

Comparison of Light Data Loggers

Do you really know what goes on with the lights in your institution overnight?

We found surprising information when we installed light data loggers in selected galleries.

This poster investigates popular, relatively inexpensive commercial light data loggers, comparing and contrasting some of the most important aspects of the loggers.

While significant research has been conducted comparing environmental data loggers that record temperature and relative humidity, the conservation literature is lacking a formal survey of light and UV data loggers. Given the trend towards allowing more natural light into galleries, and demonstrated through data gathered using microfade testers and spectrophotometers, closely tracking the light exposure objects experience over the long term has become critical. This in turn makes a thorough understanding of current light data logging options extremely important for museum professionals.

Data was personally collected testing three of the most popular data loggers and by surveying conservators about their experiences with these light data loggers. Installing light data loggers throughout an institution is a costly measure. This research provides the information museum professionals need to make an informed decision that suits their institution.

Three of the most popular data loggers were chosen from our test:

TandD RTR-574
Hanwell ML4703-K
HOBO U12-012



What Each Logger Records

	Data Loggers Surveyed		
	TandD RTR-574	Hanwell ML4703-K	HOBO U12-012
Illuminance	✓	✓	✓
UV	✓	✓	
Temperature	✓		✓
Relative humidity	✓		✓
Price	\$400	\$749	\$140

Actual Size of Data Loggers Surveyed



Options for Data Download

	Data Loggers Surveyed		
	TandD RTR-574	Hanwell ML4703-K	HOBO U12-012
USB Physically plug data logger into computer via USB cord	✓	✓	✓
Wireless remote device Data logger remains on wall and another device wirelessly downloads data from logger	✓	✓ *at additional cost	
Internet-capable unit Data is automatically uploaded in real time to the internet and accessible 24/7	✓ *at additional cost	✓ *at additional cost	

Features of Each Logger

Data Logger	Features
TandD RTR-574	All environmental monitoring possible, including T and RH in addition to light Wireless download options
Hanwell ML4703-K	Easily compatible with electronic window shades
HOBO U12-012	Very inexpensive

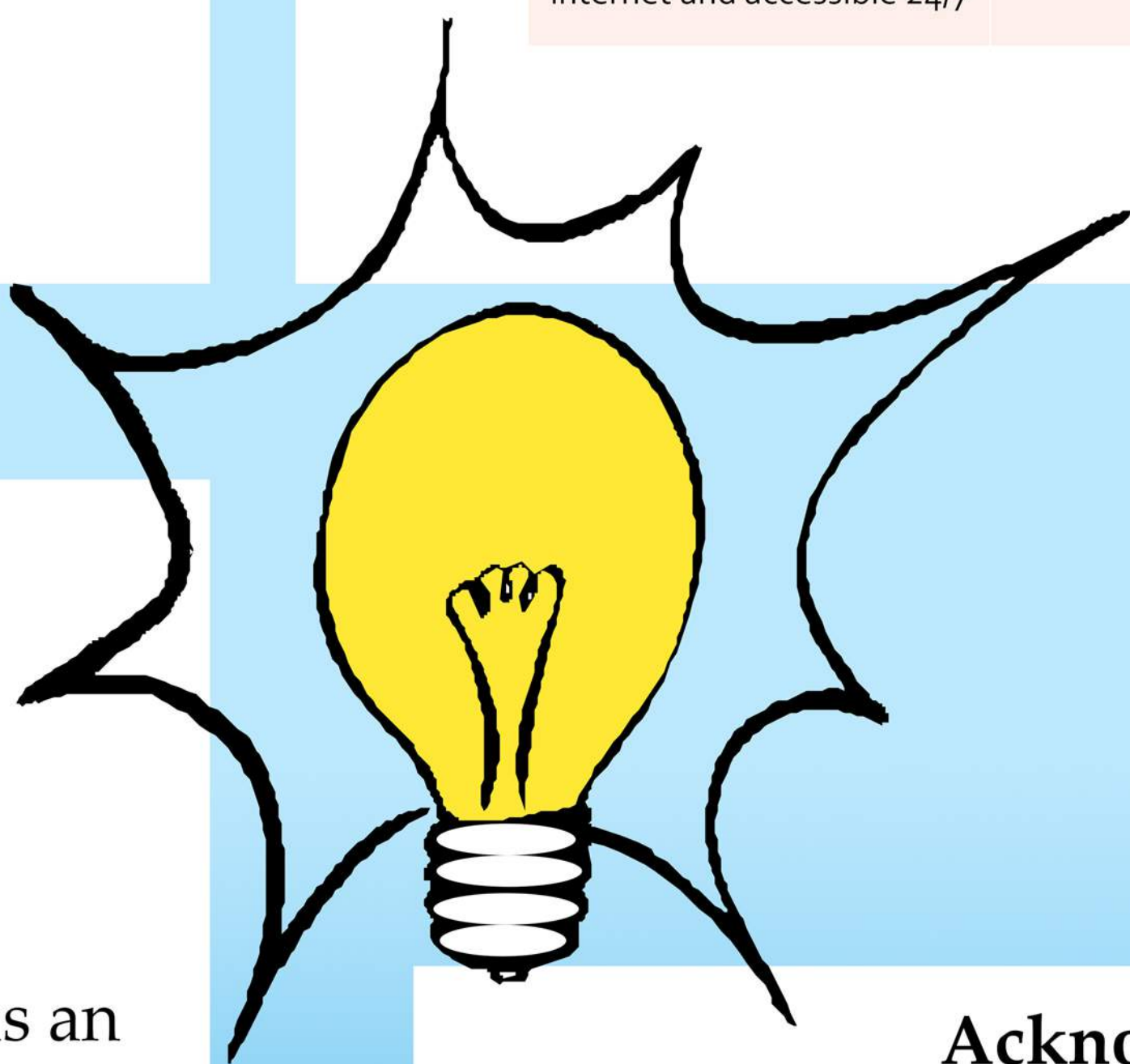
Software Capabilities

All three loggers have free software with basic graphing and analysis capabilities

The data from the software can be downloaded as an Excel file (.csv)

Author

Anisha Gupta is a third-year graduate intern at the Fine Arts Museums of San Francisco, completing her final year in the Winterthur/University of Delaware Program in Art Conservation. She is specializing in paper conservation with a minor in photographic materials.



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