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: P636512

Luminaire Tested: GWS-SA3F-830-U-T2R-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:	P636512
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-12)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	1/10/2023
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	McGRAW-EDISON
Catalog Number:	GWS-SA3F-830-U-T2R-W-GRSBK
Description:	GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II ROADWAY OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK
Light Source:	(48) 3000K CCT, 80 CRI LEDS
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	13020.3 lumens
Efficiency:	N/A
Efficacy:	71.1 lumens/watt
Luminous Opening:	Rectangular (W 1.5' x L: 0.5' x H: 0')
IES Classification:	Type II - Short
BUG Rating:	B2 - U0 - G1

Input Watts (W):	183.2
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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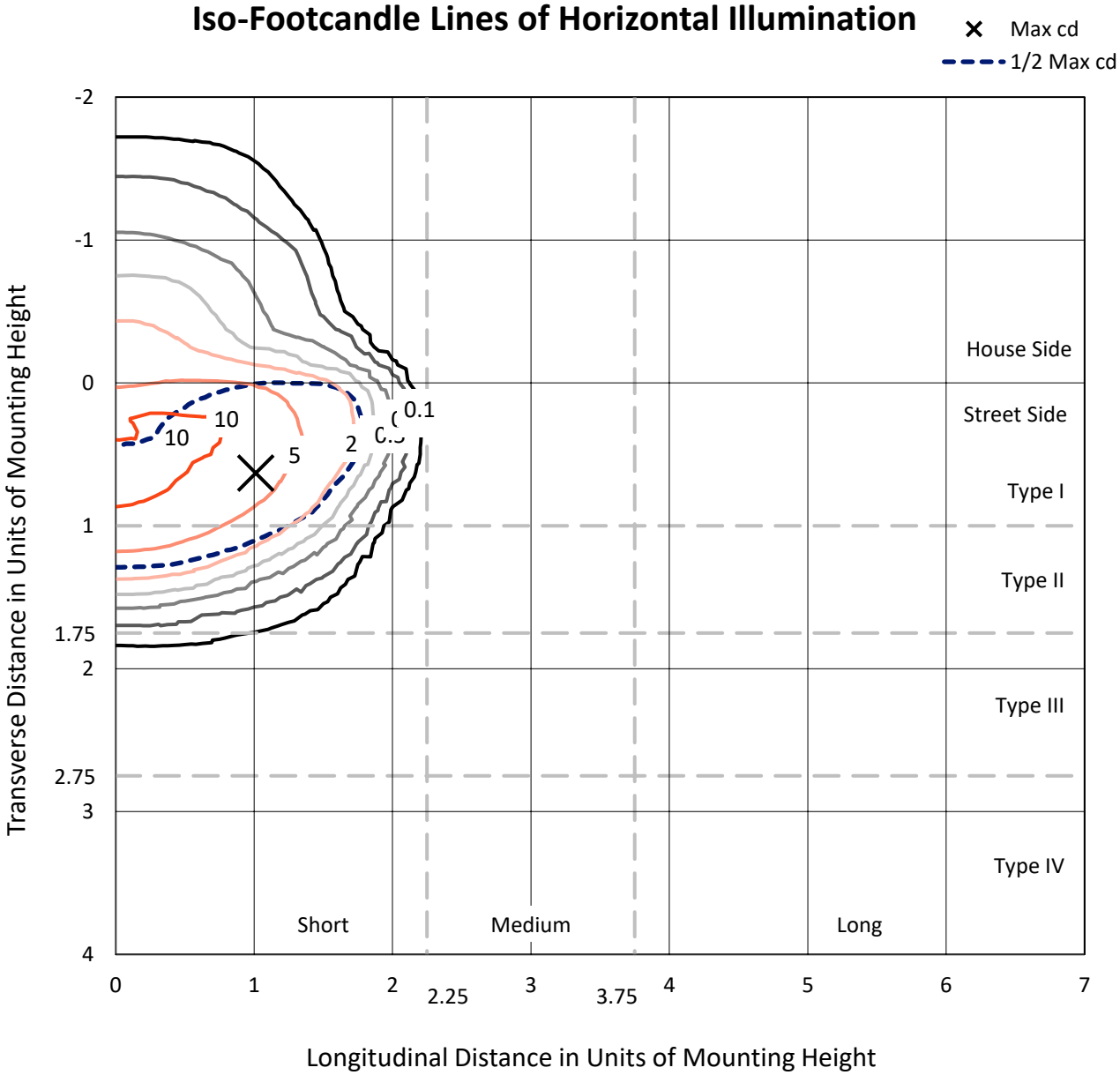
Scaled Data Report

REPORT NUMBER: P636512
CATALOG NUMBER: GWS-SA3F-830-U-T2R-W-GRSBK

Iso-Footcandle Lines of Horizontal Illumination



Based on 20 foot mounting height. Maximum calculated value = 11.9 fc
Type II - Short - N/A

