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: P638010

Luminaire Tested: GWS-SA4D-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:	P638010
	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-SA4D-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:	18790.6 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 - 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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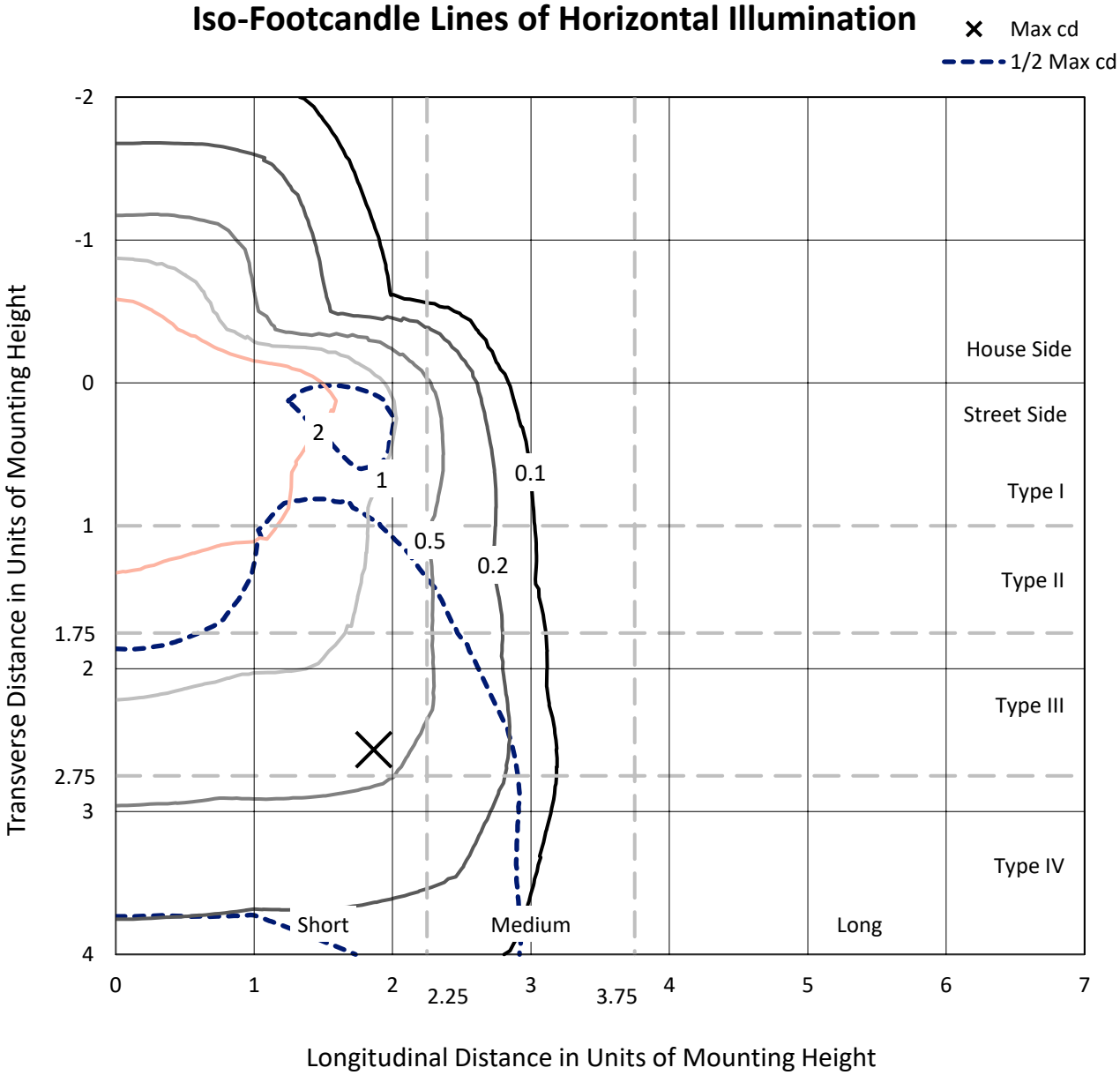
Scaled Data Report

REPORT NUMBER: P638010
CATALOG NUMBER: GWS-SA4D-830-U-T4FT-W

Iso-Footcandle Lines of Horizontal Illumination



Based on 25 foot mounting height. Maximum calculated value = 4.7 fc
Type IV - Short - N/A

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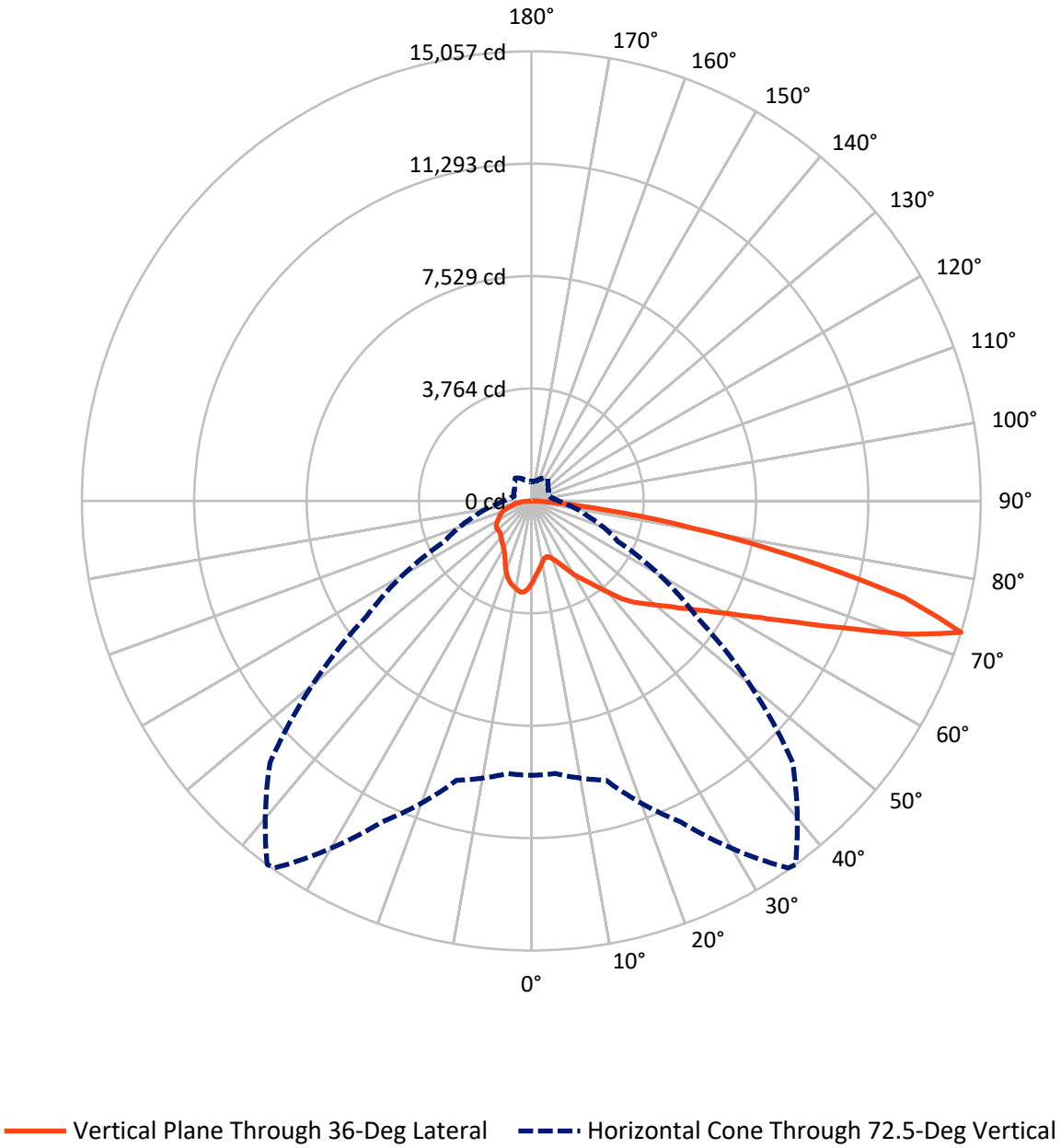
Luminous Intensity Polar Plot



