Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire
SGRTE8XT 40L 35K WD XX AR8466XT SG GL
N/A

Test Number
SP-01209_1_M-40L

Test Date
2/11/2021

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

Summary of Results

Power

Input Watts	42.2 W

Lumen Output

Output Lumens	2661
Efficacy	63.05 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.7
Two luminaires, plane 90°	0.72
Four luminaires	0.7

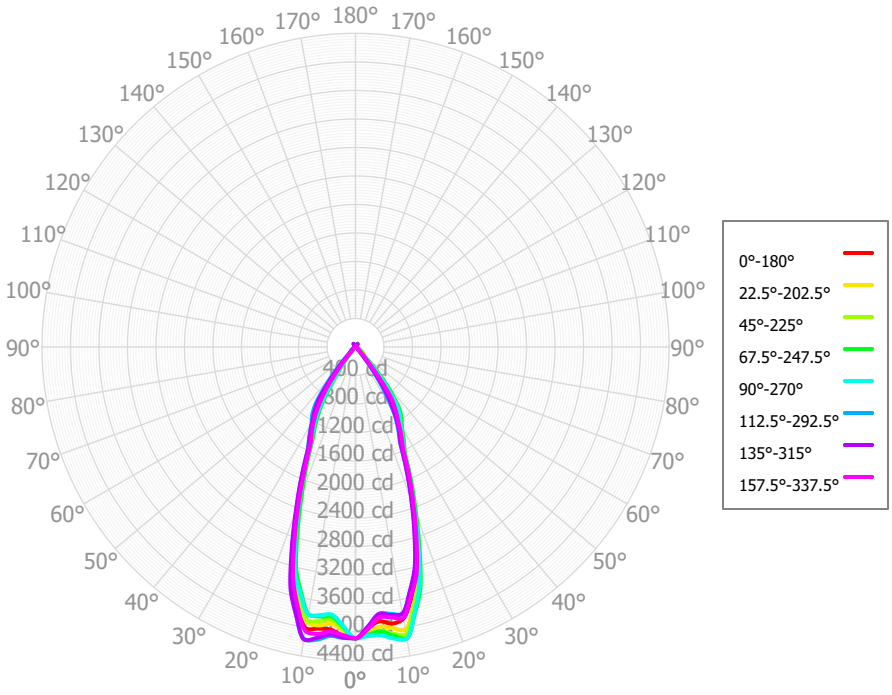
Full Beam Angle

0° - 180°	43°
90° - 270°	43°

IES File Header Contents

Keyword	Value
TEST	SP-01209_1_M-40L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/11/2021
ISSUEDATE	3/1/2021
LUMCAT	SGRTE8XT 40L 35K WD 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, scaled from 50L

