

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

SGRTE8XT 40L 35K XW XX AR8466XT SG GL  
N/A

### Test Number

SP-01211\_1\_M-40L

### Test Date

2/11/2021

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

### Summary of Results

#### Power

Input Watts	42.2 W
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#### Lumen Output

Output Lumens	2706
Efficacy	64.13 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

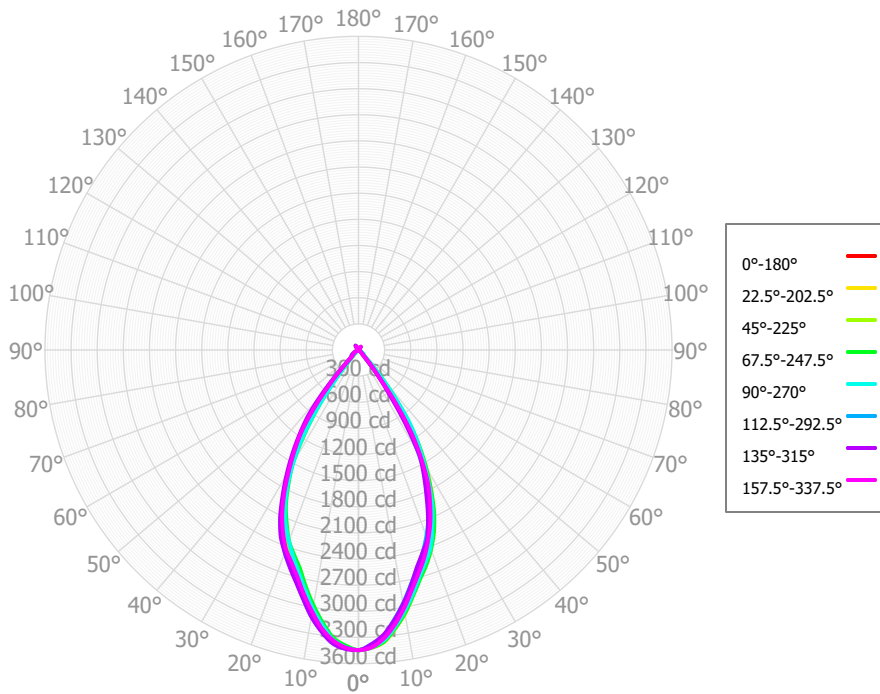
#### Full Beam Angle

0° - 180°	56°
90° - 270°	56°

### IES File Header Contents

Keyword	Value
TEST	SP-01211_1_M-40L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/11/2021
ISSUEDATE	2/25/2021
LUMCAT	SGRTE8XT 40L 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°	312.35	11.54%	90.00° - 100.00°	1.29	0.05%
10.00° - 20.00°	751.65	27.77%	100.00° - 110.00°	1.21	0.04%
20.00° - 30.00°	905.20	33.45%	100.00° - 120.00°	2.70	0.10%
30.00° - 40.00°	561.53	20.75%	120.00° - 130.00°	2.20	0.08%
40.00° - 50.00°	91.82	3.39%	130.00° - 140.00°	3.84	0.14%
50.00° - 60.00°	36.84	1.36%	140.00° - 150.00°	16.55	0.61%
60.00° - 70.00°	10.66	0.39%	150.00° - 160.00°	5.55	0.21%
70.00° - 80.00°	1.29	0.05%	160.00° - 170.00°	1.53	0.06%
80.00° - 90.00°	1.25	0.05%	170.00° - 180.00°	0.23	0.01%
0.00° - 90.00°	2672.58	98.75%	0.00° - 180.00°	2706.47	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°	3446.27	3446.27	3446.27	3446.27	3446.27	3446.27	3446.27	3446.27	3446.27	3446.27	3446.27	3446.27	3446.27	3446.27	3446.27	3446.27	3446.27
2.50°	3401.86	3420.95	3415.57	3421.31	3414.25	3421.44	3435.53	3420.23	3425.65	3401.61	3420.84	3397.69	3415.49	3382.75	3383.08	3418.87	3401.86
5.00°	3328.65	3367.38	3335.72	3361.33	3346.49	3379.20	3383.23	3348.22	3362.42	3335.98	3326.53	3319.31	3341.58	3291.86	3284.81	3326.46	3328.65
7.50°	3185.31	3226.63	3215.35	3221.81	3204.21	3254.79	3261.08	3224.97	3217.97	3178.39	3183.22	3157.42	3185.04	3126.55	3132.40	3182.68	3185.31
10.00°	3019.61	3073.91	3052.17	3069.53	3044.19	3103.67	3113.08	3054.06	3057.46	3008.46	3010.84	2977.41	3016.65	2952.57	2958.49	3011.92	3019.61
12.50°	2839.79	2886.79	2883.26	2889.88	2871.39	2929.65	2929.95	2879.54	2870.92	2822.51	2823.04	2788.52	2824.44	2764.76	2774.32	2824.73	2839.79
15.00°	2656.50	2716.21	2709.28	2725.31	2696.37	2749.85	2764.56	2702.24	2702.11	2635.34	2657.18	2598.29	2646.42	2593.54	2586.96	2659.62	2656.50
17.50°	2514.31	2583.82	2555.25	2587.28	2553.86	2608.79	2619.34	2557.85	2556.87	2507.97	2500.67	2463.77	2491.59	2444.06	2443.36	2505.59	2514.31
20.00°	2379.37	2431.15	2415.76	2434.96	2414.98	2474.74	2474.23	2434.50	2411.52	2380.93	2355.32	2334.27	2337.76	2278.80	2309.94	2332.80	2379.37
22.50°	2159.52	2240.80	2225.71	2262.06	2214.77	2293.79	2329.22	2265.52	2266.04	2195.70	2213.78	2155.73	2185.29	2096.24	2086.46	2152.49	2159.52
25.00°	1929.64	2033.91	2005.45	2051.59	2010.91	2107.10	2129.41	2072.83	2071.52	2007.19	2006.33	1974.80	1997.53	1896.40	1847.78	1945.66	1929.64
27.50°	1723.41	1801.58	1772.65	1796.63	1756.87	1858.04	1886.57	1842.85	1831.98	1774.59	1781.69	1747.14	1770.28	1680.92	1628.34	1730.51	1723.41
30.00°	1518.63	1539.91	1533.69	1540.65	1503.05	1604.91	1646.93	1597.06	1597.79	1538.91	1546.10	1513.68	1504.83	1390.40	1410.95	1441.80	1518.63
32.50°	1129.20	1241.21	1219.63	1283.68	1266.96	1375.02	1409.35	1363.56	1367.66	1279.13	1308.44	1177.50	1204.07	1043.86	1008.68	1135.33	1129.20
