TEST REPORT

COMMISSION REGULATION (EU) 2019/2020

COMMISSION DELEGATED REGULATION (EU) 2019/2015

Report Reference No. ……..……:	AOC250514011ER
Compiled by (print+ signature)…….:	Bill Hu
Approved by (print+ signature)……:	Robin Liu
	Lab Supervisor
Date of issue……...:	2025-05-16
Testing Laboratory.....:	Shenzhen AOCE Electronic Technology Service Co., Ltd
Address……:	Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China
Testing location/address……...:	Same as above
Applicant's name.....:	Guangdong Ansiondarry Technology Co., Ltd.
Address……:	Room No. 301, Building 6, Xinhongwan Zhigu Research Center, No.68, Xingzhou Road, Shatian Town, Dongguan City, Guangdong Province
Manufacturer name……..:	Guangdong Ansiondarry Technology Co., Ltd.
Address……:	Room No. 301, Building 6, Xinhongwan Zhigu Research Center, No.68, Xingzhou Road, Shatian Town, Dongguan City, Guangdong Province
Test Object……..:	LED Floor lamp
Trade Mark……...:	ANSI NDARRY
Model / Type reference……:	MF30012R (See page 4 of the report)
Rated voltage (V)……..……:	100-240 V~
Rated frequency (Hz)…..…..……:	50/60 Hz
Rated Power (W).....:	36 W
Rated luminous (lm).....:	3850 lm
Rated color temperature (CCT).....:	3000-6500 K
Rated color tendering (CRI).....:	80
Rated life (h).....:	30000
Test specification:	
Standard .....:	COMMISSION REGULATION (EU) 2019/2020; (EU) 2019/2015; COMMISSION DELEGATED REGULATION (EU) 2021/340; COMMISSION REGULATION (EU) 2021/341
Test procedure ..... :	Test report
Non-standard test method.....:	N/A
Test Report Form No......:	IECEE TRF No. (EU) 2019/2020
Test Report Form(s) Originator .....:	AOCE
Master TRF.....:	2019-11-30

Summary of Testing:	
Tests performed (name of test and test clause):	**Testing location:**
The sample(s) tested complies with the requirements of COMMISSION REGULATION (EU) 2019/2020 When determining the test conclusion. The Measurement Uncertainty of test has be enconsidered.	Shenzhen AOCE Electronic Technology Service Co., Ltd Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China
Summary of Compliance with National Differences:	
N/A	
Copy of Marking Plate:	
N/A	

Type of light source:	
Product type.....:	☒ Light source ☐ Separate control gears
Lighting technology used.....:	☒ LED ☐ OLED ☐ Other
Non-directional or directional.....:	☐ DLS (Directional) ☒ NDLS (Non-directional)
Use of lamp.....:	☒ Indoor ☐ Outdoor ☐ Industry
Light source cap-type (or other electric interface).....:	Adapter
Mains or non-mains.....:	☒ MLS (mains light source) ☐ NMLS (non-mains light source)
Connected light source (CLS).....:	☐ Yes ☒ No
Colour-tuneable light source.....:	☐ Yes ☒ No
Envelope.....:	☐ Yes ☒ No
High luminance light source.....:	☐ Yes ☒ No
Anti-glare shield.....:	☐ Yes ☒ No
Dimmable.....:	☒ Yes ☐ No
Product parameters	
Parameter.....:	100-240V~, 50/60Hz, 36W
Energy consumption in on-mode (KWh/1000h).....:	36
Energy efficiency class.....:	*See table 8*
Beam angle correspondence.....:	*See table 4*
Correlated colour temperature (K).....:	*See table 3*
On-mode power (W).....:	*See table 1*
Standby power (W).....:	*See table 1*
Networked standby power for CLS (W).....:	*See table 1*
Colour rendering index.....:	*See table 3*
Colour rendering index range (Minimum).....:	*See table 3*
Colour rendering index range (Maximum).....:	*See table 3*
Claim of equivalent power.....:	☐ Yes ☒ No
Equivalent power (W).....:	/
Chromaticity coordinate (x).....:	*See table 3*
Chromaticity coordinate (y).....:	*See table 3*
PARAMETERS FOR DIRECTIONAL LIGHT SOURCES	
Peak luminous intensity (cd).....:	*See table 4*
Beam angle (degrees).....:	*See table 4*
Beam angle range (Minimum) (degrees).....:	*See table 4*
Beam angle range (Maximum) (degrees).....:	*See table 4*
PARAMETERS FOR LED AND OLED LIGHT SOURCES	
R9 Colour rendering index.....:	*See table 3*
Survival factor.....:	*See table 4*
Lumen maintenance factor.....:	*See table 4*
PARAMETERS FOR LED AND OLED MAINS LIGHT SOURCES	

