

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: P636006

Luminaire Tested: GWS-SA3E-830-U-SLL-W-HSS

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P636006
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-SA3E-830-U-SLL-W-HSS
Description: GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: (48) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10577.4 lumens
Efficiency: N/A
Efficacy: 66.4 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G3

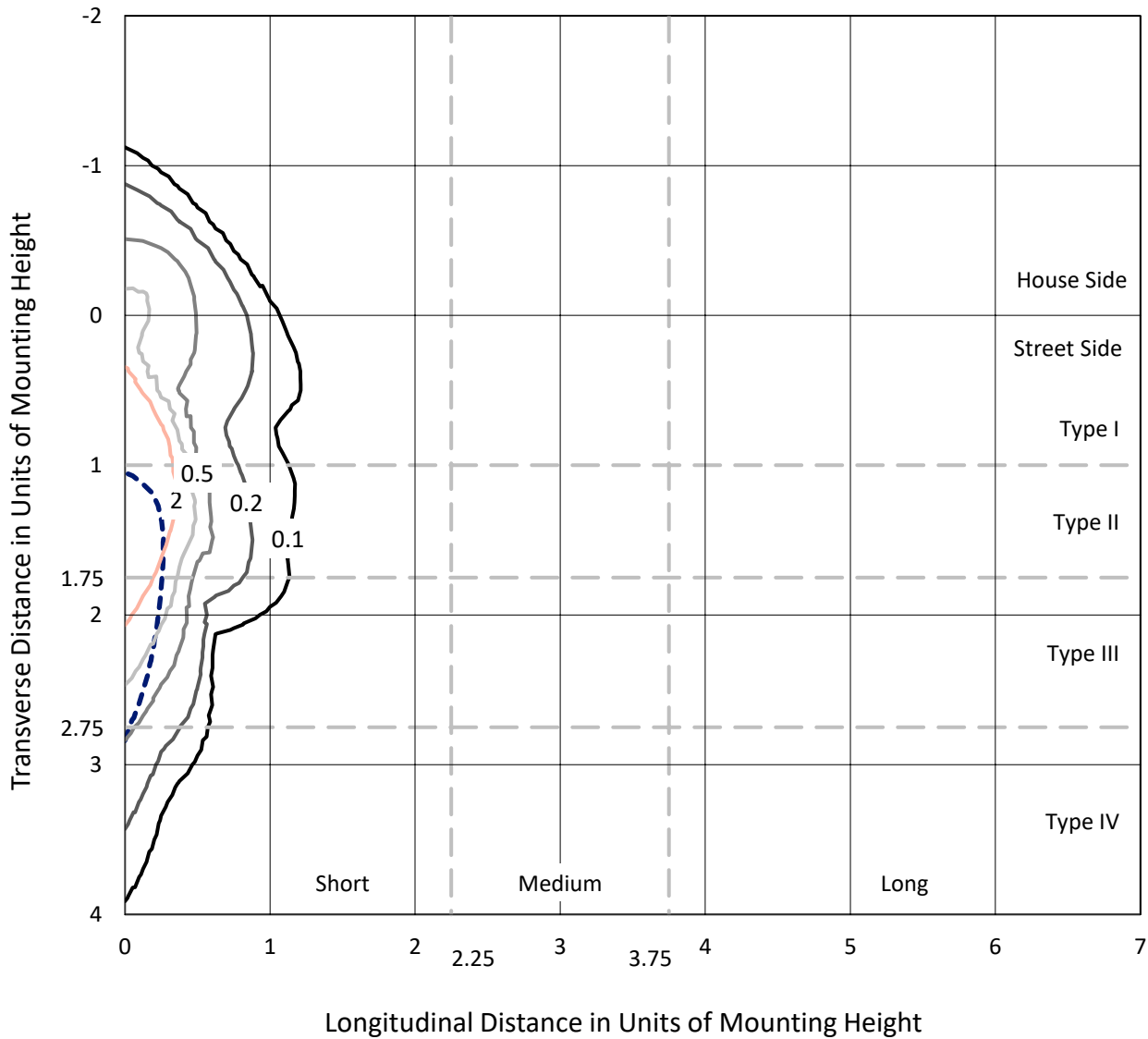
Input Watts (W): 159.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P636006
 CATALOG NUMBER: GWS-SA3E-830-U-SLL-W-HSS

