

IES LM-79-08

MEASUREMENT AND TEST REPORT

For

ShenZhen Ruizi Light Electricity Technology Co.,Ltd

Buiding 5, Yasen Innovative Industrial Park, No.8, Chengxin Rd, Baolong Industrial Town, Longgang District, 518116 Shenzhen, People's Perpublic of China.

Test Model: L07G 1200MM

Report Type:	Electrical and Photometric tests including: Luminous Intensity Distribution
Test Engineer:	Daniel Duan <i>Daniel Duan</i>
Report Number:	R2DG150509058-10
Test Date:	2015-05-13
Report Date:	2015-05-18
Reviewed By:	Jeanne Han/Safety Manager <i>Jeanne Han</i>
Prepared By:	Bay Area Compliance Laboratories Corp. (Shenzhen) 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China Tel: +86-755-33320018 Fax: +86-755-33320008
Test Facility:	Test facility was located at Pu Long Cun 69, Puxinghu Industrial Area, Tangxia Town, Dongguan, Guangdong, P.R.China.
Accreditation:	The NVLAP Lab Code is 200707-0.

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1. Product Description

General Information:

One sample was received on 2015-05-09 and used for testing. Sample No.: R2DG150509058-S01 Model: L07G 1200MM

Model Tested: L07G 1200MM
Manufacturer: ShenZhen Ruizi Light Electricity Technology Co.,Ltd
Brand Name: ERVAN
Product Designation: LED Tri-proof Light
Burning Time Before Test: 0hour(For New Products)

Rated Values:

Rated Voltage/Frequency: AC100-240V 50/60Hz
Rated Power: 40W
Nominal CCT: 4000K
Lamp Cover: Frosted

2. Standards Used

- IESNA LM-79-08: Approved Method: Electrical & Photometric Measurement of Solid-state Lighting Products
- ANSI C82.77-2002: Harmonic Emission Limits – Related Power Quality Requirements for Lighting

3. Description of Test Equipment

Device	Manufacture	Model No	Serial No	Test Range	Calibration date	Calibration due date
AC Power Supply	EVERFINE	VPS1060 PWM	1101006	0-150V, 0-300V	2015-03-12	2016-03-12
DC Power Supply	EVERFINE	WY12010	1009009	30V/5A	2015-03-05	2016-03-05
Power Meter	YOKOGAWA	WT-210	91KB35700	15/30/60/150/300/600 V	2015-03-05	2016-03-05
Goniophotometer	EVERFINE	GO-R5000	YG108492N10120001	1600mm,3000W/10A	2015-03-04	2016-03-04
Thermal Meter	Victor	VC230	EE091	0~40℃0~90%	2013-04-01	2016-03-31
Standard Light Source	EVERFINE	D908	1012004	N/A	2014-07-31	2015-07-31

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Shenzhen) attested that all calibration has been performed using suitable standards traceable to National Primary Standards and International System of Units (SI).

4. Test Method

Product was tested with no seasoning. All stabilization and measurements were made in compliance with IES LM-79-08. The product was operated at rated voltage or at voltage required by manufacturer. The ambient temperature of the sample was maintained at 25°C±1°C during measurement. And relative humidity is less than 65%.

Goniophotometer System

The goniophotometer system is calibrated by standard light source before measurement.

Type C goniophotometer was used for measuring total luminous flux, luminous intensity distribution, and color spatial uniformity. The product was operated in its intended orientation in application and was recorded in this report.

The uncertainty of the luminous intensity is $U=2.82\%$ ($K=2$), at the 95% confidence level.

