Abstract. Consider the following illumination problem: given a stage represented by a line segment $\text{Stage}$ and a set of lightsources represented by a set of points $S$ in the plane, assign powers to the lightsources such that every point on the stage receives a sufficient amount -- let's say one unit -- of light while minimizing the overall power consumption. By assuming that the amount of light arriving from a fixed lightsource decreases rapidly with the distance from the lightsource, this becomes an interesting optimization problem. We propose to reconsider the classical illumination problems as known from computational geometry literature under this light attenuation model. This paper examines the simple problem introduced above and presents different solutions, based on convex optimization, discretization and linear programming, as well as a purely combinatorial approximation algorithm. Some experimental results are also provided.