BSI Standards Publication

Luminaires

Part 1: General requirements and tests (IEC 60598-1:2014)

bsi.

National foreword

This British Standard is the UK implementation of EN 60598-1:2015, including amendment A1:2018. It is derived from IEC 60598-1:2014, including amendment 1:2017. It supersedes BS EN 60598-1:2015, which will be withdrawn on 23 February 2021.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to IEC text carry the number of the IEC amendment. For example, text altered by IEC amendment 1 is indicated by ▌A1〉 〈A1▐.

The CENELEC common modifications have been implemented at the appropriate places in the text. The start and finish of each common modification is indicated in the text by tags ▌C〉 〈C▐.

The text of IEC amendment 1:2017 has been provided in its entirety at the beginning of this document. BSI's policy of providing consolidated content remains unchanged; however, in the interest of expediency, in this instance BSI have chosen to collate the relevant content at the beginning of this document.

The UK participation in its preparation was entrusted to Technical Committee CPL/34/4, Luminaires.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Compliance with a British Standard cannot confer immunity from legal obligations.

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Amendments/corrigenda issued since publication

Date	Text affected
31 March 2016	Implementation of IEC corrigendum December 2015; Subclause 5.2.1 corrected
31 March 2018	Implementation of IEC amendment 1:2017 with CENELEC endorsement A1:2018, including additional Annex ZA references
30 September 2018	IEC amendment A1 with CENELEC endorsement A1:2018 consolidated into the core standard text

EUROPÄISCHE NORM

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English Version

Luminaires - Part 1: General requirements and tests (IEC 60598-1:2014 , modified)

Luminaires -
Partie 1: Exigences générales et essais
(IEC 60598-1:2014 , modifiée)

Leuchten -
Teil 1: Allgemeine Anforderungen und Prüfungen
(IEC 60598-1:2014 , modifiziert)

This European Standard was approved by CENELEC on 2014-10-20. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists 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.

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

Ref. No. EN 60598-1:2015 E

European foreword

The text of document 34D/1110/FDIS, future edition 8 of IEC 60598-1, prepared by SC 34D "Luminaires" of IEC/TC 34 "Lamps and related equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60598-1:2015.

A draft amendment, which covers common modifications to IEC 60598-1 (34D/1110/FDIS), was prepared by CLC/TC 34Z "Luminaires and associated equipment" and approved by CENELEC.

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)	2015-10-20
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2017-10-20

This document supersedes EN 60598-1:2008.

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

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 60598-1:2014 are prefixed “Z”.

Endorsement notice

The text of the International Standard IEC 60598-1:2014 was approved by CENELEC as a European Standard with agreed common modifications.

Foreword to amendment A1

The text of document 34D/1292/FDIS, future IEC 60598-1:2014/A1, prepared by SC 34D "Luminaires" of IEC/TC 34 "Lamps and related equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60598-1:2015/A1:2018.

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) 2018-08-23
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2021-02-23

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.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s) see informative Annex ZZ, which is an integral part of this document.

Endorsement notice

The text of the International Standard IEC 60598-1:2014/A1:2017 was approved by CENELEC as a European Standard without any modification.

In the Bibliography of EN 60598-1:2015, the following note has to be added for the standard indicated:

IEC 60664 Series	NOTE	Harmonized as EN 60664 Series.

〈C〉

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
IEC 60061	Series	Lamp caps and holders together with gauges for the control of interchangeability and safety	EN 60061	Series
IEC 60061-2 (mod)	1969	Lamp caps and holders together with gauges for the control of interchangeability and safety - Part 2: Lampholders	EN 60061-2 + A1 to A37	1993
IEC 60061-3	1969	Lamp caps and holders together with gauges for the control of interchangeability and safety - Part 3: Gauges	EN 60061-3 + A1 to A38	1993
IEC 60065 (mod)	2001	Audio, video and similar electronic apparatus - Safety requirements	EN 60065 + corr. March + corr. August + A11 + A12	2002 2006 2007 2008 2011
IEC 60068-2-75	1997	Environmental testing - Part 2-75: Tests - Test Eh: Hammer tests	EN 60068-2-75	1997
IEC 60079	Series	Explosive atmospheres	EN 60079	Series
IEC/TR 60083	–	Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC	–	–
IEC 60085	2007	Electrical insulation - Thermal evaluation and designation	EN 60085	2008
IEC 60112	2003	Method for the determination of the proof and the comparative tracking indices of solid insulating materials	EN 60112	2003
IEC 60155	1993	Glow-starters for fluorescent lamps	EN 60155	1995
IEC 60227	Series	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V	EN 50525 [1)]	Series