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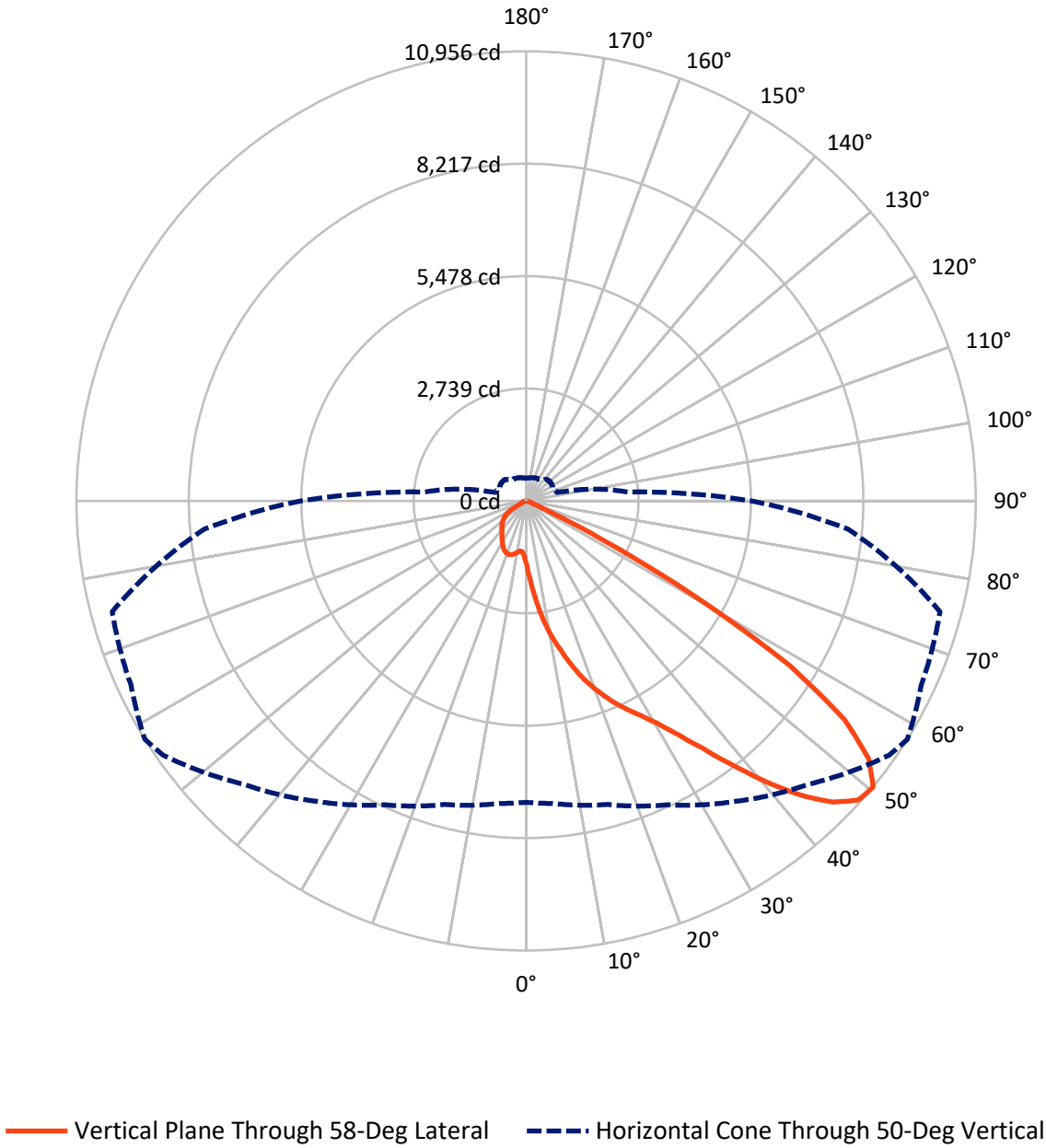
Luminous Intensity Polar Plot



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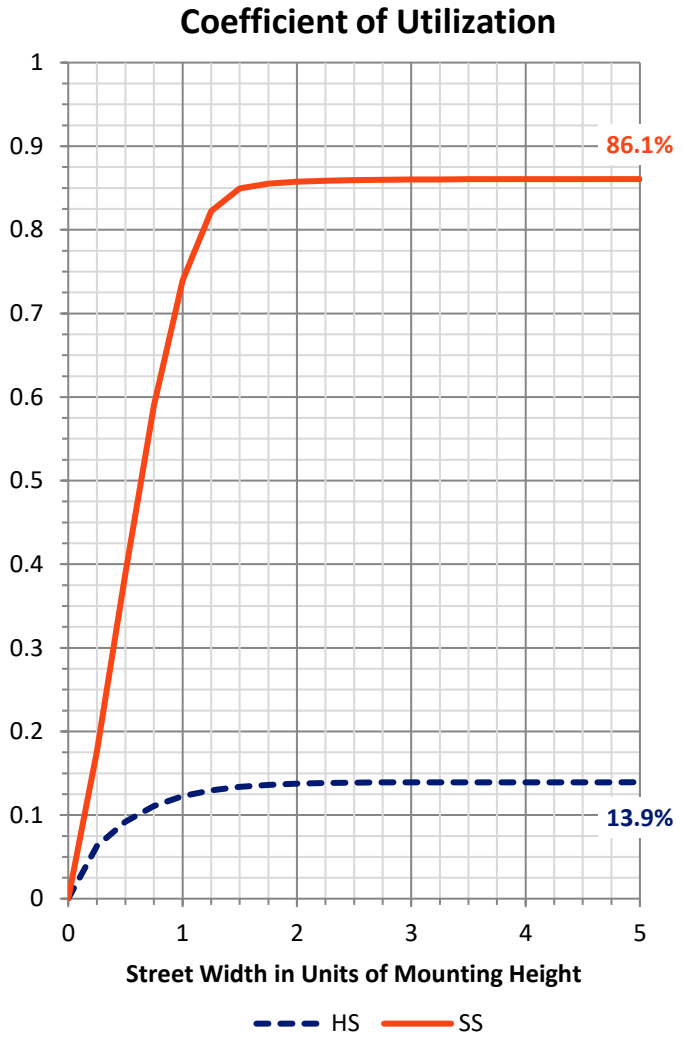
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1823.7	0.0	1823.7
	% Fixture	14.0	0.0	14.0
Street Side	Lumens	11196.6	0.0	11196.6
	% Fixture	86.0	0.0	86.0
Total	Lumens	13020.3	0.0	13020.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	192.7	1.5
10°-20°	762.7	5.9
20°-30°	1543.4	11.9
30°-40°	2730.5	21.0
40°-50°	3980.5	30.6
50°-60°	3190.4	24.5
60°-70°	574.8	4.4
70°-80°	45.3	0.3
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°	13020.3	100.0
0°-180°	13020.3	100.0



