# APPENDIX E
## Noise Data

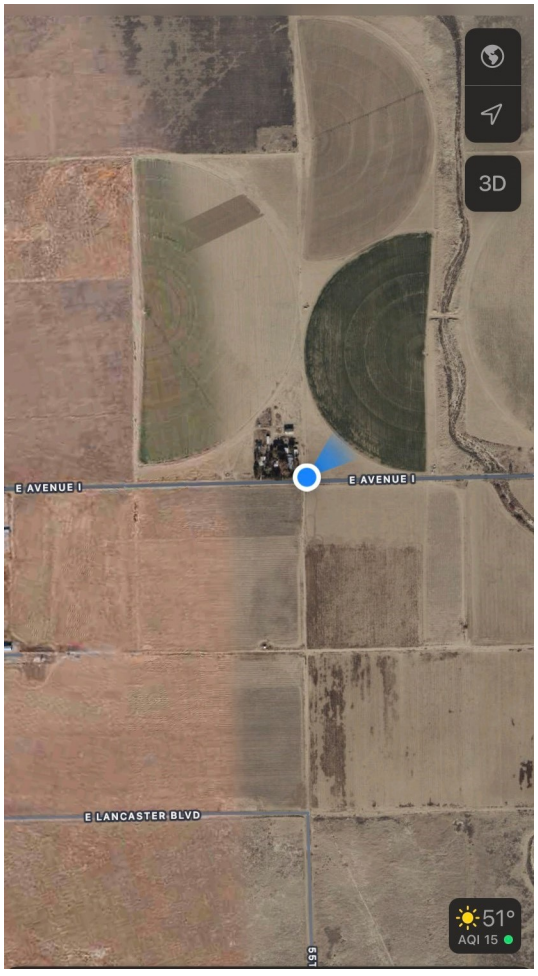
| | |
|---|---|
| **Site Number:** NM-1 | |
| **Recorded By:** Darshan Shivaiah, Dennis Dinh | |
| **Job Number:** 196028 | |
| **Date:** 12/14/2023 | |
| **Time:** 11:01 a.m. | |
| **Location:** In front of 5437 East Avenue I | |
| **Source of Ambient Noise:** Traffic along Avenue I | |

| Noise Data | | |
|---|---|---|
| $L_{eq}$ (dB) | $L_{max}$(dB) | $L_{min}$ (dB) |
| 60.3 | 84.1 | 27.8 |

| Equipment | | | | | | |
|---|---|---|---|---|---|---|
| **Category** | **Type** | **Vendor** | **Model** | **Serial No.** | **Cert. Date** | **Note** |
| Sound | Sound Level Meter | **Brüel & Kjær** | **2250** | **3011133** | **06/04/2023** | |
| | Microphone | **Brüel & Kjær** | **4189** | **3086765** | **06/04/2023** | |
| | Preamp | **Brüel & Kjær** | **ZC 0032** | **25380** | **06/04/2023** | |
| | Calibrator | **Brüel & Kjær** | **4231** | **2545667** | **06/04/2023** | |

| Weather Data | | | |
|---|---|---|---|
| **Est.** | **Duration:** 10 minutes | | **Sky:** Sunny |
| | **Note:** dBA Offset = 0.04 | | **Sensor Height (ft):** 5 ft |
| | **Wind Ave Speed (mph / m/s)** | **Temperature (degrees Fahrenheit)** | **Barometer Pressure (inches)** |
| | 4 mph | 49 | 30.24 |

## Photo of Measurement Location






## 2250

| | | |
|---|---|---|
| Instrument: | | 2250 |
| Application: | | BZ7225 Version 4.7.6 |
| Start Time: | | 12/14/2023 11:01:51 |
| End Time: | | 12/14/2023 11:11:51 |
| Elapsed Time: | | 00:10:00 |
| Bandwidth: | | 1/3-octave |
| Max Input Level: | | 142.07 |

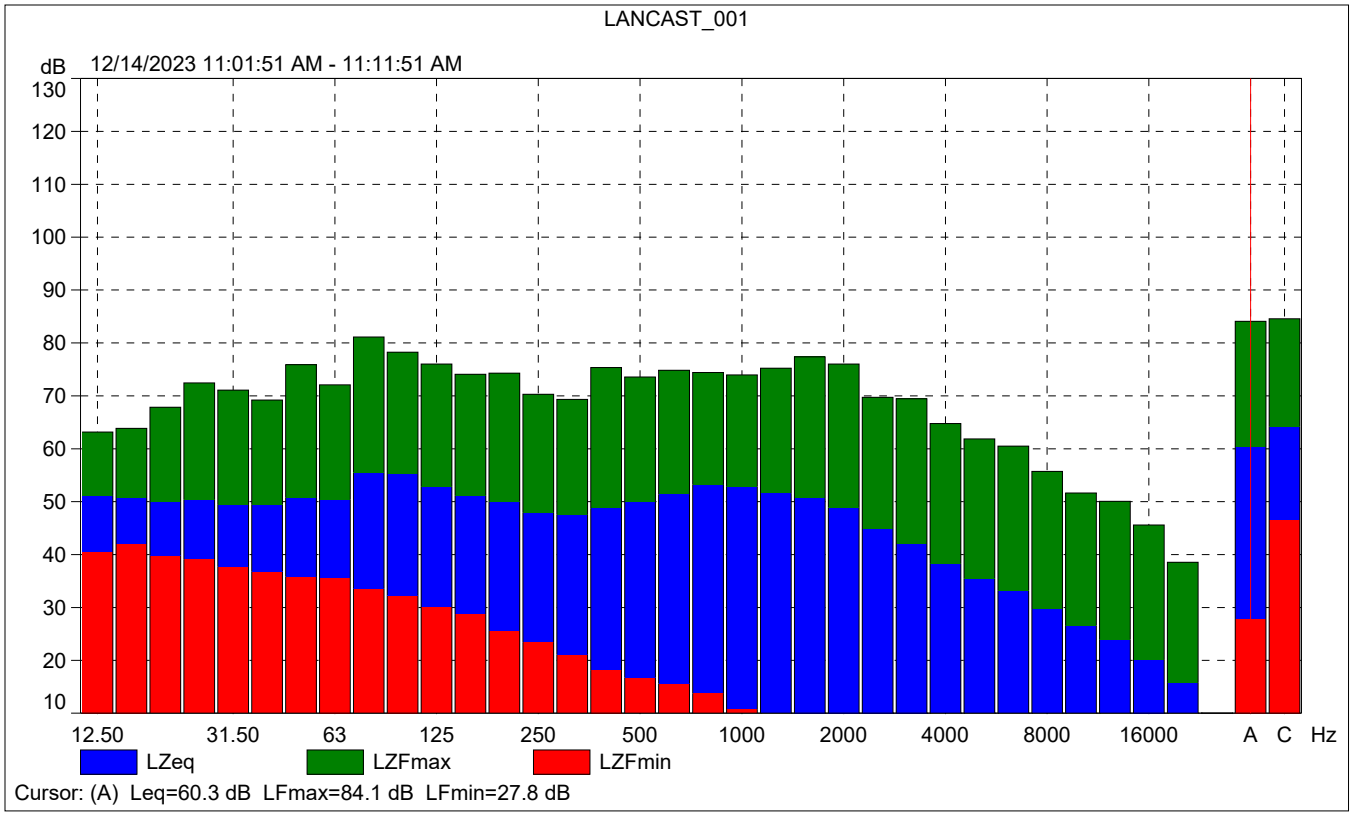
| | Time | Frequency |
|---|---|---|
| Broadband (excl. Peak): | FSI | AC |
| Broadband Peak: | | C |
| Spectrum: | FS | Z |

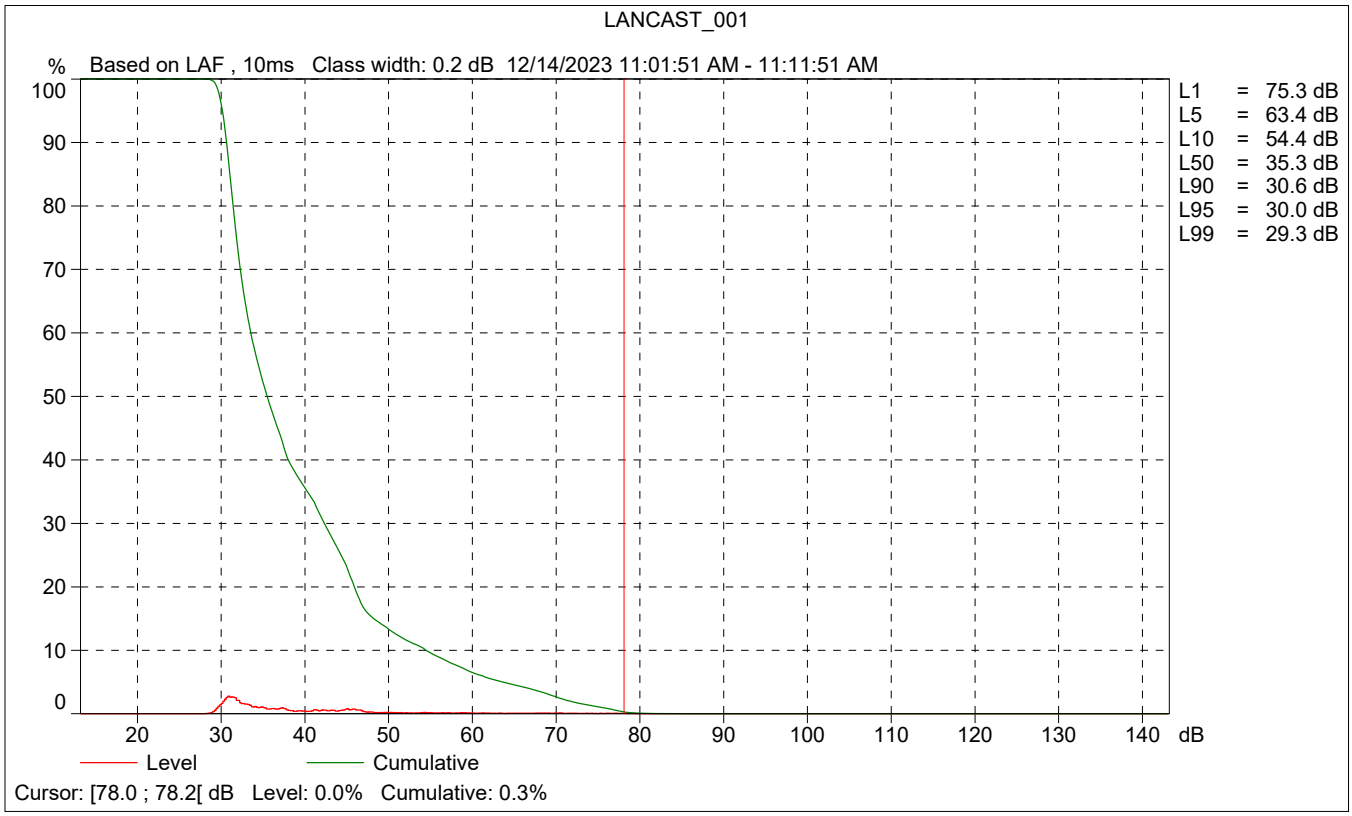
| | | |
|---|---|---|
| Instrument Serial Number: | | 3011133 |
| Microphone Serial Number: | | 3086765 |
| Input: | | Top Socket |
| Windscreen Correction: | | UA-1650 |
| Sound Field Correction: | | Free-field |

