

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 FG
N/A

Test Number

SP-01205_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	677
Efficacy	51.31 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°	0.75
Four luminaires	0.78

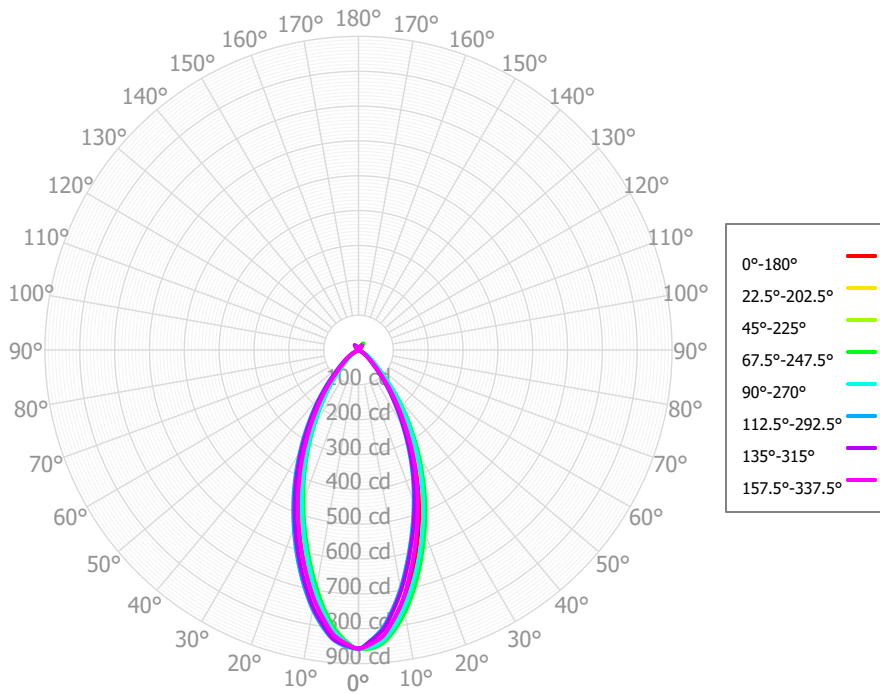
Full Beam Angle

0° - 180°	47°
90° - 270°	47°

IES File Header Contents

Keyword	Value
TEST	SP-01205_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 FG
LUMINAIRE	N/A
OTHER	Beam Angle: 47 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°	76.22	11.25%	90.00° - 100.00°	0.42	0.06%
10.00° - 20.00°	171.06	25.26%	100.00° - 110.00°	0.42	0.06%
20.00° - 30.00°	181.65	26.82%	100.00° - 120.00°	1.11	0.16%
30.00° - 40.00°	130.39	19.25%	120.00° - 130.00°	2.07	0.31%
40.00° - 50.00°	64.51	9.52%	130.00° - 140.00°	4.58	0.68%
50.00° - 60.00°	27.10	4.00%	140.00° - 150.00°	7.48	1.10%
60.00° - 70.00°	4.65	0.69%	150.00° - 160.00°	4.04	0.60%
70.00° - 80.00°	0.44	0.06%	160.00° - 170.00°	1.08	0.16%
80.00° - 90.00°	0.44	0.06%	170.00° - 180.00°	0.07	0.01%
0.00° - 90.00°	656.45	96.92%	0.00° - 180.00°	677.32	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°	857.04	857.04	857.04	857.04	857.04	857.04	857.04	857.04	857.04	857.04	857.04	857.04	857.04	857.04	857.04	857.04	857.04
2.50°	850.58	855.57	855.38	857.15	853.33	851.40	847.94	842.93	845.47	838.71	839.74	836.74	841.16	833.62	834.76	844.40	850.58
5.00°	824.89	836.82	838.79	841.25	834.47	834.60	832.39	820.32	815.78	804.03	808.81	801.06	810.85	800.71	806.34	822.75	824.89
7.50°	787.09	802.43	802.50	807.29	797.32	799.70	793.77	776.94	773.80	758.67	759.56	751.44	762.61	750.39	756.21	778.27	787.09
10.00°	736.34	757.30	759.08	765.22	751.60	756.48	750.70	729.06	723.18	704.73	706.31	693.55	708.60	695.27	701.95	729.23	736.34
12.50°	681.92	704.64	707.22	715.45	700.06	705.50	697.37	674.30	668.09	648.13	647.17	634.54	647.75	634.46	642.26	670.27	681.92
15.00°	624.26	649.84	653.01	662.81	646.37	651.70	643.28	618.50	611.64	589.76	589.19	574.98	588.19	575.56	581.86	611.58	624.26
