

## Indoor Distribution Test Report

### Spectrum Lighting Inc.

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### Spectrum Lighting Photometric Lab

#### Luminaire

LT03IND48 05L 35HK xx DW xx xx MW  
Specline Linear, 1.8" aperture x 4' Long, Matte White Refl

#### Test Number

SP-01379

#### Test Date

6/3/2022

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

### Summary of Results

#### Power

Input Watts	21 W
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#### Lumen Output

Output Lumens	1150
Efficacy	54.74 lm/W

#### Luminous Dimensions

0° - 180° Size	0.15
90° - 270° Size	4
Height	0

#### Spacing Criterion

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

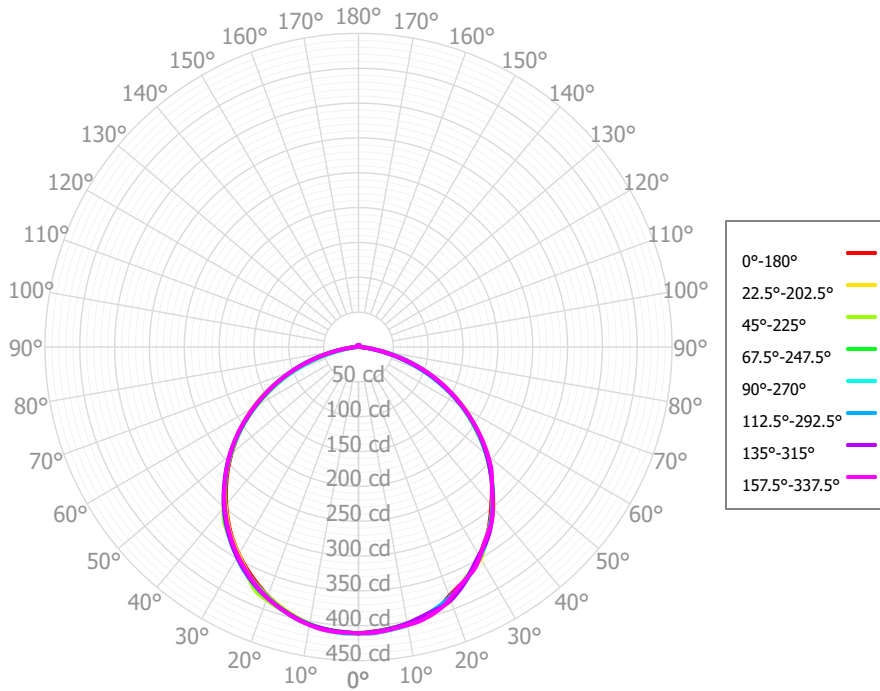
#### Full Beam Angle

0° - 180°	110°
90° - 270°	110°

### IES File Header Contents

Keyword	Value
TEST	SP-01379
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	6/3/2022
ISSUEDATE	3/27/2023
LUMCAT	LT03IND48 05L 35HK xx DW xx xx MW
LUMINAIRE	SpecLine Linear, 1.8" aperture x 4' Long, Matte White Refl
OTHER	Diffuse White Extruded Acrylic Lens, Symmetric Distribution
OTHER	Data for 4' IND fixture, Ceiling mount
OTHER	111 Degree Beam Angle
LAMP	N/A, Min. 90 CRI
LAMPCAT	N/A
OTHER	Reference project SL473
OTHER	05L designation for Spectrum linear product indicates 287.4 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°	39.49	3.44%	90.00° - 100.00°	2.76	0.24%
10.00° - 20.00°	111.57	9.71%	100.00° - 110.00°	2.64	0.23%
20.00° - 30.00°	168.79	14.68%	100.00° - 120.00°	5.13	0.45%
30.00° - 40.00°	202.94	17.65%	120.00° - 130.00°	2.29	0.20%
40.00° - 50.00°	208.53	18.14%	130.00° - 140.00°	2.01	0.18%
50.00° - 60.00°	185.10	16.10%	140.00° - 150.00°	1.62	0.14%
60.00° - 70.00°	135.51	11.79%	150.00° - 160.00°	1.20	0.10%
70.00° - 80.00°	68.10	5.92%	160.00° - 170.00°	0.74	0.06%
80.00° - 90.00°	13.45	1.17%	170.00° - 180.00°	0.25	0.02%
0.00° - 90.00°	1133.49	98.61%	0.00° - 180.00°	1149.50	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°	410.85	410.85	410.85	410.85	410.85	410.85	410.85	410.85	410.85	410.85	410.85	410.85	410.85	410.85	410.85	410.85	410.85
2.50°	409.16	410.26	410.38	410.35	411.85	410.91	409.69	410.69	410.14	410.96	410.58	409.97	411.88	410.24	409.75	411.09	409.16
5.00°	407.61	409.23	408.90	409.25	410.01	409.48	408.89	410.18	409.51	410.54	409.31	408.65	410.49	408.09	408.63	409.58	407.61
