

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01207_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	3377
Efficacy	80.03 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

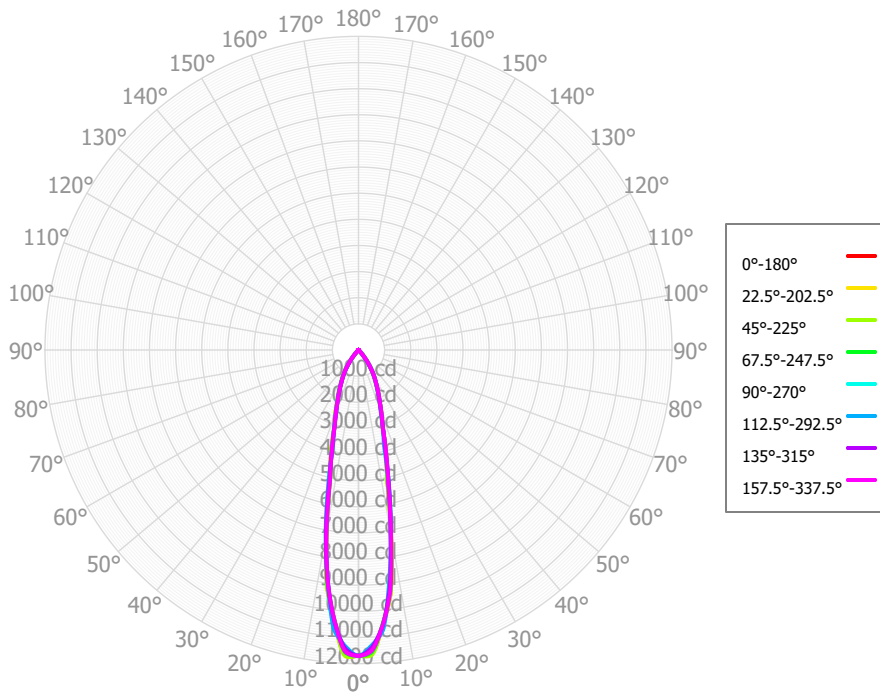
Full Beam Angle

0° - 180°	23°
90° - 270°	23°

IES File Header Contents

Keyword	Value
TEST	SP-01207_M-40L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/11/2021
ISSUEDATE	3/2/2021
LUMCAT	SGRTE8XT 40L 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°	905.34	26.81%	90.00° - 100.00°	1.03	0.03%
10.00° - 20.00°	1129.61	33.45%	100.00° - 110.00°	1.11	0.03%
20.00° - 30.00°	810.50	24.00%	100.00° - 120.00°	2.15	0.06%
30.00° - 40.00°	452.80	13.41%	120.00° - 130.00°	0.97	0.03%
40.00° - 50.00°	62.63	1.85%	130.00° - 140.00°	1.26	0.04%
50.00° - 60.00°	4.47	0.13%	140.00° - 150.00°	1.58	0.05%
60.00° - 70.00°	1.16	0.03%	150.00° - 160.00°	1.01	0.03%
70.00° - 80.00°	1.11	0.03%	160.00° - 170.00°	0.53	0.02%
80.00° - 90.00°	1.17	0.03%	170.00° - 180.00°	0.16	0.00%
0.00° - 90.00°	3368.78	99.74%	0.00° - 180.00°	3377.46	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°
0.00°	11703.23	11703.23	11703.23	11703.23	11703.23	11703.23	11703.23	11703.23	11703.23	11703.23	11703.23	11703.23	11703.23	11703.23	11703.23	11703.23
2.50°	11633.35	11634.60	11681.75	11581.06	11397.42	11362.59	11453.46	11565.03	11690.33	11724.71	11712.45	11591.91	11417.63	11331.04	11416.22	11527.72
5.00°	10577.06	10599.49	10568.51	10551.84	10639.15	10739.84	10477.94	10429.25	10451.68	10475.66	10473.03	10418.35	10519.23	10761.13	10599.28	10597.80
7.50°	9389.72	9413.18	9393.25	9314.18	9134.71	8989.31	8976.75	8997.35	9155.15	9142.85	9198.31	9099.89	8965.89	8991.53	9184.22	9306.59
10.00°	7166.26	7184.78	7173.59	7129.63	7072.49	7221.40	7142.04	7071.27	7082.73	7092.44	7101.14	7074.66	7184.43	7106.47	7090.97	7140.82
12.50°	5106.27	5139.09	5058.85	5169.23	5396.92	5376.89	5110.24	5025.37	5025.16	5020.78	5079.86	4985.28	5196.53	5429.41	5368.91	5281.03
15.00°	4031.52	4050.71	4009.82	4032.14	3972.93	3782.99	3872.99	3929.81	4027.96	4034.74	4048.91	3971.77	3876.36	3764.27	4014.75	4064.42
17.50°	3057.12	3074.12	3029.76	3051.50	3090.41	3085.10	3041.17	3017.36	3057.50	3065.71	3074.46	3014.45	3083.94	3108.32	3090.12	3092.72
20.00°	2552.94	2562.41	2540.49	2546.33	2517.99	2466.70	2491.96	2512.15	2573.90	2578.84	2582.95	2546.49	2517.44	2476.14	2542.98	2564.18
22.50°	2086.68	2092.22	2076.72	2089.39	2092.83	2084.08	2068.44	2066.69	2103.22	2102.87	2113.48	2088.44	2106.56	2109.83	2110.59	2111.65
25.00°	1763.55	1766.00	1753.84	1757.96	1740.38	1731.80	1735.94	1743.25	1770.41	1777.11	1781.34	1766.77	1764.38	1747.80	1766.26	1778.25
27.50°	1460.33	1461.49	1447.24	1454.52	1461.09	1456.73	1437.82	1433.05	1450.51	1461.05	1466.56	1449.50	1463.93	1481.09	1480.98	1481.11
30.00°	1220.31	1219.59	1211.50	1213.08	1212.70	1194.72	1193.12	1201.56	1225.85	1234.70	1237.54	1220.35	1210.70	1216.52	1235.17	1234.14
32.50°	979.73	976.73	974.15	972.00	971.92	961.02	965.36	975.49	998.26	1005.83	1004.76	989.79	982.26	977.80	988.95	988.95
