

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01211_2_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	879
Efficacy	66.61 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.87
Two luminaires, plane 90°	0.82
Four luminaires	0.84

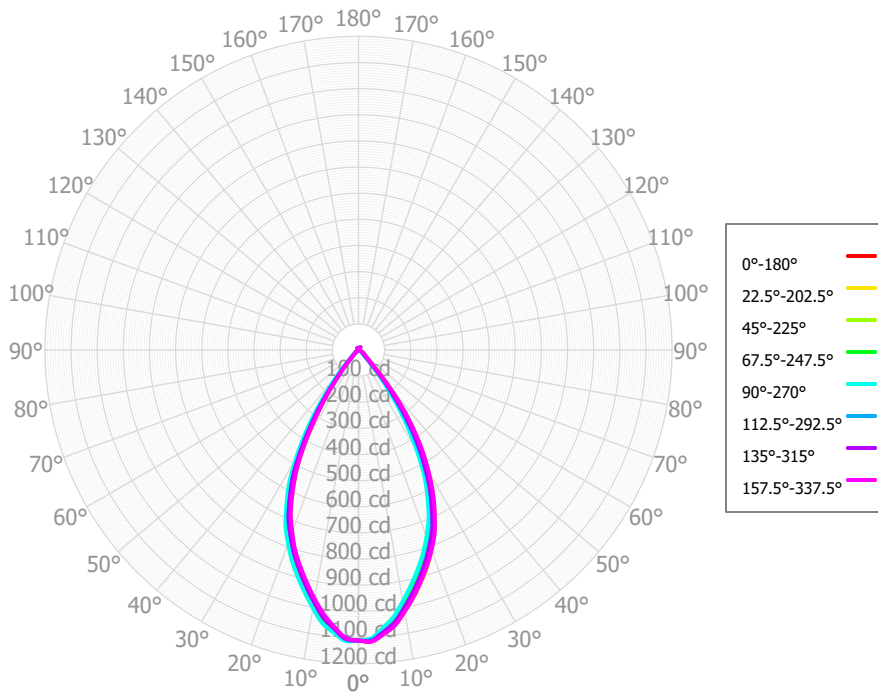
Full Beam Angle

0° - 180°	55°
90° - 270°	55°

IES File Header Contents

Keyword	Value
TEST	SP-01211_2_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 SO
LUMINAIRE	N/A
OTHER	Beam Angle: 55 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°	101.68	11.56%	90.00° - 100.00°	0.40	0.04%
10.00° - 20.00°	247.98	28.20%	100.00° - 110.00°	0.39	0.04%
20.00° - 30.00°	289.23	32.89%	100.00° - 120.00°	0.92	0.10%
30.00° - 40.00°	173.12	19.69%	120.00° - 130.00°	0.92	0.10%
40.00° - 50.00°	37.88	4.31%	130.00° - 140.00°	1.55	0.18%
50.00° - 60.00°	13.55	1.54%	140.00° - 150.00°	4.27	0.49%
60.00° - 70.00°	3.67	0.42%	150.00° - 160.00°	2.32	0.26%
70.00° - 80.00°	0.41	0.05%	160.00° - 170.00°	0.92	0.11%
80.00° - 90.00°	0.41	0.05%	170.00° - 180.00°	0.09	0.01%
0.00° - 90.00°	867.93	98.71%	0.00° - 180.00°	879.31	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°	1112.32	1112.32	1112.32	1112.32	1112.32	1112.32	1112.32	1112.32	1112.32	1112.32	1112.32	1112.32	1112.32	1112.32	1112.32	1112.32	1112.32
2.50°	1115.04	1117.70	1110.81	1109.65	1104.78	1102.71	1107.53	1102.62	1105.80	1106.25	1108.64	1108.10	1115.23	1111.06	1115.52	1117.75	1115.04
5.00°	1088.95	1091.10	1083.37	1080.88	1067.70	1069.27	1070.31	1063.72	1070.80	1068.84	1076.61	1077.81	1086.03	1084.52	1084.53	1092.71	1088.95
7.50°	1059.53	1063.40	1048.28	1044.70	1029.89	1028.98	1032.84	1019.79	1030.97	1029.95	1039.75	1042.23	1055.81	1052.97	1053.18	1064.11	1059.53
10.00°	1012.62	1017.63	1002.51	997.12	976.53	976.84	979.22	966.88	977.66	976.97	988.57	989.54	1003.62	1003.96	1004.00	1017.14	1012.62
12.50°	965.32	971.60	953.50	946.32	923.22	921.67	925.61	912.48	922.15	923.38	936.66	936.52	950.88	954.17	954.76	969.61	965.32
15.00°	916.09	922.02	902.60	893.99	871.02	869.02	871.68	858.63	866.27	866.28	882.68	882.49	898.83	901.79	903.42	919.36	916.09
