

## Indoor Distribution Test Report

### Spectrum Lighting Inc.

994 Jefferson Street  
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### Spectrum Lighting Photometric Lab

Luminaire

C1320PC120L35HKMDDO10XTSGHMMW

13" round x 20" high PC series Stage Pro luminaire for auditorium and area lighting.

Test Number

SP-R998

Test Date

7/9/2025

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

## Summary of Results

### Power

Input Watts	83.03 W
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### Lumen Output

Output Lumens	8624
Efficacy	103.87 lm/W

### Luminous Dimensions

0° - 180° Size	-1
90° - 270° Size	-1
Height	0

### Spacing Criterion

Two luminaires, plane 0°	0.37
Two luminaires, plane 90°	0.43
Four luminaires	0.43

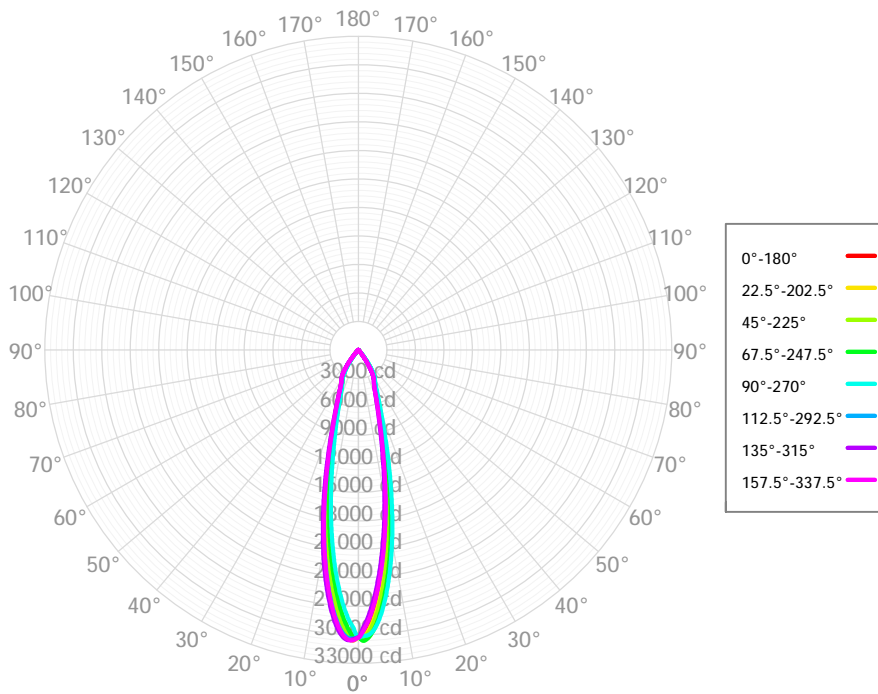
### Full Beam Angle

0° - 180°	24°
90° - 270°	24°

## IES File Header Contents

Keyword	Value
TEST	SP-R998
TESTLAB	Spectrum Lighting Photometric Lab. VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	7/9/2025
ISSUEDATE	7/9/2025
LUMCAT	C1320PC120L35HKMDDO10XTSGHMMW
LUMINAIRE	13" round x 20" high PC series Stage Pro luminaire for auditorium and area lighting.
DISTRIBUTION	Beam Angle 24
OTHER	CCT 3460 CRI 93.6 R9 71.0
OTHER	Total Luminaire wattage is approximate
OTHER	This report is prepared by Spectrum Lighting

