BIE

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

www.cie.co.at

ILUMINAT 2009 Cluj-Napoca, Romania, 20 February 2009

THE ROLE OF THE CIE AS AN INTERNATIONAL STANDARDS ORGANIZATION

Dr Franz Hengstberger President: CIE



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

CIE Central Bureau Kegelgasse 27 A-1030 Wien Austria

About Us Divisions News Bulletins Publications Symposia/Conferences Search CIE

HOME





INTERNATIONAL COMMISSION ON ILLUMINATION

Advancing knowledge and providing standardisation to improve the lighted environment

The International Commission on Illumination - also known as the CIE from its French title, the Commission Internationale de l'Eclairage - is devoted to worldwide cooperation and the exchange of information on all matters relating to the science and art of light and lighting, colour and vision, and image technology.

With strong technical, scientific and cultural foundations, the CIE is an independent, nonprofit organisation that serves member countries on a voluntary basis. Since its inception in 1913, the CIE has become a professional organization and has been accepted as representing the best authority on the subject and as such is recognized by ISO as an international standardization body.

HISTORICAL ORIGINS

- The CIE owes its origin to the development of gas lighting and electric lighting around the beginning of the 20th century
- It started out in 1900 as the International Commission on Photometry (CIP) and became the International Commission on Illumination (CIE) in 1913.



CIE TECHNICAL COMMITTEES 1921, PARIS



CIE STANDARD OBSERVER (PHOTOPIC) 1924, GENEVA



CIE TECHNICAL COMMITTEES 1924, GENEVA





CIE STANDARD COLORIMETRIC OBSERVER (1931, CAMBRIDGE)



CIE STANDARD OBSERVER (SCOTOPIC) 1951, STOCKHOLM



THE CURRENT CIE DIVISIONAL STRUCTURE



BE

EXTRACT FROM CIE STATUTES CIE OBJECTIVES

- 4.1 To provide an international forum for the discussion of all matters relating to the science, technology and art of light and lighting* and for the interchange of information in these fields between countries. To achieve these goals the Commission organizes scientific educational events and holds CIE Sessions normally every four years.
- 4.2 To develop basic **standards** and procedures of metrology in the field of light and lighting.
- 4.3 To provide guidance in the application of principles and procedures in the development of international and national **standards** in the fields of light and lighting.
- 4.4 To prépare and publish Proceedings, **Standards**, Technical Reports and other publications concerned with all matters related to the science, technology and art of light and lighting.
- 4.5 To maintain liaison and technical interaction with other international organizations concerned with matters related to the science, technology, **standardization** and art in the fields of light and lighting.



EXTRACT FROM CIE STATUTES OBJECTIVES (FOOTNOTE)

* Light and lighting in these objectives is to be understood in the broad sense of embracing such fundamental subjects as vision, photometry and colorimetry, involving natural and manmade radiation over the UV, the visible and the IR regions of the spectrum, and application subjects covering all usage of light, indoors and out, including environmental and aesthetic effects, as well as means for production and control of light and radiation.



RECOGNITION BY ISO, IEC AND CEN



International Organization for Standardization



1992

Commission Electrotechnique Internationale International Electrotechnical Commission Международная Электротехническая Комиссия

B

1989



European Committee for Standardization Comité Européen de Normalisation Europäisches Komitee für Normung

TEXT OF ISO RECOGNITION



"Council, deeming that the International Commission on Illumination (CIE) fulfils the prerequisites laid down in 1.1 and 1.2 of Council resolution 19/1984, accepts the International Commission on Illumination as an international standardizing body for the purpose of Council-resolution 19/1984 with a view to CIE documents being processed as ISO International Standards following the procedure set out in Council resolution 19/1984".



EXCERPT FROM IEC RECOGNITION



Commission Electrotechnique Internationale nternational Electrotechnical Commission Международная Электротехническая Комиссия

The IEC undertakes to:

- 3.1 Recognize the CIE as a competent authority for submitting its approved standards to IEC for direct endorsement and issue as an IEC/CIE standard in accordance with the provisions of the IEC/ISO Directives.
- 3.2 Effect joint development of standards in those areas where the domains overlap or complement each other.
- 3.3 Where mutually acceptable, publish the approved standards produced under items 3.1 and 3.2 above as joint IEC/CIE "double-logo" standards.