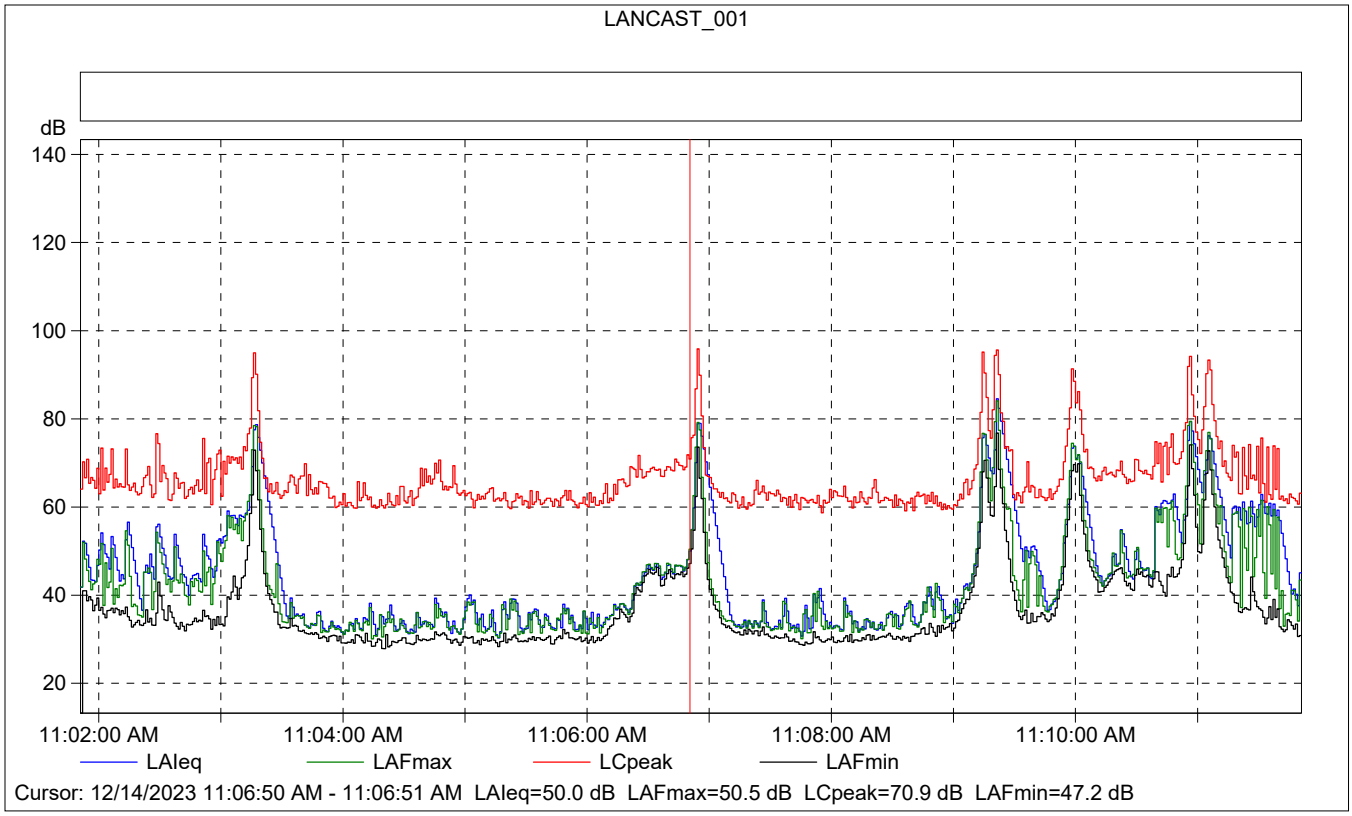
| | | |
|---|---|---|
| Calibration Time: | | 12/14/2023 10:49:17 |
| Calibration Type: | | External reference |
| Sensitivity: | | 43.8530705869198 mV/Pa |

## LANCAST_001

| | Start time | End time | Elapsed time | Overload [%] | LAeq [dB] | LAFmax [dB] | LAFmin [dB] |
|---|---|---|---|---|---|---|---|
| Value | | | | 0.00 | 60.3 | 84.1 | 27.8 |
| Time | 11:01:51 AM | 11:11:51 AM | 0:10:00 | | | | |
| Date | 12/14/2023 | 12/14/2023 | | | | | |

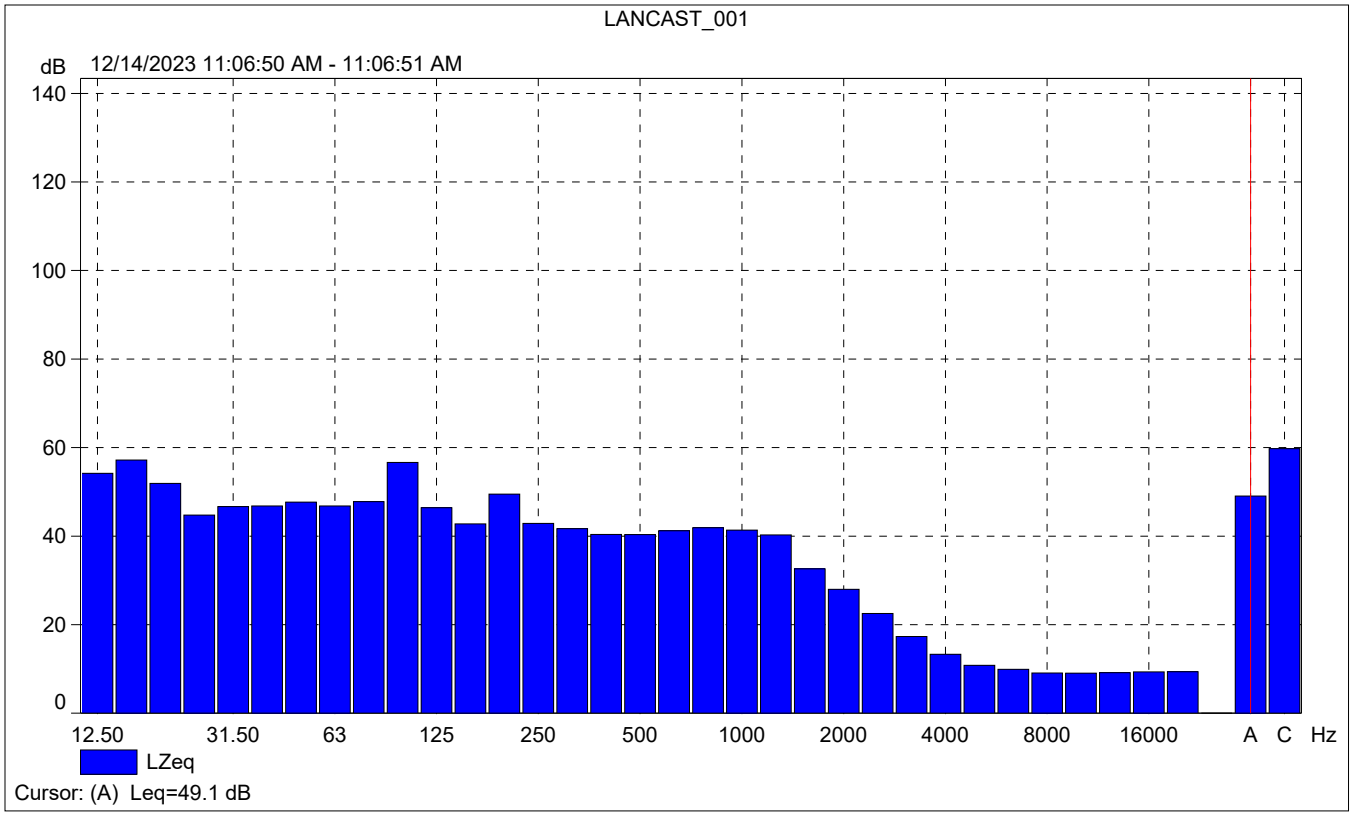

LANCAST_001
dB
12/14/2023 11:01:51 AM - 11:11:51 AM
130
120
110
100
90
80
70
60
50
40
30
20
10
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
LZFmax
LZFmin
Cursor: (A) Leq=60.3 dB LFmax=84.1 dB LFmin=27.8 dB

