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: P879543

Luminaire Tested: **MEM2-HSN-VA-160-735-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:	P879543
Test Lab:	INNOVATION CENTER(G3)
Issue Date:	10/01/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	STREETWORKS
Catalog Number:	MEM2-HSN-VA-160-735-U-WQ
Description:	EPIC MODERN SHORT HOUSING 160W 70CRI 3500K VISUAL COMFORT FIXTURE w/ TYPE V WIDE DISTRIBUTION OPTIC
Light Source:	(1) 3500K CCT, 70 CRI LEDS
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	17545.5 lumens
Efficiency:	N/A
Efficacy:	112.5 lumens/watt
Luminous Opening:	Circular (Dia: 1.12' x H: 0')
IES Classification:	Type V - Short
BUG Rating:	B4 - U0 - G3

Input Watts (W):	156
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	0.995
Total Harmonic Distortion (THDi):	6.6%
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	24 FT

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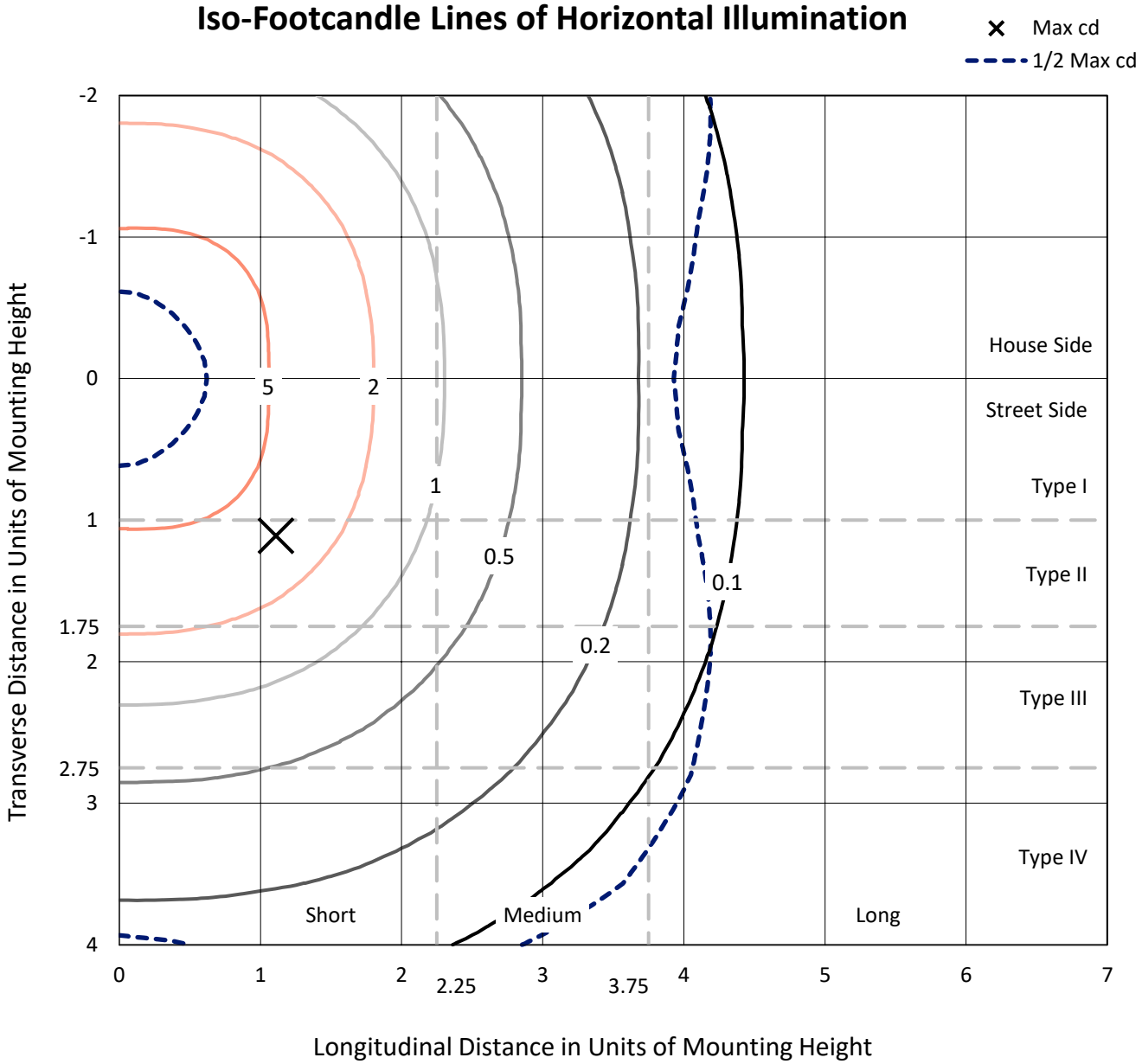
Scaled Data Report

REPORT NUMBER: P879543
CATALOG NUMBER: MEM2-HSN-VA-160-735-U-WQ

Iso-Footcandle Lines of Horizontal Illumination



Based on 15 foot mounting height. Maximum calculated value = 6.7 fc
Type V - Short - N/A

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REPORT NUMBER: P879543
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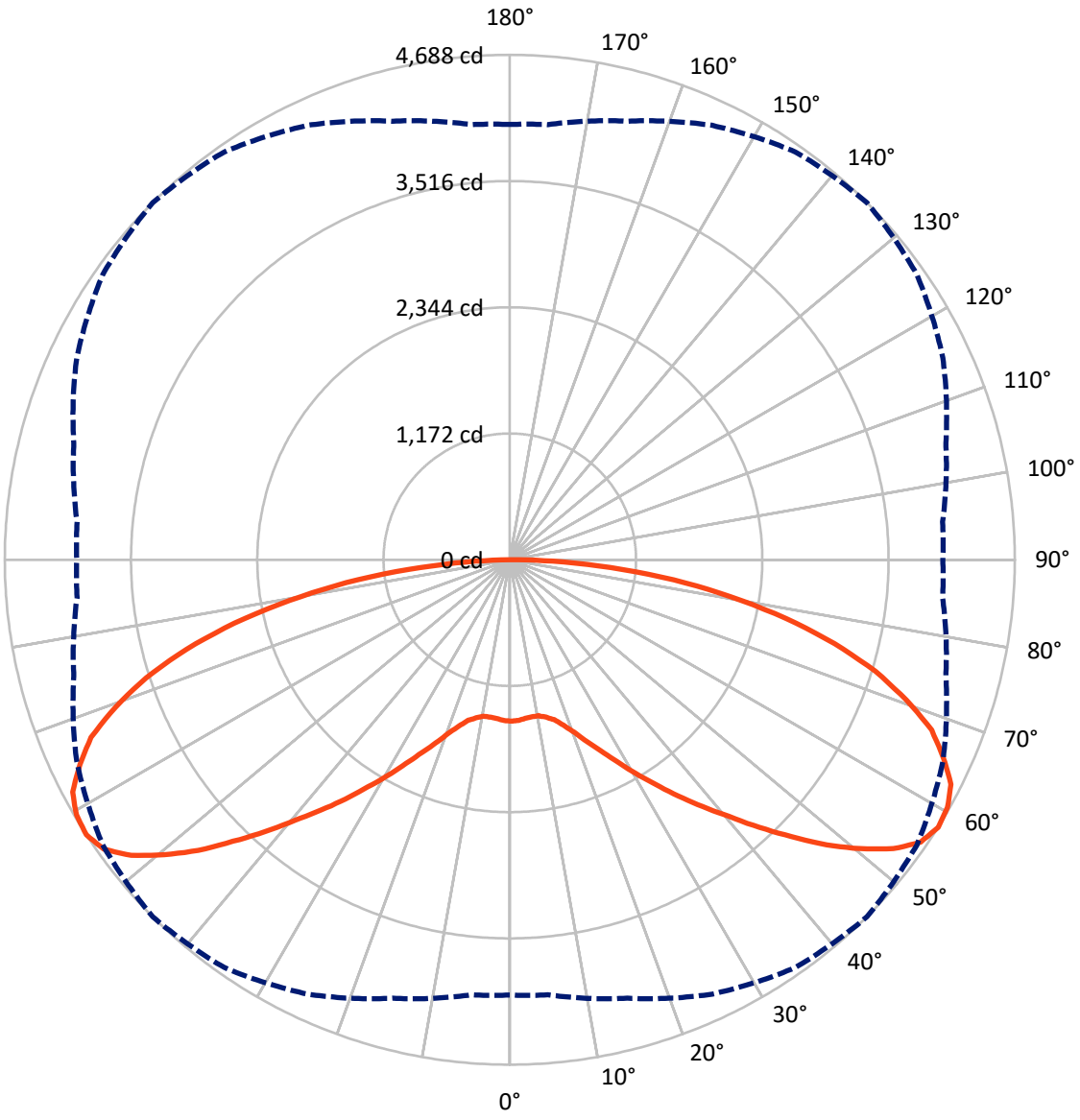
Luminous Intensity Polar Plot



