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# SYSTEM AND METHOD FOR IMPROVING LINEWIDTH CONTROL IN A LITHOGRAPHY DEVICE BY VARYING THE ANGULAR DISTRIBUTION OF LIGHT IN AN ILLUMINATOR AS A FUNCTION OF FIELD POSITION

## ABSTRACT OF THE DISCLOSURE

Electromagnetic energy is emitted from an illumination source of a lithography device. A portion of the emitted electromagnetic energy passes through an illumination optics module. The illumination optics module includes a one-dimensional optical transform element having a pupil plane. An aperture device having an adjustable aperture is located proximate to the pupil plane so that a portion of the electromagnetic energy received by the one-dimensional optical transform element passes through the aperture of the aperture device. The angular distribution of the electromagnetic energy passing through the illumination optics module is adjusted as a function of illumination field position using the aperture device, thereby improving line width control in the lithography device.

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