

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

C1320PC120L35HKNDDO10XTSGHMMW

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

Test Number

SP-R999

Test Date

7/9/2025

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

Summary of Results

Power

Input Watts	82.56 W
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Lumen Output

Output Lumens	8555
Efficacy	103.62 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.26
Two luminaires, plane 90°	0.35
Four luminaires	0.32

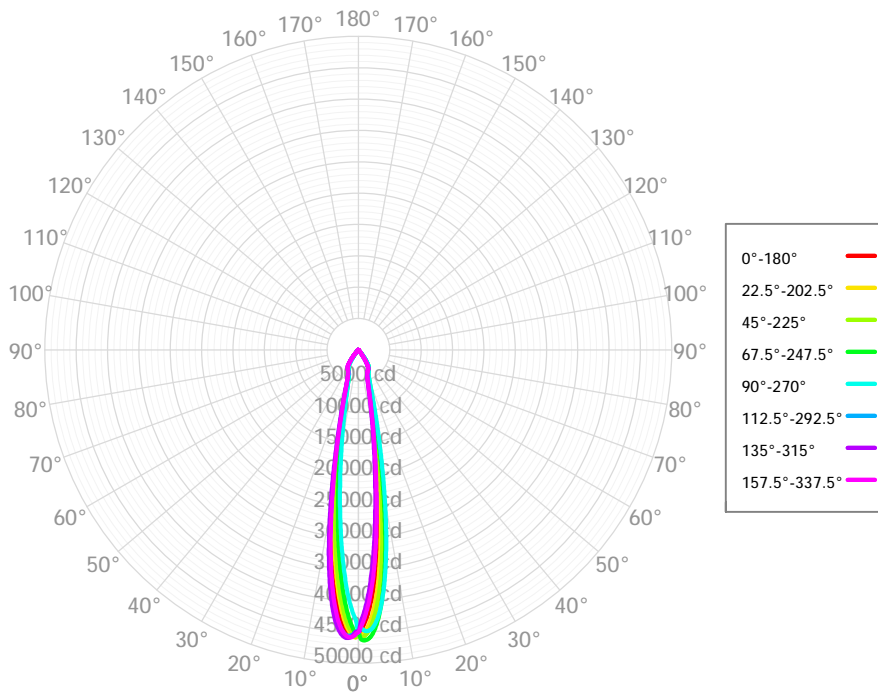
Full Beam Angle

0° - 180°	18°
90° - 270°	18°

IES File Header Contents

Keyword	Value
TEST	SP-R999
TESTLAB	Spectrum Lighting Photometric Lab. VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	7/9/2025
ISSUEDATE	7/9/2025
LUMCAT	C1320PC120L35HKNDDO10XTSGHMMW
LUMINAIRE	13" round x 20" high PC series Stage Pro luminaire for auditorium and area lighting.
DISTRIBUTION	Beam Angle 17.8
OTHER	CCT 3463 CRI 93.6 R9 71.0
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°	2929.08	34.24%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	2524.15	29.50%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	1741.27	20.35%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	1221.81	14.28%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	99.40	1.16%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	10.38	0.12%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	9.61	0.11%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	9.54	0.11%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	9.75	0.11%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	8555.00	100.00%	0.00° - 180.00°	8555.00	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°	45025.82	45025.82	45025.82	45025.82	45025.82	45025.82	45025.82	45025.82	45025.82	45025.82	45025.82	45025.82	45025.82	45025.82	45025.82	45025.82	45025.82
0.50°	44770.00	45678.75	46004.69	46140.57	44317.50	44933.34	44943.12	45375.75	45613.39	45885.48	45787.09	45293.85	43134.90	43624.55	43414.70	44212.28	44770.00
1.00°	44087.32	45338.79	45819.59	46324.65	44670.25	45343.73	45465.77	45720.05	45783.97	45684.78	45417.93	44608.72	42297.01	42724.27	42401.43	43402.45	44087.32
1.50°	43261.64	44813.73	45474.64	46309.91	44852.52	45572.24	45816.24	45859.71	45760.79	45286.92	44878.92	43775.51	41305.21	41682.95	41254.43	42379.26	43261.64
2.00°	42299.62	44139.18	44973.23	46131.45	44856.93	45613.72	45985.76	45800.14	45523.27	44751.93	44168.50	42767.70	40158.17	40480.49	39967.64	41238.97	42299.62
2.50°	41172.04	43302.98	44302.29	45763.96	44689.53	45474.29	45969.58	45557.54	45098.30	44024.99	43281.13	41625.40	38867.05	39135.68	38530.22	39987.64	41172.04
3.00°	39901.85	42314.66	43458.78	45199.05	44344.40	45150.89	45749.11	45154.98	44495.45	43099.76	42233.77	40338.35	37435.68	37653.71	36949.77	38607.86	39901.85
3.50°	38484.98	41146.91	42452.93	44441.75	43818.05	44647.96	45356.20	44575.31	43717.66	42005.43	41031.14	38890.59	35879.68	36017.02	35232.89	37085.62	38484.98
4.00°	36930.84	39842.28	41276.72	43498.86	43104.25	43954.37	44792.45	43763.79	42770.45	40778.86	39726.63	37344.76	34262.61	34285.71	33435.83	35387.27	36930.84
4.50°	35208.57	38391.15	39961.16	42409.73	42212.20	43048.92	44033.79	42791.27	41643.56	39418.40	38294.64	35693.68	32603.87	32499.62	31555.54	33576.50	35208.57
5.00°	33397.34	36811.86	38487.25	41149.27	41140.76	41964.75	43087.84	41635.97	40373.05	37948.20	36738.93	33989.50	30897.18	30666.53	29623.38	31680.01	33397.34
5.50°	31512.36	35035.50	36860.26	39731.65	39903.89	40709.39	41911.80	40295.29	38967.44	36396.87	35138.51	32252.46	29161.54	28820.97	27691.22	29743.16	31512.36
6.00°	29563.05	33196.00	35108.27	38174.61	38517.33	39283.91	40540.17	38823.35	37437.02	34756.56	33475.53	30462.26	27423.13	26997.10	25770.81	27774.17	29563.05
6.50°	27621.16	31282.90	33271.36	36480.70	37023.35	37745.32	39036.65	37194.30	35827.20	33063.39	31756.32	28658.04	25709.90	25194.96	23894.79	25822.71	27621.16
7.00°	25672.97	29315.94	31349.05	34644.08	35388.95	36078.82	37385.97	35430.43	34135.12	31345.65	29998.17	26844.24	24014.04	23415.09	22081.34	23881.38	25672.97
7.50°	23783.78	27381.90	29406.25	32760.84	33680.71	34300.24	35621.88	33615.34	32355.69	29549.85	28232.66	25040.09	22364.02	21702.06	20370.05	22028.31	23783.78
