

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: P629080

Luminaire Tested: GWS-SA1A-830-U-SLR-W-GRSBK

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P629080
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-42)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA1A-830-U-SLR-W-GRSBK
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR RIGHT OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK
Light Source: (16) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1205.2 lumens
Efficiency: N/A
Efficacy: 61.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B0 - U0 - G0

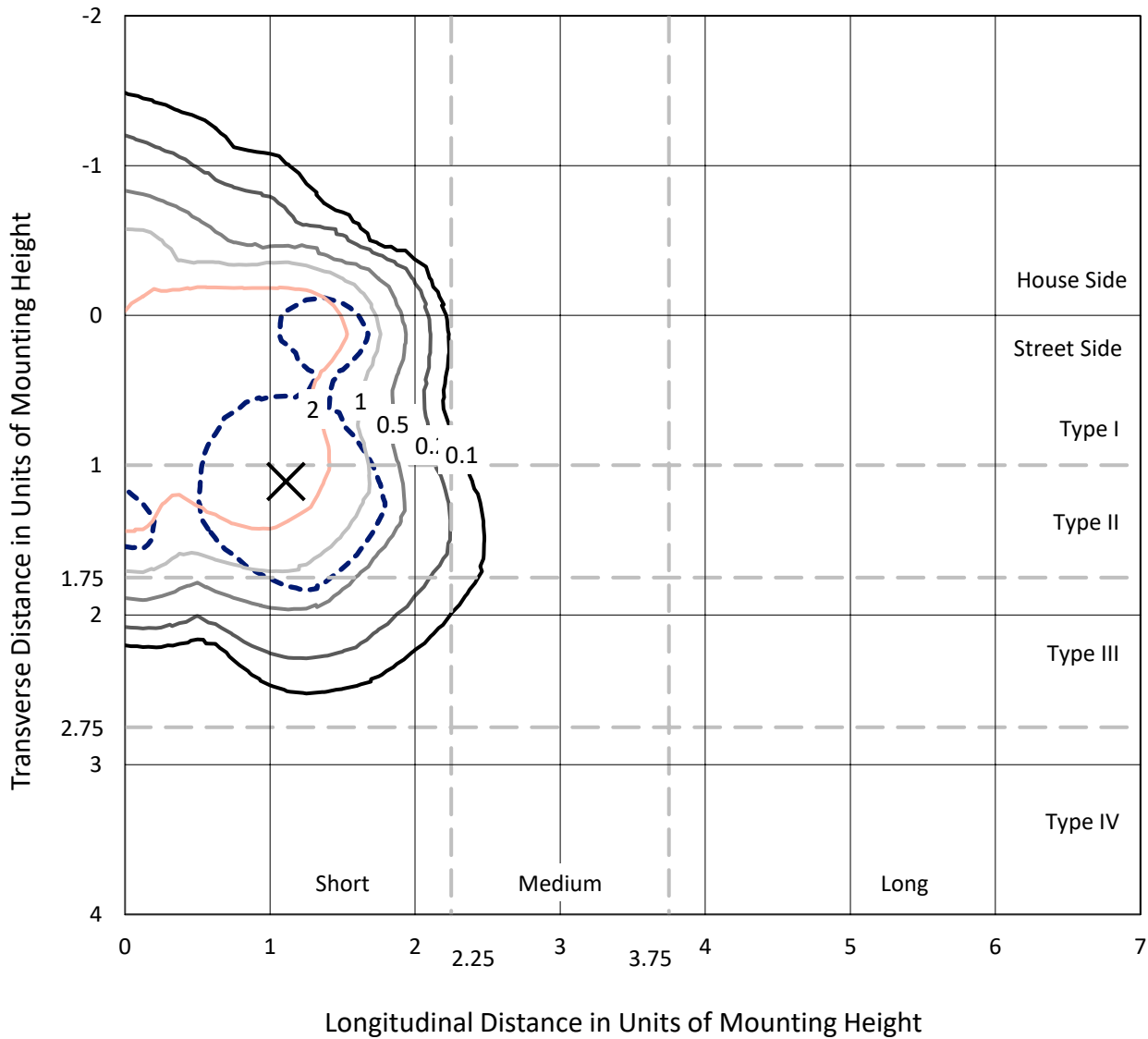
Input Watts (W): 19.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

