

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGRTE8XT 20L 35K MD XX AR8466XT SG FG
N/A

Test Number

SP-01205_M-20L

Test Date

2/11/2021

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

Summary of Results

Power

Input Watts	19.9 W
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Lumen Output

Output Lumens	1042
Efficacy	52.36 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

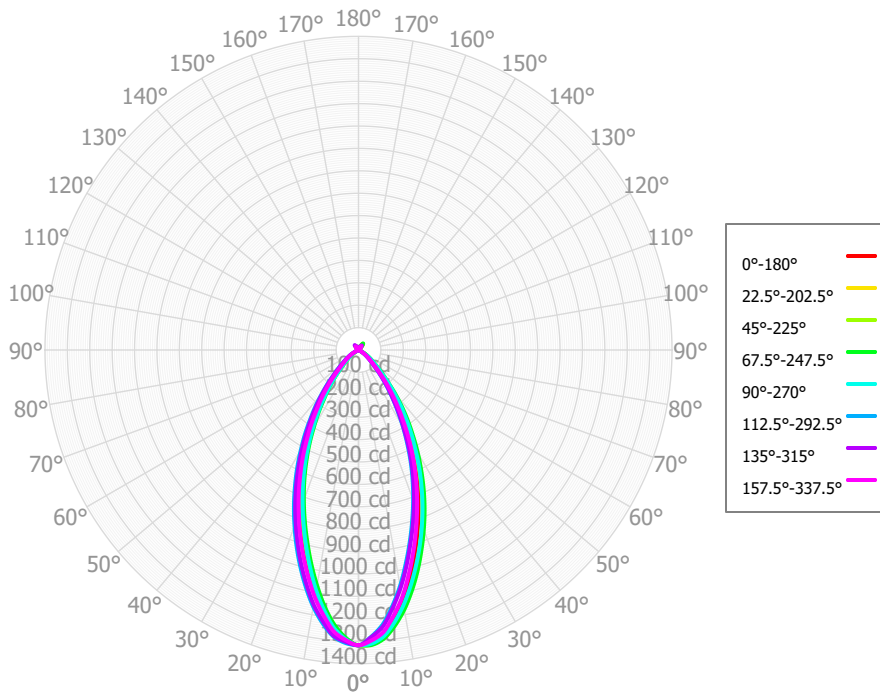
Full Beam Angle

0° - 180°	47°
90° - 270°	47°

IES File Header Contents

Keyword	Value
TEST	SP-01205_M-20L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/11/2021
ISSUEDATE	3/2/2021
LUMCAT	SGRTE8XT 20L 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°	117.27	11.25%	90.00° - 100.00°	0.65	0.06%
10.00° - 20.00°	263.17	25.26%	100.00° - 110.00°	0.65	0.06%
20.00° - 30.00°	279.46	26.82%	100.00° - 120.00°	1.71	0.16%
30.00° - 40.00°	200.60	19.25%	120.00° - 130.00°	3.18	0.31%
40.00° - 50.00°	99.24	9.52%	130.00° - 140.00°	7.05	0.68%
50.00° - 60.00°	41.69	4.00%	140.00° - 150.00°	11.51	1.10%
60.00° - 70.00°	7.15	0.69%	150.00° - 160.00°	6.22	0.60%
70.00° - 80.00°	0.67	0.06%	160.00° - 170.00°	1.67	0.16%
80.00° - 90.00°	0.67	0.06%	170.00° - 180.00°	0.11	0.01%
0.00° - 90.00°	1009.92	96.92%	0.00° - 180.00°	1042.03	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°	1318.53	1318.53	1318.53	1318.53	1318.53	1318.53	1318.53	1318.53	1318.53	1318.53	1318.53	1318.53	1318.53	1318.53	1318.53	1318.53	1318.53
2.50°	1308.59	1316.26	1315.97	1318.70	1312.81	1309.85	1304.52	1296.82	1300.73	1290.33	1291.91	1287.30	1294.08	1282.50	1284.25	1299.08	1308.59
5.00°	1269.06	1287.41	1290.44	1294.23	1283.80	1284.00	1280.60	1262.04	1255.04	1236.97	1244.33	1232.41	1247.46	1231.87	1240.52	1265.76	1269.06
7.50°	1210.90	1234.51	1234.62	1241.99	1226.64	1230.31	1221.18	1195.29	1190.46	1167.19	1168.55	1156.06	1173.24	1154.45	1163.40	1197.35	1210.90
10.00°	1132.83	1165.08	1167.82	1177.26	1156.30	1163.81	1154.93	1121.64	1112.59	1084.20	1086.62	1067.01	1090.15	1069.65	1079.92	1121.89	1132.83
12.50°	1049.10	1084.06	1088.03	1100.69	1077.01	1085.38	1072.88	1037.38	1027.83	997.13	995.64	976.21	996.54	976.09	988.09	1031.19	1049.10
15.00°	960.39	999.76	1004.63	1019.70	994.41	1002.61	989.67	951.55	940.98	907.33	906.44	884.58	904.91	885.47	895.17	940.89	960.39
17.50°	872.25	913.57	920.88	935.27	911.47	919.08	904.29	865.54	853.25	820.61	819.39	798.13	815.23	797.75	809.15	851.31	872.25
