

## **Indoor Distribution Test Report**

# **Spectrum Lighting Inc.**

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## **Spectrum Lighting Photometric Lab**

### **Luminaire**

STT4PC 50L 35K XW xx xx LN4AGL  
Nom 4" diam Euro Series track light

### **Test Number**

SP-01367

### **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
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### Lumen Output

Output Lumens	3367
Efficacy	96.21 lm/W

### Luminous Dimensions

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

### Spacing Criterion

Two luminaires, plane 0°	0.98
Two luminaires, plane 90°	0.99
Four luminaires	0.84

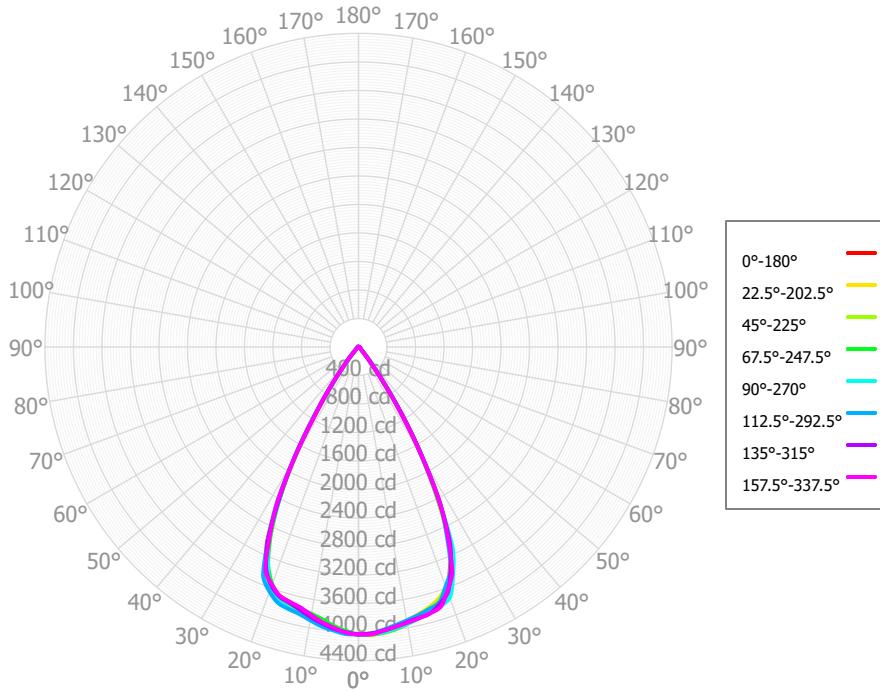
### Full Beam Angle

0° - 180°	58°
90° - 270°	58°

## IES File Header Contents

Keyword	Value
TEST	SP-01367
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 LN4AGL
LUMINAIRE	Nom 4" diam Euro Series track light
OTHER	XW optic, Clear glass 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°	382.31	11.35%	90.00° - 100.00°	1.45	0.04%
10.00° - 20.00°	1066.02	31.66%	100.00° - 110.00°	1.39	0.04%
20.00° - 30.00°	1306.58	38.80%	100.00° - 120.00°	2.75	0.08%
30.00° - 40.00°	473.65	14.07%	120.00° - 130.00°	1.38	0.04%
40.00° - 50.00°	60.33	1.79%	130.00° - 140.00°	1.45	0.04%
50.00° - 60.00°	28.63	0.85%	140.00° - 150.00°	1.35	0.04%
60.00° - 70.00°	22.36	0.66%	150.00° - 160.00°	1.06	0.03%
70.00° - 80.00°	13.07	0.39%	160.00° - 170.00°	0.65	0.02%
80.00° - 90.00°	4.12	0.12%	170.00° - 180.00°	0.23	0.01%
0.00° - 90.00°	3357.06	99.69%	0.00° - 180.00°	3367.39	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°	4032.87	4032.87	4032.87	4032.87	4032.87	4032.87	4032.87	4032.87	4032.87	4032.87	4032.87	4032.87	4032.87	4032.87	4032.87	4032.87	4032.87
2.50°	4028.54	4049.09	4039.10	4037.32	4033.59	4031.89	4006.22	4013.69	3996.70	3994.42	3994.95	3989.69	4005.32	4028.69	4024.37	4036.40	4028.54
5.00°	4016.08	4020.22	4028.69	4022.01	4020.07	3994.33	3968.08	3954.59	3953.04	3936.41	3936.09	3933.03	3962.40	3984.81	3995.77	3998.93	4016.08
7.50°	3960.04	3980.95	3995.54	3990.69	3982.79	3955.05	3911.52	3894.98	3884.51	3871.81	3876.42	3857.16	3901.58	3939.26	3960.65	3961.79	3960.04
