

Hygeaire®

GERMICIDAL ULTRAVIOLET INDIRECT AIR DISINFECTION



Model
LIND24-EVO-2PM



Model LIND24-EVO

A SINCE 1963
ATLANTIC U ULTRAVIOLET
CORPORATION®

ABOUT US

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.

The UV application specialists at Atlantic Ultraviolet Corporation® 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.



GERMICIDAL ULTRAVIOLET

Germicidal Ultraviolet is a unique and rapid method of disinfection. It utilizes germicidal ultraviolet lamps producing ultraviolet wavelengths at 254 nanometers (nm)—a level 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*

ADVANTAGES

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.

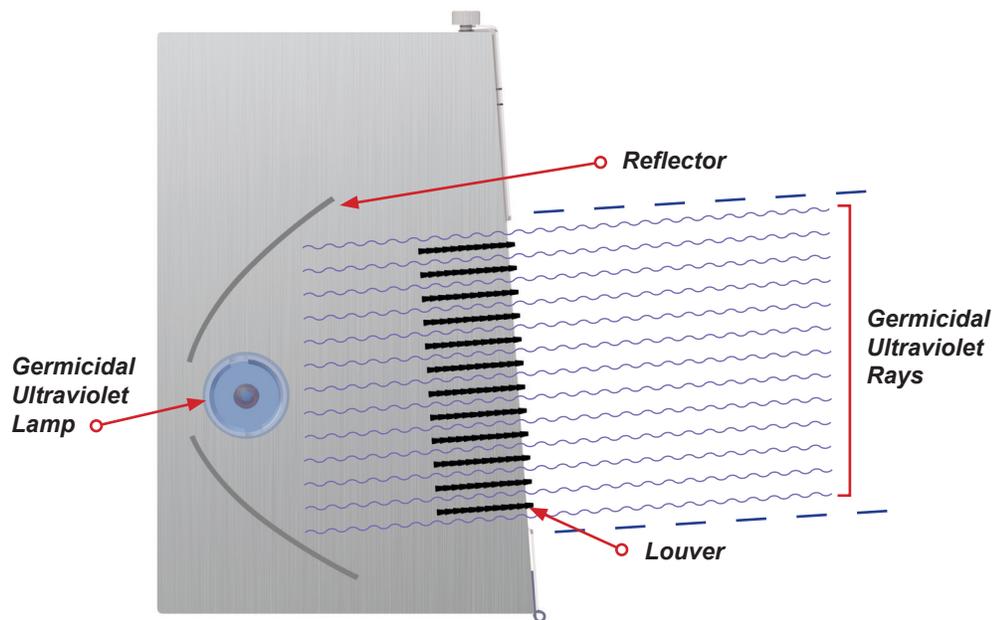
Versatile

Three styles available (pendent mount and wall mount) to handle different room configurations.

Low Maintenance

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

PRINCIPLE OF OPERATION



*Model LIND24-EVO
Wall Mount, Single Lamp*

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. Germicidal ultraviolet rays project across the upper room air.
2. Bacteria and virus 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 Fixture

Surelite™ Electronic Ballasts

State-of-the-art electronic ballasts are designed to operate ultraviolet lamps. The Hygeaire® Germicidal Ultraviolet Indirect Disinfection System includes three unique electronic variable output versions (EVO) of the Surelite™ with an adjustable feature mounted to base of the fixture.

