

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

SGRTE8XT 13L 35K MD XX AR8466XT SG SO  
N/A

### Test Number

SP-01205\_2\_M-13L

### Test Date

2/11/2021

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

### Summary of Results

#### Power

Input Watts	13.2 W
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#### Lumen Output

Output Lumens	838
Efficacy	63.52 lm/W

#### Luminous Dimensions

0° - 180° Size	-0.63
90° - 270° Size	-0.63
Height	0

#### Spacing Criterion

Two luminaires, plane 0°	0.62
Two luminaires, plane 90°	0.55
Four luminaires	0.71

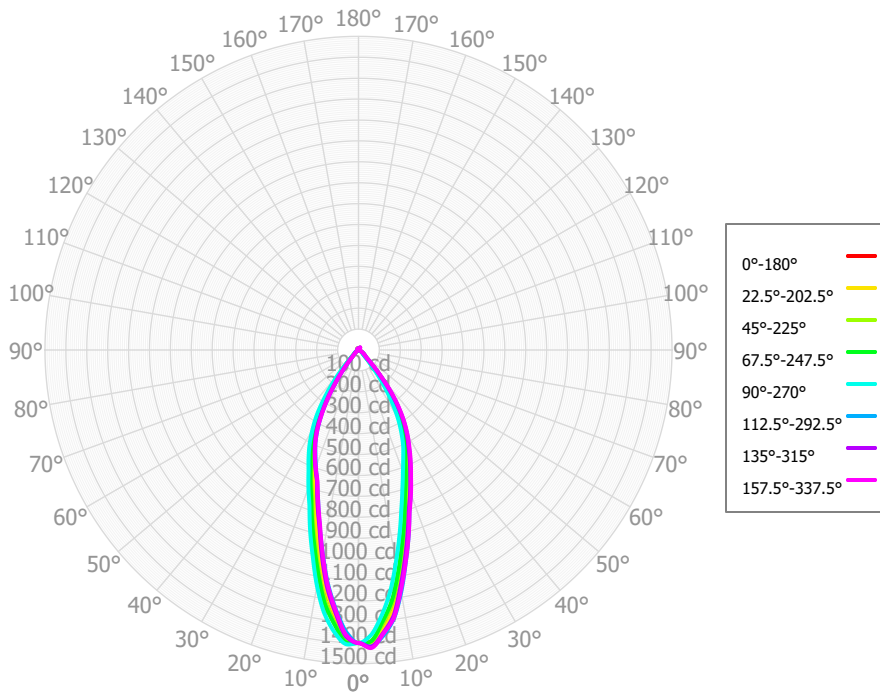
#### Full Beam Angle

0° - 180°	37°
90° - 270°	37°

### IES File Header Contents

Keyword	Value
TEST	SP-01205_2_M-13L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/11/2021
ISSUEDATE	3/2/2021
LUMCAT	SGRTE8XT 13L 35K MD XX AR8466XT SG SO
LUMINAIRE	N/A
OTHER	Beam Angle: 37 degrees
LAMPCAT	N/A
LAMP	19mm LES
OTHER	LEDXT lumen output is the same for all available CCT's
OTHER	Total luminaire watts is approximate; includes 2 watts for thermal protector
OTHER	This report prepared by Spectrum Lighting, scaled from 50L

