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: P638001

Luminaire Tested: GWS-SA4D-830-U-T3-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:	P638001
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-24)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	1/10/2023
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	McGRAW-EDISON
Catalog Number:	GWS-SA4D-830-U-T3-W-GRSBK
Description:	GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III 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:	12012.9 lumens
Efficiency:	N/A
Efficacy:	74.1 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):	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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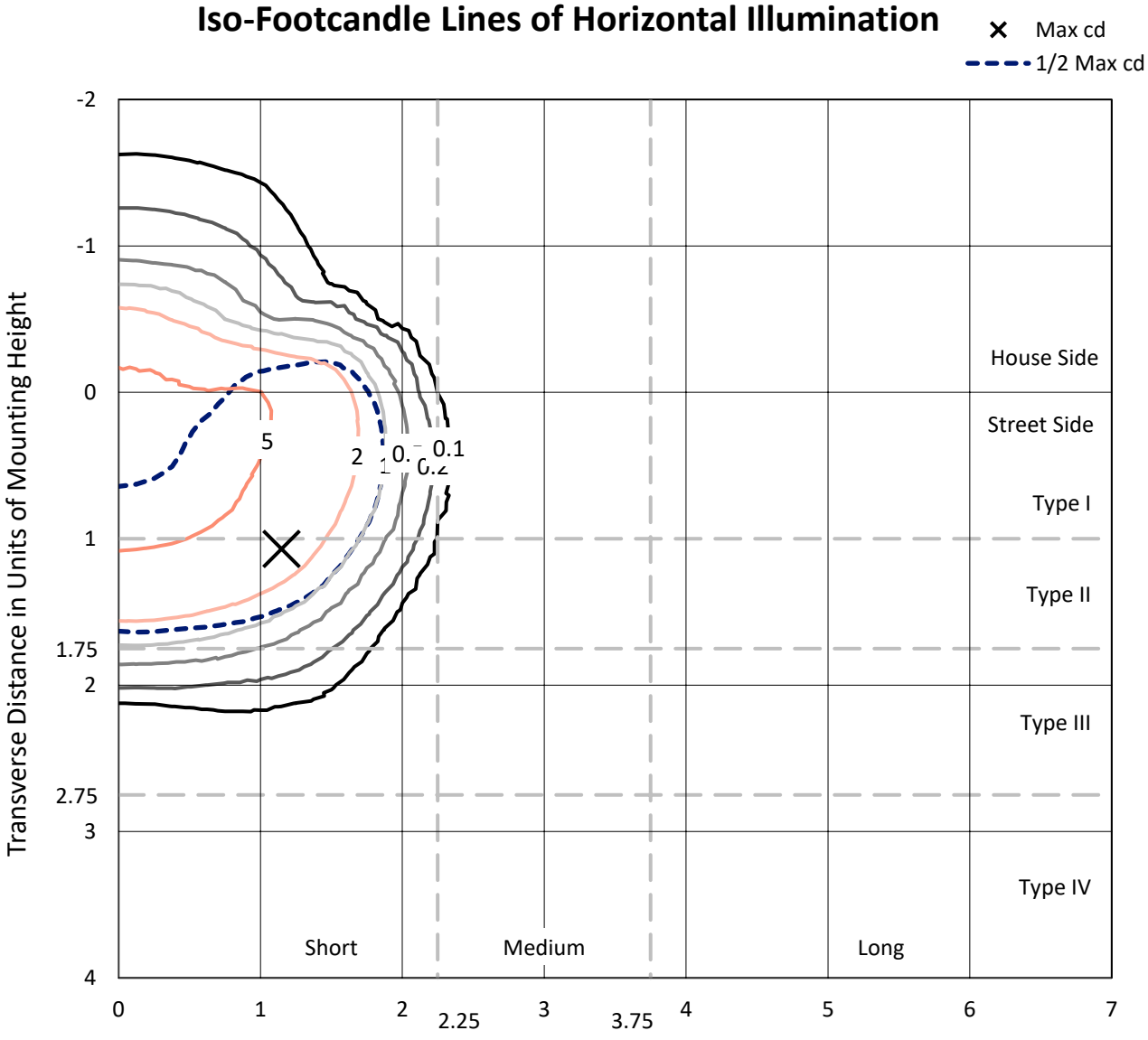
Scaled Data Report

REPORT NUMBER: P638001
CATALOG NUMBER: GWS-SA4D-830-U-T3-W-GRSBK

Iso-Footcandle Lines of Horizontal Illumination



Based on 20 foot mounting height. Maximum calculated value = 7.1 fc
Type II - Short - N/A

