

## Ljusarmatur – Säkerhet – Del 1: Allmänna fordringar och provning

*Luminaires –*

*Part 1: General requirements and tests*

Som svensk standard gäller europastandarden EN 60598-1:2004. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60598-1:2004.

### Nationellt förord

Europastandarden EN 60598-1:2004

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 60598-1, Sixth edition, 2003 - Luminaires - Part 1: General requirements and tests**

utarbetad inom International Electrotechnical Commission, IEC.

I bilaga ZB redovisas en svensk avvikelse, vilken av CENELEC accepterats till följd av speciella nationella förhållanden.

Tidigare fastställd svensk standard SS-EN 60598-1, utgåva 5, 2000, SS-EN 60598-1/A11, utgåva 1, 2001, SS-EN 60598-1/A11 C1, utgåva 1, 2001 och SS-EN 60598-1/A12, utgåva 1, 2002, gäller ej fr o m 2007-07-01.

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EUROPEAN STANDARD

**EN 60598-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English version

**Luminaires**  
**Part 1: General requirements and tests**  
(IEC 60598-1:2003, modified)

Luminaires

Partie 1: Prescriptions générales et essais  
(CEI 60598-1:2003, modifiée)

Leuchten

Teil 1: Allgemeine Anforderungen  
und Prüfungen  
(IEC 60598-1:2003, modifiziert)

This European Standard was approved by CENELEC on 2004-07-06. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, 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 the International Standard IEC 60598-1:2003, prepared by SC 34D, Luminaires, of IEC TC 34, Lamps and related equipment, together with common modifications prepared by the Technical Committee CENELEC TC 34Z, Luminaires and associated equipment, was approved by CENELEC as EN 60598-1 on 2004-07-06.

This European Standard supersedes EN 60598-1:2000 + A11:2000 + corrigendum April 2001 + A12:2002.

The following dates were fixed:

- latest date by which the EN has to be implemented  
at national level by publication of an identical  
national standard or by endorsement (dop) 2005-05-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2007-07-01

Annexes ZA, ZB and ZC have been added by CENELEC.

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## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60061-2 (mod)	– <sup>1)</sup>	Lamp caps and holders together with gauges for the control of interchangeability and safety Part 2: Lampholders	EN 60061-2	1993 <sup>2)</sup>
IEC 60061-3 (mod)	– <sup>1)</sup>	Part 3: Gauges	EN 60061-3	1993 <sup>2)</sup>
IEC 60065 (mod)	2001	Audio, video and similar electronic apparatus - Safety requirements	EN 60065	2002
IEC 60068-2-75	– <sup>1)</sup>	Environmental testing Part 2-75: Tests - Test Eh: Hammer tests	EN 60068-2-75	1997 <sup>2)</sup>
IEC 60079 (mod)	Series	Electrical apparatus for explosive gas atmospheres	EN 60079	Series
IEC 60083	– <sup>1)</sup>	Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC	-	-
IEC 60085	– <sup>1)</sup>	Thermal evaluation and classification of electrical insulation	HD 566 S1	1990 <sup>2)</sup>
IEC 60112	2003	Method for the determination of the proof and the comparative tracking indices of solid insulating materials	EN 60112	2003
IEC 60155	– <sup>1)</sup>	Glow-starters for fluorescent lamps	EN 60155	1995 <sup>2)</sup>
IEC 60227 (mod)	Series	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V	HD 21 <sup>3)</sup>	Series
IEC 60238	1998	Edison screw lampholders	EN 60238	1998
IEC 60245 (mod)	Series	Rubber insulated cables - rated voltages up to and including 450/750 V	HD 22 <sup>4)</sup>	Series
IEC 60320	Series	Appliance couplers for household and similar general purposes	EN 60320	Series

<sup>1)</sup> Undated reference.

<sup>2)</sup> Valid edition at date of issue.

<sup>3)</sup> The HD 21 series is related to, but not directly equivalent with the IEC 60227 series.

<sup>4)</sup> The HD 22 series is related to, but not directly equivalent with the IEC 60245 series.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60357 (mod)	- <sup>1)</sup>	Tungsten halogen lamps (non-vehicle) - Performance specifications	EN 60357	2003 <sup>2)</sup>
IEC 60360	- <sup>1)</sup>	Standard method of measurement of lamp cap temperature rise	EN 60360	1998 <sup>2)</sup>
IEC 60384-14	- <sup>1)</sup>	Fixed capacitors for use in electronic equipment - Part 14: Sectional specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains	-	-
IEC 60400 (mod)	- <sup>1)</sup>	Lampholders for tubular fluorescent lamps and starterholders	EN 60400	2000 <sup>2)</sup>
IEC 60417	data-base	Graphical symbols for use on equipment	-	-
IEC 60432-1 (mod)	1999	Incandescent lamps - Safety specifications Part 1: Tungsten filament lamps for domestic and similar general lighting purposes	EN 60432-1	2000
IEC 60432-2 (mod)	- <sup>1)</sup>	Part 2: Tungsten halogen lamps for domestic and similar general lighting purposes	EN 60432-2	2000 <sup>2)</sup>
IEC 60432-3	- <sup>1)</sup>	Part 3: Tungsten-halogen lamps (non-vehicle)	EN 60432-3	2003 <sup>2)</sup>
IEC 60529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May	1991 1993
IEC 60570	2003	Electrical supply track systems for luminaires	EN 60570	2003
IEC 60598-2 (mod)	Series	Luminaires Part 2: Particular requirements	EN 60598-2	Series
IEC 60598-2-4	1997	Part 2: Particular requirements -- Section 4: Portable general purpose luminaires	EN 60598-2-4	1997
IEC 60634	- <sup>1)</sup>	Heat test source (H.T.S.) lamps for carrying out heating tests on luminaires	EN 60634	1995 <sup>2)</sup>
IEC 60662	- <sup>1)</sup>	High-pressure sodium vapour lamps	EN 60662	1993 <sup>2)</sup>
IEC 60664-1	- <sup>1)</sup>	Insulation coordination for equipment within low-voltage systems Part 1: Principles, requirements and tests	EN 60664-1	2003 <sup>2)</sup>
IEC 60684	Series	Flexible insulating sleeving	EN 60684	Series
IEC 60695-2	Series	Fire hazard testing Part 2: Test methods	EN 60695-2	Series
IEC 60695-2-2	- <sup>1)</sup>	Part 2: Test methods Section 2: Needle-flame test	EN 60695-2-2	1994
IEC 60838	Series	Miscellaneous lampholders	EN 60838	Series
IEC 60901	- <sup>1)</sup>	Single-capped fluorescent lamps - Performance requirements	EN 60901	1996

