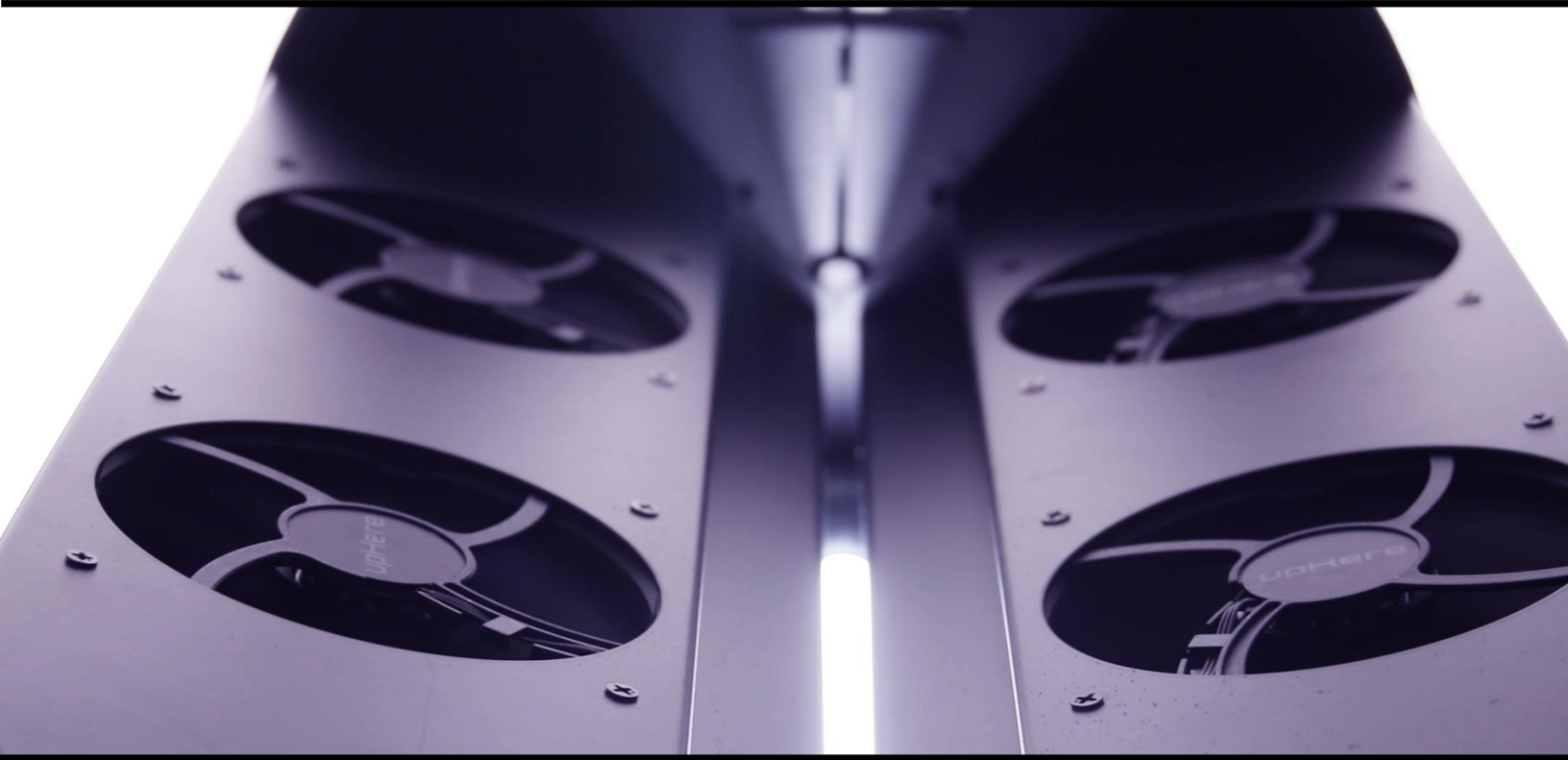


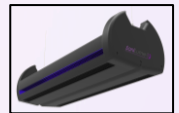
The World's Most Powerful Room Air Sanitizer

SaniLume 
sanilume.ca



SaniLume 

Video



The Science
How It Works
Is Sanilume Safe?
Technical
A Comparison Of UVC Disinfection Methods
Features
Product Specifications
About

Page 2
Page 6
Page 11
Page 12
Page 18
Page 23
Page 24
Page 26

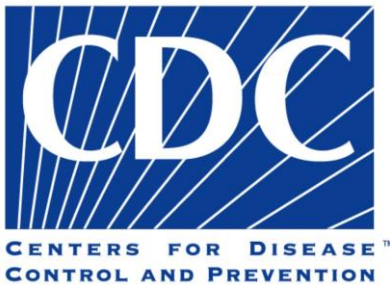
Tried And True



Sanilume is a powerful room sanitizer that continuously and safely disinfects the air against most viruses and pathogens **in occupied spaces** using safe, proven technology. A sleek inconspicuous design blends into your space.

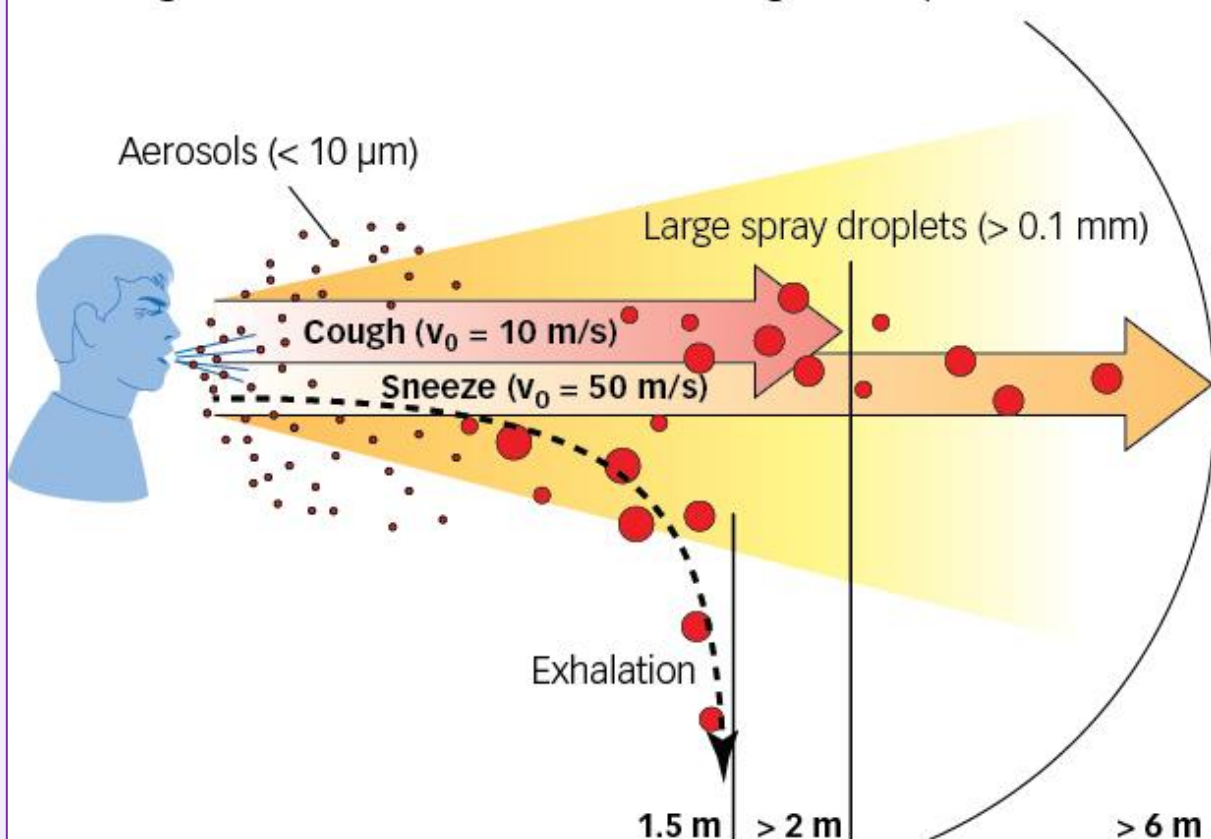
Peace of mind for everyone to
return with confidence.

Covid-19 is spread through the air, in floating aerosol form.

