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: P636988

Luminaire Tested: GWS-SA4B-830-U-SL3-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:	P636988
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-32)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	1/10/2023
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	McGRAW-EDISON
Catalog Number:	GWS-SA4B-830-U-SL3-W-GRSBK
Description:	GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR 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:	6725.3 lumens
Efficiency:	N/A
Efficacy:	71.2 lumens/watt
Luminous Opening:	Rectangular (W 1' x L: 1' x H: 0')
IES Classification:	Type II - Short
BUG Rating:	B2 - U0 - G1

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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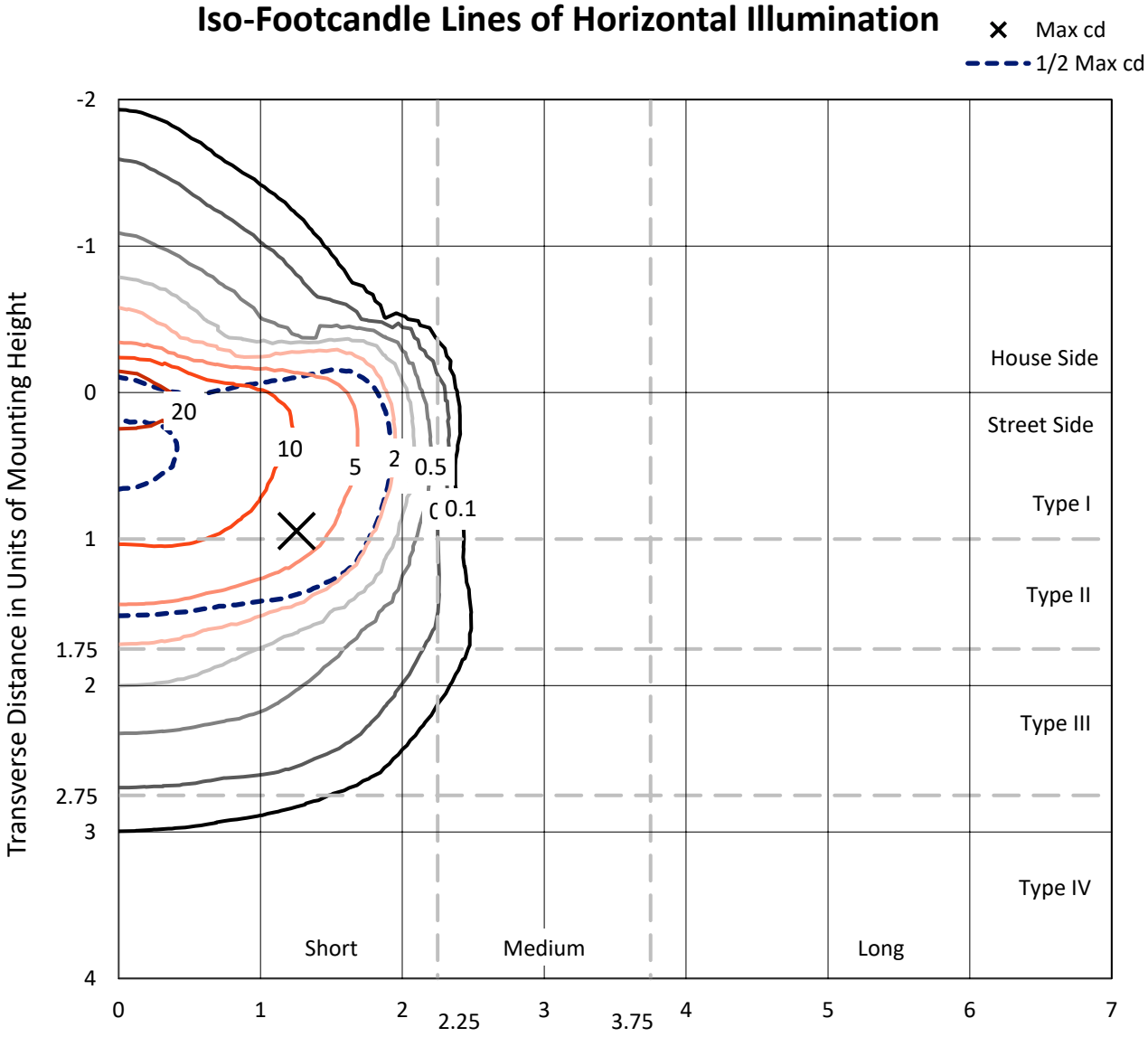
Scaled Data Report

REPORT NUMBER: P636988
CATALOG NUMBER: GWS-SA4B-830-U-SL3-W-GRSBK

Iso-Footcandle Lines of Horizontal Illumination



Based on 10 foot mounting height. Maximum calculated value = 29.5 fc
Type II - Short - N/A

