APPLICATION FOR TEST REPORT

On Behalf of

JIANGMEN BAOTIAN LIGHTING CO., LTD.

CEILING LAMP

Model: MX900109-3

Prepared For	**:**	**JIANGMEN BAOTIAN LIGHTING CO., LTD.** **Nange Industrial Zone, Hetang Town, Jiangmen City, Guangdong Province, China**
Prepared By	**:**	**Shenzhen LCS Compliance Testing Laboratory Ltd.** **1/F., Xingyuan Industrial Park, Tongda Road, Bao'an Avenue, Bao'an District, Shenzhen, Guangdong, China**
Date of Test	**:**	**September 12, 2013 – June 06, 2014**
Date of Report	**:**	**June 12, 2014**
Report Number	**:**	**LCS1406050089S**

TEST REPORT

COMMISSION REGULATION (EU) No 1194/2012 of 12 December 2012

COMMISSION DELEGATED REGULATION (EU) No 874/2012 of 26 September 2012

Implementing Directive 2009/125/EC Of The European Parliament And Of The Council With Regard To Ecodesign Requirements For Directional Lamps, Light Emitting Diode Lamps And Related Equipment

Report reference No. ..... :	LCS1406050089S
Tested by ..... :	Kelda Dai
Approved by ..... :	Hart Qiu
Date of issue ..... :	June 12, 2014
Contents ..... :	17pages

Testing laboratory	
Name ..... :	Shenzhen LCS Compliance Testing Laboratory Ltd.
Address ..... :	1/F., Xingyuan Industrial Park, Tongda Road, Bao'an Avenue, Bao'an District, Shenzhen, Guangdong, China
Testing location ..... :	As above
Client	
Name ..... :	JIANGMEN BAOTIAN LIGHTING CO., LTD.
Address ..... :	Nange Industrial Zone, Hetang Town, Jiangmen City, Guangdong Province, China
Manufacturer	
Name ..... :	JIANGMEN BAOTIAN LIGHTING CO., LTD.
Address ..... :	Nange Industrial Zone, Hetang Town, Jiangmen City, Guangdong Province, China
Test specification	
Standard ..... :	COMMISSION REGULATION (EU) No 1194/2012 of 12 December 2012; COMMISSION DELEGATED REGULATION (EU) No 874/2012 of 26 September 2012
Test procedure ..... :	COMMISSION REGULATION (EU) No 1194/2012 of 12 December 2012; COMMISSION DELEGATED REGULATION (EU) No 874/2012 of 26 September 2012
Non-standard test method ..... :	N/A
Test item Description ..... :	CEILING LAMP
Trademark ..... :	N/A
Model and/or type reference..... :	MX900109-3
Rating(s)(V/Hz) ..... :	230V~, 50 Hz, 380x0.06W/ LED Module

Test case verdicts

Test case does not apply to the test object : N(N/A)

Test item does meet the requirement .....: P(Pass)

Test item does not meet the requirement ...: F(Fail)

Testing

Date of receipt of test item ..... : September 12, 2013

Date(s) of performance of test.....: September 12, 2013 – June 06, 2014

General remarks

The test results presented in this report relate only to the object tested.

This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

"(see Enclosure #)" refers to additional information appended to the report.

"(see appended table)" refers to a table appended to the report.

Throughout this report a comma (point) is used as the decimal separator.

Remarks:

The sample(s) tested complies with the requirements of COMMISSION REGULATION (EU) No 1194/2012 of 12 December 2012; COMMISSION DELEGATED REGULATION (EU) No 874/2012 of 26 September 2012.

These tests full fill the requirements of standard ISO/IEC 17025.

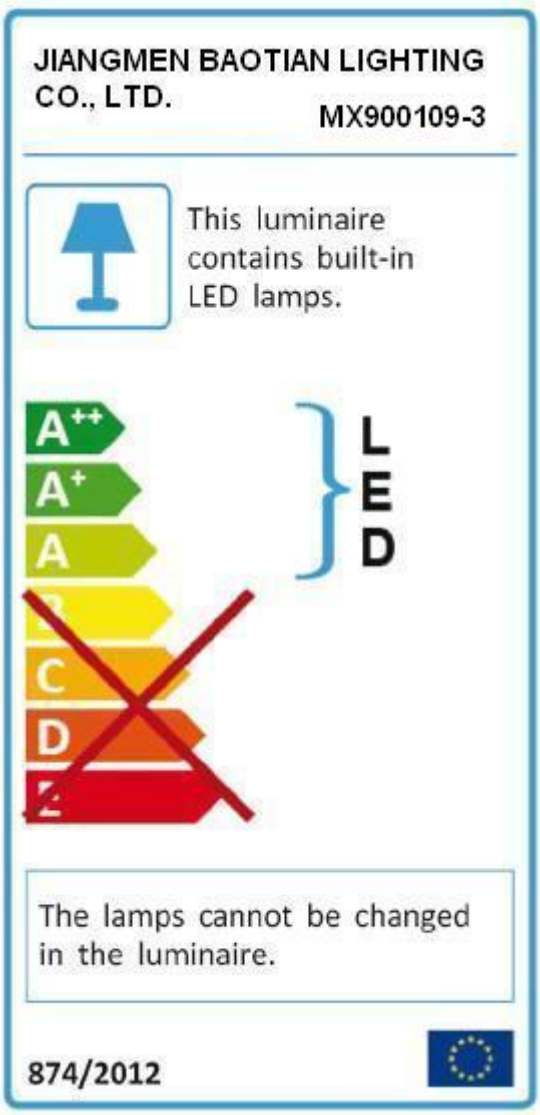
When determining the test conclusion, the Measurement Uncertainty of test has been considered.

