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: P638008

Luminaire Tested: GWS-SA4D-830-U-T3R-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:	P638008
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-15)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	1/10/2023
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	McGRAW-EDISON
Catalog Number:	GWS-SA4D-830-U-T3R-W
Description:	GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III ROADWAY OPTICS
Light Source:	(64) 3000K CCT, 80 CRI LEDS
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	19776.6 lumens
Efficiency:	N/A
Efficacy:	122.0 lumens/watt
Luminous Opening:	Rectangular (W 1' x L: 1' x H: 0')
IES Classification:	Type III - Medium
BUG Rating:	B3 - U0 - G3

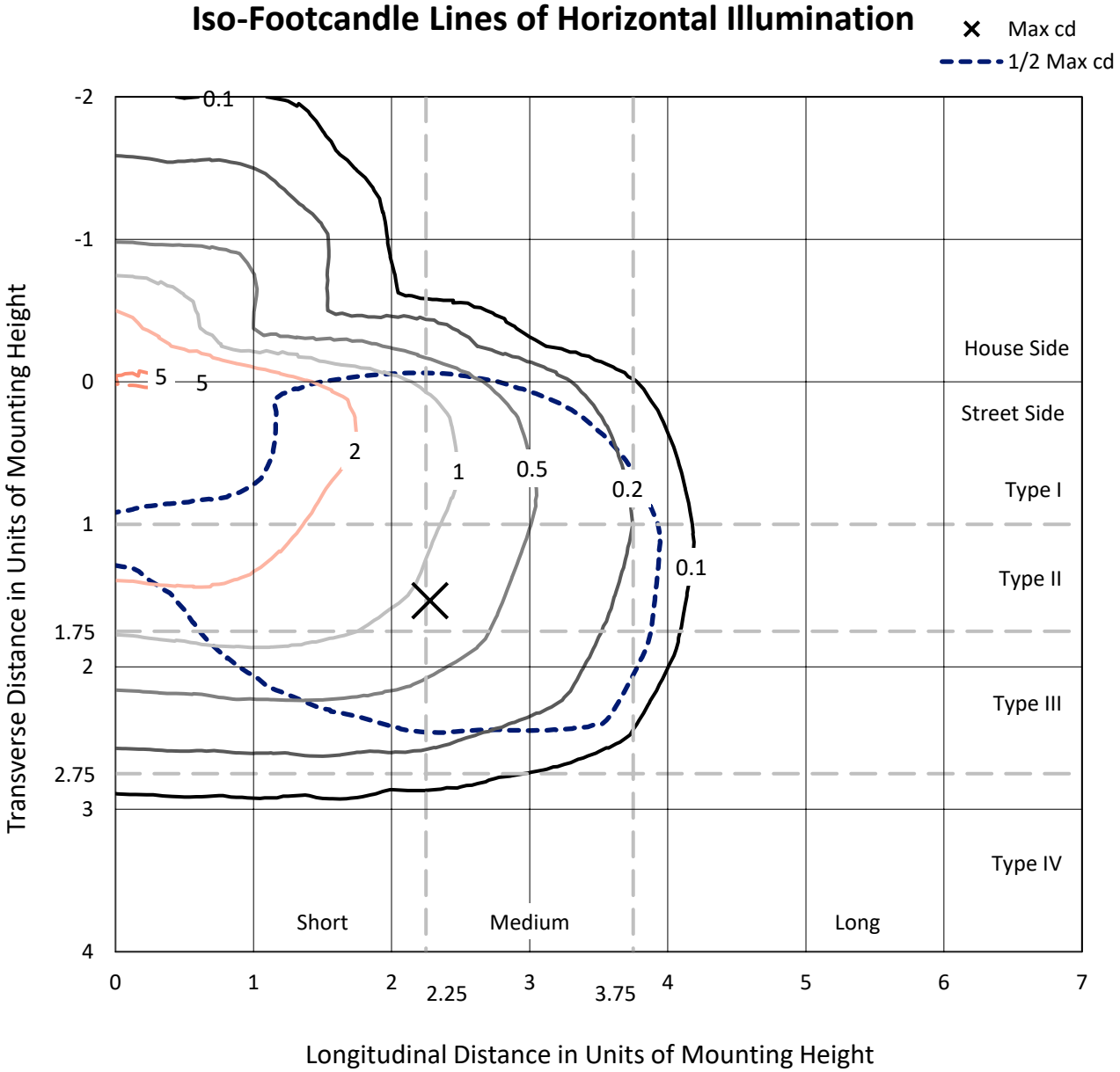
Input Watts (W):	162.1
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	0
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	28.75 FT

