Summary: Let $f$ be the function defined on the open unit disk, with $f(0) = 0 = f'(0) - 1$, satisfying the subordinations $zf'(z)/f(z) \prec \alpha + (1 - \alpha)e^2$ or $zf'(z)/f(z) \prec \alpha + (1 - \alpha)\sqrt{1 + z}$ respectively, where $0 \leq \alpha < 1$. The sharp radii has been determined for these functions to belong to several well-known classes. In addition, some inclusion relations and coefficient estimates are also obtained.

MSC:
- 30C45 Special classes of univalent and multivalent functions of one complex variable (starlike, convex, bounded rotation, etc.)
- 30C80 Maximum principle, Schwarz’s lemma, Lindelöf principle, analogues and generalizations; subordination
- 30C50 Coefficient problems for univalent and multivalent functions of one complex variable

Keywords:
- star-like functions
- lemniscate of Bernoulli
- coefficient estimates
- inclusion relations

Full Text: DOI

References:

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