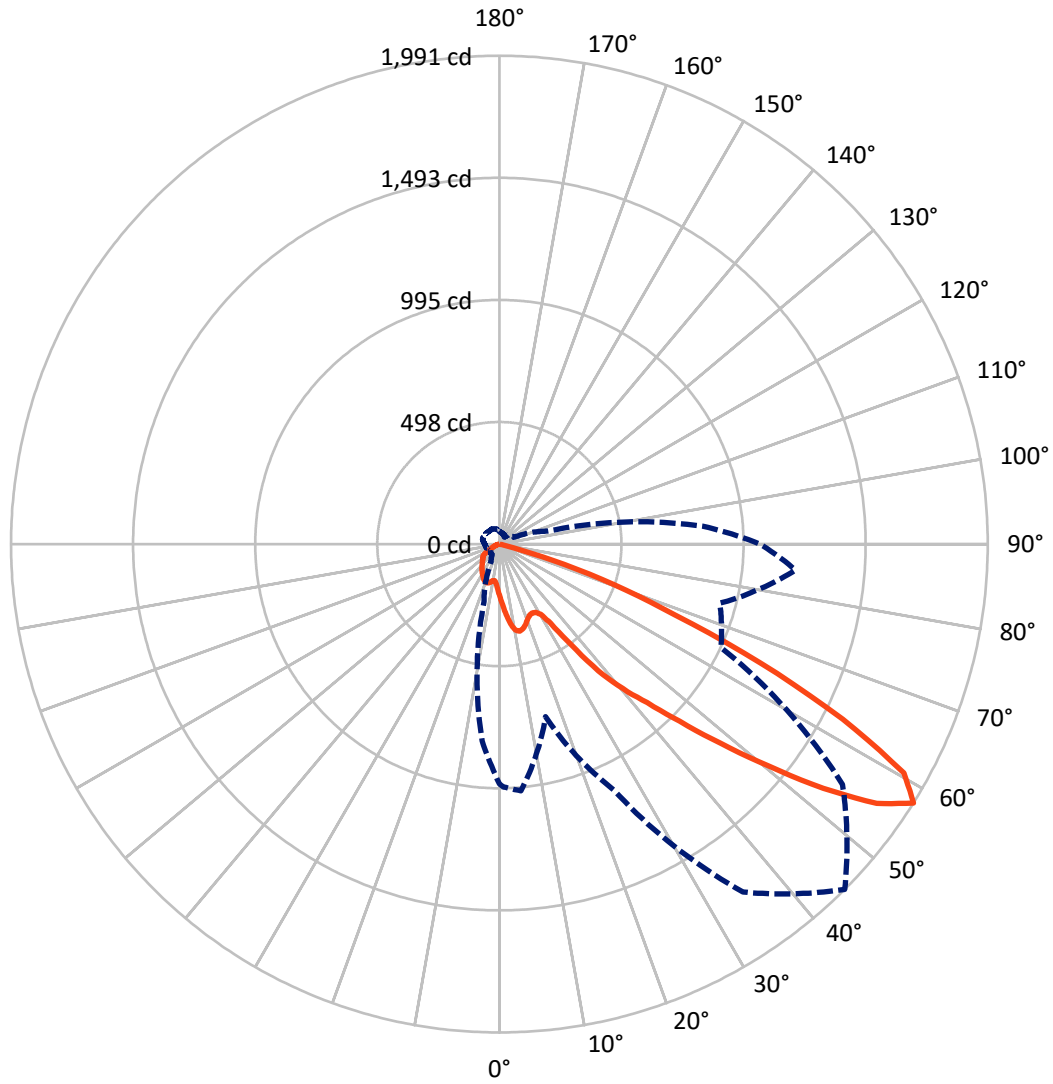
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.8 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 57.5-Deg Vertical