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

Scaled Data Report

REPORT NUMBER: P638008
CATALOG NUMBER: GWS-SA4D-830-U-T3R-W

Iso-Footcandle Lines of Horizontal Illumination



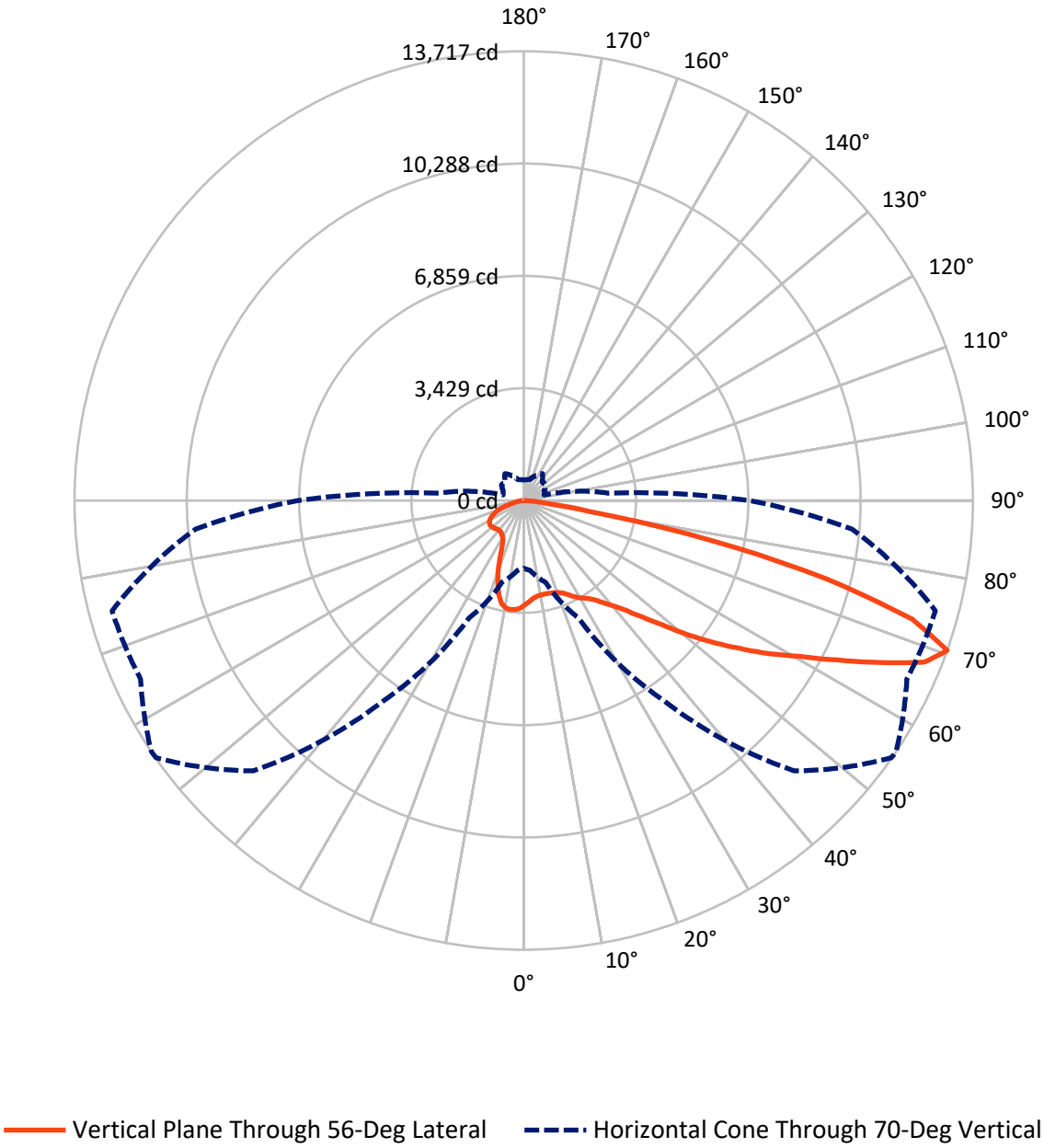
Based on 25 foot mounting height. Maximum calculated value = 5.3 fc
Type III - Medium - N/A

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

Scaled Data Report

REPORT NUMBER: P638008
CATALOG NUMBER: GWS-SA4D-830-U-T3R-W

Luminous Intensity Polar Plot



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

Scaled Data Report

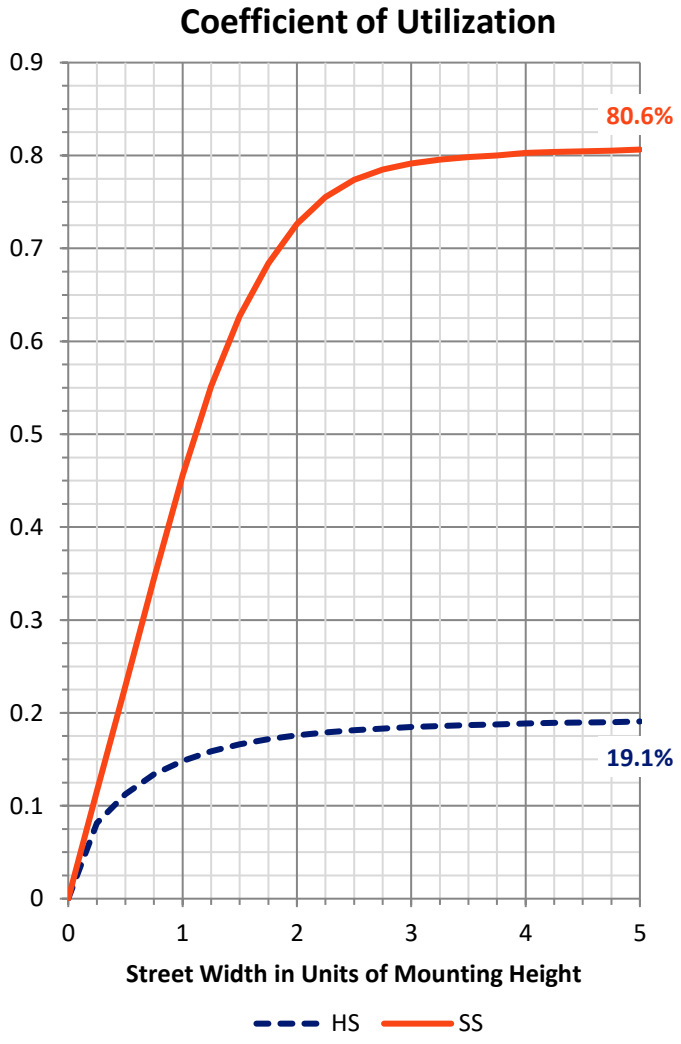
REPORT NUMBER: P638008
CATALOG NUMBER: GWS-SA4D-830-U-T3R-W

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3802.1	0.0	3802.1
	% Fixture	19.2	0.0	19.2
Street Side	Lumens	15974.5	0.0	15974.5
	% Fixture	80.8	0.0	80.8
Total	Lumens	19776.6	0.0	19776.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	295.4	1.5
10°-20°	800.4	4.0
20°-30°	1323.3	6.7
30°-40°	1978.5	10.0
40°-50°	2944.3	14.9
50°-60°	4185.9	21.2
60°-70°	5184.4	26.2
70°-80°	2862.7	14.5
80°-90°	201.6	1.0
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°	19776.6	100.0
0°-180°	19776.6	100.0



