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: P637993

Luminaire Tested: GWS-SA4D-830-U-T2-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:	P637993
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-20)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	1/10/2023
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	McGRAW-EDISON
Catalog Number:	GWS-SA4D-830-U-T2-W-GRSBK
Description:	GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II 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:	11555.5 lumens
Efficiency:	N/A
Efficacy:	71.3 lumens/watt
Luminous Opening:	Rectangular (W 1' x L: 1' x H: 0')
IES Classification:	Type II - Short
BUG Rating:	B2 - U0 - G1

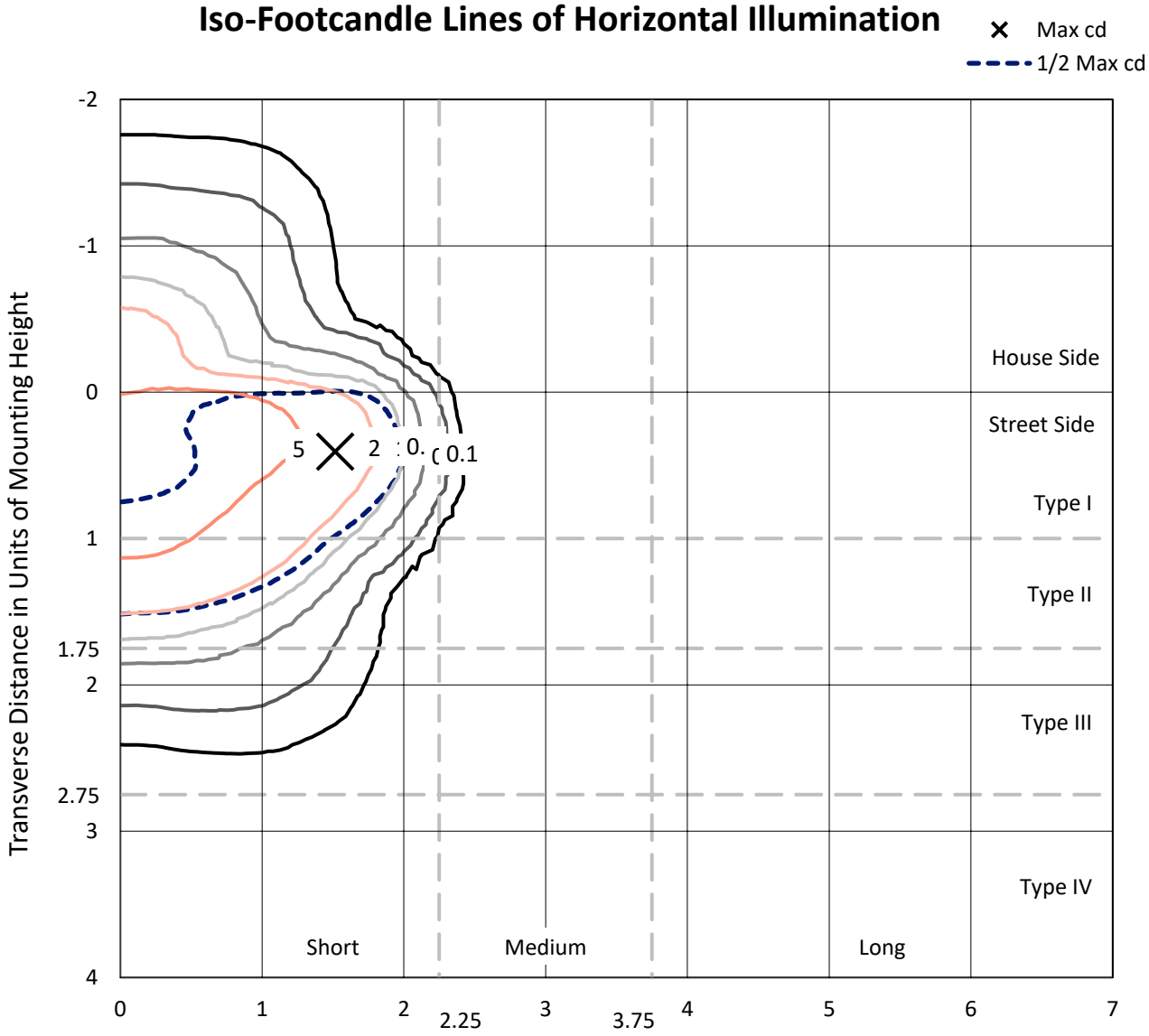
Input Watts (W):	162.1
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	0
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	28.75 FT

