

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGRTE8XT 50L 35K XW XX AR8466XT SG GL
N/A

Test Number

SP-01211_1

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	3383
Efficacy	66.21 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

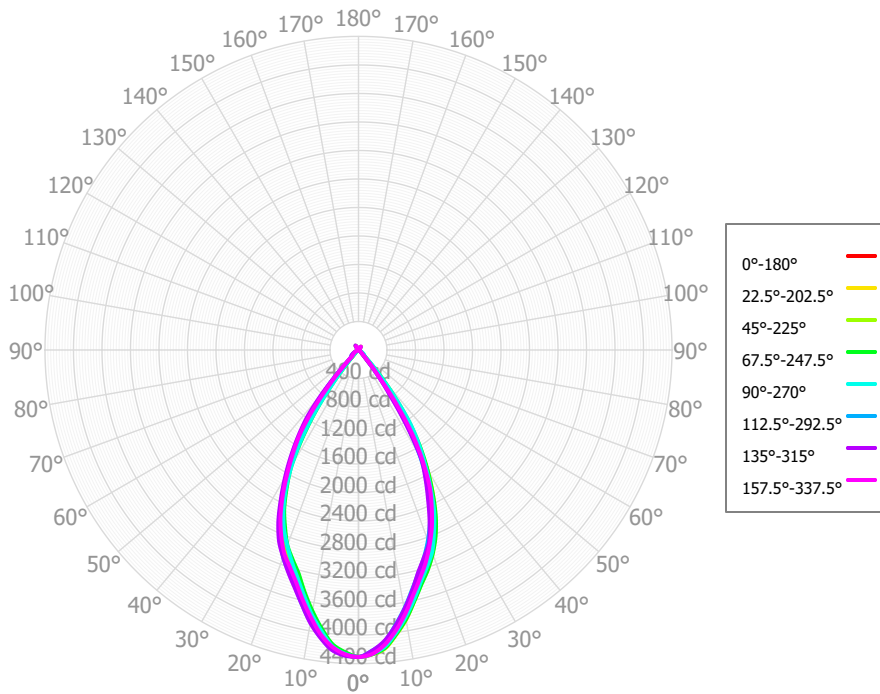
Full Beam Angle

0° - 180°	56°
90° - 270°	56°

IES File Header Contents

Keyword	Value
TEST	SP-01211_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/11/2021
ISSUEDATE	2/25/2021
LUMCAT	SGRTE8XT 50L 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
_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°	390.43	11.54%	90.00° - 100.00°	1.61	0.05%
10.00° - 20.00°	939.56	27.77%	100.00° - 110.00°	1.52	0.04%
20.00° - 30.00°	1131.50	33.45%	100.00° - 120.00°	3.38	0.10%
30.00° - 40.00°	701.92	20.75%	120.00° - 130.00°	2.74	0.08%
40.00° - 50.00°	114.77	3.39%	130.00° - 140.00°	4.80	0.14%
50.00° - 60.00°	46.05	1.36%	140.00° - 150.00°	20.68	0.61%
60.00° - 70.00°	13.33	0.39%	150.00° - 160.00°	6.94	0.21%
70.00° - 80.00°	1.61	0.05%	160.00° - 170.00°	1.91	0.06%
80.00° - 90.00°	1.56	0.05%	170.00° - 180.00°	0.29	0.01%
0.00° - 90.00°	3340.73	98.75%	0.00° - 180.00°	3383.09	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°	4307.84	4307.84	4307.84	4307.84	4307.84	4307.84	4307.84	4307.84	4307.84	4307.84	4307.84	4307.84	4307.84	4307.84	4307.84	4307.84	4307.84
2.50°	4252.33	4276.18	4269.47	4276.63	4267.81	4276.80	4294.41	4275.29	4282.06	4252.01	4276.05	4247.11	4269.37	4228.44	4228.85	4273.58	4252.33
5.00°	4160.81	4209.23	4169.66	4201.66	4183.11	4224.00	4229.03	4185.27	4203.02	4169.97	4158.17	4149.14	4176.97	4114.83	4106.02	4158.07	4160.81
7.50°	3981.64	4033.28	4019.18	4027.26	4005.26	4068.49	4076.35	4031.21	4022.46	3972.98	3979.02	3946.77	3981.30	3908.19	3915.50	3978.36	3981.64
10.00°	3774.51	3842.39	3815.22	3836.92	3805.23	3879.59	3891.35	3817.58	3821.82	3760.58	3763.55	3721.76	3770.81	3690.72	3698.11	3764.90	3774.51
12.50°	3549.74	3608.49	3604.08	3612.35	3589.23	3662.06	3662.44	3599.42	3588.64	3528.14	3528.80	3485.65	3530.55	3455.95	3467.89	3530.92	3549.74
15.00°	3320.62	3395.27	3386.60	3406.64	3370.46	3437.32	3455.70	3377.80	3377.63	3294.18	3321.48	3247.86	3308.03	3241.92	3233.70	3324.53	3320.62
17.50°	3142.89	3229.77	3194.06	3234.10	3192.32	3260.99	3274.18	3197.32	3196.09	3134.96	3125.84	3079.71	3114.49	3055.08	3054.20	3131.99	3142.89
20.00°	2974.21	3038.93	3019.70	3043.70	3018.72	3093.43	3092.78	3043.12	3014.40	2976.17	2944.15	2917.84	2922.20	2848.50	2887.42	2916.01	2974.21
22.50°	2699.39	2801.01	2782.13	2827.57	2768.46	2867.24	2911.52	2831.90	2832.55	2744.63	2767.23	2694.67	2731.61	2620.30	2608.07	2690.61	2699.39
25.00°	2412.05	2542.39	2506.82	2564.49	2513.64	2633.88	2661.76	2591.03	2589.41	2508.99	2507.92	2468.50	2496.91	2370.50	2309.72	2432.07	2412.05
27.50°	2154.26	2251.97	2215.82	2245.78	2196.08	2322.55	2358.22	2303.57	2289.97	2218.24	2227.12	2183.92	2212.85	2101.15	2035.42	2163.14	2154.26
30.00°	1898.29	1924.89	1917.11	1925.82	1878.82	2006.13	2058.66	1996.33	1997.23	1923.64	1932.63	1892.09	1881.04	1738.00	1763.69	1802.25	1898.29
32.50°	1411.50	1551.52	1524.54	1604.59	1583.70	1718.77	1761.69	1704.45	1709.58	1598.91	1635.54	1471.88	1505.09	1304.82	1260.86	1419.16	1411.50
