TEST REPORT
COMMISSION REGULATION (EU) 2019/2020 of 1 October 2019
laying down ecodesign requirements for light sources and separate control gears pursuant to Directive 2009/125/EC of the European Parliament and of the Council

Report Reference No. ..... :	JAT241210661S1-SR00
Tested by (name + signature) ..... :	Tanac
	Tim You
Approved by (name + signature) .... :	
Date of issue ..... :	2024-12-17
Total number of pages ..... :	16
Testing Laboratory ..... :	Dongguan Junan Testing & Certification Co., Ltd.
Address ..... :	Room 303, Building 1, No.316, Renzhou Road, Shatian Town, Dongguan City, Guangdong Province, China.
Applicant's name ..... :	Zhongshan Fantasy Appliance Co.,Ltd.
Address ..... :	3/F building 2 No.8 Yongxing North Road,Yongxing Industrial Zone, Henglan town Zhongshan Guangdong China.
Manufacturer's name ..... :	Zhongshan Fantasy Appliance Co.,Ltd.
Address ..... :	3/F building 2 No.8 Yongxing North Road,Yongxing Industrial Zone, Henglan town Zhongshan Guangdong China.
Test specification:	
Standard..... :	COMMISSION REGULATION (EU) No 2019/2020
	COMMISSION DELEGATED REGULATION (EU) 2019/2015
Test procedure ..... :	ERP
Non-standard test method……..:	None
Test item description ..... :	Ceiling fan with light
Trade Mark..... :	N/A
Factory ..... :	Zhongshan Fantasy Appliance Co.,Ltd.
Model/Type reference ..... :	FSD-R3601d
Ratings ..... :	220-240V~, 50/60Hz

Summary of testing:

1. According to technical document which provided by manufacturer，the luminaire removing lampshade was considered as the light source，The test was carried out with light source only.
   According to technical document which provided by manufacturer，LED module XXXX removed from luminaire was consider as light source.
2. The light source of luminaire were tested and complies with the requirements of Annex II of COMMISSION REGULATION EU 2019/2020.
3. The light source belongs to Class X according to COMMISSION REGULATION EU 2019/2015, see table 4.
4. The parameters of the product information sheet for EU 2019/2015, please see attachment 1.
5. When determining the test conclusion, the Measurement Uncertainty of test has been considered.

Copy of marking plate

—

Possible test case verdicts:

- test case does not apply to the test object.....: N/A
- test object does meet the requirement.....: P (Pass)
- test object does not meet the requirement.....: F (Fail)

Testing .....:

Date of receipt of test item .....: 2024-12-10

Date (s) of performance of tests .....: 2024-12-10 to 2024-12-16

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.

General product information:

EU 2019/2020			
Clause	Requirement + Test	Result - Remark	Verdict
	Classification		P
	Lighting technology ..... :	☒ LED ☐ Others:	P
	Directional or non-directional..... :	☒ Directional ☐ Non-directional	P
	Dimmable ..... :	☐ Dimmable ☒ Non-dimmable	P
	Light source ..... :	☒ **Yes** ☐ **No**	P
	CLS..... :	☐ Yes ☒ No	P
	Separate control gear ..... :	☐ **Yes** ☐ **No**	N/A
	CSCG ..... :	☐ Yes ☐ No	N/A
	Containing product ..... :	☒ **Yes** ☐ **No**	P
	Light source removeable ..... :	☐ Yes ☒ No	P
	Light source CLS ..... :	☐ Yes ☒ No	P
	Control gear removeable ..... :	☐ Yes ☒ No	P
	Control gear CSCG ..... :	☐ Yes ☒ No	P
Article 2	**Definitions**		**P**
	'light source' means an electrically operated product intended to emit, or, in the case of a non-incandescent light source, intended to be possibly tuned to emit, light, or both, with all of the following optical characteristics:		P
(a)	chromaticity coordinates x and y in the range 0,270 < x < 0,530 and -2,3172 x^2 + 2,3653 x - 0,2199 < y < - 2,3172 x^2 + 2,3653 x - 0,1595		P
(b)	a luminous flux < 500 lumen per mm^2 of projected light-emitting surface area		P
(c)	a luminous flux between 60 and 82 000 lumen;		P
(d)	a colour rendering index (CRI) > 0		P
	High-pressure sodium (HPS) light sources that do not fulfil condition (a) are considered light sources for the purposes of this Regulation		N/A
ANNEX II	**Ecodesign requirements**		N/A
1	**Energy efficiency requirements**		**P**
(a)	**Energy efficiency requirements for light source**		**P**
	From 1 September 2021, the declared power consumption of a light source P_{on} shall not exceed the maximum allowed power P_{onmax} (in W)	See table 1 & 2	**P**
	The standby power P_{sb} of a light source shall not exceed 0,5 W.		**N/A**
	The networked standby power P_{net} of a connected light source shall not exceed 0,5 W.		**N/A**
(b)	**Energy efficiency requirements for separate control gear**		**N/A**