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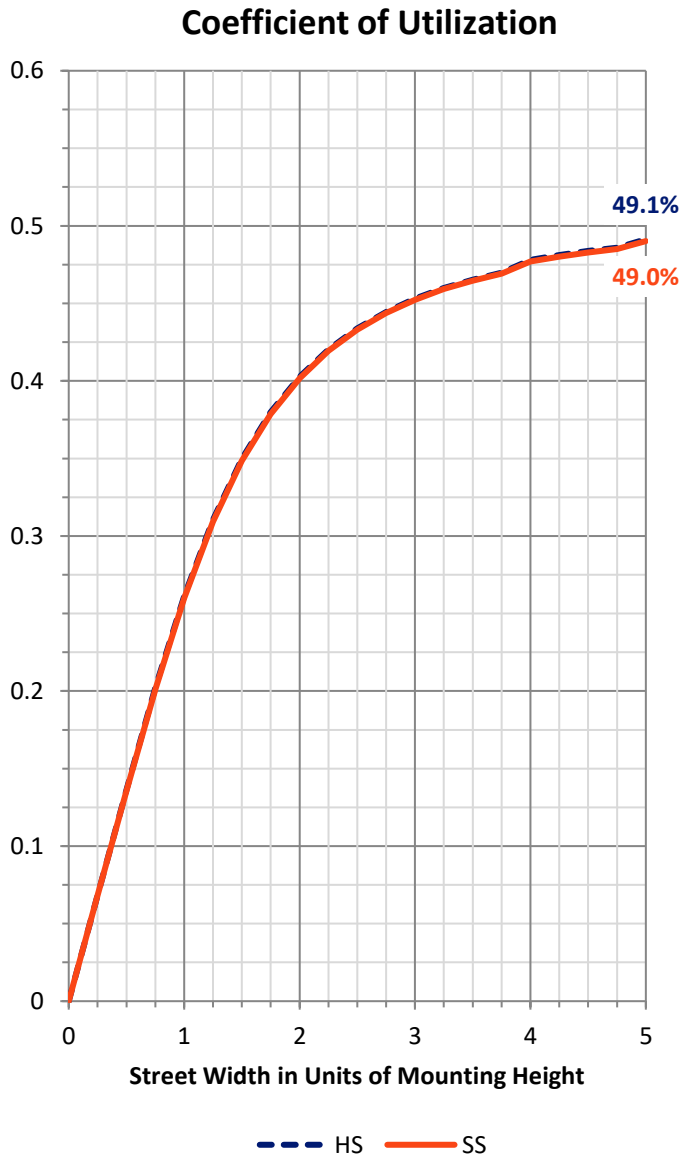
REPORT NUMBER: P879543
CATALOG NUMBER: MEM2-HSN-VA-160-735-U-WQ

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8772.8	0.0	8772.8
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	8772.8	0.0	8772.8
	% Fixture	50.0	0.0	50.0
Total	Lumens	17545.5	0.0	17545.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.1	0.8
10°-20°	443.6	2.5
20°-30°	911.7	5.2
30°-40°	1663.5	9.5
40°-50°	2728.0	15.5
50°-60°	3822.6	21.8
60°-70°	3998.9	22.8
70°-80°	2921.7	16.7
80°-90°	914.6	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°	17545.5	100.0
0°-180°	17545.5	100.0



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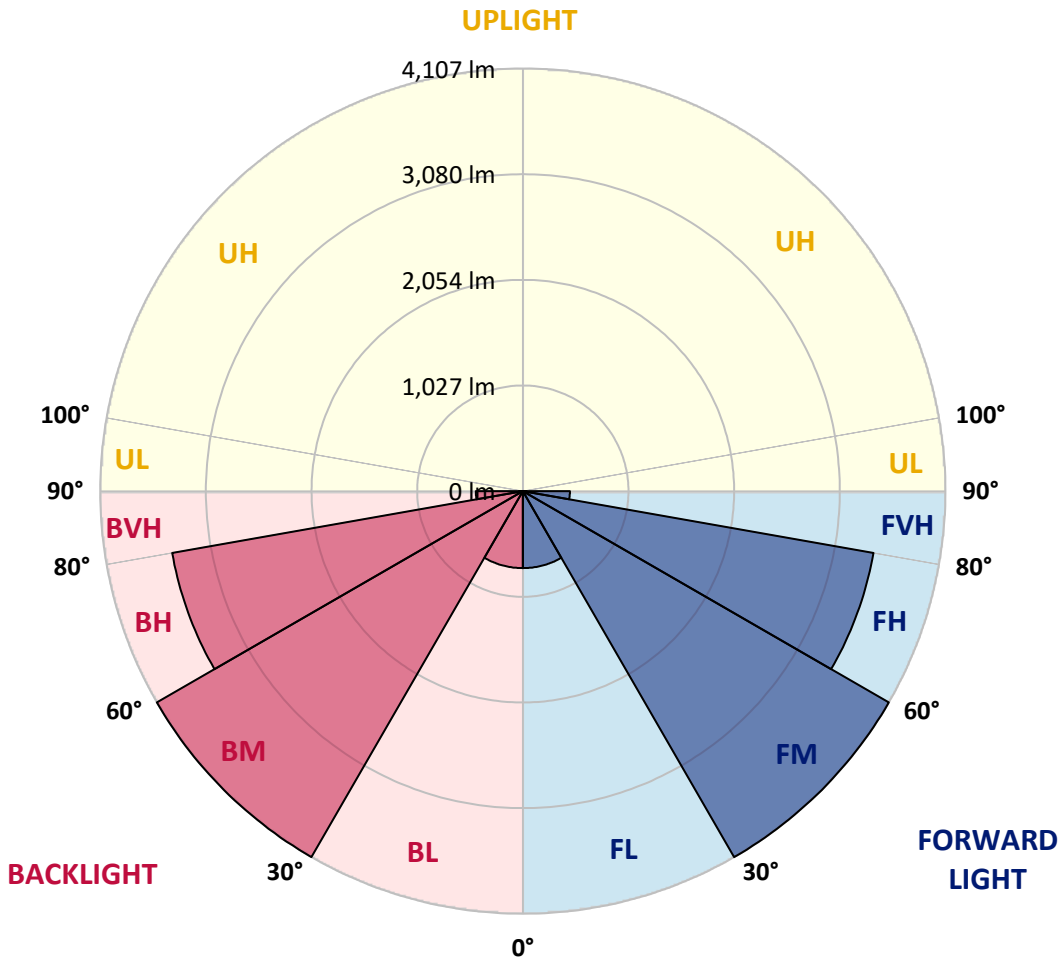
Scaled Data Report

