

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: STREETWORKS

Report Number: P879846

Luminaire Tested: **MEM2-HSN-VA-80-750-U-RW**

Issue Date: 10/01/2024



Test Information

Test Method: LM-79-08
Report Number: P879846
Test Lab: INNOVATION CENTER(G3)
Issue Date: 10/01/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: MEM2-HSN-VA-80-750-U-RW
Description: EPIC MODERN SHORT HOUSING 80W 70CRI 5000K VISUAL COMFORT FIXTURE w/
RECTANGULAR WIDE DISTRIBUTION OPTIC
Light Source: (1) 5000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

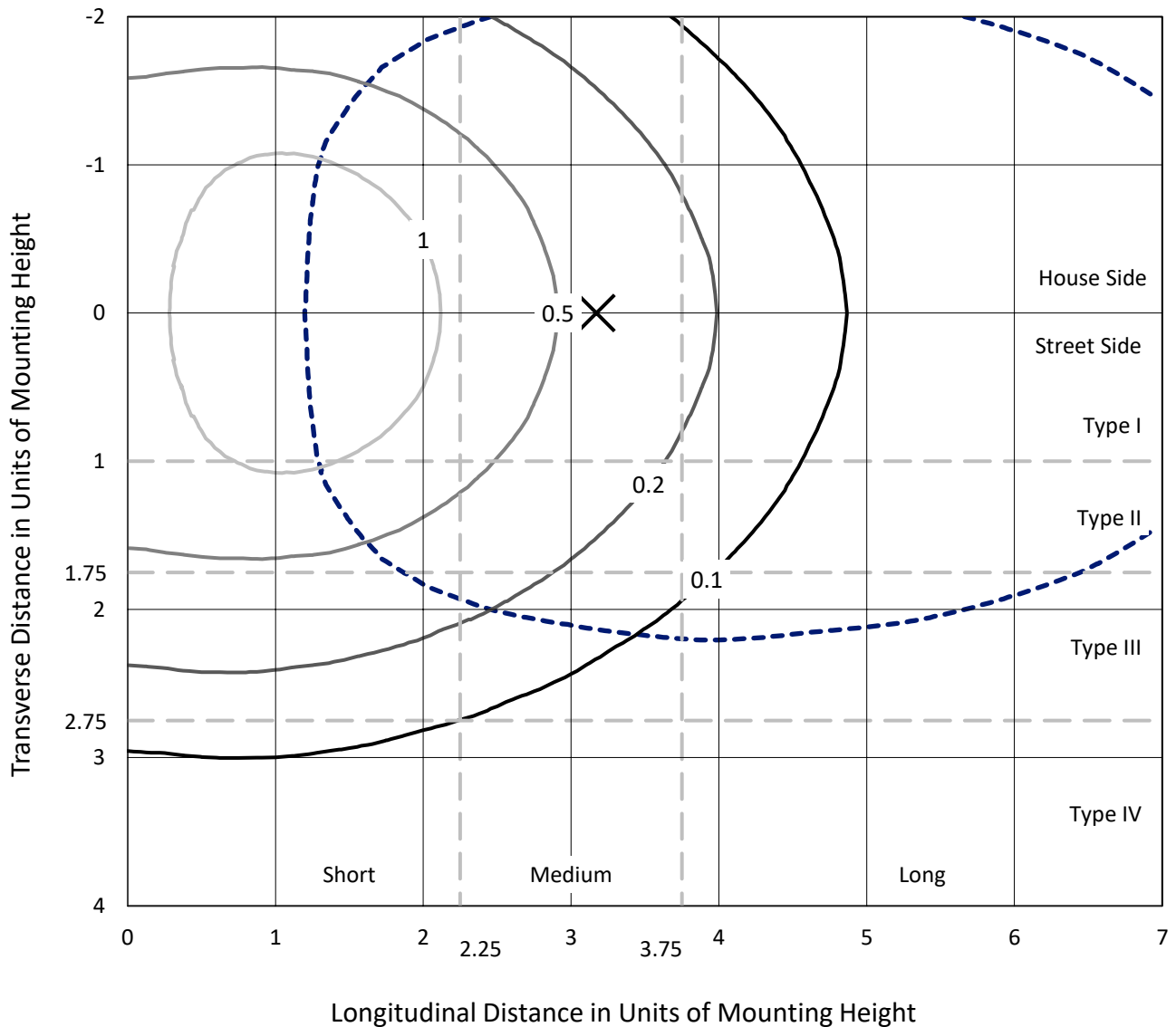
Lumens per Lamp: N/A
Luminaire Lumens: 6216.9 lumens
Efficiency: N/A
Efficacy: 79.7 lumens/watt
Luminous Opening: Circular (Dia: 1.12' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