EU 2019/2020			
Clause	Requirement + Test	Result - Remark	Verdict
	From 1 September 2021, the values set in Table 3 of (EU) 2019/2020 for the minimum energy efficiency requirements of a separate control gear operating at full-load shall apply		N/A
	Multi-wattage separate control gears shall comply with the requirements according to the maximum declared power on which they can operate.		N/A
	The no-load power P_{no} of a separate control gear shall not exceed 0,5 W.		N/A
	The standby power P_{sb} of a separate control gear shall not exceed 0,5 W.		N/A
	The networked standby power P_{net} of a connected separate control gear shall not exceed 0,5 W.		N/A
2	**Functionality requirements**		**P**
	From 1 September 2021, the functional requirements specified in Table 4 of (EU) 2019/2020 shall apply for light sources	See table 1 & 2	P
3	**Information requirements**		**P**
	From 1 September 2021 the following information requirements shall apply:		P
(a)	**Information to be displayed on the light source itself**		**P**
	For all light sources, except CTLS, LFL, CFLni, other FL, and HID, the value and physical unit of the useful luminous flux (*lm*) and correlated colour temperature (*K*) shall be displayed in a legible font on the surface		P
	For directional light sources, the beam angle (°) shall also be indicated.		P
	If there is room for only two values, the useful luminous flux and the correlated colour temperature shall be displayed. If there is room for only one value, the useful luminous flux shall be displayed.		P
(b)	**Information to be visibly displayed on the packaging**		N/A
(1)	**Light source placed on the market, not in a containing product**		N/A
	In a packaging containing information to be visibly displayed at a point-of-sale prior to its purchase, the following information shall be clearly and prominently displayed on the packaging:		P
	(a) the useful luminous flux (Φuse) in a font at least twice as large as the display of the on-mode power (Pon), clearly indicating if it refers to the flux in a sphere (360°), in a wide cone (120°) or in a narrow cone (90°);	in a sphere (360°)： 1977.5lm	P
	(b) the correlated colour temperature, rounded to the nearest 100 K, also expressed graphically or in words, or the range of correlated colour temperatures that can be set	3100K	P
	(c) the beam angle in degrees (for directional light sources), or the range of beam angles that can be set;	115.5°	P
	(d) electrical interface details, e.g. cap- or connector-type, type of power supply (e.g. 230 V AC 50 Hz, 12 V DC);		P
	(e) the L70B50 lifetime for LED and OLED light sources, expressed in hours;	20000hours	P