17.50°	566.96	593.82	598.57	607.92	592.45	597.40	587.79	562.60	554.61	533.40	532.61	518.79	529.90	518.53	525.95	553.35	566.96
20.00°	509.93	538.53	544.08	554.12	538.48	542.96	533.03	506.69	499.17	478.12	477.71	463.90	474.40	463.73	470.35	496.74	509.93
22.50°	454.56	483.59	489.41	501.01	485.01	489.45	479.40	453.23	444.26	424.72	424.49	411.11	421.17	410.73	417.53	442.45	454.56
25.00°	400.18	429.57	434.70	447.73	431.64	436.14	426.42	399.88	391.55	372.13	372.24	358.96	368.80	358.42	364.81	389.13	400.18
27.50°	347.92	375.89	383.07	394.37	379.60	384.94	374.27	349.26	339.40	321.71	320.79	308.94	316.99	306.56	313.58	336.93	347.92
30.00°	296.69	324.39	331.69	343.45	327.76	334.06	324.54	299.01	291.38	272.06	272.73	259.40	268.89	258.81	262.94	286.69	296.69
32.50°	249.62	273.52	283.74	293.56	281.72	287.99	277.33	254.53	244.11	228.55	226.98	216.78	222.83	213.28	219.60	238.36	249.62
35.00°	204.20	228.90	236.00	248.62	236.19	242.34	234.29	211.04	204.48	186.68	187.74	175.26	183.66	174.90	177.43	195.87	204.20
37.50°	165.33	185.63	194.58	205.35	196.35	203.01	194.85	176.05	165.77	153.54	152.13	143.74	147.55	139.70	143.88	158.14	165.33
40.00°	128.45	147.86	153.65	165.04	156.81	164.01	158.79	141.84	134.93	122.11	121.12	113.24	117.31	110.11	111.57	124.15	128.45
42.50°	99.19	110.91	119.68	125.49	124.24	131.51	125.11	111.94	104.60	96.35	92.22	88.76	89.12	82.49	85.39	92.66	99.19
45.00°	71.70	87.09	87.62	98.77	92.58	99.82	98.41	84.67	83.33	71.35	71.52	64.62	69.75	64.01	62.10	70.43	71.70
47.50°	56.55	64.48	70.72	74.40	74.74	80.44	75.75	67.76	62.48	56.77	53.77	51.17	52.75	48.02	49.26	53.23	56.55
50.00°	43.41	52.26	54.92	60.69	57.66	61.90	60.19	52.66	50.84	42.95	42.40	38.01	41.35	38.05	37.67	41.63	43.41
52.50°	34.85	40.48	44.95	48.29	46.91	50.46	48.00	43.06	39.47	34.39	32.77	30.39	31.07	29.28	29.62	32.50	34.85
55.00°	26.76	32.50	35.40	38.89	36.32	39.44	38.37	33.75	31.16	25.98	24.89	22.83	24.26	22.28	22.09	25.14	26.76
57.50°	19.55	24.52	27.47	29.70	26.68	30.68	29.70	25.15	22.97	18.47	17.37	15.80	17.91	15.52	15.74	18.40	19.55
