

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

LT03IND48 20L 35K NL xx xx MW

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

Test Number

SP-01548_2

Test Date

6/3/2022

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

Summary of Results

Power

Input Watts	62 W
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Lumen Output

Output Lumens	5896
Efficacy	95.09 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.24
Two luminaires, plane 90°	1.18
Four luminaires	1.18

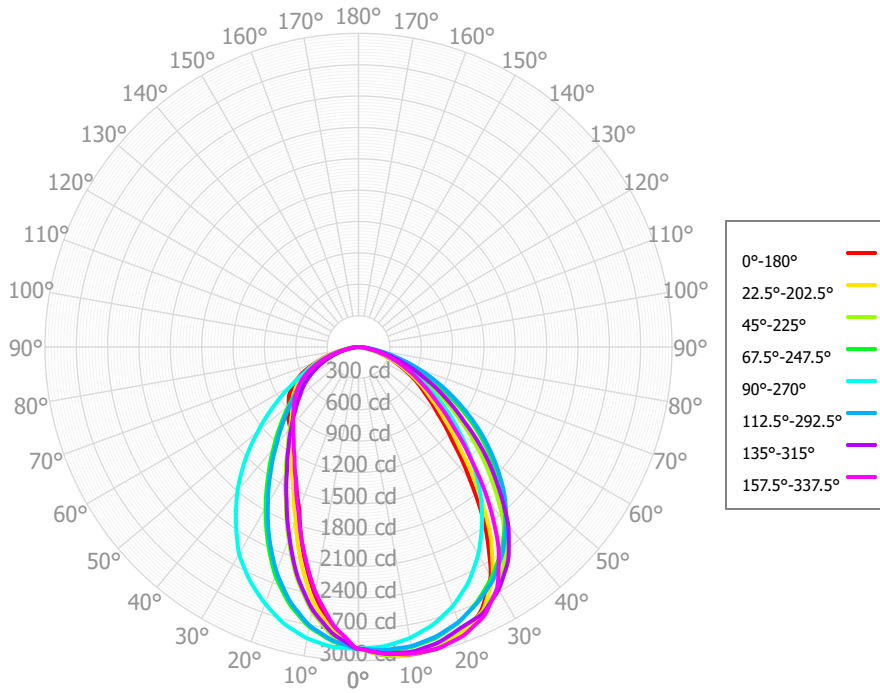
Full Beam Angle

0° - 180°	66°
90° - 270°	92°

IES File Header Contents

Keyword	Value
TEST	SP-01548_2
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	6/3/2022
ISSUEDATE	3/27/2023
LUMCAT	LT03IND48 20L 35K NL xx xx MW
LUMINAIRE	Specline Linear, 1.8" aperture x 4' Long, Matte White Refl
OTHER	Extruded Acrylic Lens, Asymmetric Distribution
OTHER	Data for 4' IND fixture, Ceiling mount
OTHER	66 deg x 96 deg Beam Angle
LAMP	N/A, Min. 80 CRI
LAMPCAT	N/A
OTHER	Reference project SL473
OTHER	05L designation for Spectrum linear product indicates 1489 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°	272.94	4.63%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	732.96	12.43%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	1033.39	17.53%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	1133.89	19.23%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	1033.23	17.52%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	822.17	13.94%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	553.62	9.39%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	260.99	4.43%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	52.65	0.89%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	5895.83	100.00%	0.00° - 180.00°	5895.83	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°	2887.72	2887.72	2887.72	2887.72	2887.72	2887.72	2887.72	2887.72	2887.72	2887.72	2887.72	2887.72	2887.72	2887.72	2887.72	2887.72	2887.72
2.50°	2924.45	2924.51	2923.44	2901.76	2880.39	2852.91	2823.13	2783.23	2806.00	2811.60	2833.29	2857.00	2883.90	2898.00	2915.07	2917.95	2924.45
5.00°	2961.19	2961.29	2959.15	2915.78	2873.07	2818.11	2758.53	2678.74	2724.28	2735.49	2778.86	2826.27	2880.08	2908.28	2942.42	2948.18	2961.19
7.50°	2972.91	2971.99	2961.24	2915.29	2850.10	2761.16	2652.86	2527.96	2564.40	2609.67	2671.94	2771.59	2854.95	2907.11	2951.26	2962.77	2972.91
10.00°	2984.62	2982.69	2963.33	2914.80	2827.14	2704.20	2547.19	2377.19	2404.51	2483.85	2565.02	2716.89	2829.83	2905.94	2960.09	2977.35	2984.62
12.50°	2983.08	2974.88	2953.78	2896.39	2788.89	2613.57	2405.61	2198.36	2219.99	2306.70	2423.66	2631.69	2786.15	2886.40	2944.89	2978.58	2983.08
15.00°	2981.55	2967.06	2944.23	2877.97	2750.64	2522.93	2264.02	2019.53	2035.46	2129.54	2282.30	2546.49	2742.46	2866.86	2929.69	2979.79	2981.55
17.50°	2953.24	2940.03	2910.41	2840.90	2693.91	2406.78	2098.68	1849.72	1845.89	1944.78	2117.97	2436.32	2677.42	2832.44	2895.31	2958.52	2953.24
20.00°	2924.93	2912.99	2876.58	2803.83	2637.18	2290.61	1933.32	1679.91	1656.32	1760.03	1953.64	2326.14	2612.38	2798.02	2860.93	2937.25	2924.93
22.50°	2852.33	2856.99	2836.92	2745.55	2561.31	2155.06	1780.73	1548.96	1533.76	1617.44	1797.10	2190.00	2537.60	2747.25	2836.38	2888.68	2852.33
25.00°	2779.71	2800.97	2797.26	2687.26	2485.44	2019.51	1628.13	1418.02	1411.19	1474.85	1640.55	2053.85	2462.82	2696.48	2811.83	2840.12	2779.71
