

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

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

### Test Number

SP-01211\_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	555
Efficacy	54.41 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

Two luminaires, plane 0°	0.84
Two luminaires, plane 90°	0.83
Four luminaires	0.91

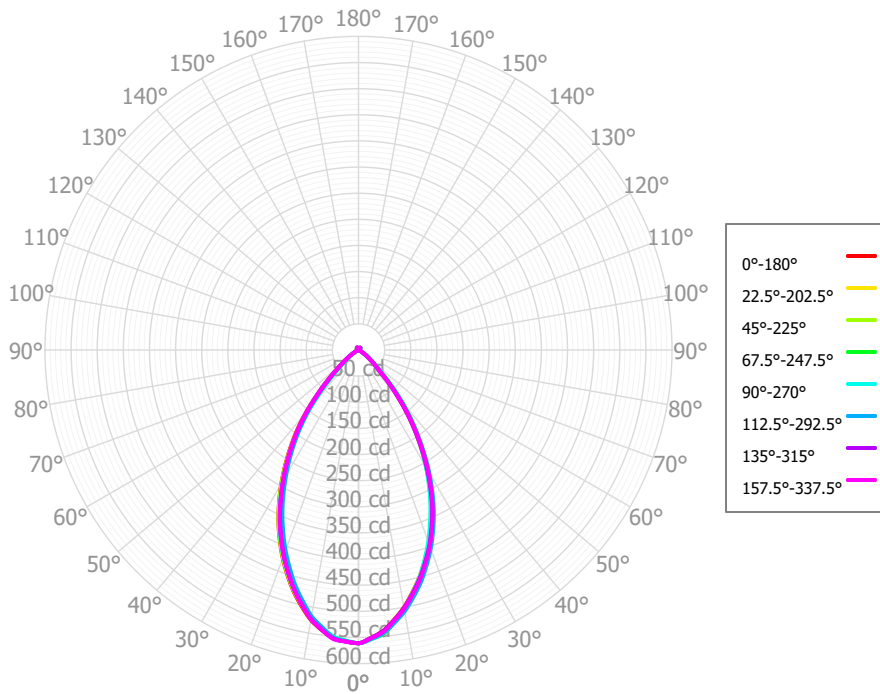
#### Full Beam Angle

0° - 180°	60°
90° - 270°	59°

### IES File Header Contents

Keyword	Value
TEST	SP-01211_M-10L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/11/2021
ISSUEDATE	3/1/2021
LUMCAT	SGRTE8XT 10L 35K XW XX AR8466XT SG FG
LUMINAIRE	N/A
OTHER	Beam Angle: 59 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°	51.75	9.32%	90.00° - 100.00°	0.31	0.06%
10.00° - 20.00°	129.15	23.27%	100.00° - 110.00°	0.31	0.06%
20.00° - 30.00°	156.72	28.24%	100.00° - 120.00°	0.87	0.16%
30.00° - 40.00°	127.15	22.91%	120.00° - 130.00°	1.44	0.26%
40.00° - 50.00°	58.66	10.57%	130.00° - 140.00°	2.31	0.42%
50.00° - 60.00°	17.62	3.17%	140.00° - 150.00°	2.79	0.50%
60.00° - 70.00°	2.90	0.52%	150.00° - 160.00°	1.87	0.34%
70.00° - 80.00°	0.33	0.06%	160.00° - 170.00°	0.77	0.14%
80.00° - 90.00°	0.32	0.06%	170.00° - 180.00°	0.06	0.01%
0.00° - 90.00°	544.59	98.12%	0.00° - 180.00°	555.00	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°	561.09	561.09	561.09	561.09	561.09	561.09	561.09	561.09	561.09	561.09	561.09	561.09	561.09	561.09	561.09	561.09	561.09
2.50°	551.36	552.65	552.30	553.93	553.64	557.66	558.73	558.42	558.36	558.43	557.79	556.89	557.17	553.53	551.50	551.78	551.36
5.00°	539.89	541.77	542.34	545.33	543.91	552.18	554.07	555.04	553.80	552.86	553.18	550.98	551.03	543.96	540.13	541.56	539.89
7.50°	520.83	523.47	522.36	526.19	524.85	535.13	539.79	539.27	540.40	538.33	538.35	535.13	536.14	526.42	521.68	522.60	520.83
10.00°	500.32	503.50	502.09	506.46	504.12	517.54	522.92	523.15	524.67	521.71	522.83	518.26	519.43	508.01	501.58	503.13	500.32
12.50°	475.57	479.55	476.39	480.20	477.94	492.26	499.77	499.26	502.50	499.39	500.51	495.96	497.47	484.65	477.40	479.08	475.57
