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

Scaled data based on original data using

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

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P636497

Luminaire Tested: GWS-SA3F-830-U-SL4-W-HSS

Issue Date: 1/10/2023

Report Generated By 670246102 / DESKTOP-G35701P

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

Scaled Data Report

Test Information

Test Method:	LM-79-2019
Report Number:	P636497
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-36)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	1/10/2023
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	McGRAW-EDISON
Catalog Number:	GWS-SA3F-830-U-SL4-W-HSS
Description:	GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source:	(48) 3000K CCT, 80 CRI LEDS
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	15303.9 lumens
Efficiency:	N/A
Efficacy:	83.5 lumens/watt
Luminous Opening:	Rectangular (W 1.5' x L: 0.5' x H: 0')
IES Classification:	Type IV - Short
BUG Rating:	B1 - U0 - G3

Input Watts (W):	183.2
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	0
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	28.75 FT

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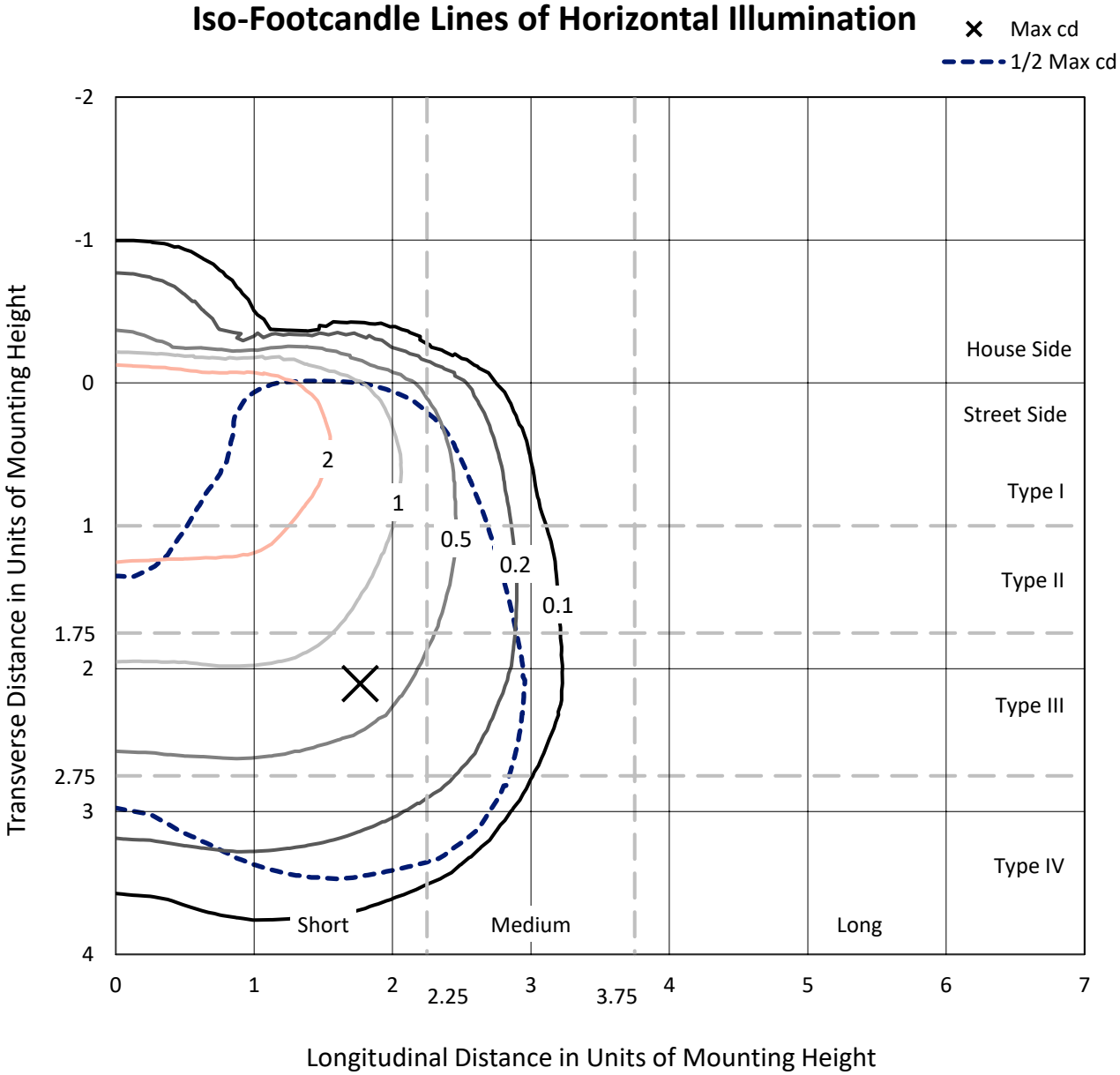
Scaled Data Report

REPORT NUMBER: P636497
CATALOG NUMBER: GWS-SA3F-830-U-SL4-W-HSS

Iso-Footcandle Lines of Horizontal Illumination



Based on 25 foot mounting height. Maximum calculated value = 4.5 fc
Type IV - Short - N/A

