AL ARABIA INDUSTRIES LLC

TEST REPORT

SCOPE OF WORK

This report gives the results of tests conducted on an AR-LBS-S.
The test results include Static Pressure, Area Factor, Throw and Sound Power Level.
The sample was selected and supplied by the client and was received at the laboratories on: February 19, 2026

The sample appeared to be in new unused condition upon receipt.

MODEL NUMBER

AR-LBS-S SUPPLY LINEAR BAR REGISTER

PROJECT NUMBER

G106483741

REPORT NUMBER

106483741CRT-001

ISSUE DATE

June 25, 2026

REVISED DATE

None

TEST DATE

June 23, 2026

DOCUMENT CONTROL NUMBER

DIFF.PKT.2022

Total Quality. Assured.

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REPORT NUMBER
106483741CRT-001

ISSUE DATE
June 25, 2026

MODEL NUMBER(s)
AR-LBS-S SUPPLY LINEAR BAR REGISTER

REPORT RENDERED TO:
AL ARABIA INDUSTRIES LLC
ICAD3 MUSSAFFAH
ABU DHABI - UAE.

AUTHORIZATION

The testing performed was authorized by signed quote number SWA.

TEST STANDARDS

ASHRAE 70-2023 Standard “Method of Testing for Rating the Performance of Air Outlets and Inlets”.

In Charge of Testing:	Reviewer:
Gerald Gray Associate Engineer Acoustical Testing	Brian Cyr Engineer Acoustical Testing

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SAMPLE INFORMATION

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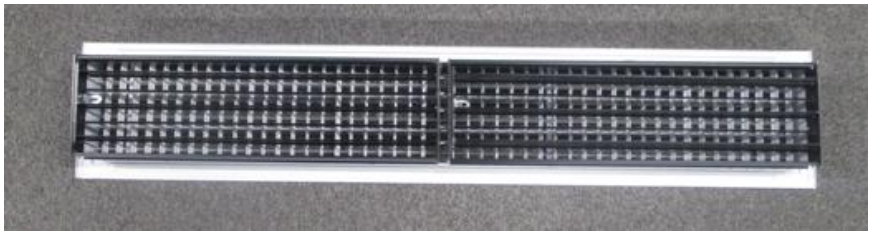
ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Received
1	CRT2602191421-001	AR-LBS-S	SUPPLY LINEAR BAR REGISTER	February 19, 2026

DESCRIPTION OF TEST SPECIMEN

The sample consisted of a model AR-LBS-S SUPPLY LINEAR BAR REGISTER. The sample measured 41.25 x 7.75 inches at the face. The sample measured 39.25 x 5.75 inches at the inlet.

SAMPLE PHOTOS



TEST METHODS

The sample was tested in accordance with the ASHRAE 70-2023 Standard “Method of Testing the Performance of Air Outlets and Inlets”. Acoustical data was obtained employing a Bruel & Kjaer Pulse Digital Frequency Analyzer. The reference sound source used for this test was a calibrated Bruel & Kjaer Type 4204, which conforms to the above standard. The octave band sound power levels were plotted on graph of Noise Criteria Curves. These curves are reprinted with permission from the ASHRAE Handbook and Product Directory, 2017. The sample was installed in the facility and supplied with measured volumes of air. The static pressure was measured upstream of the sample. The testing was done with isothermal air.

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EQUIPMENT LIST

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#	Equipment	Model No	Control No.	Last Cal	Cal Due
2	Pulse Analyzer	3110	E553	5/5/2025	5/5/2026
3	Microphone/Pre - DF	4942	E550	5/5/2025	5/5/2026
4	Reference Sound Source	4204	A230	11/20/2024	11/20/2027
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Temperature:

Dry Bulb 67.9 °F

Wet Bulb 48.6 °F

Barometric Pressure: 28.59 inHg

ASHRAE 70 - 2023 Edition

AREA FACTOR A_k - FOR AIR OUTLETS

Free Area, ft^2: 1.22

Neck Area, ft^2: 1.57

Face Area, ft^2: 2.22

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RESULTS OF TESTS

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SOUND POWER LEVEL

1/3 Octave Band Center Frequency Hertz	**SUPPLY LINEAR BAR REGISTER AR-LBS-S Sound Power Level dB re 10-12 Watt**					
125	41.4*	40.6	45.8	49.3	51.9	54.5
250	33.6*	36.9	42.5	46.0	48.6	51.7
500	28.9*	33.7	40.3	44.0	46.7	49.8
1000	30*	30.4	38.1	42.8	46.0	49.6
2000	20.1*	23.8	32.3	38.0	41.9	46.4
4000	22.2*	22.5*	23.4*	28.8	33.5	39.0
8000	26.9*	27*	27.1*	27.1*	27.5*	28.7*
Supply Air Volume, CFM	500	650	800	900	1000	1150
Inlet Static Pressure, in. H2O	0.03	0.05	0.07	0.09	0.11	0.13
**Noise Criteria (NC)	<15	19	27	31	35	38

* Sound Power Level data has reached ambient levels in the test room or is determined by instrument limitations. Actual levels are less than or equal to the levels indicated.

** Noise Criteria ratings were determined by subtracting a room absorption of 10dB from the Sound Power Level data.

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RESULTS OF TESTS
THROW

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0° Deflection Inlet Static Pressure 0.00 " H2O Air Volume 190 CFM

Distance From Ceiling	Distance From Diffuser (Ft)										
	0'	2'	4'	6'	8'	10'	12'	14'	16'	18'	20'
1"	--	32	67	81	81	79	62	67	59	59	51
3"	--	48	66	72	76	73	74	66	62	58	50
6"	158	116	86	76	71	64	68	64	65	58	48
9"	138	107	83	76	69	62	66	62	64	50	44
12"	--	24	51	60	55	55	56	53	61	41	36
18"	--	18	38	55	55	52	54	48	58	39	34
24"	--	--	27	40	48	45	50	44	50	36	27

0° Deflection Inlet Static Pressure 0.01 " H2O Air Volume 280 CFM

Distance From Ceiling	Distance From Diffuser (Ft)										
	0'	2'	4'	6'	8'	10'	12'	14'	16'	18'	20'
1"	20	54	111	121	110	111	102	97	89	78	82
3"	22	88	131	115	109	108	110	97	93	81	80
6"	213	180	122	105	107	105	99	92	89	78	75
9"	239	145	104	96	107	103	97	87	88	75	69
12"	17	40	53	63	84	88	81	71	74	60	58
18"	16	27	42	51	78	78	74	69	68	52	55
24"	--	18	23	31	67	61	63	60	56	36	47

0° Deflection Inlet Static Pressure 0.02 " H2O Air Volume 370 CFM

Distance From Ceiling	Distance From Diffuser (Ft)										
	0'	2'	4'	6'	8'	10'	12'	14'	16'	18'	20'
1"	28	38	113	146	146	148	144	132	122	118	105
3"	32	75	147	159	151	148	146	135	130	116	115
6"	272	195	163	148	143	135	129	124	121	99	115
9"	294	208	166	139	140	130	122	115	120	95	115
12"	19	59	109	107	114	110	106	101	106	76	93
18"	20	45	85	94	106	101	94	94	99	74	83
24"	--	28	47	71	81	82	83	81	86	64	76

NOTE: All throw values are in feet per minute.
The testing was done with isothermal air.