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

Scaled Data Report

REPORT NUMBER: P637993
CATALOG NUMBER: GWS-SA4D-830-U-T2-W-GRSBK

Iso-Footcandle Lines of Horizontal Illumination



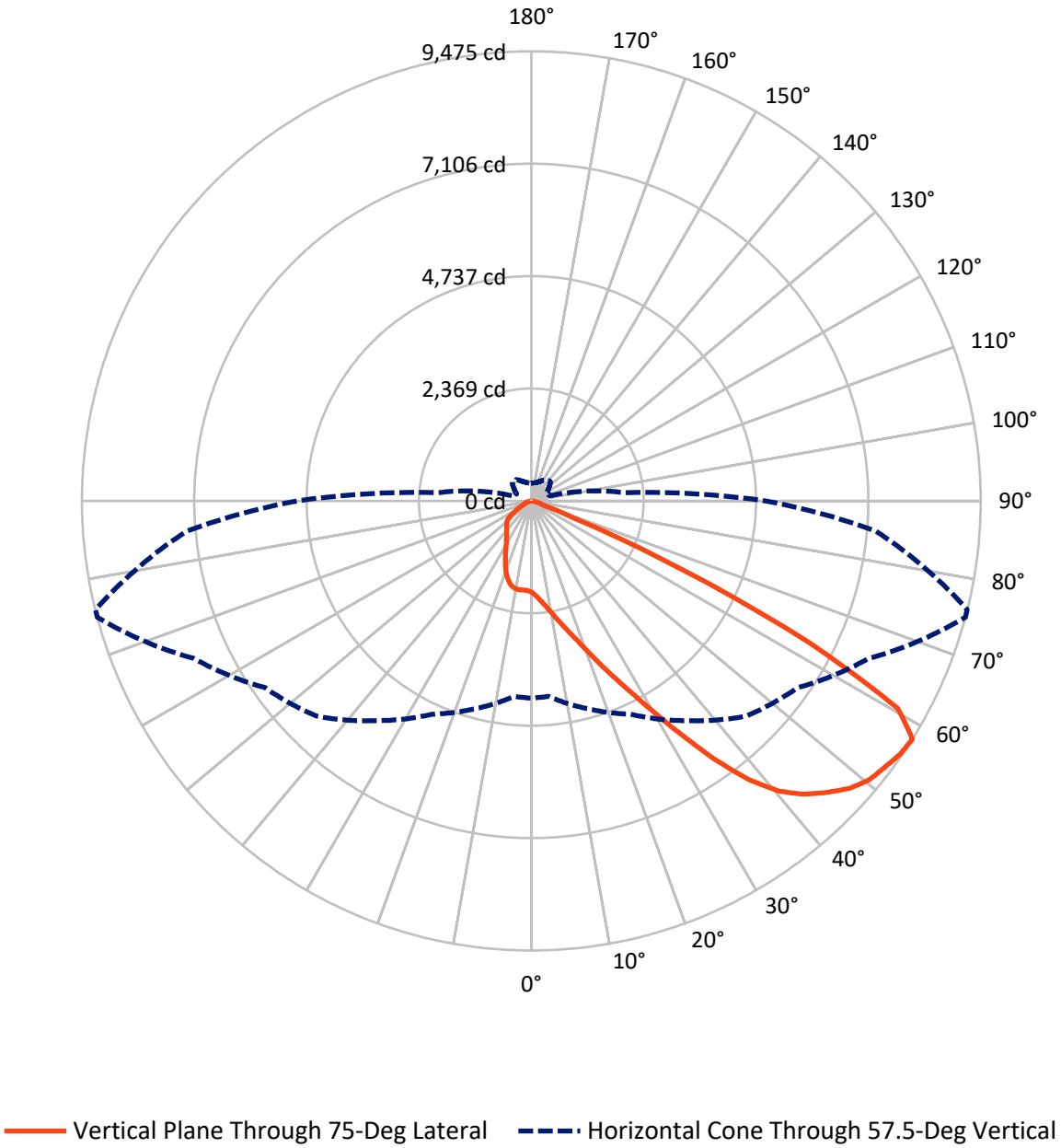
Based on 20 foot mounting height. Maximum calculated value = 9 fc
Type II - Short - N/A

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

Scaled Data Report

REPORT NUMBER: P637993
CATALOG NUMBER: GWS-SA4D-830-U-T2-W-GRSBK

Luminous Intensity Polar Plot



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

Scaled Data Report

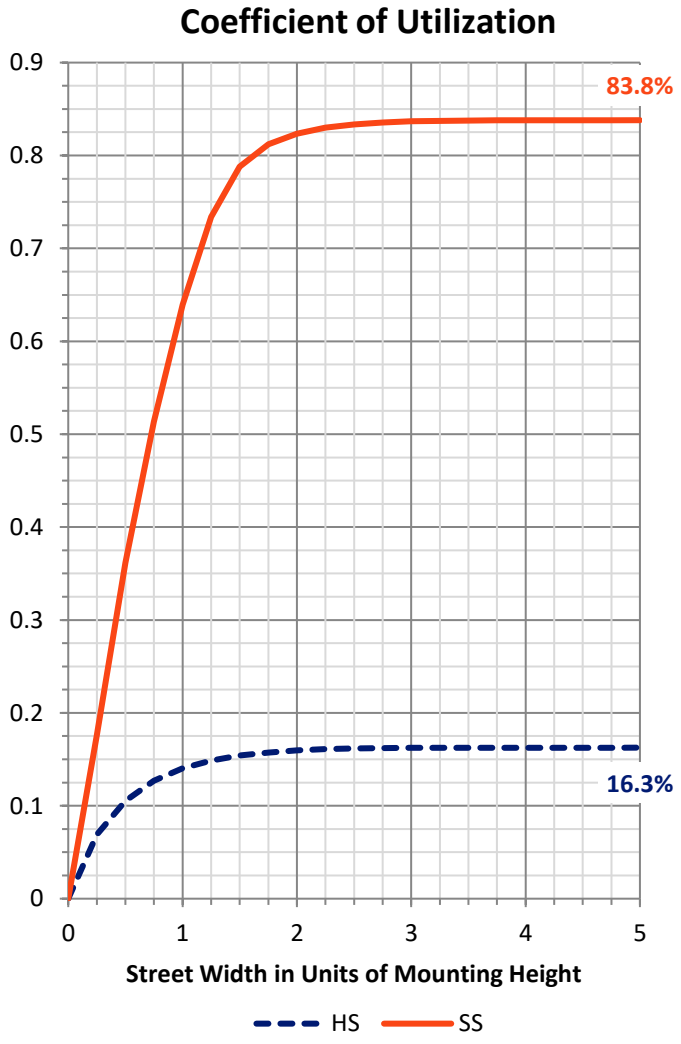
REPORT NUMBER: P637993
CATALOG NUMBER: GWS-SA4D-830-U-T2-W-GRSBK

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1887.6	0.0	1887.6
	% Fixture	16.3	0.0	16.3
Street Side	Lumens	9667.9	0.0	9667.9
	% Fixture	83.7	0.0	83.7
Total	Lumens	11555.5	0.0	11555.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	196.1	1.7
10°-20°	637.1	5.5
20°-30°	1166.6	10.1
30°-40°	1935.6	16.8
40°-50°	2956.1	25.6
50°-60°	3321.7	28.7
60°-70°	1225.2	10.6
70°-80°	117.1	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°	11555.5	100.0
0°-180°	11555.5	100.0



