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: P638472

Luminaire Tested: GWS-SA4E-830-U-SL2-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:	P638472
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-27)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	1/10/2023
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	McGRAW-EDISON
Catalog Number:	GWS-SA4E-830-U-SL2-W
Description:	GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS
Light Source:	(64) 3000K CCT, 80 CRI LEDS
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	23889.5 lumens
Efficiency:	N/A
Efficacy:	117.9 lumens/watt
Luminous Opening:	Rectangular (W 1' x L: 1' x H: 0')
IES Classification:	Type II - Short
BUG Rating:	B3 - U0 - G4

Input Watts (W):	202.6
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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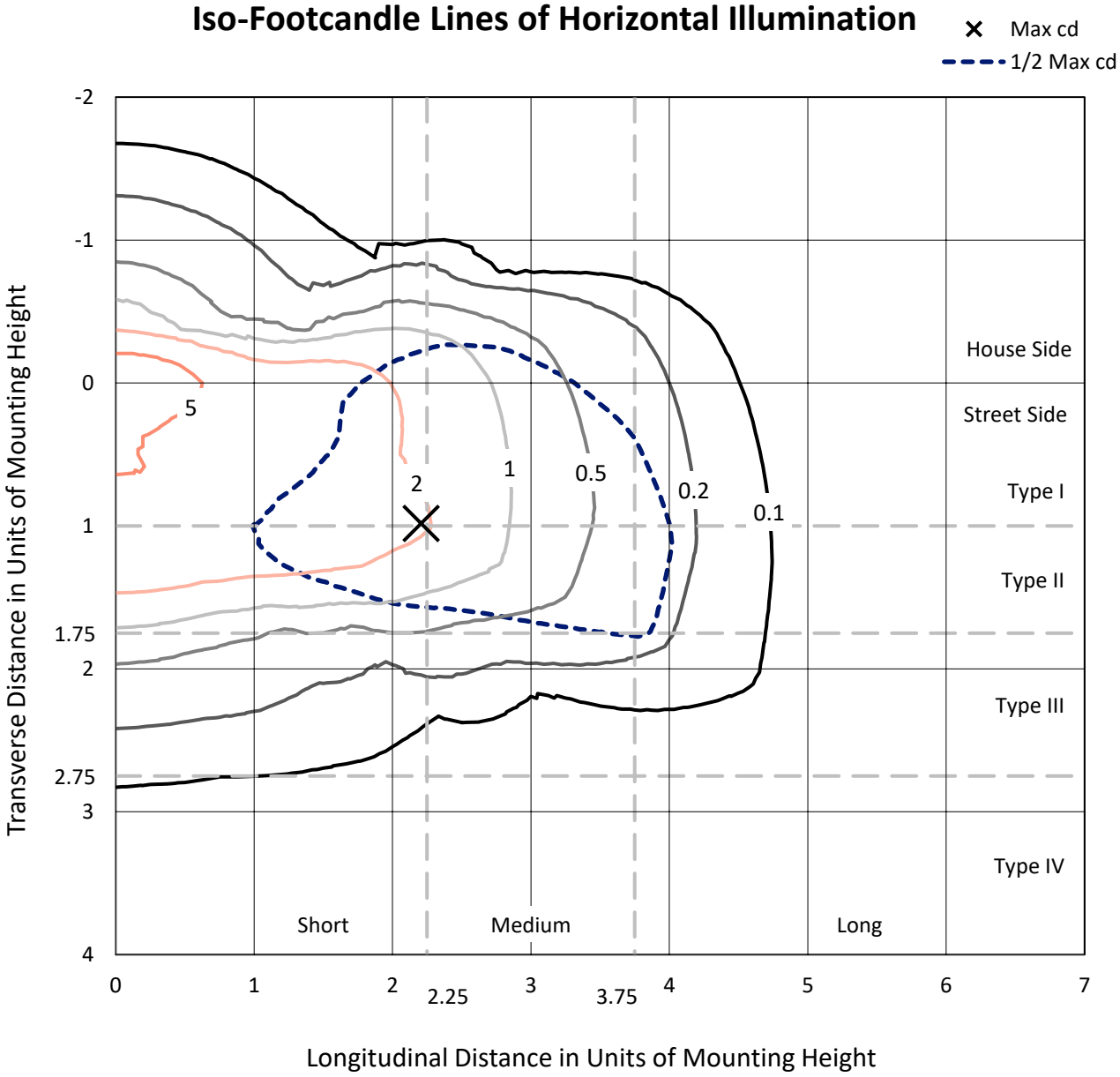
REPORT NUMBER: P638472
CATALOG NUMBER: GWS-SA4E-830-U-SL2-W

Iso-Footcandle Lines of Horizontal Illumination



Based on 25 foot mounting height. Maximum calculated value = 8.4 fc
Type II - Short - N/A

