

BEAM UNIFORMITY MEASUREMENTS MULTIPOINT 601-300 W

The new ISO24444:2019 (UVA+B position) & ISO24444:2022 (UVA position) requires a beam uniformity measurement every 6 months. To facilitate these measurements, Solar Light Co develops 2 types of detectors:

- **PMA2174 – Digital sensor – Quadrant Sensor Assembly – for version 2.5 (new model)**

Solar Light's Model PMA2174 Digital Quadrant Sensor Assembly is designed specifically for use with Homogenizer- Equipped Multipoint® Solar Simulators, such as Multipoint® Models 601-300 and 601-150. The sensor may be used with any Solar Light PMA-Series Radiometer or DCS-Series Automated Dose Controller to determine beam uniformity in compliance to the applicable ISO and FDA regulations.

- **PMA2172 - Digital sensor – Quadrant Sensor Assembly – for version 1.0 (previous model)**

Solar Light's Model PMA2172 Digital Quadrant Sensor Assembly is designed specifically for use with 8mm Liquid Light Guide Solar Simulators, such as Multipoint Models 601-300 and 601-150. The sensor may be used with any Solar Light PMA-Series Radiometer or DCS-Series Automated Dose Controller to determine beam uniformity in compliance to the applicable ISO and FDA regulations.

Procedure – PMA 2174:

One specific support is supplied with the sensor:



- 1) Remove the Teflon support to put the supplied support on the homogenizer, at the end of the LLGs.

*Note: please note that the control should be done in sit position (support not fixed). If your LLGs are in prone position, you will **NOT** be able to place LLG at 90°.*

Then, you should handle the specific support in place (or fix it with tape).

Best way is to place the sensor on the specific support in position #1 and place it on LLGs by handling it.



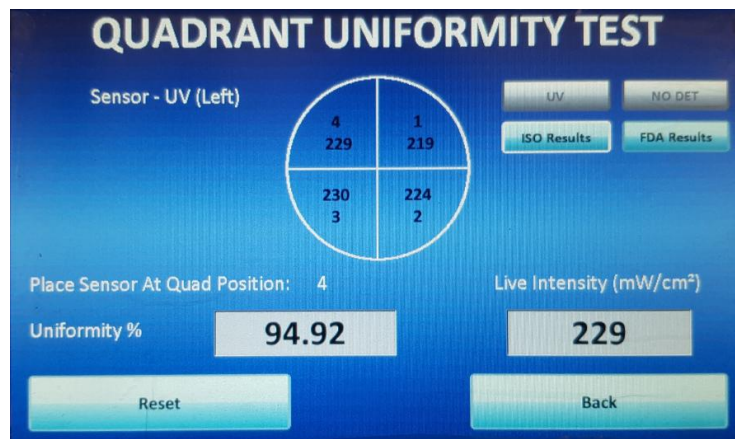
- 2) Place the sensor in the first port you want to measure. The sensor will stay on the support with a magnet system.
- 3) Measure in first the position #1, and do the same for the 3 others positions:



- 4) This control could be handle via the DCS-2 radiometer and its special function "QUADRANT UNIFORMITY TEST":

Note: your DCS2 should be connected to the power supply (connector on the front) to control the shutter.

- Select the function QUADRANT UNIFORMITY TEST.



The program will ask you to place the sensor in position 1.
The measurement will start when you open the shutter manually. The program will then measure for 10 seconds and will take the average value.
Then, it will ask you to place sensor in position #2.
Do it and click on CONTINUE.
Do the same for the 4 positions. The final results will appears at the end of the test.
2 results available: ISO and FDA.

Note: you can display the formula (% uniformity) by holding the ISO or FDA results button for few seconds.

The ISO formula is the following:

$$\text{ISO-TOL formula: } 100 - [((\text{Max}-\text{Min}) / \text{Average 4 measurements}) \times 100]$$