Iso-Footcandle Lines of Horizontal Illumination

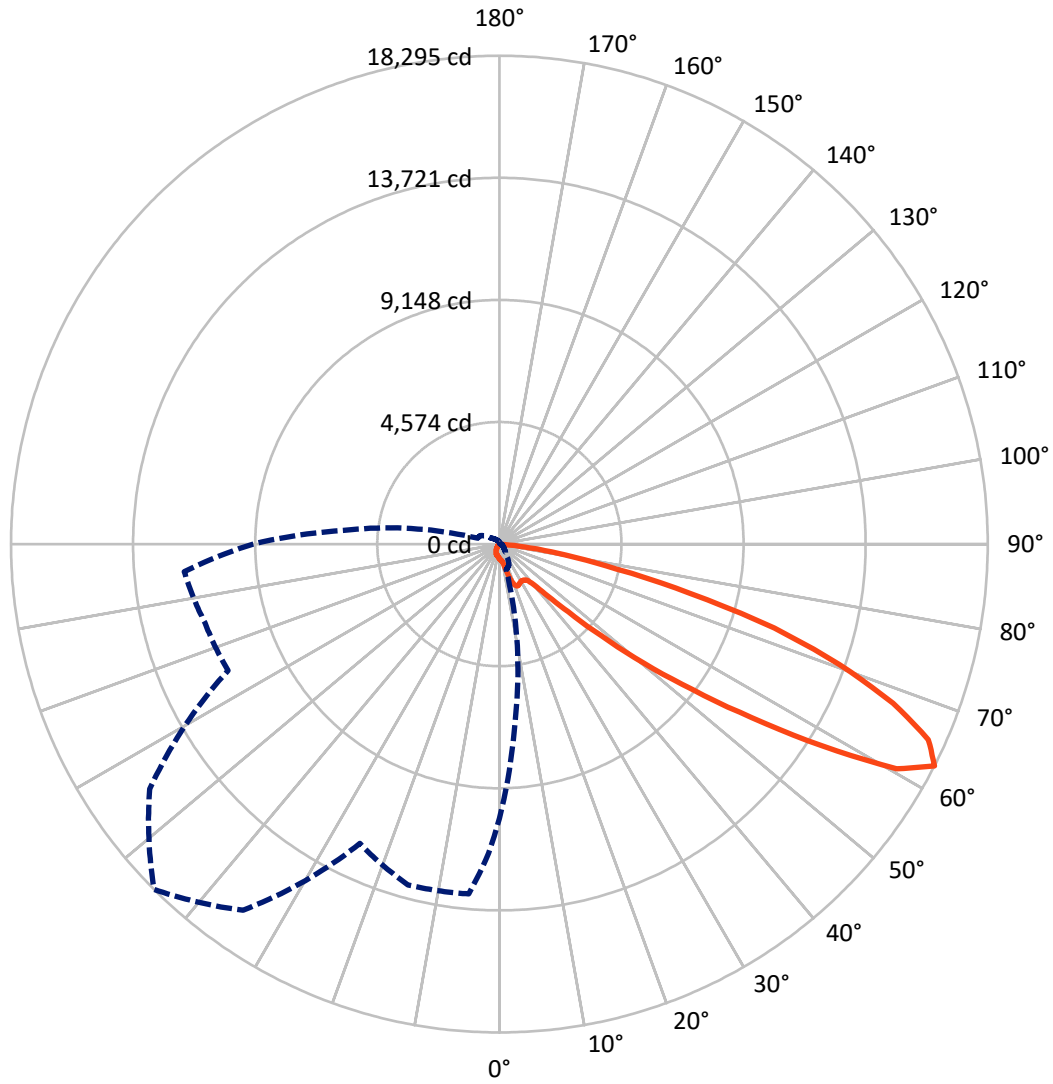
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.7 fc
 Type III - Short - N/A

REPORT NUMBER: P636006
CATALOG NUMBER: GWS-SA3E-830-U-SLL-W-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P636006
 CATALOG NUMBER: GWS-SA3E-830-U-SLL-W-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1229.0	0.0	1229.0
	% Fixture	11.6	0.0	11.6
Street Side	Lumens	9348.4	0.0	9348.4
	% Fixture	88.4	0.0	88.4
Total	Lumens	10577.4	0.0	10577.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.4	0.4
10°-20°	162.4	1.5
20°-30°	366.8	3.5
30°-40°	631.9	6.0
40°-50°	1192.0	11.3
50°-60°	2661.4	25.2
60°-70°	3559.5	33.7
70°-80°	1785.0	16.9
80°-90°	171.1	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°	10577.4	100.0
0°-180°	10577.4	100.0

