

## Indoor Distribution Test Report

### Spectrum Lighting Inc.

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### Spectrum Lighting Photometric Lab

#### Luminaire

LT03IND24 25L 35HK xx LW xx xx MW

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

#### Test Number

SP-01378\_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
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#### Lumen Output

Output Lumens	3029
Efficacy	75.73 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

Two luminaires, plane 0°	1.91
Two luminaires, plane 90°	1.21
Four luminaires	1.69

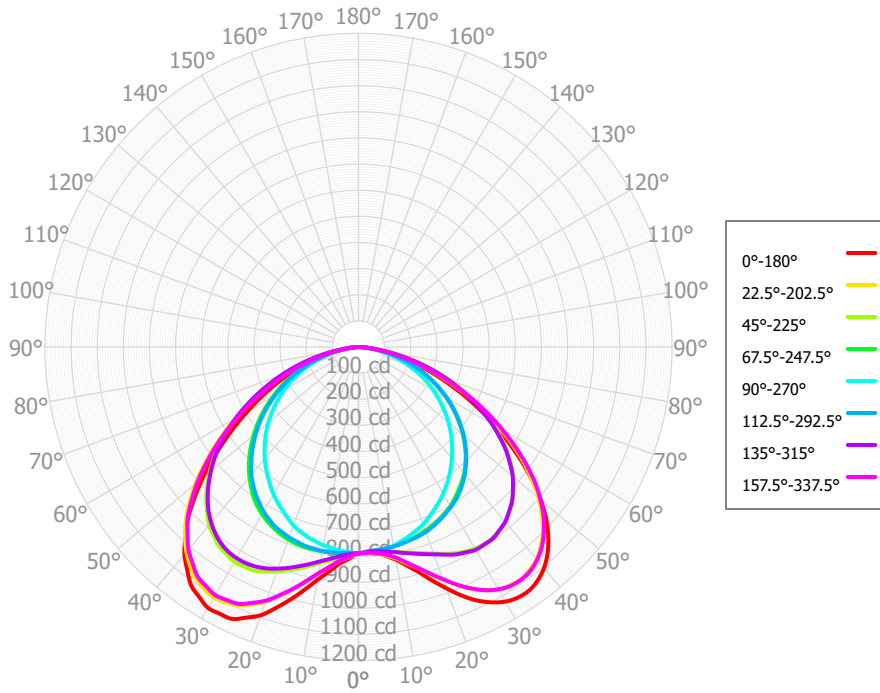
#### Full Beam Angle

0° - 180°	118°
90° - 270°	76°

### IES File Header Contents

Keyword	Value
TEST	SP-01378_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 LW xx xx MW
LUMINAIRE	SpecLine Linear, 1.8" aperture x 2' Long, Matte White Refl
OTHER	Extruded Acrylic Lens, Batwing Distribution
OTHER	Data for 2' 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	25L designation for Spectrum linear product indicates 1515 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
_CRI	90
_LAMPMULT	05L x 0.22, 11L x 0.46, 20L x 0.81

