Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

SL03IND2 11L 35HK DW xx xx MW

Specline Linear Pendant, 1.8" aperture x 2' Long, Matte White Refl

Test Number

SP-01320_1

Test Date

6/3/2022

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

Summary of Results

Power

Input Watts	17 W

Lumen Output

Output Lumens	1201
Efficacy	70.68 lm/W

Luminous Dimensions

0° - 180° Size	0.15
90° - 270° Size	2
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.24
Two luminaires, plane 90°	1.25
Four luminaires	1.37

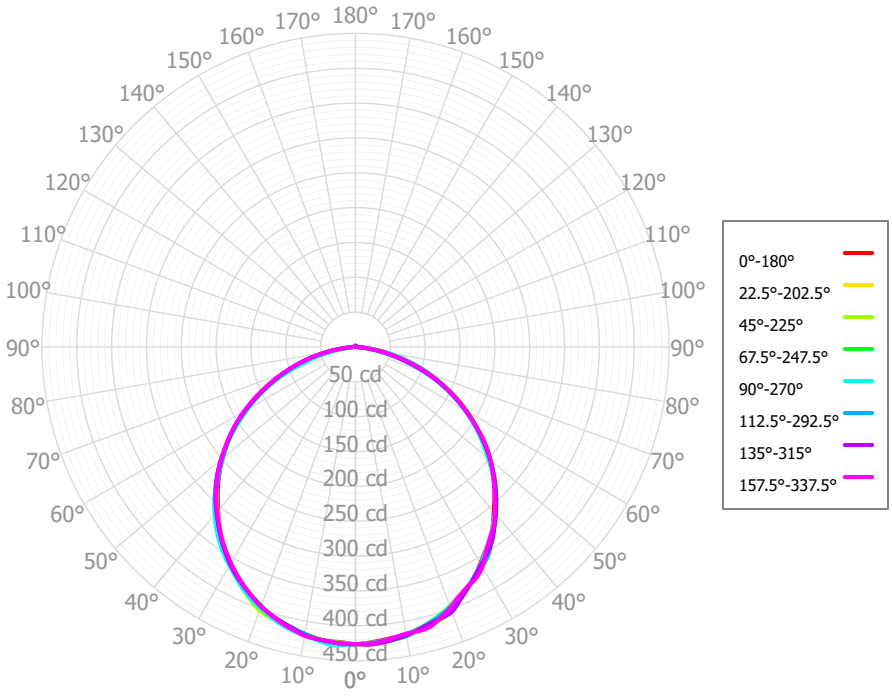
Full Beam Angle

0° - 180°	111°
90° - 270°	111°

IES File Header Contents

Keyword	Value
TEST	SP-01320_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	6/3/2022
ISSUEDATE	11/2/2022
LUMCAT	SL03IND2 11L 35HK DW xx xx MW
LUMINAIRE	Specline Linear Pendant, 1.8" aperture x 2' Long, Matte White Refl
OTHER	Diffuse White Extruded Acrylic Lens, Symmetric Distribution
OTHER	Data for 2' IND fixture, or 2' module for continuous ROW
OTHER	111 Degree Beam Angle
LAMP	N/A, Min. 90 CRI
LAMPCAT	N/A
OTHER	Reference project SL473
OTHER	11L designation for Spectrum linear product indicates 600 Source Lm/Ft.
OTHER	CCT Output Multipliers: 40HK x 1.01, 30HK x 0.98, 27HK x 0.95
OTHER	Total Luminaire Watts is approximate
OTHER	This report prepared by Spectrum Lighting