Surelite™ Electronic Ballasts offers these advantages over conventional ballasts:

- deliver high uv lamp output
- lightweight
- operate cool for longer life
- versatile—each operates a wide range of lamps
- save energy through high efficiency
- provide silent operation

Interlock Safety Switch

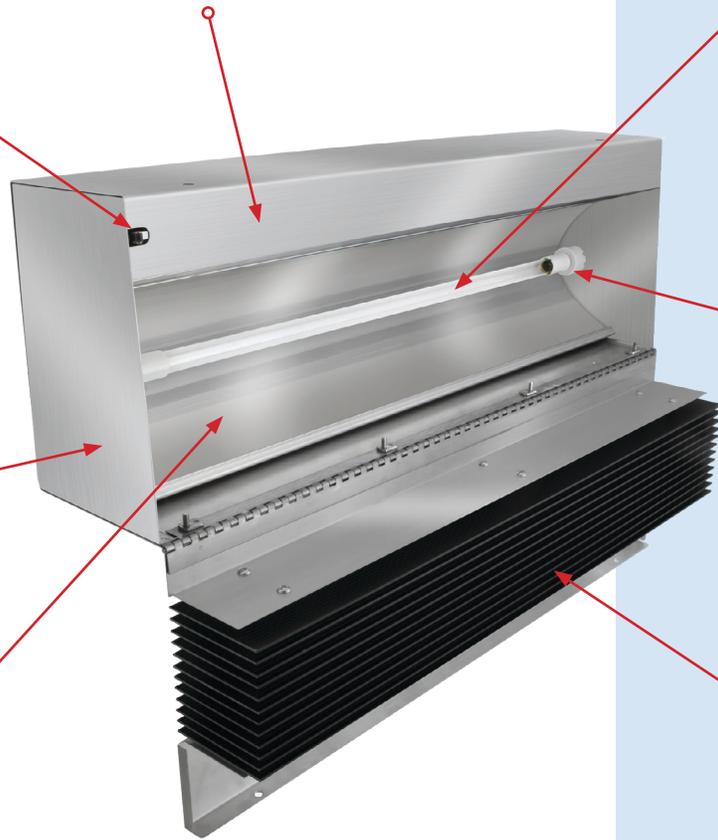
Switch protects field technicians from exposure to germicidal ultraviolet wavelengths by automatically disconnecting power to the lamp when fixture is opened.

Stainless Steel Construction

The fixture 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 germicidal ultraviolet intensity.



STER-L-RAY® Germicidal UV 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 germicidal ultraviolet rays to the upper portion of the room.

Model LIND24-EVO
Wall Mount, Single Lamp

(see page 8 for Optional Accessories)