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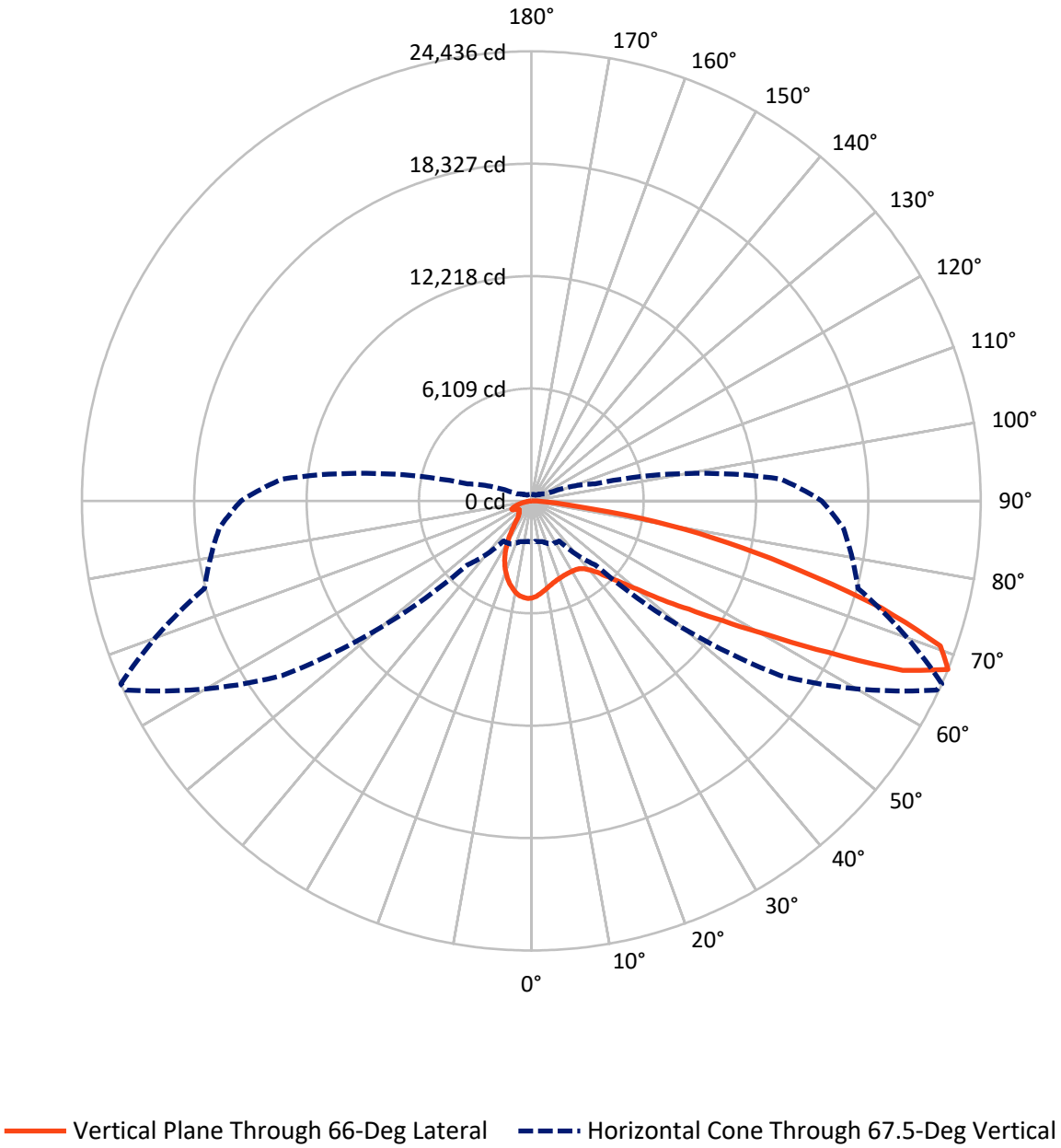
Luminous Intensity Polar Plot



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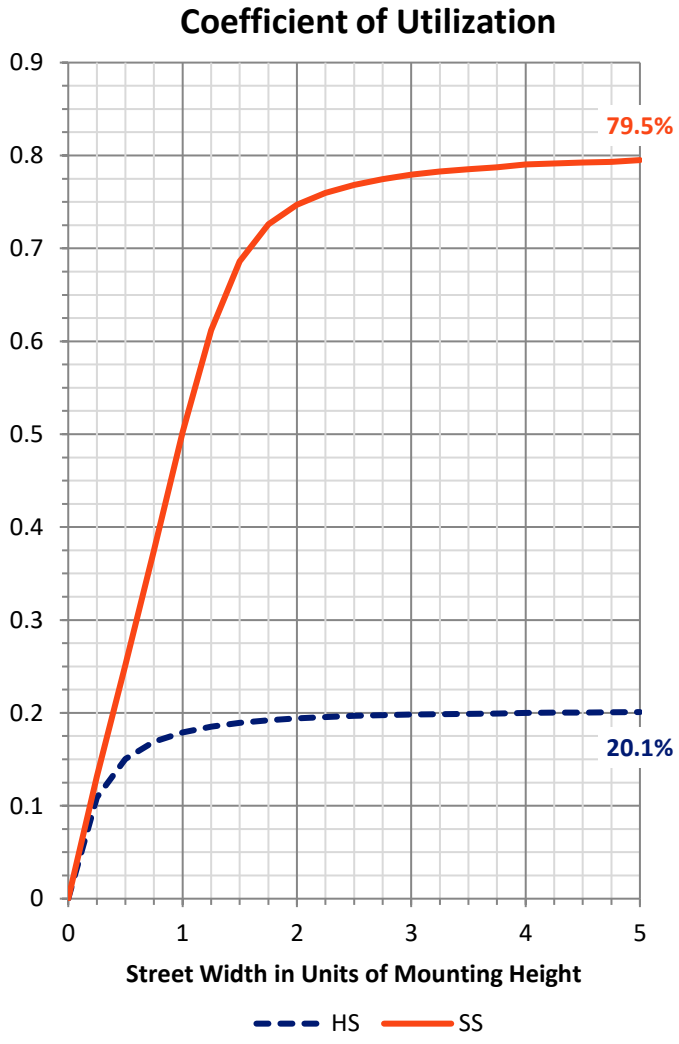
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4847.7	0.0	4847.7
	% Fixture	20.3	0.0	20.3
Street Side	Lumens	19041.8	0.0	19041.8
	% Fixture	79.7	0.0	79.7
Total	Lumens	23889.5	0.0	23889.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	463.3	1.9
10°-20°	1138.6	4.8
20°-30°	1565.0	6.6
30°-40°	2139.7	9.0
40°-50°	3242.1	13.6
50°-60°	5040.0	21.1
60°-70°	6136.1	25.7
70°-80°	3737.8	15.6
80°-90°	427.0	1.8
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°	23889.5	100.0
0°-180°	23889.5	100.0



