IEC 62442-1

Edition 3.0 2022-02
REDLINE VERSION

INTERNATIONAL STANDARD

colour inside

Energy performance of lamp controlgear – Part 1: Controlgear for fluorescent lamps – Method of measurement to determine the total input power of controlgear circuits and the efficiency of controlgear

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 29.140.99

ISBN 978-2-8322-1078-6

Warning! Make sure that you obtained this publication from an authorized distributor.

® Registered trademark of the International Electrotechnical Commission

CONTENTS

FOREWORD 4
1 Scope 6
2 Normative references 6
3 Terms and definitions 7
4 General 9
~~4.1 Applicability ..... 10~~
4.1 Ballast lumen factor 10
4.2 Dimmable controlgear 10
4.3 Multi-power and/or multi-number-lamp controlgear 10
4.4 General notes on tests 11
4.5 Sampling of controlgear for testing 11
4.6 Size of the test sample 11
4.7 Conditioning of lamps 11
4.8 Test voltages and frequencies 11
4.9 Sensor and network connections 11
5 Method of measurement and calculation of total input power of controlgear-lamp circuits and the efficiency of controlgear 11
5.1 Correction for ballast lumen factor 12
5.2 Method of measurement 12
5.3 Measurement and calculation of the total input power of magnetic controlgear-lamp circuits 12
5.4 Calculation of the efficiency of electromagnetic controlgear 13
5.5 Measurement and calculation of the total input power of electronic controlgear-lamp circuits 13
5.6 Calculation of the efficiency of electronic controlgear 14
5.7 Measuring the standby power 14
5.8 Measuring the networked standby power 14
5.9 Reporting of power measurements 15
Annex A (normative) Energy performance measurement set-up 16
A.1 Measurement set-up for electromagnetic controlgear 16
A.2 Measurement set-up for electronic controlgear 16
A.2.1 Measurement of the total input power 16
~~A.2.2 Light output measurement ..... 17~~
A.2.2 Light output measurement 17
A.2.3 Distance to lamp related to lamp length: explanations 19
Annex B (informative) Application of the reference ballast when assessing lamps in electronic operation 21
B.1 Calculation of the reference ballast impedance 21
B.2 Method of adjusting the lamp power 21
Bibliography 22

Figure A.1 – Measurement of electromagnetic controlgear-lamp circuits 16
Figure A.2 – Measurement of AC supplied electronic controlgear-lamp circuits 17
~~Figure A.3 – Test setup for measuring standby power ..... 18~~
Figure A.3 – Side view of light output measurement system 18
Figure A.4 – Top view of light output measurement system 18

Figure A.5 – Configuration of lamp and photocell sensor 20

Table 1 – Typical nominal electricity supply details for some regions 11

INTERNATIONAL ELECTROTECHNICAL COMMISSION

_____

ENERGY PERFORMANCE OF LAMP CONTROLGEAR –

Part 1: Controlgear for fluorescent lamps – Method of measurement to determine the total input power of controlgear circuits and the efficiency of controlgear

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.
2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
6) All users should ensure that they have the latest edition of this publication.
7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition IEC 62442-1:2018. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

IEC 62442-1 has been prepared by subcommittee 34C: Auxiliaries for lamps, of IEC technical committee 34: Lighting. It is an International Standard.

This third edition cancels and replaces the second edition published in 2018. This edition constitutes a technical revision.

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

a) this edition has been harmonized with IEC 62442-2 and IEC 62442-3;
b) the reference to and use of the measurement methods for non-active power consumption in accordance with IEC 63103 have been added.

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

Draft	Report on voting
34C/1545/FDIS	34C/1548/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

A list of all parts in the IEC 62442 series, published under the general title *Energy performance of lamp controlgear*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under 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.

ENERGY PERFORMANCE OF LAMP CONTROLGEAR –

Part 1: Controlgear for fluorescent lamps – Method of measurement to determine the total input power of controlgear circuits and the efficiency of controlgear

1 Scope

This part of IEC 62442 defines a measurement and calculation method of the total input power for controlgear-lamp circuits when operating with their associated fluorescent lamp(s). The calculation method for the efficiency of the lamp controlgear is also defined. This document applies to electrical controlgear-lamp circuits consisting only of the controlgear and the lamp(s). It is intended for use on DC supplies up to 1 000 V and/or AC supplies up to 1 000 V at 50 Hz or 60 Hz.