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	383.63	14.42%	90.00° - 100.00°	1.12	0.04%
10.00° - 20.00°	897.17	33.72%	100.00° - 110.00°	1.10	0.04%
20.00° - 30.00°	738.69	27.76%	100.00° - 120.00°	2.43	0.09%
30.00° - 40.00°	455.34	17.11%	120.00° - 130.00°	2.23	0.08%
40.00° - 50.00°	93.55	3.52%	130.00° - 140.00°	3.98	0.15%
50.00° - 60.00°	43.26	1.63%	140.00° - 150.00°	17.85	0.67%
60.00° - 70.00°	11.34	0.43%	150.00° - 160.00°	6.05	0.23%
70.00° - 80.00°	1.04	0.04%	160.00° - 170.00°	1.88	0.07%
80.00° - 90.00°	1.06	0.04%	170.00° - 180.00°	0.23	0.01%
0.00° - 90.00°	2625.08	98.66%	0.00° - 180.00°	2660.85	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°	4088.50	4088.50	4088.50	4088.50	4088.50	4088.50	4088.50	4088.50	4088.50	4088.50	4088.50	4088.50	4088.50	4088.50	4088.50	4088.50	4088.50
2.50°	3947.81	4024.17	4040.80	4043.30	4061.82	4086.72	4080.39	4046.20	4056.59	3980.12	3960.81	3932.72	3920.26	3944.39	3928.24	3966.42	3947.81
5.00°	3865.47	3940.23	3998.87	4006.91	4060.37	4070.58	4049.21	4009.86	3982.62	3900.61	3844.75	3798.97	3770.96	3759.91	3761.97	3810.78	3865.47
7.50°	3915.82	3978.93	4057.22	4085.97	4126.43	4141.99	4115.82	4061.46	3985.83	3941.56	3880.24	3815.26	3796.55	3776.89	3793.95	3827.24	3915.82
10.00°	3872.21	4031.48	4093.24	4150.02	4157.30	4160.58	4167.68	4047.52	4009.35	3920.37	3893.70	3805.57	3811.25	3802.51	3798.04	3859.44	3872.21
12.50°	3614.93	3736.31	3756.74	3841.38	3825.98	3850.10	3853.01	3737.07	3742.15	3648.70	3632.52	3528.26	3555.59	3533.03	3515.02	3592.18	3614.93
15.00°	3282.78	3415.78	3404.15	3517.22	3469.16	3498.71	3521.68	3379.87	3411.91	3313.63	3340.97	3221.40	3283.03	3255.70	3210.44	3309.09	3282.78
17.50°	2804.67	2916.27	2881.87	2993.84	2928.97	2950.25	2976.40	2847.86	2892.60	2764.83	2798.20	2702.06	2793.66	2781.12	2750.99	2851.42	2804.67
20.00°	2347.02	2409.70	2373.54	2479.37	2405.28	2421.75	2440.28	2332.70	2341.32	2244.78	2271.37	2199.76	2310.13	2309.11	2297.00	2390.84	2347.02
22.50°	1923.82	2005.62	1967.40	2043.06	1973.50	1972.13	1984.59	1869.57	1906.16	1805.57	1844.23	1792.42	1877.86	1883.62	1873.43	1981.82	1923.82
25.00°	1588.50	1607.96	1597.01	1641.99	1589.71	1584.37	1566.11	1488.25	1486.03	1439.42	1454.61	1421.90	1477.55	1478.96	1495.92	1582.86	1588.50
27.50°	1383.54	1436.84	1428.95	1465.02	1416.36	1397.35	1384.20	1323.03	1300.88	1247.07	1246.23	1212.88	1280.52	1295.50	1320.36	1388.09	1383.54
30.00°	1221.22	1269.87	1274.33	1301.81	1259.57	1233.19	1209.51	1145.02	1136.45	1023.53	1019.92	983.72	1067.44	1100.23	1133.35	1196.71	1221.22
32.50°	1114.02	1168.87	1179.38	1205.97	1161.73	1131.11	1070.18	938.28	868.09	735.46	722.53	682.91	775.67	818.02	905.55	1045.93	1114.02
35.00°	930.91	1053.36	1054.26	1085.37	1022.45	979.43	899.13	703.61	594.14	472.82	449.54	412.09	499.53	543.45	664.60	877.16	930.91
37.50°	660.89	796.00	818.22	865.41	758.42	711.56	600.77	415.14	358.57	255.46	255.93	231.56	286.11	312.29	384.06	563.70	660.89
40.00°	417.31	543.98	578.94	628.00	499.28	456.94	335.48	199.45	126.84	109.35	105.83	94.88	114.37	116.63	164.21	277.84	417.31
42.50°	200.19	330.14	329.80	333.22	252.54	228.88	178.97	106.72	87.74	74.88	76.34	69.36	79.83	79.09	98.16	160.59	200.19
45.00°	99.45	150.48	152.16	113.94	82.81	84.59	62.87	48.20	50.08	50.68	52.29	48.97	51.70	48.23	51.90	63.91	99.45
47.50°	101.99	155.18	157.51	106.16	82.13	87.49	59.98	39.85	41.91	40.47	41.03	39.71	41.24	41.53	48.38	64.71	101.99
50.00°	94.86	154.63	155.18	97.23	81.35	87.93	56.87	33.20	33.95	31.86	31.43	31.36	31.99	35.23	44.62	63.68	94.86
52.50°	80.25	131.65	135.84	85.58	80.37	84.63	53.28	28.73	28.50	25.20	25.20	24.76	25.61	30.13	40.40	55.48	80.25
55.00°	64.88	108.13	113.81	73.42	75.94	76.93	47.93	23.46	23.20	19.66	19.42	18.88	20.33	24.87	34.74	46.49	64.88
57.50°	49.00	82.66	86.65	60.22	65.77	63.29	38.99	17.31	19.13	15.31	14.41	14.20	17.26	19.23	26.72	34.99	49.00
60.00°	34.09	57.27	60.47	45.60	50.92	48.27	29.99	12.89	15.01	12.08	10.57	10.34	14.04	13.93	18.88	23.98	34.09
62.50°	19.77	32.09	35.86	28.43	29.33	31.63	20.88	10.17	10.67	9.88	8.53	7.66	10.58	9.37	11.30	14.27	19.77
65.00°	10.35	12.14	17.20	14.56	13.59	17.64	12.58	6.72	6.58	6.66	5.91	4.98	7.00	5.40	5.66	6.50	10.35
67.50°	3.46	5.38	7.14	5.76	5.16	6.36	5.55	2.63	3.63	2.63	2.52	2.30	3.24	2.56	2.45	3.19	3.46
70.00°	1.14	0.81	1.36	0.73	0.77	0.90	1.48	0.85	1.27	1.07	0.72	0.91	1.14	0.84	0.86	0.99	1.14
72.50°	0.85	0.94	0.99	0.83	0.86	0.74	1.45	0.85	1.18	1.27	0.78	0.93	1.28	0.97	1.06	1.00	0.85
75.00°	0.81	0.99	0.76	0.92	1.00	0.79	1.28	0.95	1.07	1.20	0.90	0.96	1.28	1.01	1.06	0.97	0.81
77.50°	0.87	0.87	0.69	0.97	1.19	1.01	0.95	1.13	0.91	0.97	1.09	1.01	1.12	0.91	0.84	0.89	0.87
80.00°	0.87	0.77	0.74	0.97	1.12	1.18	0.90	1.21	0.84	0.86	1.09	1.03	0.99	0.82	0.77	0.85	0.87
82.50°	0.85	0.73	0.93	0.91	0.83	1.31	1.13	1.24	1.03	0.81	0.94	1.04	0.91	0.75	0.82	0.90	0.85
85.00°	0.90	0.75	1.02	0.92	0.84	1.20	1.24	1.25	1.14	0.86	0.78	1.06	0.90	0.76	0.89	0.94	0.90
87.50°	0.97	0.86	1.03	0.98	1.09	0.93	1.22	1.25	1.06	0.97	0.62	1.09	0.98	0.89	0.98	1.00	0.97
90.00°	1.06	0.88	1.03	1.02	1.07	1.01	1.26	1.08	1.00	0.88	0.60	1.00	1.01	0.97	1.16	1.11	1.06
92.50°	1.16	0.78	1.03	1.04	0.88	1.27	1.33	0.84	0.95	0.71	0.67	0.84	1.02	1.02	1.40	1.29	1.16
95.00°	0.97	0.78	1.10	1.01	0.88	1.23	1.33	0.93	0.88	0.83	0.82	0.88	1.03	0.99	1.42	1.30	0.97
97.50°	0.73	0.90	1.20	0.95	0.99	1.04	1.28	1.14	0.76	1.04	1.03	1.03	1.05	0.92	1.33	1.11	0.73
100.00°	0.76	0.99	1.24	1.05	1.12	0.90	1.03	1.23	0.75	1.06	1.00	1.26	0.98	0.99	1.25	1.06	0.76
102.50°	0.82	1.05	1.23	1.24	1.26	0.77	0.66	1.28	0.87	1.01	0.85	1.54	0.86	1.17	1.18	1.12	0.82
105.00°	0.79	1.05	1.18	1.22	1.25	0.78	0.76	1.34	0.91	0.99	0.86	1.41	0.79	1.19	1.16	1.09	0.79
107.50°	0.75	1.01	1.12	1.09	1.18	0.83	1.11	1.41	0.85	0.98	0.93	1.11	0.74	1.09	1.15	0.99	0.75
110.00°	0.73	0.96	1.11	1.03	1.16	1.05	1.27	1.25	0.85	1.03	1.00	1.09	0.85	1.12	1.35	0.93	0.73
112.50°	0.70	0.91	1.12	1.01	1.16	1.33	1.34	1.06	0.94	1.08	1.07	1.18	1.05	1.22	1.61	0.90	0.70

