

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

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

### Test Number

SP-01205\_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	495
Efficacy	48.53 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

Two luminaires, plane 0°	0.72
Two luminaires, plane 90°	0.75
Four luminaires	0.78

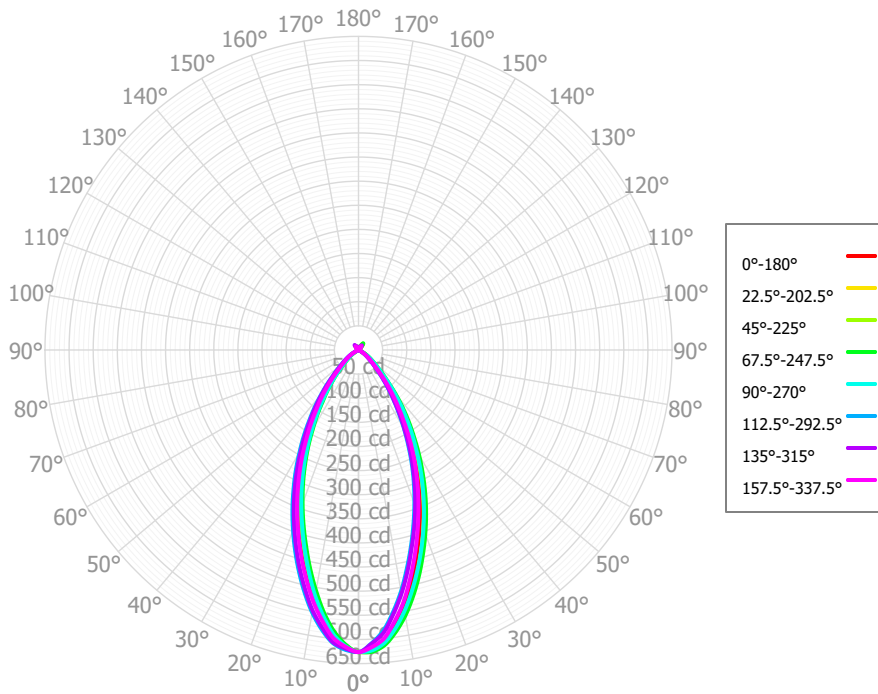
#### Full Beam Angle

0° - 180°	47°
90° - 270°	47°

### IES File Header Contents

Keyword	Value
TEST	SP-01205_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 MD XX AR8466XT SG FG
LUMINAIRE	N/A
OTHER	Beam Angle: 47 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°	55.70	11.25%	90.00° - 100.00°	0.31	0.06%
10.00° - 20.00°	125.00	25.26%	100.00° - 110.00°	0.31	0.06%
20.00° - 30.00°	132.74	26.82%	100.00° - 120.00°	0.81	0.16%
30.00° - 40.00°	95.28	19.25%	120.00° - 130.00°	1.51	0.31%
40.00° - 50.00°	47.14	9.52%	130.00° - 140.00°	3.35	0.68%
50.00° - 60.00°	19.80	4.00%	140.00° - 150.00°	5.47	1.10%
60.00° - 70.00°	3.40	0.69%	150.00° - 160.00°	2.95	0.60%
70.00° - 80.00°	0.32	0.06%	160.00° - 170.00°	0.79	0.16%
80.00° - 90.00°	0.32	0.06%	170.00° - 180.00°	0.05	0.01%
0.00° - 90.00°	479.71	96.92%	0.00° - 180.00°	494.96	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°	626.30	626.30	626.30	626.30	626.30	626.30	626.30	626.30	626.30	626.30	626.30	626.30	626.30	626.30	626.30	626.30	626.30
2.50°	621.58	625.22	625.09	626.38	623.59	622.18	619.65	615.99	617.84	612.91	613.66	611.47	614.69	609.19	610.02	617.06	621.58
5.00°	602.81	611.52	612.96	614.76	609.81	609.90	608.29	599.47	596.15	587.56	591.05	585.39	592.55	585.14	589.24	601.24	602.81
7.50°	575.18	586.39	586.44	589.95	582.65	584.40	580.06	567.76	565.47	554.41	555.06	549.13	557.29	548.36	552.61	568.74	575.18
10.00°	538.10	553.41	554.71	559.20	549.24	552.81	548.59	532.78	528.48	514.99	516.15	506.83	517.82	508.08	512.96	532.90	538.10
12.50°	498.32	514.93	516.81	522.83	511.58	515.56	509.62	492.75	488.22	473.64	472.93	463.70	473.35	463.64	469.34	489.81	498.32
