

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: P631555

Luminaire Tested: GWS-SA1F-830-U-SLR-W-HSS

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P631555
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-44)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA1F-830-U-SLR-W-HSS
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND
SPILL LIGHT ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD
Light Source: (16) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4153.4 lumens
Efficiency: N/A
Efficacy: 61.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

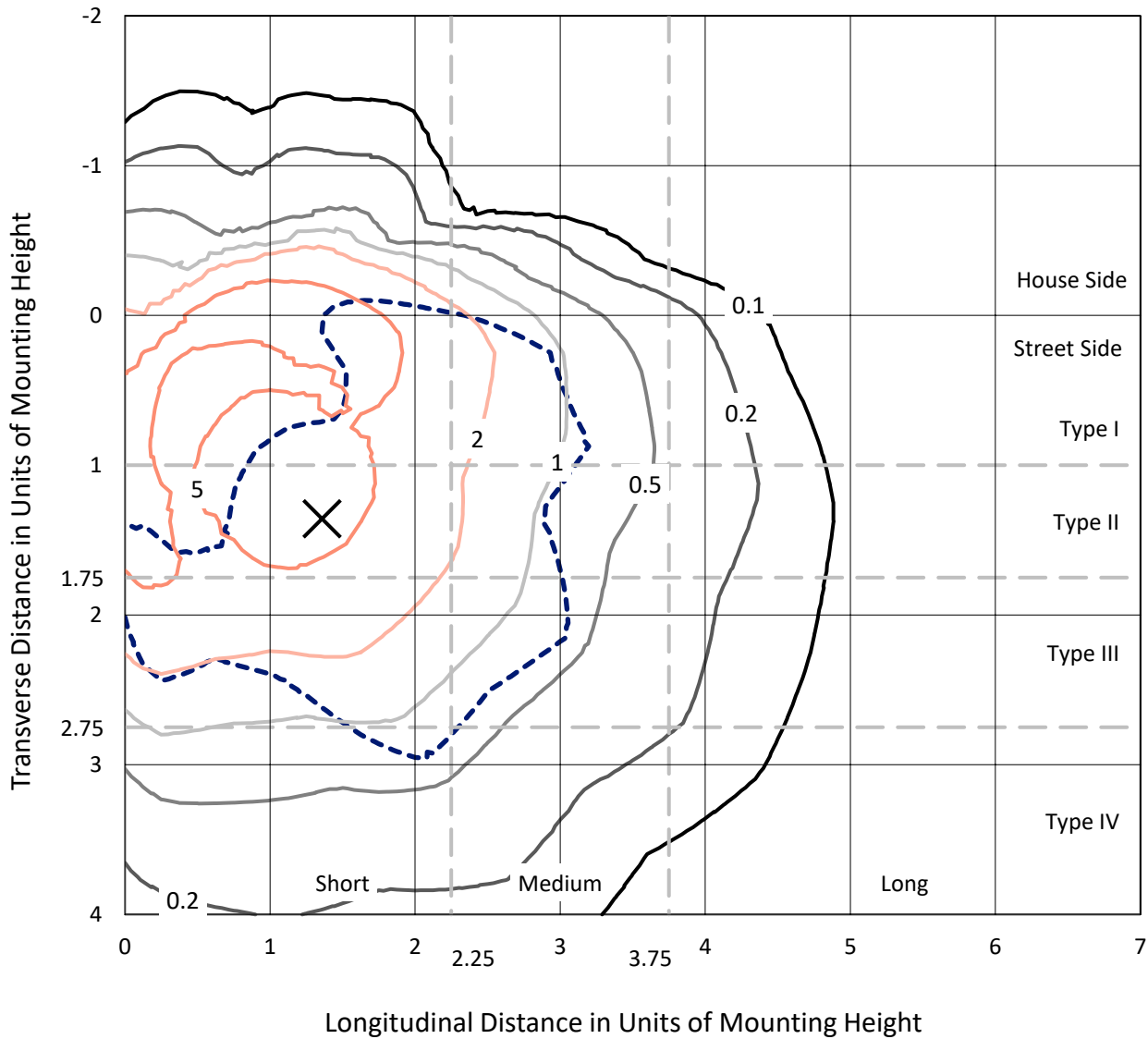
Input Watts (W): 67.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

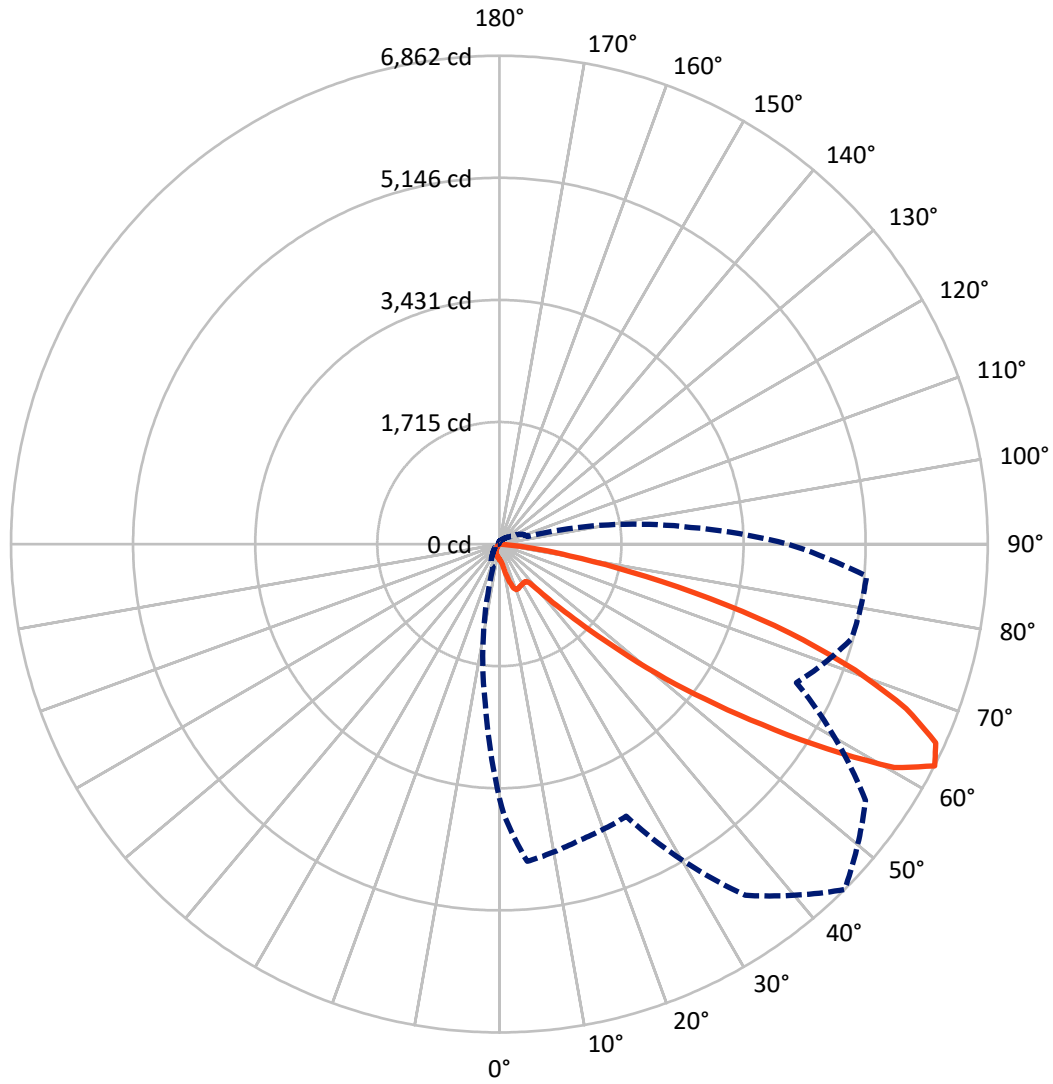
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.4 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	512.5	0.0	512.5
	% Fixture	12.3	0.0	12.3
Street Side	Lumens	3640.9	0.0	3640.9
	% Fixture	87.7	0.0	87.7
Total	Lumens	4153.4	0.0	4153.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	19.2	0.5
10°-20°	72.4	1.7
20°-30°	157.4	3.8
30°-40°	258.4	6.2
40°-50°	475.0	11.4
50°-60°	1020.0	24.6
60°-70°	1370.0	33.0
70°-80°	713.4	17.2
80°-90°	67.6	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°	4153.4	100.0
0°-180°	4153.4	100.0

Coefficient of Utilization



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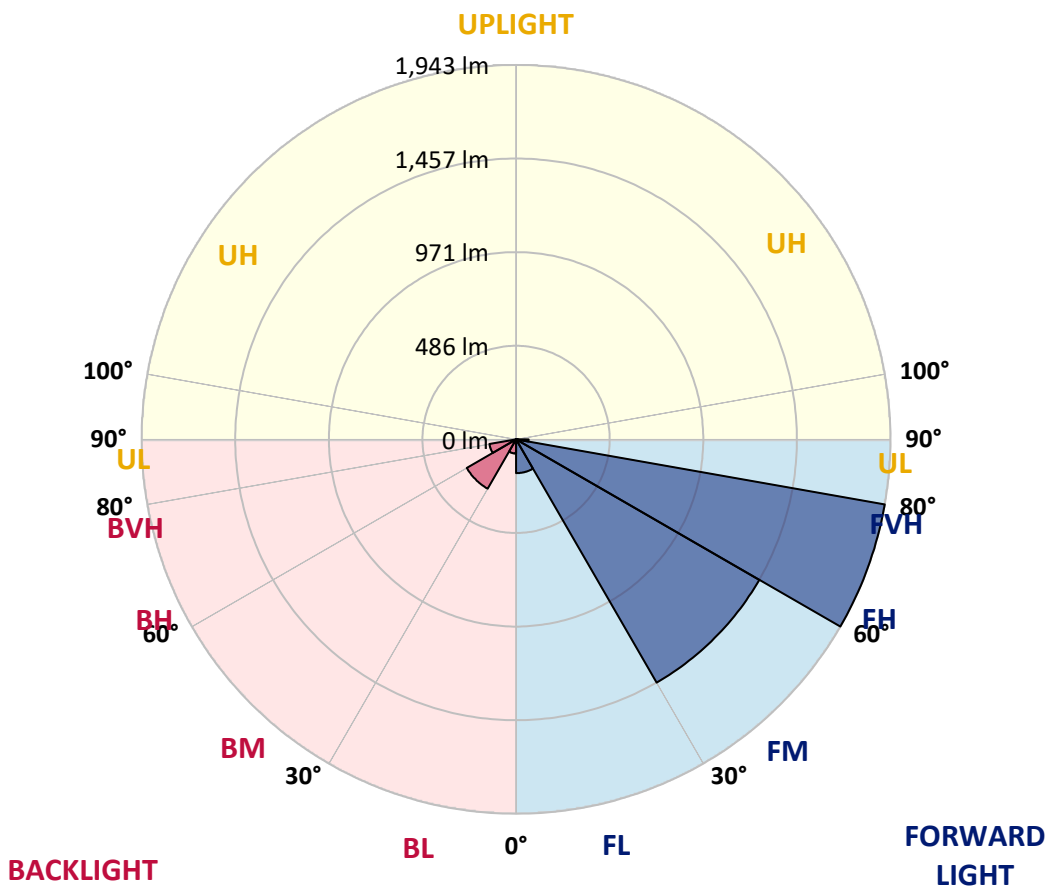
CATALOG NUMBER: GWS-SA1F-830-U-SLR-W-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	175.5	4.2			
