



SLOVENSKI STANDARD
SIST EN 60598-1:1995/A1:1996
01-junij-1996

Luminaires - Part 1: General requirements and tests (IEC 598-1:1992/A1:1993, modified)

Luminaires -- Part 1: General requirements and tests

Leuchten -- Teil 1: Allgemeine Anforderungen und Prüfungen

Luminaires -- Partie 1: Prescriptions générales et essais

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Ta slovenski standard je istoveten z: EN 60598-1:1993/A1:1996

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ICS:

29.140.40 Svetila Luminaires

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EUROPEAN STANDARD

EN 60598-1/A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 1998

ICS 29.140.40

Descriptors: General requirements, luminaire, rated voltage, extra low-voltage, nominal current, flexible cable, flexible cord, temperature, capacitor, winding, ballast, switch, electric starter, cable, connector, flammable material, fire-resistant material, type test, electric earthing, protection against electric shock, resistance to dust, resistance to moisture, insulation resistance, electric strength, creepage distance, insulation clearance, thermal endurance test, resistance to heat, resistance to fire, resistance to tracking, electric terminal, marking

English version

Luminaires

Part 1: General requirements and tests

(IEC 60598-1:1996/A1:1998, modified)

Luminaires

Partie 1: Prescriptions générales et essais

(CEI 60598-1:1996/A1:1998, modifiée)

Leuchten

Teil 1: Allgemeine Anforderungen und Prüfungen

(IEC 60598-1:1996/A1:1998, modifiziert)

SIST EN 60598-1:1995/A1:1996

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This amendment A1 modifies the European Standard EN 60598-1:1997; it was approved by CENELEC on 1998-04-01. 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.

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

This amendment 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 34D/382/FDIS, future amendment 1 to IEC 60598-1:1996, prepared by SC 34D, Luminaires, of IEC TC 34, Lamps and related equipment, was submitted to the IEC-CENELEC parallel vote.

Together with common modifications prepared by the Technical Committee CENELEC TC 34Z, Luminaires and associated equipment, it was approved by CENELEC as amendment A1 to EN 60598-1:1997 on 1998-04-01.

The following dates were fixed:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1999-01-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) -

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Endorsement notice

The text of amendment 1:1998 to the International Standard IEC 60598-1:1996 was approved by CENELEC as an amendment to the European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS**SECTION 12: ENDURANCE TEST AND THERMAL TEST**

12.4.2 c) line 2 After "90° C" add the following:
"(see note *** to table 12.2 relating to unsleeved fixed wiring)".

Table 12.2 In note *** add the following:

- after "European Installation Standards" :	(HD 384)
- after "European cable Standards" :	(HD 21)

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Annex ZA (normative)

Normative references to international publications
with their corresponding European publications

Addition:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60990	1990	Methods of measurement of touch-current and protective conductor current	-	-

Annex ZC (informative)

A-deviations

<u>Clause</u>	<u>Deviation</u>
3.3.3 c), 4.7.5, 12.4.2 (table 12.2)	Delete the A-deviation for Sweden.
12.4.2	Delete the A-deviation for Norway regarding table 12.1.

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NORME
INTERNATIONALE
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60598-1

1996

AMENDEMENT 1
AMENDMENT 1

1998-03

Amendement 1

Luminaire –

Partie 1:
Prescriptions générales et essais

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Part 1:
General requirements and tests

*Les feuilles de cet amendement sont à insérer dans la
Publication 60598-1 (1996)*

*The sheets contained in this amendment are to be
inserted in Publication 60598-1 (1996)*

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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**NORME
INTERNATIONALE
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60598-1

Quatrième édition
Fourth edition
1996-12

comprenant l'amendement 1 (1998)
including Amendment 1 (1998)

Luminaire –

**Partie 1:
Prescriptions générales et essais**

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General requirements and tests
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International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

LUMINAIRES –

Part 1: General requirements and tests

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The 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 the 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 National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 598 has been prepared by subcommittee 34D: Luminaires, of IEC technical committee 34: Lamps and related equipments.

