Report By:

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

Report: TAB Report

Function: Test, Adjust, & Balance

Date: 04/21/2025

Completed By: National TAB

PROJECT

04-14-25 CHIPOTLE #5397 MORGANTON, NC

1219 BURKEMONT AVE

MORGANTON, NC 28655

Client

Chipotle Mexican Grill

610 Newport Center Drive, Suite 1100

Newport Beach, CA 92660

National TAB

Project: 04-14-25 CHIPOTLE #5397 MORGANTON, NC

Table Of Contents

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.

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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	3500	3318	3000	2798	500	520	14.3%	15.7%						
RTU-2	DINING	3400	3375	2400	2318	1000	1057	29.4%	31.3%						
EF-1	COOK LINE											2925	2877		
EF-2	BATHROOM													150	143
MAU-1	HOOD									1675	1527				
TOTALS		6900	6693	5400	5116	1500	1577			1675	1527	2925	2877	150	143

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3175	3104
TOTAL EXHAUST	3075	3020
NET AIRFLOW	100	84

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	0.001
SIDE	0.01
REAR	0.013
AVERAGE	**0.008**

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

04-14-25 CHIPOTLE #5397 MORGANTON, NC

CheckList Information

Name :	01: RTU'S/AHU'S	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	03/12/2025 - Kyle Henry - National TAB		
Completed Date :	04/21/2025 - JOASH ALBIN - 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)	N/A
Comment:	
Economizer blank plate is installed below the ouside air intake (Trane only) (N/A = not applicable)	N/A
Comment:	
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")	N/A
Comment: ES5 in honeywell controller for lowest setting	
Motors are all operating below the FLA rating?	Yes
Comment:	
Are belts tight?	N/A
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:	

04-14-25 CHIPOTLE #5397 MORGANTON, NC

CheckList Information

Name :	02: EF’S	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	03/12/2025 - Kyle Henry - National TAB		
Completed Date :	04/21/2025 - JOASH ALBIN - National TAB		

CheckList Item Details

EF's

Rotation is correct?	Yes
Comment:	
Belts are tight?	N/A
Comment:	
Viroguard installed on hood fan(s)?	Yes
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:	

04-14-25 CHIPOTLE #5397 MORGANTON, NC

CheckList Information

Name :	03: MUA	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	03/12/2025 - Kyle Henry - National TAB		
Completed Date :	04/21/2025 - JOASH ALBIN - 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:	

04-14-25 CHIPOTLE #5397 MORGANTON, NC

CheckList Information

Name :	04: HOODS	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	03/12/2025 - Kyle Henry - National TAB		
Completed Date :	04/21/2025 - JOASH ALBIN - 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:	

04-14-25 CHIPOTLE #5397 MORGANTON, NC

CheckList Information

Name :	05: FINAL TESTS	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	03/12/2025 - Kyle Henry - National TAB		
Completed Date :	04/21/2025 - JOASH ALBIN - 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/fryer/hoods/EF fans	
List smoke candle type used	
Comment:	
S-102	

HOOD CAPTURE TEST

Smoke test capture % - Perimeter of hood

Comment:

100%, YES

Smoke test capture % - Top of cooking surface

Comment:

100%,YES

WITNESS

Date test was completed	04/16/2025

Comment:

VIDEO CAPETURE

TAB tech name / Firm

Comment:

VIDEO CAPTURE

Site super name / Firm

Comment:

VIDEO CAPTURE

Owner representative name / Firm (if Applicable)

Comment:

VIDEO CAPTURE

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:

0.008

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Project: 04-14-25 CHIPOTLE #5397 MORGANTON, NC

System/Unit: AHU/RTU

Asset: RTU1 AREA:KITCHEN

Unit Data		
	Design	**Actual**
MFG	CARRIER	CARRIER
Serial Num	-	1923P79786
Model Num	48FC_M11	48FCFM12A3M5A6W4C0
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	35X20
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2

Motor Data		
	Design	**Actual**
Motor MFG	-	NL
Frame	-	NL
Horsepower	3	3
Motor Rpm	-	NL
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	12.6

