

## Indoor Distribution Test Report

### Spectrum Lighting Inc.

994 Jefferson Street  
Fall River, MA 02721  
+1.508.678.2303

### Spectrum Lighting Photometric Lab

Luminaire

C0614LM137L40HKNDNL  
6" Round x 12" High Cylinder Luminaire

Test Number

SP-R15

Test Date

9/10/2025

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

## Summary of Results

### Power

Input Watts	100.03 W
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### Lumen Output

Output Lumens	7655
Efficacy	76.53 lm/W

### Luminous Dimensions

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

### Spacing Criterion

Two luminaires, plane 0°	0.46
Two luminaires, plane 90°	0.4
Four luminaires	0.5

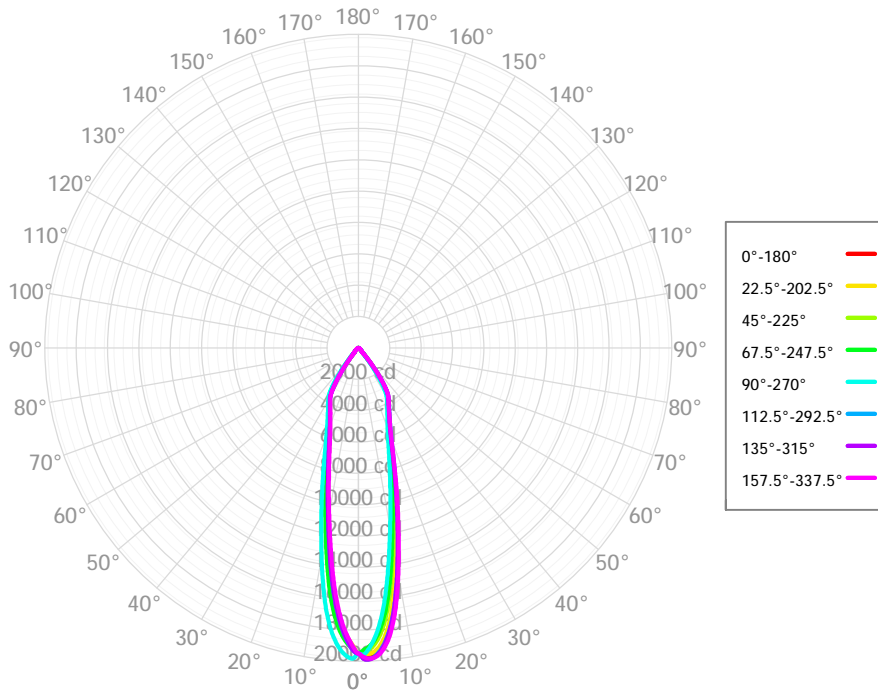
### Full Beam Angle

0° - 180°	25°
90° - 270°	25°

## IES File Header Contents

Keyword	Value
TEST	SP-R15
TESTLAB	Spectrum Lighting Photometric Lab. VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/10/2025
ISSUEDATE	9/10/2025
LUMCAT	C0614LM137L40HKNDNL
LUMINAIRE	6" Round x 12" High Cylinder Luminaire
DISTRIBUTION	Beam Angle 25.4
OTHER	CCT 4118 CRI 91.6 R9 60.0
OTHER	Total Luminaire wattage is approximate
OTHER	This report is prepared by Spectrum Lighting
_CRI	90+
_CCTMULT	30K x 1.28, 35K x 1.35, 40K x 1.37, 30HK x 1.001, 35HK x 0.99
_LAMPMULT	100L x 0.77, 120L x 0.88

