

Bertucci's Brick Oven Pizzeria

Energy Consumption Reduction Pilot Program

Test Results

For:

Walk-In Refrigerator
Walk-In Freezer
Domestic Hot Water Heater

Hauppauge Location
358 Vanderbilt Motor Parkway
Hauppauge, NY 11788

A Confidential Report
Prepared by Intellidyne®
June 2003

EXECUTIVE SUMMARY

The following is a summary of the Energy Saving Performance of the **IntelliCon[®]-RU** control which was installed on two (2) different commercial refrigeration systems including: one **Walk-in Refrigerator**, one **Walk-in Freezer**, and one **IntelliCon[®]-LCH** control that was installed on the **Domestic Hot Water Boiler**. These systems operate on a 24 hours per day, 7 days per week basis at the Bertucci's Brick Oven Pizzeria in Hauppauge NY.

During the testing period at this particular location, the **IntelliCon[®]-RU** delivered an electric consumption reduction of **11.49%** on the walk-in refrigerator and **12.61%** on the walk-in freezer with no degradation of the temperature maintenance. Also during the testing period at this particular location, the **IntelliCon[®]-LCH** reduced the fuel consumption on the domestic hot-water boiler by **21.17%** with no noticeable difference in water-temperature maintenance; as observed and confirmed by the Hauppauge staff. Also notable is the fact that the IntelliCon[®] controller reduced the on/off cycling of the domestic hot water boiler by 42.8%.

The attached report contains documentation supporting the summary results and further elucidates the length of the test as well as documenting the overall temperature performance and predictability of the temperature range of each unit; **after the IntelliCon[®] affect.**

The analysis of the data collected concludes that the **IntelliCon[®]** unit substantially reduced the energy consumption beyond the minimum 10% that is guaranteed, while providing temperature performance which is consistent with the temperatures that are being maintained without the use of the **IntelliCon[®]** technology.

These results further demonstrate the financial benefit resulting from the implementation of the **IntelliCon[®]** Energy Saving Control. While the test was performed on refrigeration and heating applications, the principle of operation is the same for our refrigeration controller (**IntelliCon[®]-RU**) and the **IntelliCon[®]-CAC**; which reduces electric consumption on commercial air conditioning systems. These controls continually monitor the system to detect load changes. In cases where the load is less than the system maximum output the control modifies 'system-cycling' to match the energy output to the load requirements. This process is varied dynamically from cycle to cycle.

Test Summary and Recommendations:

Bertucci's can expect a pay-back on the **IntelliCon[®]** investment in less than 12 months when the three (LCH, RU and CAC) controls are applied. (This assumes that energy costs are in the \$.10 per KWH and \$1.00 per Therm range and assumes no benefit from reduced "Peak Demand Charges" or reduced maintenance costs).

- **Guaranteed Energy Consumption Reductions**
- **Consistent Temperature Performance**
- **15 Year Replacement Warranty**
- **Low Upfront costs and High ROI**

Intellidyne is confident you will agree that the application of IntelliCon[®] technology is an excellent business decision which can deliver real and meaningful operating cost reductions year in and year out.



90 Pratt Oval
 Glen Cove, NY 11542
 Phone: 516-676-0777
 Fax: 516-676-2640

Test Report

Report No. 12116-1

Date: 06/18/03

Customer:

Bertucci's
 358 Vanderbilt Parkway
 Hauppauge, NY 11788

 Contact: Corey Grossman

Test Site Location:

SAME

 Walk-In Freezer

Test Type: HEATING AIR CONDITIONING REFRIGERATION OTHER: _____
 Product Tested: HW LCH LCS CHW CHS AC CAC RU OTHER: _____

Type of Equipment:

Kolpack, M251560
 208/230V 3ø, RLA: 7A

Test Start Date: 04/29/03
 Test End Date: 06/01/03
 No. of Days in Test: 34

COMPRESSOR RUN-TIME: in HRS. in MIN.
 IntelliCon ON-DAYS: 121.0
 IntelliCon OFF-DAYS: 138.4
 RUN-TIME was changed by: 12.61%

