

## **Indoor Distribution Test Report**

# **Spectrum Lighting Inc.**

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## **Spectrum Lighting Photometric Lab**

### **Luminaire**

NL1010GV 27L 35K XX FJ1 MW  
Nautical Light RLM with 10" diam reflector/canopy

### **Test Number**

SP-00938\_1

### **Test Date**

10/22/2019

The results contained in this report pertain only to this IES file.

### Summary of Results

#### Power

Input Watts	18.3 W
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#### Lumen Output

Output Lumens	1808
Efficacy	98.78 lm/W

#### Luminous Dimensions

0° - 180° Size	-0.83
90° - 270° Size	-0.83
Height	0.63

#### Spacing Criterion

Two luminaires, plane 0°	1.26
Two luminaires, plane 90°	1.26
Four luminaires	1.53

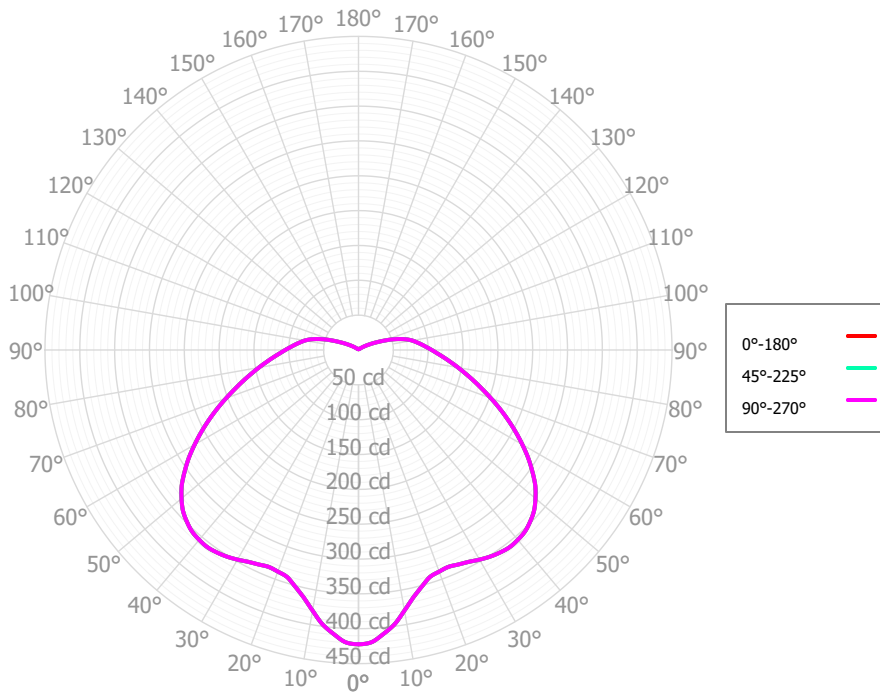
#### Full Beam Angle

0° - 180°	137°
90° - 270°	137°

### IES File Header Contents

Keyword	Value
TEST	SP-00938_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	10/22/2019
ISSUEDATE	2/20/2020
LUMCAT	NL1010GV 27L 35K XX FJ1 MW
LUMINAIRE	Nautical Light RLM with 10" diam reflector/canopy
OTHER	3" Frosted glass jar
OTHER	Beam angle: 137.8 degrees
LAMPCAT	N/A
LAMP	N/A
OTHER	CCT Output Multipliers: 27K x 0.971, 30K x 0.985, 40K x 1.03
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	80
_CCTMULT	27K x 0.971, 30K x 0.985, 40K x 1.03
_LAMPMULT	15L x 0.573

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	39.73	2.20%	90.00° - 100.00°	99.42	5.50%
10.00° - 20.00°	99.57	5.51%	100.00° - 110.00°	63.81	3.53%
20.00° - 30.00°	157.77	8.72%	100.00° - 120.00°	87.78	4.85%
30.00° - 40.00°	222.22	12.29%	120.00° - 130.00°	6.79	0.38%
40.00° - 50.00°	268.24	14.83%	130.00° - 140.00°	2.01	0.11%
50.00° - 60.00°	271.85	15.03%	140.00° - 150.00°	0.99	0.05%
60.00° - 70.00°	234.36	12.96%	150.00° - 160.00°	0.63	0.04%
70.00° - 80.00°	181.83	10.05%	160.00° - 170.00°	0.41	0.02%
80.00° - 90.00°	134.89	7.46%	170.00° - 180.00°	0.15	0.01%
0.00° - 90.00°	1,610.46	89.04%	0.00° - 180.00°	1,808.65	100.00%