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	1510.49	19.73%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	2299.64	30.04%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	2074.46	27.10%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	1416.24	18.50%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	242.30	3.17%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	89.09	1.16%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	17.86	0.23%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	3.24	0.04%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.69	0.02%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	7655.00	100.00%	0.00° - 180.00°	7655.00	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°	19499.63	19499.63	19499.63	19499.63	19499.63	19499.63	19499.63	19499.63	19499.63	19499.63	19499.63	19499.63	19499.63	19499.63	19499.63	19499.63	19499.63
1.00°	19651.47	19504.44	19365.81	19282.98	19577.39	19306.85	19293.91	19062.52	19118.89	19013.12	19154.73	19190.08	19828.72	19832.44	19849.81	19730.19	19651.47
2.00°	19700.57	19529.68	19261.23	19090.06	19206.40	18812.90	18791.69	18513.06	18637.58	18555.86	18826.72	18918.46	19713.86	19867.09	19889.08	19828.28	19700.57
3.00°	19598.03	19407.84	18992.19	18752.57	18678.39	18177.05	18153.54	17842.20	18025.38	17956.52	18353.78	18491.68	19446.57	19723.84	19758.51	19783.41	19598.03
4.00°	19320.41	19112.20	18550.00	18257.84	17986.35	17386.59	17372.36	17017.45	17280.10	17216.60	17732.25	17920.98	19021.78	19410.98	19463.84	19572.59	19320.41
5.00°	18865.60	18634.31	17939.39	17595.24	17134.16	16444.96	16454.17	16048.10	16381.11	16327.41	16954.87	17184.81	18452.13	18938.46	19000.46	19188.20	18865.60
6.00°	18220.16	17972.17	17128.74	16764.09	16134.08	15401.92	15417.45	14996.07	15360.59	15309.15	16024.84	16295.79	17721.90	18319.42	18371.19	18629.73	18220.16
7.00°	17364.47	17109.75	16135.20	15773.83	15017.78	14265.27	14306.62	13857.80	14257.49	14199.41	14976.55	15276.09	16824.99	17528.39	17572.04	17874.23	17364.47
8.00°	16318.86	16061.33	15010.53	14673.95	13851.58	13120.28	13170.25	12732.39	13126.25	13082.03	13862.29	14157.89	15779.96	16562.00	16594.29	16934.83	16318.86
9.00°	15172.17	14908.44	13846.80	13532.27	12714.52	12034.99	12083.84	11673.38	12042.94	12016.16	12764.86	13049.35	14645.95	15483.24	15491.71	15851.29	15172.17
10.00°	13984.14	13737.22	12718.85	12435.79	11667.29	11048.06	11090.13	10725.63	11060.93	11044.26	11743.03	11999.88	13491.94	14348.41	14325.81	14678.43	13984.14
11.00°	12831.23	12612.51	11663.29	11425.82	10709.69	10143.37	10189.20	9852.59	10152.90	10155.02	10799.16	11037.09	12388.02	13212.50	13168.02	13498.76	12831.23
12.00°	11748.91	11559.06	10699.89	10490.76	9830.94	9318.50	9365.35	9062.55	9337.15	9336.86	9937.60	10140.82	11366.65	12120.52	12065.24	12368.38	11748.91
13.00°	10760.84	10589.46	9818.00	9639.36	9049.94	8586.81	8618.48	8338.72	8601.39	8601.10	9148.73	9321.11	10434.64	11105.70	11055.38	11317.83	10760.84
14.00°	9836.41	9699.10	9023.59	8866.54	8332.57	7924.22	7941.62	7701.43	7926.17	7933.44	8425.60	8586.48	9556.23	10181.49	10108.76	10347.92	9836.41
15.00°	8988.48	8897.13	8296.75	8176.67	7686.56	7320.43	7345.80	7134.52	7326.48	7335.66	7776.25	7904.06	8779.69	9312.92	9239.08	9452.04	8988.48
16.00°	8215.46	8159.75	7640.21	7534.88	7106.51	6793.46	6819.37	6632.04	6794.79	6806.87	7188.74	7302.96	8049.68	8516.00	8429.85	8625.96	8215.46
17.00°	7530.57	7499.95	7059.62	6969.89	6597.97	6340.23	6358.31	6191.99	6339.51	6344.39	6670.59	6766.98	7407.88	7816.41	7712.62	7875.75	7530.57
18.00°	6924.07	6925.38	6551.71	6486.51	6157.30	5938.90	5946.17	5814.53	5939.21	5947.35	6223.50	6309.85	6844.91	7183.30	7079.32	7212.31	6924.07
19.00°	6411.47	6427.00	6119.19	6054.20	5779.26	5595.58	5608.59	5494.16	5596.79	5603.86	5832.06	5900.01	6351.45	6633.70	6534.40	6646.68	6411.47
20.00°	5972.36	5986.79	5744.10	5693.25	5460.69	5303.00	5316.87	5212.73	5311.10	5316.82	5512.47	5558.83	5935.69	6163.42	6070.10	6164.53	5972.36
21.00°	5600.69	5624.93	5429.90	5383.66	5192.40	5055.09	5053.35	4969.97	5055.61	5062.66	5233.24	5264.61	5576.49	5766.96	5684.54	5757.93	5600.69
22.00°	5303.97	5325.13	5165.98	5131.61	4948.74	4830.81	4832.25	4752.72	4833.76	4841.54	4989.50	5012.33	5281.42	5439.07	5367.61	5420.35	5303.97
23.00°	5041.07	5070.99	4934.70	4896.46	4747.59	4628.75	4627.62	4555.44	4634.99	4639.34	4774.12	4796.06	5026.32	5155.38	5097.26	5142.24	5041.07
24.00°	4814.36	4845.32	4728.62	4698.72	4551.35	4441.10	4440.92	4380.95	4452.32	4452.11	4580.87	4596.05	4803.35	4916.43	4858.98	4894.85	4814.36
25.00°	4606.50	4637.18	4537.12	4512.20	4375.46	4284.41	4281.98	4229.03	4285.41	4295.67	4400.21	4415.03	4600.32	4697.77	4642.89	4680.35	4606.50
26.00°	4414.54	4439.97	4362.89	4349.39	4231.41	4132.53	4139.48	4088.64	4141.31	4147.79	4248.75	4261.03	4426.97	4501.67	4450.10	4481.03	4414.54
27.00°	4241.98	4280.18	4215.68	4199.36	4075.14	3978.24	3994.13	3951.12	3995.85	3991.99	4113.70	4117.66	4276.92	4330.94	4282.51	4300.60	4241.98
28.00°	4092.68	4121.50	4052.61	4043.22	3913.93	3846.47	3860.06	3818.48	3857.49	3853.20	3940.05	3960.71	4125.95	4171.15	4125.20	4145.65	4092.68
29.00°	3948.62	3956.66	3888.35	3878.12	3778.23	3724.91	3735.63	3697.31	3731.12	3732.56	3800.85	3808.17	3964.87	4017.17	3977.41	4004.75	3948.62
30.00°	3811.80	3819.38	3754.44	3743.39	3642.40	3568.12	3595.47	3546.76	3604.14	3605.51	3672.56	3680.79	3815.11	3855.15	3836.54	3860.76	3811.80
31.00°	3681.60	3695.68	3622.62	3607.32	3448.77	3333.30	3375.17	3310.62	3410.40	3410.20	3528.10	3537.94	3683.88	3727.60	3706.40	3730.48	3681.60
32.00°	3540.75	3554.61	3427.31	3401.55	3171.79	3033.73	3082.16	3002.29	3125.93	3126.15	3289.88	3311.05	3521.31	3592.21	3563.05	3604.35	3540.75
33.00°	3324.28	3332.09	3146.76	3104.84	2839.07	2695.80	2744.62	2661.26	2790.81	2784.08	2975.58	3002.44	3283.12	3397.78	3351.19	3424.84	3324.28
34.00°	3020.61	3029.23	2816.20	2773.61	2486.34	2328.87	2390.69	2309.44	2437.88	2426.16	2625.30	2662.85	2978.62	3118.75	3066.46	3147.12	3020.61
35.00°	2677.80	2679.48	2463.03	2421.46	2123.11	1954.80	2021.26	1946.44	2079.18	2069.80	2263.69	2310.61	2632.73	2792.97	2733.92	2815.66	2677.80
36.00°	2319.73	2319.21	2102.29	2059.27	1756.14	1588.72	1653.01	1578.06	1720.32	1723.49	1910.83	1945.75	2273.58	2432.24	2376.59	2462.90	2319.73
37.00°	1960.22	1965.96	1750.00	1695.80	1395.64	1234.17	1296.17	1229.49	1371.29	1374.42	1560.50	1582.21	1905.34	2059.76	2008.53	2101.91	1960.22
38.00°	1609.53	1619.76	1402.40	1346.71	1056.63	914.77	965.90	903.83	1038.60	1041.04	1219.80	1243.30	1544.66	1694.11	1641.29	1736.19	1609.53
39.00°	1265.80	1277.30	1066.99	1013.75	760.20	648.00	688.52	632.99	736.73	736.11	901.34	927.66	1195.90	1337.30	1289.12	1384.14	1265.80
40.00°	939.06	945.41	762.03	718.98	528.79	459.93	485.73	445.55	504.18	501.94	624.48	644.61	877.59	1006.32	961.82	1054.73	939.06
41.00°	654.47	658.04	512.24	496.35	403.76	384.95	392.48	378.36	391.26	381.10	434.08	442.00	613.44	719.80	679.23	754.40	654.47
42.00°	440.72	453.90	388.19	385.78	356.79	346.75	352.83	340.51	343.86	339.28	353.91	358.67	427.18	498.18	462.27	511.00	440.72
43.00°	345.78	357.09	339.28	341.90	325.00	318.17	322.96	312.86	316.49	308.37	322.85	321.63	356.24	380.77	360.38	372.59	345.78

