

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

C06xxSQXT 13L WD 35K XX TCY SO MW  
Nom. 6" Square x 18" H Cylinder

### Test Number

SP-01203\_M-13L

### Test Date

10/13/2017

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

### Summary of Results

#### Power

Input Watts	13 W
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#### Lumen Output

Output Lumens	1104
Efficacy	84.96 lm/W

#### Luminous Dimensions

0° - 180° Size	0.35
90° - 270° Size	0.35
Height	0

#### Spacing Criterion

Two luminaires, plane 0°	0.69
Two luminaires, plane 90°	0.69
Four luminaires	0.74

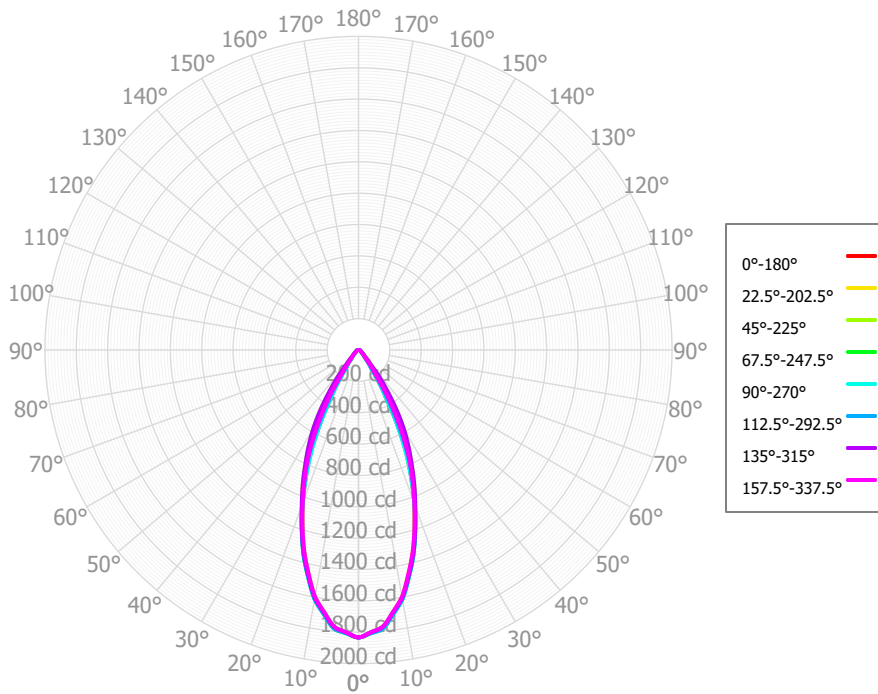
#### Full Beam Angle

0° - 180°	44°
90° - 270°	44°

### IES File Header Contents

Keyword	Value
TEST	SP-01203_M-13L
TESTLAB	VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	10/13/2017
ISSUEDATE	2/23/2021
LUMCAT	C06xxSQXT 13L WD 35K XX TCY SO MW
LUMINAIRE	Nom. 6" Square x 18" H Cylinder
OTHER	Cylinder also available as 24" H variant
OTHER	Downlight: Wide Beam, Regressed Solite lens
OTHER	Downlight: 43.8 Degree Beam Angle
OTHER	Trim: Same Color as Cylinder, Matte White
LAMP	N/A
OTHER	N/A, 19mm LES direct
OTHER	Total Luminaire Watts is approximate
OTHER	LEDXT lumen output is the same for all available CCT's
OTHER	See Catalog cut sheet for different source lumen multipliers
OTHER	This report prepared by Spectrum Lighting, scaled from 20L

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	171.52	15.53%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	368.87	33.40%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	338.40	30.64%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	140.53	12.72%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	40.90	3.70%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	21.54	1.95%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	15.13	1.37%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	10.31	0.93%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	3.29	0.30%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1110.49	100.55%	0.00° - 180.00°	1110.49	100.55%

### Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°
0.00°	1833.20	1833.20	1833.20	1833.20	1833.20
2.50°	1804.23	1802.73	1803.27	1808.59	1804.77
5.00°	1775.26	1772.27	1773.34	1783.98	1776.33
7.50°	1689.35	1685.36	1689.16	1698.88	1692.27
10.00°	1603.43	1598.46	1604.97	1613.77	1608.21
12.50°	1471.70	1466.65	1476.19	1483.80	1478.49
15.00°	1339.96	1334.85	1347.41	1353.83	1348.76
17.50°	1189.90	1187.56	1202.29	1201.44	1195.60
20.00°	1039.84	1040.26	1057.17	1049.05	1042.43
22.50°	878.90	901.58	928.86	901.02	873.98
25.00°	717.95	762.90	800.54	752.98	705.52
27.50°	535.37	611.81	686.51	581.09	526.66
30.00°	352.80	460.73	572.49	409.20	347.80
32.50°	247.94	322.02	447.37	278.56	239.11
35.00°	143.09	183.32	322.25	147.91	130.42
37.50°	108.95	129.00	223.27	109.90	99.95
40.00°	74.80	74.68	124.30	71.88	69.48
42.50°	61.14	61.34	87.37	59.73	57.37
45.00°	47.48	47.99	50.43	47.58	45.26
47.50°	40.20	40.62	41.59	40.51	38.11
50.00°	32.92	33.25	32.74	33.43	30.97
52.50°	27.28	28.54	28.42	28.47	25.95
55.00°	21.65	23.83	24.10	23.50	20.93
57.50°	18.51	20.91	21.48	20.65	18.37
60.00°	15.37	17.99	18.86	17.81	15.80
62.50°	15.18	16.57	17.09	16.77	15.13
65.00°	14.99	15.15	15.32	15.73	14.46
67.50°	14.06	14.29	13.73	14.86	13.53
70.00°	13.13	13.43	12.14	13.99	12.59
72.50°	11.64	11.64	10.48	12.30	11.78
75.00°	10.14	9.85	8.82	10.60	10.97
77.50°	7.81	7.87	7.14	8.59	9.27
80.00°	5.48	5.88	5.46	6.57	7.58
82.50°	4.01	4.01	3.78	4.78	5.22
85.00°	2.54	2.13	2.09	2.99	2.86
87.50°	1.71	1.55	1.56	2.04	2.03
90.00°	0.88	0.96	1.03	1.10	1.20

