

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01211_2_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	2029
Efficacy	63.02 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

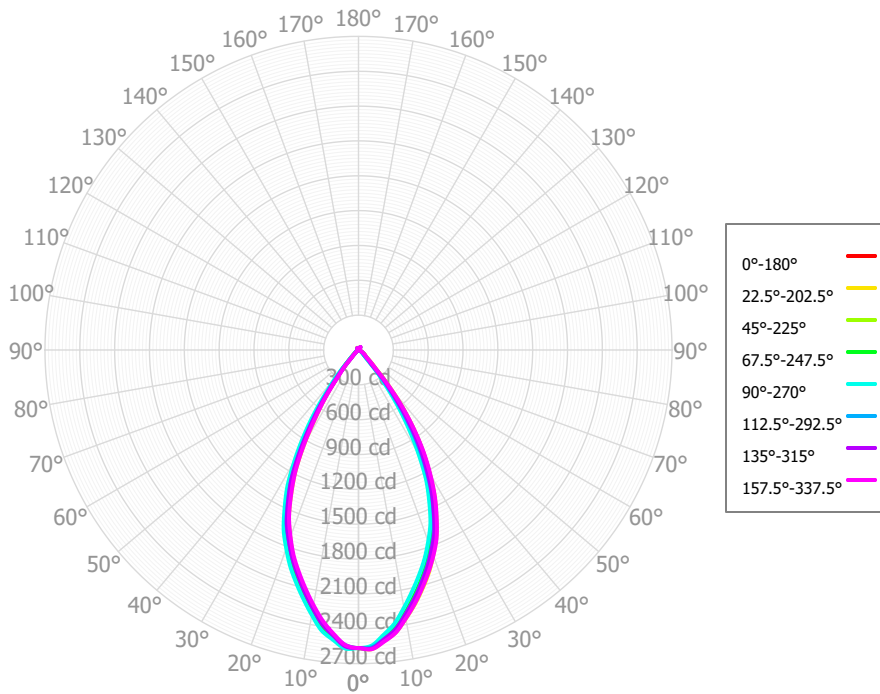
Full Beam Angle

0° - 180°	55°
90° - 270°	55°

IES File Header Contents

Keyword	Value
TEST	SP-01211_2_M-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 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°	234.65	11.56%	90.00° - 100.00°	0.91	0.04%
10.00° - 20.00°	572.27	28.20%	100.00° - 110.00°	0.90	0.04%
20.00° - 30.00°	667.46	32.89%	100.00° - 120.00°	2.12	0.10%
30.00° - 40.00°	399.51	19.69%	120.00° - 130.00°	2.12	0.10%
40.00° - 50.00°	87.41	4.31%	130.00° - 140.00°	3.57	0.18%
50.00° - 60.00°	31.26	1.54%	140.00° - 150.00°	9.84	0.49%
60.00° - 70.00°	8.46	0.42%	150.00° - 160.00°	5.35	0.26%
70.00° - 80.00°	0.94	0.05%	160.00° - 170.00°	2.13	0.11%
80.00° - 90.00°	0.94	0.05%	170.00° - 180.00°	0.21	0.01%
0.00° - 90.00°	2002.91	98.71%	0.00° - 180.00°	2029.17	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°	2566.90	2566.90	2566.90	2566.90	2566.90	2566.90	2566.90	2566.90	2566.90	2566.90	2566.90	2566.90	2566.90	2566.90	2566.90	2566.90	2566.90
2.50°	2573.16	2579.30	2563.41	2560.74	2549.49	2544.71	2555.84	2544.51	2551.84	2552.88	2558.40	2557.15	2573.61	2563.97	2574.28	2579.43	2573.16
5.00°	2512.97	2517.93	2500.08	2494.34	2463.93	2467.54	2469.95	2454.75	2471.08	2466.55	2484.49	2487.25	2506.22	2502.75	2502.77	2521.64	2512.97
7.50°	2445.06	2454.01	2419.10	2410.85	2376.67	2374.56	2383.47	2353.36	2379.16	2376.81	2399.43	2405.14	2436.48	2429.93	2430.42	2455.64	2445.06
10.00°	2336.81	2348.37	2313.47	2301.04	2253.52	2254.24	2259.74	2231.26	2105.73	2128.04	2130.87	2161.53	2161.20	2194.33	2201.92	2203.30	2227.66
12.50°	2227.66	2242.16	2200.39	2183.82	2130.50	2126.94	2136.01	2105.73	2128.04	2130.87	2161.53	2161.20	2194.33	2201.92	2203.30	2227.66	2227.66
15.00°	2114.04	2127.75	2082.93	2063.06	2010.05	2005.42	2011.56	1981.45	1999.09	1999.10	2036.95	2036.53	2074.21	2081.04	2084.81	2121.60	2114.04
17.50°	1998.58	2012.23	1964.18	1941.35	1888.83	1885.31	1886.97	1857.37	1870.00	1867.05	1907.08	1907.86	1954.13	1958.69	1965.97	2004.86	1998.58
20.00°	1874.29	1882.10	1833.23	1809.47	1755.23	1753.41	1750.68	1712.17	1727.36	1718.05	1762.50	1767.13	1818.80	1831.57	1836.92	1884.56	1874.29
22.50°	1742.59	1749.39	1698.85	1675.00	1618.99	1618.74	1613.64	1563.82	1582.73	1568.60	1607.55	1615.52	1683.33	1694.65	1706.10	1756.34	1742.59
25.00°	1577.29	1586.11	1535.53	1511.46	1442.67	1436.69	1432.13	1373.17	1394.52	1372.93	1424.95	1432.32	1505.35	1527.36	1532.85	1592.64	1577.29
27.50°	1407.49	1420.09	1364.43	1340.69	1262.83	1244.01	1249.11	1176.65	1200.36	1176.27	1226.34	1235.32	1327.02	1349.61	1358.48	1424.32	1407.49
30.00°	1217.92	1242.83	1163.21	1134.69	1036.02	1012.73	1006.64	935.77	959.92	930.29	986.68	999.85	1101.88	1140.76	1161.77	1236.33	1217.92
32.50°	1025.11	1028.59	954.09	920.36	810.12	773.06	764.73	688.98	713.42	683.65	754.86	770.06	876.76	927.96	963.90	1044.05	1025.11
35.00°	818.72	822.38	748.07	707.92	595.56	554.51	539.32	483.71	512.08	495.42	542.69	555.75	656.02	703.65	744.94	833.99	818.72