Drive Data	
	Actual
Motor Sheave Size	DD
Motor Bore Size	DD
Motor Sheave SetPt	DD
Fan Sheave Size	DD
Fan Sheave Bore	DD
Belt CL Distance	DD
Num of Belts	DD
Belt Size	DD
Belt Alignment	DD

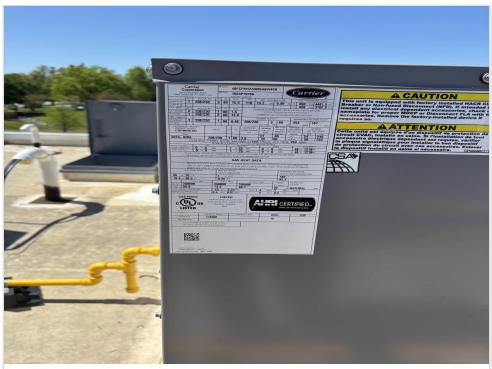
Test Data		
	Design	**Actual**
SF CFM	3500	3318
SF RPM	-	DD
RA CFM	3000	2798
OA CFM	500	520
RL Voltage	-	210/211/212
RL Amperage	-	7.2/7.8/7.6
SF Rotation	-	CCW
SF System SetPt	-	80%
RA Damper Position	-	5.65 VDC
Min OA Damper Position	-	4.35 VDC
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	ES5

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.34"
Fan Suction SP	-	-0.56"
Fan Discharge SP	-	0.44"
Total ESP	.8"	0.78"
Fan Total SP	-	1.0"

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

Completed By: JOASH ALBIN on 04/21/2025

Unit Data - PHOTO LOG



04/21/2025

04/21/2025

04/21/2025

National TAB

Project:04-14-25 CHIPOTLE #5397 MORGANTON, NC

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"	400	1	178	383	383	95.8
RTU1-SGRD2	BACK	CD1	12"	425	1	279	395	395	92.9
RTU1-SGRD3	BACK	CD1	12"	425	1	215	399	399	93.9
RTU1-SGRD4	BACK	SR2	8"	150	1	145	149	149	99.3
RTU1-SGRD5	BACK	CD1	8"	150	1	146	139	139	92.7
RTU1-SGRD6	KITCHEN	CD1	12"	475	1	346	428	428	90.1
RTU1-SGRD7	KITCHEN	CD1	12"	475	1	360	435	435	91.6
RTU1-SGRD8	KITCHEN	CD1	10"	250	1	271	245	245	98.0
RTU1-SGRD9	HOOD	ACPSP	165X6	800	1	989	745	745	93.1
Total				3550		2929	3318	3318	93.46%

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Project: 04-14-25 CHIPOTLE #5397 MORGANTON, NC

System/Unit: AHU/RTU

Asset: RTU2 AREA:DINING

Unit Data		
	Design	**Actual**
MFG	CARRIER	CARRIER
Serial Num	-	0424P62987
Model Num	48FC_M09	48FCFN09D3M5A6W4F0
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	35X20
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2

Motor Data		
	Design	**Actual**
Motor MFG	-	NL
Frame	-	NL
Horsepower	3	3
Motor Rpm	-	NL
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	7.5

Drive Data	
	Actual
Motor Sheave Size	DD
Motor Bore Size	DD
Motor Sheave SetPt	DD
Fan Sheave Size	DD
Fan Sheave Bore	DD
Belt CL Distance	DD
Num of Belts	DD
Belt Size	DD
Belt Alignment	DD

Test Data		
	Design	**Actual**
SF CFM	3400	3375
SF RPM	-	DD
RA CFM	2400	2318
OA CFM	1000	1057
RL Voltage	-	210/211/212
RL Amperage	-	7.0/7.1/6.9
SF Rotation	-	CCW
SF System SetPt	-	90%
RA Damper Position	-	4.35 VDC
Min OA Damper Position	-	5.65 VDC
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	ES5

