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: P641439

Luminaire Tested: GWS-SA5F-830-U-SL2-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:	P641439
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-28)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	1/10/2023
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	McGRAW-EDISON
Catalog Number:	GWS-SA5F-830-U-SL2-W-GRSBK
Description:	GALLEON WALL SLIM LUMINAIRE. (5) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK
Light Source:	(80) 3000K CCT, 80 CRI LEDS
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	19469.1 lumens
Efficiency:	N/A
Efficacy:	62.7 lumens/watt
Luminous Opening:	Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification:	Type II - Short
BUG Rating:	B3 - U0 - G2

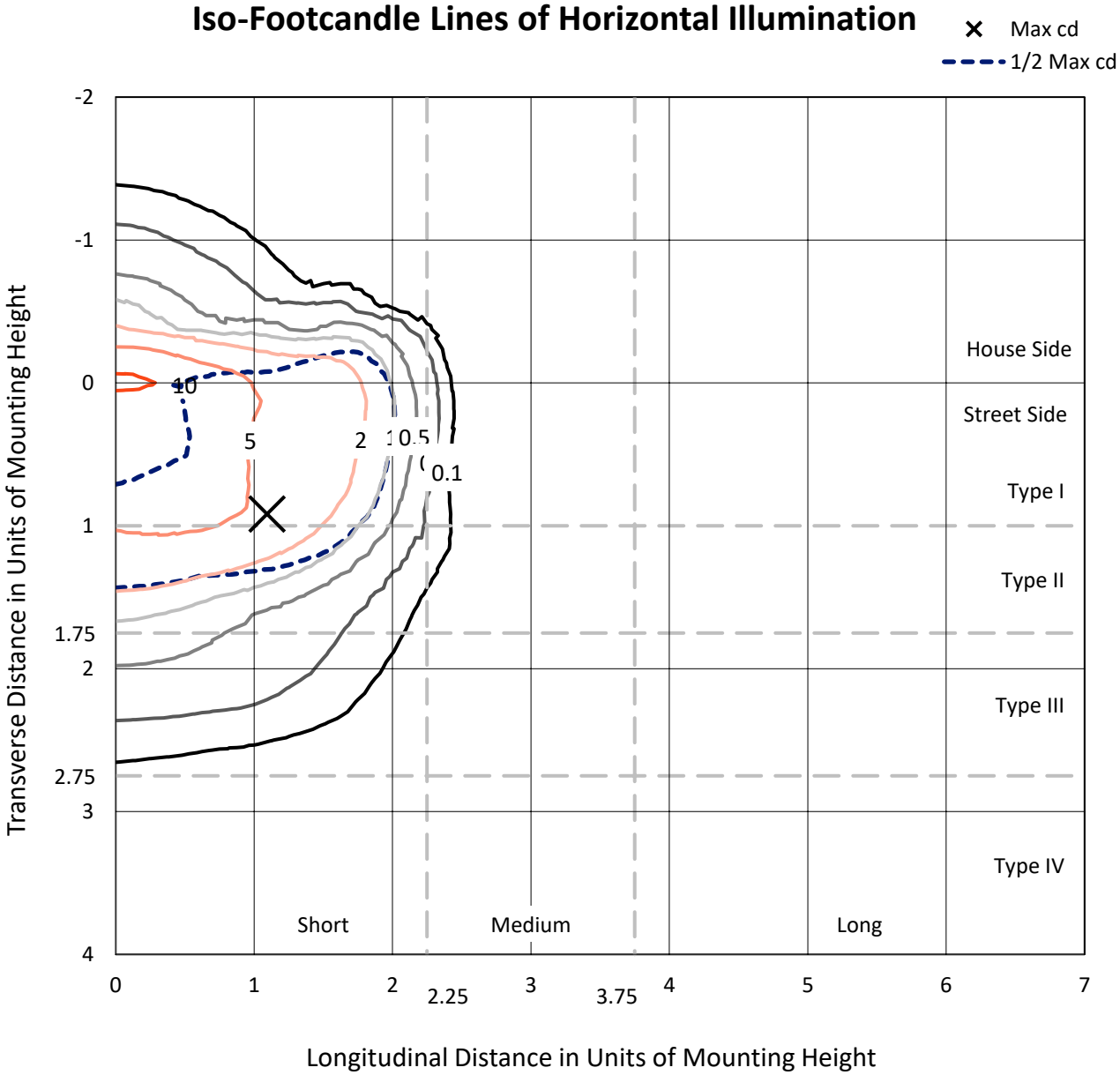
Input Watts (W):	310.3
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	0
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	28.75 FT

