

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGRTE8XT 10L 35K ND XX AR8466XT SG GL
N/A

Test Number

SP-01207_M-10L

Test Date

2/11/2021

The results contained in this report pertain only to this IES file.

Summary of Results

Power

Input Watts	10.2 W
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Lumen Output

Output Lumens	802
Efficacy	78.64 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

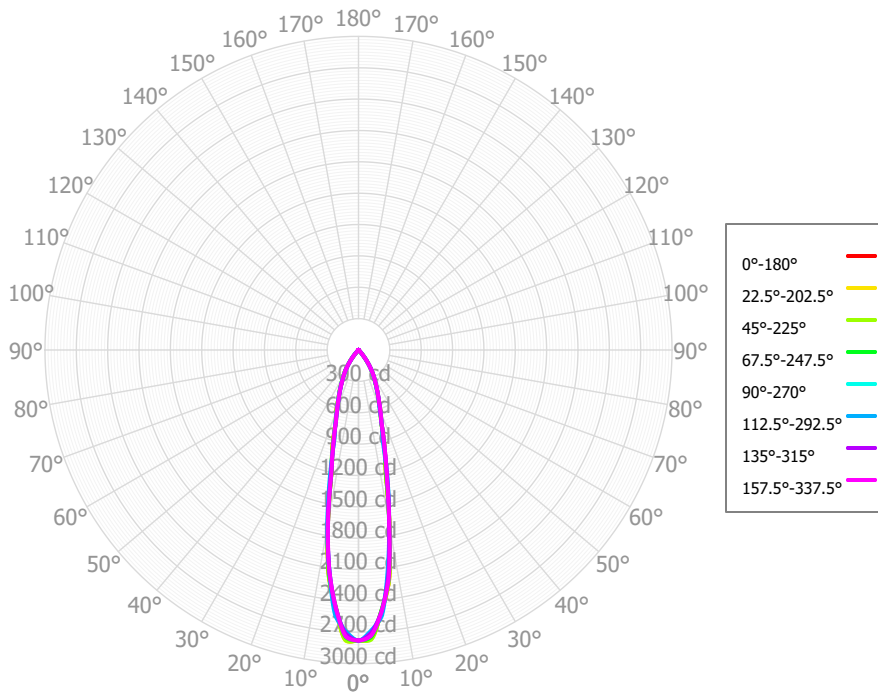
Full Beam Angle

0° - 180°	23°
90° - 270°	23°

IES File Header Contents

Keyword	Value
TEST	SP-01207_M-10L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/11/2021
ISSUEDATE	3/2/2021
LUMCAT	SGRTE8XT 10L 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°	215.02	26.81%	90.00° - 100.00°	0.24	0.03%
10.00° - 20.00°	268.28	33.45%	100.00° - 110.00°	0.26	0.03%
20.00° - 30.00°	192.49	24.00%	100.00° - 120.00°	0.51	0.06%
30.00° - 40.00°	107.54	13.41%	120.00° - 130.00°	0.23	0.03%
40.00° - 50.00°	14.87	1.85%	130.00° - 140.00°	0.30	0.04%
50.00° - 60.00°	1.06	0.13%	140.00° - 150.00°	0.38	0.05%
60.00° - 70.00°	0.28	0.03%	150.00° - 160.00°	0.24	0.03%
70.00° - 80.00°	0.26	0.03%	160.00° - 170.00°	0.12	0.02%
80.00° - 90.00°	0.28	0.03%	170.00° - 180.00°	0.04	0.00%
0.00° - 90.00°	800.09	99.74%	0.00° - 180.00°	802.15	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°	2779.52	2779.52	2779.52	2779.52	2779.52	2779.52	2779.52	2779.52	2779.52	2779.52	2779.52	2779.52	2779.52	2779.52	2779.52	2779.52	2779.52
2.50°	2762.92	2763.22	2774.41	2750.50	2706.89	2698.61	2720.20	2746.69	2776.45	2784.62	2781.71	2753.08	2711.69	2691.12	2711.35	2737.83	2762.92
5.00°	2512.05	2517.38	2510.02	2506.06	2526.80	2550.71	2488.51	2476.95	2482.27	2487.97	2487.34	2474.36	2498.32	2555.77	2517.33	2516.98	2512.05
7.50°	2230.06	2235.63	2230.90	2212.12	2169.49	2134.96	2131.98	2136.87	2174.35	2171.43	2184.60	2161.22	2129.40	2135.49	2181.25	2210.32	2230.06
10.00°	1701.99	1706.38	1703.73	1693.29	1679.72	1715.08	1696.23	1679.43	1682.15	1684.46	1686.52	1680.23	1706.30	1687.79	1684.10	1695.95	1701.99
