Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

LT03IND48 11L 35HK xx LW xx xx MW

Specline Linear, 1.8" aperture x 4' Long, Matte White Refl

Test Number

SP-01381_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

Lumen Output

Output Lumens	2802
Efficacy	77.83 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.88
Two luminaires, plane 90°	1.21
Four luminaires	1.69

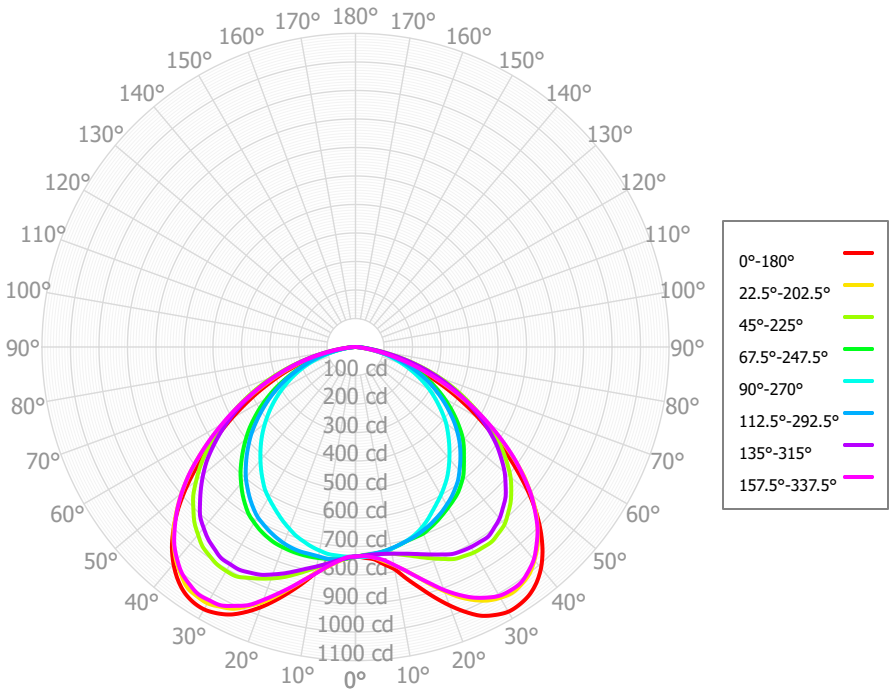
Full Beam Angle

0° - 180°	117°
90° - 270°	76°

IES File Header Contents

Keyword	Value
TEST	SP-01381_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	6/3/2022
ISSUEDATE	3/27/2023
LUMCAT	LT03IND48 11L 35HK xx LW xx xx MW
LUMINAIRE	Specline Linear, 1.8" aperture x 4' Long, Matte White Refl
OTHER	Wide Extruded Acrylic Lens, Batwing Distribution
OTHER	Data for 4' IND fixture, Ceiling mount
OTHER	76 Degree x 118 Degree Beam Angle
LAMP	N/A, Min. 90 CRI
LAMPCAT	N/A
OTHER	Reference project SL473
OTHER	11L designation for Spectrum linear product indicates 700 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°	72.69	2.59%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	225.18	8.04%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	389.21	13.89%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	517.16	18.46%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	557.92	19.91%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	493.10	17.60%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	347.81	12.41%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	169.13	6.04%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	29.78	1.06%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	2801.98	100.00%	0.00° - 180.00°	2801.98	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°	735.18	735.18	735.18	735.18	735.18	735.18	735.18	735.18	735.18	735.18	735.18	735.18	735.18	735.18	735.18	735.18	735.18
2.50°	740.32	735.02	730.23	732.08	737.53	742.20	741.76	738.98	743.24	743.04	743.51	742.91	736.34	731.11	731.72	734.60	740.32
5.00°	747.96	741.77	728.84	729.10	735.43	747.69	752.78	756.86	754.23	757.99	754.30	747.87	734.59	727.38	730.68	741.84	747.96
7.50°	768.99	757.98	731.50	724.24	730.52	749.50	766.95	778.40	778.53	780.22	767.28	750.03	732.64	724.36	732.29	754.00	768.99
10.00°	792.07	777.52	736.25	718.73	720.32	746.01	781.74	807.22	805.58	803.74	784.53	751.68	725.27	718.00	736.33	776.24	792.07
12.50°	833.22	803.44	746.39	711.59	710.87	743.87	796.84	837.21	847.52	838.59	805.59	752.73	716.89	710.70	742.92	802.47	833.22
15.00°	875.08	834.61	758.61	704.08	702.50	743.23	814.40	872.20	889.48	874.59	826.41	752.43	705.77	703.40	751.31	834.81	875.08
17.50°	920.53	873.39	773.60	699.92	690.98	739.56	832.83	907.58	931.51	914.15	847.08	750.84	694.37	696.09	762.30	869.52	920.53
20.00°	964.92	911.62	789.33	696.23	675.96	733.25	849.22	944.23	971.57	953.45	864.17	747.59	678.47	686.69	774.74	907.08	964.92
22.50°	1005.71	949.23	804.93	685.83	657.86	724.26	865.08	980.11	1006.60	984.22	879.43	743.11	662.39	677.08	787.94	940.35	1005.71
25.00°	1040.35	979.31	820.51	674.97	637.13	713.48	873.76	1002.09	1035.58	1013.33	893.48	734.88	644.79	665.42	801.45	969.66	1040.35