1) EN 50525 Series, which is related to, but not directly equivalent with IEC 60227 Series, applies instead. 〈C〉

Publication	Year	Title	EN/HD	Year
IEC 60228	2004	Conductors of insulated cables	EN 60228	2005
IEC 60238	2004	Edison screw lampholders	EN 60238 + corr. January	2004 2005
IEC 60245	Series	Rubber insulated cables - Rated voltages up to and including 450/750 V	EN 50525[2)]	Series
IEC 60269	Series	Low-voltage fuses	EN/HD 60269	Series
IEC 60320	Series	Appliance couplers for household and similar general purposes	EN 60320	Series
IEC 60357	2002	Tungsten halogen lamps (non-vehicle) - Performance specifications	EN 60357 + corr. July	2003 2003
IEC 60360	1998	Standard method of measurement of lamp cap temperature rise	EN 60360	1998
IEC 60364-4-41 (mod)	2005	Low-voltage electrical installations - Part 4-41: Protection for safety - Protection against electric shock	HD 60364-4-41 + corr. July	2007 2007
IEC 60384-14	2005	Fixed capacitors for use in electronic equipment - Part 14: Sectional specification - Fixed capacitors for electromagnetic interference suppression and connection to the supply mains	EN 60384-14	2005 [3)]
IEC 60400	2008	Lampholders for tubular fluorescent lamps and starterholders	EN 60400	2008
IEC 60417	data-base	Graphical symbols for use on equipment	–	–
IEC 60432-1 (mod) A1	1999 2005	Incandescent lamps - Safety specifications - Part 1: Tungsten filament lamps for domestic and similar general lighting purposes	EN 60432-1 A1	2000 2005
IEC 60432-2 (mod) A1 (mod)	1999 2005	Incandescent lamps - Safety specifications - Part 2: Tungsten halogen lamps for domestic and similar general lighting purposes	EN 60432-2 A1	2000 2005
IEC 60432-3	2002	Incandescent lamps - Safety specifications - Part 3: Tungsten-halogen lamps (non-vehicle)	EN 60432-3	2003 [4)]
IEC 60449 + A1	1973 1979	Voltage bands for electrical installations of buildings	HD 193 S2	1982
IEC 60529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May	1991 1993

2) EN 50525 Series, which is related to, but not directly equivalent with IEC 60245 Series, applies instead.

3) Superseded by EN 60384-14:2013 (DOW = 2016-07-10).

4) Superseded by EN 60432-3:2013 (DOW = 2015-08-08).

