

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: P641455

Luminaire Tested: GWS-SA5F-830-U-SLR-W-HSS

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P641455
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-SA5F-830-U-SLR-W-HSS
Description: GALLEON WALL SLIM LUMINAIRE. (5) LIGHTSQUARES WITH 16 LEDS EACH AND
SPILL LIGHT ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD
Light Source: (80) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20576.8 lumens
Efficiency: N/A
Efficacy: 66.3 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

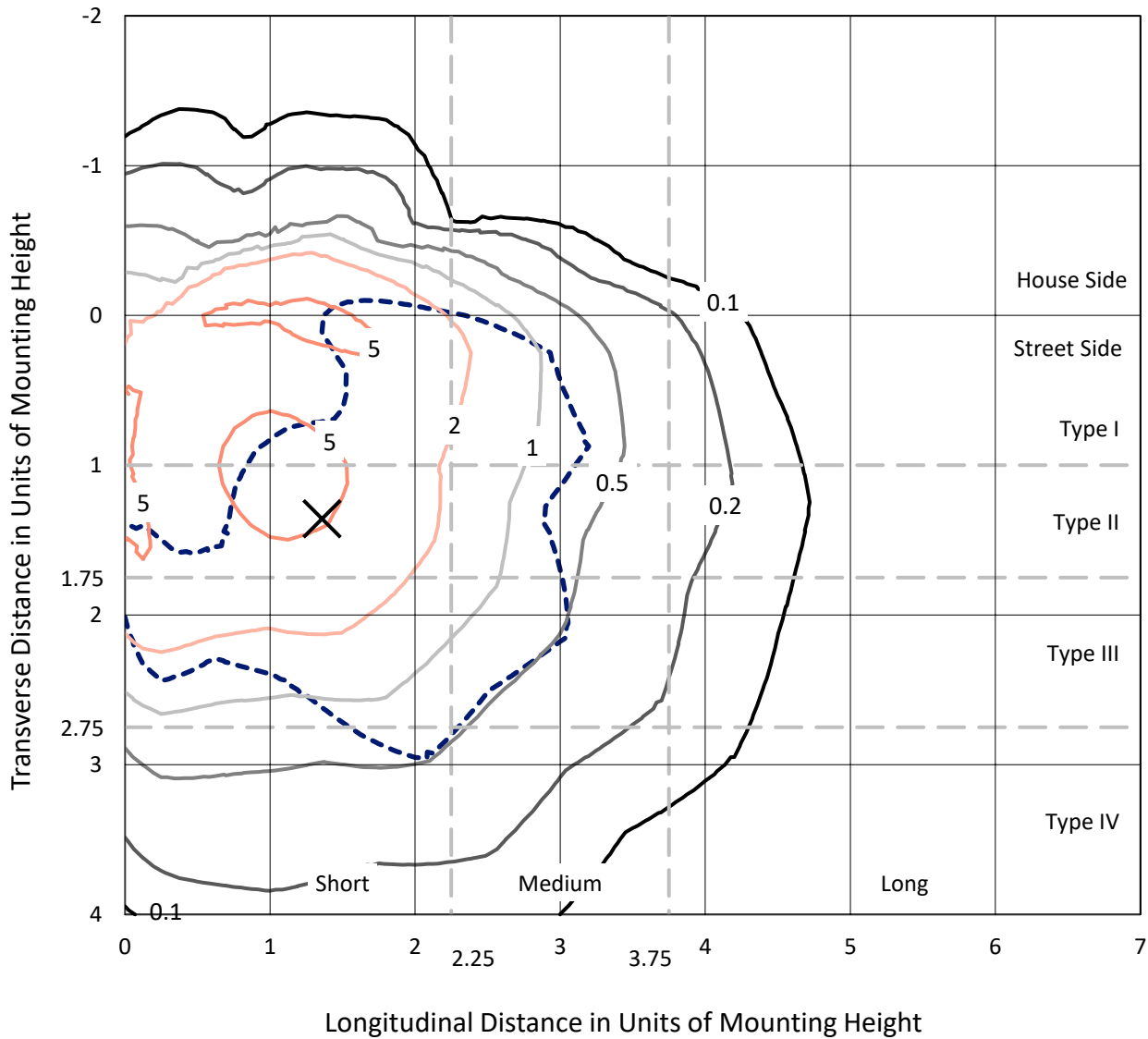
Input Watts (W): 310.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

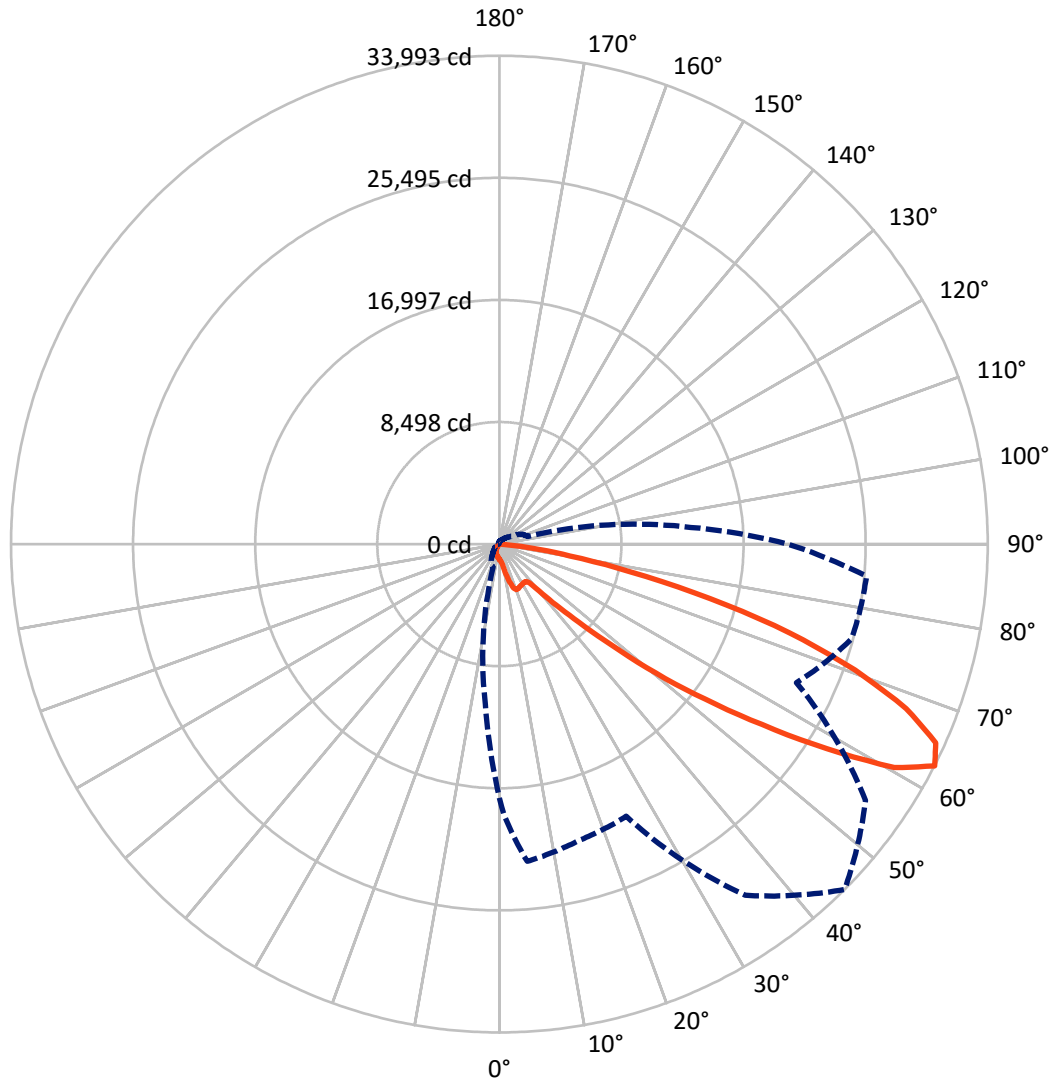
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.7 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	2539.2	0.0	2539.2
	% Fixture	12.3	0.0	12.3
Street Side	Lumens	18037.7	0.0	18037.7
	% Fixture	87.7	0.0	87.7
Total	Lumens	20576.8	0.0	20576.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.9	0.5
10°-20°	358.7	1.7
20°-30°	779.8	3.8
30°-40°	1280.0	6.2
40°-50°	2353.1	11.4
50°-60°	5053.4	24.6
60°-70°	6787.5	33.0
70°-80°	3534.3	17.2
80°-90°	335.1	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°	20576.8	100.0
0°-180°	20576.8	100.0

Coefficient of Utilization

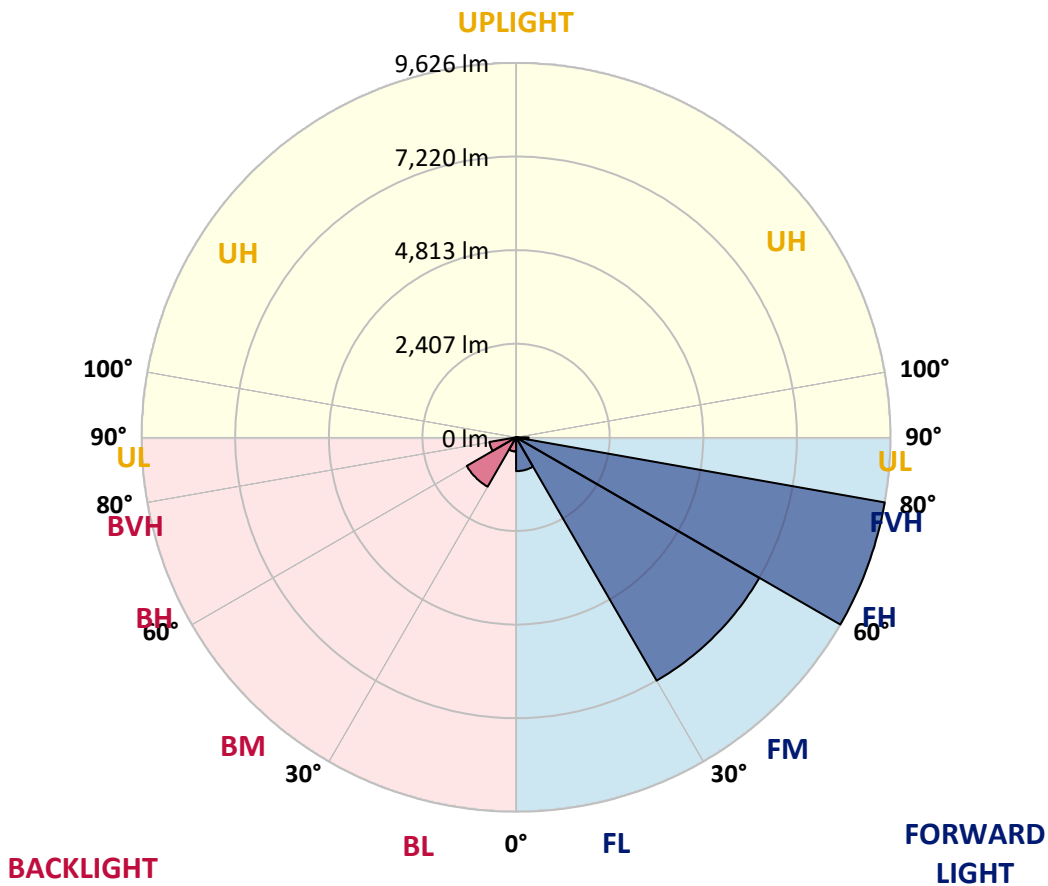


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	869.3	4.2			
FM (30°-60°)	7222.2	35.1			
FH (60°-80°)	9626.0	46.8			G4/12000
FVH (80°-90°)	320.2	1.6			G3/500
BL (0°-30°)	364.2	1.8	B1/500		
BM (30°-60°)	1464.2	7.1	B2/2500		
