



Report No. 12155
Date: 03/30/07

Fuel Reduction Pilot Program

CONDUCTED AT

KEOGH-DWYER CORRECTIONAL
FACILITY

FOR

Sussex County

TEST RESULTS

FOR

TWO HOT-WATER BOILERS

&

TWO DOMESTIC HOT-WATER HEATERS

A Confidential Report

Prepared by

Intellidyne LLC



90 Pratt Oval
 Glen Cove, NY 11542
 Phone: 516-676-0777
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Test Report

Report No. 12155-1

Date: 03/30/07

Customer:

Sussex County

Test Site Location:

Keogh-Dwyer Correctional Facility
 41 High Street
 Newton, New Jersey, 07860

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

Type of Equipment:

Manufacturer: HB Smith
 Model: 28-13 both Boiler # 1 & # 2
 Capacity / SetPt: B1 = 4.06MMbtu/190°, B2= 3.78MMbtu/190°
 Fuel Type: Natural Gas
 Application: Hydronic Heat via AHU Coils and convectors
 Area Served: Entire facility
 Misc.

Test Start Date: 01/24/07
 Test End Date: 02/22/07
 No. of Days in Test: 30

BURNER RUN-TIME: in HRS. in MIN.
 IntelliCon ON-DAYS: 368:18:29
 IntelliCon OFF-DAYS: 412:18:30 RUN-TIME was reduced by: 10.67%

BURNER USAGE FACTOR:
 IntelliCon On-Days: 51%
 IntelliCon Off-Days: 57%

HEATING DEGREE-DAYS (FOR TEST PERIOD)
 IntelliCon ON-DAYS: 587 It was 1.1% Colder on the On-Days.
 IntelliCon OFF-DAYS: 580
 Total Degree-Days: 1167

USAGE PER DEGREE-DAY
 ON-DAYS: 0:37:40
 OFF-DAYS: 0:42:37

SOLAR LOAD COMPENSATION: (Lumens/Sq. Ft.)
 IntelliCon ON-DAYS: 1605580
 IntelliCon OFF-DAYS: 1810675 It was 11.33% Sunnier on the OFF-Days.

Individual Runtimes

	Boiler #1	Boiler #2
ON-Day Runtime	211:58:02	156:20:27
Cycles	403	441
OFF-Day Runtime	230:40:26	181:38:04
Cycles	521	659

BURNER CYCLING REDUCTION:
 IntelliCon ON-DAYS: 844
 IntelliCon OFF-DAYS: 1180 Cycling was reduced by: 28.5%

Adj. Savings = 11.61%

COMMENTS:



90 Pratt Oval
 Glen Cove, NY 11542
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Test Report

Report No. 12155-2

Date: 03/30/07

Customer:

Sussex County

Test Site Location:

Keogh-Dwyer Correctional Facility
 41 High Street
 Newton, New Jersey, 07860

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

Type of Equipment:

Manufacturer: AO Smith
 Model: BTR500A100 both DHW Heater # 1 & # 2
 Capacity / SetPt: 500Mbtu/140° both
 Fuel Type: Natural Gas
 Application: Domestic Hot Water Generation
 Area Served: Entire facility
 Misc.

Test Start Date: 01/24/07
 Test End Date: 02/22/07
 No. of Days in Test: 30

BURNER RUN-TIME:

in HRS. in MIN.

IntelliCon ON-DAYS: 152:30:59

IntelliCon OFF-DAYS: 183:14:58

RUN-TIME was reduced by: 16.77%

BURNER USAGE FACTOR:

IntelliCon On-Days: 21%

IntelliCon Off-Days: 25%

Individual Runtimes

ON-Day Runtime Cycles	Boiler #1	Boiler #2
	87:38:57	64:52:02
	518	428

OFF-Day Runtime Cycles	Boiler #1	Boiler #2
	100:59:01	82:15:57
	1958	1448

BURNER CYCLING REDUCTION:

IntelliCon ON-DAYS: 946

IntelliCon OFF-DAYS: 3406

Cycling was reduced by: 72.2%

Adj. Savings = 16.77%

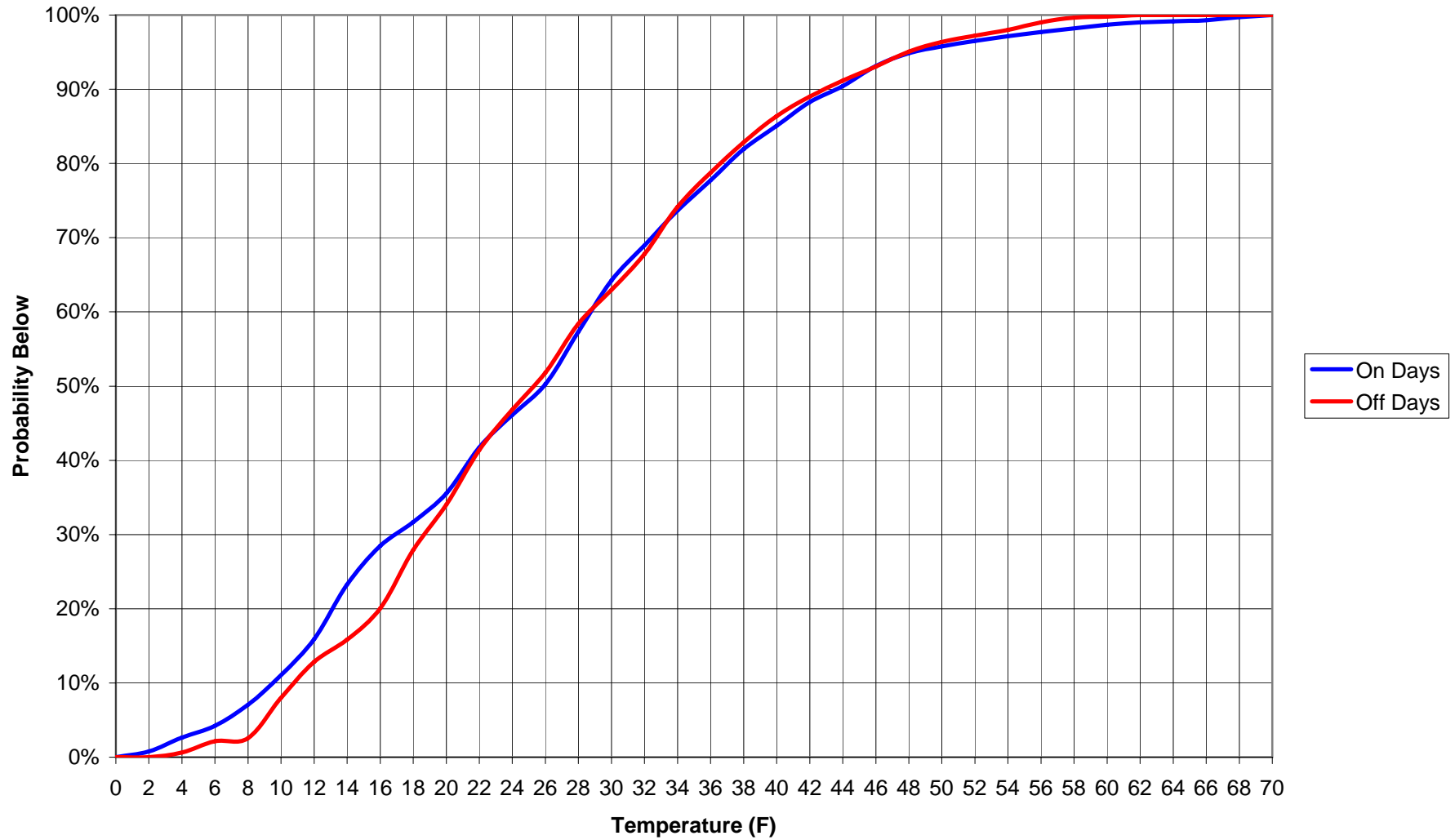
COMMENTS:

Empty comment box for additional notes.