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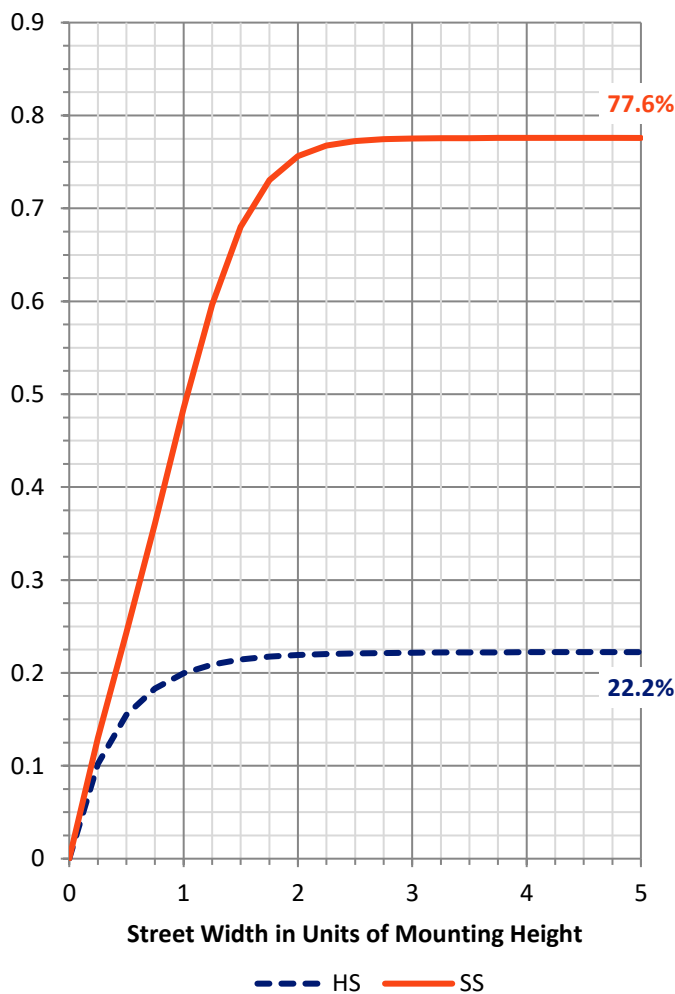
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	269.9	0.0	269.9
	% Fixture	22.4	0.0	22.4
Street Side	Lumens	935.3	0.0	935.3
	% Fixture	77.6	0.0	77.6
Total	Lumens	1205.2	0.0	1205.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	20.8	1.7
10°-20°	67.4	5.6
20°-30°	109.5	9.1
30°-40°	169.2	14.0
40°-50°	271.3	22.5
50°-60°	370.8	30.8
60°-70°	179.6	14.9
70°-80°	16.4	1.4
80°-90°	0.0	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°	1205.2	100.0
0°-180°	1205.2	100.0