NOTE Requirements for testing individual controlgear during production are not included.

This document specifies the measurement method for the total input power and the calculation method of the controlgear efficiency for all controlgear used for domestic and normal commercial purposes operating with the following fluorescent lamps:

– ~~linear~~ double-capped fluorescent lamps (IEC 60081);
– ~~single-ended (compact)~~ single-capped fluorescent lamps (IEC 60901);
– other general purpose low-pressure mercury fluorescent lamps.

This document does not apply to:

– controlgear which form an integral part of the lamp;
– controllable wire-wound magnetic controlgear.
– ~~luminaires, which rely on additional optical performance aspects.~~

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, *International Electrotechnical Vocabulary (IEV) – Part 845: Lighting* (available at http://www.electropedia.org)

IEC 60081:1997, *Double-capped fluorescent lamps – Performance specifications*
IEC 60081:1997/AMD4:2010

IEC 60901:1996, *Single-capped fluorescent lamps – Performance specifications*
IEC 60901:1996/AMD5:2011

IEC 60921:2004, *Ballasts for tubular fluorescent lamps – Performance requirements*

IEC 60929:2011, *AC and/or DC-supplied electronic control gear for tubular fluorescent lamps – Performance requirements*

~~IEC 61347-2-3, *Lamp control gear – Part 2-3: Particular requirements for AC and/or DC supplied electronic control gear for fluorescent lamps*~~

~~IEC 61347-2-8, *Lamp controlgear – Part 2-8: Particular requirements for ballasts for fluorescent lamps*~~

IEC 63103:2020, *Lighting equipment – Non-active mode power measurement*

IEC TS 63105, *Lighting systems and related equipment – Vocabulary*

IEC 62442-1

Edition 3.0 2022-02

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Energy performance of lamp controlgear – Part 1: Controlgear for fluorescent lamps – Method of measurement to determine the total input power of controlgear circuits and the efficiency of controlgear

Performance énergétique des appareillages de lampes – Partie 1: Appareillages des lampes à fluorescence – Méthode de mesurage pour la détermination de la puissance d'entrée totale des circuits d'appareillage et du rendement des appareillages



IEC 62442-1:2022-02(en-fr)

CONTENTS

FOREWORD 4
1 Scope 6
2 Normative references 6
3 Terms and definitions 7
4 General 9
4.1 Ballast lumen factor 9
4.2 Dimmable controlgear 10
4.3 Multi-power and/or multi-number-lamp controlgear 10
4.4 General notes on tests 10
4.5 Sampling of controlgear for testing 10
4.6 Size of the test sample 10
4.7 Conditioning of lamps 10
4.8 Test voltages and frequencies 10
4.9 Sensor and network connections 11
5 Method of measurement and calculation of total input power of controlgear-lamp circuits and the efficiency of controlgear 11
5.1 Correction for ballast lumen factor 11
5.2 Method of measurement 11
5.3 Measurement and calculation of the total input power of magnetic controlgear-lamp circuits 12
5.4 Calculation of the efficiency of electromagnetic controlgear 12
5.5 Measurement and calculation of the total input power of electronic controlgear-lamp circuits 12
5.6 Calculation of the efficiency of electronic controlgear 14
5.7 Measuring the standby power 14
5.8 Measuring the networked standby power 14
5.9 Reporting of power measurements 14
Annex A (normative) Energy performance measurement set-up 15
A.1 Measurement set-up for electromagnetic controlgear 15
A.2 Measurement set-up for electronic controlgear 15
A.2.1 Measurement of the total input power 15
A.2.2 Light output measurement 16
A.2.3 Distance to lamp related to lamp length: explanations 17
Annex B (informative) Application of the reference ballast when assessing lamps in electronic operation 19
B.1 Calculation of the reference ballast impedance 19
B.2 Method of adjusting the lamp power 19
Bibliography 20

Figure A.1 – Measurement of electromagnetic controlgear-lamp circuits 15
Figure A.2 – Measurement of AC supplied electronic controlgear-lamp circuits 16
Figure A.3 – Side view of light output measurement system 16
Figure A.4 – Top view of light output measurement system 17
Figure A.5 – Configuration of lamp and photocell sensor 18

Table 1 – Typical nominal electricity supply details for some regions 11

INTERNATIONAL ELECTROTECHNICAL COMMISSION

_____

ENERGY PERFORMANCE OF LAMP CONTROLGEAR –

Part 1: Controlgear for fluorescent lamps – Method of measurement to determine the total input power of controlgear circuits and the efficiency of controlgear

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.
2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
6) All users should ensure that they have the latest edition of this publication.
7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

IEC 62442-1 has been prepared by subcommittee 34C: Auxiliaries for lamps, of IEC technical committee 34: Lighting. It is an International Standard.

