

## Indoor Distribution Test Report

### Spectrum Lighting Inc.

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

Luminaire

C0614LM100L40KNDGL

6" Round x 12" High Cylinder Luminaire

Test Number

SP-R19

Test Date

9/10/2025

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

## Summary of Results

### Power

Input Watts	70.24 W
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### Lumen Output

Output Lumens	7318
Efficacy	104.19 lm/W

### Luminous Dimensions

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

### Spacing Criterion

Two luminaires, plane 0°	0.42
Two luminaires, plane 90°	0.42
Four luminaires	0.49

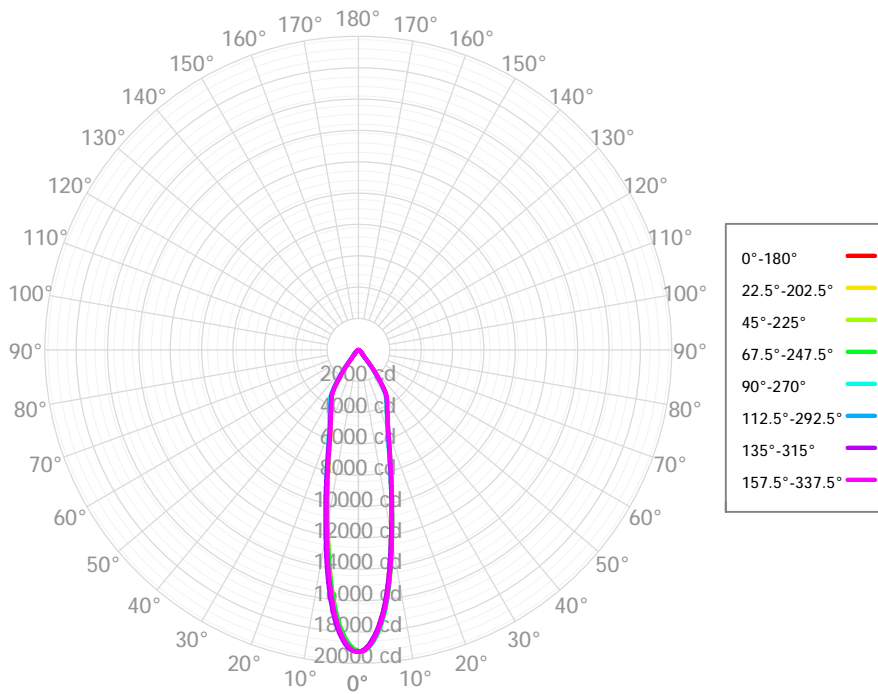
### Full Beam Angle

0° - 180°	25°
90° - 270°	25°

## IES File Header Contents

Keyword	Value
TEST	SP-R19
TESTLAB	Spectrum Lighting Photometric Lab. VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/10/2025
ISSUEDATE	9/10/2025
LUMCAT	C0614LM100L40KNDGL
LUMINAIRE	6" Round x 12" High Cylinder Luminaire
DISTRIBUTION	Beam Angle 24.8
OTHER	CCT 3956 CRI 82.4 R9 7.7
OTHER	Total Luminaire wattage is approximate
OTHER	This report is prepared by Spectrum Lighting
_CRI	80+
_CCTMULT	30K x 0.93, 35K x 0.98, 30HK x 0.73, 35HK x 0.72, 40HK x 0.73
_LAMPMULT	120L x 1.14, 137L x 1.31