Displacement factor……:	*See table 1*
Colour consistency in McAdam ellipses……..:	*See table 3*
Claims that an LED light source replaces a fluorescent light source without integrated ballast of a particular wattage……:	☐ Yes ☒ N.A
Replacement claim (W)……..:	/
Flicker metric (W)……:	*See table 5*
Stroboscopic effect metric (W)……..:	*See table 5*
Outer dimensions without (Millimetre)……:	/
Spectral power distribution in the range 250 nm to 800 nm, at full-load……..:	*See table 7*
Possible Test Case Verdicts:	
Test case does not apply to the test object……:	N/A (Not Applicable)
Test object does meet the requirement……..……:	P (Pass)
Test object does not meet the requirement……:	F (Fail)
Testing:	
Ambient temperature of tested ..... :	25.0 ℃
Test inputs..... :	230 V~
Sample size for tested ..... :	10 pcs
Date of receipt of test item……..…..:	2023-03-21
Date (s) of performance of tests……:	2023-03-21 to 2023-12-15
General Remarks:	
Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or use in part without prior written consent from Shenzhen AOCE Electronic Technology Service Co., Ltd	
Note:	
1. Derived models: MF30012, MF30008, MF30008R, MF30014, MF30014R, MF30008.4, MF30012-1. 2. All models are identical except for the name 3. The test data is based on the original report number AOC250305020ER, added the model MF30012-1.	

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Clause	Requirement + Test	Result – Remark	Verdict
2	**Functional requirements**		-
	From 1 September 2021, the functional requirements specified in follow table shall apply for light sources:		P
	Table 4 **Functional requirements for light sources**		-
	Colour rendering: CRI ≥ 80 (except for HID with Φ_{use} > 4 klm and for light sources intended for use in outdoor applications, industrial applications or other applications where lighting standards allow a CRI< 80, when a clear indication to this effect is shown on the light source packaging and in all relevant printed and electronic documentation)		
	Displacement factor (DF, cos φ_1) at power input P_{on} for LED and OLED MLS: No limit at $P_{on} \leq 5$ W; DF ≥ 0,5 at 5 W < P_{on} ≤ 10 W; DF ≥ 0,7 at 10 W < P_{on} ≤ 25 W; DF ≥ 0,9 at 25 W < P_{on}		
	Lumen maintenance factor (for LED and OLED): The lumen maintenance factor X_{LMF}% after endurance testing according to Annex V shall be at least $X_{LMF,MIN}$ % calculated as follows: $X_{LMF,MIN}\% = 100 \times e^{\frac{(3000 \times \ln(0.7))}{L_{70}}}$ where L_{70} is the declared $L_{70}B_{50}$ lifetime (in hours). If the calculated value for $X_{LMF,MIN}$ exceeds 96,0 %, an $X_{LMF,MIN}$ value of 96,0 % shall be used		
	Survival factor (for LED and OLED): Light sources should be operational as specified in row 'Survival factor (for LED and OLED)' of Annex IV, Table 6, following the endurance testing given in Annex V.		
	Colour consistency for LED and OLED light sources: Variation of chromaticity coordinates within a six-step MacAdam ellipse or less.		
	Flicker for LED and OLED MLS: P_{st} LM ≤ 1,0 at full-load		
	Stroboscopic effect for LED and OLED MLS: SVM ≤ 0,4 at full-load (except for HID with Φ_{use} > 4 klm and for light sources intended for use in outdoor applications, industrial applications or other applications where lighting standards allow a CRI< 80)		
	Colour rendering	*See table 3*	P
	Displacement factor (DF, cos φ1) at power input Pon for LED and OLED MLS	*See table 1*	P
	Lumen maintenance factor (for LED and OLED)	＞96%	P
	Survival factor (for LED and OLED)	*See table 4*	P
	Colour consistency for LED and OLED light sources （SDCM）	*See table 3*	P
	Flicker for LED and OLED MLS (P_{st} LM≤ 1.0)	*See table 5*	P
	Stroboscopic effect for LED and OLED MLS (SVM ≤ 0.9; From 1 September 2024: SVM ≤ 0.4)	*See table 5*	P

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Clause	Requirement + Test	Result – Remark	Verdict
3	**Information requirements**		-
	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, ther 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 if, after the inclusion of safety-related information, there is sufficient space available for it without unduly obstructing the light emission.		P
	For directional light sources, the beam angle (°) shall also be indicated.		N/A
	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**		P
-(1)	Light source placed on the market, not in a containing product		P
--(a)	the useful luminous flux (Φuse) in a font at least twice as large as the display of the on-mode power (P_{on}), clearly indicating if it refers to the flux in a sphere (360°), in a wide cone (120°) or in a narrow cone (90°);		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;		P
--(c)	the beam angle in degrees (for directional light sources), or the range of beam angles that can be set;		N/A
--(d)	electrical interface details, e.g. cap- or connector-type, type of power supply (e.g. 220-240 V AC 50 Hz, 12 V DC);		P
--(e)	the L70B50 lifetime for LED and OLED light sources, expressed in hours;		P
--(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

