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: P639000

Luminaire Tested: GWS-SA4F-830-U-T4FT-W

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:	P639000
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-54)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	1/10/2023
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	McGRAW-EDISON
Catalog Number:	GWS-SA4F-830-U-T4FT-W
Description:	GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source:	(64) 3000K CCT, 80 CRI LEDS
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	26107.4 lumens
Efficiency:	N/A
Efficacy:	115.9 lumens/watt
Luminous Opening:	Rectangular (W 1' x L: 1' x H: 0')
IES Classification:	Type IV - Short
BUG Rating:	B3 - U0 - G4

Input Watts (W):	225.3
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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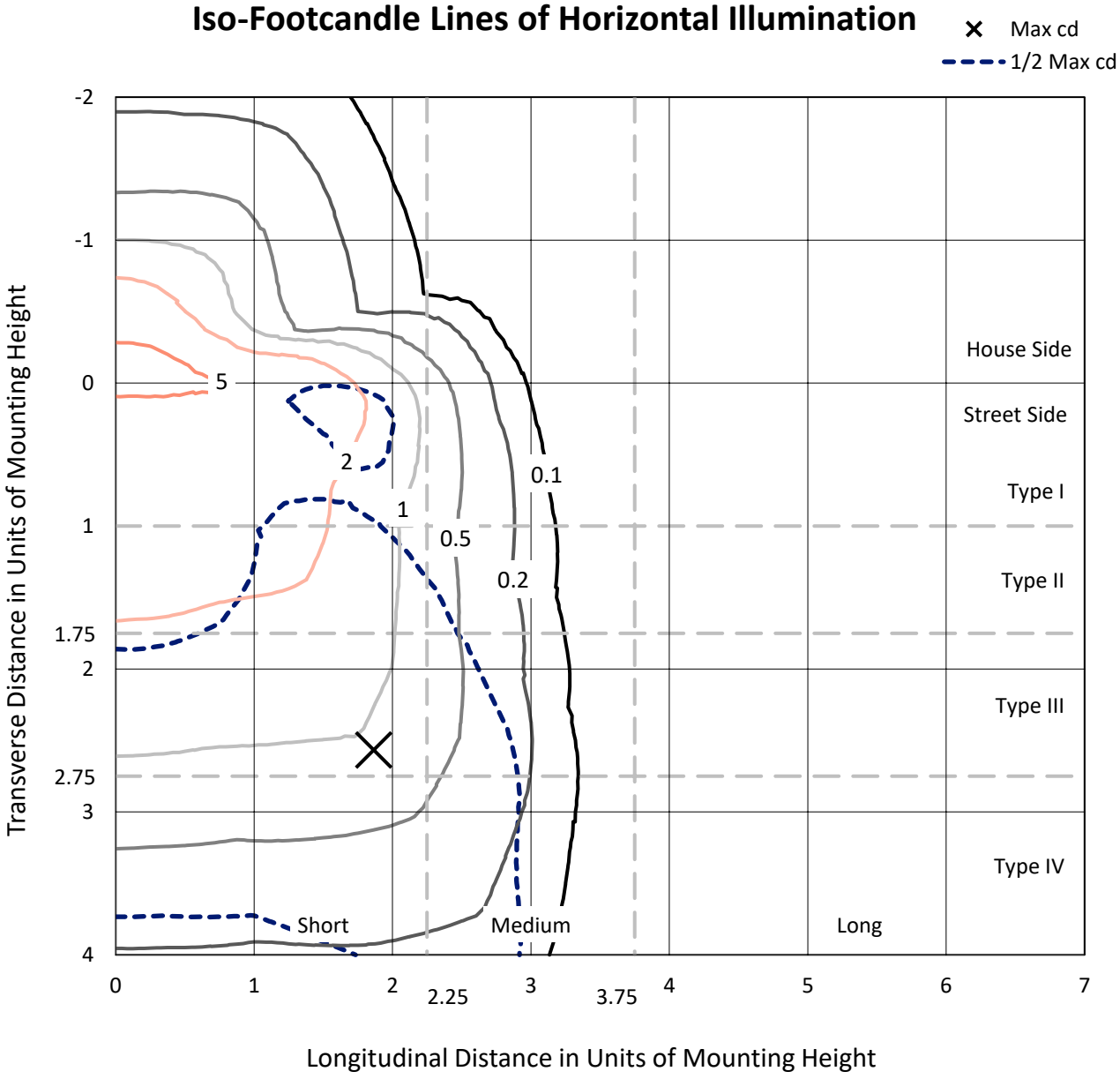
REPORT NUMBER: P639000
CATALOG NUMBER: GWS-SA4F-830-U-T4FT-W

Iso-Footcandle Lines of Horizontal Illumination



Based on 25 foot mounting height. Maximum calculated value = 6.5 fc
Type IV - Short - N/A

