

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

C0614LM120L35KNDNL
6" Round x 12" High Cylinder Luminaire

Test Number

SP-R31

Test Date

9/10/2025

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

Summary of Results

Power

Input Watts	81.61 W
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Lumen Output

Output Lumens	9034
Efficacy	110.7 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°	0.39
Four luminaires	0.48

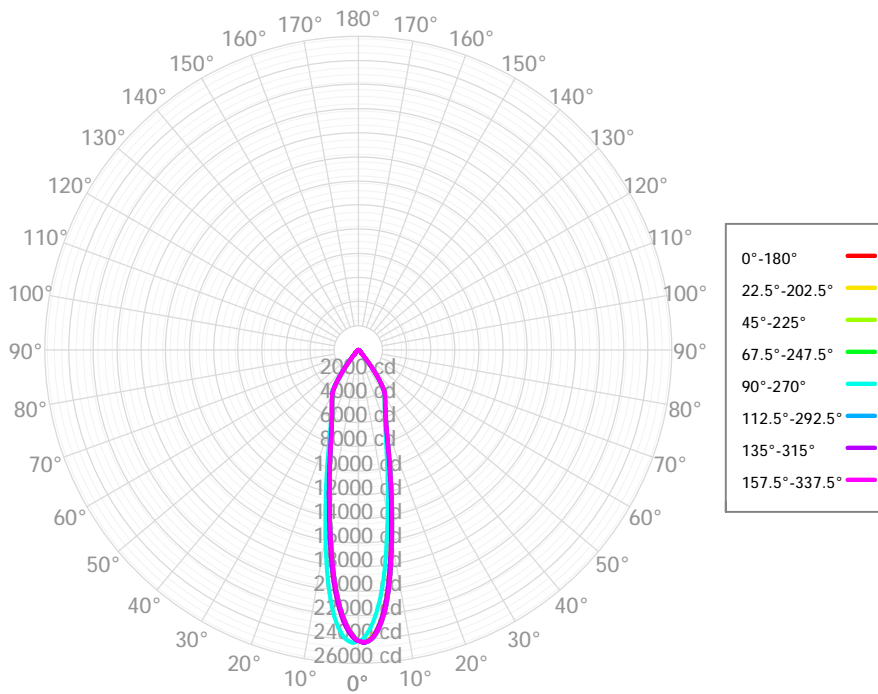
Full Beam Angle

0° - 180°	24°
90° - 270°	24°

IES File Header Contents

Keyword	Value
TEST	SP-R31
TESTLAB	Spectrum Lighting Photometric Lab. VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/10/2025
ISSUEDATE	9/10/2025
LUMCAT	C0614LM120L35KNDNL
LUMINAIRE	6" Round x 12" High Cylinder Luminaire
DISTRIBUTION	Beam Angle 24.4
OTHER	CCT 3469 CRI 81.7 R9 5.3
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 0.88, 137L x 1.15