EXAMPLE OF DOUBLE-LOGO STANDARD WITH IEC

NORME CEI INTERNATIONALE IEC INTERNATIONAL 62471 STANDARD CIE S 009:2002 Fremière editori

Sécurité photobiologique des lampes et des appareils utilisant des lampes

Photobiological safety of lamps and lamp systems

© IEC 2006 Droits de reproduction réservés - Copyright - all rights reserved

Assume patie de ontre publication ne para tive reportaite al vitraise mans cantage frame que o act e par actur postérit, form or for publication may be reportande al indicativation se an internante, in postérie de principales and manoliter, without permission in writing from machinity, and tracenterical de fraideme.

International Bectrosothical Commission, 3, ray de Varantel, PO Rox 131, CH-1211 Geneva 20, Switzerland Telephane: ++1 22 519 02 11 Telefac: ++1 22 519 02 00 E-mail: Inmedigles.ch Web: version.ch



Pourgela, nair catalogue en eigueur Fargalos, que canent catalogue

Х

CODE PRIX

PRICE CODE

BE

First edition 2006-07

EXCERPTS FROM CEN RECOGNITION



European Committee for Standardization Comité Européen de Normalisation Europäisches Komitee für Normung

CEN recognises that the development and consultation methods used in CIE, its commitment to compliance with relevant legislation and the public availability of CIE documents, facilitate the reference to CIE documents and satisfy the major requirements of the CEN Technical Board policy for normative reference......

As identified by technical bodies of CEN and CIE, both organisations can decide to endorse each other's publications, using their own internal regulations, procedures and practices, taking into account the needs for doing so and the nature of the publications.....



COOPERATION WITH THE ORGANS OF THE METRE CONVENION



Cooperation Agreement with the International Committee for Weights And Measures (CIPM) -2 April 2007



EXCERPT FROM CIPM - CIE COOPERATION AGREEMENT (2007)

Recognizing that the CIPM's responsibility for the definition of the photometric units in the SI¹ and the standardization of the action spectra of the human eye² by the CIE are the interlinked cornerstones of practical physical photometry worldwide, the Parties undertake to inform each other whenever either Party is contemplating a change in any of these foundations of physical photometry. If considered necessary by both Parties, a joint, temporary, ad-hoc task group, reporting to the CCPR and the relevant CIE Division, would be formed to discuss the specific topic in more detail.

¹ Le Système International d'Unités (The International System of Units)

² The CIE action spectra for the human eye in various states of adaptation (photopic, mesopic and scotopic), for various field sizes (2°, 10°) and various other conditions (visual environment, age of observer, etc) as the CIE may decide to standardize.



EXCERPT FROM CIE – PLDA COOPERATION AGREEMENT (2008)

AGREEMENT BETWEEN THE INTERNATIONAL COMMISSION ON ILLUMINATION AND THE PROFESSIONAL LIGHTING DESIGNERS' ASSOCIATION Article I

1. The International Commission on Illumination (CIE), referred to hereinafter as "the Commission", and the Professional Lighting Designers' Association (PLDA), referred to hereinafter as "the Association", agree that with a view to facilitating the implementation of their objectives, set out respectively in the Statutes of the CIE and the PLDA, they will act in close cooperation with each other and consult each other regularly in regard to matters of common interest.

2. The Association takes note of the objectives of the Commission in the fields of vision and colour, measurements of light, interior environment and lighting design, lighting and signalling for transport, exterior lighting and other application, photobiological effects, and imaging technologies as set forth in the Statute of the Commission and in particular that the Commission has the expertise and role to standardize action spectra for photobiological and photochemical quantities, including those related to Human vision¹, and to ensure that data obtained in the course of its work is accurate and reliable.

