Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire
SGRTE8XT 30L 35K MD XX AR8466XT SG GL
N/A

Test Number
SP-01205_1_M-30L

Test Date
2/11/2021

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

Summary of Results

Power

Input Watts	32.2 W

Lumen Output

Output Lumens	1880
Efficacy	58.4 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.5
Two luminaires, plane 90°	0.5
Four luminaires	0.68

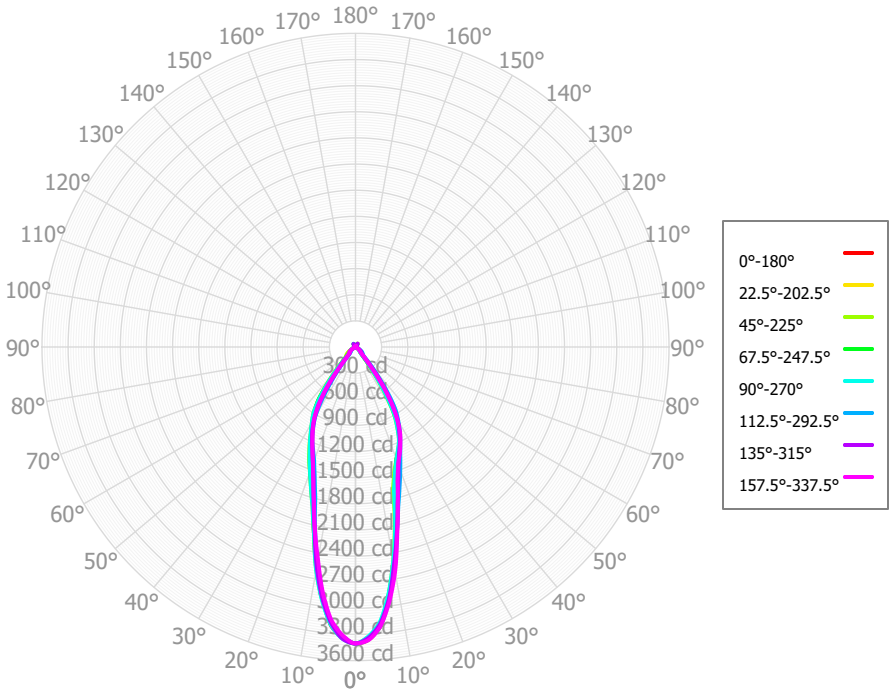
Full Beam Angle

0° - 180°	33°
90° - 270°	33°

IES File Header Contents

Keyword	Value
TEST	SP-01205_1_M-30L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/11/2021
ISSUEDATE	3/2/2021
LUMCAT	SGRTE8XT 30L 35K MD XX AR8466XT SG GL
LUMINAIRE	N/A
OTHER	Beam Angle: 33 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°	286.21	15.22%	90.00° - 100.00°	0.90	0.05%
10.00° - 20.00°	518.15	27.56%	100.00° - 110.00°	0.91	0.05%
20.00° - 30.00°	547.00	29.09%	100.00° - 120.00°	2.03	0.11%
30.00° - 40.00°	349.82	18.60%	120.00° - 130.00°	1.62	0.09%
40.00° - 50.00°	84.66	4.50%	130.00° - 140.00°	2.54	0.14%
50.00° - 60.00°	51.16	2.72%	140.00° - 150.00°	13.55	0.72%
60.00° - 70.00°	12.15	0.65%	150.00° - 160.00°	6.35	0.34%
70.00° - 80.00°	0.92	0.05%	160.00° - 170.00°	2.25	0.12%
80.00° - 90.00°	0.86	0.05%	170.00° - 180.00°	0.16	0.01%
0.00° - 90.00°	1850.93	98.44%	0.00° - 180.00°	1880.33	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°	3404.25	3404.25	3404.25	3404.25	3404.25	3404.25	3404.25	3404.25	3404.25	3404.25	3404.25	3404.25	3404.25	3404.25	3404.25	3404.25	3404.25
2.50°	3341.26	3367.61	3340.87	3364.81	3329.56	3328.64	3355.37	3317.62	3344.32	3331.80	3350.58	3330.33	3355.87	3355.05	3345.63	3370.07	3341.26
5.00°	3225.35	3213.94	3196.86	3226.58	3177.99	3178.12	3185.27	3153.61	3212.44	3179.57	3200.06	3192.43	3209.26	3202.16	3201.80	3228.72	3225.35
7.50°	2892.89	2934.02	2887.72	2924.22	2877.15	2889.90	2913.10	2856.51	2903.51	2890.58	2927.17	2882.69	2937.00	2930.03	2929.25	2958.05	2892.89
10.00°	2524.48	2565.44	2493.51	2563.20	2495.74	2512.53	2563.67	2481.81	2575.47	2513.06	2595.40	2511.84	2601.19	2589.25	2543.88	2617.56	2524.48
12.50°	2128.65	2119.73	2085.96	2115.70	2104.86	2146.45	2164.60	2149.72	2199.30	2175.12	2200.31	2170.23	2199.86	2188.74	2193.50	2209.99	2128.65
