Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

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

Test Number
SP-01205_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

Lumen Output

Output Lumens	3134
Efficacy	61.33 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.5
Two luminaires, plane 90°	0.5
Four luminaires	0.68

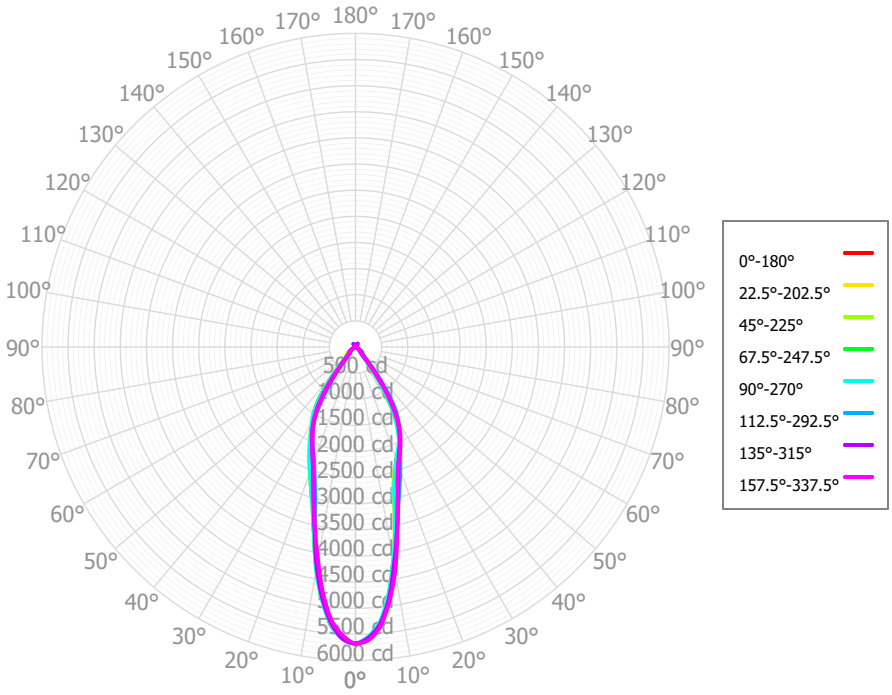
Full Beam Angle

0° - 180°	33°
90° - 270°	33°

IES File Header Contents

Keyword	Value
TEST	SP-01205_1
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 GL
LUMINAIRE	N/A
OTHER	Beam Angle: 33 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°	477.02	15.22%	90.00° - 100.00°	1.50	0.05%
10.00° - 20.00°	863.59	27.56%	100.00° - 110.00°	1.51	0.05%
20.00° - 30.00°	911.66	29.09%	100.00° - 120.00°	3.39	0.11%
30.00° - 40.00°	583.03	18.60%	120.00° - 130.00°	2.69	0.09%
40.00° - 50.00°	141.10	4.50%	130.00° - 140.00°	4.24	0.14%
50.00° - 60.00°	85.26	2.72%	140.00° - 150.00°	22.58	0.72%
60.00° - 70.00°	20.26	0.65%	150.00° - 160.00°	10.58	0.34%
70.00° - 80.00°	1.53	0.05%	160.00° - 170.00°	3.75	0.12%
80.00° - 90.00°	1.44	0.05%	170.00° - 180.00°	0.26	0.01%
0.00° - 90.00°	3084.88	98.44%	0.00° - 180.00°	3133.88	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°	5673.74	5673.74	5673.74	5673.74	5673.74	5673.74	5673.74	5673.74	5673.74	5673.74	5673.74	5673.74	5673.74	5673.74	5673.74	5673.74	5673.74
2.50°	5568.77	5612.68	5568.12	5608.01	5549.27	5547.73	5592.28	5529.37	5573.87	5552.99	5584.30	5550.55	5593.12	5591.76	5576.05	5616.79	5568.77
5.00°	5375.59	5356.57	5328.11	5377.63	5296.64	5296.87	5308.78	5256.02	5354.07	5299.28	5333.43	5320.71	5348.76	5336.94	5336.33	5381.19	5375.59
7.50°	4821.49	4890.03	4812.87	4873.69	4795.26	4816.50	4855.16	4760.84	4839.18	4817.63	4878.61	4804.49	4895.00	4883.38	4882.08	4930.09	4821.49
10.00°	4207.46	4275.74	4155.84	4272.00	4159.56	4187.54	4272.78	4136.36	4292.45	4188.43	4325.67	4186.40	4335.32	4315.42	4239.79	4362.61	4207.46
12.50°	3547.75	3532.89	3476.60	3526.16	3508.10	3577.42	3607.67	3582.86	3665.50	3625.21	3667.18	3617.05	3666.44	3647.91	3655.84	3683.32	3547.75
15.00°	2883.10	2973.32	2788.21	2942.48	2849.81	2977.20	3097.43	3063.29	3138.65	3096.66	3173.55	3061.25	3172.33	3160.32	3113.89	3128.08	2883.10
17.50°	2578.14	2544.74	2478.63	2554.92	2516.13	2599.29	2669.21	2690.94	2812.64	2761.75	2828.07	2773.05	2828.72	2801.34	2716.24	2672.34	2578.14
20.00°	2291.73	2303.13	2290.77	2295.81	2294.89	2316.49	2382.46	2374.40	2506.54	2509.67	2547.16	2539.29	2541.05	2501.55	2403.42	2386.75	2291.73
22.50°	2146.08	2172.23	2133.52	2166.42	2125.11	2122.98	2155.71	2147.09	2232.77	2255.14	2313.96	2284.86	2292.96	2236.81	2184.46	2213.00	2146.08
25.00°	1997.64	1999.19	1983.85	1999.69	1968.92	1959.41	1964.33	1945.90	1995.73	1999.79	2081.87	2027.61	2067.23	2025.37	2010.76	2032.21	1997.64
27.50°	1776.03	1805.99	1735.35	1801.90	1734.62	1757.21	1784.94	1762.73	1808.18	1806.50	1850.46	1834.04	1854.60	1839.43	1812.83	1847.66	1776.03
30.00°	1539.55	1500.17	1469.44	1502.62	1485.40	1544.98	1561.52	1583.57	1621.57	1628.98	1662.47	1645.68	1666.44	1635.74	1605.63	1592.04	1539.55
32.50°	1151.19	1150.86	1070.94	1133.06	1094.85	1196.69	1326.78	1303.29	1436.00	1418.84	1496.01	1446.21	1489.84	1425.31	1300.19	1305.50	1151.19
