

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

LT03IND24 20L 35HK xx LA xx xx MW
Specline Linear, 1.8" aperture x 2' Long, Matte White Refl

Test Number

SP-01377_2

Test Date

6/3/2022

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

Summary of Results

Power

Input Watts	32 W
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Lumen Output

Output Lumens	2530
Efficacy	79.06 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.12
Two luminaires, plane 90°	1.1
Four luminaires	1.19

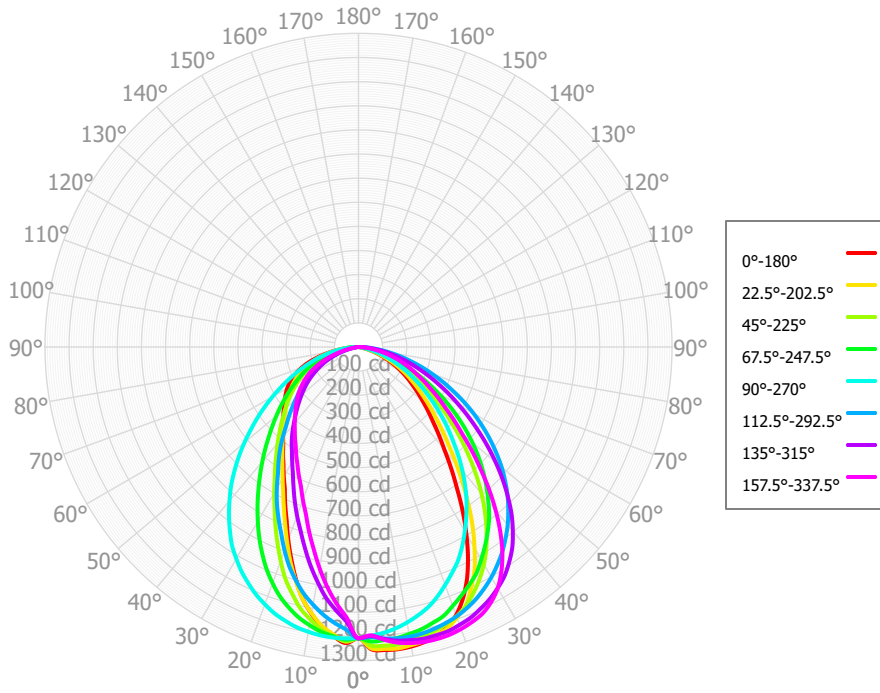
Full Beam Angle

0° - 180°	67°
90° - 270°	91°

IES File Header Contents

Keyword	Value
TEST	SP-01377_2
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	6/3/2022
ISSUEDATE	3/27/2023
LUMCAT	LT03IND24 20L 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	67 Degree x 85 Degree Beam Angle
LAMP	N/A, Min. 90 CRI
LAMPCAT	N/A
OTHER	Reference project SL473
OTHER	20L designation for Spectrum linear product indicates 1265 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°	114.79	4.54%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	310.77	12.28%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	436.78	17.26%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	475.10	18.78%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	437.08	17.28%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	354.08	14.00%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	245.78	9.71%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	124.55	4.92%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	31.04	1.23%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	2529.98	100.00%	0.00° - 180.00°	2529.98	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°	1207.66	1207.66	1207.66	1207.66	1207.66	1207.66	1207.66	1207.66	1207.66	1207.66	1207.66	1207.66	1207.66	1207.66	1207.66	1207.66	1207.66
2.50°	1255.33	1251.51	1239.82	1222.47	1198.33	1173.12	1139.89	1123.34	1228.72	1222.23	1221.92	1214.53	1209.71	1204.67	1200.14	1197.09	1255.33
5.00°	1261.38	1256.49	1243.18	1220.30	1189.78	1148.19	1093.95	1065.23	1202.31	1195.97	1203.08	1203.92	1209.55	1213.15	1214.76	1218.66	1261.38
7.50°	1263.80	1260.53	1243.82	1217.29	1177.05	1119.45	1045.92	1001.33	1170.51	1166.08	1182.26	1191.06	1206.16	1218.46	1228.59	1236.28	1263.80
10.00°	1261.15	1255.41	1237.48	1208.69	1160.04	1084.88	985.76	930.72	1123.08	1121.31	1147.68	1171.07	1198.96	1219.69	1234.12	1246.22	1261.15
12.50°	1254.10	1249.86	1229.70	1199.55	1139.72	1047.95	924.79	858.55	1069.97	1071.16	1111.09	1148.20	1189.76	1216.96	1239.26	1252.74	1254.10
15.00°	1242.07	1237.01	1218.95	1185.00	1116.59	1002.26	860.56	791.78	999.60	1004.85	1060.26	1118.14	1175.11	1210.11	1237.92	1253.93	1242.07
17.50°	1218.24	1223.28	1205.71	1170.04	1085.93	953.89	798.80	725.86	924.54	936.58	1008.21	1084.06	1158.23	1200.63	1235.66	1251.43	1218.24
20.00°	1183.32	1193.90	1188.39	1142.64	1050.13	896.76	744.63	674.37	851.25	863.82	943.30	1042.07	1135.42	1188.88	1225.90	1244.19	1183.32
22.50°	1130.40	1161.51	1162.89	1115.22	1013.69	837.63	690.77	624.17	778.32	794.70	878.13	996.34	1110.75	1172.59	1214.94	1233.28	1130.40
25.00°	1063.78	1103.55	1126.68	1087.37	976.89	784.55	637.65	586.03	719.17	732.41	815.27	944.75	1080.93	1153.14	1197.49	1218.54	1063.78
