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sodium chloride solution for at least 2
hours.
(b) The electric light may not be
equipped with a switch mechanism
which permits continuous display of a
beam of light except that the light may
be equipped with a switch which re-
turns to the off position when pressure
is released.

§ 161.013–5 Intensity requirements.

(a) If an electric light emits light
over an arc of the horizon of 360 de-
grees, the light must:
(1) When level, have a peak intensity
within 0.1 degrees of the horizontal
plane;
(2) Have a peak Equivalent Fixed In-
tensity of at least 75 cd; and,
(3) Have a minimum Equivalent
Fixed Intensity within a vertical diver-
cence of ±3 degrees of at least 15 cd.
(b) If an electric light emits a direc-
tional beam of light, the light must:
(1) Have an Equivalent Fixed Inten-
sity of no less than 25 cd within
±4 degrees vertical and ±4 degrees horizontal
divergence centered about the peak in-
tensity; and,
(2) Have a minimum peak Equivalent
Fixed Intensity of 2,500 cd.
(c) The Equivalent Fixed Intensity
(EIF) is the intensity of the light cor-
rected for the length of the flash and is
determined by the formula:

\[ \text{EIF} = I \times \left( t_c + t_i \right) / 0.2 + \left( t_c \right) \]

Where:
I is the measured intensity of the fixed
beam,
t_c is the contact closure time in seconds,
(0.33 for this S-O-S signal), and
t_i is the incandescence time of the lamp in
seconds.
(d) An electric light which meets the
requirements of either paragraph (a) or
(b) of this section need not, if capable
of operating in both manners, meet the
requirements of the other paragraph.

§ 161.013–7 Signal requirements.

(a) An electric light must have a flash char-
acteristic of the International Morse Code for S-O-S and,
under design conditions,
(1) Each short flash must have a du-
ration of ½ second;
(2) Each long flash must have a dura-
tion of 1 second;
(3) The dark period between each
short flash must have a duration of ½ second;
(4) The dark period between each
long flash must have a duration of ½ second;
(5) The dark period between each let-
ter must have a duration of 2 seconds;
(6) The dark period between each
S-O-S signal must have a duration of 3
seconds.
(b) The flash characteristics de-
scribed in paragraph (a) must be pro-
duced automatically when the signal is
activated.

§ 161.013–9 Independent power source.

(a) Each independent power source
must be capable of powering the light
so that it meets the requirements of
§161.013–3(a)(1) and emits a recogniz-
able flash characteristic of the Inter-
national Morse Code for S-O-S at a rate
of between 3 and 5 times per minute
after six hours of continuous display of
the signal.
(b) If the independent power source is
rechargeable, it must have a water-
proof recharger designed for marine
use.
(c) If the independent power source
requires external water to form an
electrolyte, it must operate in sea
water and fresh water.

§ 161.013–11 Prototype test.

(a) Each manufacturer must test a
prototype light identical to the lights
to be certified prior to the labeling re-
(b) If the prototype light fails to
meet any of the general performance
requirements of §161.013–3 the lights
must not be certified under this sub-
part.
(c) Each manufacturer must:
(1) Forward the test results within 30
days to the Commandant (CG–ENG), U.
S. Coast Guard, 2100 2nd St., SW., Stop
7126, Washington, DC 20593–7126; and
(2) Retain records of the test results
for at least 5 years, or as long as the
light is manufactured and certified,
whichever is longer.

[CGD 76–183a, 44 FR 73054, Dec. 17, 1979, as
amended by CGD 88–070, 53 FR 34536, Sept. 7,
1998; CGD 95–072, 60 FR 50457, Sept. 29, 1995;
CGD 96–041, 61 FR 60734, Sept. 27, 1996]