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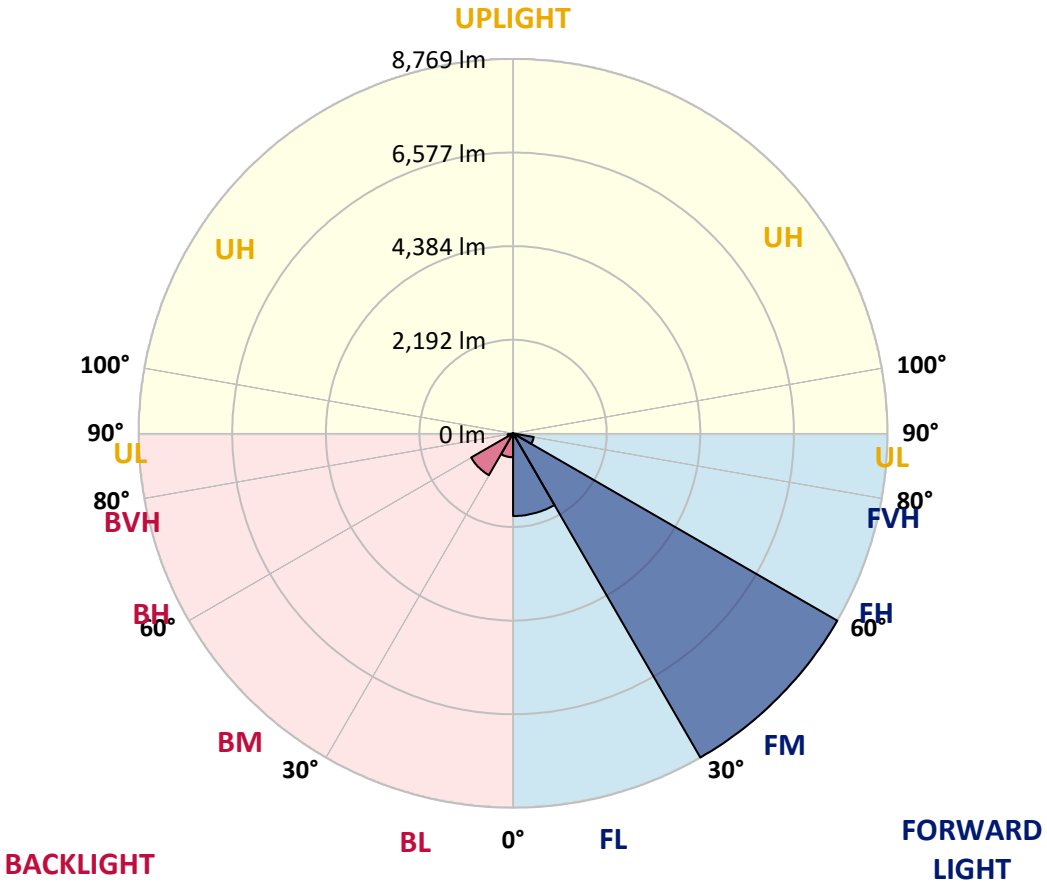
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	1937.4	14.9			
FM	(30°-60°)	8768.8	67.3			
FH	(60°-80°)	490.5	3.8			G0/660
FVH	(80°-90°)	0.0	0.0			G0/10
BL	(0°-30°)	561.4	4.3	B2/1000		
BM	(30°-60°)	1132.6	8.7	B2/2500		
BH	(60°-80°)	129.6	1.0	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: B2-U0-G1
Type II Short



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Scaled Data Report

REPORT NUMBER: P636512
CATALOG NUMBER: GWS-SA3F-830-U-T2R-W-GRSBK

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	1555.3	1555.3	1555.3	1555.3	1555.3	1555.3	1555.3	*1555.3*	1555.3	1555.3	1555.3
2.5°	2301.6	2265.3	2244.5	2227.8	2154.0	2037.0	1960.4	*1920.0*	1853.2	1740.4	1643.0
5°	3003.3	2976.8	2928.1	2894.7	2800.0	2634.3	2463.1	*2394.8*	2243.1	1988.3	1759.9
7.5°	3468.3	3448.8	3430.7	3386.2	3297.1	3146.7	2957.3	*2886.3*	2652.4	2290.4	1915.9
10°	3826.2	3810.9	3790.0	3788.6	3719.0	3583.9	3398.7	*3324.9*	3071.5	2619.0	2099.7
12.5°	4140.8	4128.3	4124.1	4163.1	4118.6	4018.3	3817.8	*3725.9*	3457.2	2954.6	2302.9
15°	4356.7	4353.9	4372.0	4448.6	4473.6	4427.7	4259.2	*4160.3*	3851.2	3291.5	2527.1
17.5°	4455.5	4463.9	4498.7	4630.9	4742.3	4781.3	4651.8	*4568.3*	4242.5	3632.6	2766.6
20°	4624.0	4621.2	4642.1	4767.4	4903.8	5043.1	5004.1	*4933.1*	4637.9	3993.3	3032.5
22.5°	5098.8	5058.4	5013.8	5033.3	5082.1	5245.0	5317.4	*5281.2*	5045.9	4363.6	3306.8
25°	5828.4	5786.6	5643.2	5504.0	5412.1	5485.9	5584.7	*5602.8*	5451.0	4743.7	3593.6
27.5°	6602.5	6564.9	6403.4	6194.6	5931.4	5803.3	5877.1	*5913.3*	5849.3	5196.2	3898.6
30°	7327.9	7277.8	7101.0	6842.0	6537.1	6340.8	6257.2	*6282.3*	6319.9	5732.3	4256.4
32.5°	7957.3	7919.7	7708.0	7435.1	7141.4	6936.7	6741.7	*6783.5*	6875.4	6388.1	4714.5
35°	8490.5	8471.0	8246.9	7975.4	7664.9	7560.4	7393.4	*7401.7*	7493.6	7180.3	5272.8
37.5°	8954.2	8920.8	8717.5	8465.5	8219.0	8202.3	8156.4	*8160.6*	8207.9	8103.5	5914.7
40°	9246.6	9216.0	9071.1	8915.2	8739.8	8742.6	8980.6	*8998.7*	8944.4	9009.9	6592.8
42.5°	9356.6	9334.3	9256.3	9257.7	9239.6	9321.8	9768.7	*9802.1*	9607.2	9721.4	7172.0
45°	9165.8	9156.1	9161.6	9362.1	9579.4	9832.8	10413.4	*10471.8*	10196.2	10193.4	7624.5
47.5°	8550.4	8530.9	8693.8	9034.9	9537.6	10030.5	10803.2	*10893.7*	10608.3	10463.5	7908.5
50°	*7344.6*	*7400.3*	*7657.9*	*8170.3*	*8934.7*	*9759.0*	*10799.0*	*10956.4*	*10623.6*	*10439.8*	*7861.2*
52.5°	5320.2	5309.0	5872.9	6577.5	7507.5	8890.1	10225.4	*10455.1*	10251.9	10207.3	7755.4
55°	2894.7	2996.3	3376.4	4309.3	5470.5	7245.8	8915.2	*9416.4*	9651.8	10122.4	7946.1
57.5°	1063.8	1108.3	1346.4	2006.4	2896.1	4505.6	6810.0	*7566.0*	8292.8	9885.7	7914.1
60°	428.8	437.2	531.9	737.9	1216.9	2293.2	4085.1	*4756.3*	5441.3	7567.4	6073.4
62.5°	311.9	323.0	360.6	431.6	615.4	1002.5	1761.3	*2048.1*	2238.9	3748.2	2992.2
65°	252.0	260.4	291.0	323.0	406.6	538.8	568.1	*547.2*	544.4	969.1	686.4
67.5°	208.9	217.2	239.5	261.8	292.4	268.7	194.9	*204.7*	167.1	165.7	135.1
70°	153.2	162.9	185.2	208.9	175.4	72.4	112.8	*167.1*	126.7	105.8	103.0
72.5°	115.6	122.5	143.4	136.5	51.5	27.8	75.2	*121.1*	97.5	78.0	76.6
75°	86.3	90.5	72.4	22.3	5.6	7.0	27.8	*50.1*	54.3	44.6	44.6
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	2.8	*4.2*	5.6	7.0	8.4
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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Scaled Data Report