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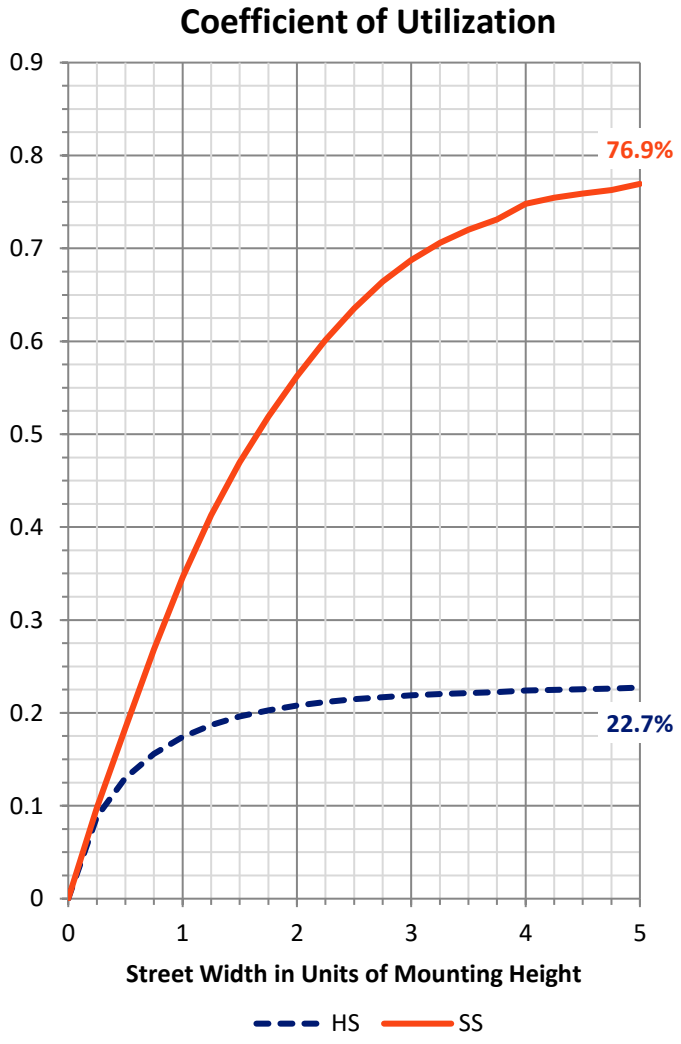
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4332.0	0.0	4332.0
	% Fixture	23.1	0.0	23.1
Street Side	Lumens	14458.6	0.0	14458.6
	% Fixture	76.9	0.0	76.9
Total	Lumens	18790.6	0.0	18790.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	257.1	1.4
10°-20°	725.3	3.9
20°-30°	1201.1	6.4
30°-40°	1798.8	9.6
40°-50°	2624.3	14.0
50°-60°	3735.1	19.9
60°-70°	4719.1	25.1
70°-80°	3362.7	17.9
80°-90°	367.1	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°	18790.6	100.0
0°-180°	18790.6	100.0



