

<h1>Test Report</h1> <p>Issued by University of Salford (Acoustics Test Laboratory) Date of Issue: 5th March 2026 Report Number: 07607/13</p>	
<p>Page 1 of 14</p>	
<p>APPROVED SIGNATORIES</p> <p>Claire Lomax [x] Andy Moorhouse []  Gary Phillips [] Danny McCaul []</p>	
<p>acoustic test & calibration laboratory</p> <p>The University of Salford, Salford, Greater Manchester, M5 4WT, UK http://www.acoustics.salford.ac.uk t 0161 295 3030/0161 295 3319 f 0161 295 4456 e c.lomax1@salford.ac.uk</p>	

Determination of airborne noise from an appliance

Measurements described in this test report comply with:-
BS EN ISO 3744:2010 ‘Acoustics. Determination of sound power levels and sound energy levels of noise sources using sound pressure. Engineering methods for an essentially free field over a reflecting plane’

COMPANY NAME & ADDRESS:	Chauvet UK POD 1 EVO Park Nottingham NG16 6NT
FOR ATTENTION OF:	Ben Virgo
UNIT UNDER TEST:	Lighting Unit, Rogue Outcast 1M Beam
DATE OF TEST:	28 th January 2025
TEST ENGINEER:	Sean Furlong
MEASUREMENT PURPOSE:	To determine airborne noise by measurements to the above standards.

Results relate only to samples tested. Items tested are the samples supplied by the manufacturer, who was responsible for selecting at random from a standard production run.

Test Report

Issued by University of Salford (Acoustics Test Laboratory)

Date of Issue: 5th March 2026

Report Number: 07607/13

Page 2 of 14

1.0 Description of Appliance Under Test

CATEGORY:	Lighting Unit
DESIGN CHARACTERISTICS:	Floor mounted
MANUFACTURER:	Chauvet
MODEL:	Rogue Outcast 1M Beam
TEST REF NUMBERS:	07607/13_1 to 5
SERIAL NUMBER:	08012301-0425706773
POWER:	Not Stated
POWER SOURCE:	UK Mains
SETTINGS: <i>*See Table 1.0 below for details of settings</i>	07607/13_1 “Ambient” 07607/13_2 “Auto” 07607/13_3 “Eco” 07607/13_4 “Full” 07607/13_5 “Max”

** Table 1.0 – Manufacturer’s description of the different settings of the sample that were used to create the Test Configuration for each measurement.*

Explanation of Settings Used for Each Test	
Setting Name	Test Configuration
Ambient	Unit is in idle state, switched on and no output or movements
Auto	All Effects Static, 100% Light output — Auto Fan mode
Eco	All Effects Static, 100% Light output — Eco Fan mode
Full	All Effects Static, 100% Light output — Full Fan mode
Max	Unit is using all mechanical options and the light output is on – Absolute Silent Mode Off

Test Report

Issued by University of Salford (Acoustics Test Laboratory)

Date of Issue: 5th March 2026

Report Number: 07607/13

Page 3 of 14

2.0 Test Conditions

2.1 The following conditions were measured over duration of the test:-

	Measured Average Value
TEST REF NUMBER:	07607/13 1 to 5
SERIAL NO. / SAMPLE REF.	08012301-0425706773
Atmospheric Pressure	98.416
Ambient Temperature	21.1
Ambient Relative Humidity	33.3

- 2.2 The test was carried out in the hemi-anechoic chamber at the University of Salford.
- 2.3 The unit under test was mounted directly on the floor, in the centre of the hemi-anechoic chamber.
- 2.4 Unit operation was controlled by the client from outside the chamber, after initial configuration directly at the unit. Measurements were taken immediately after each setting of the unit was set and confirmed by the client.
- 2.5 For measurement of the sound pressure level of the Reference Sound Source (RSS), the RSS was placed directly on the floor of the hemi-anechoic chamber at the same location as the unit under test as defined in BS EN ISO 3744: 2010.

Test Report

Issued by University of Salford (Acoustics Test Laboratory)

Date of Issue: 5th March 2026

Report Number: 07607/13

Page 4 of 14



Figure 1 – Client image of the unit type, as tested in the hemi-anechoic chamber at the University of Salford.

3 Acoustical Data

3.1 Measurement method

A direct measurement method was used as stated in BS EN ISO 3744: 2010.

3.2 Reference Sound Source

The Laboratory reference sound source (RSS) type B&K 4204, serial number 1460189 was used on mains supply.

3.3 Microphone Array

Ten laboratory free field, low noise microphones were used for the measurement, placed in fixed positions 1 to 10 on a hemispherical surface ($d = 1.50$ m) with guidance from BS EN ISO 3744: 2010. The location of each measurement position is provided in Appendix 1 to this report.

