Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

LT03IND48 25L 35K DW xx xx MW

Specline Linear, 1.8" aperture x 4' Long, Matte White Refl

Test Number

SP-01549_3

Test Date

6/2/2022

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

Summary of Results

Power

Input Watts	76 W

Lumen Output

Output Lumens	5875
Efficacy	77.31 lm/W

Luminous Dimensions

0° - 180° Size	0.15
90° - 270° Size	4
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.25
Two luminaires, plane 90°	1.25
Four luminaires	1.37

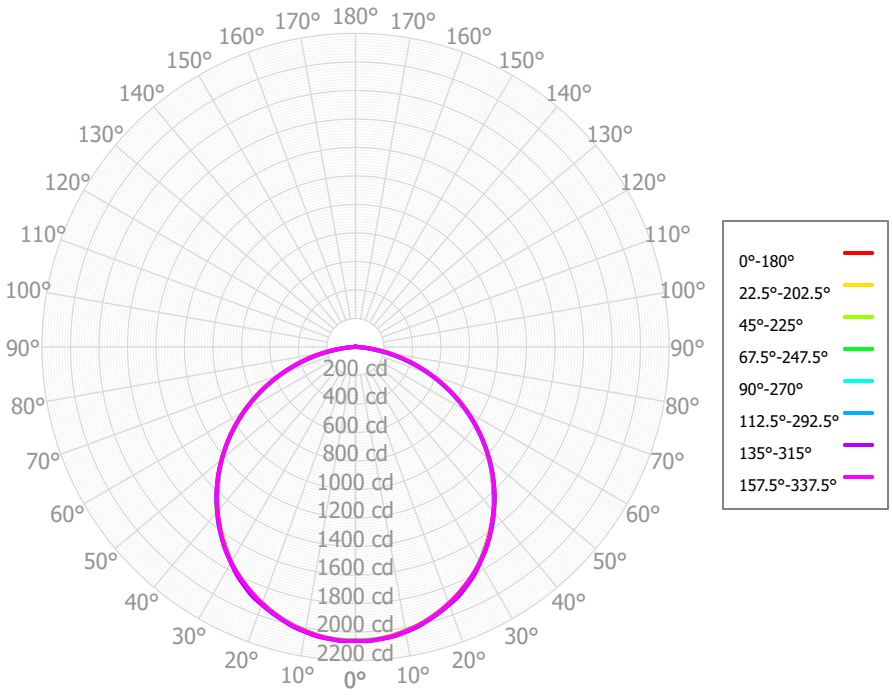
Full Beam Angle

0° - 180°	112°
90° - 270°	112°

IES File Header Contents

Keyword	Value
TEST	SP-01549_3
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	6/2/2022
ISSUEDATE	3/27/2023
LUMCAT	LT03IND48 25L 35K DW xx xx MW
LUMINAIRE	Specline Linear, 1.8" aperture x 4' Long, Matte White Refl
OTHER	Diffuse White Extruded Acrylic Lens, Symmetric Distribution
OTHER	Data for 4' IND fixture, Ceiling mount
OTHER	111 Degree Beam Angle
LAMP	N/A, Min. 80 CRI
LAMPCAT	N/A
OTHER	Reference project SL473
OTHER	25L designation for Spectrum linear product indicates 1469 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
_CRI	80
_CCTMULT	30K x 0.97, 40K x 1.02