37.50°	610.77	616.40	542.83	495.90	386.42	340.31	317.94	283.56	316.20	307.49	355.97	364.16	436.37	491.46	527.81	623.17	610.77
40.00°	396.60	412.47	360.32	320.17	238.08	210.73	201.38	177.52	201.82	202.09	230.75	232.04	286.95	313.08	339.14	409.40	396.60
42.50°	211.77	222.93	183.32	152.35	100.81	98.06	88.94	82.56	96.84	97.30	128.79	124.63	139.56	166.79	160.10	224.73	211.77
45.00°	140.63	154.43	121.71	95.90	75.73	64.45	64.41	56.38	64.25	69.12	81.87	79.40	93.26	108.04	120.15	151.55	140.63
47.50°	82.20	92.28	86.73	62.44	52.29	45.75	40.75	37.63	39.31	41.24	46.44	44.95	48.06	63.83	82.46	91.66	82.20
50.00°	70.68	81.25	72.25	50.48	44.60	36.49	32.78	28.62	29.49	32.37	37.18	37.06	41.61	57.68	73.59	80.34	70.68
52.50°	59.57	70.30	62.27	42.70	37.05	28.90	25.01	20.61	21.12	23.58	28.80	29.69	35.15	51.32	64.61	68.88	59.57
55.00°	49.93	59.85	53.05	36.16	30.76	23.82	20.40	16.93	17.49	18.97	22.35	23.57	28.63	44.40	54.38	56.89	49.93
57.50°	40.32	49.27	43.99	29.84	24.45	19.17	15.88	13.65	14.29	14.40	16.83	18.17	22.19	37.32	44.11	45.29	40.32
60.00°	30.82	37.75	32.60	22.43	17.82	14.16	12.55	10.19	11.23	10.88	13.31	14.46	17.70	29.84	33.33	35.03	30.82
62.50°	20.87	25.99	20.74	14.83	11.31	9.10	9.17	6.72	8.17	7.37	9.39	10.32	13.15	21.25	22.52	24.11	20.87
65.00°	9.48	12.64	11.29	8.31	5.75	5.21	4.94	3.86	4.78	4.11	4.64	5.20	7.27	10.00	11.31	11.06	9.48
67.50°	0.84	1.09	2.29	1.98	0.87	1.51	1.04	1.06	1.36	0.97	1.36	1.56	1.69	1.94	1.16	1.10	0.84
70.00°	0.88	1.07	0.94	1.09	0.86	0.83	1.06	0.82	1.17	0.77	1.04	1.18	1.31	1.27	0.85	0.80	0.88
72.50°	0.88	1.04	1.00	1.07	0.87	0.59	1.08	0.75	1.19	0.58	0.87	0.92	0.95	0.77	0.57	0.60	0.88
75.00°	0.77	1.05	0.94	1.03	1.05	0.64	1.08	0.82	0.96	0.79	0.99	0.91	1.07	0.67	0.56	0.75	0.77
77.50°	0.75	1.04	0.87	0.99	1.18	0.73	1.06	0.90	0.73	0.99	0.97	0.89	1.16	0.64	0.58	0.83	0.75
80.00°	1.02	0.98	0.95	0.90	0.91	0.85	0.95	0.94	0.77	0.96	0.68	0.82	0.90	0.79	0.82	0.73	1.02
82.50°	1.14	0.91	1.06	0.81	0.68	0.97	0.84	0.97	0.82	0.92	0.59	0.86	0.68	0.82	1.02	0.67	1.14
85.00°	0.85	0.87	1.04	0.81	0.69	0.89	0.86	0.98	0.79	0.87	0.84	1.10	0.98	0.61	1.00	0.69	0.85
87.50°	0.65	0.83	1.00	0.83	0.71	0.79	0.88	0.99	0.75	0.82	0.93	1.15	1.25	0.51	0.97	0.71	0.65
90.00°	0.68	0.80	0.88	0.81	0.80	0.79	0.94	0.97	0.87	0.83	0.73	0.80	1.18	0.63	0.86	0.76	0.68
92.50°	0.75	0.76	0.75	0.78	0.89	0.81	0.98	0.95	1.00	0.83	0.62	0.62	1.11	0.71	0.80	0.77	0.75
95.00°	0.90	0.74	0.85	0.85	1.00	0.69	0.82	0.78	1.03	0.81	0.68	0.76	1.03	0.72	1.04	0.73	0.90
97.50°	1.00	0.72	0.98	0.93	1.07	0.55	0.69	0.60	1.05	0.79	0.73	0.89	0.95	0.78	1.21	0.69	1.00
100.00°	0.97	0.73	0.91	0.98	0.93	0.61	0.75	0.66	0.87	0.81	0.74	1.03	0.90	0.93	0.94	0.65	0.97
102.50°	0.95	0.73	0.81	1.03	0.80	0.69	0.80	0.73	0.69	0.83	0.77	1.08	0.85	1.00	0.71	0.67	0.95
105.00°	0.95	0.71	0.98	1.03	0.77	0.73	0.83	0.66	0.90	0.79	0.84	0.98	0.82	0.92	0.72	0.82	0.95
107.50°	0.96	0.70	1.19	1.02	0.78	0.77	0.86	0.59	1.12	0.75	0.88	0.87	0.80	0.88	0.74	0.93	0.96
110.00°	1.04	0.79	1.03	1.07	1.06	0.80	0.94	0.91	1.03	0.80	0.90	0.74	0.84	0.93	0.88	0.92	1.04
112.50°	1.08	0.87	0.84	1.12	1.33	0.82	0.99	1.24	0.93	0.85	0.88	0.95	0.91	1.24	1.01	0.93	1.08

