

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

C1320PC120L35KMDDO10XTSGHMMW

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

Test Number

SP-R992

Test Date

7/9/2025

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

Summary of Results

Power

Input Watts	83.21 W
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Lumen Output

Output Lumens	9660
Efficacy	116.09 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.33
Two luminaires, plane 90°	0.49
Four luminaires	0.45

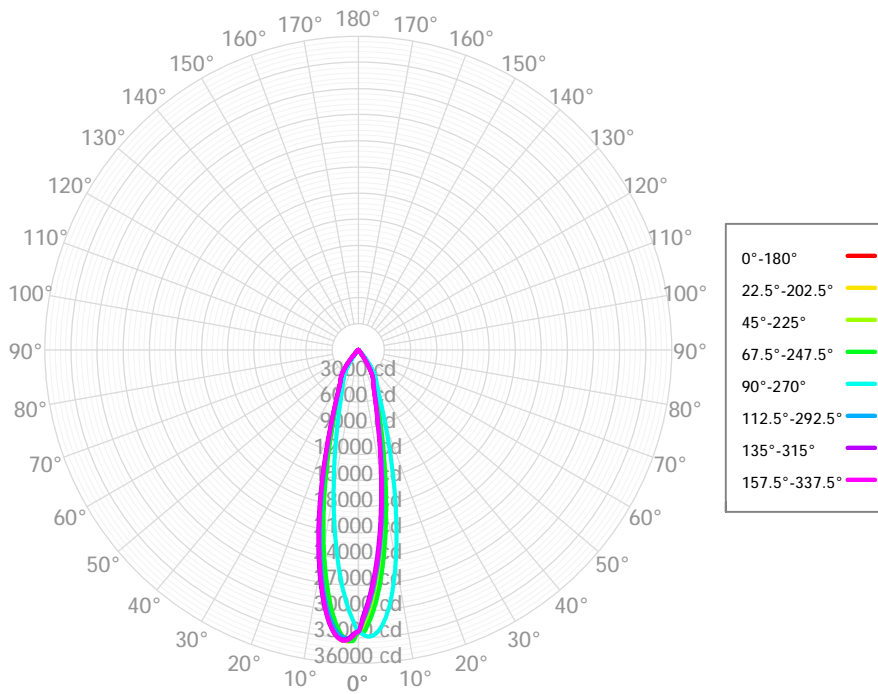
Full Beam Angle

0° - 180°	24°
90° - 270°	24°

IES File Header Contents

Keyword	Value
TEST	SP-R992
TESTLAB	Spectrum Lighting Photometric Lab. VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	7/9/2025
ISSUEDATE	7/9/2025
LUMCAT	C1320PC120L35KMDDO10XTSGHMMW
LUMINAIRE	13" round x 20" high PC series Stage Pro luminaire for auditorium and area lighting.
DISTRIBUTION	Beam Angle 24.2
OTHER	CCT 3354 CRI 83.7 R9 8.8
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°	2475.09	25.62%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	3471.66	35.94%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	2272.77	23.53%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	1281.20	13.26%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	128.53	1.33%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	9.67	0.10%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	7.27	0.08%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	7.22	0.07%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	6.58	0.07%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	9660.00	100.00%	0.00° - 180.00°	9660.00	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°	32327.10	32327.10	32327.10	32327.10	32327.10	32327.10	32327.10	32327.10	32327.10	32327.10	32327.10	32327.10	32327.10	32327.10	32327.10	32327.10	32327.10
1.00°	30967.16	31736.86	31940.38	32482.22	32723.49	32808.36	32631.97	32843.29	32865.16	33215.53	33268.27	33417.93	31228.65	31137.95	30574.09	30917.87	30967.16
2.00°	29645.54	30573.05	30865.62	31578.78	32937.91	33120.73	33165.34	33320.24	33327.56	33483.17	33475.72	33394.07	30015.46	29896.46	29223.51	29556.61	29645.54
3.00°	28158.79	29209.27	29569.66	30419.59	32821.98	33069.88	33307.16	33428.49	33434.32	33374.38	33324.88	32995.88	28579.63	28444.43	27666.58	28030.56	28158.79
4.00°	26536.34	27682.64	28063.57	29037.20	32407.13	32685.99	33113.91	33150.28	33162.66	32880.67	32789.52	32229.50	27008.55	26815.50	26002.72	26386.94	26536.34
5.00°	24819.73	26028.81	26390.06	27472.40	31715.04	31972.46	32551.45	32507.20	32516.40	32019.13	31886.85	31129.83	25306.45	25085.97	24233.92	24638.03	24819.73
6.00°	23017.76	24272.08	24627.79	25757.13	30732.84	30965.10	31632.55	31532.96	31534.07	30828.25	30672.00	29750.88	23518.32	23282.04	22369.44	22815.73	23017.76
7.00°	21177.09	22448.86	22803.72	23943.84	29497.16	29681.17	30442.45	30262.04	30262.73	29395.45	29212.84	28180.44	21691.48	21422.12	20483.54	20954.42	21177.09
8.00°	19323.62	20599.69	20946.65	22085.61	28038.36	28207.22	29016.46	28773.22	28756.93	27787.34	27582.79	26488.01	19851.02	19570.82	18611.59	19094.66	19323.62
9.00°	17496.65	18748.00	19088.16	20220.22	26416.92	26591.78	27444.55	27119.46	27087.20	26070.10	25850.37	24706.54	18050.64	17762.56	16780.21	17250.84	17496.65
10.00°	15722.21	16933.60	17271.99	18379.19	24704.76	24838.01	25737.27	25362.65	25322.13	24264.06	24054.87	22872.80	16334.66	16001.83	15055.33	15479.39	15722.21
11.00°	14061.71	15209.99	15548.46	16600.76	22895.90	23025.55	23931.91	23518.29	23490.15	22408.64	22207.64	21011.98	14705.94	14360.43	13449.50	13820.89	14061.71
12.00°	12534.48	13608.38	13949.41	14926.01	21037.94	21191.47	22093.23	21653.78	21636.08	20560.89	20357.64	19168.89	13185.41	12860.03	11998.10	12302.72	12534.48
13.00°	11166.49	12145.68	12501.11	13374.36	19198.26	19350.25	20236.77	19796.23	19793.64	18732.66	18527.03	17363.88	11795.02	11492.58	10709.21	10955.18	11166.49
14.00°	9948.12	10833.77	11185.95	11971.92	17428.05	17526.60	18385.63	17954.46	17976.10	16937.16	16745.86	15636.29	10539.45	10265.11	9559.92	9773.28	9948.12