EU 2019/2020			
Clause	Requirement + Test	Result - Remark	Verdict
	(f) the on-mode power (P_{on}), expressed in W		P
	(g) the standby power (P_{sb}), expressed in W and rounded to the second decimal. If the value is zero, it may be omitted from the packaging;		P
	(h) the networked standby power (P_{net}) for CLS, expressed in W and rounded to the second decimal. If the value is zero, it may be omitted from the packaging		P
	(i) the colour rendering index, rounded to the nearest integer, or the range of CRI-values that can be set		P
	(j) if CRI< 80, and the light source is intended for use in outdoor applications, industrial applications or other applications where lighting standards allow a CRI< 80, a clear indication to this effect. For HID light sources with useful luminous flux > 4 000 lm, this indication is not mandatory;		P
	(k) if the light source is 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;		P
	(l) a warning if the light source cannot be dimmed or can be dimmed only with specific dimmers or with specific wired or wireless dimming methods. In the latter cases a list of compatible dimmers and/or methods shall be provided on the manufacturer's website;		P
	(m) if the light source contains mercury: a warning of this, including the mercury content in mg rounded to the first decimal place;		P
	(n) if the light source is within the scope of Directive 2012/19/EU, without prejudice to marking obligations pursuant to Article 14(4) of Directive 2012/19/EU, or contains mercury: a warning that it shall not be disposed of as unsorted municipal waste.		P
	Items (a) to (d) shall be displayed on the packaging in the direction meant to face prospective buyer; for other items this is also recommended, if space permits.		P
	For light sources that can be set to emit light with different characteristics, the information shall be reported for the reference control settings. In addition, a range of obtainable values may be indicated.		P
(2)	**Separate control gears:**		**N/A**
	If a separate control gear is placed on the market as a stand-alone product and not as a part of a containing product, in a packaging containing information to be visibly displayed to potential buyers, prior to their purchase, the following information shall be clearly and prominently displayed on the packaging:		N/A
	(a) the maximum output power of the control gear (for HL, LED and OLED) or the power of the light source for which the control gear is intended (for FL and HID)		N/A
	(b) the type of light source(s) for which it is intended		N/A
	(c) the efficiency in full-load, expressed in percentage		N/A

EU 2019/2020			
Clause	Requirement + Test	Result - Remark	Verdict
	(d) the no-load power (Pno), expressed in W and rounded to the second decimal, or the indication that the gear is not intended to operate in no-load mode. If the value is zero, it may be omitted from the packaging but shall nonetheless be declared in the technical documentation and on websites;		N/A
	(e) the standby power (Psb), expressed in W and rounded to the second decimal. If the value is zero, it may be omitted from the packaging but shall nonetheless be declared in the technical documentation and on websites;		N/A
	(f) where applicable, the networked standby power (Pnet), expressed in W and rounded to the second decimal. If the value is zero, it may be omitted from the packaging but shall nonetheless be declared in the technical documentation and on websites;		N/A
	(g) a warning if the control gear is not suitable for dimming of light sources or can be used only with specific types of dimmable light sources or using specific wired or wireless dimming methods. In the latter cases, detailed information on the conditions in which the control gear can be used for dimming shall be provided on the manufacturer's or importer's website;		N/A
	(h) a QR-code redirecting to a free-access website of the manufacturer, importer or authorised representative, or the internet address for such a website, where full information on the control gear can be found		N/A
(c)	**Information to be visibly displayed on a free-access website for separate control gears**		N/A
	(a) the information specified in point 3(b)(2), except 3(b)(2)(h)		N/A
	(b) the outer dimensions in mm		N/A
	(c) the mass in grams of the control gear, without packaging, and without lighting control parts and non-lighting parts, if any and if they can be physically separated from the control gear;		N/A
	(d) instructions on how to remove lighting control parts and non-lighting parts, if any, or how to switch them off or minimise their power consumption during control-gear testing for market surveillance purposes;		N/A
	(e) if the control gear can be used with dimmable light sources, a list of minimum characteristics that the light sources should have to be fully compatible with the control gear during dimming, and possibly a list of compatible dimmable light sources		N/A
	(f) recommendations on how to dispose of it at the end of its life in line with Directive 2012/19/EU		N/A
(d)	**Technical documentation for separate control gears**		**N/A**
	The information specified in point 3(c) of this Annex shall also be contained in the technical documentation file		N/A
(e)	**Information for products specified in point 3 of Annex III**		N/A

