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: P638957

Luminaire Tested: GWS-SA4F-830-U-AFL-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:	P638957
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-46)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	1/10/2023
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	McGRAW-EDISON
Catalog Number:	GWS-SA4F-830-U-AFL-W-GRSBK
Description:	GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK
Light Source:	(64) 3000K CCT, 80 CRI LEDS
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	20356.6 lumens
Efficiency:	N/A
Efficacy:	90.4 lumens/watt
Luminous Opening:	Rectangular (W 1' x L: 1' x H: 0')
IES Classification:	Type II - Short
BUG Rating:	B3 - U0 - G1

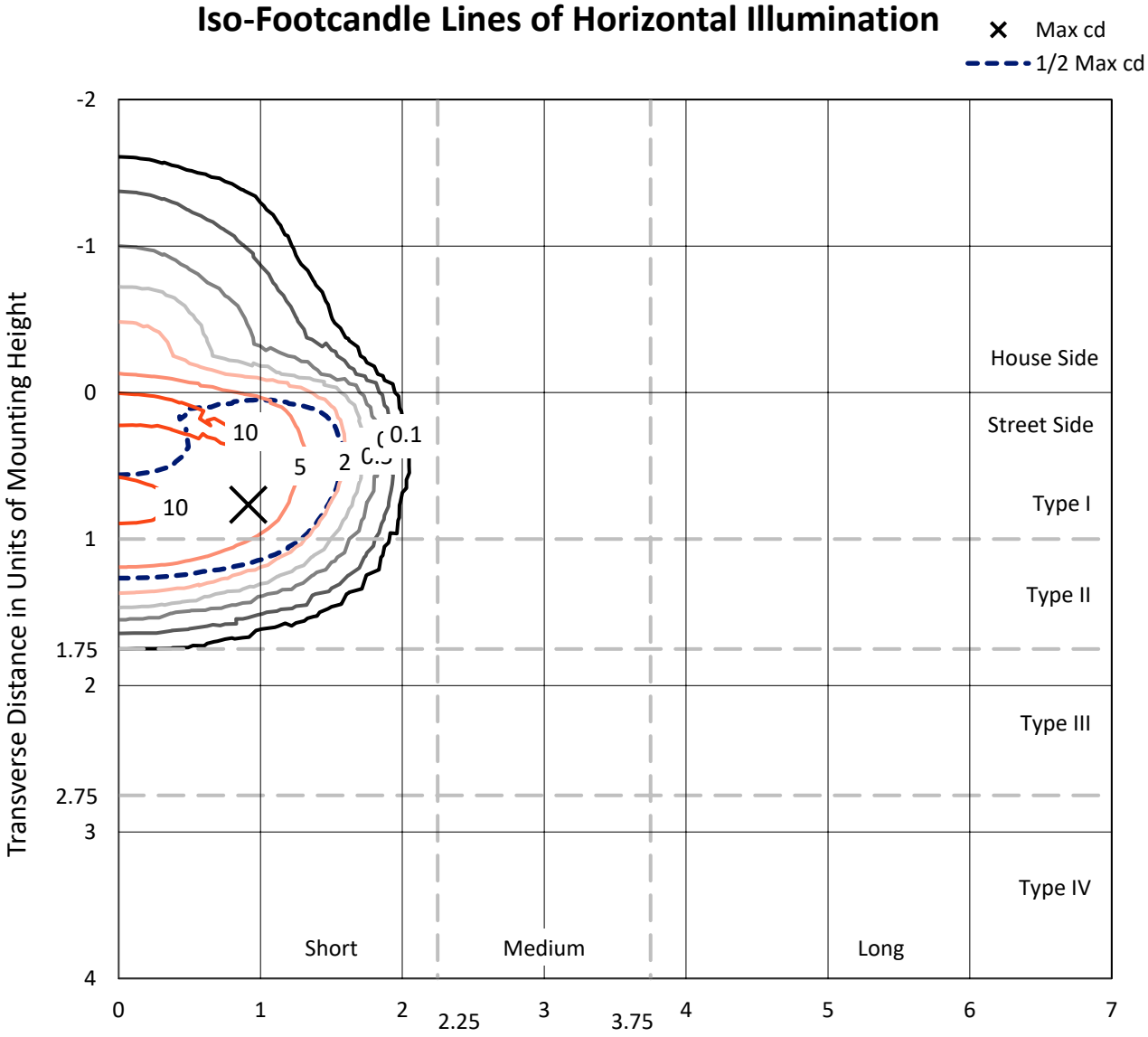
Input Watts (W):	225.3
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	0
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	28.75 FT

