

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

SGRTE8XT 30L 35K ND XX AR8466XT SG GL  
N/A

### Test Number

SP-01207\_M-30L

### Test Date

2/11/2021

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

### Summary of Results

#### Power

Input Watts	32.2 W
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#### Lumen Output

Output Lumens	2533
Efficacy	78.67 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

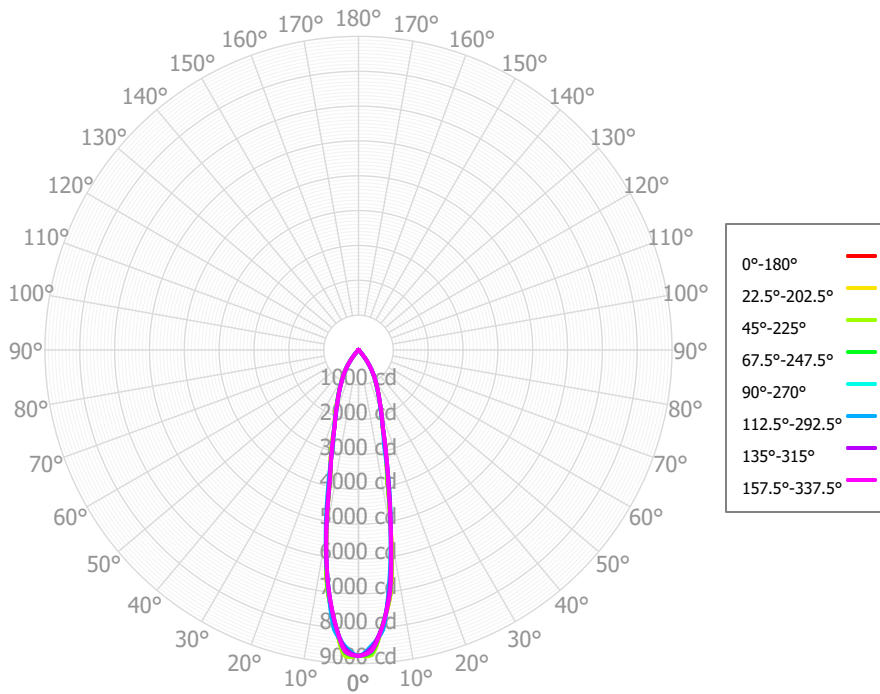
#### Full Beam Angle

0° - 180°	23°
90° - 270°	23°

### IES File Header Contents

Keyword	Value
TEST	SP-01207_M-30L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/11/2021
ISSUEDATE	3/2/2021
LUMCAT	SGRTE8XT 30L 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°	679.00	26.81%	90.00° - 100.00°	0.77	0.03%
10.00° - 20.00°	847.21	33.45%	100.00° - 110.00°	0.83	0.03%
20.00° - 30.00°	607.87	24.00%	100.00° - 120.00°	1.61	0.06%
30.00° - 40.00°	339.60	13.41%	120.00° - 130.00°	0.72	0.03%
40.00° - 50.00°	46.97	1.85%	130.00° - 140.00°	0.95	0.04%
50.00° - 60.00°	3.35	0.13%	140.00° - 150.00°	1.19	0.05%
60.00° - 70.00°	0.87	0.03%	150.00° - 160.00°	0.76	0.03%
70.00° - 80.00°	0.83	0.03%	160.00° - 170.00°	0.39	0.02%
80.00° - 90.00°	0.88	0.03%	170.00° - 180.00°	0.12	0.00%
0.00° - 90.00°	2526.59	99.74%	0.00° - 180.00°	2533.10	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°	8777.42	8777.42	8777.42	8777.42	8777.42	8777.42	8777.42	8777.42	8777.42	8777.42	8777.42	8777.42	8777.42	8777.42	8777.42	8777.42	8777.42
2.50°	8725.01	8725.95	8761.31	8685.80	8548.06	8521.94	8590.09	8673.77	8767.75	8793.53	8784.34	8693.93	8563.22	8498.28	8562.16	8645.79	8725.01
5.00°	7932.80	7949.61	7926.38	7913.88	7979.36	8054.88	7858.46	7821.94	7838.76	7856.74	7854.77	7813.76	7889.43	8070.85	7949.46	7948.35	7932.80
7.50°	7042.29	7059.89	7044.94	6985.64	6851.03	6741.99	6732.56	6748.01	6866.36	6857.14	6898.73	6824.92	6724.42	6743.65	6888.16	6979.94	7042.29
10.00°	5374.69	5388.58	5380.19	5347.22	5304.37	5416.05	5356.53	5303.45	5312.05	5319.33	5325.86	5306.00	5388.32	5329.85	5318.23	5355.62	5374.69
12.50°	3829.70	3854.32	3794.14	3876.92	4047.69	4032.67	3832.68	3769.03	3768.87	3765.59	3809.89	3738.96	3897.40	4072.06	4026.68	3960.77	3829.70
15.00°	3023.64	3038.03	3007.37	3024.11	2979.69	2837.25	2904.74	2947.36	3020.97	3026.05	3036.68	2978.83	2907.27	2823.20	3011.06	3048.31	3023.64
17.50°	2292.84	2305.59	2272.32	2288.63	2317.80	2313.82	2280.88	2263.02	2293.13	2329.29	2305.85	2260.84	2312.96	2331.24	2317.59	2319.54	2292.84
20.00°	1914.70	1921.80	1905.37	1909.75	1888.49	1850.02	1868.97	1884.11	1930.43	1934.13	1937.21	1909.87	1888.08	1857.10	1907.23	1923.14	1914.70
22.50°	1565.01	1569.17	1557.54	1567.04	1569.62	1563.06	1551.33	1550.02	1577.41	1577.16	1585.11	1566.33	1579.92	1582.37	1582.94	1583.74	1565.01
25.00°	1322.66	1324.50	1315.38	1318.47	1305.29	1298.85	1301.95	1307.43	1327.81	1332.83	1336.00	1325.08	1323.29	1310.85	1324.69	1333.69	1322.66
27.50°	1095.25	1096.12	1085.43	1090.89	1095.82	1092.54	1078.37	1074.79	1087.88	1095.79	1099.92	1087.12	1097.95	1110.82	1110.73	1110.83	1095.25
30.00°	915.23	914.69	908.62	909.81	909.53	896.04	894.84	901.17	919.39	926.03	928.15	915.26	908.02	912.39	926.37	925.60	915.23
