

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01207_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	3424
Efficacy	81.14 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.41
Two luminaires, plane 90°	0.42
Four luminaires	0.46

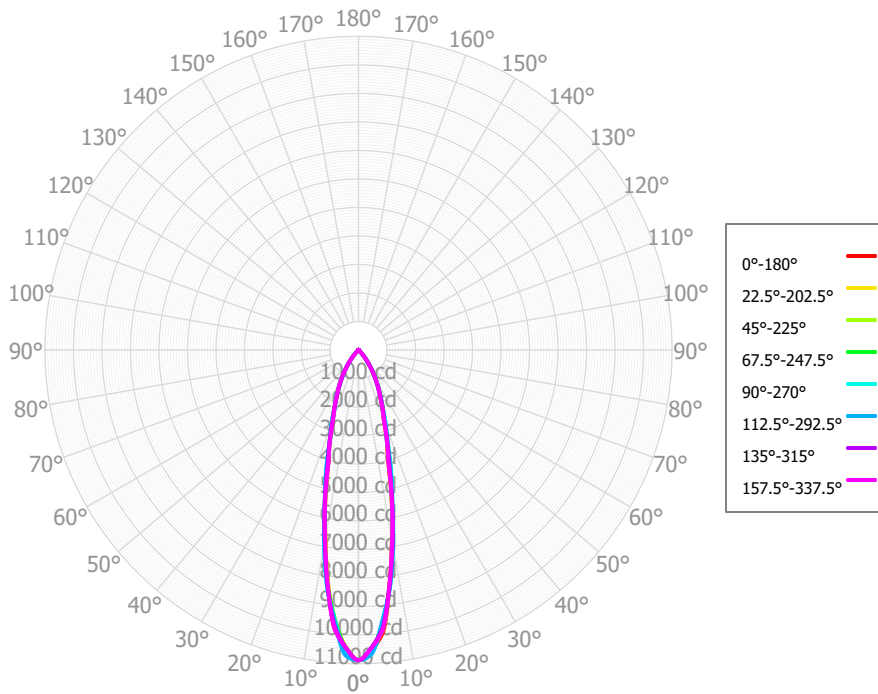
Full Beam Angle

0° - 180°	25°
90° - 270°	25°

IES File Header Contents

Keyword	Value
TEST	SP-01207_1_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 SO
LUMINAIRE	N/A
OTHER	Beam Angle: 25 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°	834.55	24.37%	90.00° - 100.00°	0.77	0.02%
10.00° - 20.00°	1184.58	34.59%	100.00° - 110.00°	0.82	0.02%
20.00° - 30.00°	844.50	24.66%	100.00° - 120.00°	1.62	0.05%
30.00° - 40.00°	456.24	13.32%	120.00° - 130.00°	0.86	0.03%
40.00° - 50.00°	90.90	2.65%	130.00° - 140.00°	1.14	0.03%
50.00° - 60.00°	3.98	0.12%	140.00° - 150.00°	1.25	0.04%
60.00° - 70.00°	0.80	0.02%	150.00° - 160.00°	0.89	0.03%
70.00° - 80.00°	0.74	0.02%	160.00° - 170.00°	0.48	0.01%
80.00° - 90.00°	0.78	0.02%	170.00° - 180.00°	0.13	0.00%
0.00° - 90.00°	3417.05	99.79%	0.00° - 180.00°	3424.19	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°	10882.85	10882.85	10882.85	10882.85	10882.85	10882.85	10882.85	10882.85	10882.85	10882.85	10882.85	10882.85	10882.85	10882.85	10882.85	10882.85
2.50°	10528.10	10503.19	10534.88	10582.38	10638.85	10713.51	10437.90	10454.60	10450.62	10416.09	10434.84	10522.11	10576.40	10671.17	10447.34	10470.41
5.00°	9927.39	9835.69	9757.33	9631.27	9636.49	9580.89	9713.01	9789.52	9771.65	9625.88	9520.40	9494.96	9536.44	9553.48	9782.55	9834.99
7.50°	8341.63	8314.03	8349.99	8378.35	8411.14	8417.41	8324.17	8293.22	8239.00	8230.87	8266.64	8339.61	8404.94	8424.92	8335.79	8307.64
10.00°	6751.70	6808.96	6902.75	6944.21	6984.72	6928.52	6807.82	6749.13	6708.05	6699.12	6750.25	6835.13	6906.10	6917.11	6893.47	6788.13
12.50°	5377.10	5375.33	5404.77	5444.86	5509.43	5431.65	5477.88	5409.20	5383.89	5394.78	5419.04	5433.13	5481.29	5422.50	5473.61	5403.63
15.00°	4003.36	4069.61	4192.31	4340.64	4424.78	4386.23	4183.08	4080.45	4064.05	4142.20	4229.69	4306.76	4355.47	4349.63	4159.58	4056.07
17.50°	3292.19	3306.14	3339.25	3376.78	3433.56	3352.34	3373.67	3334.15	3342.79	3351.55	3345.38	3322.86	3336.38	3292.03	3371.37	3315.93
20.00°	2581.01	2610.27	2665.65	2747.62	2796.90	2770.53	2656.45	2620.36	2624.54	2664.32	2695.73	2724.04	2741.61	2739.31	2643.68	2596.01
22.50°	2183.95	2196.47	2218.84	2237.96	2245.59	2199.10	2211.47	2206.09	2216.33	2217.89	2202.19	2191.68	2196.33	2193.15	2218.82	2193.81
25.00°	1787.20	1804.76	1832.56	1859.38	1866.01	1852.04	1817.25	1807.71	1809.14	1825.72	1827.54	1836.71	1844.83	1845.95	1814.71	1797.99
27.50°	1497.66	1505.77	1522.01	1527.02	1527.12	1509.55	1510.87	1516.85	1520.36	1523.71	1508.66	1502.27	1508.23	1501.04	1512.60	1504.19
30.00°	1208.31	1215.13	1233.07	1238.12	1242.13	1234.84	1220.99	1231.40	1232.02	1241.69	1232.42	1222.91	1230.35	1228.19	1218.12	1212.68
32.50°	958.38	959.00	971.27	964.61	969.99	961.57	965.16	976.61	982.06	986.73	974.55	957.85	962.66	956.94	961.49	956.09