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

REPORT NUMBER: P879846
 CATALOG NUMBER: MEM2-HSN-VA-80-750-U-RW

Iso-Footcandle Lines of Horizontal Illumination

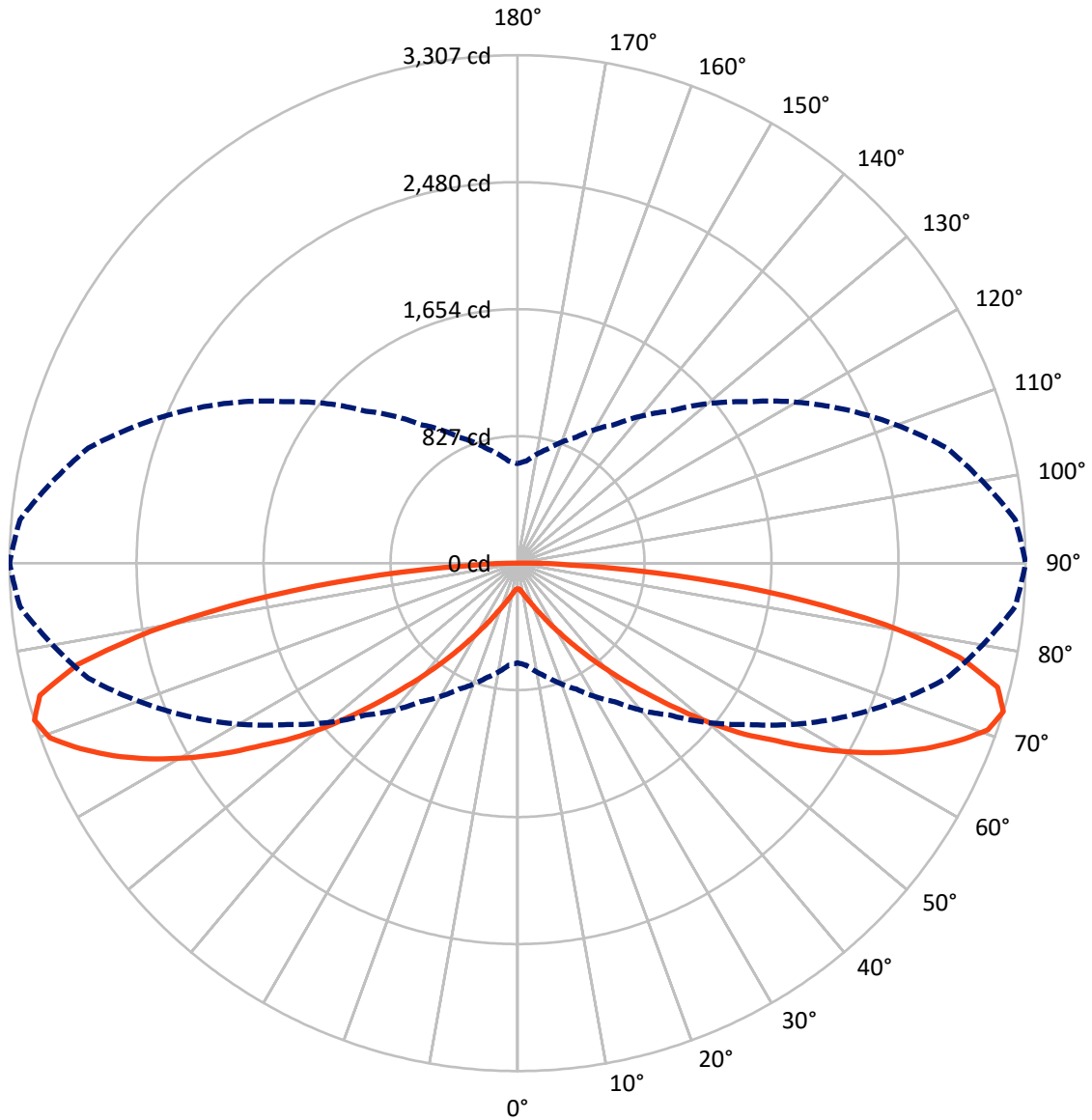
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 2 fc
 Type III - Short - N/A

REPORT NUMBER: P879846
CATALOG NUMBER: MEM2-HSN-VA-80-750-U-RW

Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

REPORT NUMBER: P879846
 CATALOG NUMBER: MEM2-HSN-VA-80-750-U-RW

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3108.4	0.0	3108.4
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	3108.4	0.0	3108.4
	% Fixture	50.0	0.0	50.0
Total	Lumens	6216.9	0.0	6216.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	17.1	0.3
10°-20°	63.7	1.0
20°-30°	147.0	2.4
30°-40°	315.0	5.1
40°-50°	650.5	10.5
50°-60°	1194.9	19.2
60°-70°	1703.6	27.4
70°-80°	1584.7	25.5
80°-90°	540.3	8.7
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°	6216.9	100.0
0°-180°	6216.9	100.0



