

## Indoor Distribution Test Report

### Spectrum Lighting Inc.

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### Spectrum Lighting Photometric Lab

**Luminaire**

LT03IND24 20L 35K LW xx xx MW

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

**Test Number**

SP-01547\_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	2798
Efficacy	87.43 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

Two luminaires, plane 0°	1.88
Two luminaires, plane 90°	1.21
Four luminaires	1.72

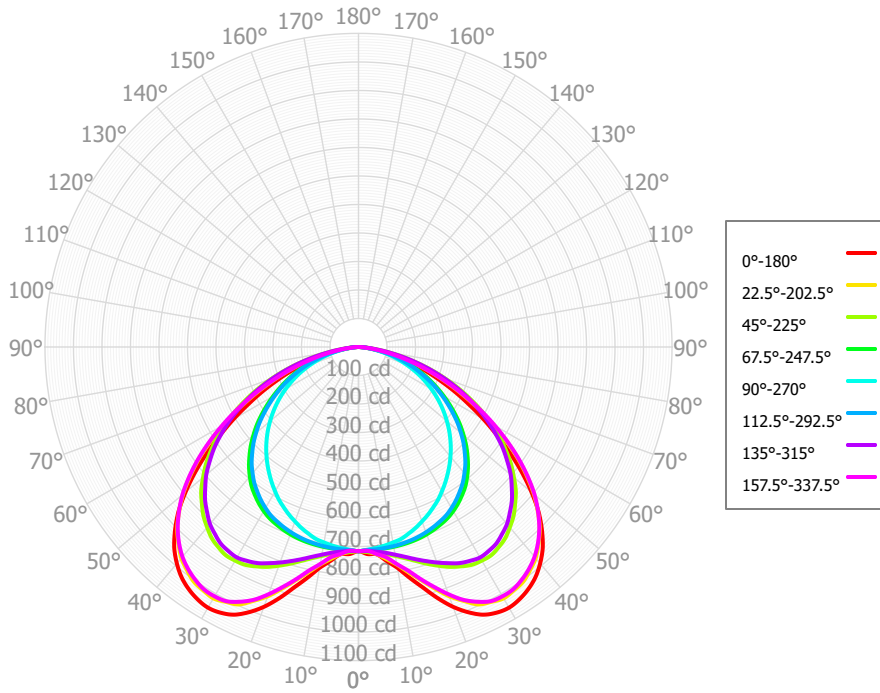
#### Full Beam Angle

0° - 180°	118°
90° - 270°	74°

### IES File Header Contents

Keyword	Value
TEST	SP-01547_2
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	6/3/2022
ISSUEDATE	3/27/2023
LUMCAT	LT03IND24 20L 35K LW xx xx MW
LUMINAIRE	SpecLine Linear Pendant, 1.8" aperture x 2' Long, Matte White Refl
OTHER	Wide Extruded Acrylic Lens, Batwing Distribution
OTHER	Data for 2' IND fixture, Ceiling mount
OTHER	118 deg x 73 deg Beam Angle
LAMP	N/A, Min. 80 CRI
LAMPCAT	N/A
OTHER	Reference project SL473
OTHER	05L designation for Spectrum linear product indicates 1399 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°	70.65	2.53%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	221.04	7.90%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	385.20	13.77%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	510.40	18.24%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	554.14	19.81%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	494.57	17.68%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	352.08	12.58%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	175.89	6.29%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	33.95	1.21%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	2797.91	100.00%	0.00° - 180.00°	2797.91	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°	716.32	716.32	716.32	716.32	716.32	716.32	716.32	716.32	716.32	716.32	716.32	716.32	716.32	716.32	716.32	716.32	716.32
2.50°	727.33	720.39	719.76	713.51	711.82	713.06	716.90	715.47	727.33	720.39	719.76	713.51	711.82	713.06	716.90	715.47	727.33
5.00°	730.22	730.04	723.34	713.34	707.93	712.54	721.02	729.23	730.22	730.04	723.34	713.34	707.93	712.54	721.02	729.23	730.22
7.50°	757.24	750.29	732.41	712.72	702.78	711.14	728.31	744.06	757.24	750.29	732.41	712.72	702.78	711.14	728.31	744.06	757.24
10.00°	786.85	775.10	744.25	711.79	696.44	709.19	739.94	773.11	786.85	775.10	744.25	711.79	696.44	709.19	739.94	773.11	786.85
12.50°	829.36	809.33	759.31	710.24	689.85	706.57	754.04	803.54	829.36	809.33	759.31	710.24	689.85	706.57	754.04	803.54	829.36
15.00°	873.70	846.42	777.09	707.92	678.10	702.87	770.71	843.07	873.70	846.42	777.09	707.92	678.10	702.87	770.71	843.07	873.70
17.50°	923.92	888.15	797.28	704.37	665.73	698.10	787.63	882.81	923.92	888.15	797.28	704.37	665.73	698.10	787.63	882.81	923.92
20.00°	970.23	930.79	816.47	699.52	651.33	691.82	804.75	923.41	970.23	930.79	816.47	699.52	651.33	691.82	804.75	923.41	970.23
22.50°	1007.58	964.24	834.99	693.09	636.79	684.40	821.00	960.15	1007.58	964.24	834.99	693.09	636.79	684.40	821.00	960.15	1007.58
25.00°	1036.36	996.63	849.29	685.49	620.69	675.64	836.71	986.33	1036.36	996.63	849.29	685.49	620.69	675.64	836.71	986.33	1036.36