15.00°	1729.86	1783.99	1672.92	1765.49	1709.89	1786.32	1858.46	1837.97	1883.19	1858.00	1904.13	1836.75	1903.40	1896.19	1868.33	1876.85	1729.86
17.50°	1546.88	1526.84	1487.18	1532.95	1509.68	1559.58	1601.53	1614.56	1687.59	1657.05	1696.84	1663.83	1697.23	1680.80	1629.75	1603.40	1546.88
20.00°	1375.04	1381.88	1374.46	1377.48	1376.94	1389.90	1429.48	1424.64	1503.92	1505.80	1528.30	1523.57	1524.63	1500.93	1442.05	1432.05	1375.04
22.50°	1287.65	1303.34	1280.11	1299.85	1275.07	1273.79	1293.42	1288.25	1339.66	1353.08	1388.37	1370.92	1375.78	1342.08	1310.68	1327.80	1287.65
25.00°	1198.58	1199.51	1190.31	1199.81	1181.35	1175.65	1178.60	1167.54	1197.44	1199.88	1249.12	1216.57	1240.34	1215.22	1206.46	1219.33	1198.58
27.50°	1065.62	1083.59	1041.21	1081.14	1040.77	1054.33	1070.96	1057.64	1084.91	1083.90	1110.28	1100.42	1112.76	1103.66	1087.70	1108.59	1065.62
30.00°	923.73	900.10	881.66	901.57	891.24	926.99	936.91	950.14	972.94	977.39	997.48	987.41	999.86	981.44	963.38	955.23	923.73
32.50°	690.71	690.52	642.56	679.83	656.91	718.01	796.07	781.97	861.60	851.30	897.61	867.73	893.91	855.19	780.11	783.30	690.71
35.00°	463.83	466.05	394.49	458.54	411.51	493.74	576.03	604.49	690.55	721.55	731.95	745.12	716.36	653.38	579.40	561.46	463.83
37.50°	275.39	237.13	242.43	237.50	252.82	307.22	340.96	387.97	465.01	491.79	539.86	495.58	512.00	428.98	373.19	322.55	275.39
40.00°	117.80	145.13	96.12	134.90	100.36	125.51	212.21	167.83	293.67	249.76	352.52	257.29	318.77	268.22	165.73	194.10	117.80
42.50°	95.11	84.26	83.35	86.08	80.53	94.49	96.75	127.94	163.59	190.92	166.66	177.93	128.81	121.59	118.57	94.39	95.11
45.00°	77.50	75.54	71.93	68.83	63.51	73.85	91.30	95.77	114.37	144.73	134.75	106.28	91.11	105.55	96.44	73.10	77.50
47.50°	76.81	75.09	67.45	63.11	57.09	73.36	93.22	93.53	115.51	138.35	138.88	94.30	86.65	110.21	91.45	66.92	76.81
50.00°	73.08	66.82	62.46	54.08	50.55	72.93	88.13	90.51	103.78	132.03	125.27	81.78	79.67	102.66	88.15	56.53	73.08
52.50°	61.51	57.79	52.08	44.12	42.56	63.85	82.56	74.56	85.45	105.95	108.65	66.38	72.31	93.92	73.93	45.61	61.51
55.00°	49.54	46.89	41.99	36.01	34.75	54.70	65.61	58.82	67.22	80.48	87.57	52.32	64.35	78.02	59.25	36.16	49.54