10.00°	3903.23	3911.67	3945.16	3945.56	3945.06	3895.58	3849.35	3820.16	3817.10	3827.43	3816.22	3802.91	3840.07	3897.52	3921.94	3931.35	3903.23
12.50°	3857.77	3845.87	3873.28	3894.57	3902.98	3838.59	3779.08	3746.29	3764.14	3788.20	3781.09	3768.80	3814.53	3855.86	3894.59	3900.89	3857.77
15.00°	3811.71	3789.29	3803.02	3838.91	3860.71	3805.53	3720.06	3707.01	3711.76	3768.26	3760.97	3729.97	3789.76	3809.94	3872.98	3869.93	3811.71
17.50°	3731.45	3712.11	3734.63	3761.82	3816.88	3763.62	3676.22	3664.18	3665.48	3752.65	3697.84	3686.99	3707.77	3761.84	3784.49	3826.69	3731.45
20.00°	3643.52	3585.09	3597.32	3668.69	3743.85	3652.39	3569.47	3548.37	3596.90	3607.41	3610.66	3542.57	3622.57	3576.28	3665.02	3646.51	3643.52
22.50°	3354.80	3373.83	3386.46	3411.60	3469.70	3493.53	3384.31	3411.58	3343.71	3436.11	3347.39	3316.11	3319.99	3382.69	3386.72	3439.13	3354.80
25.00°	3046.81	2973.61	2989.04	3041.36	3137.52	3013.39	3013.67	2958.51	3043.93	2965.19	2993.74	2918.12	3007.70	2940.47	3040.14	2981.91	3046.81
27.50°	2414.85	2475.31	2404.66	2474.04	2466.54	2501.66	2426.14	2486.60	2413.74	2442.24	2436.53	2391.92	2414.87	2486.64	2467.20	2496.35	2414.85
30.00°	1784.00	1775.82	1781.04	1779.39	1803.83	1808.76	1811.16	1802.63	1786.92	1783.14	1783.63	1798.14	1821.53	1815.21	1805.67	1798.12	1784.00
32.50°	1167.43	1150.65	1121.04	1187.12	1183.90	1158.72	1166.50	1144.78	1180.24	1103.95	1202.66	1157.02	1218.33	1158.44	1206.97	1132.16	1167.43
35.00°	585.84	665.24	650.65	655.76	632.08	726.70	692.82	729.05	633.04	692.45	653.09	698.97	639.42	707.50	630.98	675.78	585.84
37.50°	352.02	308.70	345.24	359.10	387.46	349.62	392.73	346.90	392.60	314.99	366.17	359.21	389.43	286.28	347.88	273.29	352.02
40.00°	138.50	178.31	169.46	190.87	178.95	216.60	203.23	218.62	183.22	192.58	183.69	182.35	157.13	181.52	160.37	169.66	138.50
42.50°	93.94	87.49	97.98	105.77	114.08	103.81	117.62	103.39	117.01	96.43	104.77	103.93	107.82	85.32	92.49	80.27	93.94
45.00°	53.93	60.56	58.38	63.09	60.31	70.40	67.40	73.57	61.38	67.10	63.21	66.40	62.53	64.72	60.38	59.40	53.93
47.50°	45.26	42.68	42.83	43.41	46.66	42.89	47.94	47.07	48.63	43.39	47.77	51.61	51.98	46.19	48.59	42.08	45.26