Publication	Year	Title	EN/HD	Year
IEC 60570 (mod)	2003	Electrical supply track systems for luminaires	EN 60570	2003
IEC 60598-2	Series	Luminaires - Part 2: Particular requirements	EN 60598-2	Series
IEC 60598-2-4	1997	Luminaires - Part 2: Particular requirements - Section 4: Portable general purpose luminaires	EN 60598-2-4	1997
IEC 60634	1993	Heat test source (H.T.S.) lamps for carrying out heating tests on luminaires	EN 60634	1995
IEC 60662 (mod)	1980	High-pressure sodium vapour lamps	EN 60662	1993 [5)]
IEC 60664-1	2007	Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests	EN 60664-1	2007
IEC 60664-4	2005	Insulation coordination for equipment within low-voltage systems -- Part 4: Consideration of high-frequency voltage stress	EN 60664-4	2006
IEC 60682	1980	Standard method of measuring the pinch temperature of quartz-tungsten-halogen lamps	EN 60682	1993
IEC 60684	Series	Flexible insulating sleeving	EN 60684	Series
IEC 60695-2	Series	Fire hazard testing - Part 2: Glowing/hot-wire based test methods	EN 60695-2	Series
IEC 60695-2-10	2000	Fire hazard testing - Part 2-10: Glowing/hot-wire based test methods - Glow-wire apparatus and common test procedure	EN 60695-2-10	2001 [6)]
IEC 60695-11-5	2004	Fire hazard testing - Part 11-5: Test flames - Needle-flame test method - Apparatus, confirmatory test arrangement and guidance	EN 60695-11-5	2005
IEC 60838	Series	Miscellaneous lampholders	EN 60838	Series
IEC 60989	–	Separating transformers, autotransformers, variable transformers and reactors	–	–
IEC 60990	1999	Methods of measurement of touch current and protective conductor current	EN 60990	1999
IEC 60998-2-1 (mod)	–	Connecting devices for low-voltage circuits for household and similar purposes - Part 2-1: Particular requirements for connecting devices as separate entities with screw-type clamping units	EN 60998-2-1	2004

5) Superseded by EN 60662:2012 (DOW = 2015-01-02).

6) Superseded by EN 60695-2-10:2013 (DOW = 2016-05-14).

〈C〉 Publication	Year	Title	EN/HD	Year
IEC 60998-2-2 (mod)	–	Connecting devices for low-voltage circuits for household and similar purposes - Part 2-2: Particular requirements for connecting devices as separate entities with screwless-type clamping units	EN 60998-2-2	2004
IEC 61032	1997	Protection of persons and equipment by enclosures - Probes for verification	EN 61032	1998
IEC 61058-1 (mod)	2000	Switches for appliances - Part 1: General requirements	EN 61058-1	2002 [7)]
IEC 61140	2001	Protection against electric shock - Common aspects for installation and equipment	EN 61140	2002
IEC 61167	1992	Metal halide lamps	EN 61167	1994 [8)]
IEC 61184	2008	Bayonet lampholders	EN 61184	2008
IEC 61199	1999	Single-capped fluorescent lamps - Safety specifications	EN 61199	1999 [9)]
IEC 61249	Series	Materials for printed boards and other interconnecting structures	EN 61249	Series
IEC 61347	Series	Lamp controlgear	EN 61347	Series
IEC 61347-2-9	2000	Lamp controlgear - Part 2-9: Particular requirements for ballasts for discharge lamps (excluding fluorescent lamps)	EN 61347-2-9 + corr. July + corr. December	2001 [10)] 2003 2010
IEC 61558-1	2005	Safety of power transformers, power supplies, reactors and similar products - Part 1: General requirements and tests	EN 61558-1 + corr. August	2005 2006
IEC 61558-2 (mod)	Series	Safety of power transformers, power supplies, reactors and similar products - Part 2: Particular requirements and test	EN 61558-2	Series
IEC 61558-2-5	1997	Safety of power transformers, power supply units and similar - Part 2-5: Particular requirements for shaver transformers and shaver supply units	EN 61558-2-5 + A11	1998 [11)] 2004 [11)]
IEC 61558-2-6	1997	Safety of power transformers, power supply units and similar - Part 2-6: Particular requirements for safety isolating transformers for general use	EN 61558-2-6	1997 [12)]

7) EN 61058-1 includes A1:2001 to IEC 61058-1 (mod).

8) Superseded by EN 61167:2011.

9) Superseded by EN 61199:2011.

10) Superseded by EN 61347-2-9:2013 (DOW = 2015-12-04).

11) Superseded by EN 61558-2-5:2010.

12) Superseded by EN 61558-2-6:2009.

