



## Photometric Indoor Test Report

Relevant Standards

IES LM-79-2008

ANSI C82.77

Prepared For

Sea Gull Lighting Products, LLC

Andre Duljas

301 W. Washington Street

Riverside, NJ 08075

Catalog Number

98860S (AC)

LTL Test Number

29277

Test Date

2012-03-22

Prepared By

Jeff Smith Jr., Technician III

Approved By

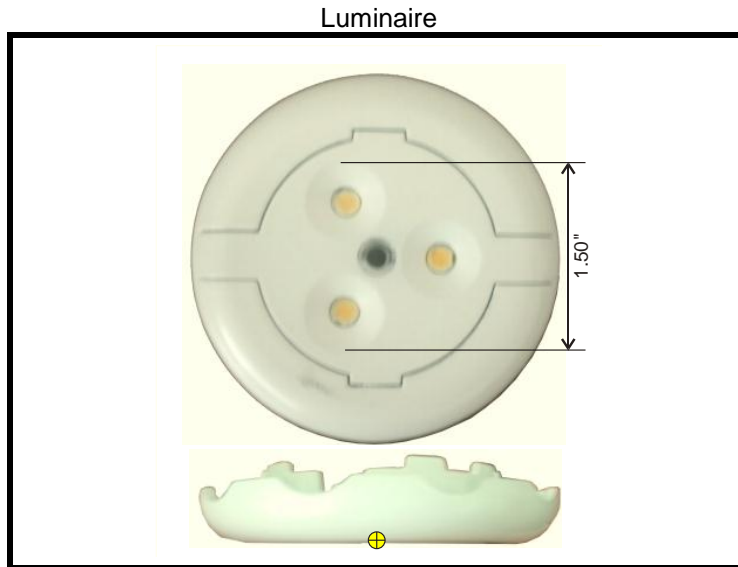
Zachary Mooney, Project Coordinator III

The results contained in this report pertain only to the tested sample.

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Luminaire Description: Cast white enamel aluminum housing, no enclosure
Catalog Number: 98860S (AC)
Lamp: Three white LEDs with clear plastic optics below each
Mounting: Surface



Zonal Lumen Summary

Table with 4 columns: Zone (Degrees), Lumens, % of Lamp, % of Luminaire. Rows include zones from 0-30 to 0-180 degrees.

Test Conditions

Test Temperature: 24.4 °C
Voltage: 12.00 VAC
Current: 0.3549 A
Power: 3.978 W
Power Factor: 0.934
Frequency: 60 Hz
Current THD: 34.1 %

Summary of Results

Total Lumen Output: 174.4 Lumens
Luminaire Efficacy: 43.8 Lumens/Watt
CIE Type: Direct
Spacing Criterion: 1.34 All Directions

Data was acquired using the calibrated photodetector method of absolute photometry. A spectral mismatch correction factor was employed based on the spectral responsivity of the photodetector and the spectral power distribution of the test subject.



Candela Tabulation  
Horizontal Angle (Degrees)

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
0	69.02	69.02	69.02	69.02	69.02	69.02	69.02	69.02	69.02	69.02	69.02	69.02	69.02	69.02	69.02	69.02
5	69.22	69.22	69.22	69.22	69.22	69.22	69.22	69.22	69.22	69.22	69.22	69.22	69.22	69.22	69.22	69.22
10	69.35	69.35	69.35	69.35	69.35	69.35	69.35	69.35	69.35	69.35	69.35	69.35	69.35	69.35	69.35	69.35
15	68.96	68.96	68.96	68.96	68.96	68.96	68.96	68.96	68.96	68.96	68.96	68.96	68.96	68.96	68.96	68.96
20	68.16	68.16	68.16	68.16	68.16	68.16	68.16	68.16	68.16	68.16	68.16	68.16	68.16	68.16	68.16	68.16
25	66.33	66.33	66.33	66.33	66.33	66.33	66.33	66.33	66.33	66.33	66.33	66.33	66.33	66.33	66.33	66.33
30	63.18	63.18	63.18	63.18	63.18	63.18	63.18	63.18	63.18	63.18	63.18	63.18	63.18	63.18	63.18	63.18
35	58.88	58.88	58.88	58.88	58.88	58.88	58.88	58.88	58.88	58.88	58.88	58.88	58.88	58.88	58.88	58.88
40	53.41	53.41	53.41	53.41	53.41	53.41	53.41	53.41	53.41	53.41	53.41	53.41	53.41	53.41	53.41	53.41
45	46.82	46.82	46.82	46.82	46.82	46.82	46.82	46.82	46.82	46.82	46.82	46.82	46.82	46.82	46.82	46.82
50	39.40	39.40	39.40	39.40	39.40	39.40	39.40	39.40	39.40	39.40	39.40	39.40	39.40	39.40	39.40	39.40
55	31.80	31.80	31.80	31.80	31.80	31.80	31.80	31.80	31.80	31.80	31.80	31.80	31.80	31.80	31.80	31.80
60	23.67	23.67	23.67	23.67	23.67	23.67	23.67	23.67	23.67	23.67	23.67	23.67	23.67	23.67	23.67	23.67
65	15.50	15.50	15.50	15.50	15.50	15.50	15.50	15.50	15.50	15.50	15.50	15.50	15.50	15.50	15.50	15.50
70	6.77	6.77	6.77	6.77	6.77	6.77	6.77	6.77	6.77	6.77	6.77	6.77	6.77	6.77	6.77	6.77
75	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Zonal Lumen Tabulation (5 degree zones)