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	119.38	14.24%	90.00° - 100.00°	0.39	0.05%
10.00° - 20.00°	234.52	27.97%	100.00° - 110.00°	0.36	0.04%
20.00° - 30.00°	244.05	29.11%	100.00° - 120.00°	0.81	0.10%
30.00° - 40.00°	161.04	19.21%	120.00° - 130.00°	0.86	0.10%
40.00° - 50.00°	43.29	5.16%	130.00° - 140.00°	1.73	0.21%
50.00° - 60.00°	18.10	2.16%	140.00° - 150.00°	4.70	0.56%
60.00° - 70.00°	4.78	0.57%	150.00° - 160.00°	2.86	0.34%
70.00° - 80.00°	0.38	0.05%	160.00° - 170.00°	1.10	0.13%
80.00° - 90.00°	0.39	0.05%	170.00° - 180.00°	0.08	0.01%
0.00° - 90.00°	825.93	98.51%	0.00° - 180.00°	838.45	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°	1402.08	1402.08	1402.08	1402.08	1402.08	1402.08	1402.08	1402.08	1402.08	1402.08	1402.08	1402.08	1402.08	1402.08	1402.08	1402.08	1402.08
2.50°	1408.22	1401.88	1393.62	1394.65	1365.95	1350.79	1371.95	1364.44	1371.61	1365.51	1391.87	1400.21	1408.16	1419.26	1420.69	1426.82	1408.22
5.00°	1347.21	1346.49	1316.42	1306.57	1274.27	1245.16	1262.42	1250.45	1277.72	1275.35	1309.47	1318.11	1351.67	1371.24	1358.73	1362.91	1347.21
7.50°	1263.55	1263.31	1225.70	1213.50	1164.04	1125.80	1147.27	1131.92	1162.98	1165.00	1213.29	1227.39	1266.61	1297.00	1283.74	1294.28	1263.55
10.00°	1142.69	1149.41	1100.85	1085.33	1030.34	986.09	1004.56	987.82	1028.12	1030.85	1085.14	1097.17	1145.17	1176.28	1152.97	1167.78	1142.69
12.50°	1022.17	1024.00	979.22	958.22	906.10	858.89	863.78	852.00	888.47	905.81	953.53	970.59	1011.28	1042.71	1025.42	1042.18	1022.17
15.00°	902.08	909.34	863.72	845.88	791.25	746.03	758.05	746.56	780.63	789.22	842.43	855.40	893.94	924.88	907.36	925.07	902.08
17.50°	799.85	797.54	760.91	738.02	697.89	659.29	658.30	654.69	677.65	698.18	733.14	750.88	780.54	809.98	801.40	813.79	799.85
20.00°	715.37	713.23	676.58	660.07	621.10	595.76	602.50	598.14	616.79	625.48	661.89	671.05	699.96	728.18	722.07	733.51	715.37
22.50°	640.89	633.63	602.59	586.08	558.90	539.04	547.01	542.25	559.05	563.57	591.75	599.17	624.38	649.81	647.49	656.54	640.89
25.00°	574.11	569.56	540.22	528.59	505.49	487.07	492.96	487.65	502.26	507.70	533.02	541.12	564.69	585.64	580.82	591.44	574.11
27.50°	511.98	506.96	478.47	468.87	443.34	422.03	433.41	423.90	444.24	441.04	472.22	479.51	506.17	522.11	518.07	528.20	511.98
30.00°	452.65	443.65	417.26	402.63	377.23	350.05	356.76	346.42	364.85	369.86	399.60	413.09	440.64	463.05	460.31	469.68	452.65
32.50°	386.77	380.02	349.27	333.48	301.44	270.87	278.74	268.18	285.94	291.31	325.64	339.49	374.28	402.57	397.41	407.53	386.77
35.00°	317.92	308.66	276.64	258.09	222.44	188.79	197.55	189.05	210.78	210.48	246.71	258.35	294.77	327.67	329.32	338.40	317.92
37.50°	242.81	236.99	203.62	184.92	154.25	125.38	127.60	124.04	139.85	148.12	173.21	184.76	216.05	252.15	253.02	264.15	242.81
40.00°	165.59	162.46	130.41	115.43	88.57	67.36	77.10	71.90	88.59	89.58	114.24	117.30	143.55	173.09	170.32	182.35	165.59
