

MIL-L-5904D
AMENDMENT 1
8 October 1981

MILITARY SPECIFICATION

LIGHT, RUNWAY MARKER, ELEVATED, TYPE C-1

This amendment forms a part of Military Specification MIL-L-5904D, dated 14 November 1978, and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 12

3.6.1.1.2.2 Delete and substitute: "3.6.1.1.2.2 Rectangular beam. - The dimensions to the rectangular beams may be reduced to 5 deg. horizontal and 4 deg. vertical with rounded corners of 2 deg. radii at 20,000 candlepower and 10 deg. horizontal and 9 deg. vertical with rounded corners at 4 deg. radii at 5,000 candlepower."

Delete paragraph 6.3 in its entirety.

Custodians:

Army - AV
Navy - AS
Air Force - 99

Preparing activity:

Air Force - 99

(Project 6210-0535)

Review activities:

DSC - GS
Air Force - 11
Navy - YD

FSC 6210

MIL-L-5904D
14 NOVEMBER 1978
SUPERSEDING
MIL-L-5904C
3 June 1958

MILITARY SPECIFICATION

LIGHT, RUNWAY MARKER, ELEVATED, TYPE C-1

This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 This specification covers Class I, II and III of high-intensity elevated runway marker lights designated Type C-1.

2. APPLICABLE DOCUMENTS

* 2.1 Issue of documents. The following documents of the issue in effect on date of invitation for bids or request for proposal form a part of this specification to the extent specified herein.

SPECIFICATIONS

Federal

PPP-B-601	Boxes, Wood, Cleated-Plywood
PPP-B-636	Box, Fiberboard

Military

MIL-P-116	Preservation-Packaging, Methods of
MIL-D-1000	Drawings, Engineering And Associated Lists
MIL-E-5272	Environmental Testing, Aeronautical And Associated Equipment, General Specification For
MIL-C-7989	Covers, Light-Transmitting, For Aeronautical Lights
MIL-C-25050	Colors, Aeronautical Lights And Lighting Equipment, General Requirements For

Federal Aviation Agency

FAA-L-823	Plug And Receptacle, Cable Connectors
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Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: HQ AFLC CASO/LODS, Federal Center, Battle Creek MI 49106 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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STANDARDS

Military

MIL-STD-129	Marking For Shipment And Storage
MIL-STD-130	Identification Marking Of US Military Property
MIL-STD-143	Specifications And Standards, Order Of Precedence For The Selection Of
MS25013	Lamp, Incandescent, T-14 Bulb, Medium Prefocus Base

(Copies of specifications, standards, drawings, and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

3. REQUIREMENTS

3.1 Preproduction. This specification makes provisions for preproduction testing.

3.2 Components. The light shall consist of the following:

<u>Item No.</u>	<u>Description</u>	<u>See Requirement</u>
1	Lens	3.5.2
2	Filters	3.5.3
3	Lamp	3.5.4
4	Socket	3.5.5
5	Housing	3.5.6
6	Cord	3.5.7

* 3.3 Selection of specifications and standards. Specifications and standards for necessary commodities and services not specified herein shall be selected in accordance with MIL-STD-143 except as provided in 3.3.1.

3.3.1 Standard parts. MS or AN standard parts shall be used wherever they are suitable for the purpose, and shall be identified on the drawing by their part number. Commercial utility parts such as screws, bolts, nuts, and cotter pins may be used provided they possess suitable properties and are replaceable by MS or AN standard parts without alteration, and provided the corresponding MS or AN part numbers are referenced in the parts list and, if practicable, on the contractor's drawings. In the event there is no suitable corresponding MS or AN standard part in effect on date of invitation for bids, commercial parts may be used provided they conform to all requirements of this specification.

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3.4 Materials.

3.4.1 Fungus-proof materials. Materials that are nutrients for fungi shall not be used where it is practical to avoid them. Where used and not hermetically sealed, they shall be treated with a fungicidal agent acceptable to the procuring activity. However, if they will be used in a hermetically sealed enclosure, fungicidal treatment will not be necessary.

3.5 Design and construction. The light shall be so designed that it will operate satisfactorily under all weather conditions and so constructed that no parts will work loose in service. It shall be built to withstand the strains, jars, vibrations, and other conditions incident to shipping storage, installation, and service. The light shall be so constructed that adjustments and repairs can be easily made by the personnel of operating units and overhaul bases with tools normally available commercially. The light shall be so designed that weight is held to the minimum consistent with the necessary strength and rigidity. The exact shape and design are optional provided all requirements specified herein are met.