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Clause	Requirement + Test	Result – Remark	Verdict
--(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;		N/A
--(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;		N/A
--(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;		N/A
--(m)	if the light source contains mercury: a warning of this, including the mercury content in mg rounded to the first decimal place;		N/A
--(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.		N/A
	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.		N/A
	The information does not need to use the exact wording on the list above. Alternatively, it may be displayed in the form of graphs, drawings or symbols.		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

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Clause	Requirement + Test	Result – Remark	Verdict
--(c)	the efficiency in full-load, expressed in percentage;		N/A
--(d)	the no-load power (P_{no}), 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 (P_{sb}), 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)	the on-mode power (P_{on}), expressed in W;		N/A
--(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;		N/A
--(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;		N/A
(c)	**Information to be visibly displayed on a free-access website of the manufacturer, importer or authorised representative**		N/A
-(1)	Separate control gears:		N/A
	For any separate control gear that is placed on the EU market, the following information shall be displayed on at least one free-access website:		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

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Clause	Requirement + Test	Result – Remark	Verdict
	The information does not need to use the exact wording in the list above. Alternatively, it may be displayed in the form of graphs, drawings or symbols.		N/A
(d)	**Technical documentation**		N/A
-(1)	Separate control gears:		N/A
	The information specified in point 3(c)(2) of this Annex shall also be contained in the technical documentation file drawn up for the purposes of conformity assessment pursuant to Article 8 of Directive 2009/125/EC.		N/A
(e)	**Information for products specified in point 3 of Annex III**		N/A
	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 for compliance assessment as per Article 5 of this Regulation and on all forms of packaging, product information and advertisement, together with an explicit indication that the light source or separate control gear is not intended for use in other applications.		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
	In particular 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**		-
1	**This Regulation shall not apply to light sources and separate control gears specifically tested and approved to operate:**		N/A
(a)	in potentially explosive atmospheres, as defined in Directive 2014/34/EU of the European Parliament and of the Council ([1]);		N/A
(b)	for emergency use, as set out in Directive 2014/35/EU of the European Parliament and of the Council ([2]);		N/A
(c)	in radiological and nuclear medicine installations, as defined in Article 3 of Council Directive 2009/71/EURATOM ([3]);		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
(d)	in or on military or civil defence establishments, equipment, ground vehicles, marine equipment or aircraft, as set out in Member States' regulations or in documents issued by the European Defence Agency;		N/A
(e)	in or on motor vehicles, their trailers and systems, interchangeable towed equipment, components and separate technical units as set out in Regulation (EC) No 661/2009 ([4]), (EU) No 167/2013 ([5]) and (EU) No 168/2013 of the European Parliament and of the Council ([6]);		N/A
(f)	in or on non-road mobile machinery as set out in Regulation (EU) 2016/1628 of the European Parliament and of the Council ([7]) and in or on their trailers;		N/A
(g)	in or on interchangeable equipment as set out in Directive 2006/42/EC of the European Parliament and of the Council ([8]) intended to be towed or to be mounted and fully raised from the ground or that cannot articulate around a vertical axis when the vehicle to which it is attached is in use on a road by vehicles as set out in Regulation (EU) No 167/2013;		N/A
(h)	in or on civil aviation aircraft, as set out in Commission Regulation (EU) No 748/2012 ([9]);		N/A
(i)	in railway vehicle lighting, as set out in Directive 2008/57/EC of the European Parliament and of the Council ([10]);		N/A
(j)	in marine equipment, as set out in Directive 2014/90/EU of the European Parliament and of the Council ([11]);		N/A
(k)	in medical devices, as set out in Council Directive 93/42/EEC ([12]) or Regulation (EU) 2017/745 of the European Parliament and of the Council ([13]) and in vitro medical devices as set out in Directive 98/79/EC of the European Parliament and of the Council ([14]).		N/A
	For the purpose of this point, 'specifically tested and approved' means that the light source or separate control gear:		N/A
	— has been specifically tested for the mentioned operating condition or application, according to the European legislation mentioned or related implementing measures, or relevant European or international standards, or, in the absence of these, according to relevant Member States legislation; and		N/A
	— is accompanied by evidence, to be included in the technical documentation, in the form of a certificate, a type approval mark, a test report, that the product has been specifically approved for the mentioned operating condition or application; and		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
	— is placed on the market specifically for the mentioned operating condition or application, as evidenced at least by the technical documentation, and except for point (d), information on the packaging and any advertising or marketing materials.		N/A
2	**In addition, this Regulation shall not apply to:**		-
(a)	double-capped fluorescent T5 light sources with power P ⩽ 13 W;		N/A
(b)	electronic displays (e.g. televisions, computer monitors, notebooks, tablets, mobile phones, e-readers, game consoles), including displays within the scope of Commission Regulation (EU) 2019/2021 ([15]), and Commission Regulation (EU) No 617/2013 ([16]);		N/A
(c)	light sources and separate control gears in battery-operated products, including but not limited to e.g. torches, mobile phones with an integrated torch light, toys including light sources, desk lamps operating only on batteries, armband lamps for cyclists, solar-powered garden lamps;		N/A
(d)	light sources for spectroscopy and photometric applications, such as for example UV-VIS spectroscopy, molecular spectroscopy, atomic absorption spectroscopy, nondispersive infrared (NDIR), fourier-transform infrared (FTIR), medical analysis, ellipsometry, layer thickness measurement, process monitoring or environ-mental monitoring;		N/A
(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:**		-
(a)	signalling (including, but not limited to, road-, railway-, marine- or air traffic- signalling, traffic control or airfield lamps);		N/A
(b)	image capture and image projection (including, but not limited to, photocopying, printing (directly or in pre-processing), lithography, film and video projection, holography);		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

