

## Indoor Distribution Test Report

### Spectrum Lighting Inc.

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### Spectrum Lighting Photometric Lab

#### Luminaire

LT03IND24 05L 35HK xx DW xx xx MW  
Specline Linear, 1.8" aperture x 2' Long, Matte White Refl

#### Test Number

SP-01376

#### Test Date

6/3/2022

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

### Summary of Results

#### Power

Input Watts	11.5 W
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#### Lumen Output

Output Lumens	575
Efficacy	49.98 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

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

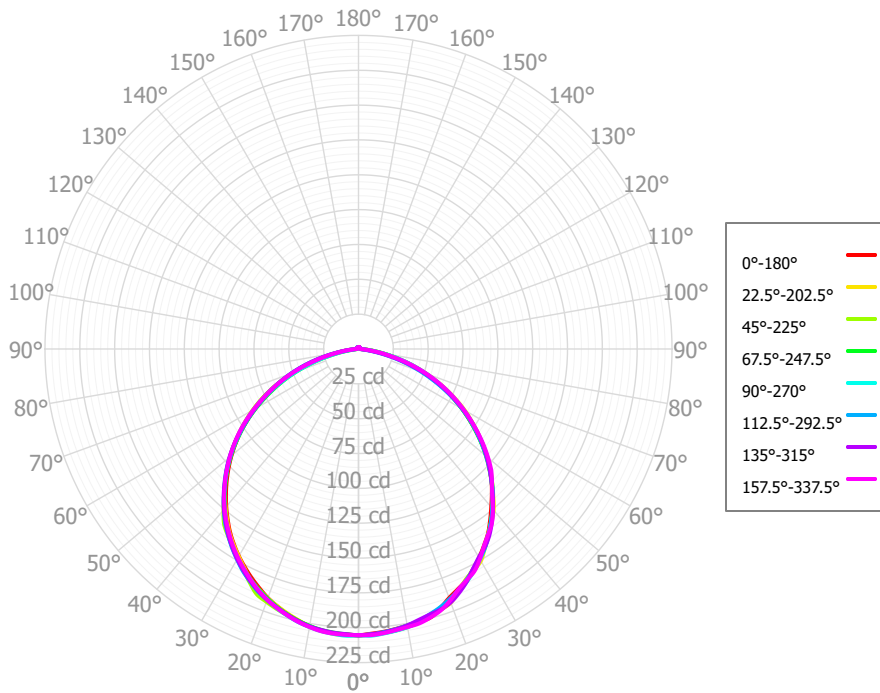
#### Full Beam Angle

0° - 180°	110°
90° - 270°	110°

### IES File Header Contents

Keyword	Value
TEST	SP-01376
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	6/3/2022
ISSUEDATE	3/27/2023
LUMCAT	LT03IND24 05L 35HK xx DW xx xx MW
LUMINAIRE	SpecLine Linear, 1.8" aperture x 2' Long, Matte White Refl
OTHER	Diffuse White Extruded Acrylic Lens, Symmetric Distribution
OTHER	Data for 2' 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: 27HK x 0.95, 30HK x 0.98, 40HK x 1.01
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°	19.75	3.44%	90.00° - 100.00°	1.38	0.24%
10.00° - 20.00°	55.78	9.71%	100.00° - 110.00°	1.32	0.23%
20.00° - 30.00°	84.40	14.68%	100.00° - 120.00°	2.57	0.45%
30.00° - 40.00°	101.47	17.65%	120.00° - 130.00°	1.15	0.20%
40.00° - 50.00°	104.27	18.14%	130.00° - 140.00°	1.01	0.18%
50.00° - 60.00°	92.55	16.10%	140.00° - 150.00°	0.81	0.14%
60.00° - 70.00°	67.76	11.79%	150.00° - 160.00°	0.60	0.10%
70.00° - 80.00°	34.05	5.92%	160.00° - 170.00°	0.37	0.06%
80.00° - 90.00°	6.72	1.17%	170.00° - 180.00°	0.13	0.02%
0.00° - 90.00°	566.75	98.61%	0.00° - 180.00°	574.75	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°	205.43	205.43	205.43	205.43	205.43	205.43	205.43	205.43	205.43	205.43	205.43	205.43	205.43	205.43	205.43	205.43	205.43
2.50°	204.58	205.13	205.19	205.18	205.93	205.45	204.85	205.35	205.07	205.48	205.29	204.98	205.94	205.12	204.87	205.55	204.58
5.00°	203.80	204.61	204.45	204.62	205.00	204.74	204.45	205.09	204.76	205.27	204.65	204.33	205.24	204.04	204.31	204.79	203.80
7.50°	202.73	203.10	203.58	203.79	203.94	203.93	203.46	204.33	203.68	203.78	203.92	203.40	204.24	202.92	203.09	203.64	202.73
10.00°	201.60	201.56	201.99	202.59	202.69	202.24	202.18	202.62	202.29	202.21	201.96	201.81	202.60	201.47	201.47	202.65	201.60
12.50°	200.55	200.22	200.23	200.76	200.74	200.46	200.04	200.55	199.70	199.42	199.84	199.77	200.56	199.85	199.23	201.71	200.55
15.00°	199.52	198.87	197.62	198.16	197.96	197.61	197.49	197.83	196.96	196.60	197.68	197.15	197.95	197.25	197.37	199.46	199.52
17.50°	195.13	196.29	194.88	195.13	195.01	194.68	194.65	194.84	193.71	193.56	195.52	194.18	194.98	194.51	196.08	196.66	195.13
20.00°	190.18	193.66	191.54	191.64	191.89	191.53	191.69	191.40	190.20	190.45	193.06	190.66	191.36	191.00	193.51	192.16	190.18
22.50°	186.57	187.99	187.88	187.86	188.26	188.38	187.89	187.47	185.84	186.72	190.57	186.82	187.37	187.33	189.14	187.01	186.57
25.00°	183.14	182.40	182.99	183.79	184.10	184.04	183.73	182.79	181.39	182.80	184.80	182.54	183.17	182.97	184.02	183.24	183.14
27.50°	178.20	179.09	178.16	179.04	179.51	179.64	179.02	177.97	176.64	177.34	178.77	178.03	178.86	178.56	177.91	179.96	178.20
