

## Indoor Distribution Test Report

### Spectrum Lighting Inc.

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### Spectrum Lighting Photometric Lab

#### Luminaire

LT03IND48 11L 35K DW xx xx MW  
Specline Linear, 1.8" aperture x 4' Long, Matte White Refl

#### Test Number

SP-01549\_1

#### Test Date

6/3/2022

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

### Summary of Results

#### Power

Input Watts	36 W
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#### Lumen Output

Output Lumens	2738
Efficacy	76.07 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

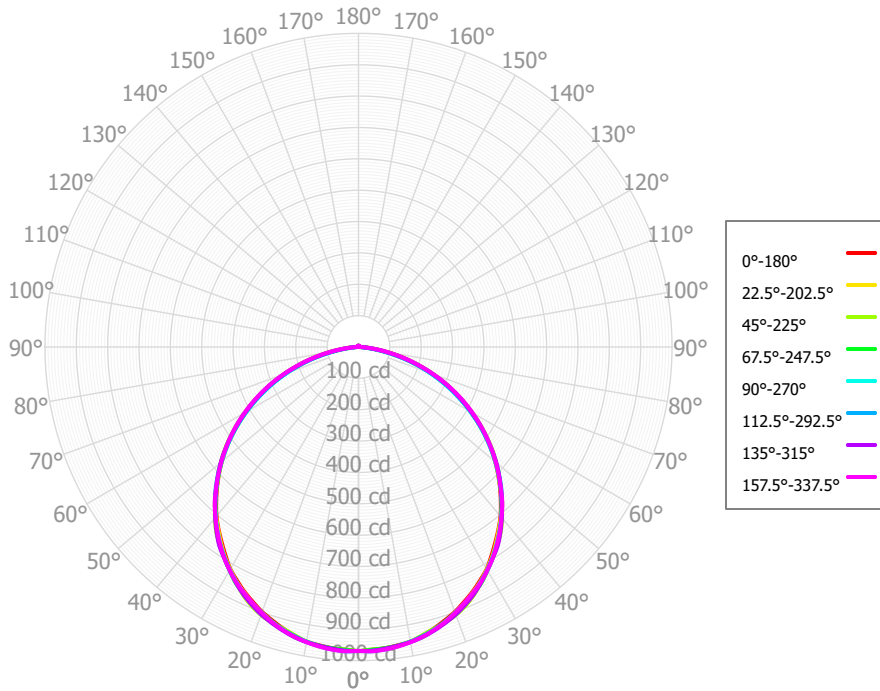
#### Full Beam Angle

0° - 180°	111°
90° - 270°	111°

### IES File Header Contents

Keyword	Value
TEST	SP-01549_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	6/3/2022
ISSUEDATE	3/27/2023
LUMCAT	LT03IND48 11L 35K 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. 80 CRI
LAMPCAT	N/A
OTHER	Reference project SL473
OTHER	11L designation for Spectrum linear product indicates 685 Source Lm/Ft.
OTHER	CCT Output Multipliers: 40K x 1.02, 30K x 0.97
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°	93.26	3.41%	90.00° - 100.00°	4.03	0.15%
10.00° - 20.00°	263.13	9.61%	100.00° - 110.00°	3.50	0.13%
20.00° - 30.00°	398.90	14.57%	100.00° - 120.00°	6.91	0.25%
30.00° - 40.00°	480.11	17.53%	120.00° - 130.00°	3.03	0.11%
40.00° - 50.00°	494.87	18.07%	130.00° - 140.00°	2.62	0.10%
50.00° - 60.00°	442.39	16.16%	140.00° - 150.00°	2.24	0.08%
60.00° - 70.00°	329.63	12.04%	150.00° - 160.00°	1.68	0.06%
70.00° - 80.00°	175.99	6.43%	160.00° - 170.00°	1.00	0.04%
80.00° - 90.00°	38.26	1.40%	170.00° - 180.00°	0.34	0.01%
0.00° - 90.00°	2716.54	99.20%	0.00° - 180.00°	2738.37	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°	969.79	969.79	969.79	969.79	969.79	969.79	969.79	969.79	969.79	969.79	969.79	969.79	969.79	969.79	969.79	969.79	969.79
2.50°	966.76	969.86	966.02	967.08	971.56	969.94	969.88	971.76	966.76	969.86	966.02	967.08	971.56	969.94	969.88	971.76	966.76
5.00°	964.57	966.70	965.01	964.23	967.47	968.19	965.79	968.90	964.57	966.70	965.01	964.23	967.47	968.19	965.79	968.90	964.57
7.50°	959.84	961.56	961.55	960.94	962.46	961.96	961.11	963.68	959.84	961.56	961.55	960.94	962.46	961.96	961.11	963.68	959.84
10.00°	954.45	953.90	954.76	954.35	954.83	954.77	955.67	955.97	954.45	953.90	954.76	954.35	954.83	954.77	955.67	955.97	954.45
12.50°	942.68	944.98	941.57	947.44	945.72	944.34	947.28	946.61	942.68	944.98	941.57	947.44	945.72	944.34	947.28	946.61	942.68
15.00°	929.70	932.81	930.08	932.77	933.25	933.42	935.85	933.80	929.70	932.81	930.08	932.77	933.25	933.42	935.85	933.80	929.70
17.50°	914.58	919.37	921.25	917.74	919.27	920.36	922.50	919.13	914.58	919.37	921.25	917.74	919.27	920.36	922.50	919.13	914.58
20.00°	899.19	902.17	909.15	901.59	902.57	907.11	907.53	901.74	899.19	902.17	909.15	901.59	902.57	907.11	907.53	901.74	899.19
22.50°	880.32	883.82	892.84	885.31	884.90	887.54	889.75	883.20	880.32	883.82	892.84	885.31	884.90	887.54	889.75	883.20	880.32
25.00°	861.24	863.70	871.78	867.23	865.81	867.73	870.06	864.29	861.24	863.70	871.78	867.23	865.81	867.73	870.06	864.29	861.24
27.50°	839.78	843.18	845.75	848.35	844.75	844.90	846.88	845.27	839.78	843.18	845.75	848.35	844.75	844.90	846.88	845.27	839.78
30.00°	818.02	818.57	821.05	822.60	821.32	821.90	821.73	821.86	818.02	818.57	821.05	822.60	821.32	821.90	821.73	821.86	818.02