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Clause	Requirement + Test	Result – Remark	Verdict
(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
(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 > 7 000 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 scene-lighting use in film studios, TV studios, and photographic studios, or for stage-lighting use in theatres, discos and during concerts or other 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 — 440nm — 490nm — 90 % Green — 520nm — 570nm — 65 % Red — 610nm — 670nm — 95 % and are intended for use in applications requiring high-quality coloured light;		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
(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 (of e.g. wavelength, flux, colour temperature, colour rendering index), or for laboratory use or quality control applications for the evaluation of coloured surfaces and materials under standard viewing conditions (e.g. standard illuminants);		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
(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 (e.g. stretch blow-moulding process in PET-Industry, 3D-printing, gluing, inks, paint and coating hardening);		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 electro-heating equipment (e.g. stretch blow-moulding process in PET-Industry, 3D-printing, gluing, inks, paint and coating hardening);		N/A
(u)	single capped fluorescent lamps (CFLni) having a diameter of 16 mm (T5), 2G11 4 pin base, with CCT = 3 200 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

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Clause	Requirement + Test	Result – Remark	Verdict
(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;		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 T7 With CRI ≥ 85 and CCT 2 900, 3 000, 3 200, 5 600 or 6 500 K.		N/A
4	**CLS and CSCG 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, discos and during concerts or other entertainment events, for connection to high speed control networks (utilising signalling rates of 250 000 bits per second and higher) in always-listening mode, shall be exempt from the requirements on standby (Psb) and on networked standby (Pnet) of points 1(a) and 1(b) of Annex II.**		**-**
ANNEX IV	**Verification procedure for market surveillance purposes**		**N/A**
ANNEX V	**Functionality after endurance testing**		**-**
	Models of LED- and OLED- light sources shall undergo endurance testing to verify their lumen maintenance and survival factor. This endurance testing consists of the test method outlined below. The authorities of a Member State shall test 10 units of the model for this test.		P
	The endurance test for LED and OLED light sources shall be conducted as follows:		P
(a)	Ambient conditions and test setup:		P
-(i)	The switching cycles are to be conducted in a room with an ambient temperature of 25 ± 10 °C and an average air velocity of less than 0,2 m/s.		P

(EU) 2019/2020			
Clause	Requirement + Test	Result – Remark	Verdict
-(ii)	The switching cycles on the sample shall be conducted in free air in a vertical base-up position. However, if a manufacturer or importer has declared the light source suitable for use in a specific orientation only, then the sample shall be mounted in that orientation.		P
-(iii)	The applied voltage during the switching cycles shall have a tolerance within 2 %. The total harmonic content of the supply voltage shall not exceed 3 %. Standards provide guidance on the supply voltage source. Light sources designed to be operated on mains voltage shall be tested at 220-240 V, 50 Hz supply, even if the products are able to be operated on variable supply conditions.		N/A
(b)	Endurance test method:		P
-(i)	Initial flux measurement: measure the luminous flux of the light source prior to starting the endurance test switching cycle.		P
-(ii)	Switching cycles: operate the light source for 1 200 cycles of repeated, continuous switching cycles without interruption. One complete switching cycle consists of 150 minutes of the light source switched ON at full power followed by 30 minutes of the light source switched OFF. The hours of operation recorded (i.e. 3 000 hours) include only the periods of the switching cycle when the light source was switched ON, i.e. the total test time is 3 600 hours.		P
-(iii)	Final flux measurement: at the end of the 1 200 switching cycles, note if any light sources have failed (see 'Survival factor' in Annex IV, Table 6 of this Regulation) and measure the luminous flux of the light sources that have not failed.		P
-(iv)	For each of the units in the sample which have not failed, divide the measured final flux by the measured initial flux. Average the resulting values over all the units that did not fail to compute the determined value for the lumen maintenance factor XLMF %.		P