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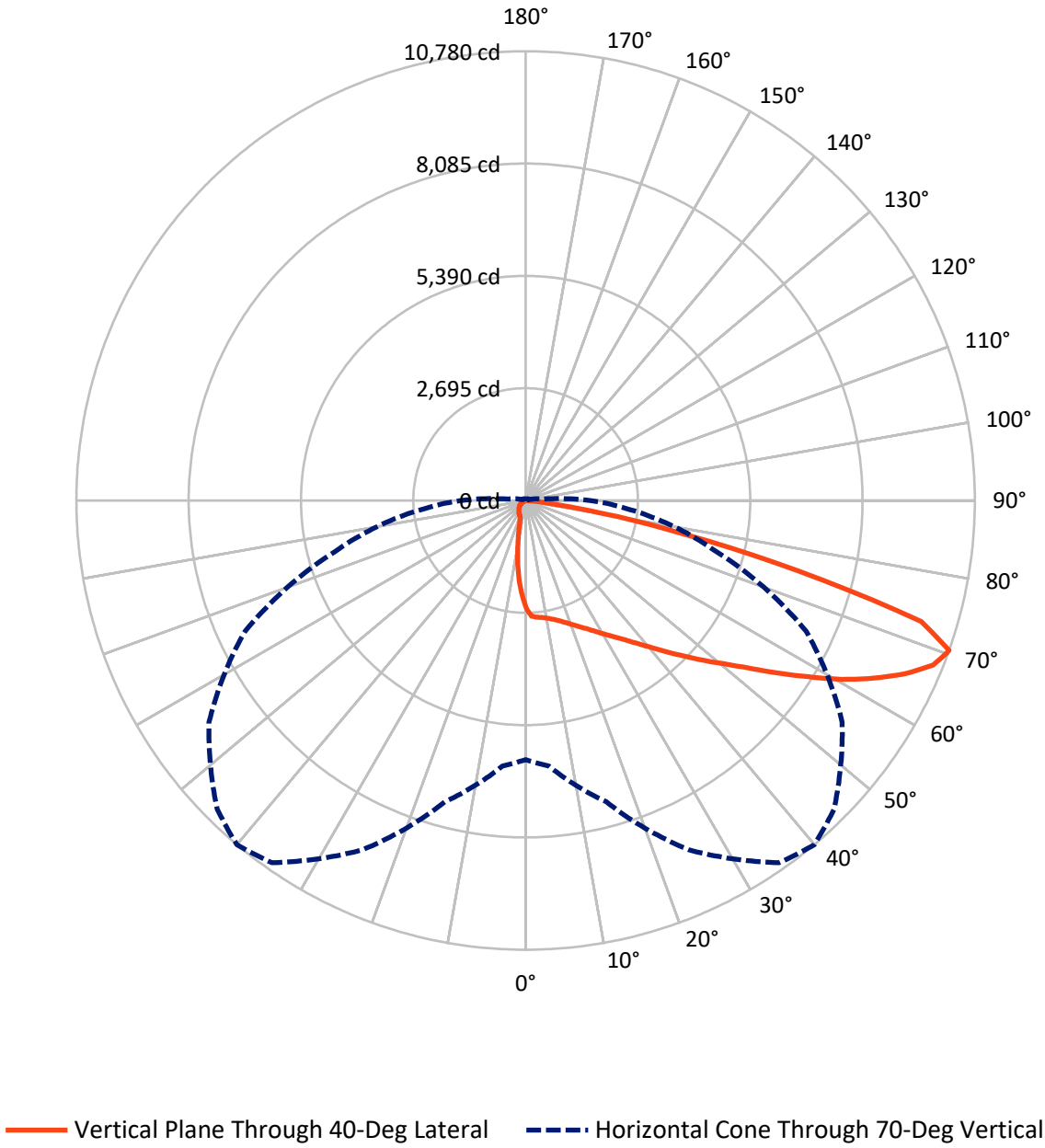
Luminous Intensity Polar Plot



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REPORT NUMBER: P636497
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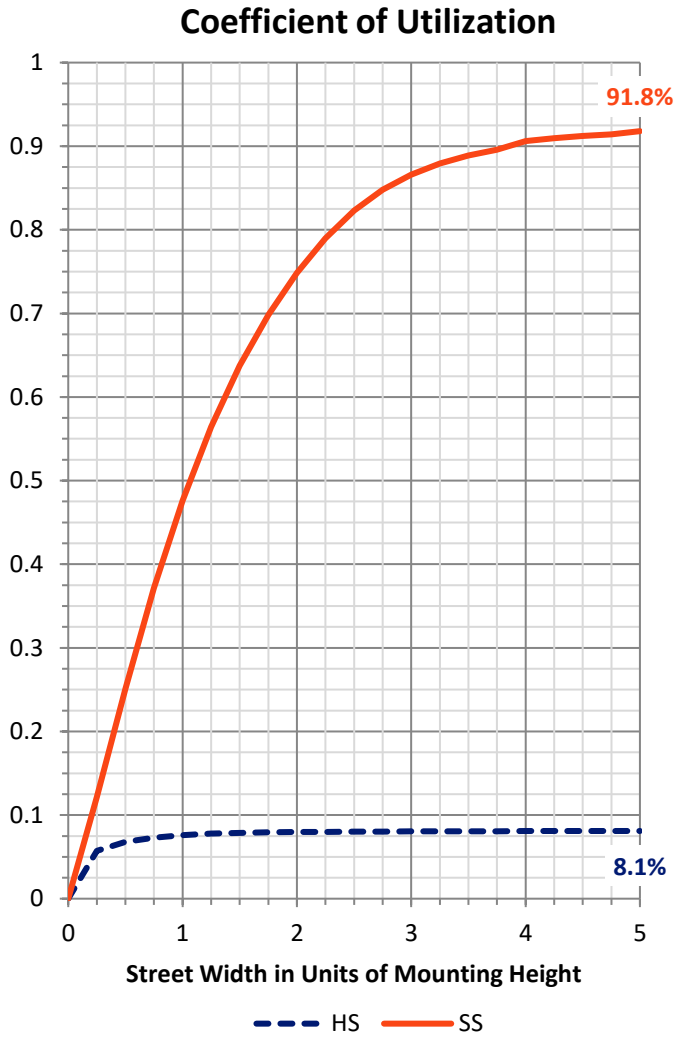
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1251.5	0.0	1251.5
	% Fixture	8.2	0.0	8.2
Street Side	Lumens	14052.4	0.0	14052.4
	% Fixture	91.8	0.0	91.8
Total	Lumens	15303.9	0.0	15303.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	219.5	1.4
10°-20°	556.7	3.6
20°-30°	931.7	6.1
30°-40°	1463.3	9.6
40°-50°	2314.7	15.1
50°-60°	3376.5	22.1
60°-70°	4185.6	27.4
70°-80°	2117.7	13.8
80°-90°	138.3	0.9
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°	15303.9	100.0
0°-180°	15303.9	100.0