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	2409	2409	2409	2409	2350	2350	2350	2350	2240	2240	2240	2139	2139	2139	2046	2046	2003
	1	2298	2242	2193	2148	2246	2196	2152	2111	2109	2074	2041	2030	2002	1976	1956	1935	1894
	2	2186	2088	2008	1940	2139	2051	1978	1916	1982	1922	1870	1917	1869	1826	1858	1819	1785
	3	2078	1949	1850	1771	2035	1919	1828	1755	1862	1786	1723	1810	1746	1693	1761	1709	1664
	4	1974	1824	1713	1629	1936	1799	1697	1618	1752	1665	1596	1709	1634	1575	1668	1606	1554
	5	1877	1710	1593	1508	1842	1689	1581	1500	1650	1556	1484	1614	1532	1468	1580	1510	1453
	6	1785	1607	1488	1402	1753	1590	1478	1396	1557	1458	1385	1526	1439	1373	1497	1421	1362
	7	1698	1513	1393	1309	1670	1499	1385	1305	1471	1370	1296	1444	1354	1287	1420	1340	1279
	8	1618	1428	1309	1227	1592	1415	1302	1223	1391	1289	1217	1369	1277	1210	1347	1265	1203
	9	1543	1350	1233	1153	1519	1339	1227	1150	1319	1217	1145	1299	1206	1140	1280	1196	1135
	10	1473	1279	1164	1087	1451	1270	1159	1085	1252	1150	1080	1234	1142	1076	1218	1133	1072

