

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

994 Jefferson Street  
Fall River, MA 02721  
+1.508.678.2303

## Spectrum Lighting Photometric Lab

### Luminaire

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

### Test Number

SP-01202\_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	1128
Efficacy	86.77 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

Two luminaires, plane 0°	0.61
Two luminaires, plane 90°	0.62
Four luminaires	0.67

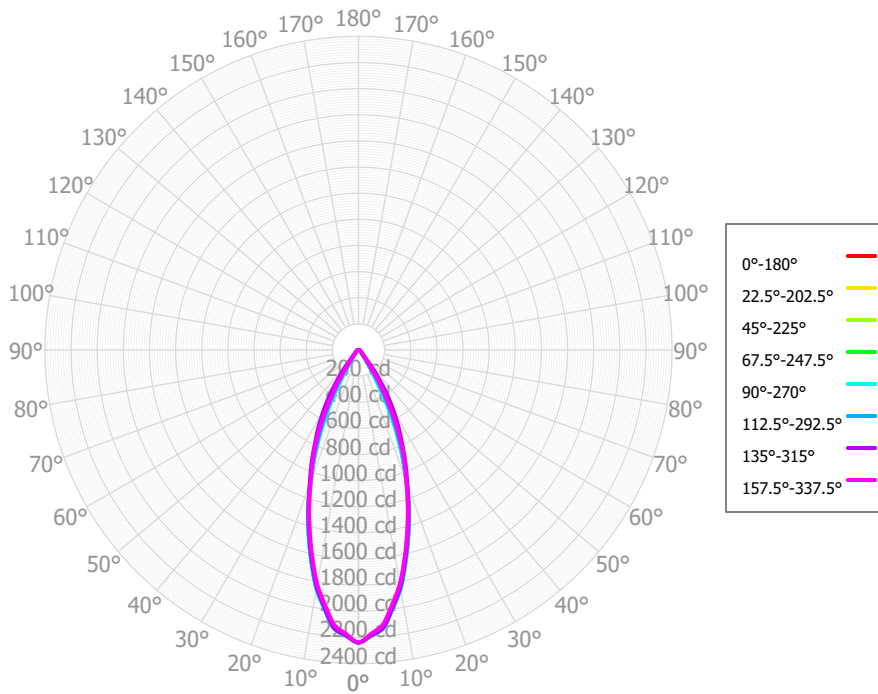
#### Full Beam Angle

0° - 180°	39°
90° - 270°	39°

### IES File Header Contents

Keyword	Value
TEST	SP-01202_M-13L
TESTLAB	VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	10/13/2017
ISSUEDATE	2/23/2021
LUMCAT	C06xxSQXT 13L MD 35K XX TCY SO MW
LUMINAIRE	Nom. 6" Square x 18" H Cylinder
OTHER	Cylinder also available as 24" H variant
OTHER	Downlight: Medium Beam, Regressed Solite lens
OTHER	Downlight: 38.6 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°	202.54	17.96%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	400.06	35.47%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	330.13	29.27%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	121.44	10.77%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	32.21	2.86%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	19.59	1.74%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	15.08	1.34%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	10.60	0.94%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	3.73	0.33%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1135.38	100.65%	0.00° - 180.00°	1135.38	100.65%

### Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°
0.00°	2238.77	2238.77	2238.77	2238.77	2238.77
2.50°	2180.50	2176.58	2188.09	2187.70	2191.00
5.00°	2122.24	2114.39	2137.41	2136.64	2143.23
7.50°	1977.09	1968.16	1988.98	1994.10	2000.03
10.00°	1831.94	1821.93	1840.54	1851.56	1856.82
12.50°	1640.01	1632.01	1647.94	1660.45	1664.32
15.00°	1448.07	1442.10	1455.34	1469.35	1471.83
17.50°	1257.34	1258.64	1272.30	1276.20	1272.94
20.00°	1066.62	1075.18	1089.27	1083.05	1074.06
22.50°	879.17	914.81	937.22	896.80	870.46
25.00°	691.73	754.44	785.18	710.56	666.87
27.50°	508.26	588.95	658.46	537.29	468.74
30.00°	324.80	423.45	531.73	364.03	270.61
32.50°	216.37	292.24	406.06	245.88	181.55
35.00°	107.94	161.02	280.39	127.73	92.49
37.50°	81.21	111.12	186.52	92.67	72.67
40.00°	54.47	61.22	92.66	57.60	52.85
42.50°	45.52	49.44	66.21	47.56	43.56
45.00°	36.56	37.66	39.77	37.51	34.27
47.50°	31.97	32.81	33.97	32.59	29.54
50.00°	27.38	27.97	28.16	27.68	24.80
52.50°	24.52	25.03	25.14	24.43	22.07
55.00°	21.65	22.08	22.12	21.19	19.35
57.50°	19.63	19.78	20.28	19.22	17.30
60.00°	17.61	17.48	18.43	17.26	15.24
62.50°	16.49	16.36	16.99	16.22	14.25
65.00°	15.38	15.25	15.54	15.18	13.27
67.50°	14.10	14.64	14.54	14.12	13.05
70.00°	12.82	14.02	13.54	13.06	12.84
72.50°	11.00	12.08	11.96	11.81	11.80
75.00°	9.18	10.14	10.38	10.57	10.75
77.50°	7.32	7.99	8.37	8.65	9.00
80.00°	5.46	5.85	6.37	6.73	7.26
82.50°	3.88	4.14	4.91	5.27	5.48
85.00°	2.30	2.43	3.46	3.80	3.70
87.50°	1.61	1.60	2.35	2.43	2.52
90.00°	0.92	0.76	1.24	1.06	1.34

