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: P637982

Luminaire Tested: GWS-SA4D-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:	P637982
	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-SA4D-830-U-SL4-W-HSS
Description:	GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source:	(64) 3000K CCT, 80 CRI LEDS
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	15327.9 lumens
Efficiency:	N/A
Efficacy:	94.6 lumens/watt
Luminous Opening:	Rectangular (W 1' x L: 1' x H: 0')
IES Classification:	Type IV - Short
BUG Rating:	B1 - U0 - G3

Input Watts (W):	162.1
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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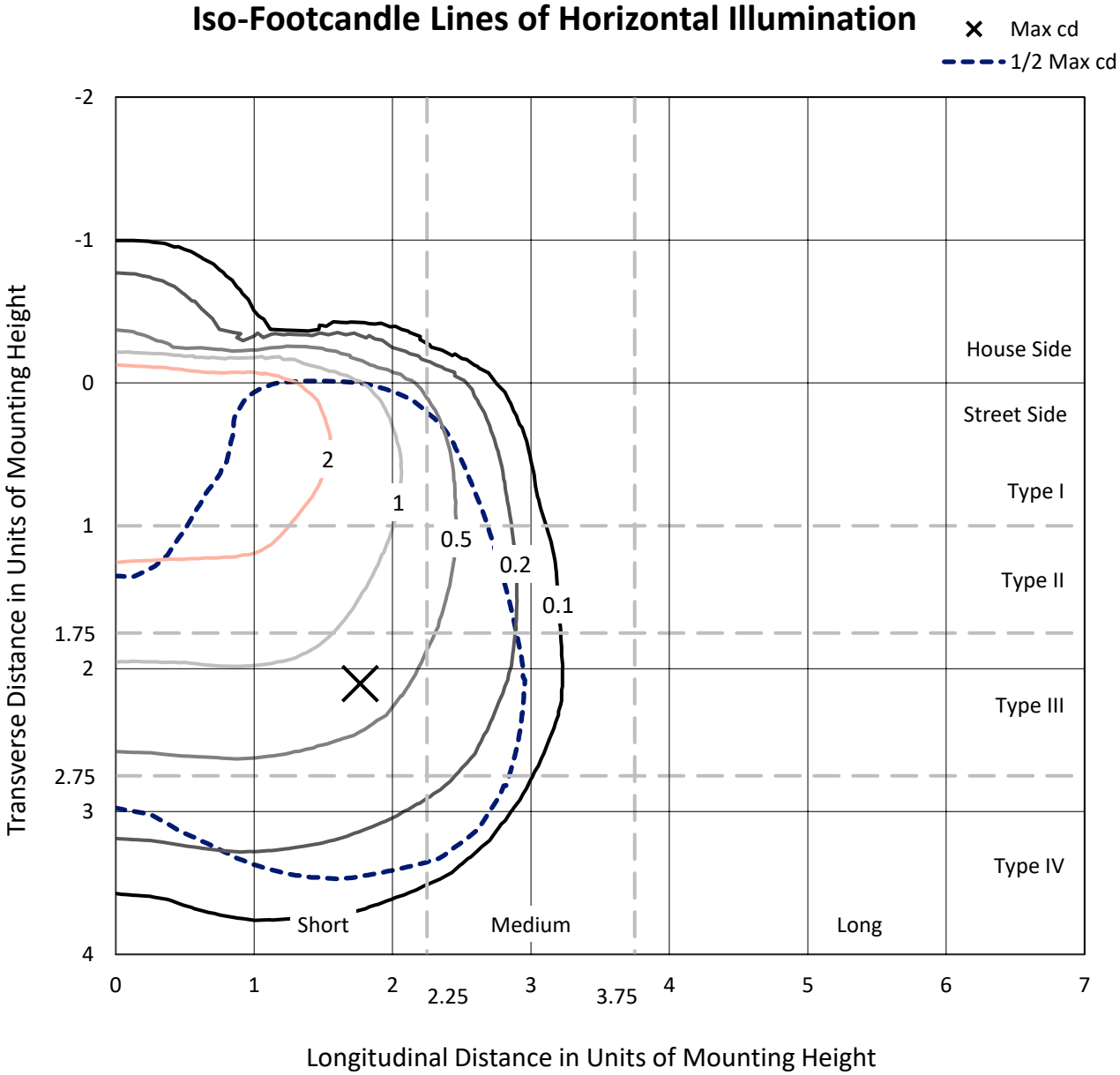
Scaled Data Report

REPORT NUMBER: P637982
CATALOG NUMBER: GWS-SA4D-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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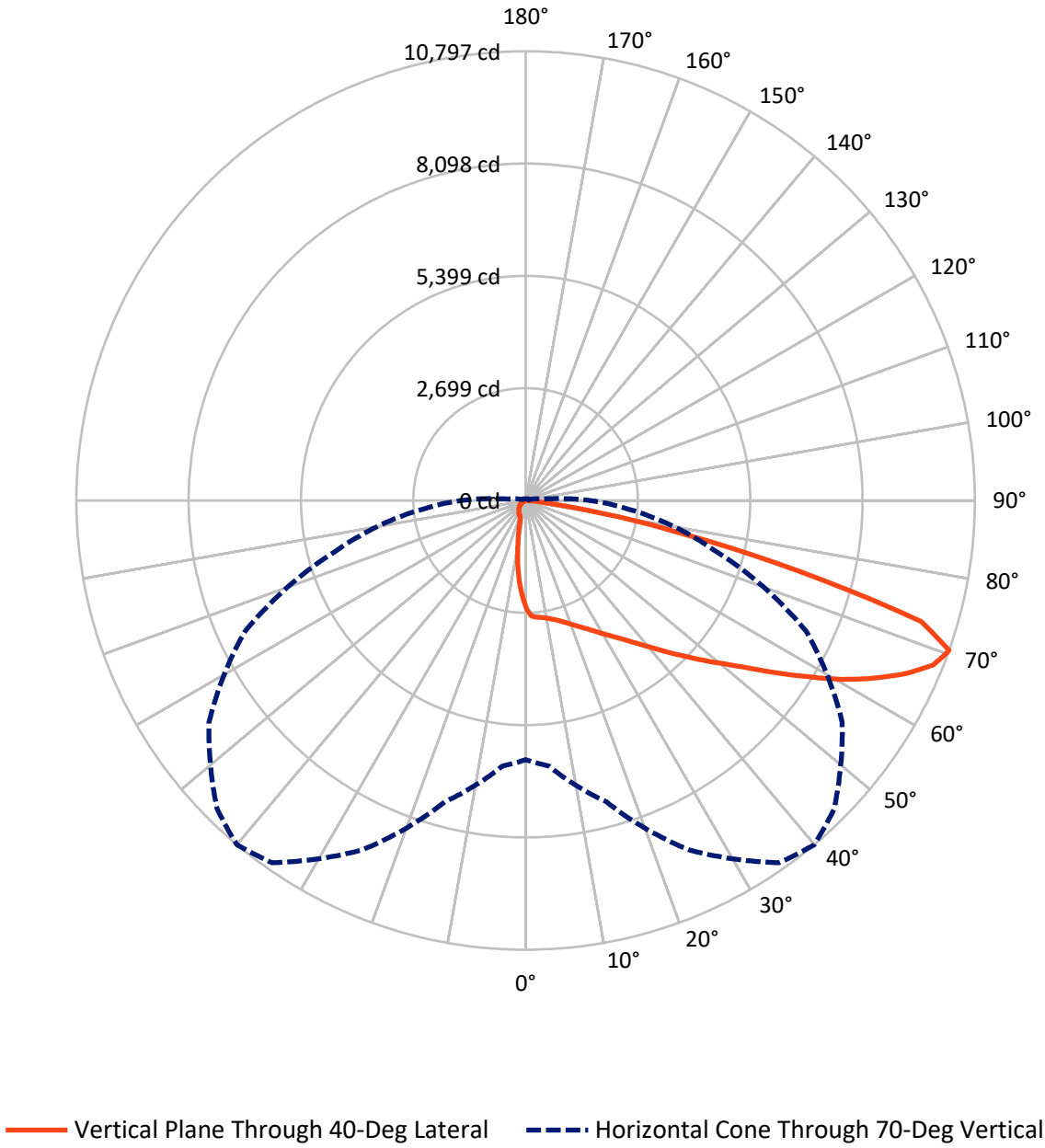
Luminous Intensity Polar Plot