27.50°	1060.14	1002.79	826.79	662.64	617.88	701.02	881.29	1021.95	1053.17	1027.24	907.06	724.53	627.23	653.62	807.10	991.49	1060.14
30.00°	1072.44	1016.25	832.17	650.33	599.61	687.71	879.93	1026.27	1062.85	1038.54	907.45	711.11	610.02	639.66	810.50	1008.05	1072.44
32.50°	1071.35	1023.01	833.17	638.19	580.08	668.34	877.88	1027.71	1060.94	1036.61	904.27	696.37	591.72	625.42	811.39	1012.52	1071.35
35.00°	1062.50	1016.30	833.61	625.35	559.91	646.68	863.89	1015.95	1048.98	1029.64	893.66	674.73	567.99	608.52	811.79	1010.34	1062.50
37.50°	1042.85	1002.84	823.94	607.73	536.67	622.89	849.41	1000.45	1025.78	1005.92	881.76	650.96	543.94	590.62	799.56	994.60	1042.85
40.00°	1012.71	976.70	813.09	588.56	512.29	598.54	828.87	973.41	993.50	978.72	859.47	624.31	518.77	567.61	785.96	973.35	1012.71
42.50°	971.37	945.76	792.04	562.90	487.76	569.58	806.58	941.06	953.41	943.19	836.18	597.06	493.47	544.38	765.52	940.26	971.37
45.00°	920.05	903.98	769.73	537.98	463.19	539.85	771.37	896.93	902.82	902.07	804.45	566.05	467.83	520.43	744.59	903.77	920.05
47.50°	860.55	859.34	741.26	515.17	438.86	509.02	735.71	849.33	845.14	850.87	772.06	534.55	441.44	495.34	714.21	854.88	860.55
50.00°	791.95	803.47	710.20	489.66	414.57	478.10	698.00	795.81	779.91	795.65	729.53	501.84	413.71	467.44	683.15	803.56	791.95
52.50°	717.51	745.72	670.72	458.39	386.05	443.45	658.00	736.93	710.84	734.96	686.38	469.00	385.73	438.12	645.49	741.61	717.51
55.00°	643.61	675.41	628.65	426.49	357.17	408.75	610.90	671.08	639.76	670.30	637.81	432.81	357.39	406.23	606.65	678.51	643.61
57.50°	569.96	603.96	580.34	393.60	328.94	374.14	563.10	605.46	567.94	601.44	587.97	396.45	328.23	374.23	561.62	609.90	569.96
60.00°	499.60	535.76	529.98	360.01	300.63	339.44	513.74	540.06	502.56	534.91	531.91	358.04	298.20	342.10	514.97	541.14	499.60
62.50°	430.39	467.63	476.00	325.57	270.50	304.03	462.96	476.59	438.92	470.30	476.21	319.20	268.72	309.50	462.62	472.93	430.39
65.00°	364.32	399.92	422.53	290.46	240.32	268.37	409.78	414.63	379.82	407.41	421.70	277.79	239.71	276.41	410.45	404.81	364.32
67.50°	299.03	332.60	369.75	254.70	209.67	231.56	355.29	354.86	321.49	345.59	366.64	237.03	209.44	241.73	358.73	337.49	299.03
70.00°	241.95	268.47	314.68	218.43	179.08	195.80	299.13	296.40	270.18	288.44	310.26	198.71	178.37	205.72	305.43	271.28	241.95
72.50°	186.14	206.34	257.20	181.77	148.80	163.40	245.92	242.03	219.48	233.49	254.32	160.96	146.08	169.77	249.18	210.93	186.14
75.00°	138.46	153.73	199.03	147.45	118.46	130.47	195.66	189.48	170.65	180.92	199.16	124.77	113.21	133.85	193.68	153.13	138.46
77.50°	91.37	103.97	140.30	114.44	87.93	96.33	147.12	139.29	122.23	129.19	147.26	90.49	83.95	100.96	139.23	104.43	91.37
80.00°	59.25	63.22	91.25	81.51	59.71	64.64	99.93	89.86	81.67	86.11	99.75	59.95	55.96	69.55	90.36	61.26	59.25
82.50°	28.31	29.99	48.19	48.61	36.79	37.24	59.97	55.06	43.36	45.13	59.64	34.30	34.09	42.53	47.63	31.96	28.31
85.00°	14.44	14.44	23.19	26.95	18.93	17.57	24.32	23.49	23.06	24.24	27.25	15.91	13.76	17.08	21.35	11.13	14.44
87.50°	2.30	4.18	6.81	8.72	9.70	8.11	9.76	12.65	5.90	6.35	9.82	5.03	7.15	8.19	8.93	6.00	2.30
90.00°	2.43	3.13	2.32	4.09	4.03	3.05	4.55	4.52	4.05	3.53	4.54	2.93	2.67	3.33	3.40	2.84	2.43