INSTALLATION

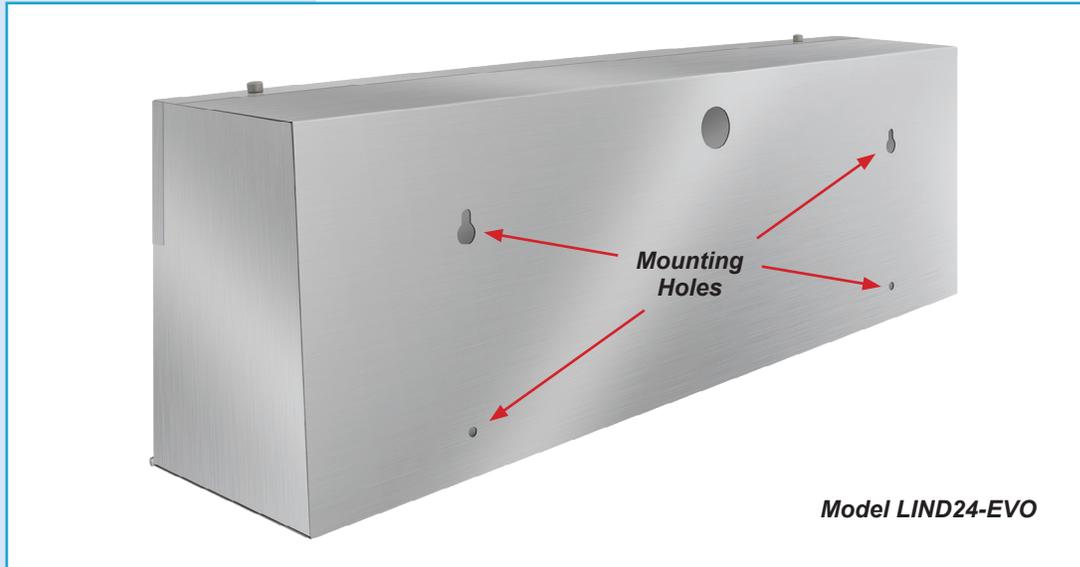


Figure 1 – Shows the back side of Hygeaire® Model LIND24-EVO; note the four mounting holes in the back of the fixture. The fixture is to be mounted on a plumb and vertical surface, at a minimum height of 7 feet from the bottom of the fixture to the floor, in a location that must be able to safely support 16 pounds.

SPECIFICATIONS—Hygeaire® LIND24-EVO Wall Mount Indirect Fixture

Model	Lamp	Power Consumption ①	Total Ultraviolet Output ②	Exterior Housing Dimensions			Rated Average Lamp Life
				Length	Width	Depth	
LIND24-EVO	05-1348-R (1)	31 Watts	8.5 Watts	24"	5-11/32"	7-7/8"	10,000 Hours

① Wattage is Lamp Watts including 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 fixtures are available—specify when ordering.
- Consult factory with other specific power requirements.
- Bottom of fixture 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 Fixture

Surelite™ Electronic Ballasts

State-of-the-art electronic ballasts are designed to operate ultraviolet lamps. The Hygeaire® Germicidal Ultraviolet Indirect Disinfection System includes three unique electronic variable output versions (EVO) of the Surelite™ with an adjustable feature mounted to base of the fixture.

Surelite™ Electronic Ballasts offers these advantages over conventional ballasts:

- deliver high uv lamp output
- light weight
- operate cool for longer life
- versatile—each operates a wide range of lamps
- save energy through high efficiency
- provide silent operation

Interlock Safety Switch

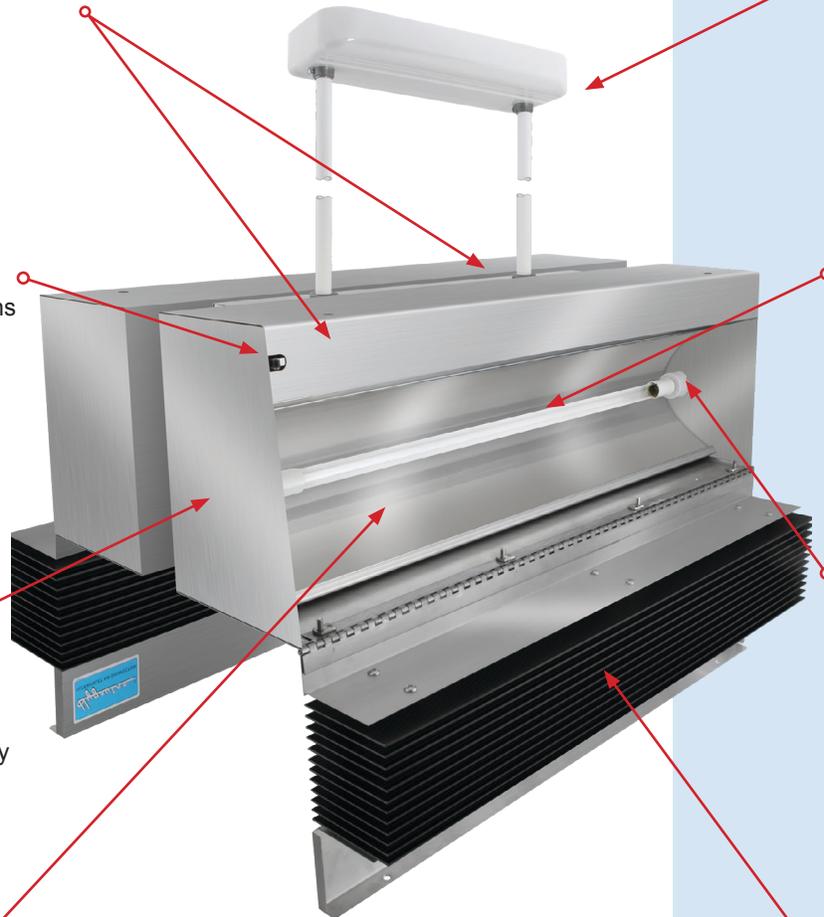
Switch protects field technicians from exposure to germicidal ultraviolet wavelengths by automatically disconnecting power to the lamp when fixture is opened.