FM (30°-60°)	1457.8	35.1			
FH (60°-80°)	1943.0	46.8			G2/5000
FVH (80°-90°)	64.6	1.6			G1/100
BL (0°-30°)	73.5	1.8	B0/110		
BM (30°-60°)	295.6	7.1	B1/1000		
BH (60°-80°)	140.4	3.4	B1/500		G1/500
BVH (80°-90°)	3.0	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	215.9	215.9	215.9	215.9	215.9	215.9	215.9	215.9	215.9	215.9	215.9
2.5°	220.2	221.2	222.1	225.5	227.9	229.8	230.3	228.8	225.5	222.1	217.3
5°	213.5	214.5	217.8	226.9	236.0	243.2	245.6	244.2	236.0	225.5	214.5
7.5°	213.0	214.9	223.1	242.3	261.9	276.8	280.7	277.3	261.9	240.8	218.3
10°	230.3	233.6	245.6	280.2	316.2	342.5	353.1	338.7	314.2	275.9	238.9
12.5°	275.4	281.1	304.2	354.5	410.2	445.2	459.6	441.9	403.5	347.8	289.3
15°	346.4	355.0	389.6	464.9	530.6	561.8	566.6	556.5	511.9	450.5	371.8
17.5°	446.7	459.1	512.9	589.6	637.1	648.1	646.7	636.2	603.5	561.3	487.0
20°	566.6	581.5	634.2	697.6	702.4	689.4	682.2	676.0	664.9	657.7	599.7
22.5°	687.5	705.7	760.9	776.7	733.5	696.1	678.4	683.2	699.5	735.0	711.5
25°	807.9	825.2	877.0	834.3	747.9	685.6	663.0	674.5	713.4	790.2	820.4
27.5°	948.5	961.4	992.1	873.6	750.3	676.9	654.9	672.6	720.1	824.7	939.8
30°	1094.8	1102.5	1087.6	884.2	742.2	664.0	646.7	672.6	731.6	847.7	1029.6
32.5°	1202.3	1203.7	1155.3	885.1	737.9	653.4	639.0	669.7	742.7	866.9	1116.4
35°	1313.1	1305.9	1220.0	899.5	749.4	657.3	644.8	677.9	759.9	889.5	1192.7
37.5°	1425.4	1412.4	1292.5	923.0	779.1	699.0	691.3	719.6	787.8	920.7	1276.6
40°	1540.5	1522.7	1367.8	958.6	845.3	841.0	867.4	864.0	864.0	960.5	1363.0