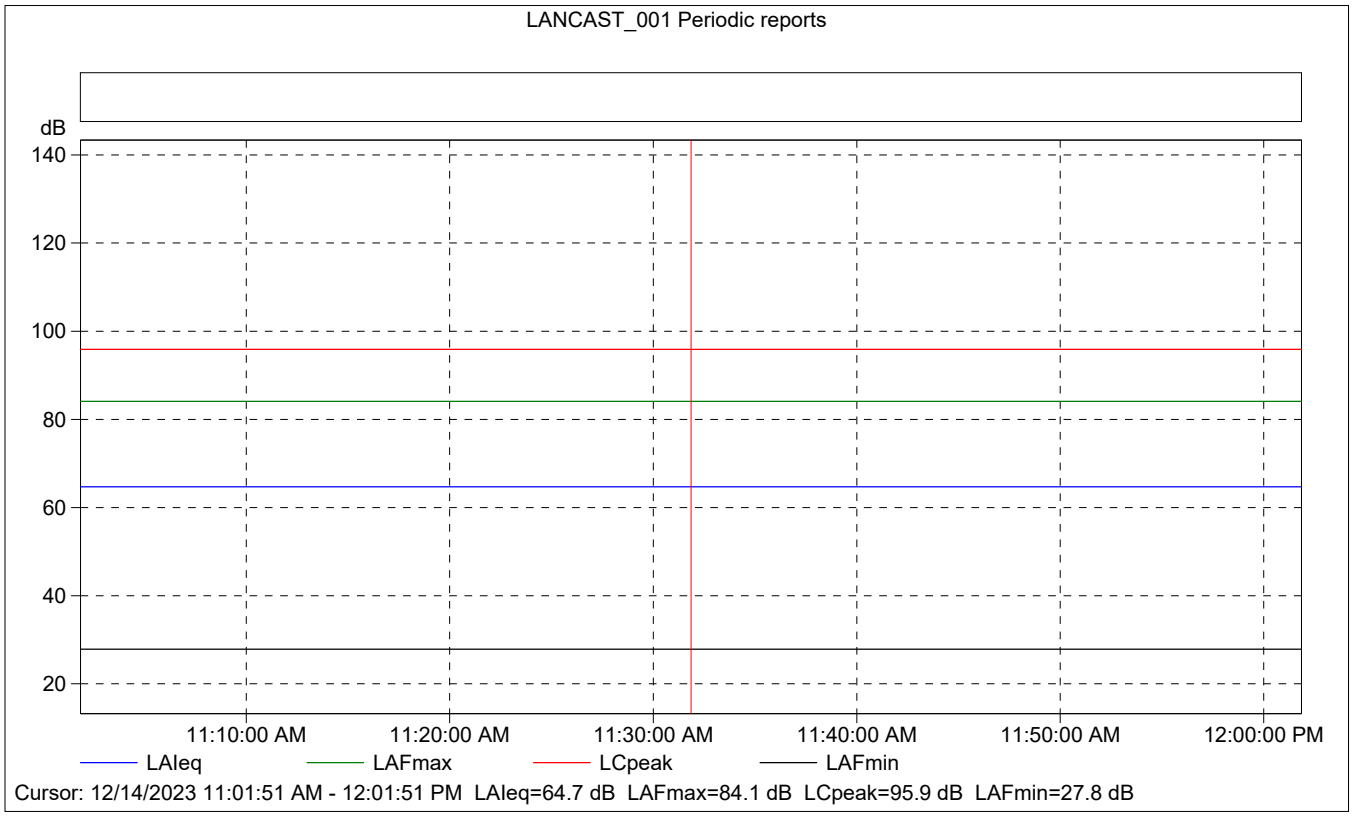

LANCAST_001
%
Based on LAF , 10ms Class width: 0.2 dB 12/14/2023 11:01:51 AM - 11:11:51 AM
100
90
80
70
60
50
40
30
20
10
0
20
30
40
50
60
70
80
90
100
110
120
130
140
dB
L1 = 75.3 dB
L5 = 63.4 dB
L10 = 54.4 dB
L50 = 35.3 dB
L90 = 30.6 dB
L95 = 30.0 dB
L99 = 29.3 dB
Level
Cumulative
Cursor: [78.0 ; 78.2[ dB Level: 0.0% Cumulative: 0.3%




## LANCAST_001

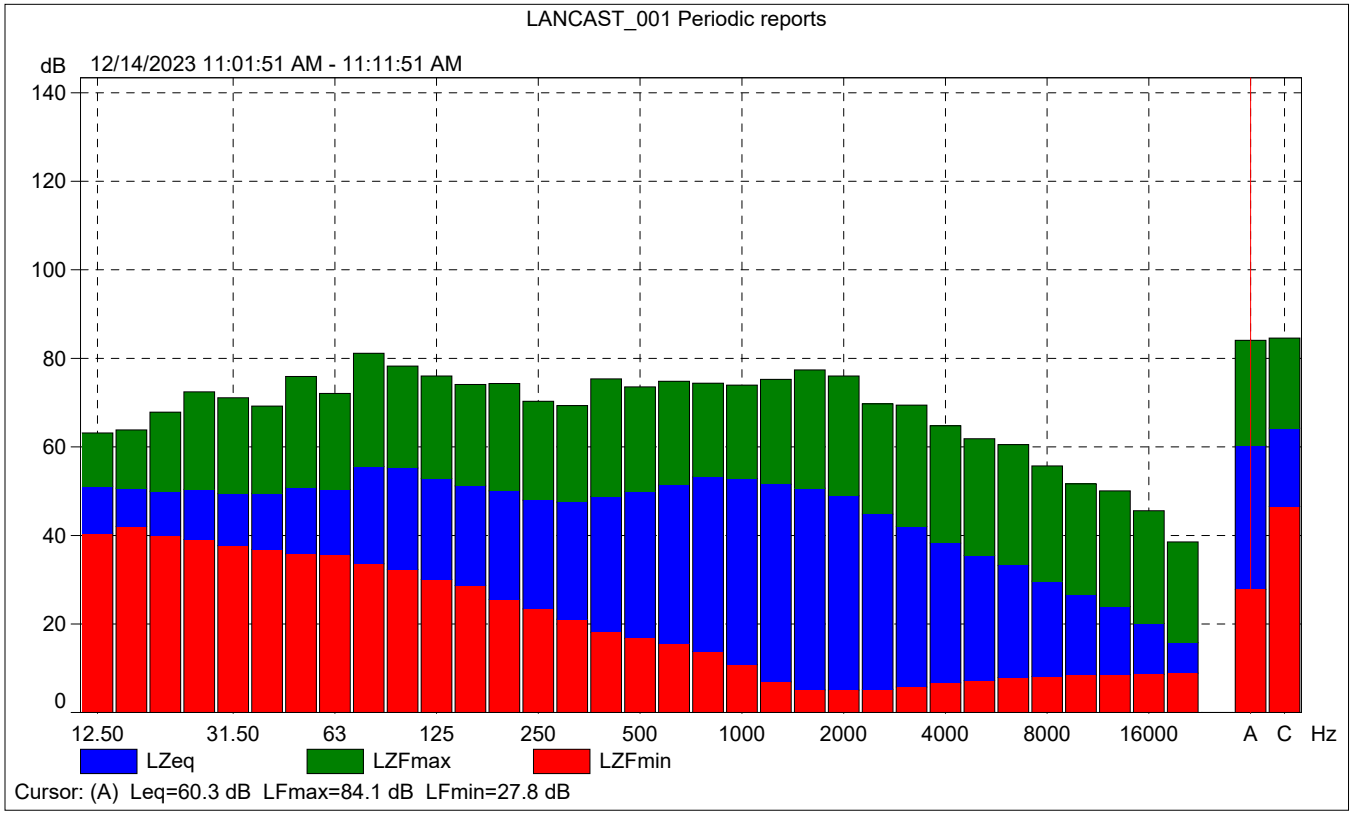
| | Start time | Elapsed time | Overload [%] | LAIeq [dB] | LAFmax [dB] | LAFmin [dB] |
|---|---|---|---|---|---|---|
| Value | | | 0.00 | 50.0 | 50.5 | 47.2 |
| Time | 11:06:50 AM | 0:00:01 | | | | |
| Date | 12/14/2023 | | | | | |

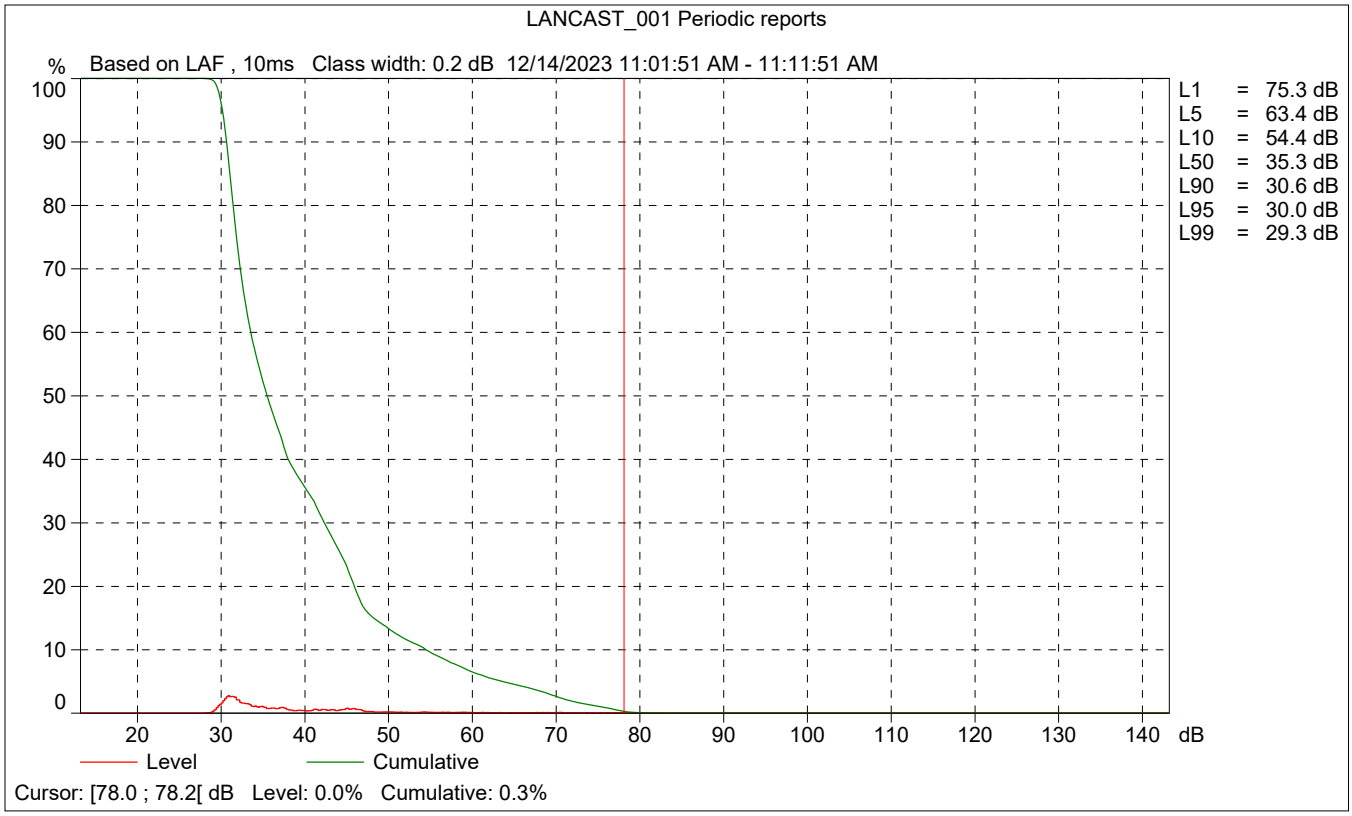

LANCAST_001
dB
12/14/2023 11:06:50 AM - 11:06:51 AM
140
120
100
80
60
40
20
0
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
Cursor: (A) Leq=49.1 dB