15.00°	456.19	474.88	477.20	484.36	472.34	476.24	470.09	451.98	446.96	430.98	430.56	420.18	429.83	420.60	425.21	446.92	456.19
17.50°	414.32	433.94	437.42	444.25	432.95	436.56	429.54	411.13	405.29	389.79	389.21	379.11	387.23	378.93	384.35	404.37	414.32
20.00°	372.64	393.54	397.60	404.93	393.51	396.78	389.52	370.28	364.78	349.40	349.10	339.00	346.68	338.88	343.72	363.00	372.64
22.50°	332.18	353.39	357.64	366.12	354.43	357.68	350.33	331.20	324.65	310.37	310.21	300.43	307.78	300.15	305.12	323.33	332.18
25.00°	292.44	313.92	317.67	327.19	315.43	318.72	311.62	292.22	286.14	271.94	272.02	262.32	269.51	261.92	266.59	284.36	292.44
27.50°	254.25	274.69	279.94	288.20	277.40	281.30	273.50	255.23	248.03	235.10	234.43	225.76	231.64	224.03	229.15	246.22	254.25
30.00°	216.81	237.06	242.39	250.99	239.52	244.12	237.17	218.51	212.93	198.81	199.30	189.56	196.50	189.13	192.15	209.50	216.81
32.50°	182.42	199.88	207.35	214.53	205.87	210.45	202.66	186.00	178.39	167.02	165.87	158.42	162.84	155.86	160.48	174.18	182.42
35.00°	149.22	167.28	172.46	181.69	172.60	177.10	171.21	154.22	149.43	136.42	137.19	128.08	134.21	127.81	129.66	143.13	149.22
37.50°	120.82	135.65	142.19	150.06	143.48	148.36	142.39	128.65	121.14	112.21	111.17	105.04	107.83	102.09	105.14	115.56	120.82
40.00°	93.87	108.05	112.28	120.61	114.59	119.85	116.04	103.65	98.60	89.23	88.51	82.75	85.73	80.47	81.53	90.72	93.87
42.50°	72.49	81.05	87.46	91.70	90.79	96.10	91.42	81.80	76.44	70.41	67.39	64.87	65.12	60.28	62.40	67.71	72.49
45.00°	52.40	63.64	64.03	72.18	67.66	72.94	71.92	61.87	60.90	52.14	52.27	47.22	50.97	46.78	45.38	51.47	52.40
47.50°	41.33	47.12	51.68	54.37	54.62	58.78	55.35	49.52	45.66	41.48	39.30	37.39	38.55	35.09	36.00	38.90	41.33
50.00°	31.72	38.19	40.13	44.35	42.14	45.24	43.99	38.48	37.15	31.39	30.98	27.78	30.22	27.81	27.53	30.42	31.72
52.50°	25.47	29.58	32.85	35.29	34.28	36.88	35.08	31.47	28.84	25.13	23.95	22.21	22.71	21.40	21.64	23.75	25.47
55.00°	19.55	23.75	25.87	28.42	26.54	28.82	28.04	24.66	22.77	18.99	18.19	16.68	17.73	16.28	16.15	18.37	19.55
57.50°	14.29	17.92	20.08	21.70	19.49	22.42	21.71	18.38	16.79	13.50	12.69	11.54	13.09	11.34	11.50	13.45	14.29