32.50°	789.41	793.32	797.50	796.55	795.71	796.35	797.62	797.33	789.41	793.32	797.50	796.55	795.71	796.35	797.62	797.33	789.41
35.00°	760.89	764.30	771.94	768.84	767.97	770.29	773.97	768.99	760.89	764.30	771.94	768.84	767.97	770.29	773.97	768.99	760.89
37.50°	733.26	734.91	744.94	740.31	738.74	740.35	743.55	739.97	733.26	734.91	744.94	740.31	738.74	740.35	743.55	739.97	733.26
40.00°	704.90	706.67	712.33	708.65	708.34	710.06	710.76	709.56	704.90	706.67	712.33	708.65	708.34	710.06	710.76	709.56	704.90
42.50°	671.97	678.36	676.51	676.14	675.98	677.86	676.67	678.98	671.97	678.36	676.51	676.14	675.98	677.86	676.67	678.98	671.97
45.00°	638.81	641.58	642.18	641.11	642.31	644.93	642.23	643.34	638.81	641.58	642.18	641.11	642.31	644.93	642.23	643.34	638.81
47.50°	604.64	604.93	608.55	605.80	606.68	609.26	607.87	607.41	604.64	604.93	608.55	605.80	606.68	609.26	607.87	607.41	604.64
50.00°	569.81	570.52	573.19	569.88	570.00	572.63	573.53	571.16	569.81	570.52	573.19	569.88	570.00	572.63	573.53	571.16	569.81
52.50°	532.83	535.57	537.20	532.72	532.17	533.31	535.44	534.86	532.83	535.57	537.20	532.72	532.17	533.31	535.44	534.86	532.83
55.00°	495.54	496.17	498.55	493.30	493.85	494.15	496.87	497.29	495.54	496.17	498.55	493.30	493.85	494.15	496.87	497.29	495.54
57.50°	457.47	456.64	459.16	453.36	453.20	455.34	456.49	459.52	457.47	456.64	459.16	453.36	453.20	455.34	456.49	459.52	457.47
60.00°	418.38	416.40	416.98	412.61	411.76	415.35	415.97	419.73	418.38	416.40	416.98	412.61	411.76	415.35	415.97	419.73	418.38
62.50°	377.23	376.10	374.24	372.16	369.74	373.22	375.80	379.75	377.23	376.10	374.24	372.16	369.74	373.22	375.80	379.75	377.23
65.00°	335.85	335.57	333.76	332.06	327.58	331.07	335.59	338.66	335.85	335.57	333.76	332.06	327.58	331.07	335.59	338.66	335.85
67.50°	294.08	294.46	293.59	290.38	285.38	288.90	294.16	297.17	294.08	294.46	293.59	290.38	285.38	288.90	294.16	297.17	294.08
70.00°	252.27	251.67	251.31	247.14	243.18	246.56	252.63	253.97	252.27	251.67	251.31	247.14	243.18	246.56	252.63	253.97	252.27
72.50°	210.42	209.64	208.86	204.46	201.71	204.03	209.88	211.48	210.42	209.64	208.86	204.46	201.71	204.03	209.88	211.48	210.42
75.00°	169.30	169.31	168.31	162.23	160.31	162.02	167.39	171.27	169.30	169.31	168.31	162.23	160.31	162.02	167.39	171.27	169.30
77.50°	128.96	130.45	127.84	121.65	119.31	120.51	126.59	131.90	128.96	130.45	127.84	121.65	119.31	120.51	126.59	131.90	128.96
80.00°	91.99	94.20	88.86	82.18	78.34	83.07	87.25	94.55	91.99	94.20	88.86	82.18	78.34	83.07	87.25	94.55	91.99
82.50°	57.96	61.37	51.21	49.89	48.02	48.85	54.41	60.60	57.96	61.37	51.21	49.89	48.02	48.85	54.41	60.60	57.96
85.00°	32.97	33.60	29.31	21.49	18.83	26.12	26.14	33.40	32.97	33.60	29.31	21.49	18.83	26.12	26.14	33.40	32.97
87.50°	14.42	15.01	9.79	9.74	11.29	10.75	13.48	14.28	14.42	15.01	9.79	9.74	11.29	10.75	13.48	14.28	14.42
90.00°	6.21	7.46	6.33	5.13	4.36	4.68	4.18	8.03	6.21	7.46	6.33	5.13	4.36	4.68	4.18	8.03	6.21
92.50°	4.12	3.50	3.47	3.74	3.54	3.54	3.65	4.24	4.12	3.50	3.47	3.74	3.54	3.54	3.65	4.24	4.12
95.00°	3.37	3.06	3.47	3.47	2.86	3.17	3.27	3.62	3.37	3.06	3.47	3.47	2.86	3.17	3.27	3.62	3.37
97.50°	3.24	2.89	3.48	3.48	3.09	3.11	3.22	3.21	3.24	2.89	3.48	3.48	3.09	3.11	3.22	3.21	3.24
100.00°	3.15	2.94	3.49	3.57	3.27	3.38	3.24	3.03	3.15	2.94	3.49	3.57	3.27	3.38	3.24	3.03	3.15
102.50°	3.07	3.01	3.47	3.54	3.24	3.75	3.38	3.01	3.07	3.01	3.47	3.54	3.24	3.75	3.38	3.01	3.07
105.00°	3.17	3.09	3.39	3.48	3.25	3.42	3.43	3.13	3.17	3.09	3.39	3.48	3.25	3.42	3.43	3.13	3.17