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

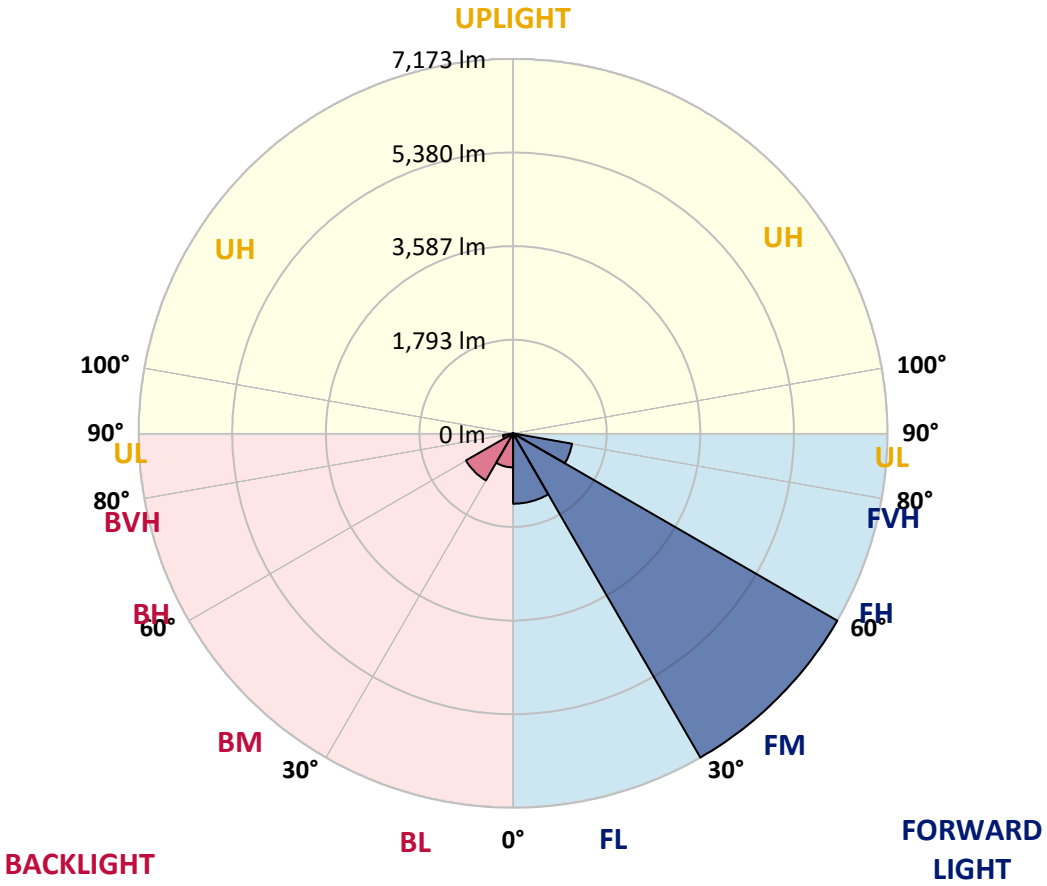
Scaled Data Report

REPORT NUMBER: P637993
CATALOG NUMBER: GWS-SA4D-830-U-T2-W-GRSBK

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	1348.5	11.7			
FM	(30°-60°)	7173.1	62.1			
FH	(60°-80°)	1146.3	9.9			G1/1800
FVH	(80°-90°)	0.1	0.0			G0/10
BL	(0°-30°)	651.3	5.6	B2/1000		
BM	(30°-60°)	1040.2	9.0	B2/2500		
BH	(60°-80°)	196.0	1.7	B1/500		G1/500
BVH	(80°-90°)	0.0	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G1
Type II Short



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

Scaled Data Report

REPORT NUMBER: P637993
CATALOG NUMBER: GWS-SA4D-830-U-T2-W-GRSBK

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	76°	85°
0°	1927.3	1927.3	1927.3	1927.3	1927.3	1927.3	1927.3	1927.3	*1927.3*	1927.3	1927.3
2.5°	2153.2	2175.5	2168.6	2154.6	2146.2	2117.0	2098.8	2045.8	*2008.2*	2004.0	1969.1
5°	2425.2	2421.0	2415.4	2398.7	2384.7	2338.7	2284.3	2195.1	*2115.6*	2105.8	2031.9
7.5°	2574.4	2577.2	2580.0	2577.2	2567.4	2532.5	2472.6	2368.0	*2246.7*	2238.3	2121.1
10°	2635.7	2641.3	2655.3	2681.8	2705.5	2702.7	2667.8	2560.4	*2411.2*	2397.3	2239.7
12.5°	2665.0	2672.0	2694.3	2744.5	2808.7	2858.9	2864.4	2768.2	*2603.7*	2581.4	2380.5
15°	2705.5	2712.4	2740.3	2805.9	2899.3	2998.3	3062.5	3001.1	*2817.0*	2793.3	2535.3
17.5°	2723.6	2733.4	2773.8	2860.3	2981.6	3133.6	3278.6	3273.1	*3069.4*	3051.3	2715.2
20°	2758.5	2765.4	2801.7	2895.1	3041.6	3260.5	3504.6	3592.4	*3377.6*	3351.2	2932.8
22.5°	2868.6	2871.4	2888.2	2946.7	3083.4	3352.5	3734.7	3964.8	*3741.6*	3706.8	3176.8
25°	3048.5	3047.1	3054.1	3063.9	3164.3	3446.0	3956.4	4384.5	*4158.6*	4121.0	3453.0
27.5°	3277.2	3277.2	3294.0	3266.1	3306.5	3561.7	4175.3	4867.1	*4643.9*	4590.9	3755.6
30°	3546.4	3545.0	3584.0	3539.4	3552.0	3744.4	4411.0	5392.8	*5229.6*	5164.1	4104.2
32.5°	3911.8	3903.4	3948.0	3886.7	3844.8	4020.5	4698.3	5942.3	*5931.1*	5830.7	4542.1
35°	4373.4	4359.4	4373.4	4313.4	4238.1	4406.8	5074.8	6490.3	*6709.3*	6603.3	5063.7
37.5°	4832.2	4876.8	4892.2	4789.0	4727.6	4896.3	5528.1	6981.2	*7452.6*	7342.4	5606.2
40°	5373.3	5359.3	5412.3	5296.6	5257.5	5444.4	5971.6	7346.6	*8041.1*	7936.5	6088.7
42.5°	5772.1	5797.2	5862.8	5798.6	5767.9	5943.7	6343.9	7560.0	*8449.7*	8346.5	6433.2
45°	6250.5	6268.6	6293.7	6240.7	6208.6	6381.6	6613.1	7653.4	*8760.7*	8649.1	6664.7
47.5°	6767.9	6781.8	6781.8	6673.0	6569.8	6640.9	6793.0	7706.4	*9046.6*	8939.2	6836.2
50°	7138.8	7145.8	7207.1	7130.4	6905.9	6795.7	6875.2	7758.0	*9236.2*	9135.8	6892.0
52.5°	6809.7	6801.3	7003.5	7162.5	7222.5	7003.5	7017.5	7833.3	*9328.3*	9241.8	6936.6
55°	5734.5	5720.5	6005.0	6391.3	6919.9	7200.2	7189.0	7877.9	*9430.1*	9377.1	7098.4
57.5°	*4157.2*	*4133.5*	*4529.6*	*4959.1*	*5652.2*	*6412.2*	*6858.5*	*7852.8*	*9474.7*	*9470.5*	*7286.6*
60°	2499.1	2479.5	2853.3	3305.1	3840.6	4604.9	5345.4	7034.2	*8877.8*	8886.2	6797.1
62.5°	1538.2	1556.3	1893.8	2123.9	2323.4	2553.5	2981.6	4731.8	*6576.8*	6631.2	4776.4
65°	1034.8	1048.7	1361.1	1651.2	1651.2	1349.9	1158.9	2262.0	*3508.7*	3416.7	2259.2
67.5°	694.5	709.8	956.7	1295.6	1344.4	941.3	470.0	675.0	*977.6*	948.3	559.2
70°	408.6	425.3	637.3	888.3	979.0	655.4	313.8	285.9	*277.5*	269.2	217.6
72.5°	182.7	189.7	324.9	451.8	412.8	276.1	221.7	228.7	*216.2*	212.0	177.1
75°	55.8	58.6	83.7	97.6	99.0	99.0	133.9	179.9	*170.1*	171.5	136.7
77.5°	13.9	13.9	22.3	20.9	11.2	9.8	25.1	40.4	*41.8*	37.7	27.9
80°	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	*1.4*	1.4	1.4
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: P637993
CATALOG NUMBER: GWS-SA4D-830-U-T2-W-GRSBK