Test Report

Issued by University of Salford (Acoustics Test Laboratory)

Date of Issue: 5th March 2026

Report Number: 07607/13

Page 5 of 14

3.4 Measured sound pressure levels of the unit

Each unit was run at the selected setting. Three measurements were made at each setting.

Mean sound pressure levels were measured over 30 seconds to give the measured sound pressure levels, L_{pi} at each measurement position in each third octave band. The sound power level was then calculated.

The background noise corrections K_1 , environmental correction calculated from RSS levels K_2 , measured sound pressure levels, L_{pi} at each measurement point, corrected sound pressure levels, L_{pf} , and the sound power level, L_w of the source in each third octave frequency band are given in Appendix 2 of this report. The measured time averaged sound pressure level of the RSS, $L'_{p(RSS)}$, at each microphone position is reported in Appendix 3 to this report.

3.5 Calculated sound power levels

The calculated A-Weighted sound power level, L_{WA} in dBA for each setting are given in table 3.1.

Table 3.1 –A-weighted noise emissions for each setting, averaged over 30 seconds and over 10 microphone positions.

Test Number	07607/13_1	07607/13_2	07607/13_3	07607/13_4	07607/13_5
Setting	Ambient	Auto	Eco	Full	Max
A-weighted sound power level, L_{WA} in dBA	28.7	51.0	27.7	60.1	60.1

Test Report

Issued by University of Salford (Acoustics Test Laboratory)

Date of Issue: 5th March 2026

Report Number: 07607/13

Page 6 of 14

3.6 Sound Pressure Level at 1 m from the source (not covered by BS EN 3744: 2010)

The A-weighted Sound Power Level can be used to calculate the A-weighted sound pressure level expected at different distances from the source in hemi-anechoic free field conditions*.

The calculation of the sound pressure levels is based on the formulae in BS EN 3744: 2010 for a parallelepiped measurement surface (for a noise source measured, in this case, above a single reflective plane).

The calculations show that to estimate the average sound pressure level expected at a distance of 1 m from the surface of the unit, 12.7 dB should be subtracted from the sound power value. This would give A-weighted average sound pressure levels in table 3.2 for each unit setting at 1 m from the surface of the unit:-

Table 3.2 – Calculated A-weighted sound pressure level* for each setting at 1 m from the unit surface

Test Number	07607/13_1	07607/13_2	07607/13_3	07607/13_4	07607/13_5
Setting	Ambient	Auto	Eco	Full	Max
A-weighted sound pressure level, L_p in dBA	15.9	38.3	15.0	47.4	47.3

**This calculation represents an estimate of the levels that would be obtained in hemi-anechoic free field conditions and should not be assumed to be valid for any specific building environments where the characteristics of the room should be accounted for.*

Test Report

Issued by University of Salford (Acoustics Test Laboratory)

Date of Issue: 5th March 2026

Report Number: 07607/13

Page 7 of 14

Appendix 1 – Locations of measurement positions

Defining measurement surface & Co-ordinates

Measurement distance, d

1.50 m

	x, mm	y, mm	z, mm
Microphone Position 1	-1485	0	225
Microphone Position 2	750	-1290	225
Microphone Position 3	750	1290	225
Microphone Position 4	-675	1155	675
Microphone Position 5	-675	-1155	675
Microphone Position 6	1335	0	675
Microphone Position 7	495	855	1125
Microphone Position 8	-990	0	1125
Microphone Position 9	495	-855	1125
Microphone Position 10	0	0	1500

Surface Area, m²

14.14 m²

Test Report

Issued by University of Salford (Acoustics Test Laboratory)

Date of Issue: 5th March 2026

Report Number: 07607/13

Page 8 of 14

Appendix 2 – Measurements and calculations according to BS EN ISO 3744

The following tables include measurement details that provide in each third octave band, for each of the seven settings:-

- measured L_{pi} , averaged over 30 s, at each measurement position
- background noise corrections K_1
- environmental correction K_2 , calculated from RSS levels
- corrected sound pressure levels, L_{pf}
- the sound power level, L_w of the source
- the A-weighted sound power level, L_{wA} of the source

! The levels at these frequencies are affected by background level and therefore levels quoted represent an upper limit for the sound pressure levels of the noise source.

