Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

CF06XXPC 10L 35K XW XX CL XX

Nom 6" diam Gamma Cylinder (damp location), clear glass lens

Test Number

SP-01044_M-10L

Test Date

2/3/2020

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

Summary of Results

Power

Input Watts	6.5 W

Lumen Output

Output Lumens	727
Efficacy	111.79 lm/W

Luminous Dimensions

0° - 180° Size	-0.5
90° - 270° Size	-0.5
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.17
Two luminaires, plane 90°	1.17
Four luminaires	1.11

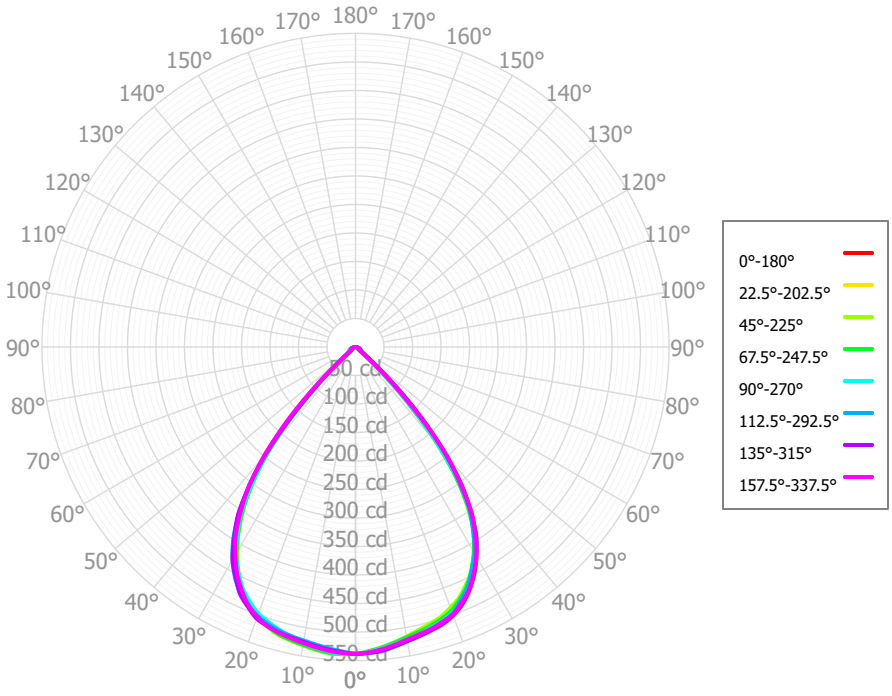
Full Beam Angle

0° - 180°	78°
90° - 270°	77°

IES File Header Contents

Keyword	Value
TEST	SP-01044_M-10L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/3/2020
ISSUEDATE	5/16/2022
LUMCAT	CF06XXPC 10L 35K XW XX CL XX
LUMINAIRE	Nom 6" diam Gamma Cylinder (damp location), clear glass lens
OTHER	Beam angle: 77.4 deg
OTHER	XTRA Wide optic
LAMPCAT	N/A
LAMP	N/A
OTHER	CCT Output Multipliers: 27K x 0.97, 30K x 0.98, 40K x 1.04, 27HK x 0.78, 30HK x 0.82
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting, scaled from 40L