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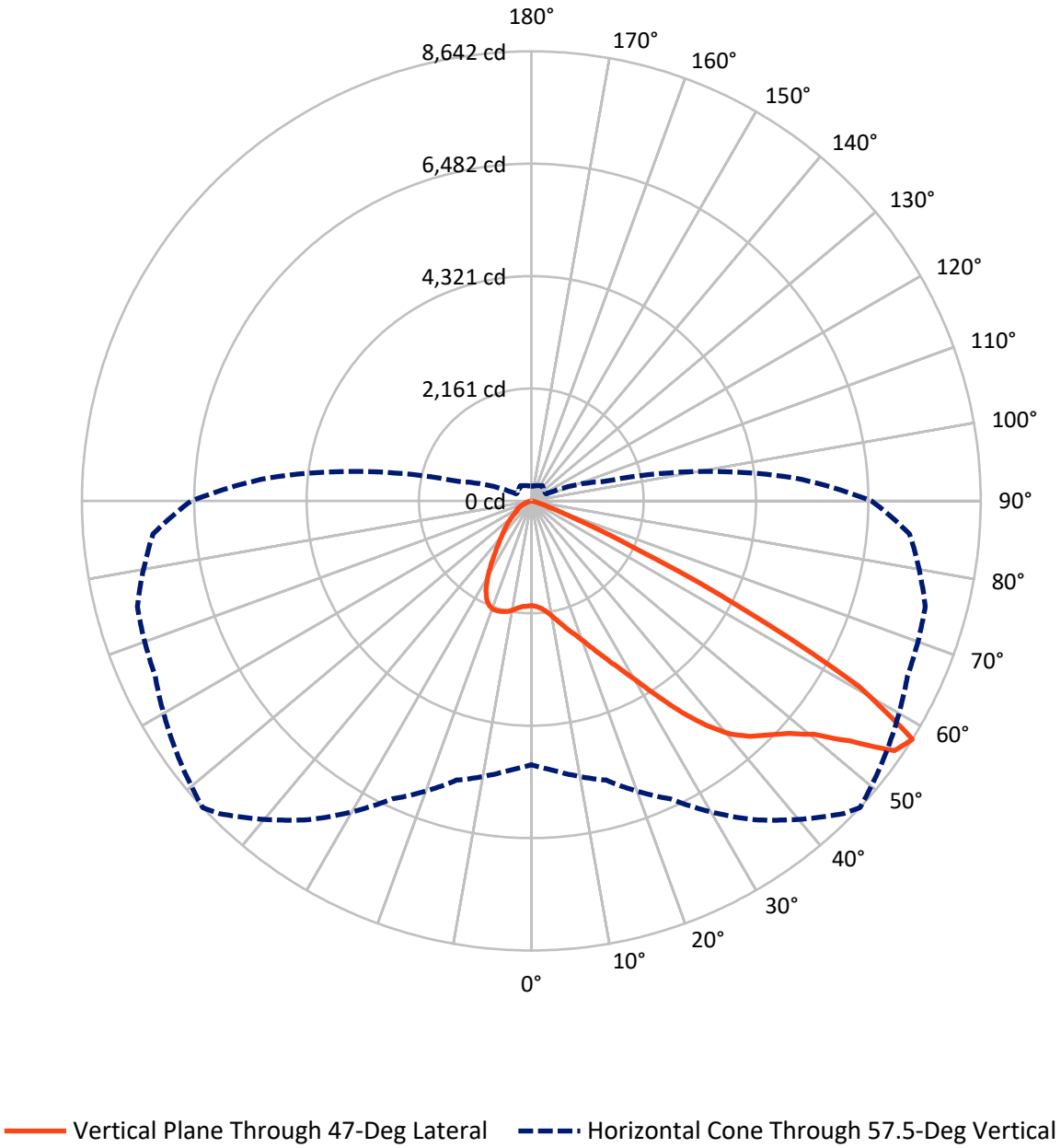
Luminous Intensity Polar Plot



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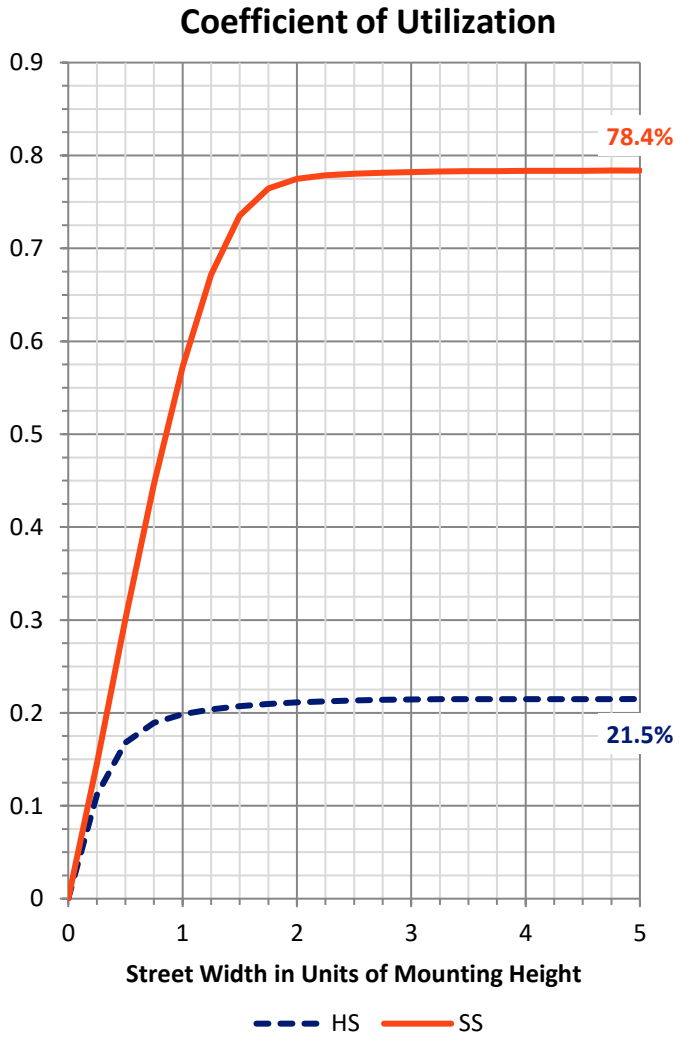
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2606.2	0.0	2606.2
	% Fixture	21.7	0.0	21.7
Street Side	Lumens	9406.7	0.0	9406.7
	% Fixture	78.3	0.0	78.3
Total	Lumens	12012.9	0.0	12012.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	200.1	1.7
10°-20°	675.1	5.6
20°-30°	1253.5	10.4
30°-40°	2006.6	16.7
40°-50°	2933.1	24.4
50°-60°	3620.0	30.1
60°-70°	1209.6	10.1
70°-80°	112.7	0.9
80°-90°	2.3	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°	12012.9	100.0
0°-180°	12012.9	100.0



