

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

C1320PC200L35KMDDO10XTSGHMMW

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

Test Number

SP-R991

Test Date

7/9/2025

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

Summary of Results

Power

Input Watts	143.38 W
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Lumen Output

Output Lumens	15284
Efficacy	106.6 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.39
Two luminaires, plane 90°	0.4
Four luminaires	0.43

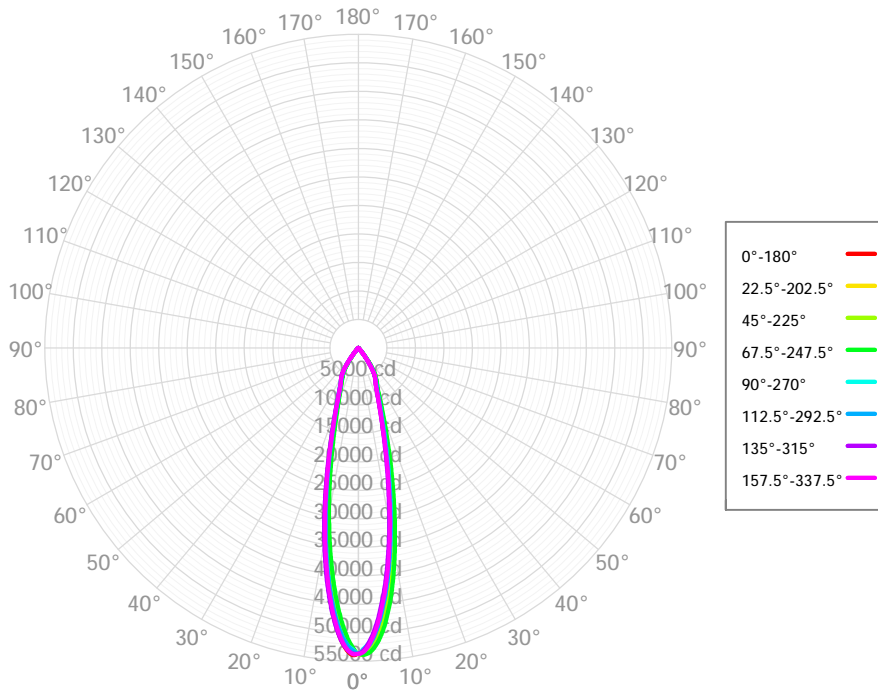
Full Beam Angle

0° - 180°	24°
90° - 270°	24°

IES File Header Contents

Keyword	Value
TEST	SP-R991
TESTLAB	Spectrum Lighting Photometric Lab. VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	7/9/2025
ISSUEDATE	7/9/2025
LUMCAT	C1320PC200L35KMDDO10XTSGHMMW
LUMINAIRE	13" round x 20" high PC series Stage Pro luminaire for auditorium and area lighting.
DISTRIBUTION	Beam Angle 24.2
OTHER	CCT 3379 CRI 83.2 R9 6.9
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°	4028.22	26.36%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	5440.05	35.59%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	3574.68	23.39%	110.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	2057.84	13.46%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	139.87	0.92%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	13.91	0.09%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	10.50	0.07%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	9.46	0.06%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	9.48	0.06%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	15284.00	100.00%	0.00° - 180.00°	15284.00	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°	53679.35	53679.35	53679.35	53679.35	53679.35	53679.35	53679.35	53679.35	53679.35	53679.35	53679.35	53679.35	53679.35	53679.35	53679.35	53679.35	53679.35
1.00°	53329.98	53822.43	53787.85	53844.59	52777.16	53135.91	53645.54	53750.62	53911.34	53579.75	53418.62	52643.06	52979.29	53175.00	53000.72	53344.60	53329.98
2.00°	52176.60	53030.17	53114.54	53538.71	51907.35	52308.23	53085.34	53031.98	53240.86	52524.52	52277.59	51161.05	52255.50	52336.94	51809.18	52225.49	52176.60
3.00°	50541.88	51739.71	51997.38	52723.64	50601.38	50947.30	51958.38	51739.82	51983.10	50899.11	50606.11	49170.14	50997.50	50952.83	50107.25	50605.77	50541.88
4.00°	48507.64	50008.79	50430.41	51441.21	48819.93	49111.58	50289.27	49944.96	50198.30	48815.73	48465.56	46801.34	49218.40	49043.34	47988.81	48558.11	48507.64
5.00°	46188.07	47920.07	48471.01	49747.69	46658.61	46917.89	48177.54	47729.77	47990.59	46388.71	45991.64	44167.39	47040.55	46795.59	45590.91	46210.11	46188.07
6.00°	43649.63	45544.59	46183.42	47656.26	44196.39	44447.92	45774.05	45232.29	45447.03	43721.16	43292.96	41386.36	44578.06	44288.24	42966.24	43637.55	43649.63
