

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01209_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	724
Efficacy	54.86 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.69
Two luminaires, plane 90°	0.72
Four luminaires	0.77

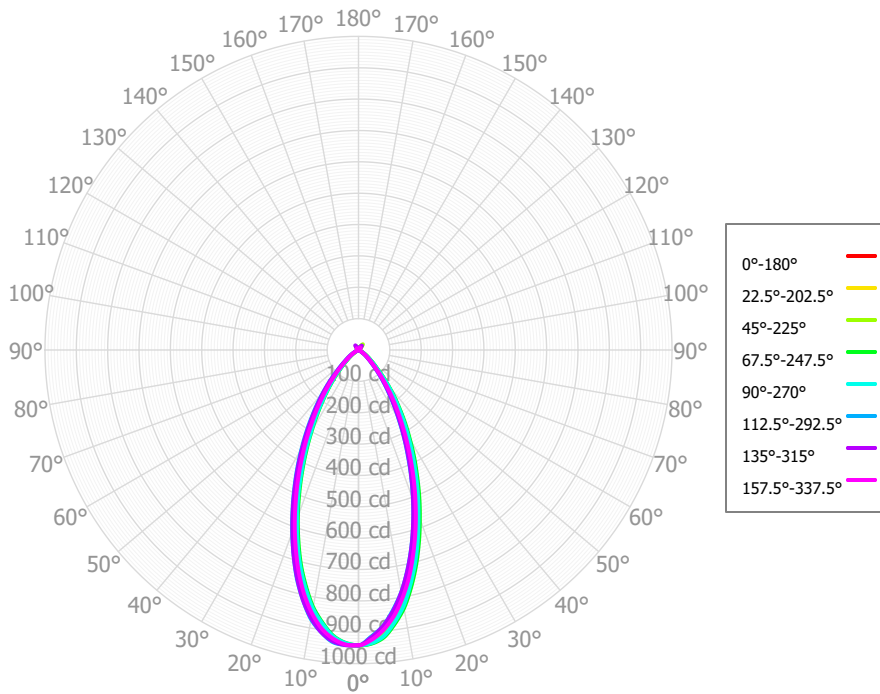
Full Beam Angle

0° - 180°	47°
90° - 270°	47°

IES File Header Contents

Keyword	Value
TEST	SP-01209_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 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°	85.59	11.82%	90.00° - 100.00°	0.39	0.05%
10.00° - 20.00°	194.86	26.91%	100.00° - 110.00°	0.41	0.06%
20.00° - 30.00°	196.78	27.18%	100.00° - 120.00°	1.17	0.16%
30.00° - 40.00°	134.36	18.56%	120.00° - 130.00°	2.18	0.30%
40.00° - 50.00°	64.31	8.88%	130.00° - 140.00°	4.16	0.57%
50.00° - 60.00°	24.47	3.38%	140.00° - 150.00°	6.87	0.95%
60.00° - 70.00°	3.89	0.54%	150.00° - 160.00°	3.31	0.46%
70.00° - 80.00°	0.42	0.06%	160.00° - 170.00°	0.89	0.12%
80.00° - 90.00°	0.38	0.05%	170.00° - 180.00°	0.07	0.01%
0.00° - 90.00°	705.05	97.37%	0.00° - 180.00°	724.10	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°	942.04	942.04	942.04	942.04	942.04	942.04	942.04	942.04	942.04	942.04	942.04	942.04	942.04	942.04	942.04	942.04	942.04
2.50°	926.91	935.30	935.85	937.69	936.01	941.70	942.31	940.35	939.11	938.67	939.13	935.27	936.10	915.72	918.45	926.34	926.91
5.00°	899.68	911.42	911.88	920.55	916.68	935.50	932.95	924.69	924.59	917.76	919.11	915.89	917.99	885.07	885.82	897.78	899.68
7.50°	858.34	875.48	873.31	881.91	876.32	908.45	908.29	896.80	895.43	885.94	886.42	877.93	881.30	837.97	841.07	857.68	858.34
10.00°	806.13	823.78	822.91	835.89	828.64	872.08	868.62	853.30	854.01	839.61	842.95	833.07	838.13	784.57	785.39	804.52	806.13
12.50°	743.73	765.19	761.59	775.04	765.40	817.41	817.18	799.02	800.43	784.64	788.28	773.29	779.71	719.84	720.97	743.48	743.73
15.00°	677.01	698.33	696.12	709.67	699.62	757.40	754.98	735.06	737.52	719.87	724.75	709.46	716.45	651.15	652.08	674.14	677.01
17.50°	606.59	630.55	627.15	641.12	628.94	687.82	687.58	665.00	669.09	649.71	655.57	637.72	646.11	579.82	579.88	604.04	606.59
20.00°	537.26	561.73	559.42	571.70	559.76	618.46	615.83	594.29	596.72	578.55	582.29	565.79	573.78	507.68	509.66	533.20	537.26
22.50°	468.80	495.00	492.66	506.02	493.27	549.46	546.57	523.22	526.09	506.89	511.08	493.53	502.50	439.63	440.78	464.95	468.80
