

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

STT3PC 40L 35K ND XX NL  
Nom 3" diam Euro tracklight

### Test Number

SP-00596\_21

### Test Date

7/10/2019

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

### Summary of Results

#### Power

Input Watts	30.3 W
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#### Lumen Output

Output Lumens	3097
Efficacy	102.23 lm/W

#### Luminous Dimensions

0° - 180° Size	-0.23
90° - 270° Size	-0.23
Height	0

#### Spacing Criterion

Two luminaires, plane 0°	0.35
Two luminaires, plane 90°	0.34
Four luminaires	0.39

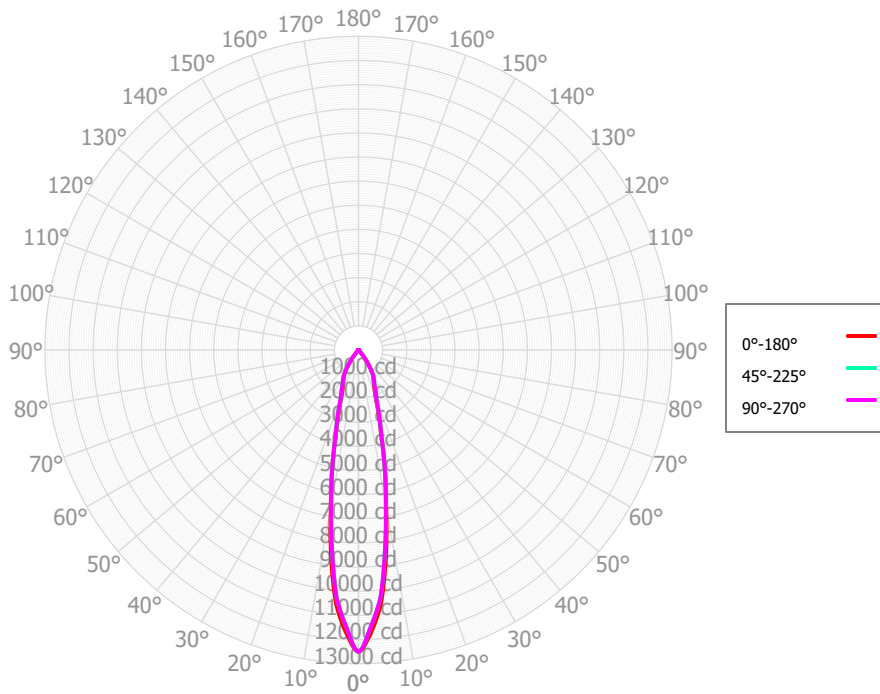
#### Full Beam Angle

0° - 180°	21°
90° - 270°	21°

### IES File Header Contents

Keyword	Value
TEST	SP-00596_21
TESTLAB	Spectrum Lighting Photometric lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	7/10/2019
ISSUEDATE	5/28/2020
LUMCAT	STT3PC 40L 35K ND XX NL
LUMINAIRE	Nom 3" diam Euro tracklight
OTHER	Beam Angle: 21.2 degrees
OTHER	Narrow Beam, open aperture
LAMPCAT	N/A
LAMP	N/A, 80 CRI
OTHER	CCT Output Multipliers: 27K x 0.96, 30K x 0.99, 40K x 1.04
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	80+
_CCTMULT	27K x 0.96, 30K x 0.99, 40K x 1.04
_LAMPMULT	20L x 0.47, 30L x 0.73

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	895.73	28.63%	90.00° - 100.00°	0.17	0.01%
10.00° - 20.00°	1,048.54	33.51%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	726.91	23.23%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	407.51	13.03%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	31.96	1.02%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	4.87	0.16%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	5.83	0.19%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	4.27	0.14%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	2.83	0.09%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	3,128.45	99.99%	0.00° - 180.00°	3,128.63	100.00%

### Candela Distribution

	0.00°	45.00°	90.00°
0.00°	12,504.10	12,504.10	12,504.10
2.50°	11,736.70	11,506.99	11,506.99
5.00°	10,589.53	10,347.00	10,347.00
7.50°	8,682.71	8,400.41	8,400.41
10.00°	6,601.95	6,528.51	6,528.51
12.50°	5,049.86	5,031.91	5,031.91
15.00°	3,623.29	3,648.87	3,648.87
17.50°	2,770.41	2,876.57	2,876.57
20.00°	2,058.68	2,172.53	2,172.53
22.50°	1,725.21	1,851.61	1,851.61
25.00°	1,490.26	1,553.91	1,553.91
27.50°	1,331.36	1,392.43	1,392.43
30.00°	1,192.95	1,216.36	1,216.36
32.50°	940.89	947.86	947.86
35.00°	657.19	677.78	677.78
37.50°	402.57	397.25	397.25
40.00°	156.49	143.34	143.34
42.50°	65.31	75.22	75.22
45.00°	21.05	14.44	14.44
47.50°	8.66	9.53	9.53
50.00°	6.23	5.14	5.14
52.50°	5.46	4.90	4.90
55.00°	5.23	4.81	4.81
57.50°	5.34	5.90	5.90
60.00°	5.55	6.84	6.84
62.50°	6.23	6.27	6.27
65.00°	7.07	5.72	5.72
67.50°	6.10	5.33	5.33
70.00°	4.69	4.94	4.94
72.50°	3.84	4.55	4.55
75.00°	3.34	4.26	4.26
77.50°	3.28	4.05	4.05
80.00°	2.82	2.95	2.95
82.50°	2.89	3.10	3.10
85.00°	2.54	3.04	3.04
87.50°	2.70	2.21	2.21
90.00°	0.00	1.66	1.66
92.50°	0.00	0.00	0.00
95.00°	0.00	0.00	0.00
97.50°	0.00	0.00	0.00
100.00°	0.00	0.00	0.00
102.50°	0.00	0.00	0.00
105.00°	0.00	0.00	0.00
107.50°	0.00	0.00	0.00
110.00°	0.00	0.00	0.00
112.50°	0.00	0.00	0.00