7.50°	405.46	406.20	407.16	407.58	407.88	407.86	406.93	408.65	407.37	407.56	407.85	406.80	408.47	405.84	406.18	407.28	405.46
10.00°	403.19	403.13	403.99	405.19	405.37	404.48	404.36	405.24	404.58	404.42	403.93	403.61	405.21	402.94	402.95	405.29	403.19
12.50°	401.10	400.44	400.46	401.52	401.49	400.92	400.09	401.10	399.40	398.83	399.68	399.53	401.13	399.70	398.46	403.43	401.10
15.00°	399.05	397.74	395.25	396.31	395.92	395.23	394.98	395.66	393.92	393.21	395.36	394.31	395.89	394.51	394.74	398.91	399.05
17.50°	390.26	392.59	389.75	390.27	390.03	389.35	389.31	389.68	387.42	387.12	391.04	388.37	389.96	389.02	392.15	393.32	390.26
20.00°	380.36	387.32	383.08	383.28	383.77	383.07	383.39	382.79	380.39	380.91	386.12	381.32	382.72	381.99	387.03	384.31	380.36
22.50°	373.13	375.98	375.76	375.73	376.52	376.76	375.78	374.95	371.69	373.45	381.14	373.63	374.73	374.67	378.27	374.01	373.13
25.00°	366.29	364.80	365.97	367.57	368.19	368.08	367.46	365.59	362.78	365.60	369.60	365.08	366.34	365.95	368.04	366.48	366.29
27.50°	356.41	358.18	356.32	358.08	359.03	359.28	358.04	355.94	353.27	354.68	357.53	356.06	357.73	357.11	355.82	359.93	356.41
30.00°	346.14	351.22	347.16	347.25	349.01	348.66	348.19	345.85	343.43	343.83	347.08	346.36	347.73	347.79	345.44	348.38	346.14
32.50°	335.09	337.85	337.27	336.15	337.86	337.97	337.16	335.15	332.69	333.39	336.72	336.31	337.05	337.81	337.40	335.21	335.09
35.00°	323.95	324.60	324.97	324.81	325.63	326.19	325.70	323.59	321.35	322.61	326.80	324.44	325.67	325.31	327.14	324.54	323.95
37.50°	310.31	313.30	312.43	312.59	312.84	314.39	313.32	311.50	308.51	309.70	316.91	311.69	313.96	312.54	314.26	314.61	310.31
40.00°	296.44	301.67	299.13	299.59	299.53	300.13	300.63	298.74	295.39	296.78	301.40	297.99	300.37	298.80	300.32	299.97	296.44
42.50°	283.30	286.34	285.57	285.41	285.52	285.85	286.47	285.30	281.61	283.89	285.71	283.85	285.95	284.90	285.20	284.02	283.30
45.00°	270.22	271.06	271.25	270.22	270.90	270.79	271.85	271.02	267.58	270.58	271.09	269.51	271.60	270.51	270.20	270.93	270.22
47.50°	255.37	256.29	256.54	254.70	255.70	255.72	256.80	256.27	252.98	255.23	256.50	255.08	257.29	255.72	255.33	258.57	255.37
50.00°	240.43	241.32	240.81	238.92	240.02	240.04	241.64	240.96	238.04	239.80	240.69	239.19	241.07	239.75	240.12	242.83	240.43