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REPORT NUMBER: P636497
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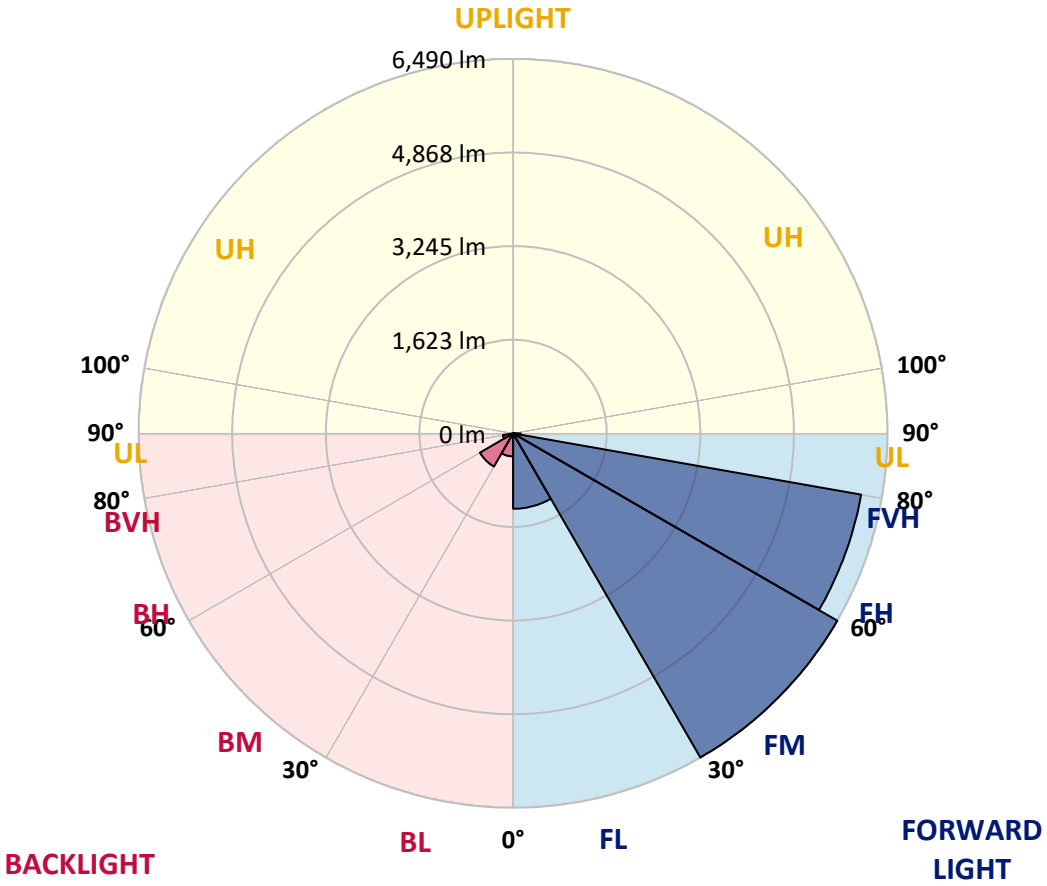
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	1308.2	8.5			
FM	(30°-60°)	6490.2	42.4			
FH	(60°-80°)	6124.9	40.0			G3/7500
FVH	(80°-90°)	129.1	0.8			G2/225
BL	(0°-30°)	399.6	2.6	B1/500		
BM	(30°-60°)	664.3	4.3	B1/1000		
BH	(60°-80°)	178.4	1.2	B1/500		G1/500
BVH	(80°-90°)	9.1	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3
Type IV Short



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Scaled Data Report

REPORT NUMBER: P636497
CATALOG NUMBER: GWS-SA3F-830-U-SL4-W-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	2596.9	2596.9	2596.9	2596.9	2596.9	2596.9	2596.9	2596.9	2596.9	2596.9	2596.9
2.5°	2791.8	2801.6	2800.2	2804.4	2794.6	2779.3	2776.5	2755.6	2718.0	2670.7	2617.8
5°	2848.9	2860.1	2851.7	2847.5	2829.4	2812.7	2808.5	2786.3	2743.1	2679.0	2587.1
7.5°	2897.7	2900.4	2894.9	2885.1	2858.7	2836.4	2821.1	2790.4	2738.9	2674.9	2569.0
10°	2906.0	2904.6	2907.4	2908.8	2892.1	2872.6	2860.1	2818.3	2752.8	2684.6	2570.4
12.5°	2896.3	2896.3	2914.4	2935.2	2935.2	2925.5	2913.0	2875.4	2798.8	2718.0	2598.3
15°	2908.8	2913.0	2947.8	2986.8	2999.3	2989.6	2984.0	2945.0	2865.6	2776.5	2648.4
17.5°	2953.4	2957.5	3013.2	3071.7	3087.0	3075.9	3064.7	3025.8	2940.8	2843.3	2705.5
20°	3018.8	3029.9	3100.9	3176.1	3190.1	3176.1	3153.9	3099.6	3014.6	2915.8	2759.8
22.5°	3138.5	3145.5	3222.1	3301.5	3308.4	3286.1	3252.7	3177.5	3088.4	2992.3	2821.1
25°	3297.3	3307.0	3383.6	3460.2	3442.1	3408.7	3362.7	3277.8	3176.1	3082.8	2899.0
27.5°	3486.7	3497.8	3573.0	3639.8	3592.5	3553.5	3502.0	3396.1	3293.1	3208.2	2999.3
30°	3691.3	3701.1	3767.9	3827.8	3765.1	3719.2	3657.9	3549.3	3444.9	3380.8	3141.3
32.5°	3889.1	3887.7	3951.7	4000.5	3936.4	3900.2	3844.5	3734.5	3651.0	3623.1	3353.0
35°	4072.9	4072.9	4125.8	4174.5	4128.6	4109.1	4057.6	3969.8	3922.5	3955.9	3635.6
37.5°	4258.1	4248.3	4298.4	4352.7	4348.6	4350.0	4320.7	4278.9	4281.7	4400.1	4024.1
40°	4411.2	4407.1	4465.5	4536.5	4592.2	4636.8	4618.7	4634.0	4721.7	4943.1	4521.2
42.5°	4533.8	4543.5	4618.7	4731.5	4872.1	4962.6	4975.2	5037.8	5263.4	5605.9	5082.4
45°	4674.4	4675.8	4780.2	4952.9	5177.1	5320.5	5370.6	5532.1	5852.4	6293.8	5697.8
47.5°	4847.1	4830.4	4947.3	5189.6	5514.0	5725.7	5814.8	6016.7	6512.4	6965.0	6199.1
50°	5037.8	5007.2	5139.5	5469.5	5891.4	6155.9	6337.0	6632.2	7166.9	7516.4	6572.3
52.5°	5259.2	5230.0	5380.4	5791.1	6343.9	6665.6	6898.1	7196.1	7728.0	7936.9	6795.1
55°	5540.5	5511.3	5670.0	6176.8	6878.6	7296.4	7540.0	7790.7	8250.2	8247.4	6956.6
57.5°	5852.4	5812.0	6032.0	6664.2	7545.6	7980.0	8227.9	8350.4	8647.0	8488.3	7065.2
60°	6210.3	6174.0	6479.0	7244.8	8315.6	8718.0	8874.0	8823.9	8972.8	8630.3	7027.6
62.5°	6533.3	6516.6	6895.3	7860.3	9049.4	9389.2	9432.3	9213.7	9212.3	8633.1	6774.2
65°	6868.9	6900.9	7463.4	8569.0	9787.4	10015.8	9942.0	9600.8	9308.4	8291.9	6025.1
67.5°	6994.2	7087.5	7838.0	9209.6	10369.5	10547.7	10418.2	9794.4	8908.8	7144.6	4588.1
70°	6220.0	6395.4	7484.3	9245.8	10610.3	10780.2	10469.7	9273.6	7427.2	4732.9	2513.3
72.5°	4730.1	4934.8	6236.7	7570.7	9542.3	9929.4	9398.9	7555.3	4787.2	2073.3	843.8
75°	2647.0	2868.4	4645.2	5700.6	6406.6	6760.3	6565.3	4847.1	2120.7	541.7	252.0
77.5°	895.3	969.1	2161.1	3527.0	4228.8	3911.3	3311.2	2407.5	779.8	206.1	133.7
80°	530.5	558.4	804.8	1755.9	2225.1	1845.0	1456.5	889.8	396.8	110.0	93.3
82.5°	158.7	188.0	444.2	651.7	871.7	543.0	459.5	508.2	206.1	59.9	78.0
85°	0.0	0.0	94.7	201.9	228.4	89.1	89.1	288.2	37.6	25.1	57.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.4	7.0	4.2	5.6	12.5
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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REPORT NUMBER: P636497
CATALOG NUMBER: GWS-SA3F-830-U-SL4-W-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2596.9	2596.9	2596.9	2596.9	2596.9	2596.9	2596.9	2596.9	2596.9	2596.9	2596.9
2.5°	2580.2	2531.4	2474.4	2420.0	2368.5	2301.7	2269.7	2230.7	2197.3	2179.2	2188.9
5°	2528.7	2452.1	2335.1	2216.8	2097.0	1984.2	1882.6	1814.3	1753.1	1721.0	1728.0
7.5°	2484.1	2381.1	2198.7	2005.1	1812.9	1619.4	1462.1	1339.5	1244.8	1205.8	1198.9
10°	2464.6	2335.1	2077.5	1799.0	1503.8	1243.4	1020.7	885.6	789.5	742.2	750.5
12.5°	2474.4	2311.4	1974.5	1597.1	1214.2	910.7	697.6	570.9	502.7	474.8	467.9
15°	2502.2	2305.9	1882.6	1391.0	937.1	636.3	481.8	430.3	416.3	413.6	413.6
17.5°	2534.2	2307.3	1787.9	1182.2	711.5	472.0	412.2	402.4	398.2	395.5	396.8
20°	2566.3	2307.3	1679.3	970.5	534.7	408.0	392.7	385.7	381.5	380.1	380.1
22.5°	2605.2	2307.3	1558.1	774.2	428.9	387.1	374.6	370.4	366.2	364.8	363.4
25°	2652.6	2308.7	1424.5	605.7	389.9	369.0	359.2	355.1	350.9	348.1	348.1
27.5°	2720.8	2319.8	1276.9	472.0	367.6	352.3	343.9	339.8	335.6	331.4	331.4
30°	2819.7	2347.6	1111.2	389.9	346.7	334.2	325.8	323.0	318.9	314.7	313.3
32.5°	2967.3	2396.4	939.9	349.5	327.2	314.7	304.9	302.2	298.0	293.8	292.4
35°	3173.4	2485.5	772.8	324.4	302.2	289.6	284.1	282.7	277.1	272.9	272.9
37.5°	3475.5	2630.3	612.7	299.4	281.3	271.5	264.6	261.8	256.2	252.0	250.6
40°	3844.5	2818.3	476.2	279.9	261.8	252.0	245.1	240.9	233.9	228.4	225.6
42.5°	4315.2	3048.0	376.0	259.0	243.7	233.9	228.4	220.0	210.3	201.9	200.5
45°	4805.3	3284.8	310.5	239.5	227.0	218.6	211.6	200.5	186.6	176.8	174.1
47.5°	5181.2	3432.3	271.5	218.6	208.9	201.9	193.5	179.6	162.9	151.8	149.0
50°	5450.0	3454.6	242.3	199.1	193.5	186.6	174.1	157.3	139.2	128.1	125.3
52.5°	5582.3	3354.4	218.6	181.0	176.8	169.9	154.6	136.5	117.0	105.8	103.0
55°	5642.1	3165.0	196.3	165.7	160.1	151.8	135.1	115.6	96.1	86.3	83.5
57.5°	5618.5	2885.1	176.8	150.4	143.4	133.7	115.6	94.7	79.4	69.6	68.2
60°	5443.0	2492.5	157.3	135.1	126.7	115.6	97.5	78.0	64.1	57.1	55.7
62.5°	5064.3	2005.1	137.9	117.0	111.4	100.3	83.5	64.1	52.9	48.7	47.3
65°	4288.7	1417.5	118.4	98.9	96.1	84.9	69.6	52.9	46.0	43.2	41.8
67.5°	3082.8	861.9	100.3	84.9	82.2	72.4	58.5	46.0	41.8	40.4	40.4
70°	*1549.8*	*408.0*	*79.4*	*69.6*	*69.6*	*59.9*	*50.1*	*41.8*	*40.4*	*39.0*	*39.0*
72.5°	526.3	174.1	59.9	54.3	57.1	51.5	43.2	39.0	39.0	39.0	39.0
75°	179.6	91.9	41.8	39.0	41.8	41.8	37.6	37.6	39.0	39.0	39.0
77.5°	117.0	61.3	29.2	26.5	32.0	32.0	32.0	34.8	37.6	37.6	37.6
80°	96.1	33.4	19.5	18.1	23.7	23.7	26.5	32.0	34.8	34.8	34.8
82.5°	82.2	20.9	11.1	12.5	16.7	18.1	22.3	26.5	30.6	32.0	32.0
85°	55.7	11.1	8.4	9.7	11.1	13.9	18.1	22.3	25.1	27.8	27.8
87.5°	15.3	4.2	5.6	7.0	7.0	9.7	13.9	16.7	19.5	20.9	20.9
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

