

## Indoor Distribution Test Report

### Spectrum Lighting Inc.

994 Jefferson Street  
Fall River, MA 02721  
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### Spectrum Lighting Photometric Lab

Luminaire

C0614LM137L35KNDNL  
6" Round x 12" High Cylinder Luminaire

Test Number

SP-R21

Test Date

9/10/2025

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

## Summary of Results

### Power

Input Watts	95.87 W
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### Lumen Output

Output Lumens	10344
Efficacy	107.9 lm/W

### Luminous Dimensions

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

### Spacing Criterion

Two luminaires, plane 0°	0.43
Two luminaires, plane 90°	0.41
Four luminaires	0.48

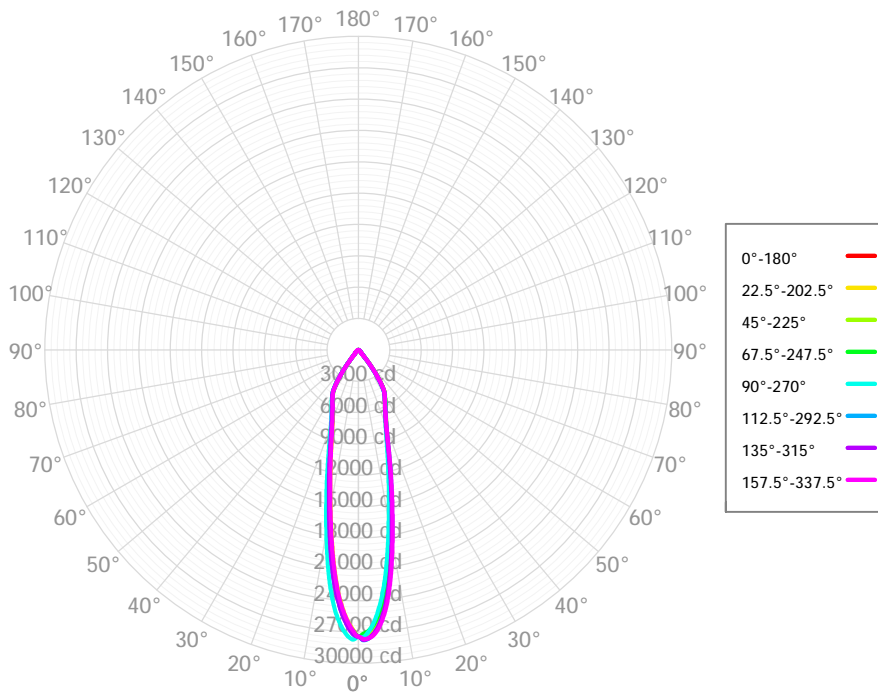
### Full Beam Angle

0° - 180°	24°
90° - 270°	25°

## IES File Header Contents

Keyword	Value
TEST	SP-R21
TESTLAB	Spectrum Lighting Photometric Lab. VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/10/2025
ISSUEDATE	9/10/2025
LUMCAT	C0614LM137L35KNDNL
LUMINAIRE	6" Round x 12" High Cylinder Luminaire
DISTRIBUTION	Beam Angle 24.7
OTHER	CCT 3481 CRI 81.5 R9 4.3
OTHER	Total Luminaire wattage is approximate
OTHER	This report is prepared by Spectrum Lighting
_CRI	80+
_CCTMULT	30K x 0.95, 40K x 1.02, 30HK x 0.744, 35HK x 0.73, 40HK x 0.74
_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°	2085.47	20.16%	90.00° - 100.00°	1.62	0.02%
10.00° - 20.00°	3093.28	29.90%	100.00° - 110.00°	1.55	0.01%
20.00° - 30.00°	2781.42	26.89%	100.00° - 120.00°	3.09	0.03%
30.00° - 40.00°	1902.00	18.39%	120.00° - 130.00°	1.66	0.02%
40.00° - 50.00°	319.25	3.09%	130.00° - 140.00°	1.90	0.02%
50.00° - 60.00°	119.53	1.16%	140.00° - 150.00°	2.20	0.02%
60.00° - 70.00°	23.69	0.23%	150.00° - 160.00°	1.93	0.02%
70.00° - 80.00°	3.64	0.04%	160.00° - 170.00°	1.13	0.01%
80.00° - 90.00°	1.88	0.02%	170.00° - 180.00°	0.31	0.00%
0.00° - 90.00°	10330.16	99.87%	0.00° - 180.00°	10344.00	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°	27441.94	27441.94	27441.94	27441.94	27441.94	27441.94	27441.94	27441.94	27441.94	27441.94	27441.94	27441.94	27441.94	27441.94	27441.94	27441.94	27441.94
1.00°	27558.71	27421.07	27289.96	27180.68	27496.70	27246.40	27240.83	26936.21	27007.39	26825.94	26971.72	26918.58	27728.77	27788.05	27754.84	27669.77	27558.71
2.00°	27463.71	27374.47	27078.22	26937.84	27026.43	26616.38	26638.12	26234.06	26366.78	26171.31	26444.27	26427.10	27449.78	27649.64	27629.97	27628.27	27463.71
3.00°	27086.84	27029.50	26589.35	26447.01	26349.23	25791.89	25814.08	25339.10	25509.24	25273.86	25680.37	25689.96	26906.17	27275.26	27246.08	27369.61	27086.84
4.00°	26461.07	26434.00	25864.45	25720.93	25408.81	24774.87	24819.69	24256.74	24455.48	24178.50	24708.53	24740.36	26105.28	26645.43	26607.01	26832.45	26461.07