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

Scaled Data Report

REPORT NUMBER: P641439
CATALOG NUMBER: GWS-SA5F-830-U-SL2-W-GRSBK

Iso-Footcandle Lines of Horizontal Illumination



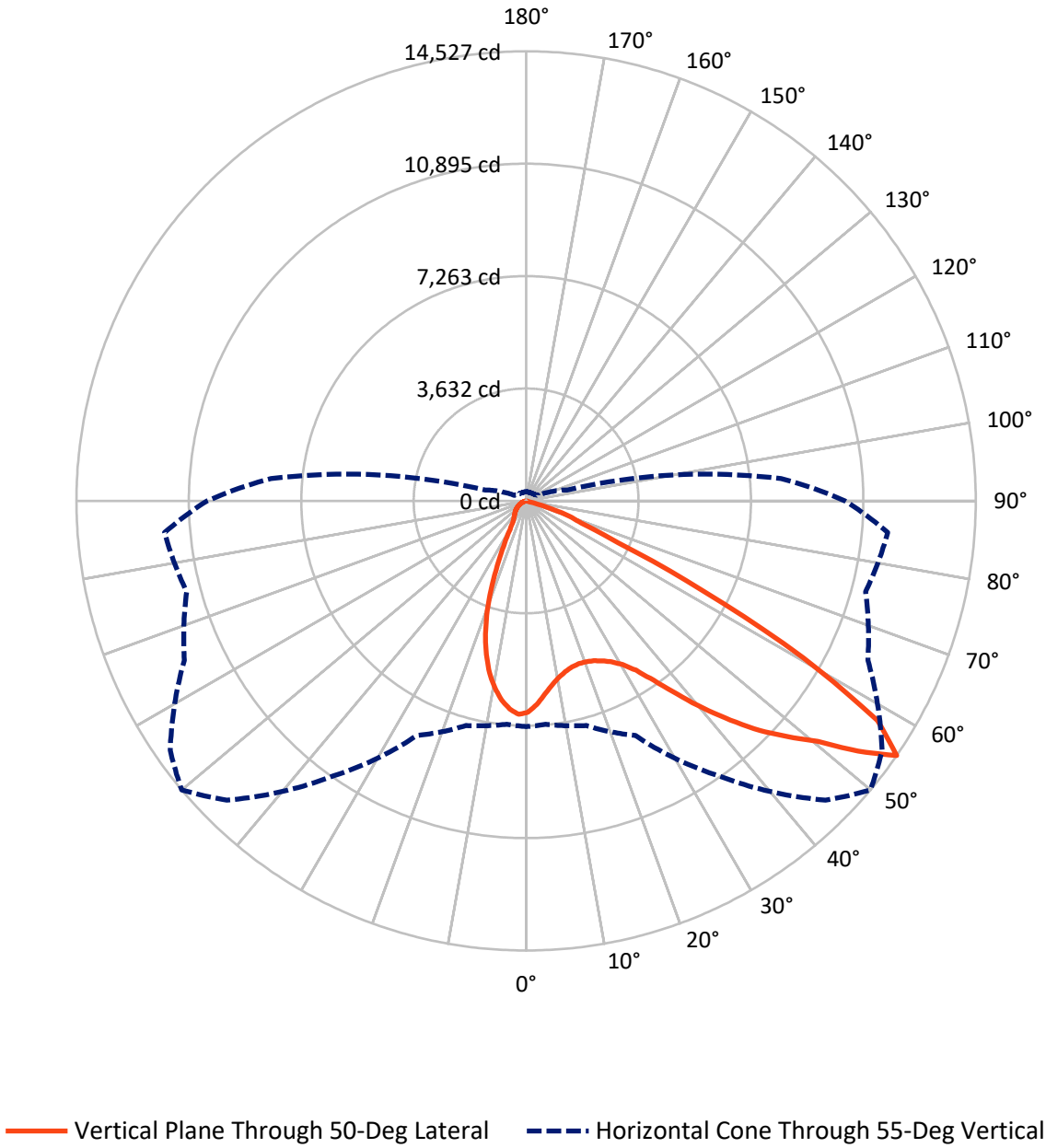
Based on 25 foot mounting height. Maximum calculated value = 10.9 fc
Type II - Short - N/A

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

Scaled Data Report

REPORT NUMBER: P641439
CATALOG NUMBER: GWS-SA5F-830-U-SL2-W-GRSBK

Luminous Intensity Polar Plot



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

Scaled Data Report

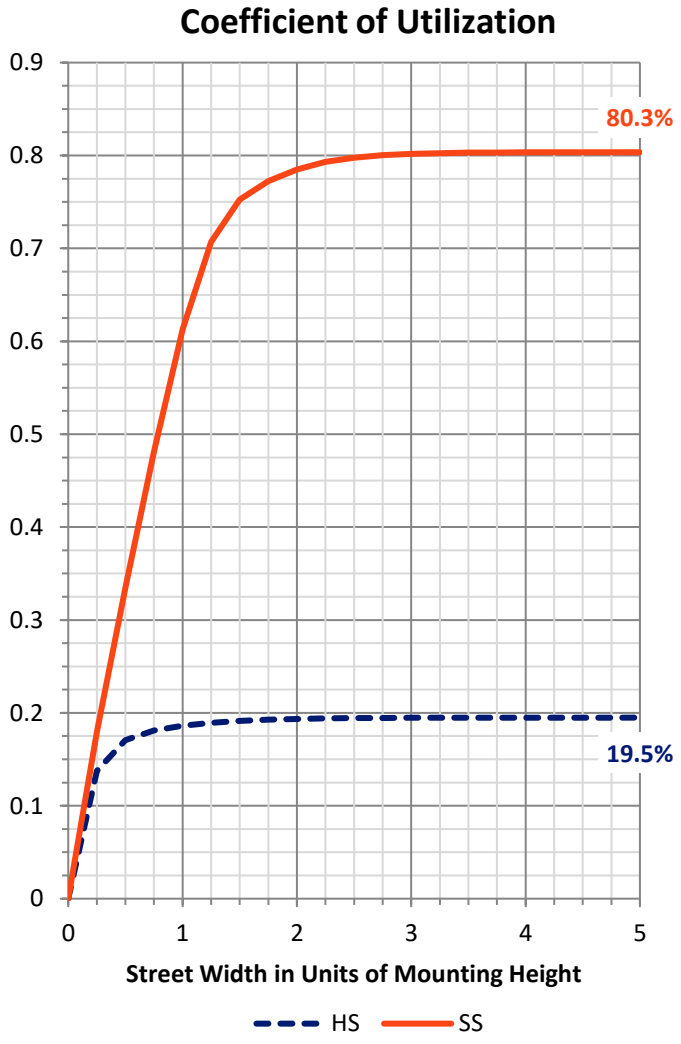
REPORT NUMBER: P641439
CATALOG NUMBER: GWS-SA5F-830-U-SL2-W-GRSBK

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3836.3	0.0	3836.3
	% Fixture	19.7	0.0	19.7
Street Side	Lumens	15632.8	0.0	15632.8
	% Fixture	80.3	0.0	80.3
Total	Lumens	19469.1	0.0	19469.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	599.9	3.1
10°-20°	1476.2	7.6
20°-30°	2082.3	10.7
30°-40°	3081.4	15.8
40°-50°	4445.4	22.8
50°-60°	5243.7	26.9
60°-70°	2339.1	12.0
70°-80°	201.1	1.0
80°-90°	0.1	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°	19469.1	100.0
0°-180°	19469.1	100.0



