

Cree® LED Components IES LM-80-2008 Testing Results



NVLAP Lab Code 500041-0

Revision: 16A (July 2, 2014)

INTRODUCTION

This document provides the results of Cree's IES LM-80-2008 ("LM-80") testing on its LED components. Cree is providing this data so that the public can verify the reliability of Cree LEDs as part of a complete LED lighting system.

Note that this document only provides the end results of the LM-80 tests. This is not a complete LM-80 report. Do not use this document to submit luminaires or lamps to an agency. Cree customers who need the full LM-80 reports should contact their Cree sales representative.

Cree's customers who wish to share LM-80 results with their customers have permission to link to this document from their website. This document is subject to change without notice, so please do not link to a local copy.

NVLAP ACCREDITATION FOR LM-80-2008 TESTING

Cree's SSL testing laboratory in Durham, NC, USA is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) to perform IES LM-80-2008 testing. All LM-80-2008 results produced by Cree are generated in Cree's accredited laboratory. Full details on Cree's NVLAP accreditation are available here:

<http://ts.nist.gov/standards/scopes/5000410.htm>

This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST or any other agency of the federal government.

TABLE OF CONTENTS

LED Modules (Rev 2).....	2
XLamp® CXA1304 White LEDs (Rev 0).....	3
XLamp® CXA1507 White LEDs (Rev 1).....	4
XLamp® CXA1512 White LEDs (Rev 0).....	5
XLamp® CXA1816 White LEDs (Rev 0).....	6
XLamp® CXA1820 White LEDs (Rev 0).....	7
XLamp® CXA1830 White LEDs (Rev 0).....	8
XLamp® CXA2011 White LEDs (Rev 0).....	9
XLamp® CXA2520 White LEDs (Rev 0).....	10
XLamp® CXA2530 White LEDs (Rev 0).....	11
XLamp® CXA2540 White LEDs (Rev 0).....	12
XLamp® CXA3050 White LEDs (Rev 0).....	13
XLamp® MC-E White LEDs (Rev 1).....	14
XLamp® ML-B White LEDs (Rev 1).....	15
XLamp® ML-C & ML-E White LEDs (Rev 1).....	16
XLamp® ML-E White LEDs (Rev 1).....	17
XLamp® MP-L EasyWhite LEDs (Rev 0).....	18
XLamp® MT-G EasyWhite LEDs (Rev 1).....	19
XLamp® MT-G2 EasyWhite LEDs (Rev 1).....	20
XLamp® MX-3 White LEDs (Rev 0).....	21
XLamp® MX-6 White LEDs (Rev 2).....	22
XLamp® XB-D White LEDs (Rev 2).....	23
XLamp® XB-E High Voltage White LEDs (Rev 0).....	24
XLamp® XB-G High Voltage White LEDs (Rev 0).....	25
XLamp® XM-L EasyWhite LEDs (Rev 1).....	26
XLamp® XM-L High Voltage White LEDs (Rev 0).....	27
XLamp® XM-L White LEDs (Rev 2).....	28
XLamp® XM-L2 White LEDs (Rev 1).....	30
XLamp® XP-E White LEDs (Rev 3).....	31
XLamp® XP-E High Efficiency White LEDs (Rev 4).....	32
XLamp® XP-E2 High Efficiency White LEDs (Rev 0).....	33
XLamp® XP-G White LEDs (Rev 6).....	34
XLamp® XP-G2 White LEDs (Rev 3).....	35
XLamp® XQ-B White LEDs (Rev 0).....	36
XLamp® XQ-D White LEDs (Rev 0).....	37
XLamp® XR-E White LEDs (Rev 1).....	38
XLamp® XT-E High Voltage White LEDs (Rev 0).....	39
XLamp® XT-E White LEDs (Rev 6).....	40

XLAMP® XT-E WHITE LEDs (REV 6)

Revision: 6 (November 13, 2013)

Description Of LED Light Sources

XLamp XT-E White LEDs (Series: XTEAWT)

This LM-80 report is applicable to the following order codes:
XTEAWT-XX-XXXX-XXXXXXXXXX

No failures occurred during testing.

Test Summary

Data Set	Case Temp. [T _s]	Ambient Temp. [T _A]	Drive Current [I _F]	Average Lumen Maintenance at 6,000 hours	Average Chromaticity Shift (Δu'v') at 6,000 hours	Reported TM-21 Lifetimes
3	55°C	55°C	1000 mA	98.1%	0.0012	L95(12k) > 69,600 hrs L90(12k) > 69,600 hrs L80(12k) > 69,600 hrs L70(12k) > 69,600 hrs
2	85°C	85°C	1000 mA	98.8%	0.0014	L95(11k) > 66,500 hrs L90(11k) > 66,500 hrs L80(11k) > 66,500 hrs L70(11k) > 66,500 hrs
4	105°C	105°C	1000 mA	96.1%	0.0021	L90(10k) > 60,500 hrs L80(10k) > 60,500 hrs L70(10k) > 60,500 hrs
5	55°C	55°C	1250 mA	96.3%	0.0008	L90(9k) > 54,400 hrs L80(9k) > 54,400 hrs L70(9k) > 54,400 hrs
6	85°C	85°C	1250 mA	95.6%	0.0012	L90(9k) = 19,300 hrs L80(9k) = 41,400 hrs L70(9k) > 54,400 hrs

XLAMP® XT-E HIGH VOLTAGE WHITE LEDS (REV 0)

Revision: 0 (August 21, 2012)

Description Of LED Light Sources

XLamp XT-E High Voltage White LEDs (Series: XTEHVW)

This LM-80 report is applicable to the following order codes:
XTEHVW-Qx-xxxx-xxxxxxxxxx

No failures occurred during testing.

Test Summary

Data Set	Case Temp. [T _s]	Ambient Temp. [T _A]	Drive Current [I _F]	Average Lumen Maintenance at 6,000 hours	Average Chromaticity Shift (Δu'v') at 6,000 hours	Reported TM-21 Lifetimes
1	55°C	55°C	44 mA	98.5%	0.0007	L90(6k) > 36,300 hrs L80(6k) > 36,300 hrs L70(6k) > 36,300 hrs
2	85°C	85°C	44 mA	94.1%	0.0009	L90(6k) > 36,300 hrs L80(6k) > 36,300 hrs L70(6k) > 36,300 hrs
3	105°C	105°C	44 mA	93.3%	0.0012	L90(6k) = 13,500 hrs L80(6k) > 36,300 hrs L70(6k) > 36,300 hrs
4	55°C	55°C	66 mA	95.6%	0.0008	L90(6k) = 25,100 hrs L80(6k) > 36,300 hrs L70(6k) > 36,300 hrs
5	85°C	85°C	66 mA	93.7%	0.0011	L90(6k) > 36,300 hrs L80(6k) > 36,300 hrs L70(6k) > 36,300 hrs