

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01207_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	1098
Efficacy	83.16 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.39
Two luminaires, plane 90°	0.4
Four luminaires	0.43

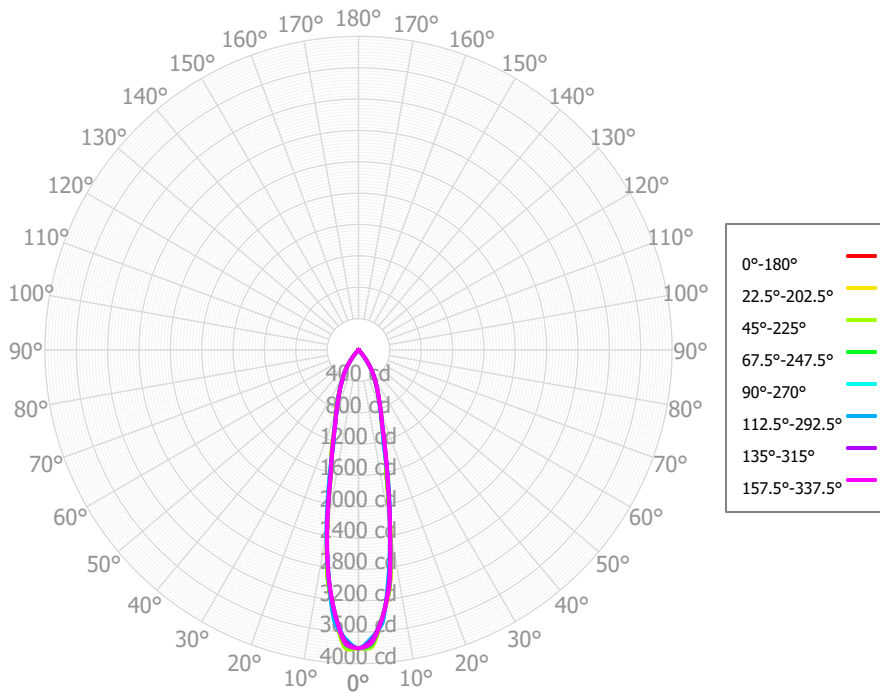
Full Beam Angle

0° - 180°	23°
90° - 270°	23°

IES File Header Contents

Keyword	Value
TEST	SP-01207_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 GL
LUMINAIRE	N/A
OTHER	Beam Angle: 23 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°	294.23	26.81%	90.00° - 100.00°	0.33	0.03%
10.00° - 20.00°	367.12	33.45%	100.00° - 110.00°	0.36	0.03%
20.00° - 30.00°	263.41	24.00%	100.00° - 120.00°	0.70	0.06%
30.00° - 40.00°	147.16	13.41%	120.00° - 130.00°	0.31	0.03%
40.00° - 50.00°	20.35	1.85%	130.00° - 140.00°	0.41	0.04%
50.00° - 60.00°	1.45	0.13%	140.00° - 150.00°	0.51	0.05%
60.00° - 70.00°	0.38	0.03%	150.00° - 160.00°	0.33	0.03%
70.00° - 80.00°	0.36	0.03%	160.00° - 170.00°	0.17	0.02%
80.00° - 90.00°	0.38	0.03%	170.00° - 180.00°	0.05	0.00%
0.00° - 90.00°	1094.85	99.74%	0.00° - 180.00°	1097.68	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°	3803.55	3803.55	3803.55	3803.55	3803.55	3803.55	3803.55	3803.55	3803.55	3803.55	3803.55	3803.55	3803.55	3803.55	3803.55	3803.55	3803.55
2.50°	3780.84	3781.25	3796.57	3763.85	3704.16	3692.84	3722.37	3758.63	3799.36	3810.53	3806.55	3767.37	3710.73	3682.59	3710.27	3746.51	3780.84
5.00°	3437.54	3444.83	3434.77	3429.35	3457.72	3490.45	3405.33	3389.51	3396.80	3404.59	3403.73	3385.96	3418.75	3497.37	3444.77	3444.29	3437.54
7.50°	3051.66	3059.28	3052.81	3027.11	2968.78	2921.53	2917.44	2924.14	2975.42	2971.43	2989.45	2957.46	2913.92	2922.25	2984.87	3024.64	3051.66
10.00°	2329.03	2335.05	2331.42	2317.13	2298.56	2346.96	2321.16	2298.16	2301.89	2305.04	2307.87	2299.27	2334.94	2309.60	2304.56	2320.77	2329.03
12.50°	1659.54	1670.20	1644.13	1680.00	1754.00	1747.49	1660.83	1633.25	1633.18	1631.75	1650.95	1620.22	1688.87	1764.56	1744.89	1716.33	1659.54
