

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

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

### Test Number

SP-01199

### 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	1573
Efficacy	72.49 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

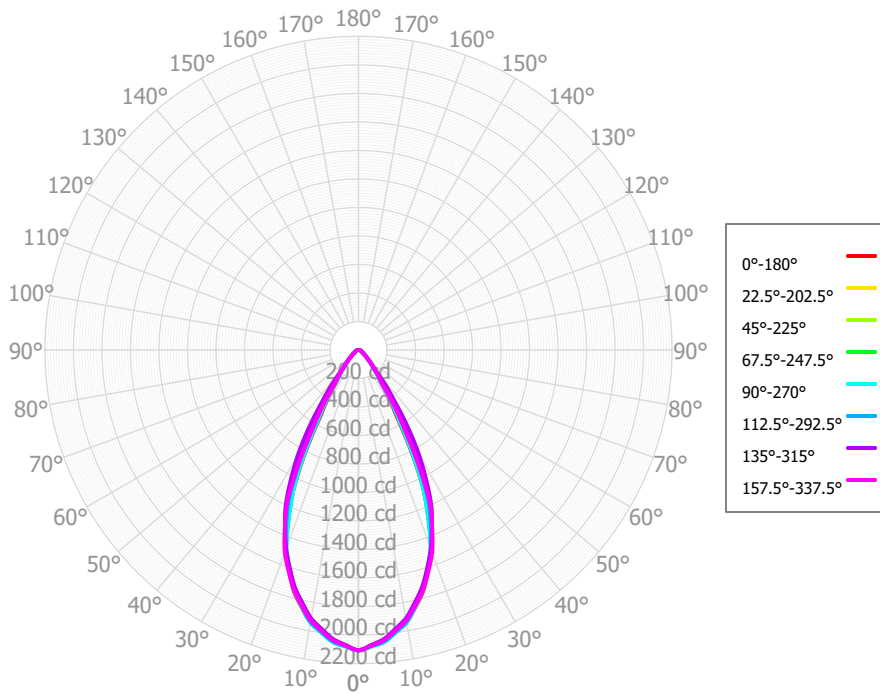
#### Full Beam Angle

0° - 180°	50°
90° - 270°	50°

### IES File Header Contents

Keyword	Value
TEST	SP-01199
TESTLAB	VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	10/13/2017
ISSUEDATE	2/23/2021
LUMCAT	C06xxSQXT 20L XW 35K EX 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

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	200.94	12.77%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	481.50	30.61%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	506.73	32.21%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	228.11	14.50%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	82.68	5.26%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	38.45	2.44%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	23.64	1.50%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	13.89	0.88%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	4.07	0.26%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1580.01	100.44%	0.00° - 180.00°	1580.01	100.44%

### Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°
0.00°	2107.13	2107.13	2107.13	2107.13	2107.13
2.50°	2078.80	2076.14	2072.20	2079.94	2082.99
5.00°	2050.47	2045.16	2037.26	2052.75	2058.86
7.50°	1995.68	1986.42	1975.43	1995.13	2000.33
10.00°	1940.89	1927.69	1913.60	1937.50	1941.81
12.50°	1846.42	1836.94	1819.21	1839.11	1842.43
15.00°	1751.94	1746.20	1724.81	1740.71	1743.05
17.50°	1621.92	1628.44	1604.92	1616.57	1610.19
20.00°	1491.90	1510.69	1485.03	1492.43	1477.33
22.50°	1286.17	1349.20	1346.98	1325.53	1277.36
25.00°	1080.44	1187.71	1208.93	1158.62	1077.39
27.50°	808.42	925.11	1027.28	914.88	825.01
30.00°	536.40	662.51	845.63	671.14	572.62
32.50°	403.65	475.93	645.37	483.59	420.30
35.00°	270.90	289.35	445.11	296.04	267.98
37.50°	218.94	227.52	313.77	228.59	212.42
40.00°	166.97	165.68	182.42	161.14	156.87
42.50°	134.52	134.94	140.87	131.38	127.92
45.00°	102.06	104.20	99.32	101.62	98.97
47.50°	80.47	84.32	82.14	82.91	80.05
50.00°	58.88	64.44	64.95	64.21	61.14
52.50°	46.14	52.21	54.40	53.21	49.49
55.00°	33.40	39.98	43.85	42.22	37.84
57.50°	28.67	34.11	37.62	36.03	32.71
60.00°	23.93	28.25	31.39	29.85	27.59
62.50°	22.66	26.14	27.91	26.87	25.57
65.00°	21.38	24.04	24.44	23.90	23.55
67.50°	19.64	21.78	21.81	21.79	21.88
70.00°	17.89	19.52	19.19	19.68	20.22
72.50°	15.33	16.56	16.00	15.75	17.20
75.00°	12.77	13.60	12.81	11.82	14.18
77.50°	10.37	10.58	9.99	9.72	10.84
80.00°	7.97	7.56	7.17	7.61	7.50
82.50°	5.55	5.60	4.86	5.20	5.31
85.00°	3.13	3.63	2.55	2.80	3.12
87.50°	2.44	2.55	1.86	2.10	2.21
90.00°	1.75	1.47	1.16	1.40	1.31