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

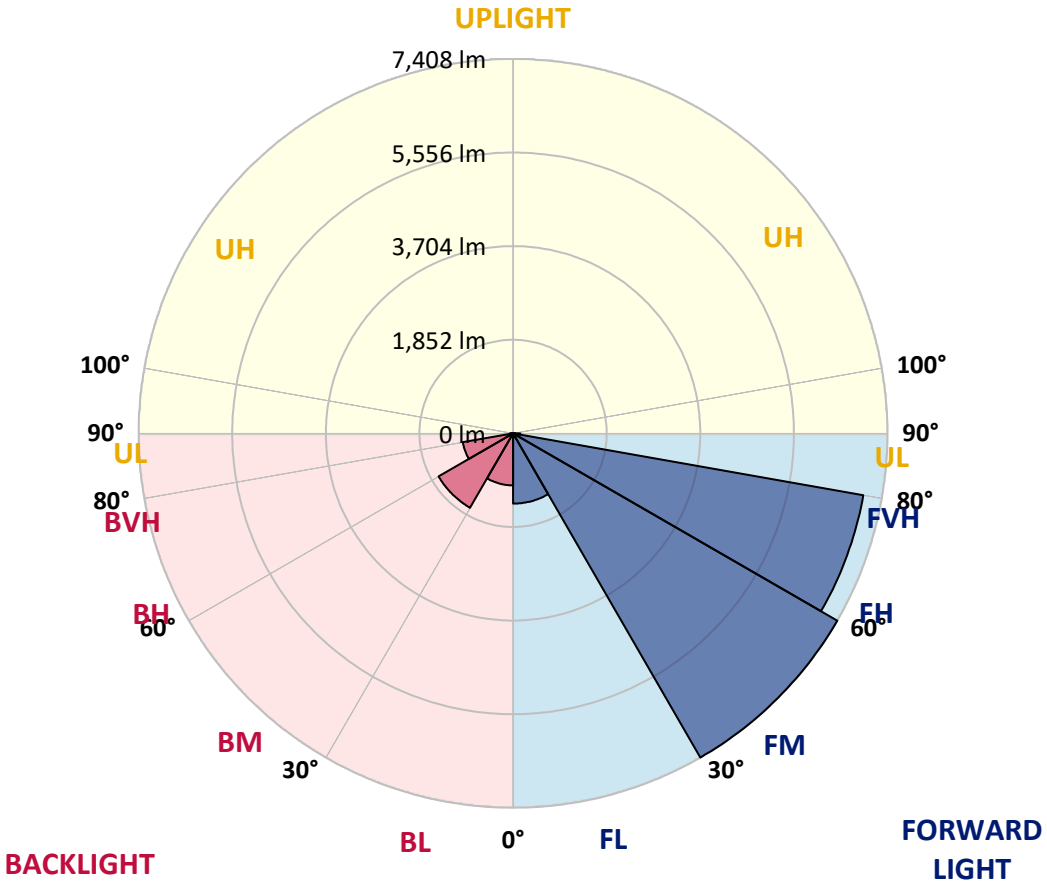
Scaled Data Report

REPORT NUMBER: P638008
CATALOG NUMBER: GWS-SA4D-830-U-T3R-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	1389.9	7.0			
FM	(30°-60°)	7408.0	37.5			
FH	(60°-80°)	7036.5	35.6			G3/7500
FVH	(80°-90°)	140.1	0.7			G2/225
BL	(0°-30°)	1029.2	5.2	B3/2500		
BM	(30°-60°)	1700.8	8.6	B2/2500		
BH	(60°-80°)	1010.6	5.1	B3/2500		G3/2500
BVH	(80°-90°)	61.5	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-G3
Type III Medium