8.00°	21968.69	25466.47	27472.60	30776.04	31900.15	32437.50	33762.30	31761.95	30495.97	27686.26	26434.94	23280.08	20794.40	20076.86	18771.91	20283.15	21968.69
8.50°	20216.50	23612.29	25579.56	28818.07	30048.43	30486.06	31820.73	29810.78	28589.78	25820.75	24640.35	21557.41	19270.92	18546.88	17281.26	18634.49	20216.50
9.00°	18584.38	21837.62	23756.71	26808.88	28170.36	28483.47	29801.58	27806.07	26667.95	23962.38	22852.19	19907.58	17803.82	17124.20	15919.57	17101.38	18584.38
9.50°	17042.87	20138.22	21996.17	24845.68	26270.94	26459.18	27743.24	25827.41	24739.16	22143.40	21098.75	18318.22	16430.75	15801.20	14662.73	15696.63	17042.87
10.00°	15630.52	18532.98	20308.25	22992.74	24394.95	24431.47	25693.03	23866.64	22845.81	20387.69	19418.97	16794.35	15157.79	14585.72	13499.11	14414.01	15630.52
10.50°	14316.88	16998.51	18708.43	21187.81	22563.62	22497.46	23676.78	21981.53	21056.31	18754.41	17834.61	15419.46	13973.39	13449.70	12413.35	13230.69	14316.88
11.00°	13111.66	15576.37	17154.39	19443.50	20823.77	20646.35	21747.54	20179.11	19345.75	17213.23	16343.97	14143.57	12868.22	12365.40	11395.19	12122.96	13111.66
11.50°	12019.83	14281.05	15752.80	17813.40	19147.90	18895.30	19918.98	18498.88	17765.75	15793.87	14956.48	12969.08	11845.92	11375.39	10470.07	11123.36	12019.83
12.00°	11021.32	13062.74	14449.97	16291.86	17569.72	17294.87	18211.00	16934.56	16292.98	14489.85	13716.47	11891.06	10910.15	10472.37	9643.64	10230.96	11021.32
12.50°	10136.33	11948.82	13221.20	14939.40	16114.98	15806.11	16616.51	15487.75	14959.21	13281.43	12568.83	10896.62	10078.54	9667.52	8887.77	9417.68	10136.33
13.00°	9344.26	10963.71	12105.52	13684.32	14782.98	14468.69	15179.53	14163.35	13733.04	12193.80	11526.96	10037.36	9327.98	8949.55	8218.91	8674.43	9344.26
13.50°	8625.43	10065.44	11069.89	12556.69	13550.02	13243.45	13861.20	12959.42	12612.54	11207.00	10572.44	9248.35	8652.93	8291.95	7622.72	8014.95	8625.43
14.00°	7999.79	9286.44	10164.12	11492.93	12430.10	12126.29	12662.24	11878.09	11598.48	10303.91	9716.70	8552.78	8059.98	7703.52	7092.12	7449.10	7999.79
14.50°	7420.15	8559.59	9348.65	10553.40	11404.16	11130.22	11589.46	10899.65	10668.74	9505.54	8972.71	7920.97	7516.94	7185.76	6617.59	6922.33	7420.15
15.00°	6892.84	7917.37	8624.42	9689.37	10477.98	10203.63	10621.43	10037.81	9822.09	8765.52	8289.25	7380.15	7028.24	6715.43	6205.18	6466.23	6892.84
15.50°	6449.62	7349.43	7988.80	8925.72	9649.58	9372.83	9760.27	9250.33	9072.28	8101.81	7668.31	6882.68	6587.54	6302.52	5828.90	6047.61	6449.62
16.00°	6050.74	6838.36	7431.77	8249.19	8891.26	8633.16	8979.50	8555.98	8392.30	7513.77	7121.67	6444.08	6208.69	5942.96	5507.54	5712.07	6050.74
16.50°	5703.20	6373.39	6917.54	7667.94	8220.63	7960.36	8303.50	7930.86	7777.04	6981.96	6637.59	6066.41	5863.48	5614.73	5229.19	5427.43	5703.20
17.00°	5411.93	5975.08	6472.67	7138.17	7613.75	7369.19	7678.13	7365.91	7231.94	6506.98	6213.16	5728.12	5569.30	5334.20	4985.22	5169.35	5411.93
17.50°	5147.17	5634.40	6065.33	6657.39	7067.58	6836.01	7130.68	6860.87	6726.32	6085.74	5844.50	5441.33	5300.15	5091.82	4782.47	4954.26	5147.17
18.00°	4909.01	5341.65	5728.28	6237.81	6598.50	6366.10	6638.54	6417.34	6284.60	5716.64	5519.49	5191.50	5064.93	4888.53	4609.00	4752.77	4909.01
18.50°	4710.25	5074.07	5425.30	5873.02	6174.60	5963.06	6218.16	6030.95	5898.25	5396.26	5250.45	4974.88	4857.49	4696.37	4460.26	4582.71	4710.25
19.00°	4535.57	4843.77	5145.21	5558.11	5809.42	5606.73	5850.31	5684.54	5564.05	5136.58	5005.18	4784.17	4674.08	4543.36	4327.57	4428.30	4535.57
19.50°	4385.45	4650.09	4928.44	5267.35	5494.62	5290.69	5533.59	5385.66	5288.79	4899.34	4802.51	4607.54	4516.39	4406.04	4216.26	4302.71	4385.45
20.00°	4260.49	4486.06	4731.40	5022.63	5216.79	5020.07	5257.21	5132.91	5030.14	4706.27	4632.75	4448.93	4375.00	4284.35	4123.64	4200.55	4260.49
20.50°	4154.90	4356.37	4550.35	4813.37	4971.18	4809.44	5017.29	4899.23	4820.00	4532.32	4465.35	4313.32	4251.74	4181.39	4041.05	4105.56	4154.90
21.00°	4061.11	4239.03	4400.80	4625.82	4753.63	4615.73	4801.69	4699.37	4630.45	4380.19	4327.09	4196.88	4151.35	4093.49	3980.75	4023.04	4061.11
21.50°	3982.87	4130.04	4265.95	4460.35	4579.48	4440.82	4612.40	4526.05	4465.13	4252.11	4208.26	4101.85	4064.74	4016.92	3918.00	3944.39	3982.87

