
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*

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

ISO 2910:2018

<https://standards.iteh.ai/catalog/standards/iso/1c36eaa3-d30f-4f87-81d0-30d6e6cafd68/iso-2910-2018>



iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

ISO 2910:2018

<https://standards.iteh.ai/catalog/standards/iso/1c36eaa3-d30f-4f87-81d0-30d6e6cafd68/iso-2910-2018>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2018

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Published in Switzerland

Contents

Page

| | |
|-------------------------------------------------------------------------------------------------------------------|-----------|
| Foreword | iv |
| 1 Scope | 1 |
| 2 Normative references | 1 |
| 3 Terms and definitions | 1 |
| 4 Measurement method | 1 |
| 4.1 Operating conditions | 1 |
| 4.2 Luminance measuring device..... | 1 |
| 4.3 Chrominance measuring device..... | 1 |
| 4.4 Position of measuring device in theatres..... | 2 |
| 5 Luminance level of screen centre | 2 |
| 6 Chrominance | 2 |
| Annex A (informative) Recommended distributions, limits and tolerances for luminance and chrominance | 3 |
| Bibliography | 5 |

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

ISO 2910:2018

<https://standards.iteh.ai/catalog/standards/iso/1c36eaa3-d30f-4f87-81d0-30d6e6cafd68/iso-2910-2018>

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

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.

ISO 2910:2018

<https://standards.iteh.ai/catalog/standards/iso/1c36eaa3-d30f-4f87-81d0-30d6e6cafd68/iso-2910-2018>

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°.

4.4 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.

5 Luminance level of screen centre

The reference luminance level shall be 55 cd/m² for each format. See [Annex A](#) for further recommendations.

6 Chrominance

The light reflected from the screen shall have a reference spectral distribution comparable to that of a black body at a colour temperature of 5 800 K. See [Annex A](#) for further recommendations.

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

ISO 2910:2018

<https://standards.iteh.ai/catalog/standards/iso/1c36eaa3-d30f-4f87-81d0-30d6e6cafd68/iso-2910-2018>