

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 XW xx xx NL
Nom 4" diam Euro Series track light

Test Number

SP-01368

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	3630
Efficacy	103.73 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.96
Two luminaires, plane 90°	0.99
Four luminaires	0.83

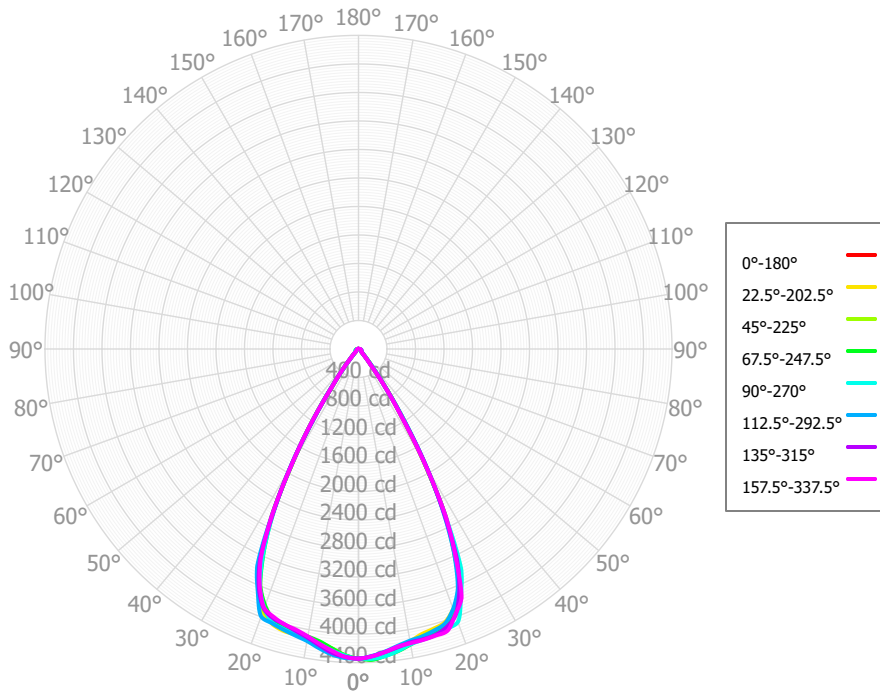
Full Beam Angle

0° - 180°	58°
90° - 270°	58°

IES File Header Contents

Keyword	Value
TEST	SP-01368
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	7/11/2022
ISSUEDATE	7/18/2022
LUMCAT	STT4PC 50L 35K XW xx xx NL
LUMINAIRE	Nom 4" diam Euro Series track light
OTHER	XW optic, No lens
OTHER	Beam Angle: 58 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°	409.62	11.28%	90.00° - 100.00°	1.45	0.04%
10.00° - 20.00°	1149.10	31.65%	100.00° - 110.00°	1.25	0.03%
20.00° - 30.00°	1405.58	38.72%	100.00° - 120.00°	2.62	0.07%
30.00° - 40.00°	479.60	13.21%	120.00° - 130.00°	1.39	0.04%
40.00° - 50.00°	59.58	1.64%	130.00° - 140.00°	1.28	0.04%
50.00° - 60.00°	37.35	1.03%	140.00° - 150.00°	1.19	0.03%
60.00° - 70.00°	36.88	1.02%	150.00° - 160.00°	1.00	0.03%
70.00° - 80.00°	30.59	0.84%	160.00° - 170.00°	0.64	0.02%
80.00° - 90.00°	12.32	0.34%	170.00° - 180.00°	0.21	0.01%
0.00° - 90.00°	3620.61	99.73%	0.00° - 180.00°	3630.39	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°	4344.82	4344.82	4344.82	4344.82	4344.82	4344.82	4344.82	4344.82	4344.82	4344.82	4344.82	4344.82	4344.82	4344.82	4344.82	4344.82	4344.82
2.50°	4331.49	4351.73	4357.10	4366.10	4352.54	4340.79	4324.19	4325.04	4313.10	4305.29	4301.96	4303.71	4306.94	4312.45	4316.26	4317.80	4331.49
5.00°	4281.35	4298.86	4318.89	4322.10	4326.10	4302.58	4280.16	4251.44	4238.53	4224.24	4221.09	4221.26	4249.36	4263.03	4267.95	4270.51	4281.35
7.50°	4216.69	4235.87	4264.08	4275.53	4271.21	4236.02	4195.21	4175.54	4168.67	4156.34	4153.67	4141.73	4178.05	4202.98	4222.42	4213.30	4216.69
10.00°	4168.62	4167.61	4198.92	4210.16	4208.22	4161.79	4113.55	4096.00	4106.90	4126.40	4110.42	4096.73	4126.47	4157.19	4182.26	4193.65	4168.62