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1927.3	1927.3	1927.3	1927.3	1927.3	1927.3	1927.3	1927.3	1927.3	1927.3	1927.3
2.5°	1953.8	1917.5	1893.8	1860.4	1836.6	1811.5	1789.2	1771.1	1761.3	1758.6	1759.9
5°	1998.4	1941.2	1885.5	1821.3	1776.7	1734.8	1701.4	1674.9	1662.3	1658.1	1658.1
7.5°	2066.8	1987.3	1888.2	1787.8	1712.5	1647.0	1607.9	1578.7	1567.5	1564.7	1556.3
10°	2156.0	2047.2	1884.1	1727.9	1621.9	1553.6	1525.7	1517.3	1521.5	1522.9	1521.5
12.5°	2263.4	2110.0	1857.6	1640.0	1525.7	1483.8	1486.6	1508.9	1534.0	1546.6	1549.4
15°	2377.7	2167.2	1797.6	1535.4	1443.4	1442.0	1482.4	1534.0	1582.8	1603.8	1609.3
17.5°	2506.0	2213.2	1705.6	1423.9	1372.3	1412.7	1485.2	1564.7	1630.3	1665.1	1672.1
20°	2646.9	2250.8	1588.4	1319.3	1309.5	1382.0	1482.4	1580.0	1660.9	1700.0	1707.0
22.5°	2793.3	2277.3	1453.1	1223.0	1252.3	1347.2	1455.9	1550.8	1627.5	1672.1	1677.7
25°	2960.7	2280.1	1315.1	1142.2	1199.3	1299.7	1391.8	1469.9	1534.0	1573.1	1577.3
27.5°	3107.1	2246.7	1192.4	1076.6	1150.5	1241.2	1302.5	1345.8	1390.4	1412.7	1414.1
30°	3275.8	2188.1	1076.6	1023.6	1100.3	1168.7	1199.3	1209.1	1213.3	1217.5	1211.9
32.5°	3476.7	2117.0	990.1	972.0	1043.1	1089.2	1097.5	1078.0	1054.3	1020.8	1012.5
35°	3723.5	2052.8	919.0	921.8	980.4	1008.3	1001.3	959.5	913.4	873.0	866.0
37.5°	3991.3	1998.4	864.6	873.0	912.0	931.6	910.7	864.6	843.7	808.9	810.2
40°	4228.3	1953.8	815.8	824.2	842.3	860.5	827.0	796.3	835.3	832.6	835.3
42.5°	4397.1	1916.1	774.0	769.8	782.4	794.9	769.8	754.5	820.0	801.9	811.6
45°	4496.1	1881.3	739.1	714.0	733.5	755.9	739.1	719.6	741.9	658.2	651.3
47.5°	4563.0	1861.8	708.4	659.6	694.5	733.5	698.7	651.3	619.2	546.7	541.1
50°	4570.0	1852.0	672.2	603.8	648.5	690.3	649.9	584.3	538.3	506.2	502.0
52.5°	4606.3	1871.5	622.0	532.7	581.5	648.5	620.6	555.0	492.3	464.4	458.8
55°	4768.0	1953.8	538.3	435.1	506.2	616.4	596.9	495.1	435.1	418.4	414.2
57.5°	*4935.4*	*1970.5*	*423.9*	*344.5*	*440.7*	*570.4*	*545.3*	*456.0*	*397.5*	*377.9*	*373.7*
60°	4512.8	1623.3	318.0	284.5	389.1	527.1	504.8	432.3	364.0	340.3	336.1
62.5°	2964.9	877.2	252.4	241.3	327.7	446.3	460.2	390.5	324.9	299.8	298.4
65°	1366.7	407.2	193.8	191.1	256.6	355.6	396.1	341.7	274.7	252.4	252.4
67.5°	372.4	202.2	152.0	140.9	174.3	238.5	288.7	255.2	195.2	168.7	167.3
70°	185.5	163.2	136.7	121.3	125.5	147.8	170.1	142.2	99.0	80.9	79.5
72.5°	152.0	133.9	115.7	103.2	94.8	90.6	87.9	71.1	46.0	34.9	33.5
75°	113.0	96.2	82.3	66.9	57.2	53.0	47.4	34.9	19.5	11.2	9.8
77.5°	25.1	23.7	22.3	16.7	15.3	12.6	9.8	7.0	2.8	0.0	0.0
80°	1.4	1.4	1.4	1.4	1.4	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