Test Report

Issued by University of Salford (Acoustics Test Laboratory)

Date of Issue: 5th March 2026

Report Number: 07607/13

Page 9 of 14

MEASURED TIME AVERAGED SPL at 1.5 m, L'P - [07607/13_1 – "Ambient" Setting]											Mean L _p over mic positions	ΔL_p [dB]	BG corr. K ₁ , [dB]	Env corr. K ₂ , [dB]	L _p [dB]	Sound Power, L _w [dB]	A- weighting corrections [dB]	Sound Power, L _{wA} [dB]
Frequency [Hz]	Mic 1 [dB]	Mic 2 [dB]	Mic 3 [dB]	Mic 4 [dB]	Mic 5 [dB]	Mic 6 [dB]	Mic 7 [dB]	Mic 8 [dB]	Mic 9 [dB]	Mic 10 [dB]								
100	15.6	15.3	13.7	12.0	11.1	16.7	11.0	11.5	8.9	11.6	13.4	7.7	0.80	-2.0	14.5	26.0	-19.1	6.9
125	7.3	6.6	7.5	7.9	6.8	5.1	8.3	2.7	8.9	2.9	6.8	1.9	1.30	1.5	4.0	15.5	-16.1	-0.6
160	1.2	2.1	0.0	-2.0	-2.4	-3.7	-2.7	-5.0	-3.0	-1.6	-1.2	-0.8	1.30	0.3	-2.8	8.7	-13.4	-4.7
200	-3.2	-3.4	-3.2	-5.3	-5.5	-2.9	-3.8	-5.3	-4.1	-6.0	-4.2	2.3	1.30	-0.1	-5.4	6.2	-10.9	-4.7
250	4.2	4.9	3.3	3.3	3.4	7.3	2.7	2.3	4.1	-2.4	3.8	11.9	0.29	1.1	2.4	13.9	-8.6	5.3
315	-6.7	-6.0	-6.4	-8.5	-8.5	-8.4	-9.0	-8.8	-9.2	-7.9	-7.8	0.4	1.30	0.6	-9.8	1.8	-6.6	-4.8
400	-7.1	-6.5	-5.9	-9.9	-9.6	-10.0	-8.1	-8.4	-8.6	-8.2	-8.0	1.4	1.30	0.5	-9.8	1.7	-4.8	-3.1
500	-2.6	-4.2	-3.5	-7.0	-3.1	-4.4	-4.0	-4.0	-6.4	-5.1	-4.2	5.0	1.30	0.5	-6.0	5.5	-3.2	2.3
630	8.1	0.3	4.9	2.9	2.0	6.3	4.4	4.1	4.2	1.3	4.4	13.5	0.20	0.6	3.6	15.1	-1.9	13.2
800	7.3	7.5	2.0	2.0	7.4	5.0	1.3	2.6	3.9	3.4	4.9	13.5	0.20	0.7	4.0	15.5	-0.8	14.7
1000	8.1	-0.4	-1.1	-0.4	0.9	2.8	2.7	3.2	0.5	1.6	2.7	10.7	0.39	0.6	1.8	13.3	0	13.3
1250	3.7	4.9	1.7	4.6	0.7	10.8	5.2	4.8	6.8	1.8	5.5	12.8	0.23	0.5	4.7	16.2	0.6	16.8
1600	10.8	6.8	7.2	7.2	6.8	9.1	8.1	8.6	7.1	3.4	7.9	14.4	0.16	0.6	7.1	18.7	1	19.7
2000	10.5	12.6	13.4	7.5	7.0	7.5	8.9	10.1	7.8	6.3	9.8	15.5	0.00	0.9	8.9	20.4	1.2	21.6
2500	11.2	12.0	11.2	7.5	8.9	6.4	9.3	10.7	8.3	4.1	9.5	14.8	0.14	-1.4	10.7	22.3	1.3	23.6
3150	6.8	7.4	7.6	7.8	10.1	4.0	6.4	6.3	6.5	2.3	7.0	11.8	0.30	-0.5	7.2	18.7	1.2	19.9
4000	4.5	1.6	1.8	2.4	2.3	0.0	1.5	0.7	2.7	-1.6	1.9	5.4	1.30	0.1	0.4	11.9	1	12.9
5000	-1.6	-0.8	-0.8	-0.7	-0.9	-1.2	-1.3	-1.6	-0.9	-3.2	-1.3	2.7	1.30	-0.1	-2.4	9.1	0.5	9.6
6300	-4.2	-2.8	-3.3	-3.2	-2.6	-3.7	-2.6	-2.8	-2.8	-3.7	-3.1	0.9	1.30	0.2	-4.6	6.9	-0.1	6.8
8000	-4.3	-2.7	-2.9	-2.8	-2.6	-3.0	-1.8	-2.5	-2.3	-3.7	-2.8	0.8	1.30	-0.6	-3.5	8.0	-1.1	6.9
10000	-4.1	-3.0	-1.9	-2.3	-2.3	-2.4	-2.3	-2.4	-2.1	-2.8	-2.5	0.2	1.30	-0.3	-3.5	8.0	-2.5	5.5
A-WEIGHTED SOUND POWER LEVEL																		28.7

This report is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to recognised national standards, and to the units of measurement realised at the National Physical Laboratory or other recognised national standards laboratories. This certificate may not be reproduced other than in full except with the prior written approval of the issuing laboratory.