42.5°	1681.1	1660.4	1479.1	1058.8	999.8	1096.2	1168.2	1123.6	1041.1	1052.1	1475.2
45°	1866.7	1849.0	1671.9	1250.7	1242.1	1463.7	1560.6	1472.4	1267.0	1263.7	1662.8
47.5°	2163.7	2160.3	1979.5	1473.3	1538.6	1931.5	2118.6	1948.8	1524.7	1487.7	2017.9
50°	2581.1	2571.0	2362.8	1734.3	1891.2	2511.0	2844.9	2561.9	1836.0	1749.2	2493.3
52.5°	3051.2	3061.8	2899.6	2019.3	2265.9	3155.8	3620.7	3264.3	2174.3	2081.7	3091.5
55°	3494.1	3554.5	3511.8	2352.7	2631.9	3867.8	4472.8	4034.7	2593.1	2516.8	3762.2
57.5°	3840.4	4010.8	4310.1	2837.3	3062.3	4700.6	5424.1	4870.0	3081.9	3223.5	4675.2
60°	3859.6	4085.1	4780.3	3851.0	3615.9	5415.0	6374.0	5686.1	3850.5	4423.3	5390.5
62.5°	3570.3	3812.1	4474.2	4311.6	4219.0	6022.8	6861.5	6281.0	4606.6	5126.2	5178.5
65°	3239.3	3483.5	4132.6	3789.1	4148.9	5996.9	6737.7	6294.9	4675.2	4648.3	4799.0
67.5°	2738.9	2958.2	3545.9	3354.0	3824.1	5707.6	6165.8	5898.1	4307.2	4347.5	4414.7
70°	1999.1	2210.2	2755.7	2765.3	3339.6	5186.2	5297.9	5261.0	3966.6	4009.3	3817.4
72.5°	1444.1	1622.1	2092.7	2267.8	2666.0	4349.0	4271.7	4414.2	3403.4	3570.8	3066.1
75°	1038.2	1171.6	1535.2	1972.8	2113.3	3229.7	3058.0	3418.7	2730.8	3074.8	2305.2
77.5°	421.2	468.2	604.0	1328.9	1388.9	2172.8	1872.0	2483.2	1946.8	2020.2	1117.3
80°	17.3	19.2	24.9	686.1	952.3	1222.4	1001.7	1327.5	1285.7	813.7	263.9
82.5°	1.9	1.9	4.3	197.7	416.9	674.5	472.1	764.7	651.0	344.9	119.9
