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Sommario/riassunto	During structural fire fighting suppression operations, fire fighters wear protective gear to insulate them from the high temperature environment including hot combustion gases, burning surfaces, and thermal radiation. Current turnout gear insulates the fire fighter to such an extent, basically encapsulating his/her entire body that it is more difficult for each individual fire fighter to understand how hazardous or hot the thermal environment is. A fire fighter s body is usually covered with protective gear during search and rescue operations. Therefore, the natural heatsensing mechanism of the body is incapable of sensing the ambient temperature, possibly putting firefighters at risk. A thermal sensing device that attaches to the visor of the head gear is designed to restore situational awareness of the firefighter by showing

varying heat intensity through different colored warning indicators in the firefighter's line of sight. Human factors evaluation of the performance of the warnings in the thermal sensing device was conducted in laboratory-scale (i.e., climatic chamber experiments) and in full-scale (i.e. fire experiments in ISO room) environments. While a previous report discussed the laboratory-scale experiments, this report describes the full-scale fire exposure experiments. The evaluation involved tracking the performance of multiple thermal sensors within a standard room during live fire tests.
