

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

C06xxSQXT 20L WD 35K XX TCY SO MW  
Nom. 6" Square x 18" H Cylinder

### Test Number

SP-01203

### Test Date

10/13/2017

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

### Summary of Results

#### Power

Input Watts	21.7 W
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#### Lumen Output

Output Lumens	1699
Efficacy	78.3 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

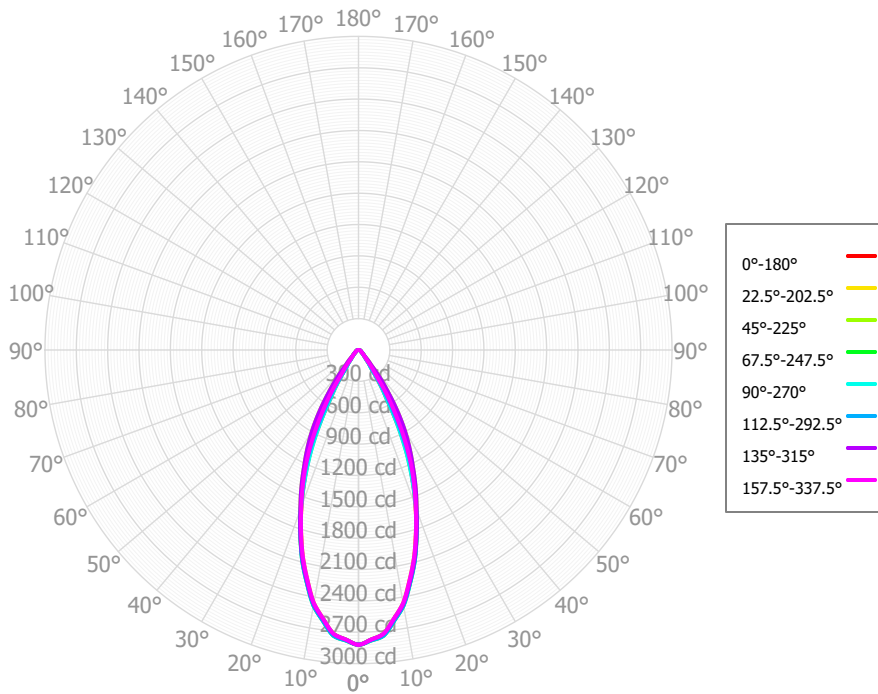
#### Full Beam Angle

0° - 180°	44°
90° - 270°	44°

### IES File Header Contents

Keyword	Value
TEST	SP-01203
TESTLAB	VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	10/13/2017
ISSUEDATE	2/23/2021
LUMCAT	C06xxSQXT 20L 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

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	263.88	15.53%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	567.49	33.40%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	520.62	30.64%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	216.20	12.72%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	62.92	3.70%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	33.14	1.95%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	23.28	1.37%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	15.87	0.93%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	5.06	0.30%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1708.45	100.55%	0.00° - 180.00°	1708.45	100.55%

### Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°
0.00°	2820.31	2820.31	2820.31	2820.31	2820.31
2.50°	2775.74	2773.44	2774.27	2782.44	2776.56
5.00°	2731.17	2726.56	2728.22	2744.58	2732.82
7.50°	2599.00	2592.86	2598.70	2613.66	2603.50
10.00°	2466.82	2459.16	2469.18	2482.73	2474.17
12.50°	2264.15	2256.39	2271.06	2282.77	2274.60
15.00°	2061.48	2053.61	2072.93	2082.81	2075.02
17.50°	1830.62	1827.01	1849.68	1848.37	1839.38
20.00°	1599.75	1600.41	1626.42	1613.92	1603.74
22.50°	1352.15	1387.05	1429.01	1386.18	1344.58
25.00°	1104.54	1173.69	1231.59	1158.43	1085.42
27.50°	823.65	941.25	1056.17	893.98	810.25
30.00°	542.76	708.81	880.75	629.53	535.08
32.50°	381.45	495.42	688.26	428.55	367.86
35.00°	220.14	282.04	495.76	227.56	200.65
37.50°	167.61	198.47	343.49	169.08	153.77
40.00°	115.07	114.90	191.23	110.59	106.89
42.50°	94.06	94.36	134.41	91.89	88.26
45.00°	73.04	73.83	77.59	73.19	69.63
47.50°	61.84	62.49	63.98	62.32	58.63
50.00°	50.64	51.16	50.38	51.43	47.64
52.50°	41.97	43.91	43.72	43.79	39.92
55.00°	33.31	36.65	37.07	36.15	32.20
57.50°	28.48	32.16	33.04	31.78	28.26
60.00°	23.65	27.67	29.01	27.40	24.31
62.50°	23.35	25.49	26.29	25.80	23.28
65.00°	23.06	23.31	23.56	24.20	22.25
67.50°	21.63	21.99	21.12	22.86	20.81
70.00°	20.20	20.67	18.67	21.52	19.37
72.50°	17.90	17.91	16.12	18.92	18.12
75.00°	15.60	15.15	13.57	16.31	16.88
77.50°	12.01	12.10	10.98	13.21	14.27
80.00°	8.43	9.05	8.40	10.11	11.65
82.50°	6.17	6.17	5.81	7.35	8.03
85.00°	3.91	3.29	3.22	4.59	4.40
87.50°	2.63	2.38	2.40	3.14	3.13
90.00°	1.36	1.48	1.58	1.69	1.85

