

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 WD XX AR8466XT SG SO
N/A

Test Number

SP-01209_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	875
Efficacy	66.28 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.72
Two luminaires, plane 90°	0.72
Four luminaires	0.73

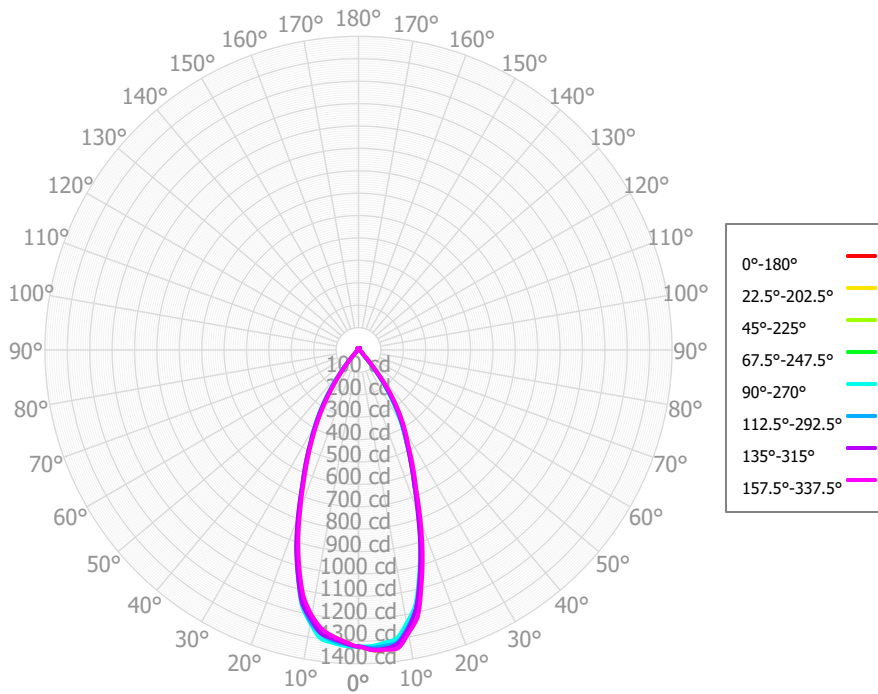
Full Beam Angle

0° - 180°	44°
90° - 270°	44°

IES File Header Contents

Keyword	Value
TEST	SP-01209_2_M-13L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/11/2021
ISSUEDATE	3/1/2021
LUMCAT	SGRTE8XT 13L 35K WD XX AR8466XT SG SO
LUMINAIRE	N/A
OTHER	Beam Angle: 44 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°	125.30	14.32%	90.00° - 100.00°	0.42	0.05%
10.00° - 20.00°	286.22	32.71%	100.00° - 110.00°	0.43	0.05%
20.00° - 30.00°	255.05	29.15%	100.00° - 120.00°	0.95	0.11%
30.00° - 40.00°	147.02	16.80%	120.00° - 130.00°	0.93	0.11%
40.00° - 50.00°	32.91	3.76%	130.00° - 140.00°	1.64	0.19%
50.00° - 60.00°	12.93	1.48%	140.00° - 150.00°	4.15	0.47%
60.00° - 70.00°	3.42	0.39%	150.00° - 160.00°	2.21	0.25%
70.00° - 80.00°	0.42	0.05%	160.00° - 170.00°	0.85	0.10%
80.00° - 90.00°	0.42	0.05%	170.00° - 180.00°	0.09	0.01%
0.00° - 90.00°	863.69	98.71%	0.00° - 180.00°	874.94	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°	1324.45	1324.45	1324.45	1324.45	1324.45	1324.45	1324.45	1324.45	1324.45	1324.45	1324.45	1324.45	1324.45	1324.45	1324.45	1324.45	1324.45
2.50°	1340.83	1341.38	1338.25	1330.39	1323.10	1315.06	1311.40	1305.12	1305.84	1305.12	1311.40	1315.06	1323.10	1330.39	1338.25	1341.38	1340.83
5.00°	1344.82	1343.63	1339.39	1326.29	1312.89	1303.77	1294.59	1284.75	1284.07	1284.75	1294.59	1303.77	1312.89	1326.29	1339.39	1343.63	1344.82
7.50°	1330.70	1343.42	1323.78	1317.03	1299.00	1277.80	1277.42	1255.86	1261.72	1255.86	1277.42	1277.80	1299.00	1317.03	1323.78	1343.42	1330.70
10.00°	1279.60	1284.64	1267.23	1259.07	1238.46	1233.21	1221.50	1202.53	1205.31	1202.53	1221.50	1233.21	1238.46	1259.07	1267.23	1284.64	1279.60
12.50°	1198.45	1221.03	1184.74	1184.13	1169.50	1154.66	1160.90	1130.19	1143.05	1130.19	1160.90	1154.66	1169.50	1184.13	1184.74	1221.03	1198.45