35.00°	925.94	1121.16	1095.11	1239.54	1277.85	1429.31	1467.89	1417.69	1384.01	1258.73	1210.15	1051.98	1070.48	868.21	746.14	937.20	925.94
37.50°	541.40	631.44	689.26	838.59	854.33	1060.53	1175.78	1031.15	1034.91	838.17	768.10	634.99	591.14	429.46	440.82	438.24	541.40
40.00°	183.37	315.01	290.74	497.48	460.88	696.75	768.36	619.28	651.11	461.39	441.05	263.43	305.09	213.78	147.81	250.89	183.37
42.50°	122.49	149.83	155.90	197.27	266.32	391.88	311.48	364.13	249.53	250.29	122.27	158.75	141.80	110.68	106.09	97.75	122.49
45.00°	67.45	72.57	82.87	86.21	106.03	126.16	169.35	138.41	115.02	92.74	94.30	71.58	75.64	68.86	66.66	71.54	67.45
47.50°	52.82	58.52	65.27	80.75	106.72	131.64	133.46	105.93	90.24	93.09	72.54	57.53	59.66	51.80	51.13	52.67	52.82
50.00°	38.98	46.72	56.86	72.88	103.97	133.69	124.91	97.42	82.47	92.11	69.36	45.05	46.99	40.47	36.47	40.63	38.98
52.50°	28.89	36.25	46.37	63.89	89.28	119.02	123.55	85.42	80.29	88.05	65.88	37.52	35.70	31.00	27.30	28.78	28.89
55.00°	20.15	28.24	35.65	50.68	73.50	103.23	107.88	73.19	74.53	81.27	58.57	30.46	28.70	24.26	18.95	21.00	20.15
57.50°	16.19	21.43	28.50	35.93	54.78	83.43	89.48	61.43	67.89	69.32	50.68	24.54	23.10	18.19	14.38	13.70	16.19
60.00°	12.20	15.87	21.53	25.99	37.04	63.03	70.69	49.48	56.66	54.35	38.52	18.62	18.43	14.37	10.24	11.56	12.20
62.50°	8.14	10.80	12.94	17.38	21.44	40.97	51.86	30.87	44.59	34.72	26.21	12.70	13.99	10.94	7.59	9.19	8.14
65.00°	4.73	6.40	4.64	9.94	9.65	21.86	27.81	13.22	24.32	18.63	13.18	7.59	8.46	6.41	5.09	5.27	4.73
67.50°	2.73	2.21	3.15	2.74	4.58	9.30	3.38	7.06	3.07	7.11	2.78	3.79	2.73	1.76	2.98	2.03	2.73
70.00°	1.48	1.38	1.78	1.65	1.60	1.33	2.37	1.63	1.57	1.23	2.37	1.55	1.67	1.73	1.57	1.93	1.48
72.50°	1.55	1.32	1.66	1.45	1.65	1.63	1.86	1.45	1.33	1.34	2.01	1.40	1.18	2.00	1.68	1.83	1.55
75.00°	1.49	1.31	1.55	1.33	1.73	1.67	1.47	1.34	1.39	1.33	1.81	1.44	1.21	1.65	1.76	1.71	1.49
77.50°	1.24	1.30	1.53	1.21	1.83	1.34	1.11	1.55	1.46	1.22	1.63	1.69	1.27	1.31	1.80	1.59	1.24
80.00°	1.24	1.25	1.51	1.41	1.66	1.22	1.09	1.68	1.59	1.23	1.50	1.66	1.36	1.51	1.72	1.46	1.24
82.50°	1.53	1.20	1.44	1.63	1.23	1.33	1.10	1.46	1.69	1.33	1.33	1.35	1.45	1.66	1.47	1.42	1.53
85.00°	1.58	1.26	1.38	1.69	1.30	1.48	1.46	1.30	1.42	1.31	1.12	1.39	1.42	1.25	1.44	1.57	1.58
87.50°	1.39	1.33	1.35	1.74	1.79	1.66	1.71	1.28	1.17	1.22	1.13	1.69	1.38	0.95	1.67	1.70	1.39
90.00°	1.27	1.49	1.30	1.46	1.77	1.68	1.40	1.37	1.19	1.32	1.47	1.64	1.26	1.38	1.77	1.77	1.27
92.50°	1.21	1.64	1.17	1.23	1.41	1.58	1.20	1.72	1.27	1.50	1.73	1.35	1.15	1.70	1.75	1.67	1.21
95.00°	1.31	1.67	1.16	1.46	1.38	1.36	1.45	1.84	1.65	1.53	1.90	1.33	1.19	1.57	1.67	1.32	1.31
97.50°	1.54	1.67	1.38	1.64	1.53	1.05	1.66	1.57	1.86	1.48	1.85	1.46	1.25	1.44	1.53	1.17	1.54
100.00°	1.44	1.40	1.52	1.50	1.62	1.14	1.77	1.32	1.42	1.31	1.58	1.48	1.43	1.32	1.49	1.27	1.44
102.50°	1.16	1.16	1.51	1.41	1.69	1.44	1.78	1.11	1.12	1.10	1.43	1.46	1.58	1.28	1.51	1.37	1.16
105.00°	1.35	1.09	1.49	1.52	1.76	1.34	1.58	1.08	1.21	1.15	1.39	1.63	1.62	1.46	1.46	1.48	1.35
107.50°	1.75	1.09	1.47	1.65	1.82	1.06	1.49	1.26	1.21	1.27	1.39	1.85	1.61	1.69	1.36	1.52	1.75
110.00°	1.76	1.42	1.54	1.85	1.75	1.17	1.62	1.41	1.00	1.34	1.42	1.68	1.42	2.01	1.42	1.50	1.76
112.50°	1.63	1.67	1.73	2.08	1.64	1.42	1.65	1.53	0.93	1.41	1.55	1.40	1.37	2.30	1.53	1.74	1.63

