

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

CY0618SQFAGV 27L 35K XX XX MW
Nom 6" X 18" H rectangular shaped decorative luminaire

Test Number

SP-00989

Test Date

12/24/2019

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

Summary of Results

Power

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

Lumen Output

Output Lumens	1479
Efficacy	77.82 lm/W

Luminous Dimensions

0° - 180° Size	0.5
90° - 270° Size	0.5
Height	1.5

Spacing Criterion

Two luminaires, plane 0°	0.43
Two luminaires, plane 90°	0.43
Four luminaires	0.45

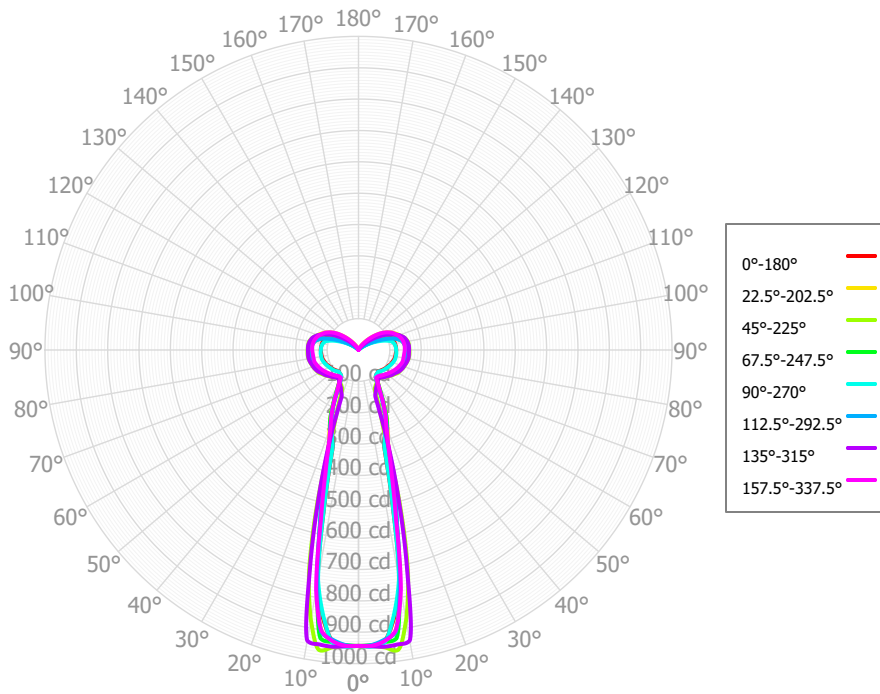
Full Beam Angle

0° - 180°	25°
90° - 270°	25°

IES File Header Contents

Keyword	Value
TEST	SP-00989
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	12/24/2019
ISSUEDATE	4/7/2020
LUMCAT	CY0618SQFAGV 27L 35K XX XX MW
LUMINAIRE	Nom 6" X 18" H rectangular shaped decorative luminaire
LAMPCAT	N/A
LAMP	N/A
OTHER	CCT Output Multipliers: 27K x 0.97, 30K x 0.99, 40K x 1.03
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared 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°	86.60	5.86%	90.00° - 100.00°	157.41	10.65%
10.00° - 20.00°	118.64	8.02%	100.00° - 110.00°	140.87	9.53%
20.00° - 30.00°	79.09	5.35%	100.00° - 120.00°	240.73	16.28%
30.00° - 40.00°	67.74	4.58%	120.00° - 130.00°	55.89	3.78%
40.00° - 50.00°	86.17	5.83%	130.00° - 140.00°	23.29	1.58%
50.00° - 60.00°	110.71	7.49%	140.00° - 150.00°	6.72	0.45%
60.00° - 70.00°	133.90	9.06%	150.00° - 160.00°	1.45	0.10%
70.00° - 80.00°	151.07	10.22%	160.00° - 170.00°	0.46	0.03%
80.00° - 90.00°	158.66	10.73%	170.00° - 180.00°	0.14	0.01%
0.00° - 90.00°	992.58	67.13%	0.00° - 180.00°	1,478.67	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°	944.04	944.04	944.04	944.04	944.04	944.04	944.04	944.04	944.04	944.04	944.04	944.04	944.04	944.04	944.04	944.04	944.04
2.50°	943.36	945.22	945.02	942.60	947.30	942.06	945.86	944.36	943.36	945.22	945.02	942.60	947.30	942.06	945.86	944.36	943.36
5.00°	934.73	930.89	952.18	935.85	938.62	928.57	950.05	932.90	934.73	930.89	952.18	935.85	938.62	928.57	950.05	932.90	934.73
7.50°	864.49	905.33	964.99	927.74	857.48	908.23	947.61	903.96	864.49	905.33	964.99	927.74	857.48	908.23	947.61	903.96	864.49
10.00°	754.36	759.53	874.98	751.22	743.13	758.01	941.15	778.10	754.36	759.53	874.98	751.22	743.13	758.01	941.15	778.10	754.36
12.50°	499.02	551.77	729.77	563.73	498.46	567.42	716.28	553.66	499.02	551.77	729.77	563.73	498.46	567.42	716.28	553.66	499.02
