

Signify Classified - Internal
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: P636996

Luminaire Tested: GWS-SA4B-830-U-SLL-W-HSS

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P636996
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-40)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA4B-830-U-SLL-W-HSS
Description: GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: (64) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6961.8 lumens
Efficiency: N/A
Efficacy: 73.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

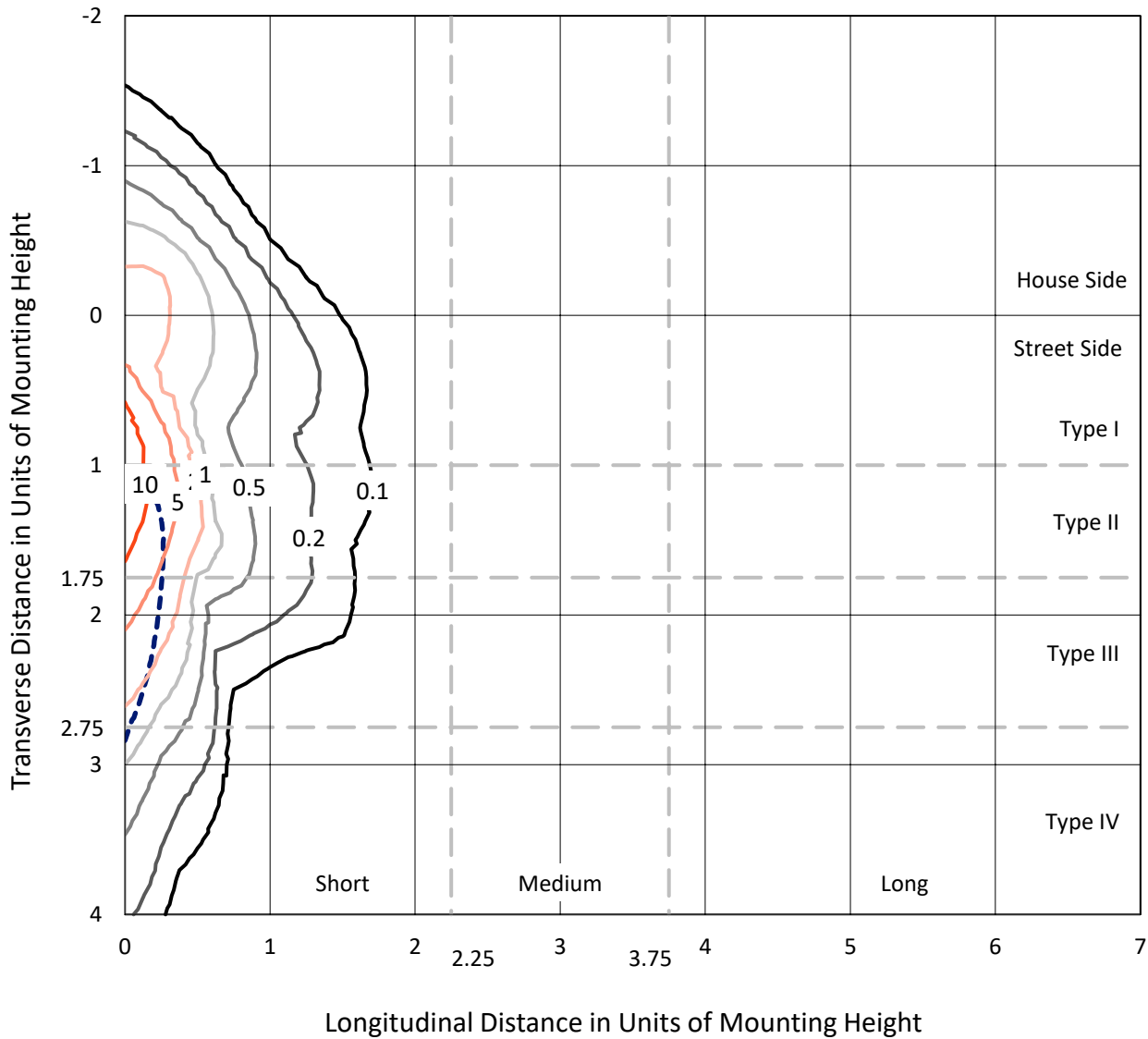
Input Watts (W): 94.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