35.00°	773.05	776.75	657.48	764.24	685.84	822.89	960.06	1007.48	1150.92	1202.58	1219.91	1241.87	1193.94	1088.96	965.67	935.77	773.05
37.50°	458.99	395.21	404.05	395.83	421.36	512.03	568.27	646.61	775.02	819.66	899.77	825.97	853.34	714.96	621.98	537.58	458.99
40.00°	196.33	241.88	160.20	224.83	167.27	209.19	353.68	279.72	489.45	416.26	587.53	428.81	531.28	447.03	276.22	323.50	196.33
42.50°	158.52	140.43	138.92	143.47	134.22	157.48	161.25	213.23	272.65	318.21	277.77	296.55	214.68	202.65	197.61	157.32	158.52
45.00°	129.17	125.91	119.88	114.73	105.85	123.09	152.17	159.62	190.61	241.21	224.58	177.14	151.85	175.92	160.73	121.83	129.17
47.50°	128.01	125.15	112.41	105.18	95.15	122.26	155.36	155.89	192.52	230.58	231.47	157.17	144.42	183.68	152.41	111.53	128.01
50.00°	121.79	111.37	104.10	90.13	84.26	121.56	146.89	150.85	172.97	220.05	208.79	136.29	132.78	171.10	146.92	94.22	121.79
52.50°	102.52	96.32	86.80	73.54	70.93	106.41	137.60	124.26	142.41	176.59	181.09	110.63	120.51	156.54	123.22	76.02	102.52
55.00°	82.57	78.15	69.98	60.02	57.91	91.17	109.35	98.03	112.04	134.13	145.95	87.20	107.26	130.03	98.74	60.26	82.57
57.50°	61.25	59.86	56.38	47.14	47.14	74.81	81.76	74.94	81.74	103.64	110.02	72.31	93.91	103.02	77.78	44.68	61.25
60.00°	42.17	47.19	42.59	37.18	36.00	57.91	61.86	51.86	57.33	72.71	78.60	54.91	72.67	74.62	56.62	35.79	42.17
62.50°	26.83	34.32	27.94	27.63	23.05	37.32	41.75	28.81	34.85	38.74	47.40	30.11	51.08	46.49	31.94	26.93	26.83
65.00°	14.41	17.80	14.81	15.47	11.65	18.56	20.09	9.32	18.53	9.78	24.58	10.98	25.78	23.20	9.28	14.25	14.41
67.50°	5.98	2.82	6.90	3.08	5.93	8.65	2.08	4.50	3.72	5.21	2.77	5.04	1.89	2.17	4.83	2.48	5.98
70.00°	1.64	1.90	1.15	2.29	1.74	1.00	1.59	0.94	1.45	1.64	1.87	1.16	1.72	1.75	1.03	2.06	1.64
72.50°	1.93	1.14	1.20	1.88	1.90	1.40	1.23	1.30	1.37	1.72	1.06	1.09	1.57	1.41	1.04	1.69	1.93
75.00°	1.90	1.27	1.22	1.66	1.97	1.63	1.32	1.50	1.44	1.69	1.15	1.11	1.52	1.51	1.09	1.67	1.90
77.50°	1.58	1.37	1.19	1.45	1.86	1.39	1.41	1.31	1.52	1.38	1.20	1.27	1.47	1.57	1.27	1.57	1.58
80.00°	1.36	1.35	1.17	1.49	1.65	1.26	1.54	1.22	1.35	1.17	0.99	1.35	1.40	1.52	1.44	1.14	1.36
82.50°	1.21	1.34	1.19	1.52	1.25	1.40	1.51	1.33	1.16	1.18	0.85	1.34	1.37	1.50	1.52	0.83	1.21
85.00°	1.24	1.36	1.15	1.47	1.01	1.51	1.18	1.41	1.26	1.18	1.06	1.41	1.48	1.59	1.56	0.97	1.24
87.50°	1.38	1.34	1.01	1.44	1.01	1.58	1.06	1.44	1.36	1.17	1.21	1.55	1.56	1.71	1.48	1.10	1.38
90.00°	1.39	1.22	0.94	1.48	1.14	1.56	1.32	1.47	1.45	1.15	1.23	1.66	1.56	1.91	1.45	1.24	1.39
92.50°	1.35	1.17	0.95	1.49	1.43	1.40	1.42	1.50	1.51	1.10	1.19	1.73	1.48	1.92	1.48	1.40	1.35
95.00°	1.37	1.28	1.10	1.42	1.56	1.34	1.29	1.50	1.20	1.09	1.01	1.57	1.24	1.57	1.50	1.63	1.37
97.50°	1.41	1.35	1.36	1.47	1.54	1.41	1.26	1.47	0.98	1.13	0.95	1.24	1.15	1.38	1.50	1.68	1.41
100.00°	1.44	1.36	1.50	1.90	1.68	1.30	1.34	1.36	1.39	1.25	1.16	1.28	1.38	1.47	1.38	1.42	1.44
102.50°	1.47	1.29	1.55	2.14	1.96	1.02	1.42	1.19	1.67	1.45	1.39	1.54	1.50	1.48	1.11	1.36	1.47
105.00°	1.22	1.12	1.42	1.91	1.95	0.96	1.50	1.13	1.41	1.47	1.65	1.55	1.45	1.40	1.05	1.61	1.22
107.50°	0.90	1.24	1.16	1.83	1.74	1.10	1.43	1.16	1.18	1.35	1.66	1.45	1.40	1.52	1.22	1.83	0.90
110.00°	1.26	1.67	1.31	2.04	1.72	1.19	1.25	1.21	1.04	1.40	1.34	1.40	1.38	1.85	1.39	2.04	1.26
112.50°	1.75	2.24	1.68	2.02	1.80	1.26	1.18	1.29	1.06	1.58	1.19	1.37	1.50	1.85	1.54	2.38	1.75