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	2273.95	26.37%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	3068.03	35.58%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	2008.19	23.29%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	1165.17	13.51%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	79.71	0.92%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	8.38	0.10%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	6.95	0.08%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	6.92	0.08%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	6.70	0.08%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	8624.00	100.00%	0.00° - 180.00°	8624.00	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°	30286.80	30286.80	30286.80	30286.80	30286.80	30286.80	30286.80	30286.80	30286.80	30286.80	30286.80	30286.80	30286.80	30286.80	30286.80	30286.80	30286.80
1.00°	29735.15	30254.27	30390.70	30640.35	30116.90	30380.52	30464.18	30569.10	30572.11	30599.69	30488.08	30191.28	29285.58	29425.46	29245.48	29584.87	29735.15
2.00°	28871.60	29595.81	29834.81	30318.98	30050.23	30339.93	30583.09	30519.35	30482.47	30227.44	30018.82	29461.34	28450.38	28527.14	28225.67	28668.43	28871.60
3.00°	27758.04	28664.95	28982.95	29651.76	29637.37	29928.44	30312.87	30096.25	30012.42	29513.99	29220.91	28455.83	27369.90	27392.25	26995.46	27521.93	27758.04
4.00°	26479.37	27499.54	27876.58	28681.87	28879.60	29158.54	29668.61	29319.39	29196.69	28495.22	28155.02	27216.17	26114.22	26075.92	25612.46	26186.54	26479.37
5.00°	25029.15	26148.32	26564.45	27477.54	27839.85	28099.16	28699.92	28243.04	28113.45	27259.57	26876.50	25815.94	24698.01	24641.05	24117.70	24723.13	25029.15
6.00°	23481.39	24658.40	25094.69	26116.69	26591.43	26840.29	27480.25	26967.83	26812.26	25866.69	25442.19	24304.84	23187.67	23112.67	22529.74	23177.52	23481.39
7.00°	21859.71	23064.77	23522.10	24623.14	25188.22	25424.48	26096.06	25539.86	25370.52	24348.02	23909.82	22714.26	21579.87	21503.04	20891.27	21554.76	21859.71
8.00°	20195.25	21399.69	21889.65	23029.10	23686.86	23895.97	24599.21	23993.47	23834.15	22750.21	22295.13	21054.54	19951.40	19845.94	19219.25	19873.49	20195.25
9.00°	18496.46	19705.46	20205.62	21378.40	22100.04	22291.20	22996.14	22357.58	22224.60	21094.50	20623.99	19370.34	18286.53	18172.84	17530.69	18189.75	18496.46
10.00°	16819.05	18009.22	18500.71	19680.98	20438.88	20617.10	21325.42	20693.80	20563.97	19416.96	18932.78	17676.68	16639.93	16509.52	15856.15	16514.30	16819.05
11.00°	15159.63	16314.58	16803.89	17962.89	18754.00	18912.12	19621.27	19001.61	18892.82	17727.51	17250.51	16007.00	15020.92	14883.26	14248.33	14866.88	15159.63
12.00°	13573.88	14658.71	15139.65	16252.64	17066.32	17198.93	17912.98	17313.54	17223.60	16059.96	15600.43	14394.53	13478.60	13327.58	12724.62	13299.20	13573.88
13.00°	12109.88	13105.91	13567.47	14611.11	15411.15	15513.38	16210.91	15632.69	15573.88	14443.21	14003.31	12868.00	12056.68	11893.32	11331.20	11851.26	12109.88
14.00°	10796.64	11683.28	12084.93	13054.82	13822.36	13875.89	14555.48	14021.54	13967.35	12917.52	12508.94	11460.08	10780.14	10614.61	10096.37	10550.81	10796.64
15.00°	9624.70	10403.23	10758.33	11611.03	12339.50	12369.39	12986.42	12505.97	12467.42	11506.48	11131.32	10218.37	9636.90	9480.36	9018.48	9399.52	9624.70
16.00°	8589.65	9258.32	9578.25	10302.08	10981.54	10990.61	11543.92	11123.25	11099.67	10229.72	9906.27	9111.73	8619.69	8478.73	8077.50	8392.40	8589.65
17.00°	7686.54	8264.01	8541.24	9172.27	9765.11	9761.80	10248.27	9893.52	9876.54	9114.14	8829.06	8153.30	7741.16	7618.22	7270.01	7530.31	7686.54
18.00°	6926.05	7418.59	7649.91	8189.63	8698.68	8692.76	9103.96	8819.29	8807.32	8139.53	7891.06	7321.10	6988.56	6882.78	6577.78	6795.02	6926.05
19.00°	6269.21	6691.06	6901.62	7340.99	7781.91	7779.22	8130.39	7888.60	7884.32	7311.89	7089.92	6615.13	6338.50	6243.85	5980.66	6147.50	6269.21
20.00°	5694.26	6064.03	6248.98	6622.93	7001.35	6990.08	7301.56	7104.67	7093.27	6601.84	6410.83	6001.09	5766.50	5687.73	5455.13	5587.57	5694.26
21.00°	5196.89	5511.99	5689.82	6014.48	6322.45	6313.94	6586.40	6427.19	6414.21	5996.20	5825.26	5470.25	5275.06	5208.77	5002.05	5099.73	5196.89
22.00°	4771.00	5033.84	5206.06	5483.55	5744.19	5738.30	5976.95	5850.19	5837.23	5467.99	5309.17	5007.78	4850.53	4796.73	4620.51	4686.09	4771.00
23.00°	4426.10	4646.69	4787.31	5030.75	5257.66	5245.54	5450.37	5352.94	5336.65	5022.53	4870.00	4618.80	4511.61	4459.73	4311.77	4359.01	4426.10
24.00°	4157.62	4332.60	4451.62	4644.91	4843.24	4821.23	4988.39	4922.96	4911.68	4632.91	4501.81	4304.36	4241.96	4194.34	4060.64	4087.99	4157.62
25.00°	3948.91	4076.04	4172.91	4322.44	4483.45	4457.36	4595.15	4556.65	4543.90	4302.79	4197.02	4057.24	4022.50	3977.43	3868.40	3888.49	3948.91
26.00°	3779.69	3870.48	3944.05	4064.31	4180.41	4150.35	4267.86	4254.88	4235.96	4034.15	3951.39	3860.14	3846.22	3805.39	3713.76	3721.67	3779.69
27.00°	3631.07	3704.72	3760.32	3859.24	3935.52	3913.71	3997.39	4010.34	3990.34	3830.40	3764.40	3699.60	3699.29	3663.39	3579.01	3596.79	3631.07
28.00°	3483.78	3572.60	3612.01	3692.46	3751.45	3735.51	3799.16	3815.61	3794.68	3666.74	3609.65	3563.63	3544.94	3530.31	3429.91	3450.74	3483.78
29.00°	3304.27	3419.60	3467.48	3545.14	3587.83	3585.87	3651.44	3660.86	3631.43	3506.07	3468.07	3417.04	3353.03	3333.10	3250.39	3281.19	3304.27
30.00°	3084.14	3217.84	3282.92	3390.53	3430.38	3442.62	3523.14	3522.56	3465.17	3347.27	3302.67	3229.13	3124.64	3097.57	3022.17	3063.77	3084.14
31.00°	2831.55	2962.74	3058.03	3213.63	3266.75	3301.34	3394.61	3374.04	3308.39	3182.30	3122.32	3003.47	2863.52	2824.63	2735.33	2801.77	2831.55
32.00°	2547.16	2692.57	2798.40	2992.27	3087.96	3138.81	3231.39	3189.00	3129.16	2980.30	2896.31	2739.31	2572.44	2517.56	2419.10	2507.44	2547.16
33.00°	2241.03	2398.75	2510.56	2713.89	2862.29	2914.91	3024.11	2951.01	2900.58	2716.00	2623.10	2439.10	2255.49	2195.49	2087.18	2183.46	2241.03
34.00°	1914.37	2084.62	2193.72	2406.20	2576.08	2637.33	2761.77	2664.87	2605.98	2411.80	2317.15	2116.16	1923.09	1861.77	1758.71	1852.13	1914.37
35.00°	1589.42	1750.97	1863.26	2078.97	2263.37	2327.60	2449.82	2346.68	2287.26	2088.69	1996.99	1786.91	1594.56	1533.07	1430.40	1525.80	1589.42
36.00°	1270.41	1432.78	1540.59	1743.38	1936.33	1996.59	2120.75	2016.89	1960.84	1760.42	1668.50	1457.77	1280.67	1211.50	1118.43	1208.67	1270.41
37.00°	970.44	1121.40	1227.91	1418.89	1614.82	1667.32	1782.60	1678.68	1631.59	1440.37	1352.60	1144.09	971.97	910.82	830.15	910.63	970.44
38.00°	694.06	833.29	927.26	1107.65	1295.19	1350.46	1442.77	1352.32	1314.78	1136.06	1051.14	853.52	698.65	641.37	569.33	639.99	694.06
39.00°	455.18	573.86	641.64	820.64	991.42	1040.74	1096.76	1048.83	1009.89	853.61	774.45	588.56	472.35	415.93	358.49	413.46	455.18
40.00°	288.71	372.03	394.03	564.28	728.94	752.63	769.19	756.89	736.07	605.34	538.16	383.19	306.19	256.60	217.58	253.70	288.71
41.00°	193.92	237.53	217.21	359.53	499.54	507.71	480.10	513.43	502.41	396.35	349.48	243.29	199.87	167.29	133.41	156.42	193.92
42.00°	127.86	147.12	118.18	216.63	318.72	311.73	270.39	313.15	314.47	235.12	215.28	159.18	127.58	106.75	94.46	101.29	127.86
43.00°	77.27	84.41	71.35	124.36	191.55	175.06	158.00	174.46	181.44	133.81	131.24	102.36	73.75	59.08	55.42	68.41	77.27