REPORT NUMBER: P636512
CATALOG NUMBER: GWS-SA3F-830-U-T2R-W-GRSBK

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1555.3	1555.3	1555.3	1555.3	1555.3	1555.3	1555.3	1555.3	1555.3	1555.3	1555.3
2.5°	1587.3	1528.8	1445.3	1375.6	1322.7	1271.2	1232.2	1193.2	1191.8	1172.4	1168.2
5°	1654.1	1548.3	1395.1	1285.1	1218.3	1177.9	1150.1	1136.2	1129.2	1122.2	1119.4
7.5°	1750.2	1598.4	1386.8	1269.8	1214.1	1187.7	1168.2	1159.8	1155.6	1150.1	1148.7
10°	1868.5	1670.8	1417.4	1299.1	1250.3	1225.3	1204.4	1191.8	1184.9	1175.1	1172.4
12.5°	2010.6	1759.9	1466.1	1347.8	1296.3	1262.9	1235.0	1216.9	1207.2	1194.6	1191.8
15°	2163.7	1856.0	1520.4	1392.3	1331.1	1287.9	1253.1	1225.3	1207.2	1191.8	1187.7
17.5°	2322.4	1953.5	1569.2	1423.0	1347.8	1296.3	1246.2	1208.6	1186.3	1166.8	1161.2
20°	2500.7	2053.7	1601.2	1428.5	1342.2	1274.0	1215.5	1168.2	1145.9	1119.4	1113.9
22.5°	2687.2	2147.0	1615.1	1416.0	1311.6	1232.2	1169.6	1120.8	1088.8	1061.0	1052.6
25°	2868.2	2230.5	1608.2	1381.2	1265.6	1173.7	1109.7	1059.6	1024.8	996.9	990.0
27.5°	3060.4	2300.2	1583.1	1329.7	1203.0	1109.7	1048.4	1005.3	973.3	942.6	935.7
30°	3276.2	2364.2	1542.7	1267.0	1129.2	1044.3	996.9	967.7	932.9	900.8	891.1
32.5°	3536.6	2421.3	1484.2	1191.8	1063.8	987.2	960.7	938.4	898.1	864.6	857.7
35°	3834.5	2468.6	1410.4	1113.9	999.7	951.0	945.4	916.2	863.3	824.3	815.9
37.5°	4179.8	2514.6	1322.7	1037.3	952.4	934.3	935.7	885.5	821.5	774.1	768.6
40°	4551.6	2560.5	1225.3	970.5	909.2	924.5	912.0	841.0	736.6	690.6	685.0
42.5°	4938.7	2610.7	1126.4	907.8	873.0	886.9	868.8	751.9	676.7	653.0	650.2
45°	5288.1	2670.5	1019.2	845.2	836.8	832.6	802.0	680.9	648.8	632.1	630.7
47.5°	5540.2	2660.8	905.0	785.3	797.8	783.9	690.6	647.4	621.0	598.7	593.1
50°	*5494.2*	*2490.9*	*786.7*	*718.5*	*747.7*	*735.2*	*621.0*	*608.5*	*584.8*	*561.1*	*552.8*
52.5°	5377.2	2259.8	683.6	647.4	693.4	664.1	573.6	561.1	540.2	509.6	499.9
55°	5439.9	2042.6	602.9	590.4	637.7	550.0	520.7	501.2	479.0	445.6	441.4
57.5°	5238.0	1666.6	484.5	492.9	563.9	469.2	456.7	426.1	388.5	366.2	363.4
60°	3625.7	895.3	303.5	313.3	408.0	394.0	409.4	381.5	335.6	314.7	310.5
62.5°	1665.2	359.2	165.7	158.7	214.4	267.3	350.9	348.1	291.0	257.6	254.8
65°	403.8	164.3	118.3	111.4	121.1	160.1	228.3	274.3	235.3	196.3	192.1
67.5°	130.9	133.7	108.6	101.6	107.2	119.7	136.5	151.8	150.4	137.8	135.1
70°	104.4	121.1	100.2	91.9	91.9	96.1	91.9	73.8	64.0	69.6	72.4
72.5°	78.0	91.9	79.4	71.0	68.2	66.8	57.1	41.8	29.2	26.5	25.1
75°	45.9	51.5	48.7	41.8	39.0	34.8	27.8	18.1	9.7	7.0	4.2
77.5°	8.4	9.7	11.1	8.4	7.0	5.6	4.2	1.4	0.0	0.0	0.0
80°	0.0	1.4	1.4	1.4	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

