

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

C0614LM100L40HKNSO
6" Round x 12" High Cylinder Luminaire

Test Number

SP-R17

Test Date

9/10/2025

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

Summary of Results

Power

Input Watts	74.01 W
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Lumen Output

Output Lumens	6063
Efficacy	81.92 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.5
Two luminaires, plane 90°	0.48
Four luminaires	0.57

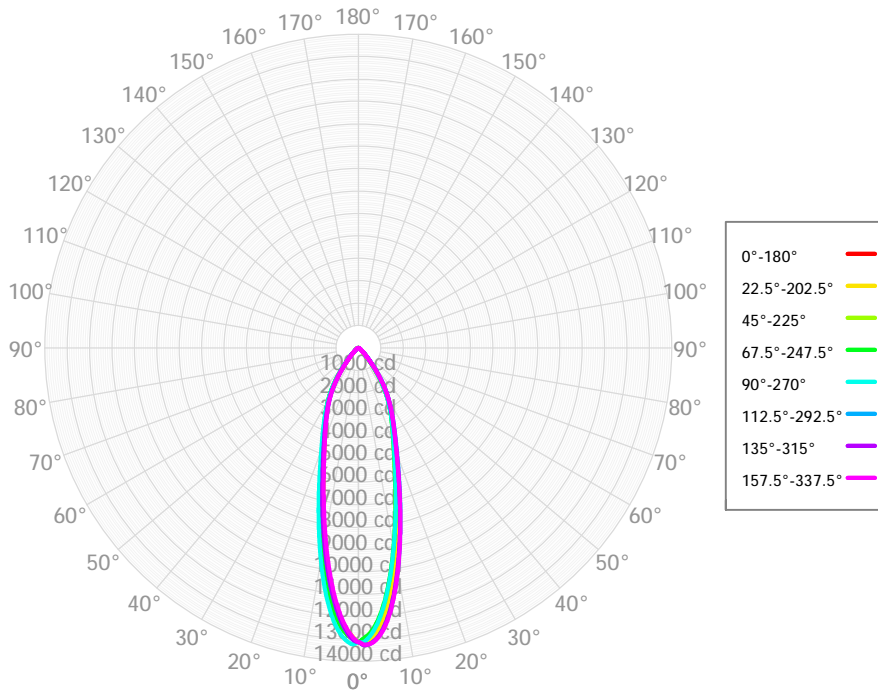
Full Beam Angle

0° - 180°	29°
90° - 270°	30°

IES File Header Contents

Keyword	Value
TEST	SP-R17
TESTLAB	Spectrum Lighting Photometric Lab. VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/10/2025
ISSUEDATE	9/10/2025
LUMCAT	C0614LM100L40HKND SO
LUMINAIRE	6" Round x 12" High Cylinder Luminaire
DISTRIBUTION	Beam Angle 29.6
OTHER	CCT 4033 CRI 91.7 R9 61.9
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	120L x 1.14, 137L x 1.31