15.00°	8901.95	9677.62	10011.63	10716.49	15713.32	15755.21	16564.87	16155.24	16206.72	15200.90	15036.31	14009.57	9432.27	9199.25	8593.01	8758.20	8901.95
16.00°	8006.93	8675.30	8974.55	9594.07	14092.71	14121.84	14822.38	14456.45	14513.97	13585.17	13425.64	12515.15	8468.33	8273.92	7756.94	7880.92	8006.93
17.00°	7240.13	7810.43	8074.23	8604.90	12622.49	12613.01	13217.77	12867.43	12935.82	12078.86	11951.12	11155.96	7646.40	7477.41	7023.76	7134.19	7240.13
18.00°	6573.76	7060.42	7291.04	7735.22	11310.47	11221.67	11757.65	11440.92	11504.89	10732.99	10632.08	9945.60	6921.38	6788.88	6394.80	6491.54	6573.76
19.00°	6015.09	6415.01	6608.72	6989.45	10097.18	9981.97	10452.25	10181.68	10231.53	9551.95	9472.86	8890.43	6333.98	6200.53	5861.63	5932.08	6015.09
20.00°	5530.17	5860.16	6016.60	6337.80	9045.99	8928.88	9327.94	9092.65	9130.62	8542.39	8468.58	7985.18	5825.80	5701.09	5395.70	5455.60	5530.17
21.00°	5121.14	5400.50	5522.16	5780.38	8124.09	8040.34	8365.73	8154.02	8192.93	7676.43	7612.82	7209.89	5390.10	5279.17	5012.40	5043.89	5121.14
22.00°	4779.79	5021.85	5130.25	5314.57	7329.44	7246.33	7534.33	7361.36	7392.94	6941.81	6885.05	6562.47	5018.32	4926.13	4678.73	4702.23	4779.79
23.00°	4499.76	4710.18	4814.38	4949.43	6636.10	6562.79	6824.30	6677.65	6697.76	6311.99	6279.36	6025.02	4724.15	4625.58	4419.41	4421.86	4499.76
24.00°	4286.20	4450.10	4543.96	4663.09	6019.33	5990.53	6217.52	6110.97	6103.47	5791.68	5764.07	5559.60	4430.26	4368.38	4207.97	4221.57	4286.20
25.00°	4103.96	4236.11	4316.72	4420.68	5515.44	5506.52	5698.80	5604.00	5603.83	5334.53	5319.55	5155.81	4183.93	4158.93	4041.40	4051.59	4103.96
26.00°	3930.56	4049.90	4131.23	4211.90	5107.12	5084.53	5246.17	5183.31	5180.32	4940.96	4921.22	4793.26	3957.72	3953.42	3878.78	3888.16	3930.56
27.00°	3758.39	3868.03	3947.26	4022.06	4771.44	4737.43	4867.63	4828.46	4824.18	4605.67	4580.23	4489.58	3751.44	3744.12	3686.03	3736.75	3758.39
28.00°	3553.65	3648.37	3710.28	3829.77	4511.17	4455.41	4553.52	4535.79	4526.17	4334.45	4297.33	4233.07	3542.98	3516.72	3458.70	3543.00	3553.65
29.00°	3298.45	3385.11	3448.53	3588.44	4283.00	4233.08	4299.37	4303.29	4285.82	4115.07	4074.90	4013.07	3298.95	3269.41	3192.74	3273.16	3298.45
30.00°	2996.70	3105.39	3153.59	3319.40	4088.22	4048.34	4103.70	4120.82	4086.52	3922.61	3869.82	3808.84	3040.48	2995.87	2875.01	2958.46	2996.70
31.00°	2661.04	2801.93	2849.63	3033.14	3880.89	3871.62	3956.02	3960.18	3914.47	3742.50	3683.91	3619.59	2743.91	2678.67	2538.24	2606.63	2661.04
32.00°	2306.30	2471.74	2546.48	2734.40	3669.88	3680.97	3797.25	3806.03	3723.59	3554.50	3509.42	3432.91	2398.24	2318.62	2172.35	2238.30	2306.30
33.00°	1940.72	2132.16	2212.67	2410.10	3452.62	3475.56	3610.99	3600.15	3508.57	3344.50	3324.18	3214.11	2040.39	1958.01	1810.67	1874.58	1940.72
34.00°	1581.77	1769.79	1855.47	2055.61	3187.58	3249.88	3398.07	3350.85	3265.99	3099.73	3068.68	2937.12	1682.00	1593.84	1452.53	1510.93	1581.77
35.00°	1231.43	1419.06	1474.93	1686.00	2896.65	2976.48	3135.18	3058.94	2985.71	2801.00	2765.84	2598.87	1340.78	1236.96	1117.80	1167.03	1231.43
36.00°	904.23	1086.62	1096.57	1325.04	2579.12	2658.42	2815.67	2728.10	2659.54	2468.04	2428.70	2236.99	1025.42	923.89	810.46	847.57	904.23
37.00°	626.92	778.74	748.67	987.70	2233.20	2303.72	2474.98	2369.47	2312.78	2113.10	2072.83	1870.53	755.08	658.76	549.65	573.84	626.92
38.00°	408.30	525.87	461.22	691.77	1873.62	1937.35	2095.62	1997.90	1950.67	1753.65	1712.25	1513.56	533.71	453.46	359.98	356.33	408.30
39.00°	250.58	340.08	265.35	463.66	1520.12	1575.75	1696.12	1642.64	1586.04	1410.62	1370.69	1193.59	358.32	304.92	227.75	204.24	250.58
40.00°	148.98	220.72	156.05	294.97	1185.66	1239.70	1300.10	1290.86	1247.47	1098.37	1066.58	910.85	222.97	186.43	134.66	124.36	148.98
41.00°	91.91	127.67	90.21	176.38	890.53	928.98	927.52	958.84	926.51	823.19	795.46	652.18	128.76	107.95	81.26	80.59	91.91
42.00°	60.24	63.04	52.59	95.90	659.75	669.60	603.90	661.11	662.97	584.45	553.74	426.82	77.56	70.91	54.86	58.41	60.24
43.00°	40.17	41.09	24.29	51.59	482.23	466.04	358.77	411.91	450.74	385.89	344.84	252.03	55.67	55.74	34.73	34.46	40.17

