

**Safety Considerations for High-Intensity Lights (HIL)
Directed into the Navigable Airspace**

RATIONALE

High-intensity lights (HIL) (e.g., searchlights and handheld spotlights, see examples in Appendix A) may impair a pilot's visual function and affect aviation safety. Handheld spotlights, flashlights where the manufacturer specifies a high candlepower (>0.25 million candlepower), are becoming more available. Guidance is needed to assist aviation authorities (both domestic and international) with the safe use of these light sources.

The Federal Aviation Administration (FAA) requested that the SAE provide guidance for evaluating the effects of bright lights on aircraft operations in the navigable airspace. The information in this ARP may be used by the FAA and other authorities. Additionally, the guidance presented in this ARP may be incorporated into future FAA documents such as FAA Order 7400.2 (Procedures for Handling Airspace Matters) and Advisory Circulars (ACs).

INTRODUCTION

On March 26, 1999, the FAA submitted a written request to the SAE for assistance in developing standards and regulations concerning outdoor laser operations. Since December 1999, the SAE has developed several documents, including: AS4970, "Human Factors Considerations for Outdoor Laser Operations in the Navigable Airspace," and three Aerospace Recommended Practices: ARP5535, "Observers for Laser Safety in the Navigable Airspace," ARP5572, "Control Measures for Laser Safety in the Navigable Airspace," and ARP5293, "Safety Considerations for Lasers Projected in the Navigable Airspace" in support of this request. Although the number of aviation incidents involving high-intensity lights have been much less than with laser light sources, such incidents have occurred and the FAA has little guidance on the use such devices in the aviation environment. As a result, the FAA has asked the SAE to develop guidance of high-intensity light devices.

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TABLE OF CONTENTS

1.	SCOPE.....	4
1.1	Purpose.....	4
2.	REFERENCES.....	4
2.1	Applicable Documents	4
2.1.1	SAE Publications.....	4
2.1.2	ANSI Publications	4
2.1.3	U.S. Government Publications.....	5
2.2	Other Applicable References.....	5
2.3	Definitions	5
3.	BACKGROUND	7
3.1	Physics of Light.....	7
3.2	Bioeffects and Physiology of Vision/Vision Effects from High-Intensity Lights.....	7
4.	APPLICATIONS OF HIL	8
4.1	Directed HIL Sources.....	8
4.1.1	Carbon Arc.....	8
4.1.2	Enclosed Arc.....	8
4.1.3	High-Intensity Discharge.....	9
4.1.4	Xenon and Mercury/Xenon	9
4.1.5	HMI®	10
4.2	Other Light Sources	10
4.2.1	Incandescent.....	10
4.2.2	Fluorescent	10
4.2.3	Light Emitting Diode.....	10
4.2.4	Sodium Vapor	10
4.2.5	Metal Halide	10
4.3	Reflector Design and Lamp Orientation.....	11
5.	CONTROL MEASURES BY PROPONENT	11
6.	STATE AND LOCAL LIGHTING ORDINANCES.....	11
7.	NOTAM REGARDING OUTDOOR HIGH-INTENSITY LIGHT OPERATION(S).....	11
8.	INCIDENTS INVOLVING HIL IN AVIATION.....	12
9.	INFORMATION ON THE HIL TO BE PROVIDED TO THE FAA BY THE PROPONENT	12
10.	OBSERVATION OF HIL FROM AN AIRCRAFT INFLIGHT	12
11.	PHYSICAL MEASUREMENTS OF OPTICAL RADIATION OF SAMPLE HIL SOURCES	13
12.	HIL EVALUATION CONSIDERATIONS FOR AVIATION SAFETY	13
13.	RECOMMENDATIONS FOR FURTHER RESEARCH	15
14.	NOTES.....	15

APPENDIX A	EXAMPLES OF HIL	16
APPENDIX B	SAMPLE OF SAFE OPERATING PROCEDURES FOR OUTDOOR SEARCHLIGHT OPERATORS	19
APPENDIX C	SAMPLE OF HIL SAFETY INFORMATION FOR AVIATORS	20
APPENDIX D	RADIOMETRIC AND PHOTOMETRIC VALUES FOR TYPICAL COMMERCIAL SEARCHLIGHTS.....	22
APPENDIX E	AIRSPACE FLIGHT ZONES.....	31
APPENDIX F	A SAMPLE OF AN HIL INCIDENT REPORT	34
FIGURE 1	HIGH-INTENSITY LIGHT SOURCE FROM GROUND AS SEEN FROM THE COCKPIT OF AN AIRCRAFT	13
FIGURE 2	HIL BEAM PROJECTING ABOVE THE LASER FREE ZONE.....	14