

Lighting Africa Minimum Performance Standard

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Only high quality products with truthful packaging and marketing materials will be eligible for Tier 1 – the highest tier of Lighting Africa Business Services. The following are the enforceable specifications required for access to Tier 1 (Associate Level) – to be based on laboratory results from a qualified test lab using the Lighting Africa Quality Test Method (LA-QTM). The Associate Partners who access Tier 1 services will also be expected to maintain their high quality standards and truth in advertising to keep access.

Benchmark Summary

There are five key categories of positive test results that are required:

1) Truth in Advertising:

Accurate Labeling (e.g., rated run time, battery capacity, PV power).

2) Brightness:

20 lumens or illuminates an area equal to 2 sheets of paper @ 25 lux

3) Run Time:

8 hour autonomous run time or 4 hour PV run time

4) Lumen Maintenance:

L70 time is > 2000 hours.

5) Quality:

Pass basic durability and quality checks.

A more detailed table that lists the required specifications is on the following page.

Category	Sheet Field	General Requirement
<i>Information</i>	Manufacturer	Accurately Specified
	Product Name	Accurately Specified
	Model Number	Accurately Specified
<i>Illumination</i>	Light output	Accurately specified at each available level (lumens). At least one level must meet one of the following criteria, which defines the “specified light output” in subsequent testing:
		<ul style="list-style-type: none"> • ≥ 20 lumens • Illuminates a 0.1 m^2 surface at $\geq 25 \text{ lux}_{\text{horizontal}}$ under conditions defined by LAQT
	Lamp Type	Accurately Specified
<i>Energy System Performance</i>	Run Times	Accurately specified for each light setting; must meet or exceed one or both of the standards below:
	Autonomous Run Time (full battery)	≥ 8 hours @ \geq specified light output
	Lighting hours per solar day (PV only)	≥ 4 hours @ \geq specified light output
<i>Lumen Depreciation</i>	Lumen Depreciation at 2000 Hours	$\geq 70\%$ of specified light output (depreciation at highest setting)
<i>Charger</i>	Charger Rating	Charger Power Rating Accurately Specified (e.g. PV power or mechanical charge time)
<i>Storage</i>	Battery Capacity	Accurately Specified
<i>Design and Durability</i>	IP Class	41 or better (43 if PV is integrated with Lamp)
	Drop Test	Pass Drop Test (@ 1m onto concrete)
	Soldering Quality	Pass Soldering Inspection (no bad joints)
	Switch Durability	Pass Switch durability test (functions after 1000 cycles)