	0	NR
395	2	NR	525	536	NR	655	277	NR	785	5	NR	915	0	NR
400	4	NR	530	567	NR	660	240	NR	790	4	NR	920	0	NR
405	7	NR	535	596	NR	665	208	NR	795	4	NR	925	0	NR
410	12	NR	540	619	NR	670	179	NR	800	3	NR	930	0	NR
415	25	NR	545	644	NR	675	154	NR	805	3	NR	935	0	NR
420	51	NR	550	671	NR	680	133	NR	810	3	NR	940	0	NR
425	100	NR	555	701	NR	685	114	NR	815	2	NR	945	0	NR
430	180	NR	560	735	NR	690	98	NR	820	2	NR	950	0	NR
435	315	NR	565	768	NR	695	83	NR	825	2	NR	955	0	NR
440	514	NR	570	798	NR	700	71	NR	830	1	NR	960	0	NR
445	828	NR	575	825	NR	705	61	NR	835	1	NR	965	0	NR
450	992	NR	580	843	NR	710	52	NR	840	1	NR	970	0	NR
455	652	NR	585	848	NR	715	44	NR	845	1	NR	975	0	NR
460	382	NR	590	844	NR	720	38	NR	850	1	NR	980	0	NR
465	282	NR	595	826	NR	725	32	NR	855	1	NR	985	0	NR
470	180	NR	600	800	NR	730	28	NR	860	1	NR	990	0	NR
475	119	NR	605	762	NR	735	24	NR	865	1	NR	995	0	NR
480	101	NR	610	719	NR	740	20	NR	870	1	NR	1000	0	NR
485	98	NR	615	669	NR	745	17	NR	875	0	NR			

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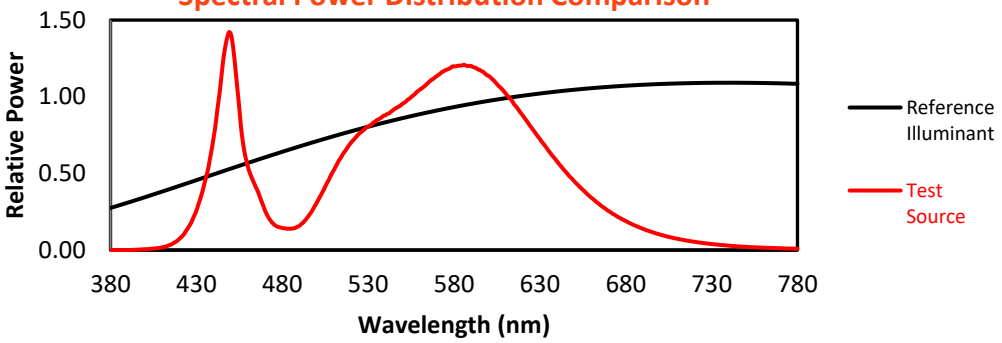
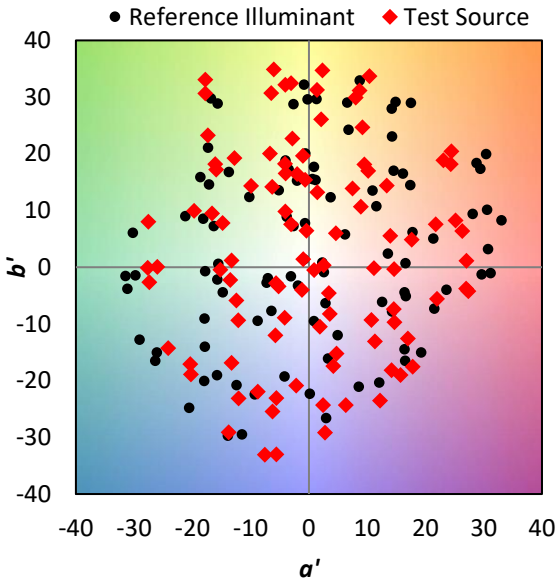
Summary