Coefficient of Utilization

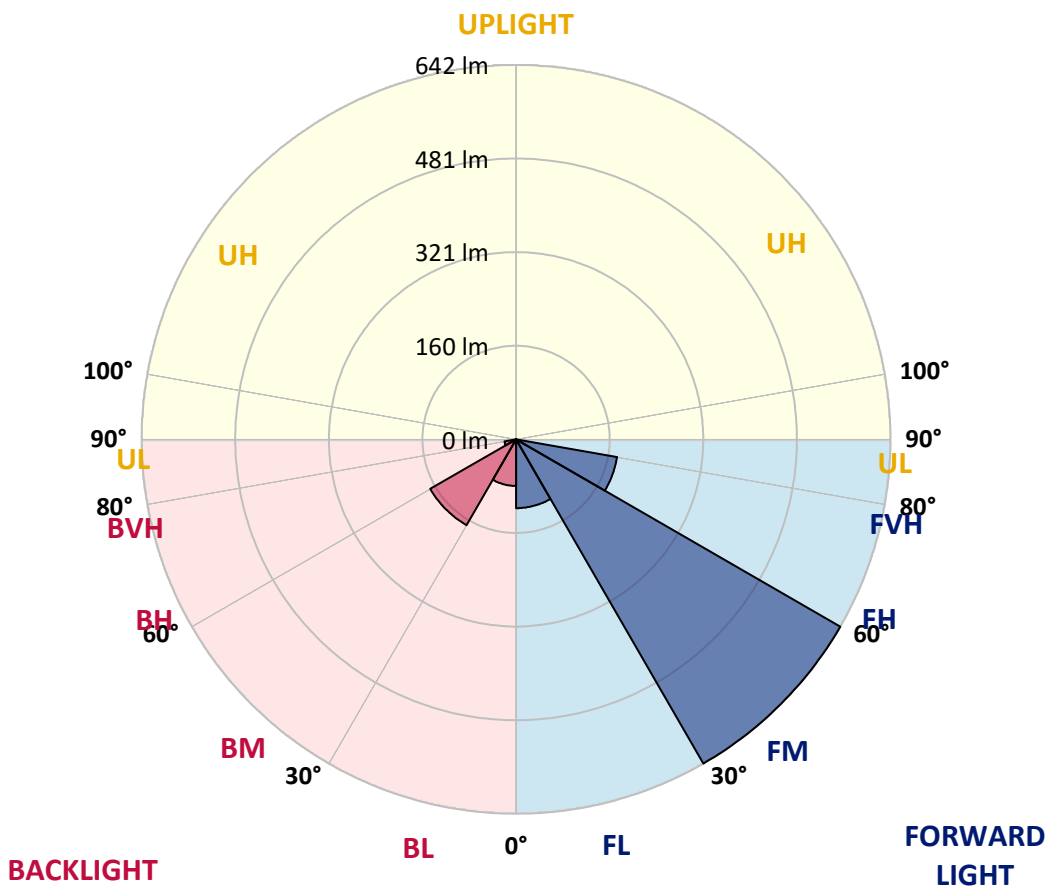


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	117.9	9.8			
FM (30°-60°)	641.6	53.2			
FH (60°-80°)	175.8	14.6			G0/660
FVH (80°-90°)	0.0	0.0			G0/10
BL (0°-30°)	79.9	6.6	B0/110		
BM (30°-60°)	169.8	14.1	B0/220		
BH (60°-80°)	20.2	1.7	B0/110		G0/110
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: B0-U0-G0
 Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	211.8	211.8	211.8	211.8	211.8	211.8	211.8	211.8	211.8	211.8	211.8
2.5°	229.5	230.9	233.4	238.5	242.9	245.8	247.1	246.8	245.0	243.7	241.1
5°	254.1	254.1	258.8	270.6	279.7	285.4	288.3	286.5	282.9	277.3	268.5
7.5°	275.6	276.4	284.4	301.2	315.0	323.1	327.8	326.8	320.5	309.6	292.2
10°	292.5	293.4	304.0	324.5	340.7	349.0	356.0	356.6	349.6	335.2	315.1
12.5°	308.8	309.8	320.8	340.6	354.8	358.2	364.4	366.8	365.0	354.8	333.9
15°	326.5	328.8	338.1	352.9	358.9	354.8	358.9	363.2	369.2	368.3	349.5
17.5°	343.8	345.4	355.0	360.2	353.5	343.0	344.9	350.1	363.7	377.0	364.9
20°	359.8	362.1	370.0	363.2	343.2	326.8	327.0	333.8	354.5	382.4	380.6
22.5°	376.7	380.1	385.8	366.6	333.6	314.0	314.8	321.0	347.2	387.4	398.4
25°	398.7	402.0	405.7	375.1	330.5	307.7	310.8	316.4	347.2	396.0	420.4
27.5°	428.5	430.8	430.9	390.8	335.9	308.7	315.1	321.6	357.6	413.1	449.9
30°	465.9	469.5	464.8	415.2	352.6	321.6	331.2	339.3	379.9	442.1	493.3
32.5°	511.4	516.4	510.1	451.5	387.4	366.3	383.7	388.3	415.6	484.1	542.5
35°	564.9	569.1	562.3	501.7	468.7	472.6	504.0	498.0	487.1	535.7	600.0
37.5°	623.5	627.4	614.3	577.8	588.8	605.7	655.9	635.3	600.3	602.3	662.4
40°	677.3	681.5	660.9	660.6	683.3	714.0	774.6	746.3	698.6	689.4	720.8
42.5°	733.0	735.9	717.3	704.6	756.1	819.5	883.6	845.4	763.7	753.7	794.0
45°	812.5	818.6	785.4	726.3	821.7	940.8	1030.1	955.5	808.1	800.0	906.1
47.5°	929.4	933.9	866.3	739.9	882.8	1091.8	1213.3	1098.3	847.1	828.7	1059.3
50°	1026.1	1029.2	940.6	754.8	947.7	1254.8	1422.1	1267.7	891.0	876.1	1202.3
52.5°	1097.4	1109.0	1038.2	785.4	1033.1	1446.3	1653.2	1468.4	959.5	967.8	1320.8
55°	1112.1	1128.0	1105.0	804.2	1108.2	1641.5	1866.6	1648.0	1027.9	1037.3	1360.7
57.5°	977.4	990.0	1009.1	728.4	1106.4	1730.9	1990.5	1707.6	996.8	930.2	1211.5
60°	732.2	740.9	775.6	556.8	1017.5	1651.9	1894.0	1606.2	871.6	709.8	923.1
62.5°	434.2	438.1	482.0	360.7	844.6	1422.5	1570.7	1385.9	688.8	477.4	565.4
65°	166.6	165.0	198.5	178.0	621.1	1133.1	1168.3	1056.5	472.6	218.8	215.6
67.5°	25.7	24.6	33.2	52.6	447.9	785.3	770.9	761.5	296.0	51.0	44.5
70°	5.8	5.8	7.1	15.5	273.7	461.4	493.8	470.8	189.5	10.9	5.8
72.5°	2.8	2.8	3.4	6.6	99.1	190.1	221.5	218.1	61.5	3.6	2.1
75°	1.0	1.1	1.1	1.5	6.0	9.9	22.7	16.2	3.9	0.0	0.0
77.5°	0.3	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.2	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



