SVENSK STANDARD SS-EN IEC 61228

Fastställd	Utgåva	Sida	Ansvarig kommitté
2021-01-27	3	1 (1+21)	SEK TK 34

Belysningsmateriel – Metod för mätning och specificering av UV-strålning från ljuskällor för solarier

Fluorescent ultraviolet lamps used for tanning – Measurement and specification method

Som svensk standard gäller europastandarden EN IEC 61228:2020. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 61228:2020.

Nationellt förord

Europastandarden EN IEC 61228:2020

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 61228, Third edition, 2020 - Fluorescent ultraviolet lamps used for tanning - Measurement and specification method**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 61228, utgåva 2, 2008, gäller ej fr o m 2023-12-09.

ICS 17.240.00; 29.240.01; 97.170.00

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Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 61228

December 2020

ICS 17.240; 29.140.01; 97.170

Supersedes EN 61228:2008 and all of its amendments and corrigenda (if any)

English Version

Fluorescent ultraviolet lamps used for tanning - Measurement and specification method (IEC 61228:2020)

Lampes fluorescentes à ultraviolet utilisées pour le bronzage - Méthode de mesure et de spécification (IEC 61228:2020)

UV-Leuchtstofflampen für Bräunungszwecke - Verfahren zur Messung und Beschreibung (IEC 61228:2020)

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN IEC 61228:2020 E

SEK Svensk Elstandard SS-EN IEC 61228, utg 3:2021

European foreword

The text of document 34A/2213/FDIS, future edition 3 of IEC 61228, prepared by SC 34A "Electric light sources" of IEC/TC 34 "Lighting" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61228:2020.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2021-09-09
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-12-09

This document supersedes EN 61228:2008 and all of its amendments and corrigenda (if any).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 61228:2020 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60081:1997	NOTE	Harmonized as EN 60081:1998 (not modified)
IEC 60081:1997/A1:2000	NOTE	Harmonized as EN 60081:1998/A1:2002
IEC 60081:1997/A2:2003	NOTE	Harmonized as EN 60081:1998/A2:2003 (not modified)
IEC 60081:1997/A3:2005	NOTE	Harmonized as EN 60081:1998/A3:2005 (not modified)
IEC 60081:1997/A4:2010	NOTE	Harmonized as EN 60081:1998/A4:2010 (not modified)
IEC 60081:1997/A5:2013	NOTE	Harmonized as EN 60081:1998/A5:2013 (not modified)
IEC 60081:1997/A6:2017	NOTE	Harmonized as EN 60081:1998/A6:2017
IEC 60901:1996	NOTE	Harmonized as EN 60901:1996 (not modified)
IEC 60901:1996/A1:1997	NOTE	Harmonized as EN 60901:1996/A1:1997 (not modified)
IEC 60901:1996/A2:2000	NOTE	Harmonized as EN 60901:1996/A2:2000 (not modified)
IEC 60901:1996/A3:2004	NOTE	Harmonized as EN 60901:1996/A3:2004 (not modified)
IEC 60901:1996/A4:2007	NOTE	Harmonized as EN 60901:1996/A4:2008 (not modified)
IEC 60901:1996/A5:2011	NOTE	Harmonized as EN 60901:1996/A5:2012 (not modified)
IEC 60901:1996/A6:2014	NOTE	Harmonized as EN 60901:1996/A6:2017 (modified)
IEC 61195	NOTE	Harmonized as EN 61195
IEC 61199	NOTE	Harmonized as EN 61199
IEC 62471:2006	NOTE	Harmonized as EN 62471:2008 (modified)

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 Where 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
IEC 60061-1	-	Lamp caps and holders together with gauges for the control ofinterchangeability and safety. Part 1: Lamp caps	EN 60061-1	-
IEC 60081	-	Double-capped fluorescent lamps - Performance specifications	EN 60081	-
IEC 60155	-	Glow-starters for fluorescent lamps	EN 60155	-
IEC 60335-2-27	-	Household and similar electrical appliances - Safety - Part 2-27: Particular requirements for appliances for skin exposure to optical radiation	EN 60335-2-27	-
IEC 60921	-	Ballasts for tubular fluorescent lamps - Performance requirements	EN 60921	-
IEC 60929	-	AC and/or DC-supplied electronic control gear for tubular fluorescent lamps - Performance requirements	EN 60929	-
IEC 61049	-	Capacitors for use in tubular fluorescent and other discharge lamp circuits. Performance requirements	EN 61049	-
ISO/CIE 28077	2016	Photocarcinogenesis action spectrum (non-melanoma skin cancers)	-	-
CIE 63	1984	The spectroradiometric measurement of light sources		

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FLUORESCENT ULTRAVIOLET LAMPS USED FOR TANNING – MEASUREMENT AND SPECIFICATION METHOD

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61228 has been prepared by subcommittee 34A: Electric light sources, of IEC technical committee 34: Lighting.

This third edition cancels and replaces the second edition published in 2008. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) maintenance code: description of the depreciation of the UV irradiance lamp during operation;
b) operating position: information added for single capped lamps;
c) spectroradiometric measuring system: new information about distance between sensor and lamp axis;
d) measurement and evaluation procedure: separated detailed information for double capped fluorescent UV lamps and single capped fluorescent UV lamps;
e) Annex C (normative), Method of test for irradiance maintenance: new information added;
f) Annex D (normative), Reflector gauge: new information added;

g) Annex E (normative), Lamp datasheets for measurement: complementary information added.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
34A/2213/FDIS	34A/2220/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

FLUORESCENT ULTRAVIOLET LAMPS USED FOR TANNING – MEASUREMENT AND SPECIFICATION METHOD

1 Scope

This document describes the method of measuring, evaluating and specifying the UV irradiation characteristics of fluorescent ultraviolet lamps that are used in appliances for tanning purposes. It includes specific requirements regarding the marking of such lamps.

These requirements relate only to type testing.

Lamps complying with the requirements of this document comply with the electrical and mechanical safety requirements of IEC 61195 and IEC 61199 with the exception of the requirements for maximum limits of UV radiation.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60061-1, *Lamp caps and holders together with gauges for the control of interchangeability and safety – Part 1: Lamp caps*

IEC 60081, *Double-capped fluorescent lamps – Performance specifications*

IEC 60155, *Glow-starters for fluorescent lamps*

IEC 60335-2-27, *Household and similar electrical appliances – Safety – Part 2-27: Particular requirements for appliances for skin exposure to optical radiation*

IEC 60921, *Ballasts for tubular fluorescent lamps – Performance requirements*

IEC 60929, *AC and/or DC-supplied electronic control gear for tubular fluorescent lamps – Performance requirements*

IEC 61049, *Capacitors for use in tubular fluorescent and other discharge lamp circuits. Performance requirements*

ISO/CIE 28077:2016, *Photocarcinogenesis action spectrum (non-melanoma skin cancers)*

CIE 63:1984, *The spectroradiometric measurement of light sources*