

## About Test Results

Test results of the TIDA-00576 reference design are performed using the DLP® LightCrafter Display 4710 EVM which is the TI's implementation of the TIDA-00576 reference design. This EVM incorporates the DLP 0.47" 1080p chipset comprising of the DLP4710 DMD, DLPC3439 controller and DLPA3005 PMIC/Led Driver. The EVM and TI design enable faster development cycles for applications requiring full HD resolution and higher brightness projection display solutions. The entire test data contained below was measured from one DLP LightCrafter Display 4710 EVM to provide an example from a typical unit. Please note that performance will vary across EVMs due to variations in manufacturing. The performance data is not guaranteed

## If You Need Assistance

Refer to the DLP and MEMS TI E2E Community support forums:

[https://e2e.ti.com/support/dlp\\_mems\\_micro-electro-mechanical\\_systems](https://e2e.ti.com/support/dlp_mems_micro-electro-mechanical_systems)

For specific questions on the DLP LightCrafter Display 4710 EVM refer to the DLP LightCrafter Display 4710 Development Platform Forum.

This test reports provides following test data:

1. Lumens measurement
2. Power Up and Power Down Sequence
3. Optical Engine Size
4. Optical Engine Throw Ratio

## 1 Lumens Measurement

This section provides the lumens measured for the EVM, which is the TI's implementation of this reference design.

