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 March 4, 1982  
 SUPERSEDING  
 A-A-53  
 September 30, 1979

## COMMERCIAL ITEM DESCRIPTION

### LANTERN, ELECTRIC (TWO BEAMS)

The General Services Administration has authorized the use of this commercial item description in preference to Federal Specification W-L-200, type II.

This description covers electric hand lanterns, dry cell operated, with concentrated and diffused light beams.

#### Salient characteristics:

The lantern shall be a complete unit including battery case, light sources, switch, handle and stand, reflector assembly, diffused light assembly, necessary wiring and contacts, and spare beam. A positive means of holding the 4Fd 6 V lantern battery in the battery case shall be used. No special tools shall be required to remove or replace the lamps or battery. A metal wire stand guard is optional. The lantern shall be equipped with PR13 or PR15 lamps.

Switch. The switch shall have at least four positions including "off", "on" for concentrated beam, "on" diffused beam, or "on" for both beams. The switch shall remain electrically operative after 25,000 cycles from "off" through all "on" positions back to "off".

Impact resistance. The lantern shall not be damaged when subjected to an impact of one foot-pound at  $-20^{\circ}\text{F} \pm 2^{\circ}\text{F}$  using a one pound steel ball. The impact shall be applied to the base (side opposite the handle), the end opposite the reflector and the lens ring side. The lantern shall be at the indicated temperature of two hours.

Durability drop. The lantern (battery included) shall not be damaged when tested as follows: Drop the lantern at  $75^{\circ}\text{F} \pm 2^{\circ}\text{F}$  from a minimum height of three feet into a box of loose dry sand with a minimum depth of one foot. Drop the lantern three times on the base and three times on the end opposite the reflector.

Concentrated beam. The concentrated beam shall have a maximum diameter of 12-inches at a distance of 60 inches from the lantern lens.

Diffused beam. The diffused beam shall have a minimum diameter of 60 inches and a maximum diameter of 80 inches at a distance of 60 inches from the lantern. The optical axis of the diffused beam shall be in the vertical plane and at a right angle to the concentrated beam. The diffused light beam shall be visible  $360^{\circ}$  in the horizontal plane.

Beam candlepower. The minimum beam candle power (candelas) of the concentrated beam shall be 2,500 at 5.2 volts. The test distance shall be 10 feet between the reflectors lens cover and the photoreceptor. The photometer shall be calibrated using the standard lamp with a color temperature of  $2856^{\circ}\text{K}$ . The photoreceptor shall have a minimum diameter of one-inch and be equipped with a light filter to yield a response curve matching that of the International Commission on Illumination standard observer. The calculation shall be as follows:

$$I = ED^2$$

Where I = Illuminous intensity of the light beam in candelas.

E = Illuminance reading of photometer calculated in footcandles.

D = Distance between the lantern lens and photoreceptor.

Workmanship. There shall be no defects that affect serviceability or appearance.

Regulatory requirements. The manufacturer shall utilize recovered materials to the maximum extent practicable.

Packaging, packing, and marking. Packaging, packing, and marking shall be as specified in the contract or order.

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FSS

PREPARING ACTIVITY:

GSA - FSS

FSC 6230