Measurements of power of 0.50 W or greater was made with an uncertainty of less than or equal to 2 % at the 95 % confidence level.

Measurements of power of less than 0.50 W was made with an uncertainty of less than or equal to 0.01 W at the 95 % confidence level.

The test report includes: Attachment 1: Picture of test result
Attachment 2: 1 pages of product photos

Copy of marking plate



COMMISSION REGULATION (EU) No 1194/2012 of 12 December 2012			
Clause	Requirement - Test	Result - Remark	Verdict
ANNEX III	ECODESIGN REQUIREMENTS		P
1	ENERGY EFFICIENCY REQUIREMENTS		P
1.1	Energy efficiency requirements for directional lamps		P
	The energy efficiency index (EEI) of the lamp is calculated as follows and rounded to two decimal places: EEI = Pcor / Pref		P
	Lamps operating on external halogen lamp control gear: Pcor=Prated × 1,06		N
	Lamps operating on LED lamp control gear: Pcor=Prated	35.93W	P
	Lamps operating on external LED lamp control gear: Pcor=Prated × 1,10		N
	Fluorescent lamps of 16 mm diameter (T5 lamps) and 4- pin single capped fluorescent lamps operating on external fluorescent lamp control gear: Pcor=Prated × 1,10		N
	Other lamps operating on external fluorescent lamp control gear: Pcor=Prated $\times \frac{0,24\sqrt{\Phi_{use}} + 0,0103\Phi_{use}}{0,15\sqrt{\Phi_{use}} + 0,0097\Phi_{use}}$		N
	Pref is the reference power obtained from the useful luminous flux of the lamp (Φ use) by the following formula:		P
	For models with Φuse < 1 300 lumen: $P_{ref} = 0,88\sqrt{\Phi_{use}} + 0,049\Phi_{use}$		N
	For models with Φuse ≥ 1 300 lumen: Pref=0,07341Φuse	Pref=106.52	P
	The maximum EEI of directional lamps:	35.93W/106.52=0.34	P
1.2	Energy efficiency requirements for lamp control gear		N
	As from stage 2, the no-load power of a lamp control gear intended for use between the mains and the switch for turning the lamp load on/off shall not exceed 1,0 W. As from stage 3, the limit shall be 0.50 W. For lamp control gear with output power (P) over 250 W, the no-load power limits shall be multiplied by P/250 W.		N
	As from stage 3, the standby power of a lamp control gear shall not exceed 0,50 W.		N
	As from stage 2, the efficiency of a halogen lamp control gear shall be at least 0.91 at 100 % load.		N
2	FUNCTIONALITY REQUIREMENTS		P
2.1	Functionality requirements for directional lamps other than LED lamps		N
	The lamp functionality requirements are set out in Table 3 for directional compact fluorescent lamps and in Table 4 for directional lamps excluding compact fluorescent lamps, LED lamps and high-intensity discharge lamps.		N
	Table 3: Functionality requirements for directional compact fluorescent lamps		N

COMMISSION REGULATION (EU) No 1194/2012 of 12 December 2012			
Clause	Requirement - Test	Result - Remark	Verdict
	Table 4: Functionality requirements for other directional lamps (excluding LED lamps, compact fluorescent lamps and high-intensity discharge lamps)		N
2.2	Functionality requirements for non-directional and directional LED lamps		P
	The lamp functionality requirements are set out in Table 5 for both non-directional and directional LED lamps.		P
	Table 5: Functionality requirements for non-directional and directional LED lamps		P
	-Lamp survival factor at 6 000 h: From 1 March 2014: ≥ 0,90		P
	- Lumen Maintenance at 6 000 h: From 1 March 2014: ≥ 0,80		P
	-Number of switching cycles before failure: ≥ 15 000 if rated lamp life ≥ 30 000 h otherwise: ≥ half the rated lamp life expressed in hours		P
	- Starting time: < 0,5 s		P
	- Lamp warm-up time to 95%Φ: < 2 s		P
	- Premature failure rate: ≤ 5,0% at 1 000 h		P
	-Colour rendering (Ra): ≥ 80; ≥ 65 if the lamp is intended for outdoor or industrial applications in accordance with point 3.1.3(l) of this Annex	See Table 4A	P
	-Colour consistency: Variation of chromaticity coordinates within a six-step MacAdam ellipse or less.		P
	-Lamp power factor (PF) for lamps with integrated control gear: P ≤ 2 W: no requirement; 2 W < P ≤ 5 W: PF > 0,4; 5 W < P ≤ 25 W: PF > 0,5; P > 25 W: PF > 0,9	See Table 10A	P
2.3	Functionality requirement for equipment designed for installation between the mains and the lamps		N
	As from stage 2, equipment designed for installation between the mains and the lamps shall comply with state-of- the-art requirements for compatibility with lamps whose energy efficiency index (calculated for both directional and non-directional lamps in accordance with the method set out in point 1.1 of this Annex) is at most:		N
	-0.24 for non-directional lamps (assuming that Φ use = total rated luminous flux),		N
	-0.40 for directional lamps.		N
3	PRODUCT INFORMATION REQUIREMENTS		P
3.1	Product information requirements for directional lamps		N
	In all forms of product information, the term ‘energy-saving lamp’ or any similar product related promotional statement about lamp		N