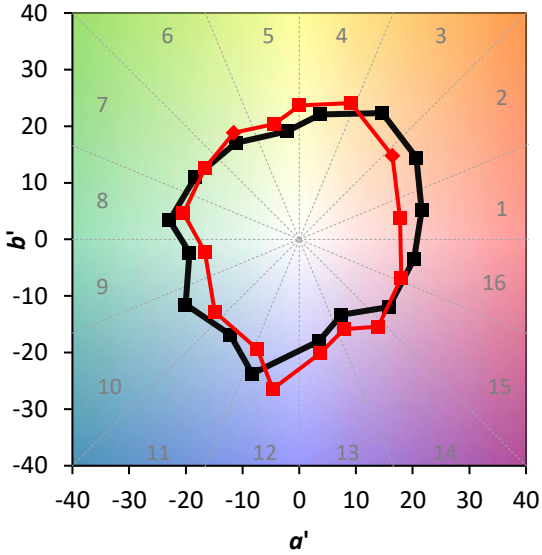
R_f = 73.2
R_g = 93.9
CIE R_a = 71.0
R_9 = -38.4

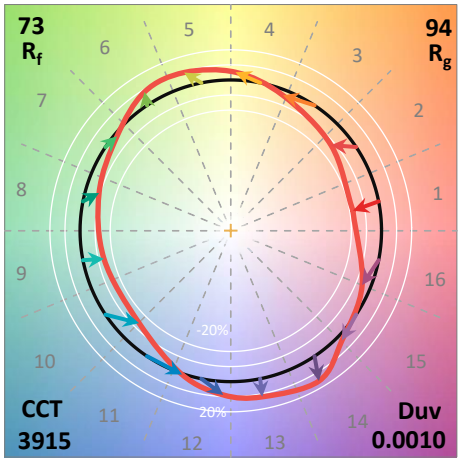
Spectral Power Distribution Comparison

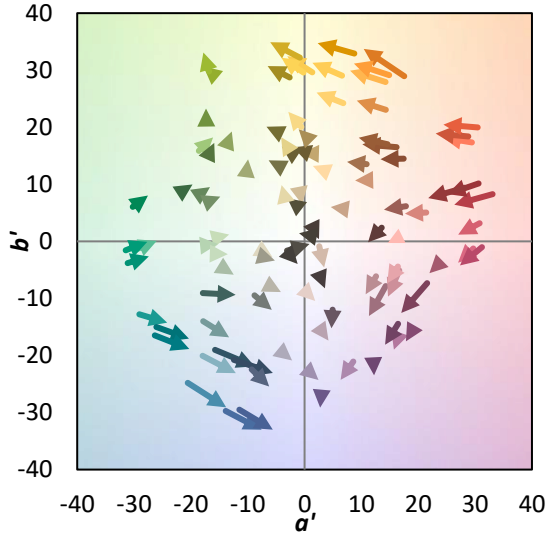


Color Vector Graphics









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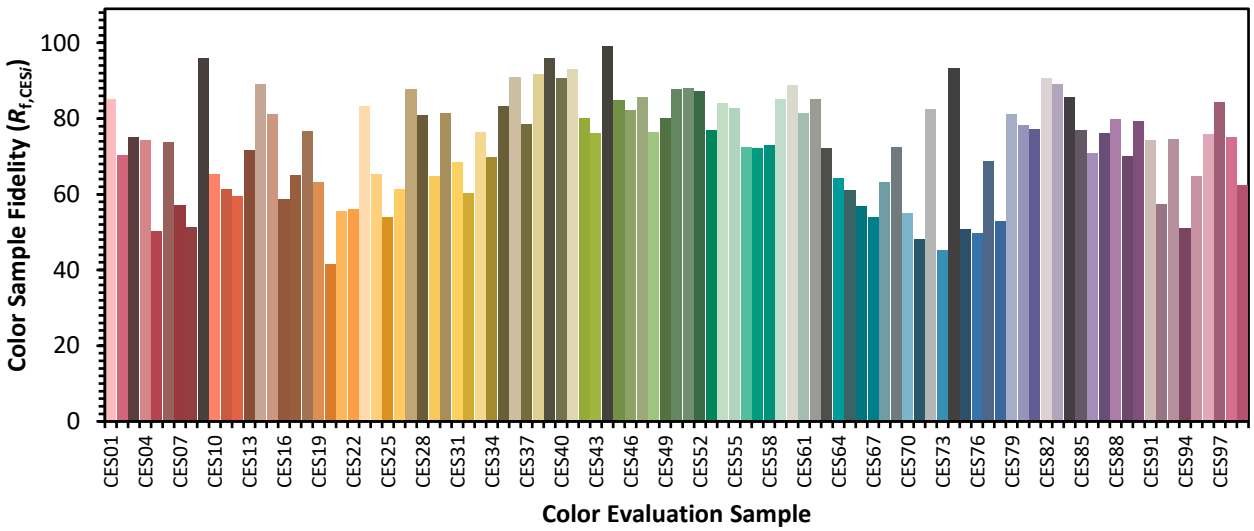
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 85	CES26 = 61	CES51 = 88	CES76 = 50
CES02 = 61	CES27 = 88	CES52 = 87	CES77 = 69
CES03 = 30	CES28 = 81	CES53 = 77	CES78 = 53
CES04 = 70	CES29 = 65	CES54 = 84	CES79 = 81
CES05 = 47	CES30 = 81	CES55 = 83	CES80 = 78
CES06 = 50	CES31 = 69	CES56 = 73	CES81 = 77
CES07 = 40	CES32 = 60	CES57 = 72	CES82 = 91
CES08 = 39	CES33 = 76	CES58 = 73	CES83 = 89
