Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

LT03IND24 11L 35K DW xx xx MW

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

Test Number

SP-01546_1

Test Date

6/3/2022

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

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Summary of Results

Power

Input Watts	19 W

Lumen Output

Output Lumens	1369
Efficacy	72.06 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°	111°
90° - 270°	111°

IES File Header Contents

Keyword	Value
TEST	SP-01546_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	6/3/2022
ISSUEDATE	3/23/2023
LUMCAT	LT03IND24 11L 35K 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. 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

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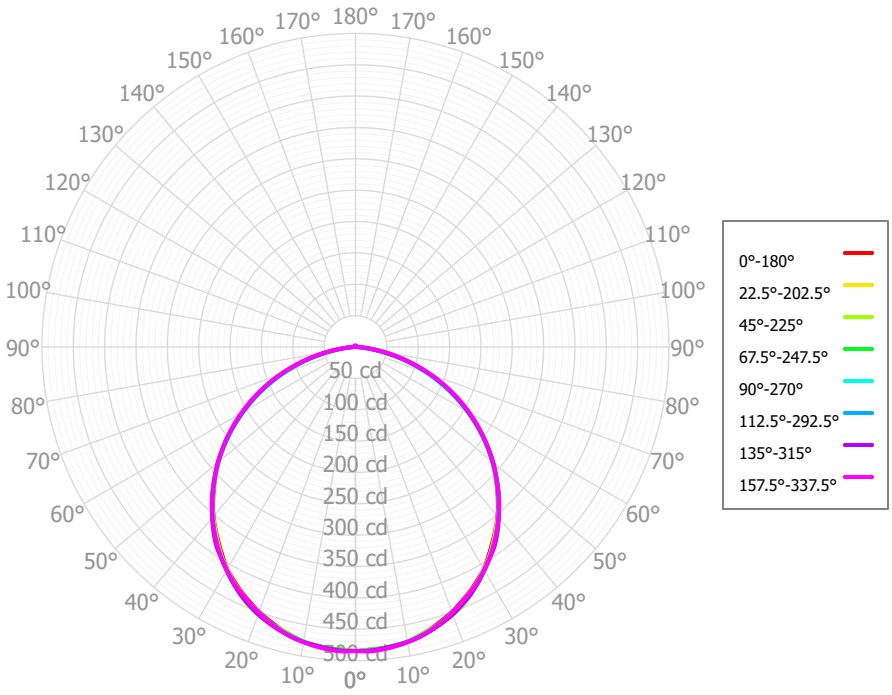
Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	46.63	3.41%	90.00° - 100.00°	2.01	0.15%
10.00° - 20.00°	131.57	9.61%	100.00° - 110.00°	1.75	0.13%
20.00° - 30.00°	199.45	14.57%	100.00° - 120.00°	3.45	0.25%
30.00° - 40.00°	240.06	17.53%	120.00° - 130.00°	1.52	0.11%
40.00° - 50.00°	247.43	18.07%	130.00° - 140.00°	1.31	0.10%
50.00° - 60.00°	221.19	16.16%	140.00° - 150.00°	1.12	0.08%
60.00° - 70.00°	164.81	12.04%	150.00° - 160.00°	0.84	0.06%
70.00° - 80.00°	87.99	6.43%	160.00° - 170.00°	0.50	0.04%
80.00° - 90.00°	19.13	1.40%	170.00° - 180.00°	0.17	0.01%
0.00° - 90.00°	1358.27	99.20%	0.00° - 180.00°	1369.19	100.00%

