

Report By:

National TAB
1329 E. KEMPER ROAD
SUITE 4210
CINCINNATI, OH 45246



Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 04/23/2024

PROJECT
Joseph House (Cincinnati, OH)

3304 COLERAIN AVE

CINCINNATI, OH

Client

Cincinnati Air
3239 Profit Dr

Fairfield, OH 45014

National TAB

Project: Joseph House (Cincinnati, OH)

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National TAB

Project: Joseph House (Cincinnati, OH)

System/Unit: AHU/RTU



Asset: AHU-1-1

AREA:130A

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	32R0270530P90Y
Model Num	NA	TPEFYP018MA144A
Configuration	HORIZONTAL	HORIZONTAL
Num PreFilter 1	-	1
PreFilter Size 1	-	8"X19"X1"

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	-	0.162
Motor Rpm	-	NA
Phase	1	1
Rated Voltage	208	208
Rated Amperage	-	1.54
Service Factor	-	NA

Test Data		
	Design	Actual
SF CFM	600	580
RA CFM	524	518
OA CFM	76	62
RL Voltage	208	214.6
RL Amperage	-	0.70
SF System SetPt	-	4/4
OA Damper Position	-	SET MANUALLY

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.36"
Fan Discharge SP	-	0.022"
Total ESP	0.6	0.382"

Completed By: Jordan Best on 04/18/2024

Notes:
Returns below design, balanced proportionately.

Written By: Jordan Best on 04/18/2024

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Project: Joseph House (Cincinnati, OH)

AHU/RTU



Diffuser Supply (GRD)

AHU-1-1/130A

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
1-1	131	CD-4	8	160	85	148	92.5
1-2	131	CD-4	8	160	75	137	85.6
1-3	130	CD-4	8	110	69	109	99.1
1-4	129B	CD-3	6	15	59	19	126.7
1-5	130	CD-4	8	110	93	111	100.9
1-6	129A	CD-3	6	15	50	21	140.0
1-7	130A	CD-3	6	30	82	35	116.7
Total				600	513	580	96.67%

Diffuser Ret/Exh (GRD)

AHU-1-1/130A

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R1-1	RG-1	22X10	320	1	173	175	175	54.7
R1-2	RG-1	22X10	320	1	163	161	161	50.3
Total			640		336	336	336	52.5%

Completed By: Jordan Best on 04/12/2024

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Project: Joseph House (Cincinnati, OH)

System/Unit: AHU/RTU



Asset: AHU-1-2

AREA:128

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	35R0368430P90Z
Model Num	NA	TPEFYP024MA144A
Configuration	HORIZONTAL	HORIZONTAL
Num PreFilter 1	-	1
PreFilter Size 1	-	8"X19"X1"

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	-	0.162
Motor Rpm	-	NA
Phase	1	1
Rated Voltage	208	208
Rated Amperage	-	2.88

Test Data		
	Design	Actual
SF CFM	800	769
RA CFM	740	714
OA CFM	60	55
RL Voltage	208	213.2
RL Amperage	-	1.94
SF System SetPt	-	4/4
OA Damper Position	-	SET MANUALLY

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.50"
Fan Discharge SP	-	0.195"
Total ESP	0.6	0.695"

Completed By: Jordan Best on 04/18/2024

Notes:
 Diffuser 5 below design, attempted to push air from other diffusers but unable to raise flow.
 Returns below design, balanced proportionately.