It forms the fourth edition of IEC 598-1 and replaces the third edition (1992) and amendment 1 (1993).

The text of this standard is based on the following documents:

FDIS	Report on voting
34D/382/FDIS	34D/426/RVD

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

Annexes A, B, C, D, E, F and P form an integral part of this standard.

Annexes J, K, L, M, N, Q and R are for information only.

LUMINAIRES –

Part 1: General requirements and tests

SECTION 0: GENERAL INTRODUCTION

0.1 Scope and object

This part 1 of International Standard IEC 598 specifies general requirements for the classification and marking of luminaires and for their mechanical and electrical construction, together with related tests. The standard is applicable to luminaires for use with electric light sources on supply voltages not exceeding 1 000 V. Additional sections will be added when a need for them is recognized. ①

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

Each section of IEC 598-2 details requirements for a particular type of luminaire or group of luminaires on supply voltages not exceeding 1 000 V. These sections are published separately for ease of revision and additional sections will be added as and when a need for them is recognized.

Attention is drawn to the fact that this part 1 covers all aspects of safety (electrical, thermal and mechanical).

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.

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 598-2. This part 1 is thus not to be 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 section of part 2.

The sections of part 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 section of part 2. All sections of part 2 are self-contained and therefore do not contain references to other sections of part 2.

IEC 320: *Appliance couplers for household and similar general purposes*

IEC 357: 1982, *Tungsten halogen lamps (non-vehicle)*

Amendments: 1 (1984), 2 (1985), 3 (1987), 4 (1989), 5 (1992), 6 (1993), 7 (1994), 8 (1995)

IEC 360: 1987, *Standard method of measurement of lamp cap temperature rise*

IEC 364-3: 1993, *Electrical installations of buildings – Part 3: Assessment of general characteristics*

Amendment 1 (1993), Amendment 2 (1995)

IEC 364-7-702: 1983, *Electrical installations of buildings – Part 7: Requirements for special installations or locations – Section 702: Swimming pools*

IEC 384-14: 1993, *Fixed capacitors for use in electronic equipment – Part 14: Sectional specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains*

IEC 400: 1991, *Lampholders for tubular fluorescent lamps and starter-holders*

Amendment 1 (1993), Amendment 2 (1994)

IEC 416: 1988, *General principles for the creation of graphical symbols for use on equipment*

IEC 417: 1973, *Graphical symbols for use on equipment. Index, survey and compilation of the single sheets*

IEC 432-1: 1993, *Safety specifications for incandescent lamps – Part 1: Tungsten filament lamps for domestic and similar general lighting purposes*

Amendment 1 (1995)

IEC 432-2: 1994, *Safety specifications for incandescent lamps – Part 2: Tungsten halogen lamps for domestic and similar lighting purposes*

IEC 529: 1989, *Degrees of protection provided by enclosures (IP Code)*

IEC 570: 1995, *Electrical supply track systems for luminaires*

IEC 598-2: *Luminaires – Part 2: Particular requirements*

IEC 598-2-4: 1979, *Portable general purpose luminaires*

Amendment 3 (1990)

IEC 630: 1994, *Maximum lamp outlines for general lighting lamps*

IEC 634: 1993, *Heat test source (H.T.S.) lamps for carrying out heating tests on luminaires*

IEC 662: 1980, *High pressure sodium vapour lamps*

Amendments: 2 (1987), 3 (1990), 4 (1992), 5 (1993), 6 (1994), 7 and 8 (1995)

IEC 664-1: 1992, *Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests*

IEC 684: *Specification for flexible insulating sleeving*

IEC 695-2-2: 1991, *Fire hazard testing – Section 2: Needle-flame test*

IEC 742: 1983, *Isolating transformers and safety isolating transformers – Requirements*