### 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>	1352	1352	1352	1352	1320	1320	1320	1320	1262	1262	1262	1208	1208	1208	1159	1159	1135
	<b>1</b>	1291	1260	1233	1208	1263	1236	1211	1189	1190	1170	1152	1148	1132	1118	1109	1097	1075
	<b>2</b>	1232	1179	1136	1099	1207	1160	1120	1087	1124	1091	1063	1090	1064	1041	1059	1038	1017
	<b>3</b>	1177	1109	1056	1014	1155	1093	1045	1005	1064	1023	990	1036	1003	974	1011	983	965
	<b>4</b>	1125	1046	988	944	1105	1033	980	938	1009	963	927	987	948	916	966	933	916
	<b>5</b>	1077	990	929	884	1059	980	923	881	960	911	873	941	899	865	924	887	872
	<b>6</b>	1032	940	878	833	1016	931	873	831	914	863	825	899	854	820	885	845	831
	<b>7</b>	989	894	832	789	975	887	828	787	873	821	783	860	813	779	848	806	793
	<b>8</b>	950	852	791	749	937	846	788	747	834	782	744	823	776	741	813	770	758
	<b>9</b>	913	814	754	713	901	809	751	712	799	746	710	789	742	707	780	737	726
	<b>10</b>	878	779	720	681	867	775	718	680	766	714	678	758	710	676	750	706	696

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	74.0 fc	3.9 ft
6.5 ft	53.0 fc	4.6 ft
7.5 ft	39.8 fc	5.3 ft
8.0 ft	35.0 fc	5.6 ft
10.0 ft	22.4 fc	7.0 ft
12.0 ft	15.5 fc	8.4 ft
14.0 ft	11.4 fc	9.8 ft
16.0 ft	8.7 fc	11.2 ft
20.0 ft	5.6 fc	14.1 ft
24.0 ft	3.9 fc	16.9 ft
28.0 ft	2.9 fc	19.7 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	196717	196717	196717
<b>45.00°</b>	4543	4942	4259
<b>55.00°</b>	3317	3389	2964
<b>65.00°</b>	3198	3231	2758
<b>75.00°</b>	3116	3524	3650
<b>85.00°</b>	2316	3484	3732

### 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>	9.3	10.2	9.6	10.6	10.9	8.9	9.9	9.3	10.2	10.6
	<b>3H</b>	11.4	12.3	11.8	12.6	13.0	11.1	12.0	11.5	12.3	12.7
	<b>4H</b>	12.2	13.0	12.6	13.4	13.8	12.2	13.0	12.6	13.3	13.7
	<b>6H</b>	12.8	13.5	13.2	13.9	14.3	13.0	13.7	13.4	14.1	14.5
	<b>8H</b>	12.9	13.6	13.4	14.0	14.4	13.3	14.0	13.7	14.4	14.8
	<b>12H</b>	13.0	13.7	13.5	14.1	14.5	13.5	14.2	14.0	14.6	15.0
<b>4H</b>	<b>2H</b>	9.9	10.7	10.3	11.0	11.4	9.6	10.4	10.0	10.8	11.2
	<b>3H</b>	12.3	13.0	12.7	13.4	13.8	12.0	12.7	12.5	13.1	13.5
	<b>4H</b>	13.3	13.9	13.7	14.3	14.7	13.2	13.8	13.7	14.2	14.7
	<b>6H</b>	13.9	14.4	14.4	14.9	15.4	14.2	14.7	14.6	15.1	15.6
	<b>8H</b>	14.1	14.6	14.6	15.0	15.5	14.5	15.0	15.0	15.4	15.9
	<b>12H</b>	14.2	14.6	14.7	15.1	15.6	14.8	15.2	15.3	15.7	16.2
<b>8H</b>	<b>4H</b>	13.6	14.1	14.1	14.5	15.0	13.6	14.1	14.1	14.5	15.0
	<b>6H</b>	14.4	14.8	14.9	15.3	15.8	14.7	15.0	15.2	15.5	16.0
	<b>8H</b>	14.7	15.0	15.2	15.5	16.0	15.1	15.5	15.7	16.0	16.5
	<b>12H</b>	14.9	15.2	15.4	15.7	16.3	15.6	15.8	16.1	16.3	16.9
<b>12H</b>	<b>4H</b>	13.6	14.0	14.1	14.5	15.0	13.6	14.0	14.1	14.5	15.0
	<b>6H</b>	14.5	14.8	15.0	15.3	15.8	14.7	15.1	15.3	15.5	16.1
	<b>8H</b>	14.8	15.1	15.4	15.6	16.2	15.3	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