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	40.98	3.41%	90.00° - 100.00°	1.57	0.13%
10.00° - 20.00°	115.82	9.64%	100.00° - 110.00°	1.45	0.12%
20.00° - 30.00°	175.12	14.58%	100.00° - 120.00°	2.86	0.24%
30.00° - 40.00°	210.70	17.54%	120.00° - 130.00°	1.26	0.11%
40.00° - 50.00°	217.61	18.11%	130.00° - 140.00°	1.06	0.09%
50.00° - 60.00°	194.47	16.19%	140.00° - 150.00°	0.89	0.07%
60.00° - 70.00°	144.75	12.05%	150.00° - 160.00°	0.65	0.05%
70.00° - 80.00°	77.09	6.42%	160.00° - 170.00°	0.41	0.03%
80.00° - 90.00°	16.09	1.34%	170.00° - 180.00°	0.14	0.01%
0.00° - 90.00°	1192.64	99.26%	0.00° - 180.00°	1201.48	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°	426.56	426.56	426.56	426.56	426.56	426.56	426.56	426.56	426.56	426.56	426.56	426.56	426.56	426.56	426.56	426.56	426.56
2.50°	424.88	427.60	425.26	426.05	426.22	425.19	426.41	426.53	424.44	424.96	425.47	426.15	428.17	425.51	427.66	426.47	424.88
5.00°	422.73	424.82	424.22	424.74	425.84	425.16	424.39	424.67	423.81	424.11	424.60	425.08	428.39	424.05	426.42	424.53	422.73
7.50°	420.56	421.93	422.44	422.62	423.95	422.69	422.58	422.90	423.16	422.90	421.51	422.13	424.53	421.39	423.54	420.91	420.56
10.00°	418.30	418.16	419.91	419.22	421.89	418.15	419.80	420.94	418.41	419.46	418.29	417.99	420.71	418.40	420.54	417.99	418.30
12.50°	415.88	414.66	415.07	414.90	416.32	413.61	414.17	415.59	413.57	415.57	414.18	414.69	416.97	415.21	415.85	417.88	415.88
15.00°	413.05	413.31	409.89	409.38	410.59	409.05	408.55	410.07	408.81	409.93	410.13	411.80	412.19	410.46	411.26	415.58	413.05
17.50°	407.50	410.36	403.94	403.17	403.95	403.17	402.96	403.24	403.73	403.60	406.89	404.27	405.47	405.06	408.48	407.13	407.50
20.00°	396.82	399.90	397.02	395.99	397.16	396.65	396.29	396.08	395.67	395.41	402.80	395.12	398.60	398.28	404.60	398.12	396.82
22.50°	387.63	389.64	388.49	388.40	388.85	387.96	387.84	387.46	387.46	386.92	393.11	387.38	391.49	391.09	393.04	387.96	387.63
25.00°	380.63	380.06	379.89	380.03	380.25	378.49	379.14	378.46	378.41	377.83	382.98	380.01	382.76	381.98	381.62	379.74	380.63
27.50°	371.01	370.77	371.18	371.42	370.00	369.08	370.11	368.31	368.98	368.44	371.01	370.43	372.27	372.50	370.81	374.53	371.01
30.00°	358.42	362.20	360.82	360.21	359.45	359.70	359.79	357.79	358.18	358.56	359.61	360.51	362.11	363.61	360.49	364.58	358.42
32.50°	346.93	351.35	348.84	348.47	347.83	348.25	348.22	346.48	346.91	347.22	349.86	349.61	352.22	354.79	351.65	348.84	346.93
35.00°	336.38	336.54	337.33	336.84	336.07	336.48	335.95	334.58	334.46	334.13	338.99	338.63	340.74	340.31	341.28	335.81	336.38
37.50°	323.39	323.36	326.17	325.24	323.96	323.22	323.16	321.69	321.26	321.02	325.76	326.09	328.22	325.64	327.58	325.33	323.39
40.00°	308.71	312.34	312.99	311.62	311.00	309.84	310.43	308.90	306.67	307.90	311.94	313.41	314.42	312.60	313.50	311.67	308.71
