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From a large number of magnetograms, we compute several physical measures including the maximum horizontal gradient, the length of neutral line, etc. These measures are used to describe photospheric magnetic field properties such as nonpotentiality and complexity, which is believed to be closely related with flare production. Our statistical results suggest that solar flare productivity increases with nonpotentiality and complexity. And, the relationship between flare productivity and these measures can be well fitted with functions. It is very beneficial for us to employ these measures to set up an operational flare forecast model in the future work.