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

Scaled Data Report

REPORT NUMBER: P638008
CATALOG NUMBER: GWS-SA4D-830-U-T3R-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	65°	75°	85°
0°	3192.2	3192.2	3192.2	3192.2	3192.2	3192.2	3192.2	3192.2	3192.2	3192.2	3192.2
2.5°	2987.2	2970.5	2990.0	2999.8	3024.9	3061.2	3093.2	3094.6	3111.4	3151.8	3190.9
5°	2852.0	2843.6	2849.2	2878.5	2905.0	2951.0	2999.8	3004.0	3051.4	3130.9	3209.0
7.5°	2747.4	2736.2	2757.1	2794.8	2828.3	2879.9	2944.0	2949.6	3016.5	3136.5	3256.4
10°	2596.8	2588.4	2627.4	2677.6	2750.2	2835.2	2920.3	2927.3	3015.1	3172.7	3340.1
12.5°	2531.2	2531.2	2547.9	2595.4	2674.8	2787.8	2916.1	2927.3	3037.4	3228.5	3447.5
15°	2633.0	2640.0	2626.0	2623.2	2655.3	2762.7	2921.7	2938.4	3079.3	3285.7	3553.4
17.5°	2838.0	2845.0	2808.7	2751.6	2719.5	2786.4	2942.6	2960.7	3123.9	3348.4	3667.8
20°	3125.3	3133.7	3054.2	2966.3	2856.1	2854.8	2983.1	2999.8	3181.1	3416.8	3789.1
22.5°	3461.4	3467.0	3366.6	3227.1	3058.4	2981.7	3052.8	3069.5	3255.0	3511.6	3920.2
25°	3850.5	3867.2	3745.9	3543.7	3315.0	3156.0	3168.5	3188.1	3387.5	3638.5	4075.0
27.5°	4266.1	4287.0	4147.6	3924.4	3609.2	3348.4	3317.8	3334.5	3528.3	3716.6	4157.3
30°	4691.4	4706.8	4567.3	4312.1	3925.8	3566.0	3443.3	3453.0	3589.7	3754.3	4241.0
32.5°	5164.2	5151.7	5017.8	4723.5	4291.2	3826.8	3560.4	3557.6	3658.0	3829.6	4360.9
35°	5607.7	5625.8	5483.6	5158.6	4692.8	4148.9	3736.1	3725.0	3803.1	3952.3	4529.7
37.5°	6144.6	6139.0	5968.9	5617.5	5095.9	4457.2	3983.0	3963.5	3991.4	4143.4	4765.4
40°	6528.1	6567.2	6457.0	6129.3	5567.3	4836.5	4271.7	4228.4	4235.4	4379.1	5080.5
42.5°	6841.9	6878.2	6889.3	6680.2	6107.0	5305.1	4631.5	4588.2	4592.4	4796.0	5468.2
45°	7083.2	7132.0	7289.6	7228.2	6715.0	5846.2	5118.2	5073.6	5076.4	5302.3	5936.8
47.5°	7182.2	7235.2	7554.6	7701.0	7360.7	6493.3	5723.5	5657.9	5667.7	5917.3	6472.4
50°	7150.1	7221.3	7653.6	8065.0	7901.8	7151.5	6447.3	6401.2	6363.6	6726.2	7053.9
52.5°	6874.0	6952.1	7643.8	8296.5	8343.9	7773.5	7194.8	7168.3	7159.9	7585.2	7703.8
55°	6060.9	6192.0	7307.7	8357.9	8689.8	8359.3	8005.0	7960.4	8003.6	8505.7	8360.6
57.5°	5610.5	5708.1	6649.5	8289.5	8972.9	8917.1	8813.9	8818.1	8866.9	9505.6	9157.0
60°	5353.9	5468.2	6284.1	8102.6	9244.8	9594.9	9660.4	9660.4	9748.3	10583.6	9965.8
62.5°	5013.6	5129.4	5942.4	7742.8	9495.9	10392.6	10724.5	10720.3	10755.2	11739.8	10756.6
65°	4323.3	4430.7	5256.3	7175.2	9618.6	11271.2	11933.6	11921.1	11851.3	12769.0	11279.6
67.5°	3139.3	3241.1	4026.2	6095.8	9176.5	11979.6	13179.0	13184.6	12767.6	13417.5	11307.4
70°	2069.6	2139.3	2588.4	3959.3	7462.5	11674.2	13700.6	13717.3	12908.5	13013.0	10063.5
72.5°	1291.4	1340.2	1616.3	2361.1	4409.7	9240.6	12361.8	12407.8	11612.9	11435.7	8268.6
75°	857.7	891.2	1075.2	1376.5	2040.3	5001.0	9396.8	9544.7	9307.6	8964.5	5761.1
77.5°	516.0	543.9	684.8	874.4	903.7	1953.8	5485.0	5867.1	5900.6	4680.3	2412.7
80°	235.7	267.8	377.9	499.3	481.1	680.6	1934.3	2023.6	2387.6	1486.6	761.5
82.5°	139.5	153.4	251.0	248.2	205.0	330.5	695.9	714.0	606.7	543.9	324.9
85°	55.8	65.5	106.0	93.4	75.3	107.4	262.2	274.7	263.6	237.1	119.9
87.5°	0.0	0.0	0.0	0.0	1.4	2.8	23.7	25.1	36.3	65.5	36.3
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: P638008
CATALOG NUMBER: GWS-SA4D-830-U-T3R-W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3192.2	3192.2	3192.2	3192.2	3192.2	3192.2	3192.2	3192.2	3192.2	3192.2	3192.2
2.5°	3216.0	3207.6	3249.4	3281.5	3295.4	3309.4	3296.8	3292.7	3292.7	3264.8	3250.8
5°	3250.8	3255.0	3312.2	3338.7	3338.7	3327.5	3294.1	3270.3	3262.0	3225.7	3216.0
7.5°	3316.4	3334.5	3387.5	3386.1	3347.0	3285.7	3202.0	3137.9	3079.3	3054.2	3038.8
10°	3423.8	3447.5	3483.7	3425.1	3316.4	3154.6	2977.5	2838.0	2754.3	2687.4	2687.4
12.5°	3546.5	3568.8	3561.8	3426.5	3202.0	2899.4	2644.2	2483.8	2366.6	2305.3	2305.3
15°	3669.2	3687.3	3612.0	3362.4	2963.5	2560.5	2281.6	2089.1	1987.3	1930.1	1930.1
17.5°	3793.3	3791.9	3632.9	3214.6	2652.5	2185.3	1912.0	1762.8	1727.9	1718.2	1716.8
20°	3913.3	3881.2	3606.4	2967.7	2291.3	1807.4	1634.5	1644.2	1695.8	1718.2	1720.9
22.5°	4048.5	3969.0	3528.3	2652.5	1881.3	1545.2	1556.4	1637.3	1712.6	1746.0	1750.2
25°	4186.6	4044.4	3397.3	2283.0	1538.2	1449.0	1535.5	1626.1	1711.2	1754.4	1758.6
27.5°	4242.4	4044.4	3174.1	1854.8	1355.6	1408.5	1503.4	1591.2	1680.5	1730.7	1740.5
30°	4288.4	4009.5	2861.7	1468.5	1280.2	1369.5	1451.8	1532.7	1620.5	1681.9	1693.0
32.5°	4352.6	3978.8	2483.8	1234.2	1245.4	1331.8	1389.0	1457.4	1536.9	1577.3	1573.1
35°	4427.9	3931.4	2027.8	1122.7	1216.1	1299.8	1340.2	1380.7	1344.4	1343.0	1347.2
37.5°	4535.3	3889.5	1630.3	1072.5	1196.6	1277.5	1310.9	1224.5	1174.3	1153.3	1145.0
40°	4690.1	3872.8	1285.8	1043.2	1193.8	1276.1	1252.4	1118.5	1050.1	977.6	976.2
42.5°	4885.3	3860.3	1062.7	1029.2	1203.5	1308.1	1171.5	1048.7	907.9	875.8	873.0
45°	5136.3	3840.7	951.1	1026.4	1227.3	1333.2	1163.1	952.5	856.3	842.3	842.3
47.5°	5439.0	3810.1	900.9	1026.4	1253.7	1322.1	1138.0	931.6	832.6	847.9	857.7
50°	5786.2	3771.0	874.4	1023.6	1280.2	1322.1	1085.0	927.4	827.0	906.5	938.6
52.5°	6157.2	3726.4	856.3	1012.5	1298.4	1323.5	1087.8	941.4	832.6	920.4	946.9
55°	6567.2	3719.4	831.2	988.8	1304.0	1287.2	1094.8	972.0	840.9	834.0	835.4
57.5°	7084.6	3803.1	813.1	953.9	1281.6	1213.3	1108.7	994.4	831.2	832.6	842.3
60°	7625.7	3960.7	828.4	920.4	1235.6	1143.6	1118.5	983.2	783.8	761.5	764.2
62.5°	8085.9	4080.6	840.9	905.1	1168.7	1082.2	1108.7	958.1	757.3	751.7	764.2
65°	8278.4	3981.6	810.3	873.0	1071.1	1006.9	1087.8	926.0	735.0	714.0	715.4
67.5°	8065.0	3517.2	750.3	801.9	960.9	910.7	1054.3	884.2	704.3	679.2	673.6
70°	*6889.3*	*2584.2*	*647.1*	*688.9*	*827.0*	*797.7*	*1002.7*	*829.8*	*655.5*	*637.3*	*624.8*
72.5°	5551.9	1829.7	536.9	548.1	648.5	672.2	913.5	761.5	599.7	548.1	529.9
75°	3864.4	1149.2	447.7	436.5	468.6	513.2	712.6	631.8	517.4	463.0	446.3
77.5°	1662.4	589.9	350.0	344.5	312.4	355.6	546.7	527.2	433.7	371.0	361.2
80°	556.4	341.7	252.4	242.7	207.8	249.6	384.9	421.2	340.3	274.7	258.0
82.5°	278.9	198.0	160.4	145.0	139.5	157.6	227.3	262.2	235.7	189.7	160.4
85°	136.7	113.0	87.9	86.5	72.5	68.3	94.8	111.6	106.0	78.1	73.9
87.5°	50.2	44.6	27.9	22.3	13.9	9.8	5.6	5.6	4.2	4.2	4.2
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