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	3336	3336	3336	3336	3258	3258	3258	3258	3113	3113	3113	2981	2981	2981	2859	2859	2859	2802
	1	3054	2923	2806	2700	2978	2860	2753	2656	2741	2653	2572	2632	2560	2493	2531	2473	2419	2421
	2	2774	2543	2353	2193	2700	2490	2315	2167	2391	2243	2116	2299	2176	2068	2214	2112	2021	2066
	3	2523	2226	1996	1813	2453	2181	1968	1796	2097	1914	1764	2020	1864	1733	1948	1816	1703	1775
	4	2303	1963	1714	1524	2238	1926	1693	1513	1855	1652	1492	1789	1614	1471	1728	1576	1451	1541
RCR	5	2111	1745	1490	1301	2051	1714	1474	1294	1654	1442	1279	1598	1411	1265	1546	1382	1251	1352
	6	1943	1564	1309	1126	1889	1537	1296	1121	1486	1271	1110	1438	1246	1100	1393	1223	1090	1197
	7	1797	1411	1161	985	1747	1388	1150	982	1344	1130	974	1303	1110	967	1265	1092	959	1069
	8	1667	1281	1038	871	1623	1262	1030	868	1224	1013	863	1189	997	857	1156	982	852	962
	9	1554	1170	936	777	1513	1153	929	775	1121	915	771	1091	902	766	1062	889	762	872
	10	1453	1075	849	699	1416	1060	843	697	1032	832	694	1006	821	690	981	810	687	795

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	24.3 fc	18.1 ft
6.5 ft	17.4 fc	21.4 ft
7.5 ft	13.1 fc	24.7 ft
8.0 ft	11.5 fc	26.3 ft
10.0 ft	7.4 fc	32.9 ft
12.0 ft	5.1 fc	39.5 ft
14.0 ft	3.8 fc	46.1 ft
16.0 ft	2.9 fc	52.6 ft
20.0 ft	1.8 fc	65.8 ft
24.0 ft	1.3 fc	79.0 ft
28.0 ft	0.9 fc	92.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	13189	13189	13189
45.00°	23342	19529	11752
55.00°	20130	19662	11171
65.00°	15465	17936	10201
75.00°	9597	13795	8211
85.00°	2972	4773	3897

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	23.5	25.1	23.8	25.4	25.7	20.2	21.8	20.6	22.2	22.5
	3H	24.6	26.1	25.0	26.5	26.8	21.7	23.2	22.1	23.5	23.9
	4H	24.9	26.4	25.3	26.7	27.1	22.2	23.6	22.6	23.9	24.3
	6H	25.1	26.4	25.5	26.7	27.1	22.5	23.8	22.9	24.1	24.5
	8H	25.1	26.3	25.5	26.7	27.1	22.5	23.8	22.9	24.2	24.6
	12H	25.1	26.2	25.5	26.6	27.1	22.5	23.7	23.0	24.1	24.5
4H	2H	24.0	25.4	24.4	25.8	26.1	21.7	23.1	22.1	23.4	23.8
	3H	25.4	26.6	25.8	27.0	27.4	23.2	24.4	23.6	24.8	25.2
	4H	25.8	26.9	26.2	27.3	27.7	23.7	24.8	24.2	25.2	25.6
	6H	26.0	26.9	26.4	27.4	27.8	24.1	25.0	24.5	25.4	25.9
	8H	26.0	26.9	26.5	27.3	27.8	24.1	25.0	24.6	25.4	25.9
	12H	26.0	26.8	26.5	27.2	27.7	24.1	24.9	24.6	25.4	25.9
8H	4H	26.0	26.9	26.5	27.3	27.8	24.2	25.1	24.7	25.6	26.0
	6H	26.3	27.0	26.8	27.5	27.9	24.6	25.3	25.1	25.8	26.3
	8H	26.3	26.9	26.8	27.4	27.9	24.7	25.4	25.2	25.9	26.3
	12H	26.3	26.9	26.8	27.3	27.9	24.8	25.3	25.3	25.8	26.4
12H	4H	26.0	26.8	26.5	27.3	27.8	24.3	25.1	24.8	25.5	26.0
	6H	26.3	26.9	26.8	27.4	27.9	24.7	25.4	25.2	25.8	26.3
	8H	26.3	26.9	26.8	27.4	27.9	24.8	25.4	25.3	25.9	26.4

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0