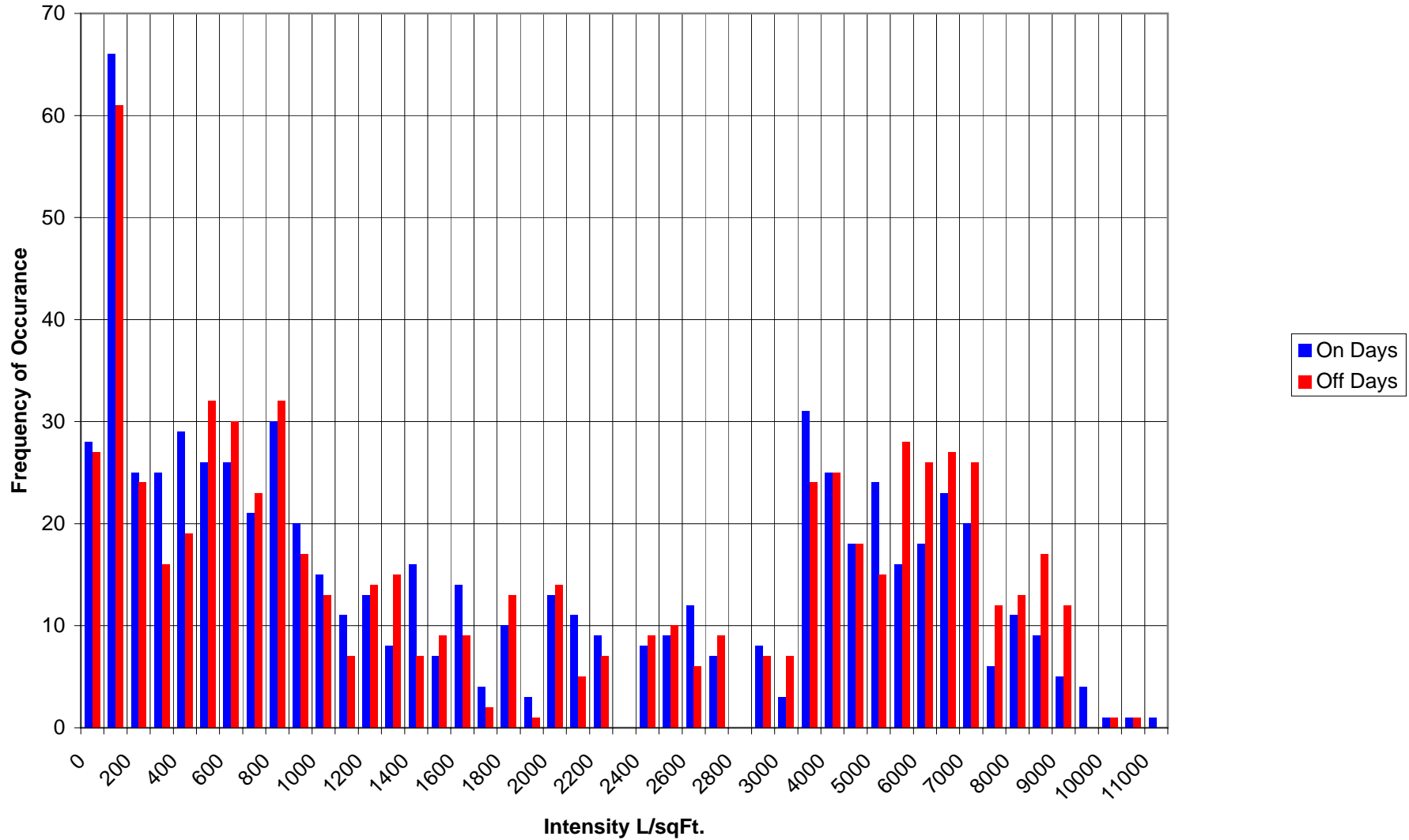
Keogh-Dwyer Correctional Facility Outside Air Temp Histogram (1/24/07 - 2/22/07)