42.50°	108.20	95.16	84.12	66.21	58.84	45.48	43.42	42.38	46.56	59.04	67.36	71.77	79.22	103.37	111.05	116.89	108.20
45.00°	55.42	65.92	48.49	42.82	34.29	30.72	32.40	29.02	33.71	31.90	44.49	40.16	52.87	67.62	65.83	70.01	55.42
47.50°	42.83	42.16	36.75	29.13	29.52	25.68	24.90	21.67	23.62	26.49	28.90	26.89	31.90	40.84	48.13	44.70	42.83
50.00°	36.03	37.49	31.91	25.15	26.16	21.73	21.07	17.62	19.82	22.19	24.46	22.46	27.93	37.64	43.07	38.70	36.03
52.50°	30.75	32.82	27.51	21.58	22.38	18.26	17.68	14.40	16.20	18.45	20.42	18.66	24.13	33.85	36.95	32.97	30.75
55.00°	25.59	28.13	23.20	18.32	18.62	14.82	14.65	11.53	12.87	14.80	16.83	15.08	20.71	28.93	30.46	27.44	25.59
57.50°	21.22	23.47	19.42	15.09	15.20	11.83	11.65	9.36	10.10	12.18	13.63	12.32	17.12	23.88	24.74	22.43	21.22
60.00°	16.73	18.88	15.69	11.88	11.59	8.74	8.69	7.41	8.08	9.39	10.78	9.76	13.22	18.65	19.20	17.70	16.73
62.50°	10.34	13.07	9.42	7.57	6.57	4.53	5.40	4.54	5.47	5.58	7.18	6.10	8.93	12.80	12.43	11.81	10.34
65.00°	4.46	5.49	3.17	2.75	2.27	0.88	1.95	1.48	2.24	2.31	3.02	2.26	4.12	6.24	5.49	5.45	4.46
67.50°	2.22	1.20	1.63	1.07	1.20	0.55	0.77	0.79	0.67	1.26	1.16	1.15	1.32	2.35	2.85	2.51	2.22
70.00°	0.39	0.62	0.24	0.42	0.40	0.29	0.38	0.39	0.45	0.46	0.57	0.28	0.61	0.89	0.54	0.57	0.39
72.50°	0.41	0.37	0.37	0.29	0.40	0.33	0.32	0.32	0.35	0.41	0.35	0.27	0.30	0.31	0.49	0.23	0.41
75.00°	0.43	0.40	0.47	0.27	0.39	0.37	0.34	0.27	0.33	0.35	0.28	0.27	0.29	0.37	0.46	0.21	0.43
77.50°	0.41	0.39	0.48	0.35	0.37	0.41	0.31	0.26	0.32	0.30	0.33	0.30	0.30	0.37	0.42	0.29	0.41
80.00°	0.38	0.36	0.46	0.44	0.37	0.42	0.27	0.26	0.33	0.30	0.40	0.33	0.30	0.34	0.38	0.38	0.38
82.50°	0.31	0.34	0.37	0.38	0.41	0.36	0.35	0.35	0.33	0.39	0.42	0.36	0.35	0.33	0.36	0.35	0.31
85.00°	0.26	0.31	0.31	0.31	0.40	0.37	0.45	0.41	0.33	0.43	0.42	0.39	0.42	0.32	0.33	0.31	0.26
87.50°	0.24	0.31	0.30	0.35	0.32	0.46	0.40	0.31	0.37	0.41	0.36	0.40	0.40	0.38	0.32	0.33	0.24
90.00°	0.25	0.32	0.32	0.40	0.31	0.47	0.36	0.26	0.44	0.39	0.30	0.40	0.35	0.47	0.31	0.36	0.25
92.50°	0.32	0.30	0.39	0.34	0.37	0.36	0.27	0.36	0.37	0.40	0.26	0.42	0.31	0.46	0.32	0.39	0.32
95.00°	0.37	0.29	0.43	0.29	0.42	0.33	0.21	0.43	0.28	0.34	0.21	0.42	0.28	0.43	0.32	0.42	0.37
97.50°	0.42	0.29	0.44	0.26	0.44	0.38	0.36	0.40	0.31	0.24	0.29	0.35	0.34	0.45	0.27	0.45	0.42
100.00°	0.41	0.30	0.46	0.23	0.41	0.39	0.47	0.37	0.35	0.29	0.36	0.31	0.42	0.48	0.24	0.46	0.41
102.50°	0.36	0.32	0.49	0.19	0.36	0.38	0.38	0.35	0.33	0.41	0.35	0.34	0.33	0.42	0.26	0.38	0.36
105.00°	0.32	0.34	0.44	0.18	0.36	0.37	0.30	0.35	0.31	0.42	0.33	0.36	0.22	0.37	0.31	0.34	0.32
107.50°	0.30	0.27	0.31	0.26	0.40	0.35	0.26	0.37	0.39	0.38	0.31	0.34	0.31	0.29	0.41	0.38	0.30
110.00°	0.33	0.21	0.31	0.34	0.40	0.37	0.24	0.34	0.47	0.32	0.29	0.39	0.39	0.23	0.44	0.39	0.33
112.50°	0.39	0.31	0.40	0.39	0.38	0.42	0.30	0.27	0.47	0.25	0.32	0.50	0.33	0.33	0.40	0.34	0.39

