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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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**Digital cinema (D-cinema) quality -- Screen luminance level,
chromaticity and uniformity**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the translation method equivalent to ISO 26431-1:2008 "Digital Cinema Quality Part 1. Screen Brightness Level, Chroma and

Evenness".

This standard has made the following editorial changes.

--- Change the standard name to "Digital Cinema Quality Screen Brightness, Chroma and Uniformity".

Introduction

This standard includes SMPTE431-1:2006 and the following information.

--- Reference material. NFS27-100, movie-digital cinema-type electronic projection room, providing additional information.

--- For details on stray light and contrast (see Appendix A, A.7), please check the relevant standards.

Digital Cinema Quality Screen Brightness, Chroma and Uniformity

1 Scope

This standard specifies the identification screening room and commercial theater. When the movie is projected by a projector using a digital light engine, the absolute reflection of the

screen is absolutely

Brightness level, white point chromaticity, and brightness uniformity. The purpose of this standard is to restore the color gamut and contrast of the projected image to digital cinema.

The effect is consistent when the version is produced.

This standard applies to the identification of projection rooms and commercial cinemas. When using a digital light engine projector to project a movie, the absolute reflection of the screen is absolutely

Detection of brightness, chromaticity and brightness uniformity.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

ISO 10527.2007 CIE standard colorimetric observation (CIE standard colorimetric observers)

3 performance level

There are different requirements for different applications in the industry for errors or target accuracy to be achieved in a particular installation. For example, the master system

The accuracy requirements of the studio system for screen technical indicators are higher than for commercial theaters. To facilitate communication, define the following two categories or level accuracy

Screening place.

--- Identification screening room. This level of precision is the highest precision for practical application of chromaticity. It is recommended for master post-production for dimming and color grading.

--- Theater. This level of accuracy is the lowest precision for commercial cinema projections.

See Chapter 5 for the classification of performance levels.

4.1 Projector conditions

The measurement should be made when the projector is in normal working condition, the lens should be in the best focus position, and the format of the format can cover the screen.

The largest area. Display on the screen (the entire screen or at least five areas defined by the center of the screen and the four corners defined in 4.2)

Is a 100% white level signal, the above white level signal is defined by the digital code value, which is the maximum allowed by the input signal standard.

Sexual white level.

4.2 Measurement position on the screen

The measurement of the brightness of the cinema screen reflection should include the geometric center and four sides of the screen. For the identification screening room, it should also increase the screen

Measurement of the four corners. The edge and corner are measured on the inside of the edge of the screen, and the distance from the edge of the screen is 5% of the width (height) of the screen.

1%.

4.3 Measurement position in the auditorium

Measurements of the indicators on the screen shall be made at the center seat of the row of seats closest to the geometric center of the seating area of the audience, measuring