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## **The CIE 2016 Colour Appearance Model for Colour Management Systems: CIECAM16**

**CIE 248:2022**

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A colour appearance model provides a viewing-condition-specific method for the transformation of the tristimulus values,  $X$ ,  $Y$ ,  $Z$ , to or from perceptual attribute correlates.

This publication describes a specific colour appearance model, CIECAM16, which may be useful for colour management systems, used in the imaging industries, that involve related colours. The main applications of the model are the evaluation of photographic prints and self-luminous displays, where the colours will be perceived as related colours.

This model is based on the CAM16 colour appearance model. It consists of a chromatic adaptation transform and equations to calculate a set of perceptual attribute correlates using the CIE 1931 standard colorimetric observer. This report provides revisions to the CIE colour appearance model for colour management systems that involve related colours, CIECAM02. The CIECAM16 model is simpler than the original CIECAM02 model, but it maintains the same prediction performance for visual data as the original model.

The evolution and application of this colour appearance model, CIECAM16, are presented, as is additional information about the use of the model in practical applications. This Technical Report replaces CIE 159:2004 "A colour appearance model for colour management systems: CIECAM02".

The publication is written in English, with a short summary in French and German. It consists of 38 pages with 6 figures and 8 tables and is readily available from the [CIE Webshop](#) or from the National Committees of the CIE.

The price of this publication is EUR 120,- (Members of a National Committee of the CIE receive a 66,7 % discount on this price – please approach your NC for information on accessing this discount).