Written By: Jordan Best on 04/18/2024

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Project: Joseph House (Cincinnati, OH)

AHU/RTU



Diffuser Supply (GRD)

AHU-1-2/128

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
2-1	125	CD-4	8	160	52	146	91.3
2-2	124	CD-4	8	160	138	168	105.0
2-3	126	CD-4	8	160	156	144	90.0
2-4	127	CD-4	8	160	133	166	103.8
2-5	128	CD-4	8	160	125	145	90.6
Total				800	604	769	96.12%

Diffuser Ret/Exh (GRD)

AHU-1-2/128

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R2-1	RG-1	22X10	148	1	187	128	122	82.4
R2-2	RG-1	22X10	148	1	158	131	115	77.7
R2-3	RG-1	22X10	148	1	116	122	132	89.2
R2-4	RG-1	22X10	148	1	73	109	117	79.1
R2-5	RG-1	22X10	148	1	71	114	114	77.0
Total			740		605	604	600	81.08%

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Project: Joseph House (Cincinnati, OH)

System/Unit: AHU/RTU



Asset: AHU-1-3

AREA:136

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	34R01886
Model Num	NA	PEFY-P30NMAU-E4
Configuration	HORIZONTAL	HORIZONTAL
Num PreFilter 1	-	1
PreFilter Size 1	-	8"X19"X1"

Test Data		
	Design	Actual
SF CFM	1000	994
RA CFM	940	936
OA CFM	60	58
RL Voltage	208	214.1
RL Amperage	-	2.48
SF System SetPt	-	4/4
OA Damper Position	-	SET MANUALLY

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	-	0.162
Motor Rpm	-	NA
Phase	1	1
Rated Voltage	208	208
Rated Amperage	-	2.88

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.49"
Fan Discharge SP	-	NA
Total ESP	0.6	0.49"

Completed By: Jordan Best on 04/18/2024

Notes:
Returns below design, balanced proportionately.

Written By: Jordan Best on 04/18/2024

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Project: Joseph House (Cincinnati, OH)

AHU/RTU



Diffuser Supply (GRD)

AHU-1-3/136

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
3-1	133	CD-4	8	115	184	119	103.5
3-2	133	CD-4	8	115	155	119	103.5
3-3	132	CD-4	8	115	20	98	85.2
3-4	132	CD-4	8	115	139	111	96.5
3-5	134	CD-4	8	115	90	123	107.0
3-6	134	CD-4	8	115	127	116	100.9
3-7	135	CD-4	8	115	135	116	100.9
3-8	135	CD-4	8	115	109	116	100.9
3-9	136	SR-1	6X6	80	76	76	95.0
Total				1000	1035	994	99.4%

Diffuser Ret/Exh (GRD)

AHU-1-3/136

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R3-1	RG-1	22X10	225	1	206	187	143	63.6
R3-2	RG-1	22X10	225	1	173	185	142	63.1
R3-3	RG-1	22X10	225	1	89	142	130	57.8
R3-4	RG-1	22X10	225	1	63	148	126	56.0
R3-5	RR-1	6X6	40	1	185	53	64	160.0
Total			940		716	715	605	64.36%

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Project: Joseph House (Cincinnati, OH)

System/Unit: AHU/RTU



Asset: AHU-1-4

AREA:100A

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	32R02019
Model Num	NA	PEFY-P48NMAU-E4
Configuration	HORIZONTAL	HORIZONTAL
Num PreFilter 1	-	1
PreFilter Size 1	-	8"X19"X1"

Test Data		
	Design	Actual
SF CFM	1600	1478
RA CFM	1490	1372
OA CFM	110	106
RL Voltage	208	215
RL Amperage	-	2.33
SF System SetPt	-	4/4
OA Damper Position	-	SET MANUALLY

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	-	0.402
Motor Rpm	-	NA
Phase	1	1
Rated Voltage	208	208
Rated Amperage	-	3.09
Service Factor	-	NA

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.10"
Fan Discharge SP	-	0.065"
Total ESP	0.6	0.162"

Notes:
 Unit below design CFM operating at highest set point.
 Returns below design, balanced proportionately.

