

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01364

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	3580
Efficacy	102.28 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.33
Two luminaires, plane 90°	0.33
Four luminaires	0.35

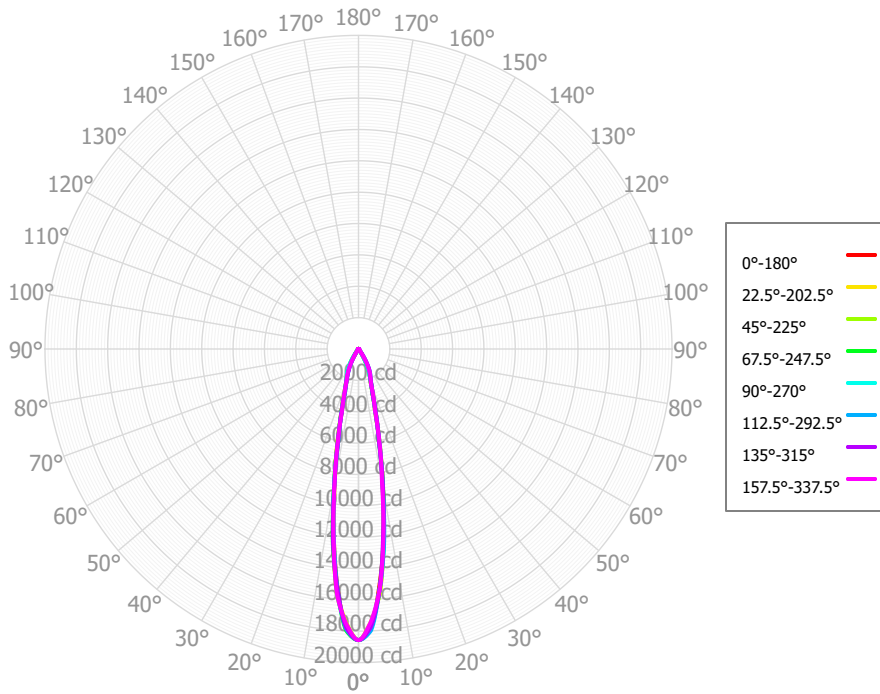
Full Beam Angle

0° - 180°	20°
90° - 270°	19°

IES File Header Contents

Keyword	Value
TEST	SP-01364
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	7/11/2022
ISSUEDATE	7/18/2022
LUMCAT	STT4PC 50L 35K ND xx xx NL
LUMINAIRE	Nom 4" diam Euro Series track light
OTHER	ND optic, No lens
OTHER	Beam Angle: 19 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°	1259.90	35.19%	90.00° - 100.00°	1.26	0.04%
10.00° - 20.00°	1227.16	34.28%	100.00° - 110.00°	1.16	0.03%
20.00° - 30.00°	721.37	20.15%	100.00° - 120.00°	2.27	0.06%
30.00° - 40.00°	199.97	5.59%	120.00° - 130.00°	1.14	0.03%
40.00° - 50.00°	34.39	0.96%	130.00° - 140.00°	1.02	0.03%
50.00° - 60.00°	35.32	0.99%	140.00° - 150.00°	1.03	0.03%
60.00° - 70.00°	48.85	1.36%	150.00° - 160.00°	1.01	0.03%
70.00° - 80.00°	32.52	0.91%	160.00° - 170.00°	0.55	0.02%
80.00° - 90.00°	11.94	0.33%	170.00° - 180.00°	0.16	0.00%
0.00° - 90.00°	3571.41	99.76%	0.00° - 180.00°	3579.85	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°	18567.24	18567.24	18567.24	18567.24	18567.24	18567.24	18567.24	18567.24	18567.24	18567.24	18567.24	18567.24	18567.24	18567.24	18567.24	18567.24	18567.24
2.50°	17879.77	17479.63	17569.40	17829.78	17619.14	17899.09	17823.93	17585.36	17897.41	17536.11	17605.82	17982.16	17709.85	17993.29	17781.36	17486.78	17879.77
5.00°	15215.64	15620.22	15590.43	15375.03	15428.94	15379.86	15425.17	15728.78	15326.22	15619.34	15736.13	15456.61	15636.25	15424.20	15425.41	15445.93	15215.64
7.50°	12319.03	12148.16	12350.12	12155.96	12371.64	12136.94	12446.77	12142.71	12083.75	12295.82	12201.44	12538.71	12127.94	12495.49	12024.89	12180.92	12319.03
10.00°	8954.64	8915.96	8777.26	9052.27	8817.87	8988.76	8837.97	8846.15	8987.24	8706.63	8959.94	8995.61	8937.50	8929.91	8954.33	8635.21	8954.64
