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: P879531

Luminaire Tested: **MEM2-HTN-VA-160-750-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:	P879531
Test Lab:	INNOVATION CENTER(G3)
Issue Date:	10/01/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	STREETWORKS
Catalog Number:	MEM2-HTN-VA-160-750-U-WQ
Description:	EPIC MODERN TALL HOUSING 160W 70CRI 5000K VISUAL COMFORT FIXTURE w/ TYPE V WIDE DISTRIBUTION OPTIC
Light Source:	(1) 5000K CCT, 70 CRI LEDS
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	19130.1 lumens
Efficiency:	N/A
Efficacy:	122.6 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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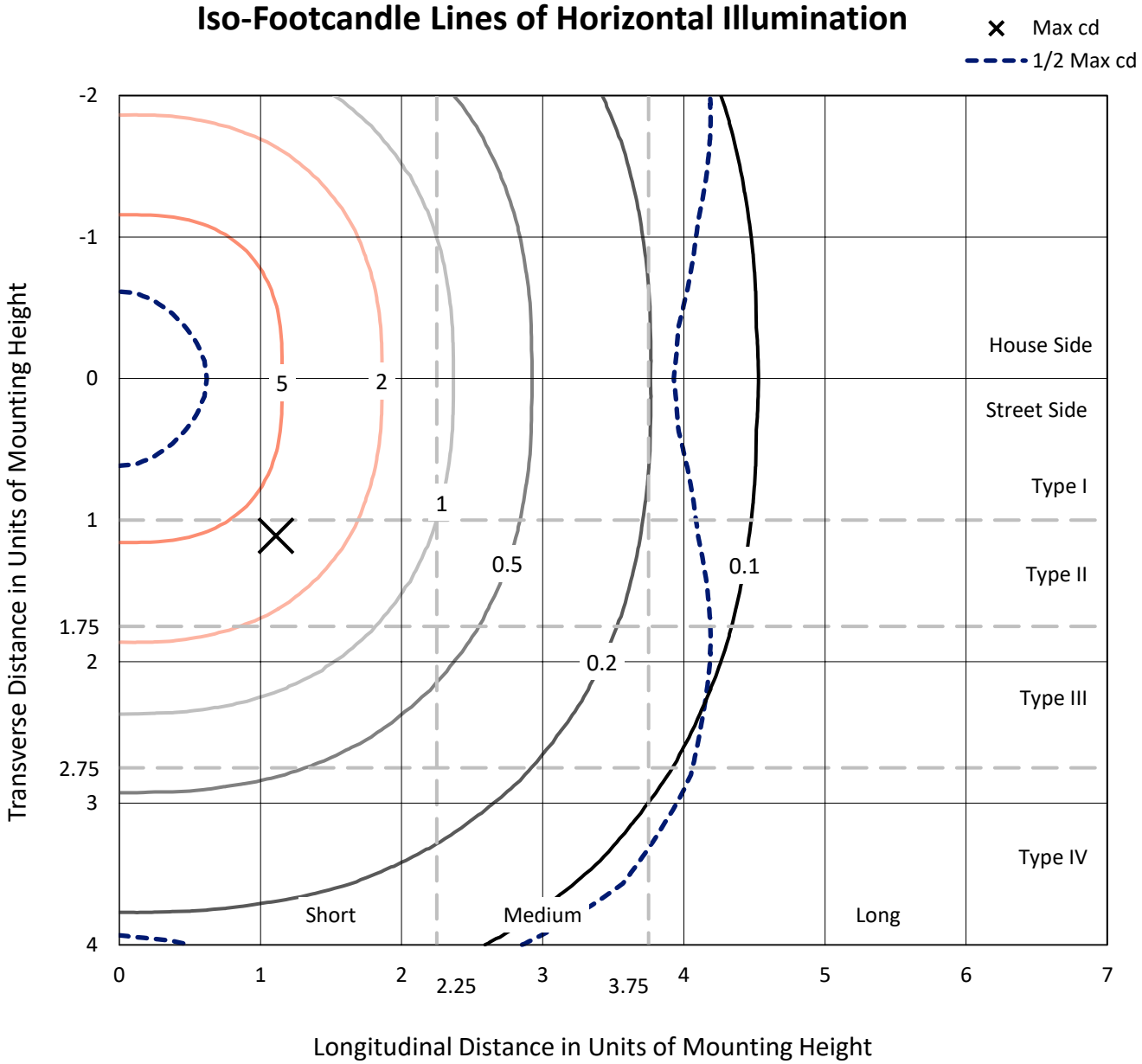
Scaled Data Report

REPORT NUMBER: P879531
CATALOG NUMBER: MEM2-HTN-VA-160-750-U-WQ

Iso-Footcandle Lines of Horizontal Illumination



Based on 15 foot mounting height. Maximum calculated value = 7.3 fc
Type V - Short - N/A

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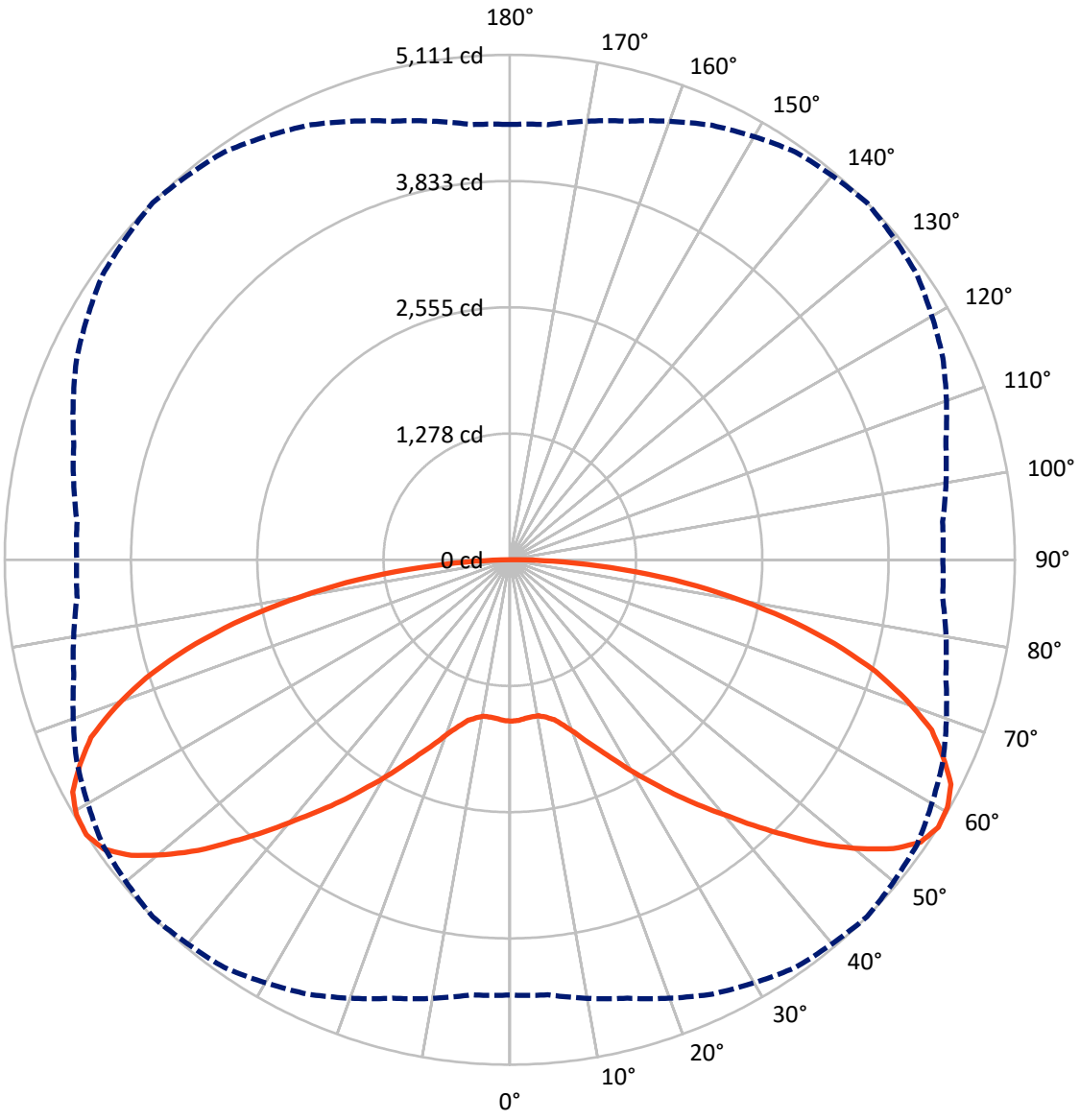
Luminous Intensity Polar Plot



