

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

C1320PC120L35KNDDO10XTSGHMMW

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

Test Number

SP-R993

Test Date

7/9/2025

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

Summary of Results

Power

Input Watts	83.34 W
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Lumen Output

Output Lumens	9724
Efficacy	116.68 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.22
Two luminaires, plane 90°	0.39
Four luminaires	0.33

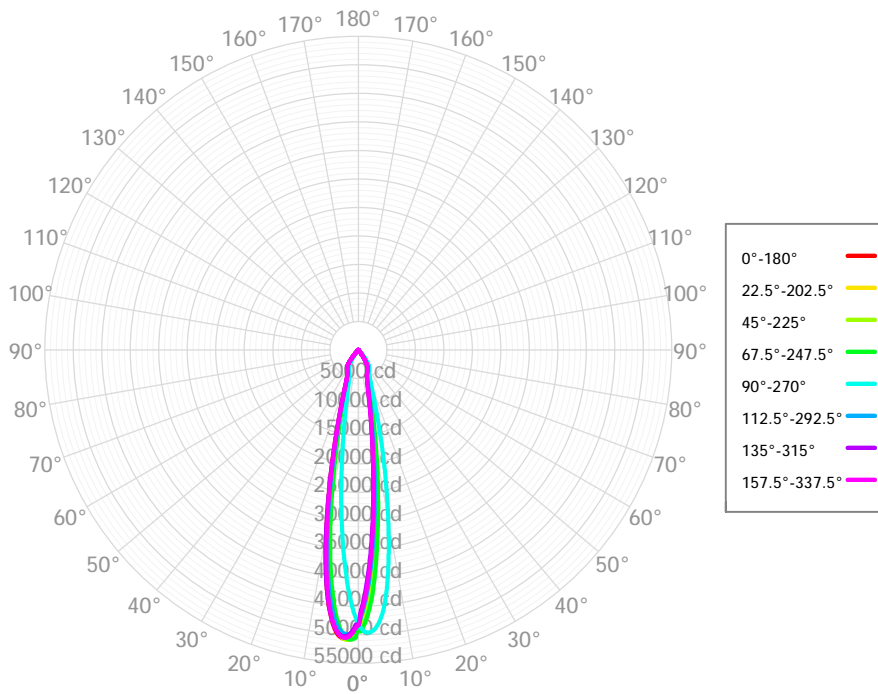
Full Beam Angle

0° - 180°	18°
90° - 270°	18°

IES File Header Contents

Keyword	Value
TEST	SP-R993
TESTLAB	Spectrum Lighting Photometric Lab. VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	7/9/2025
ISSUEDATE	7/9/2025
LUMCAT	C1320PC120L35KNDDO10XTSGHMMW
LUMINAIRE	13" round x 20" high PC series Stage Pro luminaire for auditorium and area lighting.
DISTRIBUTION	Beam Angle 18
OTHER	CCT 3355 CRI 83.6 R9 8.4
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°	3227.48	33.19%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	3010.35	30.96%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	1956.35	20.12%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	1340.37	13.78%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	150.34	1.55%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	10.88	0.11%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	9.55	0.10%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	9.16	0.09%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	9.50	0.10%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	9724.00	100.00%	0.00° - 180.00°	9724.00	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°	48318.42	48318.42	48318.42	48318.42	48318.42	48318.42	48318.42	48318.42	48318.42	48318.42	48318.42	48318.42	48318.42	48318.42	48318.42	48318.42	48318.42
0.50°	46405.14	47917.94	48296.61	49433.07	48768.45	48785.67	48183.28	48668.78	48605.26	49635.69	49814.58	50457.13	47118.80	46973.91	45932.60	46521.77	46405.14
1.00°	45057.12	46790.26	47288.93	48665.03	49255.22	49358.96	49013.02	49458.41	49416.68	50230.38	50340.07	50728.18	46037.33	45772.42	44515.93	45183.10	45057.12
1.50°	43545.94	45500.85	46103.55	47739.96	49562.82	49733.11	49626.66	50020.31	50036.52	50626.13	50687.67	50867.47	44693.04	44389.24	42908.25	43679.46	43545.94
2.00°	41885.78	44055.66	44764.46	46636.71	49630.59	49923.97	50053.84	50381.39	50461.96	50853.54	50865.50	50780.31	43194.62	42806.26	41163.73	42001.58	41885.78
2.50°	40125.23	42465.94	43253.84	45357.75	49581.71	49935.25	50291.91	50559.09	50676.98	50876.14	50849.52	50520.38	41605.39	41101.60	39337.09	40186.44	40125.23
3.00°	38214.11	40732.96	41574.37	43887.16	49323.68	49748.83	50345.00	50527.58	50709.50	50705.65	50636.00	50044.21	39841.87	39321.88	37368.25	38277.93	38214.11
3.50°	36220.43	38863.91	39727.21	42235.19	48950.13	49469.30	50171.26	50357.28	50548.33	50330.11	50217.86	49359.85	38044.88	37443.52	35402.69	36292.46	36220.43
4.00°	34158.87	36894.58	37773.77	40435.28	48416.68	48974.21	49845.92	49931.80	50192.33	49768.64	49614.51	48461.33	36171.09	35552.68	33365.86	34246.92	34158.87
4.50°	32020.53	34836.50	35712.20	38492.13	47721.65	48301.91	49346.48	49321.81	49641.11	49000.36	48799.38	47369.07	34270.04	33611.25	31340.34	32144.36	32020.53
5.00°	29838.40	32722.59	33659.40	36472.80	46858.62	47443.88	48638.48	48536.66	48886.98	48023.78	47780.64	46095.56	32299.49	31622.54	29286.35	29999.40	29838.40
5.50°	27681.58	30605.34	31580.71	34433.07	45799.66	46375.92	47742.09	47563.43	47921.18	46837.50	46561.05	44639.63	30323.27	29606.46	27214.31	27852.88	27681.58
6.00°	25590.02	28523.18	29595.62	32393.61	44561.27	45135.04	46648.22	46375.60	46768.47	45481.48	45174.58	43037.93	28396.78	27611.98	25212.93	25751.51	25590.02
6.50°	23607.11	26523.48	27693.40	30395.55	43151.13	43732.89	45365.36	44998.42	45448.23	43989.18	43643.74	41276.53	26430.91	25650.57	23269.60	23743.87	23607.11
7.00°	21729.53	24599.61	25843.74	28463.27	41544.31	42155.08	43925.23	43416.74	43937.86	42332.51	41948.59	39437.67	24518.25	23755.10	21432.53	21837.55	21729.53
7.50°	19959.19	22767.77	24084.63	26583.02	39776.43	40439.40	42336.95	41698.05	42283.55	40576.02	40180.46	37510.70	22677.43	21930.61	19698.93	20045.97	19959.19
