Model LIND24-EVO-2PM

Model LIND24-EVO
Since 1963, Atlantic Ultraviolet Corporation has pioneered the discovery and development of beneficial uses of ultraviolet energy. Over the years these efforts have led to the development of valuable, cost effective and environmentally sound techniques and products now known and respected throughout the world.

Atlantic Ultraviolet’s application specialists assist customers in the selection of germicidal lamps and equipment. Their specialized knowledge is a valuable resource in formulating effective and cost-conscious ultraviolet solutions. Extensive inventories and a dedicated staff enable Atlantic Ultraviolet to fulfill its commitment to provide fast deliveries and responsive customer service.

Ultraviolet is a unique and rapid method of disinfection utilizing germicidal ultraviolet lamps that produce short-wave radiation at 254 nanometers (nm) that is lethal to bacteria, virus and other microorganisms.

An ever growing range of industries and consumer applications have found ultraviolet to be the ideal solution for their air treatment needs.

Atlantic Ultraviolet equipment and systems are manufactured in the USA.

Model LIND24-EVO-2PM

Model LIND24-EVO
Economical
System requires very little power to operate.

Safe
Low risk of over-exposure.

Fast
Disinfects air in seconds, reducing the risk of cross infection and exposure of occupants to infectious airborne microbes.

Automatic
Continuous disinfection without special attention.

Durable
Polished Stainless Steel and Aluminum construction.

Versatile
Two styles available to handle different room configurations.

Low Maintenance
Annual lamp replacement and periodic cleaning is all that is required.

The Hygeaire® design has been carefully conceived to direct germicidal ultraviolet rays to purify the upper room air of occupied spaces in order to reduce the risk of cross infection and exposure of occupants to infectious airborne microbes.

The operation of the Hygeaire® is as follows:

1. Ultraviolet rays project across the upper room air.

2. Bacteria and viruses that are carried into the ultraviolet field by convection currents or air circulation are destroyed.

3. The air in the room is continuously being purified.
SPECIAL FEATURES

Hygeaire® LIND24-EVO Wall Mount Indirect Unit

Surelite™ Electronic Ballast
State-of-the-art electronic ballasts are designed to operate ultraviolet lamps. The Hygeaire® unit includes a unique variable output version of the Surelite™ with an adjustable feature mounted to base of the fixture.

The Surelite™ Electronic Ballast offers these advantages over conventional ballasts:
- delivers higher uv lamp output
- instant starting
- eliminates “stroboscopic effect”
- small and lightweight
- operates cooler for longer life
- versatile... each operates a wide range of lamps
- saves energy through higher efficiency
- provides silent operation
- variable ultraviolet output adjustment feature

Safety Interlock Switch
Switch protects field technicians from exposure to ultraviolet radiation by automatically disconnecting power to the lamp when fixture is opened.

Stainless Steel Construction
The unit is manufactured in Type 304 stainless steel for unparalleled strength, durability and an attractive finish.

Polished Reflector
Interior surface includes a special polished reflector which provides a highly reflective surface to maximize ultraviolet intensity.

STER-L-RAY® Slimline Germicidal Lamp
Lamp is instant starting and provides the utmost in quality, sustained output and longevity. (see page 8 for information)

Steadfast™ Lampholder
Set includes a stationary and a spring-loaded, telescopic holder that holds a single pin lamp securely. The spring-loaded feature on one end facilitates convenient, quick and easy lamp changes.

Louvers
Unique construction directs ultraviolet rays to the upper portion of the room.

Model LIND24-EVO
Wall Mount, Single Lamp
(see page 8 for Optional Accessories)
SPECIFICATIONS - Hygeaire® LIND24-EVO Wall Mount Indirect Unit

<table>
<thead>
<tr>
<th>Model</th>
<th>Lamp</th>
<th>Power Consumptions</th>
<th>Total Ultraviolet Output</th>
<th>Exterior Housing Dimensions</th>
<th>Rated Average Lamp Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIND24-EVO</td>
<td>05-1348-R (1)</td>
<td>30.7 Watts</td>
<td>8.5 Watts</td>
<td>24” 5-11/32” 7-7/8”</td>
<td>10,000 Hours</td>
</tr>
</tbody>
</table>