### 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%	0%
	<b>pcc</b>	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	<b>pw</b>	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	<b>0</b>	3,725	3,725	3,725	3,725	3,638	3,638	3,638	3,638	3,476	3,476	3,476	3,328	3,328	3,328	3,192	3,192	3,128
	<b>1</b>	3,582	3,508	3,442	3,382	3,506	3,441	3,382	3,329	3,316	3,269	3,227	3,201	3,165	3,131	3,095	3,067	3,006
	<b>2</b>	3,444	3,317	3,212	3,124	3,378	3,264	3,170	3,089	3,166	3,089	3,022	3,075	3,013	2,959	2,990	2,941	2,885
	<b>3</b>	3,312	3,148	3,020	2,919	3,254	3,106	2,990	2,896	3,027	2,930	2,850	2,954	2,874	2,807	2,886	2,821	2,765
	<b>4</b>	3,188	2,997	2,857	2,749	3,137	2,963	2,834	2,733	2,899	2,789	2,702	2,840	2,747	2,672	2,785	2,707	2,658
	<b>5</b>	3,071	2,861	2,714	2,605	3,026	2,833	2,696	2,594	2,781	2,663	2,572	2,732	2,630	2,550	2,687	2,599	2,554
	<b>6</b>	2,961	2,737	2,587	2,480	2,920	2,715	2,574	2,472	2,671	2,548	2,456	2,631	2,523	2,440	2,593	2,499	2,457
	<b>7</b>	2,857	2,625	2,474	2,369	2,821	2,606	2,464	2,363	2,570	2,443	2,351	2,536	2,424	2,340	2,504	2,405	2,366
	<b>8</b>	2,760	2,522	2,373	2,270	2,727	2,506	2,364	2,266	2,475	2,348	2,257	2,447	2,332	2,248	2,420	2,317	2,281
	<b>9</b>	2,668	2,428	2,280	2,181	2,639	2,414	2,274	2,178	2,388	2,260	2,171	2,363	2,247	2,164	2,340	2,235	2,202
	<b>10</b>	2,582	2,341	2,196	2,100	2,556	2,329	2,191	2,097	2,306	2,180	2,092	2,285	2,169	2,087	2,265	2,159	2,129

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	413.4 fc	2.1 ft
6.5 ft	296.0 fc	2.4 ft
7.5 ft	222.3 fc	2.8 ft
8.0 ft	195.4 fc	3.0 ft
10.0 ft	125.0 fc	3.7 ft
12.0 ft	86.8 fc	4.5 ft
14.0 ft	63.8 fc	5.2 ft
16.0 ft	48.8 fc	6.0 ft
20.0 ft	31.3 fc	7.5 ft
24.0 ft	21.7 fc	9.0 ft
28.0 ft	15.9 fc	10.4 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	3,239,492	3,239,492	3,239,492
<b>45.00°</b>	7,714	5,292	5,292
<b>55.00°</b>	2,364	2,170	2,170
<b>65.00°</b>	4,336	3,504	3,504
<b>75.00°</b>	3,346	4,267	4,267
<b>85.00°</b>	7,541	9,041	9,041

### 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	0.1	1.0	0.4	1.3	1.6	0.5	1.4	0.9	1.7	2.0
	3H	3.4	4.2	3.8	4.6	4.9	3.4	4.2	3.8	4.5	4.9
	4H	4.3	5.1	4.8	5.4	5.8	4.7	5.4	5.1	5.8	6.2
	6H	5.4	6.0	5.8	6.4	6.8	5.9	6.5	6.3	6.9	7.3
	8H	5.9	6.6	6.4	7.0	7.4	6.4	7.1	6.9	7.4	7.9
	12H	6.6	7.2	7.1	7.6	8.0	7.2	7.8	7.6	8.2	8.6
4H	2H	1.2	1.9	1.6	2.2	2.6	1.5	2.2	1.9	2.5	2.9
	3H	4.4	5.0	4.8	5.4	5.8	4.4	5.0	4.9	5.4	5.9
	4H	5.5	6.0	6.0	6.5	6.9	5.9	6.4	6.3	6.8	7.3
	6H	6.7	7.1	7.2	7.6	8.1	7.2	7.6	7.6	8.1	8.5
	8H	7.4	7.8	7.8	8.2	8.7	7.8	8.2	8.3	8.7	9.2
	12H	8.2	8.5	8.7	9.0	9.5	8.7	9.1	9.2	9.6	10.0
8H	4H	6.1	6.5	6.6	6.9	7.4	6.4	6.8	6.8	7.2	7.7
	6H	7.4	7.8	8.0	8.3	8.8	7.8	8.2	8.3	8.7	9.1
	8H	8.3	8.6	8.8	9.1	9.6	8.7	9.0	9.2	9.5	10.0
	12H	9.4	9.6	9.9	10.1	10.7	9.8	10.1	10.4	10.6	11.2
12H	4H	6.2	6.5	6.6	7.0	7.5	6.4	6.8	6.9	7.3	7.7
	6H	7.6	7.9	8.2	8.4	9.0	8.0	8.3	8.5	8.8	9.3
	8H	8.6	8.9	9.2	9.4	10.0	9.0	9.2	9.5	9.7	10.3

Corrected UGR values based on total output lumens

SHR = 1.0