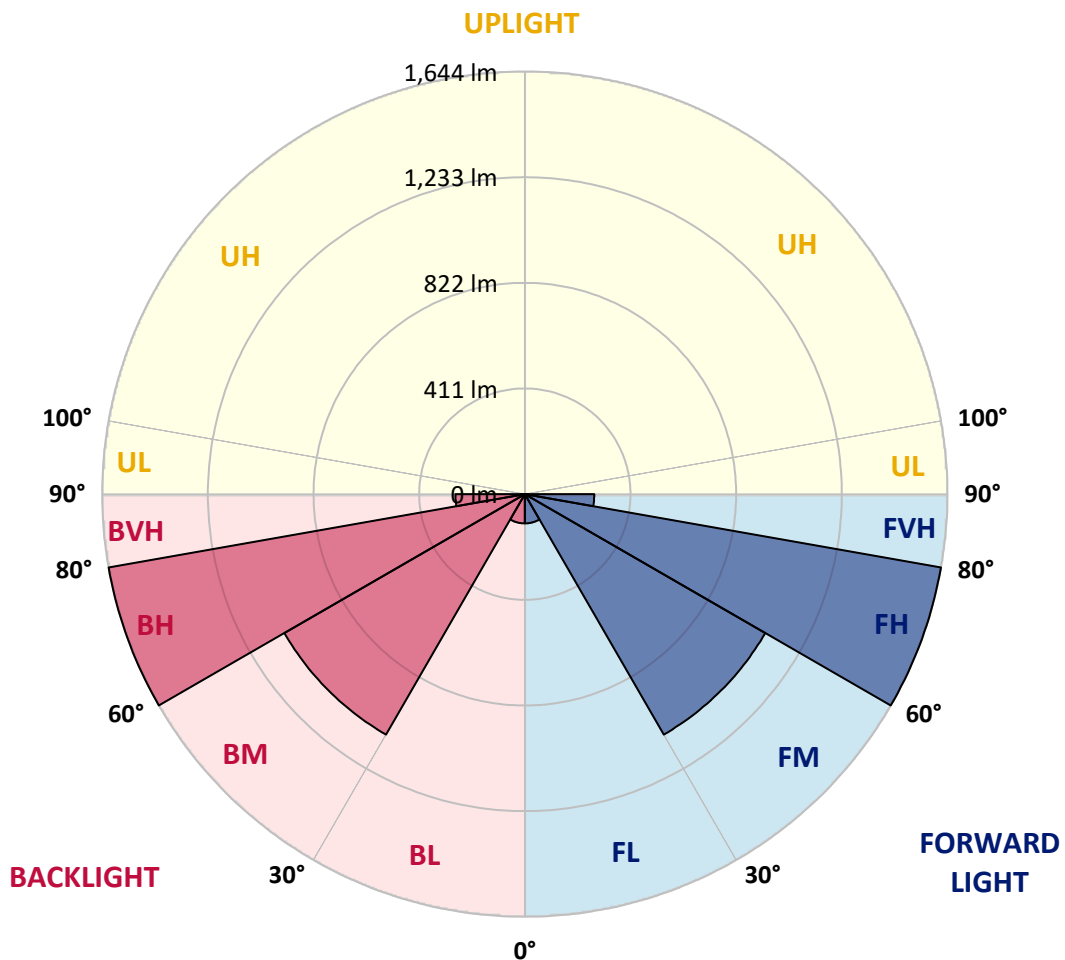
REPORT NUMBER: P879846
 CATALOG NUMBER: MEM2-HSN-VA-80-750-U-RW

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	113.9	1.8			
FM (30°-60°)	1080.2	17.4			
FH (60°-80°)	1644.2	26.4			G1/1800
FVH (80°-90°)	270.2	4.3			G3/500
BL (0°-30°)	113.9	1.8	B1/500		
BM (30°-60°)	1080.2	17.4	B2/2500		
BH (60°-80°)	1644.2	26.4	B3/2500		G3/2500
BVH (80°-90°)	270.2	4.3			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Short