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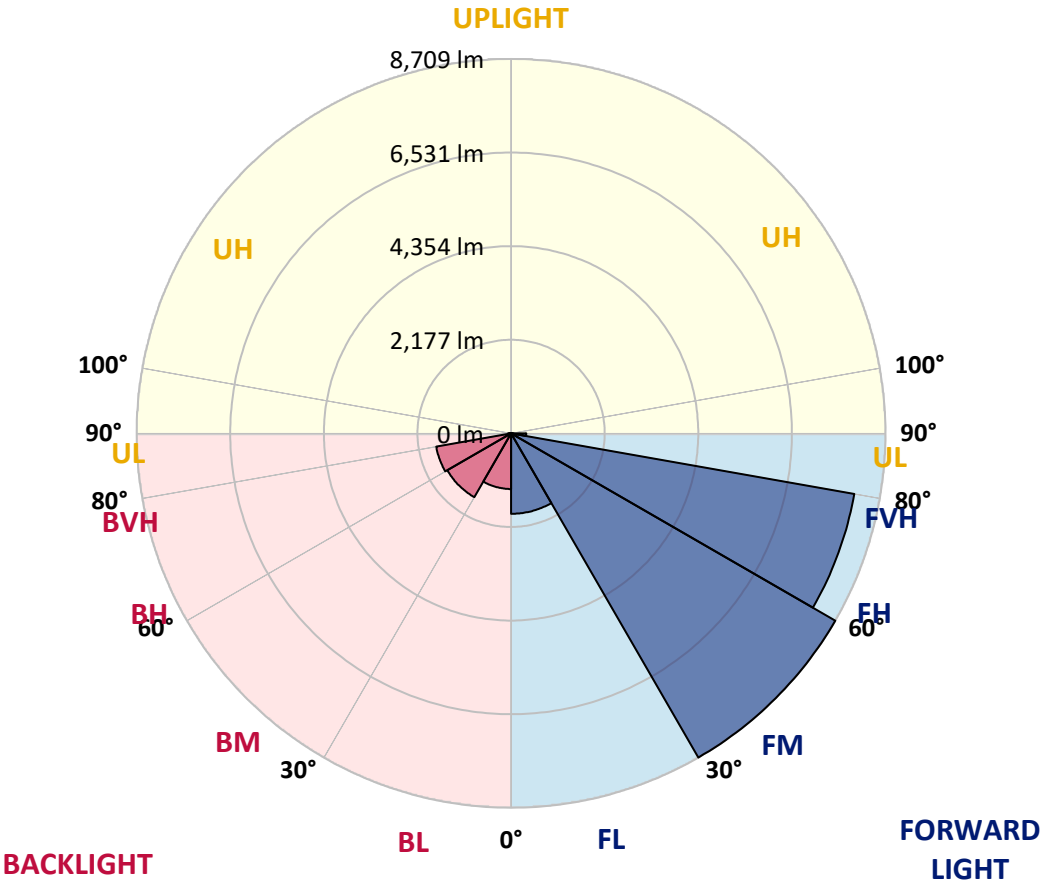
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	1871.9	7.8			
FM	(30°-60°)	8708.6	36.5			
FH	(60°-80°)	8106.3	33.9			G4/12000
FVH	(80°-90°)	355.0	1.5			G3/500
BL	(0°-30°)	1295.1	5.4	B3/2500		
BM	(30°-60°)	1713.1	7.2	B2/2500		
BH	(60°-80°)	1767.6	7.4	B3/2500		G3/2500
BVH	(80°-90°)	72.0	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4
Type II Short



