

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

C1320PC120L35HKWDDO10XTSGHMMW

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

Test Number

SP-R997

Test Date

7/9/2025

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

Summary of Results

Power

Input Watts	82.76 W
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Lumen Output

Output Lumens	8679
Efficacy	104.87 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.71
Two luminaires, plane 90°	0.79
Four luminaires	0.77

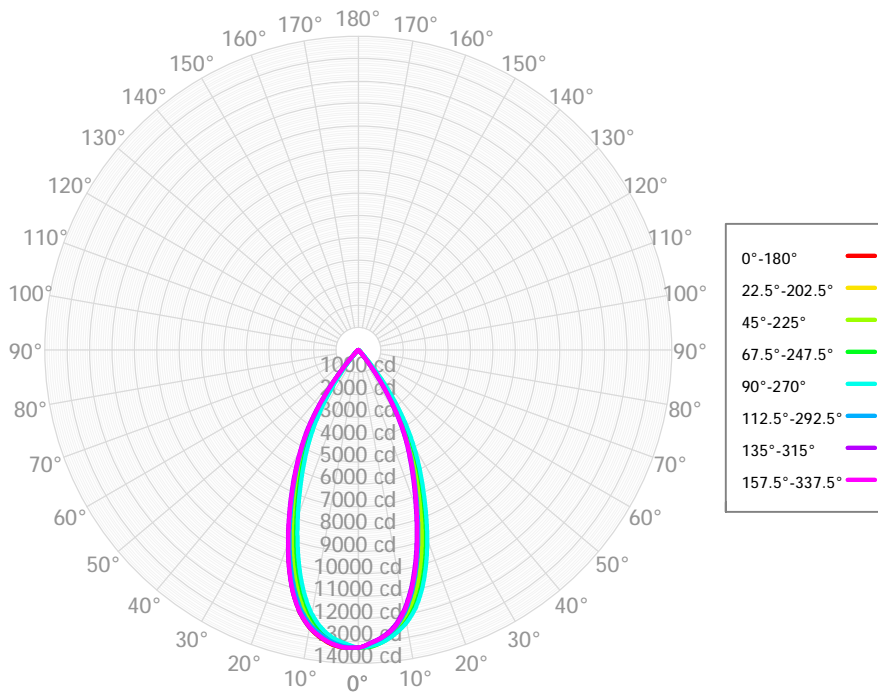
Full Beam Angle

0° - 180°	48°
90° - 270°	48°

IES File Header Contents

Keyword	Value
TEST	SP-R997
TESTLAB	Spectrum Lighting Photometric Lab. VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	7/9/2025
ISSUEDATE	7/9/2025
LUMCAT	C1320PC120L35HKWDDO10XTSGHMMW
LUMINAIRE	13" round x 20" high PC series Stage Pro luminaire for auditorium and area lighting.
DISTRIBUTION	Beam Angle 48.2
OTHER	CCT 3468 CRI 93.7 R9 71.4
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°	1233.87	14.22%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	2901.78	33.43%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	2878.46	33.17%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	1504.01	17.33%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	133.89	1.54%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	9.19	0.11%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	7.08	0.08%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	5.58	0.06%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	5.14	0.06%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	8679.00	100.00%	0.00° - 180.00°	8679.00	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°	13286.56	13286.56	13286.56	13286.56	13286.56	13286.56	13286.56	13286.56	13286.56	13286.56	13286.56	13286.56	13286.56	13286.56	13286.56	13286.56	13286.56
2.50°	13113.56	13180.20	13217.56	13263.93	13228.90	13264.51	13310.25	13304.04	13317.53	13309.10	13280.93	13235.96	13127.44	13112.22	13085.50	13099.29	13111.56
5.00°	12866.38	12953.99	12989.70	13063.62	13073.63	13098.38	13187.37	13180.27	13215.90	13159.95	13114.19	13015.38	12910.02	12884.24	12830.11	12861.49	12866.38
7.50°	12477.57	12591.18	12637.25	12761.86	12774.51	12810.16	12936.83	12926.49	12966.26	12867.42	12807.22	12652.09	12536.82	12525.88	12424.63	12481.75	12477.57
10.00°	11844.21	12037.83	12117.44	12324.01	12377.06	12437.78	12573.52	12555.04	12586.96	12430.98	12324.41	12090.45	11965.99	11929.61	11774.46	11839.29	11844.21
12.50°	10980.00	11276.66	11419.21	11704.17	11809.69	11856.99	12030.00	12012.25	12033.00	11777.37	11624.36	11301.47	11148.79	11083.37	10889.40	10970.45	10980.00
15.00°	9939.13	10284.43	10502.58	10885.60	11020.39	11020.87	11261.32	11233.95	11240.12	10887.67	10685.11	10327.71	10138.64	10047.37	9822.79	9932.12	9939.13
17.50°	8827.91	9190.09	9458.10	9897.41	10058.23	10049.53	10284.09	10248.66	10255.30	9850.42	9634.69	9231.33	9017.68	8905.10	8666.68	8774.38	8827.91
20.00°	7712.05	8082.63	8375.95	8826.61	8997.76	8973.69	9190.18	9145.66	9142.21	8693.39	8473.55	8090.37	7891.05	7746.44	7508.71	7621.06	7712.05
