

Signify Classified - Internal  
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: INVUE

Report Number: P880284

Luminaire Tested: **EMM2-HSN-VA5-830-U-WT4**

Issue Date: 10/01/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P880284  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 10/01/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: EMM2-HSN-VA5-830-U-WT4  
Description: EPIC MODERN SHORT HOUSING 5W 80CRI 3000K VISUAL COMFORT FIXTURE w/  
DRIVE LANE TYPE IV DISTRIBUTION OPTIC  
Light Source: (1) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

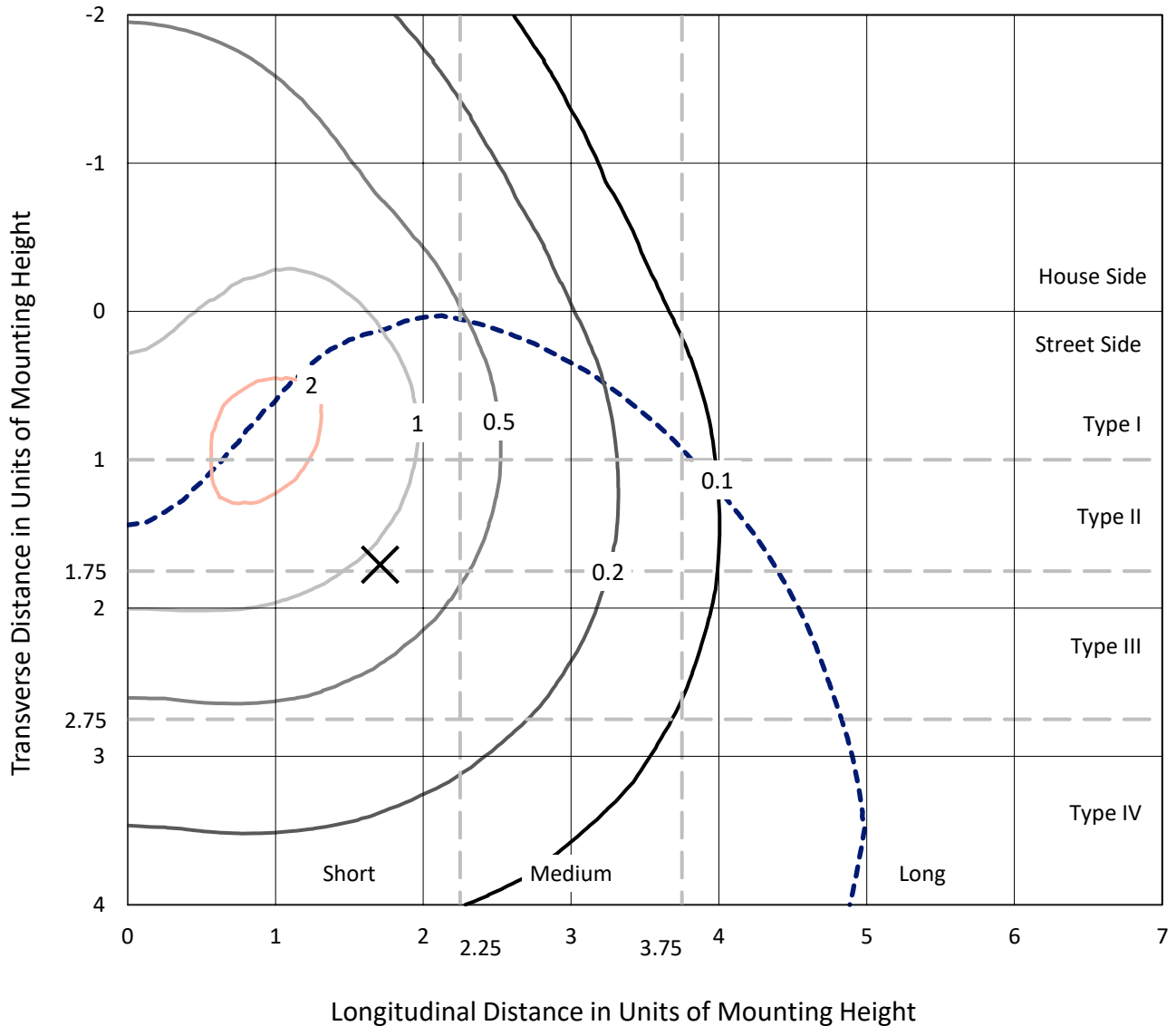
Lumens per Lamp: N/A  
Luminaire Lumens: 6872.5 lumens  
Efficiency: N/A  
Efficacy: 88.1 lumens/watt  
Luminous Opening: Circular (Dia: 1.12' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U0 - G3

Input Watts (W): 78  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 6%  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

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### Iso-Footcandle Lines of Horizontal Illumination

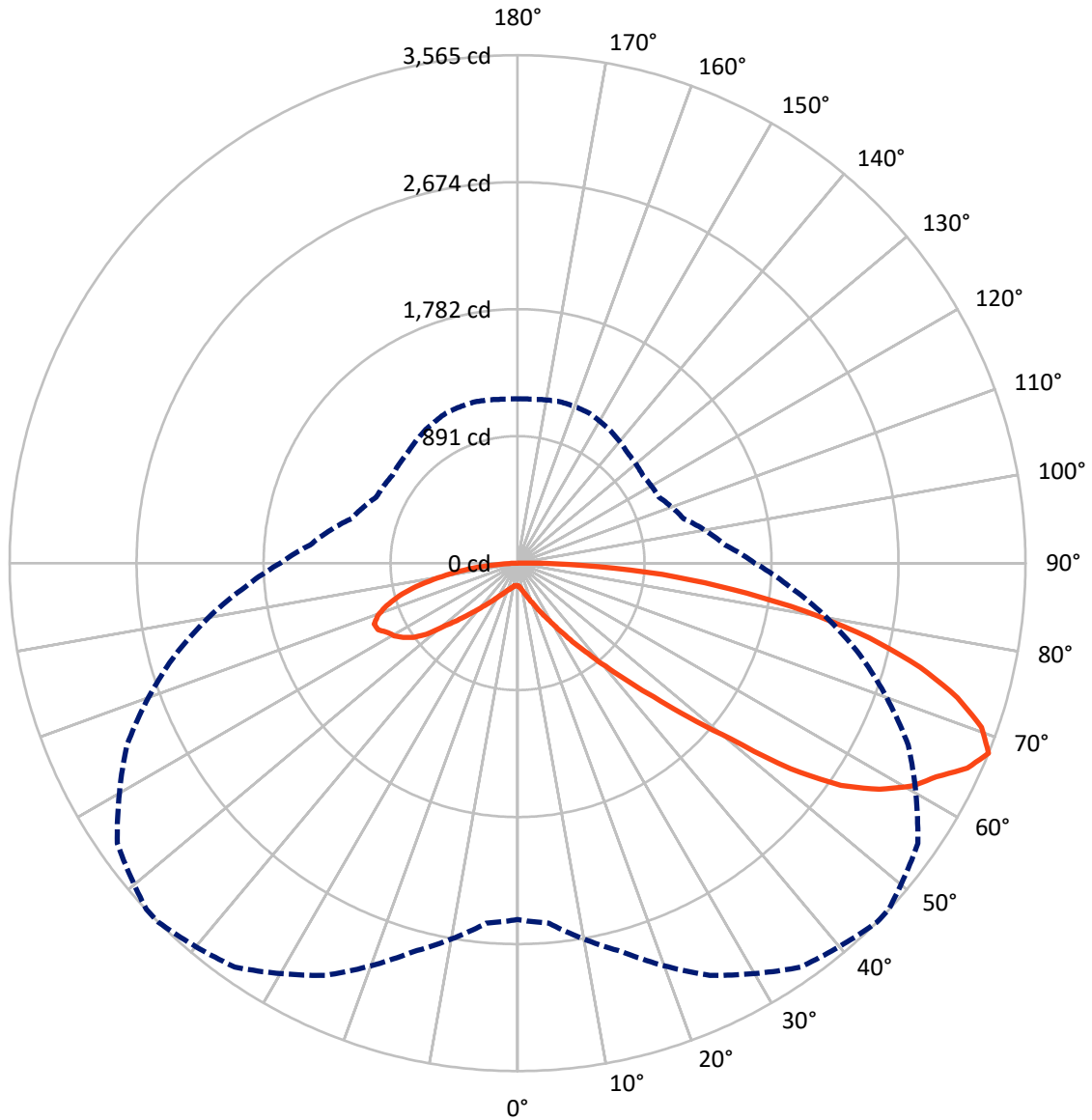
✕ Max cd  
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 2.4 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 67.5-Deg Vertical