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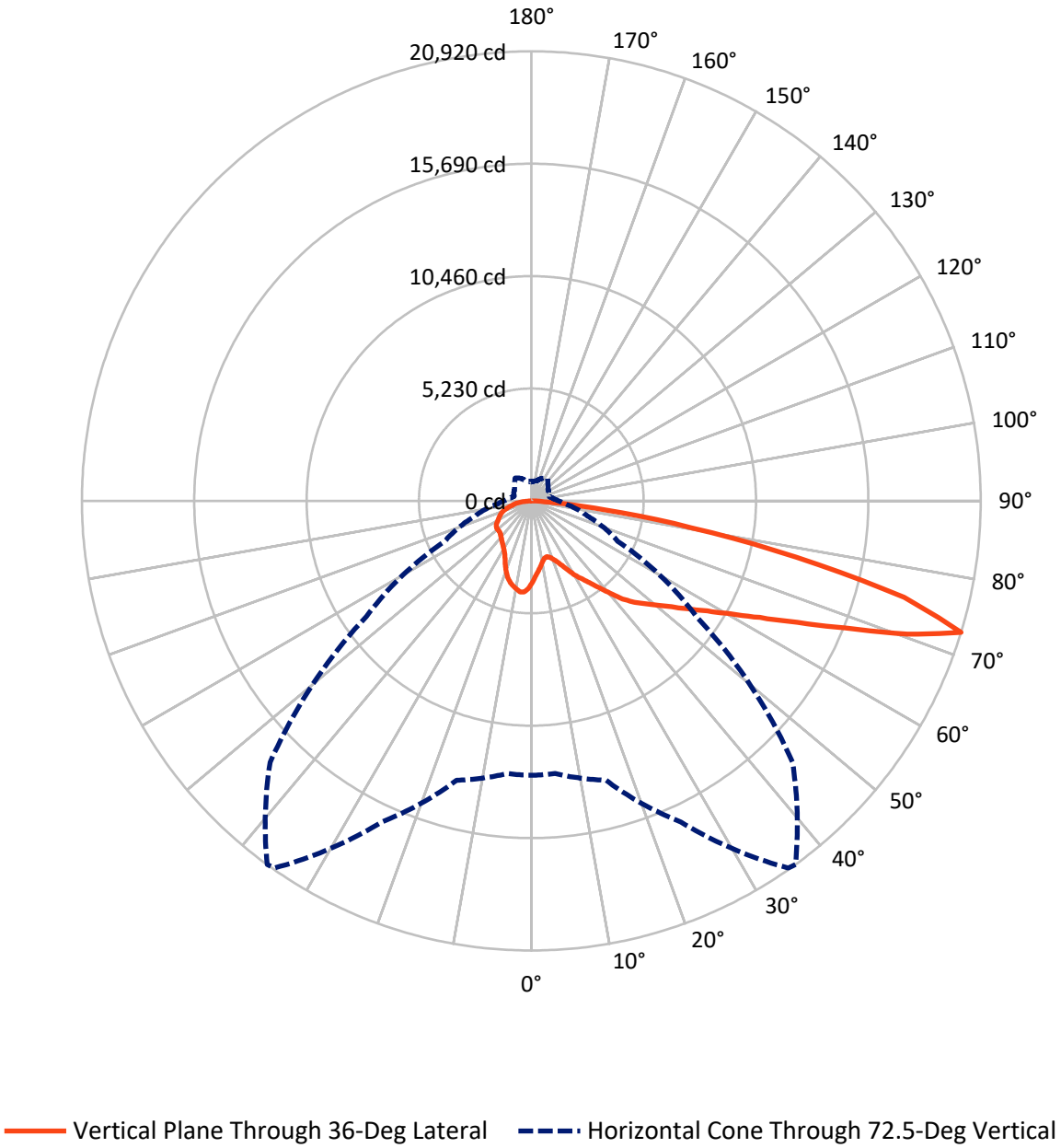
Luminous Intensity Polar Plot



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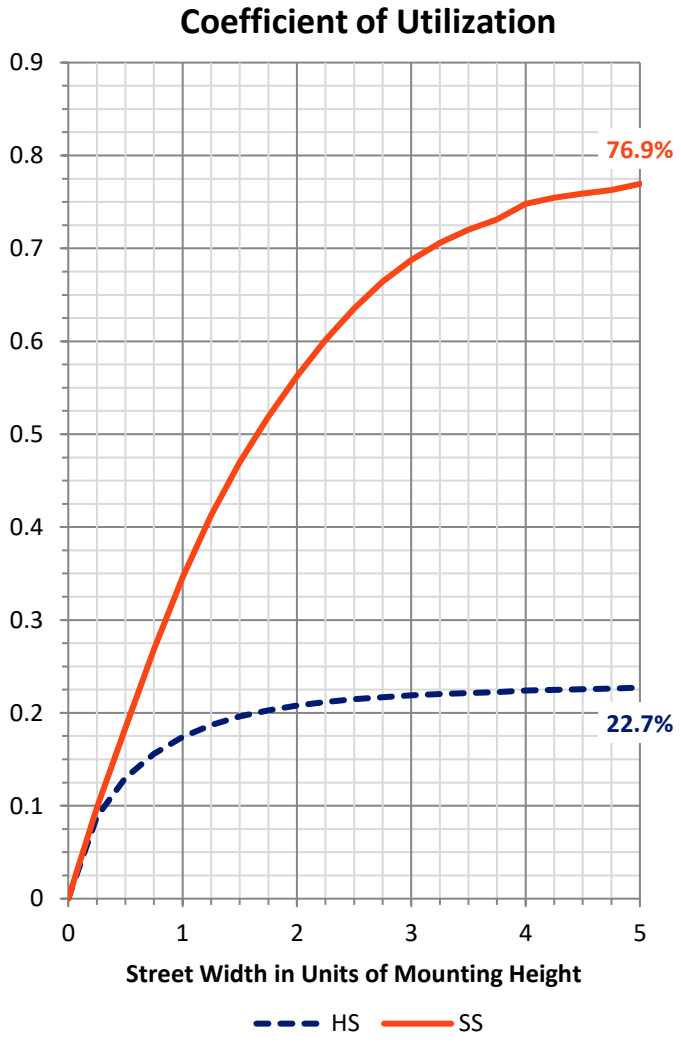
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6018.9	0.0	6018.9
	% Fixture	23.1	0.0	23.1
Street Side	Lumens	20088.5	0.0	20088.5
	% Fixture	76.9	0.0	76.9
Total	Lumens	26107.4	0.0	26107.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	357.1	1.4
10°-20°	1007.7	3.9
20°-30°	1668.8	6.4
30°-40°	2499.2	9.6
40°-50°	3646.1	14.0
50°-60°	5189.6	19.9
60°-70°	6556.6	25.1
70°-80°	4672.2	17.9
80°-90°	510.0	2.0
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°	26107.4	100.0
0°-180°	26107.4	100.0



