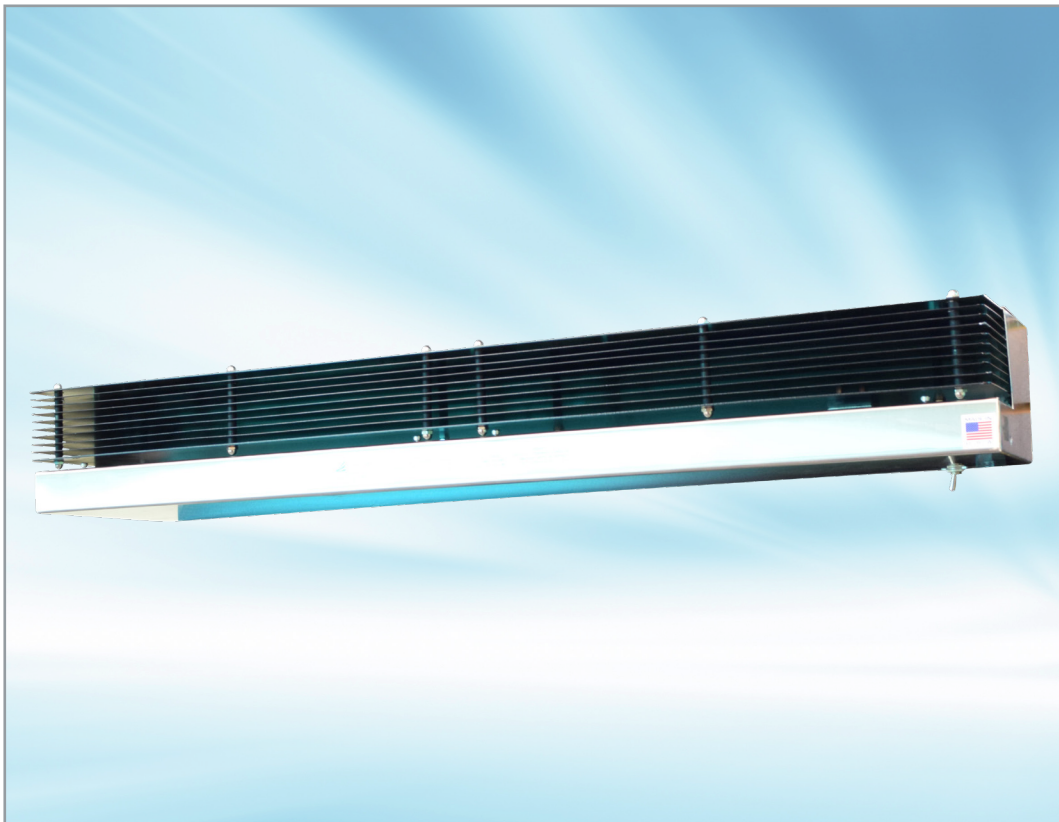




Maintenance • Service • Safety

Recommendations For Lumalier Upper Air Disinfectors WM Series



www.lumalier.com

1931 Thomas Road | Memphis TN 38134 | 901-800-1709
EPA ESTABLISHMENT NO. 91347-TN-001

Maintenance

Scheduled Maintenance Procedures

Quarterly – Safely visually inspect lamps from below to insure all lamps are operational.

Semi-Annually – If the lamps show visual dust accumulation, they should be cleaned.

To clean lamps:

- De-energize by switching the ON/OFF switch to the “OFF” position.
- Using soft cotton gloves, remove the lamps from the UV unit.
- Using a soft cotton cloth, with isopropyl alcohol, wipe the lamps and allow to dry. Replace the lamps.
- Reinstall the chrome mesh lamp guard.
- Turn on the exterior toggle switch. Read warnings.
- Inspect the lamps using safety glasses to insure all lamps are energized.

Annually – Replace the lamps.

