

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01211_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	880
Efficacy	66.64 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.82
Two luminaires, plane 90°	0.83
Four luminaires	0.86

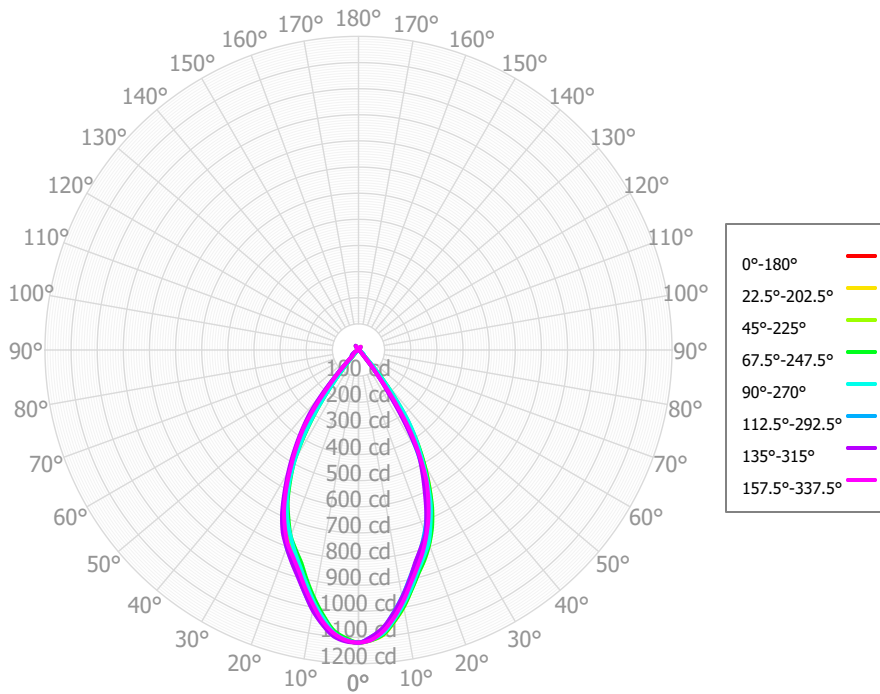
Full Beam Angle

0° - 180°	56°
90° - 270°	56°

IES File Header Contents

Keyword	Value
TEST	SP-01211_1_M-13L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/11/2021
ISSUEDATE	2/25/2021
LUMCAT	SGRTE8XT 13L 35K XW XX AR8466XT SG GL
LUMINAIRE	N/A
OTHER	Beam Angle: 43 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°	101.51	11.54%	90.00° - 100.00°	0.42	0.05%
10.00° - 20.00°	244.29	27.77%	100.00° - 110.00°	0.39	0.04%
20.00° - 30.00°	294.19	33.45%	100.00° - 120.00°	0.88	0.10%
30.00° - 40.00°	182.50	20.75%	120.00° - 130.00°	0.71	0.08%
40.00° - 50.00°	29.84	3.39%	130.00° - 140.00°	1.25	0.14%
50.00° - 60.00°	11.97	1.36%	140.00° - 150.00°	5.38	0.61%
60.00° - 70.00°	3.47	0.39%	150.00° - 160.00°	1.80	0.21%
70.00° - 80.00°	0.42	0.05%	160.00° - 170.00°	0.50	0.06%
80.00° - 90.00°	0.41	0.05%	170.00° - 180.00°	0.08	0.01%
0.00° - 90.00°	868.59	98.75%	0.00° - 180.00°	879.60	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°	1120.04	1120.04	1120.04	1120.04	1120.04	1120.04	1120.04	1120.04	1120.04	1120.04	1120.04	1120.04	1120.04	1120.04	1120.04	1120.04	1120.04
2.50°	1105.61	1111.81	1110.06	1111.92	1109.63	1111.97	1116.55	1111.57	1113.34	1105.52	1111.77	1104.25	1110.03	1099.39	1099.50	1111.13	1105.61
5.00°	1081.81	1094.40	1084.11	1092.43	1087.61	1098.24	1099.55	1088.17	1092.79	1084.19	1081.12	1078.78	1086.01	1069.85	1067.56	1081.10	1081.81
7.50°	1035.23	1048.65	1044.99	1047.09	1041.37	1057.81	1059.85	1048.11	1045.84	1032.98	1034.55	1026.16	1035.14	1016.13	1018.03	1034.37	1035.23
10.00°	981.37	999.02	991.96	997.60	989.36	1008.69	1011.75	992.57	993.67	977.75	978.52	967.66	980.41	959.59	961.51	978.88	981.37
12.50°	922.93	938.21	937.06	939.21	933.20	952.14	952.23	935.85	933.05	917.32	917.49	906.27	917.94	898.55	901.65	918.04	922.93
