Cancelled See 37B

Federal Aviation Agency

AC NO: 150/5345-37A CHG 1

AIRPORTS

EFFECTIVE: 4/3/67

ADVISORY CIRCULAR CHANGE

SUBJECT: CHG 1 TO ADVISORY CIRCULAR 150/5345-37A, SUBJ: FAA SPECIFICATION L-850, LIGHT ASSEMBLY, AIRPORT RUNWAY, CENTERLINE

1. PURPOSE. This advisory circular change transmits revised pages to the subject advisory circular.

2. EXPLANATION OF CHANGES.

   a. The order of testing of the fixtures is specified.

   b. The lead terminations inside the base are simplified.

   c. The vibration tests are changed to require a lower vibration test of the lamps only.

   d. The requirements for tension test of the external leads on the base are changed to a specific value.

3. PAGE CONTROL CHART.

Remove Pages	Dated	Insert Pages	Dated
5	4/29/66	5	4/29/66
6	4/29/66	6	4/3/67
7	4/29/66	7	4/3/67
8	4/29/66	8	4/3/67
11	4/29/66	11	4/3/67
12	4/29/66	12	4/29/66

William M. Flener

William M. Flener
Deputy Director
Airports Service

Federal Aviation Agency

ADVISORY CIRCULAR

AC NO: AC 150/5345-37A	
AIRPORTS	
EFFECTIVE:	
4/29/66	

SUBJECT: FAA SPECIFICATION L-850, LIGHT ASSEMBLY, AIRPORT RUNWAY, CENTERLINE

1. PURPOSE. This circular transmits FAA Specification L-850, Light Assembly, Airport Runway, Centerline, for the guidance of the public. The use of this specification is required for project activity under the Federal-aid Airport Program.

2. CANCELLATION. AC 150/5345-37, FAA Specification L-850, Light Assembly, Airport Runway, Centerline, dated August 23, 1965, and Change 1 dated October 26, 1965, are cancelled.

3. DESCRIPTION OF SPECIFICATION. This equipment specification establishes the performance requirements and pertinent construction details for a bidirectional semiflush inset light assembly to be used for lighting airport runway centerlines.

4. EXPLANATION OF REVISIONS.

   a. The angular coverages for 2000 candela and 5000 candela shown in Figure 1 were reduced.

   b. Details pertaining to the design of the "O" ring gasket, receptacle, and receptacle groove shown in Figure 2 were eliminated.

   c. The vibration test was revised.

   d. Additional details were added to assure adequate preparation of the light assembly for shipment and installation.

5. HOW TO GET THIS CIRCULAR. Obtain additional copies of this circular, AC 150/5345-37A, FAA Specification L-850, Light Assembly, Airport Runway, Centerline, from the Federal Aviation Agency, Printing Branch, HQ-438, Washington, D.C. 20553.

for Cole Morrow, Director
Airports Service

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1. SCOPE. The equipment covered by this specification is a bidirectional, semiflush inset light assembly complete with a base receptacle. The light assembly is designed for mounting in a hole drilled in the runway pavement. The light assembly is to be used for lighting airport runway centerlines. Critical dimensions of the top assembly and base receptacle are specified to insure interchangeability of these two major components within types and the use of Type I top assemblies with Type II base receptacles, regardless of manufacturer. Two types of light assemblies, varying only in base receptacle depth, are covered by this specification.

Type I	Shallow Base Receptacle--2.75 Inches Deep
Type II	Deep Base Receptacle--8.25 Inches Deep

2. APPLICABLE DOCUMENTS. The following documents of the issue in effect on the date of application for qualification (paragraph 4a) form a part of this specification to the extent specified herein:

   a. Military Specifications. Copies of the following Military specifications may be obtained from the Commanding Officer, Naval Supply Depot, 5801 Tabor Avenue, Philadelphia, Pennsylvania 19120, Attention: Code CDS:

MIL-C-25050 (ASG)	Colors, Aeronautical Lights and Lighting Equipment, General Specification for
MIL-P-26915 (USAF)	Primer Coating, Zinc Dust Pigmented, for Steel Surfaces
MIL-R-5847	Rubber, Silicone, High and Low Temperature Resistant
MIL-STD-10	Surface Roughness Waviness and Lay

   b. Federal Specifications. Copies of the following Federal specifications may be obtained from the Business Service Centers of the General Services Administration Regional Offices:

QQ-Z-325	Zinc Coating, Electrodeposited Requirements for
QQ-P-416	Plating, Cadmium (Electrodeposited)

3. REQUIREMENTS.

   a. Performance Requirements.