25.00°	405.00	430.39	430.18	441.25	429.69	483.18	479.23	456.63	456.60	438.86	441.22	424.14	431.47	372.74	377.07	399.03	405.00
27.50°	344.62	370.16	370.79	382.97	370.86	421.01	416.24	392.42	392.02	372.49	376.44	359.49	367.98	314.48	316.57	338.65	344.62
30.00°	290.34	314.05	316.39	326.06	315.75	362.19	356.35	334.32	330.42	314.04	314.77	299.75	306.15	258.35	263.55	282.83	290.34
32.50°	240.21	263.49	265.34	276.36	266.24	307.98	302.17	279.16	276.46	258.90	261.14	247.55	255.11	212.97	214.83	233.93	240.21
35.00°	196.98	217.73	220.24	228.00	220.51	258.20	251.71	231.99	226.70	213.27	212.01	201.11	206.10	169.90	174.77	190.34	196.98
37.50°	158.05	176.17	178.79	186.84	179.99	214.10	208.10	188.33	185.35	171.27	171.80	162.75	168.67	136.33	139.25	152.29	158.05
40.00°	123.94	137.97	141.79	146.80	142.61	173.14	168.59	151.25	148.29	136.23	136.21	128.24	133.14	104.55	108.43	118.13	123.94
42.50°	92.58	106.74	107.28	115.05	109.20	135.88	133.21	116.83	116.00	103.57	105.70	98.76	104.19	80.72	79.85	90.53	92.58
45.00°	70.77	80.63	82.39	84.38	82.53	104.53	100.12	90.07	85.92	79.36	77.57	74.61	76.13	58.14	60.71	67.13	70.77
47.50°	53.96	61.91	62.47	66.92	63.82	79.57	76.39	66.07	65.25	57.72	58.92	56.86	59.33	45.31	45.71	51.10	53.96
50.00°	42.00	48.22	48.80	50.83	48.92	60.59	57.38	50.94	48.52	44.34	44.38	42.69	43.80	33.76	35.27	39.45	42.00
52.50°	32.35	37.25	38.07	40.39	38.15	47.64	44.72	38.73	36.93	33.23	34.05	32.46	34.45	25.87	26.64	30.30	32.35
55.00°	24.10	27.97	28.87	30.42	28.52	36.87	34.95	29.37	27.32	24.97	25.38	23.90	25.64	18.37	19.15	22.49	24.10
57.50°	16.45	19.75	20.32	21.88	20.01	28.10	26.24	20.86	19.79	17.40	18.25	17.07	18.62	12.46	12.07	15.45	16.45
60.00°	9.79	12.15	12.39	13.43	12.25	19.61	17.97	13.77	12.97	11.53	11.66	11.25	11.71	6.69	7.06	8.79	9.79
62.50°	3.53	6.52	4.70	7.19	5.16	11.36	10.93	7.07	7.72	6.01	6.87	6.38	7.23	3.59	2.71	4.53	3.53
65.00°	1.35	1.93	1.83	1.04	1.52	5.71	4.34	3.54	2.95	3.18	2.66	3.14	2.86	0.66	1.23	1.37	1.35
67.50°	0.62	0.45	0.63	0.71	0.80	2.10	1.84	0.75	1.29	0.85	1.19	1.28	1.55	0.47	0.57	0.51	0.62
70.00°	0.43	0.46	0.39	0.49	0.48	0.49	0.74	0.30	0.49	0.47	0.50	0.41	0.31	0.38	0.41	0.59	0.43
72.50°	0.41	0.41	0.45	0.47	0.49	0.34	0.43	0.31	0.36	0.39	0.35	0.33	0.38	0.42	0.37	0.51	0.41