COMMISSION REGULATION (EU) No 1194/2012 of 12 December 2012			
Clause	Requirement - Test	Result - Remark	Verdict
	efficacy may be used only if the energy efficiency index of the lamp (calculated in accordance with the method set out in point 1.1 of this Annex) is 0,40 or below.		
3.1.1	Information to be displayed on the lamp itself		P
	For lamps other than high-intensity discharge lamps, the value and unit ('lm', 'K' and '°') of the nominal useful luminous flux, of the colour temperature and of the nominal beam angle shall be displayed in a legible font on the surface of the lamp if, after the inclusion of safety-related information such as power and voltage, there is sufficient space available for it on the lamp without unduly obstructing the light coming from the lamp.		P
	If there is room for only one of the three values, the nominal useful luminous flux shall be provided. If there is room for two values, the nominal useful luminous flux and the colour temperature shall be provided.		N
3.1.2	Information to be visibly displayed to end-users, prior to their purchase, on the packaging and on free access websites		N
	If the product is placed on the market in a packaging containing information to be visibly displayed to the end- users, prior to their purchase, the information shall also be clearly and prominently indicated on the packaging.		N
	(a) Nominal useful luminous flux displayed in a font at least twice as large as any display of the nominal lamp power		N
	(b) Nominal life time of the lamp in hours (not longer than the rated life time)		N
	(c) Colour temperature, as a value in Kelvins and also expressed graphically or in words		N
	(d) Number of switching cycles before premature failure		N
	(e) Warm-up time up to 60 % of the full light output (may be indicated as 'instant full light' if less than 1 second)		N
	(f) A warning if the lamp cannot be dimmed or can be dimmed only on specific dimmers; in the latter case a list of compatible dimmers shall be also provided on the manufacturer's website		N
	(g) If designed for optimum use in non-standard conditions (such as ambient temperature Ta ≠ 25 °C or specific thermal management is necessary), information on those conditions		N
	(h) Lamp dimensions in millimetres (length and largest diameter)		N
	(i) Nominal beam angle in degrees		N
	(j) If the lamp's beam angle is ≥ 90° and its useful		N

COMMISSION REGULATION (EU) No 1194/2012 of 12 December 2012			
Clause	Requirement - Test	Result - Remark	Verdict
	luminous flux as defined in point 1.1 of this Annex is to be measured in a 120° cone, a warning that the lamp is not suitable for accent lighting		
	(k) If the lamp cap is a standardised type also used with filament lamps, but the lamp's dimensions are different from the dimensions of the filament lamp(s) that the lamp is meant to replace, a drawing comparing the lamp's dimensions to the dimensions of the filament lamp(s) it replaces		N
	(l) An indication that the lamp is of a type listed in the first column of Table 6 may be displayed only if the luminous flux of the lamp in a 90° cone (Φ 90°) is not lower than the reference luminous flux indicated in Table 6 for the smallest wattage among the lamps of the type concerned. The reference luminous flux shall be multiplied by the correction factor in Table 7. For LED lamps, it shall be in addition multiplied by the correction factor in Table 8		N
	(m) An equivalence claim involving the power of a replaced lamp type may be displayed only if the lamp type is listed in Table 6 and if the luminous flux of the lamp in a 90° cone (Φ 90°) is not lower than the corresponding reference luminous flux in Table 6. The reference luminous flux shall be multiplied by the correction factor in Table 7. For LED lamps, it shall be in addition multiplied by the correction factor in Table 8. The intermediate values of both the luminous flux and the claimed equivalent lamp power (rounded to the nearest 1 W) shall be calculated by linear interpolation between the two adjacent values		N
	Table 6: Reference luminous flux for equivalence claims		N
	Table 7: Multiplication factors for lumen maintenance		N
	- Halogen lamps: 1		N
	- Compact fluorescent lamps: 1.08		N
	- LED lamps: 1 + 0,5 × (1 — *LLMF*) where LLMF is the lumen maintenance factor at the end of the nominal life		N
	Table 8: Multiplication factors for LED lamps		N
	-20° ≤ beam angle: 1		N
	-15° ≤ beam angle < 20°: 0.9		N
	-10° ≤ beam angle < 15°: 0.85		N
	- beam angle < 10°: 0.80		N
3.13	Information to be made publicly available on free-access websites and in any other form the		N

COMMISSION REGULATION (EU) No 1194/2012 of 12 December 2012			
Clause	Requirement - Test	Result - Remark	Verdict
	manufacturer deems appropriate		
	-(a) The information specified in point 3.1.2		N
	-(b) Rated power (0,1 W precision)		N
	-(c) Rated useful luminous flux		N
	-(d) Rated lamp life time		N
	-(e) Lamp power factor		N
	-(f) Lumen maintenance factor at the end of the nominal life (except for filament lamps)		N
	-(g) Starting time (as X,X seconds)		N
	-(h) Colour rendering		N
	-(i) Colour consistency (only for LEDs)		N
	-(j) Rated peak intensity in candela (cd)		N
	-(l) If intended for use in outdoor or industrial applications, an indication to this effect		N
	- (m) Spectral power distribution in the range 180-800 nm;		N
3.2	Additional product information requirements for LED lamps replacing fluorescent lamps without integrated ballast		N
3.3	Product information requirements for equipment other than luminaires, designed for installation between the mains and the lamps		N
	As from stage 2, if the equipment provides no compatibility with any of the energy-saving lamps according to part 2.3 of this Annex, a warning that the equipment is not compatible with energy-saving lamps shall be published on publicly available free-access websites and in other forms the manufacturer deems appropriate.		N
3.4	Product information requirements for lamp control gears		N
	As from stage 2, the following information shall be published on publicly available free access websites and in other forms the manufacturer deems appropriate:		N
	— Indication that the product is intended to be used as a lamp control gear,		N
	— If applicable, the information that the product may be operated in no-load		N
ANNEX IV	Verification procedure for market surveillance purposes		N