      (1) Photometric Output. The light assembly including the light source or lamp shall be designed to provide a light distribution not less than that shown in Figure 1.

(2) Power Requirements. All current carrying parts requiring insulation shall be insulated for at least 600 volts and shall have a current carrying capacity of 1.5 times the normal operating current. The input to the light assembly shall not require more than 220 watts.

(3) Environmental Conditions. The light assembly shall be designed and constructed for continuous outdoor operation under all conditions including:

(a) Temperature. All ambient temperatures from a minimum of -45°F. to a maximum of +120°F.

(b) Service. The light assembly shall be designed to withstand vibration, shock, dynamic, and static loading resulting from normal runway maintenance and aircraft operations.

b. Design Requirements for Type I and Type II Light Assemblies.

(1) Top Assembly. The metal components, excluding bolts, nuts, and washers which are specified elsewhere, shall be fabricated from metal having a minimum tensile strength of 50,000 p.s.i. and a minimum hardness of 163 Brinell. Pry bar slots, indentations, or other suitable provisions shall be made for prying or jacking the top assembly free of the receptacle when the unit is installed in the pavement.

(a) Dimensional Requirements. The principal critical dimensions of the top assembly shall be as listed in this paragraph and as shown in Figure 2. The outside diameter of the upper portion of the top assembly shall be 11.938 inches, ±0.050 inch. At its outer diameter, the overall thickness of the flange portion that rests on the base flange shall be 0.75 inch, ±0.05 inch. The top assembly flange shall have a portion extending at least 1/4-inch down into the base receptacle to restrict side motion, and resist shear action, when the unit is struck. The diameter of this extension into the base receptacle shall be 9.935 inches (+0.000 inch,-0.020 inch). The protrusion into the base receptacle shall contain no fillet or other obstruction to prevent metal-to-metal seating of bearing surface on the base receptacle. No part of the top assembly shall be more than 1.250 inches above the bearing surface of the flange. All interfaces of the top assembly and base receptacle shall be machined to the same finish as shown in Figure 2. The flange of the upper portion of the

top assembly shall have six bolt holes equally spaced 60 degrees apart on a bolt-hole diamater of 11.250 inches, ±0.010 inch. The bolt holes shall each be 7/16-inch in diameter and shall not be tapped. The bolt holes shall be counterbored or recessed so that the resultant thickness of metal left between the bottom of the counterbored holes and the underneath flange surface is 0.400 inch, ±0.015 inch. The counterbored holes shall be of sufficient diameter to permit easy removal of the bolts with a standard socket wrench. The light channels shall be centered between bolt holes. The light channels shall be oriented so that the centers of the two light beams emitted are 180 degrees apart. The external portion of the top surface extending above the pavement shall be smoothly sloped upward from the edges at angles not exceeding 10 degrees in the direction parallel to the light channels and not exceeding 15 degrees in all other directions. These maximum slope angles shall not apply to the light channels, optical windows, and such indentations as bolt hole recesses. The top assembly shall be provided with an external rib, or other suitable means, in the area of the lenses to mitigate damage to the head assembly due to action of snowplow blades and aircraft tailhooks.

(b) Lamp Optical Assembly. The design of the top assembly shall be such that the entire top assembly, or the lamp and optical parts of the unit, can be quickly and easily removed as an assembly or package for maintenance in a shop. A completely encapsulated or sealed subassembly designed as a "throwaway" item or for rehabilitation by the manufacturer will be acceptable. Special tools shall not be required to remove and/or replace the optical assembly. The lamp and optical assembly shall be so designed that consistent optical performance of the fixtures can be assured in accordance with the specification requirements. These performance requirements shall be obtained when any part of the installed assembly is replaced. Two terminal connections shall be provided for connecting the power supply leads to the top assembly. The average life of the lamp at rated current shall be not less than 500 hours.

