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: P636021

Luminaire Tested: GWS-SA3E-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:	P636021
	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-SA3E-830-U-T3-W-GRSBK
Description:	GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III 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:	10787.8 lumens
Efficiency:	N/A
Efficacy:	67.8 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):	159.2
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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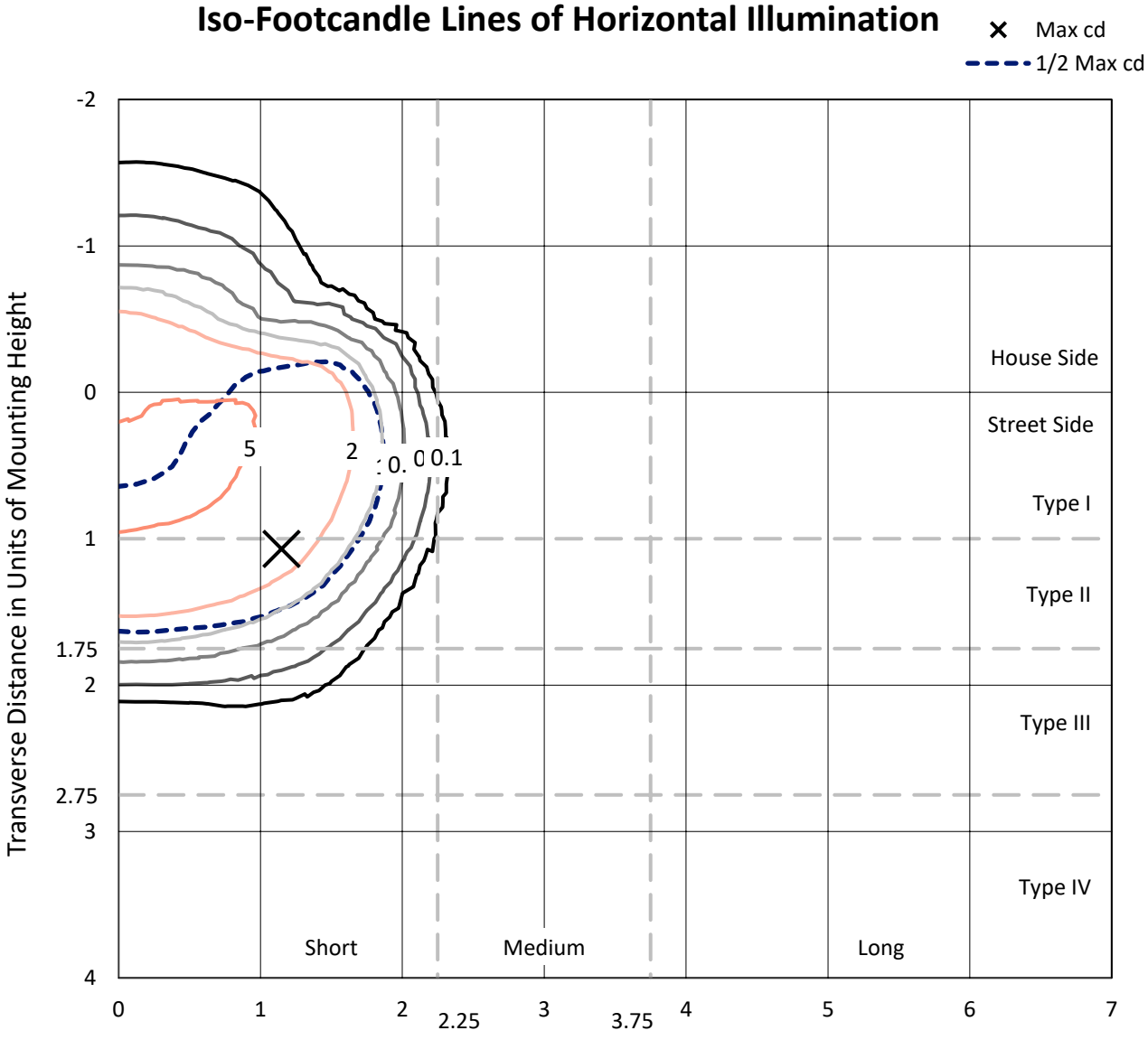
Scaled Data Report

REPORT NUMBER: P636021
CATALOG NUMBER: GWS-SA3E-830-U-T3-W-GRSBK

Iso-Footcandle Lines of Horizontal Illumination



Based on 20 foot mounting height. Maximum calculated value = 6.4 fc
Type II - Short - N/A

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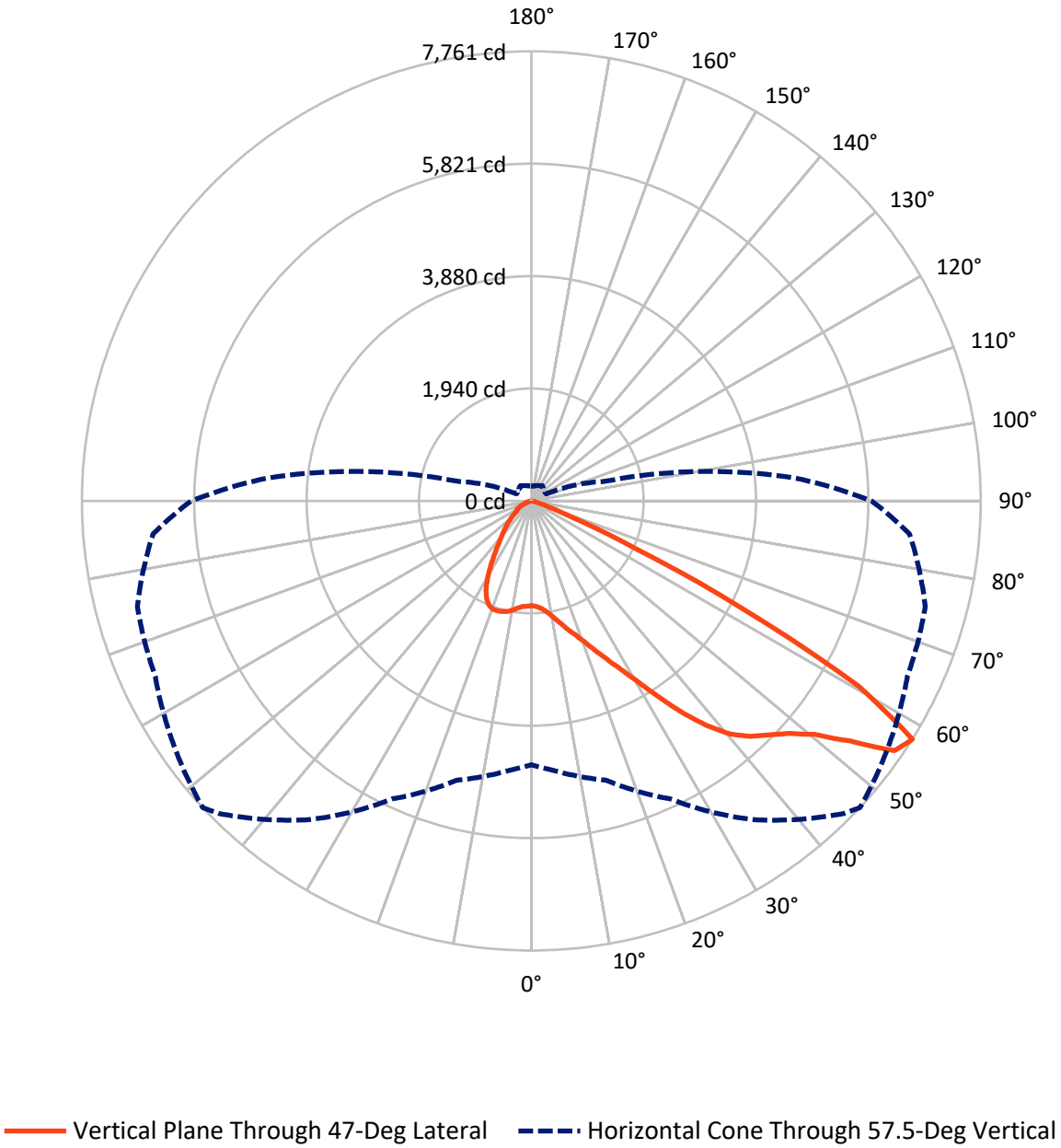
Luminous Intensity Polar Plot