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	3719	3719	3719	3719	3627	3627	3627	3627	3455	3455	3455	3297	3297	3297	3153	3153	3153	3085
	1	3548	3463	3386	3317	3466	3390	3322	3260	3255	3200	3150	3130	3087	3048	3015	2982	2952	2919
	2	3376	3226	3102	2998	3302	3168	3056	2960	3059	2967	2888	2959	2884	2819	2866	2806	2753	2748
	3	3210	3013	2861	2739	3144	2966	2826	2714	2877	2760	2664	2795	2698	2617	2719	2639	2571	2585
	4	3053	2822	2653	2524	2994	2783	2627	2506	2710	2577	2471	2642	2529	2437	2579	2483	2405	2434
	5	2905	2650	2472	2341	2852	2618	2452	2328	2557	2413	2303	2500	2376	2279	2447	2340	2255	2296
	6	2767	2496	2314	2183	2718	2469	2298	2174	2417	2267	2155	2369	2238	2137	2324	2209	2119	2169
	7	2638	2356	2173	2045	2594	2333	2161	2038	2289	2136	2024	2248	2112	2010	2210	2089	1997	2053
	8	2518	2230	2048	1924	2478	2210	2038	1918	2173	2018	1907	2137	1998	1897	2104	1979	1886	1946
	9	2407	2115	1936	1816	2370	2098	1928	1811	2065	1911	1803	2035	1895	1794	2006	1879	1786	1849
	10	2303	2010	1835	1719	2270	1996	1828	1715	1967	1814	1708	1940	1800	1701	1915	1787	1695	1760