32.50°	734.80	732.55	730.61	729.00	728.94	720.77	724.02	731.61	748.69	754.37	753.57	742.35	736.70	733.35	741.71	741.71	734.80
35.00°	553.24	548.67	548.34	548.69	550.43	544.86	543.51	549.89	565.43	570.18	567.82	557.46	555.95	554.14	556.87	559.43	553.24
37.50°	380.11	374.89	373.63	376.74	377.43	367.76	360.47	367.85	381.97	384.78	380.98	373.60	370.97	373.43	383.39	387.25	380.11
40.00°	226.01	222.16	221.10	218.73	206.12	216.48	213.99	208.48	197.61	193.27	190.57	198.05	214.92	204.17	215.68	225.72	226.01
42.50°	108.03	107.30	100.55	105.85	113.67	107.46	75.18	54.15	48.77	36.21	45.58	45.27	69.95	105.07	114.21	116.59	108.03
45.00°	61.18	61.33	59.21	58.34	40.91	37.73	38.57	33.05	28.54	21.49	26.22	27.01	25.62	21.80	41.59	56.45	61.18
47.50°	27.63	29.72	27.91	26.90	21.56	23.89	19.08	12.96	11.93	9.21	10.92	11.09	14.32	13.81	16.76	24.29	27.63
50.00°	16.67	20.73	18.16	15.75	13.12	13.23	10.84	7.13	6.37	5.18	5.11	5.96	7.90	6.88	9.91	14.99	16.67
52.50°	8.38	12.51	10.04	7.82	7.15	6.50	3.98	1.87	2.15	2.01	1.25	1.78	2.80	4.08	6.06	8.47	8.38
55.00°	4.03	5.36	4.92	3.50	1.58	2.48	2.52	1.69	1.36	1.29	1.30	1.23	1.33	1.90	3.16	3.92	4.03
57.50°	1.40	1.32	1.60	1.14	0.80	1.44	1.50	1.49	0.81	0.79	1.19	0.83	0.64	1.73	2.00	2.04	1.40
60.00°	1.01	1.02	1.16	0.70	0.58	0.98	1.16	1.16	0.74	0.83	0.79	0.85	0.54	1.58	1.29	1.83	1.01
62.50°	0.80	0.90	0.90	0.58	0.63	1.07	0.85	0.93	0.72	0.79	0.60	0.81	0.53	1.47	1.13	1.38	0.80
65.00°	0.77	0.99	0.91	0.73	0.70	1.03	1.01	1.24	0.78	0.61	0.71	0.60	0.43	1.39	1.09	0.79	0.77
67.50°	0.78	0.92	0.75	0.86	0.83	0.88	1.18	1.39	0.85	0.51	0.81	0.47	0.32	1.36	1.00	0.77	0.78
70.00°	0.84	0.71	0.38	0.97	0.97	0.82	1.11	0.91	0.92	0.57	0.88	0.51	0.31	1.27	0.91	1.02	0.84
72.50°	0.78	0.58	0.30	0.97	0.78	0.83	1.06	0.61	0.95	0.57	0.86	0.51	0.32	1.07	0.99	1.07	0.78
75.00°	0.63	0.50	0.53	0.88	0.58	0.76	1.42	0.92	0.95	0.47	0.75	0.44	0.62	0.88	1.10	1.05	0.63
77.50°	0.62	0.56	0.59	0.86	0.59	0.65	1.73	1.13	0.91	0.43	0.67	0.41	0.94	0.69	1.15	0.88	0.62
80.00°	0.71	0.70	0.49	0.86	0.60	0.70	1.48	1.08	0.81	0.47	0.62	0.45	0.93	0.58	1.20	0.65	0.71
82.50°	0.72	0.69	0.62	0.67	0.84	0.85	1.24	1.06	0.87	0.54	0.67	0.54	0.90	0.59	1.48	0.65	0.72
85.00°	0.66	0.58	0.92	0.37	1.03	0.93	1.07	1.09	1.10	0.65	0.80	0.68	0.59	0.67	1.76	0.71	0.66
87.50°	0.59	0.58	1.00	0.31	0.76	0.96	0.95	1.01	1.07	0.77	0.77	0.69	0.29	0.85	1.41	0.93	0.59
90.00°	0.51	0.63	0.92	0.36	0.52	0.90	1.08	0.67	0.78	0.91	0.61	0.54	0.29	0.85	1.06	1.20	0.51
92.50°	0.44	0.54	0.72	0.53	0.48	0.80	1.13	0.53	0.64	0.89	0.62	0.52	0.32	0.66	0.91	1.29	0.44
95.00°	0.37	0.38	0.44	0.74	0.47	0.95	0.81	0.73	0.63	0.72	0.75	0.66	0.66	0.53	0.78	1.35	0.37
97.50°	0.53	0.36	0.42	0.68	0.64	1.19	0.57	0.81	0.61	0.61	0.73	0.76	0.96	0.45	0.78	1.36	0.53
100.00°	0.79	0.39	0.55	0.54	0.76	1.31	0.60	0.70	0.58	0.56	0.61	0.82	0.81	0.55	0.80	1.36	0.79
102.50°	0.78	0.43	0.59	0.53	0.63	1.40	0.67	0.80	0.54	0.48	0.56	0.86	0.68	0.80	1.07	1.27	0.78
105.00°	0.66	0.48	0.59	0.56	0.51	1.30	0.82	1.17	0.51	0.38	0.55	0.86	0.63	1.04	1.26	1.18	0.66
107.50°	0.76	0.56	0.84	0.60	0.47	1.15	0.89	1.21	0.68	0.43	0.80	0.85	0.60	1.27	0.91	1.05	0.76
110.00°	0.93	0.65	1.20	0.64	0.47	1.13	0.76	0.87	0.97	0.57	1.18	0.83	0.64	1.08	0.63	0.92	0.93
112.50°	0.89	0.84	0.94	0.57	0.60	1.14	0.75	0.77	1.01	0.57	1.02	0.76	0.66	0.62	0.79	1.07	0.89

