

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

AF0624GV 27L 35K EX FG6 HM

Nom. 6" diam x 24" H tubular luminaire with matte white decorative acrylic shade

Test Number

SP-00995

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	1646
Efficacy	86.64 lm/W

Luminous Dimensions

0° - 180° Size	-0.5
90° - 270° Size	-0.5
Height	1.75

Spacing Criterion

Two luminaires, plane 0°	0.59
Two luminaires, plane 90°	0.59
Four luminaires	0.84

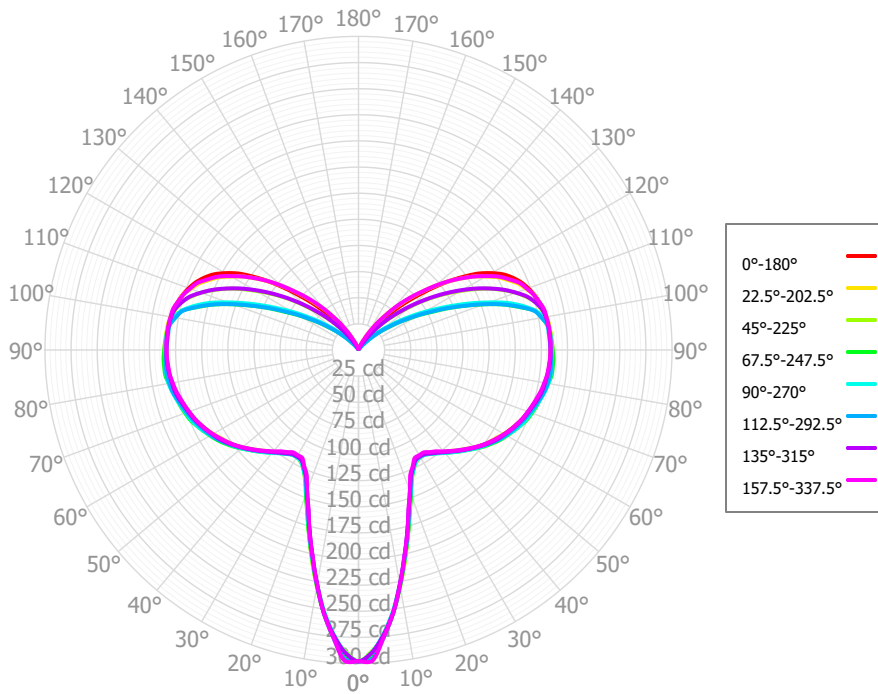
Full Beam Angle

0° - 180°	239°
90° - 270°	215°

IES File Header Contents

Keyword	Value
TEST	SP-00995
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	1/3/2020
ISSUEDATE	1/7/2020
LUMCAT	AF0624GV 27L 35K EX FG6 HM
LUMINAIRE	Nom. 6" diam x 24" H tubular luminaire with matte white decorative acrylic shade
OTHER	Beam Angle (downlight): 39 degrees
OTHER	Uplight: 38.6%
OTHER	Downlight: 61.4%
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°	25.02	1.52%	90.00° - 100.00°	200.15	12.16%
10.00° - 20.00°	50.51	3.07%	100.00° - 110.00°	179.71	10.92%
20.00° - 30.00°	58.14	3.53%	100.00° - 120.00°	310.06	18.83%
30.00° - 40.00°	76.29	4.63%	120.00° - 130.00°	76.67	4.66%
40.00° - 50.00°	105.80	6.43%	130.00° - 140.00°	34.40	2.09%
50.00° - 60.00°	138.51	8.41%	140.00° - 150.00°	10.89	0.66%
60.00° - 70.00°	167.47	10.17%	150.00° - 160.00°	2.09	0.13%
70.00° - 80.00°	188.95	11.48%	160.00° - 170.00°	0.39	0.02%
80.00° - 90.00°	200.76	12.20%	170.00° - 180.00°	0.11	0.01%
0.00° - 90.00°	1,011.45	61.44%	0.00° - 180.00°	1,646.22	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°	297.91	297.91	297.91	297.91	297.91	297.91	297.91	297.91	297.91	297.91	297.91	297.91	297.91	297.91	297.91	297.91	297.91
2.50°	291.96	293.35	288.71	293.82	289.80	296.30	290.10	297.87	291.96	293.35	288.71	293.82	289.80	296.30	290.10	297.87	291.96
5.00°	274.25	273.62	275.68	274.37	273.09	276.28	273.91	276.10	274.25	273.62	275.68	274.37	273.09	276.28	273.91	276.10	274.25
7.50°	253.50	253.24	253.71	253.98	252.25	254.01	253.64	254.03	253.50	253.24	253.71	253.98	252.25	254.01	253.64	254.03	253.50
10.00°	228.60	228.25	229.59	228.83	227.70	228.58	227.68	228.14	228.60	228.25	229.59	228.83	227.70	228.58	227.68	228.14	228.60
12.50°	204.61	203.65	205.87	204.31	204.04	202.77	203.01	202.52	204.61	203.65	205.87	204.31	204.04	202.77	203.01	202.52	204.61
15.00°	181.90	182.06	182.24	183.10	181.20	181.10	180.15	180.57	181.90	182.06	182.24	183.10	181.20	181.10	180.15	180.57	181.90
17.50°	161.70	161.21	163.13	162.74	161.70	159.94	159.97	159.07	161.70	161.21	163.13	162.74	161.70	159.94	159.97	159.07	161.70
20.00°	145.08	146.15	145.18	147.13	145.31	145.34	143.67	144.00	145.08	146.15	145.18	147.13	145.31	145.34	143.67	144.00	145.08
22.50°	132.05	131.95	133.90	132.72	133.05	131.61	130.92	129.43	132.05	131.95	133.90	132.72	133.05	131.61	130.92	129.43	132.05
25.00°	124.20	124.89	124.38	125.22	124.73	124.43	123.43	122.82	124.20	124.89	124.38	125.22	124.73	124.43	123.43	122.82	124.20
27.50°	118.81	118.53	120.45	118.76	119.87	118.18	118.55	116.54	118.81	118.53	120.45	118.76	119.87	118.18	118.55	116.54	118.81
30.00°	117.05	118.12	118.03	118.39	118.35	117.81	117.58	116.31	117.05	118.12	118.03	118.39	118.35	117.81	117.58	116.31	117.05
32.50°	117.23	118.02	118.74	118.48	118.85	118.30	118.06	116.24	117.23	118.02	118.74	118.48	118.85	118.30	118.06	116.24	117.23
35.00°	120.34	120.79	120.31	121.32	121.34	120.77	120.76	119.22	120.34	120.79	120.31	121.32	121.34	120.77	120.76	119.22	120.34
37.50°	123.64	123.65	123.64	124.33	124.59	123.54	123.88	122.26	123.64	123.65	123.64	124.33	124.59	123.54	123.88	122.26	123.64
40.00°	127.24	127.30	127.47	128.41	128.59	127.40	127.63	126.66	127.24	127.30	127.47	128.41	128.59	127.40	127.63	126.66	127.24
