

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

PAC0618GV 27L 35K xx FG6

Nom. 6" diam x 18" H tubular luminaire with wrap around slotted cover

Test Number

SP-00967

Test Date

12/19/2019

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

Summary of Results

Power

Input Watts	19 W
-------------	------

Lumen Output

Output Lumens	1305
Efficacy	68.69 lm/W

Luminous Dimensions

0° - 180° Size	-0.5
90° - 270° Size	-0.5
Height	1.3

Spacing Criterion

Two luminaires, plane 0°	0.65
Two luminaires, plane 90°	0.66
Four luminaires	0.85

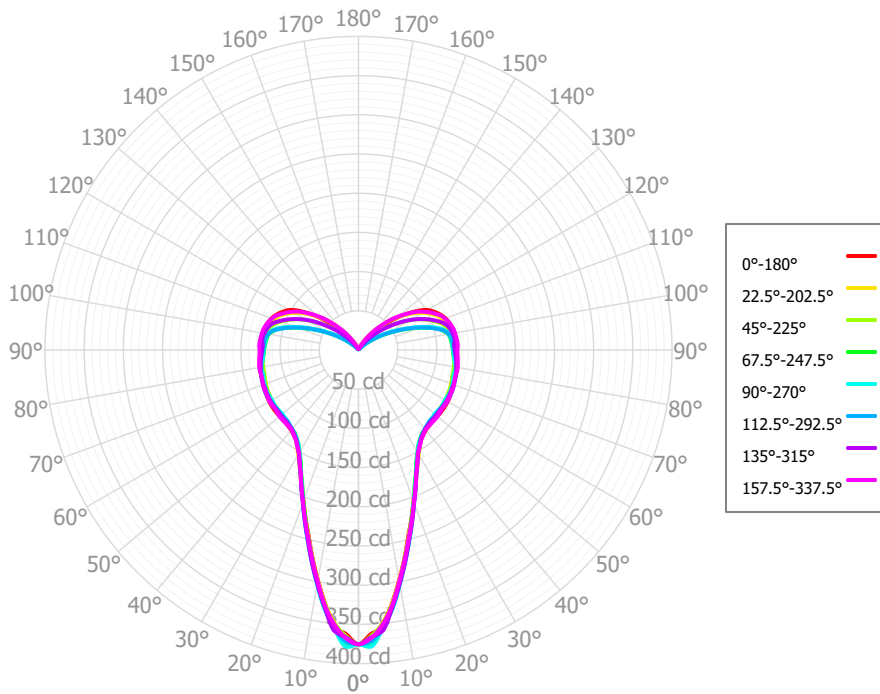
Full Beam Angle

0° - 180°	45°
90° - 270°	45°

IES File Header Contents

Keyword	Value
TEST	SP-00967
TESTLAB	Spectrum Lighting Photometric Lab VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	12/19/2019
ISSUEDATE	1/7/2020
LUMCAT	PAC0618GV 27L 35K xx FG6
LUMINAIRE	Nom. 6" diam x 18" H tubular luminaire with wrap around slotted cover
OTHER	Beam Angle (downlight): 45 degrees
OTHER	Uplight: 32.2%
OTHER	Downlight: 67.8%
LAMP	N/A
LAMPCAT	N/A
OTHER	CCT Multipliers: 27K x 0.97, 30K x 0.99, 40K x 1.03
OTHER	Total luminaire watts is approximate
OTHER	This report generated by Spectrum Lighting