35.00°	740.75	896.93	876.09	991.63	1022.28	1143.45	1174.31	1134.15	1107.21	1006.99	968.12	841.59	856.38	694.57	596.91	749.76	740.75
37.50°	433.12	505.15	551.40	670.87	683.46	848.42	940.62	824.92	827.92	670.54	614.48	507.99	472.91	343.57	352.66	350.59	433.12
40.00°	146.70	252.01	232.59	397.98	368.70	557.40	614.68	495.43	520.89	369.11	352.84	210.74	244.08	171.02	118.24	200.72	146.70
42.50°	98.00	119.87	124.72	157.82	131.05	313.50	249.18	291.30	199.62	200.23	97.82	127.00	113.44	88.54	84.87	78.20	98.00
45.00°	53.96	58.06	66.29	68.97	84.83	100.93	135.48	110.73	92.02	74.19	75.44	57.27	60.51	55.09	53.33	57.23	53.96
47.50°	42.26	46.82	52.22	64.60	85.38	105.31	106.77	84.74	72.19	74.47	58.03	46.03	47.73	41.44	40.91	42.14	42.26
50.00°	31.19	37.38	45.49	58.30	83.18	106.95	99.93	77.93	65.98	73.69	55.49	36.04	37.59	32.38	29.17	32.50	31.19
52.50°	23.11	29.00	37.09	51.12	71.42	95.22	98.84	68.34	64.23	70.44	52.71	30.02	28.56	24.80	21.84	23.03	23.11
55.00°	16.12	22.59	28.52	40.55	58.80	82.59	86.30	58.55	59.63	65.02	46.85	24.37	22.96	19.41	15.16	16.80	16.12
57.50°	12.95	17.14	22.80	28.75	43.82	66.75	71.58	49.15	54.31	55.46	40.55	19.63	18.48	14.55	11.50	10.96	12.95
60.00°	9.76	12.70	17.22	20.79	29.64	50.42	56.56	39.59	45.33	43.48	30.81	14.90	14.75	11.49	8.19	9.25	9.76
62.50°	6.51	8.64	10.35	13.90	17.15	32.78	41.49	24.70	35.67	27.77	20.97	10.16	11.19	8.75	6.07	7.35	6.51
65.00°	3.78	5.12	3.71	7.95	7.72	17.49	22.25	10.57	19.46	14.91	10.54	6.07	6.77	5.13	4.07	4.22	3.78
67.50°	2.19	1.77	2.52	2.19	3.66	7.44	2.70	5.65	2.45	5.69	2.23	3.03	2.18	1.41	2.38	1.62	2.19
70.00°	1.19	1.10	1.42	1.32	1.28	1.07	1.90	1.30	1.26	0.99	1.90	1.24	1.33	1.39	1.26	1.54	1.19
72.50°	1.24	1.06	1.33	1.16	1.32	1.30	1.49	1.16	1.06	1.07	1.61	1.12	0.94	1.60	1.34	1.46	1.24
75.00°	1.19	1.05	1.24	1.06	1.38	1.34	1.18	1.07	1.11	1.07	1.45	1.16	0.97	1.32	1.41	1.37	1.19
77.50°	1.00	1.04	1.23	0.97	1.46	1.08	0.89	1.24	1.17	0.97	1.31	1.36	1.02	1.05	1.44	1.28	1.00
80.00°	0.99	1.00	1.21	1.13	1.33	0.97	0.87	1.34	1.28	0.98	1.20	1.33	1.09	1.21	1.38	1.17	0.99
82.50°	1.23	0.96	1.15	1.30	0.99	1.07	0.88	1.17	1.36	1.06	1.07	1.08	1.16	1.33	1.18	1.14	1.23
85.00°	1.27	1.01	1.10	1.35	1.04	1.18	1.17	1.04	1.13	1.05	0.90	1.11	1.13	1.00	1.15	1.26	1.27
87.50°	1.12	1.06	1.08	1.39	1.43	1.33	1.37	1.02	0.94	0.98	0.90	1.36	1.11	0.76	1.34	1.36	1.12
90.00°	1.02	1.19	1.04	1.16	1.42	1.35	1.12	1.10	0.95	1.05	1.17	1.31	1.01	1.10	1.42	1.42	1.02
92.50°	0.97	1.31	0.94	0.98	1.13	1.26	0.96	1.37	1.01	1.20	1.38	1.08	0.92	1.36	1.40	1.34	0.97
95.00°	1.05	1.34	0.93	1.17	1.10	1.09	1.16	1.47	1.32	1.22	1.52	1.07	0.95	1.26	1.33	1.05	1.05
97.50°	1.23	1.34	1.10	1.32	1.22	0.84	1.33	1.26	1.48	1.19	1.48	1.16	1.00	1.15	1.23	0.94	1.23
100.00°	1.15	1.12	1.21	1.20	1.30	0.91	1.41	1.06	1.14	1.05	1.27	1.18	1.14	1.06	1.19	1.01	1.15
102.50°	0.93	0.93	1.21	1.13	1.35	1.15	1.42	0.89	0.90	0.88	1.15	1.17	1.26	1.03	1.21	1.10	0.93
105.00°	1.08	0.87	1.19	1.22	1.40	1.07	1.26	0.86	0.97	0.92	1.11	1.30	1.30	1.17	1.16	1.18	1.08
107.50°	1.40	0.88	1.17	1.32	1.45	0.85	1.20	1.01	0.97	1.01	1.11	1.48	1.29	1.35	1.09	1.21	1.40
110.00°	1.41	1.14	1.23	1.48	1.40	0.93	1.30	1.13	0.80	1.07	1.14	1.34	1.14	1.61	1.13	1.20	1.41
112.50°	1.30	1.34	1.39	1.66	1.31	1.14	1.32	1.22	0.74	1.13	1.24	1.12	1.10	1.84	1.23	1.39	1.30