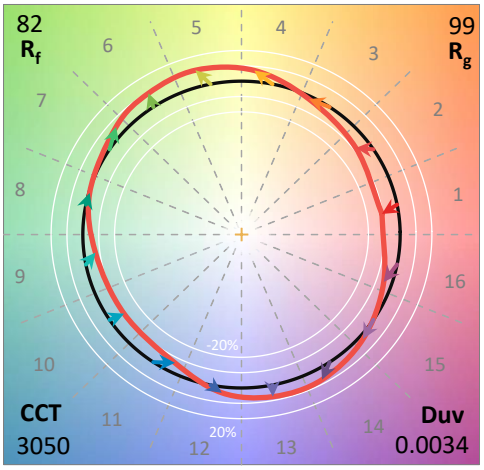
Test Information

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

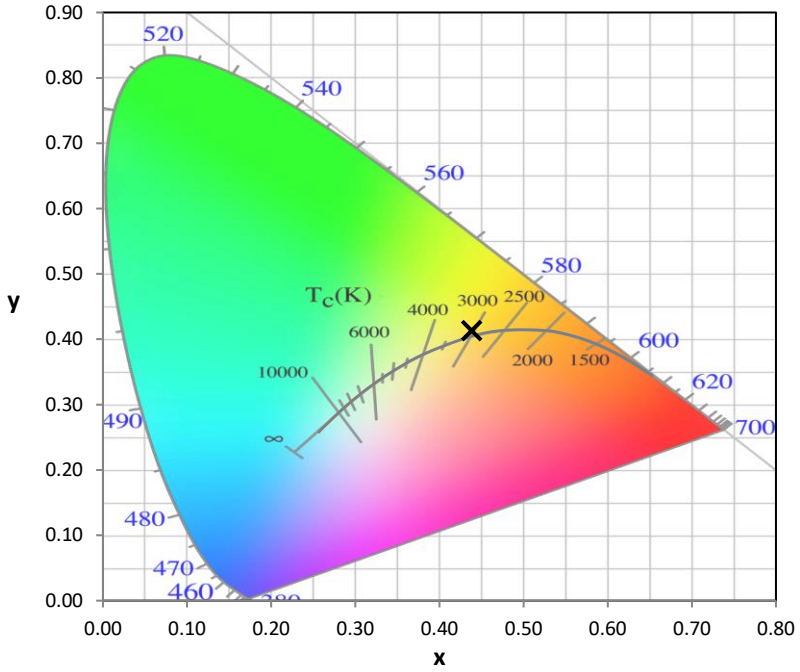
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

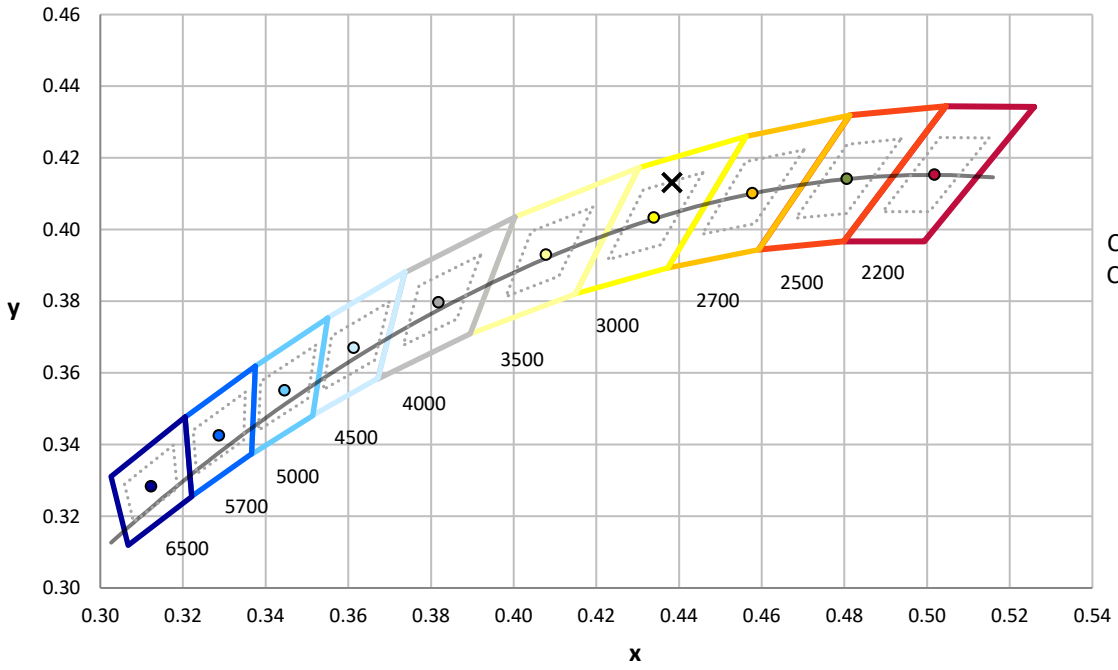
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

