

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01205_1_M-20L

Test Date

2/11/2021

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

Summary of Results

Power

Input Watts	19.9 W
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Lumen Output

Output Lumens	1254
Efficacy	62.99 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

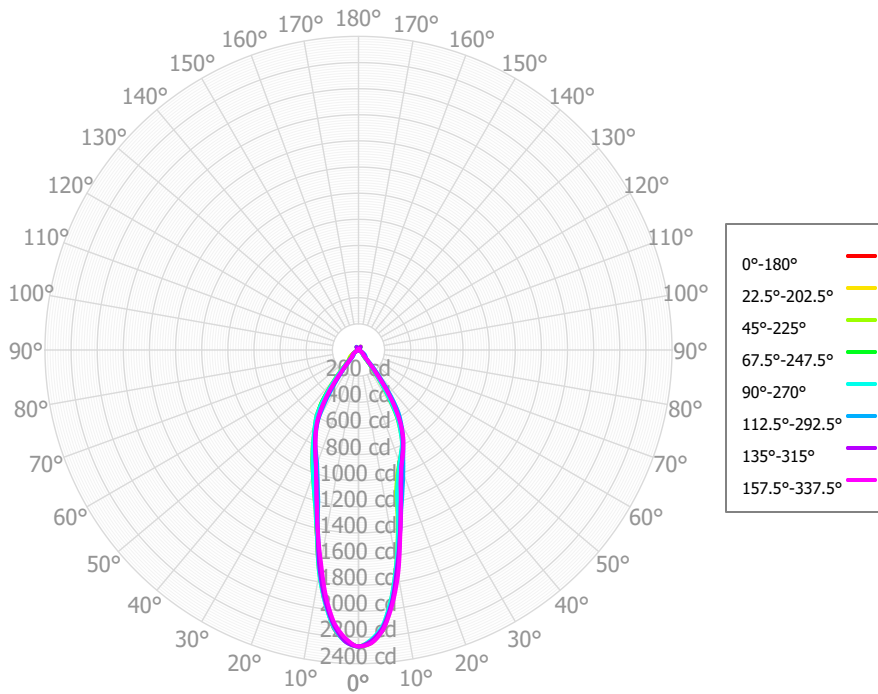
Full Beam Angle

0° - 180°	33°
90° - 270°	33°

IES File Header Contents

Keyword	Value
TEST	SP-01205_1_M-20L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/11/2021
ISSUEDATE	3/2/2021
LUMCAT	SGRTE8XT 20L 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, scaled from 50L