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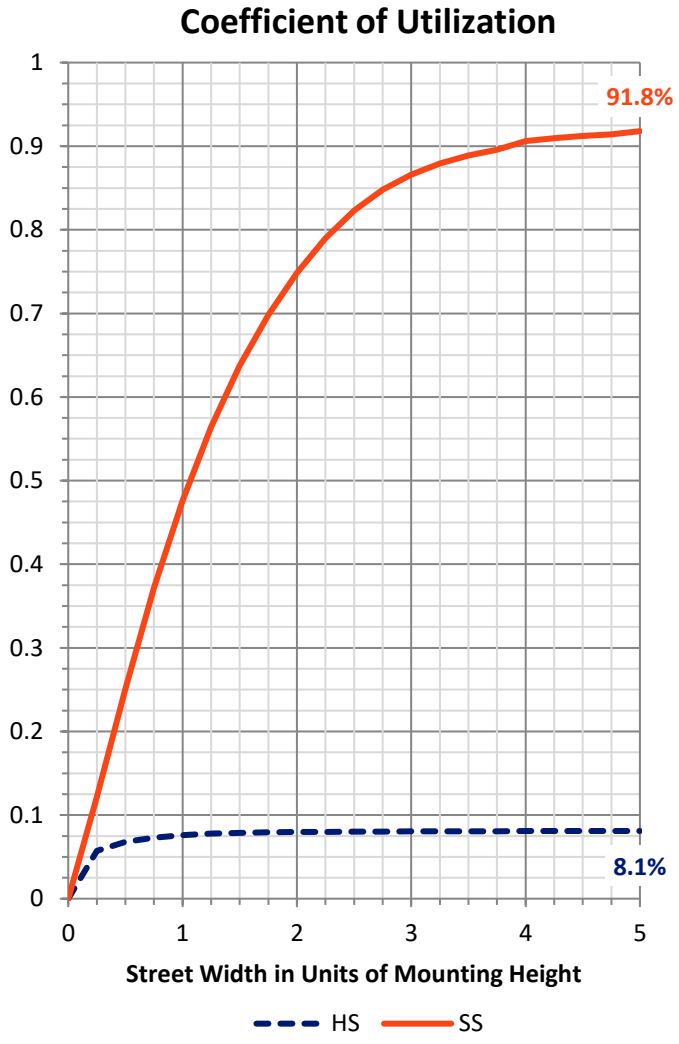
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1253.4	0.0	1253.4
	% Fixture	8.2	0.0	8.2
Street Side	Lumens	14074.5	0.0	14074.5
	% Fixture	91.8	0.0	91.8
Total	Lumens	15327.9	0.0	15327.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	219.8	1.4
10°-20°	557.5	3.6
20°-30°	933.2	6.1
30°-40°	1465.6	9.6
40°-50°	2318.3	15.1
50°-60°	3381.8	22.1
60°-70°	4192.2	27.4
70°-80°	2121.0	13.8
80°-90°	138.5	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°	15327.9	100.0
0°-180°	15327.9	100.0