15.00°	1310.24	1316.48	1303.19	1310.45	1291.20	1229.47	1258.72	1277.19	1309.09	1311.29	1315.89	1290.83	1259.82	1223.39	1304.79	1320.94	1310.24
17.50°	993.56	999.09	984.67	991.74	1004.38	1002.66	988.38	980.64	993.69	996.36	999.20	979.70	1002.28	1010.20	1004.29	1005.14	993.56
20.00°	829.70	832.78	825.66	827.56	818.35	801.68	809.89	816.45	836.52	838.12	839.46	827.61	818.17	804.74	826.47	833.36	829.70
22.50°	678.17	679.97	674.94	679.05	680.17	677.33	672.24	671.68	683.55	683.43	686.88	678.74	684.63	685.69	685.94	686.29	678.17
25.00°	573.15	573.95	570.00	571.34	565.62	562.84	564.18	566.55	575.38	577.56	578.93	574.20	573.42	568.03	574.03	577.93	573.15
27.50°	474.61	474.98	470.35	472.72	474.85	473.44	467.29	465.74	471.41	474.84	476.63	471.09	475.78	481.35	481.32	481.36	474.61
30.00°	396.60	396.37	393.74	394.25	394.13	388.28	387.77	390.51	398.40	401.28	402.20	396.61	393.48	395.37	401.43	401.10	396.60
32.50°	318.41	317.44	316.60	315.90	315.87	312.33	313.74	317.03	324.43	326.89	326.55	321.68	319.23	317.79	321.41	321.41	318.41
35.00°	239.74	237.76	237.62	237.77	238.52	236.11	235.52	238.29	245.02	247.08	246.06	241.56	240.91	240.13	241.31	242.42	239.74
37.50°	164.71	162.45	161.91	163.26	163.55	159.36	156.20	159.40	165.52	166.74	165.09	161.90	160.75	161.82	166.13	167.81	164.71
40.00°	97.94	96.27	95.81	94.78	89.32	93.81	92.73	90.34	85.63	83.75	82.58	85.82	93.13	88.47	93.46	97.81	97.94
42.50°	46.81	46.49	43.57	45.87	49.26	46.56	32.58	23.47	21.13	15.69	19.75	19.61	30.31	45.53	49.49	50.52	46.81
45.00°	26.51	26.58	25.66	25.28	17.73	16.35	16.71	14.32	12.37	9.31	11.36	11.70	11.10	9.44	18.02	24.46	26.51
47.50°	11.97	12.88	12.09	11.66	9.34	10.35	8.27	5.61	5.17	3.99	4.73	4.81	6.20	5.98	7.26	10.53	11.97
50.00°	7.22	8.98	7.87	6.82	5.69	5.73	4.70	3.09	2.76	2.24	2.21	2.58	3.42	2.98	4.29	6.50	7.22
52.50°	3.63	5.42	4.35	3.39	3.10	2.82	1.73	0.81	0.93	0.87	0.54	0.77	1.21	1.77	2.62	3.67	3.63
55.00°	1.74	2.32	2.13	1.52	0.68	1.08	1.09	0.73	0.59	0.56	0.56	0.53	0.57	0.82	1.37	1.70	1.74
57.50°	0.61	0.57	0.69	0.49	0.35	0.62	0.65	0.65	0.35	0.34	0.51	0.36	0.28	0.75	0.87	0.88	0.61