12.50°	6162.56	6241.75	6296.23	5985.77	6262.37	5867.16	6091.04	6141.92	5925.03	6314.65	6261.96	6149.79	6053.17	6076.90	6051.69	6269.71	6162.56
15.00°	4302.46	4124.64	4023.48	4284.95	4174.92	4188.46	4116.21	4065.80	4292.86	4076.64	4181.69	4213.28	4135.30	4252.24	4291.16	4093.31	4302.46
17.50°	2969.71	3046.44	3061.42	2915.73	3067.38	2806.72	2911.31	3028.85	2896.98	3126.87	3046.34	2916.46	2994.49	2989.55	3002.49	3129.83	2969.71
20.00°	2349.40	2271.23	2264.27	2324.24	2323.70	2263.57	2273.38	2279.36	2354.27	2267.42	2283.07	2315.66	2346.05	2392.60	2383.40	2291.00	2349.40
22.50°	1911.64	1955.26	1913.45	1870.49	1870.68	1841.06	1824.33	1924.17	1903.10	1977.17	1986.23	1931.63	2022.13	1991.91	1980.32	2005.10	1911.64
25.00°	1676.64	1615.32	1594.62	1470.08	1500.77	1444.66	1490.64	1545.33	1567.03	1693.62	1687.67	1741.89	1747.82	1785.41	1710.37	1744.75	1676.64
27.50°	1347.10	1245.14	1165.07	1075.71	1077.17	1050.45	1096.67	1139.83	1236.83	1298.37	1387.33	1445.31	1500.09	1486.10	1472.76	1389.46	1347.10
30.00°	931.06	861.68	737.17	688.83	641.99	665.12	672.91	750.74	810.84	905.34	1024.89	1070.00	1134.32	1111.18	1080.14	1032.09	931.06
32.50°	576.72	464.45	430.06	302.37	370.83	285.30	384.57	376.91	396.46	539.15	608.92	705.61	717.88	741.70	660.80	633.91	576.72
35.00°	269.46	221.66	142.44	180.62	123.96	168.73	149.50	168.47	228.97	208.28	332.12	347.90	421.93	375.86	379.61	263.85	269.46
37.50°	119.23	110.81	95.48	65.46	75.93	59.12	75.02	86.37	75.61	125.37	153.84	176.05	167.32	185.26	114.14	155.46	119.23
40.00°	67.07	57.85	53.60	53.35	45.32	50.38	50.54	50.68	59.51	55.14	76.42	96.11	91.92	91.37	75.21	61.52	67.07
42.50°	46.32	46.11	47.86	42.08	41.84	41.93	40.94	44.00	44.96	46.98	57.24	64.27	63.31	55.40	49.13	52.46	46.32
45.00°	41.45	40.03	42.47	39.41	39.29	35.74	34.82	39.47	39.72	40.10	47.41	51.36	53.11	45.11	44.36	43.97	41.45
47.50°	38.10	37.22	38.72	36.57	31.96	30.40	31.12	36.05	35.44	37.83	42.02	46.24	46.37	41.70	39.82	37.85	38.10
50.00°	35.34	35.26	35.06	32.62	25.21	29.50	27.82	33.58	35.37	36.66	41.03	43.54	41.73	40.70	38.06	34.24	35.34