22.50°	6691.34	7047.86	7308.75	7725.91	7892.40	7886.32	8095.14	8043.78	7992.87	7562.68	7351.13	7006.85	6806.71	6670.54	6465.50	6582.19	6691.34
25.00°	5756.73	6082.56	6309.98	6676.97	6846.26	6873.57	7062.41	6986.97	6907.20	6502.99	6309.33	6002.31	5829.23	5700.47	5511.63	5629.56	5756.73
27.50°	4862.85	5169.53	5391.56	5717.66	5887.01	5923.42	6092.50	6005.67	5905.23	5558.37	5371.38	5080.05	4912.53	4807.29	4635.50	4734.42	4862.85
30.00°	3931.40	4237.06	4467.25	4770.79	4932.32	4971.85	5159.26	5089.19	4979.83	4641.09	4456.89	4179.07	3956.26	3816.84	3671.88	3811.62	3931.40
32.50°	2906.33	3196.66	3411.81	3774.93	3974.03	4054.20	4271.33	4152.55	4039.30	3736.28	3558.21	3218.62	2935.21	2780.99	2614.44	2769.46	2906.33
35.00°	1872.19	2171.02	2372.24	2718.51	2950.41	3048.23	3236.27	3067.23	2992.06	2697.15	2542.15	2186.92	1936.28	1785.94	1623.89	1755.82	1872.19
37.50°	982.60	1226.57	1364.73	1690.06	1936.54	2005.69	2103.82	1977.13	1941.34	1687.96	1581.49	1259.53	1073.91	928.23	798.38	885.06	982.60
40.00°	378.78	537.11	545.89	827.27	1064.21	1099.96	1080.93	1035.71	1033.23	866.85	803.50	582.24	484.05	369.07	281.27	322.01	378.78
42.50°	125.06	183.82	153.55	286.80	477.09	462.86	385.67	352.04	414.99	317.59	304.73	196.19	169.98	121.66	90.75	98.70	125.06
45.00°	41.05	49.46	46.18	84.05	181.20	159.87	127.77	104.45	129.64	106.42	99.57	62.17	45.81	34.23	26.14	32.98	41.05
47.50°	16.68	16.71	15.10	24.21	61.40	60.03	49.96	31.40	47.60	42.25	35.65	21.88	17.99	13.63	12.48	12.94	16.68
50.00°	11.05	11.41	11.61	12.00	21.18	20.42	15.84	12.72	19.11	16.51	15.11	13.55	11.79	10.59	10.58	11.51	11.05
52.50°	9.84	9.92	11.05	10.08	12.05	12.91	13.00	11.27	12.17	13.50	13.92	12.17	10.38	9.76	10.42	11.36	9.84
55.00°	7.70	9.08	9.49	7.92	9.77	11.48	12.02	10.86	10.83	10.29	11.53	10.96	9.19	8.38	9.15	10.33	7.70
57.50°	7.08	8.91	8.14	8.99	9.86	9.01	12.17	10.12	9.75	10.29	10.65	9.07	7.67	6.73	7.15	6.70	7.08
60.00°	6.80	6.34	6.99	8.26	9.27	7.54	8.90	9.67	8.58	9.65	9.95	7.86	7.11	6.29	6.76	5.66	6.80
62.50°	7.19	7.83	6.37	6.73	7.27	7.14	8.60	7.99	8.90	7.74	8.22	7.20	7.17	7.03	6.92	6.44	7.19
65.00°	7.23	5.12	5.90	8.02	6.78	7.64	8.08	6.64	6.94	8.86	8.80	6.46	8.43	6.62	7.22	7.15	7.23
67.50°	8.13	5.66	6.22	6.26	7.66	8.03	7.05	7.80	5.60	9.13	8.56	8.11	6.71	5.22	5.72	6.52	8.13
70.00°	5.39	5.56	5.95	5.74	5.77	6.60	6.30	7.06	5.39	6.24	4.78	7.49	6.00	5.37	5.55	5.64	5.39
72.50°	6.51	4.83	4.62	5.85	4.44	5.61	5.88	6.30	4.57	5.42	5.93	7.27	6.82	4.45	5.62	5.08	6.51
75.00°	5.60	4.57	4.47	5.13	5.35	5.57	3.79	5.58	4.62	4.49	6.33	6.55	5.88	5.51	4.80	5.91	5.60
77.50°	3.69	5.32	5.25	5.02	4.94	4.95	4.89	3.91	3.72	5.06	7.67	4.71	4.57	5.89	4.56	4.85	3.69
80.00°	4.73	4.64	4.04	4.35	4.92	4.64	4.97	4.92	4.99	4.86	4.49	4.68	5.70	4.48	3.92	6.10	4.73
82.50°	4.10	5.69	4.84	3.25	3.58	5.08	5.95	4.52	5.43	5.22	4.60	6.03	4.43	3.74	6.69	3.36	4.10
85.00°	5.30	5.21	6.16	3.40	3.91	4.88	5.62	4.02	5.89	3.95	4.31	5.77	3.38	3.49	6.59	5.13	5.30
87.50°	4.76	6.21	5.51	4.77	4.11	4.69	4.27	4.75	6.26	3.86	5.09	4.71	4.63	3.74	5.23	4.71	4.76
90.00°	4.77	5.30	5.68	5.25	4.85	3.69	1.73	3.58	1.35	4.92	4.93	6.14	3.64	1.28	3.30	4.30	4.77