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	1055.16	17.40%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	1821.38	30.04%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	1623.05	26.77%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	1059.34	17.47%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	338.70	5.59%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	110.60	1.82%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	42.09	0.69%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	10.33	0.17%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	2.34	0.04%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	6063.00	100.00%	0.00° - 180.00°	6063.00	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°	13136.46	13136.46	13136.46	13136.46	13136.46	13136.46	13136.46	13136.46	13136.46	13136.46	13136.46	13136.46	13136.46	13136.46	13136.46	13136.46	13136.46
1.00°	13197.24	13118.43	13025.65	12978.09	13144.30	13043.69	13047.81	12948.96	12980.05	12923.36	12988.93	12993.79	13240.82	13267.79	13278.28	13245.58	13197.24
2.00°	13149.91	13065.65	12892.11	12822.05	12959.77	12791.96	12794.15	12666.29	12733.16	12681.55	12827.39	12864.04	13140.22	13243.13	13247.18	13249.84	13149.91
3.00°	13003.54	12912.70	12664.77	12566.11	12683.25	12456.62	12464.26	12305.22	12405.79	12348.92	12570.57	12646.29	12945.84	13121.43	13122.17	13152.68	13003.54
4.00°	12762.45	12659.79	12339.82	12229.64	12320.71	12045.48	12059.60	11869.06	11996.54	11945.88	12223.49	12343.62	12668.70	12910.25	12910.93	12954.18	12762.45
5.00°	12419.45	12312.87	11930.02	11813.12	11882.69	11571.38	11589.48	11368.54	11519.52	11469.97	11802.67	11958.07	12312.85	12606.09	12605.99	12666.67	12419.45
6.00°	11988.52	11882.50	11451.03	11328.75	11378.82	11051.13	11067.63	10827.72	10992.62	10937.70	11319.94	11492.83	11871.04	12218.46	12211.96	12292.66	11988.52
7.00°	11484.53	11374.78	10904.51	10793.30	10835.63	10497.29	10512.56	10255.10	10423.29	10370.08	10784.94	10980.57	11365.02	11766.09	11744.77	11832.57	11484.53
8.00°	10927.79	10805.73	10324.80	10219.34	10263.59	9914.95	9938.86	9659.21	9831.54	9774.47	10213.30	10423.41	10812.81	11254.47	11224.74	11311.34	10927.79
9.00°	10332.08	10204.22	9717.60	9627.18	9670.93	9326.92	9348.42	9062.55	9227.27	9169.60	9618.04	9850.10	10234.02	10700.24	10660.61	10747.39	10332.08
10.00°	9712.64	9587.83	9112.99	9042.01	9077.91	8745.25	8762.31	8475.40	8631.62	8579.85	9017.66	9261.62	9629.56	10118.33	10065.92	10150.05	9712.64
11.00°	9086.40	8961.24	8511.54	8468.21	8494.65	8187.31	8193.99	7913.47	8058.94	8008.43	8433.53	8681.36	9028.88	9516.70	9460.88	9539.19	9086.40
12.00°	8470.21	8353.63	7932.54	7906.00	7940.97	7644.42	7652.33	7371.30	7514.70	7462.67	7873.12	8107.39	8444.08	8919.58	8860.74	8926.65	8470.21
13.00°	7885.91	7769.93	7386.57	7368.07	7415.94	7133.02	7137.39	6866.18	6995.45	6938.90	7334.43	7565.64	7872.70	8335.21	8273.84	8324.14	7885.91
14.00°	7321.85	7217.09	6865.92	6869.05	6911.79	6643.06	6648.72	6394.99	6508.16	6462.15	6830.15	7053.05	7335.13	7769.70	7702.09	7749.26	7321.85
15.00°	6797.22	6700.12	6384.00	6390.39	6442.57	6198.11	6192.79	5968.96	6065.63	6022.81	6359.69	6571.72	6820.37	7231.06	7155.15	7194.81	6797.22
16.00°	6309.45	6223.21	5949.06	5949.24	6010.78	5775.72	5783.52	5578.69	5665.22	5627.17	5938.78	6124.07	6346.84	6722.67	6640.95	6674.59	6309.45
17.00°	5864.58	5791.25	5548.84	5564.58	5613.41	5400.78	5415.47	5222.71	5301.62	5261.83	5549.27	5716.81	5908.59	6252.76	6168.77	6195.58	5864.58
18.00°	5460.57	5405.33	5193.73	5205.86	5249.16	5056.68	5073.66	4901.55	4967.18	4935.06	5196.38	5343.03	5510.09	5823.20	5731.58	5756.47	5460.57
19.00°	5104.79	5059.18	4879.12	4889.63	4922.17	4753.79	4765.50	4616.40	4677.19	4645.60	4883.16	5006.26	5152.66	5425.22	5340.12	5364.00	5104.79
20.00°	4785.36	4752.78	4589.03	4598.44	4637.56	4478.88	4484.88	4357.09	4411.84	4392.71	4606.50	4708.69	4830.99	5066.78	4991.90	5011.01	4785.36
21.00°	4509.23	4473.03	4338.88	4336.90	4371.32	4222.78	4230.98	4117.70	4176.94	4167.65	4351.03	4436.19	4545.69	4750.83	4680.29	4697.03	4509.23
22.00°	4254.27	4228.75	4110.25	4103.97	4128.93	3988.72	3999.25	3897.35	3956.14	3957.24	4121.11	4194.11	4279.53	4463.18	4399.63	4423.42	4254.27
23.00°	4025.72	4008.92	3897.30	3887.36	3910.16	3767.25	3777.35	3691.97	3753.78	3769.17	3911.08	3972.58	4035.08	4202.69	4137.40	4162.43	4025.72
24.00°	3816.37	3801.63	3695.37	3681.72	3700.63	3569.22	3582.61	3502.57	3573.20	3590.04	3714.70	3766.75	3811.84	3954.41	3895.36	3925.99	3816.37
25.00°	3623.94	3606.50	3507.41	3488.96	3501.95	3380.92	3394.78	3322.10	3393.34	3419.45	3530.09	3572.25	3608.15	3727.60	3677.23	3704.33	3623.94
26.00°	3434.68	3424.19	3323.43	3308.07	3307.44	3198.10	3215.32	3148.46	3231.55	3250.56	3351.98	3390.48	3407.49	3516.46	3469.06	3508.73	3434.68
27.00°	3249.20	3243.12	3138.52	3126.22	3123.79	3019.63	3043.66	2983.59	3069.92	3082.42	3185.36	3211.23	3217.66	3319.21	3268.52	3312.67	3249.20
28.00°	3070.35	3066.20	2960.53	2944.41	2941.72	2842.09	2879.03	2821.74	2910.11	2920.21	3016.30	3036.61	3035.12	3129.68	3076.87	3123.49	3070.35
29.00°	2892.11	2886.35	2786.48	2769.65	2762.06	2672.01	2716.79	2655.19	2749.45	2757.17	2848.76	2865.56	2856.09	2946.86	2891.43	2937.07	2892.11
30.00°	2711.52	2704.70	2612.65	2589.26	2589.51	2505.20	2544.63	2487.37	2586.26	2592.39	2685.43	2696.63	2681.27	2766.83	2713.63	2755.78	2711.52
31.00°	2524.67	2519.43	2428.53	2408.85	2413.46	2331.65	2375.24	2313.50	2417.98	2419.16	2518.56	2527.24	2505.66	2591.51	2537.74	2575.23	2524.67
32.00°	2332.92	2327.60	2233.94	2217.61	2236.74	2155.22	2195.15	2134.57	2236.42	2237.07	2343.84	2348.38	2329.60	2413.74	2360.55	2391.29	2332.92
33.00°	2133.17	2128.98	2034.43	2024.52	2054.37	1975.95	2011.81	1951.87	2048.02	2047.15	2155.00	2161.31	2147.66	2233.32	2176.65	2207.33	2133.17
34.00°	1930.28	1926.37	1832.86	1834.95	1866.71	1794.72	1826.68	1766.71	1853.13	1851.04	1960.47	1971.02	1960.05	2050.24	1991.01	2014.14	1930.28
35.00°	1729.80	1723.01	1632.91	1646.90	1679.72	1616.38	1646.09	1585.03	1657.11	1654.76	1762.05	1775.48	1767.63	1858.55	1807.07	1818.30	1729.80
36.00°	1535.27	1524.16	1441.27	1461.69	1499.43	1441.17	1470.50	1405.25	1468.83	1461.47	1566.87	1586.09	1579.07	1669.14	1618.37	1621.97	1535.27
37.00°	1346.67	1337.75	1261.00	1287.38	1327.32	1271.70	1299.18	1234.88	1288.92	1275.89	1378.10	1399.90	1396.91	1487.14	1434.50	1435.19	1346.67
38.00°	1167.00	1162.15	1091.65	1119.42	1158.93	1113.77	1140.58	1075.44	1115.67	1099.60	1198.84	1219.38	1221.99	1313.53	1261.96	1260.03	1167.00
39.00°	1005.47	998.50	938.31	966.62	1007.52	968.80	992.46	929.14	958.16	936.84	1032.72	1051.24	1062.57	1151.29	1099.62	1093.55	1005.47
40.00°	860.37	850.75	802.70	831.87	872.42	839.40	858.54	797.45	816.66	793.46	881.78	901.89	921.75	998.79	952.57	941.82	860.37
41.00°	732.05	721.97	683.15	715.60	751.85	725.84	740.25	682.35	693.70	668.04	743.99	768.37	794.77	865.59	820.70	810.05	732.05
42.00°	622.90	611.03	583.95	613.57	646.98	624.55	638.74	580.26	588.85	562.12	628.74	653.87	682.99	747.30	707.01	691.73	622.90
43.00°	531.07	518.82	501.23	526.86	559.63	542.03	549.26	500.76	502.26	477.44	534.32	555.85	585.06	640.36	605.21	588.20	531.07

