

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

C0614LM100L40KNDSO
6" Round x 12" High Cylinder Luminaire

Test Number

SP-R20

Test Date

9/10/2025

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

Summary of Results

Power

Input Watts	70.01 W
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Lumen Output

Output Lumens	7516
Efficacy	107.36 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°	0.5
Four luminaires	0.56

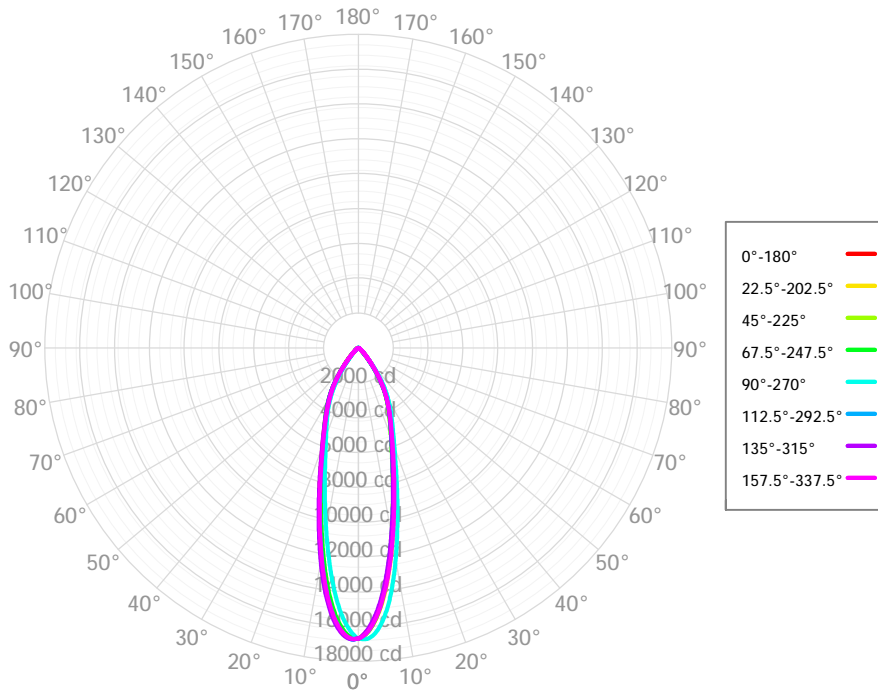
Full Beam Angle

0° - 180°	29°
90° - 270°	29°

IES File Header Contents

Keyword	Value
TEST	SP-R20
TESTLAB	Spectrum Lighting Photometric Lab. VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/10/2025
ISSUEDATE	9/10/2025
LUMCAT	C0614LM100L40KNDSO
LUMINAIRE	6" Round x 12" High Cylinder Luminaire
DISTRIBUTION	Beam Angle 29.1
OTHER	CCT 3912 CRI 83.0 R9 11.1
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°	1329.56	17.69%	90.00° - 100.00°	1.60	0.02%
10.00° - 20.00°	2260.96	30.08%	100.00° - 110.00°	1.60	0.02%
20.00° - 30.00°	1999.00	26.60%	100.00° - 120.00°	3.19	0.04%
30.00° - 40.00°	1298.28	17.27%	120.00° - 130.00°	1.66	0.02%
40.00° - 50.00°	413.48	5.50%	130.00° - 140.00°	1.71	0.02%
50.00° - 60.00°	137.06	1.82%	140.00° - 150.00°	1.82	0.02%
60.00° - 70.00°	50.90	0.68%	150.00° - 160.00°	1.49	0.02%
70.00° - 80.00°	11.77	0.16%	160.00° - 170.00°	0.84	0.01%
80.00° - 90.00°	2.43	0.03%	170.00° - 180.00°	0.26	0.00%
0.00° - 90.00°	7503.44	99.83%	0.00° - 180.00°	7516.00	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°	16678.83	16678.83	16678.83	16678.83	16678.83	16678.83	16678.83	16678.83	16678.83	16678.83	16678.83	16678.83	16678.83	16678.83	16678.83	16678.83	16678.83
1.00°	16496.39	16558.13	16500.80	16552.50	16735.03	16757.35	16735.47	16716.88	16716.96	16686.31	16694.94	16668.30	16458.28	16523.12	16471.29	16540.56	16496.39
2.00°	16209.10	16305.35	16204.12	16289.81	16688.79	16668.12	16685.54	16617.92	16640.53	16555.65	16591.11	16519.17	16112.04	16215.77	16140.66	16272.18	16209.10
3.00°	15815.03	15936.29	15796.28	15906.70	16513.71	16439.26	16508.66	16397.63	16430.62	16300.35	16352.27	16236.77	15656.05	15798.12	15695.44	15887.04	15815.03
4.00°	15316.97	15465.79	15283.79	15415.51	16205.49	16105.06	16200.95	16056.74	16104.53	15918.01	15993.46	15836.16	15112.20	15280.53	15187.72	15404.34	15316.97
5.00°	14731.94	14905.14	14676.84	14817.64	15777.59	15657.14	15785.29	15605.47	15671.76	15429.70	15525.22	15324.04	14440.96	14678.12	14578.62	14840.72	14731.94
6.00°	14065.40	14258.19	13997.50	14141.54	15247.73	15077.70	15259.18	15047.11	15133.99	14840.06	14947.93	14713.97	13725.60	13998.13	13900.01	14196.60	14065.40
7.00°	13351.35	13547.69	13267.43	13407.36	14619.83	14429.06	14643.00	14406.36	14504.35	14175.47	14284.69	14036.03	12962.89	13265.58	13176.41	13493.57	13351.35
8.00°	12613.20	12801.68	12498.08	12636.78	13905.73	13711.19	13949.09	13695.51	13801.65	13448.37	13556.86	13290.31	12165.83	12496.52	12425.47	12766.15	12613.20
9.00°	11857.65	12038.65	11722.10	11849.58	13132.87	12939.80	13213.23	12942.17	13056.24	12682.29	12795.07	12512.01	11389.24	11724.53	11658.98	12022.35	11857.65
10.00°	11099.05	11275.59	10950.23	11065.59	12334.33	12142.20	12440.00	12157.33	12284.11	11906.55	12015.25	11729.65	10625.88	10961.50	10902.63	11269.94	11099.05
11.00°	10369.57	10530.27	10198.30	10302.48	11535.17	11357.16	11639.98	11374.71	11505.27	11139.20	11237.92	10960.03	9894.85	10216.20	10182.44	10531.83	10369.57
12.00°	9683.83	9816.99	9492.58	9573.55	10741.96	10583.85	10867.41	10615.91	10741.44	10385.32	10481.99	10203.75	9192.65	9509.43	9495.91	9829.88	9683.83
13.00°	9018.18	9138.22	8823.12	8893.68	9989.40	9830.59	10120.66	9884.06	10000.25	9660.75	9754.41	9487.97	8553.21	8849.24	8844.00	9169.04	9018.18
14.00°	8390.66	8502.59	8197.49	8256.54	9276.99	9125.60	9398.94	9182.37	9301.96	8971.90	9065.22	8812.50	7950.47	8235.54	8234.53	8546.50	8390.66
15.00°	7808.40	7915.15	7631.00	7661.74	8604.18	8464.03	8723.78	8523.13	8641.54	8323.28	8415.43	8194.19	7411.35	7670.58	7672.21	7959.19	7808.40