15.00°	450.18	454.17	450.41	453.77	451.06	466.80	475.10	475.06	478.86	476.00	477.55	472.79	474.17	460.49	452.50	454.57	450.18
17.50°	422.26	425.92	421.26	424.45	420.87	437.59	447.24	447.16	451.83	448.68	450.31	445.90	447.67	432.77	424.99	427.01	422.26
20.00°	394.08	396.63	391.80	394.99	390.37	408.25	418.29	418.90	423.77	420.82	422.64	418.16	420.06	404.29	397.15	398.86	394.08
22.50°	362.40	365.56	360.02	362.95	358.03	376.67	387.39	388.01	393.73	390.46	392.90	387.47	390.16	373.13	365.56	367.78	362.40
25.00°	330.52	333.31	327.88	330.72	325.59	344.88	355.50	356.66	362.46	359.88	362.32	355.84	358.65	340.98	333.63	335.91	330.52
27.50°	295.28	299.28	293.79	296.45	291.84	311.12	322.13	322.76	329.16	326.02	328.32	321.55	324.32	305.99	297.89	300.99	295.28
30.00°	259.95	264.40	259.52	262.23	258.08	277.40	288.47	288.79	295.25	291.98	293.86	286.55	289.10	270.35	261.97	265.62	259.95
32.50°	224.02	228.41	224.48	228.38	224.69	243.84	254.44	254.56	260.45	256.69	257.88	249.85	252.58	233.11	225.13	228.83	224.02
35.00°	188.10	193.36	189.79	194.69	191.37	210.46	220.79	220.56	226.07	221.40	222.16	213.50	216.17	196.33	188.31	192.34	188.10
37.50°	152.59	159.38	156.32	161.82	159.09	178.02	187.59	187.39	192.19	186.47	187.11	177.87	179.93	160.50	152.57	156.70	152.59
40.00°	117.40	124.55	122.84	128.82	126.78	145.14	153.43	153.39	156.88	151.40	151.20	141.66	142.92	124.95	117.08	121.56	117.40
42.50°	85.98	88.89	89.34	95.28	94.29	110.52	118.33	116.92	120.03	114.15	113.30	104.44	105.02	89.93	85.59	87.55	85.98
45.00°	56.65	62.84	60.86	65.47	63.83	78.94	87.74	84.24	88.46	78.37	80.45	73.65	75.05	62.19	55.87	59.81	56.65
47.50°	43.12	44.98	44.72	48.00	47.65	57.01	61.12	60.90	61.94	57.89	57.42	52.65	52.87	45.54	42.92	44.29	43.12
50.00°	30.42	32.32	31.18	33.04	32.72	38.43	43.00	41.85	43.81	38.84	39.34	36.72	37.50	32.49	30.67	31.52	30.42
52.50°	22.24	23.46	22.99	24.85	24.34	28.96	31.29	31.67	32.56	29.76	29.43	27.43	28.04	24.28	22.93	23.29	22.24
55.00°	14.69	16.35	15.99	17.60	16.83	20.49	22.12	22.49	23.11	21.05	20.68	19.27	19.98	17.13	15.63	16.19	14.69
