

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

STT4PC 50L 35K MD xx xx NL
Nom 4" diam Euro Series track light

Test Number

SP-01362

Test Date

7/11/2022

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

Summary of Results

Power

Input Watts	35 W
-------------	------

Lumen Output

Output Lumens	3481
Efficacy	99.47 lm/W

Luminous Dimensions

0° - 180° Size	-0.33
90° - 270° Size	-0.33
Height	0

Spacing Criterion

Two luminaires, plane 0°	0.4
Two luminaires, plane 90°	0.4
Four luminaires	0.43

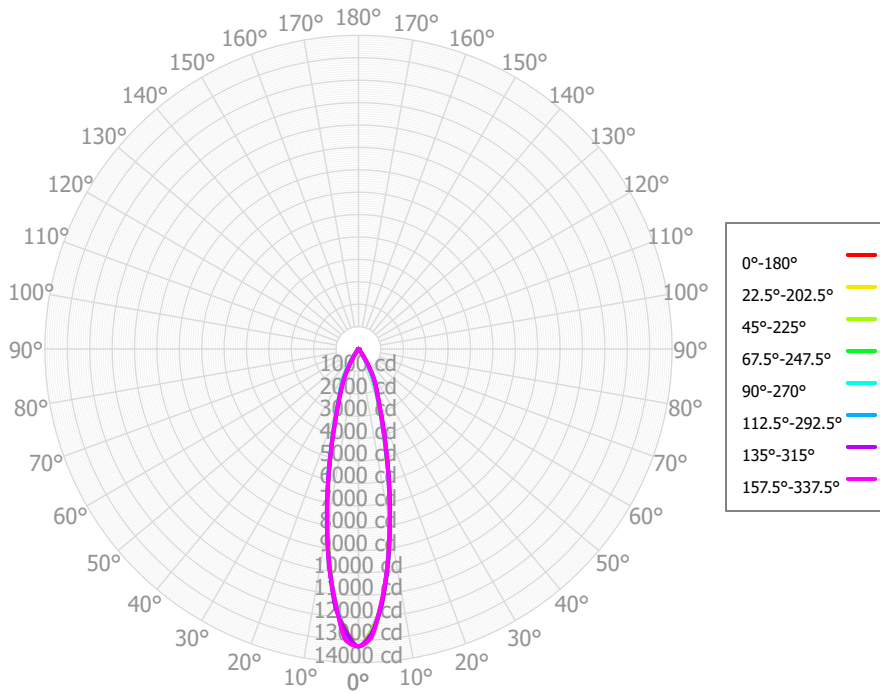
Full Beam Angle

0° - 180°	24°
90° - 270°	24°

IES File Header Contents

Keyword	Value
TEST	SP-01362
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	7/11/2022
ISSUEDATE	7/18/2022
LUMCAT	STT4PC 50L 35K MD xx xx NL
LUMINAIRE	Nom 4" diam Euro Series track light
OTHER	MD optic, No lens
OTHER	Beam Angle: 24 deg
LAMPCAT	N/A
LAMP	N/A, 19mm LES, PC
OTHER	Reference project SL484.13
OTHER	CCT Output Multipliers: 27K x 0.95, 30K x 0.98, 40K x 1.03
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	80
_CCTMULT	27K x 0.95, 30K x 0.98, 40K x 1.03

