

## **Indoor Distribution Test Report**

# **Spectrum Lighting Inc.**

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## **Spectrum Lighting Photometric Lab**

### **Luminaire**

SLO3IND2 11L 35HK LW xx xx MW

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

### **Test Number**

SP-01321\_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
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#### Lumen Output

Output Lumens	1401
Efficacy	82.41 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

Two luminaires, plane 0°	1.88
Two luminaires, plane 90°	1.21
Four luminaires	1.69

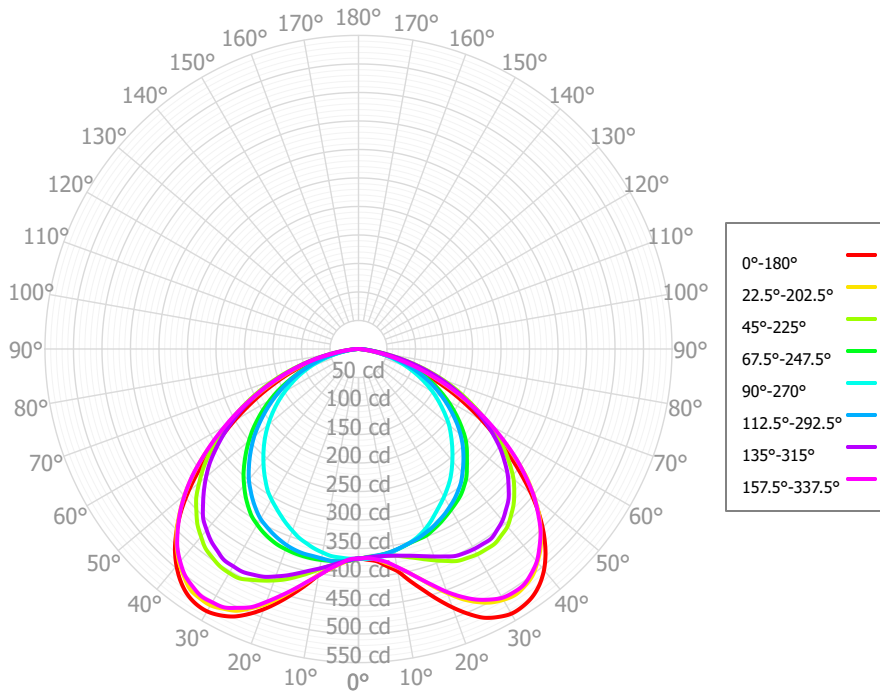
#### Full Beam Angle

0° - 180°	117°
90° - 270°	76°

### IES File Header Contents

Keyword	Value
TEST	SP-01321_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	6/3/2022
ISSUEDATE	11/2/2022
LUMCAT	SLO3IND2 11L 35HK LW xx xx MW
LUMINAIRE	SpecLine Linear Pendant, 1.8" aperture x 2' Long, Matte White Refl
OTHER	Wide Extruded Acrylic Lens, Batwing Distribution
OTHER	Data for 2' IND fixture, or 2' module for continuous ROW
OTHER	76 Degree x 118 Degree Beam Angle
LAMP	N/A, Min. 90 CRI
LAMPCAT	N/A
OTHER	Reference project SL473
OTHER	11L designation for Spectrum linear product indicates 700 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°	36.35	2.59%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	112.59	8.04%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	194.61	13.89%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	258.58	18.46%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	278.96	19.91%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	246.55	17.60%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	173.91	12.41%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	84.57	6.04%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	14.89	1.06%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1400.99	100.00%	0.00° - 180.00°	1400.99	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°	367.59	367.59	367.59	367.59	367.59	367.59	367.59	367.59	367.59	367.59	367.59	367.59	367.59	367.59	367.59	367.59	367.59
2.50°	370.16	367.51	365.12	366.04	368.76	371.10	370.88	369.49	371.62	371.52	371.75	371.46	368.17	365.56	365.86	367.30	370.16
5.00°	373.98	370.89	364.42	364.55	367.72	373.84	376.39	378.43	377.11	378.99	377.15	373.94	367.30	363.69	365.34	370.92	373.98
7.50°	384.50	378.99	365.75	362.12	365.26	374.75	383.48	389.20	389.26	390.11	383.64	375.01	366.32	362.18	366.14	377.00	384.50
10.00°	396.04	388.76	368.13	359.36	360.16	373.01	390.87	403.61	402.79	401.87	392.27	375.84	362.64	359.00	368.17	388.12	396.04
12.50°	416.61	401.72	373.19	355.80	355.43	371.94	398.42	418.60	423.76	419.30	402.79	376.36	358.44	355.35	371.46	401.24	416.61
15.00°	437.54	417.31	379.31	352.04	351.25	371.61	407.20	436.10	444.74	437.30	413.21	376.22	352.88	351.70	375.65	417.40	437.54
17.50°	460.27	436.70	386.80	349.96	345.49	369.78	416.42	453.79	465.75	457.07	423.54	375.42	347.19	348.05	381.15	434.76	460.27
20.00°	482.46	455.81	394.66	348.12	337.98	366.63	424.61	472.11	485.79	476.72	432.09	373.80	339.23	343.35	387.37	453.54	482.46
22.50°	502.85	474.62	402.47	342.92	328.93	362.13	432.54	490.06	503.30	492.11	439.71	371.56	331.20	338.54	393.97	470.17	502.85
