

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGRTE8XT 30L 35K WD XX AR8466XT SG FG
N/A

Test Number

SP-01209_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	1671
Efficacy	51.89 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.69
Two luminaires, plane 90°	0.72
Four luminaires	0.77

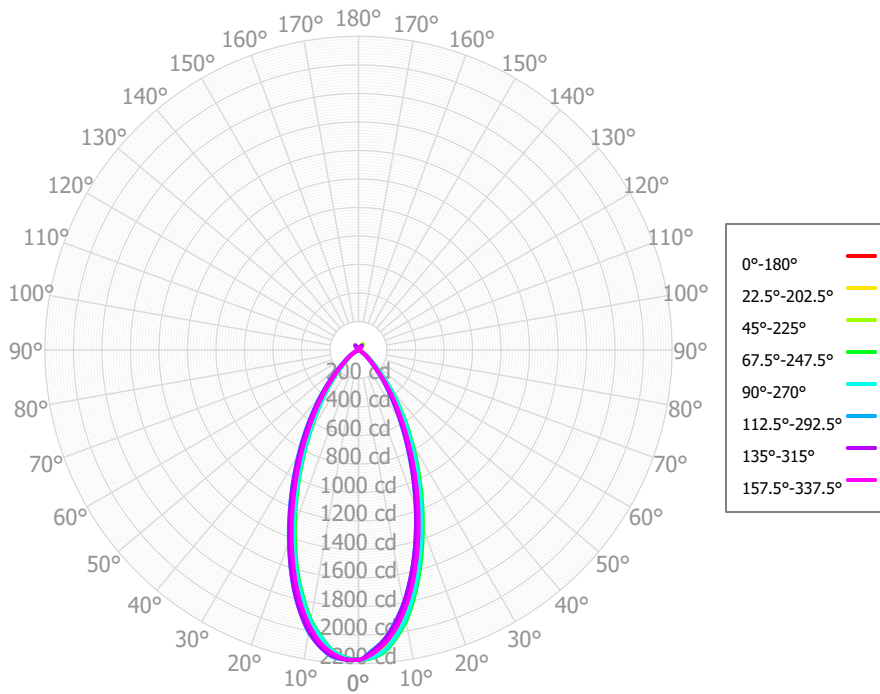
Full Beam Angle

0° - 180°	47°
90° - 270°	47°

IES File Header Contents

Keyword	Value
TEST	SP-01209_M-30L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/11/2021
ISSUEDATE	3/1/2021
LUMCAT	SGRTE8XT 30L 35K WD 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°	197.50	11.82%	90.00° - 100.00°	0.90	0.05%
10.00° - 20.00°	449.68	26.91%	100.00° - 110.00°	0.95	0.06%
20.00° - 30.00°	454.11	27.18%	100.00° - 120.00°	2.71	0.16%
30.00° - 40.00°	310.06	18.56%	120.00° - 130.00°	5.02	0.30%
40.00° - 50.00°	148.42	8.88%	130.00° - 140.00°	9.60	0.57%
50.00° - 60.00°	56.46	3.38%	140.00° - 150.00°	15.86	0.95%
60.00° - 70.00°	8.98	0.54%	150.00° - 160.00°	7.65	0.46%
70.00° - 80.00°	0.97	0.06%	160.00° - 170.00°	2.05	0.12%
80.00° - 90.00°	0.87	0.05%	170.00° - 180.00°	0.17	0.01%
0.00° - 90.00°	1627.05	97.37%	0.00° - 180.00°	1670.99	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°	2173.94	2173.94	2173.94	2173.94	2173.94	2173.94	2173.94	2173.94	2173.94	2173.94	2173.94	2173.94	2173.94	2173.94	2173.94	2173.94	2173.94
2.50°	2139.01	2158.39	2159.64	2163.90	2160.03	2173.14	2174.57	2170.04	2167.18	2166.16	2167.23	2158.31	2160.24	2113.19	2119.50	2137.72	2139.01
5.00°	2076.18	2103.28	2104.34	2124.34	2115.41	2158.85	2152.96	2133.89	2133.67	2117.91	2121.03	2113.60	2118.44	2042.47	2044.20	2071.81	2076.18
7.50°	1980.79	2020.35	2015.34	2035.17	2022.27	2096.43	2096.05	2069.53	2066.37	2044.48	2045.58	2026.00	2033.78	1933.77	1940.94	1979.27	1980.79
10.00°	1860.30	1901.03	1899.03	1928.97	1912.26	2012.49	2004.51	1969.15	1970.79	1937.55	1945.28	1922.48	1934.15	1810.54	1812.44	1856.59	1860.30
12.50°	1716.29	1765.81	1757.51	1788.56	1766.30	1886.34	1885.80	1843.89	1847.15	1810.72	1819.11	1784.51	1799.33	1661.16	1663.77	1715.73	1716.29
15.00°	1562.33	1611.54	1606.44	1637.70	1614.50	1747.84	1742.27	1696.30	1701.98	1661.25	1672.50	1637.22	1653.34	1502.65	1504.80	1555.71	1562.33
17.50°	1399.81	1455.11	1447.28	1479.51	1451.40	1587.28	1586.73	1534.61	1544.06	1499.32	1512.85	1471.65	1491.03	1338.05	1338.19	1393.94	1399.81
20.00°	1239.82	1296.31	1290.97	1319.31	1291.76	1427.22	1421.14	1371.45	1377.04	1335.11	1343.75	1305.67	1324.12	1171.56	1176.13	1230.46	1239.82
22.50°	1081.85	1142.30	1136.91	1167.75	1138.32	1267.98	1261.31	1207.44	1214.05	1169.75	1179.40	1138.92	1159.61	1014.53	1017.18	1072.96	1081.85
25.00°	934.63	993.20	992.73	1018.27	991.60	1115.03	1105.92	1053.76	1053.69	1012.74	1018.21	978.78	995.69	860.17	870.16	920.85	934.63
27.50°	795.29	854.21	855.68	883.79	855.84	971.57	960.55	905.59	904.67	859.58	868.71	829.58	849.18	725.71	730.55	781.50	795.29
30.00°	670.02	724.72	730.14	752.44	728.64	835.82	822.35	771.50	762.51	724.71	726.39	691.73	706.50	596.18	608.18	652.69	670.02
32.50°	554.34	608.06	612.31	637.76	614.40	710.73	697.31	644.22	637.97	597.45	602.63	571.27	588.70	491.46	495.75	539.84	554.34
