§ 111.75–17 Lighting of survival craft and rescue boats.

(a) During preparation, launching, and recovery, each survival craft and rescue boat, its launching appliance, and the area of water into which it is to be launched or recovered must be adequately illuminated by lighting supplied from the emergency power source.

(b) The arrangement of circuits must be such that the lighting for adjacent launching stations for survival craft or rescue boats is supplied by different branch circuits.

§ 111.75–18 Navigation lights.

Each navigation light system must meet the following:

(a) Feeders. On vessels required to have a final emergency power source by §112.05–5(a) of this chapter, each navigation light panel must be supplied by a feeder from the emergency switchboard (see §112.43–13). The feeder must be protected by overcurrent devices rated or set at a value of at least twice that of the navigation light panel main fuses.

(b) Navigation light indicator panel. Each self-propelled vessel must have a navigation light indicator panel in the navigating bridge to control side, masthead, and stern lights. The panel must visually and audibly signal the failure of each of these navigation lights. Each light source must be connected to a separate fused branch circuit. The panel must have a fused feeder disconnect switch, and the fuses must have at least twice the rating of the largest branch circuit fuse and must be greater than the maximum panel load.

(c) Dual light sources. Each self-propelled vessel must have duplicate light sources for the side, masthead, and stern lights.

(d) Navigation lights. Each navigation light must meet the following:

(1) Meet the technical details of the applicable navigation rules.

(2) Be certified by an independent laboratory to the requirements of UL 1104 (incorporated by reference; see 46 CFR 110.10–1) or an equivalent standard under 46 CFR 110.20–1. Portable battery powered lights need meet only the requirements of the standard applicable to those lights.

(3) Be labeled with a label stating the following:

(i) "MEETS _______." (Insert the identification name or number of the standard under paragraph (d)(2) of this section to which the light was type-tested.)

(ii) "TESTED BY _______." (Insert the name or registered certification mark of the independent laboratory that tested the fixture to the standard under paragraph (d)(2) of this section).

(iii) Manufacturer’s name.

(iv) Model number.

(v) Visibility of the light in nautical miles.

(vi) Date on which the fixture was type-tested.
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(vii) Identification of bulb used in the compliance test.

(4) If it is a flashing light, have its intensity determined by the formula:

\[ I_e = \frac{G}{0.2 + t_2 - t_1} \]

Where

\( I_e \) = Luminous Intensity.
\( G \) = Integral of \( Idt \) evaluated between the limits of \( t_1 \) and \( t_2 \).
\( t_1 \) = Time in seconds of the beginning of the flash.
\( t_2 \) = Time in seconds of the end of the flash.

NOTE: The limits, \( t_1 \) and \( t_2 \), are to be chosen so as to maximize \( I_e \).

(e) Installation of navigation lights.
Each navigation light must:

(1) Be installed so that its location and its angle of visibility meet the applicable navigation rules;

(2) Except as permitted by the applicable navigation rules, be arranged so that light from a navigation light is not obstructed by any part of the vessel's structure or rigging;

(3) Be wired by a short length of heavy-duty, flexible cable to a watertight receptacle outlet next to the light or, for permanently mounted fixtures, by direct run of fixed cable; and

(4) If it is a double-lens, two-lamp type, have each lamp connected to its branch circuit conductors either by an individual flexible cable and watertight receptacle plug or, for permanently mounted fixtures, by an individual direct run of fixed cable.


§ 111.75–20 Lighting fixtures.

(a) The construction of each lighting fixture for a non-hazardous location must meet UL 1598A or IEC 92–306 (both incorporated by reference; see 46 CFR 110.10–1).

(b) Each fixture globe, lens, or diffuser must have a high strength guard or be made of high strength material, except in an accommodation space, navigating bridge, gyro room, radio room, galley, or similar space where it is not subject to damage.

(c) No fixture may be used as a connection box for a circuit other than the branch circuit supplying the fixture.

(d) Lighting fixtures must be installed as follows:

(1) Each fixture in the weather or in a location exposed to splashing water must be watertight. Each fixture in a damp or wet location must at least be dripproof.

(2) Each fixture and lampholder must be fixed. A fixture must not be supported by the screw shell of a lampholder.

(3) Each pendent-type fixture must be suspended by and supplied through a threaded, rigid conduit stem.

(4) Each tablelamp, desklamp, floorlamp, and similar equipment must be secured in place so that it cannot be displaced by the roll or pitch of the vessel.

(e) Nonemergency and decorative interior-lighting fixtures in environmentally protected, nonhazardous locations need meet only the applicable UL type-fixture standards in UL 1598 (incorporated by reference; see 46 CFR 110.10–1) and UL 1598A marine supplement or the standards in IEC 92–306. These fixtures must have vibration clamps on fluorescent tubes longer than 102 cm (40 inches), secure mounting of glassware, and rigid mounting.