To replace lamps:

- De-energize by switching the ON/OFF switch to the “OFF” position.
- Remove the used lamps from the UV unit.
- Wearing soft cotton gloves and using a soft cotton cloth, with isopropyl alcohol, wipe the new lamps and allow to dry.
- Install the new lamps.
- Turn on the exterior toggle switch.
- Inspect the lamps through the viewing port to insure all lamps are energized.

Service

Lumalier replacement parts and lamps can be purchased from authorized distributors.

For information call 901-800-1709.

What is UVGI?

UV-C, also known as “germicidal ultraviolet”, **has a specific wavelength of 253.7nanometers (253.7 billionths of a meter)** and is known to deactivate molds, spores and germs contained in tiny airborne droplet nuclei that transmit diseases such as measles, tuberculosis, and influenza from person to person. With significant penetrating ability, UV-C can penetrate the cell wall of a microorganism and destroy it but it cannot penetrate the outer layer of human skin or the cornea of the eye. Although overexposure may lead to a temporary, minor eye irritation or skin reddening it does not cause serious or long-term health effects.

Safety

Personal Protective Equipment

Employees must wear personal protective equipment whenever UV radiation measurements are being made close to the lamp source in order to document lamp output, or when maintenance procedures must be performed in areas where UVGI systems are activated. Personal Protection Equipment includes:

- Safety glasses with side shields
- Head, neck and face covering opaque to UV radiation
- Soft cotton gloves
- Long-sleeved, tightly woven fabrics with SPF 15 or greater

Reporting UV Exposure

Should any temporary eye or skin irritation that develops after acute exposure to UV radiation one should contact their supervisor or physician.

UV-C Measuring Protocols

According to CDC, OSHA, EPA, and other governing entities report that the safe lower room UV-C exposure is $0.2 \mu\text{W}/\text{cm}^2$ over an 8-hour occupancy period.

In order to measure these readings, a reliable UV-C hand-held radiometer should be used, preferably a radiometer that has fractional readings (i.e. tenths of a μW).

The process is as follows:

- Stand at a distance of 10'-0" from the face of the fixture.
- Hold the UV-C sensor at eye level (i.e. 5'6" to 6'-0") from the floor.
- Hold the sensor facing straight ahead.
- Record the reading from the radiometer.
- If the reading is above $0.2 \mu\text{W}/\text{cm}^2$ then the UV-C beam can be blocked with a simple piece of paper covering the lower 2-3 louvers on the fixture, then re-test the readings.

The intensity of each lamp fluctuates slightly while energized but this is normal.

Ozone Caution

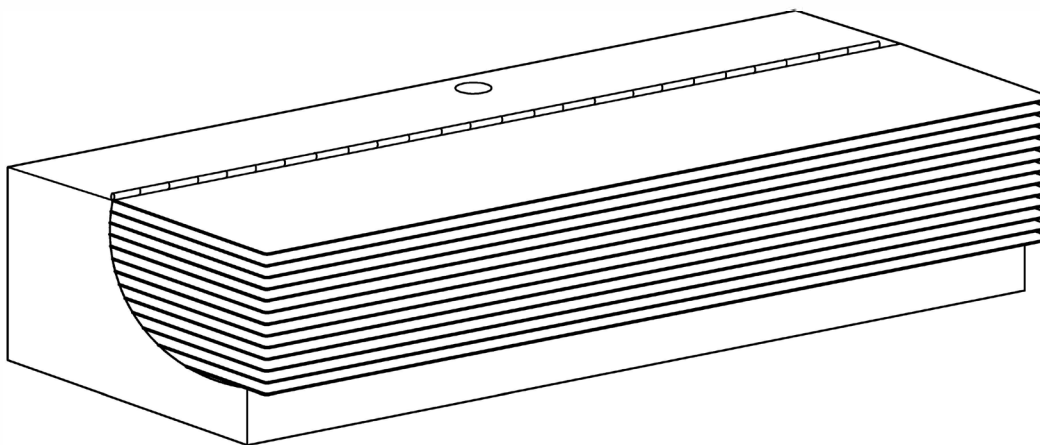
Ozone has been proven to be hazardous to human health. It can cause moderate to severe and chronic breathing problems. Some UV-C lamps do produce ozone and these **must be avoided**. The only UV-C lamp(s) that is recommended is the Philips brand lamps. They do not produce ozone. If other than Philips lamps are ordered, it must be specified in the lamp data that the lamps are ozone-free.