REPORT NUMBER: P879543
CATALOG NUMBER: MEM2-HSN-VA-160-735-U-WQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	748.1	4.3			
FM	(30°-60°)	4107.0	23.4			
FH	(60°-80°)	3460.3	19.7			G2/5000
FVH	(80°-90°)	457.3	2.6			G3/500
BL	(0°-30°)	748.1	4.3	B2/1000		
BM	(30°-60°)	4107.0	23.4	B3/5000		
BH	(60°-80°)	3460.3	19.7	B4/5000		G2/5000
BVH	(80°-90°)	457.3	2.6			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G3
Type V Short



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REPORT NUMBER: P879543
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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1498.0	1498.0	1498.0	1498.0	1498.0	*1498.0*	1498.0	1498.0	1498.0	1498.0	1498.0
2.5°	1492.5	1494.7	1493.6	1493.6	1492.5	*1493.6*	1495.8	1496.9	1495.8	1496.9	1495.8
5°	1482.7	1482.7	1481.6	1480.5	1480.5	*1480.5*	1480.5	1480.5	1481.6	1481.6	1482.7
7.5°	1470.6	1470.6	1470.6	1472.8	1471.7	*1472.8*	1472.8	1471.7	1470.6	1470.6	1471.7
10°	1472.8	1471.7	1470.6	1472.8	1471.7	*1472.8*	1472.8	1470.6	1471.7	1472.8	1473.9
12.5°	1491.4	1489.2	1492.5	1495.8	1498.0	*1500.2*	1499.1	1498.0	1494.7	1491.4	1491.4
15°	1532.1	1529.9	1533.2	1537.6	1538.7	*1539.8*	1543.1	1538.7	1537.6	1532.1	1531.0
17.5°	1590.4	1589.3	1595.9	1604.6	1609.0	*1614.5*	1609.0	1604.6	1592.6	1590.4	1593.7
20°	1673.9	1670.6	1683.8	1698.1	1702.5	*1709.1*	1704.7	1695.9	1683.8	1670.6	1670.6
22.5°	1780.5	1788.2	1794.8	1805.8	1823.4	*1834.4*	1820.1	1804.7	1787.1	1779.4	1773.9
25°	1919.0	1917.9	1924.5	1946.5	1957.4	*1965.1*	1962.9	1942.1	1926.7	1915.7	1914.6
27.5°	2052.0	2065.2	2078.3	2092.6	2120.1	*2123.4*	2120.1	2094.8	2070.7	2061.9	2058.6
30°	2228.9	2226.7	2238.8	2272.9	2300.4	*2302.6*	2293.8	2263.0	2235.5	2219.0	2221.2
32.5°	2401.5	2383.9	2415.8	2438.8	2461.9	*2486.1*	2463.0	2438.8	2415.8	2380.6	2391.6
35°	2558.6	2572.9	2590.5	2637.8	2685.0	*2694.9*	2679.5	2630.1	2585.0	2568.5	2549.9
37.5°	2751.0	2751.0	2780.7	2849.9	2892.8	*2908.1*	2886.2	2836.7	2774.1	2749.9	2741.1
40°	2944.4	2944.4	2989.5	3047.7	3111.5	*3133.5*	3109.3	3044.4	2992.8	2930.1	2940.0
42.5°	3132.4	3147.7	3207.1	3278.5	3367.6	*3397.2*	3363.2	3276.3	3201.6	3142.3	3133.5
45°	3340.1	3364.3	3429.1	3546.7	3622.5	*3665.4*	3618.1	3543.4	3411.5	3354.4	3323.6
47.5°	3566.5	3583.0	3676.4	3788.5	3911.6	*3956.7*	3900.6	3778.6	3666.5	3565.4	3561.0
50°	3763.2	3759.9	3879.7	4034.7	4174.3	*4217.1*	4172.1	4040.2	3857.7	3745.6	3756.6
52.5°	3910.5	3929.2	4055.6	4246.8	4395.2	*4457.8*	4384.2	4225.9	4035.8	3919.3	3884.1
55°	4006.1	4036.9	4184.2	4390.8	4560.1	*4627.1*	4554.6	4372.1	4164.4	4013.8	3992.9
57.5°	*4041.3*	*4054.5*	*4214.9*	*4449.0*	*4621.6*	*4687.5*	*4612.8*	*4434.8*	*4189.7*	*4032.5*	*4019.3*
60°	3987.4	4000.6	4174.3	4413.9	4611.7	*4667.8*	4608.4	4399.6	4150.1	3989.6	3967.7
62.5°	3855.5	3891.8	4084.2	4321.6	4548.0	*4595.2*	4533.7	4305.1	4074.3	3880.8	3849.0
65°	3697.3	3735.8	3899.5	4164.4	4369.9	*4420.5*	4372.1	4152.3	3900.6	3714.9	3684.1
67.5°	3476.4	3483.0	3675.3	3943.5	4161.1	*4222.6*	4139.1	3939.1	3665.4	3489.6	3465.4
70°	3200.5	3204.9	3409.3	3657.7	3857.7	*3908.3*	3853.4	3640.1	3395.0	3203.8	3187.3
72.5°	2846.6	2887.3	3056.5	3302.7	3489.6	*3548.9*	3477.5	3296.1	3069.7	2880.7	2843.3
75°	2470.7	2496.0	2643.3	2881.8	3042.2	*3115.9*	3057.6	2881.8	2643.3	2487.2	2454.2
77.5°	2031.1	2065.2	2209.1	2410.3	2543.3	*2622.4*	2558.6	2402.6	2209.1	2066.3	2065.2
80°	1604.6	1595.9	1726.6	1900.3	2032.2	*2078.3*	2038.8	1887.1	1713.5	1602.4	1587.1
82.5°	1113.4	1111.2	1252.9	1369.4	1480.5	*1533.2*	1472.8	1374.9	1240.9	1141.9	1110.1
85°	633.1	647.4	740.8	813.3	907.8	*939.7*	918.8	826.5	706.7	619.9	614.4
87.5°	219.8	239.6	257.2	309.9	371.5	*399.0*	369.3	355.0	315.4	273.7	275.9
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: SP1-2407-176-8

Test Date: 09/25/2024

Luminaire Tested: MEM2-HTN-VA-130-735-U-RW

Data in this report applies to families of products including MEM2-HTN-VA-130-735-U-RW

