

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

C06xxSQXT 30L MD 35K XX TCY SO MW  
Nom. 6" Square x 18" H Cylinder

### Test Number

SP-01202\_M-30L

### Test Date

10/13/2017

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

### Summary of Results

#### Power

Input Watts	32.6 W
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#### Lumen Output

Output Lumens	2603
Efficacy	79.85 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

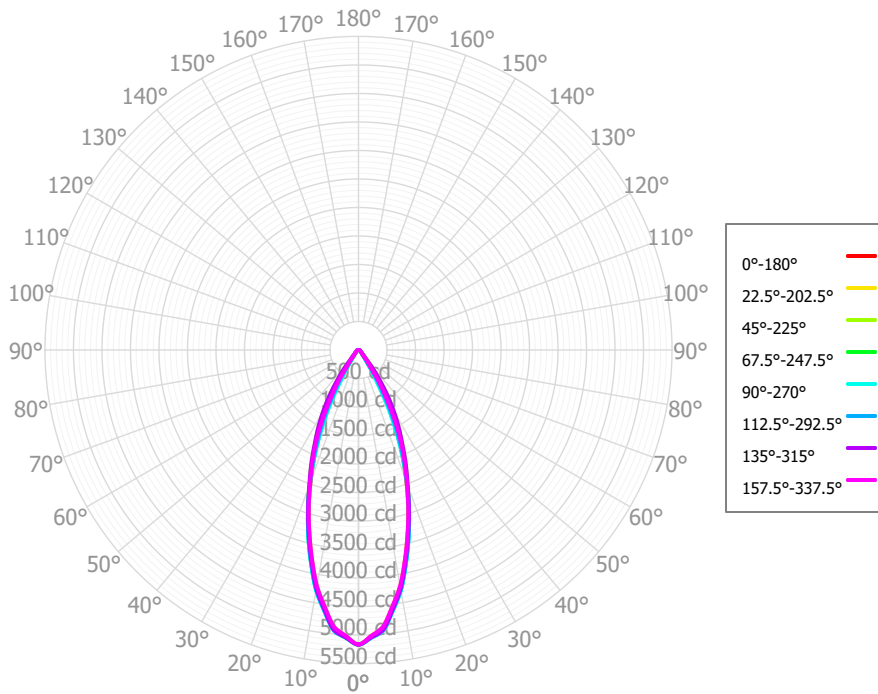
#### Full Beam Angle

0° - 180°	39°
90° - 270°	39°

### IES File Header Contents

Keyword	Value
TEST	SP-01202_M-30L
TESTLAB	VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	10/13/2017
ISSUEDATE	2/23/2021
LUMCAT	C06xxSQXT 30L 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
_CRI	83
_CCTMULT	Same for all available CCT's
_LAMPMULT	10L x 0.32, 13L x 0.43, 20L x 0.67

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	467.40	17.96%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	923.23	35.47%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	761.83	29.27%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	280.25	10.77%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	74.32	2.86%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	45.20	1.74%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	34.80	1.34%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	24.46	0.94%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	8.61	0.33%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	2620.11	100.65%	0.00° - 180.00°	2620.11	100.65%

### Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°
0.00°	5166.39	5166.39	5166.39	5166.39	5166.39
2.50°	5031.93	5022.88	5049.43	5048.54	5056.15
5.00°	4897.47	4879.37	4932.48	4930.70	4945.92
7.50°	4562.51	4541.91	4589.94	4601.76	4615.44
10.00°	4227.56	4204.45	4247.41	4272.82	4284.97
12.50°	3784.63	3766.18	3802.94	3831.81	3840.75
15.00°	3341.70	3327.91	3358.47	3390.80	3396.53
17.50°	2901.56	2904.55	2936.09	2945.07	2937.56
20.00°	2461.43	2481.18	2513.70	2499.33	2478.59
22.50°	2028.86	2111.10	2162.82	2069.54	2008.76
25.00°	1596.30	1741.01	1811.95	1639.74	1538.92
27.50°	1172.92	1359.11	1519.51	1239.91	1081.71
30.00°	749.54	977.20	1227.07	840.07	624.49
32.50°	499.31	674.39	937.06	567.42	418.97
35.00°	249.09	371.58	647.05	294.77	213.44
37.50°	187.40	256.43	430.44	213.85	167.70
40.00°	125.71	141.29	213.83	132.93	121.96
42.50°	105.04	114.10	152.80	109.75	100.53
45.00°	84.37	86.91	91.77	86.56	79.09
47.50°	73.78	75.73	78.38	75.21	68.16
50.00°	63.19	64.55	64.99	63.87	57.23
52.50°	56.58	57.75	58.02	56.38	50.94
55.00°	49.97	50.96	51.06	48.89	44.65
57.50°	45.30	45.65	46.80	44.36	39.91
60.00°	40.63	40.34	42.54	39.82	35.18
62.50°	38.06	37.76	39.20	37.42	32.90
65.00°	35.50	35.19	35.86	35.02	30.61
67.50°	32.54	33.77	33.56	32.58	30.12
70.00°	29.59	32.35	31.25	30.13	29.63
72.50°	25.38	27.88	27.60	27.26	27.22
75.00°	21.18	23.40	23.95	24.38	24.81
77.50°	16.89	18.44	19.32	19.96	20.78
80.00°	12.60	13.49	14.69	15.54	16.74
82.50°	8.95	9.55	11.33	12.15	12.65
85.00°	5.30	5.60	7.98	8.77	8.54
87.50°	3.71	3.68	5.42	5.61	5.82
90.00°	2.12	1.76	2.86	2.44	3.09

