

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01205_1_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	815
Efficacy	61.73 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.5
Two luminaires, plane 90°	0.5
Four luminaires	0.68

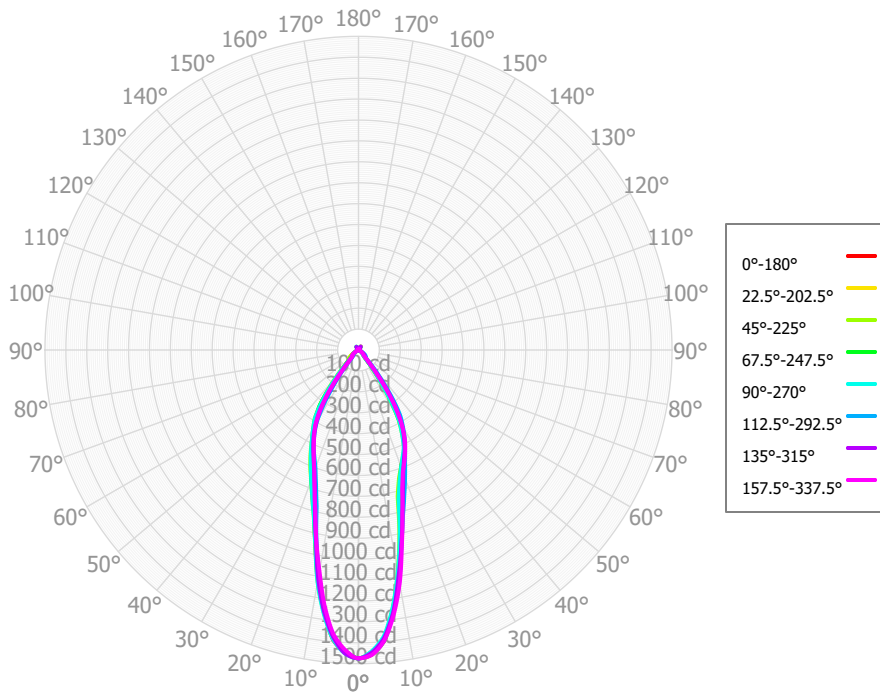
Full Beam Angle

0° - 180°	33°
90° - 270°	33°

IES File Header Contents

Keyword	Value
TEST	SP-01205_1_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 GL
LUMINAIRE	N/A
OTHER	Beam Angle: 33 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°	124.02	15.22%	90.00° - 100.00°	0.39	0.05%
10.00° - 20.00°	224.53	27.56%	100.00° - 110.00°	0.39	0.05%
20.00° - 30.00°	237.03	29.09%	100.00° - 120.00°	0.88	0.11%
30.00° - 40.00°	151.59	18.60%	120.00° - 130.00°	0.70	0.09%
40.00° - 50.00°	36.69	4.50%	130.00° - 140.00°	1.10	0.14%
50.00° - 60.00°	22.17	2.72%	140.00° - 150.00°	5.87	0.72%
60.00° - 70.00°	5.27	0.65%	150.00° - 160.00°	2.75	0.34%
70.00° - 80.00°	0.40	0.05%	160.00° - 170.00°	0.98	0.12%
80.00° - 90.00°	0.37	0.05%	170.00° - 180.00°	0.07	0.01%
0.00° - 90.00°	802.07	98.44%	0.00° - 180.00°	814.81	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°	1475.17	1475.17	1475.17	1475.17	1475.17	1475.17	1475.17	1475.17	1475.17	1475.17	1475.17	1475.17	1475.17	1475.17	1475.17	1475.17	1475.17
2.50°	1447.88	1459.30	1447.71	1458.08	1442.81	1442.41	1453.99	1437.64	1449.21	1443.78	1451.92	1443.14	1454.21	1453.86	1449.77	1460.37	1447.88
5.00°	1397.65	1392.71	1385.31	1398.18	1377.13	1377.19	1380.28	1366.56	1392.06	1377.81	1386.69	1383.38	1390.68	1387.60	1387.45	1399.11	1397.65
7.50°	1253.59	1271.41	1251.35	1267.16	1246.77	1252.29	1262.34	1237.82	1258.19	1252.58	1268.44	1249.17	1272.70	1269.68	1269.34	1281.82	1253.59
10.00°	1093.94	1111.69	1080.52	1110.72	1081.49	1088.76	1110.92	1075.45	1116.04	1088.99	1124.67	1088.46	1127.18	1122.01	1102.35	1134.28	1093.94
12.50°	922.41	918.55	903.91	916.80	912.11	930.13	937.99	931.54	953.03	942.55	953.47	940.43	953.27	948.46	950.52	957.66	922.41
15.00°	749.61	773.06	724.93	765.04	740.95	774.07	805.33	796.46	816.05	805.13	825.12	795.93	824.80	821.68	809.61	813.30	749.61
