

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

AF0624GV 15L 35K EX FG6 HM

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

Test Number

SP-00995_M-15L

Test Date

1/3/2020

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

Summary of Results

Power

Input Watts	10 W
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Lumen Output

Output Lumens	938
Efficacy	93.83 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

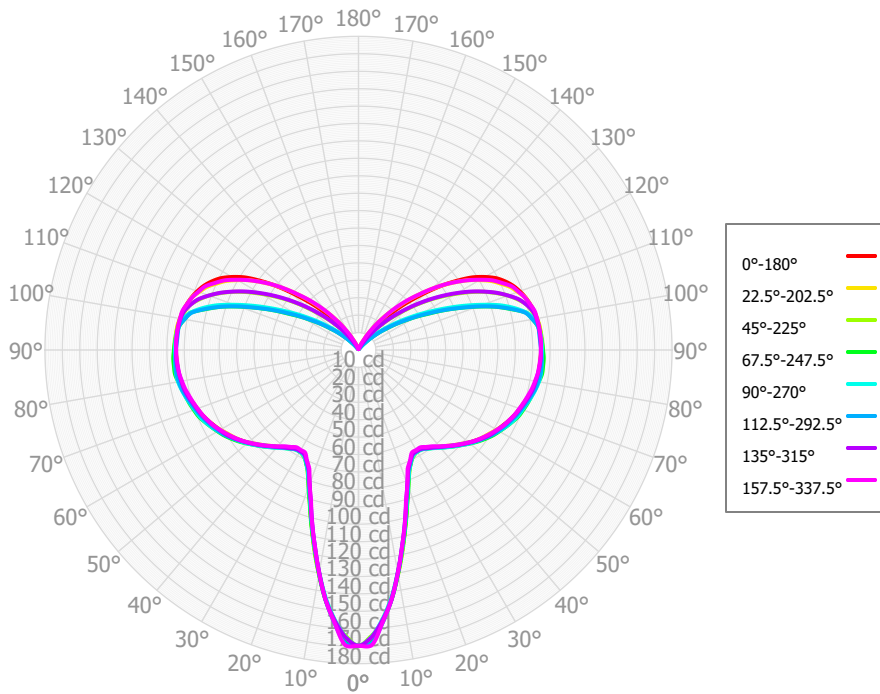
Full Beam Angle

0° - 180°	239°
90° - 270°	215°

IES File Header Contents

Keyword	Value
TEST	SP-00995_M-15L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	1/3/2020
ISSUEDATE	1/7/2020
LUMCAT	AF0624GV 15L 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, scaled from 27L