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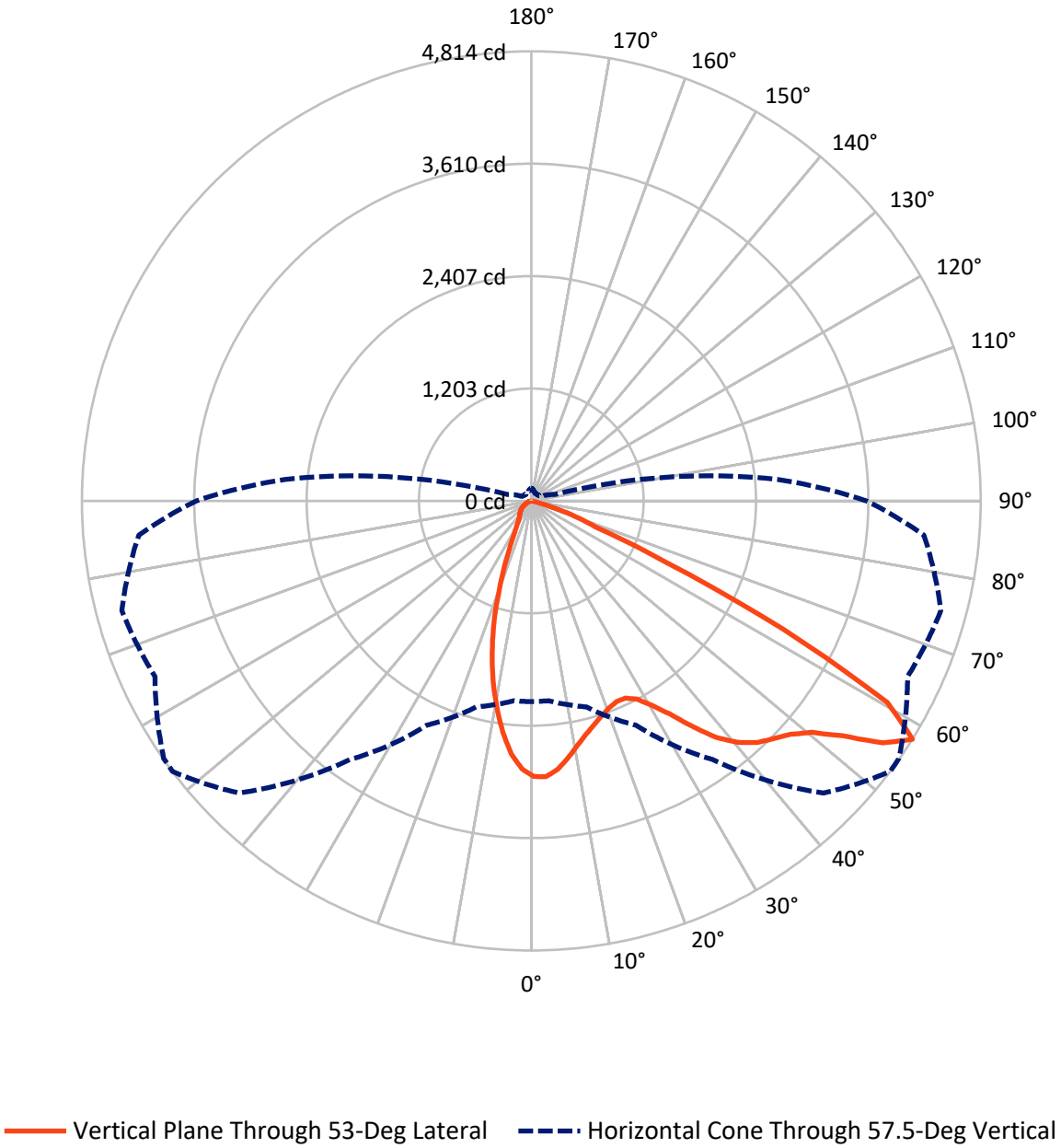
Luminous Intensity Polar Plot



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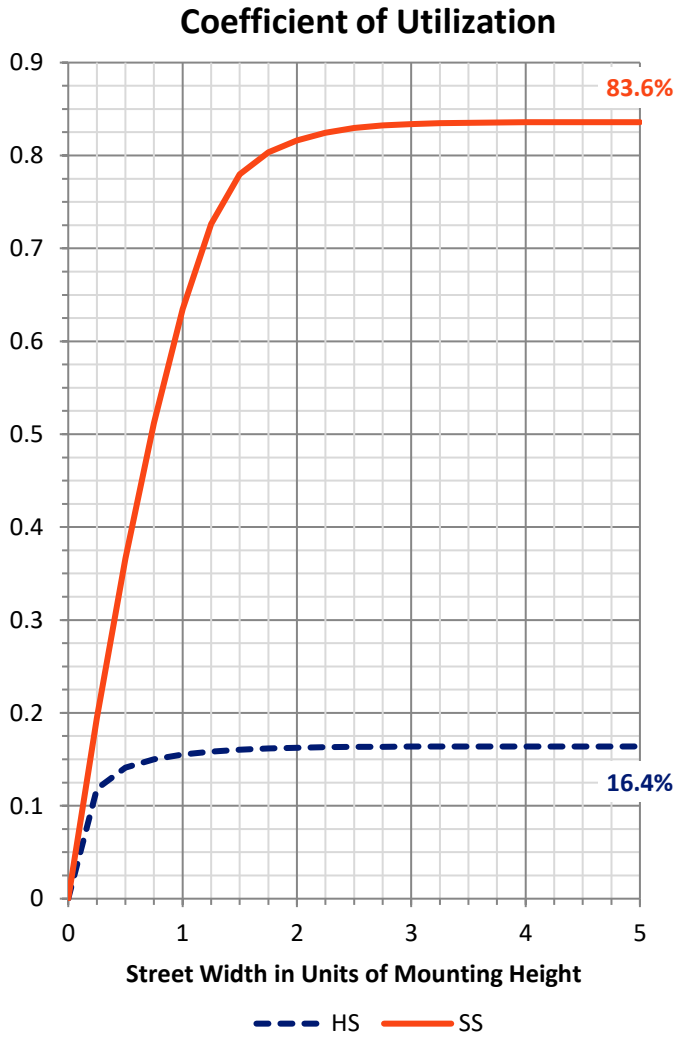
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1110.9	0.0	1110.9
	% Fixture	16.5	0.0	16.5
Street Side	Lumens	5614.4	0.0	5614.4
	% Fixture	83.5	0.0	83.5
Total	Lumens	6725.3	0.0	6725.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	252.4	3.8
10°-20°	554.1	8.2
20°-30°	721.9	10.7
30°-40°	1047.1	15.6
40°-50°	1510.9	22.5
50°-60°	1827.3	27.2
60°-70°	744.7	11.1
70°-80°	66.9	1.0
80°-90°	0.0	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°	6725.3	100.0
0°-180°	6725.3	100.0