15.00°	1070.46	1086.81	1053.80	1059.21	1044.82	1042.04	1043.96	1017.21	1029.70	1017.21	1043.96	1042.04	1044.82	1059.21	1053.80	1086.81	1070.46
17.50°	934.87	951.16	917.70	922.05	917.93	914.32	923.98	895.87	911.63	895.87	923.98	914.32	917.93	922.05	917.70	951.16	934.87
20.00°	789.97	809.96	774.18	786.69	781.75	774.79	789.15	760.89	780.55	760.89	789.15	774.79	781.75	786.69	774.18	809.96	789.97
22.50°	665.76	673.34	651.14	651.61	654.88	655.07	656.97	640.17	650.31	640.17	656.97	655.07	654.88	651.61	651.14	673.34	665.76
25.00°	561.35	576.07	551.12	556.60	555.18	547.51	557.81	537.63	552.18	537.63	557.81	547.51	555.18	556.60	551.12	576.07	561.35
27.50°	477.00	483.69	467.92	464.91	463.04	459.54	461.19	444.53	455.29	444.53	461.19	459.54	463.04	464.91	467.92	483.69	477.00
30.00°	407.81	415.92	399.60	394.09	387.47	380.73	380.95	360.83	369.86	360.83	380.95	380.73	387.47	394.09	399.60	415.92	407.81
32.50°	338.88	347.54	329.13	323.43	311.81	300.58	300.88	279.66	286.00	279.66	300.88	300.58	311.81	323.43	329.13	347.54	338.88
35.00°	270.10	277.09	257.17	249.65	236.02	219.97	221.55	200.48	210.66	200.48	221.55	219.97	236.02	249.65	257.17	277.09	270.10
37.50°	196.66	205.16	183.55	176.61	165.09	152.49	148.44	136.35	140.55	136.35	148.44	152.49	165.09	176.61	183.55	205.16	196.66
40.00°	121.11	129.55	109.05	109.75	100.50	88.25	93.33	81.39	89.16	81.39	93.33	88.25	100.50	109.75	109.05	129.55	121.11
42.50°	74.61	71.29	66.81	51.33	56.58	54.41	49.92	48.86	47.25	48.86	49.92	54.41	56.58	51.33	66.81	71.29	74.61
45.00°	37.69	45.49	37.54	35.72	33.66	25.36	31.92	26.81	30.12	26.81	31.92	25.36	33.66	35.72	37.54	45.49	37.69
47.50°	27.90	28.89	28.49	23.13	21.87	19.69	19.69	18.59	17.86	18.59	19.69	19.69	21.87	23.13	28.49	28.89	27.90
50.00°	24.32	25.71	25.37	20.79	19.03	15.89	16.99	15.19	15.09	15.19	16.99	15.89	19.03	20.79	25.37	25.71	24.32
52.50°	21.38	22.49	22.06	18.34	16.44	13.55	14.39	12.82	12.56	12.82	14.39	13.55	16.44	18.34	22.06	22.49	21.38
55.00°	18.53	19.22	18.72	15.58	14.00	11.26	11.92	10.69	10.41	10.69	11.92	11.26	14.00	15.58	18.72	19.22	18.53