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

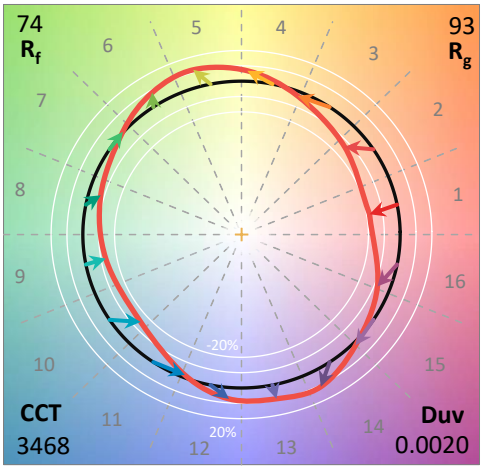
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2407-176-8
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-130-735-U-RW**
Description:	EPIC MODERN VISUAL COMFORT 130W WAVESTREAM RECTANGULAR WIDE

Spectral Parameters

CCT (K):	3468
CIE u':	0.2356
CIE v':	0.5145
Duv:	0.0020
CIE x:	0.4092
CIE y:	0.3972
CIE z:	0.1936
Peak Wavelength (nm):	590
Dominant Wavelength (nm):	580
Purity:	42.03411
Rf:	74.1
Rg:	93.4

CRI (Ra):	70.6
R1:	66.2
R2:	79.1
R3:	90.8
R4:	68.4
R5:	66.3
R6:	71.1
R7:	78.4
R8:	44.5
R9:	-41.3
R10:	52.2
R11:	63.6
R12:	47.5
R13:	68.3
R14:	94.8
R15:	57.6



Test Conditions

Stabilization Time:	46M
Operation Time:	1H 46M
Sphere Temperature (°C):	25.2

REPORT NUMBER: SP1-2407-176-8

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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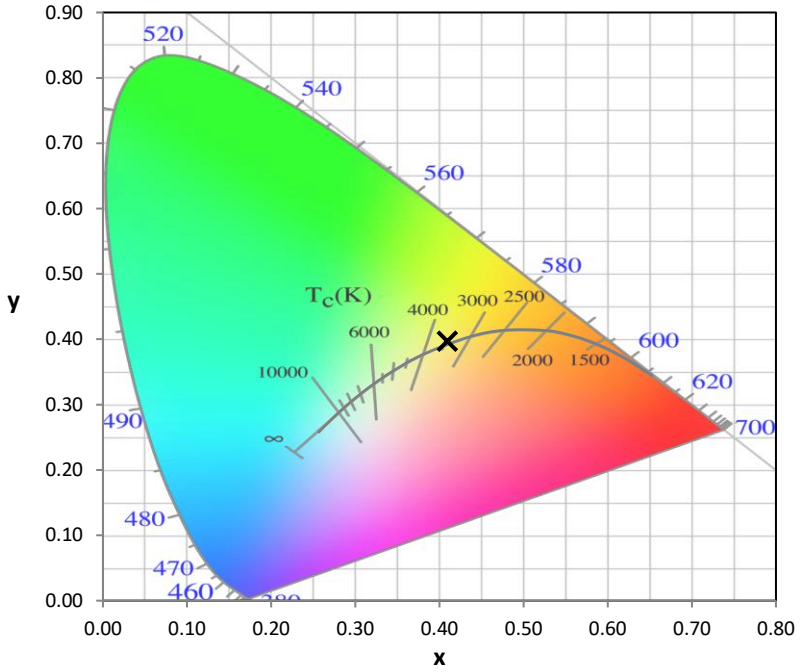
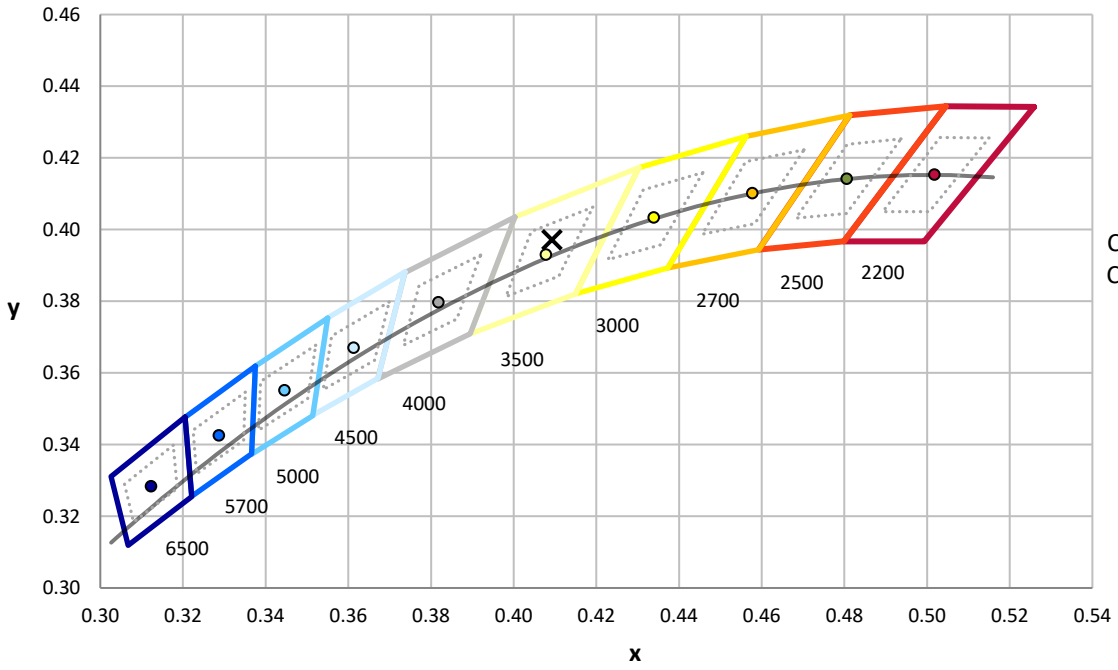
CIE 1931 Chromaticity Diagram



