



GERMICIDAL ULTRAVIOLET INDIRECT AIR DISINFECTION



Model LIND24-EVO

*Model
LIND24-EVO-2PM*



SINCE 1963

ATLANTIC
ULTRAVIOLET
CORPORATION®

ABOUT US



Since 1963, we've been engineering and manufacturing germicidal ultraviolet equipment to prevent disease caused by contaminants in water, in air, and on surfaces. Our engineers bring each concept to a finished model, implementing stringent quality control procedures. Each product is manufactured with stainless steel and the highest quality materials to ensure the safety of personnel and room occupants. We stock an extensive inventory in our 37,500 square foot facility and ship throughout the world. Our knowledgeable team of UV-C specialists will provide effective and cost-conscious solutions for your home, business, industry, or institution.

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.



*Model
LIND24-EVO*

PRINCIPLE OF OPERATION

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

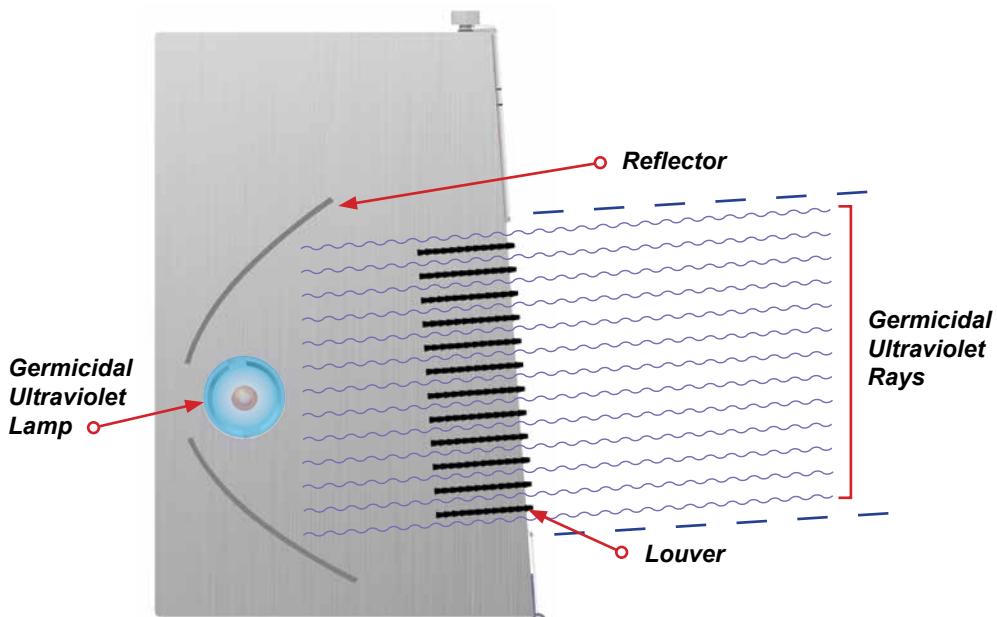
Polished stainless steel and aluminum construction.

Versatile

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

Low Maintenance

Only routine cleaning and annual lamp replacement are required.



Model LIND24-EVO
Wall Mount, Single Lamp

The **Hygeaire®** design has been carefully conceived to neutralize airborne microbes in occupied spaces, reducing the risk of cross infection.

The operation of the **Hygeaire®** is as follows:

1. Germicidal 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 neutralized.
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 a unique **Surelite™** ballast with an electronic variable output feature.