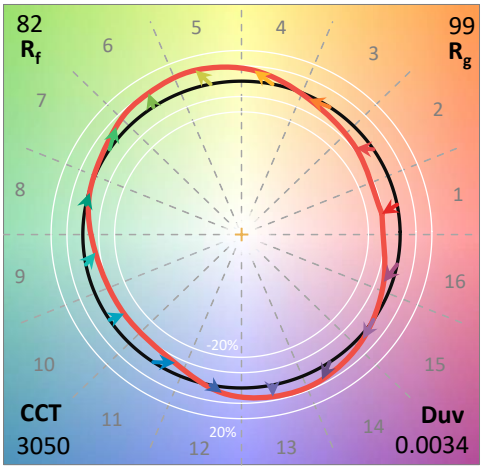
Test Information

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

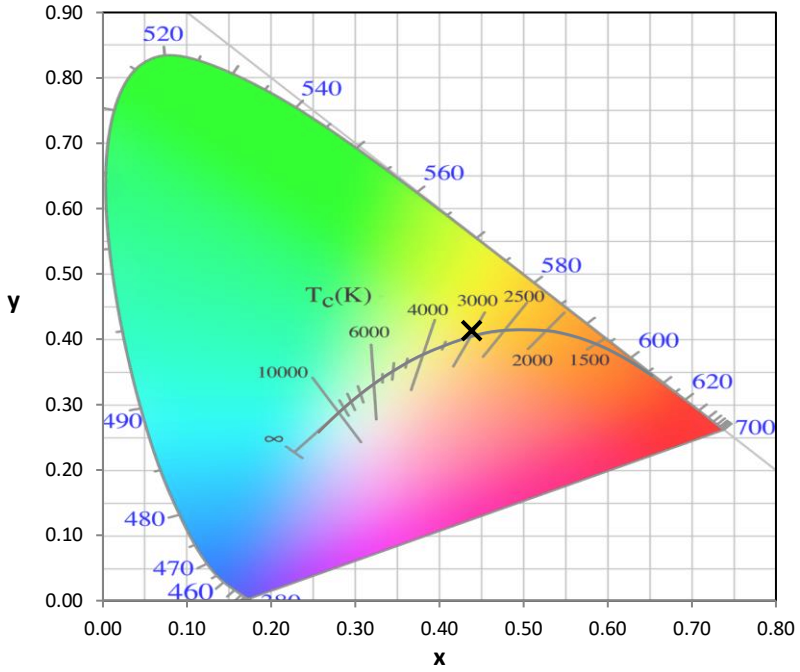
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

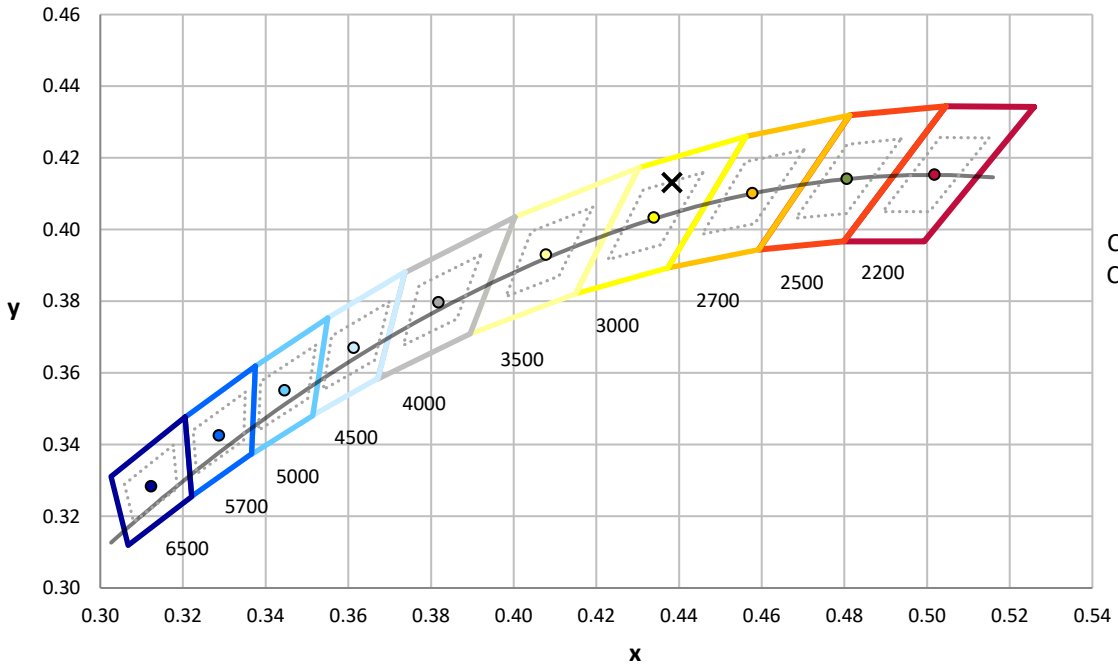
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

