

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01207_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	1113
Efficacy	84.31 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.41
Two luminaires, plane 90°	0.42
Four luminaires	0.46

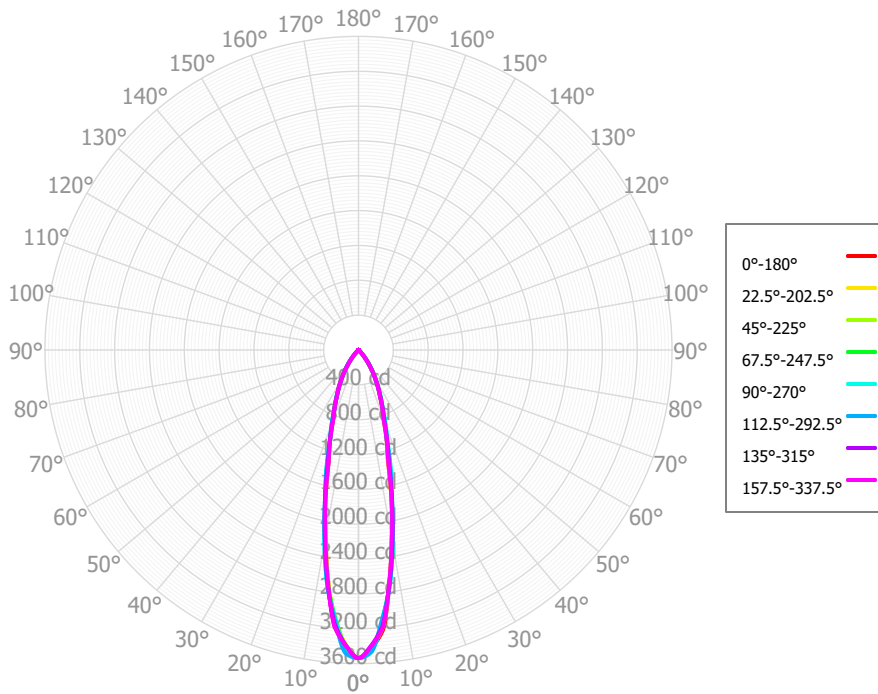
Full Beam Angle

0° - 180°	25°
90° - 270°	25°

IES File Header Contents

Keyword	Value
TEST	SP-01207_1_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 ND XX AR8466XT SG SO
LUMINAIRE	N/A
OTHER	Beam Angle: 25 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°	271.23	24.37%	90.00° - 100.00°	0.25	0.02%
10.00° - 20.00°	384.99	34.59%	100.00° - 110.00°	0.27	0.02%
20.00° - 30.00°	274.46	24.66%	100.00° - 120.00°	0.53	0.05%
30.00° - 40.00°	148.28	13.32%	120.00° - 130.00°	0.28	0.03%
40.00° - 50.00°	29.54	2.65%	130.00° - 140.00°	0.37	0.03%
50.00° - 60.00°	1.29	0.12%	140.00° - 150.00°	0.41	0.04%
60.00° - 70.00°	0.26	0.02%	150.00° - 160.00°	0.29	0.03%
70.00° - 80.00°	0.24	0.02%	160.00° - 170.00°	0.16	0.01%
80.00° - 90.00°	0.25	0.02%	170.00° - 180.00°	0.04	0.00%
0.00° - 90.00°	1110.54	99.79%	0.00° - 180.00°	1112.86	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°	3536.93	3536.93	3536.93	3536.93	3536.93	3536.93	3536.93	3536.93	3536.93	3536.93	3536.93	3536.93	3536.93	3536.93	3536.93	3536.93	3536.93
2.50°	3421.63	3413.54	3423.84	3439.27	3457.62	3481.89	3392.32	3397.74	3396.45	3385.23	3391.32	3419.69	3437.33	3468.13	3395.39	3402.88	3421.63
5.00°	3226.40	3196.60	3171.13	3130.16	3131.86	3113.79	3156.73	3181.60	3175.79	3128.41	3094.13	3085.86	3099.34	3104.88	3179.33	3196.37	3226.40
7.50°	2711.03	2702.06	2713.75	2722.96	2733.62	2735.66	2705.36	2695.30	2677.67	2675.03	2686.66	2710.37	2731.61	2738.10	2709.13	2699.98	2711.03
10.00°	2194.30	2212.91	2243.39	2256.87	2270.03	2251.77	2212.54	2193.47	2180.12	2177.21	2193.83	2221.42	2244.48	2248.06	2240.38	2206.14	2194.30
12.50°	1747.56	1746.98	1756.55	1769.58	1790.57	1765.29	1780.31	1757.99	1749.76	1753.30	1761.19	1765.77	1781.42	1762.31	1778.92	1756.18	1747.56
