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: P637968

Luminaire Tested: GWS-SA4D-830-U-AFL-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:	P637968
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-47)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	1/10/2023
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	McGRAW-EDISON
Catalog Number:	GWS-SA4D-830-U-AFL-W-GRSWH
Description:	GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE 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:	17648.5 lumens
Efficiency:	N/A
Efficacy:	108.9 lumens/watt
Luminous Opening:	Rectangular (W 1' x L: 1' x H: 0')
IES Classification:	Type II - Short
BUG Rating:	B3 - U0 - G1

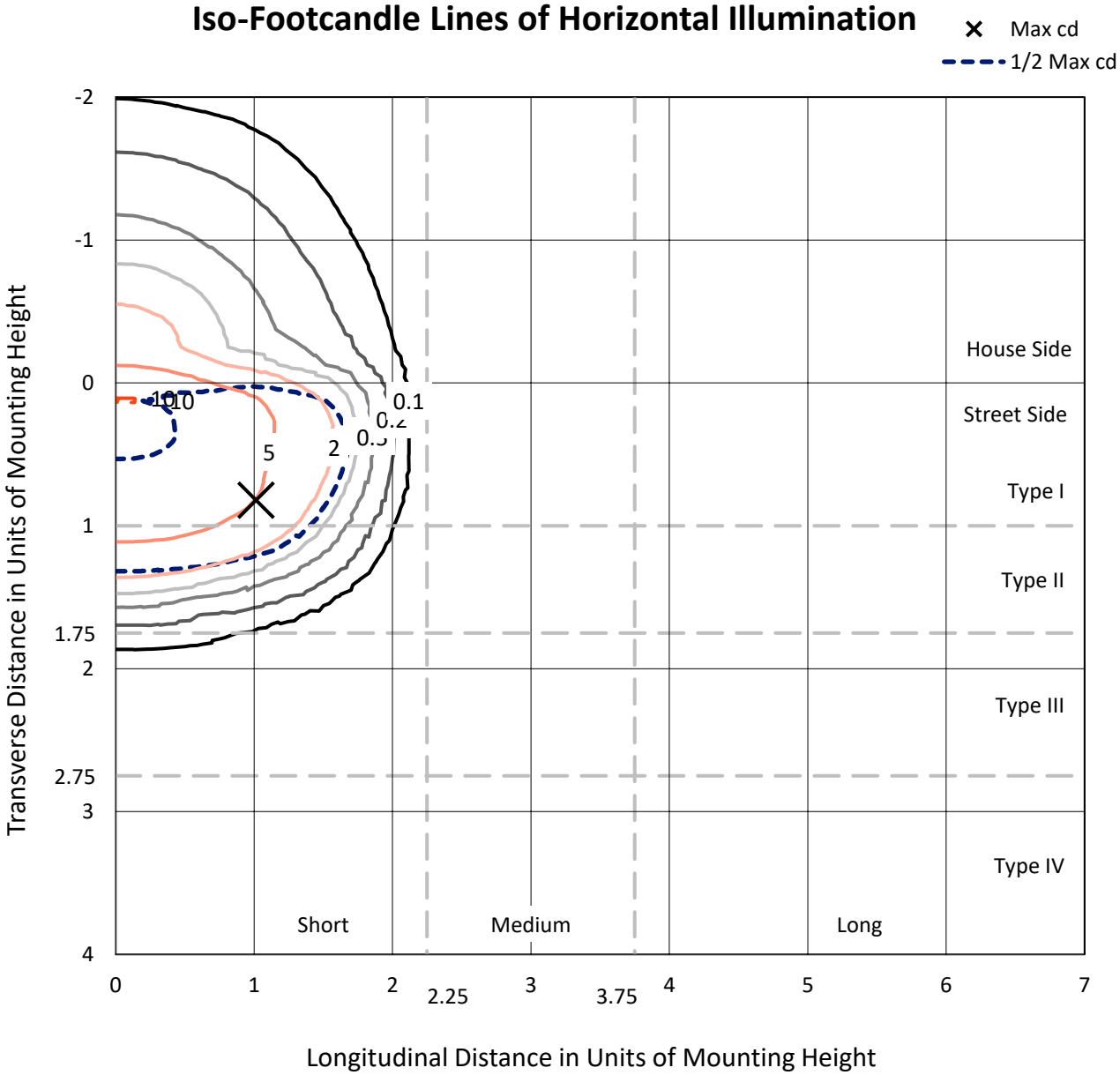
Input Watts (W):	162.1
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	0
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	28.75 FT