Table 2	Maximum energy efficiency index (EEI)				P
Type reference:					
Application date	Mains-voltage filament lamps	Other filament lamps	High-intensity discharge lamps	Other lamps	Measured Value
Stage 1	If Φuse > 450	If Φuse ≤ 450 lm: 1.20	0,50	0,50	0.34

COMMISSION REGULATION (EU) No 1194/2012 of 12 December 2012			
Clause	Requirement - Test	Result - Remark	Verdict

	lm: 1,75	If Φuse > 450 lm: 0,95			
Stage 2	1.75	0.95	0.50	0.50	P
Stage 3	0.95	0.95	0.36	0.20	N

Table 3	Functionality requirements for directional compact fluorescent lamps		N
Type reference:			
Functionality parameter	Stage 1 except where indicated otherwise	Stage 3	Measured Stage 1
Lamp survival factor at 6 000 h	From 1 March 2014: ≥ 0,50	≥ 0,70	N
Lumen maintenance	At 2 000 h: ≥ 80 %	At 2 000 h: ≥ 83 % At 6 000 h: ≥ 70 %	N
Number of switching cycles before failure	≥ half the lamp lifetime expressed in hours ≥ 10 000 if lamp starting time > 0,3 s	≥ lamp lifetime expressed in hours ≥ 30 000 if lamp starting time > 0,3 s	N
Starting time	< 2,0 s	< 1,5 s if P < 10 W < 1,0 s if P ≥ 10 W	N
Lamp warm-up time to 60 % Φ	< 40 s or < 100 s for lamps containing mercury in amalgam form	< 40 s or < 100 s for lamps containing mercury in amalgam form	N
Premature failure rate	≤ 5,0 % at 500 h	≤ 5,0 % at 1 000 h	N
Lamp power factor for lamps with integrated control gear	≥ 0,50 if P < 25 W ≥ 0,90 if P ≥ 25 W	≥ 0,55 if P < 25 W ≥ 0,90 if P ≥ 25 W	N
Colour rendering (Ra)	≥ 80 ≥ 65 if the lamp is intended for outdoor or industrial applications according to point 3.1.3(l) of this Annex	≥ 80 ≥ 65 if the lamp is intended for outdoor or industrial applications according to point 3.1.3(l) of this Annex	N

Table 4	Functionality requirements for other directional lamps (excluding LED lamps, compact fluorescent lamps and high-intensity discharge lamps)		N
Type reference:			
Functionality parameter	Stage 1 and 2	Stage 3	Measured Stage 1
Rated lamp lifetime at 50 % lamp survival	≥ 1 000 h (≥ 2 000 h in stage 2) ≥ 2 000 h for extra low voltage lamps not complying with the stage 3 filament lamp efficiency requirement in point 1.1 of this Annex	≥ 2 000 h ≥ 4 000 h for extra low voltage lamps	N

COMMISSION REGULATION (EU) No 1194/2012 of 12 December 2012			
Clause	Requirement - Test	Result - Remark	Verdict

Lumen maintenance	≥ 80 % at 75 % of rated average lifetime	≥ 80 % at 75 % of rated average lifetime	N
Number of switching cycles	≥ four times the rated lamp life expressed in hours	≥ four times the rated lamp life expressed in hours	N
Starting time	< 0,2 s	< 0,2 s	N
Lamp warm-up time to 60 % Φ	≤ 1,0 s	≤ 1,0 s	N
Premature failure rate	≤ 5,0 % at 100 h	≤ 5,0 % at 200 h	N
Lamp power factor for lamps with integrated control gear	Power > 25 W: ≥ 0,9 Power ≤ 25 W: ≥ 0,5	Power > 25 W: ≥ 0,9 Power ≤ 25 W: ≥ 0,5	N

Table 5	Functionality requirements for non-directional and directional LED lamps		P
Type reference:			
Functionality parameter	Requirements		Measured Stage 1
Lamp survival factor at 6 000 h:	From 1 March 2014: ≥ 0,90		P
Lumen Maintenance at 6 000 h:	From 1 March 2014: ≥ 0,80		P
-Number of switching cycles before failure:	≥ 15 000 if rated lamp life ≥ 30 000 h otherwise: ≥ half the rated lamp life expressed in hours		P
- Starting time:	< 0.5 s	See Table 5A	P
- Lamp warm-up time to 95%Φ:	< 2 s	See Table 7A	P
- Premature failure rate:	≤ 5,0% at 1 000 h		P
-Colour rendering (Ra):	≥ 80; ≥ 65 if the lamp is intended for outdoor or industrial applications in accordance with point 3.1.3(l) of this Annex	See Table 4A	P
-Colour consistency:	Variation of chromaticity coordinates within a six-step MacAdam ellipse or less.	See Table 12A	P
-Lamp power factor (PF) for lamps with integrated control gear:	P ≤ 2 W: no requirement; 2 W < P ≤ 5 W: PF > 0,4; 5 W < P ≤ 25 W: PF > 0,5; P > 25 W: PF > 0,9	See Table 10A	P