60.00°	9.06	12.10	14.00	14.70	12.55	15.84	15.12	12.28	11.36	8.14	8.42	6.72	8.72	7.09	7.21	8.79	9.06
62.50°	4.94	6.54	7.09	7.79	6.05	8.60	8.46	6.53	6.30	4.54	4.32	3.71	4.37	2.89	3.54	4.22	4.94
65.00°	1.02	3.22	1.96	3.93	1.07	2.78	4.36	2.49	3.03	1.31	2.25	1.17	2.35	1.54	1.12	2.08	1.02
67.50°	0.62	0.40	0.97	0.36	0.69	1.26	0.82	1.12	0.49	0.74	0.34	0.64	0.44	0.29	0.55	0.43	0.62
70.00°	0.27	0.31	0.30	0.41	0.40	0.22	0.33	0.33	0.46	0.28	0.30	0.24	0.39	0.24	0.25	0.24	0.27
72.50°	0.30	0.25	0.24	0.44	0.34	0.29	0.31	0.27	0.42	0.35	0.31	0.25	0.34	0.20	0.28	0.26	0.30
75.00°	0.31	0.28	0.22	0.38	0.30	0.32	0.33	0.26	0.37	0.40	0.30	0.28	0.27	0.26	0.29	0.28	0.31
77.50°	0.28	0.31	0.25	0.33	0.30	0.30	0.35	0.29	0.32	0.33	0.28	0.36	0.21	0.31	0.27	0.31	0.28
80.00°	0.25	0.33	0.28	0.35	0.31	0.27	0.36	0.29	0.28	0.29	0.28	0.39	0.25	0.27	0.25	0.26	0.25
82.50°	0.25	0.36	0.28	0.37	0.32	0.22	0.37	0.25	0.26	0.32	0.28	0.34	0.29	0.23	0.23	0.20	0.25
85.00°	0.27	0.37	0.27	0.38	0.33	0.23	0.34	0.27	0.28	0.33	0.25	0.28	0.31	0.26	0.25	0.24	0.27
87.50°	0.36	0.37	0.26	0.35	0.32	0.33	0.31	0.35	0.28	0.29	0.22	0.21	0.33	0.29	0.29	0.27	0.36
90.00°	0.41	0.33	0.27	0.26	0.29	0.36	0.33	0.34	0.25	0.27	0.25	0.19	0.34	0.34	0.26	0.26	0.41
92.50°	0.33	0.31	0.30	0.21	0.24	0.31	0.34	0.29	0.27	0.28	0.28	0.23	0.35	0.35	0.19	0.25	0.33
95.00°	0.28	0.31	0.31	0.28	0.24	0.28	0.26	0.32	0.34	0.28	0.27	0.28	0.30	0.27	0.19	0.28	0.28
97.50°	0.30	0.32	0.29	0.31	0.29	0.26	0.21	0.40	0.35	0.24	0.25	0.34	0.26	0.22	0.22	0.30	0.30
100.00°	0.33	0.34	0.29	0.29	0.28	0.26	0.31	0.41	0.27	0.24	0.19	0.33	0.22	0.24	0.25	0.26	0.33
102.50°	0.36	0.35	0.29	0.29	0.23	0.27	0.37	0.40	0.26	0.29	0.18	0.25	0.19	0.28	0.29	0.24	0.36
105.00°	0.38	0.37	0.31	0.30	0.24	0.29	0.26	0.33	0.29	0.32	0.24	0.23	0.18	0.38	0.27	0.26	0.38
107.50°	0.37	0.39	0.33	0.31	0.27	0.31	0.19	0.24	0.28	0.33	0.29	0.27	0.20	0.41	0.22	0.29	0.37
110.00°	0.37	0.41	0.34	0.31	0.28	0.33	0.18	0.25	0.26	0.31	0.32	0.29	0.24	0.36	0.25	0.34	0.37
112.50°	0.38	0.74	0.35	0.30	0.28	0.35	0.18	0.28	0.26	0.28	0.35	0.32	0.24	0.33	0.30	0.52	0.38