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5. Test Result

[Goniophotometer System]

Total operating time for luminous intensity distribution: **1.0 hour**

Test orientation: **Downward**

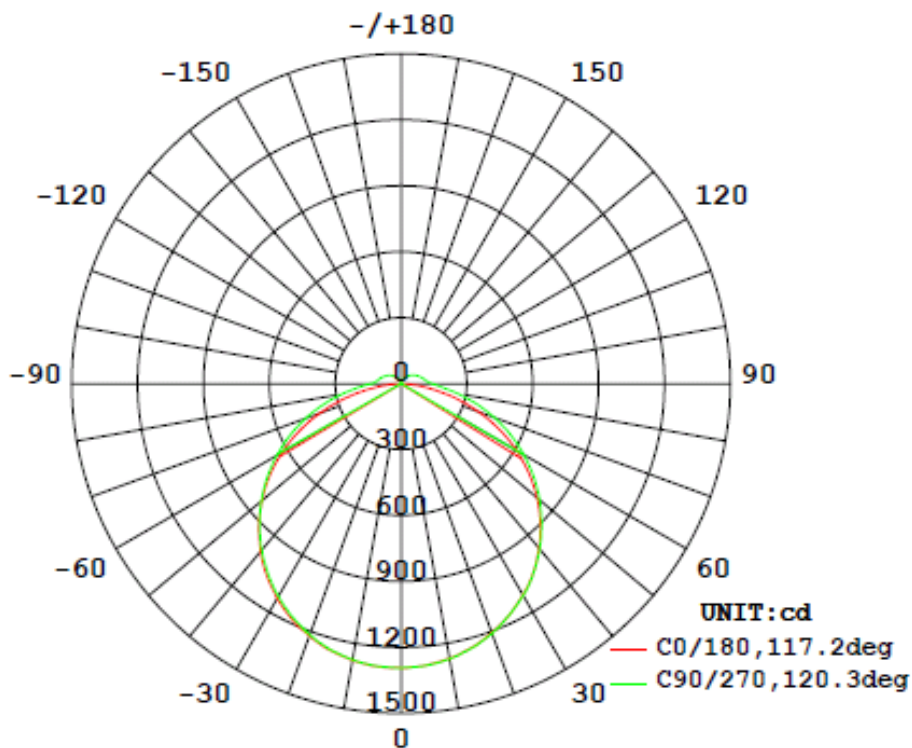
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
230.1	50.0	0.1749	38.21	0.9496

Photometric Measurement

Luminous Flux (lm)	Efficacy (lm/W)	CBCP (cd)	S/MH (C0/180)	S/MH (C90/270)
4317.4	112.99	1293	1.30	1.29

Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle (50% Imax):	117.2	119.6	120.3	119.5	119.2
Field Angle (10% Imax):	161.5	173.1	183.6	171.3	172.4

