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: P637022

Luminaire Tested: GWS-SA4B-830-U-T4W-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:	P637022
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-52)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	1/10/2023
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	McGRAW-EDISON
Catalog Number:	GWS-SA4B-830-U-T4W-W
Description:	GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source:	(64) 3000K CCT, 80 CRI LEDS
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	11399.7 lumens
Efficiency:	N/A
Efficacy:	120.8 lumens/watt
Luminous Opening:	Rectangular (W 1' x L: 1' x H: 0')
IES Classification:	Type III - Short
BUG Rating:	B2 - U0 - G2

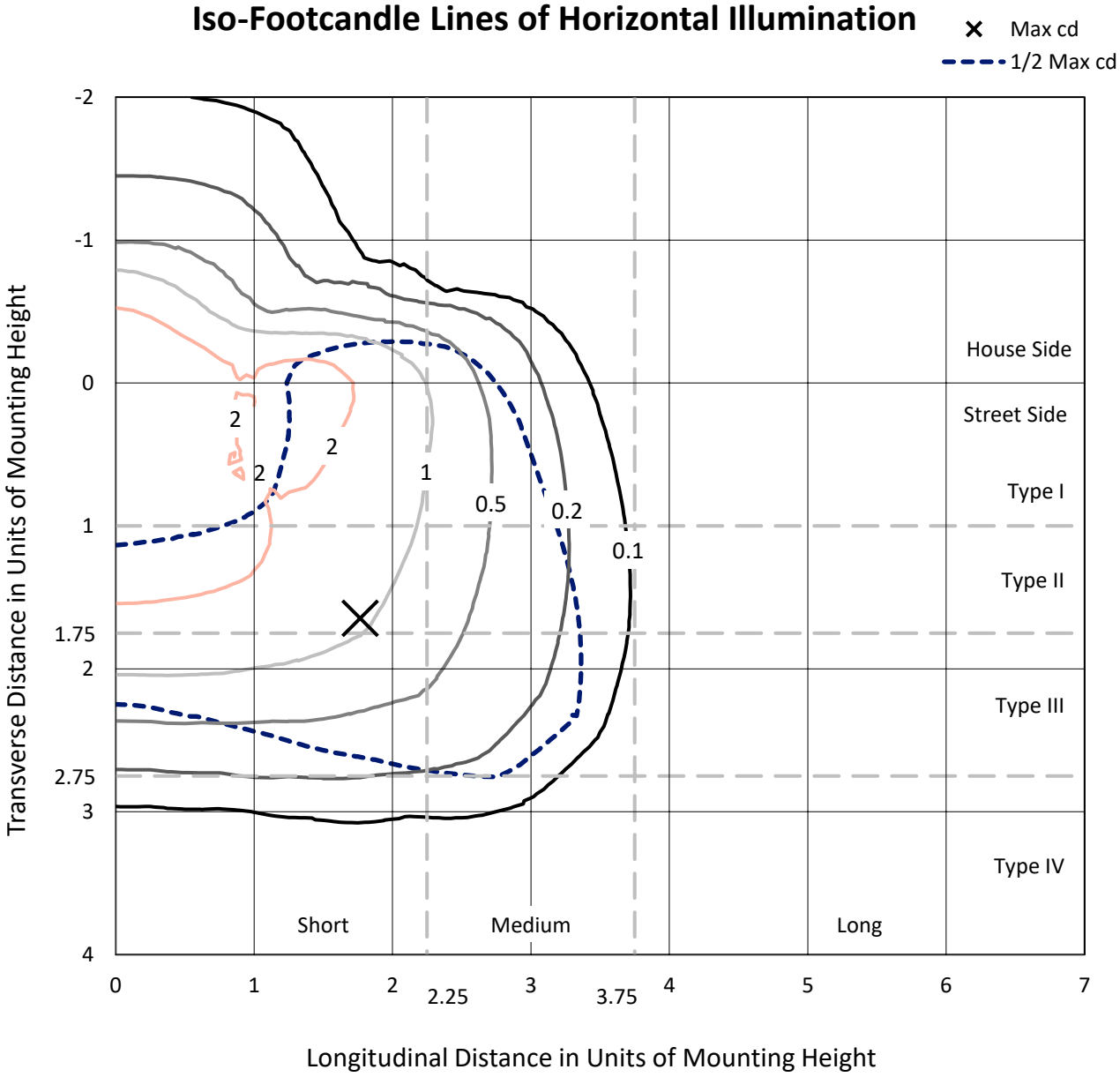
Input Watts (W):	94.4
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	0
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	28.75 FT