35.00°	454.58	502.46	508.24	526.15	508.86	595.85	580.87	535.37	523.16	492.15	489.26	464.11	475.62	392.07	403.31	439.25	454.58
37.50°	364.72	406.54	412.59	431.17	415.37	494.07	480.24	434.60	427.73	395.23	396.47	375.58	389.24	314.60	321.35	351.44	364.72
40.00°	286.02	318.38	327.21	338.77	329.10	399.55	389.05	349.04	342.20	314.37	314.34	295.95	307.26	241.28	250.23	272.62	286.02
42.50°	213.65	246.31	247.57	265.49	251.99	313.57	307.41	269.61	267.68	239.01	243.92	227.91	240.44	186.27	184.27	208.91	213.65
45.00°	163.31	186.07	190.13	194.72	190.45	241.23	231.04	207.85	198.27	183.14	179.00	172.19	175.68	134.17	140.10	154.93	163.31
47.50°	124.53	142.86	144.17	154.42	147.27	183.62	176.29	152.47	150.57	133.20	135.97	131.21	136.91	104.56	105.48	117.92	124.53
50.00°	96.93	111.27	112.62	117.31	112.89	139.83	132.42	117.55	111.96	102.33	102.41	98.51	101.09	77.90	81.39	91.04	96.93
52.50°	74.66	85.96	87.85	93.22	88.05	109.94	103.20	89.37	85.23	76.70	78.59	74.90	79.50	59.69	61.47	69.91	74.66
55.00°	55.61	64.56	66.62	70.21	65.82	85.08	80.66	67.78	63.04	57.63	58.56	55.16	59.16	42.40	44.18	51.91	55.61
57.50°	37.96	45.59	46.89	50.50	46.19	64.84	60.56	48.13	45.66	40.15	42.10	39.39	42.96	28.77	27.86	35.66	37.96
60.00°	22.60	28.03	28.59	30.99	28.26	45.25	41.47	31.78	29.93	26.60	26.90	25.96	27.02	15.43	16.29	20.28	22.60
62.50°	8.15	15.04	10.85	16.60	11.91	26.22	25.21	16.31	17.82	13.87	15.86	14.73	16.69	8.29	6.26	10.46	8.15
65.00°	3.12	4.46	4.22	2.40	3.51	13.18	10.02	8.17	6.81	7.34	6.14	7.24	6.59	1.53	2.83	3.17	3.12
67.50°	1.44	1.05	1.46	1.65	1.83	4.85	4.25	1.73	2.98	1.95	2.75	2.95	3.58	1.08	1.32	1.18	1.44
70.00°	1.00	1.06	0.91	1.13	1.11	1.13	1.71	0.68	1.13	1.08	1.15	0.94	0.72	0.89	0.94	1.36	1.00
72.50°	0.96	0.96	1.05	1.09	1.12	0.79	1.00	0.72	0.84	0.91	0.80	0.76	0.87	0.97	0.86	1.18	0.96
75.00°	0.90	0.81	0.95	1.05	1.01	0.78	0.85	0.74	0.92	0.97	0.77	0.77	1.00	1.06	0.85	0.86	0.90
77.50°	0.85	0.73	0.78	1.05	0.82	1.00	0.79	0.76	1.00	1.06	0.83	0.91	0.93	0.94	0.87	0.80	0.85
80.00°	0.88	0.67	0.79	1.04	0.71	1.04	0.75	0.83	1.07	0.96	0.90	0.99	0.86	0.82	0.81	0.83	0.88
82.50°	0.94	0.61	0.84	0.99	0.66	0.95	0.70	0.89	0.96	0.83	0.91	1.02	0.78	0.85	0.75	0.76	0.94
85.00°	0.84	0.55	0.82	0.92	0.66	0.84	0.65	0.83	0.82	0.68	0.89	0.95	0.71	0.88	0.80	0.65	0.84
87.50°	0.72	0.69	0.78	0.70	0.70	0.71	0.75	0.75	0.70	0.53	0.79	0.81	0.76	0.86	0.86	0.72	0.72
90.00°	0.80	0.90	0.83	0.52	0.76	0.82	0.89	0.72	0.59	0.75	0.68	0.73	0.80	0.84	0.85	0.84	0.80
92.50°	0.91	0.85	0.89	0.76	0.82	1.06	0.95	0.69	0.64	1.00	0.69	0.69	0.69	0.86	0.82	0.77	0.91
95.00°	0.93	0.72	0.84	0.98	0.94	0.97	1.00	0.63	0.71	0.97	0.71	0.74	0.61	0.87	0.81	0.66	0.93
97.50°	0.92	0.79	0.76	1.01	1.09	0.72	1.06	0.57	0.79	0.93	0.78	0.85	0.77	0.82	0.79	0.69	0.92
100.00°	0.98	0.91	0.79	1.03	1.08	0.62	1.12	0.68	0.87	0.91	0.85	0.91	0.91	0.77	0.82	0.75	0.98
102.50°	1.06	0.88	0.84	0.95	1.00	0.59	0.98	0.79	0.87	0.89	0.82	0.94	0.85	0.68	0.85	0.93	1.06
105.00°	0.93	0.81	0.98	0.90	1.14	0.66	0.81	0.63	0.86	0.80	0.78	0.95	0.82	0.62	1.08	1.12	0.93
107.50°	0.79	0.91	1.13	0.97	1.38	0.77	0.82	0.47	0.73	0.71	0.89	0.96	0.97	0.76	1.32	1.09	0.79
110.00°	1.11	1.04	1.11	1.06	1.28	0.83	0.84	0.76	0.59	0.85	1.01	1.00	1.10	0.90	0.98	1.03	1.11
112.50°	1.47	1.50	1.07	1.22	1.06	0.87	0.81	1.06	0.75	1.00	0.96	1.04	1.13	1.01	0.62	2.62	1.47