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REPORT NUMBER: P638472
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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	5278.9	5278.9	5278.9	5278.9	5278.9	5278.9	5278.9	5278.9	*5278.9*	5278.9	5278.9
2.5°	4944.3	4961.7	4951.3	5017.5	5021.0	5104.6	5151.7	5191.8	*5195.2*	5247.5	5282.4
5°	4606.2	4616.6	4616.6	4679.4	4721.2	4832.7	4940.8	5055.8	*5064.5*	5190.0	5285.9
7.5°	4332.6	4343.0	4336.1	4419.7	4473.7	4597.5	4735.2	4911.2	*4928.6*	5130.8	5298.1
10°	4118.2	4114.7	4132.1	4208.8	4278.5	4426.7	4580.0	4780.5	*4806.6*	5062.8	5312.0
12.5°	3971.8	3975.3	3985.8	4065.9	4140.9	4287.3	4445.8	4663.7	*4691.6*	4984.4	5305.0
15°	3902.1	3895.1	3903.8	3977.0	4048.5	4177.5	4341.3	4566.1	*4594.0*	4914.7	5306.8
17.5°	3886.4	3881.2	3879.4	3931.7	3985.8	4106.0	4262.9	4491.2	*4520.8*	4869.3	5317.2
20°	3935.2	3928.2	3909.1	3931.7	3954.4	4055.5	4207.1	4437.1	*4470.2*	4839.7	5338.2
22.5°	4069.4	4057.2	4027.6	3999.7	3970.1	4031.1	4172.2	4397.1	*4430.2*	4820.5	5359.1
25°	4273.3	4262.9	4231.5	4168.7	4060.7	4050.2	4165.3	4379.6	*4412.7*	4806.6	5367.8
27.5°	4553.9	4538.2	4506.8	4416.2	4240.2	4121.7	4191.4	4377.9	*4409.3*	4790.9	5359.1
30°	4886.8	4876.3	4858.9	4749.1	4513.8	4273.3	4250.7	4391.8	*4416.2*	4782.2	5341.6
32.5°	5224.9	5214.4	5228.4	5176.1	4886.8	4524.3	4379.6	4430.2	*4447.6*	4780.5	5326.0
35°	5522.9	5535.1	5636.2	5644.9	5360.8	4864.1	4583.5	4519.0	*4522.5*	4815.3	5332.9
37.5°	5834.9	5881.9	6014.4	6127.6	5890.6	5313.8	4886.8	4686.4	*4682.9*	4904.2	5376.5
40°	6247.9	6268.8	6437.9	6650.5	6502.3	5930.7	5317.2	4960.0	*4935.6*	5085.5	5493.3
42.5°	6650.5	6701.0	6971.1	7215.1	7166.3	6626.1	5859.2	5369.5	*5326.0*	5406.1	5733.8
45°	7162.9	7211.7	7514.9	7828.6	7917.5	7412.1	6552.9	5951.6	*5908.0*	5888.9	6174.7
47.5°	7675.2	7725.8	7997.6	8450.8	8762.7	8395.0	7455.6	6720.2	*6648.7*	6573.8	6840.4
50°	8020.3	8079.6	8339.2	8883.0	9615.0	9621.9	8525.7	7727.5	*7636.9*	7518.4	7778.1
52.5°	8008.1	8046.4	8293.9	8921.3	10228.4	11031.8	9958.3	9010.2	*8937.0*	8679.1	8905.6
55°	7379.0	7436.5	7685.7	8469.9	10294.6	12368.6	12063.6	10522.9	*10392.2*	9930.4	10179.6
57.5°	6115.4	6164.2	6415.2	7382.4	9707.3	13053.5	14737.0	12450.5	*12271.0*	11293.3	11580.8
60°	4616.6	4557.4	4675.9	5522.9	8302.6	13070.9	17096.7	15064.6	*14764.9*	12750.2	12990.7
62.5°	3464.7	3405.4	3431.5	3670.3	5629.2	12014.8	18442.2	18640.8	*18145.9*	14395.4	14348.4
65°	2737.9	2704.8	2779.7	2943.6	3281.7	9149.6	18452.6	22508.1	*22196.1*	16302.0	15740.9
67.5°	*2230.8*	*2209.9*	*2286.5*	*2589.8*	*2661.2*	*4916.4*	*16546.0*	*24313.6*	*24435.6*	*18389.9*	*17032.3*
70°	1796.8	1765.4	1885.7	2284.8	2474.8	2974.9	11852.7	23393.4	*23590.4*	19634.2	16668.0
72.5°	1240.9	1242.6	1303.6	1850.8	2389.4	2568.9	6704.5	19479.1	*19906.1*	18506.7	14653.4
75°	836.5	843.5	860.9	1221.7	2201.1	2492.2	3572.7	14747.5	*15049.0*	15296.4	12112.4
77.5°	505.4	508.9	549.0	738.9	1518.0	2326.6	2420.7	10690.3	*10927.3*	10083.8	7507.9
80°	292.8	305.0	341.6	495.0	1024.8	1748.0	1873.5	6554.6	*6823.0*	4482.4	2385.9
82.5°	129.0	137.7	186.5	287.6	597.8	1486.6	1462.2	2589.8	*2551.4*	1249.6	827.8
85°	22.7	27.9	40.1	90.6	219.6	784.3	1134.6	1143.3	*1075.3*	474.0	343.3
87.5°	0.0	0.0	0.0	0.0	0.0	5.2	170.8	306.7	*305.0*	134.2	118.5
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: P638472
CATALOG NUMBER: GWS-SA4E-830-U-SL2-W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5278.9	5278.9	5278.9	5278.9	5278.9	5278.9	5278.9	5278.9	5278.9	5278.9	5278.9
2.5°	5305.0	5258.0	5299.8	5305.0	5296.3	5289.4	5237.1	5191.8	5186.5	5137.7	5137.7
5°	5324.2	5280.6	5301.6	5261.5	5198.7	5134.2	5022.7	4946.0	4911.2	4848.4	4848.4
7.5°	5350.4	5305.0	5280.6	5181.3	5034.9	4893.7	4714.2	4564.4	4503.4	4414.5	4411.0
10°	5374.8	5317.2	5233.6	5040.1	4806.6	4581.8	4320.4	4107.7	3963.1	3856.8	3856.8
12.5°	5373.0	5298.1	5132.5	4846.7	4524.3	4198.4	3849.8	3529.1	3337.4	3171.9	3161.4
15°	5369.5	5266.7	5003.5	4621.9	4194.9	3743.5	3269.5	2851.2	2567.1	2405.0	2391.1
17.5°	5366.0	5226.6	4858.9	4365.7	3794.0	3178.8	2553.2	2100.1	1863.0	1763.7	1767.2
20°	5366.0	5181.3	4703.8	4071.1	3332.2	2502.6	1873.5	1544.1	1484.9	1490.1	1495.3
22.5°	5350.4	5125.5	4531.2	3750.5	2818.1	1840.4	1382.0	1270.5	1301.9	1350.7	1357.6
25°	5313.8	5033.2	4330.8	3394.9	2206.4	1340.2	1127.6	1106.7	1164.2	1225.2	1242.6
27.5°	5256.2	4926.9	4106.0	2978.4	1624.3	1077.0	991.6	989.9	1035.2	1080.5	1096.2
30°	5195.2	4808.3	3869.0	2514.8	1176.4	937.6	904.5	904.5	927.2	955.0	951.6
32.5°	5123.8	4688.1	3614.5	2032.1	958.5	859.2	848.7	843.5	847.0	857.5	857.5
35°	5062.8	4581.8	3353.1	1521.5	859.2	815.6	805.2	793.0	787.7	780.8	784.3
37.5°	5040.1	4498.1	3083.0	1146.8	810.4	784.3	766.8	749.4	737.2	733.7	732.0
40°	5076.7	4463.3	2812.9	944.6	775.5	751.1	732.0	709.3	698.9	698.9	698.9
42.5°	5219.6	4489.4	2537.5	854.0	751.1	723.3	695.4	674.5	671.0	674.5	676.2
45°	5481.1	4590.5	2251.7	808.7	730.2	695.4	662.3	646.6	646.6	650.1	650.1
47.5°	5948.1	4855.4	1969.3	780.8	709.3	672.7	637.9	622.2	620.4	623.9	623.9
50°	6756.8	5332.9	1714.9	761.6	693.6	655.3	620.4	599.5	594.3	592.5	592.5
52.5°	7776.3	6160.8	1552.8	747.7	674.5	636.1	601.3	573.4	562.9	557.7	557.7
55°	9008.5	7263.9	1552.8	737.2	650.1	613.5	573.4	545.5	529.8	522.8	522.8
57.5°	10404.4	8548.4	1821.2	728.5	630.9	587.3	543.7	515.9	498.4	488.0	488.0
60°	11824.8	9906.0	2485.2	716.3	613.5	554.2	510.6	484.5	461.8	449.6	447.9
62.5°	13297.5	11401.3	3360.1	723.3	601.3	522.8	475.8	446.2	427.0	414.8	413.0
65°	14646.4	12825.2	4125.2	777.3	603.0	495.0	435.7	409.6	393.9	378.2	376.4
67.5°	*15791.4*	*13611.2*	*3588.4*	*887.1*	*639.6*	*461.8*	*395.6*	*369.5*	*355.5*	*345.1*	*343.3*
70°	14989.7	12412.1	2035.6	955.0	690.1	427.0	350.3	332.9	318.9	312.0	310.2
72.5°	12818.2	10509.0	1361.1	843.5	629.1	381.7	308.5	294.5	284.1	275.4	273.6
75°	10383.5	8334.0	1040.4	691.9	489.7	310.2	264.9	254.4	244.0	235.3	233.5
77.5°	6143.3	4815.3	766.8	547.2	345.1	242.2	219.6	210.9	200.4	193.4	191.7
80°	1960.6	1673.1	486.2	376.4	228.3	186.5	169.1	162.1	151.6	142.9	141.2
82.5°	747.7	646.6	257.9	191.7	151.6	127.2	113.3	106.3	99.3	90.6	88.9
85°	331.1	310.2	142.9	102.8	81.9	62.7	55.8	52.3	43.6	36.6	34.9
87.5°	116.8	116.8	61.0	29.6	17.4	8.7	5.2	1.7	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