1. Wattage is Lamp Watts and ballast loss (approximate).
2. Output at 254 nanometers at 100 hours and 80 degrees F (approximate).
   • 120 Volts 50/60 Hz and 220-230 Volts 50/60 Hz units are available - specify when ordering.
   • Consult factory with other specific power requirements.
   • Bottom of unit must be installed at a minimum height of 7 feet above the floor, see page 11 for more information.
SPECIAL FEATURES

Hygeaire® LIND24-EVO-2PM Pendant Mount Indirect Unit

Surelite™ Electronic Ballast
State-of-the-art electronic ballasts are designed to operate ultraviolet lamps. The Hygeaire® unit includes two unique variable output versions of the Surelite™ with an adjustable feature mounted to base of the fixture.

The Surelite™ Electronic Ballasts offers these advantages over conventional ballasts:
- deliver higher uv lamp output
- eliminate “stroboscopic effect”
- operate cooler for longer life
- saves energy through higher efficiency
- variable ultraviolet output adjustment feature

Safety Interlock Switch
Switch protects field technicians from exposure to ultraviolet radiation by automatically disconnecting power to the lamp when fixture is opened.

Stainless Steel Construction
The unit is manufactured in Type 304 stainless steel for unparalleled strength, durability and an attractive finish.

Polished Reflector
Interior surface includes a special polished reflector which provides a highly reflective surface to maximize ultraviolet intensity.

Model LIND24-EVO-2PM
Pendant Mount, Double Lamp
(see page 8 for Optional Accessories)

STER-L-RAY® Slimline Germicidal Lamp
Lamp is instant starting and provides the utmost in quality, sustained output and longevity. (see page 8 for information)

Steadfast™ Lampholder
Set includes a stationary and a spring-loaded, telescopic holder that holds a single pin lamp securely. The spring-loaded feature on one end facilitates convenient, quick and easy lamp changes.

Louvers
Unique construction directs ultraviolet rays to the upper portion of the room.

Pendant Mount Canopy Set
Secures Hygeaire® LIND24-EVO-2PM to surface (not shown, see photo on page 7, Figure 3)
INSTALLATION

Figure 2 - Shows the top of Hygeaire® Model LIND24-EVO-2PM (above). Note the two mounting holes on the top of this unit (these are for the Pendant Mount Canopy Set attachment). The fixture is to be mounted at a minimum height of 7 feet from the bottom of the fixture to the floor, in a location that must be able to safely support 32 pounds.

Figure 3 - Shows Hygeaire® Model LIND24-EVO-2PM complete with Pendant Mount Canopy Set (left).

SPECIFICATIONS - Hygeaire® LIND24-EVO-2PM Pendant Mount Indirect Unit

<table>
<thead>
<tr>
<th>Model</th>
<th>Lamp</th>
<th>Power Consumptions</th>
<th>Total Ultraviolet Output</th>
<th>Exterior Housing Dimensions</th>
<th>Rated Average Lamp Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIND24-EVO-2PM</td>
<td>05-1348-R (2)</td>
<td>61.4 Watts</td>
<td>17 Watts</td>
<td>24&quot;</td>
<td>10-17/32&quot;</td>
</tr>
</tbody>
</table>

① Wattage is Lamp Watts and ballast loss (approximate).
② Output at 254 nanometers at 100 hours and 80 degrees F (approximate).

- 120 Volts 50/60 Hz and 220-240 Volts 50/60 Hz units are available - specify when ordering.
- Consult factory with other specific power requirements.
- Bottom of unit must be installed at a minimum height of 7 feet above the floor, see page 11 for more information.
Zenith™ Ultraviolet Meter
A sensitive, hand-held, ultraviolet meter that can be used to:
• Survey installations to ensure that the germicidal ultraviolet radiant exposure of personnel within the treated area, is within acceptable limits. The Zenith™ Ultraviolet Meter provides accurate and easy-to-read levels of intensity that may be interpreted by anyone - not just engineers.
• Check the intensity of aging ultraviolet lamps

ArmorLite™ Safety Shield
Protective coating applied to STER-L-RAY® Germicidal Lamps ensures protection for employees, products and work environments by eliminating the dangers associated with fragments of broken lamps and mercury contamination. (Lamp on right has Armorlite™ coating)

GENUINE STER-L-RAY® GERMICIDAL LAMPS

STER-L-RAY® Germicidal Lamps are shortwave, low pressure mercury vapor discharge tubes that produce ultraviolet wavelengths lethal to microorganisms. Approximately 95% of the ultraviolet energy emitted from STER-L-RAY® germicidal lamps is at the mercury resonance line of 254 nanometers, the region of germicidal effectiveness most destructive to bacteria, mold and virus.