DEGREE-DAY ADJUSTMENT NOT USED FOR THIS TEST
 IntelliCon ON-DAYS: _____
 IntelliCon OFF-DAYS: _____
 Total Degree-Days: _____

SOLAR LOAD COMPENSATION: NOT USED FOR THIS TEST
 IntelliCon ON-DAYS: _____
 IntelliCon OFF-DAYS: _____

COMPRESSOR CYCLING REDUCTION:
 IntelliCon ON-DAYS: 1534
 IntelliCon OFF-DAYS: 1565
 Cycling was reduced by: 2.0%

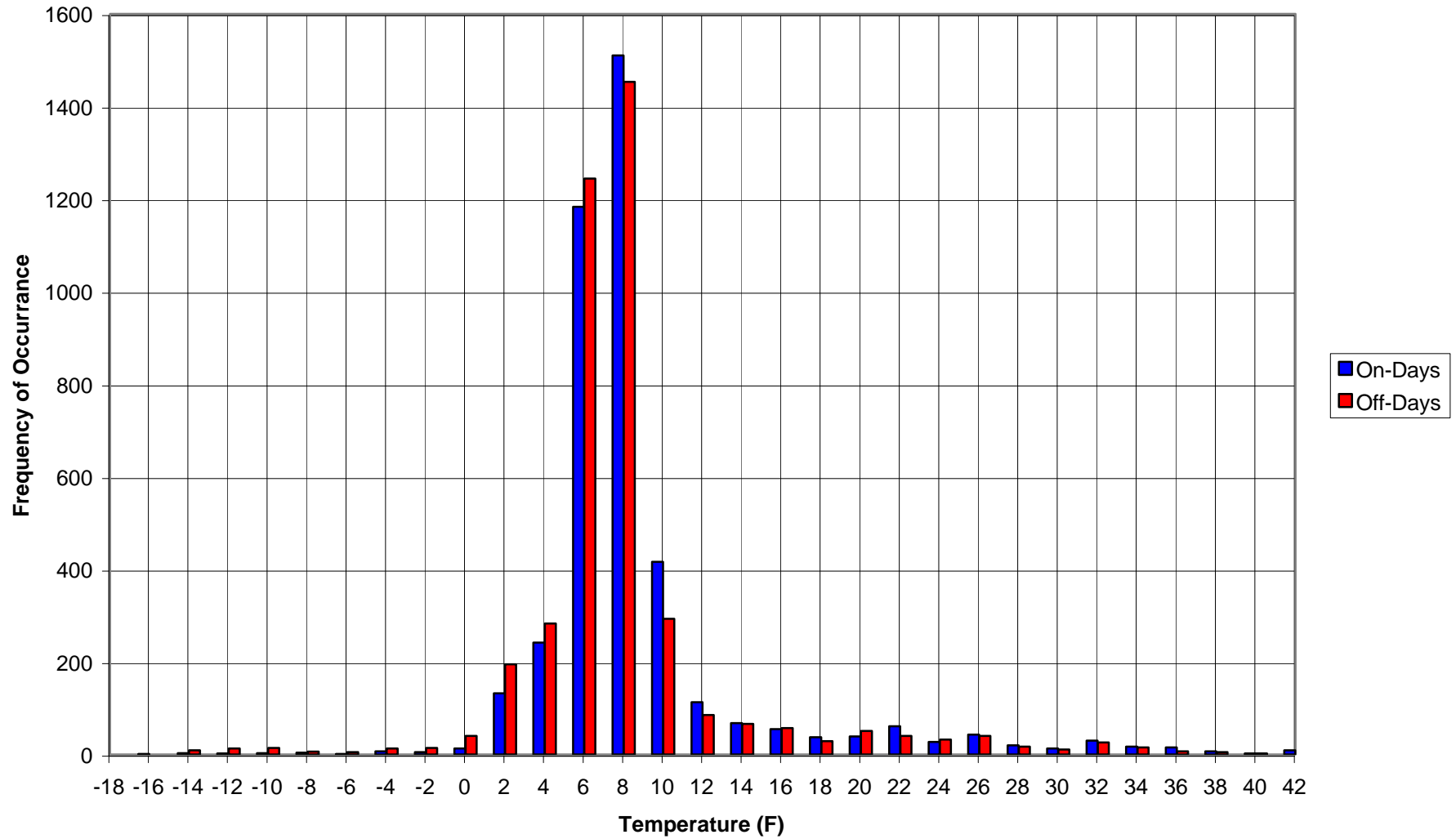
Savings = 12.61%

COMMENTS:

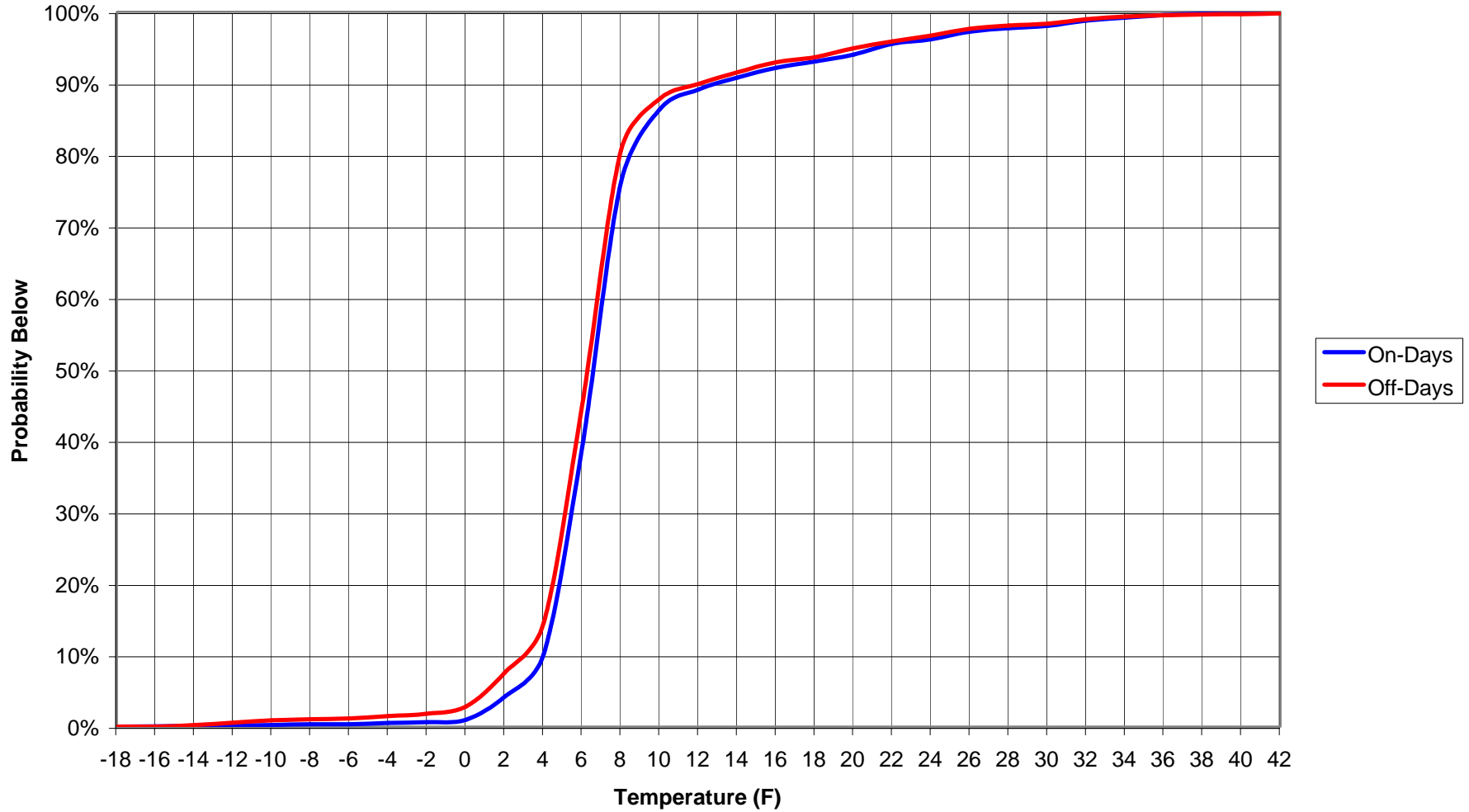
ATTACHMENTS:

EXEC. SUMMARY TEMP. HISTOGRAM SOLAR HISTOGRAM OTHER _____
 TEMP. PROBABILITY SOLAR PROBABILITY OTHER _____

Walk-In Freezer Temperature Histogram
4/29/03 -- 6/1/03



Walk-In Freezer Temperature Probabilities
4/29/03 -- 6/1/03





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Test Report

Report No. 12116-2

Date: 06/18/03

Customer:

Bertucci's
 358 Vanderbilt Parkway
 Hauppauge, NY 11788

 Contact: Corey Grossman

Test Site Location:

SAME

 Walk-In Refrigerator

Test Type: HEATING AIR CONDITIONING REFRIGERATION OTHER: _____
 Product Tested: HW LCH LCS CHW CHS AC CAC RU OTHER: _____

Type of Equipment:

Kolpack, F3AD-A201-TFC-001
 208/230V 3ø, RLA: 8.7A

Test Start Date: 04/29/03
 Test End Date: 06/01/03
 No. of Days in Test: 34

COMPRESSOR RUN-TIME: in HRS. in MIN.
 IntelliCon ON-DAYS: 115.5
 IntelliCon OFF-DAYS: 130.5
 RUN-TIME was changed by: 11.49%

DEGREE-DAY ADJUSTMENT NOT USED FOR THIS TEST
 IntelliCon ON-DAYS: _____
 IntelliCon OFF-DAYS: _____
 Total Degree-Days: _____

SOLAR LOAD COMPENSATION: NOT USED FOR THIS TEST
 IntelliCon ON-DAYS: _____
 IntelliCon OFF-DAYS: _____

COMPRESSOR CYCLING REDUCTION:
 IntelliCon ON-DAYS: 1275
 IntelliCon OFF-DAYS: 1284
 Cycling was reduced by: 0.7%