REPORT NUMBER: P879846

CATALOG NUMBER: MEM2-HSN-VA-80-750-U-RW

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	167.3	167.3	167.3	167.3	167.3	167.3	167.3	167.3	167.3	167.3	167.3
2.5°	168.1	168.1	168.1	168.1	168.9	168.9	168.9	168.9	168.9	168.9	168.9
5°	170.5	170.5	170.5	171.3	172.8	173.6	174.4	174.4	175.2	175.2	175.2
7.5°	174.4	174.4	175.2	177.6	179.2	181.5	183.9	184.7	187.1	187.1	187.1
10°	180.0	180.0	181.5	183.9	187.8	192.6	196.5	199.7	201.3	202.1	202.8
12.5°	187.1	187.1	189.4	193.4	199.7	205.2	211.5	215.5	219.4	221.0	221.0
15°	195.7	195.7	198.9	204.4	211.5	219.4	228.1	235.2	240.7	243.1	243.9
17.5°	204.4	205.2	209.2	216.3	225.7	236.0	247.0	256.5	265.2	268.3	269.9
20°	215.5	215.5	220.2	229.7	241.5	255.7	270.7	283.3	294.4	300.7	301.5
22.5°	228.1	228.9	233.6	245.5	260.5	278.6	298.3	315.7	331.5	339.4	338.6
25°	240.7	241.5	248.6	262.8	281.8	307.0	332.3	355.2	376.5	385.9	385.9
27.5°	255.7	256.5	265.2	281.8	307.0	338.6	371.7	404.9	426.2	440.4	445.1
30°	273.9	274.7	284.9	306.2	335.4	374.9	419.1	461.7	490.1	510.7	511.4
32.5°	293.6	295.2	307.8	332.3	370.2	419.9	475.1	528.0	567.5	593.5	592.7
35°	320.4	322.0	339.4	367.0	412.8	472.0	539.1	610.9	656.7	686.7	689.8
37.5°	348.1	351.2	371.0	407.3	462.5	533.5	618.0	698.5	766.4	794.0	801.9
40°	380.4	383.6	408.0	452.2	516.2	606.9	711.1	809.8	887.9	925.8	931.3
42.5°	417.5	423.0	451.5	502.8	583.3	688.2	809.8	931.3	1030.0	1079.7	1076.6
45°	470.4	475.1	511.4	569.1	659.8	780.6	928.2	1080.5	1187.0	1244.7	1243.9
47.5°	520.9	527.2	570.6	643.2	748.2	888.7	1062.3	1236.0	1358.3	1422.2	1433.3
50°	573.0	581.7	636.9	718.2	842.9	1015.0	1209.9	1396.2	1544.6	1623.5	1642.4
52.5°	661.4	669.3	727.7	812.9	946.3	1136.5	1360.7	1569.8	1734.0	1817.7	1848.4
55°	721.4	734.0	808.2	914.8	1066.3	1267.6	1513.8	1755.3	1940.8	2022.9	2040.2
57.5°	741.1	754.5	843.7	975.5	1163.4	1405.7	1674.0	1932.9	2134.2	2245.4	2273.1
60°	741.9	758.5	854.8	997.6	1210.7	1502.8	1816.9	2123.9	2352.0	2474.3	2498.0
62.5°	767.2	786.1	888.7	1022.1	1234.4	1547.7	1914.0	2285.7	2565.1	2689.0	2715.1
65°	795.6	817.7	926.6	1075.0	1288.1	1595.9	1975.5	2402.5	2756.9	2901.3	2913.9
67.5°	766.4	785.3	899.8	1053.7	1275.4	1605.4	2018.9	2475.1	2872.1	3081.3	3091.5
70°	718.2	738.0	846.9	987.4	1205.2	1533.5	1969.2	2475.1	2940.0	3202.8	3250.2
72.5°	648.0	667.7	771.1	905.3	1101.0	1398.6	1831.1	2361.5	2893.4	3251.8	3307.0
75°	562.0	580.1	675.6	797.9	969.2	1238.3	1630.6	2145.2	2711.9	3161.0	3227.3
77.5°	468.8	485.4	566.7	665.3	810.6	1049.7	1385.9	1851.6	2394.6	2854.8	2940.8
80°	368.6	385.2	447.5	524.9	641.7	824.8	1103.4	1489.3	1958.9	2344.1	2428.6
82.5°	276.2	284.1	328.3	384.4	459.3	595.1	800.3	1101.0	1452.2	1728.5	1766.4
85°	173.6	180.7	210.7	249.4	294.4	365.4	493.3	674.0	877.7	1033.1	1035.5
87.5°	53.7	62.4	71.8	94.7	108.1	130.2	156.3	220.2	289.7	365.4	343.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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

Report Prepared for

Cooper Lighting Solutions

Streetworks

Report Number: SP1-2407-176-6

Test Date: 09/26/2024

Luminaire Tested: MEM2-HTN-VA-30-750-U-WQ

Data in this report applies to families of products including MEM2-HTN-VA-30-750-U-WQ

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-176-6
 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-30-750-U-WQ**
 Description: EPIC MODERN VISUAL COMFORT 30W WAVESTREAM WIDE

Spectral Parameters

CCT (K): 4786
 CIE u': 0.2093
 CIE v': 0.4953
 Duv: 0.0066
 CIE x: 0.3533
 CIE y: 0.3716
 CIE z: 0.2751
 Peak Wavelength (nm): 449
 Dominant Wavelength (nm): 570
 Purity: 17.53512
 Rf: 73
 Rg: 94.6

CRI (Ra):	70.9		
R1:	67.8	R9:	-29.8
R2:	75.1	R10:	40.9
R3:	80.6	R11:	67.4
R4:	71.6	R12:	35.3
R5:	67.8	R13:	68.5
R6:	65.4	R14:	89.0
R7:	82.0	R15:	60.9
R8:	57.0		



Test Conditions

Stabilization Time: 45M
 Operation Time: 1H 45M
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-176-6

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: SP1-2407-176-6

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 5000K 7-step quadrangle

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Photopic Flux vs. Wavelength