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	992.50	28.51%	90.00° - 100.00°	1.30	0.04%
10.00° - 20.00°	1328.55	38.16%	100.00° - 110.00°	1.16	0.03%
20.00° - 30.00°	782.68	22.48%	100.00° - 120.00°	2.33	0.07%
30.00° - 40.00°	202.00	5.80%	120.00° - 130.00°	1.16	0.03%
40.00° - 50.00°	37.43	1.08%	130.00° - 140.00°	1.11	0.03%
50.00° - 60.00°	39.15	1.12%	140.00° - 150.00°	1.05	0.03%
60.00° - 70.00°	44.79	1.29%	150.00° - 160.00°	0.90	0.03%
70.00° - 80.00°	32.18	0.92%	160.00° - 170.00°	0.50	0.01%
80.00° - 90.00°	13.66	0.39%	170.00° - 180.00°	0.15	0.00%
0.00° - 90.00°	3472.95	99.76%	0.00° - 180.00°	3481.46	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°	13275.62	13275.62	13275.62	13275.62	13275.62	13275.62	13275.62	13275.62	13275.62	13275.62	13275.62	13275.62	13275.62	13275.62	13275.62	13275.62	13275.62
2.50°	12650.69	12943.46	12639.29	12770.07	12760.50	12990.92	12670.22	13025.67	12611.93	12794.52	12724.63	12658.63	12854.93	12827.37	12757.26	12913.81	12650.69
5.00°	11540.79	11466.88	11589.91	11589.33	11497.16	11510.43	11628.80	11492.59	11594.08	11451.44	11527.67	11594.04	11445.93	11512.36	11576.34	11449.05	11540.79
7.50°	9813.03	9884.91	9822.08	9891.46	9833.99	9930.73	9876.61	9912.74	9809.55	9776.63	9842.15	9820.87	9890.33	9883.86	9884.67	9815.44	9813.03
10.00°	7998.38	8032.23	8054.10	8048.23	8071.56	8096.01	8118.01	8074.89	8037.92	8007.81	7991.15	8059.74	8050.23	8106.67	8038.52	8038.50	7998.38
12.50°	6346.74	6290.37	6285.82	6349.42	6270.96	6348.06	6344.06	6298.75	6324.23	6212.23	6335.99	6329.87	6339.04	6287.21	6393.35	6246.54	6346.74
15.00°	4713.71	4805.82	4718.78	4686.41	4818.00	4805.26	4753.13	4815.11	4731.92	4812.38	4741.28	4777.13	4859.81	4886.26	4803.24	4876.26	4713.71
17.50°	3647.76	3542.12	3555.79	3595.97	3487.56	3504.50	3566.39	3477.71	3616.96	3511.96	3655.07	3647.12	3631.25	3590.38	3715.27	3541.44	3647.76
20.00°	2632.30	2751.67	2629.83	2629.44	2709.83	2722.80	2608.71	2744.14	2648.69	2774.64	2708.20	2720.50	2815.19	2839.67	2748.38	2835.80	2632.30
22.50°	2187.26	2098.20	2137.89	2086.25	2106.49	2051.07	2111.01	2078.92	2190.07	2163.97	2212.58	2234.03	2193.79	2208.56	2257.72	2168.08	2187.26
25.00°	1781.60	1711.95	1658.17	1624.14	1601.27	1594.00	1624.69	1667.54	1733.76	1749.92	1825.81	1791.74	1865.95	1831.54	1867.05	1805.06	1781.60
27.50°	1348.77	1301.91	1198.87	1161.33	1123.57	1143.77	1159.22	1246.17	1284.70	1374.11	1416.60	1436.41	1503.28	1503.89	1454.55	1453.45	1348.77
30.00°	914.70	849.50	778.86	698.40	717.68	705.94	739.34	791.89	855.55	943.13	1002.68	1065.66	1091.72	1091.05	1038.01	1009.21	914.70
32.50°	559.10	478.71	419.98	407.50	329.55	367.35	395.79	404.96	482.62	503.00	633.78	666.76	713.95	664.12	661.99	563.57	559.10
35.00°	205.36	242.84	177.29	139.89	178.04	192.94	160.38	216.20	193.15	287.01	273.22	354.72	379.74	389.60	292.32	330.09	205.36
