LIGHTING GLOBAL
Catalyzing Markets for Modern Lighting

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Lighting Global Standardized Specifications Sheet Updates

Final Action Decisions

October 4, 2013

Beginning in 2010, Lighting Africa began releasing standardized specifications sheets (SSS) based on comprehensive Quality Test Method (QTM) results from tests carried out by third-party laboratories. The SSS program has been one of the most popular aspects of the Lighting Africa website and has been successful at informing key market actors about good quality products in a verified, comparable way. In 2013, the SSS program is shifting to management by Lighting Global as the program supports both Lighting Africa and Lighting Asia with Product Quality Assurance services. The reach of SSS is growing and we expect them to continue to be the best available source for verified test results in the off-grid lighting space.

A stakeholder feedback process was held from April to June to help inform the next version of the SSS format and policy. We released an initial memo to start the process on April 2, 2013. The changes detailed in that memo included an update to the policy around SSS on the Lighting Global website and proposed updates to the format. Since then, stakeholders have submitted valuable input in this process, most of which was in relation to the updated SSS format. This document announces the final action decisions for this round of updates to the SSS. It includes a summary of the changes that were suggested during the stakeholder process and notes on whether each change will be implemented.

The overall results from this process are:

- The new SSS access policy that was announced April 2, 2013 is in effect. Following the end of the grace period (November 15, 2013), all SSS must be publicly accessible (i.e., no password protection). Moreover, agreeing to have an active SSS is required to receive an SSS and verification letter and to have an *online* presence on the Lighting Global /Africa / Asia websites.
- Many of the changes to the SSS format that were proposed on April 2, 2013 will be adopted (details below).
- Based on stakeholder feedback there are some modifications to the proposed SSS format that will be included in this update.
- New-format SSS will be produced for all products with a current SSS and rolled out soon.

SSS Access Policy Changes

In addition to updating the SSS format, there is also a revised SSS access policy that requires public access for all SSS. Having publicly available SSS will ensure that the value to the market is more fully realized by ensuring distributors, bulk-purchasers, financial sector organizations, and other key stakeholders have full access to the third-party verified information they need to make sound purchasing or investment decisions.

The SSS access policy includes the following elements:

Public Access Required. Every SSS on the official SSS web page must be publicly accessible. No restrictions on access are allowed.

Website presence is contingent on SSS. Only products with a current, valid SSS will be eligible for promotion on the Lighting Global / Africa / Asia websites. This includes all promotional content and verification that products have passed the Minimum Quality Standards and/or Recommended Performance Targets. In other words, without a valid and publicly available SSS there will be no official verification of test results available beyond the detailed test reports that are provided from the laboratory.

There is a grace period. Firms with password protected SSS had the option to remove the password or remove their SSS entirely during a grace period between April 2, 2013 and November 15, 2013.

This new policy does not affect non-website services from Lighting Global / Africa / Asia. Companies who choose to not participate in the SSS program will still be eligible for other services as long as the other qualifying criteria are met. Participation in the SSS program will no longer be a requirement for Lighting Africa Business Development Services.

Summary of the Updated SSS Format

The proposed update to the SSS format was designed to make the SSS more thorough, focused on key parameters for consumer experience, and visually appealing. For example, the proposed SSS format uses graphics to indicate whether the product has passed the Lighting Global Minimum Quality Standards and has mobile phone charging capability. Figure 1 (follows the memo) shows a visual example of the first page of the new SSS format (left) and the previous SSS format (right). The full details of the updated format changes are included in the appendix (with notes on areas where there are modifications from the stakeholder process). Attached to this memo is the new Lighting Global policy document on SSS that reflects the updates to the access policy and format.

Stakeholder Contributions to the SSS Format:

The key updates to the SSS format based on stakeholder feedback are highlighted here. The full set of updates is detailed in the table below.

1. The Durability section of the SSS will be modified and abbreviated to ensure no products have a "fail" listed (this was possible in cases where a particular durability criterion does not apply to that product class but it was still tested, for example, a fixed-indoor base station that does not pass a drop test);
2. Detailed battery and PV module information will not be required to be listed for all products, only those for which the details are useful to buyers (a more detailed explanation is provided below);
3. Manufacturer contact information will be placed at the bottom of the SSS;
4. The solar run time bar graph will be revised to be more easily understood.