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REPORT NUMBER: P639000
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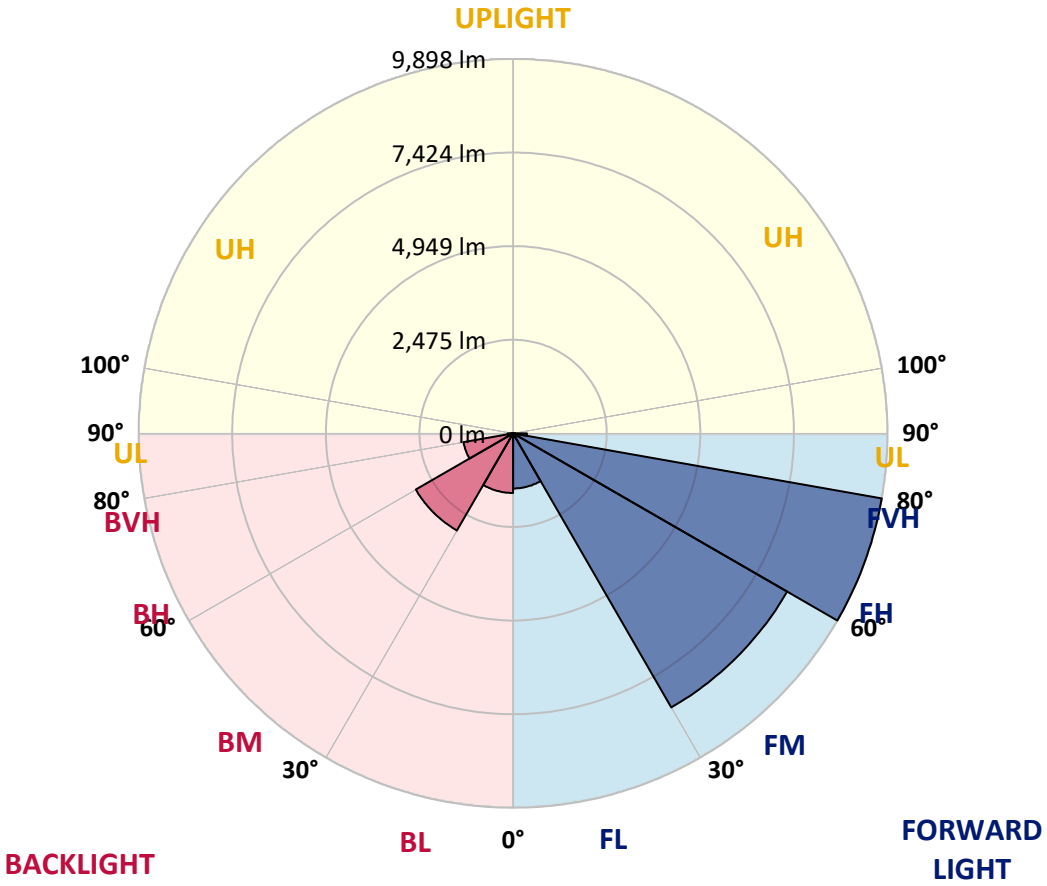
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	1457.5	5.6			
FM	(30°-60°)	8366.8	32.0			
FH	(60°-80°)	9898.2	37.9			G4/12000
FVH	(80°-90°)	366.1	1.4			G3/500
BL	(0°-30°)	1576.1	6.0	B3/2500		
BM	(30°-60°)	2968.2	11.4	B3/5000		
BH	(60°-80°)	1330.6	5.1	B3/2500		G3/2500
BVH	(80°-90°)	144.0	0.6			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4
Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	3820.9	3820.9	3820.9	3820.9	3820.9	*3820.9*	3820.9	3820.9	3820.9	3820.9	3820.9
2.5°	3485.7	3479.9	3468.3	3503.2	3538.0	*3534.2*	3582.6	3629.1	3679.5	3731.8	3801.6
5°	3206.7	3202.8	3193.2	3245.5	3297.8	*3295.8*	3375.3	3450.9	3553.5	3665.9	3805.4
7.5°	2927.7	2918.0	2931.6	2997.5	3071.1	*3078.8*	3187.3	3311.3	3460.5	3629.1	3826.7
10°	2681.6	2679.7	2685.5	2759.1	2869.6	*2877.3*	3016.8	3189.3	3386.9	3611.7	3875.2
12.5°	2617.7	2613.8	2598.3	2635.1	2718.4	*2730.1*	2883.1	3094.3	3336.5	3621.4	3941.1
15°	2722.3	2712.6	2658.4	2640.9	2681.6	*2691.3*	2821.1	3038.1	3307.5	3638.8	4024.4
17.5°	2902.5	2896.7	2794.0	2722.3	2749.4	*2757.2*	2854.1	3028.5	3299.7	3673.7	4127.1
20°	3166.0	3140.8	2980.0	2871.5	2871.5	*2883.1*	2941.3	3071.1	3309.4	3716.3	4243.3
22.5°	3514.8	3464.4	3237.7	3090.5	3051.7	*3067.2*	3092.4	3177.7	3350.1	3788.0	4388.6
25°	3906.2	3859.7	3590.4	3383.0	3328.8	*3334.6*	3313.3	3328.8	3439.2	3886.8	4568.8
27.5°	4322.8	4291.8	4005.0	3741.5	3656.2	*3656.2*	3580.7	3543.9	3563.2	3999.2	4770.4
30°	4694.8	4652.2	4410.0	4121.3	4008.9	*4008.9*	3865.5	3786.1	3739.6	4136.8	5039.7
32.5°	4890.5	4865.3	4704.5	4483.6	4346.0	*4324.7*	4200.7	4107.7	3999.2	4340.2	5403.9
35°	5146.2	5140.4	5043.6	4871.1	4696.7	*4665.7*	4580.5	4506.8	4318.9	4594.0	5888.3
37.5°	5467.9	5458.2	5442.7	5340.0	5130.7	*5124.9*	5049.4	4960.2	4716.1	4960.2	6475.4
40°	5828.3	5810.8	5791.5	5789.5	5663.6	*5642.3*	5636.5	5535.7	5194.7	5402.0	7087.7
42.5°	6324.3	6264.2	6082.1	6163.5	6256.5	*6237.1*	6310.7	6159.6	5791.5	5927.1	7667.1
45°	6934.6	6787.4	6427.0	6450.2	6684.7	*6723.5*	6979.2	6942.4	6448.3	6533.6	8277.4
47.5°	7300.9	7173.0	6837.8	6818.4	7111.0	*7159.4*	7715.5	7785.3	7155.5	7264.0	9031.1
50°	7601.2	7512.1	7236.9	7264.0	7574.1	*7622.5*	8446.0	8595.2	7822.1	8012.0	9906.9
52.5°	7963.5	7835.6	7622.5	7750.4	8130.1	*8188.3*	9257.8	9418.6	8422.7	8833.5	10813.7
55°	8167.0	8114.6	8118.5	8314.2	8790.9	*8870.3*	10108.4	10081.3	8973.0	9536.8	11495.7
57.5°	8635.9	8616.5	8794.7	8868.4	9562.0	*9664.7*	10959.0	10726.5	9472.9	10081.3	11823.2
60°	9463.2	9414.8	9569.8	9682.2	10515.3	*10660.6*	11908.5	11358.2	9812.0	10486.3	11712.8
62.5°	10625.8	10565.7	10571.5	10749.8	11792.2	*11945.3*	12964.4	11885.2	9916.6	10548.3	11013.3
65°	12071.2	11984.0	11885.2	12127.4	13487.6	*13615.5*	14113.4	12268.8	9666.7	9951.5	9552.3
67.5°	13596.1	13524.4	13408.1	13915.8	15682.9	*15760.4*	15401.9	12235.9	8874.2	8354.9	6700.2
70°	13685.2	13702.7	14252.9	16089.8	18548.6	*18568.0*	16620.7	11573.2	7186.5	5415.6	3338.5
72.5°	*12766.8*	*12737.7*	*13454.7*	*16487.0*	*20854.3*	*20920.2*	*17196.1*	*9376.0*	*4441.0*	*2701.0*	*1565.6*
75°	10370.0	10420.4	11174.1	14425.4	17874.3	*17932.4*	14018.5	5528.0	2110.0	1321.4	1001.7
77.5°	4464.2	4745.2	6231.3	10162.7	12801.7	*12621.5*	7225.3	2239.9	1125.7	941.7	767.3
