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: P638996

Luminaire Tested: GWS-SA4F-830-U-T3R-W-GRSWH

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:	P638996
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-17)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	1/10/2023
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	McGRAW-EDISON
Catalog Number:	GWS-SA4F-830-U-T3R-W-GRSWH
Description:	GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III ROADWAY OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH
Light Source:	(64) 3000K CCT, 80 CRI LEDS
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	23697 lumens
Efficiency:	N/A
Efficacy:	105.2 lumens/watt
Luminous Opening:	Rectangular (W 1' x L: 1' x H: 0')
IES Classification:	Type II - Short
BUG Rating:	B3 - U0 - G3

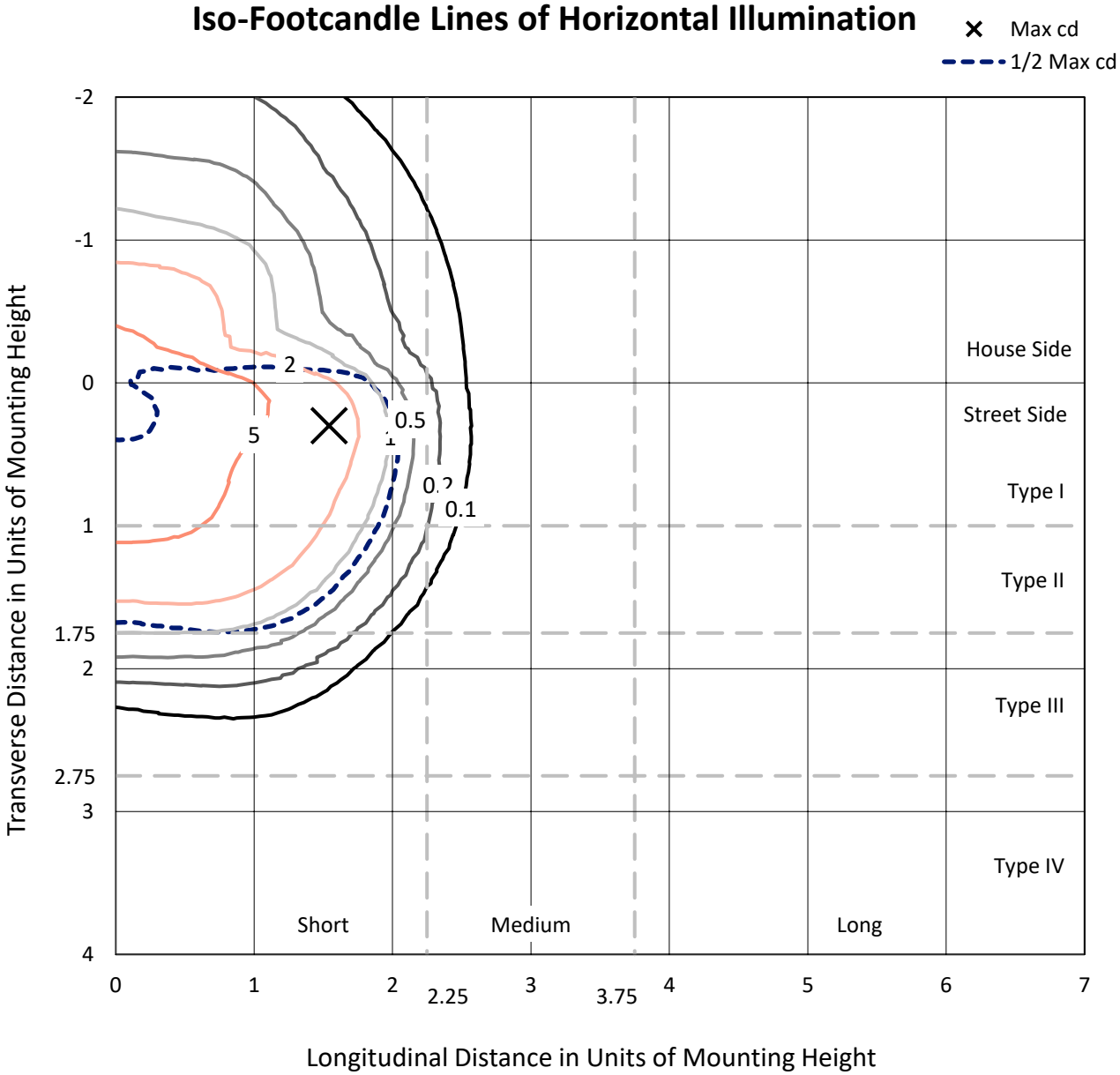
Input Watts (W):	225.3
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	0
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	28.75 FT

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P638996
CATALOG NUMBER: GWS-SA4F-830-U-T3R-W-GRSWH

