INSTALLATION INSTRUCTIONS
Aktra Flood Series Floodlight

IMPORTANT:
Read carefully before installing. All work should be performed by a qualified Electrician. These instructions may not provide directions to cover every variation and detail. To obtain additional information, consult your vendor or contact the factory directly for assistance before attempting anything with uncertainty. Improper installation and/or utilization may void manufacturer's warranty.

This fixture must be grounded in accordance with local codes and the NATIONAL ELECTRIC CODE. Failure to do so may result in serious personal injury. HID luminaires should be operated on grounded systems only.

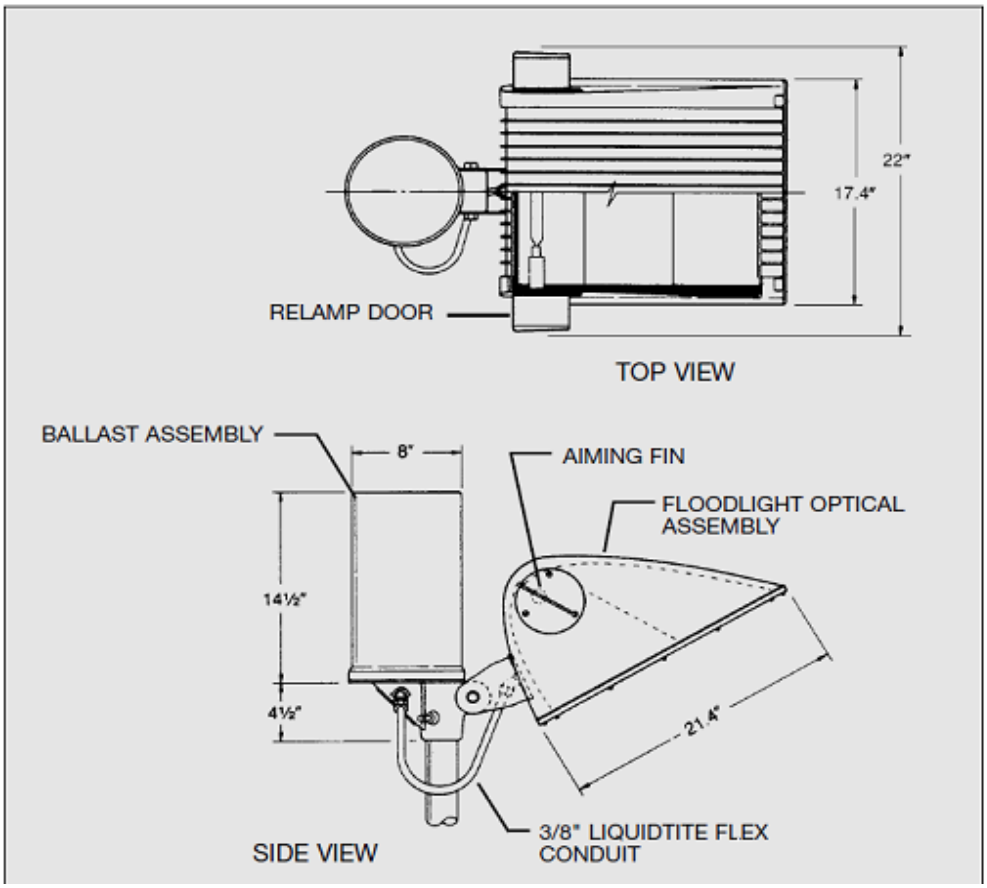
Ungrounded power distribution systems may carry high transient voltages which can cause failure of any type electrical equipment. Use of this equipment on ungrounded systems will VOID THE WARRANTY.

GENERAL:
Upon receipt, inspect for any freight damage, which should be brought to the attention of the delivering carrier. See "Damage and Shortage Claims" for proper steps in filing claims with the carrier. Compare the catalog description listed on the packing slip with the label on the carton to assure you have received the correct material.

This floodlight is designed for outdoor lighting and should not be used in areas with limited ventilation or within enclosures having high ambient temperatures. It is provided with an integral mastfitter for mounting on a vertical 2-3/8"OD tenon x 4-1/2" tall. The flood light is UL approved for wet locations (UL1598).

