

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01211_1_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	643
Efficacy	63.02 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.82
Two luminaires, plane 90°	0.83
Four luminaires	0.86

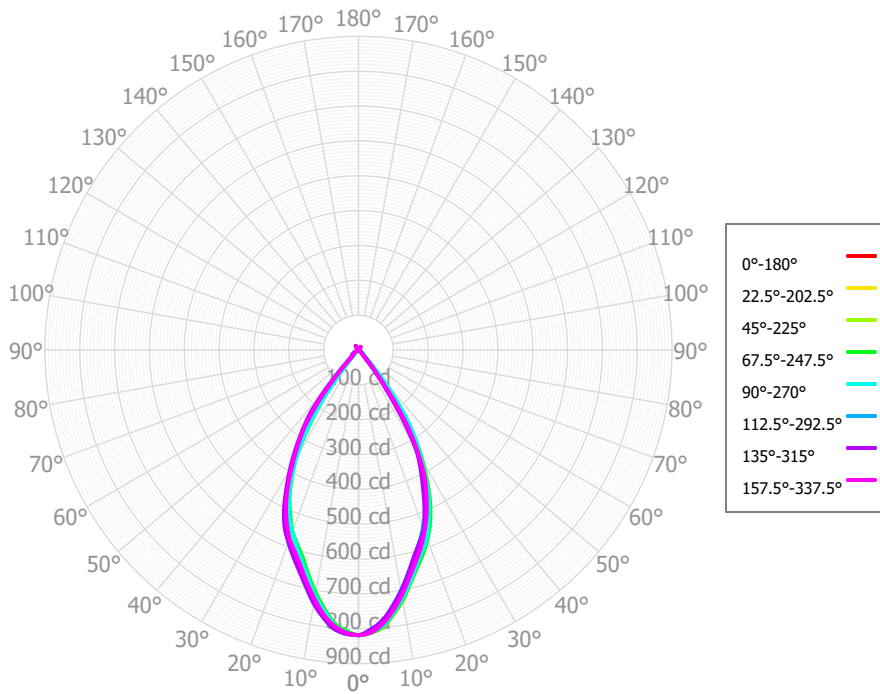
Full Beam Angle

0° - 180°	56°
90° - 270°	56°

IES File Header Contents

Keyword	Value
TEST	SP-01211_1_M-10L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/11/2021
ISSUEDATE	2/25/2021
LUMCAT	SGRTE8XT 10L 35K XW 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°	74.18	11.54%	90.00° - 100.00°	0.31	0.05%
10.00° - 20.00°	178.52	27.77%	100.00° - 110.00°	0.29	0.04%
20.00° - 30.00°	214.99	33.45%	100.00° - 120.00°	0.64	0.10%
30.00° - 40.00°	133.36	20.75%	120.00° - 130.00°	0.52	0.08%
40.00° - 50.00°	21.81	3.39%	130.00° - 140.00°	0.91	0.14%
50.00° - 60.00°	8.75	1.36%	140.00° - 150.00°	3.93	0.61%
60.00° - 70.00°	2.53	0.39%	150.00° - 160.00°	1.32	0.21%
70.00° - 80.00°	0.31	0.05%	160.00° - 170.00°	0.36	0.06%
80.00° - 90.00°	0.30	0.05%	170.00° - 180.00°	0.05	0.01%
0.00° - 90.00°	634.74	98.75%	0.00° - 180.00°	642.79	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°	818.49	818.49	818.49	818.49	818.49	818.49	818.49	818.49	818.49	818.49	818.49	818.49	818.49	818.49	818.49	818.49	818.49
2.50°	807.94	812.47	811.20	812.56	810.88	812.59	815.94	812.30	813.59	807.88	812.45	806.95	811.18	803.40	803.48	811.98	807.94
5.00°	790.55	799.75	792.23	798.32	794.79	802.56	803.52	795.20	798.57	792.29	790.05	788.34	793.62	781.82	780.14	790.03	790.55
7.50°	756.51	766.32	763.65	765.18	761.00	773.01	774.51	765.93	764.27	754.87	756.01	749.89	756.45	742.56	743.95	755.89	756.51
10.00°	717.16	730.05	724.89	729.01	722.99	737.12	739.36	725.34	726.15	714.51	715.07	707.13	716.45	701.24	702.64	715.33	717.16
12.50°	674.45	685.61	684.78	686.35	681.95	695.79	695.86	683.89	681.84	670.35	670.47	662.27	670.80	656.63	658.90	670.87	674.45
15.00°	630.92	645.10	643.45	647.26	640.39	653.09	656.58	641.78	641.75	625.89	631.08	617.09	628.53	615.97	614.40	631.66	630.92
