

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

CY0608GV 27L 35K XX XX MW

Nom 6" diam x 8" H cylindrical shaped decorative luminaire

### Test Number

SP-00986

### 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
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#### Lumen Output

Output Lumens	2015
Efficacy	106.08 lm/W

#### Luminous Dimensions

0° - 180° Size	-0.5
90° - 270° Size	-0.5
Height	0.67

#### Spacing Criterion

Two luminaires, plane 0°	0.85
Two luminaires, plane 90°	0.85
Four luminaires	0.77

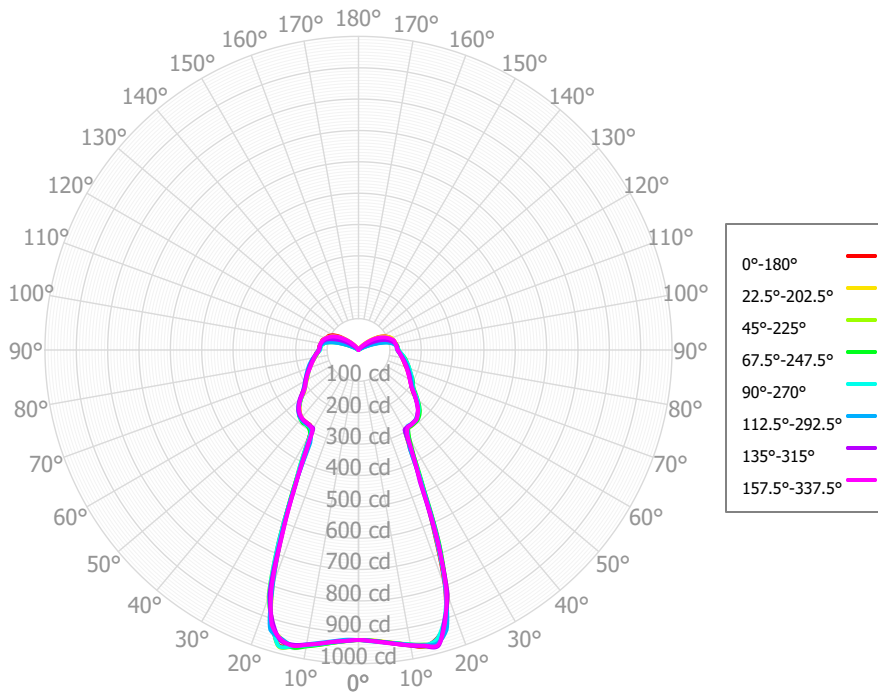
#### Full Beam Angle

0° - 180°	50°
90° - 270°	50°

### IES File Header Contents

Keyword	Value
TEST	SP-00986
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	12/24/2019
ISSUEDATE	4/7/2020
LUMCAT	CY0608GV 27L 35K XX XX MW
LUMINAIRE	Nom 6" diam x 8" H cylindrical 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°	91.42	4.54%	90.00° - 100.00°	134.08	6.65%
10.00° - 20.00°	262.77	13.04%	100.00° - 110.00°	112.72	5.59%
20.00° - 30.00°	230.25	11.42%	100.00° - 120.00°	182.40	9.05%
30.00° - 40.00°	182.68	9.06%	120.00° - 130.00°	32.09	1.59%
40.00° - 50.00°	206.43	10.24%	130.00° - 140.00°	10.29	0.51%
50.00° - 60.00°	190.50	9.45%	140.00° - 150.00°	2.21	0.11%
60.00° - 70.00°	178.17	8.84%	150.00° - 160.00°	0.80	0.04%
70.00° - 80.00°	164.16	8.14%	160.00° - 170.00°	0.50	0.02%
80.00° - 90.00°	146.55	7.27%	170.00° - 180.00°	0.16	0.01%
0.00° - 90.00°	1,652.94	82.01%	0.00° - 180.00°	2,015.46	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°	925.07	925.07	925.07	925.07	925.07	925.07	925.07	925.07	925.07	925.07	925.07	925.07	925.07	925.07	925.07	925.07	925.07
2.50°	928.73	926.63	928.55	928.31	930.35	925.38	929.12	928.53	927.82	929.17	929.05	929.53	928.93	928.03	928.94	929.22	928.73
5.00°	935.58	934.09	935.06	935.46	936.53	932.64	934.89	934.32	936.02	937.19	937.04	937.22	936.24	935.65	935.46	937.04	935.58
7.50°	946.00	943.33	944.44	943.99	944.66	942.16	944.68	944.08	945.65	947.95	947.04	948.44	946.11	944.30	946.04	946.20	946.00
10.00°	957.07	955.20	954.51	954.17	953.80	953.56	954.26	954.73	956.33	958.84	957.21	960.11	956.79	955.83	957.25	956.22	957.07
12.50°	968.87	964.19	969.01	962.64	965.36	965.45	962.95	966.49	966.27	969.80	968.60	972.08	967.47	965.19	967.86	965.94	968.87
15.00°	956.02	969.32	972.00	969.24	957.67	953.08	959.45	955.84	975.72	953.00	980.06	957.97	978.16	969.01	978.38	975.48	956.02
17.50°	917.77	923.77	911.47	921.28	908.00	935.25	910.40	919.51	917.48	922.68	910.92	927.56	915.17	934.79	908.95	915.88	917.77
20.00°	809.59	813.91	830.24	818.31	817.03	800.11	829.18	812.40	817.89	801.27	838.42	809.57	833.60	810.38	830.83	818.57	809.59
22.50°	635.20	671.46	651.16	676.62	641.64	641.01	641.69	630.81	666.17	638.26	661.52	641.59	668.47	668.02	651.24	660.74	635.20
25.00°	486.02	491.03	485.90	498.00	486.88	486.96	474.64	478.59	484.47	490.11	482.62	495.62	484.99	487.16	463.21	472.87	486.02
27.50°	358.77	372.01	380.10	382.71	370.48	333.80	367.70	355.56	376.91	348.09	386.54	361.10	385.71	354.25	375.38	371.65	358.77
30.00°	298.89	318.66	296.35	322.86	295.86	301.75	289.03	293.56	308.24	300.83	292.39	308.24	302.33	314.73	294.26	310.77	298.89
32.50°	294.37	292.48	295.66	295.62	292.04	287.34	287.66	287.31	285.51	288.81	290.25	295.26	290.28	289.61	290.73	292.50	294.37
35.00°	292.17	293.76	294.79	294.60	289.83	286.80	286.46	284.45	284.66	285.79	288.13	291.71	290.31	290.84	290.56	292.17	292.17
37.50°	291.73	293.04	293.33	293.47	290.19	288.03	285.63	284.45	283.72	285.88	286.52	292.32	288.66	289.99	289.20	290.44	291.73
40.00°	287.24	290.44	290.35	292.27	287.64	284.70	283.60	281.50	282.75	281.36	284.57	287.57	286.77	285.70	287.81	288.18	287.24