### 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>	3014	3014	3014	3014	2943	2943	2943	2943	2811	2811	2811	2690	2690	2690	2579	2579	2527
	<b>1</b>	2897	2837	2783	2735	2836	2782	2734	2691	2680	2642	2607	2586	2556	2529	2499	2476	2455
	<b>2</b>	2784	2680	2594	2522	2729	2637	2559	2494	2556	2493	2439	2481	2430	2386	2412	2372	2336
	<b>3</b>	2675	2540	2435	2352	2627	2505	2410	2333	2441	2361	2296	2381	2315	2260	2325	2271	2225
	<b>4</b>	2572	2414	2299	2211	2530	2386	2280	2198	2334	2243	2172	2285	2209	2147	2240	2175	2122
	<b>5</b>	2474	2301	2180	2091	2437	2278	2165	2081	2235	2138	2063	2195	2111	2045	2157	2085	2027
	<b>6</b>	2383	2198	2074	1986	2349	2179	2063	1979	2143	2042	1966	2110	2021	1953	2079	2001	1940
	<b>7</b>	2296	2104	1980	1893	2266	2089	1971	1888	2058	1954	1878	2030	1938	1869	2004	1922	1859
	<b>8</b>	2215	2019	1895	1810	2188	2005	1888	1807	1980	1875	1799	1956	1861	1792	1933	1848	1785
	<b>9</b>	2139	1940	1818	1736	2114	1929	1813	1733	1907	1801	1728	1886	1791	1722	1867	1780	1717
	<b>10</b>	2067	1868	1748	1669	2045	1858	1743	1666	1839	1734	1662	1821	1725	1658	1804	1717	1653