(c) Rubber Materials. Rubber, when used in the top assembly, shall be of silicone rubber suitable for the application.

(d) Bolts, Studs, Nuts, and Washers. All bolts, studs, nuts, and washers, and other similar fasteners used in the top assembly shall be fabricated from 18-8 stainless steel. This requirement shall not apply to current carrying components.

(e) Current Carrying Components. Current carrying components shall be fabricated of non-corrosive, high-conductivity materials. Aluminum shall not be acceptable for this purpose. Electrical contacts shall be made of coin-silver material or other equally high conductivity corrosion resisting materials.

(f) Dissimilar Materials. Use of dissimilar materials in contact with each other which will lead to electrolytic corrosive action shall be avoided.

(g) Finish. All surfaces of the finished top assembly shall be smooth, without burrs or sharp edges. The top surface protruding above the pavement, when installed, shall contain no bolts, bolt heads, nuts, or other protrusions above the smooth top surface that could be damaged by snowplow blades, by aircraft tailhooks, or by vehicles. In addition, all edges above the pavement including the metal edges above the lenses, the top edges of the light channels and ribs, and the top edge of the outer periphery of the finished top assembly shall be rounded to not less than 1/8-inch radius.

(h) Protective Plating. All ferrous structural and hardware parts of the top assembly, not made of stainless steel, shall be plated after fabrication, machining, and drilling. This plating shall be zinc conforming to Class 2, Type I of Federal Specification QQ-Z-325, or cadium conforming to Class 1, Type I of Federal Specification QQ-P-416. The plating shall be applied as required by the applicable specification.

(i) Color of Light. When color is specified in the contract, it shall conform to Type I, non-diffusing, Grade B requirements of Specification MIL-C-25050. When no color is specified by the purchaser, aviation white ware shall be supplied. Certification of compliance with this specification shall be furnished to the Federal Aviation Agency, Airports Service, Washington, D.C. 20553.

(2) Base Receptacle. Type I and Type II base receptacles, as shown in Figure 2, shall be fabricated from a suitable ferrous material by welding, drawing, or casting. All dimensions and requirements shown in Figure 2, except references to welding, shall apply to all fabricating methods. References to welding shall apply only to fabrication methods where welding is

required. For all types of construction the "free" interior space defined by the note in Figure 2 for both the Type I and Type II units shall be maintained. The exterior surface shall contain no protrusions except for the allowable protrusion required for sealing of leads. A reference line indicating the direction of the horizontal beam axis shall be cast, stamped, or painted on the inside surface of the receptacle bottom. Castings and drawings shall be in accordance with standard practices for the method involved.

(a) Flange. The top face and inside edge of the flange shall be machine finished. Six blind holes, 5/8-inch deep and tapped at least 1/2-inch, shall be provided in the top face. After the protective plating has been applied, the flange shall conform to the requirements shown in Figure 2. The level of the top surface of the flange shall be such that it shall not vary more than 0.010 inch from a reference plane perpendicular to the vertical axis of the cylindrical body. Surface finishes shall be determined as roughness height ratings in micro-inches in accordance with Military Standard MIL-STD-10. The effect of flaws shall be included in the roughness height measurements.

(b) Welding. When a welding process is used, all welding shall consist of continuous watertight welds of a strength at least equal to the material welded.

(c) Protective Plating. After fabrication, machining, and drilling, the entire base receptacle shall be plated for corrosion protection. This plating shall be zinc per Class 2, Type I of Federal Specification QQ-Z-325 or cadmium conforming to Class 1, Type I of Federal Specification QQ-P-416. The plating shall be applied as required by the applicable specification.

(d) Protective Painting. After the protective plating has been applied to the receptacle, all inside surfaces, including the underside of the cover flange, shall be given one coat of paint in compliance with Military Specification MIL-P-26915.

(3) Leads. Two leads shall be furnished with the base receptacle to supply power to the lamp. The leads shall enter the base receptacle through the wire entrance shown in Figure 2. The wire entrance shall be sealed in the factory to assure a water and air tight seal. The integrity of the seal shall be checked as specified in paragraphs 4a(6) and 4a(10). The seal and wire shall be installed to prevent water from wicking into the base. The method used in sealing the leads shall not result in a protrusion of more than 1/4-inch on the exterior surface of

the base receptacle. On the interior surface, the sealing method shall not result in an encroachment on the minimum free interior space specified in Figure 2. Provision shall be made to disconnect the leads inside the base. A standard commercial No. 8 screw terminal shall be provided inside the base. The lead wire used to connect the top fitting terminals with the screw terminals in the base shall have suitable terminals on both ends.