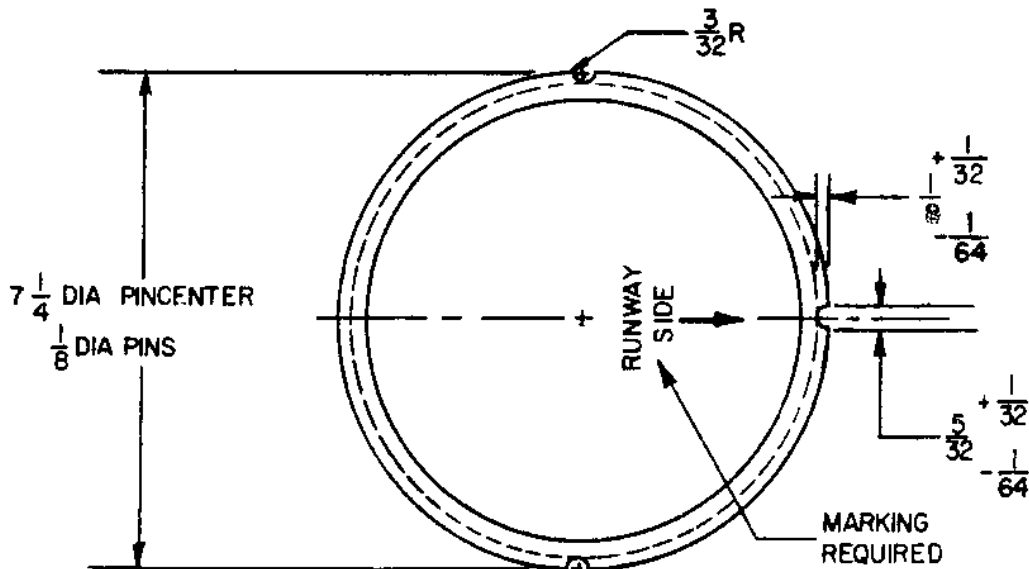
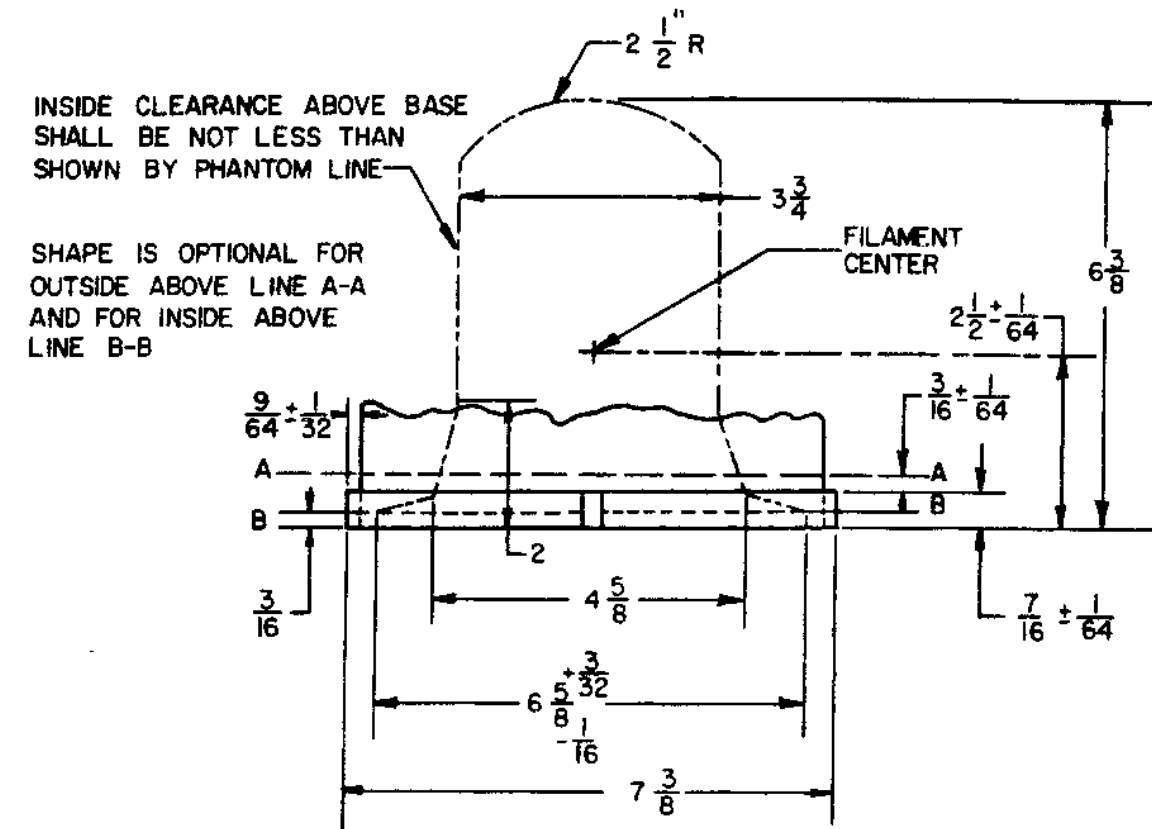
3.5.1 Focus. The entire optical system shall be of the fixed pefocus type requiring no focusing at installation or in service.

* 3.5.2 Lens. The lens for Class I light shall be in accordance with Figure 1, of one piece construction, and shall utilize both internal and external prisms. The three indexing slots shown in Figure 1 need not run completely through the mounting flange as shown, but may extend up into the flange a minimum of 7/32 inch from the bottom. The lenses for Class II and Class III lights shall be in accordance with Figure 2 of one piece construction and shall be smooth external construction. The lenses shall be marked with an arrow and the words RUN-WAY SIDE as indicated. The glass shall be type I (aviation white), in accordance with MIL-C-25050, and Class B, heat resistant in accordance with MIL-C-7989.

3.5.2.1 Shield. If the design of the lens requires shielding in order to limit the light emitted on the runway side, a suitable shield shall be attached to the lens. A shield, when used, shall be considered a part of the lens and shall be securely fastened to the lens so that no adjustment or positioning of the shield is required when a lens is mounted upon any approved housing. The shield, when used, shall also serve as a reflector in order to improve the light distribution.

* 3.5.3 Filters. Class I light filters, when required, shall be of Class B, heat-resistant glass in accordance with MIL-C-7989, and shall be in accordance with Figure 3. The corners on the mounting flange of each nominal 180 deg. filter shall be cut at an angle of 45 deg. in order that the filters may be indexed by lugs which are 3/16-inch wide by 5/32-inch high with 3/32-inch radius at top. Filters shall be shipped separately and shall be of the color specified by the procuring activity. Two mounting clips in accordance with Figure 3 and two 0.164-32-3/8 machine screws of stainless steel shall be supplied with each filter. Unless otherwise specified, each filter shall cover $180 + 0 - 5$ deg. (see 6.2). The requirements for color beams in the Class II and Class III light assemblies shall be accomplished by using colored domes in accordance with the configuration shown in Figure 4 except that Class III light is not intended for use with red/green lenses normally used in threshold light applications. These colored dome shall be of one piece construction. Aviation colors shall be in accordance with MIL-C-25050. All glass shall be high grade heat resistant glass.

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DIMENSIONS IN INCHES
UNLESS OTHERWISE SPECIFIED
TOLERANCES: FRACTIONS ± 1/16

