

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01209_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	865
Efficacy	65.51 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.7
Two luminaires, plane 90°	0.72
Four luminaires	0.7

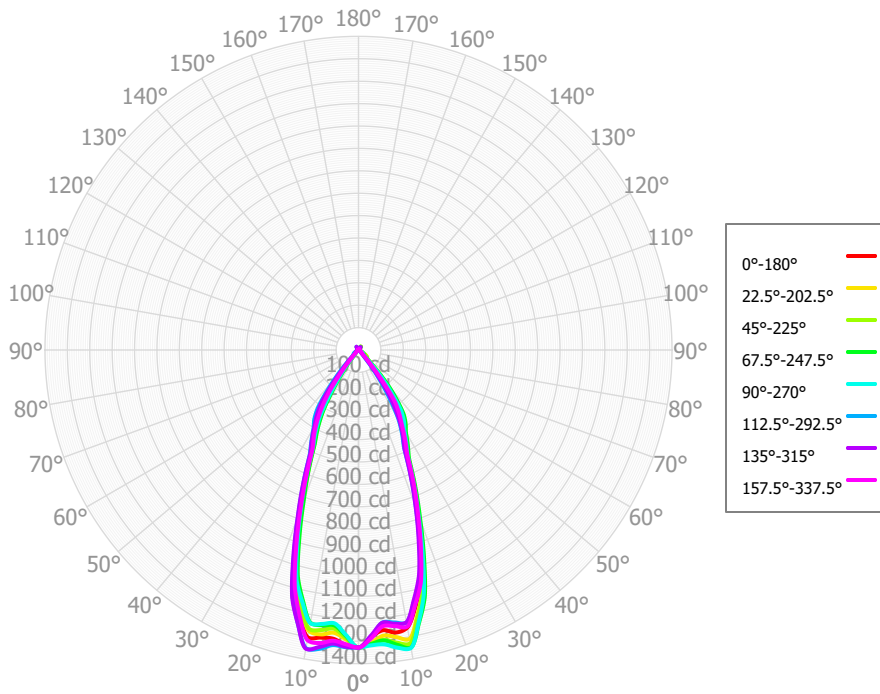
Full Beam Angle

0° - 180°	43°
90° - 270°	43°

IES File Header Contents

Keyword	Value
TEST	SP-01209_1_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 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°	124.68	14.42%	90.00° - 100.00°	0.36	0.04%
10.00° - 20.00°	291.58	33.72%	100.00° - 110.00°	0.36	0.04%
20.00° - 30.00°	240.08	27.76%	100.00° - 120.00°	0.79	0.09%
30.00° - 40.00°	147.99	17.11%	120.00° - 130.00°	0.72	0.08%
40.00° - 50.00°	30.41	3.52%	130.00° - 140.00°	1.29	0.15%
50.00° - 60.00°	14.06	1.63%	140.00° - 150.00°	5.80	0.67%
60.00° - 70.00°	3.68	0.43%	150.00° - 160.00°	1.97	0.23%
70.00° - 80.00°	0.34	0.04%	160.00° - 170.00°	0.61	0.07%
80.00° - 90.00°	0.34	0.04%	170.00° - 180.00°	0.08	0.01%
0.00° - 90.00°	853.15	98.66%	0.00° - 180.00°	864.78	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°	1328.76	1328.76	1328.76	1328.76	1328.76	1328.76	1328.76	1328.76	1328.76	1328.76	1328.76	1328.76	1328.76	1328.76	1328.76	1328.76	1328.76
2.50°	1283.04	1307.85	1313.26	1314.07	1320.09	1328.19	1326.13	1315.02	1318.39	1293.54	1287.26	1278.13	1274.09	1281.93	1276.68	1289.09	1283.04
5.00°	1256.28	1280.58	1299.63	1302.25	1319.62	1322.94	1315.99	1303.21	1294.35	1267.70	1249.54	1234.66	1225.56	1221.97	1222.64	1238.50	1256.28
7.50°	1272.64	1293.15	1318.59	1327.94	1341.09	1346.15	1337.64	1319.97	1295.40	1281.01	1261.08	1239.96	1233.88	1227.49	1233.03	1243.85	1272.64
10.00°	1258.47	1310.23	1330.30	1348.76	1351.12	1352.19	1354.49	1315.45	1303.04	1274.12	1265.45	1236.81	1238.66	1235.82	1234.36	1254.32	1258.47
12.50°	1174.85	1214.30	1220.94	1248.45	1243.44	1251.28	1252.23	1214.55	1216.20	1185.83	1180.57	1146.69	1155.57	1148.23	1142.38	1167.46	1174.85
15.00°	1066.90	1110.13	1106.35	1143.10	1127.48	1137.08	1144.55	1098.46	1108.87	1076.93	1085.81	1046.96	1066.99	1058.10	1043.39	1075.46	1066.90
