

## **Indoor Distribution Test Report**

# **Spectrum Lighting Inc.**

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## **Spectrum Lighting Photometric Lab**

### **Luminaire**

C06xxSQXT 13L ND 35K EX TCY GL MW  
Nom. 6" Square x 18" H Cylinder

### **Test Number**

SP-01201\_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	1289
Efficacy	99.14 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

Two luminaires, plane 0°	0.34
Two luminaires, plane 90°	0.35
Four luminaires	0.38

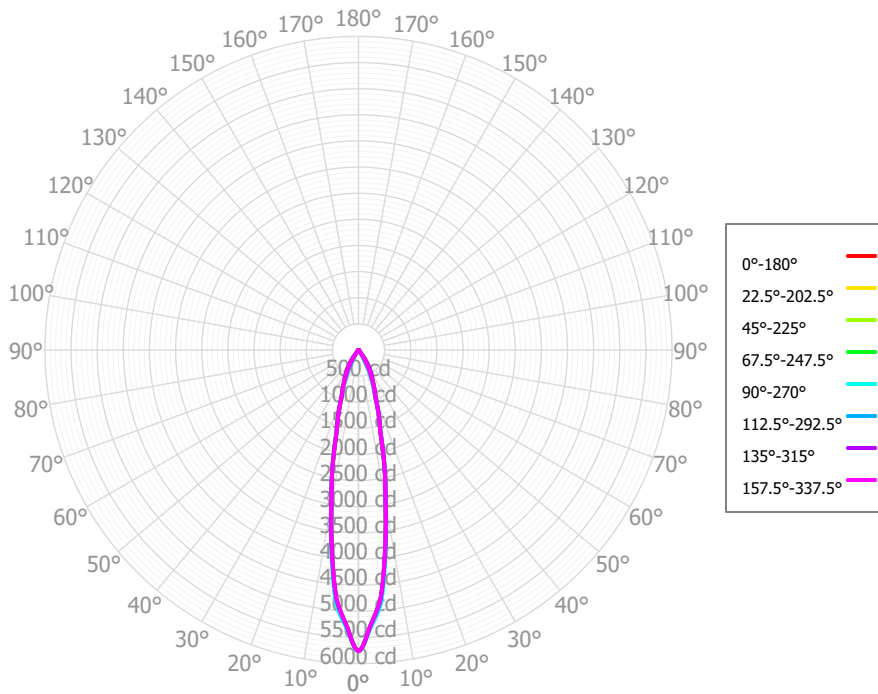
#### Full Beam Angle

0° - 180°	21°
90° - 270°	21°

### IES File Header Contents

Keyword	Value
TEST	SP-01201_M-13L
TESTLAB	VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	10/13/2017
ISSUEDATE	2/23/2021
LUMCAT	C06xxSQXT 13L ND 35K EX TCY GL MW
LUMINAIRE	Nom. 6" Square x 18" H Cylinder
OTHER	Cylinder also available as 24" H variant
OTHER	Downlight: Narrow Beam, Clear Glass lens
OTHER	Downlight: 21 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°	416.51	32.32%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	471.67	36.60%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	272.99	21.18%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	84.50	6.56%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	18.54	1.44%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	16.65	1.29%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	14.72	1.14%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	9.45	0.73%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	2.72	0.21%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1307.75	101.47%	0.00° - 180.00°	1307.75	101.47%

### Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°
0.00°	5757.33	5757.33	5757.33	5757.33	5757.33
2.50°	5288.65	5276.89	5275.02	5288.66	5321.13
5.00°	4819.98	4796.45	4792.72	4819.99	4884.94
7.50°	3911.29	3889.22	3887.71	3894.92	3955.40
10.00°	3002.61	2981.99	2982.70	2969.84	3025.87
12.50°	2307.07	2294.54	2302.30	2296.55	2322.82
15.00°	1611.54	1607.09	1621.90	1623.25	1619.77
17.50°	1269.72	1268.39	1286.47	1283.43	1272.20
20.00°	927.89	929.68	951.05	943.62	924.62
22.50°	739.53	769.08	799.03	767.80	728.79
25.00°	551.17	608.48	647.01	591.97	532.94
27.50°	383.34	473.39	555.45	421.49	364.71
30.00°	215.51	338.30	463.89	251.00	196.49
32.50°	129.25	211.54	356.66	156.66	113.80
35.00°	43.00	84.77	249.43	62.33	31.11
37.50°	33.36	55.44	153.75	43.66	26.88
40.00°	23.72	26.10	58.06	25.00	22.65
42.50°	22.35	23.94	40.85	23.08	21.81
45.00°	20.98	21.78	23.63	21.16	20.97
47.50°	20.87	21.09	21.49	19.97	20.74
50.00°	20.75	20.39	19.35	18.78	20.51
52.50°	20.20	19.59	19.13	18.45	20.17
55.00°	19.64	18.79	18.90	18.11	19.83
57.50°	17.65	17.46	18.16	17.70	18.64
60.00°	15.67	16.13	17.41	17.29	17.45
62.50°	14.29	15.47	16.26	16.92	16.11
65.00°	12.92	14.81	15.11	16.55	14.77
67.50°	12.42	13.55	13.99	14.62	13.37
70.00°	11.93	12.30	12.87	12.69	11.98
72.50°	10.06	10.70	10.49	11.45	10.94
75.00°	8.19	9.11	8.10	10.20	9.89
77.50°	6.33	6.84	6.82	7.80	7.97
80.00°	4.47	4.57	5.55	5.39	6.05
82.50°	3.10	3.07	3.83	3.95	4.51
85.00°	1.73	1.56	2.11	2.50	2.98
87.50°	0.99	0.78	1.57	1.59	1.86
90.00°	0.24	0.00	1.03	0.69	0.73