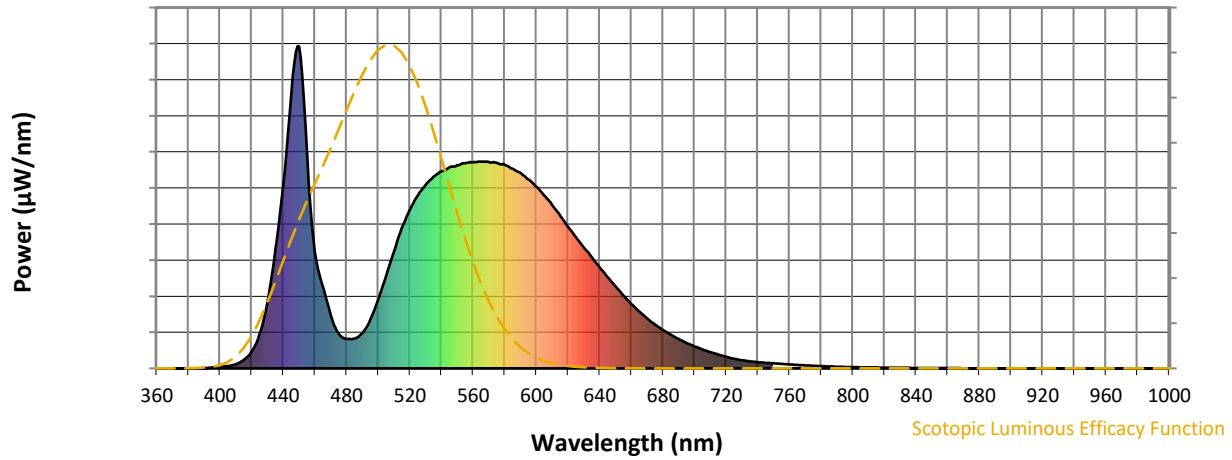


Photopic Lumens: NR

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	110	NR	620	440	NR	750	16	NR	880	0	NR
365	0	NR	495	150	NR	625	407	NR	755	14	NR	885	0	NR
370	0	NR	500	213	NR	630	375	NR	760	12	NR	890	0	NR
375	0	NR	505	288	NR	635	345	NR	765	11	NR	895	0	NR
380	0	NR	510	364	NR	640	314	NR	770	9	NR	900	0	NR
385	0	NR	515	436	NR	645	283	NR	775	8	NR	905	0	NR
390	1	NR	520	492	NR	650	254	NR	780	7	NR	910	0	NR
395	3	NR	525	537	NR	655	227	NR	785	6	NR	915	0	NR
400	5	NR	530	570	NR	660	200	NR	790	5	NR	920	0	NR
405	7	NR	535	595	NR	665	177	NR	795	4	NR	925	0	NR
410	13	NR	540	611	NR	670	155	NR	800	4	NR	930	0	NR
415	25	NR	545	624	NR	675	136	NR	805	3	NR	935	0	NR
420	52	NR	550	631	NR	680	119	NR	810	3	NR	940	0	NR
425	106	NR	555	637	NR	685	104	NR	815	3	NR	945	0	NR
430	204	NR	560	640	NR	690	91	NR	820	2	NR	950	0	NR
435	369	NR	565	642	NR	695	79	NR	825	2	NR	955	0	NR
440	573	NR	570	641	NR	700	68	NR	830	2	NR	960	0	NR
445	844	NR	575	638	NR	705	59	NR	835	2	NR	965	0	NR
450	999	NR	580	632	NR	710	50	NR	840	1	NR	970	0	NR
455	668	NR	585	620	NR	715	43	NR	845	1	NR	975	0	NR
460	361	NR	590	607	NR	720	36	NR	850	1	NR	980	0	NR
465	255	NR	595	586	NR	725	30	NR	855	1	NR	985	0	NR
470	165	NR	600	564	NR	730	25	NR	860	1	NR	990	0	NR
475	106	NR	605	537	NR	735	22	NR	865	1	NR	995	0	NR
480	91	NR	610	507	NR	740	19	NR	870	0	NR	1000	0	NR
485	93	NR	615	474	NR	745	17	NR	875	0	NR			

REPORT NUMBER: SP1-2407-176-6

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.69

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	110	NR	620	440	NR	750	16	NR	880	0	NR
365	0	NR	495	150	NR	625	407	NR	755	14	NR	885	0	NR
370	0	NR	500	213	NR	630	375	NR	760	12	NR	890	0	NR
375	0	NR	505	288	NR	635	345	NR	765	11	NR	895	0	NR
380	0	NR	510	364	NR	640	314	NR	770	9	NR	900	0	NR
385	0	NR	515	436	NR	645	283	NR	775	8	NR	905	0	NR
390	1	NR	520	492	NR	650	254	NR	780	7	NR	910	0	NR
395	3	NR	525	537	NR	655	227	NR	785	6	NR	915	0	NR
400	5	NR	530	570	NR	660	200	NR	790	5	NR	920	0	NR
405	7	NR	535	595	NR	665	177	NR	795	4	NR	925	0	NR
410	13	NR	540	611	NR	670	155	NR	800	4	NR	930	0	NR
415	25	NR	545	624	NR	675	136	NR	805	3	NR	935	0	NR
420	52	NR	550	631	NR	680	119	NR	810	3	NR	940	0	NR
425	106	NR	555	637	NR	685	104	NR	815	3	NR	945	0	NR
430	204	NR	560	640	NR	690	91	NR	820	2	NR	950	0	NR
435	369	NR	565	642	NR	695	79	NR	825	2	NR	955	0	NR
440	573	NR	570	641	NR	700	68	NR	830	2	NR	960	0	NR
445	844	NR	575	638	NR	705	59	NR	835	2	NR	965	0	NR
450	999	NR	580	632	NR	710	50	NR	840	1	NR	970	0	NR
455	668	NR	585	620	NR	715	43	NR	845	1	NR	975	0	NR
460	361	NR	590	607	NR	720	36	NR	850	1	NR	980	0	NR
465	255	NR	595	586	NR	725	30	NR	855	1	NR	985	0	NR
470	165	NR	600	564	NR	730	25	NR	860	1	NR	990	0	NR
475	106	NR	605	537	NR	735	22	NR	865	1	NR	995	0	NR
480	91	NR	610	507	NR	740	19	NR	870	0	NR	1000	0	NR
485	93	NR	615	474	NR	745	17	NR	875	0	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.36

