



International Commission on Illumination
Commission Internationale de l'Eclairage
Internationale Beleuchtungskommission

PRESS RELEASE

July 2024

A roadmap toward basing CIE colorimetry on cone fundamentals

CIE 254:2024

ISBN 978-3-902842-73-2

DOI: 10.25039/TR.254.2024

This Technical Report presents a roadmap for the CIE, to help guide its development of a new, complete, self-consistent system of CIE colorimetric measures, based directly on cone fundamentals, with explicit consideration of the impacts of normal variations of the cone fundamentals due to age, field of view, and individual diversity.

The report provides the necessary background information, with detailed supporting references, to support the reasoning behind the new specific proposals that are presented. It recommends that the CIE form several new Technical Committees to help address these conclusions.

The five proposed new CIE Technical Committees can be tentatively described with the following titles:

- (i) Creation of LMS-based measures similar to some measures within the XYZ system;
- (ii) Expansion of the cone fundamental wavelength range;
- (iii) LMS-based approximately uniform colour space;
- (iv) Recommendations for a global study of cone fundamental diversity;
- (v) Colorimetric effects of cone fundamental diversity.

The document is written in English, with a short summary in French and German. It consists of 38 pages with 5 figures and is readily available from the [CIE Webshop](#) or from the National Committees of the CIE.

The price of this publication is EUR 90,- (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).