60.00°	0.44	0.44	0.50	0.30	0.25	0.42	0.50	0.50	0.32	0.36	0.34	0.37	0.23	0.68	0.56	0.79	0.44
62.50°	0.35	0.39	0.39	0.25	0.27	0.46	0.37	0.40	0.31	0.34	0.26	0.35	0.23	0.64	0.49	0.60	0.35
65.00°	0.33	0.43	0.39	0.31	0.30	0.45	0.44	0.54	0.34	0.26	0.31	0.26	0.19	0.60	0.47	0.34	0.33
67.50°	0.34	0.40	0.32	0.37	0.36	0.38	0.51	0.60	0.37	0.22	0.35	0.20	0.14	0.59	0.44	0.33	0.34
70.00°	0.36	0.31	0.17	0.42	0.42	0.36	0.48	0.40	0.40	0.25	0.38	0.22	0.14	0.55	0.39	0.44	0.36
72.50°	0.34	0.25	0.13	0.42	0.34	0.36	0.46	0.27	0.41	0.25	0.37	0.22	0.14	0.46	0.43	0.46	0.34
75.00°	0.27	0.22	0.23	0.38	0.25	0.33	0.62	0.40	0.41	0.20	0.33	0.19	0.27	0.38	0.48	0.46	0.27
77.50°	0.27	0.24	0.25	0.37	0.25	0.28	0.75	0.49	0.39	0.19	0.29	0.18	0.41	0.30	0.50	0.38	0.27
80.00°	0.31	0.30	0.21	0.37	0.26	0.30	0.64	0.47	0.35	0.20	0.27	0.20	0.40	0.25	0.52	0.28	0.31
82.50°	0.31	0.30	0.27	0.29	0.36	0.37	0.54	0.46	0.38	0.23	0.29	0.23	0.39	0.26	0.64	0.28	0.31
85.00°	0.28	0.25	0.40	0.16	0.44	0.40	0.46	0.47	0.48	0.28	0.35	0.29	0.25	0.29	0.76	0.31	0.28
87.50°	0.25	0.25	0.44	0.14	0.33	0.42	0.41	0.44	0.46	0.33	0.33	0.30	0.13	0.37	0.61	0.40	0.25
90.00°	0.22	0.27	0.40	0.16	0.23	0.39	0.47	0.29	0.34	0.40	0.26	0.23	0.13	0.37	0.46	0.52	0.22
92.50°	0.19	0.23	0.31	0.23	0.21	0.35	0.49	0.23	0.28	0.39	0.27	0.23	0.14	0.29	0.40	0.56	0.19
95.00°	0.16	0.16	0.19	0.32	0.20	0.41	0.35	0.31	0.27	0.31	0.33	0.29	0.29	0.23	0.34	0.58	0.16
97.50°	0.23	0.16	0.18	0.30	0.28	0.52	0.25	0.35	0.26	0.27	0.32	0.33	0.41	0.20	0.34	0.59	0.23
100.00°	0.34	0.17	0.24	0.23	0.33	0.57	0.26	0.30	0.25	0.24	0.26	0.36	0.35	0.24	0.35	0.59	0.34
102.50°	0.34	0.19	0.26	0.23	0.27	0.61	0.29	0.35	0.23	0.21	0.24	0.37	0.29	0.35	0.46	0.55	0.34
105.00°	0.29	0.21	0.26	0.24	0.22	0.56	0.35	0.51	0.22	0.17	0.24	0.37	0.27	0.45	0.54	0.51	0.29
107.50°	0.33	0.24	0.37	0.26	0.20	0.50	0.38	0.53	0.29	0.19	0.35	0.37	0.26	0.55	0.39	0.46	0.33
110.00°	0.40	0.28	0.52	0.28	0.21	0.49	0.33	0.38	0.42	0.25	0.51	0.36	0.28	0.47	0.27	0.40	0.40
112.50°	0.39	0.37	0.41	0.25	0.26	0.49	0.32	0.33	0.44	0.25	0.44	0.33	0.28	0.27	0.34	0.46	0.39