Iso-Footcandle Lines of Horizontal Illumination



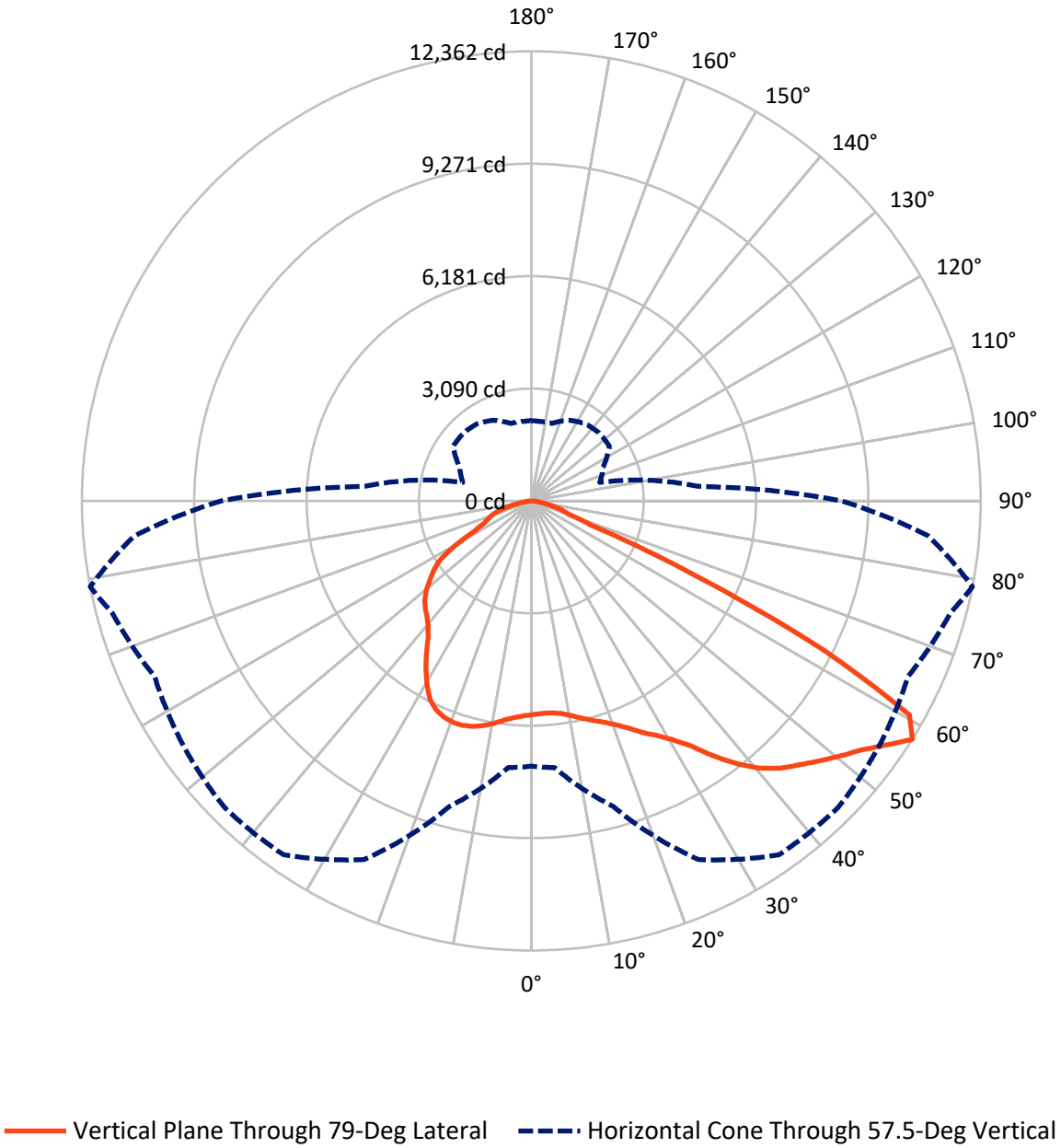
Based on 25 foot mounting height. Maximum calculated value = 9.5 fc
Type II - Short - N/A

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P638996
CATALOG NUMBER: GWS-SA4F-830-U-T3R-W-GRSWH

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

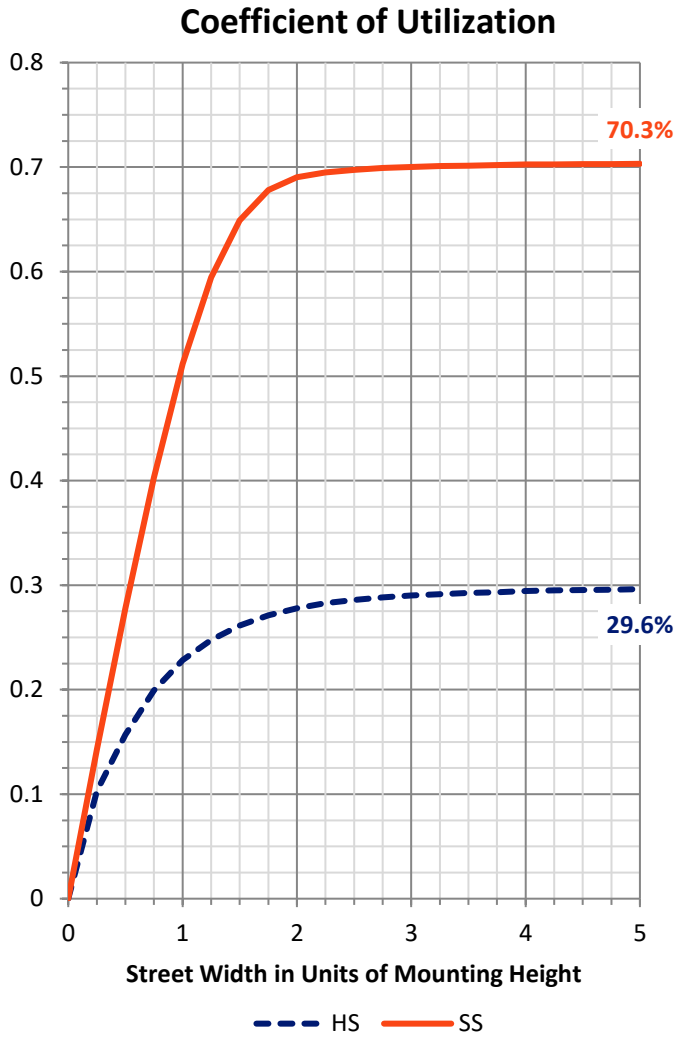
REPORT NUMBER: P638996
CATALOG NUMBER: GWS-SA4F-830-U-T3R-W-GRSWH

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7044.0	0.0	7044.0
	% Fixture	29.7	0.0	29.7
Street Side	Lumens	16653.0	0.0	16653.0
	% Fixture	70.3	0.0	70.3
Total	Lumens	23697.0	0.0	23697.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	543.9	2.3
10°-20°	1511.4	6.4
20°-30°	2561.9	10.8
30°-40°	3921.3	16.5
40°-50°	5228.6	22.1
50°-60°	6038.7	25.5
60°-70°	3137.9	13.2
70°-80°	667.0	2.8
80°-90°	86.4	0.4
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°	23697.0	100.0
0°-180°	23697.0	100.0



Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

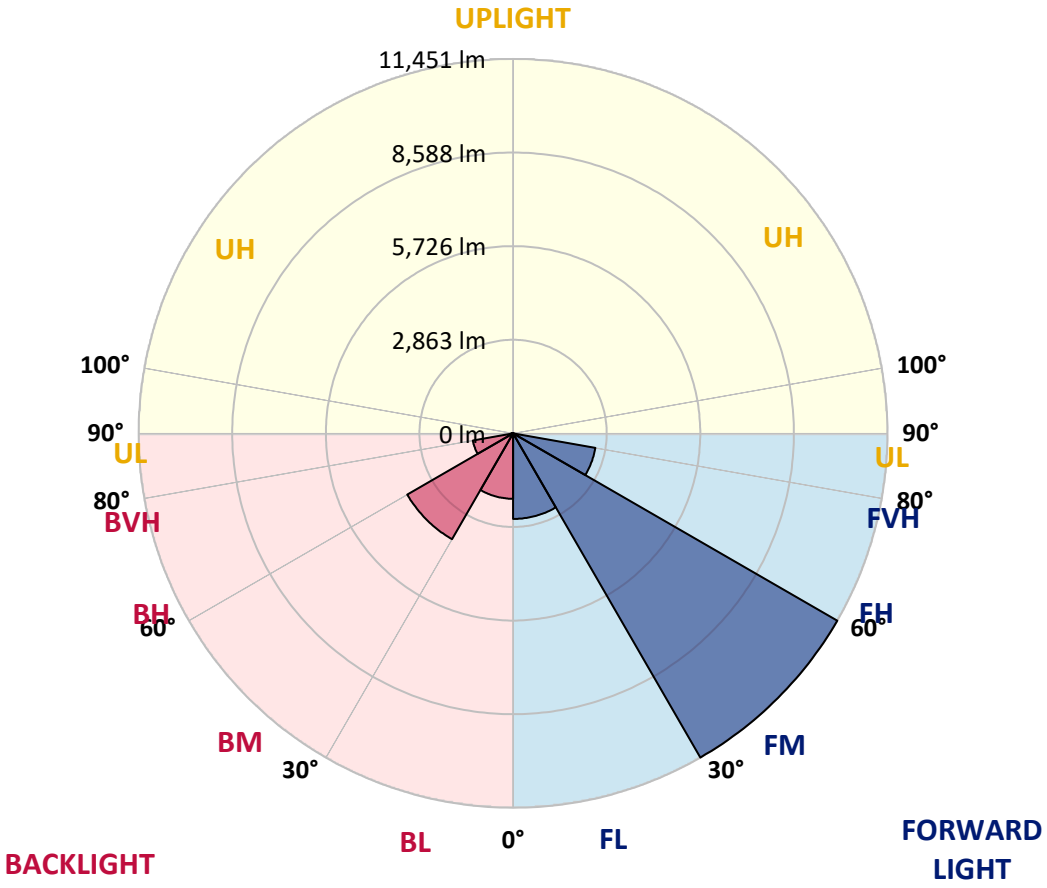
Scaled Data Report

REPORT NUMBER: P638996
CATALOG NUMBER: GWS-SA4F-830-U-T3R-W-GRSWH

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	2616.7	11.0			
FM	(30°-60°)	11451.1	48.3			
FH	(60°-80°)	2555.1	10.8			G2/5000
FVH	(80°-90°)	30.1	0.1			G1/100
BL	(0°-30°)	2000.4	8.4	B3/2500		
BM	(30°-60°)	3737.5	15.8	B3/5000		
BH	(60°-80°)	1249.8	5.3	B3/2500		G3/2500
BVH	(80°-90°)	56.3	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3
Type II Short



Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P638996
CATALOG NUMBER: GWS-SA4F-830-U-T3R-W-GRSWH

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	5872.7	5872.7	5872.7	5872.7	5872.7	5872.7	5872.7	5872.7	5872.7	*5872.7*	5872.7
2.5°	5605.3	5593.7	5597.5	5613.0	5671.2	5713.8	5758.3	5799.0	5837.8	*5849.4*	5859.1
5°	5405.7	5384.4	5390.2	5415.4	5483.2	5554.9	5634.3	5731.2	5824.2	*5855.2*	5895.9
7.5°	5264.3	5260.4	5270.1	5308.8	5380.5	5448.3	5551.0	5688.6	5849.4	*5901.7*	5973.4
10°	5076.3	5068.6	5107.3	5186.8	5305.0	5413.5	5535.5	5698.3	5923.0	*6000.5*	6111.0
12.5°	4927.1	4923.3	4964.0	5074.4	5225.5	5398.0	5566.5	5748.7	6021.9	*6128.4*	6264.0
15°	5014.3	4996.9	4998.8	5076.3	5212.0	5415.4	5644.0	5839.7	6120.7	*6256.3*	6430.7
17.5°	5268.2	5237.2	5213.9	5227.5	5305.0	5516.2	5762.2	5961.8	6235.0	*6393.9*	6607.0
20°	5618.8	5601.4	5537.5	5494.8	5512.3	5698.3	5948.2	6134.2	6384.2	*6562.4*	6791.1
22.5°	6089.7	6047.0	5959.9	5892.0	5839.7	5985.0	6215.6	6376.4	6591.5	*6777.5*	7015.8
25°	6672.9	6610.9	6473.3	6366.7	6254.4	6403.5	6608.9	6731.0	6876.3	*7048.7*	7275.4
27.5°	7267.7	7215.4	7062.3	6918.9	6779.4	6872.4	7116.6	7186.3	7170.8	*7296.8*	7490.5
30°	7901.3	7835.4	7690.1	7535.1	7354.9	7414.9	7633.9	7668.8	7504.1	*7608.7*	7740.4
32.5°	8569.7	8505.8	8379.8	8199.6	7996.2	8019.5	8079.5	8112.5	7955.5	*8015.6*	8116.3
35°	9249.8	9189.7	9061.8	8883.6	8734.4	8593.0	8441.8	8573.6	8482.5	*8598.8*	8591.0
37.5°	9871.7	9811.7	9732.2	9594.7	9338.9	9059.9	8711.2	8873.9	9015.3	*9162.6*	9137.4
40°	10292.2	10251.5	10270.9	10249.6	9920.2	9368.0	8842.9	9021.2	9406.7	*9658.6*	9645.0
42.5°	10654.5	10613.8	10726.2	10807.6	10420.1	9652.8	8906.8	9077.3	9656.7	*10050.0*	10030.6
45°	10815.3	10803.7	10989.7	11247.4	10877.3	9955.0	9071.5	9193.6	9846.5	*10350.3*	10276.7
47.5°	10623.5	10664.2	11030.4	11466.3	11257.1	10313.5	9408.7	9439.7	10094.6	*10675.8*	10468.5
50°	10241.8	10330.9	10825.0	11472.1	11534.1	10718.4	9875.6	9798.1	10427.8	*11022.6*	10569.2
52.5°	9685.7	9778.7	10584.7	11427.6	11693.0	11187.3	10497.6	10387.1	10848.3	*11369.4*	10586.7
55°	8408.9	8534.8	10034.5	11326.8	11848.0	11613.6	11198.9	10974.2	11390.8	*11846.1*	10759.1
57.5°	*7294.8*	*7360.7*	*8693.7*	*10879.3*	*11879.0*	*11927.5*	*11698.8*	*11431.4*	*11929.4*	*12361.5*	*10952.9*
60°	5353.4	5368.9	6568.2	9001.8	10927.7	11745.3	11658.1	11260.9	11673.6	*11948.8*	10065.5
62.5°	3024.5	3026.4	3983.6	6008.3	8162.8	9573.4	9627.6	9276.9	8930.1	*9011.5*	7006.1
65°	1135.4	1242.0	1819.3	2952.8	4706.3	5651.8	5876.5	5957.9	5380.5	*5022.1*	3756.9
67.5°	759.5	784.7	1061.8	1519.0	2094.5	2418.0	2704.8	2712.5	1984.0	*1769.0*	1480.3
70°	579.3	604.5	835.1	1087.0	1061.8	980.4	1059.8	1030.8	1065.6	*1094.7*	1125.7
72.5°	432.1	457.3	647.1	767.3	637.4	627.8	711.1	790.5	864.1	*895.1*	943.6
75°	286.8	306.1	435.9	410.8	352.6	416.6	519.3	598.7	641.3	*678.1*	714.9
77.5°	182.1	195.7	232.5	187.9	195.7	244.1	302.3	373.9	414.6	*451.4*	470.8
80°	83.3	81.4	79.4	89.1	110.4	143.4	182.1	224.8	255.8	*271.3*	282.9
82.5°	32.9	36.8	40.7	48.4	60.1	77.5	102.7	131.8	156.9	*160.8*	170.5
85°	13.6	15.5	17.4	21.3	27.1	34.9	42.6	60.1	75.6	*81.4*	87.2
87.5°	0.0	0.0	0.0	0.0	1.9	3.9	5.8	9.7	17.4	*19.4*	21.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P638996
CATALOG NUMBER: GWS-SA4F-830-U-T3R-W-GRSWH