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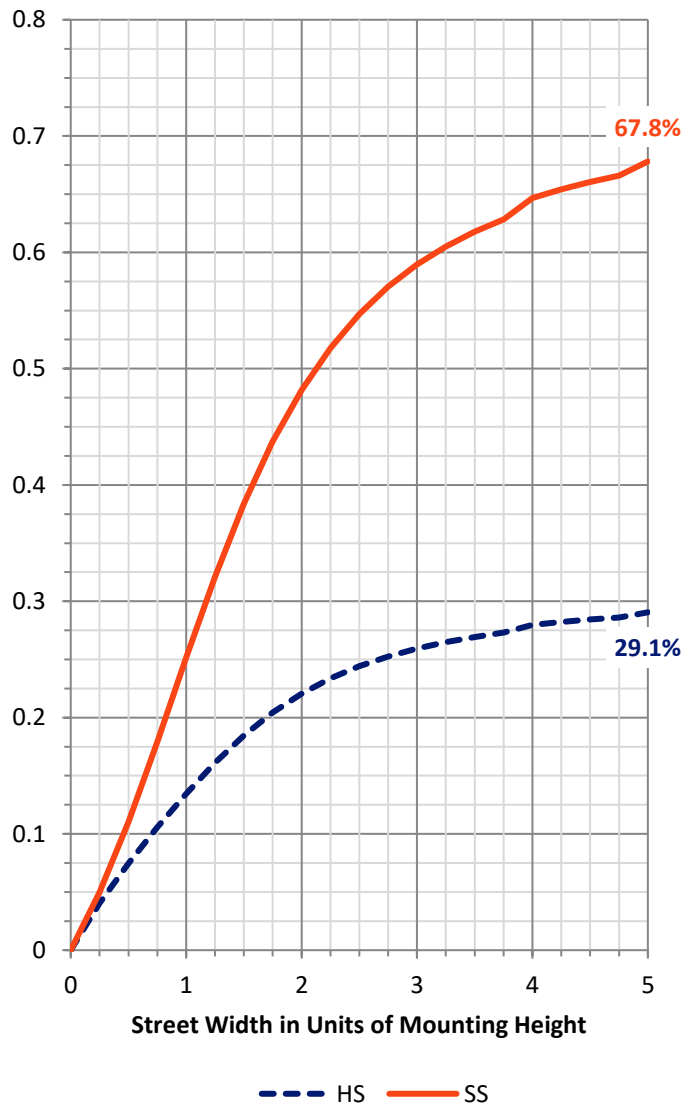
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2036.8	0.0	2036.8
	% Fixture	29.6	0.0	29.6
<b>Street Side</b>	Lumens	4835.7	0.0	4835.7
	% Fixture	70.4	0.0	70.4
<b>Total</b>	Lumens	6872.5	0.0	6872.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	16.3	0.2
10°-20°	61.1	0.9
20°-30°	144.0	2.1
30°-40°	315.8	4.6
40°-50°	687.7	10.0
50°-60°	1413.0	20.6
60°-70°	1990.6	29.0
70°-80°	1690.0	24.6
80°-90°	553.9	8.1
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°	6872.5	100.0
0°-180°	6872.5	100.0