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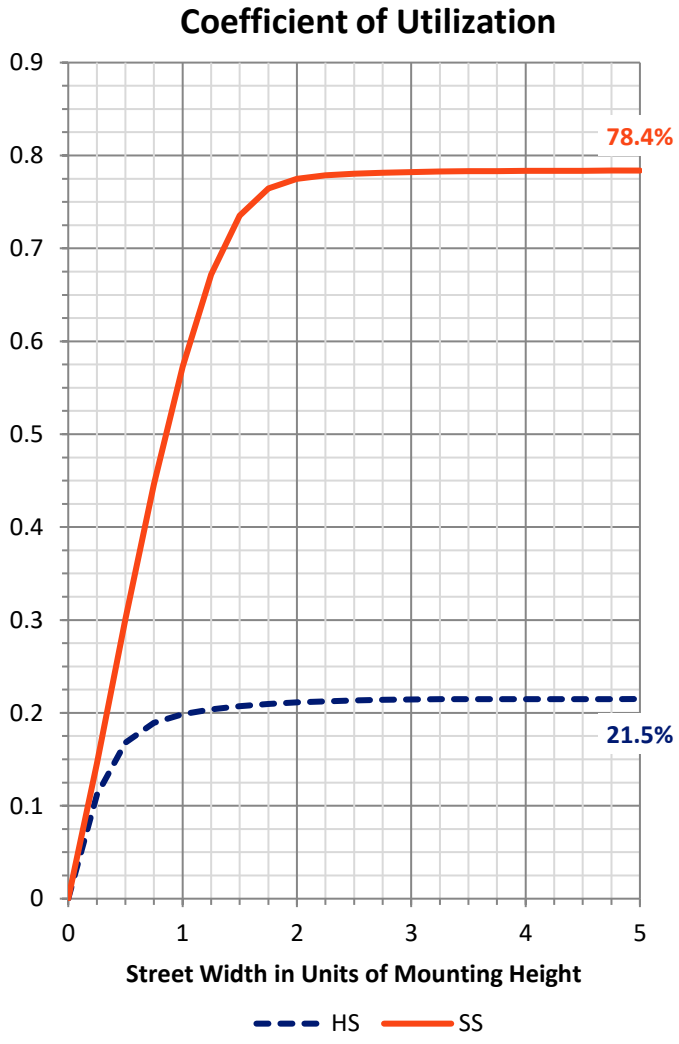
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2340.4	0.0	2340.4
	% Fixture	21.7	0.0	21.7
Street Side	Lumens	8447.4	0.0	8447.4
	% Fixture	78.3	0.0	78.3
Total	Lumens	10787.8	0.0	10787.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.7	1.7
10°-20°	606.2	5.6
20°-30°	1125.6	10.4
30°-40°	1801.9	16.7
40°-50°	2634.0	24.4
50°-60°	3250.8	30.1
60°-70°	1086.2	10.1
70°-80°	101.2	0.9
80°-90°	2.1	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°	10787.8	100.0
0°-180°	10787.8	100.0