35.00°	708.64	713.86	732.70	732.10	736.40	733.22	715.60	723.39	732.48	737.79	730.56	730.69	734.53	732.30	715.88	703.44
37.50°	511.75	513.44	523.02	513.93	511.86	505.71	519.11	518.32	518.88	521.98	518.37	519.62	520.17	509.95	523.90	508.71
40.00°	315.38	328.37	345.74	348.29	345.03	349.10	332.47	315.60	306.24	313.44	330.34	351.41	359.61	349.22	341.67	318.84
42.50°	203.38	206.20	208.93	201.12	191.53	193.90	194.08	177.97	169.10	175.92	186.56	201.80	211.39	191.10	207.19	201.43
45.00°	91.76	99.48	107.36	111.41	105.89	109.84	64.48	43.34	33.84	53.72	76.07	101.11	110.57	105.46	88.88	89.18
47.50°	53.88	55.05	49.37	41.64	36.03	27.00	29.78	22.92	20.63	21.83	22.41	25.22	27.90	22.71	48.40	50.70
50.00°	16.25	17.94	14.35	16.76	15.22	15.35	12.05	7.87	7.56	9.56	11.09	13.73	15.43	14.18	13.92	14.33
52.50°	9.76	10.47	7.45	7.25	5.64	4.99	5.90	4.64	4.45	4.78	4.90	4.87	5.14	5.92	7.82	8.63
55.00°	3.31	4.12	3.16	3.83	2.73	3.03	1.84	1.94	1.40	1.61	2.55	2.92	3.19	4.03	2.68	3.25
57.50°	2.28	2.24	2.07	2.51	1.31	1.20	1.24	1.37	1.37	0.96	1.35	1.37	1.52	2.20	2.04	2.30
60.00°	1.26	0.73	1.39	1.62	0.82	0.90	1.25	0.89	1.35	0.83	0.99	0.87	0.90	1.62	1.44	1.43
62.50°	0.93	0.69	1.19	0.86	0.53	0.63	1.06	0.90	1.10	0.79	0.67	0.53	0.47	1.05	0.96	1.52
65.00°	0.61	0.64	1.02	0.60	0.49	0.61	0.83	0.93	0.86	0.77	0.37	0.60	0.74	0.86	0.57	1.58
67.50°	0.87	0.59	0.90	0.51	0.51	0.60	0.66	0.92	0.87	0.67	0.34	0.65	0.90	0.67	0.64	1.13
70.00°	1.13	0.55	0.79	0.57	0.65	0.67	0.50	0.91	0.88	0.56	0.50	0.62	0.60	0.62	0.73	0.70
72.50°	0.96	0.55	0.67	0.69	0.82	0.74	0.43	1.08	0.88	0.52	0.60	0.57	0.38	0.58	0.89	0.51
75.00°	0.80	0.57	0.66	0.79	0.77	0.65	0.38	1.26	0.88	0.51	0.65	0.44	0.48	0.82	0.99	0.36
77.50°	0.81	0.71	0.77	0.89	0.66	0.56	0.48	0.99	0.83	0.57	0.60	0.45	0.57	1.04	0.79	0.58
80.00°	0.83	0.81	0.79	0.84	0.58	0.65	0.61	0.69	0.78	0.65	0.46	0.83	0.67	0.95	0.63	0.79
82.50°	1.01	0.72	0.70	0.76	0.50	0.74	0.54	0.62	0.63	0.68	0.43	1.03	0.75	0.87	0.64	0.78
85.00°	1.18	0.66	0.61	0.98	0.44	0.61	0.44	0.55	0.48	0.70	0.48	0.75	0.80	0.79	0.68	0.77
87.50°	1.08	0.67	0.52	1.30	0.39	0.48	0.68	0.62	0.56	0.69	0.67	0.54	0.86	0.70	0.80	0.78
90.00°	0.99	0.70	0.54	1.00	0.50	0.89	0.98	0.70	0.64	0.69	0.97	0.53	0.95	0.58	0.89	0.80
92.50°	0.91	0.78	0.68	0.49	0.64	1.30	0.73	0.70	0.83	0.62	0.91	0.51	0.97	0.47	0.79	0.85
95.00°	0.82	0.80	0.69	0.34	0.75	0.99	0.40	0.69	1.01	0.55	0.60	0.48	0.69	0.63	0.78	0.88
97.50°	0.67	0.66	0.54	0.32	0.84	0.67	0.61	0.66	0.80	0.46	0.41	0.48	0.49	0.79	1.20	0.67
100.00°	0.52	0.60	0.44	0.55	0.71	0.78	0.92	0.63	0.59	0.37	0.32	0.56	0.58	0.95	1.47	0.49
102.50°	0.65	0.85	0.41	0.87	0.53	0.89	1.05	0.56	0.50	0.64	0.44	0.65	0.65	1.12	1.11	0.68
105.00°	0.78	1.03	0.51	0.80	0.82	0.85	1.15	0.49	0.43	0.98	0.72	0.74	0.64	1.28	0.79	0.85
107.50°	0.71	0.98	0.74	0.61	1.20	0.81	0.91	0.71	0.80	0.90	0.81	0.75	0.70	1.42	0.72	0.76
110.00°	0.65	0.95	0.78	0.67	0.86	0.75	0.61	0.94	1.16	0.75	0.75	0.55	0.98	1.29	0.67	0.68
112.50°	0.82	0.98	0.58	0.80	0.37	0.70	0.76	0.97	1.04	0.62	0.66	0.45	1.16	1.14	0.71	0.79