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

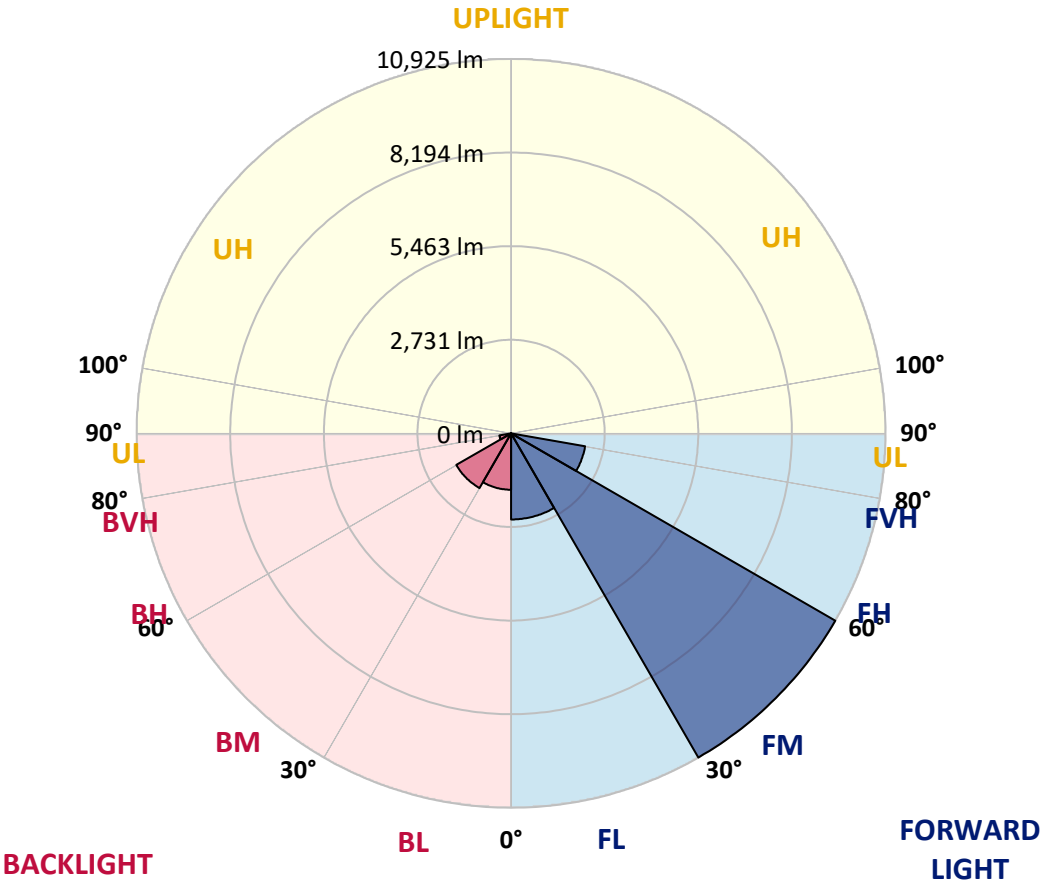
Scaled Data Report

REPORT NUMBER: P641439
CATALOG NUMBER: GWS-SA5F-830-U-SL2-W-GRSBK

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	2513.5	12.9			
FM	(30°-60°)	10925.4	56.1			
FH	(60°-80°)	2193.8	11.3			G2/5000
FVH	(80°-90°)	0.0	0.0			G0/10
BL	(0°-30°)	1644.9	8.4	B3/2500		
BM	(30°-60°)	1845.0	9.5	B2/2500		
BH	(60°-80°)	346.4	1.8	B1/500		G1/500
BVH	(80°-90°)	0.1	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G2
Type II Short



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

Scaled Data Report

REPORT NUMBER: P641439
CATALOG NUMBER: GWS-SA5F-830-U-SL2-W-GRSBK

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	50°	55°	65°	75°	85°
0°	6830.8	6830.8	6830.8	6830.8	6830.8	6830.8	*6830.8*	6830.8	6830.8	6830.8	6830.8
2.5°	6346.0	6350.7	6353.1	6417.3	6441.1	6536.1	*6586.0*	6612.2	6681.1	6761.9	6828.5
5°	5920.5	5913.4	5925.3	6006.1	6058.4	6198.6	*6274.7*	6327.0	6479.1	6669.2	6828.5
7.5°	5549.8	5564.0	5578.3	5666.2	5744.7	5896.8	*6006.1*	6084.5	6296.1	6578.9	6847.5
10°	5288.3	5288.3	5309.7	5409.5	5502.2	5690.0	*5799.3*	5899.1	6151.1	6498.1	6868.9
12.5°	5095.8	5098.2	5124.3	5238.4	5345.4	5540.3	*5654.3*	5751.8	6029.9	6417.3	6873.6
15°	5005.5	4998.4	5019.7	5141.0	5259.8	5442.8	*5561.6*	5656.7	5944.3	6372.1	6897.4
17.5°	4981.7	4977.0	4993.6	5112.4	5233.7	5411.9	*5528.4*	5623.4	5932.4	6386.4	6968.7
20°	5050.6	5041.1	5034.0	5136.2	5250.3	5426.2	*5547.4*	5654.3	5989.5	6464.8	7078.0
22.5°	5214.6	5214.6	5198.0	5247.9	5324.0	5483.2	*5609.2*	5749.4	6139.2	6621.7	7239.6
25°	5516.5	5492.7	5461.8	5483.2	5473.7	5573.5	*5723.3*	5918.2	6422.0	6880.8	7436.9
27.5°	5861.1	5882.5	5830.2	5832.6	5749.4	5713.8	*5887.3*	6182.0	6842.7	7246.8	7729.3
30°	6329.3	6312.7	6315.1	6308.0	6115.4	5946.7	*6134.4*	6526.6	7372.7	7805.3	8109.5
32.5°	6695.4	6719.1	6797.6	6842.7	6590.8	6319.8	*6519.5*	6994.8	7976.4	8442.3	8575.4
35°	7082.8	7125.6	7284.8	7432.2	7220.6	6909.3	*7123.2*	7615.2	8544.5	9072.1	9110.2
37.5°	7491.6	7577.1	7767.3	8026.4	7993.1	7717.4	*7912.3*	8344.8	8991.3	9452.4	9552.2
40°	7959.8	8043.0	8354.4	8727.5	8805.9	8744.1	*8808.3*	9060.3	9286.0	9469.1	9742.4
42.5°	8473.2	8587.3	8981.8	9480.9	9775.7	9830.3	*9680.6*	9654.4	9414.4	9278.9	9702.0
45°	9079.3	9212.4	9659.2	10305.7	10773.9	10847.6	*10588.5*	10253.4	9495.2	9138.7	9580.8
47.5°	9759.0	9885.0	10329.5	11106.7	11803.0	11831.6	*11380.0*	10840.5	9735.3	9300.3	9673.5
50°	9987.2	10065.6	10450.7	11363.3	12646.8	12865.5	*12211.9*	11501.2	10217.7	9775.7	10125.0
52.5°	9202.9	9233.8	9568.9	10491.1	12475.7	13880.3	*13426.4*	12487.6	11075.8	10500.6	10821.4
55°	*7291.9*	*7242.0*	*7513.0*	*8359.1*	*10842.8*	*13673.6*	*14526.8*	*14037.2*	*12181.0*	*11351.5*	*11727.0*
57.5°	5100.6	5041.1	4979.3	5552.1	8090.5	11591.5	*13386.0*	14253.5	13233.9	12195.2	12703.8
60°	4192.6	4135.6	3836.1	3572.3	4891.4	8323.5	*10281.9*	11914.8	13148.3	12152.4	12672.9
62.5°	3622.2	3588.9	3467.7	3108.8	2878.3	4751.2	*6438.7*	8002.6	10089.4	9542.7	9571.3
65°	2845.0	2835.5	2918.7	2956.7	2545.5	2628.7	*3284.7*	4159.4	5454.7	5143.3	4877.1
67.5°	1944.2	1922.8	2079.7	2557.4	2448.1	2074.9	*1922.8*	1939.4	2360.1	1442.7	1145.6
70°	1235.9	1186.0	1188.4	1585.3	1991.7	1637.6	*1483.1*	1304.8	1174.1	213.9	242.4
72.5°	791.5	760.6	653.6	715.4	922.2	798.6	*805.7*	694.0	463.5	114.1	133.1
75°	332.7	306.6	235.3	187.8	185.4	116.5	*102.2*	95.1	64.2	64.2	68.9
77.5°	2.4	0.0	0.0	2.4	4.8	2.4	*2.4*	4.8	9.5	14.3	16.6
80°	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	0.0	0.0	2.4
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

