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The dose response curve of EDR2 film has to be accurately determined prior to profile and dose distribution measurements. The dependency of the film sensitometric curve on the energy of megavoltage photon beams (6X, 15X, 18X), field size, depth, and irradiation technique (dMLC step wedge, static fields with one field per film or multiple fields per film) was studied. The validation was done based on ion chamber and diode measurements of 60° EDW profiles. There was a 2% agreement among these methods. The energy dependence in the megavoltage range was insignificant. For small and medium field sizes at depths up to 20cm, the differences in EDW profiles determined with two out of the three sensitometric curves were within 2%. For large field sizes (25x25) and depths larger than 15 cm, differences up to 5% were determined due to scatter component increase in the beam. There was a good agreement between the EDW profiles determined using the dMLC step wedge calibration curve and the traditional one (one field per film). However, for sensitometric curves obtained from films irradiated with more than one field per film, differences up to 10% in dose were detected. In conclusion, the above technique based on 60° EDW profile evaluation can provide a quick quality assurance tool for EDR2 sensitometric curve validation prior to more complex SRS and IMRT dosimetrical analysis.