8.00°	18331.29	21018.18	22395.06	24789.06	37940.26	38596.41	40585.05	39857.43	40497.64	38722.74	38310.55	35514.12	20901.03	20184.06	18091.29	18394.52	18331.29
8.50°	16841.56	19363.91	20782.33	23063.98	36012.52	36695.66	38725.09	37901.75	38583.26	36754.28	36340.47	33453.01	19216.21	18547.63	16601.19	16863.88	16841.56
9.00°	15454.88	17843.39	19213.09	21393.36	34077.63	34744.69	36755.50	35887.74	36608.44	34699.12	34298.50	31326.94	17665.67	17024.15	15218.50	15475.04	15454.88
9.50°	14197.44	16396.34	17712.73	19777.51	32147.51	32725.86	34730.47	33807.01	34552.39	32592.07	32195.61	29200.90	16251.00	15631.84	13966.29	14191.17	14197.44
10.00°	13074.53	15075.77	16310.46	18243.44	30225.20	30673.84	32671.53	31707.41	32472.01	30458.97	30035.78	27095.34	14916.28	14347.27	12828.34	13030.84	13074.53
10.50°	12053.02	13862.80	14992.74	16789.19	28385.85	28639.66	30552.26	29643.60	30368.17	28302.67	27856.34	25026.01	13713.05	13216.88	11795.10	11979.68	12053.02
11.00°	11121.48	12760.61	13772.13	15419.53	26503.01	26633.34	28422.37	27596.33	28300.57	26194.62	25696.49	23039.17	12634.63	12157.46	10874.88	11029.18	11121.48
11.50°	10263.86	11753.40	12644.06	14161.48	24704.27	24677.58	26336.49	25603.08	26294.13	24166.62	23636.55	21149.17	11655.28	11215.49	10023.26	10172.67	10263.86
12.00°	9493.70	10837.04	11622.75	13008.78	22982.23	22798.30	24302.13	23689.52	24333.95	22232.81	21673.75	19392.87	10775.33	10349.00	9254.25	9396.75	9493.70
12.50°	8812.58	10003.45	10699.17	11946.71	21325.01	20980.53	22371.21	21837.27	22457.64	20406.51	19837.66	17759.71	9975.92	9582.51	8573.98	8717.05	8812.58
13.00°	8206.70	9249.26	9855.93	10988.15	19709.61	19269.96	20532.88	20079.46	20653.19	18683.40	18145.46	16255.09	9231.92	8879.38	7970.60	8107.04	8206.70
13.50°	7648.43	8573.44	9101.28	10102.07	18202.82	17674.77	18818.38	18421.11	18956.76	17098.35	16589.35	14885.72	8566.89	8243.46	7431.86	7548.13	7648.43
14.00°	7148.79	7971.21	8434.23	9320.14	16755.56	16186.43	17256.45	16882.79	17381.53	15645.58	15174.73	13641.92	7973.29	7681.58	6947.10	7051.49	7148.79
14.50°	6721.55	7431.92	7843.49	8640.37	15382.11	14818.56	15783.30	15455.54	15904.97	14322.24	13886.16	12540.03	7455.03	7189.19	6530.74	6641.23	6721.55
15.00°	6331.77	6951.01	7321.88	8050.08	14109.85	13562.45	14455.16	14133.17	14551.52	13117.53	12730.03	11532.63	6986.50	6744.32	6166.38	6279.66	6331.77
15.50°	5996.76	6531.42	6862.83	7521.80	12948.77	12442.62	13240.55	12954.96	13323.26	12024.65	11694.18	10634.89	6569.30	6346.61	5845.13	5959.36	5996.76
16.00°	5704.38	6167.48	6461.61	7047.77	11904.92	11440.03	12155.49	11902.21	12218.75	11039.90	10749.82	9821.43	6209.16	5997.84	5580.98	5679.12	5704.38
16.50°	5439.83	5847.97	6105.94	6630.55	10949.30	10537.72	11179.19	10940.15	11222.18	10160.36	9889.86	9073.31	5886.56	5707.37	5335.49	5434.17	5439.83
17.00°	5221.81	5566.07	5799.12	6267.27	10086.27	9715.44	10290.40	10089.12	10325.15	9359.57	9122.93	8428.45	5607.75	5445.21	5134.86	5226.01	5221.81
17.50°	5032.82	5329.65	5531.78	5946.63	9317.37	8984.03	9486.97	9325.64	9519.89	8636.93	8451.43	7843.89	5379.21	5222.19	4955.10	5042.30	5032.82
18.00°	4866.86	5124.62	5315.03	5666.90	8633.76	8328.29	8779.29	8646.08	8801.96	8010.65	7843.41	7332.55	5183.02	5032.84	4813.50	4875.57	4866.86
18.50°	4734.76	4960.90	5128.14	5420.86	8038.13	7749.37	8146.24	8031.94	8164.30	7446.41	7317.56	6879.97	5012.34	4881.36	4693.88	4739.66	4734.76
19.00°	4616.21	4814.30	4959.28	5205.40	7506.37	7218.74	7579.06	7494.97	7594.12	6952.84	6845.03	6475.88	4857.69	4755.48	4587.76	4624.07	4616.21
19.50°	4517.17	4692.50	4824.77	5022.20	7035.95	6768.86	7076.07	7019.68	7100.95	6529.70	6440.57	6142.14	4721.18	4640.51	4494.76	4520.55	4517.17
20.00°	4437.22	4582.43	4703.37	4862.37	6623.84	6363.26	6635.91	6592.37	6669.15	6158.05	6098.13	5835.94	4604.57	4539.04	4411.48	4433.13	4437.22
20.50°	4365.33	4489.12	4592.73	4723.09	6259.08	6015.92	6262.77	6230.10	6292.03	5832.79	5804.37	5582.42	4503.14	4453.08	4344.48	4353.13	4365.33
21.00°	4304.97	4407.35	4501.43	4598.50	5935.68	5707.72	5928.64	5916.15	5966.57	5550.21	5541.51	5341.36	4417.93	4378.67	4277.28	4287.18	4304.97
21.50°	4245.94	4339.65	4411.48	4493.88	5655.23	5444.00	5652.01	5637.27	5681.32	5313.20	5325.00	5135.10	4340.90	4299.97	4214.05	4228.42	4245.94