50.00°	37.36	38.25	34.40	34.49	35.32	36.49	36.51	39.08	37.72	37.90	41.02	43.36	42.41	42.71	42.22	40.11	37.36
52.50°	34.13	34.18	30.92	28.77	31.45	30.64	31.63	31.71	33.46	33.53	37.09	38.50	39.78	39.45	38.53	38.36	34.13
55.00°	31.20	30.61	28.43	24.44	27.58	26.55	27.45	27.33	29.65	31.60	34.01	35.80	37.39	37.49	35.47	37.40	31.20
57.50°	29.84	28.38	26.56	22.28	23.74	23.15	23.80	23.48	27.29	29.77	32.23	34.13	36.49	35.57	34.80	36.04	29.84
60.00°	28.24	27.84	24.04	20.97	20.18	21.70	21.48	21.90	24.88	27.61	30.80	32.29	35.35	33.81	34.64	33.25	28.24
62.50°	25.58	25.59	21.12	19.26	17.38	19.65	20.10	20.14	22.34	25.43	28.50	30.38	32.96	31.86	31.65	30.72	25.58
65.00°	22.99	21.27	19.10	17.42	15.04	15.99	17.80	17.67	19.81	22.84	26.00	28.34	30.57	28.96	28.15	29.00	22.99
67.50°	20.65	18.69	17.58	14.32	13.85	13.02	14.88	15.12	17.32	20.23	23.00	26.27	28.23	26.06	26.41	26.68	20.65
70.00°	18.45	18.07	16.03	10.80	12.18	11.71	13.06	12.32	14.81	16.35	19.88	22.71	25.50	23.17	24.96	22.63	18.45
72.50°	16.77	16.14	14.45	9.36	9.41	10.28	11.90	9.77	12.26	12.51	17.15	18.61	21.11	20.31	21.95	18.77	16.77
75.00°	14.58	12.84	11.82	8.54	6.99	8.57	9.71	7.99	9.74	9.89	14.48	15.65	16.85	17.57	18.73	15.39	14.58
77.50°	10.76	9.64	8.69	7.02	5.29	6.84	6.95	6.41	7.29	7.34	11.95	13.08	13.07	14.61	14.06	12.18	10.76
80.00°	7.38	6.52	6.64	5.32	3.98	5.05	5.26	5.41	5.32	5.96	9.44	9.81	9.45	10.91	9.24	9.39	7.38
82.50°	5.32	4.42	5.07	3.89	3.42	3.61	4.13	4.30	4.38	4.59	6.43	6.32	6.36	7.50	6.72	6.63	5.32
85.00°	3.53	3.24	3.32	2.52	2.68	2.81	3.02	2.90	3.35	3.37	3.35	3.95	3.72	4.96	4.42	3.91	3.53
87.50°	2.48	2.29	1.51	2.02	1.66	2.08	1.94	1.81	2.14	2.22	2.25	1.89	2.40	2.79	2.99	2.01	2.48
90.00°	1.77	1.54	1.01	1.71	1.05	1.47	1.42	1.41	1.35	1.83	1.38	1.50	1.44	1.64	1.61	1.73	1.77
92.50°	1.93	1.18	0.99	1.59	1.12	1.14	1.15	1.23	1.32	1.46	1.21	1.53	1.46	0.88	1.33	1.48	1.93
95.00°	1.87	1.12	1.02	1.51	1.16	1.28	1.33	1.49	1.39	1.28	1.10	1.40	1.47	1.09	1.10	1.30	1.87
97.50°	1.33	1.08	1.07	1.26	1.17	1.30	1.67	1.66	1.63	1.14	1.12	1.24	1.47	1.36	1.07	1.18	1.33
100.00°	0.94	1.06	1.11	0.99	1.22	1.13	1.67	1.63	1.77	1.35	1.15	1.48	1.45	1.72	1.05	1.18	0.94