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

Scaled Data Report

REPORT NUMBER: P638957
CATALOG NUMBER: GWS-SA4F-830-U-AFL-W-GRSBK

Iso-Footcandle Lines of Horizontal Illumination



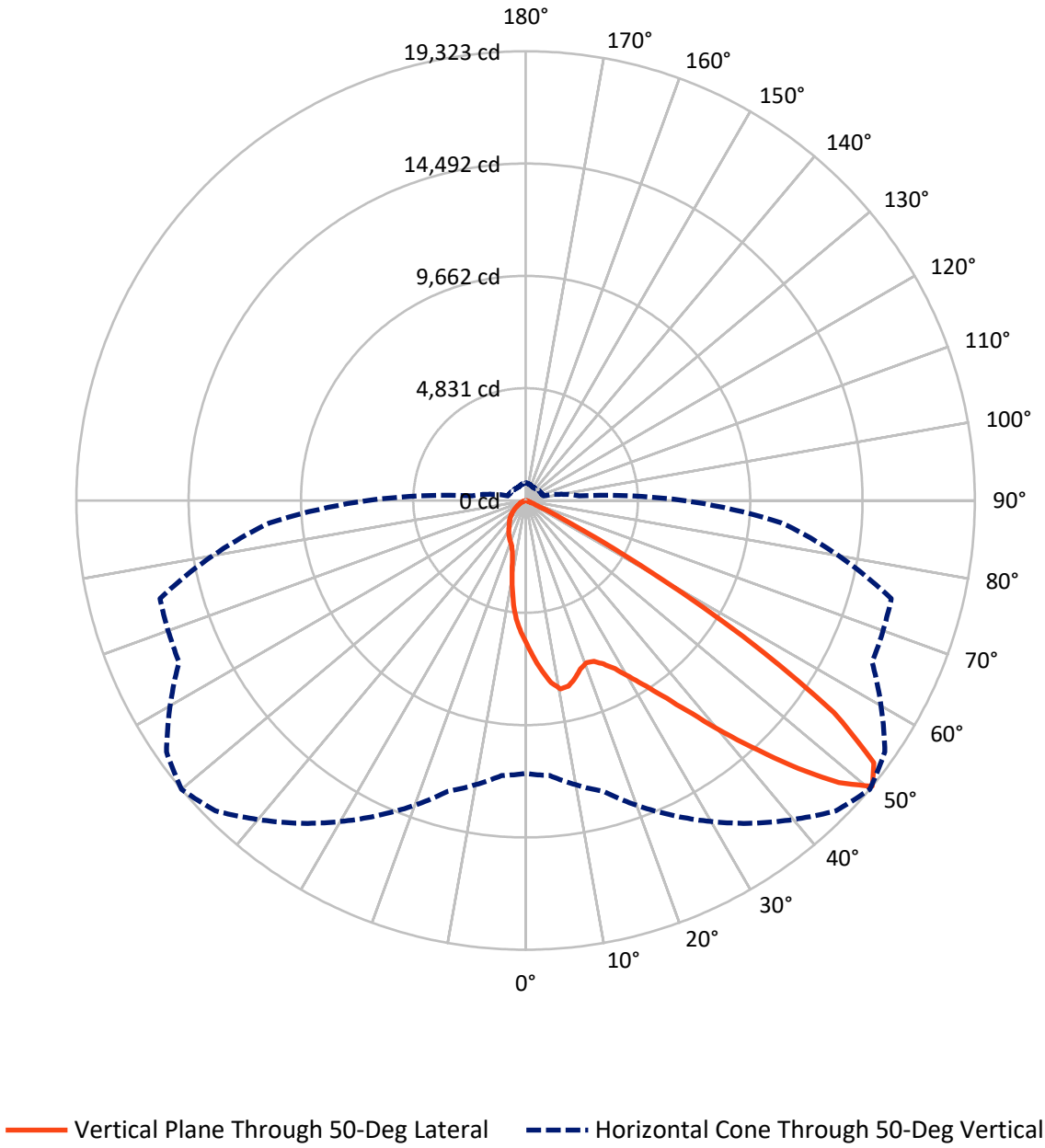
Based on 25 foot mounting height. Maximum calculated value = 12.6 fc
Type II - Short - N/A

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

Scaled Data Report

REPORT NUMBER: P638957
CATALOG NUMBER: GWS-SA4F-830-U-AFL-W-GRSBK

Luminous Intensity Polar Plot



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

Scaled Data Report

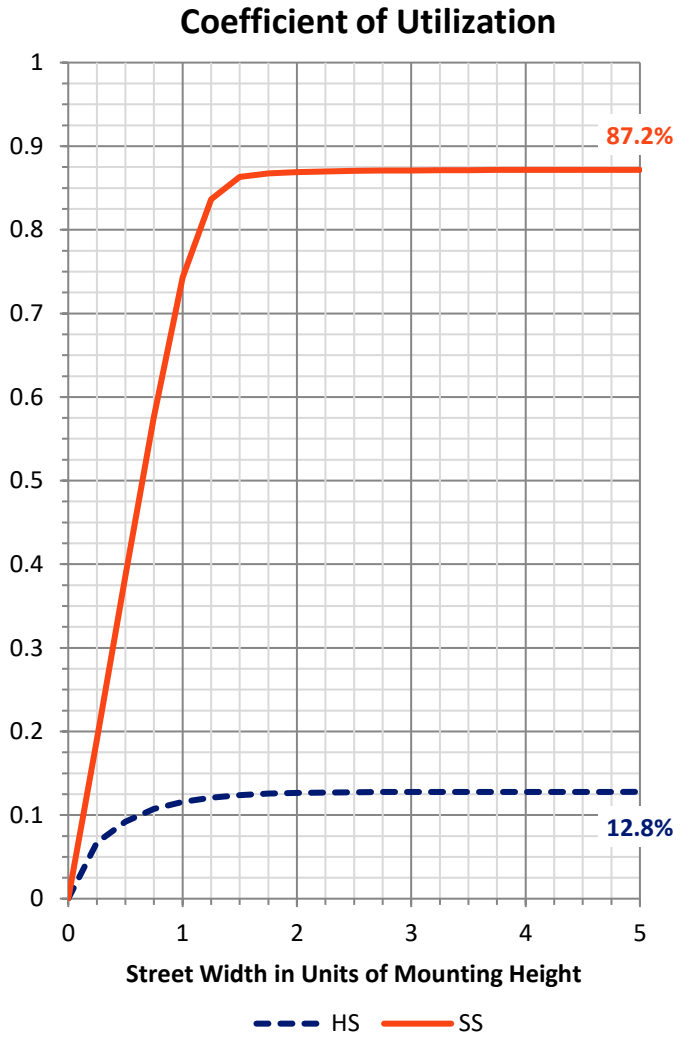
REPORT NUMBER: P638957
CATALOG NUMBER: GWS-SA4F-830-U-AFL-W-GRSBK

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2615.5	0.0	2615.5
	% Fixture	12.8	0.0	12.8
Street Side	Lumens	17741.1	0.0	17741.1
	% Fixture	87.2	0.0	87.2
Total	Lumens	20356.6	0.0	20356.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	572.1	2.8
10°-20°	1476.1	7.3
20°-30°	2436.1	12.0
30°-40°	4020.0	19.7
40°-50°	6360.6	31.2
50°-60°	4815.7	23.7
60°-70°	602.7	3.0
70°-80°	68.2	0.3
80°-90°	5.2	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°	20356.6	100.0
0°-180°	20356.6	100.0