17.50°	911.52	947.79	936.61	973.00	951.92	958.83	967.33	925.56	940.10	898.57	909.41	878.17	907.94	903.86	894.07	926.71	911.52
20.00°	762.78	783.15	771.40	805.79	781.71	787.07	793.09	758.13	760.93	729.55	738.19	714.92	750.79	750.46	746.53	777.02	762.78
22.50°	625.24	651.83	639.40	663.99	641.39	640.94	644.99	607.61	619.50	586.81	599.38	582.53	610.30	612.17	608.87	644.09	625.24
25.00°	516.26	522.59	519.03	533.65	516.66	514.92	508.99	483.68	482.96	467.81	472.75	462.12	480.20	480.66	486.18	514.43	516.26
27.50°	449.65	466.97	464.41	476.13	460.32	454.14	449.87	429.99	422.79	405.30	405.03	394.18	416.17	421.04	429.12	451.13	449.65
30.00°	396.90	412.71	414.16	423.09	409.36	400.79	393.09	372.13	369.35	332.65	331.47	319.71	346.92	357.58	368.34	388.93	396.90
32.50°	362.06	379.88	383.30	391.94	377.56	367.61	347.81	304.94	282.13	239.03	234.82	221.95	252.09	265.86	294.30	339.93	362.06
35.00°	302.54	342.34	342.64	352.75	332.30	318.32	292.22	228.67	193.10	153.67	146.10	133.93	162.35	176.62	216.00	285.08	302.54
37.50°	214.79	258.70	265.92	281.26	246.49	231.26	195.25	134.92	116.53	83.02	83.18	75.26	92.98	101.50	124.82	183.20	214.79
40.00°	135.63	176.79	188.15	204.10	162.27	148.50	109.03	64.82	41.22	35.54	34.39	30.84	37.17	37.90	53.37	90.30	135.63
42.50°	65.06	107.29	107.19	108.30	82.08	74.38	58.16	34.68	28.52	24.34	24.81	22.54	25.94	25.70	31.90	52.19	65.06
45.00°	32.32	48.90	49.45	37.03	26.91	27.49	20.43	15.66	16.27	16.47	17.00	15.92	16.80	15.68	16.87	20.77	32.32
47.50°	33.15	50.43	51.19	34.50	26.69	28.43	19.49	12.95	13.62	13.15	13.33	12.91	13.40	13.50	15.72	21.03	33.15
50.00°	30.83	50.25	50.43	31.60	26.44	28.58	18.48	10.79	11.03	10.36	10.22	10.19	10.40	11.45	14.50	20.69	30.83
52.50°	26.08	42.79	44.15	27.81	26.12	27.51	17.31	9.34	9.26	8.19	8.19	8.05	8.32	9.79	13.13	18.03	26.08
55.00°	21.09	35.14	36.99	23.86	24.68	25.00	15.58	7.63	7.54	6.39	6.31	6.14	6.61	8.08	11.29	15.11	21.09
57.50°	15.92	26.87	28.16	19.57	21.38	20.57	12.67	5.63	6.22	4.98	4.68	4.62	5.61	6.25	8.68	11.37	15.92
