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AIJES

**Architectural Institute of Japan
Environmental Standards**

AIJES-L0002-2016 (English Version)

Standard for Lighting Environment

Architectural Institute of Japan

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***On the occasion of the publication of English Versions of Environmental Standards of the
Architectural Institute of Japan (AIJES English Versions)***

In 2001, Architectural Institute of Japan (AIJ) released the "Report of the Society's Criteria and Specifications Review Committee", announcing that "AIJ continues to prepare and publish standards and standard specification documents for actively addressing various problems currently faced and contributing to the sound development of architecture." It also stated that standards, criteria, and standard specifications of AIJ should have the following four roles: roles leading practical work, roles supporting legal regulations, roles as academic organizations, roles as neutral organizations.

For environmental performance experienced with the five senses in daily life, recommended standards, not legal minimum standards are necessary. These standards are used when users experience the environmental performance levels of a building and practitioners realize the environmental performance required by the users. It is important for AIJ to publish new academic achievements and technological developments as the recommended environmental standards.

Under such a background, the Research Committee on Environmental Engineering has been working on "Environmental Standards of the Architectural Institute of Japan" (AIJES) with affiliated committees which have examined performance items, performance standards, verification methods, and so on.

As of 2019, the Japanese versions of the AIJES have been published for each environmental field. It has been decided that translated English versions will be published at a future date.

These specified in the English versions standards shall become the first step towards raising expectations for the improvement of the building environment and conservation of the global environment.

With the publication of the English versions of the AIJES, the Committee on Environmental Engineering would like to express sincere gratitude to everyone concerned in various fields including the members who assisted the work, and the Committee asks for further cooperation in the global implementation of the AIJES.

AIJ Research Committee on Environmental Engineering

Purpose and basic policy of establishing Environmental Standards of the Architectural Institute of Japan (AIJES)

- (1) AIJ establishes "Environmental Standards of the Architectural Institute of Japan" and publishes it for society. These standards are "environmental standards for buildings and cities" defined by the Research Committee on Environmental Engineering of AIJ, and are referred to as "Environmental Standards of Architectural Institute of Japan" (AIJES). Symbols for target environmental fields and numbers in the order of publication for each field are given.
- (2) The purpose of establishing AIJES is to show academic criteria for judging the environment of buildings and cities based on the Code of Conduct and Ethics Guidelines of AIJ, and to take the leading role in relevant legal standards. Based on this purpose, it is expected that researchers, clients, designers, supervisors, constructors, and administrative officers will share knowledge about AIJES.
- (3) The scope of the application of AIJES covers all environments of buildings and cities, and it covers all levels such as urban environment, environment around buildings, building environment, indoor environment, local environment, and micro-environment around the human body.
- (4) AIJES shall be defined by the terms "standards", "norms", "specifications", and "guidelines". The definition of these terms basically follows the provisions of AIJ; however, in AIJES, "standards" is used to represent the whole.
- (5) AIJES shall demonstrate the academic judgment standards of AIJ with objectivity and foresight, logic and ethics, regionality and internationality, and flexibility and consistency, while maintaining neutrality and fairness.
- (6) The content shall be thereby agreed upon and accepted by consensus of the members of AIJ. AIJES shall include performance items such as safety, health, comfort, energy saving, resource saving / recyclability, environmental compatibility, welfare and so on.
- (7) The contents of AIJES are applied at each stage of planning, designing, construction, completion and operation of buildings, and shall include criteria concerning categories such as performance values, calculation method, construction method, inspection method, test method, measurement method, evaluation method and so on.
- (8) AIJES shall consider such classifications as the minimum level (acceptable value), recommended level (recommended value), and target level (target value) to define the environmental level.

- (9) AIJES shall be revised as necessary in consideration of, among other factors, the progress of science and technologies and the changes in social conditions that affect its contents.
- (10) In principle, AIJES shall conform to various laws and regulations and public rules as it is based on the premise that it is applied to actual cities and buildings.
- (11) Where possible, AIJES shall maintain a consistent system among different environmental fields.

Foreword

This standard proposes a philosophy for ambient and target lighting and describes a framework of lighting environment criteria corresponding to this new philosophy for the next generation, to optimise the effectiveness of the lighting environment while minimising energy consumption. More sophisticated lighting designs, such as luminance-based designs, have become possible with recent developments in lighting calculation and simulation methods. This standard places luminance rather than illuminance at the centre of lighting metrics, unlike conventional lighting standards. This standard will respond to the growing demand for better functionality and performance of the lighting environment and contribute to achieving a comfortable lighting environment.

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