
**Cinematography — Screen luminance
and chrominance for the projection of
film motion pictures**

*Cinématographie — Luminance et chrominance des écrans pour la
projection de films sur pellicule*



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Published in Switzerland

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 36, *Cinematography*.

This fourth edition is a minor revision and the title changed to include the word film.

Cinematography — Screen luminance and chrominance for the projection of film motion pictures

1 Scope

This document specifies the screen luminance level and chrominance white point for theatrical projection of 70 mm, 35 mm and 16 mm motion-picture prints at a rate of 24 frames per second.

It can also be applicable to the non-theatrical presentation of 70 mm, 35 mm and 16 mm motion-picture prints intended for projection at 24 frames per second.

NOTE Throughout this document, the term “screen” means the screen-picture area appropriate to the film format and projection system in use.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

4 Measurement method

4.1 Operating conditions

Measure the luminance and chrominance with the projector operating at a nominal projection speed of 24 frames per second with the shutter running and without film in the gate.

NOTE Measured luminance and chrominance are affected by the lens in use as well as other optical components.

4.2 Luminance measuring device

The screen luminance shall be measured with a photometer having an acceptance angle not greater than 2° (recommended value 1,5°), having the spectral sensitivity of a Standard Observer^[1] agreed by the International Commission on Illumination in 1924, and adopted in 1933 by the International Committee of Weights and Measures.

4.3 Chrominance measuring device

The screen chrominance shall be measured with a colour temperature meter or a spot spectroradiometer with an acceptance angle not greater than 2°.