17.50°	670.32	661.63	644.44	664.28	654.19	675.82	694.00	699.64	731.29	718.05	735.30	720.99	735.47	728.35	706.22	694.81	670.32
20.00°	595.85	598.81	595.60	596.91	596.67	602.29	619.44	617.34	651.70	652.51	662.26	660.21	660.67	650.40	624.89	620.55	595.85
22.50°	557.98	564.78	554.72	563.27	552.53	551.97	560.48	558.24	580.52	586.34	601.63	594.06	596.17	581.57	567.96	575.38	557.98
25.00°	519.39	519.79	515.80	519.92	511.92	509.45	510.73	505.93	518.89	519.95	541.29	527.18	537.48	526.60	522.80	528.38	519.39
27.50°	461.77	469.56	451.19	468.49	451.00	456.88	464.08	458.31	470.13	469.69	481.12	476.85	482.20	478.25	471.34	480.39	461.77
30.00°	400.28	390.04	382.05	390.68	386.20	401.69	405.99	411.73	421.61	423.53	432.24	427.88	433.27	425.29	417.46	413.93	400.28
32.50°	299.31	299.22	278.44	294.60	284.66	311.14	344.96	338.86	373.36	368.90	388.96	376.02	387.36	370.58	338.05	339.43	299.31
35.00°	200.99	201.95	170.94	198.70	178.32	213.95	249.61	261.95	299.24	312.67	317.18	322.88	310.42	283.13	251.07	243.30	200.99
37.50°	119.34	102.75	105.05	102.92	109.55	133.13	147.75	168.12	201.51	213.11	233.94	214.75	221.87	185.89	161.71	139.77	119.34
40.00°	51.04	62.89	41.65	58.46	43.49	54.39	91.96	72.73	127.26	108.23	152.76	111.49	138.13	116.23	71.82	84.11	51.04
42.50°	41.21	36.51	36.12	37.30	34.90	40.94	41.92	55.44	70.89	82.73	72.22	77.10	55.82	52.69	51.38	40.90	41.21
45.00°	33.58	32.74	31.17	29.83	27.52	32.00	39.56	41.50	49.56	62.72	58.39	46.06	39.48	45.74	41.79	31.68	33.58
47.50°	33.28	32.54	29.23	27.35	24.74	31.79	40.39	40.53	50.06	59.95	60.18	40.86	37.55	47.76	39.63	29.00	33.28
50.00°	31.67	28.96	27.07	23.43	21.91	31.60	38.19	39.22	44.97	57.21	54.28	35.44	34.52	44.49	38.20	24.50	31.67
52.50°	26.65	25.04	22.57	19.12	18.44	27.67	35.78	32.31	37.03	45.91	47.08	28.76	31.33	40.70	32.04	19.77	26.65
55.00°	21.47	20.32	18.19	15.61	15.06	23.71	28.43	25.49	29.13	34.87	37.95	22.67	27.89	33.81	25.67	15.67	21.47
57.50°	15.93	15.56	14.66	12.26	12.26	19.45	21.26	19.49	21.25	26.95	28.61	18.80	24.42	26.78	20.22	11.62	15.93
