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: P637003

Luminaire Tested: GWS-SA4B-830-U-T2-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:	P637003
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-20)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	1/10/2023
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	McGRAW-EDISON
Catalog Number:	GWS-SA4B-830-U-T2-W-GRSBK
Description:	GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II 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:	6829.9 lumens
Efficiency:	N/A
Efficacy:	72.4 lumens/watt
Luminous Opening:	Rectangular (W 1' x L: 1' x H: 0')
IES Classification:	Type II - Short
BUG Rating:	B1 - 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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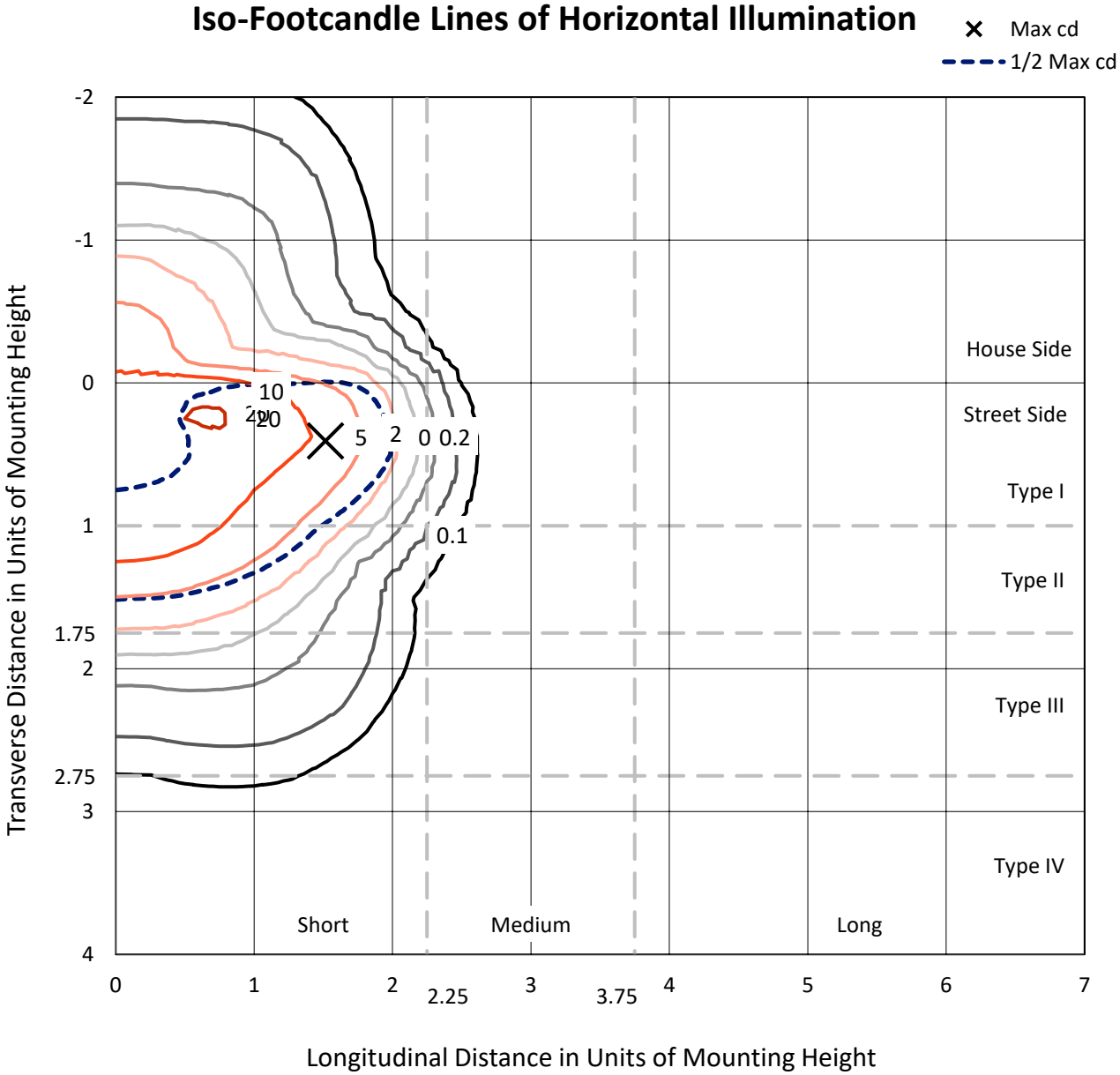
Scaled Data Report

REPORT NUMBER: P637003
CATALOG NUMBER: GWS-SA4B-830-U-T2-W-GRSBK

Iso-Footcandle Lines of Horizontal Illumination



Based on 10 foot mounting height. Maximum calculated value = 21.3 fc
Type II - Short - N/A