BH (60°-80°)	695.7	3.4	B2/1000		G2/1000
BVH (80°-90°)	14.9	0.1			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G4
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6
2.5°	1091.0	1095.7	1100.5	1117.1	1129.0	1138.5	1140.9	1133.7	1117.1	1100.5	1076.7
5°	1057.7	1062.4	1079.1	1124.2	1169.4	1205.0	1216.9	1209.8	1169.4	1117.1	1062.4
7.5°	1055.3	1064.8	1105.2	1200.3	1297.7	1371.4	1390.4	1373.8	1297.7	1193.2	1081.4
10°	1140.9	1157.5	1216.9	1388.1	1566.3	1697.0	1749.3	1678.0	1556.8	1366.7	1183.6
12.5°	1364.3	1392.8	1506.9	1756.5	2032.2	2205.7	2277.0	2189.0	1998.9	1723.2	1433.2
15°	1716.1	1758.8	1930.0	2303.1	2628.7	2783.2	2807.0	2757.1	2536.1	2231.8	1842.0
17.5°	2212.8	2274.6	2540.8	2921.1	3156.4	3211.1	3203.9	3151.6	2990.0	2780.9	2412.5
20°	2807.0	2880.7	3142.1	3455.9	3479.6	3415.5	3379.8	3348.9	3294.3	3258.6	2971.0
22.5°	3406.0	3496.3	3769.6	3848.0	3634.1	3448.7	3360.8	3384.6	3465.4	3641.3	3524.8
25°	4002.5	4088.1	4344.8	4133.3	3705.4	3396.5	3284.7	3341.8	3534.3	3914.6	4064.3
27.5°	4698.9	4763.1	4915.2	4328.2	3717.3	3353.7	3244.3	3332.3	3567.6	4085.7	4656.2
30°	5423.9	5461.9	5388.2	4380.5	3676.9	3289.5	3203.9	3332.3	3624.6	4199.8	5100.6
32.5°	5956.3	5963.4	5723.3	4385.2	3655.5	3237.2	3165.9	3318.0	3679.3	4294.9	5530.8
35°	6505.3	6469.7	6044.2	4456.5	3712.6	3256.2	3194.4	3358.4	3764.9	4406.6	5908.7
37.5°	7061.5	6997.3	6403.1	4573.0	3859.9	3463.0	3425.0	3565.2	3902.7	4561.1	6324.7
40°	7631.9	7544.0	6776.3	4748.9	4187.9	4166.5	4297.3	4280.6	4280.6	4758.4	6752.5
42.5°	8328.3	8226.1	7327.7	5245.6	4953.3	5431.0	5787.5	5566.5	5157.7	5212.3	7308.7