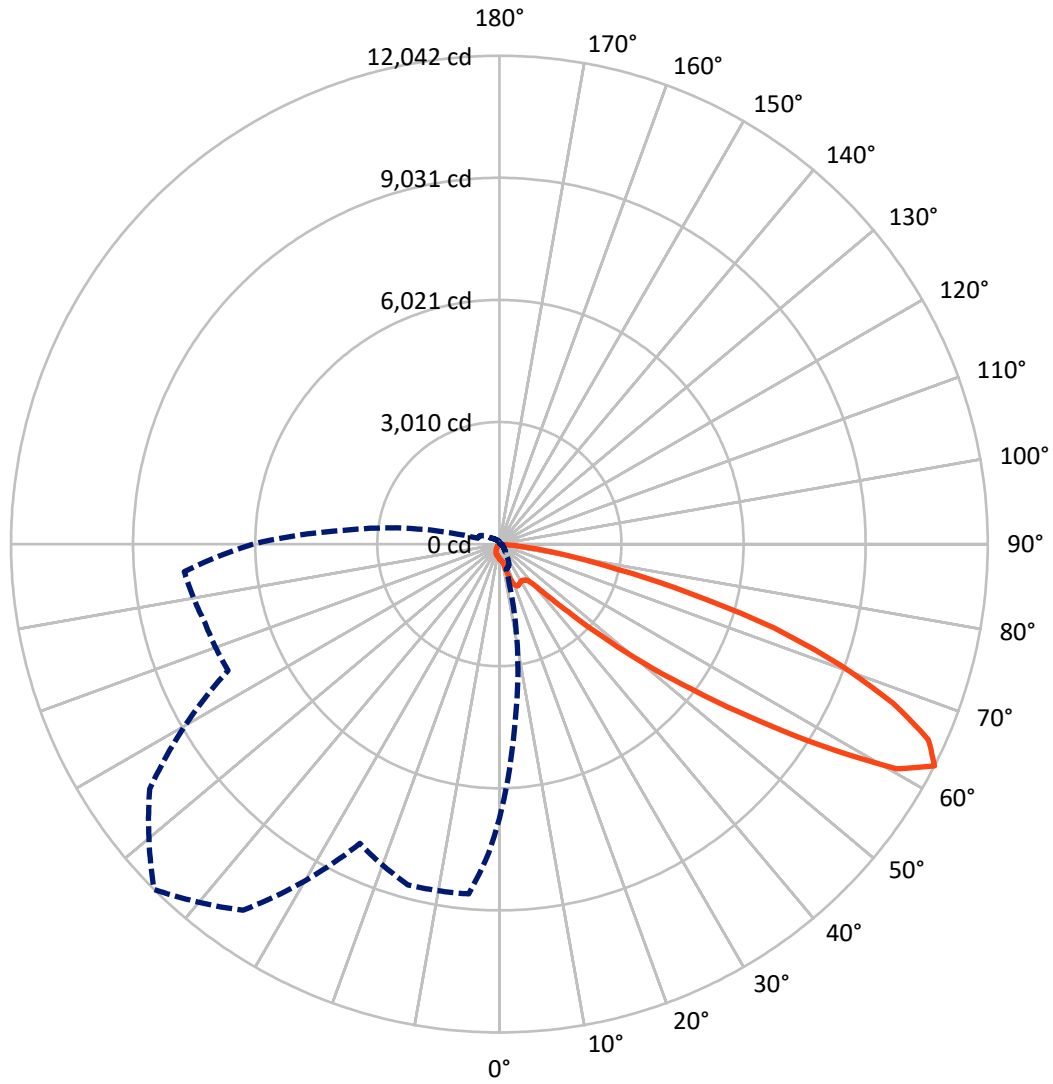
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.4 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 315-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	808.9	0.0	808.9
	% Fixture	11.6	0.0	11.6
Street Side	Lumens	6152.9	0.0	6152.9
	% Fixture	88.4	0.0	88.4
Total	Lumens	6961.8	0.0	6961.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.2	0.4
10°-20°	106.9	1.5
20°-30°	241.4	3.5
30°-40°	415.9	6.0
40°-50°	784.5	11.3
50°-60°	1751.6	25.2
60°-70°	2342.8	33.7
70°-80°	1174.8	16.9
80°-90°	112.6	1.6
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°	6961.8	100.0
0°-180°	6961.8	100.0

