# BLUECALC™

AIR DISINFECTION ANALYSIS - REPORT

Customer / Project: **5 Ton 20x14 2000cfm**

## Duct Data

| | | |
|---|---|---|
| Duct Width | 20 | in |
| Duct Height | 14 | in |
| Airflow | 2000 | CFM |
| Air Velocity | 1028.57 | ft/min |
| Duct Wall Material | Galvanized duct - rough | |

## Irradiation Data

| | | |
|---|---|---|
| Avg germicidal UV dose delivered | 1254 | µJ/cm2 |
| Air temperature increase | 0.1 | °C |
| Exposure time | 0.10 | s |

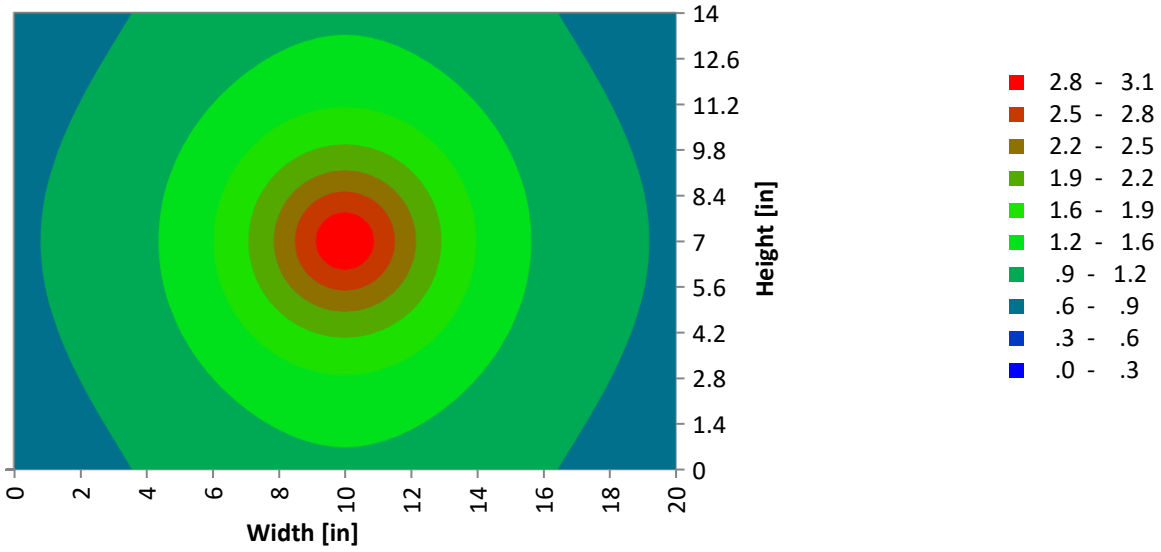
## UVGI Lamp Data

| | | |
|---|---|---|
| Model | TUVC-ADS-224D-HO | |
| Number of Units | 1 | |
| Setup type for multiple units | n/a | |
| Number of Lamps per Unit | 2 | |
| Lamp Length | 609 | mm |
| UVGI Power per Lamp | 19 | W |
| Electrical Power per Lamp | 57 | W |
| Electrical Power per Module | 114 | W |
| Electrical Power (Total) | 114 | W |
| Teflon coating | No | |

## Inactivation (sterilization) rates after 18000 hours

| Microorganism | Recirculation (6 passes) | | |
|---|---|---|---|
| | Minimum | Average | LOG Average |
| **Coronavirus** | > 99.99% | > 99.99% | > 4 |
| **Tuberculosis** | > 99.99% | > 99.99% | > 4 |
| **Influenza A virus** | 99.61% | 99.99% | 3 |
| **Adenovirus** | 92.38% | 98.41% | 1 |

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




**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.