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	198.20	3.37%	90.00° - 100.00°	5.08	0.09%
10.00° - 20.00°	558.83	9.51%	100.00° - 110.00°	3.74	0.06%
20.00° - 30.00°	847.68	14.43%	100.00° - 120.00°	7.39	0.13%
30.00° - 40.00°	1021.36	17.38%	120.00° - 130.00°	3.41	0.06%
40.00° - 50.00°	1056.97	17.99%	130.00° - 140.00°	2.96	0.05%
50.00° - 60.00°	952.60	16.21%	140.00° - 150.00°	2.40	0.04%
60.00° - 70.00°	720.64	12.27%	150.00° - 160.00°	1.81	0.03%
70.00° - 80.00°	400.32	6.81%	160.00° - 170.00°	1.14	0.02%
80.00° - 90.00°	94.13	1.60%	170.00° - 180.00°	0.38	0.01%
0.00° - 90.00°	5850.74	99.58%	0.00° - 180.00°	5875.31	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°	2062.34	2062.34	2062.34	2062.34	2062.34	2062.34	2062.34	2062.34	2062.34	2062.34	2062.34	2062.34	2062.34	2062.34	2062.34	2062.34	2062.34
2.50°	2061.10	2058.04	2057.82	2060.28	2063.93	2066.68	2063.98	2062.77	2061.10	2058.04	2057.82	2060.28	2063.93	2066.68	2063.98	2062.77	2061.10
5.00°	2052.50	2053.18	2052.79	2052.93	2055.47	2056.82	2057.57	2054.65	2052.50	2053.18	2052.79	2052.93	2055.47	2056.82	2057.57	2054.65	2052.50
7.50°	2039.29	2042.47	2040.73	2044.36	2045.61	2046.52	2048.67	2043.91	2039.29	2042.47	2040.73	2044.36	2045.61	2046.52	2048.67	2043.91	2039.29
10.00°	2021.95	2027.95	2025.12	2026.02	2027.62	2029.46	2030.99	2026.25	2021.95	2027.95	2025.12	2026.02	2027.62	2029.46	2030.99	2026.25	2021.95
12.50°	2002.10	2008.12	2003.92	2005.64	2008.50	2012.07	2011.26	2005.99	2002.10	2008.12	2003.92	2005.64	2008.50	2012.07	2011.26	2005.99	2002.10
15.00°	1976.43	1983.65	1980.83	1979.59	1980.83	1984.86	1982.87	1980.10	1976.43	1983.65	1980.83	1979.59	1980.83	1984.86	1982.87	1980.10	1976.43
17.50°	1946.63	1951.85	1954.21	1952.10	1952.64	1957.62	1954.28	1951.68	1946.63	1951.85	1954.21	1952.10	1952.64	1957.62	1954.28	1951.68	1946.63
20.00°	1912.93	1917.07	1924.63	1918.01	1918.54	1920.34	1924.59	1916.49	1912.93	1917.07	1924.63	1918.01	1918.54	1920.34	1924.59	1916.49	1912.93
22.50°	1876.09	1876.94	1888.74	1881.84	1883.93	1883.06	1893.12	1877.82	1876.09	1876.94	1888.74	1881.84	1883.93	1883.06	1893.12	1877.82	1876.09
25.00°	1835.81	1836.94	1848.29	1838.78	1840.01	1839.27	1849.28	1836.12	1835.81	1836.94	1848.29	1838.78	1840.01	1839.27	1849.28	1836.12	1835.81
27.50°	1792.43	1797.22	1796.70	1793.19	1795.90	1795.25	1804.33	1792.64	1792.43	1797.22	1796.70	1793.19	1795.90	1795.25	1804.33	1792.64	1792.43
30.00°	1741.97	1750.63	1744.86	1745.62	1743.35	1744.77	1748.86	1745.34	1741.97	1750.63	1744.86	1745.62	1743.35	1744.77	1748.86	1745.34	1741.97
32.50°	1684.11	1687.35	1692.29	1697.21	1690.80	1693.85	1693.12	1695.49	1684.11	1687.35	1692.29	1697.21	1690.80	1693.85	1693.12	1695.49	1684.11
35.00°	1626.08	1626.40	1637.94	1638.55	1633.45	1636.35	1633.74	1636.52	1626.08	1626.40	1637.94	1638.55	1633.45	1636.35	1633.74	1636.52	1626.08
37.50°	1567.86	1572.02	1577.47	1574.73	1576.03	1578.18	1574.20	1570.47	1567.86	1572.02	1577.47	1574.73	1576.03	1578.18	1574.20	1570.47	1567.86
40.00°	1504.76	1513.66	1515.05	1509.38	1508.37	1511.94	1509.00	1506.47	1504.76	1513.66	1515.05	1509.38	1508.37	1511.94	1509.00	1506.47	1504.76
42.50°	1435.17	1442.20	1444.57	1443.15	1440.23	1444.49	1443.81	1444.25	1435.17	1442.20	1444.57	1443.15	1440.23	1444.49	1443.81	1444.25	1435.17
45.00°	1365.04	1370.47	1373.69	1372.48	1368.30	1372.33	1373.73	1375.44	1365.04	1370.47	1373.69	1372.48	1368.30	1372.33	1373.73	1375.44	1365.04
47.50°	1294.09	1297.64	1300.81	1298.93	1296.05	1299.27	1303.65	1300.17	1294.09	1297.64	1300.81	1298.93	1296.05	1299.27	1303.65	1300.17	1294.09
50.00°	1221.28	1224.42	1227.26	1223.13	1220.70	1222.92	1225.74	1224.39	1221.28	1224.42	1227.26	1223.13	1220.70	1222.92	1225.74	1224.39	1221.28
52.50°	1145.20	1149.20	1149.12	1145.64	1144.96	1145.81	1147.59	1148.02	1145.20	1149.20	1149.12	1145.64	1144.96	1145.81	1147.59	1148.02	1145.20
55.00°	1067.10	1072.88	1070.60	1065.87	1063.62	1064.77	1066.33	1069.55	1067.10	1072.88	1070.60	1065.87	1063.62	1064.77	1066.33	1069.55	1067.10
57.50°	984.98	989.62	988.66	984.15	981.36	982.59	984.85	988.36	984.98	989.62	988.66	984.15	981.36	982.59	984.85	988.36	984.98
60.00°	901.94	906.06	906.38	900.41	896.38	898.53	900.74	905.01	901.94	906.06	906.38	900.41	896.38	898.53	900.74	905.01	901.94
62.50°	816.80	819.80	819.45	814.72	810.84	813.84	816.36	818.52	816.80	819.80	819.45	814.72	810.84	813.84	816.36	818.52	816.80
65.00°	731.24	733.42	732.42	727.43	723.90	727.30	729.14	731.75	731.24	733.42	732.42	727.43	723.90	727.30	729.14	731.75	731.24
67.50°	644.55	645.69	642.68	638.36	636.59	640.03	641.50	644.50	644.55	645.69	642.68	638.36	636.59	640.03	641.50	644.50	644.55
70.00°	557.51	558.01	552.95	549.55	547.80	550.79	553.84	557.64	557.51	558.01	552.95	549.55	547.80	550.79	553.84	557.64	557.51
72.50°	469.36	471.89	468.33	461.05	458.54	460.63	466.18	471.52	469.36	471.89	468.33	461.05	458.54	460.63	466.18	471.52	469.36
75.00°	382.34	385.79	383.70	372.91	368.95	371.49	379.82	386.44	382.34	385.79	383.70	372.91	368.95	371.49	379.82	386.44	382.34
77.50°	299.66	303.17	298.96	285.28	279.24	282.89	293.77	303.61	299.66	303.17	298.96	285.28	279.24	282.89	293.77	303.61	299.66
80.00°	219.15	220.55	214.21	201.05	194.90	198.30	210.55	222.78	219.15	220.55	214.21	201.05	194.90	198.30	210.55	222.78	219.15
82.50°	149.23	148.75	138.75	122.35	112.83	116.17	128.13	147.18	149.23	148.75	138.75	122.35	112.83	116.17	128.13	147.18	149.23
85.00°	83.52	77.23	63.92	60.00	61.30	61.54	73.75	80.21	83.52	77.23	63.92	60.00	61.30	61.54	73.75	80.21	83.52
87.50°	43.55	43.26	34.74	28.38	25.04	26.08	28.82	39.67	43.55	43.26	34.74	28.38	25.04	26.08	28.82	39.67	43.55
90.00°	7.77	11.51	10.27	6.23	9.22	8.51	11.42	7.41	7.77	11.51	10.27	6.23	9.22	8.51	11.42	7.41	7.77
92.50°	5.48	6.51	5.71	4.41	5.05	5.42	5.20	5.09	5.48	6.51	5.71	4.41	5.05	5.42	5.20	5.09	5.48
95.00°	3.37	4.25	3.96	3.16	3.46	3.76	3.36	3.17	3.37	4.25	3.96	3.16	3.46	3.76	3.36	3.17	3.37
97.50°	3.43	3.74	3.57	3.32	3.53	3.40	3.55	3.02	3.43	3.74	3.57	3.32	3.53	3.40	3.55	3.02	3.43
100.00°	3.49	3.48	3.45	3.43	3.54	3.17	3.94	2.89	3.49	3.48	3.45	3.43	3.54	3.17	3.94	2.89	3.49
102.50°	3.62	3.42	3.59	3.40	3.50	3.10	4.43	2.95	3.62	3.42	3.59	3.40	3.50	3.10	4.43	2.95	3.62
105.00°	3.75	3.39	3.80	3.47	3.38	3.18	4.43	3.03	3.75	3.39	3.80	3.47	3.38	3.18	4.43	3.03	3.75