27.50°	2654.79	2682.08	2731.96	2616.35	2388.07	1876.63	1498.52	1320.61	1326.65	1377.26	1516.23	1914.71	2373.95	2634.88	2746.01	2747.44	2654.79
30.00°	2529.87	2563.18	2666.67	2545.43	2290.68	1733.75	1368.90	1223.20	1242.10	1279.67	1391.89	1775.56	2285.08	2573.27	2680.17	2654.75	2529.87
32.50°	2324.95	2382.06	2554.65	2463.66	2176.22	1600.53	1267.75	1151.72	1169.36	1202.88	1283.20	1641.04	2164.68	2488.84	2587.87	2494.48	2324.95
35.00°	2120.02	2200.94	2442.62	2381.87	2061.76	1467.30	1166.60	1080.23	1096.62	1126.08	1174.50	1506.52	2044.27	2404.40	2495.55	2334.20	2120.02
37.50°	1890.16	1987.34	2296.25	2282.30	1934.68	1344.16	1082.31	1027.05	1054.89	1067.16	1098.61	1385.57	1923.48	2302.81	2362.21	2134.18	1890.16
40.00°	1660.29	1773.74	2149.87	2182.72	1807.61	1221.01	998.03	973.85	1013.16	1008.24	1022.71	1264.62	1802.67	2201.22	2228.87	1934.16	1660.29
42.50°	1466.78	1574.89	1977.22	2060.94	1672.15	1119.71	926.01	927.01	982.90	953.24	951.59	1159.22	1668.78	2085.42	2059.61	1730.22	1466.78
45.00°	1273.26	1376.04	1804.57	1939.16	1536.69	1018.40	853.99	880.17	952.63	898.22	880.46	1053.82	1534.88	1969.62	1890.36	1526.27	1273.26
47.50°	1132.65	1224.07	1640.51	1800.50	1397.77	930.35	794.64	839.37	912.03	857.44	823.91	961.01	1395.32	1835.94	1728.73	1354.71	1132.65
50.00°	992.04	1072.09	1476.45	1661.84	1258.84	842.28	735.27	798.57	871.41	816.66	767.36	868.19	1255.74	1702.25	1567.09	1183.15	992.04
52.50°	886.52	955.60	1316.55	1520.64	1132.28	764.21	686.07	757.80	841.48	781.68	705.19	790.59	1125.01	1565.32	1396.61	1049.74	886.52
55.00°	781.01	839.11	1156.64	1379.45	1005.71	686.13	636.87	717.04	811.54	746.70	643.02	712.97	994.26	1428.39	1226.12	916.33	781.01
57.50°	699.89	744.58	1017.85	1231.63	882.86	613.06	580.40	670.12	765.80	702.25	596.61	639.61	871.59	1285.73	1085.98	810.01	699.89
60.00°	618.79	650.05	879.07	1083.82	760.02	540.01	523.94	623.19	720.05	657.80	550.19	566.26	748.93	1143.07	945.85	703.68	618.79
62.50°	535.65	561.79	761.77	940.71	658.30	471.98	471.33	565.47	656.16	606.23	491.14	501.89	654.62	1006.66	818.00	613.74	535.65
65.00°	452.51	473.53	644.46	797.59	556.58	403.96	418.72	507.75	592.27	554.66	432.07	437.52	560.29	870.24	690.15	523.78	452.51
67.50°	384.86	397.41	537.43	672.27	469.46	350.95	358.00	441.73	510.46	488.04	382.50	380.14	475.43	741.75	582.31	446.01	384.86
70.00°	317.21	321.28	430.38	546.95	382.34	297.94	297.29	375.71	428.65	421.42	332.91	322.76	390.56	613.26	474.47	368.23	317.21
72.50°	251.09	257.32	338.92	431.87	302.53	242.08	243.71	306.30	354.04	349.93	270.95	266.41	321.90	492.98	378.73	296.71	251.09
75.00°	184.97	193.34	247.44	316.80	222.71	186.22	190.12	236.87	279.42	278.42	208.99	210.06	253.22	372.69	282.98	225.17	184.97
77.50°	125.53	139.09	175.45	223.38	161.90	133.01	143.45	172.77	199.84	209.11	156.77	159.58	176.53	279.05	210.19	165.23	125.53
80.00°	66.08	84.83	103.45	129.96	101.08	79.81	96.78	108.67	120.26	139.79	104.55	109.10	99.84	185.41	137.41	105.28	66.08
82.50°	44.22	55.15	66.44	83.01	70.12	53.27	61.88	70.78	77.40	93.77	67.85	74.50	67.30	125.05	88.00	70.37	44.22
85.00°	22.36	25.46	29.42	36.06	39.15	26.73	26.98	32.87	34.54	47.73	31.14	39.89	34.75	64.70	38.58	35.46	22.36
87.50°	16.14	18.02	19.61	24.00	25.18	19.74	19.80	22.04	21.36	31.78	21.98	27.03	22.19	41.26	25.72	24.45	16.14
90.00°	9.92	10.57	9.79	11.93	11.21	12.75	12.61	11.20	8.17	15.83	12.81	14.16	9.63	17.82	12.87	13.43	9.92