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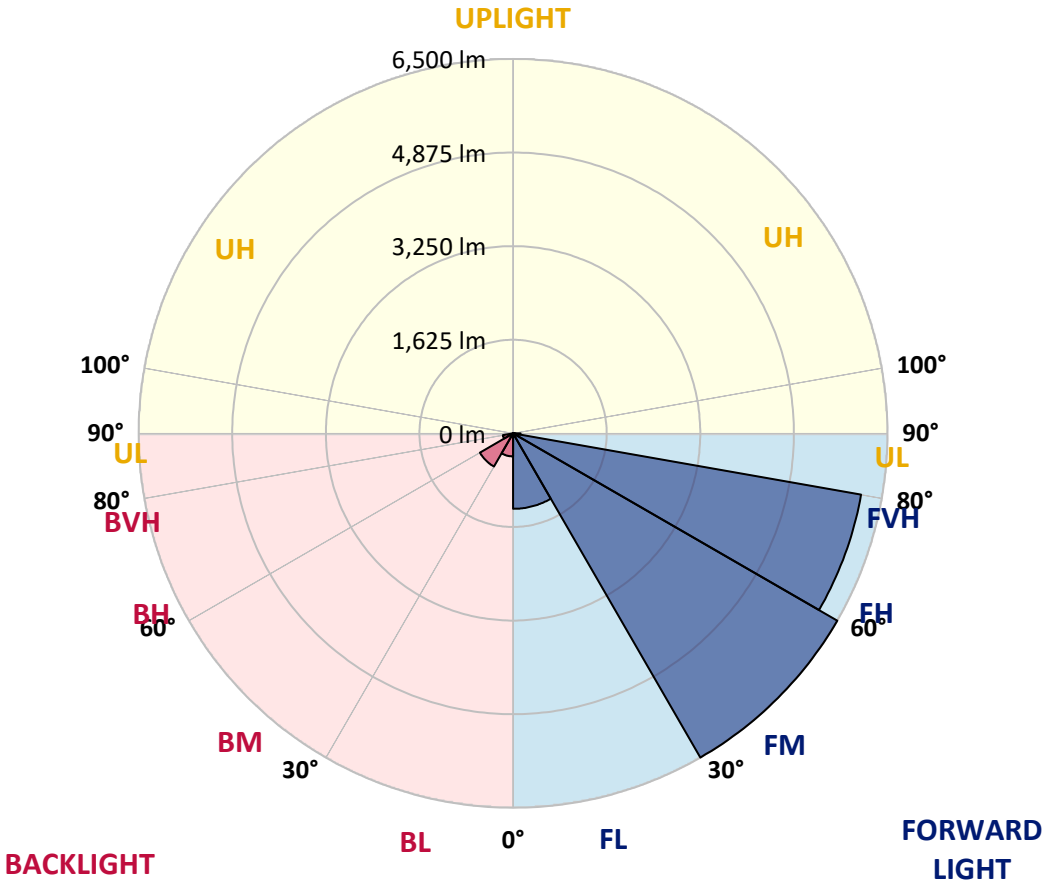
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	1310.3	8.5			
FM	(30°-60°)	6500.4	42.4			
FH	(60°-80°)	6134.5	40.0			G3/7500
FVH	(80°-90°)	129.3	0.8			G2/225
BL	(0°-30°)	400.3	2.6	B1/500		
BM	(30°-60°)	665.3	4.3	B1/1000		
BH	(60°-80°)	178.7	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: P637982
CATALOG NUMBER: GWS-SA4D-830-U-SL4-W-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	2601.0	2601.0	2601.0	2601.0	2601.0	2601.0	2601.0	2601.0	2601.0	2601.0	2601.0
2.5°	2796.2	2806.0	2804.6	2808.8	2799.0	2783.7	2780.9	2759.9	2722.3	2674.9	2621.9
5°	2853.4	2864.5	2856.2	2852.0	2833.9	2817.1	2812.9	2790.6	2747.4	2683.2	2591.2
7.5°	2902.2	2905.0	2899.4	2889.6	2863.1	2840.8	2825.5	2794.8	2743.2	2679.1	2573.1
10°	2910.6	2909.2	2912.0	2913.4	2896.6	2877.1	2864.5	2822.7	2757.2	2688.8	2574.5
12.5°	2900.8	2900.8	2918.9	2939.9	2939.9	2930.1	2917.5	2879.9	2803.2	2722.3	2602.4
15°	2913.4	2917.5	2952.4	2991.5	3004.0	2994.2	2988.7	2949.6	2870.1	2780.9	2652.6
17.5°	2958.0	2962.2	3018.0	3076.5	3091.9	3080.7	3069.6	3030.5	2945.4	2847.8	2709.7
20°	3023.5	3034.7	3105.8	3181.1	3195.1	3181.1	3158.8	3104.4	3019.3	2920.3	2764.1
22.5°	3143.5	3150.4	3227.1	3306.6	3313.6	3291.3	3257.8	3182.5	3093.3	2997.0	2825.5
25°	3302.5	3312.2	3388.9	3465.6	3447.5	3414.0	3368.0	3282.9	3181.1	3087.7	2903.6
27.5°	3492.1	3503.3	3578.6	3645.5	3598.1	3559.1	3507.5	3401.5	3298.3	3213.2	3004.0
30°	3697.1	3706.9	3773.8	3833.8	3771.0	3725.0	3663.7	3554.9	3450.3	3386.1	3146.3
32.5°	3895.2	3893.8	3957.9	4006.7	3942.6	3906.3	3850.5	3740.4	3656.7	3628.8	3358.2
35°	4079.3	4079.3	4132.3	4181.1	4135.0	4115.5	4063.9	3976.1	3928.6	3962.1	3641.3
37.5°	4264.7	4255.0	4305.2	4359.6	4355.4	4356.8	4327.5	4285.7	4288.4	4407.0	4030.4
40°	4418.1	4414.0	4472.5	4543.7	4599.4	4644.1	4625.9	4641.3	4729.1	4950.9	4528.3
42.5°	4540.9	4550.6	4625.9	4738.9	4879.8	4970.4	4983.0	5045.7	5271.7	5614.7	5090.4
45°	4681.7	4683.1	4787.7	4960.7	5185.2	5328.8	5379.0	5540.8	5861.6	6303.7	5706.8
47.5°	4854.7	4837.9	4955.1	5197.7	5522.7	5734.7	5823.9	6026.1	6522.6	6975.9	6208.8
50°	5045.7	5015.0	5147.5	5478.1	5900.6	6165.6	6346.9	6642.6	7178.1	7528.1	6582.6
52.5°	5267.5	5238.2	5388.8	5800.2	6353.9	6676.0	6908.9	7207.4	7740.1	7949.3	6805.7
55°	5549.2	5519.9	5678.9	6186.5	6889.4	7307.8	7551.9	7802.9	8263.1	8260.3	6967.5
57.5°	5861.6	5821.1	6041.5	6674.6	7557.4	7992.6	8240.8	8363.5	8660.6	8501.6	7076.3
60°	6220.0	6183.7	6489.2	7256.2	8328.7	8731.7	8887.9	8837.7	8986.9	8643.8	7038.6
62.5°	6543.5	6526.8	6906.1	7872.6	9063.6	9403.9	9447.1	9228.2	9226.8	8646.6	6784.8
65°	6879.6	6911.7	7475.1	8582.5	9802.8	10031.5	9957.6	9615.9	9323.0	8304.9	6034.5
67.5°	7005.2	7098.6	7850.3	9224.0	10385.7	10564.2	10434.5	9809.7	8922.8	7155.8	4595.3
70°	6229.8	6405.5	7496.1	9260.3	10627.0	10797.1	10486.1	9288.1	7438.9	4740.3	2517.3
72.5°	4737.5	4942.5	6246.5	7582.5	9557.3	9945.0	9413.7	7567.2	4794.7	2076.6	845.1
75°	2651.2	2872.9	4652.4	5709.6	6416.6	6770.9	6575.6	4854.7	2124.0	542.5	252.4
77.5°	896.7	970.7	2164.4	3532.6	4235.5	3917.5	3316.4	2411.3	781.0	206.4	133.9
80°	531.3	559.2	806.1	1758.6	2228.6	1847.9	1458.8	891.2	397.5	110.2	93.4
82.5°	159.0	188.3	444.9	652.7	873.0	543.9	460.2	509.0	206.4	60.0	78.1
85°	0.0	0.0	94.8	202.2	228.7	89.3	89.3	288.7	37.7	25.1	57.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.4	7.0	4.2	5.6	12.6
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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Scaled Data Report