Full Set of Recommendations:

The table below (following Figure 1) summarizes stakeholder recommendations to the proposed SSS format and policy. In the interest of confidentiality and clarity, we summarized and synthesized the recommendations we received. The information in the table includes:

- The "category" of the recommendation.
- A summary of the recommendation.
- A decision on adoption (Yes, No, or somewhere in-between for some).
- An assessment of the recommendation from the Lighting Global perspective that informs why adoption of the recommendation is possible or difficult and the decision on adoption.
- A policy update for recommendations that are fully or partially accepted to explain how the particular recommendation will be implemented.

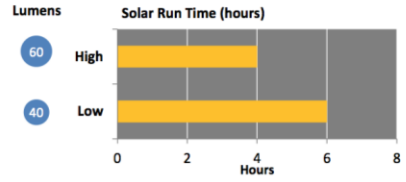
Figure 1: Sample SSS -- New and Old Format

NEW SSS (first page)

Sunshine Lamp

Sunshine Solar
Results based on test procedures detailed in IEC 62257-9-5, ed. 2.0

Verify Online: www.lightingglobal.org/specs/sunshine-lamp
Valid Until: July 2014



Meets Lighting Global Minimum Quality Standards

Mobile Charging

1 **Light Point**

Warranty Information

All parts are protected from manufacturing defects or failure under normal use for a period of one year. The solar module is protected from defects and failure under normal use for two years.

Performance Details

	Brightness Setting***	
Performance Measure	**High**	**Low**
Full battery run time* (hours)	8	12
Run time per day of solar charging* (hours)	4	6
Total light output (lumens)	60	40
Total area with illumination > 25 lux** (m^2)	0.4	0.25
Total lighting service (lumen-hours / solar-day)	240	240

* Run time estimates do not account for mobile phone charging or other auxiliary loads; the run time is defined as the time until the output is 70% of the initial, stabilized output.
** Total area with illumination > 25 lux is determined by the maximum area with adequate illumination at a 0.75 m distance and at the distance from which the product would normally provide task lighting service.
*** Additional brightness settings (not tested): Medium, Bed-light

Lighting Details

Lamp type	LED
Description of light points	Single column containing 15 LEDs
Colour characteristics	CRI 85 CCT "Cool" (5000-7000 K)
Distribution type	Omnidirectional
Lumen maintenance	95% of the original output remains after 2,000 hours run time

OLD SSS

Example Product

Verify specifications at:
www.lightingafrica.org/specs/EX_01

Overall Performance

"High" setting: 25 lumens for 4 hours after one day of solar charging

General Information

Manufacturer	Example Corporation, Inc.
Product Name	Example Lamp 3000+
Model Number	ABC12345
Contact	janedoe@examplecorp.com
Website	www.examplecorp.com
Warranty	6 months for lamp, 1 year for solar module; see detailed terms for more information.

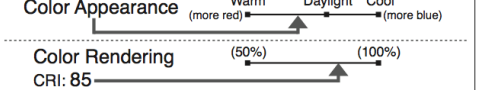
Run Time

Autonomous Run Time (full battery)	6.0 hours on "high" setting
Lighting hours per solar day (PV only)	4.0 hours on "high" setting

Lighting System

Lamp type	LED
Light output	25 lumens on "high" setting
Light output at 2000 hours	23 lumens on "high" setting

Light Distribution: Omni



Charging System

Charge type(s)	Solar PV

Storage System

Storage Type	Rechargeable NiMH (3x AA in package)
Nominal Battery Voltage	3.6 volts DC
Battery Capacity	650 milliamp hours
Battery Protection	Active HVD and LVD
Easily Replaceable Battery?	No

Additional Information & Special Features

Lamp Housing: Injection molded ABS
Standard feature: Mobile phone charging with six connectors
Factory Certification: ISO9001

