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: P867743

Luminaire Tested: **MEM2-HTN-SA-40-722-U-T5R**

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:	P867743
Test Lab:	INNOVATION CENTER(G3)
Issue Date:	08/21/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	STREETWORKS
Catalog Number:	MEM2-HTN-SA-40-722-U-T5R
Description:	EPIC MODERN TALL HOUSING DISCRETE LED ARRAYS 40W 70CRI 2200K FIXTURE w/ TYPE V ROUND DISTRIBUTION OPTIC
Light Source:	(10) 2200K CCT, 70 CRI LEDS
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	4367.6 lumens
Efficiency:	N/A
Efficacy:	133.2 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

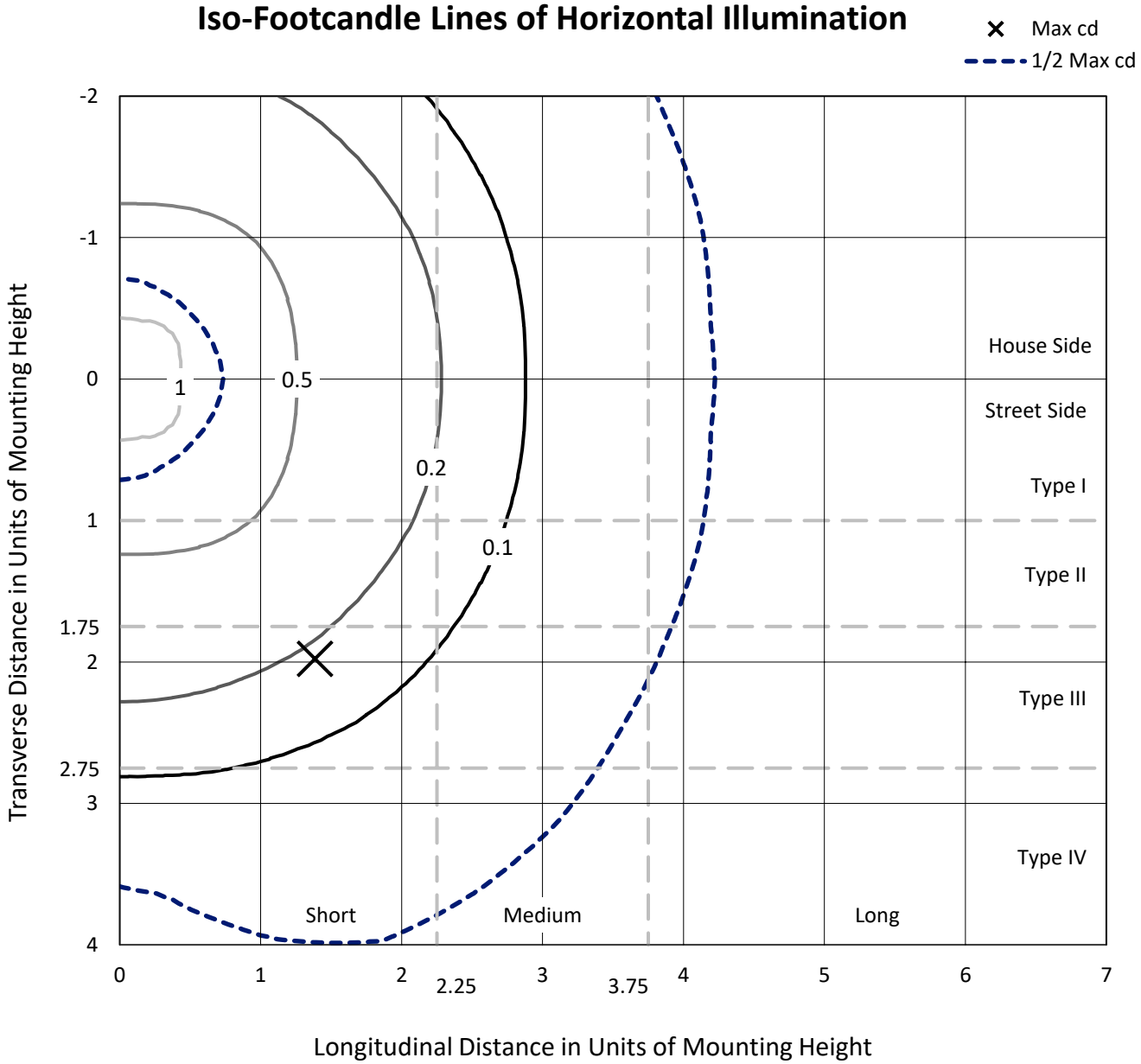
Input Watts (W):	32.8
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	0.99
Total Harmonic Distortion (THDi):	9.76%
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	24 FT

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P867743
CATALOG NUMBER: MEM2-HTN-SA-40-722-U-T5R

Iso-Footcandle Lines of Horizontal Illumination



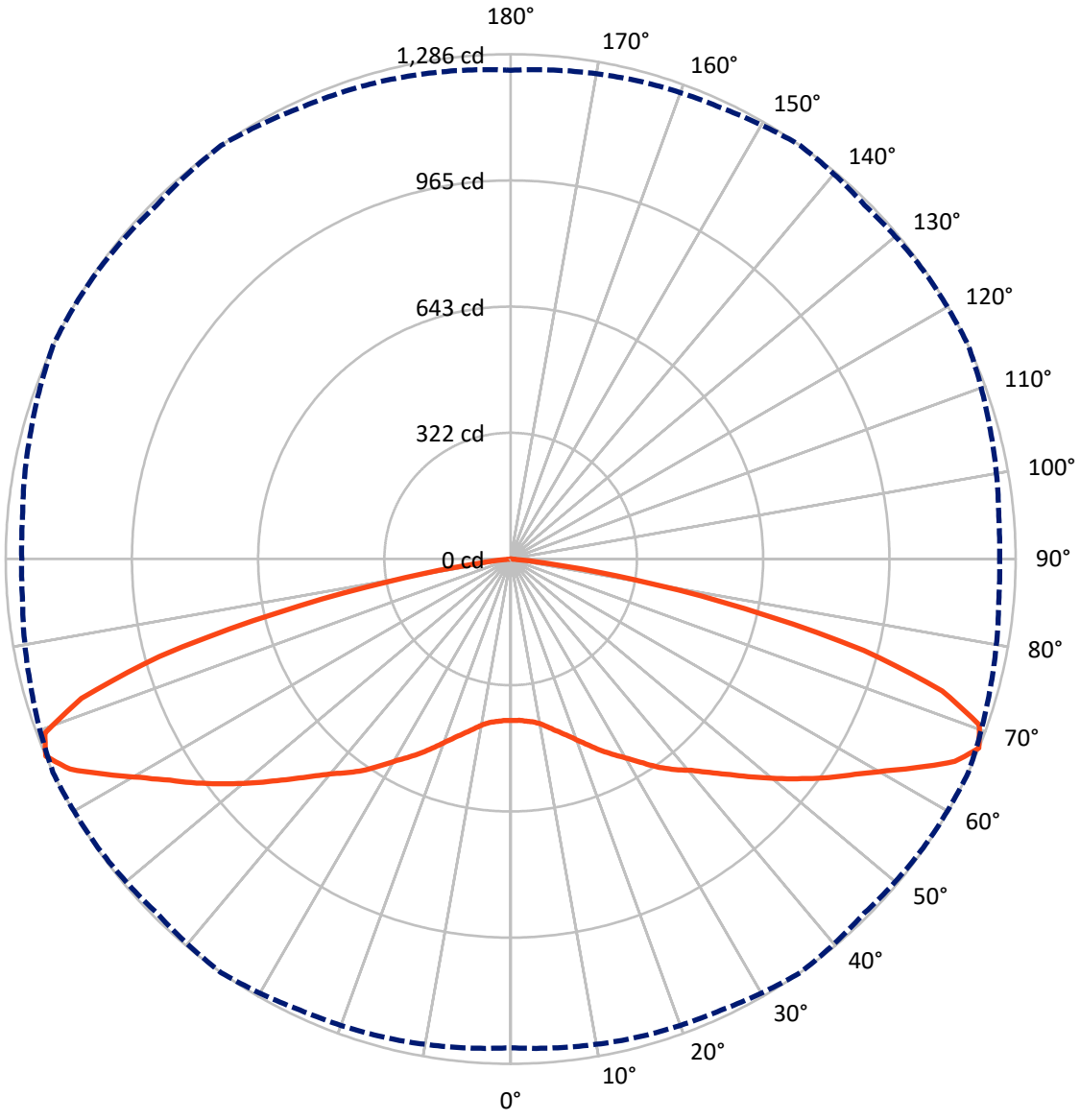
Based on 20 foot mounting height. Maximum calculated value = 1 fc
Type V - Short - N/A