(a) Rating. The leads shall be single conductors with suitable insulation rated for at least 600 volts. The exterior leads sealed in the base shall have wires with insulation rated for at least 125°C. operation. The replaceable interior leads shall have wires with insulation rated for at least 250°C. operation.

(b) Conductors. The lead conductors shall be copper No. 12 AWG with at least 19 strands.

(c) Length. The leads shall have sufficient length inside the base receptacle to permit servicing of the top assembly * without requiring disconnection of the wires. External leads are to be at least 18 inches long. *

(4) "O" Ring Gasket. The "O" ring gasket for use in the "O" ring groove of the cover flange of the base receptacle shall be molded from silicone rubber conforming to Military Specification MIL-R-5847.

(5) Hold-Down Bolts. Six hex bolts 3/8-inch in diameter, 3/4-inch in length and suitable for use in the tapped holes in the flange as shown in Figure 2 shall be furnished. These shall be used for fastening the top assembly to the base receptacle. In addition, six 3/8-inch internal tooth lock washers shall be furnished for use under the bolt heads. Bolts and lock washers shall be fabricated of 18-8 stainless steel.

(6) Plywood Covers. A plywood cover shall be furnished with each base receptacle to protect the machined flange surface during shipment, handling, and installation. This plywood cover shall be mounted on and concentric with the base receptacle in lieu of the top assembly. Prior to mounting on the base, the perimeter of this cover shall be immersed to a depth of at least 2.0 inches in melted paraffine and rotated one complete turn. Such treatment shall provide a non-adhesive surface to the top, edge, and bottom contact surfaces of the cover. The cover

furnished shall be of exterior commercial Grade C-D, 5-ply plywood, 3/4-inch thick. It shall be 12 inches in diameter (+1/8-inch or -0) and shall contain six holes corresponding to the tapped holes in the base receptacle flange. These holes shall be 7/16-inch in diameter and shall be counterbored on the Grade D side 1 1/8-inches in diameter to a depth of 1/4-inch. The Grade D side of the cover shall have painted on it a suitable reference line to indicate the light axis.

(7) Parts List and Installation Instructions. A complete parts list and installation instructions shall be furnished with each shipment of light assemblies or each shipment of light assembly components. Sufficient drawings or illustrations shall be provided to indicate clearly the method of assembly and installation.

4. QUALITY ASSURANCE PROVISIONS.

a. Qualification Testing. The manufacturer shall furnish a light assembly to an independent testing laboratory, acceptable to the Federal Aviation Administration, Airports Service, Washington, D.C. 20553, for testing in accordance with the photometric, electrical, * and physical tests specified herein. These tests shall be performed in the order shown. This testing is required to certify the manufacturer's ability to produce a light assembly meeting the * requirements of this specification. More than one light assembly may be submitted for the tests. In the event a light assembly fails, it may be resubmitted for test after the cause of the failure has been corrected. Prior to tests, the top assembly hold-down bolts shall be torqued to a value specified by the manufacturer. The manufacturer shall furnish one light assembly, two certified copies of the testing laboratory's report, and installation instructions to the Airports Service of the Federal Aviation Administration for inspection, review, and approval. When approved, the name of the qualified manufacturer and a description of his equipment will be included in AC 150/5345-1A, Approved Airport Lighting Equipment. The manufacturer shall bear all testing costs.

(1) Vibration Tests. The base receptacle shall be mounted securely in place on the surface of the test table of the vibration testing machine. It shall be mounted in a horizontal position corresponding to its position in place on a runway. Small angles or brackets may be welded to the base receptacle to hold * it in place on the test table. The top assembly, with an electrical shunt across terminals of the lamp in place, shall be installed in the receptacle with provisions to determine whether continuity of the electrical circuit is maintained during the tests. *

(a) Vibration Planes. The light assembly, mounted in place on the test table as specified above, shall be vibrated in three planes, or directions of vibration, as follows:

1 In a direction perpendicular to the plane of the test table, i.e., vibrated vertically.

2 Vibrated horizontally in a direction parallel to the light axis, i.e., parallel to the line through the centers of the light channels.