17.50°	866.05	871.97	851.14	841.25	818.49	816.97	817.68	804.86	810.33	809.06	826.40	826.74	846.79	848.77	851.92	868.77	866.05
20.00°	812.19	815.58	794.40	784.11	760.60	759.81	758.63	741.94	748.52	744.49	763.75	765.76	788.15	793.68	796.00	816.64	812.19
22.50°	755.12	758.07	736.17	725.83	701.56	701.45	699.24	677.65	685.85	679.73	696.61	700.06	729.44	734.35	739.31	761.08	755.12
25.00°	683.49	687.32	665.40	654.97	625.16	622.56	620.59	595.04	604.29	594.94	617.48	620.67	652.32	661.86	664.24	690.15	683.49
27.50°	609.91	615.37	591.25	580.96	547.23	539.07	541.28	509.88	520.16	509.72	531.41	535.30	575.04	584.83	588.67	617.20	609.91
30.00°	527.77	530.76	504.06	491.70	448.94	438.85	436.21	405.50	415.97	403.13	427.56	433.27	477.48	494.33	503.43	535.74	527.77
32.50°	444.21	445.72	413.44	398.82	351.05	334.99	331.38	298.56	309.15	296.25	327.11	333.69	379.93	402.11	417.69	452.42	444.21
35.00°	354.78	356.36	324.16	306.76	258.08	240.29	233.71	209.61	221.90	214.68	235.16	240.83	284.27	304.91	322.81	361.39	354.78
37.50°	264.67	267.10	235.23	214.89	167.45	147.47	137.77	122.88	137.02	133.25	154.25	157.80	189.09	212.97	228.72	270.04	264.67
40.00°	171.86	178.74	156.14	138.74	103.17	91.32	87.26	76.93	87.45	87.57	99.99	100.55	124.34	135.67	146.96	177.41	171.86
42.50°	91.77	96.60	79.44	66.02	43.68	42.49	38.54	35.78	41.97	42.16	55.81	54.01	60.48	72.27	69.38	97.38	91.77
45.00°	60.94	66.92	52.74	41.56	32.82	27.93	27.91	24.43	27.84	29.95	35.48	34.41	40.41	46.82	52.06	65.67	60.94
47.50°	35.62	39.99	37.58	27.06	22.66	19.83	17.66	16.31	17.04	17.87	20.12	19.48	20.83	27.66	35.73	39.72	35.62
50.00°	30.63	35.21	31.31	21.87	19.33	15.81	14.21	12.40	12.78	14.02	16.11	16.06	18.03	25.00	31.89	34.82	30.63
52.50°	25.82	30.46	26.98	18.51	16.05	12.52	10.84	8.93	9.15	10.22	12.48	12.86	15.23	22.24	28.00	29.85	25.82
55.00°	21.64	25.94	22.99	15.67	13.33	10.32	8.84	7.34	7.58	8.22	9.68	10.21	12.40	19.24	23.57	24.65	21.64
57.50°	17.47	21.35	19.06	12.93	10.59	8.31	6.88	5.92	6.19	6.24	7.29	7.88	9.61	16.17	19.11	19.63	17.47