WARNING: In no case mount this floodlight to either a horizontal tenon or inverted tenon.

IMPORTANT: The flood light optical assembly and ballast assembly are separately packaged. After uncartoning, inspect for any damage. If damage is noticed, see "Damage and Shortage Claims Form" (yellow) for proper steps in filing claims with the carrier.



OPTICAL ASSEMBLY

STEP 1 – Place fixture on a firm surface being careful not to scratch the paint finish and open the relamp door (on the right side of fixture when viewing fixture from the back side) by removing the three captive 8-32 x 5/8" screws. Allow relamp door to hang from safety cable. See **FIGURE 1.**

LAMPING

STEP 2 – Prior to installing lamp into socket, check to make sure it is the correct type and wattage. **CAUTION: Observe lamp manufacturer's recommendations and restrictions on lamp operation, particularly regarding ballast type and burning position.** Insert lamp into the socket and firmly tighten to ensure lamp is properly seated. Tightening must be sufficient enough to fully depress and load the center contact of the socket.

PHILIPS

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STABILUX LAMP SOCKET

STEP 3 – The floodlight has a three finger stabilux lamp socket that grips the opposite end of the lamp which holds the lamp in alignment and offers protection against breakage when the fixture is subjected to vibration. It's important that the stabilux grips the opposite end of the lamp when the relamp door is put back into place. Adjust to fit end of lamp, turning the three finger stabilux until it firmly slides against the end of the lamp.

CAUTION: Do not over extend the stabilux as this can break the lamp when tightening the three 8-32 screws. See **FIGURE 2.**

BALLAST ASSEMBLY

STEP 4 – Attach fixture mounting yoke to ballast enclosure/mastfitter assembly with the 4-1/2" long machine bolt, 1/2" flat washer, 1/2" – 13 hex head nut, diecast inserts, and internal-external lock washer (provided in fixture hardware kit). Tighten the 1/2"-13 hex head nut slightly. See **FIGURE 3.**

STEP 5 – Fixture at this stage may be set at the proper vertical aiming angle by using the degree markings on the mounting yoke. (Aiming angle may also be set after the fixture and ballast assembly are mounted to the pole or 2-3/8" OD vertical tenon). If proper aiming angle has been set, tighten the 1/2"-13 hex head nut on mastfitter to 50 ft.-lbs. See **FIGURE 3 (torque)** and **FIGURE 4 (aiming)**.

FIXTURE WIRING

This fixture must be wired in accordance with the NEC and applicable local codes. **WARNING: Proper grounding is required to insure personal safety.** Connect the green or bare copper fixture-ground lead to a suitable ground connector. Use approved connectors for all electrical connections.

STEP-6 – Unscrew and remove the 45° conduit connector nut from the liquidtite flex conduit and install the male

connector in the ½" threaded hole in the ballast mastfitter base. Slide the nut up the flex conduit, then slide the flex conduit over the male connector and securely tighten the cable connector nut. See **FIGURE 5.**

