Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire
SGRTE8XT 20L 35K WD XX AR8466XT SG GL
N/A

Test Number
SP-01209_1_M-20L

Test Date
2/11/2021

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

© Spectrum Lighting

Summary of Results

Power

Input Watts	19.9 W

Lumen Output

Output Lumens	1330
Efficacy	66.86 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

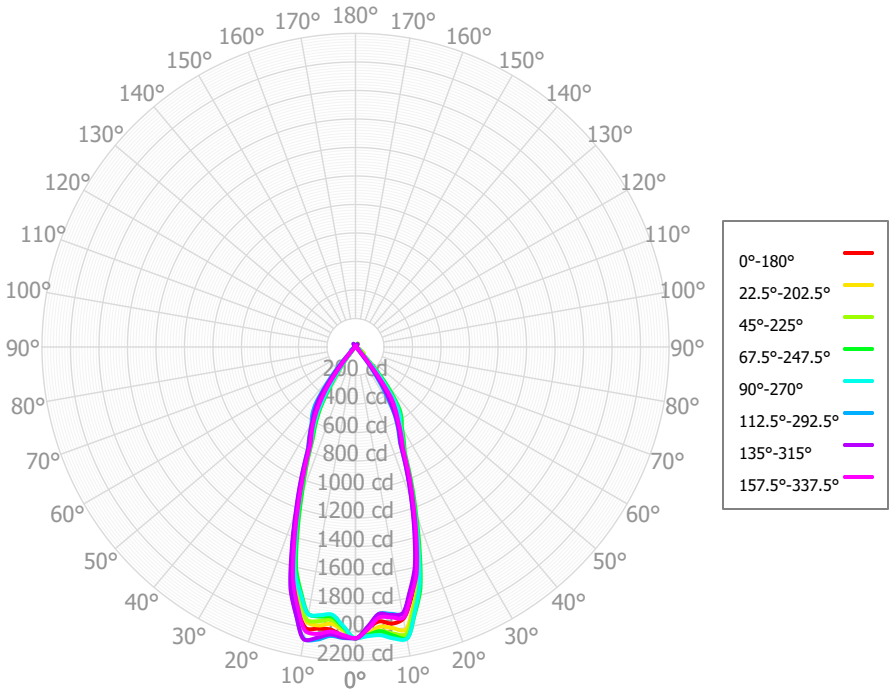
0° - 180°	43°
90° - 270°	43°

IES File Header Contents

Keyword	Value
TEST	SP-01209_1_M-20L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/11/2021
ISSUEDATE	3/1/2021
LUMCAT	SGRTE8XT 20L 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

© Spectrum Lighting

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	191.82	14.42%	90.00° - 100.00°	0.56	0.04%
10.00° - 20.00°	448.59	33.72%	100.00° - 110.00°	0.55	0.04%
20.00° - 30.00°	369.35	27.76%	100.00° - 120.00°	1.21	0.09%
30.00° - 40.00°	227.67	17.11%	120.00° - 130.00°	1.11	0.08%
40.00° - 50.00°	46.78	3.52%	130.00° - 140.00°	1.99	0.15%
50.00° - 60.00°	21.63	1.63%	140.00° - 150.00°	8.93	0.67%
60.00° - 70.00°	5.67	0.43%	150.00° - 160.00°	3.02	0.23%
70.00° - 80.00°	0.52	0.04%	160.00° - 170.00°	0.94	0.07%
80.00° - 90.00°	0.53	0.04%	170.00° - 180.00°	0.12	0.01%
0.00° - 90.00°	1312.54	98.66%	0.00° - 180.00°	1330.43	100.00%

