APPLICATION FOR TEST REPORT

On Behalf of

Jiangmen Baotian Lighting Co Ltd

LED Lamp (Ceiling Lamp)

Model: MP8525-6B(85820010-01)

Prepared For	:	**Jiangmen Baotian Lighting Co Ltd** **Nanhua East Rd Ind'l Park, Hetang Town, Jiangmen,Guangdong，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	:	**December 23, 2014 - September 14, 2015**
Date of Report	:	**September 14, 2015**
Report Number	:	**LCS1505291717S**

TEST REPORT

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

COMMISSION REGULATION (EC) No 244/2009 of 18 March 2009

Ecodesign for LED lamp light emitting diode lamps and related equipment

Report reference No	LCS1505291717S
Tested by	Teddy Liu
Approved by	Hart Qiu
Date of issue	September 14, 2015
Contents	18 pages

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	Nanhua East Rd Ind'l Park, Hetang Town, Jiangmen, Guangdong, China
Manufacturer	
Name	Jiangmen Baotian Lighting Co Ltd
Address	Nanhua East Rd Ind'l Park, Hetang Town, Jiangmen, Guangdong, China
Test specification	
Standard	COMMISSION REGULATION (EU) No 1194/2012 of 12 December 2012; COMMISSION REGULATION (EC) No 244/2009 of 18 March 2009
Test procedure	COMMISSION REGULATION (EU) No 1194/2012 of 12 December 2012; COMMISSION REGULATION (EC) No 244/2009 of 18 March 2009
Non-standard test method	N/A
Test item Description	LED Lamp (Ceiling Lamp)
Trademark	N/A
Model and/or type reference	MP8525-6B(85820010-01)
Rating(s)(V/Hz)	220-240V AC, 50/60Hz, 22.5W

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 .....:	December 23, 2014
Date(s) of performance of test…..:	December 23, 2014 – September 14, 2015
Test item particulars:	
Lamp type:	
- Non directional LED lamp	☒
- Directional LED lamp	☐
- LED lamp replacing fluorescent lamp without integrated ballast	☐
Control gear:	
- Integrated	☒
- External	☐
Use of lamp:	
- Indoor	☒
- Outdoor	☐
- Industry	☐
Envelope transparency:	
- Clear lamp	☒
- Non-clear lamp	☐
Dimmable lamp:	☐
Lamps with anti-glare shield:	☐
Lamp cap installed:	N/A
Declared data:	
Rated voltage ……(V):	220-240V AC, 50/60Hz
Rated lamp power ……(W):	22.5W
Rated useful luminous flux……(lm):	N/A
Rated beam angel ……: (°):	N/A
Rated CCT ……..……..(K):	N/A
Rated life time ……..…..(h):	⩾30000
Attachments: The test report includes: Attachment : pages of product photos	

Summary of testing:

The product meets the efficiency requirement of stage 1 to stage 3 of directional lamps according to the implementation measure No. EU 1194/2012.

The product meets the functionality requirements of stage 1 according to the implementation measure No. EU 1194/2012.

Remark:
Lamp survival factor at 6000 h and lumen maintenance at 6000 h will be applicable from 1 March 2014.

Efficiency & Information requirement:

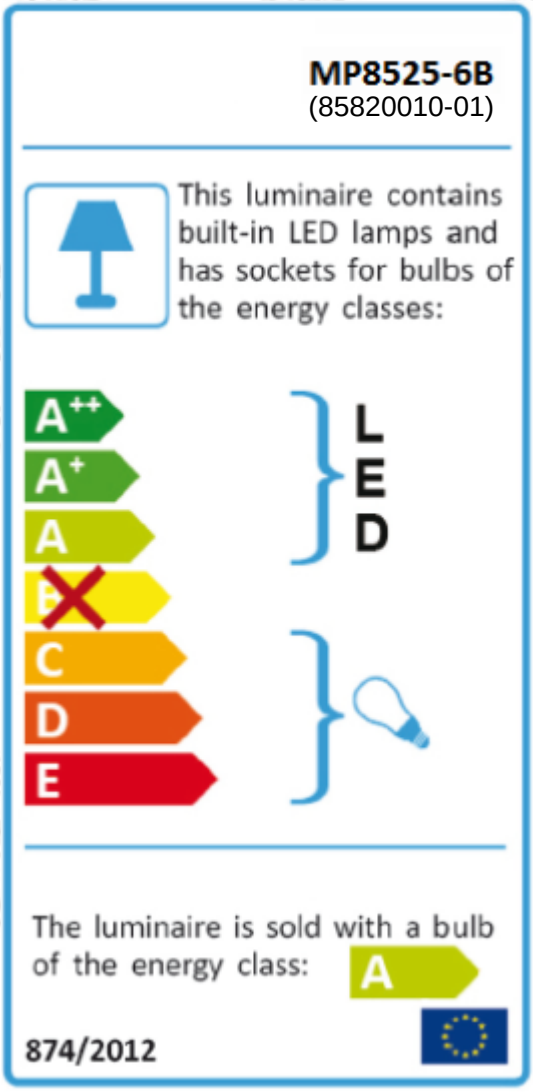
Non-directional	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Start Date	1.Sep.2009	1.Sep.2009	1.Sep.2011	1.Sep.2012	1.Sep.2013	1.Sep.2016