27.50°	983.18	1042.25	1085.94	1058.05	931.32	732.42	589.33	548.44	661.83	676.29	753.06	891.12	1049.88	1128.93	1178.60	1191.78	983.18
30.00°	894.04	962.07	1040.27	1017.47	881.83	677.05	549.90	516.39	619.83	629.42	699.01	834.83	1013.41	1102.07	1154.20	1154.88	894.04
32.50°	802.41	880.48	986.53	976.60	831.67	621.39	513.75	484.78	578.85	587.38	646.19	778.97	976.06	1071.25	1126.47	1102.86	802.41
35.00°	709.54	793.36	925.67	934.31	781.28	577.47	482.59	459.11	545.51	551.18	601.91	723.54	929.55	1038.64	1089.26	1040.26	709.54
37.50°	628.72	708.25	860.83	889.89	726.49	533.91	450.64	433.79	512.55	518.19	558.90	670.70	882.16	1001.40	1047.55	965.94	628.72
40.00°	552.61	629.00	793.18	837.94	670.58	488.81	417.73	411.22	486.32	488.38	521.78	620.06	832.17	962.55	995.63	885.05	552.61
42.50°	491.94	554.97	723.78	785.30	613.65	444.34	387.40	389.17	460.75	461.08	485.80	571.93	782.02	919.12	939.37	801.34	491.94
45.00°	435.84	493.00	653.35	730.74	556.55	408.67	359.62	369.69	441.92	435.81	453.76	525.57	727.59	874.50	875.32	716.39	435.84
47.50°	389.86	435.87	585.89	674.90	504.49	373.47	333.07	350.45	423.08	413.43	422.82	483.80	673.10	825.05	809.66	638.16	389.86
50.00°	346.16	387.54	519.80	616.31	453.01	341.70	307.55	332.08	404.20	392.95	394.78	444.63	617.79	774.66	741.68	562.30	346.16
52.50°	308.89	342.52	459.65	557.45	404.19	310.18	283.11	312.94	386.18	373.11	367.44	408.14	562.84	719.74	673.93	499.64	308.89
55.00°	272.59	302.32	401.63	498.13	355.52	279.92	259.38	291.67	371.83	353.62	341.54	372.85	510.98	664.27	606.44	440.44	272.59
57.50°	240.86	264.84	349.52	439.44	313.14	250.24	234.61	270.12	357.07	334.61	315.88	340.23	459.63	607.50	542.02	391.79	240.86
60.00°	209.52	230.65	299.08	381.65	270.91	222.65	209.27	247.96	340.97	315.82	290.61	308.54	410.95	550.65	480.55	345.09	209.52
62.50°	178.10	197.16	252.17	325.89	231.83	195.36	184.76	224.00	323.15	295.87	265.88	279.12	363.43	492.06	422.59	305.03	178.10
65.00°	146.77	164.35	205.98	272.42	193.22	168.86	160.60	197.02	301.00	275.56	241.86	250.28	320.16	433.60	367.38	265.80	146.77
67.50°	119.03	132.58	167.39	221.86	158.88	142.06	134.73	168.47	277.35	251.56	217.83	222.53	278.26	378.65	316.14	232.76	119.03
70.00°	91.47	101.65	129.79	173.93	125.36	114.63	108.29	137.73	250.77	226.69	193.76	194.98	240.31	323.99	267.49	200.09	91.47
72.50°	66.29	74.03	95.40	130.11	96.43	88.49	84.78	106.99	220.87	198.82	169.27	168.76	203.62	272.05	223.69	168.04	66.29
75.00°	41.87	48.57	61.24	89.41	68.39	64.54	61.97	76.25	185.77	170.45	144.38	142.71	169.73	221.00	182.40	136.06	41.87
77.50°	22.65	28.40	35.83	55.71	43.97	42.30	40.74	49.26	150.69	139.50	119.39	117.28	137.02	175.37	144.60	105.73	22.65
80.00°	6.32	11.00	11.29	26.28	22.77	22.40	19.80	25.70	115.63	108.29	94.32	91.89	106.38	131.25	108.21	75.91	6.32
82.50°	3.98	4.50	6.07	11.49	11.21	9.34	10.52	11.50	83.01	77.83	70.29	68.24	77.62	93.45	76.29	51.07	3.98
85.00°	2.08	2.47	1.29	3.80	2.85	4.08	2.51	4.42	52.94	47.44	46.88	44.84	51.57	58.39	45.81	27.85	2.08
87.50°	1.73	1.75	1.42	1.44	1.84	1.54	1.77	1.75	29.85	27.77	28.08	27.31	30.06	31.75	25.17	14.11	1.73
90.00°	1.48	1.43	1.53	1.15	1.31	1.51	1.38	1.78	12.66	9.00	11.49	10.94	13.81	11.21	6.83	2.82	1.48

