

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

AF0810GV 27L 35K EX FG8 HM

Nom. 8" diam x 10" H tubular luminaire with matte white decorative acrylic shade

Test Number

SP-00996

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
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Lumen Output

Output Lumens	1984
Efficacy	104.41 lm/W

Luminous Dimensions

0° - 180° Size	-0.67
90° - 270° Size	-0.67
Height	0.58

Spacing Criterion

Two luminaires, plane 0°	0.84
Two luminaires, plane 90°	0.84
Four luminaires	0.88

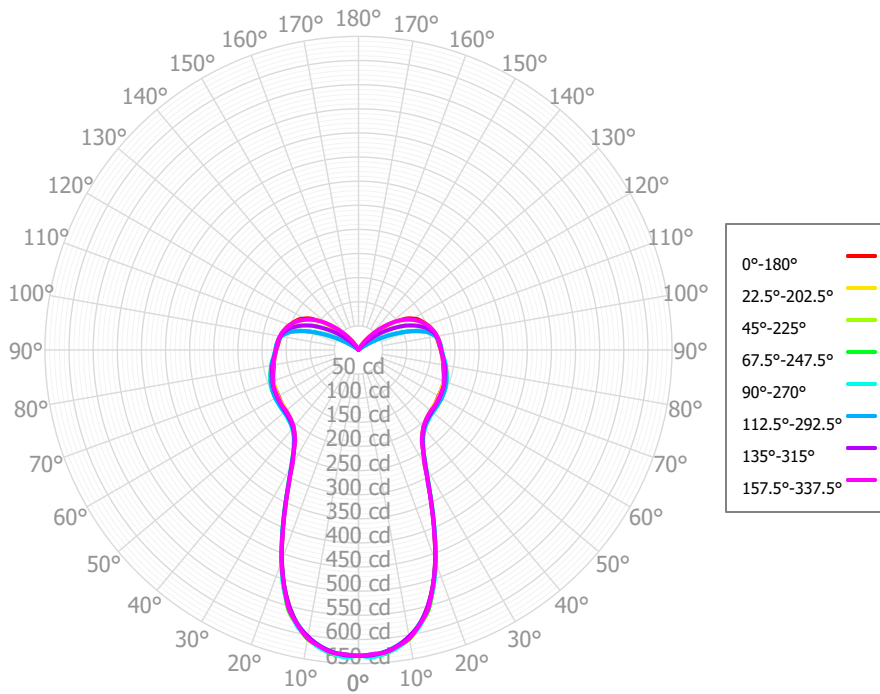
Full Beam Angle

0° - 180°	54°
90° - 270°	54°

IES File Header Contents

Keyword	Value
TEST	SP-00996
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	1/3/2020
ISSUEDATE	1/7/2020
LUMCAT	AF0810GV 27L 35K EX FG8 HM
LUMINAIRE	Nom. 8" diam x 10" H tubular luminaire with matte white decorative acrylic shade
OTHER	Beam Angle (downlight): 54 degrees
OTHER	Uplight: 32.8%
OTHER	Downlight: 67.2%
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
_CRI	80+
_CCTMULT	27K x 0.97, 30K x 0.99, 40K x 1.03
_LAMPMULT	15L x 0.57