IEC 838: *Miscellaneous lampholders*

IEC 901: 1987, *Single-capped fluorescent lamps – Safety and performance requirements*
Amendment 1 (1989), Amendment 2 (1992)

IEC 920: 1990, *Ballasts for tubular fluorescent lamps – General and safety requirements*
Amendment 1 (1993), Amendment 2 (1995)

IEC 922: 1989, *Ballasts for discharge lamps (excluding tubular fluorescent lamps) – General and safety requirements*
Amendment 2 (1992)

IEC 924: 1990, *D.C. supplied electronic ballasts for tubular fluorescent lamps – General and safety requirements*
Amendment 1 (1993)

IEC 972: 1989, *Classification and interpretation of new lighting products*
Amendment 1 (1991)

IEC 989: 1991, *Separating transformers, autotransformers, variable transformers and reactors*

IEC 990: 1990, *Methods of measurement of touch-current and protective conductor current*

IEC 1032: 1990, *Test probes to verify protection by enclosures*

IEC 1046: 1993, *D.C. or a.c. supplied electronic step-down convertors for filament lamps – General and safety requirements*
Amendment 1 (1995)

IEC 1058-1: 1990, *Switches for appliances – Part 1: General requirements*
Amendment 1 (1993), Amendment 2 (1994)

IEC 1167: 1992, *Metal halide lamps*
Amendment 1 (1995)

IEC 1184: 1993, *Bayonet lampholders*

IEC 1195: 1993, *Double-capped fluorescent lamps – Safety specifications*

IEC 1199: 1993, *Single-capped fluorescent lamps – Safety specifications*

ISO 75-2: 1993, *Plastics – Determination of temperature of deflection under load – Part 2: Plastics and ebonite*

ISO 1891: 1979, *Bolts, screws, nuts and accessories – Terminology and nomenclature*

ISO 4046: 1978, *Paper, board, pulp and related terms – Vocabulary*

Certain parts of luminaires, such as joints, raising and lowering devices, may be tested separately provided that the design of these parts is such that their performance is not dependent upon the other parts of the luminaires.

Luminaires intended to be used with non-detachable flexible cables or cords are tested with the flexible cable or cord connected to the luminaire.

For luminaires intended to be used with but not normally supplied with a shade, the luminaire manufacturer shall provide a shade, typical of the type that might be used with the luminaire.

0.5 Components of luminaires

0.5.1 Components, other than integral components, shall comply with the requirements of the relevant IEC standards, if any.

Integral components shall comply as far as is reasonable with the IEC component standards, as part of the luminaire.

NOTE – This does not imply that components need to be separately tested before approval of the luminaire.

0.5.2 Components complying with the requirements of their own standard and used in accordance with their intended use, shall only be tested to the requirements of this standard where there are no requirements in the component standard (covering the requirement heading of this standard).

NOTE – A valid test report should be considered adequate to show compliance.

Lampholders and starterholders shall additionally comply with the gauging and interchangeability requirements of the appropriate IEC component standard where applicable after building into the luminaire.

0.5.3 Components for which no appropriate IEC standard exists shall satisfy the relevant requirements of this luminaire standard as part of the luminaire. Lampholders and starterholders shall additionally comply with the gauging and interchangeability requirements of the appropriate IEC component standard where applicable.

NOTE – Examples of components are lampholders, switches, transformers, ballasts, flexible cables and cords and plugs.

0.5.4 Compliance with this standard can only be assured if protective shields of identical specification are used.

0.6 List of sections of part 2

1. Fixed general purpose luminaires.
2. Recessed luminaires.
3. Luminaires for road and street lighting.
4. Portable general purpose luminaires.
5. Floodlights.
6. Luminaires with built-in transformers for tungsten filament lamps.
7. Portable luminaires for garden use.
8. Handlamps.
9. Photo and film luminaires (non-professional).
10. Portable child-appealing luminaires.
11. Not used at present.