

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

994 Jefferson Street  
Fall River, MA 02721  
+1.508.678.2303

## Spectrum Lighting Photometric Lab

### Luminaire

AF0620GV 27L 35K EX FG8 HM

Nom. 8" diam x 20" H tubular luminaire with matte white decorative acrylic shade

### Test Number

SP-00997

### Test Date

1/3/2020

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

### Summary of Results

#### Power

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

#### Lumen Output

Output Lumens	1773
Efficacy	93.31 lm/W

#### Luminous Dimensions

0° - 180° Size	-0.67
90° - 270° Size	-0.67
Height	1.42

#### Spacing Criterion

Two luminaires, plane 0°	0.68
Two luminaires, plane 90°	0.68
Four luminaires	0.88

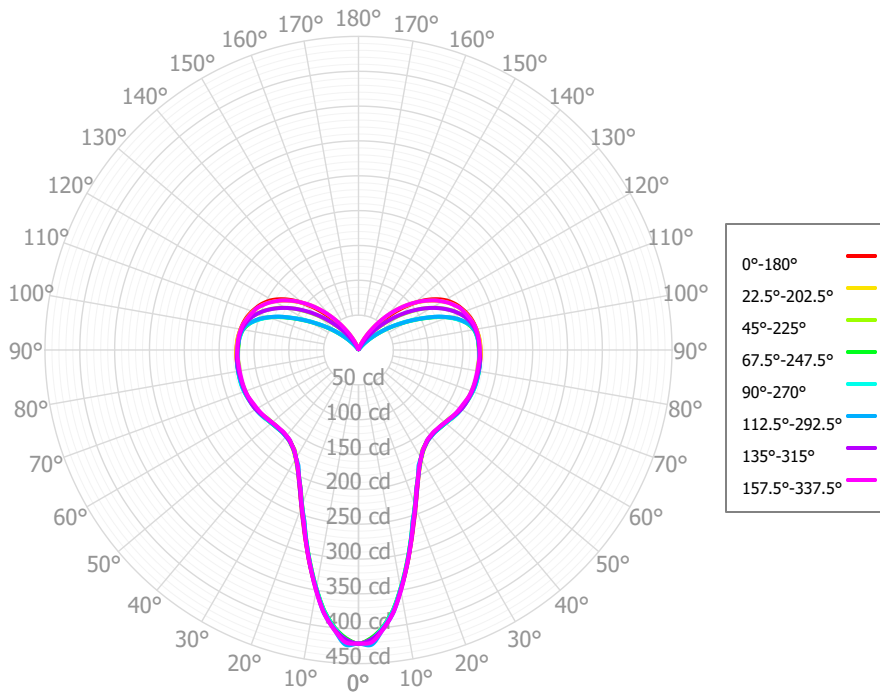
#### Full Beam Angle

0° - 180°	47°
90° - 270°	47°

### IES File Header Contents

Keyword	Value
TEST	SP-00997
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	1/3/2020
ISSUEDATE	1/7/2020
LUMCAT	AF0620GV 27L 35K EX FG8 HM
LUMINAIRE	Nom. 8" diam x 20" H tubular luminaire with matte white decorative acrylic shade
OTHER	Beam Angle (downlight): 48 degrees
OTHER	Uplight: 35.9%
OTHER	Downlight: 64.1%
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°	37.06	2.09%	90.00° - 100.00°	188.24	10.62%
10.00° - 20.00°	80.24	4.53%	100.00° - 110.00°	171.25	9.66%
20.00° - 30.00°	93.63	5.28%	100.00° - 120.00°	303.47	17.12%
30.00° - 40.00°	105.29	5.94%	120.00° - 130.00°	84.42	4.76%
40.00° - 50.00°	124.82	7.04%	130.00° - 140.00°	42.63	2.40%
50.00° - 60.00°	149.10	8.41%	140.00° - 150.00°	15.14	0.85%
60.00° - 70.00°	170.41	9.61%	150.00° - 160.00°	3.29	0.19%
70.00° - 80.00°	184.33	10.40%	160.00° - 170.00°	0.49	0.03%
80.00° - 90.00°	190.17	10.73%	170.00° - 180.00°	0.13	0.01%
0.00° - 90.00°	1,135.05	64.02%	0.00° - 180.00°	1,772.87	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°	421.40	421.40	421.40	421.40	421.40	421.40	421.40	421.40	421.40	421.40	421.40	421.40	421.40	421.40	421.40	421.40	421.40
2.50°	414.72	414.99	418.18	413.98	416.12	423.60	415.77	420.25	414.72	414.99	418.18	413.98	416.12	423.60	415.77	420.25	414.72
5.00°	399.53	400.32	399.83	399.30	399.72	402.41	401.77	402.95	399.53	400.32	399.83	399.30	399.72	402.41	401.77	402.95	399.53
7.50°	378.22	378.56	378.37	377.07	377.86	381.03	379.96	380.80	378.22	378.56	378.37	377.07	377.86	381.03	379.96	380.80	378.22
10.00°	348.87	348.87	348.23	347.58	347.57	349.52	349.36	350.86	348.87	348.87	348.23	347.58	347.57	349.52	349.36	350.86	348.87
12.50°	319.34	318.79	316.62	317.59	317.37	318.01	318.94	318.75	319.34	318.79	316.62	317.59	317.37	318.01	318.94	318.75	319.34
15.00°	289.60	288.28	287.40	287.15	287.30	287.92	288.72	289.27	289.60	288.28	287.40	287.15	287.30	287.92	288.72	289.27	289.60
17.50°	262.75	261.06	258.55	260.27	260.17	257.90	261.93	260.49	262.75	261.06	258.55	260.27	260.17	257.90	261.93	260.49	262.75
20.00°	239.47	237.39	236.88	236.62	237.35	237.25	238.84	237.93	239.47	237.39	236.88	236.62	237.35	237.25	238.84	237.93	239.47
22.50°	219.34	217.90	216.28	217.25	217.63	216.68	219.02	216.95	219.34	217.90	216.28	217.25	217.63	216.68	219.02	216.95	219.34
25.00°	203.10	202.80	201.62	201.75	202.37	201.65	202.62	202.02	203.10	202.80	202.01	201.75	202.37	201.65	202.62	202.02	203.10
27.50°	189.51	190.28	188.67	189.30	189.30	186.74	189.38	188.62	189.51	190.28	188.67	189.30	189.30	186.74	189.38	188.62	189.51
30.00°	179.10	180.38	179.30	179.53	179.26	179.22	179.34	179.44	179.10	180.38	179.30	179.53	179.26	179.22	179.34	179.44	179.10
32.50°	171.37	172.83	170.46	172.05	171.59	171.78	171.86	171.29	171.37	172.83	170.46	172.05	171.59	171.78	171.86	171.29	171.37
35.00°	166.74	167.68	166.41	166.51	167.11	167.22	166.98	166.46	166.74	167.68	166.41	166.51	167.11	167.22	166.98	166.46	166.74
37.50°	163.43	163.85	162.95	162.92	163.85	162.77	163.60	162.40	163.43	163.85	162.95	162.92	163.85	162.77	163.60	162.40	163.43