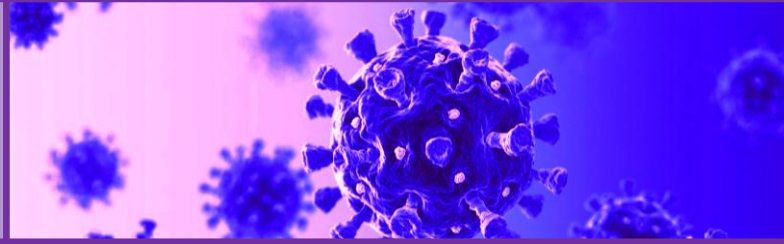


“CORONAVIRUS CAN COMMONLY SPREAD THROUGH RESPIRATORY DROPLETS OR SMALL PARTICLES, SUCH AS THOSE IN AEROSOLS, WHICH ARE PRODUCED EVEN WHEN A PERSON BREATHES.”

Figure 3: How COVID-19 is transmitted through aerosol particles



Does UVC Kill Covid-19?



US National Library of
Medicine National
Institutes of Health

"Ultraviolet germicidal irradiation (UVGI) is an established means of disinfection and can be used to prevent the spread of certain infectious diseases. UV-C radiation kills or inactivates microbes by damaging their deoxyribonucleic acid (DNA)"



"Because UVC disinfection kills most recognized pathogenic microorganisms, it can generally be inferred that sterilization and disinfection should minimize the viability of SARS-CoV-19 on surfaces and in the air in confined spaces"

What Is The Best Way To Use UVC?

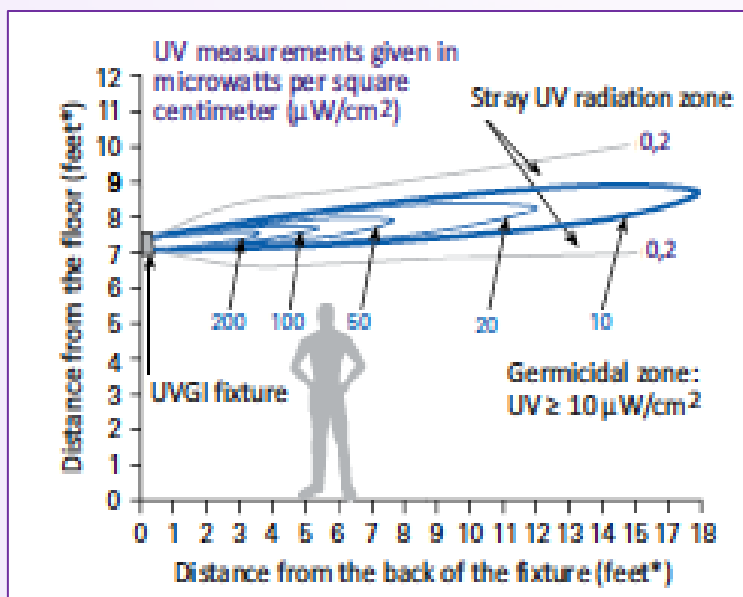
The media and marketplace are buzzing with a multitude of different kinds of devices using UVC light, many making outrageous or false claims. Here is what the world's main governing body for lighting (IES) states:

“When UV is used in ducts, it unfortunately does relatively little to prevent person-to-person transmission in a room where both an infectious source and other susceptible persons share the same air”



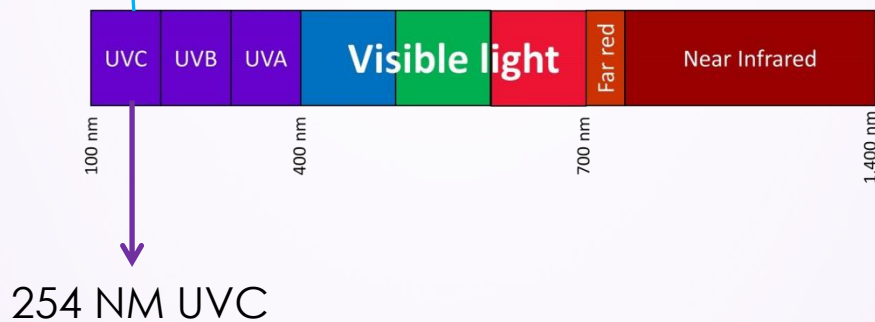
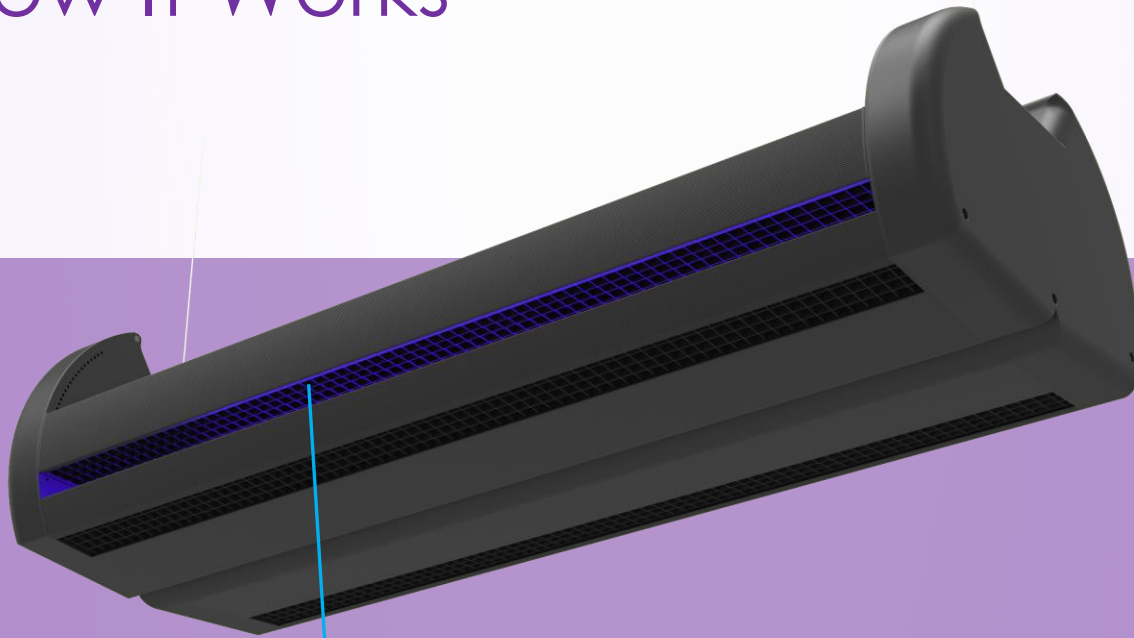
“Air cleaners can be placed in rooms, but moving large volumes of air is limited by the clean-air delivery... the result is a disappointing 1 to 2 air changes per hour, far too little to effectively prevent transmission.

“UPPER-ROOM GUV IS CONSIDERED THE MOST EFFECTIVE APPLICATION FOR ROOM AIR DISINFECTION”



Upper-air units continuously emit UV-C rays above people's heads eliminating viruses, germs and bacteria.

