

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

4" Nom. Sq. x 12" H LED Cylinder XT Series, Medium Beam
C0412SQXT-10L-xxK-MD-EX-SO-xx-MW

Test Number

SP-00628_8_M-10L

Test Date

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

Summary of Results

Power

Input Watts	8.3 W
-------------	-------

Lumen Output

Output Lumens	584
Efficacy	70.3 lm/W

Luminous Dimensions

0° - 180° Size	0.18
90° - 270° Size	0.18
Height	0

Spacing Criterion

Two luminaires, plane 0°	0.6
Two luminaires, plane 90°	0.6
Four luminaires	0.69

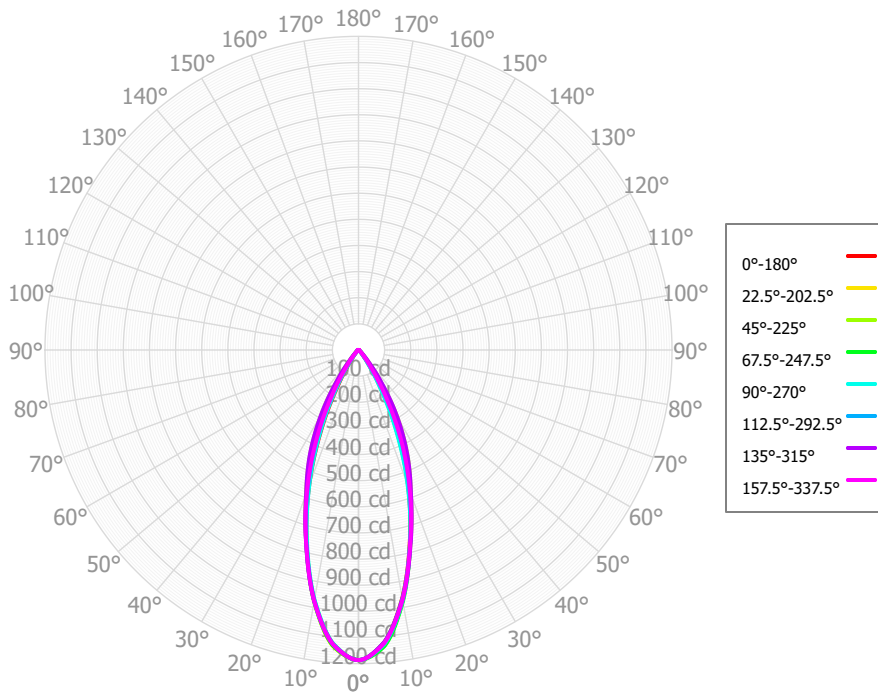
Full Beam Angle

0° - 180°	38°
90° - 270°	38°

IES File Header Contents

Keyword	Value
TEST	SP-00628_8_M-10L
TESTLAB	VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	11/13/2017
UPDATE	11/1/2021
LUMINAIRE	4" Nom. Sq. x 12" H LED Cylinder XT Series, Medium Beam
LUMCAT	C0412SQXT-10L-xxK-MD-EX-SO-xx-MW
OTHER	Matte White finish, Solite lens
OTHER	2.16" Square Aperture
OTHER	38.7 Degree Beam Angle
LAMP	N/A
LAMPCAT	N/A, Min. 83 CRI
OTHER	Total Luminaire Watts is approximate
OTHER	LEDXT lumen output is the same for all available CCT's
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°	107.37	18.40%	90.00° - 100.00°	0.46	0.08%
10.00° - 20.00°	208.52	35.74%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	173.99	29.82%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	67.32	11.54%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	14.71	2.52%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	4.95	0.85%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	2.51	0.43%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	1.87	0.32%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.82	0.31%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	583.06	99.92%	0.00° - 180.00°	583.52	100.00%

Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°	112.50°	135.00°	157.50°	180.00°	202.50°	225.00°	247.50°	270.00°	292.50°	315.00°	337.50°	360.00°
0.00°	1186.75	1186.75	1186.75	1186.75	1186.75	1186.75	1186.75	1186.75	1186.75	1186.75	1186.75	1186.75	1186.75	1186.75	1186.75	1186.75	1186.75
5.00°	1123.65	1134.97	1127.78	1137.77	1130.30	1129.83	1130.04	1129.99	1129.30	1136.51	1127.42	1134.53	1127.02	1124.17	1124.23	1126.60	1123.65
10.00°	964.69	972.80	973.00	977.67	973.33	975.87	975.49	976.05	973.94	977.83	973.58	976.96	970.10	967.15	970.56	969.72	964.69
15.00°	759.25	762.73	767.67	763.96	763.78	771.82	770.94	772.84	766.96	770.99	769.67	768.08	762.17	762.39	769.27	764.04	759.25
20.00°	555.97	572.43	584.69	569.41	550.01	569.58	585.52	574.76	552.75	570.22	585.02	570.14	550.89	570.22	586.72	575.16	555.97
25.00°	354.54	398.48	441.88	382.57	341.38	380.45	438.87	383.68	337.92	380.31	435.19	386.46	345.94	390.81	441.44	392.64	354.54
30.00°	175.22	227.70	294.97	209.26	163.65	209.86	285.14	208.94	157.51	207.12	282.26	215.10	171.28	219.15	296.25	214.19	175.22
35.00°	68.63	96.27	146.87	87.15	58.63	90.40	141.96	88.09	59.01	85.50	139.99	92.11	66.26	90.14	154.62	85.87	68.63
40.00°	28.63	35.49	51.13	31.96	25.51	34.46	53.81	34.44	26.15	32.46	51.37	34.62	26.46	32.53	61.01	33.07	28.63
45.00°	15.13	16.04	17.41	14.82	13.61	15.37	20.57	16.53	14.98	15.67	18.89	15.71	13.02	15.22	22.69	16.13	15.13
50.00°	8.17	8.02	8.33	8.71	8.50	8.58	9.93	8.74	8.92	8.66	9.06	8.65	7.63	7.89	11.10	8.89	8.17
55.00°	4.78	4.86	5.18	5.28	4.26	5.46	5.47	5.78	5.72	5.54	5.14	5.52	4.53	4.38	5.40	5.24	4.78
60.00°	3.06	3.35	3.41	3.26	2.84	3.46	3.68	4.19	3.85	3.61	3.35	3.38	3.22	2.77	2.76	3.54	3.06
65.00°	2.19	2.36	2.21	2.15	1.76	3.23	2.75	3.08	2.59	2.52	3.23	2.56	2.79	1.99	1.88	2.27	2.19
70.00°	1.37	1.44	1.52	1.37	1.44	1.96	2.29	2.47	2.68	2.55	2.36	2.12	2.43	1.41	1.05	1.50	1.37
75.00°	1.15	1.44	1.40	1.19	1.45	2.17	2.45	2.44	2.10	2.26	2.47	2.60	2.32	1.26	0.96	1.03	1.15
80.00°	0.90	0.58	0.82	0.82	0.77	2.22	1.96	2.70	2.43	2.65	2.85	2.38	2.48	1.05	0.76	0.77	0.90
85.00°	1.02	0.73	0.73	0.73	0.81	2.39	2.62	2.64	2.73	2.62	2.53	2.38	2.90	0.71	0.71	0.69	1.02
90.00°	0.00	0.00	0.00	0.00	0.00	3.48	3.44	3.37	3.40	3.57	3.25	3.40	3.13	0.00	0.00	0.00	0.00
95.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