52.50°	223.33	224.63	224.78	222.50	223.79	224.30	225.07	225.16	222.36	224.02	224.88	222.72	224.12	223.61	224.54	226.30	223.33
55.00°	206.14	208.04	208.06	205.62	207.14	207.07	208.13	208.80	206.15	208.12	208.08	205.63	207.15	207.01	208.17	209.02	206.14
57.50°	189.09	192.12	191.06	188.59	190.29	189.83	190.29	191.73	188.91	191.67	191.28	188.30	190.18	190.04	191.03	191.58	189.09
60.00°	172.04	175.94	173.40	171.46	173.29	172.39	172.23	173.92	171.86	174.88	174.44	169.91	172.29	172.11	173.31	174.42	172.04
62.50°	154.93	158.10	155.52	154.01	155.93	154.95	154.75	155.98	155.15	156.82	157.51	151.16	154.11	153.72	155.07	157.30	154.93
65.00°	137.80	140.17	137.18	136.35	138.33	137.61	137.40	137.93	137.68	138.63	138.57	132.62	135.03	134.24	136.97	139.76	137.80
67.50°	119.63	121.73	119.00	118.81	120.78	120.27	119.87	119.61	118.93	120.04	119.61	114.15	115.67	114.98	119.00	122.15	119.63
70.00°	101.46	103.32	101.14	101.35	103.26	102.89	102.30	101.04	100.54	101.50	100.41	94.99	96.00	96.22	100.33	103.70	101.46
72.50°	83.29	85.01	83.40	83.97	85.84	85.46	84.46	82.48	82.71	83.18	81.25	75.62	76.23	77.56	81.11	85.12	83.29
75.00°	65.16	66.88	65.91	66.63	68.46	67.57	66.56	63.94	65.00	65.05	62.72	56.72	57.42	59.15	62.41	66.55	65.16
77.50°	48.42	49.59	49.26	50.13	51.47	49.97	49.64	47.03	47.48	47.53	44.46	37.94	38.85	41.35	44.11	47.98	48.42
80.00°	31.94	33.33	34.10	34.09	34.69	34.72	32.88	31.47	32.20	31.45	28.97	23.85	24.86	24.77	28.64	33.17	31.94
82.50°	20.82	21.39	21.08	21.45	21.66	20.36	21.01	19.61	20.08	19.30	14.44	10.92	11.95	12.05	15.17	18.78	20.82
85.00°	10.14	11.00	11.58	10.56	10.63	12.15	9.83	10.62	11.04	9.43	8.52	6.00	6.92	6.45	7.61	11.03	10.14
87.50°	6.36	6.48	5.19	5.46	5.54	4.90	5.77	5.48	6.08	5.31	3.24	2.87	3.56	2.86	3.98	3.90	6.36
90.00°	2.85	2.89	3.60	3.17	3.44	3.61	2.58	3.13	3.15	2.36	2.92	2.31	2.88	2.75	2.54	2.92	2.85
92.50°	2.67	2.56	2.66	2.47	2.66	2.51	2.27	2.21	2.76	2.16	2.64	2.26	2.72	2.64	2.48	2.41	2.67
95.00°	2.50	2.32	2.68	2.49	2.49	2.51	2.26	2.26	2.51	2.05	2.64	2.30	2.66	2.55	2.43	2.38	2.50
97.50°	2.50	2.34	2.67	2.58	2.53	2.51	2.36	2.26	2.44	2.13	2.66	2.34	2.63	2.56	2.38	2.37	2.50
100.00°	2.49	2.36	2.59	2.70	2.65	2.56	2.46	2.23	2.40	2.17	2.75	2.36	2.73	2.70	2.42	2.49	2.49
102.50°	2.45	2.38	2.60	2.69	2.73	2.59	2.20	2.20	2.37	2.12	2.81	2.37	2.85	2.74	2.50	2.61	2.45
105.00°	2.43	2.42	2.72	2.63	2.79	2.59	1.92	2.17	2.37	2.04	2.71	2.34	2.76	2.64	2.51	2.58	2.43

