

## **Indoor Distribution Test Report**

# **Spectrum Lighting Inc.**

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## **Spectrum Lighting Photometric Lab**

### **Luminaire**

ALAT18GV 27L 35K xx MWI xx xx

Nom 18.4" diam reflector x 10.7" H, Retro Pendant decorative luminaire

### **Test Number**

SP-00725\_M-27L

### **Test Date**

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

### Summary of Results

#### Power

Input Watts	18 W
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#### Lumen Output

Output Lumens	1864
Efficacy	103.56 lm/W

#### Luminous Dimensions

0° - 180° Size	-1.53
90° - 270° Size	-1.53
Height	0

#### Spacing Criterion

Two luminaires, plane 0°	1.25
Two luminaires, plane 90°	1.25
Four luminaires	1.38

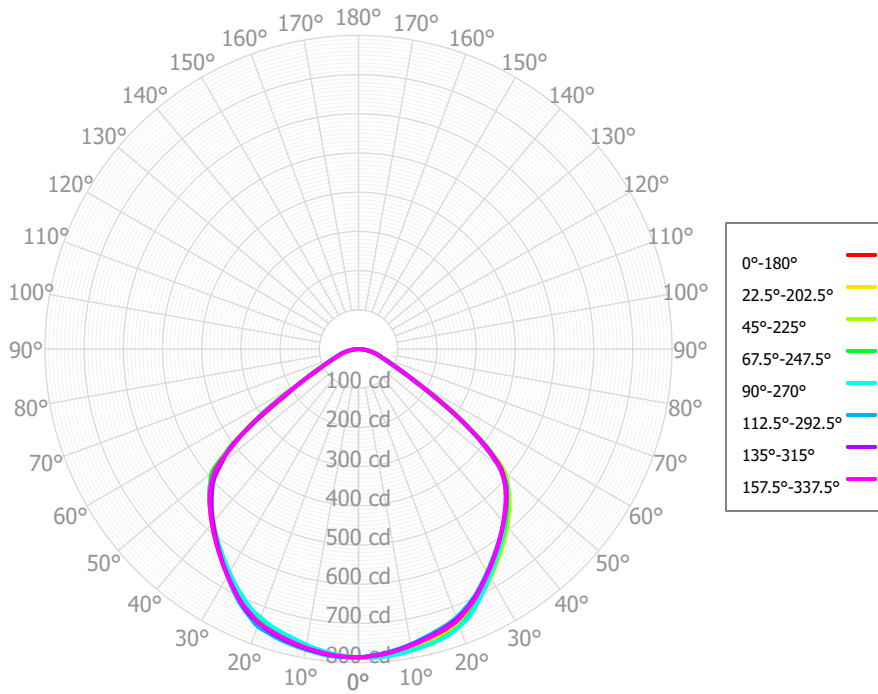
#### Full Beam Angle

0° - 180°	106°
90° - 270°	106°

### IES File Header Contents

Keyword	Value
TEST	SP-00725_M-27L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	10/30/2018
UPDATE	6/8/2022
LUMCAT	ALAT18GV 27L 35K xx MWI xx xx
LUMINAIRE	Nom 18.4" diam reflector x 10.7" H, Retro Pendant decorative luminaire
OTHER	Matte white interior finish
OTHER	Platinum outside finish
OTHER	4" Low profile frosted glass dome
OTHER	Beam Angle: 104.4 deg
LAMPCAT	N/A, Gen3
LAMP	N/A
OTHER	Total Luminaire watts is approximate
OTHER	CCT multipliers: 27K x 0.971, 30K x 0.985, 40K x 1.03
OTHER	This report generated by Spectrum Lighting, scaled from 55L
_CRI	85+

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	75.51	4.05%	90.00° - 100.00°	0.03	0.00%
10.00° - 20.00°	214.44	11.50%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	325.31	17.45%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	389.52	20.90%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	411.23	22.06%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	287.99	15.45%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	102.07	5.48%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	46.70	2.51%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	11.25	0.60%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1864.02	100.00%	0.00° - 180.00°	1864.06	100.00%

### Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°	112.50°	135.00°	157.50°	180.00°	202.50°	225.00°	247.50°	270.00°	292.50°	315.00°	337.50°	360.00°
0.00°	786.73	786.73	786.73	786.73	786.73	786.73	786.73	786.73	786.73	786.73	786.73	786.73	786.73	786.73	786.73	786.73	786.73
2.50°	785.44	785.34	787.35	788.01	788.53	787.02	786.52	785.56	785.54	785.06	784.30	785.23	784.75	782.81	783.98	784.60	785.44
5.00°	781.66	783.00	786.32	787.28	787.51	786.89	784.17	783.28	781.81	781.62	780.00	781.80	779.51	778.59	779.84	781.37	781.66
7.50°	777.37	779.33	783.68	784.16	785.84	783.19	780.53	778.53	777.02	776.70	774.17	774.95	773.79	772.12	774.54	775.31	777.37
10.00°	771.83	775.23	779.28	780.84	781.19	778.84	775.63	773.71	770.99	770.65	767.36	767.16	765.80	765.18	767.10	769.19	771.83
12.50°	766.42	770.70	775.07	776.99	776.57	773.75	770.25	767.04	764.60	763.53	759.89	759.02	757.53	756.57	759.74	762.08	766.42
15.00°	761.27	764.97	771.07	771.90	772.05	768.54	763.18	760.29	756.74	755.66	751.60	750.80	749.18	748.00	752.51	754.89	761.27
17.50°	754.18	758.15	763.65	764.04	765.81	760.88	755.53	752.22	748.53	746.29	742.79	742.47	740.82	739.53	743.96	746.84	754.18
20.00°	743.33	746.42	753.10	752.81	753.79	752.92	743.84	743.53	736.45	735.98	730.93	734.13	728.99	729.30	733.38	737.85	743.33
22.50°	729.44	730.72	736.96	734.94	739.13	735.03	730.95	727.52	723.53	721.61	717.35	718.76	716.93	714.44	719.33	721.11	729.44
25.00°	710.27	711.83	716.17	714.97	716.50	716.24	711.08	710.96	704.82	704.90	699.52	702.17	697.90	697.89	700.44	703.69	710.27
27.50°	690.00	690.59	694.99	691.21	693.56	693.01	689.36	689.76	685.07	685.46	679.55	681.27	678.59	677.35	680.58	681.85	690.00
30.00°	667.98	669.47	673.54	668.08	669.80	669.47	667.33	668.50	663.78	664.61	658.63	659.75	658.17	656.73	659.49	660.12	667.98
32.50°	646.44	648.42	652.69	645.96	646.64	646.46	645.22	646.87	642.27	643.65	637.28	638.91	637.74	635.97	638.60	638.94	646.44
35.00°	625.58	627.20	632.26	624.59	624.85	623.47	622.62	625.28	621.55	622.65	616.55	618.14	617.54	615.72	617.95	617.75	625.58
37.50°	604.30	605.89	611.39	604.34	602.70	600.50	599.93	603.89	600.92	601.97	596.07	598.11	597.34	596.46	597.13	596.52	604.30
40.00°	582.46	584.21	590.24	582.85	579.73	577.52	577.55	582.40	580.05	581.42	575.79	578.14	577.22	576.91	576.13	575.17	582.46
42.50°	560.26	562.34	568.13	559.71	556.35	553.77	555.22	560.40	559.15	560.85	555.58	558.48	557.11	556.87	555.13	553.40	560.26
45.00°	537.63	538.81	545.47	535.08	532.19	529.91	530.02	537.53	536.21	540.28	534.54	538.84	537.02	535.51	534.13	530.90	537.63
47.50°	510.48	514.44	517.86	508.62	504.24	502.38	504.46	511.01	513.14	514.40	513.22	513.65	514.80	512.13	507.60	505.84	510.48
50.00°	478.44	468.21	487.70	466.56	469.84	472.40	458.89	474.72	466.48	486.81	467.71	488.30	468.06	470.31	476.29	470.33	478.44
52.50°	417.12	412.31	420.08	407.18	413.94	402.26	411.32	403.75	418.89	418.62	415.44	411.16	415.97	402.03	412.94	403.22	417.12
55.00°	327.27	326.56	335.37	330.75	324.23	331.01	318.34	328.12	320.70	338.64	325.87	333.60	316.98	323.48	324.30	330.42	327.27
57.50°	247.67	228.97	255.18	237.02	244.04	246.25	222.04	238.19	222.53	255.74	227.42	247.31	223.44	231.69	245.53	242.59	247.67
60.00°	177.19	169.64	176.82	170.38	177.30	166.52	169.50	162.37	169.22	172.11	169.10	163.17	168.15	163.47	173.87	169.12	177.19
62.50°	130.08	123.88	133.21	128.53	128.30	131.10	118.89	125.80	116.88	129.54	119.21	127.06	117.53	122.60	127.55	130.25	130.08
65.00°	101.75	97.69	102.22	99.22	101.69	97.99	95.89	94.26	93.47	95.79	92.72	92.14	93.25	92.82	97.52	98.13	101.75
67.50°	81.51	76.44	82.86	78.80	81.06	79.92	73.99	74.82	71.20	76.09	70.28	74.49	71.38	73.38	77.60	77.98	81.51
70.00°	65.45	64.55	66.59	65.90	65.33	64.05	62.06	59.69	59.13	58.84	58.76	58.38	58.83	60.57	62.03	63.84	65.45
72.50°	55.60	54.11	57.59	55.46	56.40	55.21	51.26	51.18	48.53	50.64	48.58	49.77	48.65	50.63	53.42	54.20	55.60
75.00°	46.67	45.94	48.23	47.07	48.31	46.52	43.41	42.62	41.26	42.78	41.20	41.76	41.97	42.84	44.85	45.38	46.67
77.50°	38.41	35.99	38.56	37.22	38.94	37.95	34.46	34.12	33.38	34.99	33.58	34.53	33.89	34.34	35.79	36.44	38.41
80.00°	29.17	25.57	29.00	26.86	28.84	28.26	25.25	26.49	25.13	26.97	25.63	26.05	25.21	25.24	26.64	27.11	29.17
82.50°	18.74	15.65	19.07	17.14	19.42	18.53	16.71	16.74	16.56	18.48	16.61	17.32	16.12	16.05	18.34	17.30	18.74
85.00°	9.07	6.71	9.44	7.69	9.76	9.59	7.11	8.22	7.44	9.80	8.41	9.03	7.24	7.53	9.57	8.42	9.07
87.50°	2.22	1.00	2.19	1.41	2.39	2.85	1.42	2.34	2.08	3.58	1.68	2.84	1.78	1.62	2.64	1.55	2.22
90.00°	0.00	0.00	0.00	0.00	0.00	0.42	0.38	0.53	0.47	0.51	0.49	0.41	0.62	0.00	0.00	0.00	0.00
92.50°	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	0.00
95.00°	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	0.00	0.00
97.50°	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	0.00
100.00°	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	0.00	0.00