Stainless Steel Construction

The fixture 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 germicidal ultraviolet intensity.



Pendant Mount Canopy Set

Secures Hygeaire® LIND24-EVO-2PM to surface (see Figure 3 on page 7 for full pendant).

STER-L-RAY® Germicidal UV Lamps

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 germicidal ultraviolet rays to the upper portion of the room.

Model LIND24-EVO-2PM
Pendant Mount, Double Lamp

(see page 8 for Optional Accessories)

INSTALLATION

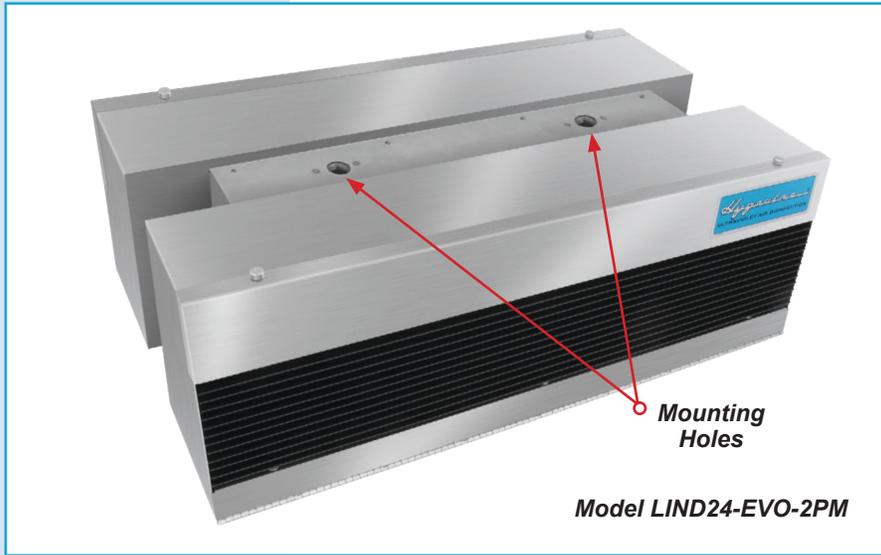


Figure 2 – Shows the top of **Hygeaire® Model LIND24-EVO-2PM** (above). Note the two mounting holes on the top of this fixture (these are for the Pendant Mount Canopy Set attachment). The fixture is to be mounted at a minimum height of 7 feet from the bottom of the fixture to the floor, in a location 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 Pendent Mount Indirect Fixture

Model	Lamp	Power Consumption ①	Total Ultraviolet Output ②	Exterior Housing Dimensions			Rated Average Lamp Life
				Length	Width	Depth	
LIND24-EVO-2PM	05-1348-R (2)	61.4 Watts	17 Watts	24"	10-17/32"	7-7/8"	10,000 Hours

① Wattage is Lamp Watts including 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 fixtures are available—specify when ordering.
- Consult factory with other specific power requirements.
- Bottom of fixture must be installed at a minimum height of 7 feet above the floor, see page 11 for more information.

OPTIONAL ACCESSORIES



Zenith™ Germicidal Ultraviolet Detector

The **Zenith™** Germicidal Ultraviolet Detector is a sensitive hand-held, self-contained battery operated ultraviolet meter that can be used for:

- Monitoring UV-C Germicidal Lamp Intensity & Aging
- Measuring UV-C Germicidal Fixture Leakage



ArmorLite™ Germicidal Ultraviolet Lamp 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.

