

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

C1320PC52L35KMDDO10XTSGHMMW

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

Test Number

SP-R988

Test Date

7/9/2025

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

Summary of Results

Power

Input Watts	43.44 W
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Lumen Output

Output Lumens	4852
Efficacy	111.69 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

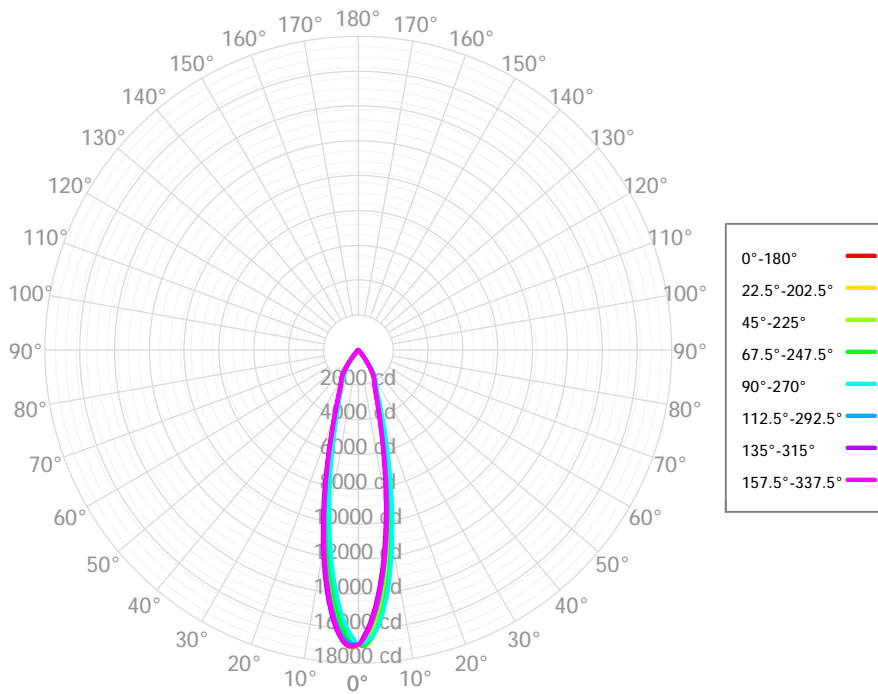
Full Beam Angle

0° - 180°	24°
90° - 270°	24°

IES File Header Contents

Keyword	Value
TEST	SP-R988
TESTLAB	Spectrum Lighting Photometric Lab. VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	7/9/2025
ISSUEDATE	7/9/2025
LUMCAT	C1320PC52L35KMDDO10XTSGHMMW
LUMINAIRE	13" round x 20" high PC series Stage Pro luminaire for auditorium and area lighting.
DISTRIBUTION	Beam Angle 24.1
OTHER	CCT 3320 CRI 84.0 R9 10.2
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°	1272.91	26.23%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	1722.28	35.50%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	1131.32	23.32%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	650.53	13.41%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	46.56	0.96%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	7.27	0.15%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	7.04	0.15%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	6.95	0.14%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	7.13	0.15%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	4852.00	100.00%	0.00° - 180.00°	4852.00	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°	16934.34	16934.34	16934.34	16934.34	16934.34	16934.34	16934.34	16934.34	16934.34	16934.34	16934.34	16934.34	16934.34	16934.34	16934.34	16934.34	16934.34
1.00°	16600.44	16845.36	16889.99	17018.41	16798.93	16894.20	16993.05	17035.92	17073.51	17088.03	17073.59	16933.29	16557.70	16595.83	16484.69	16601.40	16600.44
2.00°	16117.07	16474.69	16559.05	16799.43	16674.32	16781.54	16961.76	16966.35	17017.57	16902.17	16877.18	16599.87	16170.62	16174.61	15964.29	16121.43	16117.07
3.00°	15494.02	15951.42	16089.38	16427.03	16380.61	16492.72	16747.03	16702.81	16763.31	16529.25	16476.52	16082.00	15614.70	15595.94	15316.22	15489.43	15494.02
4.00°	14768.67	15308.38	15486.87	15912.86	15945.74	16039.48	16350.20	16256.70	16328.14	15983.73	15906.41	15419.22	14933.10	14898.48	14570.12	14771.58	14768.67
5.00°	13979.07	14563.36	14772.30	15269.87	15367.05	15438.01	15794.02	15651.77	15732.27	15290.13	15206.47	14646.66	14164.00	14117.41	13748.55	13966.48	13979.07
6.00°	13126.68	13760.46	13964.02	14529.22	14675.91	14726.64	15111.31	14932.79	15003.61	14492.32	14398.55	13800.41	13323.55	13267.12	12866.75	13104.75	13126.68
7.00°	12222.65	12896.75	13087.98	13694.24	13874.88	13934.60	14324.08	14122.27	14177.44	13637.25	13526.78	12904.94	12423.71	12351.49	11935.03	12190.55	12222.65
8.00°	11289.72	11975.57	12167.40	12789.80	13018.21	13068.93	13476.03	13240.37	13300.40	12730.94	12617.58	11973.69	11495.30	11411.69	10984.86	11246.84	11289.72
9.00°	10345.96	11031.49	11223.92	11852.52	12114.49	12150.50	12570.24	12308.28	12369.44	11792.63	11676.00	11020.96	10560.39	10465.67	10032.39	10294.26	10345.96
10.00°	9403.84	10089.00	10275.60	10908.12	11167.01	11214.79	11629.65	11359.41	11428.63	10847.92	10727.51	10077.16	9631.93	9528.36	9097.91	9355.53	9403.84
11.00°	8480.93	9137.19	9337.85	9947.04	10226.64	10271.41	10682.73	10410.59	10481.07	9909.34	9790.45	9146.42	8728.76	8605.35	8188.25	8414.49	8480.93
12.00°	7600.87	8225.70	8427.30	9014.72	9300.46	9328.32	9731.61	9467.55	9545.98	8983.09	8865.68	8253.02	7870.27	7734.75	7323.96	7532.44	7600.87
13.00°	6788.57	7376.84	7569.44	8117.19	8401.36	8415.51	8799.71	8544.73	8629.99	8085.67	7974.95	7407.77	7071.65	6930.67	6535.03	6718.72	6788.57
14.00°	6050.56	6579.88	6781.93	7286.55	7547.70	7555.76	7885.75	7658.25	7741.91	7233.23	7141.66	6622.42	6331.18	6195.22	5830.17	5981.12	6050.56