7.00°	40928.27	42951.30	43593.81	45255.06	41507.68	41743.94	43139.43	42490.03	42718.70	40887.77	40444.99	38474.32	41895.61	41543.96	40150.00	40881.81	40928.27
8.00°	38049.75	40167.70	40798.53	42590.72	38655.31	38882.04	40317.70	39577.18	39818.39	37935.17	37514.26	35502.22	39041.71	38651.88	37197.94	37969.36	38049.75
9.00°	35092.68	37256.70	37879.71	39720.68	35679.57	35933.03	37363.34	36581.46	36830.05	34955.29	34534.48	32519.71	36100.20	35680.10	34197.10	34974.80	35092.68
10.00°	32107.07	34283.32	34904.77	36743.61	32707.87	32936.80	34369.82	33572.22	33843.22	31969.32	31563.87	29567.25	33136.19	32683.76	31188.43	31961.96	32107.07
11.00°	29153.23	31297.59	31907.11	33740.78	29787.76	29971.34	31366.91	30571.23	30878.99	29033.01	28639.86	26720.96	30207.50	29738.97	28211.42	28982.43	29153.23
12.00°	26228.94	28341.38	28941.91	30752.60	26929.50	27064.33	28395.08	27631.41	27967.56	26183.83	25812.89	24011.84	27366.09	26855.26	25324.32	26068.67	26228.94
13.00°	23515.65	25505.72	26105.56	27823.48	24218.13	24276.62	25517.68	24798.89	25145.85	23453.35	23122.64	21487.58	24705.36	24131.54	22664.72	23320.95	23515.65
14.00°	20979.99	22860.16	23460.25	25053.04	21725.74	21698.04	22796.42	22139.05	22469.77	20901.89	20602.41	19174.86	22181.07	21622.82	20219.99	20782.93	20979.99
15.00°	18663.29	20401.06	21022.59	22496.35	19444.50	19355.05	20294.10	19674.25	19987.79	18571.37	18315.54	17078.02	19858.39	19333.21	18041.58	18499.61	18663.29
16.00°	16643.50	18181.08	18806.77	20122.50	17379.69	17232.04	18045.42	17504.44	17758.14	16506.82	16313.06	15246.96	17749.27	17273.97	16113.02	16474.85	16643.50
17.00°	14887.87	16226.75	16830.61	17995.36	15543.42	15368.83	16052.19	15594.86	15799.23	14716.38	14546.77	13653.18	15865.51	15448.48	14443.58	14728.30	14887.87
18.00°	13355.12	14522.65	15077.74	16115.63	13922.55	13782.20	14348.66	13955.96	14110.92	13184.65	13047.72	12298.12	14223.84	13862.22	13010.59	13246.17	13355.12
19.00°	12058.27	13067.15	13536.93	14450.90	12509.17	12407.07	12881.78	12563.08	12675.76	11874.58	11747.07	11138.49	12821.46	12519.86	11765.40	11959.94	12058.27
20.00°	10929.58	11797.80	12215.11	12978.71	11322.75	11206.49	11641.54	11363.20	11472.38	10757.69	10669.03	10168.89	11595.12	11336.44	10697.22	10853.48	10929.58
21.00°	9963.36	10689.05	11060.05	11707.59	10249.18	10174.58	10565.78	10341.14	10412.30	9805.69	9753.61	9346.16	10554.29	10326.96	9767.55	9900.27	9963.36
22.00°	9133.99	9738.30	10045.46	10602.58	9330.43	9298.75	9645.41	9459.21	9505.42	9007.67	8969.71	8642.32	9677.98	9461.19	8977.42	9071.60	9133.99
23.00°	8438.54	8943.12	9186.68	9627.74	8582.35	8556.52	8854.35	8701.36	8744.29	8317.91	8290.44	8018.97	8942.59	8742.13	8310.83	8379.68	8438.54