### 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>	995	995	995	995	971	971	971	971	925	925	925	883	883	883	844	844	826
	<b>1</b>	949	926	906	887	927	907	889	872	871	856	843	838	826	816	807	798	781
	<b>2</b>	903	863	830	802	883	847	817	792	818	794	772	792	772	754	767	751	737
	<b>3</b>	859	806	765	732	841	793	756	725	769	738	712	747	721	699	727	706	691
	<b>4</b>	816	754	709	674	800	744	702	669	724	688	660	706	676	651	689	664	651
	<b>5</b>	776	708	660	625	762	699	655	621	683	644	615	668	634	608	654	625	613
	<b>6</b>	739	666	617	582	726	659	613	579	645	605	575	632	597	570	620	589	579
	<b>7</b>	704	628	579	545	692	622	576	543	610	569	539	599	563	535	589	557	547
	<b>8</b>	672	594	545	512	661	589	542	510	579	537	507	569	532	504	560	527	518
	<b>9</b>	641	563	515	482	632	558	512	481	550	508	479	541	504	477	534	500	492
	<b>10</b>	613	535	487	456	605	531	485	455	523	482	453	516	478	451	509	475	467

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	46.3 fc	3.7 ft
6.5 ft	33.2 fc	4.4 ft
7.5 ft	24.9 fc	5.0 ft
8.0 ft	21.9 fc	5.4 ft
10.0 ft	14.0 fc	6.7 ft
12.0 ft	9.7 fc	8.1 ft
14.0 ft	7.2 fc	9.4 ft
16.0 ft	5.5 fc	10.8 ft
20.0 ft	3.5 fc	13.5 ft
24.0 ft	2.4 fc	16.1 ft
28.0 ft	1.8 fc	18.8 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	48414	48414	48414
45.00°	2706	2368	1674
55.00°	1541	1397	1121
65.00°	364	259	185
75.00°	57	63	52
85.00°	102	121	157

### 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	7.0	8.0	7.4	8.3	8.7	3.0	4.0	3.4	4.4	4.7
	3H	6.8	7.7	7.3	8.1	8.5	2.9	3.7	3.3	4.1	4.5
	4H	6.7	7.5	7.2	7.9	8.3	2.8	3.6	3.2	4.0	4.4
	6H	6.6	7.4	7.1	7.8	8.2	2.7	3.4	3.1	3.8	4.2
	8H	6.6	7.3	7.1	7.7	8.1	2.6	3.3	3.1	3.7	4.2
	12H	6.5	7.2	7.0	7.6	8.1	2.6	3.2	3.1	3.7	4.1
4H	2H	6.8	7.6	7.2	8.0	8.4	2.8	3.6	3.3	4.0	4.4
	3H	6.6	7.3	7.1	7.7	8.1	2.7	3.3	3.1	3.7	4.2
	4H	6.5	7.1	7.0	7.5	8.0	2.5	3.1	3.0	3.6	4.1
	6H	6.4	6.9	6.9	7.4	7.9	2.5	2.9	3.0	3.4	3.9
	8H	6.3	6.8	6.8	7.3	7.8	2.4	2.9	2.9	3.3	3.8
	12H	6.3	6.7	6.8	7.2	7.7	2.4	2.8	2.9	3.3	3.8
8H	4H	6.3	6.8	6.8	7.3	7.8	2.4	2.8	2.9	3.3	3.8
	6H	6.2	6.6	6.7	7.1	7.6	2.3	2.6	2.8	3.2	3.7
	8H	6.1	6.5	6.7	7.0	7.5	2.2	2.6	2.8	3.1	3.6
	12H	6.1	6.4	6.6	6.9	7.5	2.2	2.5	2.8	3.0	3.7
12H	4H	6.3	6.6	6.8	7.2	7.7	2.3	2.7	2.8	3.2	3.7
	6H	6.1	6.5	6.7	7.0	7.5	2.2	2.5	2.8	3.0	3.6
	8H	6.1	6.4	6.6	6.9	7.5	2.2	2.5	2.7	3.0	3.6

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0