How It Works

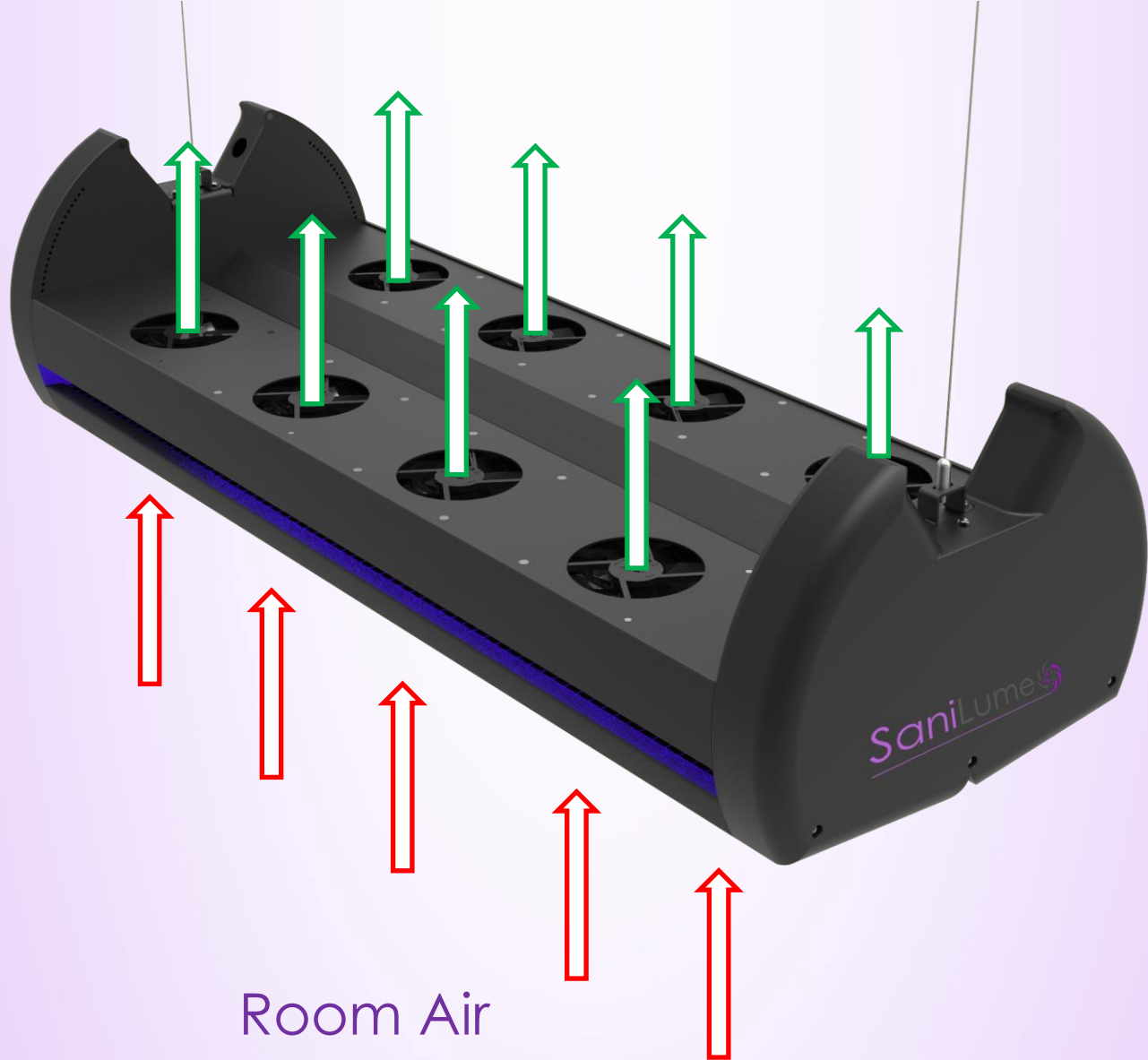


UVC light in the 254 nm spectrum has been used for nearly a century as a scientifically proven method of pathogen disinfection in the upper areas of indoor spaces, above people's heads. Up to 99% of common pathogens such as viruses, bacteria, mold spores and funguses are systematically eliminated.



People Safe Pathogen Inactivation Zone

Using proprietary technology and clean modern compact design, UVC light is directed to a narrow zone safely above people's heads. Rising convection currents within the room are greatly amplified by our fixture and cycle the air through the pathogen elimination zone many times per hour.

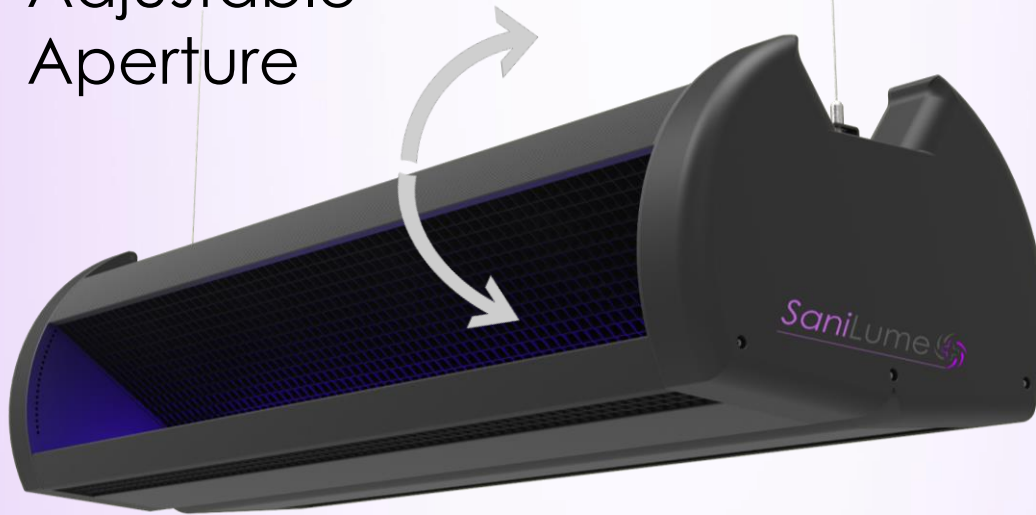


US National Library of Medicine National Institutes of Health:
“The use of mixing fan, and air exchange rate significantly affected UV effectiveness.”



Our fixture enable over **25,000 cubic feet of air per hour** to travel through the fixture and pathogen elimination zone, disinfecting a 400 sq. ft. room approximately every two minutes.

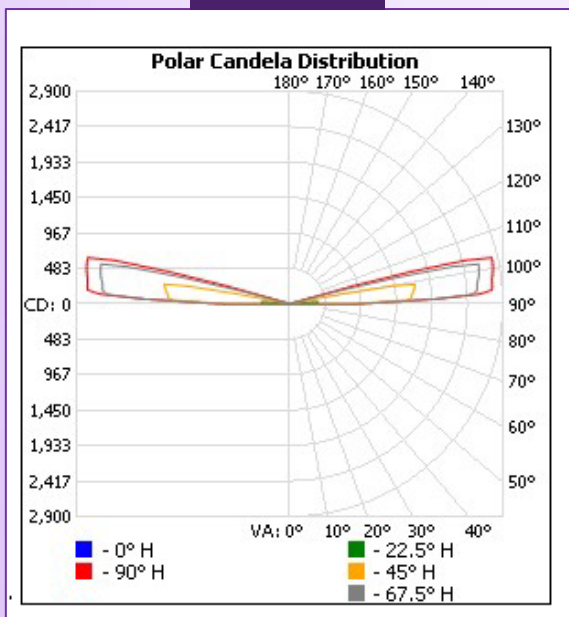
Adjustable
Aperture



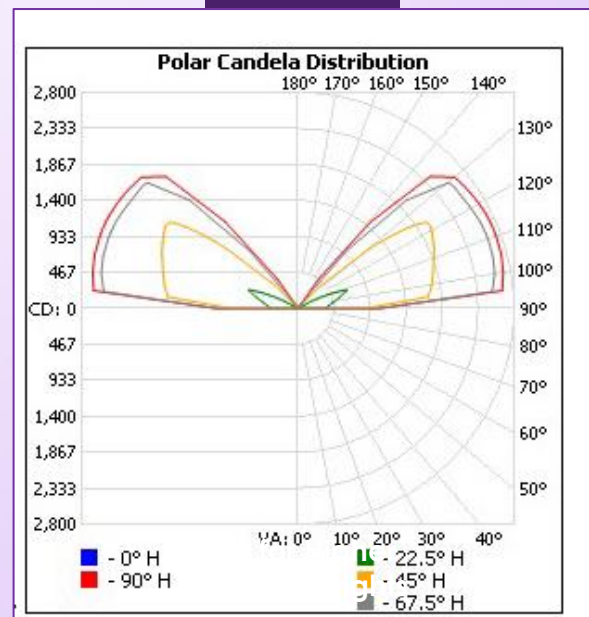
Adjustable Ceiling Heights

With our patented adjustable aperture, our fixtures can be adjusted on site to maximize occupant safety and also to increase the amount and distribution of UVC energy in higher ceiling spaces.

Set For 8
Ft. Ceilings

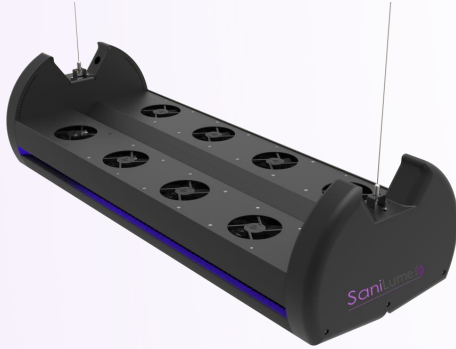


Set For Tall
Ceilings



Where To Use It

SaniLume 



Offices



Areas where people congregate



Schools



Retirement
Homes



Hospitals



Gyms

Most Importantly, Is Sanilume Safe?

