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: P636977

Luminaire Tested: GWS-SA4B-830-U-AFL-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:	P636977
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-46)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	1/10/2023
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	McGRAW-EDISON
Catalog Number:	GWS-SA4B-830-U-AFL-W-GRSBK
Description:	GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE 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:	8659.8 lumens
Efficiency:	N/A
Efficacy:	91.7 lumens/watt
Luminous Opening:	Rectangular (W 1' x L: 1' x H: 0')
IES Classification:	Type II - Short
BUG Rating:	B1 - U0 - G0

Input Watts (W):	94.4
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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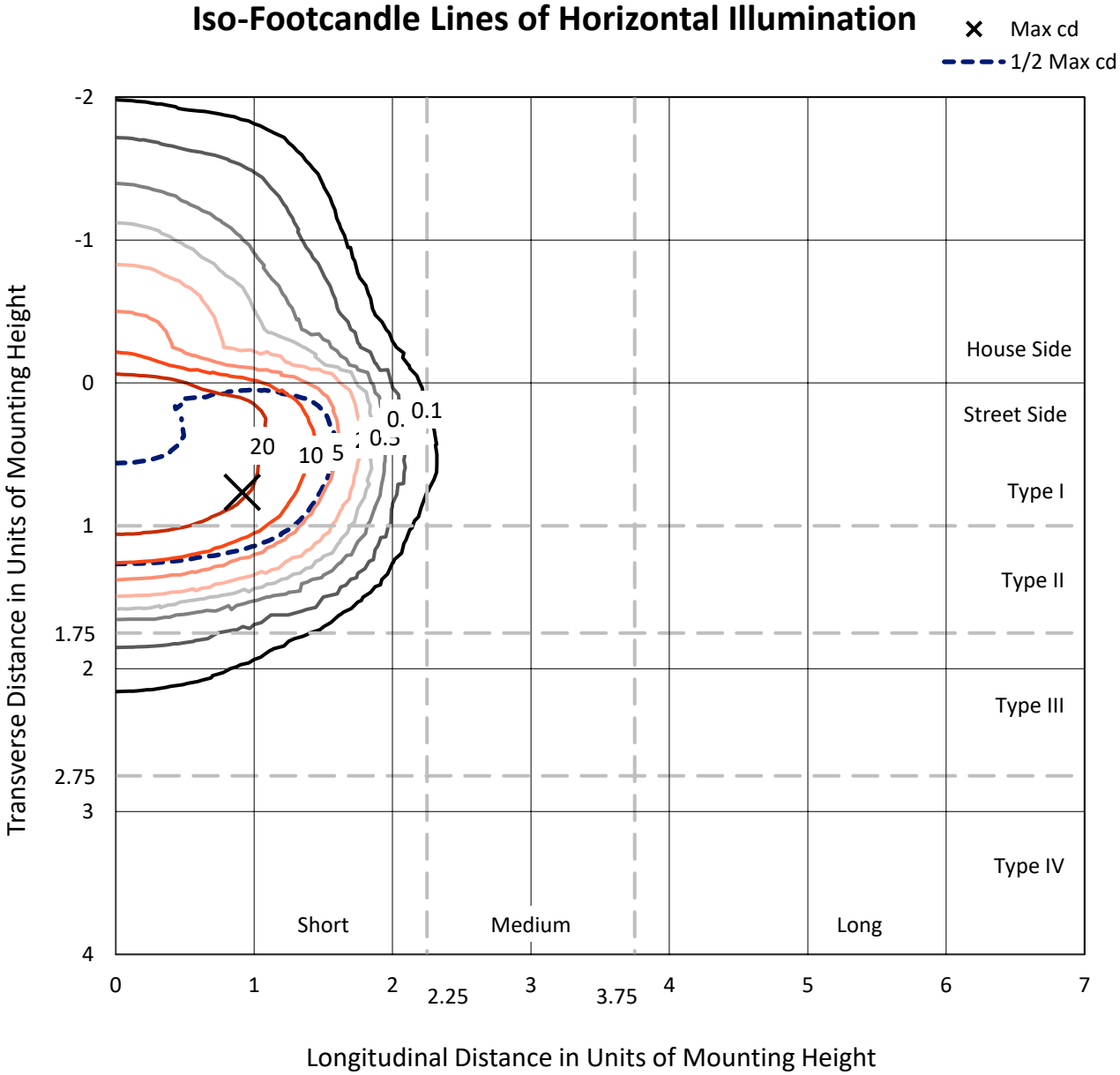
Scaled Data Report

REPORT NUMBER: P636977
CATALOG NUMBER: GWS-SA4B-830-U-AFL-W-GRSBK

Iso-Footcandle Lines of Horizontal Illumination



Based on 10 foot mounting height. Maximum calculated value = 33.6 fc
Type II - Short - N/A