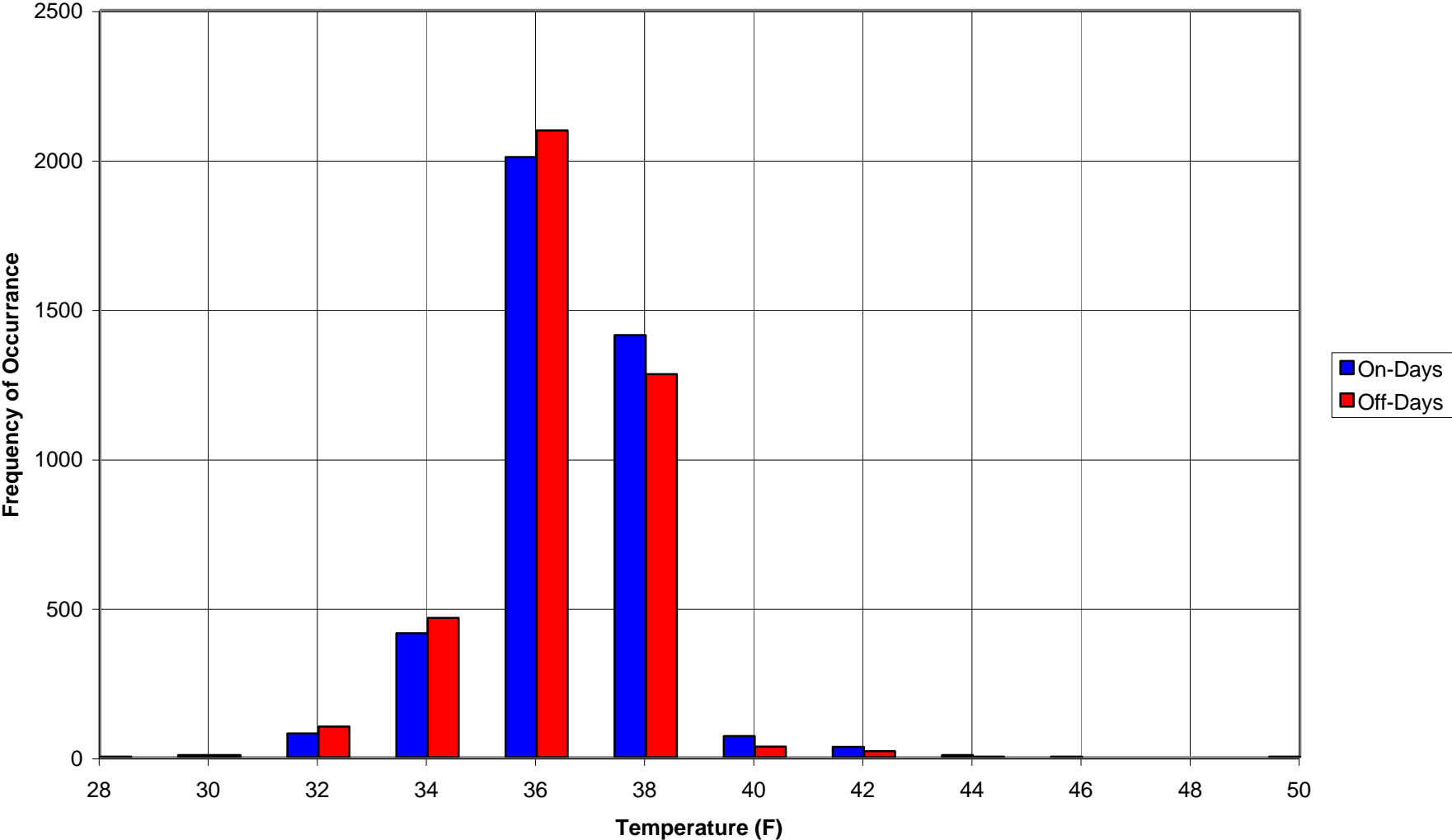
Savings = 11.49%

COMMENTS:

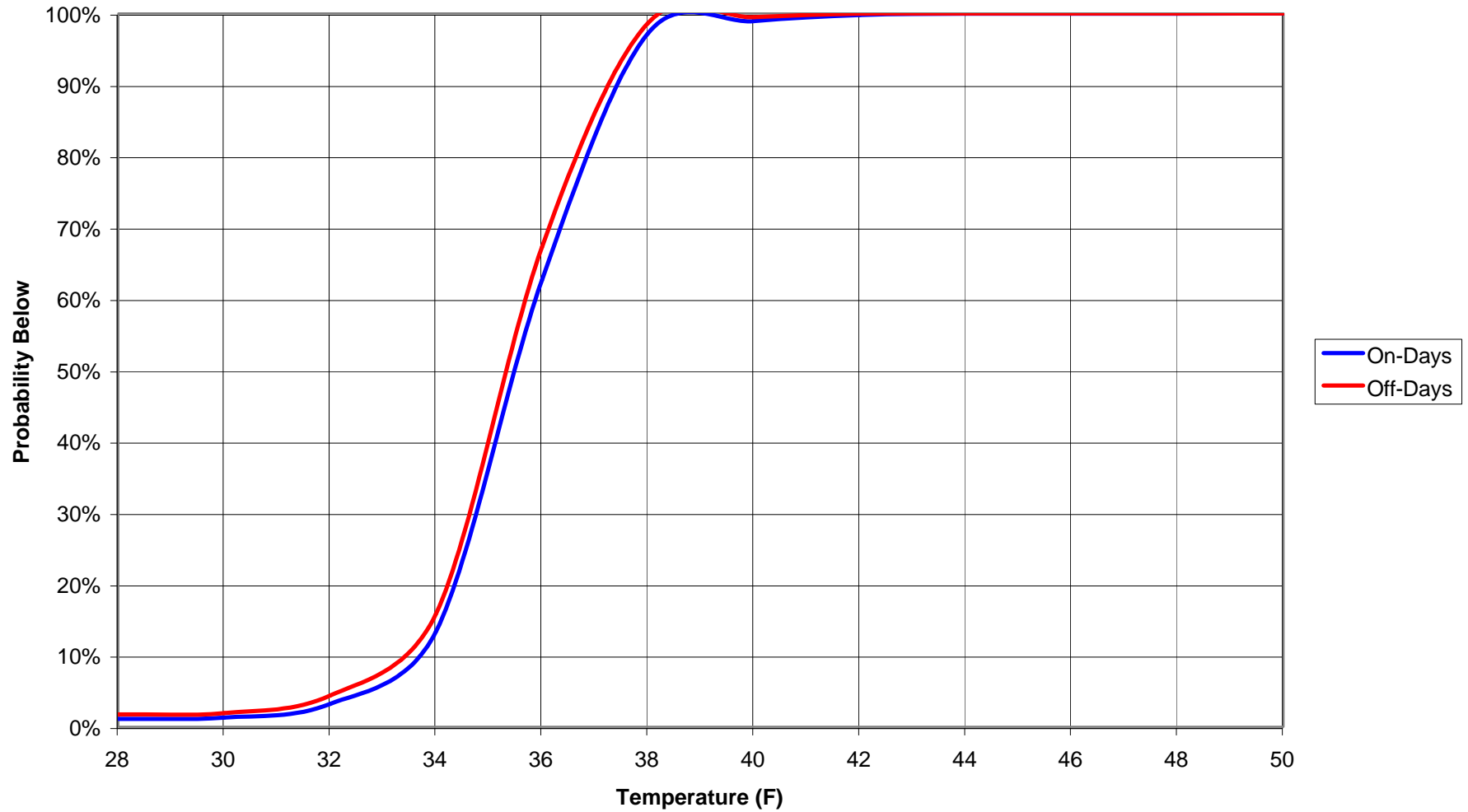
ATTACHMENTS:

EXEC. SUMMARY TEMP. HISTOGRAM SOLAR HISTOGRAM OTHER _____
 TEMP. PROBABILITY SOLAR PROBABILITY OTHER _____

Walk-In Refrigerator Temperature Histogram
4/29/03 -- 6/1/03



Walk-In Refrigerator Temperature Probabilities 4/29/03 -- 6/1/03





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Test Report

Report No. 12116-3

Date: 06/18/03

Customer:

Bertucci's
 358 Vanderbilt Parkway
 Hauppauge, NY 11788

 Contact: Corey Grossman

Test Site Location:

SAME

 Domestic Hot-Water Heater

Test Type: HEATING AIR CONDITIONING REFRIGERATION OTHER: _____
 Product Tested: HW LCH LCS CHW CHS AC CAC RU OTHER: _____

Type of Equipment:

AO Smith, HW520 932
 Natural Gas, 120v, 24v control

Test Start Date: 04/29/03
 Test End Date: 06/01/03
 No. of Days in Test: 34

BURNER RUN-TIME: in HRS. in MIN.
 IntelliCon ON-DAYS: 61.8
 IntelliCon OFF-DAYS: 78.4 RUN-TIME was changed by: 21.17%

DEGREE-DAY ADJUSTMENT NOT USED FOR THIS TEST
 IntelliCon ON-DAYS: _____
 IntelliCon OFF-DAYS: _____
 Total Degree-Days: _____

SOLAR LOAD COMPENSATION: NOT USED FOR THIS TEST
 IntelliCon ON-DAYS: _____
 IntelliCon OFF-DAYS: _____

BURNER CYCLING REDUCTION:
 IntelliCon ON-DAYS: 2109
 IntelliCon OFF-DAYS: 3686 Cycling was reduced by: 42.8%

Savings = 21.17%

COMMENTS:

ATTACHMENTS: EXEC. SUMMARY TEMP. HISTOGRAM SOLAR HISTOGRAM OTHER _____
 TEMP. PROBABILITY SOLAR PROBABILITY OTHER _____