20.00°	784.51	828.51	837.05	852.49	828.43	835.32	820.05	779.53	767.96	735.57	734.94	713.68	729.84	713.43	723.62	764.21	784.51
22.50°	699.32	743.98	752.93	770.78	746.16	753.00	737.54	697.27	683.47	653.41	653.07	632.48	647.96	631.89	642.35	680.70	699.32
25.00°	615.66	660.88	668.78	688.82	664.05	670.98	656.03	615.21	602.39	572.50	572.68	552.25	567.38	551.41	561.25	598.65	615.66
27.50°	535.26	578.30	589.34	606.73	584.00	592.22	575.80	537.33	522.16	494.94	493.53	475.29	487.67	471.63	482.43	518.35	535.26
30.00°	456.44	499.06	510.30	528.39	504.24	513.94	499.30	460.02	448.28	418.55	419.59	399.07	413.68	398.16	404.52	441.06	456.44
32.50°	384.04	420.81	436.52	451.63	433.41	443.06	426.66	391.58	375.56	351.61	349.19	333.51	342.81	328.13	337.84	366.70	384.04
35.00°	314.15	352.16	363.08	382.50	363.36	372.83	360.44	324.68	314.59	287.19	288.83	269.64	282.55	269.08	272.97	301.33	314.15
37.50°	254.35	285.58	299.35	315.92	302.07	312.33	299.77	270.85	255.02	236.22	234.04	221.15	227.01	214.92	221.35	243.29	254.35
40.00°	197.62	227.48	236.38	253.91	241.25	252.32	244.28	218.22	207.58	187.86	186.34	174.21	180.48	169.40	171.65	191.00	197.62
42.50°	152.61	170.63	184.13	193.06	191.14	202.32	192.47	172.21	160.93	148.23	141.87	136.56	137.10	126.91	131.37	142.55	152.61
45.00°	110.31	133.99	134.79	151.96	142.43	153.57	151.40	130.26	128.20	109.77	110.03	99.41	107.31	98.48	95.54	108.35	110.31
47.50°	87.00	99.19	108.79	114.46	114.99	123.75	116.53	104.25	96.13	87.33	82.73	78.72	81.15	73.87	75.78	81.89	87.00
50.00°	66.78	80.40	84.49	93.36	88.71	95.24	92.60	81.02	78.22	66.08	65.22	58.48	63.62	58.54	57.95	64.04	66.78
52.50°	53.62	62.27	69.16	74.29	72.16	77.64	73.85	66.24	60.72	52.91	50.41	46.75	47.81	45.05	45.57	50.00	53.62
55.00°	41.16	49.99	54.47	59.84	55.88	60.67	59.04	51.93	47.95	39.97	38.29	35.12	37.32	34.28	33.99	38.68	41.16
57.50°	30.08	37.72	42.27	45.69	41.04	47.19	45.70	38.70	35.34	28.41	26.72	24.30	27.55	23.88	24.22	28.31	30.08
60.00°	19.07	25.47	29.47	30.95	26.43	33.35	31.83	25.85	23.91	17.13	17.73	14.14	18.35	14.93	15.18	18.51	19.07
62.50°	10.41	13.78	14.92	16.41	12.74	18.10	17.81	13.75	13.26	9.56	9.10	7.81	9.20	6.08	7.46	8.88	10.41
65.00°	2.14	6.78	4.12	8.27	2.25	5.84	9.18	5.24	6.39	2.75	4.74	2.47	4.95	3.25	2.37	4.38	2.14
67.50°	1.31	0.84	2.04	0.77	1.45	2.65	1.72	2.36	1.02	1.56	0.73	1.35	0.92	0.62	1.15	0.90	1.31
70.00°	0.57	0.66	0.64	0.86	0.85	0.45	0.70	0.69	0.96	0.59	0.63	0.51	0.82	0.51	0.52	0.51	0.57