60.00°	10.96	12.27	11.07	9.67	9.36	15.06	16.08	13.48	14.91	18.91	20.44	14.28	18.89	19.40	14.72	9.31	10.96
62.50°	6.98	8.92	7.26	7.19	5.99	9.70	10.85	7.49	9.06	10.07	12.32	7.83	13.28	12.09	8.30	7.00	6.98
65.00°	3.75	4.63	3.85	4.02	3.03	4.83	5.22	2.42	4.82	2.54	6.39	2.86	6.70	6.03	2.41	3.71	3.75
67.50°	1.55	0.73	1.79	0.80	1.54	2.25	0.54	1.17	0.97	1.35	0.72	1.31	0.49	0.56	1.26	0.64	1.55
70.00°	0.43	0.50	0.30	0.59	0.45	0.26	0.41	0.24	0.38	0.43	0.49	0.30	0.45	0.46	0.27	0.54	0.43
72.50°	0.50	0.30	0.31	0.49	0.49	0.36	0.32	0.34	0.36	0.45	0.28	0.28	0.41	0.37	0.27	0.44	0.50
75.00°	0.50	0.33	0.32	0.43	0.51	0.42	0.34	0.39	0.37	0.44	0.30	0.29	0.40	0.39	0.28	0.43	0.50
77.50°	0.41	0.36	0.31	0.38	0.48	0.36	0.37	0.34	0.39	0.36	0.31	0.33	0.38	0.41	0.33	0.41	0.41
80.00°	0.35	0.35	0.31	0.39	0.43	0.33	0.40	0.32	0.35	0.30	0.26	0.35	0.36	0.40	0.37	0.30	0.35
82.50°	0.31	0.35	0.31	0.40	0.32	0.36	0.39	0.35	0.30	0.31	0.22	0.35	0.36	0.39	0.39	0.22	0.31
85.00°	0.32	0.35	0.30	0.38	0.26	0.39	0.31	0.37	0.33	0.31	0.27	0.37	0.38	0.41	0.40	0.25	0.32
87.50°	0.36	0.35	0.26	0.37	0.26	0.41	0.28	0.37	0.35	0.31	0.32	0.40	0.40	0.45	0.39	0.29	0.36
90.00°	0.36	0.32	0.24	0.38	0.30	0.40	0.34	0.38	0.38	0.30	0.32	0.43	0.40	0.50	0.38	0.32	0.36
92.50°	0.35	0.30	0.25	0.39	0.37	0.36	0.37	0.39	0.39	0.29	0.31	0.45	0.39	0.50	0.39	0.36	0.35
95.00°	0.35	0.33	0.28	0.37	0.41	0.35	0.34	0.39	0.31	0.28	0.26	0.41	0.32	0.41	0.39	0.42	0.35
97.50°	0.37	0.35	0.35	0.38	0.40	0.37	0.33	0.38	0.26	0.29	0.25	0.32	0.30	0.36	0.39	0.44	0.37
100.00°	0.37	0.35	0.39	0.49	0.44	0.34	0.35	0.35	0.36	0.33	0.30	0.33	0.36	0.38	0.36	0.37	0.37
102.50°	0.38	0.34	0.40	0.56	0.51	0.26	0.37	0.31	0.43	0.38	0.36	0.40	0.39	0.38	0.29	0.35	0.38
105.00°	0.32	0.29	0.37	0.50	0.51	0.25	0.39	0.29	0.37	0.38	0.43	0.40	0.38	0.36	0.27	0.42	0.32
107.50°	0.24	0.32	0.30	0.48	0.45	0.29	0.37	0.30	0.31	0.35	0.43	0.38	0.37	0.39	0.32	0.48	0.24
110.00°	0.33	0.44	0.34	0.53	0.45	0.31	0.33	0.32	0.27	0.37	0.35	0.36	0.36	0.48	0.36	0.53	0.33
112.50°	0.46	0.58	0.44	0.53	0.47	0.33	0.31	0.34	0.28	0.41	0.31	0.36	0.39	0.48	0.40	0.62	0.46