57.50°	9.89	10.37	11.11	12.53	12.89	14.31	14.58	15.16	14.91	14.20	13.62	12.37	12.98	11.19	10.61	10.66	9.89
60.00°	5.57	6.39	6.88	7.99	8.92	9.23	10.06	9.40	9.79	8.07	8.26	7.36	8.21	6.66	6.03	6.20	5.57
62.50°	2.92	3.52	3.68	4.51	4.89	6.24	7.24	6.10	6.57	4.99	5.03	4.21	4.87	3.53	3.20	3.07	2.92
65.00°	0.88	1.82	1.52	1.94	1.72	3.60	4.25	3.38	3.72	2.35	2.61	2.08	2.60	1.57	0.96	1.17	0.88
67.50°	0.56	0.68	0.73	0.92	0.90	1.56	1.17	1.43	1.06	1.19	1.07	0.81	0.90	0.63	0.62	0.60	0.56
70.00°	0.34	0.37	0.31	0.31	0.32	0.34	0.32	0.35	0.23	0.34	0.30	0.31	0.34	0.26	0.37	0.33	0.34
72.50°	0.37	0.39	0.30	0.32	0.29	0.32	0.37	0.30	0.22	0.33	0.28	0.38	0.31	0.31	0.31	0.33	0.37
75.00°	0.39	0.33	0.30	0.30	0.27	0.30	0.39	0.29	0.24	0.31	0.28	0.39	0.31	0.29	0.28	0.31	0.39
77.50°	0.40	0.23	0.32	0.25	0.28	0.29	0.41	0.33	0.29	0.25	0.28	0.36	0.32	0.23	0.31	0.26	0.40
80.00°	0.40	0.23	0.31	0.24	0.29	0.28	0.41	0.31	0.29	0.23	0.27	0.32	0.29	0.26	0.34	0.27	0.40
82.50°	0.37	0.26	0.29	0.28	0.30	0.26	0.40	0.25	0.29	0.28	0.24	0.27	0.25	0.35	0.35	0.33	0.37
85.00°	0.33	0.27	0.30	0.29	0.30	0.27	0.34	0.26	0.27	0.33	0.25	0.25	0.26	0.35	0.35	0.33	0.33
87.50°	0.27	0.28	0.33	0.28	0.29	0.29	0.27	0.31	0.25	0.35	0.28	0.25	0.27	0.30	0.33	0.29	0.27
90.00°	0.24	0.26	0.33	0.25	0.27	0.28	0.32	0.35	0.25	0.37	0.27	0.24	0.31	0.27	0.30	0.28	0.24
92.50°	0.27	0.24	0.31	0.22	0.27	0.23	0.38	0.37	0.25	0.39	0.24	0.23	0.34	0.24	0.28	0.28	0.27
95.00°	0.29	0.26	0.31	0.22	0.29	0.22	0.32	0.36	0.26	0.39	0.24	0.22	0.31	0.26	0.27	0.30	0.29
97.50°	0.31	0.29	0.32	0.22	0.33	0.24	0.25	0.35	0.26	0.37	0.26	0.21	0.26	0.31	0.29	0.34	0.31
100.00°	0.29	0.30	0.31	0.22	0.35	0.26	0.26	0.31	0.27	0.35	0.30	0.23	0.25	0.31	0.29	0.34	0.29
102.50°	0.21	0.30	0.29	0.20	0.34	0.27	0.28	0.27	0.28	0.31	0.34	0.25	0.25	0.29	0.26	0.32	0.21
105.00°	0.25	0.32	0.31	0.23	0.34	0.29	0.23	0.24	0.30	0.30	0.32	0.29	0.26	0.27	0.29	0.32	0.25
107.50°	0.38	0.36	0.34	0.29	0.35	0.33	0.18	0.23	0.32	0.31	0.29	0.33	0.26	0.26	0.37	0.33	0.38
110.00°	0.45	0.35	0.36	0.32	0.36	0.34	0.29	0.27	0.32	0.32	0.26	0.36	0.25	0.32	0.38	0.34	0.45
112.50°	0.47	0.35	0.37	0.34	0.36	0.35	0.40	0.33	0.33	0.34	0.24	0.38	0.24	0.38	0.32	0.35	0.47