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

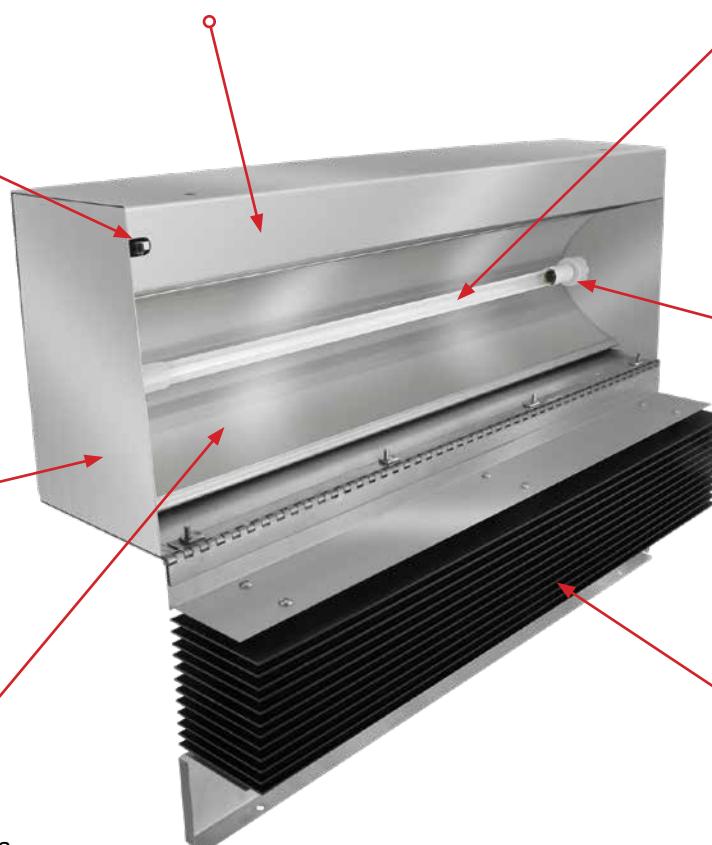
Switch protects field technicians from exposure to germicidal ultraviolet wavelengths by automatically disconnecting power to the lamp when fixture is opened.

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

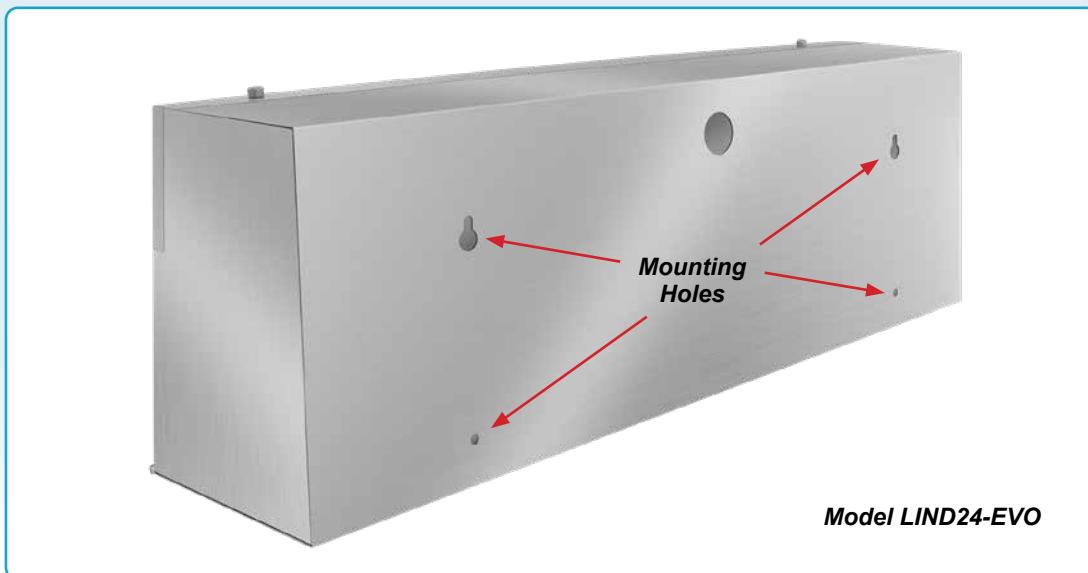


Figure 1 – Shows the back side of **Hygeaire® Model LIND24-EVO**; note the four mounting holes in the back of the fixture. The fixture is to be mounted on a plumb and vertical surface, with the bottom of the fixture at least 7 feet from the floor, and in a location that must be able to safely support 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 Pendent 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 a unique **Surelite™** ballast with an electronic variable output feature.