5.00°	25573.45	25570.53	24904.58	24777.10	24270.90	23573.28	23643.06	22974.67	23208.30	22886.88	23511.76	23566.44	25145.90	25789.85	25745.14	26025.79	25573.45
6.00°	24415.40	24482.78	23702.60	23616.63	22960.00	22202.20	22282.68	21521.05	21792.38	21425.65	22115.37	22182.87	23912.59	24716.47	24599.38	24972.51	24415.40
7.00°	23022.58	23113.27	22272.42	22250.08	21468.55	20693.46	20772.03	19966.23	20244.22	19848.04	20589.52	20662.46	22457.42	23372.27	23258.62	23683.61	23022.58
8.00°	21447.31	21557.66	20665.14	20699.64	19868.91	19098.43	19194.68	18372.42	18649.44	18236.95	18971.46	19066.50	20872.56	21857.88	21688.67	22149.06	21447.31
9.00°	19783.76	19917.34	19001.98	19107.46	18269.62	17525.68	17607.08	16830.91	17089.01	16701.34	17402.22	17488.77	19231.22	20238.02	20035.63	20494.73	19783.76
10.00°	18129.35	18263.88	17407.72	17535.94	16716.60	16053.79	16121.45	15391.60	15640.70	15304.75	15940.60	16008.71	17622.95	18596.19	18374.47	18831.52	18129.35
11.00°	16562.11	16702.94	15925.13	16058.54	15319.52	14717.39	14770.94	14115.30	14339.71	14038.18	14614.06	14674.34	16110.38	17006.25	16816.84	17206.09	16562.11
12.00°	15117.77	15253.44	14579.69	14707.71	14046.13	13486.25	13551.05	12964.00	13163.17	12890.83	13411.52	13452.24	14732.04	15537.87	15351.43	15691.44	15117.77
13.00°	13820.19	13950.08	13362.09	13495.84	12890.75	12392.28	12437.27	11907.87	12084.34	11838.06	12309.25	12331.47	13473.14	14198.92	13996.21	14353.17	13820.19
14.00°	12629.84	12766.87	12265.32	12389.95	11835.02	11388.88	11446.23	10956.58	11112.08	10906.95	11317.22	11331.60	12322.58	12971.35	12769.03	13090.29	12629.84
15.00°	11529.93	11688.82	11260.46	11386.52	10909.38	10515.46	10547.21	10115.33	10249.63	10066.99	10430.89	10425.07	11271.32	11850.71	11639.38	11931.44	11529.93
16.00°	10555.19	10719.20	10359.29	10479.71	10060.45	9713.55	9754.60	9377.14	9489.97	9317.34	9627.36	9612.97	10348.05	10825.57	10619.83	10889.23	10555.19
17.00°	9692.10	9864.34	9556.76	9680.90	9317.18	9008.54	9053.38	8721.88	8816.94	8662.71	8933.43	8912.92	9527.32	9922.61	9733.74	9955.99	9692.10
18.00°	8944.79	9123.00	8856.49	8977.48	8660.84	8412.89	8442.66	8156.30	8234.67	8107.21	8332.14	8308.94	8825.02	9142.64	8962.57	9153.54	8944.79
19.00°	8295.21	8477.39	8252.20	8354.89	8104.51	7899.32	7916.88	7671.54	7743.38	7626.46	7806.88	7782.98	8203.22	8471.65	8306.88	8469.82	8295.21
20.00°	7752.95	7915.55	7751.24	7836.64	7627.42	7451.63	7468.39	7255.14	7321.70	7221.52	7368.78	7335.72	7684.34	7900.98	7751.63	7887.20	7752.95
21.00°	7311.37	7452.46	7334.45	7400.08	7224.41	7064.43	7084.67	6896.46	6956.80	6875.50	6994.31	6955.06	7253.22	7434.76	7310.38	7418.65	7311.37
22.00°	6929.41	7073.24	6974.35	7024.00	6871.01	6734.70	6742.40	6577.94	6631.77	6572.57	6670.15	6633.31	6889.42	7042.47	6940.88	7013.70	6929.41
23.00°	6601.42	6728.68	6658.58	6709.07	6573.87	6439.15	6438.45	6287.07	6347.33	6292.85	6384.96	6352.48	6562.80	6700.76	6607.13	6670.27	6601.42