52.50°	37.44	33.69	31.66	29.58	27.36	28.90	29.06	31.49	35.36	38.56	41.68	44.54	37.37	41.21	36.96	38.58	37.44
55.00°	41.05	36.02	30.57	30.65	30.10	29.45	30.78	32.43	35.58	41.04	44.70	46.42	45.03	42.13	42.75	43.16	41.05
57.50°	45.91	39.82	35.90	33.26	37.73	31.81	35.41	34.34	38.79	44.81	48.39	51.78	53.54	46.62	48.64	48.35	45.91
60.00°	51.07	43.23	41.97	41.08	44.31	39.47	40.18	40.12	49.57	48.39	55.45	57.71	61.00	51.82	55.10	53.56	51.07
62.50°	54.64	46.52	49.69	46.12	45.15	43.85	43.57	46.85	55.12	51.65	63.24	57.89	68.15	56.55	60.02	58.82	54.64
65.00°	57.94	46.23	51.04	43.98	43.78	40.69	46.37	45.63	49.99	52.88	61.22	57.47	64.84	61.23	58.11	58.68	57.94
67.50°	50.77	45.18	41.14	38.75	33.66	35.12	37.07	43.01	43.46	51.18	57.73	54.56	61.27	60.37	55.31	49.73	50.77
70.00°	42.47	37.20	32.47	27.12	24.86	25.05	28.01	33.89	34.61	47.38	51.42	51.53	54.53	59.08	49.53	43.25	42.47
72.50°	37.32	28.16	25.57	19.00	20.00	18.22	21.15	24.04	29.44	41.09	44.86	47.27	48.57	53.11	45.09	40.05	37.32
75.00°	32.34	25.10	20.53	16.82	16.47	16.34	15.27	20.37	29.22	35.44	38.88	43.08	48.18	47.12	44.16	35.61	32.34
77.50°	28.35	22.58	17.74	14.30	16.06	13.75	15.20	17.07	26.43	30.39	32.92	40.20	46.51	45.24	41.33	29.78	28.35
80.00°	24.23	17.84	14.01	11.32	13.92	10.28	14.29	15.15	20.74	24.90	27.40	36.55	38.57	42.51	34.62	24.69	24.23
82.50°	17.19	13.01	9.34	8.12	8.50	6.91	9.78	13.08	14.13	19.03	21.71	25.88	29.73	28.38	26.53	20.27	17.19
85.00°	10.38	7.21	5.52	4.67	4.29	3.65	5.80	7.44	6.69	11.84	13.31	15.63	17.68	15.10	16.11	13.80	10.38
87.50°	5.95	1.73	2.37	2.38	1.99	1.79	3.55	2.22	2.65	3.76	5.56	7.89	7.86	8.12	8.26	5.79	5.95
90.00°	2.07	1.10	0.95	1.19	0.79	1.13	1.81	1.50	1.21	0.94	3.14	1.54	4.19	2.19	3.97	2.06	2.07
92.50°	1.54	0.58	0.71	0.82	1.02	1.13	1.38	0.90	0.79	0.99	1.10	1.13	1.63	1.46	1.43	0.94	1.54
95.00°	1.03	0.98	0.61	1.10	1.08	1.59	1.07	1.02	1.01	1.04	1.05	0.80	1.54	0.93	0.87	0.85	1.03
97.50°	0.60	1.27	0.59	1.29	0.97	1.49	0.98	1.08	1.02	1.08	1.04	0.73	1.38	1.14	0.87	1.28	0.60
100.00°	0.38	0.90	0.69	1.45	0.95	1.06	1.00	0.92	0.92	0.99	1.20	0.74	1.10	1.31	1.38	1.36	0.38