directional	Stage 1	Stage 2	Stage 3
Start Date	1.Sep.2013	1.Sep.2014	1.Sep.2016

Functionality requirement:

All	Stage 1	Stage 1a	Stage 2	Stage 3
Start Date	1.Sep.2013	1.Mar.2014	1.Sep.2014	1.Sep.2016

Copy of marking plate:



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.

(EU) No 1194/2012 and (EU) 244/2009			
Clause	Requirement - Test	Result - Remark	Verdict
0	**Measurement methods**		--
	Recognized state of art measurement methods incl. the one published in the Official Journal taking into account the measurement methods of (EC) 244/2009, (EU) 1194/2012		--
1.	Sample		--
	Number of sample used for test ……:	40 pcs	P
2.	Energy efficiency requirements		N
2.1	Non-directional LED lamp		--
a	Lamp efficacy ((ηlamp) (Annex II, cl.1 of EC 244/2009)		N
	Evaluation : P ≤ Pmax	P=W	N
b	Limit definition:		N
	Clear lamps - Stage 1~5: Pmax = 0,8 * (0,88√Φ+0,049Φ)	Pmax: (incl. corrections) Ø:lm	N
	Clear lamps - Stage 6: Pmax = 0,6 * (0,88√Φ+0,049Φ)	Pmax: (incl. corrections) Ø:lm	N
	Non-clear lamps - Stage 1~6: Pmax = 0,24√Φ+0,0103Φ	Pmax: W Ø: lm	N
c	Exceptions:		N
	Clear lamps 60 lm ≤ Φ ≤ 950 lm in Stage 1 Pmax = 1,1 * (0,88√Φ+0,049Φ)		N
	Clear lamps 60 lm ≤ Φ ≤ 725 lm in Stage 2 Pmax = 1,1 * (0,88√Φ+0,049Φ)		N
	Clear lamps 60 lm ≤ Φ ≤ 450 lm in Stage 3 Pmax = 1,1 * (0,88√Φ+0,049Φ)		N
	Clear lamps with G9 or R7s cap in Stage 6 Pmax = 0,8 * (0,88√Φ+0,049Φ)		N
	Correction factors, which are cumulative where appropriate and also applicable to the products covered by the Exceptions:		N
	non-clear lamp with colour rendering index ≥ 90 and P ≤ 0,5 * (0,88√Φ+0,049Φ)	Pmax/0,85	N
	non-clear lamp with second envelope and P ≤ 0,5* (0,88√Φ+0,049Φ)	Pmax/0,95	N
	LED lamp requiring external power supply	Pmax/1,1	N
2.2	**Directional LED lamp**		P
a.	The maximum EEI (Annex III, cl.1.1 of EU 1194/2012):		P
	The energy efficiency index is calculated as follows and rounded to 2 decimal places: EEI = Pcor/ Pref	EEI: 0.22	P
	Stage 1~2: EEI max ≤ 0.5	All models comply the requirement for stage 1~2	P
	Stage 3: EEI max ≤ 0.2	All models comply the requirement for stage 3	N
b	Correction factors, which are cumulative where appropriate		--
	No correction appropriate : Pcor = Prated lamps)	Prated:=22.5	P
	Lamps operating on external LED lamp control		N