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	84.9 fc	5.9 ft
6.5 ft	60.8 fc	6.9 ft
7.5 ft	45.6 fc	8.0 ft
8.0 ft	40.1 fc	8.5 ft
10.0 ft	25.7 fc	10.7 ft
12.0 ft	17.8 fc	12.8 ft
14.0 ft	13.1 fc	14.9 ft
16.0 ft	10.0 fc	17.1 ft
20.0 ft	6.4 fc	21.4 ft
24.0 ft	4.5 fc	25.6 ft
28.0 ft	3.3 fc	29.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	88635	88635	88635
45.00°	6868	5944	3698
55.00°	3006	3194	1852
65.00°	775	923	470
75.00°	103	126	140
85.00°	339	412	272

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	8.9	9.9	9.3	10.2	10.5	2.9	3.9	3.3	4.2	4.6
	3H	8.7	9.5	9.1	9.9	10.3	2.8	3.6	3.2	4.0	4.4
	4H	8.6	9.4	9.0	9.8	10.2	2.7	3.5	3.1	3.8	4.3
	6H	8.5	9.2	8.9	9.6	10.0	2.6	3.3	3.1	3.7	4.1
	8H	8.4	9.1	8.9	9.5	10.0	2.6	3.2	3.0	3.7	4.1
	12H	8.4	9.0	8.9	9.4	9.9	2.6	3.2	3.0	3.6	4.1
4H	2H	8.7	9.5	9.2	9.9	10.3	2.8	3.5	3.2	3.9	4.3
	3H	8.5	9.1	8.9	9.6	10.0	2.6	3.2	3.0	3.6	4.1
	4H	8.4	8.9	8.9	9.4	9.9	2.5	3.0	2.9	3.5	4.0
	6H	8.3	8.8	8.8	9.2	9.7	2.4	2.9	2.9	3.4	3.9
	8H	8.2	8.7	8.7	9.1	9.7	2.4	2.8	2.9	3.3	3.8
	12H	8.2	8.6	8.7	9.1	9.6	2.4	2.8	2.9	3.3	3.8
8H	4H	8.2	8.6	8.7	9.1	9.6	2.3	2.8	2.8	3.2	3.7
	6H	8.1	8.4	8.6	9.0	9.5	2.3	2.6	2.8	3.2	3.7
	8H	8.0	8.3	8.6	8.9	9.4	2.3	2.6	2.8	3.1	3.7
	12H	8.0	8.3	8.6	8.8	9.4	2.4	2.6	2.9	3.2	3.8
12H	4H	8.1	8.5	8.7	9.0	9.5	2.3	2.6	2.8	3.1	3.7
	6H	8.0	8.3	8.6	8.8	9.4	2.2	2.5	2.8	3.0	3.6
	8H	8.0	8.3	8.5	8.8	9.4	2.3	2.5	2.8	3.0	3.7

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0