

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

AF0609GV 27L 35K EX FG6 HM

Nom. 6" diam x 9" H tubular luminaire with matte white decorative acrylic shade

Test Number

SP-009342_8

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	1699
Efficacy	89.4 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.78
Two luminaires, plane 90°	0.77
Four luminaires	0.88

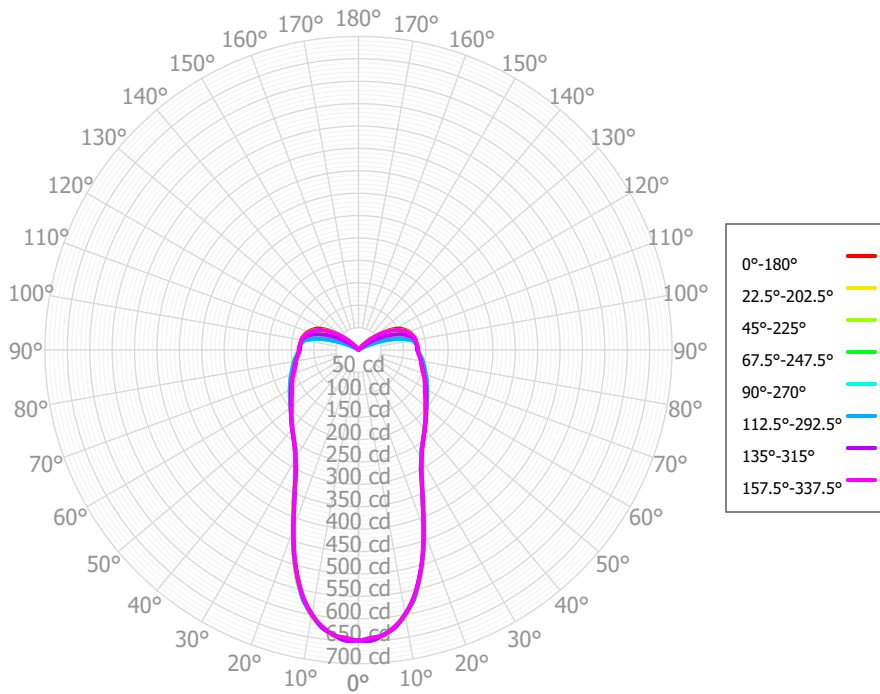
Full Beam Angle

0° - 180°	52°
90° - 270°	52°

IES File Header Contents

Keyword	Value
TEST	SP-009342_8
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	1/3/2020
ISSUEDATE	1/7/2020
LUMCAT	AF0609GV 27L 35K EX FG6 HM
LUMINAIRE	Nom. 6" diam x 9" H tubular luminaire with matte white decorative acrylic shade
OTHER	Beam Angle (downlight): 52 degrees
OTHER	Uplight: 22.2%
OTHER	Downlight: 77.8%
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°	60.59	3.57%	90.00° - 100.00°	142.31	8.38%
10.00° - 20.00°	144.92	8.53%	100.00° - 110.00°	118.95	7.00%
20.00° - 30.00°	156.10	9.19%	100.00° - 120.00°	191.00	11.25%
30.00° - 40.00°	157.63	9.28%	120.00° - 130.00°	31.76	1.87%
40.00° - 50.00°	164.09	9.66%	130.00° - 140.00°	9.63	0.57%
50.00° - 60.00°	165.59	9.75%	140.00° - 150.00°	1.83	0.11%
60.00° - 70.00°	164.05	9.66%	150.00° - 160.00°	0.61	0.04%
70.00° - 80.00°	158.00	9.30%	160.00° - 170.00°	0.36	0.02%
80.00° - 90.00°	149.94	8.83%	170.00° - 180.00°	0.12	0.01%
0.00° - 90.00°	1,320.91	77.77%	0.00° - 180.00°	1,698.53	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°	648.46	648.46	648.46	648.46	648.46	648.46	648.46	648.46	648.46	648.46	648.46	648.46	648.46	648.46	648.46	648.46	648.46
2.50°	646.01	646.72	645.35	647.89	647.80	649.33	649.56	642.95	646.01	646.72	645.35	647.89	647.80	649.33	649.56	642.95	646.01
5.00°	638.31	638.49	641.54	638.44	638.16	638.08	638.51	638.90	638.31	638.49	641.54	638.44	638.16	638.08	638.51	638.90	638.31
7.50°	622.96	624.01	623.28	625.26	623.73	625.84	624.41	622.08	622.96	624.01	623.28	625.26	623.73	625.84	624.41	622.08	622.96
10.00°	601.61	600.12	604.23	599.72	599.73	600.04	598.25	600.40	601.61	600.12	604.23	599.72	599.73	600.04	598.25	600.40	601.61
12.50°	568.87	570.45	568.53	570.42	568.47	572.00	567.71	566.50	568.87	570.45	568.53	570.42	568.47	572.00	567.71	566.50	568.87
15.00°	528.87	528.37	532.06	526.11	525.58	526.19	524.18	526.87	528.87	528.37	532.06	526.11	525.58	526.19	524.18	526.87	528.87
17.50°	480.18	479.96	479.97	478.47	477.95	478.99	477.83	475.88	480.18	479.96	479.97	478.47	477.95	478.99	477.83	475.88	480.18
20.00°	427.04	429.56	428.18	427.29	424.15	424.64	424.75	425.33	427.04	429.56	428.18	427.29	424.15	424.64	424.75	425.33	427.04
22.50°	380.20	378.35	379.29	375.54	376.31	373.74	376.04	375.48	380.20	378.35	379.29	375.54	376.31	373.74	376.04	375.48	380.20
25.00°	335.98	339.25	333.26	337.32	334.97	335.62	335.55	334.42	335.98	339.25	333.26	337.32	334.97	335.62	335.55	334.42	335.98
27.50°	306.20	303.90	304.75	300.40	303.50	301.73	302.71	305.05	306.20	303.90	304.75	300.40	303.50	301.73	302.71	305.05	306.20
30.00°	281.10	282.10	278.82	280.95	280.82	280.09	281.49	281.42	281.10	282.10	278.82	280.95	280.82	280.09	281.49	281.42	281.10
32.50°	264.77	263.53	264.09	262.21	263.42	261.65	264.03	264.01	264.77	263.53	264.09	262.21	263.42	261.65	264.03	264.01	264.77
35.00°	250.54	250.87	250.32	250.59	249.87	250.41	251.31	250.06	250.54	250.87	250.32	250.59	249.87	250.41	251.31	250.06	250.54
37.50°	239.50	239.17	239.68	239.10	239.08	239.56	240.31	239.15	239.50	239.17	239.68	239.10	239.08	239.56	240.31	239.15	239.50
40.00°	229.01	229.03	229.51	229.79	229.97	229.43	231.06	229.38	229.01	229.03	229.51	229.79	229.97	229.43	231.06	229.38	229.01