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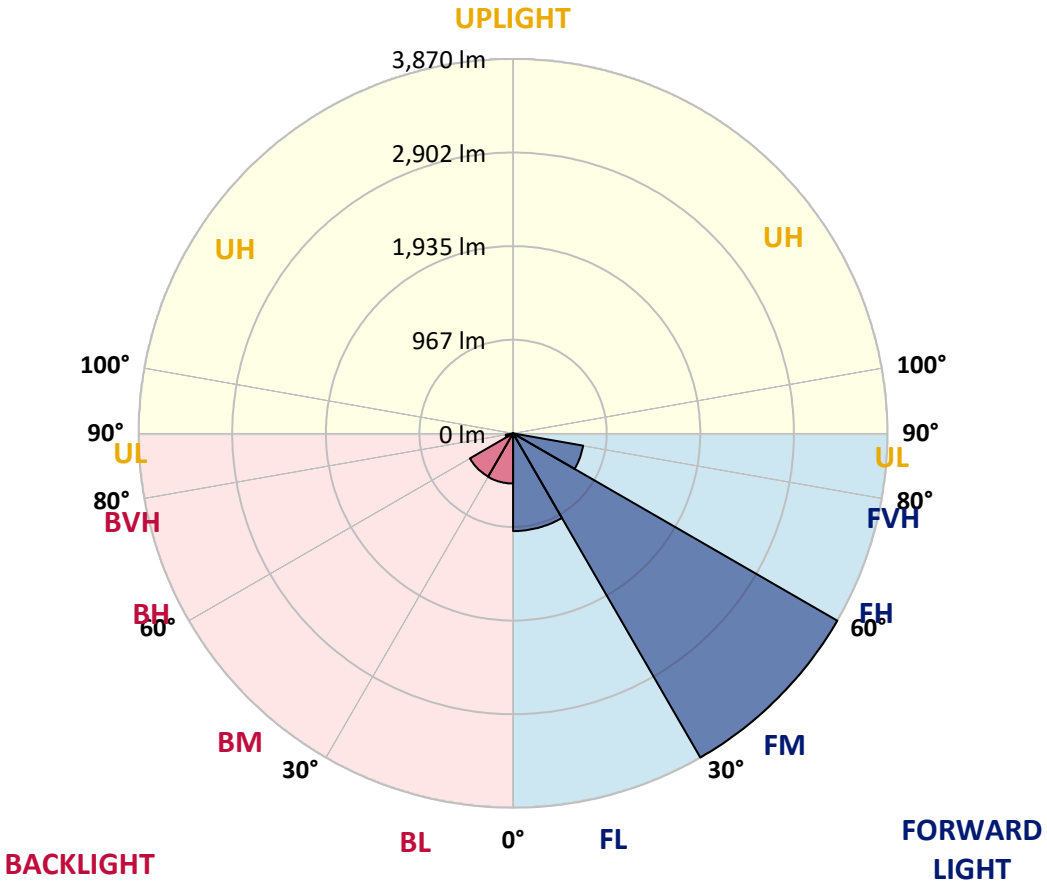
CATALOG NUMBER: GWS-SA4B-830-U-SL3-W-GRSBK

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	1009.9	15.0			
FM	(30°-60°)	3869.6	57.5			
FH	(60°-80°)	734.9	10.9			G1/1800
FVH	(80°-90°)	0.0	0.0			G0/10
BL	(0°-30°)	518.5	7.7	B2/1000		
BM	(30°-60°)	515.6	7.7	B1/1000		
BH	(60°-80°)	76.8	1.1	B0/110		G0/110
BVH	(80°-90°)	0.0	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G1
Type II Short



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Scaled Data Report

REPORT NUMBER: P636988
CATALOG NUMBER: GWS-SA4B-830-U-SL3-W-GRSBK

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	53°	55°	65°	75°	85°
0°	2950.1	2950.1	2950.1	2950.1	2950.1	2950.1	*2950.1*	2950.1	2950.1	2950.1	2950.1
2.5°	2908.9	2915.5	2927.0	2941.9	2951.7	2956.7	*2956.7*	2970.7	2961.6	2954.2	2946.0
5°	2784.4	2791.0	2806.7	2830.6	2854.5	2871.8	*2891.6*	2906.4	2912.2	2912.2	2898.2
7.5°	2608.8	2617.9	2627.8	2660.8	2712.7	2751.4	*2785.2*	2806.7	2838.0	2847.9	2828.1
10°	2420.1	2429.2	2451.4	2496.7	2556.1	2613.8	*2671.5*	2698.7	2752.3	2780.3	2758.0
12.5°	2260.2	2264.3	2294.0	2348.4	2424.2	2503.3	*2573.4*	2601.4	2677.3	2719.3	2692.9
15°	2128.3	2130.8	2160.4	2220.6	2308.0	2405.3	*2493.4*	2522.3	2615.4	2678.9	2639.3
17.5°	2028.6	2029.4	2054.9	2120.0	2211.5	2319.5	*2424.2*	2459.7	2580.0	2656.7	2597.3
20°	1978.3	1975.8	1993.9	2050.8	2137.4	2245.3	*2369.0*	2412.7	2560.2	2653.4	2565.2
22.5°	1979.1	1973.3	1980.7	2021.1	2094.5	2195.9	*2334.4*	2383.8	2561.9	2667.4	2538.0
25°	2026.1	2017.8	2019.5	2040.9	2092.8	2185.2	*2339.3*	2392.1	2594.8	2714.4	2528.1
27.5°	2105.2	2096.1	2096.1	2106.9	2134.9	2219.0	*2401.1*	2461.3	2683.0	2805.9	2548.7
30°	2207.4	2198.4	2195.1	2205.8	2228.9	2306.3	*2538.8*	2601.4	2833.9	2955.9	2614.6
32.5°	2324.5	2313.8	2319.5	2334.4	2356.6	2463.8	*2716.0*	2799.3	3022.6	3157.8	2733.3
35°	2448.1	2439.0	2465.4	2497.6	2532.2	2682.2	*2960.8*	3033.4	3254.3	3409.2	2914.7
37.5°	2566.0	2561.9	2617.1	2684.7	2756.4	2944.3	*3209.7*	3265.8	3452.9	3682.9	3136.4
40°	2683.9	2683.0	2777.8	2896.5	3011.1	3205.6	*3398.5*	3444.7	3574.1	3895.5	3349.1
42.5°	2815.7	2815.7	2946.8	3105.1	3257.6	3426.5	*3537.0*	3557.6	3628.5	4018.4	3509.0
45°	2941.9	2949.3	3100.9	3284.8	3465.3	3598.8	*3632.6*	3634.3	3650.7	4090.9	3641.7
47.5°	3041.6	3048.2	3229.5	3441.4	3635.9	3729.9	*3734.8*	3727.4	3709.3	4160.1	3743.9
50°	3122.4	3132.3	3321.9	3546.1	3752.9	3856.0	*3893.9*	3886.5	3840.3	4234.3	3815.6
52.5°	3161.9	3176.0	3354.0	3598.0	3883.2	4071.9	*4177.5*	4194.8	4036.5	4275.5	3884.0
55°	2845.4	2866.0	3030.1	3363.9	3955.7	4405.8	*4571.5*	4568.2	4249.2	4398.4	4050.5
57.5°	*2148.9*	*2147.3*	*2283.3*	*2648.4*	*3378.7*	*4424.7*	*4813.8*	*4807.2*	*4447.8*	*4541.0*	*4221.1*
60°	1463.1	1453.2	1489.5	1665.9	2362.4	3604.6	*4381.1*	4470.1	4306.9	4194.8	3584.0
62.5°	1204.3	1195.2	1183.7	1135.0	1356.8	2245.3	*3026.8*	3161.9	3140.5	2915.5	2247.8
65°	985.8	993.3	1025.4	1004.8	943.8	1151.5	*1571.1*	1651.0	1509.3	1270.2	785.5
67.5°	727.0	730.3	772.4	881.2	848.2	766.6	*739.4*	752.6	441.0	202.8	131.1
70°	429.5	431.9	470.7	616.6	688.3	588.5	*499.5*	492.1	174.7	54.4	59.3
72.5°	243.2	238.2	245.6	293.4	375.0	312.4	*257.2*	234.1	52.8	30.5	30.5
75°	115.4	112.1	96.4	90.7	82.4	52.8	*33.0*	28.0	13.2	12.4	12.4
77.5°	0.8	2.5	1.6	2.5	2.5	1.6	*0.8*	0.8	2.5	2.5	3.3
80°	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	0.0	0.0	0.0
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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CATALOG NUMBER: GWS-SA4B-830-U-SL3-W-GRSBK