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	4075	4075	4075	4075	3979	3979	3979	3979	3801	3801	3801	3637	3637	3637	3488	3488	3417
	1	3914	3832	3758	3692	3831	3758	3692	3633	3619	3568	3520	3492	3452	3414	3375	3344	3315
	2	3757	3615	3497	3398	3684	3557	3450	3360	3447	3361	3286	3346	3276	3215	3253	3197	3148
	3	3607	3421	3277	3163	3542	3375	3243	3137	3287	3177	3087	3206	3115	3039	3130	3056	2992
	4	3464	3247	3088	2967	3407	3209	3063	2949	3138	3013	2915	3072	2966	2881	3010	2922	2848
	5	3329	3090	2923	2800	3278	3059	2903	2787	3000	2866	2763	2946	2830	2739	2895	2795	2715
	6	3201	2947	2776	2654	3155	2921	2761	2645	2873	2732	2627	2827	2704	2610	2785	2677	2593
	7	3081	2817	2645	2525	3040	2795	2633	2519	2754	2610	2506	2716	2588	2493	2680	2567	2480
	8	2968	2698	2527	2410	2931	2679	2518	2405	2645	2499	2395	2612	2481	2386	2581	2464	2376
	9	2862	2588	2420	2307	2829	2573	2412	2303	2543	2397	2295	2515	2383	2288	2488	2369	2281
	10	2763	2488	2322	2213	2733	2474	2316	2210	2448	2304	2204	2424	2292	2198	2401	2280	2192