60.00°	12.40	16.55	19.16	20.12	17.18	21.68	20.69	16.80	15.54	11.13	11.53	9.19	11.93	9.70	9.87	12.03	12.40
62.50°	6.77	8.95	9.70	10.67	8.28	11.76	11.58	8.94	8.62	6.22	5.92	5.07	5.98	3.95	4.85	5.77	6.77
65.00°	1.39	4.41	2.68	5.38	1.46	3.80	5.97	3.41	4.15	1.79	3.08	1.61	3.22	2.11	1.54	2.85	1.39
67.50°	0.85	0.55	1.33	0.50	0.94	1.72	1.12	1.54	0.67	1.01	0.47	0.88	0.60	0.40	0.75	0.58	0.85
70.00°	0.37	0.43	0.41	0.56	0.55	0.29	0.46	0.45	0.62	0.38	0.41	0.33	0.53	0.33	0.34	0.33	0.37
72.50°	0.41	0.34	0.33	0.60	0.47	0.39	0.42	0.37	0.57	0.48	0.42	0.35	0.47	0.27	0.38	0.35	0.41
75.00°	0.43	0.38	0.30	0.52	0.42	0.44	0.45	0.35	0.51	0.54	0.40	0.39	0.37	0.36	0.39	0.39	0.43
77.50°	0.38	0.42	0.35	0.45	0.41	0.41	0.47	0.40	0.44	0.45	0.39	0.49	0.29	0.43	0.37	0.43	0.38
80.00°	0.34	0.46	0.38	0.48	0.42	0.37	0.49	0.40	0.39	0.40	0.39	0.53	0.34	0.37	0.35	0.35	0.34
82.50°	0.34	0.49	0.38	0.51	0.44	0.30	0.51	0.34	0.36	0.44	0.38	0.46	0.40	0.32	0.32	0.28	0.34
85.00°	0.37	0.51	0.37	0.52	0.45	0.32	0.46	0.37	0.39	0.45	0.34	0.38	0.42	0.35	0.34	0.33	0.37
87.50°	0.50	0.51	0.35	0.48	0.44	0.46	0.42	0.48	0.39	0.40	0.31	0.29	0.45	0.40	0.40	0.37	0.50
90.00°	0.56	0.45	0.37	0.35	0.40	0.49	0.45	0.47	0.34	0.37	0.35	0.26	0.47	0.46	0.36	0.36	0.56
92.50°	0.44	0.42	0.42	0.29	0.33	0.42	0.47	0.39	0.36	0.39	0.38	0.31	0.47	0.48	0.26	0.35	0.44
95.00°	0.38	0.43	0.42	0.38	0.33	0.38	0.36	0.44	0.47	0.38	0.37	0.38	0.41	0.37	0.26	0.38	0.38
97.50°	0.41	0.44	0.40	0.42	0.39	0.36	0.29	0.55	0.47	0.32	0.34	0.47	0.36	0.30	0.29	0.40	0.41
100.00°	0.45	0.46	0.39	0.40	0.38	0.36	0.42	0.57	0.37	0.32	0.27	0.45	0.30	0.32	0.35	0.36	0.45
102.50°	0.49	0.48	0.40	0.39	0.32	0.38	0.50	0.55	0.35	0.40	0.24	0.34	0.25	0.39	0.40	0.33	0.49
105.00°	0.52	0.51	0.42	0.42	0.32	0.40	0.36	0.46	0.39	0.44	0.33	0.32	0.25	0.51	0.36	0.35	0.52
107.50°	0.50	0.53	0.45	0.42	0.37	0.43	0.25	0.33	0.39	0.45	0.40	0.36	0.27	0.56	0.30	0.39	0.50
110.00°	0.50	0.56	0.47	0.42	0.38	0.46	0.25	0.35	0.35	0.43	0.44	0.40	0.33	0.49	0.35	0.46	0.50
112.50°	0.51	1.02	0.48	0.42	0.39	0.48	0.25	0.39	0.36	0.38	0.47	0.44	0.33	0.44	0.42	0.72	0.51