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2950.1	2950.1	2950.1	2950.1	2950.1	2950.1	2950.1	2950.1	2950.1	2950.1	2950.1
2.5°	2931.1	2906.4	2900.6	2899.0	2875.9	2851.2	2825.6	2815.7	2800.9	2791.8	2799.3
5°	2875.9	2840.5	2809.1	2780.3	2729.2	2673.1	2624.5	2593.2	2563.5	2543.7	2548.7
7.5°	2797.6	2751.4	2679.7	2606.4	2512.4	2428.3	2334.4	2276.7	2223.1	2193.4	2207.4
10°	2714.4	2653.4	2538.8	2414.3	2266.8	2134.9	2000.5	1890.9	1827.4	1767.3	1773.9
12.5°	2632.8	2552.0	2380.5	2191.8	2005.5	1810.9	1608.2	1456.5	1352.6	1277.6	1266.1
15°	2556.9	2453.1	2226.4	1977.4	1723.6	1464.7	1205.9	989.1	868.8	794.6	789.7
17.5°	2489.3	2360.7	2066.5	1753.2	1435.1	1103.7	806.1	643.8	574.5	542.4	539.1
20°	2424.2	2267.6	1903.3	1525.7	1120.2	774.8	556.4	481.4	459.1	445.9	447.6
22.5°	2361.6	2166.2	1731.8	1273.5	839.9	544.0	431.1	402.2	399.8	401.4	402.2
25°	2308.8	2073.1	1555.4	1030.4	599.3	414.6	360.2	352.0	359.4	370.1	371.8
27.5°	2281.6	1997.2	1383.1	785.5	433.6	337.1	312.4	315.7	328.9	340.4	342.1
30°	2289.0	1940.4	1205.1	569.6	333.8	284.4	276.1	282.7	295.9	306.6	308.3
32.5°	2341.8	1911.5	1022.9	414.6	274.5	248.1	244.8	249.8	261.3	269.5	270.4
35°	2446.5	1918.1	849.8	317.3	235.7	220.9	220.1	223.4	229.1	234.9	235.7
37.5°	2600.6	1971.7	679.2	263.8	213.5	202.8	199.5	199.5	203.6	206.1	207.7
40°	2766.3	2052.5	544.0	233.3	197.8	186.3	179.7	177.2	180.5	183.8	184.6
42.5°	2903.1	2133.2	441.8	211.8	185.5	169.8	161.6	159.9	164.0	169.8	171.5
45°	3007.8	2195.9	368.5	194.5	171.5	154.1	145.1	145.1	152.5	162.4	164.0
47.5°	3103.4	2246.2	314.1	178.9	158.3	140.1	131.1	132.7	145.1	158.3	160.7
50°	3168.5	2286.6	273.7	164.9	147.5	128.6	120.3	123.6	138.5	154.1	156.6
52.5°	3238.6	2336.0	247.3	152.5	137.7	119.5	112.1	114.6	131.1	148.4	151.7
55°	3432.3	2501.7	246.5	136.0	120.3	107.2	103.9	104.7	121.2	141.0	145.1
57.5°	*3590.6*	*2647.6*	*262.9*	*114.6*	*100.6*	*94.0*	*92.3*	*93.1*	*108.0*	*130.2*	*135.2*
60°	2970.7	2057.4	217.6	94.8	84.1	82.4	80.0	81.6	95.6	115.4	119.5
62.5°	1758.2	1176.2	103.9	72.5	71.7	70.1	67.6	70.9	84.1	101.4	103.9
65°	600.9	348.7	65.9	59.3	61.0	58.5	56.1	59.3	70.9	80.8	81.6
67.5°	115.4	92.3	52.8	49.5	50.3	45.3	44.5	47.8	54.4	56.1	55.2
70°	60.2	53.6	40.4	40.4	38.7	32.1	32.1	35.4	35.4	33.0	32.1
72.5°	31.3	29.7	26.4	29.7	24.7	19.8	19.8	21.4	19.8	16.5	16.5
75°	12.4	12.4	11.5	14.8	10.7	9.1	8.2	9.9	7.4	5.8	5.8
77.5°	3.3	3.3	3.3	4.1	2.5	2.5	1.6	1.6	0.8	0.0	0.0
80°	0.0	0.8	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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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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

