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16. Abstract LED traffic signal lamps are being used to replace incandescent traffic signal lamps because of the long-term cost saving associated with reduced energy consumption and longer service life. The are reasons to believe that the use of LED traffic signal lamps may compromise of the safety features designed into traffic signal systems that were intended for use with incandescent lamps. The focus of this study is to analyze the electrical characteristics of LED traffic signal lamp assemblies and determine if they are compatible with exisiting typical traffic signal hardware (load switches and conflict monitors). The as-new state and failed state electrical characteristics of the LED lamps assemblies are measured and analyzed. A testing procedure is established and documented for repeating this analysis on newer models of LED traffic signal lamps in the future.			
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