Table

Table 1

Model No.: MF30012R 3000K

Sample No.	Pon(W)	No-load power P_{no}(W)	Standby power P_{sb}(W)	Networked standby power P_{net}(W)	Displacement factor
S01	35.66	N/A	N/A	N/A	0.92
S02	36.02	N/A	N/A	N/A	0.92
S03	35.48	N/A	N/A	N/A	0.94
S04	36.05	N/A	N/A	N/A	0.90
S05	35.98	N/A	N/A	N/A	0.90
S06	35.80	N/A	N/A	N/A	0.90
S07	36.05	N/A	N/A	N/A	0.92
S08	35.77	N/A	N/A	N/A	0.90
S09	35.48	N/A	N/A	N/A	0.93
S10	35.77	N/A	N/A	N/A	0.92
Average value	35.81	N/A	N/A	N/A	0.91
limit value	≤36.36	N/A	N/A	N/A	≥ 0.9

Table 1

Model No.: MF30012R 6500K

Sample No.	Pon(W)	No-load power P_{no}(W)	Standby power P_{sb}(W)	Networked standby power P_{net}(W)	Displacement factor
S01	36.08	N/A	N/A	N/A	0.94
S02	36.44	N/A	N/A	N/A	0.95
S03	35.94	N/A	N/A	N/A	0.95
S04	35.94	N/A	N/A	N/A	0.92
S05	35.83	N/A	N/A	N/A	0.92
S06	36.33	N/A	N/A	N/A	0.92
S07	35.72	N/A	N/A	N/A	0.95
S08	35.83	N/A	N/A	N/A	0.92
S09	35.79	N/A	N/A	N/A	0.95
S10	35.94	N/A	N/A	N/A	0.94
Average value	35.98	N/A	N/A	N/A	0.93
limit value	≤36.91	N/A	N/A	N/A	≥ 0.9

Table

Table 2

Model No.: MF30012R 3000K

Ponmax = C × (L + Φuse / (F × η)) × R										
P_{onmax} (W)	C	L	Φuse / (F × η)	Φuse	F	η	R=(CRI+80)/160	CRI	80	160
36.36	1.08	1.5	32.04	3845.2	1	120	1.00	80.6	80	160

Table 2

Model No.: MF30012R 6500K

Ponmax = C × (L + Φuse / (F × η)) × R										
P_{onmax} (W)	C	L	Φuse / (F × η)	Φuse	F	η	R=(CRI+80)/160	CRI	80	160
36.91	1.08	1.5	32.26	3870.8	1	120	1.01	82	80	160

Table 3

Model No.: MF30012R 3000K

Sample No.	Chromaticity Coordinates		CCT(K)	CRI	SDCM	R9
	x	y				
S01	0.4373	0.4026	2997	80.7	1.9	1
S02	0.4404	0.4046	3046	80.4	1.9	1
S03	0.4386	0.4030	3043	80.9	1.9	1
S04	0.4408	0.4046	3006	80.1	1.9	1
S05	0.4382	0.4038	3046	80.7	1.9	1
S06	0.4219	0.4022	3025	80.8	1.9	1
S07	0.4377	0.4018	2951	80.9	1.8	1
S08	0.4395	0.4034	2954	80.1	1.8	1
S09	0.4399	0.4030	2924	80.5	1.8	1
S10	0.4391	0.4046	2893	80.5	1.8	1
Average value	0.4373	0.4034	2989	80.6	1.9	1

Table 3

Model No.: MF30012R 6500K

Sample No.	Chromaticity Coordinates		CCT(K)	CRI	SDCM	R9
	x	y				
S01	0.3103	0.3305	6631	82.1	3.0	18
S02	0.3125	0.3321	6739	81.8	3.0	18
S03	0.3113	0.3308	6733	82.4	3.1	18
S04	0.3128	0.3321	6652	81.5	3.1	18
S05	0.3110	0.3315	6739	82.1	3.1	18
S06	0.2994	0.3301	6692	82.2	3.1	18

Table

S07	0.3107	0.3298	6530	82.4	3.0	18
S08	0.3119	0.3311	6537	81.5	3.0	18
S09	0.3122	0.3308	6469	81.9	3.0	18
S10	0.3116	0.3321	6402	81.9	2.9	18
Average value	0.3104	0.3311	6613	82.0	3.0	18

Table 4

Model No.: MF30012R 3000K

Sample No.	Useful luminous flux Φuse (lm) at 0h	Useful luminous flux Φ use (lm) at 3600h	Lumen maintenance factor	Survival factor	Beam angle(°)	Peak luminous intensity (cd)
S01	3835.9	3739.0	97.47%	100%	N/A	N/A
S02	3890.3	3807.8	97.88%	100%	N/A	N/A
S03	3940.7	3837.2	97.37%	100%	N/A	N/A
S04	3847.6	3728.5	96.91%	100%	N/A	N/A
S05	3835.9	3730.9	97.26%	100%	N/A	N/A
S06	3758.3	3682.4	97.98%	100%	N/A	N/A
S07	3824.3	3704.8	96.88%	100%	N/A	N/A
S08	3828.1	3736.1	97.60%	100%	N/A	N/A
S09	3801.0	3693.0	97.16%	100%	N/A	N/A
S10	3890.3	3799.9	97.68%	100%	N/A	N/A
Average value	3845.2	3746.0	97.42%	100%	N/A	N/A