12.50°	4123.93	4099.31	4131.80	4152.31	4179.26	4117.08	4055.87	4037.20	4059.00	4102.82	4081.10	4054.80	4102.15	4131.81	4174.53	4182.78	4123.93
15.00°	4095.53	4065.39	4091.70	4127.02	4156.66	4077.40	4002.28	4003.23	4029.38	4092.49	4070.61	4031.52	4068.04	4092.89	4156.29	4165.86	4095.53
17.50°	4068.97	4024.04	4054.33	4079.64	4118.01	4036.47	3966.39	3946.31	3970.04	4041.52	4009.64	3981.74	4023.60	4039.03	4098.35	4148.08	4068.97
20.00°	3912.33	3887.42	3904.56	3966.53	4077.78	3995.44	3881.41	3868.44	3880.86	3926.61	3895.85	3831.99	3866.41	3883.52	3978.70	3970.12	3912.33
22.50°	3740.03	3700.23	3736.34	3731.29	3757.98	3693.47	3650.32	3618.85	3624.28	3666.75	3621.77	3600.40	3618.64	3642.37	3697.74	3780.22	3740.03
25.00°	3203.13	3201.36	3196.83	3235.02	3412.63	3364.79	3275.89	3248.17	3237.61	3233.91	3219.76	3151.20	3162.58	3182.10	3279.93	3227.58	3203.13
27.50°	2642.21	2643.71	2633.40	2632.41	2646.85	2625.89	2595.23	2630.02	2621.37	2629.27	2611.71	2606.52	2577.97	2579.70	2597.11	2657.32	2642.21
30.00°	1856.68	1855.95	1862.13	1858.19	1891.58	1895.74	1905.07	1880.82	1870.34	1865.88	1877.39	1877.02	1897.56	1889.46	1897.35	1863.22	1856.68
32.50°	1123.07	1150.74	1144.73	1198.12	1226.07	1231.92	1199.62	1245.14	1234.43	1218.54	1240.24	1227.35	1173.25	1156.73	1172.99	1114.20	1123.07
35.00°	661.05	667.78	689.38	677.62	632.07	642.99	676.90	654.12	649.29	652.83	647.29	693.56	701.14	680.22	639.84	649.77	661.05
37.50°	278.70	303.36	310.97	344.38	381.89	386.23	377.53	374.03	368.09	344.86	358.08	337.95	313.31	294.80	320.84	259.40	278.70
40.00°	166.40	174.65	183.88	188.34	175.76	176.37	190.15	179.12	182.22	175.12	169.49	181.84	173.34	160.90	143.43	157.86	166.40
42.50°	80.49	87.08	87.28	100.51	109.51	108.89	107.27	108.59	108.79	101.06	102.67	95.72	88.94	87.89	87.09	79.25	80.49
45.00°	58.66	60.70	61.28	61.86	59.20	58.49	62.20	60.22	58.63	64.54	62.85	69.44	67.97	66.17	59.08	62.17	58.66
47.50°	43.94	45.18	43.43	43.21	45.52	45.23	44.38	48.41	48.11	51.54	53.68	57.23	55.59	51.95	49.72	50.28	43.94
50.00°	41.90	41.93	39.49	35.42	36.11	36.55	37.77	39.95	42.37	44.95	48.47	54.16	53.27	50.31	47.16	48.67	41.90