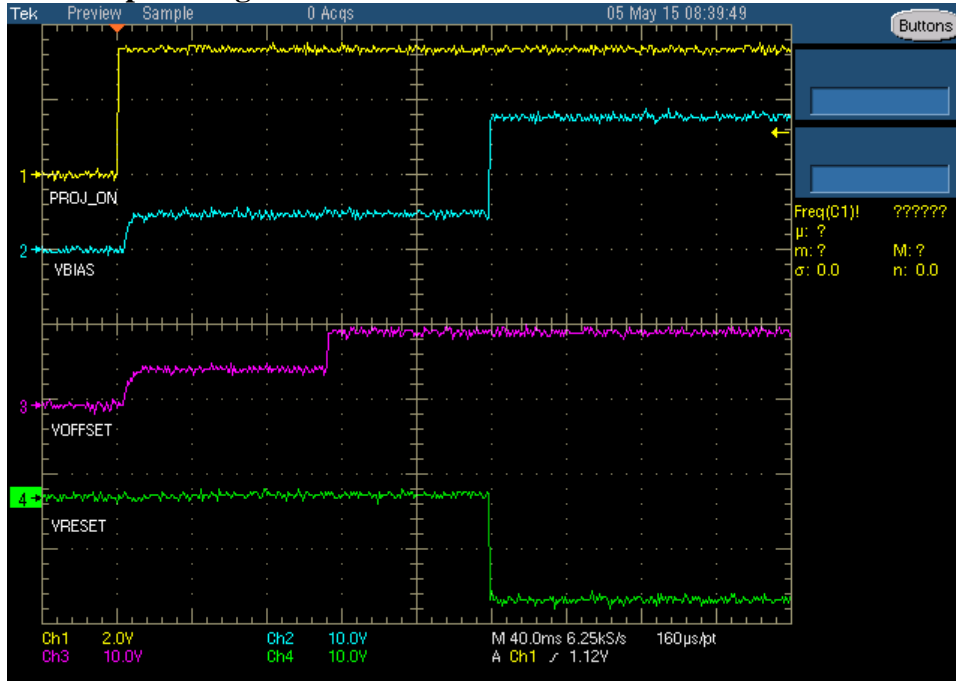
White Point: 6600K

**Lumens: 456 (ANSI)**

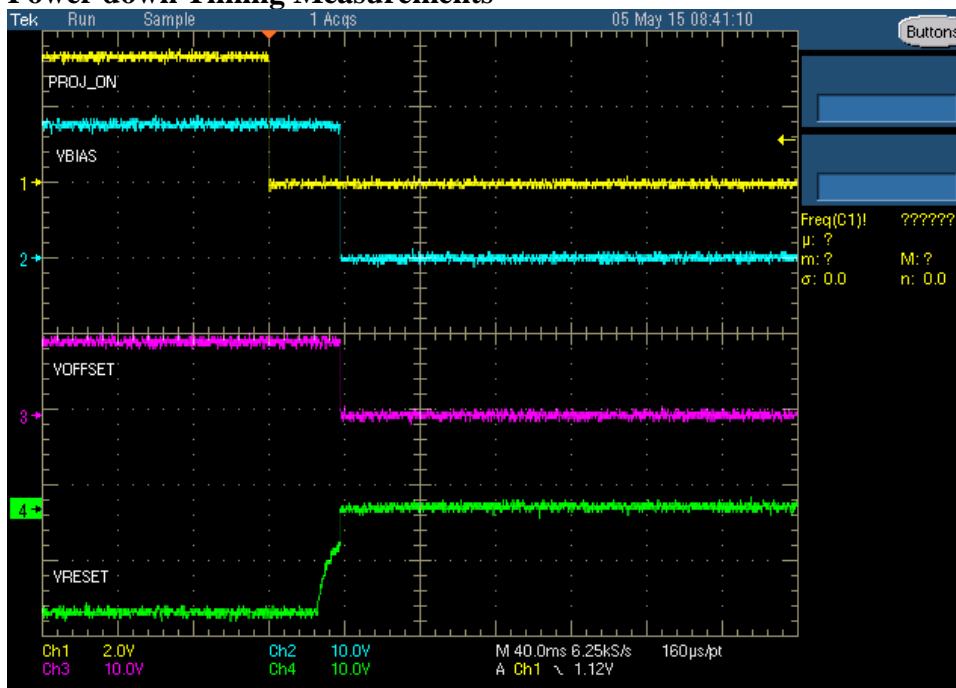
## 2. Power Up and Power Down Timing Measurements

Power Up and Power Down timing requirements are described in detail in the DLP4710 datasheet. Key signals measured are PROJ\_ON and the power supplies to the DMD- VBIAS, VOFFSET and VRESET. For more details on the timing requirements please refer the DLP4710 device datasheet.

### Power Up Timing Measurements

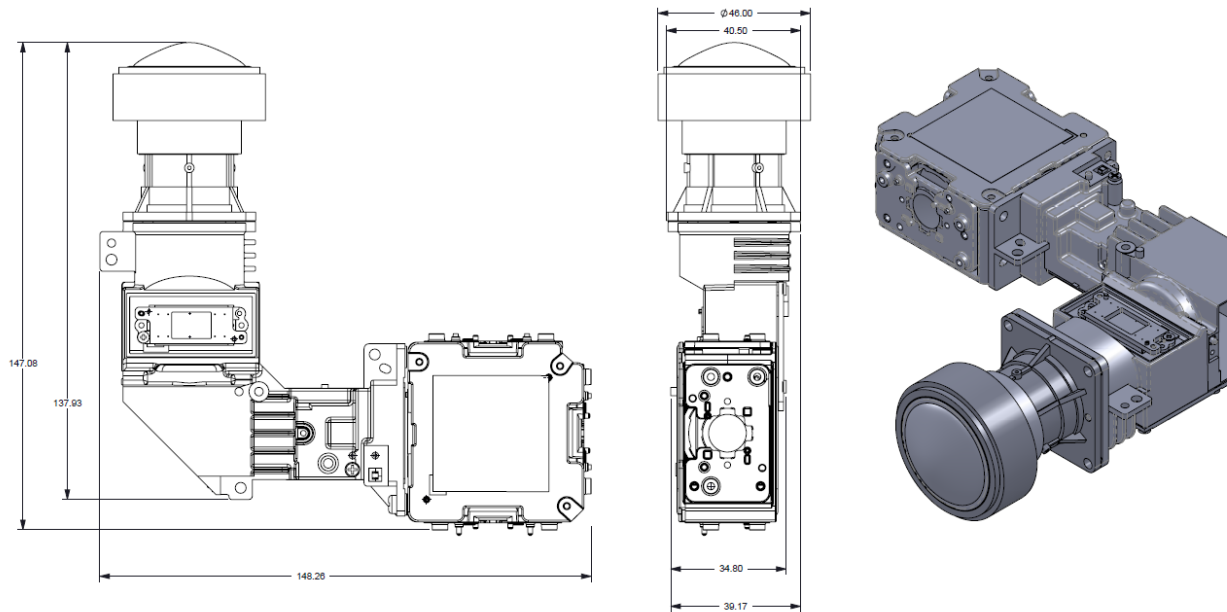


### Power down Timing Measurements



**3. Optical engine size**

DLP4710 is a key component of the 0.47" 1080p chipset and enables use of full HD resolution for projection display applications. The optical engine used in this DLPDLCR4710EVM is designed for +1000 Lumens applications:



Total volume of the optical engine is: 883.14 cc

**4. Throw Ratio**

An optical engine’s throw ratio is defined as the ratio of the distance measured from lens to screen and the width of the projected image.

$$\text{Throw Ratio} = \text{Distance/Width}$$

Throw ratio for the optical engine used in this ref design is 1.0

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