Table 4

Model No.: MF30012R 6500K

Sample No.	Useful luminous flux Φuse (lm) at 0h	Useful luminous flux Φ use (lm) at 3600h	Lumen maintenance factor	Survival factor	Beam angle(°)	Peak luminous intensity (cd)
S01	3868.8	3769.2	97.43%	100%	N/A	N/A
S02	3907.8	3823.1	97.83%	100%	N/A	N/A
S03	3958.5	3852.6	97.33%	100%	N/A	N/A
S04	3864.9	3743.5	96.86%	100%	N/A	N/A
S05	3853.2	3745.8	97.21%	100%	N/A	N/A
S06	3841.5	3762.1	97.93%	100%	N/A	N/A
S07	3841.5	3719.7	96.83%	100%	N/A	N/A
S08	3845.4	3751.1	97.55%	100%	N/A	N/A
S09	3818.1	3707.9	97.11%	100%	N/A	N/A

Table

S10	3907.8	3815.2	97.63%	100%	N/A	N/A
Average value	3870.8	3769.0	97.37%	100%	N/A	N/A

Table 5

Model No.: -

Sample No.	Flicker for LED and OLED MLS (P_{st} LM≤ 1.0)	Stroboscopic effect for LED and OLED MLS (SVM ≤ 0.9; From 1 September 2024: SVM ≤ 0.4)
S01	N/A	N/A
S02	N/A	N/A
S03	N/A	N/A
S04	N/A	N/A
S05	N/A	N/A
S06	N/A	N/A
S07	N/A	N/A
S08	N/A	N/A
S09	N/A	N/A
S10	N/A	N/A
Average value	N/A	N/A

Table 6

Model No.: /

Sample No.	Control gear efficiency
-	-
-	-
-	-
Average value	-

Table

Table 7

Model No.: MF30012R 3000K

Spectral Distribution

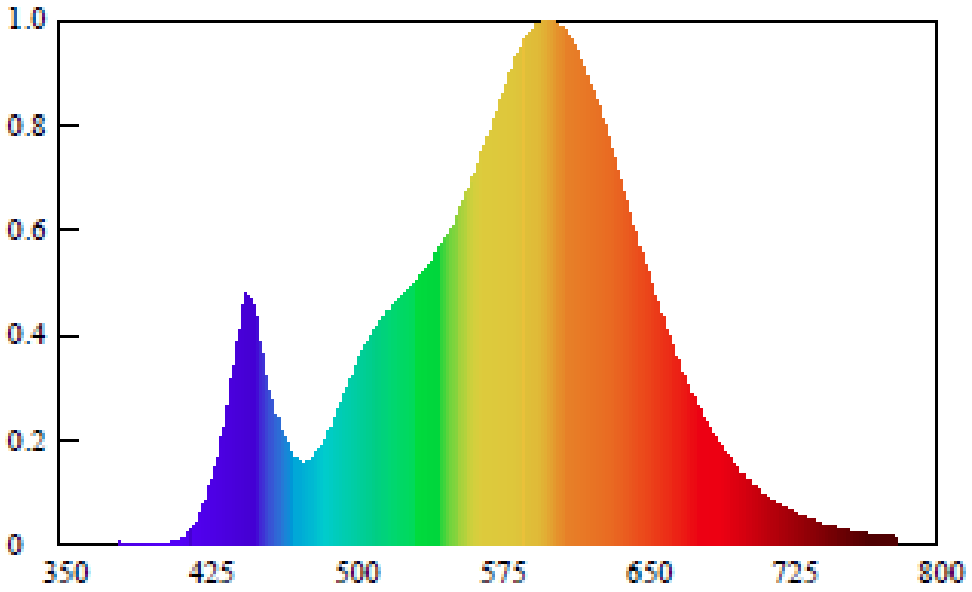
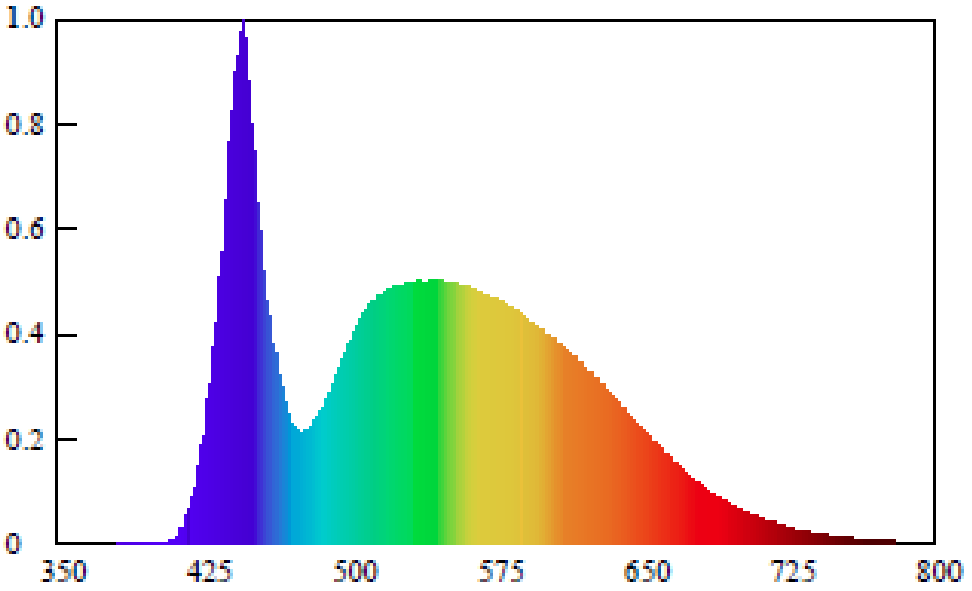