LANCAST_001 Periodic reports
dB
140
120
100
80
60
40
20
11:10:00 AM
11:20:00 AM
11:30:00 AM
11:40:00 AM
11:50:00 AM
12:00:00 PM
LAIeq
LAFmax
LCpeak
LAFmin
Cursor: 12/14/2023 11:01:51 AM - 12:01:51 PM LAIeq=64.7 dB LAFmax=84.1 dB LCpeak=95.9 dB LAFmin=27.8 dB

# LANCAST_001 Periodic reports

| | Start time | Elapsed time | Overload [%] | LAIeq [dB] | LAFmax [dB] | LAFmin [dB] |
|---|---|---|---|---|---|---|
| Value | | | 0.00 | 64.7 | 84.1 | 27.8 |
| Time | 11:01:51 AM | 0:10:00 | | | | |
| Date | 12/14/2023 | | | | | |




LANCAST_001 Periodic reports
% Based on LAF , 10ms Class width: 0.2 dB 12/14/2023 11:01:51 AM - 11:11:51 AM
100
90
80
70
60
50
40
30
20
10
0
20 30 40 50 60 70 80 90 100 110 120 130 140 dB
L1 = 75.3 dB
L5 = 63.4 dB
L10 = 54.4 dB
L50 = 35.3 dB
L90 = 30.6 dB
L95 = 30.0 dB
L99 = 29.3 dB
Level
Cumulative
Cursor: [78.0 ; 78.2[ dB Level: 0.0% Cumulative: 0.3%

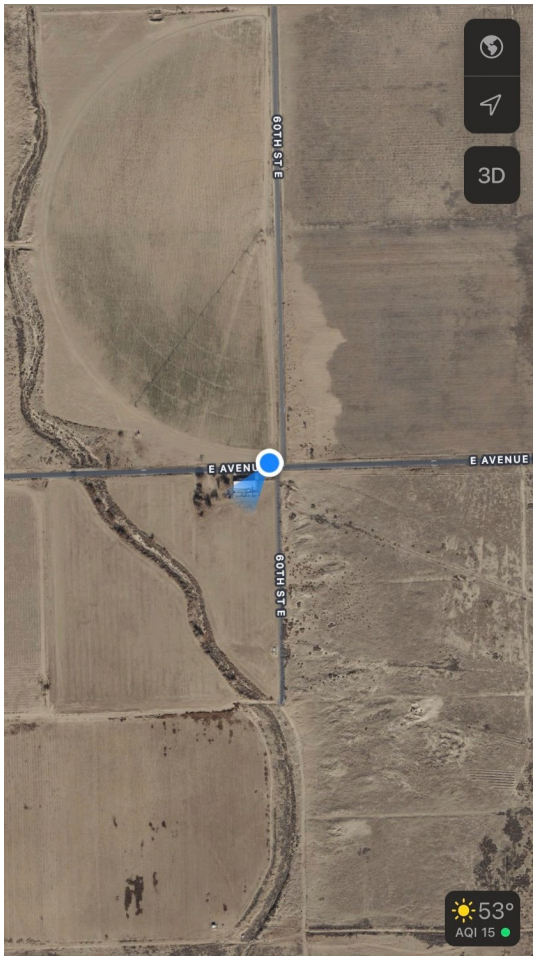
| | |
|---|---|
| **Site Number:** NM-2 | |
| **Recorded By:** Darshan Shivaiah, Dennis Dinh | |
| **Job Number:** 196028 | |
| **Date:** 12/14/2023 | |
| **Time:** 11:21 a.m. | |
| **Location:** Northeast corner of the 60th street and Avenue I intersection | |
| **Source of Ambient Noise:** Traffic along Avenue I | |

| Noise Data | | |
|---|---|---|
| $L_{eq}$ (dB) | $L_{max}$(dB) | $L_{min}$ (dB) |
| 62.2 | 82.4 | 32.3 |

| Equipment | | | | | | |
|---|---|---|---|---|---|---|
| **Category** | **Type** | **Vendor** | **Model** | **Serial No.** | **Cert. Date** | **Note** |
| Sound | Sound Level Meter | **Brüel & Kjær** | **2250** | **3011133** | **06/04/2023** | |
| | Microphone | **Brüel & Kjær** | **4189** | **3086765** | **06/04/2023** | |
| | Preamp | **Brüel & Kjær** | **ZC 0032** | **25380** | **06/04/2023** | |
| | Calibrator | **Brüel & Kjær** | **4231** | **2545667** | **06/04/2023** | |

| Weather Data | | | |
|---|---|---|---|
| **Est.** | **Duration:** 10 minutes | | **Sky:** Sunny |
| | **Note:** dBA Offset = 0.004 | | **Sensor Height (ft):** 5 ft |
| | **Wind Ave Speed (mph / m/s)** | **Temperature (degrees Fahrenheit)** | **Barometer Pressure (inches)** |
| | 4 mph | 49 | 30.24 |

## Photo of Measurement Location






## 2250

| | | |
|---|---|---|
| Instrument: | | 2250 |
| Application: | | BZ7225 Version 4.7.6 |
| Start Time: | | 12/14/2023 11:21:54 |
| End Time: | | 12/14/2023 11:31:54 |
| Elapsed Time: | | 00:10:00 |
| Bandwidth: | | 1/3-octave |
| Max Input Level: | | 142.07 |

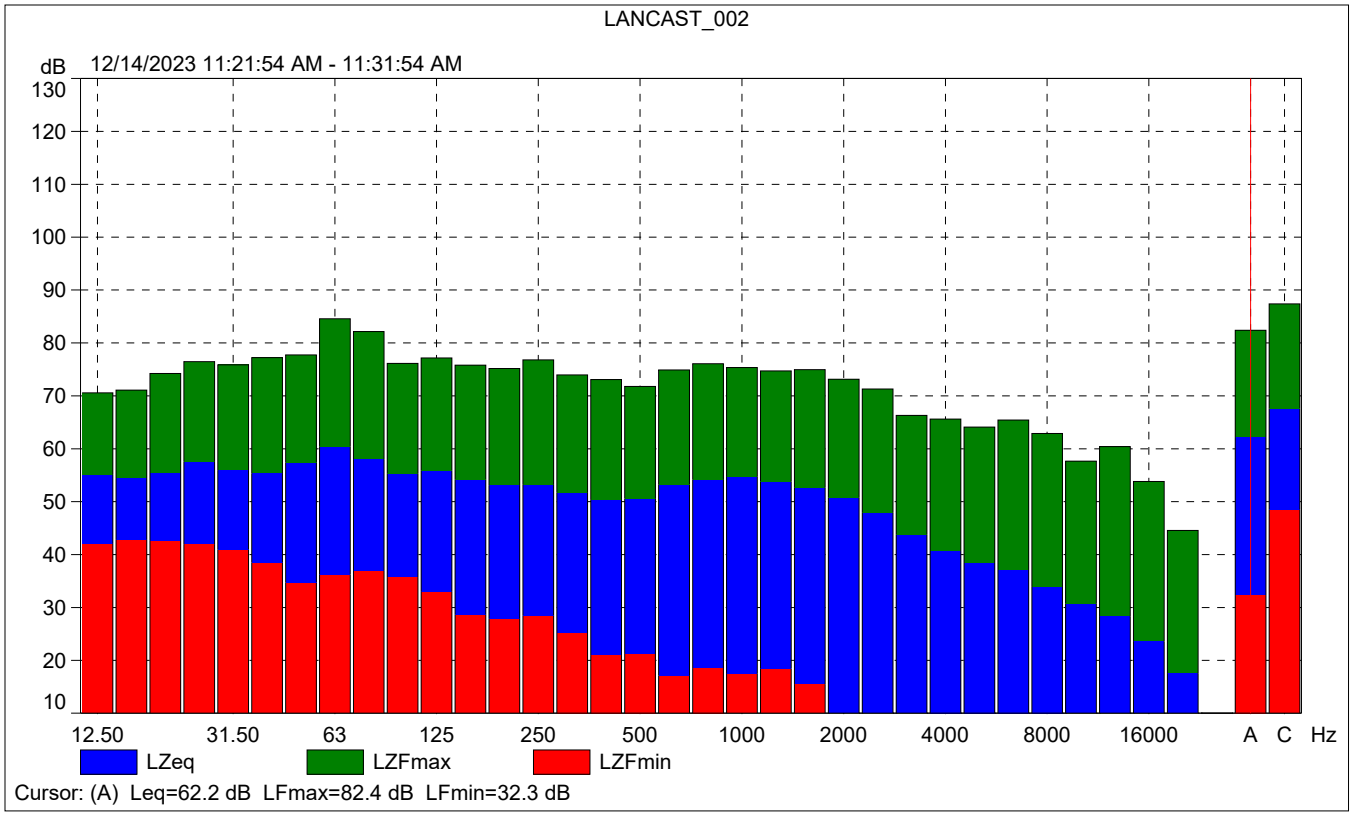
| | Time | Frequency |
|---|---|---|
| Broadband (excl. Peak): | FSI | AC |
| Broadband Peak: | | C |
| Spectrum: | FS | Z |