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

Scaled Data Report

REPORT NUMBER: P637968
CATALOG NUMBER: GWS-SA4D-830-U-AFL-W-GRSWH

Iso-Footcandle Lines of Horizontal Illumination



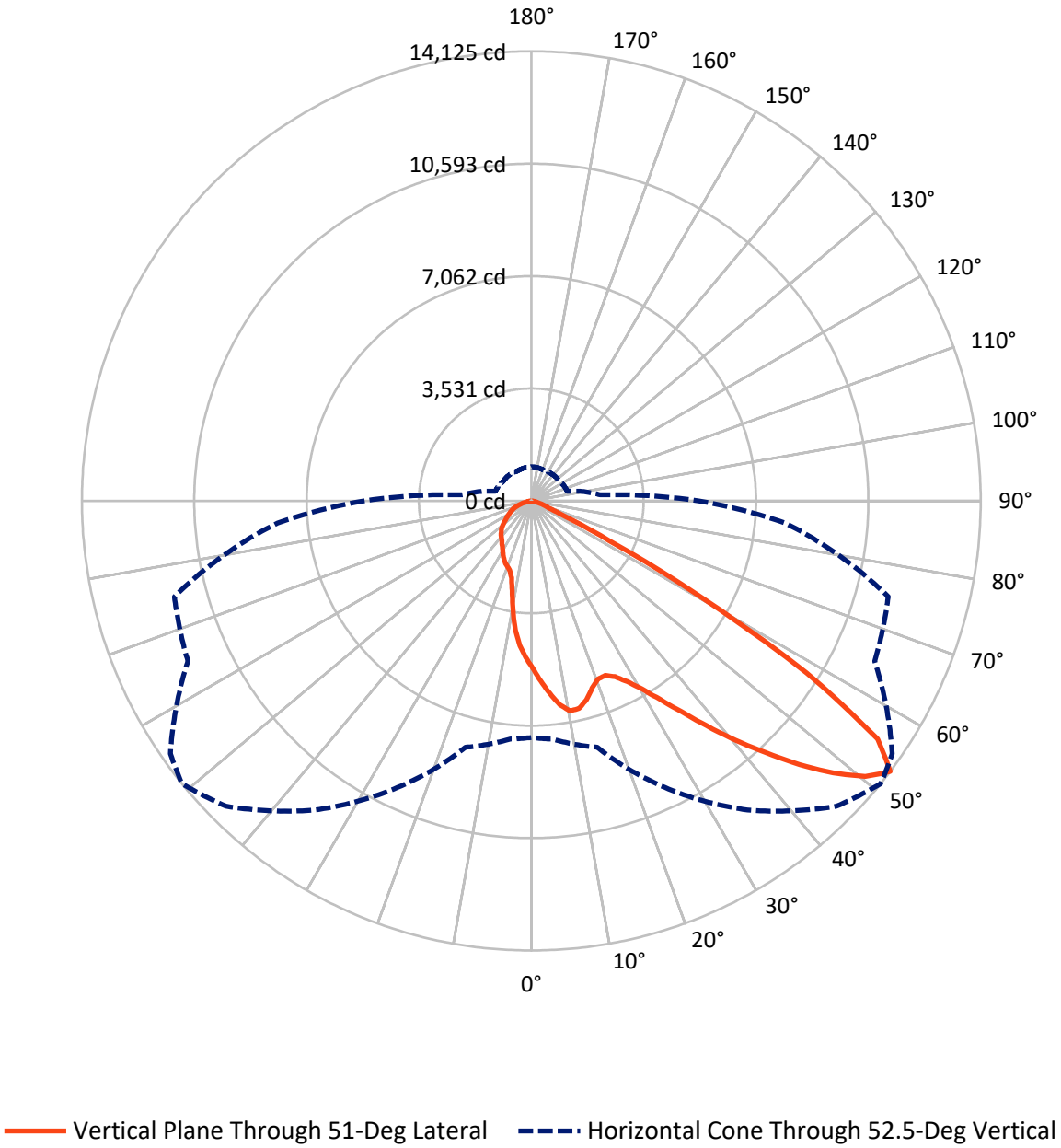
Based on 25 foot mounting height. Maximum calculated value = 10.3 fc
Type II - Short - N/A

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

Scaled Data Report

REPORT NUMBER: P637968
CATALOG NUMBER: GWS-SA4D-830-U-AFL-W-GRSWH

Luminous Intensity Polar Plot



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

Scaled Data Report

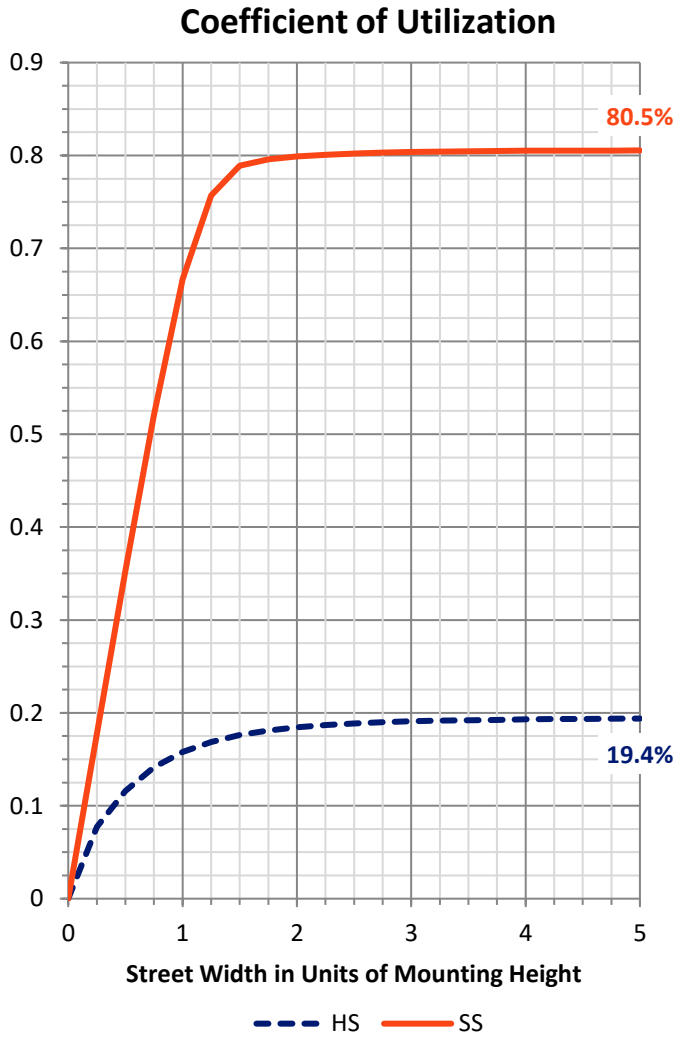
REPORT NUMBER: P637968
CATALOG NUMBER: GWS-SA4D-830-U-AFL-W-GRSWH

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3438.7	0.0	3438.7
	% Fixture	19.5	0.0	19.5
Street Side	Lumens	14209.8	0.0	14209.8
	% Fixture	80.5	0.0	80.5
Total	Lumens	17648.5	0.0	17648.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	490.3	2.8
10°-20°	1274.1	7.2
20°-30°	2071.6	11.7
30°-40°	3283.1	18.6
40°-50°	4951.6	28.1
50°-60°	4283.5	24.3
60°-70°	971.1	5.5
70°-80°	286.3	1.6
80°-90°	36.9	0.2
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°	17648.5	100.0
0°-180°	17648.5	100.0