This third edition cancels and replaces the second edition published in 2018. This edition constitutes a technical revision.

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

a) this edition has been harmonized with IEC 62442-2 and IEC 62442-3;
b) the reference to and use of the measurement methods for non-active power consumption in accordance with IEC 63103 have been added.

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

Draft	Report on voting
34C/1545/FDIS	34C/1548/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

A list of all parts in the IEC 62442 series, published under the general title *Energy performance of lamp controlgear*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under 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.

ENERGY PERFORMANCE OF LAMP CONTROLGEAR –

Part 1: Controlgear for fluorescent lamps – Method of measurement to determine the total input power of controlgear circuits and the efficiency of controlgear

1 Scope

This part of IEC 62442 defines a measurement and calculation method of the total input power for controlgear-lamp circuits when operating with their associated fluorescent lamp(s). The calculation method for the efficiency of the lamp controlgear is also defined. This document applies to electrical controlgear-lamp circuits consisting only of the controlgear and the lamp(s). It is intended for use on DC supplies up to 1 000 V and/or AC supplies up to 1 000 V at 50 Hz or 60 Hz.

NOTE Requirements for testing individual controlgear during production are not included.

This document specifies the measurement method for the total input power and the calculation method of the controlgear efficiency for all controlgear used for domestic and normal commercial purposes operating with the following fluorescent lamps:

– double-capped fluorescent lamps (IEC 60081);
– single-capped fluorescent lamps (IEC 60901);
– other general purpose low-pressure mercury fluorescent lamps.

This document does not apply to:

– controlgear which form an integral part of the lamp;
– controllable wire-wound magnetic controlgear.

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, *International Electrotechnical Vocabulary (IEV) – Part 845: Lighting* (available at http://www.electropedia.org)

IEC 60081:1997, *Double-capped fluorescent lamps – Performance specifications*
IEC 60081:1997/AMD4:2010

IEC 60901:1996, *Single-capped fluorescent lamps – Performance specifications*
IEC 60901:1996/AMD5:2011

IEC 60921:2004, *Ballasts for tubular fluorescent lamps – Performance requirements*

IEC 60929:2011, *AC and/or DC-supplied electronic control gear for tubular fluorescent lamps – Performance requirements*

IEC 63103:2020*, Lighting equipment – Non-active mode power measurement*

IEC TS 63105, *Lighting systems and related equipment – Vocabulary*

SOMMAIRE

AVANT-PROPOS 24
1 Domaine d'application 26
2 Références normatives 26
3 Termes et définitions 27
4 Généralités 30
4.1 Facteur de flux lumineux du ballast 30
4.2 Appareillages à intensité variable 30
4.3 Appareillages multipuissances et/ou multilampes 30
4.4 Généralités sur les essais 30
4.5 Echantillonnage des appareillages pour les essais 30
4.6 Nombre d'échantillons d'essai 31
4.7 Conditionnement des lampes 31
4.8 Tensions et fréquences d'essai 31
4.9 Capteur et raccordements au réseau 31
5 Méthode de mesurage et de calcul de la puissance d'entrée totale des circuits appareillage-lampe et du rendement des appareillages 31
5.1 Correction du facteur de flux lumineux du ballast 31
5.2 Méthode de mesurage 32
5.3 Mesurage et calcul de la puissance d'entrée totale des circuits appareillage de commande magnétique-lampe 32
5.4 Calcul du rendement d'un appareillage de commande électromagnétique 33
5.5 Mesurage et calcul de la puissance d'entrée totale des circuits appareillage électronique-lampe 33
5.6 Calcul du rendement d'un appareillage électronique 34
5.7 Mesurage de la puissance de veille 34
5.8 Mesurage de la puissance de veille en réseau 34
5.9 Enregistrement des mesures de puissance 35
Annexe A (normative) Montage de mesure de la performance énergétique 36
A.1 Montage de mesure pour les appareillages de commande électromagnétiques 36
A.2 Montage de mesure pour les appareillages électroniques 36
A.2.1 Mesurage de la puissance d'entrée totale 36
A.2.2 Mesurage du flux lumineux 37
A.2.3 Distance par rapport à la lampe en fonction de la longueur de la lampe: explications 38
Annexe B (informative) Application du ballast de référence lors de l'évaluation des lampes en fonctionnement électronique 40
B.1 Calcul de l'impédance du ballast de référence 40
B.2 Méthode d'ajustement de la puissance de la lampe 40
Bibliographie 41