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	359.8 fc	2.4 ft
6.5 ft	257.6 fc	2.9 ft
7.5 ft	193.5 fc	3.3 ft
8.0 ft	170.0 fc	3.6 ft
10.0 ft	108.8 fc	4.4 ft
12.0 ft	75.6 fc	5.3 ft
14.0 ft	55.5 fc	6.2 ft
16.0 ft	42.5 fc	7.1 ft
20.0 ft	27.2 fc	8.9 ft
24.0 ft	18.9 fc	10.7 ft
28.0 ft	13.9 fc	12.4 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	375787	375787	375787
45.00°	4481	5243	5171
55.00°	199	190	164
65.00°	50	84	40
75.00°	107	88	102
85.00°	466	240	174

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	-13.5	-12.6	-12.3	-17.6	-16.7	-17.2	-16.4	-16.0
	3H	-13.1	-12.3	-12.7	-12.0	-11.6	-16.4	-15.6	-16.0	-15.2	-14.9
	4H	-12.6	-11.9	-12.2	-11.5	-11.1	-15.4	-14.7	-15.0	-14.3	-13.9
	6H	-11.6	-10.9	-11.2	-10.6	-10.2	-14.1	-13.4	-13.7	-13.0	-12.6
	8H	-10.7	-10.0	-10.2	-9.6	-9.2	-13.1	-12.5	-12.6	-12.1	-11.6
	12H	-9.2	-8.6	-8.8	-8.2	-7.8	-11.9	-11.3	-11.5	-10.9	-10.5
4H	2H	-13.9	-13.2	-13.5	-12.8	-12.4	-17.5	-16.7	-17.1	-16.4	-16.0
	3H	-13.0	-12.4	-12.6	-12.0	-11.6	-15.9	-15.3	-15.5	-14.9	-14.5
	4H	-12.4	-11.9	-12.0	-11.5	-11.0	-14.8	-14.2	-14.3	-13.8	-13.4
	6H	-11.0	-10.5	-10.5	-10.1	-9.6	-13.0	-12.5	-12.5	-12.1	-11.6
	8H	-9.8	-9.4	-9.3	-8.9	-8.4	-11.6	-11.2	-11.1	-10.7	-10.3
	12H	-8.0	-7.7	-7.5	-7.2	-6.7	-10.3	-9.9	-9.8	-9.4	-8.9
8H	4H	-12.1	-11.6	-11.6	-11.2	-10.7	-14.3	-13.9	-13.8	-13.4	-13.0
	6H	-10.3	-9.9	-9.8	-9.4	-8.9	-12.1	-11.7	-11.5	-11.2	-10.7
	8H	-8.9	-8.6	-8.4	-8.1	-7.6	-10.3	-10.0	-9.8	-9.5	-9.0
	12H	-7.0	-6.8	-6.5	-6.2	-5.7	-8.7	-8.5	-8.2	-8.0	-7.4
12H	4H	-11.9	-11.5	-11.4	-11.1	-10.6	-14.1	-13.8	-13.6	-13.3	-12.8
	6H	-10.1	-9.8	-9.5	-9.3	-8.7	-11.8	-11.5	-11.3	-11.1	-10.5
	8H	-8.6	-8.4	-8.1	-7.9	-7.3	-10.0	-9.7	-9.5	-9.2	-8.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0