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instruments

SpectraLight™ QC



QUALITY VISUAL ASSESSMENT THROUGH SUPPLY CHAIN-WIDE LIGHTING **CONTROL.**

In a global economy, consistency is king.

Brands that keep their promises tend to keep their customers. Even in emerging markets, customer expectations for consistent quality are maturing fast—faster than many manufacturers' ability to meet them.

An inevitability of the movement toward greater consistency will be the increased value brand owners place on supply chain control whenever and wherever they can exercise it. Many brand owners are already tightening their supply chains—working with fewer, more trusted partners rather than choosing partners based primarily on price. On the supplier side, the advantage that partners and suppliers can provide to brand owners who are looking to achieve more consistent quality control will help demonstrate value.

When it comes to product color—especially in the garment industry, automobile interiors, and other color-critical product categories—consistent quality control has been particularly elusive. The problem hasn't been with the science of light and color, which is tremendously advanced. Standards and practices based on the latest science are already well established and supported by industry standards and practices. Yet, brand owners and specifiers continue to reject as much as 50 percent of their textile suppliers' first time sample approval submissions due to inaccurate or inconsistent color.

The challenge of visual color assessment is as complex as these rejected samples are expensive. Lightbooths offer some degree of control, but cool white fluorescent light in a brand new SpectraLight III—a trusted tool for inspectors for more than a generation—can differ from cool white fluorescent light in another lightbooth... or in another SpectraLight III that may be using older lamps, or lamps of different brands... or even through the eyes of a different operator using the exact same equipment. It won't be a lightbooth that finally solves a problem this complex, but a truly holistic visual assessment system that addresses the instrument, the information, and the operator.



From X-Rite's Macbeth lighting products, SpectraLight QC marks a new evolution in visual color assessment.

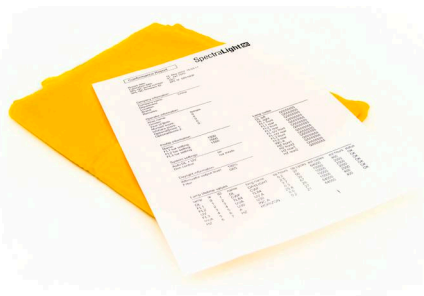
This holistic solution starts with state of the art light sources, and also includes a data-driven back-end that carefully monitors the performance and condition of lamps, as well as a system to educate and certify operators. For brand owners and specifiers, SpectraLight QC is a revolutionary system upon which to build standard operating procedures across your supply chain. For suppliers, SpectraLight QC is an investment that proves your commitment to best practices in visual color assessment. In fact, at any checkpoint where approvals are necessary across the supply chain—at the supplier, the vendor, the sourcing office, all the way up to product design and corporate quality control—the SpectraLight QC reduces human error, standardizes conditions for visual assessment, and saves time and money.

THE INSTRUMENT



The illumination technology used by SpectraLight QC is superior to any lightbooth on the market. It's one instrument that can meet practically any specification, thanks to the number of light sources it features—more than any other product, including Daylight, Incandescent “A,” Horizon, three fluorescent (choice of any combination of CWF, U30, U35, and TL84), and UVa. Integrated light sensors provide real-time digital output of fluorescent lamp lux, which can be set by the operator to meet industry standards such as ASTM and AATCC Evaluation Procedure 9: Visual Evaluation of Color Difference of Textiles is aligned with ASTM Standard D1729 Standard Practice for Visual Appraisal of Colors and Color Difference of Diffusely-Illuminated Opaque Materials. Its closed-loop fluorescent lamp control allows operators to move from one light source to the next without having to wait for a required warm-up time. The same sensors and electronics ensure that all fluorescent lamps are controlled in real time to maintain precise lux over the life of the lamp. SpectraLight QC also provides factory-calibrated UV, and allows the user the ability to adjust the amount of UV based on the needs of the sample based on their application.

THE INFORMATION



While visual assessment might start with illumination technology, real supply chain compliance also requires reliable information. To this end, SpectraLight QC generates and traces data on all aspects of visual assessment through its PC-based reporting capability. Data—including company name, customer name, sample ID, lamps used for assessment, lamp condition (age, lamp life remaining, illumination levels, and calibration information), operator name and certification (Farnsworth-Munsell 100 Hue Test score)—can be printed and sent along with the physical sample, or transferred electronically. Essentially, SpectraLight QC is its own auditing and traceability tool, facilitating the analysis of a rejected sample to isolate the root cause of the problem. SpectraLight QC not only lowers the rejection rate of samples through faster and easier trouble-shooting, but it also allows all parties involved to thoroughly investigate the supply chain and take corrective action to eliminate the potential for future problems. Continuous improvement just got better.