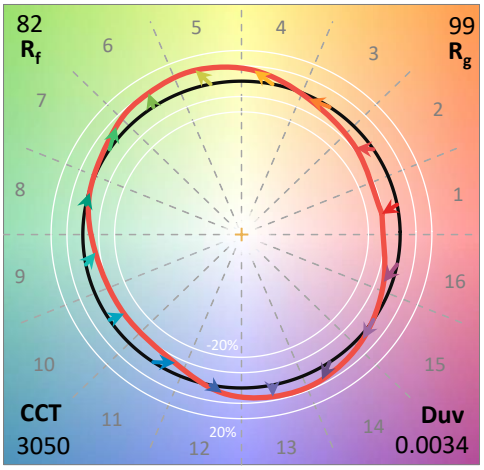
Test Information

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

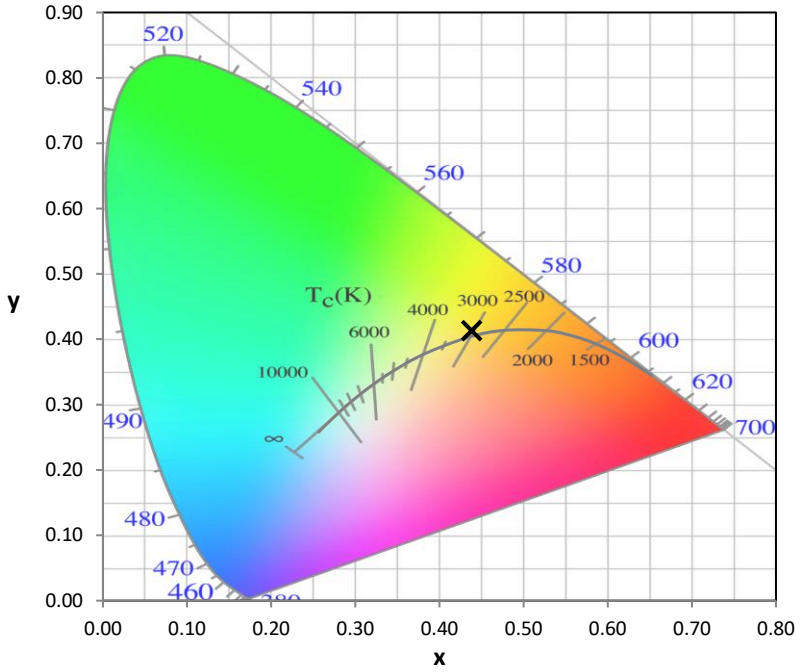
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

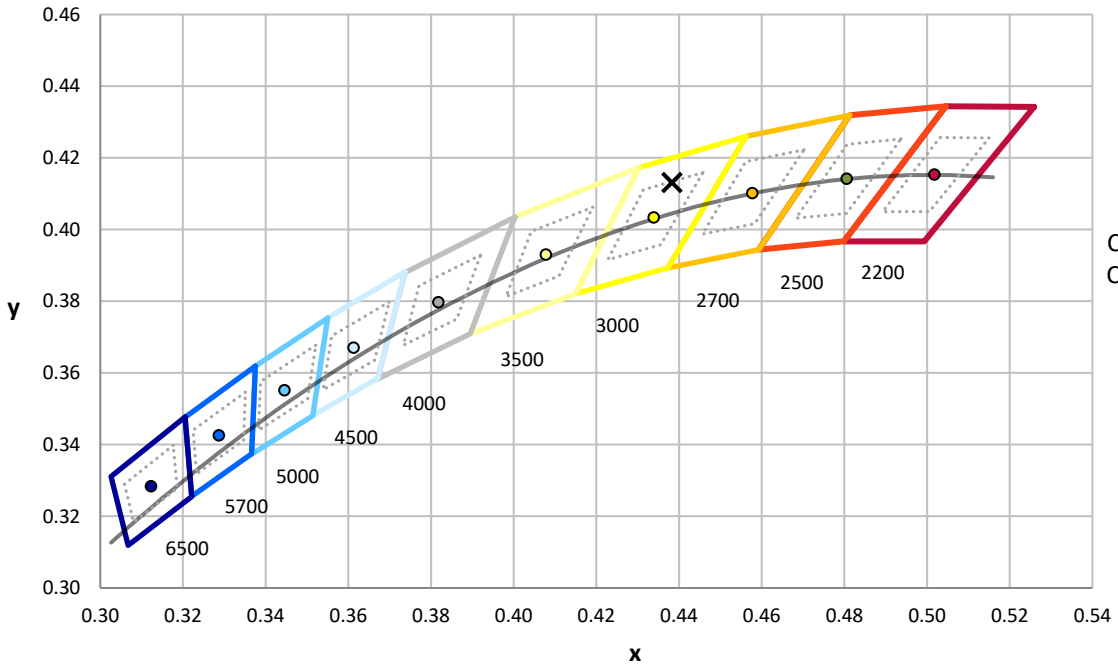
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