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P867743
CATALOG NUMBER: MEM2-HTN-SA-40-722-U-T5R

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

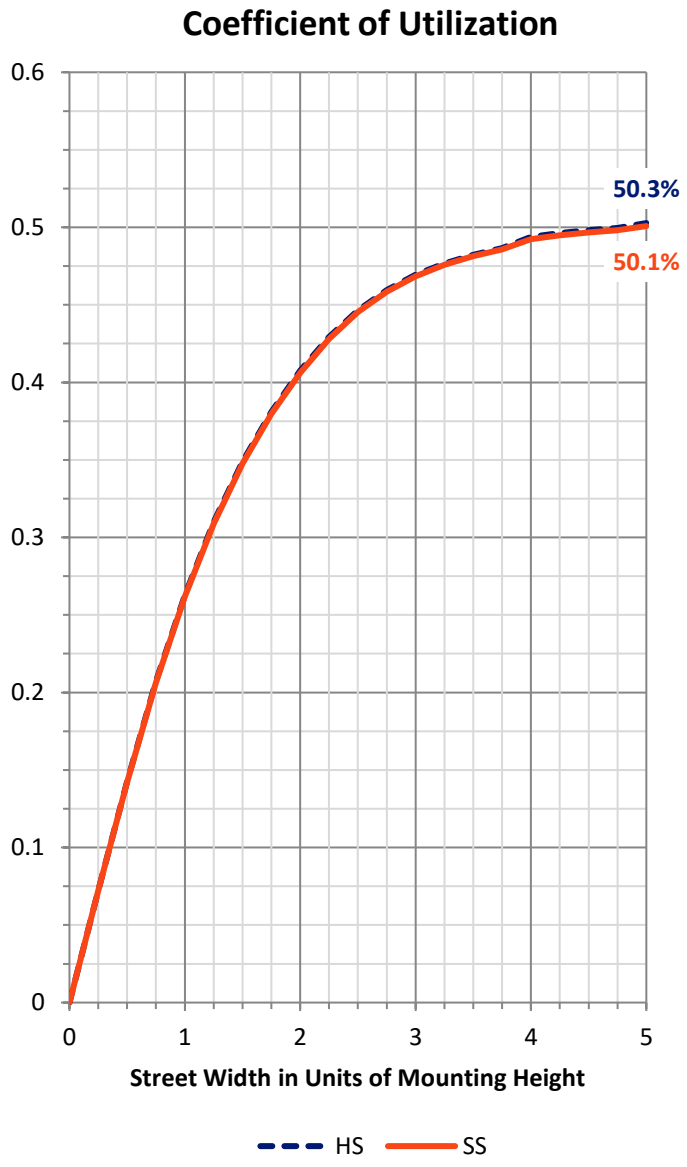
REPORT NUMBER: P867743
CATALOG NUMBER: MEM2-HTN-SA-40-722-U-T5R

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2183.8	0.0	2183.8
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2183.8	0.0	2183.8
	% Fixture	50.0	0.0	50.0
Total	Lumens	4367.6	0.0	4367.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.0	0.9
10°-20°	131.1	3.0
20°-30°	250.6	5.7
30°-40°	405.0	9.3
40°-50°	592.7	13.6
50°-60°	850.0	19.5
60°-70°	1191.3	27.3
70°-80°	840.6	19.2
80°-90°	66.2	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°	4367.6	100.0
0°-180°	4367.6	100.0



Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

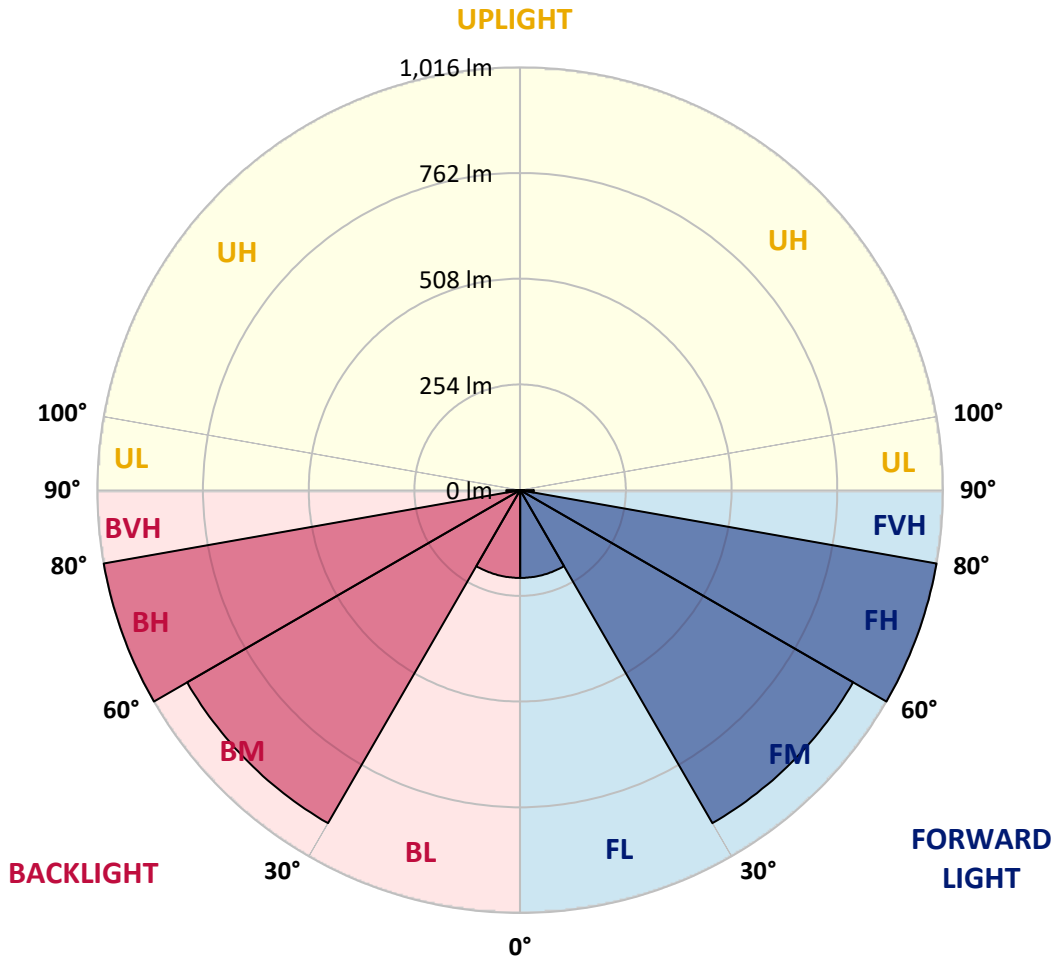
Scaled Data Report

REPORT NUMBER: P867743
CATALOG NUMBER: MEM2-HTN-SA-40-722-U-T5R

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	210.9	4.8			
FM	(30°-60°)	923.9	21.2			
FH	(60°-80°)	1016.0	23.3			G1/1800
FVH	(80°-90°)	33.1	0.8			G1/100
BL	(0°-30°)	210.9	4.8	B1/500		
BM	(30°-60°)	923.9	21.2	B1/1000		
BH	(60°-80°)	1016.0	23.3	B3/2500		G1/1800
BVH	(80°-90°)	33.1	0.8			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



Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P867743
CATALOG NUMBER: MEM2-HTN-SA-40-722-U-T5R

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	411.4	411.4	411.4	411.4	411.4	411.4	411.4	411.4	411.4	411.4	411.4
2.5°	414.0	413.1	412.3	412.3	411.4	412.3	411.4	412.3	411.4	411.4	411.4
5°	416.5	415.7	415.7	415.7	414.8	414.8	414.8	414.8	414.0	413.1	414.0
7.5°	419.1	419.1	418.2	419.9	419.1	419.9	419.9	420.8	419.1	418.2	419.1
10°	425.9	425.9	425.9	427.6	427.6	430.1	430.1	431.0	430.1	428.4	428.4
12.5°	440.3	439.5	439.5	439.5	441.2	442.9	444.6	444.6	443.7	441.2	441.2
15°	456.5	458.2	456.5	455.6	456.5	458.2	459.9	459.9	459.0	458.2	458.2
17.5°	476.0	476.9	475.2	473.5	473.5	476.0	476.9	476.9	476.0	474.3	474.3
20°	493.0	493.9	493.9	493.0	493.9	495.6	496.4	497.3	494.7	492.2	492.2
22.5°	507.5	508.3	510.0	513.4	516.8	518.5	517.7	517.7	513.4	510.9	510.0
25°	525.3	527.9	531.3	535.5	541.5	545.7	544.0	540.6	537.2	532.1	531.3
27.5°	560.2	560.2	556.8	558.5	565.3	569.5	567.8	565.3	558.5	555.1	554.2
30°	587.4	587.4	587.4	585.7	589.9	595.0	593.3	589.1	585.7	584.0	584.0
32.5°	613.7	612.0	614.6	618.0	619.7	621.4	621.4	618.0	612.0	609.5	609.5
35°	638.4	640.1	642.6	647.7	652.0	649.4	645.2	642.6	636.7	631.6	631.6
37.5°	662.2	663.9	666.4	674.1	680.9	680.0	674.9	668.1	660.5	656.2	653.7
40°	679.2	680.0	686.8	698.7	708.1	711.5	707.2	697.9	686.0	677.5	678.3
42.5°	699.6	701.3	712.3	729.3	742.9	748.0	742.1	729.3	712.3	701.3	701.3
45°	729.3	730.2	744.6	765.9	783.7	792.2	783.7	765.9	743.8	732.7	731.9
47.5°	759.1	761.6	777.8	803.3	829.6	839.8	830.5	807.5	781.2	767.6	765.9
50°	793.1	794.8	814.3	849.2	878.9	892.5	880.6	851.7	822.8	805.8	806.7
52.5°	826.2	831.3	857.7	894.2	929.9	945.2	928.2	896.8	866.2	850.0	849.2
55°	875.5	881.5	904.4	945.2	982.6	999.6	983.5	948.6	915.5	897.6	894.2
57.5°	937.6	941.0	961.4	1003.0	1034.5	1050.6	1041.3	1009.0	977.5	955.4	951.2
60°	1008.1	1011.5	1027.7	1070.2	1095.7	1107.6	1104.2	1085.5	1064.2	1054.0	1051.5
62.5°	1108.4	1109.3	1117.8	1142.4	1167.9	1173.0	1164.5	1160.3	1167.1	1156.0	1158.6
65°	1223.2	1223.2	1220.6	1224.0	1243.6	1237.6	1231.7	1250.4	1247.0	1228.3	1224.9
67.5°	1245.3	1250.4	1260.6	1268.2	1286.1	1275.0	1282.7	1286.1	1264.8	1247.8	1245.3
70°	1114.4	1120.3	1177.3	1212.1	1266.5	1276.7	1252.1	1239.3	1215.5	1184.1	1175.6
72.5°	759.9	789.7	953.7	1065.9	1149.2	1162.0	1148.4	1132.2	1084.6	1060.0	1043.0
75°	606.9	623.1	769.3	879.8	929.1	928.2	873.8	856.0	818.6	815.2	818.6
77.5°	370.6	374.0	517.7	604.4	610.3	606.9	584.8	571.2	576.3	550.8	555.1
80°	113.1	123.3	195.5	295.0	317.1	306.9	302.6	307.7	312.8	320.5	332.4
82.5°	23.0	28.9	39.1	85.0	96.9	96.1	95.2	105.4	114.8	119.0	144.5
85°	2.6	2.6	3.4	6.8	14.5	23.0	23.8	21.3	32.3	31.5	22.1
87.5°	0.9	0.9	0.9	0.9	0.9	1.7	1.7	1.7	1.7	1.7	1.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

Streetworks

Report Number: SP1-2407-157-2

Test Date: 08/07/2024

Luminaire Tested: MEM2-HTN-SA-40-722-U-5WQ-2

Data in this report applies to families of products including MEM2-HTN-SA-40-722-U-5WQ-2

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

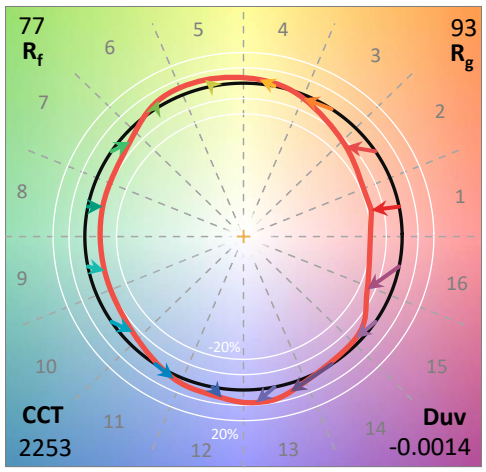
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2407-157-2
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-40-722-U-5WQ-2**
Description:	Epic Modern Light Square 40W 5WQ Optic and Flare Trim