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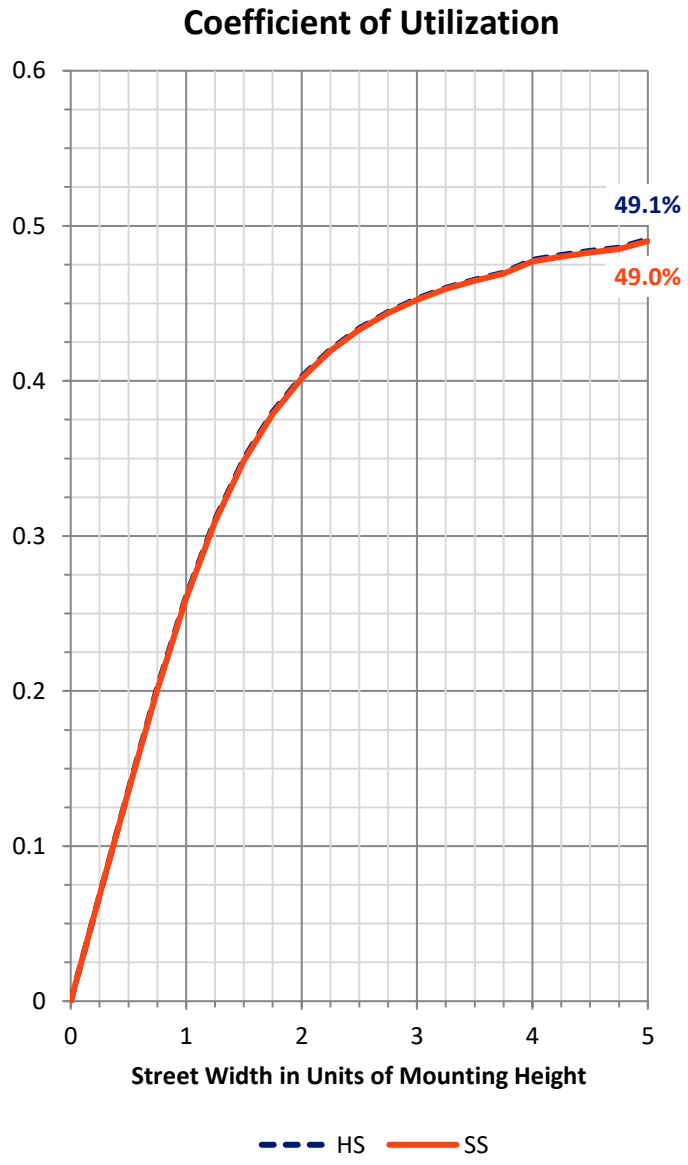
REPORT NUMBER: P879531
CATALOG NUMBER: MEM2-HTN-VA-160-750-U-WQ

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9565.0	0.0	9565.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	9565.0	0.0	9565.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	19130.1	0.0	19130.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.8	0.8
10°-20°	483.6	2.5
20°-30°	994.0	5.2
30°-40°	1813.7	9.5
40°-50°	2974.3	15.5
50°-60°	4167.8	21.8
60°-70°	4360.1	22.8
70°-80°	3185.6	16.7
80°-90°	997.1	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°	19130.1	100.0
0°-180°	19130.1	100.0



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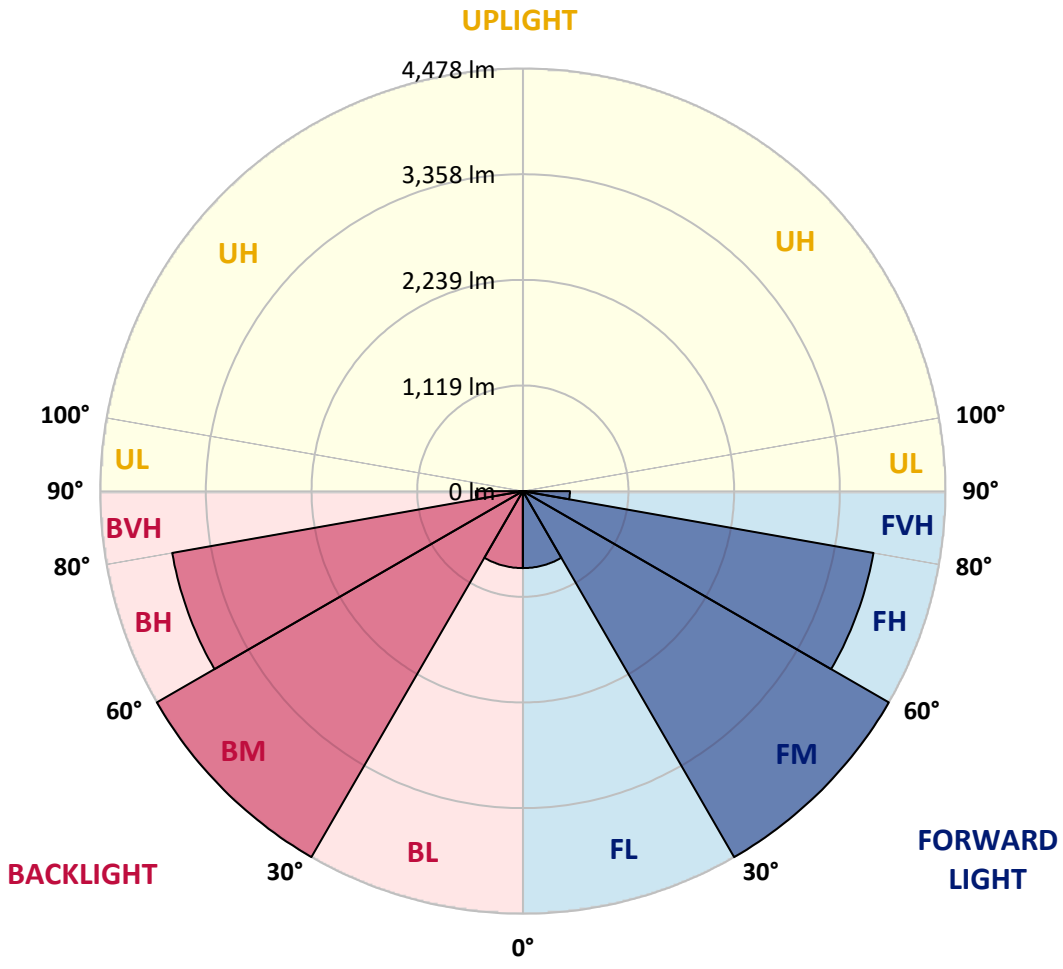
Scaled Data Report