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	211.8	211.8	211.8	211.8	211.8	211.8	211.8	211.8	211.8	211.8	211.8
2.5°	235.5	234.3	230.1	224.5	219.0	214.1	209.1	203.1	198.7	193.7	192.1
5°	261.7	254.6	243.1	231.1	220.1	210.7	201.6	191.9	184.8	177.7	175.2
7.5°	283.9	273.4	254.7	236.8	221.7	208.4	195.3	182.0	171.7	163.2	160.7
10°	303.8	291.7	266.7	244.5	225.6	210.2	194.3	177.7	164.2	154.2	151.7
12.5°	321.0	306.9	276.9	250.4	227.2	209.6	194.2	180.9	168.7	157.3	154.2
15°	335.4	319.8	285.5	254.3	224.8	201.5	188.0	185.9	184.9	172.3	166.3
17.5°	349.5	332.0	292.5	256.0	218.0	187.2	177.5	187.0	197.3	189.0	181.4
20°	364.2	344.3	299.6	256.4	206.6	171.2	169.6	184.6	197.6	195.0	187.9
22.5°	381.5	359.7	308.5	256.2	192.4	157.6	163.7	179.9	190.4	190.3	184.6
25°	406.6	379.1	320.5	257.2	176.8	147.0	157.3	172.0	180.6	180.2	175.6
27.5°	433.5	402.3	336.0	259.6	163.6	140.9	149.6	161.1	168.6	168.3	164.2
30°	471.3	429.0	350.9	259.8	154.0	137.7	141.2	149.2	156.3	155.5	152.4
32.5°	517.1	459.1	363.4	250.5	148.0	134.6	132.5	136.5	142.0	140.9	140.1
35°	572.5	494.9	374.1	230.3	138.8	128.4	122.8	123.6	127.5	128.1	127.8
37.5°	635.6	537.5	387.4	203.6	126.3	119.5	111.9	111.3	113.5	115.6	117.2
40°	698.0	585.4	405.4	176.5	115.0	108.2	100.9	99.3	100.2	104.0	107.4
42.5°	768.1	641.0	424.8	153.4	107.2	95.7	88.7	85.7	88.4	94.4	98.5
45°	869.2	718.9	443.7	134.9	104.0	84.7	75.3	75.0	78.1	85.8	90.4
47.5°	1011.0	819.6	456.2	120.5	103.8	76.1	64.9	66.9	70.4	78.1	83.2
50°	1149.3	945.8	442.4	109.5	100.4	70.4	57.2	61.1	64.6	71.3	76.6
52.5°	1232.7	1013.6	388.8	99.1	89.9	67.9	49.6	56.4	57.0	63.0	68.7
55°	1224.0	969.7	297.8	83.1	74.3	64.1	41.6	50.9	51.2	55.7	60.6
57.5°	1062.4	832.6	204.5	67.4	55.9	53.0	34.3	42.9	46.0	48.7	52.3
60°	791.8	607.5	91.2	54.7	35.5	35.8	29.3	32.4	37.1	40.3	43.4
62.5°	466.6	349.5	37.1	32.9	19.6	22.5	23.6	23.6	26.6	29.0	30.9
65°	176.4	122.3	15.1	16.5	10.2	10.5	13.9	17.2	19.4	21.5	24.1
67.5°	30.9	21.4	7.8	6.2	6.0	5.3	7.1	11.2	12.5	14.1	15.2
70°	5.2	4.4	3.2	3.1	2.8	2.9	4.7	7.9	8.7	9.2	9.7
72.5°	1.5	1.3	1.0	0.8	0.6	0.8	2.9	6.2	6.5	6.8	7.3
75°	0.0	0.0	0.0	0.0	0.0	0.0	1.1	4.4	4.7	4.9	5.3
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.3	1.6	1.3
80°	0.0	0.0	0.0	0.0	0.0	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