35.00°	737.66	731.55	731.13	731.59	733.90	726.48	724.67	733.19	753.91	760.24	757.10	743.28	741.27	738.85	742.49	745.90
37.50°	506.81	499.86	498.17	502.33	503.24	490.35	480.62	490.46	509.29	513.04	507.97	498.14	494.62	497.91	511.18	516.33
40.00°	301.35	296.21	294.80	291.64	274.82	288.65	285.31	277.98	263.47	257.69	254.09	264.07	286.55	272.22	287.58	300.96
42.50°	144.04	143.06	134.07	141.13	151.56	143.27	100.24	72.20	65.02	48.28	60.77	60.35	93.27	140.09	152.29	155.45
45.00°	81.58	81.78	78.95	77.79	54.55	50.31	51.43	44.06	38.06	28.66	34.96	36.01	34.17	29.06	55.45	75.27
47.50°	36.84	39.63	37.21	35.87	28.74	31.85	25.44	17.28	15.91	12.29	14.56	14.79	19.09	18.41	22.35	32.39
50.00°	22.22	27.64	24.22	21.00	17.49	17.63	14.45	9.51	8.50	6.91	6.81	7.94	10.53	9.18	13.21	19.99
52.50°	11.17	16.68	13.39	10.43	9.54	8.67	5.31	2.50	2.87	2.68	1.66	2.37	3.74	5.44	8.08	11.29
55.00°	5.37	7.14	6.57	4.67	2.10	3.31	3.35	2.26	1.82	1.72	1.73	1.64	1.77	2.54	4.21	5.23
57.50°	1.86	1.76	2.14	1.52	1.07	1.92	1.99	1.99	1.07	1.06	1.58	1.10	0.86	2.31	2.66	2.72
60.00°	1.35	1.36	1.54	0.93	0.77	1.30	1.54	1.54	0.99	1.10	1.06	1.13	0.72	2.10	1.72	2.44
62.50°	1.06	1.21	1.20	0.77	0.84	1.43	1.13	1.24	0.96	1.06	0.80	1.08	0.71	1.96	1.51	1.84
65.00°	1.03	1.32	1.21	0.97	0.93	1.38	1.35	1.65	1.04	0.81	0.95	0.81	0.57	1.85	1.46	1.05
67.50°	1.04	1.23	1.00	1.14	1.11	1.17	1.57	1.86	1.13	0.69	1.08	0.63	0.42	1.81	1.34	1.03
70.00°	1.11	0.95	0.51	1.30	1.30	1.10	1.48	1.22	1.22	0.76	1.17	0.68	0.42	1.70	1.21	1.35
72.50°	1.04	0.77	0.40	1.29	1.03	1.11	1.42	0.82	1.27	0.76	1.15	0.68	0.43	1.43	1.32	1.43
75.00°	0.84	0.67	0.70	1.18	0.78	1.02	1.89	1.23	1.26	0.63	1.00	0.59	0.83	1.17	1.47	1.40
77.50°	0.83	0.74	0.78	1.14	0.78	0.86	2.30	1.51	1.21	0.58	0.89	0.55	1.26	0.92	1.54	1.17
80.00°	0.95	0.93	0.66	1.15	0.80	0.94	1.97	1.44	1.09	0.63	0.83	0.61	1.24	0.77	1.60	0.87
82.50°	0.95	0.92	0.82	0.89	1.12	1.14	1.65	1.41	1.16	0.72	0.89	0.72	1.20	0.79	1.97	0.86
85.00°	0.87	0.78	1.23	0.49	1.37	1.23	1.43	1.46	1.47	0.86	1.07	0.91	0.78	0.90	2.35	0.94
87.50°	0.78	0.77	1.34	0.42	1.02	1.28	1.27	1.35	1.42	1.03	1.03	0.92	0.39	1.13	1.88	1.24
90.00°	0.69	0.84	1.23	0.48	0.70	1.20	1.44	0.90	1.04	1.22	0.81	0.72	0.39	1.14	1.41	1.59
92.50°	0.59	0.72	0.96	0.71	0.64	1.06	1.50	0.71	0.86	1.19	0.83	0.70	0.42	0.88	1.22	1.72
95.00°	0.49	0.51	0.59	0.99	0.63	1.27	1.08	0.97	0.84	0.96	1.00	0.88	0.89	0.71	1.04	1.79
97.50°	0.70	0.48	0.56	0.91	0.86	1.59	0.75	1.07	0.81	0.82	0.97	1.02	1.28	0.60	1.04	1.81
100.00°	1.05	0.52	0.74	0.72	1.01	1.75	0.81	0.94	0.77	0.74	0.81	1.10	1.08	0.73	1.07	1.81
102.50°	1.04	0.58	0.79	0.71	0.83	1.86	0.89	1.07	0.72	0.64	0.75	1.14	0.90	1.07	1.42	1.70
105.00°	0.88	0.63	0.79	0.75	0.69	1.73	1.09	1.56	0.67	0.51	0.73	1.15	0.84	1.39	1.68	1.58
107.50°	1.02	0.75	1.12	0.80	0.63	1.53	1.18	1.62	0.90	0.58	1.07	1.14	0.80	1.69	1.21	1.41
110.00°	1.25	0.87	1.60	0.86	0.63	1.51	1.02	1.17	1.29	0.76	1.57	1.10	0.86	1.45	0.84	1.23
112.50°	1.19	1.13	1.26	0.76	0.80	1.52	1.00	1.02	1.35	0.76	1.36	1.01	0.88	0.83	1.06	1.43