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	77.99	2.57%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	241.16	7.96%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	415.42	13.71%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	551.82	18.22%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	597.80	19.73%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	532.75	17.59%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	381.83	12.61%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	193.00	6.37%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	37.41	1.24%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	3029.19	100.00%	0.00° - 180.00°	3029.19	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°	789.88	789.88	789.88	789.88	789.88	789.88	789.88	789.88	789.88	789.88	789.88	789.88	789.88	789.88	789.88	789.88	789.88
2.50°	789.70	790.28	789.31	786.79	787.70	788.71	794.28	803.20	810.77	805.07	800.19	790.20	786.09	783.15	784.65	788.66	789.70
5.00°	790.93	790.77	788.13	783.41	785.57	791.56	803.61	820.99	832.16	820.86	809.64	791.26	782.49	780.48	784.41	791.10	790.93
7.50°	806.95	805.64	791.48	779.38	779.03	792.30	817.35	848.17	867.13	848.97	823.65	792.79	776.81	778.11	789.94	801.67	806.95
10.00°	826.95	821.90	796.68	775.10	772.32	792.82	832.45	878.77	904.98	879.24	839.10	793.91	770.71	775.24	797.21	818.11	826.95
12.50°	857.22	848.32	805.40	769.85	760.68	790.60	850.22	916.49	951.61	918.57	857.77	794.37	762.03	770.27	807.55	844.43	857.22
15.00°	892.16	875.29	815.38	764.29	748.98	788.23	868.10	956.33	999.64	958.23	877.26	793.28	752.75	765.25	818.63	874.20	892.16
17.50°	937.18	912.26	827.43	756.33	735.92	781.97	886.16	994.74	1046.27	998.99	895.71	790.01	740.60	760.05	831.37	908.94	937.18
20.00°	982.77	949.43	841.03	747.75	722.54	775.58	902.80	1032.79	1092.74	1036.87	913.95	784.51	727.06	753.57	844.43	945.58	982.77
22.50°	1029.41	986.23	856.84	738.06	704.59	766.65	917.33	1059.90	1121.14	1066.59	929.48	776.23	708.28	743.47	860.14	984.63	1029.41
25.00°	1070.30	1022.47	870.93	728.14	686.55	757.40	927.72	1084.88	1148.19	1090.95	944.59	765.81	689.54	732.62	876.24	1019.43	1070.30
27.50°	1101.94	1049.07	882.88	716.09	667.63	742.52	932.88	1091.95	1150.87	1102.69	947.75	753.10	670.93	720.01	886.61	1049.57	1101.94
30.00°	1125.16	1074.01	890.90	703.71	648.33	727.21	933.26	1096.45	1152.73	1107.63	949.63	738.24	651.10	706.81	896.42	1070.87	1125.16
32.50°	1136.79	1080.72	894.75	686.23	626.70	707.14	928.45	1085.68	1134.61	1099.07	940.30	721.40	628.10	692.44	896.40	1083.80	1136.79
35.00°	1138.02	1085.37	892.91	668.17	604.61	686.64	917.27	1073.30	1115.71	1083.94	930.18	700.22	605.13	675.87	895.76	1086.40	1138.02
37.50°	1126.60	1075.02	885.72	648.96	580.32	662.95	899.96	1043.41	1076.74	1057.42	910.17	675.51	582.19	655.50	885.05	1080.33	1126.60
40.00°	1104.52	1061.62	872.97	629.68	555.82	638.20	877.16	1012.45	1036.49	1024.73	889.76	649.08	558.15	633.48	873.96	1063.33	1104.52
42.50°	1071.28	1032.07	855.73	605.12	530.54	607.81	849.79	968.77	979.91	982.87	857.24	621.46	532.06	609.03	852.98	1038.46	1071.28
45.00°	1027.40	999.13	832.59	580.39	504.80	577.07	816.29	924.68	921.77	934.26	824.42	590.50	505.68	583.00	831.60	1003.07	1027.40
47.50°	973.92	951.61	805.34	551.24	477.67	544.79	778.41	864.98	849.95	877.06	784.29	557.55	478.86	554.97	801.64	961.21	973.92
50.00°	910.24	900.73	772.50	521.95	449.87	512.02	736.94	804.91	777.61	814.82	743.68	523.50	450.70	525.14	770.83	909.03	910.24
52.50°	838.41	838.38	736.22	489.40	420.32	477.55	693.19	737.25	702.07	746.89	697.18	488.88	420.69	493.32	730.41	851.45	838.41
55.00°	761.73	773.58	693.46	456.74	390.69	442.33	645.40	669.49	627.39	678.09	649.75	452.46	390.45	460.63	688.98	784.20	761.73
57.50°	681.72	701.93	647.34	422.90	360.88	404.97	595.43	600.51	556.74	608.44	594.99	415.24	359.92	427.07	640.12	712.54	681.72
60.00°	604.34	630.02	596.29	388.74	330.64	367.87	540.37	531.74	488.04	539.38	539.68	377.00	328.81	391.80	590.27	639.11	604.34
62.50°	528.51	557.52	543.07	351.95	299.58	331.42	483.01	464.59	426.58	470.83	481.23	338.39	297.08	355.10	534.83	565.01	528.51
65.00°	454.82	484.56	487.27	315.02	267.66	294.16	425.97	398.66	366.38	406.29	422.97	299.41	264.75	317.77	478.95	491.59	454.82
67.50°	382.22	410.64	430.53	277.25	234.39	255.28	369.04	339.57	310.09	344.68	365.51	260.32	231.87	279.98	421.15	418.38	382.22
70.00°	316.81	339.76	370.88	239.44	201.76	216.66	313.10	281.39	255.25	285.95	307.93	221.44	198.74	241.62	362.52	347.66	316.81
72.50°	254.50	274.10	310.31	201.47	170.04	178.50	257.48	227.15	204.11	229.04	249.91	182.62	165.41	202.89	301.03	277.60	254.50
75.00°	198.47	212.28	249.91	163.62	137.97	141.43	203.45	173.95	154.69	176.09	193.64	145.77	132.17	164.54	240.11	216.68	198.47
77.50°	144.70	156.10	189.55	126.20	105.46	106.00	149.84	124.53	108.96	125.27	142.50	109.31	98.98	126.38	180.79	157.66	144.70
80.00°	100.82	105.72	134.42	90.15	75.83	73.33	103.83	78.59	67.69	81.28	94.00	76.87	69.74	91.38	124.36	108.54	100.82
82.50°	59.85	62.86	80.32	58.21	49.17	44.23	59.37	42.76	34.73	40.40	52.14	45.01	42.82	57.80	74.90	60.95	59.85
85.00°	32.42	31.11	44.24	30.68	27.70	22.38	31.28	15.04	12.12	19.09	20.09	24.79	23.31	32.63	35.18	32.96	32.42
87.50°	8.32	11.74	10.92	14.09	10.97	8.60	5.85	6.80	5.92	5.50	8.67	5.83	7.52	10.79	15.26	7.25	8.32
90.00°	3.12	2.13	4.75	2.65	2.86	1.73	2.60	1.26	2.26	1.96	1.38	3.45	2.37	3.89	2.39	3.62	3.12

