Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

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

Test Number
SP-01207_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	2568
Efficacy	79.76 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.41
Two luminaires, plane 90°	0.42
Four luminaires	0.46

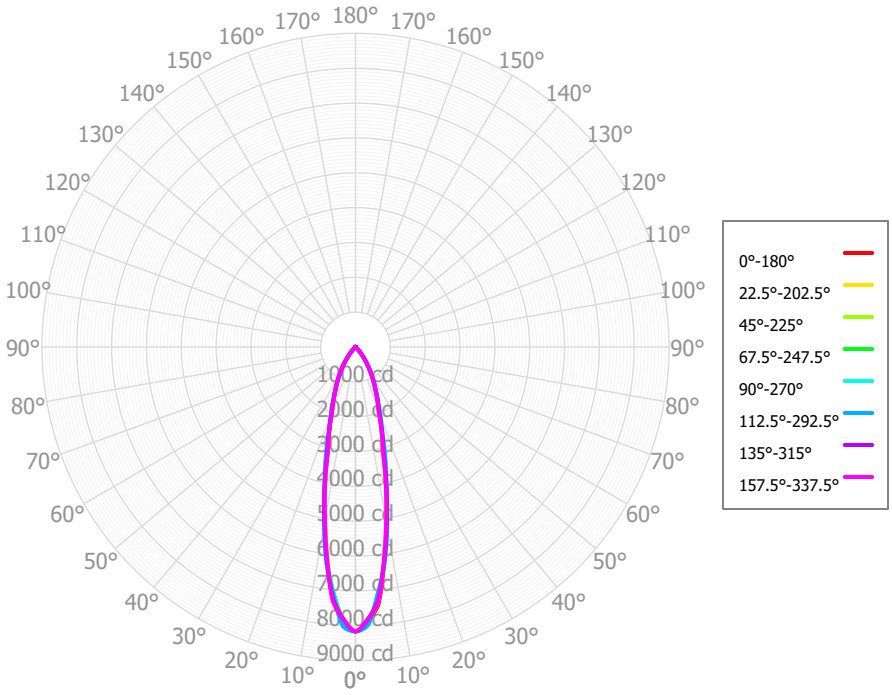
Full Beam Angle

0° - 180°	25°
90° - 270°	25°

IES File Header Contents

Keyword	Value
TEST	SP-01207_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 ND XX AR8466XT SG SO
LUMINAIRE	N/A
OTHER	Beam Angle: 25 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°	625.91	24.37%	90.00° - 100.00°	0.57	0.02%
10.00° - 20.00°	888.43	34.59%	100.00° - 110.00°	0.62	0.02%
20.00° - 30.00°	633.37	24.66%	100.00° - 120.00°	1.21	0.05%
30.00° - 40.00°	342.18	13.32%	120.00° - 130.00°	0.64	0.03%
40.00° - 50.00°	68.17	2.65%	130.00° - 140.00°	0.85	0.03%
50.00° - 60.00°	2.99	0.12%	140.00° - 150.00°	0.94	0.04%
60.00° - 70.00°	0.60	0.02%	150.00° - 160.00°	0.67	0.03%
70.00° - 80.00°	0.55	0.02%	160.00° - 170.00°	0.36	0.01%
80.00° - 90.00°	0.58	0.02%	170.00° - 180.00°	0.10	0.00%
0.00° - 90.00°	2562.79	99.79%	0.00° - 180.00°	2568.14	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°	8162.14	8162.14	8162.14	8162.14	8162.14	8162.14	8162.14	8162.14	8162.14	8162.14	8162.14	8162.14	8162.14	8162.14	8162.14	8162.14	8162.14
2.50°	7896.07	7877.39	7901.16	7936.79	7979.13	8035.13	7828.43	7840.95	7837.96	7812.07	7826.13	7891.58	7932.30	8003.38	7835.50	7852.81	7896.07
5.00°	7445.54	7376.77	7318.00	7223.46	7227.37	7185.66	7284.76	7342.14	7328.74	7219.41	7140.30	7121.22	7152.33	7165.11	7336.91	7376.24	7445.54
7.50°	6256.22	6235.53	6262.49	6283.76	6308.36	6313.06	6243.13	6219.91	6179.25	6173.16	6199.98	6254.71	6303.71	6318.69	6251.84	6230.73	6256.22
10.00°	5063.77	5106.72	5177.06	5208.15	5238.54	5196.39	5105.87	5061.85	5031.04	5024.34	5062.69	5126.35	5179.57	5187.83	5170.10	5091.10	5063.77
12.50°	4032.82	4031.50	4053.57	4083.64	4132.07	4073.74	4108.41	4056.90	4037.91	4046.08	4064.28	4074.85	4110.97	4066.88	4105.21	4052.72	4032.82
15.00°	3002.52	3052.21	3144.23	3255.48	3318.58	3289.67	3137.31	3060.34	3048.04	3106.65	3172.27	3230.07	3266.60	3262.22	3119.68	3042.05	3002.52
17.50°	2469.14	2479.60	2504.44	2532.59	2575.17	2514.25	2530.25	2500.61	2507.09	2513.66	2509.04	2492.15	2502.28	2469.02	2528.53	2486.95	2469.14
20.00°	1935.76	1957.70	1999.24	2060.71	2097.68	2077.90	1992.34	1965.27	1968.41	1998.24	2021.79	2043.03	2056.21	2054.49	1982.76	1947.00	1935.76
22.50°	1637.96	1647.35	1664.13	1678.47	1684.19	1649.33	1658.60	1654.57	1662.24	1663.41	1651.64	1643.76	1647.25	1644.86	1664.12	1645.36	1637.96
25.00°	1340.40	1353.57	1374.42	1394.54	1399.51	1389.03	1362.94	1355.78	1356.86	1369.29	1370.65	1377.53	1383.62	1384.46	1361.04	1348.50	1340.40
27.50°	1123.25	1129.33	1141.51	1145.27	1145.34	1132.16	1133.15	1137.64	1140.27	1142.78	1131.49	1126.70	1131.17	1125.78	1134.45	1128.15	1123.25
30.00°	906.23	911.35	924.80	928.59	931.60	926.13	915.74	923.55	924.01	931.27	924.32	917.18	922.76	921.14	913.59	909.51	906.23
32.50°	718.78	719.25	728.46	723.46	727.50	721.18	723.87	732.46	736.55	740.04	730.91	718.39	722.00	717.70	721.12	717.07	718.78