37.50°	131.92	90.46	100.51	84.88	78.87	79.65	93.33	74.40	115.99	103.01	155.41	187.60	166.96	136.10	166.02	101.27	131.92
40.00°	61.10	64.58	54.20	54.02	53.37	59.02	51.65	59.05	59.46	68.12	75.69	80.97	98.20	88.42	71.30	73.66	61.10
42.50°	53.38	47.55	47.84	48.03	41.94	45.35	46.18	47.67	51.21	50.56	59.99	66.80	58.21	64.63	55.65	47.08	53.38
45.00°	45.79	42.82	42.61	44.24	39.00	41.53	41.74	45.95	44.25	46.77	52.60	56.34	50.09	54.61	48.55	45.25	45.79
47.50°	42.05	39.81	38.74	41.36	37.44	38.01	38.63	43.56	40.02	44.24	48.92	51.14	46.19	45.84	44.18	43.49	42.05
50.00°	38.68	39.02	37.38	38.54	36.78	34.89	37.30	39.70	37.62	42.14	45.65	48.46	46.58	44.12	40.03	42.69	38.68
52.50°	41.95	39.02	38.86	39.24	36.26	34.01	38.15	38.18	38.76	40.07	43.56	49.07	48.77	42.87	45.76	42.23	41.95
55.00°	45.15	39.98	39.61	40.10	37.80	35.79	39.98	41.43	41.20	42.46	41.56	50.54	52.65	47.21	52.09	45.68	45.15
57.50°	47.34	41.54	39.63	42.34	39.58	38.28	42.95	42.76	45.97	45.06	47.11	53.03	54.94	51.82	52.73	48.90	47.34
60.00°	49.36	43.75	40.04	44.62	38.76	41.56	43.61	40.50	47.55	46.94	53.11	55.15	55.84	54.52	53.13	50.04	49.36
62.50°	49.75	45.35	40.84	40.56	37.70	41.35	41.89	39.40	43.90	48.80	53.55	56.86	57.11	57.17	55.32	50.79	49.75
65.00°	49.64	46.33	38.94	36.46	36.06	37.58	39.63	40.27	40.99	47.69	53.77	57.23	58.67	55.83	57.53	48.73	49.64
67.50°	45.55	43.32	34.63	31.15	34.37	31.21	36.83	38.71	39.19	46.48	48.14	56.23	57.75	54.48	53.70	46.47	45.55
70.00°	41.49	36.57	29.91	25.81	26.97	22.41	31.08	33.33	35.46	39.86	42.42	52.15	54.99	53.68	49.84	43.00	41.49
72.50°	37.60	31.18	24.84	19.93	19.31	16.74	22.71	27.89	29.05	33.40	38.60	45.15	50.82	52.73	44.32	39.87	37.60
75.00°	33.70	26.97	21.96	14.35	17.47	13.84	18.16	22.37	25.06	31.30	34.86	41.22	45.66	47.42	38.98	38.52	33.70
77.50°	29.73	23.67	20.76	13.87	15.76	13.32	16.73	18.44	24.18	29.12	34.31	39.99	41.92	42.16	37.79	36.49	29.73
80.00°	25.51	21.10	17.43	13.11	11.80	14.73	14.14	16.63	20.99	25.32	33.51	35.65	39.09	37.88	36.13	31.29	25.51
82.50°	20.07	16.13	12.63	8.78	7.85	11.35	10.66	12.88	15.07	21.10	26.53	28.78	30.84	33.02	27.13	25.26	20.07
85.00°	14.26	9.36	7.89	4.67	5.12	4.41	6.90	6.79	9.50	11.49	19.41	19.02	19.47	20.66	18.18	15.81	14.26
87.50°	6.94	5.17	3.19	2.78	2.45	1.34	2.95	2.83	4.31	2.72	10.07	7.09	11.13	9.04	9.72	7.56	6.94
90.00°	1.15	2.74	1.31	1.12	1.71	0.92	1.21	1.31	1.47	2.14	1.44	1.81	4.43	4.64	2.06	3.63	1.15
92.50°	1.09	1.58	1.11	1.21	1.00	0.94	0.91	0.50	1.03	1.57	1.24	1.10	1.58	0.73	1.70	0.72	1.09
95.00°	1.03	1.23	1.20	1.22	0.90	1.24	1.14	0.46	1.06	1.09	1.10	0.88	0.63	0.70	1.37	1.09	1.03
97.50°	0.91	1.03	1.44	0.80	0.83	1.20	1.69	0.65	1.54	0.67	1.52	0.97	0.46	0.65	1.36	1.27	0.91
100.00°	0.83	0.91	1.28	0.50	0.97	0.95	1.83	1.07	1.87	0.70	1.83	1.05	0.64	0.56	1.38	0.92	0.83