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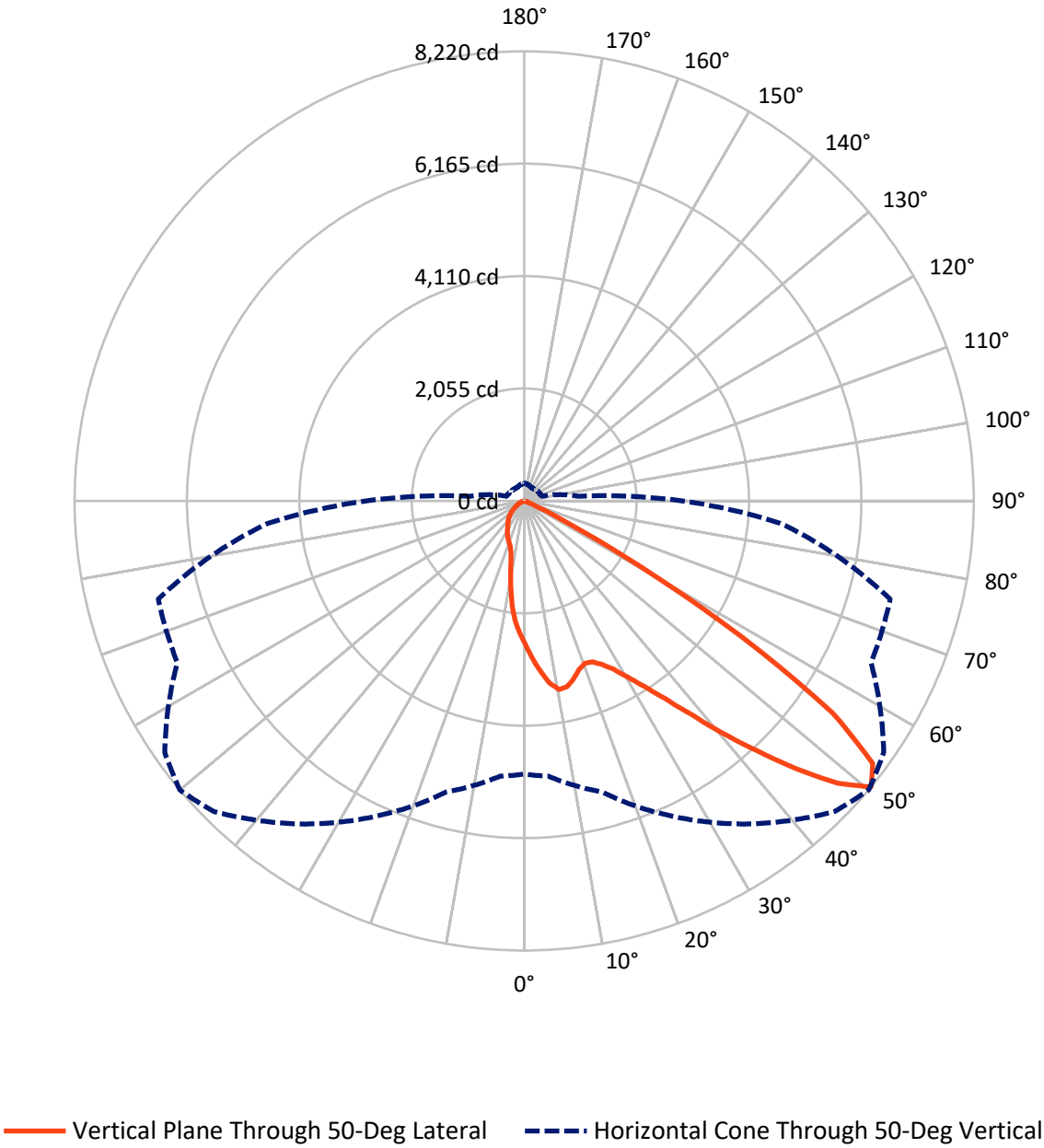
Luminous Intensity Polar Plot



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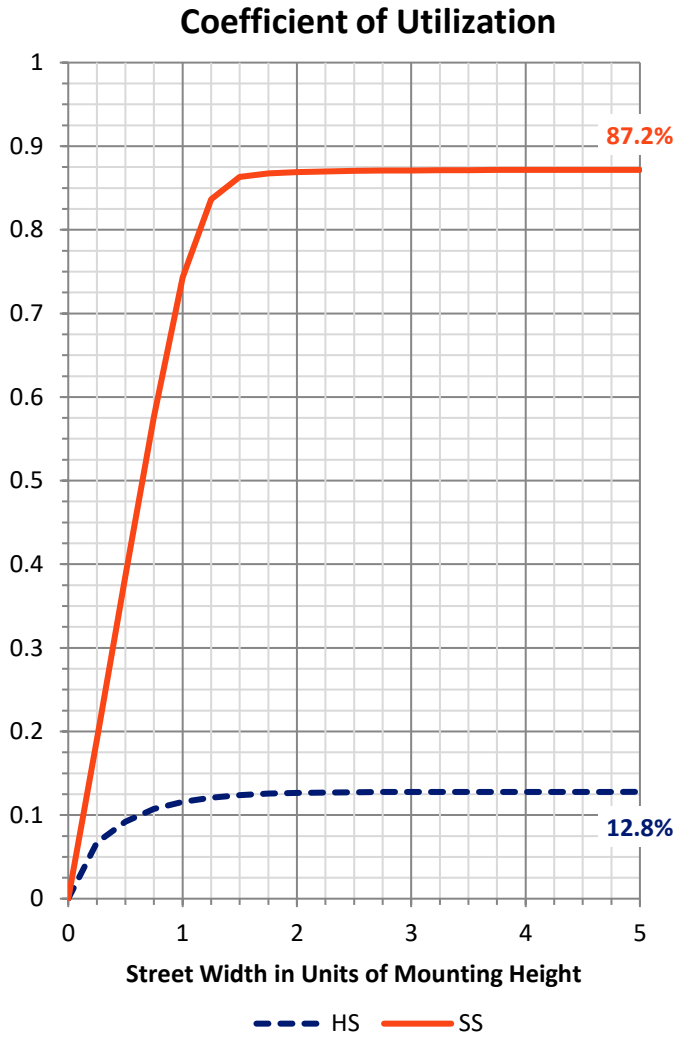
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1112.6	0.0	1112.6
	% Fixture	12.8	0.0	12.8
Street Side	Lumens	7547.1	0.0	7547.1
	% Fixture	87.2	0.0	87.2
Total	Lumens	8659.8	0.0	8659.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.4	2.8
10°-20°	627.9	7.3
20°-30°	1036.3	12.0
30°-40°	1710.1	19.7
40°-50°	2705.8	31.2
50°-60°	2048.6	23.7
60°-70°	256.4	3.0
70°-80°	29.0	0.3
80°-90°	2.2	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°	8659.8	100.0
0°-180°	8659.8	100.0