42.50°	279.95	283.46	282.68	286.10	280.86	280.90	278.89	276.23	276.64	275.42	276.39	280.67	279.08	279.06	277.87	279.34	279.95
45.00°	268.70	272.75	273.40	276.47	271.61	270.74	271.62	267.41	268.45	265.84	267.73	268.91	270.72	268.86	267.79	268.19	268.70
47.50°	254.88	257.99	259.71	262.28	259.09	260.09	259.00	256.03	255.65	255.28	252.95	255.35	255.06	255.41	252.45	253.48	254.88
50.00°	237.94	240.02	244.49	245.19	244.16	242.03	244.47	240.19	241.16	237.59	238.23	239.00	238.70	237.30	237.10	237.65	237.94
52.50°	219.14	224.26	225.48	229.67	226.19	223.58	226.30	221.38	225.99	218.11	224.02	221.71	223.29	222.26	221.39	222.09	219.14
55.00°	206.72	210.15	210.06	215.08	212.83	213.77	211.76	208.75	210.58	207.63	210.34	210.64	207.95	211.28	206.07	206.59	206.72
57.50°	197.76	200.05	202.92	206.17	204.80	204.28	203.48	199.95	201.14	199.11	200.89	201.42	201.07	202.07	197.99	196.88	197.76
60.00°	189.87	192.68	195.36	200.37	197.74	196.69	195.56	192.52	193.48	190.87	191.77	193.23	194.59	195.01	190.07	188.65	189.87
62.50°	182.53	185.48	186.92	192.84	191.70	189.12	188.25	185.87	186.28	182.68	184.90	185.33	186.09	187.73	184.08	181.47	182.53
65.00°	175.65	178.38	179.17	184.44	185.30	182.98	180.96	178.59	179.21	177.00	178.14	179.64	177.53	180.21	178.03	174.53	175.65
67.50°	168.99	171.79	172.72	177.91	178.53	176.84	173.71	170.96	172.58	171.74	171.99	174.47	172.63	173.60	171.26	168.64	168.99
70.00°	162.40	165.50	166.24	172.24	172.28	171.08	167.21	164.39	166.05	165.38	165.87	168.08	167.76	167.95	164.60	162.95	162.40
72.50°	155.83	159.92	159.71	166.64	166.51	165.30	161.71	158.33	160.14	158.87	159.89	161.43	162.13	162.04	158.74	157.19	155.83
75.00°	150.62	154.72	153.96	161.07	160.41	159.06	156.22	152.74	154.35	153.70	153.82	156.11	156.46	155.87	152.95	151.41	150.62
77.50°	145.92	149.05	149.48	155.67	154.02	152.81	150.77	147.37	149.10	148.68	147.33	151.01	149.56	149.85	147.59	145.86	145.92
80.00°	141.72	143.17	144.87	150.33	148.41	146.42	145.32	143.07	143.95	142.83	141.23	144.74	142.78	143.96	142.28	140.34	141.72
82.50°	137.69	137.94	140.06	143.50	143.43	140.17	139.88	139.22	139.91	136.91	136.68	138.29	138.55	138.11	137.22	136.52	137.69
85.00°	133.02	133.01	135.10	136.15	137.89	135.54	134.52	134.44	136.05	133.19	132.25	132.93	134.19	132.29	132.37	132.91	133.02
87.50°	128.14	129.16	129.94	131.49	131.93	131.06	129.23	129.33	131.51	129.62	128.27	127.72	128.06	127.54	128.61	128.61	128.14
90.00°	126.12	125.76	126.70	127.68	128.18	127.99	125.73	126.92	126.87	127.28	125.00	125.08	122.43	123.63	125.38	124.24	126.12
92.50°	124.89	124.83	125.94	125.98	125.92	125.15	124.07	125.41	126.15	125.00	123.97	122.70	121.82	121.96	124.49	122.84	124.89
95.00°	123.33	124.82	124.55	124.89	123.53	124.08	123.07	124.56	125.85	124.03	122.85	120.88	120.99	121.86	123.44	121.66	123.33
97.50°	121.69	123.17	122.40	120.75	121.07	122.38	122.70	123.91	123.73	123.08	121.50	119.12	118.30	118.61	121.76	120.53	121.69
100.00°	120.14	120.96	119.87	115.86	116.27	116.61	121.09	122.33	121.46	121.67	119.79	113.61	114.97	113.26	119.27	119.41	120.14
102.50°	118.60	118.70	116.91	106.61	110.12	109.54	118.40	120.50	120.49	120.23	117.17	107.87	107.15	103.91	113.89	118.16	118.60
105.00°	115.42	116.41	112.31	96.37	97.14	95.37	114.24	117.82	119.61	117.54	113.87	95.10	98.19	92.14	108.22	116.91	115.42
107.50°	111.92	114.18	106.01	80.80	80.55	80.63	108.86	114.94	115.16	114.82	108.98	82.06	82.52	76.05	101.59	111.97	111.92
110.00°	108.79	111.96	98.28	64.20	65.06	63.17	100.61	110.34	110.56	110.97	102.85	63.77	66.95	57.58	93.94	106.96	108.79
112.50°	105.71	106.49	89.20	48.10	50.10	46.48	90.20	105.39	107.88	107.00	94.11	45.35	51.88	42.19	83.41	100.90	105.71

