Technical Report Documentation Page

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
UMTRI-2008-14		

4. Title and Subtitle	5. Report Date
Real-World Frequency of Use of Lighting Equipment	April 2008
	6. Performing Organization Code: 302753

7. Author(s)	8. Performing Organization Report No.
Buonarosa, M.L., Sayer, J.R., and Flannagan, M.J.	UMTRI-2008-14

9. Performing Organization Name and Address	10. Work Unit no. (TRAIS)
The University of Michigan Transportation Research Institute 2901 Baxter Road Ann Arbor, Michigan 48109-2150 U.S.A.	11. Contract or Grant No.

12. Sponsoring Agency Name and Address	13. Type of Report and Period Covered
The University of Michigan Industry Affiliation Program for Human Factors in Transportation Safety	14. Sponsoring Agency Code

15. Supplementary Notes

The Affiliation Program currently includes Alps Automotive/Alpine Electronics, Autoliv, BMW, Chrysler, Com-Corp Industries, Denso, Federal-Mogul, Ford, GE, General Motors, Gentex, Grote Industries, Hella, Hitachi America, Honda, Ichikoh Industries, Koito Manufacturing, Lang-Mekra North America, Magna Donnelly, Mitsubishi Motors, Muth, Nissan, North American Lighting, OSRAM Sylvania, Philips Lighting, Renault, SABIC Innovative Plastics, Siemens VDO Automotive, Sisecam, SL Corporation, Stanley Electric, Toyota Technical Center USA, Truck-Lite, Valeo, Visteon/ACH, and 3M Visibility and Insulation Solutions. Information about the Affiliation Program is available at: http://www.umich.edu/~industry/

16. Abstract

This study provides information about average annual use of the following automotive lighting equipment by U.S. drivers: low- and high-beam headlamps, turn signals, back-up, license plate, parking, sidemarker, stop, and tail lamps. The data were collected as part of a naturalistic field study of crash warning systems. Eighty-seven randomly selected drivers from southeastern Michigan were provided with instrumented research vehicles (11 identical 2003 Nissan Altimas) for periods averaging 26 days and instructed to drive the research vehicle in place of their personal vehicle.

The results are presented for each lamp type in terms of the average annual hours of use and minutes used per 100 km driven. These findings are discussed in relation to the rated life of various bulbs and the median life of vehicles in the U.S.

17. Key Words	18. Distribution Statement
Lighting equipment, use, headlamps, stop lamps, turn signals	Unlimited

19. Security Classification (of this report)	20. Security Classification (of this page)	21. No. of Pages	22. Price
None	None	18	