Test Report

Issued by University of Salford (Acoustics Test Laboratory)

Date of Issue: 5th March 2026

Report Number: 07607/13

Page 10 of 14

MEASURED TIME AVERAGED SPL at 1.5 m, L'P - [07607/13_2 - "Auto" Setting]											Mean L _p over mic positions	ΔL_p [dB]	BG corr. K ₁ , [dB]	Env corr. K ₂ , [dB]	L _p [dB]	Sound Power, L _w [dB]	A- weighting corrections [dB]	Sound Power, L _{wA} [dB]
Frequency [Hz]	Mic 1 [dB]	Mic 2 [dB]	Mic 3 [dB]	Mic 4 [dB]	Mic 5 [dB]	Mic 6 [dB]	Mic 7 [dB]	Mic 8 [dB]	Mic 9 [dB]	Mic 10 [dB]								
100	10.3	10.9	12.1	11.5	11.9	9.2	11.1	9.0	9.9	6.0	10.5	4.8	1.30	-2.0	11.1	22.6	-19.1	3.5
125	12.4	16.1	17.5	16.8	17.1	13.5	16.1	11.6	14.9	2.8	15.1	10.2	0.44	1.5	13.2	24.7	-16.1	8.6
160	13.5	19.1	19.8	18.6	18.0	15.1	17.2	10.9	16.9	4.6	16.8	17.2	0.00	0.3	16.5	28.0	-13.4	14.6
200	15.8	20.2	21.1	20.1	19.7	14.9	19.0	11.8	18.3	6.5	18.2	24.7	0.00	-0.1	18.3	29.8	-10.9	18.9
250	19.6	24.0	25.2	25.0	25.1	18.2	21.0	14.1	20.7	10.3	22.2	30.3	0.00	1.1	21.0	32.5	-8.6	23.9
315	21.6	27.8	29.1	26.4	27.2	20.8	21.5	17.7	21.0	15.7	24.8	33.0	0.00	0.6	24.1	35.6	-6.6	29.0
400	25.8	30.9	30.5	27.8	27.7	24.1	23.3	18.0	22.7	17.6	26.7	36.1	0.00	0.5	26.2	37.7	-4.8	32.9
500	36.4	37.1	37.2	32.7	34.3	34.1	27.1	23.7	25.9	29.2	33.8	43.1	0.00	0.5	33.3	44.8	-3.2	41.6
630	37.6	35.8	34.7	29.4	28.0	31.6	20.7	22.1	27.3	34.4	32.8	41.9	0.00	0.6	32.2	43.7	-1.9	41.8
800	36.6	33.7	35.5	26.3	21.6	27.6	27.9	31.0	30.8	36.2	32.8	41.4	0.00	0.7	32.0	43.6	-0.8	42.8
1000	40.0	34.1	36.1	28.8	27.0	23.7	31.2	38.3	30.5	31.8	34.6	42.5	0.00	0.6	34.0	45.5	0	45.5
1250	30.1	25.0	30.3	23.8	27.6	27.0	26.0	29.0	23.8	23.6	27.3	34.6	0.00	0.5	26.8	38.3	0.6	38.9
1600	29.2	25.7	28.2	28.4	29.6	28.2	24.8	27.2	25.9	27.5	27.7	34.3	0.00	0.6	27.2	38.7	1	39.7
2000	27.2	24.7	24.6	29.4	26.9	26.6	26.5	25.0	27.2	24.8	26.6	32.2	0.00	0.9	25.7	37.2	1.2	38.4
2500	18.2	20.1	20.9	24.2	24.1	20.4	27.2	24.3	25.8	21.8	23.5	28.8	0.00	-1.4	24.9	36.4	1.3	37.7
3150	16.5	23.3	17.6	24.7	26.5	20.0	24.8	22.7	24.3	22.6	23.2	28.1	0.00	-0.5	23.8	35.3	1.2	36.5
4000	17.1	23.3	19.2	24.4	22.5	18.6	19.7	17.3	21.1	21.0	21.1	24.6	0.00	0.1	21.0	32.5	1	33.5
5000	17.7	24.4	22.8	18.5	19.7	16.8	20.0	15.9	21.0	15.8	20.2	24.1	0.00	-0.1	20.3	31.8	0.5	32.3
6300	14.9	19.0	19.9	18.1	17.8	12.2	13.9	11.5	17.4	11.4	16.6	20.7	0.00	0.2	16.4	27.9	-0.1	27.8
8000	8.7	12.8	14.1	14.7	14.5	9.1	11.6	8.7	13.1	7.5	12.2	15.8	0.00	-0.6	12.8	24.3	-1.1	23.2
10000	6.3	13.9	10.2	11.7	10.7	7.2	9.0	5.1	10.7	4.3	9.9	12.6	0.25	-0.3	9.9	21.4	-2.5	18.9
A-WEIGHTED SOUND POWER LEVEL																		51.0

This report is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to recognised national standards, and to the units of measurement realised at the National Physical Laboratory or other recognised national standards laboratories. This certificate may not be reproduced other than in full except with the prior written approval of the issuing laboratory.