### Candela Distribution

	0.00°	45.00°	90.00°
0.00°	422.36	422.36	422.36
2.50°	419.97	419.97	419.97
5.00°	409.23	409.23	409.23
7.50°	397.00	397.00	397.00
10.00°	379.79	379.79	379.79
12.50°	363.75	363.75	363.75
15.00°	351.44	351.44	351.44
17.50°	341.48	341.48	341.48
20.00°	338.50	338.50	338.50
22.50°	336.98	336.98	336.98
25.00°	339.63	339.63	339.63
27.50°	342.82	342.82	342.82
30.00°	347.44	347.44	347.44
32.50°	351.62	351.62	351.62
35.00°	354.68	354.68	354.68
37.50°	356.59	356.59	356.59
40.00°	355.70	355.70	355.70
42.50°	353.54	353.54	353.54
45.00°	348.42	348.42	348.42
47.50°	341.72	341.72	341.72
50.00°	331.58	331.58	331.58
52.50°	319.85	319.85	319.85
55.00°	304.75	304.75	304.75
57.50°	288.91	288.91	288.91
60.00°	271.58	271.58	271.58
62.50°	254.16	254.16	254.16
65.00°	236.56	236.56	236.56
67.50°	219.17	219.17	219.17
70.00°	202.16	202.16	202.16
72.50°	186.01	186.01	186.01
75.00°	171.41	171.41	171.41
77.50°	157.61	157.61	157.61
80.00°	145.15	145.15	145.15
82.50°	133.45	133.45	133.45
85.00°	122.95	122.95	122.95
87.50°	113.35	113.35	113.35
90.00°	105.12	105.12	105.12
92.50°	97.52	97.52	97.52
95.00°	90.85	90.85	90.85
97.50°	84.39	84.39	84.39
100.00°	78.22	78.22	78.22
102.50°	70.54	70.54	70.54
105.00°	60.82	60.82	60.82
107.50°	50.49	50.49	50.49
110.00°	39.37	39.37	39.37
112.50°	30.01	30.01	30.01

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

<b>RCR</b>	<b>pfc</b>	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	<b>pcc</b>	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	<b>pw</b>	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	<b>0</b>	2,106	2,106	2,106	2,106	2,034	2,034	2,034	2,034	1,900	1,900	1,900	1,777	1,777	1,777	1,664	1,664	1,610
	<b>1</b>	1,863	1,753	1,654	1,565	1,791	1,691	1,602	1,520	1,576	1,502	1,435	1,470	1,410	1,356	1,372	1,325	1,278
	<b>2</b>	1,669	1,493	1,347	1,225	1,599	1,440	1,307	1,194	1,341	1,231	1,135	1,250	1,159	1,079	1,166	1,092	1,051
	<b>3</b>	1,506	1,289	1,121	987	1,441	1,244	1,090	965	1,160	1,029	922	1,082	972	880	1,009	918	883
	<b>4</b>	1,368	1,127	951	816	1,308	1,089	925	799	1,016	877	766	949	830	734	887	786	756
	<b>5</b>	1,250	996	819	688	1,195	963	798	675	901	758	649	843	720	623	789	683	657
	<b>6</b>	1,148	889	715	589	1,099	860	697	579	807	664	558	756	632	537	709	601	579
	<b>7</b>	1,060	800	631	512	1,015	775	616	503	728	588	486	684	561	468	643	534	515
	<b>8</b>	983	725	562	450	943	703	550	443	662	526	428	624	502	413	588	480	463
	<b>9</b>	916	661	505	400	879	642	494	393	606	474	381	573	454	368	541	434	420
	<b>10</b>	857	607	458	358	823	590	448	353	559	430	342	528	413	331	500	396	383

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	14.0 fc	28.2 ft
6.5 ft	10.0 fc	33.3 ft
7.5 ft	7.5 fc	38.4 ft
8.0 ft	6.6 fc	41.0 ft
10.0 ft	4.2 fc	51.2 ft
12.0 ft	2.9 fc	61.5 ft
14.0 ft	2.2 fc	71.7 ft
16.0 ft	1.6 fc	82.0 ft
20.0 ft	1.1 fc	102.5 ft
24.0 ft	0.7 fc	122.9 ft
28.0 ft	0.5 fc	143.4 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	8,402	8,402	8,402
<b>45.00°</b>	4,985	4,985	4,985
<b>55.00°</b>	4,441	4,441	4,441
<b>65.00°</b>	3,624	3,624	3,624
<b>75.00°</b>	2,860	2,860	2,860
<b>85.00°</b>	2,330	2,330	2,330

### UGR CIE 190:2010

Ceiling reflectance		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall reflectance		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Plane reflectance		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
2H	2H	-	-	-	-	-	-	-	-	-	-
	3H	-	-	-	-	-	-	-	-	-	-
	4H	-	-	-	-	-	-	-	-	-	-
	6H	-	-	-	-	-	-	-	-	-	-
	8H	-	-	-	-	-	-	-	-	-	-
	12H	-	-	-	-	-	-	-	-	-	-
4H	2H	-	-	-	-	-	-	-	-	-	-
	3H	-	-	-	-	-	-	-	-	-	-
	4H	-	-	-	-	-	-	-	-	-	-
	6H	-	-	-	-	-	-	-	-	-	-
	8H	-	-	-	-	-	-	-	-	-	-
	12H	-	-	-	-	-	-	-	-	-	-
8H	4H	-	-	-	-	-	-	-	-	-	-
	6H	-	-	-	-	-	-	-	-	-	-
	8H	-	-	-	-	-	-	-	-	-	-
	12H	-	-	-	-	-	-	-	-	-	-
12H	4H	-	-	-	-	-	-	-	-	-	-
	6H	-	-	-	-	-	-	-	-	-	-
	8H	-	-	-	-	-	-	-	-	-	-

Corrected UGR values based on total output lumens

SHR = 1.0