12.50°	1212.74	1220.53	1201.48	1227.69	1281.77	1277.01	1213.68	1193.53	1193.48	1192.44	1206.47	1184.00	1234.18	1289.48	1275.12	1254.24	1212.74
15.00°	957.48	962.04	952.33	957.63	943.57	898.46	919.83	933.33	956.64	958.25	961.62	943.30	920.64	894.01	953.50	965.30	957.48
17.50°	726.07	730.10	719.57	724.73	733.97	732.71	722.28	716.62	726.16	728.11	730.18	715.93	732.44	738.23	733.90	734.52	726.07
20.00°	606.32	608.57	603.37	604.75	598.02	585.84	591.84	596.63	611.30	612.47	613.45	604.79	597.89	588.08	603.96	608.99	606.32
22.50°	495.59	496.90	493.22	496.23	497.05	494.97	491.26	490.84	499.51	499.43	501.95	496.00	500.31	501.08	501.27	501.52	495.59
25.00°	418.84	419.42	416.54	417.51	413.34	411.30	412.29	414.02	420.47	422.06	423.07	419.61	419.04	415.10	419.49	422.33	418.84
27.50°	346.83	347.10	343.72	345.45	347.01	345.97	341.48	340.35	344.50	347.00	348.31	344.26	347.68	351.76	351.73	351.76	346.83
30.00°	289.82	289.65	287.73	288.11	288.02	283.74	283.37	285.37	291.14	293.24	293.92	289.83	287.54	288.92	293.35	293.11	289.82
32.50°	232.69	231.97	231.36	230.85	230.83	228.24	229.27	231.68	237.09	238.88	238.63	235.08	233.29	232.23	234.88	234.88	232.69
35.00°	175.19	173.74	173.64	173.75	174.30	172.54	172.11	174.13	179.05	180.56	179.81	176.53	176.05	175.48	176.34	177.15	175.19
37.50°	120.37	118.72	118.32	119.30	119.52	116.46	114.15	116.48	120.96	121.85	120.64	118.31	117.47	118.25	121.41	122.63	120.37
40.00°	71.57	70.35	70.02	69.27	65.27	68.55	67.76	66.02	62.58	61.20	60.35	62.72	68.06	64.65	68.30	71.48	71.57
42.50°	34.21	33.98	31.84	33.52	36.00	34.03	23.81	17.15	15.44	11.47	14.43	14.33	22.15	33.27	36.17	36.92	34.21
45.00°	19.37	19.42	18.75	18.47	12.96	11.95	12.21	10.46	9.04	6.81	8.30	8.55	8.11	6.90	13.17	17.88	19.37
47.50°	8.75	9.41	8.84	8.52	6.83	7.57	6.04	4.10	3.78	2.92	3.46	3.51	4.53	4.37	5.31	7.69	8.75
50.00°	5.28	6.56	5.75	4.99	4.15	4.19	3.43	2.26	2.02	1.64	1.62	1.89	2.50	2.18	3.14	4.75	5.28
52.50°	2.65	3.96	3.18	2.48	2.27	2.06	1.26	0.59	0.68	0.64	0.39	0.56	0.89	1.29	1.92	2.68	2.65
55.00°	1.27	1.70	1.56	1.11	0.50	0.79	0.80	0.54	0.43	0.41	0.41	0.39	0.42	0.60	1.00	1.24	1.27