42.50°	131.39	131.03	132.06	132.54	132.76	131.42	131.69	131.07	131.39	131.03	132.06	132.54	132.76	131.42	131.69	131.07	131.39
45.00°	136.40	135.46	136.88	137.03	137.11	135.90	136.25	135.59	136.40	135.46	136.88	137.03	137.11	135.90	136.25	135.59	136.40
47.50°	141.07	139.94	141.08	141.58	141.63	140.45	140.80	140.12	141.07	139.94	141.08	141.58	141.63	140.45	140.80	140.12	141.07
50.00°	145.20	144.98	145.10	146.57	146.33	145.34	145.35	144.79	145.20	144.98	145.10	146.57	146.33	145.34	145.35	144.79	145.20
52.50°	149.38	149.89	150.17	151.49	150.75	150.29	149.84	149.44	149.38	149.89	150.17	151.49	150.75	150.29	149.84	149.44	149.38
55.00°	153.66	153.22	155.55	155.94	154.88	154.90	154.26	153.32	153.66	153.22	155.55	155.94	154.88	154.90	154.26	153.32	153.66
57.50°	157.59	156.61	159.45	160.30	159.07	159.44	158.22	157.19	157.59	156.61	159.45	160.30	159.07	159.44	158.22	157.19	157.59
60.00°	160.96	160.76	162.86	163.88	163.34	162.99	161.43	160.96	160.96	160.76	162.86	163.88	163.34	162.99	161.43	160.96	160.96
62.50°	164.28	164.85	166.16	167.47	167.26	166.35	164.64	164.70	164.28	164.85	166.16	167.47	167.26	166.35	164.64	164.70	164.28
65.00°	167.50	168.11	169.42	171.01	170.77	169.35	167.88	167.49	167.50	168.11	169.42	171.01	170.77	169.35	167.88	167.49	167.50
67.50°	170.43	171.29	171.86	174.41	173.63	172.27	170.81	170.27	170.43	171.29	171.86	174.41	173.63	172.27	170.81	170.27	170.43
70.00°	172.83	173.17	174.03	176.50	175.72	174.86	173.18	172.50	172.83	173.17	174.03	176.50	175.72	174.86	173.18	172.50	172.83
72.50°	175.25	175.09	176.61	178.56	178.03	177.37	175.60	174.72	175.25	175.09	176.61	178.56	178.03	177.37	175.60	174.72	175.25
75.00°	177.71	177.61	179.34	180.24	180.57	179.88	178.14	176.87	177.71	177.61	179.34	180.24	180.57	179.88	178.14	176.87	177.71
77.50°	179.90	180.07	181.22	181.98	182.75	182.39	180.17	179.02	179.90	180.07	181.22	181.98	182.75	182.39	180.17	179.02	179.90
80.00°	181.58	181.52	182.79	184.30	184.49	183.79	181.25	180.56	181.58	181.52	182.79	184.30	184.49	183.79	181.25	180.56	181.58
82.50°	182.82	182.92	183.99	186.42	185.34	184.96	182.28	182.10	182.82	182.92	183.99	186.42	185.34	184.96	182.28	182.10	182.82
85.00°	183.24	183.22	185.06	186.63	185.09	184.95	183.24	182.76	183.24	183.22	185.06	186.63	185.09	184.95	183.24	182.76	183.24
87.50°	183.69	183.52	185.51	186.75	184.94	184.69	183.82	183.41	183.69	183.52	185.51	186.75	184.94	184.69	183.82	183.41	183.69
90.00°	184.20	184.00	185.75	185.85	184.91	184.01	183.69	183.74	184.20	184.00	185.75	185.85	184.91	184.01	183.69	183.74	184.20
92.50°	184.41	184.46	185.33	184.93	184.60	183.23	183.57	184.06	184.41	184.46	185.33	184.93	184.60	183.23	183.57	184.06	184.41
95.00°	184.07	184.27	184.66	183.73	183.94	182.79	183.48	183.68	184.07	184.27	184.66	183.73	183.94	182.79	183.48	183.68	184.07
97.50°	183.51	184.04	183.52	182.31	182.34	182.41	183.09	183.29	183.51	184.04	183.52	182.31	182.34	182.41	183.09	183.29	183.51
100.00°	182.51	182.53	182.20	178.12	179.52	177.98	182.09	182.49	182.51	182.53	182.20	178.12	179.52	177.98	182.09	182.49	182.51
102.50°	181.10	180.99	179.26	173.20	173.37	172.58	179.96	181.69	181.10	180.99	179.26	173.20	173.37	172.58	179.96	181.69	181.10
105.00°	178.86	178.52	175.69	159.15	162.81	159.75	175.43	178.77	178.86	178.52	175.69	159.15	162.81	159.75	175.43	178.77	178.86
107.50°	176.23	175.99	168.70	144.89	149.67	145.09	169.45	175.80	176.23	175.99	168.70	144.89	149.67	145.09	169.45	175.80	176.23
110.00°	172.80	170.86	160.31	127.84	133.07	128.26	160.38	171.55	172.80	170.86	160.31	127.84	133.07	128.26	160.38	171.55	172.80
112.50°	168.72	165.68	149.94	110.84	116.67	110.88	150.58	167.26	168.72	165.68	149.94	110.84	116.67	110.88	150.58	167.26	168.72