80°	1288.5	1398.9	2220.5	4832.4	7670.9	*7535.3*	2859.9	839.0	784.7	707.2	550.3
82.5°	416.6	461.1	813.8	1924.0	3437.3	*3433.4*	1085.1	496.0	513.5	480.5	354.6
85°	116.3	133.7	249.9	583.2	1063.7	*1042.4*	313.9	234.4	273.2	277.1	176.3
87.5°	0.0	0.0	1.9	3.9	3.9	*3.9*	7.8	34.9	79.4	100.8	71.7
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-SA4F-830-U-T4FT-W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3820.9	3820.9	3820.9	3820.9	3820.9	3820.9	3820.9	3820.9	3820.9	3820.9	3820.9
2.5°	3844.2	3838.4	3917.8	3979.8	4037.9	4076.7	4088.3	4096.1	4111.6	4119.3	4111.6
5°	3871.3	3900.4	4032.1	4129.0	4206.5	4253.0	4255.0	4251.1	4262.7	4253.0	4247.2
7.5°	3929.4	3985.6	4152.3	4255.0	4305.3	4307.3	4260.8	4206.5	4179.4	4156.1	4148.4
10°	4006.9	4090.3	4272.4	4340.2	4324.7	4253.0	4150.3	4065.1	4016.6	3981.8	3974.0
12.5°	4113.5	4206.5	4379.0	4377.0	4280.1	4152.3	4032.1	3929.4	3859.7	3819.0	3805.4
15°	4214.3	4332.5	4456.5	4365.4	4212.3	4057.3	3902.3	3764.7	3671.7	3607.8	3596.2
17.5°	4338.3	4464.2	4512.7	4328.6	4127.1	3927.5	3720.2	3540.0	3414.0	3338.5	3332.7
20°	4481.7	4594.0	4539.8	4264.6	4016.6	3755.1	3474.1	3272.6	3137.0	3063.3	3069.1
22.5°	4648.3	4729.7	4547.5	4177.5	3863.6	3510.9	3197.0	3003.3	2912.2	2873.5	2875.4
25°	4826.5	4878.9	4534.0	4059.3	3629.1	3212.5	2912.2	2823.1	2815.3	2805.6	2809.5
27.5°	5037.7	5026.1	4493.3	3892.6	3313.3	2865.7	2712.6	2735.9	2766.9	2763.0	2766.9
30°	5320.6	5210.2	4441.0	3662.1	2937.4	2575.1	2594.4	2660.3	2701.0	2704.9	2716.5
32.5°	5644.2	5413.6	4357.6	3348.2	2578.9	2412.3	2484.0	2563.4	2611.9	2621.6	2637.1
35°	6029.8	5646.1	4210.4	2956.8	2321.2	2315.4	2381.3	2435.6	2487.9	2491.7	2491.7
37.5°	6473.5	5878.7	3975.9	2524.7	2162.4	2232.1	2294.1	2305.7	2319.3	2307.7	2313.5
40°	6880.4	6103.4	3642.7	2131.4	2032.5	2158.5	2210.8	2172.0	2129.4	2100.4	2106.2
42.5°	7221.4	6256.5	3200.9	1856.2	1900.8	2092.6	2133.3	2053.8	1970.5	1916.3	1924.0
45°	7605.1	6397.9	2681.6	1670.2	1788.4	2046.1	2073.2	1970.5	1864.0	1782.6	1771.0
47.5°	8134.0	6686.6	2220.5	1540.4	1709.0	2020.9	2065.5	1926.0	1786.5	1664.4	1650.8
50°	8787.0	7095.5	1834.9	1455.1	1672.1	2007.3	2063.5	1877.5	1710.9	1567.5	1557.8
52.5°	9500.0	7494.6	1550.1	1389.3	1635.3	1966.7	2053.8	1823.3	1631.5	1476.4	1464.8
55°	9974.7	7651.6	1358.3	1327.3	1575.3	1902.7	2015.1	1771.0	1511.3	1369.9	1352.4
57.5°	10114.2	7450.0	1224.6	1271.1	1497.8	1813.6	1941.5	1660.5	1437.7	1325.3	1311.8
60°	9874.0	6942.4	1141.2	1224.6	1412.5	1699.3	1813.6	1596.6	1379.6	1278.8	1269.1
62.5°	9195.8	6159.6	1077.3	1176.1	1325.3	1579.1	1732.2	1519.1	1315.6	1236.2	1222.6
65°	7831.8	5051.3	1025.0	1125.7	1242.0	1464.8	1643.1	1441.6	1245.9	1185.8	1170.3
67.5°	5477.6	3547.7	968.8	1065.7	1158.7	1354.4	1550.1	1369.9	1174.2	1129.6	1114.1
70°	2677.8	1881.4	901.0	995.9	1069.6	1242.0	1457.1	1282.7	1079.2	1054.1	1032.7
72.5°	*1274.9*	*1052.1*	*821.5*	*901.0*	*947.5*	*1092.8*	*1302.1*	*1156.7*	*966.9*	*912.6*	*875.8*
75°	854.5	747.9	716.9	788.6	800.2	916.5	1116.1	997.9	852.5	790.5	759.5
77.5°	647.2	571.6	602.6	666.5	643.3	753.7	918.4	889.4	769.2	713.0	697.5
80°	455.3	416.6	478.6	517.3	499.9	641.3	827.4	761.5	633.6	571.6	560.0
82.5°	286.8	279.0	352.6	358.5	364.3	507.6	680.1	598.7	492.1	405.0	375.9
85°	143.4	158.9	211.2	211.2	209.3	261.6	387.5	337.1	265.5	211.2	205.4
87.5°	48.4	67.8	91.1	73.6	56.2	44.6	50.4	62.0	65.9	63.9	63.9
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