MCGRAW EDISON

Report Number: SP1-2408-195-9

Test Date: 08/07/2024

Luminaire Tested: GALN-SB1A-830-U-5WQ

Data in this report applies to families of products including GALN-SB1A-830-U-5WQ.

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

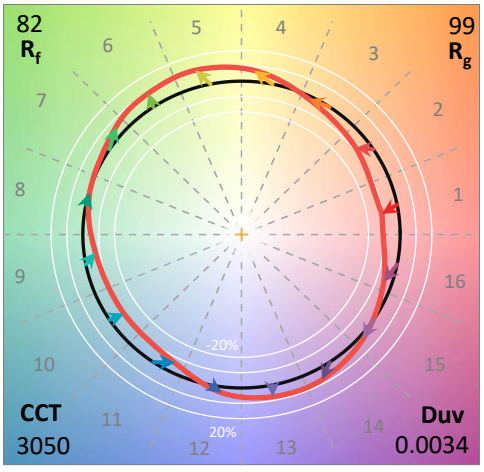
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2408-195-9
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	08/07/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	MCGRAW EDISON
Catalog Number:	**GALN-SB1A-830-U-5WQ**
Description:	GALLEON AREA AND ROADWAY LUMINAIRE. (1) 80 CRI, 3000K, 350MA HIGH DENSITY LIGHTSQUARE WITH 26 LEDS AND TYPE V WIDE OPTICS

Spectral Parameters

CCT (K):	3050	CRI (Ra):	81.0		
CIE u':	0.2476	R1:	79.6	R9:	7.1
CIE v':	0.5251	R2:	85.6	R10:	67.0
Duv:	0.0034	R3:	92.0	R11:	82.7
CIE x:	0.4383	R4:	82.6	R12:	63.2
CIE y:	0.4131	R5:	78.9	R13:	80.3
CIE z:	0.1487	R6:	81.7	R14:	95.0
Peak Wavelength (nm):	603	R7:	85.2	R15:	71.7
Dominant Wavelength (nm):	581	R8:	62.0		
Purity:	55.55201				