60.00°	11.08	18.61	19.65	14.82	16.55	15.69	9.75	4.19	4.88	3.93	3.44	3.36	4.56	4.53	6.14	7.79	11.08
62.50°	6.42	10.43	11.66	9.24	9.53	10.28	6.79	3.31	3.47	3.21	2.77	2.49	3.44	3.05	3.67	4.64	6.42
65.00°	3.36	3.95	5.59	4.73	4.42	5.73	4.09	2.19	2.14	2.17	1.92	1.62	2.28	1.76	1.84	2.11	3.36
67.50°	1.12	1.75	2.32	1.87	1.68	2.07	1.80	0.86	1.18	0.85	0.82	0.75	1.05	0.83	0.80	1.04	1.12
70.00°	0.37	0.26	0.44	0.24	0.25	0.29	0.48	0.28	0.41	0.35	0.24	0.29	0.37	0.27	0.28	0.32	0.37
72.50°	0.28	0.31	0.32	0.27	0.28	0.24	0.47	0.28	0.38	0.41	0.25	0.30	0.42	0.31	0.35	0.32	0.28
75.00°	0.26	0.32	0.25	0.30	0.33	0.26	0.42	0.31	0.35	0.39	0.29	0.31	0.42	0.33	0.34	0.32	0.26
77.50°	0.28	0.28	0.22	0.32	0.39	0.33	0.31	0.37	0.30	0.32	0.35	0.33	0.36	0.29	0.27	0.29	0.28
80.00°	0.28	0.25	0.24	0.32	0.36	0.38	0.29	0.39	0.27	0.28	0.36	0.33	0.32	0.27	0.25	0.28	0.28
82.50°	0.28	0.24	0.30	0.30	0.27	0.43	0.37	0.40	0.34	0.26	0.30	0.34	0.29	0.24	0.27	0.29	0.28
85.00°	0.29	0.24	0.33	0.30	0.27	0.39	0.40	0.41	0.37	0.28	0.25	0.34	0.29	0.25	0.29	0.31	0.29
87.50°	0.31	0.28	0.33	0.32	0.35	0.30	0.40	0.41	0.35	0.31	0.20	0.35	0.32	0.29	0.32	0.32	0.31
90.00°	0.34	0.29	0.34	0.33	0.35	0.33	0.41	0.35	0.32	0.29	0.19	0.33	0.33	0.32	0.38	0.36	0.34
92.50°	0.38	0.25	0.33	0.34	0.29	0.41	0.43	0.27	0.31	0.23	0.22	0.27	0.33	0.33	0.45	0.42	0.38
95.00°	0.32	0.25	0.36	0.33	0.29	0.40	0.43	0.30	0.29	0.27	0.27	0.28	0.33	0.32	0.46	0.42	0.32
97.50°	0.24	0.29	0.39	0.31	0.32	0.34	0.42	0.37	0.25	0.34	0.33	0.33	0.34	0.30	0.43	0.36	0.24
100.00°	0.25	0.32	0.40	0.34	0.36	0.29	0.33	0.40	0.24	0.34	0.32	0.41	0.32	0.32	0.41	0.34	0.25
102.50°	0.27	0.34	0.40	0.40	0.41	0.25	0.21	0.42	0.28	0.33	0.28	0.50	0.28	0.38	0.38	0.36	0.27
105.00°	0.26	0.34	0.38	0.40	0.41	0.25	0.25	0.44	0.30	0.32	0.28	0.46	0.26	0.39	0.38	0.35	0.26
107.50°	0.24	0.33	0.36	0.35	0.38	0.27	0.36	0.46	0.28	0.32	0.30	0.36	0.24	0.35	0.38	0.32	0.24
110.00°	0.24	0.31	0.36	0.33	0.38	0.34	0.41	0.41	0.28	0.33	0.32	0.35	0.28	0.36	0.44	0.30	0.24
112.50°	0.23	0.29	0.36	0.33	0.38	0.43	0.44	0.34	0.30	0.35	0.35	0.38	0.34	0.40	0.52	0.29	0.23