24.00°	7850.78	8287.79	8488.86	8820.93	7979.05	7935.91	8187.57	8067.14	8096.16	7719.14	7684.94	7483.33	8309.92	8129.12	7741.09	7780.87	7850.78
25.00°	7374.80	7743.70	7928.67	8175.77	7498.85	7428.57	7618.76	7554.90	7555.88	7213.16	7171.99	7026.86	7762.12	7608.07	7264.19	7288.16	7374.80
26.00°	6994.45	7297.92	7470.04	7666.01	7096.04	7010.72	7147.55	7129.45	7110.68	6813.12	6747.42	6638.45	7290.89	7176.60	6889.38	6907.84	6994.45
27.00°	6693.31	6928.45	7083.14	7249.73	6760.94	6683.63	6785.36	6781.44	6760.53	6493.40	6400.02	6297.53	6881.95	6817.75	6601.99	6629.26	6693.31
28.00°	6419.58	6613.73	6748.04	6891.95	6441.70	6402.78	6504.40	6505.38	6466.77	6181.39	6090.10	5978.21	6515.65	6492.83	6344.26	6364.60	6419.58
29.00°	6146.67	6326.06	6456.00	6578.85	6103.67	6099.47	6260.60	6262.31	6183.98	5886.05	5785.65	5676.09	6175.76	6158.39	6056.76	6108.52	6146.67
30.00°	5826.94	6002.53	6119.74	6271.05	5749.62	5783.18	5979.64	5970.83	5875.94	5581.43	5504.49	5362.76	5837.90	5803.31	5714.94	5816.10	5826.94
31.00°	5443.79	5609.17	5710.68	5914.30	5372.68	5450.64	5663.25	5613.67	5526.90	5235.45	5180.03	4984.33	5473.92	5426.95	5313.11	5448.01	5443.79
32.00°	4986.42	5151.51	5248.44	5502.38	4939.16	5051.84	5296.76	5190.98	5110.97	4811.12	4740.07	4482.99	5075.05	4997.95	4828.83	4964.93	4986.42
33.00°	4449.92	4675.92	4765.27	5042.66	4443.43	4576.58	4837.88	4691.69	4629.50	4295.87	4212.67	3915.49	4605.29	4507.94	4294.56	4424.35	4449.92
34.00°	3882.40	4171.96	4265.40	4576.64	3918.74	4035.09	4301.49	4136.96	4088.19	3727.74	3651.11	3321.14	4060.85	3960.51	3711.90	3840.01	3882.40
35.00°	3294.10	3614.30	3758.67	4081.59	3349.64	3453.32	3723.66	3541.92	3510.14	3160.75	3082.93	2753.67	3496.05	3375.12	3130.27	3248.15	3294.10
36.00°	2723.10	3055.48	3205.06	3518.80	2784.36	2868.52	3111.33	2952.83	2928.66	2603.79	2528.71	2203.92	2922.13	2776.98	2562.50	2663.85	2723.10
37.00°	2165.07	2492.27	2616.94	2936.50	2222.77	2307.52	2475.26	2381.14	2366.45	2072.55	2007.28	1713.64	2356.20	2212.44	2007.19	2107.96	2165.07
38.00°	1630.21	1939.28	2006.23	2362.28	1701.67	1778.31	1847.05	1837.05	1832.20	1588.55	1537.96	1284.92	1838.80	1676.67	1493.56	1575.33	1630.21
39.00°	1150.11	1436.43	1431.28	1809.71	1263.52	1307.74	1282.03	1334.40	1348.16	1166.46	1122.56	892.88	1375.80	1221.08	1044.95	1098.25	1150.11
40.00°	764.07	1000.00	929.41	1311.05	925.86	926.44	812.38	884.62	947.09	803.87	758.00	562.75	989.56	863.82	692.76	712.14	764.07
41.00°	474.51	659.28	543.52	893.18	677.65	628.46	479.79	540.24	631.28	510.23	452.27	319.70	686.36	587.33	445.48	422.57	474.51
42.00°	279.95	426.67	310.27	585.03	482.50	392.11	280.09	307.09	405.59	303.15	249.84	184.12	440.38	380.25	272.86	247.05	279.95
43.00°	170.83	256.97	173.68	365.23	313.43	237.20	170.68	185.40	247.78	197.23	159.50	128.76	254.97	221.84	154.47	156.40	170.83

