

THERMO-OPTICAL PERFORMANCE OF A SOLAR FUNNEL COOKER

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Abstract: Funnel type solar cookers are simple, effective and have multiple advantages in practical use, but there is limited data available in scientific literature about their thermo-optical performance. This work aims to fill this lack of data. A well known model of solar funnel cooker has been subject to a series of experimental tests, indoor and outdoor, using different working fluids (water and oil). The experimental data has been used to calibrate the parameters of a simple thermal model. The calibrated model predictions show good agreement with experimental data and figures of merit describing the thermo-optical performance of the cooker are provided.

Keywords: Solar, solar funnel cooker, experimentation, thermal model, figure of merit.