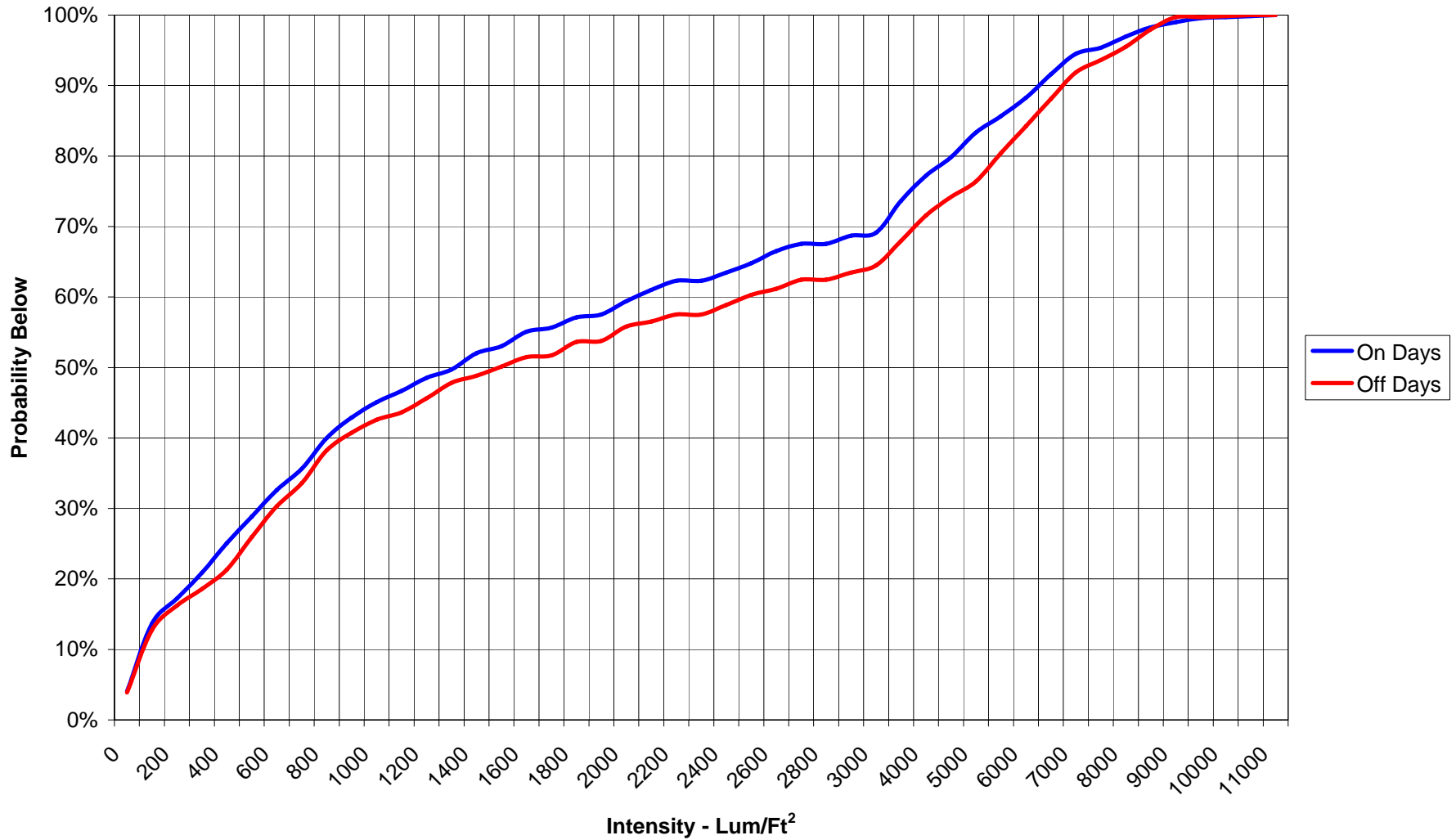
**Keogh-Dwyer Correctional Facility
OAT Temperature Probabilities (1/24/07 - 2/22/07)**