45°	9248.2	9160.2	8283.2	6196.3	6153.6	7251.6	7731.8	7294.4	6277.1	6260.5	8238.0
47.5°	10719.4	10702.8	9806.7	7299.2	7622.4	9569.0	10496.0	9654.6	7553.5	7370.5	9996.8
50°	12787.2	12737.3	11705.8	8592.2	9369.4	12440.2	14094.5	12692.1	9096.0	8665.8	12352.3
52.5°	15116.5	15168.8	14365.4	10004.0	11225.7	15634.6	17937.8	16171.8	10771.7	10313.0	15316.1
55°	17310.3	17609.8	17398.2	11655.9	13039.2	19161.8	22159.0	19988.9	12846.6	12468.7	18638.9
57.5°	19026.3	19870.1	21353.2	14056.4	15171.2	23287.9	26872.2	24127.0	15268.6	15969.8	23162.0
60°	19121.4	20238.5	23682.5	19078.6	17914.0	26827.0	31578.3	28169.9	19076.2	21914.2	26705.8
62.5°	17688.2	18886.1	22166.1	21360.4	20901.6	29838.4	33993.1	31117.1	22822.1	25396.2	25655.2
65°	16048.2	17258.0	20473.8	18772.0	20554.6	29710.1	33379.9	31186.1	23162.0	23028.9	23775.2
67.5°	13569.2	14655.4	17567.0	16616.3	18945.5	28276.9	30546.7	29220.5	21339.0	21538.6	21871.4
70°	9904.2	10949.9	13652.4	13699.9	16544.9	25693.3	26247.1	26064.1	19651.4	19863.0	18912.2
72.5°	7154.2	8036.0	10367.6	11235.2	13207.9	21545.8	21163.1	21869.0	16861.1	17690.6	15190.2
75°	5143.4	5804.2	7605.8	9773.4	10469.8	16000.7	15149.8	16937.1	13528.8	15233.0	11420.6
77.5°	2086.8	2319.8	2992.4	6583.8	6880.9	10764.6	9274.3	12302.4	9645.1	10008.7	5535.6
80°	85.6	95.1	123.6	3398.8	4718.0	6056.1	4962.8	6576.6	6369.8	4031.1	1307.2
82.5°	9.5	9.5	21.4	979.2	2065.4	3341.8	2338.8	3788.6	3225.3	1708.9	594.2
85°	2.4	2.4	4.8	111.7	484.9	534.8	316.1	1162.3	1499.8	698.8	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.9	21.4	23.8	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°	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6