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

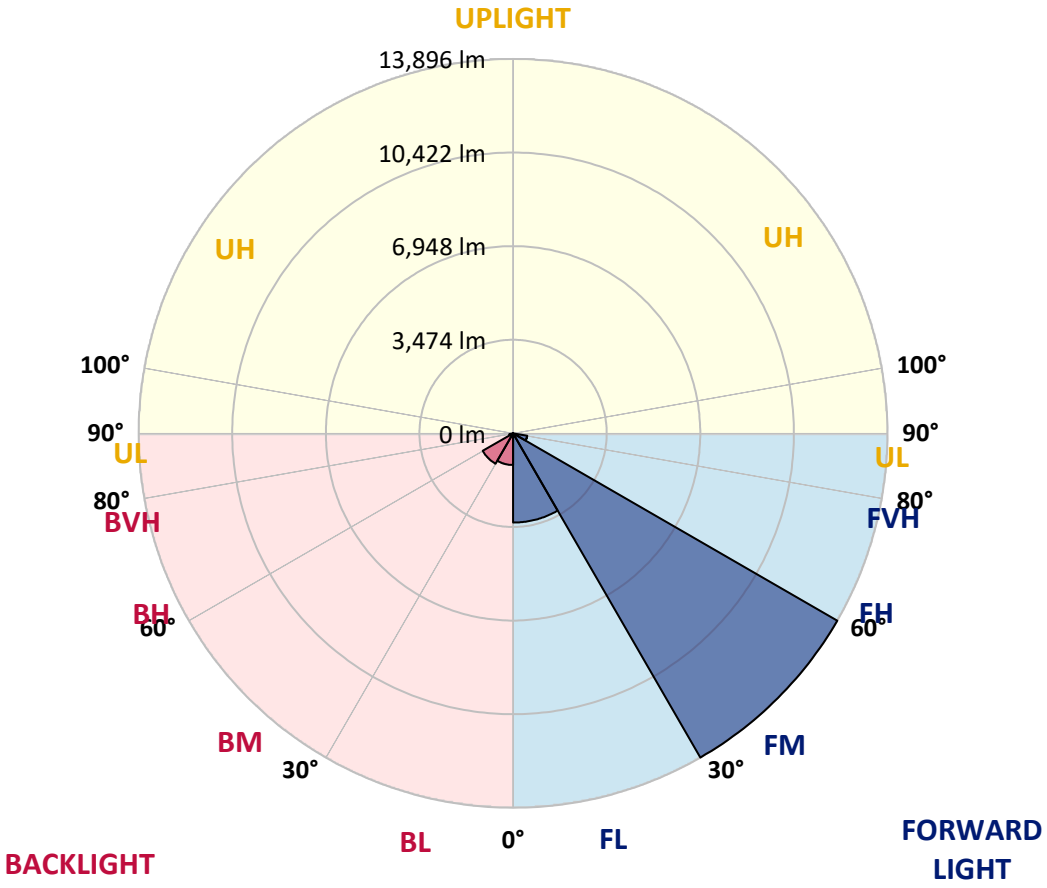
Scaled Data Report

REPORT NUMBER: P638957
CATALOG NUMBER: GWS-SA4F-830-U-AFL-W-GRSBK

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	3310.3	16.3			
FM	(30°-60°)	13895.5	68.3			
FH	(60°-80°)	532.9	2.6			G0/660
FVH	(80°-90°)	2.4	0.0			G0/10
BL	(0°-30°)	1174.0	5.8	B3/2500		
BM	(30°-60°)	1300.8	6.4	B2/2500		
BH	(60°-80°)	138.0	0.7	B1/500		G1/500
BVH	(80°-90°)	2.8	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-G1
Type II Short



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

Scaled Data Report

REPORT NUMBER: P638957
CATALOG NUMBER: GWS-SA4F-830-U-AFL-W-GRSBK

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	50°	55°	65°	75°	85°
0°	6167.2	6167.2	6167.2	6167.2	6167.2	6167.2	6167.2	6167.2	6167.2	6167.2	6167.2
2.5°	7027.5	7083.7	7068.2	6994.6	6915.1	6858.9	6771.8	6744.6	6547.0	6409.4	6264.1
5°	7876.2	7893.6	7874.2	7785.1	7645.6	7511.9	7368.5	7285.2	6953.9	6655.5	6351.3
7.5°	8079.6	8058.3	8095.1	8139.7	8120.3	8062.2	7911.0	7820.0	7424.7	6938.4	6477.2
10°	7444.1	7395.7	7533.2	7763.8	8006.0	8279.2	8240.4	8248.2	7883.9	7294.9	6641.9
12.5°	6601.3	6581.9	6684.6	6952.0	7426.7	8046.7	8195.9	8445.8	8304.4	7680.5	6829.9
15°	6231.2	6240.9	6302.9	6471.4	6812.4	7583.6	7942.0	8393.5	8680.3	8054.4	7037.2
17.5°	6287.4	6322.2	6320.3	6376.5	6583.8	7201.9	7620.4	8228.8	8970.9	8484.6	7275.5
20°	6669.1	6703.9	6651.6	6609.0	6678.8	7105.0	7451.8	8062.2	9166.6	8918.6	7527.4
22.5°	7240.6	7281.3	7157.3	7035.3	6990.7	7263.9	7515.8	7994.4	9315.8	9315.8	7752.2
25°	7932.4	7988.5	7796.7	7579.7	7455.7	7599.1	7789.0	8147.4	9468.8	9672.3	7905.2
27.5°	8705.4	8707.4	8542.7	8298.6	8066.0	8083.5	8197.8	8492.3	9637.4	10055.9	8025.4
30°	9575.4	9581.2	9362.3	9069.7	8777.1	8697.7	8794.6	9017.4	9988.1	10538.4	8192.0
32.5°	10699.2	10726.3	10412.4	9982.3	9602.5	9453.3	9509.5	9744.0	10546.1	11142.9	8441.9
35°	12218.2	12247.3	11784.2	11216.5	10612.0	10387.2	10443.4	10679.8	11354.1	12001.2	8841.1
37.5°	13717.9	13756.6	13287.8	12758.8	11929.5	11557.5	11615.6	11840.4	12567.0	13187.0	9480.5
40°	14754.5	14806.8	14661.5	14305.0	13535.8	13047.5	13117.3	13198.6	13902.0	14605.3	10309.7
42.5°	15300.9	15374.5	15436.5	15618.6	15213.7	14804.9	14686.7	14692.5	15260.2	16050.7	11171.9
45°	15333.8	15405.5	15723.3	16426.6	16734.7	16649.4	16434.3	16289.0	16296.8	17013.7	11710.6
47.5°	14268.2	14401.9	14996.7	16374.3	17532.9	18240.2	18131.6	17786.8	16732.7	17077.6	11652.5
50°	11743.5	11875.3	12956.4	14938.6	16951.7	18875.7	19323.2	18860.2	16447.9	16281.3	11053.8
52.5°	8529.1	8542.7	9244.1	11559.5	14595.6	17703.4	18757.5	18712.9	16013.9	15316.4	10236.1
55°	4051.4	4003.0	4791.6	6523.8	10094.7	14318.5	16095.3	16599.0	15397.8	14618.9	9602.5
57.5°	1180.0	1203.2	1553.9	2545.9	5049.3	9151.1	11022.8	11960.5	12638.7	12018.7	7448.0
60°	529.0	530.9	591.0	775.0	1681.8	4256.8	5698.4	6858.9	7556.5	7002.3	3694.9
62.5°	383.6	385.6	408.8	437.9	571.6	1441.5	2137.1	2848.2	2900.5	1898.8	935.8
65°	319.7	319.7	323.6	323.6	342.9	515.4	649.1	837.0	705.3	523.1	366.2
67.5°	257.7	259.6	263.5	263.5	257.7	257.7	279.0	306.1	327.4	404.9	337.1
70°	201.5	199.6	199.6	201.5	195.7	166.6	180.2	205.4	224.8	315.8	292.6
72.5°	156.9	158.9	156.9	149.2	135.6	98.8	106.6	133.7	143.4	197.6	197.6
75°	118.2	120.1	112.4	85.3	56.2	31.0	40.7	65.9	83.3	96.9	71.7
77.5°	15.5	15.5	11.6	11.6	9.7	11.6	11.6	15.5	23.3	23.3	17.4
80°	1.9	1.9	1.9	3.9	5.8	7.8	7.8	7.8	7.8	9.7	9.7
82.5°	1.9	1.9	1.9	1.9	5.8	5.8	7.8	7.8	7.8	7.8	7.8
85°	0.0	0.0	0.0	1.9	3.9	5.8	5.8	7.8	7.8	7.8	7.8
87.5°	0.0	0.0	0.0	1.9	3.9	5.8	5.8	5.8	7.8	7.8	7.8
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: P638957
CATALOG NUMBER: GWS-SA4F-830-U-AFL-W-GRSBK