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	10332	10332	10332	10332	10092	10092	10092	10092	9643	9643	9643	9233	9233	9233	8856	8856	8856	8679
	1	9891	9668	9468	9288	9680	9482	9303	9141	9132	8990	8860	8811	8700	8597	8515	8429	8349	8262
	2	9455	9067	8746	8476	9267	8919	8628	8381	8642	8404	8199	8386	8193	8024	8150	7995	7857	7839
	3	9033	8524	8130	7817	8866	8406	8045	7754	8182	7880	7631	7976	7724	7513	7784	7576	7398	7432
	4	8630	8033	7596	7262	8480	7936	7532	7219	7754	7408	7135	7585	7291	7053	7428	7179	6973	7047
	5	8245	7585	7124	6784	8111	7506	7075	6754	7355	6981	6695	7215	6891	6637	7084	6805	6580	6684
	6	7881	7176	6703	6364	7760	7110	6666	6343	6984	6592	6300	6867	6522	6259	6757	6455	6218	6344
	7	7536	6801	6325	5991	7427	6746	6295	5975	6639	6237	5944	6540	6182	5914	6447	6128	5884	6027
	8	7212	6457	5982	5656	7113	6410	5959	5645	6319	5912	5622	6234	5867	5599	6154	5824	5577	5732
	9	6907	6140	5671	5354	6817	6100	5652	5345	6022	5614	5328	5949	5577	5311	5879	5542	5294	5458
	10	6620	5849	5387	5079	6539	5813	5371	5073	5746	5340	5059	5682	5309	5046	5622	5280	5033	5204