Coefficient of Utilization



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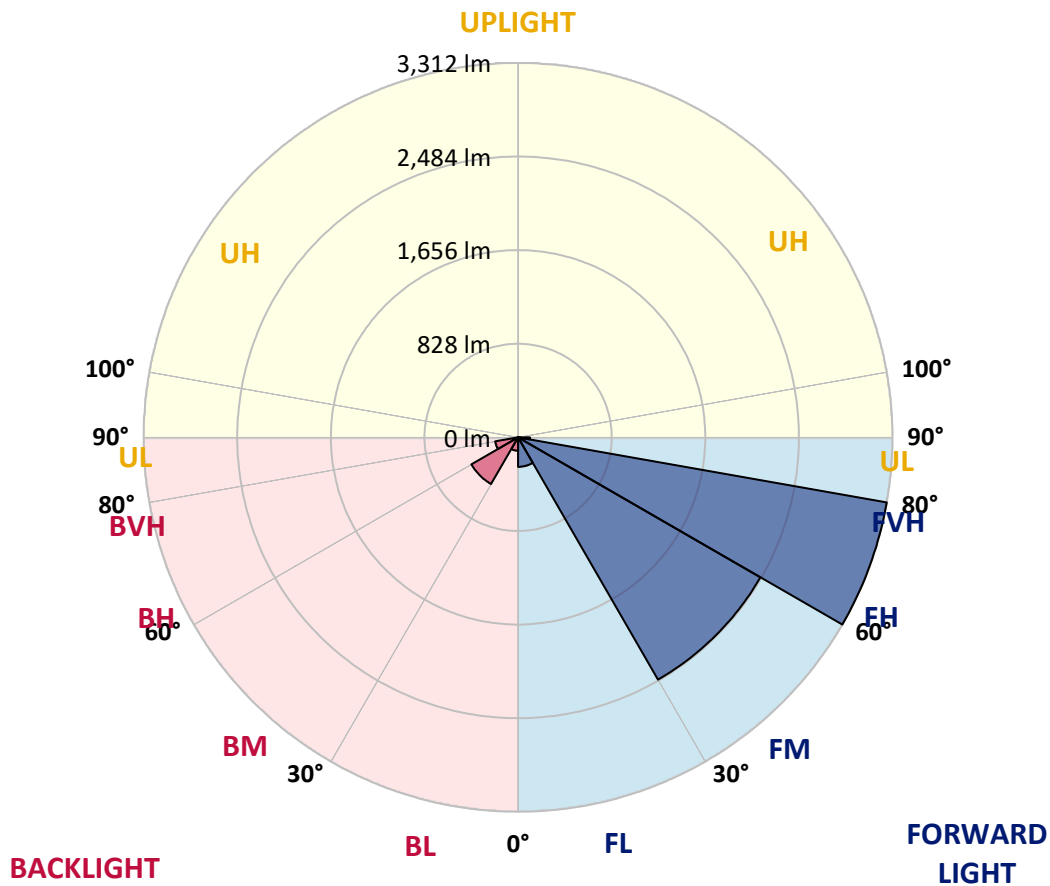
CATALOG NUMBER: GWS-SA4B-830-U-SLL-W-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	260.7	3.7			
FM (30°-60°)	2475.1	35.6			
FH (60°-80°)	3312.0	47.6			G2/5000
FVH (80°-90°)	105.1	1.5			G2/225
BL (0°-30°)	118.7	1.7	B1/500		
BM (30°-60°)	477.0	6.9	B1/1000		
BH (60°-80°)	205.7	3.0	B1/500		G1/500
BVH (80°-90°)	7.5	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	2°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	361.0	361.0	361.0	361.0	361.0	361.0	361.0	361.0	361.0	361.0	361.0
2.5°	356.9	356.1	354.5	349.5	345.4	342.9	338.0	338.0	337.1	335.5	332.2
5°	345.4	342.1	338.8	329.7	319.8	314.1	307.5	306.6	306.6	305.0	304.2
7.5°	327.3	324.0	319.8	305.0	295.9	290.2	284.4	283.6	281.1	281.1	281.1
10°	317.4	312.4	305.8	289.3	280.3	275.3	271.2	268.7	267.1	264.6	263.8
12.5°	338.8	329.7	315.7	286.0	273.7	267.1	262.1	260.5	255.5	252.2	249.8
15°	405.6	383.3	355.3	293.5	271.2	261.3	254.7	251.4	247.3	241.5	237.4
17.5°	515.2	483.0	436.1	317.4	268.7	256.4	248.1	242.3	236.6	230.0	225.0
20°	666.9	619.1	563.0	361.0	268.7	250.6	240.7	233.3	225.0	217.6	211.8
22.5°	859.8	811.9	716.3	435.2	272.0	243.2	231.6	221.7	211.8	205.3	198.7
25°	1075.7	1008.1	919.1	525.1	281.1	233.3	220.9	211.0	202.0	193.7	186.3
27.5°	1316.4	1243.1	1124.4	652.9	300.9	223.4	209.4	200.3	192.1	183.8	173.9
30°	1538.2	1494.5	1373.3	806.2	333.0	216.8	200.3	192.1	183.8	173.1	164.0