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5872.7	5872.7	5872.7	5872.7	5872.7	5872.7	5872.7	5872.7	5872.7	5872.7	5872.7
2.5°	5911.4	5886.2	5928.9	5957.9	5985.0	5956.0	5946.3	5921.1	5917.2	5917.2	5930.8
5°	5965.7	5948.2	5992.8	6010.2	6008.3	5944.4	5905.6	5855.2	5830.0	5830.0	5833.9
7.5°	6062.5	6052.9	6078.0	6050.9	5988.9	5859.1	5731.2	5624.7	5553.0	5516.2	5527.8
10°	6223.4	6211.7	6190.4	6089.7	5911.4	5642.1	5380.5	5186.8	5070.5	5004.6	5008.5
12.5°	6380.3	6360.9	6285.4	6062.5	5696.3	5268.2	4925.2	4708.2	4580.3	4502.8	4485.4
15°	6552.7	6502.4	6339.6	5923.0	5345.7	4810.9	4452.5	4218.0	4080.4	4033.9	4032.0
17.5°	6717.4	6628.3	6333.8	5675.0	4925.2	4332.3	3971.9	3826.6	3803.4	3824.7	3830.5
20°	6884.1	6740.7	6269.9	5332.1	4425.3	3855.7	3669.7	3729.8	3816.9	3875.1	3888.6
22.5°	7056.5	6833.7	6124.5	4890.3	3898.3	3534.1	3611.6	3743.3	3851.8	3929.3	3937.1
25°	7250.3	6920.9	5907.5	4349.8	3475.9	3444.9	3598.0	3737.5	3853.8	3942.9	3958.4
27.5°	7360.7	6922.8	5603.3	3793.7	3282.2	3410.1	3565.1	3696.8	3813.1	3909.9	3927.4
30°	7469.2	6870.5	5120.9	3342.2	3226.0	3369.4	3508.9	3630.9	3741.4	3836.3	3857.6
32.5°	7622.3	6822.1	4564.8	3082.6	3193.1	3330.6	3444.9	3553.4	3638.7	3681.3	3692.9
35°	7812.1	6760.1	3973.9	2970.2	3171.7	3299.6	3400.4	3458.5	3348.1	3324.8	3350.0
37.5°	8077.6	6701.9	3384.9	2921.8	3158.2	3288.0	3377.1	3227.9	3092.3	3038.1	3057.4
40°	8364.3	6669.0	2985.7	2883.1	3164.0	3299.6	3280.2	3059.4	2863.7	2749.4	2745.5
42.5°	8608.5	6618.6	2730.0	2857.9	3179.5	3344.2	3148.5	2910.2	2619.5	2551.7	2553.7
45°	8773.2	6490.7	2594.4	2830.7	3193.1	3353.9	3086.5	2704.8	2497.5	2454.9	2452.9
47.5°	8841.0	6258.2	2507.2	2788.1	3191.1	3274.4	2960.6	2619.5	2412.2	2400.6	2408.4
50°	8796.4	5876.5	2418.0	2704.8	3144.6	3191.1	2815.2	2544.0	2354.1	2418.0	2464.5
52.5°	8631.7	5382.5	2311.5	2590.5	3061.3	3096.2	2741.6	2497.5	2311.5	2396.7	2433.5
55°	8589.1	4981.4	2175.9	2441.3	2937.3	2927.6	2664.1	2474.2	2282.4	2249.5	2255.3
57.5°	*8532.9*	*4590.0*	*1951.1*	*2173.9*	*2623.4*	*2638.9*	*2590.5*	*2447.1*	*2206.9*	*2197.2*	*2206.9*
60°	7413.0	3518.6	1739.9	1875.5	2154.5	2237.9	2507.2	2396.7	2084.8	2044.1	2042.2
62.5°	4841.9	2131.3	1548.1	1635.3	1755.4	1852.3	2286.3	2251.4	1951.1	1925.9	1943.3
65°	2604.0	1519.0	1408.6	1460.9	1526.8	1600.4	1894.9	2005.3	1763.2	1674.0	1676.0
67.5°	1331.1	1292.3	1304.0	1340.8	1391.1	1428.0	1528.7	1625.6	1503.5	1428.0	1426.0
70°	1139.3	1170.3	1187.7	1209.0	1242.0	1236.1	1245.8	1263.3	1253.6	1216.8	1214.8
72.5°	970.7	1019.1	1023.0	1026.9	1038.5	1011.4	994.0	964.9	966.8	972.6	974.6
75°	738.2	784.7	796.3	790.5	802.1	767.3	744.0	714.9	680.1	674.3	678.1
77.5°	480.5	517.3	534.8	530.9	536.7	509.6	497.9	466.9	426.3	410.8	410.8
80°	290.6	311.9	325.5	329.4	335.2	315.8	296.4	269.3	251.9	234.4	234.4
82.5°	176.3	189.9	199.6	199.6	205.4	184.1	168.6	149.2	141.4	125.9	125.9
85°	89.1	98.8	102.7	100.8	96.9	79.4	73.6	63.9	60.1	52.3	52.3
87.5°	21.3	27.1	27.1	19.4	19.4	9.7	5.8	1.9	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

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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