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	51.38	7.07%	90.00° - 100.00°	0.02	0.00%
10.00° - 20.00°	144.99	19.95%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	214.18	29.48%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	211.98	29.17%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	82.60	11.37%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	8.79	1.21%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	8.08	1.11%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	4.06	0.56%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.55	0.08%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	726.61	100.00%	0.00° - 180.00°	726.64	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°	538.37	538.37	538.37	538.37	538.37	538.37	538.37	538.37	538.37	538.37	538.37	538.37	538.37	538.37	538.37	538.37	538.37
2.50°	535.43	534.29	534.08	534.50	535.00	534.59	536.05	537.25	538.69	539.16	539.71	539.02	538.90	537.40	537.14	536.07	535.43
5.00°	531.09	529.64	528.69	529.56	530.74	530.88	533.20	535.09	536.51	539.06	538.13	538.48	536.26	535.25	534.75	532.15	531.09
7.50°	525.46	523.85	522.60	523.32	525.84	526.73	529.39	531.35	533.10	534.99	535.49	534.53	532.24	530.09	529.18	526.98	525.46
10.00°	519.58	517.89	515.85	517.22	520.90	522.87	525.27	527.43	529.11	530.53	531.22	530.57	527.01	524.16	524.00	521.07	519.58
12.50°	513.42	511.41	508.89	512.19	515.94	519.54	521.94	523.35	525.41	526.56	526.69	526.33	520.80	518.81	519.41	516.25	513.42
15.00°	507.48	505.03	502.72	506.90	510.37	515.30	518.81	518.61	521.81	522.52	521.85	521.53	513.89	513.56	514.64	511.92	507.48
17.50°	501.73	498.87	496.72	500.31	504.50	509.73	513.09	513.38	514.03	513.66	513.95	513.23	506.05	506.02	509.65	505.81	501.73
20.00°	492.84	490.69	486.56	492.24	496.40	501.98	506.93	503.39	505.00	504.30	502.93	503.59	497.66	498.21	501.17	499.06	492.84
22.50°	481.71	478.51	475.73	478.69	487.42	491.63	493.23	490.45	488.63	487.60	487.95	488.20	483.94	481.97	489.17	485.86	481.71
25.00°	465.72	463.89	459.21	462.76	470.71	476.69	478.71	471.44	470.68	469.84	469.61	470.56	467.76	465.25	471.95	470.86	465.72
27.50°	446.86	445.43	442.15	440.22	451.67	457.29	455.39	449.45	446.28	444.09	445.41	445.85	445.27	442.01	450.47	448.54	446.86
30.00°	421.88	421.01	416.22	415.22	423.70	430.96	431.55	421.31	420.92	416.65	417.19	417.91	420.51	418.29	424.02	424.77	421.88
32.50°	394.03	388.83	389.75	384.90	393.80	399.16	395.87	390.74	385.05	380.87	381.58	381.93	384.99	384.65	394.31	390.76	394.03
35.00°	351.39	346.76	343.54	346.25	348.51	356.14	359.21	350.06	348.31	342.16	341.92	341.25	346.53	349.42	353.67	355.46	351.39
37.50°	303.38	294.28	295.99	292.93	300.87	306.00	305.33	306.35	297.70	292.72	291.42	291.42	294.71	299.54	307.10	303.41	303.38
40.00°	237.76	230.79	228.80	229.87	230.36	239.93	248.77	246.69	246.30	237.64	236.10	233.85	240.24	246.91	248.00	250.24	237.76
42.50°	167.15	157.92	161.15	153.08	157.87	165.56	169.67	183.57	174.58	167.13	167.34	164.32	169.85	178.65	183.56	175.12	167.15
45.00°	100.20	94.32	90.08	88.32	90.28	98.53	95.70	112.15	104.78	103.29	93.97	102.19	97.43	113.40	117.00	100.83	100.20
47.50°	33.98	37.28	28.37	37.25	23.89	34.52	48.89	39.46	59.12	53.56	53.26	49.57	55.98	60.45	49.75	54.61	33.98
50.00°	17.34	12.71	15.22	10.55	13.80	13.95	11.18	21.41	18.70	20.75	20.86	19.97	16.50	19.45	25.23	12.35	17.34
52.50°	7.13	6.56	4.77	6.30	4.45	6.90	8.87	8.12	14.59	16.34	14.31	14.26	13.11	14.53	11.40	9.42	7.13
55.00°	6.44	4.68	4.24	4.51	4.72	5.64	7.19	8.40	11.16	13.45	12.58	12.27	10.37	11.21	9.30	6.93	6.44
57.50°	6.46	4.71	4.01	4.60	4.99	5.75	7.28	9.05	11.06	12.67	11.66	13.41	10.73	11.59	9.24	7.27	6.46
60.00°	6.85	5.21	4.61	5.04	5.31	6.26	7.50	9.23	11.00	12.00	10.84	13.33	11.02	11.64	9.15	7.61	6.85
62.50°	7.23	5.88	5.25	5.68	5.65	6.85	7.97	9.38	11.06	11.45	9.87	12.40	10.55	11.08	9.07	7.88	7.23
65.00°	7.32	6.39	5.99	6.32	6.08	6.92	8.08	9.10	10.89	10.79	8.88	10.96	9.94	10.10	8.87	7.93	7.32
67.50°	7.28	6.88	6.25	6.95	6.37	6.93	7.60	8.69	10.19	10.02	7.36	9.24	8.44	8.51	8.59	7.36	7.28
70.00°	6.55	5.94	5.85	6.34	6.29	6.65	6.91	7.68	9.13	8.63	5.79	7.65	6.77	6.81	6.97	6.50	6.55
72.50°	5.36	4.75	4.95	5.32	5.46	5.91	6.05	6.23	7.61	6.89	4.02	6.11	4.70	5.02	5.30	5.26	5.36
75.00°	3.53	3.03	3.72	3.48	4.02	4.14	4.01	4.20	5.46	5.28	2.51	4.48	3.07	3.20	3.52	3.36	3.53
77.50°	1.94	1.75	1.83	1.91	2.37	2.21	2.15	2.34	3.25	3.47	1.29	2.81	1.80	1.77	1.88	1.67	1.94
80.00°	0.86	0.87	0.90	0.79	1.08	0.86	0.93	1.10	1.38	1.39	0.94	1.23	1.08	1.02	0.78	1.00	0.86
82.50°	0.42	0.45	0.47	0.38	0.43	0.53	0.72	0.62	0.89	0.91	0.80	0.86	0.61	0.67	0.57	0.55	0.42
85.00°	0.35	0.34	0.27	0.37	0.34	0.45	0.43	0.50	0.65	0.70	0.61	0.49	0.58	0.50	0.47	0.37	0.35
87.50°	0.30	0.31	0.22	0.35	0.26	0.32	0.35	0.34	0.36	0.51	0.42	0.45	0.35	0.53	0.46	0.40	0.30
90.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.28	0.29	0.29	0.34	0.34	0.23	0.35	0.00	0.00
92.50°	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
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
97.50°	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