Side Effects Of UV-C Exposure

- The only side effects known are temporary irritation of eyes and skin.
- If bare eyes are exposed to UV-C light, it can cause temporary irritation, feeling like a lot of sand in the eyes.
- If bare skin is exposed to UV-C light, it can cause a temporary “sunburn” that does not tan but does peel.
- If any of this occurs, it is because of direct exposure to UV-C light.

Material Safety Data Sheets (MSDS)

For MSDS sheets on our lamps, please contact your local Lumalier representative.



DIMENSIONS: 18 1/4" L. x 8 1/2" EXT. x 4 3/4" H.

FINISHES: ALUMINUM HOUSING &
FLAT BLACK LOUVERS

ELECTRICAL REQUIREMENTS: 120V/0.55A THRU 240V/0.24A/ 50-60Hz / 0.5A

LAMP: (1) 36W TWIN TUBE UV

UV WATTS: 12 UV WATTS

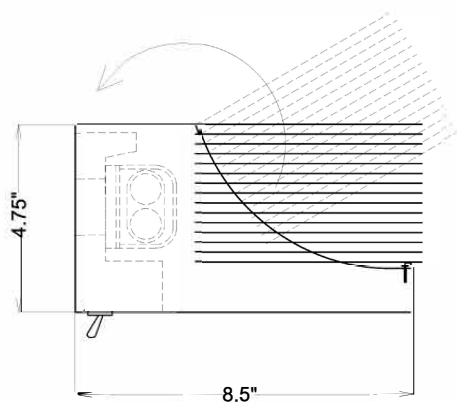
NOMINAL WATTS: 36 WATTS

MINIMUM CEILING HEIGHT: 7' 9"

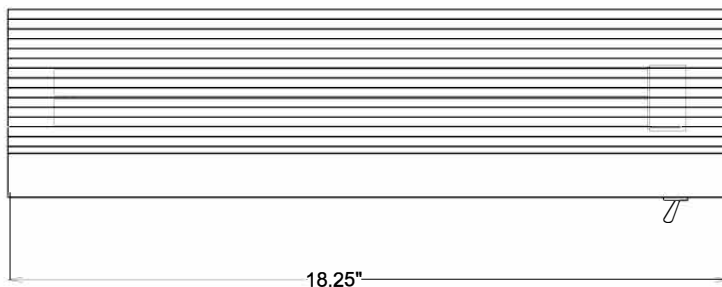
MOUNT NO LOWER THAN 7' 0" ABOVE FINISHED FLOOR.

WALL MOUNTED UV UPPER ROOM AIR DISINFECTOR W/ HINGED LOUVER ASSEMBLY FOR EASE OF MAINTENANCE.