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

Scaled Data Report

REPORT NUMBER: P637022
CATALOG NUMBER: GWS-SA4B-830-U-T4W-W

Iso-Footcandle Lines of Horizontal Illumination



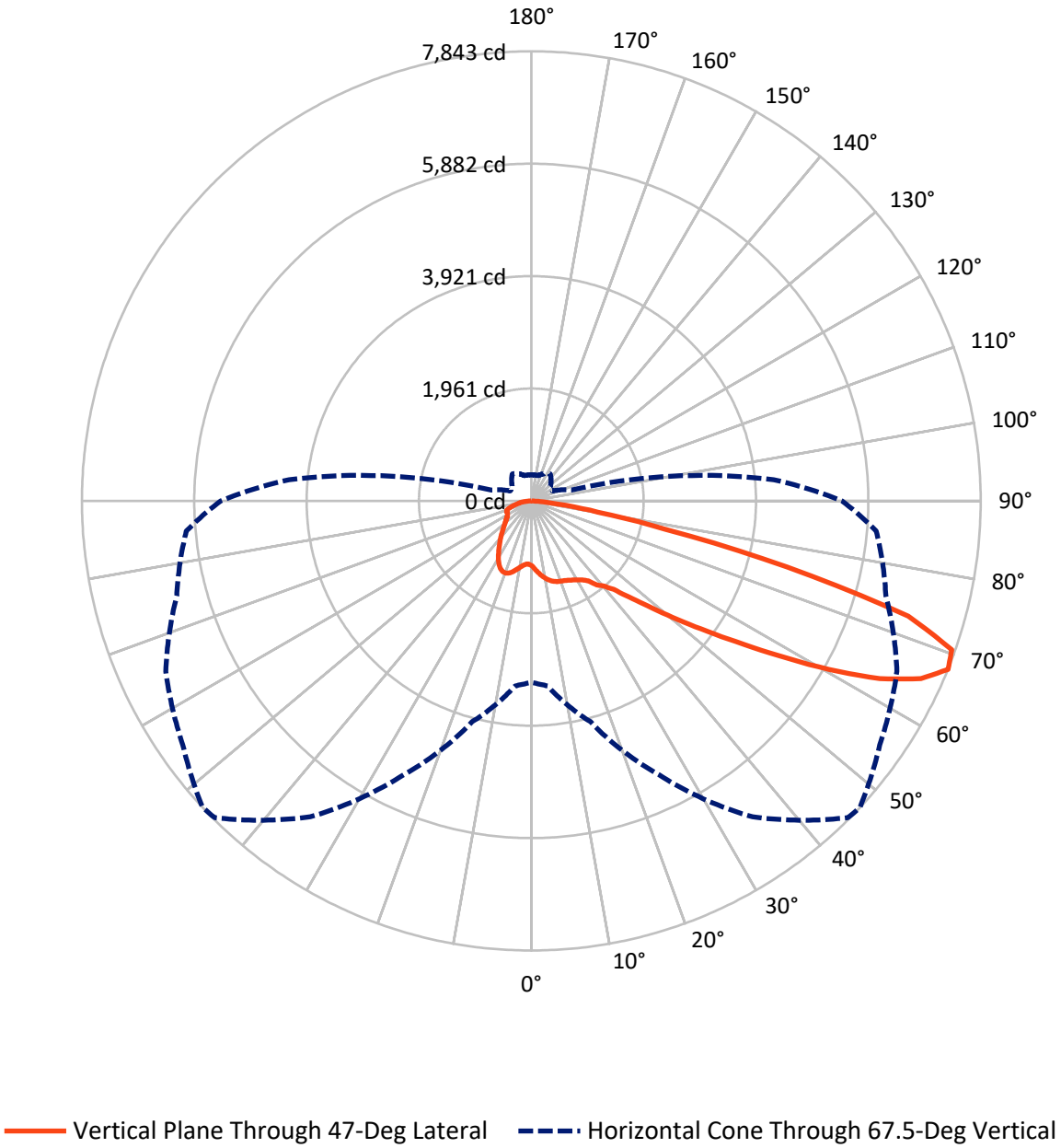
Based on 20 foot mounting height. Maximum calculated value = 3.6 fc
Type III - Short - N/A

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

Scaled Data Report

REPORT NUMBER: P637022
CATALOG NUMBER: GWS-SA4B-830-U-T4W-W

Luminous Intensity Polar Plot



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

Scaled Data Report

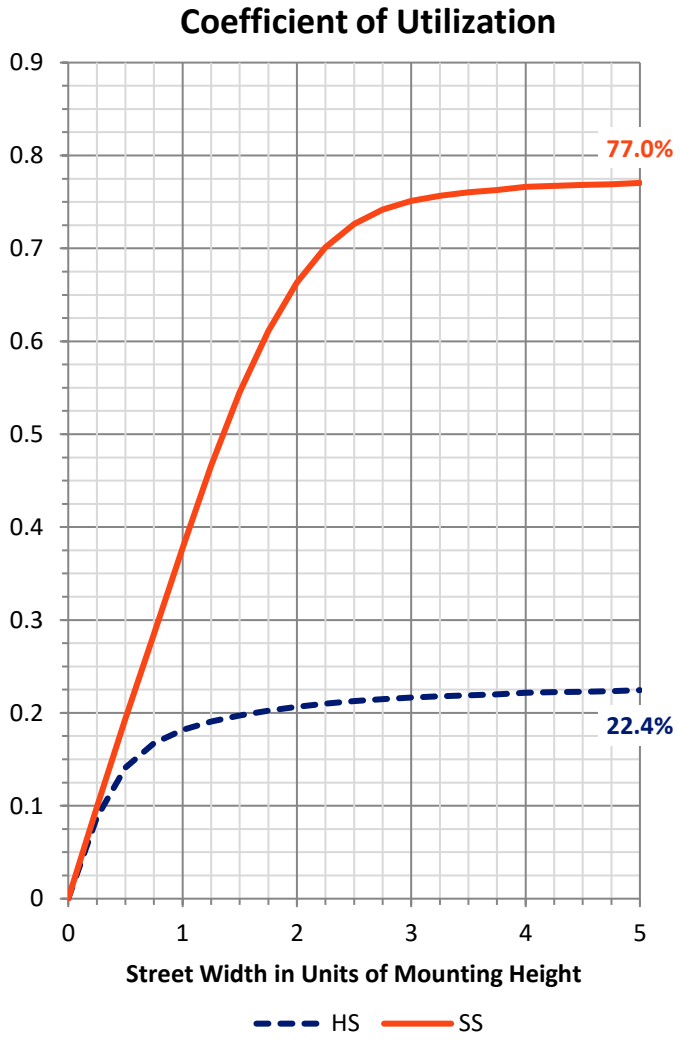
REPORT NUMBER: P637022
CATALOG NUMBER: GWS-SA4B-830-U-T4W-W

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2598.1	0.0	2598.1
	% Fixture	22.8	0.0	22.8
Street Side	Lumens	8801.6	0.0	8801.6
	% Fixture	77.2	0.0	77.2
Total	Lumens	11399.7	0.0	11399.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.5	1.0
10°-20°	384.8	3.4
20°-30°	654.0	5.7
30°-40°	958.1	8.4
40°-50°	1459.8	12.8
50°-60°	2611.8	22.9
60°-70°	3485.2	30.6
70°-80°	1576.1	13.8
80°-90°	154.4	1.4
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°	11399.7	100.0
0°-180°	11399.7	100.0