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	1027	1027	1027	1027	1002	1002	1002	1002	954	954	954	911	911	911	872	872	853
	1	981	958	938	919	959	939	920	904	902	887	874	868	856	846	836	828	819
	2	936	896	863	835	916	880	850	825	850	826	805	823	803	786	798	782	768
	3	892	840	799	767	874	827	790	760	803	772	746	781	755	733	760	739	721
	4	851	789	744	710	834	779	737	705	759	723	695	740	710	686	723	698	677
	5	811	743	696	661	797	735	691	658	718	680	651	703	670	644	689	660	638
	6	774	702	654	619	761	695	649	616	681	641	611	668	633	606	656	625	601
	7	740	665	616	582	728	658	612	580	647	606	576	636	599	572	625	593	569
	8	707	630	582	549	697	625	579	547	615	574	544	606	569	541	597	563	539
	9	677	599	551	519	667	595	549	518	586	545	516	578	540	513	570	536	511
	10	649	571	524	493	640	567	522	492	559	518	490	552	514	488	545	511	486

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	43.9 fc	4.4 ft
6.5 ft	31.5 fc	5.2 ft
7.5 ft	23.6 fc	6.0 ft
8.0 ft	20.8 fc	6.4 ft
10.0 ft	13.3 fc	8.0 ft
12.0 ft	9.2 fc	9.6 ft
14.0 ft	6.8 fc	11.1 ft
16.0 ft	5.2 fc	12.7 ft
20.0 ft	3.3 fc	15.9 ft
24.0 ft	2.3 fc	19.1 ft
28.0 ft	1.7 fc	22.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	45882	45882	45882
45.00°	1578	2415	1314
55.00°	1269	2227	1486
65.00°	275	457	361
75.00°	35	33	44
85.00°	116	132	108

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	5.9	6.8	6.3	7.2	7.5	4.1	5.0	4.5	5.4	5.7
	3H	5.7	6.5	6.1	6.9	7.3	3.9	4.7	4.3	5.1	5.5
	4H	5.6	6.4	6.0	6.8	7.2	3.8	4.6	4.3	5.0	5.4
	6H	5.5	6.2	5.9	6.6	7.0	3.7	4.4	4.2	4.8	5.2
	8H	5.4	6.1	5.9	6.5	7.0	3.7	4.3	4.1	4.7	5.2
	12H	5.4	6.0	5.8	6.4	6.9	3.6	4.2	4.1	4.6	5.1
4H	2H	5.7	6.4	6.1	6.8	7.3	3.9	4.6	4.3	5.0	5.4
	3H	5.5	6.1	5.9	6.5	7.0	3.7	4.3	4.1	4.7	5.2
	4H	5.4	5.9	5.8	6.4	6.8	3.6	4.1	4.0	4.6	5.1
	6H	5.3	5.7	5.7	6.2	6.7	3.5	3.9	4.0	4.4	4.9
	8H	5.2	5.6	5.7	6.1	6.6	3.4	3.8	3.9	4.3	4.8
	12H	5.1	5.5	5.6	6.0	6.5	3.4	3.7	3.9	4.2	4.8
8H	4H	5.2	5.6	5.7	6.1	6.6	3.4	3.8	3.9	4.3	4.8
	6H	5.1	5.4	5.6	5.9	6.4	3.3	3.6	3.8	4.2	4.7
	8H	5.0	5.3	5.5	5.8	6.4	3.2	3.5	3.8	4.1	4.6
	12H	4.9	5.2	5.5	5.7	6.3	3.2	3.5	3.8	4.0	4.6
12H	4H	5.1	5.5	5.6	6.0	6.5	3.3	3.7	3.8	4.2	4.7
	6H	5.0	5.3	5.5	5.8	6.4	3.2	3.5	3.8	4.0	4.6
	8H	4.9	5.2	5.5	5.7	6.3	3.2	3.4	3.7	4.0	4.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0