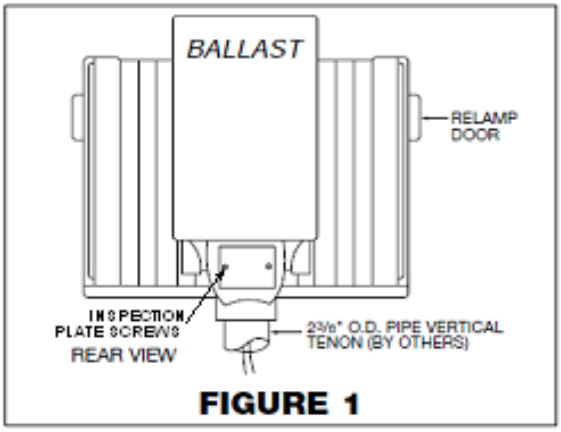

FIGURE 1

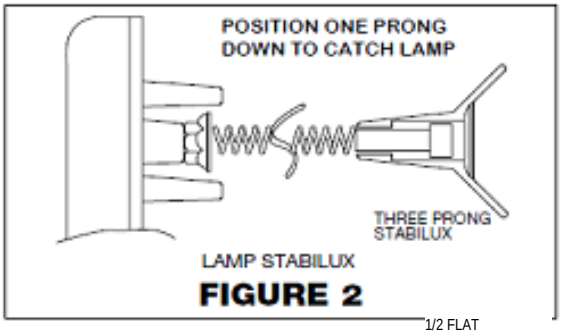

FIGURE 2

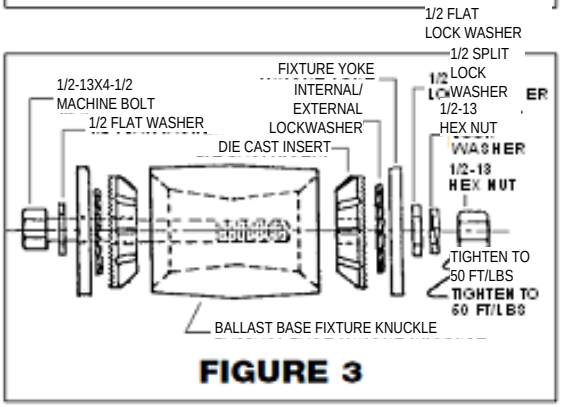

FIGURE 3

STEP 7 – Remove inspection plate and gasket from back of mastfitter by removing the two screws. Mount fixture/ballast assembly to 2-3/8" vertical pipe tenon (by others) see **FIGURE 1,** after pushing branch circuit lead wires (by others) through the mastfitter and out inspection plate opening see **FIGURE 6**.

Service may also be made by removing the 1/2" pipe plug from the mastfitter and attaching a proper watertight connector (by others), and then inserting an SO cord with branch circuit lead wires (by others). Tighten the two 3/8" square head set screws on the side of the mastfitter against the pipe tenon to 8 ft.-lbs.

STEP 8 – Make proper electrical connections as indicated on wiring diagram located on the ballast enclosure. Connect line lead to black lead, neutral lead to white and ground lead to the green grounding screw inside the mastfitter splice box.

On 120 volt and 277 volt systems, connect the voltage supply lead to the ballast lead marked with the voltage marker. Connect the neutral supply lead marked com.

On other voltage systems, connect one supply lead to the ballast lead marked with the proper voltage and the other supply lead to the ballast lead marked com.

WARNING: On quad voltage ballast (QV), leads not required should always remain with the insulated connector intact. See **FIG. 8.**

STEP 9 – Before closing the mastfitter splice box, check to be sure proper voltage leads have been selected to match the supply voltage before energizing. Improper wiring may result in ballast failure and void warranty.

Insure wires in pole are strain-relieved. Place connected wires into the mastfitter splice box and replace inspection plate and gasket. Tighten the inspection plate screws securely to 1 ft-lbs.

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AIMING

STEP 10 – The reflector system for this floodlight is an asymmetrical cutoff design. When the main candlepower is aimed at 63 degrees above vertical (2 times the mounting height) the floodlight meets its cutoff criteria. It can be aimed to meet semi-cutoff when aimed 2.4 times the mounting height. If fixture was not aimed during assembly (Step 5), loosen the 1/2" - 13 bolt. Set fixture to proper aiming angle by using the degree markings on the mounting yoke. Optional aiming may be accomplished by sighting down the aiming device on either side of the fixture using the fin on the relamp or socket plate.
See **FIGURE 4.**