EU 2019/2020			
Clause	Requirement + Test	Result - Remark	Verdict
	For the light sources and separate control gears specified in point 3 of Annex III the intended purpose shall be stated in the technical documentation		N/A
	The technical documentation file drawn up for the purposes of conformity assessment, in accordance with Article 5 of this Regulation shall list the technical parameters that make the product design specific to qualify for the exemption		N/A
	For light sources indicated in point 3(p) of Annex III it shall be stated: 'This light source is only for use by photo sensitive patients. Use of this light source will lead to increased energy cost compared to an equivalent more energy efficient product.'		N/A
ANNEX III	**Exemptions**		**P**
1	**This Regulation shall not apply to light sources and separate control gears specifically tested and approved to operate in other directives or regulations specified in (EU) 2019/2020 ANNEX III point 1 .....:**		**P**
2	**This Regulation shall not apply to**		
	(a) double-capped fluorescent T5 light sources with power P ⩽ 13 W		N/A
	(b) electronic displays		N/A
	(c) light sources and separate control gears in battery-operated products		N/A
	(d) light sources for spectroscopy and photometric applications		P
	(e) light sources and separate control gears on bicycles and other non-motorised vehicles.		N/A
3	**Any light source or separate control gear within the scope of this Regulation shall be exempt from the requirements of this Regulation, with the exception of the information requirements set out in point 3(e) of Annex II, if they are specifically designed and marketed for their intended use in at least one of the following applications:**		**N/A**
	(a) signalling		N/A
	(b) image capture and image projection		N/A
	(c) light sources with specific effective ultraviolet power > 2 mW/klm and intended for use in applications requiring high UV-content		N/A
	(d) light sources with a peak radiation around 253,7 nm and intended for germicidal use (destruction of DNA)		N/A
	(e) light sources emitting 5 % or more of total radiation power of the range 250-800 nm in the range of 250-315 nm and/or 20 % or more of total radiation power of the range 250-800 nm in the range of 315-400 nm, and intended for disinfection or fly trapping		N/A

EU 2019/2020			
Clause	Requirement + Test	Result - Remark	Verdict
	(f) light sources with the primary purpose of emitting radiation around 185,1 nm and intended to be used for the generation of ozone		N/A
	(g) light sources emitting 40 % or more of total radiation power of the range 250-800 nm in the range of 400-480 nm, and intended for coral zooxanthellae symbioses		N/A
	(h) FL light sources emitting 80 % or more of total radiation power of the range 250-800 nm in the range of 250-400 nm, and intended for sun-tanning		N/A
	(i) HID light sources emitting 40 % or more of total radiation power of the range 250-800 nm in the range of 250-400 nm, and intended for sun-tanning		N/A
	(j) light sources with a photosynthetic efficacy > 1,2 µmol/J, and/or emitting 25 % or more of total radiation power of the range 250-800 nm in the range of 700-800 nm, and intended for use in horticulture		N/A
	(k) HID light sources with correlated colour temperature CCT > 7000 K and intended for use in applications requiring such a high CCT		N/A
	(l) light sources with a beam angle of less than 10° and intended for spot-lighting applications requiring a very narrow light beam		N/A
	(m) halogen light sources with cap-type G9.5, GX9.5, GY9.5, GZ9.5, GZX9.5, GZY9.5, GZZ9.5, K39d, G9.5HPL, G16d, GES/E40 (low voltage (24V) silver crown only), GX16, GX16d, GY16, G22, G38, GX38, GX38Q, P28s, P40s, PGJX28, PGJX 36, PGJX50, R7s with a luminous flux > 12 000 lm, QXL, designed and marketed specifically for entertainment events		N/A
	(n) colour-tuneable light sources that can be set to at least the colours listed in this point and which have for each of these colours, measured at the dominant wavelength, a minimum excitation purity of blue (90%); green (65%); red (95%) and are intended for use in applications requiring high-quality coloured light		N/A
	(o) light sources accompanied by an individual calibration certificate detailing the exact radiometric flux and/or spectrum under specified conditions, and intended for use in photometric calibration, or for laboratory use or quality control applications for the evaluation of coloured surfaces and materials under standard viewing conditions		N/A
	(p) light sources provided specifically for use by photosensitive patients, to be sold in pharmacies and other authorised selling points (e.g. suppliers of disability products), upon presentation of a medical prescription;		N/A
	(q) incandescent light sources (not including halogen light sources) fulfilling all of the following conditions: power ≤ 40 W, length ≤ 60 mm, diameter ≤ 30 mm, declared suitable for operation at ambient temperature ≥ 300 °C, and intended for use in high temperature applications such as ovens;		N/A