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

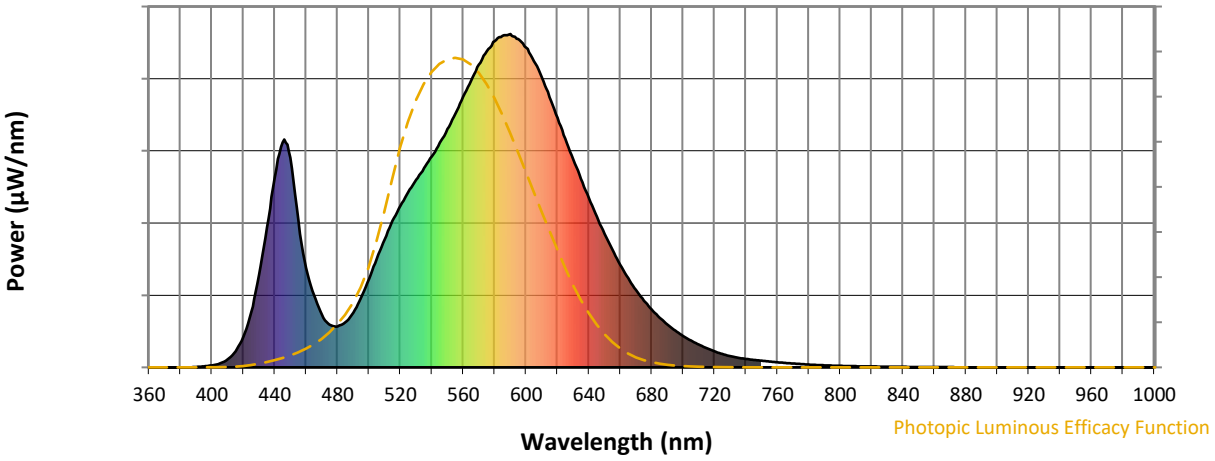


CCT = 3468K
CIE x = 0.4092
CIE y = 0.3972
Duv = 0.0020

Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2407-176-8

Photopic Flux vs. Wavelength

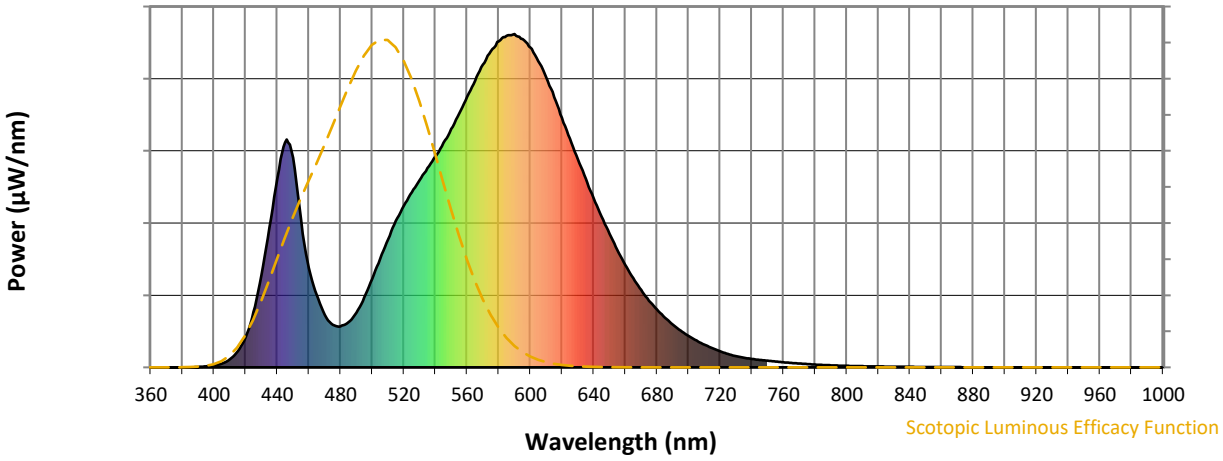


Photopic Lumens: NR

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	164	NR	620	749	NR	750	20	NR	880	0	NR
365	0	NR	495	209	NR	625	686	NR	755	17	NR	885	0	NR
370	0	NR	500	265	NR	630	624	NR	760	15	NR	890	0	NR
375	0	NR	505	325	NR	635	566	NR	765	13	NR	895	0	NR
380	0	NR	510	384	NR	640	508	NR	770	11	NR	900	0	NR
385	0	NR	515	439	NR	645	452	NR	775	10	NR	905	0	NR
390	1	NR	520	485	NR	650	401	NR	780	8	NR	910	0	NR
395	3	NR	525	526	NR	655	353	NR	785	7	NR	915	0	NR
400	6	NR	530	562	NR	660	308	NR	790	6	NR	920	0	NR
405	11	NR	535	598	NR	665	268	NR	795	5	NR	925	0	NR
410	24	NR	540	633	NR	670	232	NR	800	5	NR	930	0	NR
415	48	NR	545	674	NR	675	200	NR	805	4	NR	935	0	NR
420	91	NR	550	715	NR	680	174	NR	810	3	NR	940	0	NR
425	166	NR	555	761	NR	685	149	NR	815	3	NR	945	0	NR
430	276	NR	560	812	NR	690	129	NR	820	3	NR	950	0	NR
435	420	NR	565	860	NR	695	110	NR	825	2	NR	955	0	NR
440	568	NR	570	908	NR	700	94	NR	830	2	NR	960	0	NR
445	675	NR	575	948	NR	705	80	NR	835	2	NR	965	0	NR
450	629	NR	580	978	NR	710	68	NR	840	2	NR	970	0	NR
455	443	NR	585	994	NR	715	58	NR	845	1	NR	975	0	NR
460	299	NR	590	1000	NR	720	48	NR	850	1	NR	980	0	NR
465	217	NR	595	985	NR	725	40	NR	855	1	NR	985	0	NR
470	157	NR	600	959	NR	730	34	NR	860	1	NR	990	0	NR
475	127	NR	605	918	NR	735	29	NR	865	1	NR	995	0	NR
480	123	NR	610	869	NR	740	25	NR	870	1	NR	1000	0	NR
485	135	NR	615	810	NR	745	22	NR	875	0	NR			

REPORT NUMBER: SP1-2407-176-8

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR **S/P: 1.35**

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	164	NR	620	749	NR	750	20	NR	880	0	NR
365	0	NR	495	209	NR	625	686	NR	755	17	NR	885	0	NR
370	0	NR	500	265	NR	630	624	NR	760	15	NR	890	0	NR
375	0	NR	505	325	NR	635	566	NR	765	13	NR	895	0	NR
380	0	NR	510	384	NR	640	508	NR	770	11	NR	900	0	NR
385	0	NR	515	439	NR	645	452	NR	775	10	NR	905	0	NR
390	1	NR	520	485	NR	650	401	NR	780	8	NR	910	0	NR
395	3	NR	525	526	NR	655	353	NR	785	7	NR	915	0	NR
400	6	NR	530	562	NR	660	308	NR	790	6	NR	920	0	NR
405	11	NR	535	598	NR	665	268	NR	795	5	NR	925	0	NR
410	24	NR	540	633	NR	670	232	NR	800	5	NR	930	0	NR
415	48	NR	545	674	NR	675	200	NR	805	4	NR	935	0	NR
420	91	NR	550	715	NR	680	174	NR	810	3	NR	940	0	NR
425	166	NR	555	761	NR	685	149	NR	815	3	NR	945	0	NR
430	276	NR	560	812	NR	690	129	NR	820	3	NR	950	0	NR
435	420	NR	565	860	NR	695	110	NR	825	2	NR	955	0	NR
440	568	NR	570	908	NR	700	94	NR	830	2	NR	960	0	NR
445	675	NR	575	948	NR	705	80	NR	835	2	NR	965	0	NR
450	629	NR	580	978	NR	710	68	NR	840	2	NR	970	0	NR
455	443	NR	585	994	NR	715	58	NR	845	1	NR	975	0	NR
460	299	NR	590	1000	NR	720	48	NR	850	1	NR	980	0	NR
465	217	NR	595	985	NR	725	40	NR	855	1	NR	985	0	NR
470	157	NR	600	959	NR	730	34	NR	860	1	NR	990	0	NR
475	127	NR	605	918	NR	735	29	NR	865	1	NR	995	0	NR
480	123	NR	610	869	NR	740	25	NR	870	1	NR	1000	0	NR
485	135	NR	615	810	NR	745	22	NR	875	0	NR			