52.50°	40.63	39.52	36.83	32.65	33.95	35.29	37.24	38.72	40.64	44.43	47.49	52.43	51.54	49.54	47.94	46.85	40.63
55.00°	40.39	37.85	35.84	31.92	32.50	34.31	36.07	37.60	39.10	44.98	46.74	51.37	51.98	49.31	48.73	44.72	40.39
57.50°	40.65	37.73	35.45	31.23	31.96	33.69	34.63	36.38	38.65	43.37	46.35	50.60	52.34	49.11	49.51	44.15	40.65
60.00°	41.41	38.66	35.64	30.55	29.98	31.67	32.11	35.00	38.09	41.57	45.87	49.93	51.68	49.16	49.02	45.34	41.41
62.50°	40.92	38.08	34.26	29.22	26.57	28.32	29.30	32.28	36.54	40.55	44.30	48.19	50.80	49.01	48.20	44.78	40.92
65.00°	39.44	36.77	31.66	27.78	24.34	26.09	29.58	29.84	35.10	39.50	42.73	46.19	48.67	47.51	46.84	42.68	39.44
67.50°	37.18	34.69	29.62	26.12	22.98	24.67	30.42	28.61	34.30	37.32	41.14	44.68	46.66	46.21	45.39	41.05	37.18
70.00°	34.45	32.34	27.91	24.44	21.52	23.94	27.58	27.26	32.93	35.11	39.44	43.24	45.14	45.69	42.35	39.72	34.45
72.50°	31.62	29.46	25.85	22.26	20.00	23.57	24.37	25.59	29.56	32.56	37.32	41.08	43.42	44.20	39.18	36.83	31.62
75.00°	28.73	26.44	23.65	20.11	18.90	21.46	21.82	23.51	26.42	30.06	34.92	38.87	41.19	40.01	36.93	33.16	28.73
77.50°	26.80	24.47	21.47	18.88	17.98	18.62	19.26	20.55	23.85	27.83	31.81	34.26	37.35	35.64	34.55	30.86	26.80
80.00°	25.17	22.67	19.29	17.30	15.87	15.57	16.27	17.08	20.20	24.35	27.09	29.42	30.41	30.89	30.28	29.07	25.17
82.50°	18.38	15.93	13.82	12.90	13.38	12.46	12.98	12.76	14.59	17.10	19.34	21.28	22.88	24.07	25.19	21.40	18.38
85.00°	10.45	8.83	7.67	8.49	8.03	7.67	7.38	8.35	9.26	10.34	12.08	13.36	14.48	14.10	14.62	12.22	10.45
87.50°	5.87	4.75	4.37	4.04	2.09	2.57	2.59	3.81	4.31	4.71	5.50	6.91	7.96	6.95	5.66	6.85	5.87
90.00°	1.72	0.95	1.41	0.75	1.50	1.65	1.54	1.34	1.72	1.17	1.79	1.68	3.50	3.07	3.19	2.07	1.72
92.50°	1.48	1.00	1.63	1.11	1.51	1.14	0.83	0.88	1.60	1.08	1.20	1.44	1.49	1.24	1.34	1.63	1.48
95.00°	1.44	1.04	1.95	1.35	1.47	1.27	1.15	0.90	1.48	0.99	0.94	1.28	1.56	1.20	1.21	1.51	1.44
97.50°	1.43	0.96	1.38	1.28	1.42	1.39	1.33	1.26	1.36	0.91	0.94	1.33	1.39	1.34	1.08	1.31	1.43
100.00°	1.40	0.91	0.90	1.16	1.30	1.06	1.18	1.46	1.23	0.86	0.97	1.30	1.07	1.59	0.98	1.13	1.40