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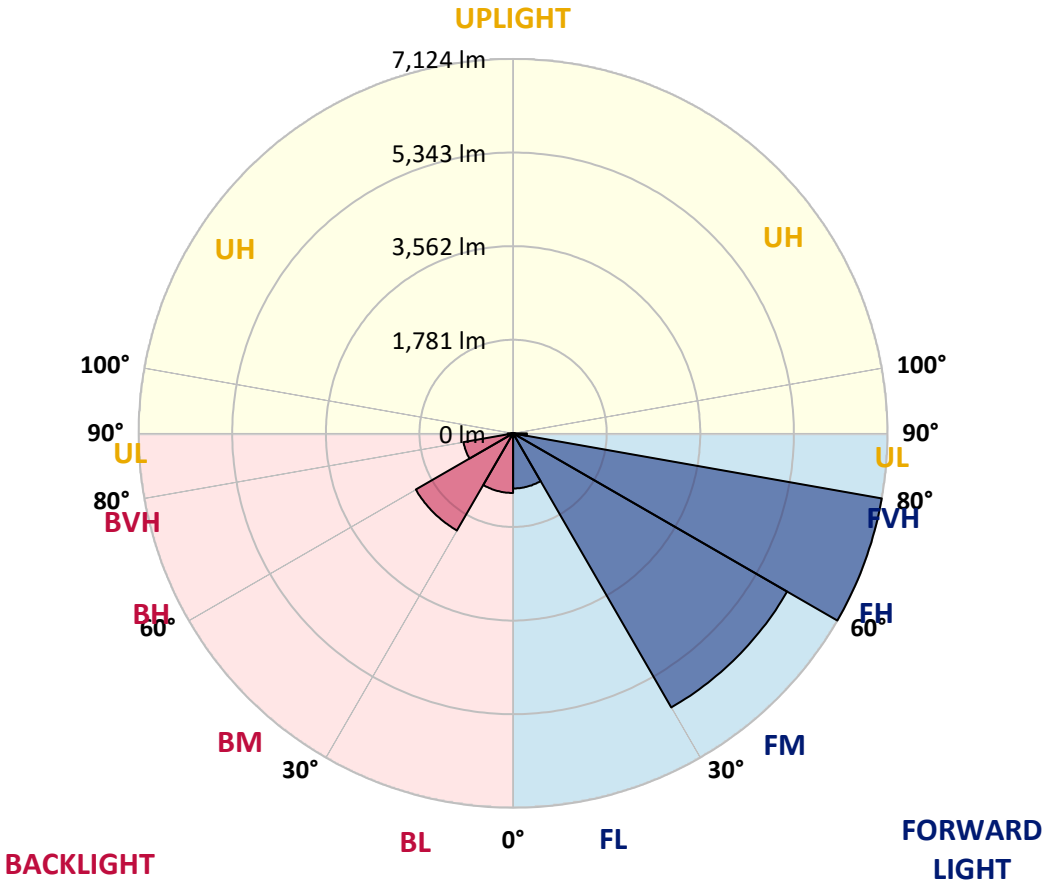
REPORT NUMBER: P638010
CATALOG NUMBER: GWS-SA4D-830-U-T4FT-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	1049.0	5.6			
FM	(30°-60°)	6021.9	32.0			
FH	(60°-80°)	7124.1	37.9			G3/7500
FVH	(80°-90°)	263.5	1.4			G3/500
BL	(0°-30°)	1134.4	6.0	B3/2500		
BM	(30°-60°)	2136.3	11.4	B2/2500		
BH	(60°-80°)	957.7	5.1	B2/1000		G2/1000
BVH	(80°-90°)	103.6	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-G3
Type IV Short