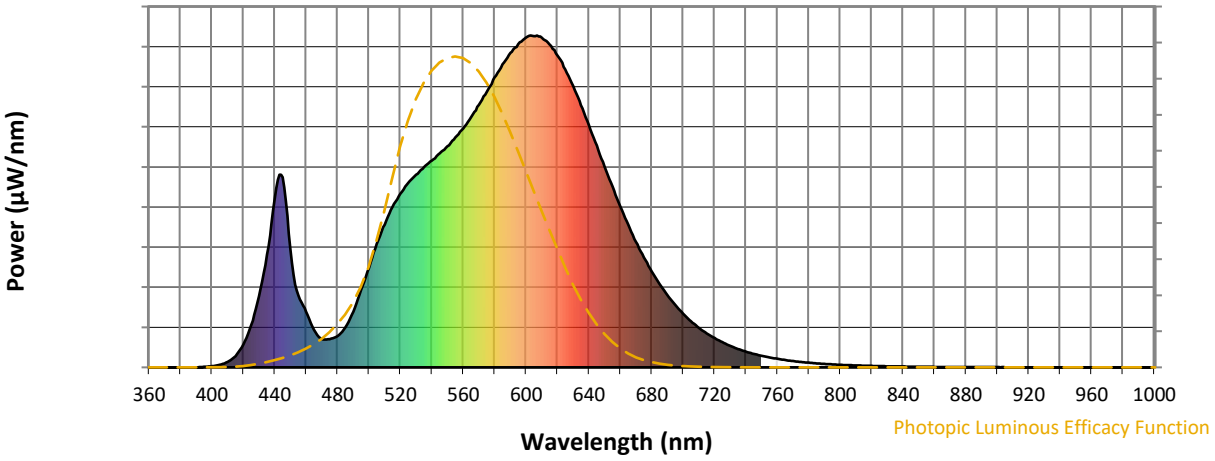


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength

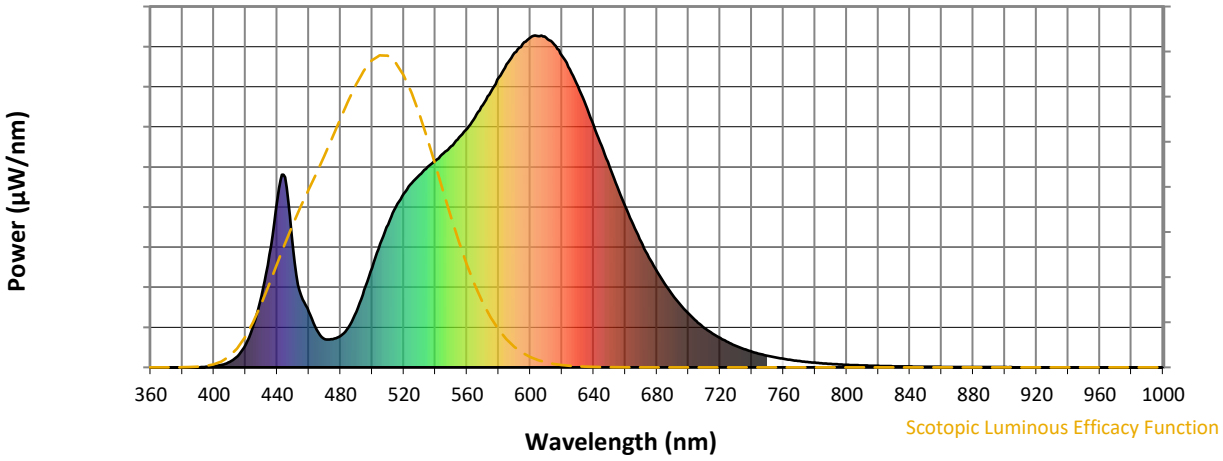


Photopic Lumens: NR

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

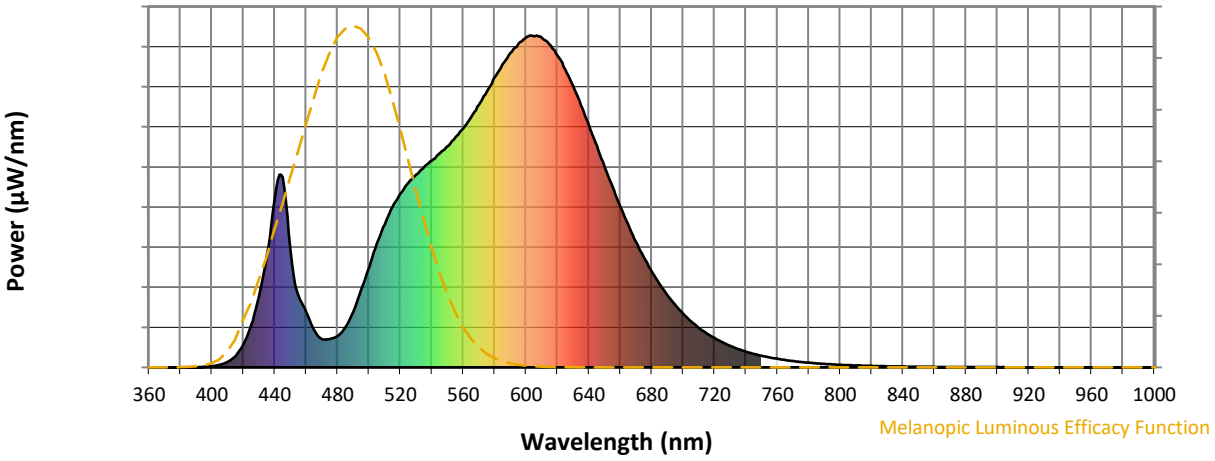


Scotopic Lumens: NR **S/P: 1.27**

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			

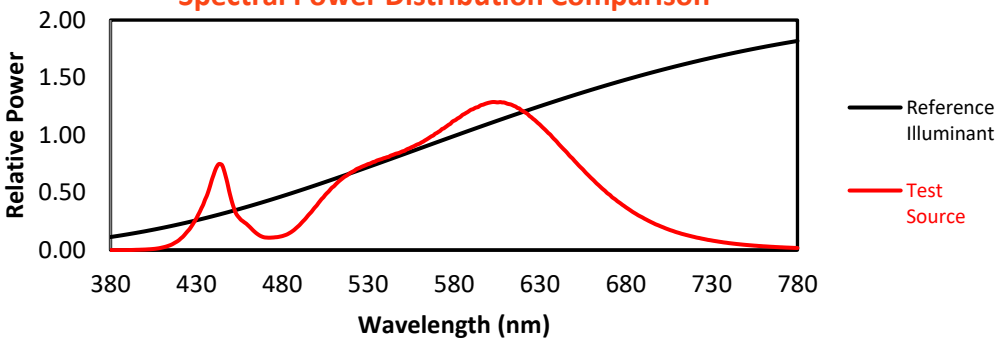
REPORT NUMBER: SP1-2408-195-9

TM-30-18

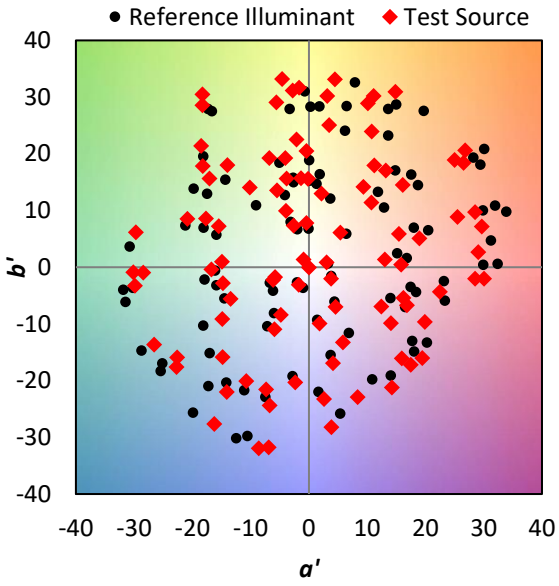
Summary

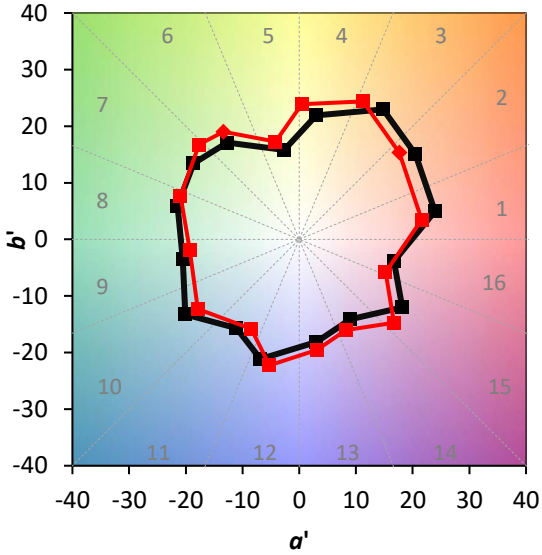
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