Rf:	81.5
Rg:	99.2



Test Conditions

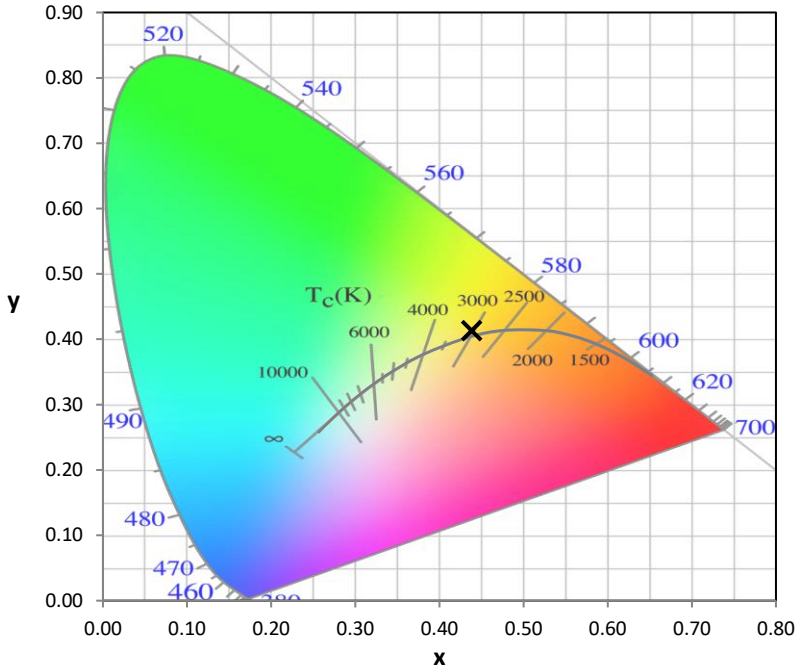
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

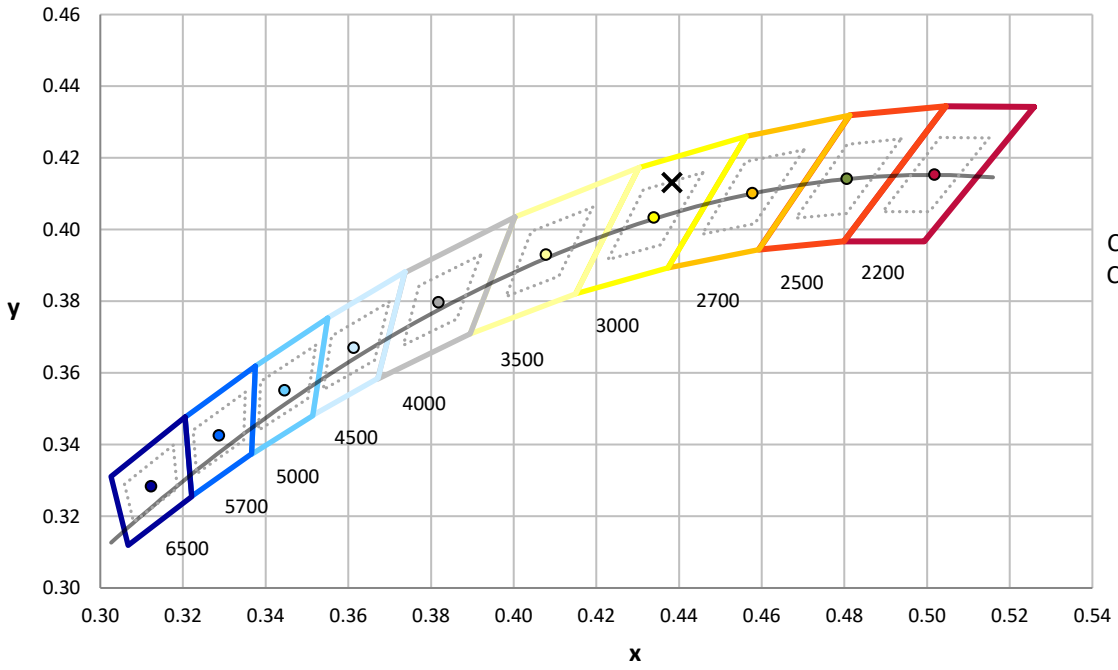
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2408-195-9

CIE 1931 Chromaticity Diagram



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

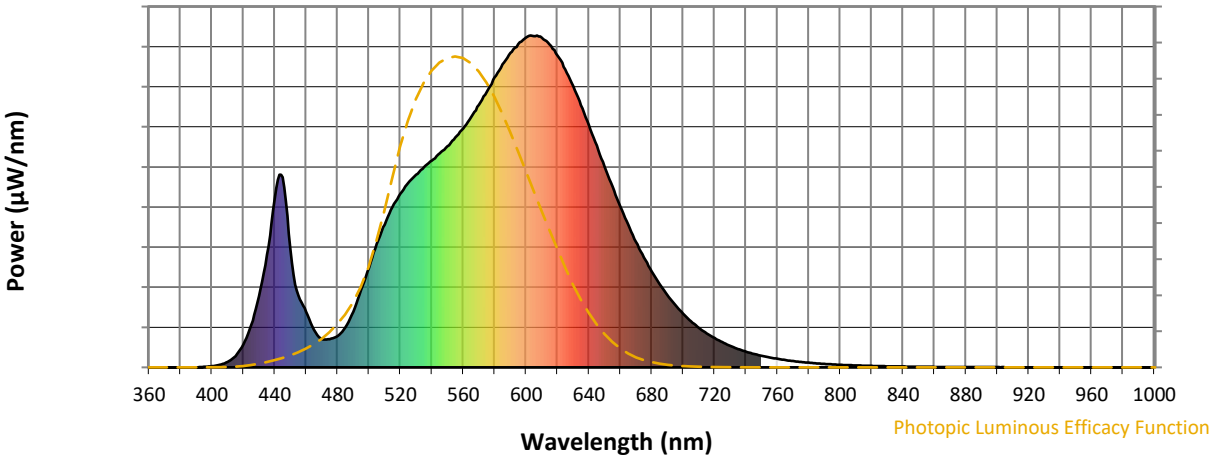


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

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	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

