

(h) For buoys or daybeacons: Shape, color, number, or letter, depth of water in which located or height above water.

(i) For racons: Manufacturer and model number of racon, height above water of desired installation, and requested coding characteristic. Equipment must have FCC authorization.

[CGFR 68-152, 33 FR 19816, Dec. 27, 1968, as amended by CGD 85-057, 51 FR 11448, Apr. 3, 1986; USCG-2000-7466, 68 FR 68238, Dec. 8, 2003; USCG-2000-7466, 69 FR 12541, Mar. 17, 2004; USCG-2001-10714, 69 FR 24982, May 5, 2004; USCG-2008-0179, 73 FR 35002, June 19, 2008; USCG-2012-0306, 77 FR 37312, June 21, 2012]

§ 66.01-10 Characteristics.

The characteristics of a private aid to navigation must conform to those prescribed by the United States Aids to Navigation System set forth in subpart B of part 62 of this subchapter.

[USCG-2000-7466, 68 FR 68238, Dec. 8, 2003]

§ 66.01-11 Lights.

(a) Except for range and sector lights, each light approved as a private aid to navigation must:

(1) Have at least the effective intensity required by this subpart omnidirectionally in the horizontal plane, except at the seams of its lens-mold.

(2) Have at least 50% of the effective intensity required by this subpart within ±2° of the horizontal plane.

(3) Have a minimum effective intensity of at least 1 candela for a range of 1 nautical mile, 3 candelas for one of 2 nautical miles, 10 candelas for one of 3 nautical miles, and 54 candelas for one of 5 nautical miles. The District Commander may change the requirements for minimum intensity to account for local environmental conditions. For a flashing light this intensity is determined by the following formula:

$$I_e = G / (0.2 + t_2 - t_1)$$

Where:

I_e = Effective intensity

G = The integral of the instantaneous intensity of the flashed light with respect to time

t_1 = Time in seconds at the beginning of the flash

t_2 = Time in seconds at the end of the flash
 $t_2 - t_1$ is greater than or equal to 0.2 seconds.

(4) Unless the light is a prefocused lantern, have a means of verifying that the source of the light is at the focal point of the lens.

(5) Emit a color within the angle of 50% effective intensity with color coordinates lying within the boundaries defined by the corner coordinates in Table 66.01-11(5) of this part when plotted on the Standard Observer Diagram of the International Commission on Illumination (CIE).

TABLE 66.01-11(5)—COORDINATES OF CHROMATICITY

Color	Coordinates of chromaticity	
	x axis	y axis
White	0.500	0.382
	0.440	0.382
	0.285	0.264
	0.285	0.332
	0.453	0.440
Green	0.500	0.440
	0.305	0.689
	0.321	0.494
	0.228	0.351
	0.028	0.385
Red	0.735	0.265
	0.721	0.259
	0.645	0.335
Yellow	0.665	0.335
	0.618	0.382
	0.612	0.382
	0.555	0.435
	0.560	0.440

(6) Have a recommended interval for replacement of the source of light that ensures that the lantern meets the minimal required intensity stated in paragraph (a)(3) of this section in case of degradation of either the source of light or the lens.

(7) Have autonomy of at least 10 days if the light has a self-contained power system. Power production for the prospective position should exceed the load during the worst average month of insolation. The literature concerning the light must clearly state the operating limits and service intervals. Low-voltage disconnects used to protect the battery must operate so as to prevent sporadic operation at night.

(b) The manufacturer of each light approved as a private aid to navigation must certify compliance by means of an indelible plate or label affixed to the aid that meets the requirements of § 66.01-14.

[USCG-2000-7466, 68 FR 68238, Dec. 8, 2003]