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	1459.15	19.94%	90.00° - 100.00°	1.59	0.02%
10.00° - 20.00°	2178.22	29.77%	100.00° - 110.00°	1.52	0.02%
20.00° - 30.00°	1976.57	27.01%	100.00° - 120.00°	2.98	0.04%
30.00° - 40.00°	1284.25	17.55%	120.00° - 130.00°	1.60	0.02%
40.00° - 50.00°	260.40	3.56%	130.00° - 140.00°	1.67	0.02%
50.00° - 60.00°	111.02	1.52%	140.00° - 150.00°	1.81	0.02%
60.00° - 70.00°	29.39	0.40%	150.00° - 160.00°	1.57	0.02%
70.00° - 80.00°	4.90	0.07%	160.00° - 170.00°	0.84	0.01%
80.00° - 90.00°	1.79	0.02%	170.00° - 180.00°	0.25	0.00%
0.00° - 90.00°	7305.68	99.83%	0.00° - 180.00°	7318.00	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°	19251.93	19251.93	19251.93	19251.93	19251.93	19251.93	19251.93	19251.93	19251.93	19251.93	19251.93	19251.93	19251.93	19251.93	19251.93	19251.93	19251.93
1.00°	19130.50	19209.97	19138.68	19165.30	19228.64	19189.23	19208.13	19175.64	19171.42	19102.96	19120.19	19029.67	19187.88	19219.53	19134.05	19206.74	19130.50
2.00°	18849.35	18967.95	18878.34	18977.96	18976.44	18914.29	19014.39	18867.80	18921.75	18775.92	18832.95	18673.54	18897.86	18961.21	18833.35	18954.53	18849.35
3.00°	18403.17	18575.95	18457.00	18622.34	18560.59	18481.99	18593.51	18418.58	18489.68	18256.53	18361.35	18149.88	18439.59	18530.76	18357.47	18525.87	18403.17
4.00°	17811.89	18051.15	17887.72	18103.79	17990.91	17853.97	18023.38	17785.62	17865.23	17600.36	17722.77	17475.65	17851.83	17967.15	17781.76	17944.57	17811.89
5.00°	17086.63	17358.07	17168.84	17430.77	17240.11	17103.50	17307.34	16968.41	17071.92	16727.41	16919.19	16636.07	17094.03	17284.28	17046.67	17266.51	17086.63
6.00°	16259.83	16529.07	16300.92	16610.45	16350.92	16177.51	16413.90	15988.48	16135.66	15691.81	15951.72	15649.47	16212.02	16464.10	16180.38	16448.08	16259.83
7.00°	15254.58	15569.13	15299.68	15639.54	15357.52	15135.80	15381.36	14912.36	15057.91	14591.69	14863.57	14556.21	15193.34	15502.48	15210.40	15500.30	15254.58
8.00°	14148.13	14524.69	14200.27	14555.89	14265.48	13989.74	14287.36	13795.31	13914.13	13418.59	13722.11	13417.14	14101.19	14446.26	14151.86	14475.11	14148.13
9.00°	13061.56	13422.78	13078.13	13447.04	13115.07	12880.79	13153.49	12651.79	12760.07	12295.12	12585.50	12316.26	12988.05	13357.31	13049.10	13381.48	13061.56
10.00°	12000.58	12322.67	11997.83	12349.23	12015.91	11789.55	12038.38	11549.94	11665.50	11250.87	11518.85	11283.96	11899.60	12284.95	11994.59	12303.04	12000.58
11.00°	10997.84	11297.17	10998.48	11322.17	11027.75	10812.78	11014.38	10573.29	10665.43	10294.15	10550.76	10343.34	10915.65	11264.07	11002.62	11266.60	10997.84
12.00°	10098.74	10372.23	10089.91	10367.29	10114.75	9901.53	10088.09	9665.47	9746.20	9409.76	9661.68	9493.98	10004.90	10342.71	10105.64	10354.33	10098.74
13.00°	9293.59	9540.24	9276.61	9506.43	9255.83	9050.46	9239.95	8803.04	8907.39	8615.16	8863.15	8714.01	9208.63	9501.65	9293.99	9514.78	9293.59
14.00°	8557.38	8774.39	8531.12	8735.44	8490.61	8279.75	8432.29	8044.43	8142.99	7896.72	8131.59	8015.29	8475.97	8737.29	8550.96	8746.01	8557.38
15.00°	7881.37	8076.58	7860.54	8023.79	7802.27	7589.64	7716.69	7386.56	7449.84	7257.91	7485.27	7398.80	7800.27	8046.94	7871.61	8057.75	7881.37
16.00°	7275.65	7451.24	7253.61	7394.16	7167.17	6980.58	7063.29	6771.08	6850.74	6696.66	6905.34	6845.80	7203.73	7426.26	7265.26	7435.62	7275.65
17.00°	6747.64	6892.75	6716.97	6833.79	6633.95	6461.43	6535.70	6258.99	6325.77	6201.62	6393.01	6365.15	6677.31	6866.03	6733.80	6889.82	6747.64
18.00°	6284.07	6410.63	6247.36	6345.02	6149.87	6007.94	6048.71	5821.10	5875.30	5771.80	5965.15	5944.47	6208.85	6387.92	6277.44	6413.36	6284.07
19.00°	5856.49	5984.11	5833.51	5909.38	5746.24	5612.33	5641.74	5461.41	5498.28	5415.59	5590.93	5573.71	5808.26	5968.72	5873.57	5994.67	5856.49
20.00°	5513.32	5617.17	5480.10	5545.07	5406.26	5283.17	5310.84	5153.18	5184.56	5124.94	5278.08	5265.99	5467.52	5607.34	5523.00	5623.82	5513.32
21.00°	5227.89	5297.24	5178.21	5231.15	5116.10	5003.21	5030.82	4889.76	4915.30	4866.98	5016.50	4999.95	5184.44	5291.70	5225.91	5307.06	5227.89
22.00°	4966.39	5033.16	4916.68	4961.43	4870.97	4760.67	4779.06	4659.79	4685.51	4639.49	4782.70	4774.39	4929.83	5025.95	4960.64	5033.21	4966.39
23.00°	4735.97	4796.18	4693.52	4725.86	4651.74	4555.68	4563.50	4450.50	4462.61	4437.03	4573.41	4575.52	4715.77	4800.23	4734.76	4792.45	4735.97
24.00°	4528.40	4579.59	4490.79	4522.37	4456.54	4363.43	4371.68	4258.72	4273.21	4250.21	4384.29	4389.45	4531.50	4577.87	4527.13	4583.65	4528.40
25.00°	4331.69	4397.34	4308.45	4331.41	4266.20	4183.06	4194.94	4082.83	4097.53	4089.77	4213.63	4227.46	4350.10	4388.00	4322.64	4397.04	4331.69
26.00°	4170.71	4223.90	4147.24	4164.61	4111.05	4031.97	4039.15	3934.49	3941.07	3941.33	4060.50	4068.44	4182.68	4217.67	4169.03	4218.68	4170.71
27.00°	4027.18	4073.44	4004.89	4024.98	3967.74	3865.60	3882.26	3791.57	3796.25	3792.58	3904.58	3913.15	4033.84	4062.98	4019.30	4060.30	4027.18
28.00°	3870.93	3920.32	3848.01	3863.85	3804.56	3712.67	3729.54	3636.81	3653.74	3648.14	3743.80	3742.92	3867.73	3910.92	3887.02	3926.75	3870.93
29.00°	3739.60	3755.64	3687.42	3703.54	3646.82	3578.74	3593.60	3502.92	3518.44	3522.97	3606.33	3600.78	3709.64	3755.37	3735.21	3791.31	3739.60
30.00°	3609.35	3630.32	3558.25	3573.49	3515.96	3442.97	3461.81	3375.49	3392.97	3368.34	3478.97	3464.00	3584.86	3624.69	3616.31	3668.57	3609.35
31.00°	3483.63	3510.77	3431.23	3446.42	3355.83	3252.22	3272.44	3163.47	3204.43	3153.44	3291.11	3275.17	3438.54	3494.30	3489.98	3532.17	3483.63
32.00°	3306.57	3335.12	3232.84	3248.56	3121.92	2996.55	3012.84	2868.57	2944.92	2869.73	3025.48	2992.25	3176.57	3286.34	3286.56	3369.78	3306.57
33.00°	3036.51	3085.07	2955.96	2977.24	2805.62	2667.83	2693.26	2527.37	2622.85	2545.08	2704.56	2667.52	2878.66	3003.72	2994.84	3106.94	3036.51
34.00°	2713.52	2784.90	2635.23	2658.23	2473.30	2323.78	2356.72	2187.87	2265.25	2195.42	2360.98	2307.37	2534.81	2692.44	2662.23	2793.16	2713.52
35.00°	2360.51	2447.19	2283.62	2304.98	2118.77	1958.10	1998.76	1829.09	1905.32	1827.51	1997.19	1951.08	2175.29	2341.50	2311.86	2444.11	2360.51
36.00°	1992.53	2075.02	1916.18	1942.39	1749.24	1589.73	1629.59	1472.58	1557.15	1456.43	1627.72	1596.43	1813.11	1966.87	1953.61	2084.28	1992.53
37.00°	1628.95	1692.48	1552.34	1587.46	1398.17	1247.42	1273.79	1137.63	1210.50	1123.94	1269.78	1253.17	1459.62	1598.68	1588.17	1727.10	1628.95
38.00°	1275.33	1333.66	1205.07	1239.26	1057.19	943.05	965.02	838.26	902.82	836.61	949.11	939.02	1124.74	1263.47	1241.79	1372.05	1275.33
39.00°	956.03	1010.57	899.60	931.35	782.53	687.65	702.22	602.51	643.29	613.46	686.93	684.99	834.69	957.65	940.25	1040.99	956.03
40.00°	699.72	740.14	651.24	668.54	569.45	511.83	504.53	462.48	480.40	471.62	507.83	515.63	613.68	707.17	693.28	765.61	699.72
41.00°	528.59	543.45	495.21	500.68	454.38	426.86	424.01	399.74	414.10	414.99	433.78	440.82	489.68	531.77	533.88	568.62	528.59
42.00°	450.73	451.47	426.15	430.48	412.62	386.79	383.21	360.53	372.94	378.90	394.13	402.18	437.46	463.67	460.63	473.80	450.73
43.00°	412.69	412.70	387.30	391.74	377.03	353.72	350.21	332.37	342.46	349.53	365.24	370.50	400.46	423.71	422.32	430.84	412.69