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	11500	11500	11500	11500	11233	11233	11233	11233	10733	10733	10733	10277	10277	10277	9857	9857	9857	9660
	1	11054	10825	10619	10434	10822	10618	10435	10269	10232	10087	9955	9876	9764	9659	9549	9462	9382	9276
	2	10622	10227	9901	9626	10418	10065	9769	9519	9760	9520	9313	9478	9285	9116	9218	9065	8928	8890
	3	10210	9695	9298	8981	10030	9566	9202	8909	9322	9019	8770	9096	8846	8635	8887	8681	8505	8519
	4	9818	9219	8780	8445	9659	9114	8709	8396	8917	8572	8299	8733	8442	8206	8563	8317	8114	8167
	5	9448	8788	8327	7987	9306	8703	8274	7953	8541	8169	7885	8390	8070	7818	8250	7974	7753	7835
	6	9098	8397	7926	7589	8972	8326	7885	7564	8192	7804	7515	8067	7727	7467	7949	7652	7420	7524
	7	8769	8040	7567	7236	8655	7981	7534	7218	7868	7471	7182	7763	7410	7147	7664	7351	7112	7233
	8	8459	7712	7243	6920	8357	7662	7217	6906	7567	7166	6880	7478	7117	6853	7393	7070	6827	6961
	9	8168	7411	6948	6635	8076	7369	6927	6625	7287	6886	6604	7211	6846	6584	7138	6808	6565	6707
	10	7895	7134	6679	6376	7811	7097	6662	6368	7027	6628	6352	6961	6595	6337	6898	6563	6322	6471