REPORT NUMBER: P637982
CATALOG NUMBER: GWS-SA4D-830-U-SL4-W-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2601.0	2601.0	2601.0	2601.0	2601.0	2601.0	2601.0	2601.0	2601.0	2601.0	2601.0
2.5°	2584.2	2535.4	2478.2	2423.8	2372.2	2305.3	2273.2	2234.2	2200.7	2182.6	2192.3
5°	2532.6	2455.9	2338.8	2220.2	2100.3	1987.3	1885.5	1817.2	1755.8	1723.7	1730.7
7.5°	2488.0	2384.8	2202.1	2008.2	1815.8	1621.9	1464.3	1341.6	1246.8	1207.7	1200.8
10°	2468.5	2338.8	2080.8	1801.8	1506.2	1245.4	1022.3	887.0	790.7	743.3	751.7
12.5°	2478.2	2315.1	1977.6	1599.6	1216.1	912.1	698.7	571.8	503.5	475.6	468.6
15°	2506.1	2309.5	1885.5	1393.2	938.6	637.3	482.5	430.9	417.0	414.2	414.2
17.5°	2538.2	2310.9	1790.7	1184.0	712.6	472.8	412.8	403.0	398.9	396.1	397.5
20°	2570.3	2310.9	1681.9	972.0	535.5	408.6	393.3	386.3	382.1	380.7	380.7
22.5°	2609.3	2310.9	1560.6	775.4	429.5	387.7	375.2	371.0	366.8	365.4	364.0
25°	2656.7	2312.3	1426.7	606.7	390.5	369.6	359.8	355.6	351.4	348.7	348.7
27.5°	2725.1	2323.4	1278.9	472.8	368.2	352.8	344.5	340.3	336.1	331.9	331.9
30°	2824.1	2351.3	1112.9	390.5	347.3	334.7	326.3	323.6	319.4	315.2	313.8
32.5°	2971.9	2400.1	941.4	350.0	327.7	315.2	305.4	302.6	298.4	294.3	292.9
35°	3178.3	2489.4	774.0	324.9	302.6	290.1	284.5	283.1	277.5	273.3	273.3
37.5°	3481.0	2634.4	613.6	299.8	281.7	272.0	265.0	262.2	256.6	252.4	251.0
40°	3850.5	2822.7	477.0	280.3	262.2	252.4	245.5	241.3	234.3	228.7	225.9
42.5°	4321.9	3052.8	376.5	259.4	244.1	234.3	228.7	220.3	210.6	202.2	200.8
45°	4812.8	3289.9	311.0	239.9	227.3	219.0	212.0	200.8	186.9	177.1	174.3
47.5°	5189.4	3437.7	272.0	219.0	209.2	202.2	193.9	179.9	163.2	152.0	149.2
50°	5458.5	3460.0	242.7	199.4	193.9	186.9	174.3	157.6	139.5	128.3	125.5
52.5°	5591.0	3359.6	219.0	181.3	177.1	170.1	154.8	136.7	117.1	106.0	103.2
55°	5651.0	3170.0	196.6	166.0	160.4	152.0	135.3	115.8	96.2	86.5	83.7
57.5°	5627.3	2889.6	177.1	150.6	143.6	133.9	115.8	94.8	79.5	69.7	68.3
60°	5451.6	2496.4	157.6	135.3	126.9	115.8	97.6	78.1	64.2	57.2	55.8
62.5°	5072.2	2008.2	138.1	117.1	111.6	100.4	83.7	64.2	53.0	48.8	47.4
65°	4295.4	1419.7	118.5	99.0	96.2	85.1	69.7	53.0	46.0	43.2	41.8
67.5°	3087.7	863.3	100.4	85.1	82.3	72.5	58.6	46.0	41.8	40.4	40.4
70°	*1552.2*	*408.6*	*79.5*	*69.7*	*69.7*	*60.0*	*50.2*	*41.8*	*40.4*	*39.0*	*39.0*
72.5°	527.2	174.3	60.0	54.4	57.2	51.6	43.2	39.0	39.0	39.0	39.0
75°	179.9	92.0	41.8	39.0	41.8	41.8	37.7	37.7	39.0	39.0	39.0
77.5°	117.1	61.4	29.3	26.5	32.1	32.1	32.1	34.9	37.7	37.7	37.7
80°	96.2	33.5	19.5	18.1	23.7	23.7	26.5	32.1	34.9	34.9	34.9
82.5°	82.3	20.9	11.2	12.6	16.7	18.1	22.3	26.5	30.7	32.1	32.1
85°	55.8	11.2	8.4	9.8	11.2	13.9	18.1	22.3	25.1	27.9	27.9
87.5°	15.3	4.2	5.6	7.0	7.0	9.8	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

