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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 29458-2024

Replacing GB/T 29458-2012

Requirements and test methods for LED displays in sports venue

体育场馆LED显示屏使用要求及检验方法

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Standardization Administration of the PRC

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document replaces GB/T 29458-2012 "Requirements and test methods for the use of

LED displays in sports venues" and GB/T 29458- Compared with 2012, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

a) The scope of application has been changed (see Chapter 1, Chapter 1 of the 2012 edition);

b) Added display screen installation structure type (see 4.4);

c) Changed the installation location requirements for flat panel displays (see 5.1.1, 2012 edition 5.1); added bucket-shaped displays and ring-shaped displays.

Installation and maintenance requirements for screens and fence displays (see 5.1.2 to 5.1.4);

d) Added the requirement for the number of characters displayed on bucket-shaped display screens (see 5.4.1);

e) The control system functional requirements have been changed (see 5.6, 5.4 of the 2012 edition);

f) Changed the requirements for brightness, brightness uniformity, contrast and viewing angle (see 5.7.1 to 5.7.4, 5.5.1, 5.5.3 to 5.7.4 of the 2012 edition) 5.5.5), added the requirements for white field chromaticity coordinate uniformity (see 5.7.6);

g) The requirements for refresh frequency and pixel loss rate have been changed (see 5.8.2, 5.8.3, and 5.6.2 and 5.6.3 of the 2012 edition);

h) Changed the requirements for appearance quality, enclosure protection level, assembly accuracy, protective measures and other performance (see 5.9~5.13, 2012 edition) 5.7~5.12);

i) The inspection method and inspection environment have been changed (see 6.1, 6.1 of the 2012 edition);

j) The inspection method for installation and maintenance has been changed (see 6.2.1, 6.2.1 of the 2012 edition);

k) The inspection methods for display function and control system function have been changed (see 6.2.2, 6.2.6, and 6.2.4 of the 2012 edition);

l) Changed the test methods for brightness, viewing angle, and white field chromaticity coordinates (see 6.2.7.1, 6.2.7.4, 6.2.7.5, 6.2.5.2, 2012 edition) 6.2.5.1, 6.2.5.4), added the test method for white field chromaticity coordinate uniformity (see 6.2.7.6);

m) Changed the inspection methods for electrical performance, appearance quality, enclosure protection level, assembly accuracy, protective measures and other performance (see 6.2.8~6.2.13 of the 2012 edition, 6.2.7~6.2.12 of the 2012 edition).

Please note that some of the contents of this document may involve patents. The issuing

organization of this document does not assume the responsibility for identifying patents.

This document is proposed by the State General Administration of Sport.

This document is under the jurisdiction of the National Sports Standardization Technical Committee (SAC/TC456).

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The previous versions of this document and the documents it replaces are as follows.

- First published in 2012 as GB/T 29458-2012;

- This is the first revision.

1 Scope

This document specifies the technical requirements and qualification judgment rules for LED display screens in sports venues, describes the corresponding testing methods, and gives Classification of LED displays.

This document is applicable to the installation and testing of LED display screens used in stadiums, comprehensive gymnasiums, swimming and diving halls, and ice and snow venues.

The LED display screens of other types of venues can be used for reference.

This document does not apply to small LED electronic timing scoreboards and signboards.

2 Normative references

GB/T 4208

3.1 Terms and Definitions

The following terms and definitions apply to this document.

3.1.1 LED displays

A device that uses LED pixels to display text, images, videos and other information.

Note. It usually includes basic components such as LED screen and display control system, as well as auxiliary systems, and adopts an integrated or split structure.

[Source. SJ/T 11141-2017, 3.1, modified]

3.1.2 pixel

The smallest imaging unit of an LED display.

[Source. SJ/T 11141-2017, 3.6]

3.1.3 assembly accuracy

The geometric deviation of the pixels of the LED display screen occurs during the assembly process.

Note. Includes flatness, horizontal relative misalignment, vertical relative misalignment, and relative deviation of pixel center distance.

3.1.4 ratioofout-of-controlpixel

The ratio of LED pixels whose luminous state does not match the display state required by the control to the total pixels.