Date of Sample Procurement for Testing January 2011

Revision 2011.01

Category	Recommendation	Decision	Lighting Global Assessment	Policy Update / SSS Format Update (if applicable)
Policy	Maintaining both Quality Standards and Performance Targets is a confusing system; merge them into a single standard going forward.	No	The Minimum Quality Standards are the key set of requirements for a product to receive support and are the cornerstone of the Lighting Global Quality Assurance program. Historically, the Performance Targets have been are used by Lighting Africa and Lighting Asia primarily to determine which products are eligible for participation in consumer-facing activities such as awareness campaigns. We have no immediate plans to merge the Performance Targets into the Quality Standards.	N/A
SSS Format	Remove all references to the Performance Targets in the Standardized Specifications Sheets.	Yes	The Minimum Quality Standards are the key set of requirements for a product to receive support our programs, including receiving an SSS. With that in mind, and in an effort to avoid any confusion between the purpose of the Minimum Quality Standards and the Recommended Performance Targets, we agree that it makes sense to remove any references to the Performance Targets from the SSS.	All direct references to the Recommended Performance Targets in the Standardized Specifications Sheets will be removed.
SSS Format	Remove the Special Features section	No	The Special Features section is an optional section where manufacturers are able to self-declare information about their product if they provide supporting evidence. Companies can elect not to provide information if they do not wish to include items in this section. In such cases, the section would not be included in the SSS.	N/A

Category	Recommendation	Decision	Lighting Global Assessment	Policy Update / SSS Format Update (if applicable)
SSS Format	Remove the pass/fail designations in the Durability section	Yes and No	The originally-proposed format lists each durability aspect that the product was tested for and provides a pass/fail designation for each aspect. While all products with a SSS will have passed all of the applicable durability tests, there are cases where a "fail" designation would have been listed because the product is not required to pass a particular durability test (e.g., for the drop test on fixed indoor products) to meet the Minimum Quality Standards. This could lead to confusion and we have updated the format to remove this issue while still providing the same information.	The Durability section will be changed to have two rows of information: 1) "Overall durability and workmanship" (which all products will have a "pass" for since they must meet all applicable tests to pass the Quality Standards) and 2) "Durability tests passed," where we will list all of the durability tests the product passed (e.g., drop test, strain relief, physical ingress, protection from occasional rain, etc.). This list could be slightly different from product-to-product.
SSS Format	Remove all solar module and battery details	Yes and No	For products that provide auxiliary load services such as mobile phone charging, the solar module maximum power provides information that can be used to estimate how much energy could be available for the auxiliary loads beyond the product's normal lighting service. Similarly, the battery package type, capacity, and nominal voltage listed on the proposed SSS are relevant only in cases where the battery is easily replaceable. The details for both these aspects will only be required in cases where they are relevant given the functionality and design of the product.	The PV module maximum power will need to be listed for products that provide services for auxiliary loads beyond lighting (e.g. mobile phone charging), either with built-in functionality or the presence of an auxiliary power port. The "Battery Replaceability", "Battery Chemistry", and "Appropriate Battery Protection" fields will remain mandatory. Furthermore, if a battery is easily replaceable, the SSS must either list the battery package type, capacity, and nominal voltage, or the SSS must contain a statement such as: "Replacement batteries are available from the product manufacturer."
SSS Format	Remove the Marks & Certifications section	No	The Marks & Certifications section is an optional section where manufacturers are able to self-declare information about their product if they provide appropriate supporting evidence. If no marks or certifications are applicable for a particular product, then this section will not be included.	N/A

Category	Recommendation	Decision	Lighting Global Assessment	Policy Update / SSS Format Update (if applicable)
SSS Format	Have a separate SSS format for solar home systems	Yes and No	We understand the concern here and feel that "solar home systems" that are tested in the Lighting Global framework can be easily accounted for in the SSS format.	Instead of a completely different program for products with multiple light points, we will add a field for the number of individual light points included in the product, which in the case of solar home systems will typically be greater than one.
SSS Format	Re-arrange the order of SSS sections to keep the most important information first	Yes	This is a simple change that should keep the majority of the most important information at or near the top of the SSS.	We will move the manufacturer contact information to the bottom of the SSS (the specific recommendation from stakeholders), but the organization of the rest of the information will stay the same, as we believe the information is generally already arranged from most important to least important.
SSS Format	Include all light output settings in the SSS	Yes and No	Our testing policy is to test up to two product settings for standard testing. For products that have more than two settings, the manufacturer can opt to pay more for QTM testing to have extra settings tested. If these additional tests are conducted, the information can be included in the SSS. The cost of the additional testing will vary depending on the lamp design and on pricing given by the test lab that completes the measurements.	The standard SSS will continue to show up to two product settings. The SSS will show more settings for manufacturers who opt to pay more to have additional settings tested.
SSS Format	Put emphasis on the solar run time for each light mode rather than the lumen-hours per solar day	Yes	The lumen-hours per solar day metric makes it easy for consumers to compare products based on a metric of overall lighting service that combines light output and run time. That said, we agree that the lumen-hours per solar day value should not be placed at the top of the SSS as originally proposed.	The SSS will continue to list the lumen-hours per solar day metric in the "Performance Details" section. The top of the SSS, directly under the header, will no longer prominently list this value. Instead, the plots showing the solar run time and luminous flux for each product setting tested will fill that space. In this way the solar run time and light output will be the key metrics that the SSS emphasize.
SSS Format	Refine the solar run time bar graph	Yes	We appreciate the comments about how we can refine this graph to be more easily understood. These updates are easily made.	For products with settings that have very different solar run times, we will follow graphing convention by including a break (shown by a jagged line) in the longest run time's bar as well as the x-axis. In addition, we will change the graph header to read "Solar Run Time" and also add axis labels to clarify the information that is presented in the graph.

