

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01211_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	759
Efficacy	57.54 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.84
Two luminaires, plane 90°	0.83
Four luminaires	0.91

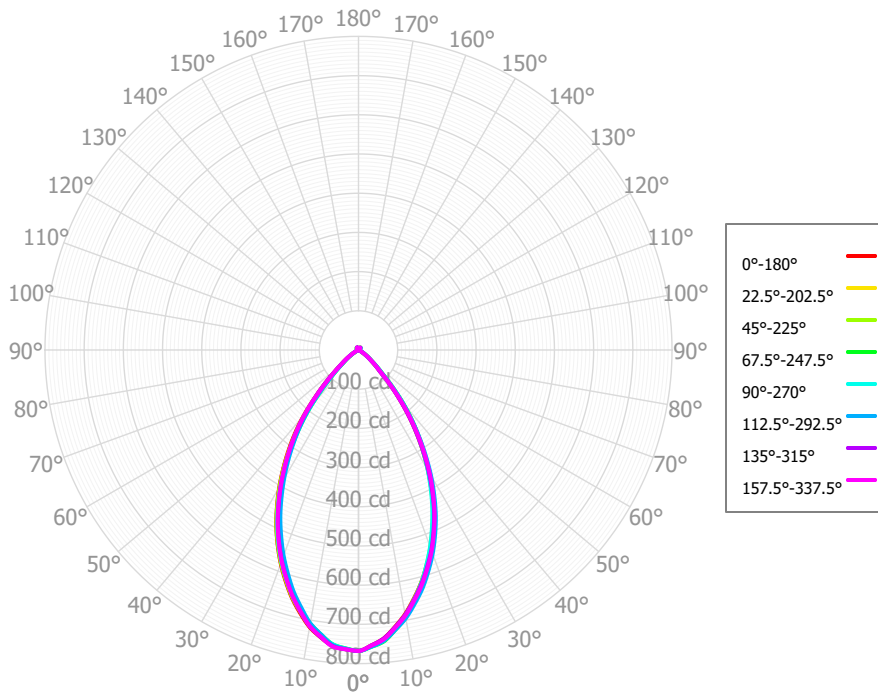
Full Beam Angle

0° - 180°	60°
90° - 270°	59°

IES File Header Contents

Keyword	Value
TEST	SP-01211_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 XW XX AR8466XT SG FG
LUMINAIRE	N/A
OTHER	Beam Angle: 59 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°	70.81	9.32%	90.00° - 100.00°	0.43	0.06%
10.00° - 20.00°	176.73	23.27%	100.00° - 110.00°	0.43	0.06%
20.00° - 30.00°	214.45	28.24%	100.00° - 120.00°	1.19	0.16%
30.00° - 40.00°	173.99	22.91%	120.00° - 130.00°	1.97	0.26%
40.00° - 50.00°	80.27	10.57%	130.00° - 140.00°	3.16	0.42%
50.00° - 60.00°	24.11	3.17%	140.00° - 150.00°	3.82	0.50%
60.00° - 70.00°	3.97	0.52%	150.00° - 160.00°	2.55	0.34%
70.00° - 80.00°	0.45	0.06%	160.00° - 170.00°	1.05	0.14%
80.00° - 90.00°	0.44	0.06%	170.00° - 180.00°	0.09	0.01%
0.00° - 90.00°	745.22	98.12%	0.00° - 180.00°	759.48	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°	767.81	767.81	767.81	767.81	767.81	767.81	767.81	767.81	767.81	767.81	767.81	767.81	767.81	767.81	767.81	767.81	767.81
2.50°	754.50	756.26	755.78	758.02	757.61	763.11	764.58	764.16	764.07	764.16	763.29	762.06	762.44	757.46	754.68	755.07	754.50
5.00°	738.80	741.37	742.16	746.24	744.30	755.61	758.20	759.53	757.83	756.55	756.99	753.97	754.04	744.37	739.12	741.08	738.80
7.50°	712.72	716.32	714.81	720.04	718.22	732.29	738.67	737.95	739.49	736.66	736.69	732.28	733.67	720.37	713.88	715.13	712.72
10.00°	684.65	689.01	687.08	693.06	689.85	708.21	715.57	715.89	717.98	713.93	715.45	709.20	710.80	695.18	686.38	688.49	684.65
12.50°	650.78	656.23	651.90	657.12	654.03	673.61	683.89	683.20	687.63	683.38	684.91	678.68	680.75	663.20	653.29	655.58	650.78
15.00°	616.04	621.50	616.35	620.95	617.24	638.78	650.13	650.08	655.28	651.37	653.49	646.98	648.86	630.15	619.21	622.04	616.04
17.50°	577.83	582.84	576.46	580.83	575.93	598.81	612.02	611.90	618.29	613.98	616.21	610.18	612.60	592.21	581.56	584.33	577.83
20.00°	539.27	542.75	536.15	540.51	534.19	558.65	572.40	573.24	579.90	575.86	578.35	572.21	574.82	553.25	543.46	545.81	539.27
22.50°	495.92	500.23	492.66	496.67	489.93	515.44	530.11	530.96	538.79	534.32	537.65	530.22	533.90	510.59	500.24	503.28	495.92
25.00°	452.29	456.10	448.68	452.56	445.55	471.94	486.47	488.07	495.99	492.46	495.80	486.94	490.79	466.61	456.55	459.67	452.29
27.50°	404.07	409.55	402.03	405.67	399.36	425.75	440.81	441.67	450.43	446.13	449.28	440.01	443.80	418.73	407.64	411.88	404.07
30.00°	355.72	361.81	355.13	358.84	353.16	379.60	394.75	395.19	404.03	399.55	402.12	392.13	395.62	369.96	358.48	363.48	355.72
32.50°	306.55	312.56	307.19	312.52	307.48	333.67	348.17	348.34	356.41	351.27	352.89	341.90	345.63	319.00	308.07	313.13	306.55
35.00°	257.40	264.60	259.72	266.42	261.88	288.00	302.13	301.82	309.36	302.96	304.01	292.16	295.82	268.66	257.69	263.21	257.40