32.5°	1804.4	1726.9	1627.2	980.9	375.9	210.2	192.9	181.3	174.8	164.9	155.0
35°	2072.3	2006.4	1875.3	1196.1	423.7	203.6	183.8	173.1	167.3	155.8	145.1
37.5°	2348.5	2333.6	2204.2	1434.3	470.7	196.2	173.1	166.5	160.7	147.6	135.2
40°	2620.5	2593.3	2473.8	1706.3	499.5	187.9	164.0	159.9	153.3	138.5	124.5
42.5°	2881.0	2860.4	2744.1	1966.8	495.4	180.5	155.0	150.0	145.1	130.2	112.9
45°	3200.8	3167.0	3020.3	2159.7	453.4	188.8	145.9	137.7	136.8	122.8	101.4
47.5°	3799.3	3688.0	3439.0	2308.1	411.3	210.2	136.0	126.1	131.9	115.4	89.9
50°	4637.6	4506.5	4146.3	2423.5	410.5	238.2	134.4	115.4	127.8	109.6	80.0
52.5°	5480.0	5249.2	4811.5	2485.3	441.0	258.8	149.2	104.7	122.8	103.9	72.5
55°	6287.0	5808.1	5090.1	2280.9	464.9	281.1	176.4	98.9	113.8	97.3	68.4
57.5°	7056.1	6257.4	5211.3	1804.4	544.9	290.2	192.9	101.4	100.6	89.0	65.1
60°	7161.6	6235.9	4966.5	1049.4	600.9	274.5	186.3	112.9	88.2	79.1	59.4
62.5°	6762.7	5821.3	4408.4	654.5	558.1	268.7	165.7	128.6	80.0	70.1	51.9
65°	6156.8	5170.9	3675.6	422.0	422.9	298.4	145.1	126.1	75.0	61.8	44.5
67.5°	5209.7	4327.6	2895.8	282.7	239.1	254.7	126.9	86.6	73.4	52.8	34.6
70°	3802.6	3080.5	1885.2	188.8	142.6	203.6	106.3	61.8	69.2	43.7	24.7
72.5°	2779.6	2069.8	1052.6	123.6	80.8	118.7	78.3	44.5	53.6	32.1	17.3
75°	2000.6	1424.4	600.9	79.1	53.6	65.1	51.1	30.5	34.6	25.6	15.7
77.5°	962.8	694.1	272.8	43.7	36.3	33.0	27.2	19.0	21.4	23.1	14.0
80°	36.3	27.2	20.6	21.4	23.1	14.8	12.4	9.9	12.4	15.7	7.4
82.5°	0.0	0.0	0.0	2.5	3.3	4.1	4.9	4.1	4.9	5.8	0.8
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