Written By: Jordan Best on 04/18/2024

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Project: Joseph House (Cincinnati, OH)

AHU/RTU



Diffuser Supply (GRD)

AHU-1-4/100A

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
4-1	105	CD-1	6	40	127	41	102.5
4-2	103	CD-4	8	250	175	192	76.8
4-3	100A	CD-4	8	150	148	155	103.3
4-4	100A	CD-4	8	150	144	160	106.7
4-5	114	CD-3	6	30	32	33	110.0
4-6	115	CD-3	6	30	42	32	106.7
4-7	102	SR-4	8	350	261	260	74.3
4-8	100A	CD-4	8	150	151	150	100.0
4-9	100A	CD-4	8	150	163	151	100.7
4-10	100A	CD-4	8	150	127	133	88.7
4-11	100A	CD-4	8	150	103	95	63.3
4-12	106	CD-4	8	70	81	76	108.6
Total				1670	1554	1478	88.5%

Diffuser Ret/Exh (GRD)

AHU-1-4/100A

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R4-1	RG-1	22X10	175	1	350	170	170	97.1
R4-2	RR-3	20X6	275	1	317	270	270	98.2
R4-3	RG-3	10X10	80	1	117	72	72	90.0
R4-4	RG-2	22X22	860	1	222	322	322	37.4
Total			1390		1006	834	834	60%

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Project: Joseph House (Cincinnati, OH)

System/Unit: AHU/RTU



Asset: AHU-1-6

AREA:119

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	35R0368530P90Z
Model Num	NA	TPEFYP024MA144A
Configuration	HORIZONTAL	HORIZONTAL
Num PreFilter 1	-	1
PreFilter Size 1	-	8"X19"X1"

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	-	0.162
Motor Rpm	-	NA
Phase	1	1
Rated Voltage	208	208
Rated Amperage	-	2.88

Test Data		
	Design	Actual
SF CFM	800	771
RA CFM	740	707
OA CFM	60	64
RL Voltage	208	214.5
RL Amperage	-	1.19
SF System SetPt	-	4/4
OA Damper Position	-	SET MANUALLY

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.39"
Fan Discharge SP	-	0.024"
Total ESP	0.6	0.414"

Completed By: Jordan Best on 04/18/2024

Notes:
Returns below design, balanced proportionately.

Written By: Jordan Best on 04/18/2024

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Project: Joseph House (Cincinnati, OH)

AHU/RTU



Diffuser Supply (GRD)

AHU-1-6/119

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
6-1	121	CD-4	8	95	102	92	96.8
6-2	121	CD-4	8	95	101	95	100.0
6-3	122	CD-4	8	95	97	93	97.9
6-4	122	CD-4	8	95	105	99	104.2
6-5	120	CD-4	8	95	119	87	91.6
6-6	120	CD-4	8	95	106	86	90.5
6-7	119	CD-4	8	115	119	111	96.5
6-8	119	CD-4	8	115	111	108	93.9
Total				800	860	771	96.38%

Diffuser Ret/Exh (GRD)

AHU-1-6/119

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R6-1	RG-1	22X10	185	1	202	202	139	75.1
R6-2	RG-1	22X10	185	1	131	131	128	69.2
R6-3	RG-1	22X10	185	1	108	108	144	77.8
R6-4	RG-1	22X10	185	1	98	98	136	73.5
Total			740		539	539	547	73.92%

Completed By: Jordan Best on 04/12/2024

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Project: Joseph House (Cincinnati, OH)

System/Unit: AHU/RTU



Asset: AHU-1-7

AREA:118

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	35R0369530P90Z
Model Num	NA	TPEFYP024MA144A
Configuration	HORIZONTAL	HORIZONTAL
Num PreFilter 1	-	1
PreFilter Size 1	-	8"X25"X1"

Motor Data		
	Design	Actual
Horsepower	-	0.162
Phase	1	1
Rated Voltage	208	208
Rated Amperage	-	2.03

Test Data		
	Design	Actual
SF CFM	800	832
RA CFM	695	568
OA CFM	105	116
RL Voltage	208	214
RL Amperage	-	1.8
SF System SetPt	-	4/4
OA Damper Position	-	SET MANUALLY

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.69"
Fan Discharge SP	-	0.05"
Total ESP	0.6	0.74"

Completed By: Jordan Best on 04/18/2024

Notes:
Returns below design, balanced proportionately.