REPORT NUMBER: P879531
CATALOG NUMBER: MEM2-HTN-VA-160-750-U-WQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	815.7	4.3			
FM	(30°-60°)	4478.0	23.4			
FH	(60°-80°)	3772.8	19.7			G2/5000
FVH	(80°-90°)	498.6	2.6			G3/500
BL	(0°-30°)	815.7	4.3	B2/1000		
BM	(30°-60°)	4478.0	23.4	B3/5000		
BH	(60°-80°)	3772.8	19.7	B4/5000		G2/5000
BVH	(80°-90°)	498.6	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: P879531
CATALOG NUMBER: MEM2-HTN-VA-160-750-U-WQ

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1633.3	1633.3	1633.3	1633.3	1633.3	1633.3	1633.3	1633.3	1633.3	1633.3	1633.3
2.5°	1627.3	1629.7	1628.5	1628.5	1627.3	1628.5	1630.9	1632.1	1630.9	1632.1	1630.9
5°	1616.6	1616.6	1615.4	1614.2	1614.2	1614.2	1614.2	1614.2	1615.4	1615.4	1616.6
7.5°	1603.4	1603.4	1603.4	1605.8	1604.6	1605.8	1605.8	1604.6	1603.4	1603.4	1604.6
10°	1605.8	1604.6	1603.4	1605.8	1604.6	1605.8	1605.8	1603.4	1604.6	1605.8	1607.0
12.5°	1626.1	1623.7	1627.3	1630.9	1633.3	1635.7	1634.5	1633.3	1629.7	1626.1	1626.1
15°	1670.5	1668.1	1671.7	1676.5	1677.7	1678.9	1682.5	1677.7	1676.5	1670.5	1669.3
17.5°	1734.0	1732.8	1740.0	1749.6	1754.4	1760.4	1754.4	1749.6	1736.4	1734.0	1737.6
20°	1825.1	1821.5	1835.8	1851.4	1856.2	1863.4	1858.6	1849.0	1835.8	1821.5	1821.5
22.5°	1941.3	1949.7	1956.9	1968.9	1988.0	2000.0	1984.4	1967.7	1948.5	1940.1	1934.1
25°	2092.3	2091.1	2098.3	2122.2	2134.2	2142.6	2140.2	2117.5	2100.7	2088.7	2087.5
27.5°	2237.3	2251.7	2266.0	2281.6	2311.6	2315.2	2311.6	2284.0	2257.7	2248.1	2244.5
30°	2430.2	2427.8	2441.0	2478.2	2508.1	2510.5	2500.9	2467.4	2437.4	2419.4	2421.8
32.5°	2618.4	2599.2	2633.9	2659.1	2684.3	2710.6	2685.5	2659.1	2633.9	2595.6	2607.6
35°	2789.7	2805.3	2824.5	2876.0	2927.5	2938.3	2921.5	2867.6	2818.5	2800.5	2780.1
37.5°	2999.4	2999.4	3031.8	3107.3	3154.0	3170.8	3146.8	3092.9	3024.6	2998.2	2988.6
40°	3210.3	3210.3	3259.5	3323.0	3392.5	3416.5	3390.1	3319.4	3263.1	3194.8	3205.5
42.5°	3415.3	3432.0	3496.7	3574.6	3671.7	3704.1	3666.9	3572.2	3490.7	3426.0	3416.5
45°	3641.7	3668.1	3738.8	3867.0	3949.7	3996.4	3944.9	3863.4	3719.6	3657.3	3623.8
47.5°	3888.6	3906.6	4008.4	4130.7	4264.9	4314.0	4252.9	4119.9	3997.6	3887.4	3882.6
50°	4103.1	4099.5	4230.1	4399.1	4551.3	4598.0	4548.9	4405.1	4206.2	4083.9	4095.9
52.5°	4263.7	4284.0	4421.9	4630.4	4792.1	4860.4	4780.2	4607.6	4400.3	4273.3	4234.9
55°	4367.9	4401.5	4562.1	4787.3	4971.9	5045.0	4965.9	4767.0	4540.5	4376.3	4353.5
57.5°	4406.3	4420.7	4595.6	4850.9	5039.0	5110.9	5029.4	4835.3	4568.0	4396.7	4382.3
60°	4347.6	4361.9	4551.3	4812.5	5028.2	5089.3	5024.6	4796.9	4524.9	4350.0	4326.0
62.5°	4203.8	4243.3	4453.0	4711.8	4958.7	5010.2	4943.1	4693.9	4442.2	4231.3	4196.6
65°	4031.2	4073.1	4251.7	4540.5	4764.6	4819.7	4767.0	4527.3	4252.9	4050.4	4016.8
67.5°	3790.3	3797.5	4007.2	4299.6	4536.9	4604.0	4512.9	4294.8	3996.4	3804.7	3778.3
70°	3489.5	3494.3	3717.2	3988.1	4206.2	4261.3	4201.4	3968.9	3701.7	3493.1	3475.2
72.5°	3103.7	3148.0	3332.6	3601.0	3804.7	3869.4	3791.5	3593.8	3346.9	3140.8	3100.1
75°	2693.9	2721.4	2882.0	3142.0	3317.0	3397.3	3333.8	3142.0	2882.0	2711.8	2675.9
77.5°	2214.5	2251.7	2408.7	2627.9	2772.9	2859.2	2789.7	2619.6	2408.7	2252.9	2251.7
80°	1749.6	1740.0	1882.6	2071.9	2215.7	2266.0	2222.9	2057.5	1868.2	1747.2	1730.4
82.5°	1213.9	1211.5	1366.1	1493.1	1614.2	1671.7	1605.8	1499.1	1352.9	1245.1	1210.3
85°	690.2	705.8	807.7	886.8	989.8	1024.6	1001.8	901.1	770.5	675.9	669.9
87.5°	239.7	261.2	280.4	337.9	405.0	435.0	402.6	387.1	343.9	298.4	300.8
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: SP1-2407-176-10

Test Date: 09/25/2024

Luminaire Tested: MEM2-HTN-VA-130-750-U-RW

Data in this report applies to families of products including MEM2-HTN-VA-130-750-U-RW