57.50°	15.12	15.98	15.46	12.78	11.39	9.50	9.73	8.69	8.45	8.69	9.73	9.50	11.39	12.78	15.46	15.98	15.12
60.00°	11.67	12.76	12.21	9.93	8.70	7.61	7.82	6.71	6.72	6.71	7.82	7.61	8.70	9.93	12.21	12.76	11.67
62.50°	6.42	8.24	6.96	6.65	5.60	4.75	5.35	4.32	4.65	4.32	5.35	4.75	5.60	6.65	6.96	8.24	6.42
65.00°	1.43	2.80	1.69	2.77	2.35	2.20	2.44	1.90	2.27	1.90	2.44	2.20	2.35	2.77	1.69	2.80	1.43
67.50°	0.87	0.74	1.00	0.66	1.15	1.21	1.03	1.12	1.00	1.12	1.03	1.21	1.15	0.66	1.00	0.74	0.87
70.00°	0.38	0.49	0.36	0.55	0.48	0.45	0.55	0.39	0.53	0.39	0.55	0.45	0.48	0.55	0.36	0.49	0.38
72.50°	0.38	0.42	0.35	0.46	0.37	0.43	0.39	0.36	0.38	0.36	0.39	0.43	0.37	0.46	0.35	0.42	0.38
75.00°	0.38	0.40	0.34	0.40	0.36	0.41	0.39	0.33	0.41	0.33	0.39	0.41	0.36	0.40	0.34	0.40	0.38
77.50°	0.39	0.44	0.35	0.35	0.35	0.39	0.39	0.32	0.44	0.32	0.39	0.39	0.35	0.35	0.35	0.44	0.39
80.00°	0.40	0.49	0.36	0.32	0.33	0.37	0.38	0.33	0.47	0.33	0.38	0.37	0.33	0.32	0.36	0.49	0.40
82.50°	0.41	0.46	0.39	0.34	0.34	0.35	0.35	0.38	0.51	0.38	0.35	0.35	0.34	0.34	0.39	0.46	0.41
85.00°	0.40	0.41	0.40	0.40	0.35	0.38	0.32	0.42	0.54	0.42	0.32	0.38	0.35	0.40	0.40	0.41	0.40
87.50°	0.33	0.36	0.35	0.42	0.34	0.45	0.32	0.44	0.47	0.44	0.32	0.45	0.34	0.42	0.35	0.36	0.33
90.00°	0.30	0.30	0.32	0.42	0.34	0.47	0.32	0.44	0.37	0.44	0.32	0.47	0.34	0.42	0.32	0.30	0.30
92.50°	0.32	0.34	0.34	0.39	0.39	0.43	0.41	0.38	0.38	0.38	0.41	0.43	0.39	0.39	0.34	0.34	0.32
95.00°	0.32	0.39	0.35	0.35	0.42	0.40	0.51	0.35	0.41	0.35	0.51	0.40	0.42	0.35	0.35	0.39	0.32
97.50°	0.32	0.42	0.34	0.38	0.40	0.38	0.41	0.40	0.39	0.40	0.41	0.38	0.40	0.38	0.34	0.42	0.32
100.00°	0.34	0.44	0.35	0.43	0.38	0.38	0.32	0.43	0.38	0.43	0.32	0.38	0.38	0.43	0.35	0.44	0.34
102.50°	0.37	0.48	0.40	0.39	0.36	0.40	0.34	0.42	0.36	0.42	0.34	0.40	0.36	0.39	0.40	0.48	0.37
105.00°	0.41	0.51	0.41	0.34	0.36	0.41	0.36	0.43	0.35	0.43	0.36	0.41	0.36	0.34	0.41	0.51	0.41
107.50°	0.46	0.49	0.37	0.42	0.40	0.41	0.39	0.45	0.34	0.45	0.39	0.41	0.40	0.42	0.37	0.49	0.46
110.00°	0.45	0.47	0.38	0.50	0.43	0.41	0.41	0.43	0.33	0.43	0.41	0.41	0.43	0.50	0.38	0.47	0.45
112.50°	0.40	0.47	0.42	0.59	0.46	0.41	0.42	0.38	0.39	0.38	0.42	0.41	0.46	0.59	0.42	0.47	0.40