Table 7

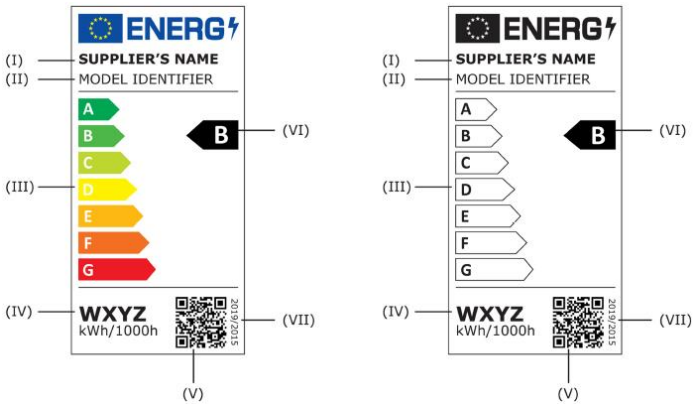
Model No.: MF30012R 6500K

Spectral Distribution



(EU) 2019/2015			
Clause	Requirement + Test	Result – Remark	Verdict

ANNEX II	**Energy efficiency classes and calculation method**		-
	The energy efficiency class of light sources shall be determined as set out in Table 1, on the basis of the total mains efficacy η_{TM}, which is calculated by dividing the declared useful luminous flux Φ_{use} (expressed in lm) by the declared on-mode power consumption P_{on} (expressed in W) and multiplying by the applicable factor F_{TM} of Table 2, as follows:		P
	$\eta_{TM} = (\Phi_{use}/P_{on}) \times F_{TM}$ (lm/W).	*See table 8*	P
	Energy efficiency class / Total mains efficacy η_{TM} (lm/W) A: $210 \leq \eta_{TM}$ B: $185 \leq \eta_{TM} < 210$ C: $160 \leq \eta_{TM} < 185$ D: $135 \leq \eta_{TM} < 160$ E: $110 \leq \eta_{TM} < 135$ F: $85 \leq \eta_{TM} < 110$ G: $\eta_{TM} < 85$	*See table 8*	P
	Factors F_{TM} by light source type Non-directional (NDLS) operating on mains (MLS): 1,000 Non-directional (NDLS) not operating on mains (NMLS): 0,926 Directional (DLS) operating on mains (MLS): 1,176 Directional (DLS) not operating on mains (NMLS): 1,089		-
ANNEX III	**Label for light sources**		-
1	LABEL		-
	If the light source is intended to be marketed through a point of sale, a label produced in the format and containing information as set out in this Annex is printed on the individual packaging.		P
	Suppliers shall choose a label format between point 1.1 and point 1.2 of this Annex.		P
	The label shall be:		P

(EU) 2019/2015			
Clause	Requirement + Test	Result – Remark	Verdict
	— for the standard-sized label at least 36 mm wide and 75 mm high;		N/A
	— for the small-sized label (width less than 36 mm) at least 20 mm wide and 54 mm high.		P
	The packaging shall not be smaller than 20 mm wide and 54 mm high.		P
	Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above. The small-sized label shall not be used on packaging with a width of 36 mm or more.		P
	The label and the arrow indicating the energy efficiency class may be printed in monochrome as specified in points 1.1 and 1.2, only if all other information, including graphics, on the packaging is printed in monochrome.		P
	If the label is not printed on the part of the packaging meant to face the prospective customer, an arrow containing the letter of the energy efficiency class shall be displayed as hereafter, with the colour of the arrow matching the letter and the colour of the energy class. The size shall be such that the label is clearly visible and legible. The letter in the energy efficiency class arrow shall be Calibri Bold and positioned in the centre of the rectangular part of the arrow, with a border of 0,5 pt in 100 % black placed around the arrow and the letter of the efficiency class.		N/A
	Figure 1 Coloured/monochrome left/right arrow for the part of the packaging facing the prospective customer 		N/A
1.1	Standard-sized label:		N/A
			N/A

