

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01211_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
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Lumen Output

Output Lumens	1353
Efficacy	67.98 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.87
Two luminaires, plane 90°	0.82
Four luminaires	0.84

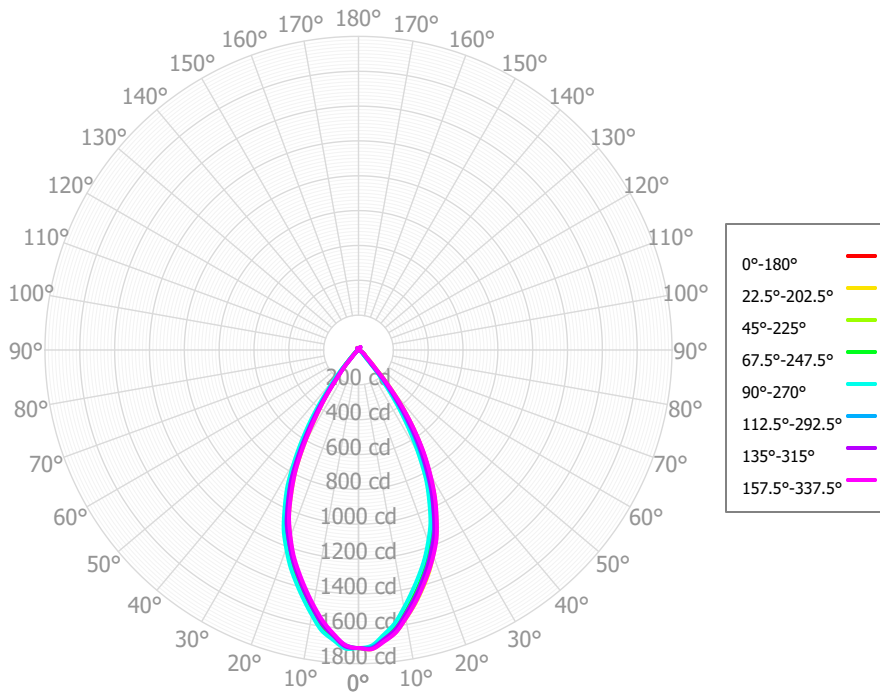
Full Beam Angle

0° - 180°	55°
90° - 270°	55°

IES File Header Contents

Keyword	Value
TEST	SP-01211_2_M-20L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/11/2021
ISSUEDATE	2/25/2021
LUMCAT	SGRTE8XT 20L 35K XW XX AR8466XT SG SO
LUMINAIRE	N/A
OTHER	Beam Angle: 55 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°	156.44	11.56%	90.00° - 100.00°	0.61	0.04%
10.00° - 20.00°	381.51	28.20%	100.00° - 110.00°	0.60	0.04%
20.00° - 30.00°	444.98	32.89%	100.00° - 120.00°	1.41	0.10%
30.00° - 40.00°	266.34	19.69%	120.00° - 130.00°	1.41	0.10%
40.00° - 50.00°	58.27	4.31%	130.00° - 140.00°	2.38	0.18%
50.00° - 60.00°	20.84	1.54%	140.00° - 150.00°	6.56	0.49%
60.00° - 70.00°	5.64	0.42%	150.00° - 160.00°	3.56	0.26%
70.00° - 80.00°	0.63	0.05%	160.00° - 170.00°	1.42	0.11%
80.00° - 90.00°	0.63	0.05%	170.00° - 180.00°	0.14	0.01%
0.00° - 90.00°	1335.27	98.71%	0.00° - 180.00°	1352.78	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°	1711.27	1711.27	1711.27	1711.27	1711.27	1711.27	1711.27	1711.27	1711.27	1711.27	1711.27	1711.27	1711.27	1711.27	1711.27	1711.27	1711.27
2.50°	1715.44	1719.53	1708.94	1707.16	1699.66	1696.47	1703.89	1696.34	1701.23	1701.92	1705.60	1704.76	1715.74	1709.32	1716.18	1719.62	1715.44
5.00°	1675.31	1678.62	1666.72	1662.89	1642.62	1645.02	1646.64	1636.50	1647.38	1644.36	1656.33	1658.16	1670.82	1668.50	1668.51	1681.10	1675.31
7.50°	1630.04	1636.01	1612.73	1607.23	1584.45	1583.04	1588.98	1568.91	1586.10	1584.54	1599.62	1603.43	1624.32	1619.95	1620.28	1637.09	1630.04
10.00°	1557.88	1565.58	1542.32	1534.03	1502.35	1502.83	1506.50	1487.51	1504.09	1503.03	1520.88	1522.36	1544.03	1544.55	1544.62	1564.83	1557.88
12.50°	1485.11	1494.77	1466.93	1455.88	1420.34	1417.96	1424.01	1403.82	1418.70	1420.58	1441.02	1440.80	1462.88	1467.95	1468.87	1491.71	1485.11
15.00°	1409.36	1418.50	1388.62	1375.37	1340.03	1336.95	1341.04	1320.97	1332.73	1332.73	1357.97	1357.68	1382.81	1387.36	1389.87	1414.40	1409.36
17.50°	1332.39	1341.49	1309.45	1294.23	1259.22	1256.87	1257.98	1238.25	1246.67	1244.70	1271.39	1271.91	1302.75	1305.80	1310.65	1336.57	1332.39
20.00°	1249.53	1254.73	1222.15	1206.32	1170.15	1168.94	1167.12	1141.45	1151.57	1145.37	1175.00	1178.09	1212.53	1221.04	1224.62	1256.38	1249.53
22.50°	1161.73	1166.26	1132.56	1116.67	1079.33	1079.16	1075.76	1042.55	1055.15	1045.73	1071.70	1077.01	1122.22	1129.77	1137.40	1170.90	1161.73
25.00°	1051.52	1057.41	1023.69	1007.64	961.78	957.79	954.75	915.45	929.68	915.29	949.96	954.88	1003.57	1018.24	1021.90	1061.76	1051.52
27.50°	938.33	946.73	909.62	893.79	841.89	829.34	832.74	784.43	800.24	784.18	817.56	823.55	884.68	899.74	905.65	949.55	938.33
30.00°	811.95	816.56	775.47	756.46	690.68	675.16	671.09	623.85	639.95	620.19	657.79	666.57	734.58	760.51	774.51	824.22	811.95
32.50°	683.41	685.73	636.06	613.57	540.08	515.37	509.82	459.32	475.61	455.77	503.24	513.38	584.51	618.64	642.60	696.03	683.41
