



# Food Service Technology Center Appliance Test Summary Report

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<b>Manufacturer</b>	Lang
<b>Model / Serial Number</b>	9Q-ECOF-AP / COE1110A0004
<b>Appliance</b>	Full-Size Convection Oven – Electric

<b>Report Number</b>	501311017
<b>Report Date</b>	June, 2011
<b>Tested By</b>	M. Karsz

## Purpose of Testing

This testing determined the energy input rate, preheat time and energy, idle energy rate and heavy-load cooking-energy efficiency of the oven by applying the ASTM F1496-99 Standard Test Method.

## Energy Input Rate

Test Voltage (V)	208
Rated Energy Input Rate (kW)	11.50
Measured Energy Input Rate (kW)	11.25
Difference (%)	2.2

## Preheat

Final Preheat Temperature (°F)	341.9
Duration (min)	8.17
Energy Consumption (Wh)	1,442
Preheat Rate (°F/min)	33.1

## Idle

Average Cavity Temperature (°F)	348.6
Idle Energy Rate (kW)	1.36

## Heavy-Load Cooking-Energy Efficiency <sup>a</sup>

Food Product	Russet Potatoes
Oven Temperature (°F)	350
Cook Time (min)	51.17
Cooking Energy Rate (kW)	8.03
Energy to Food (Btu/lb)	224
Energy to Oven (Btu/lb)	322
Cooking-Energy Efficiency (%)	69.5 ± 0.5
Production Capacity (lb/h)	85.0 ± 1.5

<sup>a</sup> based on a minimum of three test replicates.



**Lang 9Q-ECOF-AP Electric  
Convection Oven**

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### Heavy-Load Test Data

	Test #1	Test #2	Test #3
<b>Measured Values</b>			
<b>Cook Time (min)</b>	<b>50.75</b>	<b>51.33</b>	<b>51.42</b>
Test Voltage (V)	207	207	208
Electric Energy Consumption (kWh)	6.80	6.86	6.89
Temperature of Uncooked Potatoes (°F)	75.4	74.5	74.0
Temperature of Cooked Potatoes (°F)	205	205	205
Initial Weight of Potatoes (lbs)	72.500	72.500	72.495
Final Weight of Potatoes (lbs)	64.060	63.900	63.810
<b>Calculated Values</b>			
Sensible Heat (Btu)	7,893	7,947	7,977
Latent – Heat of Vaporization (Btu)	8,187	8,342	8,424
Total Energy to Food (Btu)	16,080	16,289	16,401
<b>Energy To Food (Btu/lb)</b>	<b>222</b>	<b>225</b>	<b>226</b>
Total Energy to Oven (Btu)	23,208	23,413	23,516
<b>Energy to Oven (Btu/lb)</b>	<b>320</b>	<b>323</b>	<b>324</b>
<b>Cooking-Energy Efficiency (%)</b>	<b>69.3</b>	<b>69.6</b>	<b>69.7</b>
<b>Cooking Energy Rate (kW)</b>	<b>8.04</b>	<b>8.02</b>	<b>8.04</b>
<b>Production Capacity (lb/h)</b>	<b>85.7</b>	<b>84.7</b>	<b>84.6</b>

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