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	6167.2	6167.2	6167.2	6167.2	6167.2	6167.2	6167.2	6167.2	6167.2	6167.2	6167.2
2.5°	6176.9	6064.6	5928.9	5835.9	5704.2	5617.0	5493.0	5409.7	5338.0	5281.8	5312.8
5°	6178.9	6000.6	5723.5	5487.2	5229.5	4993.1	4739.3	4539.7	4359.5	4278.1	4322.7
7.5°	6217.6	5961.9	5537.5	5117.1	4623.0	4134.7	3677.5	3305.5	3121.4	3034.2	3061.3
10°	6293.2	5944.4	5330.2	4632.7	3830.5	3164.0	2720.3	2468.4	2365.8	2311.5	2321.2
12.5°	6362.9	5932.8	5060.9	3995.2	3022.6	2454.9	2224.3	2189.4	2210.8	2212.7	2210.8
15°	6457.9	5911.5	4727.6	3340.3	2418.1	2121.6	2127.4	2177.8	2228.2	2243.7	2239.8
17.5°	6558.6	5878.5	4297.5	2712.6	2051.9	2024.7	2092.6	2160.4	2210.8	2218.5	2220.4
20°	6663.3	5810.7	3807.3	2214.6	1881.4	1951.1	2026.7	2077.1	2113.9	2125.5	2129.4
22.5°	6711.7	5667.4	3241.5	1858.1	1767.1	1860.1	1916.2	1982.1	1993.7	1951.1	1958.9
25°	6686.5	5425.2	2689.3	1617.9	1652.7	1745.7	1829.1	1796.1	1747.7	1716.7	1726.4
27.5°	6607.1	5103.5	2148.7	1441.5	1530.7	1648.9	1658.5	1621.7	1614.0	1588.8	1596.5
30°	6521.8	4733.4	1728.3	1300.1	1406.7	1530.7	1501.6	1515.2	1517.1	1488.0	1497.7
32.5°	6469.5	4345.9	1375.7	1205.2	1327.2	1350.5	1408.6	1435.7	1437.7	1369.9	1381.5
35°	6486.9	3964.2	1164.5	1127.7	1253.6	1247.8	1329.2	1344.7	1232.3	1139.3	1149.0
37.5°	6628.4	3611.6	1044.3	1067.6	1125.7	1170.3	1232.3	1129.6	1104.4	1061.8	1067.6
40°	6891.9	3311.3	972.7	1030.8	1038.5	1110.2	1015.3	1028.8	1030.8	1003.7	1009.5
42.5°	7200.0	3061.3	930.0	1009.5	990.1	1001.7	906.8	933.9	963.0	951.3	953.3
45°	7355.0	2817.2	893.2	935.8	941.7	831.2	809.9	839.0	875.8	881.6	883.5
47.5°	7217.4	2584.7	854.5	829.3	868.0	757.6	732.4	742.1	784.7	808.0	811.8
50°	*6796.9*	*2317.3*	*796.3*	*734.3*	*713.0*	*680.1*	*656.8*	*658.8*	*707.2*	*747.9*	*755.6*
52.5°	6206.0	2038.3	701.4	622.0	573.5	598.7	604.5	592.9	637.5	678.1	685.9
55°	5632.5	1689.5	556.1	505.7	461.1	515.4	530.9	515.4	529.0	556.1	558.0
57.5°	3966.2	955.2	426.3	418.5	381.7	441.8	467.0	443.7	420.4	437.9	441.8
60°	1838.7	499.9	327.4	327.4	317.8	379.8	422.4	389.4	344.9	352.6	358.4
62.5°	575.5	315.8	240.3	226.7	259.6	323.6	358.4	325.5	273.2	273.2	280.9
65°	325.5	271.3	189.9	174.4	211.2	259.6	280.9	246.1	199.6	195.7	195.7
67.5°	302.3	257.7	168.6	141.4	149.2	166.6	174.4	151.1	137.6	135.6	137.6
70°	249.9	215.1	135.6	96.9	91.1	89.1	93.0	87.2	83.3	85.3	91.1
72.5°	155.0	129.8	85.3	58.1	50.4	48.4	48.4	48.4	46.5	46.5	46.5
75°	56.2	48.4	38.8	29.1	25.2	23.3	23.3	25.2	23.3	21.3	19.4
77.5°	17.4	15.5	15.5	15.5	13.6	11.6	9.7	9.7	7.8	5.8	5.8
80°	9.7	9.7	9.7	9.7	7.8	7.8	5.8	3.9	1.9	1.9	0.0
82.5°	9.7	9.7	9.7	7.8	7.8	7.8	5.8	3.9	1.9	0.0	0.0
85°	7.8	7.8	7.8	7.8	7.8	7.8	5.8	3.9	1.9	0.0	0.0
87.5°	7.8	7.8	7.8	7.8	7.8	7.8	5.8	3.9	1.9	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

