Report By:

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

Report: TAB REPORT

Function: Test, Adjust, & Balance

Date: 05/13/2025

Completed By: National TAB

PROJECT

05-12-25 CHIPOTLE #5427 MACOMB, IL

1610 E JACKSON ST

MACOMB, IL 61455

Client

Chipotle Mexican Grill

610 Newport Center Drive, Suite 1100

Newport Beach, CA 92660

National TAB

Project: 05-12-25 CHIPOTLE #5427 MACOMB, IL

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Project Summary

The summary below provides a quick understanding of our scope of work and general testing procedures. Enclosed in the report is further detail about your building performance including recommendations, asset data, and pictures. Our focus is to work with the trades to remedy any issues or deficiencies during the actual field balancing and not after the balancing has occurred to achieve a positive environment and outcome. The level of success is determined by the availability of the trades, possible parts needed, or time constraints.

RTU's (Roof Top Units) w/ Diffusers
Each of the RTU's were measured at their terminal devices or via traverse to establish a total flow for that unit. Each RTU was adjusted to within tolerance of the engineer's design flow. Each outlet was then adjusted to within tolerance of the design flow. Outside air was measured by reading the intake air opening with a velocity grid and multiplying by the free area. The outside air damper was adjusted until the airflow was within the design requirements. Any equipment that fell outside of that tolerance is noted throughout the report.

Kitchen Exhaust Hood & Associated Fans
Each kitchen exhaust fan was measured at the hood filter bay utilizing a velocity matrix and a manufacturer's correction factor. Each filter velocity is multiplied by the manufacturer's corrected area. The sum of these readings equals the total flow of the exhaust fans. The total flow of the exhaust was then adjusted to within tolerance of the design flow. . Any EF's that fell outside of this tolerance is noted throughout the report.

MUA (Make Up Air Unit) w/ PSP
Total flow for the MAU (Make-up Air Unit) unit was measured by readings taken at the discharge of the hood's perforated supply plenum. Readings taken with a velocity matrix were averaged and multiplied by a manufacturer's corrected area. Adjustments to the fan speed were made in order to bring the unit to within design tolerance. Any MUA's that fell outside of this tolerance is noted throughout the report.

General Exhaust Fans w/ Grilles
The general exhaust fans were measured by reading each air device with a flow hood. The total airflow for each fan is equivalent to the sum of these readings. Fan speed was then adjusted so that the airflow was within tolerance of design. Each terminal device was balanced to within tolerance of the design volume using the installed volume dampers. Any equipment that fell outside of this tolerance is noted throughout the report.

Final Building Tests
After completing the test and balance the final building pressure was measured. It was confirmed that the building pressure fell within acceptable tolerances of -0.02" wc to +0.02" wc and that the pressure measurement coincides with the actual and design net airflow. Any deviations from these standards are noted throughout the report.
The hood capture was tested at the perimeter of the hood and the cook top level with the equipment heat on to ensure satisfactory hood capture and containment.

NATIONAL TAB

AIR BALANCE SCHEDULE

UNIT	AREA SERVED	HVAC SUPPLY		HVAC RETURN		HVAC OUTDOOR		OA %		HOOD MAKE-UP		HOOD EXHAUST		GENERAL EXH.	
		DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL
RTU-1	KITCHEN	5000	4814	4500	4277	500	537	10.0%	11.2%						
RTU-2	DINING	4800	4949	3800	3892	1000	1057	20.8%	21.4%						
EF-1	COOK LINE											2550	2595		
EF-2	RESTROOM													150	151
MAU-1	HOOD									1300	1294				
TOTALS		9800	9763	8300	8169	1500	1594			1300	1294	2550	2595	150	151

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	2800	2888
TOTAL EXHAUST	2700	2746
NET AIRFLOW	100	142

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	0.0059
SIDE	-0.0022
REAR	0.0071
AVERAGE	**0.0036**

FINAL CHECKS

ACTUAL NET AIRFLOW COINCIDES WITH DESIGN: ✔

MEASURED PRESSURES COINCIDES WITH ACTUAL NET AIRFLOW: ✔

PRESSURE FALLS WITHIN IMC TOLERANCE OF +/-0.02" W.C. ✔

NOTES:

CheckList List

- 01: RTU’S/AHU’S
- 02: EF’S
- 03: MUA
- 04: HOODS
- 05: FINAL TESTS

05-12-25 CHIPOTLE #5427 MACOMB, IL

CheckList Information

Name :	01: RTU'S/AHU'S	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	03/31/2025 - Kyle Henry - National TAB		
Completed Date :	05/13/2025 - Dylan Crisman - National TAB		

CheckList Item Details

RTU's/AHU's

Thermostats installed and have power?	Yes
Comment:	
All diffusers and grilles are installed and match design?	Yes
Comment:	
Deflector plates are removed from 1x1 diffusers on the serve line (double check that this is specified on the diffuser schedule first)	Yes
Comment:	
Economizer blank plate is installed below the ouside air intake (Trane only) (N/A = not applicable)	N/A
Comment:	
York Units instal	
Economizers are assembled and functional?	Yes
Comment:	
DCV Max damper opening position is set to minimum?	Yes

Comment:	
Free cooling enthalpy set point set for lowest setting (Typically "D")	Yes
Comment:	
Motors are all operating below the FLA rating?	Yes
Comment:	
Are belts tight?	Yes
Comment:	
If direct drive unit is the speed controller working?	Yes
Comment:	
Is gas piping installed and valves turned on?	Yes
Comment:	
Unit free of noticeable noise and vibration	Yes
Comment:	
Final outside air damper position is marked with permanent marker?	Yes
Comment:	

05-12-25 CHIPOTLE #5427 MACOMB, IL

CheckList Information

Name :	02: EF’S	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	03/31/2025 - Kyle Henry - National TAB		
Completed Date :	05/13/2025 - Dylan Crisman - National TAB		

CheckList Item Details

EF's

Rotation is correct?	Yes
Comment:	
Belts are tight?	N/A
Comment:	
Direct Drive.	
Viroguard installed on hood fan(s)?	
Comment:	
Hinge kit installed installed on hood fan?	Yes
Comment:	
Lean fan back. Is grease duct installation adequate and is duct ran all the way to the base of the fan?	Yes
Comment:	
Flex conduit is long enough so that fan can be completely tilted back?	Yes
Comment:	

There is no major leakage around base of fan?	Yes
Comment:	
Is the motor operating below the motor FLA rating?	Yes
Comment:	
For restroom fan(s) is the back draft damper installed and can it fully open?	Yes
Comment:	
Unit free of noticeable noise and vibration?	Yes
Comment:	

05-12-25 CHIPOTLE #5427 MACOMB, IL

CheckList Information

Name :	03: MUA	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	03/31/2025 - Kyle Henry - National TAB		
Completed Date :	05/13/2025 - Dylan Crisman - National TAB		

CheckList Item Details

MUA

Rotation is correct?	Yes
Comment:	
Gas piping is installed and valves are in on position?	Yes
Comment:	
Internal motorized damper is fully opening?	Yes
Comment:	
Motor is operating below the FLA rating?	Yes
Comment:	
Unit free of noticeable noise and vibration?	Yes
Comment:	

05-12-25 CHIPOTLE #5427 MACOMB, IL

CheckList Information

Name :	04: HOODS	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	03/31/2025 - Kyle Henry - National TAB		
Completed Date :	05/13/2025 - Dylan Crisman - National TAB		

CheckList Item Details

HOODS

All hood filters installed and accounted for?	Yes
Comment:	
Hoods are wired and have power?	Yes
Comment:	
Hood is free of alarms?	Yes
Comment:	
Hood is free of damage?	Yes
Comment:	
Quarter or full vertical end panels are installed if specified?	Yes
Comment:	

05-12-25 CHIPOTLE #5427 MACOMB, IL

CheckList Information

Name :	05: FINAL TESTS	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	03/31/2025 - Kyle Henry - National TAB		
Completed Date :	05/13/2025 - Dylan Crisman - National TAB		

CheckList Item Details

FINAL CHECKS

Is space free of drafting?	Yes
Comment:	
Is space comfortable in all areas?	Yes
Comment:	
Is the space free of ventilation noise?	Yes
Comment:	
List kitchen equipment turned on for testing	Yes
Comment: Griddle, Stove, Fryer.	
List smoke candle type used	
Comment: CE0163 45 SEC 150 CF	

HOOD CAPTURE TEST

Smoke test capture % - Perimeter of hood	

Comment:

100%

Smoke test capture % - Top of cooking surface

Comment:

100%

WITNESS

Date test was completed	05/13/2025

Comment:

TAB tech name / Firm

Comment:

Dylan Crisman / NTi

Site super name / Firm

Comment:

Dave Jakubowski / Stasica Construction

Owner representative name / Firm (if Applicable)

Comment:

BUILDING PRESSURE

Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)	Pass

Comment:

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Project: 05-12-25 CHIPOTLE #5427 MACOMB, IL

System/Unit: AHU/RTU

Asset: RTU1 AREA:KITCHEN

Unit Data		
	Design	**Actual**
MFG	YORK	YORK
Serial Num	-	N2N4139144
Model Num	KJ150	KJ150N18R2BEEAA2A1
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29X21
Num Final Filter 1	-	4
Final Filter Size 1	-	20X24X2

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR-RELIANCE
Frame	-	184T
Horsepower	3	5.0
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	13.5

Drive Data	
	Actual
Motor Sheave Size	1VP50
Motor Bore Size	1"
Motor Sheave SetPt	3 TURNS OPEN
Fan Sheave Size	7.5"
Fan Sheave Bore	1"
Belt CL Distance	20"
Num of Belts	1
Belt Size	BX56
Belt Alignment	VERIFIED

Test Data		
	Design	**Actual**
SF CFM	5000	4814
SF RPM	-	
RA CFM	4500	4277
OA CFM	500	537
RL Voltage	-	215/215/215
RL Amperage	-	[1]13.8/13.9/13.4
SF Rotation	-	CW
SF System SetPt	-	3 TURNS OPEN
RA Damper Position	-	MECHANICAL LINKAGE
Min OA Damper Position	-	15%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	27B

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.85”
Fan Suction SP	-	-0.97”
Fan Discharge SP	-	0.60”
Total ESP	.8"	1.45”
Fan Total SP	-	1.57”

General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	YES
Condensate Drain Installed	YES

Completed By: Dylan Crisman on 05/13/2025

Notes:
[1] unit had to be set above FLA to achieve design flow, set below service factor maximum.

Written By: Dylan Crisman on 05/13/2025

Unit Data - PHOTO LOG

05/12/2025

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Project:05-12-25 CHIPOTLE #5427 MACOMB, IL

AHU/RTU

Diffuser Supply (GRD)

RTU1/KITCHEN

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
RTU1-SGRD1	BACK	CD1	12"	450	1	384	432	432	96.0
RTU1-SGRD2	BACK	CD1	12"	450	1	517	418	418	92.9
RTU1-SGRD3	BACK	CD1	12"	450	1	334	425	425	94.4
RTU1-SGRD4	BACK	CD1	8"	150	1	250	141	141	94.0
RTU1-SGRD5	BACK	CD1	12"	450	1	544	411	411	91.3
RTU1-SGRD6	KITCHEN	CD2	8"	250	1	187	230	230	92.0
RTU1-SGRD7	KITCHEN	CD2	8"	250	1	194	238	238	95.2
RTU1-SGRD8	KITCHEN	CD2	8"	250	1	185	229	229	91.6
RTU1-SGRD9	KITCHEN	CD2	8"	250	1	205	247	247	98.8
RTU1-SGRD10	KITCHEN	CD1	12"	450	1	418	437	437	97.1
RTU1-SGRD11	KITCHEN	CD1	12"	450	1	490	427	427	94.9
RTU1-SGRD12	KITCHEN	CD1	12"	450	1	412	433	433	96.2
RTU1-SGRD13	HOOD	ACPSP	165X6	700	5.36	863	746	746	106.6
Total				5000		4983	4814	4814	96.28%

Completed By: Dylan Crisman on 05/13/2025

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Project: 05-12-25 CHIPOTLE #5427 MACOMB, IL

System/Unit: AHU/RTU

Asset: RTU2 AREA:DINING

Unit Data		
	Design	**Actual**
MFG	YORK	YORK
Serial Num	-	N2A5147805
Model Num	KJ150	KJ150N24R2BEEAA2A1
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29X21
Num Final Filter 1	-	4
Final Filter Size 1	-	20X24X2

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR-RELIANCE
Frame	-	184T
Horsepower	3	5.0
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	13.5

Drive Data	
	Actual
Motor Sheave Size	1VP50
Motor Bore Size	1"
Motor Sheave SetPt	3 TURNS OPEN
Fan Sheave Size	7.5"
Fan Sheave Bore	1"
Belt CL Distance	20"
Num of Belts	1
Belt Size	BX56
Belt Alignment	VERIFIED