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

<b>RCR</b>	<b>ptc</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>	1365	1365	1365	1365	1331	1331	1331	1331	1268	1268	1268	1211	1211	1211	1158	1158	1133
	<b>1</b>	1251	1199	1151	1109	1219	1171	1128	1089	1119	1084	1052	1072	1043	1017	1028	1005	983
	<b>2</b>	1140	1047	971	907	1108	1024	954	895	981	922	871	941	892	849	904	864	844
	<b>3</b>	1040	921	829	756	1010	902	816	748	865	792	732	831	770	718	800	748	731
	<b>4</b>	952	817	717	641	925	800	707	636	769	689	625	741	671	615	714	654	639
	<b>5</b>	876	730	628	552	851	716	620	548	690	606	541	665	592	534	643	578	565
	<b>6</b>	809	657	555	482	786	645	549	479	623	538	474	602	526	468	583	516	504
	<b>7</b>	750	596	496	426	729	586	491	424	567	482	419	549	472	415	532	464	454
	<b>8</b>	698	544	447	380	679	535	443	378	519	435	375	503	427	372	489	420	411
	<b>9</b>	652	499	405	342	635	492	402	340	477	395	338	464	389	335	451	383	375
	<b>10</b>	612	460	370	310	596	454	367	309	441	362	307	430	356	304	419	351	344

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	13.6 fc	15.7 ft
6.5 ft	9.7 fc	18.6 ft
7.5 ft	7.3 fc	21.4 ft
8.0 ft	6.4 fc	22.9 ft
10.0 ft	4.1 fc	28.6 ft
12.0 ft	2.9 fc	34.3 ft
14.0 ft	2.1 fc	40.0 ft
16.0 ft	1.6 fc	45.8 ft
20.0 ft	1.0 fc	57.2 ft
24.0 ft	0.7 fc	68.6 ft
28.0 ft	0.5 fc	80.1 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	7371	7371	7371
<b>45.00°</b>	6856	6882	6873
<b>55.00°</b>	6447	6508	6479
<b>65.00°</b>	5850	5823	5872
<b>75.00°</b>	4517	4568	4746
<b>85.00°</b>	2088	2384	2187

### 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	18.6	20.2	19.0	20.5	20.9	18.5	20.1	18.9	20.5	20.8
	3H	20.3	21.7	20.7	22.1	22.5	20.2	21.6	20.6	21.9	22.3
	4H	20.8	22.2	21.2	22.5	23.0	20.7	22.0	21.1	22.4	22.8
	6H	21.1	22.4	21.6	22.8	23.2	20.9	22.2	21.4	22.6	23.0
	8H	21.2	22.4	21.6	22.8	23.2	21.0	22.2	21.4	22.6	23.0
	12H	21.2	22.4	21.7	22.8	23.2	21.0	22.1	21.5	22.5	23.0
4H	2H	19.2	20.5	19.6	20.9	21.3	19.1	20.5	19.6	20.9	21.3
	3H	21.1	22.2	21.5	22.6	23.1	21.0	22.1	21.4	22.5	22.9
	4H	21.7	22.7	22.2	23.2	23.6	21.6	22.6	22.0	23.0	23.5
	6H	22.1	23.0	22.6	23.5	24.0	21.9	22.8	22.4	23.3	23.8
	8H	22.2	23.0	22.7	23.5	24.0	22.0	22.8	22.5	23.3	23.8
	12H	22.3	23.0	22.8	23.5	24.0	22.0	22.8	22.5	23.3	23.8
8H	4H	21.9	22.8	22.4	23.2	23.7	21.8	22.6	22.3	23.1	23.6
	6H	22.4	23.1	22.9	23.6	24.1	22.2	22.9	22.7	23.4	23.9
	8H	22.5	23.2	23.1	23.7	24.2	22.3	22.9	22.8	23.4	24.0
	12H	22.6	23.2	23.2	23.7	24.3	22.4	22.9	22.9	23.4	24.0
12H	4H	21.9	22.7	22.4	23.2	23.7	21.8	22.5	22.3	23.0	23.5
	6H	22.4	23.0	23.0	23.5	24.1	22.2	22.8	22.8	23.3	23.9
	8H	22.6	23.1	23.1	23.6	24.2	22.3	22.9	22.9	23.4	24.0

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0