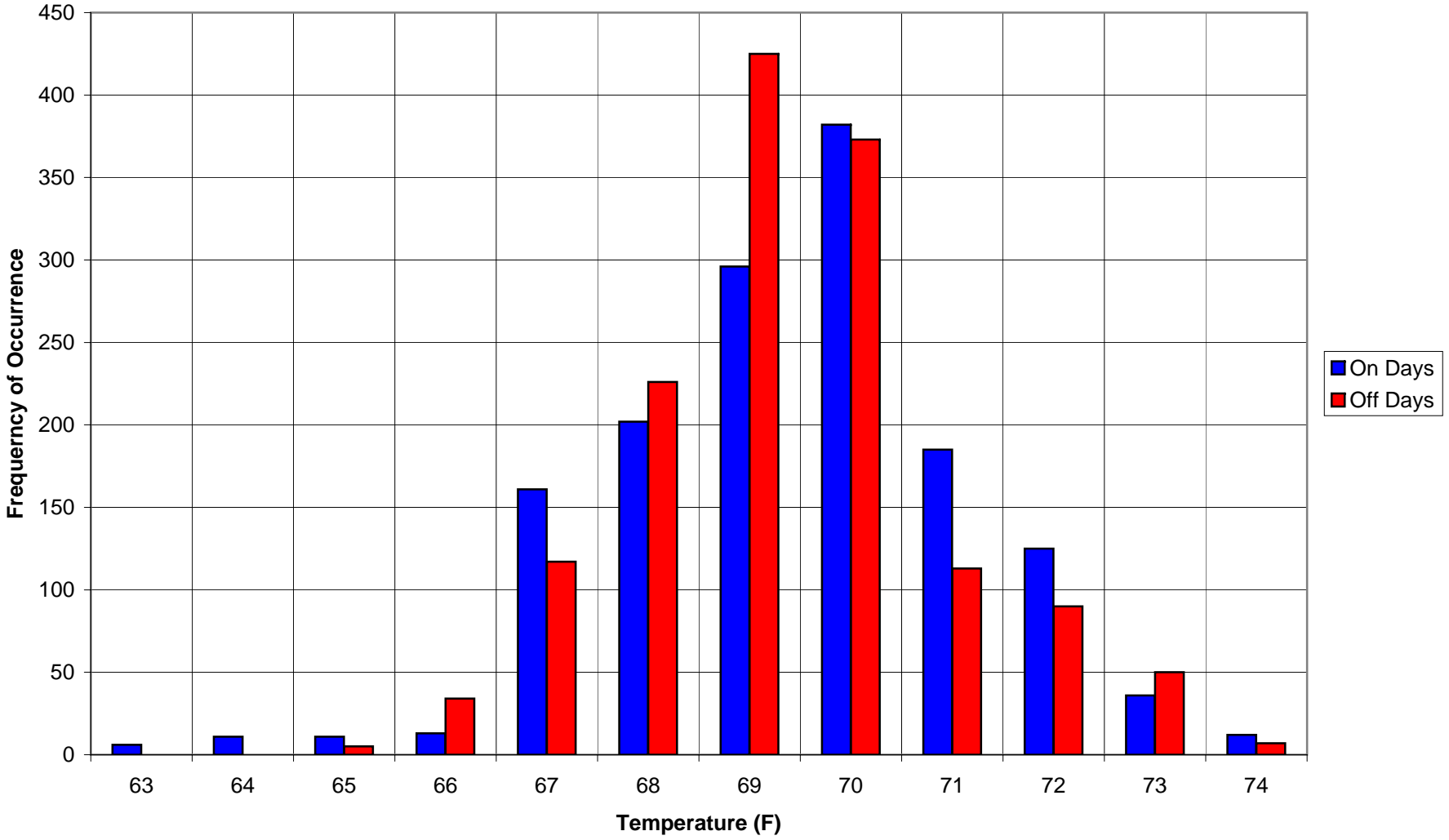
Keogh-Dwyer Correctional Facility Solar Influence Histogram (1/24/07 - 2/22/07)