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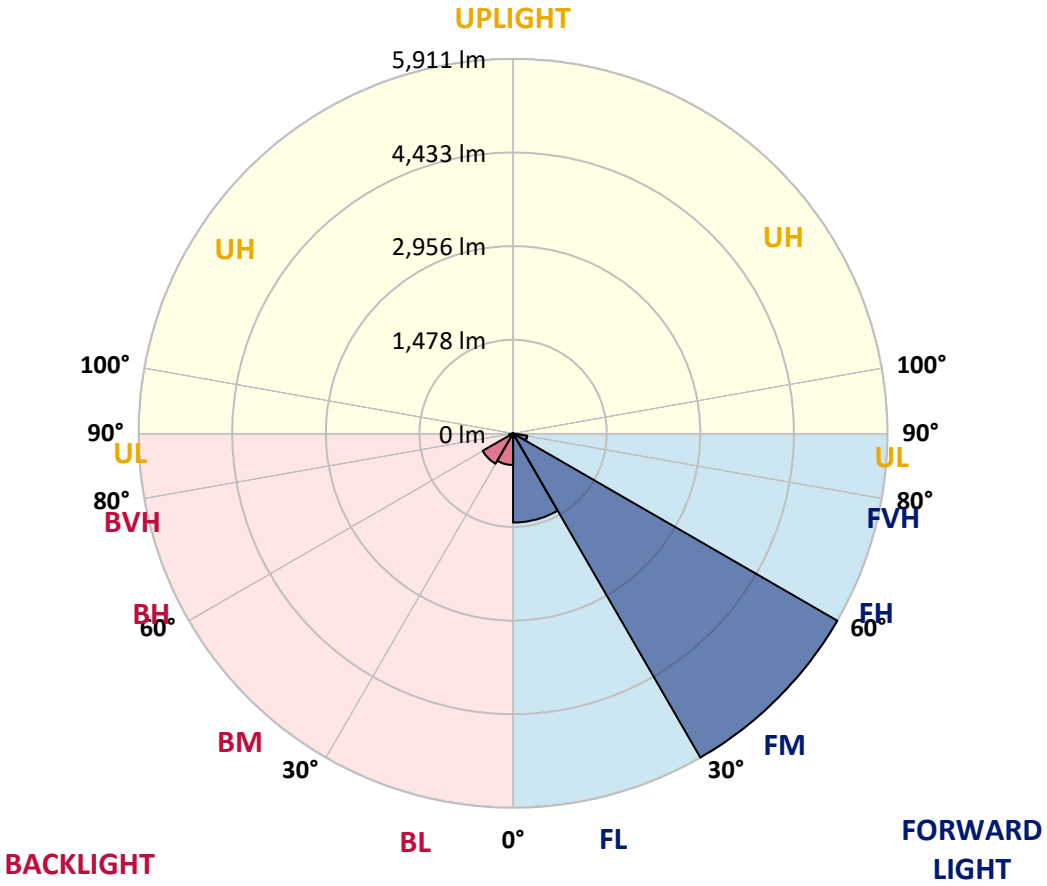
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	1408.2	16.3			
FM	(30°-60°)	5911.2	68.3			
FH	(60°-80°)	226.7	2.6			G0/660
FVH	(80°-90°)	1.0	0.0			G0/10
BL	(0°-30°)	499.4	5.8	B1/500		
BM	(30°-60°)	553.3	6.4	B1/1000		
BH	(60°-80°)	58.7	0.7	B0/110		G0/110
BVH	(80°-90°)	1.2	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G0
Type II Short



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REPORT NUMBER: P636977
CATALOG NUMBER: GWS-SA4B-830-U-AFL-W-GRSBK

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	50°	55°	65°	75°	85°
0°	2623.6	2623.6	2623.6	2623.6	2623.6	2623.6	*2623.6*	2623.6	2623.6	2623.6	2623.6
2.5°	2989.5	3013.4	3006.8	2975.5	2941.7	2917.8	*2880.7*	2869.2	2785.1	2726.6	2664.8
5°	3350.6	3358.0	3349.7	3311.8	3252.5	3195.6	*3134.6*	3099.2	2958.2	2831.3	2701.9
7.5°	3437.1	3428.0	3443.7	3462.7	3454.4	3429.7	*3365.4*	3326.7	3158.5	2951.6	2755.5
10°	3166.8	3146.1	3204.7	3302.8	3405.8	3522.0	*3505.5*	3508.8	3353.9	3103.3	2825.5
12.5°	2808.2	2800.0	2843.6	2957.4	3159.3	3423.1	*3486.6*	3592.9	3532.7	3267.3	2905.5
15°	2650.8	2654.9	2681.3	2753.0	2898.0	3226.1	*3378.6*	3570.6	3692.6	3426.4	2993.7
17.5°	2674.7	2689.5	2688.7	2712.6	2800.8	3063.7	*3241.8*	3500.6	3816.3	3609.4	3095.0
20°	2837.1	2851.9	2829.6	2811.5	2841.2	3022.5	*3170.1*	3429.7	3899.5	3794.0	3202.2
22.5°	3080.2	3097.5	3044.8	2992.8	2973.9	3090.1	*3197.3*	3400.8	3963.0	3963.0	3297.8
25°	3374.5	3398.4	3316.8	3224.5	3171.7	3232.7	*3313.5*	3466.0	4028.1	4114.6	3362.9
27.5°	3703.3	3704.2	3634.1	3530.2	3431.3	3438.8	*3487.4*	3612.7	4099.8	4277.8	3414.0
30°	4073.4	4075.9	3982.8	3858.3	3733.8	3700.0	*3741.3*	3836.0	4249.0	4483.1	3484.9
32.5°	4551.5	4563.0	4429.5	4246.5	4085.0	4021.5	*4045.4*	4145.1	4486.4	4740.2	3591.2
35°	5197.7	5210.1	5013.1	4771.6	4514.4	4418.8	*4442.7*	4543.2	4830.1	5105.4	3761.0
37.5°	5835.7	5852.1	5652.7	5427.7	5074.9	4916.6	*4941.4*	5037.0	5346.1	5609.8	4033.0
40°	6276.6	6298.9	6237.1	6085.4	5758.2	5550.5	*5580.1*	5614.8	5914.0	6213.2	4385.8
42.5°	6509.1	6540.4	6566.8	6644.2	6472.0	6298.1	*6247.8*	6250.3	6491.8	6828.1	4752.6
45°	6523.1	6553.6	6688.8	6988.0	7119.0	7082.7	*6991.3*	6929.4	6932.7	7237.7	4981.7
47.5°	6069.7	6126.6	6379.7	6965.7	7458.6	7759.5	*7713.3*	7566.6	7118.2	7264.9	4957.0
50°	*4995.8*	*5051.8*	*5511.7*	*6354.9*	*7211.3*	*8029.8*	*8220.2*	*8023.2*	*6997.0*	*6926.1*	*4702.3*
52.5°	3628.3	3634.1	3932.5	4917.5	6209.0	7531.1	*7979.5*	7960.6	6812.4	6515.7	4354.5
55°	1723.5	1702.9	2038.4	2775.2	4294.3	6091.2	*6847.0*	7061.3	6550.3	6218.9	4085.0
57.5°	502.0	511.9	661.0	1083.1	2148.0	3892.9	*4689.1*	5088.1	5376.6	5112.8	3168.4
60°	225.0	225.8	251.4	329.7	715.4	1810.9	*2424.1*	2917.8	3214.6	2978.8	1571.8
62.5°	163.2	164.0	173.9	186.3	243.2	613.2	*909.1*	1211.6	1233.9	807.8	398.1
65°	136.0	136.0	137.6	137.6	145.9	219.2	*276.1*	356.1	300.0	222.5	155.8
67.5°	109.6	110.4	112.1	112.1	109.6	109.6	*118.7*	130.2	139.3	172.3	143.4
70°	85.7	84.9	84.9	85.7	83.2	70.9	*76.7*	87.4	95.6	134.4	124.5
72.5°	66.8	67.6	66.8	63.5	57.7	42.0	*45.3*	56.9	61.0	84.1	84.1
75°	50.3	51.1	47.8	36.3	23.9	13.2	*17.3*	28.0	35.4	41.2	30.5
77.5°	6.6	6.6	4.9	4.9	4.1	4.9	*4.9*	6.6	9.9	9.9	7.4
80°	0.8	0.8	0.8	1.6	2.5	3.3	*3.3*	3.3	3.3	4.1	4.1
82.5°	0.8	0.8	0.8	0.8	2.5	2.5	*3.3*	3.3	3.3	3.3	3.3
85°	0.0	0.0	0.0	0.8	1.6	2.5	*2.5*	3.3	3.3	3.3	3.3
87.5°	0.0	0.0	0.0	0.8	1.6	2.5	*2.5*	2.5	3.3	3.3	3.3
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: P636977
CATALOG NUMBER: GWS-SA4B-830-U-AFL-W-GRSBK

