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colour inside

Fluorescent ultraviolet lamps used for tanning – Measurement and specification method

INTERNATIONAL
ELECTROTECHNICAL
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FOREWORD

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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

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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 ~~recommendations~~ 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 60050-845:1987, *International Electrotechnical Vocabulary (IEV) – Chapter 845: Lighting*~~

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 60901, *Single-capped fluorescent lamps – Performance specifications*~~

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

~~IEC 62471, *Photobiological safety of lamps and lamp systems*~~

IEC 61228

Edition 3.0 2020-11

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Fluorescent ultraviolet lamps used for tanning – Measurement and specification method

Lampes fluorescentes à ultraviolet utilisées pour le bronzage – Méthode de mesure et de spécification

IEC 61228:2020-11(en-fr)

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IEC 60155, *Glow-starters for fluorescent lamps*

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

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

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LAMPES FLUORESCENTES À ULTRAVIOLET UTILISÉES POUR LE BRONZAGE – MÉTHODE DE MESURE ET DE SPÉCIFICATION

AVANT-PROPOS

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Cette troisième édition annule et remplace la deuxième édition parue en 2008. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

a) code de facteur de conservation: description de l'affaiblissement de l'éclairement UV de la lampe du fait de son utilisation;
b) position de fonctionnement: ajout d'informations pour les lampes à culot unique;
c) système de mesure spectroradiométrique: nouvelles informations concernant la distance entre le capteur et l'axe de la lampe;
d) procédure de mesurage et d'évaluation: informations précises distinctes pour les lampes fluorescentes à UV à deux culots et les lampes fluorescentes à UV à culot unique;

e) Annexe C (normative), Méthode d'essai pour la conservation de l'éclairement: ajout de nouvelles informations;

f) Annexe D (normative), Gabarit du réflecteur: ajout de nouvelles informations;

g) Annexe E (normative), Feuilles de caractéristiques des lampes pour mesurage: ajout d'informations complémentaires.

Le texte de cette Norme internationale est issu des documents suivants:

FDIS	Rapport de vote
34A/2213/FDIS	34A/2220/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à l'approbation de cette Norme internationale.

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LAMPES FLUORESCENTES À ULTRAVIOLET UTILISÉES POUR LE BRONZAGE – MÉTHODE DE MESURE ET DE SPÉCIFICATION

1 Domaine d'application

Le présent document décrit la méthode pour mesurer, évaluer et spécifier les caractéristiques de rayonnement UV des lampes fluorescentes à UV utilisées dans les appareils de bronzage. Il inclut des exigences particulières concernant le marquage de telles lampes.

Ces exigences ne concernent que les essais de type.

Les lampes conformes aux exigences du présent document satisfont aux exigences de sécurité électrique et mécanique de l'IEC 61195 et de l'IEC 61199, à l'exception des exigences relatives aux limites maximales de rayonnement UV.

2 Références normatives

Les documents suivants cités dans le texte constituent, pour tout ou partie de leur contenu, des exigences du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 60061-1, *Culots de lampes et douilles ainsi que calibres pour le contrôle de l'interchangeabilité et de la sécurité – Partie 1: Culots de lampes*

IEC 60081, *Lampes à fluorescence à deux culots – Prescriptions de performance*

IEC 60155, *Interrupteurs d'amorçage à lueur pour lampes à fluorescence (starters)*

IEC 60335-2-27, *Appareils électrodomestiques et analogues – Sécurité – Partie 2-27: Exigences particulières pour les appareils d'exposition de la peau aux rayonnements optiques*

IEC 60921, *Ballasts pour lampes tubulaires à fluorescence – Exigences de performances*

IEC 60929, *Appareillages électroniques alimentés en courant alternatif et/ou continu pour lampes tubulaires à fluorescence – Exigences de performances*

IEC 61049, *Condensateurs destinés à être utilisés dans les circuits de lampes tubulaires à fluorescence et autres lampes à décharge. Prescriptions de performance*

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

CIE 63:1984, *The spectroradiometric measurement of light sources* (disponible en anglais seulement)