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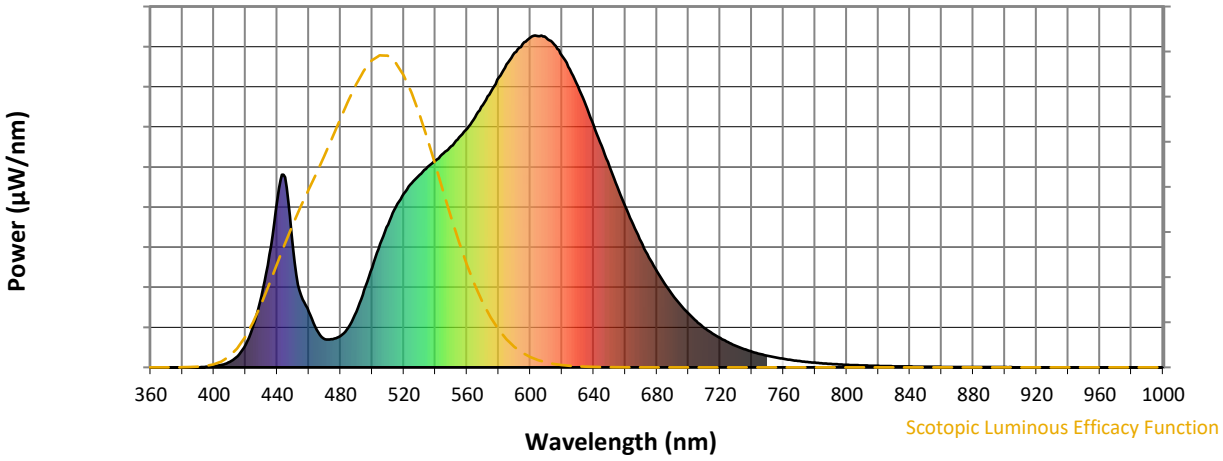
Scotopic Flux vs. Wavelength



Scotopic Lumens: NR **S/P: 1.27**

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	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

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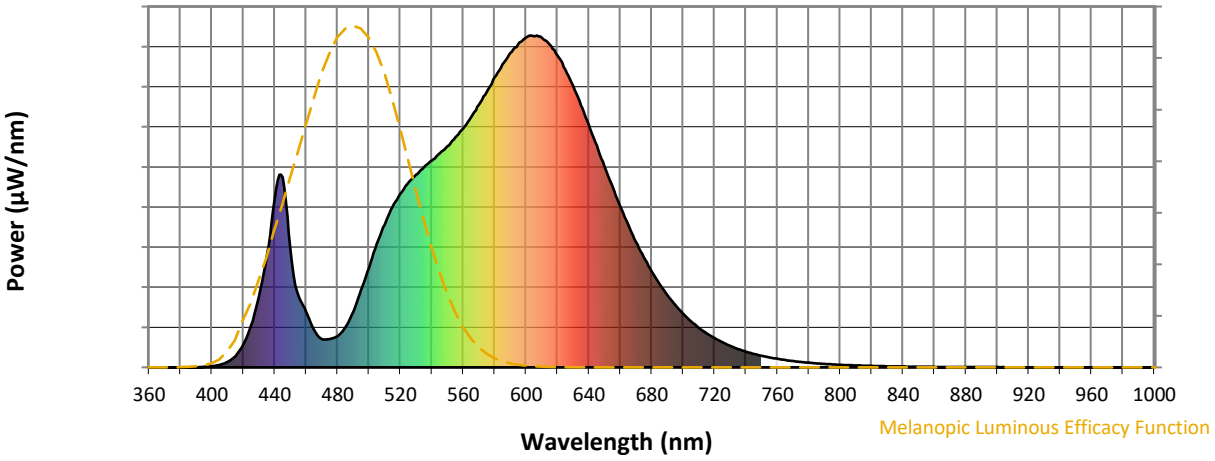
Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.32**

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	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

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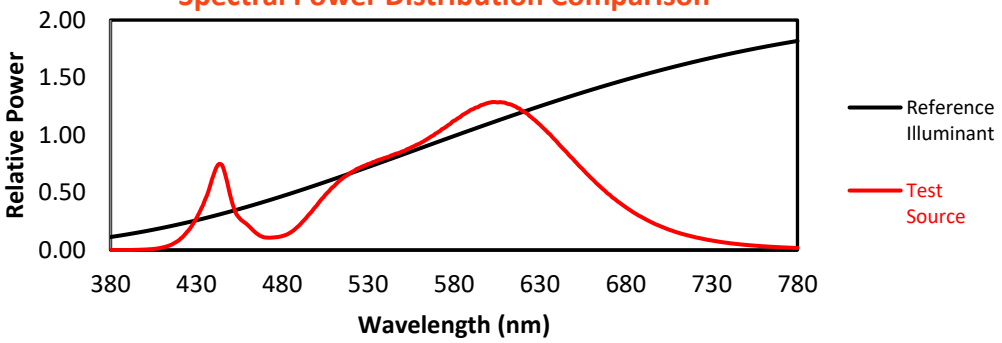
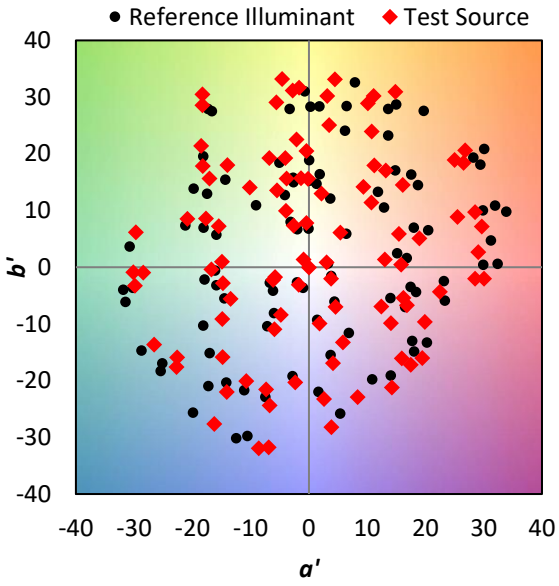
Summary

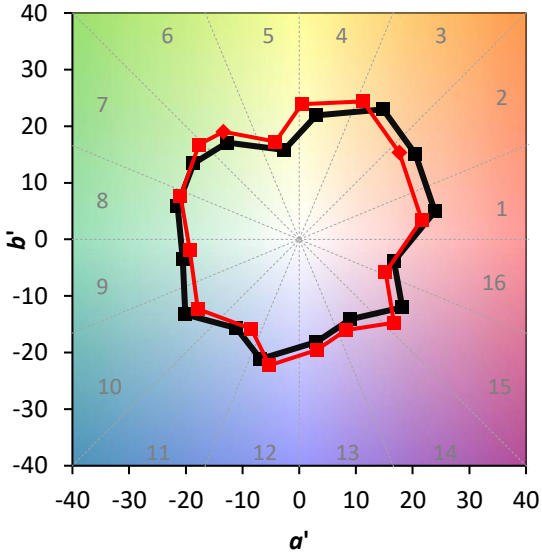
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