35.00°	545.81	548.25	498.72	471.95	397.04	369.67	359.55	322.48	341.39	330.28	361.79	370.50	437.34	469.10	496.63	555.99	545.81
37.50°	407.18	410.93	361.89	330.60	257.62	226.88	211.96	189.04	210.80	205.00	237.31	242.78	290.91	327.64	351.87	415.45	407.18
40.00°	264.40	274.98	240.21	213.44	158.72	140.49	134.25	118.35	134.54	134.72	153.83	154.69	191.30	208.72	226.10	272.93	264.40
42.50°	141.18	148.62	122.21	101.57	67.21	65.37	59.30	55.04	64.56	64.86	85.86	83.09	93.04	111.19	106.73	149.82	141.18
45.00°	93.76	102.95	81.14	63.93	50.49	42.97	42.94	37.59	42.84	46.08	54.58	52.94	62.17	72.03	80.10	101.03	93.76
47.50°	54.80	61.52	57.82	41.63	34.86	30.50	27.16	25.09	26.21	27.49	30.96	29.97	32.04	42.55	54.97	61.11	54.80
50.00°	47.12	54.17	48.17	33.65	29.73	24.33	21.86	19.08	19.66	21.58	24.79	24.70	27.74	38.45	49.06	53.56	47.12
52.50°	39.72	46.86	41.51	28.47	24.70	19.27	16.67	13.74	14.08	15.72	19.20	19.79	23.43	34.21	43.07	45.92	39.72
55.00°	33.29	39.90	35.37	24.10	20.51	15.88	13.60	11.29	11.66	12.65	14.90	15.71	19.08	29.60	36.25	37.93	33.29
57.50°	26.88	32.85	29.33	19.89	16.30	12.78	10.59	9.10	9.53	9.60	11.22	12.12	14.79	24.88	29.41	30.19	26.88
60.00°	20.55	25.17	21.74	14.95	11.88	9.44	8.37	6.80	7.48	7.25	8.87	9.64	11.80	19.90	22.22	23.35	20.55
62.50°	13.92	17.33	13.83	9.88	7.54	6.07	6.11	4.48	5.45	4.91	6.26	6.88	8.77	14.17	15.01	16.07	13.92
65.00°	6.32	8.43	7.53	5.54	3.83	3.48	3.29	2.58	3.18	2.74	3.09	3.47	4.84	6.67	7.54	7.37	6.32
67.50°	0.56	0.73	1.53	1.32	0.58	1.01	0.69	0.70	0.91	0.65	0.90	1.04	1.12	1.29	0.77	0.74	0.56
70.00°	0.59	0.71	0.63	0.72	0.57	0.55	0.70	0.54	0.78	0.51	0.69	0.79	0.87	0.85	0.57	0.53	0.59
72.50°	0.59	0.70	0.66	0.72	0.58	0.39	0.72	0.50	0.79	0.38	0.58	0.61	0.64	0.51	0.38	0.40	0.59
75.00°	0.51	0.70	0.63	0.69	0.70	0.43	0.72	0.55	0.64	0.53	0.66	0.61	0.71	0.44	0.38	0.50	0.51
77.50°	0.50	0.70	0.58	0.66	0.78	0.49	0.71	0.60	0.48	0.66	0.64	0.59	0.77	0.43	0.39	0.55	0.50
80.00°	0.68	0.65	0.63	0.60	0.61	0.57	0.63	0.62	0.51	0.64	0.46	0.55	0.60	0.52	0.54	0.49	0.68
82.50°	0.76	0.61	0.71	0.54	0.46	0.65	0.56	0.65	0.55	0.61	0.39	0.57	0.46	0.55	0.68	0.45	0.76
85.00°	0.57	0.58	0.69	0.54	0.46	0.59	0.57	0.65	0.53	0.58	0.56	0.74	0.65	0.41	0.67	0.46	0.57
87.50°	0.43	0.55	0.67	0.55	0.47	0.53	0.59	0.66	0.50	0.55	0.62	0.76	0.83	0.34	0.65	0.47	0.43
90.00°	0.46	0.53	0.59	0.54	0.53	0.53	0.63	0.65	0.58	0.55	0.49	0.53	0.79	0.42	0.57	0.50	0.46
92.50°	0.50	0.51	0.50	0.52	0.60	0.54	0.65	0.63	0.67	0.55	0.42	0.41	0.74	0.47	0.53	0.52	0.50
95.00°	0.60	0.49	0.57	0.57	0.67	0.46	0.55	0.52	0.69	0.54	0.46	0.50	0.69	0.48	0.69	0.49	0.60
97.50°	0.67	0.48	0.65	0.62	0.71	0.37	0.46	0.40	0.70	0.53	0.48	0.60	0.64	0.52	0.80	0.46	0.67
100.00°	0.65	0.49	0.60	0.65	0.62	0.41	0.50	0.44	0.58	0.54	0.49	0.69	0.60	0.62	0.63	0.43	0.65
102.50°	0.63	0.49	0.54	0.69	0.53	0.46	0.54	0.49	0.46	0.55	0.51	0.72	0.56	0.67	0.48	0.45	0.63
105.00°	0.63	0.47	0.65	0.69	0.51	0.49	0.55	0.44	0.60	0.53	0.56	0.65	0.55	0.61	0.48	0.55	0.63
107.50°	0.64	0.47	0.79	0.68	0.52	0.51	0.58	0.39	0.75	0.50	0.59	0.58	0.54	0.59	0.50	0.62	0.64
110.00°	0.70	0.52	0.69	0.71	0.70	0.53	0.63	0.61	0.68	0.54	0.60	0.49	0.56	0.62	0.59	0.61	0.70
112.50°	0.72	0.58	0.56	0.74	0.89	0.55	0.66	0.83	0.62	0.57	0.58	0.63	0.61	0.83	0.67	0.62	0.72