57.50°	0.44	0.42	0.51	0.36	0.25	0.46	0.47	0.47	0.26	0.25	0.38	0.26	0.20	0.55	0.63	0.65	0.44
60.00°	0.32	0.32	0.37	0.22	0.18	0.31	0.37	0.37	0.24	0.26	0.25	0.27	0.17	0.50	0.41	0.58	0.32
62.50°	0.25	0.29	0.28	0.18	0.20	0.34	0.27	0.29	0.23	0.25	0.19	0.26	0.17	0.46	0.36	0.44	0.25
65.00°	0.24	0.31	0.29	0.23	0.22	0.33	0.32	0.39	0.25	0.19	0.23	0.19	0.14	0.44	0.35	0.25	0.24
67.50°	0.25	0.29	0.24	0.27	0.26	0.28	0.37	0.44	0.27	0.16	0.26	0.15	0.10	0.43	0.32	0.24	0.25
70.00°	0.26	0.23	0.12	0.31	0.31	0.26	0.35	0.29	0.29	0.18	0.28	0.16	0.10	0.40	0.29	0.32	0.26
72.50°	0.25	0.18	0.10	0.31	0.25	0.26	0.34	0.19	0.30	0.18	0.27	0.16	0.10	0.34	0.31	0.34	0.25
75.00°	0.20	0.16	0.17	0.28	0.18	0.24	0.45	0.29	0.30	0.15	0.24	0.14	0.20	0.28	0.35	0.33	0.20
77.50°	0.20	0.18	0.19	0.27	0.19	0.20	0.55	0.36	0.29	0.14	0.21	0.13	0.30	0.22	0.37	0.28	0.20
80.00°	0.23	0.22	0.16	0.27	0.19	0.22	0.47	0.34	0.26	0.15	0.20	0.14	0.29	0.18	0.38	0.21	0.23
82.50°	0.23	0.22	0.20	0.21	0.27	0.27	0.39	0.33	0.28	0.17	0.21	0.17	0.28	0.19	0.47	0.21	0.23
85.00°	0.21	0.18	0.29	0.12	0.33	0.29	0.34	0.35	0.35	0.20	0.25	0.21	0.19	0.21	0.56	0.22	0.21
87.50°	0.19	0.18	0.32	0.10	0.24	0.30	0.30	0.32	0.34	0.24	0.24	0.22	0.09	0.27	0.45	0.30	0.19
90.00°	0.16	0.20	0.29	0.11	0.17	0.28	0.34	0.21	0.25	0.29	0.19	0.17	0.09	0.27	0.33	0.38	0.16
92.50°	0.14	0.17	0.23	0.17	0.15	0.25	0.36	0.17	0.20	0.28	0.20	0.17	0.10	0.21	0.29	0.41	0.14
95.00°	0.12	0.12	0.14	0.23	0.15	0.30	0.26	0.23	0.20	0.23	0.24	0.21	0.21	0.17	0.25	0.43	0.12
97.50°	0.17	0.11	0.13	0.22	0.20	0.38	0.18	0.26	0.19	0.19	0.23	0.24	0.30	0.14	0.25	0.43	0.17
100.00°	0.25	0.12	0.17	0.17	0.24	0.42	0.19	0.22	0.18	0.18	0.19	0.26	0.26	0.17	0.25	0.43	0.25
102.50°	0.25	0.14	0.19	0.17	0.20	0.44	0.21	0.25	0.17	0.15	0.18	0.27	0.21	0.25	0.34	0.40	0.25
105.00°	0.21	0.15	0.19	0.18	0.16	0.41	0.26	0.37	0.16	0.12	0.17	0.27	0.20	0.33	0.40	0.37	0.21
107.50°	0.24	0.18	0.27	0.19	0.15	0.36	0.28	0.38	0.21	0.14	0.25	0.27	0.19	0.40	0.29	0.33	0.24
110.00°	0.30	0.21	0.38	0.20	0.15	0.36	0.24	0.28	0.31	0.18	0.37	0.26	0.20	0.34	0.20	0.29	0.30
112.50°	0.28	0.27	0.30	0.18	0.19	0.36	0.24	0.24	0.32	0.18	0.32	0.24	0.21	0.20	0.25	0.34	0.28

