

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

CY1520SQFAGV 27L 35K XX XX MW
Nom 15" square x 18" H Luminous 'Cube' Closed Bottom

Test Number

SP-00907_M-27L

Test Date

4/30/2019

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	1791
Efficacy	94.27 lm/W

Luminous Dimensions

0° - 180° Size	1.25
90° - 270° Size	1.25
Height	1.5

Spacing Criterion

Two luminaires, plane 0°	1.95
Two luminaires, plane 90°	1.97
Four luminaires	2.22

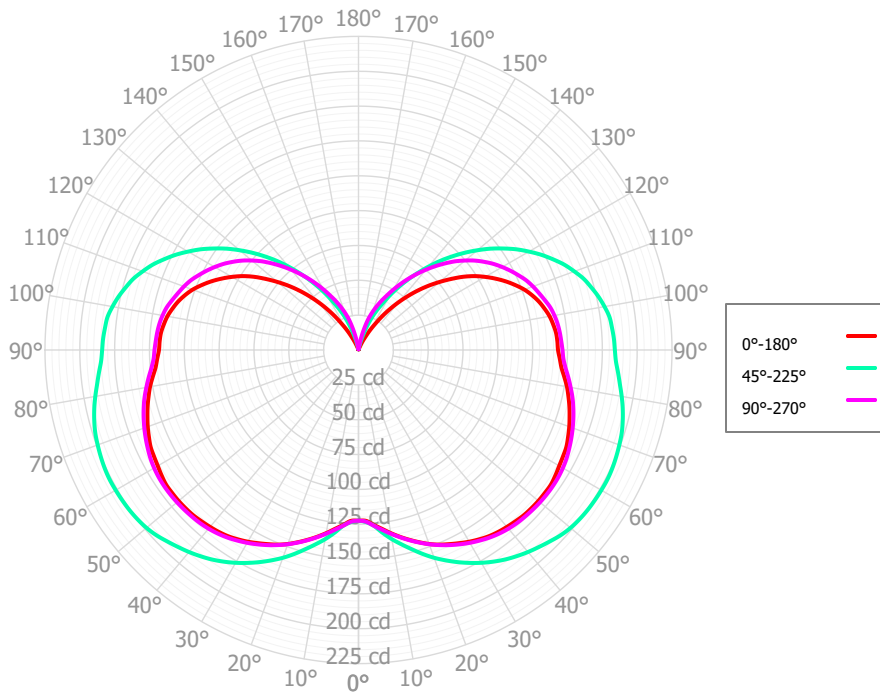
Full Beam Angle

0° - 180°	243°
90° - 270°	259°

IES File Header Contents

Keyword	Value
TEST	SP-00907_M-27L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	4/30/2019
ISSUEDATE	4/7/2020
LUMCAT	CY1520SQFAGV 27L 35K XX XX MW
LUMINAIRE	Nom 15" square x 18" H Luminous 'Cube' Closed Bottom
OTHER	Uplight - 38.9%
OTHER	Downlight - 61.1%
LAMPCAT	N/A
LAMP	N/A, CRI 80+
OTHER	CCT Output Multipliers: 27K x 0.97, 30K x 0.99, 40K x 1.03
OTHER	Total luminaire wattages is approximate
OTHER	This report prepared by Spectrum Lighting, scaled from 55L
_CRI	80+
_CCTMULT	27K x 0.97, 30K x 0.99, 40K x 1.03
_LAMPMULT	15L x 0.268

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	12.91	0.72%	90.00° - 100.00°	177.63	9.92%
10.00° - 20.00°	41.30	2.31%	100.00° - 110.00°	163.34	9.12%
20.00° - 30.00°	74.69	4.17%	100.00° - 120.00°	300.03	16.75%
30.00° - 40.00°	109.00	6.08%	120.00° - 130.00°	102.25	5.71%
40.00° - 50.00°	140.37	7.84%	130.00° - 140.00°	65.82	3.67%
50.00° - 60.00°	165.65	9.25%	140.00° - 150.00°	34.24	1.91%
60.00° - 70.00°	181.64	10.14%	150.00° - 160.00°	13.05	0.73%
70.00° - 80.00°	187.19	10.45%	160.00° - 170.00°	2.63	0.15%
80.00° - 90.00°	183.00	10.21%	170.00° - 180.00°	0.10	0.01%
0.00° - 90.00°	1,095.73	61.16%	0.00° - 180.00°	1,791.48	100.00%