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

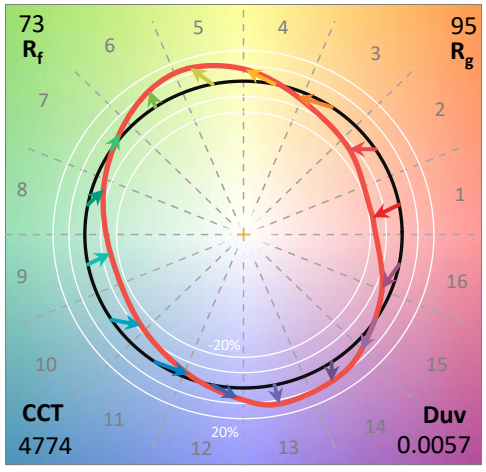
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2407-176-10
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-130-750-U-RW**
Description:	EPIC MODERN VISUAL COMFORT 130W WAVESTREAM RECTANGULAR WIDE

Spectral Parameters

CCT (K):	4774
CIE u':	0.2100
CIE v':	0.4945
Duv:	0.0057
CIE x:	0.3535
CIE y:	0.3699
CIE z:	0.2766
Peak Wavelength (nm):	444
Dominant Wavelength (nm):	571
Purity:	17.0787
Rf:	73.1
Rg:	94.9

CRI (Ra):	70.8		
R1:	67.0	R9:	-40.0
R2:	75.4	R10:	43.4
R3:	83.5	R11:	69.3
R4:	71.8	R12:	45.5
R5:	68.4	R13:	67.9
R6:	67.5	R14:	90.8
R7:	80.0	R15:	58.2
R8:	53.1		



Test Conditions

Stabilization Time:	37M
Operation Time:	1H 37M
Sphere Temperature (°C):	25.2

REPORT NUMBER: SP1-2407-176-10

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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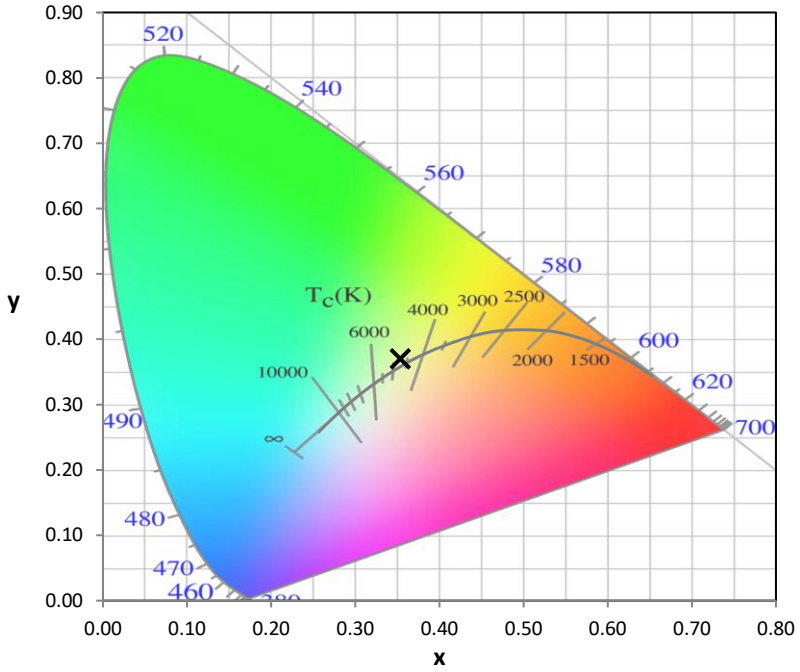
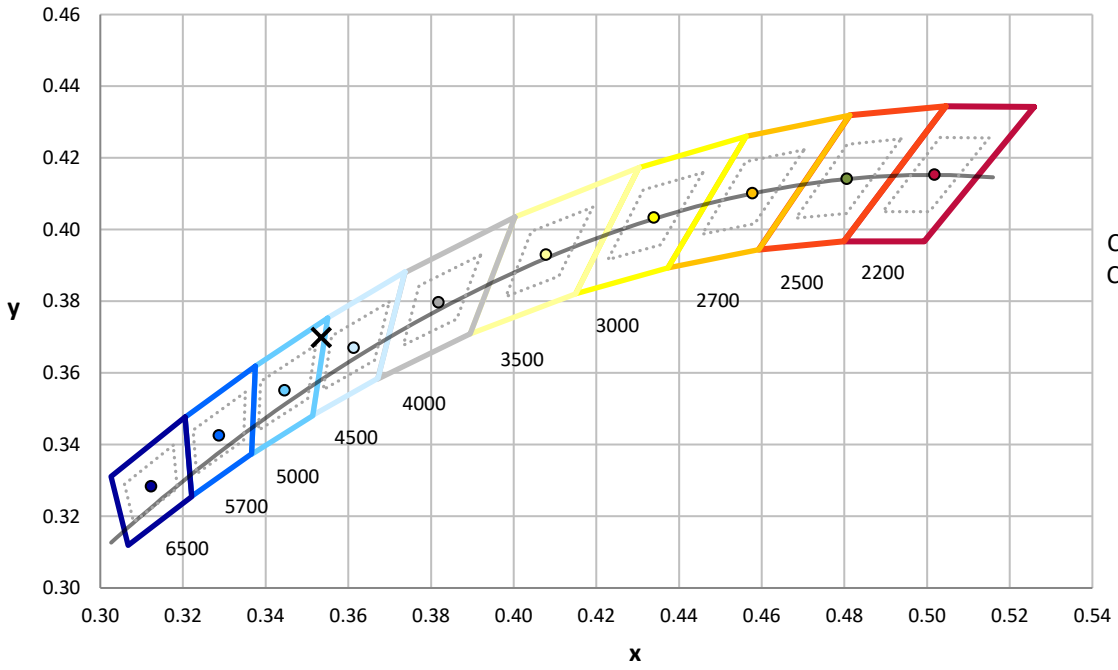
CIE 1931 Chromaticity Diagram



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



CCT = 4774K
CIE x = 0.3535
CIE y = 0.3699
Duv = 0.0057

Point lies inside the ANSI 5000K 7-step quadrangle

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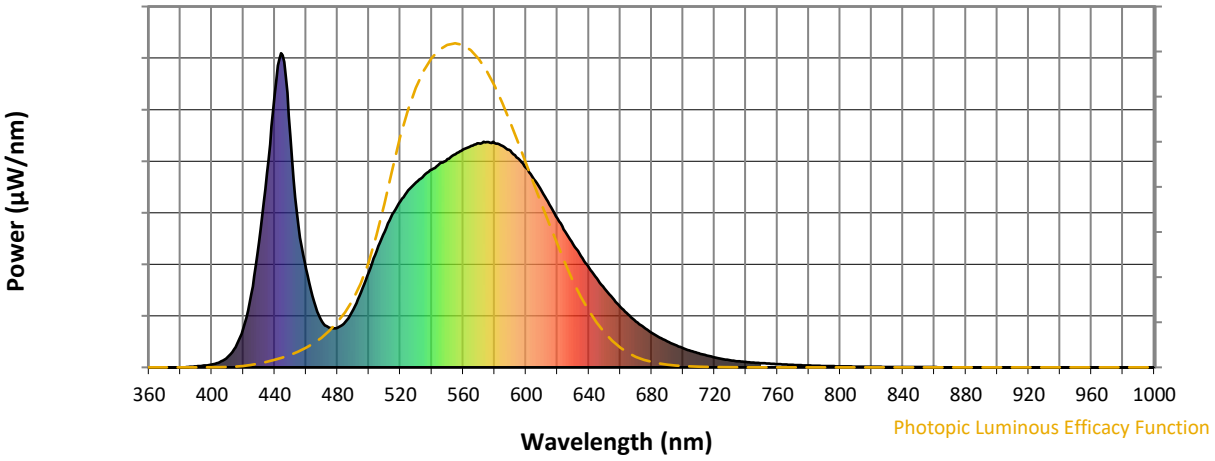
Photopic Flux vs. Wavelength