Luminous Intensity (cd) Distribution Data

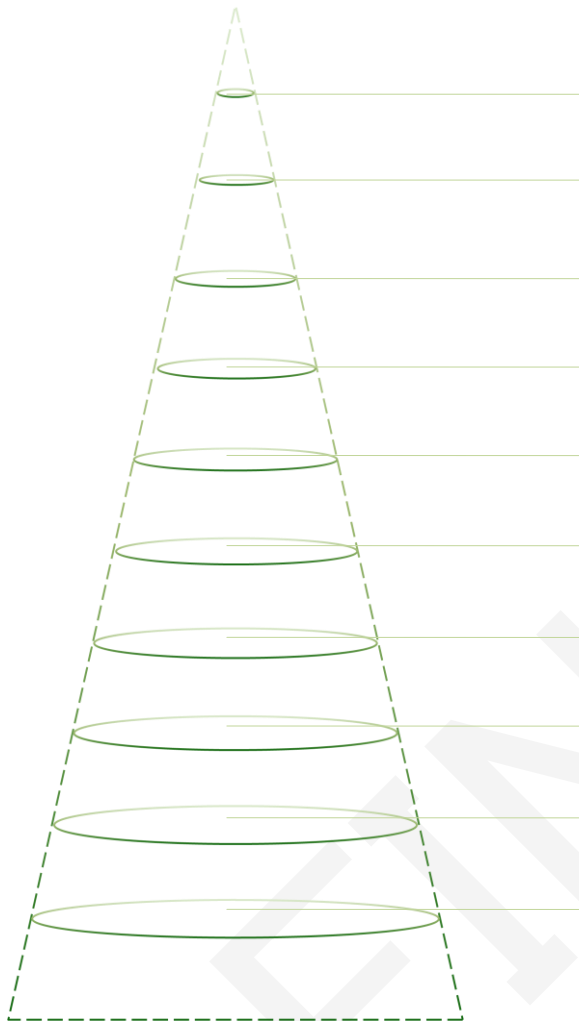
C γ	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0.0°	1293	1292	1292	1292	1292	1292	1293	1292
5.0°	1291	1290	1290	1289	1289	1288	1287	1288
10.0°	1278	1277	1277	1276	1275	1273	1274	1272
15.0°	1255	1255	1254	1253	1252	1250	1249	1248
20.0°	1222	1223	1221	1219	1216	1215	1216	1213
25.0°	1181	1180	1179	1176	1172	1171	1172	1170
30.0°	1129	1130	1127	1122	1118	1117	1119	1117
35.0°	1067	1069	1067	1061	1057	1056	1057	1056
40.0°	996	1000	998	993	988	987	988	985
45.0°	917	922	922	917	913	911	911	907
50.0°	828	837	839	835	831	829	828	821
55.0°	732	743	749	748	746	742	737	727
60.0°	626	642	653	656	654	650	643	625
65.0°	513	535	553	560	560	553	539	518
70.0°	394	424	450	463	464	455	436	405
75.0°	271	309	344	362	366	355	329	291
80.0°	152	199	242	267	272	259	227	180
85.0°	51	104	155	186	193	177	139	85
90.0°	4	51	99	130	138	122	85	33
95.0°	1	38	81	108	114	101	70	25
100.0°	1	33	74	99	106	93	63	22
105.0°	1	29	67	92	98	86	57	19
110.0°	1	26	61	84	90	78	51	17
115.0°	1	23	55	76	82	71	46	15
120.0°	1	20	48	68	74	64	41	13
125.0°	1	18	43	61	66	57	36	12
130.0°	1	16	38	53	58	50	32	10
135.0°	1	13	32	46	50	43	27	9
140.0°	1	11	27	39	43	37	23	7
145.0°	1	9	23	33	36	31	19	6
150.0°	1	8	18	26	29	25	16	5
155.0°	1	6	14	20	22	19	12	4
160.0°	2	4	10	15	16	14	8	3
165.0°	2	3	6	9	10	9	5	2
170.0°	2	2	4	5	6	4	3	2
175.0°	2	2	2	2	2	2	2	2
180.0°	1	1	1	1	1	1	1	1

Luminous Intensity (cd) Distribution Data (cont.)

C γ	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0.0°	1293	1292	1292	1292	1292	1292	1293	1292
5.0°	1287	1286	1286	1287	1288	1287	1289	1288
10.0°	1269	1269	1269	1271	1271	1272	1275	1274
15.0°	1243	1244	1243	1244	1245	1247	1250	1250
20.0°	1208	1208	1207	1208	1209	1212	1216	1216
25.0°	1163	1162	1161	1162	1163	1168	1172	1174
30.0°	1110	1110	1111	1109	1112	1116	1121	1123
35.0°	1050	1051	1050	1050	1051	1057	1062	1064
40.0°	978	979	980	980	982	987	993	994
45.0°	897	901	903	904	905	911	915	915
50.0°	809	815	819	820	824	828	831	828
55.0°	711	721	728	733	737	740	739	732
60.0°	607	620	633	640	645	645	641	629
65.0°	494	514	533	545	550	548	539	519
70.0°	376	403	429	446	452	448	433	405
75.0°	255	291	325	347	354	347	325	288
80.0°	140	183	226	252	261	251	222	176
85.0°	43	92	143	175	185	171	137	81
90.0°	1	47	98	131	141	128	89	34
95.0°	1	38	81	110	119	106	73	26
100.0°	0	33	74	101	109	97	66	23
105.0°	1	30	68	93	101	89	60	20
110.0°	1	27	61	85	93	82	54	18
115.0°	1	24	55	78	84	74	49	16
120.0°	1	21	50	70	76	67	43	14
125.0°	1	19	44	62	68	59	38	13
130.0°	1	17	39	55	60	52	34	11
135.0°	1	14	34	48	52	45	29	10
140.0°	1	11	28	40	45	39	25	8
145.0°	1	8	22	33	37	33	22	8
150.0°	1	5	16	26	30	27	19	7
155.0°	1	3	11	19	23	22	16	7
160.0°	1	2	6	12	16	16	12	6
165.0°	1	1	3	7	10	10	8	5
170.0°	1	1	2	3	5	6	5	3
175.0°	1	1	1	2	2	2	2	2
180.0°	1	1	1	1	1	1	1	1