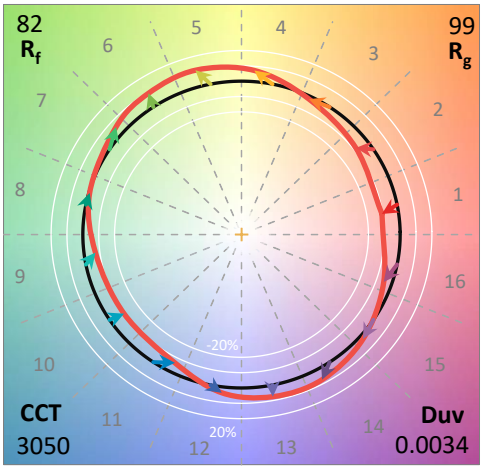
Test Information

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

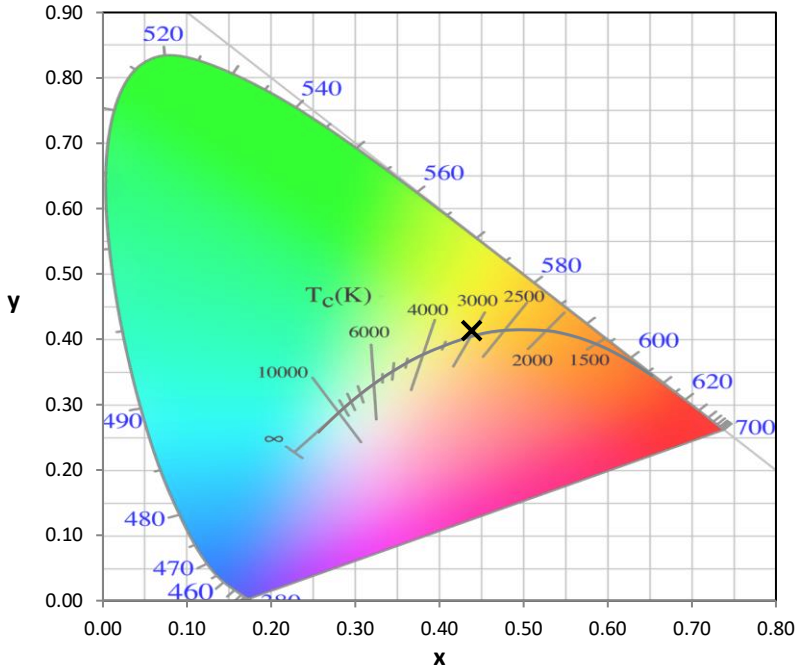
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

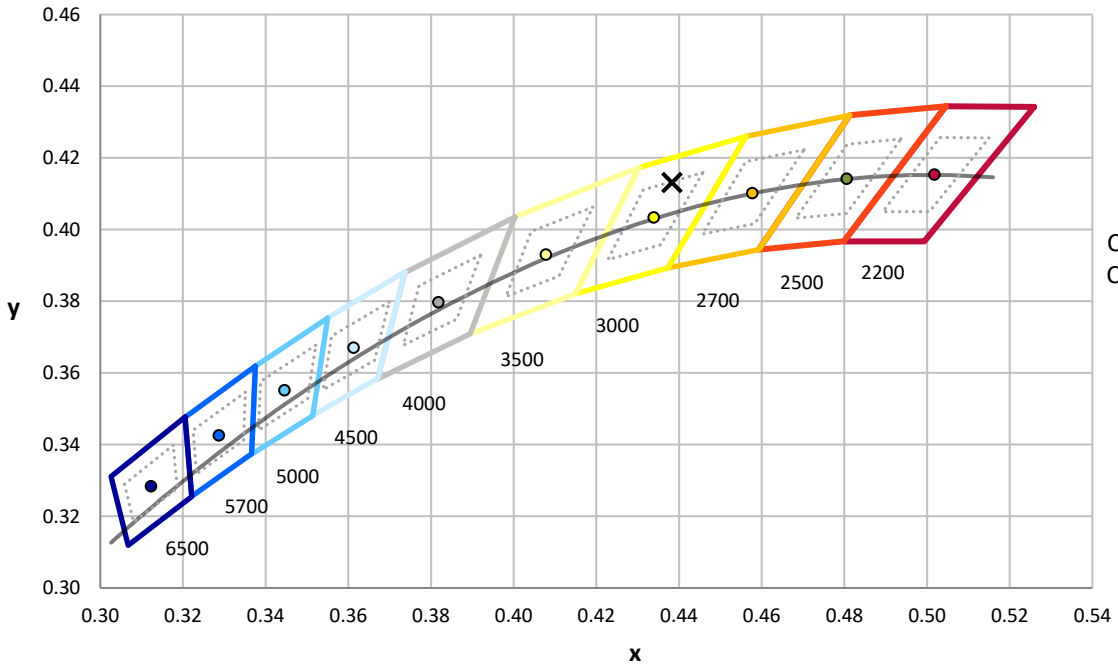
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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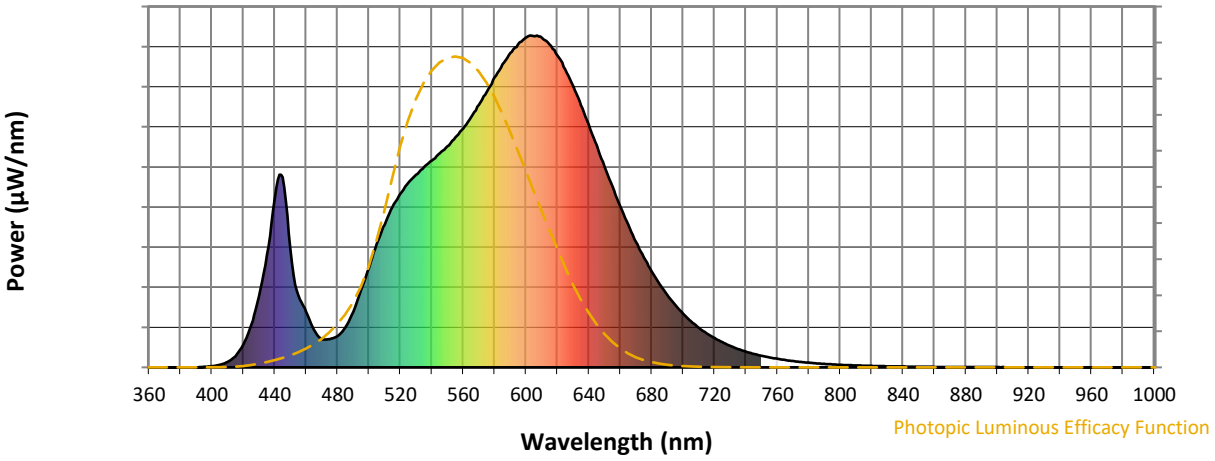
Photopic Flux vs. Wavelength