35.00°	531.48	535.40	549.53	549.07	552.30	549.91	536.70	542.54	549.36	553.35	547.92	548.02	550.90	549.22	536.91	527.58	531.48
37.50°	383.81	385.08	392.26	385.45	383.90	379.28	389.33	388.74	389.16	391.49	388.78	389.72	390.13	382.46	392.92	381.53	383.81
40.00°	236.54	246.28	259.30	261.22	258.77	261.83	249.35	236.70	229.68	235.08	247.76	263.56	269.71	261.91	256.25	239.13	236.54
42.50°	152.53	154.65	156.69	150.84	143.65	145.43	145.56	133.48	126.83	131.94	139.92	151.35	158.54	143.32	155.39	151.07	152.53
45.00°	68.82	74.61	80.52	83.56	79.42	82.38	48.36	32.50	25.38	40.29	57.05	75.84	82.93	79.10	66.66	66.88	68.82
47.50°	40.41	41.29	37.03	31.23	27.02	20.25	22.33	17.19	15.47	16.37	16.81	18.92	20.93	17.03	36.30	38.03	40.41
50.00°	12.18	13.45	10.76	12.57	11.42	11.51	9.04	5.90	5.67	7.17	8.31	10.30	11.57	10.64	10.44	10.75	12.18
52.50°	7.32	7.85	5.59	5.44	4.23	3.75	4.42	3.48	3.34	3.59	3.67	3.66	3.85	4.44	5.87	6.48	7.32
55.00°	2.48	3.09	2.37	2.87	2.04	2.27	1.38	1.46	1.05	1.21	1.92	2.19	2.39	3.03	2.01	2.44	2.48
57.50°	1.71	1.68	1.55	1.88	0.98	0.90	0.93	1.03	1.03	0.72	1.01	1.03	1.14	1.65	1.53	1.73	1.71
60.00°	0.94	0.55	1.04	1.21	0.61	0.68	0.94	0.67	1.01	0.62	0.75	0.65	0.68	1.21	1.08	1.07	0.94
62.50°	0.70	0.52	0.89	0.65	0.39	0.47	0.80	0.67	0.82	0.59	0.50	0.40	0.35	0.79	0.72	1.14	0.70
65.00°	0.46	0.48	0.77	0.45	0.37	0.46	0.62	0.69	0.64	0.58	0.28	0.45	0.56	0.64	0.43	1.18	0.46
67.50°	0.66	0.44	0.68	0.38	0.38	0.45	0.50	0.69	0.65	0.50	0.25	0.48	0.67	0.50	0.48	0.85	0.66
70.00°	0.85	0.41	0.59	0.43	0.49	0.50	0.38	0.68	0.66	0.42	0.37	0.46	0.45	0.46	0.55	0.52	0.85
72.50°	0.72	0.41	0.50	0.52	0.62	0.55	0.33	0.81	0.66	0.39	0.45	0.42	0.29	0.44	0.67	0.38	0.72
75.00°	0.60	0.43	0.50	0.59	0.57	0.49	0.29	0.95	0.66	0.38	0.49	0.33	0.36	0.61	0.74	0.27	0.60
77.50°	0.61	0.53	0.58	0.67	0.49	0.42	0.36	0.74	0.62	0.43	0.45	0.34	0.43	0.78	0.59	0.44	0.61
80.00°	0.62	0.60	0.59	0.63	0.43	0.49	0.46	0.52	0.59	0.49	0.35	0.63	0.50	0.72	0.47	0.59	0.62
82.50°	0.75	0.54	0.52	0.57	0.37	0.56	0.41	0.46	0.47	0.51	0.33	0.77	0.56	0.65	0.48	0.58	0.75
85.00°	0.88	0.49	0.45	0.73	0.33	0.46	0.33	0.41	0.36	0.52	0.36	0.56	0.60	0.59	0.51	0.58	0.88
87.50°	0.81	0.51	0.39	0.98	0.29	0.36	0.51	0.47	0.42	0.52	0.50	0.41	0.65	0.53	0.60	0.59	0.81
90.00°	0.74	0.53	0.41	0.75	0.37	0.67	0.74	0.53	0.48	0.52	0.73	0.40	0.71	0.44	0.67	0.60	0.74
92.50°	0.68	0.58	0.51	0.37	0.48	0.97	0.55	0.52	0.63	0.47	0.68	0.38	0.72	0.35	0.59	0.64	0.68
95.00°	0.62	0.60	0.52	0.26	0.56	0.74	0.30	0.52	0.76	0.41	0.45	0.36	0.52	0.47	0.58	0.66	0.62
97.50°	0.50	0.50	0.40	0.24	0.63	0.50	0.46	0.50	0.60	0.34	0.31	0.36	0.37	0.59	0.90	0.50	0.50
100.00°	0.39	0.45	0.33	0.41	0.53	0.58	0.69	0.47	0.44	0.27	0.24	0.42	0.44	0.71	1.10	0.37	0.39
102.50°	0.49	0.64	0.31	0.65	0.40	0.67	0.79	0.42	0.38	0.48	0.33	0.49	0.49	0.84	0.83	0.51	0.49
105.00°	0.58	0.78	0.38	0.60	0.61	0.64	0.86	0.37	0.32	0.73	0.54	0.56	0.48	0.96	0.60	0.64	0.58
107.50°	0.53	0.74	0.56	0.46	0.90	0.60	0.68	0.53	0.60	0.68	0.60	0.56	0.53	1.07	0.54	0.57	0.53
110.00°	0.48	0.71	0.59	0.50	0.65	0.56	0.46	0.71	0.87	0.56	0.57	0.41	0.73	0.97	0.50	0.51	0.48
112.50°	0.62	0.74	0.43	0.60	0.28	0.52	0.57	0.72	0.78	0.46	0.50	0.34	0.87	0.86	0.53	0.59	0.62