15.00°	5387.13	5866.88	6070.37	6519.15	6763.03	6751.07	7037.01	6829.40	6903.63	6441.32	6356.46	5906.31	5654.64	5534.43	5204.46	5323.72	5387.13
16.00°	4808.20	5235.20	5431.19	5833.57	6048.36	6017.75	6269.01	6072.46	6137.14	5726.71	5653.41	5262.54	5055.27	4944.87	4657.10	4759.68	4808.20
17.00°	4312.92	4681.16	4860.98	5216.94	5410.15	5355.72	5569.71	5397.40	5458.63	5091.89	5035.35	4697.44	4533.57	4442.18	4191.83	4270.03	4312.92
18.00°	3889.53	4206.58	4364.53	4667.54	4835.51	4779.31	4961.42	4815.79	4855.95	4542.74	4498.25	4213.66	4082.44	4009.89	3789.15	3855.66	3889.53
19.00°	3522.12	3797.65	3932.49	4194.09	4336.37	4288.29	4440.95	4315.45	4351.42	4076.10	4033.78	3798.78	3693.84	3631.01	3441.97	3497.75	3522.12
20.00°	3210.16	3437.57	3555.02	3774.98	3901.17	3858.28	3994.43	3886.20	3912.40	3672.43	3643.51	3447.63	3359.33	3300.03	3138.68	3181.25	3210.16
21.00°	2936.75	3130.38	3230.06	3414.55	3525.88	3489.43	3615.66	3520.08	3542.61	3327.87	3309.12	3155.91	3077.39	3021.89	2879.87	2914.26	2936.75
22.00°	2703.90	2869.10	2951.97	3103.20	3195.21	3172.26	3288.74	3207.18	3221.59	3041.39	3025.42	2902.57	2843.24	2785.07	2663.52	2683.48	2703.90
23.00°	2507.57	2653.45	2718.25	2831.65	2911.37	2901.52	3002.80	2934.14	2946.40	2800.93	2785.02	2686.50	2635.15	2592.69	2476.66	2489.60	2507.57
24.00°	2357.34	2475.93	2533.85	2616.01	2677.98	2670.23	2759.31	2705.08	2715.80	2591.57	2576.98	2493.69	2463.67	2426.78	2321.12	2331.51	2357.34
25.00°	2229.51	2331.02	2384.38	2452.38	2497.64	2481.17	2552.84	2510.02	2522.06	2405.52	2392.03	2335.02	2315.26	2284.52	2197.52	2203.84	2229.51
26.00°	2136.05	2214.14	2257.83	2319.82	2347.44	2322.70	2378.57	2356.48	2356.45	2252.94	2238.08	2194.75	2184.81	2171.62	2103.46	2111.68	2136.05
27.00°	2047.30	2110.41	2148.75	2201.67	2224.24	2196.78	2237.67	2228.25	2225.18	2134.83	2114.83	2077.33	2068.76	2065.41	2020.70	2030.94	2047.30
28.00°	1962.92	2021.43	2056.95	2101.63	2120.10	2099.35	2127.48	2126.09	2118.62	2034.72	2008.91	1974.16	1965.04	1964.79	1933.41	1948.67	1962.92
29.00°	1868.98	1922.82	1961.53	2009.53	2022.81	2011.79	2042.32	2039.68	2031.74	1944.65	1911.22	1880.44	1854.91	1854.69	1829.97	1863.30	1868.98
30.00°	1755.31	1808.17	1835.91	1907.74	1918.79	1915.66	1963.53	1969.85	1939.77	1851.70	1819.39	1780.95	1743.29	1734.32	1705.27	1751.85	1755.31
31.00°	1612.03	1669.48	1698.08	1782.57	1809.18	1817.36	1874.09	1876.62	1840.31	1753.52	1728.60	1682.66	1618.20	1601.59	1556.74	1601.83	1612.03
32.00°	1444.14	1518.46	1543.22	1641.24	1685.27	1710.32	1773.95	1757.41	1727.87	1636.36	1613.77	1544.75	1473.78	1447.32	1391.59	1435.96	1444.14
33.00°	1269.48	1358.90	1391.55	1493.73	1545.37	1580.91	1651.59	1622.17	1589.94	1494.05	1468.38	1382.34	1305.75	1273.98	1212.64	1253.63	1269.48
34.00°	1083.31	1184.08	1229.70	1333.12	1392.86	1425.59	1500.01	1452.53	1431.39	1324.68	1301.17	1198.87	1121.03	1091.74	1026.37	1064.84	1083.31
35.00°	899.82	1004.14	1052.54	1162.22	1223.71	1248.40	1327.62	1272.26	1256.49	1143.72	1122.39	1012.57	939.32	907.18	837.88	880.16	899.82
36.00°	723.52	824.59	866.53	975.84	1042.73	1068.60	1141.64	1088.23	1069.48	965.73	941.55	830.07	758.35	722.79	664.66	699.94	723.52
37.00°	542.37	649.13	673.31	790.37	860.72	878.39	945.50	898.45	885.13	783.85	767.79	654.05	588.55	551.21	498.79	529.85	542.37
38.00°	389.01	487.60	492.12	613.73	684.55	703.41	744.77	719.47	708.07	616.83	602.60	505.41	441.28	405.79	348.44	374.66	389.01
39.00°	255.93	339.89	316.43	448.68	524.36	536.58	553.69	549.81	543.05	465.70	454.05	372.99	316.96	285.05	234.35	245.19	255.93
40.00°	164.21	225.15	185.17	308.36	387.20	387.61	378.43	386.72	398.07	340.04	324.77	253.42	216.41	192.28	148.92	147.56	164.21
41.00°	93.64	147.86	104.52	201.20	278.76	271.27	235.20	251.64	272.91	220.65	211.30	158.05	142.24	123.28	89.67	85.02	93.64
42.00°	59.44	90.95	59.04	123.64	199.30	178.49	136.32	151.04	177.20	137.57	122.14	87.11	81.91	72.75	55.87	51.57	59.44
43.00°	37.48	48.66	35.27	71.61	137.18	113.57	79.06	89.36	109.31	81.59	71.40	52.13	49.55	45.39	37.54	38.54	37.48