### 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>	586	586	586	586	570	570	570	570	541	541	541	515	515	515	491	491	480
	<b>1</b>	556	542	529	517	543	530	518	508	507	498	489	486	479	472	467	461	450
	<b>2</b>	527	501	480	462	514	491	472	456	473	457	444	456	443	432	440	430	420
	<b>3</b>	498	464	438	418	487	456	433	413	441	421	405	427	410	397	414	400	391
	<b>4</b>	471	431	403	381	461	425	398	377	412	389	371	400	381	365	389	373	365
	<b>5</b>	445	402	372	349	436	396	368	347	386	361	342	376	355	338	366	348	341
	<b>6</b>	422	376	345	322	413	371	342	321	362	336	317	353	331	314	345	326	319
	<b>7</b>	400	352	321	299	392	348	319	298	340	314	295	333	310	293	326	306	300
	<b>8</b>	380	331	300	279	373	327	298	278	321	294	276	314	291	274	308	287	282
	<b>9</b>	361	312	281	261	355	309	280	260	303	277	258	297	274	257	292	271	266
	<b>10</b>	344	294	265	245	338	292	263	244	287	261	243	282	258	242	277	256	252

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	20.7 fc	5.0 ft
6.5 ft	14.8 fc	5.9 ft
7.5 ft	11.1 fc	6.8 ft
8.0 ft	9.8 fc	7.3 ft
10.0 ft	6.3 fc	9.1 ft
12.0 ft	4.3 fc	10.9 ft
14.0 ft	3.2 fc	12.7 ft
16.0 ft	2.4 fc	14.5 ft
20.0 ft	1.6 fc	18.2 ft
24.0 ft	1.1 fc	21.8 ft
28.0 ft	0.8 fc	25.4 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	21626	21626	21626
45.00°	2559	3127	3304
55.00°	1177	1558	1598
65.00°	83	160	87
75.00°	42	29	41
85.00°	107	108	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	6.0	7.0	6.4	7.4	7.8	6.8	7.9	7.3	8.3	8.7
	3H	5.8	6.7	6.2	7.1	7.6	6.7	7.6	7.1	8.0	8.4
	4H	5.7	6.6	6.2	7.0	7.4	6.6	7.4	7.0	7.8	8.3
	6H	5.6	6.4	6.1	6.8	7.3	6.5	7.3	7.0	7.7	8.2
	8H	5.6	6.3	6.0	6.7	7.2	6.4	7.2	6.9	7.6	8.1
	12H	5.5	6.2	6.0	6.6	7.2	6.4	7.1	6.9	7.5	8.0
4H	2H	5.7	6.6	6.2	7.0	7.5	6.6	7.5	7.1	7.9	8.4
	3H	5.5	6.2	6.0	6.7	7.2	6.5	7.1	6.9	7.6	8.1
	4H	5.4	6.0	5.9	6.5	7.0	6.4	7.0	6.8	7.4	8.0
	6H	5.3	5.9	5.9	6.4	6.9	6.3	6.8	6.8	7.3	7.8
	8H	5.3	5.8	5.8	6.3	6.8	6.2	6.7	6.7	7.2	7.7
	12H	5.2	5.7	5.8	6.2	6.7	6.1	6.6	6.7	7.1	7.7
8H	4H	5.3	5.7	5.8	6.3	6.8	6.2	6.7	6.7	7.2	7.7
	6H	5.2	5.5	5.7	6.1	6.7	6.1	6.5	6.6	7.0	7.6
	8H	5.1	5.4	5.7	6.0	6.6	6.0	6.4	6.6	6.9	7.5
	12H	5.1	5.4	5.6	5.9	6.6	6.0	6.3	6.6	6.8	7.5
12H	4H	5.2	5.6	5.7	6.2	6.7	6.1	6.5	6.7	7.1	7.6
	6H	5.1	5.4	5.7	6.0	6.6	6.0	6.4	6.6	6.9	7.5
	8H	5.0	5.4	5.6	5.9	6.6	6.0	6.3	6.5	6.8	7.5

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0