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Building environment design — Indoor environment — Design process for visual environment

Conception de l'environnement des bâtiments — Environnement intérieur — Processus de conception de l'environnement visuel



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 16817 was prepared by Technical Committee ISO/TC 205, *Building environment design*.

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Introduction

ISO/TC 205 provides general principles for the design of building indoor environment. These principles are defined in ISO 16813 and help the main participants in the design process to ensure an indoor environment of the quality required for users.

The purpose of this International Standard is to provide design team members with a design process for the indoor visual environment to ensure required visual comfort, physiological effects of light and energy performance and sustainability of buildings. Visual comfort implies more than providing a comfortable lighting environment for executing a task. For example, a window has two functions: to facilitate the entry of daylight and to provide a view.

The design of an indoor visual environment of the required quality for users must take into account human needs that include elements linked to task performance, visual comfort, health, safety and well-being in reference with the work of ISO/TC 159 *Ergonomics*. With respect to illuminating engineering and lighting fixtures, the work requires close consultation with CIE (International Commission on Illumination). The existing standards of CIE and CEN will be used and any new work will be performed in close coordination with CIE and CEN.

This International Standard:

- provides a framework for taking into consideration various parameters and criteria that influence the quality of the indoor visual environment;
- is prepared for design teams (architects and engineers), as well as building clients, contractors, government officials, and academic staff;
- is aimed at assisting these groups in applying an effective design process in the pursuit of an indoor visual environment of the required quality for the users;
- incorporates sustainability considerations;
- is prepared on the basis of the following fundamental ideas:
 - i) it addresses the standardization of a design process elaborated through a systemic approach, a system of tasks that are structured together;
 - ii) it is a guideline which invites designers to follow an iterative and progressive approach, to make choices and take compromise solutions according to the goals of the client, to the constraints and the opportunities linked to the building site, in relation to the main areas of work covered by ISO/TC 205;
 - iii) it allows the performance level or values to be established by the programme and/or applicable regulation.