Tables

Table1A. Lamp survival factor at 6 000 h (for LED lamps only)												
Standard		Clause				Model No.			Verdict			
IEC/PAS 62612 EU 1194/2012		Lamp survival factor				MX900109-3			P			
Conditions		-test procedure: the rate of lamp continued to operate at 6000h to total tested lamp -test conditions: -ambition: 25℃/ 65%R.H.. -Test voltage: 230V~										
Technical requirements		Test result										
Lamp survival factor at 6 000 h	Lamp survival factor at 6 000 h ≥0.9	Lamp No.	1	2	3	4	5	6	7	8	9	10
		6000h	√	√	√	√	√	√	√	√	√	√
		Lamp No.	11	12	13	14	15	16	17	18	19	20
		6000h	√	√	√	√	√	√	√	√	√	√
note		"X means the lamp has failed before 6000 hrs; √means the lamp passed the testing										

Table2A. Number of switching cycles before failure												
Standard		Clause				Model No.			Verdict			
EU 244/2009 EU 1194/2012		Number of switching cycles before failure				MX900109-3			P			
Conditions		-test procedure: Tungsten filament lamp-EN 60064 CFL-EN 60969 LED lamp- IEC/PAS 62612 Tungsten halogen lamp-EN 60357 -test conditions: -ambition: 25℃/ 65%R.H. -Test voltage: 230V~										
Technical requirements		Test result										
Number of switching cycles before failure	≥ 15 000 if rated lamp life ≥ 30 000 h otherwise: ≥ half the rated lamp life expressed in hours	Lamp No.	1	2	3	4	5	6	7	8	9	10
		Rated life __	√	√	√	√	√	√	√	√	√	√
		Lamp No.	11	12	13	14	15	16	17	18	19	20
		Rated life __	√	√	√	√	√	√	√	√	√	√
note		"X" means the lamp has still alight when the times reach; "√"means the lamp has failed when the times reach										

Table3A. Lumen maintenance for LED lamp			
Standard	Clause	Model No.	Verdict
IEC/PAS 62612 EU 1194/2012 CIE 97: 2005	Lumen maintenance	MX900109-3	P
Conditions	-test conditions: -ambition: 25℃/ 65%R.H. -Test voltage: 230V~		

Tables

Technical requirements		Test result										
Lumen Maintenance at 6 000 h	Lumen Maintenance at 6 000 h ≥0.8	Lamp No.	1	2	3	4	5	6	7	8	9	10
		After 6000h(lm)	1204	1204	1219	1204	1219	1233	1233	1204	1233	1204
		Lumen Maintenance(%)	0.83	0.83	0.84	0.83	0.84	0.85	0.85	0.83	0.85	0.83
		Lamp No.	11	12	13	14	15	16	17	18	19	20
		After 6000h(lm)	1233	1233	1219	1233	1219	1204	1233	1219	1219	1204
		Lumen Maintenance(%)	0.85	0.85	0.84	0.85	0.84	0.83	0.85	0.84	0.84	0.83
Average Lumen maintenance		0.84										
Note		The average results of the lamps in the test batch do not vary from the limit, threshold or declared values by more than 10 %.										

Table4A. Colour rendering(Ra) for lamp												
Standard		Clause			Model No.			Verdict				
IEC/PAS 62612 EU 1194/2012 EN 60969 EU 244/2009 CIE 13.3: 1995		Colour rendering			MX900109-3			P				
Conditions		-test conditions: -ambition: 25℃/ 65%R.H. -Test voltage: 230V~										
Technical requirements			Test result									
Ra	Outdoor	Indoor	Lamp No.	1	2	3	4	5	6	7	8	9	10
	≥65	≥80	Ra	80.2	80.4	80.3	80.2	80.3	80.4	80.2	80.3	80.4	80.3
			Lamp No.	11	12	13	14	15	16	17	18	19	20
			Ra	80.2	80.4	80.3	80.4	80.2	80.4	80.3	80.2	80.4	80.2
Average Ra			80.3										
Note			Compliance: the average Ra of the lamps in the test batch is not lower than three points below the required value, and no lamp in the test batch has a Ra value that is more than 3.9 points below the required value. Non-compliance: otherwise.										

Tables

Table5A. Starting time for LED lamp											
Standard	Clause			Model No.			Verdict				
IEC/PAS 62612 EU 1194/2012	Starting time			MX900109-3			P				
Conditions	-Starting time: time in seconds to reach the lamp remains alight without interruption -test conditions: -ambition: 25℃/65%R.H. -Test voltage: 230V~ 92% rated voltage or 92% of minimum voltage range										
Technical requirements	Test result(Units:s)										
Stage 1 to 3	Lamp No.	1	2	3	4	5	6	7	8	9	10
Commission Regulation (Eu) No 1194/2012 ＜0.5s	Time	0.26	0.27	0.25	0.26	0.27	0.26	0.25	0.27	0.26	0.27
	Lamp No.	11	12	13	14	15	16	17	18	19	20
	Time	0.25	0.26	0.25	0.26	0.27	0.25	0.26	0.27	0.26	0.25
Average starting time	0.26										