FIGURE 1. LENS

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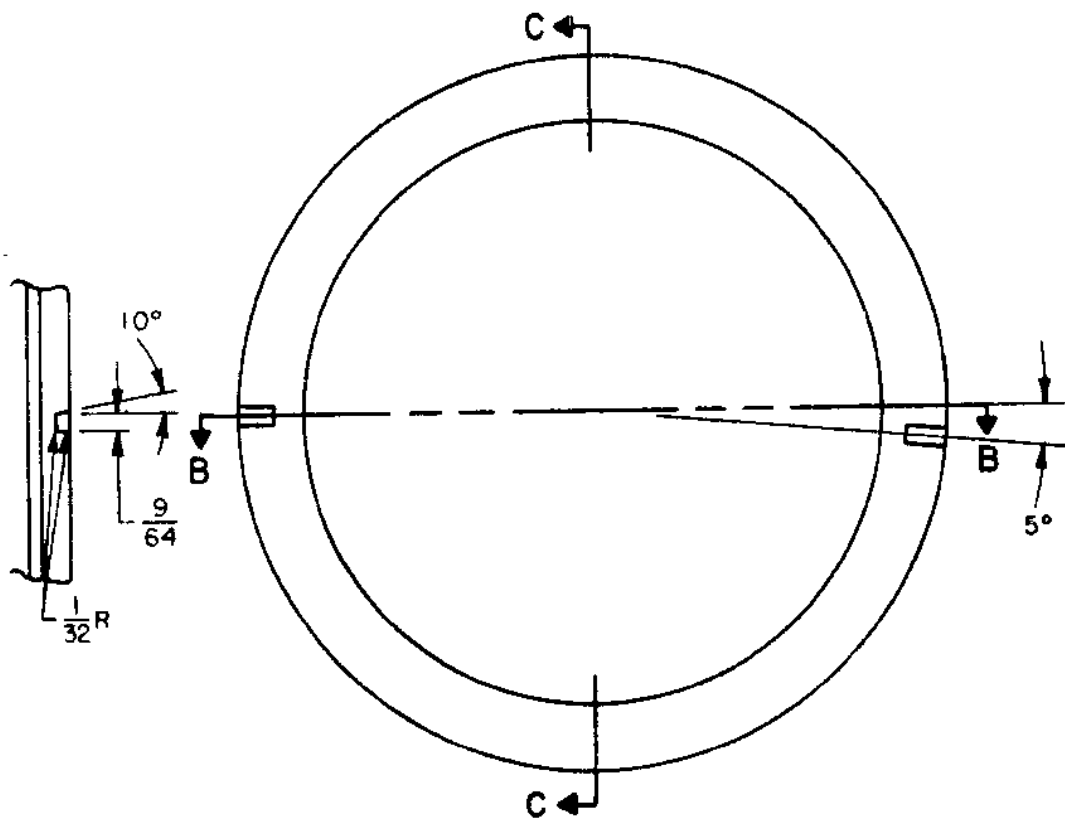
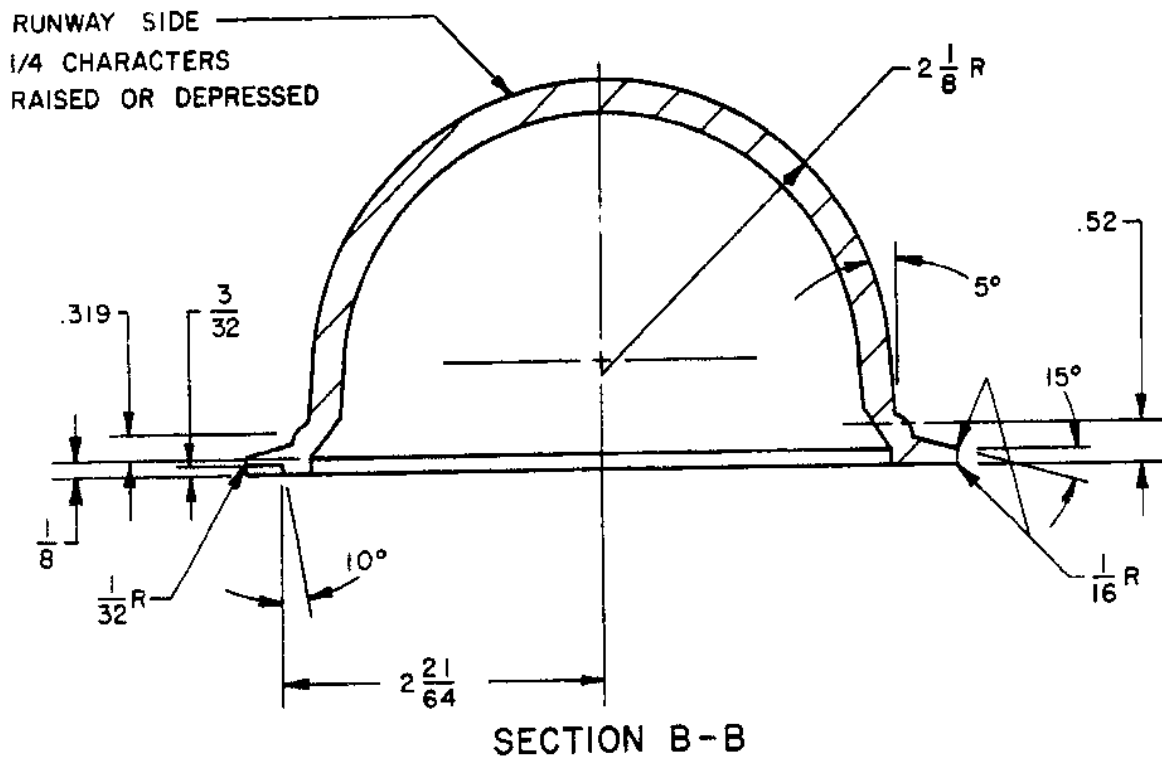
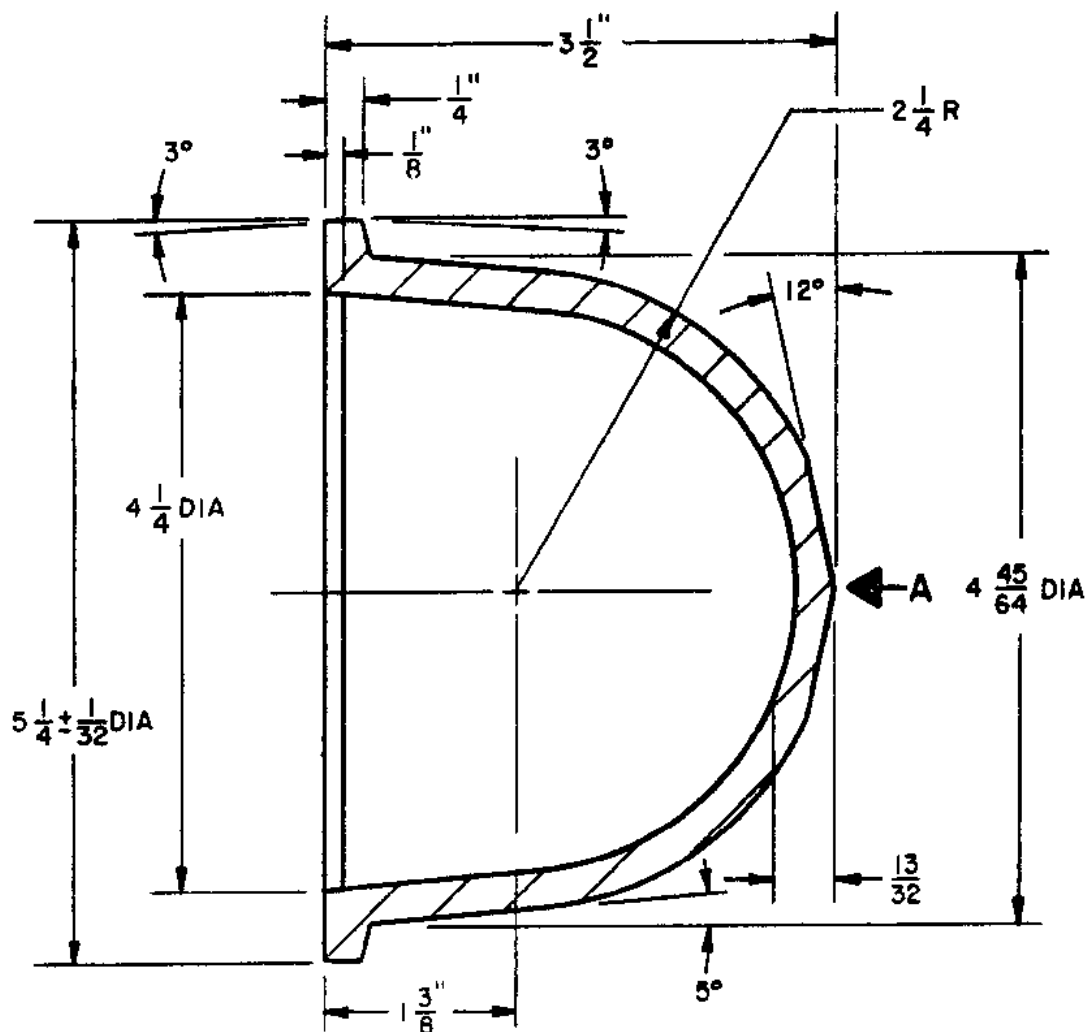