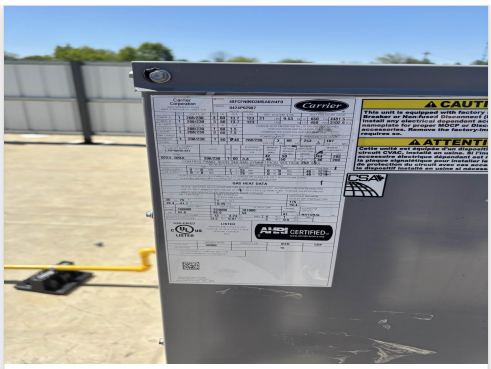
Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.31"
Fan Suction SP	-	-0.58"
Fan Discharge SP	-	0.46"
Total ESP	.8"	0.89"
Fan Total SP	-	1.04"

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

Completed By: JOASH ALBIN on 04/21/2025

Unit Data - PHOTO LOG

04/21/2025



04/21/2025

04/21/2025

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Project:04-14-25 CHIPOTLE #5397 MORGANTON, NC

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	SR1	12"	500	.78	345	425	505	101.0
RTU2-SGRD2	DINING	SR1	12"	475	.78	405	403	468	98.5
RTU2-SGRD3	DINING	SR1	12"	475	.78	425	415	475	100.0
RTU2-SGRD4	DINING	SR1	12"	475	.78	475	411	470	98.9
RTU2-SGRD5	DINING	SR1	12"	475	.78	750	409	465	97.9
RTU2-SGRD6	DINING	SR1	12"	475	.78	356	412	477	100.4
RTU2-SGRD7	DINING	SR1	12"	475	.78	318	404	465	97.9
RTU2-SGRD8	BACK	CD4	6"	50	.78	54	40	50	100.0
Total				3400		3128	2919	3375	99.26%

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Project: 04-14-25 CHIPOTLE #5397 MORGANTON, NC

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	-	7222290
Type	MAU	MAU
Configuration	VERTICAL	VERTCAL

Motor Data		
	Design	**Actual**
Motor MFG	-	WESTINGHOUSE
Frame	-	145T
Horsepower	1	1.5
Motor Rpm	-	1740
Phase	3	3
Voltage (rated)	208	208
Amperage (rated)	-	4.02
Service Factor	-	1.15

Gas Heat		
	Design	**Actual**
Heater Operates (y/n)	-	YES
Flame Status (pass/fail)	-	PASS
Inlet Air Temp SetPt	-	55
Discharge Air Temp SetPt	-	60
Air Flow Switch SP Actual	-	0.31"

Test Data		
	Design	**Actual**
CFM	1675	1527
SF RPM	-	DD
Motor RPM	-	58Hz
SF System SetPt	-	58Hz
RL Voltage	-	210/211/211
RL Amperage	-	3.5/3.3/3.4

General	
	Actual
Fan Rotation Correct	YES

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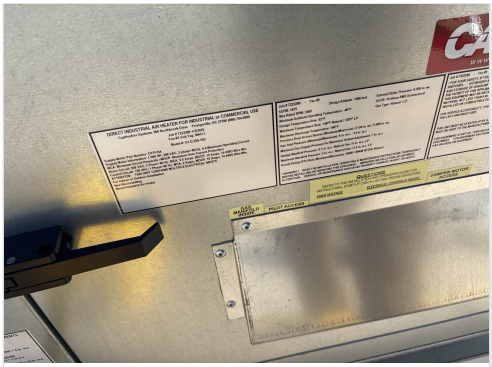
Unit Data - PHOTO LOG



04/17/2025

04/17/2025

04/17/2025

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Project: 04-14-25 CHIPOTLE #5397 MORGANTON, NC

System/Unit: FAN - Exhaust

Asset: EF1 AREA:KITCHEN

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU180HFA	DU180HFA
Serial Num	-	7222290
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	WEG
Frame	-	W22
Horsepower	2	2
Motor Rpm	-	1170
Phase	3	3
Voltage (rated)	208	208
Amperage (rated)	-	8.5
Service Factor	-	1.25

Test Data		
	Design	**Actual**
CFM	2925	2877
Fan RPM	-	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
System SetPt	-	48hZ(VFD)
RL Voltage	-	210/211/211
RL Amperage	-	5.4/5.2.5.2
Total ESP	1.2"	1.12"
Fan Inlet SP	-	-1.12"
Fan Discharge SP	-	ATM