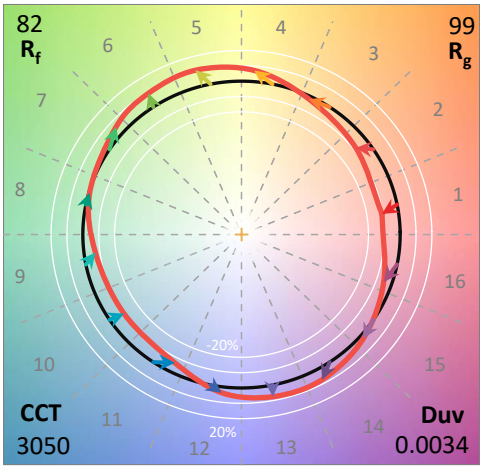
Test Information

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

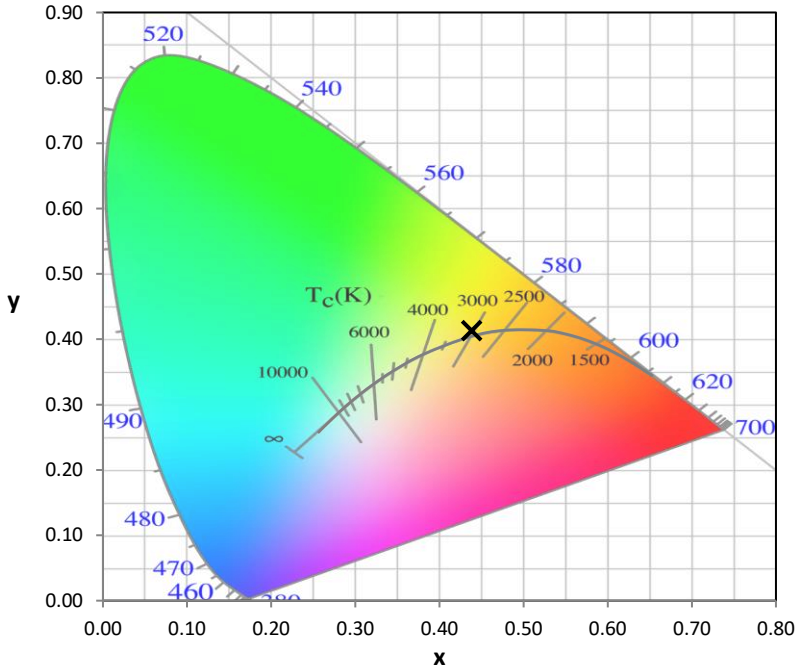
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

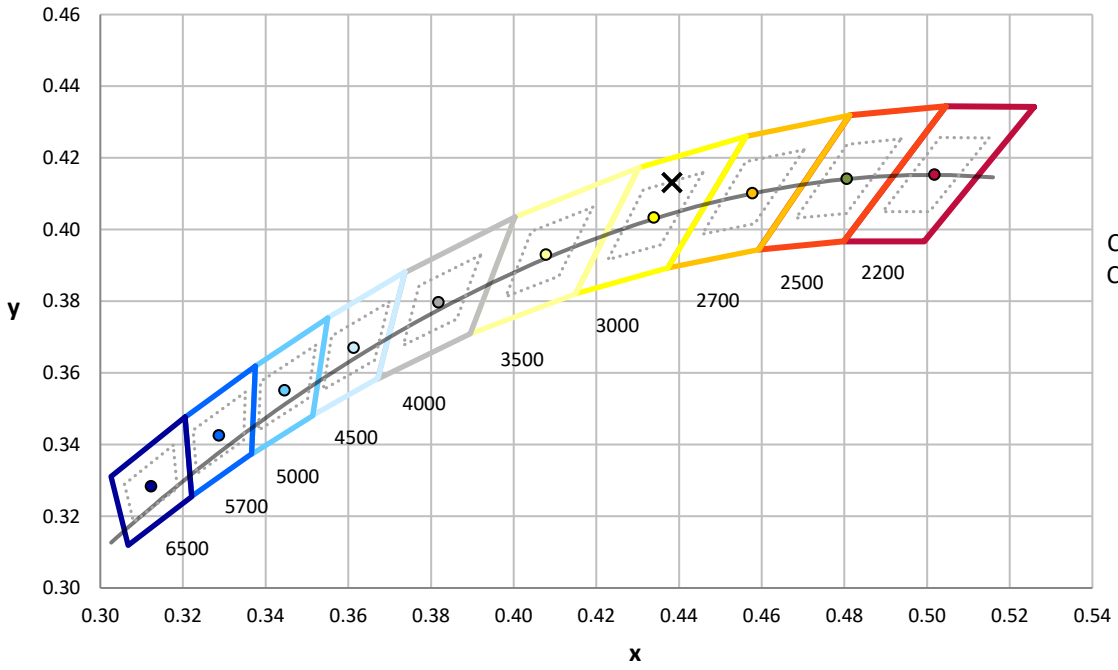
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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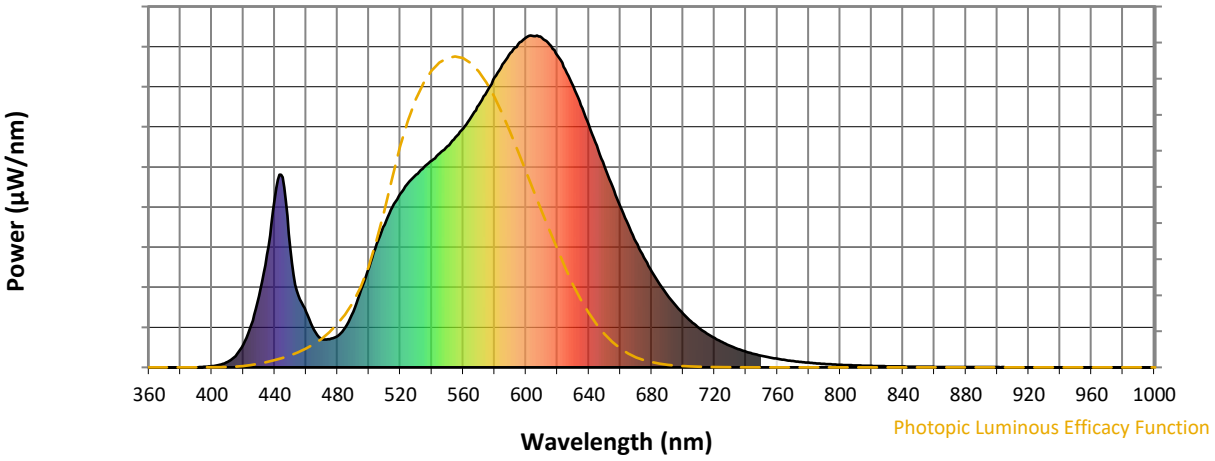
Photopic Flux vs. Wavelength