85°	0.5	0.5	1.0	22.5	97.9	107.9	63.8	234.6	302.7	141.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	4.3	4.8	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°	215.9	215.9	215.9	215.9	215.9	215.9	215.9	215.9	215.9	215.9	215.9
2.5°	217.3	214.9	212.1	209.2	207.7	203.9	202.5	201.5	200.5	201.0	201.0
5°	210.1	204.9	198.6	192.4	189.0	185.2	183.3	182.3	182.8	184.7	184.7
7.5°	209.2	199.1	185.7	177.5	173.7	170.8	168.9	167.9	168.4	170.8	171.8
10°	225.0	207.3	183.3	169.4	165.0	162.2	160.2	158.8	157.8	159.8	160.2
12.5°	259.1	234.6	194.8	168.4	160.7	156.9	155.4	152.6	151.1	152.1	152.6
15°	329.6	287.4	217.8	172.2	156.9	152.6	150.2	147.8	145.4	144.9	145.4
17.5°	421.7	361.3	252.8	181.3	154.0	148.7	145.4	142.0	138.6	138.2	137.7
20°	535.9	451.9	301.8	195.7	151.6	145.4	140.6	135.8	131.5	130.0	130.0
22.5°	640.0	561.3	364.6	213.5	148.2	140.6	134.8	129.1	124.3	121.9	121.4
25°	767.1	677.4	439.9	234.1	143.4	134.3	128.1	122.3	117.5	114.7	113.7
27.5°	895.2	799.8	525.3	261.0	137.7	128.1	122.3	117.1	111.8	108.4	107.5
30°	1019.5	931.7	621.3	294.6	133.4	121.9	117.1	111.8	107.0	101.7	100.3
32.5°	1152.9	1066.5	728.7	332.0	130.0	117.5	112.3	107.5	101.2	96.4	94.0
35°	1281.4	1205.6	847.2	368.5	126.7	113.7	107.9	103.1	96.4	91.2	87.8
37.5°	1411.0	1347.2	971.0	390.5	121.9	108.4	103.1	99.3	91.6	85.4	81.6
40°	1548.2	1493.5	1104.9	381.4	117.5	102.7	99.8	95.5	86.8	79.6	74.8
42.5°	1698.8	1633.1	1241.1	346.4	113.7	97.9	95.0	90.7	82.5	73.9	67.6
45°	1888.3	1786.1	1352.9	293.6	115.6	93.1	87.3	86.4	78.7	67.6	60.0
47.5°	2214.1	2021.2	1439.7	259.5	128.6	87.8	81.1	83.5	75.3	61.4	52.8