17.50°	597.15	613.66	606.87	614.48	606.54	619.59	622.09	607.49	607.26	595.64	593.91	585.14	591.75	580.47	580.30	595.08	597.15
20.00°	565.10	577.40	573.74	578.30	573.56	587.75	587.63	578.19	572.74	565.47	559.39	554.39	555.22	541.22	548.61	554.04	565.10
22.50°	512.88	532.19	528.61	537.24	526.01	544.78	553.19	538.06	538.18	521.48	525.77	511.99	519.01	497.86	495.53	511.22	512.88
25.00°	458.29	483.05	476.29	487.25	477.59	500.44	505.74	492.30	491.99	476.71	476.50	469.01	474.41	450.39	438.85	462.09	458.29
27.50°	409.31	427.88	421.01	426.70	417.26	441.28	448.06	437.68	435.09	421.47	423.15	414.95	420.44	399.22	386.73	411.00	409.31
30.00°	360.68	365.73	364.25	365.90	356.98	381.17	391.15	379.30	379.47	365.49	367.20	359.50	357.40	330.22	335.10	342.43	360.68
32.50°	268.19	294.79	289.66	304.87	300.90	326.57	334.72	323.85	324.82	303.79	310.75	279.66	285.97	247.92	239.56	269.64	268.19
35.00°	175.93	213.02	208.07	235.51	242.79	271.57	278.90	269.36	262.96	239.16	229.93	199.88	203.39	164.96	141.77	178.07	175.93
37.50°	102.87	119.97	130.96	159.33	162.32	201.50	223.40	195.92	196.63	159.25	145.94	120.65	112.32	81.60	83.76	83.27	102.87
40.00°	34.84	59.85	55.24	94.52	87.57	132.38	145.99	117.66	123.71	87.66	83.80	50.05	57.97	40.62	28.08	47.67	34.84
42.50°	23.27	28.47	29.62	37.48	50.60	74.46	59.18	69.18	47.41	47.55	23.23	30.16	26.94	21.03	20.16	18.57	23.27
45.00°	12.82	13.79	15.74	16.38	20.15	23.97	32.18	26.30	21.85	17.62	17.92	13.60	14.37	13.08	12.67	13.59	12.82
47.50°	10.04	11.12	12.40	15.34	20.28	25.01	25.36	20.13	17.15	17.69	13.78	10.93	11.34	9.84	9.72	10.01	10.04
50.00°	7.41	8.88	10.80	13.85	19.76	25.40	23.73	18.51	15.67	17.50	13.18	8.56	8.93	7.69	6.93	7.72	7.41
52.50°	5.49	6.89	8.81	12.14	16.96	22.61	23.48	16.23	15.25	16.73	12.52	7.13	6.78	5.89	5.19	5.47	5.49
55.00°	3.83	5.37	6.77	9.63	13.96	19.61	20.50	13.91	14.16	15.44	11.13	5.79	5.45	4.61	3.60	3.99	3.83
57.50°	3.08	4.07	5.41	6.83	10.41	15.85	17.00	11.67	12.90	13.17	9.63	4.66	4.39	3.46	2.73	2.60	3.08