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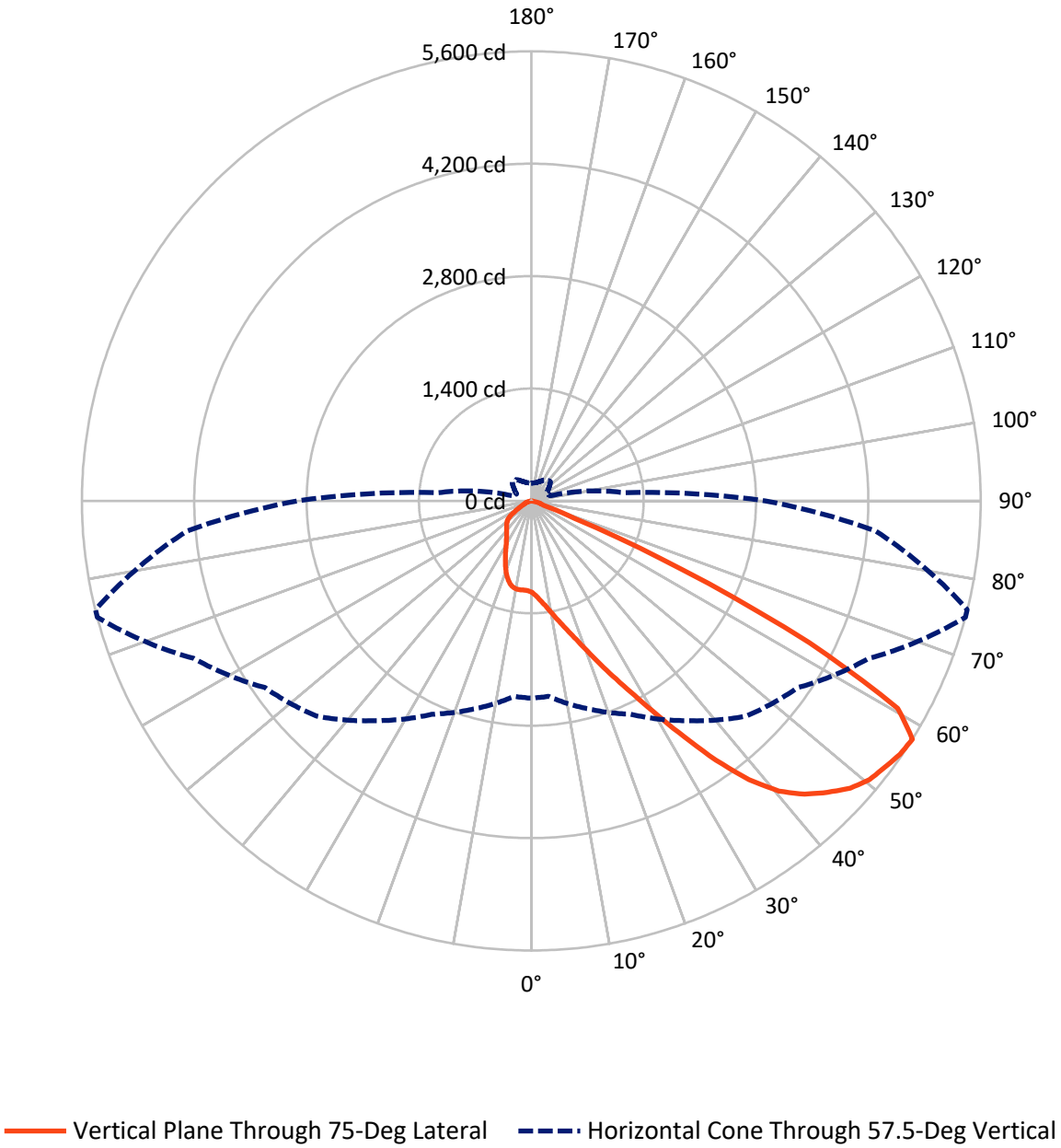
Luminous Intensity Polar Plot



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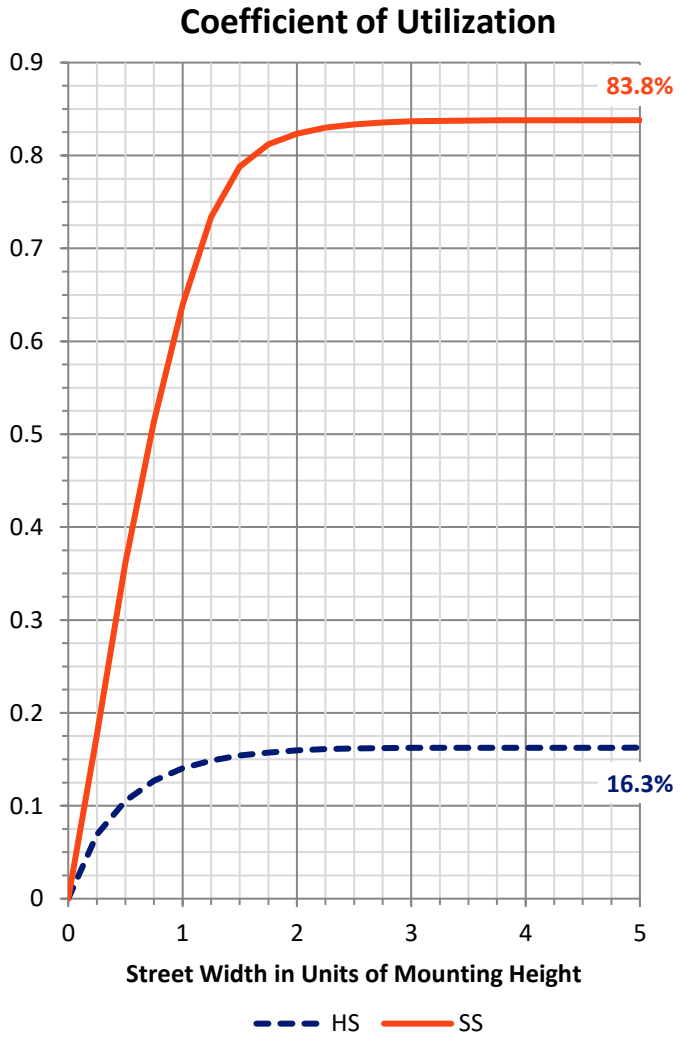
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1115.6	0.0	1115.6
	% Fixture	16.3	0.0	16.3
Street Side	Lumens	5714.3	0.0	5714.3
	% Fixture	83.7	0.0	83.7
Total	Lumens	6829.9	0.0	6829.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.9	1.7
10°-20°	376.5	5.5
20°-30°	689.5	10.1
30°-40°	1144.0	16.8
40°-50°	1747.2	25.6
50°-60°	1963.3	28.7
60°-70°	724.1	10.6
70°-80°	69.2	1.0
80°-90°	0.1	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°	6829.9	100.0
0°-180°	6829.9	100.0



