

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01211_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
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Lumen Output

Output Lumens	2030
Efficacy	63.04 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.82
Two luminaires, plane 90°	0.83
Four luminaires	0.86

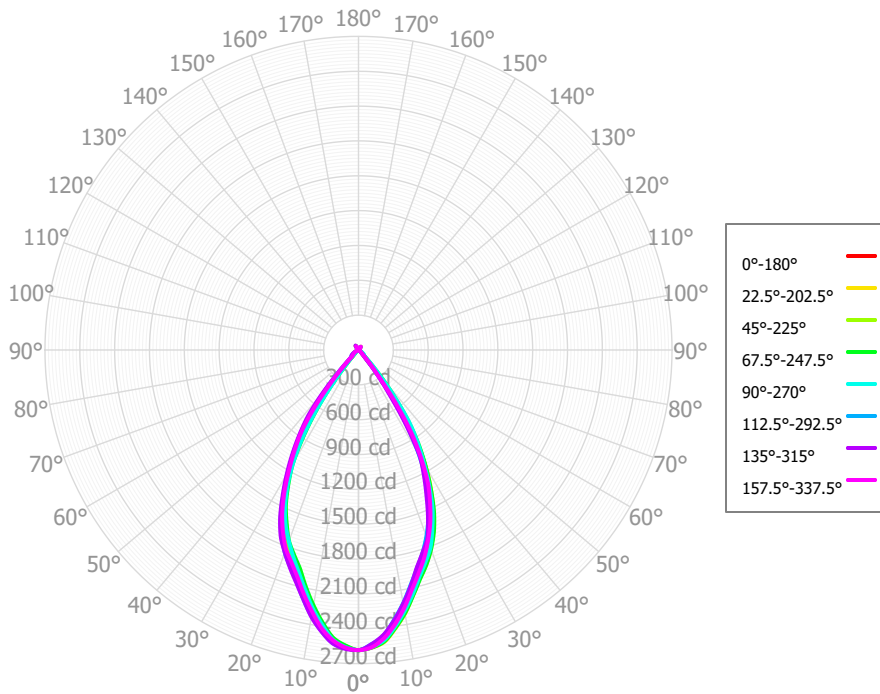
Full Beam Angle

0° - 180°	56°
90° - 270°	56°

IES File Header Contents

Keyword	Value
TEST	SP-01211_1_M-30L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/11/2021
ISSUEDATE	2/25/2021
LUMCAT	SGRTE8XT 30L 35K XW XX AR8466XT SG GL
LUMINAIRE	N/A
OTHER	Beam Angle: 43 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°	234.26	11.54%	90.00° - 100.00°	0.97	0.05%
10.00° - 20.00°	563.74	27.77%	100.00° - 110.00°	0.91	0.04%
20.00° - 30.00°	678.90	33.45%	100.00° - 120.00°	2.03	0.10%
30.00° - 40.00°	421.15	20.75%	120.00° - 130.00°	1.65	0.08%
40.00° - 50.00°	68.86	3.39%	130.00° - 140.00°	2.88	0.14%
50.00° - 60.00°	27.63	1.36%	140.00° - 150.00°	12.41	0.61%
60.00° - 70.00°	8.00	0.39%	150.00° - 160.00°	4.16	0.21%
70.00° - 80.00°	0.97	0.05%	160.00° - 170.00°	1.14	0.06%
80.00° - 90.00°	0.94	0.05%	170.00° - 180.00°	0.17	0.01%
0.00° - 90.00°	2004.44	98.75%	0.00° - 180.00°	2029.85	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°	2584.71	2584.71	2584.71	2584.71	2584.71	2584.71	2584.71	2584.71	2584.71	2584.71	2584.71	2584.71	2584.71	2584.71	2584.71	2584.71	2584.71
2.50°	2551.40	2565.71	2561.68	2565.98	2560.68	2566.08	2576.65	2565.17	2569.24	2551.21	2565.63	2548.26	2561.62	2537.06	2537.31	2564.15	2551.40
5.00°	2496.49	2525.54	2501.79	2521.00	2509.86	2534.40	2537.42	2511.16	2521.81	2501.98	2494.90	2489.48	2506.18	2468.90	2463.61	2494.84	2496.49
7.50°	2388.98	2419.97	2411.51	2416.36	2403.16	2441.09	2445.81	2418.72	2413.47	2383.79	2387.41	2368.06	2388.78	2344.91	2349.30	2387.01	2388.98
10.00°	2264.71	2305.43	2289.13	2302.15	2283.14	2327.76	2334.81	2290.55	2293.09	2256.35	2258.13	2233.06	2262.49	2214.43	2218.87	2258.94	2264.71
12.50°	2129.84	2165.09	2162.45	2167.41	2153.54	2197.24	2197.46	2159.65	2153.19	2116.88	2117.28	2091.39	2118.33	2073.57	2080.74	2118.55	2129.84
15.00°	1992.37	2037.16	2031.96	2043.98	2022.28	2062.39	2073.42	2026.68	2026.58	1976.51	1992.89	1948.72	1984.82	1945.15	1940.22	1994.72	1992.37
17.50°	1885.73	1937.86	1916.44	1940.46	1915.39	1956.59	1964.51	1918.39	1917.65	1880.98	1875.50	1847.83	1868.69	1833.05	1832.52	1879.19	1885.73
20.00°	1784.53	1823.36	1811.82	1826.22	1811.23	1856.06	1855.67	1825.87	1808.64	1785.70	1766.49	1750.70	1753.32	1709.10	1732.45	1749.60	1784.53
22.50°	1619.64	1680.60	1669.28	1696.54	1661.08	1720.34	1746.91	1699.14	1699.53	1646.78	1660.34	1616.80	1638.97	1572.18	1564.84	1614.37	1619.64
25.00°	1447.23	1525.43	1504.09	1538.69	1508.18	1580.33	1597.06	1554.62	1553.64	1505.39	1504.75	1481.10	1498.15	1422.30	1385.83	1459.24	1447.23
27.50°	1292.56	1351.18	1329.49	1347.47	1317.65	1393.53	1414.93	1382.14	1373.98	1330.95	1336.27	1310.35	1327.71	1260.69	1221.25	1297.88	1292.56
30.00°	1138.97	1154.94	1150.27	1155.49	1127.29	1203.68	1235.20	1197.80	1198.34	1154.18	1159.58	1135.26	1128.63	1042.80	1058.22	1081.35	1138.97
32.50°	846.90	930.91	914.72	962.76	950.22	1031.26	1057.01	1022.67	1025.75	959.35	981.33	883.13	903.05	782.89	756.51	851.50	846.90