### 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>	2219	2219	2219	2219	2167	2167	2167	2167	2071	2071	2071	1983	1983	1983	1902	1902	1864
	<b>1</b>	2063	1989	1923	1863	2014	1948	1888	1833	1870	1821	1776	1798	1759	1722	1733	1701	1666
	<b>2</b>	1903	1771	1662	1571	1856	1737	1637	1552	1672	1589	1517	1613	1544	1483	1558	1501	1470
	<b>3</b>	1753	1580	1446	1340	1709	1551	1428	1328	1498	1392	1305	1448	1359	1283	1402	1327	1299
	<b>4</b>	1616	1416	1269	1157	1576	1392	1255	1149	1347	1228	1134	1305	1202	1119	1266	1178	1153
	<b>5</b>	1493	1275	1122	1009	1456	1255	1111	1004	1216	1090	993	1181	1070	983	1148	1051	1030
	<b>6</b>	1383	1154	1000	889	1350	1137	991	885	1104	975	878	1074	959	871	1046	944	925
	<b>7</b>	1285	1050	897	790	1255	1035	890	787	1008	877	782	982	864	777	957	852	836
	<b>8</b>	1198	960	811	708	1170	948	805	706	924	794	702	902	784	698	880	774	760
	<b>9</b>	1120	883	737	639	1095	872	733	637	851	724	634	832	715	631	813	707	694
	<b>10</b>	1050	815	674	580	1027	806	670	579	788	663	577	771	656	574	755	649	638