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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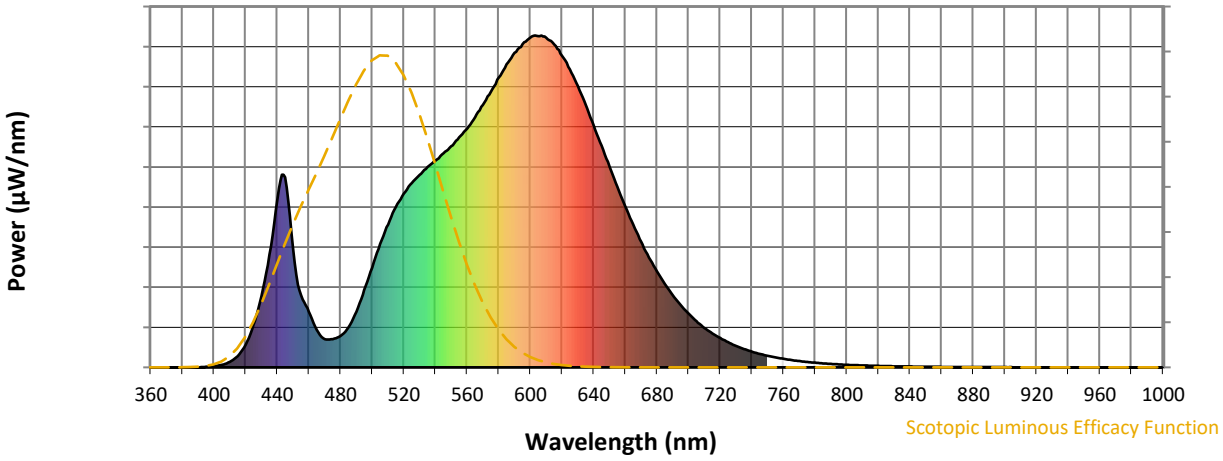
Scotopic Flux vs. Wavelength



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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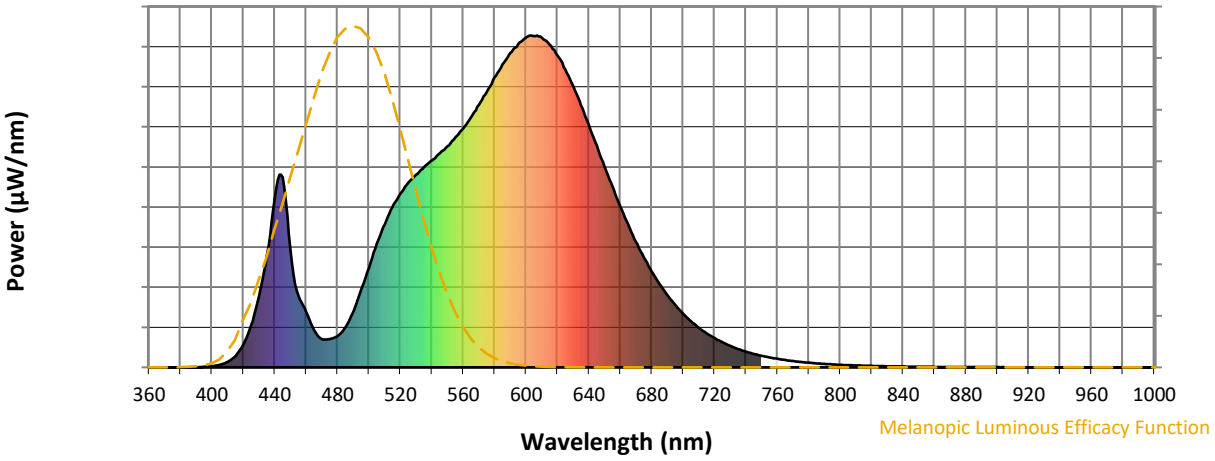
Melanopic Flux vs. Wavelength



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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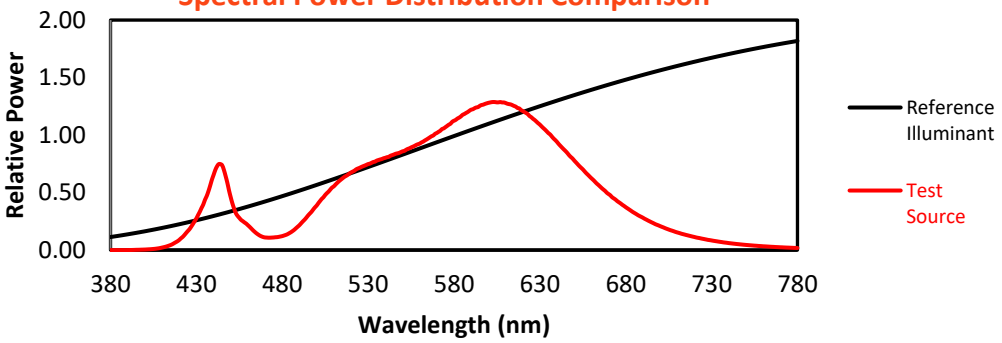
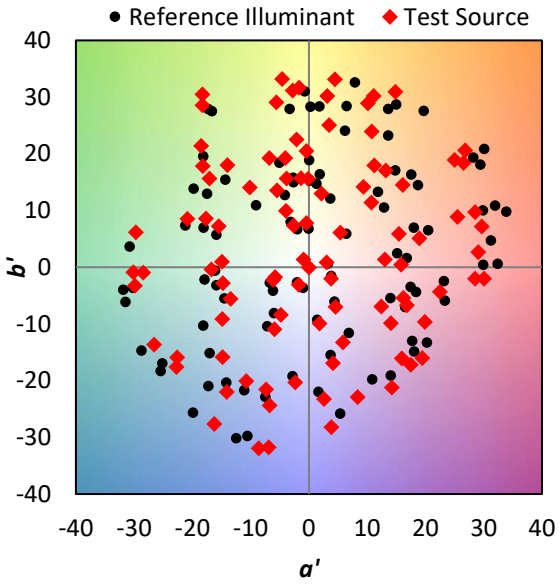
Summary

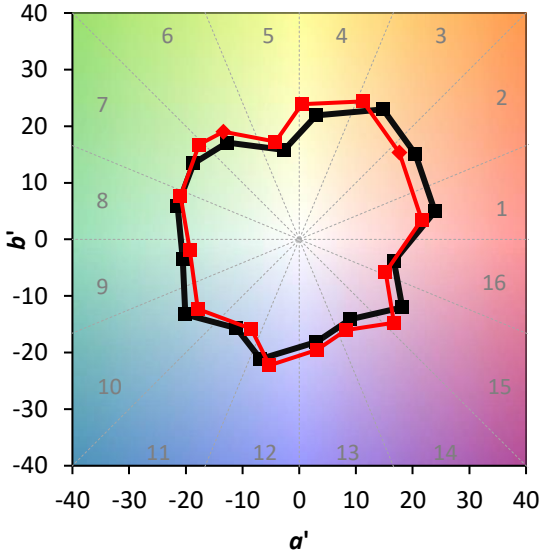
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