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2623.6	2623.6	2623.6	2623.6	2623.6	2623.6	2623.6	2623.6	2623.6	2623.6	2623.6
2.5°	2627.7	2579.9	2522.2	2482.6	2426.6	2389.5	2336.7	2301.3	2270.8	2246.9	2260.1
5°	2628.5	2552.7	2434.8	2334.3	2224.6	2124.1	2016.1	1931.2	1854.6	1819.9	1838.9
7.5°	2645.0	2536.2	2355.7	2176.8	1966.7	1758.9	1564.4	1406.2	1327.9	1290.8	1302.3
10°	2677.2	2528.8	2267.5	1970.8	1629.5	1346.0	1157.2	1050.1	1006.4	983.3	987.4
12.5°	2706.8	2523.8	2152.9	1699.6	1285.8	1044.3	946.2	931.4	940.5	941.3	940.5
15°	2747.2	2514.8	2011.2	1421.0	1028.7	902.5	905.0	926.5	947.9	954.5	952.8
17.5°	2790.1	2500.8	1828.2	1153.9	872.9	861.3	890.2	919.0	940.5	943.8	944.6
20°	2834.6	2471.9	1619.6	942.1	800.3	830.0	862.2	883.6	899.3	904.2	905.8
22.5°	2855.2	2410.9	1379.0	790.5	751.7	791.3	815.2	843.2	848.1	830.0	833.3
25°	2844.5	2307.9	1144.1	688.2	703.1	742.6	778.1	764.1	743.5	730.3	734.4
27.5°	2810.7	2171.1	914.1	613.2	651.2	701.4	705.6	689.9	686.6	675.9	679.2
30°	2774.4	2013.6	735.2	553.1	598.4	651.2	638.8	644.6	645.4	633.0	637.1
32.5°	2752.2	1848.8	585.2	512.7	564.6	574.5	599.2	610.8	611.6	582.7	587.7
35°	2759.6	1686.4	495.4	479.7	533.3	530.8	565.4	572.0	524.2	484.7	488.8
37.5°	2819.7	1536.4	444.3	454.2	478.9	497.8	524.2	480.5	469.8	451.7	454.2
40°	2931.8	1408.6	413.8	438.5	441.8	472.3	431.9	437.7	438.5	427.0	429.4
42.5°	3062.9	1302.3	395.6	429.4	421.2	426.1	385.7	397.3	409.7	404.7	405.5
45°	3128.8	1198.5	380.0	398.1	400.6	353.6	344.5	356.9	372.6	375.0	375.9
47.5°	3070.3	1099.5	363.5	352.8	369.3	322.3	311.6	315.7	333.8	343.7	345.4
50°	*2891.5*	*985.8*	*338.8*	*312.4*	*303.3*	*289.3*	*279.4*	*280.2*	*300.8*	*318.2*	*321.5*
52.5°	2640.1	867.1	298.4	264.6	244.0	254.7	257.2	252.2	271.2	288.5	291.8
55°	2396.1	718.7	236.6	215.1	196.2	219.2	225.8	219.2	225.0	236.6	237.4
57.5°	1687.2	406.4	181.3	178.0	162.4	187.9	198.6	188.8	178.9	186.3	187.9
60°	782.2	212.7	139.3	139.3	135.2	161.6	179.7	165.7	146.7	150.0	152.5
62.5°	244.8	134.4	102.2	96.4	110.4	137.6	152.5	138.5	116.2	116.2	119.5
65°	138.5	115.4	80.8	74.2	89.8	110.4	119.5	104.7	84.9	83.2	83.2
67.5°	128.6	109.6	71.7	60.2	63.5	70.9	74.2	64.3	58.5	57.7	58.5
70°	106.3	91.5	57.7	41.2	38.7	37.9	39.6	37.1	35.4	36.3	38.7
72.5°	65.9	55.2	36.3	24.7	21.4	20.6	20.6	20.6	19.8	19.8	19.8
75°	23.9	20.6	16.5	12.4	10.7	9.9	9.9	10.7	9.9	9.1	8.2
77.5°	7.4	6.6	6.6	6.6	5.8	4.9	4.1	4.1	3.3	2.5	2.5
80°	4.1	4.1	4.1	4.1	3.3	3.3	2.5	1.6	0.8	0.8	0.0
82.5°	4.1	4.1	4.1	3.3	3.3	3.3	2.5	1.6	0.8	0.0	0.0
85°	3.3	3.3	3.3	3.3	3.3	3.3	2.5	1.6	0.8	0.0	0.0
87.5°	3.3	3.3	3.3	3.3	3.3	3.3	2.5	1.6	0.8	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