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	5776	5776	5776	5776	5642	5642	5642	5642	5391	5391	5391	5162	5162	5162	4951	4951	4951	4852
	1	5551	5435	5331	5238	5434	5331	5239	5155	5137	5064	4997	4958	4901	4849	4794	4750	4709	4656
	2	5334	5135	4971	4832	5231	5053	4905	4779	4900	4779	4675	4759	4661	4576	4628	4551	4482	4463
	3	5127	4869	4669	4510	5037	4804	4621	4474	4681	4529	4404	4568	4442	4336	4463	4359	4271	4278
	4	4932	4631	4411	4242	4852	4578	4375	4217	4479	4306	4169	4387	4241	4122	4301	4178	4076	4103
	5	4747	4416	4185	4014	4676	4373	4158	3997	4292	4106	3963	4216	4055	3929	4146	4008	3897	3938
	6	4573	4221	3985	3816	4509	4185	3964	3803	4118	3924	3779	4055	3885	3755	3996	3847	3731	3783
	7	4408	4043	3806	3640	4351	4013	3790	3631	3957	3758	3613	3904	3727	3595	3854	3698	3578	3638
	8	4254	3880	3645	3483	4203	3855	3632	3476	3807	3606	3463	3762	3582	3450	3720	3558	3436	3503
	9	4109	3730	3498	3341	4063	3709	3487	3336	3668	3467	3326	3629	3447	3316	3593	3427	3306	3377
	10	3972	3592	3364	3212	3931	3573	3355	3208	3538	3338	3201	3505	3322	3193	3474	3306	3185	3260