Table6A. Premature failure rate											
Standard	Clause			Model No.			Verdict				
EU 1194/2012 EU 244/2009	Premature failure rate			MX900109-3			P				
Conditions	-Test procedure: the rate of lamp fail before certain hours of operation -test conditions: -ambition: 25℃/65%R.H. -Test voltage: 230V~										
Technical requirements	Test result(Units: lm)										
For 1000 hrs the premature failure rate＜5.0%	Lamp No.	1	2	3	4	5	6	7	8	9	10
	1000h	√	√	√	√	√	√	√	√	√	√
	Lamp No.	11	12	13	14	15	16	17	18	19	20
	1000h	√	√	√	√	√	√	√	√	√	√
Notes:	“X” means the lamp has failed before 1000 hrs; “√” means the lamp passed the testing										
Notes:	For these purposes, ‘end of life’ shall mean the point in time when only 50 % of the lamps are projected to survive or when the average lumen maintenance of the batch is projected to fall below 70 %, whichever is projected to occur first. Compliance: the lumen maintenance at end of life and the lifetime values obtained by extrapolation from the lamp survival factor and from the average lumen maintenance of the lamps in the test batch at 6 000 h are not lower than respectively the lumen maintenance and the rated lifetime values declared in the product information minus 10 %. Non-compliance: otherwise.										

Tables

Table7A. Warm up time for LED lamp												
Standard	Clause			Model No.						Verdict		
IEC/PAS 62612 EU 1194/2012	Lamp warm-up time to 95 % Φ			MX900109-3						P		
Conditions	-Warm-up time: time in seconds to reach 90% of final luminous flux -test conditions: -ambition: 25℃/65%R.H. -Test voltage: 230V~ rated voltage or minimum voltage of the range__											
Technical requirements		Test result(Units: s)										
Warm-up time	Stage 1 to 3	Lamp No.	1	2	3	4	5	6	7	8	9	10
	Lamp warm-up time to 95 % Φ ＜2s		0.48	0.50	0.49	0.50	0.50	0.48	0.50	0.48	0.49	0.47
		Lamp No.	11	12	13	14	15	16	17	18	19	20
			0.48	0.49	0.50	0.48	0.48	0.50	0.48	0.50	0.50	0.50
Average Warm up time		0.49										

Table8A. Lamp Wattage											
Standard	Clause			Model No.				Verdict			
EN 50285 EU 1194/2012 EU 244/2009	Lamp Wattage			MX900109-3				P			
Conditions	-Test procedure: Tungsten filament lamp-EN 60064 CFL-EN 60969 LED lamp- IEC/PAS 62612 Tungsten halogen lamp-EN 60357 -test conditions: -ambition: 25℃/65%R.H. -Test voltage: 230V~										
Technical requirements	Test result(Units: w)										
Lamp Wattage Stage 1 to 3	Lamp No.	1	2	3	4	5	6	7	8	9	10
EN 50285 for means value individual for performance standard requirement for each sample	P	35.92	35.94	35.93	35.92	35.93	35.94	35.92	35.93	35.94	35.93
	Lamp No.	11	12	13	14	15	16	17	18	19	20
	P	35.92	35.94	35.93	35.94	35.92	35.94	35.93	35.92	35.94	35.92
Average Wattage	35.93										

Table9A. Luminous Flux			
Standard	Clause	Model No.	Verdict
EN 50285 EU 1194/2012 EU 244/2009	Luminous Flux	MX900109-3	P

Tables

Conditions	-Test procedure: Tungsten filament lamp-EN 60064 CFL-EN 60969 LED lamp- IEC/PAS 62612 Tungsten halogen lamp-EN 60357 -test conditions: -ambition: 25℃/65%R.H. -Test voltage: 230V~										
Technical requirements	Test result(Units: lm)										
Luminous Flux Stage 1 to 3	Lamp No.	1	2	3	4	5	6	7	8	9	10
		1450	1452	1451	1450	1451	1452	1450	1451	1452	1451
	Lamp No.	11	12	13	14	15	16	17	18	19	20
		1450	1452	1451	1452	1450	1452	1451	1450	1452	1450
Average Luminous Flux(Φ_T)	1451										
Note	The average results of the lamps in the test batch do not vary from the limit, threshold or declared values by more than 10 %.										

Table10A. Lamp power factor for LED lamp											
Standard		Clause			Model No.				Verdict		
IEC/PAS 62612 EU 1194/2012		PF			MX900109-3				P		
Conditions		-test conditions: -ambition: 25℃/65%R.H. -Test voltage: 230V~									
Technical requirements		Test result									
Lamp power factor for lamp with integrated control gear	P≤2W: no requirement, 2W＜P≤5W: PF＞0.4, 5W＜P≤25W: PF＞0.5,P＞25W: PF＞0.9	Lamp No.	1	2	3	4	5	6	7	8	9	10
		PF	0.97	0.99	0.98	0.97	0.98	0.99	0.97	0.98	0.99	0.98
		Lamp No.	11	12	13	14	15	16	17	18	19	20
		PF	0.97	0.99	0.98	0.99	0.97	0.99	0.98	0.97	0.99	0.97
Average power factor		0.99										
Note		The average results of the lamps in the test batch do not vary from the limit, threshold or declared values by more than 10 %.										