35.00°	555.56	672.70	657.07	743.73	766.71	857.59	880.73	850.62	830.41	755.24	726.09	631.19	642.29	520.92	447.68	562.32	555.56
37.50°	324.84	378.86	413.55	503.16	512.60	636.32	705.47	618.69	620.94	502.90	460.86	380.99	354.68	257.68	264.49	262.95	324.84
40.00°	110.02	189.00	174.45	298.49	276.53	418.05	461.01	371.57	390.67	276.83	264.63	158.06	183.06	128.27	88.68	150.54	110.02
42.50°	73.50	89.90	93.54	118.36	159.79	235.13	186.89	218.48	149.72	150.17	73.36	95.25	85.08	66.41	63.65	58.65	73.50
45.00°	40.47	43.54	49.72	51.73	63.62	75.70	101.61	83.05	69.01	55.64	56.58	42.95	45.39	41.32	40.00	42.92	40.47
47.50°	31.69	35.11	39.16	48.45	64.03	78.98	80.08	63.56	54.14	55.85	43.52	34.52	35.80	31.08	30.68	31.60	31.69
50.00°	23.39	28.03	34.12	43.73	62.38	80.21	74.95	58.45	49.48	55.27	41.62	27.03	28.19	24.28	21.88	24.38	23.39
52.50°	17.33	21.75	27.82	38.34	53.57	71.41	74.13	51.25	48.17	52.83	39.53	22.51	21.42	18.60	16.38	17.27	17.33
55.00°	12.09	16.95	21.39	30.41	44.10	61.94	64.73	43.91	44.72	48.76	35.14	18.27	17.22	14.56	11.37	12.60	12.09
57.50°	9.71	12.86	17.10	21.56	32.87	50.06	53.69	36.86	40.73	41.59	30.41	14.73	13.86	10.92	8.63	8.22	9.71
60.00°	7.32	9.52	12.92	15.59	22.23	37.82	42.42	29.69	33.99	32.61	23.11	11.17	11.06	8.62	6.14	6.94	7.32
62.50°	4.89	6.48	7.76	10.43	12.86	24.58	31.12	18.52	26.75	20.83	15.73	7.62	8.40	6.56	4.56	5.51	4.89
65.00°	2.84	3.84	2.78	5.96	5.79	13.12	16.69	7.93	14.59	11.18	7.91	4.55	5.08	3.85	3.05	3.16	2.84
67.50°	1.64	1.32	1.89	1.64	2.75	5.58	2.03	4.24	1.84	4.27	1.67	2.28	1.64	1.06	1.79	1.22	1.64
70.00°	0.89	0.83	1.07	0.99	0.96	0.80	1.42	0.98	0.94	0.74	1.42	0.93	1.00	1.04	0.94	1.16	0.89
72.50°	0.93	0.79	0.99	0.87	0.99	0.98	1.11	0.87	0.80	0.81	1.21	0.84	0.71	1.20	1.01	1.10	0.93
75.00°	0.89	0.78	0.93	0.80	1.04	1.00	0.88	0.80	0.83	0.80	1.09	0.87	0.72	0.99	1.06	1.03	0.89
77.50°	0.75	0.78	0.92	0.73	1.10	0.81	0.67	0.93	0.88	0.73	0.98	1.02	0.76	0.78	1.08	0.96	0.75
80.00°	0.75	0.75	0.90	0.85	1.00	0.73	0.65	1.01	0.96	0.74	0.90	1.00	0.82	0.90	1.03	0.88	0.75
82.50°	0.92	0.72	0.86	0.98	0.74	0.80	0.66	0.88	1.02	0.80	0.80	0.81	0.87	0.99	0.88	0.85	0.92
85.00°	0.95	0.76	0.83	1.01	0.78	0.89	0.88	0.78	0.85	0.79	0.67	0.84	0.85	0.75	0.86	0.94	0.95
87.50°	0.84	0.80	0.81	1.04	1.07	0.99	1.03	0.77	0.70	0.73	0.68	1.02	0.83	0.57	1.00	1.02	0.84
90.00°	0.76	0.89	0.78	0.87	1.06	1.01	0.84	0.82	0.71	0.79	0.88	0.98	0.75	0.83	1.06	1.06	0.76
92.50°	0.72	0.98	0.70	0.74	0.85	0.95	0.72	1.03	0.76	0.90	1.04	0.81	0.69	1.02	1.05	1.00	0.72
95.00°	0.79	1.00	0.69	0.88	0.83	0.81	0.87	1.11	0.99	0.92	1.14	0.80	0.71	0.94	1.00	0.79	0.79
97.50°	0.92	1.00	0.83	0.99	0.92	0.63	1.00	0.94	1.11	0.89	1.11	0.87	0.75	0.87	0.92	0.70	0.92
100.00°	0.87	0.84	0.91	0.90	0.97	0.68	1.06	0.79	0.85	0.79	0.95	0.89	0.86	0.79	0.89	0.76	0.87
102.50°	0.70	0.70	0.90	0.85	1.02	0.86	1.07	0.67	0.67	0.66	0.86	0.88	0.95	0.77	0.91	0.82	0.70
105.00°	0.81	0.65	0.89	0.91	1.05	0.81	0.95	0.65	0.73	0.69	0.83	0.98	0.97	0.88	0.87	0.89	0.81
107.50°	1.05	0.66	0.88	0.99	1.09	0.64	0.90	0.76	0.73	0.76	0.83	1.11	0.96	1.01	0.82	0.91	1.05
110.00°	1.06	0.85	0.92	1.11	1.05	0.70	0.97	0.85	0.60	0.80	0.85	1.00	0.85	1.21	0.85	0.90	1.06
112.50°	0.98	1.00	1.04	1.25	0.99	0.85	0.99	0.92	0.56	0.84	0.93	0.84	0.82	1.38	0.92	1.04	0.98