2.5°	1076.7	1064.8	1050.5	1036.3	1029.2	1010.1	1003.0	998.3	993.5	995.9	995.9
5°	1041.0	1014.9	984.0	953.1	936.5	917.4	907.9	903.2	905.6	915.1	915.1
7.5°	1036.3	986.4	919.8	879.4	860.4	846.1	836.6	831.9	834.3	846.1	850.9
10°	1114.7	1026.8	907.9	839.0	817.6	803.4	793.9	786.7	782.0	791.5	793.9
12.5°	1283.5	1162.3	965.0	834.3	796.2	777.2	770.1	755.8	748.7	753.4	755.8
15°	1632.9	1423.7	1079.1	853.3	777.2	755.8	743.9	732.1	720.2	717.8	720.2
17.5°	2089.2	1789.7	1252.6	898.4	763.0	736.8	720.2	703.5	686.9	684.5	682.1
20°	2654.9	2239.0	1495.0	969.7	751.1	720.2	696.4	672.6	651.2	644.1	644.1
22.5°	3170.7	2780.9	1806.4	1057.7	734.4	696.4	667.9	639.4	615.6	603.7	601.3
25°	3800.5	3356.1	2179.5	1159.9	710.7	665.5	634.6	606.1	582.3	568.1	563.3
27.5°	4435.1	3962.1	2602.6	1293.0	682.1	634.6	606.1	579.9	553.8	537.2	532.4
30°	5050.7	4615.8	3078.0	1459.4	660.8	603.7	579.9	553.8	530.0	503.9	496.8
32.5°	5711.5	5283.6	3610.4	1644.8	644.1	582.3	556.2	532.4	501.5	477.7	465.9
35°	6348.5	5972.9	4197.4	1825.4	627.5	563.3	534.8	511.0	477.7	451.6	435.0
37.5°	6990.2	6674.1	4810.7	1934.7	603.7	537.2	511.0	492.0	454.0	423.1	404.1
40°	7670.0	7399.0	5473.8	1889.6	582.3	508.6	494.4	473.0	430.2	394.5	370.8
42.5°	8416.3	8090.6	6148.8	1716.1	563.3	484.9	470.6	449.2	408.8	366.0	335.1
45°	9355.1	8848.9	6702.6	1454.6	572.8	461.1	432.6	427.8	389.8	335.1	297.1
47.5°	10969.0	10013.5	7132.8	1285.9	637.0	435.0	401.7	413.6	373.2	304.2	261.4