### 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%	30%
	0	2,313	2,313	2,313	2,313	2,217	2,217	2,217	2,217	2,038	2,038	2,038	1,874	1,874	1,874	1,724	1,724	1,724
	1	2,069	1,957	1,857	1,766	1,975	1,875	1,785	1,703	1,722	1,649	1,583	1,581	1,523	1,470	1,451	1,406	1,364
	2	1,880	1,704	1,559	1,437	1,792	1,635	1,503	1,392	1,504	1,397	1,304	1,384	1,297	1,221	1,272	1,203	1,141
	3	1,722	1,507	1,340	1,208	1,641	1,447	1,296	1,173	1,336	1,210	1,107	1,232	1,129	1,042	1,136	1,052	980
	4	1,587	1,348	1,173	1,039	1,512	1,297	1,137	1,013	1,201	1,066	960	1,112	1,000	909	1,029	936	859
	5	1,469	1,217	1,041	911	1,402	1,173	1,011	890	1,090	953	847	1,013	897	806	941	844	765
	6	1,367	1,108	935	810	1,305	1,070	909	793	998	860	758	931	813	723	868	768	690
	7	1,276	1,016	847	729	1,221	983	826	714	920	784	685	861	744	656	806	705	628
	8	1,196	937	774	662	1,146	908	756	649	853	720	625	801	685	600	752	651	576
	9	1,125	869	712	606	1,079	843	696	595	794	665	574	748	635	553	705	605	532
	10	1,061	810	659	559	1,019	787	645	550	743	618	531	702	591	513	663	565	495

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	30.6 fc	5.1 ft
6.5 ft	21.9 fc	6.0 ft
7.5 ft	16.4 fc	7.0 ft
8.0 ft	14.5 fc	7.4 ft
10.0 ft	9.3 fc	9.3 ft
12.0 ft	6.4 fc	11.2 ft
14.0 ft	4.7 fc	13.0 ft
16.0 ft	3.6 fc	14.9 ft
20.0 ft	2.3 fc	18.6 ft
24.0 ft	1.6 fc	22.3 ft
28.0 ft	1.2 fc	26.0 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	50,713	50,713	50,713
<b>45.00°</b>	7,698	7,833	7,781
<b>55.00°</b>	5,749	5,842	5,919
<b>65.00°</b>	4,891	4,989	5,159
<b>75.00°</b>	4,330	4,426	4,612
<b>85.00°</b>	4,081	4,145	4,230

### 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