(EU) No 1194/2012 and (EU) 244/2009			
Clause	Requirement - Test	Result - Remark	Verdict
	gear : Pcor = Prated × 1,10		
	Lamps with anti-glare shield: Pcor = Prated ×0,80	Prated: Pcor:	N
c	Pref is the reference power obtained from the useful luminous flux of the lamp (Φuse) by the following formula:		P
	For models with Φuse < 1 300 lumen: Pref = 0,88√Φuse+0,049Φuse		N
	For models with Φuse ≥ 1 300 lumen: Pref = 0,07341 Φuse	Φuse:1470 lm Pref:101.23	P
2.3	Energy efficiency requirements for lamp control gear(LED driver test with appliance)		N
	Stage 1~2: No-load power ≤ 1.0W		N
	Stage 3: No-load power ≤ 0.5W		N
3	Lamp functionality requirements for non-directional and directional LED lamp (Annex III, cl.2.2, table 5 of EU 1194/2012)		P
3.1	Lamp survival factor (LSF) at 6000h		P
	From March 1, 2014: LSF ≥ 0.90		P
3.2	Lumen maintenance (LLMF) at 6000h		P
	From March 1, 2014: LLMF ≥ 0.80		P
3.3	Number of switching cycles (n) before failure		P
	n ≥ 15 000 if rated lamp life ≥ 30 000 h		P
	otherwise: n ≥ half the rated lamp life expressed in hours		N
3.4	Starting time (t_{Start})		P
	t_{Start} <0.5 s	t_{Start} : 0.229s	P
3.5	Lamp warm-up time (t_{Warm}) to 95 % Φ		P
	t_{Warm} < 2 s	t_{Warm} : 0.590s	P
3.6	Premature failure rate (PFR)		P
	PFR ≤ 5,0 % at 1000 h	PFR: 0%	P
3.7	Colour rendering (Ra)		P
	Ra ≥80	Ra:83.8	P
	Ra ≥65 if the lamp is intended for outdoor or industrial applications		N
3.8	Colour consistency		P
	Variation of chromaticity coordinates within a sixstep MacAdam ellipse or less.		P
3.9	Lamp power factor (PF)		P
	P ≤ 2 W: no requirement		N
	2 W < P ≤ 5 W: PF > 0,4 5 W < P ≤ 25 W: PF > 0,5	PF: 0.534	P
	P > 25 W: PF > 0,9		N
3.10	Compatibility requirement for lamps using lamp caps also used with filament lamps		N
	Lamps shall comply from **stage 2** with state of art requirements for compatibility with equipment		N

(EU) No 1194/2012 and (EU) 244/2009			
Clause	Requirement - Test	Result - Remark	Verdict
	designed for installation between the mains and filament lamps (e.g. dimmer, …)		
4	Product Information Requirements		N
4.1	Product information requirements for **directional lamps** (Annex III, cl.3.1 of EU 1194/2012)		N
	The following information shall be provided as from stage 1, except where otherwise stipulated.		N
	In all forms of product information, the term **'energy-saving lamp'** or any similar product related promotional statement about lamp efficacy may be used only if the energy efficiency index of the lamp (calculated in accordance with	LED modules marketed as part of a lumiaire from which they are not intended to be removed by the end-user.	N
	the method set out in point 1.1 of this Annex) is 0,40 or below.		N
4.1.1	Information to be displayed on the lamp itself		N
	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.		N
	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
4.1.2	Information to be visibly displayed to end-users, prior to their purchase, on the packaging and on free access websites		N
	The information below shall be displayed on free access websites and in any other form the manufacturer deems appropriate.		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
	The information does not need to use the exact wording on the list below. It may be displayed in the form of graphs, drawings or symbols rather than text.		N
(a)	The information does not need to use the exact wording on the list below. It may be displayed in the form of graphs, drawings or symbols rather than text.		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

(EU) No 1194/2012 and (EU) 244/2009			
Clause	Requirement - Test	Result - Remark	Verdict
(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 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;		N
(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 (Φ90°) 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;	Claimed equivalent: Refernce Φ90° (lm): (incl. correction factor)	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 (Φ90°) 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.	Claimed equivalent: Claimed P: Refernce Φ90° (lm): (incl. correction factor)	N

(EU) No 1194/2012 and (EU) 244/2009			
Clause	Requirement - Test	Result - Remark	Verdict

Table 6

Reference luminous flux for equivalence claims

Extra-low voltage reflector type		
Type	Power (W)	Reference $\Phi_{90°}$ (lm)
MR11 GU4	20	160
	35	300
MR16 GU 5.3	20	180
	35	300
	50	540
AR111	35	250
	50	390
	75	640
	100	785