3 Vibrated horizontally in a direction at right angles to the light axis, i.e., normal to the line through the centers of the light channels.

* (b) Vibration Frequencies. The light assembly shall be vibrated in each direction through frequency ranges of 10 to 2,000 CPS until the G's shown in Table 1 are reached. A lamp of the type used in the fixture shall be tested separately in three mutually perpendicular planes through the frequencies shown in Table 1 until the acceleration reaches 3 G's in each plane. The duration of each sweep shall be 10 minutes. Electrical continuity shall be continuously monitored through the vibration tests.

TABLE 1. VIBRATION FREQUENCIES

Acceleration G's	Frequency CPS
10	10 to 500
15	500 to 2000

(c) Inspection. Physical inspection of the light assembly and the lamp shall be made to determine if there is mechanical failure of any component part or the loosening of any parts or fasteners. *

(2) Photometric Tests. The optical performance of the unit shall be determined by photometric readings with a clear lens and the type lamp for which the unit is designed. The lamp shall be operated at its rated current. The photometric axis of the fixture shall be established in relation to a fixture properly installed in the pavement with the horizontal axis lying on the plane of the pavement, passing through the center of the fixture, and parallel to the centerline. The vertical axis shall lie on a line passing through the center of the fixture, perpendicular to the pavement plane. Horizontal candela

distributions shall be measured for both beams at each lateral degree, at elevation angles of 0°, 1°, 1-1/2°, 2°, 3°, 4°, 5°, 6°, and 7°, and the light values shall meet the candela requirements of Figure 1. In addition, candela values shall be taken to demonstrate that the unit meets the requirements of Note (d) of Figure 1. If the fixture is so designed that the light channels have negative slopes and portions of each lens are below pavement level, such portions shall then be obscured by opaque tape. The candela distributions for both beams shall then be measured again at elevation angles of 0°, 1°, and 2°, and the light values at these angles shall meet the applicable values prescribed in Figure 1. This test shall be performed after the vibration tests.

(3) High Temperature Test. The light assembly shall be subjected to a high temperature of +55°C. (±2°C.) for a period of 7 hours with the lamp operating at rated current. Any abnormal bulb blackening, blistering, smoking, corrosion, or other evidence of heat damage to any part shall be cause for rejection.

(4) Cycling and Thermal Shock Test. The light assembly mounted on a base receptacle shall be subjected to a cycling test by operating the unit at rated current at room temperature (dry) for a period of not less than four hours. At the expiration of the "on" part of the cycle, the fixture shall be de-energized and immediately submerged under at least one foot of water. The temperature of the water before submersion shall be 5°C., or lower. The unit shall remain under water for at least four hours. At the expiration of the "off" part of the cycle, the fixture shall be subjected to repetition of the above tests until a total of three "on-off" cycles have been completed. The fixture shall be immediately inspected at the completion of the third cycle. Any evidence of glass breakage or lens damage, any leakage of water into the assembly, damage to any part of the unit, or equipment failure during the tests shall be cause for rejection.

(5) Low Temperature Test. The light assembly mounted on a base receptacle shall be totally immersed in water, and while immersed, subjected to a low temperature of minus 43°C. ±2°C. for a period of 24 hours followed immediately by operation at rated current for 30 minutes or until free of ice. This shall be repeated for a total of three cycles. Any evidence of damage shall be cause for rejection.

(6) Insulation Resistance Test. The light assembly shall be operated at rated current in distilled water, at room temperature, until the voltage across the leads has reached a stable value for at least 10 minutes. The stabilized value of voltage at rated current shall be measured and recorded. The light assembly, except for the ends of the leads, shall then be completely submerged in a bath containing a saturated salt solution and operated continuously. The salt water bath shall be adequately grounded. A uniform temperature between 16°C. to 27°C. shall be maintained throughout the solution by occasional stirring. The current through the leads shall be maintained at rated current during this immersion. After three hours or more of operation in the bath, the voltage across the leads shall be adjusted to, and maintained at, the recorded value. Current readings shall be taken under the following conditions:

(a) With one lead grounded.