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

Scaled Data Report

REPORT NUMBER: P641439
CATALOG NUMBER: GWS-SA5F-830-U-SL2-W-GRSBK

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	6830.8	6830.8	6830.8	6830.8	6830.8	6830.8	6830.8	6830.8	6830.8	6830.8	6830.8
2.5°	6868.9	6811.8	6876.0	6899.8	6897.4	6899.8	6830.8	6783.3	6780.9	6721.5	6693.0
5°	6895.0	6849.9	6897.4	6866.5	6792.8	6700.1	6576.5	6469.6	6422.0	6353.1	6319.8
7.5°	6944.9	6897.4	6890.3	6766.7	6583.7	6388.8	6170.1	5975.2	5870.6	5744.7	5751.8
10°	6980.6	6925.9	6833.2	6581.3	6277.1	5965.7	5640.1	5350.1	5167.1	4998.4	4969.8
12.5°	6994.8	6914.0	6697.7	6317.5	5889.6	5483.2	5005.5	4591.9	4306.7	4085.7	4054.8
15°	7021.0	6890.3	6524.2	5999.0	5411.9	4836.7	4228.3	3662.6	3284.7	3030.4	3051.8
17.5°	7061.4	6864.1	6329.3	5642.5	4898.5	4085.7	3263.3	2614.4	2267.4	2120.1	2122.5
20°	7118.4	6833.2	6115.4	5250.3	4282.9	3237.2	2281.7	1792.1	1694.6	1689.9	1682.8
22.5°	7194.5	6802.3	5887.3	4820.1	3553.3	2267.4	1518.8	1366.6	1407.0	1485.5	1499.7
25°	7284.8	6764.3	5632.9	4335.2	2757.1	1487.9	1138.5	1114.7	1212.2	1316.7	1340.5
27.5°	7425.0	6745.3	5343.0	3783.8	1934.7	1067.2	931.7	946.0	1033.9	1121.8	1143.2
30°	7662.7	6780.9	5026.9	3165.9	1243.1	850.9	808.1	829.5	877.0	922.2	941.2
32.5°	7986.0	6885.5	4720.3	2490.9	886.5	739.2	729.7	741.6	760.6	786.7	793.8
35°	8363.9	7066.1	4404.2	1782.6	732.0	675.0	665.5	665.5	675.0	679.8	682.1
37.5°	8675.2	7256.3	4107.1	1186.0	656.0	625.1	610.8	603.7	601.3	606.1	608.5
40°	8810.7	7334.7	3783.8	862.8	601.3	579.9	558.5	537.2	537.2	553.8	556.2
42.5°	8715.6	7246.8	3410.7	713.0	563.3	532.4	499.1	480.1	489.6	506.3	511.0
45°	8513.6	7030.5	2999.5	629.8	525.3	484.9	446.8	434.9	444.5	465.8	470.6
47.5°	8480.3	6887.9	2507.5	575.2	484.9	444.5	404.1	392.2	404.1	420.7	425.4
50°	8810.7	7011.5	1960.8	527.6	446.8	401.7	368.4	356.5	363.6	373.2	377.9
52.5°	9414.4	7470.2	1582.9	482.5	401.7	358.9	337.5	323.2	323.2	332.7	335.1
55°	*10305.7*	*8271.2*	*1366.6*	*430.2*	*349.4*	*325.6*	*306.6*	*292.3*	*292.3*	*297.1*	*299.5*
57.5°	11332.4	9240.9	1416.6	361.3	306.6	294.7	278.1	266.2	271.0	271.0	271.0
60°	11189.8	9169.6	1516.4	304.2	271.0	266.2	251.9	247.2	259.1	249.6	244.8
62.5°	8242.6	6334.1	793.8	249.6	232.9	228.2	218.7	228.2	244.8	218.7	209.2
65°	4002.5	3066.0	318.5	204.4	197.3	192.5	187.8	202.0	211.5	171.1	161.6
67.5°	941.2	765.3	206.8	173.5	164.0	154.5	159.2	161.6	154.5	116.5	111.7
70°	244.8	240.1	161.6	145.0	130.7	121.2	121.2	118.8	102.2	73.7	68.9
72.5°	133.1	130.7	116.5	109.3	90.3	80.8	83.2	73.7	57.0	42.8	40.4
75°	66.5	71.3	66.5	61.8	49.9	45.2	45.2	40.4	28.5	16.6	16.6
77.5°	14.3	16.6	16.6	14.3	11.9	9.5	9.5	11.9	4.8	0.0	0.0
80°	2.4	2.4	2.4	2.4	2.4	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