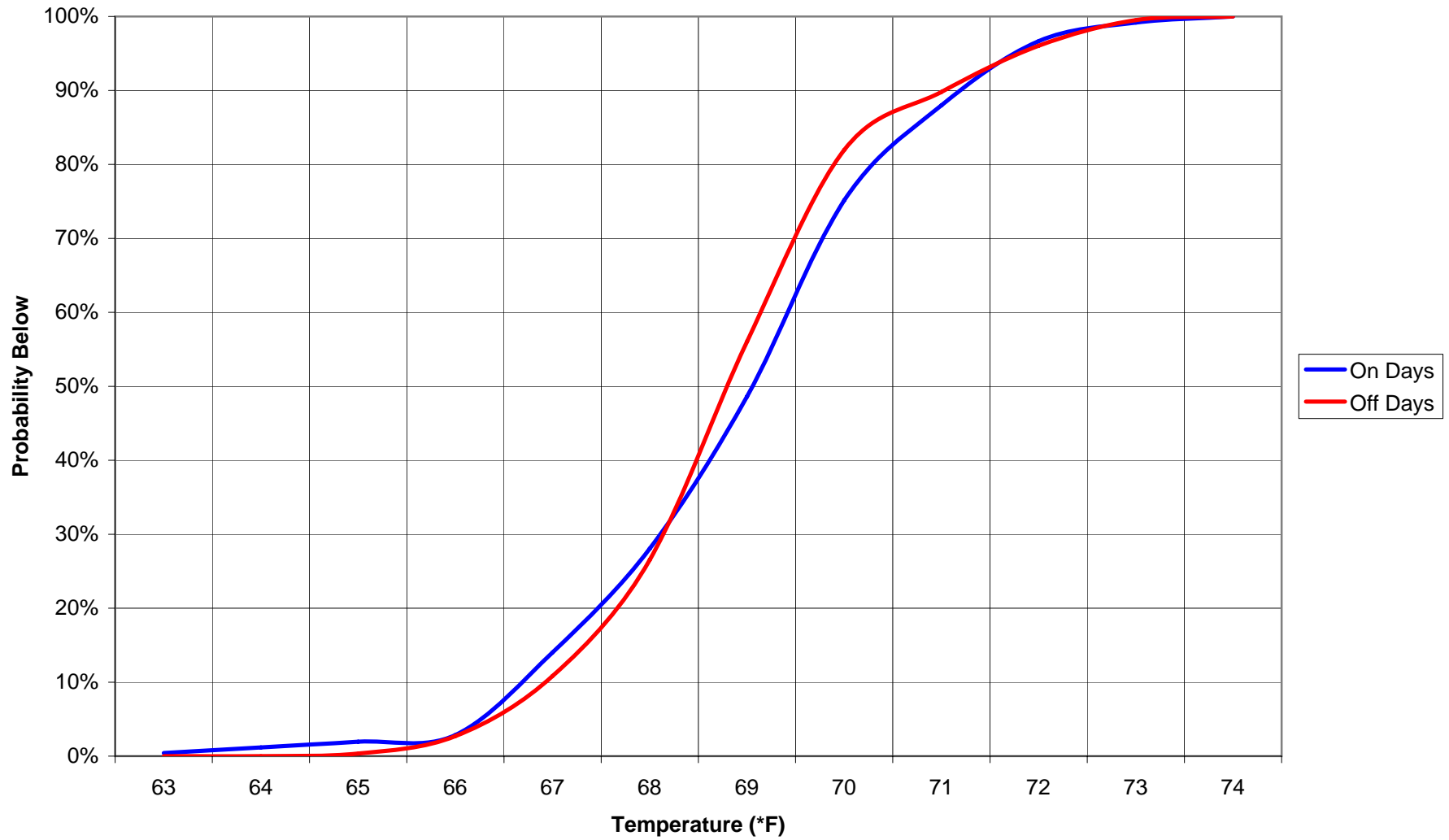
**Keogh-Dwyer Correctional Facility
Solar Influence Probabilities (1/24/07 - 2/22/07)**



