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**Cycles — Lighting and retro-reflective  
devices —**

**Part 2:  
Retro-reflective devices**

*Cycles — Éclairage et dispositifs rétroréfléchissants —*

*Partie 2: Dispositifs rétroréfléchissants*



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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at [www.iso.org/patents](http://www.iso.org/patents). ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 149, *Cycles*, Subcommittee SC 1, *Cycles and major sub-assemblies*.

This fourth edition cancels and replaces the third edition (ISO 6742-2:2015) which has been technically revised. It also incorporates the Amendment ISO 6742-2:2015/Amd:2018.

The main changes are as follows:

- terms and definitions: “pedal reflector” was added;
- change all angle units to degrees;
- addition of [7.1.2.4](#) b);
- improvement of [8.2.4](#);
- addition of [Annex A](#).

A list of all parts in the ISO 6742 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

# Cycles — Lighting and retro-reflective devices —

## Part 2: Retro-reflective devices

### 1 Scope

This document is applicable to retro-reflective devices used on cycles intended to be used on public roads and, especially, bicycles complying with ISO 4210<sup>[1]</sup> and ISO 8098<sup>[2]</sup>.

This part of ISO 6742 specifies photometric and physical requirements of retro-reflective devices.

### 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.

ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests*

CIE 15, *Colorimetry: official recommendations of the International Commission on Illumination*

CIE 1931, *XYZ colour space of the International Commission on Illumination*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

#### 3.1

##### **retro-reflective device reflector**

assembly ready for use and comprising one or more retro-reflecting optical units

#### 3.2

##### **wide angle reflector**

device providing retro-reflection through horizontal entrance angles of not less than 50° on either side of the reference axis

#### 3.3

##### **conventional reflector**

device providing retro-reflection through entrance angles of not less than 20° on either side of the reference axis

#### 3.4

##### **high values reflector**

red *retro-reflective device* (3.1) with high values of reflection e.g. dedicated to be mounted on luggage carrier