(Lamp on right has **ArmorLite™** coating. Available with lamps used in ALL **Hygeaire®** fixtures at the time of purchase. The coating is installed at the factory.)



Promate™ Safety Glasses

Safety eyewear should be used as general-purpose safety protection and for additional shielding from germicidal ultraviolet rays.



Promate™ Face Shield

Lightweight visor with adjustable headgear provides eye and face protection from germicidal ultraviolet rays.

GENUINE **STER-L-RAY®** GERMICIDAL UV LAMPS

STER-L-RAY® Germicidal Lamps are shortwave, low pressure tubes that produce germicidal ultraviolet wavelengths lethal to microorganisms.

Approximately 95% of the ultraviolet energy emitted from **STER-L-RAY®** germicidal lamps is at 254 nanometers, the region of germicidal effectiveness most destructive to bacteria, mold and virus.

STER-L-RAY®, the **STER-L-RAY®** logo, **ArmorLite™**, and the **ArmorLite™** 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 face shield, gloves and protective clothing.

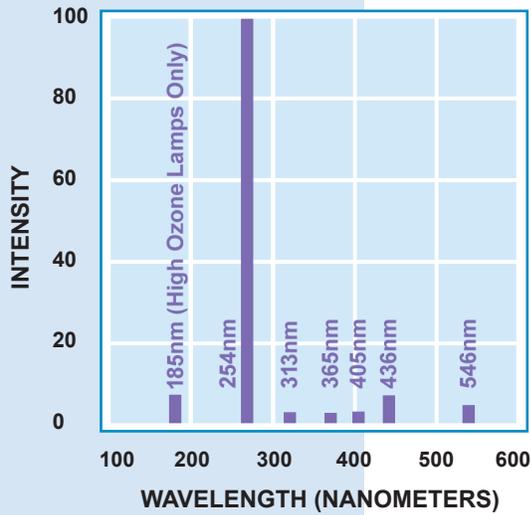
Hg - LAMP CONTAINS MERCURY, manage in accord with disposal laws, see: LampRecycle.org.



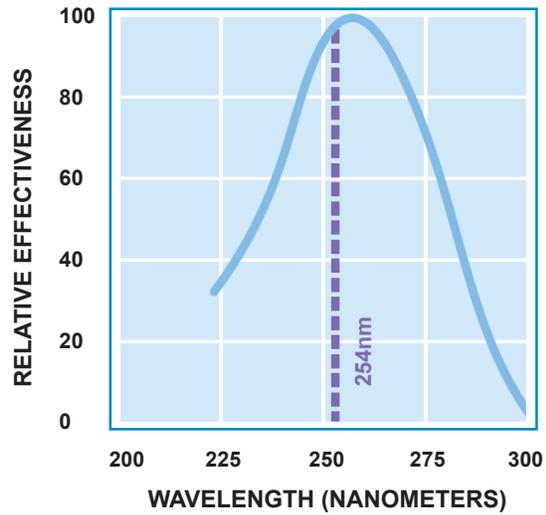
**Instant Start
Germicidal Lamps**

OPERATING CHARACTERISTICS

Relative Spectral Energy Distribution (Typical)



Germicidal Effectiveness As Related to Wavelength



ULTRAVIOLET DOSAGE

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

ORGANISM	ALTERNATE NAME	TYPE	DISEASE	DOSE*
<i>Corynebacterium diphtheriae</i>	<i>C. diphtheriae</i>	Bacteria	Diphtheria	6,500
<i>Legionella pneumophila</i>	<i>L. pneumophila</i>	Bacteria	Legionnaire's Disease	12,300
<i>Mycobacterium tuberculosis</i>	<i>M. tuberculosis</i>	Bacteria	Tuberculosis (TB)	10,000
<i>Pseudomonas aeruginosa</i>	<i>P. aeruginosa</i>	Bacteria		3,900
<i>Serratia Marcescens</i>	<i>S. marcescens</i>	Bacteria		6,160
<i>Staphylococcus aureus</i>	<i>S. aureus</i>	Bacteria		6,600
<i>Staphylococcus epidermidis</i>	<i>S. epidermidis</i>	Bacteria		5,800
Adeno Virus Type III		Virus		4,500
Coxsackie A2		Virus		6,300
Influenza		Virus	Flu	6,600

