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16. Abstract In a survey conducted over 34 years ago, Hare and Hemion (1968) found that United States drivers underuse their high beams in circumstances in which their use is recommended. High-beam use was also found to be inversely related to traffic density. Since that time, changes in beam pattern design, dimming controls, and perhaps driver awareness of the hazards of limited visibility may have sufficiently altered the situation to warrant a follow-up investigation. A survey of high-beam headlamp use was conducted on three unlit local roadways in the Ann Arbor area. Observers judged whether vehicles that were clear of both oncoming and preceding traffic had their high or low beams turned on. Illuminance measures at approximate beam pattern locations were also recorded to support beam judgments. In addition, traffic density was estimated over 15-minute intervals so that the relationship between beam use and traffic density could be examined. The results suggest that the pattern of high-beam underuse is similar to that observed in the late 1960s.					
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