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ESITAMINE

Light and lighting - Measurement and presentation of  
photometric data of lamps and luminaires - Part 5:  
Presentation of data for luminaires used for road  
lighting

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 13032-5:2018 sisaldab Euroopa standardi EN 13032-5:2018 ingliskeelset teksti.	This Estonian standard EVS-EN 13032-5:2018 consists of the English text of the European standard EN 13032-5:2018.
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English Version

Light and lighting - Measurement and presentation of  
photometric data of lamps and luminaires - Part 5:  
Presentation of data for luminaires used for road lighting

Lumière et éclairage - Mesurage et présentation des  
données photométriques des lampes et des luminaires  
- Partie 5 : Présentation des données relatives aux  
luminaires utilisés pour l'éclairage public

Licht und Beleuchtung - Messung und Darstellung  
photometrischer Daten von Lampen und Leuchten -  
Teil 5: Darstellung von Daten von Leuchten für den  
Einsatz in der Straßenbeleuchtung

This European Standard was approved by CEN on 18 June 2018.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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## European foreword

This document (EN 13032-5:2018) has been prepared by Technical Committee CEN/TC 169 “Light and Lighting”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2019, and conflicting national standards shall be withdrawn at the latest by May 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a standardization request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of Commission Regulation (EC) No 245/2009, as amended by Regulation (EU) No 347/2010.

For relationship with Commission Regulation (EC) No 245/2009, as amended by Regulation (EU) No 347/2010, see informative Annex ZA, which is an integral part of this document.

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## Introduction

The Eco-design Directive 2009/125/EC requires a reduction of energy consumption of fluorescent lamps without integrated ballast, for high intensity discharge lamps, for LED light sources, and for ballasts and luminaires able to operate such lamps and light sources.

Utilance is a measurement of the efficiency of the luminous intensity distribution of a luminaire to spread its luminous flux onto a specified surface provided other quality requirements of EN 13201 series are met.

There are many lighting solutions that can satisfy the road lighting criteria specified in EN 13201-2. To design these solutions, photometric data of the equipment is required.

The use and application of utilance can serve as a tool for the pre-selection of adequate luminaires to fulfil the lighting requirements of EN 13201-2.

The knowledge of the utilance road lighting is needed for the calculation of the installation luminous efficacy as described in EN 13201-5.

This document specifies the presentation of tables of utilances and utilization factors of luminaires used for road lighting.

Utilance is used in place of utilization factors because it can be applied to luminaires with replaceable or non-replaceable lamps/light sources.

## 1 Scope

This document defines the presentation of utilances or utilization factors respectively for luminaires used for road lighting.

## 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.

EN 12665, *Light and lighting — Basic terms and criteria for specifying lighting requirements*

EN 13201-2, *Road lighting — Part 2: Performance requirements*

EN 13201-3, *Road lighting — Part 3: Calculation of performance*

EN 13201-5, *Road lighting — Part 5: Energy performance indicators*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12665 and the following apply.

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

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

### 3.1

#### **utilization factor (of an installation, for a reference area)**

$F_U$

ratio of the luminous flux received by the reference area to the sum of the individual luminous fluxes of the lamps / light sources of the installation

### 3.2

#### **utilance (of an installation, for a reference area)**

$U$

ratio of the luminous flux received by the reference area to the sum of the individual total fluxes of the luminaires of the installation

### 3.3

#### **utilization factor road lighting**

$F_{U,rl}$

ratio of the luminous flux received by one or more parallel strips along the road to the sum of the individual total fluxes of the lamps / light sources of the installation

Note 1 to entry: “Along the road” is considered parallel to that of the kerb following in the same direction as any adjacent luminaires.

### 3.4

#### **utilance road lighting**

$U_{rl}$

ratio of the luminous flux received by one or more parallel strips along the road to the sum of the individual total fluxes of the luminaires of the installation