

Report By:

National TAB
1329 E Kemper Rd, Ste 4210
Cincinnati, OH 45246



Report: Test and Balance
Date: 1/20/2017

PROJECT
PIADA - TYLER, TX

8924 S. Broadway Ave., Building R1-A, Suite 140
Tyler, TX

Client

Piada Italian Street Food
1440 King Ave
Columbus, OH 43212

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Project: PIADA - TYLER, TX

Table Of Contents

Section	Page #
Deficiency List	3
Balance Schedule	4
Pictures	5
GRD Layout	7
Checklist Data	8
AHU/RTU	12
FAN - Supply	16
FAN - Exhaust	17
Kitchen Hood Type I	20



PROJECT: PIADA
SYSTEM: AIR BALANCE SCHEDULE
LOCATION: TYLER, TX

UNIT	HVAC SUPPLY		HVAC RETURN		HVAC OUTDOOR		HOOD MAKE-UP		HOOD EXHAUST		GENERAL		AREA SERVED
	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	
RTU-1	4000	3948	3200	3078	800	870							DINING
RTU-2	3000	2932	2500	2391	500	541							KITCHEN
EF-1									2757	2767			HOOD 1
EF-2									1659	1439			HOOD 2
EF-3											300	322	RESTROOM
MUA-1							3655	3643					HOOD 1&2
TOTAL EXH	7000	6880	5700	5469	1300	1411	3655	3643	-4416	-4206	-300	-322	
TOTL OA	-	-	-	-	4955	5054	-	-			-4716	-4528	
											239	526	NET AIRFLOW

SYSTEM COMPONENTS TO ASSETS SCHEDULED ABOVE

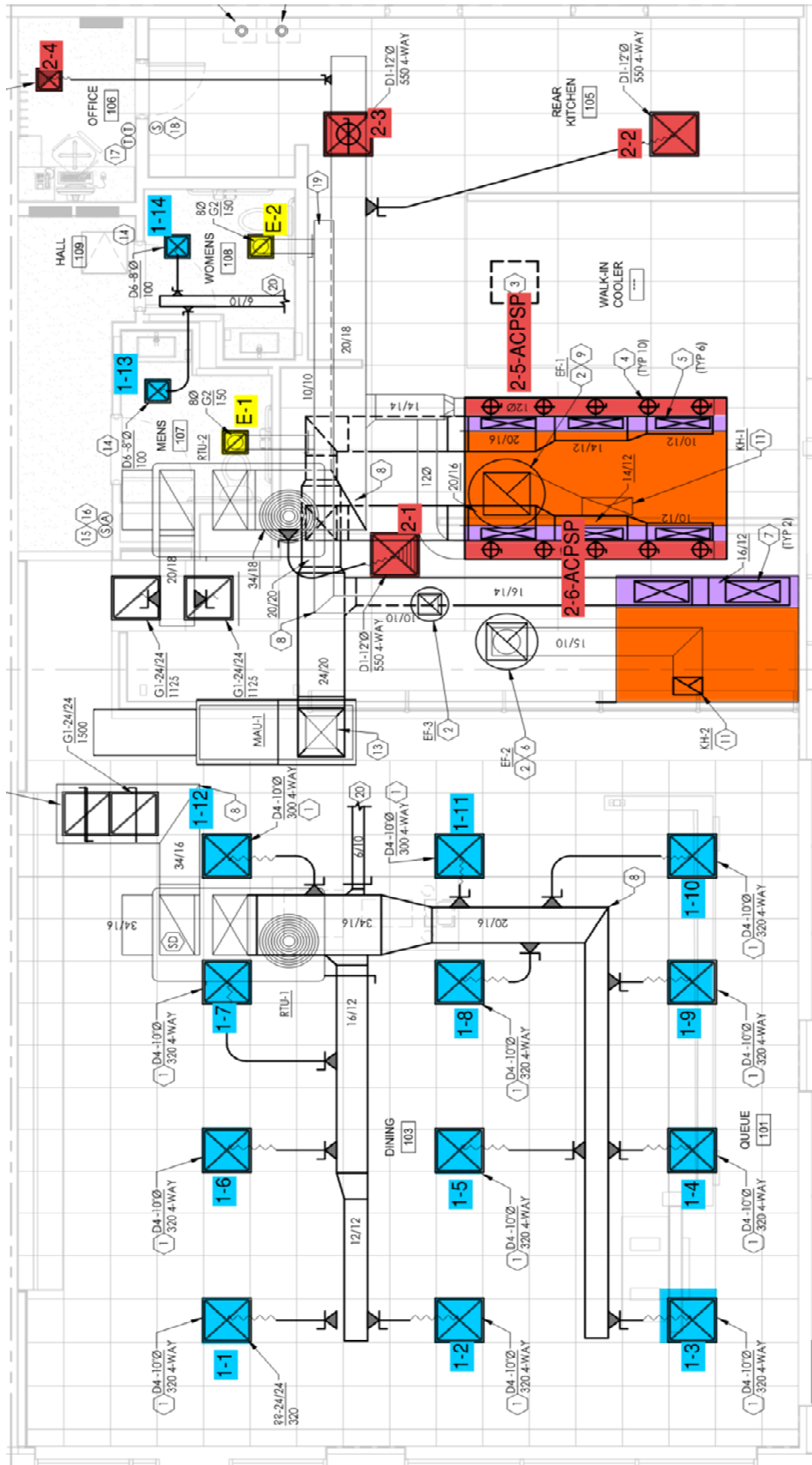
UNIT	FILTER TYPE#/SIZE	MAU TYPE	SIZE	HOOD MAKE-UP	HOOD EXHAUST	NET CFM	MANUFACTURER
HD1	SOLO 7 16X16	ACPSP	135X9	2178	2757	-579	CAPTIVE-AIRE
HD2	SOLO 4 16X16	PSP	135X9	1477	1659	-182	CAPTIVE-AIRE