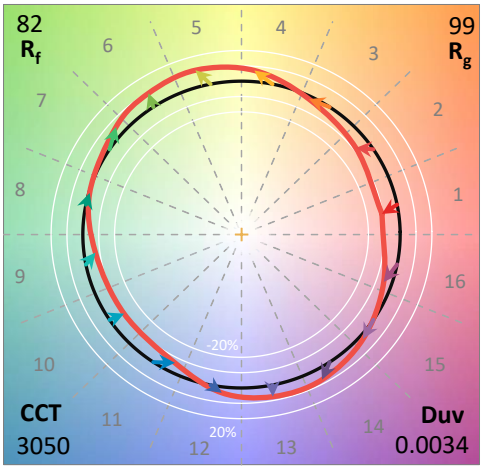
Test Information

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

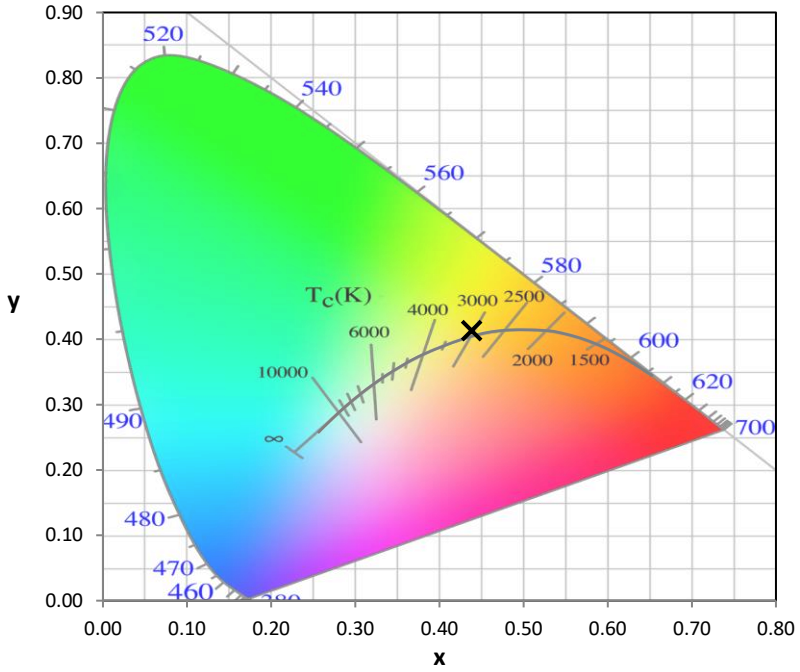
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

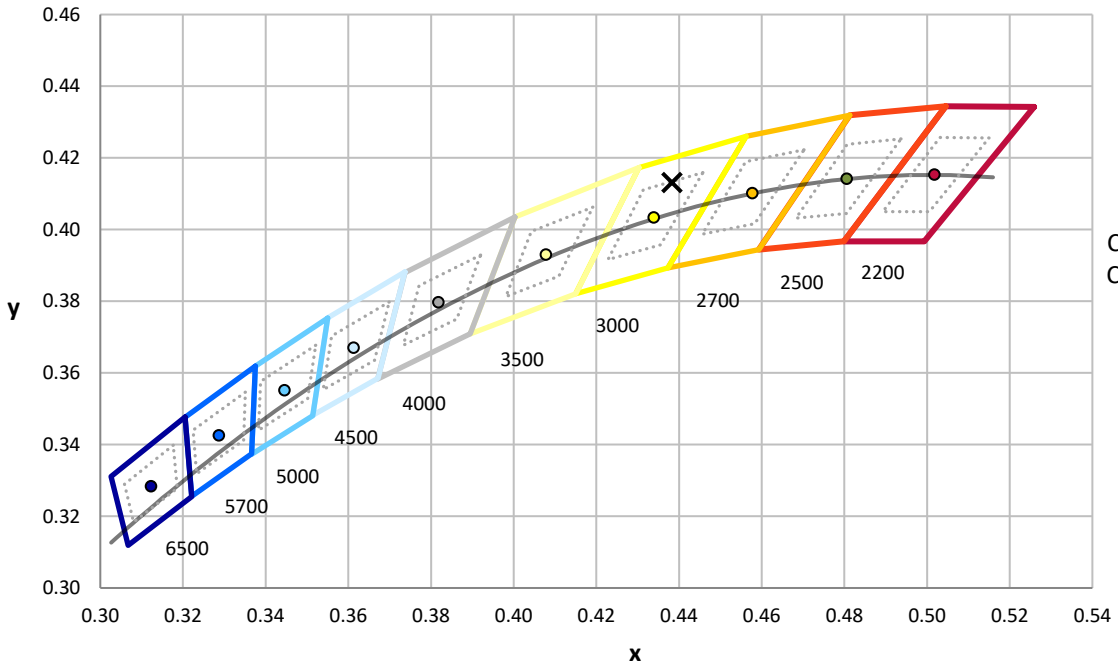
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