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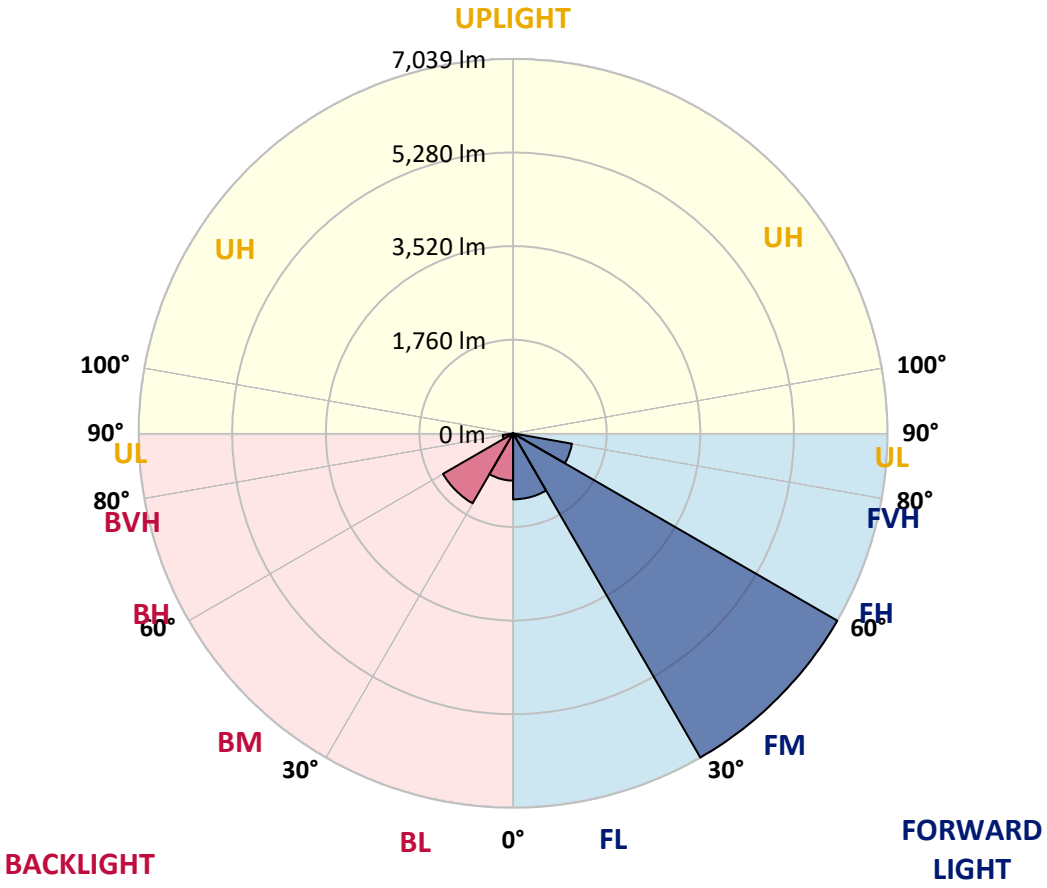
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	1241.5	10.3			
FM	(30°-60°)	7039.5	58.6			
FH	(60°-80°)	1124.2	9.4			G1/1800
FVH	(80°-90°)	1.6	0.0			G0/10
BL	(0°-30°)	887.1	7.4	B2/1000		
BM	(30°-60°)	1520.2	12.7	B2/2500		
BH	(60°-80°)	198.1	1.6	B1/500		G1/500
BVH	(80°-90°)	0.7	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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REPORT NUMBER: P638001
CATALOG NUMBER: GWS-SA4D-830-U-T3-W-GRSBK

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	2011.0	2011.0	2011.0	2011.0	2011.0	2011.0	2011.0	2011.0	2011.0	2011.0	2011.0
2.5°	2031.9	2030.5	2029.1	2037.5	2034.7	2033.3	2036.1	2036.1	2036.1	2027.7	2011.0
5°	2080.7	2080.7	2079.3	2087.7	2080.7	2076.5	2077.9	2077.9	2072.3	2057.0	2036.1
7.5°	2157.4	2154.6	2151.8	2160.2	2153.2	2151.8	2154.6	2146.2	2136.5	2111.4	2082.1
10°	2267.6	2267.6	2263.4	2271.8	2266.2	2263.4	2263.4	2257.8	2239.7	2200.6	2157.4
12.5°	2419.6	2412.6	2402.8	2395.9	2393.1	2391.7	2393.1	2384.7	2365.2	2315.0	2255.0
15°	2585.5	2580.0	2564.6	2553.5	2538.1	2535.3	2543.7	2536.7	2517.2	2448.9	2363.8
17.5°	2794.7	2801.7	2762.6	2738.9	2694.3	2691.5	2694.3	2705.5	2691.5	2603.7	2479.5
20°	2973.2	2978.8	2949.5	2932.8	2892.3	2874.2	2879.8	2897.9	2882.6	2779.4	2606.5
22.5°	3164.3	3171.3	3140.6	3105.7	3087.6	3087.6	3108.5	3133.6	3112.7	2977.4	2751.5
25°	3393.0	3398.6	3373.5	3327.4	3295.4	3335.8	3366.5	3433.4	3398.6	3214.5	2923.0
27.5°	3655.2	3656.6	3620.3	3572.9	3556.2	3631.5	3662.1	3765.3	3751.4	3480.9	3104.3
30°	3935.5	3936.9	3928.5	3896.4	3881.1	3980.1	4021.9	4171.2	4161.4	3811.4	3351.2
32.5°	4226.9	4226.9	4242.3	4239.5	4257.6	4419.4	4486.3	4656.5	4646.7	4215.8	3658.0
35°	4519.8	4521.2	4547.7	4614.6	4689.9	4904.7	4992.6	5199.0	5176.7	4699.7	4049.8
37.5°	4853.1	4839.2	4875.4	4975.8	5143.2	5391.4	5475.1	5671.7	5646.6	5194.8	4561.6
40°	5254.7	5229.6	5229.6	5346.8	5536.4	5822.3	5893.5	5991.1	5906.0	5595.0	5063.7
42.5°	5698.2	5674.5	5643.8	5747.0	5906.0	6129.1	6187.7	6161.2	6091.5	5973.0	5635.5
45°	6147.3	6111.0	6131.9	6194.7	6286.7	6392.7	6415.0	6292.3	6260.2	6293.7	6108.2
47.5°	6488.9	6463.8	6515.4	6603.3	6678.6	6693.9	6678.6	6508.5	6505.7	6624.2	6435.9
50°	6603.3	6606.1	6748.3	6940.8	7062.1	7074.7	7053.7	6858.5	6832.0	6866.9	6613.1
52.5°	6614.5	6625.6	6833.4	7200.2	7530.7	7681.3	7664.6	7454.0	7194.6	7156.9	6880.8
55°	6345.3	6410.8	6700.9	7236.4	7939.3	8420.4	8476.2	8073.2	7688.3	7656.2	7456.8
57.5°	5072.1	5205.9	5556.0	6318.8	7483.3	8497.1	8642.2	8352.1	7979.7	7843.1	7302.0
60°	3031.8	3197.8	3533.8	4469.6	5695.4	6984.0	7233.6	7274.1	7102.6	6707.9	5602.0
62.5°	1301.1	1287.2	1701.4	2418.2	3387.4	4438.9	4551.9	4727.6	4876.8	4464.0	3400.0
65°	446.3	485.3	675.0	1090.6	1695.8	2061.2	2161.6	2319.2	2531.1	2089.1	1245.4
67.5°	276.1	292.9	389.1	644.3	914.8	900.9	856.3	831.2	808.9	553.6	341.7
70°	200.8	214.8	273.3	443.5	615.0	432.3	375.1	304.0	337.5	311.0	242.7
72.5°	135.3	146.4	188.3	269.2	315.2	210.6	195.2	221.7	267.8	255.2	198.0
75°	80.9	87.9	107.4	131.1	128.3	108.8	110.2	156.2	205.0	191.1	140.9
77.5°	55.8	58.6	71.1	85.1	62.8	33.5	30.7	43.2	69.7	69.7	47.4
80°	13.9	18.1	18.1	11.2	9.8	8.4	8.4	12.6	19.5	13.9	7.0
82.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.8	2.8	2.8	2.8
85°	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	2.8	2.8	2.8
87.5°	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.8	2.8
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: P638001
CATALOG NUMBER: GWS-SA4D-830-U-T3-W-GRSBK