75.00°	0.39	0.35	0.41	0.45	0.44	0.34	0.37	0.32	0.40	0.42	0.33	0.33	0.44	0.46	0.37	0.37	0.39
77.50°	0.37	0.31	0.34	0.45	0.35	0.44	0.34	0.33	0.43	0.46	0.36	0.39	0.40	0.41	0.38	0.35	0.37
80.00°	0.38	0.29	0.34	0.45	0.31	0.45	0.33	0.36	0.46	0.41	0.39	0.43	0.37	0.35	0.35	0.36	0.38
82.50°	0.41	0.27	0.36	0.43	0.28	0.41	0.30	0.39	0.42	0.36	0.39	0.44	0.34	0.37	0.32	0.33	0.41
85.00°	0.37	0.24	0.35	0.40	0.29	0.36	0.28	0.36	0.35	0.30	0.39	0.41	0.31	0.38	0.34	0.28	0.37
87.50°	0.31	0.30	0.34	0.30	0.31	0.31	0.32	0.33	0.30	0.23	0.34	0.35	0.33	0.37	0.37	0.31	0.31
90.00°	0.34	0.39	0.36	0.23	0.33	0.36	0.38	0.31	0.25	0.33	0.30	0.32	0.35	0.37	0.37	0.37	0.34
92.50°	0.40	0.37	0.39	0.33	0.35	0.46	0.41	0.30	0.28	0.43	0.30	0.30	0.30	0.37	0.36	0.34	0.40
95.00°	0.40	0.31	0.36	0.43	0.41	0.42	0.44	0.27	0.31	0.42	0.31	0.32	0.26	0.38	0.35	0.29	0.40
97.50°	0.40	0.34	0.33	0.44	0.47	0.31	0.46	0.25	0.34	0.40	0.34	0.37	0.33	0.36	0.34	0.30	0.40
100.00°	0.43	0.39	0.34	0.45	0.47	0.27	0.49	0.29	0.38	0.39	0.37	0.39	0.39	0.33	0.36	0.33	0.43
102.50°	0.46	0.38	0.36	0.41	0.43	0.26	0.43	0.34	0.38	0.38	0.35	0.41	0.37	0.30	0.37	0.40	0.46
105.00°	0.41	0.35	0.42	0.39	0.49	0.29	0.35	0.27	0.37	0.34	0.34	0.41	0.36	0.27	0.47	0.49	0.41
107.50°	0.34	0.39	0.49	0.42	0.60	0.33	0.35	0.21	0.32	0.31	0.39	0.42	0.42	0.33	0.57	0.47	0.34
110.00°	0.48	0.45	0.48	0.46	0.56	0.36	0.36	0.33	0.25	0.37	0.44	0.43	0.48	0.39	0.43	0.44	0.48
112.50°	0.64	0.65	0.46	0.53	0.46	0.38	0.35	0.46	0.32	0.43	0.42	0.45	0.49	0.44	0.27	1.13	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	857	857	857	857	835	835	835	835	794	794	794	756	756	756	721	721	705
	1	816	795	777	760	796	778	761	746	745	732	719	715	704	695	687	679	664
	2	773	737	707	681	755	723	695	672	696	674	655	672	654	638	649	635	621
	3	732	684	647	618	716	673	639	611	651	623	599	631	607	587	612	593	580
	4	694	637	596	565	679	628	590	560	610	577	551	593	565	543	577	554	542
	5	657	595	552	520	644	587	547	516	572	537	510	558	528	504	545	519	508
	6	624	557	513	481	611	551	509	479	538	501	474	526	494	469	514	486	477
	7	592	523	479	448	581	518	476	446	506	469	442	496	463	438	486	457	449
	8	563	493	449	418	553	488	446	417	478	441	414	469	436	411	461	431	423
	9	536	465	422	392	527	461	419	391	452	415	389	445	411	386	437	407	400
	10	511	440	397	369	503	436	396	368	429	392	366	422	388	364	416	385	379