STT4PC 50L 35K XW xx xx NL

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	4320	4320	4320	4320	4218	4218	4218	4218	4028	4028	4028	3855	3855	3855	3696	3696	3696	3621
	1	4118	4017	3927	3845	4027	3938	3857	3783	3789	3724	3665	3652	3601	3554	3526	3487	3450	3416
	2	3922	3748	3605	3484	3841	3685	3555	3444	3566	3459	3367	3457	3370	3293	3356	3286	3223	3220
	3	3736	3510	3335	3195	3664	3459	3298	3168	3363	3228	3117	3274	3161	3067	3192	3098	3019	3038
	4	3560	3297	3103	2956	3495	3255	3076	2937	3176	3023	2902	3103	2973	2867	3035	2925	2833	2870
	5	3395	3104	2901	2751	3336	3070	2880	2738	3005	2840	2713	2944	2801	2689	2887	2764	2665	2714
	6	3238	2929	2722	2573	3185	2900	2706	2564	2846	2674	2546	2795	2644	2528	2747	2614	2511	2569
	7	3091	2770	2561	2415	3043	2745	2548	2409	2699	2523	2395	2656	2499	2382	2615	2476	2369	2434
	8	2952	2623	2416	2274	2909	2603	2406	2269	2563	2386	2259	2526	2366	2249	2491	2347	2240	2310
	9	2822	2489	2285	2147	2783	2471	2276	2143	2437	2260	2135	2405	2244	2128	2375	2228	2120	2194
	10	2700	2365	2165	2031	2665	2350	2157	2028	2320	2144	2022	2292	2130	2016	2266	2118	2010	2087

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	143.6 fc	6.1 ft
6.5 ft	102.8 fc	7.2 ft
7.5 ft	77.2 fc	8.3 ft
8.0 ft	67.9 fc	8.9 ft
10.0 ft	43.4 fc	11.1 ft
12.0 ft	30.2 fc	13.3 ft
14.0 ft	22.2 fc	15.5 ft
16.0 ft	17.0 fc	17.7 ft
20.0 ft	10.9 fc	22.1 ft
24.0 ft	7.5 fc	26.6 ft
28.0 ft	5.5 fc	31.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	546795	546795	546795
45.00°	10441	10907	10536
55.00°	8863	7864	7131
65.00°	11743	9428	7247
75.00°	13971	11501	9189
85.00°	15089	11070	11589

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	10.8	11.7	11.1	12.0	12.4	11.1	12.0	11.5	12.4	12.7
	3H	13.8	14.6	14.2	15.0	15.3	13.8	14.7	14.2	15.0	15.4
	4H	15.0	15.8	15.4	16.2	16.6	15.2	16.0	15.7	16.4	16.8
	6H	16.3	17.0	16.8	17.4	17.8	16.5	17.2	16.9	17.6	18.0
	8H	16.8	17.5	17.3	17.9	18.3	17.0	17.6	17.4	18.0	18.5
	12H	17.1	17.8	17.6	18.1	18.6	17.3	17.9	17.7	18.3	18.7
4H	2H	11.7	12.5	12.2	12.9	13.3	11.8	12.6	12.2	12.9	13.3
	3H	14.9	15.5	15.3	15.9	16.4	14.8	15.5	15.2	15.9	16.3
	4H	16.3	16.9	16.7	17.3	17.7	16.4	17.0	16.8	17.4	17.8
	6H	17.7	18.2	18.2	18.7	19.2	17.8	18.3	18.3	18.7	19.2
	8H	18.3	18.8	18.8	19.2	19.7	18.3	18.8	18.8	19.2	19.7
	12H	18.6	19.0	19.1	19.5	20.0	18.7	19.1	19.2	19.6	20.0
8H	4H	16.8	17.3	17.3	17.8	18.2	16.8	17.3	17.3	17.7	18.2
	6H	18.5	18.9	19.0	19.4	19.9	18.4	18.8	18.9	19.3	19.8
	8H	19.2	19.5	19.7	20.0	20.5	19.0	19.4	19.6	19.9	20.4
	12H	19.6	19.9	20.2	20.4	21.0	19.5	19.8	20.1	20.3	20.9
12H	4H	16.9	17.3	17.4	17.8	18.3	16.9	17.3	17.4	17.8	18.3
	6H	18.7	19.0	19.2	19.5	20.1	18.5	18.8	19.1	19.3	19.9
	8H	19.4	19.7	20.0	20.2	20.8	19.2	19.5	19.8	20.0	20.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0