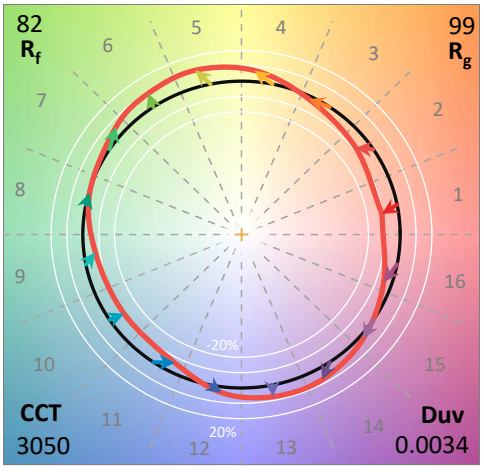
Test Information

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

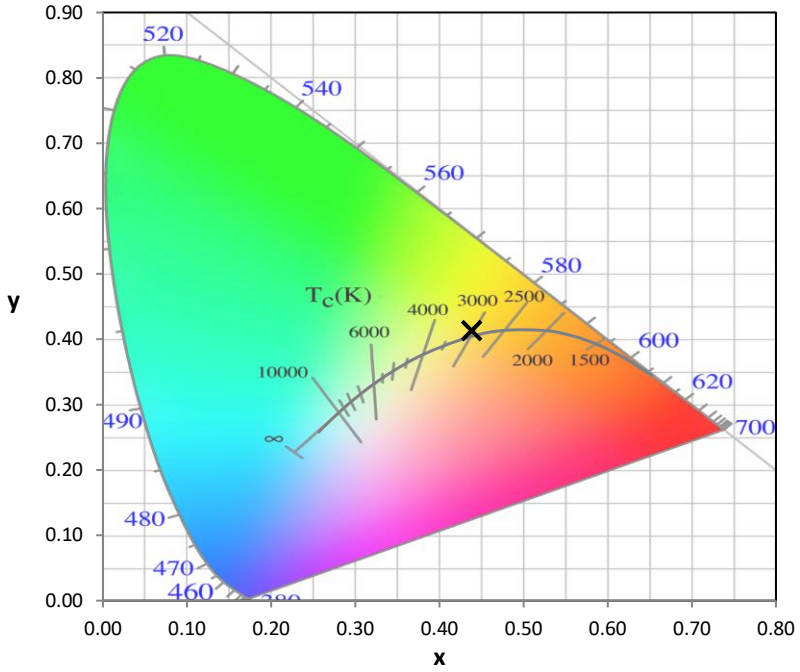
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

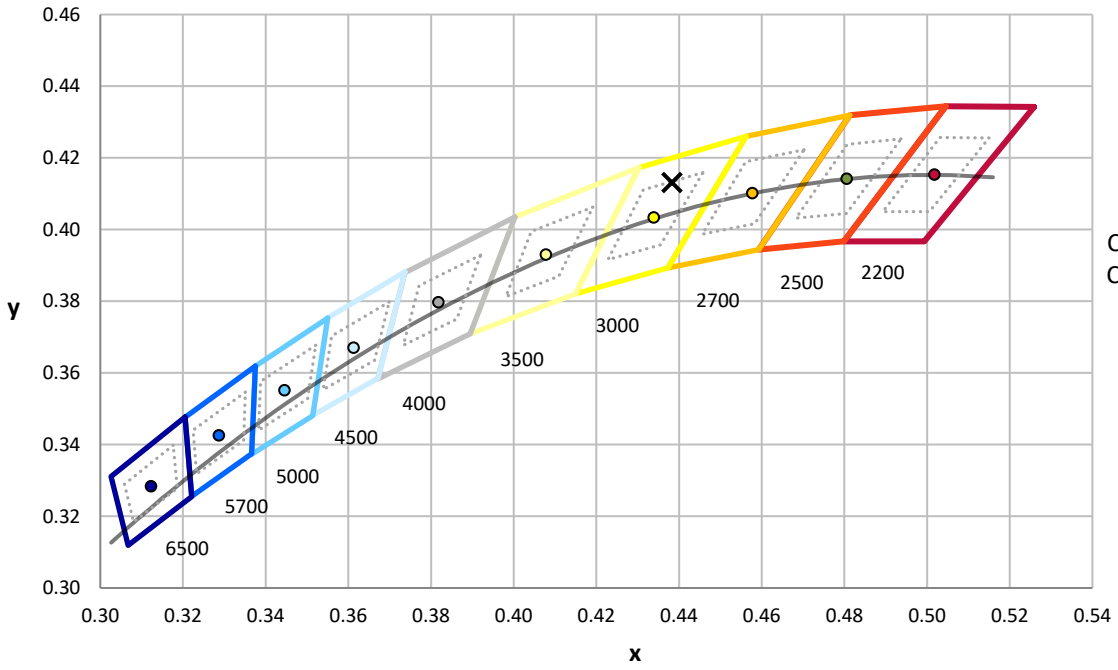
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