CES09 = 29	CES34 = 70	CES59 = 85	CES84 = 86
CES10 = 74	CES35 = 83	CES60 = 89	CES85 = 77
CES11 = 57	CES36 = 91	CES61 = 81	CES86 = 71
CES12 = 63	CES37 = 79	CES62 = 85	CES87 = 76
CES13 = 42	CES38 = 92	CES63 = 72	CES88 = 80
CES14 = 74	CES39 = 96	CES64 = 64	CES89 = 70
CES15 = 71	CES40 = 91	CES65 = 61	CES90 = 79
CES16 = 46	CES41 = 93	CES66 = 57	CES91 = 74
CES17 = 49	CES42 = 80	CES67 = 54	CES92 = 57
CES18 = 56	CES43 = 76	CES68 = 63	CES93 = 74
CES19 = 72	CES44 = 99	CES69 = 73	CES94 = 51
CES20 = 65	CES45 = 85	CES70 = 55	CES95 = 65
CES21 = 86	CES46 = 82	CES71 = 48	CES96 = 76
CES22 = 78	CES47 = 86	CES72 = 83	CES97 = 84
CES23 = 92	CES48 = 77	CES73 = 45	CES98 = 75
CES24 = 91	CES49 = 80	CES74 = 93	CES99 = 62
CES25 = 72	CES50 = 88	CES75 = 51	