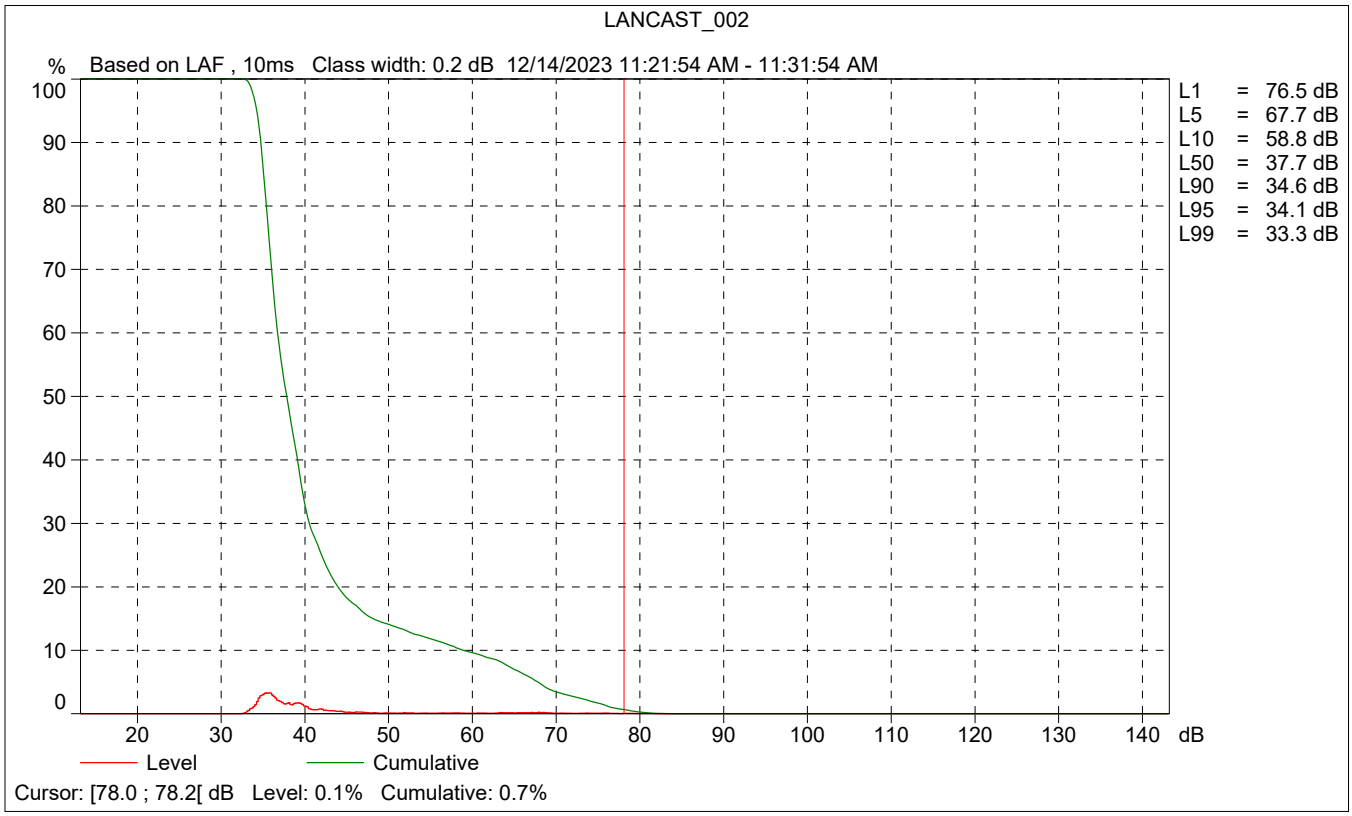
| | | |
|---|---|---|
| Instrument Serial Number: | | 3011133 |
| Microphone Serial Number: | | 3086765 |
| Input: | | Top Socket |
| Windscreen Correction: | | UA-1650 |
| Sound Field Correction: | | Free-field |

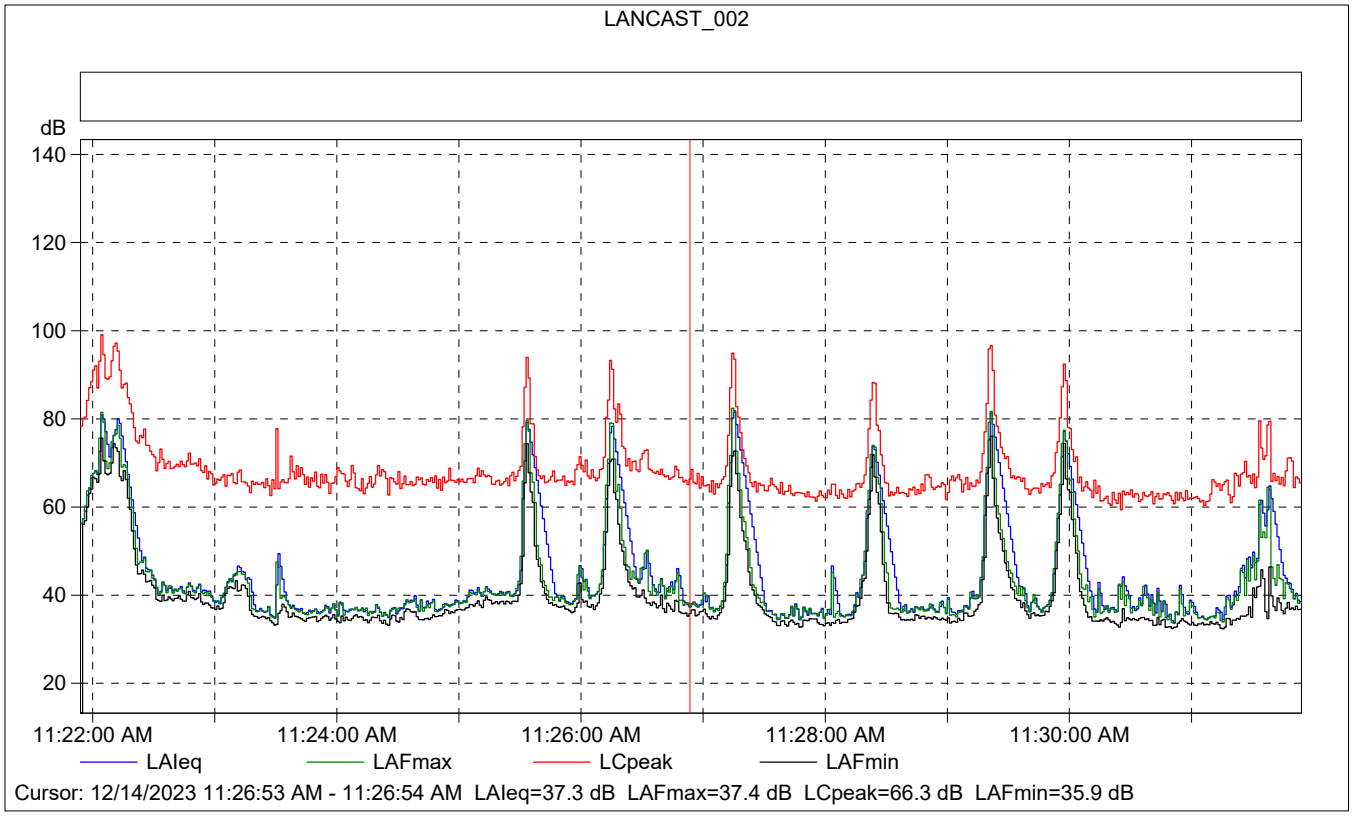
| | | |
|---|---|---|
| Calibration Time: | | 12/14/2023 10:49:17 |
| Calibration Type: | | External reference |
| Sensitivity: | | 43.8530705869198 mV/Pa |

## LANCAST_002

| | Start time | End time | Elapsed time | Overload [%] | LAeq [dB] | LAFmax [dB] | LAFmin [dB] |
|---|---|---|---|---|---|---|---|
| Value | | | | 0.00 | 62.2 | 82.4 | 32.3 |
| Time | 11:21:54 AM | 11:31:54 AM | 0:10:00 | | | | |
| Date | 12/14/2023 | 12/14/2023 | | | | | |

