

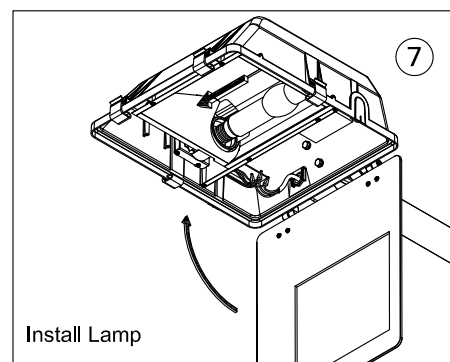
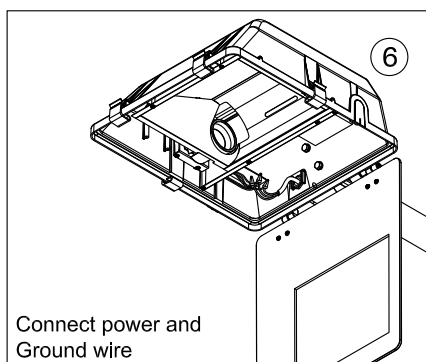
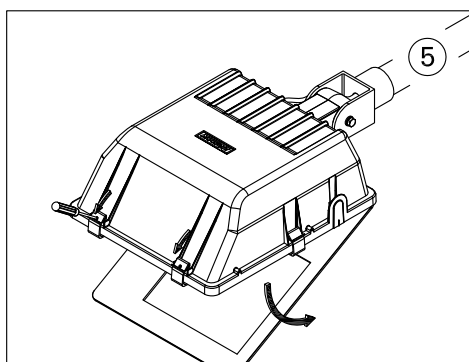
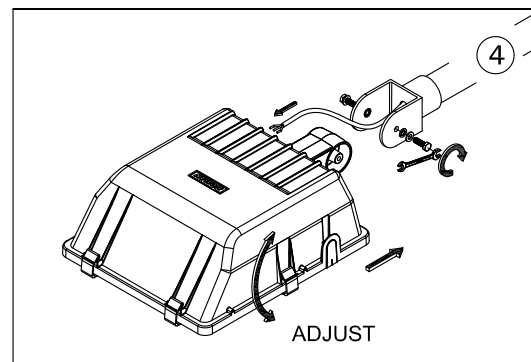
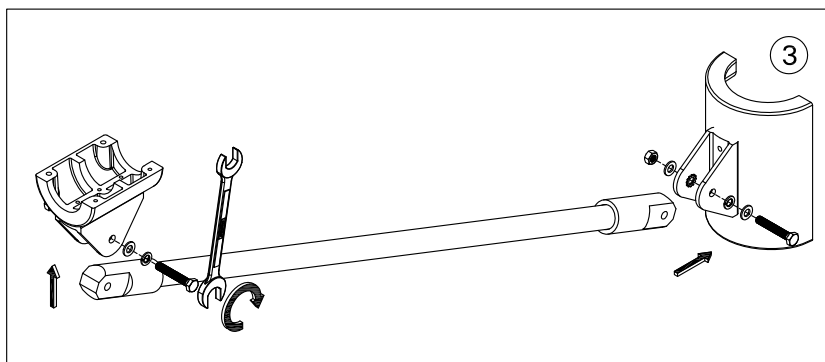
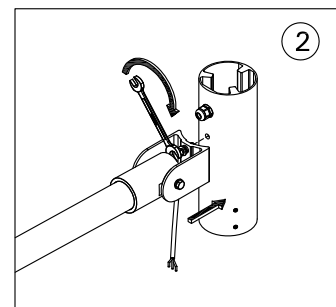
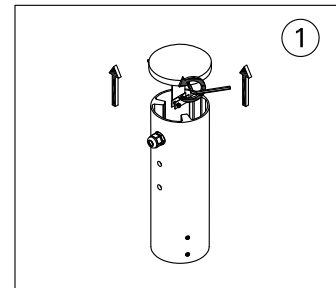
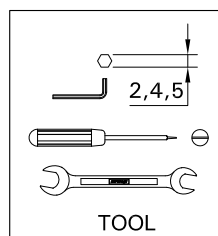
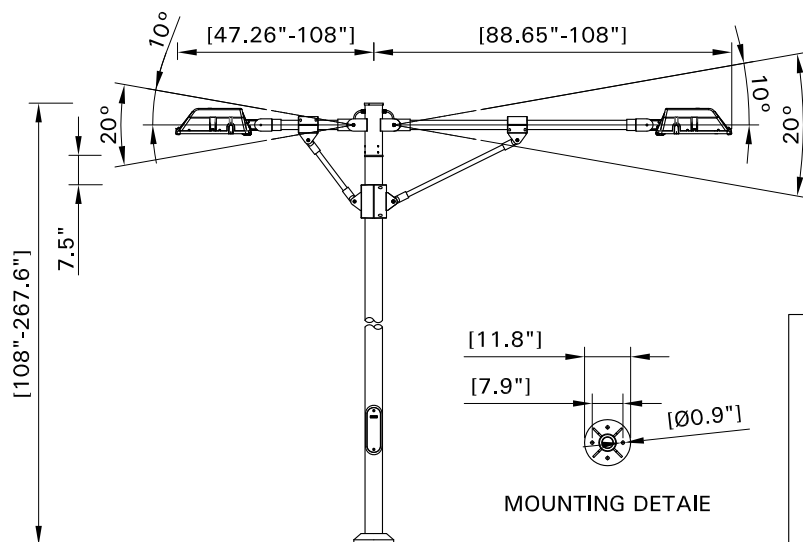
# INSTALLATION AND SERVICE MANUAL