50°	2712.5	2410.8	1520.8	257.1	148.2	85.4	75.3	81.6	72.0	55.2	46.5
52.5°	3187.5	2806.6	1572.6	278.3	165.5	91.6	69.6	79.2	69.6	50.9	42.2
55°	3641.8	3034.9	1480.0	293.6	181.8	110.3	65.2	75.3	66.7	48.5	40.8
57.5°	4131.7	3136.6	1165.3	324.8	193.3	126.2	66.2	69.6	62.8	47.0	40.3
60°	4278.0	3006.6	703.3	365.6	187.1	131.0	73.4	61.9	57.6	44.1	38.9
62.5°	4050.6	2698.1	415.0	333.0	181.8	123.8	84.0	57.1	52.3	40.3	36.0
65°	3710.4	2279.3	270.6	281.1	192.9	110.3	89.2	54.7	47.5	36.5	31.7
67.5°	3321.8	1836.0	189.5	166.0	178.0	99.3	75.3	54.2	42.7	30.7	25.9
70°	2797.9	1375.0	133.4	109.9	148.2	88.3	58.5	52.8	37.4	24.9	20.1
72.5°	2161.8	860.7	99.3	71.0	105.5	72.0	46.5	44.6	30.2	20.6	15.4
75°	1594.2	490.8	70.0	51.3	69.6	54.7	34.5	31.7	25.9	19.7	13.9
77.5°	832.4	245.6	43.7	39.3	39.8	34.1	24.9	23.0	24.0	19.7	13.0
80°	159.8	48.9	26.4	28.8	21.6	21.6	18.2	19.2	21.1	15.8	11.0
82.5°	66.7	10.6	14.4	16.3	13.4	14.9	14.9	15.4	14.9	11.5	8.2
85°	0.0	0.0	6.2	6.7	9.1	9.1	7.7	7.7	7.7	6.7	4.8
87.5°	0.0	0.0	0.0	0.0	0.5	1.4	2.9	3.4	3.8	2.9	1.9
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°	215.9	215.9	215.9	215.9	215.9	215.9	215.9	215.9	215.9	215.9	215.9
2.5°	200.5	199.6	201.0	202.0	202.9	202.9	202.0	201.0	199.6	201.0	199.6
5°	185.2	186.6	189.0	190.0	190.9	189.0	188.1	185.2	182.8	183.3	182.3
7.5°	173.2	174.6	177.5	179.4	179.4	178.5	175.6	172.7	168.9	168.9	168.4
10°	162.2	164.1	167.4	169.8	170.8	169.8	167.0	163.1	159.8	159.8	158.3
12.5°	153.0	155.4	159.3	162.6	163.6	162.6	159.8	155.9	152.1	152.1	151.1