Table11A. Correlated Color Temperature			
Standard	Clause	Model No.	Verdict
IEC/PAS 62612 EU 1194/2012 EN 60969 EU 244/2009 CIE 13.3: 1995	Correlated Color Temperature	MX900109-3	P

Tables

Conditions	-test conditions: -ambition: 25℃/65%R.H. -Test voltage: 230V~										
Technical requirements	Test result										
Correlated Color Temperature for rated 4000K	Lamp No.	1	2	3	4	5	6	7	8	9	10
		3993	3995	3994	3993	3994	3995	3993	3994	3995	3994
	Lamp No.	11	12	13	14	15	16	17	18	19	20
		3993	3995	3994	3995	3993	3995	3994	3993	3995	3993
Average Correlated Color Temperature	3994										
Note	The average results of the lamps in the test batch do not vary from the limit, threshold or declared values by more than 10 %.										

Table12A. Colour consistency

Standard	Clause	Model No.	Verdict
IEC/PAS 62612 EU 1194/2012 EN 60969 EU 244/2009 CIE 13.3: 1995	Colour consistency	MX900109-3	P

Conditions	-test conditions: -ambition: 25℃/65%R.H. -Test voltage: 230V~										
Technical requirements	Test result										
SDCM Correlated Color Temperature	Lamp No.	1	2	3	4	5	6	7	8	9	10
	SDCM	3.84	3.86	3.85	3.84	3.85	3.86	3.84	3.85	3.86	3.85
	Lamp No.	11	12	13	14	15	16	17	18	19	20
	SDCM	3.84	3.86	3.85	3.86	3.84	3.86	3.85	3.84	3.86	3.84
Average SDCM	3.85										
Note	The average results of the lamps in the test batch do not vary from the limit, threshold or declared values by more than 10 %.										

Table13A. Energy class

Standard	Clause	Model No.	Verdict
EU 874/2012 EU 1194/2012 EU 244/2009	Energy class	MX900109-3	P
Conditions	-Test procedure: Tungsten filament lamp-EN 60064; CFL-EN 60969 LED lamp- IEC/PAS 62612 Tungsten halogen lamp-EN 60357 -test conditions:		

Tables

	-ambition: 25℃/65%R.H. -Test voltage: 230V~				
Luminous Flux of the lamp	--				
Technical requirements		Test result			
EEI=Pcor/Pref		For non-direction lamp		For direction lamp	
Pcor which is Prated x Correction factors; Pref: for model withΦ_{use}＜1300 lumen:0.88√Φuse+0.049Φuse, for model withΦ_{use}＞1300 lumen: 0,07341Φuse		A++	EEI≤0.11	A++	EEI≤0.13
		A+	0.11＜EEI≤0.17	A+	0.13＜EEI≤0.18
		A	0.17＜EEI≤0.24	A	0.18＜EEI≤0.40
		B	0.24＜EEI≤0.60	B	0.40＜EEI≤0.95
		C	0.60＜EEI≤0.80	C	0.95＜EEI≤1.20
		D	0.80＜EEI≤0.95	D	1.20＜EEI≤1.75
		E	0.95＜EEI	E	1.75＜EEI
Energy class	EEI=0.34	--		A	

ATTACHMENT 1

Picture of test result

色品坐标 Chromaticity Coordinates: x=0.3843 y=0.3900 u'=0.2224 v'=0.5079

相关色温 Correlated Color Temperature: 3994 K　　主波长 Dominant Wavelength: 575.0 nm(E)

