



Report No. 12120
Date: 8/11/03

Incorporated Village of Rockville Centre

Energy Consumption Reduction Pilot Program

Test Results for:

Fire House
110 Maple Avenue
Rockville Centre, NY 11570

Commercial Air Conditioning System
Carrier 10 Ton - Packaged Roof-Top

A Confidential Report
Prepared by
Intellidyne LLC

EXECUTIVE SUMMARY

The following is a summary of the Energy Saving Performance of the **IntelliCon[®]-CAC** control which was installed on one (1) **Carrier 10 Ton Packaged Roof-Top commercial air conditioning system** at the Rockville Centre Fire House, 110 Maple Avenue. This system operates on a 24 hours per day, 7 days per week basis.

During the testing period at this particular location, the **IntelliCon[®]-CAC** delivered an electric consumption reduction of **13.10%** on the air conditioning system with no degradation of the temperature maintenance.

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 the unit *after the IntelliCon[®] affect.*

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

These results further document the financial benefit resulting from the implementation of the IntelliCon[®] Energy Saving Control. While the test was performed on the air conditioning application, the principle of operation is the same for the IntelliCon[®]-RU and the IntelliCon[®]-CAC which reduces electric consumption on commercial refrigeration. These controls continually monitor the system to detect load changes. In cases where the load is less than the system maximum output the control delays the start of the system to lower the energy output to match the reduced load. This process is varied dynamically from cycle to cycle.

Test Summary and Recommendations:

The Village of Rockville Centre can expect a pay-back on the IntelliCon[®] investment in less than 12 months when the controls are applied. (This assumes that energy costs are in the \$.10 per KWH 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. 12120

Date: 08/11/03

Customer:

Village of Rockville Centre

Test Site Location:

Fire House
 110 Maple Ave
 Rockville Centre, NY
 Contact: Tom Cardile

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

Type of Equipment:

Carrier Packaged Roof-Top
 10 Ton
 220V 3 Phase, RLA: 19.8
 Actual Amperage: 14.2

Test Start Date: 07/08/03
 Test End Date: 07/29/03
 No. of Days in Test: 22

COMPRESSOR RUN-TIME:

in HRS. in MIN.

IntelliCon ON-DAYS: 216:56:13

IntelliCon OFF-DAYS: 239:18:37

RUN-TIME was reduced by: 9.35%

COMPRESSOR USAGE FACTOR:

IntelliCon On-Days: 82%

IntelliCon Off-Days: 91%

COOLING DEGREE-DAYS (FOR TEST PERIOD)

IntelliCon ON-DAYS: 111

It was 5.5% Warmer on the On-Days.

IntelliCon OFF-DAYS: 105

Total Degree-Days: 216

SOLAR LOAD COMPENSATION: (Lumens/Sq. Ft.)