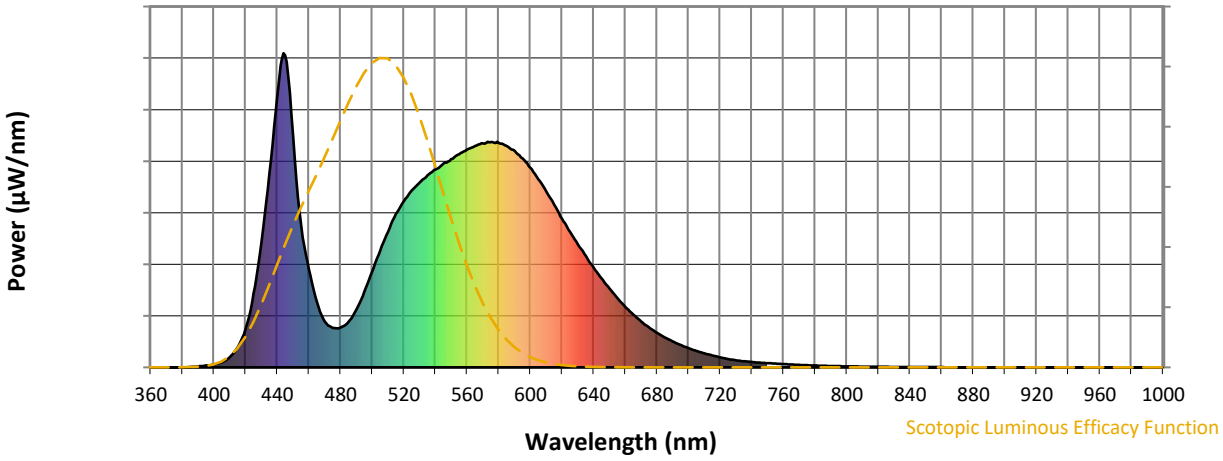


Photopic Lumens: NR

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	184	NR	620	474	NR	750	13	NR	880	0	NR
365	0	NR	495	239	NR	625	432	NR	755	12	NR	885	0	NR
370	0	NR	500	305	NR	630	392	NR	760	10	NR	890	0	NR
375	0	NR	505	371	NR	635	354	NR	765	9	NR	895	0	NR
380	0	NR	510	432	NR	640	318	NR	770	8	NR	900	0	NR
385	1	NR	515	488	NR	645	283	NR	775	7	NR	905	0	NR
390	3	NR	520	529	NR	650	251	NR	780	6	NR	910	0	NR
395	6	NR	525	563	NR	655	221	NR	785	5	NR	915	0	NR
400	9	NR	530	589	NR	660	193	NR	790	4	NR	920	0	NR
405	16	NR	535	611	NR	665	169	NR	795	4	NR	925	0	NR
410	33	NR	540	629	NR	670	146	NR	800	3	NR	930	0	NR
415	64	NR	545	649	NR	675	127	NR	805	3	NR	935	0	NR
420	124	NR	550	663	NR	680	110	NR	810	2	NR	940	0	NR
425	233	NR	555	678	NR	685	95	NR	815	2	NR	945	0	NR
430	397	NR	560	693	NR	690	83	NR	820	2	NR	950	0	NR
435	617	NR	565	705	NR	695	71	NR	825	2	NR	955	0	NR
440	868	NR	570	713	NR	700	61	NR	830	1	NR	960	0	NR
445	994	NR	575	717	NR	705	52	NR	835	1	NR	965	0	NR
450	736	NR	580	715	NR	710	45	NR	840	1	NR	970	0	NR
455	454	NR	585	705	NR	715	38	NR	845	1	NR	975	0	NR
460	314	NR	590	689	NR	720	32	NR	850	1	NR	980	0	NR
465	210	NR	595	665	NR	725	27	NR	855	1	NR	985	0	NR
470	146	NR	600	635	NR	730	23	NR	860	1	NR	990	0	NR
475	126	NR	605	599	NR	735	19	NR	865	0	NR	995	0	NR
480	126	NR	610	561	NR	740	17	NR	870	0	NR	1000	0	NR
485	144	NR	615	517	NR	745	15	NR	875	0	NR			

REPORT NUMBER: SP1-2407-176-10

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR **S/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	184	NR	620	474	NR	750	13	NR	880	0	NR
365	0	NR	495	239	NR	625	432	NR	755	12	NR	885	0	NR
370	0	NR	500	305	NR	630	392	NR	760	10	NR	890	0	NR
375	0	NR	505	371	NR	635	354	NR	765	9	NR	895	0	NR
380	0	NR	510	432	NR	640	318	NR	770	8	NR	900	0	NR
385	1	NR	515	488	NR	645	283	NR	775	7	NR	905	0	NR
390	3	NR	520	529	NR	650	251	NR	780	6	NR	910	0	NR
395	6	NR	525	563	NR	655	221	NR	785	5	NR	915	0	NR
400	9	NR	530	589	NR	660	193	NR	790	4	NR	920	0	NR
405	16	NR	535	611	NR	665	169	NR	795	4	NR	925	0	NR
410	33	NR	540	629	NR	670	146	NR	800	3	NR	930	0	NR
415	64	NR	545	649	NR	675	127	NR	805	3	NR	935	0	NR
420	124	NR	550	663	NR	680	110	NR	810	2	NR	940	0	NR
425	233	NR	555	678	NR	685	95	NR	815	2	NR	945	0	NR
430	397	NR	560	693	NR	690	83	NR	820	2	NR	950	0	NR
435	617	NR	565	705	NR	695	71	NR	825	2	NR	955	0	NR
440	868	NR	570	713	NR	700	61	NR	830	1	NR	960	0	NR
445	994	NR	575	717	NR	705	52	NR	835	1	NR	965	0	NR
450	736	NR	580	715	NR	710	45	NR	840	1	NR	970	0	NR
455	454	NR	585	705	NR	715	38	NR	845	1	NR	975	0	NR
460	314	NR	590	689	NR	720	32	NR	850	1	NR	980	0	NR
465	210	NR	595	665	NR	725	27	NR	855	1	NR	985	0	NR
470	146	NR	600	635	NR	730	23	NR	860	1	NR	990	0	NR
475	126	NR	605	599	NR	735	19	NR	865	0	NR	995	0	NR
480	126	NR	610	561	NR	740	17	NR	870	0	NR	1000	0	NR
485	144	NR	615	517	NR	745	15	NR	875	0	NR			

