Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire
C06xxSQXT 10L XN GL 35K XX TCY GL MW
Nom. 6" Square x 18" H Cylinder

Test Number
SP-01200_M-10L

Test Date
10/13/2017

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

Summary of Results

Power

Input Watts	12.8 W

Lumen Output

Output Lumens	845
Efficacy	66 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.2
Two luminaires, plane 90°	0.21
Four luminaires	0.21

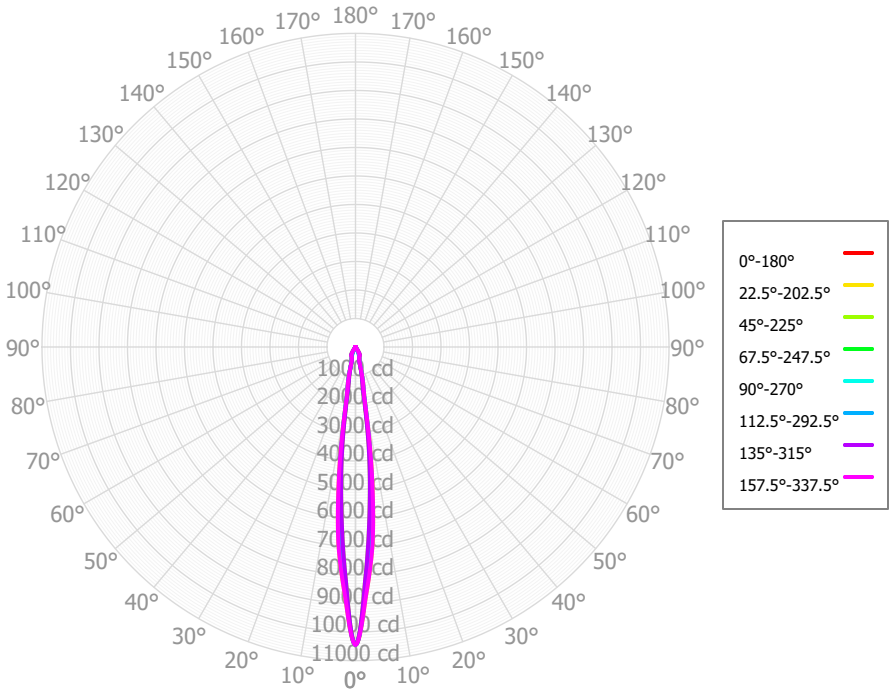
Full Beam Angle

0° - 180°	12°
90° - 270°	12°

IES File Header Contents

Keyword	Value
TEST	SP-01200_M-10L
TESTLAB	VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	10/13/2017
ISSUEDATE	2/23/2021
LUMCAT	C06xxSQXT 10L XN GL 35K XX TCY GL MW
LUMINAIRE	Nom. 6" Square x 18" H Cylinder
OTHER	Cylinder also available as 24" H variant
OTHER	Downlight: Xtra Narrow Beam, Clear Glass lens
OTHER	Downlight: 12 Degree Beam Angle
OTHER	Trim: Same Color as Cylinder, Matte White
LAMP	N/A
OTHER	N/A, 9mm 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 13L

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	483.32	57.22%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	194.40	23.01%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	133.31	15.78%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	42.13	4.99%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	7.88	0.93%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	6.99	0.83%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	6.09	0.72%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	3.65	0.43%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.32	0.16%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	879.10	104.07%	0.00° - 180.00°	879.10	104.07%

Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°
0.00°	10445.48	10445.48	10445.48	10445.48	10445.48
2.50°	8269.51	8672.53	8062.12	8474.99	8369.56
5.00°	6093.54	6899.57	5678.77	6504.51	6293.64
7.50°	3869.41	4346.98	3561.11	4090.94	4036.19
10.00°	1645.27	1794.39	1443.45	1677.38	1778.74
12.50°	1078.29	1160.78	967.26	1095.56	1151.08
15.00°	511.30	527.18	491.08	513.75	523.42
17.50°	442.76	453.23	435.48	444.49	445.38
20.00°	374.23	379.27	379.88	375.23	367.34
22.50°	350.03	361.62	363.24	333.52	301.29
25.00°	325.83	343.97	346.60	291.81	235.25
27.50°	212.39	270.96	326.33	202.15	143.74
30.00°	98.94	197.96	306.06	112.50	52.23
32.50°	58.17	122.55	211.34	63.57	31.72
35.00°	17.39	47.15	116.63	14.64	11.21
37.50°	13.96	29.70	69.32	13.08	10.10
40.00°	10.53	12.24	22.01	11.52	8.98
42.50°	10.53	10.92	15.49	10.67	8.21
45.00°	10.53	9.60	8.96	9.81	7.45
47.50°	11.55	9.27	8.38	8.69	7.14
50.00°	12.57	8.94	7.80	7.57	6.83
52.50°	11.57	9.06	7.53	6.83	6.69
55.00°	10.57	9.17	7.26	6.09	6.55
57.50°	9.58	8.54	7.54	5.79	6.57
60.00°	8.58	7.90	7.82	5.48	6.59
62.50°	7.65	6.85	7.61	5.57	6.33
65.00°	6.72	5.79	7.40	5.65	6.06
67.50°	5.85	6.09	5.72	4.85	5.30
70.00°	4.98	6.40	4.05	4.05	4.54
72.50°	4.04	5.23	3.92	3.66	3.93
75.00°	3.10	4.06	3.80	3.28	3.32
77.50°	2.68	3.20	2.69	2.33	2.73
80.00°	2.26	2.34	1.59	1.39	2.14
82.50°	1.54	1.68	1.31	1.60	1.71
85.00°	0.82	1.01	1.02	1.82	1.28
87.50°	0.74	0.76	0.86	1.00	1.07
90.00°	0.65	0.51	0.69	0.18	0.87