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	3012	3012	3012	3012	2942	2942	2942	2942	2811	2811	2811	2691	2691	2691	2582	2582	2530
	1	2778	2668	2570	2482	2711	2612	2522	2441	2505	2432	2364	2407	2348	2292	2317	2269	2222
	2	2548	2357	2198	2065	2483	2310	2164	2041	2221	2099	1994	2140	2038	1949	2064	1980	1938
	3	2341	2094	1902	1750	2280	2054	1877	1735	1981	1829	1704	1912	1783	1675	1849	1740	1703
	4	2157	1874	1666	1508	2101	1841	1647	1498	1779	1611	1477	1721	1576	1458	1668	1542	1510
	5	1995	1689	1475	1318	1943	1661	1461	1311	1609	1432	1297	1560	1405	1283	1515	1379	1350
	6	1851	1532	1319	1165	1804	1509	1307	1160	1465	1285	1150	1423	1263	1141	1384	1242	1217
	7	1724	1399	1189	1041	1681	1379	1179	1037	1341	1161	1030	1306	1144	1023	1272	1127	1105
	8	1610	1284	1079	938	1572	1267	1072	936	1235	1057	930	1204	1043	925	1175	1029	1010
	9	1510	1185	986	852	1475	1170	980	850	1142	968	846	1116	956	842	1091	945	928
	10	1419	1099	907	779	1388	1086	902	777	1062	892	774	1038	882	771	1017	872	857

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	39.9 fc	7.3 ft
6.5 ft	28.6 fc	8.6 ft
7.5 ft	21.5 fc	9.9 ft
8.0 ft	18.9 fc	10.6 ft
10.0 ft	12.1 fc	13.3 ft
12.0 ft	8.4 fc	15.9 ft
14.0 ft	6.2 fc	18.6 ft
16.0 ft	4.7 fc	21.2 ft
20.0 ft	3.0 fc	26.5 ft
24.0 ft	2.1 fc	31.8 ft
28.0 ft	1.5 fc	37.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	43330	43330	43330
45.00°	22115	33152	28240
55.00°	17052	25124	22239
65.00°	12460	17487	16404
75.00°	5804	8490	9481
85.00°	857	530	1174

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	21.9	23.5	22.3	23.8	24.1	21.9	23.4	22.3	23.8	24.1
	3H	22.9	24.3	23.3	24.6	25.0	23.7	25.1	24.1	25.4	25.8
	4H	23.1	24.4	23.5	24.8	25.1	24.3	25.6	24.7	26.0	26.4
	6H	23.1	24.3	23.6	24.7	25.1	24.8	26.0	25.2	26.4	26.8
	8H	23.1	24.3	23.5	24.6	25.0	25.0	26.1	25.4	26.5	26.9
	12H	23.1	24.2	23.5	24.6	25.0	25.1	26.2	25.5	26.6	27.0
4H	2H	23.0	24.3	23.4	24.6	25.0	22.4	23.7	22.8	24.0	24.4
	3H	24.2	25.3	24.7	25.7	26.1	24.3	25.4	24.7	25.8	26.2
	4H	24.6	25.6	25.0	26.0	26.4	25.1	26.0	25.5	26.5	26.9
	6H	24.7	25.6	25.2	26.0	26.5	25.7	26.5	26.1	27.0	27.4
	8H	24.7	25.5	25.2	26.0	26.4	25.9	26.7	26.4	27.1	27.6
	12H	24.7	25.4	25.2	25.9	26.4	26.1	26.8	26.6	27.3	27.7
8H	4H	25.1	25.9	25.6	26.3	26.8	25.3	26.1	25.8	26.6	27.0
	6H	25.4	26.0	25.9	26.5	27.0	26.0	26.7	26.5	27.2	27.7
	8H	25.4	26.0	25.9	26.5	27.0	26.3	26.9	26.8	27.4	27.9
	12H	25.4	26.0	25.9	26.4	27.0	26.6	27.1	27.1	27.6	28.2
12H	4H	25.2	25.9	25.6	26.3	26.8	25.4	26.1	25.9	26.6	27.0
	6H	25.5	26.1	26.0	26.5	27.1	26.1	26.7	26.6	27.2	27.7
	8H	25.6	26.1	26.1	26.6	27.2	26.4	27.0	26.9	27.4	28.0

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0