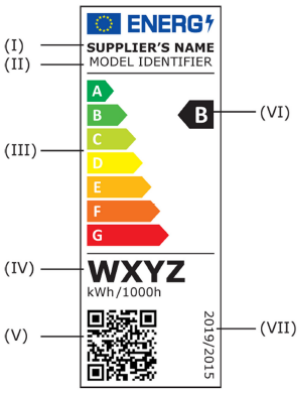
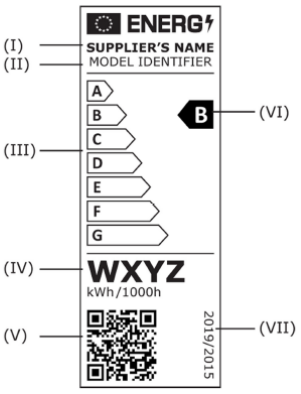
(EU) 2019/2015			
Clause	Requirement + Test	Result – Remark	Verdict
1.2	Small-sized label:		P
	 		P
1.3	The following information shall be included in the label for light sources:		P
	I. supplier's name or trade mark;		P
	II. supplier's model identifier;		P
	III. scale of energy efficiency classes from A to G;		P
	IV. the energy consumption, expressed in kWh of electricity consumption per 1 000 hours, of the light source in on-mode;		P
	V. QR-code;		P
	VI. the energy efficiency class in accordance with Annex II;		P
	VII. the number of this Regulation that is '2019/2015'.		P

Table 8 a

Model No.: MF30012R 3000K

Energy efficiency class				
Total mains efficacy η_{TM} (lm/W)	Useful luminous flux Φ_{use} (lm) at 0h	P_{on}(W)	Factor F_{TM}	Energy Efficiency Class
107.4	3845.2	35.81	1.000	F

Table 8 a

Model No.: MF30012R 6500K

Energy efficiency class				
Total mains efficacy η_{TM} (lm/W)	Useful luminous flux Φ_{use} (lm) at 0h	P_{on}(W)	Factor F_{TM}	Energy Efficiency Class
107.6	3870.8	35.98	1.000	F

Test Equipment List

Equipment Name	Manufacturer	Model No.	Reference No.	Calibration Due Date
2m Integating Sphere	SENSING	SL-300	AOC-S-126	2024-04-24
Horizontal Distribution Photometer	SENSING	GMS1800D	AOC-S-124	2024-05-16
Standard Lamp	SENSING	240V/150W	AOC-S-143	2024-05-29
Digital power meter	HENGHE	WT310E	AOC-S-012	2024-04-22
Digital power meter	SENSING	UI2008	AOC-S-123	2024-04-22
Digital power meter	SENSING	UI2021	AOC-S-123	2024-04-22
DC source	OYHS	OYHS-Z120V-50A	AOC-S-062	2024-04-22
Variable frequency power supply	WOSEN	BP6005	AOC-S-129	2024-04-22
Variable frequency power supply	AIPUSI	KDF-500	AOC-S-130	2024-04-22
Oscilloscope	TEKTRONIX	MDO3012	AOC-S-028	2024-04-22

Product Photo

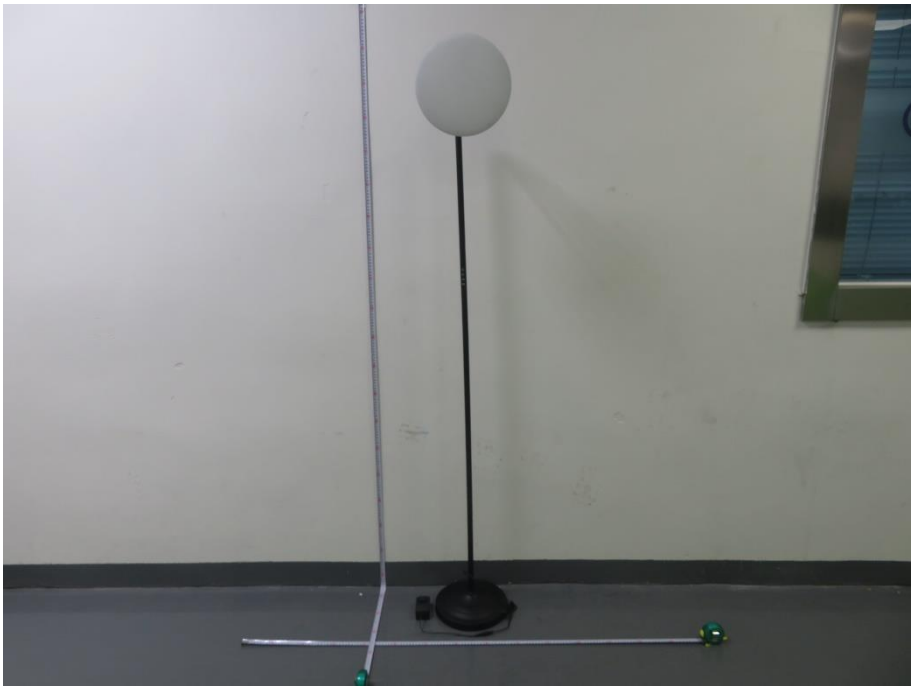


Fig. 1

-- End of Report --