15.00°	313.79	420.88	510.93	423.37	317.15	432.23	495.63	406.97	313.79	420.88	510.93	423.37	317.15	432.23	495.63	406.97	313.79
17.50°	280.98	314.33	267.59	296.61	281.86	305.87	307.42	313.15	280.98	314.33	267.59	296.61	281.86	305.87	307.42	313.15	280.98
20.00°	250.97	269.07	187.25	266.61	249.85	262.81	156.82	259.75	250.97	269.07	187.25	266.61	249.85	262.81	156.82	259.75	250.97
22.50°	224.91	234.44	135.74	233.93	222.68	223.58	143.79	224.68	224.91	234.44	135.74	233.93	222.68	223.58	143.79	224.68	224.91
25.00°	188.82	192.35	127.81	191.88	186.82	182.68	132.87	186.57	188.82	192.35	127.81	191.88	186.82	182.68	132.87	186.57	188.82
27.50°	142.99	150.88	122.59	154.13	142.09	144.86	126.72	147.64	142.99	150.88	122.59	154.13	142.09	144.86	126.72	147.64	142.99
30.00°	116.51	128.04	118.15	125.43	116.01	123.88	120.82	125.11	116.51	128.04	118.15	125.43	116.01	123.88	120.82	125.11	116.51
32.50°	102.57	108.31	114.11	107.89	102.67	107.75	115.28	104.67	102.57	108.31	114.11	107.89	102.67	107.75	115.28	104.67	102.57
35.00°	97.58	107.04	112.54	106.09	97.50	106.41	112.48	104.46	97.58	107.04	112.54	106.09	97.50	106.41	112.48	104.46	97.58
37.50°	96.31	106.52	111.98	106.45	95.94	106.27	112.35	104.87	96.31	106.52	111.98	106.45	95.94	106.27	112.35	104.87	96.31
40.00°	94.67	108.28	114.72	108.86	94.68	108.41	114.38	107.54	94.67	108.28	114.72	108.86	94.68	108.41	114.38	107.54	94.67
42.50°	92.93	110.51	117.76	111.57	93.49	110.79	117.84	110.17	92.93	110.51	117.76	111.57	93.49	110.79	117.84	110.17	92.93
45.00°	94.54	113.64	121.40	114.48	95.91	113.47	120.95	112.62	94.54	113.64	121.40	114.48	95.91	113.47	120.95	112.62	94.54
47.50°	96.52	116.69	125.12	117.55	98.79	116.59	123.90	115.25	96.52	116.69	125.12	117.55	98.79	116.59	123.90	115.25	96.52
50.00°	98.71	119.67	128.97	120.68	100.91	120.07	127.73	118.37	98.71	119.67	128.97	120.68	100.91	120.07	127.73	118.37	98.71
52.50°	100.90	123.04	132.90	124.42	103.00	123.99	131.78	121.41	100.90	123.04	132.90	124.42	103.00	123.99	131.78	121.41	100.90
55.00°	103.02	126.74	136.91	128.30	104.75	128.17	134.94	124.34	103.02	126.74	136.91	128.30	104.75	128.17	134.94	124.34	103.02
57.50°	105.01	129.86	141.07	131.79	106.56	131.48	138.00	127.34	105.01	129.86	141.07	131.79	106.56	131.48	138.00	127.34	105.01
60.00°	106.44	132.63	145.32	135.24	108.63	134.49	142.37	130.41	106.44	132.63	145.32	135.24	108.63	134.49	142.37	130.41	106.44
62.50°	108.21	135.78	148.06	138.39	110.71	137.74	146.62	133.35	108.21	135.78	148.06	138.39	110.71	137.74	146.62	133.35	108.21