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Scaled Data Report

REPORT NUMBER: P638010
CATALOG NUMBER: GWS-SA4D-830-U-T4FT-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	2750.1	2750.1	2750.1	2750.1	2750.1	2750.1	2750.1	2750.1	2750.1	2750.1	2750.1
2.5°	2508.8	2504.6	2496.3	2521.4	2546.5	2543.7	2578.6	2612.0	2648.3	2685.9	2736.1
5°	2308.0	2305.2	2298.2	2335.9	2373.6	2372.2	2429.3	2483.7	2557.6	2638.5	2738.9
7.5°	2107.2	2100.2	2110.0	2157.4	2210.4	2216.0	2294.1	2383.3	2490.7	2612.0	2754.3
10°	1930.1	1928.7	1932.9	1985.9	2065.4	2070.9	2171.3	2295.5	2437.7	2599.5	2789.1
12.5°	1884.1	1881.3	1870.1	1896.6	1956.6	1964.9	2075.1	2227.1	2401.4	2606.4	2836.6
15°	1959.4	1952.4	1913.3	1900.8	1930.1	1937.1	2030.5	2186.7	2380.5	2619.0	2896.5
17.5°	2089.1	2084.9	2011.0	1959.4	1978.9	1984.5	2054.2	2179.7	2374.9	2644.1	2970.4
20°	2278.7	2260.6	2144.8	2066.8	2066.8	2075.1	2117.0	2210.4	2381.9	2674.8	3054.1
22.5°	2529.7	2493.5	2330.3	2224.3	2196.4	2207.6	2225.7	2287.1	2411.2	2726.4	3158.7
25°	2811.4	2778.0	2584.1	2434.9	2395.9	2400.1	2384.7	2395.9	2475.4	2797.5	3288.4
27.5°	3111.3	3089.0	2882.6	2692.9	2631.6	2631.6	2577.2	2550.7	2564.6	2878.4	3433.4
30°	3379.0	3348.4	3174.0	2966.2	2885.4	2885.4	2782.2	2725.0	2691.5	2977.4	3627.3
32.5°	3519.9	3501.8	3386.0	3227.0	3128.0	3112.7	3023.4	2956.5	2878.4	3123.8	3889.5
35°	3704.0	3699.8	3630.1	3505.9	3380.4	3358.1	3296.8	3243.8	3108.5	3306.5	4238.1
37.5°	3935.5	3928.5	3917.3	3843.4	3692.8	3688.6	3634.2	3570.1	3394.4	3570.1	4660.6
40°	4194.9	4182.3	4168.4	4167.0	4076.3	4061.0	4056.8	3984.3	3738.8	3888.1	5101.3
42.5°	4551.9	4508.6	4377.5	4436.1	4503.1	4489.1	4542.1	4433.3	4168.4	4266.0	5518.3
45°	4991.2	4885.2	4625.8	4642.5	4811.3	4839.2	5023.2	4996.7	4641.1	4702.5	5957.6
47.5°	5254.7	5162.7	4921.4	4907.5	5118.1	5152.9	5553.2	5603.4	5150.1	5228.2	6500.1
50°	5470.9	5406.7	5208.7	5228.2	5451.4	5486.2	6078.9	6186.3	5629.9	5766.5	7130.4
52.5°	5731.7	5639.6	5486.2	5578.3	5851.6	5893.4	6663.2	6779.0	6062.2	6357.8	7783.1
55°	5878.1	5840.5	5843.2	5984.1	6327.2	6384.3	7275.5	7255.9	6458.2	6864.1	8274.0
57.5°	6215.6	6201.6	6329.9	6382.9	6882.2	6956.1	7887.7	7720.3	6818.0	7255.9	8509.7
60°	6811.1	6776.2	6887.8	6968.7	7568.3	7672.9	8571.0	8175.0	7062.1	7547.4	8430.2
62.5°	7647.8	7604.6	7608.8	7737.1	8487.3	8597.5	9331.1	8554.3	7137.4	7592.0	7926.7
65°	8688.2	8625.4	8554.3	8728.6	9707.6	9799.6	10158.0	8830.4	6957.5	7162.5	6875.2
67.5°	9785.7	9734.1	9650.4	10015.8	11287.6	11343.4	11085.4	8806.7	6387.1	6013.4	4822.4
70°	9849.8	9862.4	10258.4	11580.5	13350.2	13364.1	11962.6	8329.8	5172.5	3897.8	2402.8
72.5°	9188.8	9167.9	9683.9	11866.4	15009.7	15057.2	12376.8	6748.3	3196.4	1944.0	1126.8
75°	7463.7	7500.0	8042.5	10382.6	12864.9	12906.7	10089.7	3978.7	1518.7	951.1	721.0
77.5°	3213.1	3415.3	4484.9	7314.5	9213.9	9084.2	5200.3	1612.1	810.2	677.8	552.2
80°	927.4	1006.9	1598.2	3478.1	5521.1	5423.5	2058.4	603.8	564.8	509.0	396.1
82.5°	299.8	331.9	585.7	1384.8	2474.0	2471.2	781.0	357.0	369.6	345.9	255.2
85°	83.7	96.2	179.9	419.8	765.6	750.3	225.9	168.7	196.6	199.4	126.9
87.5°	0.0	0.0	1.4	2.8	2.8	2.8	5.6	25.1	57.2	72.5	51.6
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: P638010
CATALOG NUMBER: GWS-SA4D-830-U-T4FT-W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2750.1	2750.1	2750.1	2750.1	2750.1	2750.1	2750.1	2750.1	2750.1	2750.1	2750.1
2.5°	2766.8	2762.6	2819.8	2864.4	2906.3	2934.2	2942.5	2948.1	2959.3	2964.9	2959.3
5°	2786.3	2807.3	2902.1	2971.8	3027.6	3061.1	3062.5	3059.7	3068.1	3061.1	3056.9
7.5°	2828.2	2868.6	2988.6	3062.5	3098.7	3100.1	3066.7	3027.6	3008.1	2991.3	2985.8
10°	2884.0	2943.9	3075.0	3123.8	3112.7	3061.1	2987.2	2925.8	2890.9	2865.8	2860.3
12.5°	2960.7	3027.6	3151.7	3150.3	3080.6	2988.6	2902.1	2828.2	2778.0	2748.7	2738.9
15°	3033.2	3118.3	3207.5	3142.0	3031.8	2920.2	2808.7	2709.6	2642.7	2596.7	2588.3
17.5°	3122.4	3213.1	3247.9	3115.5	2970.4	2826.8	2677.6	2547.9	2457.2	2402.8	2398.7
20°	3225.6	3306.5	3267.5	3069.4	2890.9	2702.7	2500.5	2355.4	2257.8	2204.8	2209.0
22.5°	3345.6	3404.1	3273.1	3006.7	2780.8	2527.0	2301.0	2161.6	2096.0	2068.1	2069.5
25°	3473.9	3511.5	3263.3	2921.6	2612.0	2312.2	2096.0	2031.9	2026.3	2019.3	2022.1
27.5°	3625.9	3617.5	3234.0	2801.7	2384.7	2062.6	1952.4	1969.1	1991.4	1988.7	1991.4
30°	3829.5	3750.0	3196.4	2635.7	2114.2	1853.4	1867.3	1914.7	1944.0	1946.8	1955.2
32.5°	4062.4	3896.4	3136.4	2409.8	1856.2	1736.2	1787.8	1845.0	1879.9	1886.9	1898.0
35°	4339.9	4063.8	3030.4	2128.1	1670.7	1666.5	1713.9	1753.0	1790.6	1793.4	1793.4
37.5°	4659.3	4231.1	2861.7	1817.1	1556.3	1606.5	1651.2	1659.5	1669.3	1660.9	1665.1
40°	4952.1	4392.9	2621.8	1534.0	1462.9	1553.5	1591.2	1563.3	1532.6	1511.7	1515.9
42.5°	5197.6	4503.1	2303.8	1336.0	1368.1	1506.1	1535.4	1478.2	1418.3	1379.2	1384.8
45°	5473.7	4604.9	1930.1	1202.1	1287.2	1472.7	1492.2	1418.3	1341.6	1283.0	1274.6
47.5°	5854.4	4812.7	1598.2	1108.7	1230.0	1454.5	1486.6	1386.2	1285.8	1197.9	1188.2
50°	6324.4	5106.9	1320.7	1047.3	1203.5	1444.8	1485.2	1351.3	1231.4	1128.2	1121.2
52.5°	6837.6	5394.2	1115.7	999.9	1177.0	1415.5	1478.2	1312.3	1174.2	1062.7	1054.3
55°	7179.2	5507.1	977.6	955.3	1133.8	1369.5	1450.4	1274.6	1087.8	986.0	973.4
57.5°	7279.6	5362.1	881.4	914.8	1078.0	1305.3	1397.4	1195.1	1034.8	953.9	944.1
60°	7106.7	4996.7	821.4	881.4	1016.6	1223.0	1305.3	1149.1	992.9	920.4	913.4
62.5°	6618.6	4433.3	775.4	846.5	953.9	1136.6	1246.7	1093.3	946.9	889.7	880.0
65°	5636.8	3635.6	737.7	810.2	893.9	1054.3	1182.6	1037.6	896.7	853.5	842.3
67.5°	3942.4	2553.5	697.3	767.0	834.0	974.8	1115.7	986.0	845.1	813.0	801.9
70°	1927.3	1354.1	648.5	716.8	769.8	893.9	1048.7	923.2	776.8	758.6	743.3
72.5°	*917.6*	*757.3*	*591.3*	*648.5*	*681.9*	*786.5*	*937.1*	*832.6*	*695.9*	*656.8*	*630.3*
75°	615.0	538.3	516.0	567.6	576.0	659.6	803.3	718.2	613.6	569.0	546.7
77.5°	465.8	411.4	433.7	479.7	463.0	542.5	661.0	640.1	553.6	513.2	502.0
80°	327.7	299.8	344.5	372.3	359.8	461.6	595.5	548.1	456.0	411.4	403.0
82.5°	206.4	200.8	253.8	258.0	262.2	365.4	489.5	430.9	354.2	291.5	270.5
85°	103.2	114.4	152.0	152.0	150.6	188.3	278.9	242.7	191.1	152.0	147.8
87.5°	34.9	48.8	65.5	53.0	40.4	32.1	36.3	44.6	47.4	46.0	46.0
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