40.00°	161.65	161.30	161.45	161.00	162.26	161.72	161.68	160.65	161.65	161.30	161.45	161.00	162.26	161.72	161.68	160.65	161.65
42.50°	160.73	160.40	160.20	160.56	161.36	160.73	160.64	159.43	160.73	160.40	160.20	160.56	161.36	160.73	160.64	159.43	160.73
45.00°	160.77	161.06	160.32	161.34	161.36	161.19	160.46	159.84	160.77	161.06	160.32	161.34	161.36	161.19	160.46	159.84	160.77
47.50°	161.32	161.99	160.60	162.26	161.97	161.69	160.97	160.59	161.32	161.99	160.60	162.26	161.97	161.69	160.97	160.59	161.32
50.00°	162.43	163.18	161.74	163.30	163.36	162.99	162.13	161.98	162.43	163.18	161.74	163.30	163.36	162.99	162.13	161.98	162.43
52.50°	164.09	164.76	162.98	164.85	165.05	164.34	163.81	163.50	164.09	164.76	162.98	164.85	165.05	164.34	163.81	163.50	164.09
55.00°	166.34	166.70	165.32	166.81	167.14	166.57	165.95	165.10	166.34	166.70	165.32	166.81	167.14	166.57	165.95	165.10	166.34
57.50°	168.28	168.31	167.78	168.23	168.91	168.74	168.08	166.71	168.28	168.31	167.78	168.23	168.91	168.74	168.08	166.71	168.28
60.00°	169.90	169.61	168.86	169.26	170.31	169.84	170.18	167.93	169.90	169.61	168.86	169.26	170.31	169.84	170.18	167.93	169.90
62.50°	171.03	170.74	169.82	170.69	171.55	170.93	171.57	169.07	171.03	170.74	169.82	170.69	171.55	170.93	171.57	169.07	171.03
65.00°	171.65	171.72	171.07	172.42	172.61	171.84	172.30	170.52	171.65	171.72	171.07	172.42	172.61	171.84	172.30	170.52	171.65
67.50°	172.39	172.59	172.35	173.59	173.68	172.75	172.96	172.03	172.39	172.59	172.35	173.59	173.68	172.75	172.96	172.03	172.39
70.00°	173.24	173.37	172.82	174.35	174.78	173.87	173.55	172.59	173.24	173.37	172.82	174.35	174.78	173.87	173.55	172.59	173.24
72.50°	173.82	173.90	173.23	174.88	175.46	174.92	173.87	172.97	173.82	173.90	173.23	174.88	175.46	174.92	173.87	172.97	173.82
75.00°	174.13	174.22	173.55	175.25	175.67	175.05	173.98	173.05	174.13	174.22	173.55	175.25	175.67	175.05	173.98	173.05	174.13
77.50°	174.51	174.33	173.87	175.42	175.59	175.19	174.27	173.08	174.51	174.33	173.87	175.42	175.59	175.19	174.27	173.08	174.51
80.00°	174.95	174.26	173.38	175.45	175.19	175.47	174.71	173.24	174.95	174.26	173.38	175.45	175.19	175.47	174.71	173.24	174.95
82.50°	175.27	174.48	172.83	174.81	174.76	175.65	174.93	173.42	175.27	174.48	172.83	174.81	174.76	175.65	174.93	173.42	175.27
85.00°	175.47	174.92	173.43	173.74	174.29	174.63	174.96	173.68	175.47	174.92	173.43	173.74	174.29	174.63	174.96	173.68	175.47
87.50°	175.43	175.15	174.09	173.13	173.91	173.66	174.46	173.95	175.43	175.15	174.09	173.13	173.91	173.66	174.46	173.95	175.43
90.00°	175.19	175.23	173.27	172.82	173.59	173.27	173.53	174.00	175.19	175.23	173.27	172.82	173.59	173.27	173.53	174.00	175.19
92.50°	174.70	174.99	172.36	172.46	172.92	172.86	173.00	174.01	174.70	174.99	172.36	172.46	172.92	172.86	173.00	174.01	174.70
95.00°	174.00	174.53	172.43	172.07	171.86	172.22	172.78	173.38	174.00	174.53	172.43	172.07	171.86	172.22	172.78	173.38	174.00
97.50°	173.05	173.34	172.55	170.50	170.58	171.37	171.78	172.67	173.05	173.34	172.55	170.50	170.58	171.37	171.78	172.67	173.05
100.00°	171.86	171.59	169.90	168.20	169.05	168.50	170.18	171.24	171.86	171.59	169.90	168.20	169.05	168.50	170.18	171.24	171.86
102.50°	170.26	169.54	167.14	163.44	164.43	165.10	167.57	169.72	170.26	169.54	167.14	163.44	164.43	165.10	167.57	169.72	170.26
105.00°	168.31	167.25	163.71	157.15	156.69	157.21	164.22	166.94	168.31	167.25	163.71	157.15	156.69	157.21	164.22	166.94	168.31
107.50°	165.63	164.39	160.26	147.91	147.58	148.93	159.42	164.00	165.63	164.39	160.26	147.91	147.58	148.93	159.42	164.00	165.63
110.00°	162.33	161.13	153.63	136.88	137.12	137.22	153.59	160.80	162.33	161.13	153.63	136.88	137.12	137.22	153.59	160.80	162.33
112.50°	158.62	157.04	146.90	123.61	124.83	125.16	146.56	157.58	158.62	157.04	146.90	123.61	124.83	125.16	146.56	157.58	158.62