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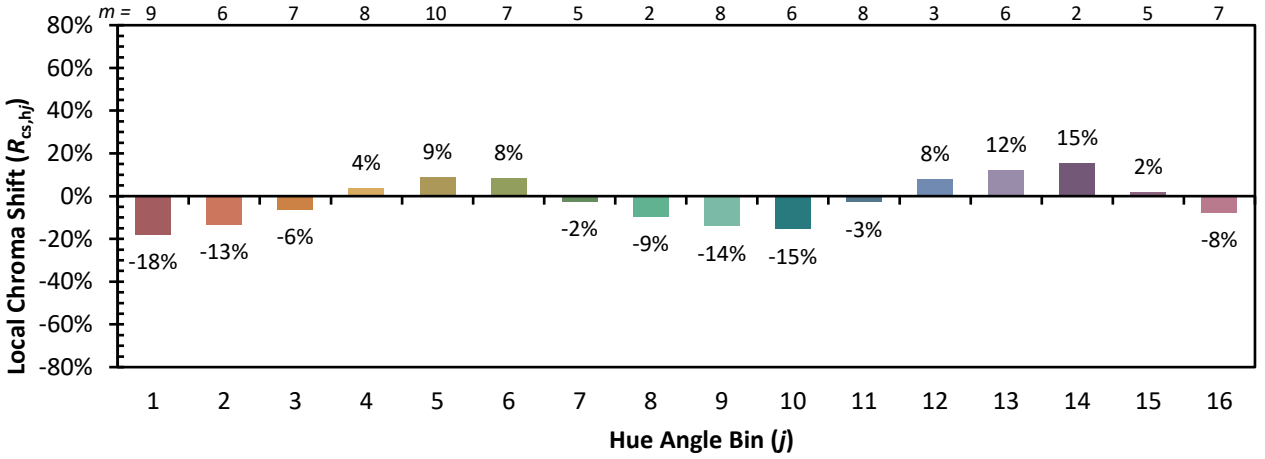
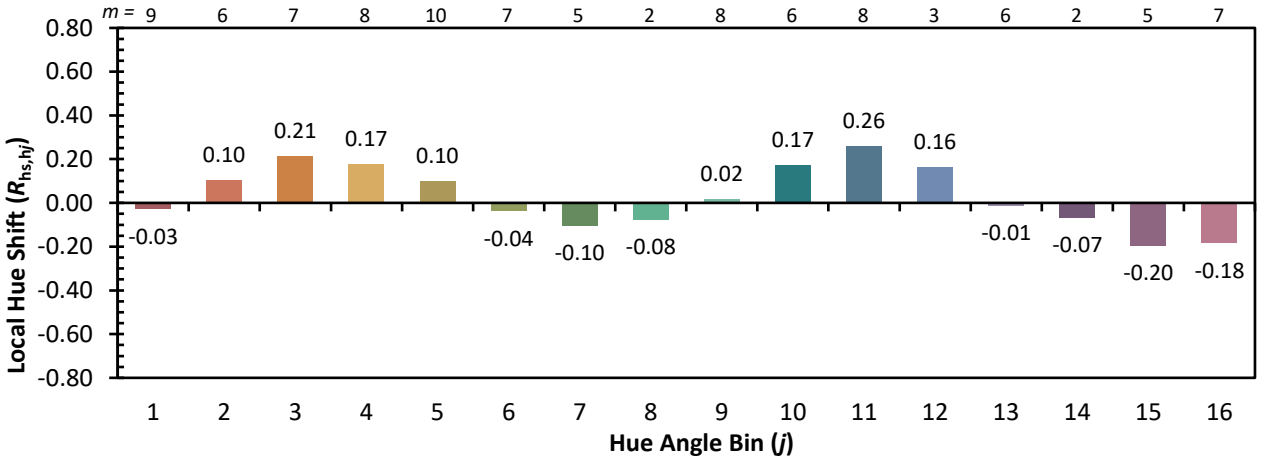
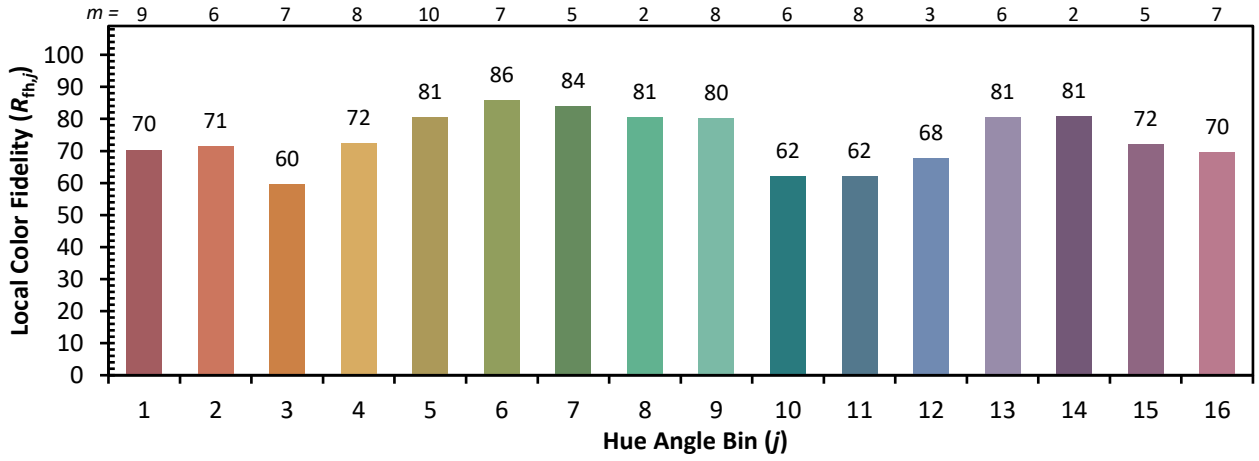
Color Rendition by Hue-Angle Bin