STER-L-RAY® and the STER-L-RAY® logo are trademarks of Atlantic Ultraviolet Corporation.

CAUTION: Exposure to direct or reflected germicidal ultraviolet rays will cause painful eye irritation and reddening of the skin. Personnel subject to such exposure must wear suitable faceshield, gloves and protective clothing.
ULTRAVIOLET DOSAGE

Germicidal lamps provide effective protection against microorganisms. A small cross-section is shown below.

<table>
<thead>
<tr>
<th>ORGANISM</th>
<th>ALTERNATE NAME</th>
<th>TYPE</th>
<th>DISEASE</th>
<th>DOSE*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corynebacterium diphtheriae</td>
<td>C. diphtheriae</td>
<td>Bacteria</td>
<td>Diptheria</td>
<td>6,500</td>
</tr>
<tr>
<td>Legionella pneumophila</td>
<td>L. pneumophila</td>
<td>Bacteria</td>
<td>Legionnaire’s Disease</td>
<td>2,700</td>
</tr>
<tr>
<td>Mycobacterium tuberculosis</td>
<td>M. tuberculosis</td>
<td>Bacteria</td>
<td>Tuberculosis (TB)</td>
<td>10,000</td>
</tr>
<tr>
<td>Pseudomonas aeruginosa</td>
<td>P. aeruginosa</td>
<td>Bacteria</td>
<td></td>
<td>3,900</td>
</tr>
<tr>
<td>Serratia Marcescens</td>
<td>S. marcescens</td>
<td>Bacteria</td>
<td></td>
<td>6,160</td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td>S. aureus</td>
<td>Bacteria</td>
<td></td>
<td>6,600</td>
</tr>
<tr>
<td>Staphylococcus epidermidis</td>
<td>S. epidermidis</td>
<td>Bacteria</td>
<td></td>
<td>5,800</td>
</tr>
<tr>
<td>Adeno Virus Type III</td>
<td></td>
<td>Virus</td>
<td></td>
<td>4,500</td>
</tr>
<tr>
<td>Coxsackie A2</td>
<td></td>
<td>Virus</td>
<td></td>
<td>6,300</td>
</tr>
<tr>
<td>Influenza</td>
<td></td>
<td>Virus</td>
<td>Flu</td>
<td>3,400</td>
</tr>
</tbody>
</table>

* Nominal Ultraviolet dosage (μWSec/cm²) necessary to inactivate better than 99% of specific microorganism. Consult factory for more complete listing.
The principal application of Hygeaire® germicidal ultraviolet is to purify the upper room air in occupied spaces in order to reduce the risk of cross infection and exposure of occupants to infectious airborne microbes. These fixtures are designed to project the ultraviolet rays across the upper room air thereby destroying bacteria and viruses that are carried into the ultraviolet field by convection currents or air circulation.

It is an important requirement when applying indirect germicidal ultraviolet irradiation to upper air to keep the radiation in the occupied level (below 6-1/2 feet) within acceptable limits. Therefore, mounting in the appropriate position is essential for safe use.

Our Ultraviolet Application Specialists are here to help you determine the best location for the installation of the Hygeaire®.

As with all indirect ultraviolet fixtures, occasional ultraviolet measurements are required to ensure that ultraviolet intensities within the occupied area remain at the maximum treatment levels without exceeding the safety limits.

The Hygeaire® fixture includes a variable output ballast, providing an adjustment to comply with the safety standard.

Our Zenith™ Ultraviolet Meter is an optional accessory (described on page 8). However we feel that it is a necessary tool to ensure that the ultraviolet radiation levels are optimized for treatment and safety purposes.
Figure 4
Distribution of UV radiation from Hygeaire® Model LIND24-EVO wall mounted unit

Figure 5
Example of the coverage area of the Hygeaire® Model LIND24-EVO wall mounted unit
Manufacturers / Engineers / Sales / Service