27.50°	1050.68	1008.18	861.43	676.82	604.30	666.10	846.16	1005.40	1050.68	1008.18	861.43	676.82	604.30	666.10	846.16	1005.40	1050.68
30.00°	1056.20	1018.43	865.44	664.84	585.03	652.45	852.77	1010.12	1056.20	1018.43	865.44	664.84	585.03	652.45	852.77	1010.12	1056.20
32.50°	1050.19	1013.01	866.42	650.50	565.55	637.00	849.24	1008.63	1050.19	1013.01	866.42	650.50	565.55	637.00	849.24	1008.63	1050.19
35.00°	1037.86	1006.27	857.38	633.80	544.90	619.23	842.30	997.69	1037.86	1006.27	857.38	633.80	544.90	619.23	842.30	997.69	1037.86
37.50°	1019.24	987.85	845.66	615.84	523.94	600.75	827.39	982.02	1019.24	987.85	845.66	615.84	523.94	600.75	827.39	982.02	1019.24
40.00°	991.50	967.18	825.97	593.13	501.90	578.23	810.70	960.92	991.50	967.18	825.97	593.13	501.90	578.23	810.70	960.92	991.50
42.50°	956.85	934.84	804.96	568.59	479.32	554.88	786.40	932.32	956.85	934.84	804.96	568.59	479.32	554.88	786.40	932.32	956.85
45.00°	910.47	899.35	777.10	540.93	455.35	527.65	761.12	897.14	910.47	899.35	777.10	540.93	455.35	527.65	761.12	897.14	910.47
47.50°	857.22	853.31	748.69	512.43	430.74	499.96	729.43	854.39	857.22	853.31	748.69	512.43	430.74	499.96	729.43	854.39	857.22
50.00°	792.55	803.58	711.78	481.25	404.97	469.24	697.33	806.44	792.55	803.58	711.78	481.25	404.97	469.24	697.33	806.44	792.55
52.50°	722.94	745.12	674.42	449.59	378.73	438.31	658.05	749.27	722.94	745.12	674.42	449.59	378.73	438.31	658.05	749.27	722.94
55.00°	649.82	683.31	631.36	415.38	351.80	404.46	618.23	687.37	649.82	683.31	631.36	415.38	351.80	404.46	618.23	687.37	649.82
57.50°	575.64	615.51	587.49	380.94	324.02	370.62	572.49	621.29	575.64	615.51	587.49	380.94	324.02	370.62	572.49	621.29	575.64
60.00°	505.94	547.43	537.71	346.31	295.33	336.90	526.11	553.65	505.94	547.43	537.71	346.31	295.33	336.90	526.11	553.65	505.94
62.50°	437.17	478.98	487.30	311.68	266.34	303.06	476.07	485.69	437.17	478.98	487.30	311.68	266.34	303.06	476.07	485.69	437.17
65.00°	375.14	412.55	434.11	276.91	237.10	268.61	425.42	417.63	375.14	412.55	434.11	276.91	237.10	268.61	425.42	417.63	375.14
67.50°	313.90	348.20	380.18	242.04	207.20	234.32	372.55	353.20	313.90	348.20	380.18	242.04	207.20	234.32	372.55	353.20	313.90
70.00°	259.00	287.72	324.02	206.44	176.88	200.60	319.04	289.37	259.00	287.72	324.02	206.44	176.88	200.60	319.04	289.37	259.00
72.50°	204.54	230.32	267.89	171.21	147.10	166.88	263.91	233.17	204.54	230.32	267.89	171.21	147.10	166.88	263.91	233.17	204.54
75.00°	158.01	176.93	211.81	137.62	117.56	133.18	209.49	177.57	158.01	176.93	211.81	137.62	117.56	133.18	209.49	177.57	158.01
77.50°	112.31	125.94	157.82	104.30	89.79	100.57	156.40	129.89	112.31	125.94	157.82	104.30	89.79	100.57	156.40	129.89	112.31
80.00°	74.78	84.59	107.22	71.84	62.61	69.96	107.11	83.08	74.78	84.59	107.22	71.84	62.61	69.96	107.11	83.08	74.78
82.50°	40.13	47.52	64.43	43.05	40.16	43.19	63.32	49.34	40.13	47.52	64.43	43.05	40.16	43.19	63.32	49.34	40.13
85.00°	20.53	24.89	31.21	22.32	18.82	21.67	31.96	18.66	20.53	24.89	31.21	22.32	18.82	21.67	31.96	18.66	20.53
87.50°	4.92	6.99	11.63	8.01	9.75	8.50	14.25	9.65	4.92	6.99	11.63	8.01	9.75	8.50	14.25	9.65	4.92
90.00°	3.31	2.88	4.80	4.11	2.38	3.98	4.96	2.23	3.31	2.88	4.80	4.11	2.38	3.98	4.96	2.23	3.31