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	2410	2410	2410	2410	2351	2351	2351	2351	2241	2241	2241	2140	2140	2140	2048	2048	2004
	1	2300	2244	2194	2149	2247	2198	2153	2113	2111	2076	2043	2031	2004	1978	1958	1937	1896
	2	2188	2091	2010	1943	2141	2054	1981	1919	1984	1924	1873	1920	1871	1829	1861	1822	1784
	3	2080	1952	1853	1774	2037	1922	1831	1758	1865	1789	1727	1813	1749	1696	1764	1712	1667
	4	1977	1826	1716	1632	1939	1802	1700	1621	1755	1668	1599	1712	1638	1578	1671	1609	1577
	5	1879	1713	1597	1511	1845	1692	1584	1503	1653	1559	1487	1617	1536	1472	1583	1513	1485
	6	1787	1610	1491	1405	1756	1592	1481	1399	1560	1461	1388	1529	1443	1377	1500	1425	1399
	7	1701	1516	1396	1312	1672	1501	1388	1308	1473	1373	1299	1447	1357	1291	1423	1343	1320
	8	1620	1431	1311	1229	1594	1418	1305	1226	1394	1292	1219	1371	1280	1213	1350	1268	1247
	9	1545	1353	1235	1155	1521	1342	1229	1153	1321	1219	1147	1301	1209	1142	1283	1199	1180
	10	1474	1281	1166	1089	1453	1272	1161	1087	1254	1152	1082	1236	1144	1078	1220	1135	1118