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	110	NR	620	440	NR	750	16	NR	880	0	NR
365	0	NR	495	150	NR	625	407	NR	755	14	NR	885	0	NR
370	0	NR	500	213	NR	630	375	NR	760	12	NR	890	0	NR
375	0	NR	505	288	NR	635	345	NR	765	11	NR	895	0	NR
380	0	NR	510	364	NR	640	314	NR	770	9	NR	900	0	NR
385	0	NR	515	436	NR	645	283	NR	775	8	NR	905	0	NR
390	1	NR	520	492	NR	650	254	NR	780	7	NR	910	0	NR
395	3	NR	525	537	NR	655	227	NR	785	6	NR	915	0	NR
400	5	NR	530	570	NR	660	200	NR	790	5	NR	920	0	NR
405	7	NR	535	595	NR	665	177	NR	795	4	NR	925	0	NR
410	13	NR	540	611	NR	670	155	NR	800	4	NR	930	0	NR
415	25	NR	545	624	NR	675	136	NR	805	3	NR	935	0	NR
420	52	NR	550	631	NR	680	119	NR	810	3	NR	940	0	NR
425	106	NR	555	637	NR	685	104	NR	815	3	NR	945	0	NR
430	204	NR	560	640	NR	690	91	NR	820	2	NR	950	0	NR
435	369	NR	565	642	NR	695	79	NR	825	2	NR	955	0	NR
440	573	NR	570	641	NR	700	68	NR	830	2	NR	960	0	NR
445	844	NR	575	638	NR	705	59	NR	835	2	NR	965	0	NR
450	999	NR	580	632	NR	710	50	NR	840	1	NR	970	0	NR
455	668	NR	585	620	NR	715	43	NR	845	1	NR	975	0	NR
460	361	NR	590	607	NR	720	36	NR	850	1	NR	980	0	NR
465	255	NR	595	586	NR	725	30	NR	855	1	NR	985	0	NR
470	165	NR	600	564	NR	730	25	NR	860	1	NR	990	0	NR
475	106	NR	605	537	NR	735	22	NR	865	1	NR	995	0	NR
480	91	NR	610	507	NR	740	19	NR	870	0	NR	1000	0	NR
485	93	NR	615	474	NR	745	17	NR	875	0	NR			

