

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGRTE8XT 50L 35K MD XX AR8466XT SG SO
N/A

Test Number

SP-01205_2

Test Date

2/11/2021

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

Summary of Results

Power

Input Watts	51.1 W
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Lumen Output

Output Lumens	3225
Efficacy	63.11 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.62
Two luminaires, plane 90°	0.55
Four luminaires	0.71

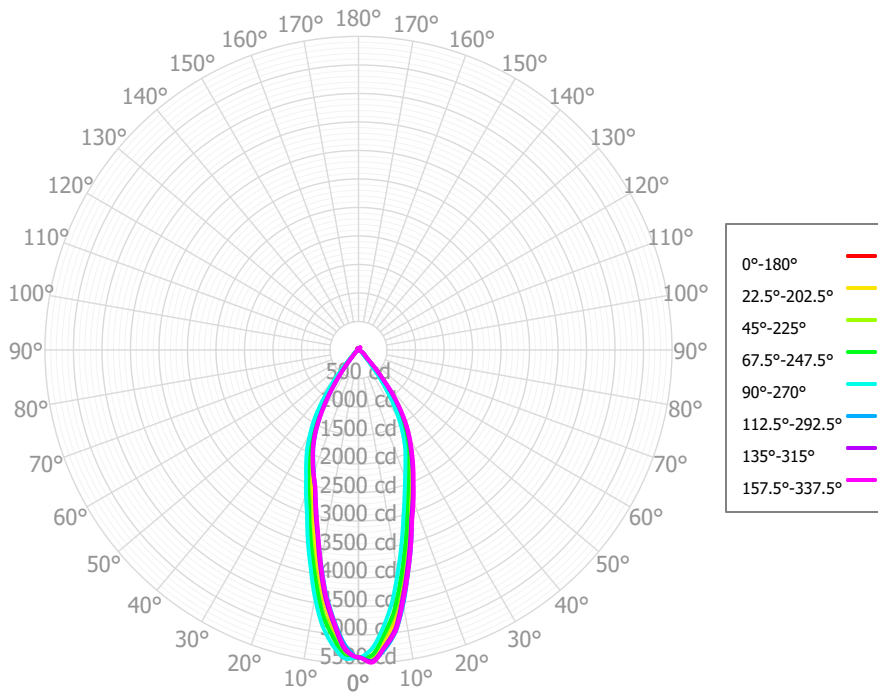
Full Beam Angle

0° - 180°	37°
90° - 270°	37°

IES File Header Contents

Keyword	Value
TEST	SP-01205_2
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/11/2021
ISSUEDATE	3/2/2021
LUMCAT	SGRTE8XT 50L 35K MD XX AR8466XT SG SO
LUMINAIRE	N/A
OTHER	Beam Angle: 37 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
_CRI	83
_CCTMULT	Same for all available CCT's
_LAMPMULT	10L x 0.19, 13L x 0.26, 20L x 0.4, 30L x 0.6, 40L x 0.8