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	190.81	15.22%	90.00° - 100.00°	0.60	0.05%
10.00° - 20.00°	345.44	27.56%	100.00° - 110.00°	0.61	0.05%
20.00° - 30.00°	364.67	29.09%	100.00° - 120.00°	1.35	0.11%
30.00° - 40.00°	233.21	18.60%	120.00° - 130.00°	1.08	0.09%
40.00° - 50.00°	56.44	4.50%	130.00° - 140.00°	1.70	0.14%
50.00° - 60.00°	34.10	2.72%	140.00° - 150.00°	9.03	0.72%
60.00° - 70.00°	8.10	0.65%	150.00° - 160.00°	4.23	0.34%
70.00° - 80.00°	0.61	0.05%	160.00° - 170.00°	1.50	0.12%
80.00° - 90.00°	0.58	0.05%	170.00° - 180.00°	0.11	0.01%
0.00° - 90.00°	1233.95	98.44%	0.00° - 180.00°	1253.55	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°	2269.50	2269.50	2269.50	2269.50	2269.50	2269.50	2269.50	2269.50	2269.50	2269.50	2269.50	2269.50	2269.50	2269.50	2269.50	2269.50	2269.50
2.50°	2227.51	2245.07	2227.25	2243.20	2219.71	2219.09	2236.91	2211.75	2229.55	2221.20	2233.72	2220.22	2237.25	2236.70	2230.42	2246.72	2227.51
5.00°	2150.23	2142.63	2131.24	2151.05	2118.66	2118.75	2123.51	2102.41	2141.63	2119.71	2133.37	2128.28	2139.50	2134.78	2134.53	2152.48	2150.23
7.50°	1928.60	1956.01	1925.15	1949.48	1918.10	1926.60	1942.07	1904.34	1935.67	1927.05	1951.44	1921.80	1958.00	1953.35	1952.83	1972.04	1928.60
10.00°	1682.98	1710.29	1662.34	1708.80	1663.83	1675.02	1709.11	1654.54	1716.98	1675.37	1730.27	1674.56	1734.13	1726.17	1695.92	1745.04	1682.98
12.50°	1419.10	1413.16	1390.64	1410.46	1403.24	1430.97	1443.07	1433.14	1466.20	1450.08	1466.87	1446.82	1466.58	1459.16	1462.34	1473.33	1419.10
15.00°	1153.24	1189.33	1115.28	1176.99	1139.92	1190.88	1238.97	1225.32	1255.46	1238.66	1269.42	1224.50	1268.93	1264.13	1245.56	1251.23	1153.24
17.50°	1031.25	1017.89	991.45	1021.97	1006.45	1039.72	1067.68	1076.37	1125.06	1104.70	1131.23	1109.22	1131.49	1120.53	1086.50	1068.94	1031.25
20.00°	916.69	921.25	916.31	918.32	917.96	926.60	952.98	949.76	1002.62	1003.87	1018.86	1015.71	1016.42	1000.62	961.37	954.70	916.69
22.50°	858.43	868.89	853.41	866.57	850.05	849.19	862.28	858.84	893.11	902.06	925.58	913.95	917.19	894.72	873.78	885.20	858.43
25.00°	799.05	799.68	793.54	799.88	787.57	783.76	785.73	778.36	798.29	799.92	832.75	811.04	826.89	810.15	804.31	812.88	799.05
27.50°	710.41	722.39	694.14	720.76	693.85	702.89	713.97	705.09	723.27	722.60	740.19	733.61	741.84	735.77	725.13	739.06	710.41
30.00°	615.82	600.07	587.78	601.05	594.16	617.99	624.61	633.43	648.63	651.59	664.99	658.27	666.58	654.30	642.25	636.82	615.82
32.50°	460.48	460.35	428.38	453.22	437.94	478.67	530.71	521.32	574.40	567.53	598.40	578.49	595.94	570.12	520.07	522.20	460.48
35.00°	309.22	310.70	262.99	305.69	274.34	329.16	384.02	402.99	460.37	481.03	487.96	496.75	477.57	435.58	386.27	374.31	309.22
37.50°	183.60	158.08	161.62	158.33	168.54	204.81	227.31	258.64	310.01	327.86	359.91	330.39	341.34	285.99	248.79	215.03	183.60
40.00°	78.53	96.75	64.08	89.93	66.91	83.67	141.47	111.89	195.78	166.50	235.01	171.53	212.51	178.81	110.49	129.40	78.53
