

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

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

### Test Number

SP-01199\_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	1023
Efficacy	78.65 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

Two luminaires, plane 0°	0.81
Two luminaires, plane 90°	0.8
Four luminaires	0.82

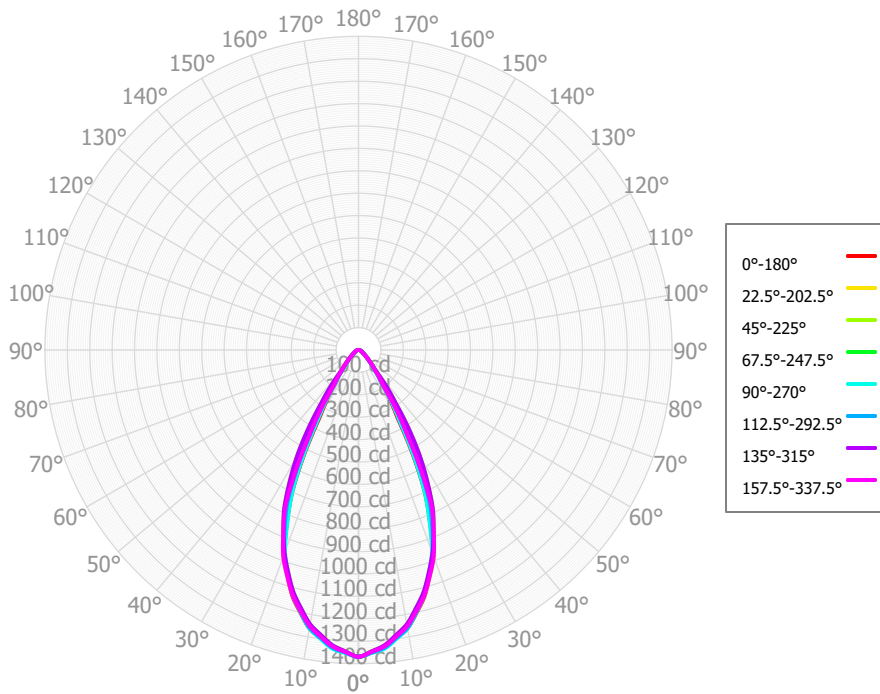
#### Full Beam Angle

0° - 180°	50°
90° - 270°	50°

### IES File Header Contents

Keyword	Value
TEST	SP-01199_M-13L
TESTLAB	VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	10/13/2017
ISSUEDATE	2/23/2021
LUMCAT	C06xxSQXT 13L XW 35K XX TCY SO MW
LUMINAIRE	Nom. 6" Square x 18" H Cylinder
OTHER	Cylinder also available as 24" H. variant
OTHER	Downlight: Xtra Wide Beam, Regressed Solite lens
OTHER	Downlight: 50.4 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°	130.61	12.77%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	312.98	30.61%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	329.38	32.21%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	148.27	14.50%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	53.74	5.26%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	24.99	2.44%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	15.37	1.50%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	9.03	0.88%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	2.64	0.26%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1027.01	100.44%	0.00° - 180.00°	1027.01	100.44%

### Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°
0.00°	1369.63	1369.63	1369.63	1369.63	1369.63
2.50°	1351.22	1349.49	1346.93	1351.96	1353.95
5.00°	1332.81	1329.35	1324.22	1334.29	1338.26
7.50°	1297.19	1291.17	1284.03	1296.83	1300.22
10.00°	1261.58	1252.99	1243.84	1259.37	1262.18
12.50°	1200.17	1194.01	1182.48	1195.42	1197.58
15.00°	1138.76	1135.03	1121.13	1131.46	1132.98
17.50°	1054.25	1058.49	1043.20	1050.77	1046.63
20.00°	969.73	981.95	965.27	970.08	960.27
22.50°	836.01	876.98	875.54	861.59	830.29
25.00°	702.29	772.01	785.80	753.11	700.30
27.50°	525.47	601.32	667.73	594.67	536.25
30.00°	348.66	430.63	549.66	436.24	372.20
32.50°	262.37	309.35	419.49	314.33	273.19
35.00°	176.09	188.08	289.32	192.42	174.18
37.50°	142.31	147.88	203.95	148.58	138.07
40.00°	108.53	107.69	118.57	104.74	101.96
42.50°	87.44	87.71	91.57	85.40	83.15
45.00°	66.34	67.73	64.56	66.05	64.33
47.50°	52.31	54.81	53.39	53.89	52.04
50.00°	38.27	41.89	42.22	41.74	39.74
52.50°	29.99	33.94	35.36	34.59	32.17
55.00°	21.71	25.98	28.50	27.44	24.59
57.50°	18.63	22.17	24.45	23.42	21.26
60.00°	15.55	18.36	20.41	19.40	17.93
62.50°	14.73	16.99	18.14	17.47	16.62
65.00°	13.90	15.62	15.88	15.53	15.31
67.50°	12.76	14.16	14.18	14.16	14.23
70.00°	11.63	12.69	12.47	12.79	13.14
72.50°	9.96	10.76	10.40	10.24	11.18
75.00°	8.30	8.84	8.33	7.69	9.21
77.50°	6.74	6.88	6.50	6.32	7.05
80.00°	5.18	4.92	4.66	4.95	4.88
82.50°	3.61	3.64	3.16	3.38	3.45
85.00°	2.03	2.36	1.66	1.82	2.03
87.50°	1.58	1.66	1.21	1.37	1.44
90.00°	1.14	0.96	0.76	0.91	0.85