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

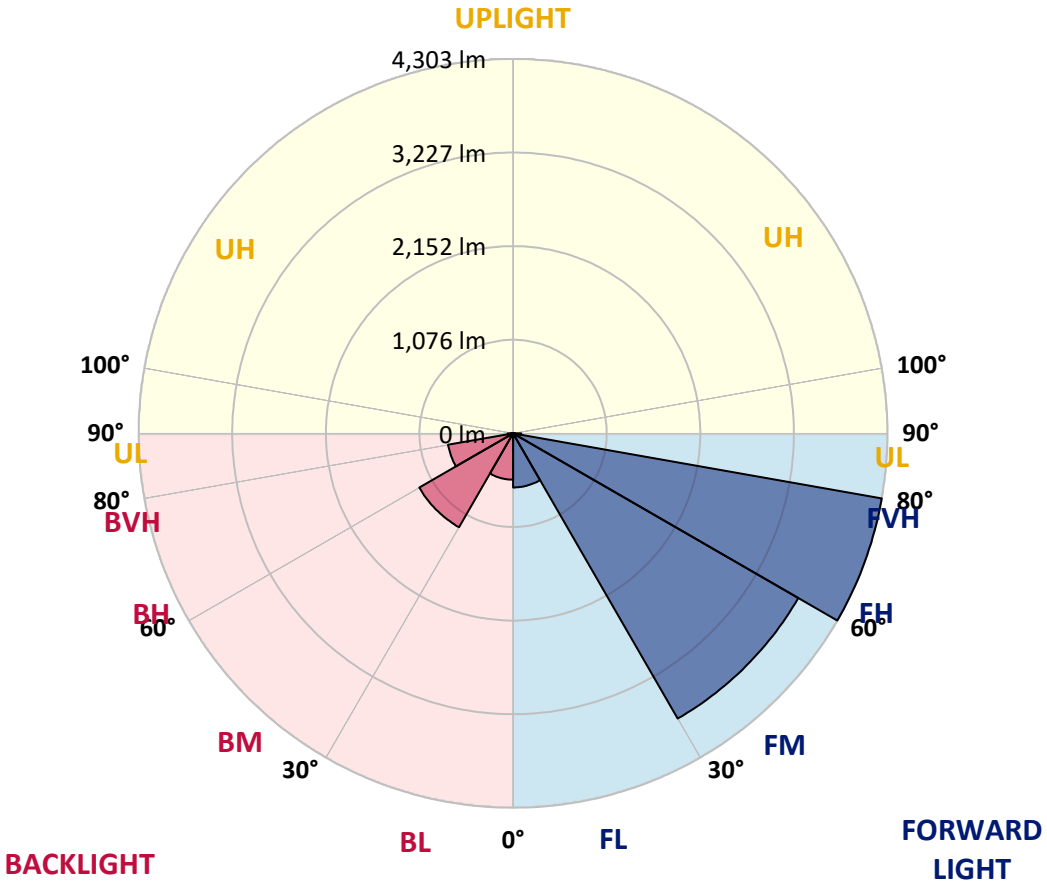
Scaled Data Report

REPORT NUMBER: P637022
CATALOG NUMBER: GWS-SA4B-830-U-T4W-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	621.7	5.5			
FM	(30°-60°)	3784.8	33.2			
FH	(60°-80°)	4303.3	37.7			G2/5000
FVH	(80°-90°)	91.8	0.8			G1/100
BL	(0°-30°)	532.6	4.7	B2/1000		
BM	(30°-60°)	1244.9	10.9	B2/2500		
BH	(60°-80°)	758.0	6.6	B2/1000		G2/1000
BVH	(80°-90°)	62.6	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2
Type III Short



