



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

PRESS RELEASE

September 2020

Recommended Reference Solar Spectra for Industrial Applications

CIE 241:2020

ISBN 978-3-902842-90-9

DOI: 10.25039/TR.241.2020

This document provides CIE recommended reference solar spectra for industrial applications. It contains a large selection of simulation benchmarks for total, direct and diffuse components of solar spectra under various atmospheric conditions and solar geometries (defined by the air mass). For this purpose a freely available solar spectral irradiance model has been used to generate tables and figures of solar spectral irradiance under a number of different atmospheric conditions, in the form of explicit meteorological input parameters. The data as provided in this document are to a large extent comparable to those in CIE 085-1989, but they are presented with a higher spectral sampling. The respective solar spectra are the basis for national and international standard reference spectra for various applications. They have been extensively validated against measured spectra.

This document cancels and replaces CIE 085-1989.

The publication is written in English, with a short summary in French and German. It consists of 89 pages with 6 figures and 12 tables and is readily available from the [CIE Webshop](#) or from the National Committees of the CIE.

The price of this publication is EUR 96,- (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).