

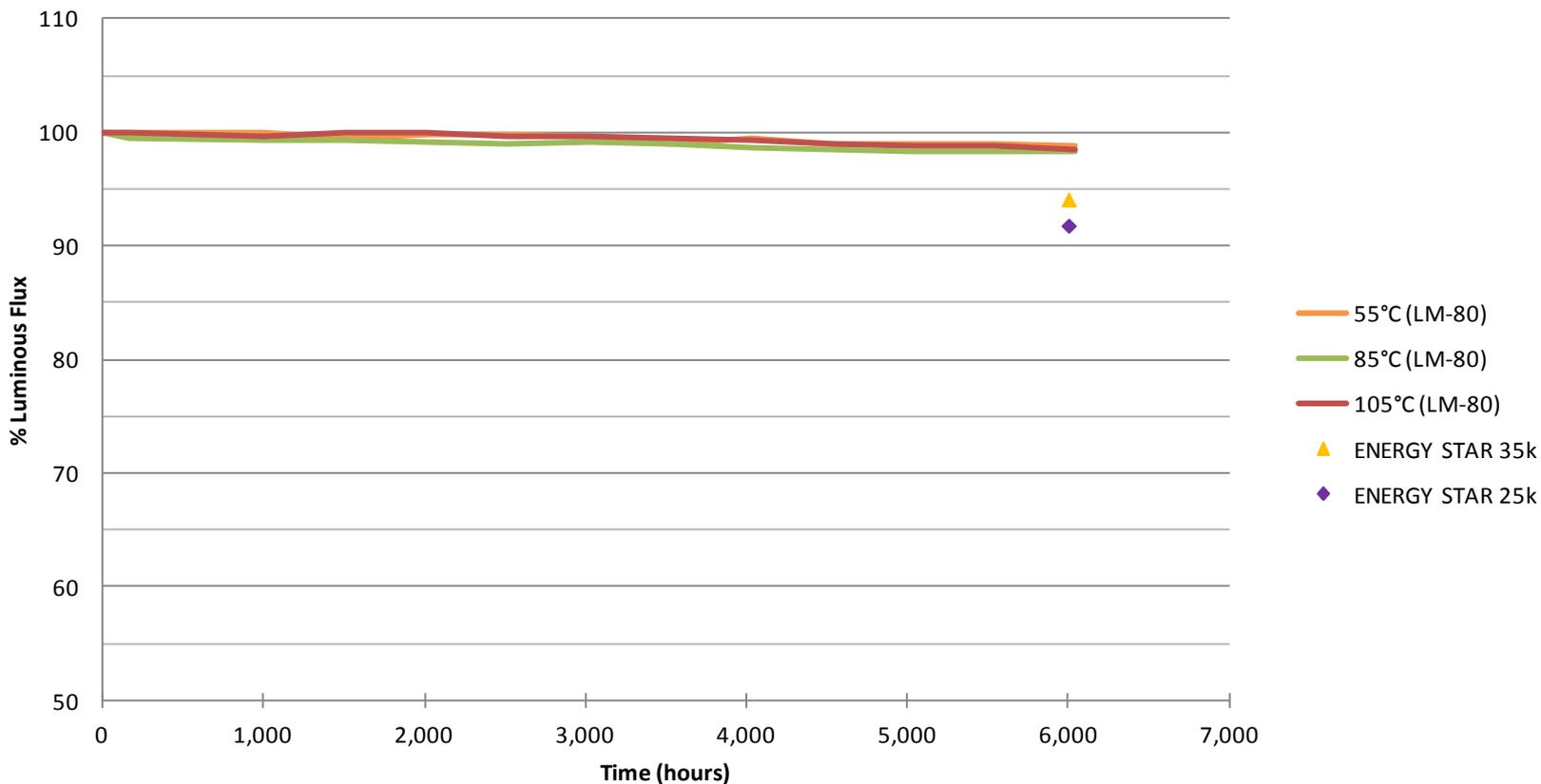


XLAMP CXA FAMILY LONG TERM TESTING SUMMARY

April 22, 2013

XLamp CXA1507 Results (LM-80)

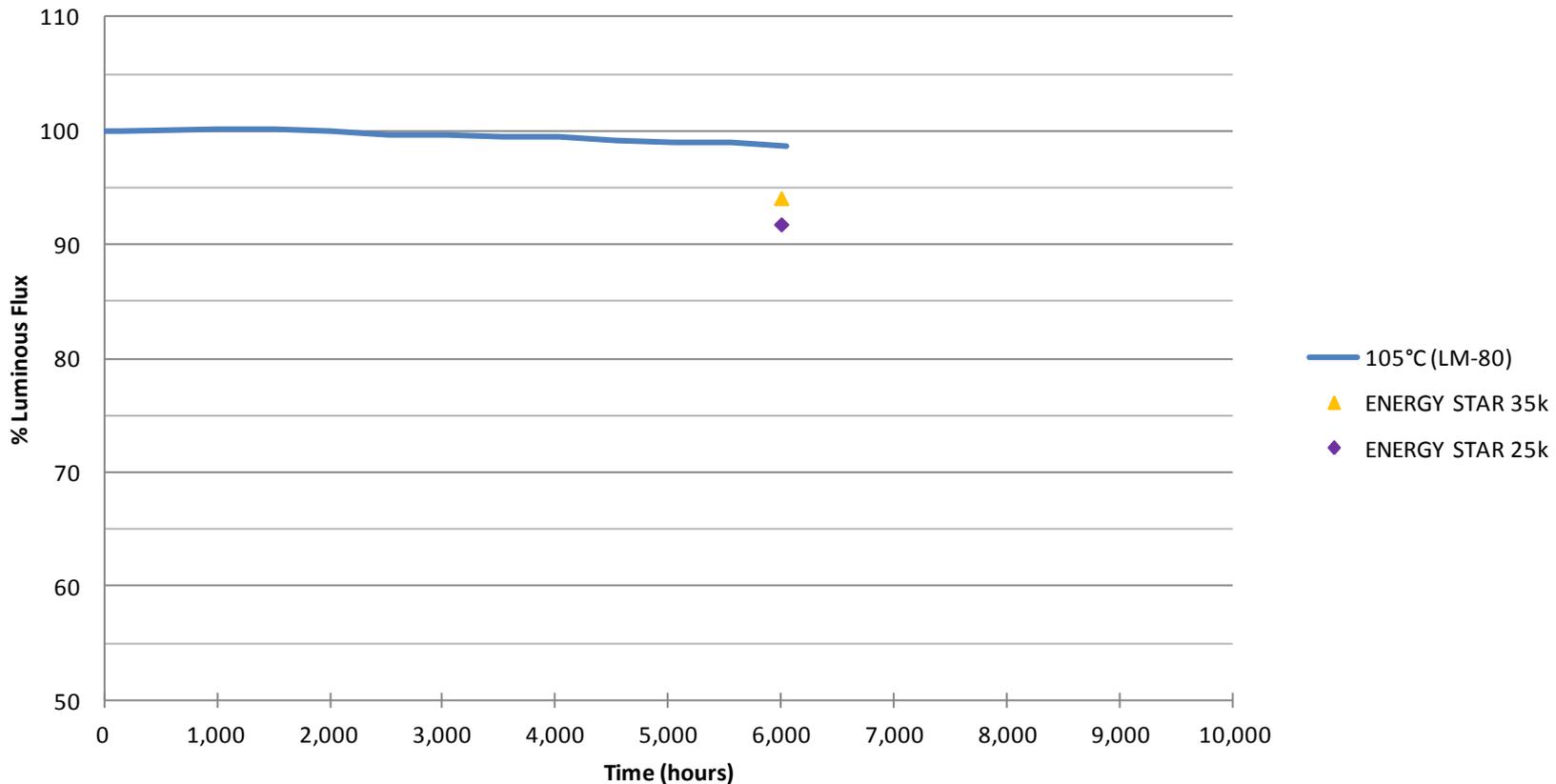
CXA1507	Ta (°C)	Tsp (°C)
200 mA	55	55
	85	85
	105	105