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	7218	7218	7218	7218	7050	7050	7050	7050	6737	6737	6737	6450	6450	6450	6187	6187	6187	6063
	1	6897	6735	6590	6460	6748	6604	6475	6357	6360	6256	6162	6135	6054	5978	5928	5865	5806	5748
	2	6574	6291	6058	5861	6442	6188	5975	5795	5993	5819	5669	5813	5672	5548	5647	5533	5432	5425
	3	6265	5893	5606	5377	6146	5810	5546	5334	5652	5431	5249	5507	5322	5167	5372	5219	5088	5119
	4	5971	5537	5218	4975	5864	5468	5174	4946	5340	5087	4888	5220	5005	4831	5109	4927	4776	4835
	5	5695	5216	4881	4634	5599	5160	4847	4613	5053	4781	4573	4954	4718	4533	4861	4658	4494	4574
	6	5436	4927	4585	4339	5350	4880	4558	4324	4791	4507	4295	4708	4458	4267	4630	4410	4238	4334
	7	5195	4665	4322	4081	5117	4626	4301	4070	4550	4260	4049	4480	4221	4028	4414	4183	4007	4114
	8	4970	4428	4087	3853	4899	4394	4070	3845	4330	4038	3829	4270	4006	3813	4214	3976	3798	3913
	9	4760	4212	3876	3650	4697	4183	3863	3643	4128	3836	3631	4077	3811	3620	4028	3786	3608	3728
	10	4566	4016	3686	3467	4508	3991	3675	3462	3943	3653	3453	3898	3632	3444	3855	3611	3435	3559