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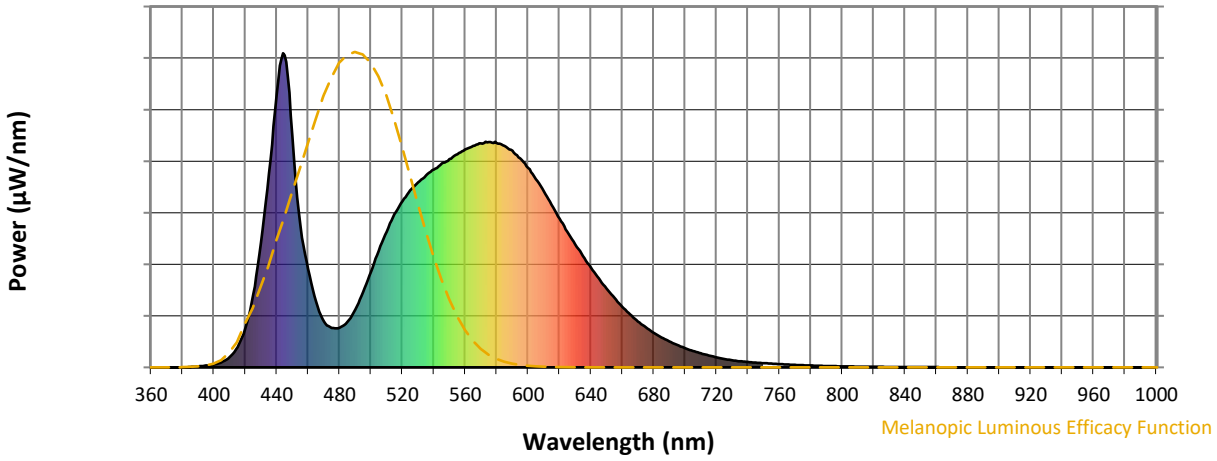
Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 3.39**

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	184	NR	620	474	NR	750	13	NR	880	0	NR
365	0	NR	495	239	NR	625	432	NR	755	12	NR	885	0	NR
370	0	NR	500	305	NR	630	392	NR	760	10	NR	890	0	NR
375	0	NR	505	371	NR	635	354	NR	765	9	NR	895	0	NR
380	0	NR	510	432	NR	640	318	NR	770	8	NR	900	0	NR
385	1	NR	515	488	NR	645	283	NR	775	7	NR	905	0	NR
390	3	NR	520	529	NR	650	251	NR	780	6	NR	910	0	NR
395	6	NR	525	563	NR	655	221	NR	785	5	NR	915	0	NR
400	9	NR	530	589	NR	660	193	NR	790	4	NR	920	0	NR
405	16	NR	535	611	NR	665	169	NR	795	4	NR	925	0	NR
410	33	NR	540	629	NR	670	146	NR	800	3	NR	930	0	NR
415	64	NR	545	649	NR	675	127	NR	805	3	NR	935	0	NR
420	124	NR	550	663	NR	680	110	NR	810	2	NR	940	0	NR
425	233	NR	555	678	NR	685	95	NR	815	2	NR	945	0	NR
430	397	NR	560	693	NR	690	83	NR	820	2	NR	950	0	NR
435	617	NR	565	705	NR	695	71	NR	825	2	NR	955	0	NR
440	868	NR	570	713	NR	700	61	NR	830	1	NR	960	0	NR
445	994	NR	575	717	NR	705	52	NR	835	1	NR	965	0	NR
450	736	NR	580	715	NR	710	45	NR	840	1	NR	970	0	NR
455	454	NR	585	705	NR	715	38	NR	845	1	NR	975	0	NR
460	314	NR	590	689	NR	720	32	NR	850	1	NR	980	0	NR
465	210	NR	595	665	NR	725	27	NR	855	1	NR	985	0	NR
470	146	NR	600	635	NR	730	23	NR	860	1	NR	990	0	NR
475	126	NR	605	599	NR	735	19	NR	865	0	NR	995	0	NR
480	126	NR	610	561	NR	740	17	NR	870	0	NR	1000	0	NR
485	144	NR	615	517	NR	745	15	NR	875	0	NR			

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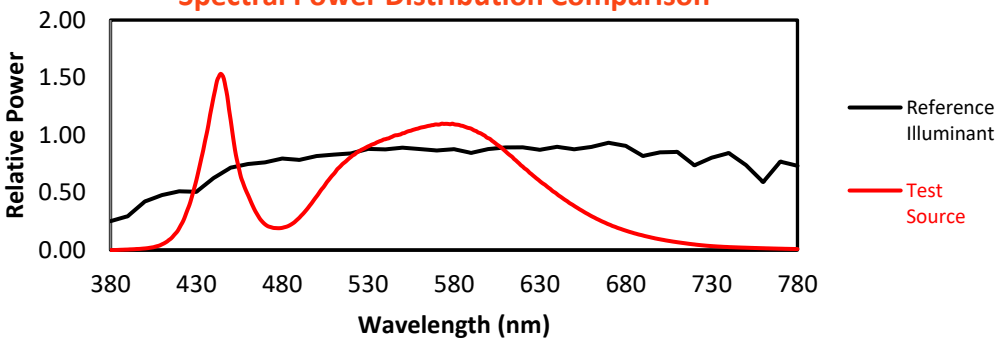
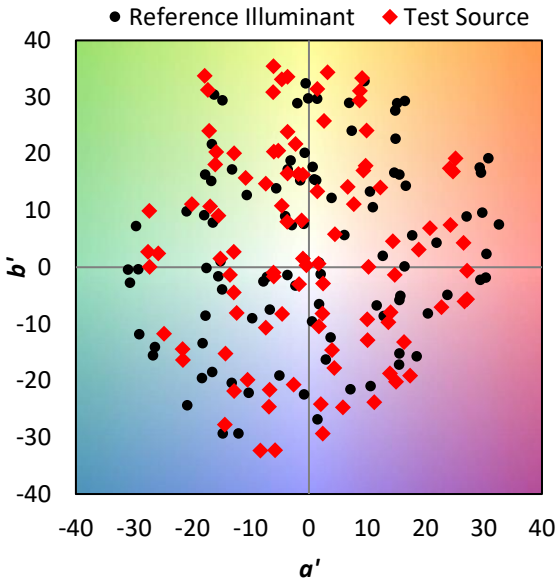
Summary

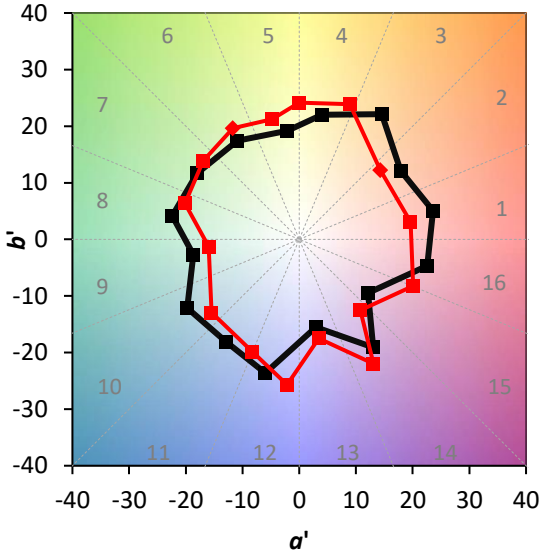
R_f = 73.1
R_g = 94.9
CIE R_a = 70.8
R_9 = -40.0