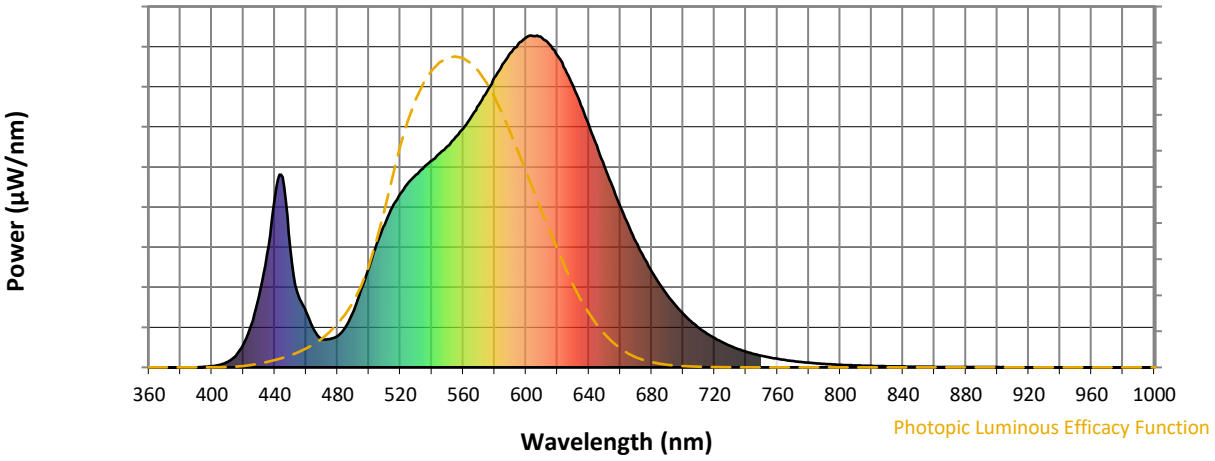


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength

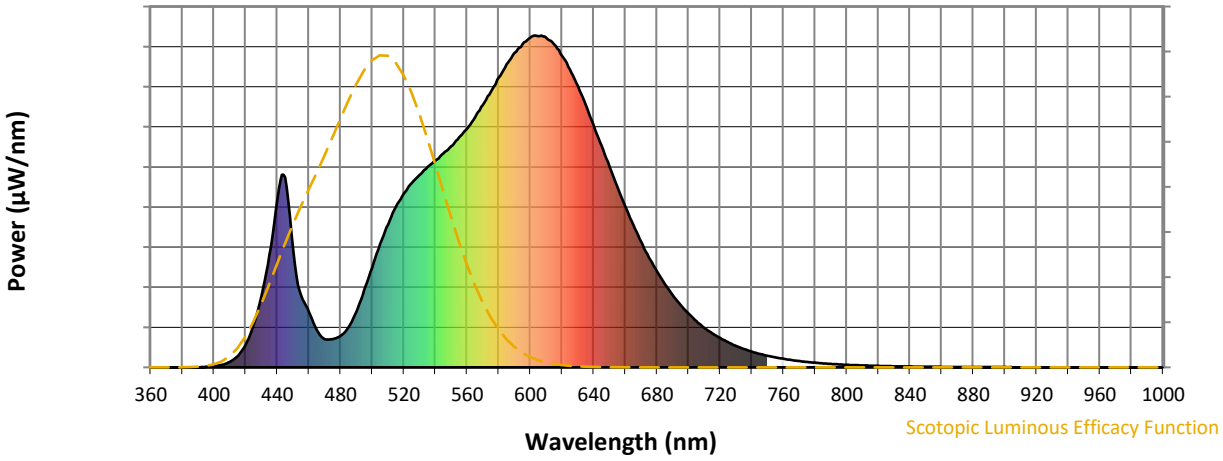


Photopic Lumens: NR

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

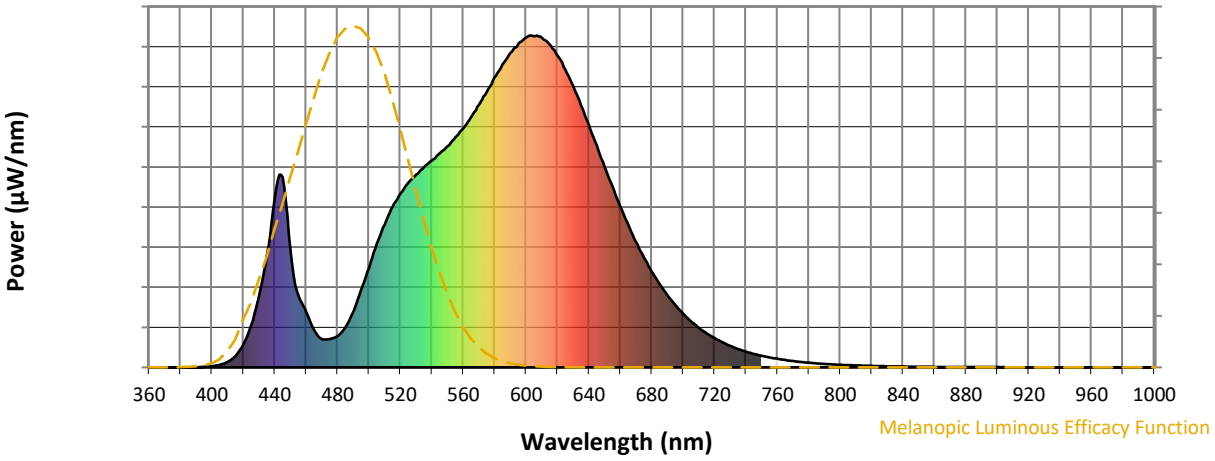


Scotopic Lumens: NR **S/P: 1.27**

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			

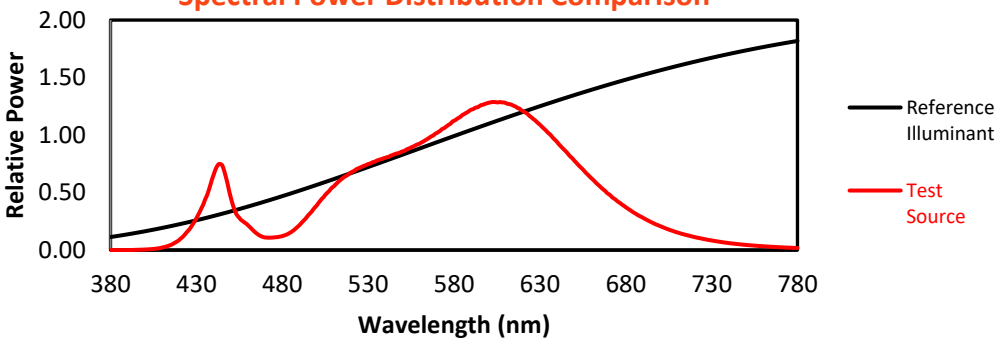
REPORT NUMBER: SP1-2408-195-9

TM-30-18

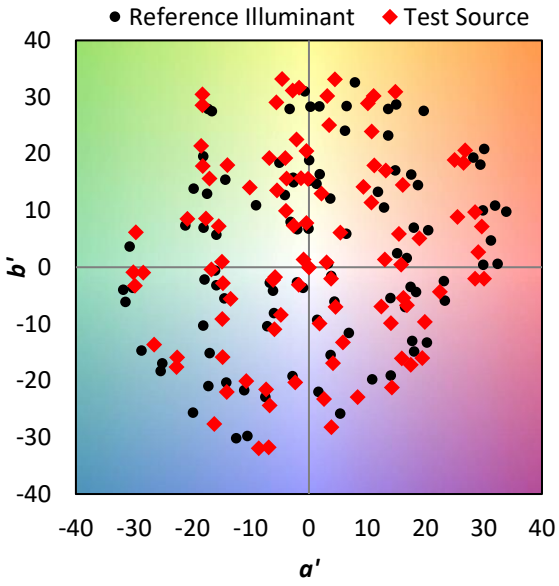
Summary

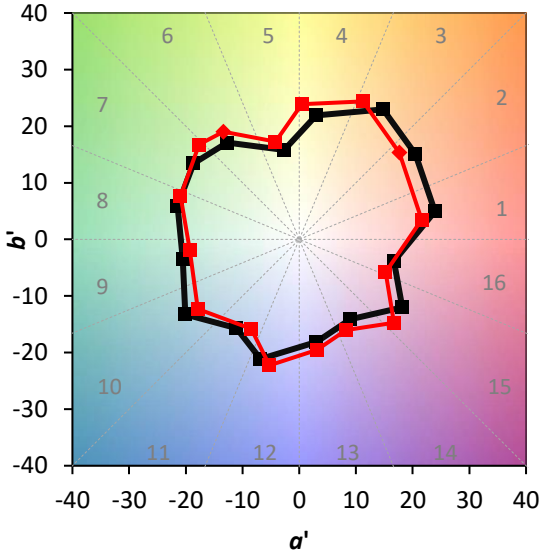
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