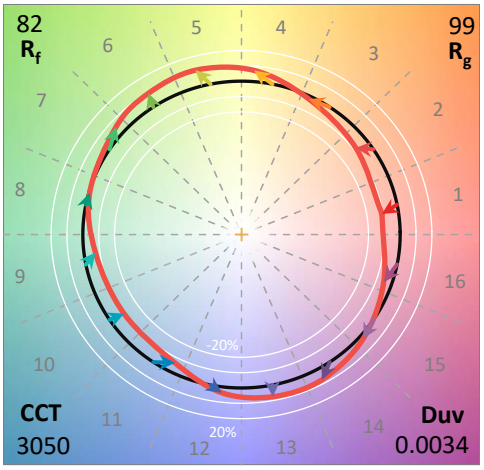
Test Information

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

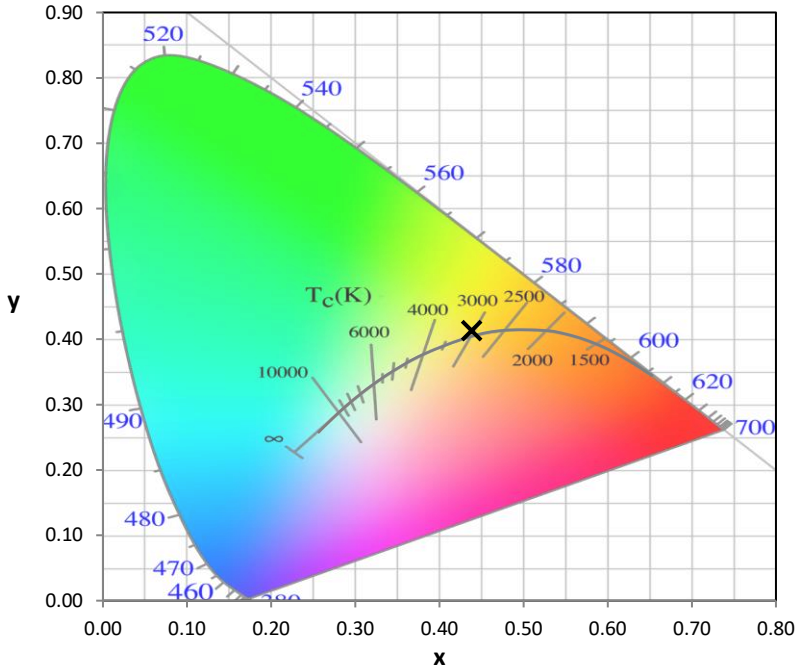
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

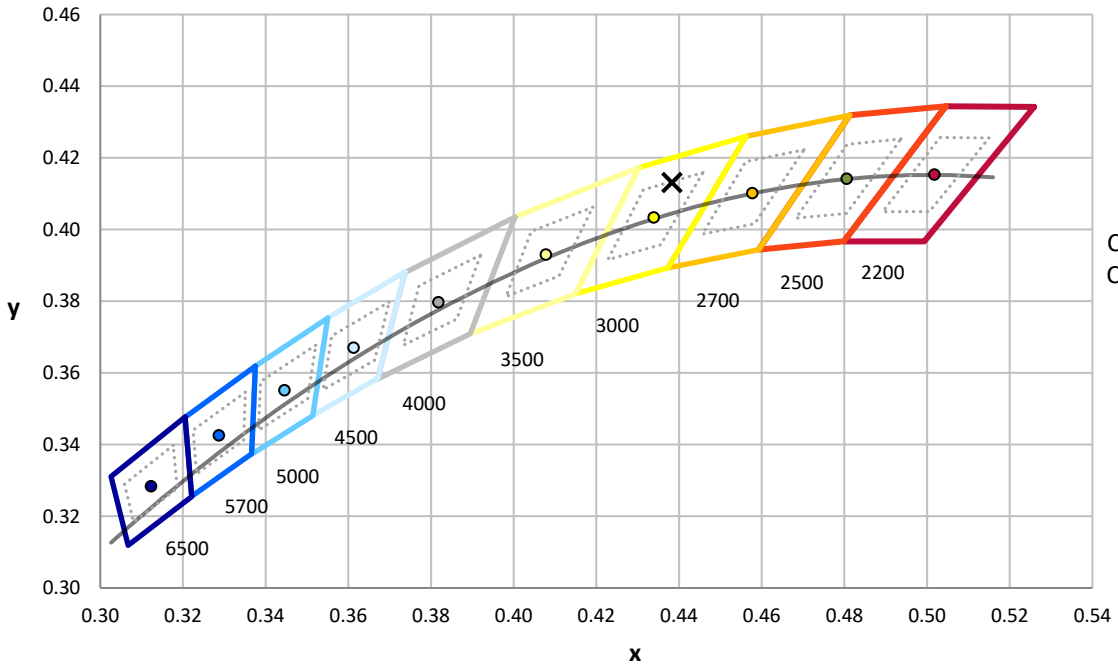
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