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	434.3 fc	2.9 ft
6.5 ft	310.9 fc	3.4 ft
7.5 ft	233.5 fc	3.9 ft
8.0 ft	205.3 fc	4.1 ft
10.0 ft	131.4 fc	5.2 ft
12.0 ft	91.2 fc	6.2 ft
14.0 ft	67.0 fc	7.3 ft
16.0 ft	51.3 fc	8.3 ft
20.0 ft	32.8 fc	10.4 ft
24.0 ft	22.8 fc	12.4 ft
28.0 ft	16.8 fc	14.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	720142	720142	720142
45.00°	30297	28851	32490
55.00°	10574	10312	11574
65.00°	4392	4472	5746
75.00°	1781	1580	1892
85.00°	1087	1039	1005

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	12.1	13.1	12.5	13.4	13.7	12.7	13.7	13.0	14.0	14.3
	3H	12.3	13.2	12.7	13.5	13.9	13.0	13.9	13.4	14.2	14.6
	4H	12.3	13.1	12.7	13.4	13.8	13.0	13.8	13.4	14.1	14.5
	6H	12.2	13.0	12.6	13.3	13.7	12.9	13.6	13.3	14.0	14.4
	8H	12.2	12.9	12.6	13.3	13.7	12.9	13.6	13.3	13.9	14.4
	12H	12.1	12.8	12.6	13.2	13.6	12.8	13.5	13.3	13.9	14.3
4H	2H	12.1	12.9	12.5	13.3	13.7	12.7	13.5	13.1	13.9	14.3
	3H	12.4	13.1	12.8	13.5	13.9	13.1	13.8	13.5	14.2	14.6
	4H	12.4	13.0	12.8	13.4	13.9	13.1	13.7	13.5	14.1	14.6
	6H	12.3	12.8	12.8	13.3	13.8	13.0	13.5	13.5	14.0	14.5
	8H	12.3	12.8	12.8	13.2	13.7	13.0	13.5	13.5	13.9	14.4
	12H	12.2	12.6	12.7	13.1	13.6	12.9	13.3	13.4	13.8	14.3
8H	4H	12.3	12.7	12.8	13.2	13.7	13.0	13.4	13.4	13.9	14.4
	6H	12.2	12.6	12.7	13.1	13.6	12.9	13.3	13.4	13.8	14.3
	8H	12.2	12.5	12.7	13.0	13.5	12.9	13.2	13.4	13.7	14.2
	12H	12.2	12.5	12.7	13.0	13.5	12.8	13.1	13.4	13.6	14.2
12H	4H	12.2	12.6	12.7	13.1	13.6	12.9	13.3	13.4	13.8	14.3
	6H	12.2	12.5	12.7	13.0	13.5	12.9	13.2	13.4	13.7	14.2
	8H	12.2	12.4	12.7	12.9	13.5	12.8	13.1	13.3	13.6	14.2

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0