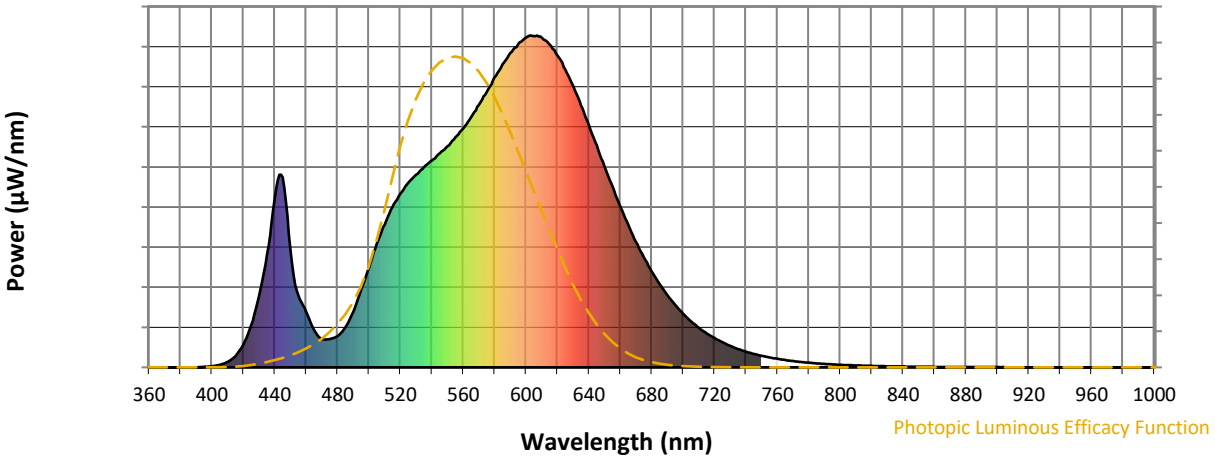


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

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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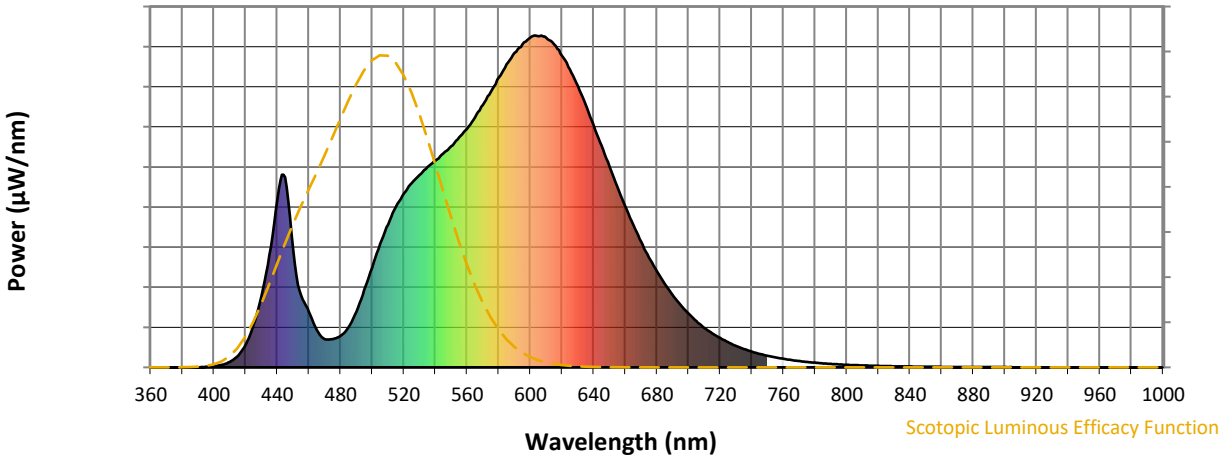
Scotopic Flux vs. Wavelength



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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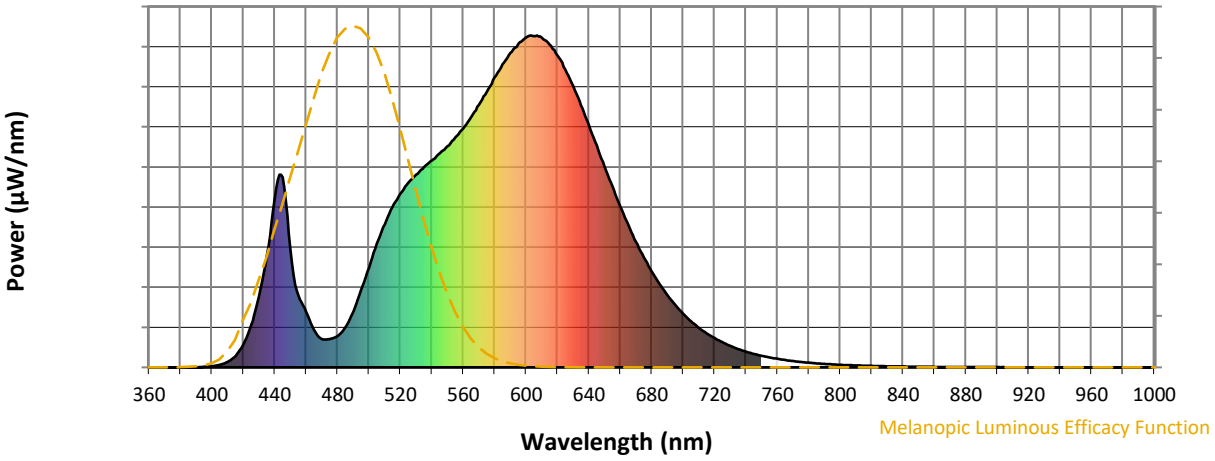
Melanopic Flux vs. Wavelength



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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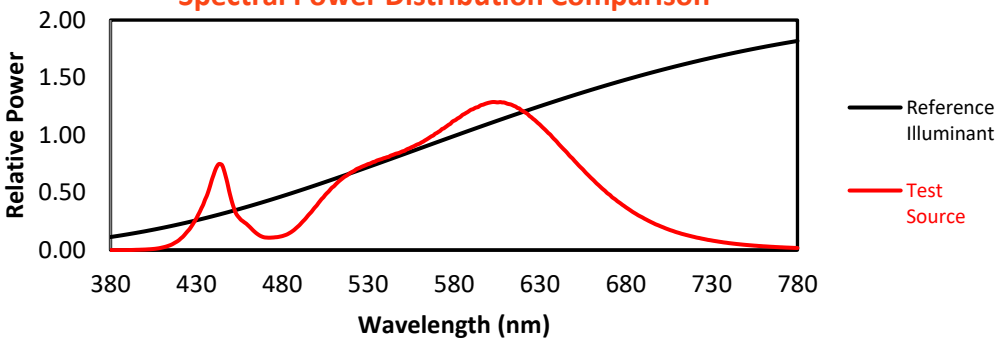
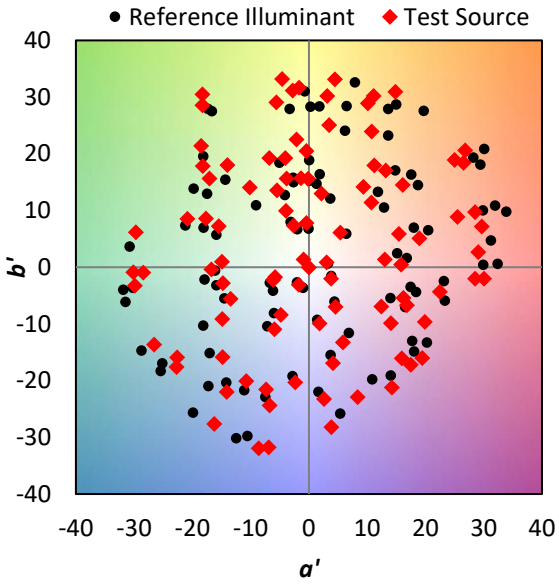
Summary

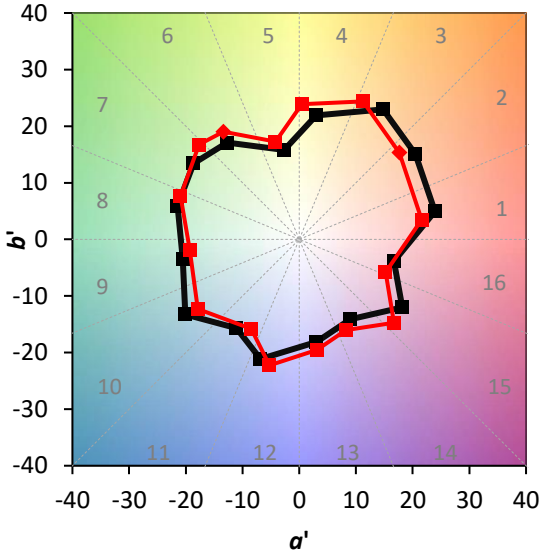
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