显色指数 Rendering Index: Ra=80.3　　峰值波长 Peak Wavelength: 459.5 nm

色纯度 Purity: 0.3233　　谱线带宽 Bandwidth: 23.9nm

光通量 Luminous Flux: 1451.244 lm　　辐射通量 Radiant Flux: 3.506 W

色 比 Color Ratio:　Kr=36.9%　Kg=54.9%　Kb=8.1%

色 容 差 Color Tolerance(SDCM): 3.8488　　色 偏 差 Chromaticity Difference: +0.00499Duv

R1=77	R2=88	R3=93	R4=73	R5=74	R6=80	R7=86	R8=62
R9=3	R10=68	R11=68	R12=45	R13=81	R14=96	R15=72	

Figure 1 Test data

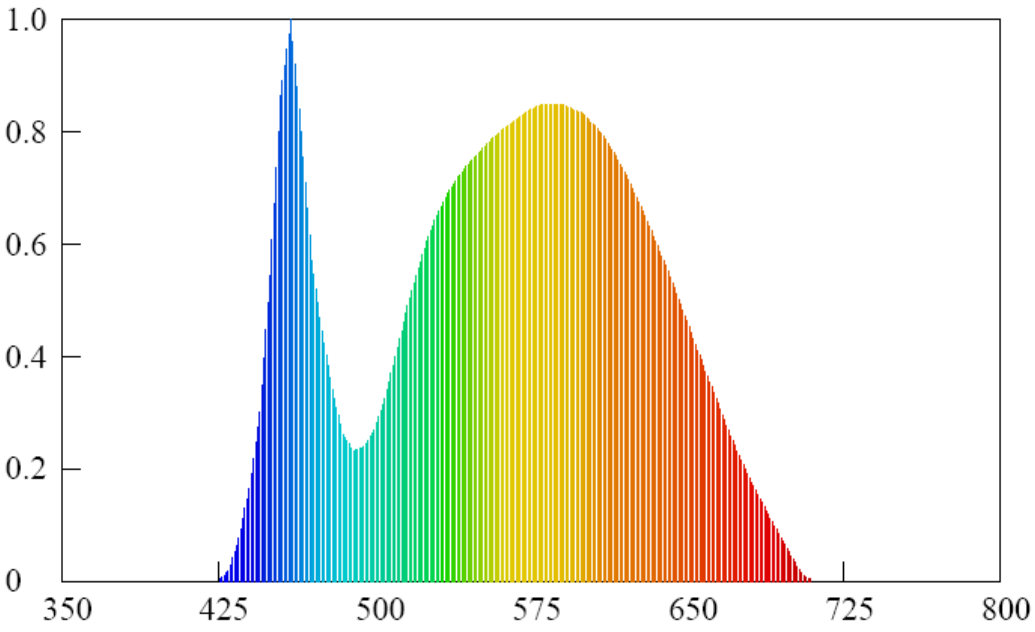


Figure 2 Spectral Chromaticity Coordinate

ATTACHMENT 1

Picture of test result

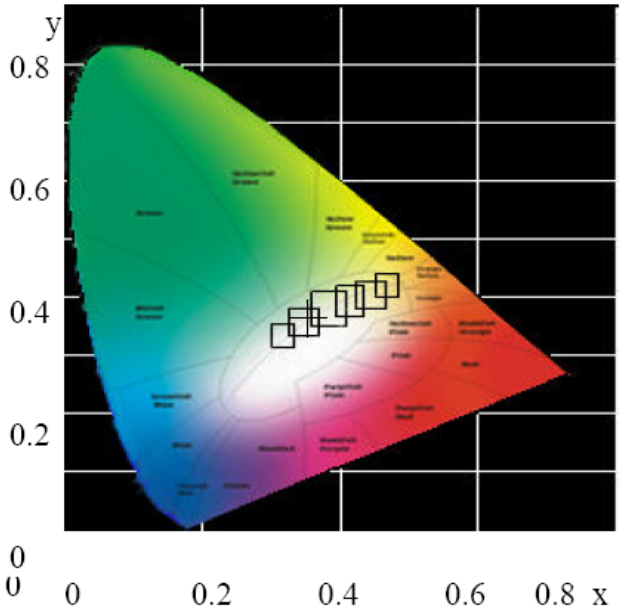
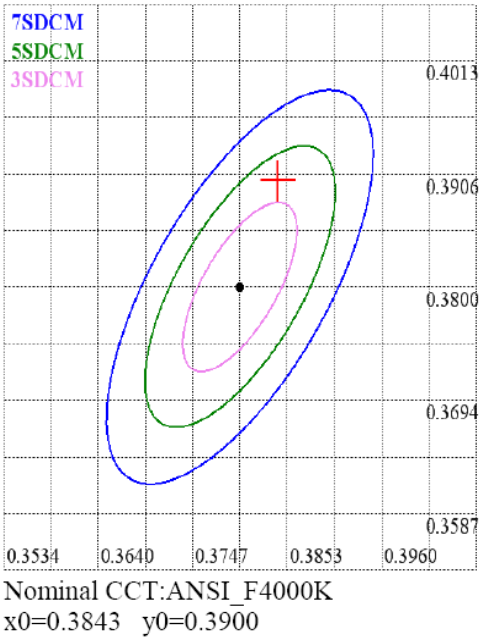


Figure 3 Spectral Chromaticity Coordinate



Nominal CCT:ANSI_F4000K
x0=0.3843 y0=0.3900

Figure 4 Colour consistency

ATTACHMENT 1

Picture of test result

Figure 5 Testing Picture

ATTACHMENT 2

Photo Documentation

View:
Model:
MX900109-3

[X]General
[ ]Front
[ ]Rear
[ ]Internal
[ ]Top
[ ]Bottom
[ ]PWB

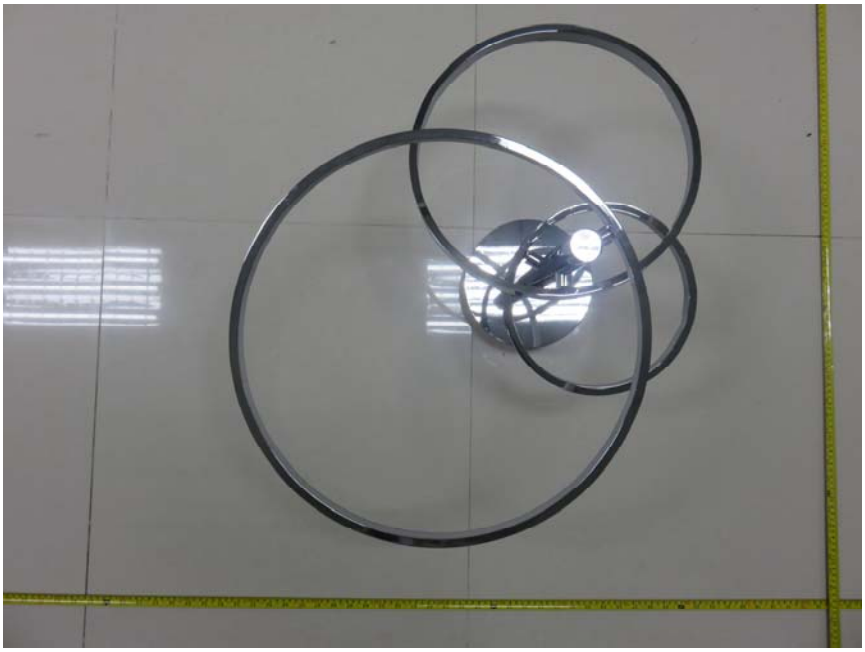


Figure 1