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

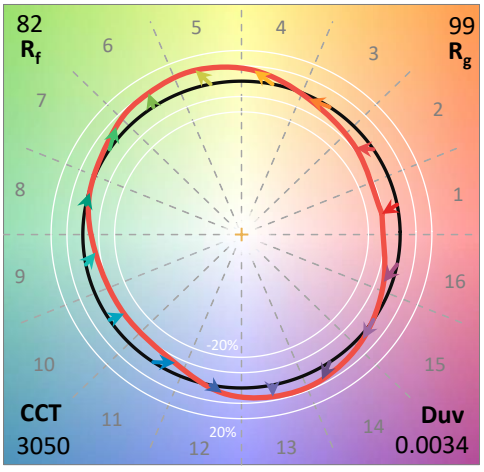
Test Information

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

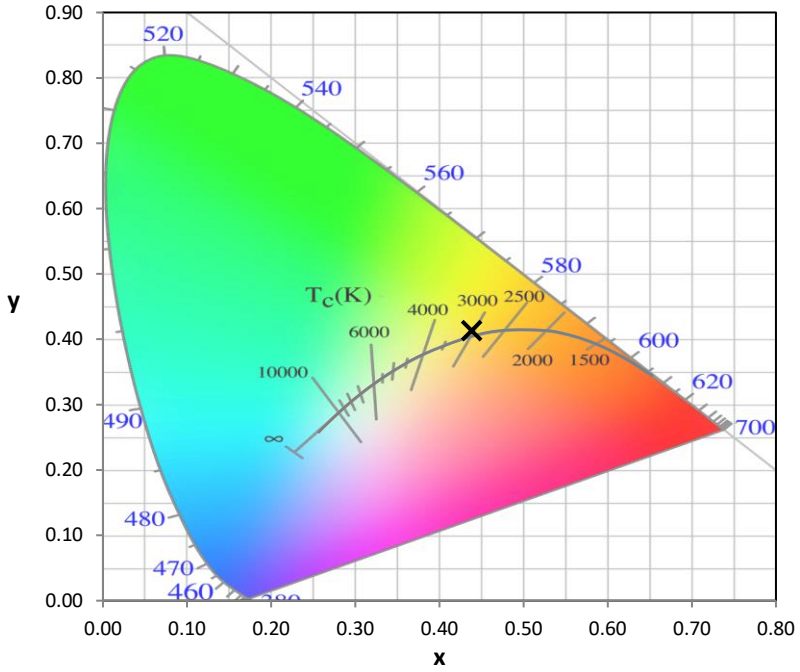
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

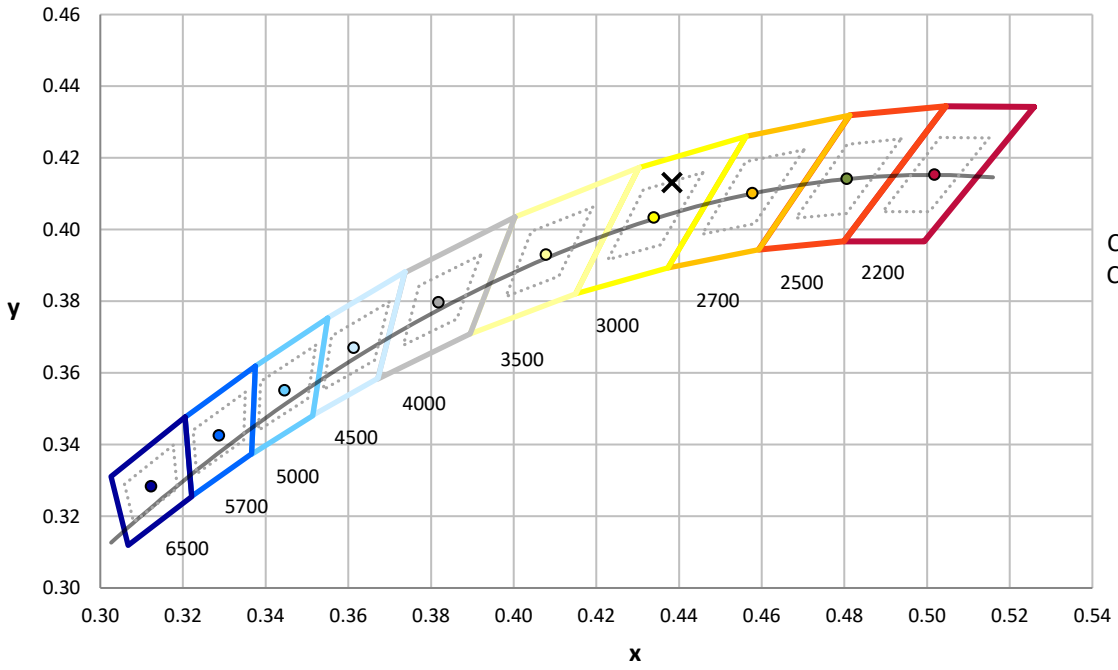
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

