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: P638466

Luminaire Tested: GWS-SA4E-830-U-RW-W-GRSBK

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:	P638466
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-50)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	1/10/2023
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	McGRAW-EDISON
Catalog Number:	GWS-SA4E-830-U-RW-W-GRSBK
Description:	GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK
Light Source:	(64) 3000K CCT, 80 CRI LEDS
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	15756.1 lumens
Efficiency:	N/A
Efficacy:	77.8 lumens/watt
Luminous Opening:	Rectangular (W 1' x L: 1' x H: 0')
IES Classification:	Type V - Short
BUG Rating:	B4 - U0 - G0

Input Watts (W):	202.6
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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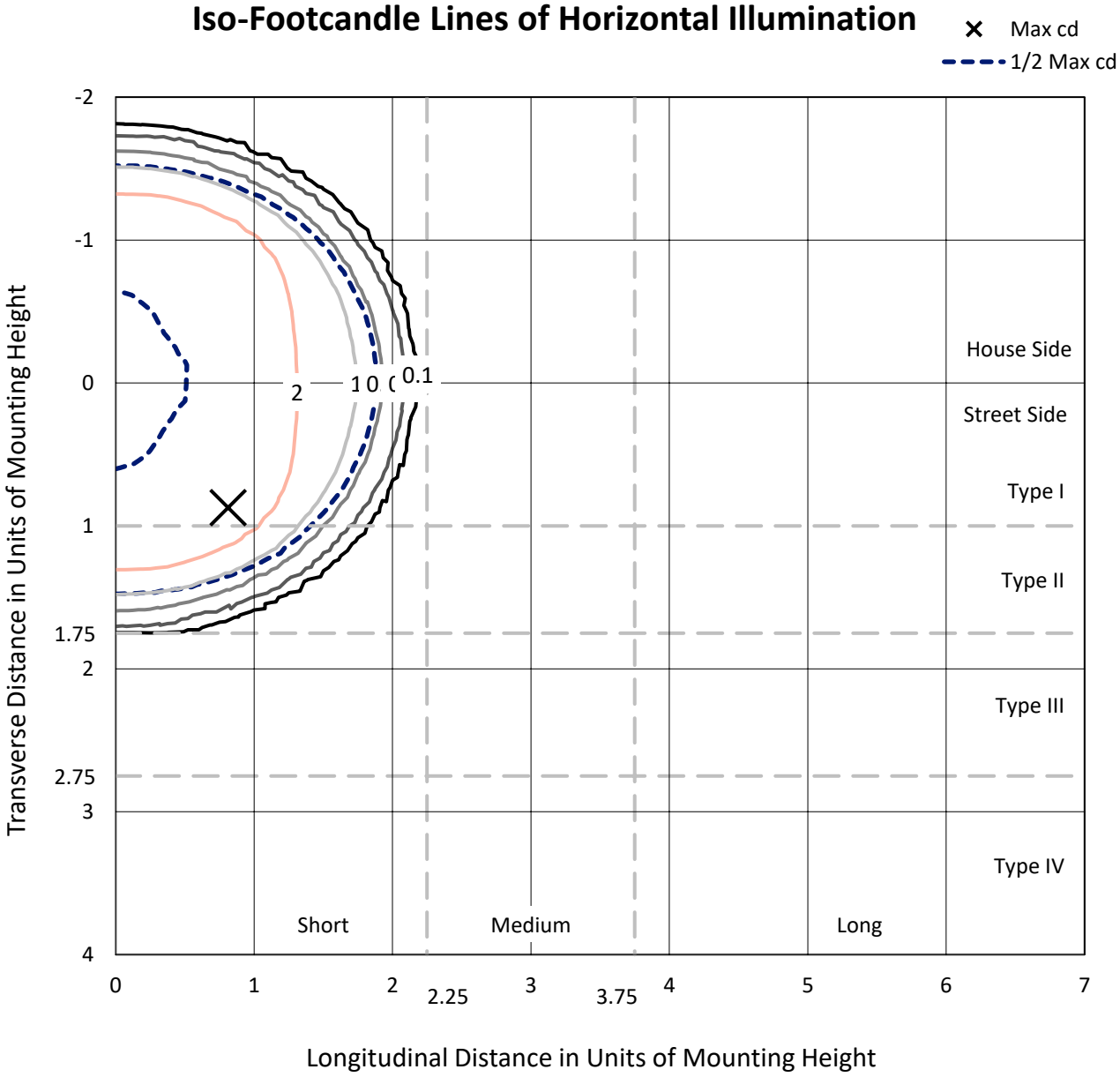
Scaled Data Report

REPORT NUMBER: P638466
CATALOG NUMBER: GWS-SA4E-830-U-RW-W-GRSBK

Iso-Footcandle Lines of Horizontal Illumination



Based on 25 foot mounting height. Maximum calculated value = 4.3 fc
Type V - Short - N/A