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

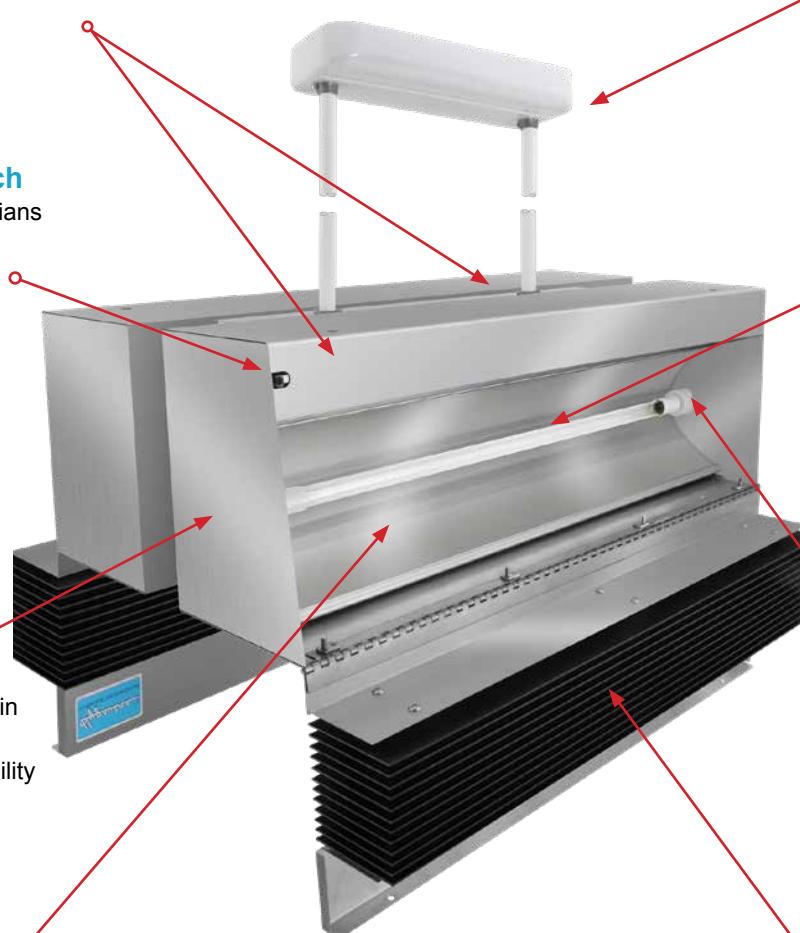
Switch protects field technicians from exposure to germicidal ultraviolet wavelengths by automatically disconnecting power to the lamp when fixture is opened.

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.



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

Pendent 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.