Test Report

Issued by University of Salford (Acoustics Test Laboratory)

Date of Issue: 5th March 2026

Report Number: 07607/13

Page 11 of 14

MEASURED TIME AVERAGED SPL at 1.5 m, L _P - [07607/13_3 - "Eco" Setting]											Mean L _p over mic positions	ΔL_p [dB]	BG corr. K ₁ , [dB]	Env corr. K ₂ , [dB]	L _p [dB]	Sound Power, L _w [dB]	A- weighting corrections [dB]	Sound Power, L _{wA} [dB]
Frequency [Hz]	Mic 1 [dB]	Mic 2 [dB]	Mic 3 [dB]	Mic 4 [dB]	Mic 5 [dB]	Mic 6 [dB]	Mic 7 [dB]	Mic 8 [dB]	Mic 9 [dB]	Mic 10 [dB]								
100	16.2	14.7	12.7	11.8	11.9	17.2	11.4	11.7	8.8	12.0	13.5	7.9	0.78	-2.0	14.7	26.2	-19.1	7.1
125	7.0	5.7	5.2	5.7	5.1	3.6	5.4	2.8	6.3	1.1	5.1	0.2	1.30	1.5	2.3	13.8	-16.1	-2.3
160	2.2	2.4	0.5	-2.0	-2.0	-2.7	-2.0	-2.9	-1.7	-2.2	-0.6	-0.3	1.30	0.3	-2.2	9.3	-13.4	-4.1
200	-1.5	-2.4	-2.2	-3.6	-4.0	-3.6	-3.5	-2.9	-3.3	-4.1	-3.1	3.4	1.30	-0.1	-4.2	7.3	-10.9	-3.6
250	-2.1	-3.6	-2.8	-3.4	-3.0	-3.4	-5.0	-3.4	-5.2	-6.4	-3.7	4.4	1.30	1.1	-6.1	5.4	-8.6	-3.2
315	-2.5	-3.3	-3.1	-7.2	-5.4	-5.8	-6.9	-7.6	-8.2	-7.5	-5.3	3.0	1.30	0.6	-7.2	4.3	-6.6	-2.3
400	3.2	0.7	1.8	-4.2	-2.2	-0.2	-3.8	-5.6	-8.0	-7.0	-1.1	8.3	0.69	0.5	-2.3	9.2	-4.8	4.4
500	2.4	-3.1	-4.8	-1.5	-4.4	-5.4	-1.5	-6.8	-5.2	-6.4	-2.7	6.6	1.08	0.5	-4.3	7.2	-3.2	4.0
630	1.2	4.4	4.2	-0.6	2.3	0.1	1.2	-3.1	4.6	7.9	3.3	12.3	0.26	0.6	2.4	13.9	-1.9	12.0
800	-1.7	4.8	1.8	-2.8	0.7	-2.0	0.0	-2.6	1.8	4.6	1.3	9.9	0.47	0.7	0.1	11.6	-0.8	10.8
1000	1.7	4.1	1.4	0.3	1.2	1.6	1.5	-1.0	2.3	-0.5	1.5	9.4	0.53	0.6	0.4	11.9	0	11.9
1250	4.6	4.0	4.2	7.8	9.4	6.4	3.8	5.0	6.9	4.7	6.1	13.4	0.20	0.5	5.3	16.9	0.6	17.5
1600	3.5	2.5	5.5	6.6	3.0	2.8	6.6	3.0	4.3	-0.2	4.2	10.8	0.38	0.6	3.2	14.7	1	15.7
2000	3.2	3.4	3.5	4.9	6.1	7.5	5.4	4.2	3.1	2.3	4.7	10.3	0.42	0.9	3.3	14.8	1.2	16.0
2500	9.0	10.2	9.4	10.8	7.8	11.6	13.3	13.4	9.2	7.8	10.7	16.0	0.00	-1.4	12.1	23.6	1.3	24.9
3150	3.6	3.1	3.9	4.3	2.7	4.5	4.9	5.5	4.8	1.1	4.0	8.9	0.60	-0.5	3.9	15.4	1.2	16.6
4000	-0.9	0.6	2.4	1.3	0.3	0.9	1.3	2.8	1.0	1.2	1.2	4.7	1.30	0.1	-0.2	11.3	1	12.3
5000	-0.6	-0.2	-0.6	-0.8	0.2	-0.1	0.8	0.7	0.3	-2.1	-0.2	3.8	1.30	-0.1	-1.3	10.2	0.5	10.7
6300	-0.6	-2.4	-1.8	-2.1	-1.9	-2.5	-2.1	-1.6	-1.6	-2.9	-1.9	2.2	1.30	0.2	-3.4	8.1	-0.1	8.0
8000	-2.5	-2.5	-1.1	-0.6	-0.8	-2.8	-0.4	-0.4	-2.3	-3.6	-1.5	2.0	1.30	-0.6	-2.2	9.3	-1.1	8.2
10000	-2.4	-2.9	-1.8	-1.6	-1.8	-1.0	-2.0	-2.1	-2.0	-2.7	-2.0	0.7	1.30	-0.3	-3.0	8.5	-2.5	6.0
A-WEIGHTED SOUND POWER LEVEL																		27.7

