

PWDAS-37**ANOMALIES IN THE COLOUR MISMATCH CORRECTION FACTOR,
CCF, APPROACH FOR INCANDESCENT LAMPS**

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The mismatch of spectral responsivity to the CIE $V(\lambda)$ function is the most critical characteristic of photometers. In the International Commission on Illumination (CIE) Technical Committee TC 2-40 draft ⁽¹⁾ under discussion, it is proposed that for the spectral evaluation of an incandescent or halogen lamp, and only in this case, the error caused by the mismatch can be corrected by a colour correction factor, which can be approximated with a ratio of temperatures and a exponent m .

$$ccf = H \left(\frac{T_d}{T_A} \right)^m$$

where $T_A = 2856\text{K}$ and T_d is the distribution temperature of the lamp to be measured.

Up to the knowledge of the authors, no limitations and/or exceptions to this approximation (nor in the interval of distribution temperature, neither in the degree of mismatch of the photometer) have been published. However in our laboratory we have found several photometers for which it is not possible to find an unique value for the mismatch exponent m . This anomalous behaviour does not depend on the degree of spectral mismatch $V(\lambda)$ function.

⁽¹⁾ CIE TC 2-40 Draft, CIE/ISO Standard for characterizing the performance of illuminance meters and luminance meters.