### 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>	2034	2034	2034	2034	1987	1987	1987	1987	1898	1898	1898	1818	1818	1818	1743	1743	1708
	<b>1</b>	1939	1892	1850	1812	1897	1855	1817	1783	1786	1756	1728	1723	1699	1677	1664	1646	1613
	<b>2</b>	1848	1766	1699	1642	1810	1737	1676	1624	1682	1631	1588	1631	1590	1554	1584	1551	1520
	<b>3</b>	1761	1655	1573	1507	1727	1631	1556	1495	1587	1523	1471	1546	1493	1448	1507	1464	1436
	<b>4</b>	1679	1556	1466	1397	1649	1537	1453	1388	1501	1429	1372	1467	1406	1356	1435	1384	1358
	<b>5</b>	1603	1468	1373	1303	1576	1452	1364	1298	1422	1345	1286	1394	1327	1275	1368	1310	1287
	<b>6</b>	1532	1388	1292	1223	1508	1375	1285	1219	1350	1270	1210	1327	1256	1202	1305	1243	1221
	<b>7</b>	1465	1316	1220	1152	1443	1305	1214	1149	1284	1203	1143	1264	1192	1137	1246	1181	1161
	<b>8</b>	1403	1251	1155	1089	1383	1241	1151	1087	1223	1141	1083	1207	1132	1078	1191	1124	1106
	<b>9</b>	1345	1191	1097	1033	1327	1183	1093	1032	1168	1086	1028	1153	1078	1025	1139	1071	1055
	<b>10</b>	1291	1136	1044	983	1274	1129	1041	981	1116	1035	979	1103	1029	976	1091	1023	1008

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	93.2 fc	4.4 ft
6.5 ft	66.8 fc	5.2 ft
7.5 ft	50.1 fc	6.0 ft
8.0 ft	44.1 fc	6.4 ft
10.0 ft	28.2 fc	8.0 ft
12.0 ft	19.6 fc	9.6 ft
14.0 ft	14.4 fc	11.3 ft
16.0 ft	11.0 fc	12.9 ft
20.0 ft	7.1 fc	16.1 ft
24.0 ft	4.9 fc	19.3 ft
28.0 ft	3.6 fc	22.5 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	247817	247817	247817
<b>45.00°</b>	9077	9642	8652
<b>55.00°</b>	5102	5679	4933
<b>65.00°</b>	4794	4899	4627
<b>75.00°</b>	5295	4605	5729
<b>85.00°</b>	3938	3248	4440

### 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>	11.0	12.0	11.4	12.4	12.7	11.0	12.0	11.3	12.3	12.6
	<b>3H</b>	13.1	13.9	13.4	14.3	14.6	13.0	13.9	13.4	14.2	14.6
	<b>4H</b>	13.9	14.7	14.3	15.1	15.5	14.0	14.8	14.4	15.2	15.6
	<b>6H</b>	14.5	15.2	14.9	15.6	16.0	14.8	15.6	15.2	15.9	16.3
	<b>8H</b>	14.6	15.3	15.1	15.7	16.1	15.1	15.8	15.5	16.2	16.6
	<b>12H</b>	14.7	15.4	15.2	15.8	16.2	15.2	15.9	15.7	16.3	16.7
<b>4H</b>	<b>2H</b>	11.6	12.4	12.0	12.8	13.1	11.5	12.3	11.9	12.7	13.1
	<b>3H</b>	13.8	14.5	14.2	14.9	15.3	13.8	14.5	14.3	14.9	15.3
	<b>4H</b>	14.8	15.4	15.3	15.9	16.3	15.0	15.6	15.4	16.0	16.4
	<b>6H</b>	15.5	16.0	16.0	16.5	17.0	15.9	16.4	16.4	16.9	17.3
	<b>8H</b>	15.7	16.2	16.2	16.6	17.1	16.2	16.7	16.7	17.1	17.6
	<b>12H</b>	15.8	16.3	16.3	16.7	17.2	16.4	16.8	16.9	17.3	17.8
<b>8H</b>	<b>4H</b>	15.1	15.6	15.6	16.0	16.5	15.2	15.7	15.7	16.1	16.6
	<b>6H</b>	15.9	16.3	16.4	16.8	17.3	16.3	16.6	16.8	17.1	17.6
	<b>8H</b>	16.2	16.5	16.7	17.0	17.5	16.7	17.0	17.2	17.5	18.0
	<b>12H</b>	16.4	16.7	16.9	17.2	17.8	17.0	17.2	17.5	17.7	18.3
<b>12H</b>	<b>4H</b>	15.1	15.5	15.6	16.0	16.5	15.2	15.6	15.7	16.1	16.6
	<b>6H</b>	16.0	16.3	16.5	16.8	17.3	16.3	16.6	16.8	17.1	17.6
	<b>8H</b>	16.3	16.6	16.8	17.1	17.6	16.7	17.0	17.3	17.5	18.1

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0