### 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>	1881	1881	1881	1881	1837	1837	1837	1837	1756	1756	1756	1681	1681	1681	1612	1612	1580
	<b>1</b>	1790	1745	1705	1669	1751	1711	1675	1642	1647	1618	1591	1588	1565	1544	1534	1516	1486
	<b>2</b>	1701	1623	1558	1504	1666	1595	1537	1487	1544	1496	1454	1497	1457	1423	1453	1421	1393
	<b>3</b>	1616	1514	1435	1372	1585	1492	1419	1361	1450	1389	1339	1412	1361	1318	1376	1334	1298
	<b>4</b>	1537	1417	1330	1264	1508	1399	1318	1256	1365	1296	1241	1334	1274	1226	1304	1254	1231
	<b>5</b>	1462	1331	1240	1172	1436	1316	1231	1167	1288	1213	1156	1262	1197	1146	1237	1181	1160
	<b>6</b>	1392	1253	1160	1093	1369	1241	1153	1089	1217	1140	1082	1195	1127	1075	1175	1114	1095
	<b>7</b>	1327	1183	1090	1024	1306	1173	1084	1021	1153	1074	1016	1134	1063	1011	1116	1053	1036
	<b>8</b>	1267	1119	1027	963	1248	1111	1022	961	1093	1014	957	1077	1006	953	1062	998	982
	<b>9</b>	1210	1062	970	909	1193	1054	967	907	1039	960	904	1025	953	901	1012	946	932
	<b>10</b>	1158	1009	919	860	1142	1002	916	859	989	910	856	977	905	854	966	899	886

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	69.7 fc	5.2 ft
6.5 ft	49.9 fc	6.1 ft
7.5 ft	37.5 fc	7.1 ft
8.0 ft	32.9 fc	7.5 ft
10.0 ft	21.1 fc	9.4 ft
12.0 ft	14.6 fc	11.3 ft
14.0 ft	10.8 fc	13.2 ft
16.0 ft	8.2 fc	15.1 ft
20.0 ft	5.3 fc	18.9 ft
24.0 ft	3.7 fc	22.6 ft
28.0 ft	2.7 fc	26.4 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	185151	185151	185151
<b>45.00°</b>	12683	12342	12299
<b>55.00°</b>	5117	6718	5796
<b>65.00°</b>	4445	5081	4896
<b>75.00°</b>	4334	4350	4813
<b>85.00°</b>	3151	2569	3142

### 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>	11.6	12.6	12.0	12.9	13.3	12.1	13.1	12.4	13.4	13.7
	<b>3H</b>	13.3	14.2	13.7	14.5	14.9	13.7	14.6	14.1	15.0	15.3
	<b>4H</b>	13.9	14.8	14.3	15.1	15.5	14.3	15.2	14.7	15.5	15.9
	<b>6H</b>	14.4	15.1	14.8	15.5	15.9	14.7	15.5	15.1	15.9	16.2
	<b>8H</b>	14.5	15.2	14.9	15.6	16.0	14.8	15.5	15.2	15.9	16.3
	<b>12H</b>	14.6	15.3	15.0	15.7	16.1	14.9	15.6	15.3	15.9	16.4
<b>4H</b>	<b>2H</b>	12.1	13.0	12.5	13.3	13.7	12.5	13.4	12.9	13.7	14.1
	<b>3H</b>	14.1	14.7	14.5	15.2	15.6	14.4	15.1	14.8	15.5	15.9
	<b>4H</b>	14.8	15.4	15.3	15.9	16.3	15.0	15.7	15.5	16.1	16.5
	<b>6H</b>	15.4	15.9	15.9	16.4	16.8	15.5	16.1	16.0	16.5	17.0
	<b>8H</b>	15.6	16.1	16.0	16.5	17.0	15.7	16.2	16.2	16.6	17.1
	<b>12H</b>	15.7	16.1	16.2	16.6	17.1	15.8	16.2	16.3	16.7	17.2
<b>8H</b>	<b>4H</b>	15.0	15.5	15.5	16.0	16.5	15.2	15.7	15.7	16.2	16.6
	<b>6H</b>	15.7	16.1	16.2	16.6	17.1	15.8	16.2	16.3	16.7	17.2
	<b>8H</b>	16.0	16.3	16.5	16.8	17.3	16.0	16.4	16.6	16.9	17.4
	<b>12H</b>	16.2	16.5	16.7	17.0	17.5	16.2	16.5	16.7	17.0	17.6
<b>12H</b>	<b>4H</b>	15.0	15.5	15.5	15.9	16.4	15.2	15.6	15.7	16.1	16.6
	<b>6H</b>	15.7	16.1	16.3	16.5	17.1	15.9	16.2	16.4	16.7	17.2
	<b>8H</b>	16.0	16.3	16.5	16.8	17.4	16.1	16.4	16.6	16.9	17.5

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0