15°	145.4	148.2	152.6	156.4	157.8	156.4	153.0	148.2	144.4	144.9	143.4
17.5°	138.2	140.6	146.3	150.6	152.1	150.6	146.3	140.1	136.3	137.2	136.3
20°	130.0	132.9	138.6	143.4	144.9	143.4	138.6	131.9	128.1	128.1	128.6
22.5°	121.4	124.3	130.0	133.4	135.3	133.9	129.1	122.8	119.0	119.0	119.5
25°	113.7	115.1	119.5	122.8	123.3	121.9	118.0	113.2	110.3	111.8	112.3
27.5°	106.5	106.5	108.4	110.3	109.9	108.4	107.0	103.1	102.7	104.1	105.5
30°	98.8	96.4	95.5	94.0	93.6	93.1	94.5	94.5	95.5	97.4	98.8
32.5°	92.1	87.3	83.0	78.7	76.3	78.2	82.0	85.4	88.8	91.6	93.1
35°	84.4	76.8	69.6	63.8	60.0	62.8	69.1	75.3	81.1	84.9	87.3
37.5°	76.8	65.7	57.1	49.9	47.0	49.4	56.1	64.8	73.4	78.2	81.6
40°	68.6	54.7	44.6	38.9	36.0	38.4	45.1	53.7	65.2	71.5	75.8
42.5°	60.4	45.1	36.0	30.2	28.8	30.2	35.5	44.1	56.6	64.3	70.0
45°	52.3	37.4	28.8	24.5	23.0	24.5	28.8	36.0	48.5	57.1	63.8
47.5°	45.1	31.7	24.0	20.1	19.2	20.6	24.0	30.2	40.8	49.4	57.1
50°	39.3	27.8	20.6	17.3	16.3	17.8	20.6	25.4	34.5	42.2	50.4
52.5°	35.5	25.9	18.2	14.9	14.4	15.4	17.8	21.6	29.3	36.0	43.7
55°	34.5	25.9	16.8	13.4	13.0	13.9	15.8	18.7	25.4	31.2	37.9
57.5°	35.5	27.8	15.8	11.5	11.0	12.0	13.9	16.3	22.1	26.9	33.1
60°	35.5	28.3	13.9	9.1	8.6	9.6	11.5	14.4	19.7	23.5	28.8
62.5°	32.1	25.9	11.5	7.2	6.2	7.2	9.6	12.0	17.3	21.1	25.4
65°	27.8	22.1	9.6	5.3	4.3	5.3	7.7	10.1	14.9	18.2	23.0
67.5°	22.5	16.8	7.2	3.8	2.9	3.8	5.8	8.2	12.5	15.8	20.6
70°	16.8	12.0	5.8	3.4	2.9	3.4	5.3	7.7	11.0	14.4	19.2
72.5°	12.5	8.2	4.8	3.4	2.4	3.4	4.8	7.2	10.6	13.9	18.2