### 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	10267	10267	10267	10267	10028	10028	10028	10028	9582	9582	9582	9174	9174	9174	8800	8800	8800	8624
	1	9871	9667	9484	9319	9663	9482	9320	9172	9137	9009	8891	8820	8720	8627	8528	8451	8380	8285
	2	9488	9137	8847	8603	9306	8992	8730	8507	8720	8507	8323	8469	8297	8147	8237	8100	7979	7944
	3	9122	8666	8313	8031	8962	8550	8227	7967	8333	8064	7843	8132	7909	7722	7945	7762	7606	7617
	4	8776	8244	7854	7557	8634	8151	7791	7513	7975	7669	7427	7811	7552	7343	7659	7441	7262	7307
	5	8448	7863	7454	7152	8322	7786	7406	7121	7642	7313	7060	7508	7224	7001	7383	7139	6943	7014
	6	8138	7516	7099	6799	8026	7453	7062	6777	7334	6990	6733	7222	6921	6690	7118	6854	6648	6740
	7	7847	7200	6781	6487	7746	7147	6752	6471	7047	6695	6439	6953	6641	6407	6865	6588	6376	6482
	8	7572	6910	6494	6208	7482	6866	6471	6196	6781	6425	6172	6701	6382	6148	6626	6340	6125	6242
	9	7315	6644	6233	5955	7233	6606	6214	5946	6533	6178	5928	6465	6142	5910	6401	6108	5892	6018
	10	7073	6398	5995	5726	6999	6366	5979	5719	6303	5949	5705	6244	5920	5691	6188	5892	5678	5809

