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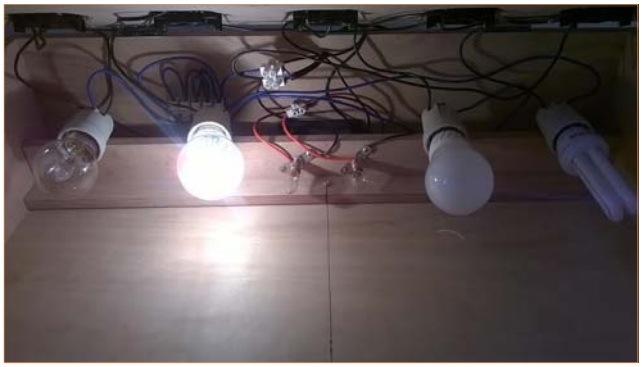
Exploring light with smart phone

Smart phones include a number of well-known sensors. During the studies of the different type of waves we were started dealing with the light. The experimental device was a home-made wooden box, which was made by one of the students. In the large size box four different light sources were located with their own switch.



The first step we were watching the value of illumination in the case of these different light sources. These results were compared with the once that we got with a classic method, the Bunsen photometer, and we got nearly similar data.

We wondered how the value of the illumination depended on the power of the light source. For this purpose, we had put together a simple circuit with a potentiometer, an voltmeter and ammeter.

In addition we were able to examine the light-transmission by the glass. After performing the measurements we were able to determine the transmittance of the glass. We calculated with the formula of *Fresnel reflection* the reflectivity and the result was compared with our measured data.

ADDITIONAIL EXPERIMENTS FROM OPTIC THEME