16.00°	7276.81	7379.81	7107.89	7124.13	7985.19	7853.20	8094.99	7913.63	8015.06	7731.84	7817.34	7625.18	6918.00	7156.30	7157.50	7421.02	7276.81
17.00°	6792.15	6891.27	6637.83	6648.62	7427.17	7294.38	7513.65	7339.20	7436.47	7187.63	7274.06	7108.40	6470.44	6695.39	6687.76	6931.94	6792.15
18.00°	6364.26	6447.14	6217.10	6222.75	6904.73	6788.04	6980.04	6828.98	6912.46	6693.01	6781.85	6639.68	6089.47	6284.30	6272.50	6485.09	6364.26
19.00°	5966.69	6044.51	5834.20	5837.42	6451.32	6341.99	6499.98	6360.93	6443.03	6253.96	6342.81	6222.78	5728.78	5909.60	5897.44	6079.90	5966.69
20.00°	5613.36	5684.60	5497.15	5495.87	6051.95	5938.90	6073.63	5949.13	6027.82	5862.60	5955.96	5853.57	5424.60	5569.13	5552.92	5716.99	5613.36
21.00°	5296.22	5352.06	5189.62	5197.11	5681.89	5566.97	5689.33	5577.48	5655.15	5505.40	5608.09	5524.12	5146.24	5266.85	5243.94	5380.62	5296.22
22.00°	5001.72	5051.33	4900.46	4924.24	5356.45	5245.21	5347.32	5239.87	5310.56	5185.92	5295.20	5226.30	4879.25	4993.29	4970.48	5074.02	5001.72
23.00°	4719.53	4774.28	4641.34	4665.89	5068.88	4961.10	5039.60	4931.20	4997.48	4894.45	5008.82	4968.63	4636.05	4742.56	4722.61	4798.03	4719.53
24.00°	4477.44	4515.62	4405.48	4426.28	4807.09	4693.70	4754.37	4656.52	4715.47	4626.01	4744.84	4720.01	4413.24	4505.68	4477.45	4544.67	4477.44
25.00°	4239.60	4265.93	4178.04	4201.85	4553.98	4439.64	4497.28	4388.51	4444.35	4372.35	4497.45	4493.15	4183.68	4278.26	4235.93	4298.19	4239.60
26.00°	4012.87	4039.44	3952.47	3978.88	4316.13	4204.99	4248.59	4130.43	4191.65	4124.84	4260.20	4270.46	3972.03	4044.55	4016.43	4064.18	4012.87
27.00°	3794.92	3814.91	3746.78	3761.12	4090.44	3985.28	4012.75	3896.38	3955.41	3890.83	4032.71	4051.21	3752.42	3817.82	3797.54	3833.50	3794.92
28.00°	3582.06	3601.40	3535.77	3548.00	3875.80	3769.31	3786.99	3667.84	3720.86	3666.62	3809.17	3828.72	3526.28	3606.81	3576.99	3611.40	3582.06
29.00°	3360.54	3393.43	3330.57	3340.57	3661.92	3560.86	3573.94	3448.06	3503.14	3450.32	3587.54	3603.61	3299.84	3397.95	3363.85	3398.02	3360.54
30.00°	3155.52	3178.01	3123.29	3131.13	3442.69	3352.97	3358.24	3230.71	3294.13	3234.16	3372.04	3383.66	3073.55	3171.27	3146.66	3186.74	3155.52
31.00°	2946.09	2966.71	2906.50	2912.02	3231.91	3135.29	3146.31	3026.31	3082.92	3026.40	3156.28	3157.42	2833.72	2940.11	2920.81	2973.39	2946.09
32.00°	2723.32	2750.60	2683.93	2689.16	3012.09	2913.60	2932.25	2812.33	2870.12	2807.36	2932.06	2923.25	2590.82	2699.45	2688.62	2759.34	2723.32
33.00°	2498.39	2523.15	2450.08	2456.08	2793.49	2691.34	2712.70	2595.85	2653.58	2588.09	2702.15	2682.50	2344.43	2457.62	2453.02	2535.54	2498.39
34.00°	2272.74	2290.82	2211.57	2213.23	2558.94	2456.35	2477.51	2359.41	2428.70	2364.96	2463.01	2433.60	2097.21	2207.45	2222.99	2304.64	2272.74
35.00°	2048.64	2060.62	1971.60	1971.47	2317.79	2211.09	2238.69	2124.67	2201.49	2134.75	2222.69	2187.34	1854.30	1962.22	1991.88	2079.68	2048.64
36.00°	1827.77	1832.96	1738.52	1736.48	2072.07	1967.75	2001.44	1898.70	1977.85	1905.15	1981.28	1942.46	1618.49	1724.99	1764.43	1855.78	1827.77
37.00°	1615.87	1613.43	1513.43	1513.79	1831.02	1732.36	1763.04	1677.06	1758.65	1685.62	1752.74	1697.38	1401.31	1495.94	1549.43	1639.96	1615.87
38.00°	1419.69	1406.44	1309.10	1299.02	1600.38	1506.15	1543.94	1470.41	1548.43	1471.51	1526.45	1474.58	1206.62	1295.88	1344.35	1432.50	1419.69
39.00°	1231.86	1221.06	1121.03	1101.57	1377.38	1294.91	1328.29	1276.73	1348.75	1279.13	1320.96	1264.00	1030.37	1112.65	1163.81	1239.29	1231.86
40.00°	1069.00	1060.07	960.20	932.41	1172.47	1105.02	1145.84	1115.32	1169.54	1102.25	1138.42	1083.43	880.79	953.90	999.02	1079.03	1069.00
41.00°	928.49	912.32	818.44	791.19	994.99	939.08	977.65	958.33	1010.11	948.76	972.21	925.17	749.79	820.40	861.39	934.64	928.49
42.00°	802.22	784.25	701.50	667.17	840.24	795.69	834.34	824.55	868.97	817.29	831.63	789.31	641.12	707.39	744.35	805.77	802.22
43.00°	692.59	675.38	602.26	567.44	706.17	668.61	706.65	703.09	744.91	699.82	715.78	677.73	549.41	608.23	639.80	695.91	692.59