42.50°	220.05	219.04	220.56	220.62	221.22	220.29	221.79	220.44	220.05	219.04	220.56	220.62	221.22	220.29	221.79	220.44	220.05
45.00°	211.25	211.31	211.93	212.57	212.64	212.66	212.49	211.65	211.25	211.31	211.93	212.57	212.64	212.66	212.49	211.65	211.25
47.50°	203.00	203.69	203.93	204.78	204.94	205.35	204.35	202.96	203.00	203.69	203.93	204.78	204.94	205.35	204.35	202.96	203.00
50.00°	194.78	196.21	196.52	198.37	197.56	198.43	197.02	195.39	194.78	196.21	196.52	198.37	197.56	198.43	197.02	195.39	194.78
52.50°	188.51	188.82	190.08	192.22	191.84	192.10	190.40	188.36	188.51	188.82	190.08	192.22	191.84	192.10	190.40	188.36	188.51
55.00°	182.32	182.89	184.33	187.06	186.61	186.35	184.19	181.93	182.32	182.89	184.33	187.06	186.61	186.35	184.19	181.93	182.32
57.50°	177.55	177.07	179.53	182.05	181.48	181.11	178.78	175.73	177.55	177.07	179.53	182.05	181.48	181.11	178.78	175.73	177.55
60.00°	172.76	172.23	174.52	177.47	176.39	176.30	173.73	171.21	172.76	172.23	174.52	177.47	176.39	176.30	173.73	171.21	172.76
62.50°	167.81	167.46	169.29	172.91	172.44	171.88	169.04	167.20	167.81	167.46	169.29	172.91	172.44	171.88	169.04	167.20	167.81
65.00°	162.88	163.08	164.77	168.38	168.68	167.71	164.48	163.46	162.88	163.08	164.77	168.38	168.68	167.71	164.48	163.46	162.88
67.50°	158.01	158.60	160.89	163.94	164.40	163.49	159.84	159.79	158.01	158.60	160.89	163.94	164.40	163.49	159.84	159.79	158.01
70.00°	153.35	153.78	156.66	159.67	160.08	159.24	155.17	154.82	153.35	153.78	156.66	159.67	160.08	159.24	155.17	154.82	153.35
72.50°	149.60	149.68	152.16	155.80	155.34	155.54	151.35	149.67	149.60	149.68	152.16	155.80	155.34	155.54	151.35	149.67	149.60
75.00°	146.20	147.86	148.97	152.53	150.61	152.09	147.71	146.69	146.20	147.86	148.97	152.53	150.61	152.09	147.71	146.69	146.20
77.50°	143.92	145.58	146.57	149.45	147.71	148.62	144.72	143.91	143.92	145.58	146.57	149.45	147.71	148.62	144.72	143.91	143.92
80.00°	141.76	142.19	143.30	146.62	144.78	145.14	141.83	141.56	141.76	142.19	143.30	146.62	144.78	145.14	141.83	141.56	141.76
82.50°	139.85	138.99	139.60	143.23	141.36	140.99	139.06	139.21	139.85	138.99	139.60	143.23	141.36	140.99	139.06	139.21	139.85
85.00°	137.64	136.15	137.04	139.27	138.02	136.67	136.30	136.20	137.64	136.15	137.04	139.27	138.02	136.67	136.30	136.20	137.64
87.50°	134.81	134.06	134.92	135.84	135.34	133.77	133.59	133.37	134.81	134.06	134.92	135.84	135.34	133.77	133.59	133.37	134.81
90.00°	132.79	133.16	133.83	132.84	132.96	131.14	130.92	133.26	132.79	133.16	133.83	132.84	132.96	131.14	130.92	133.26	132.79
92.50°	132.05	132.48	133.07	131.11	132.14	130.92	130.65	133.00	132.05	132.48	133.07	131.11	132.14	130.92	130.65	133.00	132.05
95.00°	131.24	132.05	131.68	130.25	130.90	131.01	130.35	131.56	131.24	132.05	131.68	130.25	130.90	131.01	130.35	131.56	131.24
97.50°	130.32	131.09	130.15	126.76	128.00	127.16	129.73	130.24	130.32	131.09	130.15	126.76	128.00	127.16	129.73	130.24	130.32
100.00°	129.16	129.57	127.33	121.77	123.35	123.05	128.70	129.54	129.16	129.57	127.33	121.77	123.35	123.05	128.70	129.54	129.16
102.50°	127.74	127.61	124.31	110.30	113.55	110.61	124.71	128.29	127.74	127.61	124.31	110.30	113.55	110.61	124.71	128.29	127.74
105.00°	125.76	125.28	118.90	95.91	101.54	97.83	120.02	124.90	125.76	125.28	118.90	95.91	101.54	97.83	120.02	124.90	125.76
107.50°	123.29	121.97	113.25	79.31	84.46	79.58	111.78	121.27	123.29	121.97	113.25	79.31	84.46	79.58	111.78	121.27	123.29
110.00°	119.50	117.94	103.44	61.94	67.61	61.44	102.74	116.97	119.50	117.94	103.44	61.94	67.61	61.44	102.74	116.97	119.50
112.50°	114.75	112.29	93.44	45.89	51.18	44.59	90.80	111.85	114.75	112.29	93.44	45.89	51.18	44.59	90.80	111.85	114.75