Test Data		
	Design	**Actual**
SF CFM	4800	4949
SF RPM	-	1066
RA CFM	3800	3892
OA CFM	1000	1057
RL Voltage	-	215/215/216
RL Amperage	-	11.0/10.8/11.4
SF Rotation	-	CW
SF System SetPt	-	4 TURNS OPEN
RA Damper Position	-	MECHANICAL LINKAGE
Min OA Damper Position	-	18%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	27B

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.73”
Fan Suction SP	-	-1.04”
Fan Discharge SP	-	0.64”
Total ESP	.8"	1.37”
Fan Total SP	-	1.68”

General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	YES
Condensate Drain Installed	YES

Completed By: Dylan Crisman on 05/13/2025

Unit Data - PHOTO LOG

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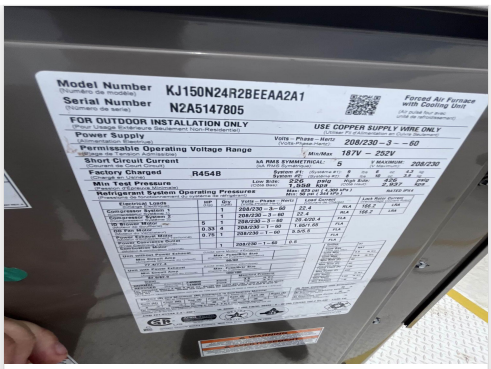

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National TAB

Project:05-12-25 CHIPOTLE #5427 MACOMB, IL

AHU/RTU

Diffuser Supply (GRD)

RTU2/DINING

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
RTU2-SGRD1	DINING	SR2	6"	500	1	520	457	494	98.8
RTU2-SGRD2	DINING	SR2	6"	600	1	310	253	560	93.3
RTU2-SGRD3	DINING	SR1	14"	900	1	1098	967	966	107.3
RTU2-SGRD4	DINING	SR1	14"	800	1	1120	978	828	103.5
RTU2-SGRD5	DINING	SR1	14"	700	1	1104	950	744	106.3
RTU2-SGRD6	DINING	SR1	14"	600	1	1074	1006	633	105.5
RTU2-SGRD7	DINING	SR1	14"	650	1	893	800	671	103.2
RTU2-SGRD8	RESTROOM	CD3	6"	50	1	87	82	53	106.0
Total				4800		6206	5493	4949	103.1%

Completed By: Dylan Crisman on 05/13/2025

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Project: 05-12-25 CHIPOTLE #5427 MACOMB, IL

System/Unit: FAN - Exhaust

Asset: EF1 AREA:KITCHEN

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU180HFA	DU180HFA
Serial Num	-	6900505
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	TECO-WESTINGHOUSE
Frame	-	184T
Horsepower	2	2.0
Motor Rpm	-	1165
Phase	3	3
Voltage (rated)	208	230
Amperage (rated)	-	6.56
Service Factor	-	1.15

Test Data		
	Design	**Actual**
CFM	2550	2595
Fan RPM	-	1033
Fan Rotation	-	CCW
Motor RPM	-	1033
System SetPt	-	53.2Hz
RL Voltage	-	108@VFD
RL Amperage	-	4.8@VFD
Total ESP	1.2"	0.61"
Fan Inlet SP	-	-0.61"
Fan Discharge SP	-	ATM

Completed By: Dylan Crisman on 05/12/2025

Unit Data - PHOTO LOG

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Project: 05-12-25 CHIPOTLE #5427 MACOMB, IL

System/Unit: FAN - Exhaust

Asset: EF2 AREA:RESTROOM

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DR12HFA	DR12HFA
Serial Num	-	6900505
Type	DOWNBLAST	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	TELCO-GREEN
Horsepower	.18	0.250
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	2.9
Service Factor	-	1.15

Test Data		
	Design	**Actual**
CFM	150	151
Fan RPM	-	1288
Fan Rotation	-	CCW
Motor RPM	-	1288
System SetPt	-	65P
Total ESP	.6"	0.22"
Fan Inlet SP	-	-0.22"
Fan Discharge SP	-	ATM

