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Luminaire performance - Part 2-1: Particular requirements - LED luminaires

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 05/23

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English Version

**Luminaire performance - Part 2-1: Particular requirements - LED  
luminaires  
(IEC 62722-2-1:2023)**

Performance des luminaires - Partie 2-1: Exigences  
particulières - Luminaires à LED  
(IEC 62722-2-1:2023)

Arbeitsweise von Leuchten - Teil 2-1: Besondere  
Anforderungen an LED-Leuchten  
(IEC 62722-2-1:2023)

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**EN IEC 62722-2-1:2023 (E)****European foreword**

The text of document 34D/1680/FDIS, future edition 2 of IEC 62722-2-1, prepared by SC 34D "Luminaires" of IEC/TC 34 "Lighting" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62722-2-1:2023.

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) 2023-11-28
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2026-02-28

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In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 62442-3 NOTE Approved as EN IEC 62442-3

## Annex ZA (normative)

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

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.

NOTE 1 Where 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](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60598-1	2020	Luminaires - Part 1: General requirements and tests	EN IEC 60598-1	2021
IEC 60598-2-3	2002	Luminaires - Part 2-3: Particular requirements - Luminaires for road and street lighting	EN 60598-2-3	2003
-	-		+ corrigendum Aug. 2005	
IEC 60598-2-5	2015	Luminaires - Part 2-5: Particular requirements - Floodlights	EN 60598-2-5	2015
IEC 62031	2018	LED modules for general lighting - Safety specifications	EN IEC 62031	2020
-	-		+ A11	2021
IEC 62717	2014	LED modules for general lighting - Performance requirements	EN 62717	2017
+ A1	2015		-	-
+ A2	2019		+ A2	2019
IEC 62722-1	-	Luminaire performance - Part 1: General requirements	EN IEC 62722-1	-



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# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



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**Luminaire performance –  
Part 2-1: Particular requirements – LED luminaires**

**Performance des luminaires –  
Partie 2-1: Exigences particulières – Luminaires à LED**





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IEC 62722-2-1

Edition 2.0 2023-01

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



**Luminaire performance –  
Part 2-1: Particular requirements – LED luminaires**

**Performance des luminaires –  
Partie 2-1: Exigences particulières – Luminaires à LED**

INTERNATIONAL  
ELECTROTECHNICAL  
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# INTERNATIONAL ELECTROTECHNICAL COMMISSION

## LUMINAIRE PERFORMANCE –

### Part 2-1: Particular requirements – LED luminaires

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IEC 62722-2-1 has been prepared by subcommittee 34D: Luminaires, of IEC technical committee 34: Lighting. It is an International Standard.

This second edition cancels and replaces the first edition published in 2014. This edition constitutes a technical revision.

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

- a) alignment with IEC 62717:2014, IEC 62717:2014/AMD1:2015 and IEC 62717:2014/AMD2:2019;
- b) clarification of temperature requirements for the maintenance test, in 10.2 and Annex A;
- c) introduction of a new Annex C on methods for calculation and measurements of parameters for extension of electric and photometric data.

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

Draft	Report on voting
34D/1680/FDIS	34D/1687/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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/standardsdev/publications](http://www.iec.ch/standardsdev/publications).

A list of all parts in the IEC 62722 series, published under the general title *Luminaire performance* 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](http://webstore.iec.ch) in the data related to the specific document. At this date, the document will be

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- withdrawn,
- replaced by a revised edition, or
- amended.

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## INTRODUCTION

This document acknowledges the need for relevant tests for luminaires using LED as an electrical light source. This document is seen in close context with the publication of simultaneously developed performance standards for luminaires in general and for LED modules. This document does not consider luminaires designed for LED lamps, which are covered in IEC 62722-1. Changes in LED luminaires standards have an impact on LED module standards and vice versa, due to the behaviour of LED. Therefore, for the development of this document, the mutual consultancy of experts of both products has taken place.

The provisions in this document represent the technical knowledge of experts from the fields of the semiconductor (LED chip) industry and of the traditional electrical light sources and luminaires.

As this document has been simultaneously developed and edited with the standard for LED modules (IEC 62717), where appropriate, the compliance of the LED modules with the provisions of IEC 62717 can be transferred to the whole luminaire.

## LUMINAIRE PERFORMANCE –

### Part 2-1: Particular requirements – LED luminaires

#### 1 Scope

This part of IEC 62722 specifies the performance requirements for LED luminaires, together with the test methods and conditions. It applies to LED luminaires for general lighting purposes.

Semi-luminaires are not covered under the scope of this document.

For some types of luminaires (e.g. decorative or household) the provision of performance data under the scope of this document is not appropriate.

In this document, the following types of LED luminaires are distinguished.

- Type A – Luminaires using LED modules where compliance with IEC 62717 is given.
- Type B – Luminaires using LED modules where compliance with IEC 62717 is not given.

Luminaires using an LED lamp are covered in IEC 62722-1 and are not within the scope of this document.

The requirements of this document relate to type testing.

This document covers LED luminaires using LED modules, based on inorganic LED technology that produces white light. It does not cover luminaires using light sources based on OLED technology (organic LED technology).

The lifetime of LED luminaires is in most cases much longer than the practical test times. Consequently, the verification of manufacturer's lifetime claims is out of the scope of this document.

Instead of lifetime validation, this document has opted for lumen maintenance categories at a defined finite test time. Therefore, the category number does not imply a prediction of achievable lifetime. The categories are lumen-depreciation character categories showing behaviour in agreement with the manufacturer's information which is provided before the test is started.

#### 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 60598-1:2020, *Luminaires – Part 1: General requirements and tests*

IEC 60598-2-3:2002, *Luminaires – Part 2-3: Particular requirements – Luminaires for road and street lighting*

IEC 60598-2-5:2015, *Luminaires – Part 2-5: Particular requirements – Floodlights*

IEC 62031:2018, *LED modules for general lighting – Safety specifications*

IEC 62717:2014, *LED modules for general lighting – Performance requirements*

IEC 62717:2014/AMD1:2015

IEC 62717:2014/AMD2:2019

IEC 62722-1, *Luminaire performance – Part 1: General requirements*

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