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

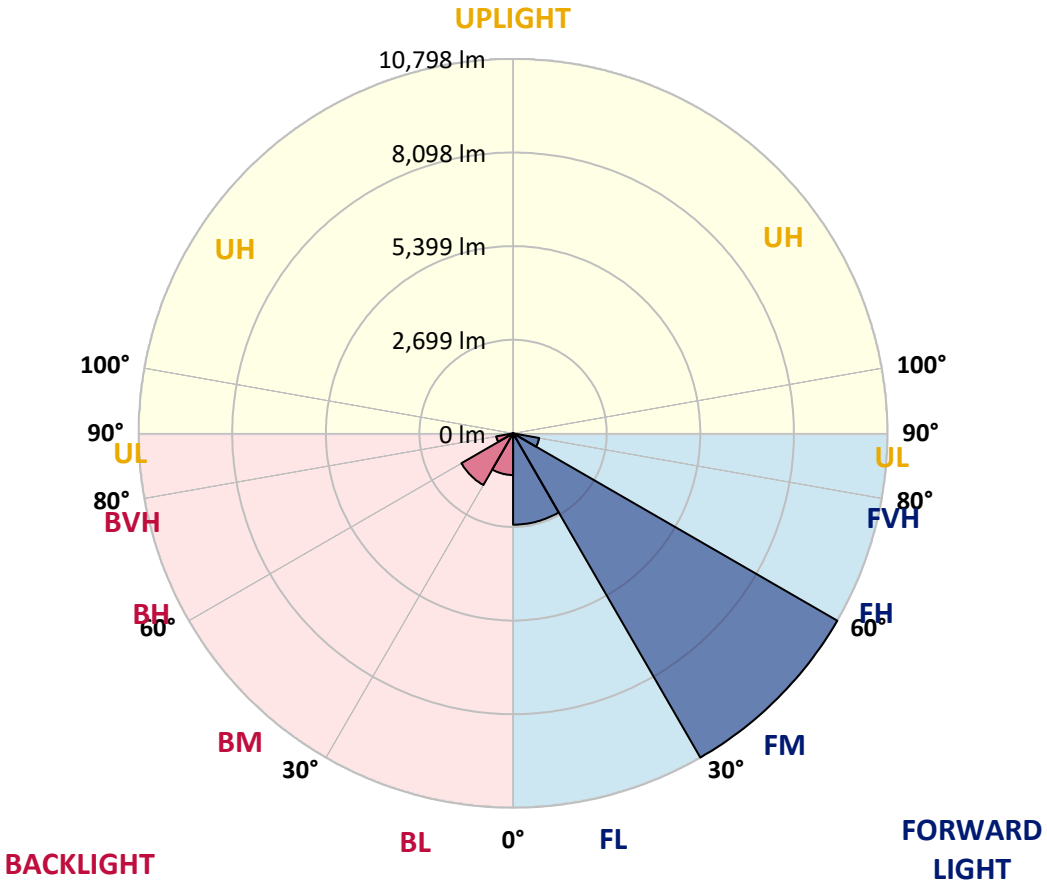
Scaled Data Report

REPORT NUMBER: P637968
CATALOG NUMBER: GWS-SA4D-830-U-AFL-W-GRSWH

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	2634.1	14.9			
FM	(30°-60°)	10797.6	61.2			
FH	(60°-80°)	764.2	4.3			G1/1800
FVH	(80°-90°)	13.9	0.1			G1/100
BL	(0°-30°)	1202.0	6.8	B3/2500		
BM	(30°-60°)	1720.5	9.7	B2/2500		
BH	(60°-80°)	493.2	2.8	B1/500		G1/500
BVH	(80°-90°)	23.0	0.1			G1/100
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: P637968
CATALOG NUMBER: GWS-SA4D-830-U-AFL-W-GRSWH

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	51°	55°	65°	75°	85°
0°	5254.8	5254.8	5254.8	5254.8	5254.8	5254.8	5254.8	5254.8	5254.8	5254.8	5254.8
2.5°	5855.9	5889.4	5837.8	5818.3	5786.2	5730.4	5666.2	5648.1	5510.1	5419.4	5317.6
5°	6444.4	6462.6	6420.7	6378.9	6299.4	6200.4	6076.3	6049.8	5798.7	5590.9	5374.8
7.5°	6575.5	6568.5	6604.8	6628.5	6618.8	6579.7	6469.5	6417.9	6118.1	5789.0	5469.6
10°	6056.7	6017.7	6151.6	6310.5	6501.6	6722.0	6709.4	6705.2	6444.4	6055.3	5590.9
12.5°	5369.2	5349.7	5458.5	5657.9	6019.1	6507.2	6689.9	6832.1	6738.7	6309.2	5726.2
15°	4975.9	4968.9	5042.9	5186.5	5473.8	6090.2	6480.7	6762.4	6991.1	6581.1	5869.9
17.5°	4904.8	4909.0	4934.1	5016.4	5222.8	5730.4	6182.2	6575.5	7187.7	6879.5	6049.8
20°	5112.6	5140.5	5097.2	5109.8	5221.4	5600.7	5978.6	6387.3	7313.3	7179.4	6243.6
22.5°	5574.2	5564.4	5469.6	5413.8	5415.2	5680.2	5956.3	6299.4	7395.5	7470.9	6419.3
25°	6097.2	6086.0	5973.1	5848.9	5770.8	5896.4	6116.7	6392.8	7469.5	7737.2	6560.2
27.5°	6715.0	6680.1	6554.6	6395.6	6222.7	6277.1	6426.3	6645.3	7583.8	7999.4	6653.6
30°	7313.3	7353.7	7173.8	6985.5	6802.8	6769.4	6855.8	7053.9	7816.7	8306.2	6765.2
32.5°	8106.8	8092.8	7893.4	7648.0	7387.2	7362.1	7430.4	7611.7	8235.1	8730.2	6935.3
35°	9067.7	9070.5	8787.4	8455.4	8084.5	8017.5	8131.9	8307.6	8858.5	9304.7	7204.5
37.5°	10066.2	10062.0	9815.2	9438.6	8932.4	8837.6	8968.6	9099.7	9638.1	10087.1	7622.9
40°	10766.3	10794.2	10678.4	10480.4	10000.7	9769.1	9884.9	9975.5	10486.0	11007.5	8173.7
42.5°	11163.7	11205.6	11230.7	11349.2	11096.8	10850.0	10808.1	10855.5	11243.2	11862.4	8691.1
45°	11248.8	11304.6	11487.3	11926.6	12024.2	11954.5	11817.8	11703.5	11808.0	12469.1	9030.0
47.5°	10873.7	10971.3	11361.8	12130.2	12700.6	12919.5	12767.5	12593.2	12134.4	12625.3	8995.1
50°	9387.0	9501.4	10381.4	11714.6	12796.8	13594.5	13608.5	13350.5	12095.3	12174.8	8557.2
52.5°	7431.8	7509.9	8013.4	9930.9	11852.7	13566.6	14124.5	13848.3	11907.1	11611.4	8009.2
55°	4441.8	4567.3	5037.3	6551.8	9233.6	12024.2	13212.4	13346.3	11815.0	11138.6	7635.4
57.5°	1499.2	1560.6	2009.6	2893.8	5441.7	8804.1	10208.4	10752.3	10725.8	10416.2	6906.0
60°	714.0	728.0	818.6	1097.5	2178.4	4600.8	6042.8	6670.4	7242.1	7299.3	4296.8
62.5°	543.9	552.3	598.3	658.2	875.8	1938.5	2769.7	3249.4	3471.2	2978.9	1564.7
65°	454.6	461.6	496.5	534.1	595.5	839.5	1062.7	1225.9	1104.5	860.5	746.1
67.5°	379.3	384.9	411.4	451.8	493.7	562.0	589.9	606.6	635.9	714.0	686.1
70°	297.0	302.6	330.5	365.4	405.8	422.6	449.1	465.8	524.4	624.8	622.0
72.5°	228.7	235.7	251.0	273.3	306.8	323.5	352.8	372.4	405.8	486.7	520.2
75°	167.4	171.5	185.5	192.5	196.6	192.5	221.7	244.1	288.7	319.4	327.7
77.5°	68.3	76.7	73.9	73.9	87.9	106.0	121.3	135.3	166.0	184.1	185.5
80°	27.9	30.7	36.3	40.4	48.8	62.8	72.5	78.1	92.0	103.2	111.6
82.5°	16.7	18.1	20.9	22.3	27.9	36.3	41.8	46.0	57.2	68.3	72.5
85°	8.4	8.4	9.8	11.2	13.9	16.7	19.5	22.3	29.3	36.3	40.4
87.5°	1.4	1.4	1.4	2.8	4.2	5.6	7.0	8.4	9.8	11.2	13.9
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: P637968
CATALOG NUMBER: GWS-SA4D-830-U-AFL-W-GRSWH