STT4PC 50L 35K ND xx xx NL

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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	4260	4260	4260	4260	4160	4160	4160	4160	3973	3973	3973	3802	3802	3802	3645	3645	3645	3571
	1	4093	4007	3931	3861	4006	3930	3862	3800	3785	3731	3682	3652	3610	3571	3529	3497	3467	3427
	2	3938	3794	3674	3573	3862	3733	3625	3533	3618	3531	3455	3513	3443	3381	3416	3360	3310	3294
	3	3796	3611	3467	3353	3729	3562	3431	3325	3471	3362	3273	3387	3297	3221	3309	3235	3172	3174
	4	3665	3452	3296	3176	3607	3413	3269	3158	3340	3217	3121	3271	3168	3085	3208	3121	3050	3065
	5	3544	3312	3150	3030	3492	3280	3130	3017	3220	3090	2991	3165	3053	2965	3112	3017	2940	2964
	6	3431	3187	3023	2906	3386	3161	3008	2896	3112	2977	2877	3065	2948	2858	3022	2920	2840	2871
	7	3326	3075	2911	2797	3286	3053	2899	2790	3012	2875	2776	2973	2852	2762	2937	2830	2748	2785
	8	3228	2972	2811	2700	3192	2954	2801	2695	2919	2782	2684	2886	2764	2674	2856	2746	2664	2704
	9	3136	2878	2720	2614	3104	2863	2712	2610	2833	2697	2601	2805	2682	2593	2779	2667	2585	2629
	10	3050	2792	2638	2535	3021	2779	2631	2532	2754	2619	2525	2730	2606	2519	2707	2594	2513	2558

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	613.8 fc	1.9 ft
6.5 ft	439.5 fc	2.2 ft
7.5 ft	330.1 fc	2.6 ft
8.0 ft	290.1 fc	2.8 ft
10.0 ft	185.7 fc	3.4 ft
12.0 ft	128.9 fc	4.1 ft
14.0 ft	94.7 fc	4.8 ft
16.0 ft	72.5 fc	5.5 ft
20.0 ft	46.4 fc	6.9 ft
24.0 ft	32.2 fc	8.3 ft
28.0 ft	23.7 fc	9.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	2336682	2336682	2336682
45.00°	7378	7558	6993
55.00°	9007	6708	6604
65.00°	17252	15198	13036
75.00°	15723	9984	8009
85.00°	14987	7968	6192

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	11.4	12.4	11.8	12.7	13.0	11.3	12.3	11.7	12.6	12.9
	3H	15.0	15.9	15.4	16.2	16.6	14.9	15.8	15.3	16.1	16.5
	4H	16.1	16.9	16.5	17.3	17.7	16.2	17.0	16.6	17.3	17.7
	6H	17.1	17.8	17.5	18.2	18.6	17.5	18.2	17.9	18.6	19.0
	8H	17.4	18.1	17.9	18.5	18.9	18.0	18.7	18.4	19.1	19.5
	12H	17.6	18.3	18.1	18.7	19.1	18.3	18.9	18.7	19.3	19.7
4H	2H	13.0	13.7	13.4	14.1	14.5	12.9	13.7	13.3	14.0	14.4
	3H	16.2	16.8	16.6	17.2	17.6	16.1	16.7	16.5	17.1	17.5
	4H	17.3	17.9	17.8	18.3	18.8	17.4	18.0	17.8	18.4	18.8
	6H	18.3	18.8	18.8	19.3	19.8	18.8	19.3	19.3	19.8	20.2
	8H	18.7	19.2	19.2	19.6	20.1	19.3	19.8	19.8	20.2	20.7
	12H	19.0	19.4	19.5	19.9	20.4	19.7	20.1	20.2	20.5	21.0
8H	4H	17.8	18.3	18.3	18.7	19.2	17.7	18.2	18.2	18.6	19.1
	6H	19.0	19.4	19.5	19.9	20.4	19.3	19.7	19.8	20.2	20.7
	8H	19.5	19.8	20.0	20.3	20.8	20.0	20.3	20.5	20.8	21.3
	12H	19.9	20.1	20.4	20.6	21.2	20.4	20.7	20.9	21.2	21.8
12H	4H	17.9	18.3	18.4	18.8	19.3	17.8	18.2	18.3	18.6	19.1
	6H	19.2	19.5	19.7	20.0	20.5	19.4	19.7	19.9	20.2	20.8
	8H	19.7	20.0	20.3	20.5	21.1	20.1	20.4	20.6	20.9	21.5

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0