

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

LT03IND24 11L 35K LA xx xx MW

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

Test Number

SP-01545_1

Test Date

6/3/2022

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

Summary of Results

Power

Input Watts	19 W
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Lumen Output

Output Lumens	1713
Efficacy	90.17 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.24
Two luminaires, plane 90°	1.18
Four luminaires	1.18

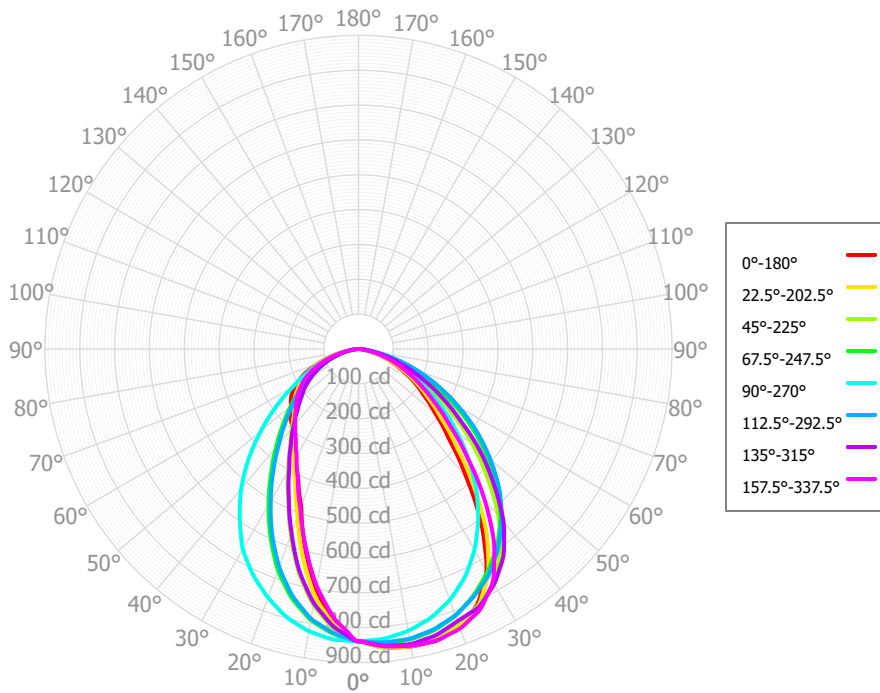
Full Beam Angle

0° - 180°	66°
90° - 270°	92°

IES File Header Contents

Keyword	Value
TEST	SP-01545_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	6/3/2022
ISSUEDATE	3/23/2023
LUMCAT	LT03IND24 11L 35K 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 deg x 96 deg Beam Angle
LAMP	N/A, Min. 80 CRI
LAMPCAT	N/A
OTHER	Reference project SL473
OTHER	11L designation for Spectrum linear product indicates 868 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°	79.31	4.63%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	212.98	12.43%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	300.28	17.53%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	329.48	19.23%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	300.23	17.52%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	238.90	13.94%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	160.87	9.39%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	75.84	4.43%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	15.30	0.89%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1713.19	100.00%	0.00° - 180.00°	1713.19	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°	839.10	839.10	839.10	839.10	839.10	839.10	839.10	839.10	839.10	839.10	839.10	839.10	839.10	839.10	839.10	839.10	839.10
2.50°	849.78	849.79	849.48	843.18	836.97	828.99	820.33	808.74	815.36	816.98	823.29	830.18	837.99	842.09	847.05	847.89	849.78
5.00°	860.45	860.48	859.86	847.26	834.84	818.87	801.56	778.38	791.61	794.87	807.47	821.25	836.88	845.08	855.00	856.67	860.45
7.50°	863.86	863.59	860.47	847.11	828.17	802.33	770.86	734.56	745.15	758.31	776.40	805.36	829.58	844.74	857.56	860.91	863.86
10.00°	867.26	866.70	861.07	846.97	821.50	785.78	740.15	690.75	698.69	721.75	745.33	789.46	822.28	844.40	860.13	865.15	867.26
12.50°	866.81	864.43	858.30	841.62	810.38	759.44	699.01	638.79	645.07	670.27	704.26	764.71	809.59	838.72	855.71	865.50	866.81
15.00°	866.37	862.16	855.52	836.27	799.27	733.10	657.87	586.83	591.46	618.79	663.18	739.95	796.89	833.04	851.30	865.86	866.37
17.50°	858.14	854.30	845.70	825.50	782.79	699.35	609.83	537.48	536.37	565.11	615.43	707.94	777.99	823.04	841.31	859.68	858.14
20.00°	849.91	846.45	835.87	814.73	766.30	665.60	561.78	488.14	481.29	511.42	567.68	675.92	759.10	813.04	831.32	853.49	849.91
22.50°	828.82	830.17	824.34	797.79	744.26	626.21	517.44	450.09	445.67	469.99	522.19	636.36	737.37	798.29	824.18	839.38	828.82
25.00°	807.72	813.89	812.82	780.85	722.21	586.82	473.10	412.04	410.06	428.56	476.71	596.80	715.63	783.53	817.05	825.27	807.72