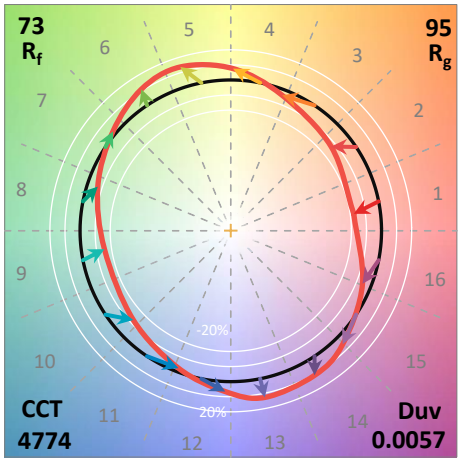
Spectral Power Distribution Comparison

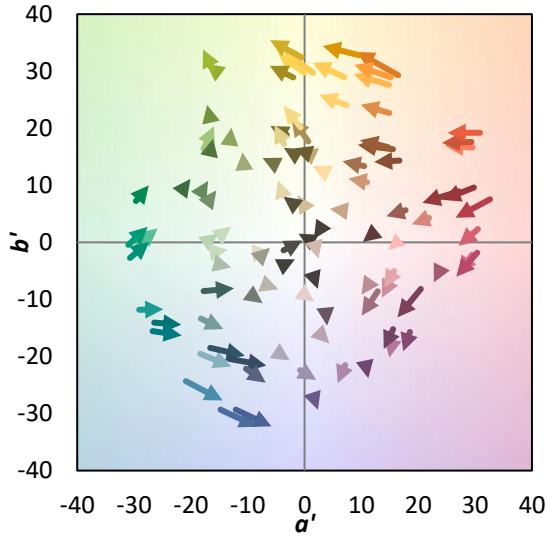


Color Vector Graphics









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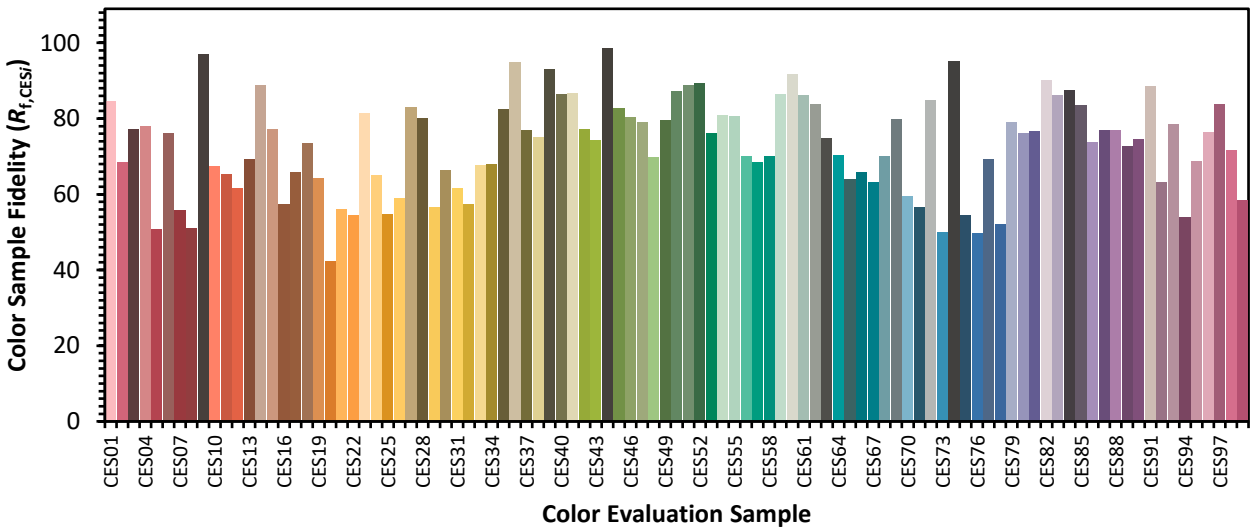
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 85	CES26 = 59	CES51 = 89	CES76 = 50
CES02 = 59	CES27 = 83	CES52 = 89	CES77 = 69
CES03 = 30	CES28 = 80	CES53 = 76	CES78 = 52
CES04 = 69	CES29 = 57	CES54 = 81	CES79 = 79
CES05 = 46	CES30 = 66	CES55 = 81	CES80 = 76
CES06 = 50	CES31 = 62	CES56 = 70	CES81 = 77
CES07 = 39	CES32 = 57	CES57 = 69	CES82 = 90
CES08 = 38	CES33 = 68	CES58 = 70	CES83 = 86
CES09 = 29	CES34 = 68	CES59 = 86	CES84 = 88
CES10 = 73	CES35 = 83	CES60 = 92	CES85 = 84
CES11 = 56	CES36 = 95	CES61 = 86	CES86 = 74
CES12 = 61	CES37 = 77	CES62 = 84	CES87 = 77
CES13 = 41	CES38 = 75	CES63 = 75	CES88 = 77
CES14 = 74	CES39 = 93	CES64 = 70	CES89 = 73
CES15 = 70	CES40 = 86	CES65 = 64	CES90 = 75
CES16 = 46	CES41 = 87	CES66 = 66	CES91 = 89
CES17 = 49	CES42 = 77	CES67 = 63	CES92 = 63
CES18 = 55	CES43 = 74	CES68 = 70	CES93 = 78
CES19 = 71	CES44 = 99	CES69 = 80	CES94 = 54
CES20 = 64	CES45 = 83	CES70 = 60	CES95 = 69
CES21 = 85	CES46 = 80	CES71 = 57	CES96 = 76
CES22 = 77	CES47 = 79	CES72 = 85	CES97 = 84
CES23 = 91	CES48 = 70	CES73 = 50	CES98 = 72
CES24 = 90	CES49 = 80	CES74 = 95	CES99 = 58
CES25 = 71	CES50 = 87	CES75 = 55	