Mains-voltage blown glass reflector type		
Type	Power (W)	Reference $\Phi_{90°}$ (lm)
R50/NR50	25	90
	40	170
R63/NR63	40	180
	60	300
R80/NR80	60	300
	75	350
	100	580
R95/NR95	75	350
	100	540
R125	100	580
	150	1 000

(EU) No 1194/2012 and (EU) 244/2009			
Clause	Requirement - Test	Result - Remark	Verdict

Mains-voltage pressed glass reflector type

Type	Power (W)	Reference $\Phi_{90°}$ (lm)
PAR16	20	90
	25	125
	35	200
	50	300
PAR20	35	200
	50	300
	75	500
PAR25	50	350
	75	550
PAR30S	50	350
	75	550
	100	750
PAR36	50	350
	75	550
	100	720
PAR38	60	400
	75	555
	80	600
	100	760
	120	900

Table 7

Multiplication factors for lumen maintenance

Lamp type	Luminous flux multiplication factor
Halogen lamps	1
Compact fluorescent lamps	1,08
LED lamps	$1 + 0,5 \times (1 - LLMF)$ where LLMF is the lumen maintenance factor at the end of the nominal life

Table 8

Multiplication factors for LED lamps

LED lamp beam angle	Luminous flux multiplication factor
20° ≤ beam angle	1
15° ≤ beam angle < 20°	0,9
10° ≤ beam angle < 15°	0,85
beam angle < 10°	0,80

(EU) No 1194/2012 and (EU) 244/2009			
Clause	Requirement - Test	Result - Remark	Verdict
4.1.3	Information to be made publicly available on free-access websites and in any other form the manufacturer deems appropriate		N
(a)	The information specified in above point 4.1.2;		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
(k)	Rated beam angle		N
(l)	If intended for use in outdoor or industrial If intended for use in outdoor or industrial		N
(m)	Spectral power distribution in the range 180-800 nm		N
4.2	Product information requirements for **non-directional lamps** (Annex II, cl.3 of EC 244/2009) (for YE077,YE078)		N
	Information to be visibly displayed prior to purchase to end-users on the packaging and on free access websites. (It may be displayed using graphs, figures or symbols rather than text.)		N
(a)	When the nominal lamp power is displayed outside the energy label in accordance with Directive 98/11/EC, the nominal luminous flux of the lamp shall also be separately displayed in a font at least twice as large as the nominal lamp power display outside the label	Label acc. to (EU) 874/2012	N
(b)	Nominal life time of the lamp in hours (not higher than the rated life time)		N
(c)	Nominal life time of the lamp in hours (not higher than the rated life time)		N
(d)	Colour temperature (also expressed as a value in Kelvins);		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;		N
(g)	If designed for optimal use in non-standard conditions (such as ambient temperature Ta ≠ 25 °C), information on those conditions;		N
(h)	Lamp dimensions in millimeters (length and diameter);		N
(i)	If equivalence with an incandescent lamp is claimed on the packaging, the claimed equivalent incandescent lamp power (rounded to 1 W) shall be that corresponding in Table 6 to the luminous flux of the lamp contained in the packaging.		N

(EU) No 1194/2012 and (EU) 244/2009			
Clause	Requirement - Test	Result - Remark	Verdict
	The intermediate values of both the luminous flux and the claimed incandescent lamp power (rounded to 1W)shall be calculated by linear interpolation between the two adjacent values.		

Table 6

Rated lamp luminous flux Φ [lm]			Claimed equivalent incandescent lamp power
CFL	Halogen	LED and other lamps	[W]
125	119	136	15
229	217	249	25
432	410	470	40
741	702	806	60
970	920	1 055	75
1 398	1 326	1 521	100
2 253	2 137	2 452	150
3 172	3 009	3 452	200

(j)	The term **'energy saving lamp'** or any similar product related promotional statement about lamp efficacy may only be used if the lamp complies with the efficacy requirements applicable to nonclear lamps in Stage 1 according to Tables 1, 2 and 3.		N
4.2.2	Information to be made publicly available on free-access websites. (information shall be expressed at least as values.)		N
(a)	The information specified in above point 4.2.1		N
(b)	Rated wattage (0,1 W precision);		N
(c)	Rated 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;		N
(g)	Starting time (as X,X seconds);		N
(h)	Colour rendering.		N
4.3	Additional product information requirements for **LED lamps replacing fluorescent lamps without integrated ballast** (Annex III, cl.3.2 of EU 1194/2012)		N
4.3.1	In addition to the product information requirements according to point 3.1 of this Annex or point 3.1 of Annex II to Regulation (EC) No 244/2009, as from stage 1, manufacturers of LED		N