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CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	211.8	211.8	211.8	211.8	211.8	211.8	211.8	211.8	211.8	211.8	211.8
2.5°	191.1	187.9	186.1	185.1	185.1	183.8	182.4	181.9	184.0	184.0	187.5
5°	172.1	169.6	166.6	164.9	162.1	162.6	161.0	160.8	162.9	163.9	167.6
7.5°	159.0	155.8	154.0	152.9	151.4	150.8	149.3	148.8	150.0	151.6	155.1
10°	150.3	149.8	149.6	150.4	150.4	149.6	148.3	147.5	147.9	150.9	155.0
12.5°	152.6	153.5	153.8	155.1	155.8	155.1	154.2	154.5	156.6	162.3	168.3
15°	162.4	161.6	161.3	161.9	162.4	161.8	161.5	163.9	171.2	179.3	186.1
17.5°	173.0	167.8	165.5	165.5	165.8	165.5	165.8	170.5	182.4	190.4	195.5
20°	178.3	168.7	165.2	164.4	165.0	165.2	166.3	171.7	184.6	190.3	191.4
22.5°	176.7	164.7	160.7	160.0	160.7	161.3	162.4	167.0	179.1	182.0	181.5
25°	168.6	156.8	153.5	153.5	155.0	154.8	155.3	158.5	168.6	170.4	169.6
27.5°	158.4	147.2	144.5	146.1	147.4	147.0	147.2	150.0	157.4	157.9	157.1
30°	148.0	138.3	135.7	137.7	139.4	139.1	139.3	142.0	146.7	146.2	145.1
32.5°	137.5	130.4	128.4	129.6	132.3	132.0	132.6	135.5	137.3	135.2	133.9
35°	127.8	124.1	122.6	123.2	125.3	125.8	127.0	128.9	128.9	126.3	124.1
37.5°	118.7	118.2	117.2	116.4	118.4	119.8	121.5	123.7	120.5	116.8	114.7
40°	110.3	112.4	111.1	109.0	110.1	112.2	115.5	117.2	113.4	109.6	106.1
42.5°	102.5	106.1	105.6	103.0	104.0	105.9	109.6	111.1	106.6	102.4	98.9
45°	95.1	100.1	100.4	97.2	98.1	100.1	104.5	104.9	99.1	94.6	92.1
47.5°	88.6	94.1	94.3	91.8	92.1	94.9	98.9	99.1	92.5	88.3	85.2
50°	82.4	88.7	89.2	87.1	87.5	90.7	94.1	93.4	86.3	81.9	79.2
52.5°	75.0	83.6	84.7	83.7	85.0	87.6	89.7	87.5	79.2	74.8	72.4
55°	66.9	78.1	80.5	79.8	81.3	83.4	83.9	82.4	72.1	67.7	65.4
57.5°	57.5	64.3	68.5	67.2	68.3	70.4	71.9	70.8	63.0	59.6	57.7
60°	47.6	52.1	53.1	51.0	50.0	53.8	57.2	55.7	49.1	47.0	44.7
62.5°	34.8	40.0	40.6	37.9	36.8	40.8	43.7	42.3	35.0	32.7	30.9
65°	27.9	32.7	34.0	31.4	30.8	33.8	35.6	32.1	26.9	24.5	22.5
67.5°	18.3	22.2	25.6	25.4	24.1	25.1	23.8	20.9	17.2	15.9	14.6
70°	11.3	13.6	15.7	16.5	16.4	16.0	14.3	12.1	11.0	10.5	9.9
72.5°	8.7	11.0	12.6	13.1	13.3	12.8	11.3	9.4	8.3	7.6	7.1
75°	6.5	8.3	9.6	10.2	10.5	10.2	8.7	7.4	6.3	5.8	5.3
77.5°	2.3	2.8	3.4	3.7	3.6	3.4	3.1	3.1	2.4	2.3	1.9
80°	0.0	0.0	0.0	0.0	0.0	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