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	290.2 fc	2.3 ft
6.5 ft	207.7 fc	2.7 ft
7.5 ft	156.0 fc	3.1 ft
8.0 ft	137.1 fc	3.3 ft
10.0 ft	87.8 fc	4.1 ft
12.0 ft	61.0 fc	5.0 ft
14.0 ft	44.8 fc	5.8 ft
16.0 ft	34.3 fc	6.6 ft
20.0 ft	21.9 fc	8.3 ft
24.0 ft	15.2 fc	9.9 ft
28.0 ft	11.2 fc	11.6 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	303086	303086	303086
<b>45.00°</b>	2988	2891	1998
<b>55.00°</b>	242	296	95
<b>65.00°</b>	63	74	57
<b>75.00°</b>	84	70	78
<b>85.00°</b>	260	366	407

### UGR CIE 190:2010

<b>Ceiling reflectance</b>		<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>	<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>
<b>Wall reflectance</b>		<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>
<b>Plane reflectance</b>		<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>
<b>Room dimensions</b>		<b>Viewed crosswise</b>					<b>Viewed endwise</b>				
<b>2H</b>	<b>2H</b>	-14.8	-13.9	-14.4	-13.6	-13.3	-17.7	-16.8	-17.4	-16.5	-16.2
	<b>3H</b>	-13.6	-12.8	-13.2	-12.5	-12.1	-16.0	-15.2	-15.6	-14.8	-14.5
	<b>4H</b>	-12.8	-12.1	-12.4	-11.7	-11.3	-14.9	-14.2	-14.5	-13.8	-13.4
	<b>6H</b>	-11.8	-11.1	-11.4	-10.7	-10.3	-12.9	-12.3	-12.5	-11.9	-11.5
	<b>8H</b>	-11.0	-10.4	-10.5	-10.0	-9.6	-11.6	-10.9	-11.1	-10.5	-10.1
	<b>12H</b>	-10.1	-9.5	-9.6	-9.1	-8.7	-10.0	-9.4	-9.6	-9.1	-8.6
<b>4H</b>	<b>2H</b>	-14.6	-13.8	-14.1	-13.5	-13.1	-17.1	-16.4	-16.7	-16.0	-15.7
	<b>3H</b>	-13.0	-12.4	-12.6	-12.0	-11.6	-14.8	-14.2	-14.4	-13.8	-13.4
	<b>4H</b>	-11.9	-11.4	-11.4	-10.9	-10.5	-13.6	-13.0	-13.1	-12.6	-12.2
	<b>6H</b>	-10.6	-10.1	-10.1	-9.7	-9.2	-11.6	-11.2	-11.2	-10.7	-10.2
	<b>8H</b>	-9.7	-9.2	-9.2	-8.8	-8.3	-10.2	-9.8	-9.7	-9.3	-8.8
	<b>12H</b>	-8.6	-8.2	-8.1	-7.8	-7.3	-8.5	-8.1	-8.0	-7.6	-7.1
<b>8H</b>	<b>4H</b>	-11.3	-10.8	-10.8	-10.4	-9.9	-12.1	-11.6	-11.6	-11.2	-10.7
	<b>6H</b>	-9.6	-9.3	-9.1	-8.8	-8.3	-10.1	-9.7	-9.5	-9.2	-8.7
	<b>8H</b>	-8.5	-8.2	-8.0	-7.7	-7.2	-8.6	-8.3	-8.1	-7.8	-7.3
	<b>12H</b>	-7.3	-7.0	-6.8	-6.5	-5.9	-6.8	-6.6	-6.3	-6.1	-5.5
<b>12H</b>	<b>4H</b>	-11.1	-10.8	-10.6	-10.3	-9.8	-11.7	-11.4	-11.2	-10.9	-10.4
	<b>6H</b>	-9.1	-8.9	-8.6	-8.4	-7.8	-9.5	-9.2	-9.0	-8.7	-8.2
	<b>8H</b>	-7.8	-7.6	-7.3	-7.1	-6.5	-8.0	-7.7	-7.4	-7.2	-6.6

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0