EU 2019/2020			
Clause	Requirement + Test	Result - Remark	Verdict
	(r) halogen light sources fulfilling all of the following conditions: cap-type G4, GY6.35 or G9, power ≤ 60 W, declared suitable for operation at ambient temperature ≥ 300 °C, and intended for use in high temperature applications such as ovens		N/A
	(s) halogen light sources with blade contact-, metal lug-, cable-, litz wire- or non-standard customised electrical interface, specifically designed and marketed for industrial or professional electro-heating equipment		N/A
	(t) halogen light sources fulfilling all of the following conditions: R7s cap, CCT ≤ 2 500 K, length not in the ranges 75-80 mm and 110-120 mm, specifically designed and marketed for industrial or professional electroheating equipment		N/A
	(u) single capped fluorescent lamps (CFLni) having a diameter of 16 mm (T5), 2G11 4 pin base, with CCT = 3200 K and chromaticity coordinates x = 0,415 y = 0,377, or with CCT = 5 500 K and chromaticity coordinates x = 0,330 y = 0,335, specifically designed and marketed for studio and video applications for traditional filmmaking		N/A
	(v) LED or OLED light sources, complying with the definition of 'original works of art' as defined in Directive 2001/84/EC of the European Parliament and of the Council (17), made by the artist him/herself in a limited number below 10 pieces		N/A
	(w) white light sources which		N/A
	(1) are designed and marketed specifically for scene-lighting use in film-studios, TV-studios and locations, and photographic-studios and locations, or for stage-lighting use in theatres, during concerts or other entertainment events; and		N/A
	(2) provide two or more of the following specifications:		N/A
	(a) LED with high CRI > 90;		N/A
	(b) GES/E40, K39d socket with changeable Colour Temperature down to 1 800 K (undimmed), used with low voltage power supply;		N/A
	(c) LED rated at 180W and greater and arranged to direct output to an area smaller than the light emitting surface;		N/A
	(d) DWE lamp type which is a tungsten lamp defined by its wattage (650 W) voltage (120 V) and terminal type (pressure screw terminal);		N/A
	(e) white bi-colour LED sources;		N/A
	(f) fluorescent tubes: Min BI Pin T5 and Bi Pin T12 with CRI ≥ 85 and CCT 2900, 3000, 3200, 5600 or 6500 K.		N/A
4	CLS and CSCG designed and marketed specifically for entertainment events, for connection to high speed control networks in always-listening mode, shall be exempt from the requirements on standby (P_{sb}) and on networked standby (P_{net}) of points 1(a) and 1(b) of Annex II		N/A

EU 2019/2020

Table 1 - Energy efficiency requirements & Functionality requirements for light source

Model :	FSD-R3601d				Test voltage (V) / current (mA) :	230Vac
Energy efficiency Calculation	P_{onmax} = C x (L + Φ_{use} / (F x η)) x R (W)					
	C : 1.23	L : 1.5	F : 0.85	η: 120 lm/W	R : 1.02	Φ_{use} : 1977.5lm