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	60.18	3.03%	90.00° - 100.00°	183.56	9.25%
10.00° - 20.00°	152.74	7.70%	100.00° - 110.00°	160.56	8.09%
20.00° - 30.00°	165.46	8.34%	100.00° - 120.00°	270.99	13.66%
30.00° - 40.00°	147.36	7.43%	120.00° - 130.00°	57.73	2.91%
40.00° - 50.00°	157.02	7.92%	130.00° - 140.00°	23.56	1.19%
50.00° - 60.00°	176.57	8.90%	140.00° - 150.00°	6.40	0.32%
60.00° - 70.00°	191.94	9.68%	150.00° - 160.00°	1.01	0.05%
70.00° - 80.00°	196.58	9.91%	160.00° - 170.00°	0.38	0.02%
80.00° - 90.00°	192.09	9.68%	170.00° - 180.00°	0.13	0.01%
0.00° - 90.00°	1,439.94	72.59%	0.00° - 180.00°	1,983.71	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°	634.02	634.02	634.02	634.02	634.02	634.02	634.02	634.02	634.02	634.02	634.02	634.02	634.02	634.02	634.02	634.02	634.02
2.50°	632.97	632.49	635.60	633.84	637.98	631.72	633.63	631.48	632.97	632.49	635.60	633.84	637.98	631.72	633.63	631.48	632.97
5.00°	628.37	632.01	629.42	632.81	631.07	628.21	628.21	629.83	628.37	632.01	629.42	632.81	631.07	628.21	628.21	629.83	628.37
7.50°	618.79	620.71	621.00	621.01	623.06	617.82	618.60	619.79	618.79	620.71	621.00	621.01	623.06	617.82	618.60	619.79	618.79
10.00°	603.59	608.61	604.76	608.05	605.74	604.74	603.01	607.29	603.59	608.61	604.76	608.05	605.74	604.74	603.01	607.29	603.59
12.50°	582.65	585.16	586.01	585.02	587.20	581.68	583.20	584.02	582.65	585.16	586.01	585.02	587.20	581.68	583.20	584.02	582.65
15.00°	551.90	559.87	552.88	559.28	553.38	555.01	551.85	556.65	551.90	559.87	552.88	559.28	553.38	555.01	551.85	556.65	551.90
17.50°	512.00	515.41	515.69	514.75	517.93	512.65	512.89	513.10	512.00	515.41	515.69	514.75	517.93	512.65	512.89	513.10	512.00
20.00°	464.38	469.69	465.45	468.59	466.51	465.27	464.83	466.77	464.38	469.69	465.45	468.59	466.51	465.27	464.83	466.77	464.38
22.50°	410.17	413.07	411.98	413.12	413.75	412.87	411.33	410.87	410.17	413.07	411.98	413.12	413.75	412.87	411.33	410.87	410.17
25.00°	359.94	358.03	362.00	359.57	362.47	359.05	361.22	357.71	359.94	358.03	362.00	359.57	362.47	359.05	361.22	357.71	359.94
27.50°	312.80	314.06	312.80	315.85	311.27	315.92	312.97	312.93	312.80	314.06	312.80	315.85	311.27	315.92	312.97	312.93	312.80
30.00°	276.92	273.19	279.94	275.85	280.02	275.55	277.85	273.52	276.92	273.19	279.94	275.85	280.02	275.55	277.85	273.52	276.92
32.50°	249.26	250.20	250.19	252.08	249.42	251.81	249.38	249.21	249.26	250.20	250.19	252.08	249.42	251.81	249.38	249.21	249.26
35.00°	230.55	229.25	233.16	231.16	234.48	231.77	231.57	228.76	230.55	229.25	233.16	231.16	234.48	231.77	231.57	228.76	230.55
37.50°	217.79	218.80	218.15	220.99	219.85	221.17	218.63	217.97	217.79	218.80	218.15	220.99	219.85	221.17	218.63	217.97	217.79
40.00°	209.55	209.32	211.50	212.02	214.15	212.36	210.93	208.95	209.55	209.32	211.50	212.02	214.15	212.36	210.93	208.95	209.55
42.50°	204.03	204.12	206.03	207.15	208.51	207.73	205.39	203.89	204.03	204.12	206.03	207.15	208.51	207.73	205.39	203.89	204.03
45.00°	200.41	199.50	202.63	202.83	205.44	203.80	202.18	199.74	200.41	199.50	202.63	202.83	205.44	203.80	202.18	199.74	200.41
47.50°	197.87	197.07	199.47	200.24	202.48	201.91	199.85	197.51	197.87	197.07	199.47	200.24	202.48	201.91	199.85	197.51	197.87
50.00°	196.31	195.02	198.33	198.48	201.78	200.30	198.41	196.03	196.31	195.02	198.33	198.48	201.78	200.30	198.41	196.03	196.31
52.50°	195.25	194.32	197.37	199.00	201.08	199.96	197.27	195.95	195.25	194.32	197.37	199.00	201.08	199.96	197.27	195.95	195.25
55.00°	193.96	193.69	196.73	199.21	200.31	199.76	196.41	195.60	193.96	193.69	196.73	199.21	200.31	199.76	196.41	195.60	193.96
57.50°	192.57	193.26	196.11	198.64	199.53	199.61	195.64	194.79	192.57	193.26	196.11	198.64	199.53	199.61	195.64	194.79	192.57
60.00°	191.54	192.53	194.81	198.26	198.66	199.47	194.76	193.92	191.54	192.53	194.81	198.26	198.66	199.47	194.76	193.92	191.54
62.50°	190.68	190.98	193.49	198.30	197.80	198.25	193.86	192.95	190.68	190.98	193.49	198.30	197.80	198.25	193.86	192.95	190.68
65.00°	190.05	189.66	192.69	197.69	197.09	196.95	192.88	192.02	190.05	189.66	192.69	197.69	197.09	196.95	192.88	192.02	190.05
67.50°	189.51	188.90	191.90	195.81	196.21	195.23	191.88	191.12	189.51	188.90	191.90	195.81	196.21	195.23	191.88	191.12	189.51
70.00°	187.71	187.98	189.21	193.77	194.05	193.49	189.69	189.22	187.71	187.98	189.21	193.77	194.05	193.49	189.69	189.22	187.71
72.50°	185.48	186.70	186.54	191.46	191.74	190.91	187.24	185.98	185.48	186.70	186.54	191.46	191.74	190.91	187.24	185.98	185.48
75.00°	182.85	184.87	184.65	189.05	188.56	188.32	185.43	183.50	182.85	184.87	184.65	189.05	188.56	188.32	185.43	183.50	182.85
77.50°	180.09	181.93	182.73	186.47	185.56	185.74	183.73	181.95	180.09	181.93	182.73	186.47	185.56	185.74	183.73	181.95	180.09
80.00°	178.14	179.46	180.42	183.59	183.51	183.14	181.20	180.08	178.14	179.46	180.42	183.59	183.51	183.14	181.20	180.08	178.14
82.50°	176.43	177.90	178.07	180.23	181.11	179.84	178.55	177.85	176.43	177.90	178.07	180.23	181.11	179.84	178.55	177.85	176.43
85.00°	174.58	175.89	175.12	177.17	177.25	176.60	175.79	175.46	174.58	175.89	175.12	177.17	177.25	176.60	175.79	175.46	174.58
87.50°	172.70	173.09	172.32	174.54	173.94	174.37	173.02	172.93	172.70	173.09	172.32	174.54	173.94	174.37	173.02	172.93	172.70
90.00°	170.49	170.86	171.35	172.36	172.76	172.20	171.20	171.14	170.49	170.86	171.35	172.36	172.76	172.20	171.20	171.14	170.49
92.50°	168.21	169.50	170.37	170.77	171.38	170.93	169.47	170.06	168.21	169.50	170.37	170.77	171.38	170.93	169.47	170.06	168.21
95.00°	166.61	168.03	169.32	168.83	169.34	169.53	168.22	168.78	166.61	168.03	169.32	168.83	169.34	169.53	168.22	168.78	166.61
97.50°	165.13	166.42	168.03	166.48	166.74	166.66	167.01	167.33	165.13	166.42	168.03	166.48	166.74	166.66	167.01	167.33	165.13
100.00°	163.53	164.48	164.95	162.25	162.44	163.21	163.99	165.44	163.53	164.48	164.95	162.25	162.44	163.21	163.99	165.44	163.53
102.50°	161.90	162.10	161.50	155.88	156.45	154.93	160.88	163.18	161.90	162.10	161.50	155.88	156.45	154.93	160.88	163.18	161.90
105.00°	159.15	158.89	155.92	145.07	145.90	145.75	155.29	159.77	159.15	158.89	155.92	145.07	145.90	145.75	155.29	159.77	159.15
107.50°	156.25	154.68	149.82	129.63	132.97	129.96	149.63	155.49	156.25	154.68	149.82	129.63	132.97	129.96	149.63	155.49	156.25
110.00°	151.99	150.20	141.06	112.44	114.08	113.59	140.49	150.93	151.99	150.20	141.06	112.44	114.08	113.59	140.49	150.93	151.99
112.50°	147.59	145.43	131.91	93.59	95.26	93.69	131.29	146.18	147.59	145.43	131.91	93.59	95.26	93.69	131.29	146.18	147.59