15.00°	863.36	882.77	880.52	885.73	876.32	893.70	898.48	878.23	878.18	856.49	863.58	844.44	860.09	842.90	840.76	864.38	863.36
17.50°	817.15	839.74	830.46	840.87	830.00	847.86	851.29	831.30	830.98	815.09	812.72	800.72	809.77	794.32	794.09	814.32	817.15
20.00°	773.30	790.12	785.12	791.36	784.87	804.29	804.12	791.21	783.74	773.80	765.48	758.64	759.77	740.61	750.73	758.16	773.30
22.50°	701.84	728.26	723.35	735.17	719.80	745.48	757.00	736.29	736.46	713.60	719.48	700.61	710.22	681.28	678.10	699.56	701.84
25.00°	627.13	661.02	651.77	666.77	653.55	684.81	692.06	673.67	673.25	652.34	652.06	641.81	649.20	616.33	600.53	632.34	627.13
27.50°	560.11	585.51	576.11	583.90	570.98	603.86	613.14	598.93	595.39	576.74	579.05	567.82	575.34	546.30	529.21	562.42	560.11
30.00°	493.56	500.47	498.45	500.71	488.49	521.59	535.25	519.05	519.28	500.15	502.48	491.94	489.07	451.88	458.56	468.58	493.56
32.50°	366.99	403.39	396.38	417.19	411.76	446.88	458.04	443.16	444.49	415.72	425.24	382.69	391.32	339.25	327.82	368.98	366.99
35.00°	240.74	291.50	284.73	322.28	332.24	371.62	381.65	368.60	359.84	327.27	314.64	273.52	278.32	225.73	194.00	243.67	240.74
37.50°	140.76	164.17	179.21	218.03	222.13	275.74	305.70	268.10	269.08	217.92	199.71	165.10	153.70	111.66	114.61	113.94	140.76
40.00°	47.68	81.90	75.59	129.34	119.83	181.16	199.77	161.01	169.29	119.96	114.67	68.49	79.32	55.58	38.43	65.23	47.68
42.50°	31.85	38.96	40.53	51.29	69.24	101.89	80.99	94.67	64.88	65.08	31.79	41.28	36.87	28.78	27.58	25.41	31.85
45.00°	17.54	18.87	21.55	22.41	27.57	32.80	44.03	35.99	29.90	24.11	24.52	18.61	19.67	17.90	17.33	18.60	17.54
47.50°	13.73	15.22	16.97	21.00	27.75	34.23	34.70	27.54	23.46	24.20	18.86	14.96	15.51	13.47	13.29	13.69	13.73
50.00°	10.14	12.15	14.78	18.95	27.03	34.76	32.48	25.33	21.44	23.95	18.03	11.71	12.22	10.52	9.48	10.56	10.14
52.50°	7.51	9.43	12.06	16.61	23.21	30.95	32.12	22.21	20.88	22.89	17.13	9.76	9.28	8.06	7.10	7.48	7.51
55.00°	5.24	7.34	9.27	13.18	19.11	26.84	28.05	19.03	19.38	21.13	15.23	7.92	7.46	6.31	4.93	5.46	5.24
57.50°	4.21	5.57	7.41	9.34	14.24	21.69	23.26	15.97	17.65	18.02	13.18	6.38	6.01	4.73	3.74	3.56	4.21