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	4017	4017	4017	4017	3919	3919	3919	3919	3735	3735	3735	3567	3567	3567	3413	3413	3341
	1	3833	3740	3657	3582	3745	3663	3589	3521	3518	3459	3405	3386	3339	3297	3263	3228	3194
	2	3646	3484	3350	3238	3568	3423	3301	3198	3307	3207	3121	3200	3119	3049	3101	3036	2979
	3	3466	3253	3088	2956	3396	3203	3052	2930	3109	2982	2878	3021	2916	2827	2940	2853	2779
	4	3295	3044	2860	2720	3231	3003	2833	2702	2925	2780	2665	2853	2730	2630	2786	2682	2595
	5	3132	2855	2661	2518	3074	2820	2640	2505	2756	2599	2479	2695	2560	2453	2639	2522	2428
	6	2978	2683	2484	2342	2926	2654	2468	2332	2599	2435	2313	2548	2404	2294	2500	2374	2276
	7	2835	2527	2327	2187	2787	2502	2314	2180	2456	2288	2165	2412	2262	2151	2371	2238	2137
	8	2700	2384	2185	2049	2657	2363	2175	2043	2323	2153	2032	2286	2133	2021	2250	2113	2011
	9	2574	2254	2058	1925	2535	2236	2049	1921	2201	2032	1912	2169	2015	1904	2138	1998	1895
	10	2457	2135	1943	1814	2422	2120	1935	1811	2089	1920	1804	2061	1906	1797	2034	1892	1790