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	1606	1606	1606	1606	1567	1567	1567	1567	1493	1493	1493	1426	1426	1426	1364	1364	1335
	1	1532	1495	1462	1432	1497	1464	1434	1407	1406	1383	1361	1353	1334	1317	1304	1290	1263
	2	1457	1392	1339	1293	1426	1368	1319	1277	1321	1281	1247	1278	1246	1218	1239	1213	1188
	3	1385	1300	1233	1181	1357	1279	1219	1170	1242	1191	1149	1207	1164	1129	1174	1139	1116
	4	1316	1216	1142	1086	1291	1199	1131	1078	1168	1110	1064	1139	1090	1050	1112	1070	1049
	5	1251	1140	1062	1005	1228	1126	1054	1000	1100	1037	989	1076	1022	979	1053	1006	987
	6	1190	1071	992	935	1169	1060	985	931	1038	972	923	1017	960	915	998	948	930
	7	1132	1009	929	873	1113	999	923	870	980	913	864	963	903	858	946	893	878
	8	1079	952	872	818	1061	944	868	816	928	860	811	913	851	807	898	843	829
	9	1028	900	822	769	1013	893	818	767	879	811	763	866	804	760	854	798	785
	10	982	853	776	724	967	847	773	723	834	767	720	823	761	717	812	756	744