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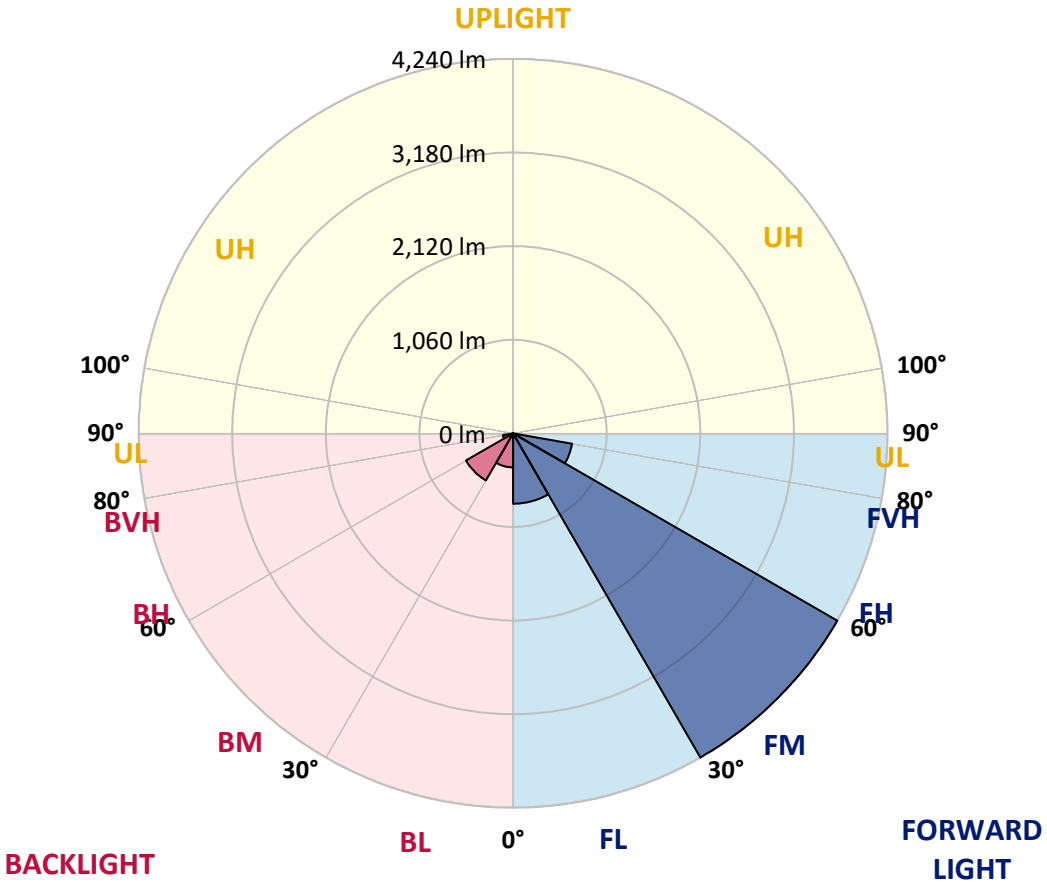
CATALOG NUMBER: GWS-SA4B-830-U-T2-W-GRSBK

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	797.0	11.7			
FM	(30°-60°)	4239.7	62.1			
FH	(60°-80°)	677.5	9.9			G1/1800
FVH	(80°-90°)	0.0	0.0			G0/10
BL	(0°-30°)	385.0	5.6	B1/500		
BM	(30°-60°)	614.8	9.0	B1/1000		
BH	(60°-80°)	115.9	1.7	B1/500		G1/500
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: B1-U0-G1
Type II Short



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Scaled Data Report

REPORT NUMBER: P637003
CATALOG NUMBER: GWS-SA4B-830-U-T2-W-GRSBK

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	76°	85°
0°	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	*1139.1*	1139.1	1139.1
2.5°	1272.7	1285.9	1281.7	1273.5	1268.5	1251.2	1240.5	1209.2	*1186.9*	1184.5	1163.9
5°	1433.4	1430.9	1427.6	1417.7	1409.5	1382.3	1350.1	1297.4	*1250.4*	1244.6	1201.0
7.5°	1521.6	1523.2	1524.9	1523.2	1517.5	1496.9	1461.4	1399.6	*1327.9*	1322.9	1253.7
10°	1557.9	1561.2	1569.4	1585.1	1599.1	1597.4	1576.8	1513.3	*1425.2*	1416.9	1323.8
12.5°	1575.2	1579.3	1592.5	1622.2	1660.1	1689.7	1693.0	1636.2	*1538.9*	1525.7	1407.0
15°	1599.1	1603.2	1619.7	1658.4	1713.6	1772.2	1810.1	1773.8	*1665.0*	1651.0	1498.5
17.5°	1609.8	1615.6	1639.5	1690.6	1762.3	1852.1	1937.8	1934.5	*1814.2*	1803.5	1604.8
20°	1630.4	1634.5	1655.9	1711.2	1797.7	1927.1	2071.4	2123.3	*1996.4*	1980.7	1733.4
22.5°	1695.5	1697.2	1707.0	1741.7	1822.4	1981.5	2207.4	2343.4	*2211.5*	2190.9	1877.7
25°	1801.8	1801.0	1805.1	1810.9	1870.3	2036.8	2338.4	2591.5	*2458.0*	2435.7	2040.9
27.5°	1937.0	1937.0	1946.9	1930.4	1954.3	2105.2	2467.8	2876.7	*2744.8*	2713.5	2219.7
30°	2096.1	2095.3	2118.4	2092.0	2099.4	2213.1	2607.1	3187.4	*3091.0*	3052.2	2425.8
32.5°	2312.1	2307.1	2333.5	2297.2	2272.5	2376.4	2776.9	3512.2	*3505.6*	3446.2	2684.6
35°	2584.9	2576.6	2584.9	2549.4	2504.9	2604.7	2999.5	3836.1	*3965.5*	3902.9	2992.9
37.5°	2856.1	2882.4	2891.5	2830.5	2794.3	2894.0	3267.4	4126.3	*4404.9*	4339.7	3313.5
40°	3175.9	3167.6	3199.0	3130.6	3107.5	3217.9	3529.5	4342.2	*4752.7*	4690.9	3598.7
42.5°	3411.6	3426.5	3465.2	3427.3	3409.2	3513.0	3749.6	4468.3	*4994.2*	4933.2	3802.3
45°	3694.3	3705.1	3719.9	3688.6	3669.6	3771.8	3908.7	4523.6	*5178.0*	5112.1	3939.2
47.5°	4000.2	4008.4	4008.4	3944.1	3883.1	3925.1	4015.0	4554.9	*5347.0*	5283.5	4040.5
50°	4219.4	4223.5	4259.8	4214.5	4081.8	4016.6	4063.6	4585.4	*5459.1*	5399.8	4073.5
52.5°	4024.9	4019.9	4139.5	4233.4	4268.9	4139.5	4147.7	4629.9	*5513.5*	5462.4	4099.9
55°	3389.4	3381.1	3549.3	3777.6	4090.0	4255.7	4249.1	4656.3	*5573.7*	5542.3	4195.5
57.5°	*2457.1*	*2443.1*	*2677.2*	*2931.1*	*3340.7*	*3790.0*	*4053.7*	*4641.4*	*5600.0*	*5597.6*	*4306.8*
60°	1477.1	1465.5	1686.4	1953.5	2270.0	2721.7	3159.4	4157.6	*5247.3*	5252.2	4017.5
62.5°	909.2	919.9	1119.3	1255.4	1373.2	1509.2	1762.3	2796.7	*3887.2*	3919.4	2823.1
65°	611.6	619.8	804.5	975.9	975.9	797.9	685.0	1337.0	*2073.8*	2019.4	1335.3
67.5°	410.5	419.6	565.4	765.7	794.6	556.4	277.8	398.9	*577.8*	560.5	330.5
70°	241.5	251.4	376.7	525.1	578.6	387.4	185.5	169.0	*164.0*	159.1	128.6
72.5°	108.0	112.1	192.1	267.1	244.0	163.2	131.1	135.2	*127.8*	125.3	104.7
75°	33.0	34.6	49.5	57.7	58.5	58.5	79.1	106.3	*100.6*	101.4	80.8
77.5°	8.2	8.2	13.2	12.4	6.6	5.8	14.8	23.9	*24.7*	22.3	16.5
80°	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	*0.8*	0.8	0.8
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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Scaled Data Report