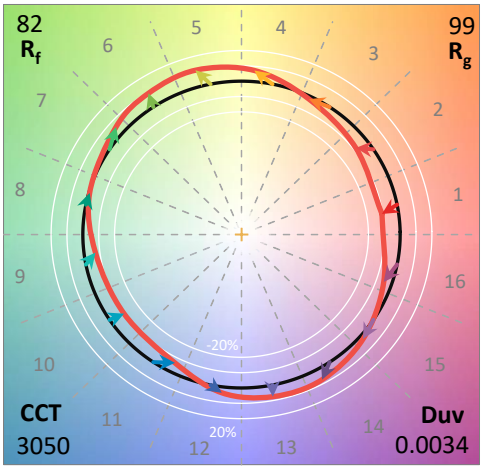
Test Information

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

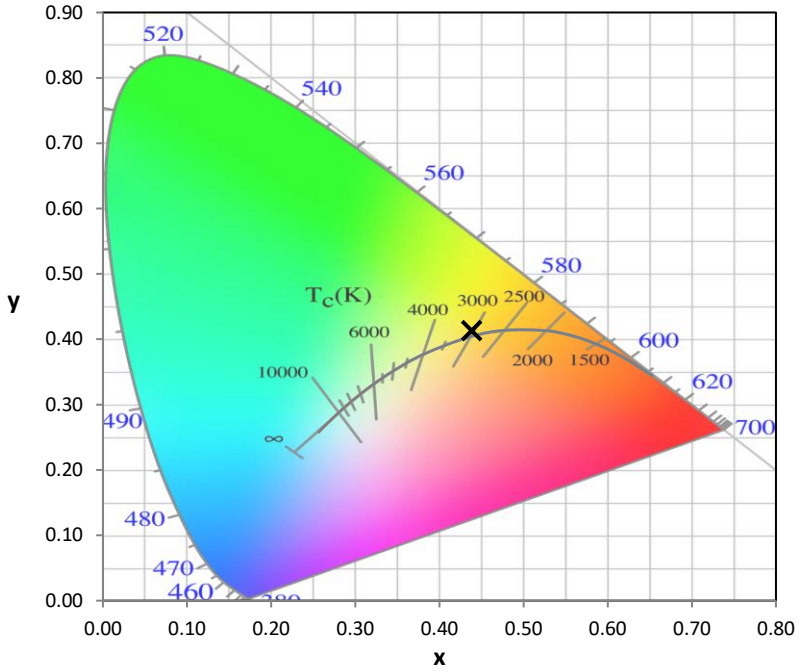
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

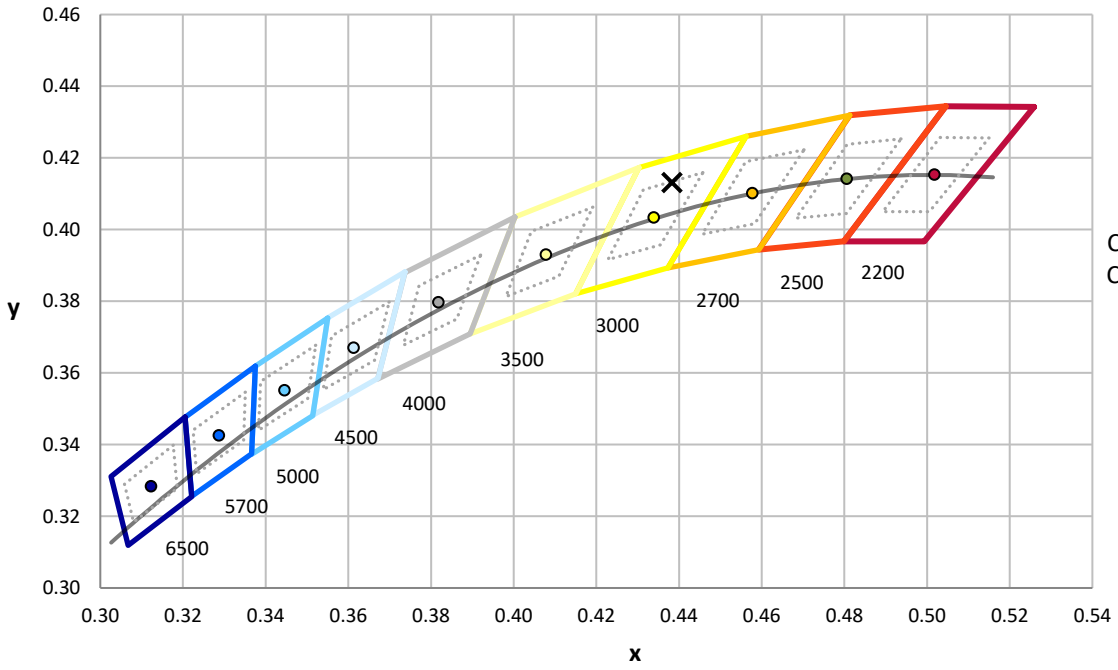
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