27.50°	771.42	779.35	793.84	760.25	693.91	545.30	435.43	383.74	385.49	400.20	440.58	556.37	689.81	765.63	797.92	798.34	771.42
30.00°	735.12	744.80	774.87	739.64	665.62	503.78	397.77	355.43	360.93	371.84	404.45	515.93	663.99	747.73	778.79	771.41	735.12
32.50°	675.57	692.17	742.32	715.88	632.36	465.07	368.38	334.66	339.79	349.53	372.87	476.85	629.00	723.20	751.97	724.84	675.57
35.00°	616.03	639.54	709.77	692.11	599.10	426.36	338.99	313.89	318.65	327.21	341.28	437.76	594.02	698.66	725.15	678.26	616.03
37.50°	549.23	577.47	667.23	663.18	562.17	390.58	314.49	298.43	306.53	310.09	319.23	402.61	558.92	669.14	686.40	620.14	549.23
40.00°	482.44	515.41	624.70	634.25	525.25	354.80	290.00	282.98	294.40	292.97	297.18	367.47	523.81	639.62	647.66	562.02	482.44
42.50°	426.21	457.63	574.53	598.86	485.89	325.36	269.08	269.37	285.61	276.99	276.51	336.84	484.91	605.97	598.47	502.76	426.21
45.00°	369.98	399.84	524.36	563.47	446.53	295.92	248.15	255.76	276.81	261.00	255.84	306.22	446.00	572.32	549.29	443.50	369.98
47.50°	329.12	355.68	476.69	523.18	406.16	270.34	230.90	243.90	265.01	249.15	239.41	279.25	405.45	533.48	502.33	393.65	329.12
50.00°	288.26	311.52	429.02	482.89	365.79	244.75	213.65	232.05	253.21	237.30	222.98	252.28	364.89	494.63	455.36	343.80	288.26
52.50°	257.60	277.68	382.56	441.86	329.01	222.06	199.36	220.20	244.51	227.14	204.91	229.73	326.90	454.84	405.82	305.03	257.60
55.00°	226.94	243.82	336.09	400.83	292.23	199.37	185.06	208.35	235.82	216.97	186.85	207.17	288.91	415.06	356.28	266.26	226.94
57.50°	203.37	216.36	295.76	357.88	256.54	178.14	168.65	194.72	222.52	204.06	173.36	185.86	253.26	373.60	315.56	235.37	203.37
60.00°	179.80	188.89	255.44	314.93	220.84	156.91	152.25	181.09	209.23	191.14	159.87	164.54	217.62	332.15	274.84	204.47	179.80
62.50°	155.65	163.24	221.35	273.35	191.29	137.15	136.96	164.31	190.66	176.16	142.71	145.84	190.22	292.51	237.69	178.34	155.65
65.00°	131.49	137.60	187.27	231.76	161.73	117.38	121.67	147.54	172.10	161.17	125.55	127.13	162.81	252.87	200.54	152.20	131.49
67.50°	111.83	115.48	156.16	195.35	136.41	101.98	104.03	128.36	148.33	141.81	111.14	110.46	138.15	215.54	169.21	129.60	111.83
70.00°	92.17	93.36	125.06	158.93	111.10	86.57	86.38	109.17	124.56	122.46	96.74	93.79	113.49	178.20	137.87	107.00	92.17
72.50°	72.96	74.77	98.48	125.49	87.91	70.34	70.82	89.00	102.87	101.68	78.73	77.41	93.54	143.25	110.05	86.22	72.96
75.00°	53.75	56.18	71.90	92.05	64.71	54.11	55.24	68.83	81.19	80.90	60.73	61.04	73.58	108.29	82.23	65.43	53.75
77.50°	36.47	40.42	50.98	64.91	47.04	38.65	41.68	50.20	58.07	60.76	45.55	46.37	51.30	81.09	61.08	48.01	36.47
80.00°	19.20	24.65	30.06	37.76	29.37	23.19	28.12	31.58	34.95	40.62	30.38	31.70	29.01	53.87	39.93	30.59	19.20
82.50°	12.85	16.02	19.31	24.12	20.38	15.48	17.98	20.57	22.49	27.25	19.72	21.65	19.56	36.34	25.57	20.45	12.85
85.00°	6.50	7.40	8.55	10.48	11.38	7.77	7.84	9.55	10.04	13.87	9.05	11.59	10.10	18.80	11.21	10.30	6.50
87.50°	4.69	5.23	5.70	6.97	7.32	5.74	5.75	6.40	6.21	9.24	6.39	7.85	6.45	11.99	7.47	7.10	4.69
90.00°	2.88	3.07	2.85	3.47	3.26	3.71	3.66	3.25	2.38	4.60	3.72	4.12	2.80	5.18	3.74	3.90	2.88

