
International Standard



6728

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Photography — Camera lenses — Determination of ISO colour contribution index (ISO/CCI)

Photographie — Objectifs photographiques — Détermination de l'indice ISO de contribution à la couleur des images (ISO/CCI)

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been authorized 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 6728 was developed by Technical Committee ISO/TC 42, *Photography*, and was circulated to the member bodies in June 1981.

It has been approved by the member bodies of the following countries :

Australia	Italy	Spain
Belgium	Japan	United Kingdom
Canada	Mexico	USA
France	Netherlands	USSR
Germany, F.R.	South Africa, Rep. of	

No member body expressed disapproval of the document.

Photography — Camera lenses — Determination of ISO colour contribution index (ISO/CCI)

0 Introduction

The overall colour balance of a photographic film camera image depends on the spectral characteristics of the film/process combination, the illuminant, and the optical system. These three elements are made by a large number of manufacturers throughout the world, but are expected to work interchangeably with one another to produce satisfactory pictures either in the form of transparencies or prints. For this reason common standards or aims have to be established for products and variability has to be tightly controlled.

This International Standard is concerned with the optical component of the photographic system which, in most cases, is the lens. It describes the spectral characteristics of an ISO standard camera lens and a method for determining the contribution of spectrally selective lenses to the colour of the final camera film image. The method is based on the assumption that the film will have the spectral sensitivity of an average colour film and be exposed to "photographic daylight" illumination. Spectral transmittance values of an ISO standard camera lens are suggested aims for lens manufacturers.

Previous to this International Standard, the colour contribution of lenses was determined using the procedure based on density, while the procedure in this International Standard is based on log transmittance. This International Standard also updates the average spectral sensitivity values for the latest colour films. For the above reasons, the colour contribution index (CCI)

values obtained through the use of this International Standard cannot be compared to those obtained with other methods prior to 1980. The use of the notation 0/5/4 rather than 5-0-1 should indicate the values are obtained by using this International Standard.

The annexes provide additional information on this subject.

1 Scope and field of application

This International Standard describes a method for determining and specifying the contribution of camera lenses to the colour of a photograph. The procedure can also be applied to other optical elements in the camera.

2 References

ISO 5/1, *Photography — Density measurements — Part 1: Terms, symbols and notations for reflection and transmission density.*¹⁾

ISO 2239, *Photography — Light sources for use in sensitometric exposure — Simulation of the spectral distribution of daylight.*

ISO 3028, *Photography — Camera flash — Determination of ISO spectral distribution index.*²⁾

1) At present at the stage of draft.

2) At present at the stage of draft. (Revision of ISO 3028-1974.)