XLamp CXA1507/2520 Results (LM-80)

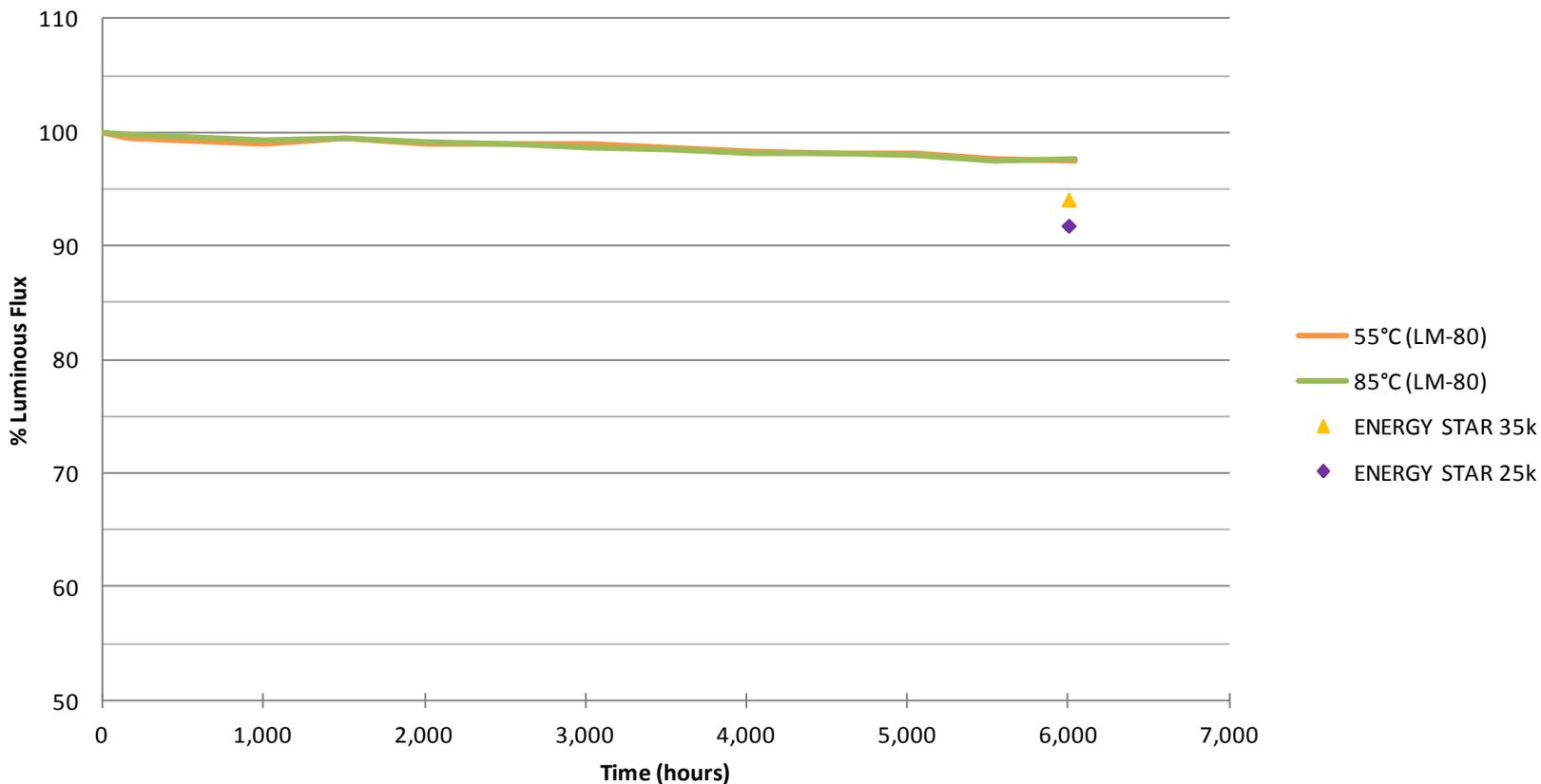
CXA1507	CXA2520	Ta (°C)	Tsp (°C)
210 mA	700 mA	105	105