### 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>	3214	3214	3214	3214	3135	3135	3135	3135	2988	2988	2988	2854	2854	2854	2731	2731	2673
	<b>1</b>	3066	2992	2926	2866	2996	2930	2871	2817	2815	2768	2724	2709	2672	2637	2611	2582	2555
	<b>2</b>	2917	2787	2680	2590	2854	2738	2641	2558	2645	2566	2497	2560	2495	2439	2481	2429	2383
	<b>3</b>	2773	2602	2470	2365	2717	2562	2441	2344	2487	2385	2302	2417	2333	2262	2352	2283	2223
	<b>4</b>	2636	2435	2288	2176	2585	2402	2266	2161	2340	2224	2132	2282	2184	2104	2228	2145	2076
	<b>5</b>	2505	2284	2129	2014	2459	2256	2112	2004	2204	2079	1983	2156	2048	1962	2111	2018	1943
	<b>6</b>	2383	2146	1988	1874	2341	2123	1974	1866	2079	1948	1850	2039	1923	1835	2000	1899	1821
	<b>7</b>	2268	2021	1862	1750	2230	2002	1851	1744	1964	1830	1732	1930	1810	1721	1897	1791	1710
	<b>8</b>	2160	1907	1748	1639	2126	1891	1740	1635	1859	1723	1626	1829	1706	1617	1800	1691	1608
	<b>9</b>	2060	1803	1646	1540	2028	1789	1639	1537	1761	1625	1530	1735	1612	1523	1710	1599	1516
	<b>10</b>	1966	1708	1554	1451	1937	1696	1548	1449	1671	1536	1443	1649	1525	1438	1627	1514	1432