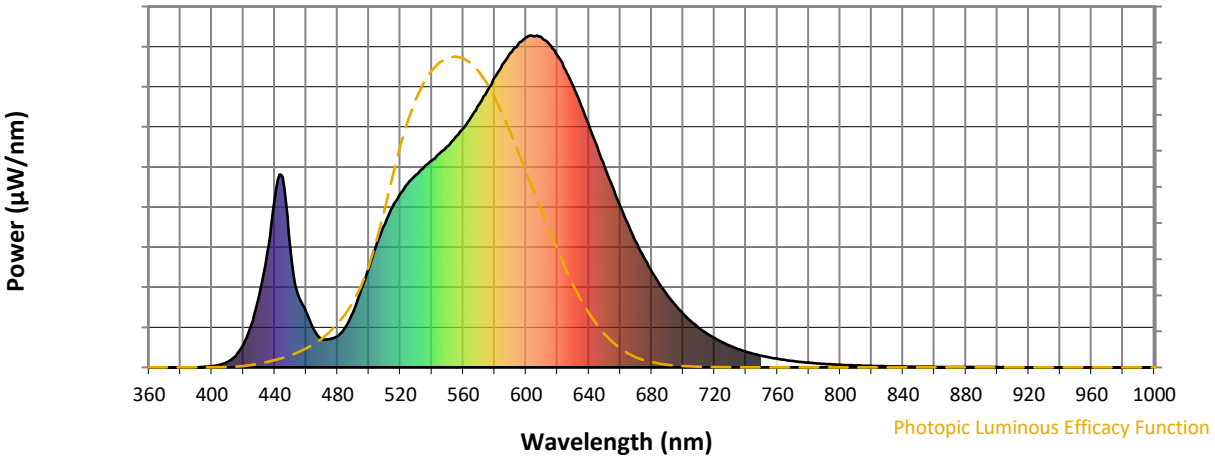


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

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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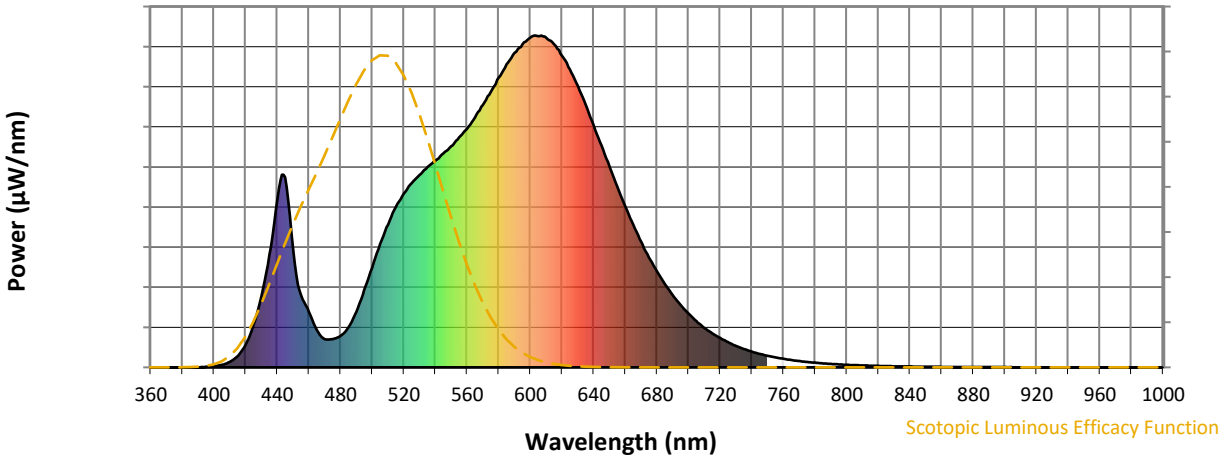
Scotopic Flux vs. Wavelength



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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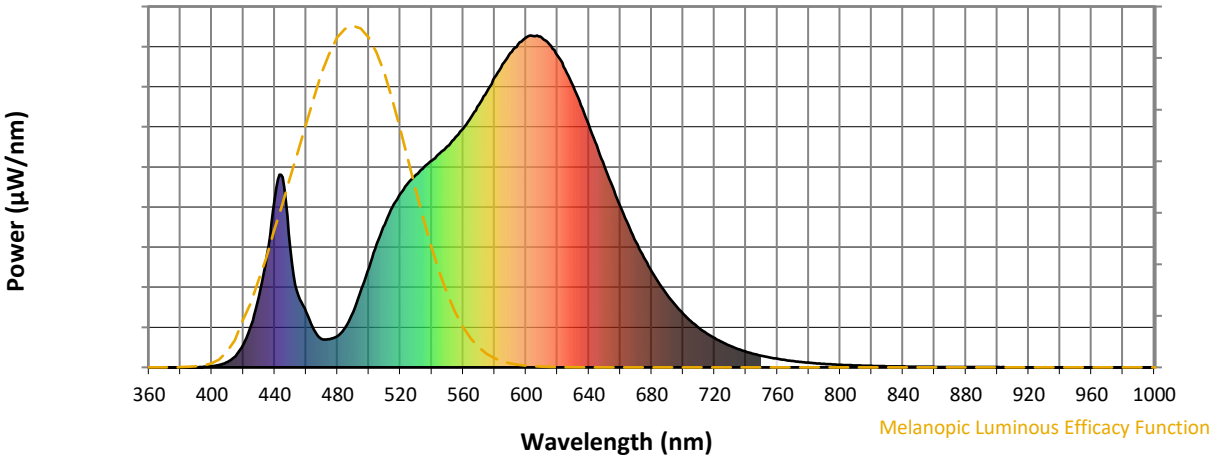
Melanopic Flux vs. Wavelength



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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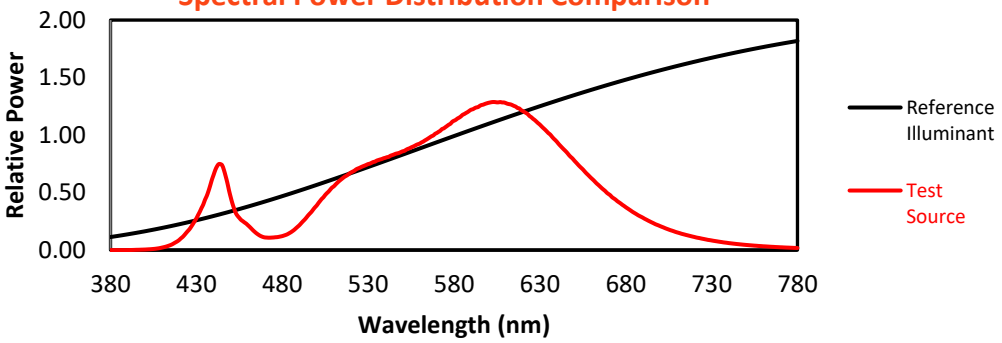
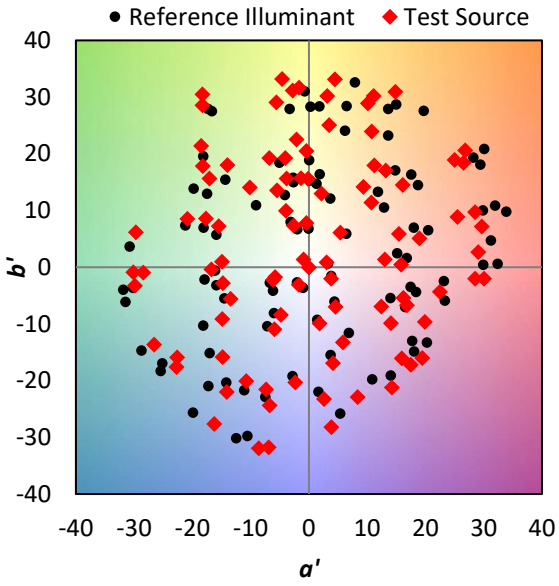
Summary

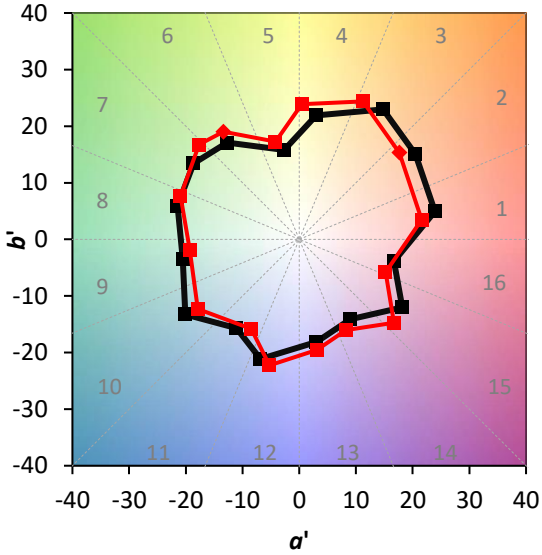
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

