Tailored Light Outcoupling from Glass Plate with Arbitrarily Shaped Apertures
In modern imaging and display systems, apertures with different shapes may be encountered. For example, in- and outcoupling apertures of the waveguide in near-to-eye displays often have to be tailored in certain shapes. With the region concept in VirtualLab Fusion, apertures with arbitrary shapes can be defined flexibly. As examples, several aperture shapes are presented. Situations with fully and partially illuminated apertures are shown as well.
Modeling Task

- Collimation lens (NA = 0.15)
- Glass plate with differently shaped apertures on back side

Diagram: A point source emits light that passes through a collimation lens and then through a glass plate with different shaped apertures on its back side. The output is shown as a question mark.
Results

- spot diagram intensity pattern
- fully illuminated aperture
- rectangular aperture
- intensity pattern (real color view)
Results

- Elliptical aperture
- Spot diagram
- Intensity pattern (real color view)
- Fully illuminated aperture
Results

polyangular aperture

partially illuminated aperture

spot diagram

intensity pattern (real color view)
Results

- Sampled aperture
- Spot diagram
- Fully illuminated aperture
- Intensity pattern (real color view)
## Document Information

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