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H2O)
FRONT	0.024
SIDE	-
REAR	0.006
AVERAGE	0.015

NOTES:









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BUILDING PRESSURE AND SMOKE CONTAINMENT TEST

Assigned Organization: National TAB

Status: Not Submitted

Asset:

HOOD CAPTURE TEST	
LIST EQUIPMENT TURNED ON FOR TESTING	NONE
LIST SMOKE CANDLE TYPE USED	45 SECOND SMOKE CARTRIDGE
SMOKE TEST CAPTURE - PERIMETER OF HOOD	100
SMOKE TEST CAPTURE - TOP OF COOKING SURFACE	100
WITNESS	
DATE TEST WAS COMPLETED	1/6/2017
TAB TECH NAME / FIRM	ROBERT SEPEDA / NATIONAL TAB
SITE SUPR NAME / FIRM	RICK CLARK / SCI
OWNER REPRESENTATIVE NAME / FIRM (IF APPLICABLE)	NOT PRESENT
CODE OFFICIAL NAME / FIRM (IF APPLICABLE)	NOT PRESENT
BUILDING PRESSURE AT FRONT & BACK DOORS (ALL SYSTEMS ON)	FRONT .024 / BACK .006

Notes/Comments:



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Project: PIADA - TYLER, TX



EXHAUST FAN SITE EVAL

Assigned Organization: National TAB

Status: Not Submitted

Asset:

EXHAUST FAN	
Verify units marked for easy identification	No
Unit sealed and properly seated to roof curb	Yes
No unusual vibration or noise present	Yes
Belts properly tensioned and free of damage	Yes
Pulleys properly aligned	Yes
Blower wheel moves freely by hand	Yes
Unit is providing required airflow	No
Verify on/off disconnect works	Yes
Verify voltage input is correct	Yes
Fan rotation is correct?	Yes

Notes/Comments:

FANS ARE NOT LABELED IN LARGE BOLD TEXT. EF-2 IS LOW BUT IS AT MAXIMUM RATED MOTOR AMPS.