IntelliCon ON-DAYS: 79411

IntelliCon OFF-DAYS: 79645

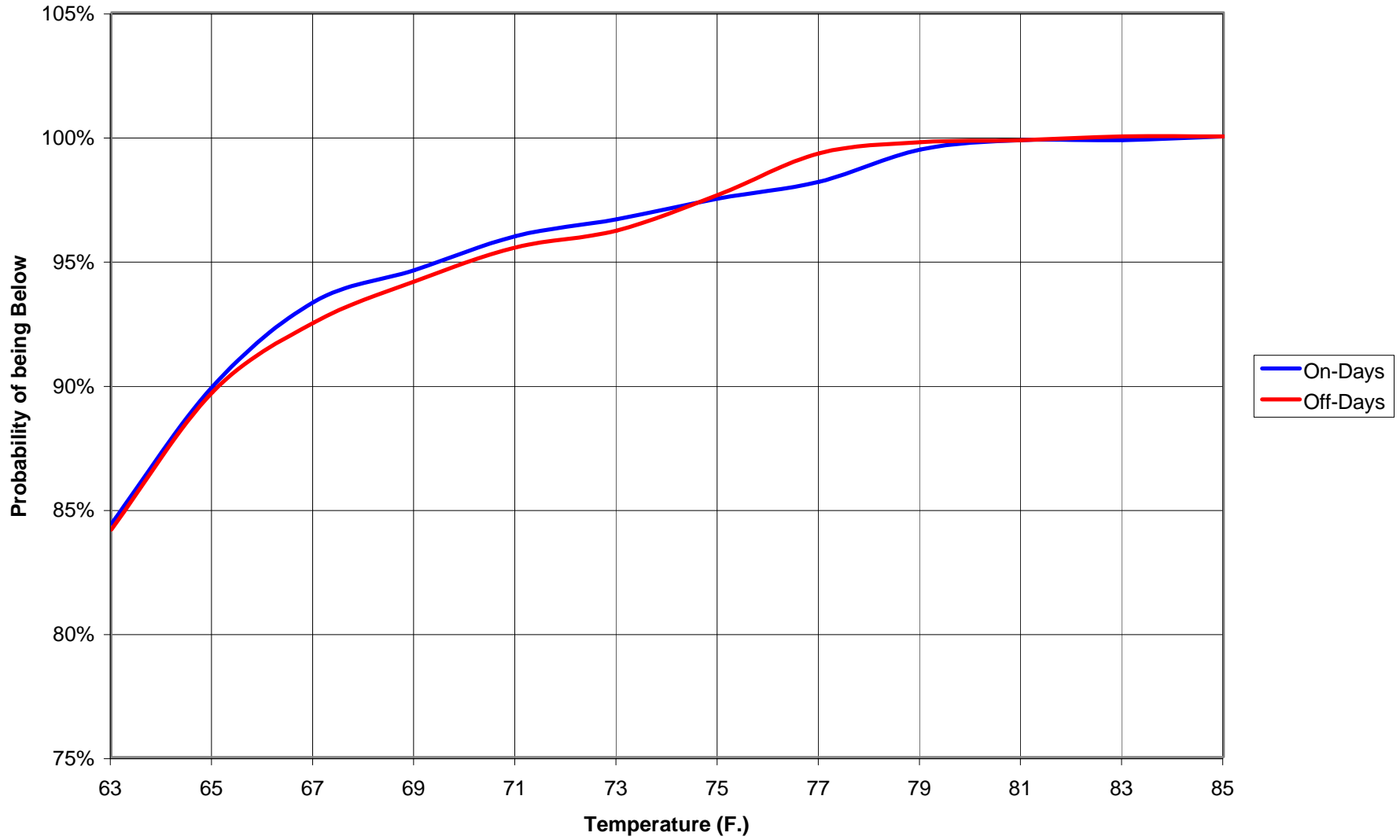
It was < 1% Sunnier on the OFF-Days.

Savings = 13.10%

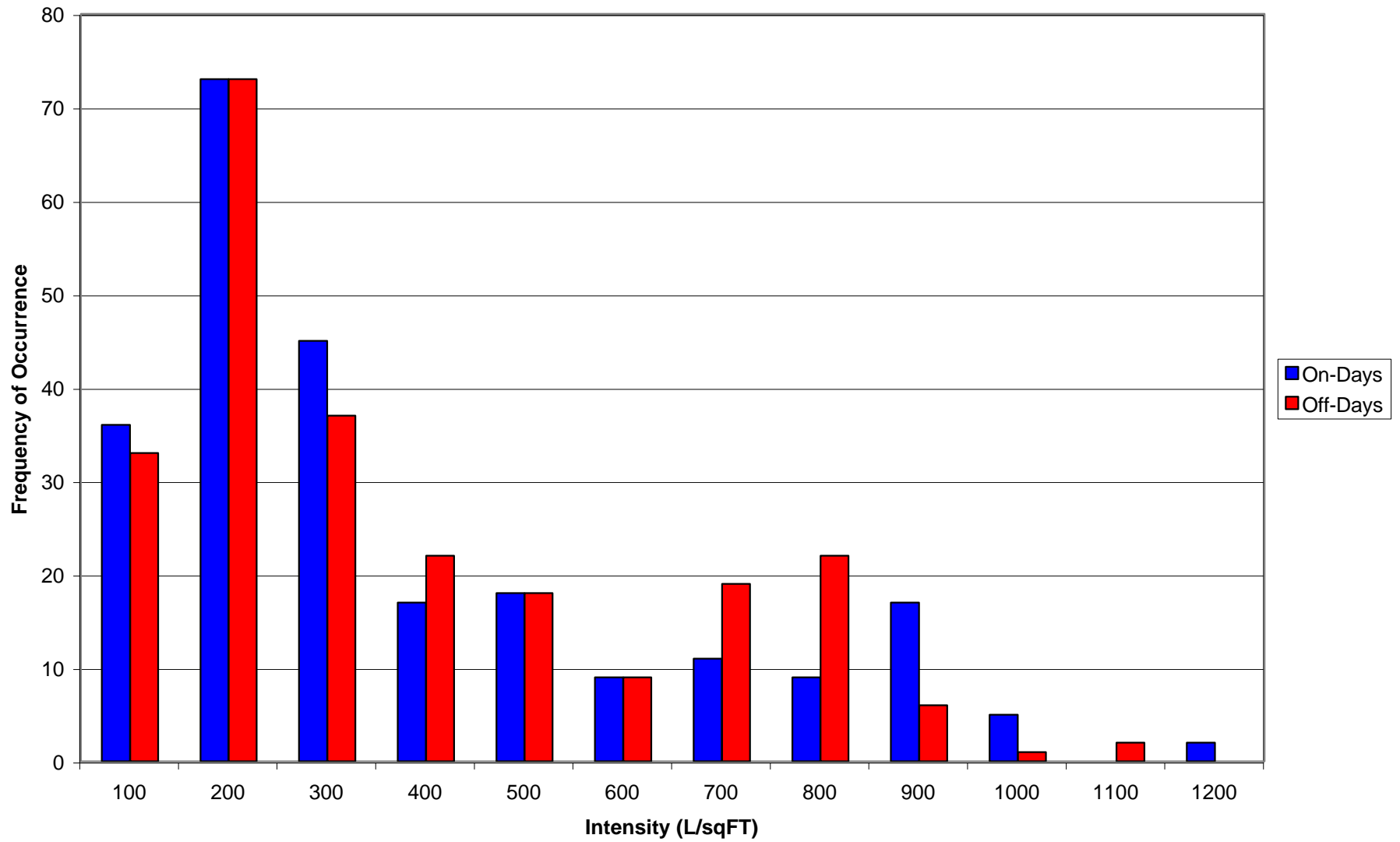
COMMENTS: The Solar Influence was so low that it was inconsequential to the results.