75°	10.6	6.7	4.3	2.9	2.4	2.9	4.3	6.7	9.6	13.0	17.3
77.5°	10.1	6.2	3.8	2.4	1.9	2.4	3.8	5.8	8.6	12.0	16.8
80°	8.6	5.3	3.4	1.9	1.4	1.9	3.4	4.8	6.7	9.1	13.0
82.5°	6.7	4.3	2.4	1.0	0.5	1.0	2.4	2.9	4.3	5.3	7.7
85°	4.3	2.4	1.0	0.0	0.0	0.0	1.0	1.9	1.9	2.4	3.8
87.5°	1.9	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.0	1.4
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°	215.9	215.9	215.9	215.9	215.9	215.9	215.9	215.9	215.9	215.9
2.5°	202.5	202.9	203.9	205.3	208.7	211.6	214.5	218.3	220.2	220.2
5°	183.3	183.7	184.2	186.1	190.9	194.8	201.0	208.7	212.5	213.5
7.5°	168.4	169.4	170.3	171.8	176.5	181.8	190.0	204.4	211.6	213.0
10°	159.8	161.2	163.1	166.0	170.3	176.1	190.0	215.9	227.9	230.3
12.5°	153.0	155.4	157.4	160.7	166.0	175.1	202.9	248.5	269.6	275.4
15°	146.3	149.2	152.1	155.4	161.2	178.5	227.9	307.0	342.1	346.4
17.5°	139.6	143.0	146.8	150.6	157.8	186.6	267.2	388.1	437.1	446.7
20°	131.9	136.3	141.5	146.3	154.5	199.6	321.9	484.6	546.0	566.6
22.5°	123.8	129.1	135.3	141.5	150.6	215.4	388.1	588.2	674.1	687.5
25°	117.1	122.3	128.1	134.3	144.4	234.6	468.2	716.8	795.0	807.9
27.5°	110.8	116.1	121.4	127.1	138.2	259.5	564.7	853.5	935.0	948.5
30°	104.1	110.3	115.6	121.4	132.4	290.3	676.0	1005.1	1082.3	1094.8
32.5°	98.3	104.6	109.9	115.6	128.1	323.8	793.0	1139.4	1202.3	1202.3
35°	93.6	100.3	104.1	111.8	124.7	345.4	903.9	1267.5	1315.0	1313.1
37.5°	88.3	96.4	99.3	104.6	120.4	347.8	1008.0	1402.8	1437.8	1425.4
40°	83.0	91.6	96.0	98.8	115.6	328.2	1122.1	1527.1	1556.8	1540.5