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Project: PIADA - TYLER, TX



HVAC SITE EVAL

Assigned Organization: National TAB

Status: Not Submitted

Asset:

HVAC DUCTWORK CHECKLIST	
Ductwork and diffusers are installed per design	Yes
Balance dampers installed and functional	Yes
Balance dampers are accessible	Yes
Ductwork is properly covered with insulation, & Insulation is secured	Yes
Tops of diffusers are properly insulated	Yes
Installed diffusers match design	Yes

Notes/Comments:



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Project: PIADA - TYLER, TX



RTU SITE EVAL

Assigned Organization: National TAB

Status: Not Submitted

Asset:

RTU CHECKLIST	
Units are labeled and installed at proper locations	No
Units size matches its design (nameplate)	Yes
Clean filters are installed at DX coil	Yes
Belts are tight and in good working order	Yes
Pulleys are properly aligned	Yes
Motors rotating correctly	Yes
Motors are operating under full load amps	Yes
Units sealed and properly seated to roof curb	Yes
Evaporator coils clean and free of debris	Yes
Gas piping installed	Yes
Gas valves turned in the on position	Yes
Condensate lines and P-traps installed correctly	Yes
Disconnect switch installed	Yes
No noticeable vibration or noise exist correct?	Yes
Economizer filters installed	Yes
Outside air dampers installed and functioning	Yes
Outside air damper positions are clearly marked	Yes
Is unit bringing in sufficient amount of outside air	Yes
Unit is providing required supply airflow	Yes
Condensor coil clean and free of damage	Yes
Verify voltage input correct	Yes

Notes/Comments:

UNITS ARE NOT LABELED IN LARGE BOLD TEXT.



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Project: PIADA - TYLER, TX

System/Unit: AHU/RTU



Asset: RTU1

AREA: DINING

Unit Data		
	Design	Actual
MFG	TRANE	CARRIER
Model Num	YSC120	48HCFE11B2M
Serial Num	-	4816P85713
Type	RTU	RTU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	21X36X1
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	56HZ
Horsepower	-	3.7
Motor Rpm	-	1725
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	10.6
Service Factor	-	1.15

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VM50
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	0 TURNS OPEN
Fan Sheave Size	-	AFD74
Fan Sheave Bore	-	1"
Belt CL Distance	-	16 1/4
Num of Belts	-	1
Belt Size	-	AX49
Belt Alignment	-	CORRECT

Test Data		
	Design	Actual
SF CFM	4000	3948
SF RPM	-	1088
RA CFM	3200	3078
OA CFM	800	870
RL Voltage	-	220/218/219
RL Amperage	-	9.8/9.4/9.0
SF Rotation	-	CCW
RA Damper Position	-	8 1/4
Min OA Damper Position	-	1/2
Min OA Damper Type	-	SINGLE BLADE
Brake Horse Power	-	3.28

Performance Data		
	Design	Actual
MA Plenum SP	-	-1.04
Fan Suction SP	-	-1.56
Fan Discharge SP	-	.76"
Total ESP	0.90"	1.80"
Fan Total SP	-	2.32"

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES

Completed By: Robert Sepeda on 01/06/2017

Notes:



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Project: PIADA - TYLER, TX

System/Unit: AHU/RTU



Diffuser Supply (GRD)

RTU1 / DINING

Asset	Area Served	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	DINING	D4	10"	320	324	391	350	109.4
SGRD2	DINING	D4	10"	320	332	383	347	108.4
SGRD3	DINING	D4	10"	320	259	316	332	103.8
SGRD4	DINING	D4	10"	320	237	263	294	91.9
SGRD5	DINING	D4	10"	320	273	322	341	106.6
SGRD6	DINING	D4	10"	320	206	260	299	93.4
SGRD7	DINING	D4	10"	320	147	168	290	90.6
SGRD8	DINING	D4	10"	320	221	276	298	93.1
SGRD9	DINING	D4	10"	320	194	240	293	91.6
SGRD10	DINING	D4	10"	320	43	338	348	108.8
SGRD11	DINING	D4	10"	300	238	262	282	94.0
SGRD12	DINING	D4	10"	300	138	129	271	90.3
SGRD13	RESTROOM	D6	8"	100	105	109	110	110.0
SGRD14	RESTROOM	D6	8"	100	50	55	93	93.0