65.00°	110.80	139.06	150.22	141.46	112.82	141.03	149.48	136.19	110.80	139.06	150.22	141.46	112.82	141.03	149.48	136.19	110.80
67.50°	112.91	141.18	152.46	143.91	114.86	143.47	152.12	138.78	112.91	141.18	152.46	143.91	114.86	143.47	152.12	138.78	112.91
70.00°	114.26	143.06	154.72	146.22	116.80	145.82	153.82	141.25	114.26	143.06	154.72	146.22	116.80	145.82	153.82	141.25	114.26
72.50°	115.73	145.19	156.58	147.97	118.52	147.67	155.68	143.42	115.73	145.19	156.58	147.97	118.52	147.67	155.68	143.42	115.73
75.00°	117.33	147.33	158.40	149.74	119.98	149.34	157.94	145.50	117.33	147.33	158.40	149.74	119.98	149.34	157.94	145.50	117.33
77.50°	118.31	148.80	160.19	151.52	120.65	149.78	159.83	145.81	118.31	148.80	160.19	151.52	120.65	149.78	159.83	145.81	118.31
80.00°	118.85	150.17	161.83	152.57	120.70	150.15	161.10	145.81	118.85	150.17	161.83	152.57	120.70	150.15	161.10	145.81	118.85
82.50°	119.22	150.80	162.41	152.48	120.88	150.25	161.58	146.07	119.22	150.80	162.41	152.48	120.88	150.25	161.58	146.07	119.22
85.00°	119.51	151.32	162.80	152.14	121.12	150.21	161.19	146.37	119.51	151.32	162.80	152.14	121.12	150.21	161.19	146.37	119.51
87.50°	119.91	151.43	162.48	151.54	120.65	149.86	161.10	147.08	119.91	151.43	162.48	151.54	120.65	149.86	161.10	147.08	119.91
90.00°	120.35	151.30	162.15	150.60	119.95	149.72	161.22	147.73	120.35	151.30	162.15	150.60	119.95	149.72	161.22	147.73	120.35
92.50°	120.14	150.63	161.84	149.43	119.61	149.85	161.21	147.99	120.14	150.63	161.84	149.43	119.61	149.85	161.21	147.99	120.14
95.00°	119.83	150.05	161.52	148.86	119.33	149.03	161.14	147.96	119.83	150.05	161.52	148.86	119.33	149.03	161.14	147.96	119.83
97.50°	119.00	149.61	161.20	148.58	117.74	147.29	159.79	147.02	119.00	149.61	161.20	148.58	117.74	147.29	159.79	147.02	119.00
100.00°	118.17	148.39	159.32	144.94	116.00	144.05	158.07	145.80	118.17	148.39	159.32	144.94	116.00	144.05	158.07	145.80	118.17
102.50°	117.39	146.43	155.89	140.35	112.64	139.87	154.97	144.01	117.39	146.43	155.89	140.35	112.64	139.87	154.97	144.01	117.39
105.00°	116.30	144.21	151.06	131.34	108.27	131.30	151.65	141.60	116.30	144.21	151.06	131.34	108.27	131.30	151.65	141.60	116.30
107.50°	113.68	141.83	145.30	121.72	98.26	120.90	145.14	138.37	113.68	141.83	145.30	121.72	98.26	120.90	145.14	138.37	113.68
110.00°	110.89	137.63	137.38	106.25	87.62	105.84	138.26	134.45	110.89	137.63	137.38	106.25	87.62	105.84	138.26	134.45	110.89
112.50°	107.60	132.66	128.55	90.59	75.09	89.65	127.83	129.93	107.60	132.66	128.55	90.59	75.09	89.65	127.83	129.93	107.60