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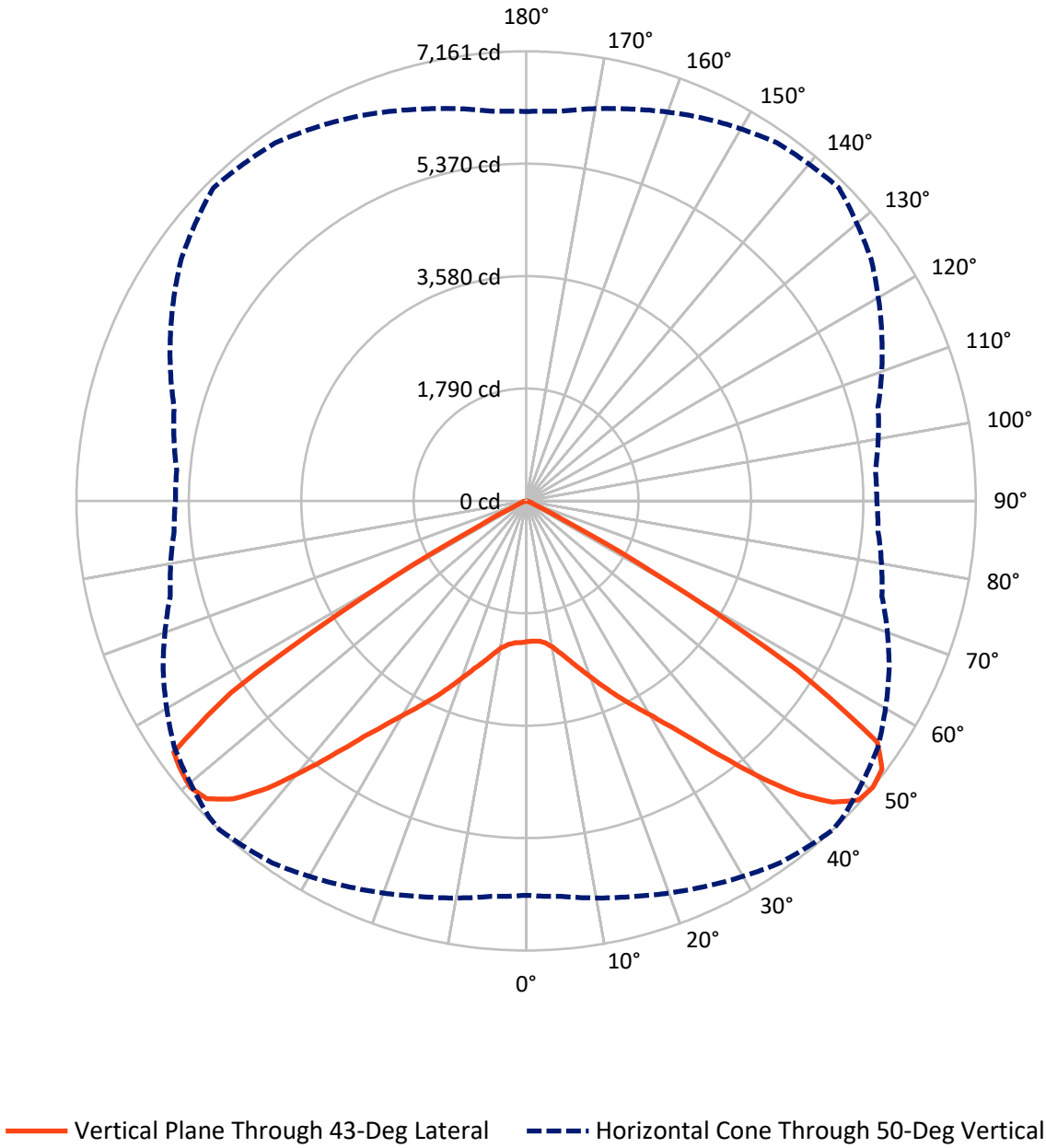
Luminous Intensity Polar Plot



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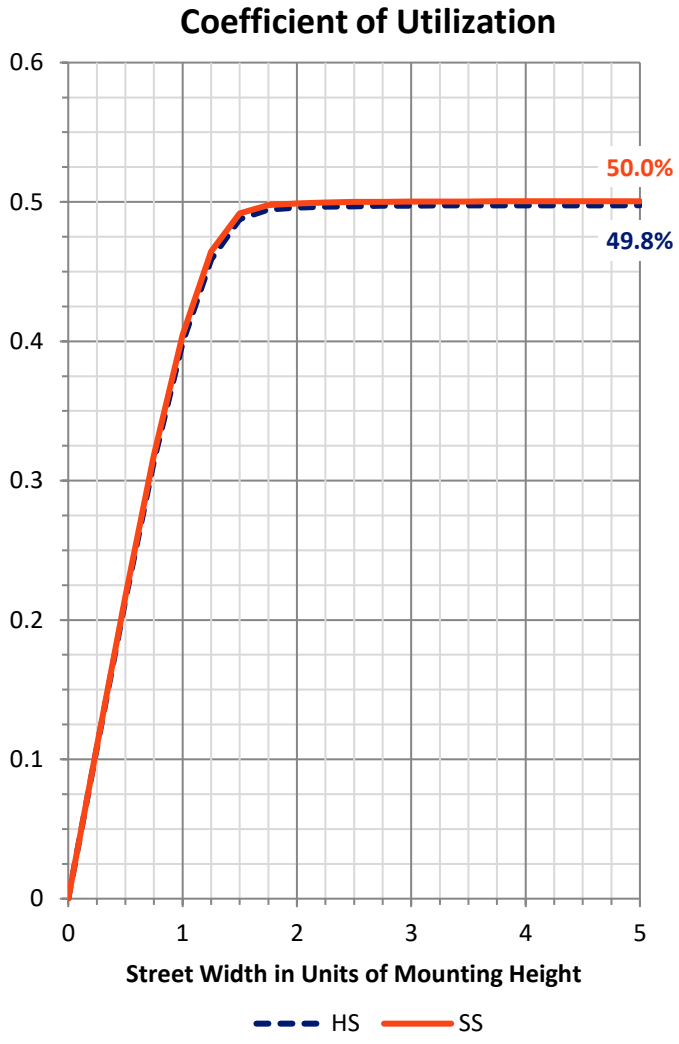
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7877.8	0.0	7877.8
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	7878.2	0.0	7878.2
	% Fixture	50.0	0.0	50.0
Total	Lumens	15756.1	0.0	15756.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.7	1.4
10°-20°	759.5	4.8
20°-30°	1536.5	9.8
30°-40°	2850.8	18.1
40°-50°	4732.2	30.0
50°-60°	4829.4	30.7
60°-70°	792.0	5.0
70°-80°	34.7	0.2
80°-90°	0.5	0.0
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°	15756.1	100.0
0°-180°	15756.1	100.0