RCR	pfc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	pcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	0	695	695	695	695	678	678	678	678	648	648	648	620	620	620	595	595	583
	1	665	650	636	624	651	637	625	614	614	604	595	592	585	578	572	566	555
	2	636	610	589	571	624	600	581	565	582	566	552	565	552	541	549	538	528
	3	609	575	549	529	598	567	544	524	552	532	516	539	522	508	526	512	502
	4	583	544	515	493	573	538	511	491	525	503	485	514	495	479	503	487	478
	5	559	516	486	463	550	510	482	461	500	476	457	491	470	453	482	464	456
	6	536	490	459	437	528	486	457	436	477	452	433	469	447	430	462	443	435
	7	514	467	436	414	507	463	434	413	456	430	411	449	426	409	443	422	416
	8	494	445	415	393	487	442	413	393	436	410	391	430	407	389	425	404	397
	9	475	425	395	375	469	423	394	374	418	391	373	413	389	372	408	387	381
	10	457	407	378	358	452	405	377	357	401	374	356	396	372	355	392	370	365

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	39.2 fc	3.8 ft
6.5 ft	28.1 fc	4.5 ft
7.5 ft	21.1 fc	5.2 ft
8.0 ft	18.5 fc	5.5 ft
10.0 ft	11.9 fc	6.9 ft
12.0 ft	8.2 fc	8.3 ft
14.0 ft	6.1 fc	9.7 ft
16.0 ft	4.6 fc	11.0 ft
20.0 ft	3.0 fc	13.8 ft
24.0 ft	2.1 fc	16.6 ft
28.0 ft	1.5 fc	19.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	394263	394263	394263
45.00°	7108	8180	6393
55.00°	2770	3001	2466
65.00°	1719	1734	1382
75.00°	1481	1798	1858
85.00°	3881	2770	3077

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	5.4	6.3	5.8	6.7	7.0	5.6	6.5	6.0	6.9	7.2
	3H	6.1	7.0	6.5	7.3	7.7	6.8	7.6	7.2	8.0	8.3
	4H	6.5	7.3	6.9	7.6	8.0	7.8	8.5	8.2	8.9	9.3
	6H	6.9	7.6	7.3	8.0	8.4	9.0	9.7	9.4	10.1	10.5
	8H	7.2	7.8	7.6	8.2	8.7	9.8	10.5	10.2	10.9	11.3
	12H	7.7	8.3	8.2	8.7	9.2	10.9	11.6	11.4	12.0	12.4
4H	2H	5.5	6.2	5.9	6.6	7.0	6.0	6.8	6.4	7.1	7.5
	3H	6.4	7.0	6.8	7.4	7.9	7.6	8.2	8.0	8.6	9.0
	4H	7.0	7.5	7.4	8.0	8.4	8.9	9.5	9.3	9.9	10.3
	6H	7.5	8.0	8.0	8.4	8.9	10.4	10.9	10.9	11.4	11.9
	8H	7.9	8.3	8.4	8.8	9.3	11.4	11.8	11.9	12.3	12.8
	12H	8.6	9.0	9.1	9.5	9.9	12.7	13.1	13.2	13.5	14.0
8H	4H	7.1	7.6	7.6	8.0	8.5	9.6	10.0	10.0	10.5	10.9
	6H	7.8	8.1	8.3	8.6	9.1	11.5	11.9	12.0	12.4	12.9
	8H	8.3	8.6	8.8	9.1	9.6	12.7	13.0	13.3	13.6	14.1
	12H	9.2	9.5	9.7	10.0	10.5	14.3	14.5	14.8	15.0	15.6
12H	4H	7.1	7.5	7.6	8.0	8.5	9.8	10.2	10.3	10.7	11.1
	6H	7.8	8.1	8.4	8.6	9.2	11.9	12.2	12.4	12.7	13.2
	8H	8.4	8.7	9.0	9.2	9.8	13.3	13.5	13.8	14.0	14.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0