37.50°	208.81	218.10	213.91	221.44	217.70	243.60	256.70	256.43	263.00	255.17	256.05	243.41	246.22	219.63	208.78	214.43	208.81
40.00°	160.66	170.44	168.09	176.28	173.49	198.61	209.96	209.90	214.68	207.19	206.91	193.85	195.57	170.99	160.21	166.34	160.66
42.50°	117.66	121.63	122.25	130.39	129.03	151.24	161.92	159.99	164.25	156.20	155.04	142.92	143.71	123.06	117.12	119.80	117.66
45.00°	77.52	85.99	83.28	89.59	87.35	108.02	120.07	115.27	121.05	107.24	110.09	100.79	102.70	85.11	76.45	81.85	77.52
47.50°	59.01	61.55	61.20	65.69	65.20	78.01	83.63	83.34	84.76	79.21	78.58	72.04	72.35	62.32	58.74	60.61	59.01
50.00°	41.63	44.23	42.67	45.21	44.78	52.59	58.84	57.27	59.95	53.15	53.83	50.25	51.31	44.47	41.97	43.13	41.63
52.50°	30.44	32.10	31.45	34.01	33.30	39.63	42.82	43.33	44.56	40.73	40.28	37.54	38.37	33.23	31.38	31.88	30.44
55.00°	20.10	22.37	21.88	24.09	23.03	28.05	30.27	30.78	31.62	28.81	28.30	26.37	27.35	23.44	21.39	22.15	20.10
57.50°	13.53	14.19	15.20	17.14	17.63	19.58	19.95	20.74	20.41	19.43	18.64	16.93	17.76	15.32	14.52	14.59	13.53
60.00°	7.62	8.75	9.42	10.93	12.21	12.62	13.76	12.87	13.39	11.05	11.30	10.07	11.23	9.12	8.26	8.48	7.62
62.50°	4.00	4.81	5.04	6.17	6.69	8.54	9.91	8.34	8.99	6.83	6.88	5.76	6.67	4.83	4.38	4.20	4.00
65.00°	1.21	2.49	2.08	2.66	2.35	4.93	5.81	4.62	5.09	3.21	3.57	2.84	3.55	2.14	1.31	1.60	1.21
67.50°	0.77	0.93	1.00	1.26	1.23	2.13	1.60	1.96	1.46	1.63	1.46	1.11	1.23	0.87	0.85	0.82	0.77
70.00°	0.47	0.50	0.43	0.43	0.44	0.47	0.44	0.48	0.32	0.47	0.41	0.43	0.46	0.36	0.50	0.45	0.47
72.50°	0.51	0.54	0.41	0.43	0.40	0.44	0.51	0.40	0.30	0.46	0.38	0.52	0.43	0.43	0.43	0.46	0.51
75.00°	0.54	0.45	0.42	0.41	0.38	0.41	0.54	0.39	0.33	0.42	0.38	0.54	0.43	0.40	0.39	0.42	0.54
77.50°	0.55	0.32	0.44	0.34	0.38	0.40	0.56	0.45	0.39	0.34	0.39	0.50	0.44	0.31	0.43	0.36	0.55
80.00°	0.54	0.32	0.43	0.33	0.39	0.38	0.56	0.43	0.40	0.31	0.37	0.44	0.40	0.36	0.46	0.37	0.54
82.50°	0.50	0.35	0.40	0.39	0.42	0.36	0.55	0.34	0.39	0.39	0.32	0.37	0.35	0.48	0.48	0.45	0.50
85.00°	0.45	0.37	0.41	0.40	0.42	0.37	0.47	0.35	0.37	0.45	0.34	0.35	0.35	0.48	0.48	0.45	0.45
87.50°	0.36	0.38	0.45	0.38	0.39	0.40	0.37	0.43	0.34	0.48	0.38	0.35	0.37	0.41	0.45	0.40	0.36
90.00°	0.33	0.36	0.45	0.35	0.38	0.38	0.44	0.48	0.34	0.51	0.37	0.33	0.42	0.36	0.41	0.38	0.33
92.50°	0.37	0.32	0.42	0.31	0.37	0.31	0.52	0.50	0.35	0.53	0.33	0.31	0.47	0.32	0.38	0.38	0.37
95.00°	0.40	0.36	0.42	0.30	0.40	0.30	0.44	0.50	0.35	0.53	0.33	0.30	0.42	0.36	0.37	0.42	0.40
97.50°	0.43	0.40	0.43	0.31	0.46	0.33	0.34	0.48	0.36	0.51	0.36	0.29	0.36	0.43	0.39	0.47	0.43
100.00°	0.39	0.41	0.42	0.30	0.48	0.35	0.36	0.43	0.37	0.47	0.41	0.31	0.35	0.42	0.39	0.46	0.39
102.50°	0.29	0.40	0.39	0.27	0.47	0.37	0.39	0.36	0.38	0.43	0.47	0.34	0.34	0.39	0.36	0.43	0.29
105.00°	0.34	0.44	0.42	0.31	0.47	0.40	0.32	0.33	0.41	0.41	0.44	0.39	0.35	0.37	0.40	0.44	0.34
107.50°	0.52	0.49	0.47	0.40	0.48	0.44	0.24	0.32	0.43	0.42	0.39	0.46	0.36	0.35	0.51	0.46	0.52
110.00°	0.62	0.49	0.49	0.44	0.49	0.47	0.40	0.37	0.44	0.44	0.36	0.49	0.34	0.43	0.52	0.47	0.62
112.50°	0.64	0.48	0.50	0.46	0.49	0.48	0.55	0.45	0.45	0.47	0.32	0.52	0.33	0.53	0.44	0.48	0.64

