

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01205_2_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
-------------	--------

Lumen Output

Output Lumens	1290
Efficacy	64.82 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.62
Two luminaires, plane 90°	0.55
Four luminaires	0.71

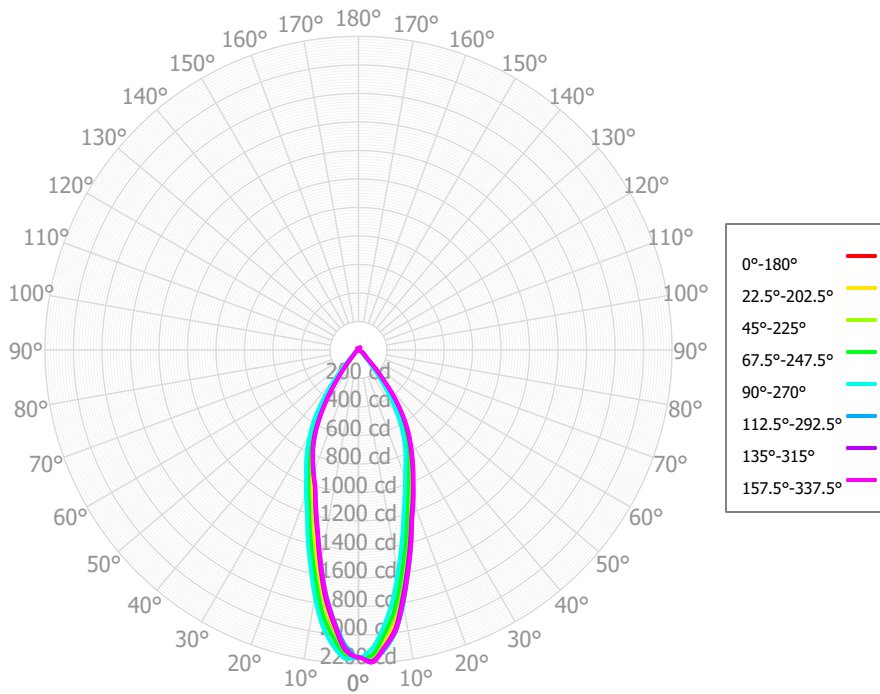
Full Beam Angle

0° - 180°	37°
90° - 270°	37°

IES File Header Contents

Keyword	Value
TEST	SP-01205_2_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 SO
LUMINAIRE	N/A
OTHER	Beam Angle: 37 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°	183.66	14.24%	90.00° - 100.00°	0.59	0.05%
10.00° - 20.00°	360.80	27.97%	100.00° - 110.00°	0.56	0.04%
20.00° - 30.00°	375.46	29.11%	100.00° - 120.00°	1.25	0.10%
30.00° - 40.00°	247.75	19.21%	120.00° - 130.00°	1.32	0.10%
40.00° - 50.00°	66.60	5.16%	130.00° - 140.00°	2.66	0.21%
50.00° - 60.00°	27.84	2.16%	140.00° - 150.00°	7.23	0.56%
60.00° - 70.00°	7.36	0.57%	150.00° - 160.00°	4.40	0.34%
70.00° - 80.00°	0.59	0.05%	160.00° - 170.00°	1.70	0.13%
80.00° - 90.00°	0.60	0.05%	170.00° - 180.00°	0.13	0.01%
0.00° - 90.00°	1270.65	98.51%	0.00° - 180.00°	1289.93	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°	2157.05	2157.05	2157.05	2157.05	2157.05	2157.05	2157.05	2157.05	2157.05	2157.05	2157.05	2157.05	2157.05	2157.05	2157.05	2157.05	2157.05
2.50°	2166.50	2156.73	2144.03	2145.61	2101.47	2078.13	2110.69	2099.14	2110.17	2100.79	2141.34	2154.17	2166.41	2183.48	2185.67	2195.11	2166.50
5.00°	2072.64	2071.53	2025.27	2010.10	1960.42	1915.63	1942.19	1923.77	1965.72	1962.08	2014.57	2027.85	2079.49	2109.61	2090.36	2096.79	2072.64
7.50°	1943.92	1943.55	1885.69	1866.92	1790.83	1732.00	1765.03	1741.42	1789.19	1792.31	1866.60	1888.29	1948.62	1995.38	1974.99	1991.19	1943.92
10.00°	1757.99	1768.33	1693.62	1669.74	1585.14	1517.06	1545.48	1519.73	1581.72	1585.92	1669.44	1687.95	1761.80	1809.66	1773.81	1796.59	1757.99
12.50°	1572.57	1575.38	1506.49	1474.18	1393.99	1321.37	1328.89	1310.77	1366.87	1393.56	1466.97	1493.21	1555.81	1604.17	1577.56	1603.36	1572.57