60.00°	13.36	16.36	14.13	9.72	7.72	6.14	5.44	4.42	4.86	4.71	5.77	6.27	7.67	12.93	14.44	15.18	13.36
62.50°	9.05	11.26	8.99	6.42	4.90	3.94	3.97	2.91	3.54	3.19	4.07	4.47	5.70	9.21	9.76	10.45	9.05
65.00°	4.11	5.48	4.89	3.60	2.49	2.26	2.14	1.67	2.07	1.78	2.01	2.25	3.15	4.33	4.90	4.79	4.11
67.50°	0.37	0.47	0.99	0.86	0.38	0.65	0.45	0.46	0.59	0.42	0.59	0.68	0.73	0.84	0.50	0.48	0.37
70.00°	0.38	0.46	0.41	0.47	0.37	0.36	0.46	0.35	0.50	0.33	0.45	0.51	0.57	0.55	0.37	0.35	0.38
72.50°	0.38	0.45	0.43	0.47	0.38	0.25	0.47	0.33	0.52	0.25	0.38	0.40	0.41	0.33	0.25	0.26	0.38
75.00°	0.33	0.45	0.41	0.45	0.46	0.28	0.47	0.36	0.42	0.34	0.43	0.40	0.46	0.29	0.24	0.32	0.33
77.50°	0.33	0.45	0.38	0.43	0.51	0.32	0.46	0.39	0.31	0.43	0.42	0.38	0.50	0.28	0.25	0.36	0.33
80.00°	0.44	0.42	0.41	0.39	0.39	0.37	0.41	0.41	0.33	0.41	0.30	0.36	0.39	0.34	0.35	0.32	0.44
82.50°	0.50	0.39	0.46	0.35	0.30	0.42	0.37	0.42	0.36	0.40	0.25	0.37	0.30	0.35	0.44	0.29	0.50
85.00°	0.37	0.38	0.45	0.35	0.30	0.39	0.37	0.43	0.34	0.38	0.36	0.48	0.43	0.26	0.43	0.30	0.37
87.50°	0.28	0.36	0.43	0.36	0.31	0.34	0.38	0.43	0.32	0.35	0.40	0.50	0.54	0.22	0.42	0.31	0.28
90.00°	0.30	0.34	0.38	0.35	0.35	0.34	0.41	0.42	0.38	0.36	0.32	0.34	0.51	0.27	0.37	0.33	0.30
92.50°	0.32	0.33	0.32	0.34	0.39	0.35	0.42	0.41	0.43	0.36	0.27	0.27	0.48	0.31	0.35	0.34	0.32
95.00°	0.39	0.32	0.37	0.37	0.43	0.30	0.35	0.34	0.45	0.35	0.30	0.33	0.45	0.31	0.45	0.32	0.39
97.50°	0.43	0.31	0.42	0.40	0.46	0.24	0.30	0.26	0.46	0.34	0.32	0.39	0.41	0.34	0.52	0.30	0.43
100.00°	0.42	0.32	0.39	0.43	0.40	0.27	0.32	0.29	0.38	0.35	0.32	0.45	0.39	0.40	0.41	0.28	0.42
102.50°	0.41	0.32	0.35	0.45	0.35	0.30	0.35	0.32	0.30	0.36	0.33	0.47	0.37	0.43	0.31	0.29	0.41
105.00°	0.41	0.31	0.43	0.45	0.33	0.32	0.36	0.29	0.39	0.34	0.36	0.43	0.36	0.40	0.31	0.36	0.41
107.50°	0.42	0.30	0.51	0.44	0.34	0.33	0.37	0.25	0.48	0.33	0.38	0.38	0.35	0.38	0.32	0.40	0.42
110.00°	0.45	0.34	0.45	0.46	0.46	0.34	0.41	0.39	0.45	0.35	0.39	0.32	0.36	0.40	0.38	0.40	0.45
112.50°	0.47	0.38	0.36	0.48	0.58	0.36	0.43	0.54	0.40	0.37	0.38	0.41	0.40	0.54	0.44	0.40	0.47