REPORT NUMBER: P637003
CATALOG NUMBER: GWS-SA4B-830-U-T2-W-GRSBK

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1
2.5°	1154.8	1133.4	1119.3	1099.6	1085.6	1070.7	1057.5	1046.8	1041.0	1039.4	1040.2
5°	1181.2	1147.4	1114.4	1076.5	1050.1	1025.4	1005.6	989.9	982.5	980.0	980.0
7.5°	1221.6	1174.6	1116.1	1056.7	1012.2	973.5	950.4	933.1	926.5	924.8	919.9
10°	1274.3	1210.0	1113.6	1021.3	958.6	918.2	901.7	896.8	899.3	900.1	899.3
12.5°	1337.8	1247.1	1097.9	969.3	901.7	877.0	878.7	891.9	906.7	914.1	915.8
15°	1405.4	1280.9	1062.5	907.5	853.1	852.3	876.2	906.7	935.5	947.9	951.2
17.5°	1481.2	1308.1	1008.1	841.6	811.1	835.0	877.8	924.8	963.6	984.2	988.3
20°	1564.5	1330.4	938.8	779.8	774.0	816.8	876.2	933.9	981.7	1004.8	1008.9
22.5°	1651.0	1346.0	858.9	722.9	740.2	796.2	860.5	916.6	961.9	988.3	991.6
25°	1749.9	1347.7	777.3	675.1	708.9	768.2	822.6	868.8	906.7	929.8	932.2
27.5°	1836.5	1327.9	704.7	636.3	680.0	733.6	769.9	795.4	821.8	835.0	835.8
30°	1936.2	1293.3	636.3	605.0	650.3	690.7	708.9	714.6	717.1	719.6	716.3
32.5°	2054.9	1251.2	585.2	574.5	616.5	643.7	648.7	637.2	623.1	603.4	598.4
35°	2200.8	1213.3	543.2	544.8	579.5	595.9	591.8	567.1	539.9	516.0	511.9
37.5°	2359.0	1181.2	511.0	516.0	539.1	550.6	538.2	511.0	498.7	478.1	478.9
40°	2499.2	1154.8	482.2	487.1	497.9	508.6	488.8	470.7	493.7	492.1	493.7
42.5°	2598.9	1132.5	457.5	455.0	462.4	469.8	455.0	445.9	484.7	474.0	479.7
45°	2657.4	1111.9	436.9	422.0	433.6	446.8	436.9	425.3	438.5	389.1	384.9
47.5°	2697.0	1100.4	418.7	389.9	410.5	433.6	413.0	384.9	366.0	323.1	319.8
50°	2701.1	1094.6	397.3	356.9	383.3	408.0	384.1	345.4	318.2	299.2	296.7
52.5°	2722.5	1106.2	367.6	314.9	343.7	383.3	366.8	328.1	291.0	274.5	271.2
55°	2818.2	1154.8	318.2	257.2	299.2	364.3	352.8	292.6	257.2	247.3	244.8
57.5°	*2917.1*	*1164.7*	*250.6*	*203.6*	*260.5*	*337.1*	*322.3*	*269.5*	*234.9*	*223.4*	*220.9*
60°	2667.3	959.4	187.9	168.1	230.0	311.6	298.4	255.5	215.1	201.1	198.6
62.5°	1752.4	518.5	149.2	142.6	193.7	263.8	272.0	230.8	192.1	177.2	176.4
65°	807.8	240.7	114.6	112.9	151.7	210.2	234.1	201.9	162.4	149.2	149.2
67.5°	220.1	119.5	89.8	83.3	103.0	140.9	170.6	150.8	115.4	99.7	98.9
70°	109.6	96.4	80.8	71.7	74.2	87.4	100.6	84.1	58.5	47.8	47.0
72.5°	89.8	79.1	68.4	61.0	56.0	53.6	51.9	42.0	27.2	20.6	19.8
75°	66.8	56.9	48.6	39.6	33.8	31.3	28.0	20.6	11.5	6.6	5.8
77.5°	14.8	14.0	13.2	9.9	9.1	7.4	5.8	4.1	1.6	0.0	0.0
80°	0.8	0.8	0.8	0.8	0.8	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