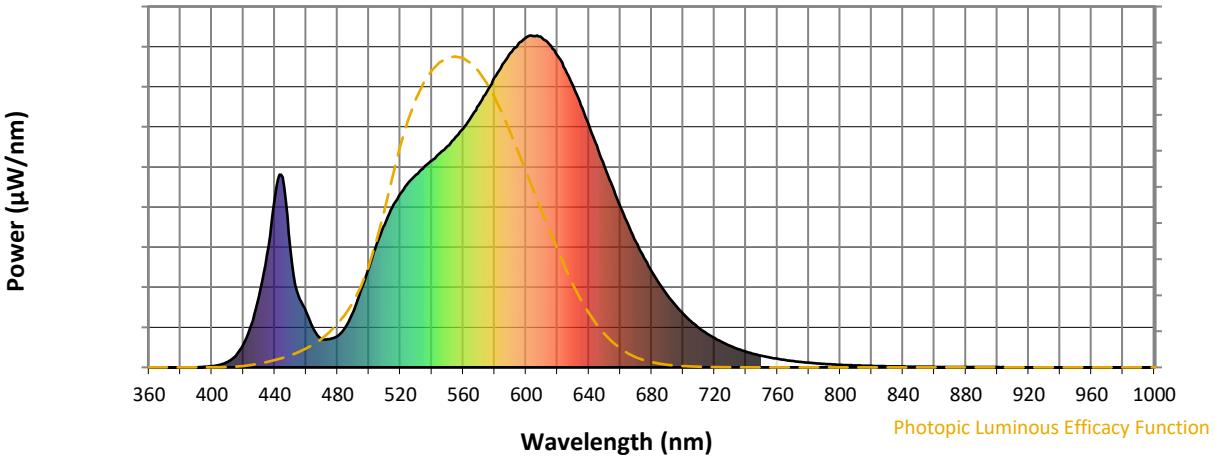


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength

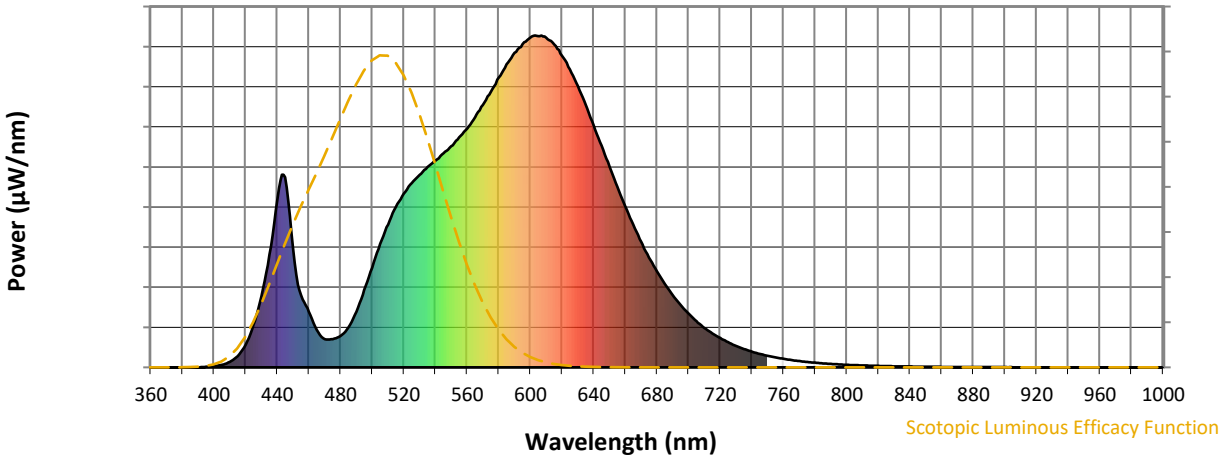


Photopic Lumens: NR

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			

REPORT NUMBER: SP1-2408-195-9

Scotopic Flux vs. Wavelength

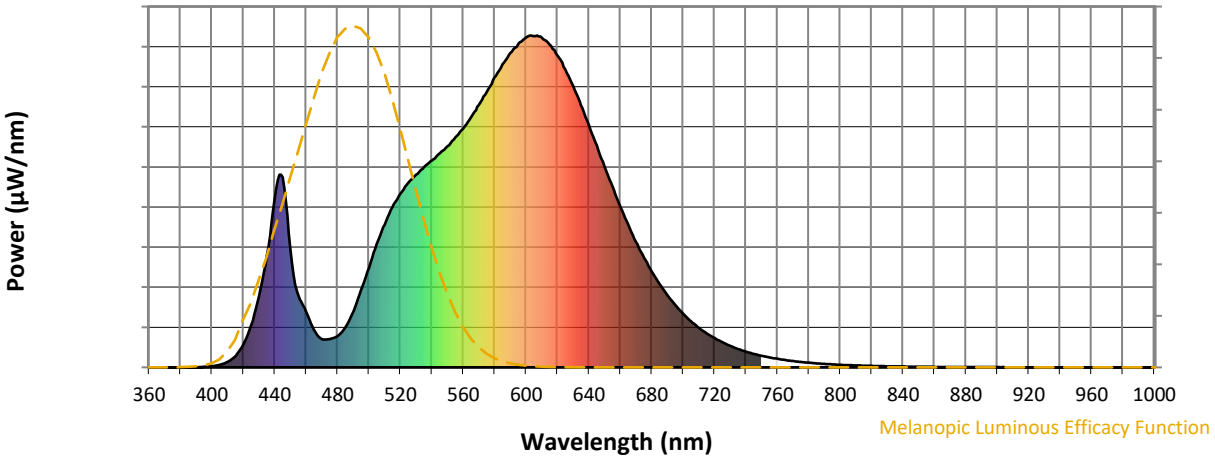


Scotopic Lumens: NR **S/P: 1.27**

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			

REPORT NUMBER: SP1-2408-195-9

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			

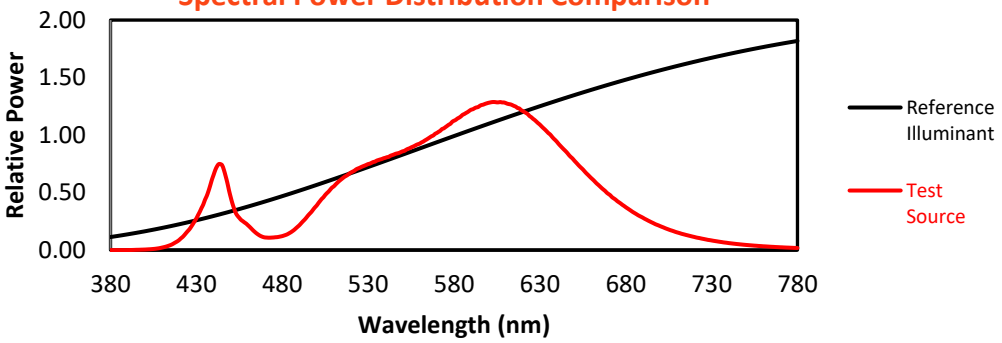
REPORT NUMBER: SP1-2408-195-9

TM-30-18

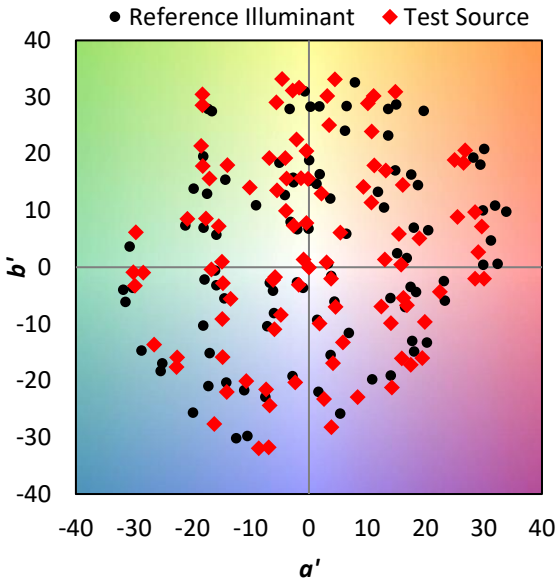
Summary

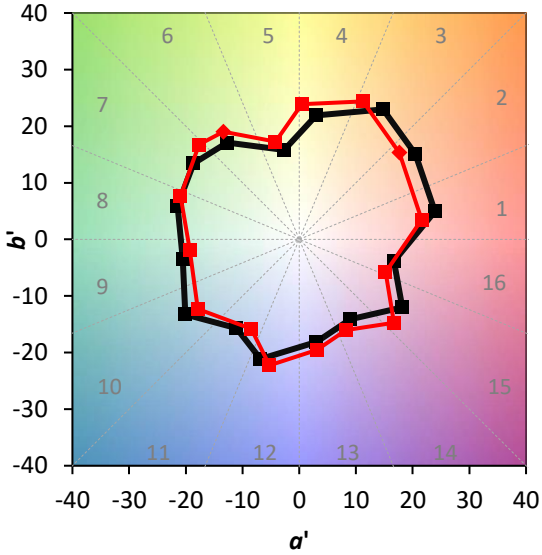
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