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	459.14	14.24%	90.00° - 100.00°	1.49	0.05%
10.00° - 20.00°	901.99	27.97%	100.00° - 110.00°	1.40	0.04%
20.00° - 30.00°	938.66	29.11%	100.00° - 120.00°	3.12	0.10%
30.00° - 40.00°	619.37	19.21%	120.00° - 130.00°	3.29	0.10%
40.00° - 50.00°	166.50	5.16%	130.00° - 140.00°	6.65	0.21%
50.00° - 60.00°	69.60	2.16%	140.00° - 150.00°	18.07	0.56%
60.00° - 70.00°	18.40	0.57%	150.00° - 160.00°	11.01	0.34%
70.00° - 80.00°	1.47	0.05%	160.00° - 170.00°	4.24	0.13%
80.00° - 90.00°	1.50	0.05%	170.00° - 180.00°	0.32	0.01%
0.00° - 90.00°	3176.64	98.51%	0.00° - 180.00°	3224.82	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°	5392.63	5392.63	5392.63	5392.63	5392.63	5392.63	5392.63	5392.63	5392.63	5392.63	5392.63	5392.63	5392.63	5392.63	5392.63	5392.63	5392.63
2.50°	5416.24	5391.83	5360.07	5364.02	5253.66	5195.33	5276.73	5247.84	5275.44	5251.98	5353.36	5385.43	5416.02	5458.70	5464.19	5487.77	5416.24
5.00°	5181.59	5178.82	5063.17	5025.26	4901.04	4789.08	4855.47	4809.43	4914.30	4905.20	5036.42	5069.63	5198.74	5274.02	5225.90	5241.98	5181.59
7.50°	4859.80	4858.88	4714.22	4667.31	4477.07	4329.99	4412.58	4353.55	4472.98	4480.76	4666.49	4720.73	4871.56	4988.44	4937.47	4977.98	4859.80
10.00°	4394.96	4420.82	4234.04	4174.34	3962.85	3792.64	3863.71	3799.32	3954.29	3964.81	4173.61	4219.88	4404.51	4524.15	4434.52	4491.47	4394.96
12.50°	3931.42	3938.46	3766.22	3685.46	3484.99	3303.44	3322.24	3276.93	3417.19	3483.89	3667.43	3733.02	3889.53	4010.43	3943.91	4008.40	3931.42
15.00°	3469.52	3497.48	3321.99	3253.38	3043.28	2869.33	2915.56	2871.39	3002.43	3035.47	3240.13	3289.99	3438.23	3557.23	3489.84	3557.94	3469.52
17.50°	3076.34	3067.46	2926.57	2838.55	2684.20	2535.73	2531.94	2518.02	2606.33	2685.30	2819.75	2888.02	3002.07	3115.30	3082.31	3129.95	3076.34
20.00°	2751.43	2743.20	2602.25	2538.73	2388.83	2291.39	2317.32	2300.52	2372.26	2405.68	2545.73	2580.96	2692.15	2800.70	2777.19	2821.18	2751.43
22.50°	2464.96	2437.04	2317.64	2254.15	2149.62	2073.24	2103.90	2085.56	2150.21	2167.59	2275.97	2304.50	2401.46	2499.26	2490.36	2525.15	2464.96
25.00°	2208.10	2190.61	2077.76	2033.02	1944.20	1873.33	1895.98	1875.59	1931.75	1952.69	2050.07	2081.22	2171.88	2252.47	2233.93	2274.78	2208.10
27.50°	1969.15	1949.83	1840.25	1803.36	1705.16	1623.20	1666.95	1630.37	1708.63	1696.29	1816.24	1844.27	1946.82	2008.11	1992.56	2031.53	1969.15
30.00°	1740.97	1706.33	1604.86	1548.57	1450.87	1346.35	1372.17	1332.39	1403.25	1422.55	1536.91	1588.82	1694.76	1780.94	1770.44	1806.45	1740.97
32.50°	1487.58	1461.62	1343.36	1282.63	1159.38	1041.82	1072.09	1031.47	1099.78	1120.41	1252.45	1305.72	1439.54	1548.34	1528.49	1567.44	1487.58
35.00°	1222.76	1187.17	1063.98	992.67	855.56	726.12	759.81	727.10	810.69	809.56	948.89	993.66	1133.71	1260.29	1266.63	1301.55	1222.76
37.50°	933.89	911.49	783.15	711.25	593.26	482.22	490.76	477.09	537.88	569.69	666.18	710.62	830.96	969.79	973.16	1015.95	933.89
40.00°	636.90	624.83	501.56	443.96	340.64	259.08	296.54	276.55	340.73	344.54	439.37	451.17	552.10	665.71	655.06	701.34	636.90
42.50°	416.14	366.00	323.53	254.67	226.30	174.94	167.00	163.01	179.08	227.07	259.06	276.02	304.70	397.59	427.13	449.58	416.14
45.00°	213.14	253.54	186.50	164.70	131.87	118.16	124.63	111.60	129.67	122.69	171.11	154.46	203.33	260.09	253.21	269.28	213.14
47.50°	164.74	162.16	141.36	112.03	113.55	98.76	95.78	83.35	90.83	101.87	111.14	103.42	122.67	157.09	185.12	171.94	164.74
50.00°	138.56	144.20	122.71	96.71	100.63	83.57	81.06	67.76	76.24	85.36	94.09	86.37	107.44	144.76	165.67	148.84	138.56
52.50°	118.28	126.22	105.81	82.98	86.07	70.22	68.01	55.39	62.30	70.97	78.53	71.76	92.82	130.19	142.10	126.82	118.28
55.00°	98.42	108.18	89.23	70.48	71.60	56.99	56.33	44.34	49.51	56.91	64.75	58.02	79.66	111.27	117.16	105.54	98.42
57.50°	81.60	90.28	74.68	58.06	58.47	45.50	44.81	36.01	38.86	46.83	52.43	47.38	65.83	91.85	95.15	86.27	81.60
60.00°	64.35	72.63	60.35	45.68	44.59	33.61	33.41	28.50	31.10	36.12	41.47	37.54	50.84	71.71	73.85	68.07	64.35
62.50°	39.79	50.28	36.23	29.10	25.26	17.43	20.76	17.45	21.06	21.47	27.60	23.46	34.35	49.22	47.83	45.41	39.79
65.00°	17.15	21.13	12.20	10.59	8.73	3.40	7.50	5.69	8.62	8.90	11.63	8.68	15.86	23.98	21.11	20.96	17.15
67.50°	8.55	4.62	6.28	4.10	4.63	2.10	2.95	3.04	2.56	4.83	4.48	4.42	5.06	9.04	10.98	9.66	8.55
70.00°	1.52	2.40	0.92	1.63	1.52	1.10	1.46	1.49	1.73	1.77	2.18	1.06	2.37	3.41	2.06	2.19	1.52
72.50°	1.59	1.42	1.41	1.10	1.53	1.26	1.23	1.23	1.35	1.56	1.34	1.03	1.14	1.20	1.88	0.89	1.59
75.00°	1.64	1.53	1.83	1.03	1.51	1.42	1.30	1.03	1.25	1.35	1.09	1.05	1.13	1.42	1.75	0.80	1.64
77.50°	1.58	1.51	1.83	1.34	1.43	1.57	1.19	1.00	1.24	1.14	1.26	1.16	1.14	1.42	1.60	1.10	1.58
80.00°	1.46	1.40	1.76	1.71	1.44	1.60	1.04	1.00	1.27	1.15	1.55	1.27	1.16	1.31	1.46	1.45	1.46
82.50°	1.19	1.30	1.43	1.47	1.57	1.39	1.36	1.35	1.27	1.51	1.60	1.40	1.34	1.26	1.37	1.33	1.19
85.00°	0.99	1.21	1.18	1.18	1.52	1.41	1.72	1.59	1.25	1.66	1.60	1.51	1.60	1.22	1.29	1.20	0.99
87.50°	0.92	1.20	1.16	1.36	1.22	1.79	1.56	1.21	1.44	1.56	1.39	1.52	1.53	1.48	1.21	1.28	0.92
90.00°	0.98	1.22	1.23	1.52	1.19	1.81	1.37	0.99	1.68	1.52	1.16	1.55	1.35	1.82	1.17	1.38	0.98
92.50°	1.22	1.17	1.49	1.32	1.44	1.40	1.05	1.39	1.42	1.53	0.99	1.63	1.20	1.77	1.25	1.51	1.22
95.00°	1.43	1.10	1.67	1.13	1.60	1.28	0.81	1.65	1.08	1.32	0.83	1.61	1.07	1.65	1.24	1.63	1.43
97.50°	1.61	1.12	1.71	1.02	1.69	1.45	1.40	1.53	1.19	0.94	1.12	1.34	1.32	1.73	1.04	1.75	1.61
100.00°	1.58	1.14	1.78	0.90	1.59	1.50	1.82	1.43	1.34	1.10	1.38	1.21	1.63	1.83	0.94	1.77	1.58
102.50°	1.38	1.23	1.88	0.73	1.38	1.47	1.46	1.36	1.25	1.57	1.33	1.33	1.26	1.63	1.01	1.47	1.38
105.00°	1.24	1.32	1.68	0.68	1.40	1.41	1.15	1.35	1.18	1.61	1.28	1.37	0.83	1.42	1.21	1.29	1.24
107.50°	1.15	1.05	1.20	1.00	1.55	1.34	0.99	1.42	1.51	1.47	1.17	1.31	1.18	1.12	1.57	1.46	1.15
110.00°	1.28	0.80	1.19	1.29	1.52	1.44	0.94	1.33	1.81	1.23	1.12	1.48	1.51	0.87	1.68	1.50	1.28
112.50°	1.51	1.20	1.52	1.49	1.44	1.62	1.15	1.04	1.80	0.96	1.24	1.93	1.28	1.26	1.52	1.29	1.51