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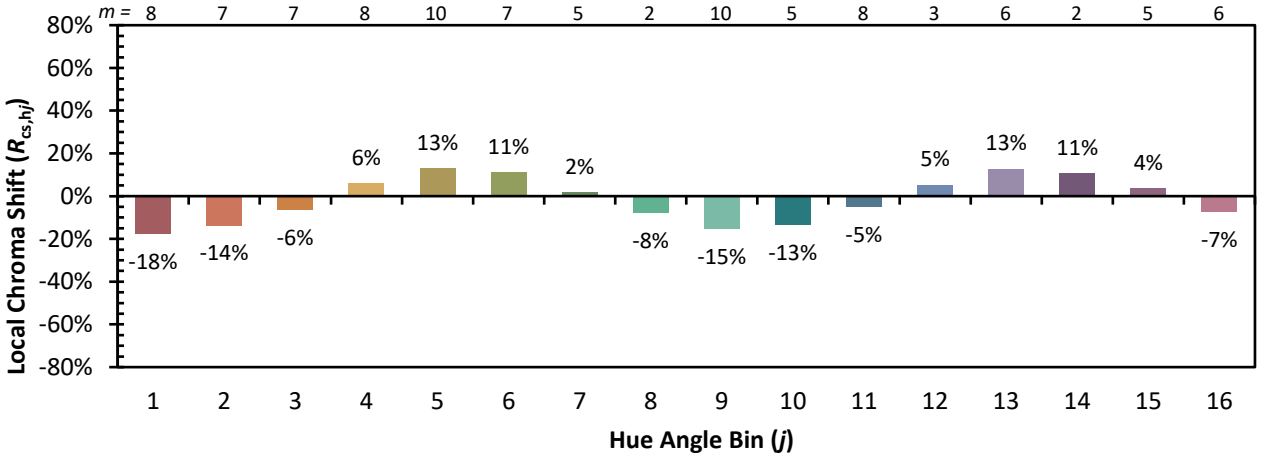
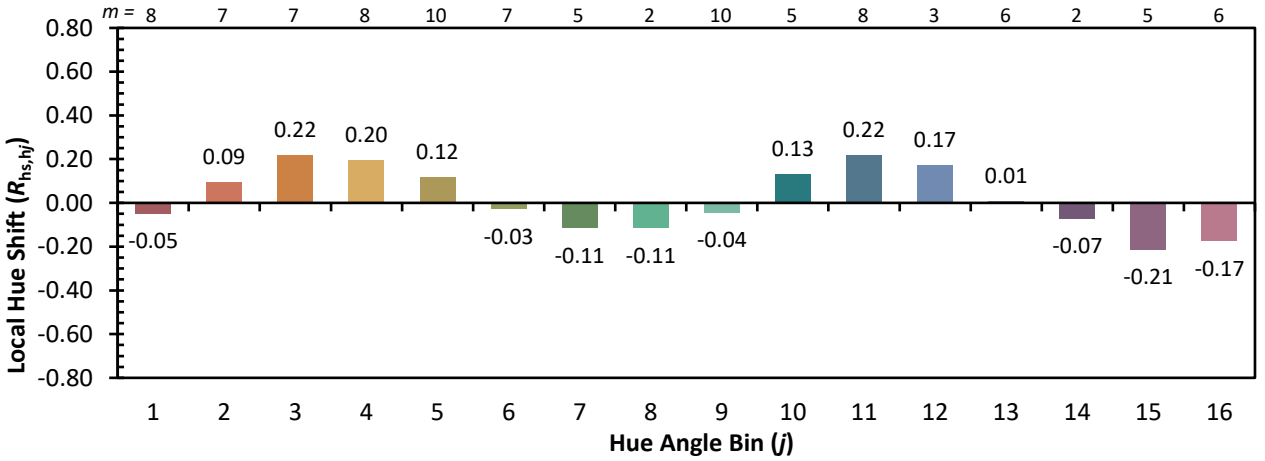
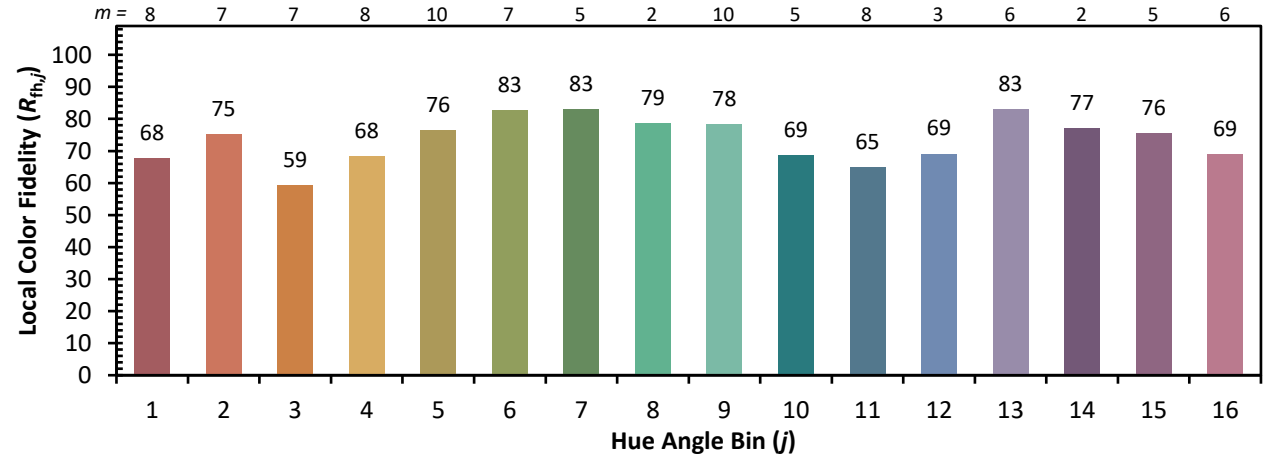
Color Rendition by Hue-Angle Bin







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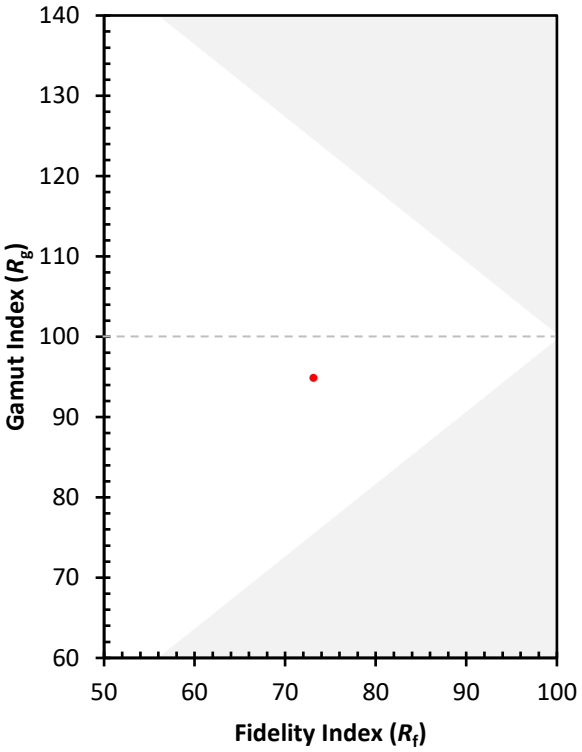
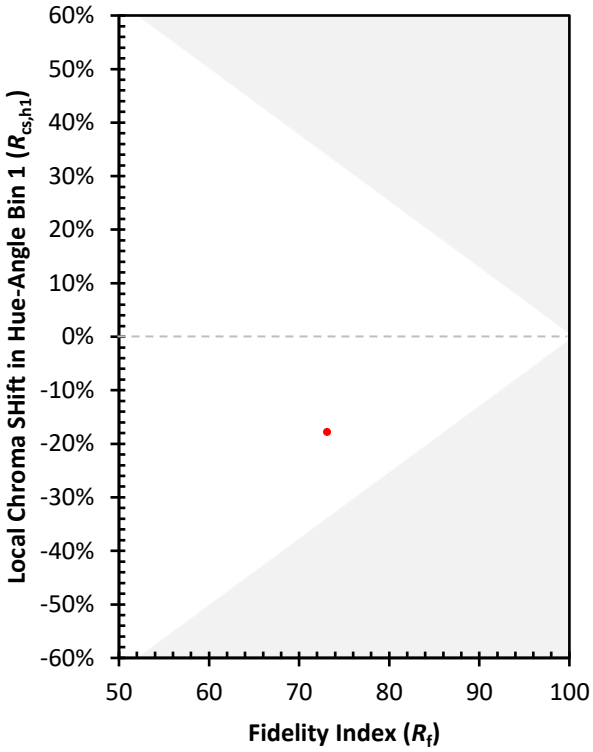
Measure Comparisons





(END OF REPORT)