FIGURE 2. LENS FOR CLASS II AND III LIGHTS

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SECTION C-C

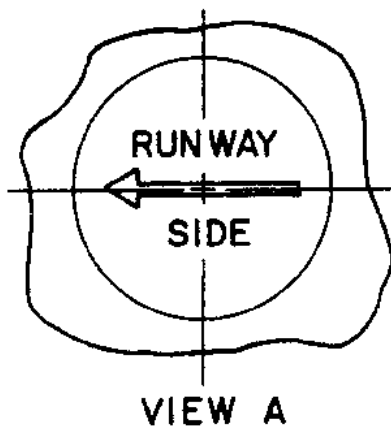
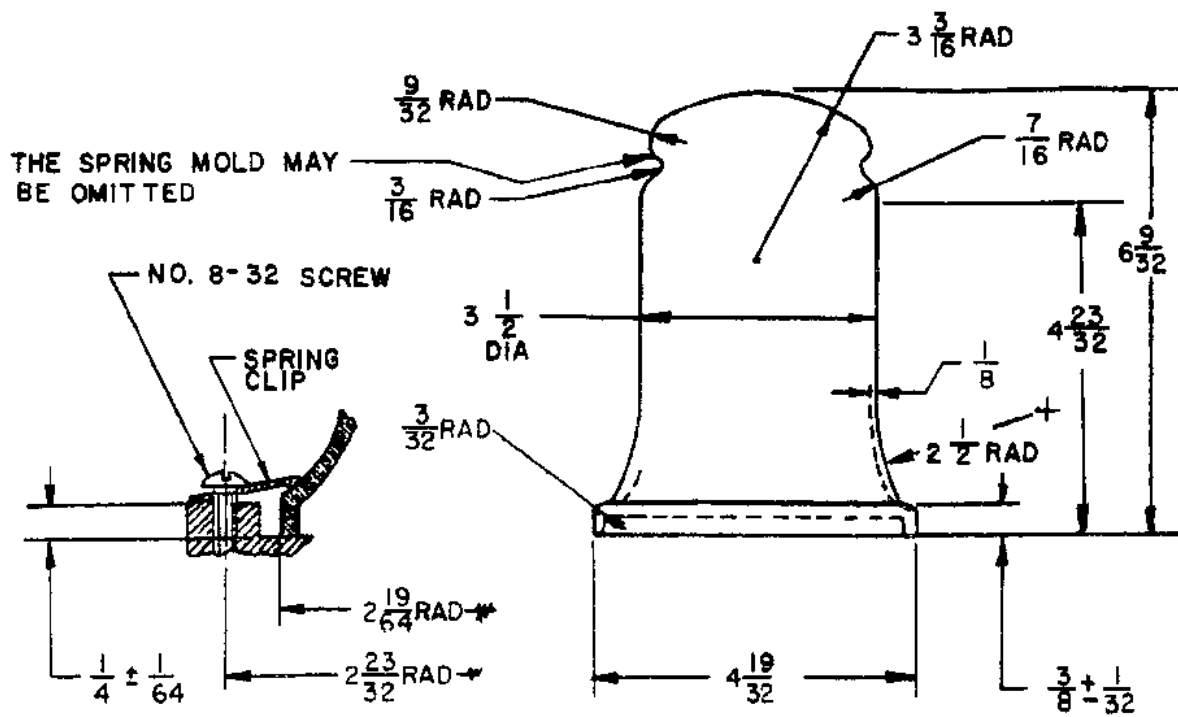
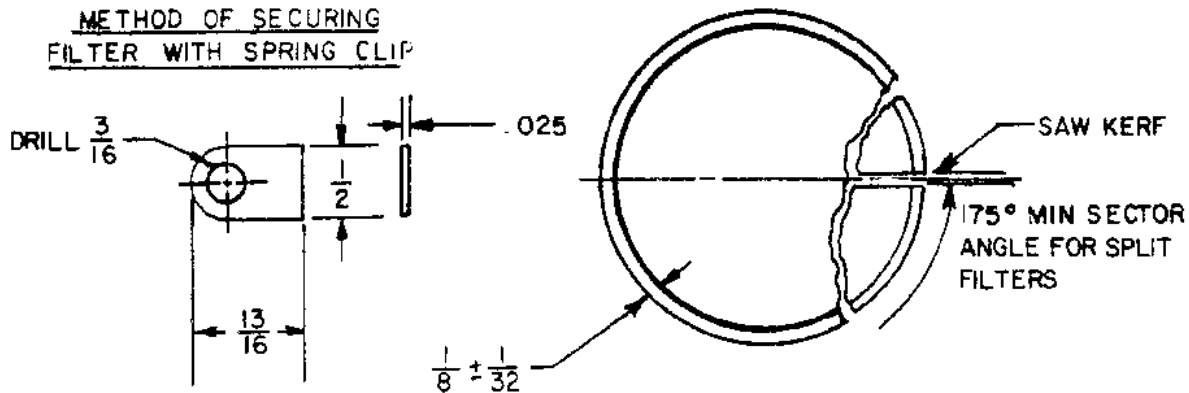


