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Effects of Dedicated Stop Lamps on Nighttime Rear-End Collisions

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16. Abstract 
This study was designed to evaluate whether dedicated stop lamps, in comparison to stop lamps that are functionally combined with tail or turn signals, provide additional safety benefits at night. The analysis compared the frequencies of rear-end collisions in which the vehicles were struck to those collisions in which the same vehicles were the striking ones. The analysis used 1999-2003 Florida and North Carolina crash data. The vehicle sample consisted of 38 passenger car models for the years 1994-2003.

Overall, the results include a statistically significant pattern that suggests a beneficial effect of dedicated stop lamps. However, the results are complex and further analyses should be done to better understand the possible effect of dedicated versus combined stop lamps.

17. Key Words 
stop lamp, brake lamp, rear lighting function, rear lamp configuration, rear-end collision, crash, accident

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