### 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>	3119	3119	3119	3119	3047	3047	3047	3047	2911	2911	2911	2787	2787	2787	2674	2674	2620
	<b>1</b>	2979	2908	2845	2788	2914	2851	2795	2743	2746	2700	2659	2648	2613	2580	2559	2531	2481
	<b>2</b>	2843	2722	2621	2537	2786	2677	2586	2508	2593	2518	2454	2515	2454	2401	2443	2395	2348
	<b>3</b>	2716	2558	2436	2339	2665	2522	2410	2320	2455	2361	2284	2392	2314	2248	2334	2269	2226
	<b>4</b>	2597	2414	2280	2178	2551	2384	2260	2165	2329	2223	2139	2278	2188	2115	2230	2154	2091
	<b>5</b>	2485	2285	2144	2041	2444	2260	2130	2032	2215	2101	2014	2173	2074	1997	2133	2048	1980
	<b>6</b>	2380	2168	2026	1923	2344	2148	2014	1917	2110	1992	1904	2075	1971	1892	2042	1951	1879
	<b>7</b>	2283	2063	1920	1820	2250	2046	1911	1815	2014	1894	1806	1984	1877	1797	1956	1861	1788
	<b>8</b>	2191	1967	1825	1728	2162	1952	1818	1725	1925	1804	1718	1900	1791	1711	1876	1777	1704
	<b>9</b>	2106	1879	1739	1645	2079	1866	1734	1643	1843	1722	1637	1821	1711	1632	1801	1701	1627
	<b>10</b>	2026	1798	1661	1571	2001	1787	1657	1569	1767	1647	1565	1748	1638	1560	1730	1629	1556

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	170.8 fc	3.9 ft
6.5 ft	122.3 fc	4.6 ft
7.5 ft	91.8 fc	5.3 ft
8.0 ft	80.7 fc	5.6 ft
10.0 ft	51.7 fc	7.0 ft
12.0 ft	35.9 fc	8.4 ft
14.0 ft	26.4 fc	9.8 ft
16.0 ft	20.2 fc	11.2 ft
20.0 ft	12.9 fc	14.1 ft
24.0 ft	9.0 fc	16.9 ft
28.0 ft	6.6 fc	19.7 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	453963	453963	453963
<b>45.00°</b>	10485	11404	9828
<b>55.00°</b>	7655	7821	6840
<b>65.00°</b>	7380	7455	6365
<b>75.00°</b>	7190	8132	8424
<b>85.00°</b>	5344	8041	8614

### 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>	12.2	13.1	12.5	13.5	13.8	11.8	12.8	12.2	13.1	13.5
	<b>3H</b>	14.3	15.2	14.7	15.5	15.9	14.0	14.9	14.4	15.2	15.6
	<b>4H</b>	15.1	15.9	15.5	16.3	16.7	15.1	15.9	15.5	16.2	16.6
	<b>6H</b>	15.7	16.4	16.1	16.8	17.2	15.9	16.6	16.3	17.0	17.4
	<b>8H</b>	15.8	16.5	16.3	16.9	17.3	16.2	16.9	16.6	17.3	17.7
	<b>12H</b>	15.9	16.6	16.4	17.0	17.4	16.4	17.1	16.9	17.5	17.9
<b>4H</b>	<b>2H</b>	12.8	13.6	13.2	13.9	14.3	12.5	13.3	12.9	13.7	14.1
	<b>3H</b>	15.2	15.9	15.6	16.3	16.7	14.9	15.6	15.4	16.0	16.4
	<b>4H</b>	16.2	16.8	16.6	17.2	17.6	16.1	16.7	16.6	17.1	17.6
	<b>6H</b>	16.8	17.3	17.3	17.8	18.3	17.1	17.6	17.5	18.0	18.5
	<b>8H</b>	17.0	17.5	17.5	18.0	18.4	17.4	17.9	17.9	18.4	18.8
	<b>12H</b>	17.1	17.6	17.6	18.0	18.5	17.7	18.1	18.2	18.6	19.1
<b>8H</b>	<b>4H</b>	16.5	17.0	17.0	17.4	17.9	16.5	17.0	17.0	17.4	17.9
	<b>6H</b>	17.3	17.7	17.8	18.2	18.7	17.6	18.0	18.1	18.5	18.9
	<b>8H</b>	17.6	17.9	18.1	18.5	19.0	18.0	18.4	18.6	18.9	19.4
	<b>12H</b>	17.8	18.1	18.3	18.6	19.2	18.5	18.7	19.0	19.2	19.8
<b>12H</b>	<b>4H</b>	16.5	17.0	17.0	17.4	17.9	16.5	16.9	17.0	17.4	17.9
	<b>6H</b>	17.4	17.7	17.9	18.2	18.8	17.6	18.0	18.2	18.4	19.0
	<b>8H</b>	17.7	18.0	18.3	18.5	19.1	18.2	18.5	18.7	19.0	19.5

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0