Zone (Degrees)	Lumens	Zone (Degrees)	Lumens	Zone (Degrees)	Lumens	Zone (Degrees)	Lumens
0-5	1.65	45-50	17.38	90-95	0	135-140	0
5-10	4.96	50-55	15.47	95-100	0	140-145	0
10-15	8.20	55-60	12.82	100-105	0	145-150	0
15-20	11.30	60-65	9.47	105-110	0	150-155	0
20-25	14.13	65-70	5.78	110-115	0	155-160	0
25-30	16.43	70-75	1.45	115-120	0	160-165	0
30-35	17.97	75-80	0.02	120-125	0	165-170	0
35-40	18.75	80-85	0	125-130	0	170-175	0
40-45	18.58	85-90	0	130-135	0	175-180	0



Utilization of Lumens - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%												
Ceiling Cavity Reflectance	90				80				70			
Wall Reflectance	70	50	30	10	70	50	30	10	70	50	30	10
Room Cavity Ratio (RCR)	** Values are expressed as Lumens delivered to the task surface **											
0	212.6	212.6	212.6	212.6	207.6	207.6	207.6	207.6	202.7	202.7	202.7	202.7
1	198.2	190.7	184.0	178.1	193.4	186.6	180.6	175.2	188.8	182.8	177.3	172.3
2	182.8	169.3	158.3	149.1	178.2	166.0	155.8	147.3	173.9	162.8	153.5	145.6
3	168.2	150.5	137.0	126.3	163.9	147.7	135.2	125.2	159.8	145.0	133.4	124.1
4	154.8	134.3	119.5	108.3	150.8	132.0	118.2	107.6	147.0	129.7	116.9	106.9
5	142.9	120.5	105.2	94.0	139.2	118.6	104.2	93.5	135.7	116.7	103.2	93.1
6	132.1	108.8	93.4	82.5	128.8	107.1	92.6	82.2	125.6	105.5	91.8	81.8
7	122.6	98.8	83.6	73.1	119.5	97.3	83.0	72.9	116.6	96.0	82.3	72.6
8	114.1	90.2	75.4	65.4	111.3	88.9	74.9	65.2	108.7	87.8	74.3	65.0
9	106.6	82.7	68.4	58.9	104.0	81.7	68.0	58.8	101.6	80.7	67.6	58.6
10	99.8	76.3	62.5	53.4	97.5	75.4	62.1	53.3	95.4	74.5	61.8	53.2

Ceiling Cavity Reflectance	50				30			10			0
Wall Reflectance	70	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)	** Values are expressed as Lumens delivered to the task surface **										
0	193.7	193.7	193.7	193.7	185.5	185.5	185.5	177.9	177.9	177.9	174.4
1	180.4	175.5	171.0	166.9	168.8	165.2	161.9	162.7	159.8	157.1	153.7
2	165.9	156.8	149.0	142.3	151.3	144.8	139.1	146.1	140.8	136.1	132.7
3	152.3	140.0	130.1	122.0	135.4	127.0	119.9	131.1	124.0	117.9	114.4
4	140.1	125.5	114.3	105.5	121.6	111.9	104.1	118.0	109.6	102.8	99.3
5	129.3	113.1	101.2	92.1	109.8	99.3	91.1	106.7	97.5	90.2	86.8
6	119.7	102.5	90.3	81.1	99.6	88.8	80.5	97.0	87.3	79.8	76.4
7	111.3	93.4	81.1	72.1	90.9	79.9	71.6	88.6	78.7	71.1	67.9
8	103.8	85.5	73.3	64.6	83.4	72.3	64.3	81.4	71.4	63.9	60.7
9	97.2	78.7	66.7	58.3	76.9	65.9	58.0	75.2	65.1	57.8	54.7
10	91.3	72.8	61.1	53.0	71.2	60.4	52.8	69.7	59.7	52.6	49.6