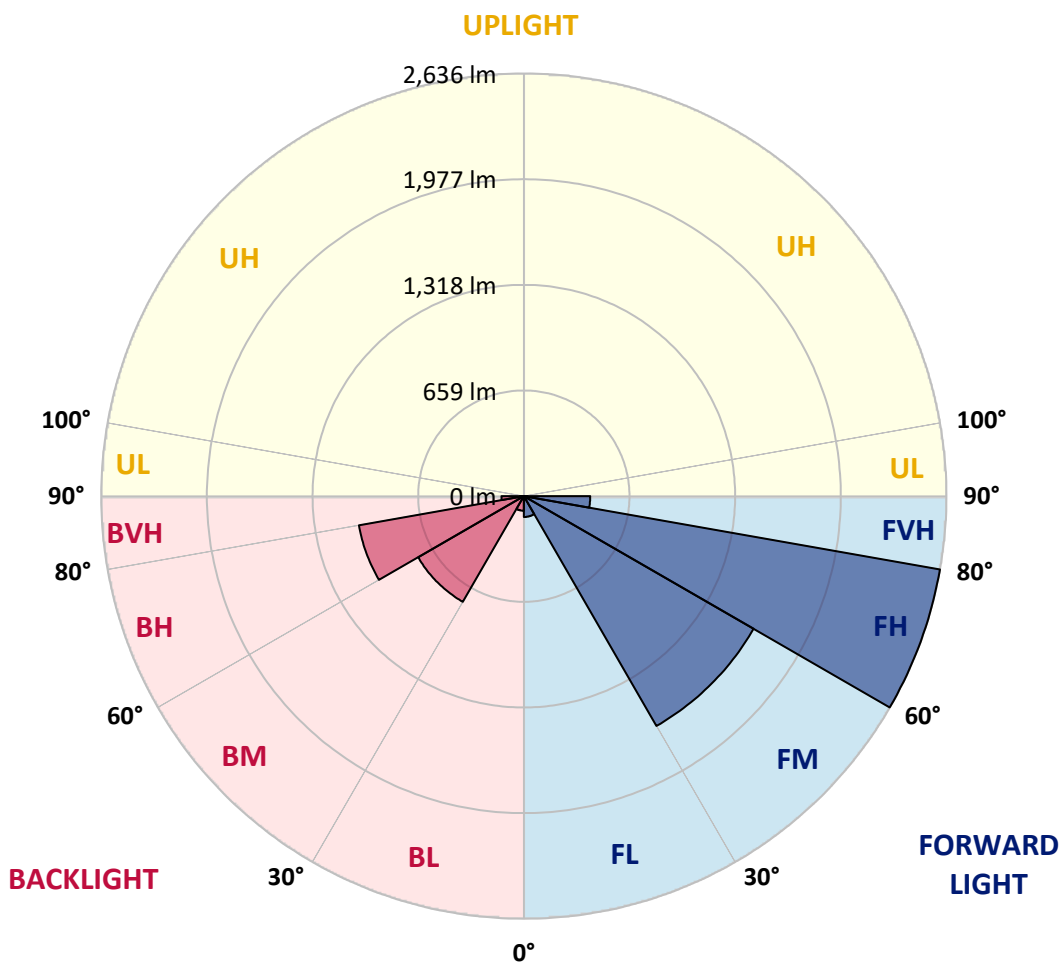
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	130.0	1.9			
FM (30°-60°)	1655.2	24.1			
FH (60°-80°)	2636.3	38.4			G2/5000
FVH (80°-90°)	414.2	6.0			G3/500
BL (0°-30°)	91.4	1.3	B0/110		
BM (30°-60°)	761.3	11.1	B1/1000		
BH (60°-80°)	1044.4	15.2	B3/2500		G3/2500
BVH (80°-90°)	139.7	2.0			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	158.7	158.7	158.7	158.7	158.7	158.7	158.7	158.7	158.7	158.7	158.7
2.5°	163.6	162.9	163.6	163.6	163.6	162.9	162.9	162.9	162.2	161.5	160.8
5°	173.4	173.4	173.4	172.7	172.7	171.3	171.3	170.6	169.2	167.8	166.4
7.5°	186.8	186.1	186.1	185.4	184.7	183.3	182.6	181.9	179.1	176.9	174.1
10°	202.9	202.9	202.2	200.8	200.8	197.3	198.0	196.6	193.1	188.9	184.0
12.5°	222.6	222.6	221.2	221.2	219.8	217.0	216.3	214.2	210.7	203.6	198.0
15°	244.4	244.4	245.8	244.4	243.0	239.4	239.4	236.6	228.9	223.3	214.9
17.5°	271.7	268.2	270.3	269.6	269.6	267.5	265.4	261.9	255.6	245.8	235.2
20°	299.8	300.5	298.4	300.5	301.2	298.4	298.4	294.2	285.1	273.1	256.3
22.5°	334.9	334.9	330.7	336.3	339.9	337.7	337.0	328.6	317.4	301.2	284.4
25°	371.4	370.0	377.1	378.5	386.2	385.5	384.8	377.1	360.2	340.6	314.6
27.5°	412.9	415.0	428.3	431.8	439.6	438.9	438.2	429.7	411.5	384.8	351.1
30°	464.1	466.9	479.6	491.5	504.9	506.3	504.9	497.8	471.2	436.0	398.1
32.5°	523.8	531.5	544.2	564.5	581.4	589.1	590.5	577.9	547.7	501.4	451.5
35°	605.3	599.0	616.5	650.2	678.3	693.7	693.0	676.2	643.2	584.2	513.3
37.5°	685.3	683.2	710.6	754.8	792.8	805.4	808.9	797.7	755.5	677.6	594.0
40°	768.9	786.4	818.0	869.3	925.5	952.1	954.3	938.1	880.5	792.8	682.5
42.5°	877.7	895.3	935.3	998.5	1079.9	1124.2	1127.0	1108.7	1039.2	925.5	789.2
45°	1015.3	1025.2	1067.3	1163.5	1268.1	1339.0	1359.4	1336.9	1251.3	1093.3	922.0
47.5°	1163.5	1163.5	1232.3	1359.4	1517.4	1610.8	1626.2	1605.9	1478.1	1287.8	1070.1
50°	1328.5	1329.2	1438.7	1620.6	1820.0	1936.6	1948.5	1899.4	1744.9	1485.8	1221.1
52.5°	1499.8	1518.1	1678.2	1953.4	2221.0	2399.3	2411.3	2354.4	2148.6	1769.5	1381.9
55°	1735.8	1764.6	1997.0	2334.7	2612.8	2753.2	2753.9	2685.8	2438.6	2044.7	1574.3
57.5°	2063.0	2074.2	2291.2	2635.9	2898.6	2994.8	2987.7	2888.0	2602.9	2198.5	1732.3
60°	2333.3	2359.3	2536.2	2856.4	3112.7	3178.7	3171.0	3039.0	2715.3	2288.4	1808.1
62.5°	2511.0	2523.6	2706.9	3014.4	3244.7	3300.2	3291.8	3168.9	2852.9	2445.0	1934.5
65°	2553.8	2574.9	2807.3	3119.7	3343.0	3468.0	3462.4	3396.4	3072.0	2560.8	1994.2
67.5°	2501.8	2536.9	2822.0	3192.1	3461.0	3564.9	3562.1	3429.4	3025.0	2486.4	1919.0
70°	2395.8	2426.0	2779.9	3184.3	3426.6	3454.7	3432.9	3281.2	2886.6	2362.8	1806.7
72.5°	2228.7	2279.9	2625.4	3008.1	3210.3	3228.6	3220.9	3035.5	2678.8	2150.0	1636.8
75°	2009.6	2072.1	2385.3	2694.9	2887.3	2918.9	2904.2	2742.0	2381.1	1883.9	1426.1
77.5°	1732.3	1767.4	2006.1	2300.3	2521.5	2527.1	2518.7	2337.5	2005.4	1577.8	1200.0
80°	1365.0	1386.1	1593.2	1838.3	2021.6	2044.0	2036.3	1914.1	1592.5	1248.5	936.0
82.5°	1011.1	997.1	1136.1	1336.9	1518.8	1520.2	1532.8	1397.3	1192.3	905.8	669.9
85°	582.1	587.7	708.5	845.4	955.7	1019.6	1018.9	953.5	766.8	576.5	408.7
87.5°	162.2	174.8	251.4	365.8	415.7	452.2	438.9	396.0	320.2	181.2	103.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P880284

CATALOG NUMBER: EMM2-HSN-VA5-830-U-WT4

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	158.7	158.7	158.7	158.7	158.7	158.7	158.7	158.7	158.7	158.7	158.7
2.5°	160.8	160.1	159.4	158.7	157.3	157.3	156.6	157.3	157.3	157.3	157.3
5°	165.0	164.3	162.2	160.8	158.7	157.3	156.6	156.6	156.6	156.6	156.6
7.5°	172.0	171.3	167.8	165.0	162.2	160.8	159.4	158.7	158.0	157.3	158.0
10°	182.6	179.8	176.2	172.0	167.8	165.7	163.6	162.9	162.2	161.5	161.5
12.5°	194.5	192.4	186.1	180.5	176.2	172.7	169.9	168.5	167.8	167.1	167.1
15°	210.7	206.4	198.0	191.0	184.7	180.5	177.6	176.2	175.5	174.8	174.8
17.5°	228.9	223.3	212.1	202.9	195.9	190.3	186.8	184.7	183.3	184.0	184.7
20°	250.0	240.8	228.2	217.0	207.8	201.5	198.0	195.2	193.8	194.5	195.2
22.5°	274.5	264.7	246.5	233.1	221.9	214.2	210.7	208.5	207.1	206.4	205.0
25°	302.6	290.0	268.9	250.7	237.3	229.6	225.4	224.0	222.6	221.2	221.2
27.5°	336.3	321.6	292.8	273.1	257.0	249.3	244.4	242.2	242.2	240.1	240.1
30°	375.7	356.0	320.9	294.9	278.8	268.9	263.3	262.6	261.2	263.3	263.3
32.5°	422.7	396.0	353.2	323.0	304.7	295.6	290.0	288.6	286.5	287.9	292.1
35°	481.7	447.3	396.0	360.2	337.7	328.6	321.6	320.9	317.4	320.9	315.3
37.5°	547.7	509.8	441.7	399.5	375.0	364.4	359.5	357.4	356.7	356.7	352.5
40°	628.4	582.8	499.9	448.0	419.9	407.3	402.3	401.6	400.2	405.2	400.2
42.5°	728.2	658.6	560.3	501.4	472.6	459.2	453.6	451.5	455.0	457.1	456.4
45°	839.1	764.0	637.6	569.5	536.5	523.1	515.4	513.3	514.7	514.7	521.7
47.5°	966.9	878.4	726.0	643.9	613.7	597.5	592.6	585.6	582.1	580.7	592.6
50°	1100.3	990.1	816.6	724.6	697.3	684.6	686.0	672.0	667.1	661.4	660.0
52.5°	1234.4	1109.4	919.8	837.0	805.4	811.7	808.9	794.2	765.4	758.3	741.5
55°	1395.2	1244.2	1018.9	919.8	892.5	897.4	908.6	908.6	902.3	886.8	873.5
57.5°	1531.4	1355.9	1093.3	969.7	945.8	958.5	980.9	997.8	1012.5	1023.8	1023.1
60°	1607.3	1424.7	1141.7	1007.6	979.5	1004.1	1037.8	1066.6	1098.2	1131.2	1129.8
62.5°	1711.9	1520.9	1228.1	1075.0	1026.6	1034.3	1072.9	1122.8	1151.6	1178.9	1186.7
65°	1739.3	1538.5	1260.4	1122.8	1083.4	1084.9	1110.8	1151.6	1176.1	1183.2	1187.4
67.5°	1665.5	1461.2	1207.0	1094.7	1073.6	1093.3	1135.4	1167.7	1171.2	1154.4	1153.0
70°	1554.6	1366.4	1122.8	1028.7	1015.3	1045.5	1101.0	1139.6	1131.2	1096.8	1094.7
72.5°	1398.0	1223.2	1009.7	941.6	928.3	966.2	1015.3	1056.1	1043.4	1017.4	1015.3
75°	1209.8	1046.2	872.8	822.2	821.5	863.0	905.8	930.4	929.7	911.4	905.8
77.5°	1005.5	872.8	719.0	673.4	690.2	729.6	761.2	779.4	773.1	766.8	764.7
80°	787.1	669.2	554.7	527.3	553.3	566.7	600.4	599.0	602.5	589.1	599.0
82.5°	560.3	482.4	397.4	385.5	389.0	415.7	433.9	431.8	422.7	412.9	408.7
85°	339.9	297.0	254.9	238.0	250.0	247.9	259.1	250.0	244.4	239.4	243.7
87.5°	94.1	81.5	77.9	56.2	69.5	54.8	57.6	40.0	35.1	42.1	36.5
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: SP1-2407-176-7