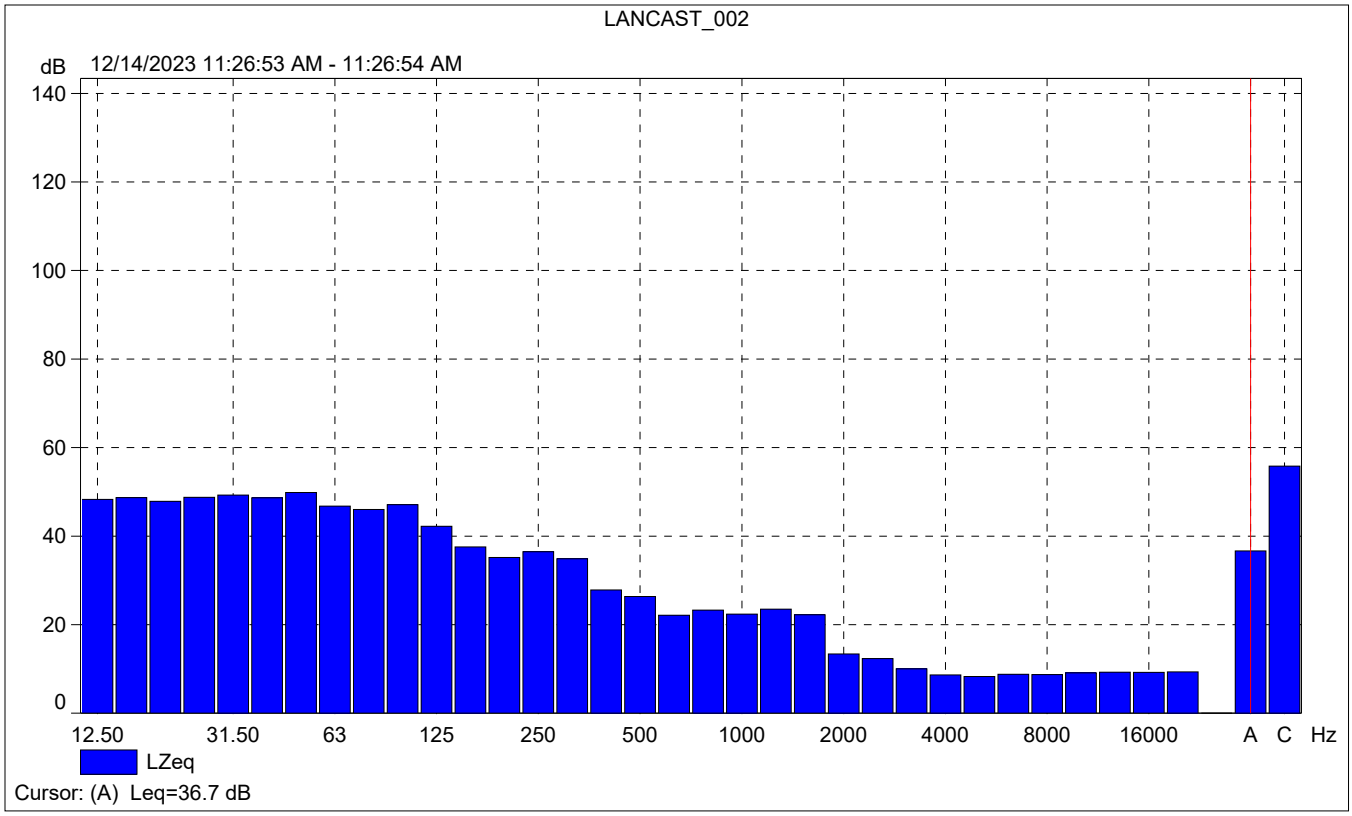

LANCAST_002
dB
12/14/2023 11:21:54 AM - 11:31:54 AM
130
120
110
100
90
80
70
60
50
40
30
20
10
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
LZFmax
LZFmin
Cursor: (A) Leq=62.2 dB LFmax=82.4 dB LFmin=32.3 dB

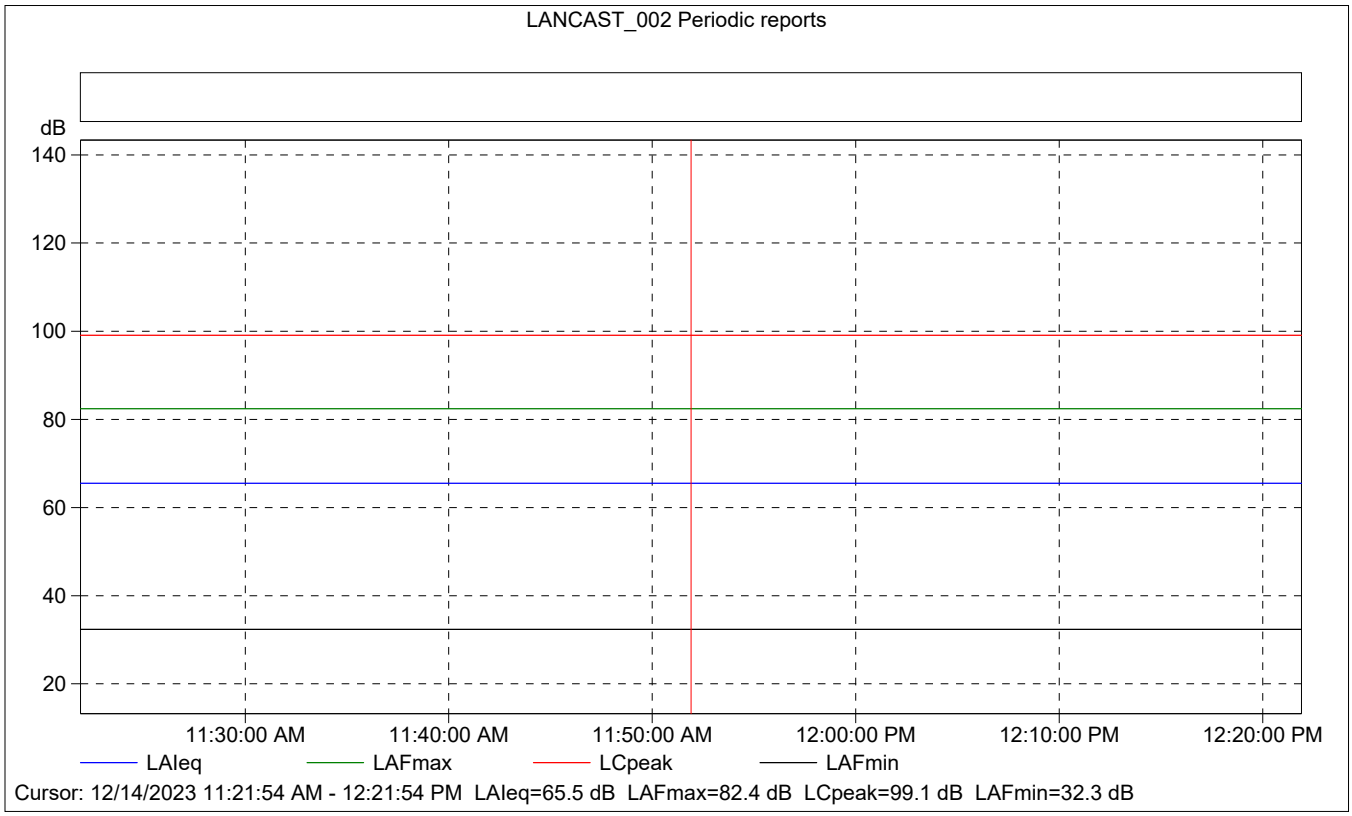

LANCAST_002
%
Based on LAF , 10ms Class width: 0.2 dB 12/14/2023 11:21:54 AM - 11:31:54 AM
100
90
80
70
60
50
40
30
20
10
0
20
30
40
50
60
70
80
90
100
110
120
130
140
dB
L1 = 76.5 dB
L5 = 67.7 dB
L10 = 58.8 dB
L50 = 37.7 dB
L90 = 34.6 dB
L95 = 34.1 dB
L99 = 33.3 dB
Level
Cumulative
Cursor: [78.0 ; 78.2[ dB Level: 0.1% Cumulative: 0.7%




## LANCAST_002

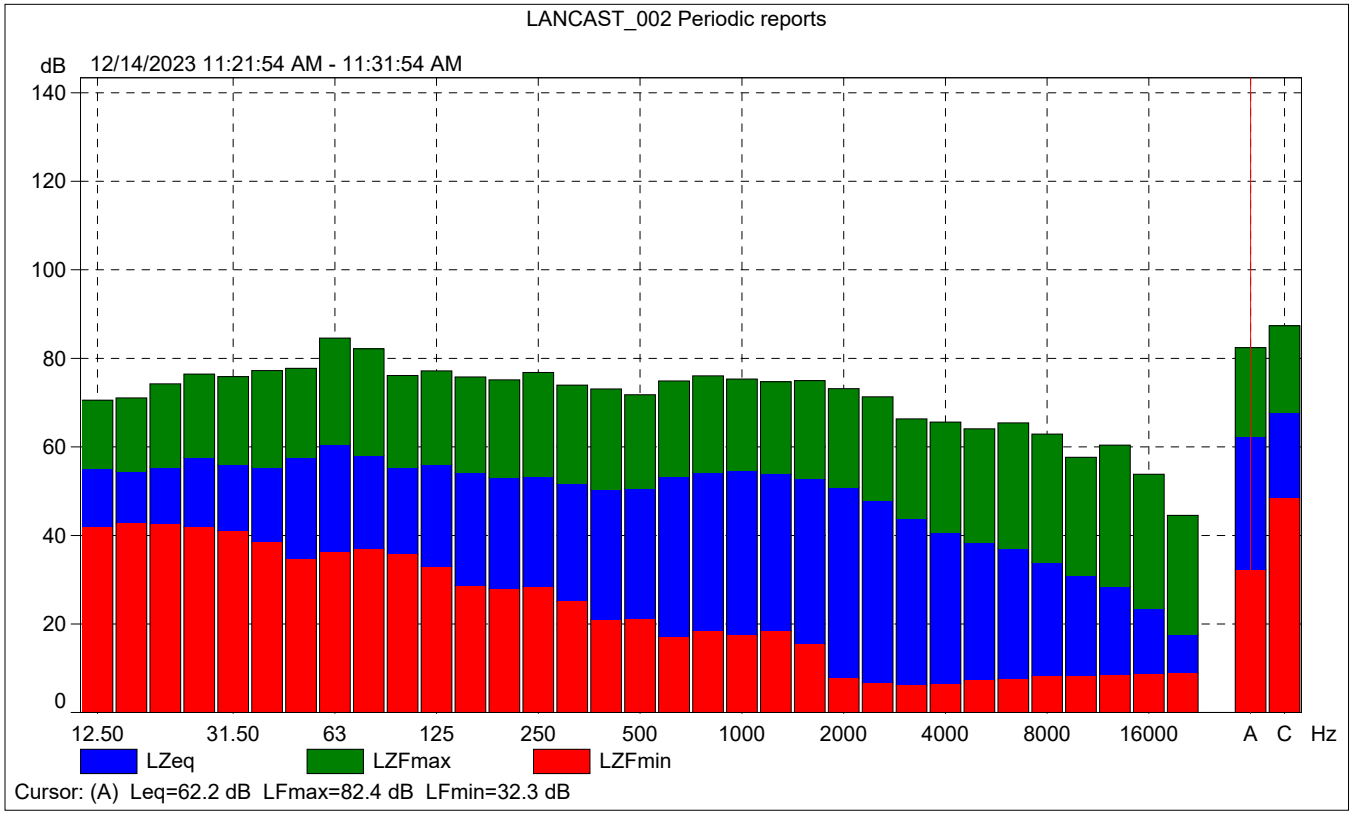
| | Start time | Elapsed time | Overload [%] | LAIeq [dB] | LAFmax [dB] | LAFmin [dB] |
|---|---|---|---|---|---|---|
| Value | | | 0.00 | 37.3 | 37.4 | 35.9 |
| Time | 11:26:53 AM | 0:00:01 | | | | |
| Date | 12/14/2023 | | | | | |