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2011.0	2011.0	2011.0	2011.0	2011.0	2011.0	2011.0	2011.0	2011.0	2011.0	2011.0
2.5°	2020.7	2004.0	2015.2	2012.4	2020.7	2023.5	2011.0	2008.2	2009.6	1992.8	1987.3
5°	2040.3	2020.7	2026.3	2020.7	2030.5	2038.9	2034.7	2040.3	2047.2	2034.7	2029.1
7.5°	2082.1	2062.6	2061.2	2052.8	2066.8	2072.3	2070.9	2086.3	2100.2	2091.9	2083.5
10°	2154.6	2128.1	2125.3	2118.4	2122.5	2126.7	2111.4	2114.2	2126.7	2117.0	2112.8
12.5°	2243.9	2211.8	2204.8	2188.1	2188.1	2167.2	2133.7	2126.7	2136.5	2129.5	2122.5
15°	2340.1	2296.9	2285.7	2256.4	2228.5	2189.5	2154.6	2146.2	2153.2	2144.9	2139.3
17.5°	2447.5	2398.7	2362.4	2310.8	2249.4	2203.4	2164.4	2146.2	2135.1	2118.4	2117.0
20°	2553.5	2489.3	2427.9	2345.7	2264.8	2195.1	2130.9	2083.5	2043.0	2017.9	2008.2
22.5°	2676.2	2581.4	2482.3	2366.6	2250.8	2144.9	2031.9	1951.0	1881.3	1857.6	1846.4
25°	2807.3	2684.6	2536.7	2386.1	2203.4	2033.3	1879.9	1759.9	1667.9	1637.2	1624.7
27.5°	2952.3	2783.6	2592.5	2381.9	2105.8	1874.3	1670.7	1521.5	1430.8	1402.9	1412.7
30°	3136.4	2911.9	2662.2	2338.7	1959.4	1651.2	1412.7	1287.2	1218.9	1192.4	1193.8
32.5°	3381.8	3095.9	2764.0	2246.7	1771.1	1397.4	1188.2	1096.1	1050.1	1015.2	1012.5
35°	3733.3	3376.3	2858.9	2098.8	1542.4	1171.4	1019.4	946.9	882.8	842.3	849.3
37.5°	4154.4	3729.1	2910.5	1899.4	1285.8	995.7	892.5	818.6	746.1	686.1	693.1
40°	4653.7	4190.7	2906.3	1637.2	1051.5	875.8	786.5	700.1	609.4	555.0	560.6
42.5°	5210.1	4627.2	2815.6	1359.7	871.6	778.2	684.7	576.0	488.1	454.6	456.0
45°	5692.6	4981.4	2656.7	1072.4	733.5	683.3	578.7	467.2	428.1	404.4	403.0
47.5°	6049.7	5240.8	2429.3	843.7	622.0	596.9	475.5	418.4	387.7	368.2	365.4
50°	6249.1	5331.4	2178.3	661.0	525.8	506.2	425.3	379.3	358.4	345.9	343.1
52.5°	6516.8	5440.2	1998.4	521.6	440.7	414.2	391.9	352.8	338.9	329.1	324.9
55°	6940.8	5650.8	1842.2	414.2	366.8	361.2	369.6	337.5	329.1	313.8	308.2
57.5°	*6541.9*	*5076.2*	*1430.8*	*320.8*	*309.6*	*330.5*	*357.0*	*322.1*	*301.2*	*287.3*	*281.7*
60°	4603.5	3374.9	719.6	258.0	276.1	309.6	336.1	291.5	270.5	273.3	270.5
62.5°	2538.1	1688.8	323.5	216.2	239.9	273.3	287.3	252.4	238.5	262.2	266.4
65°	829.8	574.6	186.9	167.3	189.7	223.1	248.2	239.9	237.1	265.0	273.3
67.5°	255.2	189.7	126.9	119.9	131.1	164.6	209.2	259.4	278.9	287.3	291.5
70°	191.1	149.2	108.8	101.8	107.4	125.5	177.1	216.2	203.6	205.0	202.2
72.5°	153.4	118.5	93.4	89.3	89.3	86.5	93.4	117.1	132.5	139.5	139.5
75°	107.4	83.7	71.1	65.5	51.6	41.8	37.7	37.7	33.5	32.1	30.7
77.5°	36.3	30.7	27.9	22.3	15.3	12.6	11.2	9.8	7.0	4.2	2.8
80°	5.6	4.2	2.8	2.8	2.8	1.4	1.4	1.4	0.0	0.0	0.0
82.5°	2.8	2.8	2.8	2.8	2.8	1.4	1.4	0.0	0.0	0.0	0.0
85°	2.8	2.8	2.8	2.8	2.8	1.4	1.4	0.0	0.0	0.0	0.0
87.5°	2.8	2.8	2.8	2.8	1.4	1.4	1.4	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