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

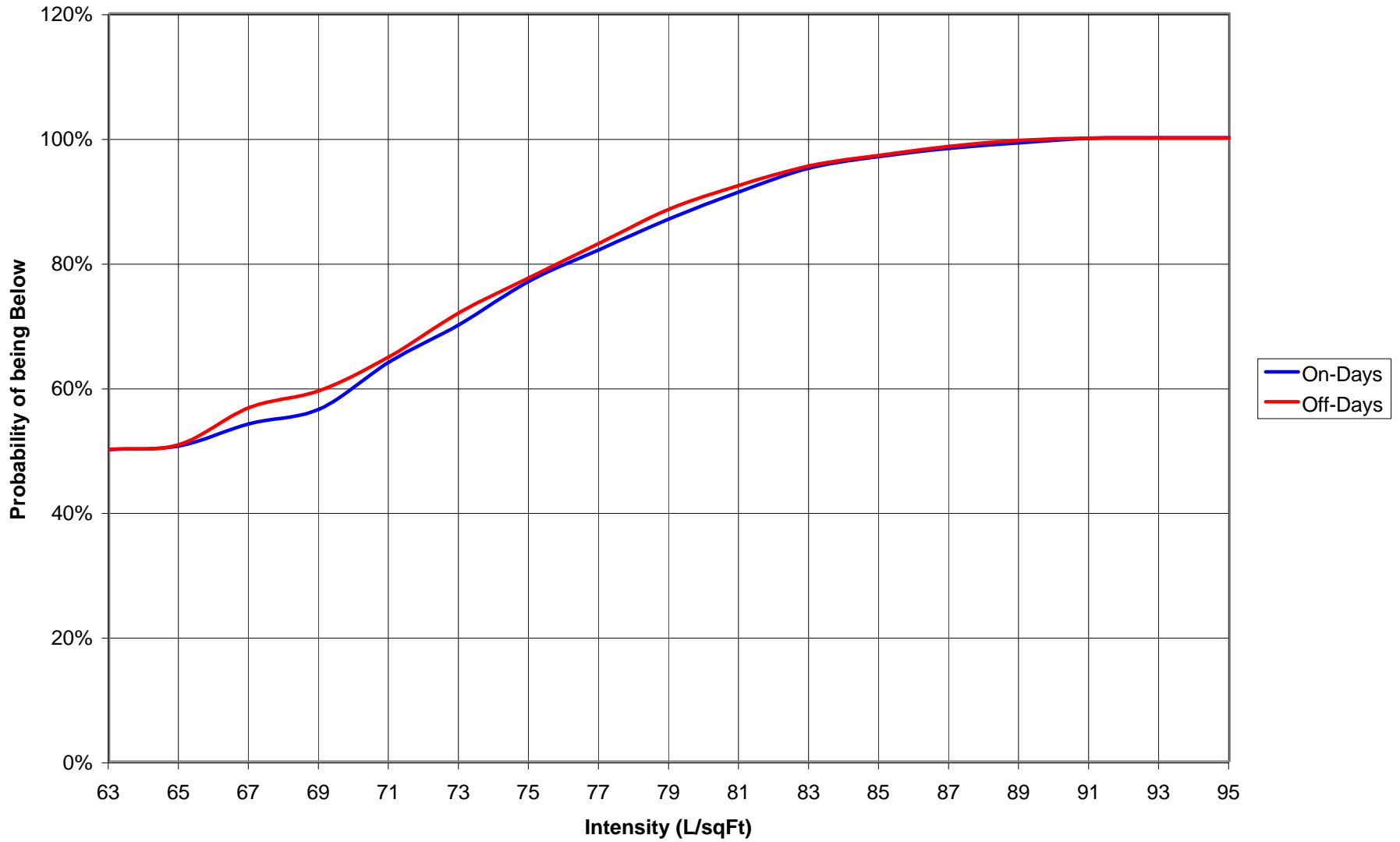
Outdoor Air Temperature Influence Probabilities (7/8/03 -- 7/29/03)



