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| **Test Date** | Jun. 14-19, 2017 |
| **Author(S)** | Liyuan Zhang, Stephen Appert, GariLynn Billingsley |
| **Approval(s)** |  |
| **Specification Doc.** | LIGO-E0900041 | Specification | 0.013-0.015 |
| **Procedure Doc.** | LIGO-E1000863 | Mean ± Error\* | 0.0138 ± 0.0003 |
| **Conclusion** | Qualified. |

\*Error is the calibration error, which is ~2%.

**Discussions and Comments:**

 **Two scans were done over central 160 mm in diameter with the beam and step sizes of 1 mm and an incident angle of 1 and 2 deg respectively, as shown in Figs. 1 and 2, the arrow on barrel was at Y+ direction. The calibration is done by normalizing the transmitted signal to the signal without mirror and the variation of laser power during scan is monitored and corrected. The results are consistent.**

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**Fig. 1 ITM10 transmission over a 160 mm diameter aperture with the incident angle of 1 deg.**

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**Fig. 2 ITM10 transmission over a 160 mm diameter aperture with the incident angle of 2 deg.**