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	361.0	361.0	361.0	361.0	361.0	361.0	361.0	361.0	361.0	361.0	361.0
2.5°	334.7	333.0	334.7	336.3	338.0	339.6	337.1	338.8	340.4	336.3	338.0
5°	308.3	307.5	312.4	314.9	318.2	319.8	318.2	318.2	317.4	312.4	312.4
7.5°	285.2	286.0	290.2	295.9	300.0	302.5	300.9	300.0	297.6	290.2	290.2
10°	267.9	267.9	274.5	279.4	285.2	287.7	286.0	283.6	281.1	273.7	272.8
12.5°	253.9	253.9	258.8	267.1	273.7	277.0	276.1	272.8	268.7	261.3	260.5
15°	240.7	239.9	247.3	254.7	263.8	267.9	266.3	263.8	256.4	249.8	248.1
17.5°	227.5	226.7	233.3	243.2	253.1	258.8	258.0	252.2	245.6	237.4	235.8
20°	214.3	212.7	220.9	230.8	240.7	246.5	244.8	239.9	231.6	223.4	221.7
22.5°	201.1	200.3	206.1	214.3	223.4	228.3	227.5	223.4	215.1	207.7	207.7
25°	186.3	186.3	190.4	196.2	202.8	205.3	206.1	204.4	199.5	195.4	195.4
27.5°	173.9	171.5	173.1	174.8	178.1	182.2	182.2	183.8	184.6	183.0	183.8
30°	164.0	159.9	157.4	154.1	152.5	154.1	155.8	161.6	167.3	170.6	172.3
32.5°	152.5	147.6	141.0	131.9	126.1	124.5	129.4	140.1	150.8	158.3	162.4
35°	141.0	134.4	122.0	108.8	101.4	98.9	104.7	117.1	132.7	145.9	151.7
37.5°	129.4	120.3	103.0	87.4	79.1	77.5	83.3	96.4	114.6	132.7	140.1
40°	116.2	105.5	84.9	68.4	61.8	60.2	65.1	78.3	97.3	117.9	129.4
42.5°	103.0	89.9	68.4	54.4	47.8	47.8	54.4	64.3	81.6	103.9	117.9
45°	89.9	75.8	56.1	43.7	39.6	40.4	44.5	54.4	68.4	91.5	104.7
47.5°	77.5	65.1	46.2	36.3	33.0	33.8	38.7	47.0	58.5	79.1	93.1
50°	66.8	55.2	40.4	30.5	28.0	29.7	34.6	42.0	51.9	70.1	81.6
52.5°	60.2	49.5	37.1	26.4	24.7	26.4	31.3	37.9	47.0	61.8	73.4
55°	56.9	48.6	37.1	23.9	21.4	23.1	28.0	34.6	42.0	56.1	65.9
57.5°	56.1	50.3	39.6	21.4	18.1	19.8	24.7	31.3	38.7	51.1	59.4
60°	52.8	47.8	38.7	17.3	14.0	16.5	20.6	27.2	35.4	47.8	55.2
62.5°	46.2	42.0	33.8	14.0	10.7	12.4	17.3	23.9	32.1	43.7	51.9
65°	37.9	33.8	26.4	9.1	6.6	8.2	13.2	20.6	28.0	39.6	47.0
67.5°	28.0	23.9	18.1	5.8	3.3	5.8	10.7	17.3	25.6	35.4	42.9
70°	17.3	14.0	9.9	3.3	2.5	4.9	9.9	16.5	23.1	33.0	40.4
72.5°	9.9	6.6	4.1	1.6	2.5	4.9	9.9	16.5	22.3	31.3	37.9
75°	7.4	4.1	1.6	0.8	1.6	4.1	9.1	14.8	21.4	29.7	36.3
77.5°	4.9	2.5	0.8	0.0	0.8	3.3	8.2	14.0	19.8	28.0	34.6
80°	0.8	0.0	0.0	0.0	0.0	2.5	7.4	12.4	18.1	24.7	30.5
82.5°	0.0	0.0	0.0	0.0	0.0	0.8	5.8	10.7	15.7	20.6	24.7
85°	0.0	0.0	0.0	0.0	0.0	0.0	3.3	8.2	12.4	15.7	17.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	8.2	9.9	11.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	361.0	361.0	361.0	361.0	361.0	361.0	361.0	361.0	361.0	361.0	361.0
2.5°	337.1	342.1	342.1	345.4	349.5	356.9	361.0	366.8	370.9	375.1	376.7