Test Date: 09/27/2024

Luminaire Tested: MEM2-HTN-VA-30-830-U-WQ

Data in this report applies to families of products including MEM2-HTN-VA-30-830-U-WQ

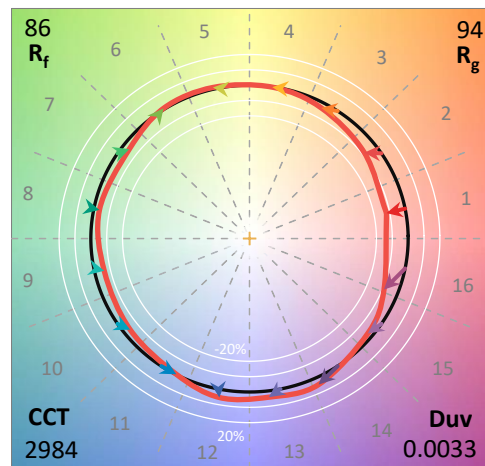
**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2407-176-7  
 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-30-830-U-WQ**  
 Description: EPIC MODERN VISUAL COMFORT 30W WAVESTREAM WIDE

**Spectral Parameters**

CCT (K): 2984  
 CIE u': 0.2500  
 CIE v': 0.5264  
 Duv: 0.0033  
 CIE x: 0.4431  
 CIE y: 0.4147  
 CIE z: 0.1422  
 Peak Wavelength (nm): 601  
 Dominant Wavelength (nm): 581  
 Purity: 57.4798  
 Rf: 85.8  
 Rg: 94.1

CRI (Ra):	81.8		
R1:	79.4	R9:	-1.1
R2:	89.9	R10:	78.4
R3:	96.6	R11:	80.8
R4:	80.6	R12:	72.8
R5:	80.1	R13:	81.7
R6:	88.9	R14:	98.5
R7:	82.6	R15:	70.2
R8:	56.0		



**Test Conditions**

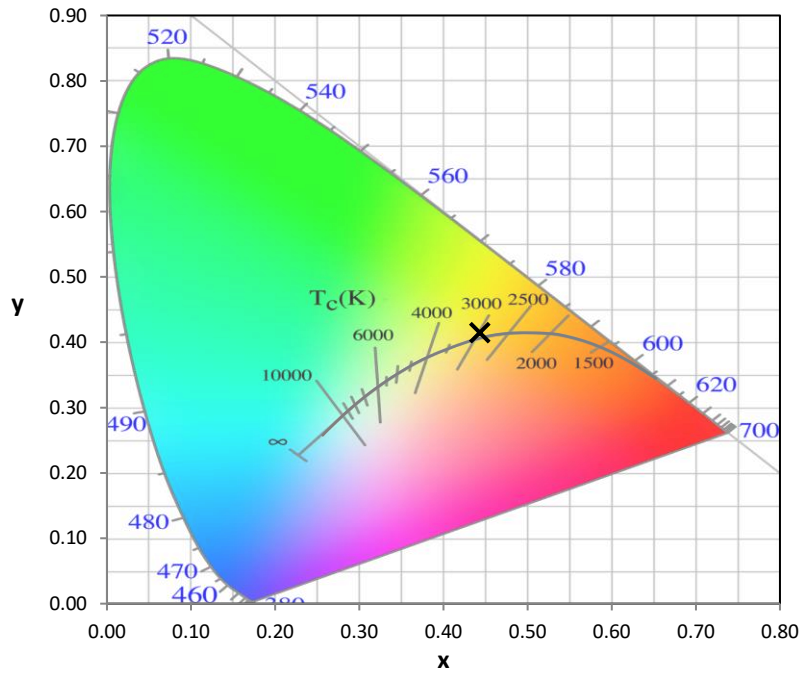
Stabilization Time: 29M  
 Operation Time: 1H 29M  
 Sphere Temperature (°C): 25.2

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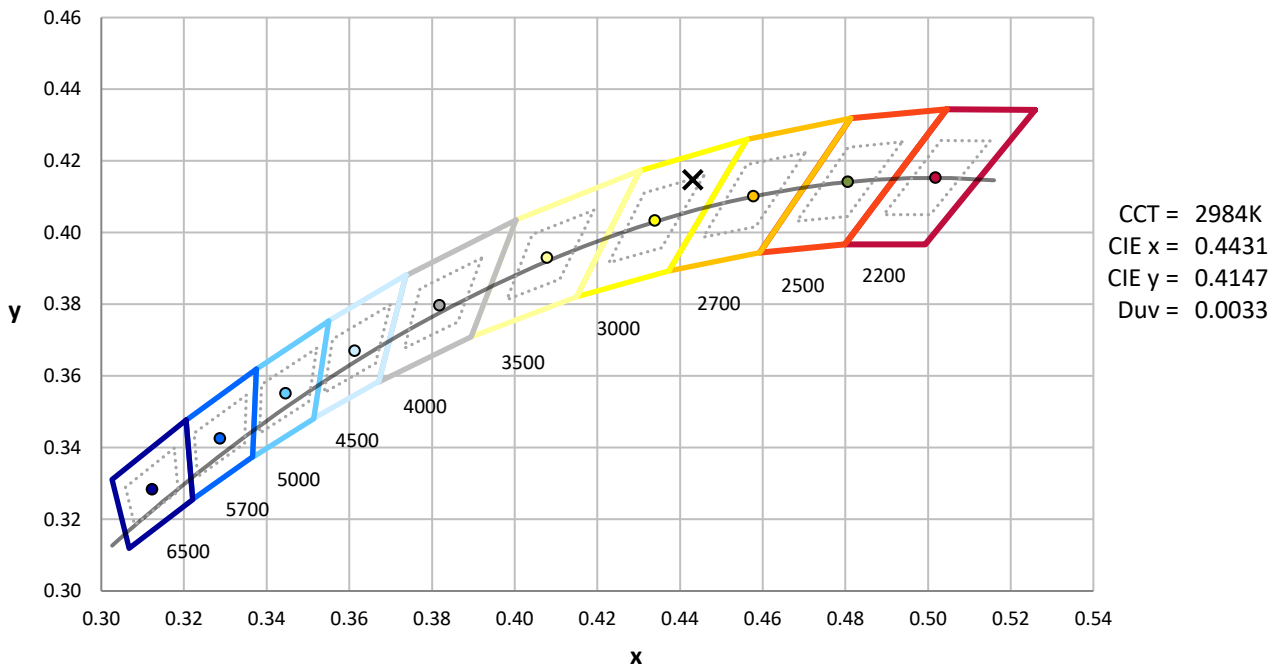
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