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	187.6 fc	3.0 ft
6.5 ft	134.3 fc	3.5 ft
7.5 ft	100.9 fc	4.1 ft
8.0 ft	88.7 fc	4.4 ft
10.0 ft	56.7 fc	5.4 ft
12.0 ft	39.4 fc	6.5 ft
14.0 ft	28.9 fc	7.6 ft
16.0 ft	22.2 fc	8.7 ft
20.0 ft	14.2 fc	10.9 ft
24.0 ft	9.9 fc	13.1 ft
28.0 ft	7.2 fc	15.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	195915	195915	195915
45.00°	6308	5854	5169
55.00°	4971	4213	3486
65.00°	1177	1210	951
75.00°	254	163	262
85.00°	491	454	399

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	8.5	9.5	8.9	9.8	10.2	10.6	11.5	11.0	11.9	12.2
	3H	8.3	9.2	8.7	9.5	9.9	10.4	11.2	10.8	11.6	12.0
	4H	8.2	9.0	8.7	9.4	9.8	10.3	11.1	10.7	11.5	11.9
	6H	8.1	8.8	8.6	9.3	9.7	10.2	10.9	10.6	11.3	11.7
	8H	8.1	8.8	8.5	9.2	9.6	10.1	10.8	10.6	11.2	11.7
	12H	8.0	8.7	8.5	9.1	9.6	10.1	10.7	10.5	11.1	11.6
4H	2H	8.3	9.1	8.7	9.5	9.9	10.4	11.2	10.9	11.6	12.1
	3H	8.1	8.8	8.6	9.2	9.6	10.3	10.9	10.7	11.3	11.8
	4H	8.0	8.6	8.5	9.0	9.5	10.1	10.7	10.6	11.2	11.7
	6H	7.9	8.4	8.4	8.9	9.4	10.0	10.5	10.5	11.0	11.5
	8H	7.9	8.3	8.4	8.8	9.3	10.0	10.4	10.5	10.9	11.4
	12H	7.8	8.2	8.3	8.7	9.2	9.9	10.3	10.4	10.8	11.3
8H	4H	7.8	8.3	8.3	8.8	9.3	10.0	10.4	10.5	10.9	11.4
	6H	7.7	8.1	8.3	8.6	9.1	9.9	10.2	10.4	10.7	11.3
	8H	7.7	8.0	8.2	8.6	9.1	9.8	10.1	10.4	10.7	11.2
	12H	7.7	7.9	8.2	8.5	9.1	9.8	10.0	10.3	10.6	11.2
12H	4H	7.8	8.2	8.3	8.7	9.2	9.9	10.3	10.4	10.8	11.3
	6H	7.7	8.0	8.2	8.5	9.1	9.8	10.1	10.3	10.6	11.2
	8H	7.6	7.9	8.2	8.4	9.1	9.7	10.0	10.3	10.5	11.2

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0