© Spectrum Lighting

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°	2044.25	2044.25	2044.25	2044.25	2044.25	2044.25	2044.25	2044.25	2044.25	2044.25	2044.25	2044.25	2044.25	2044.25	2044.25	2044.25	2044.25
2.50°	1973.90	2012.08	2020.40	2021.65	2030.91	2043.36	2040.20	2023.10	2028.30	1990.06	1980.41	1966.36	1960.13	1972.20	1964.12	1983.21	1973.90
5.00°	1932.74	1970.12	1999.44	2003.46	2030.18	2035.29	2024.60	2004.93	1991.31	1950.31	1922.38	1899.48	1885.48	1879.96	1880.98	1905.39	1932.74
7.50°	1957.91	1989.46	2028.61	2042.98	2063.21	2070.99	2057.91	2030.73	1992.92	1970.78	1940.12	1907.63	1898.27	1888.45	1896.97	1913.62	1957.91
10.00°	1936.10	2015.74	2046.62	2075.01	2078.65	2080.29	2083.84	2023.76	2004.67	1960.18	1946.85	1902.78	1905.63	1901.26	1899.02	1929.72	1936.10
12.50°	1807.46	1868.16	1878.37	1920.69	1912.99	1925.05	1926.51	1868.54	1871.08	1824.35	1816.26	1764.13	1777.79	1766.51	1757.51	1796.09	1807.46
15.00°	1641.39	1707.89	1702.08	1758.61	1734.58	1749.35	1760.84	1689.93	1705.96	1656.82	1670.48	1610.70	1641.52	1627.85	1605.22	1654.55	1641.39
17.50°	1402.33	1458.13	1440.93	1496.92	1464.48	1475.12	1488.20	1423.93	1446.30	1382.41	1399.10	1351.03	1396.83	1390.56	1375.50	1425.71	1402.33
20.00°	1173.51	1204.85	1186.77	1239.68	1202.64	1210.87	1220.14	1166.35	1170.66	1122.39	1135.68	1099.88	1155.06	1154.56	1148.50	1195.42	1173.51
22.50°	961.91	1002.81	983.70	1021.53	986.75	986.07	992.30	934.79	953.08	902.78	922.12	896.21	938.93	941.81	936.72	990.91	961.91
25.00°	794.25	803.98	798.51	821.00	794.86	792.18	783.06	744.13	743.01	719.71	727.30	710.95	738.77	739.48	747.96	791.43	794.25
27.50°	691.77	718.42	714.48	732.51	708.18	698.68	692.10	661.52	650.44	623.54	623.12	606.44	640.26	647.75	660.18	694.05	691.77
30.00°	610.61	634.94	637.16	650.90	629.78	616.60	604.75	572.51	568.22	511.76	509.96	491.86	533.72	550.12	566.67	598.36	610.61
32.50°	557.01	584.44	589.69	602.99	580.86	565.55	535.09	469.14	434.04	367.73	361.27	341.45	387.84	409.01	452.77	522.97	557.01
35.00°	465.45	526.68	527.13	542.69	511.23	489.72	449.56	351.80	297.07	236.41	224.77	206.04	249.77	271.72	332.30	438.58	465.45
37.50°	330.45	398.00	409.11	432.70	379.21	355.78	300.39	207.57	179.28	127.73	127.97	115.78	143.05	156.15	192.03	281.85	330.45
40.00°	208.66	271.99	289.47	314.00	249.64	228.47	167.74	99.72	63.42	54.68	52.91	47.44	57.19	58.31	82.10	138.92	208.66
42.50°	100.10	165.07	164.90	166.61	126.27	114.44	89.48	53.36	43.87	37.44	38.17	34.68	39.91	39.54	49.08	80.30	100.10
45.00°	49.73	75.24	76.08	56.97	41.41	42.29	31.44	24.10	25.04	25.34	26.15	24.49	25.85	24.12	25.95	31.96	49.73