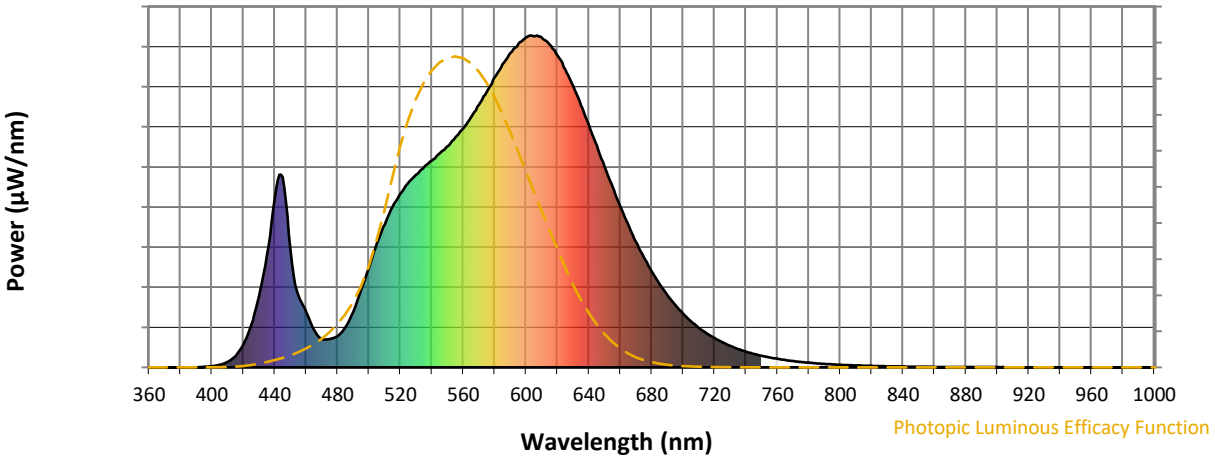


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

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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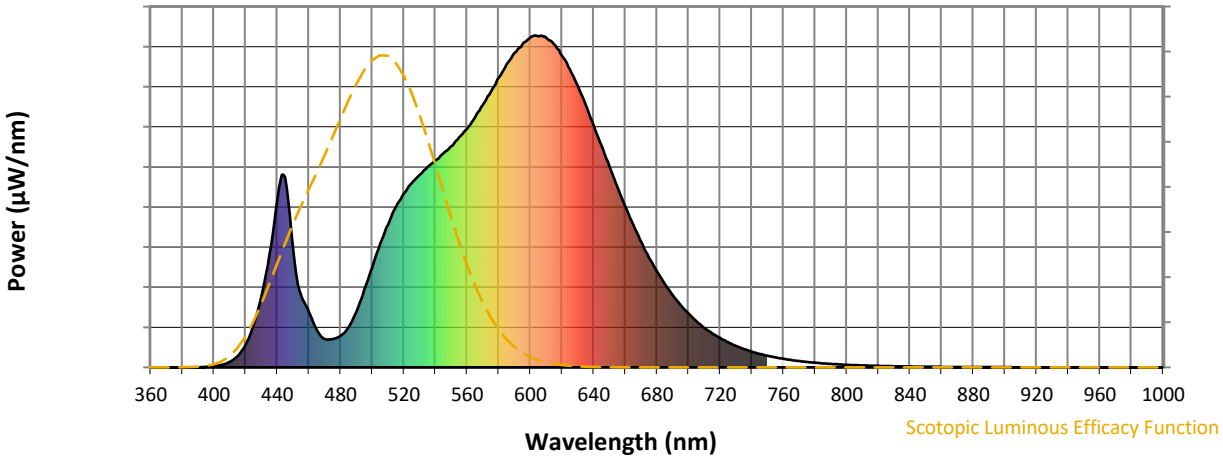
Scotopic Flux vs. Wavelength



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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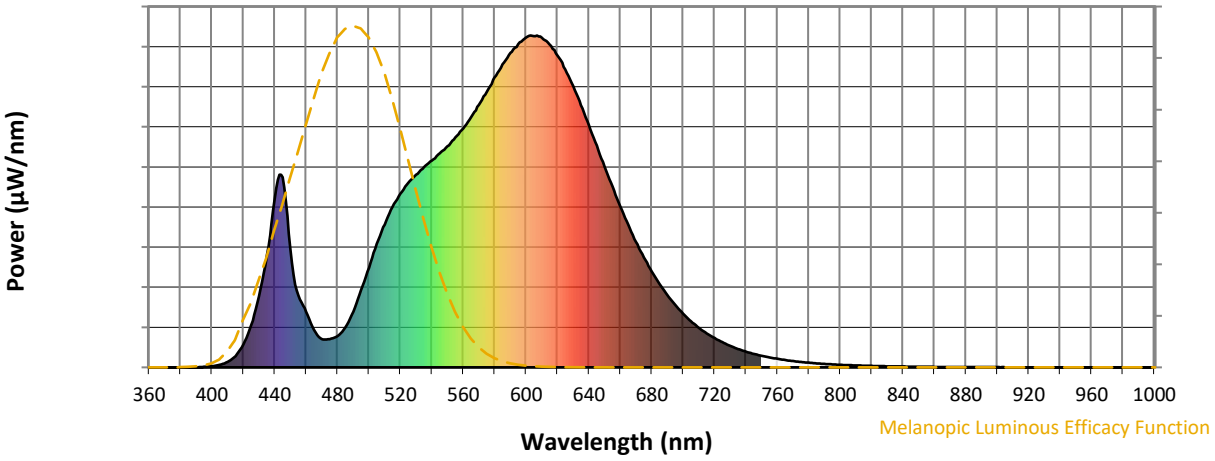
Melanopic Flux vs. Wavelength



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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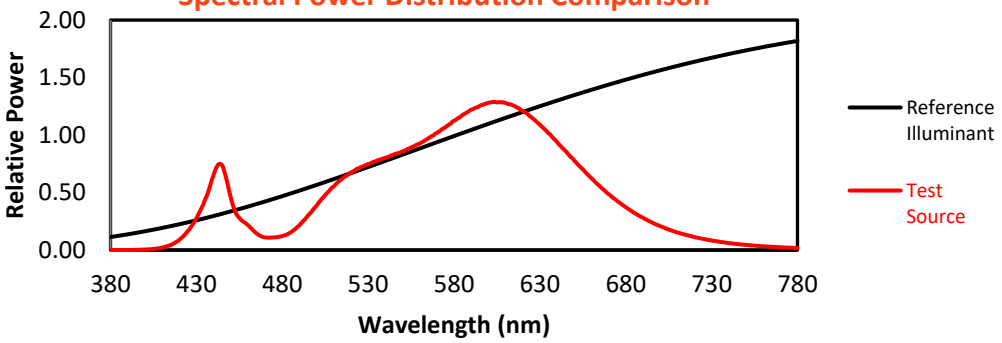
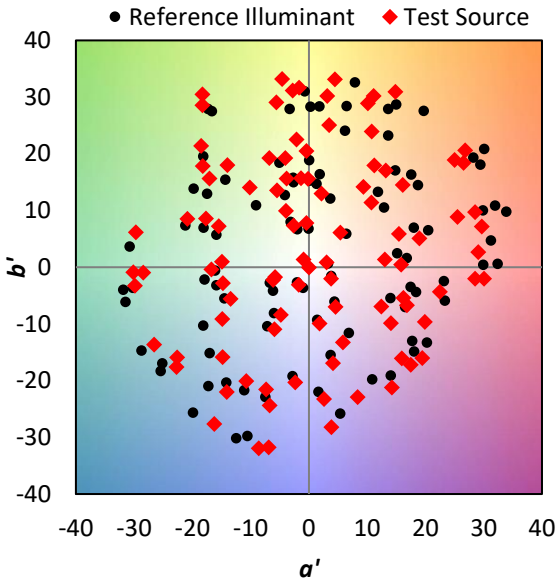
Summary

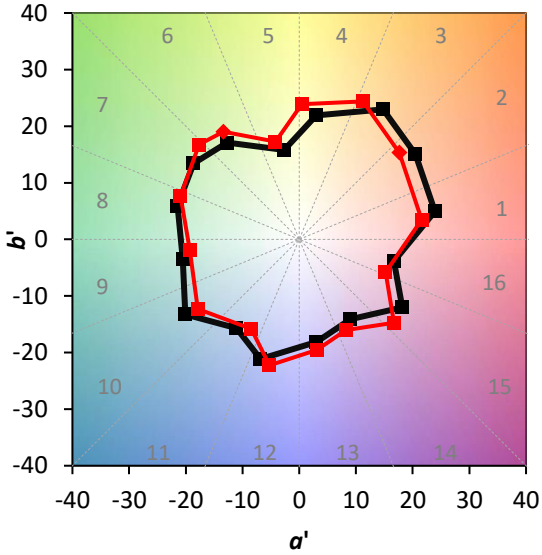
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