Tested model: CXA2520; Results scaled according to ENERGY STAR LM-80 guidelines



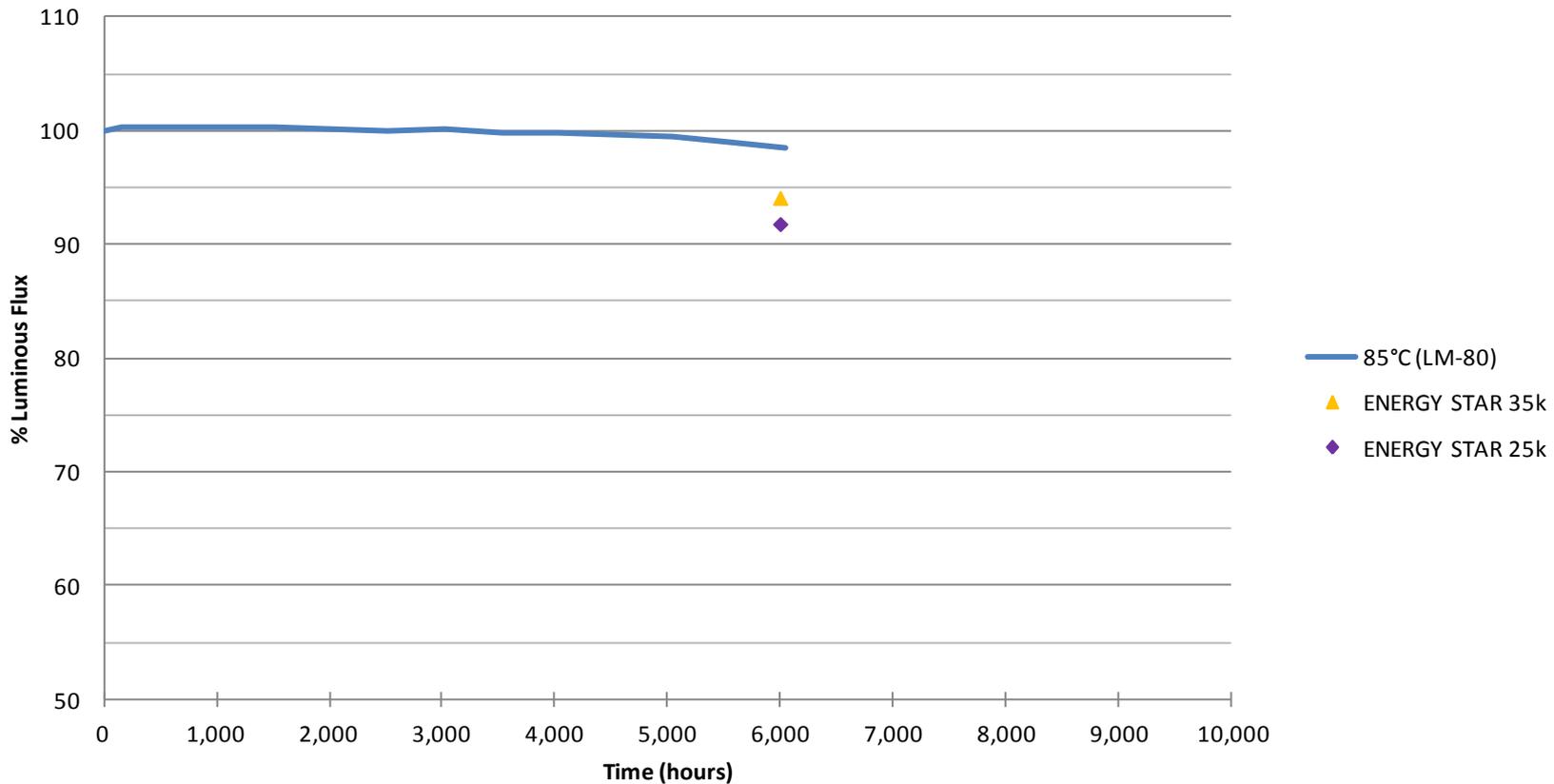
XLamp CXA1507 Results (LM-80)

Current	Ta (°C)	Tsp (°C)
375 mA	55	55
	85	85

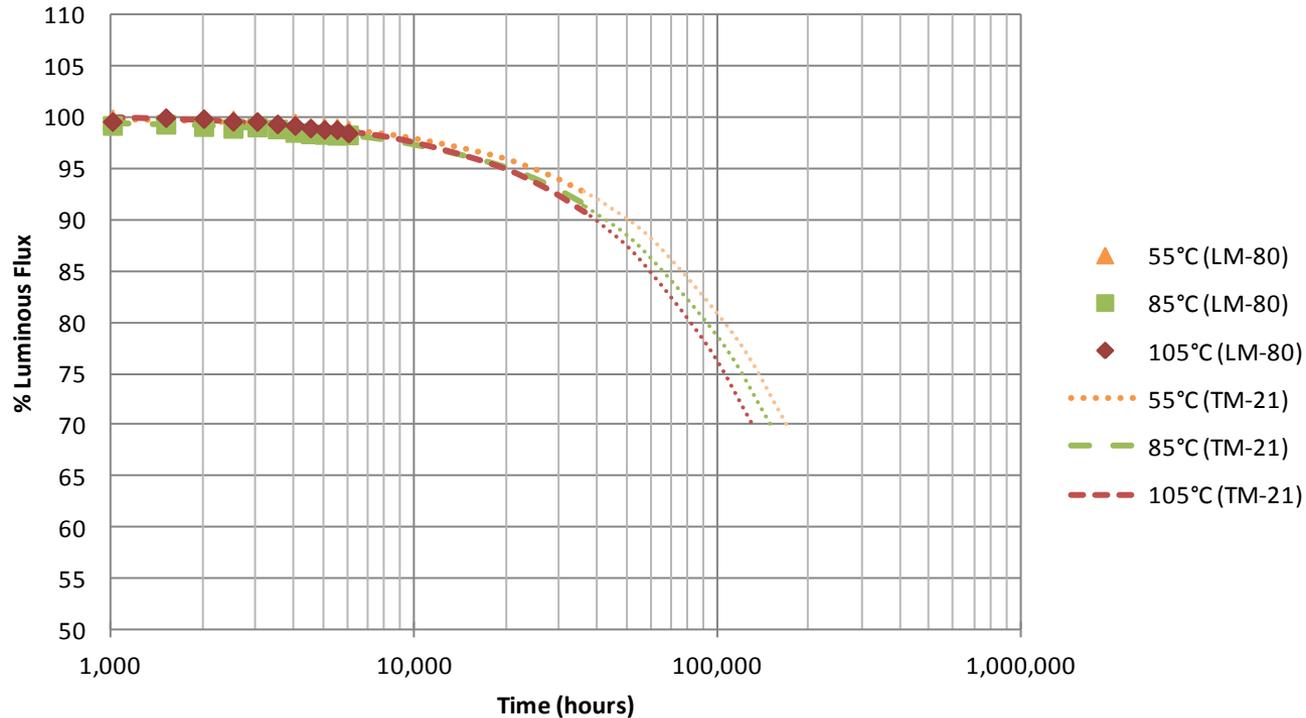


XLamp CXA2520 Results (LM-80)

