



Standard Specification for Searchlights on Motor Lifeboats¹

This standard is issued under the fixed designation F 1003; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers searchlights for motor lifeboats.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

1.3 The following precautionary caveat pertains only to the test method portion, Section 7, of this specification: *This standard does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*

B 117 Test Method of Salt Spray (Fog) Testing²

2.2 *Military Standard:*

MIL-STD-105D Sampling Procedures and Tables for Inspection by Attributes³

3. Descriptions of Terms Specific to This Standard

3.1 *lot*—a manufacturer's production run for a specific type of searchlight.

3.2 *order batch*—size of a specific contract or purchase order taken from the lot.

3.3 *production testing*—testing performed during a lot run of specific searchlights.

4. Materials and Manufacture

4.1 *Material:*

4.1.1 All materials used in the construction of these searchlights shall be of a quality suitable for the purpose intended and shall conform to the requirements of this specification.

4.1.2 The searchlight shall be constructed of brass, copper-alloy, an equivalent corrosion-resistant material, or a material that when tested in accordance with Method B 117 for 200 h, does not show signs of pitting, cracking, or deterioration.

4.1.3 Plastic, when used, shall be of a suitable thermoplastic or thermosetting material so molded as to produce a dense solid structure, uniform in texture, finish and mechanical properties.

5. Requirements

5.1 The height of the searchlight from the base to the top of the light shall not exceed 19 in. (483 mm).

5.2 The housing of the searchlight shall be capable of free movement of at least 60° above and 45° below the horizontal, and be able to rotate 360° in the horizontal plane. There shall be a means provided to lock the searchlight in any desired position without the use of tools (vertically and horizontally).

5.3 The searchlight shall be capable of illuminating a light colored object at night at 55 ft (180 m). The searchlight shall project a beam of light of not less than 5.5 ft (18 m) in diameter at a distance of 55 ft from the light source. The edge of the beam shall be a point where the intensity of the light is 10 % of the maximum intensity. The light source shall have a candlepower rating of no less than 350 000 cd.

5.4 The searchlight shall be capable of being operated for not less than 3 h of continuous use and 6 h of intermittent use.

5.5 The lamp used in the searchlight shall be of the incandescent, quartz, or other type which would allow for instant start. The lamps shall be rated for 12 V.

5.6 Each searchlight shall be watertight. The searchlight shall show no leakage of water following the test method prescribed in 7.1.

5.7 Each searchlight shall be wired with a 6-ft (2-m) length of rubber jacketed hard service flexible cord, unless otherwise specified in 8.3. The conductor size shall be no less than 16 AWG. The cable entry into the searchlight shall be sealed with a watertight bushing and packing gland. A suitable clamping device shall be installed in the area where the cables enter the gland to prevent any force being exerted on the gland or connections. The free end of this cord shall be dead-ended unless otherwise specified in 8.3.

5.8 Each searchlight shall be provided with a handle or handgrip to allow for ease of maneuvering the light into various positions.

6. Workmanship, Finish, and Appearance

6.1 Searchlights shall be of sturdy construction, and free from mechanical, electrical, or other imperfections or defects which materially affect appearance or which may affect quality, reliability, or serviceability.

6.2 The finished searchlight shall not contain rough edges,

¹ This specification is under the jurisdiction of ASTM Committee F-25 on Shipbuilding and is the direct responsibility of Subcommittee F25.10 on Electrical, Electronics, and Automation.

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² *Annual Book of ASTM Standards*, Vols 02.05 and 03.02.

³ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.