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	1825.20	20.20%	90.00° - 100.00°	1.53	0.02%
10.00° - 20.00°	2686.87	29.74%	100.00° - 110.00°	1.44	0.02%
20.00° - 30.00°	2424.12	26.83%	100.00° - 120.00°	2.83	0.03%
30.00° - 40.00°	1679.13	18.59%	120.00° - 130.00°	1.58	0.02%
40.00° - 50.00°	274.08	3.03%	130.00° - 140.00°	1.79	0.02%
50.00° - 60.00°	104.48	1.16%	140.00° - 150.00°	1.99	0.02%
60.00° - 70.00°	22.29	0.25%	150.00° - 160.00°	1.63	0.02%
70.00° - 80.00°	3.45	0.04%	160.00° - 170.00°	0.96	0.01%
80.00° - 90.00°	1.79	0.02%	170.00° - 180.00°	0.29	0.00%
0.00° - 90.00°	9021.40	99.86%	0.00° - 180.00°	9034.00	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°	24137.96	24137.96	24137.96	24137.96	24137.96	24137.96	24137.96	24137.96	24137.96	24137.96	24137.96	24137.96	24137.96	24137.96	24137.96	24137.96	24137.96
1.00°	24250.95	24233.40	24225.03	24216.58	23927.73	23799.25	23869.60	23721.32	23850.49	23711.87	23829.03	23683.11	24283.57	24271.41	24305.99	24216.85	24216.85
2.00°	24108.62	24153.02	24069.69	24138.56	23394.24	23209.27	23358.61	23152.26	23333.20	23135.45	23302.58	23115.63	24149.00	24200.07	24152.16	24176.21	24108.62
3.00°	23724.95	23838.30	23697.87	23813.48	22691.25	22417.45	22669.69	22390.40	22639.32	22372.95	22586.45	22345.28	23782.33	23904.06	23762.47	23857.00	23724.95
4.00°	23119.15	23292.25	23084.40	23269.84	21768.21	21463.60	21750.13	21436.63	21700.56	21429.82	21694.25	21407.13	23166.57	23354.48	23134.44	23323.53	23119.15
5.00°	22273.13	22513.42	22244.31	22498.98	20687.45	20351.10	20666.53	20325.23	20633.94	20311.63	20637.86	20285.55	22331.45	22572.94	22297.94	22543.27	22273.13
6.00°	21214.04	21517.92	21179.21	21505.36	19465.08	19078.54	19429.69	19049.50	19407.17	19032.66	19396.66	19014.30	21259.99	21571.55	21253.89	21580.52	21214.04
7.00°	19946.70	20305.87	19907.90	20289.04	18103.41	17723.41	18083.21	17662.21	18042.49	17659.88	18030.89	17634.65	19978.79	20353.90	19968.45	20354.28	19946.70
8.00°	18519.95	18923.84	18496.21	18905.47	16623.42	16290.25	16676.85	16236.59	16637.02	16237.85	16614.49	16227.45	18568.09	18959.71	18541.44	18967.16	18519.95
9.00°	17055.75	17461.99	17033.83	17445.30	15278.10	14910.08	15290.18	14879.38	15246.15	14868.69	15233.63	14856.00	17105.00	17485.21	17070.81	17465.38	17055.75
10.00°	15617.25	16012.82	15607.73	15988.70	13980.64	13633.80	13985.50	13599.26	13949.71	13605.07	13936.99	13583.21	15646.85	16040.68	15639.56	16034.33	15617.25
11.00°	14253.79	14631.91	14254.53	14611.25	12814.11	12510.44	12810.44	12466.43	12800.13	12473.23	12764.84	12464.87	14286.64	14673.66	14286.72	14647.19	14253.79
12.00°	13020.14	13354.56	13012.95	13351.72	11742.42	11468.58	11758.94	11480.19	11743.42	11445.63	11720.96	11434.93	13044.08	13392.43	13048.86	13364.66	13020.14
13.00°	11877.58	12193.41	11883.69	12174.61	10792.95	10535.75	10790.39	10521.48	10779.54	10515.11	10763.49	10494.49	11916.25	12234.86	11907.35	12210.14	11877.58
14.00°	10838.52	11142.46	10849.87	11110.46	9915.00	9695.40	9915.82	9666.69	9903.11	9669.88	9890.20	9653.98	10874.38	11168.38	10855.14	11137.81	10838.52
15.00°	9913.66	10165.36	9904.05	10146.51	9141.95	8939.18	9141.48	8927.26	9128.70	8919.58	9110.28	8905.68	9923.00	10176.69	9920.48	10190.78	9913.66
16.00°	9072.77	9292.50	9053.05	9271.29	8453.01	8267.46	8452.24	8242.15	8440.54	8249.62	8424.75	8236.45	9093.24	9297.62	9086.21	9315.36	9072.77
17.00°	8317.52	8520.16	8304.17	8505.22	7857.52	7695.71	7847.98	7665.18	7834.06	7669.57	7823.47	7659.36	8345.16	8542.86	8351.33	8557.19	8317.52
18.00°	7695.08	7861.25	7684.97	7851.51	7333.30	7188.90	7324.04	7171.07	7311.93	7169.20	7294.07	7159.55	7716.18	7892.27	7723.40	7885.25	7695.08
19.00°	7156.64	7298.99	7138.82	7282.31	6874.59	6757.32	6873.89	6757.50	6863.40	6746.22	6847.26	6733.78	7179.19	7299.16	7170.21	7312.72	7156.64
20.00°	6683.07	6821.76	6686.31	6808.62	6484.40	6386.02	6486.35	6396.13	6479.91	6385.10	6465.65	6373.39	6720.83	6827.82	6727.69	6839.34	6683.07
21.00°	6338.87	6423.60	6322.31	6412.38	6161.13	6083.65	6174.28	6078.61	6151.32	6071.09	6149.57	6063.69	6346.39	6440.41	6336.79	6438.48	6338.87
22.00°	6011.48	6094.32	6009.25	6086.86	5886.02	5814.54	5886.94	5803.15	5873.89	5790.68	5872.35	5797.09	6020.07	6112.64	6008.32	6111.38	6011.48
23.00°	5726.68	5807.38	5731.23	5798.29	5630.67	5570.50	5624.32	5559.36	5616.70	5543.47	5617.52	5538.75	5757.51	5822.33	5756.92	5821.60	5726.68
24.00°	5480.02	5546.79	5478.92	5539.56	5394.91	5342.35	5384.74	5325.19	5382.89	5313.33	5376.87	5307.73	5511.04	5560.06	5481.41	5557.76	5480.02
25.00°	5251.30	5309.18	5244.31	5304.58	5179.02	5129.53	5172.30	5124.69	5168.55	5109.92	5158.91	5105.94	5266.39	5319.01	5256.56	5325.77	5251.30
26.00°	5040.47	5099.33	5039.00	5092.80	5000.37	4934.27	4988.06	4959.91	4987.03	4933.61	4984.91	4938.36	5060.69	5111.20	5054.30	5119.50	5040.47
27.00°	4857.81	4916.22	4864.79	4911.67	4825.31	4783.41	4816.10	4783.34	4814.21	4763.04	4803.05	4758.18	4870.79	4929.90	4871.66	4918.06	4857.81
28.00°	4692.01	4739.57	4695.97	4740.21	4661.27	4610.15	4652.43	4595.07	4642.53	4595.88	4633.04	4591.65	4703.99	4758.68	4710.47	4734.19	4692.01
29.00°	4535.79	4572.68	4535.42	4573.57	4512.26	4463.09	4489.92	4448.65	4481.23	4444.29	4481.30	4437.18	4547.86	4582.85	4544.33	4565.03	4535.79
30.00°	4379.37	4420.89	4384.84	4418.47	4365.38	4315.58	4349.20	4321.09	4342.48	4307.56	4353.41	4296.15	4399.22	4436.84	4396.30	4423.09	4379.37
31.00°	4236.33	4277.83	4228.00	4272.85	4205.65	4161.69	4198.24	4145.95	4197.18	4140.16	4190.60	4140.40	4248.40	4301.49	4236.36	4269.11	4236.33
32.00°	4023.72	4086.46	4010.59	4083.40	3960.13	3882.20	3957.55	3875.25	3944.56	3863.15	3938.34	3859.87	4033.39	4099.85	4013.45	4104.00	4023.72
33.00°	3712.74	3794.95	3692.76	3791.15	3616.41	3509.47	3615.76	3510.99	3612.42	3503.76	3605.28	3504.24	3713.15	3800.77	3710.11	3811.28	3712.74
34.00°	3322.22	3424.84	3318.54	3422.18	3219.53	3102.04	3212.55	3108.56	3213.35	3099.16	3204.09	3095.89	3331.12	3437.25	3330.12	3441.80	3322.22
35.00°	2898.04	3012.97	2902.23	3006.59	2784.70	2674.61	2783.48	2671.27	2780.16	2667.93	2777.19	2656.08	2905.54	3029.34	2907.76	3009.84	2898.04
36.00°	2463.11	2573.10	2454.59	2565.29	2344.70	2224.08	2344.27	2232.29	2335.89	2216.49	2331.00	2214.52	2474.66	2579.93	2466.45	2570.84	2463.11
37.00°	2012.60	2124.81	2006.24	2120.95	1900.15	1780.13	1900.56	1770.66	1893.61	1775.97	1887.85	1777.85	2018.51	2124.66	2015.74	2122.94	2012.60
38.00°	1574.99	1688.29	1572.99	1679.59	1470.40	1363.20	1475.21	1354.67	1471.30	1357.33	1465.39	1359.33	1579.99	1689.40	1578.27	1688.76	1574.99
39.00°	1169.40	1266.52	1166.28	1267.34	1081.93	990.54	1084.72	985.14	1084.04	985.89	1079.72	988.33	1175.02	1275.25	1176.57	1274.24	1169.40
40.00°	836.42	905.64	822.50	907.44	759.51	691.34	758.60	688.09	759.64	686.37	758.20	690.55	822.29	914.46	828.63	914.20	836.42
41.00°	566.29	621.79	562.12	623.56	546.36	510.31	533.20	506.39	541.98	507.03	541.60	510.36	568.29	622.57	564.81	627.95	566.29
42.00°	417.59	438.36	416.85	441.16	448.51	434.89	451.13	433.93	447.09	434.58	445.94	434.54	424.54	440.89	423.64	451.52	417.59
43.00°	370.24	377.67	370.04	378.93	404.05	396.15	402.67	393.71	406.97	393.38	404.74	393.88	373.90	379.78	367.95	380.07	370.24