Coefficient of Utilization



REPORT NUMBER: P636006

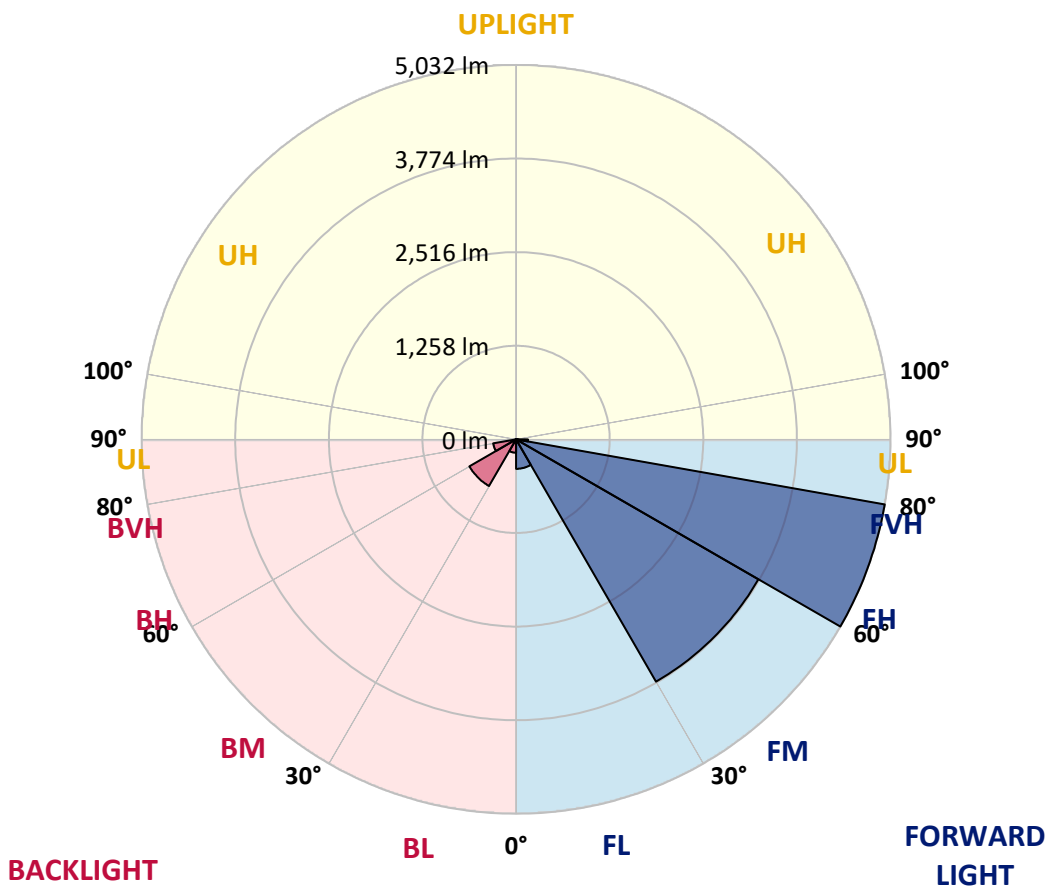
CATALOG NUMBER: GWS-SA3E-830-U-SLL-W-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	396.1	3.7			
FM (30°-60°)	3760.6	35.6			
FH (60°-80°)	5032.0	47.6			G3/7500
FVH (80°-90°)	159.7	1.5			G2/225
BL (0°-30°)	180.4	1.7	B1/500		
BM (30°-60°)	724.7	6.9	B1/1000		
BH (60°-80°)	312.5	3.0	B1/500		G1/500
BVH (80°-90°)	11.4	0.1			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type III Short





REPORT NUMBER: P636006

CATALOG NUMBER: GWS-SA3E-830-U-SLL-W-HSS

CANDELA DISTRIBUTION (FULL):