Current	Ta (°C)	Tsp (°C)
1250 mA	85	85



XLamp CXA1507 L70 Lifetime

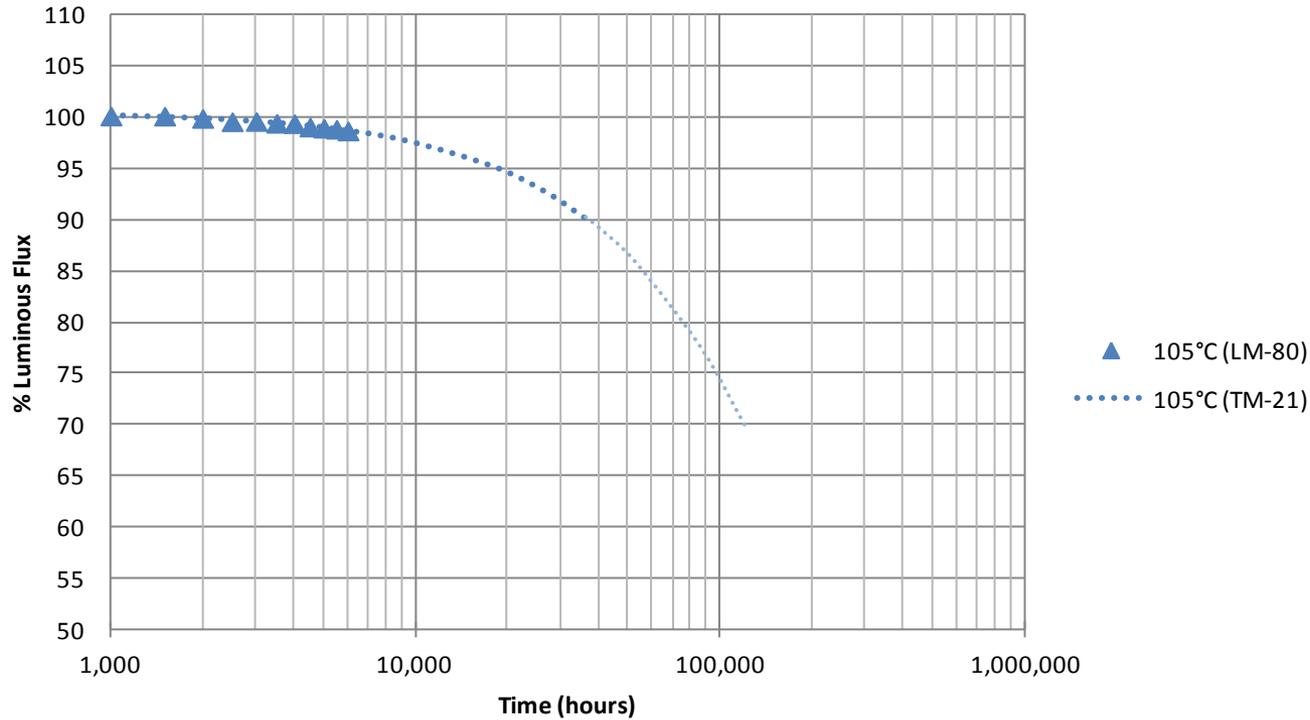


Current	Ta/Tsp	Test Duration	α	β	Calculated L70	Reported L70
200 mA [7W]	55°C	6,048 hrs	2.113E-06	1.001E+00	169,000 hrs	L70(6k) > 36,300 hrs
	85°C	6,048 hrs	2.348E-06	9.962E-1	150,000 hrs	L70(6k) > 33,300 hrs
	105°C	6,048 hrs	2.758E-06	1.003E+00	130,000 hrs	L70(6k) > 36,300 hrs

Notes:

- These extrapolations are for informational purposes only and are not a warranty or a specification.
- Extrapolated lifetimes are subject to change without notice.
- 85°C data set has sample size of 13. Full 25 sample data set will be available early Q3 2013.

XLamp CXA1507/CXA2520 L70 Lifetime (TM-21)

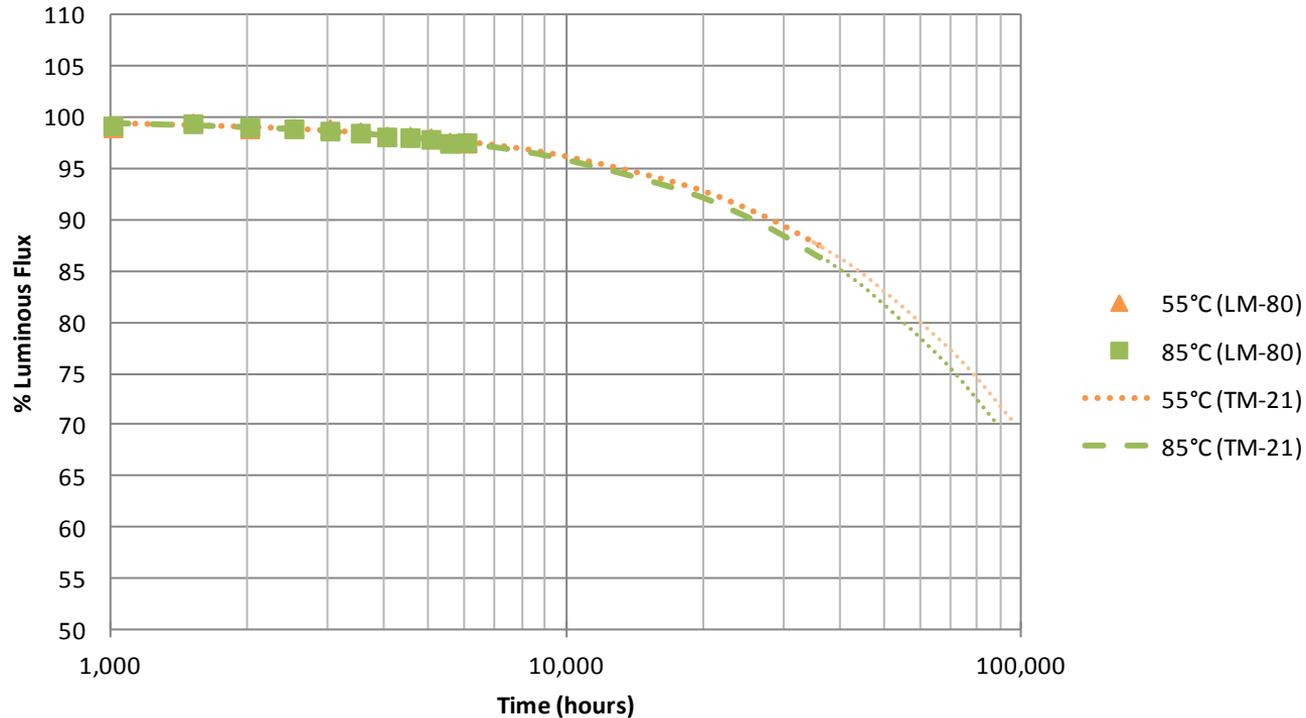


LED	Current	Ta/Tsp	Test Duration	α	β	Calculated L70	Reported L70
CXA1507	210 mA	105°C	6,048 hrs	2.996E-06	1.005E+00	121,000 hrs	L70(6k) > 36,300 hrs
CXA2520	700 mA						

Notes:

- These extrapolations are for informational purposes only and are not a warranty or a specification.
- Extrapolated lifetimes are subject to change without notice.
- Tested model: CXA3050; Results scaled according to ENERGY STAR LM-80 guidelines
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XLamp CXA1507 L70 Lifetime

