

## **Indoor Distribution Test Report**

# **Spectrum Lighting Inc.**

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## **Spectrum Lighting Photometric Lab**

### **Luminaire**

STT25PC 20L 35K MD xx MW LN2ASO

Nominal 2.5 inch dia tracklight, medium beam, matte white finish with Solite lens

### **Test Number**

SP-01056\_1

### **Test Date**

11/22/2022

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

### Summary of Results

#### Power

Input Watts	13.4 W
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#### Lumen Output

Output Lumens	965
Efficacy	72.03 lm/W

#### Luminous Dimensions

0° - 180° Size	-0.21
90° - 270° Size	-0.21
Height	0

#### Spacing Criterion

Two luminaires, plane 0°	0.64
Two luminaires, plane 90°	0.63
Four luminaires	0.64

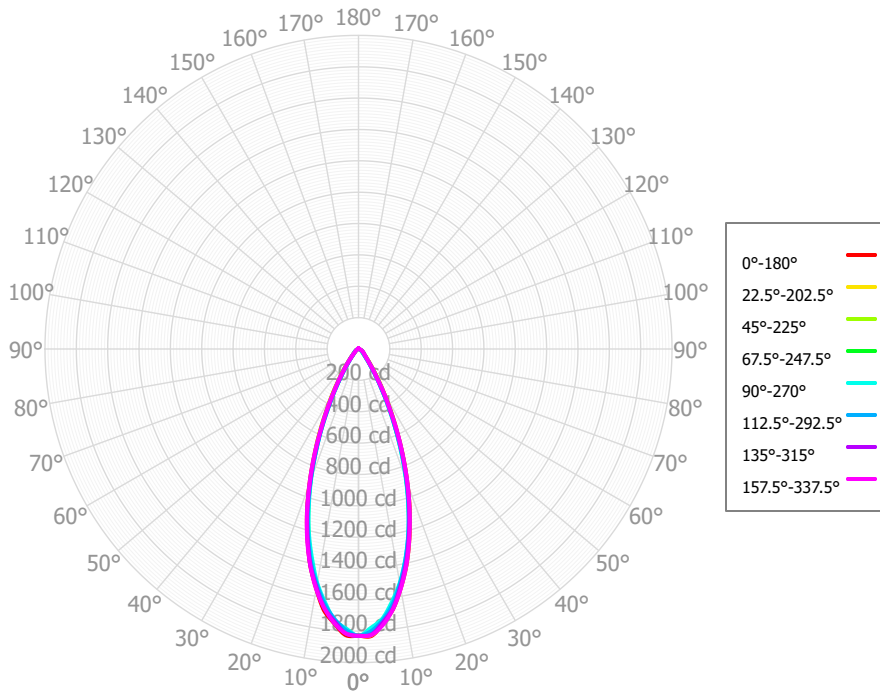
#### Full Beam Angle

0° - 180°	40°
90° - 270°	39°

### IES File Header Contents

Keyword	Value
TEST	SP-01056_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/22/2022
ISSUEDATE	11/22/2022
LUMCAT	STT25PC 20L 35K MD xx MW LN2ASO
LUMINAIRE	Nominal 2.5 inch dia tracklight, medium beam, matte white finish with Solite lens
OTHER	Beam Angle: 39 degrees
OTHER	Reference Project SL468
LAMPCAT	N/A
LAMP	N/A
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	80
_CCTMULT	27K x 0.96, 30K x 0.98, 40K x 1.03
_LAMPMULT	10L x 0.51