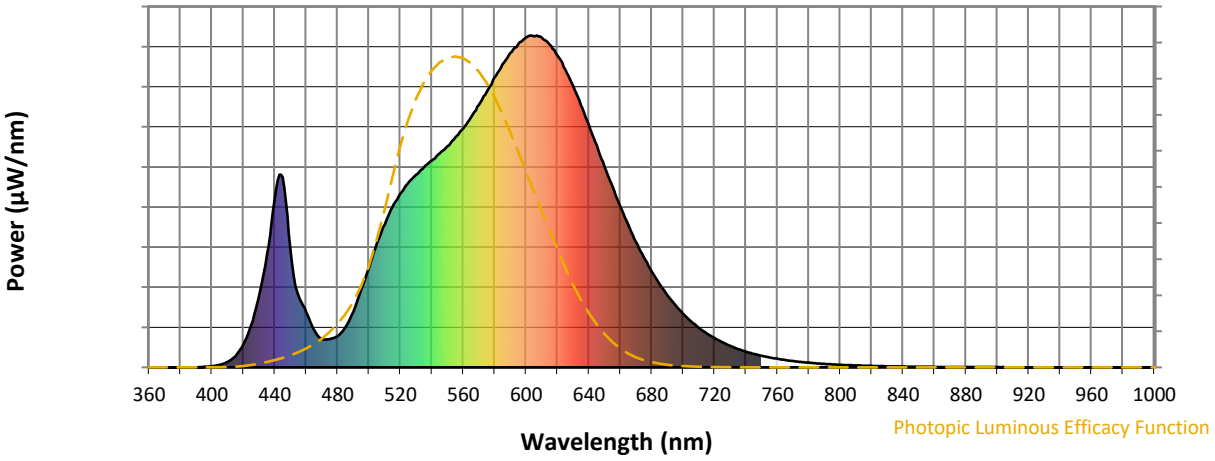


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength

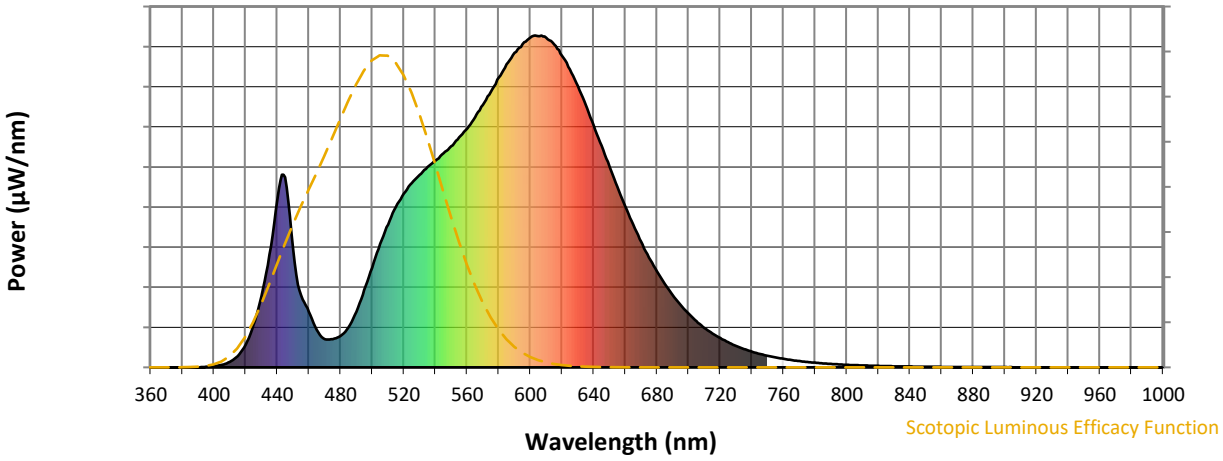


Photopic Lumens: NR

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

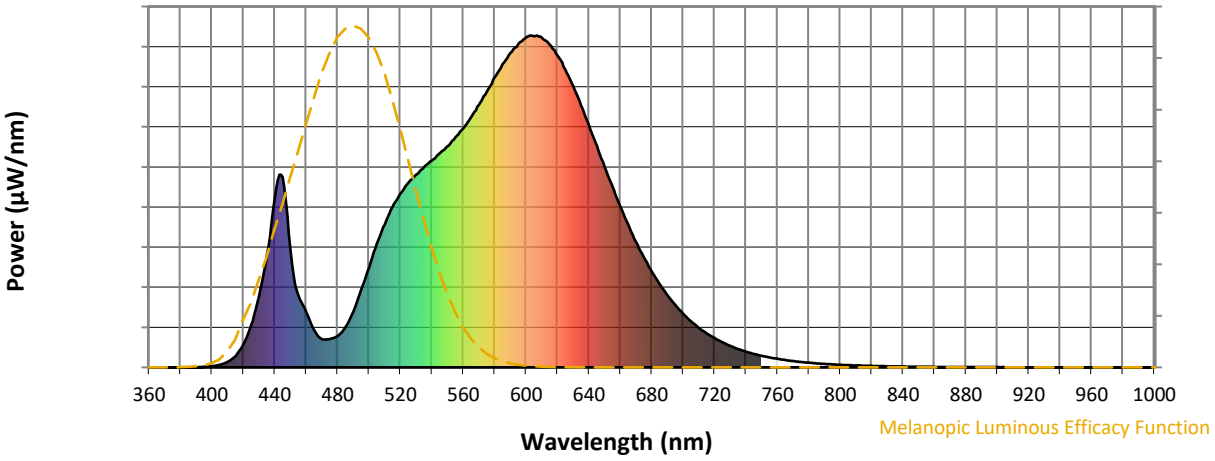


Scotopic Lumens: NR **S/P: 1.27**

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			

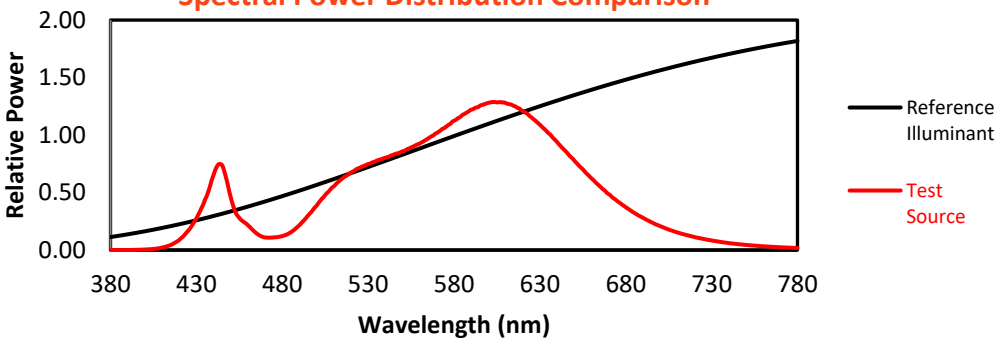
REPORT NUMBER: SP1-2408-195-9

TM-30-18

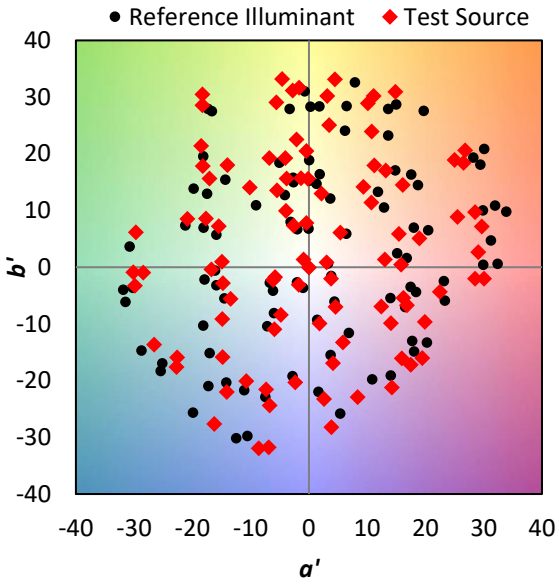
Summary

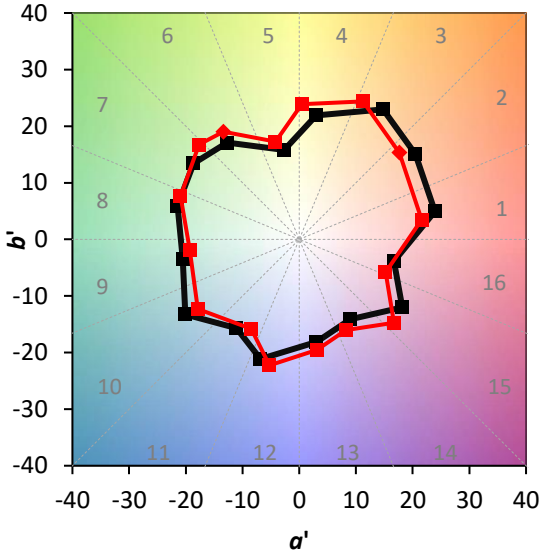
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