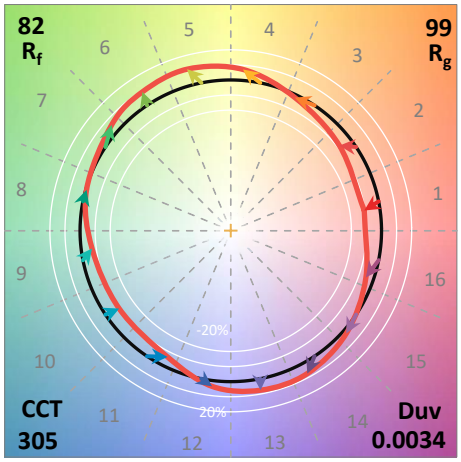
Spectral Power Distribution Comparison

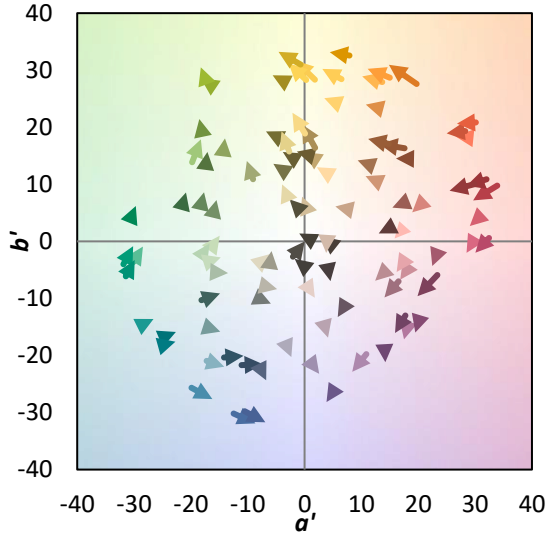


Color Vector Graphics









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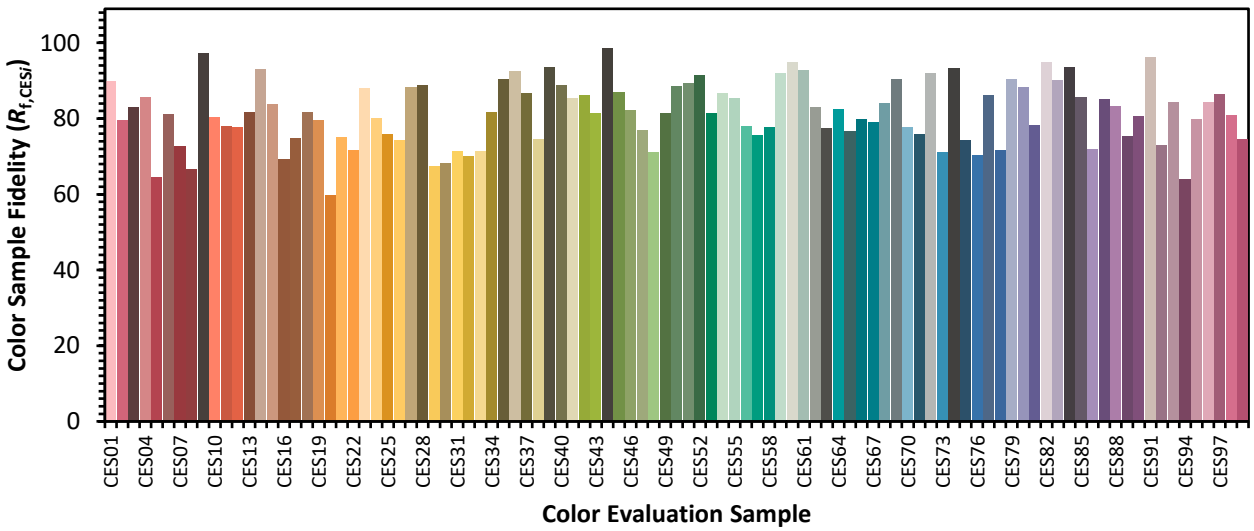
Individual Sample Fidelity Index ($R_{f,i}$)