50°	13438.5	11943.5	7534.5	1274.0	734.4	423.1	373.2	404.1	356.5	273.3	230.6
52.5°	15791.5	13904.3	7791.2	1378.5	820.0	454.0	344.6	392.2	344.6	251.9	209.2
55°	18042.3	15035.7	7332.4	1454.6	900.8	546.7	323.2	373.2	330.4	240.1	202.0
57.5°	20469.1	15539.6	5773.3	1609.1	957.9	625.1	328.0	344.6	311.4	232.9	199.7
60°	21194.0	14895.4	3484.4	1811.1	927.0	648.9	363.7	306.6	285.2	218.7	192.5
62.5°	20067.4	13367.2	2055.9	1649.5	900.8	613.2	415.9	282.8	259.1	199.7	178.3
65°	18382.2	11292.2	1340.5	1392.8	955.5	546.7	442.1	271.0	235.3	180.6	156.9
67.5°	16457.0	9096.0	938.8	822.4	881.8	492.0	373.2	268.6	211.5	152.1	128.3
70°	13861.5	6811.9	660.8	544.3	734.4	437.3	290.0	261.4	185.4	123.6	99.8
72.5°	10709.9	4264.0	492.0	351.8	522.9	356.5	230.6	221.0	149.7	102.2	76.1
75°	7898.1	2431.5	347.0	254.3	344.6	271.0	171.1	156.9	128.3	97.4	68.9
77.5°	4123.8	1216.9	216.3	194.9	197.3	168.8	123.6	114.1	118.8	97.4	64.2
80°	791.5	242.4	130.7	142.6	107.0	107.0	90.3	95.1	104.6	78.4	54.7
82.5°	330.4	52.3	71.3	80.8	66.6	73.7	73.7	76.1	73.7	57.0	40.4
85°	0.0	0.0	30.9	33.3	45.2	45.2	38.0	38.0	38.0	33.3	23.8
87.5°	0.0	0.0	0.0	0.0	2.4	7.1	14.3	16.6	19.0	14.3	9.5
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°	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6
2.5°	993.5	988.8	995.9	1000.6	1005.4	1005.4	1000.6	995.9	988.8	995.9	988.8
5°	917.4	924.6	936.5	941.2	946.0	936.5	931.7	917.4	905.6	907.9	903.2
7.5°	858.0	865.2	879.4	888.9	888.9	884.2	869.9	855.7	836.6	836.6	834.3
10°	803.4	812.9	829.5	841.4	846.1	841.4	827.1	808.1	791.5	791.5	784.3
12.5°	758.2	770.1	789.1	805.7	810.5	805.7	791.5	772.5	753.4	753.4	748.7