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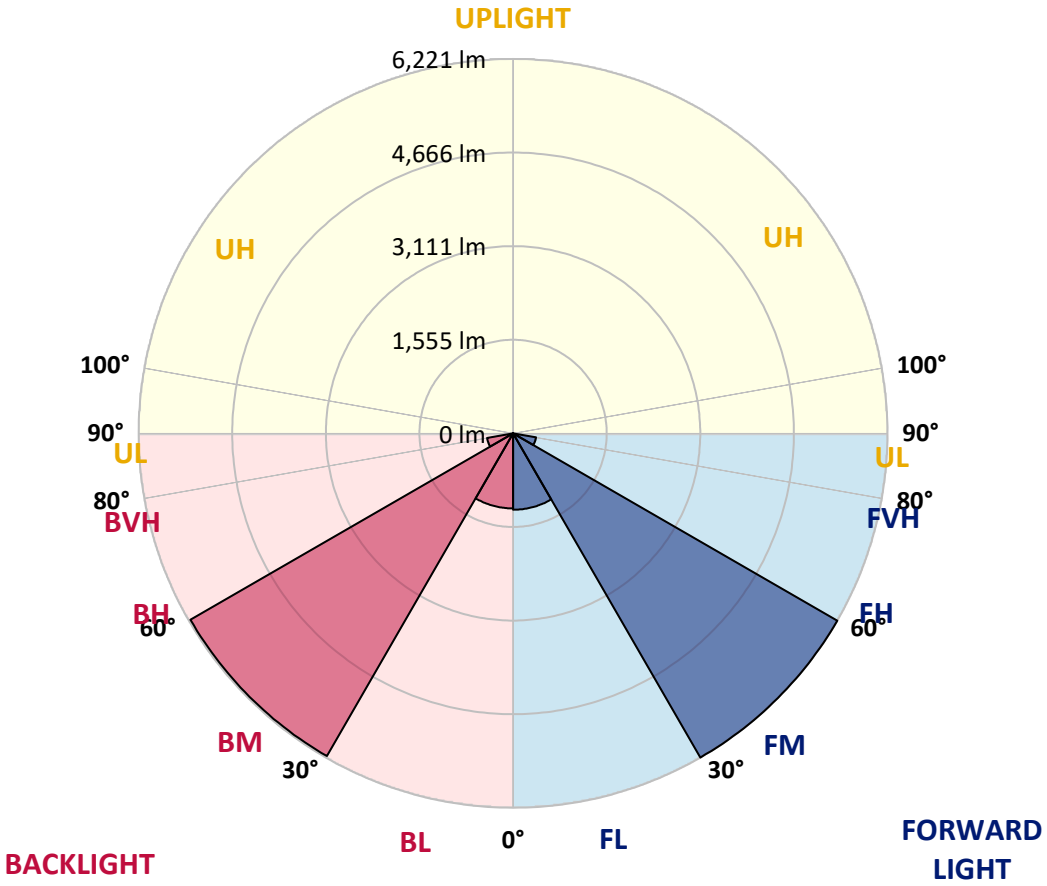
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	1269.4	8.1			
FM	(30°-60°)	6221.3	39.5			
FH	(60°-80°)	387.4	2.5			G0/660
FVH	(80°-90°)	0.2	0.0			G0/10
BL	(0°-30°)	1247.3	7.9	B3/2500		
BM	(30°-60°)	6191.0	39.3	B4/8500		
BH	(60°-80°)	439.2	2.8	B1/500		G0/660
BVH	(80°-90°)	0.3	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G0
Type V Short



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Scaled Data Report

REPORT NUMBER: P638466
CATALOG NUMBER: GWS-SA4E-830-U-RW-W-GRSBK

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	43°	45°	55°	65°	75°	85°
0°	2241.1	2241.1	2241.1	2241.1	2241.1	2241.1	2241.1	2241.1	2241.1	2241.1	2241.1
2.5°	2199.2	2204.5	2211.4	2218.4	2227.1	2235.8	2241.1	2256.7	2253.3	2267.2	2267.2
5°	2174.8	2180.1	2188.8	2204.5	2223.6	2242.8	2256.7	2288.1	2305.5	2333.4	2343.9
7.5°	2187.0	2194.0	2204.5	2228.9	2258.5	2288.1	2303.8	2354.3	2389.2	2441.5	2471.1
10°	2227.1	2234.1	2251.5	2293.3	2331.7	2373.5	2392.7	2457.1	2512.9	2584.4	2626.2
12.5°	2272.4	2281.1	2316.0	2378.7	2444.9	2500.7	2526.9	2598.3	2655.8	2736.0	2802.2
15°	2319.5	2333.4	2387.4	2479.8	2573.9	2648.8	2676.7	2753.4	2810.9	2896.3	2971.2
17.5°	2429.3	2444.9	2505.9	2605.3	2734.2	2821.4	2845.8	2925.9	2969.5	3027.0	3105.4
20°	2566.9	2596.6	2671.5	2791.7	2932.9	3016.5	3034.0	3112.4	3108.9	3133.3	3201.3
22.5°	2737.7	2758.6	2840.5	2983.4	3142.0	3234.4	3274.5	3307.6	3264.0	3243.1	3286.6
25°	2915.5	2939.9	3028.7	3185.6	3363.3	3469.6	3502.7	3528.9	3459.2	3380.8	3386.0
27.5°	3145.5	3162.9	3250.1	3417.3	3595.1	3715.3	3745.0	3790.3	3697.9	3572.4	3537.6
30°	3419.1	3436.5	3528.9	3704.9	3880.9	3983.7	4029.0	4084.8	3983.7	3826.9	3786.8
32.5°	3739.7	3757.2	3875.7	4056.9	4201.5	4313.1	4356.6	4415.9	4335.7	4159.7	4114.4
35°	4123.1	4133.6	4273.0	4469.9	4623.3	4731.3	4760.9	4830.6	4741.8	4565.8	4541.4
37.5°	4567.5	4579.7	4731.3	4959.6	5116.4	5236.7	5283.7	5302.9	5194.9	4997.9	4978.8
40°	5055.4	5095.5	5243.7	5489.4	5665.4	5817.0	5858.8	5794.3	5642.7	5374.4	5339.5
42.5°	5564.3	5599.2	5764.7	6031.3	6235.2	6390.3	6392.1	6252.7	5994.7	5623.6	5571.3
45°	5987.8	6001.7	6216.1	6484.4	6735.4	6845.2	6855.6	6602.9	6214.3	5768.2	5656.7
47.5°	6278.8	6301.4	6487.9	6745.8	7022.9	7122.2	7101.3	6785.9	6318.9	5862.3	5677.6
50°	6282.3	6320.6	6522.8	6772.0	7040.3	7160.6	7130.9	6838.2	6378.1	5865.8	5627.0
52.5°	5726.4	5789.1	6118.5	6479.2	6890.5	7096.1	7103.1	6906.1	6355.5	5810.0	5581.7
55°	4320.0	4388.0	4802.8	5417.9	6212.6	6785.9	6885.2	6826.0	6329.3	5834.4	5661.9
57.5°	2286.4	2234.1	2464.1	3074.0	4072.6	5086.8	5377.8	5851.8	6038.3	5864.0	5810.0
60°	498.4	531.5	707.5	953.2	1589.3	2392.7	2676.7	3488.8	4454.2	4882.9	5193.1
62.5°	214.3	210.9	219.6	249.2	364.2	606.4	740.6	1209.4	1908.2	2621.0	3103.7
65°	176.0	177.8	184.7	184.7	172.5	174.3	183.0	277.1	446.1	625.6	840.0
67.5°	132.4	134.2	146.4	149.9	141.2	125.5	123.7	104.6	109.8	137.7	142.9
70°	83.6	83.6	90.6	94.1	94.1	87.1	85.4	74.9	73.2	83.6	94.1
72.5°	45.3	45.3	48.8	50.5	48.8	47.1	47.1	45.3	43.6	50.5	64.5
75°	19.2	19.2	20.9	20.9	19.2	19.2	19.2	19.2	19.2	22.7	34.9
77.5°	3.5	5.2	7.0	5.2	3.5	3.5	3.5	5.2	5.2	7.0	10.5
80°	1.7	1.7	3.5	1.7	0.0	0.0	0.0	0.0	1.7	1.7	1.7
82.5°	1.7	1.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P638466
CATALOG NUMBER: GWS-SA4E-830-U-RW-W-GRSBK