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	1044	1044	1044	1044	1018	1018	1018	1018	971	971	971	927	927	927	887	887	868
	1	996	972	950	931	973	952	932	915	914	899	885	879	867	856	848	838	821
	2	947	905	870	841	927	889	857	830	859	833	810	831	810	791	805	788	772
	3	900	845	802	767	882	832	792	760	807	774	747	784	757	734	763	741	726
	4	856	790	742	706	839	779	735	701	759	721	692	740	708	682	723	696	682
	5	813	741	691	653	798	732	685	650	715	674	643	699	664	636	685	654	642
	6	773	696	645	608	760	689	640	605	675	632	600	661	624	595	649	616	605
	7	736	656	604	567	724	649	600	565	637	593	562	626	587	558	615	581	571
	8	701	619	567	532	690	613	564	530	603	559	527	593	553	524	584	548	539
	9	668	585	534	500	658	580	532	498	571	527	496	563	523	494	555	518	492
	10	638	554	504	471	629	550	502	470	542	498	468	535	495	466	528	491	484

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	36.8 fc	5.9 ft
6.5 ft	26.3 fc	6.9 ft
7.5 ft	19.8 fc	8.0 ft
8.0 ft	17.4 fc	8.5 ft
10.0 ft	11.1 fc	10.7 ft
12.0 ft	7.7 fc	12.8 ft
14.0 ft	5.7 fc	14.9 ft
16.0 ft	4.3 fc	17.1 ft
20.0 ft	2.8 fc	21.4 ft
24.0 ft	1.9 fc	25.6 ft
28.0 ft	1.4 fc	29.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	38409	38409	38409
45.00°	2976	2576	1603
55.00°	1303	1384	803
65.00°	336	400	203
75.00°	44	54	61
85.00°	147	179	118

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	6.0	7.0	6.4	7.3	7.6	0.0	1.0	0.4	1.3	1.7
	3H	5.8	6.6	6.2	7.0	7.4	-0.1	0.7	0.3	1.1	1.5
	4H	5.7	6.5	6.1	6.9	7.3	-0.2	0.5	0.2	0.9	1.4
	6H	5.6	6.3	6.0	6.7	7.1	-0.3	0.4	0.1	0.8	1.2
	8H	5.5	6.2	6.0	6.6	7.1	-0.3	0.3	0.1	0.7	1.2
	12H	5.5	6.1	6.0	6.5	7.0	-0.4	0.3	0.1	0.7	1.2
4H	2H	5.8	6.6	6.2	7.0	7.4	-0.2	0.6	0.3	1.0	1.4
	3H	5.6	6.2	6.0	6.7	7.1	-0.3	0.3	0.1	0.7	1.2
	4H	5.5	6.0	5.9	6.5	7.0	-0.4	0.1	0.0	0.6	1.1
	6H	5.4	5.9	5.9	6.3	6.8	-0.5	0.0	0.0	0.5	1.0
	8H	5.3	5.8	5.8	6.2	6.7	-0.5	-0.1	0.0	0.4	0.9
	12H	5.3	5.7	5.8	6.2	6.7	-0.5	-0.1	0.0	0.4	0.9
8H	4H	5.3	5.7	5.8	6.2	6.7	-0.6	-0.1	-0.1	0.3	0.8
	6H	5.2	5.5	5.7	6.1	6.6	-0.6	-0.3	-0.1	0.3	0.8
	8H	5.1	5.4	5.7	6.0	6.5	-0.6	-0.3	-0.1	0.2	0.8
	12H	5.1	5.4	5.6	5.9	6.5	-0.5	-0.3	0.0	0.3	0.9
12H	4H	5.2	5.6	5.7	6.1	6.6	-0.7	-0.3	-0.1	0.2	0.8
	6H	5.1	5.4	5.7	5.9	6.5	-0.7	-0.4	-0.1	0.1	0.7
	8H	5.1	5.4	5.6	5.9	6.5	-0.7	-0.4	-0.1	0.1	0.8

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0