INSTALLATION

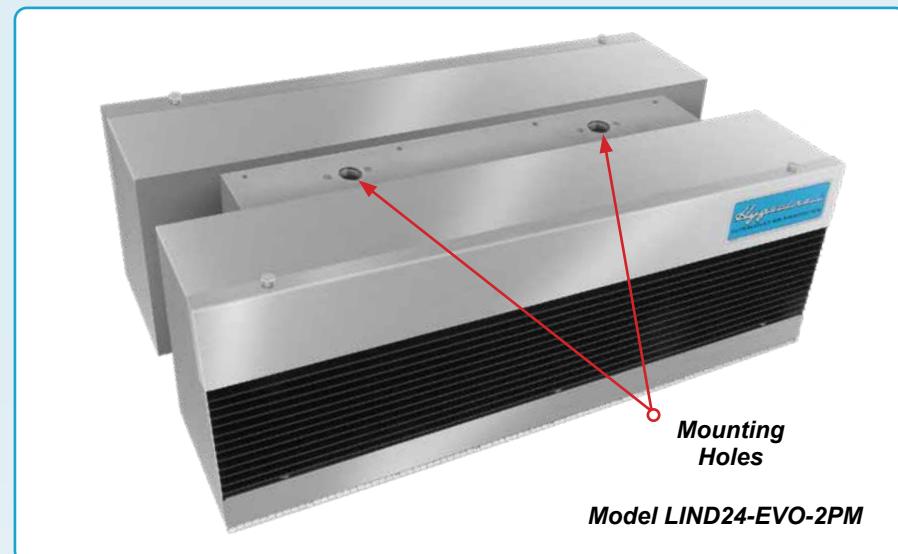


Figure 2 – Shows the top of **Hygeaire® Model LIND24-EVO-2PM** (above). Note the two mounting holes on the top of this fixture (these are for the Pendent Mount Canopy Set attachment). The fixture is to be mounted with the bottom of the fixture at least 7 feet from the floor, and in a location that must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

Figure 3 – Shows **Hygeaire® Model LIND24-EVO-2PM** complete with Pendent 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-EVO2PM	05-1348-R (1)	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 220–230 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.

OPTIONAL ACCESSORIES



Zenith™ Germicidal Ultraviolet Detector

The Zenith™ UV-C 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.



Promate™ Warning Sign

8.5" x 11" Upper Air Germicidal UV Disinfection Warning Sign (2-sided with English and Spanish).

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 viruses.

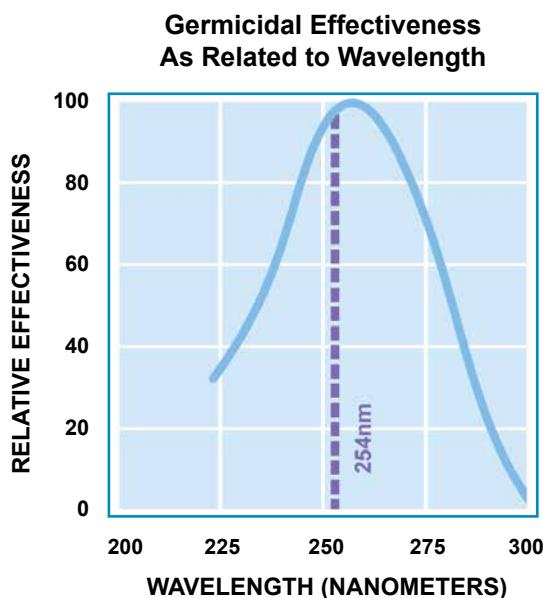
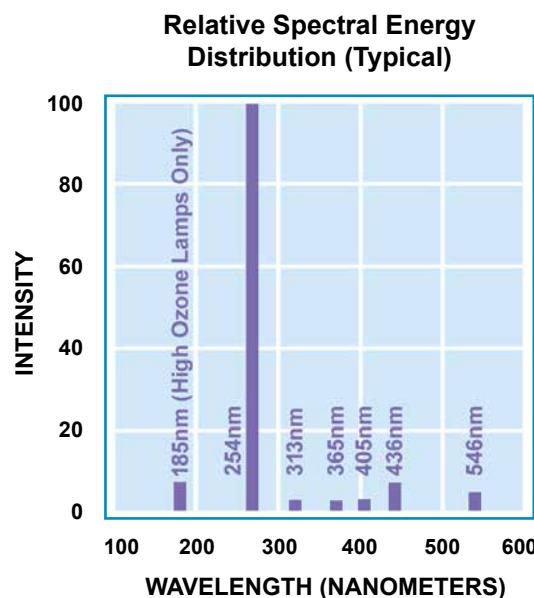
STER-L-RAY®, the **STER-L-RAY®** logo, **ArmorLite™**, and the **ArmorLite™** logo are trademarks of Atlantic Ultraviolet Corporation®.

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.