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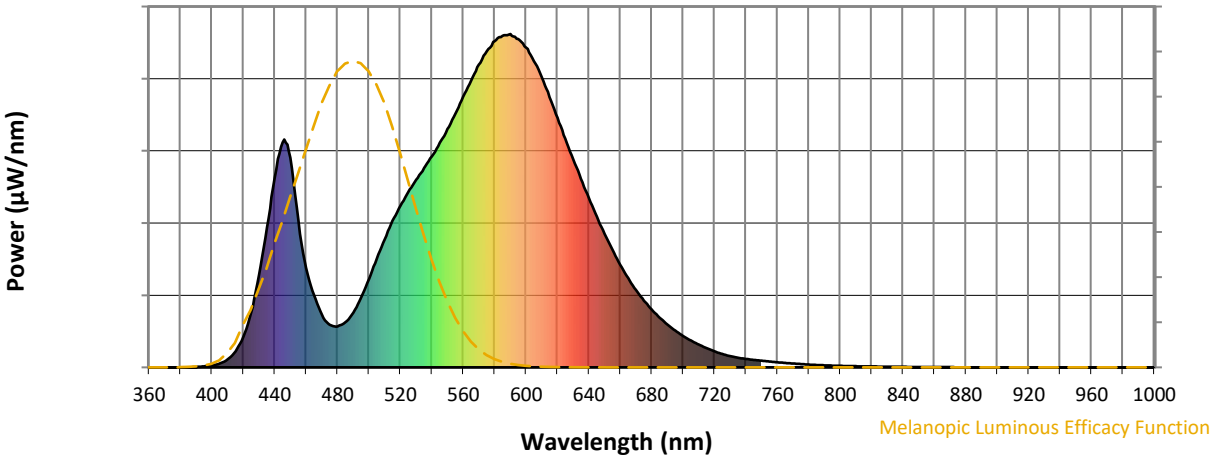
Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.54**

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	164	NR	620	749	NR	750	20	NR	880	0	NR
365	0	NR	495	209	NR	625	686	NR	755	17	NR	885	0	NR
370	0	NR	500	265	NR	630	624	NR	760	15	NR	890	0	NR
375	0	NR	505	325	NR	635	566	NR	765	13	NR	895	0	NR
380	0	NR	510	384	NR	640	508	NR	770	11	NR	900	0	NR
385	0	NR	515	439	NR	645	452	NR	775	10	NR	905	0	NR
390	1	NR	520	485	NR	650	401	NR	780	8	NR	910	0	NR
395	3	NR	525	526	NR	655	353	NR	785	7	NR	915	0	NR
400	6	NR	530	562	NR	660	308	NR	790	6	NR	920	0	NR
405	11	NR	535	598	NR	665	268	NR	795	5	NR	925	0	NR
410	24	NR	540	633	NR	670	232	NR	800	5	NR	930	0	NR
415	48	NR	545	674	NR	675	200	NR	805	4	NR	935	0	NR
420	91	NR	550	715	NR	680	174	NR	810	3	NR	940	0	NR
425	166	NR	555	761	NR	685	149	NR	815	3	NR	945	0	NR
430	276	NR	560	812	NR	690	129	NR	820	3	NR	950	0	NR
435	420	NR	565	860	NR	695	110	NR	825	2	NR	955	0	NR
440	568	NR	570	908	NR	700	94	NR	830	2	NR	960	0	NR
445	675	NR	575	948	NR	705	80	NR	835	2	NR	965	0	NR
450	629	NR	580	978	NR	710	68	NR	840	2	NR	970	0	NR
455	443	NR	585	994	NR	715	58	NR	845	1	NR	975	0	NR
460	299	NR	590	1000	NR	720	48	NR	850	1	NR	980	0	NR
465	217	NR	595	985	NR	725	40	NR	855	1	NR	985	0	NR
470	157	NR	600	959	NR	730	34	NR	860	1	NR	990	0	NR
475	127	NR	605	918	NR	735	29	NR	865	1	NR	995	0	NR
480	123	NR	610	869	NR	740	25	NR	870	1	NR	1000	0	NR
485	135	NR	615	810	NR	745	22	NR	875	0	NR			

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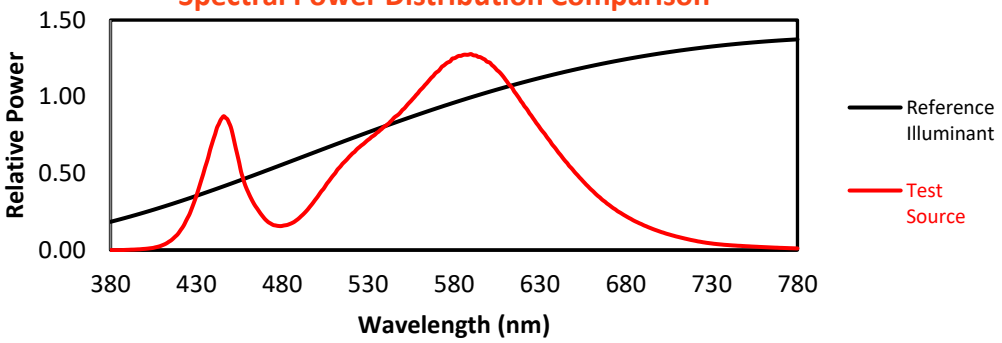
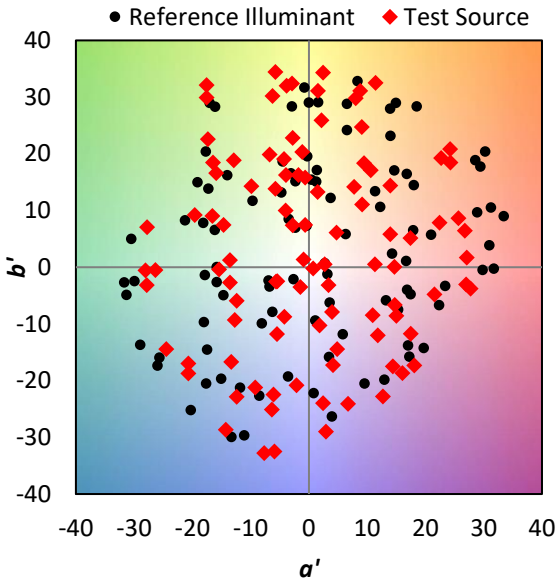
Summary

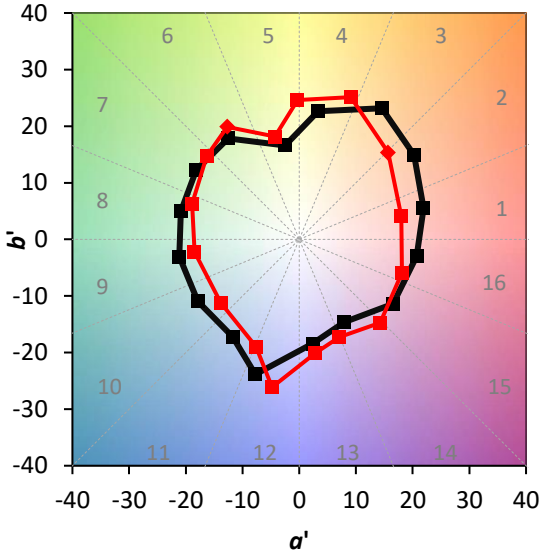
R_f = 74.1
R_g = 93.4
CIE R_a = 70.6
R_9 = -41.3