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	1979	1979	1979	1979	1928	1928	1928	1928	1832	1832	1832	1745	1745	1745	1665	1665	1627
	1	1883	1835	1792	1753	1837	1794	1756	1721	1719	1688	1660	1649	1625	1603	1585	1567	1531
	2	1785	1701	1631	1573	1743	1668	1605	1551	1607	1555	1511	1550	1508	1472	1498	1464	1432
	3	1690	1579	1494	1425	1653	1553	1474	1411	1502	1437	1383	1456	1401	1356	1413	1368	1338
	4	1601	1471	1376	1303	1567	1449	1361	1293	1407	1332	1273	1368	1304	1253	1332	1278	1252
	5	1517	1374	1273	1199	1486	1355	1262	1192	1320	1239	1177	1287	1217	1163	1257	1197	1173
	6	1439	1286	1184	1110	1411	1270	1174	1104	1241	1156	1093	1213	1139	1083	1187	1122	1101
	7	1366	1208	1105	1033	1341	1194	1097	1028	1169	1083	1020	1145	1069	1012	1123	1055	1036
	8	1299	1137	1035	965	1276	1126	1029	962	1104	1017	955	1083	1005	948	1063	994	976
	9	1237	1073	973	905	1216	1063	968	902	1044	958	897	1026	948	892	1009	938	923
	10	1180	1016	917	852	1161	1007	913	850	990	904	845	974	896	841	959	888	874