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	3828	3828	3828	3828	3733	3733	3733	3733	3556	3556	3556	3395	3395	3395	3246	3246	3177
	1	3651	3563	3484	3413	3567	3489	3418	3354	3350	3293	3242	3222	3178	3137	3104	3070	3005
	2	3473	3319	3191	3083	3398	3259	3143	3045	3147	3053	2971	3044	2968	2900	2949	2888	2833
	3	3302	3099	2941	2816	3234	3050	2906	2790	2959	2838	2739	2875	2775	2690	2797	2714	2643
	4	3139	2901	2726	2593	3078	2861	2699	2574	2786	2648	2539	2716	2599	2504	2651	2552	2471
	5	2986	2723	2538	2403	2931	2689	2518	2390	2627	2478	2364	2568	2440	2339	2514	2403	2314
	6	2842	2562	2374	2238	2792	2534	2357	2229	2481	2326	2210	2432	2296	2191	2386	2266	2173
	7	2708	2416	2227	2095	2663	2393	2214	2088	2348	2189	2073	2306	2165	2059	2266	2141	2045
	8	2583	2285	2097	1968	2542	2264	2086	1962	2226	2066	1951	2190	2046	1940	2155	2026	1930
	9	2467	2165	1980	1855	2430	2147	1971	1850	2114	1954	1842	2083	1937	1833	2053	1921	1825
	10	2359	2056	1874	1753	2325	2041	1867	1750	2012	1853	1743	1984	1839	1736	1958	1825	1729