47.50°	50.99	77.59	78.75	53.08	41.07	43.75	29.99	19.93	20.95	20.23	20.51	19.85	20.62	20.77	24.19	32.36	50.99
50.00°	47.43	77.31	77.59	48.62	40.67	43.97	28.44	16.60	16.98	15.93	15.72	15.68	16.00	17.61	22.31	31.84	47.43
52.50°	40.13	65.83	67.92	42.79	40.19	42.32	26.64	14.36	14.25	12.60	12.60	12.38	12.81	15.06	20.20	27.74	40.13
55.00°	32.44	54.07	56.90	36.71	37.97	38.46	23.97	11.73	11.60	9.83	9.71	9.44	10.16	12.44	17.37	23.25	32.44
57.50°	24.50	41.33	43.33	30.11	32.88	31.64	19.50	8.66	9.56	7.66	7.20	7.10	8.63	9.62	13.36	17.49	24.50
60.00°	17.05	28.63	30.23	22.80	25.46	24.13	14.99	6.44	7.50	6.04	5.29	5.17	7.02	6.96	9.44	11.99	17.05
62.50°	9.88	16.05	17.93	14.22	14.67	15.81	10.44	5.09	5.33	4.94	4.26	3.83	5.29	4.69	5.65	7.14	9.88
65.00°	5.18	6.07	8.60	7.28	6.79	8.82	6.29	3.36	3.29	3.33	2.95	2.49	3.50	2.70	2.83	3.25	5.18
67.50°	1.73	2.69	3.57	2.88	2.58	3.18	2.77	1.32	1.81	1.31	1.26	1.15	1.62	1.28	1.22	1.59	1.73
70.00°	0.57	0.40	0.68	0.36	0.38	0.45	0.74	0.43	0.64	0.53	0.36	0.45	0.57	0.42	0.43	0.49	0.57
72.50°	0.43	0.47	0.50	0.42	0.43	0.37	0.72	0.42	0.59	0.63	0.39	0.46	0.64	0.48	0.53	0.50	0.43
75.00°	0.41	0.50	0.38	0.46	0.50	0.40	0.64	0.48	0.54	0.60	0.45	0.48	0.64	0.50	0.53	0.49	0.41
77.50°	0.43	0.43	0.34	0.48	0.60	0.50	0.48	0.56	0.46	0.49	0.54	0.50	0.56	0.45	0.42	0.44	0.43
80.00°	0.43	0.39	0.37	0.49	0.56	0.59	0.45	0.60	0.42	0.43	0.55	0.51	0.50	0.41	0.39	0.43	0.43
82.50°	0.43	0.36	0.47	0.46	0.41	0.66	0.57	0.62	0.52	0.40	0.47	0.52	0.45	0.37	0.41	0.45	0.43
85.00°	0.45	0.37	0.51	0.46	0.42	0.60	0.62	0.62	0.57	0.43	0.39	0.53	0.45	0.38	0.44	0.47	0.45
87.50°	0.48	0.43	0.52	0.49	0.54	0.46	0.61	0.62	0.53	0.48	0.31	0.54	0.49	0.44	0.49	0.50	0.48
90.00°	0.53	0.44	0.52	0.51	0.53	0.50	0.63	0.54	0.50	0.44	0.30	0.50	0.51	0.48	0.58	0.56	0.53
92.50°	0.58	0.39	0.52	0.52	0.44	0.64	0.67	0.42	0.48	0.36	0.34	0.42	0.51	0.51	0.70	0.65	0.58
95.00°	0.48	0.39	0.55	0.51	0.44	0.62	0.67	0.46	0.44	0.42	0.41	0.44	0.51	0.50	0.71	0.65	0.48
97.50°	0.37	0.45	0.60	0.48	0.49	0.52	0.64	0.57	0.38	0.52	0.51	0.51	0.52	0.46	0.66	0.56	0.37
100.00°	0.38	0.50	0.62	0.53	0.56	0.45	0.51	0.62	0.37	0.53	0.50	0.63	0.49	0.49	0.62	0.53	0.38
102.50°	0.41	0.52	0.61	0.62	0.63	0.39	0.33	0.64	0.44	0.51	0.43	0.77	0.43	0.59	0.59	0.56	0.41
105.00°	0.40	0.53	0.59	0.61	0.63	0.39	0.38	0.67	0.46	0.50	0.43	0.70	0.39	0.59	0.58	0.54	0.40
107.50°	0.38	0.50	0.56	0.54	0.59	0.41	0.56	0.70	0.42	0.49	0.46	0.55	0.37	0.54	0.58	0.49	0.38
110.00°	0.36	0.48	0.55	0.51	0.58	0.53	0.64	0.63	0.43	0.51	0.50	0.55	0.43	0.56	0.67	0.47	0.36
112.50°	0.35	0.45	0.56	0.51	0.58	0.66	0.67	0.53	0.47	0.54	0.53	0.59	0.52	0.61	0.80	0.45	0.35