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

<b>RCR</b>	<b>pfc</b>	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	<b>pcc</b>	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	<b>pw</b>	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	<b>0</b>	1322	1322	1322	1322	1291	1291	1291	1291	1234	1234	1234	1181	1181	1181	1133	1133	1110
	<b>1</b>	1261	1230	1203	1178	1233	1206	1181	1159	1161	1141	1123	1120	1104	1090	1082	1070	1048
	<b>2</b>	1201	1148	1104	1067	1177	1129	1089	1055	1093	1060	1032	1060	1033	1010	1030	1008	988
	<b>3</b>	1145	1076	1022	980	1123	1060	1011	972	1031	990	956	1005	970	941	980	951	933
	<b>4</b>	1092	1011	953	908	1072	999	945	903	975	929	892	953	914	882	933	899	883
	<b>5</b>	1042	954	893	847	1025	944	886	843	924	874	836	906	863	829	889	852	836
	<b>6</b>	996	902	840	795	980	894	835	792	878	826	787	862	817	782	848	808	794
	<b>7</b>	952	856	793	749	938	848	789	747	835	782	743	822	775	739	810	768	755
	<b>8</b>	912	813	751	708	899	807	748	707	795	742	704	784	736	701	774	731	719
	<b>9</b>	874	774	713	672	863	769	711	671	759	706	668	749	701	666	740	696	686
	<b>10</b>	839	739	679	639	828	734	677	638	725	673	636	717	669	634	709	665	655

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	60.6 fc	4.4 ft
6.5 ft	43.4 fc	5.2 ft
7.5 ft	32.6 fc	6.0 ft
8.0 ft	28.6 fc	6.4 ft
10.0 ft	18.3 fc	8.0 ft
12.0 ft	12.7 fc	9.6 ft
14.0 ft	9.4 fc	11.3 ft
16.0 ft	7.2 fc	12.9 ft
20.0 ft	4.6 fc	16.1 ft
24.0 ft	3.2 fc	19.3 ft
28.0 ft	2.3 fc	22.5 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	161081	161081	161081
<b>45.00°</b>	5900	6267	5624
<b>55.00°</b>	3317	3691	3207
<b>65.00°</b>	3116	3185	3007
<b>75.00°</b>	3442	2993	3724
<b>85.00°</b>	2560	2111	2886

### 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	9.5	10.5	9.9	10.9	11.2	9.5	10.5	9.8	10.8	11.1
	3H	11.6	12.4	11.9	12.8	13.1	11.5	12.4	11.9	12.7	13.1
	4H	12.4	13.2	12.8	13.6	14.0	12.5	13.3	12.9	13.7	14.1
	6H	13.0	13.7	13.4	14.1	14.5	13.3	14.1	13.7	14.4	14.8
	8H	13.1	13.8	13.6	14.2	14.6	13.6	14.3	14.0	14.7	15.1
	12H	13.2	13.9	13.7	14.3	14.7	13.7	14.4	14.2	14.8	15.2
4H	2H	10.1	10.9	10.5	11.3	11.6	10.0	10.8	10.4	11.2	11.6
	3H	12.3	13.0	12.8	13.4	13.8	12.3	13.0	12.8	13.4	13.8
	4H	13.3	13.9	13.8	14.4	14.8	13.5	14.1	13.9	14.5	14.9
	6H	14.0	14.5	14.5	15.0	15.5	14.4	14.9	14.9	15.4	15.8
	8H	14.2	14.7	14.7	15.1	15.6	14.7	15.2	15.2	15.6	16.1
	12H	14.3	14.8	14.8	15.2	15.7	14.9	15.3	15.4	15.8	16.3
8H	4H	13.6	14.1	14.1	14.5	15.0	13.7	14.2	14.2	14.6	15.1
	6H	14.4	14.8	14.9	15.3	15.8	14.8	15.1	15.3	15.6	16.1
	8H	14.7	15.0	15.2	15.5	16.0	15.2	15.5	15.7	16.0	16.5
	12H	14.9	15.2	15.4	15.7	16.3	15.5	15.7	16.0	16.2	16.8
12H	4H	13.6	14.0	14.1	14.5	15.0	13.7	14.1	14.2	14.6	15.1
	6H	14.5	14.8	15.0	15.3	15.8	14.8	15.1	15.3	15.6	16.2
	8H	14.8	15.1	15.3	15.6	16.1	15.2	15.5	15.8	16.0	16.6

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0