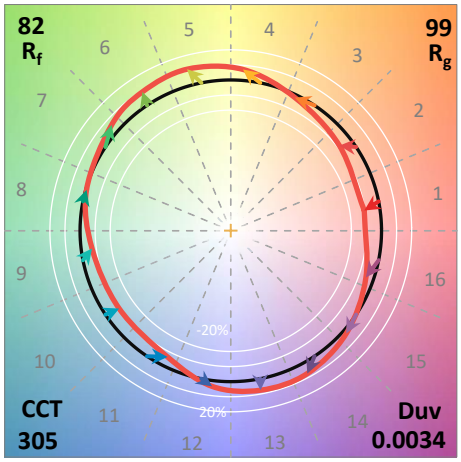
Spectral Power Distribution Comparison

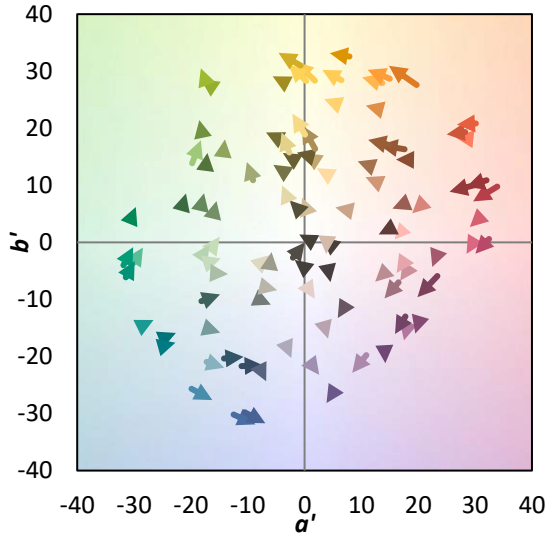


Color Vector Graphics







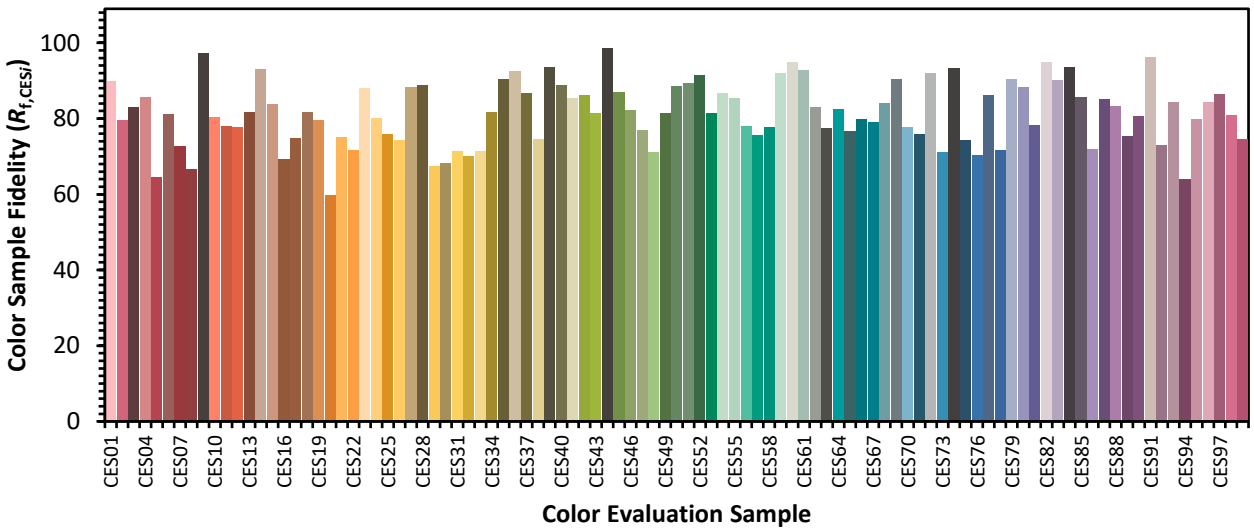


REPORT NUMBER: SP1-2408-195-9

TM-30-18

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

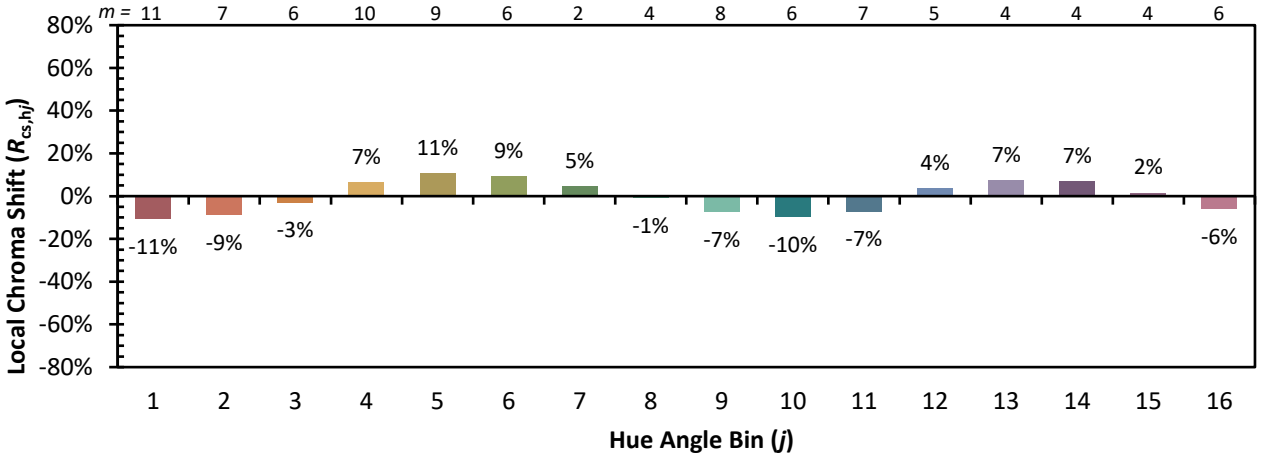
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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