Spectral Parameters

CCT (K):	2253	CRI (Ra):	70.6		
CIE u':	0.2868	R1:	68.4	R9:	-36.0
CIE v':	0.5332	R2:	88.7	R10:	78.2
Duv:	-0.0014	R3:	85.4	R11:	61.0
CIE x:	0.4974	R4:	63.5	R12:	74.2
CIE y:	0.4110	R5:	69.0	R13:	72.8
CIE z:	0.0915	R6:	88.9	R14:	92.2
Peak Wavelength (nm):	603	R7:	68.5	R15:	58.0
Dominant Wavelength (nm):	587	R8:	32.0		
Purity:	72.69432				

Rf:	76.9
Rg:	92.7



Test Conditions

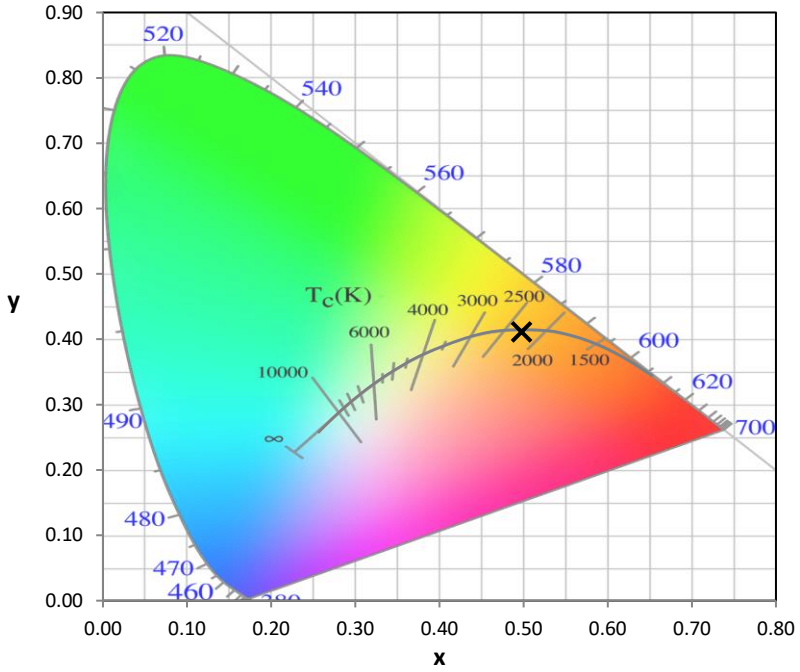
Stabilization Time:	29M
Operation Time:	1H 29M
Sphere Temperature (°C):	24.1

REPORT NUMBER: SP1-2407-157-2

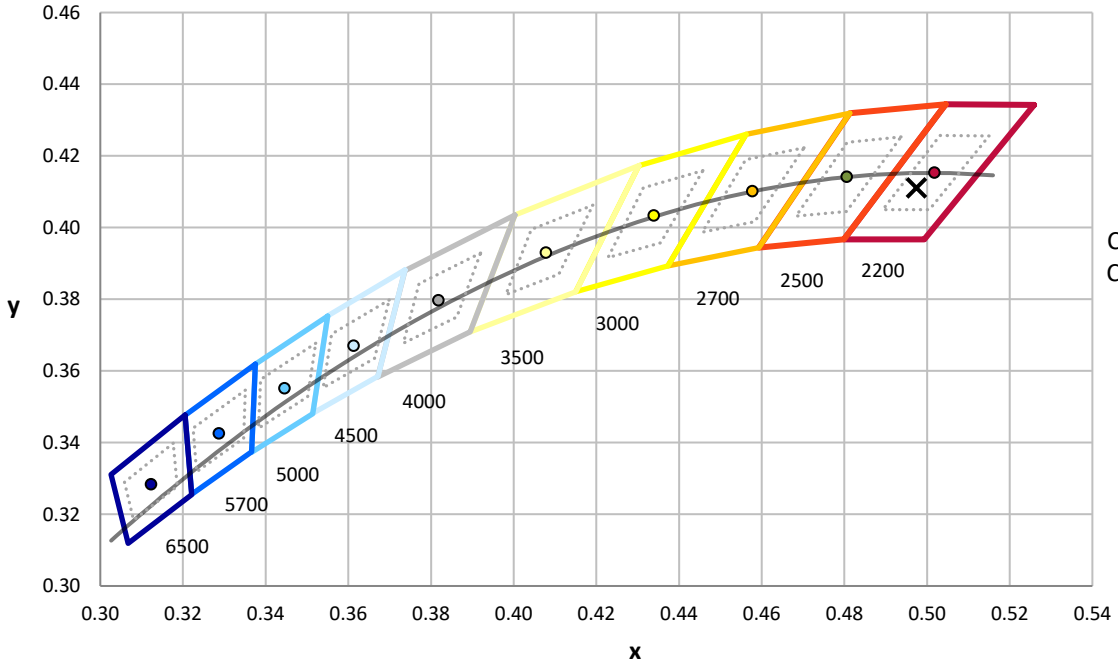
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	10/24/2023	10/24/2024
Room Thermometer	IN0046	10/24/2023	10/24/2024