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	31.1 fc	4.6 ft
6.5 ft	22.3 fc	5.5 ft
7.5 ft	16.7 fc	6.3 ft
8.0 ft	14.7 fc	6.8 ft
10.0 ft	9.4 fc	8.4 ft
12.0 ft	6.5 fc	10.1 ft
14.0 ft	4.8 fc	11.8 ft
16.0 ft	3.7 fc	13.5 ft
20.0 ft	2.4 fc	16.9 ft
24.0 ft	1.6 fc	20.3 ft
28.0 ft	1.2 fc	23.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	32529	32529	32529
45.00°	3456	4023	4030
55.00°	1451	1738	1717
65.00°	111	149	124
75.00°	52	55	58
85.00°	145	140	114

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	5.5	6.5	5.9	6.9	7.3	7.3	8.3	7.7	8.7	9.1
	3H	5.3	6.2	5.7	6.6	7.0	7.1	8.0	7.5	8.4	8.8
	4H	5.2	6.0	5.7	6.5	6.9	7.0	7.8	7.5	8.2	8.7
	6H	5.1	5.9	5.6	6.3	6.8	6.9	7.7	7.4	8.1	8.6
	8H	5.1	5.8	5.6	6.2	6.7	6.9	7.6	7.3	8.0	8.5
	12H	5.0	5.7	5.5	6.1	6.6	6.8	7.5	7.3	7.9	8.4
4H	2H	5.2	6.1	5.7	6.5	6.9	7.0	7.9	7.5	8.3	8.7
	3H	5.0	5.7	5.5	6.2	6.6	6.9	7.5	7.3	8.0	8.5
	4H	4.9	5.5	5.4	6.0	6.5	6.8	7.4	7.2	7.8	8.3
	6H	4.8	5.3	5.3	5.8	6.4	6.7	7.2	7.2	7.7	8.2
	8H	4.8	5.3	5.3	5.8	6.3	6.6	7.1	7.1	7.6	8.1
	12H	4.7	5.1	5.3	5.7	6.2	6.5	7.0	7.1	7.5	8.0
8H	4H	4.8	5.2	5.3	5.7	6.3	6.6	7.1	7.1	7.6	8.1
	6H	4.7	5.0	5.2	5.6	6.1	6.5	6.9	7.0	7.4	8.0
	8H	4.6	4.9	5.2	5.5	6.1	6.4	6.8	7.0	7.3	7.9
	12H	4.6	4.9	5.1	5.4	6.0	6.4	6.7	6.9	7.2	7.9
12H	4H	4.7	5.1	5.2	5.6	6.2	6.5	6.9	7.1	7.5	8.0
	6H	4.6	4.9	5.2	5.4	6.1	6.4	6.8	7.0	7.3	7.9
	8H	4.5	4.8	5.1	5.4	6.0	6.4	6.7	6.9	7.2	7.8

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0