〈C〉

Publication	Year	Title	EN/HD	Year
IEC 62031	2008	LED modules for general lighting - Safety specifications	EN 62031	2008
IEC 62035 (mod)	1999	Discharge lamps (excluding fluorescent lamps) - Safety specifications	EN 62035	2000 [13)]
IEC 62471 (mod)	2006	Photobiological safety of lamps and lamp systems	EN 62471	2008
IEC 80416-1	2001	Basic principles for graphical symbols for use on equipment - Part 1: Creation of symbol originals	EN 80416-1	2001 [14)]
ISO 4046-4	2002	Paper, board, pulps and related terms - Vocabulary - Part 4: Paper and board grades and converted products	–	–

[13)] Superseded by EN 62035:2014 (DOW = 2017-09-15).

[14)] Superseded by EN 80416-1:2009.

Annex ZB
(normative)

Special national conditions

Special national condition: National characteristic or practice that cannot be changed even over a long period, e.g. climatic conditions, electrical earthing conditions.

NOTE If it affects harmonization, it forms part of the European Standard or Harmonization Document.

For the countries in which the relevant special national conditions apply these provisions are normative, for other countries they are informative.

Clause	Special national condition

3.3 Denmark

Supply cords of class I luminaires, which are delivered without a plug, shall be provided with a visible tag with the following text:

Vigtigt !
Lederen med grøn/gul isolation
må kun tilsluttes en klemme mærket

 eller 

If essential for the safety of the luminaire, the tag shall in addition be provided with a diagram, which shows the connection of the other conductors, or be provided with the following text:

For tilslutning af the øvrige ledere,
se medfølgende vejledning.

NOTE "ø" may be replaced by "oe"; "æ" may be replaced by "ae".

〈C〉 Clause Special national condition

4.5.1 Denmark

Socket-outlets intended for providing power to other appliances shall be in compliance with DS60884-2-D1:2011, the Standard Sheets being applied as follows:

Class I . . . . . Standard Sheet DK 1-3a, DK 1-1c and DK 1-1d

For class I luminaires, the earthing contact of the socket-outlet shall be electrically connected to the earthing terminal of the appliance.

Class II luminaires with a degree of protection not higher than IPX0, Standard Sheet DKA 1-4a can be used.

EXEMPTION:
Socket-outlets supplied from isolation transformers (shaver supply units) and socket-outlets on outdoor luminaires may be in accordance with the requirement of DS60884-2-D1:2011 for fixed socket-outlets.

5.2.1 Cyprus

Domestic luminaires intended for connection to a standard United Kingdom 13 A socket must be pre-fitted with an approved plug complying with BS 1363.

Cord sets for domestic luminaires for connection with an appliance inlet must be pre-fitted with an approved plug complying with BS 1363.

Plugs must be fitted with the correct fuse.

Denmark

Supply cords on single-phase portable luminaires having a rated current not exceeding 13 A shall be provided with a plug according to the following table:

Class of luminaire	DS60884-2-D1:2011	EN 50075 Standard Sheet
Class I	DK 2-1a, C 2b, C 3b or C 4	
Class II	DKA 2-1a, DKA 2-1b, C 5, C 6	I

For luminaires having an appliance inlet, the plug on the supply cord shall comply with the above requirements.

If multi-phase luminaires and single-phase luminaires having a rated current exceeding 13 A are provided with a supply cord with a plug, the plug shall comply with the following table or EN 60309.

Plug	
Class of luminaire	DS60884-2-D1:2011
Class I	DK 6-1a
Class II	DK 6-1a*
* Earthing contact not connected.	

〈C〉

〈C〉 Clause Special national condition

Finland

For luminaires provided with non-detachable flexible cables and cords and a plug, the plug shall comply with the requirements of CEE Publication 7 and EN 50075, the Standard Sheets to be applied being as follows:

- Class I luminaires	CEE 7, sheet IV or VII
- Class II luminaires	CEE 7, sheet XVI (alt I only) or CEE 7, sheet XVII or EN 50075, sheet I

United Kingdom

Domestic luminaires intended for connection to a standard United Kingdom 13 A socket must be pre-fitted with an approved plug complying with BS 1363.