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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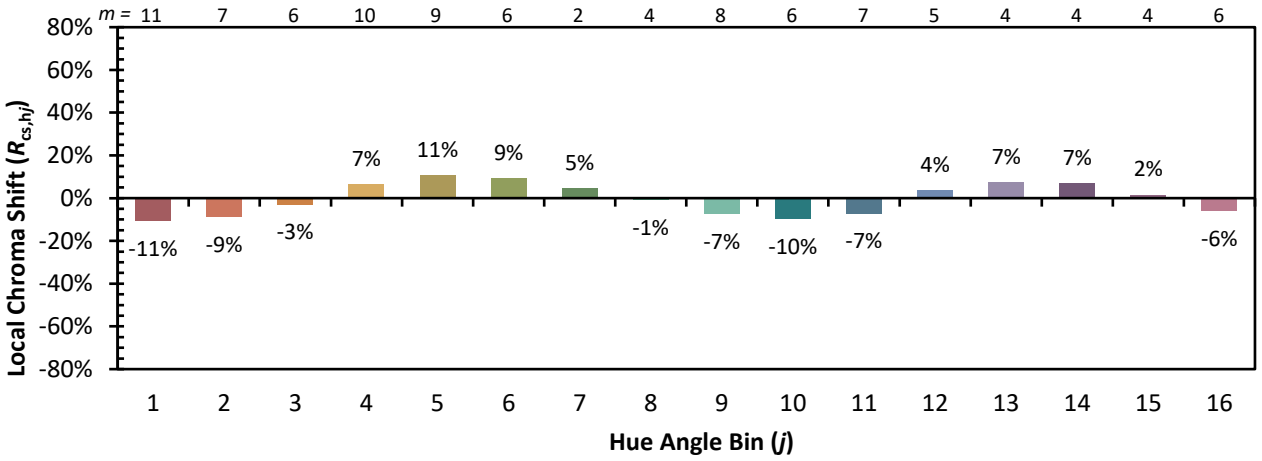
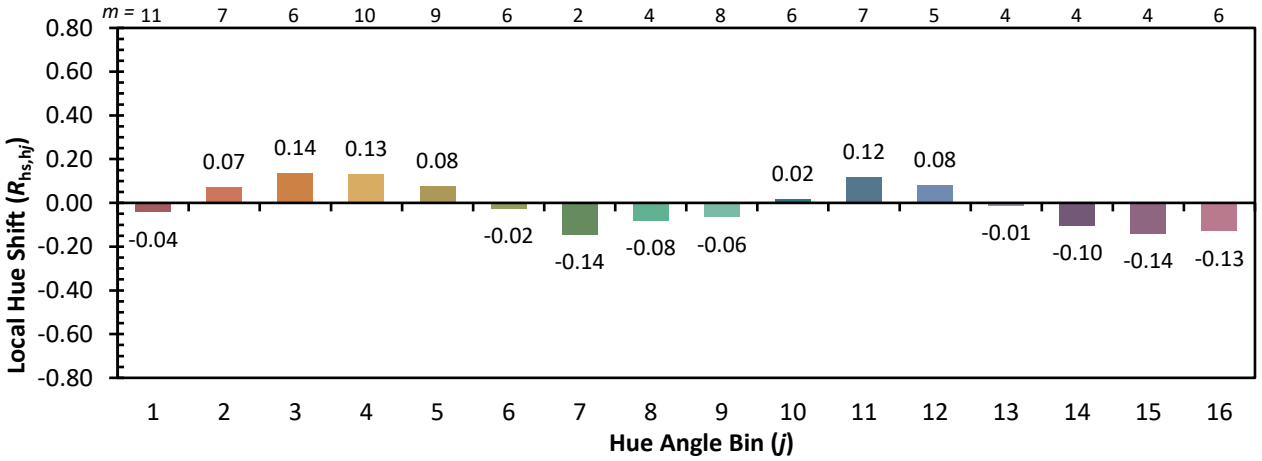
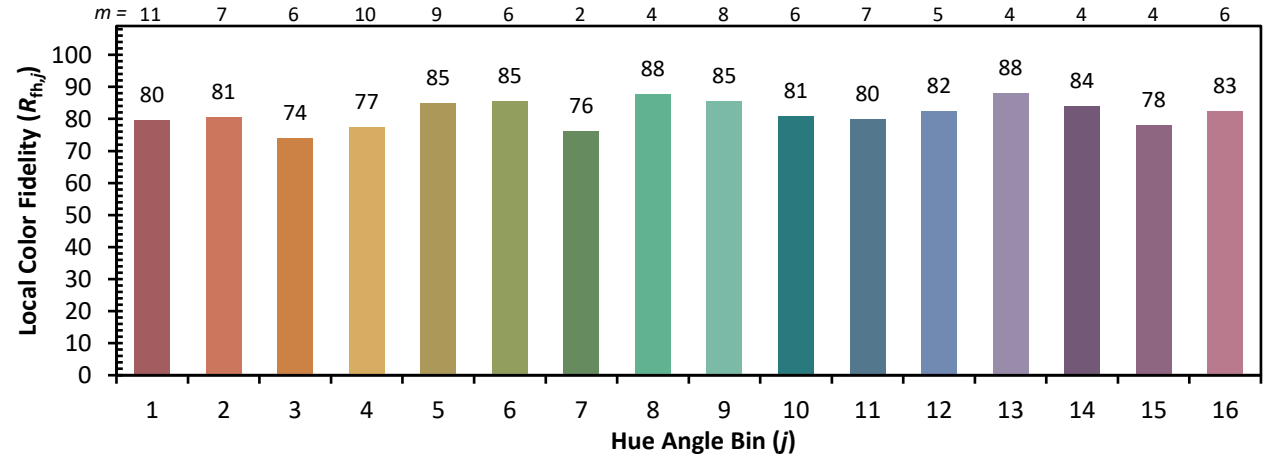
Color Rendition by Hue-Angle Bin







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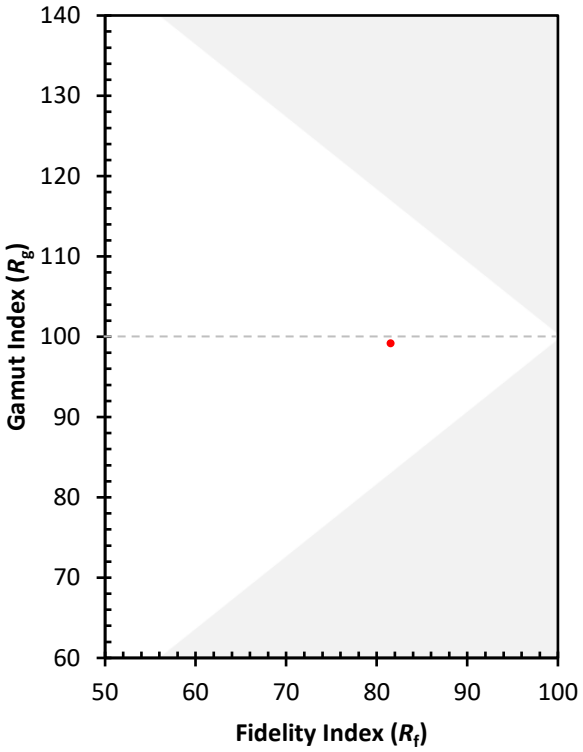
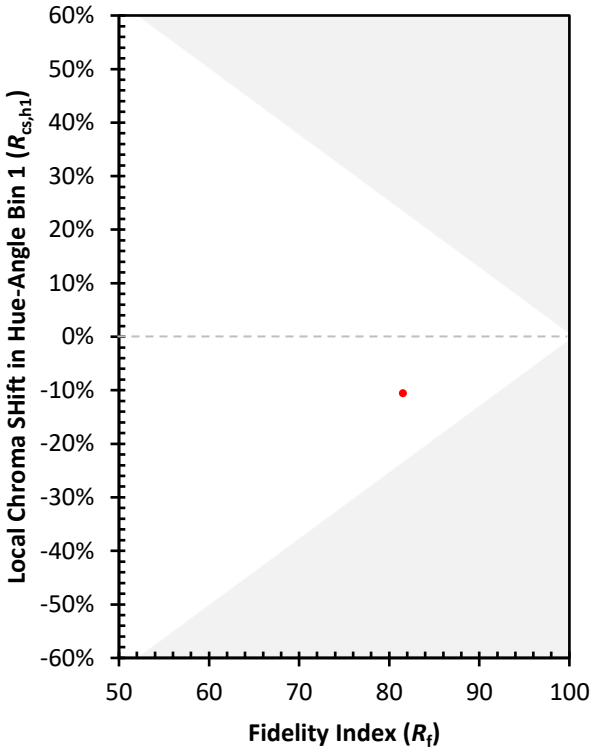
Measure Comparisons





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