25.00°	520.17	489.65	410.26	337.48	318.56	356.74	436.88	501.04	517.79	506.67	446.74	367.44	322.40	332.71	400.73	484.83	520.17
27.50°	530.07	501.40	413.40	331.32	308.94	350.51	440.64	510.98	526.59	513.62	453.53	362.26	313.62	326.81	403.55	495.75	530.07
30.00°	536.22	508.12	416.09	325.16	299.81	343.86	439.96	513.13	531.42	519.27	453.73	355.56	305.01	319.83	405.25	504.02	536.22
32.50°	535.67	511.50	416.59	319.09	290.04	334.17	438.94	513.85	530.47	518.30	452.14	348.18	295.86	312.71	405.70	506.26	535.67
35.00°	531.25	508.15	416.80	312.68	279.96	323.34	431.95	507.97	524.49	514.82	446.83	337.37	284.00	304.26	405.90	505.17	531.25
37.50°	521.42	501.42	411.97	303.87	268.33	311.45	424.71	500.22	512.89	502.96	440.88	325.48	271.97	295.31	399.78	497.30	521.42
40.00°	506.35	488.35	406.55	294.28	256.14	299.27	414.44	486.71	496.75	489.36	429.74	312.15	259.39	283.80	392.98	486.68	506.35
42.50°	485.69	472.88	396.02	281.45	243.88	284.79	403.29	470.53	476.71	471.59	418.09	298.53	246.73	272.19	382.76	470.13	485.69
45.00°	460.02	451.99	384.87	268.99	231.60	269.93	385.68	448.46	451.41	451.04	402.22	283.02	233.91	260.21	372.30	451.88	460.02
47.50°	430.27	429.67	370.63	257.58	219.43	254.51	367.85	424.66	422.57	425.43	386.03	267.28	220.72	247.67	357.11	427.44	430.27
50.00°	395.98	401.73	355.10	244.83	207.29	239.05	349.00	397.91	389.96	397.83	364.77	250.92	206.86	233.72	341.58	401.78	395.98
52.50°	358.76	372.86	335.36	229.19	193.03	221.73	329.00	368.46	355.42	367.48	343.19	234.50	192.87	219.06	322.75	370.81	358.76
55.00°	321.80	337.71	314.32	213.25	178.59	204.38	305.45	335.54	319.88	335.15	318.90	216.41	178.70	203.12	303.33	339.25	321.80
57.50°	284.98	301.98	290.17	196.80	164.47	187.07	281.55	302.73	283.97	300.72	293.99	198.23	164.12	187.12	280.81	304.95	284.98
60.00°	249.80	267.88	264.99	180.01	150.32	169.72	256.87	270.03	251.28	267.45	265.95	179.02	149.10	171.05	257.49	270.57	249.80
62.50°	215.20	233.82	238.00	162.79	135.25	152.01	231.48	238.29	219.46	235.15	238.11	159.60	134.36	154.75	231.31	236.47	215.20
65.00°	182.16	199.96	211.27	145.23	120.16	134.18	204.89	207.31	189.91	203.70	210.85	138.89	119.86	138.21	205.22	202.41	182.16
67.50°	149.51	166.30	184.87	127.35	104.83	115.78	177.65	177.43	160.75	172.80	183.32	118.52	104.72	120.86	179.37	168.75	149.51
70.00°	120.98	134.23	157.34	109.21	89.54	97.90	149.56	148.20	135.09	144.22	155.13	99.35	89.18	102.86	152.71	135.64	120.98
72.50°	93.07	103.17	128.60	90.89	74.40	81.70	122.96	121.02	109.74	116.75	127.16	80.48	73.04	84.88	124.59	105.47	93.07
75.00°	69.23	76.87	99.51	73.73	59.23	65.24	97.83	94.74	85.32	90.46	99.58	62.39	56.60	66.93	96.84	76.57	69.23
77.50°	45.68	51.98	70.15	57.22	43.97	48.17	73.56	69.64	61.11	64.60	73.63	45.24	41.97	50.48	69.61	52.22	45.68
80.00°	29.63	31.61	45.63	40.76	29.86	32.32	49.96	44.93	40.83	43.06	49.88	29.98	27.98	34.77	45.18	30.63	29.63
82.50°	14.15	15.00	24.10	24.31	18.40	18.62	29.98	27.53	21.68	22.56	29.82	17.15	17.05	21.27	23.82	15.98	14.15
85.00°	7.22	7.22	11.59	13.48	9.47	8.78	12.16	11.75	11.53	12.12	13.63	7.96	6.88	8.54	10.68	5.57	7.22
87.50°	1.15	2.09	3.41	4.36	4.85	4.06	4.88	6.33	2.95	3.17	4.91	2.52	3.57	4.10	4.47	3.00	1.15
90.00°	1.22	1.57	1.16	2.05	2.02	1.53	2.28	2.26	2.02	1.77	2.27	1.47	1.33	1.67	1.70	1.42	1.22

