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

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



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Published in Switzerland

Foreword

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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.

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ISO 2910 was prepared by Technical Committee ISO/TC 36, *Cinematography*.

This third edition cancels and replaces the second edition (ISO 2910:1990), which has been technically revised.

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

1 Scope

This International Standard 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.

This International Standard 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 International Standard, the term “screen” means the screen-picture area appropriate to the film format and projection system in use.

2 Measurement method

2.1 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.

2.2 Luminance measuring device

The screen luminance shall be measured with a photometer having an acceptance angle not greater than 2° (recommended value $1,5^\circ$), 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.

2.3 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° .

2.4 Position of measuring device in theatres

In theatres, the measurements shall be taken with the suitable meter located approximately 1 m above the floor on the longitudinal axis of the theatre at a position two-thirds of the distance from the screen to the back row of seats (measured from the screen). To ensure satisfactory performance in all parts of the theatre, measurements shall also be taken with the meter located at two points at a distance of one-third of the theatre width to each side of the single position.