15°	720.2	734.4	755.8	774.8	782.0	774.8	758.2	734.4	715.4	717.8	710.7
17.5°	684.5	696.4	724.9	746.3	753.4	746.3	724.9	694.0	675.0	679.8	675.0
20°	644.1	658.4	686.9	710.7	717.8	710.7	686.9	653.6	634.6	634.6	637.0
22.5°	601.3	615.6	644.1	660.8	670.3	663.1	639.4	608.5	589.4	589.4	591.8
25°	563.3	570.4	591.8	608.5	610.8	603.7	584.7	560.9	546.7	553.8	556.2
27.5°	527.7	527.7	537.2	546.7	544.3	537.2	530.0	511.0	508.6	515.8	522.9
30°	489.6	477.7	473.0	465.9	463.5	461.1	468.2	468.2	473.0	482.5	489.6
32.5°	456.3	432.6	411.2	389.8	377.9	387.4	406.4	423.1	439.7	454.0	461.1
35°	418.3	380.3	344.6	316.1	297.1	311.4	342.3	373.2	401.7	420.7	432.6
37.5°	380.3	325.6	282.8	247.2	232.9	244.8	278.1	320.9	363.7	387.4	404.1
40°	339.9	271.0	221.0	192.5	178.3	190.1	223.4	266.2	323.2	354.1	375.5
42.5°	299.5	223.4	178.3	149.7	142.6	149.7	175.9	218.7	280.5	318.5	347.0
45°	259.1	185.4	142.6	121.2	114.1	121.2	142.6	178.3	240.1	282.8	316.1
47.5°	223.4	156.9	118.8	99.8	95.1	102.2	118.8	149.7	202.0	244.8	282.8
50°	194.9	137.9	102.2	85.6	80.8	87.9	102.2	126.0	171.1	209.2	249.6
52.5°	175.9	128.3	90.3	73.7	71.3	76.1	87.9	107.0	145.0	178.3	216.3
55°	171.1	128.3	83.2	66.6	64.2	68.9	78.4	92.7	126.0	154.5	187.8
57.5°	175.9	137.9	78.4	57.0	54.7	59.4	68.9	80.8	109.3	133.1	164.0
60°	175.9	140.2	68.9	45.2	42.8	47.5	57.0	71.3	97.4	116.5	142.6
62.5°	159.2	128.3	57.0	35.7	30.9	35.7	47.5	59.4	85.6	104.6	126.0
65°	137.9	109.3	47.5	26.1	21.4	26.1	38.0	49.9	73.7	90.3	114.1
67.5°	111.7	83.2	35.7	19.0	14.3	19.0	28.5	40.4	61.8	78.4	102.2
70°	83.2	59.4	28.5	16.6	14.3	16.6	26.1	38.0	54.7	71.3	95.1