Functionality parameter / Sample	Φ_{use} (lm)	P_{on} (W)	P_{onmax} (W)	Lamp survival factor	Lumen Maintenance	CRI	P_{sb} (W)	P_{net} (W)	Colour consistency
1	1977.4	23.5	23.7	0.95	96.5%	82.4	--	--	4.2
2	1977.5	23.4	23.8	0.94	96.4%	82.3	--	--	4.5
3	1977.6	23.5	23.9	0.95	96.6%	82.4	--	--	4.6
4	1977.5	23.6	23.8	0.94	96.5%	82.5	--	--	4.4
5	1977.4	23.5	23.7	0.95	96.4%	82.3	--	--	4.2
6	1977.5	23.4	23.8	0.94	96.8%	82.5	--	--	4.5
7	1977.6	23.5	23.9	0.95	96.9%	82.4	--	--	4.6
8	1977.5	23.6	23.8	0.94	96.5%	82.3	--	--	4.5
9	1977.4	23.5	23.7	0.95	96.2%	82.4	--	--	4.4
10	1977.5	23.4	23.8	0.94	96.4%	82.5	--	--	4.2
Average	1977.5	23.5	23.8	0.95	96.5%	82.5	--	--	4.3
Rated value	2000	24.0	24.0	0.95	96.8%	85	--	--	4.5
Limit	-10%	☐ P ≤ 2 W: + 0,2 W ☐ 2 W < P ≤ 5 W: +10% ☒ 5 W < P ≤ 100 W: +5% ☐ P > 100 W: +2,5%	$P_{onmax} \geq P_{on}$	≥ 0,9	≥ 95,8%	☒ ≥ 80 ☐ except for HID with Φuse > 4 klm and for light sources intended for use in outdoor applications, industrial applications or other applications where lighting standards allow a CRI< 80 or (Rated - 2)	≤ 0,5 or (Rated +0,1)	≤ 0,5 or (Rated +0,1)	≤ 6
Verdict	P	P	P	P	P	P	P	P	P

EU 2019/2020

Table 2 - Energy efficiency requirements & Functionality requirements for light source			
Model :	FSD-R3601d	Test voltage (V) / current (mA) :	230Vac
Functionality parameter / Sample	DF at power input P_{on} for LED and OLED MLS	P_{st} LM	SVM
1	0.93	0.91	**0.34**
2	0.94	0.92	**0.33**
3	0.92	0.93	**0.35**
4	0.93	0.92	**0.32**
5	0.94	0.91	**0.33**
6	0.92	0.92	**0.35**
7	0.93	0.93	**0.31**
8	0.94	0.92	**0.32**
9	0.92	0.91	**0.33**
10	0.93	0.92	**0.35**
Average	0.93	0.92	**0.33**
Rated value	0.95	0.95	**0.35**
Limit	☐ P ≤ 5 W: no requirement & (Rated - 0,1) ☐ 5 W < P ≤ 10 W: DF > 0,5 & (Rated - 0,1) ☒ 10 W < P ≤ 25 W: DF > 0,7 & (Rated - 0,1) ☐ P > 25 W: DF > 0,9 & (Rated - 0,1)	≤ 1,0 & (Rated + 10%)	☒ ≤ 0,4 ☐ except for HID with Φuse > 4 klm and for light sources intended for use in outdoor applications, industrial applications or other applications where lighting standards allow a CRI< 80 & (Rated + 10%)
Verdict	**P**	**P**	**P**
Remark: Above functionality parameter value of light source was tested with separate control gear XXXXX on luminaire			

Table 3 - Energy Efficiency Requirements for separate control gear				
Type :	FSD-R3601d	Test voltage (V) :	230Vac	
Declared output power of the control gear (P_{cg}) or declared power of the light source (P_{ls}):				
Functionality parameter / Sample	Energy efficiency at full-load	P_{no} (W)	P_{sb} (W)	P_{net} (W)
1	—	—	—	—
2	—	—	—	—
3	—	—	—	—
4	—	—	—	—
5	—	—	—	—
6	—	—	—	—
7	—	—	—	—
8	—	—	—	—
9	—	—	—	—
10	—	—	—	—
Average	—	—	—	—
Rated value:	—	—	—	—
Limit	☐ Control gear for HL light sources ☐ Control gear for FL light sources ☐ Control gear for HID light sources ☒ Control gear for LED or OLED light sources: **$P_{cg}^{0,81}/(1,09* P_{cg}^{0,81}+2,10)=$** & (Rated - 0,05)	0,5 & (Rated + 0,10)	0,5 & (Rated + 0,10)	0,5 & (Rated + 0,10)
Verdict	**N/A**	**N/A**	**N/A**	**N/A**

Table 4 – COMMISSION REGULATION EU 2019/2015 Energy efficiency classes of light sources	
Model :	FSD-R3601d