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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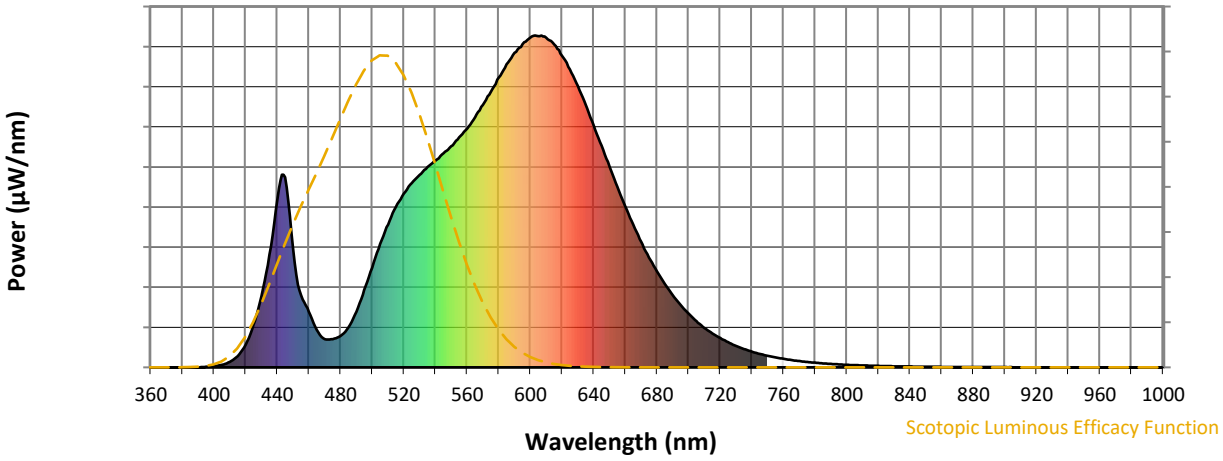
Scotopic Flux vs. Wavelength



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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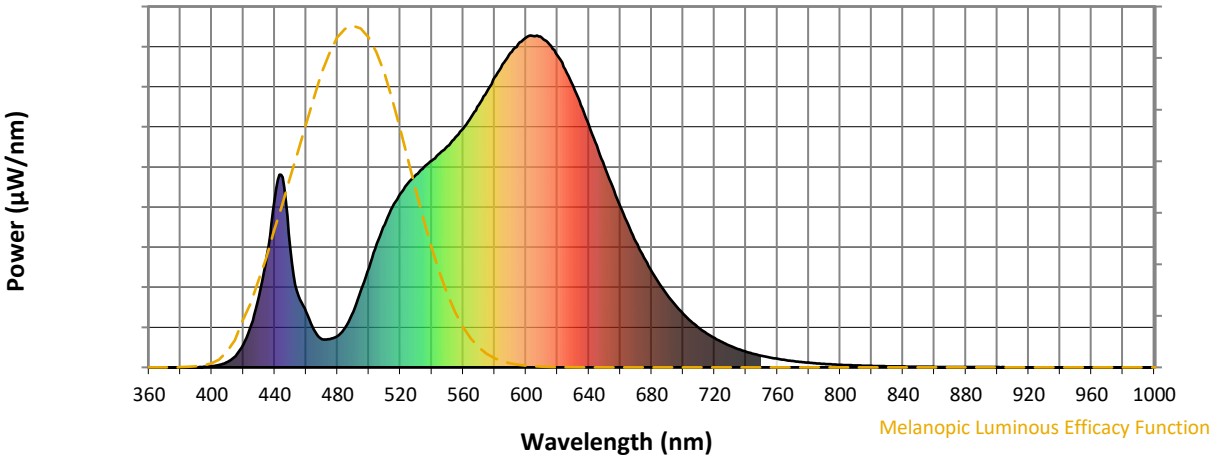
Melanopic Flux vs. Wavelength



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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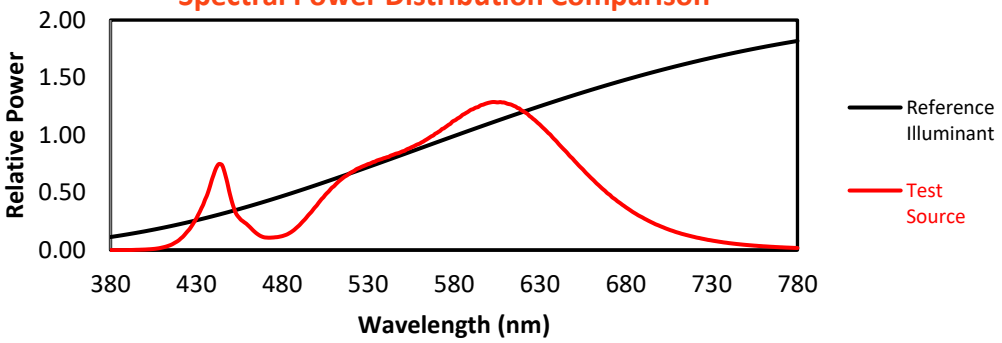
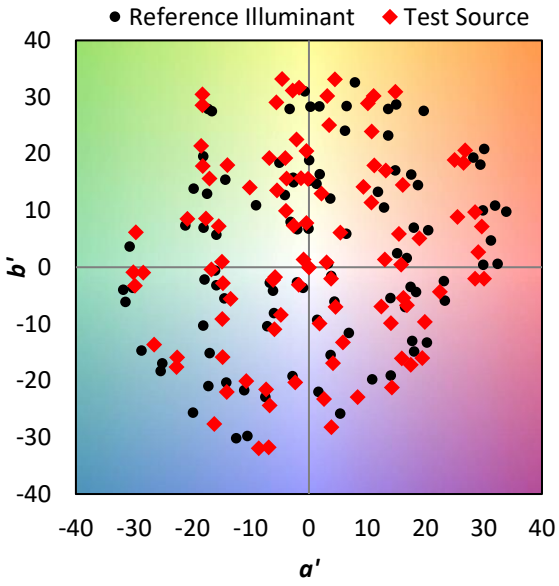
Summary

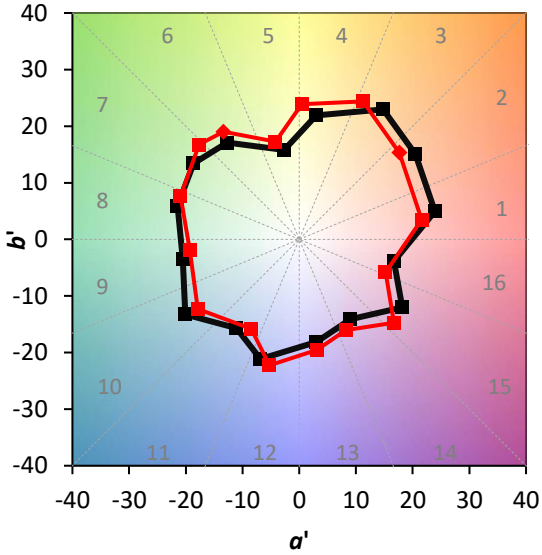
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