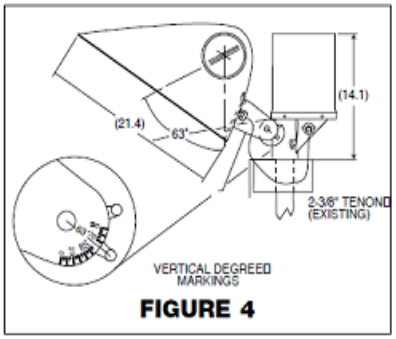

FIGURE 4

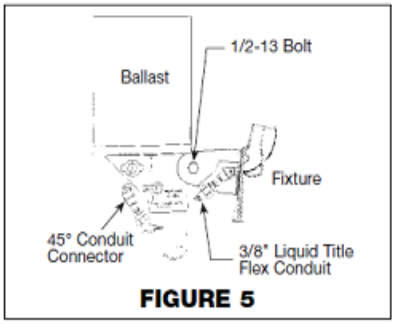

FIGURE 5

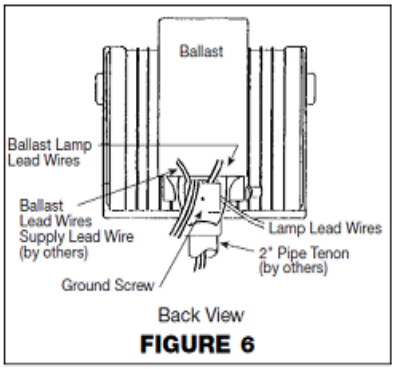

FIGURE 6

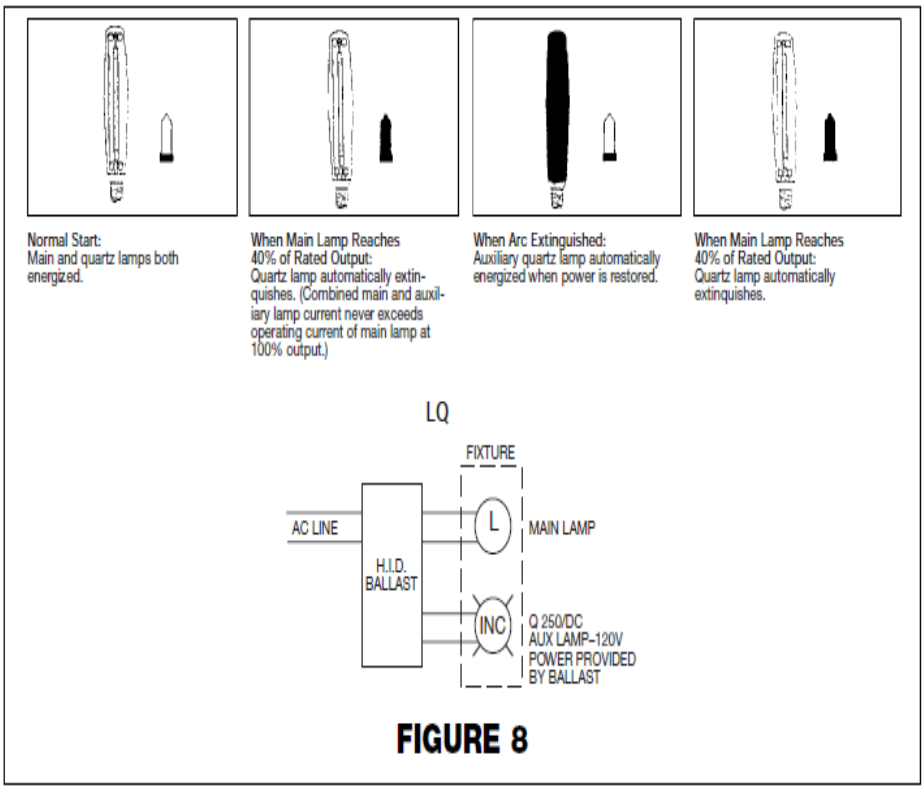

FIGURE 8

OPTIONS

LQ Hot/Cold Quartz Restrike with Time Delay
Automatically controls an integral Q250/DC quartz lamp (provided by user) anytime the main lamp is extinguished and the ballast is energized. Following a cold start or a momentary power interruption the quartz lamp is energized by a solid state controller located inside the fixture housing. The quartz lamp remains on until after the main HID lamp has reached approximately 40% light output. Combined current of the quartz lamp and HID lamp never exceed the main lamp current at full output. The quartz socket(s) is prewired and the socket leads are routed in the 3/8" liquidtite conduit and is wired to the ballast as shown per the LQ wiring diagram. See **FIGURE 7.**