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5254.8	5254.8	5254.8	5254.8	5254.8	5254.8	5254.8	5254.8	5254.8	5254.8	5254.8
2.5°	5257.6	5182.3	5094.5	5024.7	4943.8	4883.9	4798.8	4745.8	4695.6	4653.8	4623.1
5°	5263.2	5136.3	4953.6	4791.8	4624.5	4465.5	4302.3	4169.8	4051.3	3952.3	3943.9
7.5°	5295.3	5112.6	4826.7	4543.6	4217.3	3902.1	3586.9	3330.3	3135.1	3033.2	3012.3
10°	5349.7	5109.8	4697.0	4245.2	3688.7	3181.1	2807.3	2612.1	2499.1	2458.7	2444.7
12.5°	5406.8	5102.8	4531.0	3824.0	3051.4	2606.5	2401.5	2377.8	2398.7	2401.5	2400.1
15°	5476.6	5098.6	4321.9	3330.3	2585.6	2340.1	2354.1	2404.3	2453.1	2464.3	2464.3
17.5°	5561.7	5088.9	4037.4	2847.8	2294.1	2288.5	2362.4	2429.4	2475.4	2483.8	2483.8
20°	5650.9	5063.8	3687.3	2454.5	2175.6	2256.5	2335.9	2387.5	2419.6	2430.8	2432.2
22.5°	5712.3	4996.8	3284.3	2163.0	2101.7	2195.1	2252.3	2305.3	2305.3	2277.4	2269.0
25°	5724.8	4853.2	2847.8	1963.6	2013.8	2100.3	2158.8	2128.2	2071.0	2048.7	2047.3
27.5°	5678.8	4644.0	2416.8	1821.3	1907.8	1994.3	1984.5	1939.9	1914.8	1892.5	1900.8
30°	5623.0	4393.0	2043.1	1704.2	1785.1	1870.2	1836.7	1821.3	1803.2	1778.1	1783.7
32.5°	5585.4	4112.7	1755.8	1613.5	1702.8	1716.7	1740.5	1739.1	1722.3	1674.9	1672.1
35°	5596.5	3829.6	1563.3	1539.6	1634.5	1628.9	1673.5	1665.1	1549.4	1483.9	1479.7
37.5°	5685.8	3557.6	1450.4	1481.1	1525.7	1560.6	1599.6	1499.2	1458.7	1416.9	1419.7
40°	5855.9	3305.2	1389.0	1449.0	1460.1	1511.7	1421.1	1419.7	1401.6	1363.9	1362.5
42.5°	6048.4	3091.8	1347.2	1433.6	1418.3	1428.1	1331.8	1343.0	1341.6	1317.9	1310.9
45°	6165.5	2895.2	1313.7	1376.5	1380.7	1283.0	1253.7	1266.3	1273.3	1260.7	1259.3
47.5°	6044.2	2669.3	1278.8	1288.6	1324.9	1217.5	1181.2	1182.6	1195.2	1196.6	1191.0
50°	5703.9	2416.8	1237.0	1213.3	1189.6	1149.1	1115.7	1108.7	1121.3	1133.8	1138.0
52.5°	*5264.6*	*2175.6*	*1167.3*	*1131.0*	*1075.2*	*1075.2*	*1059.9*	*1037.6*	*1054.3*	*1071.0*	*1076.6*
55°	4942.4	1997.1	1068.3	1027.8	966.5	987.4	984.6	965.1	987.4	999.9	1004.1
57.5°	4282.8	1605.2	940.0	927.4	875.8	900.9	906.5	881.4	870.2	873.0	877.2
60°	2542.3	1036.2	847.9	846.5	800.5	829.8	846.5	821.4	787.9	792.1	797.7
62.5°	1140.8	792.1	732.2	726.6	725.2	762.8	781.0	757.3	709.8	714.0	719.6
65°	718.2	684.7	635.9	635.9	658.2	690.3	704.3	684.7	630.4	623.4	629.0
67.5°	666.6	637.3	587.1	577.4	588.5	615.0	616.4	578.8	546.7	541.1	541.1
70°	598.3	576.0	527.2	507.6	503.4	502.1	497.9	488.1	467.2	461.6	464.4
72.5°	495.1	479.7	449.1	428.1	417.0	415.6	398.9	390.5	372.4	369.6	368.2
75°	327.7	331.9	331.9	329.1	319.4	315.2	297.0	288.7	267.8	259.4	258.0
77.5°	193.8	198.0	203.6	205.0	203.6	203.6	186.9	177.1	156.2	145.0	142.2
80°	118.5	121.3	124.1	128.3	122.7	118.5	103.2	93.4	83.7	76.7	75.3
82.5°	76.7	79.5	80.9	83.7	80.9	75.3	62.8	57.2	50.2	44.6	43.2
85°	43.2	44.6	47.4	47.4	43.2	39.0	32.1	27.9	23.7	20.9	20.9
87.5°	15.3	15.3	15.3	16.7	13.9	12.6	8.4	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