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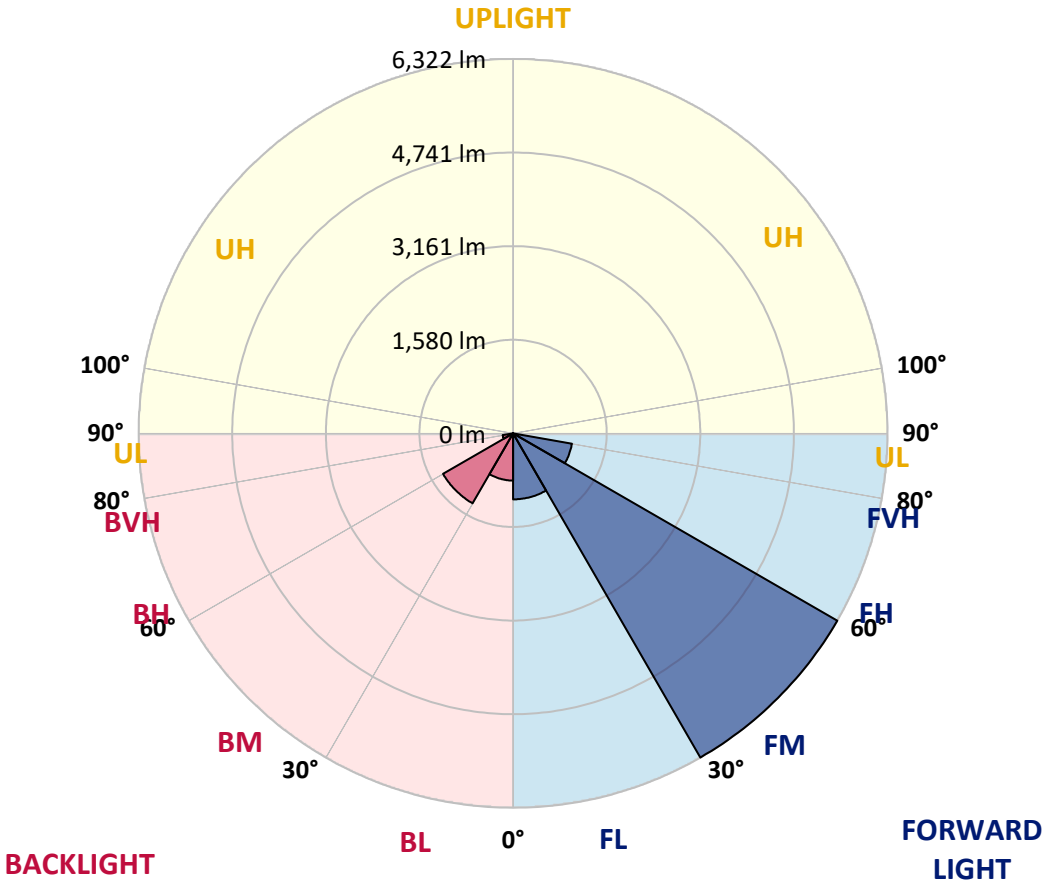
CATALOG NUMBER: GWS-SA3E-830-U-T3-W-GRSBK

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	1114.9	10.3			
FM	(30°-60°)	6321.6	58.6			
FH	(60°-80°)	1009.5	9.4			G1/1800
FVH	(80°-90°)	1.4	0.0			G0/10
BL	(0°-30°)	796.6	7.4	B2/1000		
BM	(30°-60°)	1365.2	12.7	B2/2500		
BH	(60°-80°)	177.9	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: P636021
CATALOG NUMBER: GWS-SA3E-830-U-T3-W-GRSBK

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	1805.9	1805.9	1805.9	1805.9	1805.9	1805.9	1805.9	1805.9	1805.9	1805.9	1805.9
2.5°	1824.7	1823.4	1822.2	1829.7	1827.2	1825.9	1828.4	1828.4	1828.4	1820.9	1805.9
5°	1868.5	1868.5	1867.3	1874.8	1868.5	1864.7	1866.0	1866.0	1861.0	1847.2	1828.4
7.5°	1937.4	1934.9	1932.4	1939.9	1933.6	1932.4	1934.9	1927.4	1918.6	1896.1	1869.8
10°	2036.3	2036.3	2032.6	2040.1	2035.1	2032.6	2032.6	2027.6	2011.3	1976.2	1937.4
12.5°	2172.8	2166.6	2157.8	2151.5	2149.0	2147.8	2149.0	2141.5	2124.0	2078.9	2025.1
15°	2321.9	2316.8	2303.1	2293.1	2279.3	2276.8	2284.3	2278.0	2260.5	2199.1	2122.7
17.5°	2509.7	2516.0	2480.9	2459.6	2419.5	2417.0	2419.5	2429.6	2417.0	2338.1	2226.7
20°	2670.0	2675.0	2648.7	2633.7	2597.4	2581.1	2586.1	2602.4	2588.6	2495.9	2340.6
22.5°	2841.6	2847.8	2820.3	2789.0	2772.7	2772.7	2791.5	2814.0	2795.2	2673.8	2470.9
25°	3047.0	3052.0	3029.4	2988.1	2959.3	2995.6	3023.2	3083.3	3052.0	2886.7	2624.9
27.5°	3282.4	3283.7	3251.1	3208.5	3193.5	3261.1	3288.7	3381.3	3368.8	3125.9	2787.7
30°	3534.1	3535.4	3527.9	3499.1	3485.3	3574.2	3611.8	3745.8	3737.0	3422.7	3009.4
32.5°	3795.9	3795.9	3809.6	3807.1	3823.4	3968.7	4028.8	4181.6	4172.8	3785.9	3284.9
35°	4058.9	4060.1	4083.9	4144.0	4211.7	4404.5	4483.4	4668.8	4648.7	4220.4	3636.8
37.5°	4358.2	4345.7	4378.2	4468.4	4618.7	4841.6	4916.7	5093.3	5070.8	4665.0	4096.4
40°	4718.9	4696.3	4696.3	4801.5	4971.8	5228.6	5292.4	5380.1	5303.7	5024.4	4547.3
42.5°	5117.1	5095.8	5068.3	5160.9	5303.7	5504.1	5556.7	5532.9	5470.3	5363.8	5060.7
45°	5520.4	5487.8	5506.6	5562.9	5645.6	5740.8	5760.8	5650.6	5621.8	5651.9	5485.3
47.5°	5827.2	5804.6	5851.0	5929.9	5997.5	6011.3	5997.5	5844.7	5842.2	5948.7	5779.6
50°	5929.9	5932.4	6060.1	6232.9	6341.9	6353.2	6334.4	6159.1	6135.3	6166.6	5938.6
52.5°	5939.9	5949.9	6136.5	6465.9	6762.7	6897.9	6882.9	6693.8	6460.9	6427.1	6179.1
55°	5698.2	5757.1	6017.5	6498.4	7129.6	7561.7	7611.8	7249.9	6904.2	6875.4	6696.3
57.5°	4554.8	4675.0	4989.4	5674.4	6720.1	7630.6	7760.8	7500.3	7165.9	7043.2	6557.3
60°	2722.6	2871.6	3173.5	4013.8	5114.6	6271.8	6495.9	6532.3	6378.2	6023.8	5030.7
62.5°	1168.4	1155.9	1527.9	2171.6	3042.0	3986.2	4087.7	4245.5	4379.5	4008.8	3053.2
65°	400.8	435.8	606.1	979.3	1522.9	1851.0	1941.1	2082.7	2273.0	1876.0	1118.3
67.5°	248.0	263.0	349.4	578.6	821.5	809.0	768.9	746.4	726.4	497.2	306.8
70°	180.3	192.9	245.5	398.2	552.3	388.2	336.9	273.0	303.1	279.3	217.9
72.5°	121.5	131.5	169.1	241.7	283.0	189.1	175.3	199.1	240.5	229.2	177.8
75°	72.6	78.9	96.4	117.7	115.2	97.7	98.9	140.3	184.1	171.6	126.5
77.5°	50.1	52.6	63.9	76.4	56.4	30.1	27.6	38.8	62.6	62.6	42.6
80°	12.5	16.3	16.3	10.0	8.8	7.5	7.5	11.3	17.5	12.5	6.3
82.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.5	2.5	2.5	2.5
85°	0.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3	2.5	2.5	2.5
87.5°	0.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.5	2.5
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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REPORT NUMBER: P636021
CATALOG NUMBER: GWS-SA3E-830-U-T3-W-GRSBK