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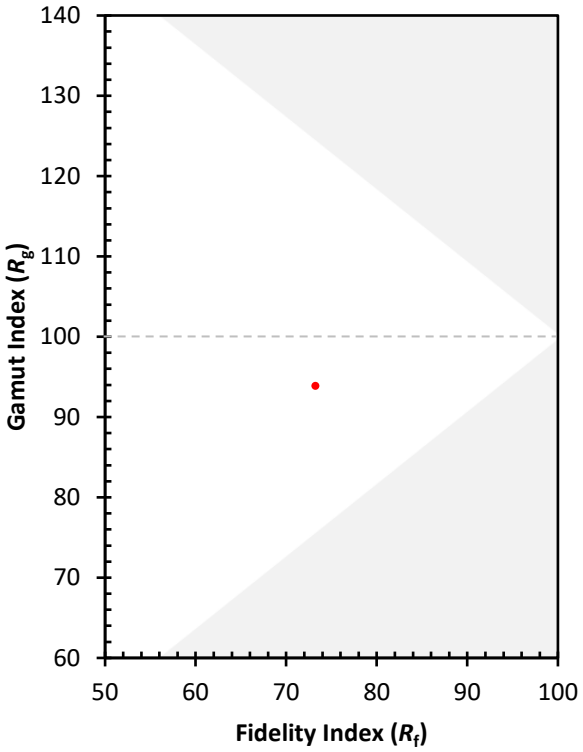
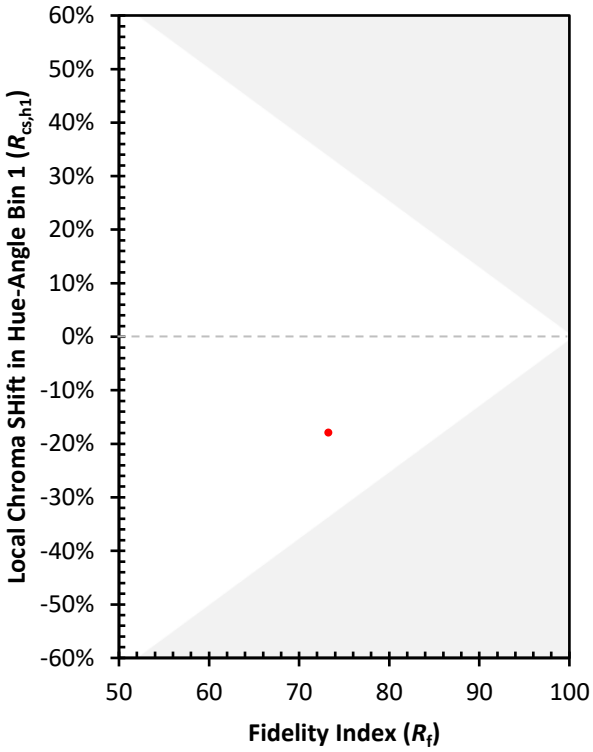
Measure Comparisons





(END OF REPORT)