4 3/4" HEIGHT; ON/OFF TOGGLE SWITCH & INTEGRAL SAFETY SWITCH

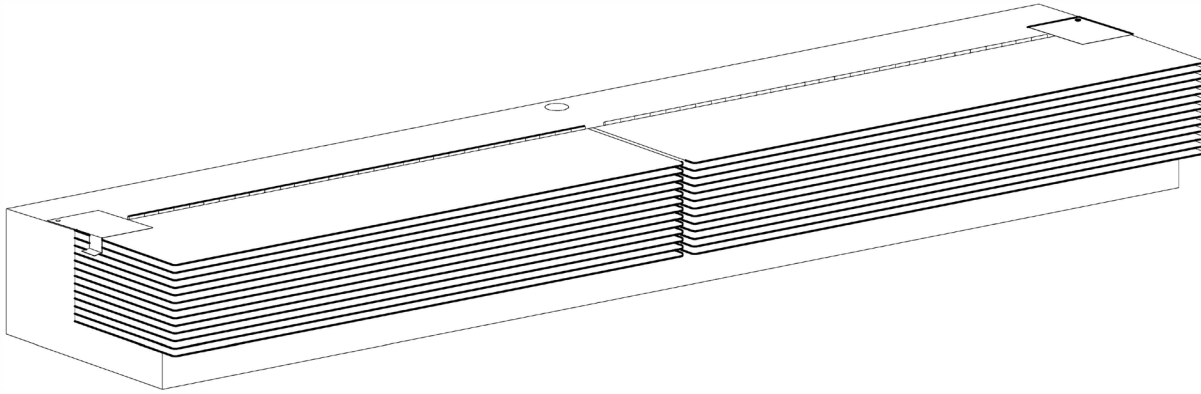


END VIEW



FRONT VIEW

DATA SHEET WM-136



DIMENSIONS: 36 1/4" L. x 8 1/2" EXT. x 4 3/4" H.

FINISHES: ALUMINUM HOUSING &
FLAT BLACK LOUVERS

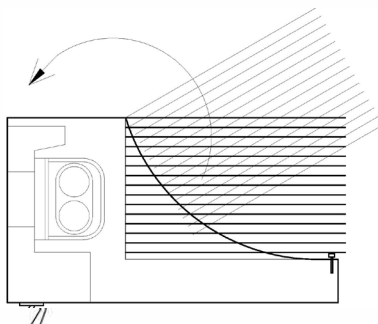
ELECTRICAL REQUIREMENTS: 120V/0.78A THRU 277V/0.33A/ 50-60Hz

LAMP: (1) 36W TWIN TUBE UV; UV WATTS: 12 UV WATTS
NOMINAL WATTS: 36 WATTS

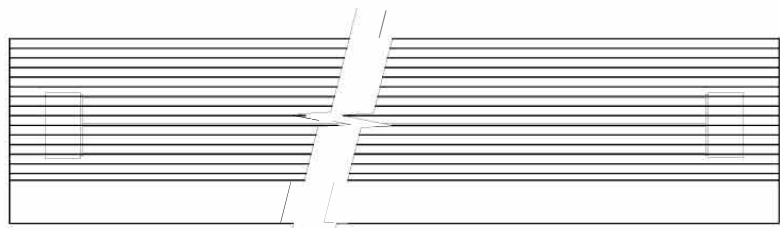
MINIMUM CEILING HEIGHT: 7' 9"
MOUNT NO LOWER THAN 7' 0" ABOVE FINISHED FLOOR.

WALL MOUNTED & HINGED LOUVER ASSEMBLY
FOR EASE OF MAINTENANCE.

4 3/4" HEIGHT; ON/OFF TOGGLE SWITCH & INTEGRAL SAFETY SWITCH



END VIEW



FRONT VIEW

SUBMITTAL DRAWING

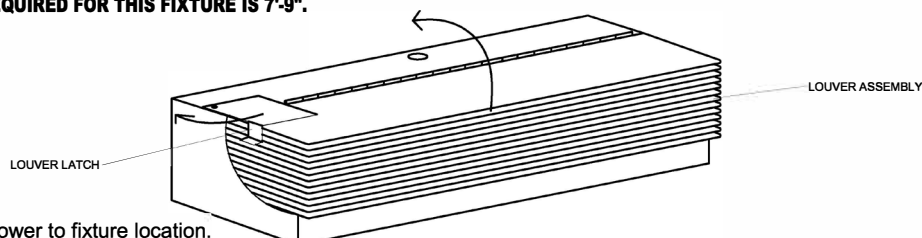
DATA SHEET WM-236

!! CAUTION !!

THIS UNIT IS DESIGNED FOR USE WITH ULTRAVIOLET LAMPS AND MUST BE INSTALLED IN COMPLIANCE WITH COMPETENT TECHNICAL DIRECTIONS SO THAT USERS' EYES AND BARE SKIN WILL NOT BE SUBJECTED TO INJURIOUS RAYS.