15.00°	1387.81	1398.99	1328.80	1301.35	1217.31	1147.73	1166.23	1148.56	1200.97	1214.19	1296.05	1316.00	1375.29	1422.89	1395.93	1423.18	1387.81
17.50°	1230.53	1226.98	1170.63	1135.42	1073.68	1014.29	1012.78	1007.21	1042.53	1074.12	1127.90	1155.21	1200.83	1246.12	1232.92	1251.98	1230.53
20.00°	1100.57	1097.28	1040.90	1015.49	955.53	916.56	926.93	920.21	948.90	962.27	1018.29	1032.38	1076.86	1120.28	1110.87	1128.47	1100.57
22.50°	985.98	974.82	927.06	901.66	859.85	829.29	841.56	834.22	860.08	867.04	910.39	921.80	960.58	999.70	996.14	1010.06	985.98
25.00°	883.24	876.25	831.10	813.21	777.68	749.33	758.39	750.23	772.70	781.08	820.03	832.49	868.75	900.99	893.57	909.91	883.24
27.50°	787.66	779.93	736.10	721.34	682.07	649.28	666.78	652.15	683.45	678.52	726.49	737.71	778.73	803.25	797.03	812.61	787.66
30.00°	696.39	682.53	641.94	619.43	580.35	538.54	548.87	532.96	561.30	569.02	614.76	635.53	677.90	712.38	708.18	722.58	696.39
32.50°	595.03	584.65	537.35	513.05	463.75	416.73	428.84	412.59	439.91	448.16	500.98	522.29	575.82	619.34	611.40	626.97	595.03
35.00°	489.10	474.87	425.59	397.07	342.22	290.45	303.93	290.84	324.28	323.82	379.56	397.46	453.49	504.11	506.65	520.62	489.10
37.50°	373.55	364.60	313.26	284.50	237.30	192.89	196.30	190.84	215.15	227.88	266.47	284.25	332.38	387.92	389.26	406.38	373.55
40.00°	254.76	249.93	200.62	177.58	136.26	103.63	118.62	110.62	136.29	137.82	175.75	180.47	220.84	266.29	262.02	280.54	254.76
42.50°	166.46	146.40	129.41	101.87	90.52	69.98	66.80	65.20	71.63	90.83	103.62	110.41	121.88	159.03	170.85	179.83	166.46
45.00°	85.26	101.41	74.60	65.88	52.75	47.26	49.85	44.64	51.87	49.08	68.44	61.78	81.33	104.04	101.28	107.71	85.26
47.50°	65.90	64.86	56.54	44.81	45.42	39.51	38.31	33.34	36.33	40.75	44.46	41.37	49.07	62.84	74.05	68.77	65.90
50.00°	55.43	57.68	49.09	38.69	40.25	33.43	32.42	27.10	30.50	34.14	37.64	34.55	42.97	57.90	66.27	59.54	55.43
52.50°	47.31	50.49	42.32	33.19	34.43	28.09	27.20	22.16	24.92	28.39	31.41	28.70	37.13	52.08	56.84	50.73	47.31
55.00°	39.37	43.27	35.69	28.19	28.64	22.80	22.53	17.73	19.80	22.76	25.90	23.21	31.86	44.51	46.86	42.22	39.37
57.50°	32.64	36.11	29.87	23.22	23.39	18.20	17.93	14.40	15.54	18.73	20.97	18.95	26.33	36.74	38.06	34.51	32.64