FIGURE 2 LENS FOR CLASS II AND III LIGHTS (CONL

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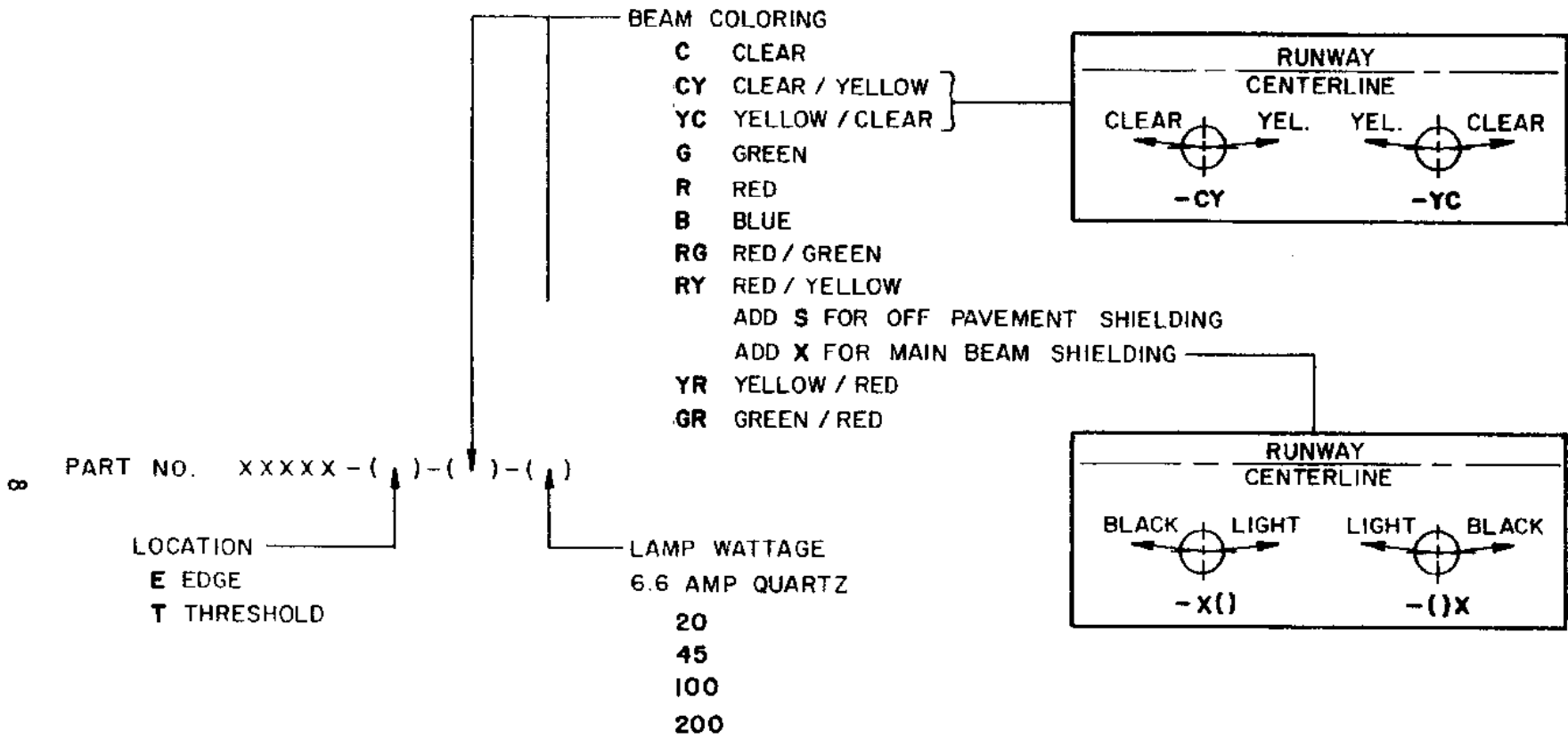


METHOD OF SECURING
FILTER WITH SPRING CLIP



DIMENSIONS IN INCHES.
UNLESS OTHERWISE SPECIFIED,
TOLERANCES: FRACTIONS $\pm \frac{1}{16}$

FIGURE 3. FILTER ASSEMBLY



EXAMPLES: XXXXX - E - C - 100 = EDGE LIGHT WITH CLEAR LIGHT AND 100 WATT QUARTZ LAMP.
 XXXXX - E - BS - 45 = EDGE LIGHT WITH BLUE LIGHT SHIELDED OFF PAVEMENT SIDE AND 45 WATT QUARTZ LAMP.

FIG 4. COLOR DC ORDERING SYSTEM

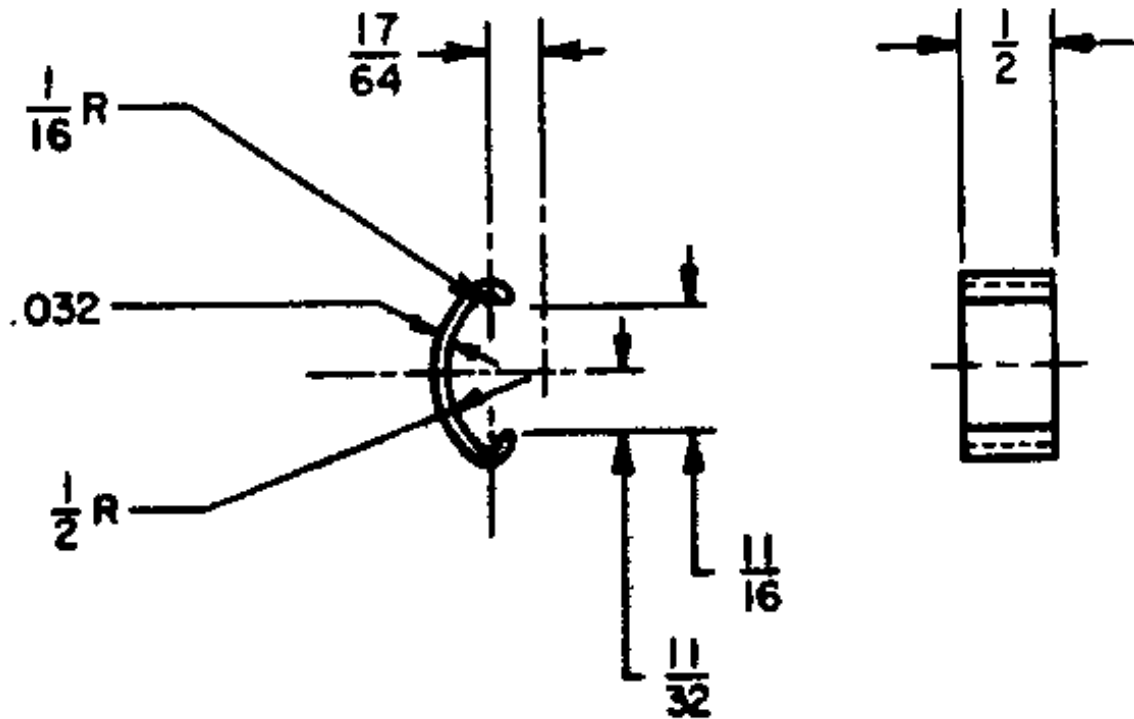
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* 3.5.4 Lamp. The Class I light assembly shall be designed to utilize a 204W, 6.6 amp MS25013-2 lamp in accordance with MS25013. Unless otherwise specified, the lamp shall not be furnished with the light (see 6.2). The Class II light assembly shall be designed to utilize a 200W, 6.6 amp halagen cycle lamp having a minimum average life of 500 hours. The Class III light assembly shall be designed to utilize a 100W, 6.6 amp, C-6 filament construction lamp having a minimum average life of 500 hours. It shall be equal to and interchangeable with GE Q200T4/CL.

