

## ARTIFICIAL SOLAR SOURCE

### REFERENCE : ET404A



*Non contractual photo*

#### SERVICE :

In countries with clear skies, it is assumed that solar radiation gives, on a surface perpendicular to the direction of the sun, a power of the order of 1 kW / m<sup>2</sup>.

The choice of lamps and optics must make it possible to obtain this power. The spectral energy distributions of the sun and the artificial source are compared in the table below.

The similarity is quite large since, for wavelengths such as 0.4  $\mu$ m <  $\lambda$  < 2.2  $\mu$ m, the radiated power is 90% for the sun and 76% for the artificial source.

#### Technical specifications :

##### Lamps :

- Quantity : 6
- Supply voltage: 220/380 V, 50 Hz, three-phase
- Type : halogen double envelope
- Wiring : 3 independent circuits

##### Optics :

- Material : specially treated aluminum
- Form : parabolic.

The radiation received by the optics is, on the one hand diffused, on the other hand, reflected parallel to the axis of the parabola.