Cord sets for domestic luminaires for connection with an appliance inlet must be pre-fitted with an approved plug complying with BS 1363.

Plugs must be fitted with the correct fuse.

〈C〉

〈C〉

Annex ZC
(informative)

A-deviations

A-deviation: National deviation due to regulations, the alteration of which is for the time being outside the competence of the CEN/CENELEC member.

This European Standard falls under Directive 2006/95/EC.

NOTE (from CEN/CENELEC IR Part 2:2008, 2.17) Where standards fall under EC Directives, it is the view of the Commission of the European Communities (OJ No. C59; 1982-03-09) that the effect of the decision of the Court of Justice in case 815/79 Cremonini/Vrankovich (European Court Reports 1980, p. 3583) is that compliance with A-deviations is no longer mandatory and that the free movement of products complying with such a standard should not be restricted except under the safeguard procedure provided for in the relevant Directive.

A-deviations in an EFTA-country are **valid instead** of the relevant provisions of the European Standard in that country until they have been removed.

Clause	Deviation
4 & 5	**France** (Arrêté of the 22th September 1969) Socket-outlets 10/16 A intended for providing power to other appliances except those supplied by an isolating transformer shall be shuttered. **(Arrêté du 30 décembre 2011 portant règlement de sécurité pour la construction des immeubles de grande hauteur et leur protection contre les risques d'incendie et de panique)** Section VIII, Installations électriques et éclairage Article GH 48, Eclairage § 1 Généralités: c) Les parties externes des luminaires satisfont à l'essai au fil incandescent, la température du fil incandescent étant de : – 850°C pour les luminaires dans les escaliers et les circulations horizontales communes ; – 650°C pour les luminaires dans les locaux. **United Kingdom** (Approved Document B of the United Kingdom Building Regulations) Particular fire protection requirements relating to thermoplastic diffusers are listed in Subclause 6.15 of the above Regulations.

〈C〉

(informative)

Relationship between this European standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered

This European Standard has been prepared under a Commission's standardization request relating to harmonized standards in the field of the Low Voltage Directive, M/511, to provide one voluntary means of conforming to safety objectives of Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits [2014 OJ L96].

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZZ.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding safety objectives of that Directive, and associated EFTA regulations.

Table ZZ.1 – Correspondence between this European standard and Annex I of Directive 2014/35/EU [2014 OJ L96]

Safety objectives of Directive 2014/35/EU	Clause(s) / sub-clause(s) of this EN	Remarks / Notes
1. General conditions		
a) the essential characteristics, the recognition and observance of which will ensure that electrical equipment will be used safely and in applications for which it was made, shall be marked on the electrical equipment, or, if this is not possible, on an accompanying document;	Section 3	To be used in conjunction with relevant part 2
b) the electrical equipment, together with its component parts, shall be made in such a way as to ensure that it can be safely and properly assembled and connected;	Section 4	To be used in conjunction with relevant part 2
c) the electrical equipment shall be so designed and manufactured as to ensure that protection against the hazards set out in points 2 and 3 is assured, providing that the equipment is used in applications for which it was made and is adequately	See item 2 and 3 of this table	

2. Protection against hazards arising from the electrical equipment Measures of a technical nature shall be laid down in accordance with point 1, in order to ensure that:		
a) persons and domestic animals are adequately protected against the danger of physical injury or other harm which might be caused by direct or indirect contact;	Section 4 Section 7 Section 14 and 15 Section 5 Section 8	All to be used in conjunction with relevant part 2
b) temperatures, arcs or radiation which would cause a danger, are not produced;	Section 4 Section 11 Section 12 Section 10	EMF is not covered All to be used in conjunction with relevant part 2
c) persons, domestic animals and property are adequately protected against non-electrical dangers caused by the electrical equipment which are revealed by experience;	Section 4 Section 10 Section 11	All to be used in conjunction with relevant part 2
d) the insulation is suitable for foreseeable conditions.	Section 9 Section 10	All to be used in conjunction with relevant part 2
3. Protection against hazards which may be caused by external influences on the electrical equipment Technical measures shall be laid down in accordance with point 1, in order to ensure that the electrical equipment:		
a) meets the expected mechanical requirements in such a way that persons, domestic animals and property are not endangered;	Section 3 Section 4	All to be used in conjunction with relevant part 2
b) is resistant to non-mechanical influences in expected environmental conditions, in such a way that persons, domestic animals and property are not endangered;	Section 9 Section 13	All to be used in conjunction with relevant part 2
c) does not endanger persons, domestic animals and property	Section 4	All to be used in conjunction with relevant part 2