This report is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to recognised national standards, and to the units of measurement realised at the National Physical Laboratory or other recognised national standards laboratories. This certificate may not be reproduced other than in full except with the prior written approval of the issuing laboratory.

Test Report

Issued by University of Salford (Acoustics Test Laboratory)

Date of Issue: 5th March 2026

Report Number: 07607/13

Page 12 of 14

MEASURED TIME AVERAGED SPL at 1.5 m, L'P - [07607/13_4 - "Full" Setting]											Mean L _p over mic positions	ΔL_p [dB]	BG corr. K ₁ , [dB]	Env corr. K ₂ , [dB]	L _p [dB]	Sound Power, L _w [dB]	A- weighting corrections [dB]	Sound Power, L _{wA} [dB]
Frequency [Hz]	Mic 1 [dB]	Mic 2 [dB]	Mic 3 [dB]	Mic 4 [dB]	Mic 5 [dB]	Mic 6 [dB]	Mic 7 [dB]	Mic 8 [dB]	Mic 9 [dB]	Mic 10 [dB]								
100	17.6	18.0	18.2	17.3	17.2	17.9	16.9	15.9	15.7	12.8	17.0	11.3	0.33	-2.0	18.6	30.1	-19.1	11.0
125	18.3	21.1	22.5	21.5	21.8	19.4	21.2	17.4	20.2	9.3	20.2	15.3	0.00	1.5	18.8	30.3	-16.1	14.2
160	18.8	24.3	24.9	23.4	22.7	21.0	22.3	16.2	22.0	9.6	21.9	22.3	0.00	0.3	21.6	33.1	-13.4	19.7
200	21.1	25.5	26.3	25.1	24.3	20.7	24.0	17.1	23.5	11.5	23.3	29.8	0.00	-0.1	23.4	34.9	-10.9	24.0
250	24.4	29.1	30.2	29.7	29.8	23.6	26.0	18.7	25.6	14.4	27.1	35.2	0.00	1.1	25.9	37.4	-8.6	28.8
315	25.8	32.4	32.7	30.1	31.1	24.9	25.1	20.7	25.0	17.4	28.7	37.0	0.00	0.6	28.1	39.6	-6.6	33.0
400	31.1	35.2	36.0	32.7	32.1	29.6	28.1	25.1	28.1	23.8	31.7	41.1	0.00	0.5	31.2	42.7	-4.8	37.9
500	36.1	38.6	36.7	33.7	33.9	33.2	27.0	24.2	26.5	30.4	34.0	43.3	0.00	0.5	33.5	45.0	-3.2	41.8
630	48.7	48.2	47.1	39.7	39.1	43.5	34.8	33.0	40.8	47.7	44.9	53.9	0.00	0.6	44.2	55.7	-1.9	53.8
800	47.2	47.8	48.7	40.3	37.2	43.7	39.8	39.1	43.4	49.1	45.4	54.0	0.00	0.7	44.7	56.2	-0.8	55.4
1000	45.8	40.3	41.4	34.8	33.1	31.0	36.6	44.0	35.7	38.3	40.4	48.3	0.00	0.6	39.8	51.3	0	51.3
1250	37.8	32.7	37.1	30.9	35.2	34.6	33.4	36.8	31.7	31.3	34.8	42.1	0.00	0.5	34.2	45.7	0.6	46.3
1600	39.0	34.1	37.2	36.2	37.1	38.9	34.2	38.3	34.7	35.8	36.9	43.5	0.00	0.6	36.3	47.8	1	48.8
2000	34.9	32.3	32.6	37.6	35.1	35.7	35.2	32.7	35.3	32.4	34.7	40.4	0.00	0.9	33.8	45.3	1.2	46.5
2500	25.5	28.7	28.8	32.8	31.6	28.0	35.0	32.3	33.9	29.4	31.5	36.8	0.00	-1.4	32.8	44.3	1.3	45.6
3150	24.5	32.6	25.6	33.4	34.3	28.8	32.9	31.6	33.1	30.9	31.7	36.6	0.00	-0.5	32.2	43.7	1.2	44.9
4000	24.7	32.5	27.9	33.4	31.5	27.3	28.7	26.3	30.1	29.3	29.9	33.5	0.00	0.1	29.8	41.3	1	42.3
5000	26.8	34.1	32.1	28.1	29.2	26.8	29.7	25.5	30.7	24.9	29.7	33.7	0.00	-0.1	29.9	41.4	0.5	41.9
6300	24.6	29.1	30.1	28.6	27.3	23.8	24.5	21.5	27.4	21.0	26.8	30.8	0.00	0.2	26.5	38.1	-0.1	38.0
8000	20.3	25.5	25.9	26.2	25.7	22.1	22.9	19.9	24.9	18.6	23.9	27.5	0.00	-0.6	24.6	36.1	-1.1	35.0
10000	18.7	26.8	21.8	24.0	23.2	20.8	20.4	17.7	23.3	16.1	22.3	25.0	0.00	-0.3	22.6	34.1	-2.5	31.6
A-WEIGHTED SOUND POWER LEVEL																		60.1