Candela Distribution

	0.00°	45.00°	90.00°
0.00°	122.53	122.53	122.53
2.50°	122.73	123.63	123.36
5.00°	126.00	126.64	126.62
7.50°	129.50	132.34	130.16
10.00°	133.46	137.85	133.91
12.50°	137.33	142.91	137.63
15.00°	141.03	148.07	141.34
17.50°	144.64	153.51	144.91
20.00°	148.14	158.70	148.36
22.50°	151.19	163.40	151.54
25.00°	153.75	167.96	154.50
27.50°	156.30	172.26	157.24
30.00°	158.87	176.35	159.80
32.50°	161.12	180.10	162.14
35.00°	163.14	183.53	164.27
37.50°	164.60	186.50	166.02
40.00°	165.72	189.25	167.40
42.50°	166.74	191.74	168.43
45.00°	167.71	194.24	169.08
47.50°	168.20	196.77	169.63
50.00°	168.51	198.61	170.05
52.50°	168.56	199.76	170.27
55.00°	168.53	200.53	170.29
57.50°	167.55	200.97	170.00
60.00°	166.36	201.23	169.36
62.50°	165.46	201.37	168.35
65.00°	164.60	200.96	166.90
67.50°	162.82	200.19	165.33
70.00°	160.97	199.20	163.59
72.50°	158.84	198.07	161.70
75.00°	156.70	196.33	159.60
77.50°	154.33	194.23	157.27
80.00°	151.93	191.82	154.60
82.50°	149.01	189.24	151.91
85.00°	146.25	187.01	149.21
87.50°	144.61	184.92	147.21
90.00°	143.20	183.98	146.41
92.50°	142.86	183.48	145.66
95.00°	142.29	182.63	144.99
97.50°	140.92	181.67	144.10
100.00°	139.26	179.26	142.76
102.50°	136.82	176.46	141.01
105.00°	134.07	173.08	138.40
107.50°	130.64	169.57	135.82
110.00°	126.67	164.86	133.27
112.50°	121.77	159.93	130.39

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	1,967	1,967	1,967	1,967	1,840	1,840	1,840	1,840	1,604	1,604	1,604	1,388	1,388	1,388	1,189	1,189	1,189
	1	1,705	1,587	1,481	1,385	1,581	1,477	1,382	1,297	1,270	1,196	1,129	1,081	1,024	971	907	863	822
	2	1,516	1,335	1,186	1,060	1,400	1,240	1,107	993	1,062	956	864	897	814	741	745	681	624
	3	1,362	1,144	976	842	1,255	1,062	911	789	908	786	687	765	668	588	632	557	492
	4	1,233	995	820	687	1,135	924	766	644	789	662	561	664	562	479	548	467	400
	5	1,124	875	701	572	1,035	813	655	537	695	566	468	586	482	400	484	400	333
	6	1,030	777	607	485	949	722	567	455	619	492	396	523	419	339	433	349	283
	7	948	695	531	416	874	647	497	391	556	432	341	471	368	292	391	307	243
	8	877	627	469	361	810	584	440	339	504	383	296	428	327	254	356	274	212
	9	815	569	418	316	753	531	392	297	459	342	260	391	294	224	327	247	187
	10	760	520	376	280	703	486	353	263	421	308	231	360	265	199	302	224	167

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	4.1 fc	-17.8 ft
6.5 ft	2.9 fc	-21.0 ft
7.5 ft	2.2 fc	-24.3 ft
8.0 ft	1.9 fc	-25.9 ft
10.0 ft	1.2 fc	-32.4 ft
12.0 ft	0.9 fc	-38.9 ft
14.0 ft	0.6 fc	-45.3 ft
16.0 ft	0.5 fc	-51.8 ft
20.0 ft	0.3 fc	-64.8 ft
24.0 ft	0.2 fc	-77.7 ft
28.0 ft	0.2 fc	-90.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	844	844	844
45.00°	743	702	749
55.00°	746	703	754
65.00°	751	706	761
75.00°	761	713	775
85.00°	786	725	801

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	7.9	9.0	8.7	9.9	11.0	7.9	9.1	8.7	9.9	11.0
	3H	10.5	11.6	11.4	12.5	13.6	10.6	11.7	11.4	12.5	13.7
	4H	11.8	12.8	12.7	13.7	14.8	11.9	12.9	12.7	13.8	14.9
	6H	13.0	14.0	13.9	14.9	16.0	13.1	14.1	14.0	15.0	16.1
	8H	13.6	14.5	14.5	15.5	16.6	13.7	14.6	14.6	15.5	16.7
	12H	14.2	15.1	15.1	16.0	17.2	14.3	15.2	15.2	16.1	17.3
4H	2H	8.8	9.8	9.7	10.7	11.8	8.9	9.9	9.7	10.8	11.9
	3H	11.7	12.6	12.6	13.5	14.6	11.7	12.6	12.6	13.5	14.7
	4H	13.1	13.9	14.0	14.8	16.0	13.2	14.0	14.0	14.9	16.1
	6H	14.5	15.2	15.4	16.2	17.3	14.6	15.3	15.5	16.2	17.4
	8H	15.2	15.9	16.1	16.8	18.0	15.2	15.9	16.1	16.9	18.0
	12H	15.8	16.5	16.7	17.4	18.6	15.9	16.5	16.8	17.5	18.7
8H	4H	13.7	14.4	14.6	15.4	16.5	13.8	14.5	14.7	15.4	16.6
	6H	15.4	16.0	16.3	16.9	18.1	15.4	16.0	16.3	17.0	18.2
	8H	16.2	16.7	17.1	17.7	18.9	16.2	16.8	17.2	17.7	18.9
	12H	17.0	17.5	17.9	18.4	19.7	17.1	17.6	18.0	18.5	19.7
12H	4H	13.9	14.5	14.8	15.4	16.6	13.9	14.5	14.8	15.5	16.7
	6H	15.6	16.1	16.5	17.1	18.3	15.6	16.2	16.6	17.1	18.3
	8H	16.5	17.0	17.4	17.9	19.2	16.5	17.0	17.5	18.0	19.2

Corrected UGR values based on total output lumens

SHR = 1.0