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

	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%
RCR	0	18195	18195	18195	18195	17772	17772	17772	17772	16982	16982	16982	16260	16260	16260	15596	15596	15596	15284
	1	17496	17135	16812	16520	17128	16808	16520	16259	16196	15969	15761	15634	15458	15294	15116	14981	14855	14686
	2	16817	16196	15683	15252	16495	15940	15476	15083	15457	15081	14756	15013	14710	14444	14601	14360	14146	14084
	3	16171	15362	14737	14239	15886	15158	14586	14126	14773	14297	13905	14416	14022	13692	14085	13762	13486	13505
	4	15557	14615	13925	13399	15305	14450	13813	13321	14138	13597	13168	13848	13390	13020	13579	13194	12875	12955
	5	14976	13940	13216	12681	14752	13805	13131	12626	13549	12966	12519	13311	12808	12413	13089	12657	12310	12437
	6	14427	13326	12586	12056	14228	13214	12521	12017	13002	12393	11939	12805	12271	11863	12620	12153	11788	11950
	7	13910	12765	12023	11502	13732	12672	11971	11474	12495	11871	11417	12328	11774	11361	12172	11681	11306	11494
	8	13424	12251	11514	11007	13264	12173	11473	10986	12022	11393	10943	11881	11315	10901	11749	11240	10860	11068
	9	12967	11779	11051	10560	12822	11712	11018	10543	11583	10953	10511	11463	10890	10480	11349	10829	10448	10670
	10	12538	11344	10629	10153	12407	11286	10602	10140	11175	10548	10116	11071	10497	10091	10972	10447	10067	10300

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	1774.5 fc	2.3 ft
6.5 ft	1270.5 fc	2.8 ft
7.5 ft	954.3 fc	3.2 ft
8.0 ft	838.7 fc	3.4 ft
10.0 ft	536.8 fc	4.3 ft
12.0 ft	372.8 fc	5.1 ft
14.0 ft	273.9 fc	6.0 ft
16.0 ft	209.7 fc	6.8 ft
20.0 ft	134.2 fc	8.5 ft
24.0 ft	93.2 fc	10.3 ft
28.0 ft	68.5 fc	12.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	735677	735677	735677
45.00°	1286	1026	1909
55.00°	419	396	358
65.00°	278	256	296
75.00°	492	332	365
85.00°	1088	1198	881

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	-8.9	-8.0	-8.6	-7.7	-7.4	-9.2	-8.3	-8.8	-7.9	-7.6
	3H	-7.1	-6.3	-6.7	-6.0	-5.6	-6.7	-5.9	-6.3	-5.6	-5.2
	4H	-5.4	-4.7	-5.0	-4.4	-4.0	-5.5	-4.8	-5.1	-4.4	-4.0
	6H	-4.1	-3.4	-3.7	-3.1	-2.7	-4.2	-3.5	-3.8	-3.2	-2.8
	8H	-2.9	-2.3	-2.5	-1.9	-1.5	-3.3	-2.7	-2.9	-2.3	-1.9
	12H	-1.9	-1.3	-1.4	-0.9	-0.4	-2.4	-1.8	-2.0	-1.4	-1.0
4H	2H	-8.5	-7.8	-8.1	-7.4	-7.0	-8.0	-7.3	-7.6	-7.0	-6.6
	3H	-6.1	-5.6	-5.7	-5.1	-4.7	-5.2	-4.7	-4.8	-4.2	-3.8
	4H	-4.4	-3.9	-4.0	-3.5	-3.0	-4.0	-3.5	-3.6	-3.1	-2.6
	6H	-2.7	-2.3	-2.3	-1.8	-1.3	-2.5	-2.1	-2.1	-1.6	-1.2
	8H	-1.5	-1.1	-1.0	-0.7	-0.2	-1.6	-1.1	-1.1	-0.7	-0.2
	12H	-0.3	0.1	0.2	0.6	1.0	-0.5	-0.1	0.0	0.3	0.8
8H	4H	-3.9	-3.5	-3.4	-3.0	-2.6	-3.1	-2.7	-2.7	-2.3	-1.8
	6H	-1.9	-1.6	-1.4	-1.1	-0.6	-1.4	-1.1	-0.9	-0.6	-0.1
	8H	-0.6	-0.3	-0.1	0.2	0.7	-0.1	0.1	0.4	0.7	1.2
	12H	1.0	1.2	1.5	1.7	2.3	1.3	1.5	1.8	2.0	2.6
12H	4H	-3.7	-3.4	-3.2	-2.9	-2.4	-3.0	-2.6	-2.5	-2.1	-1.7
	6H	-1.6	-1.3	-1.1	-0.8	-0.3	-1.1	-0.8	-0.5	-0.3	0.3
	8H	-0.2	0.1	0.3	0.6	1.1	0.4	0.7	0.9	1.2	1.7

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0