30.00°	173.07	175.61	173.58	173.62	174.50	174.33	174.09	172.93	171.72	171.91	173.54	173.18	173.87	173.89	172.72	174.19	173.07
32.50°	167.54	168.92	168.64	168.08	168.93	168.98	168.58	167.57	166.34	166.70	168.36	168.15	168.52	168.90	168.70	167.61	167.54
35.00°	161.97	162.30	162.49	162.40	162.82	163.09	162.85	161.79	160.67	161.31	163.40	162.22	162.83	162.66	163.57	162.27	161.97
37.50°	155.15	156.65	156.21	156.29	156.42	157.20	156.66	155.75	154.26	154.85	158.45	155.84	156.98	156.27	157.13	157.31	155.15
40.00°	148.22	150.84	149.57	149.80	149.76	150.06	150.31	149.37	147.70	148.39	150.70	148.99	150.18	149.40	150.16	149.98	148.22
42.50°	141.65	143.17	142.79	142.70	142.76	142.92	143.23	142.65	140.81	141.95	142.85	141.93	142.97	142.45	142.60	142.01	141.65
45.00°	135.11	135.53	135.63	135.11	135.45	135.40	135.92	135.51	133.79	135.29	135.55	134.76	135.80	135.26	135.10	135.47	135.11
47.50°	127.69	128.15	128.27	127.35	127.85	127.86	128.40	128.14	126.49	127.61	128.25	127.54	128.65	127.86	127.67	129.29	127.69
50.00°	120.21	120.66	120.40	119.46	120.01	120.02	120.82	120.48	119.02	119.90	120.35	119.59	120.53	119.88	120.06	121.41	120.21
52.50°	111.66	112.32	112.39	111.25	111.89	112.15	112.53	112.58	111.18	112.01	112.44	111.36	112.06	111.81	112.27	113.15	111.66
55.00°	103.07	104.02	104.03	102.81	103.57	103.54	104.06	104.40	103.07	104.06	104.04	102.81	103.58	103.51	104.08	104.51	103.07
57.50°	94.55	96.06	95.53	94.30	95.14	94.92	95.15	95.87	94.45	95.83	95.64	94.15	95.09	95.02	95.51	95.79	94.55
60.00°	86.02	87.97	86.70	85.73	86.64	86.19	86.12	86.96	85.93	87.44	87.22	84.96	86.15	86.05	86.65	87.21	86.02
62.50°	77.46	79.05	77.76	77.00	77.97	77.47	77.38	77.99	77.57	78.41	78.75	75.58	77.06	76.86	77.53	78.65	77.46
65.00°	68.90	70.09	68.59	68.17	69.16	68.80	68.70	68.96	68.84	69.32	69.28	66.31	67.51	67.12	68.49	69.88	68.90
67.50°	59.82	60.87	59.50	59.41	60.39	60.13	59.93	59.80	59.47	60.02	59.81	57.07	57.84	57.49	59.50	61.08	59.82
70.00°	50.73	51.66	50.57	50.68	51.63	51.44	51.15	50.52	50.27	50.75	50.20	47.49	48.00	48.11	50.17	51.85	50.73
72.50°	41.64	42.50	41.70	41.99	42.92	42.73	42.23	41.24	41.36	41.59	40.62	37.81	38.11	38.78	40.56	42.56	41.64
75.00°	32.58	33.44	32.95	33.32	34.23	33.78	33.28	31.97	32.50	32.53	31.36	28.36	28.71	29.58	31.21	33.27	32.58
77.50°	24.21	24.79	24.63	25.07	25.73	24.99	24.82	23.52	23.74	23.76	22.23	18.97	19.42	20.68	22.05	23.99	24.21
80.00°	15.97	16.66	17.05	17.05	17.35	17.36	16.44	15.73	16.10	15.73	14.49	11.93	12.43	12.39	14.32	16.59	15.97
82.50°	10.41	10.70	10.54	10.72	10.83	10.18	10.50	9.80	10.04	9.65	7.22	5.46	5.97	6.02	7.59	9.39	10.41
85.00°	5.07	5.50	5.79	5.28	5.31	6.07	4.92	5.31	5.52	4.71	4.26	3.00	3.46	3.23	3.81	5.51	5.07
87.50°	3.18	3.24	2.59	2.73	2.77	2.45	2.88	2.74	3.04	2.66	1.62	1.44	1.78	1.43	1.99	1.95	3.18
90.00°	1.43	1.45	1.80	1.59	1.72	1.80	1.29	1.57	1.58	1.18	1.46	1.15	1.44	1.37	1.27	1.46	1.43
92.50°	1.33	1.28	1.33	1.24	1.33	1.26	1.13	1.10	1.38	1.08	1.32	1.13	1.36	1.32	1.24	1.21	1.33
95.00°	1.25	1.16	1.34	1.25	1.25	1.25	1.13	1.13	1.26	1.02	1.32	1.15	1.33	1.28	1.21	1.19	1.25
97.50°	1.25	1.17	1.33	1.29	1.26	1.26	1.18	1.13	1.22	1.07	1.33	1.17	1.31	1.28	1.19	1.19	1.25
100.00°	1.25	1.18	1.30	1.35	1.32	1.28	1.23	1.11	1.20	1.09	1.38	1.18	1.36	1.35	1.21	1.24	1.25
102.50°	1.23	1.19	1.30	1.35	1.36	1.30	1.10	1.10	1.19	1.06	1.41	1.19	1.42	1.37	1.25	1.30	1.23
105.00°	1.21	1.21	1.36	1.31	1.40	1.30	0.96	1.09	1.18	1.02	1.36	1.17	1.38	1.32	1.26	1.29	1.21