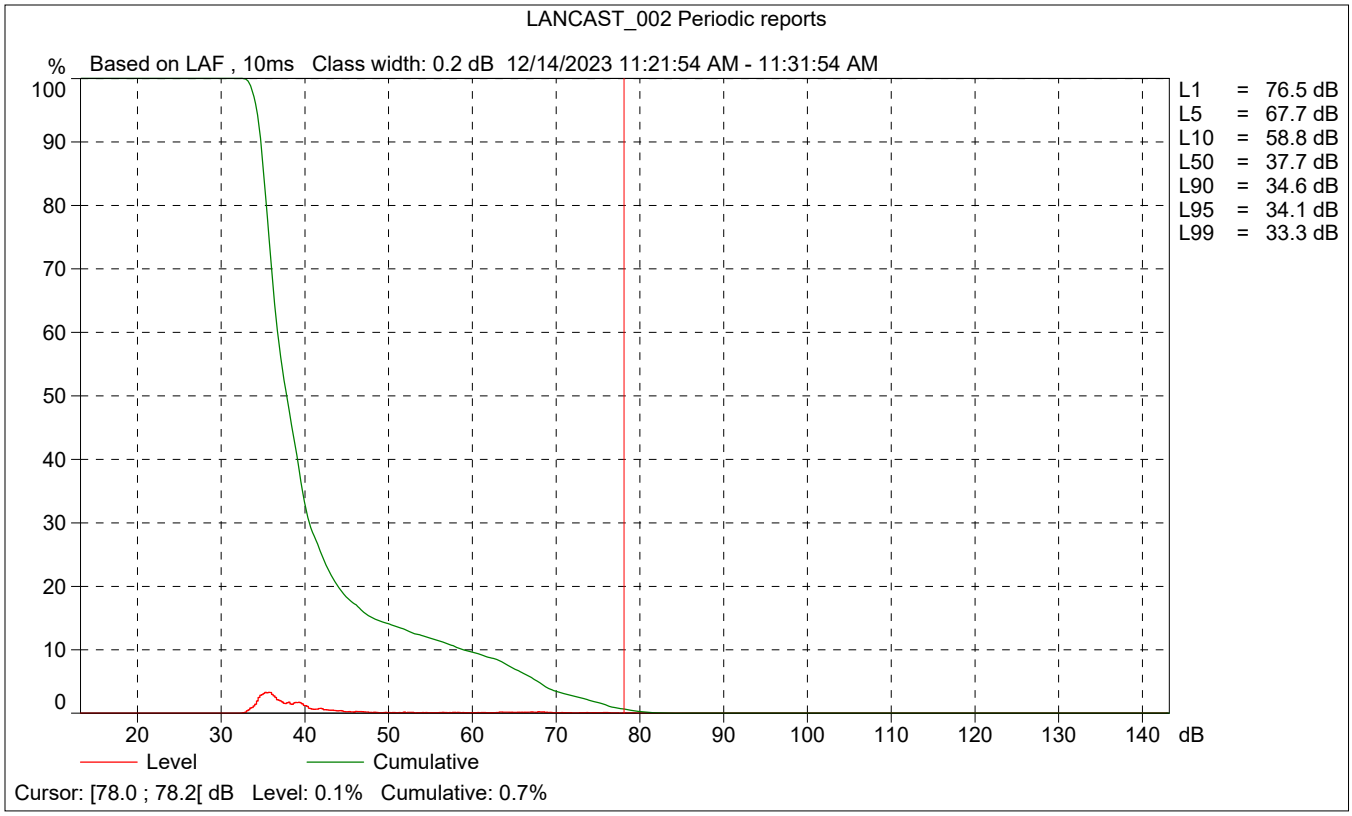

LANCAST_002
dB
12/14/2023 11:26:53 AM - 11:26:54 AM
140
120
100
80
60
40
20
0
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
Cursor: (A) Leq=36.7 dB


LANCAST_002 Periodic reports
dB
140
120
100
80
60
40
20
11:30:00 AM
11:40:00 AM
11:50:00 AM
12:00:00 PM
12:10:00 PM
12:20:00 PM
LAIeq
LAFmax
LCpeak
LAFmin
Cursor: 12/14/2023 11:21:54 AM - 12:21:54 PM LAIeq=65.5 dB LAFmax=82.4 dB LCpeak=99.1 dB LAFmin=32.3 dB

# LANCAST_002 Periodic reports

| | Start time | Elapsed time | Overload [%] | LAIeq [dB] | LAFmax [dB] | LAFmin [dB] |
|---|---|---|---|---|---|---|
| Value | | | 0.00 | 65.5 | 82.4 | 32.3 |
| Time | 11:21:54 AM | 0:10:00 | | | | |
| Date | 12/14/2023 | | | | | |




LANCAST_002 Periodic reports
% Based on LAF , 10ms Class width: 0.2 dB 12/14/2023 11:21:54 AM - 11:31:54 AM
100
90
80
70
60
50
40
30
20
10
0
20 30 40 50 60 70 80 90 100 110 120 130 140 dB
L1 = 76.5 dB
L5 = 67.7 dB
L10 = 58.8 dB
L50 = 37.7 dB
L90 = 34.6 dB
L95 = 34.1 dB
L99 = 33.3 dB
Level
Cumulative
Cursor: [78.0 ; 78.2[ dB Level: 0.1% Cumulative: 0.7%

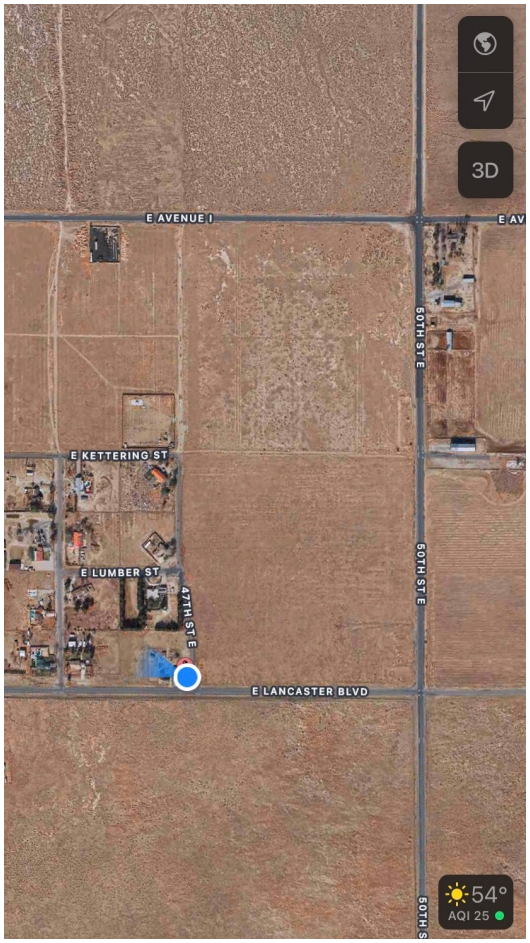
| | |
|---|---|
| **Site Number:** NM-3 | |
| **Recorded By:** Darshan Shivaiah, Dennis Dinh | |
| **Job Number:** 196028 | |
| **Date:** 12/14/2023 | |
| **Time:** 11:40 a.m. | |
| **Location:** To the east of 4661 East Lancaster Boulevard | |
| **Source of Ambient Noise:** Traffic along Lancaster Boulevard | |

| **Noise Data** | | |
|---|---|---|
| **$L_{eq}$ (dB)** | **$L_{max}$(dB)** | **$L_{min}$ (dB)** |
| 55.3 | 76.3 | 29.6 |

| **Equipment** | | | | | | |
|---|---|---|---|---|---|---|
| **Category** | **Type** | **Vendor** | **Model** | **Serial No.** | **Cert. Date** | **Note** |
| Sound | Sound Level Meter | **Brüel & Kjær** | **2250** | **3011133** | **06/04/2023** | |
| | Microphone | **Brüel & Kjær** | **4189** | **3086765** | **06/04/2023** | |
| | Preamp | **Brüel & Kjær** | **ZC 0032** | **25380** | **06/04/2023** | |
| | Calibrator | **Brüel & Kjær** | **4231** | **2545667** | **06/04/2023** | |

| **Weather Data** | | | |
|---|---|---|---|
| **Est.** | **Duration:** 10 minutes | | **Sky:** Sunny |
| | **Note:** dBA Offset = 0.004 | | **Sensor Height (ft):** 5 ft |
| | **Wind Ave Speed (mph / m/s)** | **Temperature (degrees Fahrenheit)** | **Barometer Pressure (inches)** |
| | 4 mph | 49 | 30.24 |

## Photo of Measurement Location






## 2250

| | | |
|---|---|---|
| Instrument: | | 2250 |
| Application: | | BZ7225 Version 4.7.6 |
| Start Time: | | 12/14/2023 11:40:33 |
| End Time: | | 12/14/2023 11:50:33 |
| Elapsed Time: | | 00:10:00 |
| Bandwidth: | | 1/3-octave |
| Max Input Level: | | 142.07 |