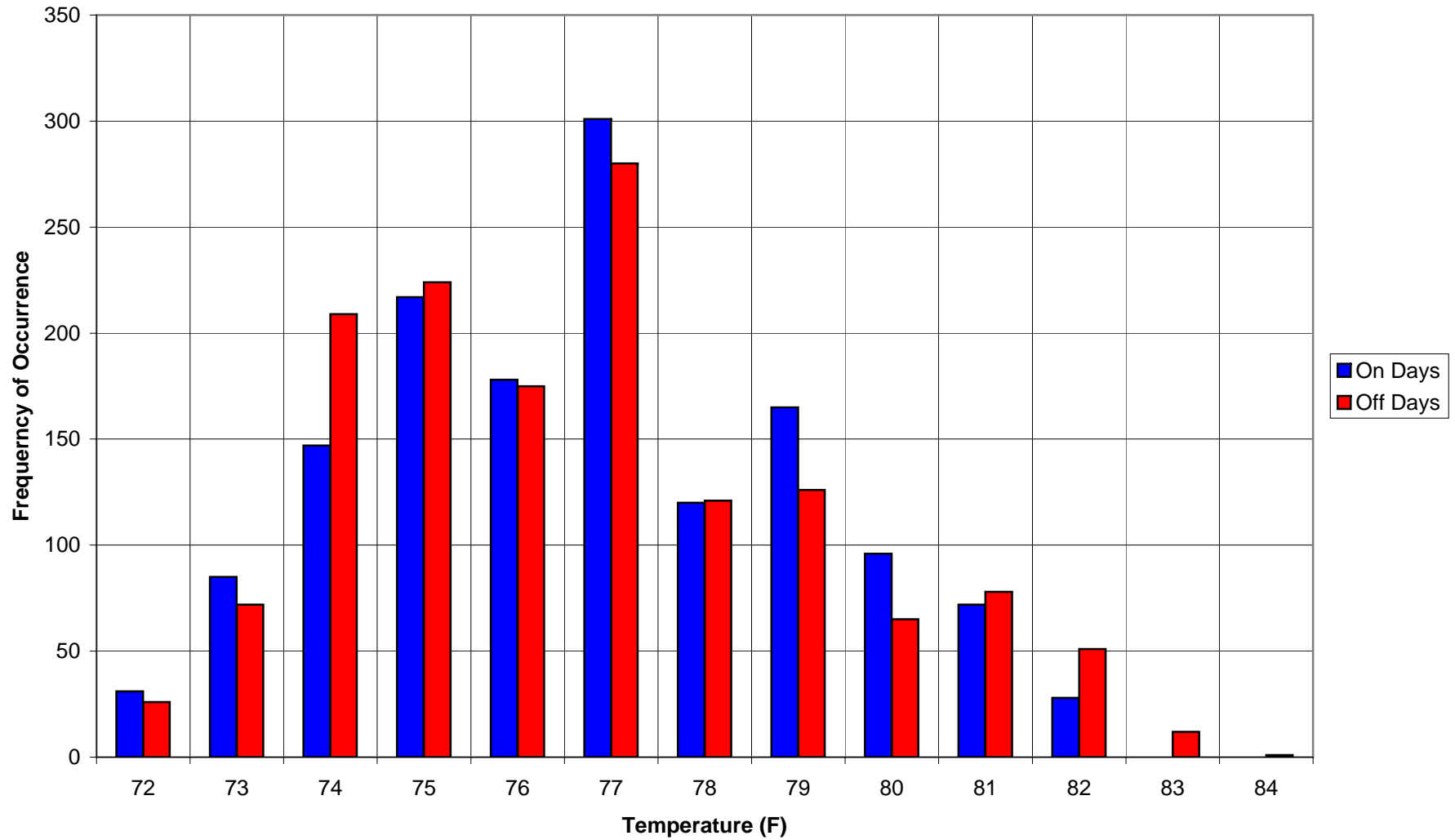
**Keogh-Dwyer Correctional Facility
Office Temperature Histogram (1/24/07 - 2/22/07)**



**Keogh-Dwyer Correctional Facility
Office Temperature Probabilities (1/24/07 - 2/22/07)**



Keogh-Dwyer Correctional Facility
Command Center 3 Temperature Histogram (1/24/07 - 2/22/07)



**Keogh-Dwyer Correctional Facility
Command Center 3 Temperature Probabilities (1/24/07 - 2/22/07)**