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	71.9 fc	4.6 ft
6.5 ft	51.5 fc	5.5 ft
7.5 ft	38.6 fc	6.3 ft
8.0 ft	34.0 fc	6.8 ft
10.0 ft	21.7 fc	8.4 ft
12.0 ft	15.1 fc	10.1 ft
14.0 ft	11.1 fc	11.8 ft
16.0 ft	8.5 fc	13.5 ft
20.0 ft	5.4 fc	16.9 ft
24.0 ft	3.8 fc	20.3 ft
28.0 ft	2.8 fc	23.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	75067	75067	75067
45.00°	7975	9285	9300
55.00°	3348	4010	3962
65.00°	255	344	287
75.00°	121	126	135
85.00°	335	324	263

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	8.4	9.4	8.8	9.8	10.2	10.2	11.2	10.6	11.6	12.0
	3H	8.2	9.1	8.6	9.5	9.9	10.0	10.9	10.4	11.3	11.7
	4H	8.1	9.0	8.6	9.4	9.8	9.9	10.7	10.4	11.2	11.6
	6H	8.0	8.8	8.5	9.2	9.7	9.8	10.6	10.3	11.0	11.5
	8H	8.0	8.7	8.5	9.1	9.6	9.8	10.5	10.2	10.9	11.4
	12H	7.9	8.6	8.4	9.0	9.5	9.7	10.4	10.2	10.8	11.3
4H	2H	8.1	9.0	8.6	9.4	9.8	10.0	10.8	10.4	11.2	11.7
	3H	7.9	8.6	8.4	9.1	9.5	9.8	10.4	10.2	10.9	11.4
	4H	7.8	8.4	8.3	8.9	9.4	9.7	10.3	10.2	10.7	11.2
	6H	7.7	8.3	8.3	8.8	9.3	9.6	10.1	10.1	10.6	11.1
	8H	7.7	8.2	8.2	8.7	9.2	9.5	10.0	10.0	10.5	11.0
	12H	7.6	8.1	8.2	8.6	9.1	9.4	9.9	10.0	10.4	10.9
8H	4H	7.7	8.1	8.2	8.6	9.2	9.5	10.0	10.0	10.5	11.0
	6H	7.6	7.9	8.1	8.5	9.0	9.4	9.8	9.9	10.3	10.9
	8H	7.5	7.8	8.1	8.4	9.0	9.3	9.7	9.9	10.2	10.8
	12H	7.5	7.8	8.0	8.3	9.0	9.3	9.6	9.9	10.1	10.8
12H	4H	7.6	8.0	8.1	8.5	9.1	9.4	9.8	10.0	10.4	10.9
	6H	7.5	7.8	8.1	8.4	9.0	9.3	9.7	9.9	10.2	10.8
	8H	7.5	7.8	8.0	8.3	8.9	9.3	9.6	9.8	10.1	10.8

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0