	0°	2°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6
2.5°	542.3	541.0	538.5	531.0	524.8	521.0	513.5	513.5	512.2	509.7	504.7
5°	524.8	519.8	514.7	501.0	485.9	477.2	467.2	465.9	465.9	463.4	462.1
7.5°	497.2	492.2	485.9	463.4	449.6	440.9	432.1	430.8	427.1	427.1	427.1
10°	482.2	474.7	464.6	439.6	425.8	418.3	412.0	408.3	405.8	402.0	400.8
12.5°	514.7	501.0	479.7	434.6	415.8	405.8	398.3	395.8	388.2	383.2	379.5
15°	616.2	582.4	539.8	445.9	412.0	397.0	387.0	382.0	375.7	367.0	360.7
17.5°	782.8	733.9	662.5	482.2	408.3	389.5	377.0	368.2	359.4	349.4	341.9
20°	1013.2	940.6	855.4	548.6	408.3	380.7	365.7	354.4	341.9	330.6	321.9
22.5°	1306.3	1233.6	1088.4	661.3	413.3	369.5	351.9	336.9	321.9	311.9	301.8
25°	1634.4	1531.7	1396.4	797.8	427.1	354.4	335.6	320.6	306.8	294.3	283.0
27.5°	2000.1	1888.6	1708.3	991.9	457.1	339.4	318.1	304.3	291.8	279.3	264.3
30°	2337.0	2270.6	2086.5	1224.9	506.0	329.4	304.3	291.8	279.3	263.0	249.2
32.5°	2741.5	2623.8	2472.3	1490.4	571.1	319.4	293.1	275.5	265.5	250.5	235.5
35°	3148.6	3048.4	2849.3	1817.3	643.7	309.3	279.3	263.0	254.2	236.7	220.4
37.5°	3568.1	3545.6	3349.0	2179.2	715.1	298.1	263.0	253.0	244.2	224.2	205.4
40°	3981.4	3940.1	3758.5	2592.5	759.0	285.6	249.2	243.0	232.9	210.4	189.1
42.5°	4377.2	4345.9	4169.3	2988.3	752.7	274.3	235.5	227.9	220.4	197.9	171.6
45°	4863.1	4811.8	4588.9	3281.3	688.8	286.8	221.7	209.2	207.9	186.6	154.0
47.5°	5772.4	5603.3	5225.1	3506.8	625.0	319.4	206.6	191.6	200.4	175.3	136.5
50°	7046.1	6847.0	6299.7	3682.1	623.7	361.9	204.1	175.3	194.1	166.6	121.5
52.5°	8326.1	7975.4	7310.4	3776.0	670.0	393.3	226.7	159.1	186.6	157.8	110.2
55°	9552.2	8824.5	7733.7	3465.4	706.4	427.1	268.0	150.3	172.8	147.8	104.0
57.5°	10720.7	9507.1	7917.8	2741.5	827.8	440.9	293.1	154.0	152.8	135.3	98.9
60°	10881.0	9474.5	7545.8	1594.3	913.0	417.1	283.0	171.6	134.0	120.2	90.2
62.5°	10274.8	8844.6	6697.9	994.4	847.9	408.3	251.7	195.4	121.5	106.5	78.9
65°	9354.3	7856.4	5584.5	641.2	642.5	453.4	220.4	191.6	114.0	93.9	67.6
67.5°	7915.3	6575.2	4399.7	429.6	363.2	387.0	192.9	131.5	111.5	80.2	52.6
70°	5777.4	4680.3	2864.3	286.8	216.7	309.3	161.6	93.9	105.2	66.4	37.6
72.5°	4223.2	3144.8	1599.3	187.9	122.7	180.3	119.0	67.6	81.4	48.8	26.3
75°	3039.6	2164.2	913.0	120.2	81.4	98.9	77.6	46.3	52.6	38.8	23.8
77.5°	1462.8	1054.5	414.6	66.4	55.1	50.1	41.3	28.8	32.6	35.1	21.3
80°	55.1	41.3	31.3	32.6	35.1	22.5	18.8	15.0	18.8	23.8	11.3
82.5°	0.0	0.0	0.0	3.8	5.0	6.3	7.5	6.3	7.5	8.8	1.3
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