Completed By: Dylan Crisman on 05/12/2025

Unit Data - PHOTO LOG

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Project:05-12-25 CHIPOTLE #5427 MACOMB, IL

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF2/RESTROOM

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF2-EGRD1	RESTROOM	ER1	6"	75	1.0	65	79	79	105.3
EF2-EGRD2	RESTROOM	ER1	6"	75	1.0	56	72	72	96.0
Total				150		121	151	151	100.67%

Completed By: Dylan Crisman on 05/12/2025

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Project: 05-12-25 CHIPOTLE #5427 MACOMB, IL

System/Unit: FAN - Supply

Asset: MAU1 AREA:HOOD

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	A1-D.250-15D	A1-D.250-15D
Serial Num	-	6900505
Type	MAU	MAU
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	TECO-WESTINGHOUSE
Frame	-	143T
Horsepower	1	1.0
Motor Rpm	-	1740
Phase	3	3
Voltage (rated)	208	230
Amperage (rated)	-	2.90
Service Factor	-	1.15

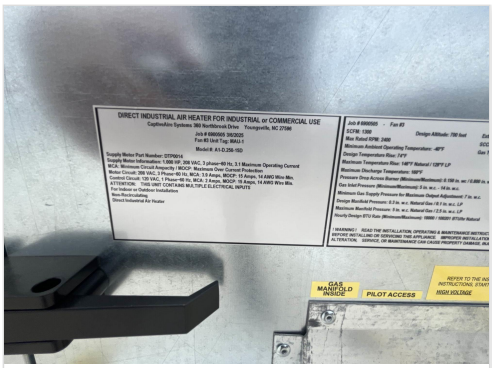
Gas Heat		
	Design	**Actual**
Heater Operates (y/n)	-	Y
Flame Status (pass/fail)	-	PASS
Inlet Air Temp SetPt	-	55
Discharge Air Temp SetPt	-	60
Air Flow Switch SP Actual	-	0.36"

Test Data		
	Design	**Actual**
CFM	1300	1294
SF RPM	-	1720
Motor RPM	-	1720
SF System SetPt	-	59.3Hz
RL Voltage	-	171@VFD
RL Amperage	-	2.9@VFD

General	
	Actual
Fan Rotation Correct	YES

Completed By: Dylan Crisman on 05/12/2025

Unit Data - PHOTO LOG



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National TAB

Project: 05-12-25 CHIPOTLE #5427 MACOMB, IL

System/Unit: Kitchen Hood Type I

Asset: HD1 AREA:COOK LINE

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	5424 ND-2-ACPSP-F	5424 ND-2-ACPSP-F
Job / Serial Num	-	6900505
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	153"	153"
Hood Width	54"	54"
Supply Plenum Type	-	ACPSP
Supply Plenum Width	9"	9"
Supply Plenum Length	165"	165"

Test Data Exhaust		
	Design	**Actual**
Filter Type	CAPTRATE SOLO	CAPTRATE SOLO
Filter Size 1	16X16	16X16
Filter Qty 1	9	9
Filter AK factor size 1	1.62	1.62
Filter Total AK Area	14.58	14.58
Filter1 FPM	-	172
Filter2 FPM	-	175
Filter3 FPM	-	174
Filter4 FPM	-	186
Filter5 FPM	-	184
Filter6 FPM	-	195
Filter7 FPM	-	181
Filter8 FPM	-	169
Filter9 FPM	-	172
Filter Ave FPM(corr)	-	178
CFM	2550	2595

Cooking Equipment	
	Actual
Item 1	GRIDDLE
Item 2	STOVE
Item 3	RICE COOKER
Item 4	FRYER

Test Data Supply		
	Design	**Actual**
Total Area	10.31	10.31
Kv factor (Vel)	0.81	0.81
Num of Readings	-	14
Reading1 FPM	-	192
Reading2 FPM	-	165
Reading3 FPM	-	169
Reading4 FPM	-	194
Reading5 FPM	-	142
Reading6 FPM	-	158
Reading7 FPM	-	136
Reading8 FPM	-	149
Reading9 FPM	-	155
Reading10 FPM	-	174
Reading11 FPM	-	168
Reading12 FPM	-	86
Reading13 FPM	-	121
Reading14 FPM	-	158
Ave FPM(corr)	-	155
CFM	1300	1294

Completed By: Dylan Crisman on 05/12/2025

Unit Data - PHOTO LOG

05/12/2025

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