MF-1 Mastfitter for Less Ballast Models
Allows fixture head only to be mounted on a vertical 2-3/8" OD tenon x 4-1/2" tall. Leads from lamp socket extend into the mastfitter splice compartment. Remove the pipe plug from the MF-1. Route SO cord through a watertight connector (both provided by user) for wiring to socket leads.
Note: Maximum distance between socket and high pressure sodium remote ballast must not exceed 150 ft when using building wiring in conduit or 75 ft when using #16 SO 600 volt cord. See **FIGURE 9.**

FIGURE 7

ACCESSORIES

F-F1 or F-F2 Ballast Fusing
If individual fusing or ballast is desired, accessory fusing is available and may be installed during wiring of the ballast. Unless otherwise specified, fuses furnished for all ballasts 150 watt through 1500 watt will be KTK 30 amp rated. 100 watt and below will be KTK 10 amp rated.

Fuse holders are usually the external type (see **FIGURE 10**) and should be wired according to diagram shown. F-F1 fuse kits are a single fuse for 120V or 277V. F-F2 fuse kits are a double fuse for 208V, 240V, or 480V.

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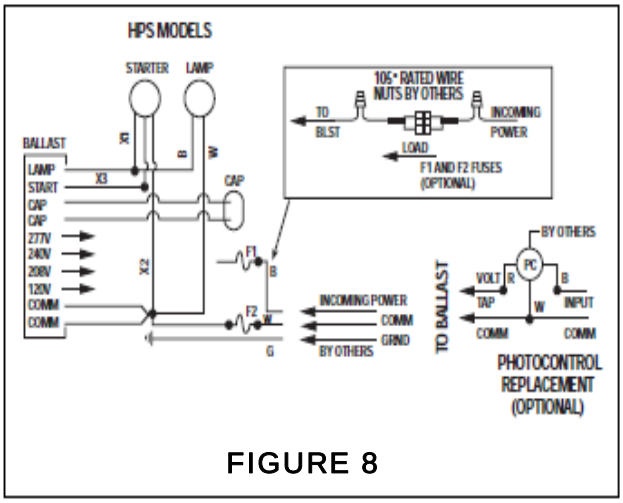

FIGURE 8

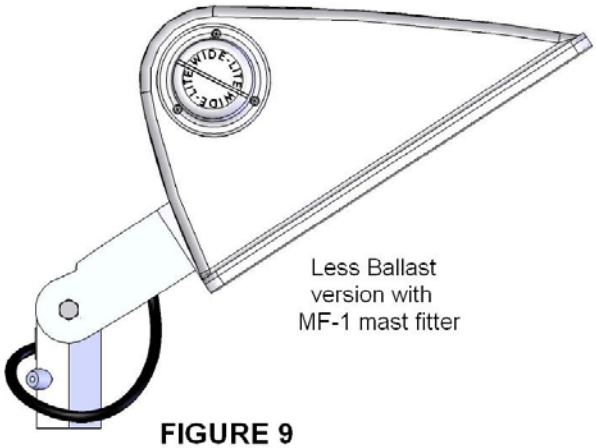

FIGURE 9

1/2" bolts provided by user. See **FIGURE 12**

PM-(*) Wood Pole Mounting Brackets
Aluminum wood pole mounts with vertical 2-3/8" OD tenon for mounting floodlights to wood poles with 6" minimum to 12" maximum diameter. See **FIGURE 13**

(*) Number which represents the number of floodlights (maximum is four) that can be mounted to a PM wood pole bracket Example: PM2 will handle up to two floodlights.