REPORT NUMBER: P636006

CATALOG NUMBER: GWS-SA3E-830-U-SLL-W-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6
2.5°	508.5	506.0	508.5	511.0	513.5	516.0	512.2	514.7	517.2	511.0	513.5
5°	468.4	467.2	474.7	478.4	483.4	485.9	483.4	483.4	482.2	474.7	474.7
7.5°	433.3	434.6	440.9	449.6	455.9	459.6	457.1	455.9	452.1	440.9	440.9
10°	407.0	407.0	417.1	424.6	433.3	437.1	434.6	430.8	427.1	415.8	414.6
12.5°	385.7	385.7	393.3	405.8	415.8	420.8	419.6	414.6	408.3	397.0	395.8
15°	365.7	364.5	375.7	387.0	400.8	407.0	404.5	400.8	389.5	379.5	377.0
17.5°	345.7	344.4	354.4	369.5	384.5	393.3	392.0	383.2	373.2	360.7	358.2
20°	325.6	323.1	335.6	350.7	365.7	374.5	372.0	364.5	351.9	339.4	336.9
22.5°	305.6	304.3	313.1	325.6	339.4	346.9	345.7	339.4	326.9	315.6	315.6
25°	283.0	283.0	289.3	298.1	308.1	311.9	313.1	310.6	303.1	296.8	296.8
27.5°	264.3	260.5	263.0	265.5	270.5	276.8	276.8	279.3	280.5	278.0	279.3
30°	249.2	243.0	239.2	234.2	231.7	234.2	236.7	245.5	254.2	259.3	261.8
32.5°	231.7	224.2	214.2	200.4	191.6	189.1	196.6	212.9	229.2	240.5	246.7
35°	214.2	204.1	185.4	165.3	154.0	150.3	159.1	177.8	201.6	221.7	230.4
37.5°	196.6	182.9	156.6	132.8	120.2	117.7	126.5	146.5	174.1	201.6	212.9
40°	176.6	160.3	129.0	104.0	93.9	91.4	98.9	119.0	147.8	179.1	196.6
42.5°	156.6	136.5	104.0	82.7	72.6	72.6	82.7	97.7	124.0	157.8	179.1
45°	136.5	115.2	85.2	66.4	60.1	61.4	67.6	82.7	104.0	139.0	159.1
47.5°	117.7	98.9	70.1	55.1	50.1	51.3	58.9	71.4	88.9	120.2	141.5
50°	101.4	83.9	61.4	46.3	42.6	45.1	52.6	63.9	78.9	106.5	124.0
52.5°	91.4	75.1	56.4	40.1	37.6	40.1	47.6	57.6	71.4	93.9	111.5
55°	86.4	73.9	56.4	36.3	32.6	35.1	42.6	52.6	63.9	85.2	100.2
57.5°	85.2	76.4	60.1	32.6	27.6	30.1	37.6	47.6	58.9	77.6	90.2
60°	80.2	72.6	58.9	26.3	21.3	25.0	31.3	41.3	53.9	72.6	83.9
62.5°	70.1	63.9	51.3	21.3	16.3	18.8	26.3	36.3	48.8	66.4	78.9
65°	57.6	51.3	40.1	13.8	10.0	12.5	20.0	31.3	42.6	60.1	71.4
67.5°	42.6	36.3	27.6	8.8	5.0	8.8	16.3	26.3	38.8	53.9	65.1
70°	26.3	21.3	15.0	5.0	3.8	7.5	15.0	25.0	35.1	50.1	61.4
72.5°	15.0	10.0	6.3	2.5	3.8	7.5	15.0	25.0	33.8	47.6	57.6
75°	11.3	6.3	2.5	1.3	2.5	6.3	13.8	22.5	32.6	45.1	55.1
77.5°	7.5	3.8	1.3	0.0	1.3	5.0	12.5	21.3	30.1	42.6	52.6
80°	1.3	0.0	0.0	0.0	0.0	3.8	11.3	18.8	27.6	37.6	46.3
82.5°	0.0	0.0	0.0	0.0	0.0	1.3	8.8	16.3	23.8	31.3	37.6
85°	0.0	0.0	0.0	0.0	0.0	0.0	5.0	12.5	18.8	23.8	26.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	12.5	15.0	17.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P636006