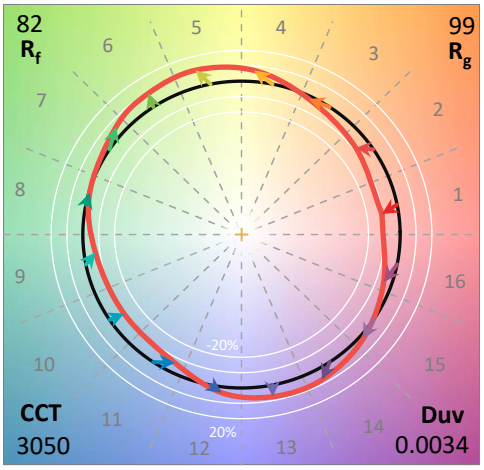
Test Information

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

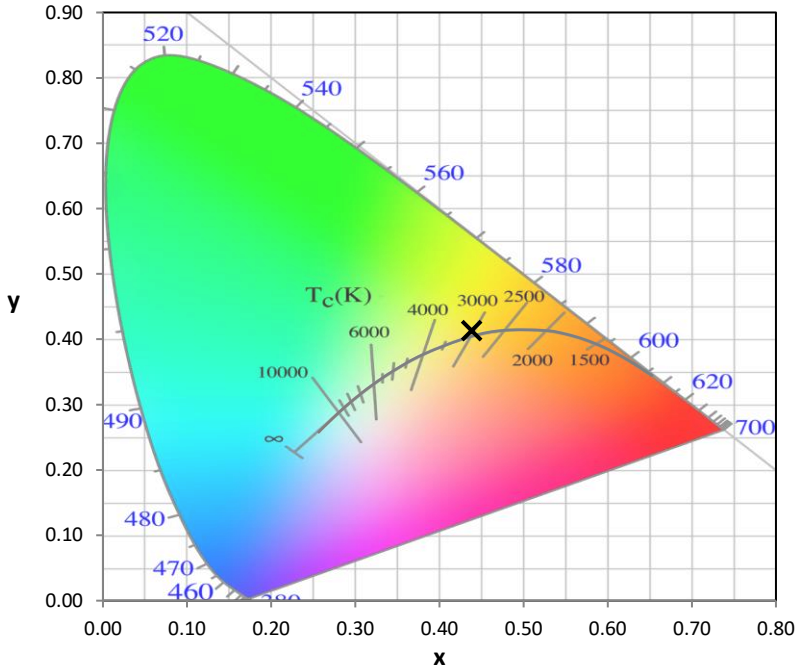
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

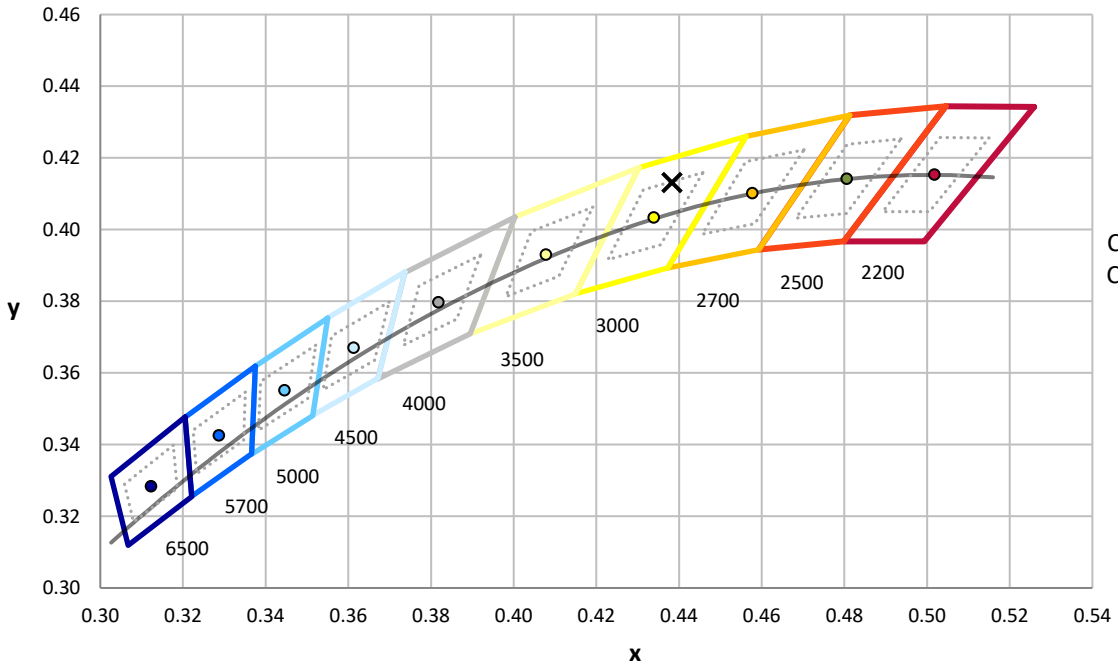
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