3. The Commission recognizes the responsibilities and role of the Association as set forth in the fields of recognition of the profession of architectural lighting design and the strengthening of the ties between lighting designers, clients and the architecutral world.



USE OF CIE STANDARDS BY NATIONAL STANDARDS BODIES

Adoption of CIE Standards as national standards (in translation, if appropriate)

- If a national standards body wishes to (translate and) adopt an ISO/CIE Standard as a national standard, it can do so according to the regulations valid for all other ISO standards (i.e. free of charge), provided that proper reference is given to the original ISO/CIE document.
- If a national standards body wishes to (translate and) adopt a CIE Standard that will not be adopted by ISO as joint standard, as a national standard, it may do so, provided proper reference is given to the original CIE document (including CB address), that the CIE CB is informed and gets a copy of the national standard for its files. No fee to be paid.
- If a national standards body wishes to adopt a CIE Draft Standard as national standard, they should wait until the CIE Standard is published, because the draft might still change, and then there exists a national standard based on an international draft, and an international standard which is different.



CIE STANDARDS AND DRAFT STANDARDS

BE

CIE S 004/E:2001	Colours of light signals
ISO 16508/CIE S 006.1/E	Road traffic lights – photometric properties of 200 mm roundel signals (1999)
ISO 16508/CIE S 006.1/F	Feux de circulation – Caractéristiques photométriques des flux de signalisation avec un diamètre de 200 mm (1999)
ISO 10527/CIE S 007/E	Erythema reference action spectrum and standard erythema dose (1999)
ISO 10527/CIE S 007/F	Spectre d'action érythémale de référence et dose érythémale normalisée (1999)
CIE S007/D	Erythemale Referenzwirkungsfunktion und standardisierte Erythemdosis (1998)
ISO 8995-1:2002(E)/CIE S 008E:2001	Lighting of work places – Part 1:Indoor
CEI/IEC62471/CIE S 009/E:2006	Photobiological safety of lamps and lamp systems
CIE S 009/F:2002	Sécurité photobiologique des lampes et des appareils utilitsant les lampes
CIE S 009/D:2002	Photobiologische Sicherheit von Lampen und Lampensystemen
ISO 23539:2005(E)/CIE S 010/E:2004	Photometry - The CIE system of physical photometry
ISO 15469/CIE S 011:2003	Spatial distribution of daylight - CIE standard general sky
ISO 23603/CIE S 012/E:2004	Standard method of assessing the spectral quality of daylight simulators for visual appraisal and measurement of colour
CIE S 013:2003	International standard global solar UV index
ISO 1164-1:2008(E)/CIE S014-1/E:2006	Colorimetry - Part 1: CIE standard colorimetric observers
ISO 1164-2:2008(E)/CIE S014-2/E:2006	Colorimetry - Part 2: CIE standard illuminants
CIE S 015:2005	Lighting of outdoor work places
ISO 8995-3:2006(E)/CIE S016/E:2005	Lighting of outdoor work places - Lighting requirements for safety and security
ISO 28077:2006(E)/CIE S01494/E:2006	Photocarcinogenesis action spectrum (Non Melanoma Skin Cancers)
ISO 30061:2007(E)/CIE S020/E:2007	Emergency Lighting
ISO 1164-4:2008(E)/CIE S014-4/E:2007	Colorimetry - Part 4: CIE 1976 L*a*b* Colour Spaces