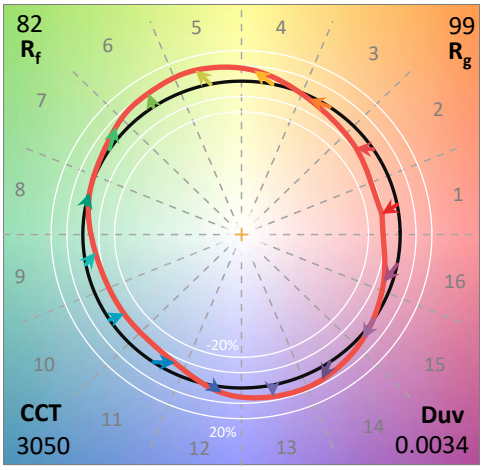
Test Information

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

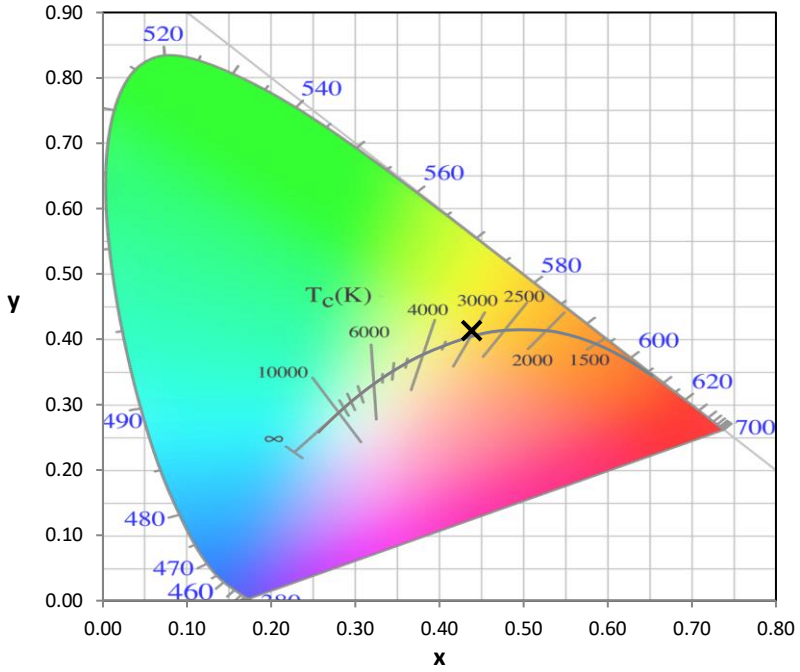
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

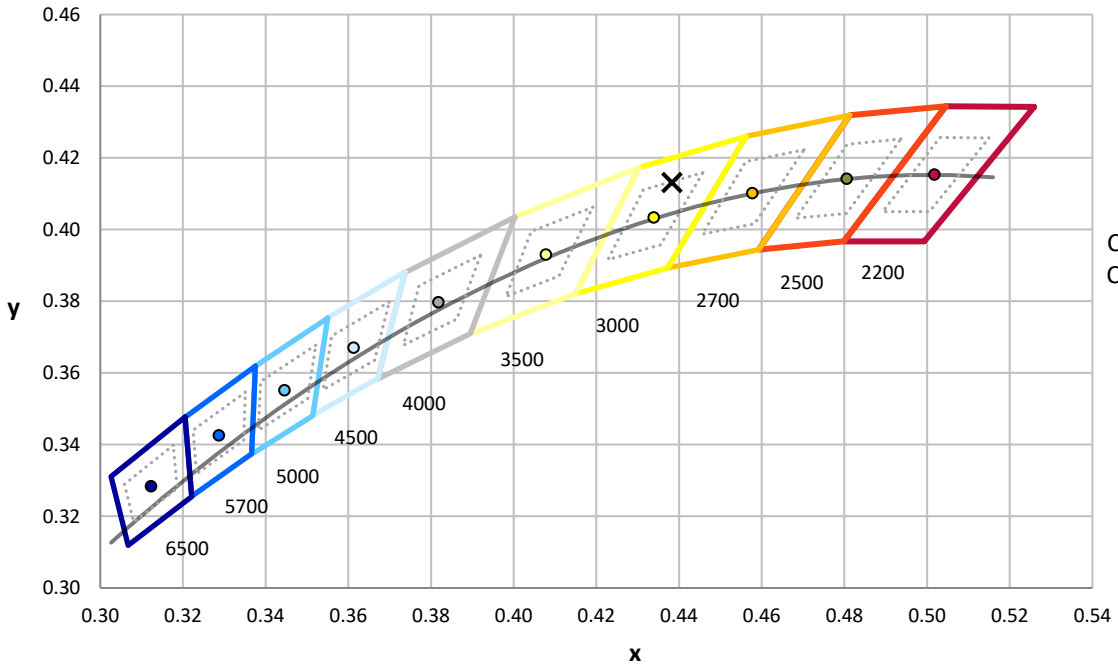
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