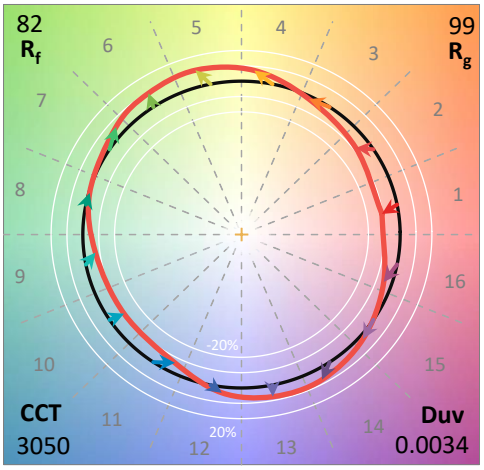
Test Information

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

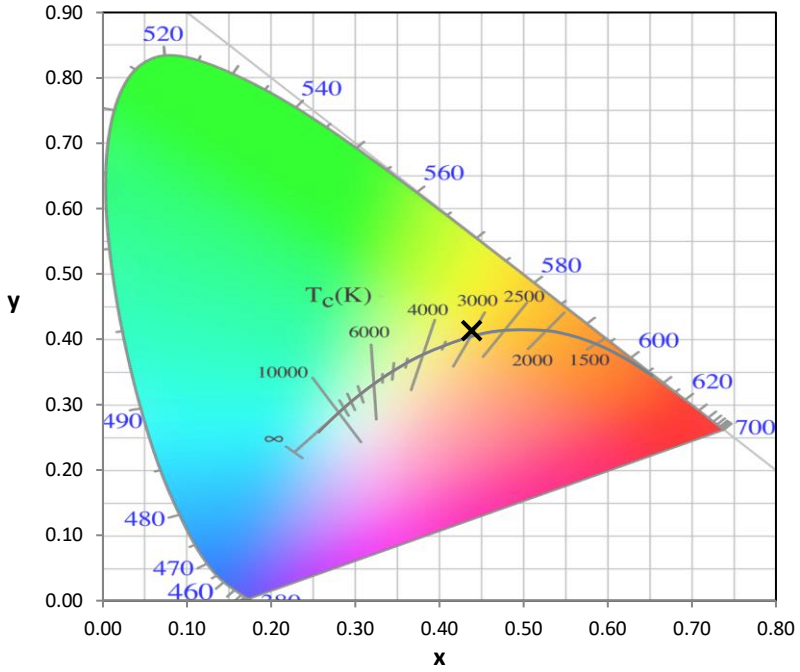
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

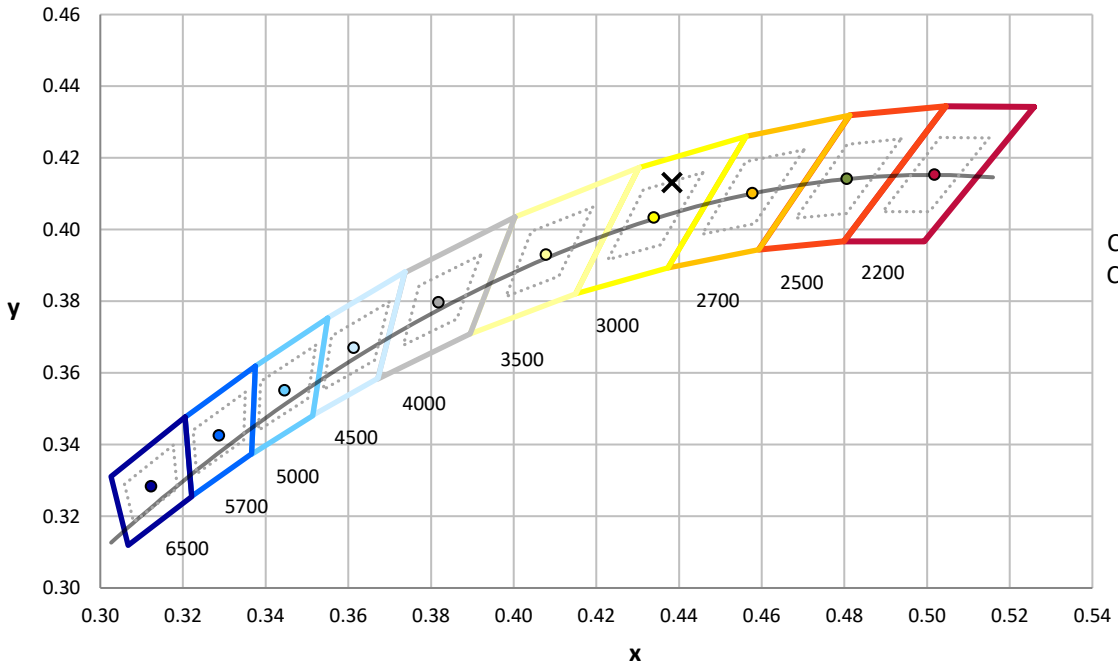
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

