SLOVENSKI STANDARD
kSIST FprEN 61167:2014/oprAA:2015

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Sijalke s kovinskim halidom - Tehnična specifikacija - Dopolnilo AA

Metal halide lamps - Performance specification

Halogen-Metalldampflampen - Anforderungen an die Arbeitsweise

Lampes aux halogénures métalliques - Spécifications de performance

Ta slovenski standard je istoveten z: **FprEN 61167:2014/prAA:2015**

ICS:

29.140.30	Fluorescenčne sijalke. Sijalke	Fluorescent lamps. Discharge lamps

kSIST FprEN 61167:2014/oprAA:2015 **en**

EUROPEAN STANDARD

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English Version

Metal halide lamps - Performance specification

Lampes aux halogénures métalliques - Spécifications de performance

Halogen-Metalldampflampen - Anforderungen an die Arbeitsweise

This draft amendment prAA, if approved, will modify the European Standard FprEN 61167:2014; it is submitted to CENELEC members for enquiry.
Deadline for CENELEC: 2016-01-29.

It has been drawn up by CLC/TC 34A.

If this draft becomes an amendment, CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

This draft amendment was established by CENELEC in three official versions (English, French, German).
A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

European foreword

This draft amendment to the draft European Standard FprEN 61167:2014 was prepared by CLC/TC 34A “Lamps”. It contains common modifications to 34A/1809/FDIS (IEC 61167:2015) and is submitted to the Enquiry.

If approved, this draft amendment will be merged together with EN 61167:201X and both drafts will be published as one single document, i.e. EN 61167:201X (based on IEC 61167:2015, modified), with the implementation dates of this FprAA.

The following dates are proposed:

– latest date by which the existence of this document has to be announced at national level	(doa)	dor + 6 months
– latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	dor + 12 months
– latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	dor + 36 months (to be confirmed or modified when voting)

EN 61167:201X will supersede EN 61167:2011.

Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 61167:2015 are prefixed “Z”.

For the relationship with EU Directives see informative Annexes ZZA, ZZB and ZZC, which are integral parts of this document.

This standard provides test methods related to parameters as prescribed by EC Regulation 245/2009, EU Regulation 1194/2012 and EU Regulation 874/2012 while conformity assessment (sampling, conformity procedures as well as limits) for market surveillance are specified in the text of the above Regulations.

Text of prAA to FprEN 61167

The text of this draft European Amendment consists of the text of the International Standard IEC 61167:2015 (34A/1809/FDIS) with the following common modifications:

COMMON MODIFICATIONS

CONTENTS ***Add*** *the following annexes:*

Annex ZA (normative) Normative references to international publications with their corresponding European publications

Annex ZZA (informative) Relationship between this European Standard and the requirements of Commission Regulation (EC) No 245/2009

Annex ZZB (informative) Relationship between this European Standard and the requirements of Commission Regulation (EU) No 1194/2012

Annex ZZC (informative) Relationship between this European Standard and the requirements of Commission Regulation (EU) No 874/2012

Add *the following clause before Clause 2*

Z1 Overall statement

Where a Commission Regulation specifies limits for parameters these limits shall be used instead of the limits specified in this standard.

3 Terms and definitions

After 3.18 ***add*** *new definitions 3.Z1 up to 3.Z7:*

3.Z1
directional lamp
lamp having at least 80 % light output within a solid angle of π sr (corresponding to a cone with angle of 120°)

[SOURCE: Regulation 1194/2012, Article 2]

3.Z2
beam angle
the angle between two imaginary lines in a plane through the optical beam axis, such that these lines pass through the centre of the front face of the lamp and through points at which the luminous intensity is 50 % of the centre beam intensity

[SOURCE: EN 61341]

3.Z3
partial luminous flux (of a light source, within a specified cone angle)

total luminous flux emitted from a light source within a specified cone angle α determined from the luminous intensity distribution $I(\theta, \varphi)$ of the source:

$$\Phi_\alpha = \int_{\varphi=0}^{2\pi} \int_{\theta=0}^{\alpha/2} I(\theta,\varphi) \sin\theta \, \mathrm{d}\theta \, \mathrm{d}\varphi \qquad (2)$$

Note 1 to entry: Partial luminous flux is expressed in lumen (lm)

Note 2 to entry: $(\theta, \varphi)=(0,0)$ is the direction of the cone axis

Note 3 to entry: The cone angle α is the full angle (diameter) of the cone

[SOURCE: EN 13032-4, 3.41, modified, – Notes 4 and 5 removed]

3.Z4
useful luminous flux, Φuse
partial luminous flux of a lamp falling within the cone used for calculating the lamp's energy efficiency according Annex III, point 1.1 of regulation (EU) No 1194/2012

Note 1 to entry: Useful luminous flux is expressed in lumen (lm).

Note 2 to entry: The regulation specifies 90° or 120° cones according to the product characteristics.

Note 3 to entry: Useful luminous flux is similar to partial luminous flux. It is determined with the cone axis coincident with the observed optical beam axis of the light source, the axis about which the luminous intensity is substantially symmetrical.

3.Z5
efficacy
'luminous efficacy of a source', 'light source efficacy' or 'lamp efficacy' (ηsource)
means the quotient of the luminous flux emitted (Φ) by the power consumed by the source (Psource). ηsource = Φ / Psource. Unit: lm/W.