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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°	484.90	484.90	484.90	484.90	484.90	484.90	484.90	484.90	484.90	484.90	484.90	484.90	484.90	484.90	484.90	484.90	484.90
2.50°	483.38	484.93	483.01	483.54	485.78	484.97	484.94	485.88	483.38	484.93	483.01	483.54	485.78	484.97	484.94	485.88	483.38
5.00°	482.29	483.35	482.51	482.12	483.74	484.10	482.90	484.45	482.29	483.35	482.51	482.12	483.74	484.10	482.90	484.45	482.29
7.50°	479.92	480.78	480.78	480.47	481.23	480.98	480.55	481.84	479.92	480.78	480.78	480.47	481.23	480.98	480.55	481.84	479.92
10.00°	477.23	476.95	477.38	477.17	477.42	477.39	477.83	477.99	477.23	476.95	477.38	477.17	477.42	477.39	477.83	477.99	477.23
12.50°	471.34	472.49	470.79	473.72	472.86	472.17	473.64	473.31	471.34	472.49	470.79	473.72	472.86	472.17	473.64	473.31	471.34
15.00°	464.85	466.41	465.04	466.38	466.62	466.71	467.92	466.90	464.85	466.41	465.04	466.38	466.62	466.71	467.92	466.90	464.85
17.50°	457.29	459.68	460.63	458.87	459.63	460.18	461.25	459.56	457.29	459.68	460.63	458.87	459.63	460.18	461.25	459.56	457.29
20.00°	449.60	451.09	454.57	450.79	451.29	453.56	453.76	450.87	449.60	451.09	454.57	450.79	451.29	453.56	453.76	450.87	449.60
22.50°	440.16	441.91	446.42	442.66	442.45	443.77	444.87	441.60	440.16	441.91	446.42	442.66	442.45	443.77	444.87	441.60	440.16
25.00°	430.62	431.85	435.89	433.62	432.90	433.86	435.03	432.15	430.62	431.85	435.89	433.62	432.90	433.86	435.03	432.15	430.62
27.50°	419.89	421.59	422.88	424.17	422.38	422.45	423.44	422.63	419.89	421.59	422.88	424.17	422.38	422.45	423.44	422.63	419.89
30.00°	409.01	409.28	410.53	411.30	410.66	410.95	410.87	410.93	409.01	409.28	410.53	411.30	410.66	410.95	410.87	410.93	409.01
32.50°	394.71	396.66	398.75	398.27	397.86	398.18	398.81	398.67	394.71	396.66	398.75	398.27	397.86	398.18	398.81	398.67	394.71
35.00°	380.45	382.15	385.97	384.42	383.98	385.14	386.99	384.50	380.45	382.15	385.97	384.42	383.98	385.14	386.99	384.50	380.45
37.50°	366.63	367.45	372.47	370.16	369.37	370.18	371.77	369.99	366.63	367.45	372.47	370.16	369.37	370.18	371.77	369.99	366.63
40.00°	352.45	353.33	356.16	354.33	354.17	355.03	355.38	354.78	352.45	353.33	356.16	354.33	354.17	355.03	355.38	354.78	352.45
42.50°	335.99	339.18	338.25	338.07	337.99	338.93	338.33	339.49	335.99	339.18	338.25	338.07	337.99	338.93	338.33	339.49	335.99
45.00°	319.41	320.79	321.09	320.55	321.16	322.46	321.11	321.67	319.41	320.79	321.09	320.55	321.16	322.46	321.11	321.67	319.41
47.50°	302.32	302.46	304.28	302.90	303.34	304.63	303.93	303.70	302.32	302.46	304.28	302.90	303.34	304.63	303.93	303.70	302.32
50.00°	284.90	285.26	286.60	284.94	285.00	286.32	286.76	285.58	284.90	285.26	286.60	284.94	285.00	286.32	286.76	285.58	284.90
52.50°	266.42	267.79	268.60	266.36	266.08	266.65	267.72	267.43	266.42	267.79	268.60	266.36	266.08	266.65	267.72	267.43	266.42
55.00°	247.77	248.09	249.28	246.65	246.93	247.07	248.44	248.65	247.77	248.09	249.28	246.65	246.93	247.07	248.44	248.65	247.77
57.50°	228.74	228.32	229.58	226.68	226.60	227.67	228.24	229.76	228.74	228.32	229.58	226.68	226.60	227.67	228.24	229.76	228.74
60.00°	209.19	208.20	208.49	206.31	205.88	207.67	207.98	209.86	209.19	208.20	208.49	206.31	205.88	207.67	207.98	209.86	209.19
62.50°	188.62	188.05	187.12	186.08	184.87	186.61	187.90	189.88	188.62	188.05	187.12	186.08	184.87	186.61	187.90	189.88	188.62
65.00°	167.92	167.79	166.88	166.03	163.79	165.53	167.79	169.33	167.92	167.79	166.88	166.03	163.79	165.53	167.79	169.33	167.92
67.50°	147.04	147.23	146.80	145.19	142.69	144.45	147.08	148.59	147.04	147.23	146.80	145.19	142.69	144.45	147.08	148.59	147.04
70.00°	126.14	125.84	125.65	123.57	121.59	123.28	126.32	126.98	126.14	125.84	125.65	123.57	121.59	123.28	126.32	126.98	126.14
72.50°	105.21	104.82	104.43	102.23	100.85	102.02	104.94	105.74	105.21	104.82	104.43	102.23	100.85	102.02	104.94	105.74	105.21
75.00°	84.65	84.66	84.16	81.12	80.16	81.01	83.69	85.64	84.65	84.66	84.16	81.12	80.16	81.01	83.69	85.64	84.65
77.50°	64.48	65.22	63.92	60.83	59.66	60.26	63.30	65.95	64.48	65.22	63.92	60.83	59.66	60.26	63.30	65.95	64.48
80.00°	45.99	47.10	44.43	41.09	39.17	41.53	43.62	47.27	45.99	47.10	44.43	41.09	39.17	41.53	43.62	47.27	45.99
82.50°	28.98	30.68	25.61	24.94	24.01	24.43	27.21	30.30	28.98	30.68	25.61	24.94	24.01	24.43	27.21	30.30	28.98
85.00°	16.49	16.80	14.66	10.74	9.42	13.06	13.07	16.70	16.49	16.80	14.66	10.74	9.42	13.06	13.07	16.70	16.49
87.50°	7.21	7.51	4.90	4.87	5.64	5.37	6.74	7.14	7.21	7.51	4.90	4.87	5.64	5.37	6.74	7.14	7.21
90.00°	3.11	3.73	3.17	2.56	2.18	2.34	2.09	4.02	3.11	3.73	3.17	2.56	2.18	2.34	2.09	4.02	3.11
92.50°	2.06	1.75	1.74	1.87	1.77	1.77	1.82	2.12	2.06	1.75	1.74	1.87	1.77	1.77	1.82	2.12	2.06
95.00°	1.68	1.53	1.74	1.73	1.43	1.59	1.63	1.81	1.68	1.53	1.74	1.73	1.43	1.59	1.63	1.81	1.68
97.50°	1.62	1.45	1.74	1.74	1.55	1.56	1.61	1.60	1.62	1.45	1.74	1.74	1.55	1.56	1.61	1.60	1.62
100.00°	1.57	1.47	1.74	1.79	1.64	1.69	1.62	1.51	1.57	1.47	1.74	1.79	1.64	1.69	1.62	1.51	1.57
102.50°	1.54	1.51	1.74	1.77	1.62	1.87	1.69	1.50	1.54	1.51	1.74	1.77	1.62	1.87	1.69	1.50	1.54
105.00°	1.58	1.55	1.70	1.74	1.62	1.71	1.71	1.57	1.58	1.55	1.70	1.74	1.62	1.71	1.71	1.57	1.58