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

<b>RCR</b>	<b>ptc</b>	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	<b>pcc</b>	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	<b>pw</b>	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	<b>0</b>	3606	3606	3606	3606	3522	3522	3522	3522	3366	3366	3366	3223	3223	3223	3091	3091	3029
	<b>1</b>	3298	3154	3026	2910	3215	3085	2968	2862	2957	2860	2772	2838	2760	2687	2729	2666	2609
	<b>2</b>	2992	2741	2533	2359	2912	2683	2492	2330	2575	2415	2276	2476	2341	2223	2384	2273	2173
	<b>3</b>	2720	2396	2146	1947	2644	2348	2116	1929	2257	2058	1894	2173	2003	1861	2095	1951	1908
	<b>4</b>	2482	2113	1842	1635	2412	2072	1819	1624	1995	1775	1601	1924	1733	1578	1858	1693	1655
	<b>5</b>	2275	1878	1600	1395	2210	1843	1582	1387	1778	1548	1372	1718	1515	1356	1661	1484	1451
	<b>6</b>	2094	1682	1405	1207	2035	1653	1391	1201	1597	1364	1190	1546	1338	1179	1497	1313	1285
	<b>7</b>	1936	1517	1246	1056	1882	1492	1235	1052	1445	1213	1043	1401	1192	1035	1359	1171	1147
	<b>8</b>	1797	1378	1114	933	1748	1356	1105	930	1316	1087	924	1278	1070	918	1242	1053	1032
	<b>9</b>	1674	1259	1004	832	1630	1240	997	830	1205	982	825	1172	968	821	1141	954	936
	<b>10</b>	1565	1156	911	748	1526	1140	905	747	1110	893	743	1081	881	739	1054	869	853

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	26.1 fc	18.3 ft
6.5 ft	18.7 fc	21.6 ft
7.5 ft	14.0 fc	25.0 ft
8.0 ft	12.3 fc	26.6 ft
10.0 ft	7.9 fc	33.3 ft
12.0 ft	5.5 fc	39.9 ft
14.0 ft	4.0 fc	46.6 ft
16.0 ft	3.1 fc	53.2 ft
20.0 ft	2.0 fc	66.5 ft
24.0 ft	1.4 fc	79.8 ft
28.0 ft	1.0 fc	93.1 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	28341	28341	28341
<b>45.00°</b>	52132	42247	25615
<b>55.00°</b>	47649	43379	24439
<b>65.00°</b>	38614	41369	22724
<b>75.00°</b>	27513	34645	19126
<b>85.00°</b>	13348	18214	11405

### 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	26.7	28.3	27.0	28.7	29.0	22.8	24.5	23.2	24.8	25.1
	3H	28.1	29.6	28.4	29.9	30.2	24.4	25.9	24.8	26.2	26.6
	4H	28.5	29.9	28.9	30.2	30.6	24.9	26.4	25.3	26.7	27.1
	6H	28.7	30.0	29.1	30.4	30.8	25.3	26.6	25.7	27.0	27.3
	8H	28.8	30.0	29.2	30.4	30.8	25.4	26.6	25.8	27.0	27.4
	12H	28.8	30.0	29.2	30.4	30.8	25.4	26.6	25.8	27.0	27.4
4H	2H	27.2	28.6	27.6	29.0	29.4	24.1	25.5	24.5	25.9	26.3
	3H	28.8	30.0	29.2	30.4	30.8	25.8	27.0	26.2	27.4	27.8
	4H	29.4	30.4	29.8	30.9	31.3	26.4	27.5	26.8	27.9	28.3
	6H	29.7	30.6	30.2	31.1	31.5	26.8	27.7	27.2	28.1	28.6
	8H	29.8	30.6	30.2	31.1	31.5	26.9	27.7	27.3	28.2	28.6
	12H	29.8	30.6	30.3	31.1	31.5	26.9	27.7	27.4	28.2	28.6
8H	4H	29.6	30.5	30.1	30.9	31.4	26.8	27.7	27.3	28.1	28.6
	6H	30.0	30.7	30.5	31.2	31.7	27.3	28.0	27.8	28.5	29.0
	8H	30.1	30.8	30.6	31.3	31.8	27.4	28.1	27.9	28.6	29.0
	12H	30.2	30.8	30.7	31.2	31.8	27.5	28.1	28.0	28.6	29.1
12H	4H	29.6	30.4	30.1	30.9	31.3	26.8	27.6	27.3	28.1	28.6
	6H	30.1	30.7	30.6	31.2	31.7	27.3	28.0	27.9	28.4	29.0
	8H	30.2	30.8	30.7	31.2	31.8	27.5	28.1	28.0	28.6	29.1

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0