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	26.0 fc	14.7 ft
6.5 ft	18.6 fc	17.3 ft
7.5 ft	14.0 fc	20.0 ft
8.0 ft	12.3 fc	21.3 ft
10.0 ft	7.9 fc	26.7 ft
12.0 ft	5.5 fc	32.0 ft
14.0 ft	4.0 fc	37.3 ft
16.0 ft	3.1 fc	42.7 ft
20.0 ft	2.0 fc	53.3 ft
24.0 ft	1.4 fc	64.0 ft
28.0 ft	1.0 fc	74.7 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	4606	4606	4606
<b>45.00°</b>	4451	4516	4406
<b>55.00°</b>	3341	3423	3309
<b>65.00°</b>	1410	1416	1409
<b>75.00°</b>	1056	1091	1093
<b>85.00°</b>	610	634	656

### 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	13.8	15.3	14.2	15.6	15.9	14.0	15.5	14.3	15.8	16.1
	3H	14.3	15.6	14.7	16.0	16.3	14.4	15.7	14.8	16.1	16.4
	4H	14.5	15.8	14.9	16.1	16.5	14.6	15.8	15.0	16.2	16.6
	6H	14.7	15.8	15.1	16.2	16.6	14.7	15.9	15.2	16.3	16.7
	8H	14.7	15.8	15.2	16.2	16.6	14.8	15.9	15.2	16.3	16.7
	12H	14.8	15.8	15.2	16.2	16.6	14.8	15.8	15.2	16.2	16.6
4H	2H	13.9	15.2	14.3	15.5	15.9	14.1	15.3	14.5	15.6	16.0
	3H	14.6	15.6	15.0	16.0	16.4	14.6	15.6	15.0	16.0	16.4
	4H	14.9	15.8	15.3	16.2	16.7	14.9	15.8	15.3	16.2	16.7
	6H	15.2	16.0	15.6	16.4	16.9	15.2	16.0	15.6	16.4	16.9
	8H	15.3	16.0	15.7	16.4	16.9	15.2	16.0	15.7	16.4	16.9
	12H	15.3	15.9	15.8	16.4	16.9	15.3	15.9	15.8	16.4	16.9
8H	4H	15.0	15.7	15.4	16.2	16.6	15.0	15.7	15.4	16.1	16.6
	6H	15.3	15.9	15.8	16.4	16.9	15.3	15.9	15.8	16.4	16.9
	8H	15.4	16.0	15.9	16.5	17.0	15.4	16.0	15.9	16.5	17.0
	12H	15.5	16.0	16.0	16.5	17.0	15.5	16.0	16.0	16.5	17.0
12H	4H	15.0	15.6	15.5	16.1	16.6	15.0	15.6	15.4	16.1	16.6
	6H	15.3	15.9	15.9	16.4	16.9	15.3	15.9	15.8	16.3	16.9
	8H	15.5	16.0	16.0	16.4	17.0	15.4	15.9	15.9	16.4	17.0

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0