DO NOT LET EYES OR BARE SKIN BECOME EXPOSED TO ULTRAVIOLET RAYS EMITTED BY THE UV LAMPS USED IN THIS FIXTURE.

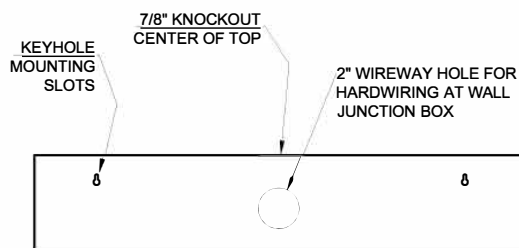
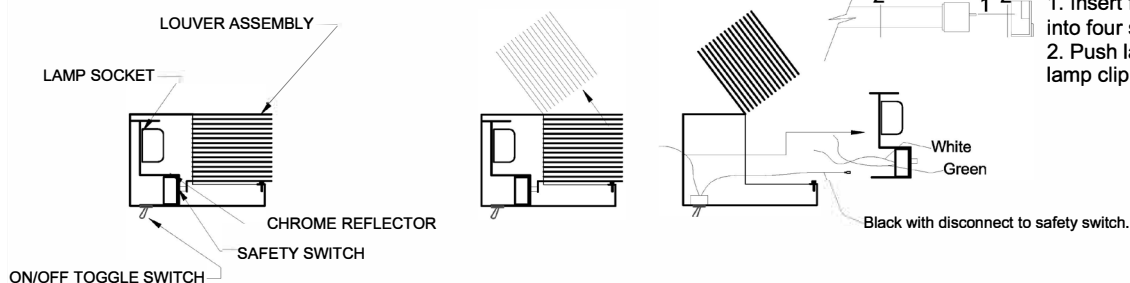
DO NOT MOUNT WITH BOTTOM OF FIXTURE BELOW 7'-0" ABOVE FINISHED FLOOR. MINIMUM CEILING HEIGHT REQUIRED FOR THIS FIXTURE IS 7'-9".



1. Disconnect power to fixture location.
2. Rotate the louver latch out raise the hinged, black louver assembly as shown.
3. Unscrew the 8-32 nuts (one at each the of the chrome reflector) & remove the chrome reflector as shown.
For ease of installation, one of the black wires from the on/off toggle switch to the safety switch has a "pull-off" disconnect terminal at the white safety switch. Gently pull this disconnect off of the safety switch. This allows total removal of the reflector.
4. Mount fixture housing to wall using the keyhole slots in housing back & using appropriate anchors (by others).
Be sure that the mounting structure will safely support the entire weight (60 lbs.) of the fixture so that no immediate or future damage will occur to persons or property. Mount fixture no less than 7'-9" from bottom of fixture to finished floor.
5. Make-up wiring connections as per The National Electrical Code (NEC) and local codes. Electrical work is to be performed by a licensed electrician. Fixture color code: black = hot, white = neutral, green = ground.
6. Reinstall reflector.
7. Be sure that the ON/OFF toggle switch is in "OFF" position, install 36W twin-tube UV lamps.
Use cotton gloves provided to handle lamps. Touching lamps with bare hands does not effect lamp life. Residue left on lamps can reduce UV output. Clean dirty lamps with isopropyl alcohol & soft cloth.
8. Lower louvers, & read caution. Unit will not operate without louvers down in place. DO NOT DEFEAT safety switch & activate lamps without louver in place.
9. Test fixture.

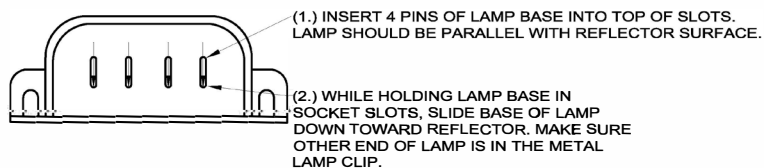
LAMP INSTALLATION

1. Insert four pins of lamp into four socket slots.
2. Push lamp down into socket & lamp clip until it gently snaps into socket.