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	10752	10752	10752	10752	10500	10500	10500	10500	10031	10031	10031	9601	9601	9601	9207	9207	9207	9021
	1	10296	10065	9858	9671	10075	9870	9685	9517	9504	9357	9222	9168	9053	8946	8858	8769	8686	8594
	2	9842	9439	9106	8826	9645	9284	8982	8726	8993	8747	8534	8725	8526	8350	8478	8318	8175	8155
	3	9404	8876	8467	8141	9229	8752	8377	8075	8517	8204	7946	8301	8040	7821	8100	7885	7701	7734
	4	8988	8369	7916	7570	8831	8268	7849	7525	8077	7719	7436	7900	7596	7349	7735	7478	7265	7339
	5	8595	7912	7435	7083	8454	7829	7384	7051	7671	7285	6988	7524	7190	6927	7387	7099	6867	6972
	6	8225	7498	7010	6660	8099	7429	6970	6637	7297	6893	6592	7174	6819	6548	7059	6748	6504	6632
	7	7878	7122	6631	6288	7764	7063	6600	6271	6952	6539	6238	6848	6480	6205	6751	6423	6173	6318
	8	7554	6779	6292	5957	7451	6730	6267	5945	6635	6218	5920	6546	6170	5895	6463	6124	5871	6028
	9	7251	6466	5986	5661	7158	6424	5965	5652	6343	5925	5633	6266	5887	5614	6194	5849	5596	5761
	10	6969	6180	5709	5395	6884	6144	5692	5387	6073	5659	5373	6007	5627	5358	5944	5596	5344	5515