Rated value :

Φ_{use} :2000 lm; P_{on} :24.0 W; F_{TM} : 1.176

$\eta_{TM} = (\Phi_{use} / P_{on}) \times F_{TM}$ (lm/W) =98 lm/W

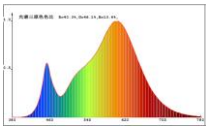
Measured value :

Φ_{use} :1978 lm; P_{on} :23.5 W; F_{TM} : 1.176

$\eta_{TM} = (\Phi_{use} / P_{on}) \times F_{TM}$ (lm/W) =99.0 lm/W

Total mains efficacy η_{TM} (lm/W)	Energy efficiency class	Energy efficiency class (Rated)	Energy efficiency class (Measured)
$210 \leq \eta_{TM}$	A	☐	☐
$185 \leq \eta_{TM} < 210$	B	☐	☐
$160 \leq \eta_{TM} < 185$	C	☐	☐
$135 \leq \eta_{TM} < 160$	D	☐	☐
$110 \leq \eta_{TM} < 135$	E	☐	☐
$85 \leq \eta_{TM} < 110$	F	☒	☒
$\eta_{TM} < 85$	G	☐	☐

Attachment 1 – Product information sheet for EU 2019/2015

Product information sheet For light source (including it is a part in a containing product)			
Supplier's name or trade mark: Zhongshan xinhe Technology Co., Ltd.			
Supplier's address: 3/F building 2 No.8 Yongxing North Road,Yongxing Industrial Zone, Henglan town Zhongshan Guangdong China.			
Model identifier: FSD-R3601d			
Type of light source: LED			
Lighting technology used:	[~~HL/LFL T5 HE/LFL T5 HO/CFLni/other FL/HPS/MH/other HID~~/LED/~~OLED/mixed/ other~~]	Non-directional or directional:	[~~NDLS~~/DLS]
Mains or non-mains:	[MLS/~~NMLS~~]	Connected light source (CLS):	[yes/~~no~~]
Colour-tuneable light source:	--	Envelope:	[no/~~second/non-clear~~]
High luminance light source:	[~~yes~~/no]		
Anti-glare shield:	[~~yes~~/no]	Dimmable:	[~~yes/only with specific dimmers~~/no]
Product parameters			
Parameters	220-240Vac	Parameters	24.0W
General product parameters:			
Energy consumption in on-mode (kWh/1 000 h)	24.0	Energy efficiency class	[~~A/B/C/D/E~~/F/~~G~~]
Useful luminous flux (Φuse), indicating if it refers to the flux in a sphere (360°), in a wide cone (120°) or in a narrow cone (90°)	1977.5lm in [sphere/~~wide cone/narrow cone~~]	Correlated colour temperature, rounded to the nearest 100 K, or the range of correlated colour temperatures, rounded to the nearest 100 K, that can be set	3100K
On-mode power (P_{on}), expressed in W	23.5	Standby power (P_{sb}), expressed in W and rounded to the second decimal	--
Networked standby power (P_{net}) for CLS, expressed in W and rounded to the second decimal	--	Colour rendering index, rounded to the nearest integer, or the range of CRI-values that can be set	82.4
Outer dimensions without separate control gear, lighting control parts and non-lighting control parts, if any (millimetre) – Height	x	Spectral power distribution in the range 250 nm to 800 nm, at full-load	
Widht	x		
Depth	x		
Claim of equivalent power	No	If yes, equivalent power (W)	--

Attachment 1 – Product information sheet for EU 2019/2015

		Chromaticity coordinates (x and y)	0,4267 0,3969
Parameters for directional light sources:			
Peak luminous intensity (cd)	414.2	Beam angle in degrees, or the range of beam angles that can be set	115.5
Parameters for LED and OLED light sources:			
R9 colour rendering index value	5	Survival factor	0.95
the lumen maintenance factor	0.97		
Parameters for LED and OLED mains light sources:			
Displacement factor (cos φ1)	0.93	Colour consistency in McAdam ellipses	4.3
Claims that an LED light source replaces a fluorescent light source without integrated ballast of a particular wattage	--	If yes then replacement claim (W)	--
Flicker metric (P_{st} LM)	0.92	Stroboscopic effect metric (SVM)	0.35