This report is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to recognised national standards, and to the units of measurement realised at the National Physical Laboratory or other recognised national standards laboratories. This certificate may not be reproduced other than in full except with the prior written approval of the issuing laboratory.

Test Report

Issued by University of Salford (Acoustics Test Laboratory)

Date of Issue: 5th March 2026

Report Number: 07607/13

Page 13 of 14

MEASURED TIME AVERAGED SPL at 1.5 m, L'P - [07607/13_5 - "Max" Setting]											Mean L _p over mic positions	ΔL_p [dB]	BG corr. K ₁ , [dB]	Env corr. K ₂ , [dB]	L _p [dB]	Sound Power, L _w [dB]	A- weighting corrections [dB]	Sound Power, L _{wA} [dB]
Frequency [Hz]	Mic 1 [dB]	Mic 2 [dB]	Mic 3 [dB]	Mic 4 [dB]	Mic 5 [dB]	Mic 6 [dB]	Mic 7 [dB]	Mic 8 [dB]	Mic 9 [dB]	Mic 10 [dB]								
100	16.1	14.9	14.8	14.4	14.4	15.3	14.2	15.7	14.2	13.8	14.8	9.2	0.56	-2.0	16.2	27.7	-19.1	8.6
125	19.0	18.2	18.8	18.7	18.4	19.6	17.8	18.4	17.6	15.2	18.3	13.4	0.21	1.5	16.6	28.1	-16.1	12.0
160	20.4	20.6	21.1	19.9	19.3	21.6	19.1	18.9	18.8	17.8	19.9	20.2	0.00	0.3	19.6	31.1	-13.4	17.7
200	26.5	25.6	26.9	25.2	24.6	25.9	25.6	22.7	24.8	24.4	25.4	31.8	0.00	-0.1	25.5	37.0	-10.9	26.1
250	34.8	31.3	32.4	33.0	32.4	32.4	29.4	29.3	28.6	25.8	31.6	39.7	0.00	1.1	30.4	42.0	-8.6	33.4
315	29.1	30.4	30.8	28.5	28.9	27.3	26.3	26.2	26.2	27.9	28.5	36.7	0.00	0.6	27.8	39.3	-6.6	32.7
400	32.5	33.2	33.4	30.1	29.6	29.9	29.8	29.2	29.6	30.7	31.1	40.5	0.00	0.5	30.6	42.1	-4.8	37.3
500	36.0	36.2	36.3	31.5	31.7	31.4	31.4	30.6	31.0	32.5	33.5	42.7	0.00	0.5	33.0	44.5	-3.2	41.3
630	48.8	48.5	48.9	39.5	39.7	41.0	43.2	42.5	42.8	46.5	45.5	54.6	0.00	0.6	44.9	56.4	-1.9	54.5
800	48.9	48.2	48.4	38.1	38.5	38.6	44.2	44.2	44.1	46.1	45.5	54.1	0.00	0.7	44.8	56.3	-0.8	55.5
1000	41.7	41.4	41.8	36.5	36.3	37.9	38.4	39.3	38.6	37.6	39.4	47.3	0.00	0.6	38.8	50.3	0	50.3
1250	34.6	34.5	34.9	34.5	34.5	35.0	33.2	33.1	33.7	33.3	34.2	41.5	0.00	0.5	33.6	45.1	0.6	45.7
1600	34.5	34.0	34.9	37.6	37.5	37.2	34.3	33.9	34.6	34.4	35.6	42.1	0.00	0.6	35.0	46.5	1	47.5
2000	30.7	30.8	30.8	34.6	34.8	34.5	33.4	32.9	34.0	33.8	33.3	39.0	0.00	0.9	32.4	43.9	1.2	45.1
2500	28.4	28.7	29.3	32.9	32.6	32.0	34.5	34.2	34.7	32.6	32.5	37.8	0.00	-1.4	33.9	45.4	1.3	46.7
3150	30.2	30.4	30.7	32.9	32.3	31.4	33.0	32.9	33.3	33.4	32.2	37.1	0.00	-0.5	32.7	44.3	1.2	45.5
4000	27.6	29.0	29.3	30.3	30.1	29.9	30.0	29.7	30.1	30.8	29.8	33.3	0.00	0.1	29.6	41.1	1	42.1
5000	28.6	28.8	29.4	28.3	28.9	28.4	29.6	28.6	29.7	28.6	28.9	32.9	0.00	-0.1	29.1	40.6	0.5	41.1
6300	26.4	26.9	27.1	26.3	26.2	25.7	26.7	25.6	26.9	25.6	26.4	30.5	0.00	0.2	26.2	37.7	-0.1	37.6
8000	23.7	23.3	23.7	25.4	24.3	23.9	25.1	23.9	25.1	22.5	24.2	27.8	0.00	-0.6	24.8	36.3	-1.1	35.2
10000	21.5	20.7	22.0	23.6	22.8	22.5	23.1	22.1	23.3	20.2	22.3	25.0	0.00	-0.3	22.6	34.1	-2.5	31.6
A-WEIGHTED SOUND POWER LEVEL																		60.1