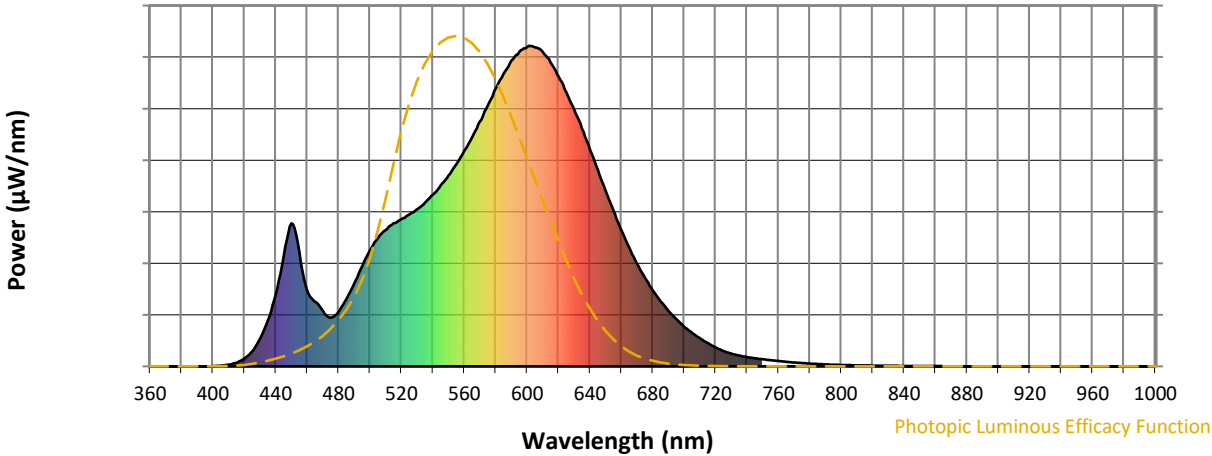


CCT = 2984K  
 CIE x = 0.4431  
 CIE y = 0.4147  
 Duv = 0.0033

Point lies inside the ANSI 3000K 4-step quadrangle

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**Photopic Flux vs. Wavelength**

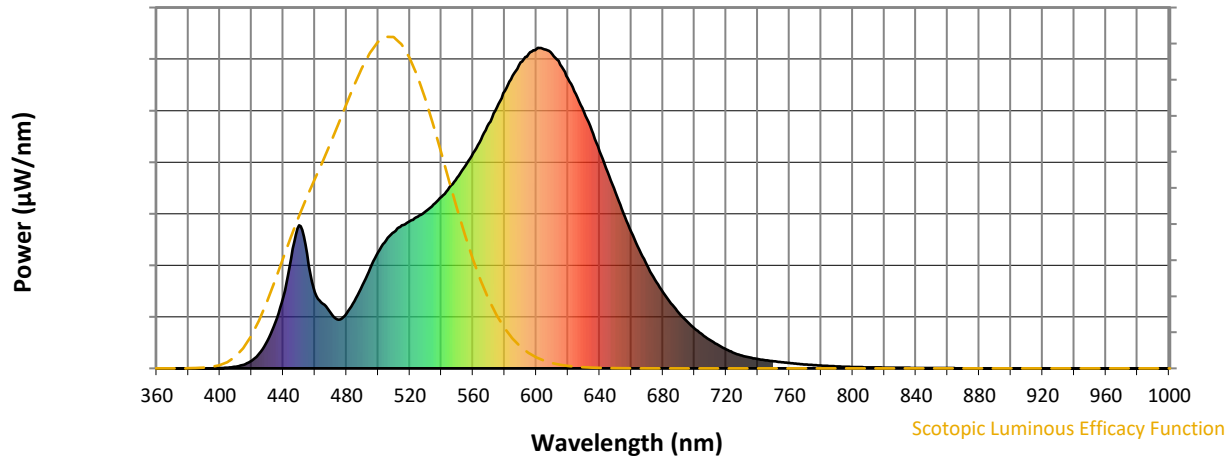


**Photopic Lumens: NR**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)
360	0	NR	490	260	NR	620	905	NR	750	22	NR	880	0	NR
365	0	NR	495	312	NR	625	856	NR	755	19	NR	885	0	NR
370	0	NR	500	362	NR	630	801	NR	760	17	NR	890	0	NR
375	0	NR	505	399	NR	635	742	NR	765	14	NR	895	0	NR
380	0	NR	510	425	NR	640	677	NR	770	12	NR	900	0	NR
385	0	NR	515	446	NR	645	613	NR	775	10	NR	905	0	NR
390	0	NR	520	459	NR	650	549	NR	780	9	NR	910	0	NR
395	0	NR	525	473	NR	655	485	NR	785	7	NR	915	0	NR
400	1	NR	530	490	NR	660	425	NR	790	6	NR	920	0	NR
405	2	NR	535	511	NR	665	371	NR	795	5	NR	925	0	NR
410	5	NR	540	535	NR	670	321	NR	800	4	NR	930	0	NR
415	11	NR	545	565	NR	675	276	NR	805	4	NR	935	0	NR
420	24	NR	550	595	NR	680	238	NR	810	3	NR	940	0	NR
425	47	NR	555	631	NR	685	203	NR	815	3	NR	945	0	NR
430	86	NR	560	672	NR	690	174	NR	820	2	NR	950	0	NR
435	144	NR	565	715	NR	695	148	NR	825	2	NR	955	0	NR
440	224	NR	570	763	NR	700	124	NR	830	2	NR	960	0	NR
445	342	NR	575	814	NR	705	105	NR	835	2	NR	965	0	NR
450	446	NR	580	866	NR	710	88	NR	840	1	NR	970	0	NR
455	357	NR	585	912	NR	715	73	NR	845	1	NR	975	0	NR
460	237	NR	590	954	NR	720	59	NR	850	1	NR	980	0	NR
465	202	NR	595	981	NR	725	48	NR	855	1	NR	985	0	NR
470	172	NR	600	996	NR	730	40	NR	860	1	NR	990	0	NR
475	152	NR	605	996	NR	735	34	NR	865	1	NR	995	0	NR
480	171	NR	610	980	NR	740	29	NR	870	0	NR	1000	0	NR
485	210	NR	615	947	NR	745	25	NR	875	0	NR			

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**Scotopic Flux vs. Wavelength**