OPERATING CHARACTERISTICS



GERMICIDAL ULTRAVIOLET DOSAGE

Germicidal ultraviolet 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>	Bacterium	Diphtheria	6.50
<i>Legionella pneumophila</i>	<i>L. pneumophila</i>	Bacterium	Legionnaire's Disease	12.30
<i>Mycobacterium tuberculosis</i>	<i>M. tuberculosis</i>	Bacterium	Tuberculosis (TB)	10.0
<i>Pseudomonas aeruginosa</i>	<i>P. aeruginosa</i>	Bacterium		3.90
<i>Serratia marcescens</i>	<i>S. marcescens</i>	Bacterium		6.160
<i>Staphylococcus aureus</i>	<i>S. aureus</i>	Bacterium	Pneumonia, Endocarditis, Sepsis	6.60
<i>Methicillin-resistant Staphylococcus aureus</i>	MRSA	Bacterium	Pneumonia, Endocarditis, Sepsis	6.50
<i>Staphylococcus epidermidis</i>	<i>S. epidermidis</i>	Bacterium	Endocarditis, Sepsis	5.80
<i>Streptococcus pyogenes</i>	Strep	Bacterium	Strep Throat	.80
<i>Clostridium difficile</i>	<i>C. diff</i>	Spore	Colitis	16.0
<i>Adenovirus</i>		Virus	Common Cold	4.50
<i>Coxsackie A2</i>		Virus	Hand, Foot, and Mouth Disease, Conjunctivitis, Meningitis	6.30
<i>Influenza</i>		Virus	Flu	1.20
<i>SARS-CoV-2</i>		Virus	COVID-19	5.0
<i>Morbillivirus hominis</i>	Measles virus, MeV	Virus	Measles, rubeola	4.40

* Nominal Ultraviolet dosage (mJ/cm²) necessary to inactivate better than 99% of specific microorganism. Visit Ultraviolet.com/microorganisms-inactivated for complete listing.

APPLICATIONS

Hygeaire® fixtures are designed for use in many occupied spaces, like the ones listed to the right. Their unique projection of germicidal UV rays across upper room air reduces the risk of cross infection by neutralizing airborne bacteria and viruses.

When applying indirect germicidal ultraviolet to upper room air, you must keep the UV intensity in the occupied portion (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

The Cost and Efficiency of Upper Room UVGI

In one study* where it was compared with four other room air cleaners, upper room UVGI (ultraviolet germicidal irradiation) was shown to have the lowest cost per equivalent room air change (Figure 4A). It was also nearly 10 times more cost-effective than mechanical ventilation in that setting (Figure 4B). Upper room UV disinfection is efficient because it treats a large portion of air at once, instead of drawing it through a box for internal treatment.

Method/Model	UVGI (\$14.44)
VENTILATION	(\$135.91)
POTOK 150M-01	(\$286.74)
TREE 100	(\$142.96)
AEROLIFE-L	(\$109.28)

Figure 4A: Cost per equivalent room air change

Method/Model	UVGI (\$9.41)
VENTILATION	(\$1.00)
POTOK 150M-01	(\$0.47)
TREE 100	(\$0.95)
AEROLIFE-L	(\$1.24)