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	1,809	1,809	1,809	1,809	1,693	1,693	1,693	1,693	1,476	1,476	1,476	1,279	1,279	1,279	1,097	1,097	1,097	1,011
	1	1,554	1,439	1,337	1,244	1,440	1,338	1,247	1,164	1,149	1,077	1,011	975	919	867	815	772	732	699
	2	1,379	1,208	1,066	946	1,273	1,120	993	886	957	856	768	806	726	656	666	604	549	542
	3	1,240	1,035	877	751	1,141	960	818	703	818	704	610	687	596	520	565	494	433	440
	4	1,124	902	739	615	1,034	837	690	576	713	594	500	599	503	426	492	416	353	370
	5	1,027	796	634	515	945	739	592	483	631	511	419	531	434	357	437	360	297	320
	6	943	709	552	439	868	659	516	412	565	447	359	477	380	306	394	316	255	281
	7	870	637	486	380	803	593	455	357	510	395	311	432	337	267	359	282	223	251
	8	807	577	432	333	745	538	405	313	464	353	274	395	303	235	330	254	197	227
	9	752	526	388	294	695	492	364	277	426	318	243	364	274	210	305	231	177	208
	10	703	483	351	263	651	452	330	248	393	290	218	337	250	189	284	212	160	191

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	9.8 fc	-19.4 ft
6.5 ft	7.1 fc	-23.0 ft
7.5 ft	5.3 fc	-26.5 ft
8.0 ft	4.7 fc	-28.3 ft
10.0 ft	3.0 fc	-35.3 ft
12.0 ft	2.1 fc	-42.4 ft
14.0 ft	1.5 fc	-49.5 ft
16.0 ft	1.2 fc	-56.5 ft
20.0 ft	0.7 fc	-70.7 ft
24.0 ft	0.5 fc	-84.8 ft
28.0 ft	0.4 fc	-99.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	16,332	16,332	16,332
45.00°	1,938	1,945	1,948
55.00°	1,994	2,019	2,010
65.00°	2,058	2,082	2,098
75.00°	2,135	2,154	2,169
85.00°	2,219	2,241	2,242

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