For installation of Gandalf 19 area lighting luminaire.  
Model. U90052.

Product drawing (dimensions)

SUITABLE FOR WET LOCATIONS



## Notice to installer :

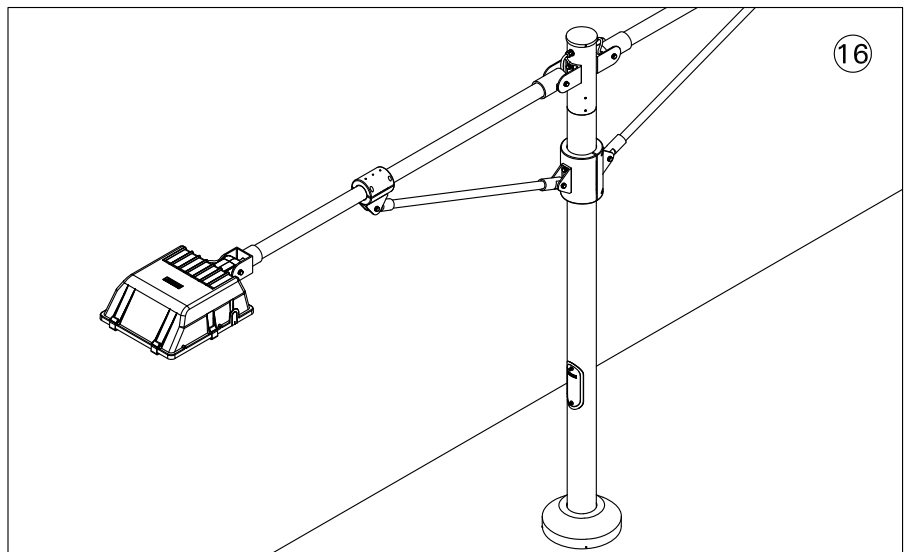
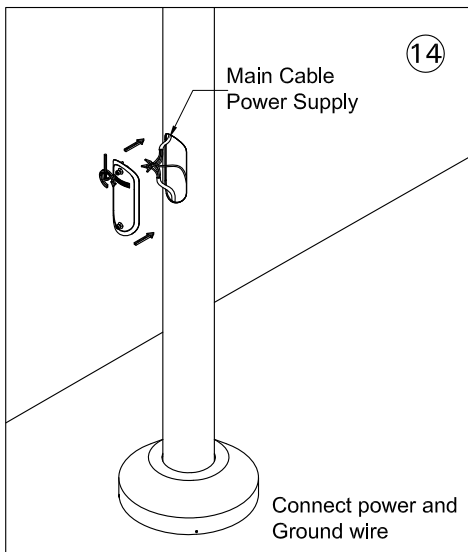
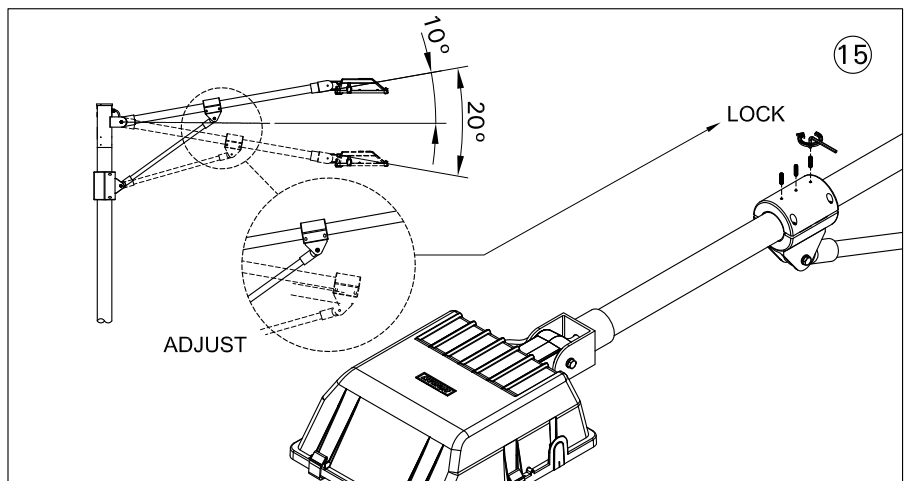
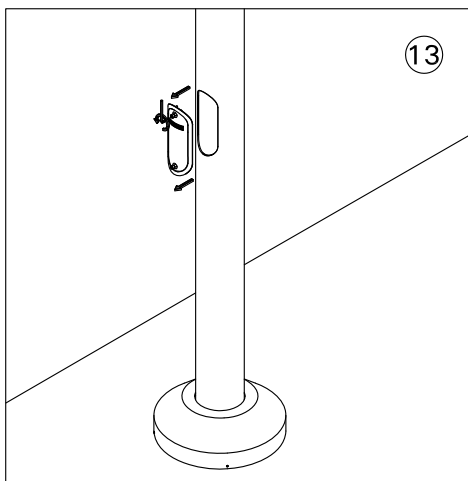
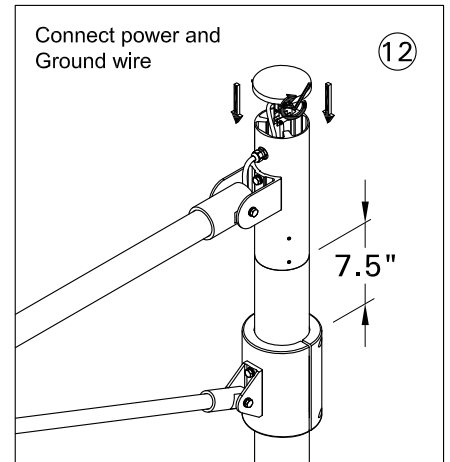
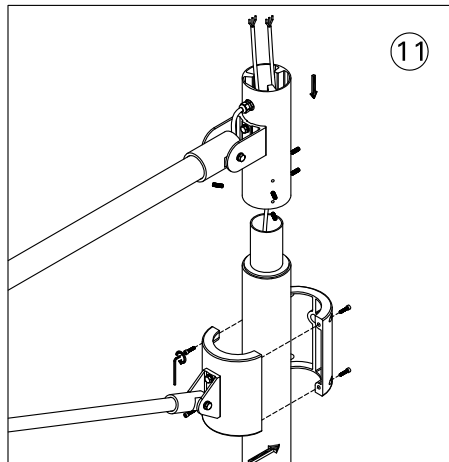
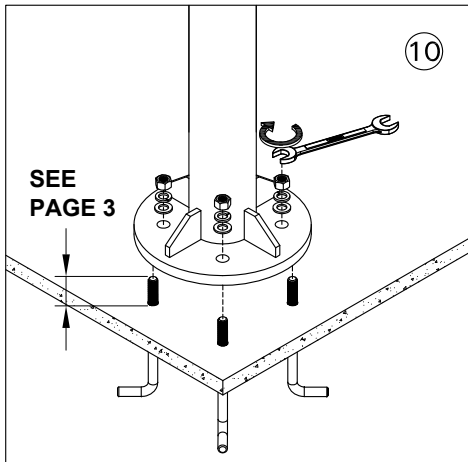
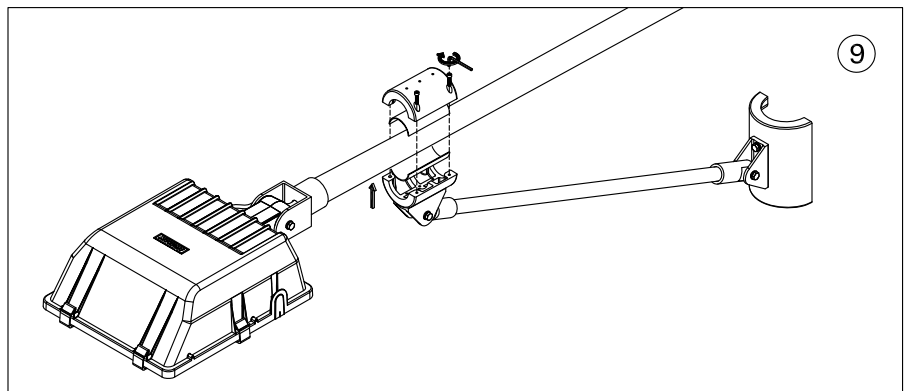
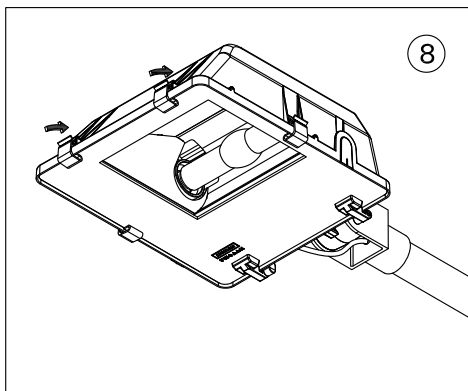
- 1.WIRING INSTRUCTIONS** Warning : RISK OF FIRE AND ELECTRICAL SHOCK. : FIXTURE MUST BE INSTALLED BY A QUALIFIED ELECTRICIAN ONLY>FIXTURE IS INTENDED FOR INSTALLATION IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, LOCAL AND FEDERAL CODE SPECIFICATIONS. DISCONNECT POWER BEFORE SERVICING.
- 2.This fixture has a VOLTAGE SPECIFIC BALLAST,Check that the supply voltage is the same as the installed ballast voltage.**