5°	311.6	312.4	313.2	314.9	319.8	328.1	335.5	344.6	355.3	363.5	368.5
7.5°	290.2	290.2	290.2	292.6	297.6	303.3	310.8	323.1	335.5	345.4	353.6
10°	272.0	274.5	275.3	279.4	285.2	292.6	300.9	311.6	325.6	338.8	353.6
12.5°	260.5	263.0	267.1	271.2	277.0	285.2	294.3	308.3	337.1	364.3	395.7
15°	249.8	253.1	258.0	263.8	270.4	279.4	289.3	318.2	385.8	436.9	486.3
17.5°	238.2	243.2	249.8	255.5	263.8	273.7	286.0	342.1	474.8	559.7	643.8
20°	223.4	230.0	237.4	246.5	256.4	267.9	286.0	391.5	603.4	725.4	836.7
22.5°	209.4	216.0	225.0	236.6	248.1	259.7	290.2	466.6	769.1	923.2	1064.2
25°	197.8	206.1	215.1	225.0	238.2	251.4	300.0	572.1	968.6	1167.2	1267.0
27.5°	187.1	197.0	206.1	214.3	225.9	240.7	322.3	713.0	1204.3	1406.3	1484.6
30°	176.4	187.9	197.0	205.3	216.8	232.5	356.1	892.7	1466.5	1662.6	1670.9
32.5°	167.3	178.1	188.8	197.0	207.7	225.9	403.1	1102.9	1735.2	1924.8	1847.3
35°	157.4	169.8	179.7	188.8	200.3	220.1	457.5	1329.6	2006.4	2165.5	2022.9
37.5°	147.6	161.6	173.9	180.5	192.1	214.3	497.1	1566.2	2283.3	2400.4	2177.0
40°	138.5	154.1	168.2	174.8	180.5	206.9	502.8	1808.5	2564.4	2632.0	2322.1
42.5°	128.6	145.9	158.3	167.3	172.3	202.0	468.2	2013.0	2800.2	2862.8	2511.7
45°	117.9	138.5	148.4	155.0	164.9	205.3	423.7	2171.2	3069.7	3177.7	2824.1
47.5°	107.2	130.2	138.5	143.4	156.6	225.0	407.2	2276.8	3514.0	3738.3	3350.8
50°	97.3	122.8	131.9	131.1	155.0	250.6	425.3	2356.7	4181.7	4445.5	4072.9
52.5°	86.6	114.6	125.3	122.0	167.3	270.4	461.6	2420.2	4695.3	5274.8	5043.1
55°	77.5	105.5	115.4	114.6	190.4	285.2	489.6	2085.5	4908.0	6045.5	6136.2
57.5°	70.9	95.6	103.9	117.9	205.3	285.2	566.3	1480.5	4912.1	6612.6	7587.0
60°	65.1	86.6	92.3	129.4	199.5	270.4	560.5	906.7	4527.1	6573.9	8358.5
62.5°	60.2	78.3	85.7	132.7	176.4	267.9	506.1	562.2	3861.1	6073.5	7798.8
65°	56.1	71.7	82.4	122.0	159.9	286.9	341.3	403.9	3131.6	5503.1	7156.7
67.5°	51.9	65.9	87.4	99.7	145.1	256.4	246.5	286.9	2458.1	4877.5	6567.3
70°	48.6	62.6	92.3	81.6	126.9	200.3	174.8	217.6	1881.9	4069.6	5737.2
72.5°	46.2	58.5	77.5	64.3	103.0	155.0	122.0	158.3	1229.9	3176.9	4677.2
75°	43.7	53.6	56.9	51.9	76.7	101.4	92.3	106.3	732.8	2322.1	3548.7
77.5°	42.9	50.3	46.2	42.0	51.9	60.2	70.1	71.7	357.8	1161.5	1859.6
80°	37.9	45.3	39.6	34.6	35.4	39.6	51.9	47.8	81.6	295.1	496.2
82.5°	29.7	35.4	33.0	28.9	28.9	28.9	34.6	32.1	26.4	132.7	224.2
85°	20.6	24.7	24.7	23.1	22.3	22.3	21.4	20.6	7.4	8.2	12.4
87.5°	14.0	17.3	18.1	17.3	14.8	13.2	11.5	9.9	3.3	0.0	1.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CATALOG NUMBER: GWS-SA4B-830-U-SLL-W-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	358°	360°
