

## Indoor Distribution Test Report

### Spectrum Lighting Inc.

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### Spectrum Lighting Photometric Lab

#### Luminaire

LT03IND24 05L 35HK xx LA xx xx MW

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

#### Test Number

SP-01377

#### 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	661
Efficacy	57.5 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

Two luminaires, plane 0°	1.37
Two luminaires, plane 90°	1.14
Four luminaires	1.24

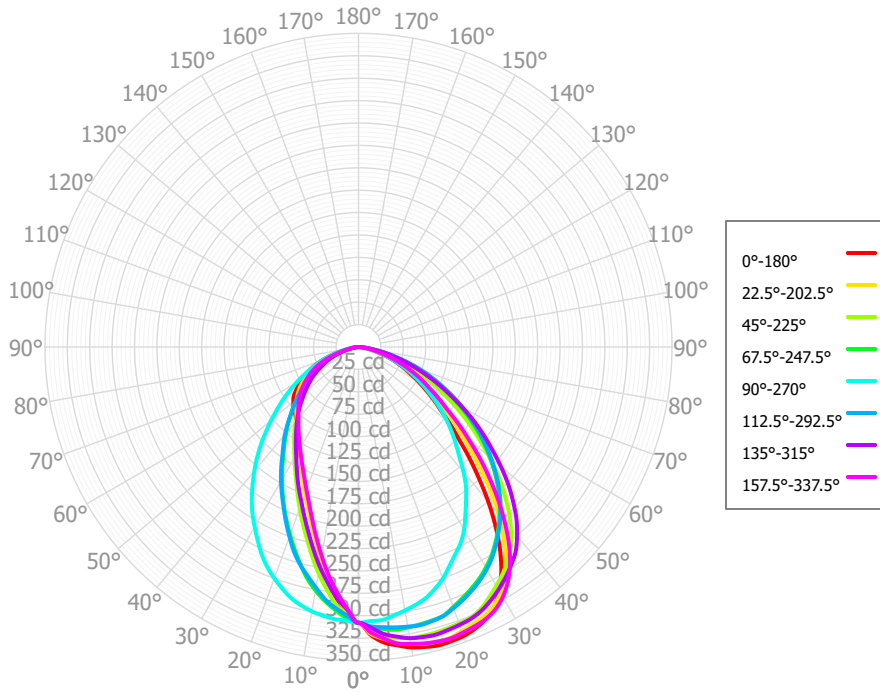
#### Full Beam Angle

0° - 180°	65°
90° - 270°	83°

### IES File Header Contents

Keyword	Value
TEST	SP-01377
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	6/3/2022
ISSUEDATE	3/27/2023
LUMCAT	LT03IND24 05L 35HK xx LA xx xx MW
LUMINAIRE	SpecLine Linear, 1.8" aperture x 2' Long, Matte White Refl
OTHER	Extruded Acrylic Lens, Asymmetric Distribution
OTHER	Data for 2' IND fixture, Ceiling mount
OTHER	66 Degree x 85 Deg Beam Angle
LAMP	N/A, Min. 90 CRI
LAMPCAT	N/A
OTHER	Reference project SL473
OTHER	05L designation for Spectrum linear product indicates 335 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°	29.05	4.39%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	78.14	11.82%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	112.81	17.06%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	128.23	19.39%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	120.10	18.16%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	95.91	14.51%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	63.67	9.63%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	28.26	4.27%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	5.05	0.76%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	661.22	100.00%	0.00° - 180.00°	661.22	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°	307.96	307.96	307.96	307.96	307.96	307.96	307.96	307.96	307.96	307.96	307.96	307.96	307.96	307.96	307.96	307.96	307.96
2.50°	322.12	320.79	317.68	313.21	306.35	300.02	293.30	292.32	297.38	295.99	299.43	302.80	305.84	312.09	313.72	319.05	322.12
5.00°	331.32	327.17	324.50	315.94	305.95	292.68	280.77	274.72	281.44	279.06	288.48	294.77	305.01	314.07	321.54	326.69	331.32
7.50°	336.07	333.21	327.55	318.33	302.32	284.35	264.96	256.67	261.14	261.42	272.68	286.11	302.53	315.73	326.10	333.89	336.07
10.00°	340.60	336.48	329.91	317.87	298.66	272.99	248.94	236.78	240.68	241.09	256.73	276.09	299.71	317.04	330.10	336.50	340.60
12.50°	342.97	339.41	330.29	317.24	294.80	261.95	231.74	217.46	219.76	221.56	239.25	264.58	295.46	318.09	331.70	338.95	342.97
15.00°	344.83	340.31	330.23	316.23	290.18	251.57	215.02	199.55	200.55	203.88	222.14	250.87	290.30	316.82	332.54	340.46	344.83
17.50°	344.38	340.34	329.31	314.65	283.26	239.57	199.78	183.31	184.65	187.91	206.76	237.11	282.76	314.90	331.43	341.23	344.38
20.00°	343.25	337.51	328.27	309.03	275.20	225.34	185.51	169.82	170.78	174.67	191.74	223.32	274.76	310.24	330.09	339.62	343.25
22.50°	340.29	334.63	327.05	303.41	264.91	211.40	173.22	157.84	159.60	162.12	177.69	209.88	265.94	305.32	328.34	337.76	340.29