BACK OF FIXTURE

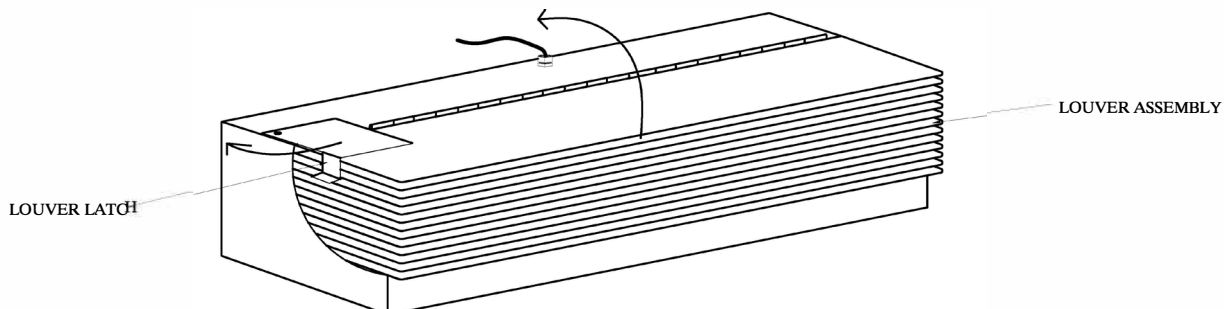
LAMP INSTALLATION INSTRUCTION



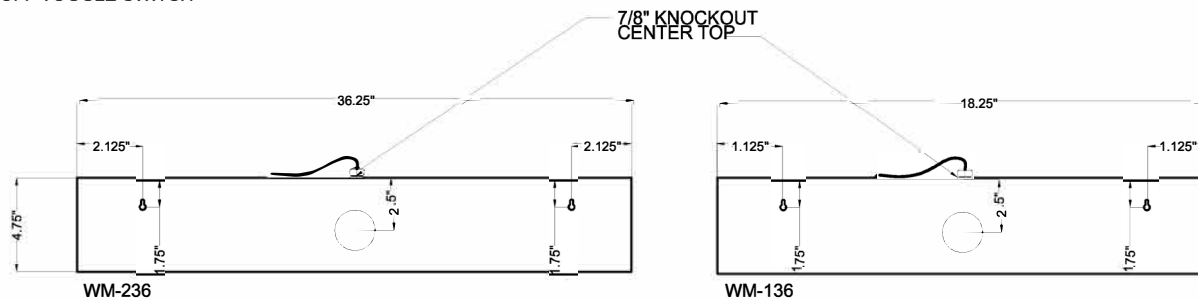
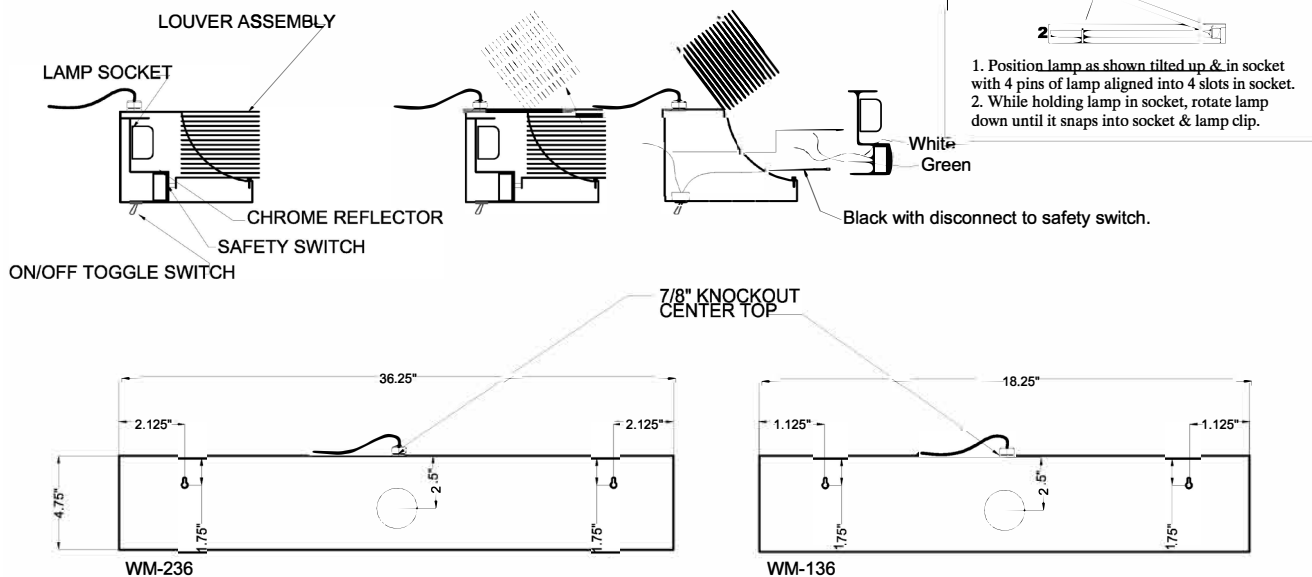
WM SERIES INSTALLATION INSTRUCTIONS