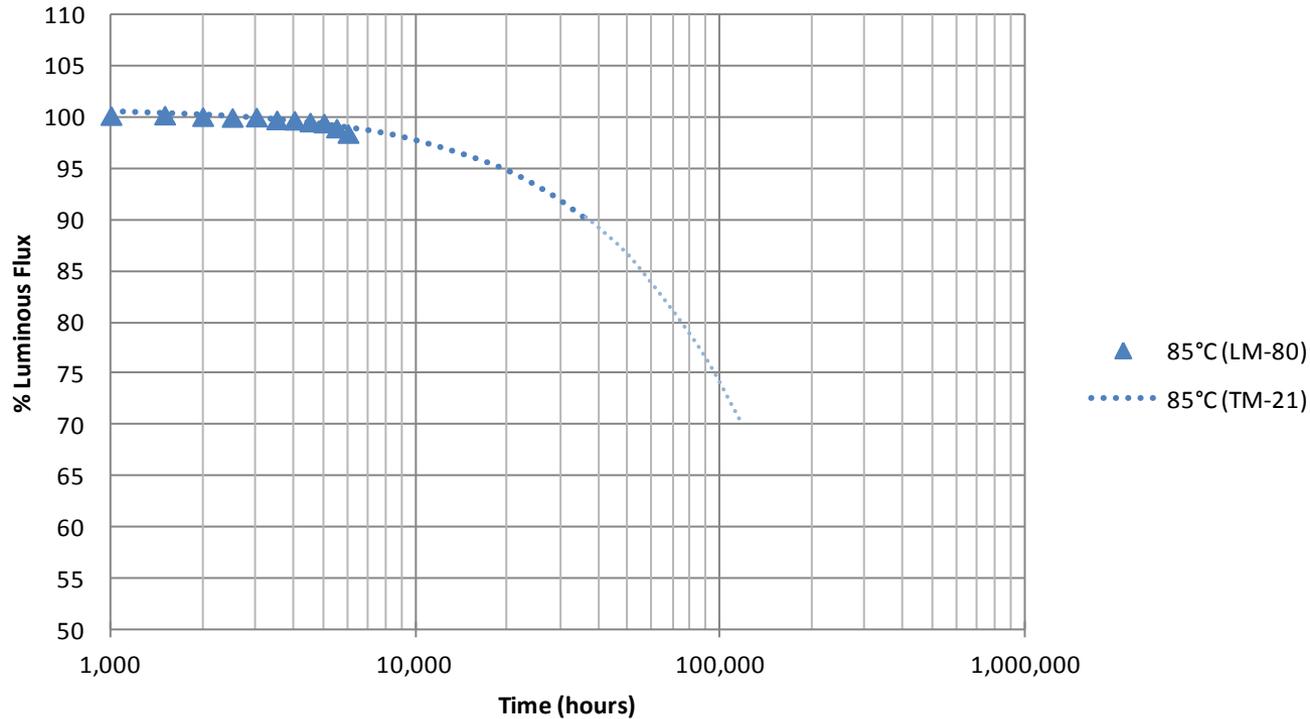


Current	Ta/Tsp	Test Duration	α	β	Calculated L70	Reported L70
375 mA [14W]	55°C	6,048 hrs	3.637E-06	9.979E-01	97,500 hrs	L70(6k) > 33,300 hrs
	85°C	6,048 hrs	3.994E-06	9.985E-01	88,900 hrs	L70(6k) > 36,300 hrs

Notes:

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- Extrapolated lifetimes are subject to change without notice.
- 55°C data set has sample size of 19. Full 25 sample data set will be available early Q3 2013.

XLamp CXA2520 L70 Lifetime



Current	Ta/Tsp	Test Duration	α	β	Calculated L70	Reported L70
1250 mA [48W]	85°C	6,048 hrs	3.069E-06	1.008E+00	119,000 hrs	L70(6k) > 36,300 hrs

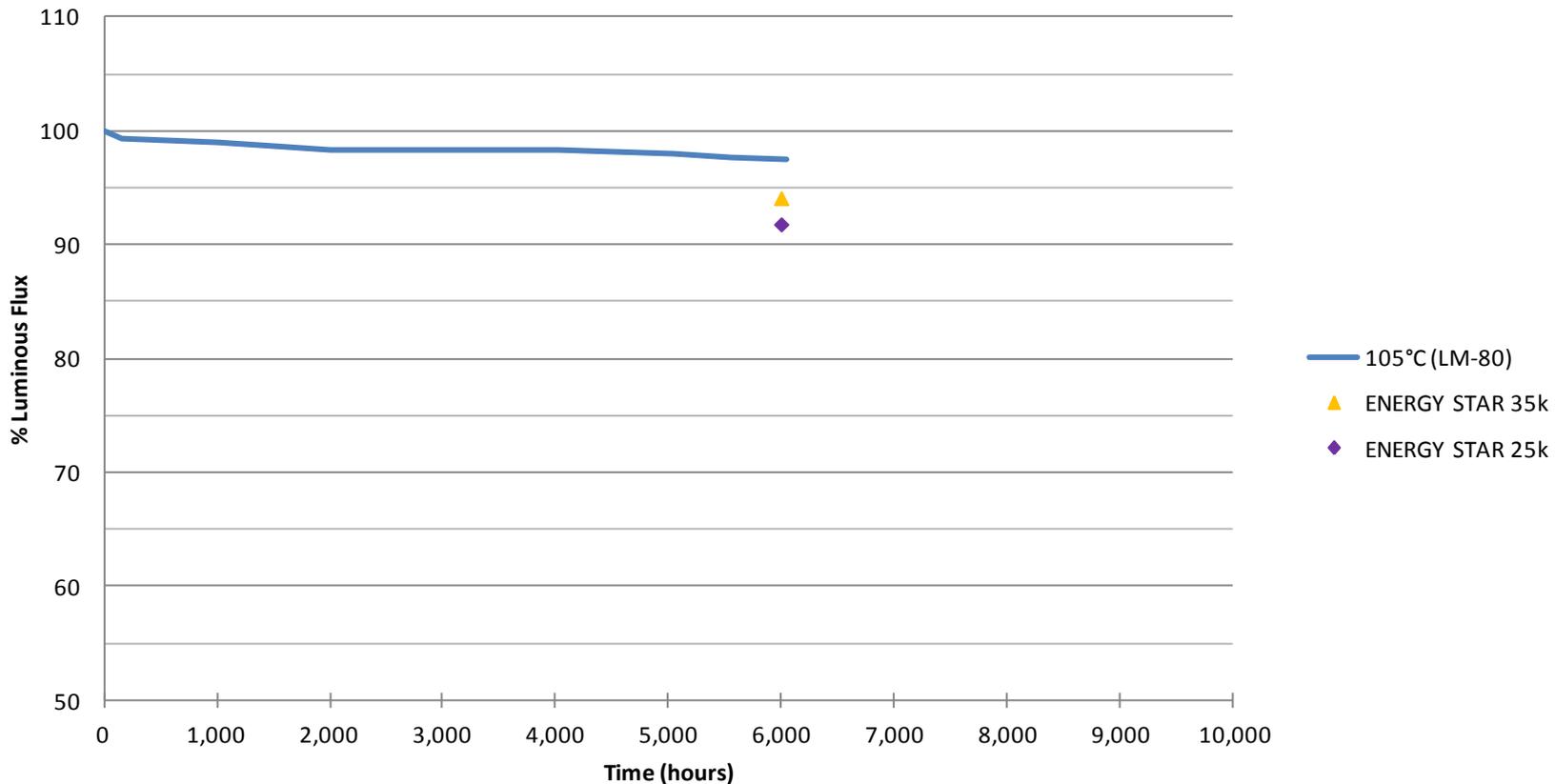
Notes:

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- Extrapolated lifetimes are subject to change without notice.