72.50°	0.62	0.52	0.51	0.93	0.73	0.60	0.65	0.57	0.88	0.74	0.65	0.54	0.72	0.42	0.59	0.54	0.62
75.00°	0.66	0.58	0.46	0.79	0.64	0.68	0.69	0.54	0.78	0.83	0.62	0.60	0.56	0.55	0.60	0.60	0.66
77.50°	0.58	0.65	0.53	0.69	0.63	0.63	0.73	0.62	0.68	0.69	0.59	0.75	0.44	0.66	0.57	0.65	0.58
80.00°	0.52	0.70	0.58	0.74	0.64	0.56	0.76	0.61	0.59	0.61	0.59	0.82	0.53	0.56	0.53	0.54	0.52
82.50°	0.52	0.75	0.59	0.79	0.67	0.46	0.78	0.52	0.56	0.68	0.59	0.71	0.61	0.49	0.49	0.43	0.52
85.00°	0.57	0.79	0.57	0.79	0.68	0.49	0.71	0.57	0.60	0.70	0.52	0.58	0.65	0.54	0.52	0.50	0.57
87.50°	0.76	0.78	0.54	0.74	0.67	0.70	0.65	0.73	0.60	0.62	0.47	0.45	0.69	0.61	0.61	0.57	0.76
90.00°	0.85	0.69	0.57	0.55	0.61	0.76	0.70	0.72	0.52	0.57	0.54	0.40	0.72	0.71	0.55	0.55	0.85
92.50°	0.68	0.65	0.64	0.45	0.51	0.65	0.72	0.60	0.56	0.60	0.58	0.48	0.73	0.75	0.40	0.54	0.68
95.00°	0.59	0.66	0.65	0.58	0.51	0.58	0.55	0.68	0.72	0.58	0.56	0.59	0.64	0.57	0.40	0.59	0.59
97.50°	0.63	0.68	0.61	0.65	0.60	0.55	0.44	0.84	0.73	0.50	0.52	0.72	0.55	0.46	0.45	0.62	0.63
100.00°	0.69	0.71	0.60	0.62	0.59	0.56	0.65	0.87	0.57	0.50	0.41	0.69	0.46	0.50	0.53	0.55	0.69
102.50°	0.76	0.74	0.61	0.61	0.49	0.58	0.78	0.85	0.54	0.61	0.37	0.52	0.39	0.59	0.62	0.51	0.76
105.00°	0.79	0.78	0.65	0.64	0.50	0.62	0.56	0.70	0.60	0.68	0.50	0.49	0.38	0.79	0.56	0.55	0.79
107.50°	0.77	0.82	0.69	0.65	0.56	0.66	0.39	0.51	0.60	0.70	0.61	0.56	0.41	0.86	0.46	0.60	0.77
110.00°	0.77	0.87	0.72	0.64	0.59	0.70	0.39	0.53	0.55	0.66	0.67	0.62	0.50	0.75	0.53	0.71	0.77
112.50°	0.79	1.56	0.74	0.64	0.60	0.74	0.38	0.60	0.56	0.58	0.73	0.68	0.50	0.68	0.64	1.10	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	1233	1233	1233	1233	1200	1200	1200	1200	1140	1140	1140	1085	1085	1085	1034	1034	1010
	1	1171	1141	1114	1089	1142	1115	1091	1069	1067	1048	1030	1023	1008	994	982	970	948
	2	1109	1055	1011	974	1082	1034	994	960	995	962	934	959	933	909	926	905	884
	3	1048	978	923	880	1024	961	911	870	928	887	852	899	864	835	871	842	824
	4	991	908	848	801	970	894	838	795	867	820	782	842	802	769	819	785	769
	5	938	846	782	735	918	834	775	730	812	760	721	791	746	712	771	733	718
	6	888	791	726	679	870	781	720	675	762	708	668	744	697	661	727	686	672
	7	842	741	676	630	826	732	671	627	716	661	621	701	652	616	686	643	631
	8	800	696	632	587	785	689	628	585	675	620	580	661	612	576	649	605	594
	9	760	656	592	549	747	650	589	548	637	582	544	626	576	540	615	570	560
	10	724	620	558	516	712	614	555	514	603	549	512	593	544	509	584	538	530