Written By: Jordan Best on 04/18/2024

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Project: Joseph House (Cincinnati, OH)

AHU/RTU



Diffuser Supply (GRD)

AHU-1-7/118

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
7-1	116	CD-4	8	140	106	145	103.6
7-2	112A	CD-1	6	30	40	34	113.3
7-3	116	CD-4	8	140	121	153	109.3
7-4	117	CD-4	8	145	101	148	102.1
7-5	117	CD-4	8	145	93	142	97.9
7-6	118	CD-4	8	100	107	108	108.0
7-7	118	CD-4	8	100	116	102	102.0
Total				800	684	832	104%

Diffuser Ret/Exh (GRD)

AHU-1-7/118

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R7-1	RG-1	22X10	280	1	249	206	222	79.3
R7-2	RG-1	22X10	290	1	166	186	209	72.1
R7-3	RG-1	22X10	200	1	155	179	137	68.5
Total			770		570	571	568	73.77%

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Project: Joseph House (Cincinnati, OH)

System/Unit: AHU/RTU



Asset: AHU-1-8

AREA:106

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	34R01875
Model Num	NA	PEFY-P30NMAU-E4
Configuration	HORIZONTAL	HORIZONTAL
Num PreFilter 1	-	1
PreFilter Size 1	-	8"X28"X1"

Motor Data		
	Design	Actual
Horsepower	-	0.162
Phase	1	1
Rated Voltage	208	208
Rated Amperage	-	2.03

Test Data		
	Design	Actual
SF CFM	1000	1004
RA CFM	800	588
OA CFM	200	204
RL Voltage	208	215
RL Amperage	-	2.0
SF System SetPt	-	4/4
OA Damper Position	-	MANUALLY SET

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.56"
Fan Discharge SP	-	0.02"
Total ESP	0.6	0.58"

Completed By: Jordan Best on 04/18/2024

Notes:
Returns below design, balanced proportionately.

Written By: Jordan Best on 04/18/2024

National TAB

Project: Joseph House (Cincinnati, OH)

AHU/RTU



Diffuser Supply (GRD)

AHU-1-8/106

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
8-1	109	CD-4	8	125	138	133	106.4
8-2	109	CD-4	8	125	140	118	94.4
8-3	110	CD-4	8	125	107	121	96.8
8-4	110	CD-4	8	125	116	128	102.4
8-5	108	CD-4	8	125	128	135	108.0
8-6	108	CD-4	8	125	114	129	103.2
8-7	107	CD-4	8	90	95	92	102.2
8-8	107	CD-4	8	90	90	85	94.4
Total				930	928	941	101.18%

Diffuser Ret/Exh (GRD)

AHU-1-8/106

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R8-1	RG-1	22X10	200	1	185	205	205	102.5
R8-2	RG-1	22X10	200	1	280	231	231	115.5
R8-3	RG-1	22X10	200	1	110	120	120	60.0
R8-4	RG-1	22X10	165	1	74	120	134	81.2
R8-5	RG-1	22X10	35	1	86	32	32	91.4
Total			800		735	708	722	90.25%

Completed By: Jordan Best on 04/18/2024

National TAB

Project: Joseph House (Cincinnati, OH)

System/Unit: AHU/RTU



Asset: AHU-1-9

AREA:111

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	32R02027
Model Num	NA	PEFY-P48NMAU-E4
Configuration	HORIZONTAL	HORIZONTAL
Num PreFilter 1	-	1
PreFilter Size 1	-	8"X45"X1"

Motor Data		
	Design	Actual
Horsepower	-	0.402
Phase	1	1
Rated Voltage	208	208
Rated Amperage	-	3.09

Test Data		
	Design	Actual
SF CFM	1910	1492
RA CFM	1340	913
OA CFM	260	270
RL Voltage	208	215
RL Amperage	-	2.9
SF System SetPt	-	4/4
OA Damper Position	-	SET MANUALLY

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.58"
Fan Discharge SP	-	0.03"
Total ESP	0.6	0.61"

Completed By: Jordan Best on 04/18/2024

Notes:
Unit below design CFM operating at highest set point.
Returns below design, balanced proportionately.

