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Principles of the “Sunny-16” rule: the correct exposure time for a photograph taken outdoors in bright sunshine conditions, with a film rated ISO 125, is 1/125-th of a second when the lens aperture is set to f/16. This corresponds to an Exposure Value (EV) equal to 15. The circular slide rules yields at a glance all possible combinations of exposure times and apertures delivering the same results, at least within the limits of the law of reciprocity for film. *Corrections for non-reciprocity are not indicated, since they vary from one film to another; digital sensors can be considered as perfectly reciprocal.*

By a comparison with the exposure table printed at the back of classical GOSSEN Lunasix/Luna-Pro exposure meters, one finds that the the “Sunny-16” rule, EV=15@ISO 125 is actually valid when the amount of incident light is 70000 lux, i.e. when the absolute meter reading is 19+2/3 on the absolute light scale.

As a general rule:

Sunny-16 rule by bright sunshine, available incident light approx. 70000 lux

**Expose for $1/S_{\text{ISO}}$ -th of a second with an aperture set to f/16
when the film (or digital sensor) ISO-rating is set to S_{ISO}**

**Changing the aperture to f/ N_2 instead of f/ N_1 ,
requires to change the exposure time by a factor $(N_2/N_1)^2$**

The old series of speeds between 1/5-th of a second and 1/400 are indicated in red, they do not differ from the standard modern series by more than one third of a f-stop, one third of an EV unit.

The aperture scale indicates all intermediate values by one-third of a f-stop from f/0.7 (*if you are lucky enough to own one of the famous Zeiss Planar lenses used by Kubrick in “Barry Lyndon”*) up to 1/1440, this extreme value covering applications to pinhole photography.