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%	10%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%
	0	1,932	1,932	1,932	1,932	1,843	1,843	1,843	1,843	1,677	1,677	1,677	1,526	1,526	1,526	1,386	1,386	1,386
	1	1,707	1,604	1,513	1,430	1,619	1,528	1,445	1,371	1,385	1,319	1,258	1,253	1,201	1,152	1,132	1,091	1,053
	2	1,539	1,380	1,249	1,139	1,457	1,315	1,196	1,096	1,192	1,096	1,013	1,079	1,002	933	974	913	858
	3	1,400	1,207	1,058	940	1,324	1,151	1,016	907	1,046	934	843	948	857	781	858	784	721
	4	1,283	1,070	915	796	1,213	1,022	880	770	931	812	718	847	748	669	768	687	620
	5	1,182	958	802	687	1,118	917	773	666	838	717	624	765	663	584	696	612	544
	6	1,094	866	713	603	1,036	830	688	585	761	641	551	697	595	517	637	551	483
	7	1,017	788	640	536	965	756	619	521	696	578	492	640	539	463	587	501	435
	8	949	722	579	481	902	694	561	468	641	526	443	591	492	419	544	459	395
	9	889	665	528	435	846	641	512	425	594	482	403	549	452	382	507	423	361
	10	836	616	485	397	796	594	471	388	552	444	370	513	418	351	475	393	333

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	21.4 fc	5.4 ft
6.5 ft	15.3 fc	6.3 ft
7.5 ft	11.5 fc	7.3 ft
8.0 ft	10.1 fc	7.8 ft
10.0 ft	6.5 fc	9.7 ft
12.0 ft	4.5 fc	11.7 ft
14.0 ft	3.3 fc	13.6 ft
16.0 ft	2.5 fc	15.6 ft
20.0 ft	1.6 fc	19.5 ft
24.0 ft	1.1 fc	23.3 ft
28.0 ft	0.8 fc	27.2 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	35,549	35,549	35,549
45.00°	7,204	7,228	7,252
55.00°	6,183	6,251	6,328
65.00°	5,664	5,730	5,865
75.00°	5,384	5,486	5,546
85.00°	5,566	5,542	5,582

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