Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

LT03IND24 25L 35HK xx LA xx xx MW

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

Test Number

SP-01377_3

Test Date

6/3/2022

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

Summary of Results

Power

Input Watts	40 W

Lumen Output

Output Lumens	3141
Efficacy	78.53 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.4
Two luminaires, plane 90°	1.15
Four luminaires	1.24

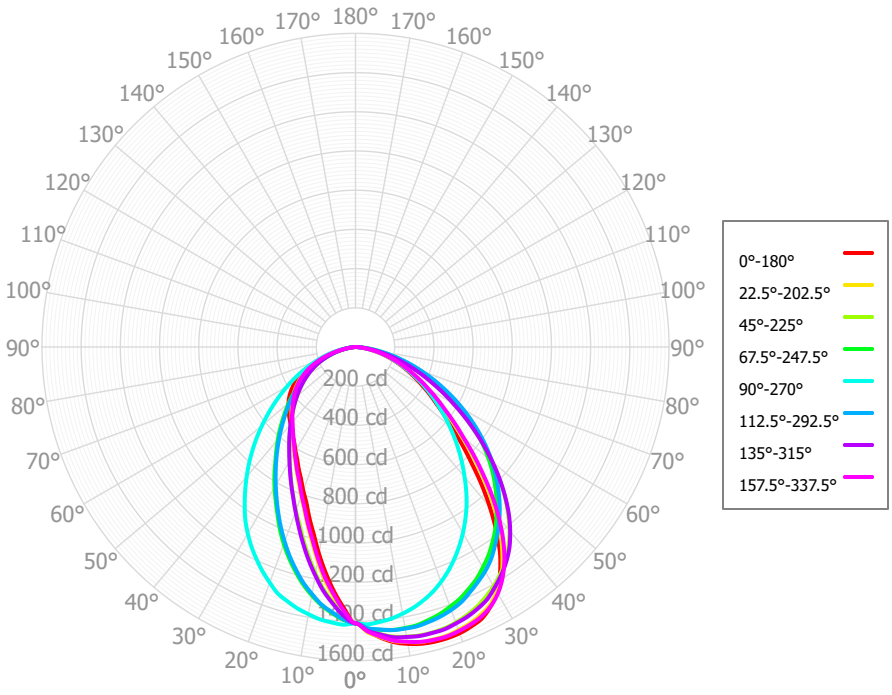
Full Beam Angle

0° - 180°	67°
90° - 270°	87°

IES File Header Contents

Keyword	Value
TEST	SP-01377_3
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	6/3/2022
ISSUEDATE	3/27/2023
LUMCAT	LT03IND24 25L 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 88 Degree Beam Angle
LAMP	N/A, Min. 90 CRI
LAMPCAT	N/A
OTHER	Reference project SL473
OTHER	25L designation for Spectrum linear product indicates 1570 Source Lm/Ft.
OTHER	CCT Output Multipliers: 40DK x 1.0, 30DK x 1.0
OTHER	Total Luminaire Watts is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	90
_LAMPMULT	05L x 0.22, 11L x 0.46, 20L x 0.82