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	113.9 fc	5.8 ft
6.5 ft	81.6 fc	6.8 ft
7.5 ft	61.3 fc	7.9 ft
8.0 ft	53.8 fc	8.4 ft
10.0 ft	34.5 fc	10.5 ft
12.0 ft	23.9 fc	12.6 ft
14.0 ft	17.6 fc	14.7 ft
16.0 ft	13.5 fc	16.8 ft
20.0 ft	8.6 fc	21.0 ft
24.0 ft	6.0 fc	25.2 ft
28.0 ft	4.4 fc	29.4 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	119001	119001	119001
<b>45.00°</b>	2635	3237	4142
<b>55.00°</b>	970	1717	3540
<b>65.00°</b>	309	303	631
<b>75.00°</b>	159	166	185
<b>85.00°</b>	502	436	413

### 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>	-0.3	0.6	0.1	1.0	1.3	8.0	8.9	8.3	9.2	9.6
	<b>3H</b>	-0.4	0.4	0.0	0.8	1.2	7.8	8.6	8.2	9.0	9.4
	<b>4H</b>	-0.5	0.3	0.0	0.7	1.1	7.7	8.4	8.1	8.8	9.2
	<b>6H</b>	-0.5	0.2	-0.1	0.6	1.0	7.6	8.3	8.0	8.7	9.1
	<b>8H</b>	-0.5	0.2	0.0	0.6	1.0	7.5	8.2	8.0	8.6	9.0
	<b>12H</b>	-0.4	0.3	0.1	0.7	1.1	7.5	8.1	7.9	8.5	9.0
<b>4H</b>	<b>2H</b>	-0.5	0.3	0.0	0.7	1.1	7.9	8.7	8.4	9.1	9.5
	<b>3H</b>	-0.6	0.1	-0.1	0.5	0.9	7.7	8.4	8.2	8.8	9.2
	<b>4H</b>	-0.6	0.0	-0.1	0.4	0.9	7.6	8.2	8.1	8.6	9.1
	<b>6H</b>	-0.6	-0.1	-0.1	0.4	0.9	7.5	8.0	8.0	8.5	9.0
	<b>8H</b>	-0.5	0.0	0.0	0.4	0.9	7.5	7.9	8.0	8.4	8.9
	<b>12H</b>	-0.3	0.1	0.2	0.6	1.1	7.4	7.8	7.9	8.3	8.8
<b>8H</b>	<b>4H</b>	-0.7	-0.3	-0.2	0.2	0.7	7.4	7.9	7.9	8.3	8.9
	<b>6H</b>	-0.6	-0.3	-0.1	0.3	0.8	7.3	7.7	7.9	8.2	8.7
	<b>8H</b>	-0.4	-0.1	0.1	0.4	0.9	7.3	7.6	7.8	8.1	8.7
	<b>12H</b>	-0.1	0.2	0.5	0.7	1.3	7.3	7.5	7.8	8.0	8.7
<b>12H</b>	<b>4H</b>	-0.7	-0.4	-0.2	0.1	0.6	7.4	7.7	7.9	8.3	8.8
	<b>6H</b>	-0.6	-0.3	0.0	0.2	0.8	7.3	7.6	7.8	8.1	8.6
	<b>8H</b>	-0.4	-0.1	0.2	0.4	1.0	7.2	7.5	7.8	8.0	8.6

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0