XLamp CXA1512/2530/2540/3050 Results (LM-80)

CXA1512	CXA2530	CXA2540	CXA3050	Ta (°C)	Tsp (°C)
346 mA	808 mA	1154 mA	1500 mA	105	105

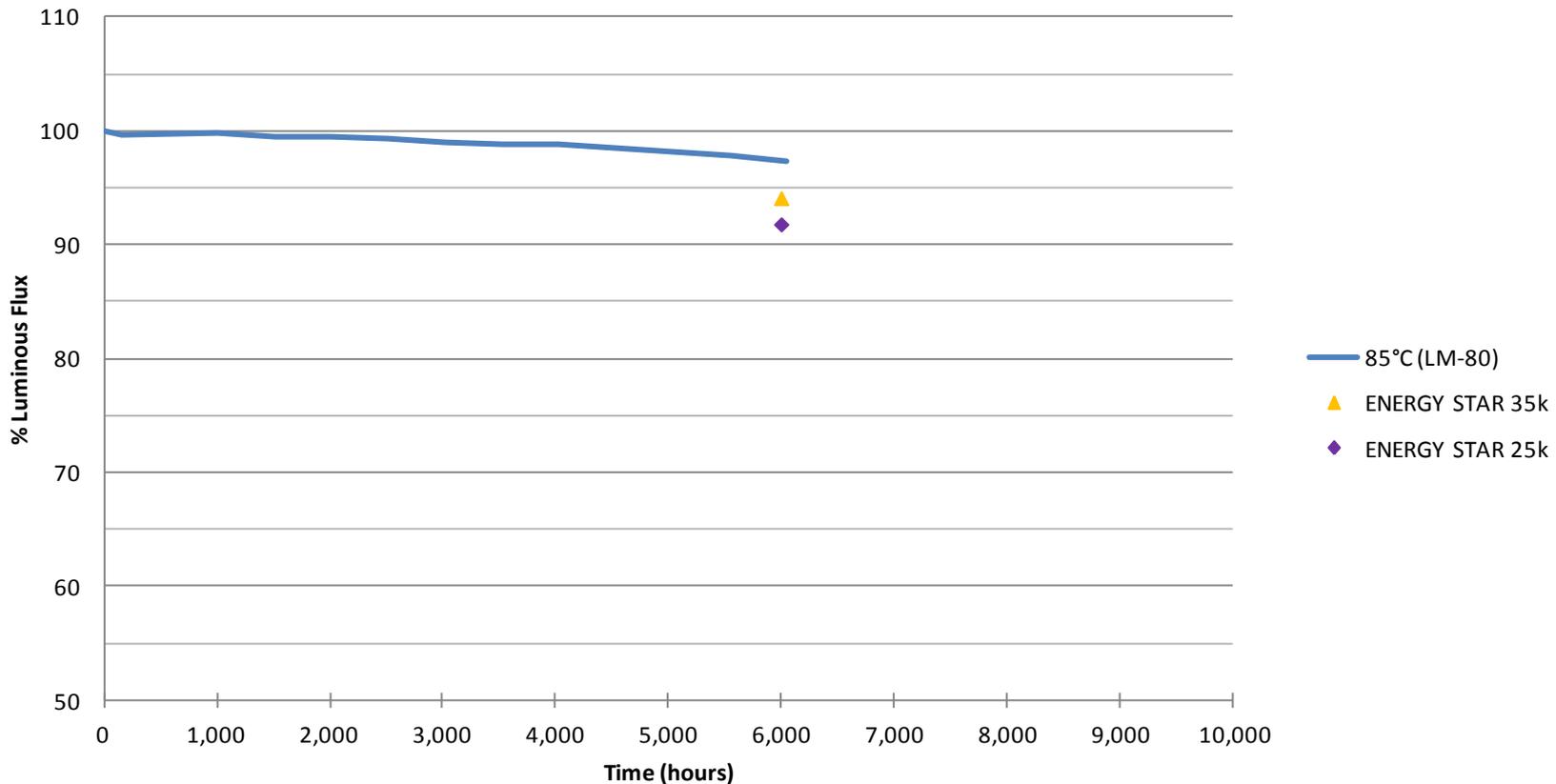
Tested model: CXA3050; Results scaled according to ENERGY STAR LM-80 guidelines



XLamp CXA1512/2530/2540/3050 Results (LM-80)