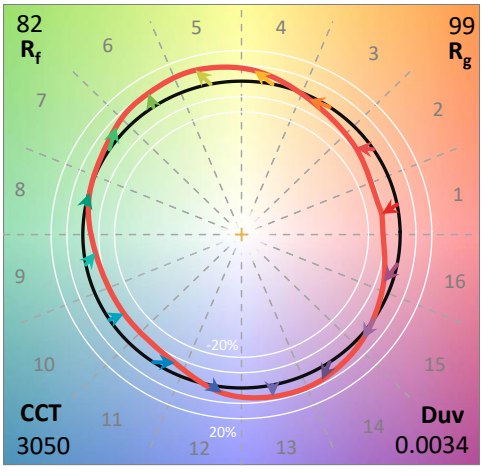
Test Information

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

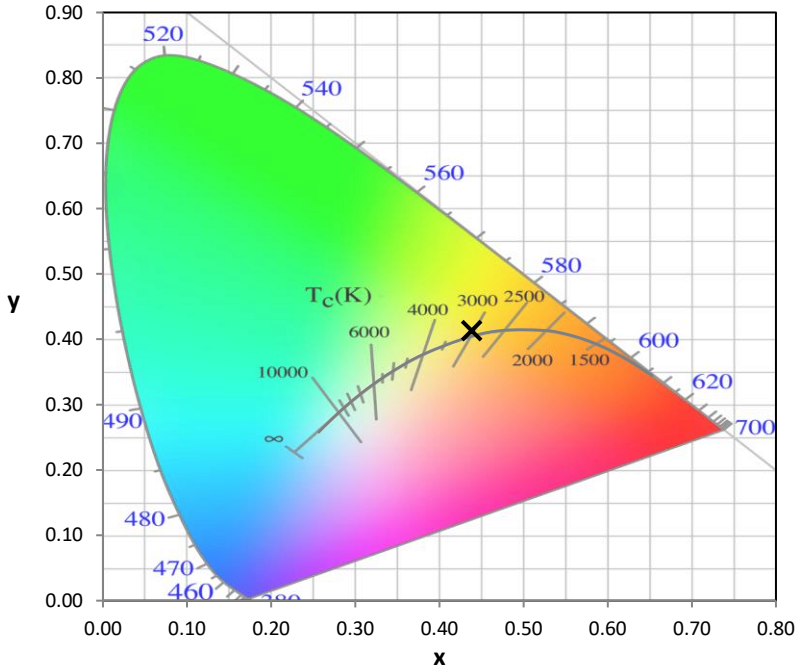
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

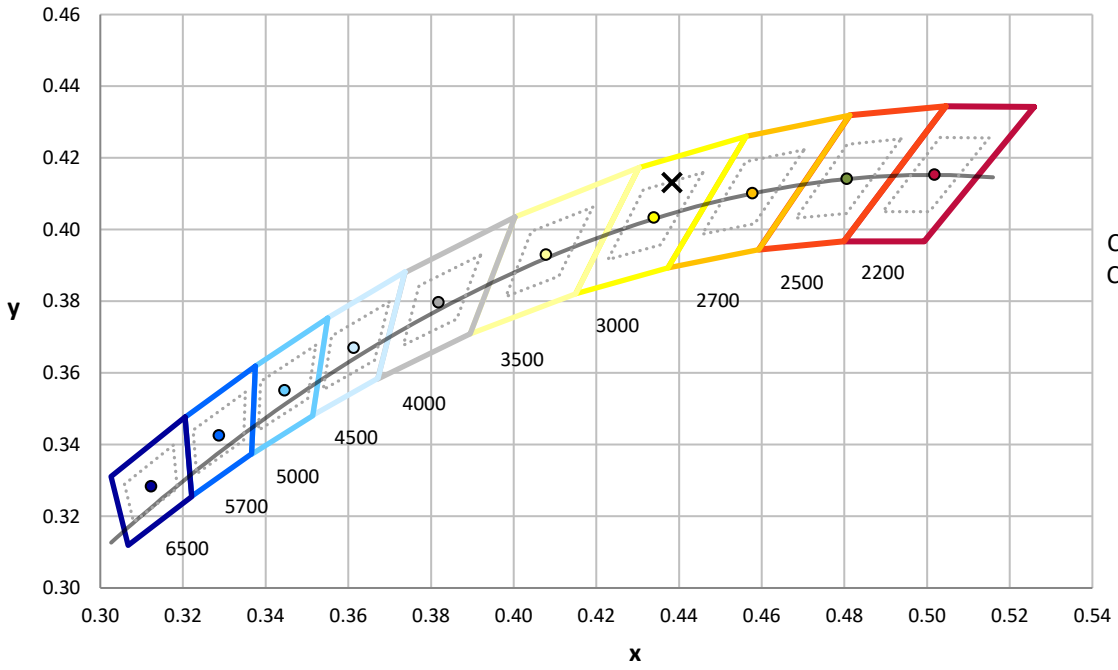
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