15.00°	1301.09	1322.62	1362.50	1410.71	1438.05	1425.52	1359.50	1326.15	1320.82	1346.22	1374.65	1399.70	1415.53	1413.63	1351.86	1318.22	1301.09
17.50°	1069.96	1074.49	1085.26	1097.46	1115.91	1089.51	1096.44	1083.60	1086.41	1089.25	1087.25	1079.93	1084.32	1069.91	1095.70	1077.68	1069.96
20.00°	838.83	848.34	866.34	892.98	908.99	900.42	863.35	851.62	852.98	865.90	876.11	885.31	891.02	890.28	859.20	843.70	838.83
22.50°	709.78	713.85	721.12	727.34	729.82	714.71	718.73	716.98	720.31	720.81	715.71	712.30	713.81	712.77	721.12	712.99	709.78
25.00°	580.84	586.55	595.58	604.30	606.45	601.91	590.61	587.51	587.97	593.36	593.95	596.93	599.57	599.93	589.78	584.35	580.84
27.50°	486.74	489.38	494.65	496.28	496.32	490.60	491.03	492.98	494.12	495.21	490.31	488.24	490.17	487.84	491.59	488.86	486.74
30.00°	392.70	394.92	400.75	402.39	403.69	401.32	396.82	400.21	400.41	403.55	400.54	397.44	399.86	399.16	395.89	394.12	392.70
32.50°	311.47	311.68	315.66	313.50	315.25	312.51	313.68	317.40	319.17	320.69	316.73	311.30	312.87	311.00	312.48	310.73	311.47
35.00°	230.31	232.01	238.13	237.93	239.33	238.30	232.57	235.10	238.06	239.78	237.43	237.47	238.72	238.00	232.66	228.62	230.31
37.50°	166.32	166.87	169.98	167.03	166.35	164.35	168.71	168.45	168.63	169.64	168.47	168.88	169.06	165.73	170.27	165.33	166.32
40.00°	102.50	106.72	112.36	113.19	112.14	113.46	108.05	102.57	99.53	101.87	107.36	114.21	116.87	113.50	111.04	103.62	102.50
42.50°	66.10	67.01	67.90	65.36	62.25	63.02	63.08	57.84	54.96	57.17	60.63	65.59	68.70	62.11	67.34	65.46	66.10
45.00°	29.82	32.33	34.89	36.21	34.41	35.70	20.96	14.08	11.00	17.46	24.72	32.86	35.94	34.28	28.89	28.98	29.82
47.50°	17.51	17.89	16.05	13.53	11.71	8.78	9.68	7.45	6.70	7.10	7.28	8.20	9.07	7.38	15.73	16.48	17.51
50.00°	5.28	5.83	4.66	5.45	4.95	4.99	3.92	2.56	2.46	3.11	3.60	4.46	5.01	4.61	4.52	4.66	5.28
52.50°	3.17	3.40	2.42	2.36	1.83	1.62	1.92	1.51	1.45	1.55	1.59	1.58	1.67	1.92	2.54	2.81	3.17
55.00°	1.08	1.34	1.03	1.25	0.89	0.98	0.60	0.63	0.45	0.52	0.83	0.95	1.04	1.31	0.87	1.06	1.08
57.50°	0.74	0.73	0.67	0.82	0.43	0.39	0.40	0.45	0.45	0.31	0.44	0.44	0.50	0.71	0.66	0.75	0.74