### 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>	3255	3255	3255	3255	3177	3177	3177	3177	3031	3031	3031	2897	2897	2897	2774	2774	2717
	<b>1</b>	2980	2852	2737	2633	2903	2787	2683	2588	2667	2581	2503	2557	2487	2422	2455	2399	2346
	<b>2</b>	2711	2488	2303	2148	2637	2434	2265	2121	2333	2191	2068	2240	2122	2018	2155	2057	2010
	<b>3</b>	2472	2185	1964	1787	2402	2140	1935	1770	2056	1880	1735	1977	1828	1702	1904	1778	1737
	<b>4</b>	2263	1936	1697	1514	2198	1898	1675	1502	1827	1633	1479	1760	1593	1457	1699	1554	1519
	<b>5</b>	2081	1730	1485	1304	2022	1698	1468	1295	1637	1434	1279	1581	1403	1263	1528	1372	1342
	<b>6</b>	1922	1557	1313	1138	1868	1530	1299	1132	1479	1273	1120	1430	1248	1108	1385	1223	1197
	<b>7</b>	1782	1412	1172	1004	1733	1389	1161	1000	1345	1140	991	1303	1119	982	1264	1099	1076
	<b>8</b>	1658	1288	1056	896	1614	1268	1047	892	1230	1029	885	1195	1012	879	1161	996	976
	<b>9</b>	1549	1182	958	806	1509	1165	950	803	1132	935	798	1101	921	792	1072	908	890
	<b>10</b>	1453	1091	874	730	1416	1076	868	728	1047	856	724	1020	844	719	995	832	817