(EU) No 1194/2012 and (EU) 244/2009			
Clause	Requirement - Test	Result - Remark	Verdict
	lamps replacing fluorescent lamps without integrated ballast shall publish a warning on publicly available free-access websites and in any other form they deem appropriate that the overall energy efficiency and light distribution of any installation that uses such lamps are determined by the design of the installation.		
4.3.2	Claims that an LED lamp replaces a fluorescent lamp without integrated ballast of a particular wattage may be made only if:		N
	— the luminous intensity in any direction around the tube axis does not deviate by more than 25 % from the average luminous intensity around the tube, and		N
	— the luminous flux of the LED lamp is not lower than the luminous flux of the fluorescent lamp of the claimed wattage. The luminous flux of the fluorescent lamp shall be obtained by multiplying the claimed wattage with the minimum luminous efficacy value corresponding to the fluorescent lamp in Commission Regulation (EC) No 245/2009 and		N
	— the wattage of the LED lamp is not higher than the wattage of the fluorescent lamp it is claimed to replace.		N
	The technical documentation file shall provide the data to support such claims.		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 lm: 1,75	If Φuse ≤ 450 lm: 1.20 If Φuse > 450 lm: 0,95	0,50	0,50	N
Stage 2	1.75	0.95	0.50	0.50	P
Stage 3	0.95	0.95	0.36	0.20	P

Table 3	Functionality requirements for directional compact fluorescent lamps		N
Type reference:			
Functionality parameter	Stage 1 except where indicated otherwise	Stage 3	Measured Stage 2
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

(EU) No 1194/2012 and (EU) 244/2009			
Clause	Requirement - Test	Result - Remark	Verdict

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 2
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
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

(EU) No 1194/2012 and (EU) 244/2009			
Clause	Requirement - Test	Result - Remark	Verdict

			Stage 2
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	15000 times	P
- Starting time:	< 0.5 s	0.229s	P
- Lamp warm-up time to 95%Φ:	< 2 s	0.590s	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	83.8	P
-Colour consistency:	Variation of chromaticity coordinates within a six-step MacAdam ellipse or less.		N
-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	0.534	P

Tables

Table1	Testdata			Model:			MP8525-6B(85820010-01)			Voltage(V):			230V			Frequency(Hz):			50Hz		
Test item	Measured Value																				
Sample:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Average	Limit
P (W) 1)	22.02	22.05	22.11	22.09	21.93	21.79	21.72	21.89	21.97	21.82	21.90	22.07	21.74	21.86	21.95	21.84	21.77	22.00	21.79	21.69	21.90	--
PF 1)	0.540	0.541	0.543	0.543	0.535	0.529	0.526	0.534	0.537	0.530	0.534	0.542	0.527	0.532	0.536	0.531	0.528	0.539	0.529	0.525	0.534	≥0.5
Φ(lm) 1)	1387	1388	1392	1391	1381	1372	1368	1378	1384	1374	1379	1390	1369	1377	1382	1375	1371	1385	1372	1366	1379	--
CCT (K) 1)	2993	2996	3004	3002	2980	2961	2951	2975	2986	2965	2976	2999	2955	2971	2983	2968	2958	2989	2961	2948	2976	--
Ra 1)	84.3	84.4	84.6	84.5	83.9	83.4	83.1	83.8	84.1	83.5	83.8	84.5	83.2	83.7	84.0	83.6	83.3	84.2	83.4	83.0	83.8	≥80(indoor)
tStart (s) 1)	0.268	0.229	0.265	0.236	0.219	0.216	0.218	0.216	0.225	0.206	0.241	0.236	0.219	0.226	0.251	0.213	0.224	0.221	0.224	0.223	0.229	< 0.5s
twarm (s) 1)	0.621	0.544	0.513	0.510	0.662	0.598	0.537	0.548	0.612	0.572	0.633	0.599	0.618	0.514	0.666	0.632	0.612	0.628	0.563	0.609	0.590	< 2s
Color Consistency *	3.0	2.9	3.1	3.0	3.1	2.9	3.0	3.1	3.0	2.9	3.1	2.9	3.1	3.0	3.1	3.1	2.9	3.0	3.1	3.1	3.0	< 6SDCM
x	0.4396	0.4395	0.4395	0.4396	0.4395	0.4397	0.4397	0.4398	0.4399	0.4398	0.4398	0.4397	0.4398	0.4398	0.4399	0.4397	0.4395	0.4395	0.4394	0.4392	--	--
y	0.4062	0.4063	0.4065	0.4066	0.4066	0.4065	0.4064	0.4064	0.4062	0.4064	0.4064	0.4063	0.4062	0.4060	0.4062	0.4061	0.4061	0.4062	0.4060	0.4061	--	--

Supplementary information:
1) initial measurement value after aging of: 30 min;
2) ANSI 4000K central point : x=0.3818, y=0.3797, for color consistency.