Written By: Jordan Best on 04/18/2024

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Project: Joseph House (Cincinnati, OH)

AHU/RTU



Diffuser Supply (GRD)

AHU-1-9/111

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
9-1	111	CD-4	8	155	103	124	80.0
9-2	111	CD-4	8	155	71	118	76.1
9-3	111	CD-4	8	155	48	67	43.2
9-4	111	CD-4	8	155	98	129	83.2
9-5	111	CD-4	8	155	96	117	75.5
9-6	111	CD-4	8	155	96	118	76.1
9-7	113	CD-1	6	50	90	74	148.0
9-8	111	CD-4	8	155	104	124	80.0
9-9	111	CD-4	8	155	91	114	73.5
9-10	111	CD-4	8	155	118	132	85.2
9-11	111	CD-4	8	155	125	122	78.7
9-12	111	CD-4	8	155	144	125	80.6
9-13	111	CD-4	8	155	114	128	82.6
Total				1910	1298	1492	78.12%

Diffuser Ret/Exh (GRD)

AHU-1-9/111

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R9-1	RG-2	22X9	1315	1	528	528	528	40.2
R9-2	RG-3	10X4	25	0.33333	385	385	385	1540.0
Total			1340		913	913	913	68.13%

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National TAB

Project: Joseph House (Cincinnati, OH)

System/Unit: FAN - Exhaust



Asset: EF131

AREA:

Unit Data		
	Design	Actual
MFG	GREENHECK	GREENHECK
Model Num	SP-A250-QD	SP-A250-QD
Type	CEILING	CEILING

Test Data		
	Design	Actual
CFM	-	264

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Project: Joseph House (Cincinnati, OH)

System/Unit: FAN - Exhaust



Asset: EF132

AREA:

Unit Data		
	Design	Actual
MFG	GREENHECK	GREENHECK
Model Num	SP-A250-QD	SP-A250-QD
Type	CEILING	CEILING

Test Data		
	Design	Actual
CFM	-	253

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National TAB

Project: Joseph House (Cincinnati, OH)

System/Unit: FAN - Exhaust



Asset: EF-112

AREA:112

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	SP-A200-QD
Type	CEILING	CEILING

Test Data		
	Design	Actual
CFM	195	220

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Project: Joseph House (Cincinnati, OH)

System/Unit: FAN - Exhaust



Asset: EF-114

AREA:114

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	SP-B90-QD
Type	CEILING	CEILING

Test Data		
	Design	Actual
CFM	70	84

Completed By: Jordan Best on 04/09/2024

National TAB

Project: Joseph House (Cincinnati, OH)

System/Unit: FAN - Exhaust



Asset: EF-115

AREA:115

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	SP-B90-QD
Type	CEILING	CEILING

Test Data		
	Design	Actual
CFM	70	92

Completed By: Jordan Best on 04/09/2024

National TAB

Project: Joseph House (Cincinnati, OH)

System/Unit: FAN - Exhaust



Asset: EF-130

AREA:130A

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	SP-A200-QD
Type	CEILING	CEILING

Test Data		
	Design	Actual
CFM	140	205

Completed By: Jordan Best on 04/09/2024

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Project: Joseph House (Cincinnati, OH)

System/Unit: FAN - Exhaust



Asset: EF-129-1

AREA:129A

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	SP-B90-QD
Type	CEILING	CEILING

Test Data		
	Design	Actual
CFM	70	81

Completed By: Jordan Best on 04/09/2024

National TAB

Project: Joseph House (Cincinnati, OH)

System/Unit: FAN - Exhaust



Asset: EF-129-2

AREA:129B

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	SP-B90-QD
Type	CEILING	CEILING

Test Data		
	Design	Actual
CFM	70	85

Completed By: Jordan Best on 04/09/2024