Sanilume has been safety certified to UL standards.

ETL CLASSIFIED



intertek
Total Quality Assurance

ILLUMISOFT LIGHTING CANADA
Report # 104457374CRT-008

SL4 Photobiological

Method:

Measurements were performed using the Optronics OL-750D spectroradiometer. The test unit was scanned for the location of maximum UV output per sections SL4.3 through section SL4.7 and radiometric scans performed at that location. The sample was powered directly by 277VAC input into the sample. Sample was measured assuming base of unit installed at 7ft mounting height, 5 degree alignment offset was utilized per SL4.1

Requirement:

Per section SL4.8 blue light hazard may not exceed risk group 1, May not exceed exempt group for all other risk hazards

Results:

UL1598CRD CLAUSE SL4.8

Wavelength (nm)	Hazard Type Description	Result	Units	Exempt	Group 1	Group 2	Hazard Group	Exposure Time (sec)
200 - 400	Weighted actinic UV skin and eye (Es)	8.99E-04		0.001	0.003	0.03	Exempt	3.34E+04
315 - 400	Unweighted UVA (EUVA)	1.24E-04		10	33	100	Exempt	8.08E+07
300 - 700	Blue Light Hazard (LB)	1.54E-03		100	10000	4000000	Exempt	6.48E+08

UL1598CRD CLAUSE SL4.5

Irradiance Value at 50CM	8.50E-04	W/cm ²
Peak Wavelength	255	nm

Conclusion:

Complies

Tested By:	Chris Klein	Signature or initials:	
Reviewed By:	David Ellis	Signature or initials:	
Test Equipment Used:	1-9		
Amb (°C):	24.8	RH%:	32.9
		Completion Date:	10/27/20

Sanilume has also been tested and certified that it is below the UV exposure guidelines for an 8 hour day used by nearly all health governing bodies around the world. As shown, our fixture is in the “exempt” category (below the exposure limits) when the bottom of the fixture is mounted at a 7 ft. height.



UVC light has been studied and used since 1935 for effectively inactivating airborne pathogens. This is a mature science. A 2019 published study by the Harvard School of Public health has shown UVC's effectiveness against H1N1 influenza, a close relative of Covid 19.

Governed by well established international regulatory safety protocols, Sanilume can safely deliver pathogen eliminating technology to the world, and give people the health protection and peace of mind they need.

UVC Certified Lab Output Test Results

intertek

Total Quality. Assured.

RADIOMETRIC .IES FILE

(see notes below)

Filename: 104457374CRT-003 Config 2 _ IES

Manufacturer: ILLUMISOFT LIGHTING CANADA

Luminaire: UPPER ROOM AIR GERMICIDAL FIXTURE

Luminaire Cat: SANILUME V2

Lamp: Hg Lamp

Distribution: Quadrilateral Symmetry

Lamp Output: Total luminaire Lumens: 6978.6

Max Candela: 2,733.0 at Horizontal: 90°, Vertical: 112°

Input Wattage: 97.89

Luminous Opening: Rectangle w/Luminous Sides (L: 34.56", W: 13.56", H: 0.6")

Test: The data set was measured in RADIOMETRIC UNITS.

The following applies for data in this .IES file:

Lumens-> mW, lux-> mW/m², candela-> mW/sr

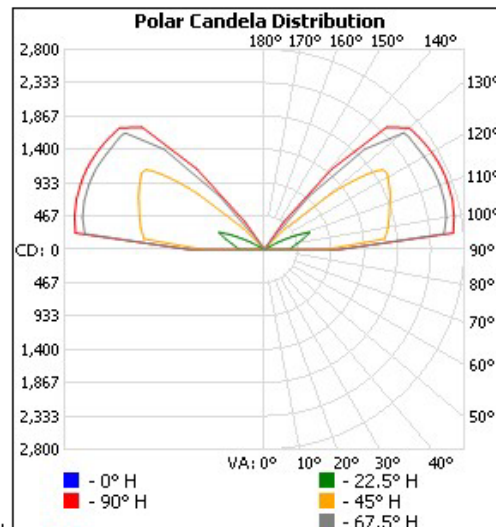
Test Lab: Intertek Cortland

Near Field Test: Test distance of 194.4cm (max per gonio limits for UV for this EUT). Inverse square law may not be appropriate based on product dimensions.

Photometry: Type C

Cutoff Class: Noncutoff

Nema Type: 3 X 1



Wide Beam

Set for Higher Ceiling Heights

intertek

Total Quality. Assured.

RADIOMETRIC .IES FILE

(see notes below)

Filename: 104457374CRT-003 Config 1 _ IES

Manufacturer: ILLUMISOFT LIGHTING CANADA

Luminaire: UPPER ROOM AIR GERMICIDAL FIXTURE

Luminaire Cat: SANILUME V2

Lamp: Hg Lamp

Distribution: Quadrilateral Symmetry

Lamp Output: Total luminaire Lumens: 2124.8

Max Candela: 2,819.0 at Horizontal: 90°, Vertical: 102°

Input Wattage: 97.89

Luminous Opening: Rectangle w/Luminous Sides (L: 34.56", W: 13.56", H: 0.6")

Test: The data set was measured in RADIOMETRIC UNITS.

The following applies for data in this .IES file:

Lumens-> mW, lux-> mW/m², candela-> mW/sr

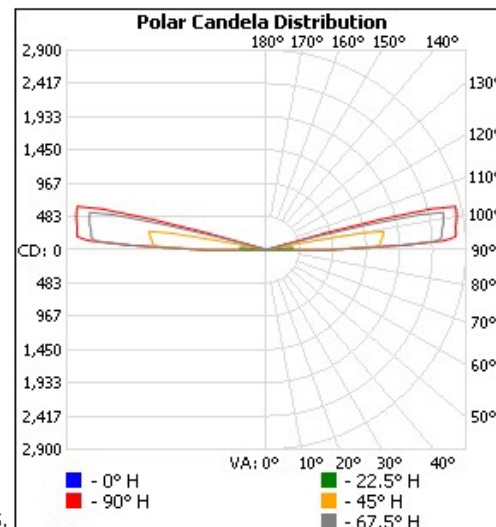
Test Lab: Intertek Cortland

Near Field Test: Test distance of 194.4cm (max per gonio limits for UV for this EUT). Inverse square law may not be appropriate based on product dimensions.

Photometry: Type C

Cutoff Class: Noncutoff

Nema Type: 1 X 1



Narrow Beam

Set For 8 Ft. Ceilings

Technical Appendices

COVID-19: Main modes of transmission - Canada.ca



Government
of Canada

Gouvernement
du Canada

[Canada.ca](#) > [Coronavirus disease \(COVID-19\)](#) > [For health professionals](#)

COVID-19: Main modes of transmission

On this page

- [How COVID-19 spreads](#)
- [Settings with higher risk of transmission](#)
- [Follow public health measures](#)
- [Ventilation](#)

How COVID-19 spreads

SARS-CoV-2, the virus that causes COVID-19, spreads from an infected person to others through respiratory droplets and aerosols created when an infected person coughs, sneezes, sings, shouts, or talks. The droplets vary in size from large droplets that fall to the ground rapidly (within seconds or minutes) near the infected person, to smaller droplets, sometimes called aerosols, which linger in the air under some circumstances.

The relative infectiousness of droplets of different sizes is not clear. Infectious droplets or aerosols may come into direct contact with the mucous membranes of another person's nose, mouth or eyes, or they may be inhaled into their nose, mouth, airways and lungs. The virus may also spread when a person touches another person (i.e., a handshake) or a surface or an object (also referred to as a fomite) that has the virus on it, and then touches their mouth, nose or eyes with unwashed hands.

Technical Appendices

Fauci: "There's good enough data to say that aerosol transmission does occur"

From CNN's Amanda Watts

Dr. Anthony Fauci testifies at a hearing in Washington, DC, on September 23. Alex Edelman/Pool/Getty Images

Dr. Anthony Fauci, the nation's leading infectious disease expert, believes "there's good enough data to say that aerosol transmission does occur."