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Asset	Area Served	Notes



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Project: PIADA - TYLER, TX

System/Unit: AHU/RTU



Asset: RTU2

AREA: KITCHEN

Unit Data		
	Design	Actual
MFG	TRANE	CARRIER
Model Num	YSC092	48HCFD08B2M
Serial Num	-	4916P42671
Type	RTU	RTU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	21X36X1
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	56HZ
Horsepower	-	2.4
Motor Rpm	-	1725
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	6.9
Service Factor	-	1.15

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VL44
Motor Bore Size	-	5/8"
Motor Sheave SetPt	-	3 1/2 TURNS OPEN
Fan Sheave Size	-	AFD74
Fan Sheave Bore	-	1"
Belt CL Distance	-	16 3/4
Num of Belts	-	1
Belt Size	-	A48
Belt Alignment	-	CORRECT

Test Data		
	Design	Actual
SF CFM	3000	2932
SF RPM	-	800
RA CFM	2500	2391
OA CFM	500	541
RL Voltage	-	221/219/219
RL Amperage	-	5.0/4.9/4.8
SF Rotation	-	CW
RA Damper Position	-	8 1/4
Min OA Damper Position	-	1/2
Min OA Damper Type	-	SINGLE BLADE
Brake Horse Power	-	1.70

Performance Data		
	Design	Actual
MA Plenum SP	-	-.57"
Fan Suction SP	-	-.79"
Fan Discharge SP	-	.41"
Total ESP	0.90"	.98"
Fan Total SP	-	1.20"

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES

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Notes:



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Project: PIADA - TYLER, TX

System/Unit: AHU/RTU



Diffuser Supply (GRD)

RTU2 / KITCHEN

Asset	Area Served	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	PREP	D1	12"	550	479	539	525	95.5
SGRD2	PREP	D1	12"	550	475	550	534	97.1
SGRD3	PREP	D1	12"	550	505	595	570	103.6
SGRD4	OFFICE	D2	8"	250	189	219	228	91.2
SGRD5	HOOD 1 BACK ACPSP	ACPSP	135X6	550	459	515	531	96.5
SGRD6	HOOD 1 FRONT ACPSP	ACPSP	135X6	550	468	527	544	98.9

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Asset	Area Served	Notes



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Project: PIADA - TYLER, TX

System/Unit: FAN - Supply



Asset: MAU1

AREA: HOOD 1&2

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	A2-D.500-G15-PB	A2-D.500-G15-PB
Serial Num	-	2745491
Type	MAU	MAU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE

Test Data		
	Design	Actual
CFM	3655	3643
SF RPM	-	859
SF Rotation	-	CW
Motor RPM	-	1643
RL Voltage	-	209
RL Amperage	-	6.5
Total ESP	0.60"	-
Fan Discharge SP	-	-

Motor Data		
	Design	Actual
Motor MFG	-	TECO
Frame	-	182T
Horsepower	3	3
Motor Rpm	-	1755
Phase	3	3
Voltage (rated)	208	208
Amperage (rated)	-	9.51
Service Factor	-	1.15

General		
	Design	Actual
Fan Rotation Correct	-	YES

Drive Data		
	Design	Actual
Motor Sheave Size	-	2VP42
Motor Bore Size	-	1 1/8
Fan Sheave Size	-	2BK70H
Fan Sheave Bore	-	1"
Belt CL Distance	-	19 1/4
Num of Belts	-	2
Belt Size	-	BX52
Belt Alignment Verified	-	YES

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

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Notes: [1] UNIT WAS MEASURE AT THE INLET ON ROOF



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Project: PIADA - TYLER, TX

System/Unit: FAN - Exhaust



Asset: EF1

AREA: HOOD 1

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	DU180HFA	DU180HFA
Serial Num	-	2745491
Type	CENTRIFUGAL	CENTRIFUGAL
Configuration	UPBLAST	UPBLAST

Motor Data		
	Design	Actual
Motor MFG	-	TECO
Frame	-	182T
Horsepower	3	3
Motor Rpm	-	1755
Phase	3	3
Voltage (rated)	208	208
Amperage (rated)	-	9.51
Service Factor	-	1.15

Test Data		
	Design	Actual
CFM	3382	2767
Fan RPM	1399	DIRECT DRIVE
Fan Rotation	-	CCW
Motor RPM	-	DIRECT DRIVE
System SetPt	-	34HZ
RL Voltage	-	83
RL Amperage	-	5.7
Total ESP	1.50"	.77"
Fan Inlet SP	-	-.77"
Fan Discharge SP	-	NA

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Notes: AIRFLOW BALANCED TO HOOD DESIGN.