0°	361.0	361.0	361.0	361.0	361.0	361.0	361.0	361.0	361.0	361.0
2.5°	382.5	385.0	385.0	381.7	379.2	372.6	366.0	359.4	357.8	356.9
5°	382.5	392.4	397.3	396.5	390.7	380.0	366.0	351.2	347.0	345.4
7.5°	376.7	395.7	410.5	413.0	402.3	383.3	357.8	335.5	329.7	327.3
10°	389.9	427.0	456.7	460.8	448.4	411.3	370.1	332.2	323.1	317.4
12.5°	460.8	521.8	558.1	575.4	551.5	504.5	436.1	368.5	347.9	338.8
15°	604.2	690.8	760.0	760.0	737.8	654.5	568.0	458.3	430.3	405.6
17.5°	788.0	896.9	957.9	951.3	917.5	858.9	755.1	597.6	540.7	515.2
20°	997.4	1062.5	1076.6	1072.4	1057.6	1023.8	952.1	783.1	706.4	666.9
22.5°	1178.8	1161.5	1140.8	1124.4	1120.2	1130.1	1120.2	990.0	929.8	859.8
25°	1301.6	1203.5	1141.7	1112.0	1126.0	1182.9	1244.7	1196.1	1148.3	1075.7
27.5°	1368.4	1198.6	1109.5	1079.0	1102.9	1183.7	1318.1	1400.5	1351.0	1316.4
30°	1404.6	1194.4	1088.9	1059.2	1095.5	1196.9	1369.2	1591.7	1593.4	1538.2
32.5°	1456.6	1220.8	1093.0	1065.8	1114.5	1236.5	1433.5	1786.3	1834.1	1804.4
35°	1515.1	1261.2	1112.0	1087.3	1147.4	1289.2	1505.2	1982.5	2082.2	2072.3
37.5°	1570.3	1306.5	1156.5	1132.6	1197.7	1334.6	1574.4	2175.4	2313.8	2348.5
40°	1628.0	1370.0	1293.3	1316.4	1352.7	1406.3	1636.3	2342.7	2568.6	2620.5
42.5°	1764.0	1590.1	1707.2	1750.8	1755.8	1645.3	1771.4	2557.0	2819.1	2881.0
45°	2067.4	1981.6	2317.1	2379.0	2346.8	2012.1	2097.1	2866.1	3169.5	3200.8
47.5°	2450.7	2490.2	3152.2	3365.7	3172.8	2444.9	2491.9	3516.5	3810.8	3799.3
50°	2897.5	3084.6	4100.1	4603.8	4142.2	3007.1	2946.9	4316.1	4673.0	4637.6
52.5°	3425.8	3775.4	5239.3	5954.8	5517.9	3639.3	3614.6	5375.3	5593.0	5480.0
55°	4091.1	4442.2	6550.0	7549.9	6928.3	4410.9	4495.8	6603.6	6645.6	6287.0
57.5°	5083.5	5311.9	8094.8	9379.0	8400.6	5459.4	6075.2	8238.2	7735.4	7056.1
60°	6885.5	6430.5	9587.6	11250.2	9966.8	6934.1	8158.2	9206.7	8098.0	7161.6
62.5°	7512.8	7380.1	10522.4	12041.6	11020.2	8145.0	8699.8	8657.8	7628.2	6762.7
65°	6562.4	7143.5	10355.0	11623.6	10885.0	7945.5	7807.1	8051.9	7099.0	6156.8
67.5°	6062.0	6587.9	9721.1	10470.4	10135.7	7268.8	6958.8	6892.1	5959.8	5209.7
70°	5557.5	6078.5	8802.0	8895.2	8739.4	6165.9	5758.6	5311.0	4454.6	3802.6
72.5°	4950.8	5237.7	7526.8	7085.0	6908.6	4842.8	4757.1	3999.6	3339.3	2779.6
75°	4317.7	4234.5	5868.3	4862.6	4994.5	3767.9	4017.7	2937.0	2446.6	2000.6
77.5°	3140.6	3078.8	3930.3	2953.5	3270.9	2468.0	2217.4	1172.2	1116.1	962.8
80°	1752.5	2112.7	2122.6	1655.2	2064.9	1609.1	554.8	38.7	24.7	36.3
82.5°	814.4	908.4	1150.7	767.4	1177.9	797.1	114.6	0.0	0.0	0.0
85°	263.8	385.8	323.1	112.9	285.2	269.6	19.0	0.0	0.0	0.0
87.5°	15.7	32.1	8.2	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

