



FHA Reference Profiler 2007 Test Result Highlights

- Both sensors of the lightweight profiler showed excellent repeatability at both test sections. The average repeatability cross correlations at the AC Section for the TriODS sensor and the RoLine sensor were 98.4 and 99.0% respectively, while at the PCC section the values were 97.4 and 99.1% respectively.
- The average reproducibility cross correlations for data collected by the TriODS and RoLine sensors was 97.3% and 96.7% for the AC and the PCC section respectively.
- The following observations were noted for the average reproducibility cross correlations between the data collected by the RoLine sensor of the lightweight profiler and reference devices:
 - Cross correlations for the Surpro's ranged from 97.1% to 98.4% at the AC section and 96.8 to 97.8% at the PCC Section
 - Cross correlation with the ARRB walking profiler was 93.9 and 96.4% at the AC and PCC sections, respectively.
- Based on the data collected for these five runs, both the TriODS and the RoLine sensors in the Ames lightweight profiler exceeded the value specified in the AASHTO standard at both test sections.

Cross correlation values (IRI filtered) between Ames lightweight profiler (RoLine Sensor) and reference devices.

Surface Type	Device No	Device	Cross Correlation with Roline Sensor (%)			
			Run 1	Run 2	Run 3	Average
Asphalt	1	ARRB Walking Profiler	94.1	93.9	93.8	93.9
	2	Wide Tire Surpro	97.6	98.7	98.5	98.3
	3	Surpro - ICC	98.1	98.6	98.6	98.4
	4	Supro - Wisconsin	98	97.2	96	97.1
	5	SSI Walking Profiler	87.2	88.1	88.1	87.8
Concrete	1	ARRB Walking Profiler	95.6	96.6	97	96.4
	2	Wide Tire Surpro	98.7	98.1	96.6	97.8
	3	Surpro - ICC	97.7	98	96.4	97.4
	4	Supro - Wisconsin	97	97.7	95.7	96.8
	5	SSI Walking Profiler	76.6	89.1	83.2	83

Note: A cross correlation value greater than 95% can be considered to be excellent, while a cross correlations value between 90 and 95% can be considered as good.