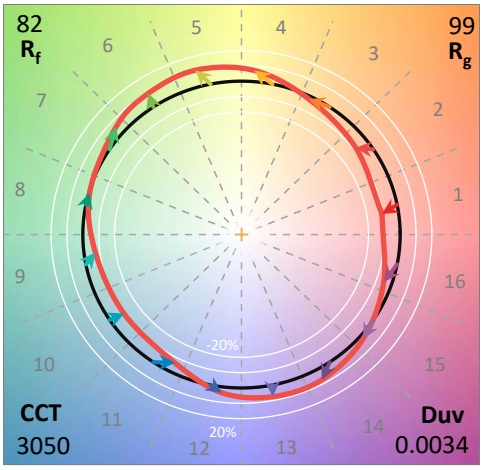
Test Information

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

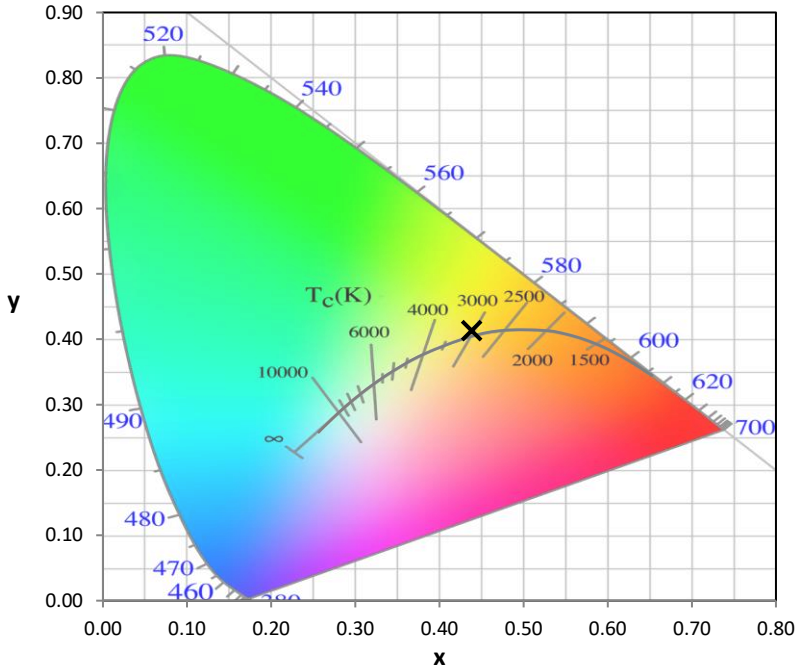
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

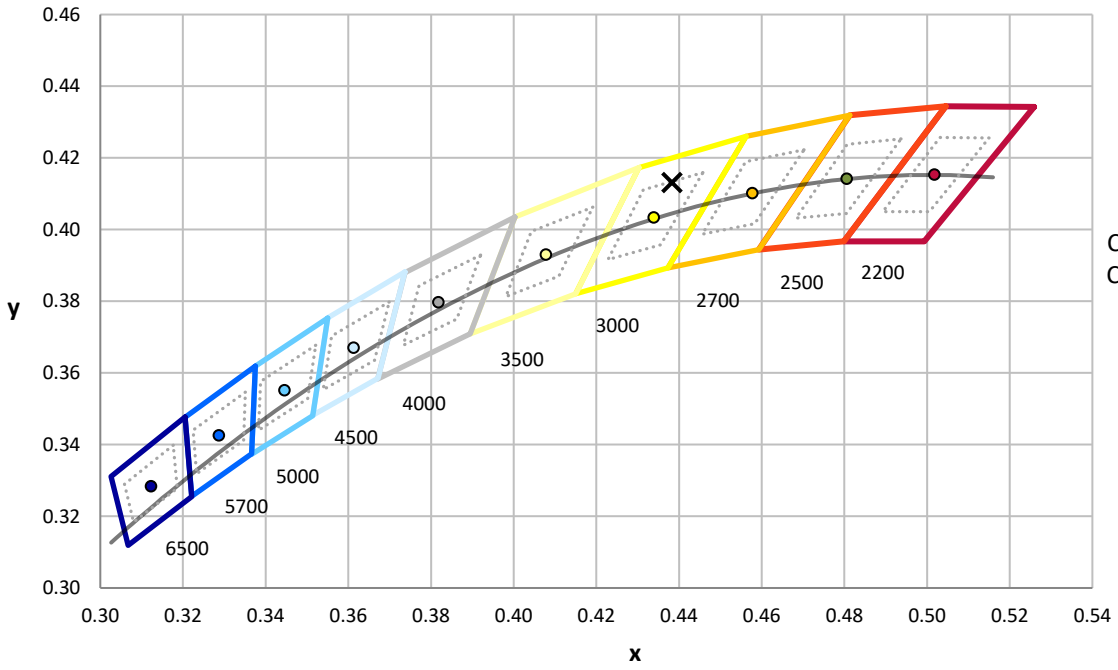
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