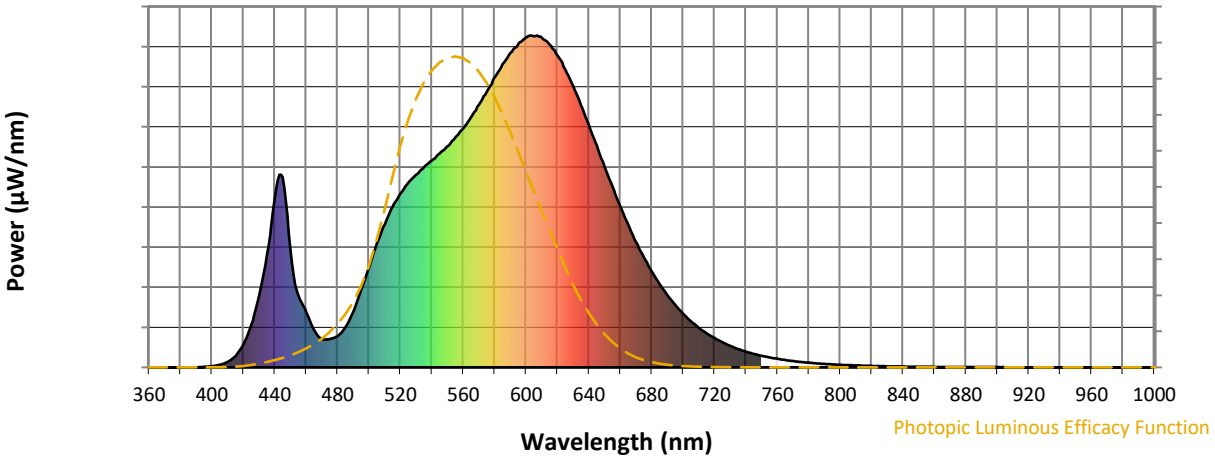


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength

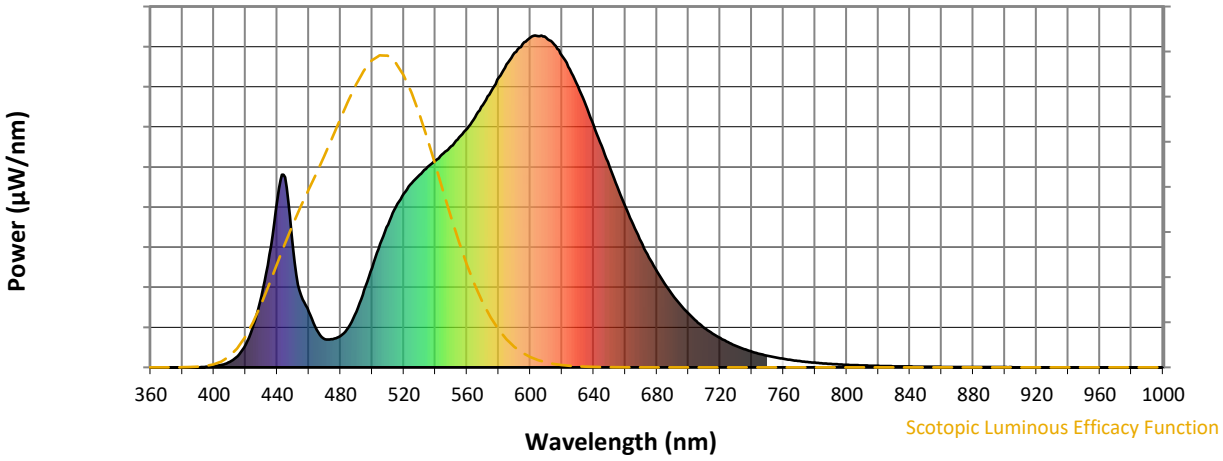


Photopic Lumens: NR

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

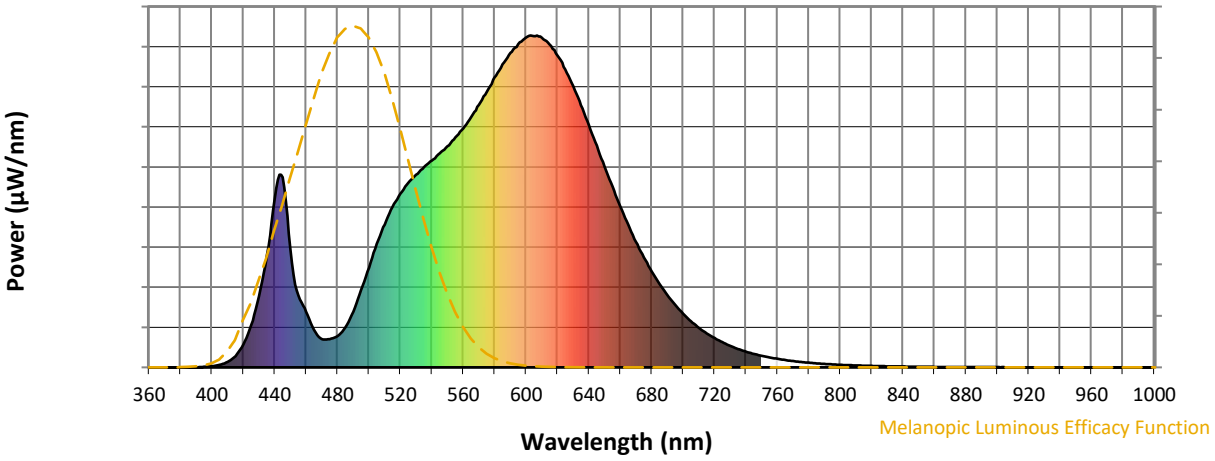


Scotopic Lumens: NR **S/P: 1.27**

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			

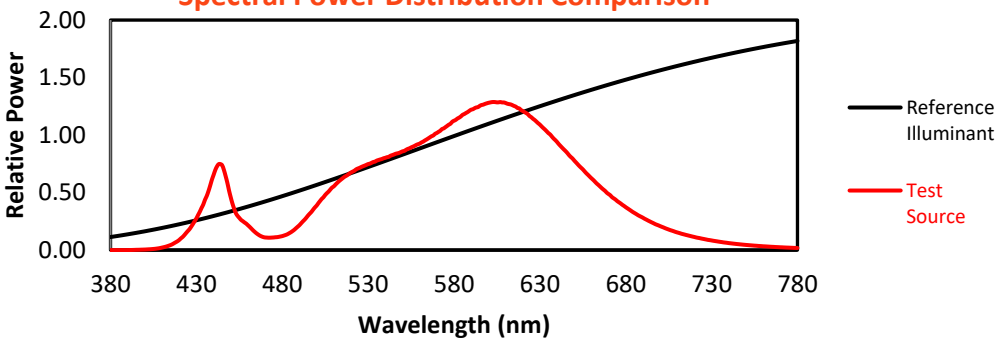
REPORT NUMBER: SP1-2408-195-9

TM-30-18

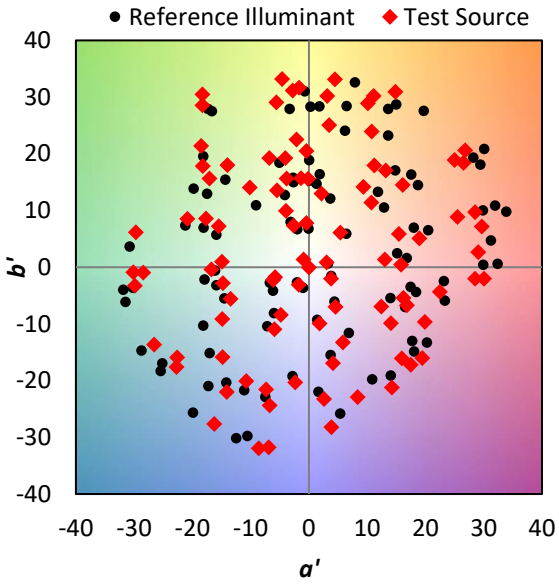
Summary

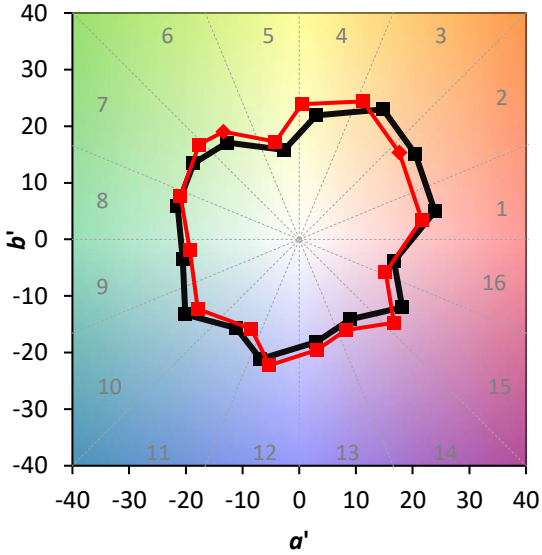
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