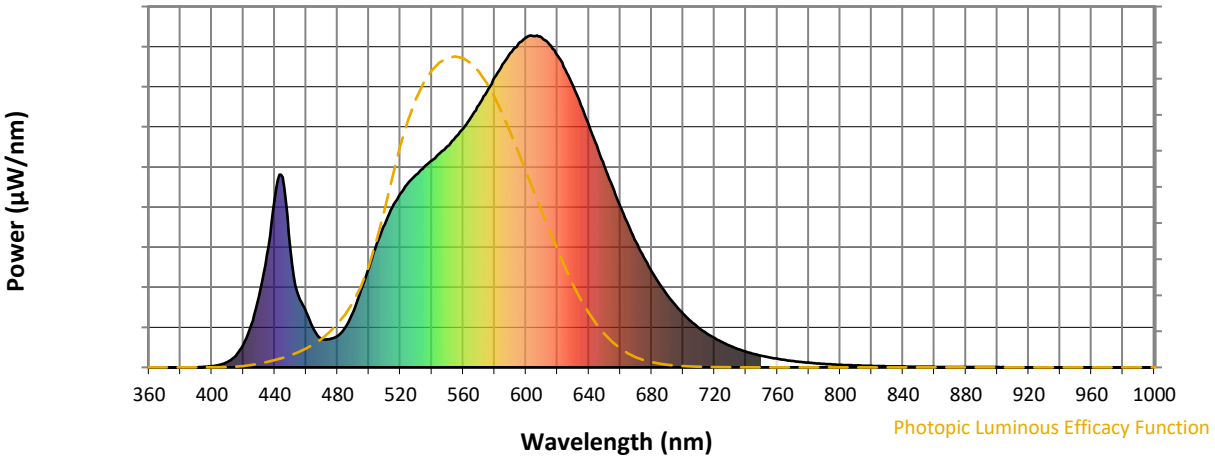


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

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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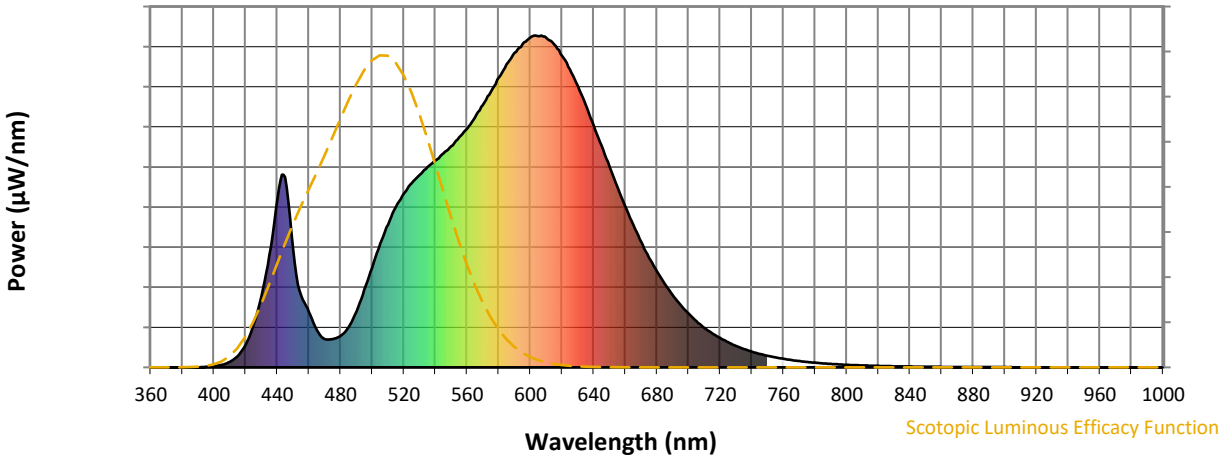
Scotopic Flux vs. Wavelength



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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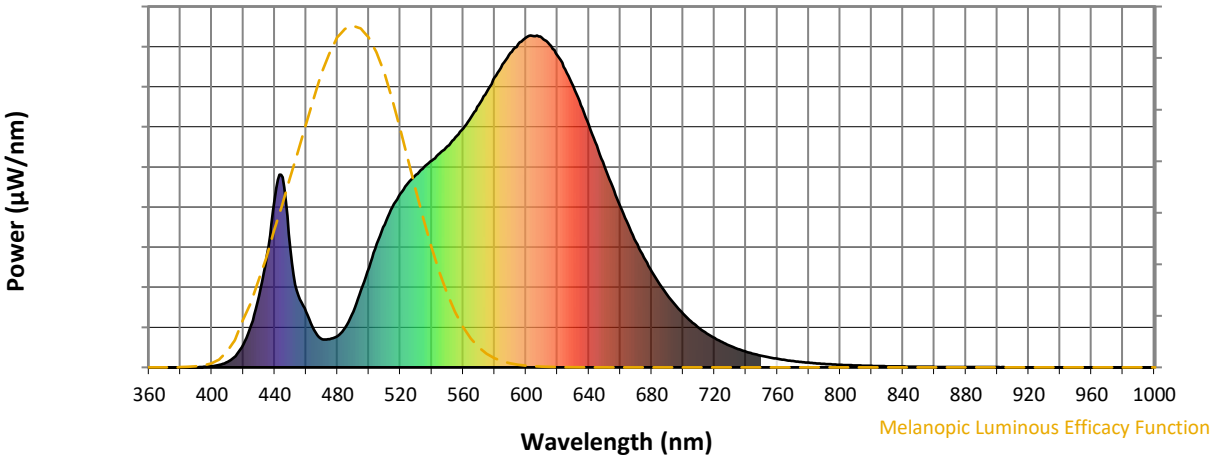
Melanopic Flux vs. Wavelength



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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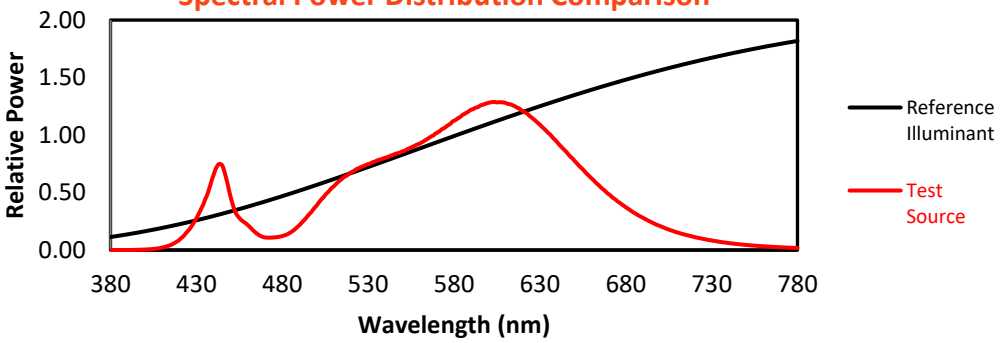
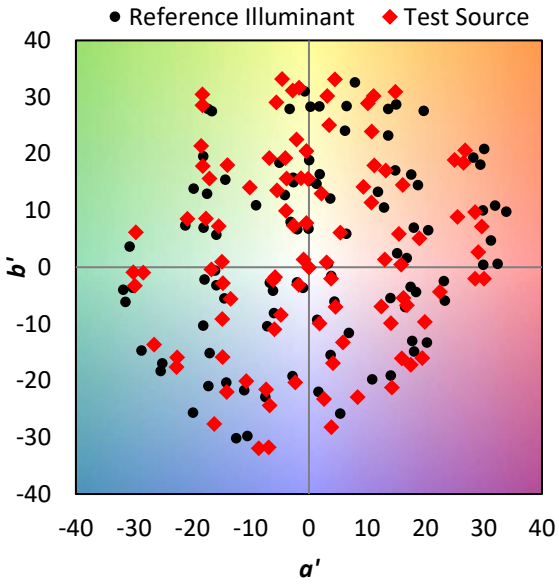
Summary

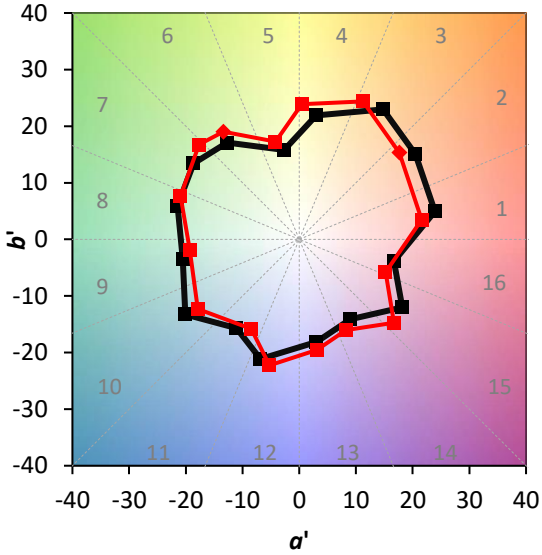
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