THE OPERATOR



A technical solution to the challenges of visual assessment can only be as successful as the operators who use it. SpectraLight QC's user programmability function allows suppliers to create custom profiles based on brand owner requirements for light source, illumination levels, and other parameters ensuring that operators only use approved lamps and accurate settings for every program. The system can also generate this information as a report to be shared with customers to identify any inconsistencies. Individual operator profiles also can be created, which can also log their Farnsworth-Munsell 100 Hue Test scores. Experts estimate that as many as 2 percent of women and 7 percent of men are color-deficient. In the past, brand owners might have flown an individual operator around the world twice a year as a way to “calibrate” visual assessment tools across its supply chain. With SpectraLight QC, information on customer preferences for instrument settings and operator visual acuity can be shared via PC as often as necessary to improve accuracy and compliance.

SpectraLight™ QC

Specifications

	Overhead Luminaire	Viewing Booth
Dimensions	Height: 9.84 in (250 mm) Width: 37.00 in (940 mm) Depth: 25.98 in (660 mm)	Height: 27.55 in (700 mm) Width: 37 in (940 mm) Depth: 24.01 in (610 mm)
Weight	89.3 lbs (40.5 kg)	22.0 lbs (10.0 kg)
Shipping Weight	116.8 lbs (53.0 kg)	35.2 lbs (16.0 kg)
Cabinet Color		Munsell notation N5 or N7

Electrical Power Requirements	Power
	L1NPE, 115Vac, 50/60Hz, 1150W
	L1NPE, 230Vac, 50/60Hz, 1150W
	L1NPE, 100Vac, 50/60Hz, 1150W
	Main Fuse
	115 VAC: F 10 A H 250 V (5x20mm)
	230 VAC: F 6.3 A H 250 (5x20mm)
	100 VAC: F 15 A H 250 V (5x20mm)
	Power Cord
	Connector: Country Specific
	Plug: IEC 60320 C13 type
	Standby Power
	2W

Lamp Options	
Simulated Daylight*	5000k, CIE D50 Noon Sky Daylight 6500k, CIE D65 Average North Sky Daylight
Fluorescent*	Choice of three: Cool White (4150k), U30 (3000k), U35 (3500k), TL84 (4000K)
Horizon	Simulates early morning sunrise and late afternoon sunset
Incandescent A	2856k, Typical Incandescent Home lighting
Ultraviolet	Filtered Near UV

*Choice of daylight and fluorescent sources. The choice of a specific daylight and fluorescent source should be based on the standard governing your industry or application

Specifications subject to change without notification

Product Features

Highest quality natural daylight available

The SpectraLight QC meets or exceeds all relevant international quality standards for filtered tungsten daylight simulation

Adjustable lux with built in lux meter

Real-time digital lux output can be adjusted to comply with ASTM and AATCC standards for sample type or user needs

Automated closed-loop lux adjustment

Built-in sensors automatically adjust voltage to maintain proper lux, compensating for age and wear through out the usable lifetime of the fluorescent lamp

Faster fluorescent lamp stabilization

After initial power-up, lamps achieve almost instant stability when switching between lamps. A helpful indicator acknowledges optimum stability

Factory calibrated, adjustable UV

Every instrument starts with exacting UV calibration. Built-in sensors monitor and correct UV output to maintain inter-instrument agreement. UV output can also be manually adjusted

Ability to create and store Brand Owner profiles

Users can create and store brand owner profiles to configure the seven available light sources for specific brand owner preferences, reducing compliance problems

Reporting and data tracking

Performance data on individual units can be shared to ensure all suppliers are meeting brand owner specifications and enable root cause analysis of potential problems that may arise

X-Rite Visual Color Assessment Institute

eLearning training and certification programs for operators in four areas critical to maintaining alignment of visual assessment environments

User software

Simplifies instrument programming, user operation and report generation

Harmony Room configurations available include:

Luminaire
Wall mounted control panel
Cabling and communication cables

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