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1805.9	1805.9	1805.9	1805.9	1805.9	1805.9	1805.9	1805.9	1805.9	1805.9	1805.9
2.5°	1814.7	1799.6	1809.6	1807.1	1814.7	1817.2	1805.9	1803.4	1804.6	1789.6	1784.6
5°	1832.2	1814.7	1819.7	1814.7	1823.4	1830.9	1827.2	1832.2	1838.5	1827.2	1822.2
7.5°	1869.8	1852.2	1851.0	1843.5	1856.0	1861.0	1859.7	1873.5	1886.0	1878.5	1871.0
10°	1934.9	1911.1	1908.6	1902.3	1906.1	1909.8	1896.1	1898.6	1909.8	1901.1	1897.3
12.5°	2015.0	1986.2	1980.0	1964.9	1964.9	1946.2	1916.1	1909.8	1918.6	1912.3	1906.1
15°	2101.4	2062.6	2052.6	2026.3	2001.3	1966.2	1934.9	1927.4	1933.6	1926.1	1921.1
17.5°	2197.9	2154.0	2121.5	2075.1	2020.0	1978.7	1943.6	1927.4	1917.3	1902.3	1901.1
20°	2293.1	2235.4	2180.3	2106.5	2033.8	1971.2	1913.6	1871.0	1834.7	1812.2	1803.4
22.5°	2403.3	2318.1	2229.2	2125.2	2021.3	1926.1	1824.7	1752.0	1689.4	1668.1	1658.1
25°	2521.0	2410.8	2278.0	2142.8	1978.7	1825.9	1688.2	1580.5	1497.8	1470.3	1459.0
27.5°	2651.2	2499.7	2328.1	2139.0	1891.0	1683.2	1500.3	1366.3	1284.9	1259.9	1268.6
30°	2816.5	2614.9	2390.7	2100.2	1759.6	1482.8	1268.6	1155.9	1094.6	1070.8	1072.0
32.5°	3036.9	2780.2	2482.2	2017.5	1590.5	1254.9	1067.0	984.3	943.0	911.7	909.2
35°	3352.5	3031.9	2567.3	1884.8	1385.1	1052.0	915.5	850.3	792.7	756.4	762.7
37.5°	3730.8	3348.8	2613.7	1705.7	1154.7	894.2	801.5	735.1	670.0	616.2	622.4
40°	4179.1	3763.3	2609.9	1470.3	944.3	786.5	706.3	628.7	547.3	498.4	503.4
42.5°	4678.8	4155.3	2528.5	1221.0	782.7	698.8	614.9	517.2	438.3	408.3	409.5
45°	5112.1	4473.4	2385.7	963.1	658.7	613.7	519.7	419.5	384.5	363.2	361.9
47.5°	5432.7	4706.3	2181.6	757.7	558.5	536.0	427.1	375.7	348.2	330.6	328.1
50°	5611.8	4787.7	1956.2	593.6	472.1	454.6	382.0	340.6	321.9	310.6	308.1
52.5°	5852.2	4885.4	1794.6	468.4	395.7	371.9	351.9	316.8	304.3	295.6	291.8
55°	6232.9	5074.5	1654.4	371.9	329.4	324.4	331.9	303.1	295.6	281.8	276.8
57.5°	*5874.8*	*4558.6*	*1284.9*	*288.0*	*278.0*	*296.8*	*320.6*	*289.3*	*270.5*	*258.0*	*253.0*
60°	4134.0	3030.7	646.2	231.7	248.0	278.0	301.8	261.7	243.0	245.5	243.0
62.5°	2279.3	1516.6	290.5	194.1	215.4	245.5	258.0	226.7	214.2	235.4	239.2
65°	745.1	516.0	167.8	150.3	170.3	200.4	222.9	215.4	212.9	237.9	245.5
67.5°	229.2	170.3	114.0	107.7	117.7	147.8	187.9	232.9	250.5	258.0	261.7
70°	171.6	134.0	97.7	91.4	96.4	112.7	159.0	194.1	182.8	184.1	181.6
72.5°	137.8	106.4	83.9	80.2	80.2	77.6	83.9	105.2	119.0	125.2	125.2
75°	96.4	75.1	63.9	58.9	46.3	37.6	33.8	33.8	30.1	28.8	27.6
77.5°	32.6	27.6	25.0	20.0	13.8	11.3	10.0	8.8	6.3	3.8	2.5
80°	5.0	3.8	2.5	2.5	2.5	1.3	1.3	1.3	0.0	0.0	0.0
82.5°	2.5	2.5	2.5	2.5	2.5	1.3	1.3	0.0	0.0	0.0	0.0
85°	2.5	2.5	2.5	2.5	2.5	1.3	1.3	0.0	0.0	0.0	0.0
87.5°	2.5	2.5	2.5	2.5	1.3	1.3	1.3	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