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	1306	1306	1306	1306	1275	1275	1275	1275	1218	1218	1218	1166	1166	1166	1117	1117	1117
	1	1256	1229	1206	1185	1229	1206	1185	1166	1161	1145	1130	1120	1108	1096	1083	1073	1064
	2	1206	1161	1124	1093	1183	1143	1109	1081	1107	1080	1057	1075	1053	1034	1045	1028	1012
	3	1159	1101	1055	1019	1138	1086	1044	1011	1058	1023	995	1032	1003	979	1007	984	964
	4	1114	1046	996	958	1096	1034	988	952	1011	972	941	990	957	930	970	943	920
	5	1072	997	945	906	1056	987	938	902	969	926	894	951	915	886	935	904	878
	6	1032	953	899	860	1018	944	894	858	929	885	852	914	876	846	901	867	841
	7	995	912	858	820	982	905	854	818	892	847	814	880	840	810	868	833	806
	8	960	875	821	785	948	869	818	783	858	812	780	847	807	777	838	801	773
	9	927	841	788	752	916	836	785	751	826	781	749	817	776	746	809	771	744
	10	896	809	758	723	886	805	755	722	797	751	720	789	748	718	782	744	716

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	125.7 fc	2.3 ft
6.5 ft	90.0 fc	2.7 ft
7.5 ft	67.6 fc	3.1 ft
8.0 ft	59.4 fc	3.3 ft
10.0 ft	38.0 fc	4.1 ft
12.0 ft	26.4 fc	5.0 ft
14.0 ft	19.4 fc	5.8 ft
16.0 ft	14.9 fc	6.6 ft
20.0 ft	9.5 fc	8.3 ft
24.0 ft	6.6 fc	9.9 ft
28.0 ft	4.9 fc	11.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	131337	131337	131337
45.00°	1295	1253	866
55.00°	105	128	41
65.00°	27	32	25
75.00°	36	30	34
85.00°	112	159	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	-17.7	-16.8	-17.3	-16.5	-16.2	-20.6	-19.7	-20.3	-19.4	-19.1
	3H	-16.5	-15.7	-16.1	-15.4	-15.0	-18.9	-18.1	-18.5	-17.7	-17.4
	4H	-15.7	-15.0	-15.3	-14.6	-14.2	-17.8	-17.1	-17.4	-16.7	-16.3
	6H	-14.7	-14.0	-14.3	-13.6	-13.2	-15.8	-15.2	-15.4	-14.8	-14.4
	8H	-13.9	-13.3	-13.5	-12.9	-12.5	-14.5	-13.9	-14.0	-13.5	-13.0
	12H	-13.0	-12.4	-12.5	-12.0	-11.6	-12.9	-12.3	-12.5	-12.0	-11.5
4H	2H	-17.5	-16.7	-17.1	-16.4	-16.0	-20.0	-19.3	-19.6	-19.0	-18.6
	3H	-15.9	-15.3	-15.5	-14.9	-14.5	-17.7	-17.1	-17.3	-16.7	-16.3
	4H	-14.8	-14.3	-14.3	-13.8	-13.4	-16.5	-15.9	-16.0	-15.5	-15.1
	6H	-13.5	-13.0	-13.0	-12.6	-12.1	-14.5	-14.1	-14.1	-13.6	-13.2
	8H	-12.6	-12.1	-12.1	-11.7	-11.2	-13.1	-12.7	-12.6	-12.2	-11.7
	12H	-11.5	-11.2	-11.0	-10.7	-10.2	-11.4	-11.0	-10.9	-10.5	-10.0
8H	4H	-14.2	-13.7	-13.7	-13.3	-12.8	-15.0	-14.5	-14.5	-14.1	-13.6
	6H	-12.5	-12.2	-12.0	-11.7	-11.2	-13.0	-12.6	-12.4	-12.1	-11.6
	8H	-11.4	-11.1	-10.9	-10.6	-10.1	-11.5	-11.3	-11.0	-10.7	-10.2
	12H	-10.2	-9.9	-9.7	-9.4	-8.8	-9.7	-9.5	-9.2	-9.0	-8.4
12H	4H	-14.0	-13.7	-13.5	-13.2	-12.7	-14.7	-14.3	-14.2	-13.8	-13.3
	6H	-12.0	-11.8	-11.5	-11.3	-10.7	-12.4	-12.1	-11.9	-11.6	-11.1
	8H	-10.7	-10.5	-10.2	-10.0	-9.4	-10.9	-10.6	-10.3	-10.1	-9.5

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0