The power dissipated by auxiliary equipment such as ballasts is not included in the power consumed by the source

[SOURCE: Regulation 245/2009 Annex II, 1.a)]

3.Z6
Lamp Lumen Maintenance Factor (LLMF)
means the ratio of the luminous flux emitted by the lamp at a given time in its life to the initial luminous flux

[SOURCE: Regulation 245/2009 Annex II, 1.b)]

3.Z7
Lamp Survival Factor (LSF)
means the fraction of the total number of lamps which continue to operate at a given time under defined conditions and switching frequency

[SOURCE: Regulation 245/2009 Annex II, 1.c)]

4 Lamp requirements

4.2 Marking

Add *the following paragraph at the end of 4.2*

Where a lamp is to be considered as a special purpose product according to Regulation (EC) No 1194/2012 this shall be declared by the supplier.

4.8.4 Requirements and test conditions

Replace *"Under consideration" with the following new text:*

The chromaticity coordinates and correlated colour temperature of an individual lamp shall be calculated according to CIE 15 from a measurement made under the conditions of Annex B or Annex E as appropriate

The colour rendering index of an individual lamp shall be calculated according to CIE 13.3 from a measurement made under the conditions of Annex B or Annex E as appropriate.

4.Z1 *After Subclause 4.7* ***add*** *new Subclause 4.Z1 as follows:*

4.Z1 Useful luminous flux

The useful luminous flux of a directional lamp shall be measured under the conditions of Annex A or Annex E as appropriate, by luminous intensity integration as described in EN 13032-4 , 6.3 "Partial luminous flux".

Alternative measurement methods may be used if they can be shown to give equivalent results for the product being tested, if necessary by applying correction factors. Measurements with lamps operating horizontally are often much easier to carry out. The reference method, however, uses the measurement position according to A.1.

In case of doubt a goniophotometry measurement of EN 13032-4 clause 6.3 shall be used.

NOTE Below are a few examples of alternative measurement methods. It is not an exhaustive list.

- For small beam angles shine into integrating sphere.
- Mount lamp on internal surface of integrating sphere.
- Mount lamp inside integrating sphere with screening (LM-20 technique).
- Illuminate a surface and measure the illuminance across the surface with a photometer.
- Illuminate a surface and measure the surface luminance with a luminance camera.
- Illuminate a translucent screen and measure the surface luminance of the rear side with a luminance camera

4.Z2 *After 4.9* ***add*** *new Subclauses 4.Z2 up to 4.Z5 as follows:*

4.Z2

The efficacy of an individual lamp shall be calculated from a measurement of luminous flux and power according to the conditions of Annex B or Annex E as appropriate.

4.Z3

The lamp lumen maintenance factor of an individual lamp shall be calculated from measurements of its luminous flux made at appropriate times according to the conditions of Annex B or Annex E as appropriate. Lamp operation between these measurements shall be as prescribed in Annex C.

4.Z4

The survival of an individual lamp shall be determined by operating lamps under the conditions prescribed in Annex C until the lamp fails to remain alight or delivers low light output (in case of doubt, low light output refers to noticeably less than 50 % of rated light output).

4.Z5

The average mercury content shall be measured in accordance with the CV AAS method as described in EN 62321-4.

Annex B (normative) Method of measuring electrical and photometrical characteristics (lamps for operation on 50 Hz or 60 Hz supply frequencies

B.1 General

Replace *the following paragraph in* ***B.1***

Photometric characteristics shall be measured in accordance with the relevant recommendations of the CIE (Commission Internationale de l'Éclairage) 84. For measurement for the centre beam intensity of reflector lamps, IEC/TR 61341 shall be used.

By

Photometric characteristics shall be measured in accordance with EN 13032-1. For determination of the centre beam intensity of reflector lamps, EN 61341 shall be used.

Annex E (normative) Method of measuring electrical and photometrical characteristics on low frequency square wave reference ballast

E.1 Purpose of this annex

Replace *the following paragraph in* ***E.1***

Photometric characteristics shall be measured in accordance with the relevant recommendations of the CIE (Commission Internationale de l'Éclairage) 84. For measurement for the centre beam intensity of reflector lamps, IEC/TR 61341 shall be used.

By

Photometric characteristics shall be measured in accordance with EN 13032-1. For determination of the centre beam intensity of reflector lamps, EN 61341 shall be used.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu

Publication	Year	Title	EN/HD	Year
		Light and lighting – Measurement and presentation of photometric data of lamps and luminaires – Part 1: Measurement and file format	EN 13032-1 +A1	2004 2012
IEC 60050-845	1987	International Electrotechnical Vocabulary – Chapter 845: Lighting	-	-
IEC 60061-1	-	Lamp caps and holders together with gauges for the control of interchangeability and safety – Part 1: Lamp caps	EN 60061-1	-
IEC 60598-1	-	Luminaires – General requirements and tests	EN 60598-1	-
IEC 60923	-	Auxiliaries for lamps – Ballasts for discharge lamps (excluding tubular fluorescent lamps) – Performance requirements	EN 60923	-
IEC 60927	-	Auxiliaries for lamps – Starting devices (other than glow starters) – Performance requirements	EN 60927	-
IEC/TR 61341	-	Method of measurement of centre beam intensity and beam angle(s) of reflector lamps	EN 61341	-
IEC 62035	-	Discharge lamps (excluding fluorescent lamps) – Safety specifications	EN 62035	-
IEC 62321-4		Determination of certain substances in electrotechnical products - Part 4: Mercury in polymers, metals and electronics by CV-AAS, CV-AFS, ICP-OES and ICP-MS	EN 62321-4	
IEC 62471	-	Photobiological safety of lamp and lamp systems	EN 62471	-
CIE 84	-	The measurement of luminous flux	-	-
CIE 13.3		Method of Measuring and Specifying Colour Rendering Properties of Light Sources	-	-