STT4PC 50L 35K MD xx xx NL

© Spectrum Lighting

Page 4 of 6

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

RCR	pfc	20%	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%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	4143	4143	4143	4143	4045	4045	4045	4045	3864	3864	3864	3697	3697	3697	3545	3545	3545	3473
	1	3974	3887	3810	3740	3888	3812	3743	3680	3670	3616	3566	3541	3498	3459	3421	3388	3358	3320
	2	3816	3670	3549	3448	3741	3610	3501	3408	3499	3410	3333	3396	3324	3261	3301	3244	3193	3180
	3	3670	3483	3337	3222	3605	3435	3302	3196	3346	3235	3144	3263	3172	3095	3187	3112	3047	3053
	4	3536	3319	3161	3040	3477	3281	3135	3022	3209	3084	2986	3142	3037	2951	3079	2991	2918	2936
	5	3410	3174	3009	2888	3358	3143	2990	2875	3084	2951	2850	3029	2915	2825	2977	2879	2801	2829
	6	3293	3044	2877	2757	3247	3018	2862	2748	2969	2832	2730	2924	2803	2712	2881	2776	2694	2729
	7	3183	2926	2760	2643	3142	2905	2748	2636	2864	2724	2622	2825	2702	2609	2789	2680	2596	2637
	8	3080	2819	2654	2541	3044	2800	2644	2536	2766	2626	2525	2733	2607	2515	2703	2590	2505	2550
	9	2984	2720	2558	2449	2951	2704	2550	2445	2675	2535	2437	2647	2520	2429	2621	2506	2422	2469
	10	2893	2629	2470	2365	2864	2616	2464	2362	2590	2452	2356	2566	2439	2350	2543	2428	2344	2393

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	438.9 fc	2.3 ft
6.5 ft	314.2 fc	2.8 ft
7.5 ft	236.0 fc	3.2 ft
8.0 ft	207.4 fc	3.4 ft
10.0 ft	132.8 fc	4.3 ft
12.0 ft	92.2 fc	5.1 ft
14.0 ft	67.7 fc	6.0 ft
16.0 ft	51.9 fc	6.8 ft
20.0 ft	33.2 fc	8.5 ft
24.0 ft	23.0 fc	10.2 ft
28.0 ft	16.9 fc	12.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1670733	1670733	1670733
45.00°	8150	7583	6941
55.00°	9906	8692	8294
65.00°	14782	11596	10737
75.00°	16387	10680	8494
85.00°	20596	11394	7387

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	11.7	12.6	12.1	13.0	13.3	11.8	12.8	12.2	13.1	13.4
	3H	14.9	15.8	15.3	16.1	16.5	15.1	15.9	15.5	16.3	16.7
	4H	16.2	17.0	16.6	17.3	17.7	16.3	17.1	16.7	17.4	17.8
	6H	17.3	18.0	17.7	18.4	18.8	17.5	18.2	17.9	18.6	19.0
	8H	17.7	18.4	18.2	18.8	19.2	18.0	18.7	18.5	19.1	19.5
	12H	18.1	18.7	18.5	19.1	19.6	18.4	19.0	18.8	19.4	19.9
4H	2H	12.9	13.6	13.3	14.0	14.4	12.9	13.6	13.3	14.0	14.4
	3H	16.0	16.7	16.4	17.1	17.5	16.0	16.7	16.4	17.1	17.5
	4H	17.4	17.9	17.8	18.4	18.8	17.3	17.9	17.7	18.3	18.7
	6H	18.6	19.1	19.1	19.6	20.1	18.7	19.2	19.2	19.7	20.1
	8H	19.2	19.6	19.6	20.1	20.6	19.3	19.8	19.8	20.2	20.7
	12H	19.6	19.9	20.1	20.4	20.9	19.7	20.1	20.2	20.6	21.1
8H	4H	17.8	18.3	18.3	18.8	19.2	17.6	18.1	18.1	18.6	19.0
	6H	19.4	19.7	19.9	20.2	20.7	19.3	19.7	19.8	20.2	20.7
	8H	20.0	20.3	20.5	20.9	21.4	20.1	20.4	20.6	20.9	21.4
	12H	20.5	20.8	21.1	21.3	21.9	20.6	20.9	21.2	21.4	22.0
12H	4H	17.9	18.3	18.4	18.8	19.3	17.7	18.1	18.2	18.6	19.1
	6H	19.5	19.8	20.1	20.3	20.9	19.4	19.8	20.0	20.2	20.8
	8H	20.3	20.5	20.8	21.0	21.6	20.3	20.5	20.8	21.0	21.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0