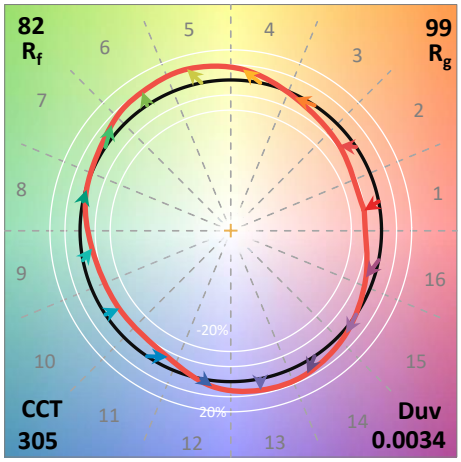
Spectral Power Distribution Comparison

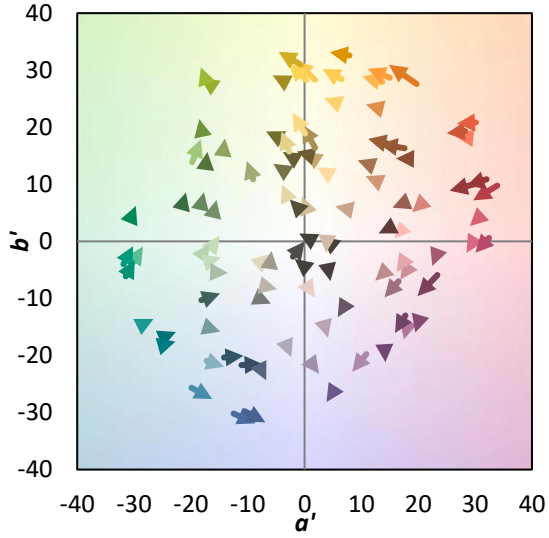


Color Vector Graphics









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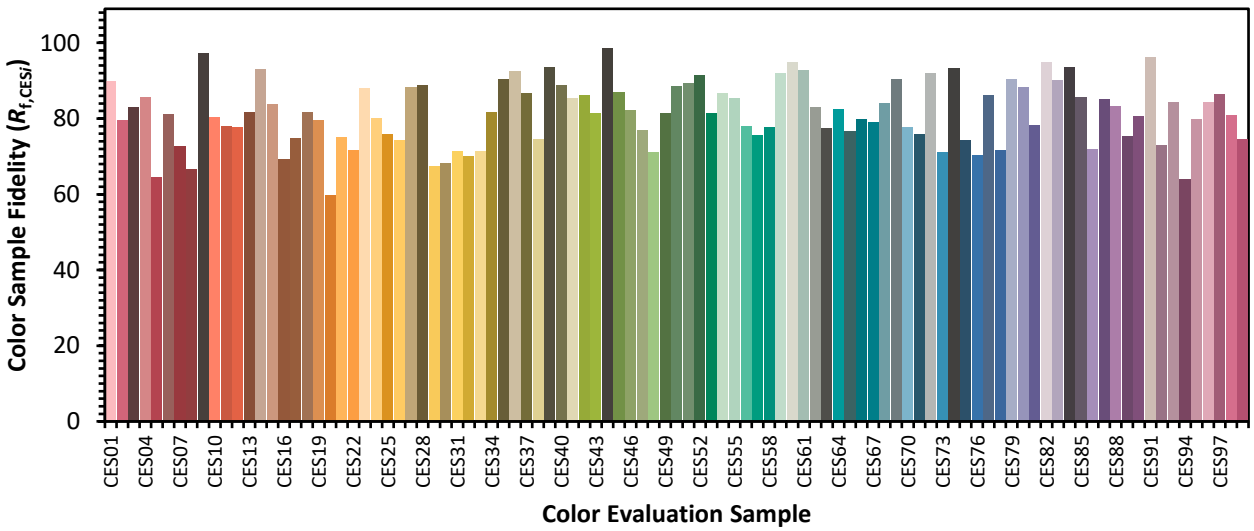
Individual Sample Fidelity Index ($R_{f,i}$)