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

Scaled Data Report

REPORT NUMBER: P637022
CATALOG NUMBER: GWS-SA4B-830-U-T4W-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	1130.1	1130.1	1130.1	1130.1	1130.1	1130.1	1130.1	1130.1	1130.1	1130.1	1130.1
2.5°	1205.1	1209.2	1208.4	1201.8	1197.7	1190.2	1191.1	1179.5	1162.2	1150.7	1137.5
5°	1311.4	1318.0	1309.8	1299.0	1282.6	1258.7	1256.2	1229.8	1196.8	1173.8	1149.9
7.5°	1403.7	1407.8	1398.0	1379.8	1355.9	1323.8	1318.0	1286.7	1245.5	1209.2	1174.6
10°	1475.4	1480.4	1467.2	1443.3	1412.0	1379.8	1375.7	1343.6	1299.9	1257.0	1213.3
12.5°	1536.4	1538.1	1524.1	1491.9	1458.1	1425.2	1421.0	1391.4	1351.0	1307.3	1259.5
15°	1571.9	1572.7	1555.4	1519.9	1487.8	1459.0	1456.5	1430.9	1393.8	1352.6	1301.5
17.5°	1569.4	1571.1	1558.7	1527.4	1499.3	1482.0	1479.6	1463.1	1434.2	1397.1	1346.0
20°	1538.9	1540.6	1532.3	1511.7	1496.9	1491.9	1492.7	1487.8	1470.5	1440.0	1388.1
22.5°	1515.0	1517.5	1510.1	1495.2	1493.6	1505.1	1507.6	1510.1	1501.8	1474.6	1424.3
25°	1526.5	1530.7	1519.1	1498.5	1501.8	1527.4	1532.3	1540.6	1534.0	1510.9	1467.2
27.5°	1606.5	1609.0	1579.3	1537.3	1527.4	1554.6	1562.0	1575.2	1570.2	1548.8	1515.0
30°	1792.0	1790.3	1726.8	1623.8	1582.6	1593.3	1599.1	1618.0	1619.7	1605.7	1573.5
32.5°	2053.3	2045.0	1946.9	1782.9	1663.4	1637.0	1643.6	1669.1	1688.1	1673.3	1629.6
35°	2329.4	2322.0	2214.0	2021.9	1812.6	1721.1	1713.7	1733.4	1762.3	1721.1	1658.4
37.5°	2592.3	2580.8	2470.3	2232.9	1996.4	1868.6	1857.9	1838.1	1820.8	1741.7	1693.9
40°	2884.1	2870.9	2774.5	2505.8	2199.1	1981.5	1954.3	1876.0	1860.4	1810.1	1786.2
42.5°	3195.7	3195.7	3115.7	2851.1	2444.0	2143.1	2107.7	1989.8	2006.3	1973.3	1945.3
45°	3507.3	3516.3	3452.9	3199.0	2771.2	2448.1	2391.2	2223.9	2263.4	2248.6	2234.6
47.5°	3772.7	3790.0	3777.6	3554.2	3171.8	2819.0	2732.4	2558.5	2643.4	2678.9	2718.4
50°	4058.7	4077.7	4065.3	3977.1	3640.8	3268.2	3190.7	3011.0	3156.9	3263.3	3392.7
52.5°	4483.2	4510.4	4407.4	4373.6	4210.4	3778.4	3709.2	3504.8	3769.4	3945.8	4234.3
55°	4841.7	4840.9	4804.7	4882.1	4822.0	4402.4	4325.8	4140.3	4478.2	4665.4	5087.4
57.5°	5008.3	5028.0	5152.5	5371.8	5492.1	5164.9	5091.5	4901.9	5239.0	5336.3	5792.1
60°	5094.0	5118.7	5359.4	5793.0	6116.9	5997.4	5968.5	5727.0	5916.6	5905.1	6386.4
62.5°	4973.6	5023.1	5409.7	5985.8	6562.8	6834.0	6824.9	6459.8	6492.8	6379.8	6754.9
65°	4421.4	4474.9	5081.6	5889.4	6817.5	7470.3	7472.8	7123.3	6935.4	6610.6	6693.1
67.5°	3161.9	3238.5	3988.6	5269.5	6727.7	7814.1	7842.9	7424.2	7039.2	6406.2	6043.5
70°	1723.5	1779.6	2367.3	3830.4	5918.2	7731.6	7785.2	7279.1	6581.0	5541.6	4652.2
72.5°	783.1	801.2	1101.2	2101.9	4043.0	6655.1	6879.3	6496.1	5404.7	4093.3	2958.3
75°	358.6	366.8	479.7	1005.6	2112.6	4453.5	4611.0	4838.5	3761.1	2584.9	1542.2
77.5°	225.0	227.5	272.8	459.9	1053.4	2223.1	2388.7	2880.8	2202.4	1279.3	644.6
80°	132.7	135.2	169.8	248.9	494.6	1017.1	1174.6	1139.1	1035.3	552.3	293.4
82.5°	66.8	69.2	98.1	141.8	269.5	404.7	476.4	478.9	385.8	299.2	165.7
85°	23.9	24.7	32.1	56.1	114.6	133.5	149.2	182.2	188.8	173.9	80.0
87.5°	0.0	0.0	0.8	1.6	3.3	13.2	14.0	26.4	55.2	61.8	32.1
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: P637022
CATALOG NUMBER: GWS-SA4B-830-U-T4W-W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1130.1	1130.1	1130.1	1130.1	1130.1	1130.1	1130.1	1130.1	1130.1	1130.1	1130.1
2.5°	1133.4	1121.0	1116.9	1112.8	1106.2	1103.7	1098.7	1093.8	1093.8	1088.9	1086.4
5°	1139.1	1122.7	1111.9	1107.0	1102.9	1105.3	1105.3	1107.0	1112.8	1109.5	1111.1
7.5°	1159.7	1140.8	1125.9	1121.8	1121.8	1131.7	1138.3	1146.6	1157.3	1158.9	1158.9
10°	1196.0	1173.8	1158.1	1155.6	1159.7	1173.8	1183.6	1193.5	1206.7	1207.6	1209.2
12.5°	1235.6	1213.3	1197.7	1201.0	1205.1	1223.2	1233.9	1242.2	1255.4	1255.4	1254.5
15°	1276.8	1252.1	1238.9	1245.5	1257.8	1278.4	1280.1	1280.9	1287.5	1285.9	1285.0
17.5°	1319.7	1293.3	1283.4	1293.3	1306.5	1316.4	1308.1	1296.6	1294.1	1290.8	1289.2
20°	1361.7	1334.5	1330.4	1337.8	1341.9	1333.7	1308.1	1286.7	1276.8	1271.8	1270.2
22.5°	1398.0	1374.9	1372.4	1372.4	1351.8	1322.9	1285.0	1256.2	1243.0	1236.4	1234.8
25°	1440.8	1419.4	1415.3	1393.0	1340.3	1287.5	1236.4	1210.0	1199.3	1196.0	1196.8
27.5°	1491.1	1476.3	1463.1	1399.6	1307.3	1224.9	1167.2	1155.6	1151.5	1155.6	1158.1
30°	1552.9	1538.1	1508.4	1391.4	1254.5	1143.3	1088.0	1087.2	1099.6	1110.3	1111.9
32.5°	1603.2	1596.6	1548.0	1365.0	1180.4	1053.4	1006.4	1009.7	1032.0	1046.8	1049.3
35°	1642.8	1653.5	1580.9	1321.3	1092.2	968.5	931.4	933.1	945.4	966.0	966.9
37.5°	1698.8	1735.1	1610.6	1254.5	990.8	895.2	861.4	849.0	847.3	853.1	854.8
40°	1811.7	1866.1	1632.1	1157.3	892.7	829.2	791.3	767.4	746.8	731.1	726.2
42.5°	1982.4	2045.0	1644.4	1039.4	805.3	764.1	721.2	690.7	654.5	621.5	610.0
45°	2295.6	2316.2	1644.4	914.1	727.8	703.1	660.2	624.0	577.8	539.1	530.8
47.5°	2796.7	2730.8	1646.1	792.9	659.4	649.5	612.4	571.2	520.1	488.0	483.0
50°	3551.8	3320.2	1679.9	692.4	602.5	604.2	577.0	531.7	485.5	461.6	457.5
52.5°	4407.4	4046.3	1770.5	618.2	554.7	567.1	552.3	508.6	467.4	446.8	442.6
55°	5211.8	4714.0	1848.0	565.4	514.3	535.8	534.9	494.6	457.5	436.9	434.4
57.5°	5896.0	5171.5	1836.5	522.6	479.7	506.9	519.3	485.5	450.9	433.6	431.1
60°	6321.3	5413.8	1672.4	483.0	453.3	486.3	510.2	483.0	454.2	450.1	450.9
62.5°	6505.9	5369.3	1357.6	453.3	436.0	476.4	520.1	500.3	484.7	494.6	500.3
65°	6219.1	4986.8	999.0	431.1	419.6	478.9	543.2	527.5	484.7	491.3	493.7
67.5°	*5422.9*	*4245.0*	*722.1*	*408.8*	*398.9*	*486.3*	*576.2*	*523.4*	*456.6*	*456.6*	*451.7*
70°	3907.9	3053.1	524.2	386.6	378.3	475.6	577.8	495.4	424.5	422.0	409.7
72.5°	2351.6	1801.0	408.8	361.9	347.0	422.0	541.5	462.4	393.2	372.6	357.7
75°	1221.6	902.6	342.9	334.7	297.6	357.7	495.4	411.3	336.3	318.2	309.9
77.5°	523.4	422.0	294.3	298.4	247.3	300.9	399.8	356.1	298.4	275.3	267.9
80°	258.0	239.9	232.4	239.0	197.8	232.4	344.5	311.6	253.1	226.7	216.0
82.5°	147.5	140.1	167.3	169.8	140.9	194.5	291.0	263.8	209.4	180.5	163.2
85°	68.4	73.4	101.4	102.2	87.4	133.5	190.4	148.4	111.3	92.3	88.2
87.5°	27.2	32.1	44.5	43.7	25.6	24.7	16.5	9.1	7.4	6.6	5.8
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