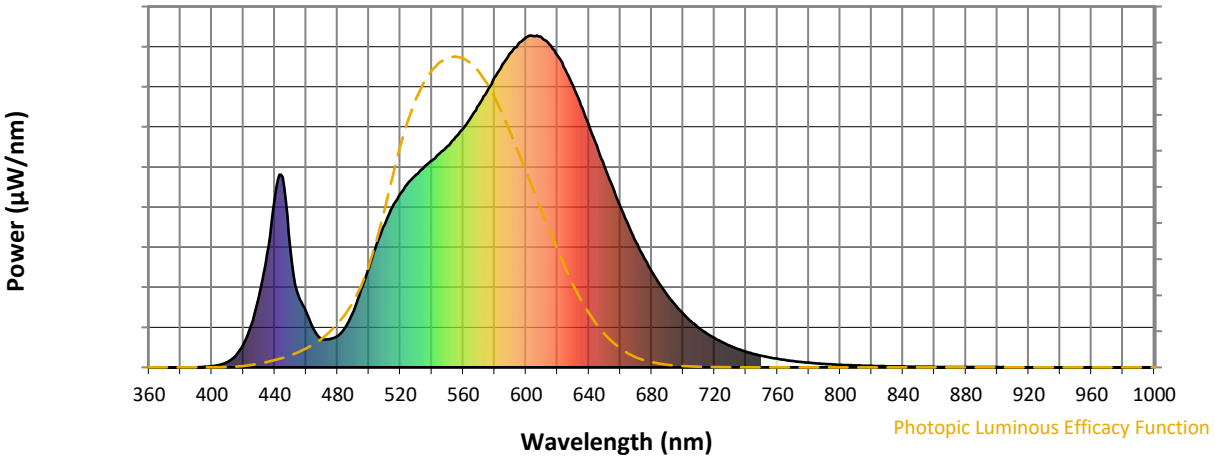


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

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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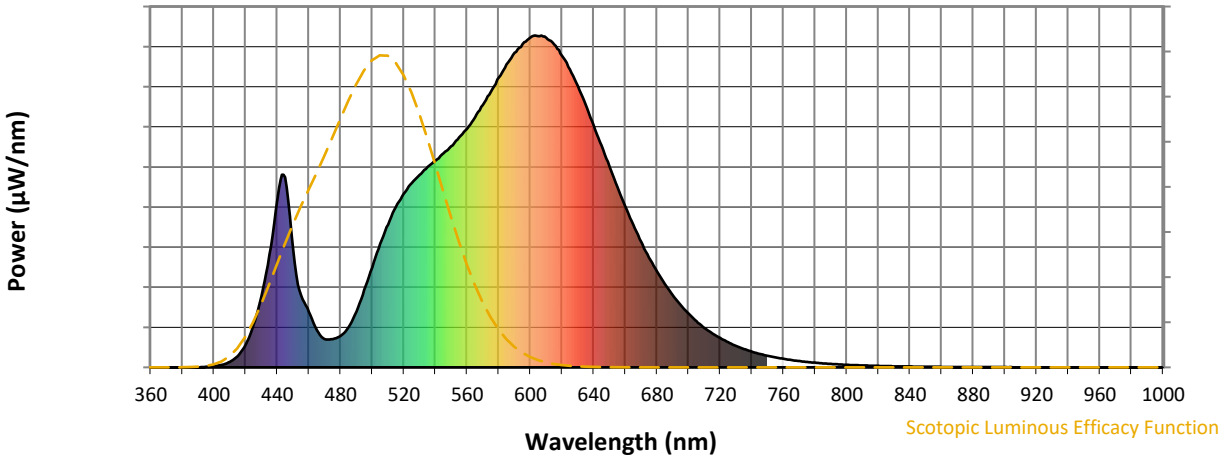
Scotopic Flux vs. Wavelength



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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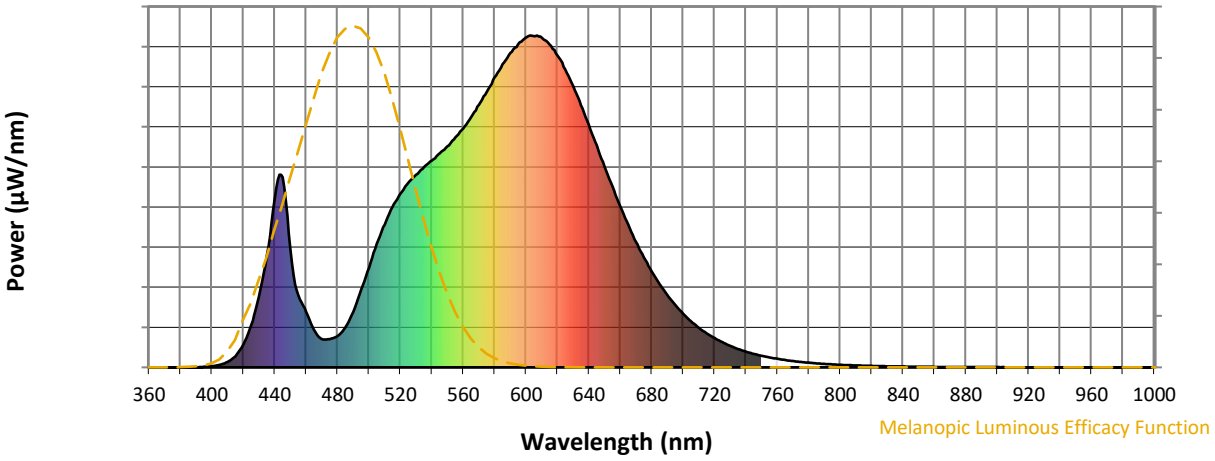
Melanopic Flux vs. Wavelength



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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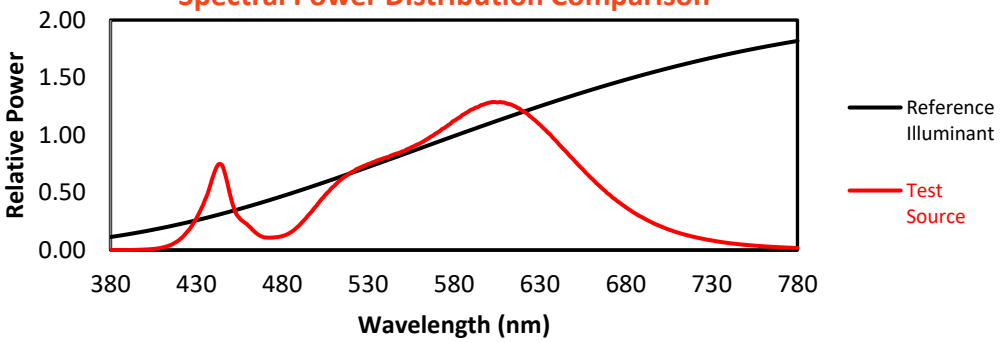
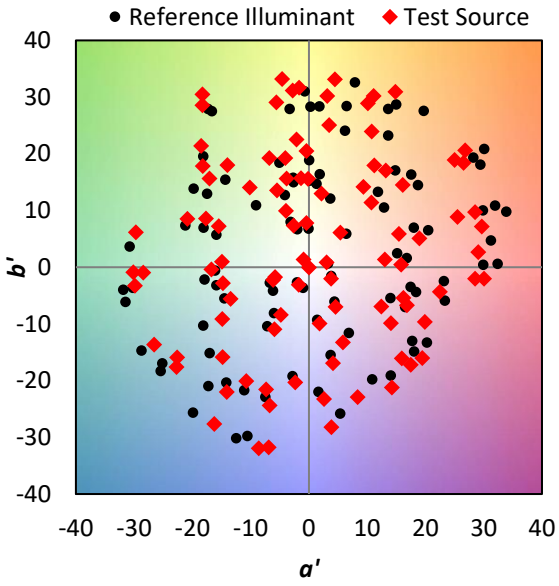
Summary

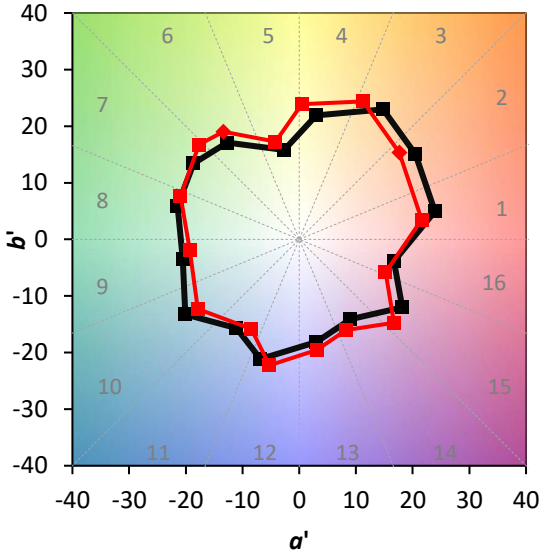
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

