



Request for Proposal (“RFP”)

Topic: Effects of Vehicle Headlight Color on Glare and Safety

Posting Date: September 9, 2025

Sponsoring Organization: AAA Foundation for Traffic Safety (“AAAFTS”)

Deadline to Submit Proposal: Tuesday, October 21, 2025, 5:00 PM EDT

Background and Purpose

AAAFTS is seeking a research organization (“Consultant”) to examine the effects of different automotive headlight configurations on safety.

Automotive headlight systems have evolved dramatically since their inception. As headlight systems developed from incandescent bulbs to High Intensity Discharge (HID) and now complex Light Emitting Diode (LED) systems, roadway illumination has improved significantly. While this improved lighting has increased visibility for drivers of vehicles with these systems, complaints of glare from other road users have also increased.

Headlights on modern vehicles can vary from warm yellowish light to cool white or even blue light in LED systems. Many complaints related to headlight glare are associated with the white or blue colors of light.

The purpose of this research is to help determine an optimal low-beam headlight color temperature that will provide adequate illumination for drivers while reducing perceived glare for oncoming drivers.

Objectives

The objectives of this project are to:

- Identify and synthesize relevant scientific literature on the impact of different headlight systems and color temperature in terms of visibility, glare and any other considerations relevant to traffic safety.
- Guided by the literature scan, conduct original research to examine the effect of different headlight colors on visibility and performance (e.g. target detection or other measures), as well as the impact on discomfort and disability glare for oncoming drivers. The study should consider a range of road users (e.g., different age groups and visual function).

Method

The AAA Foundation envisions that the objectives of this research could be met through, but not limited to, literature review and synthesis as well as test track or field approaches. The AAA Foundation envisions that a project of the intended scale would likely take approximately 12–18 months to complete.

Uses

It is AAAFTS' express intention to (i) obtain a non-exclusive, royalty-free license in perpetuity to the output and contents of the Research Project, and (ii) be the first party to publish findings from the Research Project on its website and other media channels. After AAAFTS' initial release, Consultant may publish, use or disseminate the materials obtained or derived from the Research Project in coordination with AAAFTS. Consultant agrees to acknowledge AAAFTS as the sponsor in any publications. AAAFTS agrees to list the Consultant and individual researchers as authors.

Proposal Format & Requirements

Your proposal must meet the following formatting requirements:

- Use standard letter-sized page (8.5 x 11 inch), with at least one-inch margins on all sides.
- All text should be single-spaced.
- Body text should use font no smaller than 12-point; footnotes and text inside of tables should use font no smaller than 10-point.
- The body of the proposal must not exceed five (5) pages (excluding title page, CVs, appendices, and budget material).
- Please submit the proposal as a PDF.

Proposals shall include the following elements. Failure to follow these instructions may result in disqualification:

1. Title Page

- Title of the proposal.
- Names and affiliations of all investigators.
- Address, telephone number, and email of the primary investigator and/or the individual to whom correspondence regarding the proposal is to be addressed.
- An abstract, not exceeding 300 words.

2. Main Body

The body of the proposal shall be no longer than five (5) pages (not including title page, CVs, appendices, or any budget information) and should contain the sections listed below.

- Objectives
- Approach: Proposals should provide detailed description of the proposed

project tasks and methods, the expected results and output, and potential limitations. When applicable, proposals must describe how subjects or respondents will be identified and recruited.

- Timeline and Supporting Environment: Describe the project timeline, where the activities will take place, and what facilities and resources will be used (if applicable). Present all timelines in terms of project month. Note that actual dates will be determined at the contract agreement stage. Timeline should include significant milestones, final report and other anticipated products or project outputs.

3. Project Budget

Please state the total budget request (including indirect costs as applicable) at the end of the proposal body. Please include a detailed budget including indirect costs as an Appendix. Proposals may provide multiple options for study designs that differ in scale and budget.

For awarded contracts, invoices should be based on actual expenses linked to project deliverables. Progress reports will be required. All travel requests should be documented and justified. Conference travel may or may not be justifiable depending on the purpose and scope of work.

AAAFTS is a charitable entity and is not committed to matching the indirect cost rates of the U.S. government or other entities. However, universities and organizations can request a limited amount of indirect costs. Current maximum allowable rates are:

- 0% rate for **government agencies, other private foundations, and for-profit organizations**;
- Up to a 20% rate for **U.S. universities, U.S. colleges**; and
- Up to a 25% rate for **non-governmental organizations (NGOs)**.

Rates and limitations apply to both the primary applicant and any subcontractors. Each respective organization may receive indirect costs up to the rate applicable to their organization. A contractor with an actual indirect cost rate lower than the maximum rate provided above should not increase the funding request to the maximum allowed.

4. CVs or Resumes for Key Project Staff

Other Suggestions

The body of the proposal should be self-contained; it should be able to be understood by a reviewer without any supporting appendices.

Proposal reviewers are knowledgeable about scientific methods, data analysis, and most major traffic safety topics. As such, technical details related to the tasks and method should be prioritized over background information.

Evaluation Criteria

Proposals are assessed based on three criteria: (1) *innovation*, (2) *approach*, and (3) *team experience and supporting research environment*:

Criterion 1: Innovation (weight: 10%):

Does the applicant propose novel theoretical concepts, methods, instrumentation, or interventions? Is the proposed work expected to have impact on progress in the relevant fields and/or enhance programmatic initiatives?

Criterion 2: Approach (weight: 60%):

Does the application clearly respond to the RFP objectives? Are the overall strategy, methodology, and analyses well-reasoned, technically sound, and appropriate to accomplish the project objective(s)?

Criterion 3: Team Experience and Supporting Environment (weight: 30%):

Are the Principal Investigators and proposed personnel well-suited to the project, in terms of skills and experience? Are the institutional support, equipment, and other physical resources available to project personnel adequate for the project proposed?

Project budget requests will be assessed in relation to the scope of the work proposed.

Proposal Submission

Deadline: Tuesday, October 21, 2025, 5:00 PM EDT.

No proposals will be accepted after this time.

Submit your proposal electronically to RFP@aaaafoundation.org.

When sending your proposal to the AAA Foundation, please give your electronic files names that can help identify them.

Questions

An FAQ document is available at this [link](#), which includes common questions from previous years.

If you have other questions, please email them to RFP@aaaafoundation.org. AAAFTS will accept questions until 5:00 PM EDT, September 16, 2025. Answers to these questions will be posted on the AAAFTS website no later than 5:00 PM EDT, September 17, 2025.

Terms and Conditions

The selection of a Consultant is conditioned upon and not considered final until a Research Agreement is executed by both AAAFTS and the Consultant.

About the Sponsor

Established in 1947 by The American Automobile Association, Inc., the AAA Foundation for Traffic Safety is an independent, publicly funded 501(c)(3) charitable research and education organization dedicated to saving lives by preventing traffic crashes and reducing injuries. AAAFTS' mission is to prevent traffic deaths and injuries by conducting research into their causes and by educating the public about strategies to prevent crashes and reduce injuries when they occur. Additional information about the AAA Foundation

for Traffic Safety can be found at www.aaafoundation.org.