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%	0%
	pcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	0	967	967	967	967	943	943	943	943	898	898	898	857	857	857	820	820	802
	1	923	900	880	862	901	881	864	847	846	832	819	814	803	792	784	775	759
	2	878	839	807	779	859	824	794	770	795	772	751	769	750	733	745	730	714
	3	835	783	744	712	817	771	735	706	748	718	693	727	702	680	707	686	672
	4	794	734	690	656	778	724	683	652	705	670	643	687	658	634	671	646	633
	5	755	689	643	609	741	681	638	605	665	627	599	650	618	592	636	608	597
	6	719	649	602	568	707	642	597	565	629	589	560	616	582	556	604	574	564
	7	686	613	565	532	674	607	562	530	595	555	526	585	549	523	575	543	534
	8	655	580	533	500	644	575	530	499	565	525	496	556	520	493	547	515	506
	9	626	550	503	472	616	545	501	471	537	497	469	529	493	466	522	489	481
	10	599	523	477	447	590	519	475	446	511	472	444	505	468	442	498	465	458

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	48.8 fc	3.0 ft
6.5 ft	34.9 fc	3.5 ft
7.5 ft	26.2 fc	4.1 ft
8.0 ft	23.0 fc	4.4 ft
10.0 ft	14.8 fc	5.4 ft
12.0 ft	10.2 fc	6.5 ft
14.0 ft	7.5 fc	7.6 ft
16.0 ft	5.8 fc	8.7 ft
20.0 ft	3.7 fc	10.9 ft
24.0 ft	2.6 fc	13.1 ft
28.0 ft	1.9 fc	15.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	50938	50938	50938
45.00°	1640	1522	1344
55.00°	1292	1095	906
65.00°	306	315	247
75.00°	66	42	68
85.00°	128	118	104

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	3.8	4.8	4.2	5.1	5.5	5.9	6.9	6.3	7.2	7.6
	3H	3.6	4.5	4.1	4.9	5.3	5.7	6.6	6.1	6.9	7.3
	4H	3.5	4.3	4.0	4.7	5.2	5.6	6.4	6.0	6.8	7.2
	6H	3.4	4.2	3.9	4.6	5.0	5.5	6.2	5.9	6.6	7.1
	8H	3.4	4.1	3.9	4.5	4.9	5.4	6.1	5.9	6.5	7.0
	12H	3.3	4.0	3.8	4.4	4.9	5.4	6.0	5.9	6.5	6.9
4H	2H	3.6	4.4	4.1	4.8	5.2	5.8	6.6	6.2	6.9	7.4
	3H	3.4	4.1	3.9	4.5	5.0	5.6	6.2	6.0	6.7	7.1
	4H	3.3	3.9	3.8	4.4	4.8	5.5	6.0	5.9	6.5	7.0
	6H	3.2	3.7	3.7	4.2	4.7	5.4	5.8	5.9	6.3	6.8
	8H	3.2	3.6	3.7	4.1	4.6	5.3	5.7	5.8	6.2	6.7
	12H	3.1	3.5	3.7	4.0	4.6	5.2	5.6	5.8	6.2	6.7
8H	4H	3.2	3.6	3.7	4.1	4.6	5.3	5.7	5.8	6.2	6.7
	6H	3.1	3.4	3.6	3.9	4.5	5.2	5.5	5.7	6.1	6.6
	8H	3.0	3.3	3.6	3.9	4.4	5.1	5.4	5.7	6.0	6.5
	12H	3.0	3.3	3.5	3.8	4.4	5.1	5.4	5.6	5.9	6.5
12H	4H	3.1	3.5	3.6	4.0	4.5	5.2	5.6	5.7	6.1	6.6
	6H	3.0	3.3	3.6	3.8	4.4	5.1	5.4	5.7	5.9	6.5
	8H	3.0	3.2	3.5	3.8	4.4	5.1	5.3	5.6	5.9	6.5

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0