Figure 4B: Economical efficiency of room air cleaners

APPLICATIONS

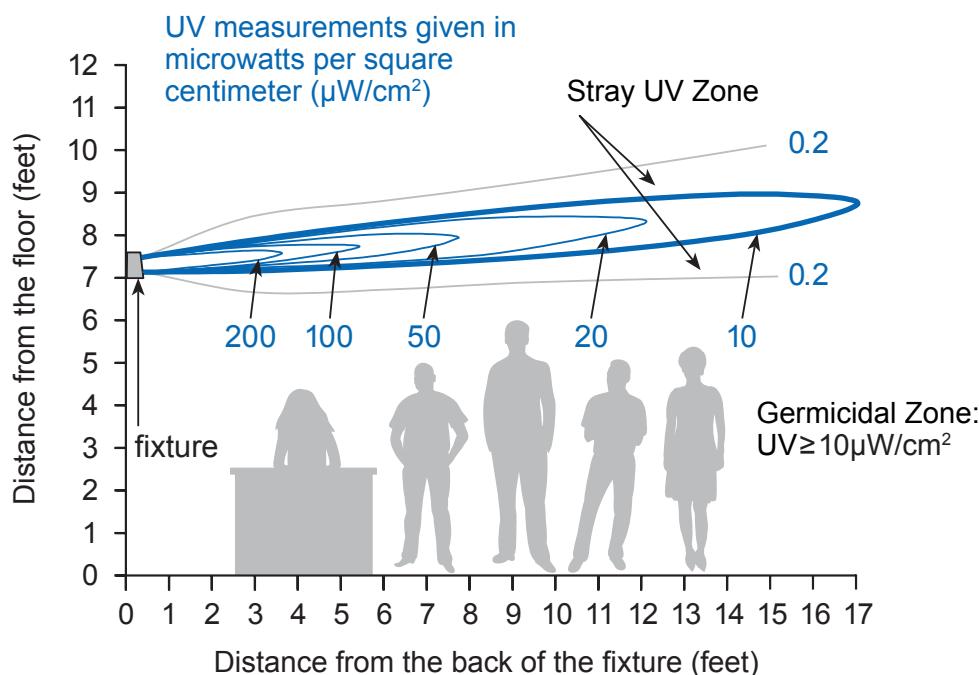


Figure 5
Distribution of UV rays from **Hygeaire® Model LIND24-EVO** wall mounted fixture.

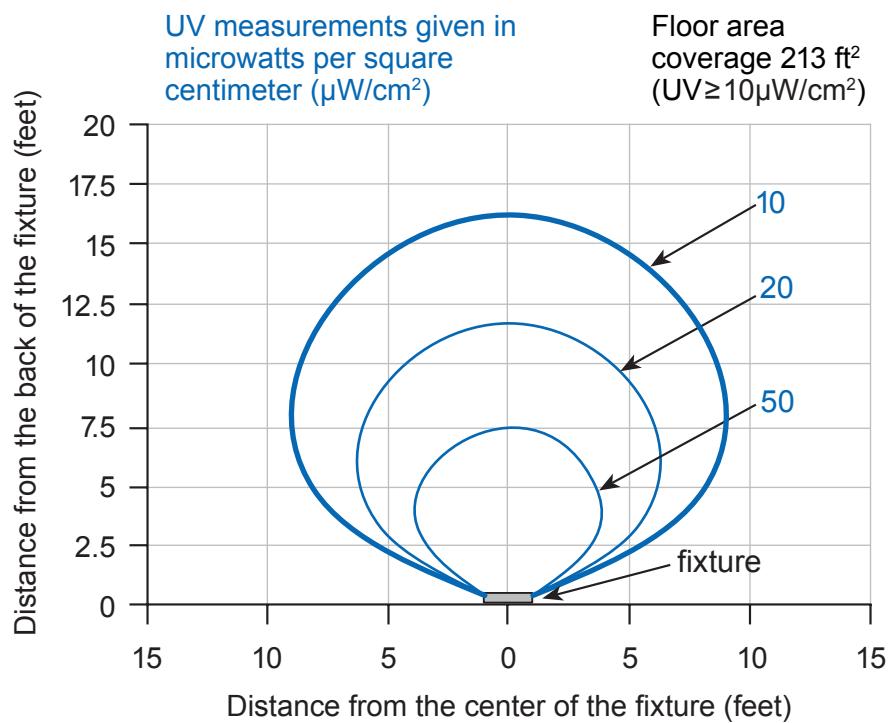


Figure 6
Example of the coverage area of the **Hygeaire® Model LIND24-EVO** wall mounted fixture.



SINCE 1963
ATLANTIC
ULTRAVIOLET
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