

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

CY0608SQCBFAGV 27L 35K XX XX MW

Nom 6" x 8" H cube shaped decorative luminaire with closed bottom

Test Number

SP-00987

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	1558
Efficacy	82.02 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.9
Two luminaires, plane 90°	1.9
Four luminaires	2.18

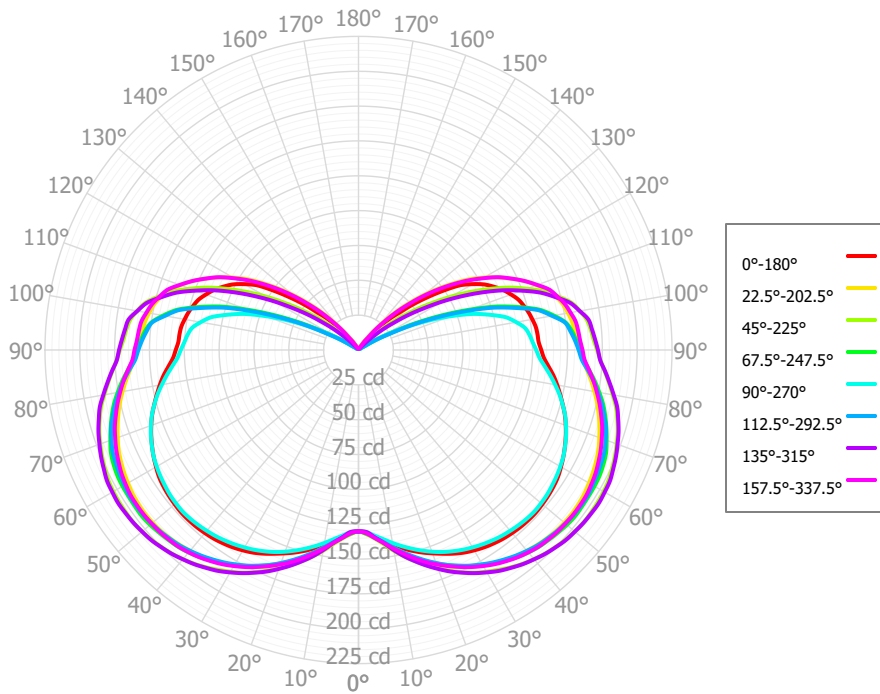
Full Beam Angle

0° - 180°	235°
90° - 270°	208°

IES File Header Contents

Keyword	Value
TEST	SP-00987
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	12/24/2019
ISSUEDATE	4/7/2020
LUMCAT	CY0608SQCBFAGV 27L 35K XX XX MW
LUMINAIRE	Nom 6" x 8" H cube shaped decorative luminaire with closed bottom
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°	13.40	0.86%	90.00° - 100.00°	164.27	10.54%
10.00° - 20.00°	43.75	2.81%	100.00° - 110.00°	137.34	8.81%
20.00° - 30.00°	78.69	5.05%	100.00° - 120.00°	222.48	14.28%
30.00° - 40.00°	114.18	7.33%	120.00° - 130.00°	39.40	2.53%
40.00° - 50.00°	146.19	9.38%	130.00° - 140.00°	13.79	0.89%
50.00° - 60.00°	170.84	10.96%	140.00° - 150.00°	2.60	0.17%
60.00° - 70.00°	185.04	11.87%	150.00° - 160.00°	0.59	0.04%
70.00° - 80.00°	186.56	11.97%	160.00° - 170.00°	0.35	0.02%
80.00° - 90.00°	176.03	11.30%	170.00° - 180.00°	0.12	0.01%
0.00° - 90.00°	1,114.69	71.53%	0.00° - 180.00°	1,558.29	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°	130.21	130.21	130.21	130.21	130.21	130.21	130.21	130.21	130.21	130.21	130.21	130.21	130.21	130.21	130.21	130.21	130.21
2.50°	131.37	132.38	132.15	132.08	130.84	131.44	130.78	131.73	131.37	132.38	132.15	132.08	130.84	131.44	130.78	131.73	131.37
5.00°	134.55	135.43	135.97	135.18	133.74	135.14	135.09	135.48	134.55	135.43	135.97	135.18	133.74	135.14	135.09	135.48	134.55
7.50°	138.08	139.36	140.62	139.23	136.96	139.18	139.77	139.66	138.08	139.36	140.62	139.23	136.96	139.18	139.77	139.66	138.08
10.00°	142.02	144.17	146.34	144.42	140.63	143.99	145.76	144.65	142.02	144.17	146.34	144.42	140.63	143.99	145.76	144.65	142.02
12.50°	145.74	149.17	151.83	149.43	144.19	148.78	151.62	149.63	145.74	149.17	151.83	149.43	144.19	148.78	151.62	149.63	145.74
15.00°	149.17	154.38	157.00	154.21	147.61	153.51	156.94	154.64	149.17	154.38	157.00	154.21	147.61	153.51	156.94	154.64	149.17
17.50°	152.39	159.25	161.98	158.75	150.92	158.18	162.20	159.40	152.39	159.25	161.98	158.75	150.92	158.18	162.20	159.40	152.39