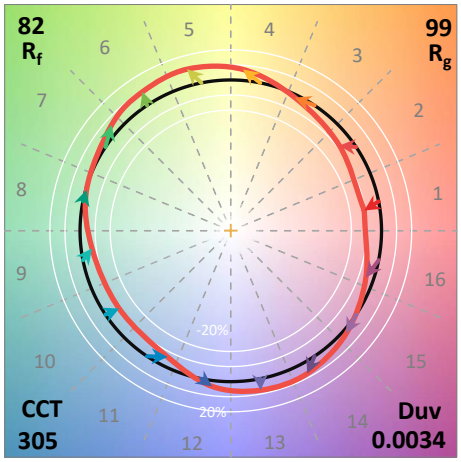
Spectral Power Distribution Comparison

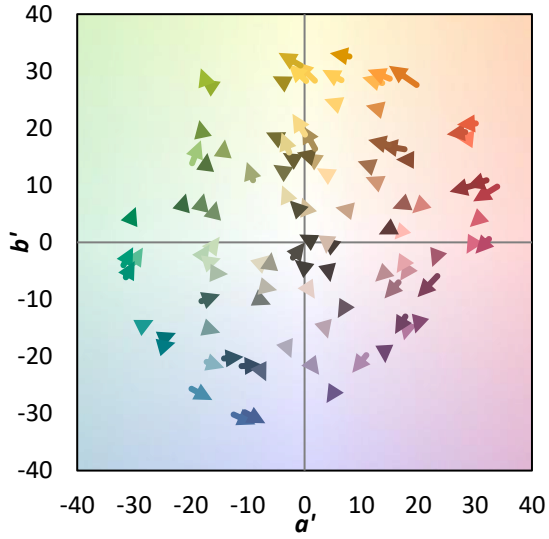


Color Vector Graphics









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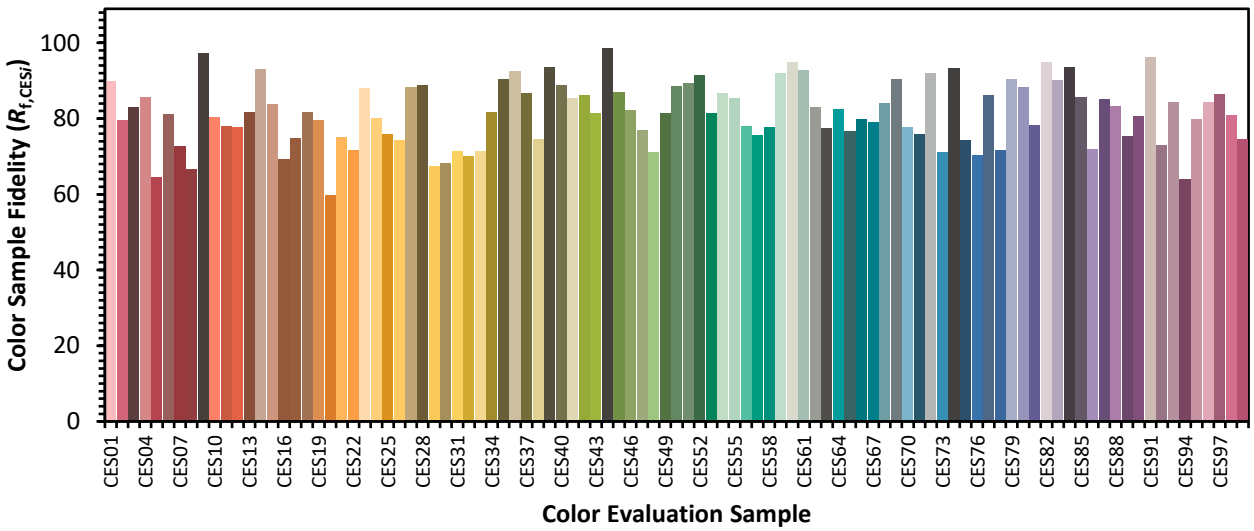
Individual Sample Fidelity Index ($R_{f,i}$)