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	133.26	4.24%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	359.60	11.45%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	521.54	16.60%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	595.65	18.96%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	563.24	17.93%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	458.18	14.59%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	317.94	10.12%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	160.19	5.10%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	31.42	1.00%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	3141.01	100.00%	0.00° - 180.00°	3141.01	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°	1410.18	1410.18	1410.18	1410.18	1410.18	1410.18	1410.18	1410.18	1410.18	1410.18	1410.18	1410.18	1410.18	1410.18	1410.18	1410.18	1410.18
2.50°	1452.88	1457.91	1448.16	1438.14	1416.64	1392.03	1373.83	1347.18	1335.67	1352.84	1367.13	1394.32	1418.41	1436.57	1450.46	1453.57	1452.88
5.00°	1489.83	1486.84	1471.85	1448.76	1408.59	1359.62	1316.14	1268.30	1252.78	1277.81	1309.33	1363.89	1410.58	1447.38	1472.99	1483.96	1489.83
7.50°	1519.79	1513.77	1491.16	1456.73	1398.35	1326.17	1255.52	1187.77	1163.01	1199.54	1247.90	1329.34	1401.44	1457.17	1494.32	1511.65	1519.79
10.00°	1538.27	1528.60	1501.23	1456.09	1382.01	1279.68	1183.32	1098.62	1072.11	1109.04	1173.82	1286.61	1384.42	1459.26	1502.70	1527.71	1538.27
12.50°	1551.20	1542.60	1507.96	1453.99	1363.05	1231.81	1110.41	1010.46	980.93	1021.62	1097.84	1239.28	1366.76	1459.52	1510.52	1541.16	1551.20
15.00°	1557.18	1544.62	1509.39	1442.13	1338.78	1175.49	1035.53	935.56	905.98	942.34	1023.66	1185.08	1343.36	1451.59	1511.02	1546.95	1557.18
17.50°	1558.23	1545.49	1505.97	1429.44	1310.42	1118.20	962.76	862.67	833.25	869.47	949.60	1128.79	1319.09	1442.19	1510.38	1548.93	1558.23
20.00°	1554.42	1536.83	1496.52	1410.51	1275.70	1057.00	894.35	803.43	779.61	809.35	889.11	1070.07	1279.52	1428.16	1501.00	1542.53	1554.42
22.50°	1543.82	1526.57	1482.34	1391.09	1236.94	995.47	830.95	746.98	727.27	754.28	828.95	1007.74	1239.37	1409.67	1490.36	1533.04	1543.82
25.00°	1528.08	1508.76	1463.66	1363.94	1193.35	933.00	775.27	702.10	685.77	706.77	773.37	942.17	1194.97	1381.17	1474.01	1518.47	1528.08
27.50°	1493.10	1484.86	1438.79	1335.77	1146.34	872.04	722.67	658.82	644.90	663.35	718.88	882.32	1149.51	1352.22	1453.28	1492.71	1493.10
30.00°	1447.08	1441.68	1409.43	1299.71	1096.20	814.09	673.72	620.05	612.37	624.64	671.94	826.40	1099.33	1322.51	1419.13	1453.01	1447.08
32.50°	1372.82	1387.44	1374.16	1262.23	1043.21	758.12	629.41	583.90	580.94	590.64	626.55	769.71	1046.51	1285.79	1382.49	1396.98	1372.82
35.00°	1286.14	1307.66	1335.53	1218.12	988.16	705.25	589.42	553.31	556.69	560.91	587.66	712.61	985.61	1239.88	1340.23	1324.89	1286.14
37.50°	1179.48	1219.75	1282.34	1172.05	928.48	654.13	551.71	524.85	533.62	533.18	549.62	663.08	924.77	1192.21	1290.49	1237.64	1179.48
40.00°	1066.54	1117.69	1223.01	1119.73	866.28	605.12	515.61	499.79	515.37	506.82	514.12	616.52	864.05	1142.76	1228.14	1138.95	1066.54
42.50°	952.36	1012.97	1151.86	1066.01	805.53	559.00	481.94	476.63	497.58	483.55	480.01	570.90	803.36	1088.69	1158.72	1033.01	952.36
45.00°	837.92	904.73	1077.18	1009.09	745.37	515.53	449.57	455.75	481.09	461.88	448.90	525.53	742.71	1031.06	1080.21	922.93	837.92
47.50°	739.09	802.35	994.06	949.79	685.27	474.90	419.24	434.73	464.22	441.03	418.44	484.53	682.27	971.03	998.16	819.99	739.09
50.00°	642.28	705.90	909.21	886.42	625.19	436.31	389.75	413.58	446.60	420.50	389.01	444.32	622.10	909.56	912.51	720.18	642.28
52.50°	571.98	621.81	824.02	821.00	568.17	399.42	361.49	392.23	427.28	398.45	360.51	405.69	564.01	843.06	826.46	636.52	571.98
55.00°	503.28	547.60	738.80	752.82	511.74	363.46	333.59	370.73	405.29	375.97	333.18	367.22	507.98	774.32	740.09	557.93	503.28
57.50°	448.15	482.23	657.17	684.49	460.06	329.07	306.14	346.49	380.46	351.23	305.95	333.43	454.55	704.10	656.90	493.04	448.15
60.00°	393.70	422.24	575.85	615.99	408.88	295.32	278.76	320.73	352.18	326.09	278.83	299.81	403.12	633.40	575.57	431.01	393.70
62.50°	347.31	369.50	502.90	547.93	360.45	262.74	251.38	292.72	320.25	298.50	250.81	267.29	354.23	563.02	501.21	378.01	347.31
65.00°	301.54	320.04	430.92	480.22	312.27	230.49	223.98	263.75	284.93	270.65	222.12	234.91	306.82	492.72	429.96	326.18	301.54
67.50°	259.52	273.96	369.14	413.44	268.88	198.84	195.27	231.24	247.20	237.00	192.80	203.74	262.50	425.52	365.65	280.53	259.52
70.00°	218.16	229.04	308.27	347.23	225.95	167.32	166.49	197.66	207.72	203.13	163.13	172.78	219.58	358.74	303.61	235.26	218.16
72.50°	179.28	187.42	252.52	286.52	187.44	137.82	137.22	161.63	168.05	167.94	134.10	142.88	180.89	296.26	247.45	193.15	179.28
75.00°	141.63	146.56	198.59	228.34	149.27	108.54	108.10	125.11	128.28	132.57	105.33	113.17	143.56	234.07	192.58	151.40	141.63
77.50°	107.34	110.57	151.47	174.21	112.94	81.10	80.40	90.08	90.39	95.56	77.56	84.14	108.85	179.08	143.76	113.94	107.34
80.00°	74.96	75.25	106.28	121.42	78.49	53.92	53.54	55.22	53.26	60.10	50.08	56.90	74.71	124.86	95.75	77.74	74.96
82.50°	46.39	47.42	66.12	78.71	50.64	33.43	31.13	30.29	28.85	32.51	29.26	34.02	46.90	80.37	60.34	49.09	46.39
85.00°	23.79	20.15	33.18	38.35	26.62	14.22	12.34	6.34	8.26	10.16	9.83	16.09	19.93	39.23	25.90	23.79	23.79
87.50°	10.13	10.53	14.03	19.13	12.11	7.17	6.10	3.58	3.34	5.25	4.81	7.05	10.21	18.76	13.13	11.14	10.13
90.00°	2.41	1.58	2.36	2.86	2.41	1.26	1.53	1.06	1.50	1.79	1.54	1.74	1.56	2.22	1.35	1.78	2.41