This report is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to recognised national standards, and to the units of measurement realised at the National Physical Laboratory or other recognised national standards laboratories. This certificate may not be reproduced other than in full except with the prior written approval of the issuing laboratory.

Test Report

Issued by University of Salford (Acoustics Test Laboratory)

Date of Issue: 5th March 2026

Report Number: 07607/13

Page 14 of 14

Appendix 3 – Measured time averaged sound pressure level of RSS, $L'_{P(RSS)}$ at each microphone position

Frequency	Mic 1	Mic 2	Mic 3	Mic 4	Mic 5	Mic 6	Mic 7	Mic 8	Mic 9	Mic 10	Average $L'_{P(RSS)}$ over microphone positions	Calculated Sound Power of RSS
[Hz]	[dB]	[dB]	[dB]									
100	64.3	61.5	63.0	61.9	62.5	63.1	61.5	63.0	61.4	57.0	62.2	73.7
125	66.6	65.9	65.0	66.5	65.1	67.3	63.4	65.3	65.6	57.8	65.4	76.9
160	65.9	66.2	65.5	65.1	64.4	67.6	62.7	63.1	63.9	57.5	64.8	76.3
200	67.0	65.4	65.4	65.0	64.0	65.4	63.3	63.1	63.1	58.7	64.5	76.0
250	68.1	66.7	66.9	67.2	67.2	65.2	63.1	61.9	63.7	59.2	65.6	77.1
315	67.1	68.0	67.9	66.1	66.6	65.3	61.3	62.3	61.5	62.4	65.5	77.0
400	67.8	68.4	68.2	65.3	64.7	65.2	61.0	60.9	61.1	60.6	65.3	76.8
500	68.9	68.5	68.7	64.5	64.8	64.6	60.8	60.6	60.8	62.0	65.6	77.1
630	69.4	69.1	69.3	63.4	63.6	63.2	63.2	63.0	63.0	65.8	66.2	77.7
800	69.9	70.4	70.8	62.7	62.4	62.1	67.4	67.2	67.1	69.0	67.9	79.4
1000	70.9	70.3	71.0	63.0	62.9	62.4	69.8	69.8	69.9	66.9	68.8	80.3
1250	70.9	71.0	71.1	70.4	70.1	69.6	69.9	69.8	69.7	71.5	70.4	81.9
1600	68.5	69.0	69.5	73.2	73.2	72.6	68.8	68.7	69.1	69.7	70.7	82.2
2000	68.3	68.8	69.0	72.2	72.1	71.6	71.3	70.9	71.4	67.2	70.6	82.1
2500	63.4	63.9	64.4	67.2	67.1	66.7	68.1	68.0	68.2	64.9	66.5	78.0
3150	65.4	63.7	63.7	70.1	69.6	68.9	66.8	66.8	67.2	62.8	67.2	78.7
4000	66.8	66.5	66.7	70.2	69.6	68.9	66.6	66.7	67.0	63.3	67.6	79.1
5000	69.1	67.9	68.7	66.2	66.7	66.9	65.4	65.3	65.9	60.3	66.8	78.3
6300	68.3	67.4	68.6	65.9	66.2	66.2	64.0	63.4	64.0	59.4	66.0	77.5
8000	64.7	63.3	64.5	64.8	64.0	63.9	63.3	62.0	63.2	57.2	63.5	75.0
10000	63.0	61.3	62.9	62.9	62.6	62.7	61.4	59.9	61.6	55.9	61.8	73.3

This report is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to recognised national standards, and to the units of measurement realised at the National Physical Laboratory or other recognised national standards laboratories. This certificate may not be reproduced other than in full except with the prior written approval of the issuing laboratory.