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	1001.2 fc	2.3 ft
6.5 ft	716.8 fc	2.8 ft
7.5 ft	538.4 fc	3.2 ft
8.0 ft	473.2 fc	3.4 ft
10.0 ft	302.9 fc	4.3 ft
12.0 ft	210.3 fc	5.1 ft
14.0 ft	154.5 fc	6.0 ft
16.0 ft	118.3 fc	6.8 ft
20.0 ft	75.7 fc	8.5 ft
24.0 ft	52.6 fc	10.2 ft
28.0 ft	38.6 fc	11.9 ft

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

	0.00°	45.00°	90.00°
0.00°	415082	415082	415082
45.00°	633	394	1583
55.00°	300	260	216
65.00°	147	267	236
75.00°	365	359	364
85.00°	853	1242	931

### 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	-10.0	-9.1	-9.7	-8.8	-8.5	-9.6	-8.7	-9.3	-8.4	-8.1
	3H	-7.4	-6.6	-7.0	-6.2	-5.9	-7.2	-6.4	-6.8	-6.1	-5.7
	4H	-5.8	-5.1	-5.4	-4.8	-4.4	-6.0	-5.3	-5.6	-4.9	-4.5
	6H	-3.7	-3.0	-3.2	-2.6	-2.2	-4.4	-3.7	-4.0	-3.4	-3.0
	8H	-2.5	-1.9	-2.1	-1.5	-1.1	-3.4	-2.8	-2.9	-2.4	-2.0
	12H	-1.5	-0.9	-1.0	-0.5	-0.1	-2.0	-1.4	-1.5	-1.0	-0.6
4H	2H	-9.0	-8.3	-8.6	-7.9	-7.5	-9.2	-8.5	-8.8	-8.2	-7.8
	3H	-6.3	-5.7	-5.9	-5.3	-4.9	-6.3	-5.7	-5.8	-5.3	-4.9
	4H	-4.6	-4.1	-4.2	-3.7	-3.2	-4.9	-4.4	-4.5	-4.0	-3.5
	6H	-2.3	-1.8	-1.8	-1.4	-0.9	-3.2	-2.7	-2.7	-2.3	-1.8
	8H	-1.0	-0.6	-0.5	-0.2	0.3	-1.9	-1.5	-1.4	-1.1	-0.6
	12H	0.2	0.5	0.7	1.0	1.5	-0.4	0.0	0.1	0.5	1.0
8H	4H	-3.9	-3.5	-3.5	-3.1	-2.6	-4.0	-3.6	-3.5	-3.1	-2.7
	6H	-1.2	-0.8	-0.7	-0.3	0.1	-2.1	-1.8	-1.6	-1.3	-0.8
	8H	0.1	0.4	0.7	1.0	1.5	-0.6	-0.3	-0.1	0.2	0.7
	12H	1.6	1.9	2.1	2.4	2.9	1.1	1.4	1.7	1.9	2.5
12H	4H	-3.7	-3.4	-3.3	-2.9	-2.4	-3.8	-3.4	-3.3	-2.9	-2.5
	6H	-0.8	-0.6	-0.3	-0.1	0.5	-1.8	-1.5	-1.2	-1.0	-0.5
	8H	0.6	0.8	1.1	1.3	1.9	-0.2	0.1	0.3	0.6	1.2

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0