60.00°	2.32	3.02	4.09	4.94	7.04	11.98	13.43	9.40	10.76	10.33	7.32	3.54	3.50	2.73	1.95	2.20	2.32
62.50°	1.55	2.05	2.46	3.30	4.07	7.78	9.85	5.87	8.47	6.60	4.98	2.41	2.66	2.08	1.44	1.75	1.55
65.00°	0.90	1.22	0.88	1.89	1.83	4.15	5.28	2.51	4.62	3.54	2.50	1.44	1.61	1.22	0.97	1.00	0.90
67.50°	0.52	0.42	0.60	0.52	0.87	1.77	0.64	1.34	0.58	1.35	0.53	0.72	0.52	0.33	0.57	0.39	0.52
70.00°	0.28	0.26	0.34	0.31	0.30	0.25	0.45	0.31	0.30	0.23	0.45	0.29	0.32	0.33	0.30	0.37	0.28
72.50°	0.29	0.25	0.32	0.28	0.31	0.31	0.35	0.28	0.25	0.25	0.38	0.27	0.22	0.38	0.32	0.35	0.29
75.00°	0.28	0.25	0.30	0.25	0.33	0.32	0.28	0.25	0.26	0.25	0.34	0.27	0.23	0.31	0.33	0.33	0.28
77.50°	0.24	0.25	0.29	0.23	0.35	0.26	0.21	0.30	0.28	0.23	0.31	0.32	0.24	0.25	0.34	0.30	0.24
80.00°	0.24	0.24	0.29	0.27	0.32	0.23	0.21	0.32	0.30	0.23	0.28	0.32	0.26	0.29	0.33	0.28	0.24
82.50°	0.29	0.23	0.27	0.31	0.23	0.25	0.21	0.28	0.32	0.25	0.25	0.26	0.27	0.31	0.28	0.27	0.29
85.00°	0.30	0.24	0.26	0.32	0.25	0.28	0.28	0.25	0.27	0.25	0.21	0.26	0.27	0.24	0.27	0.30	0.30
87.50°	0.26	0.25	0.26	0.33	0.34	0.31	0.32	0.24	0.22	0.23	0.21	0.32	0.26	0.18	0.32	0.32	0.26
90.00°	0.24	0.28	0.25	0.28	0.34	0.32	0.27	0.26	0.23	0.25	0.28	0.31	0.24	0.26	0.34	0.34	0.24
92.50°	0.23	0.31	0.22	0.23	0.27	0.30	0.23	0.33	0.24	0.29	0.33	0.26	0.22	0.32	0.33	0.32	0.23
95.00°	0.25	0.32	0.22	0.28	0.26	0.26	0.28	0.35	0.31	0.29	0.36	0.25	0.23	0.30	0.32	0.25	0.25
97.50°	0.29	0.32	0.26	0.31	0.29	0.20	0.32	0.30	0.35	0.28	0.35	0.28	0.24	0.27	0.29	0.22	0.29
100.00°	0.27	0.27	0.29	0.29	0.31	0.22	0.34	0.25	0.27	0.25	0.30	0.28	0.27	0.25	0.28	0.24	0.27
102.50°	0.22	0.22	0.29	0.27	0.32	0.27	0.34	0.21	0.21	0.21	0.27	0.28	0.30	0.24	0.29	0.26	0.22
105.00°	0.26	0.21	0.28	0.29	0.33	0.26	0.30	0.20	0.23	0.22	0.26	0.31	0.31	0.28	0.28	0.28	0.26
107.50°	0.33	0.21	0.28	0.31	0.35	0.20	0.28	0.24	0.23	0.24	0.26	0.35	0.31	0.32	0.26	0.29	0.33
110.00°	0.33	0.27	0.29	0.35	0.33	0.22	0.31	0.27	0.19	0.25	0.27	0.32	0.27	0.38	0.27	0.28	0.33
112.50°	0.31	0.32	0.33	0.40	0.31	0.27	0.31	0.29	0.18	0.27	0.29	0.27	0.26	0.44	0.29	0.33	0.31