Speaking to New Jersey Gov. Phil Murphy on Thursday, Fauci explained, "Aerosol means the droplets don't drop immediately – they hang around for a period of time."

"Generally if you have droplets that come out of a person, they generally go down within six feet. So, if you're six feet distance, you're wearing a mask, you don't worry about that," he said.

This becomes "very relevant" when you are inside where there is poor ventilation.

Fauci said we shouldn't be "getting bent out of shape," about whether Covid-19 aerosolizes or not. "Act like it's occurring – and then do the same thing you've been doing otherwise."

"Which means: Wear the mask," he added.

Illumination Engineering Society Report CR-2-20

1.3 Can UV-C kill viruses as well as bacteria?

Yes, UV-C kills living bacteria, but viruses are technically not living organisms; thus, we should correctly say "inactivate viruses." Individual, energetic UV-C photons photochemically interact with the RNA and DNA molecules in a virus or bacterium to render these microbes non-infectious. This all happens on the microscopic level. Viruses are less than one micrometer (μm , one-millionth of a meter) in size, and bacteria are typically 0.5 to 5 μm .

1.4 Can UV-C effectively inactivate the SARS-CoV-2 virus, responsible for COVID-19?

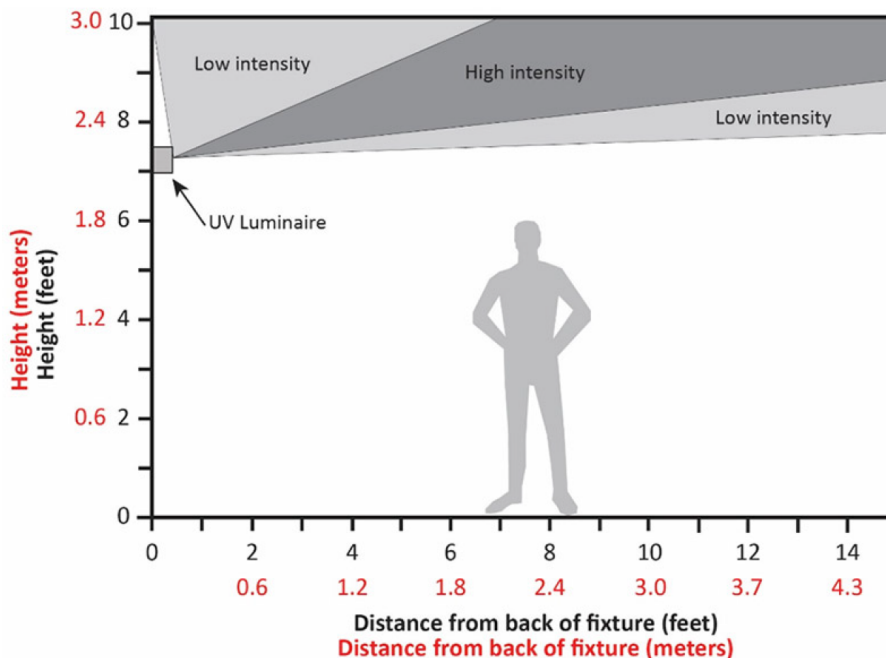
Yes, if the virus is directly illuminated by UV-C at the effective dose level. UV-C can play an effective role with other methods of disinfection, but it is essential that individuals be protected to prevent UV hazards to the eyes and skin as elaborated in **Section 4**. UV-C should not be used to disinfect the hands!

Technical Appendices

Illumination Engineering Society Report CR-2-20

3.2 Why is upper-room GUV more effective than UV in ventilation ducts or in room air cleaners?

Upper-room GUV (see Figure 3-1) disinfects large volumes of room air (above occupants' heads) at once, resulting in high "equivalent" air changes per hour (ACH) in terms of air disinfection only—GUV does not dilute odors or CO₂, the main functions of building ventilation. Odor control and CO₂ removal are accomplished by relatively low levels of ventilation (1 to 2 ACH), but air disinfection requires much higher rates of ventilation (6 to 12 ACH), or the equivalent produced by upper-room GUV. Two hospital controlled studies^[13, 14] have shown upper-room GUV to be about 80% effective against tuberculosis (TB) spread. Even when GUV is confined to the upper room, good air mixing (ideally with low-velocity ceiling fans but easily accomplished by other types of forced-air ventilation) results in very high equivalent ACH in the lower, occupied space—estimated to be an additional 24 ACH in a South African study.^[13]



Illumination Engineering Society Report CR-2-20

3.3 Is GUV inside air ducts sufficient for room-air disinfection?

When UV is used in ducts, although it ensures that recirculated air does not have viable pathogens, it unfortunately does relatively little to prevent person-to-person transmission in a room where both an infectious source and other susceptible persons share the same air. For effective interruption of transmission, air disinfection has to occur in the same room where transmission is occurring. Portable air cleaners can be placed in rooms where there is a risk of transmission, but moving large volumes of air through any device is difficult, limited by the clean-air delivery rate of the portable air cleaner. Often when the clean air delivery rate is converted to equivalent ACH, the result is a disappointing 1 to 2 ACH, far too little to effectively prevent transmission. A large air cleaner in a small room may be effective, but for larger rooms, air cleaners are simply an impractical approach to high levels of air disinfection, compared to upper-room GUV. Air cleaners may have value in a confined space where GUV is desired.

Technical Appendices

[Public Health Rep.](#) 2008 Jan-Feb; 123(1): 52–60.
doi: [10.1177/003335490812300108](#)

PMCID: PMC2099326
PMID: [18348480](#)

Safety of Upper-Room Ultraviolet Germicidal Air Disinfection for Room Occupants: Results from the Tuberculosis Ultraviolet Shelter Study

[Edward A. Nardell](#), MD,^a [Scott J. Bucher](#), MA,^b [Philip W. Brickner](#), MD,^b [Charles Wang](#), BA,^b [Richard L. Vincent](#), BSc,^b [Kathleen Becan-McBride](#), EdD,^c [Mark A. James](#), PhD,^d [Max Michael](#), MD,^e and [James D. Wright](#), PhD^f

Conclusion

These findings demonstrate that careful application of upper-room UVGI can be achieved without an apparent increase in the incidence of the most common side effects of accidental UV overexposure.

Bench-scale and room-scale experiments clearly demonstrate the effectiveness of ultraviolet germicidal irradiation (UVGI), which consists primarily of shortwave (254 nm or UV-C) energy, for inactivating a wide range of aerosolized microorganisms.¹⁻⁹ Based on these and other data, UVGI technology is widely used as a protective measure to limit the transmission of airborne pathogens. To prevent spread of infectious agents within rooms, upper room rather than UVGI within ventilation ducts is the optimal implementation mode, using wall or ceiling-mounted fixtures that direct UV-C energy above the heads of room occupants. Existing or added mechanical air mixing within rooms delivers infectious aerosols into the germicidal beam and returns disinfected air back down to the breathing zone.

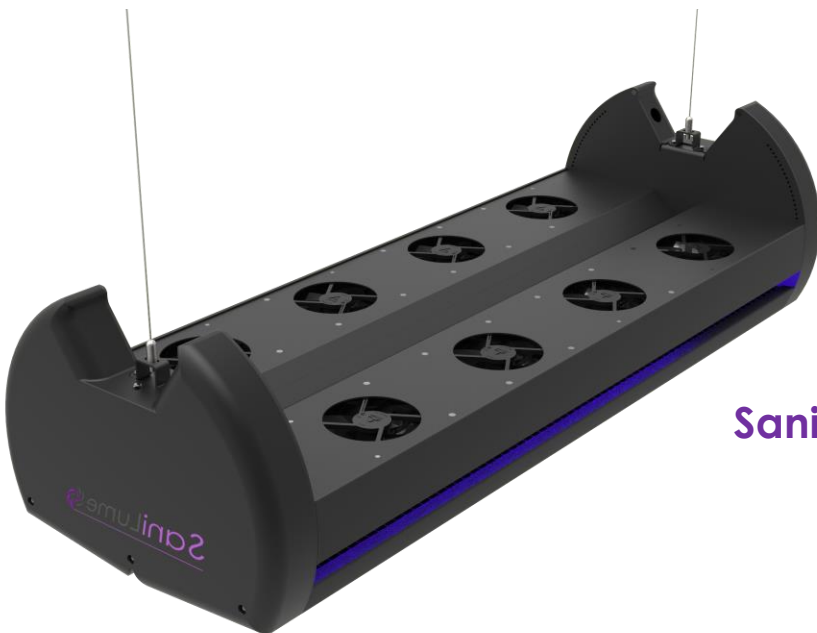
A Comparison of UVC Disinfection Methods

Current fixtures were designed many decades ago and haven't changed.