### 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%	20%	0%
	pcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	9113	9113	9113	9113	8901	8901	8901	8901	8506	8506	8506	8144	8144	8144	7811	7811	7811	7655
	1	8726	8530	8354	8196	8540	8365	8208	8066	8057	7933	7818	7774	7677	7586	7514	7438	7367	7291
	2	8340	7998	7715	7477	8175	7868	7611	7394	7623	7413	7232	7398	7228	7079	7189	7053	6932	6916
	3	7968	7520	7172	6896	7821	7415	7097	6840	7218	6951	6732	7036	6814	6628	6867	6684	6527	6557
	4	7615	7089	6704	6410	7482	7004	6648	6372	6843	6539	6298	6694	6435	6226	6555	6337	6155	6220
	5	7280	6700	6295	5996	7162	6630	6252	5969	6497	6169	5917	6374	6089	5866	6259	6013	5816	5906
	6	6965	6348	5933	5636	6859	6289	5900	5617	6179	5835	5579	6075	5773	5543	5979	5714	5507	5616
	7	6670	6028	5611	5319	6574	5978	5585	5305	5885	5534	5278	5798	5485	5251	5716	5437	5224	5348
	8	6394	5736	5322	5037	6308	5694	5301	5027	5615	5260	5007	5540	5220	4986	5470	5182	4967	5101
	9	6136	5470	5061	4785	6058	5434	5044	4777	5366	5011	4762	5302	4979	4747	5241	4947	4732	4873
	10	5896	5226	4825	4558	5825	5195	4811	4552	5136	4784	4540	5080	4757	4528	5028	4731	4517	4663