Category	Recommendation	Decision	Lighting Global Assessment	Policy Update / SSS Format Update (if applicable)
SSS Format	Replace the total area with bright illumination metric with a "readability index" to make practical sense out of color rendering index, luminous flux, and the product design	No	Developing and standardizing such a "readability index" test is not something we have pursued up to this point, and while we understand the concern, we feel that incorporating such a test into the QTM method would be unnecessarily complex and costly.	We will add language to the SSS to further explain the significance of the total area with bright illumination metric. In addition, we will continue to provide color temperature (CCT) and color rendering index (CRI) results so that SSS users with appropriate technical backgrounds have access to this information.

Differences in Layout between the Current and Updated SSS Versions:

The table below lists the sections and subcategories/metrics that are included in the current SSS version and the updated SSS version, for comparison (subcategories/metrics that are included in the proposed SSS version but not in the current SSS version are asterisked (*)). Areas where the proposed updates were influenced by stakeholder comment have hash symbols (#).

Current SSS Version	Updated SSS Version
Header Product name Lighting Africa website URL	**Header** Product name Lighting Global website URL Manufacturer name SSS expiration date*
Overall Performance Solar run time and luminous flux Product photograph	**Overall Performance** Solar run time and luminous flux plot# Product photograph Presence of mobile charging* Number of light points# Pass Lighting Global Minimum Standards*
General Information Manufacturer name Product name Product model/ID number Manufacturer contact information Website URL Warranty information	**Warranty Information**
	Product Details# (moved to the end of the SSS) Manufacturer name Product name Product model/ID number Manufacturer contact information Website URL
Run Time (for each setting tested) Autonomous run time (full-battery) Grid-charge run time (if applicable) Lighting hours per solar day (PV only)	**Performance Details (for each setting tested)#** Full-battery run time Grid-charge run time (if applicable) Run time per day of solar charging Total light output Total area with bright illumination > 25 lux*# *(with notes on significance)* Total lighting service*
Lighting System Lamp type Light output (for each setting tested) Light output at 2,000 hours Light distribution type pictogram Light CRI and CCT pictogram	**Lighting Details** Lamp type Description of light point(s)# Colour characteristics (CRI and CCT) text Distribution type text Lumen maintenance
Charging System Charge type(s)	**Special Features** Miscellaneous product features
Storage System Storage type Nominal battery voltage Battery capacity Battery protection Easily replaceable battery?	**Durability#** Overall durability and workmanship*# Durability tests passed (list)#
Additional Information & Special Features Miscellaneous product features Factory certification Safety certification Other certification	**Solar Details** PV module type* PV maximum power point (if auxiliary loads can be powered)*#

Current SSS Version	Updated SSS Version
Date of Sampling and Revision Number Sampling date SSS revision number	**Battery Details** Battery replaceability Battery chemistry (if battery is replaceable)# Battery package type* (if battery is replaceable)# Battery capacity (if battery is replaceable)# Battery nominal voltage (if battery is replaceable)# Appropriate battery protection circuit
	Marks and Certifications Factory certification Safety certification Other certification
	SSS Information SSS expiration date* Minimum Quality Standards framework version Revision