CATALOG NUMBER: GWS-SA3E-830-U-SLL-W-HSS

CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6
2.5°	512.2	519.8	519.8	524.8	531.0	542.3	548.6	557.3	563.6	569.9	572.4
5°	473.4	474.7	475.9	478.4	485.9	498.5	509.7	523.5	539.8	552.3	559.8
7.5°	440.9	440.9	440.9	444.6	452.1	460.9	472.2	490.9	509.7	524.8	537.3
10°	413.3	417.1	418.3	424.6	433.3	444.6	457.1	473.4	494.7	514.7	537.3
12.5°	395.8	399.5	405.8	412.0	420.8	433.3	447.1	468.4	512.2	553.6	601.2
15°	379.5	384.5	392.0	400.8	410.8	424.6	439.6	483.4	586.1	663.8	738.9
17.5°	361.9	369.5	379.5	388.2	400.8	415.8	434.6	519.8	721.4	850.4	978.1
20°	339.4	349.4	360.7	374.5	389.5	407.0	434.6	594.9	916.8	1102.1	1271.2
22.5°	318.1	328.1	341.9	359.4	377.0	394.5	440.9	708.9	1168.5	1402.7	1616.9
25°	300.6	313.1	326.9	341.9	361.9	382.0	455.9	869.2	1471.6	1773.4	1925.0
27.5°	284.3	299.3	313.1	325.6	343.2	365.7	489.7	1083.3	1829.8	2136.6	2255.6
30°	268.0	285.6	299.3	311.9	329.4	353.2	541.0	1356.4	2228.1	2526.1	2538.7
32.5°	254.2	270.5	286.8	299.3	315.6	343.2	612.4	1675.7	2636.3	2924.4	2806.7
35°	239.2	258.0	273.0	286.8	304.3	334.4	695.1	2020.2	3048.4	3290.1	3073.4
37.5°	224.2	245.5	264.3	274.3	291.8	325.6	755.2	2379.6	3469.2	3647.0	3307.6
40°	210.4	234.2	255.5	265.5	274.3	314.4	764.0	2747.8	3896.3	3999.0	3528.1
42.5°	195.4	221.7	240.5	254.2	261.8	306.8	711.4	3058.4	4254.5	4349.6	3816.1
45°	179.1	210.4	225.4	235.5	250.5	311.9	643.7	3298.9	4664.0	4828.1	4290.8
47.5°	162.8	197.9	210.4	217.9	238.0	341.9	618.7	3459.2	5339.1	5679.7	5091.1
50°	147.8	186.6	200.4	199.1	235.5	380.7	646.2	3580.7	6353.5	6754.3	6188.2
52.5°	131.5	174.1	190.4	185.4	254.2	410.8	701.4	3677.1	7133.8	8014.2	7662.3
55°	117.7	160.3	175.3	174.1	289.3	433.3	743.9	3168.6	7456.9	9185.2	9323.0
57.5°	107.7	145.3	157.8	179.1	311.9	433.3	860.4	2249.3	7463.2	10046.9	11527.3
60°	98.9	131.5	140.3	196.6	303.1	410.8	851.6	1377.7	6878.3	9988.0	12699.5
62.5°	91.4	119.0	130.3	201.6	268.0	407.0	769.0	854.1	5866.3	9227.8	11849.1
65°	85.2	109.0	125.2	185.4	243.0	435.8	518.5	613.7	4757.9	8361.1	10873.5
67.5°	78.9	100.2	132.8	151.5	220.4	389.5	374.5	435.8	3734.7	7410.6	9978.0
70°	73.9	95.2	140.3	124.0	192.9	304.3	265.5	330.6	2859.3	6183.2	8716.8
72.5°	70.1	88.9	117.7	97.7	156.6	235.5	185.4	240.5	1868.6	4826.8	7106.2
75°	66.4	81.4	86.4	78.9	116.5	154.0	140.3	161.6	1113.4	3528.1	5391.7
77.5°	65.1	76.4	70.1	63.9	78.9	91.4	106.5	109.0	543.5	1764.7	2825.5
80°	57.6	68.9	60.1	52.6	53.9	60.1	78.9	72.6	124.0	448.4	754.0
82.5°	45.1	53.9	50.1	43.8	43.8	43.8	52.6	48.8	40.1	201.6	340.7
85°	31.3	37.6	37.6	35.1	33.8	33.8	32.6	31.3	11.3	12.5	18.8
87.5°	21.3	26.3	27.6	26.3	22.5	20.0	17.5	15.0	5.0	0.0	2.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P636006