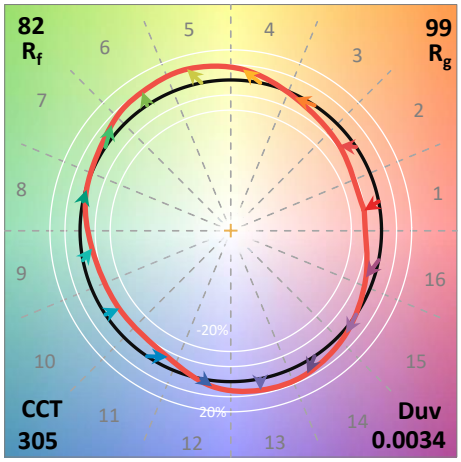
Spectral Power Distribution Comparison

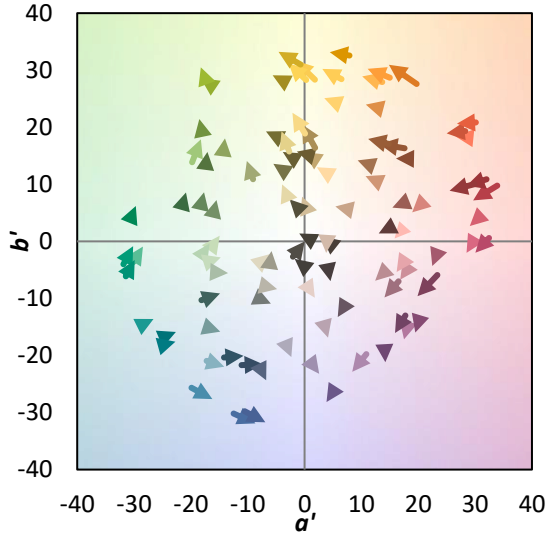


Color Vector Graphics







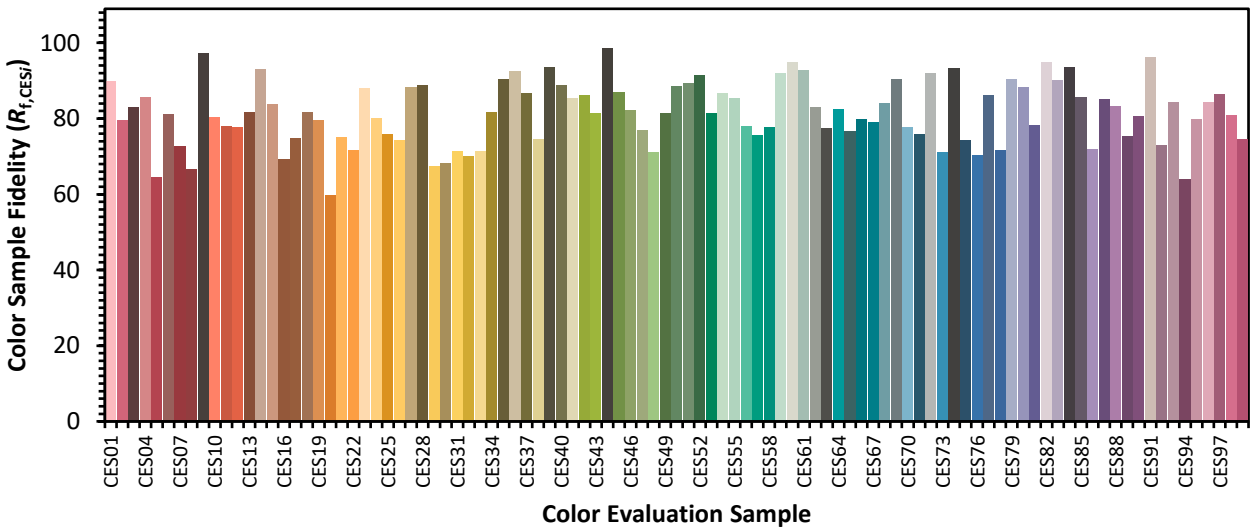


REPORT NUMBER: SP1-2408-195-9

TM-30-18

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

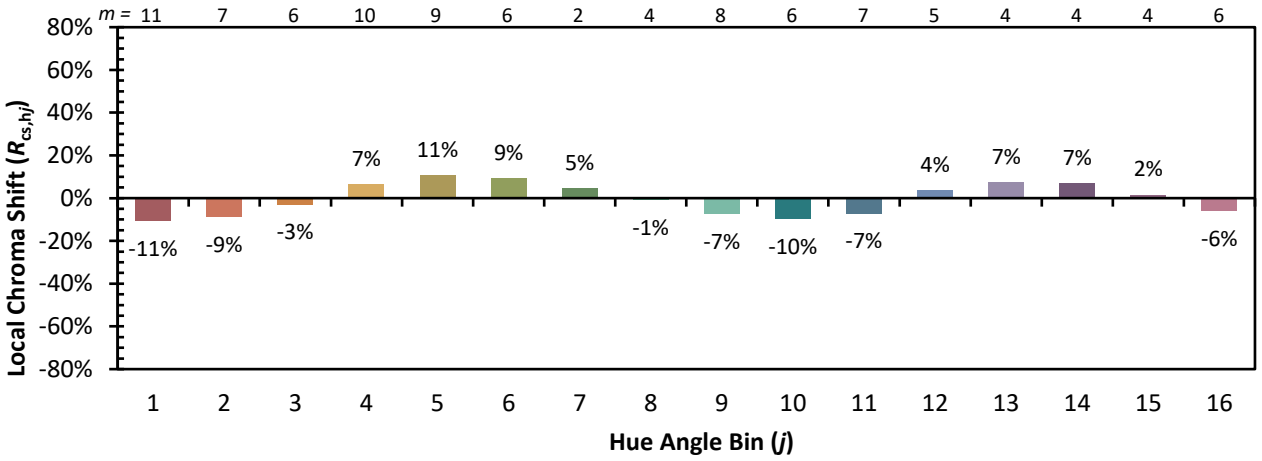
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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