© Spectrum Lighting

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	1580	1580	1580	1580	1541	1541	1541	1541	1468	1468	1468	1402	1402	1402	1341	1341	1341	1313
	1	1510	1474	1443	1414	1475	1444	1416	1390	1387	1365	1344	1335	1317	1301	1287	1273	1261	1246
	2	1440	1378	1327	1285	1409	1354	1308	1269	1308	1271	1238	1266	1236	1209	1227	1203	1182	1178
	3	1372	1292	1229	1180	1345	1272	1215	1169	1235	1187	1148	1201	1161	1128	1169	1137	1109	1114
	4	1309	1214	1145	1092	1284	1198	1134	1084	1167	1113	1070	1139	1093	1056	1113	1074	1042	1053
	5	1248	1144	1071	1017	1226	1130	1062	1012	1105	1046	1001	1082	1031	991	1060	1016	981	997
	6	1191	1080	1006	952	1171	1069	999	948	1048	986	940	1028	974	933	1009	962	925	945
	7	1138	1022	948	895	1120	1013	942	892	995	932	886	978	922	880	962	913	875	897
	8	1088	970	895	844	1072	962	891	842	946	883	837	932	875	833	918	867	829	853
	9	1042	922	848	799	1027	915	845	797	901	838	793	889	831	790	877	825	786	812
	10	998	878	806	758	985	872	803	756	860	797	754	849	791	751	839	786	748	774

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	67.6 fc	4.4 ft
6.5 ft	48.4 fc	5.2 ft
7.5 ft	36.3 fc	6.0 ft
8.0 ft	31.9 fc	6.4 ft
10.0 ft	20.4 fc	8.0 ft
12.0 ft	14.2 fc	9.6 ft
14.0 ft	10.4 fc	11.1 ft
16.0 ft	8.0 fc	12.7 ft
20.0 ft	5.1 fc	15.9 ft
24.0 ft	3.5 fc	19.1 ft
28.0 ft	2.6 fc	22.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	70588	70588	70588
45.00°	2428	3715	2022
55.00°	1953	3426	2286
65.00°	423	703	555
75.00°	54	51	67
85.00°	178	203	167

© Spectrum Lighting

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	7.4	8.3	7.8	8.7	9.0	5.6	6.5	6.0	6.9	7.2
	3H	7.2	8.0	7.6	8.4	8.8	5.4	6.2	5.8	6.6	7.0
	4H	7.1	7.9	7.5	8.2	8.7	5.3	6.1	5.7	6.5	6.9
	6H	7.0	7.7	7.4	8.1	8.5	5.2	5.9	5.7	6.3	6.7
	8H	6.9	7.6	7.4	8.0	8.5	5.2	5.8	5.6	6.2	6.7
	12H	6.9	7.5	7.3	7.9	8.4	5.1	5.7	5.6	6.1	6.6
4H	2H	7.2	7.9	7.6	8.3	8.8	5.4	6.1	5.8	6.5	6.9
	3H	7.0	7.6	7.4	8.0	8.5	5.2	5.8	5.6	6.2	6.7
	4H	6.9	7.4	7.3	7.9	8.3	5.1	5.6	5.5	6.1	6.5
	6H	6.7	7.2	7.2	7.7	8.2	5.0	5.4	5.5	5.9	6.4
	8H	6.7	7.1	7.2	7.6	8.1	4.9	5.3	5.4	5.8	6.3
	12H	6.6	7.0	7.1	7.5	8.0	4.9	5.2	5.4	5.7	6.3
8H	4H	6.7	7.1	7.2	7.6	8.1	4.9	5.3	5.4	5.8	6.3
	6H	6.6	6.9	7.1	7.4	7.9	4.8	5.1	5.3	5.7	6.2
	8H	6.5	6.8	7.0	7.3	7.9	4.7	5.0	5.3	5.6	6.1
	12H	6.4	6.7	7.0	7.2	7.8	4.7	5.0	5.3	5.5	6.1
12H	4H	6.6	7.0	7.1	7.5	8.0	4.8	5.2	5.3	5.7	6.2
	6H	6.5	6.8	7.0	7.3	7.9	4.7	5.0	5.3	5.5	6.1
	8H	6.4	6.7	7.0	7.2	7.8	4.7	4.9	5.2	5.5	6.1

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0

© Spectrum Lighting