International Commission on Illumination
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PRESS RELEASE

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CIE Technical Note
"Relating Photochemical and Photobiological Quantities to Photometric Quantities"

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Optical radiation has different effects on biological systems. To quantify these effects usually the spectral distribution of a radiant quantity is weighted with the action spectrum of that effect. By this a relation between the photobiological and radiometric quantities is made.

In very recent publications, mainly in the field of photobiological safety, a link between an actinic quantity and the corresponding photometric quantity is made mainly to give a simplified risk assessment procedure by means of absolute photometric measurements in combination with relative spectroradiometric measurements instead of absolute spectroradiometric measurements. Unfortunately, different terms or even units are used, e.g. "transformation factor", „specific effective radiant ultraviolet power", "proportionality factor", "WB/lm factor", or new units are defined, e.g. "Blue Watt", "WB".

This Technical Note proposes the definition of new terms relating photobiological or photochemical quantities to photometric quantities. It adheres to the correct use of units within the present International System of Units SI.

The publication is written in English, consists of 8 pages and is freely downloadable from the CIE webpage.