AL-10-AF Auxiliary Polycarbonate Lens
Remove one lens retainer screw from each corner of the fixture lens frame. Assemble hardware and install auxiliary lens as shown in **FIGURE 14.**

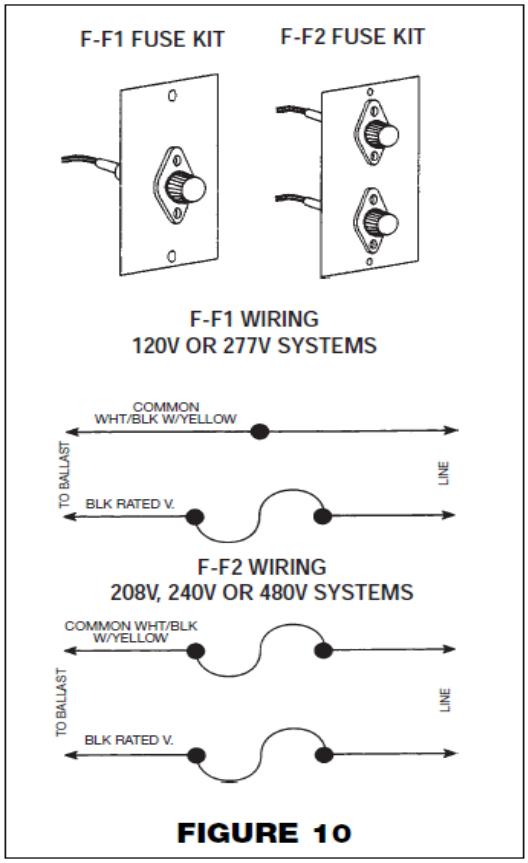

FIGURE 10

FB1 Flat Base Mount
Flat mounting casting with provisions for vertical 2-3/8" OD tenon (by others) for mounting to flat horizontal surfaces. Mounting hardware for anchoring provided by user. **CAUTION: Limit height of tenon to no more than 8".** See **FIGURE 11.**

PX-1 Cross Arm Bracket
Cast aluminum angle bracket with 2-3/8" OD vertical tenon for installing floodlights to wooden or steel cross-arms. **CAUTION: Back plate of brackets install to cross member opposite fixture lens.** There are five 9/16" mounting holes for securing the PX-1 to the cross member, three of which can be utilized without bolt interference. These are the two on top and the lower horizontal hole in the back plate. As a minimum these three holes must be utilized. Mounting hardware

PCM-1 Photocell Receptacle Only
Remove 1/2" pipe plug from the ballast mastfitter base. Thread the 1/2" photocell receptacle into the mastfitter base, tighten securely. Check to see that the photocell (provided by user) is of proper voltage and wattage. Wire in accordance to wiring diagram. See **FIGURE 15.**

WB-1 Wall Mounting Bracket
For mounting floodlight with ballast or less ballast models to a flat vertical surface only. There are four 9/16" nominal mounting holes in the back plate for 1/2" mounting bolts (provided by user). Wiring of fixture can be done internally (see wiring instructions) through the bracket for applications where the wiring box is flush mounted. Or, can be wired externally to an appropriate junction box or similar device. See **FIGURE 16.**

WB-5 Surface Wiring Box
For use with WB-1 wall bracket. Serves as a wiring compartment and used where surface mounted conduit feed is used. Tapped at top, bottom, and back for 3/4" NPT conduit. Gasket provided for sealing box to the WB-1. Mounting hardware (1/2" mounting bolts) provided by user. The WB-5 box is supported by the same bolts used to support the WB-1 and need to be long enough to secure both the WB-1 and box to the wall. The box straddles the four mounting bolts. See **FIGURE 17.**

INSTALLATION INSTRUCTIONS
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MAINTENANCE & CLEANING

Your floodlight is designed for years of trouble-free operation. It will occasionally be necessary to clean the lens to maintain the light level. The frequency of cleaning will depend upon the ambient dirt level. The lens should be cleaned with any suitable non-abrasive cleaning solution, soap, or detergent and rinsed with clean water.
WARNING: Never perform maintenance with fixture energized.

TROUBLESHOOTING

In the event fixture fails to operate properly, first check:

1) That the proper lamp is installed
2) The lamp is not faulty
3) The line voltage at the fixture is correct.
4) The fixture is properly wired.
5) The fixture is properly grounded.

If fixture still fails to operate after the above troubleshooting, contact your distributor or representative.