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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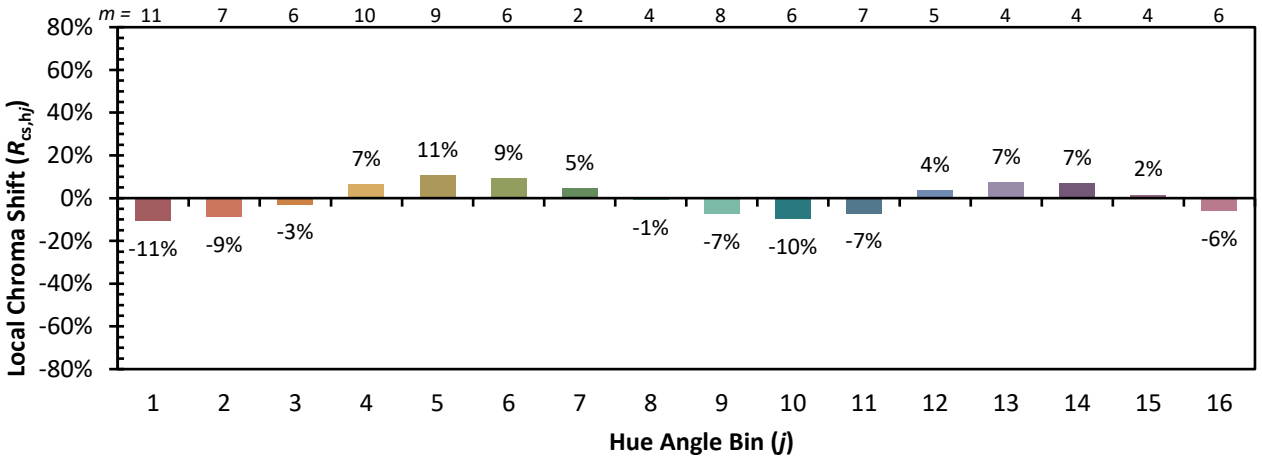
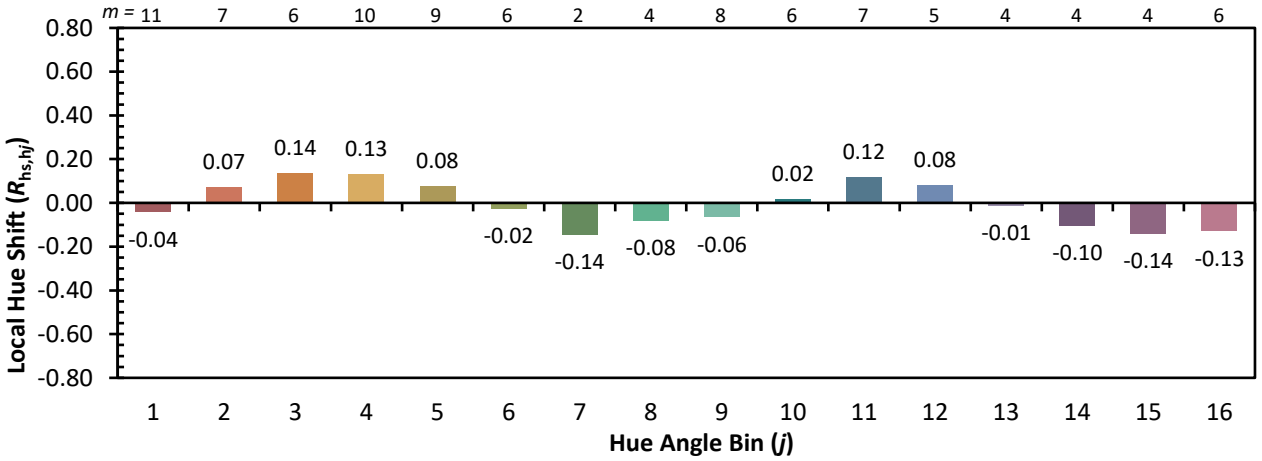
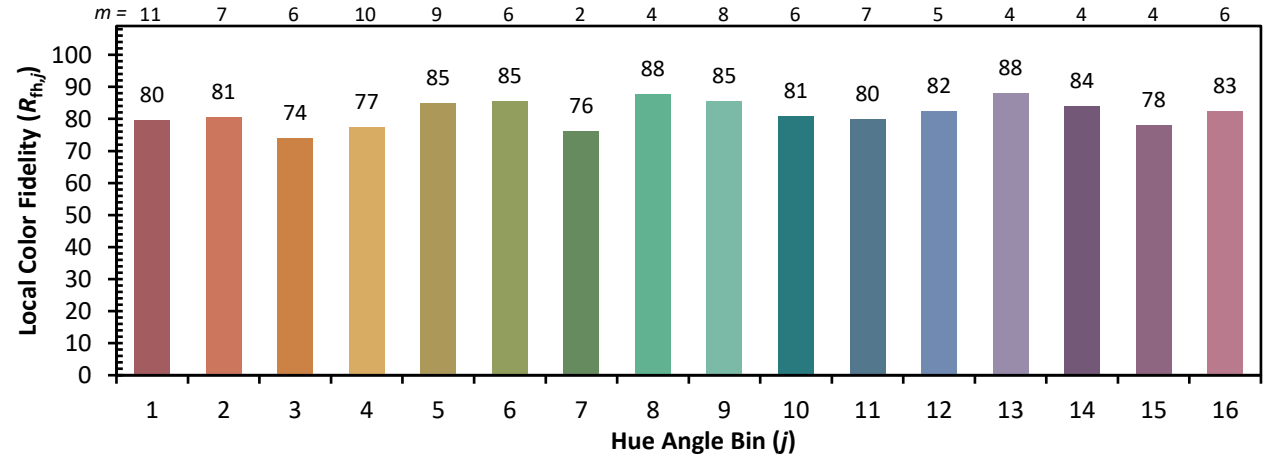
Color Rendition by Hue-Angle Bin







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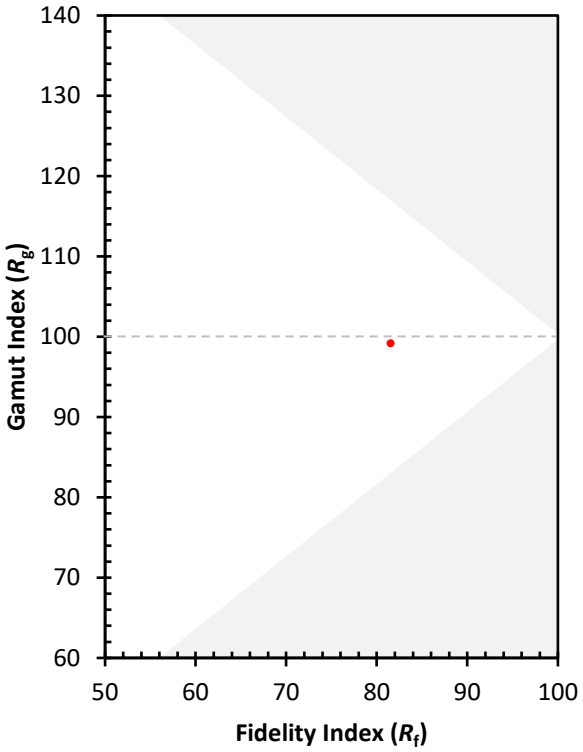
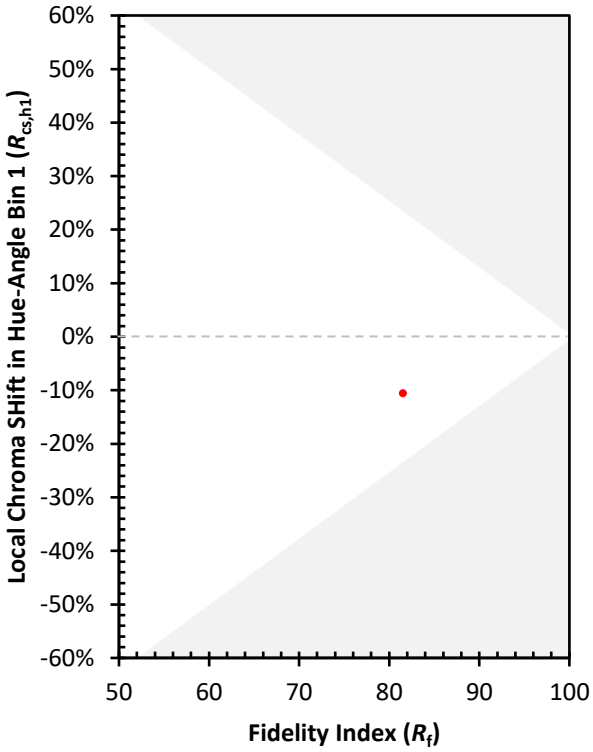
Measure Comparisons





(END OF REPORT)