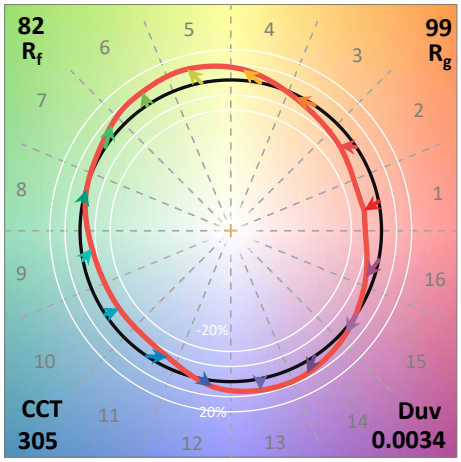
Spectral Power Distribution Comparison

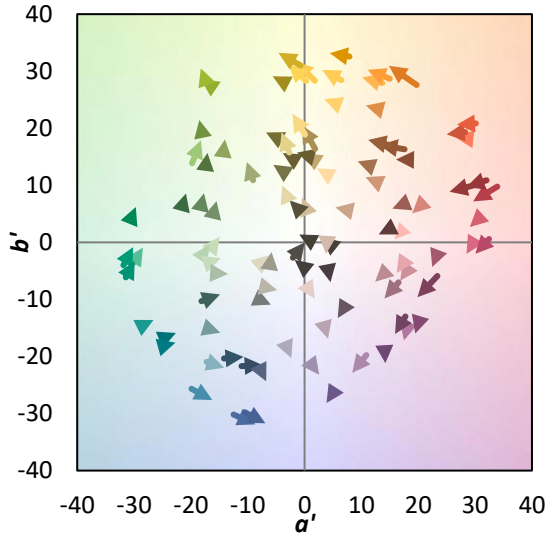


Color Vector Graphics









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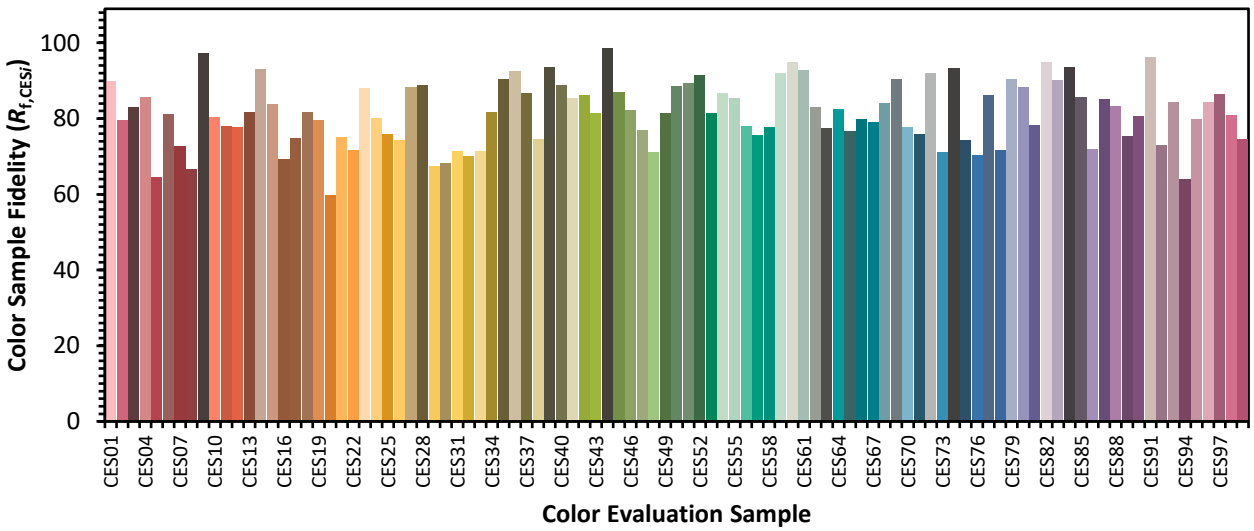
Individual Sample Fidelity Index ($R_{f,i}$)