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	559.8 fc	2.3 ft
6.5 ft	400.8 fc	2.8 ft
7.5 ft	301.1 fc	3.2 ft
8.0 ft	264.6 fc	3.4 ft
10.0 ft	169.3 fc	4.3 ft
12.0 ft	117.6 fc	5.1 ft
14.0 ft	86.4 fc	6.0 ft
16.0 ft	66.1 fc	6.8 ft
20.0 ft	42.3 fc	8.5 ft
24.0 ft	29.4 fc	10.2 ft
28.0 ft	21.6 fc	11.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	232086	232086	232086
45.00°	283	241	1018
55.00°	186	191	176
65.00°	247	191	241
75.00°	395	206	360
85.00°	890	754	1379

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	-9.2	-8.3	-8.8	-8.0	-7.7	-8.9	-8.0	-8.5	-7.7	-7.4
	3H	-6.0	-5.2	-5.6	-4.9	-4.5	-5.9	-5.1	-5.5	-4.8	-4.4
	4H	-3.8	-3.1	-3.4	-2.7	-2.4	-4.3	-3.6	-3.9	-3.3	-2.9
	6H	-1.8	-1.1	-1.4	-0.8	-0.4	-2.3	-1.6	-1.9	-1.3	-0.9
	8H	-0.7	0.0	-0.2	0.3	0.8	-0.9	-0.2	-0.4	0.2	0.6
	12H	0.3	0.9	0.7	1.2	1.7	0.5	1.1	1.0	1.5	2.0
4H	2H	-8.4	-7.7	-8.0	-7.3	-7.0	-7.6	-6.9	-7.2	-6.5	-6.1
	3H	-5.0	-4.4	-4.5	-4.0	-3.5	-4.5	-3.9	-4.1	-3.5	-3.1
	4H	-2.6	-2.1	-2.2	-1.7	-1.2	-3.1	-2.5	-2.6	-2.1	-1.6
	6H	-0.4	0.1	0.1	0.5	1.0	-0.9	-0.4	-0.4	0.0	0.5
	8H	0.9	1.3	1.4	1.8	2.2	0.6	1.0	1.1	1.5	1.9
	12H	1.9	2.3	2.4	2.8	3.3	2.1	2.5	2.6	3.0	3.5
8H	4H	-2.0	-1.6	-1.5	-1.1	-0.7	-2.5	-2.0	-2.0	-1.6	-1.1
	6H	0.7	1.0	1.2	1.5	2.0	-0.1	0.3	0.4	0.8	1.2
	8H	2.0	2.3	2.6	2.9	3.4	1.6	1.8	2.1	2.4	2.9
	12H	3.3	3.5	3.8	4.0	4.6	3.4	3.7	3.9	4.2	4.7
12H	4H	-1.8	-1.5	-1.3	-1.0	-0.5	-2.3	-1.9	-1.8	-1.4	-0.9
	6H	0.9	1.2	1.5	1.7	2.2	0.3	0.5	0.8	1.0	1.6
	8H	2.4	2.6	2.9	3.1	3.7	2.0	2.3	2.6	2.8	3.4

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0