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

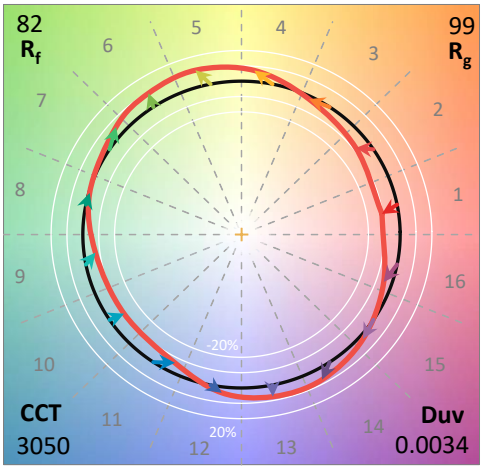
Test Information

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

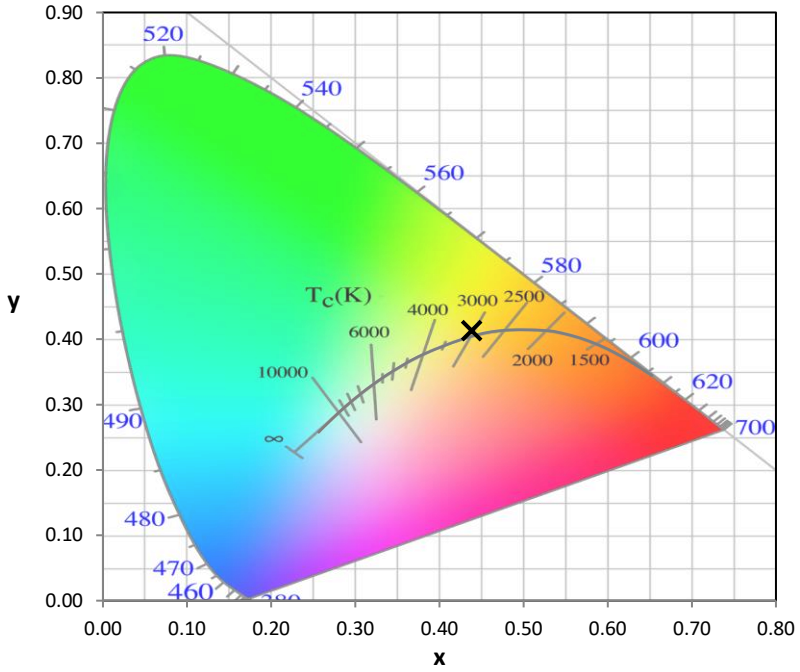
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

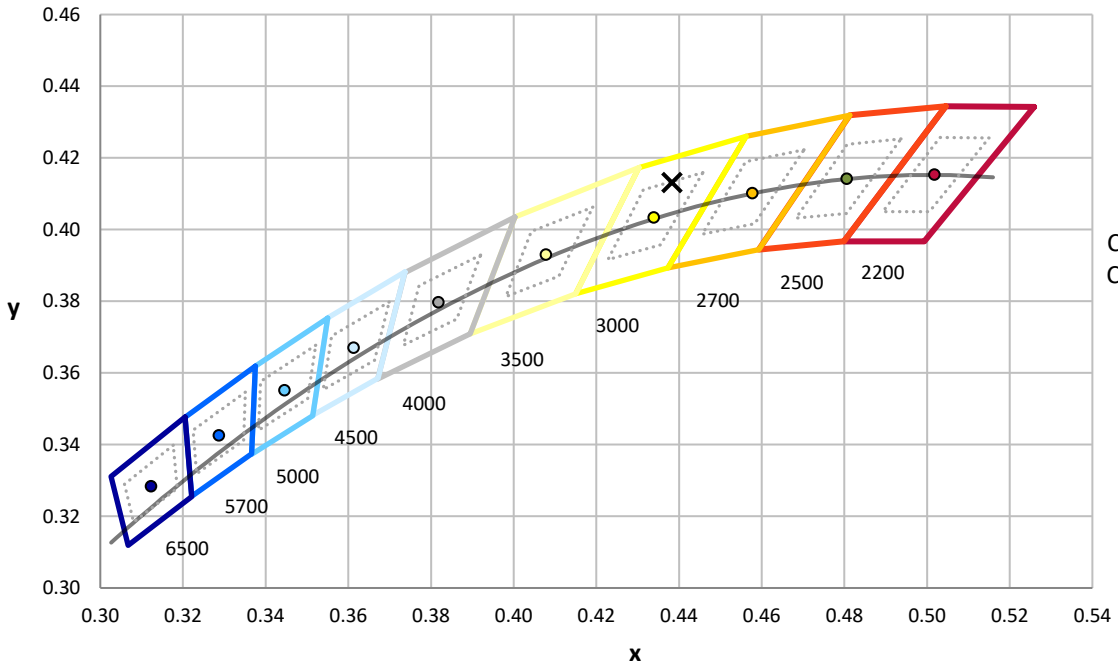
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