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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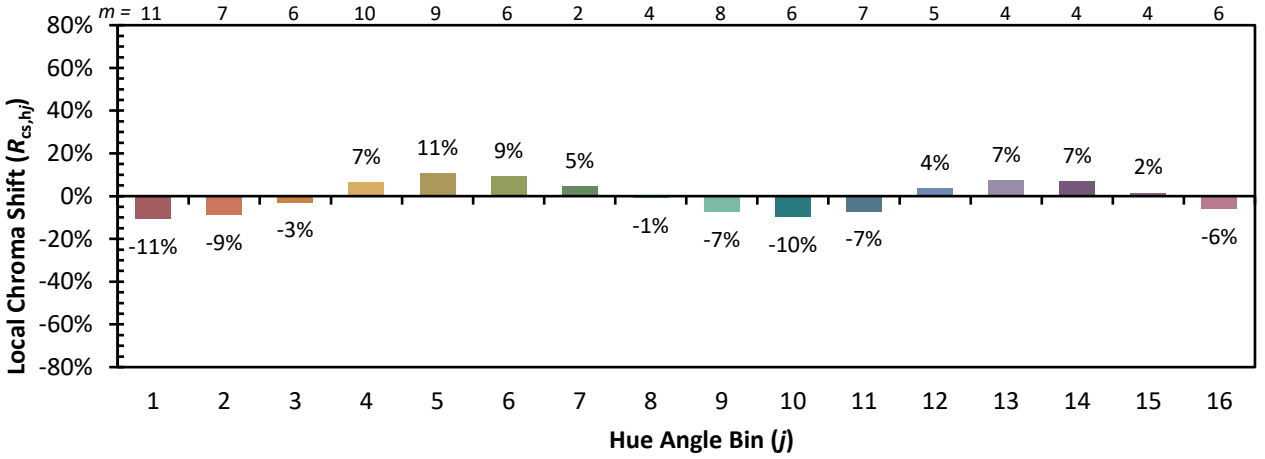
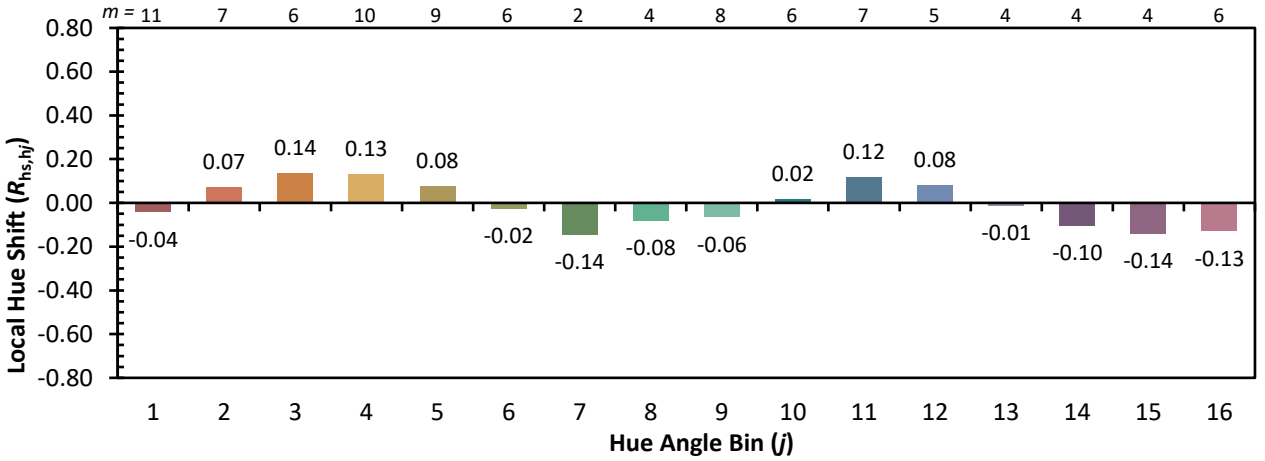
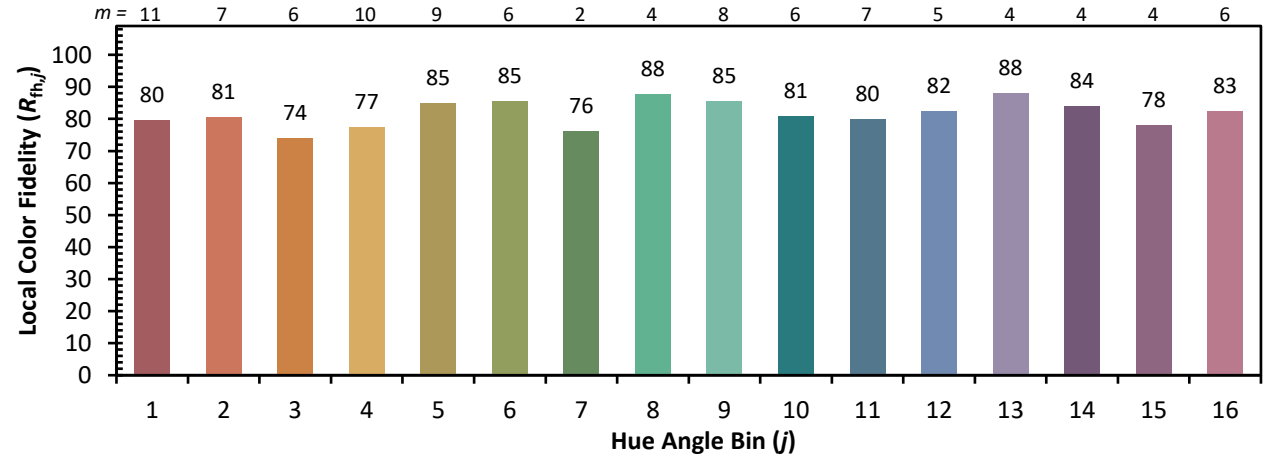
Color Rendition by Hue-Angle Bin







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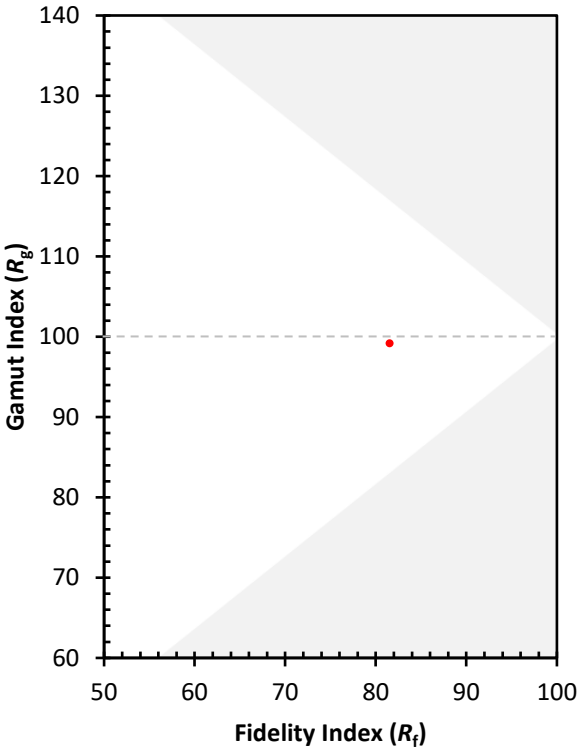
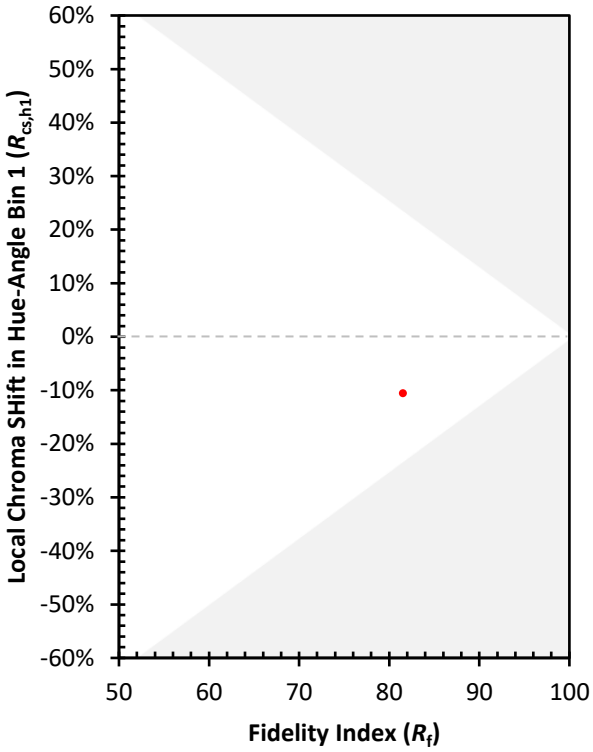
Measure Comparisons





(END OF REPORT)