## Ligman Lighting USA

Tanasbourne Commerce Center  
3302 Nw 211th Terrace  
Hillsboro Oregon 97124  
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www.ligmanlightingusa.com

ISO 9001  
ISO 14001  
BUREAU VERITAS  
Certification





## USING LEVELING SHIMS



Use anchor bolt template to set anchor bolts into concrete as per civil engineering instructions.

**Ligman does not provide foundation details. A local engineer that is familiar with the site soil conditions should provide this information.**

### NOTE:

Ligman does not recommend using leveling bolts for pole installations.



Ensure that the concrete is plumb using a level. Failing to do this will result in pole being uneven or tilted.

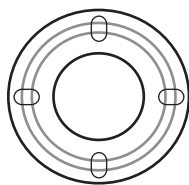


Leveling Shim Example

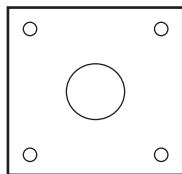
## What's Included Per Pole



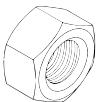
x 4



x 4



A single anchor bolt template is provided per pole size to be used for the poles on the project.



x 4

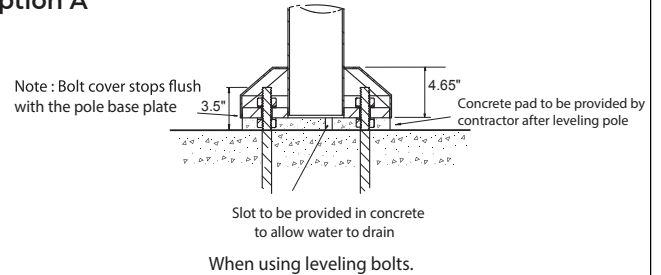
Anchor bolt template may be round or square dependant upon which pole is being used.

## USING LEVELING BOLTS

SHOULD THE CONTRACTOR SELECT TO USE THE LEVELING BOLT METHOD, AN ADDITIONAL 4 BOLTS NEED TO BE PURCHASED

In rare instances where leveling bolts have to be used, it is important that a flush concrete surface is created to mount the pole base plate.  
**NOTE: When using leveling bolts, bolt projection should be 3.5"**

### Using Leveling Bolts Option A

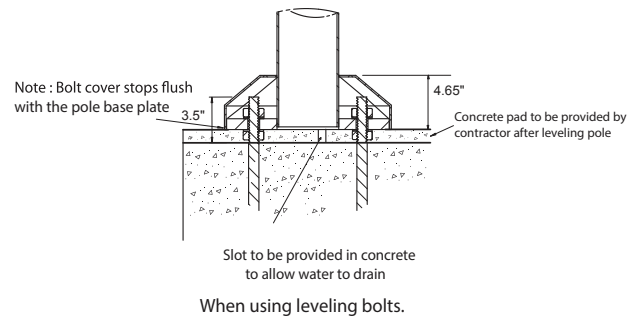


After establishing a level platform the space between the original concrete surface and the pole base should be filled with concrete and finished flush.

This provides a uniform load displacement pad for the forces created by wind and luminaire weight

Foundation and Design by Others

### Using Leveling Bolts Option B



After establishing a level platform the space between the original concrete surface and the pole base should be filled with concrete and finished flush.

This provides a uniform load displacement pad for the forces created by wind and luminaire weight