60.00°	25.74	29.05	24.14	18.27	17.84	13.44	13.36	11.40	12.44	14.45	16.59	15.02	20.33	28.69	29.54	27.23	25.74
62.50°	15.91	20.11	14.49	11.64	10.10	6.97	8.30	6.98	8.42	8.59	11.04	9.38	13.74	19.69	19.13	18.16	15.91
65.00°	6.86	8.45	4.88	4.23	3.49	1.36	3.00	2.28	3.45	3.56	4.65	3.47	6.35	9.59	8.45	8.38	6.86
67.50°	3.42	1.85	2.51	1.64	1.85	0.84	1.18	1.22	1.02	1.93	1.79	1.77	2.03	3.62	4.39	3.86	3.42
70.00°	0.61	0.96	0.37	0.65	0.61	0.44	0.58	0.60	0.69	0.71	0.87	0.42	0.95	1.36	0.82	0.88	0.61
72.50°	0.64	0.57	0.56	0.44	0.61	0.50	0.49	0.49	0.54	0.62	0.53	0.41	0.46	0.48	0.75	0.36	0.64
75.00°	0.65	0.61	0.73	0.41	0.60	0.57	0.52	0.41	0.50	0.54	0.44	0.42	0.45	0.57	0.70	0.32	0.65
77.50°	0.63	0.60	0.73	0.54	0.57	0.63	0.47	0.40	0.50	0.46	0.50	0.46	0.45	0.57	0.64	0.44	0.63
80.00°	0.58	0.56	0.70	0.68	0.57	0.64	0.42	0.40	0.51	0.46	0.62	0.51	0.46	0.53	0.58	0.58	0.58
82.50°	0.47	0.52	0.57	0.59	0.63	0.56	0.54	0.54	0.51	0.60	0.64	0.56	0.54	0.50	0.55	0.53	0.47
85.00°	0.40	0.48	0.47	0.47	0.61	0.56	0.69	0.64	0.50	0.66	0.64	0.60	0.64	0.49	0.51	0.48	0.40
87.50°	0.37	0.48	0.46	0.54	0.49	0.71	0.62	0.48	0.58	0.62	0.56	0.61	0.61	0.59	0.49	0.51	0.37
90.00°	0.39	0.49	0.49	0.61	0.48	0.72	0.55	0.40	0.67	0.61	0.46	0.62	0.54	0.73	0.47	0.55	0.39
92.50°	0.49	0.47	0.60	0.53	0.58	0.56	0.42	0.56	0.57	0.61	0.40	0.65	0.48	0.71	0.50	0.60	0.49
95.00°	0.57	0.44	0.67	0.45	0.64	0.51	0.33	0.66	0.43	0.53	0.33	0.64	0.43	0.66	0.49	0.65	0.57
97.50°	0.64	0.45	0.68	0.41	0.68	0.58	0.56	0.61	0.48	0.38	0.45	0.54	0.53	0.69	0.42	0.70	0.64
100.00°	0.63	0.46	0.71	0.36	0.64	0.60	0.73	0.57	0.54	0.44	0.55	0.48	0.65	0.73	0.38	0.71	0.63
102.50°	0.55	0.49	0.75	0.29	0.55	0.59	0.58	0.55	0.50	0.63	0.53	0.53	0.50	0.65	0.40	0.59	0.55
105.00°	0.50	0.53	0.67	0.27	0.56	0.56	0.46	0.54	0.47	0.64	0.51	0.55	0.33	0.57	0.48	0.52	0.50
107.50°	0.46	0.42	0.48	0.40	0.62	0.53	0.40	0.57	0.60	0.59	0.47	0.52	0.47	0.45	0.63	0.58	0.46
110.00°	0.51	0.32	0.48	0.52	0.61	0.58	0.37	0.53	0.72	0.49	0.45	0.59	0.60	0.35	0.67	0.60	0.51
112.50°	0.60	0.48	0.61	0.59	0.58	0.65	0.46	0.41	0.72	0.38	0.49	0.77	0.51	0.50	0.61	0.52	0.60