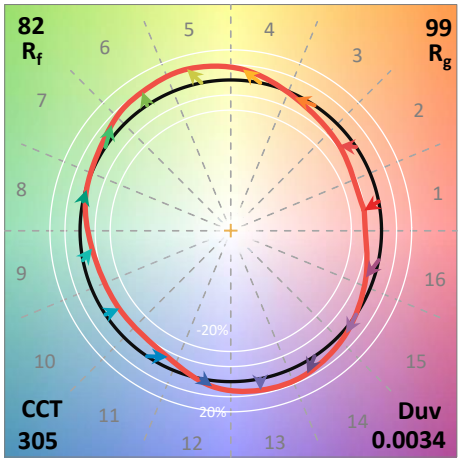
Spectral Power Distribution Comparison

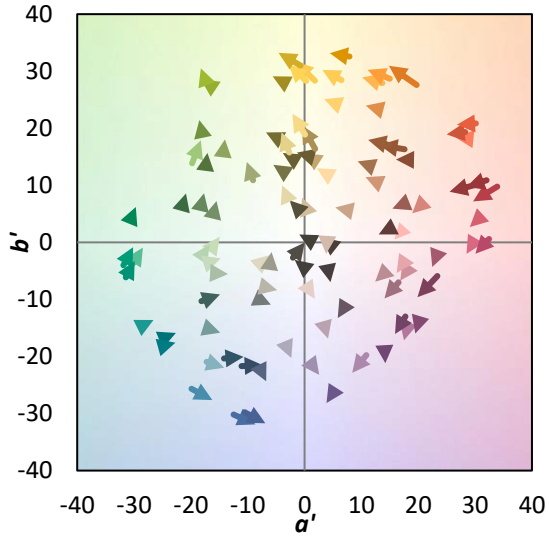


Color Vector Graphics







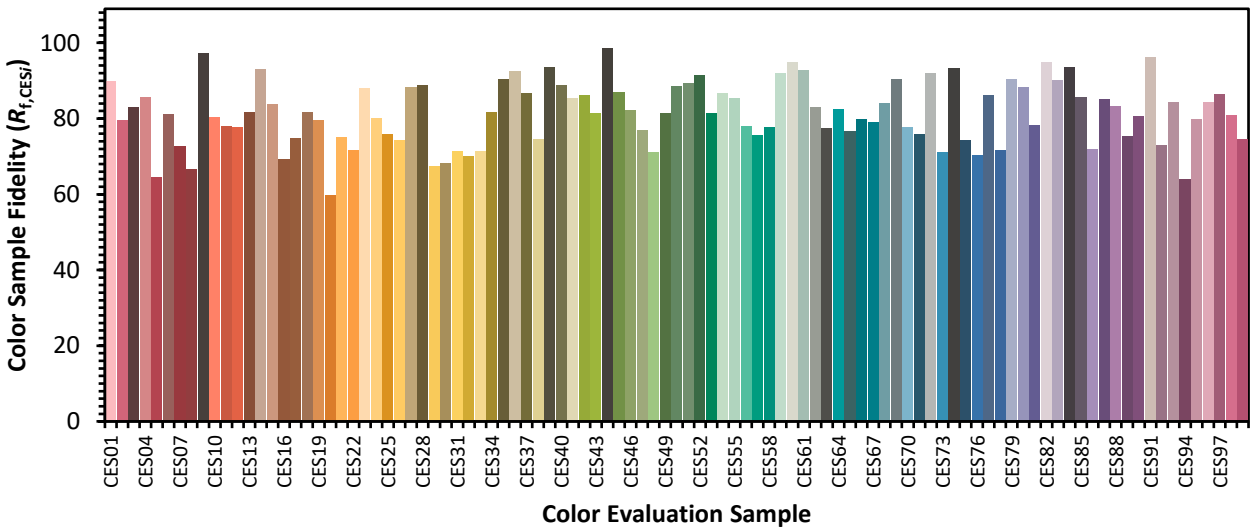


REPORT NUMBER: SP1-2408-195-9

TM-30-18

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

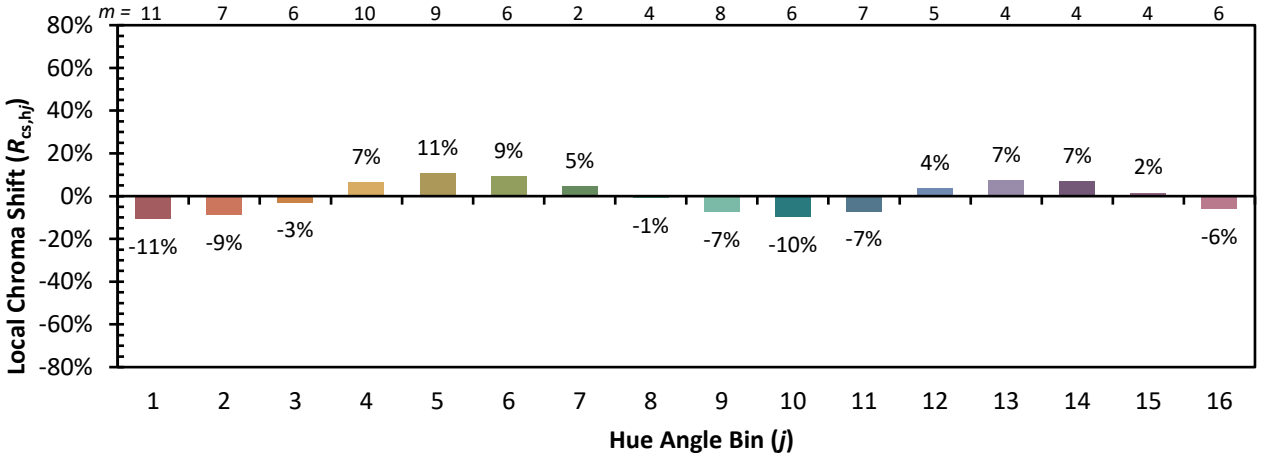
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82 = 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	