42.50°	295.28	299.59	298.59	297.88	296.41	295.34	297.76	296.24	292.48	294.72	297.16	298.79	299.99	299.33	298.79	295.72	295.28
45.00°	282.49	285.03	283.66	281.92	281.52	280.73	283.60	282.38	278.84	281.51	282.47	284.03	284.14	283.62	284.02	281.13	282.49
47.50°	267.33	268.88	268.49	265.86	266.20	264.60	268.80	267.29	264.52	265.99	267.89	268.33	267.75	267.88	269.17	267.31	267.33
50.00°	251.26	251.44	252.63	248.75	250.03	248.56	252.22	251.66	249.45	249.22	252.35	252.17	251.18	252.03	253.23	252.79	251.26
52.50°	234.80	234.74	236.56	231.82	232.89	233.25	235.06	235.61	233.83	233.55	235.89	233.94	234.56	235.69	236.21	237.98	234.80
55.00°	218.22	218.48	219.29	215.90	215.96	217.49	218.66	219.15	217.77	218.34	219.11	216.05	216.12	217.55	218.97	219.86	218.22
57.50°	200.19	202.49	201.75	199.66	199.22	199.59	202.42	202.43	201.05	200.98	202.09	199.21	197.39	199.43	201.55	200.76	200.19
60.00°	181.91	186.63	183.87	182.14	182.35	181.75	183.54	184.59	183.92	182.97	183.67	182.00	179.01	181.34	183.81	183.08	181.91
62.50°	163.57	168.61	165.95	164.49	165.39	164.06	164.33	166.23	165.70	165.56	164.44	163.98	160.68	163.03	165.89	165.69	163.57
65.00°	145.23	149.86	148.06	146.48	148.13	146.28	145.49	147.86	146.94	148.27	146.18	145.08	141.56	144.32	147.04	147.71	145.23
67.50°	127.23	131.45	130.18	128.96	130.71	128.26	126.69	129.49	128.53	129.80	128.35	124.67	122.32	125.17	127.80	129.65	127.23
70.00°	109.24	113.12	113.22	112.38	113.07	110.19	109.88	111.56	110.25	111.19	108.38	104.52	101.09	105.35	108.35	111.13	109.24
72.50°	91.27	94.93	96.14	95.17	95.34	92.00	93.10	93.72	92.58	92.67	87.73	84.71	80.19	85.39	88.83	92.58	91.27
75.00°	73.40	76.76	77.42	76.96	78.59	74.16	76.75	75.74	75.08	74.18	68.95	65.60	61.99	65.25	70.36	73.58	73.40
77.50°	56.42	58.73	59.19	58.85	62.12	56.79	60.30	57.73	58.28	56.57	50.58	47.20	43.94	47.33	52.11	54.89	56.42
80.00°	39.83	40.71	44.19	40.87	44.58	40.66	43.10	41.21	41.60	39.21	33.33	30.28	26.64	31.41	35.45	39.53	39.83
82.50°	25.26	26.93	29.42	25.88	26.84	25.86	26.86	24.78	26.99	24.40	16.23	14.54	12.01	18.12	19.01	24.73	25.26
85.00°	12.50	13.59	15.58	13.62	14.97	14.42	14.43	14.74	12.55	10.99	8.75	6.17	5.92	6.63	10.08	13.10	12.50
87.50°	6.01	7.50	4.78	6.43	3.69	5.70	4.82	5.23	6.92	5.54	1.89	2.26	1.57	2.16	1.67	3.59	6.01
90.00°	1.42	2.11	2.69	2.87	2.47	2.01	3.00	3.27	1.64	1.28	1.59	1.13	1.34	1.45	1.56	2.20	1.42
92.50°	1.43	1.79	1.29	1.44	1.55	1.41	1.67	1.56	1.30	1.37	1.30	1.28	1.23	1.26	1.45	1.18	1.43
95.00°	1.40	1.52	1.33	1.19	1.60	1.29	1.34	1.50	1.01	1.39	1.23	1.32	1.33	1.26	1.37	1.13	1.40
97.50°	1.31	1.47	1.30	1.39	1.63	1.40	1.20	1.48	1.13	1.17	1.18	1.33	1.48	1.30	1.28	1.14	1.31
100.00°	1.33	1.44	1.14	1.77	1.54	1.48	1.36	1.62	1.25	1.07	1.24	1.27	1.69	1.36	1.22	1.27	1.33