Summary

$R_f = 73$
 $R_g = 94.6$
 $CIE R_a = 70.9$
 $R_g = -29.8$

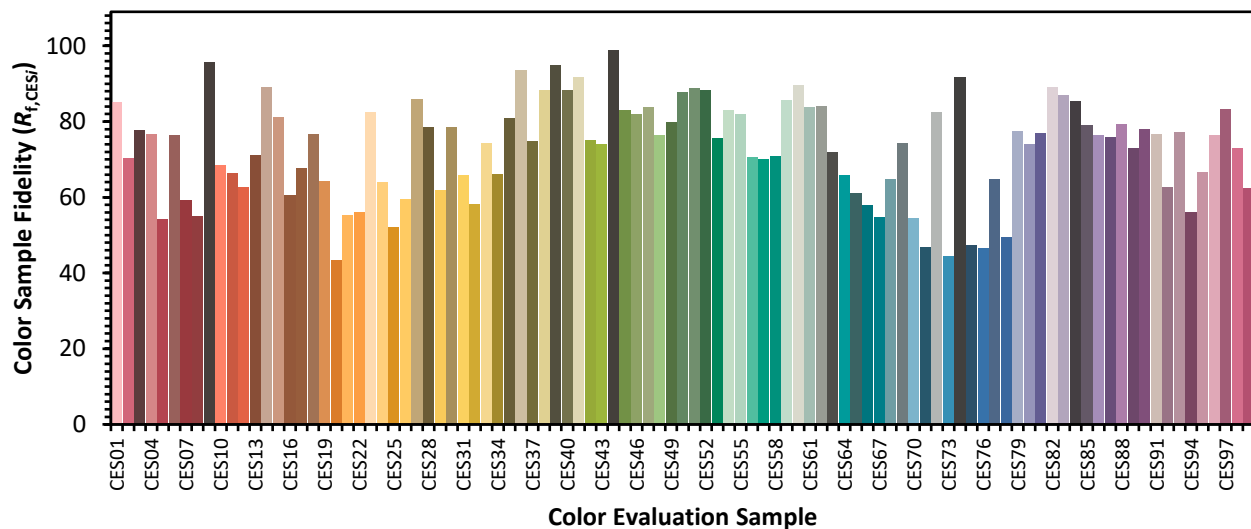


Color Vector Graphics

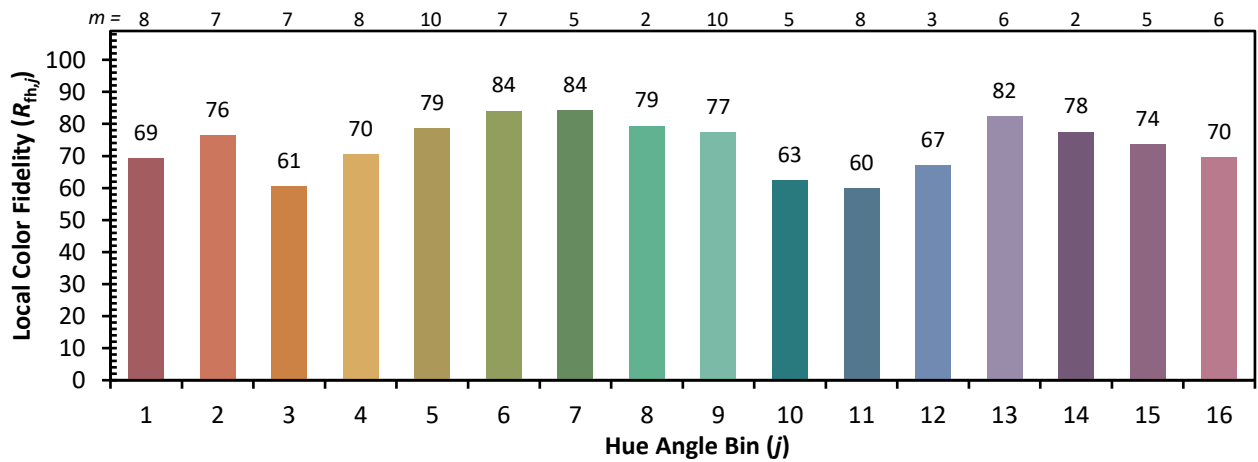
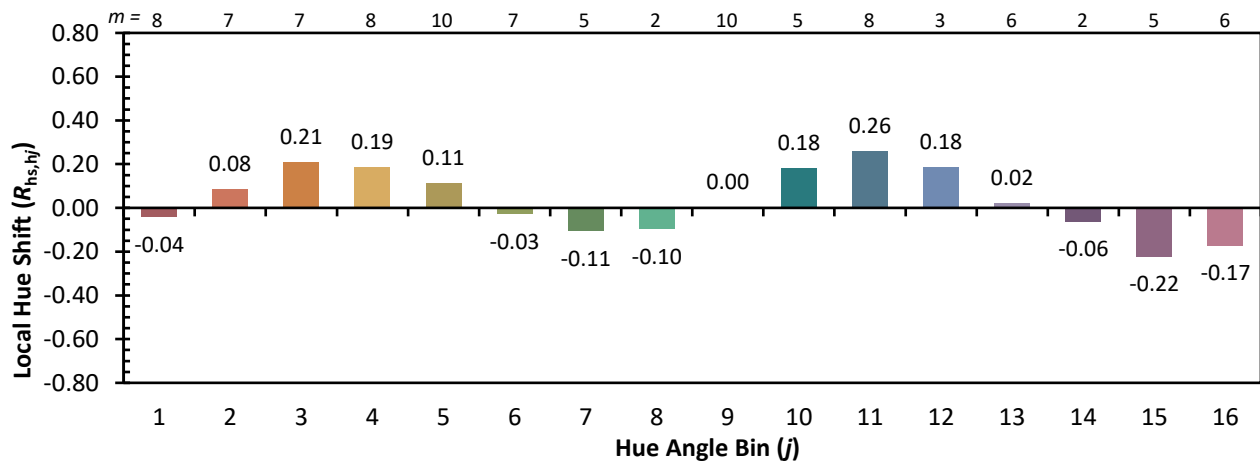
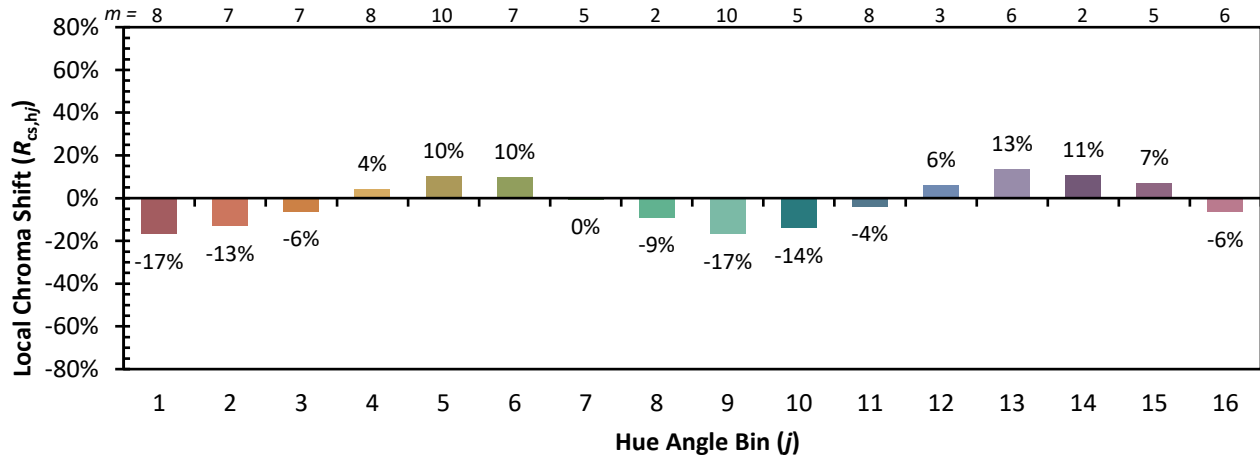