25.00°	335.41	331.61	322.70	297.80	255.39	197.71	161.18	147.60	149.30	150.34	164.59	196.70	255.65	299.72	324.84	335.40	335.41
27.50°	327.08	326.08	315.45	291.69	246.90	185.03	149.49	138.57	139.83	140.04	153.17	183.55	243.58	293.55	319.27	330.60	327.08
30.00°	314.53	316.86	307.78	284.41	235.76	173.02	139.13	130.51	132.14	130.92	142.75	170.40	231.84	286.40	312.72	322.32	314.53
32.50°	296.77	303.57	299.82	276.21	222.11	160.64	130.06	123.22	125.61	124.12	133.57	158.09	220.39	277.95	305.38	310.46	296.77
35.00°	275.41	286.12	290.19	266.57	209.35	148.10	121.69	116.38	119.30	118.60	125.28	146.05	207.67	267.95	297.07	295.03	275.41
37.50°	250.94	265.82	279.82	256.21	197.20	137.65	113.79	110.18	113.08	112.95	117.78	135.64	194.21	257.50	288.20	275.65	250.94
40.00°	225.37	243.46	264.62	245.06	182.59	127.83	106.49	104.23	108.32	107.25	109.14	125.54	180.89	246.68	275.41	253.48	225.37
42.50°	199.14	218.76	248.06	232.90	166.88	117.31	99.46	99.48	103.97	102.66	99.80	116.42	167.63	234.52	261.11	230.29	199.14
45.00°	174.87	192.90	229.50	219.96	153.88	106.69	92.09	95.01	101.04	98.30	93.75	107.39	153.96	221.57	244.18	206.60	174.87
47.50°	151.40	170.31	210.64	205.97	141.66	98.12	84.63	90.42	98.32	94.05	89.05	98.44	140.19	207.59	226.63	183.63	151.40
50.00°	132.89	148.77	190.59	191.43	129.34	89.66	78.13	85.83	94.91	89.81	82.86	89.59	127.28	193.20	207.46	160.87	132.89
52.50°	115.64	131.10	170.57	176.74	117.00	80.81	71.79	80.72	91.36	85.22	76.27	81.58	114.47	178.67	188.10	140.30	115.64
55.00°	102.04	114.15	152.26	162.01	104.51	72.23	65.56	75.55	85.36	80.50	70.02	73.61	102.97	164.11	169.90	120.12	102.04
57.50°	88.91	99.58	134.02	146.18	92.07	65.51	59.32	69.70	79.29	74.27	63.81	65.80	91.55	148.79	151.68	105.39	88.91
60.00°	77.37	85.24	116.26	130.11	80.85	58.49	52.61	63.83	72.70	67.96	57.88	58.17	80.65	133.38	132.93	91.09	77.37
62.50°	66.00	73.87	99.19	114.60	69.75	50.36	46.03	57.84	66.01	61.30	51.87	51.03	69.95	117.85	114.56	79.51	66.00
65.00°	56.62	62.65	84.60	99.13	59.51	42.87	40.53	51.43	58.98	54.33	44.52	43.92	60.33	102.40	98.26	67.97	56.62
67.50°	47.32	52.61	70.49	84.42	49.43	36.88	34.82	43.85	51.45	46.49	37.48	36.87	51.00	87.97	82.35	56.80	47.32
70.00°	38.50	42.65	57.49	69.73	39.99	30.56	28.40	36.01	42.81	38.49	32.18	30.15	42.60	73.47	67.61	45.82	38.50
72.50°	29.76	32.97	44.78	55.27	31.06	23.72	22.07	27.68	33.84	30.20	26.44	23.82	34.34	58.61	53.52	35.61	29.76
75.00°	21.23	23.90	32.49	41.31	23.29	17.45	15.97	20.03	24.36	22.37	19.27	17.99	26.35	44.28	40.70	26.23	21.23
77.50°	13.83	16.38	21.88	29.68	16.30	11.80	10.64	13.30	16.20	15.12	12.94	12.59	18.93	31.62	28.94	18.88	13.83
80.00°	8.76	10.14	13.06	18.99	10.54	7.55	6.53	7.99	9.45	9.40	8.39	8.28	12.34	20.27	18.62	12.56	8.76
82.50°	4.88	6.04	7.27	10.88	6.19	4.39	3.80	4.00	5.03	5.09	4.89	4.61	7.47	11.60	10.81	7.96	4.88
85.00°	2.72	3.28	3.77	4.92	3.40	2.67	2.62	2.07	2.39	2.80	2.90	2.83	4.30	5.43	5.41	4.53	2.72
87.50°	1.60	2.10	2.17	2.92	1.92	1.72	1.86	1.49	1.38	1.79	1.77	1.79	2.56	2.73	2.64	2.44	1.60
90.00°	1.52	1.47	1.56	1.67	1.45	1.43	1.42	1.28	1.23	1.47	1.50	1.56	1.80	1.38	1.65	1.38	1.52