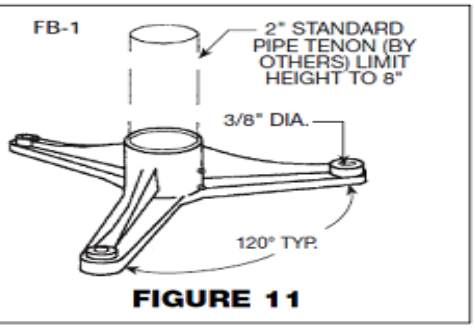
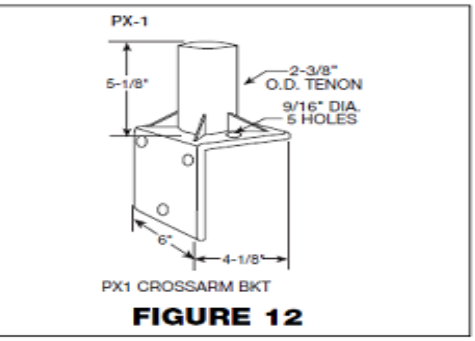


FIGURE 11



PX1 CROSSARM BKT
FIGURE 12

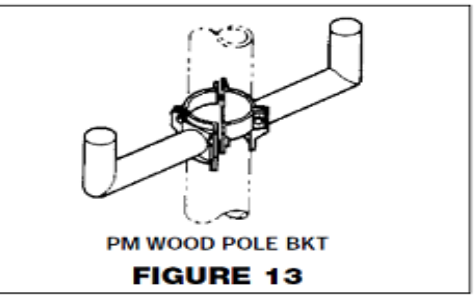


FIGURE 13

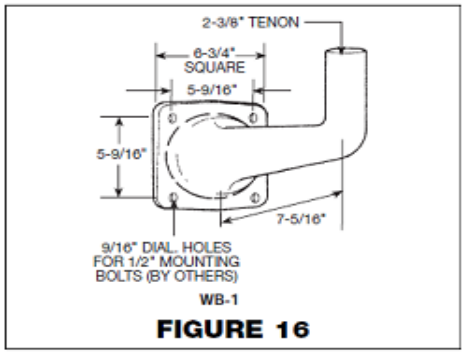


FIGURE 16

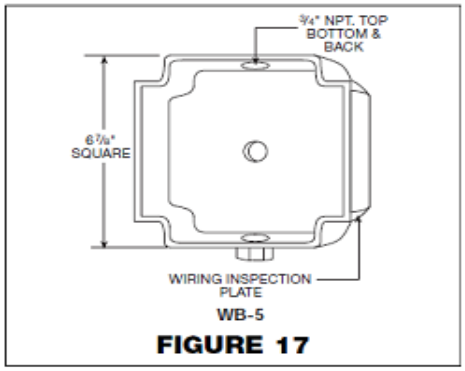


FIGURE 17

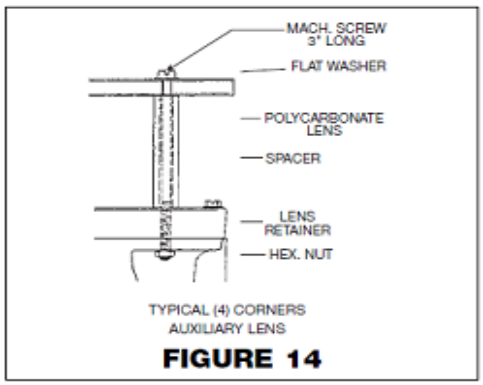


FIGURE 14

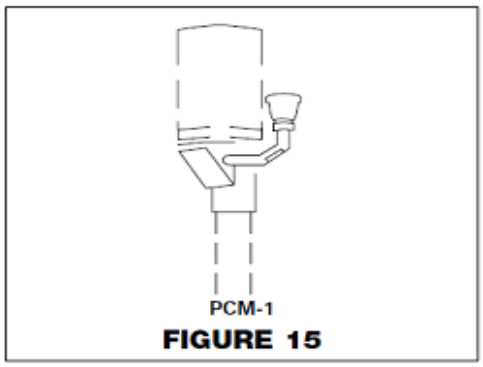


FIGURE 15

www.philips.com/luminaires

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200 Franklin Square Drive,
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