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	32.40	2.48%	90.00° - 100.00°	132.95	10.19%
10.00° - 20.00°	69.39	5.32%	100.00° - 110.00°	119.53	9.16%
20.00° - 30.00°	80.63	6.18%	100.00° - 120.00°	206.32	15.81%
30.00° - 40.00°	87.70	6.72%	120.00° - 130.00°	50.49	3.87%
40.00° - 50.00°	100.80	7.72%	130.00° - 140.00°	21.99	1.69%
50.00° - 60.00°	115.92	8.88%	140.00° - 150.00°	6.72	0.51%
60.00° - 70.00°	127.99	9.81%	150.00° - 160.00°	1.47	0.11%
70.00° - 80.00°	134.35	10.29%	160.00° - 170.00°	0.42	0.03%
80.00° - 90.00°	135.54	10.38%	170.00° - 180.00°	0.14	0.01%
0.00° - 90.00°	884.70	67.78%	0.00° - 180.00°	1,305.20	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°	375.38	375.38	375.38	375.38	375.38	375.38	375.38	375.38	375.38	375.38	375.38	375.38	375.38	375.38	375.38	375.38	375.38
2.50°	362.96	368.68	365.41	373.10	378.57	372.28	366.93	368.08	362.96	368.68	365.41	373.10	378.57	372.28	366.93	368.08	362.96
5.00°	354.80	350.08	350.86	354.15	356.03	355.56	359.22	351.85	354.80	350.08	350.86	354.15	356.03	355.56	359.22	351.85	354.80
7.50°	326.51	327.15	327.92	330.32	332.69	332.05	330.79	328.79	326.51	327.15	327.92	330.32	332.69	332.05	330.79	328.79	326.51
10.00°	298.32	298.55	300.87	302.02	303.45	303.10	302.49	299.53	298.32	298.55	300.87	302.02	303.45	303.10	302.49	299.53	298.32
12.50°	271.57	271.80	274.29	273.01	275.06	276.15	275.78	272.85	271.57	271.80	274.29	273.01	275.06	276.15	275.78	272.85	271.57
15.00°	245.60	246.95	247.88	249.01	250.55	250.44	249.74	247.96	245.60	246.95	247.88	249.01	250.55	250.44	249.74	247.96	245.60
17.50°	224.93	225.36	226.13	225.43	227.10	228.14	227.86	226.60	224.93	225.36	226.13	225.43	227.10	228.14	227.86	226.60	224.93
20.00°	205.15	206.32	205.51	206.12	206.93	207.42	207.04	207.06	205.15	206.32	205.51	206.12	206.93	207.42	207.04	207.06	205.15
22.50°	188.99	189.93	189.31	187.15	188.53	190.22	190.28	190.18	188.99	189.93	189.31	187.15	188.53	190.22	190.28	190.18	188.99
25.00°	173.91	175.11	173.76	173.20	174.01	174.19	174.77	174.33	173.91	175.11	173.76	173.20	174.01	174.19	174.77	174.33	173.91
27.50°	161.83	163.60	162.47	159.84	161.08	162.46	162.68	162.53	161.83	163.60	162.47	159.84	161.08	162.46	162.68	162.53	161.83
30.00°	151.52	153.54	151.49	150.88	150.83	151.73	152.27	151.81	151.52	153.54	151.49	150.88	150.83	151.73	152.27	151.81	151.52
32.50°	144.87	145.99	144.77	142.66	142.95	144.62	145.22	145.34	144.87	145.99	144.77	142.66	142.95	144.62	145.22	145.34	144.87
35.00°	139.47	139.25	138.29	137.69	138.08	138.01	139.33	139.60	139.47	139.25	138.29	137.69	138.08	138.01	139.33	139.60	139.47
37.50°	136.00	135.39	135.02	133.62	134.39	134.76	135.18	136.13	136.00	135.39	135.02	133.62	134.39	134.76	135.18	136.13	136.00
40.00°	133.54	132.16	131.96	132.20	131.82	131.70	132.26	132.87	133.54	132.16	131.96	132.20	131.82	131.70	132.26	132.87	133.54
42.50°	132.26	130.55	130.39	131.02	129.95	129.83	130.74	132.28	132.26	130.55	130.39	131.02	129.95	129.83	130.74	132.28	132.26
45.00°	131.53	129.14	129.03	130.34	128.58	128.12	129.91	131.76	131.53	129.14	129.03	130.34	128.58	128.12	129.91	131.76	131.53
47.50°	131.29	128.86	128.55	129.73	127.63	128.40	129.67	131.77	131.29	128.86	128.55	129.73	127.63	128.40	129.67	131.77	131.29
50.00°	131.36	128.64	128.27	129.23	126.90	128.63	129.44	131.70	131.36	128.64	128.27	129.23	126.90	128.63	129.44	131.70	131.36
52.50°	131.65	128.17	128.56	128.84	127.27	128.50	129.22	130.93	131.65	128.17	128.56	128.84	127.27	128.50	129.22	130.93	131.65
55.00°	131.74	127.75	128.72	128.59	128.10	128.51	129.41	130.39	131.74	127.75	128.72	128.59	128.10	128.51	129.41	130.39	131.74
57.50°	131.73	127.79	128.62	128.73	127.93	129.07	129.81	130.86	131.73	127.79	128.62	128.73	127.93	129.07	129.81	130.86	131.73
60.00°	131.42	127.84	128.23	129.27	127.45	129.68	129.81	131.10	131.42	127.84	128.23	129.27	127.45	129.68	129.81	131.10	131.42
62.50°	131.00	127.89	127.37	129.47	127.88	130.42	129.66	130.64	131.00	127.89	127.37	129.47	127.88	130.42	129.66	130.64	131.00
65.00°	130.23	127.71	126.89	129.42	128.50	130.73	129.32	130.31	130.23	127.71	126.89	129.42	128.50	130.73	129.32	130.31	130.23
67.50°	129.37	126.66	126.86	129.26	128.08	130.17	128.94	130.29	129.37	126.66	126.86	129.26	128.08	130.17	128.94	130.29	129.37
70.00°	128.83	125.73	126.21	129.05	127.54	129.62	128.86	129.80	128.83	125.73	126.21	129.05	127.54	129.62	128.86	129.80	128.83
72.50°	128.33	125.11	124.99	128.17	126.59	129.08	128.83	128.54	128.33	125.11	124.99	128.17	126.59	129.08	128.83	128.54	128.33
75.00°	128.03	124.90	124.26	127.01	125.66	128.35	128.32	128.07	128.03	124.90	124.26	127.01	125.66	128.35	128.32	128.07	128.03
77.50°	127.74	125.53	123.87	126.30	125.88	127.41	127.77	128.61	127.74	125.53	123.87	126.30	125.88	127.41	127.77	128.61	127.74
80.00°	127.01	125.45	123.56	125.72	125.91	126.72	126.78	128.52	127.01	125.45	123.56	125.72	125.91	126.72	126.78	128.52	127.01
82.50°	126.29	124.33	123.29	124.16	124.11	126.24	125.80	127.80	126.29	124.33	123.29	124.16	124.11	126.24	125.80	127.80	126.29
85.00°	126.19	123.18	122.40	122.41	122.46	124.94	124.92	127.03	126.19	123.18	122.40	122.41	122.46	124.94	124.92	127.03	126.19
87.50°	126.04	122.01	121.26	121.40	121.64	123.08	124.03	126.21	126.04	122.01	121.26	121.40	121.64	123.08	124.03	126.21	126.04
90.00°	125.42	121.70	120.77	120.46	120.83	121.98	123.04	126.22	125.42	121.70	120.77	120.46	120.83	121.98	123.04	126.22	125.42
92.50°	124.94	122.12	120.46	119.67	120.11	121.28	122.39	126.72	124.94	122.12	120.46	119.67	120.11	121.28	122.39	126.72	124.94
95.00°	125.12	122.51	120.36	118.87	119.43	120.61	123.24	126.39	125.12	122.51	120.36	118.87	119.43	120.61	123.24	126.39	125.12
97.50°	125.07	122.88	120.31	117.87	118.89	119.96	123.51	125.70	125.07	122.88	120.31	117.87	118.89	119.96	123.51	125.70	125.07
100.00°	124.33	121.89	119.66	116.50	117.16	116.66	122.06	124.94	124.33	121.89	119.66	116.50	117.16	116.66	122.06	124.94	124.33
102.50°	123.38	120.24	118.95	111.56	113.33	112.65	120.33	124.16	123.38	120.24	118.95	111.56	113.33	112.65	120.33	124.16	123.38
105.00°	121.94	118.12	115.44	105.59	106.93	103.96	117.98	122.34	121.94	118.12	115.44	105.59	106.93	103.96	117.98	122.34	121.94
107.50°	120.21	115.82	111.74	94.25	96.98	94.47	114.09	120.30	120.21	115.82	111.74	94.25	96.98	94.47	114.09	120.30	120.21
110.00°	117.96	113.56	105.60	82.93	86.19	83.77	107.66	117.29	117.96	113.56	105.60	82.93	86.19	83.77	107.66	117.29	117.96
112.50°	115.04	111.32	99.37	71.73	74.51	72.97	100.74	114.15	115.04	111.32	99.37	71.73	74.51	72.97	100.74	114.15	115.04