24.00°	6306.78	6431.64	6364.80	6409.84	6287.58	6162.26	6169.09	6032.82	6086.93	6033.38	6128.34	6088.61	6286.16	6396.24	6304.94	6366.09	6306.78
25.00°	6035.48	6167.16	6105.22	6148.44	6023.96	5917.36	5922.61	5809.63	5858.80	5801.92	5896.06	5854.32	6043.69	6123.83	6043.69	6088.12	6035.48
26.00°	5796.73	5902.24	5874.52	5932.00	5809.61	5704.25	5705.58	5609.03	5648.91	5598.11	5691.83	5659.47	5821.28	5885.36	5812.29	5840.75	5796.73
27.00°	5587.43	5685.37	5671.29	5724.67	5608.64	5488.79	5504.77	5418.57	5441.83	5389.42	5490.99	5456.63	5622.05	5673.88	5596.73	5623.71	5587.43
28.00°	5385.13	5481.58	5457.38	5509.13	5372.62	5276.01	5310.43	5228.87	5251.44	5188.00	5266.58	5236.15	5408.58	5462.11	5386.73	5424.77	5385.13
29.00°	5193.92	5250.34	5222.52	5285.74	5173.06	5102.88	5137.64	5055.45	5094.55	5023.82	5076.13	5039.91	5192.15	5239.05	5193.94	5228.29	5193.92
30.00°	5020.03	5062.34	5040.76	5103.88	4990.76	4936.95	4960.25	4893.05	4922.58	4864.35	4905.41	4868.35	5012.49	5056.20	5017.65	5049.80	5020.03
31.00°	4855.53	4901.70	4866.04	4920.94	4798.14	4704.67	4761.21	4672.51	4739.56	4644.35	4702.84	4649.47	4810.53	4877.20	4838.59	4877.89	4855.53
32.00°	4624.73	4711.90	4630.76	4690.88	4494.87	4359.95	4450.87	4330.18	4436.51	4316.80	4404.33	4313.18	4527.56	4633.42	4578.71	4674.95	4624.73
33.00°	4293.18	4407.54	4283.77	4334.92	4091.47	3940.60	4036.75	3898.11	4038.34	3909.36	4008.69	3892.11	4138.41	4267.64	4198.81	4355.03	4293.18
34.00°	3868.46	4009.30	3861.57	3914.21	3638.43	3474.39	3572.22	3434.23	3570.99	3444.72	3551.29	3423.63	3688.69	3841.82	3759.78	3924.36	3868.46
35.00°	3397.65	3554.61	3391.09	3440.99	3157.18	2988.87	3089.16	2945.81	3087.34	2942.88	3059.27	2935.05	3208.67	3374.51	3285.88	3465.62	3397.65
36.00°	2898.63	3053.14	2891.38	2951.41	2662.70	2486.60	2596.96	2446.40	2576.83	2424.21	2552.82	2438.43	2718.51	2877.41	2789.24	2980.34	2898.63
37.00°	2380.63	2535.77	2380.48	2450.06	2170.17	1993.58	2107.24	1955.61	2066.97	1913.04	2046.30	1948.64	2226.12	2375.63	2301.45	2482.47	2380.63
38.00°	1881.10	2024.42	1883.14	1963.67	1692.45	1538.60	1630.40	1491.90	1583.89	1447.09	1568.28	1485.87	1744.85	1887.41	1819.24	1993.90	1881.10
39.00°	1418.11	1544.23	1423.69	1501.56	1260.49	1130.66	1207.88	1081.39	1157.47	1046.39	1146.45	1072.63	1304.62	1441.24	1366.43	1525.93	1418.11
40.00°	1015.13	1120.84	1021.10	1082.97	893.13	799.77	855.72	754.73	809.73	731.81	801.48	737.45	929.48	1042.78	976.72	1103.32	1015.13
41.00°	692.84	785.16	710.44	751.25	638.99	599.11	622.79	571.74	574.98	546.13	571.39	540.28	646.83	723.86	668.46	751.49	692.84
42.00°	504.47	563.91	538.17	555.34	518.17	514.14	521.23	497.48	493.70	467.06	473.41	464.97	503.28	525.60	497.60	528.89	504.47
43.00°	434.44	463.27	465.81	486.52	469.10	469.23	473.29	458.18	447.87	429.65	430.86	425.97	446.25	449.73	434.51	442.71	434.44

