## Rates of Use of Vehicle Lighting Equipment: Variation Among Drivers

### Abstract

This study provides information about annual rates of use for the following automotive lighting equipment by U.S. drivers: backup lamps, daytime running lamps, high- and low-beam headlamps, license plate lamps, parking lamps, side marker lamps, stop lamps, tail lamps, and turn signal lamps. The data were collected as part of a naturalistic field study of crash warning systems. In that study, 108 randomly selected drivers from southeastern Michigan were provided with instrumented research vehicles (16 Honda Accords) for periods of 40 days and instructed to drive the research vehicles in place of their personal vehicles. The results reported here extend a previous report (Buonarosa, Sayer, & Flannagan, 2008) that was based on a similar, earlier naturalistic field study. The new results are based on a somewhat larger number of drivers; they are from vehicles without automatic headlamp controls; they include an estimate of daytime running lamp use; and they include further analysis of individual differences among drivers in lamp use.

The results are presented for each lamp type in terms of the average annual hours of use by all drivers, by groups of drivers based on age and gender, and for percentiles of individual drivers based on either log-normal or Weibull distributions.

### Key Words

Lighting equipment, use, headlamps, stop lamps, turn signals, daytime running lamps, bulb life