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	1,645	1,645	1,645	1,645	1,550	1,550	1,550	1,550	1,373	1,373	1,373	1,211	1,211	1,211	1,062	1,062	993
	1	1,436	1,342	1,257	1,181	1,343	1,260	1,184	1,116	1,106	1,046	992	965	918	875	835	799	765
	2	1,292	1,149	1,032	933	1,205	1,079	974	884	946	862	790	824	758	700	711	660	614
	3	1,175	1,005	874	769	1,095	944	826	731	830	735	656	724	648	584	626	566	515
	4	1,078	893	757	654	1,005	840	718	623	741	641	562	649	569	503	564	499	446
	5	995	802	668	568	929	757	634	543	671	570	493	591	508	444	516	449	396
	6	924	728	597	502	864	688	568	481	613	513	439	543	461	398	477	410	358
	7	862	666	539	450	807	631	515	432	565	468	397	503	422	362	445	378	327
	8	808	614	492	409	758	583	471	393	524	430	363	469	390	332	417	352	303
	9	760	569	453	374	714	542	434	361	490	398	334	440	363	308	394	330	282
	10	717	531	420	346	675	506	403	334	460	372	311	415	341	288	373	311	265

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	31.2 fc	2.5 ft
6.5 ft	22.3 fc	2.9 ft
7.5 ft	16.8 fc	3.4 ft
8.0 ft	14.8 fc	3.6 ft
10.0 ft	9.4 fc	4.5 ft
12.0 ft	6.6 fc	5.4 ft
14.0 ft	4.8 fc	6.3 ft
16.0 ft	3.7 fc	7.2 ft
20.0 ft	2.4 fc	9.0 ft
24.0 ft	1.6 fc	10.8 ft
28.0 ft	1.2 fc	12.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	40,646	40,646	40,646
45.00°	1,439	1,410	1,460
55.00°	1,463	1,456	1,488
65.00°	1,519	1,516	1,546
75.00°	1,600	1,565	1,637
85.00°	1,673	1,625	1,696

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	10.0	11.2	10.8	12.0	13.0	10.2	11.3	10.9	12.1	13.1
	3H	12.9	13.9	13.7	14.8	15.8	13.0	14.1	13.8	14.9	15.9
	4H	14.2	15.3	15.0	16.1	17.1	14.4	15.4	15.2	16.3	17.3
	6H	15.6	16.6	16.4	17.4	18.4	15.7	16.7	16.6	17.5	18.6
	8H	16.2	17.1	17.1	18.0	19.1	16.4	17.3	17.2	18.1	19.2
	12H	16.8	17.7	17.7	18.6	19.7	17.0	17.9	17.8	18.7	19.8
4H	2H	11.1	12.1	11.9	12.9	14.0	11.2	12.2	12.0	13.0	14.1
	3H	14.2	15.0	15.0	15.9	17.0	14.3	15.2	15.1	16.0	17.1
	4H	15.7	16.5	16.5	17.4	18.5	15.8	16.7	16.7	17.5	18.6
	6H	17.2	17.9	18.0	18.8	19.9	17.3	18.1	18.2	19.0	20.0
	8H	17.9	18.6	18.8	19.5	20.6	18.0	18.7	18.9	19.6	20.7
	12H	18.6	19.3	19.5	20.1	21.2	18.7	19.4	19.6	20.3	21.4
8H	4H	16.4	17.1	17.2	18.0	19.1	16.5	17.2	17.3	18.1	19.2
	6H	18.1	18.8	19.0	19.7	20.8	18.3	18.9	19.1	19.8	20.9
	8H	19.0	19.6	19.9	20.5	21.6	19.1	19.7	20.0	20.6	21.7
	12H	19.9	20.4	20.8	21.3	22.4	20.0	20.5	20.9	21.4	22.6
12H	4H	16.5	17.2	17.4	18.1	19.2	16.6	17.3	17.5	18.2	19.3
	6H	18.4	19.0	19.3	19.8	21.0	18.5	19.1	19.4	20.0	21.1
	8H	19.4	19.9	20.3	20.8	21.9	19.5	20.0	20.4	20.9	22.0

Corrected UGR values based on total output lumens

SHR = 1.0