

corresponding to a meteorological visibility of approximately 13 nautical miles.

(b) A selection of figures derived from the formula is given in Table 84.15(b):

TABLE 84.15(b)

Range of visibility (luminous range) of light in nautical miles D	Minimum luminous intensity of light in candelas for K=0.8 I
1	0.9
2	4.3
3	12
4	27
5	52
6	94

[CGD 81-008, 46 FR 62447, Dec. 24, 1981, as amended by USCG-2012-0306, 77 FR 37313, June 21, 2012; USCG-2012-0306, 77 FR 42637, July 20, 2012]

§ 84.17 Horizontal sectors.

(a)(1) In the forward direction, sidelights as fitted on the vessel shall show the minimum required intensities. The intensities shall decrease to reach practical cut-off between 1 and 3 degrees outside the prescribed sectors.

(2) For sternlights and masthead lights and at 22.5 degrees abaft the beam for sidelights, the minimum required intensities shall be maintained over the arc of the horizon up to 5 degrees within the limits of the sectors prescribed in Rule 21. From 5 degrees within the prescribed sectors the intensity may decrease by 50 percent up to the prescribed limits; it shall decrease steadily to reach practical cut-off at not more than 5 degrees outside the prescribed sectors.

(b) All-round lights shall be so located as not to be obscured by masts, topmasts or structures within angular sectors of more than 6 degrees, except anchor lights prescribed in Rule 30, which need not be placed at an impracticable height above the hull, and the all-round white light described in Rule 23(d), which may not be obscured at all.

(c) If it is impracticable to comply with paragraph (b) of this section by exhibiting only one all-round light, two all-round lights shall be used suitably positioned or screened to appear, as far as practicable, as one light at a minimum distance of one nautical mile.

NOTE TO PARAGRAPH (c): Two unscreened all-round lights that are 1.28 meters apart or less will appear as one light to the naked eye at a distance of one nautical mile.

[CGD 81-008, 46 FR 62447, Dec. 24, 1981, as amended by CGD 94-011, 63 FR 5731, Feb. 4, 1998; USCG-2012-0306, 77 FR 37313, June 21, 2012]

§ 84.19 Vertical sectors.

(a) The vertical sectors of electric lights as fitted, with the exception of lights on sailing vessels underway and on unmanned barges, shall ensure that:

(1) At least the required minimum intensity is maintained at all angles from 5 degrees above to 5 degrees below the horizontal;

(2) At least 60 percent of the required minimum intensity is maintained from 7.5 degrees above to 7.5 degrees below the horizontal.

(b) In the case of sailing vessels underway the vertical sectors of electric lights as fitted shall ensure that:

(1) At least the required minimum intensity is maintained at all angles from 5 degrees above to 5 degrees below the horizontal;

(2) At least 50 percent of the required minimum intensity is maintained from 25 degrees above to 25 degrees below the horizontal.

(c) In the case of unmanned barges the minimum required intensity of electric lights as fitted shall be maintained on the horizontal.

(d) In the case of lights other than electric lights these specifications shall be met as closely as possible

[CGD 81-008, 46 FR 62447, Dec. 24, 1981, as amended by CGD 89-024, 55 FR 3947, Feb. 6, 1990]

§ 84.21 Intensity of non-electric lights.

Non-electric lights shall so far as practicable comply with the minimum intensities, as specified in the Table given in § 84.15.

§ 84.23 Maneuvering light.

Notwithstanding the provisions of § 84.03(f), the maneuvering light described in Rule 34(b) shall be placed approximately in the same fore and aft vertical plane as the masthead light or lights and, where practicable, at a minimum height of one-half meter vertically above the forward masthead

§ 84.24

light, provided that it shall be carried not less than one-half meter vertically above or below the after masthead light. On a vessel where only one masthead light is carried the maneuvering light, if fitted, shall be carried where it can best be seen, not less than one-half meter vertically apart from the masthead light.

§ 84.24 High-speed craft.

(a) The masthead light of high-speed craft with a length to breadth ratio of less than 3.0 may be placed at a height related to the breadth lower than that prescribed in §84.03(a)(1), provided that the base angle of the isosceles triangle formed by the side lights and masthead light when seen in end elevation is not less than 27 degrees as determined by the formula in paragraph (b) of this section.

(b) The minimum height of masthead light above sidelights is to be determined by the following formula: $\tan 27^\circ = X/Y$; where Y is the horizontal distance between the sidelights and X is the height of the forward masthead light.

[CGD 94-011, 63 FR 5731, Feb. 4, 1998. Redesignated by USCG-1999-5832, 64 FR 34712, June 29, 1999]

§ 84.25 Approval.

The construction of lights and shapes and the installation of lights on board the vessel must satisfy the Commandant, U.S. Coast Guard.

[USCG-1999-6580, 66 FR 55091, Nov. 1, 2001]

PART 85—ANNEX II: ADDITIONAL SIGNALS FOR FISHING VESSELS FISHING IN CLOSE PROXIMITY

Sec.

85.1 General.

85.3 Signals for trawlers.

85.5 Signals for purse seiners.

AUTHORITY: Sec. 3, Pub. L. 96-591.

SOURCE: CGD 81-006, 46 FR 61845, Dec. 21, 1981, unless otherwise noted.

§ 85.1 General.

The lights mentioned herein shall, if exhibited in pursuance of Rule 26(d), be placed where they can best be seen. They shall be at least 0.9 meter apart but at a lower level than lights pre-

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scribed in Rule 26(b)(1) and (c)(1) contained in the Inland Navigational Rules Act of 1980, as amended (33 U.S.C. 2001 *et seq.*). The lights shall be visible all around the horizon at a distance of at least 1 mile but at a lesser distance from the lights prescribed by these Rules for fishing vessels.

[CGD 81-006, 46 FR 61845, Dec. 21, 1981, as amended by USCG-2012-0306, 77 FR 37313, June 21, 2012]

§ 85.3 Signals for trawlers.

(a) Vessels when engaged in trawling, whether using demersal or pelagic gear, may exhibit:

(1) When shooting their nets: two white lights in a vertical line;

(2) When hauling their nets: one white light over one red light in a vertical line;

(3) When the net has come fast upon an obstruction: two red lights in a vertical line.

(b) Each vessel engaged in pair trawling may exhibit:

(1) By night, a searchlight directed forward and in the direction of the other vessel of the pair;

(2) When shooting or hauling their nets or when their nets have come fast upon an obstruction, the lights prescribed in paragraph (a) of this section.

§ 85.5 Signals for purse seiners.

Vessels engaged in fishing with purse seine gear may exhibit two yellow lights in a vertical line. These lights shall flash alternately every second and with equal light and occultation duration. These lights may be exhibited only when the vessel is hampered by its fishing gear.

PART 86—ANNEX III: TECHNICAL DETAILS OF SOUND SIGNAL APPLIANCES

Subpart A—Whistles

Sec.

86.01 Frequencies and range of audibility.

86.03 Limits of fundamental frequencies.

86.05 Sound signal intensity and range of audibility.

86.07 Directional properties.

86.09 Positioning of whistles.

86.11 Fitting of more than one whistle.

86.13 Combined whistle systems.

86.15 Towing vessel whistles.