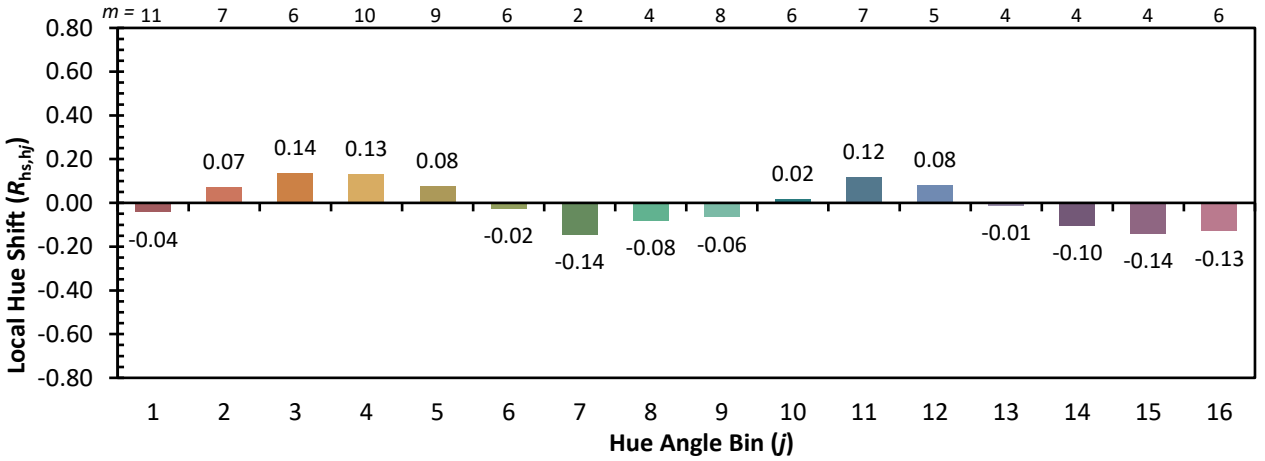


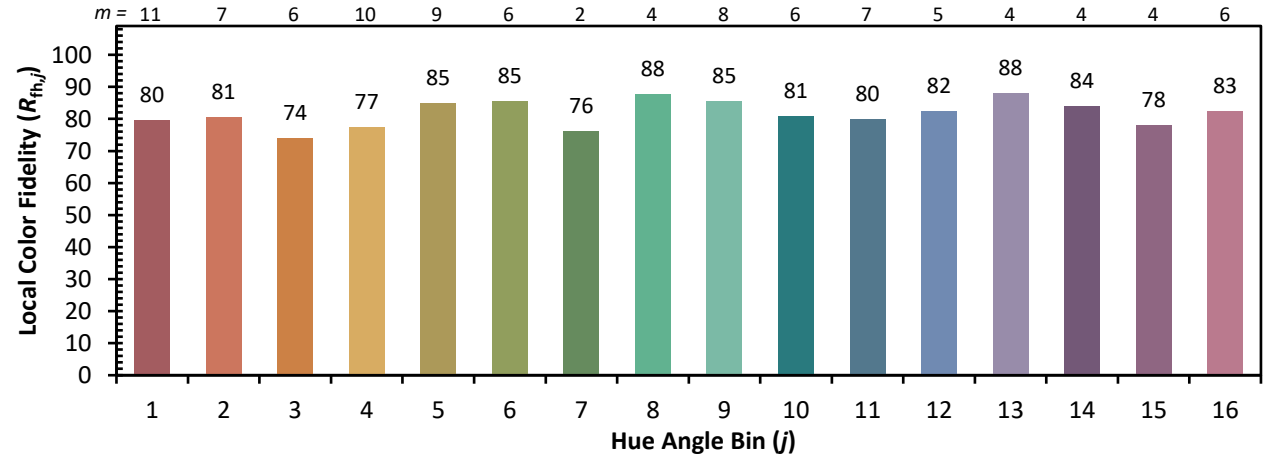
REPORT NUMBER: SP1-2408-195-9

TM-30-18

Color Rendition by Hue-Angle Bin



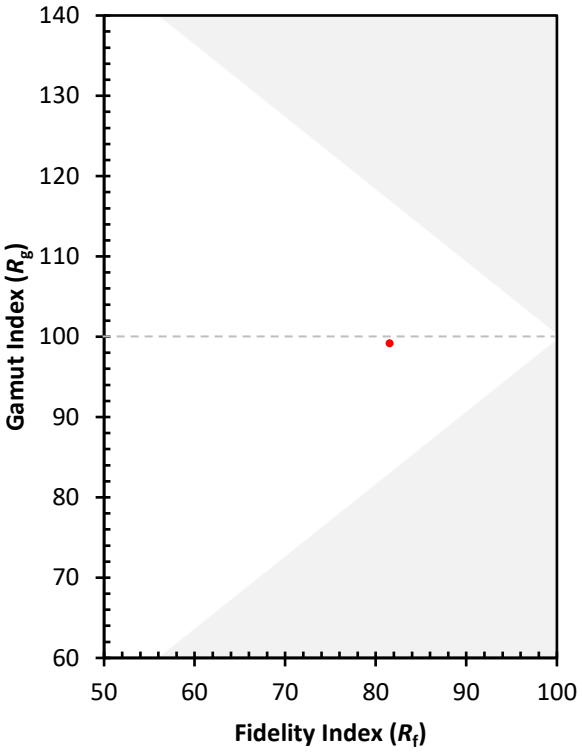


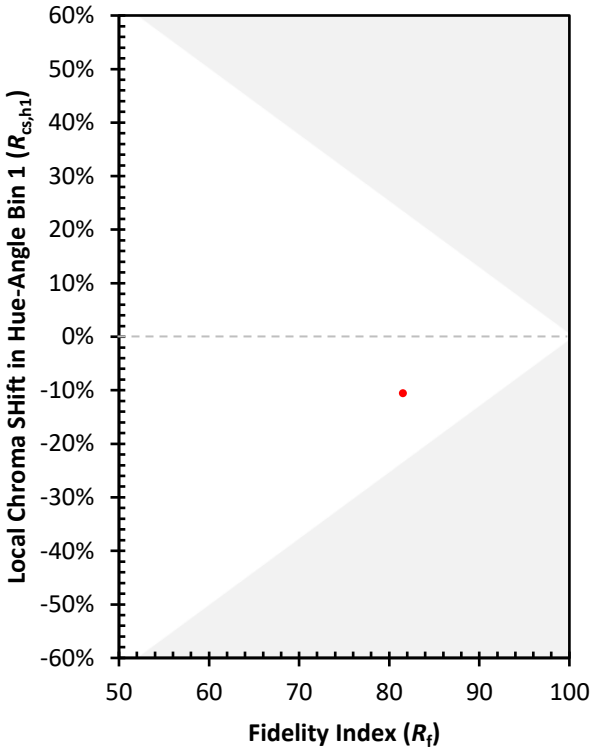


REPORT NUMBER: SP1-2408-195-9

TM-30-18

Measure Comparisons





(END OF REPORT)