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	1068.7 fc	2.4 ft
6.5 ft	765.1 fc	2.8 ft
7.5 ft	574.7 fc	3.2 ft
8.0 ft	505.1 fc	3.4 ft
10.0 ft	323.3 fc	4.3 ft
12.0 ft	224.5 fc	5.1 ft
14.0 ft	164.9 fc	6.0 ft
16.0 ft	126.3 fc	6.9 ft
20.0 ft	80.8 fc	8.6 ft
24.0 ft	56.1 fc	10.3 ft
28.0 ft	41.2 fc	12.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	443044	443044	443044
45.00°	258	217	4520
55.00°	250	225	311
65.00°	251	221	195
75.00°	326	294	401
85.00°	1362	1238	1028

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	-10.5	-9.6	-10.2	-9.3	-9.0	-9.6	-8.7	-9.2	-8.4	-8.0
	3H	-8.3	-7.5	-7.9	-7.2	-6.8	-7.5	-6.7	-7.1	-6.4	-6.0
	4H	-6.4	-5.7	-6.0	-5.3	-5.0	-5.7	-5.0	-5.3	-4.6	-4.3
	6H	-4.7	-4.0	-4.3	-3.6	-3.2	-4.0	-3.4	-3.6	-3.0	-2.6
	8H	-3.4	-2.7	-2.9	-2.4	-1.9	-3.2	-2.6	-2.8	-2.2	-1.8
	12H	-1.6	-1.0	-1.1	-0.6	-0.1	-2.2	-1.6	-1.7	-1.2	-0.7
4H	2H	-10.0	-9.3	-9.6	-8.9	-8.5	-8.7	-8.0	-8.3	-7.6	-7.2
	3H	-7.3	-6.7	-6.9	-6.3	-5.9	-6.5	-5.9	-6.0	-5.5	-5.1
	4H	-4.7	-4.2	-4.3	-3.8	-3.3	-4.4	-3.9	-4.0	-3.4	-3.0
	6H	-2.9	-2.5	-2.4	-2.0	-1.5	-2.6	-2.2	-2.1	-1.7	-1.2
	8H	-1.7	-1.3	-1.2	-0.8	-0.3	-1.8	-1.4	-1.3	-0.9	-0.4
	12H	0.2	0.5	0.6	1.0	1.5	-0.6	-0.2	-0.1	0.3	0.8
8H	4H	-4.1	-3.7	-3.6	-3.3	-2.8	-3.7	-3.3	-3.2	-2.8	-2.4
	6H	-2.1	-1.8	-1.6	-1.3	-0.8	-1.7	-1.4	-1.2	-0.9	-0.4
	8H	-0.8	-0.5	-0.2	0.1	0.6	-0.8	-0.5	-0.2	0.1	0.6
	12H	1.4	1.6	1.9	2.1	2.7	0.8	1.0	1.3	1.5	2.1
12H	4H	-3.9	-3.6	-3.4	-3.1	-2.6	-3.5	-3.2	-3.0	-2.7	-2.2
	6H	-1.8	-1.5	-1.3	-1.0	-0.5	-1.4	-1.1	-0.8	-0.6	-0.1
	8H	-0.3	0.0	0.3	0.5	1.1	-0.3	0.0	0.2	0.5	1.1

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0