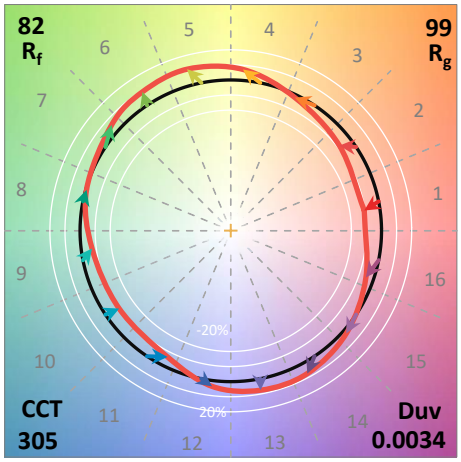
Spectral Power Distribution Comparison

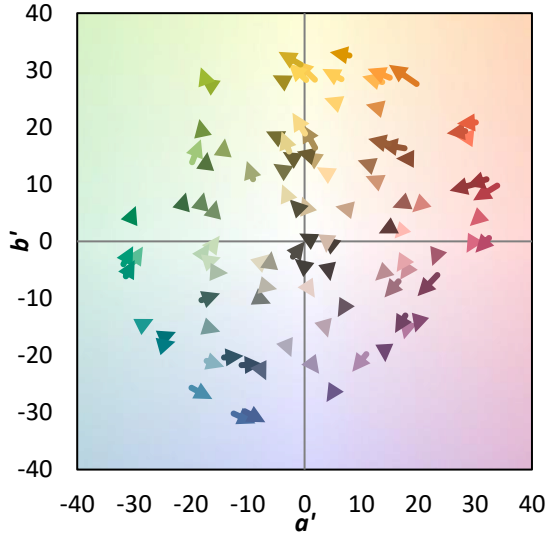


Color Vector Graphics









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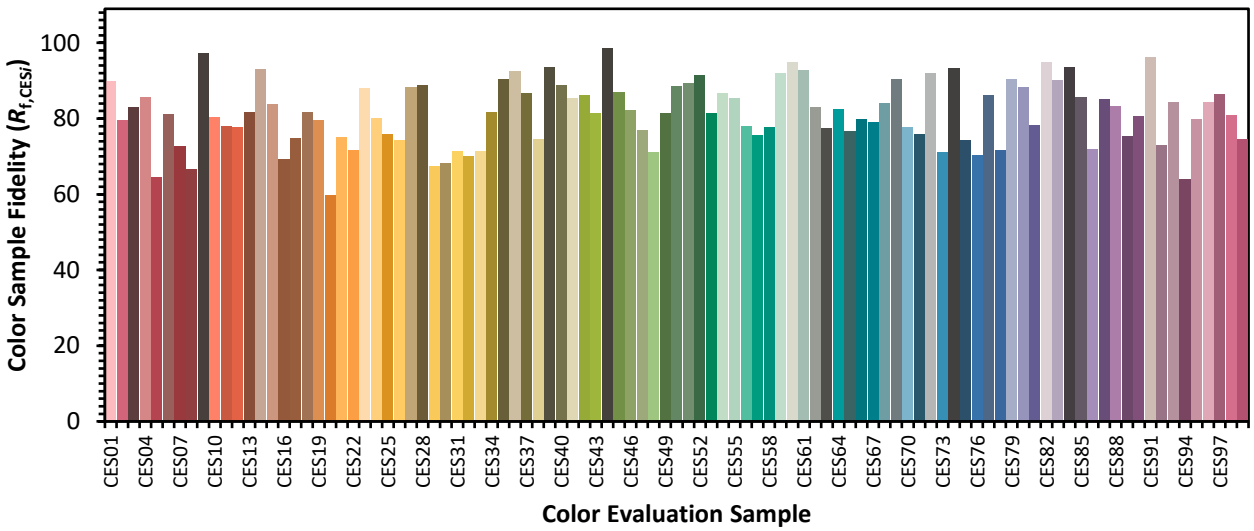
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82 = 95
CES08 = 41	CES33 = 71	CES58 = 78	CES83 = 90
CES09 = 29	CES34 = 82	CES59 = 92	CES84 = 94
CES10 = 76	CES35 = 90	CES60 = 95	CES85 = 86
CES11 = 59	CES36 = 93	CES61 = 93	CES86 = 72
CES12 = 65	CES37 = 87	CES62 = 83	CES87 = 85
CES13 = 43	CES38 = 75	CES63 = 77	CES88 = 83
CES14 = 74	CES39 = 94	CES64 = 83	CES89 = 75
CES15 = 71	CES40 = 89	CES65 = 77	CES90 = 81
CES16 = 47	CES41 = 85	CES66 = 80	CES91 = 96
CES17 = 50	CES42 = 86	CES67 = 79	CES92 = 73
CES18 = 56	CES43 = 81	CES68 = 84	CES93 = 84
CES19 = 72	CES44 = 99	CES69 = 91	CES94 = 64
CES20 = 66	CES45 = 87	CES70 = 78	CES95 = 80
CES21 = 87	CES46 = 82	CES71 = 76	CES96 = 84
CES22 = 79	CES47 = 77	CES72 = 92	CES97 = 87
CES23 = 92	CES48 = 71	CES73 = 71	CES98 = 81
CES24 = 91	CES49 = 81	CES74 = 93	CES99 = 74
CES25 = 72	CES50 = 89	CES75 = 74	