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	3159	3159	3159	3159	3082	3082	3082	3082	2937	2937	2937	2804	2804	2804	2682	2682	2682	2625
	1	3019	2949	2886	2829	2950	2888	2831	2780	2774	2729	2688	2670	2635	2602	2573	2546	2521	2493
	2	2879	2756	2655	2569	2818	2708	2616	2538	2617	2542	2477	2533	2472	2419	2455	2407	2363	2357
	3	2745	2583	2459	2359	2690	2544	2430	2338	2470	2375	2296	2402	2323	2256	2338	2273	2217	2227
	4	2617	2428	2289	2184	2568	2396	2268	2169	2335	2226	2140	2278	2186	2111	2226	2148	2084	2106
	5	2496	2288	2142	2034	2452	2261	2125	2023	2210	2093	2002	2163	2061	1982	2119	2032	1962	1994
	6	2383	2160	2011	1904	2343	2138	1998	1896	2095	1972	1881	2056	1948	1866	2018	1924	1851	1890
	7	2276	2045	1895	1790	2240	2026	1884	1784	1990	1864	1772	1956	1844	1761	1924	1825	1749	1794
	8	2177	1940	1791	1688	2144	1924	1782	1684	1893	1766	1675	1863	1749	1666	1836	1734	1657	1705
	9	2084	1844	1697	1597	2054	1830	1690	1594	1803	1676	1587	1778	1663	1580	1754	1650	1573	1624
	10	1997	1756	1612	1515	1970	1744	1606	1513	1720	1594	1507	1698	1583	1501	1677	1572	1496	1548