Traditional Fixture



- Fixed louvers
- No added room air mixing,
- Overpriced
- Industrial dated look
- Low output about 1.5 watts UVC



SaniLume 

SaniLume Max UVC Output: 7 watts

SaniLume 

A Comparison of UVC Disinfection Methods

In the wake of Covid19, the market has been flooded with a multitude of different UVC devices, most promising to disinfect 99.9% of germs. These advertising claims capitalize on the consumer's (and professional's) lack of understanding of this complex and relatively new field of science. We hope to inform and educate consumers and professional alike.

Quick View Summary

Sanilume is an upper room air UVC fixture that sends powerful UVC energy to the upper areas of a room, safely above people's heads. This form of UVC device is **widely acknowledged as the most efficient method of eliminating airborne pathogens**. According to a study¹, a Leading Brand fixture has the highest performance of any upper room GUV fixture with published **actual** UVC output data (manufacturers are not required to report this). We will use this to compare the most important fixture criteria:

UPPER ROOM GUV FIXTURE BRAND	ACTUAL UVC OUTPUT (W)	EQUIVALENT AIR CHANGES/HR*	AIR HANDLING CFH	ADJUSTABLE APERTURE	COVERAGE SQ. FT.	OZONE FREE	WARRANTY YEARS
Leading Brand	0.9818	3.9	0	NO	100	YES	3
SANILUME SL36-75	2.12-7	31.6	25,000	YES	400	YES	5/3

*400 SQ Ft Room Size / 9.8 ft Ceiling, Sanilume Aperture Set For 3.92W UVC Output. "Leading Brand" data extrapolated for a 400 SQ Ft Room Size / 9.8 ft Ceiling.

UVC Disinfection Device Comparison

General Use of UVC Light

UVC has been used for over 100 years to inactivate (kill) pathogens. Given the correct dosage (intensity x time) UVC will inactivate nearly any living microbe: viruses, funguses, bacteria etc. This is indisputable documented science.

Surface Disinfection Units

"While UVGI is an excellent surface disinfectant, it does not penetrate surfaces and cannot disinfect soiled surfaces. The inability of the UV radiant energy to reach shadowed recesses of surfaces or to penetrate coverings like dust and other matter may negatively affect

¹ Rudnick, SN, First, MW, Sears, T, Vincent, RL, Brickner, PW, Ngai, PY, Zhang, J, Levin, RL, Chin, K, Rahn, RO, Miller, SL, Nardell, EA. Spatial distribution of fluence rate from upper-room ultraviolet germicidal irradiation: experimental validation of a computer-aided design tool. HVAC&R Research 2012; 18: 774-794.

disinfection. For these reasons, UVGI is typically used as a supplemental control measure for disinfection"¹

"A 2005 published study concluded that UVGI lamps (for surface disinfection) could have some effect on the spread of infectious respiratory diseases, but there was inadequate evidence to support recommending its wide use"²

"The CDC recognizes that UVGI (for surface disinfection) has several potential applications but also has limitations and possible safety issues"^{3 4 5}

HVAC In-Duct

"When UV is used in ducts, although it ensures that recirculated air does not have viable pathogens, it unfortunately does relatively little to prevent person-to-person transmission in a room where both an infectious source and other susceptible persons share the same air. For effective interruption of transmission, air disinfection has to occur in the same room where transmission is occurring. Some manufacturers of these systems have also made claims of reduced incidence of health care-associated infections (HAIs) with the use of UVGI in AHUs. To date, however, there is little, if any, supportive evidence in the peer-reviewed scientific literature. **Our assessment of the available literature indicates claims of reduced HAIs from AHU-installed UVGI in health care facilities remain unfounded.**"^{6 7}

Portable Room Air Purifiers

An air purifier on the ground physically cannot efficiently pull all the room air into it efficiently, or at all. Remember, the air needs to pass through the purifier to work: "Portable air cleaners can be placed in rooms where there is a risk of transmission but moving large volumes of air through any device is difficult, limited by the clean-air delivery rate of the portable air cleaner. Often when the clean air delivery rate is converted to equivalent ACH, the result is a disappointing 1 to 2 ACH, far too little to effectively prevent transmission"⁸.

¹ Illuminatiion Engineering Society, Photobiological Commission CR20-2-V1a, Technology Farhad Memarzadeh, PhD, PE, Russell N. Olmsted, MPH, CIC, and Judene M. Bartley, MS, MPH, CIC Bethesda, Maryland; Ann Arbor, Michigan; and Beverly Hills, Michigan

² Lee T, Jordan NN, Sanchez JL, Gaydos JC. Selected nonvaccine interventions to prevent infectious acute respiratory disease. Am J Prev Med. 2005;28(3):305-16.

* Rudnick, SN, First, MW, Sears, T, Vincent, RL, Brickner, PW, Ngai, PY, Zhang, J, Levin, RL, Chin, K, Rahn, RO, Miller, SL, Nardell, EA. Spatial distribution of fluence rate from upper-room ultraviolet germicidal irradiation: experimental validation of a computer-aided design tool. HVAC&R Research 2012; 18: 774–794.

³ Sehulster L, Chinn RYW. Guidelines for environmental infection control in healthcare facilities – Recommendations of the Centers for Disease Control and the Healthcare Infection Control Practices Advisory Committee (HICPAC). 2003;52(RR10):1-42.

⁴ Jensen PA, Lambert LA, Lademaro MF, Ridzon R. 2005. Guidelines for preventing the transmission of *Mycobacterium tuberculosis* in health-care settings, 2005. Morbid Mortal Weekly Rep. 2005;54(RR17):1-141.

⁵ Centers for Disease Control and Prevention; and National Institute for Occupational Safety and Health. Environmental Control for Tuberculosis: Basic Upper-Room Ultraviolet Germicidal Irradiation Guidelines for Healthcare Settings. Washington, DC: Department of Health and Human Services; 2009.

⁶ Illuminatiion Engineering Society, Photobiological Commission CR20-2-V1

⁷ Technology Farhad Memarzadeh, PhD, PE, Russell N. Olmsted, MPH, CIC, and Judene M. Bartley, MS, MPH, CIC Bethesda, Maryland; Ann Arbor, Michigan; and Beverly Hills, Michigan

⁸ Illuminatiion Engineering Society, Photobiological Commission CR20-2-V1a

Upper Room Air UVC Fixtures

Scientists worldwide (ASHRAE 2019¹, IES², CDC³etc.) acknowledge the effectiveness of this method of pathogen elimination. This is why Sanilume has chosen to use, innovate and approve this UVC method.

The safety of the air we breathe in room is dependent on the number of full room air changes per hour (ACH) of fresh, non contaminated air available for people to breathe. An “equivalent air change” (eACH) is the elimination of pathogens in the air by disinfection of the air rather than replacement of the air. This is equally as effective. Here is an approximate comparison for a 400 sq. ft room with 9.8 ft ceilings:

- | | |
|---|-----------|
| 1. Portable Room Air Purifiers ⁴ : | .5 eACH |
| 2. In-Duct HVAC Units ⁵ : | 6 eACH |
| 3. Standard Upper Room Air GUV ⁶ | 5 eACH |
| 4. Sanilume Upper Room Air GUV | 31+ eACH* |

*400 SQ Ft Room Size / 9.8 ft Ceiling, Sanilume Aperture Set For 3.92W UVC Output

What Makes Sanilume Better #1: UVC Output

“UVC output is the most important factor to consider when evaluating the effectiveness of an upper room GUV luminaire, which will determine the luminaire's efficacy against airborne microorganisms”⁷ “A “Leading Brand” is one of the most efficient commercial GUV luminaires currently available for which luminaire output and lower room safety results have been published”⁸

Source type	Lamp UV-C output ^a	Luminaire UV-C output	Luminaire UV-C efficiency (luminaire output/lamp UV-C output)
Atlantic Hvacaire	8.5 W	0.471 W	5.54%
Leading Brand	22 W	0.523 W	2.38%
Lumalier corner	11 W	0.134 W	1.22%
Cooper GAC GUV	18W	.298W	1%
Sanilume SL36-75	23W	2.124W - 6.978W	9.2% to 30%

¹ 2019 ASHRAE Handbook

² Illuminatiion Engineering Society, Photobiological Commission CR20-2-V1

³ DHHS (NIOSH) Publication Number 2009-105

⁴ Illuminatiion Engineering Society, Photobiological Commission CR20-2-V1

⁵ DHHS (NIOSH) Publication Number 2009-105, Illuminatiion Engineering Society, Photobiological Commission CR20-2-V1

⁶ Jelden KC, Gibbs SG, Smith PW, Schwedhelm MM, Iwen PC, Beam EL, Hayes AK, Mar4on N, Kratochvil CJ, Boulter KC, et al. Nebraska Biocontainment Unit patient discharge and environmental decontamination after Ebola care. Amer J Infect Control. 2015;43(3):203-5.