### 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>	3331	3331	3331	3331	3253	3253	3253	3253	3109	3109	3109	2977	2977	2977	2855	2855	2798
	<b>1</b>	3046	2914	2796	2689	2970	2851	2743	2645	2732	2643	2561	2622	2550	2483	2521	2463	2411
	<b>2</b>	2764	2532	2341	2180	2690	2479	2303	2154	2380	2231	2103	2288	2164	2055	2203	2100	2054
	<b>3</b>	2513	2214	1983	1799	2443	2170	1955	1782	2086	1902	1750	2008	1851	1719	1936	1803	1763
	<b>4</b>	2293	1952	1702	1511	2228	1914	1681	1500	1843	1640	1479	1777	1601	1458	1716	1564	1529
	<b>5</b>	2101	1734	1478	1289	2041	1703	1462	1281	1642	1430	1267	1587	1399	1253	1534	1370	1340
	<b>6</b>	1934	1553	1297	1114	1879	1526	1285	1109	1475	1259	1099	1427	1235	1088	1383	1212	1186
	<b>7</b>	1787	1401	1150	974	1738	1378	1140	971	1334	1119	963	1293	1100	956	1255	1081	1059
	<b>8</b>	1659	1272	1028	861	1614	1252	1020	858	1214	1003	853	1179	987	847	1146	972	953
	<b>9</b>	1545	1162	926	768	1505	1145	919	766	1112	906	761	1082	893	757	1053	880	863
	<b>10</b>	1445	1067	841	690	1408	1052	835	688	1024	823	685	997	812	682	972	801	787

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	23.7 fc	18.5 ft
6.5 ft	17.0 fc	21.8 ft
7.5 ft	12.7 fc	25.2 ft
8.0 ft	11.2 fc	26.8 ft
10.0 ft	7.2 fc	33.6 ft
12.0 ft	5.0 fc	40.3 ft
14.0 ft	3.7 fc	47.0 ft
16.0 ft	2.8 fc	53.7 ft
20.0 ft	1.8 fc	67.1 ft
24.0 ft	1.2 fc	80.5 ft
28.0 ft	0.9 fc	94.0 ft

### Average Luminaire Luminance [cd/m<sup>2</sup>]

	0.00°	45.00°	90.00°
<b>0.00°</b>	25701	25701	25701
<b>45.00°</b>	46199	39431	23105
<b>55.00°</b>	40649	39495	22007
<b>65.00°</b>	31849	36856	20130
<b>75.00°</b>	21905	29362	16296
<b>85.00°</b>	8450	12850	7746

### 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	26.0	27.6	26.3	28.0	28.3	22.4	24.1	22.8	24.4	24.7
	3H	27.3	28.8	27.6	29.1	29.4	24.0	25.5	24.4	25.8	26.2
	4H	27.6	29.0	28.0	29.4	29.8	24.6	26.0	25.0	26.3	26.7
	6H	27.8	29.1	28.2	29.5	29.9	24.9	26.2	25.3	26.6	26.9
	8H	27.8	29.1	28.3	29.5	29.9	25.0	26.2	25.4	26.6	27.0
	12H	27.8	29.0	28.3	29.4	29.8	25.0	26.2	25.4	26.6	27.0
4H	2H	26.6	28.0	26.9	28.3	28.7	24.0	25.5	24.4	25.8	26.2
	3H	28.1	29.2	28.5	29.6	30.0	25.7	26.9	26.1	27.3	27.7
	4H	28.5	29.6	29.0	30.0	30.5	26.2	27.3	26.7	27.7	28.2
	6H	28.8	29.7	29.3	30.2	30.6	26.6	27.5	27.1	28.0	28.4
	8H	28.9	29.7	29.3	30.2	30.6	26.7	27.5	27.1	28.0	28.5
	12H	28.9	29.7	29.4	30.1	30.6	26.7	27.5	27.2	28.0	28.4
8H	4H	28.8	29.7	29.2	30.1	30.6	26.8	27.6	27.2	28.1	28.6
	6H	29.1	29.9	29.6	30.3	30.8	27.2	28.0	27.7	28.4	28.9
	8H	29.2	29.8	29.7	30.4	30.8	27.3	28.0	27.9	28.5	29.0
	12H	29.2	29.8	29.7	30.3	30.9	27.4	28.0	27.9	28.5	29.0
12H	4H	28.8	29.6	29.3	30.0	30.5	26.8	27.6	27.3	28.1	28.5
	6H	29.2	29.8	29.7	30.3	30.8	27.3	28.0	27.8	28.4	29.0
	8H	29.3	29.8	29.8	30.3	30.9	27.5	28.0	28.0	28.5	29.1

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0