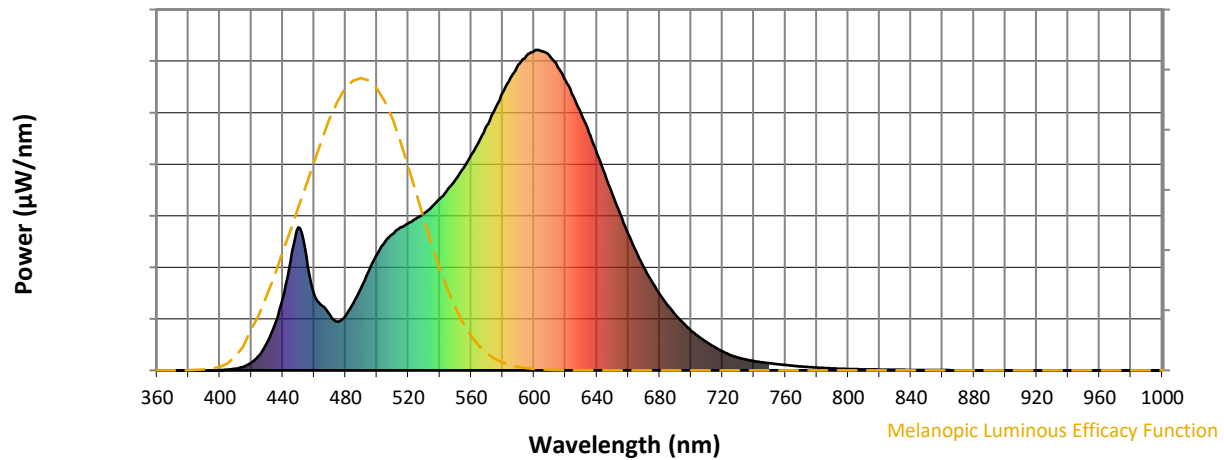
**Scotopic Lumens: NR**

**S/P: 1.32**

λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	260	NR	620	905	NR	750	22	NR	880	0	NR
365	0	NR	495	312	NR	625	856	NR	755	19	NR	885	0	NR
370	0	NR	500	362	NR	630	801	NR	760	17	NR	890	0	NR
375	0	NR	505	399	NR	635	742	NR	765	14	NR	895	0	NR
380	0	NR	510	425	NR	640	677	NR	770	12	NR	900	0	NR
385	0	NR	515	446	NR	645	613	NR	775	10	NR	905	0	NR
390	0	NR	520	459	NR	650	549	NR	780	9	NR	910	0	NR
395	0	NR	525	473	NR	655	485	NR	785	7	NR	915	0	NR
400	1	NR	530	490	NR	660	425	NR	790	6	NR	920	0	NR
405	2	NR	535	511	NR	665	371	NR	795	5	NR	925	0	NR
410	5	NR	540	535	NR	670	321	NR	800	4	NR	930	0	NR
415	11	NR	545	565	NR	675	276	NR	805	4	NR	935	0	NR
420	24	NR	550	595	NR	680	238	NR	810	3	NR	940	0	NR
425	47	NR	555	631	NR	685	203	NR	815	3	NR	945	0	NR
430	86	NR	560	672	NR	690	174	NR	820	2	NR	950	0	NR
435	144	NR	565	715	NR	695	148	NR	825	2	NR	955	0	NR
440	224	NR	570	763	NR	700	124	NR	830	2	NR	960	0	NR
445	342	NR	575	814	NR	705	105	NR	835	2	NR	965	0	NR
450	446	NR	580	866	NR	710	88	NR	840	1	NR	970	0	NR
455	357	NR	585	912	NR	715	73	NR	845	1	NR	975	0	NR
460	237	NR	590	954	NR	720	59	NR	850	1	NR	980	0	NR
465	202	NR	595	981	NR	725	48	NR	855	1	NR	985	0	NR
470	172	NR	600	996	NR	730	40	NR	860	1	NR	990	0	NR
475	152	NR	605	996	NR	735	34	NR	865	1	NR	995	0	NR
480	171	NR	610	980	NR	740	29	NR	870	0	NR	1000	0	NR
485	210	NR	615	947	NR	745	25	NR	875	0	NR			

REPORT NUMBER: SP1-2407-176-7

Melanopic Flux vs. Wavelength



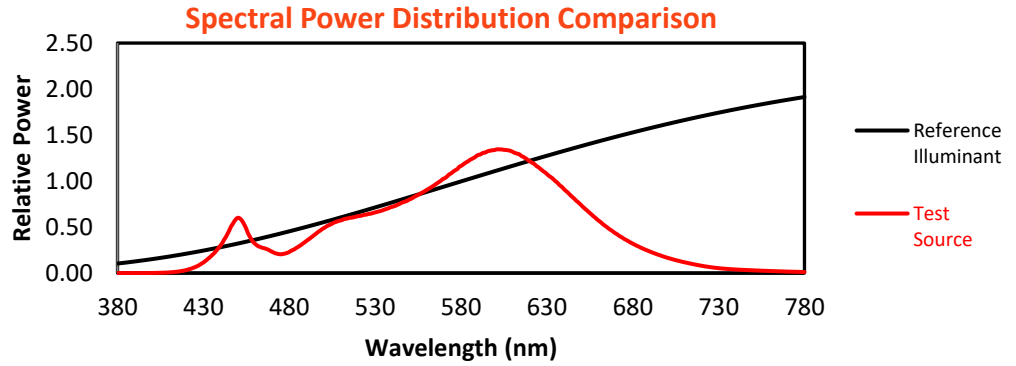
Melanopic Lumens: NR

M/P: 2.51

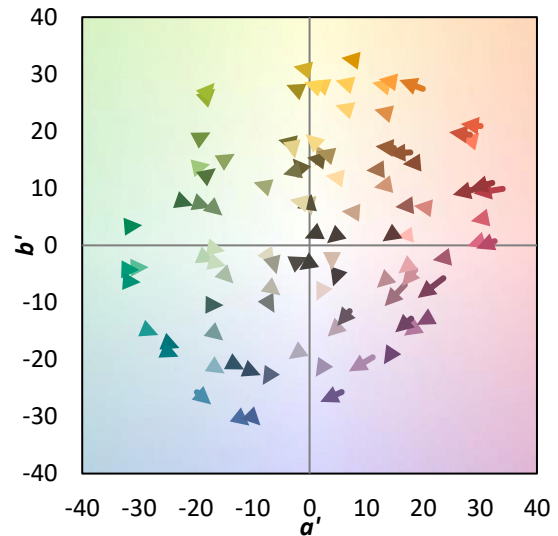
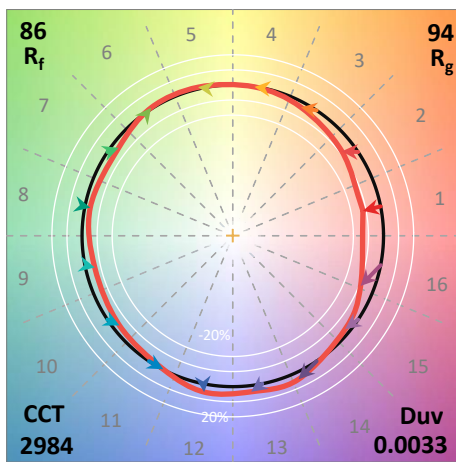
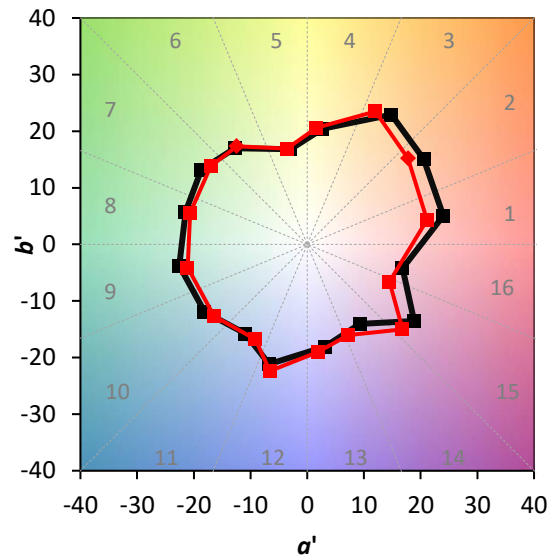
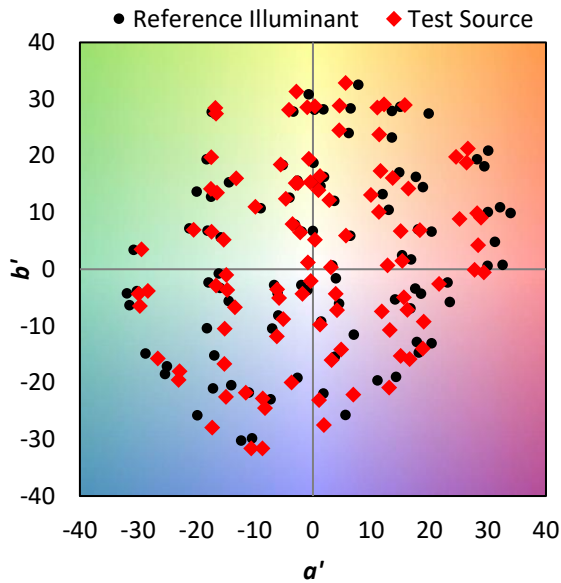
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	260	NR	620	905	NR	750	22	NR	880	0	NR
365	0	NR	495	312	NR	625	856	NR	755	19	NR	885	0	NR
370	0	NR	500	362	NR	630	801	NR	760	17	NR	890	0	NR
375	0	NR	505	399	NR	635	742	NR	765	14	NR	895	0	NR
380	0	NR	510	425	NR	640	677	NR	770	12	NR	900	0	NR
385	0	NR	515	446	NR	645	613	NR	775	10	NR	905	0	NR
390	0	NR	520	459	NR	650	549	NR	780	9	NR	910	0	NR
395	0	NR	525	473	NR	655	485	NR	785	7	NR	915	0	NR
400	1	NR	530	490	NR	660	425	NR	790	6	NR	920	0	NR
405	2	NR	535	511	NR	665	371	NR	795	5	NR	925	0	NR
410	5	NR	540	535	NR	670	321	NR	800	4	NR	930	0	NR
415	11	NR	545	565	NR	675	276	NR	805	4	NR	935	0	NR
420	24	NR	550	595	NR	680	238	NR	810	3	NR	940	0	NR
425	47	NR	555	631	NR	685	203	NR	815	3	NR	945	0	NR
430	86	NR	560	672	NR	690	174	NR	820	2	NR	950	0	NR
435	144	NR	565	715	NR	695	148	NR	825	2	NR	955	0	NR
440	224	NR	570	763	NR	700	124	NR	830	2	NR	960	0	NR
445	342	NR	575	814	NR	705	105	NR	835	2	NR	965	0	NR
450	446	NR	580	866	NR	710	88	NR	840	1	NR	970	0	NR
455	357	NR	585	912	NR	715	73	NR	845	1	NR	975	0	NR
460	237	NR	590	954	NR	720	59	NR	850	1	NR	980	0	NR
465	202	NR	595	981	NR	725	48	NR	855	1	NR	985	0	NR
470	172	NR	600	996	NR	730	40	NR	860	1	NR	990	0	NR
475	152	NR	605	996	NR	735	34	NR	865	1	NR	995	0	NR
480	171	NR	610	980	NR	740	29	NR	870	0	NR	1000	0	NR
485	210	NR	615	947	NR	745	25	NR	875	0	NR			