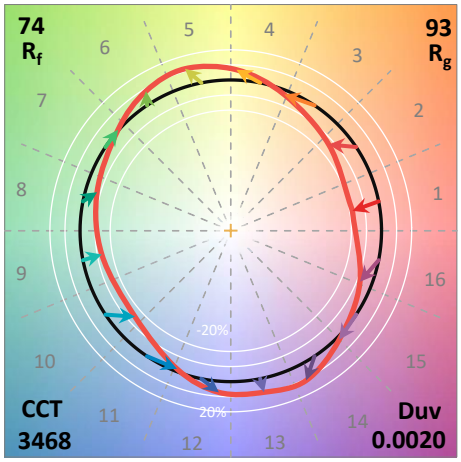
Spectral Power Distribution Comparison

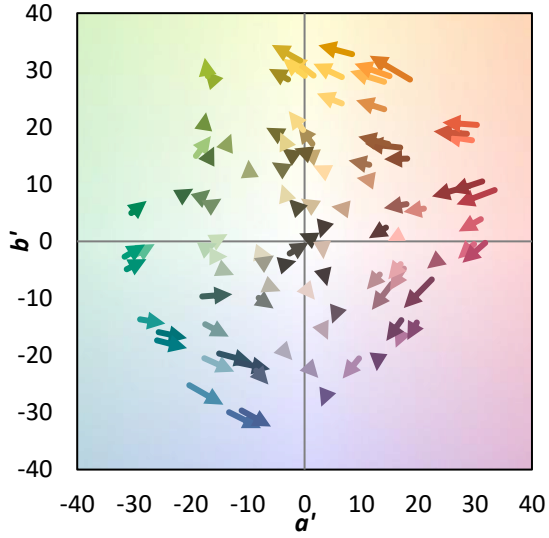


Color Vector Graphics









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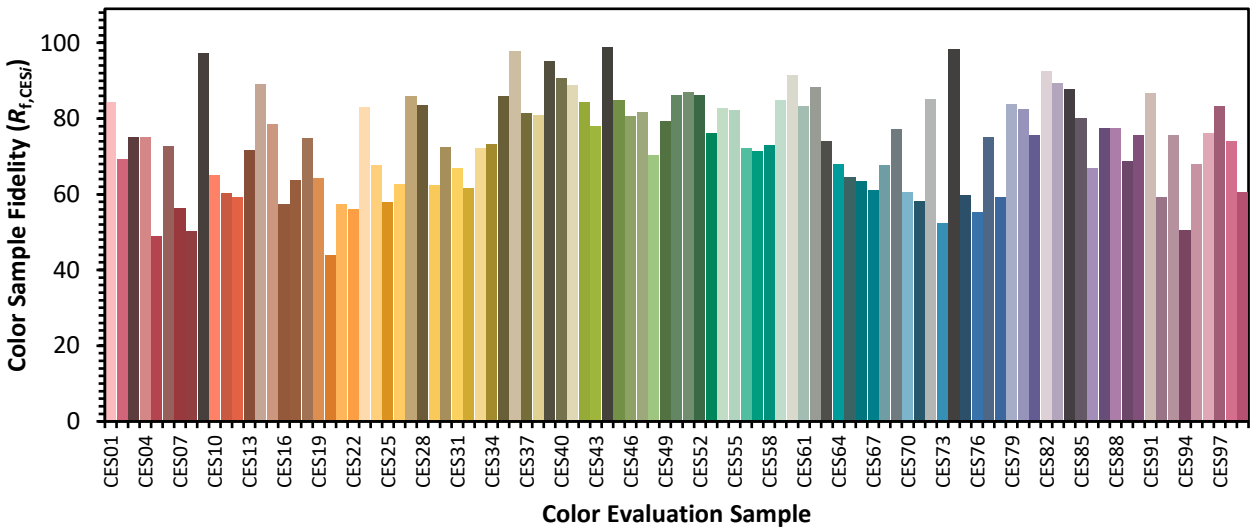
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 63	CES51 = 87	CES76 = 55
CES02 = 61	CES27 = 86	CES52 = 86	CES77 = 75
CES03 = 31	CES28 = 84	CES53 = 76	CES78 = 59
CES04 = 70	CES29 = 62	CES54 = 83	CES79 = 84
CES05 = 48	CES30 = 72	CES55 = 82	CES80 = 82
CES06 = 51	CES31 = 67	CES56 = 72	CES81 = 76
CES07 = 40	CES32 = 62	CES57 = 71	CES82 = 93
CES08 = 39	CES33 = 72	CES58 = 73	CES83 = 89
CES09 = 29	CES34 = 73	CES59 = 85	CES84 = 88
CES10 = 75	CES35 = 86	CES60 = 92	CES85 = 80
CES11 = 58	CES36 = 98	CES61 = 83	CES86 = 67
CES12 = 64	CES37 = 82	CES62 = 88	CES87 = 78
CES13 = 42	CES38 = 81	CES63 = 74	CES88 = 77
CES14 = 74	CES39 = 95	CES64 = 68	CES89 = 69
CES15 = 71	CES40 = 91	CES65 = 64	CES90 = 76
CES16 = 47	CES41 = 89	CES66 = 63	CES91 = 87
CES17 = 50	CES42 = 84	CES67 = 61	CES92 = 59
CES18 = 56	CES43 = 78	CES68 = 68	CES93 = 76
CES19 = 72	CES44 = 99	CES69 = 77	CES94 = 50
CES20 = 65	CES45 = 85	CES70 = 61	CES95 = 68
CES21 = 87	CES46 = 81	CES71 = 58	CES96 = 76
CES22 = 79	CES47 = 82	CES72 = 85	CES97 = 83
CES23 = 92	CES48 = 70	CES73 = 52	CES98 = 74
CES24 = 91	CES49 = 79	CES74 = 98	CES99 = 61
CES25 = 72	CES50 = 86	CES75 = 60	