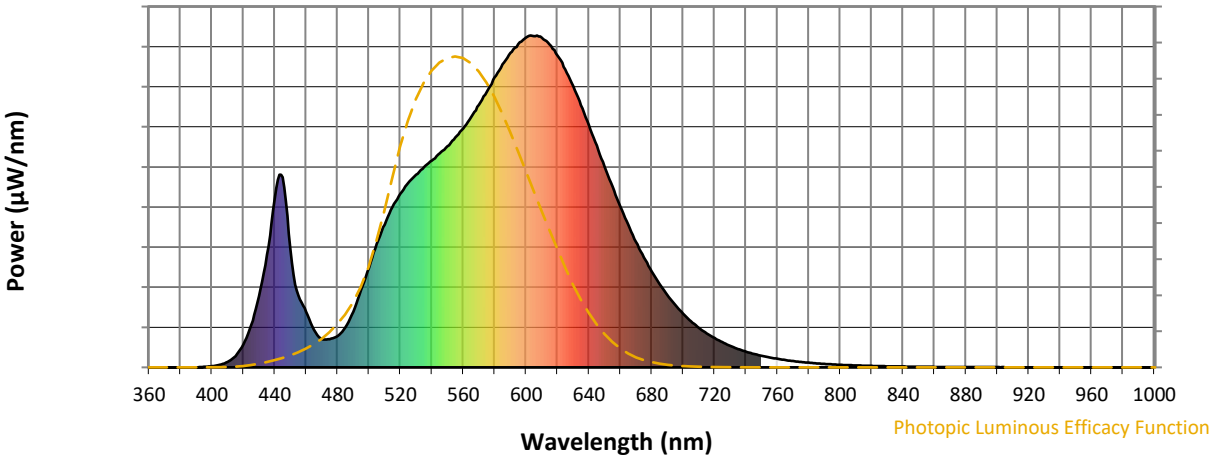


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength

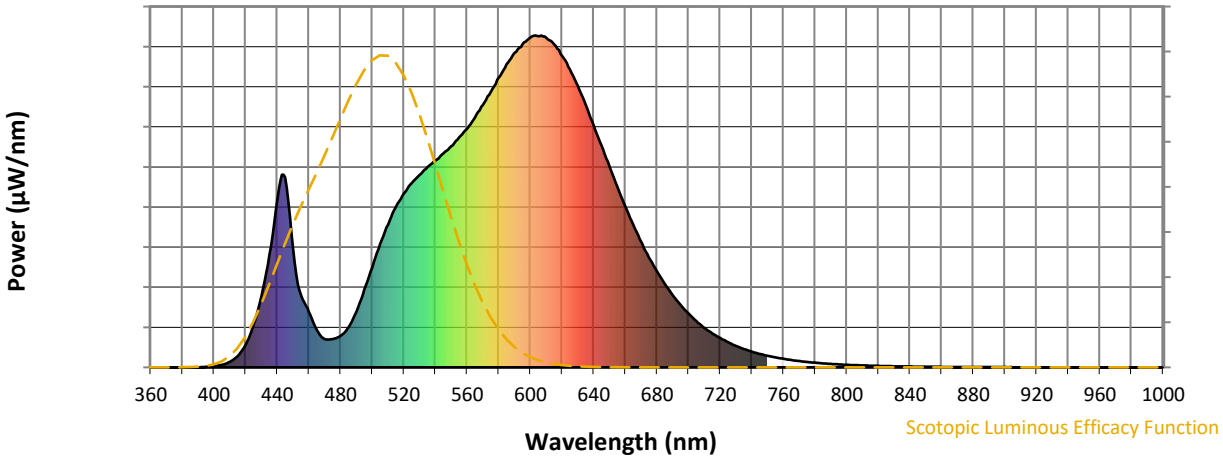


Photopic Lumens: NR

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

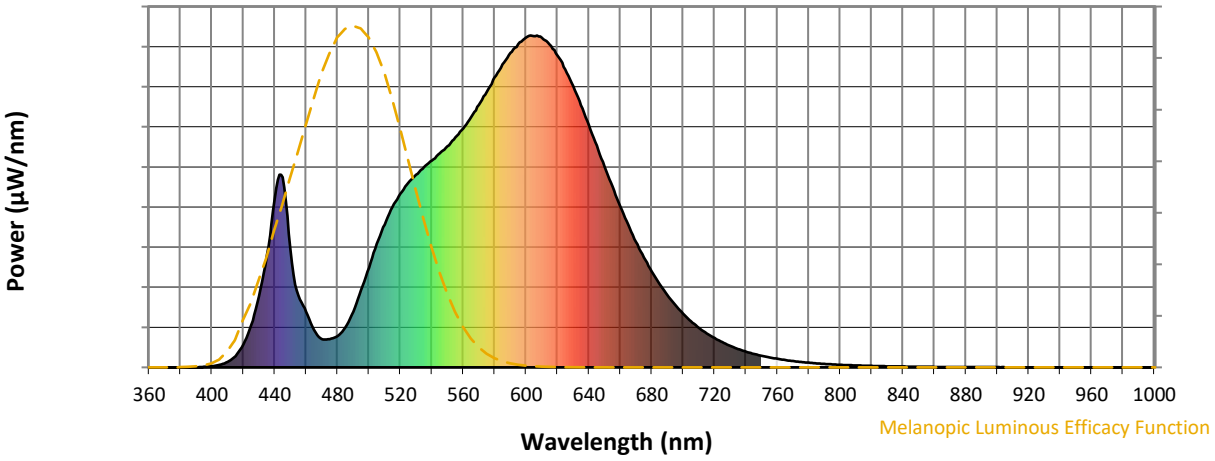


Scotopic Lumens: NR **S/P: 1.27**

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			

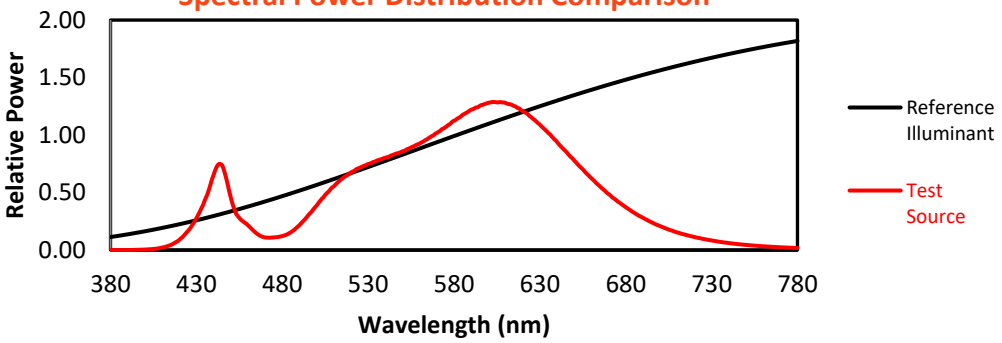
REPORT NUMBER: SP1-2408-195-9

TM-30-18

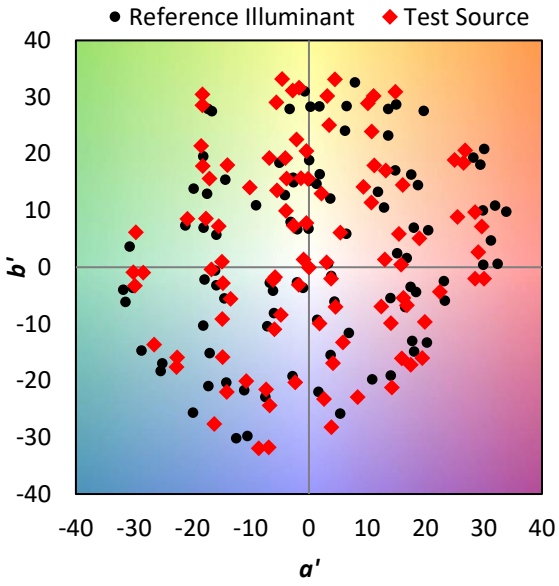
Summary

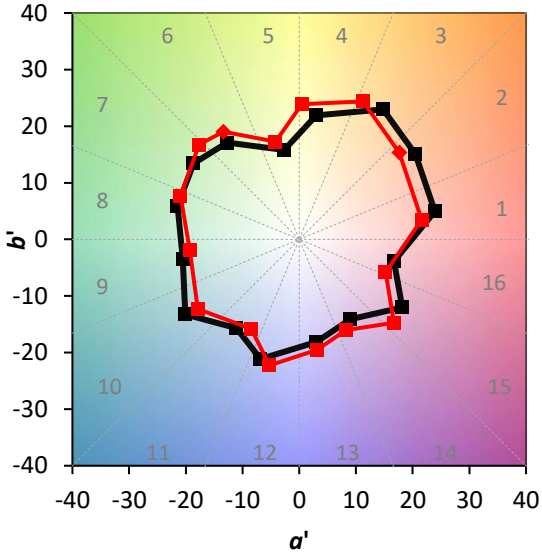
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