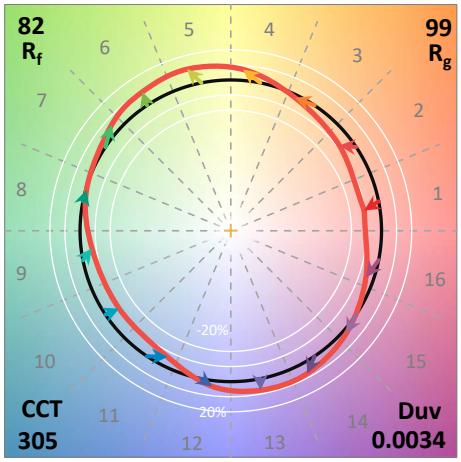
Spectral Power Distribution Comparison

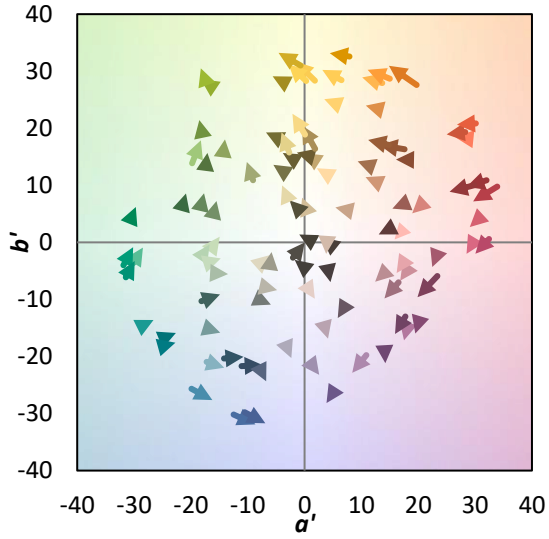


Color Vector Graphics









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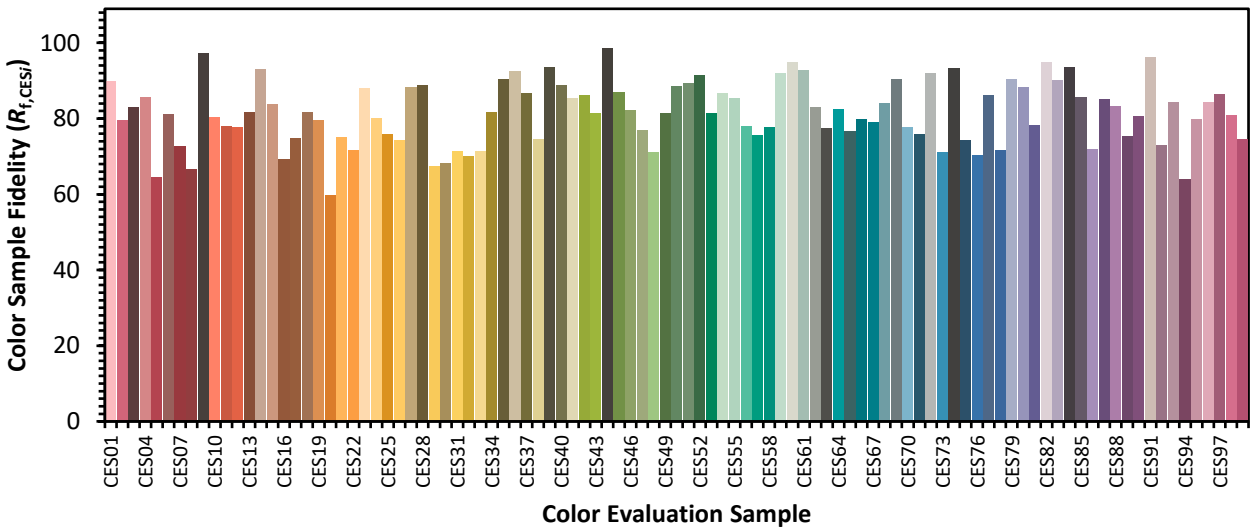
Individual Sample Fidelity Index ($R_{f,i}$)