STT4PC 50L 35K XW xx xx LN4AGL

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Page 4 of 6

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

<b>RCR</b>	<b>pfc</b>	20%	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%	10%	0%
	<b>pw</b>	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	<b>0</b>	4006	4006	4006	4006	3912	3912	3912	3912	3736	3736	3736	3575	3575	3575	3427	3427	3427	3357
	<b>1</b>	3826	3736	3654	3581	3742	3662	3589	3523	3524	3466	3413	3397	3352	3310	3281	3246	3213	3180
	<b>2</b>	3648	3491	3361	3251	3573	3432	3314	3214	3322	3226	3142	3221	3143	3074	3127	3064	3008	3004
	<b>3</b>	3477	3271	3112	2985	3411	3224	3078	2960	3135	3013	2912	3053	2951	2865	2977	2892	2820	2837
	<b>4</b>	3315	3074	2897	2763	3255	3035	2872	2746	2963	2823	2712	2895	2776	2680	2832	2732	2648	2680
	<b>5</b>	3161	2895	2709	2572	3107	2863	2689	2560	2803	2652	2536	2746	2616	2513	2694	2581	2491	2535
	<b>6</b>	3015	2732	2541	2405	2966	2705	2526	2396	2655	2497	2379	2607	2469	2363	2563	2441	2346	2399
	<b>7</b>	2878	2582	2391	2257	2834	2560	2379	2251	2517	2356	2238	2477	2333	2226	2440	2312	2214	2273
	<b>8</b>	2749	2446	2255	2124	2709	2427	2245	2119	2390	2227	2110	2356	2208	2101	2323	2191	2092	2156
	<b>9</b>	2627	2320	2132	2004	2591	2303	2124	2001	2272	2108	1994	2242	2093	1987	2214	2079	1980	2047
	<b>10</b>	2513	2204	2019	1896	2480	2190	2012	1893	2162	2000	1887	2137	1987	1882	2112	1975	1876	1946

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	133.3 fc	6.1 ft
6.5 ft	95.5 fc	7.2 ft
7.5 ft	71.7 fc	8.3 ft
8.0 ft	63.0 fc	8.9 ft
10.0 ft	40.3 fc	11.1 ft
12.0 ft	28.0 fc	13.3 ft
14.0 ft	20.6 fc	15.6 ft
16.0 ft	15.8 fc	17.8 ft
20.0 ft	10.1 fc	22.2 ft
24.0 ft	7.0 fc	26.7 ft
28.0 ft	5.1 fc	31.1 ft

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

	0.00°	45.00°	90.00°
<b>0.00°</b>	507536	507536	507536
<b>45.00°</b>	9599	10391	10734
<b>55.00°</b>	6845	6237	6051
<b>65.00°</b>	6845	5688	4479
<b>75.00°</b>	7091	5746	3398
<b>85.00°</b>	5101	4798	3877

### 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	9.3	10.2	9.7	10.5	10.9	8.7	9.6	9.1	10.0	10.3
	3H	11.1	12.0	11.5	12.3	12.7	10.8	11.6	11.2	12.0	12.3
	4H	11.9	12.7	12.3	13.0	13.4	11.5	12.2	11.9	12.6	13.0
	6H	12.3	13.0	12.8	13.4	13.8	11.9	12.6	12.4	13.0	13.4
	8H	12.5	13.1	12.9	13.5	13.9	12.0	12.7	12.5	13.1	13.5
	12H	12.5	13.2	13.0	13.5	14.0	12.1	12.7	12.6	13.1	13.6
4H	2H	9.8	10.6	10.2	10.9	11.3	9.2	10.0	9.7	10.4	10.8
	3H	12.0	12.6	12.4	13.0	13.4	11.5	12.1	11.9	12.5	12.9
	4H	12.8	13.4	13.3	13.8	14.3	12.3	12.8	12.7	13.3	13.7
	6H	13.4	13.8	13.9	14.3	14.8	12.9	13.3	13.3	13.8	14.3
	8H	13.5	14.0	14.0	14.4	14.9	13.0	13.5	13.5	13.9	14.4
	12H	13.6	14.0	14.1	14.5	15.0	13.1	13.5	13.6	14.0	14.5
8H	4H	13.1	13.5	13.6	14.0	14.5	12.4	12.9	12.9	13.3	13.8
	6H	13.8	14.1	14.3	14.6	15.1	13.2	13.5	13.7	14.0	14.5
	8H	14.0	14.3	14.5	14.8	15.3	13.4	13.7	14.0	14.2	14.8
	12H	14.2	14.4	14.7	14.9	15.5	13.6	13.9	14.1	14.4	15.0
12H	4H	13.1	13.5	13.6	14.0	14.5	12.4	12.8	12.9	13.3	13.8
	6H	13.8	14.1	14.3	14.6	15.1	13.2	13.5	13.7	14.0	14.5
	8H	14.1	14.3	14.6	14.8	15.4	13.5	13.7	14.0	14.3	14.8

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0