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	56.6 fc	5.9 ft
6.5 ft	40.5 fc	6.9 ft
7.5 ft	30.4 fc	8.0 ft
8.0 ft	26.7 fc	8.5 ft
10.0 ft	17.1 fc	10.7 ft
12.0 ft	11.9 fc	12.8 ft
14.0 ft	8.7 fc	14.9 ft
16.0 ft	6.7 fc	17.1 ft
20.0 ft	4.3 fc	21.4 ft
24.0 ft	3.0 fc	25.6 ft
28.0 ft	2.2 fc	29.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	59090	59090	59090
45.00°	4578	3962	2466
55.00°	2004	2129	1235
65.00°	516	615	313
75.00°	68	84	94
85.00°	226	275	182

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	7.5	8.4	7.9	8.8	9.1	1.5	2.5	1.9	2.8	3.2
	3H	7.3	8.1	7.7	8.5	8.9	1.4	2.2	1.8	2.6	3.0
	4H	7.2	8.0	7.6	8.3	8.8	1.3	2.0	1.7	2.4	2.8
	6H	7.1	7.8	7.5	8.2	8.6	1.2	1.9	1.6	2.3	2.7
	8H	7.0	7.7	7.5	8.1	8.6	1.2	1.8	1.6	2.2	2.7
	12H	7.0	7.6	7.4	8.0	8.5	1.1	1.8	1.6	2.2	2.6
4H	2H	7.3	8.1	7.7	8.5	8.9	1.3	2.1	1.8	2.5	2.9
	3H	7.1	7.7	7.5	8.2	8.6	1.2	1.8	1.6	2.2	2.7
	4H	7.0	7.5	7.4	8.0	8.5	1.1	1.6	1.5	2.1	2.6
	6H	6.9	7.4	7.4	7.8	8.3	1.0	1.5	1.5	2.0	2.5
	8H	6.8	7.3	7.3	7.7	8.2	1.0	1.4	1.5	1.9	2.4
	12H	6.8	7.1	7.3	7.7	8.2	1.0	1.4	1.5	1.9	2.4
8H	4H	6.8	7.2	7.3	7.7	8.2	0.9	1.3	1.4	1.8	2.3
	6H	6.7	7.0	7.2	7.6	8.1	0.9	1.2	1.4	1.7	2.3
	8H	6.6	6.9	7.2	7.5	8.0	0.9	1.2	1.4	1.7	2.3
	12H	6.6	6.9	7.1	7.4	8.0	1.0	1.2	1.5	1.8	2.4
12H	4H	6.7	7.1	7.2	7.6	8.1	0.8	1.2	1.4	1.7	2.2
	6H	6.6	6.9	7.2	7.4	8.0	0.8	1.1	1.4	1.6	2.2
	8H	6.6	6.8	7.1	7.4	8.0	0.8	1.1	1.4	1.6	2.2

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0