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

RCR	ptc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	pcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	0	2040	2040	2040	2040	1992	1992	1992	1992	1904	1904	1904	1823	1823	1823	1748	1748	1713
	1	1886	1813	1748	1690	1840	1775	1716	1662	1703	1654	1610	1637	1598	1561	1576	1544	1512
	2	1732	1604	1499	1411	1688	1573	1476	1394	1513	1432	1362	1458	1391	1331	1407	1352	1323
	3	1592	1427	1300	1198	1551	1401	1283	1188	1351	1250	1167	1305	1219	1147	1262	1190	1164
	4	1468	1278	1140	1034	1430	1256	1127	1027	1214	1102	1013	1176	1078	1000	1140	1056	1033
	5	1358	1153	1010	904	1323	1134	1000	899	1099	981	890	1066	962	881	1035	945	925
	6	1260	1047	903	800	1229	1031	895	797	1001	880	790	973	865	783	947	851	834
	7	1174	956	814	715	1145	942	808	713	917	796	708	893	784	703	870	773	758
	8	1097	878	740	645	1071	866	734	643	844	724	639	823	715	636	804	706	693
	9	1028	810	676	586	1005	800	672	584	781	664	581	763	656	579	746	648	636
	10	967	751	622	535	946	742	618	534	726	611	532	710	605	530	695	598	588

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	27.7 fc	7.4 ft
6.5 ft	19.9 fc	8.7 ft
7.5 ft	14.9 fc	10.0 ft
8.0 ft	13.1 fc	10.7 ft
10.0 ft	8.4 fc	13.4 ft
12.0 ft	5.8 fc	16.0 ft
14.0 ft	4.3 fc	18.7 ft
16.0 ft	3.3 fc	21.4 ft
20.0 ft	2.1 fc	26.7 ft
24.0 ft	1.5 fc	32.1 ft
28.0 ft	1.1 fc	37.4 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	30107	30107	30107
45.00°	18773	26607	22657
55.00°	14196	21024	18281
65.00°	11163	15899	13731
75.00°	7451	9968	8971
85.00°	2675	3519	4683

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	20.8	22.3	21.2	22.7	23.0	19.9	21.5	20.3	21.8	22.1
	3H	22.0	23.4	22.4	23.7	24.1	21.5	22.9	21.9	23.2	23.6
	4H	22.4	23.6	22.8	24.0	24.4	22.1	23.3	22.5	23.7	24.1
	6H	22.5	23.7	22.9	24.0	24.4	22.3	23.5	22.7	23.9	24.3
	8H	22.5	23.6	22.9	24.0	24.4	22.4	23.5	22.8	23.9	24.3
	12H	22.5	23.6	22.9	23.9	24.4	22.4	23.5	22.8	23.9	24.3
4H	2H	21.7	23.0	22.1	23.4	23.7	20.4	21.6	20.8	22.0	22.4
	3H	23.1	24.1	23.5	24.5	24.9	22.1	23.2	22.5	23.6	24.0
	4H	23.5	24.4	23.9	24.8	25.3	22.7	23.7	23.2	24.1	24.5
	6H	23.7	24.5	24.1	24.9	25.4	23.1	23.9	23.5	24.4	24.8
	8H	23.7	24.4	24.1	24.9	25.4	23.2	23.9	23.6	24.4	24.8
	12H	23.7	24.4	24.1	24.8	25.3	23.2	23.9	23.7	24.4	24.8
8H	4H	23.8	24.6	24.3	25.0	25.5	22.9	23.7	23.4	24.2	24.6
	6H	24.0	24.7	24.5	25.2	25.6	23.3	24.0	23.8	24.5	24.9
	8H	24.1	24.6	24.6	25.2	25.6	23.4	24.0	24.0	24.5	25.0
	12H	24.1	24.6	24.6	25.1	25.7	23.5	24.0	24.0	24.5	25.1
12H	4H	23.8	24.5	24.3	25.0	25.4	22.9	23.6	23.4	24.1	24.6
	6H	24.1	24.6	24.6	25.1	25.6	23.4	23.9	23.9	24.4	24.9
	8H	24.1	24.6	24.6	25.1	25.7	23.5	24.0	24.0	24.5	25.1

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0