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2241.1	2241.1	2241.1	2241.1	2241.1	2241.1	2241.1	2241.1	2241.1	2241.1	2241.1
2.5°	2279.4	2260.2	2267.2	2270.7	2265.5	2262.0	2242.8	2237.6	2228.9	2214.9	2211.4
5°	2356.1	2340.4	2338.6	2328.2	2303.8	2274.2	2237.6	2221.9	2204.5	2187.0	2183.5
7.5°	2485.0	2465.9	2453.7	2418.8	2363.0	2316.0	2255.0	2221.9	2199.2	2176.6	2171.3
10°	2650.6	2627.9	2593.1	2528.6	2453.7	2385.7	2314.2	2270.7	2235.8	2204.5	2202.7
12.5°	2826.6	2802.2	2739.5	2657.6	2566.9	2504.2	2413.6	2352.6	2300.3	2253.3	2248.0
15°	3011.3	2981.7	2896.3	2798.7	2715.1	2650.6	2551.2	2453.7	2373.5	2305.5	2298.6
17.5°	3152.5	3115.9	3014.8	2941.6	2873.6	2807.4	2695.9	2566.9	2460.6	2378.7	2359.6
20°	3241.3	3206.5	3110.6	3070.6	3039.2	2992.1	2859.7	2725.5	2607.0	2505.9	2488.5
22.5°	3326.7	3284.9	3201.3	3201.3	3225.7	3206.5	3063.6	2910.2	2770.8	2654.1	2627.9
25°	3422.6	3389.5	3330.2	3379.0	3440.0	3438.3	3291.9	3100.2	2939.9	2809.2	2783.0
27.5°	3562.0	3528.9	3508.0	3600.3	3677.0	3671.8	3511.5	3304.1	3135.0	3006.1	2981.7
30°	3807.7	3776.3	3753.7	3865.2	3962.8	3926.2	3750.2	3549.8	3379.0	3232.6	3215.2
32.5°	4135.3	4102.2	4072.6	4184.1	4271.3	4224.2	4056.9	3868.7	3671.8	3528.9	3494.0
35°	4565.8	4496.1	4466.4	4598.9	4635.5	4583.2	4422.9	4257.3	4048.2	3884.4	3861.7
37.5°	5010.1	4928.2	4907.3	5022.3	5081.6	5062.4	4874.2	4701.7	4475.1	4293.9	4267.8
40°	5390.0	5315.1	5278.5	5458.0	5592.2	5604.4	5435.3	5224.5	4957.9	4769.7	4722.6
42.5°	5613.1	5548.6	5539.9	5818.7	6038.3	6195.1	5993.0	5775.2	5494.6	5282.0	5243.7
45°	5663.6	5621.8	5695.0	6061.0	6402.5	6688.3	6515.8	6285.8	5982.5	5757.7	5721.1
47.5°	5658.4	5644.5	5775.2	6186.4	6618.6	6970.6	6885.2	6625.6	6332.8	6097.6	6062.7
50°	*5583.5*	*5585.2*	*5803.0*	*6249.2*	*6705.7*	*7047.3*	*6961.9*	*6721.4*	*6460.0*	*6228.3*	*6200.4*
52.5°	5553.8	5543.4	5750.8	6230.0	6794.6	7012.4	6820.8	6550.6	6259.6	5973.8	5932.0
55°	5658.4	5632.3	5757.7	6214.3	6805.1	6993.3	6487.9	5902.4	5306.4	4968.3	4940.4
57.5°	5815.2	5787.4	5846.6	6099.3	6259.6	5815.2	4774.9	3830.4	3216.9	2957.3	2844.0
60°	5193.1	5173.9	5128.6	4823.7	4137.1	3121.1	2126.0	1355.8	974.1	787.7	787.7
62.5°	3222.2	3196.0	2950.3	2192.3	1592.8	921.9	507.1	317.2	240.5	224.8	223.1
65°	904.4	899.2	744.1	526.3	334.6	207.4	183.0	186.5	183.0	177.8	176.0
67.5°	135.9	149.9	149.9	122.0	116.8	130.7	153.4	163.8	155.1	146.4	142.9
70°	87.1	94.1	90.6	78.4	83.6	97.6	109.8	111.5	106.3	97.6	95.8
72.5°	61.0	68.0	55.8	50.5	52.3	57.5	62.7	62.7	61.0	57.5	54.0
75°	36.6	36.6	26.1	24.4	24.4	26.1	26.1	29.6	29.6	27.9	26.1
77.5°	12.2	13.9	8.7	7.0	7.0	7.0	8.7	10.5	10.5	8.7	7.0
80°	1.7	3.5	1.7	1.7	1.7	1.7	1.7	1.7	3.5	3.5	1.7
82.5°	1.7	1.7	1.7	0.0	0.0	0.0	0.0	1.7	1.7	1.7	1.7
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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