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%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	954	954	954	954	932	932	932	932	890	890	890	852	852	852	817	817	817	800
	1	917	898	881	866	898	881	866	852	849	837	826	819	809	801	791	784	777	768
	2	881	849	821	799	864	835	810	790	809	789	772	786	770	756	764	751	740	736
	3	847	804	771	745	832	793	763	739	773	748	727	754	733	716	736	719	705	706
	4	814	765	728	700	801	756	722	696	739	710	688	724	699	680	709	689	672	676
	5	784	729	690	662	772	721	686	659	708	677	653	695	668	648	683	660	642	649
	6	754	696	657	629	744	690	653	627	679	647	622	668	640	618	658	634	614	623
	7	727	666	627	599	718	661	624	598	652	619	595	643	614	592	635	609	589	599
	8	701	639	600	573	693	635	598	572	627	594	570	619	589	568	612	585	565	576
	9	677	614	576	550	669	611	574	549	604	570	547	597	567	545	591	564	544	555
	10	655	591	554	528	648	588	552	528	582	549	526	577	546	525	571	544	524	536

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	91.9 fc	2.3 ft
6.5 ft	65.8 fc	2.7 ft
7.5 ft	49.4 fc	3.1 ft
8.0 ft	43.4 fc	3.3 ft
10.0 ft	27.8 fc	4.1 ft
12.0 ft	19.3 fc	5.0 ft
14.0 ft	14.2 fc	5.8 ft
16.0 ft	10.9 fc	6.6 ft
20.0 ft	6.9 fc	8.3 ft
24.0 ft	4.8 fc	9.9 ft
28.0 ft	3.5 fc	11.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	95977	95977	95977
45.00°	946	916	633
55.00°	77	94	30
65.00°	20	23	18
75.00°	27	22	25
85.00°	82	116	129

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	-18.8	-17.9	-18.4	-17.6	-17.3	-21.7	-20.8	-21.4	-20.5	-20.2
	3H	-17.6	-16.8	-17.2	-16.5	-16.1	-20.0	-19.2	-19.6	-18.8	-18.4
	4H	-16.8	-16.1	-16.4	-15.7	-15.3	-18.9	-18.1	-18.5	-17.8	-17.4
	6H	-15.8	-15.1	-15.3	-14.7	-14.3	-16.9	-16.3	-16.5	-15.9	-15.5
	8H	-15.0	-14.4	-14.5	-14.0	-13.5	-15.6	-14.9	-15.1	-14.5	-14.1
	12H	-14.1	-13.5	-13.6	-13.1	-12.7	-14.0	-13.4	-13.6	-13.0	-12.6
4H	2H	-18.6	-17.8	-18.1	-17.5	-17.1	-21.1	-20.4	-20.7	-20.0	-19.6
	3H	-17.0	-16.4	-16.6	-16.0	-15.6	-18.8	-18.2	-18.4	-17.8	-17.4
	4H	-15.9	-15.3	-15.4	-14.9	-14.5	-17.6	-17.0	-17.1	-16.6	-16.1
	6H	-14.6	-14.1	-14.1	-13.7	-13.2	-15.6	-15.2	-15.2	-14.7	-14.2
	8H	-13.7	-13.2	-13.2	-12.8	-12.3	-14.2	-13.7	-13.7	-13.3	-12.8
	12H	-12.6	-12.2	-12.1	-11.7	-11.3	-12.5	-12.1	-12.0	-11.6	-11.1
8H	4H	-15.3	-14.8	-14.8	-14.4	-13.9	-16.1	-15.6	-15.6	-15.2	-14.7
	6H	-13.6	-13.3	-13.1	-12.8	-12.3	-14.0	-13.7	-13.5	-13.2	-12.7
	8H	-12.5	-12.2	-12.0	-11.7	-11.2	-12.6	-12.3	-12.1	-11.8	-11.3
	12H	-11.3	-11.0	-10.7	-10.5	-9.9	-10.8	-10.6	-10.3	-10.1	-9.5
12H	4H	-15.1	-14.7	-14.6	-14.3	-13.8	-15.7	-15.4	-15.2	-14.9	-14.4
	6H	-13.1	-12.8	-12.6	-12.4	-11.8	-13.5	-13.2	-12.9	-12.7	-12.2
	8H	-11.8	-11.6	-11.3	-11.1	-10.5	-12.0	-11.7	-11.4	-11.2	-10.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0