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%	0%
	pcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	0	2,232	2,232	2,232	2,232	2,117	2,117	2,117	2,117	1,902	1,902	1,902	1,705	1,705	1,705	1,525	1,525	1,440
	1	1,958	1,835	1,723	1,623	1,845	1,735	1,636	1,545	1,549	1,470	1,397	1,378	1,315	1,257	1,220	1,172	1,098
	2	1,760	1,570	1,413	1,281	1,654	1,485	1,344	1,224	1,325	1,211	1,112	1,177	1,086	1,006	1,041	969	906
	3	1,598	1,369	1,192	1,051	1,500	1,296	1,135	1,006	1,158	1,027	919	1,030	924	835	911	827	772
	4	1,462	1,210	1,026	886	1,373	1,147	980	850	1,028	889	780	917	804	712	814	722	675
	5	1,345	1,082	898	762	1,264	1,027	859	733	923	783	675	827	711	619	737	641	600
	6	1,244	976	796	667	1,170	928	763	642	838	698	594	753	636	547	674	577	541
	7	1,156	887	713	591	1,089	845	684	570	766	629	530	691	576	489	621	524	493
	8	1,078	812	644	529	1,017	775	620	512	705	572	477	639	525	442	576	480	453
	9	1,010	748	587	478	954	715	565	463	652	523	433	593	483	403	538	443	419
	10	949	692	538	436	898	663	519	423	607	482	396	554	446	371	504	412	390

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	21.0 fc	5.6 ft
6.5 ft	15.0 fc	6.7 ft
7.5 ft	11.3 fc	7.7 ft
8.0 ft	9.9 fc	8.2 ft
10.0 ft	6.3 fc	10.3 ft
12.0 ft	4.4 fc	12.3 ft
14.0 ft	3.2 fc	14.4 ft
16.0 ft	2.5 fc	16.4 ft
20.0 ft	1.6 fc	20.5 ft
24.0 ft	1.1 fc	24.6 ft
28.0 ft	0.8 fc	28.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	19,357	19,357	19,357
45.00°	4,116	4,162	4,219
55.00°	4,011	4,068	4,142
65.00°	4,082	4,138	4,233
75.00°	4,218	4,259	4,350
85.00°	4,497	4,511	4,566

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