### 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>	682	682	682	682	666	666	666	666	634	634	634	605	605	605	579	579	567
	<b>1</b>	626	599	576	554	609	586	564	545	560	542	526	536	522	508	514	503	491
	<b>2</b>	570	524	485	453	554	512	477	447	491	461	436	471	446	425	452	432	414
	<b>3</b>	520	460	414	378	505	451	408	374	433	396	366	416	385	359	400	374	365
	<b>4</b>	476	408	359	321	462	400	354	318	385	344	313	370	336	307	357	327	320
	<b>5</b>	438	365	314	276	425	358	310	274	345	303	270	333	296	267	321	289	283
	<b>6</b>	404	329	278	241	393	323	275	240	312	269	237	301	263	234	291	258	252
	<b>7</b>	375	298	248	213	365	293	246	212	283	241	210	274	236	208	266	232	227
	<b>8</b>	349	272	223	190	340	268	221	189	259	217	187	252	214	186	244	210	206
	<b>9</b>	326	250	203	171	318	246	201	170	239	198	169	232	194	168	226	191	188
	<b>10</b>	306	230	185	155	298	227	184	154	221	181	153	215	178	152	209	176	172

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	6.8 fc	15.7 ft
6.5 ft	4.9 fc	18.6 ft
7.5 ft	3.7 fc	21.4 ft
8.0 ft	3.2 fc	22.9 ft
10.0 ft	2.1 fc	28.6 ft
12.0 ft	1.4 fc	34.3 ft
14.0 ft	1.0 fc	40.0 ft
16.0 ft	0.8 fc	45.8 ft
20.0 ft	0.5 fc	57.2 ft
24.0 ft	0.4 fc	68.6 ft
28.0 ft	0.3 fc	80.1 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	7371	7371	7371
45.00°	6856	6882	6873
55.00°	6447	6508	6479
65.00°	5850	5823	5872
75.00°	4517	4568	4746
85.00°	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