60.00°	0.41	0.24	0.45	0.53	0.26	0.29	0.41	0.29	0.44	0.27	0.32	0.28	0.29	0.53	0.47	0.46	0.41
62.50°	0.30	0.22	0.39	0.28	0.17	0.20	0.34	0.29	0.36	0.26	0.22	0.17	0.15	0.34	0.31	0.49	0.30
65.00°	0.20	0.21	0.33	0.20	0.16	0.20	0.27	0.30	0.28	0.25	0.12	0.20	0.24	0.28	0.19	0.51	0.20
67.50°	0.28	0.19	0.29	0.16	0.16	0.19	0.22	0.30	0.28	0.22	0.11	0.21	0.29	0.22	0.21	0.37	0.28
70.00°	0.37	0.18	0.26	0.19	0.21	0.22	0.16	0.30	0.29	0.18	0.16	0.20	0.19	0.20	0.24	0.23	0.37
72.50°	0.31	0.18	0.22	0.22	0.27	0.24	0.14	0.35	0.29	0.17	0.19	0.18	0.12	0.19	0.29	0.17	0.31
75.00°	0.26	0.19	0.21	0.26	0.25	0.21	0.12	0.41	0.29	0.17	0.21	0.14	0.16	0.27	0.32	0.12	0.26
77.50°	0.26	0.23	0.25	0.29	0.21	0.18	0.16	0.32	0.27	0.19	0.19	0.15	0.19	0.34	0.26	0.19	0.26
80.00°	0.27	0.26	0.26	0.27	0.19	0.21	0.20	0.23	0.25	0.21	0.15	0.27	0.22	0.31	0.20	0.26	0.27
82.50°	0.33	0.23	0.23	0.25	0.16	0.24	0.18	0.20	0.20	0.22	0.14	0.33	0.24	0.28	0.21	0.25	0.33
85.00°	0.38	0.21	0.20	0.32	0.14	0.20	0.14	0.18	0.16	0.23	0.16	0.24	0.26	0.26	0.22	0.25	0.38
87.50°	0.35	0.22	0.17	0.42	0.13	0.16	0.22	0.20	0.18	0.23	0.22	0.18	0.28	0.23	0.26	0.25	0.35
90.00°	0.32	0.23	0.18	0.32	0.16	0.29	0.32	0.23	0.21	0.22	0.32	0.17	0.31	0.19	0.29	0.26	0.32
92.50°	0.29	0.25	0.22	0.16	0.21	0.42	0.24	0.23	0.27	0.20	0.30	0.17	0.31	0.15	0.26	0.28	0.29
95.00°	0.27	0.26	0.22	0.11	0.24	0.32	0.13	0.23	0.33	0.18	0.19	0.16	0.22	0.20	0.25	0.29	0.27
97.50°	0.22	0.22	0.18	0.10	0.27	0.22	0.20	0.22	0.26	0.15	0.13	0.16	0.16	0.26	0.39	0.22	0.22
100.00°	0.17	0.20	0.14	0.18	0.23	0.25	0.30	0.21	0.19	0.12	0.10	0.18	0.19	0.31	0.48	0.16	0.17
102.50°	0.21	0.28	0.13	0.28	0.17	0.29	0.34	0.18	0.16	0.21	0.14	0.21	0.21	0.36	0.36	0.22	0.21
105.00°	0.25	0.34	0.16	0.26	0.27	0.28	0.37	0.16	0.14	0.32	0.23	0.24	0.21	0.42	0.26	0.28	0.25
107.50°	0.23	0.32	0.24	0.20	0.39	0.26	0.29	0.23	0.26	0.29	0.26	0.24	0.23	0.46	0.23	0.25	0.23
110.00°	0.21	0.31	0.25	0.22	0.28	0.24	0.20	0.31	0.38	0.24	0.24	0.18	0.32	0.42	0.22	0.22	0.21
112.50°	0.27	0.32	0.19	0.26	0.12	0.23	0.25	0.31	0.34	0.20	0.21	0.15	0.38	0.37	0.23	0.26	0.27