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	801	801	801	801	780	780	780	780	741	741	741	705	705	705	672	672	656
	1	761	742	724	708	743	725	709	695	694	681	670	665	655	646	638	631	616
	2	721	686	657	633	704	672	646	624	647	626	607	623	606	591	602	588	575
	3	681	636	600	572	666	624	592	566	603	576	554	584	562	543	566	548	536
	4	644	590	551	521	630	581	545	517	564	533	508	548	521	500	533	510	500
	5	610	550	509	478	597	542	504	475	528	494	469	514	485	463	501	476	467
	6	577	514	472	441	566	507	468	439	495	460	434	483	453	430	472	446	437
	7	547	482	439	409	537	476	436	408	465	430	404	455	424	400	446	418	410
	8	520	453	411	382	510	448	408	380	439	403	377	430	398	374	422	393	386
	9	494	427	385	357	486	422	383	356	414	379	354	407	374	351	400	370	364
	10	471	403	362	335	463	399	361	334	392	357	332	386	353	331	379	350	344

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	28.3 fc	5.0 ft
6.5 ft	20.3 fc	5.9 ft
7.5 ft	15.2 fc	6.8 ft
8.0 ft	13.4 fc	7.3 ft
10.0 ft	8.6 fc	9.1 ft
12.0 ft	6.0 fc	10.9 ft
14.0 ft	4.4 fc	12.7 ft
16.0 ft	3.3 fc	14.5 ft
20.0 ft	2.1 fc	18.2 ft
24.0 ft	1.5 fc	21.8 ft
28.0 ft	1.1 fc	25.4 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	29594	29594	29594
45.00°	3501	4279	4521
55.00°	1611	2131	2187
65.00°	114	219	120
75.00°	57	40	56
85.00°	147	148	176

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	7.1	8.1	7.5	8.5	8.9	7.9	9.0	8.4	9.4	9.8
	3H	6.9	7.8	7.3	8.2	8.6	7.8	8.7	8.2	9.1	9.5
	4H	6.8	7.6	7.3	8.1	8.5	7.7	8.5	8.1	8.9	9.4
	6H	6.7	7.5	7.2	7.9	8.4	7.6	8.3	8.0	8.8	9.3
	8H	6.6	7.4	7.1	7.8	8.3	7.5	8.2	8.0	8.7	9.2
	12H	6.6	7.3	7.1	7.7	8.2	7.5	8.2	8.0	8.6	9.1
4H	2H	6.8	7.7	7.3	8.1	8.5	7.7	8.6	8.2	9.0	9.5
	3H	6.6	7.3	7.1	7.8	8.3	7.6	8.2	8.0	8.7	9.2
	4H	6.5	7.1	7.0	7.6	8.1	7.4	8.1	7.9	8.5	9.1
	6H	6.4	6.9	7.0	7.5	8.0	7.3	7.9	7.9	8.4	8.9
	8H	6.4	6.9	6.9	7.4	7.9	7.3	7.8	7.8	8.3	8.8
	12H	6.3	6.7	6.9	7.3	7.8	7.2	7.7	7.8	8.2	8.8
8H	4H	6.4	6.8	6.9	7.3	7.9	7.3	7.8	7.8	8.3	8.8
	6H	6.2	6.6	6.8	7.2	7.7	7.2	7.6	7.7	8.1	8.7
	8H	6.2	6.5	6.8	7.1	7.7	7.1	7.5	7.7	8.0	8.6
	12H	6.2	6.5	6.7	7.0	7.7	7.1	7.4	7.6	7.9	8.6
12H	4H	6.3	6.7	6.8	7.3	7.8	7.2	7.6	7.8	8.2	8.7
	6H	6.2	6.5	6.8	7.1	7.7	7.1	7.4	7.7	8.0	8.6
	8H	6.1	6.4	6.7	7.0	7.6	7.1	7.4	7.6	7.9	8.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0