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	797.9 fc	2.4 ft
6.5 ft	571.3 fc	2.8 ft
7.5 ft	429.1 fc	3.2 ft
8.0 ft	377.2 fc	3.5 ft
10.0 ft	241.4 fc	4.3 ft
12.0 ft	167.6 fc	5.2 ft
14.0 ft	123.2 fc	6.0 ft
16.0 ft	94.3 fc	6.9 ft
20.0 ft	60.3 fc	8.6 ft
24.0 ft	41.9 fc	10.4 ft
28.0 ft	30.8 fc	12.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1323246	1323246	1323246
45.00°	23884	23446	26518
55.00°	9375	9099	12250
65.00°	1527	1694	3216
75.00°	685	581	360
85.00°	1064	1038	781

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	9.1	10.0	9.5	10.4	10.7	10.7	11.6	11.1	12.0	12.3
	3H	8.9	9.8	9.3	10.1	10.5	10.6	11.4	11.0	11.7	12.1
	4H	8.9	9.6	9.3	10.0	10.4	10.5	11.2	10.9	11.6	12.0
	6H	8.8	9.5	9.2	9.8	10.2	10.4	11.1	10.8	11.4	11.8
	8H	8.7	9.4	9.2	9.8	10.2	10.3	11.0	10.8	11.4	11.8
	12H	8.7	9.3	9.1	9.7	10.1	10.3	10.9	10.7	11.3	11.7
4H	2H	8.9	9.6	9.3	10.0	10.4	10.5	11.3	11.0	11.7	12.1
	3H	8.7	9.3	9.1	9.7	10.1	10.4	11.0	10.8	11.4	11.8
	4H	8.6	9.2	9.0	9.6	10.0	10.3	10.8	10.7	11.3	11.7
	6H	8.5	9.0	9.0	9.4	9.9	10.2	10.7	10.7	11.1	11.6
	8H	8.5	8.9	8.9	9.4	9.8	10.1	10.6	10.6	11.0	11.5
	12H	8.4	8.8	8.9	9.3	9.8	10.1	10.4	10.6	10.9	11.4
8H	4H	8.4	8.9	8.9	9.3	9.8	10.1	10.6	10.6	11.0	11.5
	6H	8.3	8.7	8.9	9.2	9.7	10.0	10.4	10.5	10.9	11.3
	8H	8.3	8.6	8.8	9.1	9.6	9.9	10.3	10.5	10.8	11.3
	12H	8.3	8.6	8.8	9.1	9.6	9.9	10.2	10.4	10.7	11.3
12H	4H	8.4	8.7	8.9	9.2	9.7	10.1	10.4	10.5	10.9	11.4
	6H	8.3	8.6	8.8	9.1	9.6	9.9	10.2	10.5	10.7	11.3
	8H	8.3	8.5	8.8	9.0	9.6	9.9	10.2	10.4	10.7	11.2

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0