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C4Or1D-05: Characterization testing of the Thales LPT9310-HP

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Two Thales LPT9310-HP commercial off-the-shelf (COTS) cryocooler were parametrically performance tested for cold tip temperatures between 50 K and 250 K and heat rejection temperatures between 0°C and 40°C. Both coolers had identical transfer line configurations. The test results revealed unit-to-unit thermodynamic performance variation and are compared to test results of a COTS LPT9310 cooler with the same transfer line configuration. The effect of compressor temperature and pulse tube inclination angle are also presented. In addition, the thermal performance was found to be similar for COTS cooler drive electronics and an AC power supply.

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