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

	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%
RCR	0	12311	12311	12311	12311	12023	12023	12023	12023	11486	11486	11486	10994	10994	10994	10542	10542	10330
	1	11790	11525	11289	11075	11537	11302	11090	10898	10883	10715	10561	10498	10367	10245	10144	10042	9842
	2	11270	10809	10428	10108	11045	10632	10286	9994	10299	10017	9774	9993	9764	9564	9709	9526	9340
	3	10770	10165	9697	9325	10569	10023	9594	9249	9755	9396	9101	9507	9209	8958	9277	9031	8859
	4	10294	9586	9067	8672	10114	9470	8990	8620	9251	8842	8518	9048	8700	8419	8860	8566	8407
	5	9844	9063	8517	8114	9683	8967	8458	8078	8787	8345	8006	8619	8236	7936	8462	8132	7987
	6	9420	8589	8030	7630	9276	8509	7985	7604	8359	7897	7552	8218	7812	7501	8086	7730	7598
	7	9024	8158	7597	7204	8893	8091	7561	7185	7964	7491	7147	7845	7424	7110	7734	7359	7238
	8	8652	7766	7209	6825	8535	7709	7180	6811	7601	7124	6783	7500	7069	6755	7404	7017	6906
	9	8306	7408	6858	6487	8199	7359	6835	6476	7267	6789	6454	7179	6745	6433	7096	6702	6601
	10	7983	7081	6541	6181	7886	7039	6522	6173	6958	6484	6156	6882	6447	6140	6810	6412	6319

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	907.2 fc	2.4 ft
6.5 ft	649.5 fc	2.8 ft
7.5 ft	487.9 fc	3.2 ft
8.0 ft	428.8 fc	3.4 ft
10.0 ft	274.4 fc	4.3 ft
12.0 ft	190.6 fc	5.2 ft
14.0 ft	140.0 fc	6.0 ft
16.0 ft	107.2 fc	6.9 ft
20.0 ft	68.6 fc	8.6 ft
24.0 ft	47.6 fc	10.3 ft
28.0 ft	35.0 fc	12.1 ft

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

	0.00°	45.00°	90.00°
0.00°	1504371	1504371	1504371
45.00°	27418	29969	30954
55.00°	10749	12235	13257
65.00°	2021	2155	2749
75.00°	684	631	687
85.00°	857	957	1433

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	9.4	10.3	9.7	10.6	10.9	10.3	11.3	10.7	11.6	11.9
	3H	9.2	10.1	9.6	10.4	10.8	10.2	11.0	10.6	11.4	11.7
	4H	9.1	9.9	9.6	10.3	10.7	10.1	10.9	10.5	11.2	11.6
	6H	9.0	9.7	9.5	10.1	10.5	10.0	10.7	10.4	11.1	11.5
	8H	9.0	9.6	9.4	10.0	10.4	10.0	10.6	10.4	11.0	11.4
	12H	8.9	9.6	9.4	9.9	10.4	9.9	10.5	10.3	10.9	11.4
4H	2H	9.2	9.9	9.6	10.3	10.7	10.2	10.9	10.6	11.3	11.7
	3H	9.0	9.6	9.4	10.0	10.5	10.0	10.6	10.4	11.1	11.5
	4H	8.9	9.5	9.4	9.9	10.3	9.9	10.5	10.4	10.9	11.3
	6H	8.8	9.3	9.3	9.7	10.2	9.8	10.3	10.3	10.7	11.2
	8H	8.8	9.2	9.2	9.6	10.1	9.8	10.2	10.2	10.7	11.1
	12H	8.7	9.1	9.2	9.6	10.0	9.7	10.1	10.2	10.6	11.1
8H	4H	8.7	9.2	9.2	9.6	10.1	9.7	10.2	10.2	10.6	11.1
	6H	8.6	9.0	9.2	9.5	10.0	9.6	10.0	10.2	10.5	11.0
	8H	8.6	8.9	9.1	9.4	9.9	9.6	9.9	10.1	10.4	10.9
	12H	8.6	8.8	9.1	9.3	9.9	9.6	9.8	10.1	10.3	10.9
12H	4H	8.7	9.0	9.2	9.5	10.0	9.7	10.0	10.2	10.5	11.0
	6H	8.6	8.9	9.1	9.4	9.9	9.6	9.9	10.1	10.3	10.9
	8H	8.5	8.8	9.1	9.3	9.9	9.5	9.8	10.1	10.3	10.9

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0