3.5.5 Socket. For Class I light assembly, the lamp socket shall be a ceramic, ventilated, medium-prefocus type having a rating of 1000W, 250V, equal to and interchangeable with American Phenolic Corporation Part No. 98-1. The socket shall accommodate lamps having base dimensions within the tolerance specified for the lamp. The Class II and III light socket shall accommodate lamps having base dimensions within the tolerances of lamps specified in 3.5.4.

3.5.6 Housing. The lens, filters, shield, and lamp shall be accurately and securely positioned by a lightweight-aluminum housing. Four spring clips as shown in Figure 5 shall be used to secure the lens to the housing. Indexing lugs shall be located on the housing to engage the slots in the mounting flanges of the lens and filters. The indexing lugs shall be of sufficient size to limit the rotation of the lens and filters to not more than 1 deg. The lugs which index the lens shall not extend up into the mounting flange slots more than 3/16 inch after the light is assembled. The housing shall support the lens, filters, shield, and lamp so that they are tilted 4 deg. downward toward the runway side after the light has been leveled. A 1/8-inch rubber or synthetic rubber gasket shall separate the housing and the lens. All gaskets and other materials shall be of a type which will not emit smoke or vapor during rated current operation within the specified temperature range. The design of the housing shall be such that no ventilation is required, condensation upon lens and filter is minimized, and drainage is provided to prevent the gradual accumulation of condensate. The upper portion of the housing shall contain the lens and filters and shall be readily separable from the lower portion for relamping by loosening one wing screw. Upper and lower portions of the housing shall be properly indexed to insure aiming within the required tolerances. The lens and filters shall be securely clamped in place but shall be readily removable for maintenance. Four bosses, containing four equally spaced holes with centers located on a circle 5-7/16 inches in diameter, shall be provided for attachment of color filters. The holes shall be tapped to a depth of at least 3/8 inch for No. 0.165-32 screws. After installation, the lower surface of the lens flange shall be approximately 3/32 inch below the upper surface of the bosses, and the lower surface of the color filter flange shall be approximately 1/4 inch below the upper surface of the bosses. All above apply to the Class II and III light assemblies with exceptions that the lens is secured with a band clamp, it is not necessary to tilt the light assembly 4 deg. towards the runway, relamping is accomplished by removing the band clamp, and the four bosses do not apply to Class II and III light assemblies.

* 3.5.6.1 Mounting. The housing shall be designed so that it may be mounted upon an unthreaded mounting tube having an external diameter of 2.375 +/- 0.035 inch. Two or three 1/4-20 round or fillet head, stainless steel set screws shall be installed in the housing for clamping the housing on the tube. When mounted upon the tube, the tube shall extend 2-1/8 +/- 1/8 inch into the light. The Class II and III light assemblies shall have the frangible coupling as part of the light base. The bottom of the light base shall be a 2 inch tapered pipe thread designed to fit into standard USAF and FAA airport base plates and mounting stakes.



MATERIAL: STAINLESS STEEL - AISI, TYPE 414

DIMENSIONS IN INCHES.

UNLESS OTHERWISE SPECIFIED,

TOLERANCES: FRACTIONS $\pm 1/32$

DECIMALS $\pm .010$

FIGURE 5. SPRING CLIP

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3.5.6.2 Horizontal adjustment. Horizontal adjustment of the light to any desired azimuth shall be obtained by rotating the housing on the mounting tube.

* 3.5.6.3 Leveling adjustment. The lower portion of the housing shall be designed to provide leveling of the light from any position not exceeding 4 deg. from the vertical. The leveling device shall be of the pivot type, adjustable by means of 3 or 4 screws. The screws shall be stainless steel size 8 or larger. The leveling device shall be independent of the horizontal adjustment.

3.5.6.4 Aiming. The housing shall provide a means for leveling and sighting, designed to insure aiming of the light with sufficient accuracy so that the direction of the light beams will be in accordance with the requirements specified in 3.6.1. The leveling device may be an accurately formed surface upon which a carpenter's level may be placed in two positions at right angles during installation. The sight may be any device or marks placed upon the light in such a manner as to provide accurate aiming by sighting at the next light in the row of runway lights. Removal of the lens and filters from the upper portion of the housing shall not be required during the leveling and aiming procedure.

* 3.5.7 Cord. A length of two-conductor, No. 16, type SJ or OSJ rubber or synthetic rubber cord shall be connected to the bottom of the socket, and no portion of the cord shall extend up beside the socket where it would be exposed to excessive temperatures. A two-pole, 600V, 20-amp plug in accordance with figure 1a of Federal Aviation Agency Specification L-823 shall be molded on the lower end of the cord. The length of the cord shall be such that, when hanging freely, the distance between the bottom of the assembly and the face of the plug shall be 7 +/- 1/2 inch. The socket mounting bracket shall be cut away on at least two sides, so that a screw driver blade may be used to push slack cord down into the mounting tube during installation. A suitable fiberglass sleeve at least 2 inches long, shall be applied to each of the two conductors from which the cable sheath has been stripped in order to protect the installation of the conductors from the high temperatures existing at the bottom and sides of the socket. The electrical plug and cord for the Class II and III lights shall be teflon coated wire with integral molded L-823 style plug. The cord set shall be rated for 150 deg. C operation.