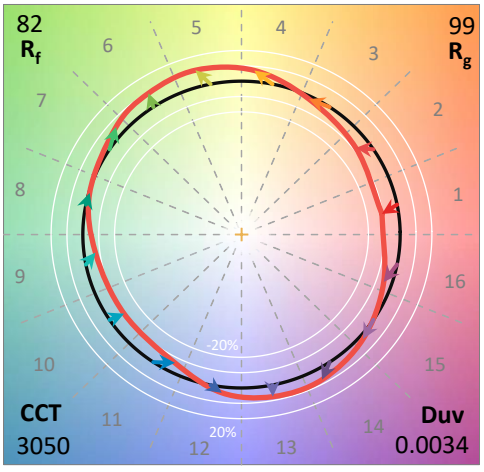
Test Information

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

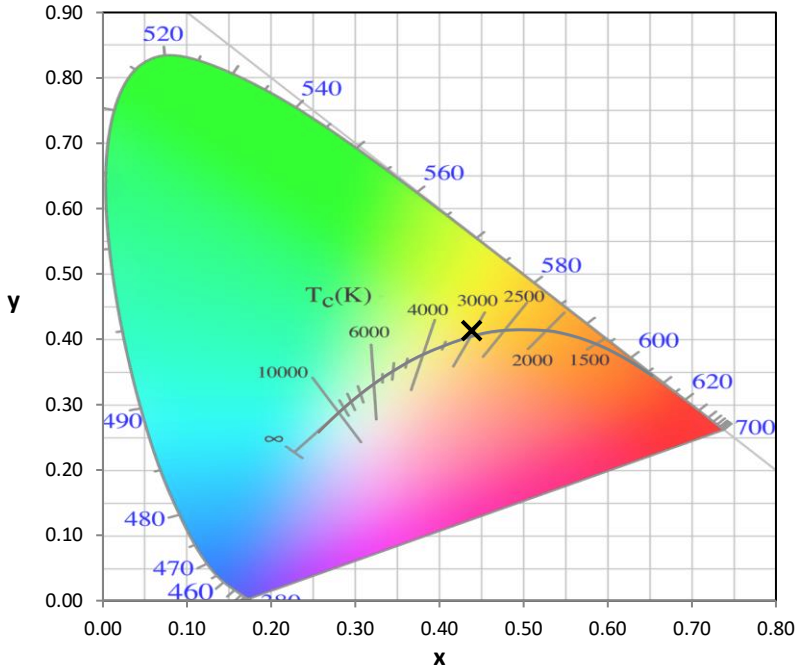
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

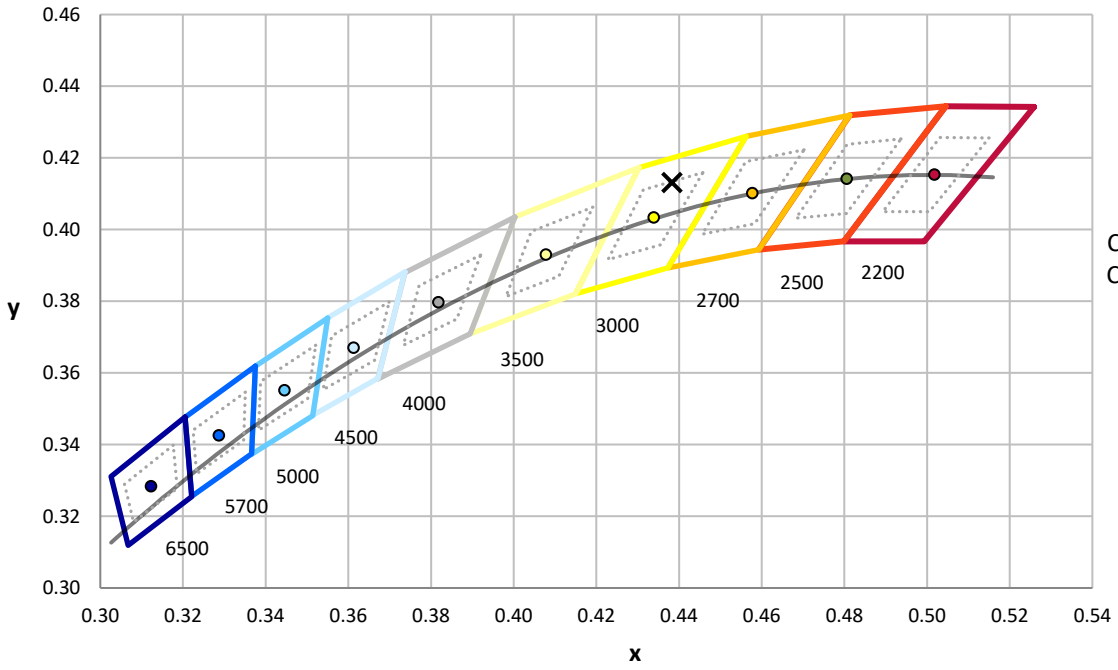
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