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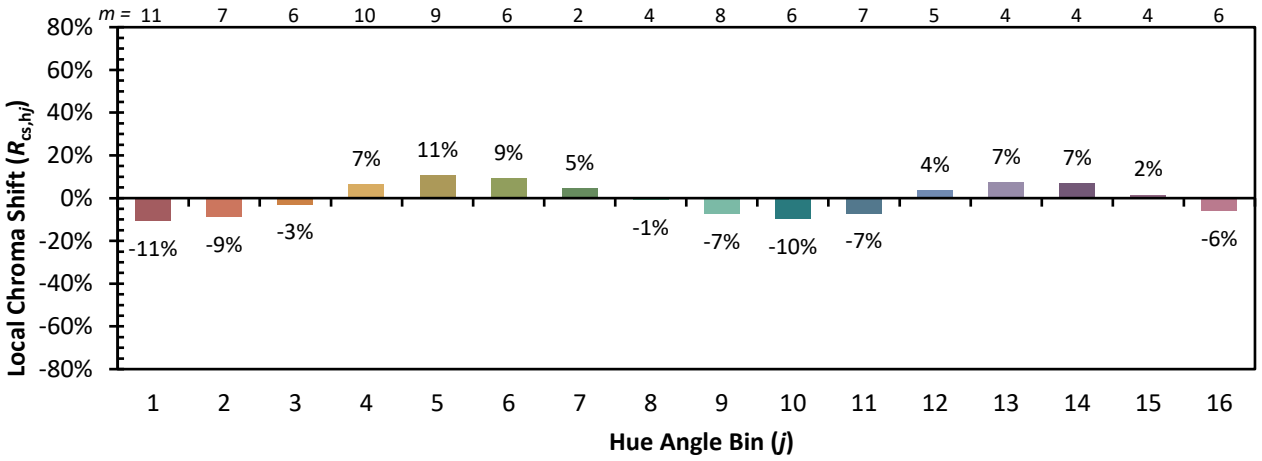
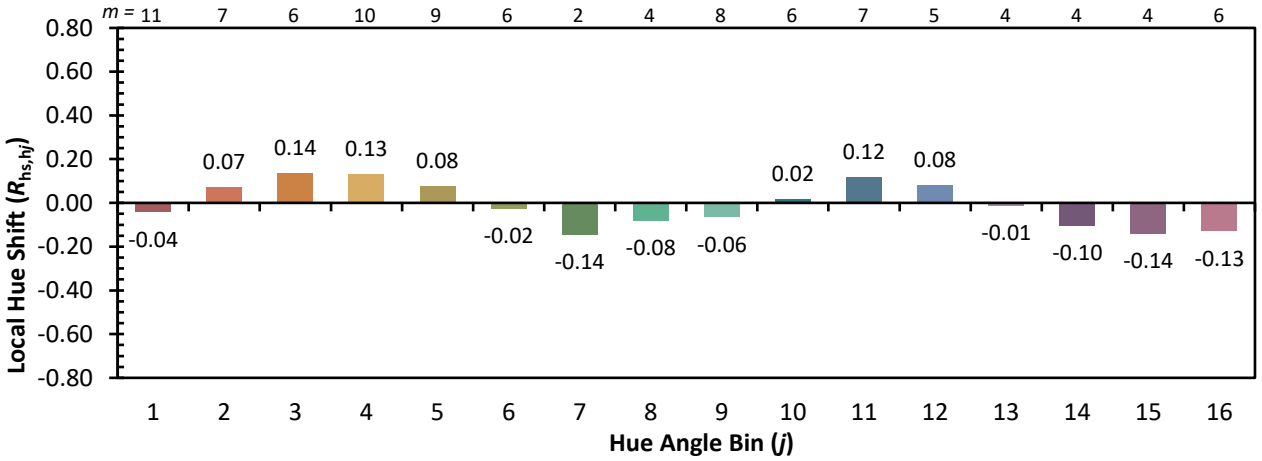
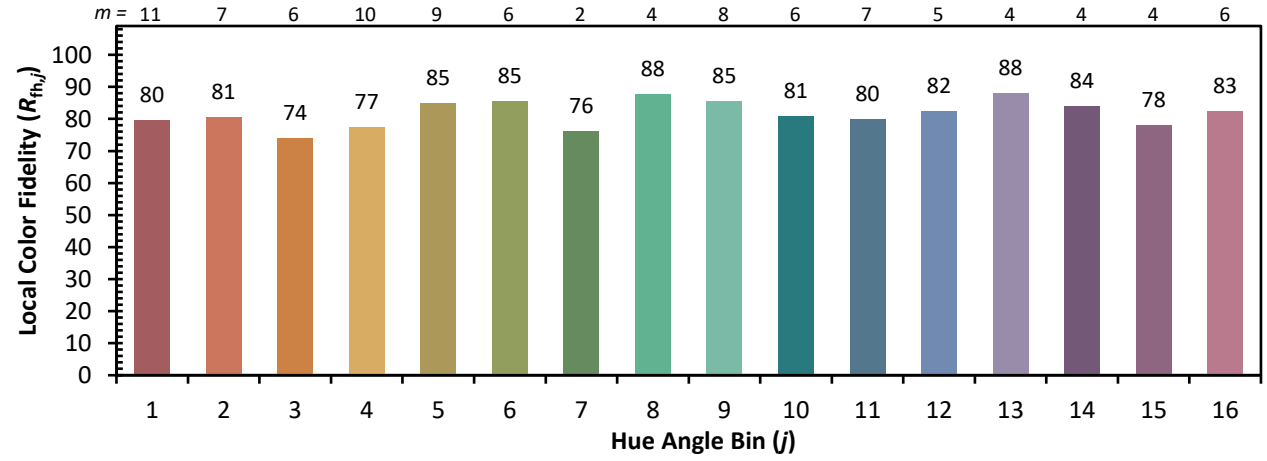
Color Rendition by Hue-Angle Bin







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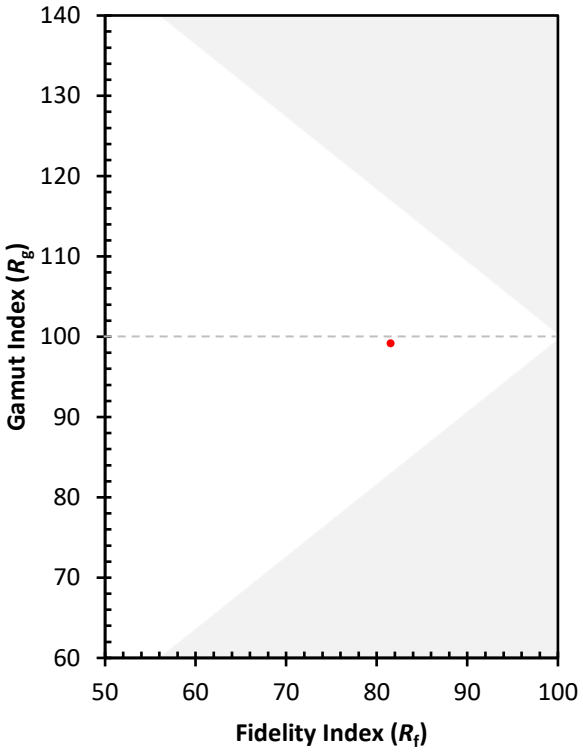
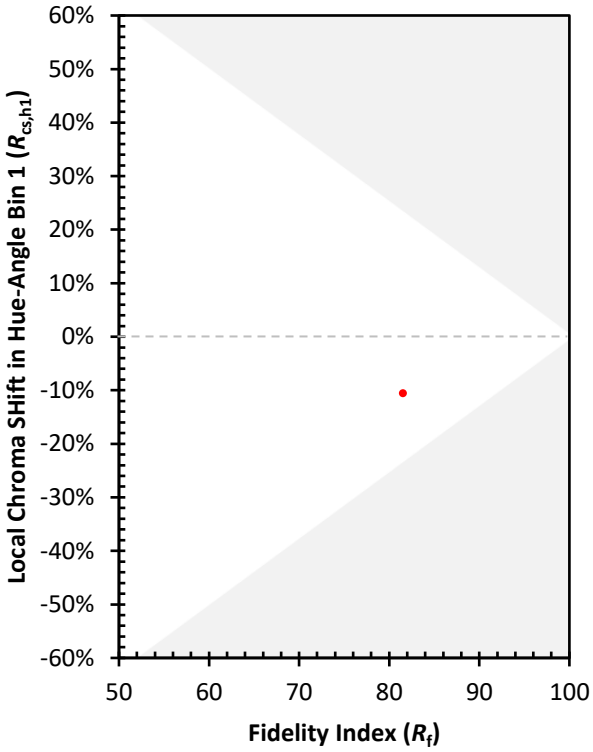
Measure Comparisons





(END OF REPORT)