



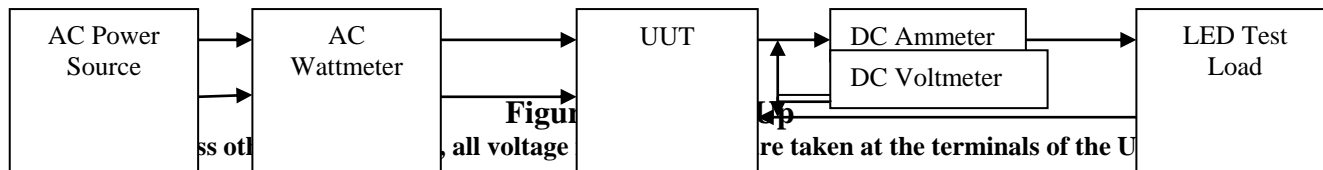
## Test Procedure for the NCL30073LED4 GEVB Evaluation Board

### Equipment Needed

- AC Source – 200 to 260 V ac 50 Hz Minimum 100 W capability
- AC Wattmeter – 100 W Minimum, True RMS Input Voltage, Current, Power Factor, and THD 0.2% accuracy or better
- DC Voltmeter – 300 V dc minimum 0.1% accuracy or better
- DC Ammeter – 1 A dc minimum 0.1% accuracy or better
- LED Load – 70 V – 80 V @ 110mA

### Test Connections

1. Connect the LED Load to the red(+) and black(-) leads through the ammeter shown in Figure 7. **Caution: Observe the correct polarity or the load may be damaged.**
2. Connect the AC power to the input of the AC wattmeter shown in Figure 5. Connect the white leads to the output of the AC wattmeter
3. Connect the DC voltmeter as shown in Figure 5.



### Functional Test Procedure

1. Set the LED Load for 75V output.
2. Set the input power to 230 V 50 Hz. **Caution: Do not touch the ECA once it is energized because there are hazardous voltages present.**