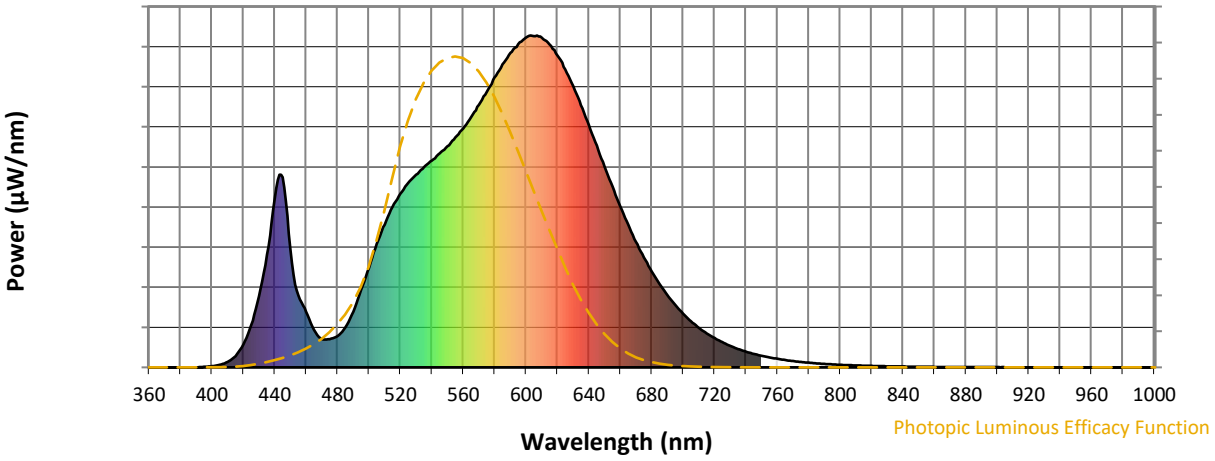


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

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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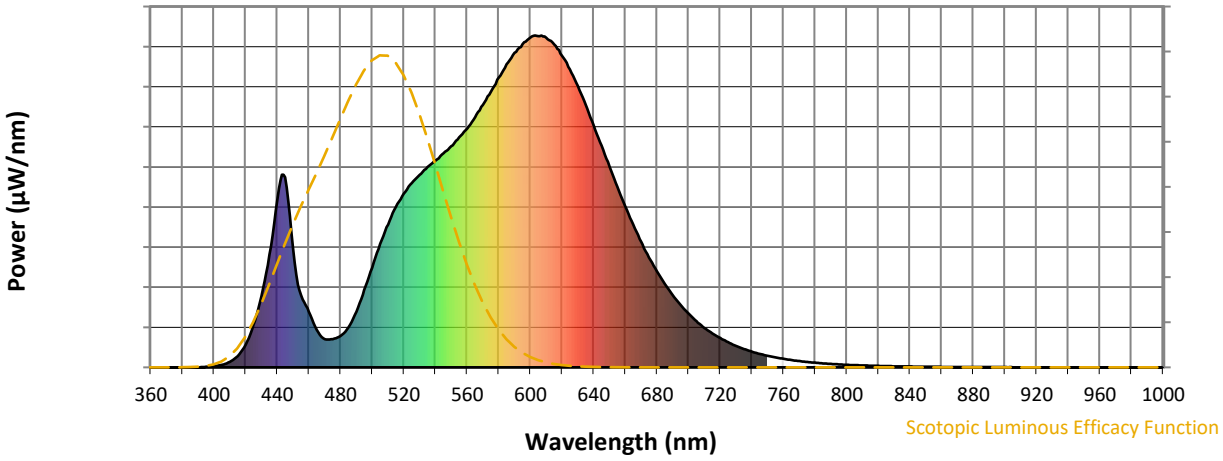
Scotopic Flux vs. Wavelength



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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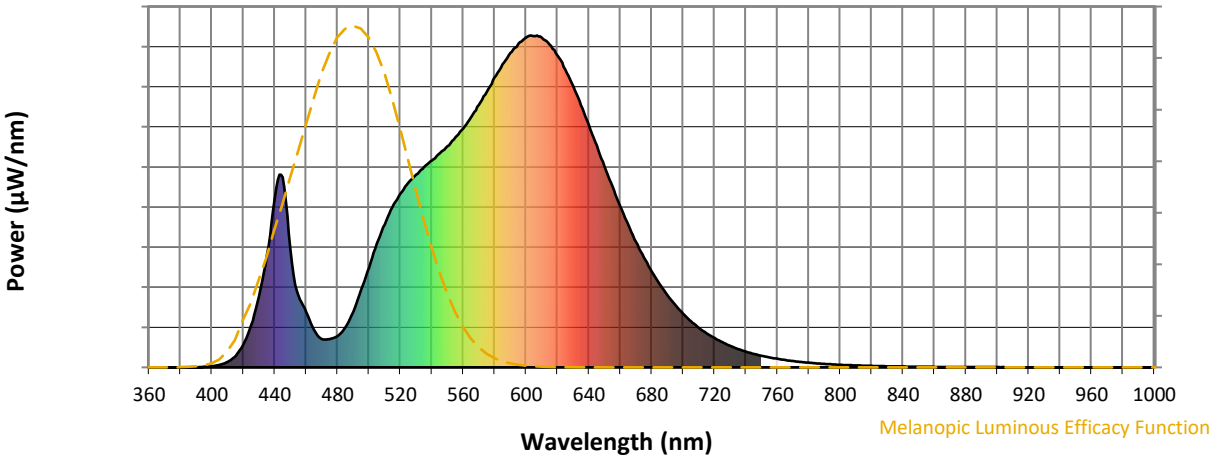
Melanopic Flux vs. Wavelength



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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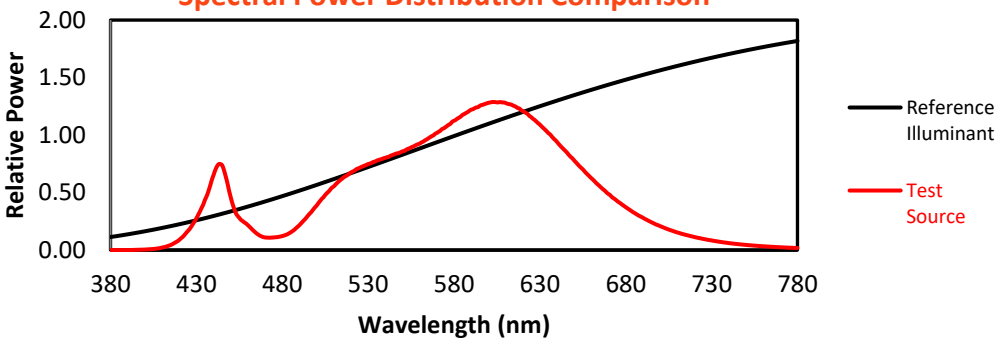
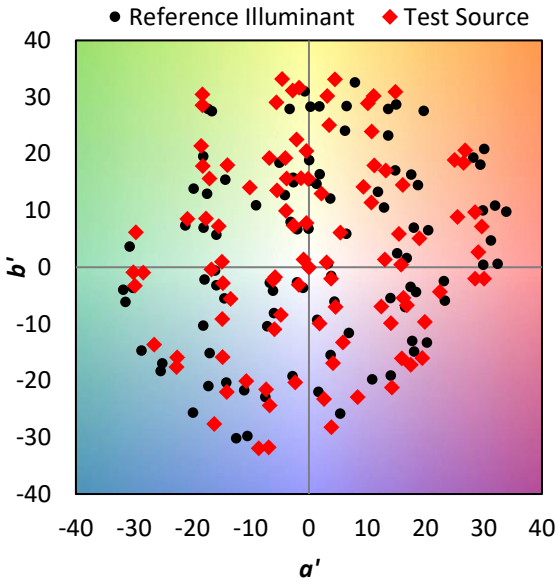
Summary

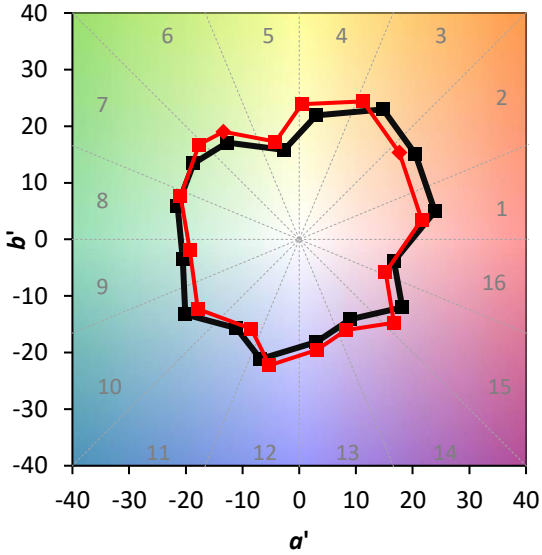
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