Tables

Table 2	**Test data**																					
Voltage (V):			**230V**				**Frequency (Hz):**				**50Hz**				**Ambient (T/rh) (°C / %)**				**25°C 66%R.H.**			
Test item	**Measured Value**																					
Sample:	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**Average**	**Limit**
PFR @1000h	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**		
LSF @6000h	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**		**⩾90%**
Øuse, @6000h(lm)	**1252**	**1266**	**1263**	**1242**	**1250**	**1220**	**1230**	**1250**	**1262**	**1221**	**1231**	**1257**	**1213**	**1213**	**1240**	**1247**	**1211**	**1233**	**1211**	**1176**	**--**	
LLMF @6000h(%)	**0.903**	**0.912**	**0.907**	**0.893**	**0.905**	**0.889**	**0.899**	**0.907**	**0.912**	**0.889**	**0.893**	**0.904**	**0.886**	**0.881**	**0.897**	**0.907**	**0.883**	**0.890**	**0.883**	**0.861**	**0.895**	**⩾80%**
Sample:	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**		
Switching cycles(n)	**15000**	**15000**	**15000**	**15000**	**15000**	**15000**	**15000**	**15000**	**15000**	**15000**	**15000**	**15000**	**15000**	**15000**	**15000**	**15000**	**15000**	**15000**	**15000**	**15000**	**15000**	**≥ 15000**
Remark: **UN: Means “Under testing”**																						

Tables

Table3. Energy class					
Standard	Clause		Model No.		Verdict
EU 874/2012 EU 1194/2012 EU 244/2009	Energy class		MP8525-6B (85820010-01)		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				
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
EEI =0.22		A		--	

ATTACHMENT

Photo Documentation

View:
Model:
MP8525-6B
(85820010-01)

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

Figure 1

Figure 2

ATTACHMENT

Photo Documentation

View:
Model:
MP8525-6B
(85820010-01)

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

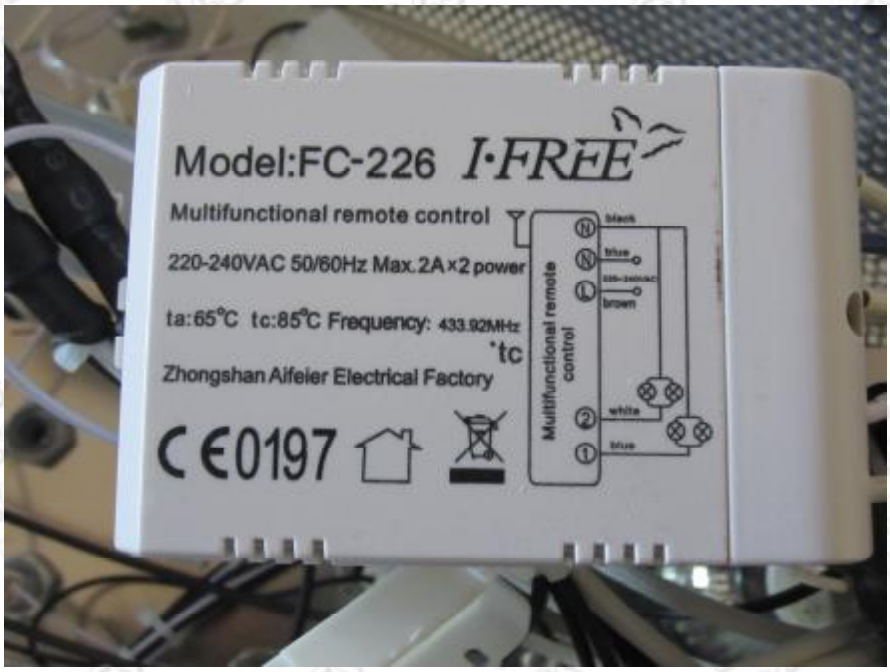


Figure 3