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	1531	1531	1531	1531	1493	1493	1493	1493	1423	1423	1423	1358	1358	1358	1299	1299	1271
	1	1460	1425	1394	1365	1427	1395	1367	1342	1340	1317	1297	1289	1271	1255	1242	1228	1202
	2	1389	1327	1276	1233	1359	1304	1257	1218	1259	1221	1188	1218	1187	1160	1180	1155	1131
	3	1321	1239	1176	1126	1294	1220	1162	1116	1184	1135	1096	1150	1110	1076	1119	1086	1064
	4	1256	1160	1090	1037	1231	1144	1080	1030	1114	1059	1016	1086	1040	1002	1060	1021	1001
	5	1194	1089	1015	961	1172	1076	1007	956	1051	991	946	1027	976	936	1006	961	943
	6	1137	1025	949	895	1117	1014	943	892	992	930	884	973	918	877	954	907	890
	7	1083	967	891	838	1065	957	886	835	939	876	829	922	866	824	906	856	841
	8	1033	914	839	787	1017	906	834	785	890	826	780	876	818	776	862	810	797
	9	987	866	792	742	972	859	788	740	846	782	737	833	775	733	821	769	756
	10	944	822	750	701	930	816	747	700	805	741	697	794	735	694	783	730	719

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	71.3 fc	3.7 ft
6.5 ft	51.1 fc	4.4 ft
7.5 ft	38.3 fc	5.0 ft
8.0 ft	33.7 fc	5.4 ft
10.0 ft	21.6 fc	6.7 ft
12.0 ft	15.0 fc	8.1 ft
14.0 ft	11.0 fc	9.4 ft
16.0 ft	8.4 fc	10.8 ft
20.0 ft	5.4 fc	13.5 ft
24.0 ft	3.7 fc	16.1 ft
28.0 ft	2.8 fc	18.8 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	74483	74483	74483
45.00°	4163	3643	2576
55.00°	2370	2149	1724
65.00°	560	399	285
75.00°	87	97	80
85.00°	157	187	241

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	8.5	9.5	8.9	9.8	10.2	4.5	5.5	4.9	5.9	6.2
	3H	8.3	9.2	8.8	9.6	10.0	4.4	5.2	4.8	5.6	6.0
	4H	8.2	9.0	8.7	9.4	9.8	4.3	5.1	4.7	5.5	5.9
	6H	8.1	8.9	8.6	9.3	9.7	4.2	4.9	4.6	5.3	5.7
	8H	8.1	8.8	8.5	9.2	9.6	4.1	4.8	4.6	5.2	5.7
	12H	8.0	8.7	8.5	9.1	9.6	4.1	4.7	4.6	5.2	5.6
4H	2H	8.3	9.1	8.7	9.5	9.9	4.3	5.1	4.8	5.5	5.9
	3H	8.1	8.8	8.6	9.2	9.6	4.2	4.8	4.6	5.2	5.7
	4H	8.0	8.6	8.5	9.0	9.5	4.0	4.6	4.5	5.1	5.5
	6H	7.9	8.4	8.4	8.9	9.4	3.9	4.4	4.4	4.9	5.4
	8H	7.8	8.3	8.3	8.8	9.3	3.9	4.4	4.4	4.8	5.3
	12H	7.8	8.2	8.3	8.7	9.2	3.9	4.3	4.4	4.8	5.3
8H	4H	7.8	8.3	8.3	8.8	9.3	3.9	4.3	4.4	4.8	5.3
	6H	7.7	8.1	8.2	8.6	9.1	3.8	4.1	4.3	4.7	5.2
	8H	7.6	8.0	8.2	8.5	9.0	3.7	4.1	4.3	4.6	5.1
	12H	7.6	7.9	8.1	8.4	9.0	3.7	4.0	4.3	4.5	5.2
12H	4H	7.8	8.1	8.3	8.7	9.2	3.8	4.2	4.3	4.7	5.2
	6H	7.6	8.0	8.2	8.5	9.0	3.7	4.0	4.3	4.5	5.1
	8H	7.6	7.9	8.1	8.4	9.0	3.7	4.0	4.2	4.5	5.1

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0