20.00°	155.32	163.73	166.70	162.97	154.05	162.69	167.19	163.66	155.32	163.73	166.70	162.97	154.05	162.69	167.19	163.66	155.32
22.50°	158.28	167.76	171.38	167.06	156.93	167.01	172.05	167.83	158.28	167.76	171.38	167.06	156.93	167.01	172.05	167.83	158.28
25.00°	161.26	171.25	176.03	170.99	159.40	170.82	176.33	171.80	161.26	171.25	176.03	170.99	159.40	170.82	176.33	171.80	161.26
27.50°	163.90	174.68	180.22	174.72	161.67	174.47	180.52	175.60	163.90	174.68	180.22	174.72	161.67	174.47	180.52	175.60	163.90
30.00°	166.02	178.03	183.67	178.18	163.61	177.61	184.29	179.00	166.02	178.03	183.67	178.18	163.61	177.61	184.29	179.00	166.02
32.50°	167.90	181.11	187.08	181.49	165.41	180.65	187.93	182.21	167.90	181.11	187.08	181.49	165.41	180.65	187.93	182.21	167.90
35.00°	169.39	183.84	190.41	184.55	166.97	183.34	190.86	184.94	169.39	183.84	190.41	184.55	166.97	183.34	190.86	184.94	169.39
37.50°	170.64	186.21	193.45	187.34	168.35	185.91	193.72	187.49	170.64	186.21	193.45	187.34	168.35	185.91	193.72	187.49	170.64
40.00°	171.49	188.08	195.96	189.67	169.38	188.12	196.09	189.55	171.49	188.08	195.96	189.67	169.38	188.12	196.09	189.55	171.49
42.50°	172.16	189.76	198.21	191.61	170.30	190.15	198.39	191.35	172.16	189.76	198.21	191.61	170.30	190.15	198.39	191.35	172.16
45.00°	172.53	191.15	199.94	192.87	171.00	191.52	200.17	192.41	172.53	191.15	199.94	192.87	171.00	191.52	200.17	192.41	172.53
47.50°	172.62	192.22	201.50	194.08	171.37	192.80	201.86	193.33	172.62	192.22	201.50	194.08	171.37	192.80	201.86	193.33	172.62
50.00°	172.21	192.76	202.68	195.21	171.07	193.72	202.77	193.83	172.21	192.76	202.68	195.21	171.07	193.72	202.77	193.83	172.21
52.50°	171.66	192.99	203.51	195.92	170.56	194.53	203.63	194.21	171.66	192.99	203.51	195.92	170.56	194.53	203.63	194.21	171.66
55.00°	170.84	192.71	203.57	195.79	169.59	194.77	204.11	194.19	170.84	192.71	203.57	195.79	169.59	194.77	204.11	194.19	170.84
57.50°	169.68	192.14	203.51	195.67	168.52	194.85	204.51	193.96	169.68	192.14	203.51	195.67	168.52	194.85	204.51	193.96	169.68
60.00°	167.79	191.04	203.13	195.53	167.23	194.08	204.01	192.95	167.79	191.04	203.13	195.53	167.23	194.08	204.01	192.95	167.79
62.50°	165.78	189.79	202.42	195.09	165.70	193.28	203.44	191.79	165.78	189.79	202.42	195.09	165.70	193.28	203.44	191.79	165.78
65.00°	163.47	188.24	200.86	193.95	163.56	192.23	201.73	190.01	163.47	188.24	200.86	193.95	163.56	192.23	201.73	190.01	163.47