60.00°	3.17	4.13	5.60	6.76	9.63	16.39	18.38	12.87	14.73	14.13	10.01	4.84	4.79	3.74	2.66	3.01	3.17
62.50°	2.12	2.81	3.36	4.52	5.57	10.65	13.48	8.03	11.59	9.03	6.82	3.30	3.64	2.84	1.97	2.39	2.12
65.00°	1.23	1.66	1.21	2.58	2.51	5.68	7.23	3.44	6.32	4.84	3.43	1.97	2.20	1.67	1.32	1.37	1.23
67.50°	0.71	0.57	0.82	0.71	1.19	2.42	0.88	1.84	0.80	1.85	0.72	0.99	0.71	0.46	0.77	0.53	0.71
70.00°	0.39	0.36	0.46	0.43	0.41	0.35	0.62	0.42	0.41	0.32	0.62	0.40	0.43	0.45	0.41	0.50	0.39
72.50°	0.40	0.34	0.43	0.38	0.43	0.42	0.48	0.38	0.35	0.35	0.52	0.36	0.31	0.52	0.44	0.48	0.40
75.00°	0.39	0.34	0.40	0.34	0.45	0.44	0.38	0.35	0.36	0.35	0.47	0.38	0.31	0.43	0.46	0.45	0.39
77.50°	0.32	0.34	0.40	0.31	0.48	0.35	0.29	0.40	0.38	0.32	0.43	0.44	0.33	0.34	0.47	0.41	0.32
80.00°	0.32	0.33	0.39	0.37	0.43	0.32	0.28	0.44	0.41	0.32	0.39	0.43	0.35	0.39	0.45	0.38	0.32
82.50°	0.40	0.31	0.37	0.42	0.32	0.35	0.29	0.38	0.44	0.35	0.35	0.35	0.38	0.43	0.38	0.37	0.40
85.00°	0.41	0.33	0.36	0.44	0.34	0.38	0.38	0.34	0.37	0.34	0.29	0.36	0.37	0.33	0.37	0.41	0.41
87.50°	0.36	0.35	0.35	0.45	0.47	0.43	0.44	0.33	0.30	0.32	0.29	0.44	0.36	0.25	0.43	0.44	0.36
90.00°	0.33	0.39	0.34	0.38	0.46	0.44	0.36	0.36	0.31	0.34	0.38	0.43	0.33	0.36	0.46	0.46	0.33
92.50°	0.31	0.43	0.30	0.32	0.37	0.41	0.31	0.45	0.33	0.39	0.45	0.35	0.30	0.44	0.46	0.43	0.31
95.00°	0.34	0.43	0.30	0.38	0.36	0.35	0.38	0.48	0.43	0.40	0.49	0.35	0.31	0.41	0.43	0.34	0.34
97.50°	0.40	0.44	0.36	0.43	0.40	0.27	0.43	0.41	0.48	0.39	0.48	0.38	0.33	0.38	0.40	0.30	0.40
100.00°	0.37	0.36	0.39	0.39	0.42	0.30	0.46	0.34	0.37	0.34	0.41	0.38	0.37	0.34	0.39	0.33	0.37
102.50°	0.30	0.30	0.39	0.37	0.44	0.37	0.46	0.29	0.29	0.29	0.37	0.38	0.41	0.33	0.39	0.36	0.30
105.00°	0.35	0.28	0.39	0.40	0.46	0.35	0.41	0.28	0.32	0.30	0.36	0.42	0.42	0.38	0.38	0.38	0.35
107.50°	0.45	0.28	0.38	0.43	0.47	0.28	0.39	0.33	0.31	0.33	0.36	0.48	0.42	0.44	0.35	0.39	0.45
110.00°	0.46	0.37	0.40	0.48	0.45	0.30	0.42	0.37	0.26	0.35	0.37	0.44	0.37	0.52	0.37	0.39	0.46
112.50°	0.42	0.43	0.45	0.54	0.43	0.37	0.43	0.40	0.24	0.37	0.40	0.36	0.36	0.60	0.40	0.45	0.42