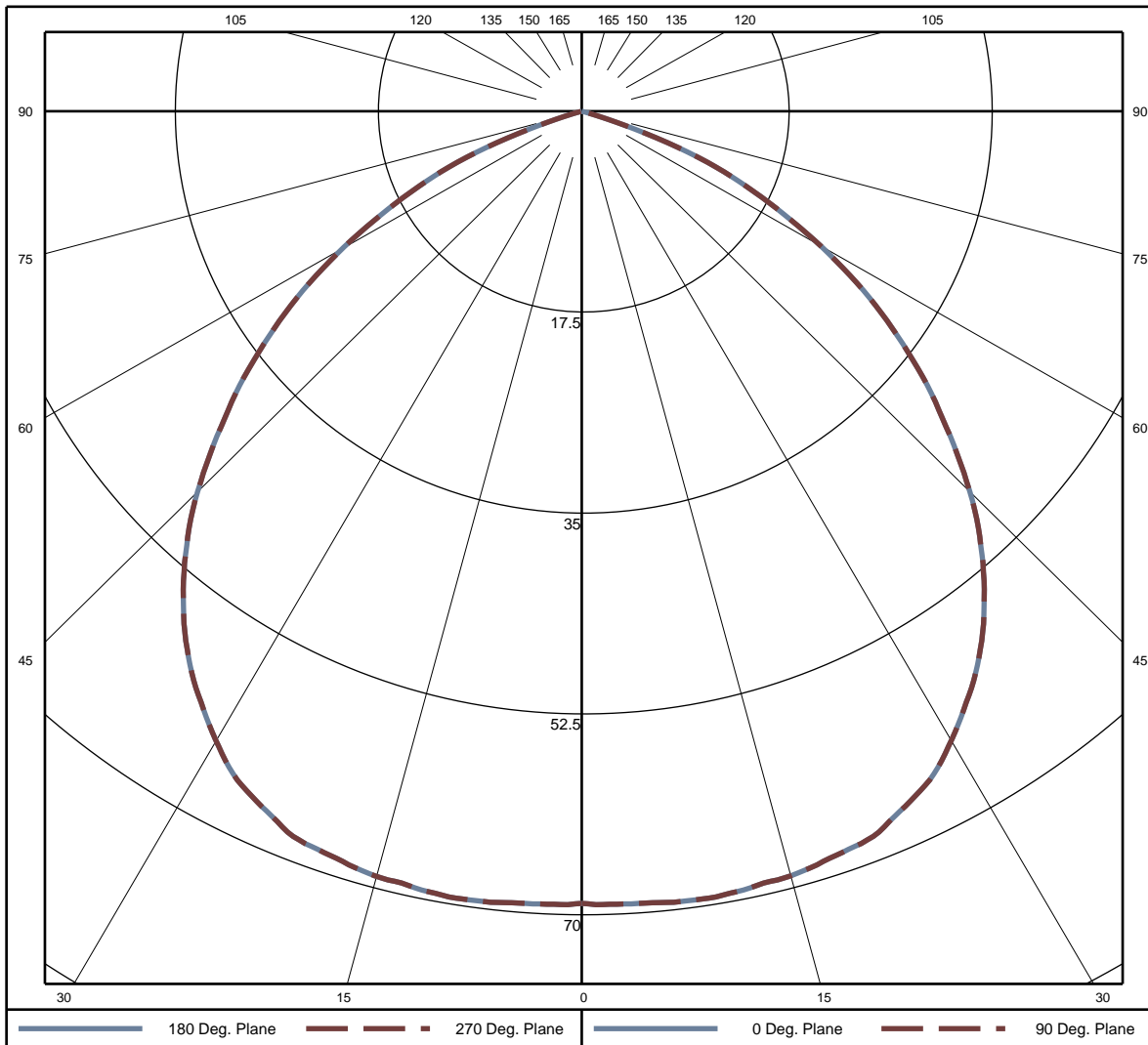
Average Luminance Table (cd/m<sup>2</sup>)