REPORT NUMBER: SP1-2407-157-2

CIE 1931 Chromaticity Diagram



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

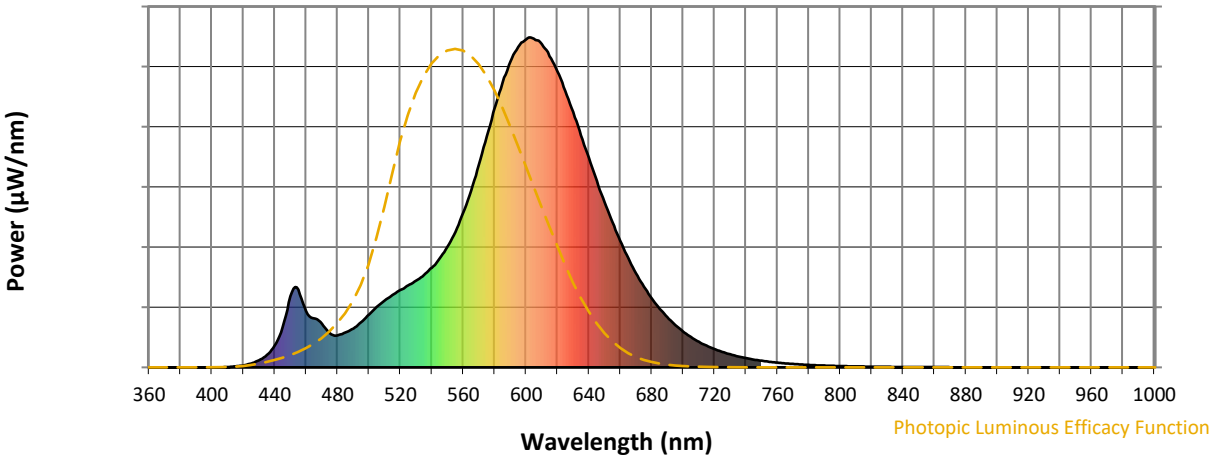


CCT = 2253K
CIE x = 0.4974
CIE y = 0.4110
Duv = -0.0014

Point lies inside the ANSI 2200K 4-step quadrangle

REPORT NUMBER: SP1-2407-157-2

Photopic Flux vs. Wavelength

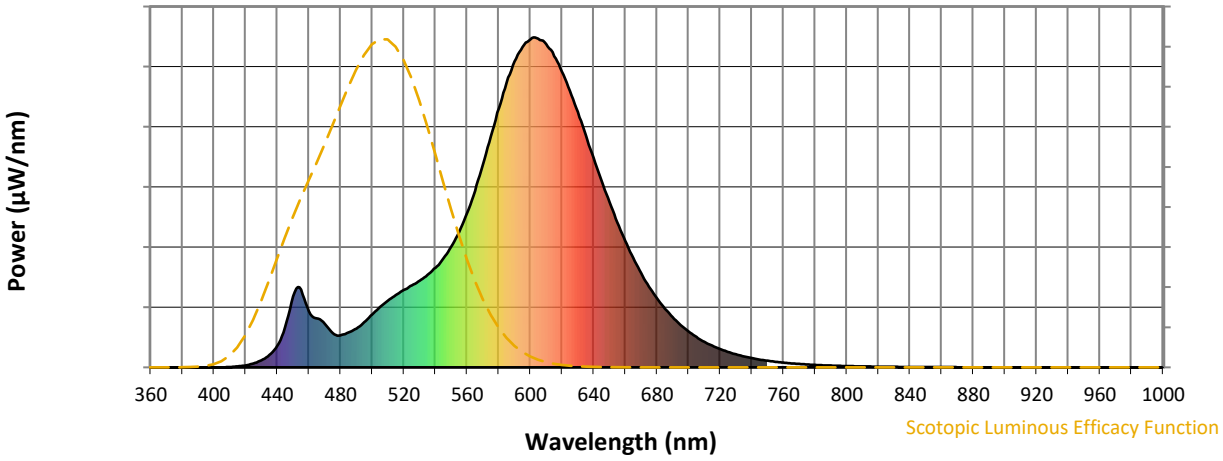


Photopic Lumens: NR

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	117	NR	620	896	NR	750	20	NR	880	0	NR
365	0	NR	495	137	NR	625	838	NR	755	17	NR	885	0	NR
370	0	NR	500	160	NR	630	774	NR	760	14	NR	890	0	NR
375	0	NR	505	183	NR	635	704	NR	765	12	NR	895	0	NR
380	0	NR	510	202	NR	640	635	NR	770	10	NR	900	0	NR
385	0	NR	515	219	NR	645	565	NR	775	9	NR	905	0	NR
390	0	NR	520	235	NR	650	501	NR	780	7	NR	910	0	NR
395	0	NR	525	249	NR	655	440	NR	785	6	NR	915	0	NR
400	0	NR	530	263	NR	660	383	NR	790	5	NR	920	0	NR
405	0	NR	535	281	NR	665	332	NR	795	5	NR	925	0	NR
410	1	NR	540	302	NR	670	286	NR	800	4	NR	930	0	NR
415	3	NR	545	331	NR	675	245	NR	805	3	NR	935	0	NR
420	6	NR	550	366	NR	680	210	NR	810	3	NR	940	0	NR
425	12	NR	555	411	NR	685	178	NR	815	3	NR	945	0	NR
430	21	NR	560	469	NR	690	152	NR	820	2	NR	950	0	NR
435	38	NR	565	536	NR	695	129	NR	825	2	NR	955	0	NR
440	66	NR	570	614	NR	700	109	NR	830	2	NR	960	0	NR
445	122	NR	575	701	NR	705	92	NR	835	1	NR	965	0	NR
450	215	NR	580	785	NR	710	77	NR	840	1	NR	970	0	NR
455	236	NR	585	863	NR	715	66	NR	845	1	NR	975	0	NR
460	170	NR	590	928	NR	720	55	NR	850	1	NR	980	0	NR
465	148	NR	595	971	NR	725	47	NR	855	1	NR	985	0	NR
470	132	NR	600	994	NR	730	40	NR	860	1	NR	990	0	NR
475	104	NR	605	996	NR	735	33	NR	865	1	NR	995	0	NR
480	97	NR	610	979	NR	740	28	NR	870	1	NR	1000	0	NR
485	105	NR	615	943	NR	745	24	NR	875	0	NR			