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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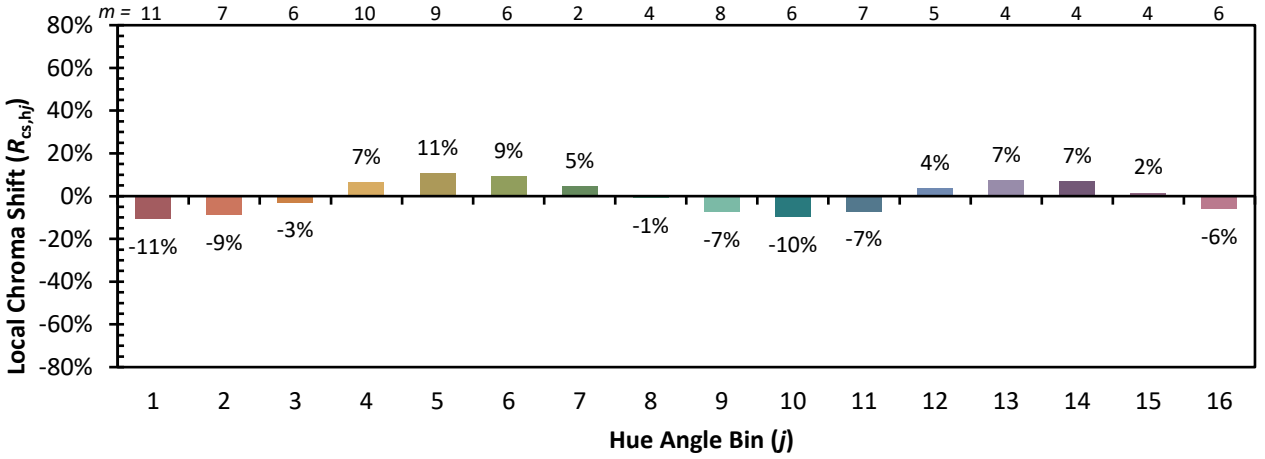
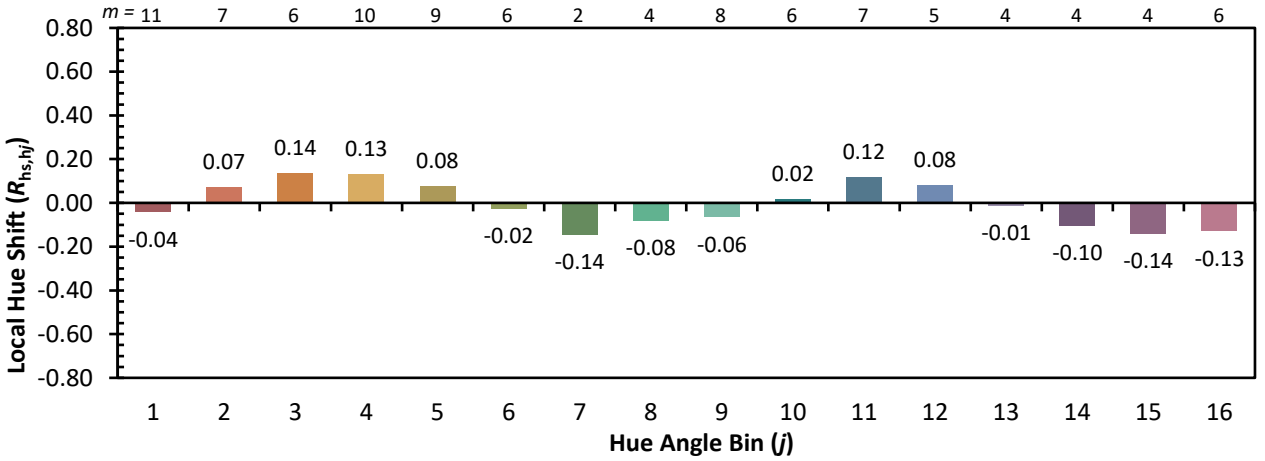
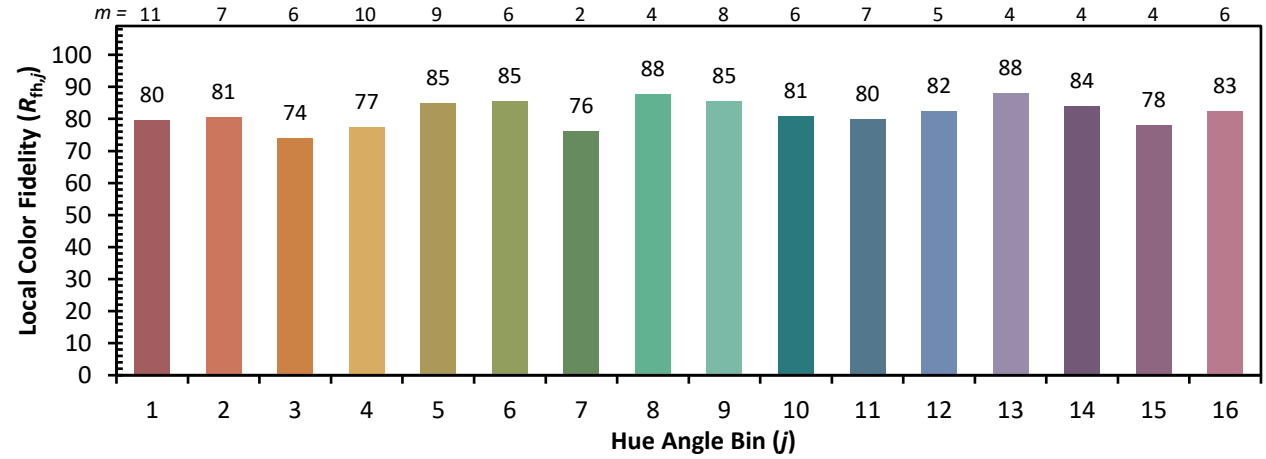
Color Rendition by Hue-Angle Bin







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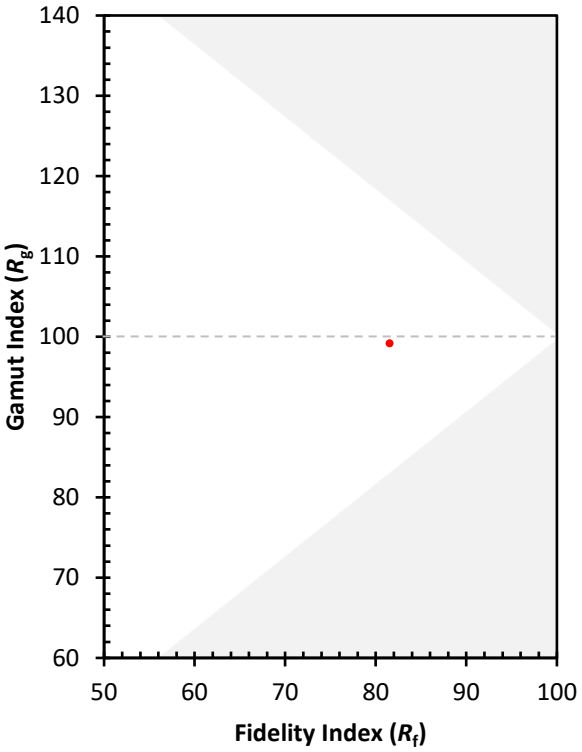
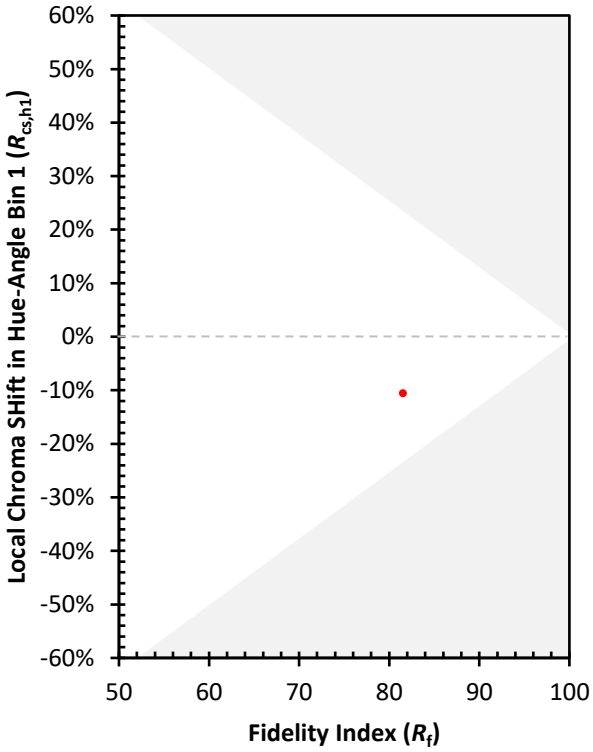
Measure Comparisons





(END OF REPORT)