*Nominal Ultraviolet dosage ($\mu\text{WSec}/\text{cm}^2$) necessary to inactivate better than 99% of specific microorganism. Consult factory for more complete listing.

APPLICATIONS

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 wavelengths to upper air to keep the rays 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**[™] Germicidal Ultraviolet Detector is an optional accessory (described on page 8). However, we feel that it is a necessary tool to ensure that the germicidal ultraviolet levels are optimized for treatment and safety purposes.

CAUTION: In order to avoid exposure to germicidal ultraviolet rays, **Hygeaire**[®] Germicidal Ultraviolet Indirect Air Disinfection Fixtures must be turned off before any maintenance is done on the ceiling or upper part of the room.



- Laboratories
- Hospitals
- Clinics
- Maternity Areas
- Labor & Delivery Areas
- Pathology Labs
- Kidney Dialysis Labs
- Operating Rooms
- Methadone Clinics
- Burn Centers
- TB Clinics
- Homeless Shelters
- Prisons & Jails
- Detention Centers
- Nursing Homes
- Universities
- Schools
- Veterinary Clinics
- Animal Husbandry
- Kennels
- Food Industry
- Food Processing
- Dairy Processing
- Bakeries
- Office Buildings
- Conference Rooms
- Clean Rooms
- Pharmaceutical Mfg.
- Electronic Production
- Cosmetic Production

APPLICATIONS

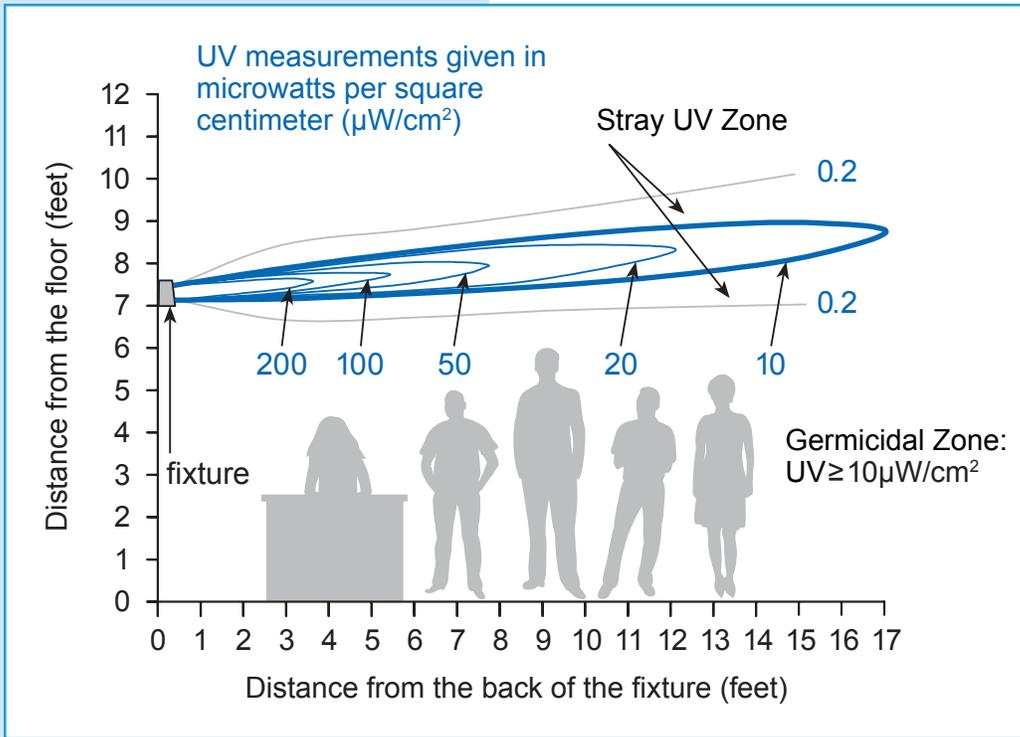


Figure 4
Distribution of UV rays from Hygeaire® Model LIND24-EVO wall mounted fixture.