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	6989	6989	6989	6989	6823	6823	6823	6823	6514	6514	6514	6232	6232	6232	5973	5973	5973	5851
	1	6388	6109	5859	5634	6226	5973	5746	5539	5719	5532	5360	5485	5332	5191	5270	5147	5033	5035
	2	5806	5322	4922	4586	5649	5209	4841	4529	4996	4686	4419	4799	4541	4314	4618	4404	4214	4305
	3	5292	4671	4191	3809	5143	4576	4131	3773	4397	4016	3702	4231	3907	3634	4077	3803	3568	3717
	4	4843	4136	3619	3224	4705	4056	3573	3200	3905	3485	3152	3765	3401	3106	3634	3321	3062	3246
RCR	5	4452	3694	3164	2774	4326	3626	3129	2757	3498	3060	2724	3379	2994	2691	3268	2931	2660	2866
	6	4111	3325	2797	2419	3996	3267	2769	2407	3159	2714	2383	3057	2662	2360	2962	2611	2337	2555
	7	3811	3014	2497	2135	3707	2965	2474	2126	2872	2430	2108	2785	2387	2091	2703	2346	2074	2298
	8	3547	2750	2248	1903	3453	2708	2229	1896	2628	2193	1883	2553	2158	1870	2482	2124	1857	2082
	9	3314	2523	2039	1712	3229	2487	2023	1706	2418	1993	1696	2353	1964	1686	2291	1936	1675	1899
	10	3107	2328	1862	1551	3030	2296	1849	1547	2236	1824	1539	2180	1799	1531	2126	1776	1522	1743

