We calculated the influence of the limb-darkened finite disk correction factor in the theory of radiation-driven winds from massive stars. We solved the 1-D m-CAK hydrodynamical equation of rotating radiation-driven winds for all three known solutions, i.e., fast, Omega-slow and delta-slow. We found that for the fast solution, the mass loss rate is increased by a factor $\sim 10\%$, while the terminal velocity is reduced about $10\%$, when compared with the solution using a finite disk correction factor from a uniformly bright star. For the other two slow solutions the changes are almost negligible.

Although, we found that the limb darkening has no effects on the wind momentum luminosity relationship, it would affect the calculation of synthetic line profiles and the derivation of accurate wind parameters.

Status: Manuscript has been accepted

Weblink: http://xxx.lanl.gov/abs/1207.6009

Comments: 19 pages, 6 figures

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