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	901	901	901	901	878	878	878	878	836	836	836	797	797	797	762	762	745
	1	855	833	813	795	835	815	797	781	782	767	754	751	740	729	723	714	698
	2	809	769	737	709	790	755	725	700	728	703	682	703	683	666	680	664	650
	3	764	712	671	639	747	700	663	633	677	646	621	657	631	609	638	616	598
	4	721	660	614	580	706	650	608	576	631	596	567	614	584	559	598	572	561
	5	681	613	565	530	667	605	560	527	589	550	521	575	541	515	561	532	522
	6	643	571	522	487	631	564	518	485	551	510	480	538	503	476	527	496	486
	7	609	533	484	450	597	527	481	448	516	475	445	505	469	441	495	463	454
	8	576	499	451	417	566	494	448	416	484	443	413	475	438	411	467	433	426
	9	547	469	421	389	537	464	419	388	456	414	385	448	410	383	440	406	399
	10	519	441	394	363	511	437	392	362	430	389	361	423	385	359	416	382	376

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	25.4 fc	6.0 ft
6.5 ft	18.2 fc	7.0 ft
7.5 ft	13.6 fc	8.1 ft
8.0 ft	12.0 fc	8.7 ft
10.0 ft	7.7 fc	10.8 ft
12.0 ft	5.3 fc	13.0 ft
14.0 ft	3.9 fc	15.2 ft
16.0 ft	3.0 fc	17.3 ft
20.0 ft	1.9 fc	21.7 ft
24.0 ft	1.3 fc	26.0 ft
28.0 ft	1.0 fc	30.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	26513	26513	26513
45.00°	3786	4067	4266
55.00°	1210	1317	1386
65.00°	99	170	192
75.00°	72	56	50
85.00°	178	161	165

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

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0