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	8945	8945	8945	8945	8735	8735	8735	8735	8344	8344	8344	7986	7986	7986	7658	7658	7503
	1	8548	8348	8169	8007	8362	8185	8024	7879	7879	7752	7635	7598	7498	7405	7340	7262	7119
	2	8149	7800	7511	7268	7984	7670	7408	7186	7427	7212	7026	7202	7028	6875	6995	6855	6730
	3	7767	7308	6953	6671	7619	7204	6878	6616	7007	6734	6509	6825	6597	6406	6656	6468	6307
	4	7405	6868	6475	6174	7272	6782	6418	6137	6621	6310	6063	6472	6207	5992	6333	6108	5923
	5	7064	6472	6058	5753	6944	6401	6015	5727	6268	5932	5675	6144	5853	5624	6028	5777	5575
	6	6744	6115	5692	5389	6637	6056	5659	5370	5945	5594	5333	5840	5532	5296	5743	5472	5261
	7	6446	5792	5368	5070	6349	5742	5341	5056	5648	5290	5029	5560	5241	5002	5477	5193	4976
	8	6168	5499	5078	4789	6081	5457	5057	4778	5377	5016	4758	5301	4976	4738	5230	4937	4718
	9	5910	5233	4818	4538	5830	5197	4801	4530	5128	4767	4514	5063	4734	4499	5001	4703	4484
	10	5670	4990	4583	4313	5597	4959	4569	4306	4899	4541	4294	4842	4514	4283	4789	4488	4271