### 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>	787	787	787	787	769	769	769	769	735	735	735	703	703	703	675	675	661
	<b>1</b>	728	700	675	652	710	685	662	642	657	638	621	632	616	602	608	596	584
	<b>2</b>	668	618	578	543	651	606	569	537	583	552	525	562	536	513	542	521	510
	<b>3</b>	613	549	500	460	598	539	493	456	520	481	448	502	469	441	485	457	447
	<b>4</b>	565	491	437	396	550	483	432	393	466	423	388	451	414	383	437	405	396
	<b>5</b>	522	442	386	345	508	435	383	343	421	375	340	409	368	336	397	361	354
	<b>6</b>	484	401	345	305	472	395	342	303	383	336	301	372	330	298	362	325	318
	<b>7</b>	450	365	310	272	439	360	308	271	350	303	269	341	299	267	332	294	288
	<b>8</b>	420	335	281	244	410	330	279	244	322	275	242	314	272	241	306	268	263
	<b>9</b>	394	309	257	221	385	305	255	221	297	252	220	290	249	219	284	246	241
	<b>10</b>	370	286	235	202	362	282	234	202	276	231	201	270	229	200	264	226	223

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	10.2 fc	7.5 ft
6.5 ft	7.3 fc	8.9 ft
7.5 ft	5.5 fc	10.3 ft
8.0 ft	4.8 fc	10.9 ft
10.0 ft	3.1 fc	13.7 ft
12.0 ft	2.1 fc	16.4 ft
14.0 ft	1.6 fc	19.1 ft
16.0 ft	1.2 fc	21.9 ft
20.0 ft	0.8 fc	27.3 ft
24.0 ft	0.5 fc	32.8 ft
28.0 ft	0.4 fc	38.3 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	11049	11049	11049
<b>45.00°</b>	8873	11645	7808
<b>55.00°</b>	6383	9524	6538
<b>65.00°</b>	4807	7182	5052
<b>75.00°</b>	2942	4505	3229
<b>85.00°</b>	1118	1550	1401

### 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	20.1	18.9	20.4	20.7	16.1	17.7	16.5	18.0	18.3
	3H	19.7	21.1	20.1	21.4	21.7	17.7	19.1	18.1	19.4	19.8
	4H	20.0	21.2	20.4	21.6	22.0	18.2	19.5	18.6	19.8	20.2
	6H	20.1	21.2	20.5	21.6	22.0	18.4	19.6	18.9	20.0	20.4
	8H	20.1	21.2	20.5	21.6	22.0	18.5	19.6	18.9	20.0	20.4
	12H	20.0	21.1	20.5	21.5	21.9	18.5	19.6	18.9	20.0	20.4
4H	2H	19.6	20.9	20.0	21.2	21.6	16.5	17.8	16.9	18.2	18.5
	3H	20.8	21.9	21.3	22.3	22.7	18.2	19.3	18.6	19.7	20.1
	4H	21.2	22.1	21.6	22.5	23.0	18.8	19.7	19.2	20.1	20.6
	6H	21.3	22.1	21.8	22.6	23.0	19.1	19.9	19.5	20.3	20.8
	8H	21.3	22.1	21.8	22.5	23.0	19.1	19.9	19.6	20.3	20.8
	12H	21.3	22.0	21.8	22.5	22.9	19.2	19.9	19.6	20.3	20.8
8H	4H	21.5	22.3	22.0	22.7	23.2	18.9	19.7	19.3	20.1	20.6
	6H	21.7	22.3	22.2	22.8	23.3	19.2	19.9	19.7	20.3	20.8
	8H	21.7	22.3	22.2	22.8	23.3	19.3	19.9	19.8	20.4	20.9
	12H	21.7	22.2	22.2	22.7	23.3	19.3	19.9	19.9	20.3	20.9
12H	4H	21.5	22.2	22.0	22.7	23.1	18.9	19.6	19.4	20.0	20.5
	6H	21.7	22.3	22.2	22.7	23.3	19.2	19.8	19.7	20.2	20.8
	8H	21.8	22.3	22.3	22.8	23.3	19.3	19.8	19.8	20.3	20.9

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0