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.

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
 CIE u': 0.2476
 CIE v': 0.5251
 Duv: 0.0034
 CIE x: 0.4383
 CIE y: 0.4131
 CIE z: 0.1487
 Peak Wavelength (nm): 603
 Dominant Wavelength (nm): 581
 Purity: 55.55201
 Rf: 81.5
 Rg: 99.2

CRI (Ra):	81.0		
R1:	79.6	R9:	7.1
R2:	85.6	R10:	67.0
R3:	92.0	R11:	82.7
R4:	82.6	R12:	63.2
R5:	78.9	R13:	80.3
R6:	81.7	R14:	95.0
R7:	85.2	R15:	71.7
R8:	62.0		



Test Conditions

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

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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

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CIE 1931 Chromaticity Diagram



CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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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			

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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

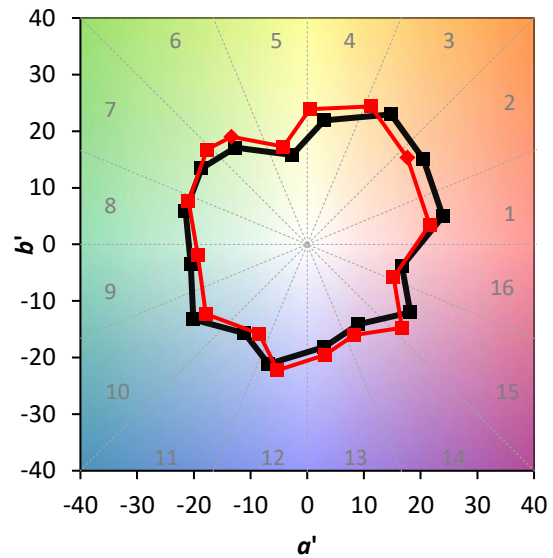
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	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			

Summary

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



Color Vector Graphics



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	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)