BlueCalc™

AIR DISINFECTION ANALYSIS - REPORT

Customer / Project: **7.5 Ton 20x18 3000cfm SINGLE**

Duct Data

Duct Width	20 in
Duct Height	18 in
Airflow	3000 CFM
Air Velocity	1200 ft/min
Duct Wall Material	Galvanized duct - rough

Irradiation Data

Avg germicidal UV dose delivered	6360 µJ/cm2
Air temperature increase	0.3 °C
Exposure time	0.24 s

UVGI Lamp Data

Model	TUVC-ADS-260Q-HO
Number of Units	1
Setup type for multiple units	n/a
Number of Lamps per Unit	4
Lamp Length	1554 mm
UVGI Power per Lamp	54 W
Electrical Power per Lamp	130 W
Electrical Power per Module	520 W
Electrical Power (Total)	520 W
Teflon coating	No

Inactivation (sterilization) rates after 18000 hours

Microorganism	Single Pass		
	Minimum	**Average**	**LOG Average**
Coronavirus	> 99.99%	> 99.99%	> 4
Tuberculosis	99.99%	> 99.99%	> 4
Influenza A virus	99.37%	99.95%	3
Adenovirus	90.45%	96.97%	1

UVC dose inside the duct after 18000 hours (mJ/cm²)

Legend:
- 14.3 - 15.4
- 13.1 - 14.3
- 12.0 - 13.1
- 10.8 - 12.0
- 9.7 - 10.8
- 8.6 - 9.7
- 7.4 - 8.6
- 6.3 - 7.4
- 5.1 - 6.3
- 4.0 - 5.1
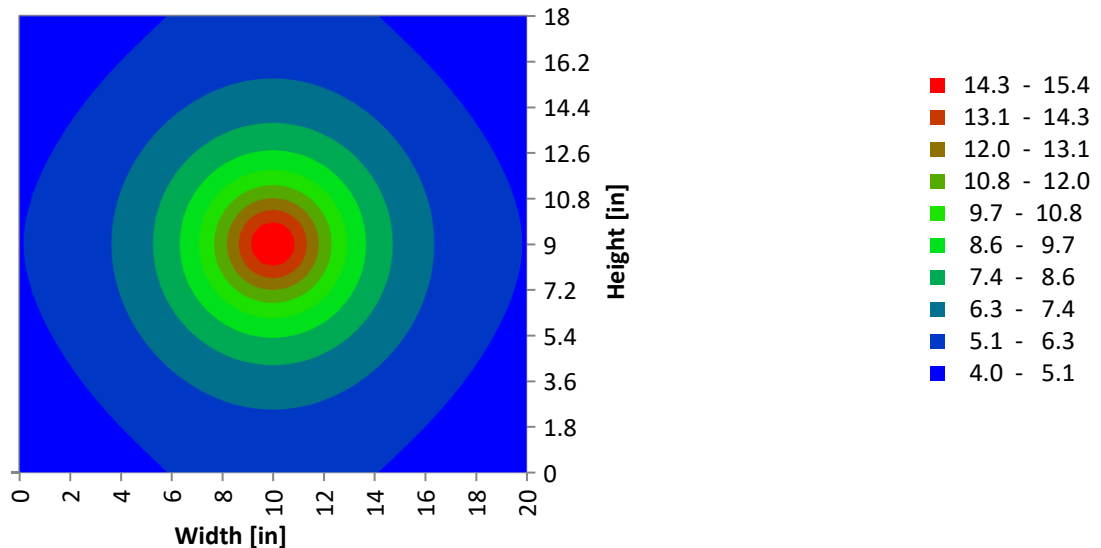
Note: 4-log inactivation equals 99.99%. Higher than 4-log inactivation are achieved in real-life scenarios but the exact predictions/model would be inaccurate because the UV disinfection analysis utilises single stage decay data and equations.

Disclaimer: The Information and the analysis of this report is proprietary and confidential. Due to the fact that the data used in this analysis is supplied by the end user who takes responsibility for its accuracy, FreshAire UV does not make and expressly disclaims any representations or warranties as to the completeness, accuracy or usefulness of the report. FreshAire UV does not warrant that the use of such information will not infringe any third-party rights, nor does Freshaire UV assume any liability for damages or costs of any kind that may result from use of such information. Data contained in this BlueCalc sizing is subject to change without notice.