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%	0%
	pcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	0	10185	10185	10185	10185	9948	9948	9948	9948	9506	9506	9506	9101	9101	9101	8730	8730	8555
	1	9804	9606	9429	9270	9598	9423	9266	9123	9081	8958	8844	8767	8671	8582	8478	8404	8336
	2	9437	9099	8819	8584	9258	8955	8703	8489	8686	8482	8305	8438	8274	8130	8209	8078	7962
	3	9090	8651	8311	8041	8933	8537	8227	7977	8323	8065	7852	8124	7911	7732	7940	7766	7621
	4	8763	8253	7879	7594	8624	8161	7816	7550	7988	7695	7463	7827	7580	7380	7677	7470	7298
	5	8455	7895	7504	7215	8332	7820	7456	7184	7679	7364	7123	7547	7276	7063	7424	7192	7005
	6	8165	7572	7173	6887	8056	7510	7137	6865	7393	7065	6821	7284	6997	6778	7182	6931	6736
	7	7894	7278	6879	6599	7797	7227	6850	6583	7129	6794	6551	7038	6741	6519	6952	6689	6488
	8	7640	7011	6615	6343	7553	6967	6592	6331	6885	6548	6307	6808	6505	6283	6735	6463	6260
	9	7402	6766	6376	6113	7324	6729	6358	6104	6659	6322	6086	6593	6287	6068	6530	6253	6050
	10	7180	6542	6160	5905	7109	6510	6145	5898	6450	6115	5884	6393	6087	5870	6339	6059	5857