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Unit Data - PHOTO LOG

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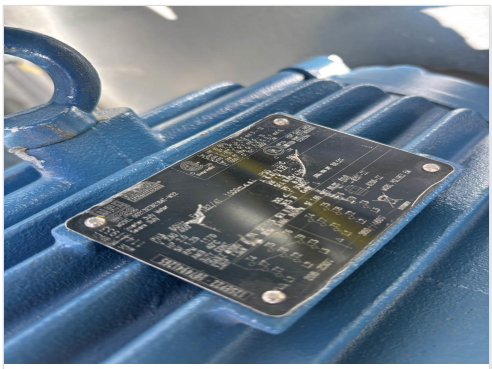
04/21/2025

04/21/2025

Motor Data - PHOTO LOG



04/21/2025

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Project: 04-14-25 CHIPOTLE #5397 MORGANTON, NC

System/Unit: FAN - Exhaust

Asset: EF2 AREA:RESTROOM

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DR12HFA	DR12HFA
Serial Num	-	7222290
Type	DOWNBLAST	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	TELCO GREEN
Frame	-	42EC
Horsepower	.18	.25
Motor Rpm	-	TELCOGREEN
Phase	1	1
Voltage (rated)	120	120
Amperage (rated)	-	2.7
Service Factor	-	1

Test Data		
	Design	**Actual**
CFM	150	143
Fan RPM	-	924
Fan Rotation	-	ccw
System SetPt	-	55p
RL Voltage	-	120
RL Amperage	-	1.2
Total ESP	.6"	0.41"
Fan Inlet SP	-	-0.41"
Fan Discharge SP	-	ATM

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Unit Data - PHOTO LOG

1. Open IMG_0484.mp4

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Project:04-14-25 CHIPOTLE #5397 MORGANTON, NC

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF2/RESTROOM

Asset										
Asset Name	**Model Num**	**MFG**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF2-1	NA	NA	ER1	6/6	75	1	72		71	94.7
EF2-2	NA	NA	ER1	6/6	75	1	71		72	96.0
Total					150		143	0	143	95.33%

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Project: 04-14-25 CHIPOTLE #5397 MORGANTON, NC

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	-	7050245
Type	TYPE 1 CANOPY	TYPE I
Hood length	153"	156"
Hood Width	54"	61/36
Supply Plenum Type	-	ACPSP
Supply Plenum Width	9"	14"
Supply Plenum Length	165"	166"

Test Data Exhaust		
	Design	**Actual**
Filter Type	CAPTRATE SOLO	CAPTRATESOLO
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	-	176
Filter2 FPM	-	213
Filter3 FPM	-	231
Filter4 FPM	-	232
Filter5 FPM	-	204
Filter6 FPM	-	191
Filter7 FPM	-	171
Filter8 FPM	-	166
Filter9 FPM	-	192
Filter Ave FPM(corr)	-	197
CFM	2925	2877

Cooking Equipment	
	Actual
Item 1	GRIDDLE
Item 2	STOVE

Test Data Supply		
	Design	**Actual**
Total Area	10.31	15.75
Kv factor (Vel)	.81	0.81
Num of Readings	-	9
Reading1 FPM	-	125
Reading2 FPM	-	111
Reading3 FPM	-	114
Reading4 FPM	-	135
Reading5 FPM	-	141
Reading6 FPM	-	108
Reading7 FPM	-	115
Reading8 FPM	-	118
Reading9 FPM	-	111
Ave FPM(corr)	-	119.7
CFM	1675	1527

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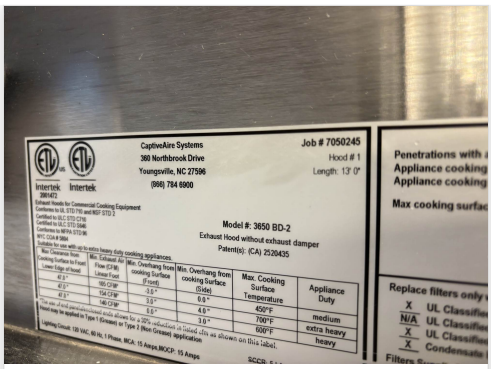
Unit Data - PHOTO LOG

04/21/2025



04/21/2025

04/21/2025