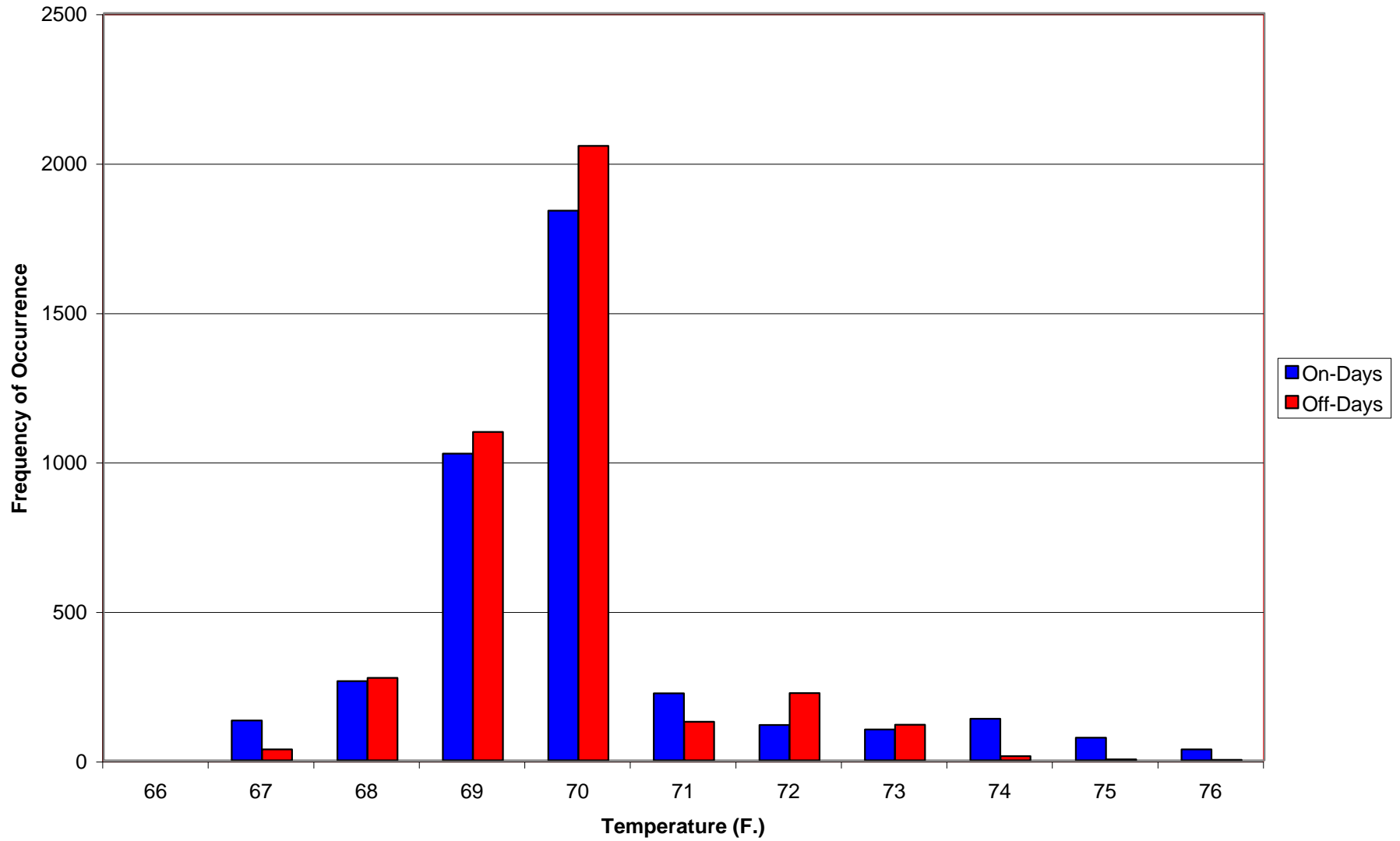
Solar Influence Histogram (7/8/03 -- 7/29/03)



Solar Influence Probabilities (7/8/03 -- 7/29/03)



Space Temperature Histogram (7/8/03 -- 7/29/03)



Space Temperature Variance Probabilities (7/8/03 -- 7/29/03)