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	1045	1045	1045	1045	1019	1019	1019	1019	971	971	971	928	928	928	887	887	869
	1	996	972	951	931	974	952	933	916	915	899	885	880	868	857	848	839	822
	2	948	906	871	842	928	890	858	831	860	834	812	832	811	793	806	789	773
	3	901	846	803	769	883	833	793	762	808	775	748	786	758	735	764	742	727
	4	857	791	744	707	840	781	737	702	760	723	693	742	710	684	724	697	684
	5	814	742	692	655	799	733	686	651	716	676	644	701	665	638	686	656	643
	6	774	698	646	609	761	690	642	606	676	633	601	663	625	597	650	617	592
	7	737	657	605	569	725	651	602	567	638	595	563	627	588	559	616	582	556
	8	702	620	568	533	691	614	565	531	604	560	528	594	555	526	585	549	523
	9	669	586	535	501	659	581	533	499	572	528	497	564	524	495	556	520	493
	10	639	555	505	472	630	551	503	471	543	499	469	536	496	467	529	492	465

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	37.0 fc	5.8 ft
6.5 ft	26.5 fc	6.8 ft
7.5 ft	19.9 fc	7.9 ft
8.0 ft	17.5 fc	8.4 ft
10.0 ft	11.2 fc	10.5 ft
12.0 ft	7.8 fc	12.6 ft
14.0 ft	5.7 fc	14.7 ft
16.0 ft	4.4 fc	16.8 ft
20.0 ft	2.8 fc	21.0 ft
24.0 ft	1.9 fc	25.2 ft
28.0 ft	1.4 fc	29.4 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	38675	38675	38675
45.00°	856	1052	1346
55.00°	315	558	1150
65.00°	100	99	205
75.00°	52	54	60
85.00°	163	142	134

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	-4.2	-3.3	-3.8	-2.9	-2.6	4.1	5.0	4.4	5.3	5.7
	3H	-4.3	-3.5	-3.9	-3.1	-2.7	3.9	4.7	4.3	5.1	5.5
	4H	-4.4	-3.6	-3.9	-3.2	-2.8	3.8	4.5	4.2	4.9	5.3
	6H	-4.4	-3.7	-4.0	-3.3	-2.9	3.7	4.4	4.1	4.8	5.2
	8H	-4.4	-3.7	-3.9	-3.3	-2.9	3.6	4.3	4.1	4.7	5.1
	12H	-4.3	-3.7	-3.8	-3.2	-2.8	3.6	4.2	4.0	4.6	5.1
4H	2H	-4.4	-3.6	-3.9	-3.2	-2.8	4.0	4.8	4.4	5.2	5.6
	3H	-4.5	-3.8	-4.0	-3.4	-3.0	3.8	4.4	4.3	4.9	5.3
	4H	-4.5	-3.9	-4.0	-3.5	-3.0	3.7	4.3	4.2	4.7	5.2
	6H	-4.5	-4.0	-4.0	-3.5	-3.0	3.6	4.1	4.1	4.6	5.1
	8H	-4.4	-3.9	-3.9	-3.5	-3.0	3.6	4.0	4.1	4.5	5.0
	12H	-4.2	-3.8	-3.7	-3.3	-2.8	3.5	3.9	4.0	4.4	4.9
8H	4H	-4.6	-4.2	-4.1	-3.7	-3.2	3.5	4.0	4.0	4.4	4.9
	6H	-4.5	-4.2	-4.0	-3.6	-3.1	3.4	3.8	4.0	4.3	4.8
	8H	-4.3	-4.0	-3.8	-3.5	-3.0	3.4	3.7	3.9	4.2	4.8
	12H	-4.0	-3.7	-3.4	-3.2	-2.6	3.4	3.6	3.9	4.1	4.8
12H	4H	-4.7	-4.3	-4.1	-3.8	-3.3	3.5	3.8	4.0	4.4	4.9
	6H	-4.5	-4.2	-4.0	-3.7	-3.1	3.4	3.7	3.9	4.2	4.7
	8H	-4.3	-4.0	-3.8	-3.5	-2.9	3.3	3.6	3.9	4.1	4.7

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0