67.50°	161.03	186.40	199.18	192.32	161.26	191.01	199.99	188.14	161.03	186.40	199.18	192.32	161.26	191.01	199.99	188.14	161.03
70.00°	158.28	183.92	197.21	189.49	158.48	188.68	197.85	185.82	158.28	183.92	197.21	189.49	158.48	188.68	197.85	185.82	158.28
72.50°	155.32	181.32	195.04	186.55	155.46	186.19	195.68	183.37	155.32	181.32	195.04	186.55	155.46	186.19	195.68	183.37	155.32
75.00°	151.79	178.46	192.31	183.32	151.68	182.53	192.95	180.29	151.79	178.46	192.31	183.32	151.68	182.53	192.95	180.29	151.79
77.50°	148.27	175.43	189.28	179.80	147.74	178.79	190.19	177.15	148.27	175.43	189.28	179.80	147.74	178.79	190.19	177.15	148.27
80.00°	144.81	171.95	185.29	175.49	143.27	174.46	186.01	173.69	144.81	171.95	185.29	175.49	143.27	174.46	186.01	173.69	144.81
82.50°	141.16	168.39	181.32	171.04	138.78	170.08	181.83	170.15	141.16	168.39	181.32	171.04	138.78	170.08	181.83	170.15	141.16
85.00°	136.96	164.60	177.46	166.20	134.20	165.17	177.78	166.13	136.96	164.60	177.46	166.20	134.20	165.17	177.78	166.13	136.96
87.50°	133.25	161.16	173.87	161.85	130.06	160.45	173.73	162.41	133.25	161.16	173.87	161.85	130.06	160.45	173.73	162.41	133.25
90.00°	131.17	158.68	171.29	159.17	127.56	158.01	171.86	160.75	131.17	158.68	171.29	159.17	127.56	158.01	171.86	160.75	131.17
92.50°	129.44	156.60	168.92	156.49	125.16	155.55	170.01	159.18	129.44	156.60	168.92	156.49	125.16	155.55	170.01	159.18	129.44
95.00°	128.96	155.73	167.33	153.83	123.21	152.75	168.25	158.25	128.96	155.73	167.33	153.83	123.21	152.75	168.25	158.25	128.96
97.50°	128.26	154.61	165.30	150.13	120.61	149.67	166.50	157.15	128.26	154.61	165.30	150.13	120.61	149.67	166.50	157.15	128.26
100.00°	126.68	152.70	161.34	142.39	114.98	141.07	161.20	154.53	126.68	152.70	161.34	142.39	114.98	141.07	161.20	154.53	126.68
102.50°	124.98	150.43	156.64	133.37	108.49	132.22	155.76	151.80	124.98	150.43	156.64	133.37	108.49	132.22	155.76	151.80	124.98
105.00°	122.78	146.90	148.38	118.97	97.62	116.63	146.47	147.89	122.78	146.90	148.38	118.97	97.62	116.63	146.47	147.89	122.78
107.50°	120.30	142.72	139.66	103.70	86.15	100.94	136.96	143.74	120.30	142.72	139.66	103.70	86.15	100.94	136.96	143.74	120.30
110.00°	116.49	136.12	128.49	84.33	71.26	81.28	124.54	136.50	116.49	136.12	128.49	84.33	71.26	81.28	124.54	136.50	116.49
112.50°	112.47	129.22	116.99	65.08	56.37	61.63	111.91	129.21	112.47	129.22	116.99	65.08	56.37	61.63	111.91	129.21	112.47