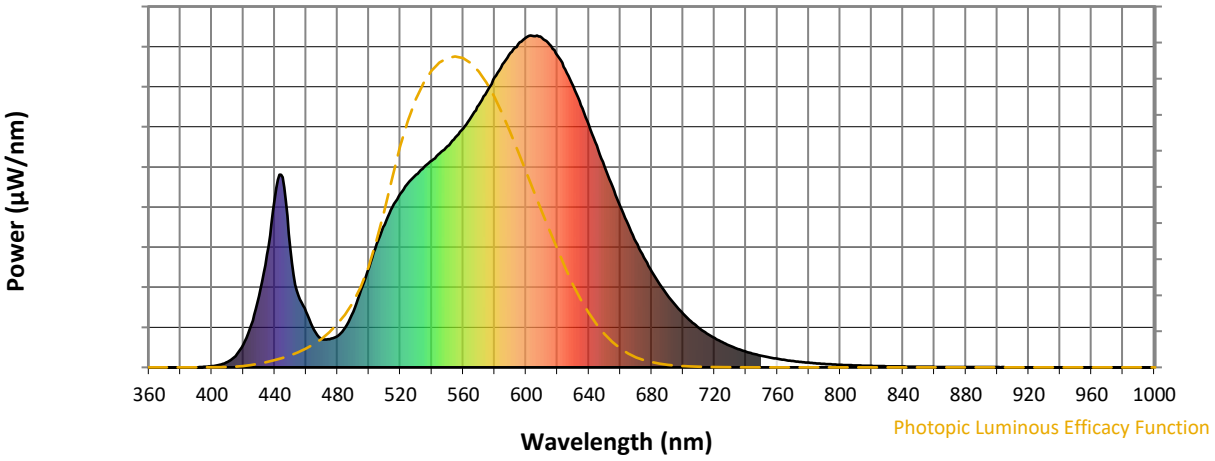


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

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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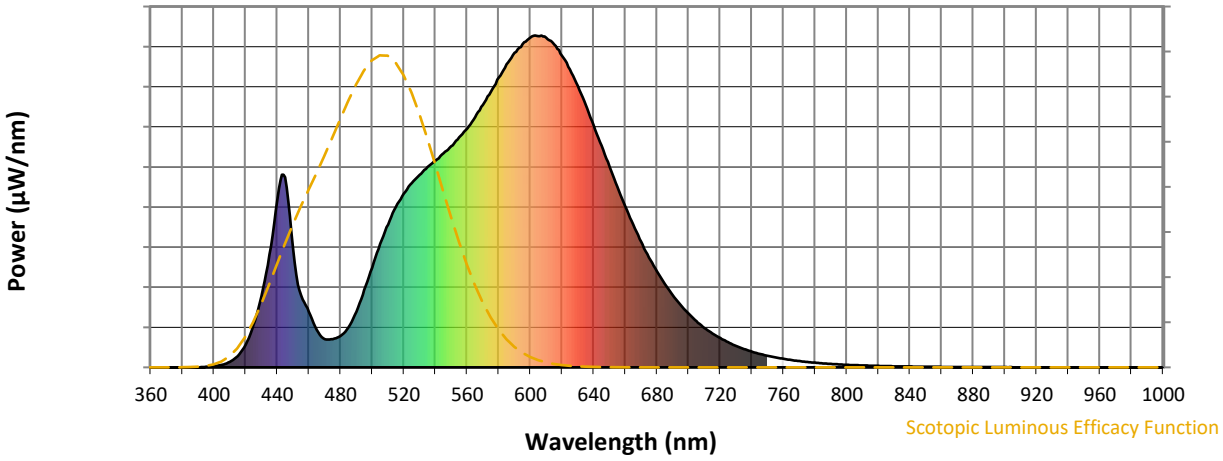
Scotopic Flux vs. Wavelength



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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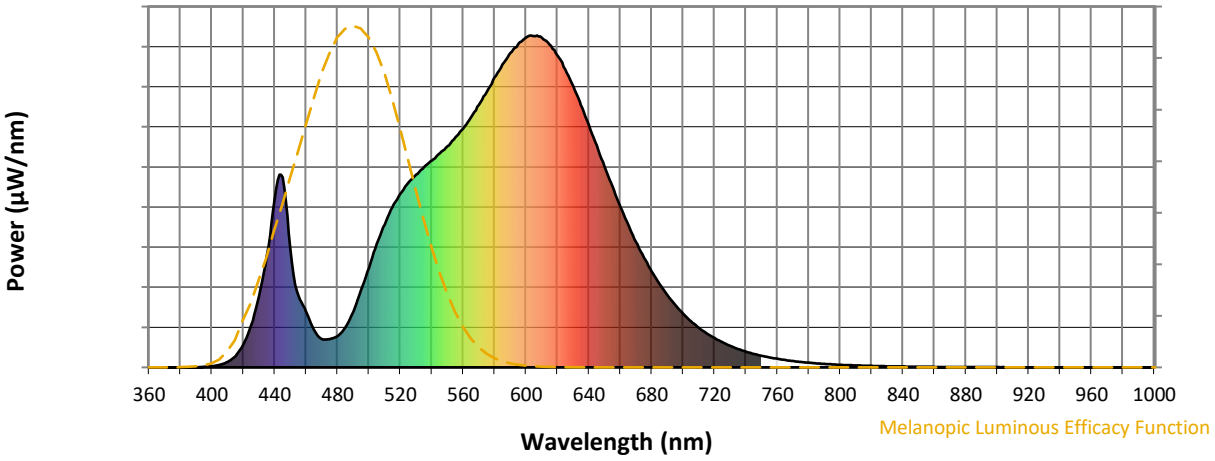
Melanopic Flux vs. Wavelength



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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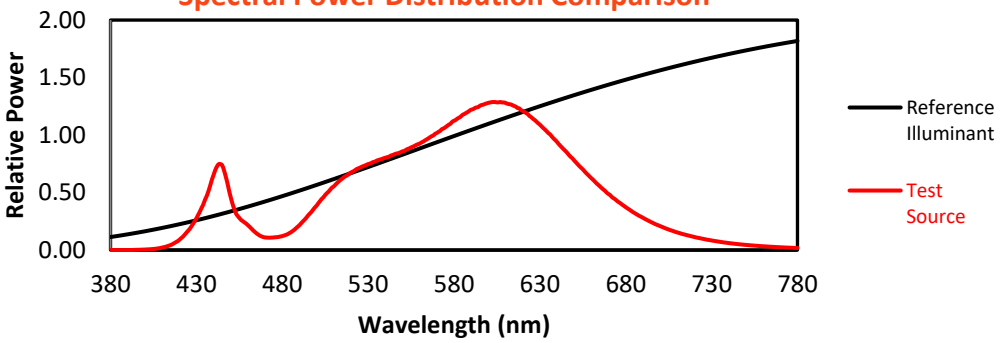
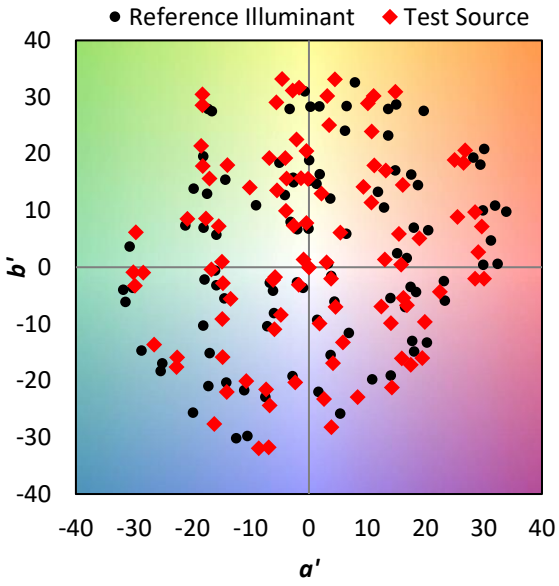
Summary

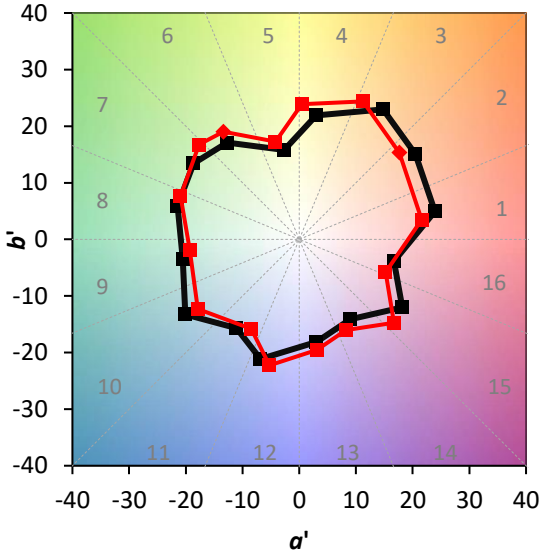
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