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

	ρfc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	ρcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	ρw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	1428	1428	1428	1428	1394	1394	1394	1394	1330	1330	1330	1272	1272	1272	1218	1218	1218	1193
	1	1308	1252	1201	1156	1274	1224	1178	1136	1171	1133	1099	1123	1092	1064	1078	1054	1031	1030
	2	1190	1092	1011	943	1157	1069	994	931	1025	962	908	984	932	886	946	903	865	883
	3	1085	959	862	785	1054	940	850	777	903	826	762	868	803	748	837	781	734	763
	4	993	850	745	665	965	833	736	660	802	717	650	773	700	640	746	683	630	667
RCR	5	913	759	652	573	887	745	644	569	719	630	562	694	616	555	671	603	548	589
	6	843	684	577	500	820	672	571	497	649	559	492	628	548	487	608	537	482	526
	7	782	620	515	441	761	610	510	439	590	501	435	572	492	431	555	483	428	473
	8	728	566	464	393	709	557	460	392	540	452	389	525	445	386	510	437	383	429
	9	680	519	420	354	663	512	417	353	497	411	350	484	405	348	471	399	346	391
	10	638	479	384	321	622	472	381	320	460	376	318	448	371	316	437	366	314	359

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	14.1 fc	16.0 ft
6.5 ft	10.1 fc	18.9 ft
7.5 ft	7.6 fc	21.9 ft
8.0 ft	6.7 fc	23.3 ft
10.0 ft	4.3 fc	29.2 ft
12.0 ft	3.0 fc	35.0 ft
14.0 ft	2.2 fc	40.8 ft
16.0 ft	1.7 fc	46.6 ft
20.0 ft	1.1 fc	58.3 ft
24.0 ft	0.7 fc	70.0 ft
28.0 ft	0.5 fc	81.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	15305	15305	15305
45.00°	14334	14393	14285
55.00°	13650	13718	13509
65.00°	12330	12570	12576
75.00°	10175	10732	10895
85.00°	5148	6415	6162

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		Viewed crosswise					Viewed endwise				
2H	2H	21.2	22.8	21.6	23.2	23.5	21.2	22.8	21.5	23.1	23.4
	3H	23.0	24.4	23.3	24.8	25.1	22.8	24.3	23.2	24.6	25.0
	4H	23.6	24.9	24.0	25.3	25.7	23.4	24.8	23.8	25.1	25.5
	6H	23.9	25.2	24.4	25.6	26.0	23.8	25.0	24.2	25.4	25.8
	8H	24.0	25.2	24.5	25.6	26.1	23.8	25.0	24.3	25.4	25.8
	12H	24.1	25.2	24.5	25.6	26.1	23.8	25.0	24.3	25.4	25.8
4H	2H	21.9	23.2	22.3	23.6	24.0	21.8	23.1	22.2	23.5	23.9
	3H	23.8	24.9	24.2	25.4	25.8	23.7	24.8	24.1	25.2	25.6
	4H	24.5	25.5	25.0	26.0	26.4	24.3	25.4	24.8	25.8	26.2
	6H	25.0	25.9	25.5	26.4	26.8	24.8	25.7	25.2	26.1	26.6
	8H	25.1	26.0	25.6	26.4	26.9	24.9	25.7	25.3	26.2	26.6
	12H	25.2	25.9	25.7	26.4	26.9	24.9	25.7	25.4	26.2	26.6
8H	4H	24.8	25.6	25.2	26.1	26.6	24.6	25.4	25.1	25.9	26.4
	6H	25.4	26.1	25.9	26.6	27.0	25.1	25.8	25.6	26.3	26.8
	8H	25.5	26.2	26.1	26.7	27.2	25.2	25.9	25.8	26.4	26.9
	12H	25.6	26.2	26.2	26.7	27.3	25.3	25.9	25.8	26.4	27.0
12H	4H	24.8	25.5	25.3	26.0	26.5	24.6	25.4	25.1	25.9	26.4
	6H	25.4	26.0	25.9	26.5	27.0	25.2	25.8	25.7	26.3	26.8
	8H	25.6	26.2	26.1	26.7	27.2	25.3	25.9	25.8	26.4	26.9

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0