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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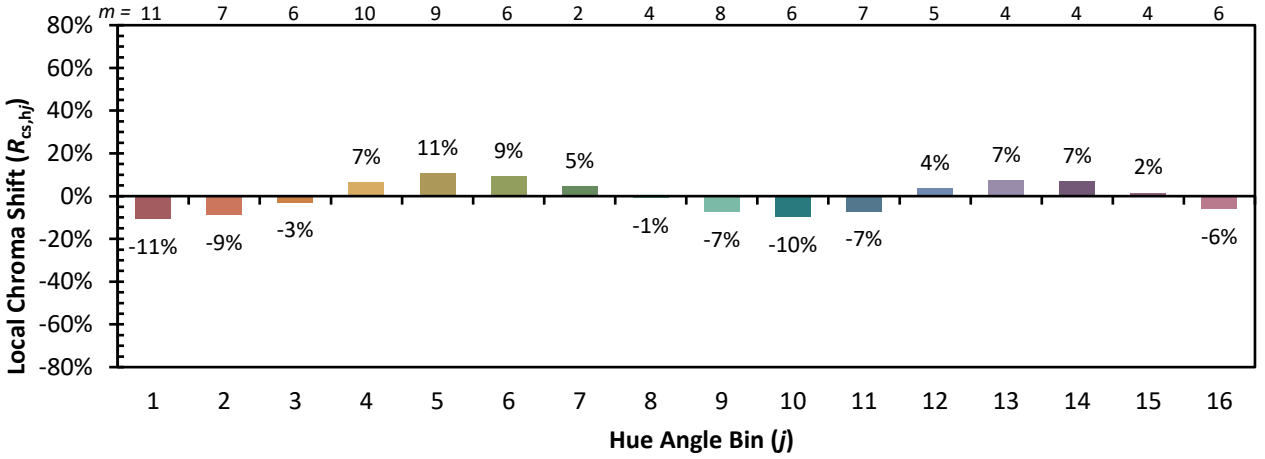
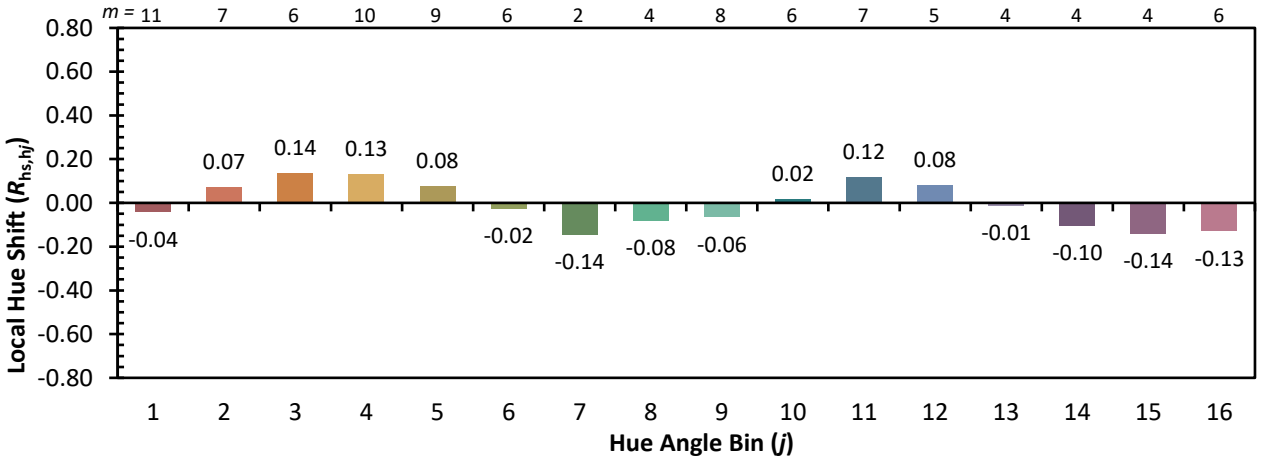
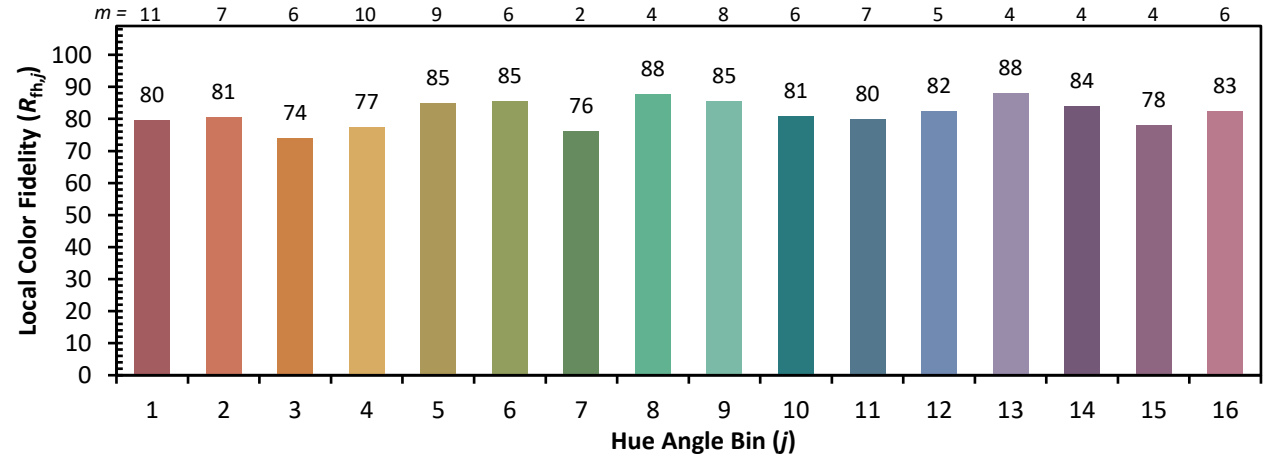
Color Rendition by Hue-Angle Bin







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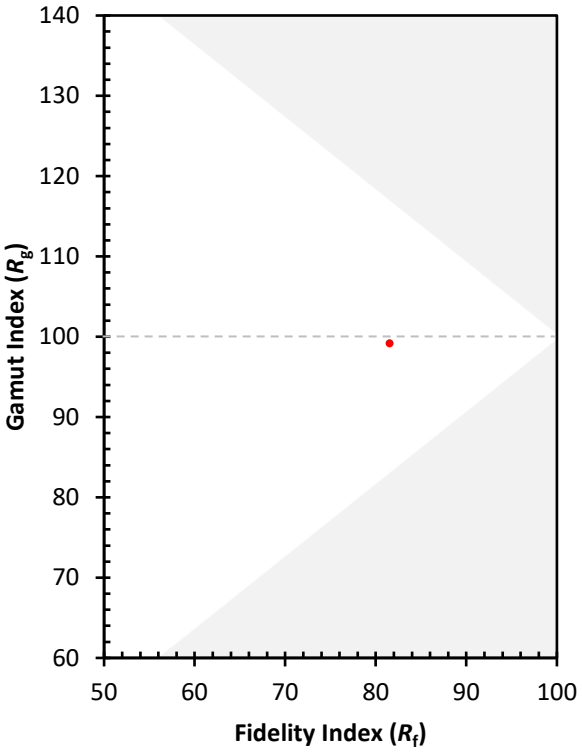
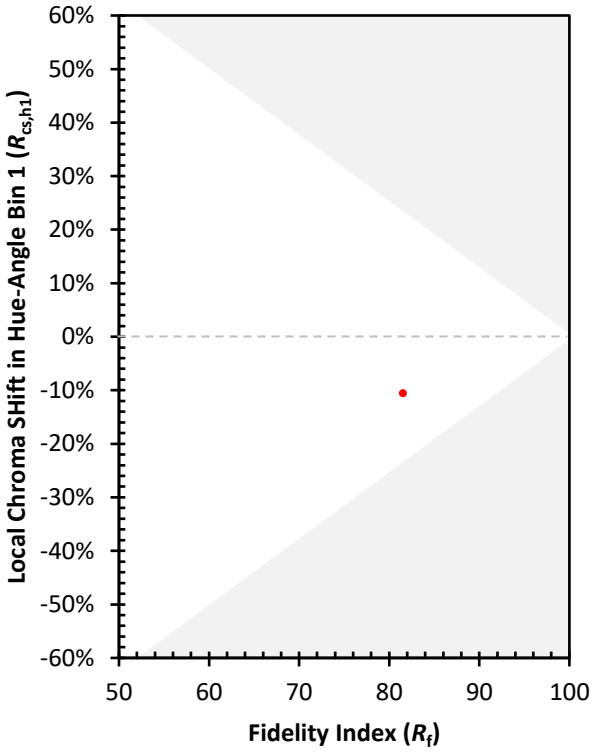
Measure Comparisons





(END OF REPORT)