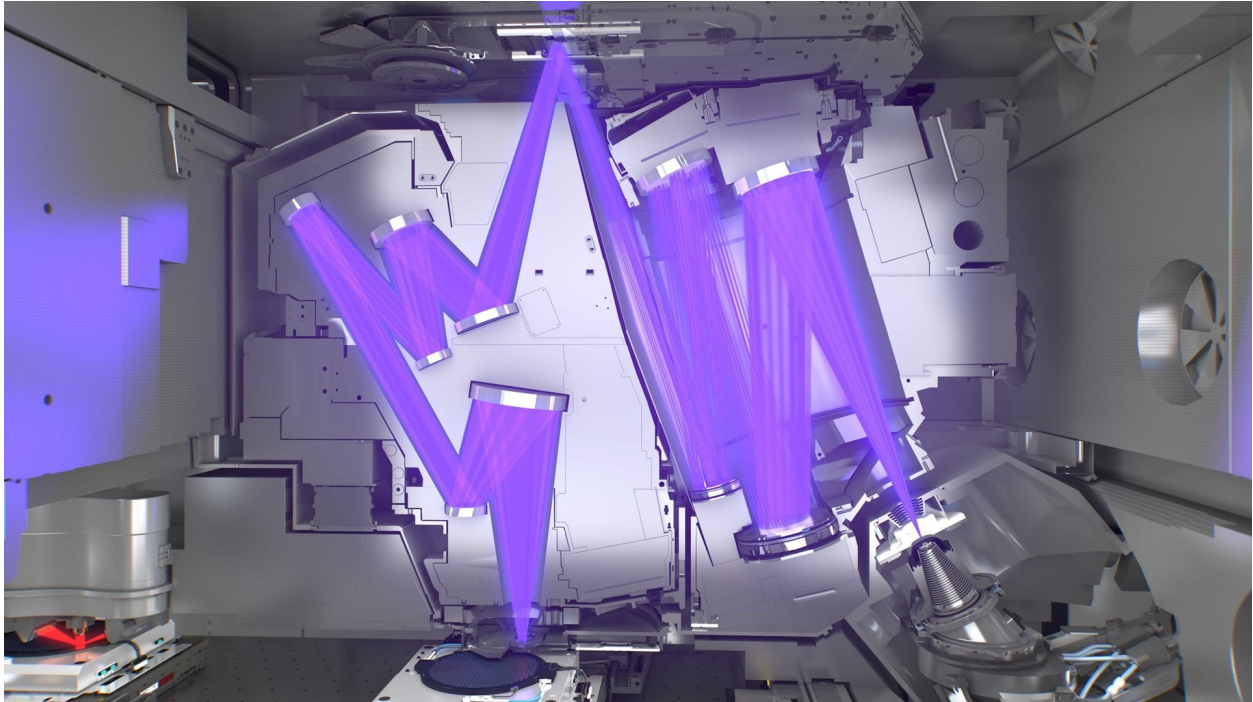# Optimization of the illumination pupil qualification function for extreme ultraviolet lithography

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Qualifying Extreme Ultraviolet (EUV) machine performance is critical to ensure that the quality of chips produced during the lithography process is up to standard. This qualification is often done by deriving information from multiple kinds of measurements. Some measurements take more time than others, and for some measurements parts of the machine need to be inactive during the measurement process. Therefore, modeling the effect of these inactive parts on the measurement output is needed.

This project is aimed at developing an accurate model that combines the knowledge about the physical processes and the data collected with various measurement settings to predict the desired quality metrics without having to run additional time-consuming dedicated measurements.