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	3056	3056	3056	3056	2984	2984	2984	2984	2851	2851	2851	2728	2728	2728	2616	2616	2616	2563
	1	2936	2874	2819	2769	2873	2818	2769	2724	2715	2676	2640	2619	2589	2561	2531	2508	2486	2458
	2	2818	2711	2623	2549	2763	2667	2588	2520	2585	2520	2464	2510	2457	2412	2440	2398	2361	2351
	3	2705	2566	2458	2372	2657	2531	2432	2353	2465	2383	2315	2404	2336	2279	2348	2292	2244	2249
	4	2598	2435	2316	2225	2555	2407	2297	2212	2354	2260	2186	2304	2225	2161	2258	2191	2136	2151
	5	2497	2317	2192	2100	2458	2294	2178	2090	2250	2149	2072	2209	2122	2054	2171	2096	2036	2059
	6	2401	2210	2082	1991	2367	2191	2071	1984	2155	2049	1970	2120	2028	1957	2089	2008	1945	1974
	7	2311	2113	1984	1894	2280	2096	1975	1889	2066	1958	1879	2037	1941	1870	2010	1925	1860	1894
	8	2226	2023	1895	1808	2198	2009	1888	1804	1983	1874	1797	1959	1861	1789	1936	1848	1782	1819
	9	2147	1941	1815	1730	2122	1929	1809	1727	1907	1798	1721	1886	1787	1716	1866	1776	1710	1750
	10	2073	1866	1742	1659	2050	1856	1737	1657	1836	1728	1653	1818	1719	1649	1801	1710	1644	1686

