

ICS 29.140
CCS K 72



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 31897.1-2025

Replacing GB/T 31897.1-2015

Luminaire performance - Part 1: General requirements

灯具性能 第1部分：一般要求

(English Translation)

Issued on: October 31, 2025

Implemented on: May 1, 2026

Issued by: State Administration for Market Regulation

Table of Contents

Preface
Introduction
1 Scope
2 Normative References
3 Terms and Definitions
4 General Requirements
5 Light source and components of the lamp
6 Photometric data
7 Electrical parameter data
8 Lighting performance data
9 Environmental data
9.1 Material Information
9.2 Maintenance Instructions
9.3 Disassembly Instructions for End-of-Life Use
Appendix A (Informative) Use of Regional Standards
Appendix B (Normative) Luminous Distribution Data for Luminaires
Appendix C (Normative) Measurement Methods for Total Power and Related Power of Luminaires
Appendix D (Informative) Symbols for luminaire maintenance and end-of-life recycling procedures during their lifespan
Reference

Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is Part 1 of GB/T 31897 "Performance of Luminaires". GB/T 31897 has the following parts published.

---Part 2-1.Special requirements for LED luminaires (GB/T 31897.201-2025).

This document supersedes GB/T 31897.1-2015 "Luminaires - Performance - Part 1: General Requirements" and is consistent with GB/T 31897.1-2015.

Compared to previous versions, aside from structural adjustments and editorial changes, the main technical changes are as follows.

- a) Two new terms, "standby mode" and "network standby mode," have been added (see 3.2 and 3.3);
- b) A reference and guide to the use of power consumption measurement methods in non-main function modes has been added (see Appendix C).

This document is modified to adopt IEC 62722-1:2022 "Luminaires performance - Part 1: General requirements".

This document has undergone the following structural adjustments compared to IEC 62722-1:2022.

- a) Appendix B corresponds to Appendix D of IEC 62722-1:2022;
- b) Appendix C corresponds to Appendix B of IEC 62722-1:2022;
- c) Appendix D corresponds to Appendix C of IEC 62722-1:2022.

The technical differences between this document and IEC 62722-1:2022, and the reasons therefor, are as follows.

---The term "ballast lumen factor" (see IEC 62722-1:2022, 3.11) has been removed to conform to Chinese standards drafting rules;

---IEC 60598-1 (see Chapter 3) has been replaced with the normatively referenced GB/T 7000.1 to adapt to my country's technical conditions, and the following has been added.

Operability;

---IEC 60598-2 (all parts) (see 4.2) has been replaced with GB/T 7000 Part 2 (all parts) as normatively referenced.

Adapt to my country's technological conditions and increase operability;

---IEC 60050-845 (see Chapter 3) has been replaced with the normatively referenced GB/T 2900.65 to adapt to my country's technical conditions.

Increase operability;

---ISO 62722-2 (all parts) has been replaced with GB/T 31897 Part 2 (all parts) as normatively referenced, to suit my needs.

The country's technical conditions increase operability;

---CIE 121 (see Chapter 6) has been replaced with the normatively referenced GB/T 22907 to adapt to my country's technical conditions and increase operability.

Actual nature;

---CIE43 (see B.2) has been replaced with the normatively referenced GB/T 23110 to adapt to my country's technical conditions and increase operability.

Acting.

The following editorial changes have been made to this document.

---IEC 60598-2-22 has been replaced with GB/T 7000.222 (see Chapter 6) for informational reference;

---Informative Appendix A, "Use of Regional Standards," has been amended.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China National Light Industry Council.

This document is under the jurisdiction of the National Technical Committee on Standardization of Lighting Appliances (SAC/TC224).

Introduction

Lighting technology is constantly evolving, with new technologies and products emerging continuously. Updating performance standards ensures the performance and safety of these new technologies.

Energy efficiency is fully considered. Energy conservation has become a global trend, and lighting performance standards require new luminaires to be superior in energy efficiency.

Reduce energy consumption and carbon footprint. Both international and domestic standards for standby power consumption testing have been updated to ensure more accurate measurement.

To measure standby power consumption and ensure the comparability of test results, this document urgently needs to be supplemented and improved. Environmental regulations are constantly evolving, requiring updates to performance standards.

This could encourage lighting manufacturers to use more environmentally friendly materials and processes.

GB/T 31897 "Performance of Luminaires" is proposed to consist of the following parts.

---Part 1: General Requirements. The purpose is to specify the performance requirements for luminaires using electric light sources and power supplies with a voltage not exceeding 1000V.

Environmental protection requirements.

---Part 2-1. Special Requirements for LED Luminaires. The purpose is to specify the performance requirements for LED luminaires, as well as the test methods and procedures.

condition.

Luminaire performance - Part 1: General requirements

1 Scope

This document specifies the performance and environmental protection requirements for luminaires using electric light sources and with a power supply voltage not exceeding 1000V. Unless otherwise specified, the performance data covered in this document apply to newly manufactured, representative luminaires that have completed the specified initial aging process.

This document sets forth requirements for energy-efficient use and reliable environmental management at the end of the life of luminaires. The purpose of this document is to provide a set of...

The requirements generally apply to most types of luminaires. Additional performance requirements for special types of light sources are specified in Part 2 (all sections).

Part 2 (all sections) also covers a wider range of performance characteristics for specialized light source technologies.

This document applies to luminaires that use electric light sources and have a power supply voltage not exceeding 1000V.

This document does not apply to half-light fixtures.

The performance parameters specified in this document do not apply to certain types of lighting fixtures (such as decorative or certain types of household lighting fixtures).

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 2900.65 Electrical Engineering Terminology - Lighting (GB/T 2900.65-2023, IEC 60050-845:2020, IDT) GB/T 7000.1 Luminaires - Part 1: General requirements and tests (GB/T 7000.1-2023, IEC 60598-1:2020, MOD) GB/T 7000 Part 2 (All Parts) Luminaires Part 2: Particular Requirements [IEC 60598-2 (All Parts)] Note. GB/T 7000.201-2023 Luminaires - Part 2-1.Special requirements for fixed general-purpose luminaires (IEC 60598-2-1:2020, MOD);

GB/T 7000.202-2023 Luminaires - Part 2-2.Particular requirements for recessed luminaires