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	1,749	1,749	1,749	1,749	1,657	1,657	1,657	1,657	1,485	1,485	1,485	1,327	1,327	1,327	1,183	1,183	1,115
	1	1,510	1,402	1,306	1,219	1,418	1,322	1,235	1,157	1,171	1,102	1,038	1,033	978	927	906	863	804
	2	1,339	1,175	1,039	925	1,252	1,106	983	879	976	876	791	856	776	706	745	682	632
	3	1,201	1,004	852	730	1,121	944	806	695	832	719	625	728	636	558	632	557	494
	4	1,087	871	714	594	1,013	820	676	565	723	603	509	632	534	455	548	468	431
	5	990	766	609	493	923	721	577	470	636	516	424	558	457	379	484	401	335
	6	907	680	527	417	846	641	500	398	567	448	359	498	398	321	433	349	284
	7	836	608	461	358	780	574	438	341	509	393	309	448	350	276	391	308	245
	8	773	549	408	311	723	519	388	297	461	349	269	407	311	241	356	275	214
	9	719	499	364	273	673	472	346	261	421	312	236	373	279	212	327	247	189
	10	671	456	327	242	629	432	312	231	386	282	210	343	253	189	302	224	168

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	4.3 fc	-21.3 ft
6.5 ft	3.1 fc	-25.2 ft
7.5 ft	2.3 fc	-29.0 ft
8.0 ft	2.0 fc	-31.0 ft
10.0 ft	1.3 fc	-38.7 ft
12.0 ft	0.9 fc	-46.5 ft
14.0 ft	0.7 fc	-54.2 ft
16.0 ft	0.5 fc	-61.9 ft
20.0 ft	0.3 fc	-77.4 ft
24.0 ft	0.2 fc	-92.9 ft
28.0 ft	0.2 fc	-108.4 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	5,606	5,606	5,606
45.00°	4,489	4,205	4,450
55.00°	4,401	4,123	4,369
65.00°	4,299	4,041	4,302
75.00°	4,208	3,963	4,205
85.00°	4,147	3,869	4,063

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	14.9	16.2	15.7	17.0	17.9	15.0	16.3	15.7	17.1	18.0
	3H	17.5	18.7	18.2	19.5	20.4	17.6	18.8	18.3	19.5	20.5
	4H	18.7	19.8	19.4	20.6	21.6	18.8	19.9	19.5	20.7	21.6
	6H	19.8	20.9	20.6	21.7	22.7	19.9	21.0	20.6	21.8	22.7
	8H	20.4	21.4	21.1	22.2	23.2	20.4	21.4	21.2	22.3	23.2
	12H	20.9	21.9	21.7	22.7	23.7	20.9	21.9	21.7	22.7	23.7
4H	2H	15.8	17.0	16.6	17.8	18.7	15.9	17.0	16.6	17.8	18.8
	3H	18.6	19.6	19.4	20.4	21.4	18.7	19.7	19.5	20.5	21.5
	4H	20.0	20.9	20.8	21.7	22.7	20.1	21.0	20.8	21.8	22.8
	6H	21.3	22.2	22.1	23.0	24.0	21.4	22.2	22.2	23.0	24.0
	8H	21.9	22.7	22.7	23.6	24.6	22.0	22.8	22.8	23.6	24.6
	12H	22.5	23.3	23.4	24.1	25.2	22.6	23.3	23.4	24.1	25.2
8H	4H	20.6	21.4	21.4	22.2	23.2	20.7	21.5	21.4	22.3	23.3
	6H	22.1	22.8	23.0	23.7	24.7	22.2	22.9	23.0	23.8	24.8
	8H	22.9	23.6	23.8	24.4	25.5	23.0	23.6	23.8	24.5	25.5
	12H	23.7	24.3	24.5	25.1	26.2	23.7	24.3	24.6	25.2	26.2
12H	4H	20.7	21.4	21.5	22.3	23.3	20.8	21.5	21.6	22.4	23.4
	6H	22.4	23.0	23.2	23.8	24.9	22.4	23.0	23.3	23.9	25.0
	8H	23.2	23.8	24.1	24.7	25.7	23.3	23.8	24.1	24.7	25.8

Corrected UGR values based on total output lumens

SHR = 1.0