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	162.13	16.80%	90.00° - 100.00°	2.08	0.22%
10.00° - 20.00°	338.44	35.06%	100.00° - 110.00°	2.03	0.21%
20.00° - 30.00°	259.22	26.86%	100.00° - 120.00°	3.95	0.41%
30.00° - 40.00°	103.66	10.74%	120.00° - 130.00°	1.75	0.18%
40.00° - 50.00°	40.74	4.22%	130.00° - 140.00°	1.56	0.16%
50.00° - 60.00°	25.15	2.61%	140.00° - 150.00°	1.33	0.14%
60.00° - 70.00°	15.14	1.57%	150.00° - 160.00°	1.01	0.10%
70.00° - 80.00°	6.01	0.62%	160.00° - 170.00°	0.63	0.07%
80.00° - 90.00°	2.27	0.24%	170.00° - 180.00°	0.20	0.02%
0.00° - 90.00°	952.75	98.70%	0.00° - 180.00°	965.25	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°	1829.65	1829.65	1829.65	1829.65	1829.65	1829.65	1829.65	1829.65	1829.65	1829.65	1829.65	1829.65	1829.65	1829.65	1829.65	1829.65	1829.65
2.50°	1833.45	1828.11	1808.38	1802.18	1781.95	1796.82	1818.02	1816.77	1828.15	1815.92	1803.56	1800.28	1786.52	1803.15	1824.85	1827.33	1833.45
5.00°	1761.71	1760.48	1751.37	1756.93	1729.08	1731.56	1745.49	1757.43	1758.82	1747.38	1742.82	1750.27	1739.17	1739.94	1754.28	1768.94	1761.71
7.50°	1676.83	1672.56	1656.93	1648.43	1628.15	1644.11	1668.35	1668.15	1683.18	1665.31	1650.40	1647.02	1631.44	1647.65	1671.78	1676.64	1676.83
10.00°	1550.10	1546.47	1537.59	1535.28	1515.64	1526.27	1544.26	1555.57	1552.68	1538.10	1529.25	1532.26	1516.21	1521.48	1539.70	1552.67	1550.10
12.50°	1413.51	1406.76	1393.56	1387.20	1377.49	1398.10	1416.74	1417.26	1419.22	1403.62	1389.56	1385.89	1369.50	1380.71	1400.22	1411.36	1413.51
15.00°	1254.31	1248.16	1237.48	1237.34	1227.03	1238.13	1252.90	1264.09	1257.02	1243.47	1232.46	1232.49	1220.88	1226.82	1240.30	1251.55	1254.31
17.50°	1089.10	1081.12	1069.03	1066.53	1056.75	1071.11	1086.29	1092.13	1092.90	1081.27	1066.87	1065.37	1053.30	1062.91	1076.51	1084.22	1089.10
20.00°	913.90	905.04	896.31	895.32	884.63	890.80	904.11	912.08	913.70	905.02	896.39	895.14	885.41	892.25	904.84	912.52	913.90
22.50°	744.75	736.11	729.40	721.80	710.29	708.72	726.44	739.59	738.45	730.47	724.22	720.44	714.71	723.57	736.29	739.61	744.75
25.00°	583.06	572.91	563.87	556.56	551.95	553.74	564.57	569.36	581.46	579.23	570.92	561.13	549.64	555.86	572.38	583.56	583.06
27.50°	443.87	437.29	433.46	421.66	408.40	401.39	417.15	435.74	436.49	433.94	422.08	418.83	412.09	417.87	428.98	430.39	443.87
30.00°	326.14	318.07	307.81	301.50	296.32	298.39	305.66	308.98	327.70	327.02	315.29	303.61	288.18	290.62	308.68	321.86	326.14
32.50°	237.79	233.92	228.24	218.10	205.98	199.92	212.85	230.09	233.45	229.69	214.20	210.84	207.12	209.05	217.92	217.26	237.79
35.00°	170.39	165.40	152.03	149.88	145.78	146.51	153.41	156.11	171.00	169.30	159.80	148.67	139.79	138.45	152.45	163.18	170.39
37.50°	125.75	123.91	115.41	109.72	100.88	98.20	107.36	117.31	120.59	117.33	108.18	105.37	103.59	103.97	111.10	111.53	125.75
40.00°	93.45	90.79	80.73	78.63	73.95	76.03	78.98	80.29	89.37	87.25	82.56	77.75	75.16	74.50	85.14	89.23	93.45
42.50°	73.20	71.37	66.03	59.95	53.73	56.32	57.58	62.27	65.67	62.95	58.24	57.42	59.50	63.51	68.42	68.51	73.20
45.00°	57.62	54.78	52.31	46.94	43.28	44.91	43.29	45.33	50.90	49.75	47.18	46.83	48.00	53.70	56.14	58.57	57.62
47.50°	49.88	46.80	44.06	39.71	35.28	35.40	34.45	36.69	40.26	39.33	37.23	39.41	41.72	46.83	49.32	49.63	49.88
50.00°	44.20	39.77	36.79	34.12	30.72	30.30	29.78	29.07	33.41	32.86	33.09	35.51	36.62	40.28	44.34	44.65	44.20
52.50°	39.53	36.22	32.86	29.82	26.69	25.96	25.99	25.86	27.59	27.35	28.78	32.39	32.63	37.19	40.18	39.93	39.53
55.00°	35.04	32.77	28.97	26.35	23.55	22.90	22.71	22.84	22.46	22.90	23.91	27.87	29.10	33.87	36.20	35.90	35.04
57.50°	31.62	28.92	25.21	23.36	20.46	19.94	19.69	20.37	19.76	19.80	19.87	23.18	25.90	29.36	31.72	31.68	31.62
60.00°	28.29	25.08	21.97	20.56	17.81	17.12	16.79	17.65	18.28	17.80	17.82	20.43	22.63	24.94	27.16	27.05	28.29
62.50°	23.99	21.28	19.66	17.85	15.17	14.53	14.18	14.39	15.72	15.40	15.68	17.74	19.32	20.83	23.11	22.95	23.99
65.00°	19.71	17.62	16.99	15.04	12.60	12.18	11.64	11.74	12.77	12.76	13.40	14.88	16.05	17.10	19.09	19.61	19.71
67.50°	15.70	14.58	13.83	12.21	10.10	10.27	9.25	10.02	10.22	10.40	11.13	12.07	12.78	14.33	15.60	15.90	15.70
70.00°	11.96	11.65	10.82	9.80	8.04	8.68	6.88	8.31	7.76	8.18	8.88	9.67	9.99	11.27	12.13	11.79	11.96
72.50°	9.81	9.06	7.95	7.48	6.12	6.77	5.48	6.62	6.03	6.69	6.69	7.33	7.31	7.70	8.75	8.62	9.81
75.00°	7.57	6.67	5.76	5.65	4.70	4.70	4.18	4.87	4.41	5.42	4.55	5.24	5.23	5.24	5.75	6.24	7.57
77.50°	4.95	4.68	4.09	3.87	3.41	3.37	3.09	3.09	3.34	4.03	3.21	3.52	3.25	4.23	4.61	4.37	4.95
80.00°	2.95	3.17	2.96	3.17	2.48	2.35	2.06	2.35	2.30	2.62	2.46	2.99	2.64	3.20	3.48	2.82	2.95
82.50°	2.58	2.40	2.13	2.52	1.83	1.98	2.09	2.30	1.98	2.35	2.10	2.43	2.13	2.17	2.35	2.16	2.58
85.00°	2.26	1.84	2.01	2.42	1.68	1.80	2.10	2.12	1.71	2.21	1.96	1.85	1.89	1.66	1.56	1.93	2.26
87.50°	2.05	1.53	2.18	2.32	1.59	1.72	1.95	1.89	1.90	2.43	1.97	1.68	1.68	1.54	1.54	1.61	2.05
90.00°	1.82	1.52	2.07	2.28	1.58	1.66	1.85	2.03	2.05	2.63	2.04	2.17	1.90	1.68	1.67	1.27	1.82
92.50°	1.58	1.78	1.89	2.19	1.63	1.88	1.97	2.31	1.92	2.19	1.89	2.32	2.08	1.96	2.04	1.49	1.58
95.00°	1.62	1.87	1.76	1.89	1.76	2.12	2.01	2.15	1.83	1.81	1.69	2.03	2.01	1.99	2.12	1.84	1.62
97.50°	1.96	1.85	1.65	1.76	1.94	2.15	1.83	1.87	1.93	2.04	1.69	1.92	1.97	1.91	1.84	1.63	1.96
100.00°	1.91	1.92	1.75	2.15	2.18	2.17	1.72	1.66	2.01	2.24	1.73	1.97	2.02	1.83	1.79	1.36	1.91