REPORT NUMBER: SP1-2407-157-2

Scotopic Flux vs. Wavelength

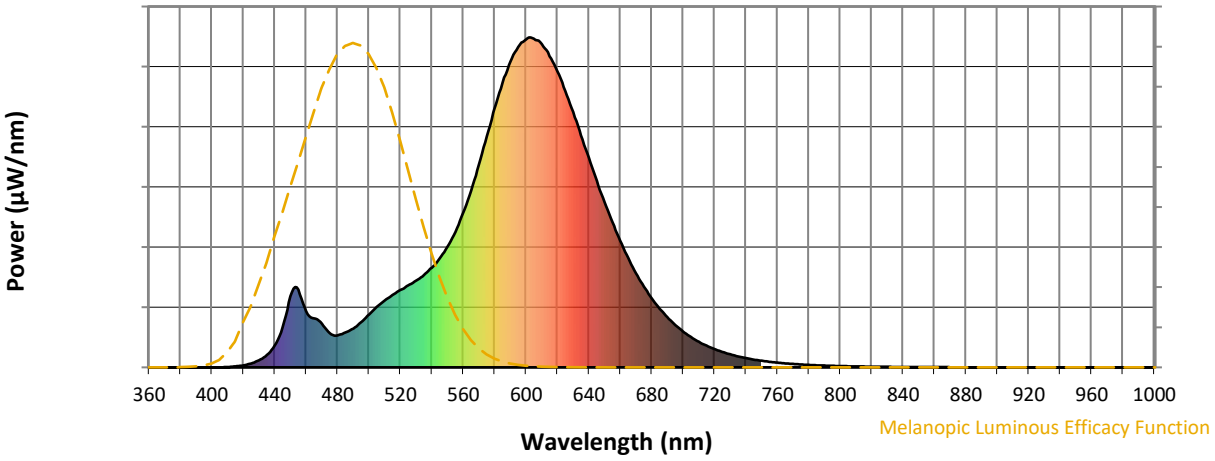


Scotopic Lumens: NR **S/P: 0.96**

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	117	NR	620	896	NR	750	20	NR	880	0	NR
365	0	NR	495	137	NR	625	838	NR	755	17	NR	885	0	NR
370	0	NR	500	160	NR	630	774	NR	760	14	NR	890	0	NR
375	0	NR	505	183	NR	635	704	NR	765	12	NR	895	0	NR
380	0	NR	510	202	NR	640	635	NR	770	10	NR	900	0	NR
385	0	NR	515	219	NR	645	565	NR	775	9	NR	905	0	NR
390	0	NR	520	235	NR	650	501	NR	780	7	NR	910	0	NR
395	0	NR	525	249	NR	655	440	NR	785	6	NR	915	0	NR
400	0	NR	530	263	NR	660	383	NR	790	5	NR	920	0	NR
405	0	NR	535	281	NR	665	332	NR	795	5	NR	925	0	NR
410	1	NR	540	302	NR	670	286	NR	800	4	NR	930	0	NR
415	3	NR	545	331	NR	675	245	NR	805	3	NR	935	0	NR
420	6	NR	550	366	NR	680	210	NR	810	3	NR	940	0	NR
425	12	NR	555	411	NR	685	178	NR	815	3	NR	945	0	NR
430	21	NR	560	469	NR	690	152	NR	820	2	NR	950	0	NR
435	38	NR	565	536	NR	695	129	NR	825	2	NR	955	0	NR
440	66	NR	570	614	NR	700	109	NR	830	2	NR	960	0	NR
445	122	NR	575	701	NR	705	92	NR	835	1	NR	965	0	NR
450	215	NR	580	785	NR	710	77	NR	840	1	NR	970	0	NR
455	236	NR	585	863	NR	715	66	NR	845	1	NR	975	0	NR
460	170	NR	590	928	NR	720	55	NR	850	1	NR	980	0	NR
465	148	NR	595	971	NR	725	47	NR	855	1	NR	985	0	NR
470	132	NR	600	994	NR	730	40	NR	860	1	NR	990	0	NR
475	104	NR	605	996	NR	735	33	NR	865	1	NR	995	0	NR
480	97	NR	610	979	NR	740	28	NR	870	1	NR	1000	0	NR
485	105	NR	615	943	NR	745	24	NR	875	0	NR			

REPORT NUMBER: SP1-2407-157-2

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 1.71**

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	117	NR	620	896	NR	750	20	NR	880	0	NR
365	0	NR	495	137	NR	625	838	NR	755	17	NR	885	0	NR
370	0	NR	500	160	NR	630	774	NR	760	14	NR	890	0	NR
375	0	NR	505	183	NR	635	704	NR	765	12	NR	895	0	NR
380	0	NR	510	202	NR	640	635	NR	770	10	NR	900	0	NR
385	0	NR	515	219	NR	645	565	NR	775	9	NR	905	0	NR
390	0	NR	520	235	NR	650	501	NR	780	7	NR	910	0	NR
395	0	NR	525	249	NR	655	440	NR	785	6	NR	915	0	NR
400	0	NR	530	263	NR	660	383	NR	790	5	NR	920	0	NR
405	0	NR	535	281	NR	665	332	NR	795	5	NR	925	0	NR
410	1	NR	540	302	NR	670	286	NR	800	4	NR	930	0	NR
415	3	NR	545	331	NR	675	245	NR	805	3	NR	935	0	NR
420	6	NR	550	366	NR	680	210	NR	810	3	NR	940	0	NR
425	12	NR	555	411	NR	685	178	NR	815	3	NR	945	0	NR
430	21	NR	560	469	NR	690	152	NR	820	2	NR	950	0	NR
435	38	NR	565	536	NR	695	129	NR	825	2	NR	955	0	NR
440	66	NR	570	614	NR	700	109	NR	830	2	NR	960	0	NR
445	122	NR	575	701	NR	705	92	NR	835	1	NR	965	0	NR
450	215	NR	580	785	NR	710	77	NR	840	1	NR	970	0	NR
455	236	NR	585	863	NR	715	66	NR	845	1	NR	975	0	NR
460	170	NR	590	928	NR	720	55	NR	850	1	NR	980	0	NR
465	148	NR	595	971	NR	725	47	NR	855	1	NR	985	0	NR
470	132	NR	600	994	NR	730	40	NR	860	1	NR	990	0	NR
475	104	NR	605	996	NR	735	33	NR	865	1	NR	995	0	NR
480	97	NR	610	979	NR	740	28	NR	870	1	NR	1000	0	NR
485	105	NR	615	943	NR	745	24	NR	875	0	NR			

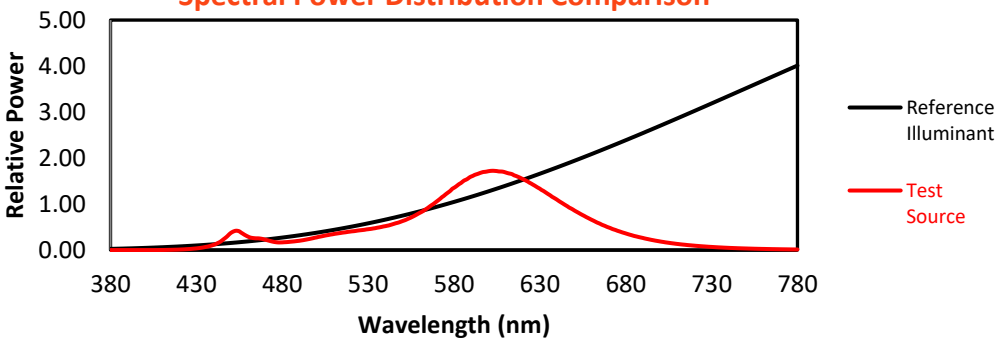
REPORT NUMBER: SP1-2407-157-2

TM-30-18

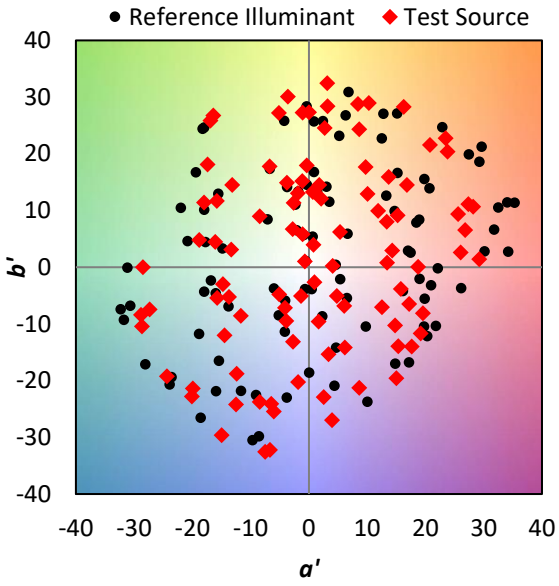
Summary

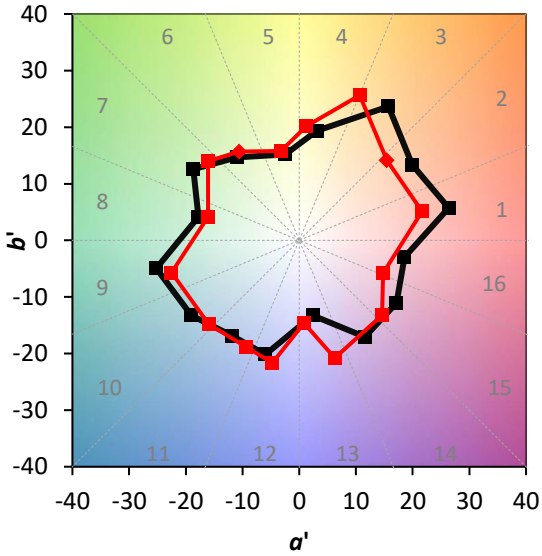
R_f = 76.9
R_g = 92.7
CIE R_a = 70.6
R_9 = -36.0