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	763	763	763	763	745	745	745	745	710	710	710	678	678	678	649	649	635
	1	728	711	695	681	712	696	682	669	668	657	647	643	634	626	620	613	607
	2	693	662	637	615	678	650	627	608	628	609	593	608	593	579	589	577	566
	3	659	618	587	562	645	609	580	557	591	567	547	574	554	537	559	542	531
	4	626	578	543	517	614	571	538	513	556	528	506	542	519	500	529	509	500
	5	595	542	506	478	584	536	502	476	524	494	471	512	486	466	501	479	470
	6	566	510	472	445	556	504	469	443	494	463	439	484	457	436	475	451	443
	7	539	480	442	416	530	475	440	414	467	435	411	458	430	409	450	425	418
	8	513	453	415	389	505	449	413	388	441	409	386	434	405	384	428	402	395
	9	489	428	391	366	482	425	389	365	418	386	363	412	383	362	406	380	374
	10	467	406	369	345	460	403	368	344	397	365	343	392	362	341	386	360	354

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	27.1 fc	5.8 ft
6.5 ft	19.4 fc	6.8 ft
7.5 ft	14.6 fc	7.9 ft
8.0 ft	12.8 fc	8.4 ft
10.0 ft	8.2 fc	10.5 ft
12.0 ft	5.7 fc	12.6 ft
14.0 ft	4.2 fc	14.7 ft
16.0 ft	3.2 fc	16.8 ft
20.0 ft	2.0 fc	21.0 ft
24.0 ft	1.4 fc	25.2 ft
28.0 ft	1.0 fc	29.4 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	28263	28263	28263
45.00°	626	769	984
55.00°	230	408	841
65.00°	73	72	150
75.00°	38	39	44
85.00°	119	104	98

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	-5.3	-4.4	-4.9	-4.0	-3.7	3.0	3.9	3.4	4.2	4.6
	3H	-5.4	-4.6	-5.0	-4.2	-3.8	2.8	3.6	3.2	4.0	4.4
	4H	-5.5	-4.7	-5.0	-4.3	-3.9	2.7	3.4	3.1	3.8	4.3
	6H	-5.5	-4.8	-5.0	-4.4	-4.0	2.6	3.3	3.0	3.7	4.1
	8H	-5.5	-4.8	-5.0	-4.4	-4.0	2.5	3.2	3.0	3.6	4.0
	12H	-5.4	-4.7	-4.9	-4.3	-3.9	2.5	3.1	2.9	3.5	4.0
4H	2H	-5.5	-4.7	-5.0	-4.3	-3.9	2.9	3.7	3.4	4.1	4.5
	3H	-5.6	-4.9	-5.1	-4.5	-4.1	2.7	3.4	3.2	3.8	4.2
	4H	-5.6	-5.0	-5.1	-4.6	-4.1	2.6	3.2	3.1	3.6	4.1
	6H	-5.5	-5.1	-5.1	-4.6	-4.1	2.5	3.0	3.0	3.5	4.0
	8H	-5.5	-5.0	-5.0	-4.6	-4.1	2.5	2.9	3.0	3.4	3.9
	12H	-5.3	-4.9	-4.8	-4.4	-3.9	2.4	2.8	2.9	3.3	3.8
8H	4H	-5.7	-5.3	-5.2	-4.8	-4.3	2.4	2.9	2.9	3.4	3.9
	6H	-5.6	-5.2	-5.1	-4.7	-4.2	2.3	2.7	2.9	3.2	3.7
	8H	-5.4	-5.1	-4.9	-4.6	-4.1	2.3	2.6	2.8	3.1	3.7
	12H	-5.1	-4.8	-4.5	-4.3	-3.7	2.3	2.5	2.8	3.1	3.7
12H	4H	-5.7	-5.4	-5.2	-4.9	-4.3	2.4	2.7	2.9	3.3	3.8
	6H	-5.6	-5.3	-5.0	-4.8	-4.2	2.3	2.6	2.8	3.1	3.7
	8H	-5.4	-5.1	-4.8	-4.6	-4.0	2.2	2.5	2.8	3.0	3.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0