

INTERNATIONAL  
STANDARD

**ISO**  
**8995-3**  
**CIE S 016/E**

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**Lighting of work places —**

Part 3:

**Lighting requirements for safety and  
security of outdoor work places**

*Éclairage des lieux de travail —*  
*Partie 3: Exigences requises de l'éclairage des lieux de travail*  
*extérieurs en matière de sûreté et de sécurité*

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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.

ISO 26182 was prepared as Standard CIE S 016 by the International Commission on Illumination, which has been recognized by the ISO Council as an international standardizing body. It was adopted by ISO under a special procedure which requires approval by at least 75 % of the member bodies casting a vote, and is published as a joint ISO/CIE edition.

The International Commission on Illumination (abbreviated as CIE from its French title) is an organization devoted to international cooperation and exchange of information among its member countries on all matters relating to the science and art of lighting.

ISO 8995-3 was prepared by Division 5 of the CIE.

ISO 8995 consists of the following parts, under the general title *Lighting of work places*:

— *Part 1: Indoor*

— *Part 2: Outdoor*

— *Part 3: Lighting requirements for safety and security of outdoor work places*

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COMMISSION INTERNATIONALE DE L'ÉCLAIRAGE  
INTERNATIONAL COMMISSION ON ILLUMINATION  
INTERNATIONALE BELEUCHTUNGSKOMMISSION

Standard

CIE S 016/E:2005

# Lighting of Outdoor Work Places - Lighting Requirements for Safety and Security

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Beleuchtung von Arbeitsplätzen im Freien — Anforderungen hinsichtlich Arbeitssicherheit und Anlagenschutz

ISO 8995-3:2006

Éclairage des lieux de travail extérieurs — Exigences requises de l'éclairage en matière de sûreté et de sécurité

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**FOREWORD**

Standards produced by the Commission Internationale de l'Eclairage (CIE) are a concise documentation of data defining aspects of light and lighting, for which international harmony requires such unique definition. CIE Standards are therefore a primary source of internationally accepted and agreed data, which can be taken, essentially unaltered, into universal standard systems.

This document CIE S 016/E:2005 has been prepared by CIE Division 5 and should be read in conjunction with CIE S 015/E:2005.

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## LIGHTING OF OUTDOOR WORK PLACES - LIGHTING REQUIREMENTS FOR SAFETY AND SECURITY

### INTRODUCTION

To enable people to perform visual tasks efficiently and accurately, especially during the night, adequate and appropriate lighting has to be provided.

The degree of visibility and comfort required in a wide range of outdoor work places is governed by the type and duration of activity.

### 1. SCOPE

This standard specifies the lighting requirements which will contribute to the visual needs for safety and security within outdoor work places.

### 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.

CIE S 015/E:2005. *Lighting of outdoor work places.*

CIE 112-1994. *Glare evaluation system for use within outdoor sports- and area lighting.*

ISO 8995-3:2006

### 3. TERMS AND DEFINITIONS

For the purposes of this standard, the terms and definitions given in IEC 60050-845/CIE 17.4<sup>[1]</sup> and the following apply.

#### 3.1 maintained illuminance ( $\bar{E}_m$ )

value below which the average illuminance on the specified surface is not allowed to fall

NOTE It is the average illuminance at the time maintenance should be carried out.

#### 3.2 illuminance uniformity ( $U_0$ )

ratio of minimum illuminance (luminance) to average illuminance (luminance) on (of) a surface

NOTE See also IEC 60050-845/ CIE 17.4<sup>[1]</sup>; 845-09-58 uniformity ratio of illuminance.

#### 3.3 glare rating limit ( $GR_L$ ) – see also Annex A

upper limit of glare by the CIE Glare Rating system

#### 3.4 colour rendering index ( $R_a$ ) – see also Annex A

a measure of the colour rendering capabilities of a lamp, which affect the colour appearance of objects and persons illuminated by that lamp