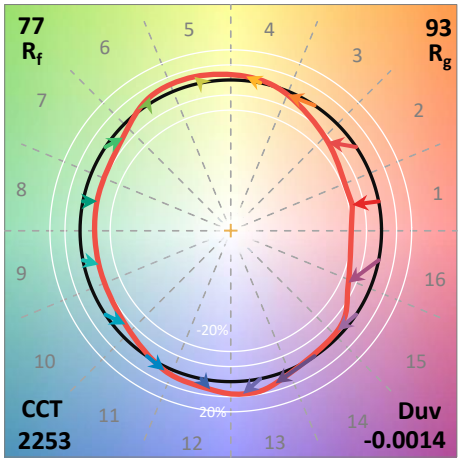
Spectral Power Distribution Comparison

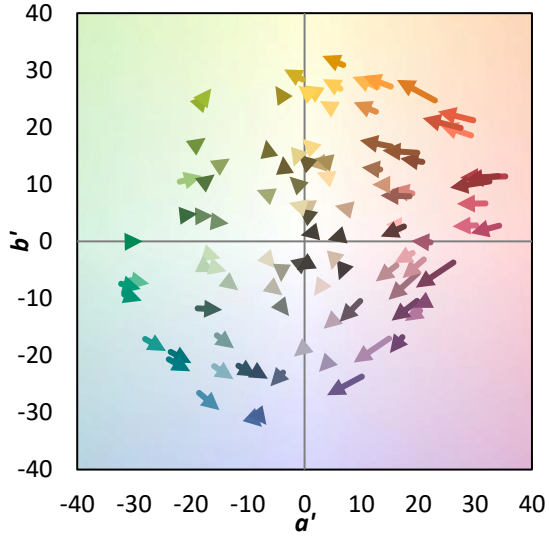


Color Vector Graphics







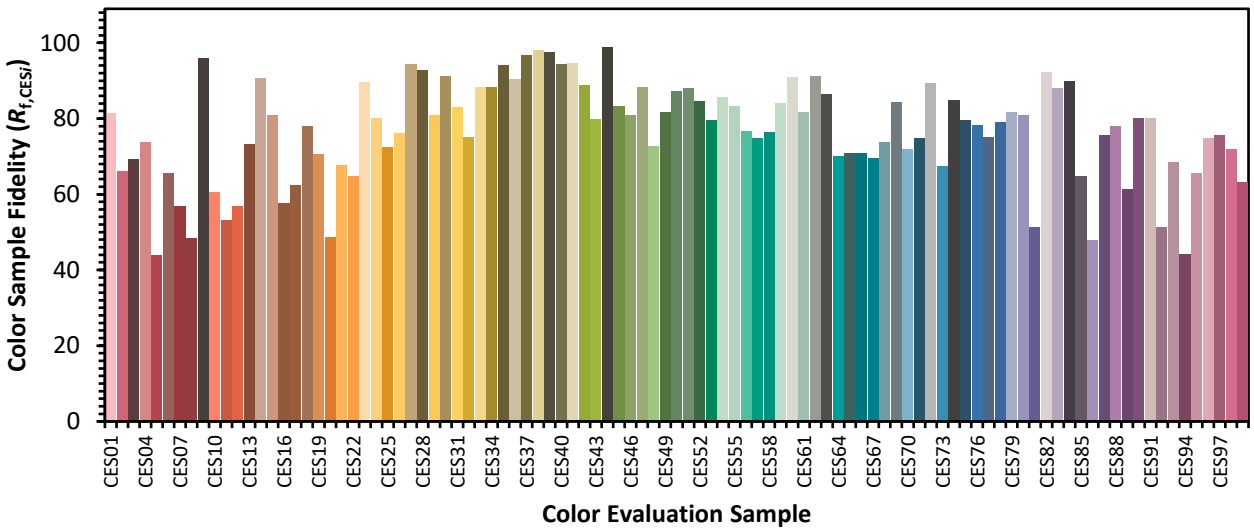


REPORT NUMBER: SP1-2407-157-2

TM-30-18

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

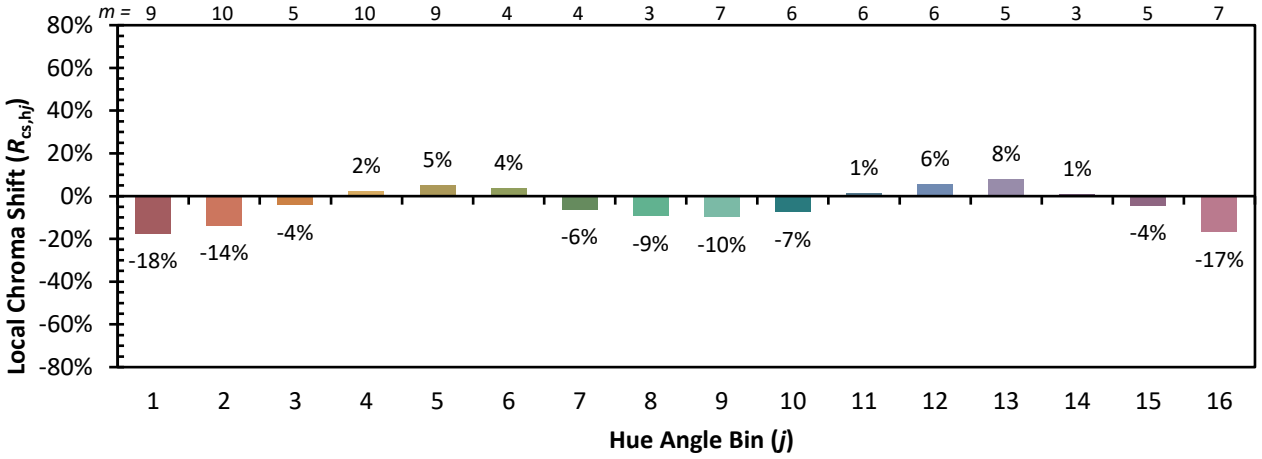
CES01 = 87	CES26 = 76	CES51 = 88	CES76 = 78
CES02 = 65	CES27 = 94	CES52 = 85	CES77 = 75
CES03 = 32	CES28 = 93	CES53 = 80	CES78 = 79
CES04 = 72	CES29 = 81	CES54 = 86	CES79 = 82
CES05 = 51	CES30 = 91	CES55 = 83	CES80 = 81
CES06 = 52	CES31 = 83	CES56 = 77	CES81 = 51
CES07 = 44	CES32 = 75	CES57 = 75	CES82 = 92
CES08 = 42	CES33 = 88	CES58 = 76	CES83 = 88
CES09 = 29	CES34 = 88	CES59 = 84	CES84 = 90
CES10 = 79	CES35 = 94	CES60 = 91	CES85 = 65
CES11 = 62	CES36 = 90	CES61 = 82	CES86 = 48
CES12 = 68	CES37 = 97	CES62 = 91	CES87 = 76
CES13 = 45	CES38 = 98	CES63 = 86	CES88 = 78
CES14 = 75	CES39 = 97	CES64 = 70	CES89 = 61
CES15 = 72	CES40 = 94	CES65 = 71	CES90 = 80
CES16 = 48	CES41 = 95	CES66 = 71	CES91 = 80
CES17 = 51	CES42 = 89	CES67 = 70	CES92 = 51
CES18 = 57	CES43 = 80	CES68 = 74	CES93 = 68
CES19 = 74	CES44 = 99	CES69 = 84	CES94 = 44
CES20 = 68	CES45 = 83	CES70 = 72	CES95 = 66
CES21 = 88	CES46 = 81	CES71 = 75	CES96 = 75
CES22 = 81	CES47 = 88	CES72 = 89	CES97 = 76
CES23 = 92	CES48 = 73	CES73 = 68	CES98 = 72
CES24 = 92	CES49 = 82	CES74 = 85	CES99 = 63
CES25 = 73	CES50 = 87	CES75 = 80	