**Summary**

$R_f = 85.8$   
 $R_g = 94.1$   
 $CIE R_a = 81.8$   
 $R_g = -1.1$



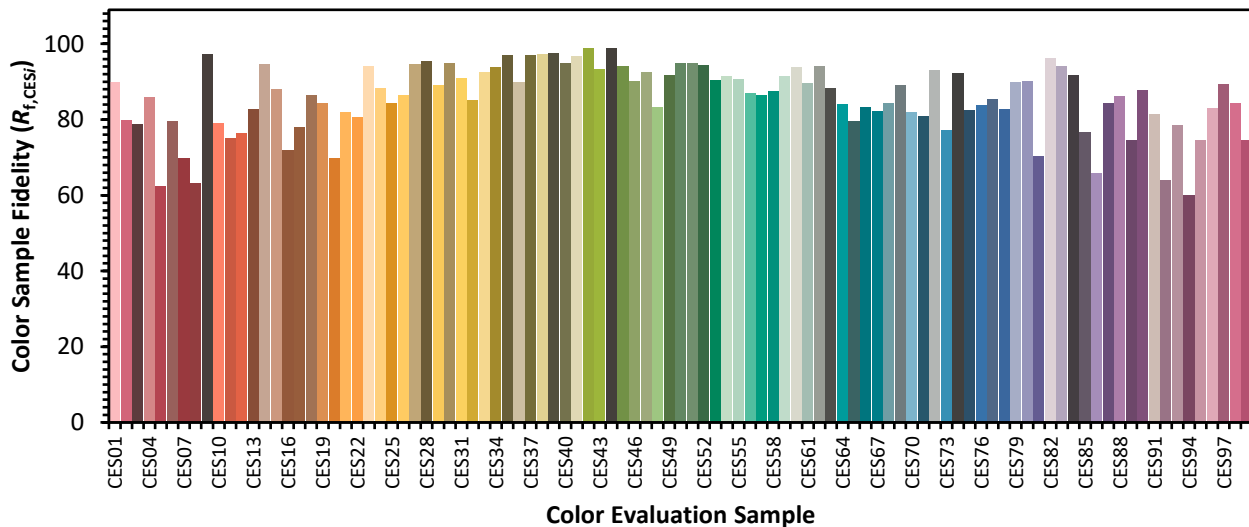
**Color Vector Graphics**



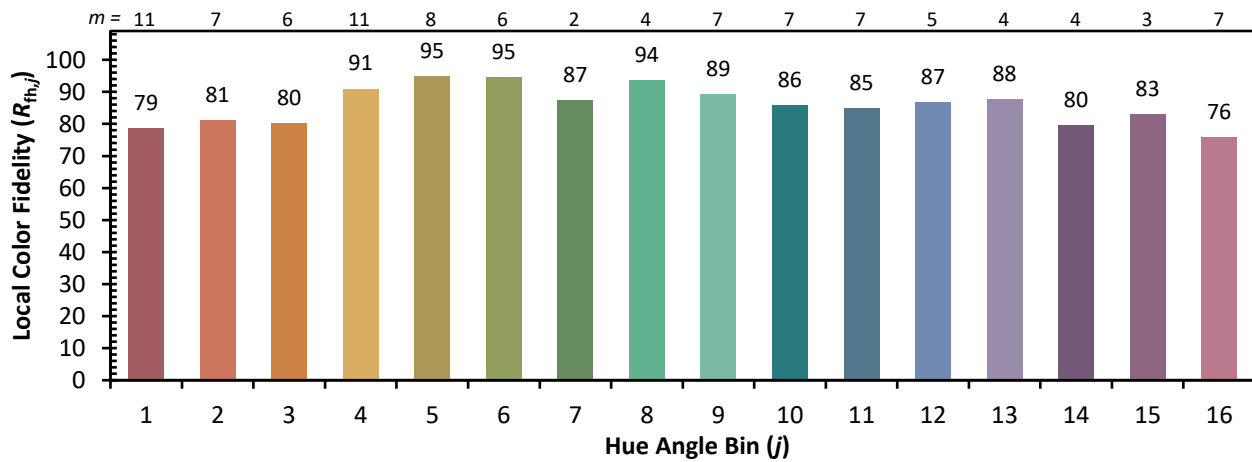
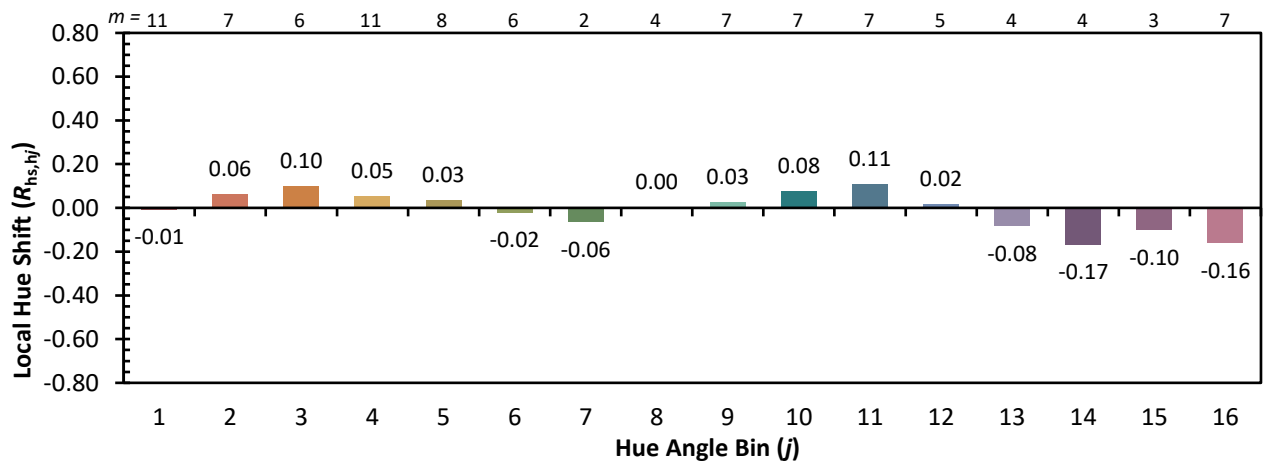
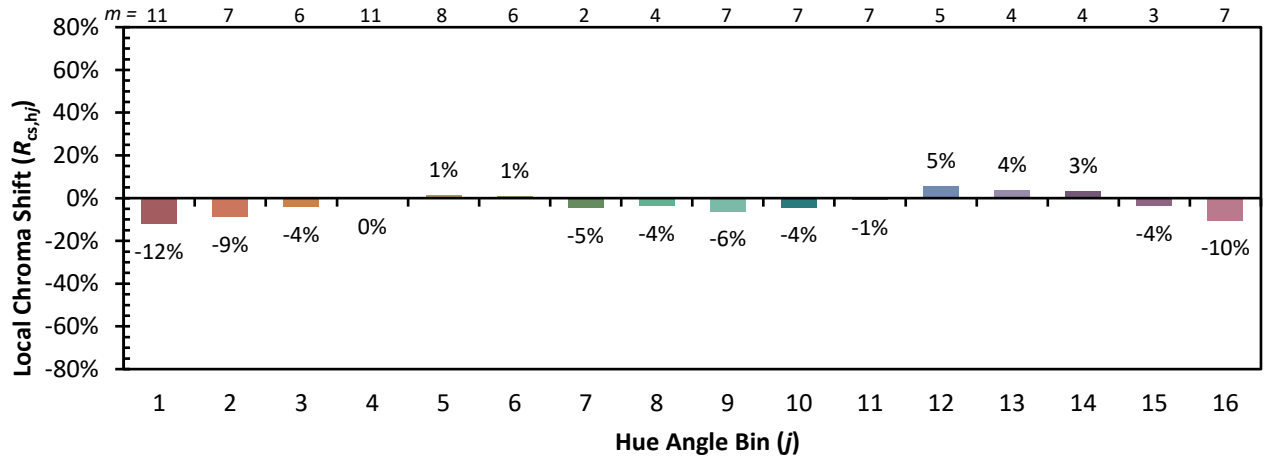