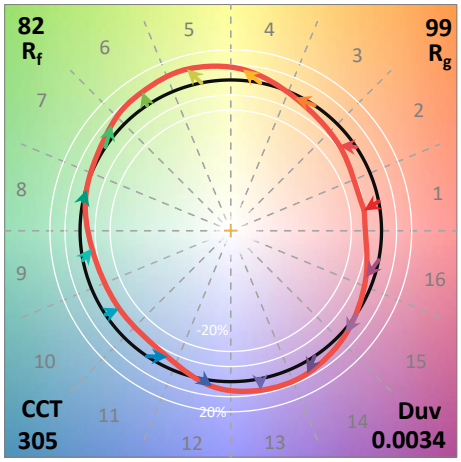
Spectral Power Distribution Comparison

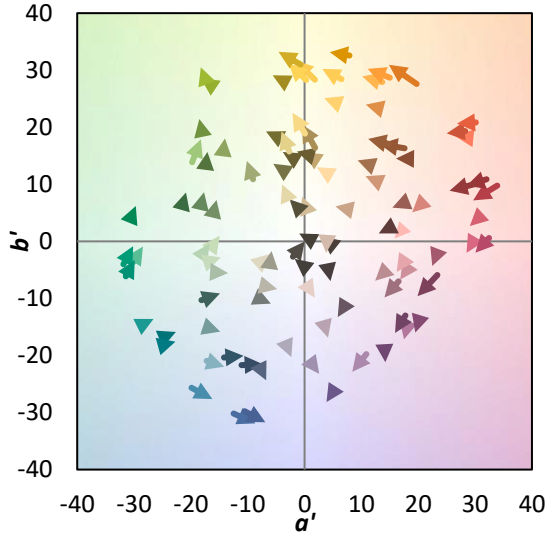


Color Vector Graphics









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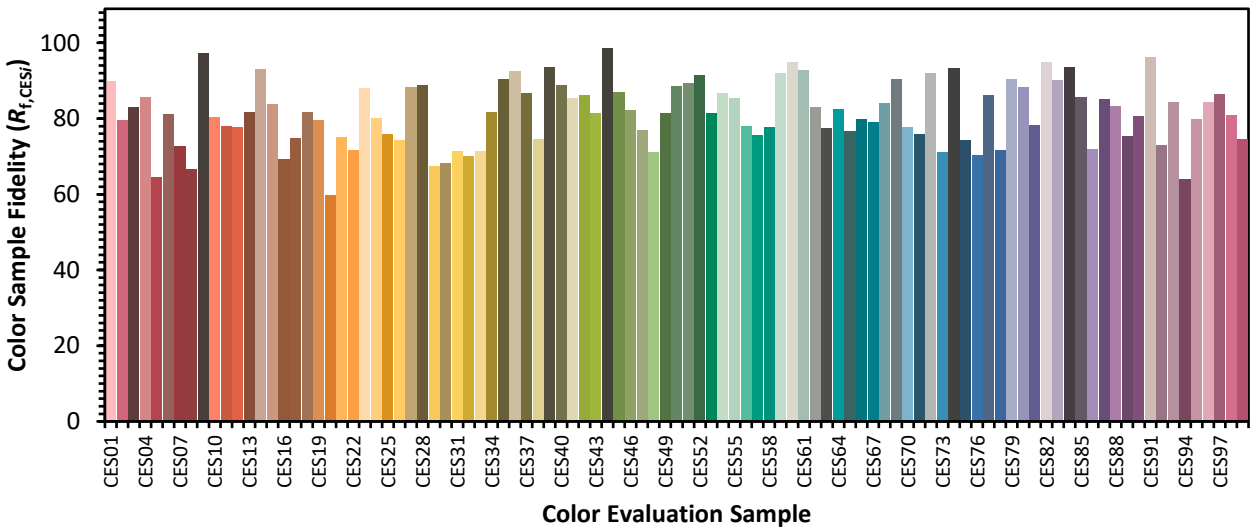
Individual Sample Fidelity Index ($R_{f,i}$)

