

Lower Confidence Bounds for the Probability
of Non-Perforation in Homogeneous Armor

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ABSTRACT:

The XM25 Airburst Grenade Launcher experience catastrophic failure during my first day at Army Research Labs. Not to be deterred, we sought multiple other experiences to ensure that the experience was worthwhile and interesting. To that end, I participated in analyzing data to make a decision brief for three types of lasers. Each laser was tested at a variety of different ranges, gauging its ability to range the target. Each range was then compared to the known value, yielding the difference. Graphics made it possible to compare these lasers, presenting a clear winner to propose. I also laid the baseline for a close-quarters battle test, comparing the XM8 to the M16 and M4. A series of scenarios in urban terrain measured a subject's ability to engage a target quickly. Using my prior combat experience, I was able to provide valuable information for the testers, allowing them to improve the test for future users. Lastly, I observed data collection for a possible replacement to the M203 Grenade Launcher. Observing the tests allowed me to experience the process of testing weapons systems and gathering data, leaving me with a much better appreciate of the time and energy required to test weapons.

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