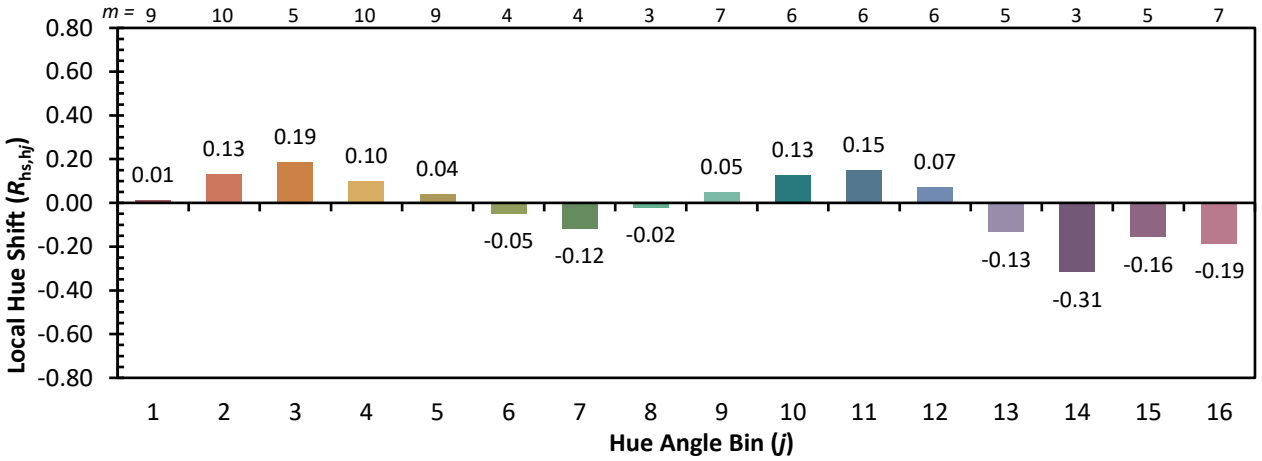


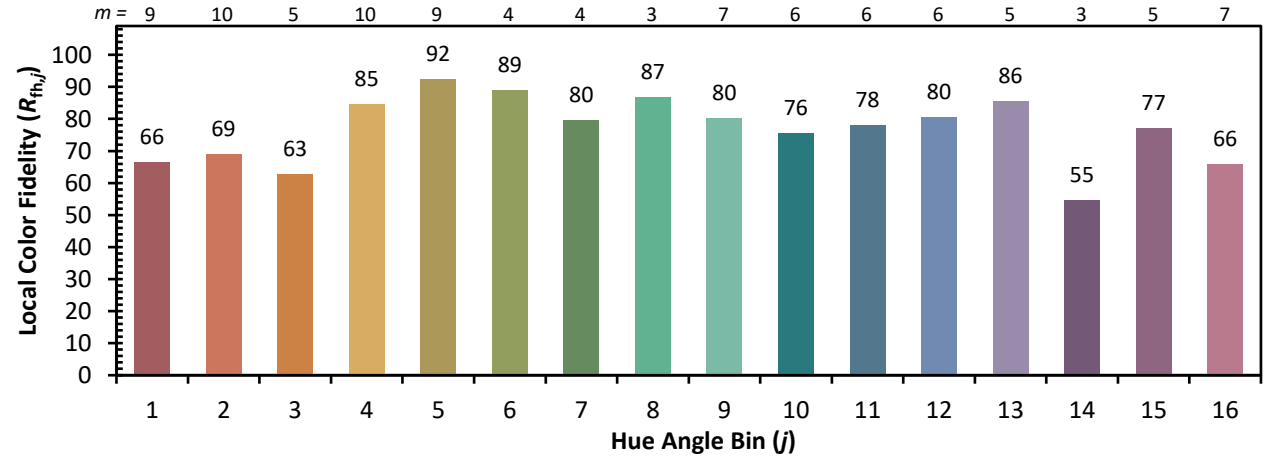
REPORT NUMBER: SP1-2407-157-2

TM-30-18

Color Rendition by Hue-Angle Bin



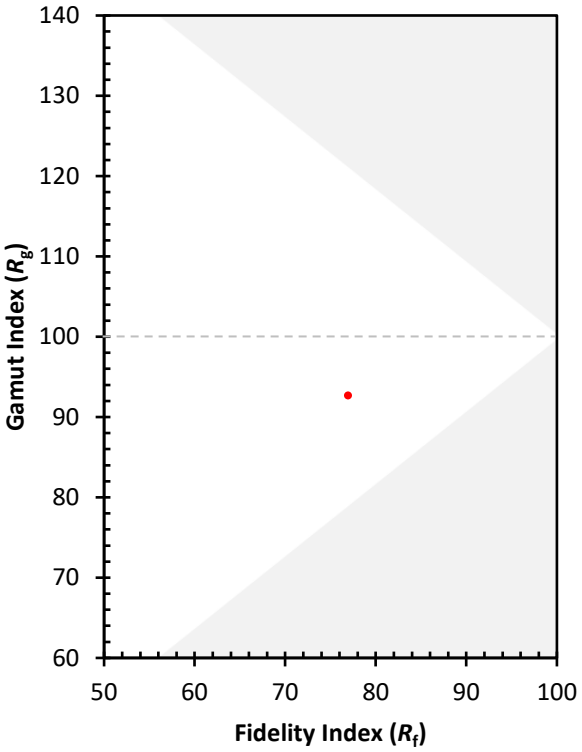


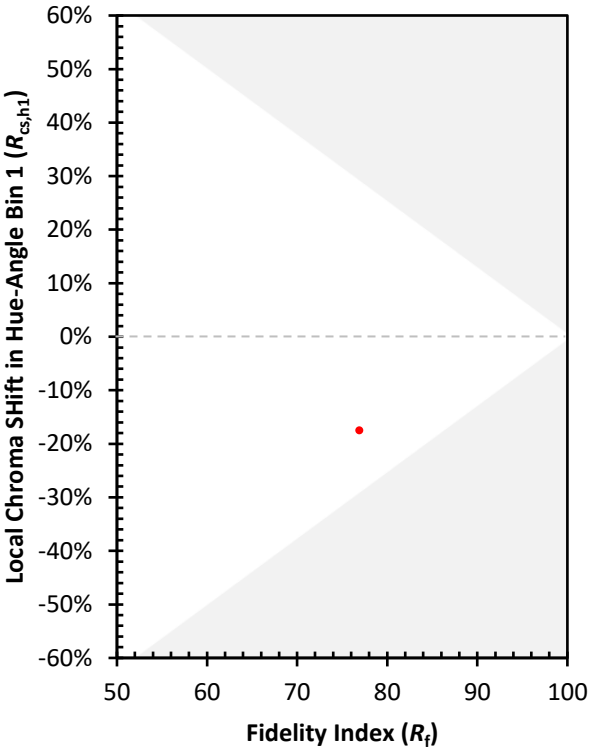


REPORT NUMBER: SP1-2407-157-2

TM-30-18

Measure Comparisons





(END OF REPORT)