Individual Sample Fidelity Index ($R_{f,i}$)

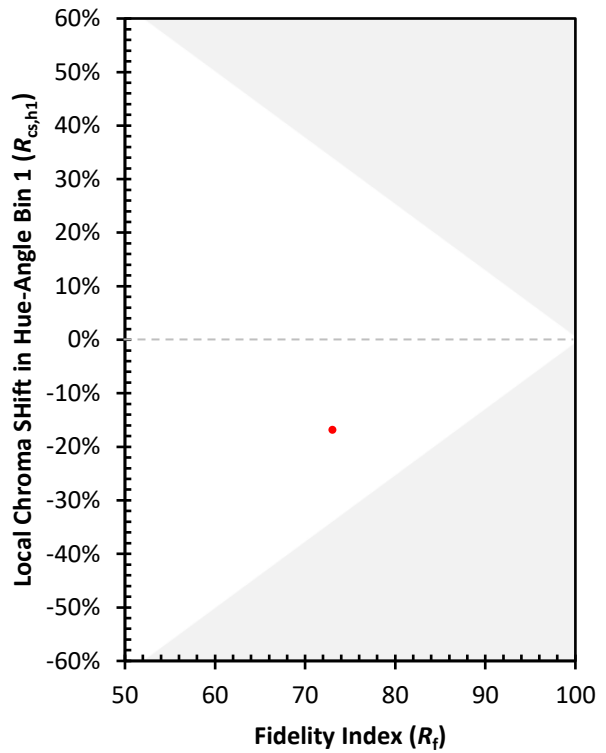
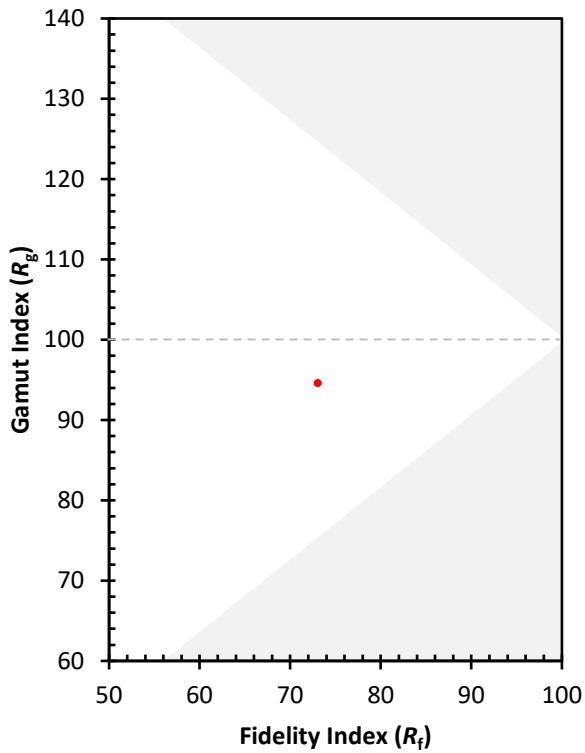
CES01 = 85	CES26 = 60	CES51 = 89	CES76 = 46
CES02 = 59	CES27 = 86	CES52 = 88	CES77 = 65
CES03 = 30	CES28 = 78	CES53 = 76	CES78 = 49
CES04 = 69	CES29 = 62	CES54 = 83	CES79 = 78
CES05 = 46	CES30 = 79	CES55 = 82	CES80 = 74
CES06 = 50	CES31 = 66	CES56 = 71	CES81 = 77
CES07 = 39	CES32 = 58	CES57 = 70	CES82 = 89
CES08 = 38	CES33 = 74	CES58 = 71	CES83 = 87
CES09 = 29	CES34 = 66	CES59 = 86	CES84 = 86
CES10 = 72	CES35 = 81	CES60 = 90	CES85 = 79
CES11 = 56	CES36 = 94	CES61 = 84	CES86 = 76
CES12 = 61	CES37 = 75	CES62 = 84	CES87 = 76
CES13 = 41	CES38 = 88	CES63 = 72	CES88 = 79
CES14 = 74	CES39 = 95	CES64 = 66	CES89 = 73
CES15 = 70	CES40 = 88	CES65 = 61	CES90 = 78
CES16 = 46	CES41 = 92	CES66 = 58	CES91 = 77
CES17 = 49	CES42 = 75	CES67 = 55	CES92 = 63
CES18 = 55	CES43 = 74	CES68 = 65	CES93 = 77
CES19 = 71	CES44 = 99	CES69 = 74	CES94 = 56
CES20 = 64	CES45 = 83	CES70 = 55	CES95 = 67
CES21 = 85	CES46 = 82	CES71 = 47	CES96 = 76
CES22 = 77	CES47 = 84	CES72 = 82	CES97 = 83
CES23 = 91	CES48 = 76	CES73 = 44	CES98 = 73
CES24 = 90	CES49 = 80	CES74 = 92	CES99 = 62
CES25 = 71	CES50 = 88	CES75 = 47	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)