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	135.2 fc	4.4 ft
6.5 ft	96.8 fc	5.2 ft
7.5 ft	72.7 fc	6.0 ft
8.0 ft	63.9 fc	6.4 ft
10.0 ft	40.9 fc	8.0 ft
12.0 ft	28.4 fc	9.6 ft
14.0 ft	20.9 fc	11.1 ft
16.0 ft	16.0 fc	12.7 ft
20.0 ft	10.2 fc	15.9 ft
24.0 ft	7.1 fc	19.1 ft
28.0 ft	5.2 fc	22.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	141177	141177	141177
45.00°	4857	7431	4044
55.00°	3906	6851	4571
65.00°	846	1405	1110
75.00°	108	102	134
85.00°	357	405	334

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	9.8	10.7	10.2	11.1	11.4	8.0	8.9	8.4	9.3	9.6
	3H	9.6	10.4	10.0	10.8	11.2	7.8	8.7	8.2	9.0	9.4
	4H	9.5	10.3	9.9	10.7	11.1	7.7	8.5	8.2	8.9	9.3
	6H	9.4	10.1	9.8	10.5	10.9	7.6	8.3	8.1	8.7	9.2
	8H	9.3	10.0	9.8	10.4	10.9	7.6	8.2	8.0	8.6	9.1
	12H	9.3	9.9	9.7	10.3	10.8	7.5	8.1	8.0	8.6	9.0
4H	2H	9.6	10.4	10.0	10.7	11.2	7.8	8.5	8.2	8.9	9.3
	3H	9.4	10.0	9.8	10.4	10.9	7.6	8.2	8.0	8.6	9.1
	4H	9.3	9.8	9.7	10.3	10.8	7.5	8.0	7.9	8.5	9.0
	6H	9.2	9.6	9.7	10.1	10.6	7.4	7.8	7.9	8.3	8.8
	8H	9.1	9.5	9.6	10.0	10.5	7.3	7.8	7.8	8.2	8.7
	12H	9.0	9.4	9.5	9.9	10.4	7.3	7.6	7.8	8.2	8.7
8H	4H	9.1	9.5	9.6	10.0	10.5	7.3	7.7	7.8	8.2	8.7
	6H	9.0	9.3	9.5	9.8	10.4	7.2	7.5	7.7	8.1	8.6
	8H	8.9	9.2	9.5	9.7	10.3	7.1	7.4	7.7	8.0	8.5
	12H	8.9	9.1	9.4	9.6	10.3	7.1	7.4	7.7	7.9	8.5
12H	4H	9.0	9.4	9.5	9.9	10.4	7.2	7.6	7.7	8.1	8.6
	6H	8.9	9.2	9.4	9.7	10.3	7.1	7.4	7.7	7.9	8.5
	8H	8.8	9.1	9.4	9.6	10.2	7.1	7.4	7.6	7.9	8.5

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0