### 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>	1,959	1,959	1,959	1,959	1,839	1,839	1,839	1,839	1,616	1,616	1,616	1,411	1,411	1,411	1,223	1,223	1,135
	<b>1</b>	1,701	1,584	1,480	1,386	1,583	1,480	1,387	1,303	1,286	1,212	1,145	1,107	1,050	997	942	898	823
	<b>2</b>	1,519	1,342	1,196	1,074	1,409	1,253	1,122	1,011	1,084	980	891	929	847	776	786	722	657
	<b>3</b>	1,371	1,159	996	865	1,270	1,082	935	816	937	818	720	802	707	628	677	603	547
	<b>4</b>	1,248	1,016	847	718	1,155	949	796	678	823	699	600	706	606	524	597	517	469
	<b>5</b>	1,143	901	733	608	1,059	843	690	575	733	607	511	630	528	448	535	452	386
	<b>6</b>	1,052	807	642	524	976	756	606	496	659	535	442	569	467	389	485	402	337
	<b>7</b>	974	728	569	458	904	683	538	434	598	477	388	519	418	343	444	361	298
	<b>8</b>	905	662	509	404	841	622	482	384	547	429	345	476	378	306	409	328	267
	<b>9</b>	844	606	460	361	786	570	436	344	503	389	309	440	344	275	380	300	242
	<b>10</b>	791	557	418	325	737	526	397	310	465	356	280	408	316	250	354	277	221

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	13.9 fc	4.8 ft
6.5 ft	10.0 fc	5.7 ft
7.5 ft	7.5 fc	6.6 ft
8.0 ft	6.6 fc	7.0 ft
10.0 ft	4.2 fc	8.8 ft
12.0 ft	2.9 fc	10.5 ft
14.0 ft	2.2 fc	12.3 ft
16.0 ft	1.6 fc	14.0 ft
20.0 ft	1.1 fc	17.5 ft
24.0 ft	0.7 fc	21.0 ft
28.0 ft	0.5 fc	24.5 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	12,866	12,866	12,866
<b>45.00°</b>	1,877	1,872	1,884
<b>55.00°</b>	1,824	1,813	1,833
<b>65.00°</b>	1,827	1,821	1,837
<b>75.00°</b>	1,855	1,849	1,872
<b>85.00°</b>	1,930	1,908	1,917

### 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