### 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	8709	8709	8709	8709	8505	8505	8505	8505	8124	8124	8124	7776	7776	7776	7456	7456	7306
	1	8336	8147	7978	7826	8156	7989	7837	7700	7692	7572	7462	7419	7325	7238	7168	7095	6953
	2	7964	7634	7362	7133	7804	7509	7262	7053	7273	7071	6897	7055	6892	6748	6854	6723	6591
	3	7606	7174	6840	6574	7463	7073	6767	6520	6883	6626	6415	6707	6493	6314	6543	6367	6246
	4	7266	6761	6391	6108	7139	6678	6336	6071	6523	6231	5999	6379	6130	5929	6245	6034	5923
	5	6946	6388	5999	5711	6831	6321	5957	5686	6192	5877	5635	6073	5799	5585	5961	5726	5623
	6	6645	6052	5654	5368	6542	5995	5621	5349	5888	5558	5313	5788	5498	5277	5694	5440	5347
	7	6363	5746	5346	5066	6271	5699	5321	5053	5608	5271	5026	5524	5223	4999	5444	5177	5092
	8	6100	5469	5072	4799	6016	5428	5051	4788	5351	5011	4768	5279	4973	4748	5211	4935	4857
	9	5855	5216	4824	4559	5779	5181	4807	4552	5115	4775	4536	5052	4743	4521	4994	4713	4642
	10	5626	4984	4600	4344	5557	4954	4586	4338	4897	4559	4326	4843	4533	4315	4792	4508	4443