42.5°	78.2	84.9	91.2	94.5	112.7	293.6	1213.8	1660.0	1695.5	1681.1
45°	73.4	79.2	83.0	89.2	114.7	269.6	1292.5	1814.9	1877.3	1866.7
47.5°	68.6	73.4	75.8	85.4	127.6	258.6	1340.4	2054.8	2172.3	2163.7
50°	63.3	69.1	69.1	84.4	146.8	262.4	1382.2	2402.1	2584.0	2581.1
52.5°	58.1	64.3	63.3	91.6	161.7	280.2	1429.7	2708.7	3024.9	3051.2
55°	52.8	58.5	59.5	106.0	170.3	295.5	1245.9	2837.8	3401.5	3494.1
57.5°	47.0	50.4	61.9	117.1	167.4	340.1	853.5	2861.3	3641.8	3840.4
60°	40.8	43.7	70.0	114.7	158.3	314.2	537.3	2650.2	3607.8	3859.6
62.5°	35.5	40.3	73.9	101.2	161.2	272.5	342.5	2258.7	3283.0	3570.3
65°	31.2	38.9	67.2	91.6	163.1	184.7	231.2	1837.5	2965.8	3239.3
67.5°	27.8	43.2	55.2	81.6	140.1	130.0	158.8	1427.8	2493.8	2738.9
70°	25.4	44.1	45.1	70.0	108.4	83.5	104.6	960.9	1719.0	1999.1
72.5°	23.0	32.6	34.1	56.1	70.0	50.9	67.6	549.8	1253.1	1444.1
75°	22.1	22.1	23.5	36.5	38.9	36.9	43.7	328.2	898.6	1038.2
77.5°	20.6	16.8	14.9	23.5	21.1	26.4	25.9	145.8	389.6	421.2
80°	16.3	12.0	10.1	14.9	14.4	17.8	15.4	12.0	17.8	17.3
82.5°	10.1	7.7	7.2	9.1	8.2	9.1	7.2	1.9	1.9	1.9
85°	4.8	4.3	3.8	3.8	4.3	3.8	2.9	1.0	0.5	0.5
87.5°	2.4	2.4	1.9	1.4	1.9	1.9	1.4	0.5	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			

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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

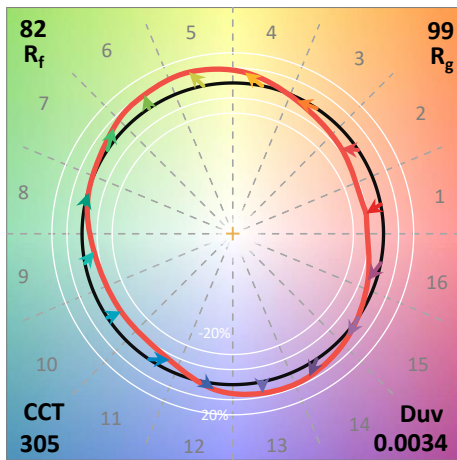
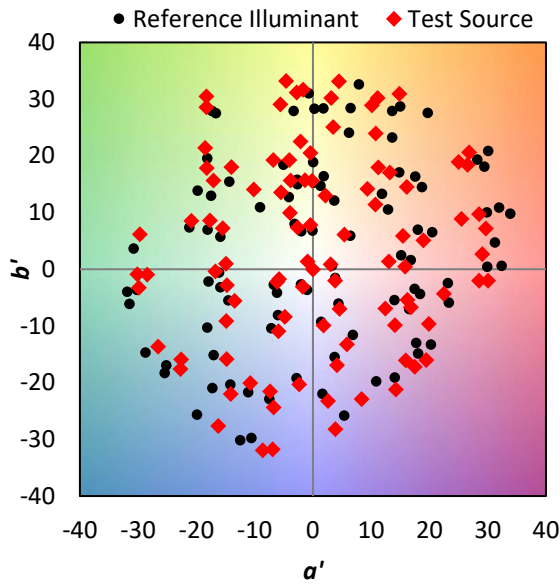
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300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