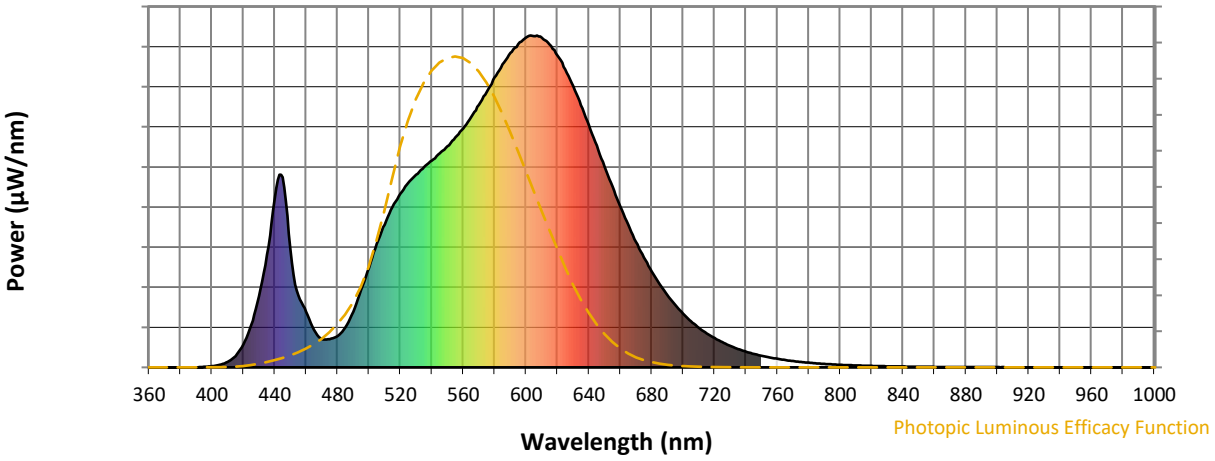


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

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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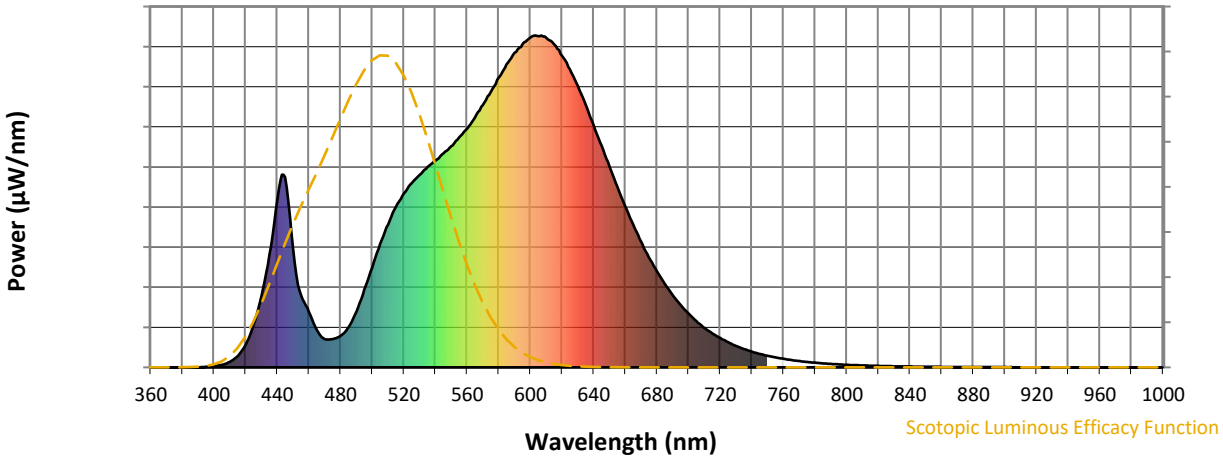
Scotopic Flux vs. Wavelength



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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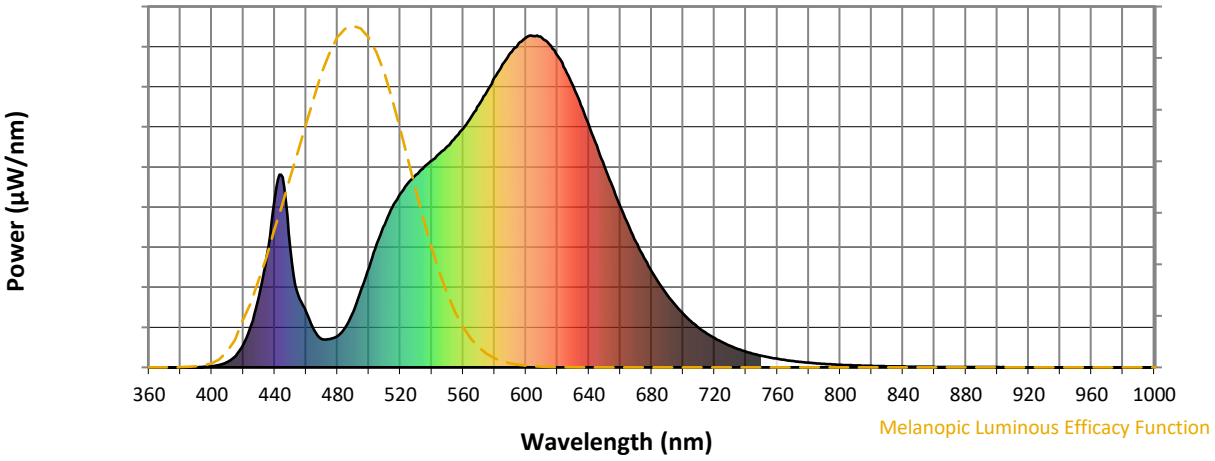
Melanopic Flux vs. Wavelength



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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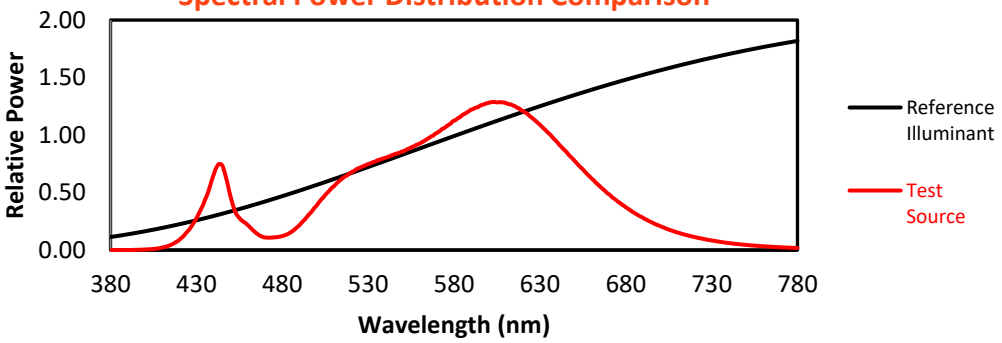
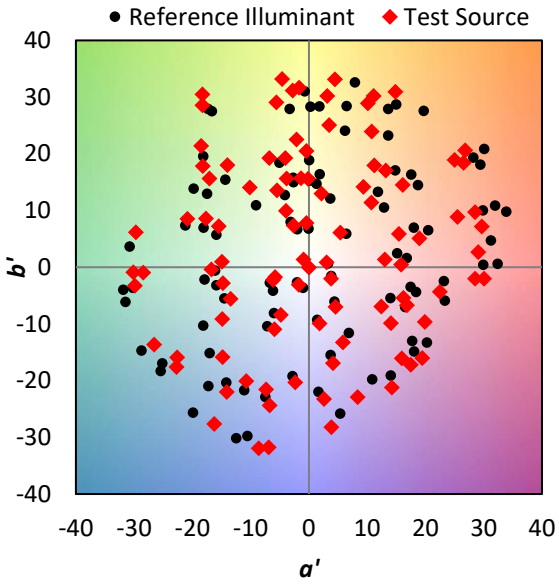
Summary

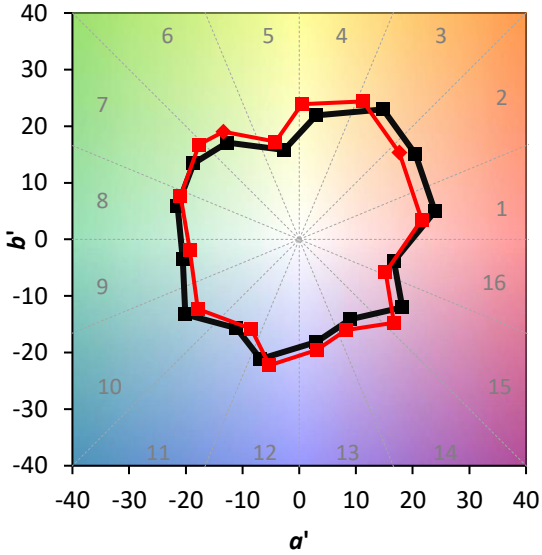
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