(b) With the ground removed from the first lead and the other lead grounded.

(c) With neither of the leads grounded.

If any of the three current readings exceed rated current by more than 1.5 percent, the light shall be rejected.

(7) Accelerated Life Test. The light assembly shall have an accelerated life test performed on it after it has successfully passed all the above tests. The top assembly mounted on a base receptacle shall be set in dry sand simulating its installation in pavement. The sand shall be at least 5 inches thick around the sides and bottom of the receptacle. Fine sand shall be spread over the top assembly and base receptacle to fill any openings in the assembled light which would be below pavement level. The unit shall then be operated for at least one-half the rated lamp life at rated current and at room temperature. After this, all sand shall be removed and the photometric performance of the unit shall be measured as described in paragraph 4a(2). Light values must equal at least 80 percent of those specified in Figure 1. After this test, the light assembly shall be taken apart and thoroughly examined. Any visibile deformation, blistering, evidence of heat damage, or corrosion shall be cause for rejection.

(8) Protective Plating Test. Zinc plating shall be tested by appropriate method described in Federal Specification QQ-Z-325. Cadmium plating shall be tested by the appropriate method described in Federal Specification QQ-P-416.

(9) Load Test. This shall be a static load test. The assembled unit, with the top assembly (including gasket, lamp, and optical assembly) mounted on a base receptacle shall be placed on a flat steel plate mounted in a standard testing machine. The load shall be applied to the top part of the fixture through a block of rubber, 11 inches in diameter and 1 1/2 inches thick, having a Shore A hardness of 55 to 70. A total load of 50,000 pounds shall be applied uniformly over the area of the rubber at a rate not greater than 10,000 pounds per minute. The light assembly shall be considered unsatisfactory if there is any permanent deformation, cracking of material or finish, breaking, or damage to any part of the light.

(10) Leakage Test. This test shall be performed after the assembled light unit has undergone the load test described in paragraph 4a(9). For the leakage test the top assembly shall be securely bolted to the base receptacle and all bolts torqued to the manufacturer's specifications. Prior to performing this * test, the two wire leads shall be subjected to a 30 pound tension for five minutes to test the integrity of the seal * where the leads enter the base receptacle. With a minimum internal pressure of 10 p.s.i., the assembled unit shall be tested using an approved bubble test material (high foam detergent producing a low surface tension). The assembly shall be considered watertight if no air bubbles appear.

b. Production Testing. Ten top assemblies, complete with lamp and optical fixtures, and ten base receptacles shall be selected at random from each 100 production units for test purposes. These light assemblies shall be subjected to the photometric tests specified in paragraph 4a(2) and to the leakage test specified in paragraph 4a(10). Leakage tests on production units shall be accomplished by means of a standard test head and a standard test base. The test head and test base shall be production units properly fitted with pressure fittings to permit the internal pressure of each assembly to be raised to 10 p.s.i. When two or more of these light assemblies fail to meet the requirements of the specification, the entire lot shall be subjected to the photometric and leakage tests and only those of the lot meeting these tests shall be shipped. These tests shall be performed by the manufacturer and may be witnessed by a government representative. Each light assembly shall be identified by a serial number and test records kept by the manufacturer for at least two years. These records shall be available to the Federal Aviation Administration upon written request.

5. PREPARATION FOR DELIVERY.

a. Light Assembly. The light assembly shall be prepared for delivery as two separate components, the base receptacle and the top assembly. All exterior surfaces of the assembly shall be cleaned of all oil, grease, and other foreign material, prior to packaging, to insure proper sealing and seating of the components at the time of installation.

(1) Top Assembly. The top assembly shall be individually packaged in a durable, domestic type, corrugated cardboard carton. It shall be properly cushioned inside the carton to provide the necessary mechanical and physical protection to the fragile optical system and the critical machined surfaces. For convenience of shipment, four packaged top assemblies may be packed in a wooden container.