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	439.2 fc	4.9 ft
6.5 ft	314.5 fc	5.8 ft
7.5 ft	236.2 fc	6.7 ft
8.0 ft	207.6 fc	7.2 ft
10.0 ft	132.9 fc	9.0 ft
12.0 ft	92.3 fc	10.7 ft
14.0 ft	67.8 fc	12.5 ft
16.0 ft	51.9 fc	14.3 ft
20.0 ft	33.2 fc	17.9 ft
24.0 ft	23.1 fc	21.5 ft
28.0 ft	16.9 fc	25.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	182093	182093	182093
45.00°	796	895	3512
55.00°	184	227	233
65.00°	235	191	220
75.00°	297	237	283
85.00°	834	968	616

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	-10.8	-9.9	-10.4	-9.5	-9.2	-9.7	-8.8	-9.3	-8.5	-8.1
	3H	-8.0	-7.2	-7.6	-6.9	-6.5	-7.1	-6.3	-6.7	-6.0	-5.6
	4H	-6.6	-5.9	-6.2	-5.5	-5.2	-5.9	-5.2	-5.5	-4.9	-4.5
	6H	-5.5	-4.8	-5.1	-4.5	-4.1	-4.8	-4.1	-4.4	-3.7	-3.3
	8H	-4.8	-4.1	-4.3	-3.7	-3.3	-4.1	-3.5	-3.7	-3.1	-2.7
	12H	-3.6	-3.0	-3.2	-2.6	-2.2	-3.5	-2.9	-3.0	-2.5	-2.1
4H	2H	-10.0	-9.3	-9.6	-8.9	-8.5	-8.8	-8.0	-8.4	-7.7	-7.3
	3H	-7.2	-6.6	-6.7	-6.1	-5.7	-6.1	-5.5	-5.7	-5.1	-4.7
	4H	-5.6	-5.1	-5.2	-4.7	-4.2	-4.8	-4.2	-4.3	-3.8	-3.4
	6H	-4.1	-3.7	-3.6	-3.2	-2.7	-3.5	-3.0	-3.0	-2.6	-2.1
	8H	-3.3	-2.8	-2.8	-2.4	-1.9	-2.7	-2.3	-2.2	-1.8	-1.3
	12H	-1.9	-1.6	-1.5	-1.1	-0.6	-1.8	-1.5	-1.4	-1.0	-0.5
8H	4H	-5.2	-4.7	-4.7	-4.3	-3.8	-4.3	-3.9	-3.8	-3.4	-2.9
	6H	-3.3	-2.9	-2.8	-2.4	-2.0	-2.7	-2.4	-2.2	-1.9	-1.4
	8H	-2.2	-1.9	-1.6	-1.4	-0.9	-1.6	-1.3	-1.1	-0.8	-0.3
	12H	-0.6	-0.3	-0.1	0.2	0.8	-0.4	-0.2	0.1	0.3	0.9
12H	4H	-5.0	-4.7	-4.6	-4.2	-3.7	-4.2	-3.8	-3.7	-3.4	-2.9
	6H	-3.0	-2.7	-2.5	-2.2	-1.7	-2.5	-2.2	-1.9	-1.7	-1.2
	8H	-1.7	-1.4	-1.2	-0.9	-0.4	-1.2	-1.0	-0.7	-0.5	0.1

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0