A method for minimizing the phase errors of Rotman lenses

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Abstract:
A method is introduced for determining the feed curves of Rotman lenses such that the phase errors are minimized. The method ensures that there are at least three zero phase error points on the radiating array for each off focal beam position. The results of a path length error study show that there is a very significant drop in the level of the maximum phase errors (in the order of about 4:1) compared with the commonly used circular and elliptical feed curves.
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