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	85.4 fc	5.8 ft
6.5 ft	61.2 fc	6.8 ft
7.5 ft	46.0 fc	7.9 ft
8.0 ft	40.4 fc	8.4 ft
10.0 ft	25.8 fc	10.5 ft
12.0 ft	17.9 fc	12.6 ft
14.0 ft	13.2 fc	14.7 ft
16.0 ft	10.1 fc	16.8 ft
20.0 ft	6.5 fc	21.0 ft
24.0 ft	4.5 fc	25.2 ft
28.0 ft	3.3 fc	29.4 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	89250	89250	89250
45.00°	1976	2428	3107
55.00°	728	1288	2655
65.00°	232	228	473
75.00°	119	124	139
85.00°	376	327	310

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	-1.3	-0.4	-0.9	0.0	0.3	7.0	7.9	7.3	8.2	8.6
	3H	-1.4	-0.6	-1.0	-0.2	0.2	6.8	7.6	7.2	8.0	8.4
	4H	-1.5	-0.7	-1.0	-0.3	0.1	6.7	7.4	7.1	7.8	8.2
	6H	-1.5	-0.8	-1.1	-0.4	0.0	6.6	7.3	7.0	7.7	8.1
	8H	-1.5	-0.8	-1.0	-0.4	0.0	6.5	7.2	7.0	7.6	8.0
	12H	-1.4	-0.7	-0.9	-0.3	0.1	6.5	7.1	6.9	7.5	8.0
4H	2H	-1.5	-0.7	-1.0	-0.3	0.1	6.9	7.7	7.4	8.1	8.5
	3H	-1.6	-0.9	-1.1	-0.5	-0.1	6.7	7.4	7.2	7.8	8.2
	4H	-1.6	-1.0	-1.1	-0.6	-0.1	6.6	7.2	7.1	7.6	8.1
	6H	-1.6	-1.1	-1.1	-0.6	-0.1	6.5	7.0	7.0	7.5	8.0
	8H	-1.5	-1.0	-1.0	-0.6	-0.1	6.5	6.9	7.0	7.4	7.9
	12H	-1.3	-0.9	-0.8	-0.4	0.1	6.4	6.8	6.9	7.3	7.8
8H	4H	-1.7	-1.3	-1.2	-0.8	-0.3	6.4	6.9	6.9	7.3	7.9
	6H	-1.6	-1.3	-1.1	-0.7	-0.2	6.3	6.7	6.9	7.2	7.7
	8H	-1.4	-1.1	-0.9	-0.6	-0.1	6.3	6.6	6.8	7.1	7.7
	12H	-1.1	-0.8	-0.5	-0.3	0.3	6.3	6.5	6.8	7.1	7.7
12H	4H	-1.7	-1.4	-1.2	-0.9	-0.4	6.4	6.7	6.9	7.3	7.8
	6H	-1.6	-1.3	-1.0	-0.8	-0.2	6.3	6.6	6.8	7.1	7.6
	8H	-1.4	-1.1	-0.8	-0.6	0.0	6.2	6.5	6.8	7.0	7.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0