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	142.4 fc	5.8 ft
6.5 ft	102.0 fc	6.8 ft
7.5 ft	76.6 fc	7.9 ft
8.0 ft	67.3 fc	8.4 ft
10.0 ft	43.1 fc	10.5 ft
12.0 ft	29.9 fc	12.6 ft
14.0 ft	22.0 fc	14.7 ft
16.0 ft	16.8 fc	16.8 ft
20.0 ft	10.8 fc	21.0 ft
24.0 ft	7.5 fc	25.2 ft
28.0 ft	5.5 fc	29.4 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	148751	148751	148751
45.00°	3294	4047	5178
55.00°	1213	2146	4425
65.00°	386	379	789
75.00°	198	207	231
85.00°	627	545	516

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	0.5	1.4	0.9	1.7	2.1	8.7	9.7	9.1	10.0	10.4
	3H	0.4	1.2	0.8	1.5	1.9	8.6	9.4	9.0	9.7	10.1
	4H	0.3	1.1	0.7	1.5	1.9	8.5	9.2	8.9	9.6	10.0
	6H	0.3	1.0	0.7	1.4	1.8	8.4	9.0	8.8	9.5	9.9
	8H	0.3	1.0	0.8	1.4	1.8	8.3	9.0	8.8	9.4	9.8
	12H	0.4	1.0	0.9	1.4	1.9	8.3	8.9	8.7	9.3	9.7
4H	2H	0.3	1.1	0.7	1.5	1.9	8.7	9.5	9.1	9.8	10.3
	3H	0.2	0.8	0.7	1.3	1.7	8.5	9.1	8.9	9.6	10.0
	4H	0.2	0.7	0.7	1.2	1.7	8.4	8.9	8.9	9.4	9.9
	6H	0.2	0.7	0.7	1.2	1.7	8.3	8.8	8.8	9.2	9.7
	8H	0.3	0.7	0.8	1.2	1.7	8.2	8.7	8.7	9.1	9.7
	12H	0.5	0.9	1.0	1.4	1.9	8.2	8.6	8.7	9.1	9.6
8H	4H	0.1	0.5	0.6	1.0	1.5	8.2	8.6	8.7	9.1	9.6
	6H	0.2	0.5	0.7	1.1	1.6	8.1	8.5	8.6	9.0	9.5
	8H	0.3	0.6	0.9	1.2	1.7	8.1	8.4	8.6	8.9	9.4
	12H	0.7	1.0	1.2	1.5	2.1	8.0	8.3	8.6	8.8	9.4
12H	4H	0.0	0.4	0.5	0.9	1.4	8.1	8.5	8.7	9.0	9.5
	6H	0.2	0.5	0.7	1.0	1.5	8.0	8.3	8.6	8.8	9.4
	8H	0.4	0.6	0.9	1.2	1.8	8.0	8.3	8.6	8.8	9.4

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0