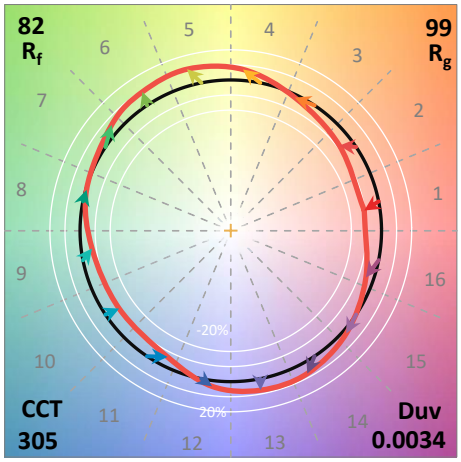
Spectral Power Distribution Comparison

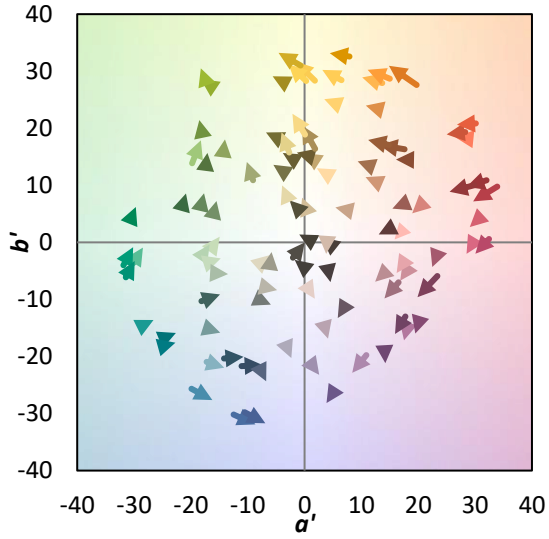


Color Vector Graphics







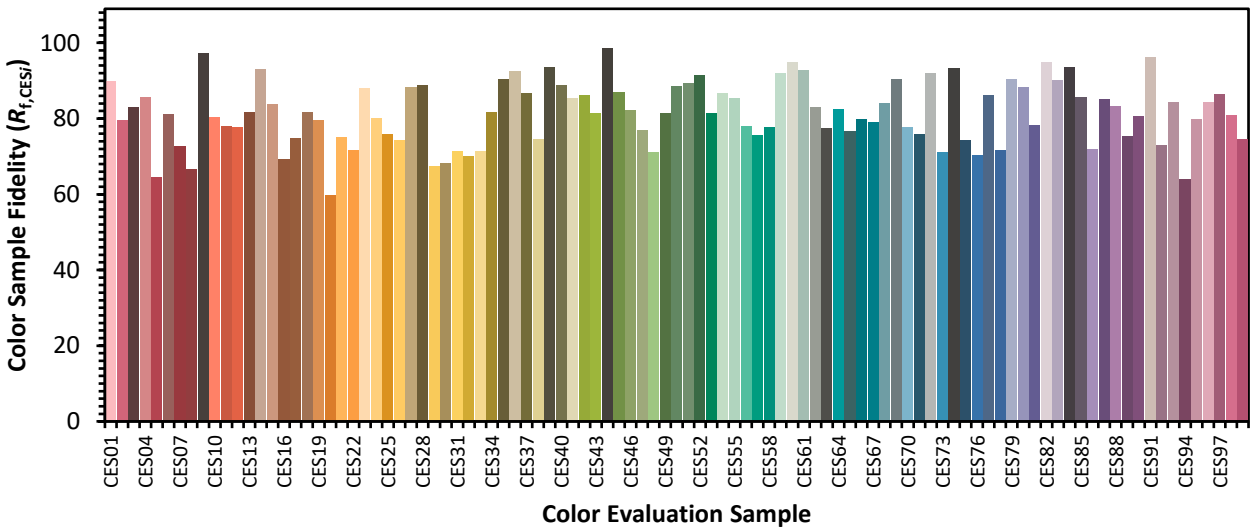


REPORT NUMBER: SP1-2408-195-9

TM-30-18

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

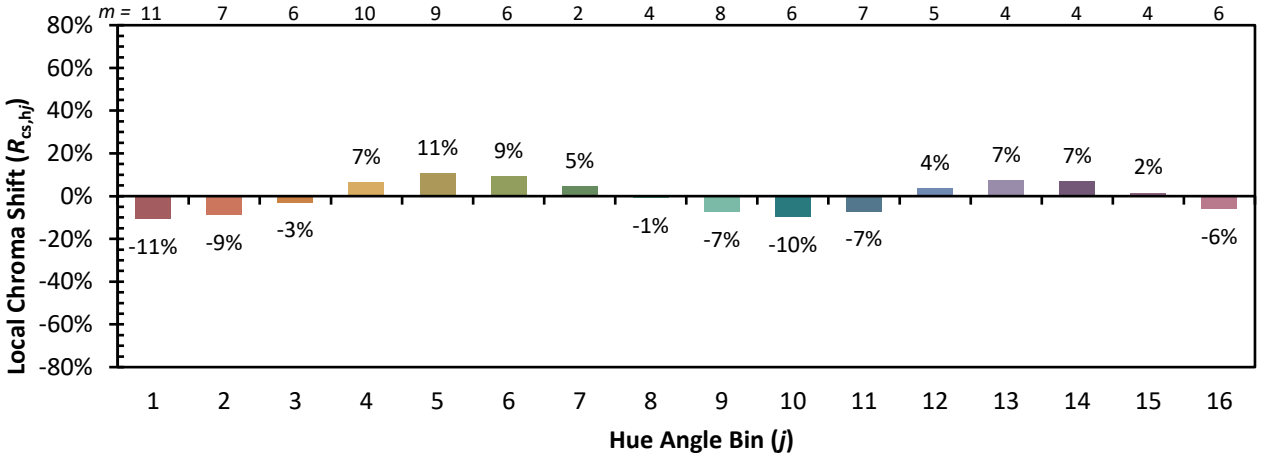
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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