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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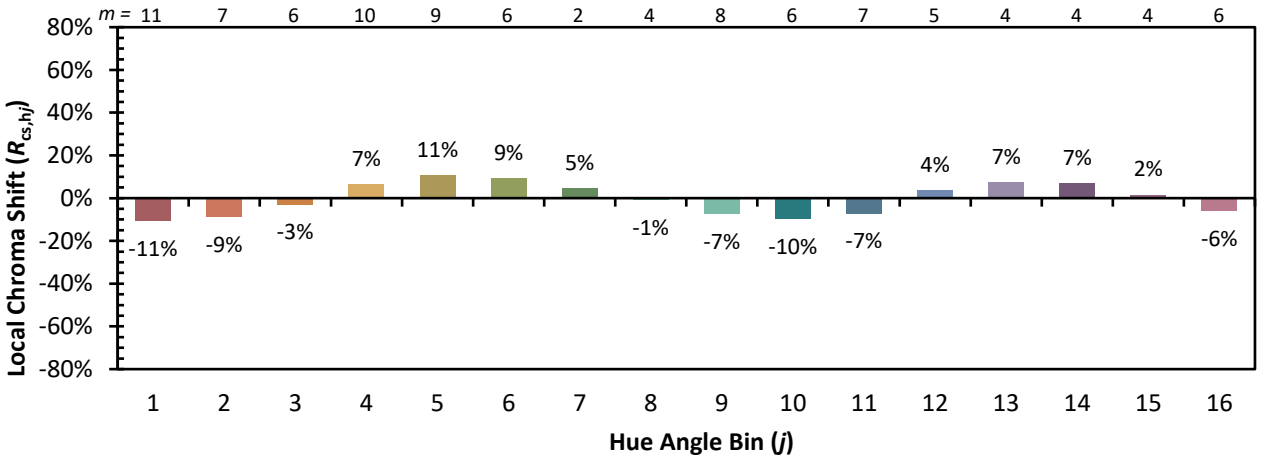
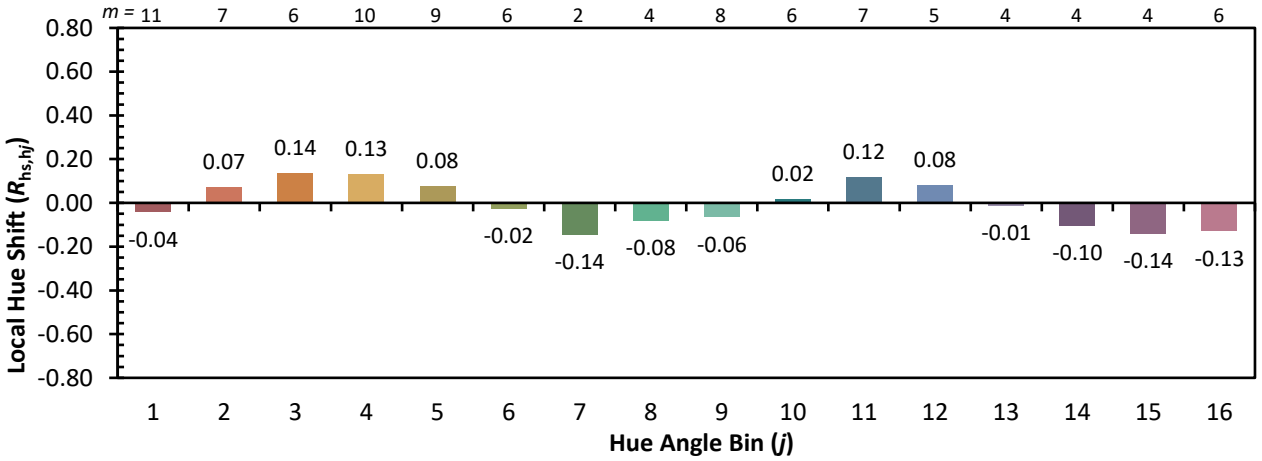
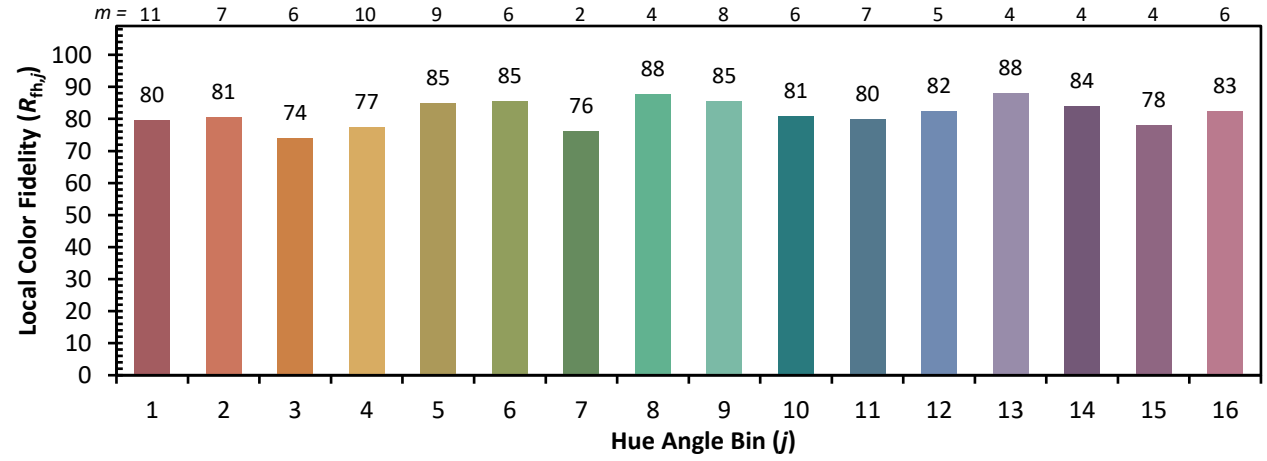
Color Rendition by Hue-Angle Bin







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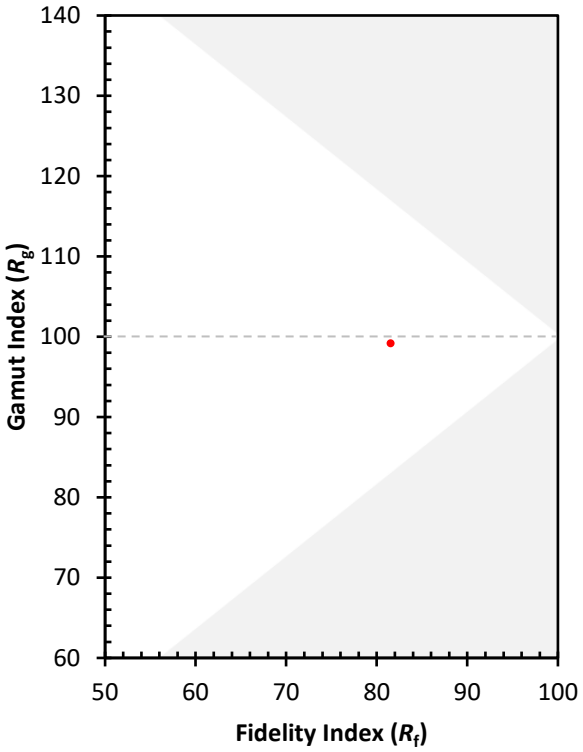
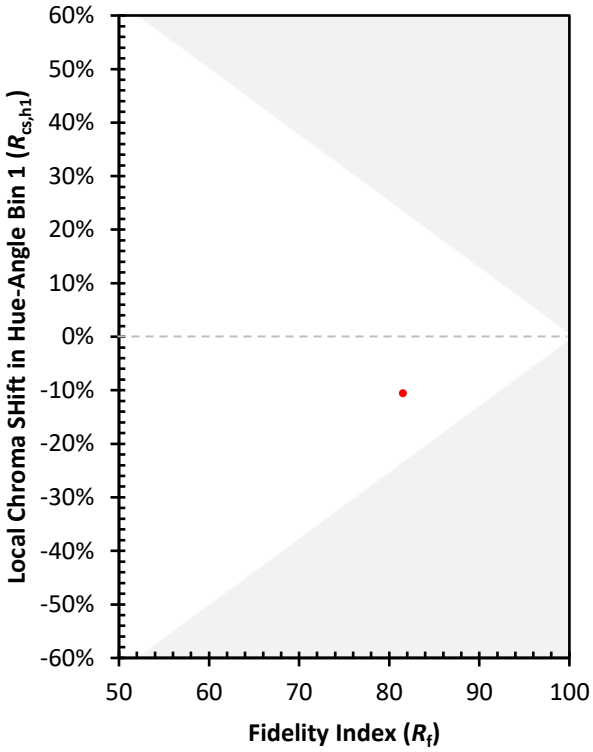
Measure Comparisons





(END OF REPORT)