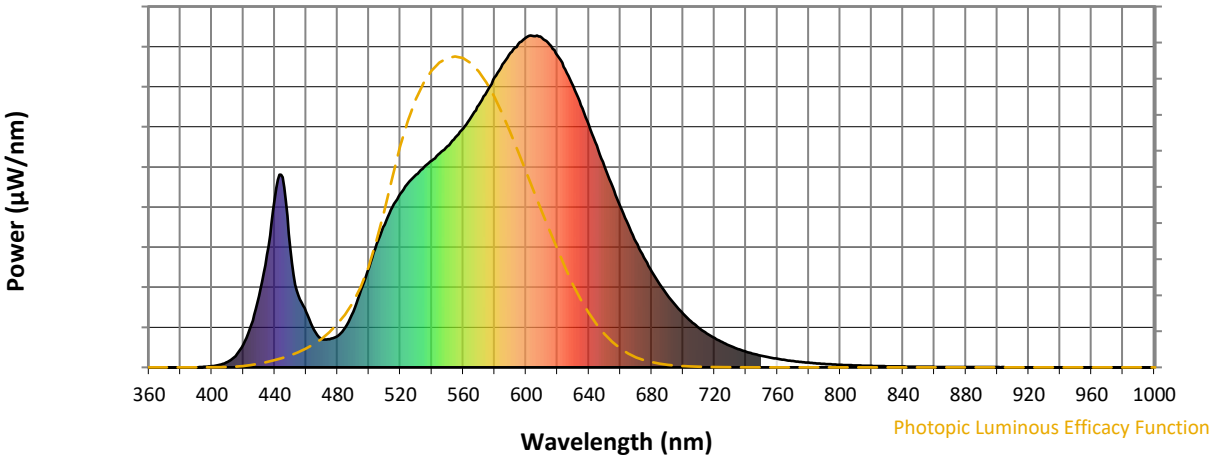


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength

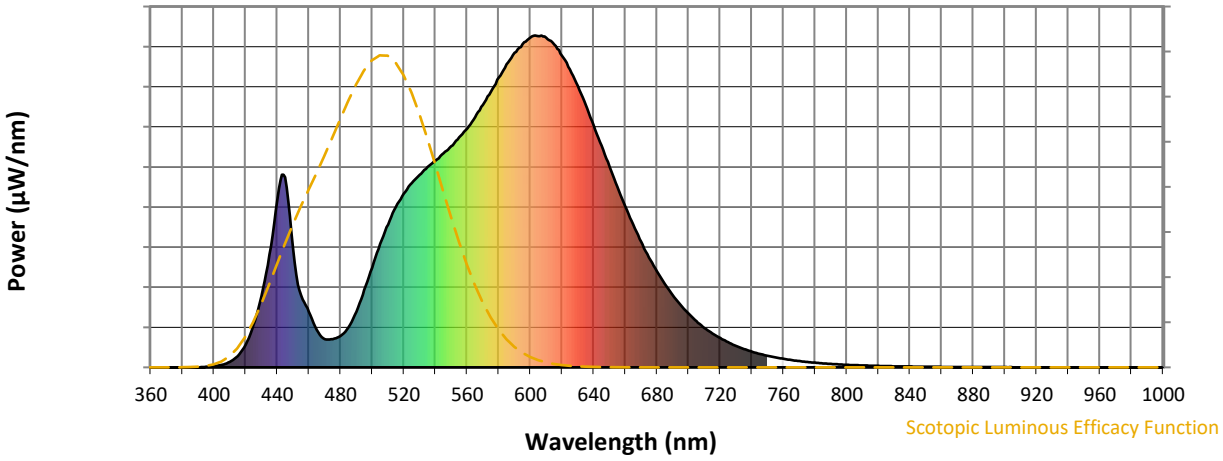


Photopic Lumens: NR

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

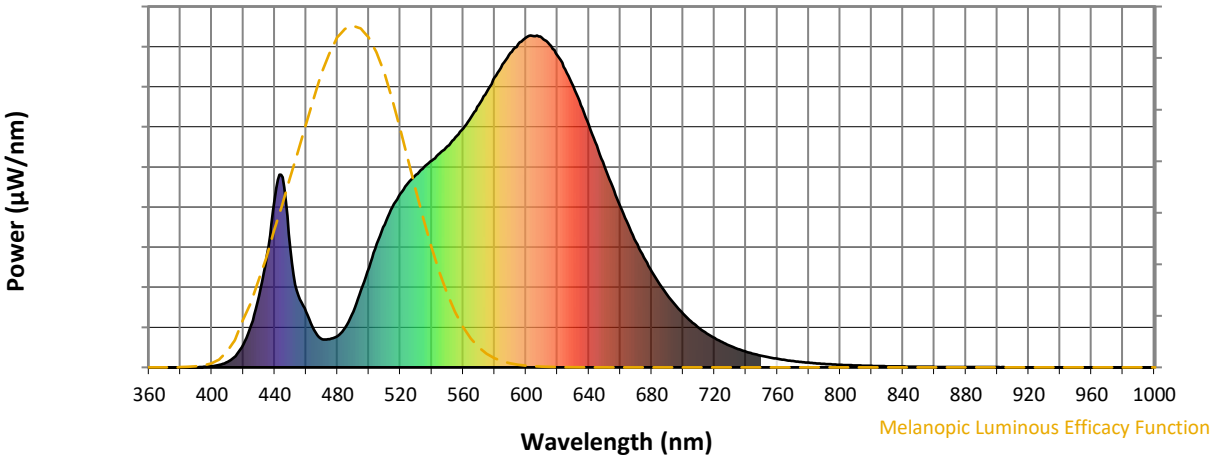


Scotopic Lumens: NR **S/P: 1.27**

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			

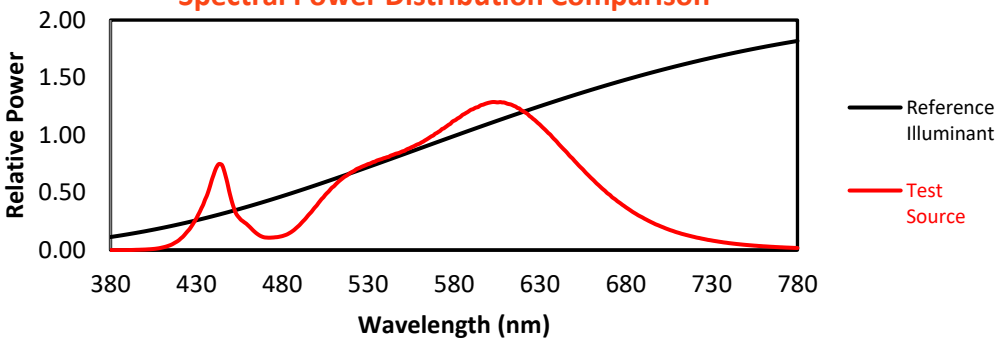
REPORT NUMBER: SP1-2408-195-9

TM-30-18

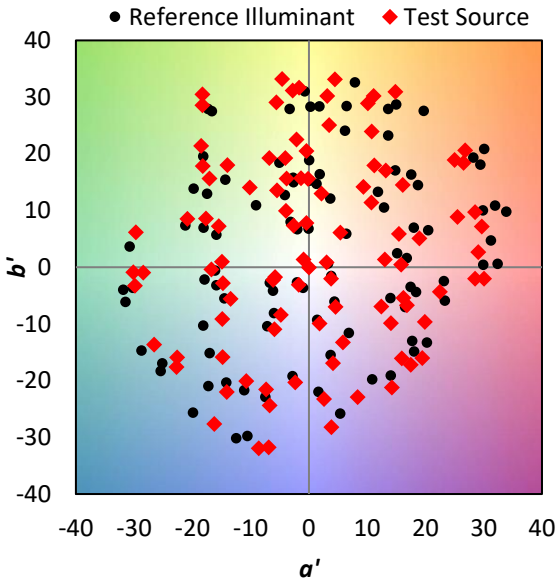
Summary

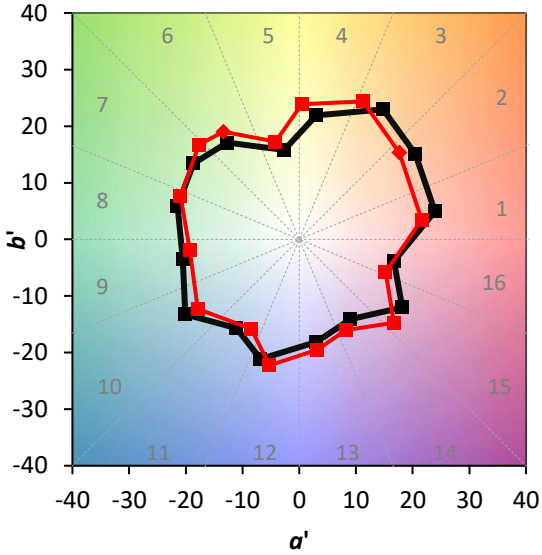
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