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

<b>RCR</b>	<b>pfc</b>	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	<b>pcc</b>	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	<b>pw</b>	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	<b>0</b>	1668	1668	1668	1668	1629	1629	1629	1629	1557	1557	1557	1490	1490	1490	1430	1430	1401
	<b>1</b>	1527	1462	1403	1350	1489	1430	1377	1328	1370	1326	1286	1316	1280	1247	1265	1237	1210
	<b>2</b>	1387	1272	1177	1097	1350	1245	1158	1084	1195	1122	1058	1149	1088	1034	1107	1056	1033
	<b>3</b>	1261	1113	998	906	1226	1091	984	898	1049	957	882	1010	932	866	974	908	888
	<b>4</b>	1151	982	857	762	1119	963	847	757	927	826	746	894	807	736	864	788	771
	<b>5</b>	1056	873	745	651	1026	857	737	647	827	721	640	799	706	633	773	691	676
	<b>6</b>	972	782	654	563	945	768	648	560	743	635	555	719	623	550	697	612	599
	<b>7</b>	898	705	580	493	874	694	575	491	672	565	487	652	555	483	632	546	535
	<b>8</b>	834	641	519	436	811	631	515	434	612	507	431	594	499	429	578	491	481
	<b>9</b>	777	585	468	389	757	577	464	388	561	458	385	545	451	383	531	445	436
	<b>10</b>	726	538	425	349	708	530	422	349	516	416	347	503	410	345	490	405	398

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	12.2 fc	18.1 ft
6.5 ft	8.7 fc	21.4 ft
7.5 ft	6.5 fc	24.7 ft
8.0 ft	5.7 fc	26.3 ft
10.0 ft	3.7 fc	32.9 ft
12.0 ft	2.6 fc	39.5 ft
14.0 ft	1.9 fc	46.1 ft
16.0 ft	1.4 fc	52.6 ft
20.0 ft	0.9 fc	65.8 ft
24.0 ft	0.6 fc	79.0 ft
28.0 ft	0.5 fc	92.1 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	13189	13189	13189
<b>45.00°</b>	23342	19529	11752
<b>55.00°</b>	20130	19662	11171
<b>65.00°</b>	15465	17936	10201
<b>75.00°</b>	9597	13795	8211
<b>85.00°</b>	2972	4773	3897

### UGR CIE 190:2010

<b>Ceiling reflectance</b>		<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>	<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>
<b>Wall reflectance</b>		<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>
<b>Plane reflectance</b>		<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>
<b>Room dimensions</b>		<b>Viewed crosswise</b>					<b>Viewed endwise</b>				
<b>2H</b>	<b>2H</b>	23.5	25.1	23.8	25.4	25.7	20.2	21.8	20.6	22.2	22.5
	<b>3H</b>	24.6	26.1	25.0	26.5	26.8	21.7	23.2	22.1	23.5	23.9
	<b>4H</b>	24.9	26.4	25.3	26.7	27.1	22.2	23.6	22.6	23.9	24.3
	<b>6H</b>	25.1	26.4	25.5	26.7	27.1	22.5	23.8	22.9	24.1	24.5
	<b>8H</b>	25.1	26.3	25.5	26.7	27.1	22.5	23.8	22.9	24.2	24.6
	<b>12H</b>	25.1	26.2	25.5	26.6	27.1	22.5	23.7	23.0	24.1	24.5
<b>4H</b>	<b>2H</b>	24.0	25.4	24.4	25.8	26.1	21.7	23.1	22.1	23.4	23.8
	<b>3H</b>	25.4	26.6	25.8	27.0	27.4	23.2	24.4	23.6	24.8	25.2
	<b>4H</b>	25.8	26.9	26.2	27.3	27.7	23.7	24.8	24.2	25.2	25.6
	<b>6H</b>	26.0	26.9	26.4	27.4	27.8	24.1	25.0	24.5	25.4	25.9
	<b>8H</b>	26.0	26.9	26.5	27.3	27.8	24.1	25.0	24.6	25.4	25.9
	<b>12H</b>	26.0	26.8	26.5	27.2	27.7	24.1	24.9	24.6	25.4	25.9
<b>8H</b>	<b>4H</b>	26.0	26.9	26.5	27.3	27.8	24.2	25.1	24.7	25.6	26.0
	<b>6H</b>	26.3	27.0	26.8	27.5	27.9	24.6	25.3	25.1	25.8	26.3
	<b>8H</b>	26.3	26.9	26.8	27.4	27.9	24.7	25.4	25.2	25.9	26.3
	<b>12H</b>	26.3	26.9	26.8	27.3	27.9	24.8	25.3	25.3	25.8	26.4
<b>12H</b>	<b>4H</b>	26.0	26.8	26.5	27.3	27.8	24.3	25.1	24.8	25.5	26.0
	<b>6H</b>	26.3	26.9	26.8	27.4	27.9	24.7	25.4	25.2	25.8	26.3
	<b>8H</b>	26.3	26.9	26.8	27.4	27.9	24.8	25.4	25.3	25.9	26.4

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0