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	551.4 fc	2.9 ft
6.5 ft	394.8 fc	3.4 ft
7.5 ft	296.5 fc	3.9 ft
8.0 ft	260.6 fc	4.2 ft
10.0 ft	166.8 fc	5.3 ft
12.0 ft	115.8 fc	6.3 ft
14.0 ft	85.1 fc	7.4 ft
16.0 ft	65.2 fc	8.4 ft
20.0 ft	41.7 fc	10.5 ft
24.0 ft	29.0 fc	12.6 ft
28.0 ft	21.3 fc	14.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	914336	914336	914336
45.00°	39817	34264	38831
55.00°	14451	13632	15074
65.00°	7192	6196	7126
75.00°	1650	1529	2132
85.00°	1274	949	1302

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	13.6	14.6	14.0	14.9	15.2	13.2	14.2	13.6	14.5	14.8
	3H	13.8	14.7	14.2	15.1	15.4	13.4	14.3	13.8	14.6	15.0
	4H	13.8	14.6	14.2	15.0	15.4	13.4	14.2	13.8	14.6	15.0
	6H	13.7	14.5	14.1	14.8	15.2	13.3	14.1	13.8	14.4	14.8
	8H	13.7	14.4	14.1	14.8	15.2	13.3	14.0	13.7	14.4	14.8
	12H	13.6	14.3	14.1	14.7	15.1	13.2	13.9	13.7	14.3	14.7
4H	2H	13.6	14.4	14.0	14.7	15.1	13.3	14.1	13.7	14.4	14.8
	3H	13.9	14.5	14.3	15.0	15.4	13.5	14.2	13.9	14.6	15.0
	4H	13.9	14.4	14.3	14.9	15.3	13.5	14.1	13.9	14.5	15.0
	6H	13.8	14.3	14.3	14.7	15.2	13.5	14.0	13.9	14.4	14.9
	8H	13.7	14.2	14.2	14.6	15.1	13.4	13.9	13.9	14.3	14.8
	12H	13.7	14.1	14.2	14.6	15.0	13.4	13.7	13.8	14.2	14.7
8H	4H	13.7	14.2	14.2	14.6	15.1	13.4	13.8	13.9	14.3	14.8
	6H	13.6	14.0	14.1	14.5	15.0	13.3	13.7	13.8	14.2	14.7
	8H	13.6	13.9	14.1	14.4	14.9	13.3	13.6	13.8	14.1	14.6
	12H	13.5	13.8	14.1	14.3	14.9	13.3	13.5	13.8	14.0	14.6
12H	4H	13.6	14.0	14.1	14.5	15.0	13.3	13.7	13.8	14.2	14.7
	6H	13.6	13.9	14.1	14.4	14.9	13.3	13.6	13.8	14.1	14.6
	8H	13.5	13.8	14.1	14.3	14.9	13.2	13.5	13.8	14.0	14.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0