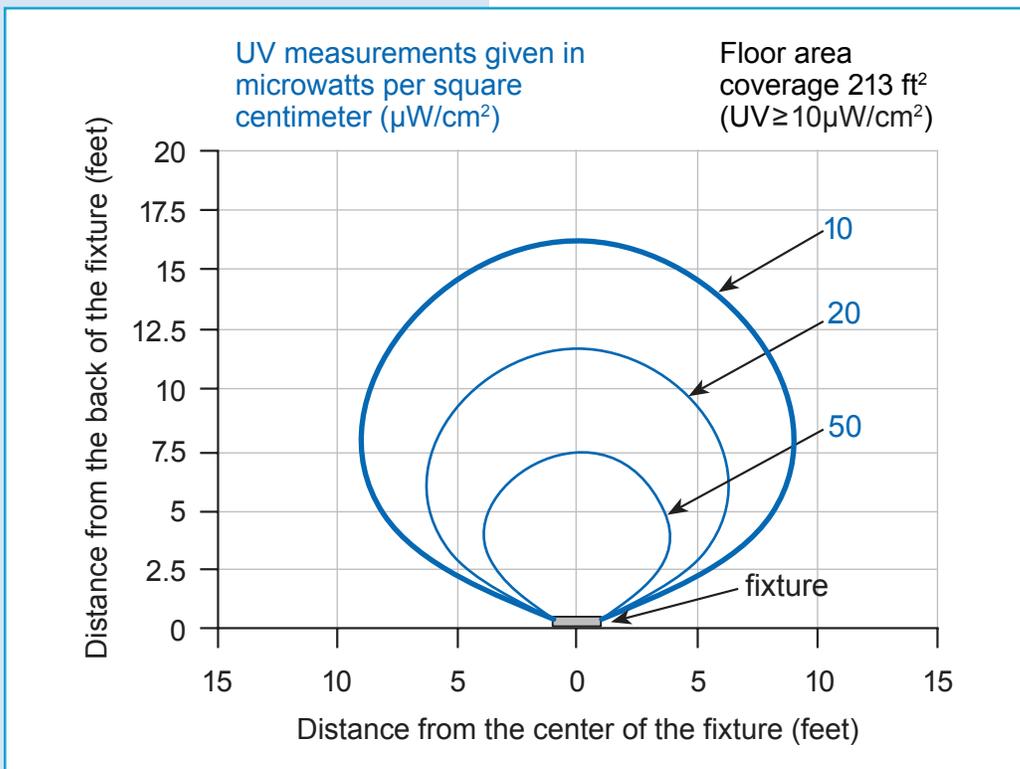
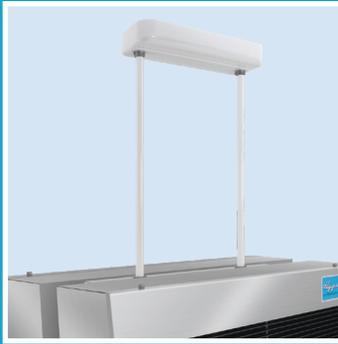


Figure 5
Example of the coverage area of the Hygeaire® Model LIND24-EVO wall mounted fixture.

The Standard of Excellence In Ultraviolet



Manufacturers / Engineers / Sales / Service – Germicidal Ultraviolet - Equipment & Lamps



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Document No. 98-0901 • September 2020



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