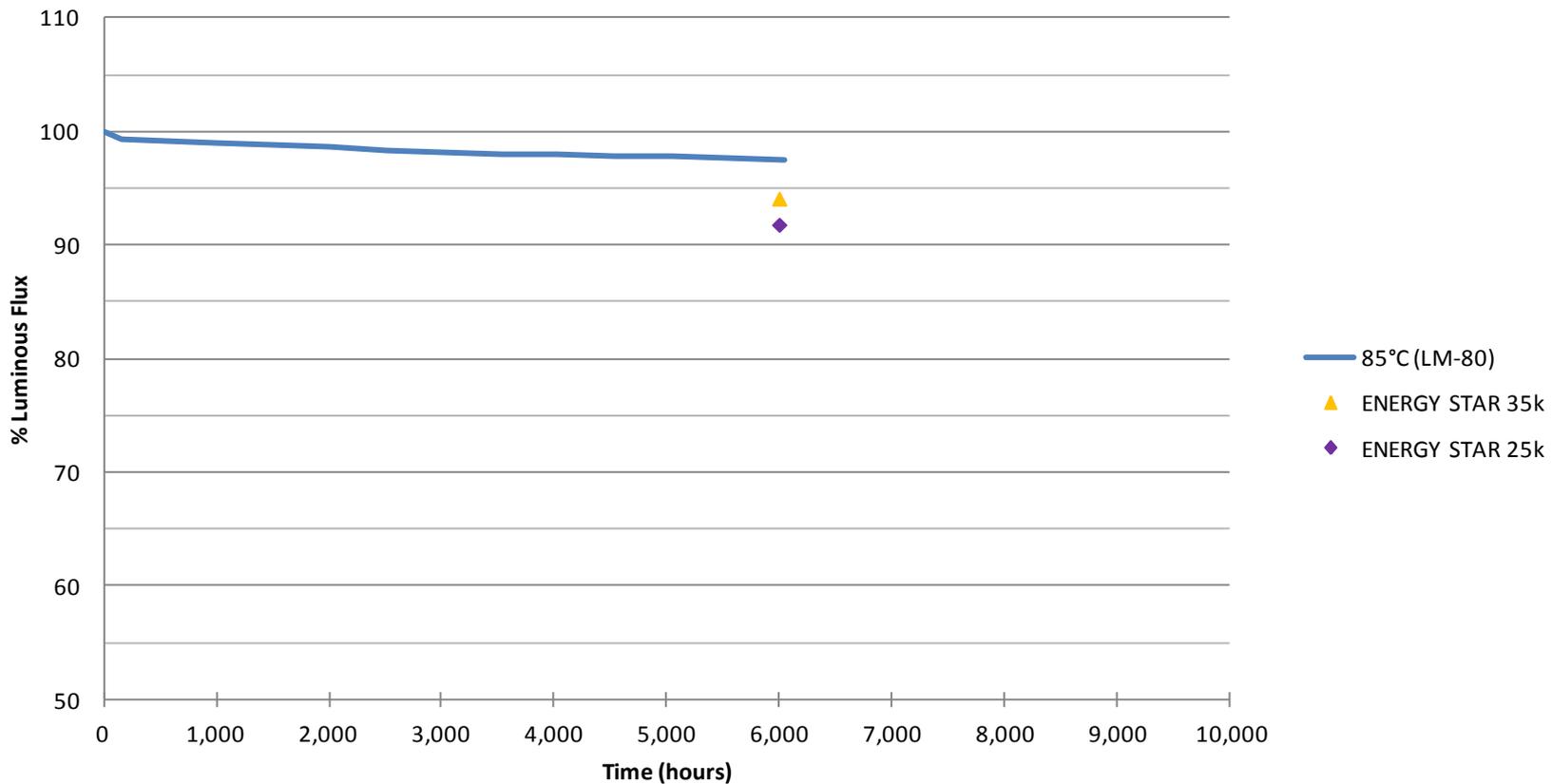
CXA1512	CXA2530	CXA2540	CXA3050	Ta (°C)	Tsp (°C)
519 mA	1212 mA	1731 mA	2250 mA	85	85

Tested model: CXA3050; Results scaled according to ENERGY STAR LM-80 guidelines

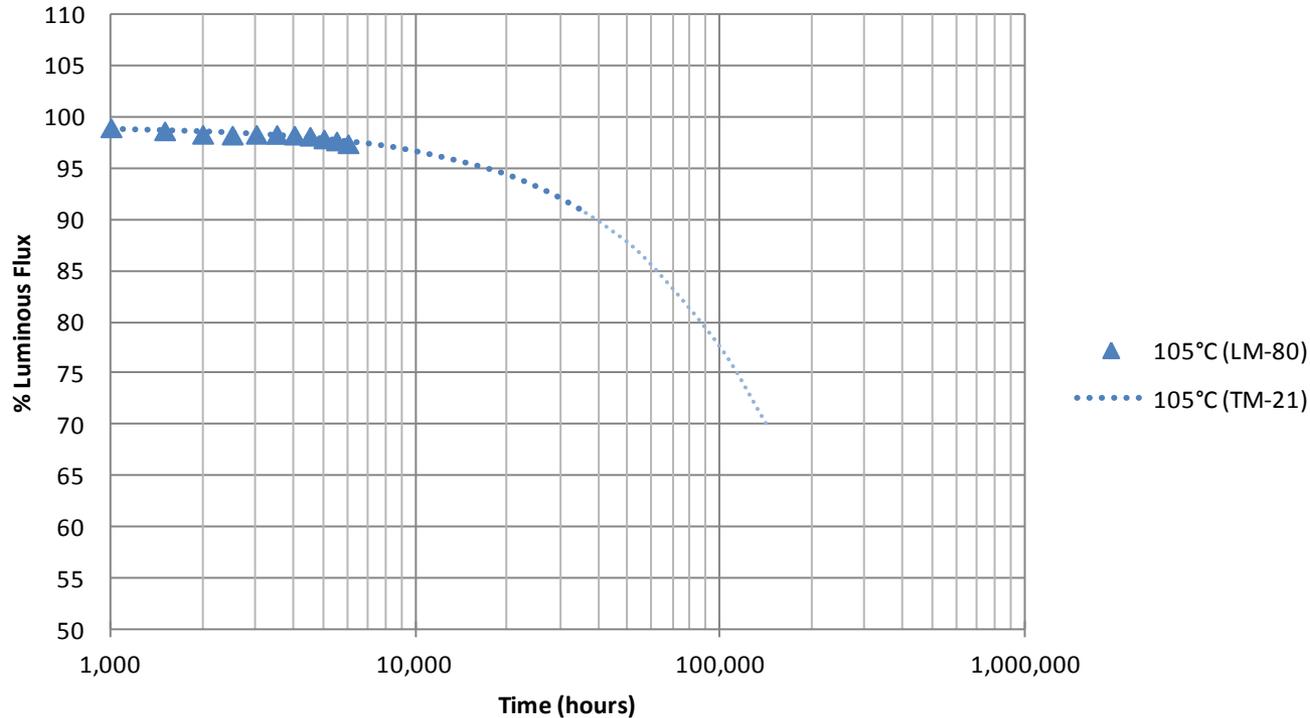


XLamp CXA2530 Results (LM-80)

CXA2530	Ta (°C)	Tsp (°C)
1400 mA	85	85



XLamp CXA1512/2530/2540/3050 L70 Lifetime (TM-21)