Individual Sample Fidelity Index ( $R_{f,i}$ )

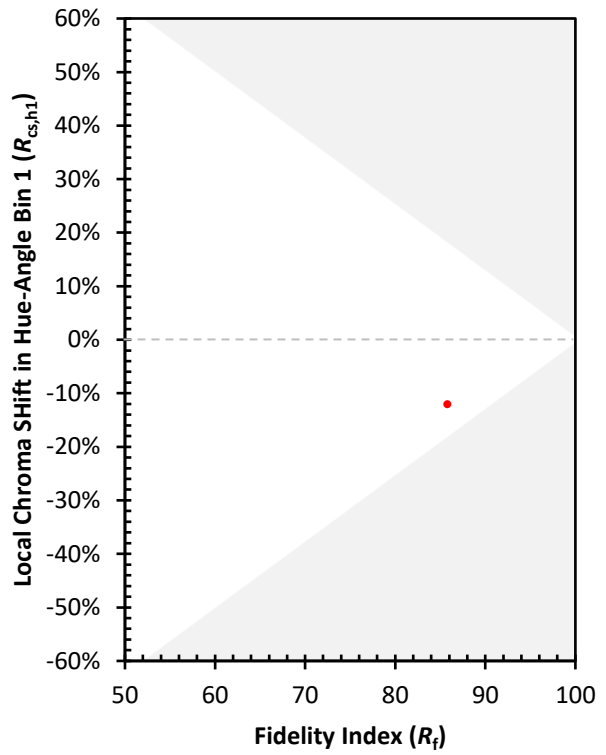
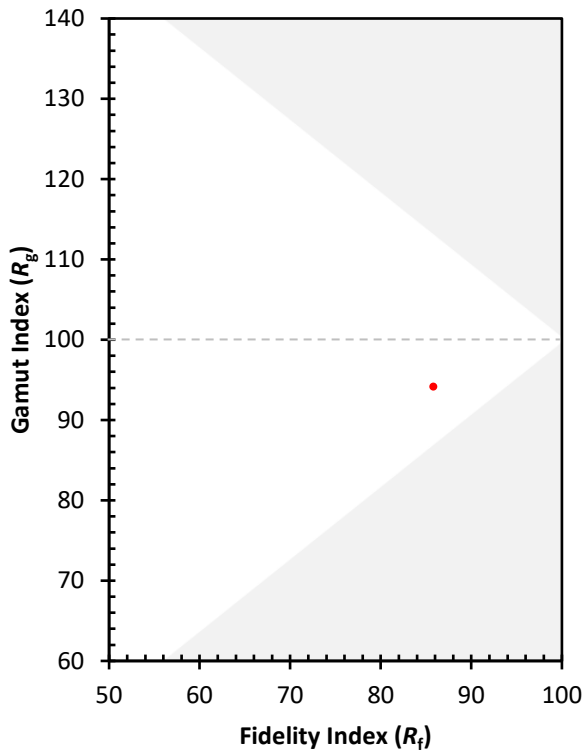
CES01 = 86	CES26 = 86	CES51 = 95	CES76 = 84
CES02 = 63	CES27 = 95	CES52 = 94	CES77 = 86
CES03 = 31	CES28 = 95	CES53 = 90	CES78 = 83
CES04 = 70	CES29 = 89	CES54 = 91	CES79 = 90
CES05 = 50	CES30 = 95	CES55 = 91	CES80 = 90
CES06 = 51	CES31 = 91	CES56 = 87	CES81 = 70
CES07 = 42	CES32 = 85	CES57 = 86	CES82 = 96
CES08 = 41	CES33 = 93	CES58 = 87	CES83 = 94
CES09 = 29	CES34 = 94	CES59 = 92	CES84 = 92
CES10 = 76	CES35 = 97	CES60 = 94	CES85 = 77
CES11 = 59	CES36 = 90	CES61 = 90	CES86 = 66
CES12 = 65	CES37 = 97	CES62 = 94	CES87 = 84
CES13 = 43	CES38 = 97	CES63 = 88	CES88 = 86
CES14 = 74	CES39 = 98	CES64 = 84	CES89 = 75
CES15 = 72	CES40 = 95	CES65 = 80	CES90 = 88
CES16 = 47	CES41 = 97	CES66 = 83	CES91 = 81
CES17 = 50	CES42 = 99	CES67 = 82	CES92 = 64
CES18 = 56	CES43 = 93	CES68 = 84	CES93 = 79
CES19 = 72	CES44 = 99	CES69 = 89	CES94 = 60
CES20 = 67	CES45 = 94	CES70 = 82	CES95 = 74
CES21 = 87	CES46 = 90	CES71 = 81	CES96 = 83
CES22 = 79	CES47 = 93	CES72 = 93	CES97 = 89
CES23 = 92	CES48 = 83	CES73 = 77	CES98 = 84
CES24 = 91	CES49 = 92	CES74 = 92	CES99 = 75
CES25 = 72	CES50 = 95	CES75 = 83	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)