3.6 Performance.

3.6.1 Photometric. The light distribution shall be asymmetrical with front and rear beams having an elevation of 4.5 deg. and a toe-in of 3.5 deg. (The corresponding horizontal angles are 86.5 deg. and 273.5 deg. The 90 deg. to 270 deg. horizontal line is parallel to the runway centerline and the 0 deg. horizontal direction is toward and perpendicular to the runway centerline.) The light distribution, when the light is equipped with the specified lamp operating at, or corrected, rated lumens and after all parts of the light reach normal operating temperatures shall be in accordance with the following requirements:

3.6.1.1 Clear (white) lights. White lights shall be designed to comply with the following design goals as closely as possible and all lights shall comply with the following production requirements:

3.6.1.1.1 Design goal. The design goal minimum for each beam shall be of rectangular cross-section having dimensions of 6 deg. horizontal and 6 deg. vertical at 20,000 cp and 11 deg. horizontal and 10 deg. vertical at 5,000 cp. The design goal

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minimum for circling guidance light shall be 5000 cp. The design goal minimum for circling guidance light shall be 500 cp from 92 deg. to 268 deg. horizontal at elevations of 4.5 deg to 12.5 deg. vertical. The design goal minimum shall be 20 cp in all directions above the horizontal for which other maximums are not specified. The design goal maximum for on-runway light shall be 100 cp from 320 deg. to 40 deg. horizontal at elevations of 0 deg. to 15 deg. vertical. The design goal maximum for the beams shall be 50,000 cp.

3.6.1.1.2 Production requirements. It is recognized that mold wear and manufacturing tolerances will make the design goal requirements difficult to hold on production item lights. Lights shall be considered satisfactory if they comply with design goals when the following tolerances are applied.

* 3.6.1.1.2.1 Beam axes. The beam axes shall be within 1-1/2 deg. of the specified 4.5 deg. elevation and 3.5 deg. toe-in angles when the light has been properly levelled and correctly aimed by means of the built-in sight.

3.6.1.1.2.2 Rectangular beam. The dimensions of the rectangular beams may be reduced to 5-1/2 deg. horizontal and 4-1/2 deg. vertical with rounded corners of 2 deg. radius at 20,000 CP and 10 deg. horizontal and 9 deg. vertical with rounded corners of 4 deg. radii at 5,000 CP.

* 3.6.1.1.2.3 The 500 CP minimum for circling guidance light may be reduced to 400 CP. Two dips down to a minimum of 250 CP will be permitted if each dip does not cover more than 5 deg. horizontal at 400 CP and the two dips are separated by at least 50 deg. horizontal at 400 CP.

3.6.1.2 Colored light. Unless otherwise specified, the light emitted from all assemblies shall comply with the requirements of MIL-C-25050 for type I (Aviation) colors. When filters are installed, all the requirements for white lights shall apply except that the minimum candlepower values shall be multiplied by the transmission ratios specified in Table I. (See 6.2)

TABLE I

Color	Ratio
White -----	1.00
Green -----	0.15
Red -----	0.13

* 3.6.1.2.1 Light filters. Colored lights shall be obtained by adding 180 deg. (nominal) color filters to white lights. The design shall be such that when two filters are installed, all light emitted shall be of the specified color. The color division shall be as sharp as practicable, but the color requirements of MIL-C-25050 shall not apply within a 5 deg. transition zone on each side of the dividing plane. The color division shall be in a vertical plane passing through the 0 to 180 deg. line.

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3.6.2 Environmental. The light shall be capable of operating satisfactorily when subjected to the following environmental conditions:

- a. Temperature ranging from -54 deg to +55 deg. C.
- b. A relative humidity up to 100 percent with condensation.
- c. Rainfall as encountered in any locale.

* 3.7 Interchangeability. All parts having the same manufacturer's part number shall be functionally and dimensionally interchangeable. The drawing number requirements of MIL-D-1000 shall govern changes in the manufacturer's part numbers.

3.8 Dimensions. The overall height of the light shall be not more than 13 inches. The length or width shall be not more than 8-1/2 inches.

3.9 Weight. The weight of the light with the filters installed shall be not more than 8-1/2 pounds.

3.10 Finishes and protective coatings. Unless fabricated from corrosion-resistant metal, all metal parts shall be suitably protected against corrosion. The outside of the light shall be finished with a high-grade yellow finish. All paint and finishes used shall be suitable for the high-operating temperatures involved, and shall not cause parts of the light to stick together.

3.11 Identification of product. Equipment, assemblies, and parts shall be marked for identification in accordance with MIL-STD-130. Manufacturer's serial numbers are not required.

3.12 Workmanship.

3.12.1 General. The light, including all parts and accessories, shall be constructed and finished in a thoroughly workmanlike manner. Particular attention shall be given to neatness and thoroughness of soldering, wiring, marking of parts and assemblies, welding and brazing, painting, riveting, machine-screw assemblies, and freedom of parts from burrs and sharp edges.

3.12.2 Dimensions and tolerances. Dimensions and tolerances not specified shall be as close as is consistent with the best shop practices. Where dimensions and tolerances may affect the interchangeability, operation, or performance of the light, they shall be held or limited accordingly.

3.12.3 Screw assemblies. Assembly screws and bolts shall be tight. The word "tight" means that the screw or bolt cannot be appreciably tightened further without damage or injury to the screw, bolt, or threads.

3.12.4 Riveting. Riveting operations shall be carefully performed to insure that the rivets are tight and satisfactorily headed.

3.12.5 Cleaning. The light shall be thoroughly cleaned of loose, spattered, or excess solder, metal chips, and other foreign material, after final assembly. Burrs and sharp edges, as well as resin flash that may cumble, shall be removed.

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4. QUALITY ASSURANCE PROVISIONS

* 4.1 Responsibility for inspection. Unless otherwise specified in the contract, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

* 4.1.1 Classification of tests. The inspection and testing of the light shall be classified as follows;

- a. Acceptance tests See 4.2
- b. Preproduction testing See 4.4

4.2 Acceptance tests. Acceptance tests shall consist of the following:

- a. Individual tests
- b. Sampling plan and tests

4.2.1 Individual tests. Each light shall be subjected to the following tests as directed under 4.3.

- a. Examination of product
- b. Operation
- c. Optical performance
- d. Socket

4.2.2 Sampling plan and tests.

4.2.2.1 Lot. A lot shall consist of lights manufactured under essentially the same conditions and submitted for inspection at substantially the same time.

4.2.2.2 Sampling plan. One light shall be selected at random from each lot of one hundred or fraction thereof produced in a lot and subjected to the photometric tests (4.3.4).