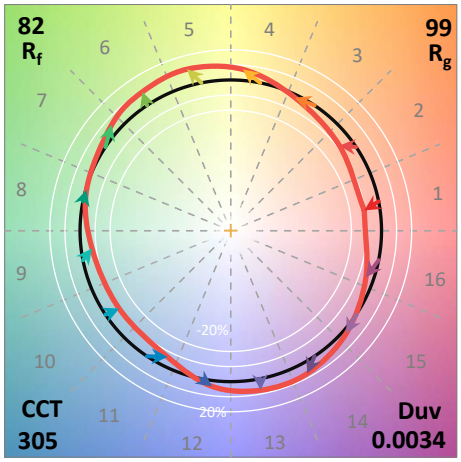
Spectral Power Distribution Comparison

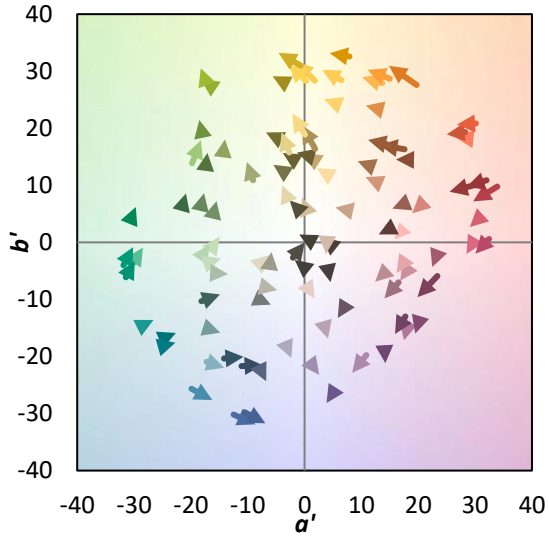


Color Vector Graphics









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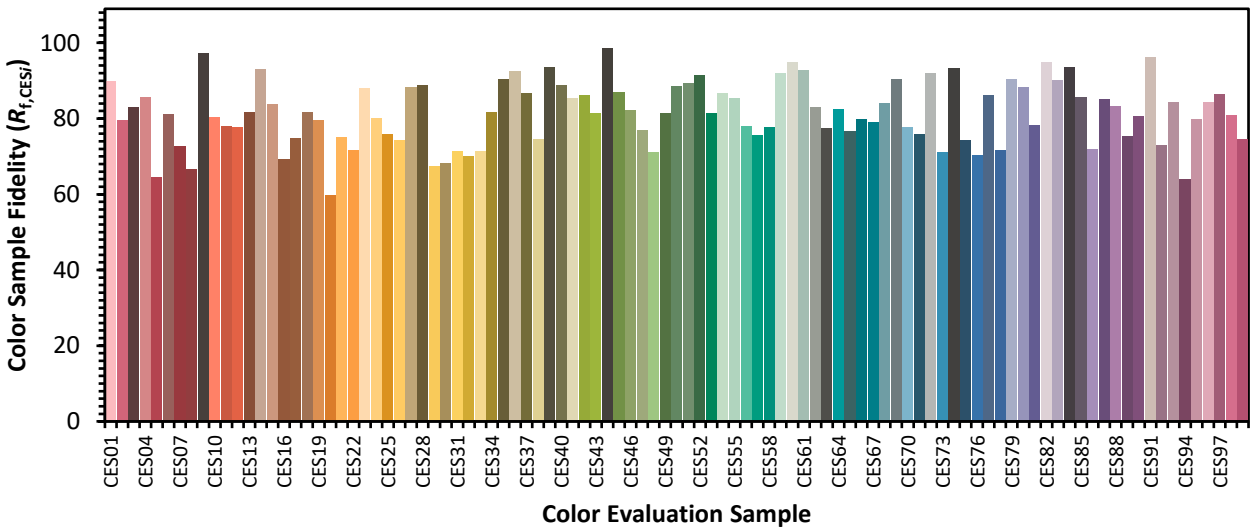
Individual Sample Fidelity Index ($R_{f,i}$)