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	11576	11576	11576	11576	11307	11307	11307	11307	10804	10804	10804	10345	10345	10345	9922	9922	9922	9724
	1	11142	10918	10716	10535	10909	10710	10531	10368	10321	10180	10051	9964	9855	9753	9635	9551	9473	9363
	2	10725	10339	10020	9752	10520	10176	9888	9644	9870	9637	9435	9588	9401	9236	9327	9178	9046	9002
	3	10328	9828	9441	9132	10149	9698	9345	9060	9454	9160	8918	9229	8986	8782	9019	8820	8650	8656
	4	9954	9372	8946	8621	9796	9268	8875	8571	9071	8737	8473	8888	8606	8378	8718	8481	8286	8329
	5	9602	8963	8517	8188	9462	8878	8463	8153	8717	8359	8084	8567	8259	8016	8428	8163	7950	8021
	6	9271	8594	8139	7813	9147	8524	8098	7788	8391	8017	7738	8266	7939	7689	8150	7864	7641	7733
	7	8961	8258	7803	7483	8850	8200	7770	7465	8088	7706	7428	7984	7645	7392	7886	7586	7357	7465
	8	8670	7952	7500	7190	8571	7903	7474	7176	7809	7424	7149	7721	7375	7122	7638	7327	7095	7216
	9	8398	7672	7227	6926	8308	7630	7206	6916	7550	7165	6895	7474	7125	6875	7403	7087	6855	6984
	10	8143	7415	6979	6688	8063	7379	6961	6680	7310	6928	6664	7245	6895	6648	7183	6864	6633	6768