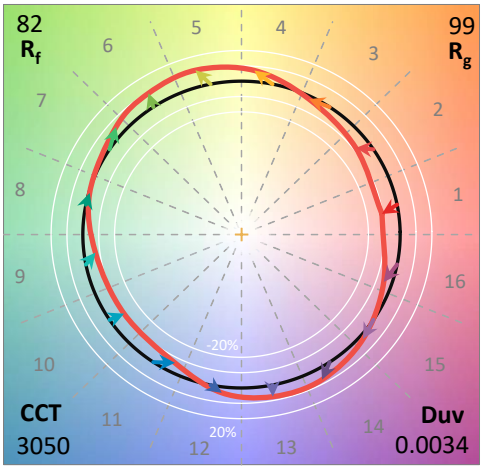
Test Information

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

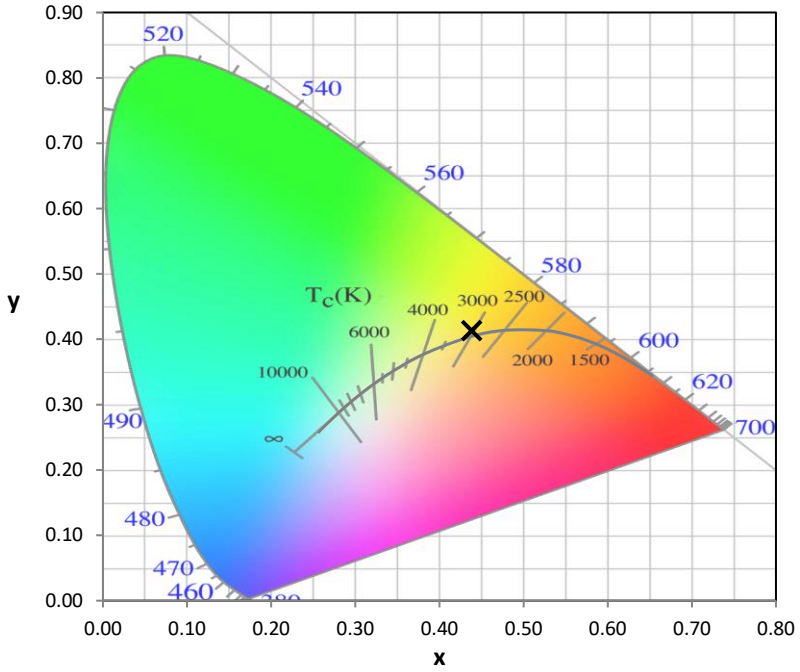
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

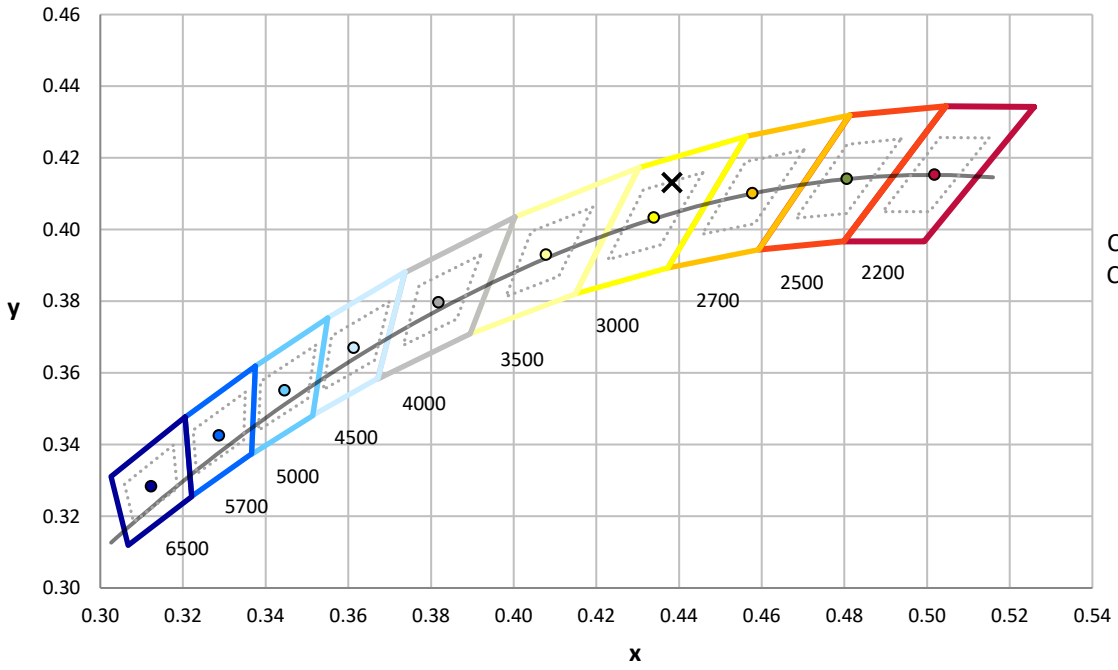
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