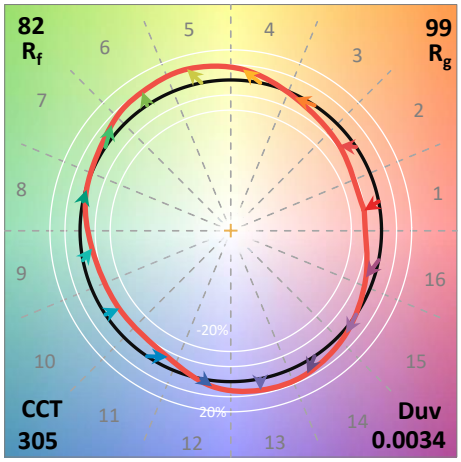
Spectral Power Distribution Comparison

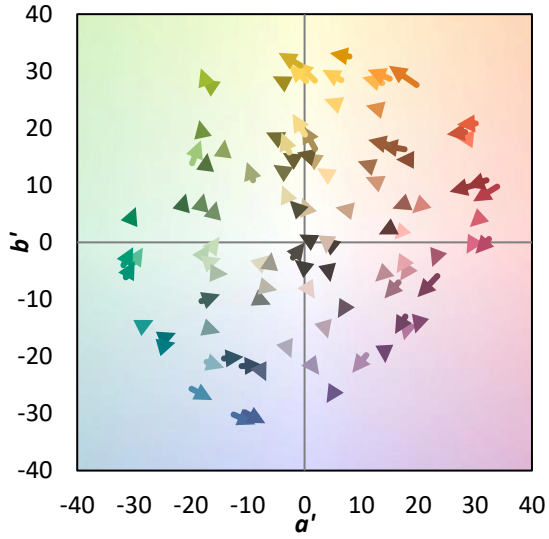


Color Vector Graphics









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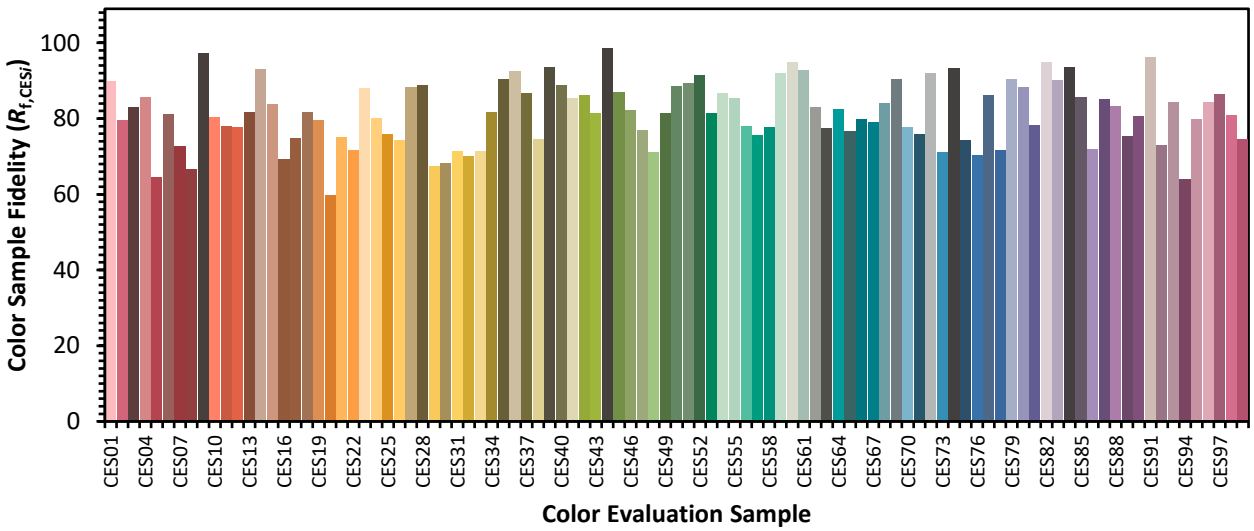
Individual Sample Fidelity Index ($R_{f,i}$)