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	43.6 fc	5.0 ft
6.5 ft	31.2 fc	5.9 ft
7.5 ft	23.4 fc	6.8 ft
8.0 ft	20.6 fc	7.3 ft
10.0 ft	13.2 fc	9.1 ft
12.0 ft	9.2 fc	10.9 ft
14.0 ft	6.7 fc	12.7 ft
16.0 ft	5.2 fc	14.5 ft
20.0 ft	3.3 fc	18.2 ft
24.0 ft	2.3 fc	21.8 ft
28.0 ft	1.7 fc	25.4 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	45529	45529	45529
45.00°	5387	6582	6955
55.00°	2478	3279	3364
65.00°	175	337	184
75.00°	87	61	86
85.00°	226	227	271

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	8.6	9.6	9.0	10.0	10.4	9.4	10.5	9.9	10.9	11.2
	3H	8.4	9.3	8.8	9.7	10.1	9.3	10.2	9.7	10.6	11.0
	4H	8.3	9.1	8.8	9.6	10.0	9.2	10.0	9.6	10.4	10.9
	6H	8.2	9.0	8.7	9.4	9.9	9.1	9.8	9.5	10.3	10.7
	8H	8.1	8.9	8.6	9.3	9.8	9.0	9.7	9.5	10.2	10.7
	12H	8.1	8.8	8.6	9.2	9.7	9.0	9.7	9.5	10.1	10.6
4H	2H	8.3	9.2	8.8	9.6	10.0	9.2	10.1	9.7	10.5	11.0
	3H	8.1	8.8	8.6	9.3	9.8	9.1	9.7	9.5	10.2	10.7
	4H	8.0	8.6	8.5	9.1	9.6	8.9	9.5	9.4	10.0	10.6
	6H	7.9	8.4	8.4	9.0	9.5	8.8	9.4	9.4	9.9	10.4
	8H	7.9	8.3	8.4	8.9	9.4	8.8	9.3	9.3	9.8	10.3
	12H	7.8	8.2	8.4	8.8	9.3	8.7	9.2	9.3	9.7	10.2
8H	4H	7.8	8.3	8.4	8.8	9.4	8.8	9.3	9.3	9.8	10.3
	6H	7.7	8.1	8.3	8.7	9.2	8.7	9.1	9.2	9.6	10.2
	8H	7.7	8.0	8.3	8.6	9.2	8.6	9.0	9.2	9.5	10.1
	12H	7.7	8.0	8.2	8.5	9.2	8.6	8.9	9.1	9.4	10.1
12H	4H	7.8	8.2	8.3	8.8	9.3	8.7	9.1	9.3	9.7	10.2
	6H	7.7	8.0	8.3	8.6	9.2	8.6	8.9	9.2	9.5	10.1
	8H	7.6	7.9	8.2	8.5	9.1	8.6	8.9	9.1	9.4	10.1

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0