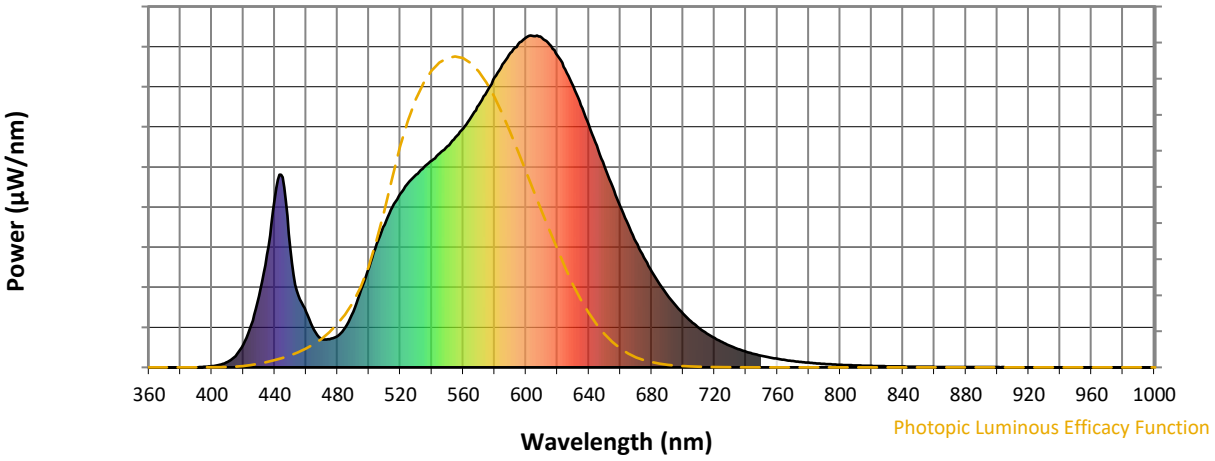


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

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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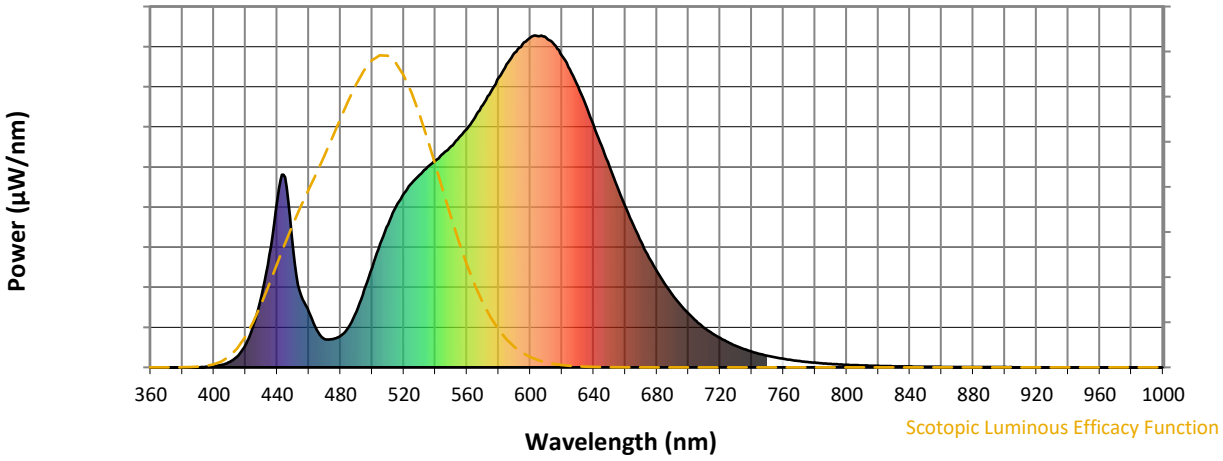
Scotopic Flux vs. Wavelength



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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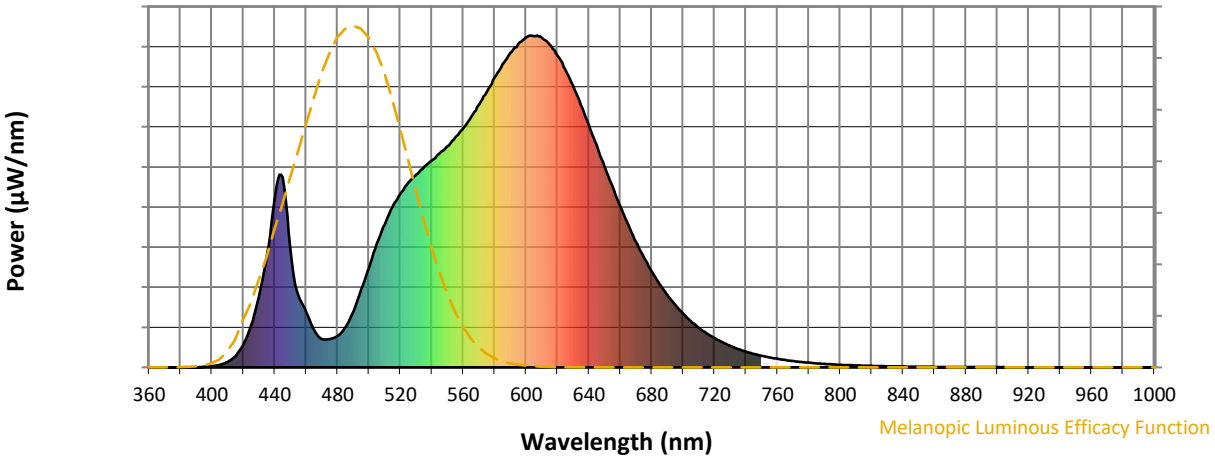
Melanopic Flux vs. Wavelength



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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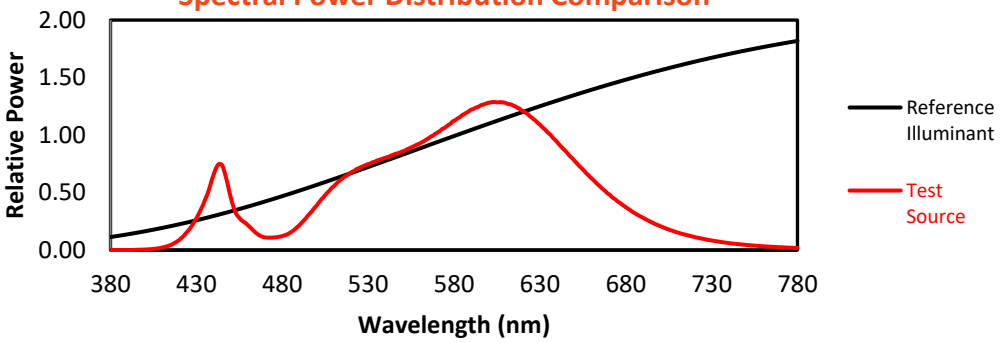
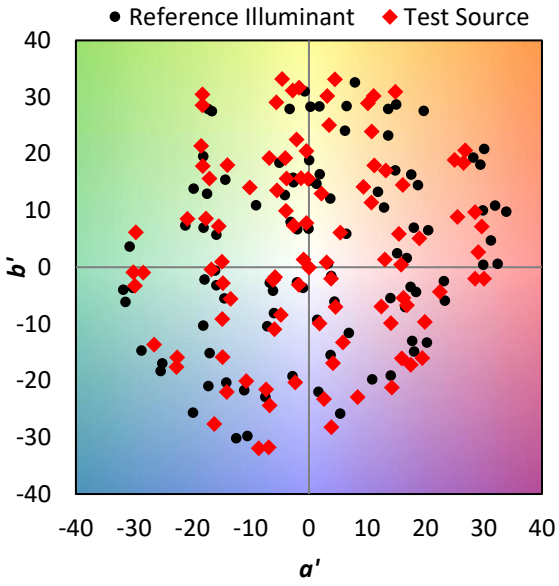
Summary

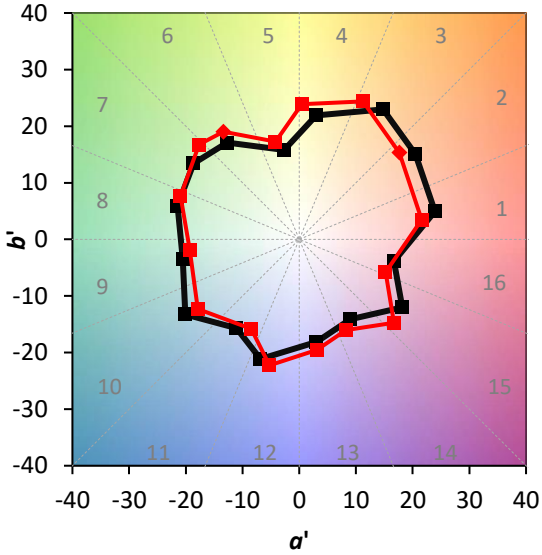
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