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	14.26	1.52%	90.00° - 100.00°	114.09	12.16%
10.00° - 20.00°	28.79	3.07%	100.00° - 110.00°	102.44	10.92%
20.00° - 30.00°	33.14	3.53%	100.00° - 120.00°	176.74	18.83%
30.00° - 40.00°	43.49	4.63%	120.00° - 130.00°	43.70	4.66%
40.00° - 50.00°	60.31	6.43%	130.00° - 140.00°	19.61	2.09%
50.00° - 60.00°	78.95	8.41%	140.00° - 150.00°	6.21	0.66%
60.00° - 70.00°	95.46	10.17%	150.00° - 160.00°	1.19	0.13%
70.00° - 80.00°	107.70	11.48%	160.00° - 170.00°	0.22	0.02%
80.00° - 90.00°	114.44	12.20%	170.00° - 180.00°	0.06	0.01%
0.00° - 90.00°	576.53	61.44%	0.00° - 180.00°	938.34	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°	169.81	169.81	169.81	169.81	169.81	169.81	169.81	169.81	169.81	169.81	169.81	169.81	169.81	169.81	169.81	169.81	169.81
2.50°	166.42	167.21	164.56	167.48	165.19	168.89	165.36	169.79	166.42	167.21	164.56	167.48	165.19	168.89	165.36	169.79	166.42
5.00°	156.32	155.96	157.14	156.39	155.66	157.48	156.13	157.38	156.32	155.96	157.14	156.39	155.66	157.48	156.13	157.38	156.32
7.50°	144.50	144.35	144.61	144.77	143.78	144.79	144.57	144.80	144.50	144.35	144.61	144.77	143.78	144.79	144.57	144.80	144.50
10.00°	130.30	130.10	130.87	130.43	129.79	130.29	129.78	130.04	130.30	130.10	130.87	130.43	129.79	130.29	129.78	130.04	130.30
12.50°	116.63	116.08	117.34	116.46	116.30	115.58	115.71	115.44	116.63	116.08	117.34	116.46	116.30	115.58	115.71	115.44	116.63
15.00°	103.68	103.77	103.88	104.37	103.28	103.22	102.69	102.93	103.68	103.77	103.88	104.37	103.28	103.22	102.69	102.93	103.68
17.50°	92.17	91.89	92.99	92.76	92.17	91.17	91.18	90.67	92.17	91.89	92.99	92.76	92.17	91.17	91.18	90.67	92.17
20.00°	82.70	83.30	82.75	83.86	82.82	82.84	81.89	82.08	82.70	83.30	82.75	83.86	82.82	82.84	81.89	82.08	82.70
22.50°	75.27	75.21	76.32	75.65	75.84	75.02	74.63	73.77	75.27	75.21	76.32	75.65	75.84	75.02	74.63	73.77	75.27
25.00°	70.80	71.19	70.90	71.38	71.10	70.93	70.36	70.01	70.80	71.19	70.90	71.38	71.10	70.93	70.36	70.01	70.80
27.50°	67.72	67.56	68.66	67.69	68.32	67.36	67.57	66.43	67.72	67.56	68.66	67.69	68.32	67.36	67.57	66.43	67.72
30.00°	66.72	67.33	67.28	67.48	67.46	67.15	67.02	66.30	66.72	67.33	67.28	67.48	67.46	67.15	67.02	66.30	66.72
32.50°	66.82	67.27	67.68	67.53	67.74	67.43	67.30	66.25	66.82	67.27	67.68	67.53	67.74	67.43	67.30	66.25	66.82
35.00°	68.59	68.85	68.58	69.15	69.17	68.84	68.84	67.95	68.59	68.85	68.58	69.15	69.17	68.84	68.84	67.95	68.59
37.50°	70.47	70.48	70.48	70.87	71.02	70.42	70.61	69.69	70.47	70.48	70.48	70.87	71.02	70.42	70.61	69.69	70.47
40.00°	72.53	72.56	72.66	73.19	73.30	72.62	72.75	72.20	72.53	72.56	72.66	73.19	73.30	72.62	72.75	72.20	72.53
42.50°	74.89	74.69	75.28	75.55	75.68	74.91	75.07	74.71	74.89	74.69	75.28	75.55	75.68	74.91	75.07	74.71	74.89
45.00°	77.75	77.21	78.02	78.11	78.15	77.46	77.66	77.29	77.75	77.21	78.02	78.11	78.15	77.46	77.66	77.29	77.75
47.50°	80.41	79.77	80.42	80.70	80.73	80.06	80.25	79.87	80.41	79.77	80.42	80.70	80.73	80.06	80.25	79.87	80.41
50.00°	82.76	82.64	82.71	83.54	83.41	82.85	82.85	82.53	82.76	82.64	82.71	83.54	83.41	82.85	82.85	82.53	82.76
52.50°	85.15	85.44	85.59	86.35	85.93	85.67	85.41	85.18	85.15	85.44	85.59	86.35	85.93	85.67	85.41	85.18	85.15
55.00°	87.59	87.33	88.67	88.89	88.28	88.29	87.93	87.39	87.59	87.33	88.67	88.89	88.28	88.29	87.93	87.39	87.59
57.50°	89.83	89.27	90.88	91.37	90.67	90.88	90.19	89.60	89.83	89.27	90.88	91.37	90.67	90.88	90.19	89.60	89.83
60.00°	91.75	91.63	92.83	93.41	93.10	92.90	92.01	91.74	91.75	91.63	92.83	93.41	93.10	92.90	92.01	91.74	91.75
62.50°	93.64	93.96	94.71	95.46	95.34	94.82	93.85	93.88	93.64	93.96	94.71	95.46	95.34	94.82	93.85	93.88	93.64
65.00°	95.48	95.82	96.57	97.48	97.34	96.53	95.69	95.47	95.48	95.82	96.57	97.48	97.34	96.53	95.69	95.47	95.48
67.50°	97.14	97.63	97.96	99.41	98.97	98.20	97.36	97.06	97.14	97.63	97.96	99.41	98.97	98.20	97.36	97.06	97.14
70.00°	98.51	98.70	99.19	100.61	100.16	99.67	98.71	98.32	98.51	98.70	99.19	100.61	100.16	99.67	98.71	98.32	98.51
72.50°	99.89	99.80	100.67	101.78	101.48	101.10	100.09	99.59	99.89	99.80	100.67	101.78	101.48	101.10	100.09	99.59	99.89
75.00°	101.30	101.24	102.22	102.74	102.92	102.53	101.54	100.82	101.30	101.24	102.22	102.74	102.92	102.53	101.54	100.82	101.30
77.50°	102.54	102.64	103.29	103.73	104.16	103.96	102.70	102.04	102.54	102.64	103.29	103.73	104.16	103.96	102.70	102.04	102.54
80.00°	103.50	103.47	104.19	105.05	105.16	104.76	103.31	102.92	103.50	103.47	104.19	105.05	105.16	104.76	103.31	102.92	103.50
82.50°	104.21	104.27	104.87	106.26	105.64	105.43	103.90	103.80	104.21	104.27	104.87	106.26	105.64	105.43	103.90	103.80	104.21
85.00°	104.45	104.43	105.48	106.38	105.50	105.42	104.44	104.17	104.45	104.43	105.48	106.38	105.50	105.42	104.44	104.17	104.45
87.50°	104.70	104.61	105.74	106.45	105.42	105.27	104.78	104.54	104.70	104.61	105.74	106.45	105.42	105.27	104.78	104.54	104.70
90.00°	104.99	104.88	105.88	105.93	105.40	104.88	104.70	104.73	104.99	104.88	105.88	105.93	105.40	104.88	104.70	104.73	104.99
92.50°	105.12	105.14	105.64	105.41	105.22	104.44	104.64	104.92	105.12	105.14	105.64	105.41	105.22	104.44	104.64	104.92	105.12
95.00°	104.92	105.03	105.25	104.73	104.85	104.19	104.58	104.70	104.92	105.03	105.25	104.73	104.85	104.19	104.58	104.70	104.92
97.50°	104.60	104.90	104.61	103.92	103.93	103.98	104.36	104.48	104.60	104.90	104.61	103.92	103.93	103.98	104.36	104.48	104.60
100.00°	104.03	104.04	103.85	101.53	102.33	101.45	103.79	104.02	104.03	104.04	103.85	101.53	102.33	101.45	103.79	104.02	104.03
102.50°	103.23	103.16	102.18	98.72	98.82	98.37	102.58	103.56	103.23	103.16	102.18	98.72	98.82	98.37	102.58	103.56	103.23
105.00°	101.95	101.76	100.14	90.71	92.80	91.06	99.99	101.90	101.95	101.76	100.14	90.71	92.80	91.06	99.99	101.90	101.95
107.50°	100.45	100.31	96.16	82.59	85.31	82.70	96.59	100.21	100.45	100.31	96.16	82.59	85.31	82.70	96.59	100.21	100.45
110.00°	98.50	97.39	91.38	72.87	75.85	73.11	91.42	97.78	98.50	97.39	91.38	72.87	75.85	73.11	91.42	97.78	98.50
112.50°	96.17	94.44	85.47	63.18	66.50	63.20	85.83	95.34	96.17	94.44	85.47	63.18	66.50	63.20	85.83	95.34	96.17