### 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>	1557	1557	1557	1557	1521	1521	1521	1521	1453	1453	1453	1391	1391	1391	1334	1334	1308
	<b>1</b>	1496	1464	1436	1411	1464	1437	1411	1389	1384	1364	1346	1336	1321	1306	1292	1280	1269
	<b>2</b>	1438	1385	1341	1304	1411	1363	1323	1289	1322	1289	1261	1283	1257	1234	1248	1227	1209
	<b>3</b>	1385	1316	1263	1220	1360	1298	1250	1211	1266	1225	1192	1235	1202	1173	1207	1179	1156
	<b>4</b>	1335	1256	1198	1153	1314	1242	1188	1147	1215	1170	1133	1190	1152	1121	1167	1135	1108
	<b>5</b>	1289	1202	1142	1097	1270	1191	1135	1093	1169	1121	1083	1149	1107	1074	1130	1094	1065
	<b>6</b>	1246	1155	1093	1049	1229	1145	1088	1046	1127	1077	1039	1111	1066	1033	1095	1056	1026
	<b>7</b>	1206	1111	1050	1007	1191	1104	1046	1005	1089	1037	1000	1075	1029	995	1061	1021	990
	<b>8</b>	1168	1072	1012	970	1155	1066	1008	968	1053	1001	965	1041	995	961	1030	988	957
	<b>9</b>	1133	1036	977	937	1121	1031	974	935	1020	968	932	1010	963	930	1000	958	927
	<b>10</b>	1100	1003	945	906	1089	998	943	905	989	938	903	980	934	901	972	929	899

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	190.3 fc	2.0 ft
6.5 ft	136.3 fc	2.4 ft
7.5 ft	102.4 fc	2.8 ft
8.0 ft	90.0 fc	3.0 ft
10.0 ft	57.6 fc	3.7 ft
12.0 ft	40.0 fc	4.4 ft
14.0 ft	29.4 fc	5.2 ft
16.0 ft	22.5 fc	5.9 ft
20.0 ft	14.4 fc	7.4 ft
24.0 ft	10.0 fc	8.9 ft
28.0 ft	7.3 fc	10.4 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	505889	505889	505889
<b>45.00°</b>	2607	2936	2606
<b>55.00°</b>	3008	2896	3038
<b>65.00°</b>	2686	3141	3070
<b>75.00°</b>	2782	2750	3358
<b>85.00°</b>	1742	2124	3005

### 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>	8.0	9.0	8.4	9.3	9.6	8.2	9.1	8.5	9.4	9.8
	<b>3H</b>	10.2	11.1	10.6	11.4	11.8	10.5	11.3	10.9	11.7	12.0
	<b>4H</b>	11.0	11.8	11.5	12.2	12.6	11.5	12.3	11.9	12.6	13.0
	<b>6H</b>	11.5	12.2	11.9	12.6	13.0	12.1	12.9	12.6	13.2	13.6
	<b>8H</b>	11.6	12.3	12.1	12.7	13.1	12.4	13.0	12.8	13.4	13.8
	<b>12H</b>	11.7	12.3	12.1	12.7	13.1	12.5	13.2	13.0	13.5	14.0
<b>4H</b>	<b>2H</b>	8.8	9.5	9.2	9.9	10.3	8.9	9.7	9.3	10.0	10.4
	<b>3H</b>	11.2	11.8	11.6	12.2	12.6	11.4	12.0	11.8	12.4	12.9
	<b>4H</b>	12.1	12.7	12.6	13.1	13.6	12.5	13.1	13.0	13.5	14.0
	<b>6H</b>	12.7	13.2	13.1	13.6	14.1	13.3	13.8	13.7	14.2	14.7
	<b>8H</b>	12.8	13.3	13.3	13.7	14.2	13.5	14.0	14.0	14.4	14.9
	<b>12H</b>	12.9	13.3	13.4	13.8	14.2	13.7	14.1	14.2	14.6	15.1
<b>8H</b>	<b>4H</b>	12.4	12.9	12.9	13.3	13.8	12.8	13.2	13.2	13.7	14.1
	<b>6H</b>	13.1	13.4	13.6	13.9	14.4	13.6	14.0	14.2	14.5	15.0
	<b>8H</b>	13.3	13.6	13.8	14.1	14.6	14.0	14.3	14.5	14.8	15.3
	<b>12H</b>	13.4	13.7	13.9	14.2	14.8	14.3	14.5	14.8	15.0	15.6
<b>12H</b>	<b>4H</b>	12.4	12.8	12.9	13.3	13.8	12.8	13.1	13.2	13.6	14.1
	<b>6H</b>	13.1	13.5	13.7	13.9	14.5	13.7	14.0	14.2	14.5	15.0
	<b>8H</b>	13.4	13.7	13.9	14.2	14.7	14.1	14.3	14.6	14.8	15.4

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0