CAUTION - RISK OF PERSONAL INJURY

THIS LUMINAIRE IS DESIGNED FOR USE WITH GERMICIDAL LAMPS AND MUST BE INSTALLED IN COMPLIANCE WITH COMPETENT TECHNICAL DIRECTIONS TO PREVENT THE USER'S EYES AND BARE SKIN FROM EXPOSURE TO HARMFUL UV RADIATION. DO NOT LET EYES OR BARE SKIN BECOME EXPOSED TO ULTRAVIOLET RAYS EMITTED BY THE UV LAMPS USED IN THIS FIXTURE. DO NOT MOUNT WITH BOTTOM OF FIXTURE BELOW 7'-0" ABOVE FINISHED FLOOR. MINIMUM CEILING HEIGHT REQUIRED FOR THIS FIXTURE IS 7'-9".



1. Disconnect power to fixture location.
2. Rotate the louver latch out raise the hinged, black louver assembly as shown.
3. Unscrew the 8-32 nuts (one at each the of the chrome reflector) & remove the chrome reflector as shown.
For ease of installation, one of the black wires from the on/off toggle switch to the safety switch has a pull-off disconnect terminal at the safety switch. Gently pull this disconnect off of the safety switch. This allows total removal of the reflector.
4. Mount fixture housing to wall using the keyhole slots in housing back & using appropriate anchors (by others).
Be sure that the mounting structure will safely support the entire weight (60 lbs.) of the fixture so that no immediate or future damage will occur to persons or property. Mount fixture no less than 7'-9" from bottom of fixture to finished floor.
5. Find a grounded outlet within 9'-0" of fixture. This will be the power supply to fixture. Electrical work is to be performed by a licensed electrician. Fixture color code: black = hot, white = neutral, green = ground.
6. Reinstall reflector.
7. Be sure that the ON/OFF toggle switch is in "OFF" position, install 36W twin-tube UV lamps.
Use cotton gloves provided to handle lamps. Touching lamps with bare hands does not effect lamp life. Residue left on lamps can reduce UV output. Clean dirty lamps with isopropyl alcohol & soft cloth.
8. Lower louvers, & read caution. Unit will not operate without louvers down in place. DO NOT DEFEAT safety switch & activate lamps without louver in place.
9. Test fixture.



BACK OF FIXTURES

WM SERIES INSTALLATION INSTRUCTIONS

Product Limited Warranty

SCOPE OF WARRANTY:

Lumalier manufactures all Lumalier UVC Air and Surface Disinfection Products in our Memphis, Tennessee, USA, factory. Lumalier warrants that all Lumalier products (the "Product") will be free from defects in materials and workmanship during the **Applicable Warranty Periods of five years from the Date of Professional Installation**. If the Product fails in normal use and service within the Stated Warranty Period due to a defective part, Lumalier will, at its option, repair or replace the defective part. The replacement part will be warranted for only the unexpired portion of the original Applicable Warranty Period. If a part of the Product fails and an exact replacement is not available, Lumalier reserves the right to provide a substitute of equal or greater value, or provide a credit in the amount of the original cost of the defective part towards the purchase of a new Lumalier product similar in function and features to your Product. **Replacement parts are NOT pro-rated**, meaning that any part or component that fails during the warranty period will **be replaced or credited** (if replacement is no longer available) **at original purchase cost**.