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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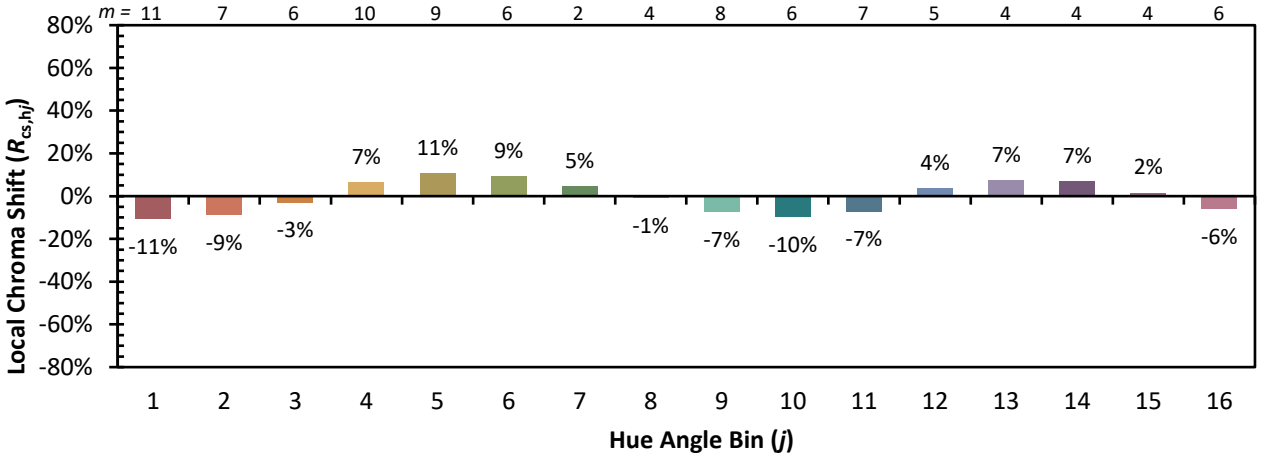
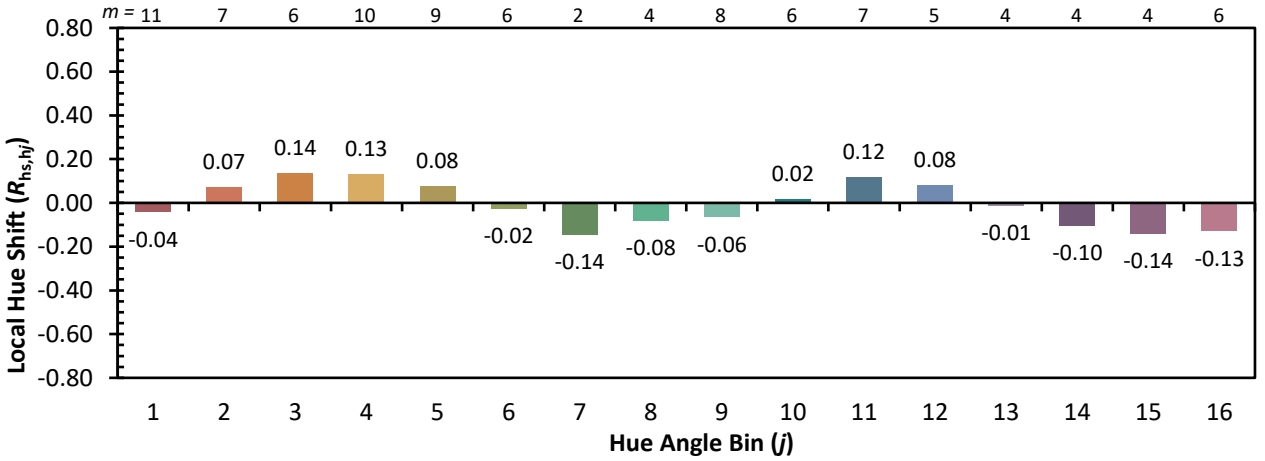
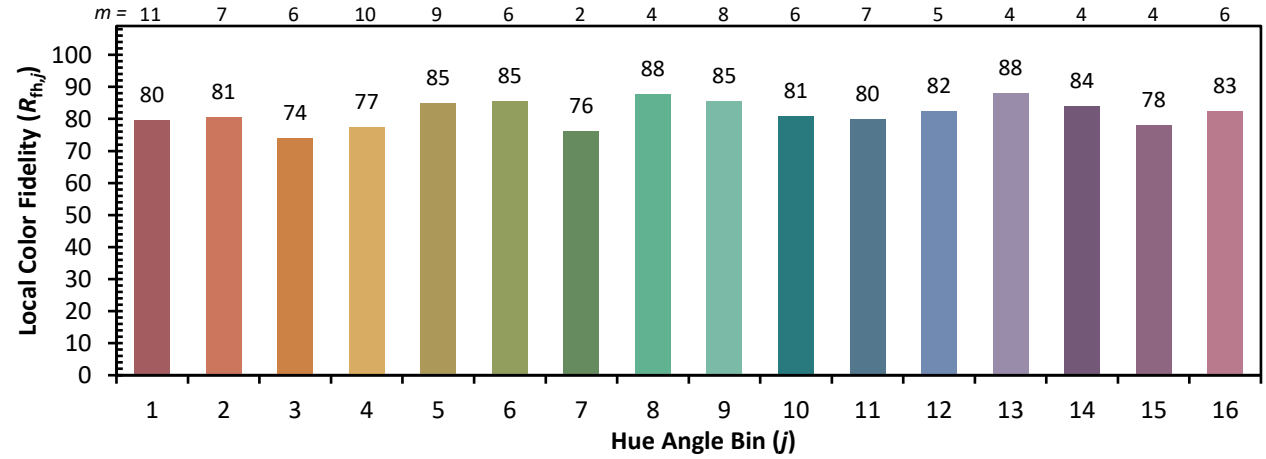
Color Rendition by Hue-Angle Bin







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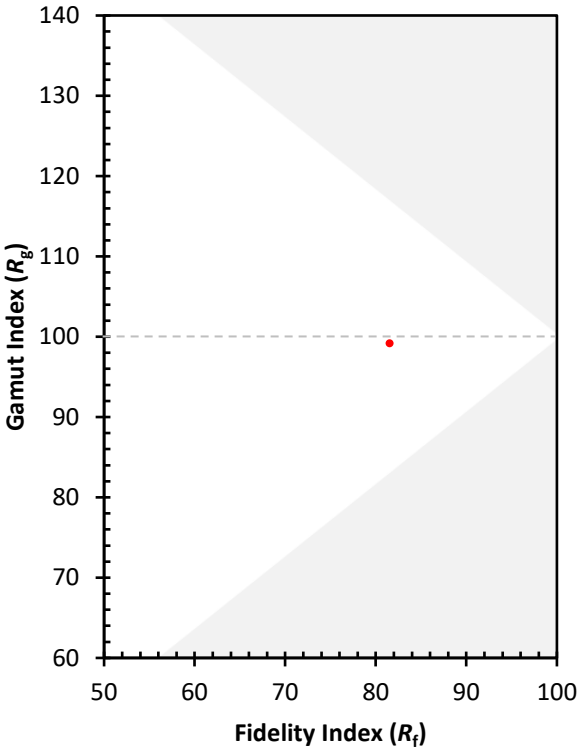
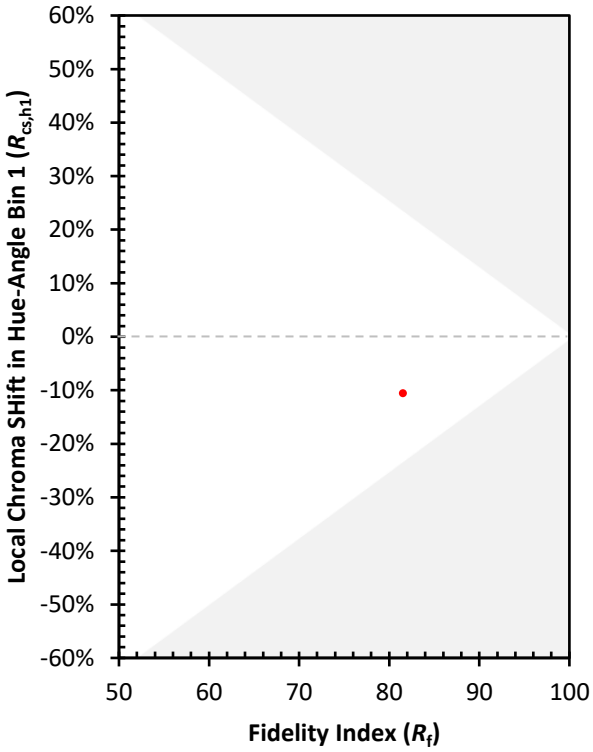
Measure Comparisons





(END OF REPORT)