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	1597.3 fc	1.7 ft
6.5 ft	1143.6 fc	2.0 ft
7.5 ft	859.0 fc	2.3 ft
8.0 ft	755.0 fc	2.5 ft
10.0 ft	483.2 fc	3.1 ft
12.0 ft	335.5 fc	3.8 ft
14.0 ft	246.5 fc	4.4 ft
16.0 ft	188.7 fc	5.0 ft
20.0 ft	120.8 fc	6.3 ft
24.0 ft	83.9 fc	7.5 ft
28.0 ft	61.6 fc	8.8 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	662206	662206	662206
45.00°	335	280	5685
55.00°	230	257	265
65.00°	269	288	232
75.00°	388	401	355
85.00°	2003	1226	1104

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	-8.2	-8.8	-7.9	-7.6	-7.8	-6.9	-7.4	-6.6	-6.2
	3H	-6.4	-5.6	-6.0	-5.3	-4.9	-5.2	-4.4	-4.8	-4.1	-3.7
	4H	-4.4	-3.7	-4.0	-3.4	-3.0	-3.8	-3.1	-3.4	-2.8	-2.4
	6H	-2.2	-1.6	-1.8	-1.2	-0.8	-2.3	-1.6	-1.9	-1.3	-0.9
	8H	-1.1	-0.4	-0.6	0.0	0.4	-1.3	-0.7	-0.9	-0.3	0.1
	12H	0.5	1.1	0.9	1.5	1.9	0.0	0.6	0.4	0.9	1.4
4H	2H	-8.3	-7.6	-7.9	-7.3	-6.9	-7.0	-6.3	-6.6	-5.9	-5.5
	3H	-5.4	-4.8	-5.0	-4.4	-4.0	-4.2	-3.6	-3.8	-3.2	-2.8
	4H	-3.3	-2.8	-2.9	-2.4	-1.9	-2.6	-2.1	-2.2	-1.6	-1.2
	6H	-0.9	-0.5	-0.4	0.0	0.5	-0.8	-0.3	-0.3	0.1	0.6
	8H	0.4	0.8	0.8	1.2	1.7	0.2	0.7	0.7	1.1	1.6
	12H	2.0	2.3	2.5	2.8	3.3	1.7	2.0	2.2	2.5	3.0
8H	4H	-2.7	-2.3	-2.2	-1.8	-1.4	-2.0	-1.6	-1.5	-1.1	-0.6
	6H	-0.1	0.2	0.4	0.7	1.2	0.2	0.5	0.7	1.0	1.5
	8H	1.2	1.5	1.8	2.1	2.6	1.5	1.8	2.0	2.3	2.8
	12H	3.1	3.3	3.6	3.8	4.4	3.2	3.5	3.7	4.0	4.5
12H	4H	-2.5	-2.2	-2.0	-1.7	-1.2	-1.8	-1.5	-1.3	-1.0	-0.5
	6H	0.1	0.4	0.7	0.9	1.4	0.4	0.7	0.9	1.2	1.7
	8H	1.6	1.8	2.1	2.3	2.9	1.8	2.1	2.4	2.6	3.2

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0