The test
Purpose of the test was to determine the sensitivity of pyranometers and semiconductor solar irradiance sensors using 4 different methods, and to compare these sensitivities to the one supplied by the manufacturer. The comparison tests were carried out under 4 different conditions:
- indoor under a solar simulator
- outdoor horizontal
- outdoor tilted at a constant tilt angle
- outdoor on a 2-axis tracker

The tests were carried out using 4 different instrument types:
- secondary standard pyranometers
- second class pyranometers
- semiconductor solar irradiance sensors
- PV reference cells

The test results
Test results are presented in graphs as the one of Figure 2. Among the different instrument types, the secondary standard pyranometers show the least variability. SR20 performance is remarkably consistent under different test conditions. The report concludes that it is too early to draw final conclusions about the absolute accuracy. We think the causes of the good consistency are SR20’s low zero offsets and high calibration accuracy.

Reference