overload.		

WARNING 1 — Presumption of conformity stays valid only as long as a reference to this European standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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LUMINAIRES –

Part 1: General requirements and tests

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.

International Standard IEC 60598-1 has been prepared by subcommittee 34D: Luminaires, of IEC technical committee 34: Lamps and related equipment.

This eighth edition constitutes a technical revision and includes the following significant technical changes with respect to the previous edition:

a) requirements to support the construction methods for new LED luminaires entering the market;

b) photobiological requirements extended;

c) more precise requirements for insulation between different types of electrical circuit;

d) other general updates and improvements.

The major changes which may affect certification are given in Annex R.

Annex R shows where a new text has been included which contains more serious/critical requirements requiring products to be re-tested.

NOTE In this standard, the following print types are used:

– requirements: in roman type;

– *test specifications: in italic type;*

– notes: in small roman type.

A list of all parts of the IEC 60598 series, under the general title: *Luminaires*, can be found on the IEC website.

The committee has decided that the contents of the base publication and its amendment will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication 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.

LUMINAIRES –

Part 1: General requirements and tests

SECTION 0: GENERAL INTRODUCTION

0.1 Scope

This Part 1 of IEC 60598 specifies general requirements for luminaires, incorporating electric light sources for operation from supply voltages up to 1 000 V. The requirements and related tests of this standard cover: classification, marking, mechanical construction, electrical construction and photobiological safety.

Each section of this Part 1 is read in conjunction with this Section 0 and with other relevant sections to which reference is made.

Each part of IEC 60598-2 details requirements for a particular type of luminaire or group of luminaires on supply voltages not exceeding 1 000 V. These parts are published separately for ease of revision and additional sections will be added as and when a need for them is recognized.

The presentation of photometric data for luminaires is under consideration by the International Commission on Illumination (CIE) and is not, therefore, included in this Part 1.

Requirements are included in this Part 1 for luminaires incorporating ignitors with nominal peak values of the voltage pulse not exceeding those of Table 11.2. The requirements apply to luminaires with ignitors built into ballasts and to luminaires with ignitors separate from ballasts. For luminaires with ignitors built into lamps, the requirements are under consideration.

Requirements for semi-luminaires are included in this Part 1.

In general, this Part 1 covers safety requirements for luminaires. The object of this Part 1 is to provide a set of requirements and tests which are considered to be generally applicable to most types of luminaires and which can be called up as required by the detail specifications of IEC 60598-2. This Part 1 is thus not regarded as a specification in itself for any type of luminaire, and its provisions apply only to particular types of luminaires to the extent determined by the appropriate part of IEC 60598-2.

The parts of IEC 60598-2, in making reference to any of the sections of Part 1, specify the extent to which that section is applicable and the order in which the tests are to be performed; they also include additional requirements as necessary.

The order in which the sections of Part 1 are numbered has no particular significance as the order in which their provisions apply is determined for each type of luminaire or group of luminaires by the appropriate part of IEC 60598-2. All parts of IEC 60598-2 are self-contained and therefore do not contain references to other parts of IEC 60598-2.

Where the requirements of any of the sections of Part 1 are referred to in the parts of IEC 60598-2 by the phrase "The requirements of section... of IEC 60598-1 apply", this phrase is to be interpreted as meaning that all the requirements of that section of Part 1 apply except those which are clearly inapplicable to the particular type of luminaire covered by that part of IEC 60598-2.