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	1488.5 fc	1.7 ft
6.5 ft	1065.7 fc	2.0 ft
7.5 ft	800.5 fc	2.3 ft
8.0 ft	703.5 fc	2.5 ft
10.0 ft	450.3 fc	3.1 ft
12.0 ft	312.7 fc	3.7 ft
14.0 ft	229.7 fc	4.3 ft
16.0 ft	175.9 fc	5.0 ft
20.0 ft	112.6 fc	6.2 ft
24.0 ft	78.2 fc	7.4 ft
28.0 ft	57.4 fc	8.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	617080	617080	617080
45.00°	590	576	2587
55.00°	306	256	241
65.00°	332	303	340
75.00°	422	338	516
85.00°	1519	1461	1573

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	-8.6	-7.7	-8.2	-7.4	-7.1	-7.3	-6.4	-6.9	-6.1	-5.7
	3H	-5.7	-5.0	-5.4	-4.6	-4.2	-5.1	-4.4	-4.8	-4.0	-3.6
	4H	-4.2	-3.4	-3.8	-3.1	-2.7	-3.7	-2.9	-3.3	-2.6	-2.2
	6H	-2.1	-1.4	-1.6	-1.0	-0.6	-1.8	-1.1	-1.4	-0.7	-0.3
	8H	-1.1	-0.5	-0.7	-0.1	0.3	-0.7	0.0	-0.2	0.3	0.8
	12H	0.3	0.9	0.7	1.3	1.7	0.7	1.3	1.1	1.7	2.1
4H	2H	-7.9	-7.1	-7.5	-6.8	-6.4	-6.8	-6.1	-6.4	-5.7	-5.4
	3H	-4.5	-3.9	-4.0	-3.4	-3.0	-3.9	-3.4	-3.5	-2.9	-2.5
	4H	-2.8	-2.2	-2.3	-1.8	-1.3	-2.4	-1.9	-2.0	-1.4	-1.0
	6H	-0.5	0.0	0.0	0.4	0.9	-0.4	0.1	0.1	0.5	1.0
	8H	0.6	1.0	1.1	1.5	2.0	1.0	1.4	1.4	1.8	2.3
	12H	2.0	2.4	2.5	2.9	3.3	2.5	2.8	3.0	3.3	3.8
8H	4H	-2.0	-1.6	-1.5	-1.1	-0.6	-1.7	-1.3	-1.3	-0.9	-0.4
	6H	0.5	0.8	1.0	1.3	1.8	0.7	1.0	1.2	1.5	2.0
	8H	1.8	2.1	2.4	2.7	3.2	2.4	2.7	2.9	3.2	3.7
	12H	3.4	3.7	3.9	4.2	4.7	4.2	4.4	4.7	4.9	5.5
12H	4H	-1.8	-1.4	-1.3	-0.9	-0.4	-1.5	-1.2	-1.1	-0.7	-0.2
	6H	0.8	1.1	1.3	1.6	2.1	1.0	1.3	1.6	1.8	2.3
	8H	2.3	2.5	2.8	3.0	3.6	2.8	3.1	3.4	3.6	4.2

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0