Figure A.1 – Mesurage des circuits appareillage de commande électromagnétique-lampe 36
Figure A.2 – Mesurage des circuits appareillage électronique-lampe alimentés en courant alternatif 37
Figure A.3 – Vue latérale du système de mesurage du flux lumineux 37
Figure A.4 – Vue de dessus du système de mesurage du flux lumineux 38

Figure A.5 – Configuration de la lampe et du capteur à cellule photoélectrique 39

Tableau 1 – Caractéristiques d'alimentation électrique nominales types de certaines régions 31

COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

_____

PERFORMANCE ÉNERGÉTIQUE DES APPAREILLAGES DE LAMPES –

Partie 1: Appareillages des lampes à fluorescence – Méthode de mesurage pour la détermination de la puissance d'entrée totale des circuits d'appareillage et du rendement des appareillages

AVANT-PROPOS

1) La Commission Electrotechnique Internationale (IEC) est une organisation mondiale de normalisation composée de l'ensemble des comités électrotechniques nationaux (Comités nationaux de l'IEC). L'IEC a pour objet de favoriser la coopération internationale pour toutes les questions de normalisation dans les domaines de l'électricité et de l'électronique. A cet effet, l'IEC – entre autres activités – publie des Normes internationales, des Spécifications techniques, des Rapports techniques, des Spécifications accessibles au public (PAS) et des Guides (ci-après dénommés "Publication(s) de l'IEC"). Leur élaboration est confiée à des comités d'études, aux travaux desquels tout Comité national intéressé par le sujet traité peut participer. Les organisations internationales, gouvernementales et non gouvernementales, en liaison avec l'IEC, participent également aux travaux. L'IEC collabore étroitement avec l'Organisation Internationale de Normalisation (ISO), selon des conditions fixées par accord entre les deux organisations.
2) Les décisions ou accords officiels de l'IEC concernant les questions techniques représentent, dans la mesure du possible, un accord international sur les sujets étudiés, étant donné que les Comités nationaux de l'IEC intéressés sont représentés dans chaque comité d'études.
3) Les Publications de l'IEC se présentent sous la forme de recommandations internationales et sont agréées comme telles par les Comités nationaux de l'IEC. Tous les efforts raisonnables sont entrepris afin que l'IEC s'assure de l'exactitude du contenu technique de ses publications; l'IEC ne peut pas être tenue responsable de l'éventuelle mauvaise utilisation ou interprétation qui en est faite par un quelconque utilisateur final.
4) Dans le but d'encourager l'uniformité internationale, les Comités nationaux de l'IEC s'engagent, dans toute la mesure possible, à appliquer de façon transparente les Publications de l'IEC dans leurs publications nationales et régionales. Toutes divergences entre toutes Publications de l'IEC et toutes publications nationales ou régionales correspondantes doivent être indiquées en termes clairs dans ces dernières.
5) L'IEC elle-même ne fournit aucune attestation de conformité. Des organismes de certification indépendants fournissent des services d'évaluation de conformité et, dans certains secteurs, accèdent aux marques de conformité de l'IEC. L'IEC n'est responsable d'aucun des services effectués par les organismes de certification indépendants.
6) Tous les utilisateurs doivent s'assurer qu'ils sont en possession de la dernière édition de cette publication.
7) Aucune responsabilité ne doit être imputée à l'IEC, à ses administrateurs, employés, auxiliaires ou mandataires, y compris ses experts particuliers et les membres de ses comités d'études et des Comités nationaux de l'IEC, pour tout préjudice causé en cas de dommages corporels et matériels, ou de tout autre dommage de quelque nature que ce soit, directe ou indirecte, ou pour supporter les coûts (y compris les frais de justice) et les dépenses découlant de la publication ou de l'utilisation de cette Publication de l'IEC ou de toute autre Publication de l'IEC, ou au crédit qui lui est accordé.
8) L'attention est attirée sur les références normatives citées dans cette publication. L'utilisation de publications référencées est obligatoire pour une application correcte de la présente publication.
9) L'attention est attirée sur le fait que certains des éléments de la présente Publication de l'IEC peuvent faire l'objet de droits de brevet. L'IEC ne saurait être tenue pour responsable de ne pas avoir identifié de tels droits de brevets.