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CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	211.8	211.8	211.8	211.8	211.8	211.8	211.8	211.8	211.8	211.8
2.5°	191.6	194.5	199.8	204.7	209.9	215.2	221.1	227.0	229.8	229.5
5°	173.3	179.6	188.3	197.9	208.6	220.1	232.9	246.0	251.7	254.1
7.5°	161.8	170.7	182.2	194.3	208.4	224.8	244.1	264.6	272.9	275.6
10°	163.2	173.6	183.2	195.0	210.0	231.3	255.2	279.7	289.4	292.5
12.5°	175.1	177.3	179.9	189.6	208.6	236.1	265.4	294.6	305.8	308.8
15°	185.8	175.2	170.4	179.3	203.4	239.5	275.8	310.6	322.9	326.5
17.5°	186.2	170.4	159.5	166.5	195.0	241.0	286.0	327.0	340.4	343.8
20°	180.2	165.0	151.1	151.3	183.5	240.7	294.4	341.7	356.8	359.8
22.5°	171.5	158.7	144.3	139.3	171.2	240.0	303.7	357.4	373.8	376.7
25°	161.8	150.6	137.8	130.2	158.9	240.7	316.6	378.0	396.0	398.7
27.5°	151.3	141.7	132.8	126.6	148.5	243.1	332.2	404.2	425.6	428.5
30°	140.2	133.1	129.6	125.8	142.0	243.7	349.0	434.8	461.9	465.9
32.5°	129.4	125.5	125.7	126.3	135.9	239.2	364.4	468.8	505.0	511.4
35°	119.4	118.2	121.5	124.7	127.0	227.5	377.8	509.0	558.2	564.9
37.5°	110.8	111.7	115.8	119.0	117.2	211.0	395.6	559.2	617.8	623.5
40°	102.5	104.9	109.6	111.1	109.8	191.7	417.0	607.6	669.5	677.3
42.5°	94.9	96.7	103.3	103.6	107.7	172.1	437.6	659.8	728.9	733.0
45°	88.7	88.4	95.2	97.3	110.4	150.4	457.7	729.2	806.7	812.5
47.5°	82.8	82.4	84.1	93.6	111.6	130.4	477.6	831.0	919.4	929.4
50°	77.1	77.6	72.6	91.8	105.4	115.0	486.7	925.0	1021.9	1026.1
52.5°	72.1	70.3	61.5	86.0	92.3	100.4	460.9	967.8	1085.4	1097.4
55°	64.9	55.1	50.7	69.8	72.9	87.6	377.5	943.0	1090.9	1112.1
57.5°	55.5	43.2	43.1	51.5	51.5	81.3	241.8	805.7	940.1	977.4
60°	42.8	33.5	35.6	35.8	33.0	59.3	135.7	583.7	695.1	732.2
62.5°	30.4	25.6	26.9	21.4	18.9	29.6	65.1	336.0	429.0	434.2
65°	20.4	17.3	14.1	11.8	11.7	12.6	26.9	121.5	147.7	166.6
67.5°	13.4	10.5	7.4	7.4	8.4	8.4	10.2	20.1	28.2	25.7
70°	8.7	7.3	4.7	4.5	5.5	5.5	5.2	5.5	5.8	5.8
72.5°	6.5	5.5	2.8	2.4	3.1	3.2	2.9	2.8	2.8	2.8
75°	4.9	3.9	1.6	1.1	1.5	1.9	1.6	1.1	1.1	1.0
77.5°	1.9	1.5	0.6	0.5	0.8	1.1	1.0	0.5	0.3	0.3
80°	0.2	0.3	0.3	0.3	0.5	0.6	0.8	0.3	0.2	0.2
82.5°	0.0	0.2	0.2	0.2	0.3	0.5	0.6	0.3	0.2	0.2
85°	0.0	0.0	0.0	0.0	0.3	0.5	0.3	0.2	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.2	0.5	0.3	0.2	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

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			

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)