42.50°	63.41	56.17	55.57	57.39	53.69	62.99	64.50	85.29	109.06	127.28	111.11	118.62	85.87	81.06	79.05	62.93	63.41
45.00°	51.67	50.36	47.95	45.89	42.34	49.24	60.87	63.85	76.24	96.49	89.83	70.85	60.74	70.37	64.29	48.73	51.67
47.50°	51.20	50.06	44.96	42.07	38.06	48.91	62.15	62.36	77.01	92.23	92.59	62.87	57.77	73.47	60.96	44.61	51.20
50.00°	48.72	44.55	41.64	36.05	33.70	48.62	58.76	60.34	69.19	88.02	83.51	54.52	53.11	68.44	58.77	37.69	48.72
52.50°	41.01	38.53	34.72	29.42	28.37	42.56	55.04	49.70	56.97	70.64	72.44	44.25	48.20	62.62	49.29	30.41	41.01
55.00°	33.03	31.26	27.99	24.01	23.17	36.47	43.74	39.21	44.82	53.65	58.38	34.88	42.90	52.01	39.50	24.11	33.03
57.50°	24.50	23.94	22.55	18.86	18.86	29.92	32.71	29.98	32.69	41.46	44.01	28.92	37.56	41.21	31.11	17.87	24.50
60.00°	16.87	18.88	17.04	14.87	14.40	23.17	24.75	20.75	22.93	29.09	31.44	21.97	29.07	29.85	22.65	14.32	16.87
62.50°	10.73	13.73	11.17	11.05	9.22	14.93	16.70	11.52	13.94	15.50	18.96	12.04	20.43	18.60	12.77	10.77	10.73
65.00°	5.76	7.12	5.92	6.19	4.66	7.42	8.04	3.73	7.41	3.91	9.83	4.39	10.31	9.28	3.71	5.70	5.76
67.50°	2.39	1.13	2.76	1.23	2.37	3.46	0.83	1.80	1.49	2.08	1.11	2.02	0.76	0.87	1.93	0.99	2.39
70.00°	0.66	0.76	0.46	0.91	0.70	0.40	0.64	0.38	0.58	0.66	0.75	0.46	0.69	0.70	0.41	0.82	0.66
72.50°	0.77	0.46	0.48	0.75	0.76	0.56	0.49	0.52	0.55	0.69	0.42	0.43	0.63	0.57	0.42	0.68	0.77
75.00°	0.76	0.51	0.49	0.66	0.79	0.65	0.53	0.60	0.57	0.68	0.46	0.44	0.61	0.60	0.43	0.67	0.76
77.50°	0.63	0.55	0.47	0.58	0.75	0.55	0.57	0.52	0.61	0.55	0.48	0.51	0.59	0.63	0.51	0.63	0.63
80.00°	0.54	0.54	0.47	0.60	0.66	0.50	0.61	0.49	0.54	0.47	0.39	0.54	0.56	0.61	0.57	0.46	0.54
82.50°	0.48	0.53	0.48	0.61	0.50	0.56	0.61	0.53	0.46	0.47	0.34	0.54	0.55	0.60	0.61	0.33	0.48
85.00°	0.50	0.54	0.46	0.59	0.40	0.60	0.47	0.56	0.50	0.47	0.42	0.56	0.59	0.64	0.62	0.39	0.50
87.50°	0.55	0.54	0.40	0.57	0.40	0.63	0.42	0.58	0.54	0.47	0.49	0.62	0.62	0.69	0.59	0.44	0.55
90.00°	0.56	0.49	0.38	0.59	0.45	0.62	0.53	0.59	0.58	0.46	0.49	0.66	0.62	0.76	0.58	0.49	0.56
92.50°	0.54	0.47	0.38	0.60	0.57	0.56	0.57	0.60	0.60	0.44	0.48	0.69	0.59	0.77	0.59	0.56	0.54
95.00°	0.55	0.51	0.44	0.57	0.63	0.54	0.52	0.60	0.48	0.44	0.40	0.63	0.49	0.63	0.60	0.65	0.55
97.50°	0.56	0.54	0.54	0.59	0.62	0.56	0.50	0.59	0.39	0.45	0.38	0.50	0.46	0.55	0.60	0.67	0.56
100.00°	0.58	0.54	0.60	0.76	0.67	0.52	0.53	0.55	0.55	0.50	0.46	0.51	0.55	0.59	0.55	0.57	0.58
102.50°	0.59	0.52	0.62	0.85	0.79	0.41	0.57	0.48	0.67	0.58	0.55	0.62	0.60	0.59	0.44	0.55	0.59
105.00°	0.49	0.45	0.57	0.76	0.78	0.39	0.60	0.45	0.56	0.59	0.66	0.62	0.58	0.56	0.42	0.64	0.49
107.50°	0.36	0.50	0.47	0.73	0.70	0.44	0.57	0.46	0.47	0.54	0.66	0.58	0.56	0.61	0.49	0.73	0.36
110.00°	0.51	0.67	0.52	0.82	0.69	0.48	0.50	0.49	0.42	0.56	0.54	0.56	0.55	0.74	0.55	0.82	0.51
112.50°	0.70	0.89	0.67	0.81	0.72	0.51	0.47	0.52	0.42	0.63	0.48	0.55	0.60	0.74	0.62	0.95	0.70