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Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

	ρfc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	ρcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	ρw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	1627	1627	1627	1627	1588	1588	1588	1588	1515	1515	1515	1448	1448	1448	1387	1387	1387	1358
	1	1490	1426	1368	1317	1452	1394	1341	1294	1334	1291	1251	1278	1243	1211	1227	1199	1173	1173
	2	1355	1244	1152	1074	1318	1217	1132	1060	1167	1095	1034	1120	1061	1009	1077	1028	985	1005
	3	1236	1093	982	894	1201	1070	967	885	1028	940	868	989	914	851	952	889	835	869
	4	1132	968	849	757	1099	949	838	751	913	816	740	880	796	728	849	777	717	759
RCR	5	1040	865	742	652	1011	849	734	648	819	717	640	790	701	632	764	686	624	671
	6	961	779	657	569	934	765	650	566	739	637	560	715	624	554	693	612	548	598
	7	891	706	586	502	866	694	581	500	672	570	495	652	560	491	632	550	487	538
	8	829	644	528	448	807	634	523	446	615	515	443	597	506	439	581	498	436	488
	9	775	591	479	403	755	583	475	401	566	468	399	551	461	396	536	454	393	445
	10	726	545	437	365	708	538	434	364	524	428	362	510	422	360	497	416	358	409

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	16.0 fc	16.1 ft
6.5 ft	11.5 fc	19.0 ft
7.5 ft	8.6 fc	21.9 ft
8.0 ft	7.6 fc	23.4 ft
10.0 ft	4.8 fc	29.2 ft
12.0 ft	3.4 fc	35.1 ft
14.0 ft	2.5 fc	40.9 ft
16.0 ft	1.9 fc	46.8 ft
20.0 ft	1.2 fc	58.5 ft
24.0 ft	0.8 fc	70.2 ft
28.0 ft	0.6 fc	81.9 ft

Average Luminaire Luminance [cd/m²]

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

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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

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