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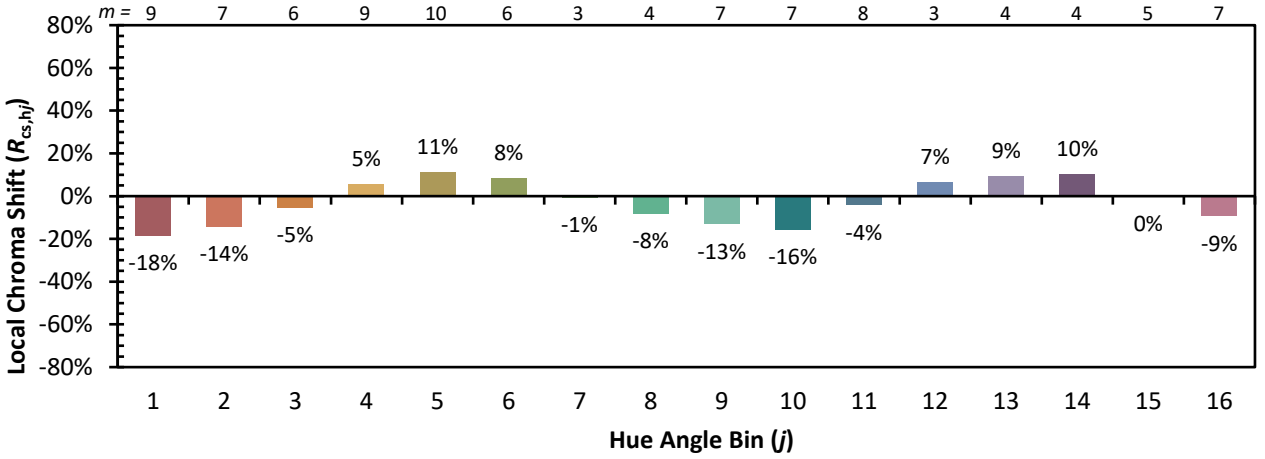
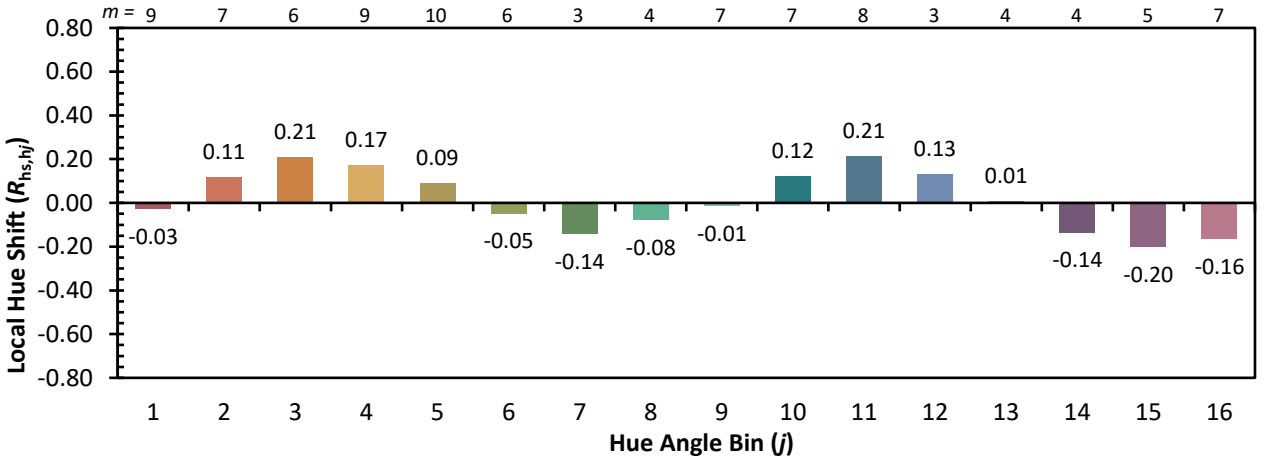
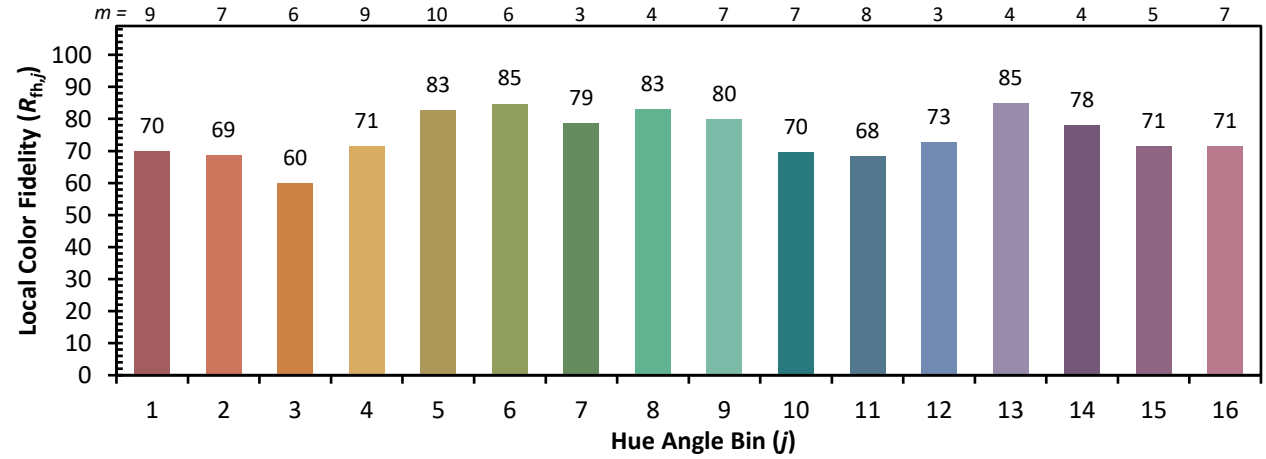
Color Rendition by Hue-Angle Bin







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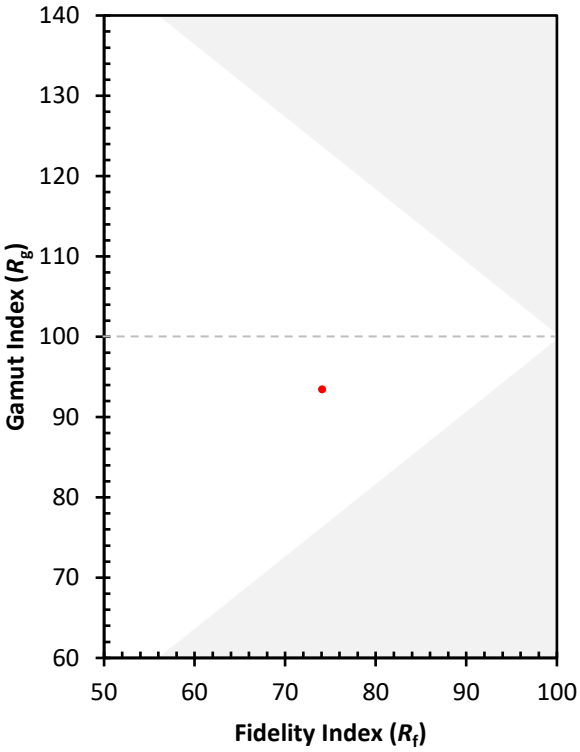
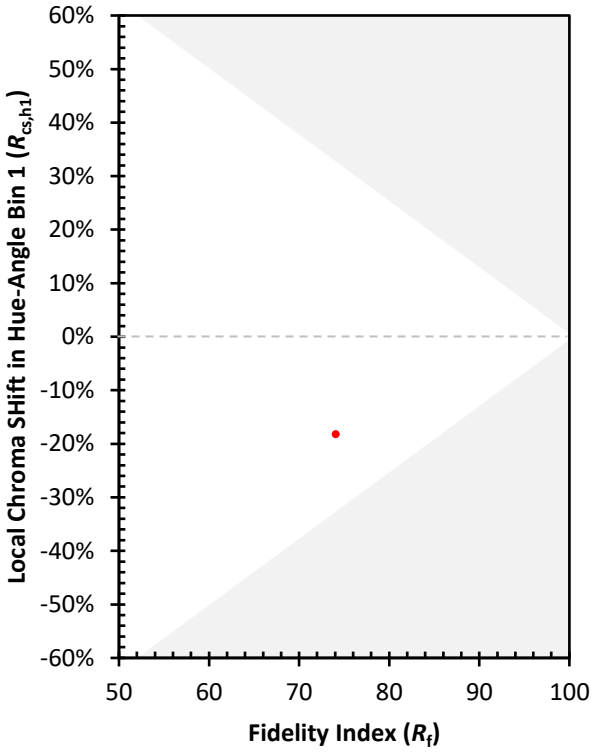
Measure Comparisons





(END OF REPORT)