Average Area Illumination Figure

Angle: 119.20°. Flux out: 3036.0 lm.



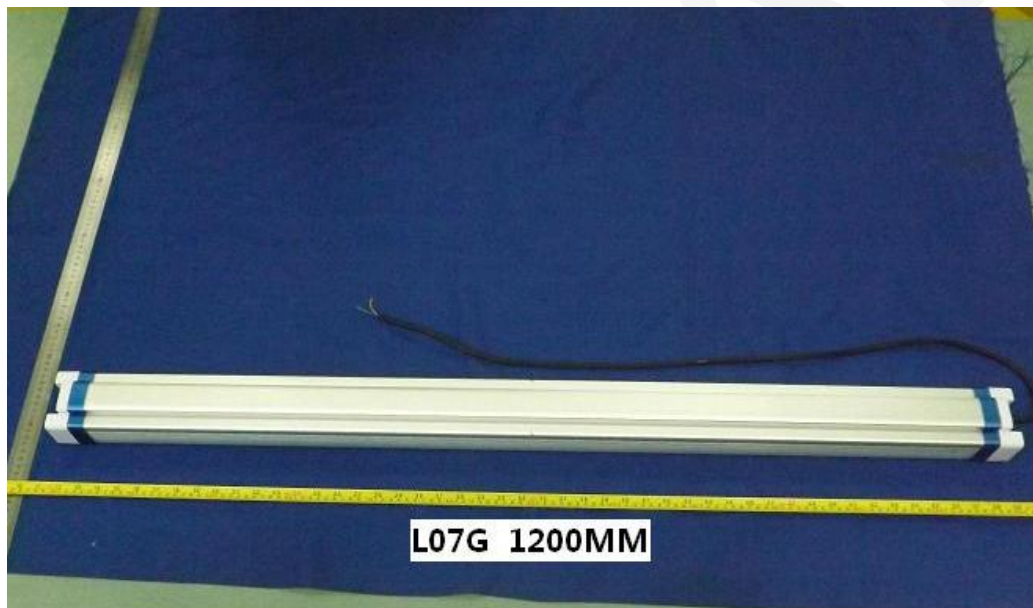
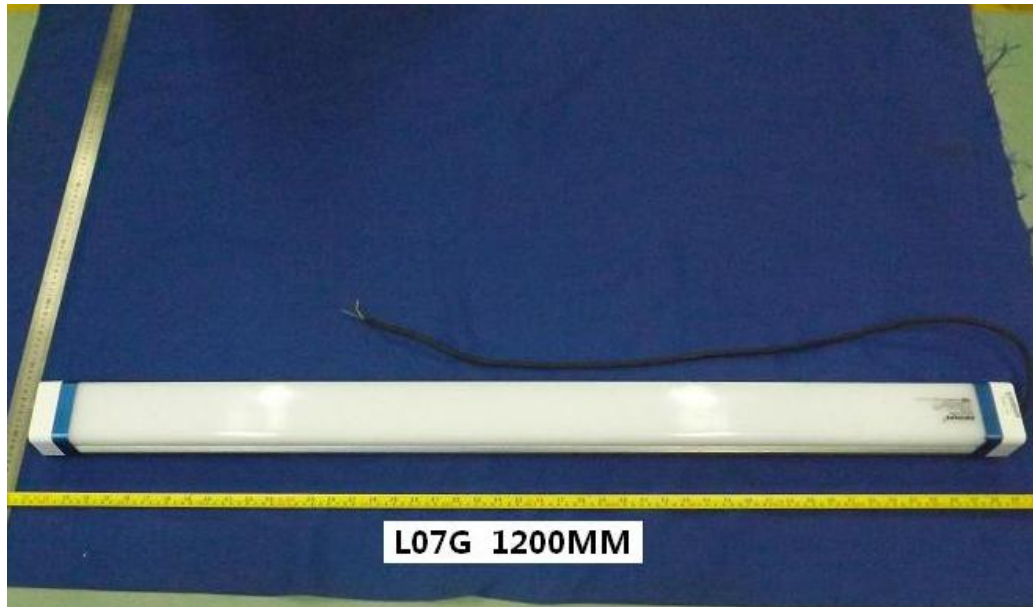
Height (m)	Diameter (cm)	$E_{avg}(lx)$	$E_{max}(lx)$
0.5	170.4	1289.0	5175.0
1.0	340.9	322.1	1294.0
1.5	511.3	143.2	575.0
2.0	681.8	80.5	323.4
2.5	852.2	51.5	207.0
3.0	1022.7	35.8	143.8
3.5	1193.1	26.3	105.6
4.0	1363.6	20.1	80.9
4.5	1534.0	15.9	63.9
5.0	1704.5	12.9	51.8