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	3739	3739	3739	3739	3652	3652	3652	3652	3490	3490	3490	3342	3342	3342	3205	3205	3205	3141
	1	3447	3310	3188	3077	3363	3240	3128	3027	3107	3016	2932	2986	2911	2842	2874	2814	2758	2755
	2	3157	2917	2718	2551	3076	2858	2676	2521	2748	2595	2463	2647	2519	2407	2553	2448	2354	2395
	3	2895	2585	2345	2153	2819	2536	2313	2134	2444	2253	2097	2359	2197	2061	2280	2143	2026	2097
	4	2664	2308	2047	1848	2594	2267	2023	1835	2189	1978	1810	2117	1934	1786	2051	1893	1763	1852
RCR	5	2459	2075	1807	1609	2395	2041	1788	1600	1975	1753	1583	1914	1719	1566	1858	1687	1550	1652
	6	2279	1879	1610	1417	2221	1850	1596	1411	1794	1568	1399	1742	1541	1387	1694	1515	1376	1484
	7	2120	1712	1447	1262	2067	1687	1436	1258	1639	1413	1249	1595	1392	1240	1553	1371	1231	1344
	8	1978	1569	1311	1134	1930	1547	1302	1131	1507	1283	1124	1468	1266	1117	1432	1249	1111	1225
	9	1852	1445	1195	1027	1809	1427	1188	1024	1391	1173	1019	1358	1158	1014	1327	1144	1009	1123
	10	1740	1337	1097	936	1700	1321	1090	934	1291	1078	930	1262	1065	926	1235	1054	923	1035

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	46.6 fc	7.8 ft
6.5 ft	33.4 fc	9.2 ft
7.5 ft	25.1 fc	10.6 ft
8.0 ft	22.0 fc	11.3 ft
10.0 ft	14.1 fc	14.2 ft
12.0 ft	9.8 fc	17.0 ft
14.0 ft	7.2 fc	19.8 ft
16.0 ft	5.5 fc	22.7 ft
20.0 ft	3.5 fc	28.4 ft
24.0 ft	2.4 fc	34.0 ft
28.0 ft	1.8 fc	39.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	50597	50597	50597
45.00°	42517	54658	37821
55.00°	31482	46215	32011
65.00°	25600	36584	26512
75.00°	19634	27531	20693
85.00°	9795	13659	10960

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	24.0	25.6	24.4	25.9	26.2	21.9	23.5	22.3	23.8	24.1
	3H	25.4	26.8	25.8	27.1	27.5	23.7	25.1	24.1	25.4	25.8
	4H	25.8	27.1	26.2	27.5	27.9	24.3	25.6	24.7	26.0	26.4
	6H	26.1	27.3	26.5	27.7	28.1	24.7	25.9	25.1	26.3	26.7
	8H	26.2	27.3	26.6	27.7	28.1	24.8	26.0	25.3	26.4	26.8
	12H	26.2	27.3	26.6	27.7	28.1	24.9	26.0	25.3	26.4	26.8
4H	2H	25.0	26.3	25.4	26.7	27.0	22.3	23.7	22.7	24.0	24.4
	3H	26.5	27.6	26.9	28.0	28.4	24.3	25.4	24.7	25.8	26.2
	4H	27.0	28.0	27.4	28.4	28.8	25.0	26.0	25.4	26.4	26.8
	6H	27.3	28.2	27.8	28.6	29.1	25.5	26.3	25.9	26.8	27.2
	8H	27.4	28.2	27.9	28.6	29.1	25.6	26.4	26.1	26.8	27.3
	12H	27.4	28.2	27.9	28.6	29.1	25.7	26.4	26.1	26.8	27.3
8H	4H	27.4	28.2	27.9	28.6	29.1	25.2	26.0	25.6	26.4	26.9
	6H	27.8	28.5	28.3	28.9	29.4	25.7	26.4	26.2	26.8	27.3
	8H	27.9	28.5	28.4	29.0	29.5	25.8	26.4	26.4	26.9	27.4
	12H	28.0	28.5	28.5	29.0	29.5	25.9	26.5	26.4	27.0	27.5
12H	4H	27.4	28.1	27.9	28.6	29.1	25.2	25.9	25.6	26.4	26.8
	6H	27.9	28.5	28.4	28.9	29.5	25.7	26.3	26.2	26.8	27.3
	8H	28.0	28.5	28.5	29.0	29.6	25.9	26.4	26.4	26.9	27.5

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0