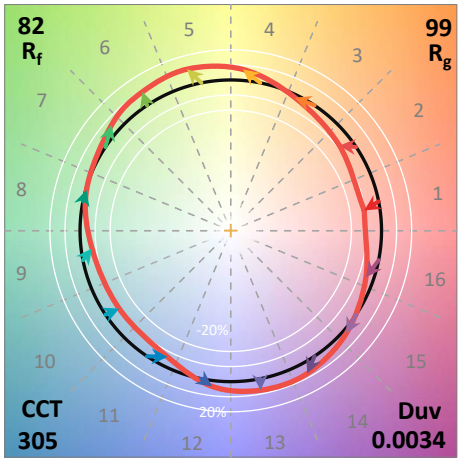
Spectral Power Distribution Comparison

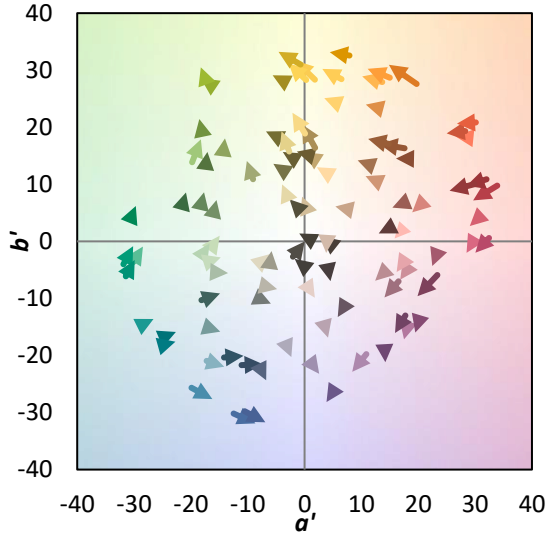


Color Vector Graphics







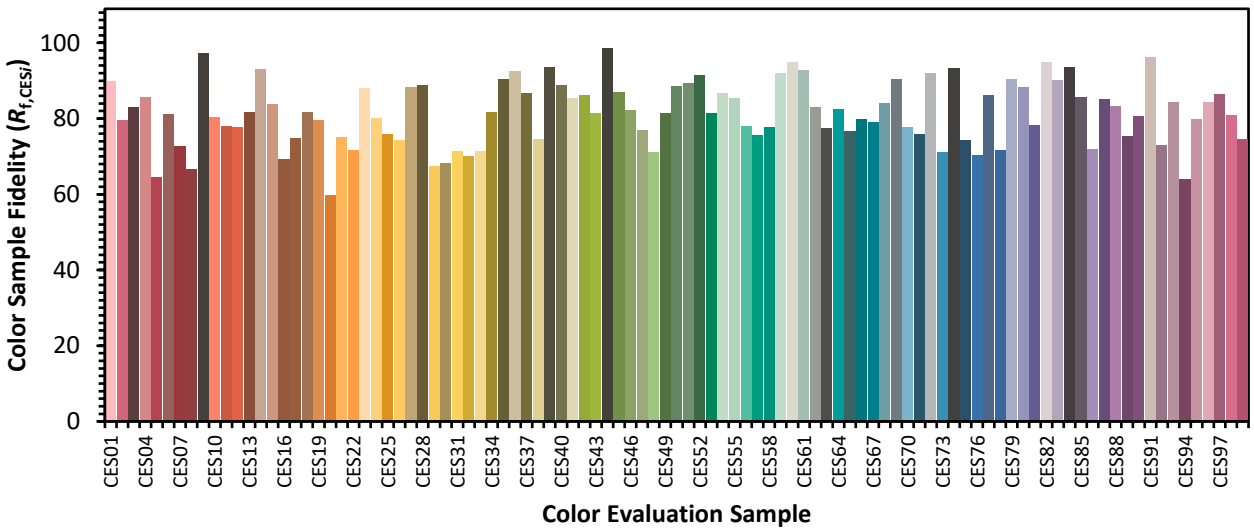


REPORT NUMBER: SP1-2408-195-9

TM-30-18

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

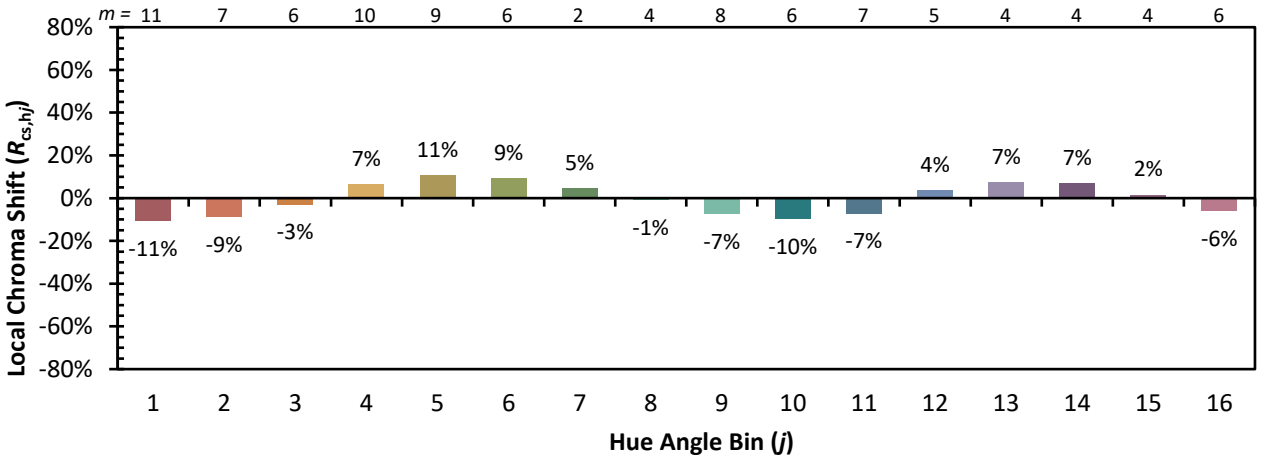
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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