72.5°	61.8	40.4	23.8	16.6	11.9	16.6	23.8	35.7	52.3	68.9	90.3
75°	52.3	33.3	21.4	14.3	11.9	14.3	21.4	33.3	47.5	64.2	85.6
77.5°	49.9	30.9	19.0	11.9	9.5	11.9	19.0	28.5	42.8	59.4	83.2
80°	42.8	26.1	16.6	9.5	7.1	9.5	16.6	23.8	33.3	45.2	64.2
82.5°	33.3	21.4	11.9	4.8	2.4	4.8	11.9	14.3	21.4	26.1	38.0
85°	21.4	11.9	4.8	0.0	0.0	0.0	4.8	9.5	9.5	11.9	19.0
87.5°	9.5	2.4	0.0	0.0	0.0	0.0	0.0	0.0	2.4	4.8	7.1
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-SA5F-830-U-SLR-W-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6	1069.6
2.5°	1003.0	1005.4	1010.1	1017.3	1033.9	1048.2	1062.4	1081.4	1091.0	1091.0
5°	907.9	910.3	912.7	922.2	946.0	965.0	995.9	1033.9	1052.9	1057.7
7.5°	834.3	839.0	843.8	850.9	874.7	900.8	941.2	1012.5	1048.2	1055.3
10°	791.5	798.6	808.1	822.4	843.8	872.3	941.2	1069.6	1129.0	1140.9
12.5°	758.2	770.1	779.6	796.2	822.4	867.5	1005.4	1231.2	1335.8	1364.3
15°	724.9	739.2	753.4	770.1	798.6	884.2	1129.0	1521.2	1694.7	1716.1
17.5°	691.7	708.3	727.3	746.3	782.0	924.6	1323.9	1922.8	2165.3	2212.8
20°	653.6	675.0	701.2	724.9	765.3	988.8	1594.8	2400.6	2704.8	2807.0
22.5°	613.2	639.4	670.3	701.2	746.3	1067.2	1922.8	2914.0	3339.4	3406.0
25°	579.9	606.1	634.6	665.5	715.4	1162.3	2319.8	3550.9	3938.4	4002.5
27.5°	549.0	575.2	601.3	629.9	684.5	1285.9	2797.5	4228.3	4632.4	4698.9
30°	515.8	546.7	572.8	601.3	656.0	1438.0	3348.9	4979.4	5362.1	5423.9
32.5°	487.2	518.1	544.3	572.8	634.6	1604.3	3928.9	5644.9	5956.3	5956.3
35°	463.5	496.8	515.8	553.8	618.0	1711.3	4477.9	6279.5	6514.8	6505.3
37.5°	437.3	477.7	492.0	518.1	596.6	1723.2	4993.7	6949.8	7123.3	7061.5