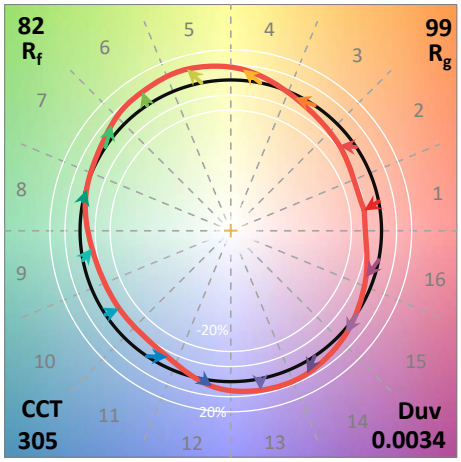
Spectral Power Distribution Comparison

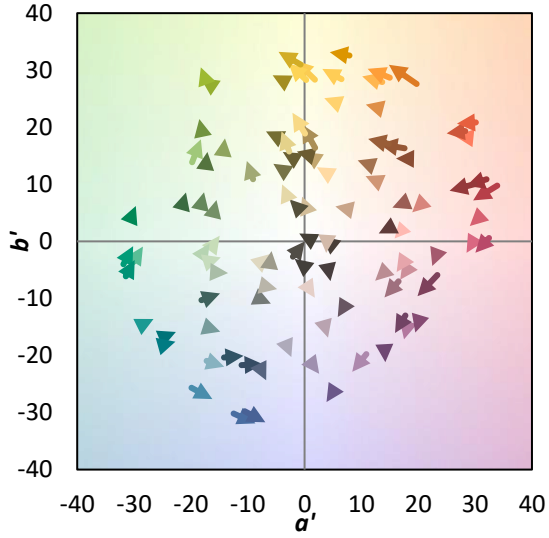


Color Vector Graphics









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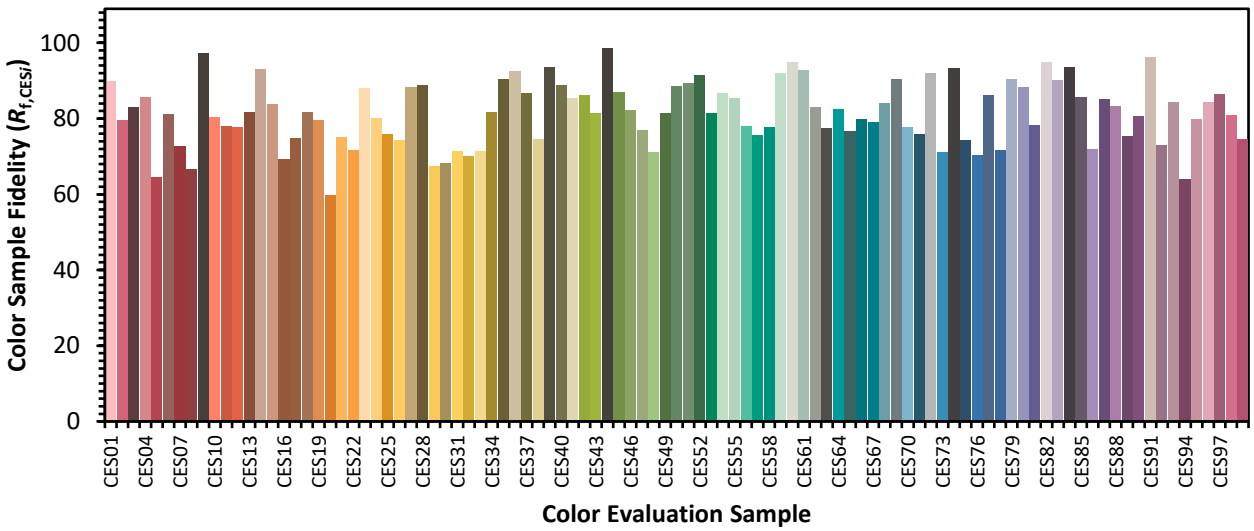
Individual Sample Fidelity Index ($R_{f,i}$)