(2) Base Receptacle. The gasket and lock washers shall be packed in two separate envelopes and placed inside the base. The top surface of the flange including the gasket groove shall have a wax film not exceeding 0.001 inch in thickness. The plywood cover and gasket, specified in paragraph 3b(6), shall be properly positioned and secured to the top of the base receptacle with the hold-down bolts specified in paragraph 3b(5). The wire leads extending from the sealed aperture in the side of the base receptacle shall be coiled and held close to base. The base receptacle shall be crated or boxed in a container, either singly or in multiple, so as to protect the sealed aperture and external wires during shipment and storage.

b. Shipping Marking. The top assembly cartons and, when used, the wood boxes and the base receptacle plywood cover shall be durably and legibly marked with:

Consignee's Name and Address

Component Name and Part No.

Specification No.

Contract No.

Manufacturer's Name and Address

6. NOTES. This information is only for the Contracting Officer. It is not a contract requirement nor binding on either the government or the contractor, except to the extent that it may be specified elsewhere in the contract as such. Any reliance placed by the contractor on the information in this paragraph is wholly at the contractor's own risk. The Contracting Officer should cite the type of light assembly desired (reference paragraph 1).

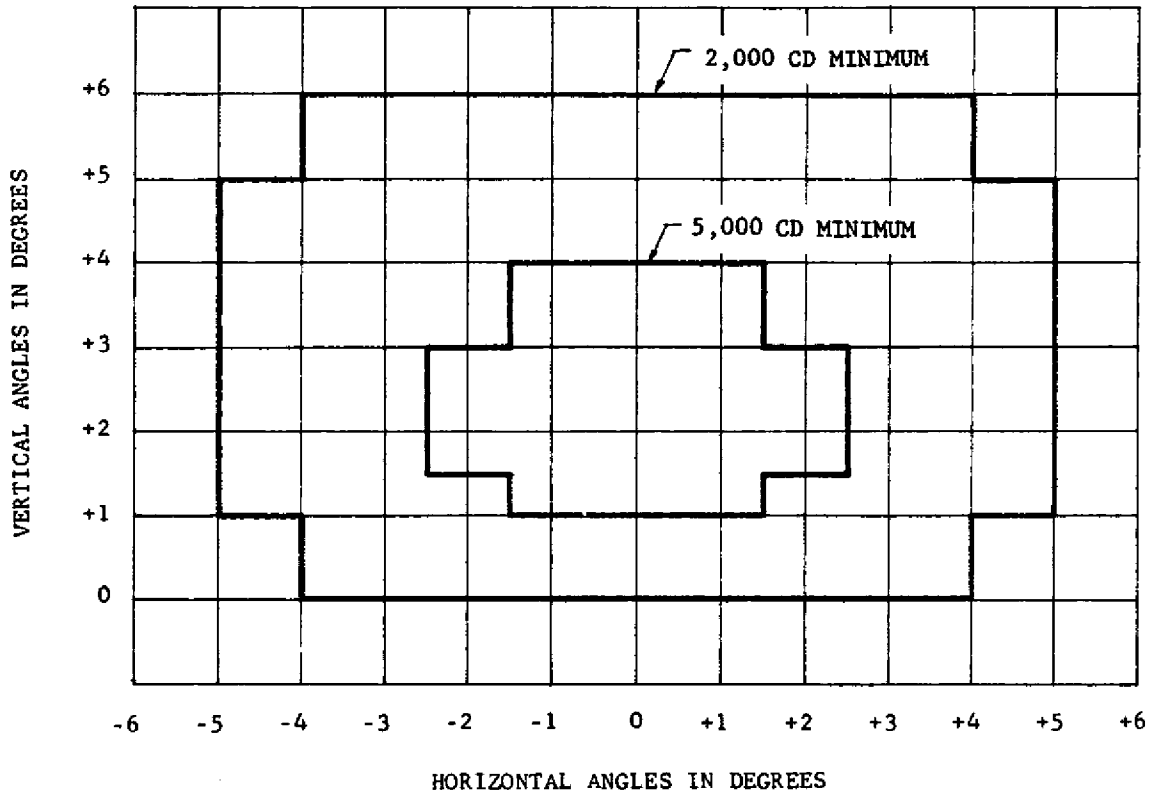
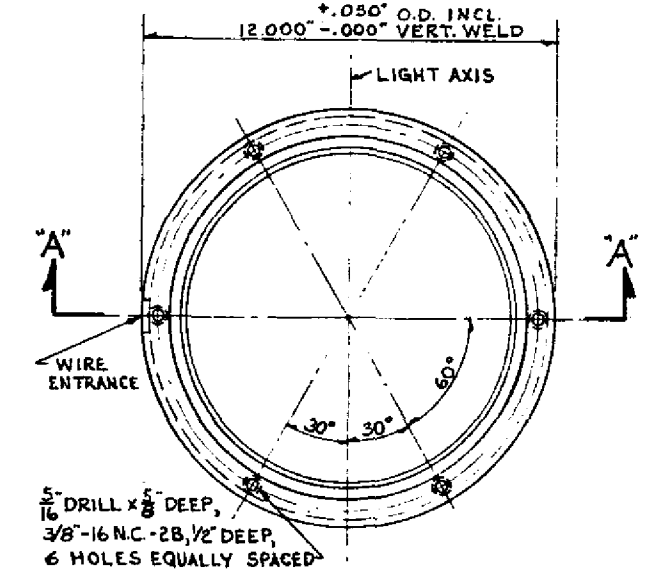
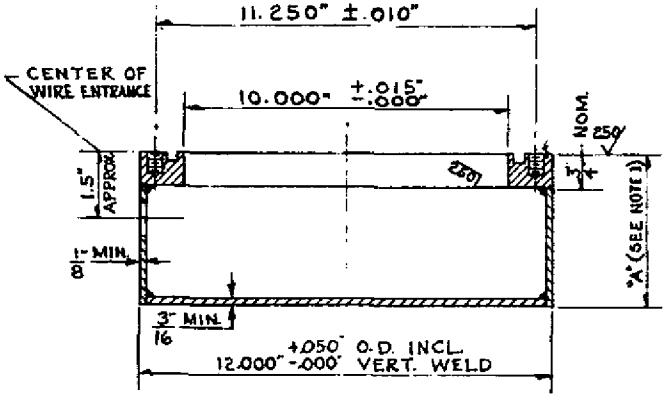