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	4019	4019	4019	4019	3924	3924	3924	3924	3748	3748	3748	3587	3587	3587	3438	3438	3369
	1	3863	3783	3711	3646	3781	3710	3646	3588	3573	3523	3476	3447	3408	3372	3331	3302	3274
	2	3711	3573	3459	3363	3639	3516	3412	3325	3408	3324	3251	3308	3241	3181	3216	3162	3115
	3	3567	3387	3247	3136	3503	3341	3213	3111	3254	3148	3061	3174	3086	3013	3100	3028	2966
	4	3429	3219	3065	2948	3373	3182	3040	2930	3112	2991	2896	3047	2945	2862	2986	2900	2829
	5	3299	3068	2907	2787	3249	3038	2887	2775	2980	2850	2750	2926	2814	2726	2876	2780	2703
	6	3177	2931	2766	2648	3132	2906	2751	2639	2858	2722	2621	2813	2694	2603	2771	2668	2586
	7	3061	2806	2640	2524	3021	2785	2629	2518	2745	2606	2505	2707	2584	2492	2672	2562	2479
	8	2953	2692	2527	2414	2917	2674	2518	2409	2640	2499	2399	2608	2482	2390	2578	2465	2380
	9	2852	2587	2424	2315	2819	2571	2417	2311	2542	2402	2303	2515	2387	2296	2489	2373	2289
	10	2756	2490	2331	2225	2727	2477	2325	2222	2452	2312	2216	2428	2300	2210	2406	2289	2204