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	1039	1039	1039	1039	1013	1013	1013	1013	966	966	966	922	922	922	882	882	864
	1	993	970	949	930	970	950	931	914	912	898	884	878	866	856	846	837	829
	2	947	906	873	845	927	890	860	834	860	836	814	833	813	795	807	791	775
	3	902	849	808	775	884	836	799	768	812	781	755	790	763	742	769	747	729
	4	860	798	752	717	844	787	745	713	767	731	703	749	718	694	732	706	685
	5	820	752	704	668	806	743	698	665	726	687	658	711	677	651	696	668	644
	6	783	710	660	625	770	702	656	623	688	648	617	675	640	613	663	632	608
	7	748	671	622	587	736	665	619	585	653	612	582	642	605	578	632	599	574
	8	715	637	588	554	704	631	585	552	621	579	549	612	574	546	603	569	544
	9	684	605	556	524	674	600	554	523	592	550	520	583	545	518	575	541	516
	10	655	576	528	497	646	572	526	496	564	523	494	557	519	492	550	515	490

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	43.8 fc	4.5 ft
6.5 ft	31.3 fc	5.3 ft
7.5 ft	23.5 fc	6.1 ft
8.0 ft	20.7 fc	6.5 ft
10.0 ft	13.2 fc	8.2 ft
12.0 ft	9.2 fc	9.8 ft
14.0 ft	6.8 fc	11.5 ft
16.0 ft	5.2 fc	13.1 ft
20.0 ft	3.3 fc	16.4 ft
24.0 ft	2.3 fc	19.6 ft
28.0 ft	1.7 fc	22.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	45734	45734	45734
45.00°	1841	1833	1644
55.00°	1116	1127	843
65.00°	117	138	192
75.00°	51	46	49
85.00°	157	160	138

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	4.4	5.4	4.8	5.7	6.1	1.1	2.1	1.5	2.4	2.8
	3H	4.2	5.1	4.6	5.4	5.8	1.0	1.8	1.4	2.2	2.6
	4H	4.1	4.9	4.6	5.3	5.7	0.9	1.6	1.3	2.0	2.5
	6H	4.0	4.7	4.5	5.1	5.6	0.8	1.5	1.2	1.9	2.3
	8H	4.0	4.6	4.4	5.1	5.5	0.7	1.4	1.2	1.8	2.3
	12H	3.9	4.6	4.4	5.0	5.4	0.7	1.3	1.2	1.8	2.2
4H	2H	4.2	4.9	4.6	5.3	5.7	0.9	1.7	1.4	2.1	2.5
	3H	4.0	4.6	4.4	5.0	5.4	0.8	1.4	1.2	1.8	2.3
	4H	3.8	4.4	4.3	4.8	5.3	0.7	1.2	1.1	1.7	2.2
	6H	3.7	4.2	4.2	4.7	5.2	0.6	1.1	1.1	1.6	2.1
	8H	3.7	4.1	4.2	4.6	5.1	0.6	1.0	1.1	1.5	2.0
	12H	3.7	4.0	4.2	4.5	5.1	0.6	0.9	1.1	1.4	2.0
8H	4H	3.7	4.1	4.2	4.6	5.1	0.5	1.0	1.0	1.4	1.9
	6H	3.6	3.9	4.1	4.4	5.0	0.4	0.8	1.0	1.3	1.8
	8H	3.5	3.8	4.1	4.4	4.9	0.4	0.7	1.0	1.3	1.8
	12H	3.5	3.8	4.1	4.3	4.9	0.5	0.7	1.0	1.2	1.9
12H	4H	3.6	4.0	4.1	4.5	5.0	0.4	0.8	1.0	1.3	1.9
	6H	3.5	3.8	4.1	4.3	4.9	0.4	0.7	0.9	1.2	1.8
	8H	3.5	3.7	4.0	4.3	4.9	0.4	0.7	0.9	1.2	1.8

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0