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	32.1 fc	16.1 ft
6.5 ft	23.0 fc	19.0 ft
7.5 ft	17.2 fc	21.9 ft
8.0 ft	15.2 fc	23.4 ft
10.0 ft	9.7 fc	29.2 ft
12.0 ft	6.7 fc	35.1 ft
14.0 ft	4.9 fc	40.9 ft
16.0 ft	3.8 fc	46.8 ft
20.0 ft	2.4 fc	58.5 ft
24.0 ft	1.7 fc	70.2 ft
28.0 ft	1.2 fc	81.9 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	17398	17398	17398
<b>45.00°</b>	16207	16293	16296
<b>55.00°</b>	15499	15593	15446
<b>65.00°</b>	14257	14168	13905
<b>75.00°</b>	11735	11666	11112
<b>85.00°</b>	6787	6033	3876

### 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	21.7	23.3	22.0	23.6	23.9	21.6	23.2	22.0	23.6	23.9
	3H	23.4	24.9	23.8	25.2	25.6	23.3	24.7	23.7	25.1	25.5
	4H	24.0	25.4	24.4	25.7	26.1	23.9	25.2	24.3	25.6	26.0
	6H	24.4	25.7	24.8	26.0	26.5	24.2	25.5	24.6	25.8	26.2
	8H	24.5	25.7	24.9	26.1	26.5	24.3	25.5	24.7	25.9	26.3
	12H	24.5	25.7	25.0	26.1	26.6	24.3	25.4	24.7	25.8	26.3
4H	2H	22.3	23.7	22.7	24.0	24.4	22.2	23.6	22.6	24.0	24.4
	3H	24.2	25.4	24.7	25.8	26.2	24.1	25.3	24.6	25.7	26.1
	4H	25.0	26.0	25.4	26.4	26.9	24.8	25.8	25.3	26.3	26.7
	6H	25.5	26.4	25.9	26.8	27.3	25.2	26.1	25.7	26.6	27.1
	8H	25.6	26.4	26.1	26.9	27.4	25.3	26.2	25.8	26.6	27.1
	12H	25.7	26.4	26.2	26.9	27.4	25.4	26.1	25.8	26.6	27.1
8H	4H	25.2	26.1	25.7	26.5	27.0	25.1	25.9	25.6	26.4	26.9
	6H	25.8	26.5	26.3	27.0	27.5	25.6	26.3	26.1	26.8	27.3
	8H	26.0	26.6	26.5	27.1	27.6	25.7	26.3	26.2	26.9	27.4
	12H	26.1	26.7	26.6	27.2	27.8	25.8	26.3	26.3	26.8	27.4
12H	4H	25.2	26.0	25.7	26.5	27.0	25.1	25.9	25.6	26.3	26.8
	6H	25.8	26.5	26.4	26.9	27.5	25.6	26.3	26.2	26.7	27.3
	8H	26.1	26.6	26.6	27.1	27.7	25.8	26.3	26.3	26.8	27.4

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0