CIE STANDARDS AND DRAFT STANDARDS

le Edit View Favorites To	is Help	
Back • 🔿 · 💽 🗟 📣	Search + Eavorites A A . B . A . B . A . B . A . B . A . B . C . A . A . A . A . A . A . A . A . A	
	// security - Foreines band	7
oogle -	Search veb V Lev Mail V W Arlswers V S Games V S FLFA World Cup V V Music V V Personals V Up sign 1	<u>n *</u>
टार	COMMISSION INTERNATIONALE DE L'ECLAIRAGE INTERNATIONAL COMMISSION ON ILLUMINATION INTERNATIONALE BELEUCHTUNGSKOMMISSION CIE Central Bureau Kegelgasse 27 A-1030 Wien Austria	
PUBLICATIONS	CIE PUBLICATIONS	C.
online Webshop	Ordering CIE Publications via the online Webshop	
<u>Publications list</u> <u>CIE Disks</u> <u>CD-ROMs and DVD</u>	Members of CIE National Committees get a 50% price reduction on CIE documents. To apply for membership, contact the <u>CIE National Committee in your country</u> .	
CIE HOME Mail CIE	Abstracts are available by clicking publication numbers. Go directly to:	
	<u>Technical Reports and Guides</u> <u>Standards</u> <u>Conference and Symposia Proceedings</u> <u>Withdrawn and out-of-print publications</u>	
	TECHNICAL REPORTS AND GUIDES:	



CIE WEBSHOP

			146	
Atrás 🝷 🜍 🕤 🗾 🙆 🏠 🔎	Búsqueda 🐈 Favoritos 🤡 🎯 🎍 💹 🔹 📙 🎇	😐 🔏		
ección 🧃 http://www.techstreet.com/ciegate.tmpl			💌 🛃 Ir Vínculos 🎽 📆 👻	
COMMINITERN	SS:ON INTERNATIONALE DE L'ECLAIRAGE IATIONAL COMMISSION ON ILLUMINATION IATIONALE BELEUCHTUNGSKOMMISSION ONICIONALE BELEUCHTUNGSKOMMISSION	ore		
LOGIN	SHOPPING BASKET HELP STORE HOME	2		
CE Catalog V CE Catalog V from stand search Tips	ome to CIE's Online Standards Store, a one-stop source for nloadable and printed CIE products, plus industry standards ASTM, IEEE, IESNA, DIN, BSI, and more. This one-stop dards shop is in partnership with Techstreet. Browse the CIE Catalog Standards, Technical Reports and Proceedings from Commission Internationale de L'Eclairage	Lighten Your Load		
nportant Links fisit the CIE Homepage Irowse CIE Catalog	Latest From CIE <u>CIE x032:2007</u> Proceedings of the 2nd CIE Expert Symposium - Visual Appearance	Multi-user Corporate Subscriptions		
iustomer Service contact CIE Vhat's New at CIE	CIE 179:2007 Methods for characterizing tristimulus colorimeters for measuring the colour of light	Related Organizations <u>ASHRAE</u> <u>ASME</u>		
ist of National Committees (bout PDF) (opyright Notice	CIE x031:2006 Proceedings of the 2nd CIE Expert Symposium - Lighting and Health	<u>asim</u> Bsi Din I <u>CC</u>		-
ecurity and Privacy Policy	CIE ×030:2006	IEEE		



4 / 2007

CIE Australia Inc CIE - Austria * Belgian Inst. on Illumination (IBE-BIV) * CIE - Brazil * Bulgarian National Committee on Illumination Canadian National Committee of the CIE * Chinese National CIF Committee Croatian National Committee of the CIE * Czech National Committee of the CIE * National Illuminating Committee of

COMMISSION INTERNATIONALE DE L'ECLAIRAGE INTERNATIONAL COMMISSION ON ILLUMINATION

INTERNATIONALE BELEUCHTUNGSKOMMISSION

CIE ADRESSES THE ISSUE OF ENERGY CONSERVATION

The issue of energy conservation in lighting was present in most debates during our Quadrennial Session held in Beijing in July 2007. It was brought to the General Assembly by the Finnish National Committee, and its concern was largely shared by the delegates which approved the following resolution:

ENERGY CONSERVATION REQUIRES SMART LIGHTING

A worldwide consensus is evolving to reduce electrical energy consumption because of concerns about global climate change. Recognizing that lighting consumes substantial energy, the International Commission on Illumination (the CIE) which held its XXVIth Session in Beijing, China 4-11 July (about 800 delegates from 42 countries), called for a worldwide effort to reduce energy consumed for lighting. This is possible through intelligent use of new technology and a scientific understanding of the varied human needs for

COLORIMETRY Understanding the CIE System



Book edited by Prof. J Schanda. Published by Wiley-Interscience, August 2007. Endorsed by the CIE. Contributions and chapters by many international experts.