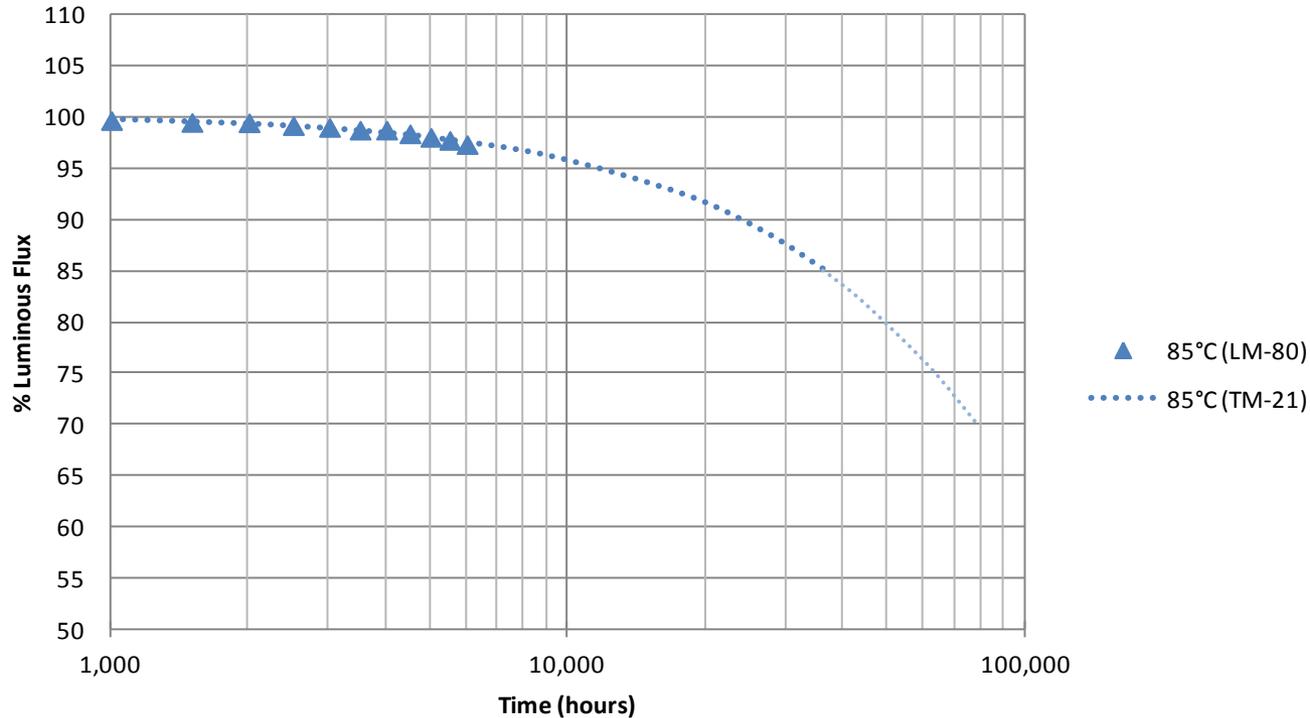


LED	Current	Ta/Tsp	Test Duration	α	β	Calculated L70	Reported L70
CXA1512	346 mA	105°C	6,048 hrs	2.454E-06	9.909E-01	142,000 hrs	L70(6k) > 36,300 hrs
CXA2530	808 mA						
CXA2540	1154 mA						
CXA3050	1500 mA						

Notes:

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- Extrapolated lifetimes are subject to change without notice.
- Tested model: CXA3050; Results scaled according to ENERGY STAR LM-80 guidelines
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XLamp CXA1512/2530/2540/3050 L70 Lifetime (TM-21)

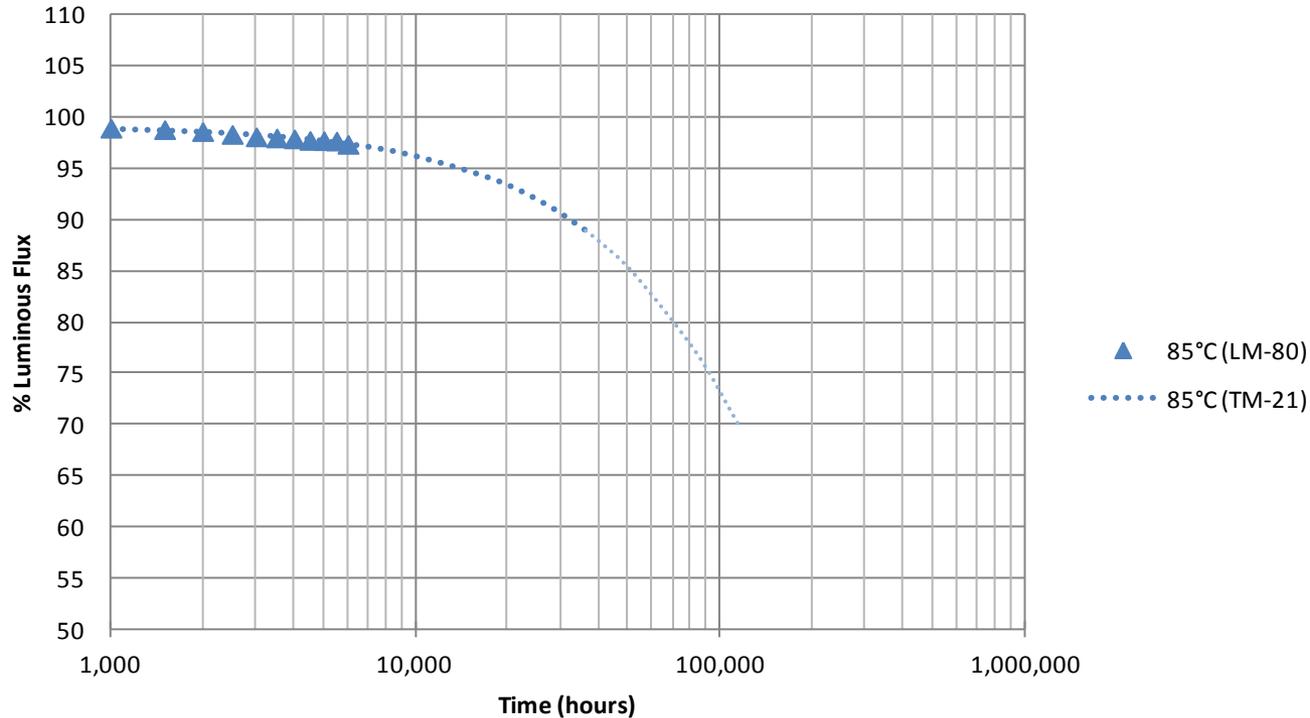


LED	Current	Ta/Tsp	Test Duration	α	β	Calculated L70	Reported L70
CXA1512	519 mA	85°C	6,048 hrs	4.543E-06	1.003E+00	79,200 hrs	L70(6k) > 36,300 hrs
CXA2530	1212 mA						
CXA2540	1731 mA						
CXA3050	2250 mA						

Notes:

- These extrapolations are for informational purposes only and are not a warranty or a specification.
- Extrapolated lifetimes are subject to change without notice.
- Tested model: CXA3050; Results scaled according to ENERGY STAR LM-80 guidelines
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XLamp CXA2530 L70 Lifetime (TM-21)



LED	Current	Ta/Tsp	Test Duration	α	β	Calculated L70	Reported L70
CXA2530	1400 mA	85°C	6,048 hrs	3.007E-06	9.918E-01	116,000 hrs	L70(6k) > 36,300 hrs

Notes:

- These extrapolations are for informational purposes only and are not a warranty or a specification.
- Extrapolated lifetimes are subject to change without notice.