INTERNATIONAL STANDARD

ISO 12608

First edition
1996-12-15

Cinematography — Room and surround conditions for evaluating television display from telecine reproduction

Cinématographie — Conditions portant sur l'environnement à respecter pour évaluer l'image sur un moniteur à partir d'un transfert téléciné

Reference number
ISO 12608:1996(E)

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.

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.

International Standard ISO 12608 was prepared by Technical Committee ISO/TC 36, *Cinematography*.

Annex A of this International Standard is for information only.

International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

Cinematography — Room and surround conditions for evaluating television display from telecine reproduction

1 Scope

This International Standard specifies the environmental and surround conditions that are required in standard definition television and video programme review areas for the consistent and critical evaluation of television signals and other video programme material, using different technical facilities on properly aligned colour-picture monitors.

This International Standard also specifies ambient lighting requirements for viewing rooms, the size of surround and background, colour monitor characteristics and observer viewing parameters. It is designed to provide for repeatable colour grading or correction and the rendering of subjective assessments.

2 Colour monitor characteristics

Parameters for the monitor screen at reference white (100 IRE) are as follows:

a) a chromaticity of illuminant D_{65};

b) a screen luminance of 120 cd/m^2 ± 17 cd/m^2 for 60 Hz television systems;

c) a screen luminance of 80 cd/m^2 ± 5 cd/m^2 for 50 Hz television systems.

This difference in screen reference white levels is to take account of the increased possibility of flicker effects, under certain circumstances, in 50 Hz television systems.

3 Observer viewing characteristics

3.1 The observer shall have normal colour perception.

3.2 Adequate time shall be allowed for visual adaptation to the viewing environment.

3.3 The observer's distance from the monitor screen(s) shall be 4 to 6 times the picture height.

3.4 The observer(s) shall view the monitor screen(s) at a preferred angle of 0° ± 5°, but no greater than ± 15°, in both the horizontal and vertical planes, from the perpendicular to the mid-point of the screen(s).

4 General conditions — Viewing area decor

4.1 The viewing area decor within the field of view shall have a generally neutral matte impression, without dominant colours.

4.2 Surface reflectances shall be non-specular and shall not exceed 10 % of the peak luminance value of the monitor white.

Surfaces which may be reflected in the monitor screens shall have a non-specular surface reflectance of less than 15 %.

4.3 Desk and control console surfaces shall have a generally neutral matte finish without dominant colours or specular features.

5 Surround characteristics

5.1 The wall surrounding the monitor(s) shall be either illuminated or reflective, and present a visually neutral surface. Illuminated or reflected light from the surround shall closely match D_{65}, and shall have a peak luminance of 12 cd/m^2 for 60 Hz television systems, or 8 cd/m^2 for 50 Hz television systems, which are nominally 10 % of the monitor screen(s) reference white (see clause 2). A gradation in intensity of the surround, from top to bottom or bottom to top, is more pleasing.

5.2 The surround shall have an area of eight times the monitor screen mask (for a single monitor), or five time the monitor screen masks (for twin monitors). Monitors shall be placed in the centre of the surround (see figures 1 and 2).

6 Viewing room lighting characteristics

6.1 All light sources used during picture assessment or adjustment shall have a colour temperature closely matching the monitor screen, i.e. D_{65} (see clause 2). Ambient reflections from an unpowered monitor shall be at the lowest possible level, and shall not cause perceptible impairment from the viewing position.

6.2 Desks or control consoles where scripts or editing instructions are to be read shall be illuminated to a light level of approximately 100 lx. Illumination on general working surfaces shall be at 30 lx to 40 lx.

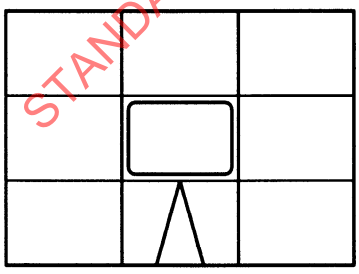

Figure 1 — Single-monitor surround area

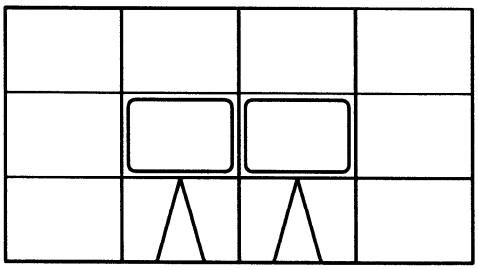

Figure 2 — Two-monitor surround area

Annex A
(informative)

Bibliography

[1] ISO 2910:1990, *Cinematography — Screen luminance for the projection of motion-picture prints in indoor theatres and review rooms.*

[2] ISO 6035:1983, *Cinematography — Viewing conditions for the evaluation of films and slides for television — Colours, luminances and dimensions.*

[3] ISO 6036:1996, *Cinematography — Colour motion-picture films and slides for television — Density specifications.*

This page intentionally left blank