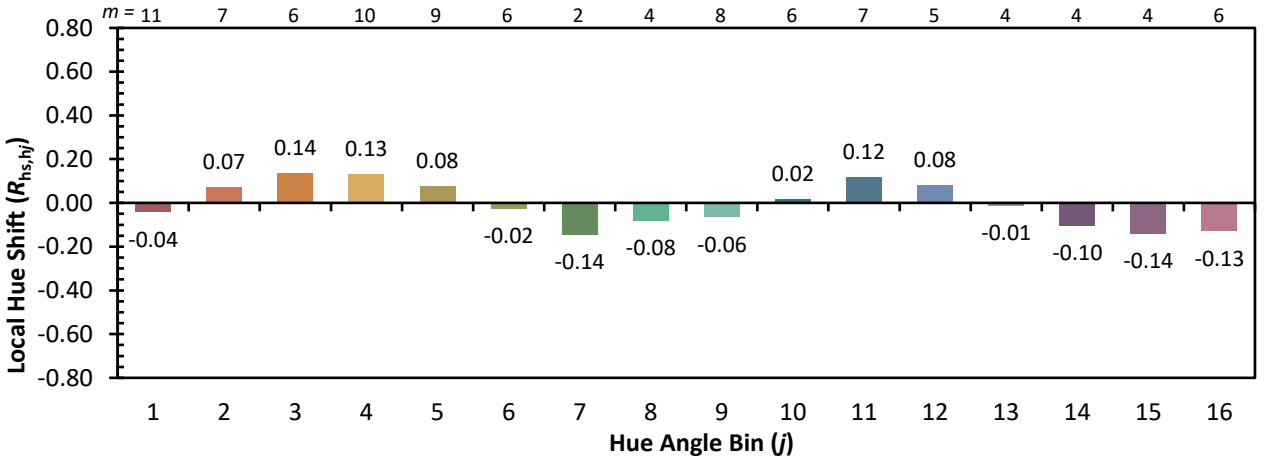


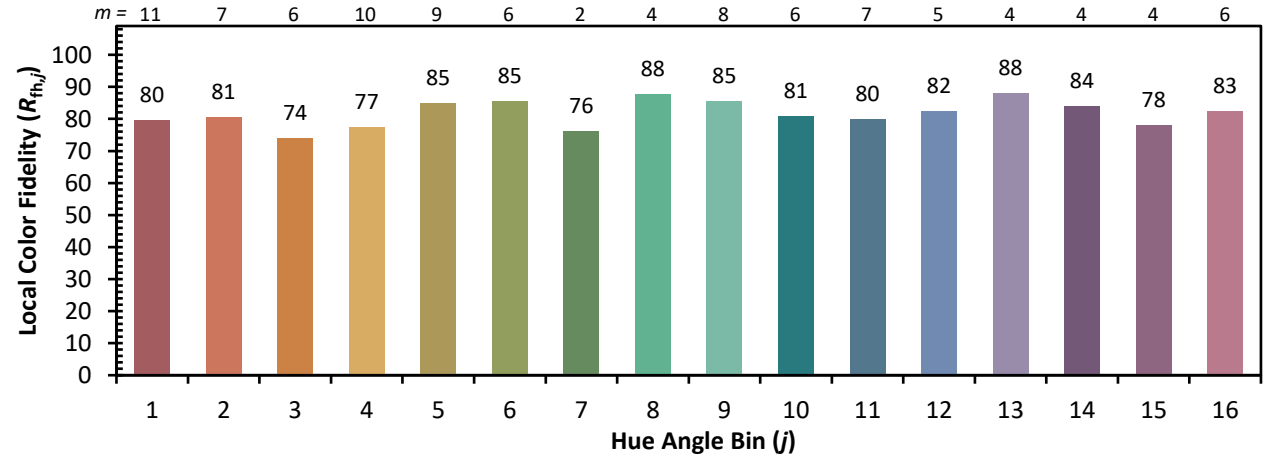
REPORT NUMBER: SP1-2408-195-9

TM-30-18

Color Rendition by Hue-Angle Bin



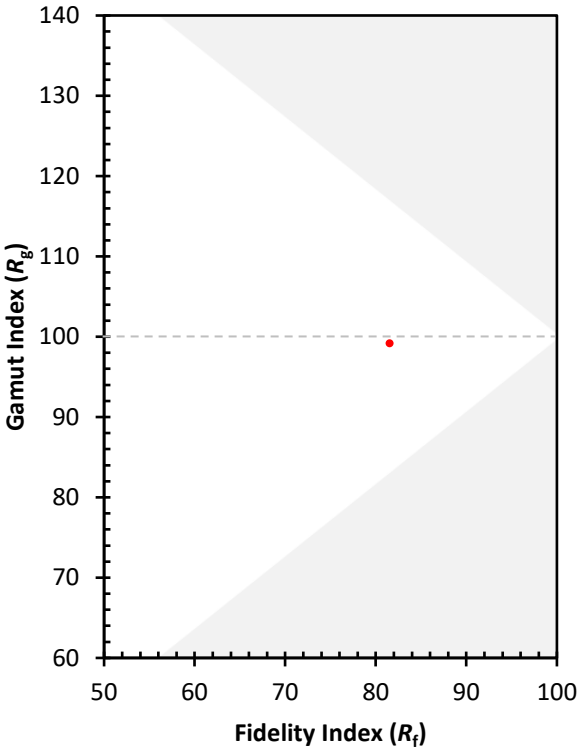


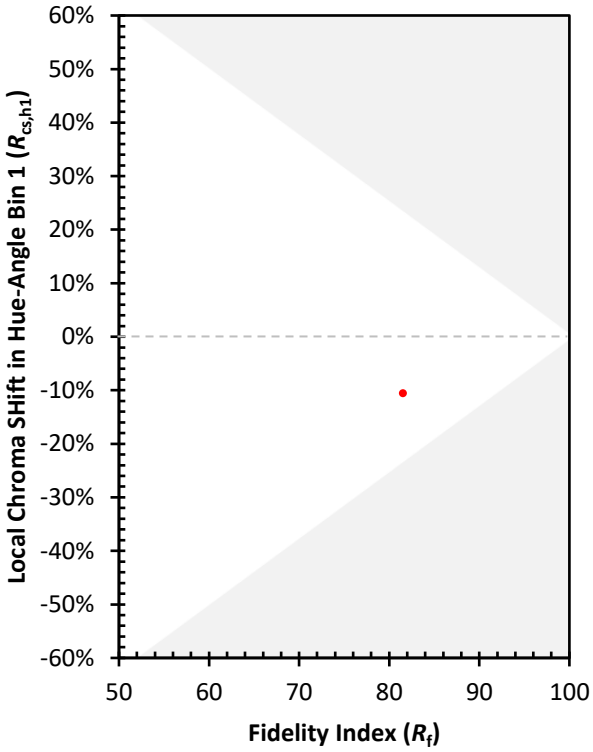


REPORT NUMBER: SP1-2408-195-9

TM-30-18

Measure Comparisons





(END OF REPORT)