57.50°	36.75	35.92	33.83	28.28	28.28	44.89	49.06	44.97	49.04	62.18	66.01	43.39	56.35	61.81	46.67	26.81	36.75
60.00°	25.30	28.31	25.55	22.31	21.60	34.75	37.12	31.12	34.40	43.63	47.16	32.95	43.60	44.77	33.97	21.48	25.30
62.50°	16.10	20.59	16.76	16.58	13.83	22.39	25.05	17.29	20.91	23.25	28.44	18.06	30.65	27.90	19.16	16.16	16.10
65.00°	8.64	10.68	8.89	9.28	6.99	11.13	12.05	5.59	11.12	5.87	14.75	6.59	15.47	13.92	5.57	8.55	8.64
67.50°	3.59	1.69	4.14	1.85	3.56	5.19	1.25	2.70	2.23	3.12	1.66	3.03	1.13	1.30	2.90	1.49	3.59
70.00°	0.99	1.14	0.69	1.37	1.05	0.60	0.95	0.56	0.87	0.99	1.12	0.69	1.03	1.05	0.62	1.24	0.99
72.50°	1.16	0.69	0.72	1.13	1.14	0.84	0.74	0.78	0.82	1.03	0.64	0.65	0.94	0.85	0.62	1.02	1.16
75.00°	1.14	0.76	0.73	1.00	1.18	0.98	0.79	0.90	0.86	1.01	0.69	0.66	0.91	0.91	0.65	1.00	1.14
77.50°	0.95	0.82	0.71	0.87	1.12	0.83	0.85	0.78	0.91	0.83	0.72	0.76	0.88	0.94	0.76	0.94	0.95
80.00°	0.81	0.81	0.70	0.90	0.99	0.76	0.92	0.73	0.81	0.70	0.59	0.81	0.84	0.91	0.86	0.69	0.81
82.50°	0.73	0.80	0.72	0.91	0.75	0.84	0.91	0.80	0.70	0.71	0.51	0.81	0.82	0.90	0.91	0.50	0.73
85.00°	0.74	0.82	0.69	0.88	0.60	0.90	0.71	0.85	0.75	0.71	0.63	0.85	0.89	0.96	0.93	0.58	0.74
87.50°	0.83	0.80	0.60	0.86	0.60	0.95	0.64	0.86	0.81	0.70	0.73	0.93	0.93	1.03	0.89	0.66	0.83
90.00°	0.84	0.73	0.56	0.89	0.68	0.93	0.79	0.88	0.87	0.69	0.74	0.99	0.93	1.15	0.87	0.74	0.84
92.50°	0.81	0.70	0.57	0.90	0.86	0.84	0.85	0.90	0.91	0.66	0.72	1.04	0.89	1.15	0.89	0.84	0.81
95.00°	0.82	0.77	0.66	0.85	0.94	0.80	0.77	0.90	0.72	0.65	0.61	0.94	0.74	0.94	0.90	0.98	0.82
97.50°	0.84	0.81	0.82	0.88	0.93	0.84	0.75	0.88	0.59	0.68	0.57	0.74	0.69	0.83	0.90	1.01	0.84
100.00°	0.86	0.82	0.90	1.14	1.01	0.78	0.80	0.82	0.83	0.75	0.70	0.77	0.83	0.88	0.83	0.85	0.86
102.50°	0.88	0.78	0.93	1.28	1.18	0.61	0.85	0.72	1.00	0.87	0.83	0.92	0.90	0.89	0.66	0.82	0.88
105.00°	0.73	0.67	0.85	1.15	1.17	0.58	0.90	0.68	0.85	0.88	0.99	0.93	0.87	0.84	0.63	0.96	0.73
107.50°	0.54	0.74	0.70	1.10	1.04	0.66	0.86	0.69	0.71	0.81	1.00	0.87	0.84	0.91	0.73	1.10	0.54
110.00°	0.76	1.00	0.79	1.22	1.03	0.72	0.75	0.73	0.63	0.84	0.80	0.84	0.83	1.11	0.83	1.22	0.76
112.50°	1.05	1.34	1.01	1.21	1.08	0.76	0.71	0.78	0.63	0.95	0.72	0.82	0.90	1.11	0.93	1.43	1.05