### Regulation

230 V / Max Load

	Output Current	Output Power	Power Factor	THD
207V				
230V				
253V				

$$\text{Efficiency} = \frac{V_{out} \times I_{out}}{P_{in}} \times 100\%$$



### Test Data

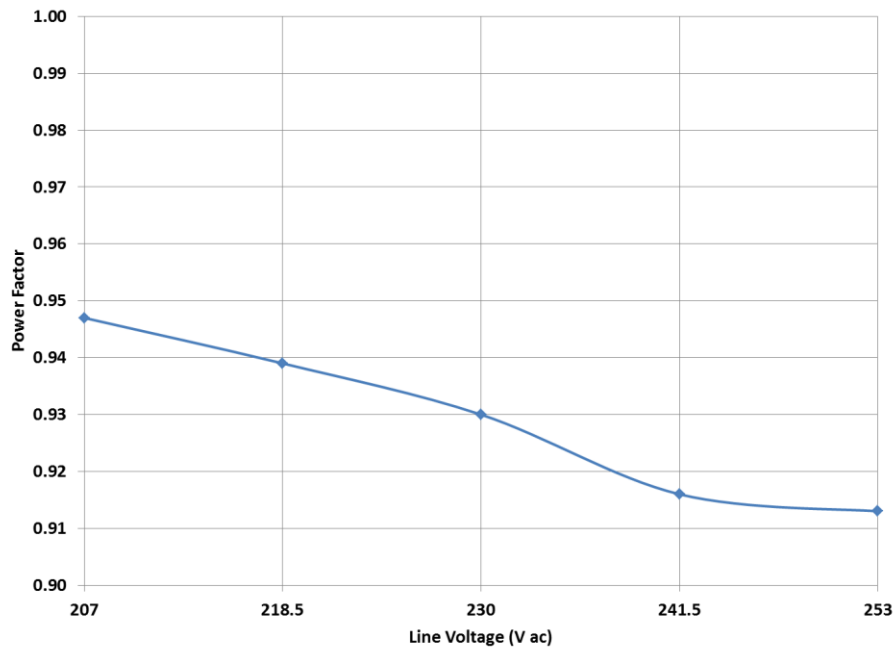


Figure 6. Power Factor over Line

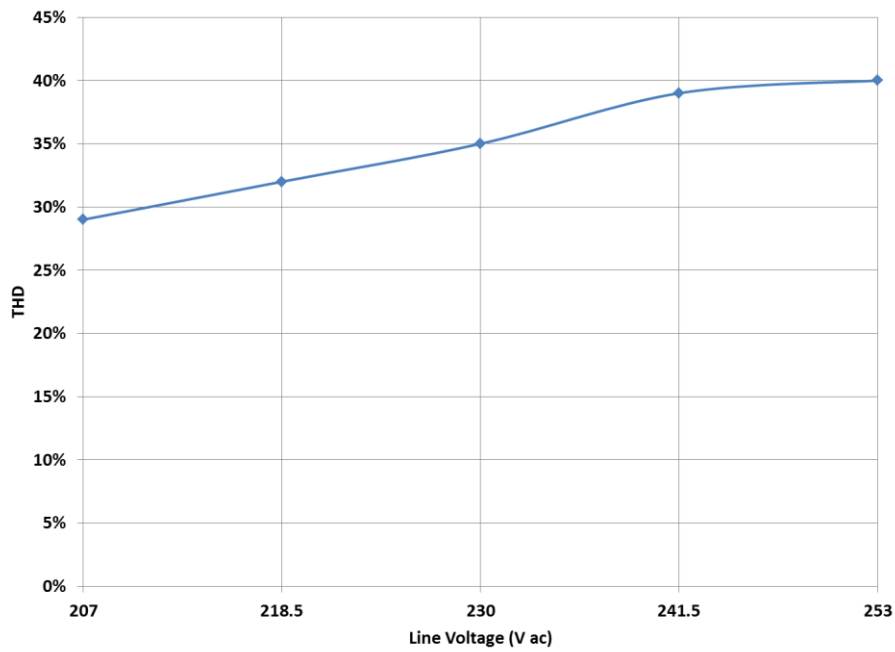