STT25PC 20L 35K MD xx MW LN2ASO

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### 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>	1146	1146	1146	1146	1118	1118	1118	1118	1066	1066	1066	1018	1018	1018	973	973	953
	<b>1</b>	1093	1067	1044	1022	1069	1045	1024	1005	1004	987	972	966	953	941	931	921	901
	<b>2</b>	1042	996	959	927	1020	979	945	916	946	918	894	915	893	873	887	869	851
	<b>3</b>	993	934	888	852	973	920	878	844	893	858	829	868	839	814	845	821	805
	<b>4</b>	948	879	828	790	930	867	821	784	845	805	774	825	791	764	806	777	762
	<b>5</b>	906	830	777	738	890	820	771	734	802	759	727	785	748	719	769	737	724
	<b>6</b>	866	786	732	694	852	778	727	691	762	718	685	748	709	680	735	701	688
	<b>7</b>	829	746	692	655	816	739	689	653	726	681	648	714	674	644	703	667	656
	<b>8</b>	795	710	657	620	783	704	654	619	693	648	615	683	642	612	673	636	626
	<b>9</b>	763	678	625	590	752	673	623	588	663	618	586	654	613	583	645	608	599
	<b>10</b>	733	648	596	562	724	643	594	561	635	590	559	627	586	557	620	582	573