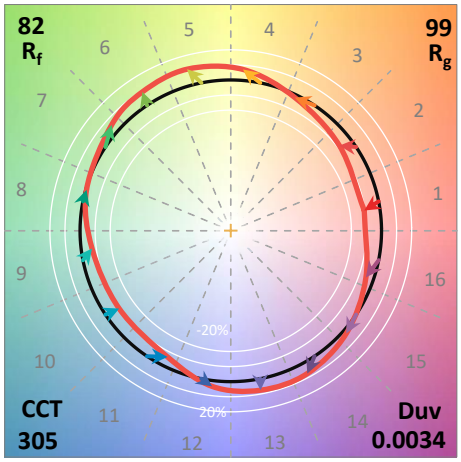
Spectral Power Distribution Comparison

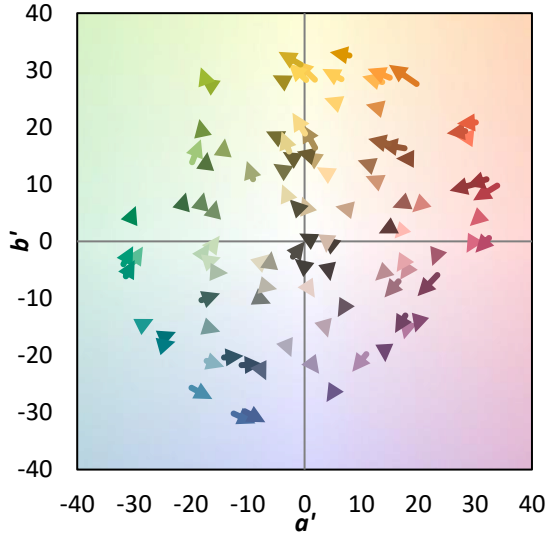


Color Vector Graphics







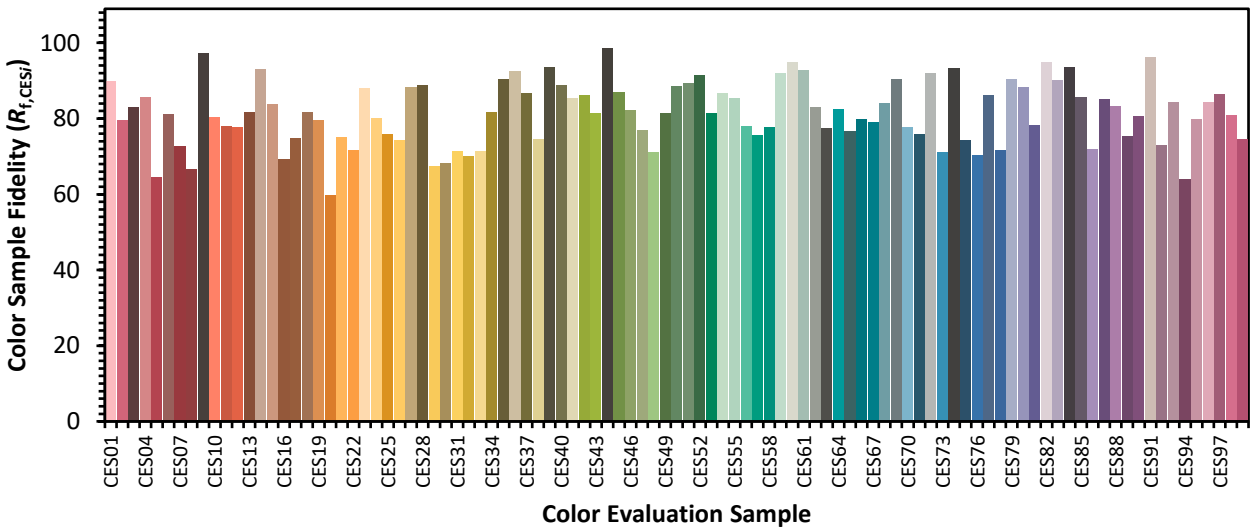


REPORT NUMBER: SP1-2408-195-9

TM-30-18

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

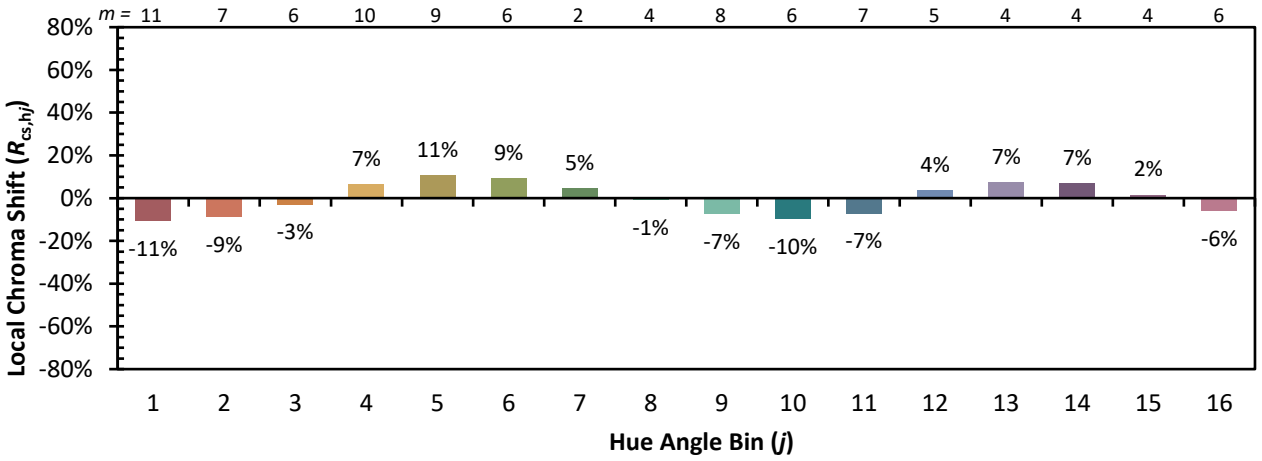
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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