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%	10%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	0	1324	1324	1324	1324	1293	1293	1293	1293	1235	1235	1235	1182	1182	1182	1133	1133	1111
	1	1272	1245	1221	1200	1245	1221	1200	1181	1176	1159	1144	1135	1122	1110	1097	1087	1077
	2	1221	1175	1137	1104	1197	1156	1121	1092	1120	1092	1068	1087	1065	1045	1057	1039	1019
	3	1172	1112	1065	1028	1151	1097	1054	1020	1068	1033	1003	1042	1012	988	1017	993	972
	4	1126	1055	1004	964	1107	1043	995	959	1020	979	947	998	964	936	978	950	926
	5	1082	1004	950	910	1065	994	944	906	975	931	898	957	920	890	941	908	882
	6	1040	958	902	863	1025	949	897	860	934	888	854	919	879	848	905	870	843
	7	1001	915	860	821	988	908	856	819	895	848	814	883	841	810	871	834	806
	8	965	877	821	783	953	871	818	782	859	812	779	849	806	775	839	801	772
	9	930	841	787	750	919	836	784	748	826	779	746	817	774	744	809	770	741
	10	898	808	755	719	888	804	753	718	796	749	716	788	745	714	780	741	713

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	116.9 fc	2.4 ft
6.5 ft	83.7 fc	2.9 ft
7.5 ft	62.9 fc	3.3 ft
8.0 ft	55.3 fc	3.6 ft
10.0 ft	35.4 fc	4.4 ft
12.0 ft	24.6 fc	5.3 ft
14.0 ft	18.0 fc	6.2 ft
16.0 ft	13.8 fc	7.1 ft
20.0 ft	8.8 fc	8.9 ft
24.0 ft	6.1 fc	10.7 ft
28.0 ft	4.5 fc	12.4 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	122131	122131	122131
45.00°	1456	1704	1681
55.00°	65	62	53
65.00°	16	27	13
75.00°	35	29	33
85.00°	151	78	57

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	-17.7	-16.8	-17.4	-16.5	-16.2	-21.5	-20.6	-21.1	-20.3	-19.9
	3H	-17.0	-16.2	-16.6	-15.9	-15.5	-20.3	-19.5	-19.9	-19.1	-18.8
	4H	-16.5	-15.8	-16.1	-15.4	-15.0	-19.3	-18.6	-18.9	-18.2	-17.9
	6H	-15.5	-14.8	-15.1	-14.5	-14.1	-18.0	-17.3	-17.6	-16.9	-16.5
	8H	-14.6	-14.0	-14.1	-13.6	-13.1	-17.0	-16.4	-16.5	-16.0	-15.5
	12H	-13.1	-12.5	-12.7	-12.1	-11.7	-15.8	-15.2	-15.4	-14.9	-14.4
4H	2H	-17.8	-17.1	-17.4	-16.7	-16.3	-21.4	-20.6	-21.0	-20.3	-19.9
	3H	-16.9	-16.3	-16.5	-15.9	-15.5	-19.8	-19.2	-19.4	-18.8	-18.4
	4H	-16.3	-15.8	-15.9	-15.4	-14.9	-18.7	-18.1	-18.2	-17.7	-17.3
	6H	-14.9	-14.4	-14.4	-14.0	-13.5	-16.9	-16.4	-16.4	-16.0	-15.5
	8H	-13.7	-13.3	-13.2	-12.8	-12.3	-15.5	-15.1	-15.1	-14.7	-14.2
	12H	-11.9	-11.6	-11.4	-11.1	-10.6	-14.2	-13.8	-13.7	-13.3	-12.9
8H	4H	-16.0	-15.5	-15.5	-15.1	-14.6	-18.2	-17.8	-17.7	-17.3	-16.9
	6H	-14.2	-13.9	-13.7	-13.3	-12.9	-16.0	-15.6	-15.4	-15.1	-14.6
	8H	-12.8	-12.5	-12.3	-12.0	-11.5	-14.2	-13.9	-13.7	-13.4	-12.9
	12H	-10.9	-10.7	-10.4	-10.2	-9.6	-12.6	-12.4	-12.1	-11.9	-11.3
12H	4H	-15.8	-15.5	-15.3	-15.0	-14.5	-18.0	-17.7	-17.6	-17.2	-16.7
	6H	-14.0	-13.7	-13.4	-13.2	-12.6	-15.7	-15.4	-15.2	-15.0	-14.4
	8H	-12.5	-12.3	-12.0	-11.8	-11.2	-13.9	-13.6	-13.4	-13.1	-12.5

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0