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	386.9 fc	2.3 ft
6.5 ft	277.0 fc	2.7 ft
7.5 ft	208.1 fc	3.1 ft
8.0 ft	182.9 fc	3.3 ft
10.0 ft	117.0 fc	4.1 ft
12.0 ft	81.3 fc	5.0 ft
14.0 ft	59.7 fc	5.8 ft
16.0 ft	45.7 fc	6.6 ft
20.0 ft	29.3 fc	8.3 ft
24.0 ft	20.3 fc	9.9 ft
28.0 ft	14.9 fc	11.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	404115	404115	404115
45.00°	3984	3855	2664
55.00°	323	395	126
65.00°	84	99	76
75.00°	112	94	104
85.00°	346	488	542

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	-13.8	-12.9	-13.4	-12.6	-12.3	-16.7	-15.8	-16.4	-15.5	-15.2
	3H	-12.6	-11.8	-12.2	-11.5	-11.1	-15.0	-14.2	-14.6	-13.8	-13.5
	4H	-11.8	-11.1	-11.4	-10.7	-10.3	-13.9	-13.2	-13.5	-12.8	-12.4
	6H	-10.8	-10.1	-10.4	-9.7	-9.3	-11.9	-11.3	-11.5	-10.9	-10.5
	8H	-10.0	-9.4	-9.5	-9.0	-8.6	-10.6	-9.9	-10.1	-9.5	-9.1
	12H	-9.1	-8.5	-8.6	-8.1	-7.7	-9.0	-8.4	-8.6	-8.1	-7.6
4H	2H	-13.6	-12.8	-13.1	-12.5	-12.1	-16.1	-15.4	-15.7	-15.0	-14.7
	3H	-12.0	-11.4	-11.6	-11.0	-10.6	-13.8	-13.2	-13.4	-12.8	-12.4
	4H	-10.9	-10.4	-10.4	-9.9	-9.5	-12.6	-12.0	-12.1	-11.6	-11.2
	6H	-9.6	-9.1	-9.1	-8.7	-8.2	-10.6	-10.2	-10.2	-9.7	-9.2
	8H	-8.7	-8.2	-8.2	-7.8	-7.3	-9.2	-8.8	-8.7	-8.3	-7.8
	12H	-7.6	-7.2	-7.1	-6.8	-6.3	-7.5	-7.1	-7.0	-6.6	-6.1
8H	4H	-10.3	-9.8	-9.8	-9.4	-8.9	-11.1	-10.6	-10.6	-10.2	-9.7
	6H	-8.6	-8.3	-8.1	-7.8	-7.3	-9.1	-8.7	-8.5	-8.2	-7.7
	8H	-7.5	-7.2	-7.0	-6.7	-6.2	-7.6	-7.4	-7.1	-6.8	-6.3
	12H	-6.3	-6.0	-5.8	-5.5	-4.9	-5.8	-5.6	-5.3	-5.1	-4.5
12H	4H	-10.1	-9.8	-9.6	-9.3	-8.8	-10.7	-10.4	-10.2	-9.9	-9.4
	6H	-8.1	-7.9	-7.6	-7.4	-6.8	-8.5	-8.2	-8.0	-7.7	-7.2
	8H	-6.8	-6.6	-6.3	-6.1	-5.5	-7.0	-6.7	-6.4	-6.2	-5.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0