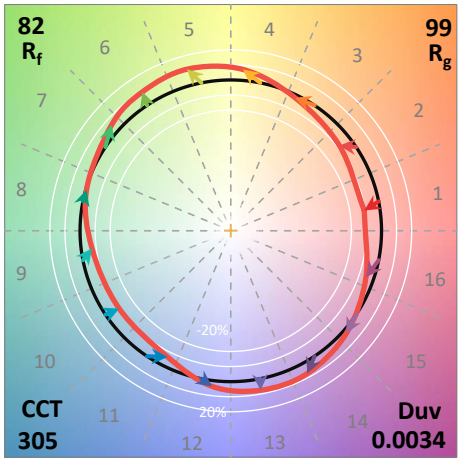
Spectral Power Distribution Comparison

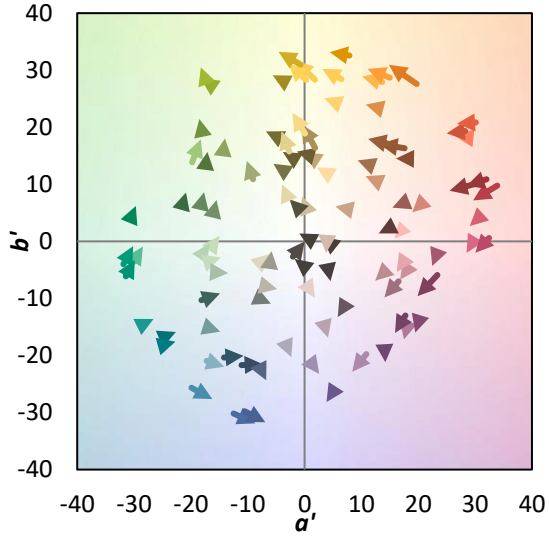


Color Vector Graphics









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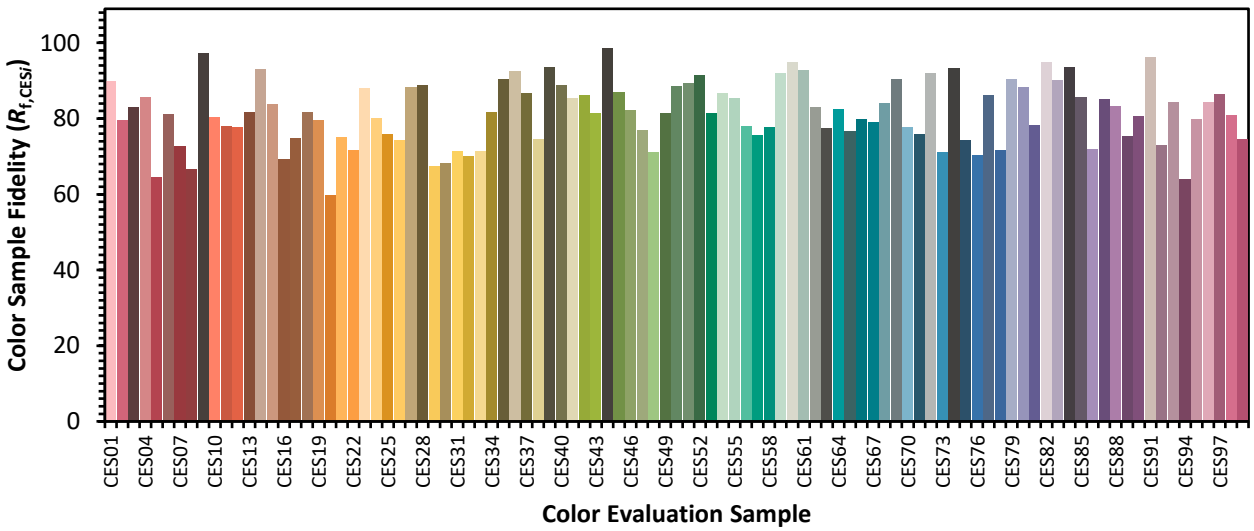
Individual Sample Fidelity Index ($R_{f,i}$)