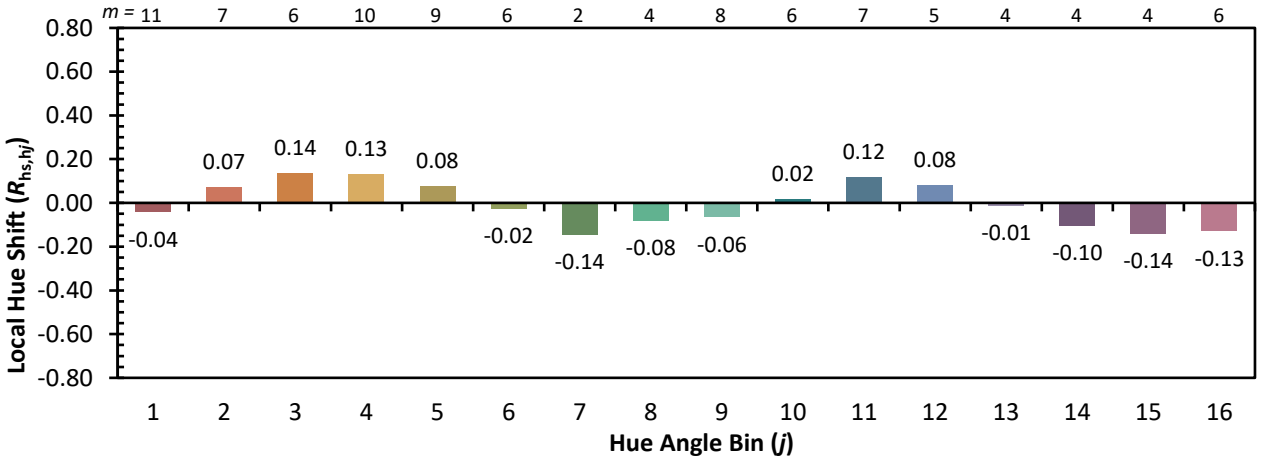


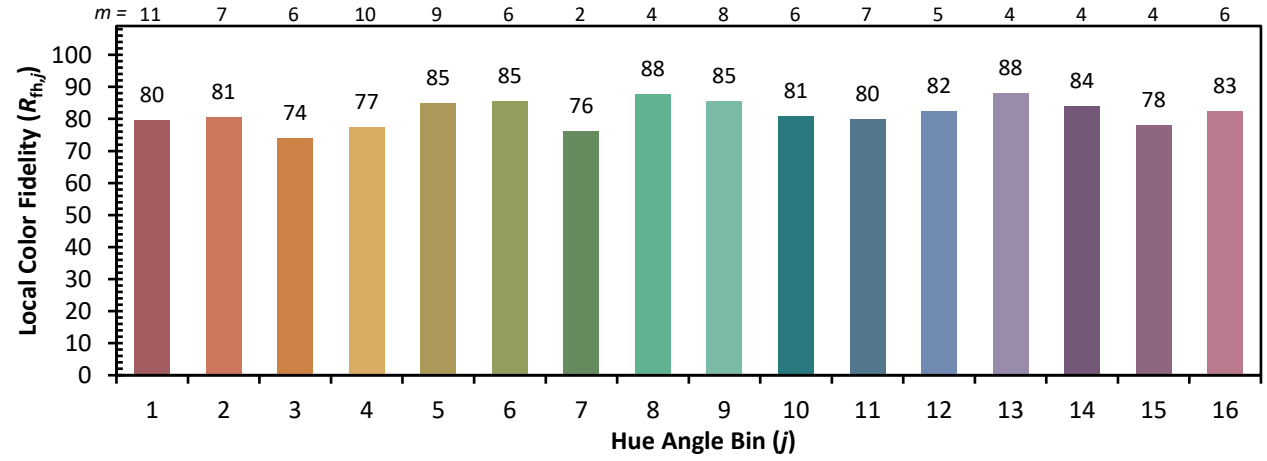
REPORT NUMBER: SP1-2408-195-9

TM-30-18

Color Rendition by Hue-Angle Bin



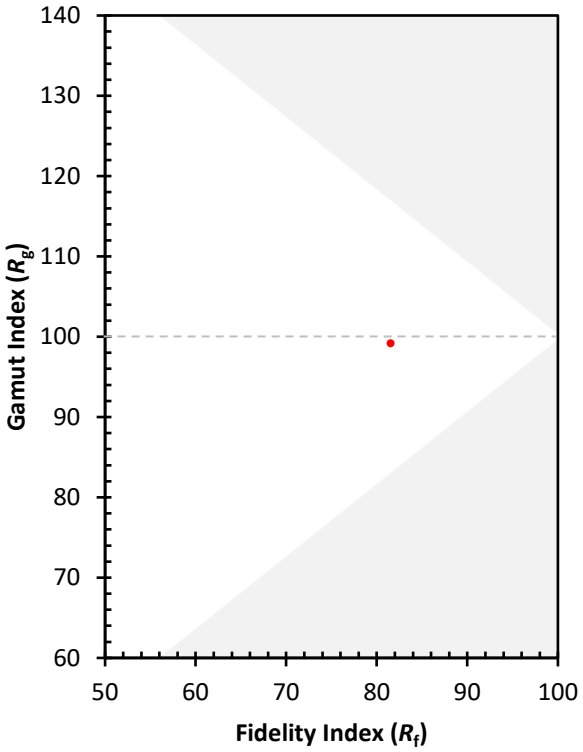


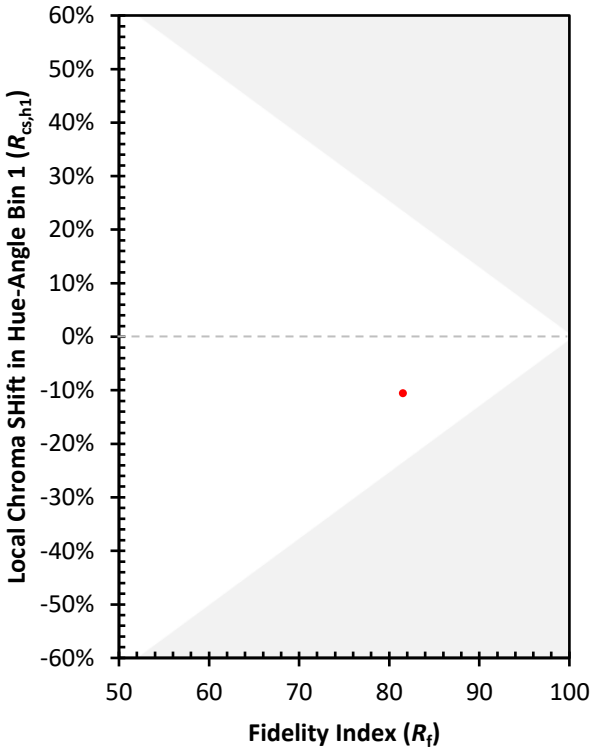


REPORT NUMBER: SP1-2408-195-9

TM-30-18

Measure Comparisons





(END OF REPORT)