



# BLUECALC™

## AIR DISINFECTION ANALYSIS - REPORT

Customer / Project: **50 Ton 44x38 20000cfm SINGLE**

### Duct Data

Duct Width	44 in
Duct Height	38 in
Airflow	20000 CFM
Air Velocity	1722.49 ft/min
Duct Wall Material	Galvanized duct - rough

### UVGI Lamp Data

Model	TUVC-ADS-260H-HO
Number of Units	2
Setup type for multiple units	parallel
Number of Lamps per Unit	6
Lamp Length	1554 mm
UVGI Power per Lamp	54 W
Electrical Power per Lamp	130 W
Electrical Power per Module	780 W
Electrical Power (Total)	1560 W
Teflon coating	No

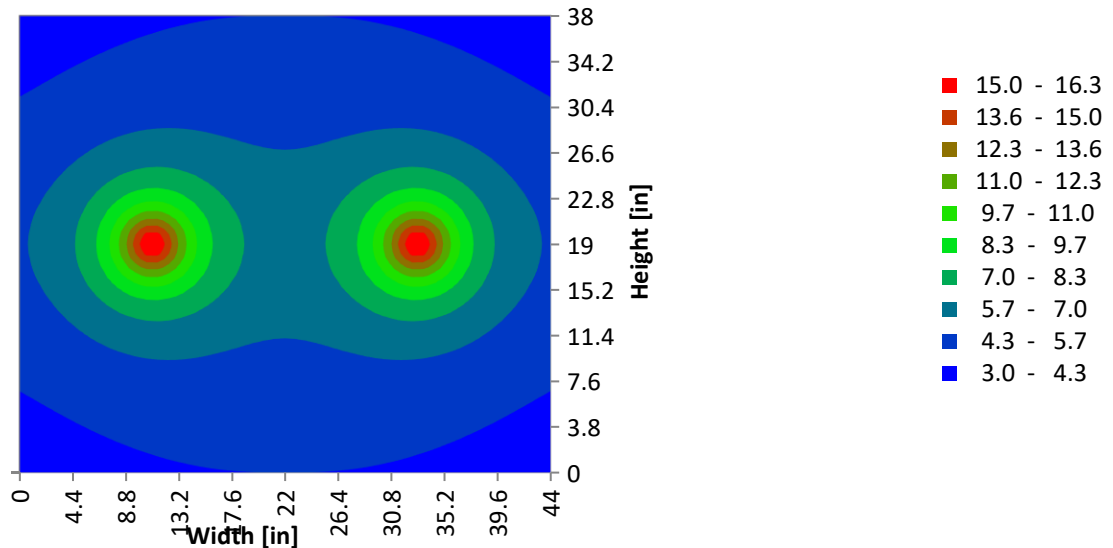
### Irradiation Data

Avg germicidal UV dose delivered	5784 $\mu\text{J}/\text{cm}^2$
Air temperature increase	0.1 °C
Exposure time	0.17 s

### Inactivation (sterilization) rates after 18000 hours

Microorganism	Single Pass		
	Minimum	Average	LOG Average
Coronavirus	> 99.99%	> 99.99%	> 4
Tuberculosis	99.97%	> 99.99%	> 4
Influenza A virus	98.81%	99.90%	2
Adenovirus	87.18%	95.85%	1

### UVC dose inside the duct after 18000 hours ( $\text{mJ}/\text{cm}^2$ )



**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.

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