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	178.3 fc	3.7 ft
6.5 ft	127.6 fc	4.4 ft
7.5 ft	95.9 fc	5.0 ft
8.0 ft	84.3 fc	5.4 ft
10.0 ft	53.9 fc	6.7 ft
12.0 ft	37.4 fc	8.1 ft
14.0 ft	27.5 fc	9.4 ft
16.0 ft	21.1 fc	10.8 ft
20.0 ft	13.5 fc	13.5 ft
24.0 ft	9.4 fc	16.1 ft
28.0 ft	6.9 fc	18.8 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	186208	186208	186208
45.00°	10408	9107	6440
55.00°	5925	5372	4310
65.00°	1401	997	713
75.00°	218	244	201
85.00°	392	467	603

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	11.7	12.7	12.1	13.0	13.4	7.7	8.7	8.1	9.0	9.4
	3H	11.5	12.4	11.9	12.7	13.2	7.6	8.4	8.0	8.8	9.2
	4H	11.4	12.2	11.9	12.6	13.0	7.5	8.3	7.9	8.6	9.1
	6H	11.3	12.0	11.8	12.4	12.9	7.4	8.1	7.8	8.5	8.9
	8H	11.3	11.9	11.7	12.4	12.8	7.3	8.0	7.8	8.4	8.9
	12H	11.2	11.9	11.7	12.3	12.7	7.3	7.9	7.7	8.3	8.8
4H	2H	11.5	12.3	11.9	12.7	13.1	7.5	8.3	8.0	8.7	9.1
	3H	11.3	11.9	11.7	12.4	12.8	7.3	8.0	7.8	8.4	8.9
	4H	11.2	11.8	11.6	12.2	12.7	7.2	7.8	7.7	8.2	8.7
	6H	11.1	11.6	11.6	12.0	12.6	7.1	7.6	7.6	8.1	8.6
	8H	11.0	11.5	11.5	11.9	12.5	7.1	7.5	7.6	8.0	8.5
	12H	11.0	11.3	11.5	11.9	12.4	7.1	7.4	7.6	8.0	8.5
8H	4H	11.0	11.5	11.5	11.9	12.4	7.0	7.5	7.5	8.0	8.5
	6H	10.9	11.2	11.4	11.8	12.3	7.0	7.3	7.5	7.8	8.4
	8H	10.8	11.1	11.4	11.7	12.2	6.9	7.2	7.5	7.8	8.3
	12H	10.8	11.1	11.3	11.6	12.2	6.9	7.2	7.5	7.7	8.3
12H	4H	10.9	11.3	11.5	11.8	12.4	7.0	7.4	7.5	7.9	8.4
	6H	10.8	11.1	11.4	11.6	12.2	6.9	7.2	7.5	7.7	8.3
	8H	10.8	11.0	11.3	11.6	12.2	6.9	7.2	7.4	7.7	8.3

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0