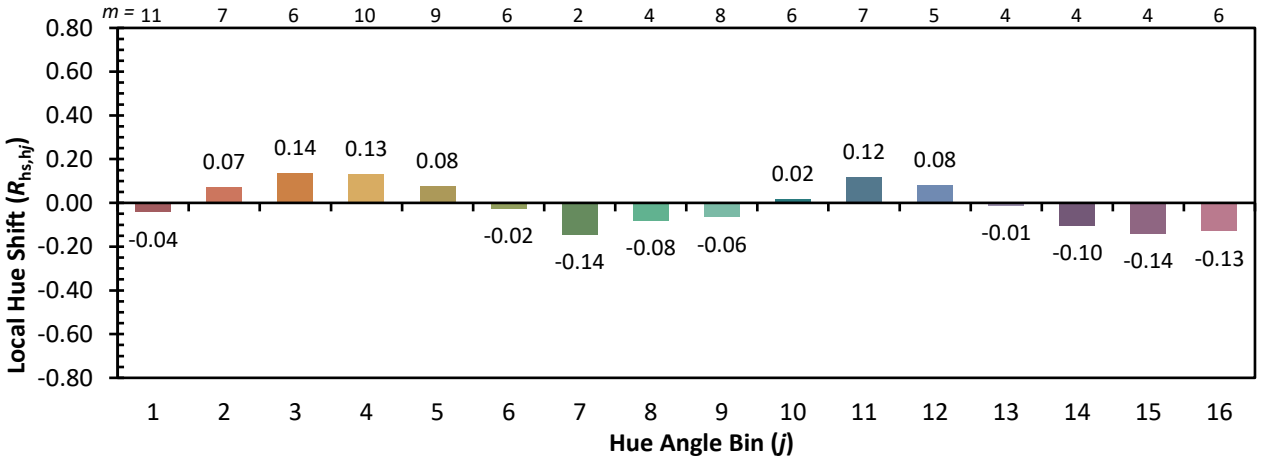


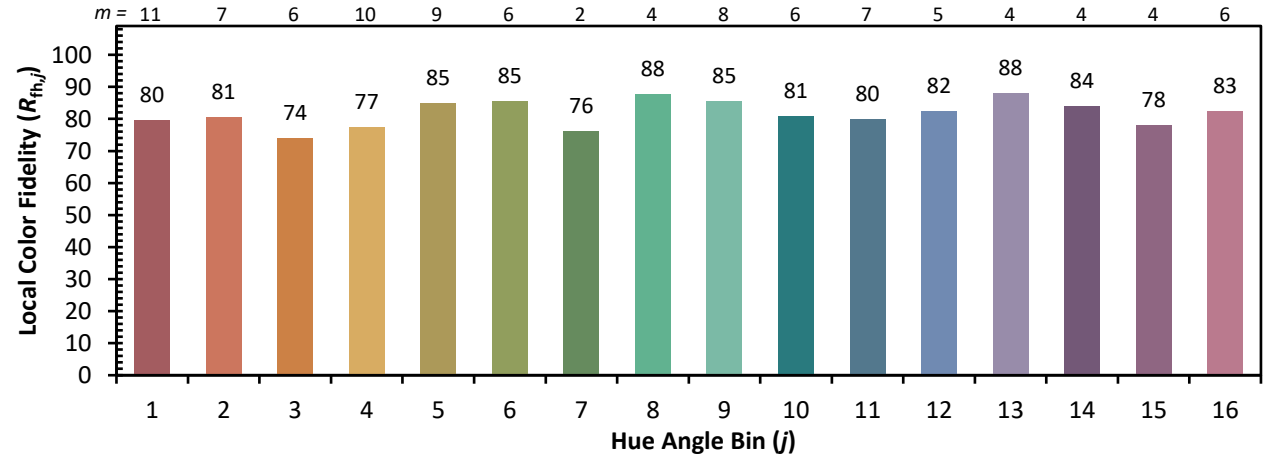
REPORT NUMBER: SP1-2408-195-9

TM-30-18

Color Rendition by Hue-Angle Bin



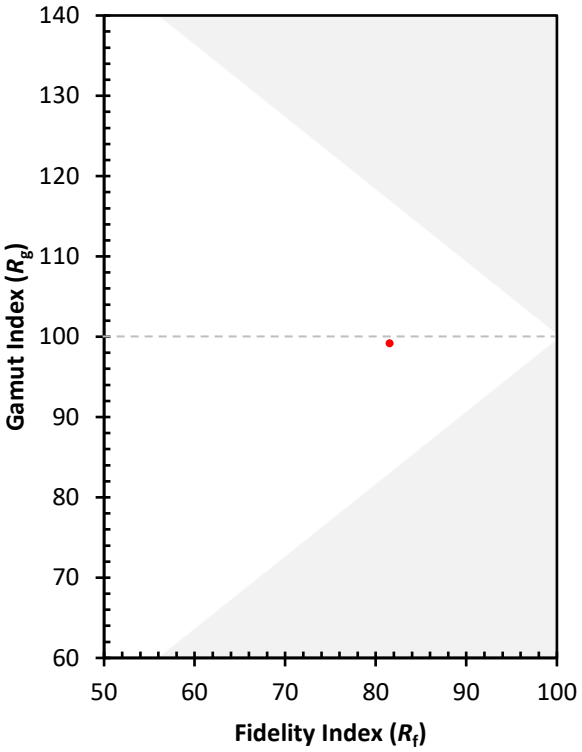


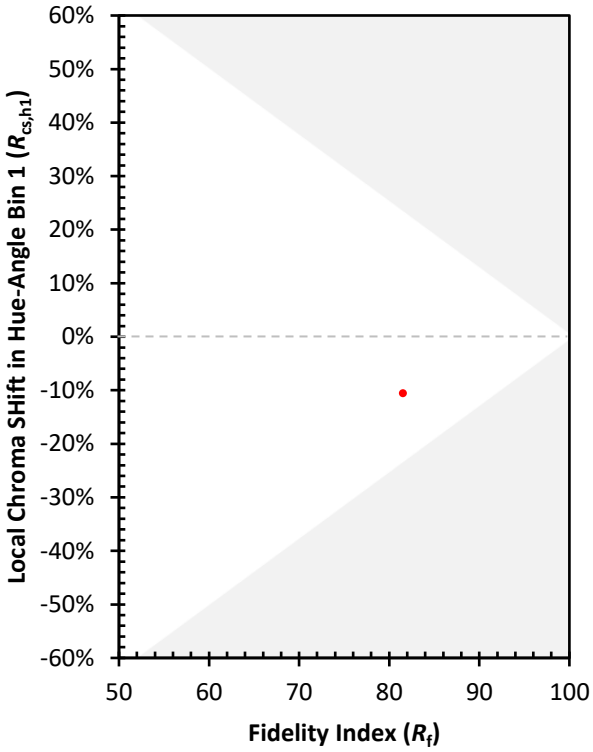


REPORT NUMBER: SP1-2408-195-9

TM-30-18

Measure Comparisons





(END OF REPORT)