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	7019	7019	7019	7019	6856	6856	6856	6856	6551	6551	6551	6272	6272	6272	6016	6016	5896
	1	6489	6240	6017	5815	6333	6108	5905	5721	5860	5694	5541	5633	5498	5373	5423	5315	5204
	2	5960	5522	5160	4855	5810	5412	5080	4798	5207	4928	4688	5018	4786	4582	4843	4652	4452
	3	5479	4912	4473	4123	5339	4821	4414	4087	4650	4302	4016	4491	4195	3947	4344	4095	4007
	4	5052	4400	3922	3557	4922	4324	3878	3533	4180	3792	3486	4046	3711	3440	3922	3634	3357
	5	4673	3968	3475	3111	4555	3904	3441	3095	3782	3375	3062	3669	3311	3030	3564	3251	2999
	6	4338	3602	3108	2753	4230	3547	3081	2742	3444	3029	2718	3348	2978	2696	3258	2930	2673
	7	4040	3289	2802	2461	3942	3243	2781	2452	3155	2739	2435	3072	2698	2419	2995	2659	2402
	8	3775	3020	2545	2219	3686	2980	2527	2212	2905	2493	2200	2834	2460	2187	2767	2428	2175
	9	3539	2787	2326	2015	3458	2753	2312	2010	2687	2284	2001	2626	2256	1991	2568	2230	1982
	10	3327	2584	2139	1843	3254	2554	2127	1839	2497	2103	1831	2444	2081	1824	2393	2058	1817

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	95.5 fc	7.4 ft
6.5 ft	68.3 fc	8.7 ft
7.5 ft	51.3 fc	10.0 ft
8.0 ft	45.1 fc	10.7 ft
10.0 ft	28.9 fc	13.4 ft
12.0 ft	20.1 fc	16.0 ft
14.0 ft	14.7 fc	18.7 ft
16.0 ft	11.3 fc	21.4 ft
20.0 ft	7.2 fc	26.7 ft
24.0 ft	5.0 fc	32.1 ft
28.0 ft	3.7 fc	37.4 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	51805	51805	51805
45.00°	32304	45783	38987
55.00°	24428	36177	31456
65.00°	19209	27357	23627
75.00°	12821	17151	15437
85.00°	4603	6056	8058

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	22.7	24.2	23.1	24.5	24.9	21.8	23.3	22.2	23.7	24.0
	3H	23.9	25.3	24.3	25.6	26.0	23.4	24.8	23.8	25.1	25.5
	4H	24.2	25.5	24.6	25.9	26.2	24.0	25.2	24.4	25.6	26.0
	6H	24.4	25.5	24.8	25.9	26.3	24.2	25.4	24.6	25.8	26.2
	8H	24.4	25.5	24.8	25.9	26.3	24.3	25.4	24.7	25.8	26.2
	12H	24.4	25.4	24.8	25.8	26.2	24.3	25.4	24.7	25.7	26.2
4H	2H	23.6	24.9	24.0	25.3	25.6	22.2	23.5	22.6	23.9	24.2
	3H	25.0	26.0	25.4	26.4	26.8	24.0	25.1	24.4	25.5	25.9
	4H	25.4	26.3	25.8	26.7	27.2	24.6	25.6	25.1	26.0	26.4
	6H	25.5	26.4	26.0	26.8	27.3	25.0	25.8	25.4	26.2	26.7
	8H	25.6	26.3	26.0	26.8	27.2	25.0	25.8	25.5	26.3	26.7
	12H	25.6	26.2	26.0	26.7	27.2	25.1	25.8	25.6	26.2	26.7
8H	4H	25.7	26.4	26.1	26.9	27.4	24.8	25.6	25.3	26.0	26.5
	6H	25.9	26.5	26.4	27.0	27.5	25.2	25.9	25.7	26.3	26.8
	8H	26.0	26.5	26.5	27.0	27.5	25.3	25.9	25.8	26.4	26.9
	12H	26.0	26.5	26.5	27.0	27.5	25.4	25.9	25.9	26.4	27.0
12H	4H	25.7	26.4	26.2	26.9	27.3	24.8	25.5	25.3	26.0	26.5
	6H	25.9	26.5	26.5	27.0	27.5	25.2	25.8	25.8	26.3	26.8
	8H	26.0	26.5	26.5	27.0	27.6	25.4	25.9	25.9	26.4	26.9

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0