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

RCR	pfc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	pcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	1,454	1,454	1,454	1,454	1,371	1,371	1,371	1,371	1,217	1,217	1,217	1,075	1,075	1,075	946	946	946	885
	1	1,267	1,182	1,106	1,038	1,185	1,110	1,043	981	976	922	873	853	811	772	739	707	676	654
	2	1,133	1,004	898	809	1,057	943	847	766	827	750	684	720	659	606	621	574	532	529
	3	1,025	870	750	655	954	817	709	622	717	629	557	624	554	495	538	482	435	444
	4	934	764	640	545	869	718	606	519	631	539	466	551	476	415	476	416	366	382
	5	856	679	555	464	798	639	526	442	564	470	399	493	417	357	428	365	315	336
	6	789	609	488	402	736	574	464	383	508	416	347	446	370	311	389	326	277	301
	7	731	551	434	352	683	520	413	337	462	372	306	408	332	276	356	294	246	272
	8	680	502	390	313	636	475	371	299	423	335	273	375	301	247	329	267	221	248
	9	635	460	353	280	595	436	336	268	390	305	246	347	275	223	306	245	201	228
	10	595	424	321	253	559	402	307	243	361	279	223	322	253	203	286	227	184	211

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	12.4 fc	4.5 ft
6.5 ft	8.9 fc	5.4 ft
7.5 ft	6.7 fc	6.2 ft
8.0 ft	5.9 fc	6.6 ft
10.0 ft	3.8 fc	8.3 ft
12.0 ft	2.6 fc	9.9 ft
14.0 ft	1.9 fc	11.6 ft
16.0 ft	1.5 fc	13.2 ft
20.0 ft	0.9 fc	16.5 ft
24.0 ft	0.7 fc	19.8 ft
28.0 ft	0.5 fc	23.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	20,578	20,578	20,578
45.00°	2,366	2,321	2,313
55.00°	2,198	2,148	2,138
65.00°	2,086	2,032	2,058
75.00°	2,031	1,971	1,993
85.00°	2,044	1,982	1,983

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