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

	ρfc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	ρcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	ρw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
RCR	0	2231	2231	2231	2231	2176	2176	2176	2176	2073	2073	2073	1978	1978	1978	1892	1892	1892	1851
	1	2129	2078	2032	1990	2080	2034	1993	1956	1953	1920	1890	1878	1852	1829	1809	1789	1771	1751
	2	2026	1936	1861	1799	1981	1901	1833	1776	1835	1780	1733	1775	1731	1692	1719	1684	1652	1649
	3	1926	1808	1716	1643	1886	1780	1696	1628	1726	1656	1599	1677	1619	1570	1631	1583	1542	1551
	4	1832	1693	1592	1514	1796	1670	1576	1504	1626	1546	1483	1585	1517	1462	1547	1490	1443	1461
	5	1743	1590	1483	1405	1711	1571	1471	1397	1534	1448	1382	1500	1426	1367	1468	1404	1353	1377
	6	1660	1498	1388	1310	1631	1481	1379	1304	1450	1360	1293	1422	1343	1282	1395	1325	1271	1301
	7	1583	1414	1304	1227	1557	1400	1296	1223	1374	1282	1215	1349	1267	1206	1326	1253	1198	1232
	8	1511	1338	1229	1154	1487	1326	1223	1151	1304	1211	1144	1282	1199	1138	1262	1188	1132	1168
	9	1444	1269	1162	1089	1422	1259	1157	1087	1239	1147	1082	1221	1137	1077	1204	1127	1071	1109
	10	1382	1206	1101	1031	1362	1197	1097	1029	1180	1088	1025	1164	1080	1021	1149	1072	1017	1056

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	112.5 fc	3.0 ft
6.5 ft	80.6 fc	3.5 ft
7.5 ft	60.5 fc	4.1 ft
8.0 ft	53.2 fc	4.4 ft
10.0 ft	34.0 fc	5.4 ft
12.0 ft	23.6 fc	6.5 ft
14.0 ft	17.4 fc	7.6 ft
16.0 ft	13.3 fc	8.7 ft
20.0 ft	8.5 fc	10.9 ft
24.0 ft	5.9 fc	13.1 ft
28.0 ft	4.3 fc	15.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	117549	117549	117549
45.00°	3785	3513	3101
55.00°	2983	2528	2092
65.00°	706	726	571
75.00°	152	98	157
85.00°	294	272	239

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	6.7	7.7	7.1	8.0	8.4	8.8	9.8	9.2	10.1	10.5
	3H	6.5	7.4	7.0	7.8	8.2	8.6	9.5	9.0	9.8	10.2
	4H	6.4	7.2	6.9	7.6	8.1	8.5	9.3	8.9	9.7	10.1
	6H	6.4	7.1	6.8	7.5	7.9	8.4	9.1	8.9	9.5	10.0
	8H	6.3	7.0	6.8	7.4	7.9	8.4	9.0	8.8	9.5	9.9
	12H	6.3	6.9	6.7	7.3	7.8	8.3	8.9	8.8	9.4	9.8
4H	2H	6.5	7.3	7.0	7.7	8.1	8.7	9.5	9.1	9.8	10.3
	3H	6.3	7.0	6.8	7.4	7.9	8.5	9.1	8.9	9.6	10.0
	4H	6.2	6.8	6.7	7.3	7.7	8.4	8.9	8.8	9.4	9.9
	6H	6.1	6.6	6.6	7.1	7.6	8.3	8.8	8.8	9.2	9.7
	8H	6.1	6.5	6.6	7.0	7.5	8.2	8.7	8.7	9.1	9.6
	12H	6.0	6.4	6.6	6.9	7.5	8.1	8.5	8.7	9.1	9.6
8H	4H	6.1	6.5	6.6	7.0	7.5	8.2	8.6	8.7	9.1	9.6
	6H	6.0	6.3	6.5	6.9	7.4	8.1	8.4	8.6	9.0	9.5
	8H	5.9	6.2	6.5	6.8	7.3	8.0	8.3	8.6	8.9	9.4
	12H	5.9	6.2	6.4	6.7	7.3	8.0	8.3	8.5	8.8	9.4
12H	4H	6.0	6.4	6.5	6.9	7.4	8.1	8.5	8.6	9.0	9.5
	6H	5.9	6.2	6.5	6.7	7.3	8.0	8.3	8.6	8.8	9.4
	8H	5.9	6.1	6.4	6.7	7.3	8.0	8.2	8.5	8.8	9.4

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0