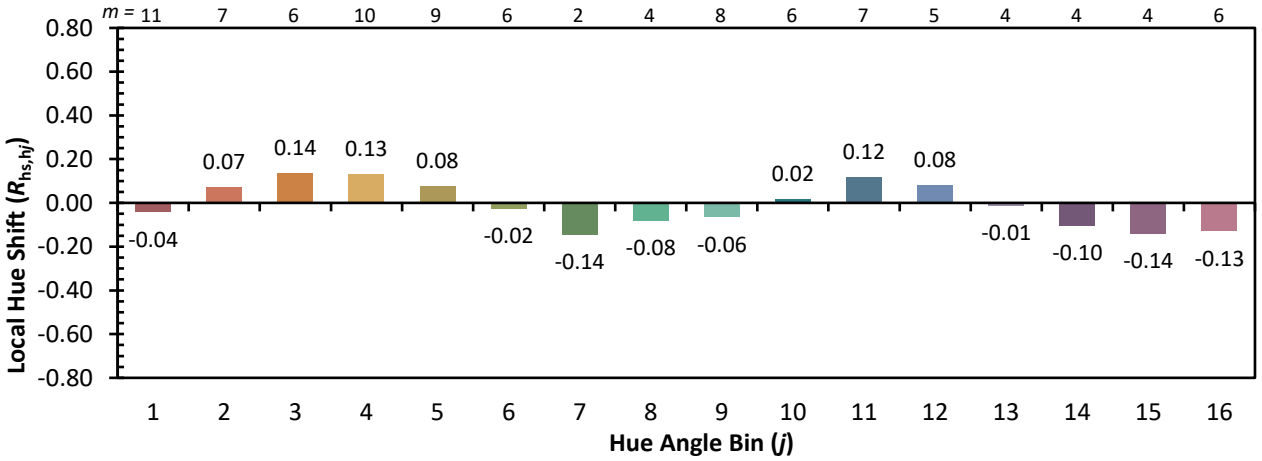


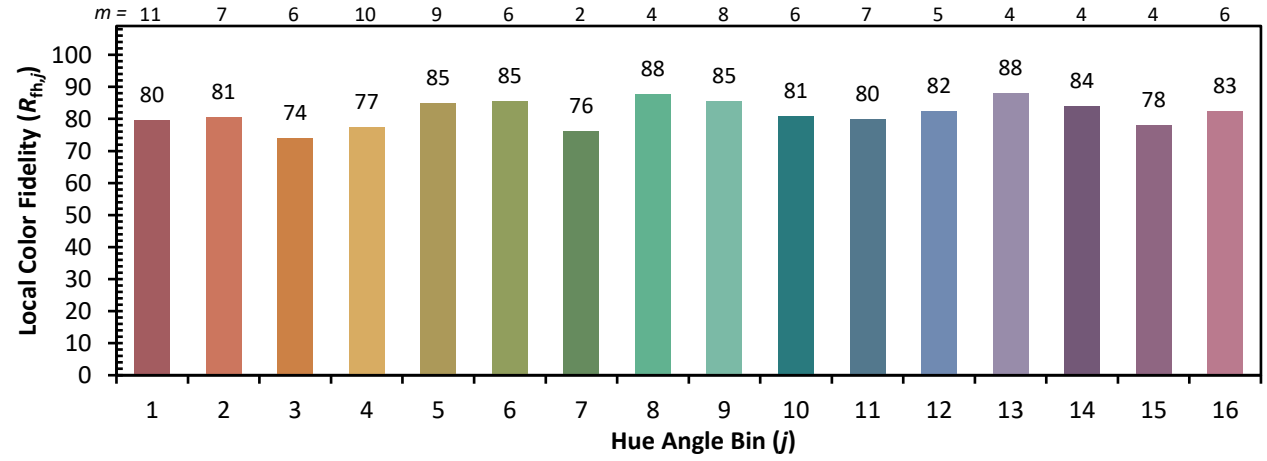
REPORT NUMBER: SP1-2408-195-9

TM-30-18

Color Rendition by Hue-Angle Bin



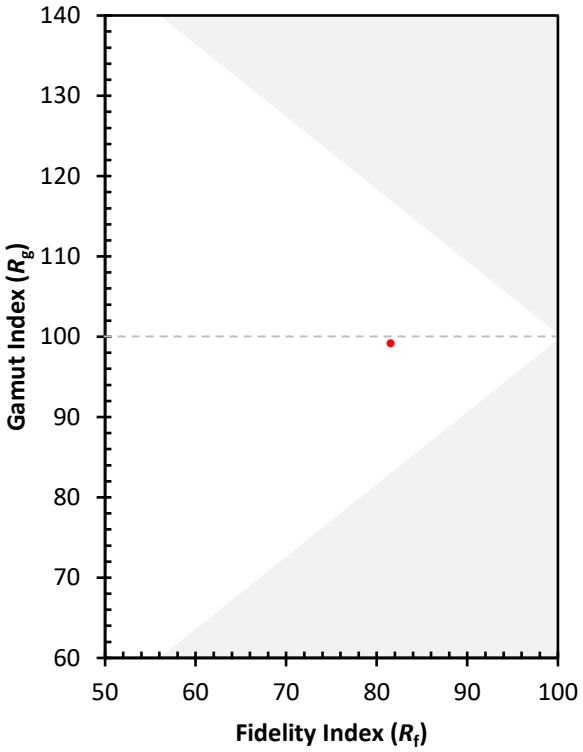


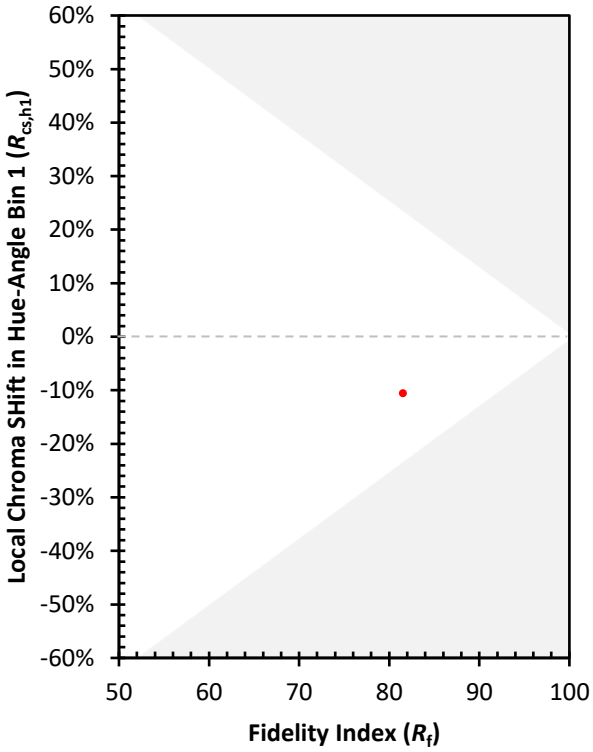


REPORT NUMBER: SP1-2408-195-9

TM-30-18

Measure Comparisons





(END OF REPORT)