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Project: PIADA - TYLER, TX

System/Unit: FAN - Exhaust



Asset: EF2

AREA: HOOD 2

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	DU85HFA	DU85HFA
Serial Num	-	2745491
Type	CENTRIFUGAL	CENTRIFUGAL
Configuration	UPBALST	UPBLAST

Motor Data		
	Design	Actual
Motor MFG	-	HSSA
Frame	-	NOT LISTED
Horsepower	0.75	3/4
Motor Rpm	-	1725
Phase	3	3
Voltage (rated)	208	208
Amperage (rated)	-	2.6
Service Factor	-	1.15

Test Data		
	Design	Actual
CFM	1659	1439
Fan RPM	1285	DIRECT DRIVE
Fan Rotation	-	CCW
Motor RPM	-	DIRECT DRIVE
System SetPt	-	50HZ
RL Voltage	-	215
RL Amperage	-	2.6
Total ESP	1.00"	1.35"
Fan Inlet SP	-	-1.35"
Fan Discharge SP	-	NA

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Notes: FAN IS SET TO MOTOR RATED AMPS. UNABLE TO REACH DESIGN AIRFLOW.



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Project: PIADA - TYLER, TX

System/Unit: FAN - Exhaust



Asset: EF3

AREA: RESTROOM

Unit Data		
	Design	Actual
MFG	GREENHECK	CENTRI MASTER
Model Num	G-081	PV075E7
Serial Num	-	16K1484-1
Type	CENTRIFUGAL	CENTRIFUGAL
Configuration	DOWNBLAST	DOWNBLAST

Test Data		
	Design	Actual
CFM	300	322
Fan RPM	-	1362
Fan Rotation	-	CW
Motor RPM	-	1768
RL Voltage	-	121
RL Amperage	-	3.7
Suction ESP	-	-.30"
Discharge ESP	-	NA
Total ESP	0.75"	.30"
Brake Horse Power	-	.17

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	48YZ
Horsepower	0.25	1/4
Motor Rpm	-	1725
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	5.5
Service Factor	-	1.35

Drive Data		
	Design	Actual
Motor Sheave Size	-	MVL40
Motor Bore Size	-	1/2
Motor Sheave SetPt	-	4 TURNS OPEN
Fan Sheave Size	-	MA38
Fan Sheave Bore	-	5/8
Belt CL Distance	-	6 5/8
Num of Belts	-	1
Belt Size	-	3L230

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Notes:

Diffuser Ret/Exh (GRD)

EF3 / RESTROOM

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD1	RESTROOM	G2	8"	150		197	174	157	104.7
EGRD2	RESTROOM	G2	8"	150		233	209	165	110.0

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Asset	Area Served	Notes



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Project: PIADA - TYLER, TX

System/Unit: Kitchen Hood Type I



Asset: HD1

AREA: HOOD 1

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	5424 ND-2WI-ACPSP-FB	5424 ND-2WI-ACPSP-FB
Job / Serial Num	-	2745491
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	123	121
Hood Width	54	51
Supply Plenum Type	ACPSP	ACPSP
Supply Plenum Width	9	9
Supply Plenum Length	135	135

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO	CAPTRATE SOLO
Filter Size 1	16X16	16X16
Filter Qty 1	7	7
Filter AK factor size 1	1.62	1.62
Filter Total AK Area	11.34	11.34
Filter1 FPM	-	209
Filter2 FPM	-	242
Filter3 FPM	-	265
Filter4 FPM	-	267
Filter5 FPM	-	270
Filter6 FPM	-	242
Filter7 FPM	-	210
Filter High FPM(corr)	-	270
Filter Low FPM (corr)	-	209
Filter Ave FPM(corr)	-	244
CFM	2757	2767