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	60.5 fc	4.0 ft
6.5 ft	43.3 fc	4.7 ft
7.5 ft	32.5 fc	5.4 ft
8.0 ft	28.6 fc	5.8 ft
10.0 ft	18.3 fc	7.3 ft
12.0 ft	12.7 fc	8.7 ft
14.0 ft	9.3 fc	10.2 ft
16.0 ft	7.1 fc	11.6 ft
20.0 ft	4.6 fc	14.5 ft
24.0 ft	3.2 fc	17.4 ft
28.0 ft	2.3 fc	20.3 ft

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

	0.00°	45.00°	90.00°
<b>0.00°</b>	568605	568605	568605
<b>45.00°</b>	25322	22991	19023
<b>55.00°</b>	18986	15699	12758
<b>65.00°</b>	14491	12490	9263
<b>75.00°</b>	9094	6917	5639
<b>85.00°</b>	8061	7153	5990

### UGR CIE 190:2010

<b>Ceiling reflectance</b>		<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>	<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>
<b>Wall reflectance</b>		<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>
<b>Plane reflectance</b>		<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>
<b>Room dimensions</b>		<b>Viewed crosswise</b>					<b>Viewed endwise</b>				
<b>2H</b>	<b>2H</b>	16.3	17.3	16.7	17.6	18.0	14.0	15.0	14.3	15.3	15.7
	<b>3H</b>	17.2	18.1	17.7	18.5	18.9	15.0	15.9	15.4	16.3	16.7
	<b>4H</b>	17.5	18.3	17.9	18.7	19.1	15.3	16.1	15.7	16.5	16.9
	<b>6H</b>	17.6	18.3	18.0	18.7	19.2	15.3	16.1	15.8	16.5	16.9
	<b>8H</b>	17.6	18.3	18.0	18.7	19.2	15.4	16.1	15.8	16.5	16.9
	<b>12H</b>	17.6	18.3	18.1	18.7	19.2	15.4	16.1	15.9	16.5	17.0
<b>4H</b>	<b>2H</b>	16.5	17.3	17.0	17.7	18.1	14.2	15.0	14.6	15.4	15.8
	<b>3H</b>	17.6	18.3	18.1	18.7	19.2	15.4	16.1	15.9	16.5	17.0
	<b>4H</b>	17.9	18.5	18.4	19.0	19.5	15.7	16.3	16.2	16.8	17.2
	<b>6H</b>	18.1	18.6	18.6	19.1	19.6	15.9	16.4	16.4	16.9	17.4
	<b>8H</b>	18.1	18.6	18.6	19.0	19.5	15.9	16.4	16.4	16.9	17.4
	<b>12H</b>	18.1	18.6	18.7	19.1	19.6	16.0	16.4	16.5	16.9	17.4
<b>8H</b>	<b>4H</b>	17.9	18.4	18.4	18.9	19.4	15.7	16.2	16.2	16.7	17.2
	<b>6H</b>	18.1	18.5	18.6	19.0	19.5	15.9	16.3	16.5	16.8	17.4
	<b>8H</b>	18.2	18.5	18.7	19.0	19.6	16.1	16.4	16.6	16.9	17.5
	<b>12H</b>	18.3	18.6	18.8	19.1	19.7	16.2	16.5	16.8	17.1	17.7
<b>12H</b>	<b>4H</b>	17.9	18.3	18.4	18.8	19.3	15.7	16.1	16.2	16.6	17.1
	<b>6H</b>	18.1	18.4	18.6	18.9	19.5	15.9	16.3	16.5	16.8	17.3
	<b>8H</b>	18.2	18.5	18.7	19.0	19.6	16.1	16.4	16.6	16.9	17.5

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0