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60989	- <sup>1)</sup>	Separating transformers, autotransformers, variable transformers and reactors	-	-
IEC 60990	1999	Methods of measurement of touch-current and protective conductor current	EN 60990	1999
IEC 61032	1997	Protection of persons and equipment by enclosures - Probes for verification	EN 61032	1998
IEC 61058-1 + A1 (mod)	2000 2001	Switches for appliances Part 1: General requirements	EN 61058-1	2002
IEC 61184	- <sup>1)</sup>	Bayonet lampholders	EN 61184	1997 <sup>2)</sup>
IEC 61195	- <sup>1)</sup>	Double-capped fluorescent lamps - Safety specifications	EN 61195	1999
IEC 61199	1999	Single-capped fluorescent lamps - Safety specifications	EN 61199	1999
IEC 61347	Series	Lamp controlgear	EN 61347	Series
IEC 61347-2-9	- <sup>1)</sup>	Part 2-9: Particular requirements for ballasts for discharge lamps (excluding fluorescent lamps)	EN 61347-2-9	2001 <sup>2)</sup>
IEC 61558-2 (mod)	Series	Safety of power transformers, power supply units and similar	EN 61558-2-5	Series
IEC 61558-2-5	- <sup>1)</sup>	Part 2-5: Particular requirements for shaver transformers and shaver supply units	EN 61558-2-5	1998
IEC 62035 (mod)	- <sup>1)</sup>	Discharge lamps (excluding fluorescent lamps) - Safety specifications	EN 62035	2000 <sup>2)</sup>
IEC 80416-1	- <sup>1)</sup>	Basic principles for graphical symbols for use on equipment Part 1: Creation of symbol originals	EN 80416-1	2001
ISO 75-2	1993	Plastics - Determination of temperature of deflection under load Part 2: Plastics and ebonite	EN ISO 75-2	1996
ISO 4046-4	2002	Paper, board, pulp and related terms - Vocabulary Part 4: Paper and board grades and converted products	-	-

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## LUMINAIRES –

### Part 1: General requirements and tests

#### SECTION 0: GENERAL INTRODUCTION

##### 0.1 Scope and object

This Part 1 of International Standard 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 and electrical construction.

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.

Each section 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 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 11.3. 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 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.

Where the requirements of any of the sections of Part 1 are referred to in the sections of part 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 section of part 2.

For explosion proof luminaires, as covered by IEC 60079, the requirements of IEC 60598 (selecting the appropriate parts 2) are applied in addition to the requirements of IEC 60079. In the event of any conflict between IEC 60598 and IEC 60079, the requirements of IEC 60079 take priority.

In accordance with IEC guidelines, new IEC standards are divided into those covering either safety or performance. In the lamp safety standards, "information for luminaire design" is given for the safe operation of lamps; this should be regarded as normative when testing luminaires to this standard.

Attention is drawn to lamp performance standards which contain "information for luminaire design"; this should be followed for proper lamp operation; however, this standard does not require the testing of lamps performance as part of the type test approval for luminaires.

Improvements in safety to take account of the state of the art technology are incorporated in the standards with revisions and amendments on an ongoing basis. Regional standardisation bodies may include statements in their derived standards to cover products which have complied with the previous document as shown by the manufacturer or standardization body. The statements may require that for such products the previous standard may continue to apply to production until a defined date after which the new standard shall apply.

## **0.2 Normative references**

The following referenced documents are indispensable for the application 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 60061-2, *Lamp caps and holders together with gauges for the control of interchangeability and safety – Part 2: Lampholders*

IEC 60061-3, *Lamp caps and holders together with gauges for the control of interchangeability and safety – Part 3: Gauges*

IEC 60065:2001, *Audio, video and similar electronic apparatus – Safety requirements*

IEC 60068-2-75, *Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests*

IEC 60079 (all parts), *Electrical apparatus for explosive gas atmospheres*

IEC 60083, *Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC*

IEC 60085, *Thermal evaluation and classification of electrical insulation*

IEC 60112:2003, *Method for the determination of the proof and the comparative tracking indices of solid insulating materials*

IEC 60155, *Glow-starters for fluorescent lamps*