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	865	865	865	865	845	845	845	845	807	807	807	773	773	773	741	741	741	727
	1	820	798	778	760	802	782	764	748	752	738	725	725	714	703	700	691	683	677
	2	774	734	702	675	757	722	692	667	698	673	652	676	656	638	656	639	625	626
	3	729	677	637	605	714	667	630	600	647	616	590	629	603	581	612	591	572	579
	4	686	625	581	547	673	617	575	543	601	565	537	586	555	530	572	546	524	535
RCR	5	646	579	532	497	634	572	528	495	558	520	490	546	512	486	534	505	481	495
	6	609	537	489	454	598	531	486	453	520	479	449	509	473	446	499	468	443	459
	7	574	499	451	417	564	494	448	416	485	443	413	475	439	411	467	434	409	426
	8	542	465	417	384	532	461	415	383	453	411	382	445	407	380	437	403	378	397
	9	512	435	387	355	503	431	386	355	424	382	353	417	379	352	410	376	351	370
	10	485	407	361	330	477	404	359	329	397	356	328	391	354	327	386	351	326	346

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	17.8 fc	8.8 ft
6.5 ft	12.7 fc	10.5 ft
7.5 ft	9.6 fc	12.1 ft
8.0 ft	8.4 fc	12.9 ft
10.0 ft	5.4 fc	16.1 ft
12.0 ft	3.7 fc	19.3 ft
14.0 ft	2.7 fc	22.5 ft
16.0 ft	2.1 fc	25.7 ft
20.0 ft	1.3 fc	32.2 ft
24.0 ft	0.9 fc	38.6 ft
28.0 ft	0.7 fc	45.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	29514	29514	29514
45.00°	7768	6984	6999
55.00°	615	405	451
65.00°	949	777	789
75.00°	747	789	852
85.00°	220	170	217

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	0.2	1.3	0.6	1.6	1.9	3.5	4.6	3.9	4.9	5.2
	3H	4.2	5.2	4.6	5.5	5.9	5.8	6.8	6.2	7.1	7.5
	4H	5.0	5.8	5.4	6.2	6.6	6.4	7.3	6.8	7.6	8.0
	6H	5.1	5.9	5.5	6.2	6.6	6.5	7.3	6.9	7.7	8.0
	8H	5.0	5.8	5.5	6.2	6.6	6.5	7.2	6.9	7.6	8.0
	12H	5.0	5.7	5.4	6.1	6.5	6.4	7.1	6.9	7.5	8.0
4H	2H	1.8	2.6	2.2	3.0	3.4	4.3	5.1	4.7	5.5	5.9
	3H	5.4	6.1	5.8	6.5	6.9	6.7	7.4	7.1	7.8	8.2
	4H	6.1	6.7	6.5	7.1	7.6	7.4	8.0	7.8	8.4	8.9
	6H	6.2	6.7	6.6	7.2	7.6	7.5	8.0	7.9	8.5	8.9
	8H	6.1	6.6	6.6	7.1	7.6	7.4	7.9	7.9	8.4	8.9
	12H	6.1	6.5	6.6	7.0	7.5	7.4	7.9	7.9	8.3	8.8
8H	4H	6.2	6.7	6.7	7.2	7.7	7.5	8.0	7.9	8.4	8.9
	6H	6.4	6.8	6.9	7.3	7.7	7.6	8.0	8.1	8.5	9.0
	8H	6.3	6.7	6.9	7.2	7.7	7.6	7.9	8.1	8.5	9.0
	12H	6.3	6.6	6.8	7.1	7.7	7.6	7.9	8.1	8.4	9.0
12H	4H	6.2	6.6	6.7	7.1	7.6	7.4	7.9	7.9	8.3	8.8
	6H	6.3	6.7	6.8	7.1	7.7	7.6	7.9	8.1	8.4	8.9
	8H	6.3	6.6	6.8	7.1	7.7	7.6	7.9	8.1	8.4	9.0

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0