

CIE 10 DEGREE PHOTOPIC PHOTOMETRIC OBSERVER

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The $V(\lambda)$ function accepted in 1924 is valid for photopic vision. It was long recognized that for para-foveal vision this function does not describe luminance perception correctly. In 1964 the CIE accepted a large field colorimetric observer, but this system had no photometric counterpart. Subsequent research has shown that $\bar{y}_{10}(\lambda)$ function can be used as the spectral luminous efficiency function of a 10° photometric observer. The present report provides guidance when and how this large field photometric observer could be used, especially if luminance has to be determined para-foveally.

Based on the detailed evaluation of the available literature data TC 1-59 came to the conclusion that the adoption of a 10° photopic photometric observer [$V_{10}(\lambda)$] can be recommended to the CIE and that this system should be based - according to the original recommendations of the CIE Colorimetric Committee - on the $\bar{y}_{10}(\lambda)$ function of the CIE 1964 standard colorimetric observer.

The report is written in English, with a short summary in French and German. It consists of 23 pages with 3 tables, and is readily available at the CIE National Committees or the CIE Central Bureau in Vienna. In the course of April you will be able to obtain it via the new CIE online webshop (www.cie.co.at).

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