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

<b>RCR</b>	<b>pfc</b>	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	<b>pcc</b>	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	<b>pw</b>	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	<b>0</b>	658	658	658	658	642	642	642	642	611	611	611	583	583	583	557	557	545
	<b>1</b>	625	609	594	581	610	596	583	571	571	561	551	549	541	533	528	522	516
	<b>2</b>	591	562	538	518	578	552	530	511	532	514	499	514	499	486	497	485	475
	<b>3</b>	558	520	490	467	546	511	484	462	495	472	453	480	461	445	466	450	441
	<b>4</b>	527	482	449	424	516	475	444	421	461	435	415	449	427	409	437	418	410
	<b>5</b>	498	448	413	387	487	442	409	385	430	402	381	420	395	376	410	389	381
	<b>6</b>	470	417	382	356	461	412	379	354	402	373	351	393	368	348	385	362	355
	<b>7</b>	445	390	354	329	436	385	352	328	377	347	325	369	343	323	362	338	332
	<b>8</b>	421	365	329	305	414	361	327	304	354	324	302	347	320	300	341	317	311
	<b>9</b>	399	342	308	284	392	339	306	283	333	303	282	327	300	280	322	297	292
	<b>10</b>	379	322	288	265	373	320	287	265	314	284	264	309	282	262	304	279	275

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	18.5 fc	6.0 ft
6.5 ft	13.3 fc	7.0 ft
7.5 ft	10.0 fc	8.1 ft
8.0 ft	8.8 fc	8.7 ft
10.0 ft	5.6 fc	10.8 ft
12.0 ft	3.9 fc	13.0 ft
14.0 ft	2.9 fc	15.2 ft
16.0 ft	2.2 fc	17.3 ft
20.0 ft	1.4 fc	21.7 ft
24.0 ft	1.0 fc	26.0 ft
28.0 ft	0.7 fc	30.3 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	19375	19375	19375
45.00°	2766	2972	3117
55.00°	884	963	1013
65.00°	72	124	140
75.00°	53	41	37
85.00°	130	117	121

### 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	2.8	3.9	3.2	4.2	4.6	4.5	5.6	4.9	5.9	6.3
	3H	2.6	3.6	3.1	3.9	4.4	4.4	5.3	4.8	5.7	6.1
	4H	2.6	3.4	3.0	3.8	4.2	4.3	5.1	4.7	5.5	6.0
	6H	2.5	3.3	2.9	3.7	4.1	4.2	5.0	4.6	5.4	5.8
	8H	2.4	3.2	2.9	3.6	4.1	4.1	4.9	4.6	5.3	5.8
	12H	2.4	3.1	2.9	3.5	4.0	4.1	4.8	4.6	5.2	5.7
4H	2H	2.6	3.4	3.0	3.8	4.3	4.4	5.3	4.8	5.6	6.1
	3H	2.4	3.1	2.9	3.5	4.0	4.2	4.9	4.7	5.4	5.8
	4H	2.3	2.9	2.8	3.4	3.9	4.1	4.7	4.6	5.2	5.7
	6H	2.2	2.8	2.7	3.2	3.8	4.0	4.6	4.5	5.0	5.6
	8H	2.2	2.7	2.7	3.2	3.7	4.0	4.5	4.5	5.0	5.5
	12H	2.2	2.6	2.7	3.1	3.6	3.9	4.4	4.5	4.9	5.4
8H	4H	2.1	2.6	2.6	3.1	3.6	4.0	4.4	4.5	4.9	5.5
	6H	2.1	2.5	2.6	3.0	3.5	3.9	4.3	4.4	4.8	5.3
	8H	2.0	2.4	2.6	2.9	3.5	3.8	4.2	4.4	4.7	5.3
	12H	2.0	2.4	2.6	2.9	3.5	3.8	4.1	4.3	4.6	5.2
12H	4H	2.1	2.5	2.6	3.0	3.5	3.9	4.3	4.4	4.8	5.4
	6H	2.0	2.3	2.6	2.9	3.4	3.8	4.1	4.4	4.7	5.2
	8H	2.0	2.3	2.5	2.8	3.5	3.8	4.1	4.3	4.6	5.2

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0