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	1488	1488	1488	1488	1451	1451	1451	1451	1382	1382	1382	1319	1319	1319	1261	1261	1234
	1	1419	1385	1354	1327	1386	1356	1329	1304	1302	1280	1260	1252	1235	1219	1206	1193	1168
	2	1350	1290	1241	1199	1321	1267	1222	1184	1224	1187	1155	1183	1154	1128	1146	1123	1101
	3	1284	1205	1144	1096	1258	1186	1131	1085	1151	1104	1066	1118	1079	1047	1088	1056	1028
	4	1221	1129	1061	1010	1197	1113	1051	1002	1084	1031	988	1057	1012	975	1032	993	974
	5	1162	1060	989	936	1141	1047	981	931	1023	965	921	1000	950	911	979	936	918
	6	1107	998	926	873	1087	988	919	870	967	907	862	948	895	855	930	884	868
	7	1055	943	869	818	1038	933	864	815	916	854	810	899	845	804	884	836	821
	8	1007	892	819	769	991	884	815	767	869	807	763	855	799	759	842	792	778
	9	963	846	774	726	948	839	771	724	826	764	721	814	758	718	802	752	740
	10	921	804	734	687	908	798	731	686	787	726	683	776	720	681	766	715	704

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	75.0 fc	3.0 ft
6.5 ft	53.7 fc	3.5 ft
7.5 ft	40.3 fc	4.1 ft
8.0 ft	35.5 fc	4.4 ft
10.0 ft	22.7 fc	5.4 ft
12.0 ft	15.8 fc	6.5 ft
14.0 ft	11.6 fc	7.6 ft
16.0 ft	8.9 fc	8.7 ft
20.0 ft	5.7 fc	10.9 ft
24.0 ft	3.9 fc	13.1 ft
28.0 ft	2.9 fc	15.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	78366	78366	78366
45.00°	2523	2342	2067
55.00°	1988	1685	1395
65.00°	471	484	381
75.00°	102	65	105
85.00°	196	182	159

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	5.3	6.3	5.7	6.6	7.0	7.4	8.3	7.8	8.7	9.1
	3H	5.1	6.0	5.5	6.4	6.8	7.2	8.1	7.6	8.4	8.8
	4H	5.0	5.8	5.5	6.2	6.6	7.1	7.9	7.5	8.3	8.7
	6H	4.9	5.7	5.4	6.1	6.5	7.0	7.7	7.4	8.1	8.6
	8H	4.9	5.6	5.4	6.0	6.4	6.9	7.6	7.4	8.0	8.5
	12H	4.8	5.5	5.3	5.9	6.4	6.9	7.5	7.4	8.0	8.4
4H	2H	5.1	5.9	5.6	6.3	6.7	7.3	8.1	7.7	8.4	8.9
	3H	4.9	5.6	5.4	6.0	6.5	7.1	7.7	7.5	8.2	8.6
	4H	4.8	5.4	5.3	5.9	6.3	7.0	7.5	7.4	8.0	8.5
	6H	4.7	5.2	5.2	5.7	6.2	6.9	7.3	7.4	7.8	8.3
	8H	4.7	5.1	5.2	5.6	6.1	6.8	7.2	7.3	7.7	8.2
	12H	4.6	5.0	5.2	5.5	6.1	6.7	7.1	7.3	7.7	8.2
8H	4H	4.6	5.1	5.2	5.6	6.1	6.8	7.2	7.3	7.7	8.2
	6H	4.6	4.9	5.1	5.4	6.0	6.7	7.0	7.2	7.6	8.1
	8H	4.5	4.8	5.1	5.4	5.9	6.6	6.9	7.2	7.5	8.0
	12H	4.5	4.8	5.0	5.3	5.9	6.6	6.9	7.1	7.4	8.0
12H	4H	4.6	5.0	5.1	5.5	6.0	6.7	7.1	7.2	7.6	8.1
	6H	4.5	4.8	5.0	5.3	5.9	6.6	6.9	7.2	7.4	8.0
	8H	4.5	4.7	5.0	5.3	5.9	6.6	6.8	7.1	7.4	8.0

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0