Lighting intentions are the goals and constraints that designers would like to achieve in an illumination design process. Light filters can be used as an architectural element to obtain such intentions by inserting them into walls or roofs. Defining correctly the filter shape is a challenge. In this work, we present a novel method to design optimal filters from a given lighting intention. Our methodology, which could be completely integrated within a computer aided architectural design framework, is based on a global illumination and optimization approach. Our test results show that optimal filter shapes can be obtained in a short time.