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	644.6 fc	2.5 ft
6.5 ft	461.5 fc	2.9 ft
7.5 ft	346.7 fc	3.3 ft
8.0 ft	304.7 fc	3.6 ft
10.0 ft	195.0 fc	4.5 ft
12.0 ft	135.4 fc	5.4 ft
14.0 ft	99.5 fc	6.2 ft
16.0 ft	76.2 fc	7.1 ft
20.0 ft	48.7 fc	8.9 ft
24.0 ft	33.9 fc	10.7 ft
28.0 ft	24.9 fc	12.5 ft

### Average Luminaire Luminance [cd/m<sup>2</sup>]

	0.00°	45.00°	90.00°
0.00°	1068972	1068972	1068972
45.00°	21889	22039	21332
55.00°	8987	8996	8533
65.00°	1768	1742	1387
75.00°	509	459	488
85.00°	815	1003	1060

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		Viewing C0-180					Viewing C90-270				
2H	2H	9.2	10.1	9.6	10.4	10.8	9.2	10.1	9.5	10.4	10.7
	3H	9.1	9.9	9.4	10.2	10.6	9.1	9.9	9.4	10.2	10.6
	4H	9.0	9.7	9.4	10.1	10.5	9.0	9.7	9.4	10.1	10.5
	6H	8.9	9.6	9.3	9.9	10.3	8.9	9.6	9.3	9.9	10.3
	8H	8.8	9.5	9.3	9.9	10.3	8.8	9.5	9.3	9.9	10.3
	12H	8.8	9.4	9.2	9.8	10.2	8.8	9.4	9.2	9.8	10.2
4H	2H	9.0	9.7	9.4	10.1	10.5	9.0	9.7	9.4	10.1	10.5
	3H	8.9	9.5	9.3	9.9	10.3	8.9	9.5	9.3	9.9	10.3
	4H	8.7	9.3	9.2	9.7	10.2	8.8	9.3	9.2	9.8	10.2
	6H	8.7	9.1	9.1	9.6	10.1	8.7	9.2	9.2	9.6	10.1
	8H	8.6	9.0	9.1	9.5	10.0	8.6	9.1	9.1	9.5	10.0
	12H	8.5	8.9	9.0	9.4	9.9	8.6	9.0	9.1	9.5	9.9
8H	4H	8.6	9.0	9.1	9.5	9.9	8.6	9.0	9.1	9.5	10.0
	6H	8.5	8.8	9.0	9.3	9.8	8.5	8.9	9.0	9.4	9.8
	8H	8.4	8.7	9.0	9.3	9.8	8.5	8.8	9.0	9.3	9.8
	12H	8.4	8.7	8.9	9.2	9.8	8.5	8.7	9.0	9.2	9.8
12H	4H	8.5	8.9	9.0	9.4	9.9	8.5	8.9	9.0	9.4	9.9
	6H	8.4	8.7	9.0	9.2	9.8	8.4	8.7	9.0	9.2	9.8
	8H	8.4	8.7	8.9	9.2	9.7	8.4	8.7	8.9	9.2	9.8

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0