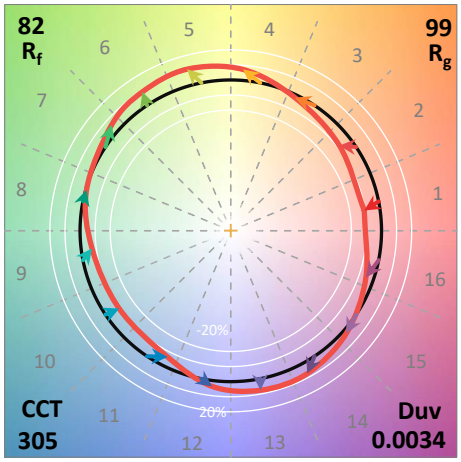
Spectral Power Distribution Comparison

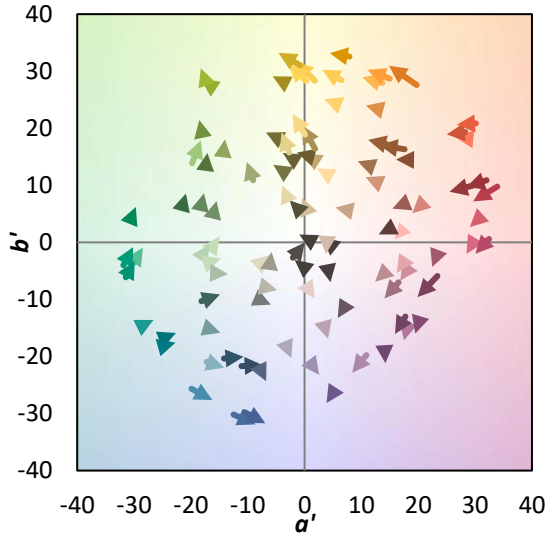


Color Vector Graphics







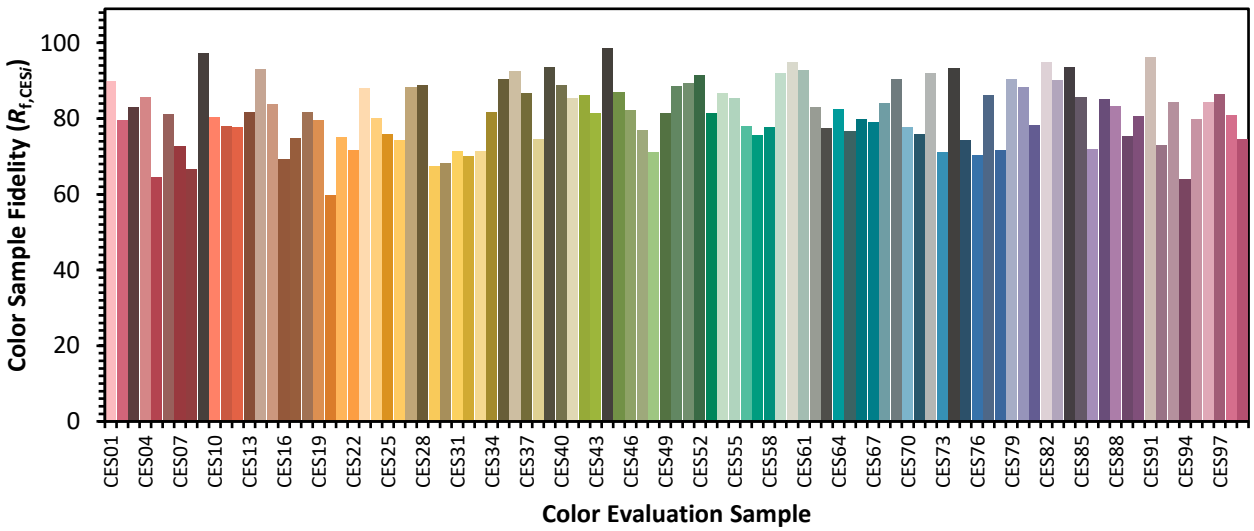


REPORT NUMBER: SP1-2408-195-9

TM-30-18

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

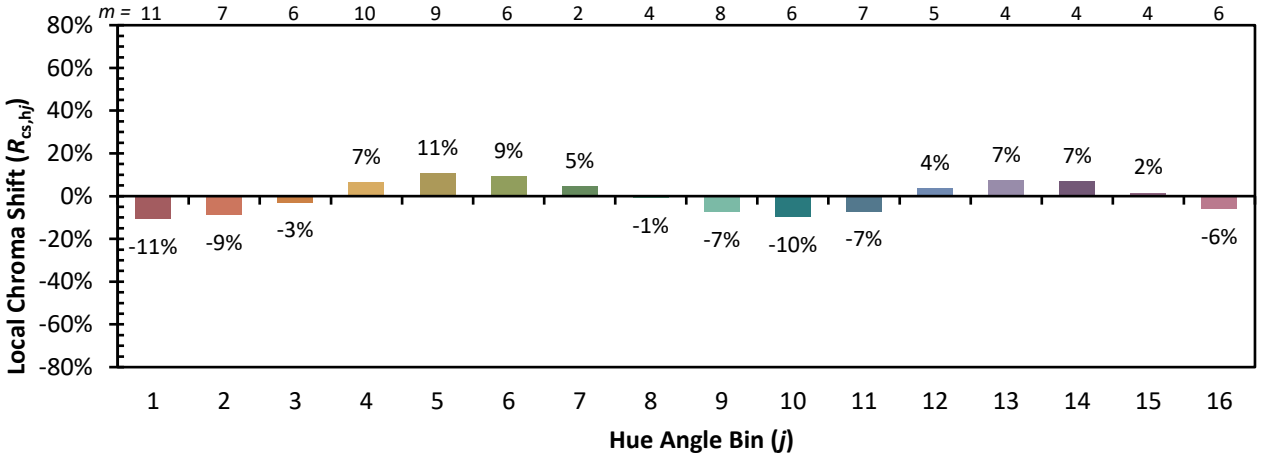
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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