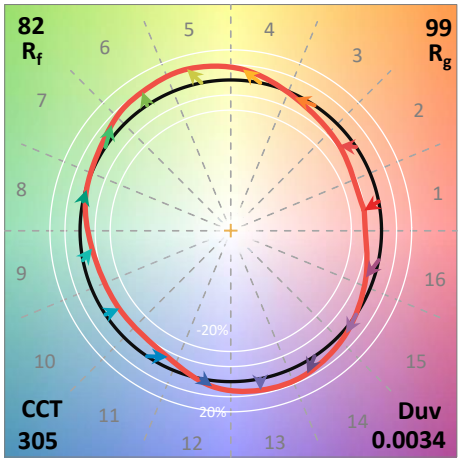
Spectral Power Distribution Comparison

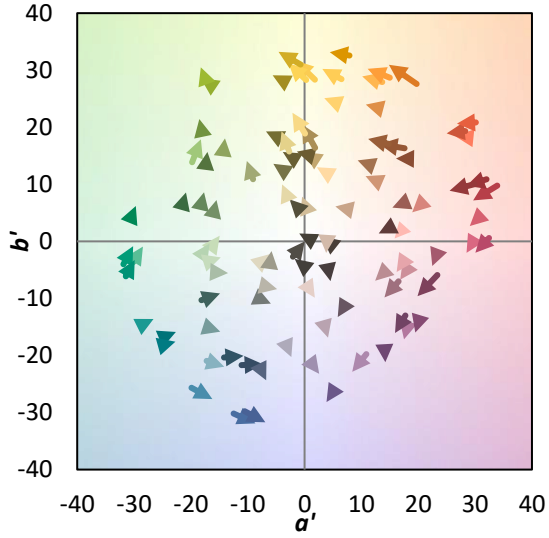


Color Vector Graphics









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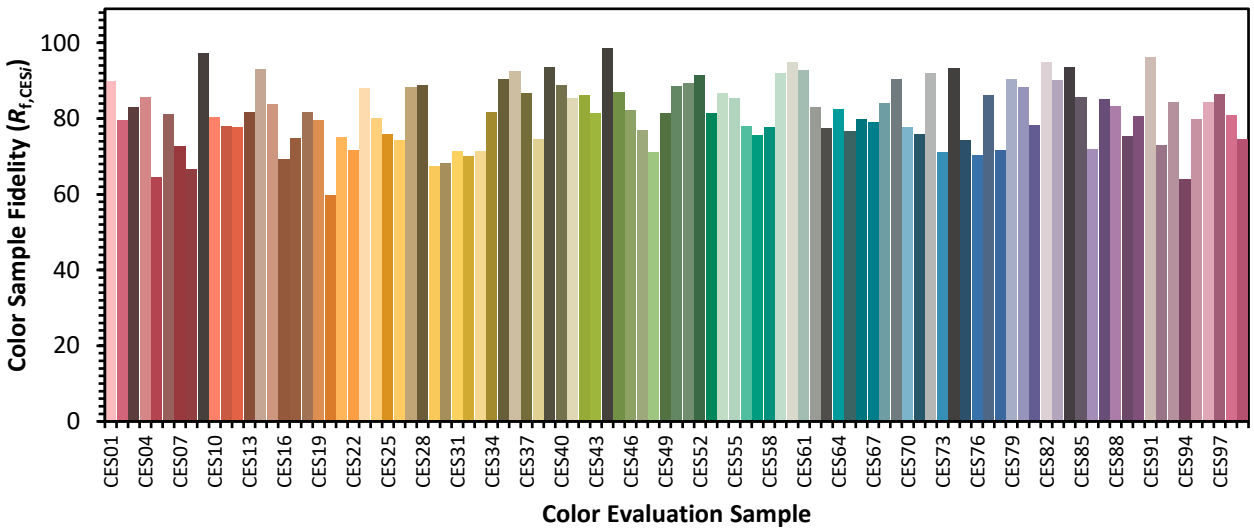
Individual Sample Fidelity Index ($R_{f,i}$)