CIE PUBLICATION 15:2004 COLORIMETRY

For over 70 years the International Commission on Illumination (CIE) has provided recommendations about the precise way in which the basic principles of colour measurement should be applied. CIE Publication 15:2004 "Colorimetry" represents the latest edition of these recommendations and contains information on standard illuminants; standard colorimetric observers; the reference standard for reflectance; illuminating and viewing conditions; the calculation of tristimulus values, chromaticity coordinates, colour spaces and colour differences; and various other colorimetric practices and formulae. This publication is consistent with the fundamental data and procedures described in the CIE Standards on Colorimetry.

This publication, which replaces CIE Publication 15.2 (and is not to be known as 15.3!), includes details of the CIE DE2000 colour difference equation; spectral power distributions for sets of halophosphate lamps, DeLuxe type lamps, three-band lamps, multi-band lamps, high pressure sodium lamps and high pressure metal halide lamps. The nomenclature for the recommended geometries has changed, and there are even changes to the equations defining the parameters of the CIELAB colour space!

The publication is accompanied by CD-ROM that contains all the tables of standard and recommended spectral distributions and a program (for Windows operation systems) to perform interpolation of spectra related to reflection or absorption measurements.



CIE PUBLICATION 15:2004 COLORIMETRY

Thus this publication represents the colorimetric state-of-the-art and should find a place on the bookshelf of every colour scientist.

The report is written in English, with a short summary in French and German. It consists of 79 pages with 17 tables, and is readily available at the CIE National Committees or the CIE Central Bureau in Vienna.

CIE 15:2004 Tables (description of files)

- Relative spectral power distributions; CIE Standard Illuminant A CIE Standard Illuminant D65
- Components of daylight used in the calculation of relative spectral power distribution of daylight illuminants of different correlated colour temperatures; <u>Component S0- Component S1- Component S2</u>
- <u>x2(lambda) data y2(lambda) data z2(lambda) data</u>
- <u>x10(lambda) data</u> <u>y10(lambda) data</u> <u>z10(lambda) data</u>





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

CIE Central Bureau Kegelgasse 27 A-1030 Wien Austria

About Us Divisions News Bulletins Publications Symposia/Conferences Search CIE

٠

•





Meetings

Every four years the CIE holds a Session, hosted by one of the member countries, which serves the very useful purpose of bringing together all the representatives of the National Committees who are interested in the technical activities of the organization. The Sessions involve the presentation of papers as well as meetings of Divisions and Technical Committees. During the Session the General Assembly meets to review and discuss the administrative and technical affairs of the CIE, make plans for the future, and elect the officers for the coming quadrennium.

The Board usually meet once a year, the Divisions at least every other year, and Technical Committees as often as is necessary to accomplish their objectives. In addition, the Divisions are encouraged to sponsor symposia and other meetings, especially in cooperation with other international bodies, to help further the work of the CIE.

Publications

The CIE publishes Standards, Technical Reports and Recommendations, prepared by the Technical Committees and the Proceedings of the Sessions and Symposia. More than 100 such <u>publications</u> have been issued, attesting to the activity of the Technical Committees. Joint publications include the IEC/CIE International Lighting Vocabulary and ISO/CIE Standards.

In addition to Technical Publications, CIE News is published quarterly. This gives regular up-dates on the progress of the technical programme and forthcoming meetings together with news on administrative matters and tonics of general interest in the world of light and

CIE SESSIONS

YEAR	VENUE	
1979	Kyoto (Japan)	
1983	Amsterdam (Netherlands)	
1987	Venice (Italy)	
1991	Melbourn (Australia)	
1995	New Delhi (India)	
1999	Warsaw (Poland)	
2003	San Diego (USA)	
2007	Beijing (China)	
2011	Sun City (South Africa)	









THANK YOU FOR YOUR ATTENTION