EFFECTIVE DATE OF LIMITED WARRANTY COVERAGE:

The Effective Warranty Date is the date of the Product's first installation, if properly documented; otherwise it is the date of purchase plus one (1) month.

APPLICABLE WARRANTY PERIODS FOR VARIOUS PARTS:

- UV Fixture: Product parts and components are warranted for an Applicable Warranty Period of Five (5) years after the Effective Date.
- UV Lamps: UV lamps are warranted for an Applicable Warranty Period of two (2) years after the Effective Date.
- Fans: Fans used in certain UV fixtures are warranted for an Applicable Warranty Period of one (1) year after the Effective Date.

STANDARD PROVISIONS AND CONDITIONS:

EXCLUSIONS - THIS LIMITED WARRANTY WILL NOT APPLY:

- (a) To damages, malfunctions or failures resulting from failure to properly install, operate or maintain the Product in accordance with the manufacturer's instructions;
- (b) To damages, malfunctions or failures resulting from abuse, accident, fire, flood and the like;
- (c) To parts used in connection with normal maintenance, such as cleaning or replacing air filters;
- (d) To Products that are not installed in accordance with applicable local codes, ordinances and good trade practices;
- (e) To damages, malfunctions or failures caused by the use of any attachment, accessory or component not authorized by the manufacturer;
- (f) To damages, malfunctions, or failures caused by misuse, accident, contaminated or corrosive atmosphere, vandalism, freight damages, fire, flood, freeze, lightening, acts of war, acts of God and the like.

SHIPPING COSTS:

This Limited Warranty does NOT cover shipping costs. You, or your installing contractor, will be responsible for the cost of shipping warranty replacement parts from our factory to the location of your product. You also are responsible for any shipping cost of returning the failed part to Lumalier, and for incidental costs incurred locally, including handling charges.

LABOR COSTS:

This Limited Warranty does NOT cover any labor expenses for service, or for removing or reinstalling Products. All such expenses are your responsibility, unless a labor service agreement exists between you and your installing contractor.

HOW TO OBTAIN WARRANTY CLAIMS ASSISTANCE:

You must promptly report any failure covered by this Limited Warranty to the installing contractor. Normally, the installing contractor from whom the unit was purchased will be able to take the necessary corrective action by obtaining any replacement parts. If the contractor is not available, please contact any other local contractor handling Lumalier products. If necessary, the following office can advise you of the nearest distributor:

1931 Thomas Road, Memphis, TN 38134, 901-800-1709

REPLACEMENTS ARE MADE SUBJECT TO VALIDATION BY LUMALIER OF WARRANTY COVERAGE. Any part to be replaced must be made available in exchange for the replacement.

EXCLUSIVE WARRANTY - LIMITATION OF LIABILITY:

This Limited Warranty is the ONLY warranty for the Product given by Lumalier. No one is authorized to make any warranties on behalf of Lumalier. ANY IMPLIED WARRANTIES, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, SHALL NOT EXTEND BEYOND THE APPLICABLE WARRANTY PERIODS SPECIFIED ABOVE. LUMALIER'S SOLE LIABILITY WITH RESPECT TO DEFECTIVE PARTS OR FAILURES SHALL BE AS SET FORTH IN THIS LIMITED WARRANTY, AND ANY CLAIMS FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES ARE EXPRESSLY EXCLUDED. Some states do not allow limitations on how long an implied warranty lasts, or for the exclusion of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Limited Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Lumalier
1931 Thomas Road
Memphis, TN 38134

In the spirit of continuous improvement, we reserve the right to make changes without notice.