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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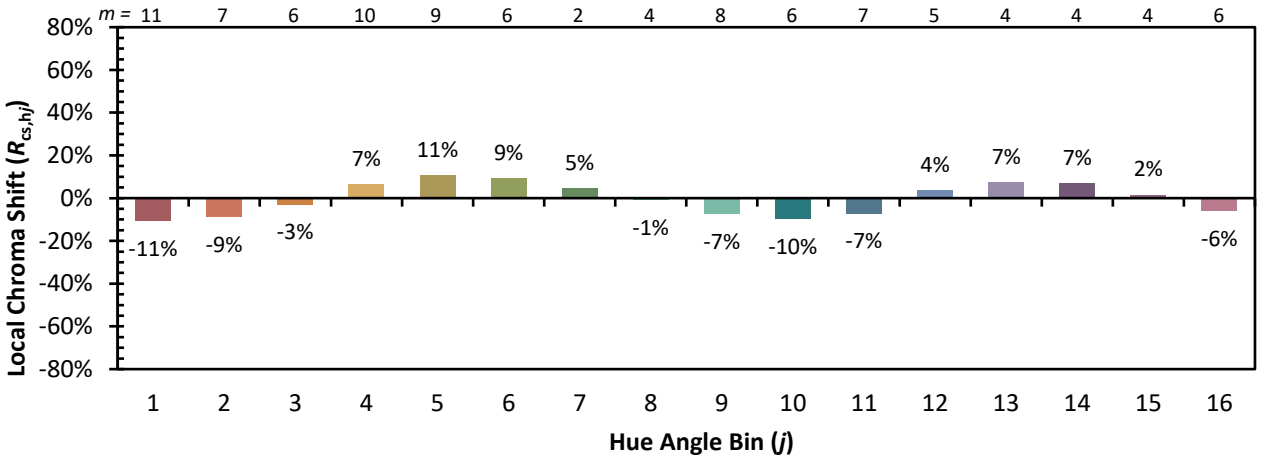
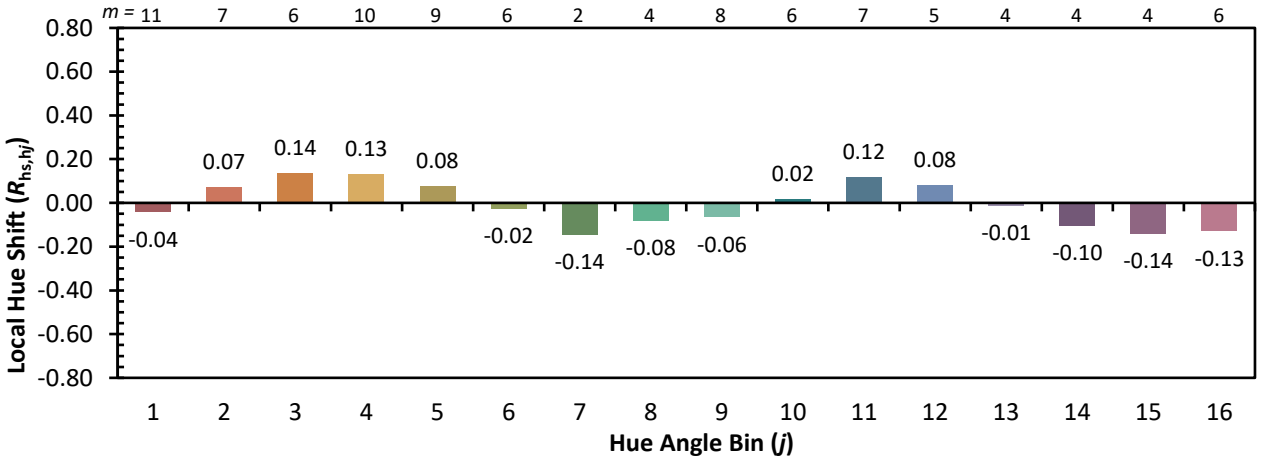
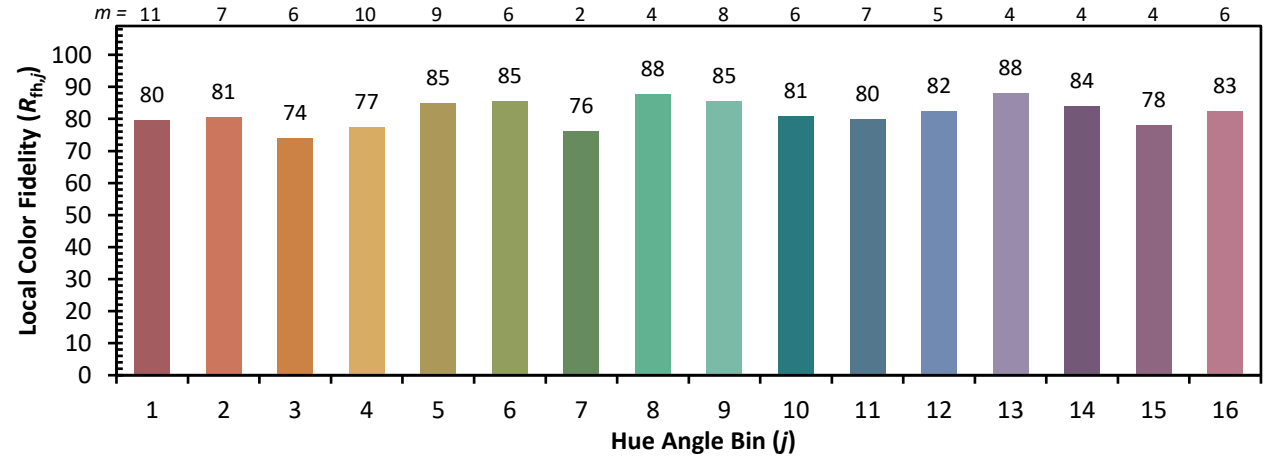
Color Rendition by Hue-Angle Bin







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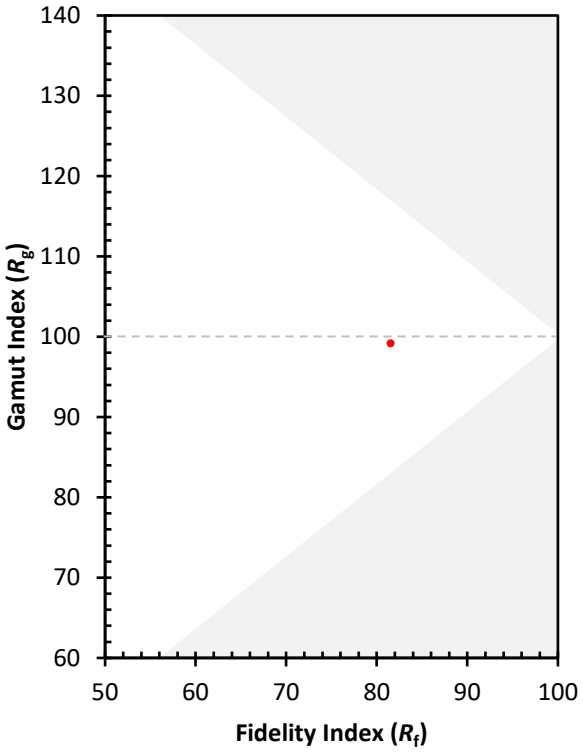
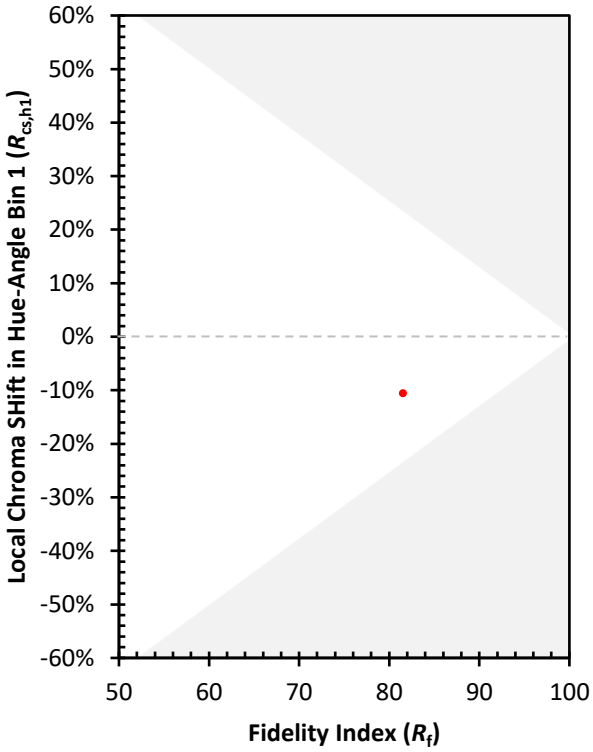
Measure Comparisons





(END OF REPORT)