Cooking Equipment		
	Design	Actual
Item 1	-	DEEP FRYER
Item 2	-	CHARGRILL
Item 3	-	RANGE
Item 4	-	DEEP FRYER

Test Data Supply		
	Design	Actual
AK factor	1	1
Total AK Area	8.44	8.44
Kv factor (Vel)	-	-
Reading1 FPM	-	158/135
Reading2 FPM	-	172/154
Reading3 FPM	-	164/152
Reading4 FPM	-	165/138
Reading5 FPM	-	144/130
Reading6 FPM	-	196/174
Reading7 FPM	-	158/184
Reading8 FPM	-	130/161
Reading9 FPM	-	151/167
Reading10 FPM	-	145/210
Reading11 FPM	-	119/183
High FPM(corr)	-	196/210
Low FPM(corr)	-	119/130
Ave FPM(corr)	-	155/162
CFM	1089	[1] FRONT / BACK

Performance Data		
	Design	Actual
Smoke Generation Type	-	45 SECOND SMOKE CARTRIDGE
Cooking Equip Heat On	-	NOT ON
Hood Capture %	-	100
Space Offset Temp Riser 1	-	15
Space Offset Temp Riser 2	-	15
Riser Temp F (idle) Riser 1	-	69.2/68.5
Riser Temp F (idle) Riser 2	-	70.3/61.1
Ambient Room Temp	-	69.4
100% override functional	-	YES

General		
	Design	Actual
Third Party Witness	-	RICK CLARK
Third Party Company	-	SCI STOVALL CONST.
Tech Witness	-	ROBERT SEPEDA
Tech Company	-	NATIONAL TAB



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Project: PIADA - TYLER, TX

System/Unit: Kitchen Hood Type I



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Notes: [1] MEASURED AT THE INLET ON THE ROOF; VELOCITIES TAKE FOR REFERENCE



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Project: PIADA - TYLER, TX

System/Unit: Kitchen Hood Type I



Asset: HD2

AREA: HOOD 2

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	5424 ND-2WI-PSP-F	5424 ND-2WI-PSP-F
Job / Serial Num	-	2745491
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	74	72
Hood Width	54	51
Supply Plenum Type	PSP	PSP
Supply Plenum Width	18	18
Supply Plenum Length	94	95

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO	CAPTRATE SOLO
Filter Size 1	16X16	16X16
Filter Qty 1	4	4
Filter AK factor size 1	1.62	1.62
Filter Total AK Area	6.48	6.48
Filter1 FPM	-	226
Filter2 FPM	-	224
Filter3 FPM	-	225
Filter4 FPM	-	214
Filter High FPM(corr)	-	226
Filter Low FPM (corr)	-	214
Filter Ave FPM(corr)	-	222
CFM	1659	1439

Cooking Equipment		
	Design	Actual
Item 1	-	STONE / EVO
Item 2	-	CONVECTION SKILLET

Test Data Supply		
	Design	Actual
AK factor	1	1
Total AK Area	11.75	11.75
Kv factor (Vel)	-	-
Reading1 FPM	-	164
Reading2 FPM	-	164
Reading3 FPM	-	159
Reading4 FPM	-	191
Reading5 FPM	-	161
Reading6 FPM	-	149
Reading7 FPM	-	147
Reading8 FPM	-	152
Reading13 FPM	-	-
Reading14 FPM	-	-
High FPM(corr)	-	191
Low FPM(corr)	-	147
Ave FPM(corr)	-	161
CFM	1477	1892

Performance Data		
	Design	Actual
Smoke Generation Type	-	45 SECOND SMOKE CARTRIDGE
Cooking Equip Heat On	-	NOT ON
Hood Capture %	-	100%
100% override functional	-	YES

General		
	Design	Actual
Third Party Witness	-	RICK CLARK
Third Party Company	-	STOVALL CONST
Tech Witness	-	ROBERT SEPEDA
Tech Company	-	NATIONAL TAB

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