L'IEC 62442-1 a été établie par le sous-comité 34C: Appareils auxiliaires pour lampes, du comité d'études 34 de l'IEC: Eclairage. Il s'agit d'une Norme internationale.

Cette troisième édition annule et remplace la deuxième édition parue en 2018. Cette édition constitue une révision technique.

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

a) cette édition a été harmonisée avec l'IEC 62442-2 et l'IEC 62442-3;

b) des références à l'IEC 63103 ont été ajoutées afin d'appliquer les méthodes de mesurage de la consommation de puissance en mode non actif.

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

Projet	Rapport de vote
34C/1545/FDIS	34C/1548/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

La version française de cette norme n'a pas été soumise au vote.

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous www.iec.ch/members_experts/refdocs. Les principaux types de documents développés par l'IEC sont décrits plus en détail sous www.iec.ch/standardsdev/publications.

Une liste de toutes les parties de la série IEC 62442, publiées sous le titre général *Performance énergétique des appareillages de lampes*, se trouve sur le site web de l'IEC.

Le comité a décidé que le contenu de ce document ne sera pas modifié avant la date de stabilité indiquée sur le site web de l'IEC sous webstore.iec.ch dans les données relatives au document recherché. A cette date, le document sera

- reconduit,
- supprimé,
- remplacé par une édition révisée, ou
- amendé.

PERFORMANCE ÉNERGÉTIQUE DES APPAREILLAGES DE LAMPES –

Partie 1: Appareillages des lampes à fluorescence – Méthode de mesurage pour la détermination de la puissance d'entrée totale des circuits d'appareillage et du rendement des appareillages

1 Domaine d'application

La présente partie de l'IEC 62442 définit une méthode de mesurage et de calcul de la puissance d'entrée totale pour les circuits appareillage-lampe qui fonctionnent avec la ou les lampes à fluorescence qui leur sont associées. La méthode de calcul du rendement des appareillages de lampes est également définie. Le présent document s'applique aux circuits appareillage-lampe électriques constitués exclusivement de l'appareillage et de la ou des lampes. Il s'applique aux alimentations en courant continu jusqu'à 1 000 V et/ou aux alimentations en courant alternatif jusqu'à 1 000 V à 50 Hz ou 60 Hz.

NOTE Les exigences pour les essais des appareillages individuels pendant la production ne sont pas incluses.

Le présent document spécifie la méthode de mesurage de la puissance d'entrée totale et la méthode de calcul du rendement pour l'ensemble des appareillages à usage domestique et usage commercial normal, qui fonctionnent avec les lampes à fluorescence suivantes:

– lampes à fluorescence à deux culots (IEC 60081);
– lampes à fluorescence à culot unique (IEC 60901);
– autres lampes à fluorescence à vapeur de mercure à basse pression destinées à un usage général.

Le présent document ne s'applique pas aux:

– appareillages qui font partie intégrante de la lampe;
– appareillages de commande magnétiques bobinés gradables.

2 Références normatives

Les documents suivants sont cités dans le texte de sorte qu'ils 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 60050-845, *Vocabulaire électrotechnique international (IEV) – Partie 845: Eclairage* (disponible à l'adresse http://www.electropedia.org)

IEC 60081:1997, *Lampes à fluorescence à deux culots – Prescriptions de performance*
IEC 60081:1997/AMD4:2010

IEC 60901:1996, *Lampes à fluorescence à culot unique – Prescriptions de performances*
IEC 60901:1996/AMD5:2011

IEC 60921:2004, *Ballasts pour lampes tubulaires à fluorescence – Exigences de performances*

IEC 60929:2011, *Appareillages électroniques alimentés en courant alternatif et/ou continu pour lampes tubulaires à fluorescence – Exigences de performances*

IEC 63103:2020, *Appareils d'éclairage – Mesure de puissance en mode non actif*

IEC TS 63105, *Lighting systems and related equipment – Vocabulary* (disponible en anglais seulement)