40°	411.2	454.0	475.4	489.6	572.8	1625.7	5559.4	7565.4	7712.7	7631.9
42.5°	387.4	420.7	451.6	468.2	558.5	1454.6	6013.3	8223.8	8399.6	8328.3
45°	363.7	392.2	411.2	442.1	568.1	1335.8	6403.1	8991.5	9300.4	9248.2
47.5°	339.9	363.7	375.5	423.1	632.2	1281.1	6640.8	10179.9	10762.2	10719.4
50°	313.7	342.3	342.3	418.3	727.3	1300.1	6847.6	11900.7	12801.5	12787.2
52.5°	287.6	318.5	313.7	454.0	801.0	1388.1	7082.9	13419.4	14985.8	15116.5
55°	261.4	290.0	294.7	525.3	843.8	1464.1	6172.6	14058.8	16851.6	17310.3
57.5°	232.9	249.6	306.6	579.9	829.5	1685.2	4228.3	14175.3	18042.3	19026.3
60°	202.0	216.3	347.0	568.1	784.3	1556.8	2662.0	13129.5	17873.6	19121.4
62.5°	175.9	199.7	366.0	501.5	798.6	1350.0	1697.0	11190.0	16264.5	17688.2
65°	154.5	192.5	332.8	454.0	808.1	915.1	1145.6	9103.2	14693.4	16048.2
67.5°	137.9	213.9	273.3	404.1	694.0	644.1	786.7	7073.4	12354.6	13569.2
70°	126.0	218.7	223.4	347.0	537.2	413.6	518.1	4760.7	8516.1	9904.2
72.5°	114.1	161.6	168.8	278.1	347.0	251.9	335.1	2723.8	6208.2	7154.2
75°	109.3	109.3	116.5	180.6	192.5	183.0	216.3	1625.7	4451.8	5143.4
77.5°	102.2	83.2	73.7	116.5	104.6	130.7	128.3	722.5	1930.0	2086.8
80°	80.8	59.4	49.9	73.7	71.3	87.9	76.1	59.4	87.9	85.6
82.5°	49.9	38.0	35.7	45.2	40.4	45.2	35.7	9.5	9.5	9.5
85°	23.8	21.4	19.0	19.0	21.4	19.0	14.3	4.8	2.4	2.4
87.5°	11.9	11.9	9.5	7.1	9.5	9.5	7.1	2.4	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

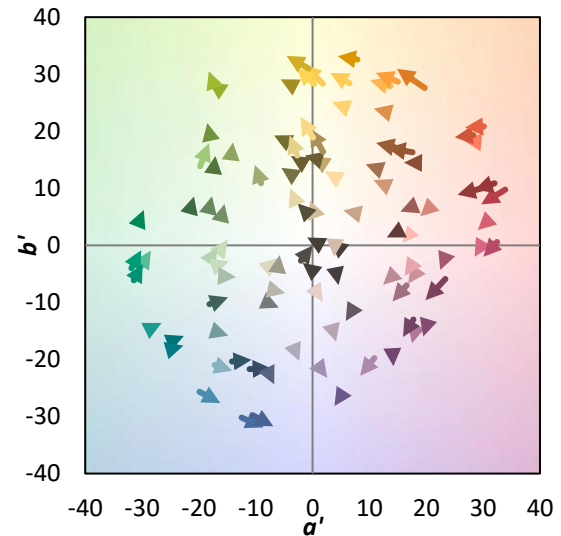
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300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