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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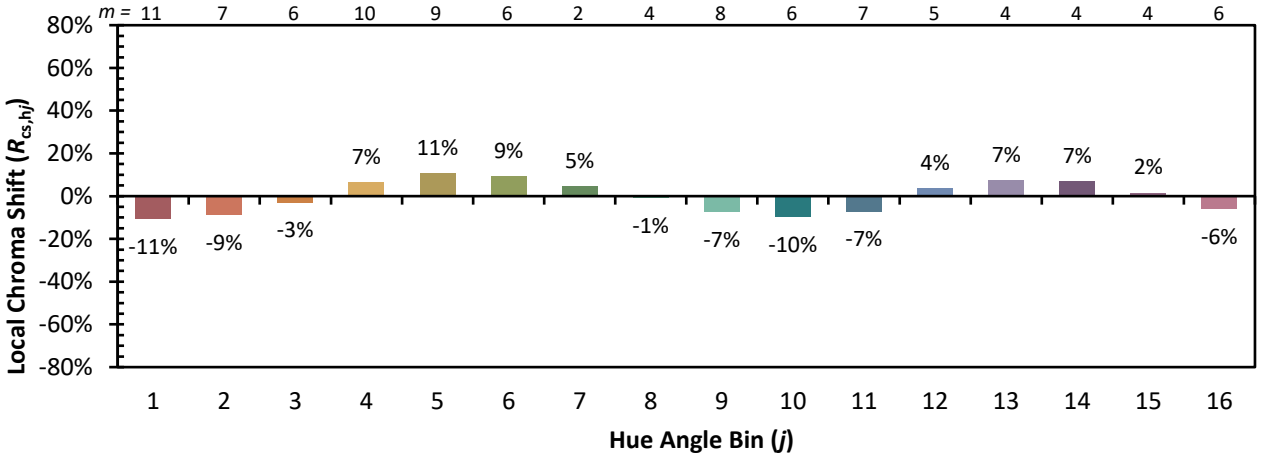
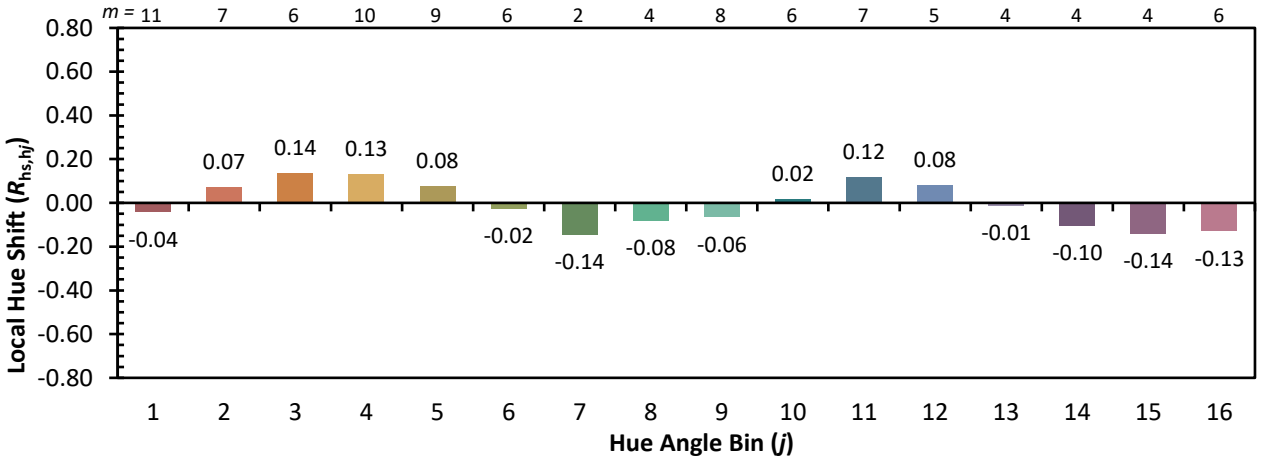
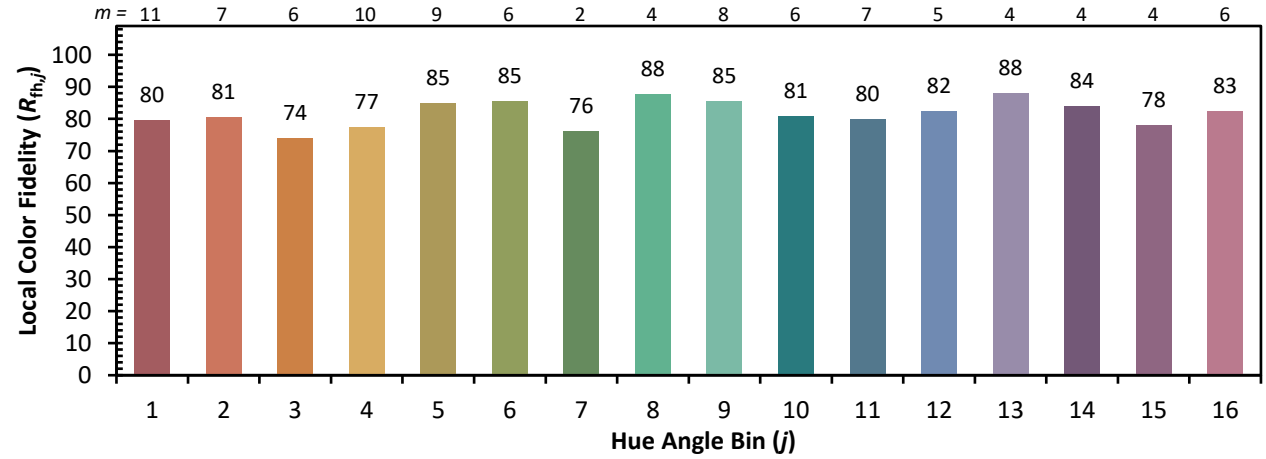
Color Rendition by Hue-Angle Bin







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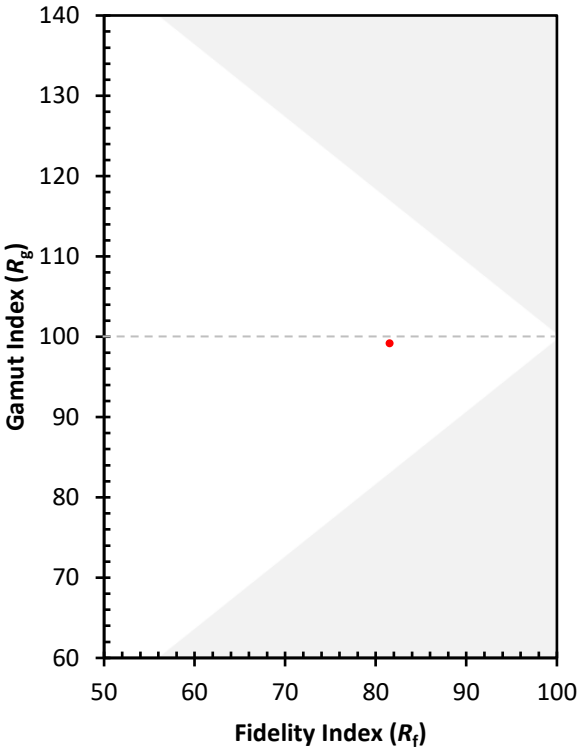
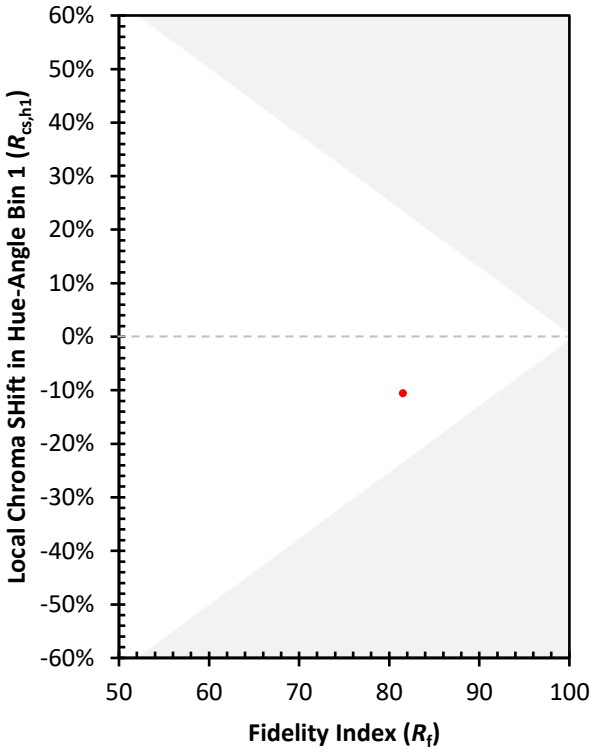
Measure Comparisons





(END OF REPORT)