FIGURE 1. ISOCANDELA CURVE FOR MINIMUM OUTPUT IN WHITE LIGHT

NOTES:
(a) The above minimum candela values apply to the light beams emitted in both directions.
(b) A horizontal shift of plus or minus one degree and a vertical shift of plus or minus one-half degree is permitted for inspection, qualification, and approval procedures.
(c) The peak candela output within the above curve shall not exceed 20,000 CD.
(d) There shall be a gradual fall-off of candela output to a candela value of no less than 5 CD within a curve whose limits are $\pm 18^{\circ}$ horizontal and 15° vertical.

FIGURE 1. ISOCANDELA CURVE FOR MINIMUM OUTPUT IN WHITE LIGHT





SECTION "A-A"

NOTES

1. FOR TYPE I UNIT, DEPTH DIMENSION "A" IS 2.75" $^{+0.1}_{-0.0}$ FOR TYPE II UNIT, DEPTH DIMENSION "A" IS 8.25" $^{+0.1}_{-0.0}$

2. CLEAR INSIDE SPACE BELOW BOTTOM OF FLANGE SHALL BE NOT LESS THAN 11 INCHES IN DIAMETER, CONCENTRIC ABOUT THE CENTER OF THE BASE, WITH A DEPTH OF 1.75 INCHES FOR THE TYPE I AND A DEPTH OF 7.25 INCHES FOR THE TYPE II.

3. NORMAL MILL TOLERANCES OF MATERIAL WILL BE ACCEPTABLE.

4. THE BOTTOM SHALL BE FLAT, WITH NO UPWARD DEVIATION AND MAXIMUM DOWNWARD DEVIATION OF .25".

5. WHERE NOT SPECIFIED, DIMENSIONS SHALL BE HELD WITHIN A TOLERANCE OF ±0.05".

6. THERE SHALL BE METAL TO METAL CONTACT BETWEEN THE TOP FITTING AND BASE RECEPTACLE.

7. THE TOP SURFACE OF THE BASE RECEPTACLE FLANGE SHALL CONTAIN A SUITABLE GASKET GROOVE AS INDICATED.

FIGURE 2. RECEPTACLE