



## Devices & Services Company

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### D&S Technical Note 12-2

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#### 15R Specular Reflectometer Measurement Procedure

1. To make a measurement, the detector thumbwheel must be in the DET position.
2. Select the aperture to be used for the measurement by rotating the aperture thumbwheel into position. The photo shows aperture #2 selected which is 25 mrad full angle.



3. Install the reference standard on the measurement port. Instruments with the model 15R designation have a standard that screws into the base. Make sure to screw it in all the way until the shoulder is flush with the base of the instrument. Model 15R-USB instruments have a quick connect standard as shown in the photo below. Match the yellow alignment marks to attach the standard.



4. Calibrate the instrument. Adjust the reading with the gain knob to match the reflectance value for the standard. The reflectance value is found on the standard and on the base of the instrument. After

calibration, remove the standard. 15R-USB models have a docking ring on the top of the instrument for the standard.



5. Adjust the center support leg to compensate for the mirror thickness. For a first surface mirror adjust the support to the fully counterclockwise position. For a second surface mirror start at the fully counterclockwise position and adjust the support by 1 full turn in the clockwise direction for each 0.05 inches thickness.



6. Place the 15R on the test sample. Adjust the outer legs to locate the reflected image within the aperture by watching for a reading on the display.



7. Maximize the reading by adjusting the outer legs. The maximum reading is the reflectance reading.



8. Moving the instrument to another spot on the test mirror the outer legs should already be close and require very little adjustment.



9. Even if the reading at the new spot seems to be OK, adjust the outer legs to be sure that the reading is maximized.



10. Recalibrate the instrument periodically as described in step 4.
11. See the Getting Started Guide or the Operation & Maintenance Manual for 15R-USB data storage functions.