4.2.2.2.1 Rejection and retest. When one or more lights from a lot fail to meet the specification, acceptance of all lights in the lot shall be withheld until the extent and cause of failure are determined. After corrections have been made, all necessary tests shall be repeated.

4.2.2.2.2 Individual tests may continue. For production reasons, individual tests may be continued pending the investigation of a sampling test failure. Final acceptance of the entire lot shall not be made until it is determined that the lot meets all the requirements of the specification.

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4.2.3 Defects in lights already accepted. The investigation of a test failure could indicate that defects may exist in lights already accepted. If so, the contractor shall fully advise the procuring activity of all defects likely to be found and methods of correcting them.

4.3 Test methods.

4.3.1 Examination of product. The light shall be inspected to determine compliance with the requirements specified herein with respect to material and workmanship.

4.3.2 Operation. The light shall be completely assembled and operated. It shall be inspected to determine proper operation.

4.3.3 Optical performance. The candlepower and direction of the main beams emitted by each light shall be determined by the method which has been approved by the procuring activity. Insufficient candlepower or deviation of over 2 deg., either horizontal or vertical from the direction indicated by the aiming device, shall be cause for rejection. (See 6.2)

4.3.4 Photometric. Photometric tests shall be conducted to determine compliance with light distribution and color requirements of 3.6.1. All parts shall reach normal operating temperatures before any readings are taken.

4.3.5 Environmental. At the discretion of the procuring activity, the light shall be subjected to the following tests conducted in accordance with the specified procedures of MIL-E-5272 to determine proper operation and lack of damage.

4.3.5.1 High temperature. The light shall be subjected to high temperature in accordance with procedure I, except at a temperature of 55 deg. +/- 2 deg. C and for a period of 7 hours, with lamp operating at rated current. Abnormal bulb blackening, blistering, smoking, or other evidence of heat damage to any part shall be cause for rejection.

4.3.5.2 Low temperature. The light shall be subjected to low temperature in accordance with procedure I for a 48-hour period, followed immediately by operation and examination of the light. Any evidence of damage shall be cause for rejection.

4.3.4.3 Humidity. The light shall be subjected to humidity in accordance with procedure I except with the humidity ranging from saturation at tropical sea level at 40 deg. +/- 2 deg. C to saturation at 10,000 feet altitude. Any evidence of damage revealed by subsequent operation and examination of the light shall be cause for rejection.

4.3.5.4 Rain. The light shall be subjected to rain in accordance with procedure I except that the light shall be operated in the rain chamber for at least 6 hours with alternate periods of 30 minutes ON and 30 minutes OFF. During the ON periods, the lamp shall be operated at rated current. The light shall show no signs of breaking or cracking when subjected to this test even when equipped with two green filters.

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4.3.6 Thermal shock. The light, with two red filters and the specified lamp installed shall be operated on rated current at room temperature for a period of 3 hours, after which the light shall immediately be inverted and immersed in water at 10 deg. C to a depth sufficient to cover the lens. Any breakage or cracking shall be cause for rejection.

4.3.7 Socket. The socket shall be check with dummy lamp gages or lamps to determine that lamps having the maximum and minimum allowable base dimensions can be satisfactorily installed int he socket.

4.4 Preproduction testing.

4.4.1 Preproduction test samples. The preproduction test samples shall consist of one complete white light, two 180 deg. green filters, and engineering data describing optical performance tests to be performed. (See 6.2) They shall be tested at a laboratory designed by the procuring activity or, when so stated in the contract at the contractor's plant under the supervision of the procuring activity.

4.4.2 Preproduction tests. The preproduction tests shall consist of all tests described under 4.3.

* 4.5 Inspection of the preservation, packaging and marking for shipment and storage. Sample items or packs shall be inspected to determine the preserva-tion, packaging, packing and marking for shipment and storage conform to the requirements of Section 5.

5. PACKAGING

* 5.1 Preservation and packaging. Preservation and packaging shall be level A or C, as specified (see 6.2).

* 5.1.1 Level A. Each light shall be packaged one (1) each Method III of MIL-P-116. The unit container shall conform to PPP-B-636, class weather resistant.

* 5.1.2 Level C. Lights shall be packaged in a manner which affords adequate protection against deterioration and physical damage during shipment from supply source to the first receiving activity for immediate use. This level may conform to the supplier's commercial practice, provided the latter meets the require-ments of this level.

* 5.2 Packing. Packing shall be level A, B, or C, as specified (see 6.2)

* 5.2.1 Level A. Lights packaged as specified in 5.1.1 shall be packed in cleated plywood containers conforming to PPP-B-601, overseas type. As far as practicable containers shall be uniform in shape and size and contain identical quantities. Gross weight shall be limited to approximately 350 pounds. Container closure and strapping shall be in accordance with the appendix to PPP-B-601.

* 5.2.2 Level B. Level B shall be the same as level A except shipping containers shall conform tgo PPP-B-601, domestic type.

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* 5.2.3 Level C. Lights packaged as specified in 5.1.2 shall be packed in a manner which affords adequate protection against damage during shipment from supply source to the first receiving activity for immediate use. This level shall conform to applicable carrier rules and regulations and may be the supplier's commercial practice, provided the latter meets the requirements of this level.

6. NOTES

* 6.1 Intended use. The Type C-1 lights (Classes I, II and III) covered by this specification is for use as an elevated runway marker light for outlining runways not over 300 feet in width under all weather conditions. The 100 watt Class III light is not intended for use with red/green lenses normally used in threshold light applications.

6.2 Ordering data. Procurement documents should specify the following:

- a. Title, number, and date of this specification.
- b. The color of filters desired and if filters should be provided with the lights. (See 3.5.3 and 3.6.1.2)
- c. Whether lamps should be furnished. (See 3.5.4)
- d. Engineering data describing optical performance tests to be used by the contractor. (See 4.3.3 and 4.4.1)
- e. Unit quantities required. (See 5.1.1)
- f. Selection of applicable levels of preservation and packaging, and packing. (See Section 5.)

6.2.1 Preproduction test samples. One complete white light, two 180 deg. red filters and two 180 deg. green filters will be required as preproduction samples to be subjected to the preproduction tests to determine compliance with the requirements of this specification. The point of inspection for these tests will be specified.

* 6.3 Reclaimed materials. The use of reclaimed materials shall be encouraged to the maximum extent possible.

6.4 Changes from previous issue. Two margins of this specifications are marked with an asterisk to indicate where changes (additions, modifications, corrections, deletions) from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

MIL-L-5904D

Custodians:

Army - AV

Navy - AS

Air Force - 99

Preparing Activity:

Air Force - 99

Review Activity:

Air Force - 11

DGSC - GS

Project No. 6210-0471