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	636.4 fc	2.4 ft
6.5 ft	455.7 fc	2.9 ft
7.5 ft	342.3 fc	3.3 ft
8.0 ft	300.8 fc	3.5 ft
10.0 ft	192.5 fc	4.4 ft
12.0 ft	133.7 fc	5.3 ft
14.0 ft	98.2 fc	6.1 ft
16.0 ft	75.2 fc	7.0 ft
20.0 ft	48.1 fc	8.8 ft
24.0 ft	33.4 fc	10.5 ft
28.0 ft	24.6 fc	12.3 ft

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

	0.00°	45.00°	90.00°
0.00°	1055394	1055394	1055394
45.00°	27291	25723	24277
55.00°	13353	12668	11287
65.00°	4265	3888	3540
75.00°	867	1119	859
85.00°	864	1105	736

### 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	12.7	13.6	13.1	14.0	14.3	10.8	11.8	11.2	12.1	12.4
	3H	12.7	13.5	13.0	13.8	14.2	10.8	11.6	11.2	12.0	12.3
	4H	12.6	13.3	13.0	13.7	14.1	10.7	11.5	11.1	11.8	12.2
	6H	12.5	13.2	12.9	13.5	13.9	10.6	11.3	11.0	11.7	12.1
	8H	12.4	13.1	12.8	13.5	13.9	10.5	11.2	11.0	11.6	12.0
	12H	12.4	13.0	12.8	13.4	13.8	10.5	11.1	10.9	11.5	12.0
4H	2H	12.5	13.3	12.9	13.7	14.1	10.6	11.4	11.0	11.8	12.2
	3H	12.5	13.1	12.9	13.5	14.0	10.6	11.3	11.0	11.7	12.1
	4H	12.4	13.0	12.8	13.4	13.8	10.5	11.1	11.0	11.5	12.0
	6H	12.3	12.8	12.8	13.2	13.7	10.4	10.9	10.9	11.4	11.9
	8H	12.2	12.7	12.7	13.1	13.6	10.4	10.8	10.9	11.3	11.8
	12H	12.2	12.6	12.7	13.1	13.5	10.3	10.7	10.8	11.2	11.7
8H	4H	12.2	12.7	12.7	13.1	13.6	10.4	10.8	10.8	11.3	11.7
	6H	12.1	12.5	12.6	13.0	13.5	10.3	10.6	10.8	11.1	11.6
	8H	12.1	12.4	12.6	12.9	13.4	10.2	10.5	10.8	11.1	11.6
	12H	12.0	12.3	12.6	12.8	13.4	10.2	10.5	10.7	11.0	11.5
12H	4H	12.2	12.5	12.7	13.0	13.5	10.3	10.7	10.8	11.2	11.6
	6H	12.1	12.4	12.6	12.8	13.4	10.2	10.5	10.7	11.0	11.5
	8H	12.0	12.3	12.5	12.8	13.4	10.2	10.4	10.7	10.9	11.5

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0