Rudnick, SN, First, MW, Sears, T, Vincent, RL, Brickner, PW, Ngai, PY, Zhang, J, Levin, RL, Chin, K, Rahn, RO, Miller, SL, Nardell, EA. Spatial distribution of fluence rate from upper-room ultraviolet germicidal irradiation: experimental validation of a computer-aided design tool. HVAC&R Research 2012; 18: 774–794.

⁷ Rudnick, SN, First, MW. Fundamental factors affecting upper-room ultraviolet germicidal irradiation – Part II. Predicting effectiveness. Journal of Occupational and Environmental Hygiene 2007; 4: 352–362.

⁸ Rudnick, SN, First, MW, Sears, T, Vincent, RL, Brickner, PW, Ngai, PY, Zhang, J, Levin, RL, Chin, K, Rahn, RO, Miller, SL, Nardell, EA. Spatial distribution of fluence rate from upper-room ultraviolet germicidal irradiation: experimental validation of a computer-aided design tool. HVAC&R Research 2012; 18: 774–794.

What Makes Sanilume Better #2: Airflow & Air Mixing

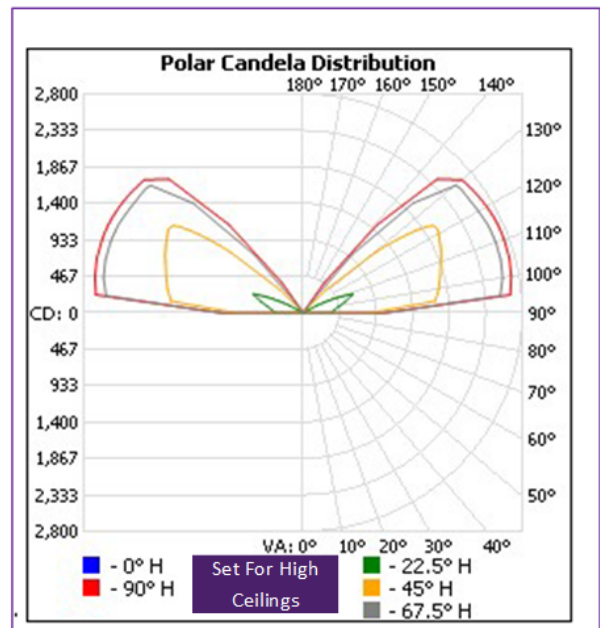
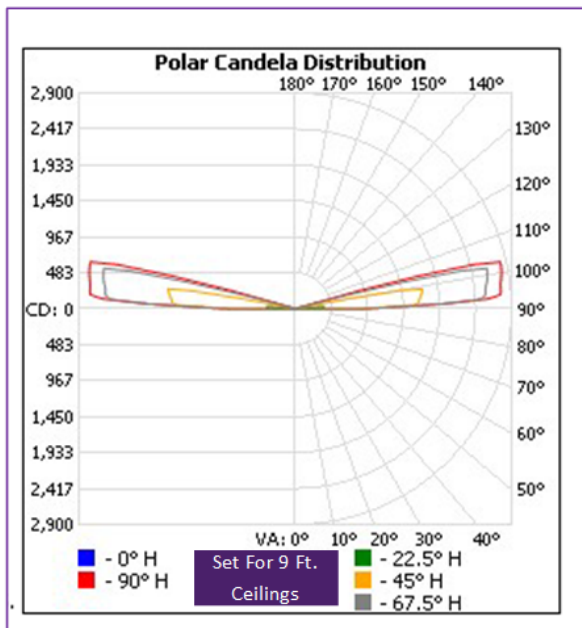
Using patent pending technology, Sanilume is the only upper room GUV fixture on the market to incorporate air moving. Next to UVC output, air mixing is the next most important factor on the efficacy of pathogen elimination. If the air containing the pathogens does not come into contact with the UVC energy, then no pathogen reduction will occur. Sanilume moves approx. 25,000 cubic feet of air through the fixture and also into the UVC energy beam that is spread across the room. This creates another 16 eACH on top of the 15.6 eACH created by the UVC energy alone, **for a total of 31.6 ACH** (400 sq. ft. room, 9.8 ft ceilings). This makes Sanilume approx. 10 times more efficient at eliminating pathogens as the Leading Brand as published¹

As ceiling heights become higher, Sanilume can increase its UVC output. **Here is the same 400 sq. ft. room with 12 ft ceilings:**

Leading Brand:	3.19 eACH
Sanilume SL36-75:	63.2 eACH (highest aperture setting)

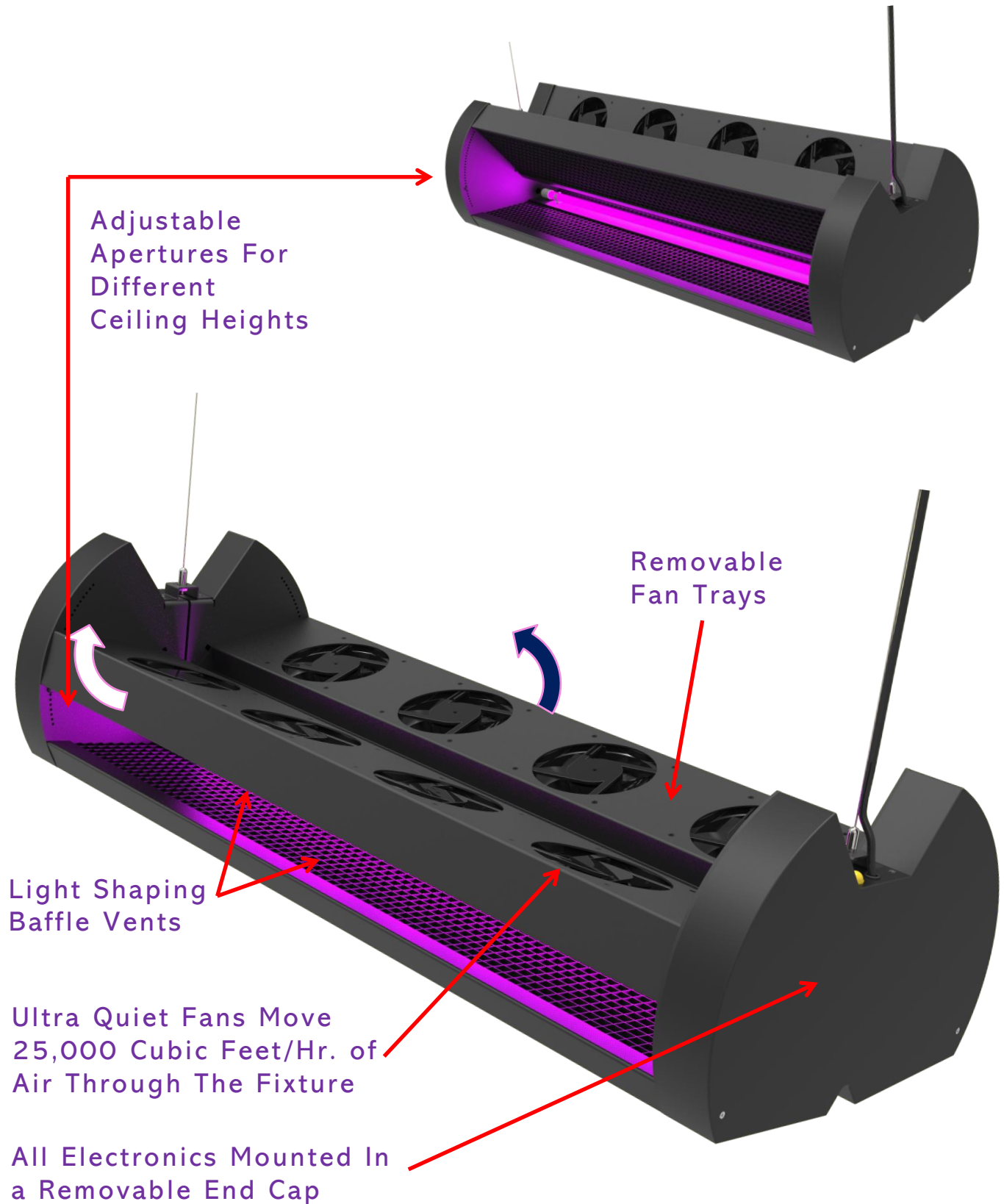
What Makes Sanilume Better #3: Adjustable Aperture