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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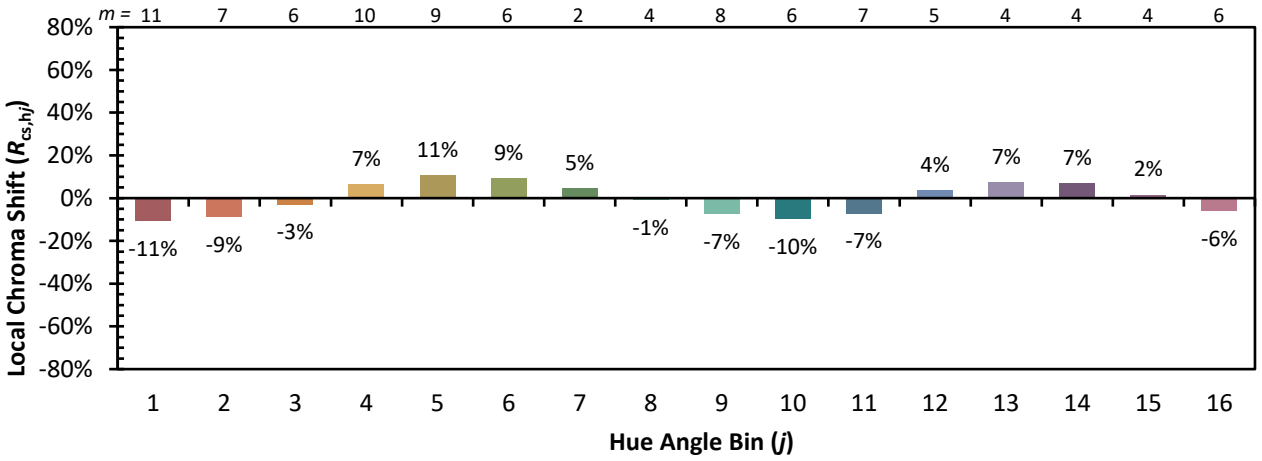
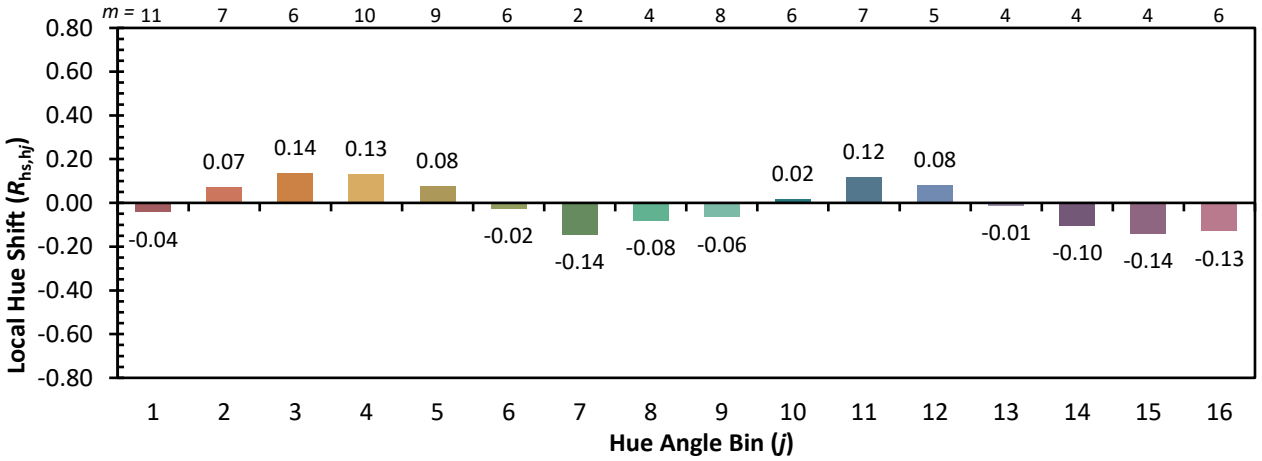
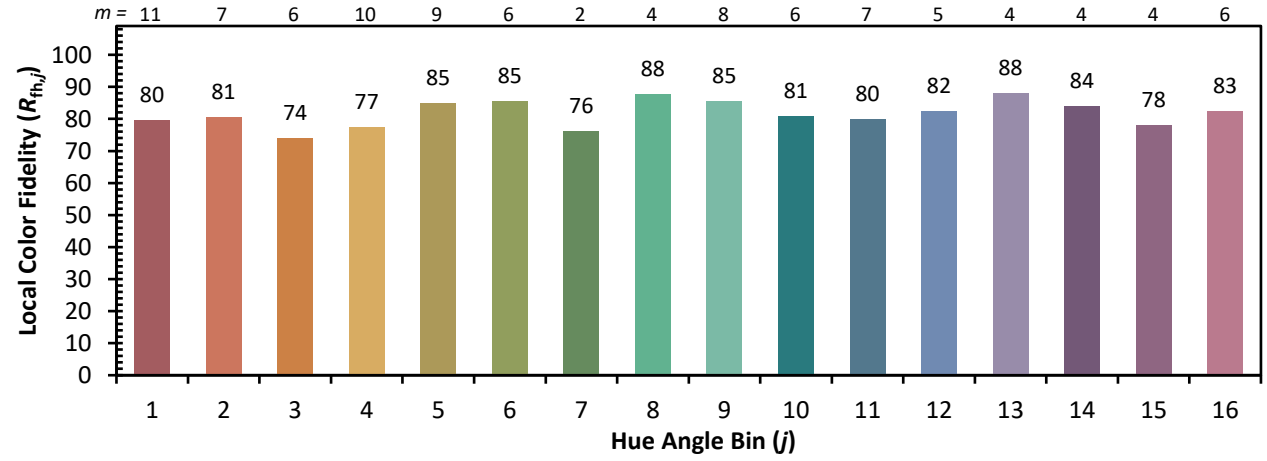
Color Rendition by Hue-Angle Bin







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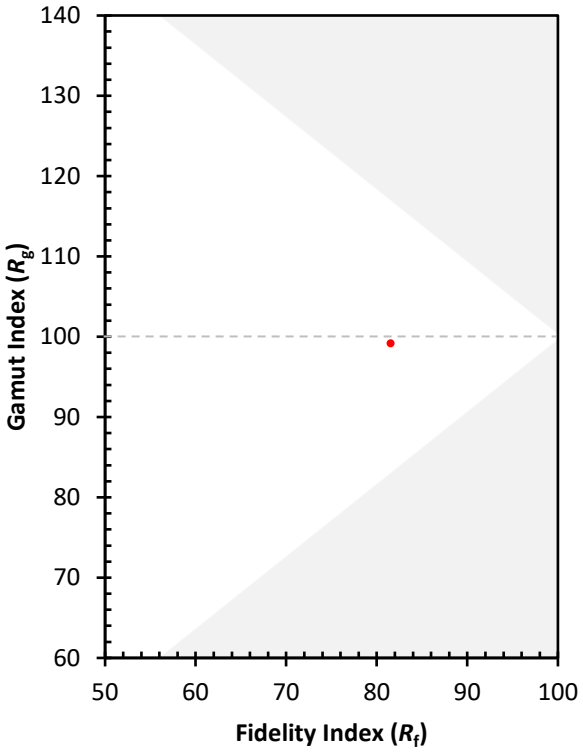
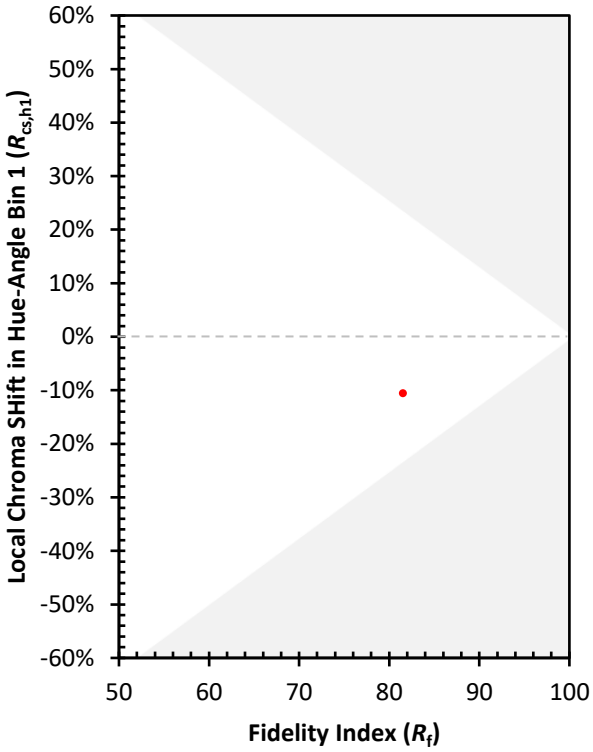
Measure Comparisons





(END OF REPORT)