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	68.2 fc	16.3 ft
6.5 ft	48.8 fc	19.3 ft
7.5 ft	36.7 fc	22.3 ft
8.0 ft	32.2 fc	23.7 ft
10.0 ft	20.6 fc	29.7 ft
12.0 ft	14.3 fc	35.6 ft
14.0 ft	10.5 fc	41.6 ft
16.0 ft	8.1 fc	47.5 ft
20.0 ft	5.2 fc	59.4 ft
24.0 ft	3.6 fc	71.2 ft
28.0 ft	2.6 fc	83.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	36998	36998	36998
45.00°	34632	34851	34715
55.00°	33376	33485	33267
65.00°	31041	31091	30729
75.00°	26502	26596	25574
85.00°	17191	13158	12617

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	24.4	26.0	24.7	26.3	26.6	24.3	26.0	24.7	26.3	26.6
	3H	26.2	27.6	26.5	28.0	28.3	26.1	27.6	26.5	27.9	28.3
	4H	26.8	28.2	27.2	28.5	28.9	26.7	28.1	27.1	28.5	28.8
	6H	27.2	28.5	27.7	28.9	29.3	27.1	28.4	27.5	28.8	29.2
	8H	27.4	28.6	27.8	29.0	29.4	27.2	28.4	27.6	28.8	29.2
	12H	27.5	28.6	27.9	29.0	29.5	27.2	28.4	27.6	28.8	29.2
4H	2H	25.0	26.4	25.4	26.7	27.1	25.0	26.4	25.4	26.7	27.1
	3H	27.0	28.2	27.4	28.6	29.0	26.9	28.1	27.4	28.5	28.9
	4H	27.8	28.8	28.2	29.2	29.7	27.7	28.7	28.1	29.2	29.6
	6H	28.3	29.3	28.8	29.7	30.2	28.2	29.1	28.6	29.5	30.0
	8H	28.5	29.4	29.0	29.8	30.3	28.3	29.1	28.7	29.6	30.1
	12H	28.6	29.4	29.1	29.9	30.4	28.3	29.1	28.8	29.6	30.1
8H	4H	28.1	28.9	28.5	29.4	29.8	28.0	28.8	28.4	29.3	29.8
	6H	28.7	29.5	29.2	29.9	30.4	28.6	29.3	29.1	29.8	30.3
	8H	29.0	29.6	29.5	30.1	30.6	28.7	29.4	29.2	29.9	30.4
	12H	29.1	29.7	29.6	30.2	30.8	28.8	29.4	29.3	29.9	30.4
12H	4H	28.1	28.9	28.6	29.3	29.8	28.0	28.8	28.5	29.3	29.7
	6H	28.8	29.4	29.3	29.9	30.4	28.6	29.3	29.1	29.7	30.3
	8H	29.0	29.6	29.6	30.1	30.7	28.8	29.4	29.3	29.9	30.4

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0