Traditional upper room GUV fixtures have fixed louvers which provide a fixed UVC distribution and output level. With our patented adjustable aperture, our fixtures can be adjusted on site to increase the amount and distribution of UVC energy in higher ceiling spaces. This allows Sanilume to provide approx. 2.2W of UVC energy to low ceiling height rooms, and up to 4 times that amount for rooms with high ceilings.



¹ Rudnick, SN, First, MW, Sears, T, Vincent, RL, Brickner, PW, Ngai, PY, Zhang, J, Levin, RL, Chin, K, Rahn, RO, Miller, SL, Nardell, EA. Spatial distribution of fluence rate from upper-room ultraviolet germicidal irradiation: experimental validation of a computer-aided design tool. HVAC&R Research 2012; 18: 774–794.

Features



Product Specifications

Upper Room Air Germicidal UVC Technology

- 254 nm germicidal UVC lamp rated for 10,000 hrs.
- Powerful UVC energy is distributed into upper room areas is proven inactivation technology against pathogens including mold, fungi, bacteria, and viruses
- Powerful integral air handling circulates room air through the UVC energy field

Construction

- All aluminum construction except UV stabilized polycarbonate end caps

Finish

- Polyester powder coat finish on all visible aluminum parts

Optics

- Horizontal multicell louvers restrict stray UVC emissions below the fixture
- Adjustable apertures can be adjusted to increase UVC output as ceiling height increases

Mounting

- Minimum mounting height is 7' 9" from the fixture bottom to the finished floor
- Recommended to not have obstructions or walls less than 10 ft in front of the fixture's apertures

Compliance

- This GUV product is designed to comply with UL1598 CRD SL4.8 Risk Group 0
- UL 1598 listed GUV fixture
- The installer must follow all the safety instructions in this manual



Warnings and Safety

- All warnings and safety information in this manual must be strictly followed

Order Information

SL36-KT-75 75-watt UVC lamp, covers approx. 400 sq. ft

SL36-KT-40 40-watt UVC lamp, covers approx. 250 sq. ft

DIMENSIONS	LENGTH	38.875" 987 MM
	WIDTH	13.88" 352 MM
	HEIGHT	9.95" 253MM
	WEIGHT	29 LBS/13.15 KG
ELECTRICAL SL-36KT-75	INPUT WATTS @ 120-277V	113W
	VOLTS	120-277
	AMPS @ 120v	0.58
	FREQUENCY	50-60 HZ
	LAMP UVC OUTPUT	23
ELECTRICAL SL-36-KT-40	INPUT WATTS @ 120-277V	64
	VOLTS	110-277
	AMPS @ 120v	0.33
	FREQUENCY	50-60 HZ
	LAMP UVC OUTPUT	14
FAN PERFORMANCE (8 Fans)	CFH	25,440
	DBA @	42
OPTION: 347V INPUT	VOLTS	110-347

Certified Laboratory Test Results

intertek

Total Quality. Assured.

RADIOMETRIC .IES FILE

(see notes below)

Filename: 104457374CRT-003 Config 2 _ IES

Manufacturer: ILLUMISOFT LIGHTING CANADA

Luminaire: UPPER ROOM AIR GERMICIDAL FIXTURE

Luminaire Cat: SANILUME V2

Lamp: Hg Lamp

Distribution: Quadrilateral Symmetry

Lamp Output: Total luminaire Lumens: 6978.6

Max Candela: 2,733.0 at Horizontal: 90°, Vertical: 112°

Input Wattage: 97.89

Luminous Opening: Rectangle w/Luminous Sides (L: 34.56", W: 13.56", H: 0.6")

Test: The data set was measured in RADIOMETRIC UNITS.

The following applies for data in this .IES file:

Lumens-> mW, lux-> mW/m², candela-> mW/sr

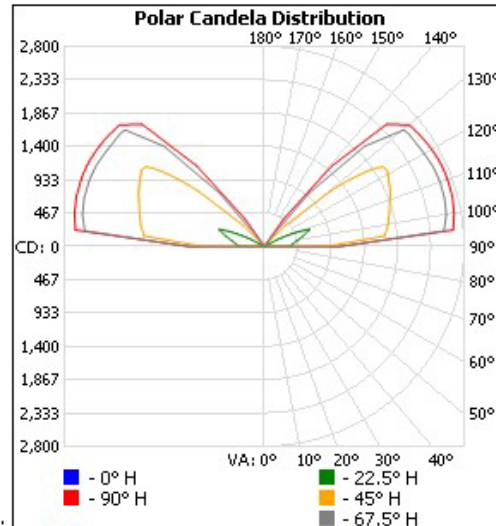
Test Lab: Intertek Cortland

Near Field Test: Test distance of 194.4cm (max per gonio limits for UV for this EUT). Inverse square law may not be appropriate based on product dimensions.

Photometry: Type C

Cutoff Class: Noncutoff

Nema Type: 3 X 1



Wide Beam

Set for Higher Ceiling Heights

intertek

Total Quality. Assured.

RADIOMETRIC .IES FILE

(see notes below)

Filename: 104457374CRT-003 Config 1 _ IES

Manufacturer: ILLUMISOFT LIGHTING CANADA

Luminaire: UPPER ROOM AIR GERMICIDAL FIXTURE

Luminaire Cat: SANILUME V2

Lamp: Hg Lamp

Distribution: Quadrilateral Symmetry

Lamp Output: Total luminaire Lumens: 2124.8

Max Candela: 2,819.0 at Horizontal: 90°, Vertical: 102°

Input Wattage: 97.89

Luminous Opening: Rectangle w/Luminous Sides (L: 34.56", W: 13.56", H: 0.6")

Test: The data set was measured in RADIOMETRIC UNITS.

The following applies for data in this .IES file:

Lumens-> mW, lux-> mW/m², candela-> mW/sr

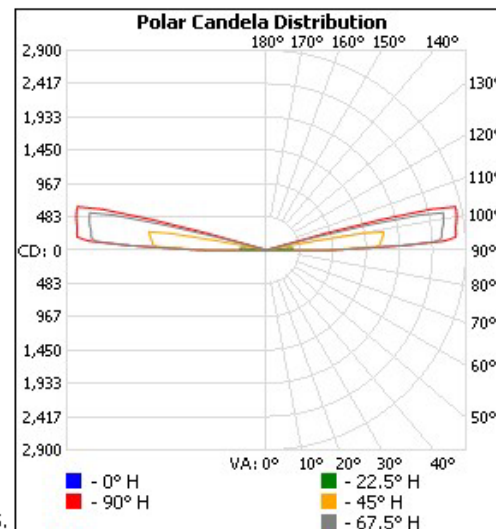
Test Lab: Intertek Cortland

Near Field Test: Test distance of 194.4cm (max per gonio limits for UV for this EUT). Inverse square law may not be appropriate based on product dimensions.

Photometry: Type C

Cutoff Class: Noncutoff

Nema Type: 1 X 1



Narrow Beam

Set For 8-9 Ft. Ceilings



Proudly based in Canada, Illumisoft Lighting has pioneered high efficiency, low glare, soft diffused lighting through the use of advanced optical film technology. With 18 patents and counting, this technology enables their commercial light fixtures to achieve the highest energy efficiency in the world (DLC Qualified Products Listings).

They are now applying their technical expertise to help the world become a safer place to live, work and play.

Contact: info@illumisoftlighting.com

Sanilume.ca

By 