Figure 7. THD over Line

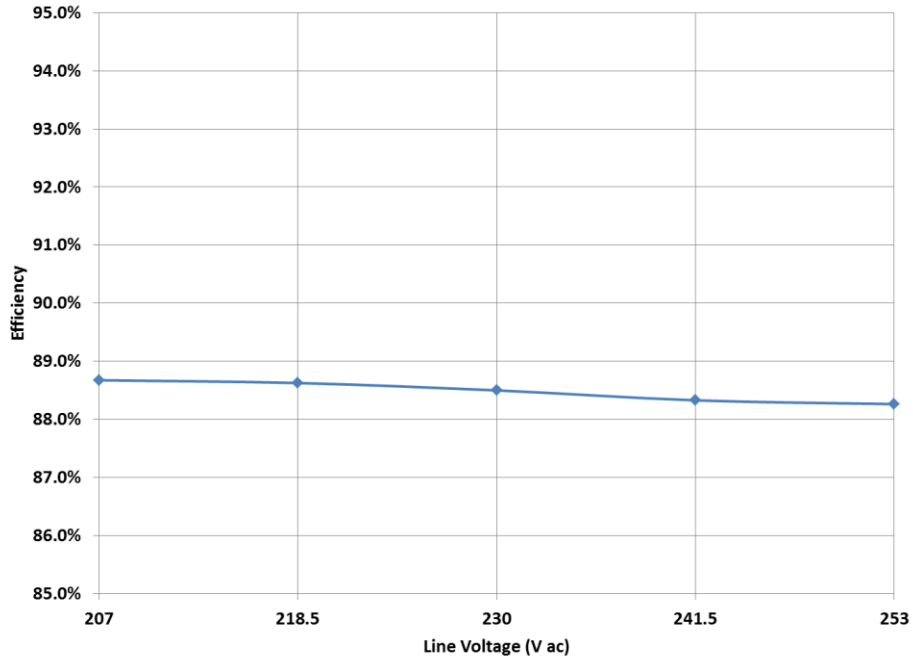


Figure 8. Efficiency

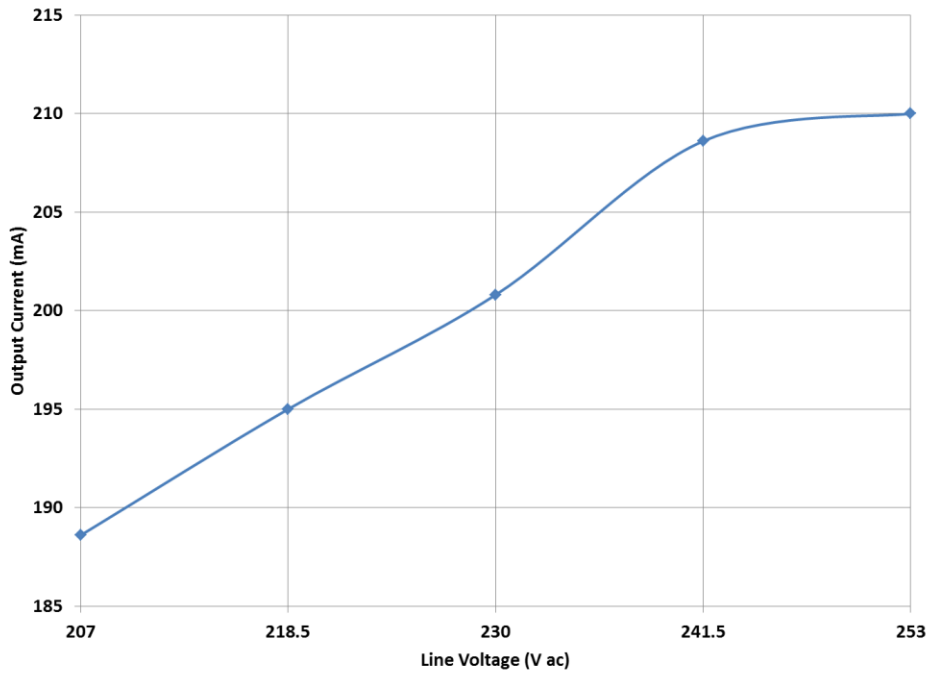


Figure 9. Regulation over Line

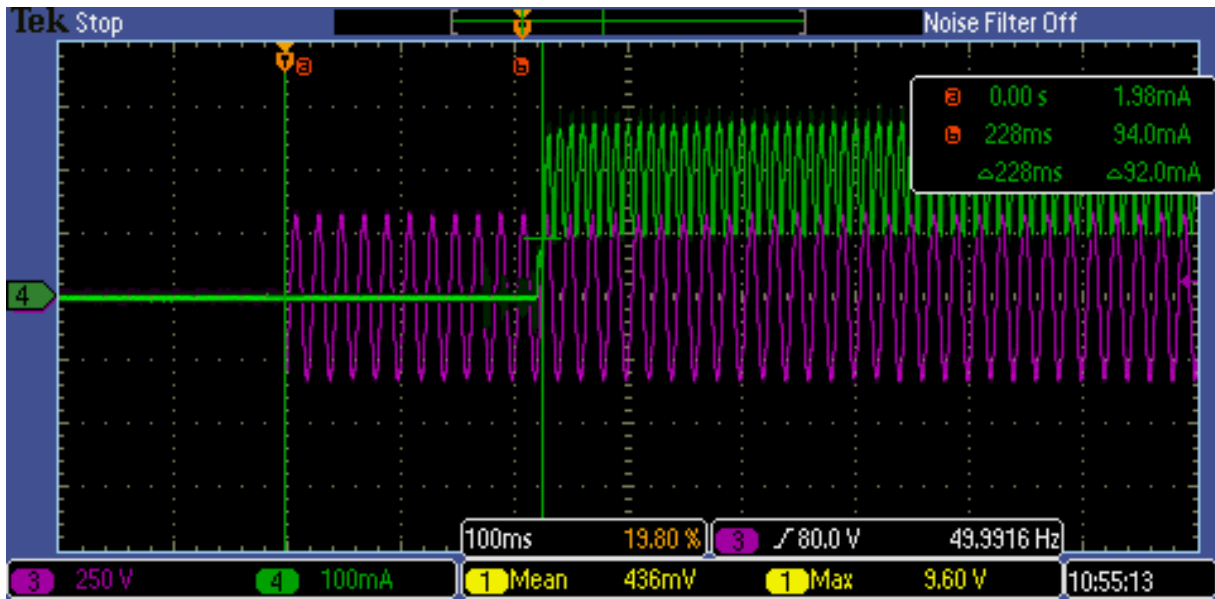
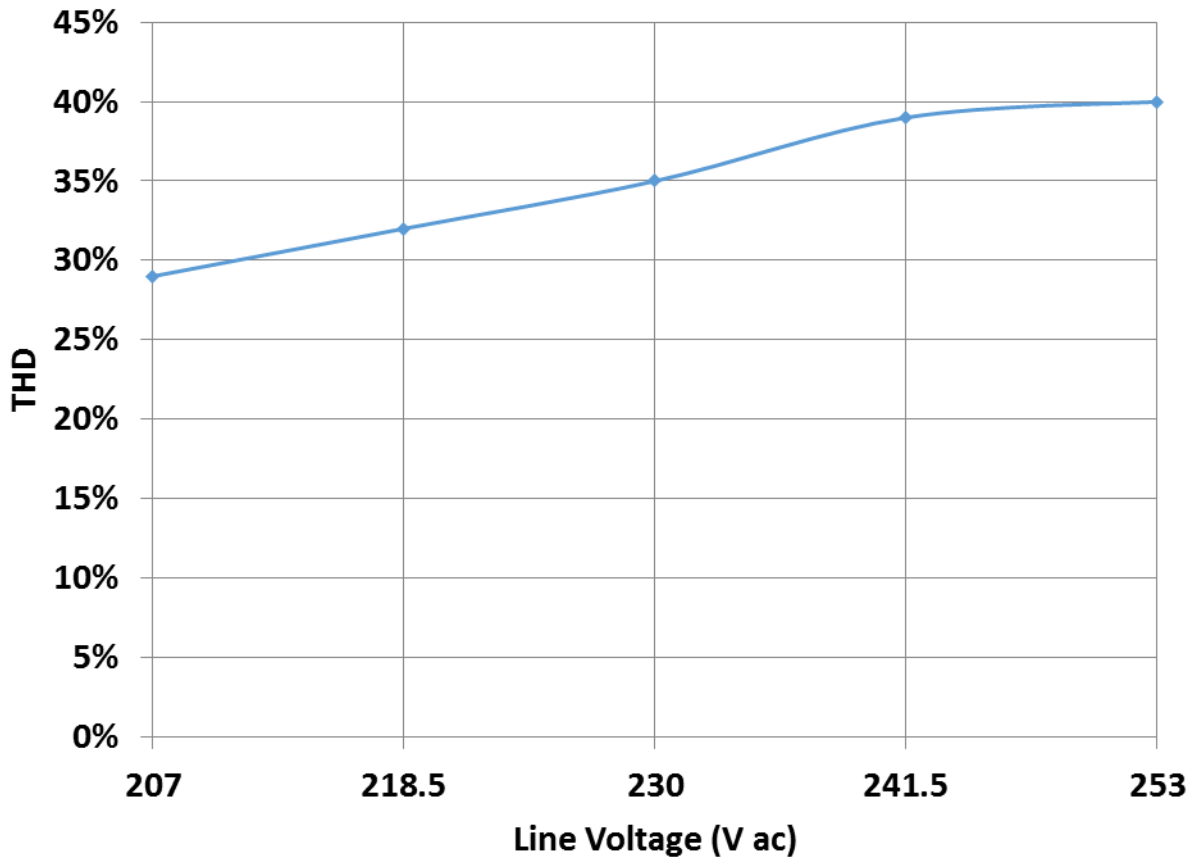


Figure 10. Start Up with AC Applied 230V



Figure 11. Output Ripple 75% Pk - Pk



Vin	Iout	Pin	Pout	PF	THD
207	188.6	15.45	13.7	0.947	0.29
218.5	195	16	14.18	0.939	0.32
230	200.8	16.52	14.62	0.93	0.35
241.5	208.6	17.22	15.21	0.916	0.39
253	210	17.38	15.34	0.913	0.4

Vin	
207	0.886731
218.5	0.88625
230	0.884988
241.5	0.883275
253	0.882624

Vin	
207	0.947
218.5	0.939
230	0.93
241.5	0.916
253	0.913