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

	ρfc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	ρcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	ρw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	1047	1047	1047	1047	1022	1022	1022	1022	977	977	977	935	935	935	897	897	897	879
	1	1012	994	978	963	991	975	961	948	940	929	919	908	900	892	879	872	866	855
	2	981	950	925	903	963	936	913	893	908	890	874	883	869	856	860	849	838	832
	3	952	913	883	858	936	901	874	852	880	857	839	860	841	826	842	827	814	811
	4	926	881	848	823	912	872	842	818	855	829	809	839	818	800	824	806	792	792
RCR	5	902	853	819	794	890	846	814	791	832	805	784	819	796	778	807	788	772	774
	6	879	829	795	770	869	823	791	768	811	784	763	801	777	758	791	770	754	758
	7	859	807	773	749	850	802	770	748	793	765	744	784	759	741	776	754	737	742
	8	840	787	754	731	832	783	752	730	775	747	727	768	743	725	761	739	722	728
	9	822	769	737	715	815	766	735	714	759	732	712	753	728	710	748	725	708	715
	10	806	753	722	701	800	750	720	700	745	717	698	740	715	697	735	712	695	702

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	345.3 fc	1.2 ft
6.5 ft	247.2 fc	1.4 ft
7.5 ft	185.7 fc	1.6 ft
8.0 ft	163.2 fc	1.7 ft
10.0 ft	104.5 fc	2.1 ft
12.0 ft	72.5 fc	2.6 ft
14.0 ft	53.3 fc	3.0 ft
16.0 ft	40.8 fc	3.4 ft
20.0 ft	26.1 fc	4.3 ft
24.0 ft	18.1 fc	5.1 ft
28.0 ft	13.3 fc	6.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	917830	917830	917830
45.00°	1308	1114	926
55.00°	1620	1112	1004
65.00°	1397	1539	1260
75.00°	1054	1289	1126
85.00°	823	1031	1287

UGR CIE 190:2010

Ceiling reflectance		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall reflectance		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Plane reflectance		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
2H	2H	4.7	5.6	5.0	5.9	6.2	2.0	2.9	2.4	3.2	3.6
	3H	6.6	7.5	7.0	7.8	8.2	4.6	5.4	5.0	5.7	6.1
	4H	7.2	8.0	7.7	8.4	8.7	5.5	6.3	5.9	6.6	7.0
	6H	7.7	8.4	8.1	8.8	9.2	6.1	6.8	6.6	7.2	7.6
	8H	7.8	8.5	8.3	8.9	9.3	6.4	7.0	6.8	7.4	7.9
	12H	7.9	8.5	8.3	8.9	9.3	6.7	7.3	7.1	7.7	8.1
4H	2H	5.4	6.1	5.8	6.5	6.9	3.6	4.4	4.0	4.7	5.1
	3H	7.5	8.1	7.9	8.5	8.9	5.8	6.4	6.2	6.8	7.2
	4H	8.3	8.8	8.7	9.2	9.7	6.8	7.3	7.2	7.7	8.2
	6H	8.8	9.3	9.3	9.8	10.2	7.4	7.8	7.8	8.3	8.8
	8H	9.0	9.4	9.5	9.9	10.4	7.7	8.1	8.1	8.5	9.0
	12H	9.1	9.5	9.6	10.0	10.4	8.0	8.4	8.5	8.9	9.3
8H	4H	8.4	8.9	8.9	9.3	9.8	7.1	7.6	7.6	8.0	8.5
	6H	9.1	9.5	9.6	10.0	10.5	7.8	8.1	8.3	8.6	9.1
	8H	9.4	9.7	9.9	10.2	10.7	8.2	8.5	8.7	9.0	9.5
	12H	9.6	9.8	10.1	10.3	10.9	8.8	9.0	9.3	9.5	10.1
12H	4H	8.4	8.8	8.9	9.3	9.7	7.1	7.5	7.6	8.0	8.5
	6H	9.1	9.4	9.6	9.9	10.4	7.8	8.1	8.4	8.6	9.2
	8H	9.4	9.7	10.0	10.2	10.8	8.3	8.6	8.8	9.1	9.6

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0