Zonal Lumen Density Measurement

Deg	Flux (lm)	%
0-5	30.8	0.71
5-10	91.6	2.13
10-15	149.6	3.46
15-20	203.0	4.70
20-25	250.1	5.80
25-30	289.5	6.70
30-35	320.6	7.43
35-40	341.3	7.90
40-45	351.5	8.14
45-50	350.9	8.13
50-55	339.6	7.87
55-60	317.5	7.35
60-65	285.4	6.61
65-70	244.5	5.66
70-75	196.6	4.56
75-80	144.6	3.35
80-85	94.4	2.18
85-90	56.9	1.32
90-95	40.6	0.94
95-100	35.4	0.82
100-105	31.8	0.74
105-110	28.4	0.65
110-115	24.9	0.58
115-120	21.6	0.50
120-125	18.3	0.43
125-130	15.3	0.35
130-135	12.4	0.29
135-140	9.7	0.22
140-145	7.4	0.17
145-150	5.4	0.13
150-155	3.6	0.08
155-160	2.3	0.05
160-165	1.2	0.03
165-170	0.5	0.01
170-175	0.2	0.01
175-180	0.0	0.00

Deg	Flux (lm)	%
0-5	30.8	0.71
0-10	122.5	2.84
0-15	272.1	6.30
0-20	475.0	11.00
0-25	725.1	16.80
0-30	1014.7	23.50
0-35	1335.2	30.93
0-40	1676.5	38.83
0-45	2028.0	46.97
0-50	2378.9	55.10
0-55	2718.5	62.97
0-60	3036.0	70.32
0-65	3321.3	76.93
0-70	3565.9	82.59
0-75	3762.5	87.15
0-80	3907.1	90.50
0-85	4001.5	92.68
0-90	4058.4	94.00
0-95	4099.0	94.94
0-100	4134.4	95.76
0-105	4166.2	96.50
0-110	4194.5	97.15
0-115	4219.5	97.73
0-120	4241.0	98.23
0-125	4259.4	98.66
0-130	4274.7	99.01
0-135	4287.1	99.30
0-140	4296.8	99.52
0-145	4304.2	99.69
0-150	4309.5	99.82
0-155	4313.2	99.90
0-160	4315.4	99.95
0-165	4316.6	99.98
0-170	4317.2	99.99
0-175	4317.4	100.00
0-180	4317.4	100.00

6. Product Photo



*****END OF REPORT*****