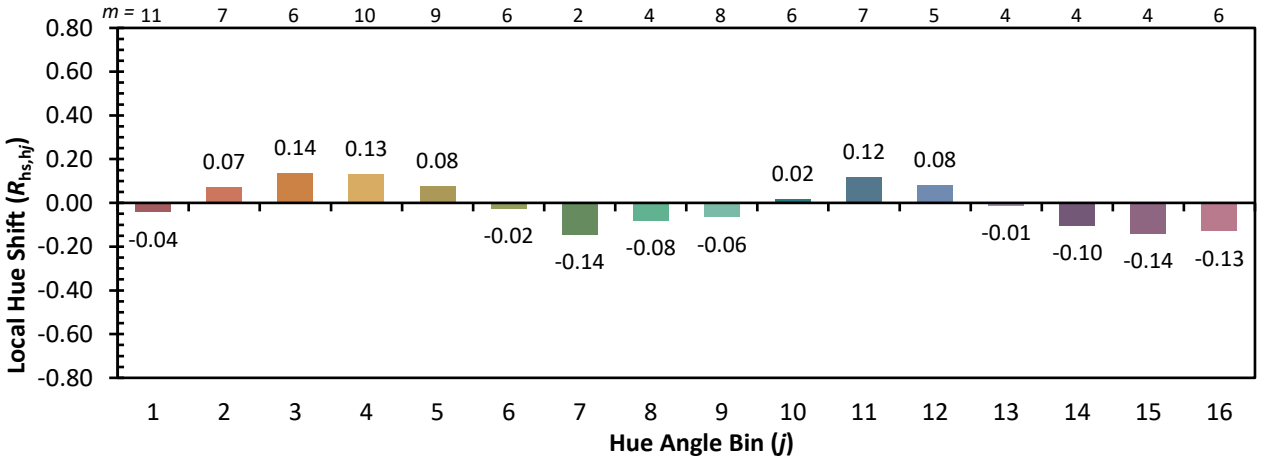


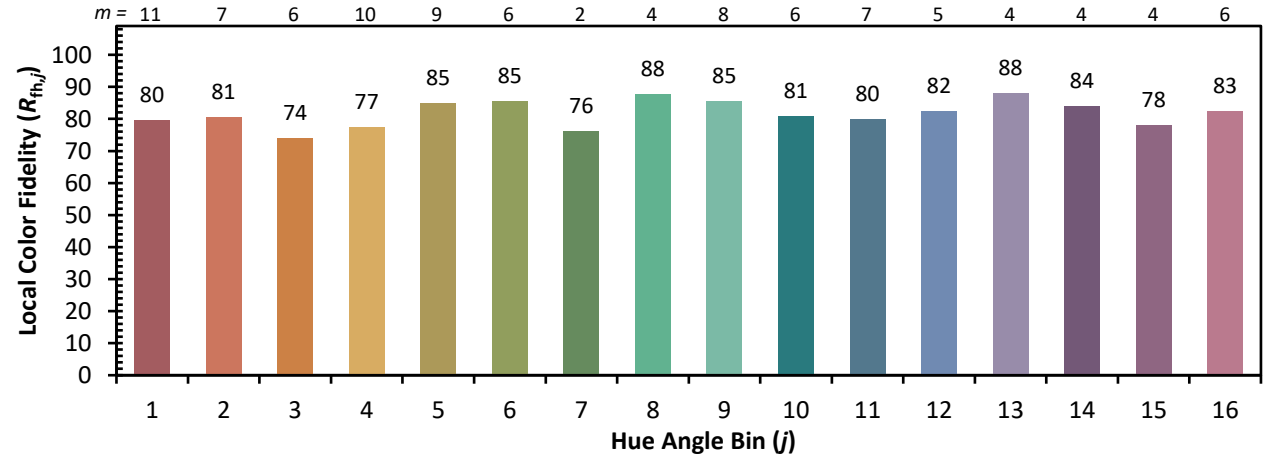
REPORT NUMBER: SP1-2408-195-9

TM-30-18

Color Rendition by Hue-Angle Bin



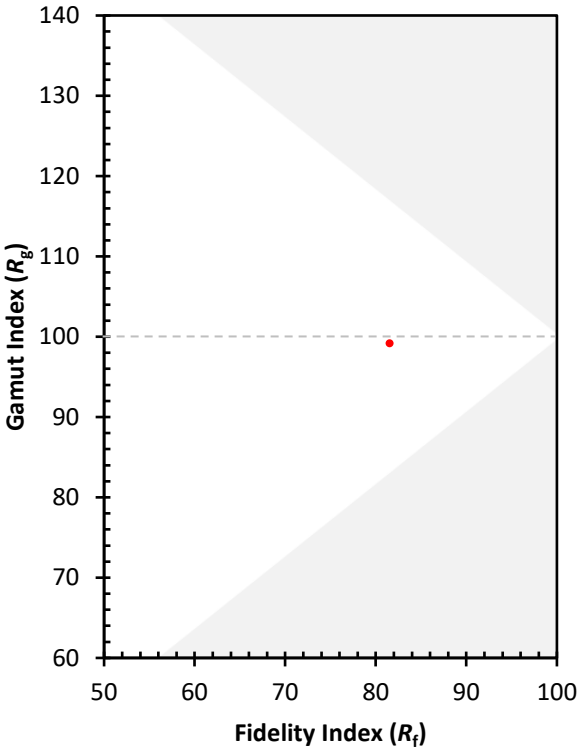


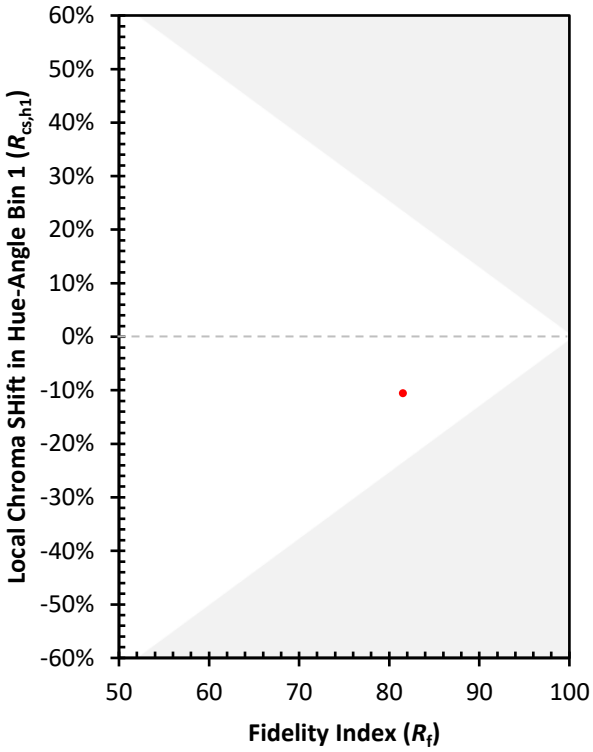


REPORT NUMBER: SP1-2408-195-9

TM-30-18

Measure Comparisons





(END OF REPORT)