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	1,031	1,031	1,031	1,031	965	965	965	965	842	842	842	729	729	729	625	625	577
	1	886	820	762	709	821	763	711	663	655	614	576	556	524	494	465	440	398
	2	786	688	607	540	725	639	566	505	545	488	438	459	414	374	380	344	309
	3	707	590	500	428	650	547	466	401	466	401	348	392	340	296	322	281	251
	4	641	514	421	351	589	477	393	328	407	339	285	341	287	243	281	237	211
	5	585	453	361	294	538	421	338	275	360	291	239	303	247	204	249	205	182
	6	537	404	315	250	495	376	294	235	322	255	204	272	217	175	225	180	160
	7	496	363	277	216	457	338	259	203	291	225	177	246	192	152	205	161	143
	8	460	329	246	190	425	307	231	178	265	201	156	225	173	134	188	145	130
	9	429	300	221	168	396	280	208	158	243	182	139	207	156	120	174	132	118
	10	401	275	200	150	371	258	188	141	224	165	124	192	143	108	162	121	109

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	5.6 fc	-19.4 ft
6.5 ft	4.0 fc	-23.0 ft
7.5 ft	3.0 fc	-26.5 ft
8.0 ft	2.7 fc	-28.3 ft
10.0 ft	1.7 fc	-35.3 ft
12.0 ft	1.2 fc	-42.4 ft
14.0 ft	0.9 fc	-49.5 ft
16.0 ft	0.7 fc	-56.5 ft
20.0 ft	0.4 fc	-70.7 ft
24.0 ft	0.3 fc	-84.8 ft
28.0 ft	0.2 fc	-99.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	9,309	9,309	9,309
45.00°	1,105	1,109	1,110
55.00°	1,137	1,151	1,146
65.00°	1,173	1,187	1,196
75.00°	1,217	1,228	1,236
85.00°	1,265	1,277	1,278

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