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	269.8 fc	2.4 ft
6.5 ft	193.2 fc	2.9 ft
7.5 ft	145.1 fc	3.3 ft
8.0 ft	127.5 fc	3.6 ft
10.0 ft	81.6 fc	4.4 ft
12.0 ft	56.7 fc	5.3 ft
14.0 ft	41.6 fc	6.2 ft
16.0 ft	31.9 fc	7.1 ft
20.0 ft	20.4 fc	8.9 ft
24.0 ft	14.2 fc	10.7 ft
28.0 ft	10.4 fc	12.4 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	281840	281840	281840
45.00°	3361	3932	3878
55.00°	149	143	123
65.00°	38	63	30
75.00°	80	66	77
85.00°	349	180	131

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	-14.8	-13.9	-14.5	-13.6	-13.3	-18.6	-17.7	-18.2	-17.4	-17.0
	3H	-14.1	-13.3	-13.7	-13.0	-12.6	-17.4	-16.6	-17.0	-16.2	-15.9
	4H	-13.6	-12.9	-13.2	-12.5	-12.1	-16.4	-15.7	-16.0	-15.3	-14.9
	6H	-12.6	-11.9	-12.2	-11.6	-11.2	-15.1	-14.4	-14.7	-14.0	-13.6
	8H	-11.7	-11.0	-11.2	-10.6	-10.2	-14.1	-13.5	-13.6	-13.1	-12.6
	12H	-10.2	-9.6	-9.8	-9.2	-8.8	-12.9	-12.3	-12.5	-11.9	-11.5
4H	2H	-14.9	-14.2	-14.5	-13.8	-13.4	-18.5	-17.7	-18.1	-17.4	-17.0
	3H	-14.0	-13.4	-13.6	-13.0	-12.6	-16.9	-16.3	-16.5	-15.9	-15.5
	4H	-13.4	-12.9	-13.0	-12.5	-12.0	-15.8	-15.2	-15.3	-14.8	-14.4
	6H	-12.0	-11.5	-11.5	-11.1	-10.6	-14.0	-13.5	-13.5	-13.1	-12.6
	8H	-10.8	-10.4	-10.3	-9.9	-9.4	-12.6	-12.2	-12.1	-11.7	-11.3
	12H	-9.0	-8.7	-8.5	-8.2	-7.7	-11.3	-10.9	-10.8	-10.4	-9.9
8H	4H	-13.1	-12.6	-12.6	-12.2	-11.7	-15.3	-14.9	-14.8	-14.4	-14.0
	6H	-11.3	-10.9	-10.8	-10.4	-9.9	-13.1	-12.7	-12.5	-12.2	-11.7
	8H	-9.9	-9.6	-9.4	-9.1	-8.6	-11.3	-11.0	-10.8	-10.5	-10.0
	12H	-8.0	-7.8	-7.5	-7.2	-6.7	-9.7	-9.5	-9.2	-9.0	-8.4
12H	4H	-12.9	-12.5	-12.4	-12.1	-11.6	-15.1	-14.8	-14.6	-14.3	-13.8
	6H	-11.1	-10.8	-10.5	-10.3	-9.7	-12.8	-12.5	-12.3	-12.1	-11.5
	8H	-9.6	-9.4	-9.1	-8.9	-8.3	-11.0	-10.7	-10.5	-10.2	-9.6

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0