CATALOG NUMBER: GWS-SA3E-830-U-SLL-W-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	358°	360°
0°	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6
2.5°	581.1	584.9	584.9	579.9	576.1	566.1	556.1	546.1	543.5	542.3
5°	581.1	596.2	603.7	602.4	593.6	577.4	556.1	533.5	527.3	524.8
7.5°	572.4	601.2	623.7	627.5	611.2	582.4	543.5	509.7	501.0	497.2
10°	592.4	648.8	693.8	700.1	681.3	625.0	562.3	504.7	490.9	482.2
12.5°	700.1	792.8	847.9	874.2	837.9	766.5	662.5	559.8	528.5	514.7
15°	918.0	1049.5	1154.7	1154.7	1120.9	994.4	862.9	696.3	653.8	616.2
17.5°	1197.3	1362.6	1455.3	1445.3	1393.9	1305.0	1147.2	908.0	821.6	782.8
20°	1515.4	1614.4	1635.7	1629.4	1606.9	1555.5	1446.5	1189.8	1073.3	1013.2
22.5°	1791.0	1764.7	1733.3	1708.3	1702.0	1717.1	1702.0	1504.2	1412.7	1306.3
25°	1977.6	1828.5	1734.6	1689.5	1710.8	1797.2	1891.2	1817.3	1744.6	1634.4
27.5°	2079.0	1821.0	1685.8	1639.4	1675.7	1798.5	2002.6	2127.9	2052.7	2000.1
30°	2134.1	1814.8	1654.4	1609.4	1664.5	1818.5	2080.3	2418.4	2420.9	2337.0
32.5°	2213.0	1854.8	1660.7	1619.4	1693.3	1878.6	2178.0	2714.0	2786.6	2741.5
35°	2301.9	1916.2	1689.5	1651.9	1743.4	1958.8	2286.9	3012.1	3163.6	3148.6
37.5°	2385.9	1985.1	1757.1	1720.8	1819.8	2027.7	2392.1	3305.1	3515.5	3568.1
40°	2473.5	2081.5	1965.0	2000.1	2055.2	2136.6	2486.1	3559.4	3902.5	3981.4
42.5°	2680.2	2415.9	2593.8	2660.1	2667.7	2499.8	2691.4	3885.0	4283.3	4377.2
45°	3141.1	3010.8	3520.5	3614.5	3565.6	3057.2	3186.2	4354.7	4815.5	4863.1
47.5°	3723.4	3783.6	4789.2	5113.6	4820.6	3714.7	3786.1	5342.8	5789.9	5772.4
50°	4402.2	4686.5	6229.5	6994.8	6293.4	4568.8	4477.4	6557.7	7100.0	7046.1
52.5°	5205.0	5736.1	7960.4	9047.5	8383.7	5529.4	5491.9	8167.0	8497.7	8326.1
55°	6215.8	6749.3	9951.7	11470.9	10526.6	6701.7	6830.7	10033.1	10097.0	9552.2
57.5°	7723.7	8070.6	12298.7	14250.0	12763.4	8294.8	9230.3	12516.7	11752.7	10720.7
60°	10461.4	9770.1	14566.9	17093.0	15143.0	10535.3	12395.2	13988.3	12303.8	10881.0
62.5°	11414.5	11212.9	15987.1	18295.3	16743.6	12375.1	13218.0	13154.1	11589.9	10274.8
65°	9970.5	10853.5	15732.9	17660.3	16538.2	12072.1	11861.7	12233.6	10785.8	9354.3
67.5°	9210.3	10009.3	14769.8	15908.2	15399.7	11043.8	10572.9	10471.5	9055.0	7915.3
70°	8443.8	9235.3	13373.3	13514.8	13278.1	9368.1	8749.4	8069.3	6768.1	5777.4
72.5°	7522.0	7957.9	11435.8	10764.5	10496.5	7358.0	7227.7	6076.7	5073.5	4223.2
75°	6560.2	6433.7	8916.0	7388.0	7588.4	5724.8	6104.3	4462.4	3717.2	3039.6
77.5°	4771.7	4677.8	5971.5	4487.4	4969.6	3749.7	3369.0	1780.9	1695.8	1462.8
80°	2662.6	3209.9	3225.0	2514.9	3137.3	2444.7	842.9	58.9	37.6	55.1
82.5°	1237.4	1380.2	1748.4	1166.0	1789.7	1211.1	174.1	0.0	0.0	0.0
85°	400.8	586.1	490.9	171.6	433.3	409.5	28.8	0.0	0.0	0.0
87.5°	23.8	48.8	12.5	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

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



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)