



International
Standard

ISO/CIE 28077

**Photocarcinogenesis action
spectrum (non-melanoma skin
cancers)**

*Spectre d'action de la photocarcinogenèse (cancers de la peau
hors mélanome)*

**Third edition
2024-10**

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Foreword

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This document was prepared by the International Commission on Illumination (CIE) Technical Committee 6-32, *Action Spectrum for Photocarcinogenesis*, in cooperation with Technical Committee ISO/TC 274, *Light and lighting*.

This third edition cancels and replaces the second edition (ISO/CIE 28077:2016), which has been technically revised.

The main changes are as follows:

- text giving historical background shifted to [Annex A](#);
- Normative reference updated;
- Bibliography updated;
- minor editorial changes.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Solar ultraviolet radiation (UVR) is recognized as a major cause of non-melanoma skin cancer in humans. Skin cancer occurs most frequently in the areas of the body most exposed to solar radiation, and correlates with the duration and intensity of outdoor exposure to UVR. Describing the relationship of exposure (dose) to risk (skin cancer) requires the availability of a spectral weighting function or action spectrum for photocarcinogenesis. This document proposes the adoption of an action spectrum derived from experimental laboratory data and modified to estimate the non-melanoma tumour response in human skin. The experimental data are not sufficient for specifying effectiveness above 400 nm, but are sufficient for estimating effectiveness from 400 nm down to 250 nm.

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