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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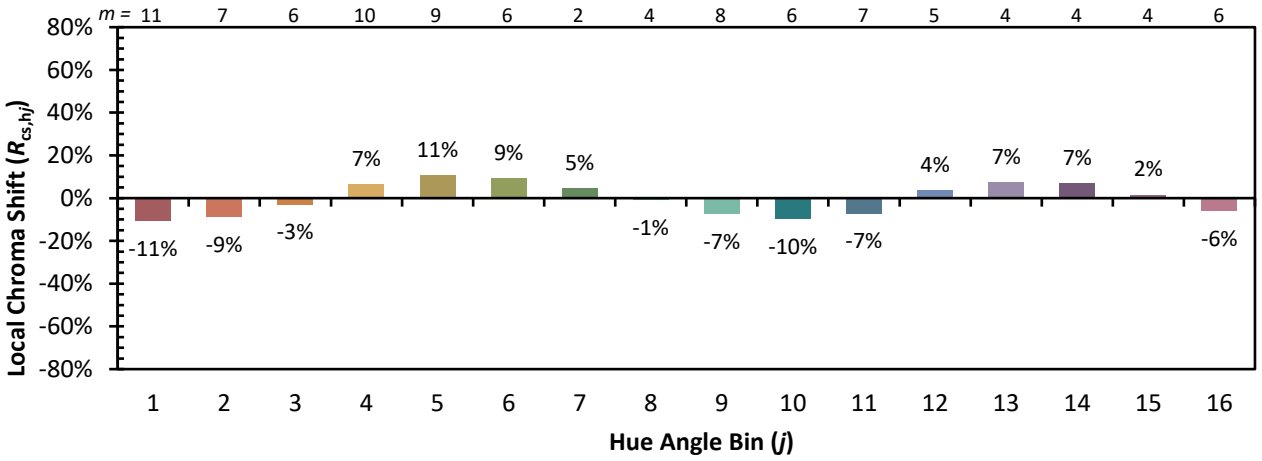
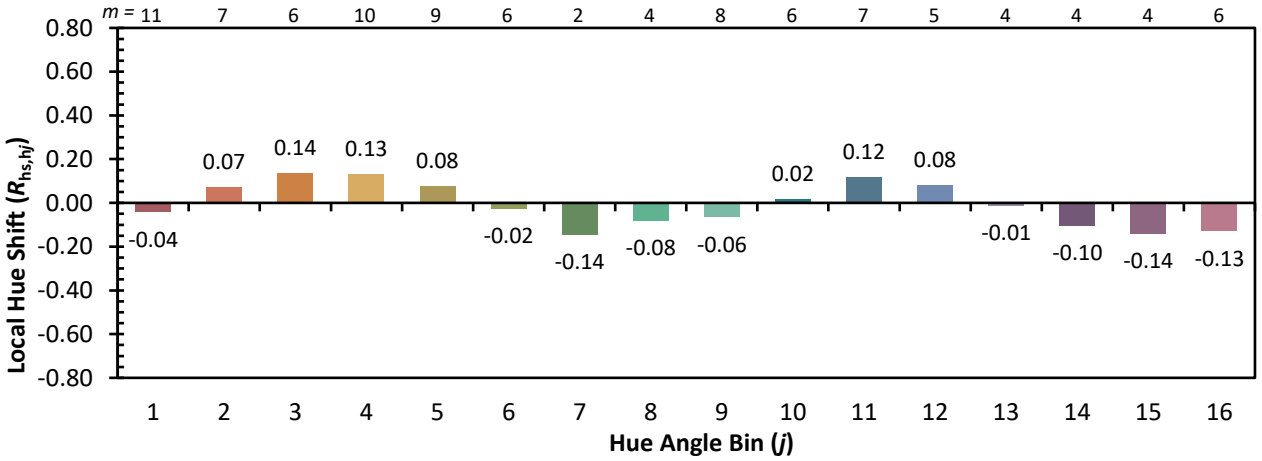
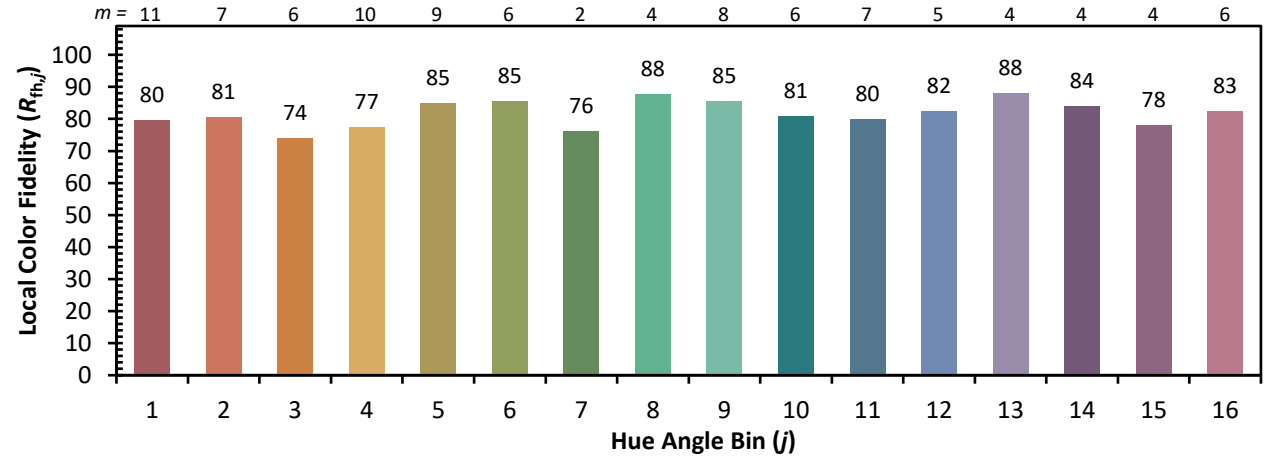
Color Rendition by Hue-Angle Bin







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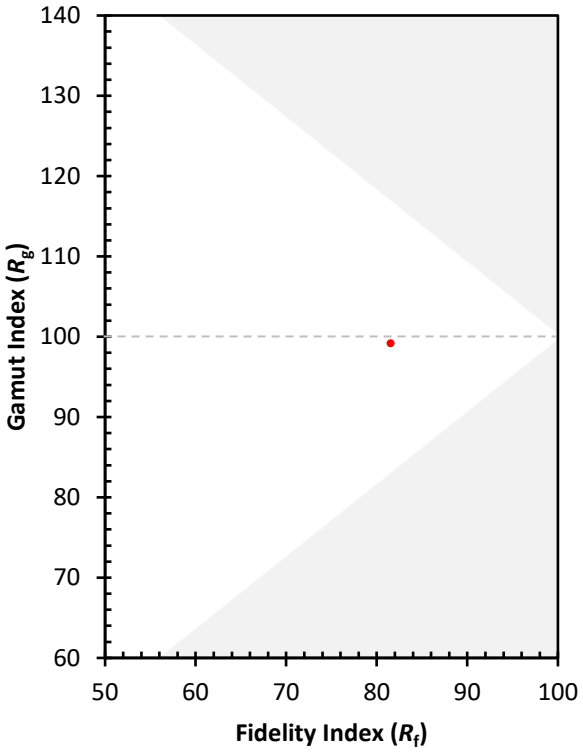
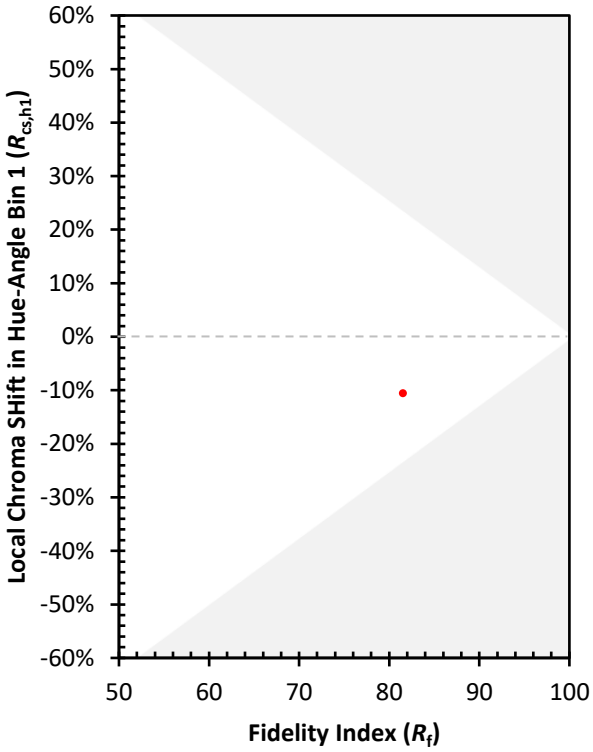
Measure Comparisons





(END OF REPORT)