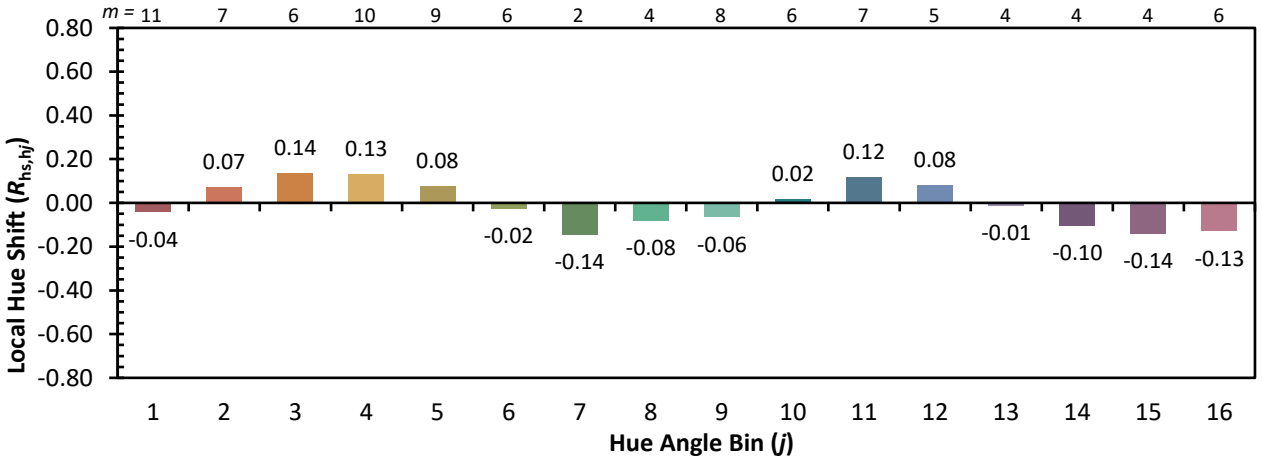


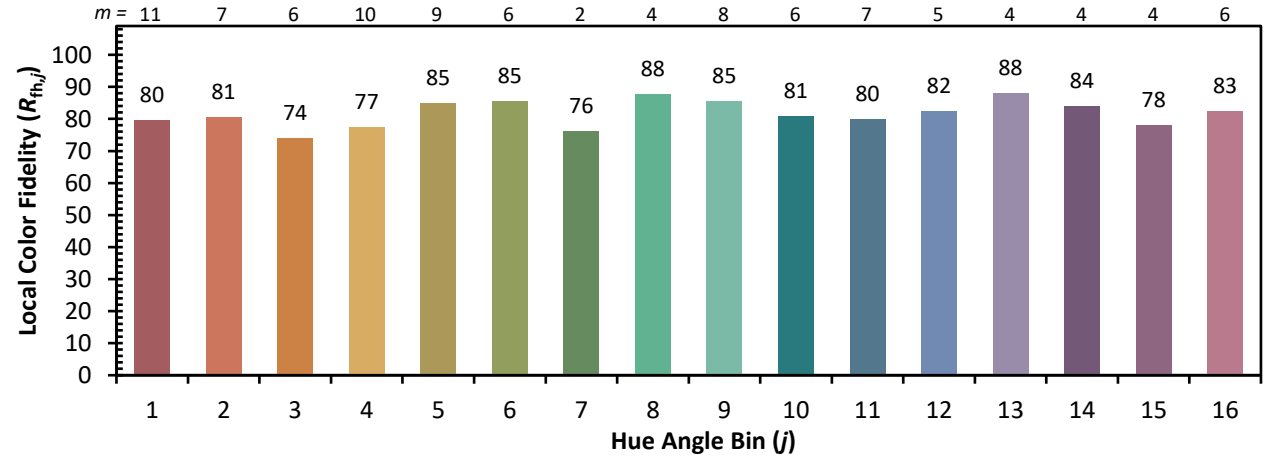
REPORT NUMBER: SP1-2408-195-9

TM-30-18

Color Rendition by Hue-Angle Bin



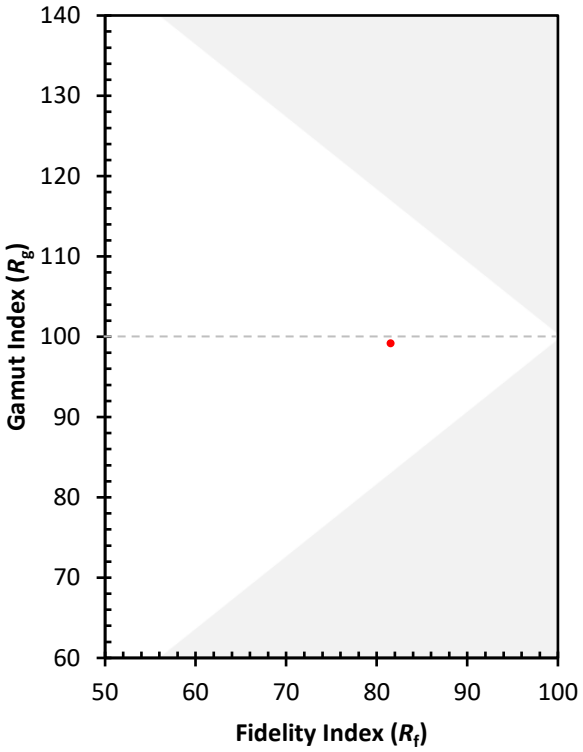


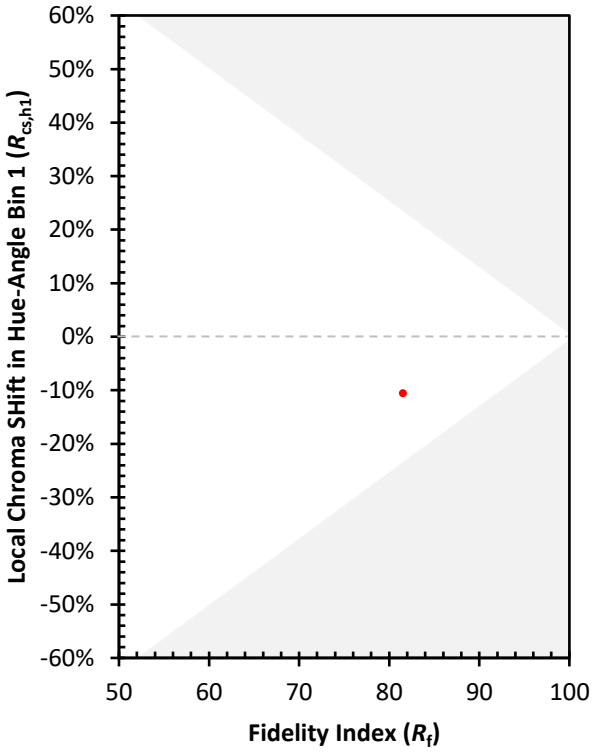


REPORT NUMBER: SP1-2408-195-9

TM-30-18

Measure Comparisons





(END OF REPORT)