Attachment 2 - Photo documentation

View:

☒ general

☐ front

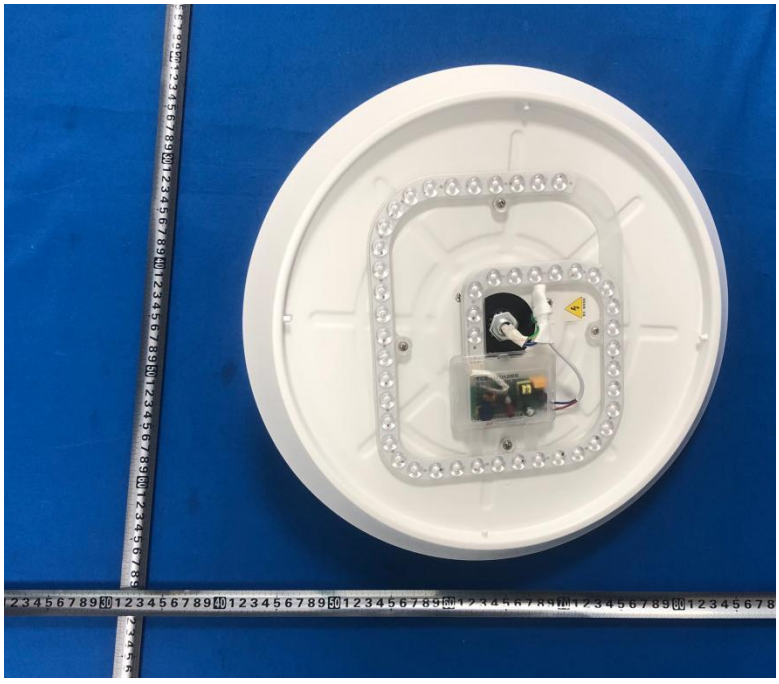
☐ rear

☐ right

☐ left

☐ top

☐ bottom



View:

☒ general

☐ front

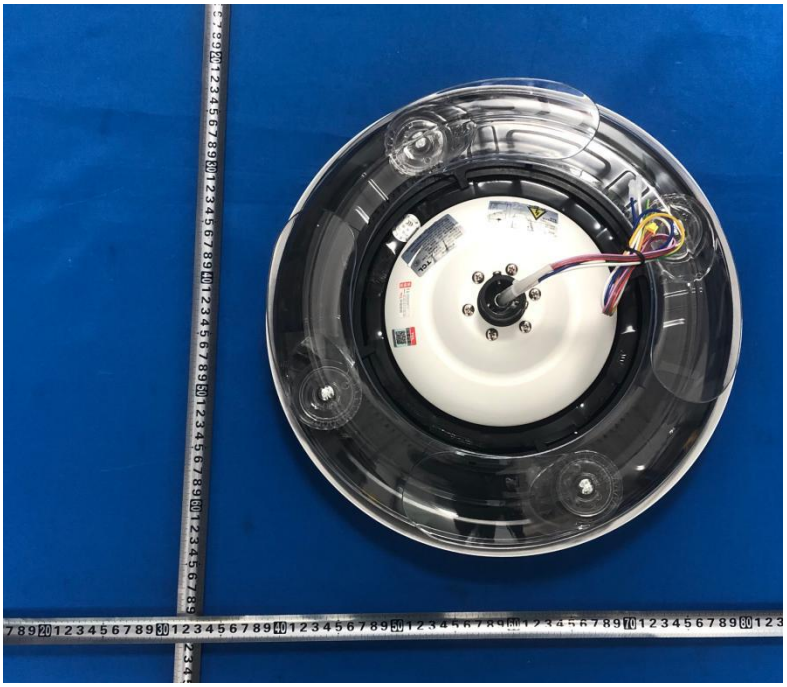
☐ rear

☐ right

☐ left

☐ top

☐ bottom



- - - End of Report - - -