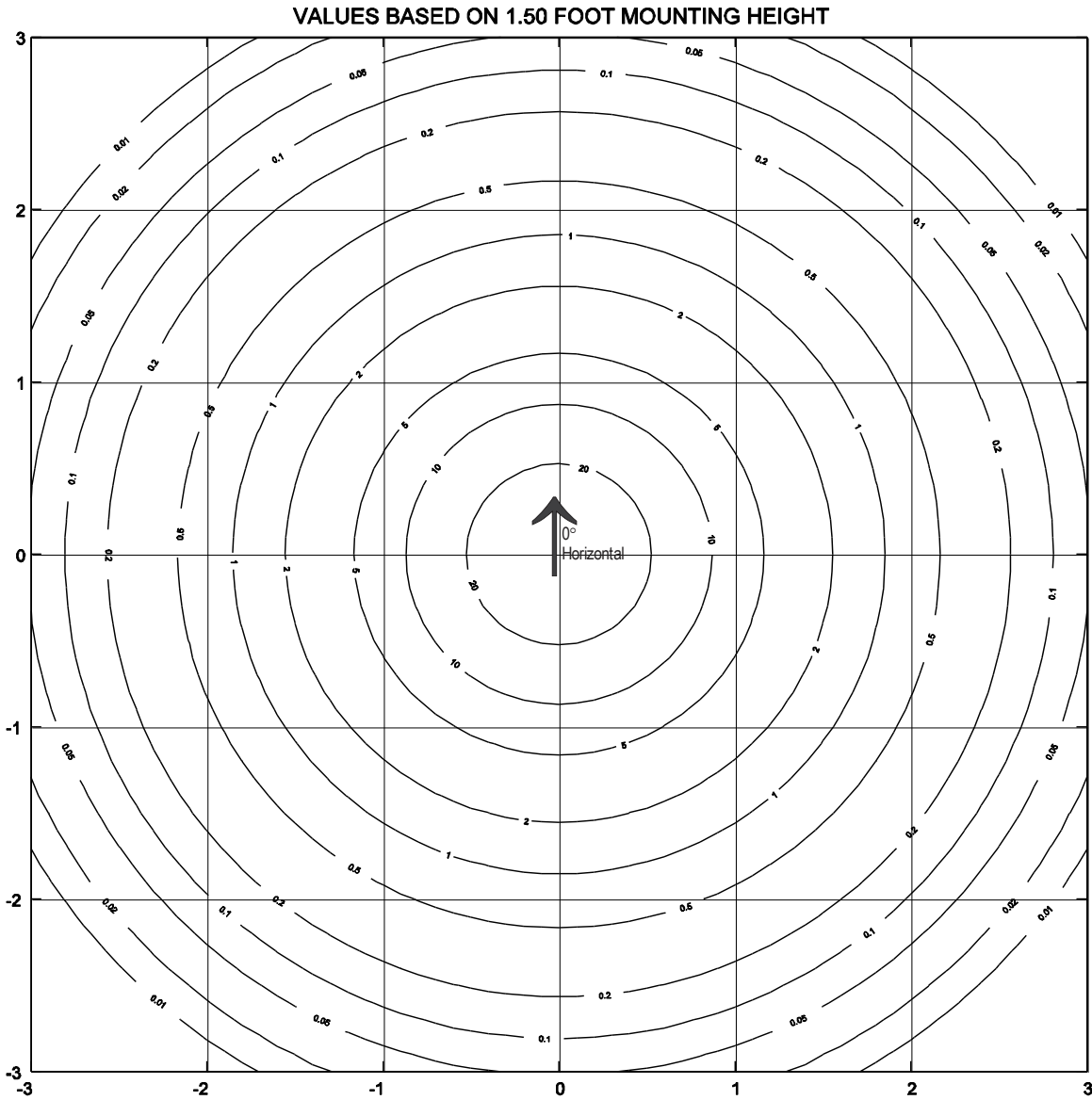
		Horizontal Angle (Degrees)		
		0	45	90
Vertical Angle (Degree)	0	60540	60540	60540
	45	58070	58070	58070
	55	48620	48620	48620
	65	32180	32180	32180
	75	1326	1326	1326
	85	0	0	0

This test was conducted using photometry techniques according to standard IES procedures. The user must therefore use caution in the following situations: 1) This test was performed using a specific ballast/lamp combination. Extrapolation of this data for other ballast/lamp combinations may produce erroneous results. 2) This test was conducted in a controlled laboratory environment where the ambient temperature was held at 25°C ±1°C. Field performance may differ particularly in regards to change in luminous output as a result of difference in ambient temperature and method of mounting the luminaire.



Polar Plot (Candela)





Isofootcandle values are based on a mounting height of 1.5', with the luminaire located at 0, 0. Isofootcandle values are calculated from the direct contribution of the luminaire only. Wall, ceiling, and floor contributions are not included. Grid lines are in increments of mounting height.