### 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>	1223	1223	1223	1223	1194	1194	1194	1194	1141	1141	1141	1093	1093	1093	1048	1048	1027
	<b>1</b>	1164	1134	1108	1085	1138	1112	1089	1067	1071	1052	1034	1032	1017	1004	997	985	975
	<b>2</b>	1106	1055	1013	977	1083	1037	999	966	1004	972	945	973	947	925	945	924	905
	<b>3</b>	1051	984	933	892	1030	970	923	884	943	903	870	918	885	857	895	867	843
	<b>4</b>	999	921	865	821	980	910	857	816	887	842	807	867	828	797	848	815	788
	<b>5</b>	950	865	806	762	934	855	800	758	837	789	752	820	778	745	804	768	738
	<b>6</b>	905	815	754	711	890	807	750	708	791	741	703	777	732	698	763	724	694
	<b>7</b>	863	769	708	666	849	762	705	664	749	698	660	737	691	657	726	685	653
	<b>8</b>	823	728	667	626	811	722	665	625	711	659	622	700	654	619	691	648	617
	<b>9</b>	787	690	631	591	776	685	628	590	675	624	588	666	619	586	658	615	584
	<b>10</b>	753	656	597	559	743	651	596	558	643	592	556	635	588	555	628	585	553

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	45.3 fc	5.2 ft
6.5 ft	32.4 fc	6.1 ft
7.5 ft	24.3 fc	7.1 ft
8.0 ft	21.4 fc	7.5 ft
10.0 ft	13.7 fc	9.4 ft
12.0 ft	9.5 fc	11.3 ft
14.0 ft	7.0 fc	13.2 ft
16.0 ft	5.4 fc	15.1 ft
20.0 ft	3.4 fc	18.9 ft
24.0 ft	2.4 fc	22.6 ft
28.0 ft	1.7 fc	26.4 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	120348	120348	120348
<b>45.00°</b>	8244	8022	7994
<b>55.00°</b>	3326	4366	3768
<b>65.00°</b>	2889	3302	3182
<b>75.00°</b>	2817	2827	3128
<b>85.00°</b>	2048	1670	2043

### UGR CIE 190:2010

<b>Ceiling reflectance</b>		<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>	<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>
<b>Wall reflectance</b>		<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>
<b>Plane reflectance</b>		<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>
<b>Room dimensions</b>		<b>Viewed crosswise</b>					<b>Viewed endwise</b>				
<b>2H</b>	<b>2H</b>	10.1	11.1	10.5	11.5	11.8	10.6	11.6	10.9	11.9	12.2
	<b>3H</b>	11.8	12.7	12.2	13.0	13.4	12.2	13.1	12.6	13.5	13.8
	<b>4H</b>	12.4	13.3	12.8	13.6	14.0	12.8	13.7	13.2	14.0	14.4
	<b>6H</b>	12.9	13.6	13.3	14.0	14.4	13.2	14.0	13.6	14.4	14.8
	<b>8H</b>	13.0	13.7	13.5	14.1	14.5	13.3	14.0	13.8	14.4	14.8
	<b>12H</b>	13.1	13.8	13.5	14.2	14.6	13.4	14.1	13.8	14.4	14.9
<b>4H</b>	<b>2H</b>	10.6	11.5	11.1	11.8	12.2	11.0	11.9	11.4	12.2	12.6
	<b>3H</b>	12.6	13.2	13.0	13.7	14.1	12.9	13.6	13.3	14.0	14.4
	<b>4H</b>	13.3	13.9	13.8	14.4	14.8	13.5	14.2	14.0	14.6	15.0
	<b>6H</b>	13.9	14.4	14.4	14.9	15.3	14.0	14.6	14.5	15.0	15.5
	<b>8H</b>	14.1	14.6	14.5	15.0	15.5	14.2	14.7	14.7	15.1	15.6
	<b>12H</b>	14.2	14.6	14.7	15.1	15.6	14.3	14.7	14.8	15.2	15.7
<b>8H</b>	<b>4H</b>	13.5	14.0	14.0	14.5	15.0	13.7	14.2	14.2	14.7	15.1
	<b>6H</b>	14.2	14.6	14.7	15.1	15.6	14.3	14.7	14.8	15.2	15.7
	<b>8H</b>	14.5	14.8	15.0	15.3	15.8	14.6	14.9	15.1	15.4	15.9
	<b>12H</b>	14.7	15.0	15.2	15.5	16.0	14.7	15.0	15.2	15.5	16.1
<b>12H</b>	<b>4H</b>	13.5	14.0	14.0	14.4	14.9	13.7	14.1	14.2	14.6	15.1
	<b>6H</b>	14.2	14.6	14.8	15.1	15.6	14.4	14.7	14.9	15.2	15.7
	<b>8H</b>	14.5	14.8	15.1	15.3	15.9	14.6	14.9	15.1	15.4	16.0

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0