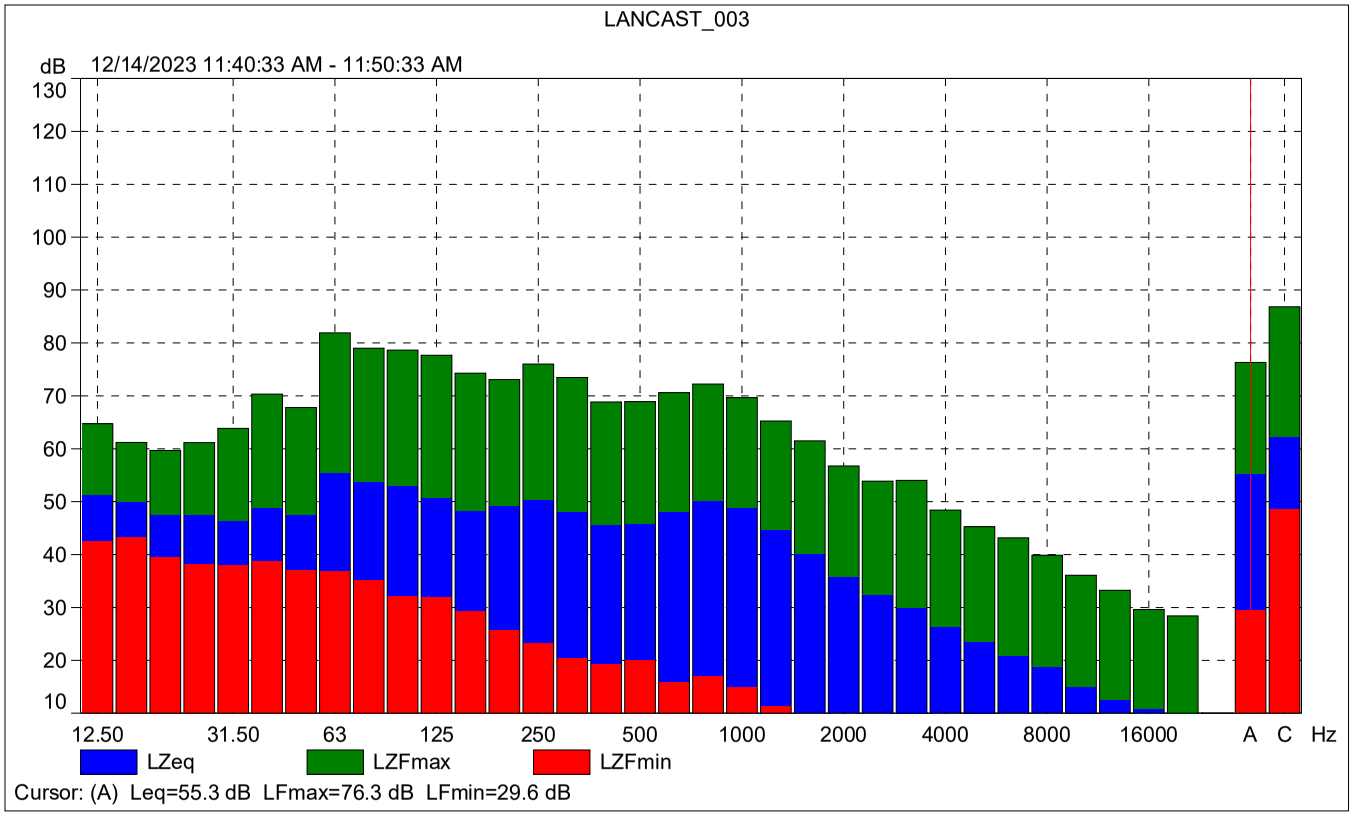
| | Time | Frequency |
|---|---|---|
| Broadband (excl. Peak): | FSI | AC |
| Broadband Peak: | | C |
| Spectrum: | FS | Z |

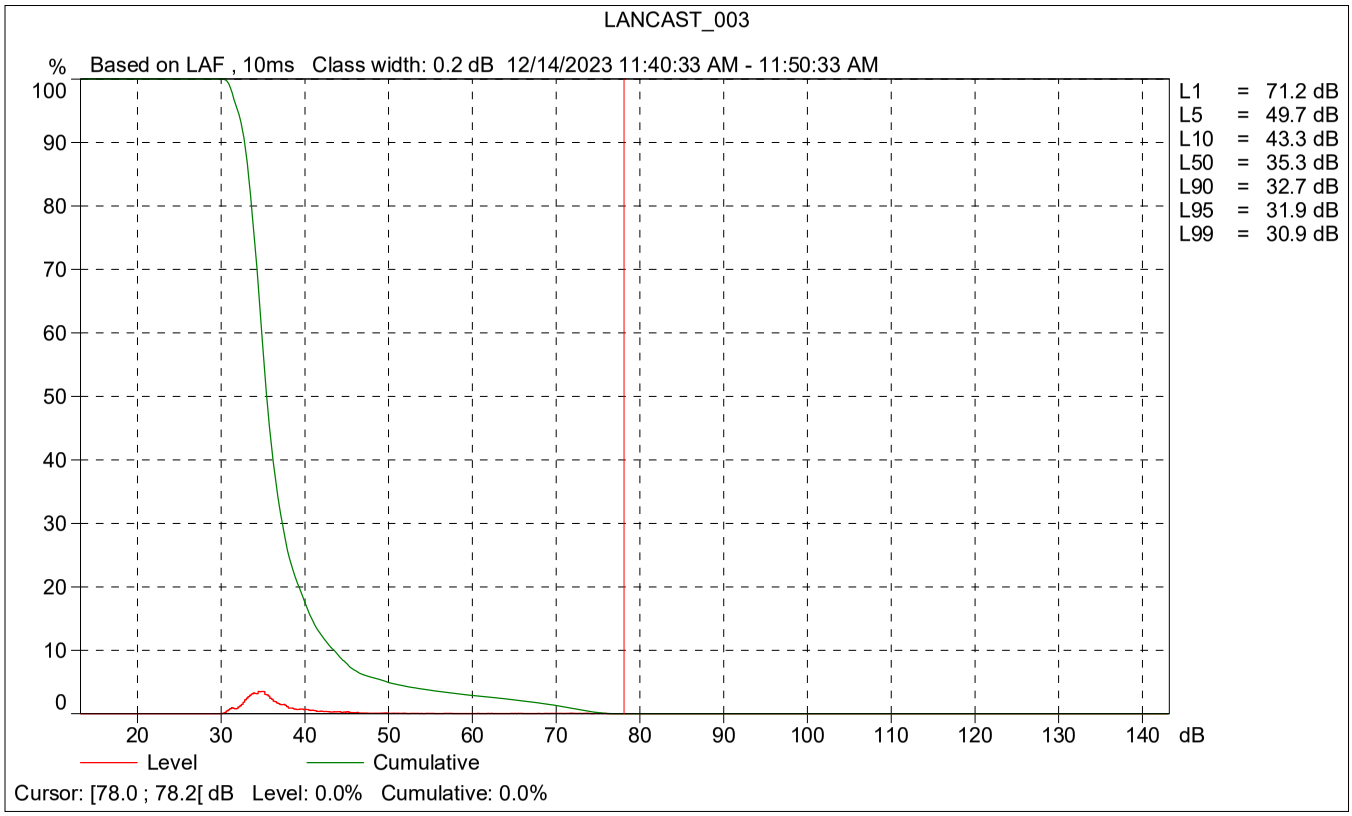
| | | |
|---|---|---|
| Instrument Serial Number: | | 3011133 |
| Microphone Serial Number: | | 3086765 |
| Input: | | Top Socket |
| Windscreen Correction: | | UA-1650 |
| Sound Field Correction: | | Free-field |

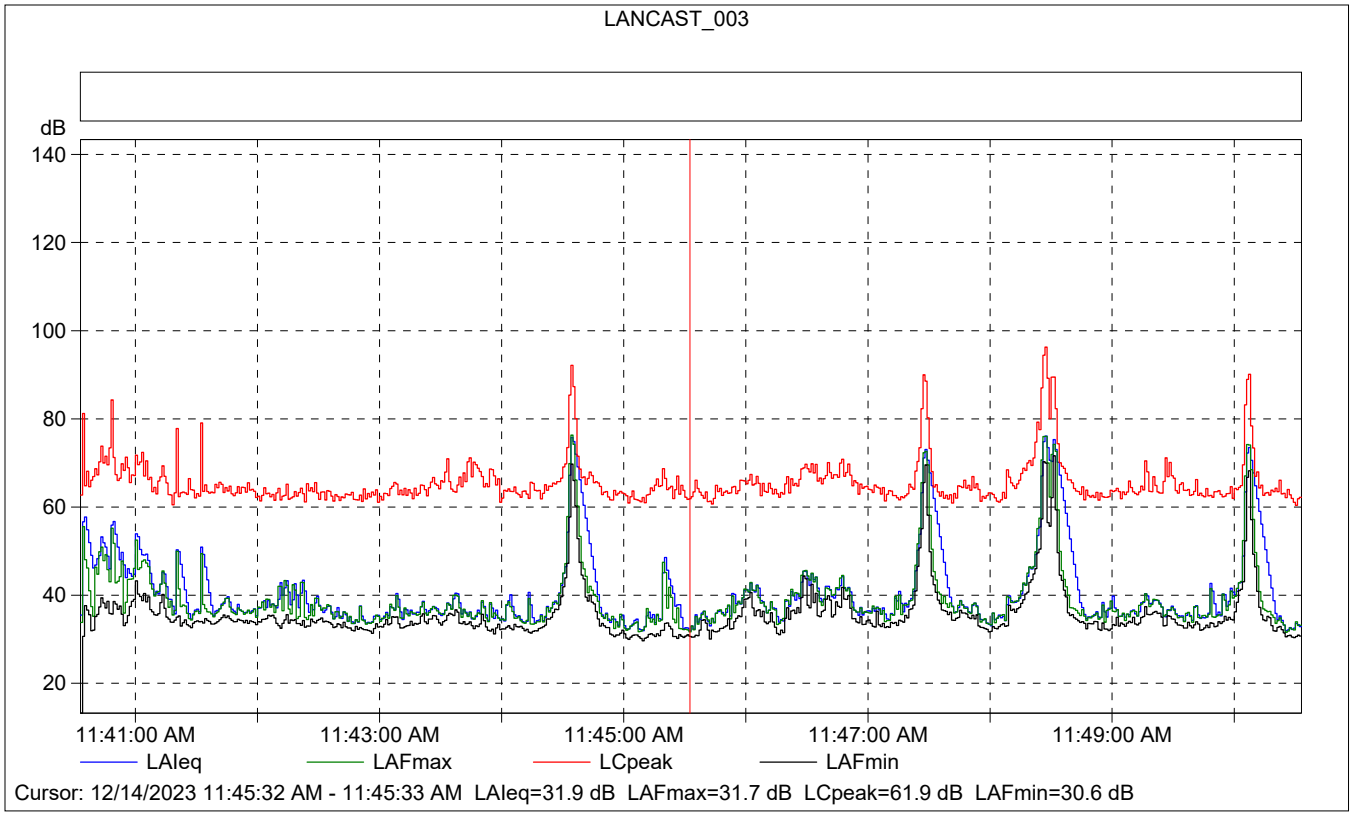
| | | |
|---|---|---|
| Calibration Time: | | 12/14/2023 10:49:17 |
| Calibration Type: | | External reference |
| Sensitivity: | | 43.8530705869198 mV/Pa |

## LANCAST_003

| | Start time | End time | Elapsed time | Overload [%] | LAeq [dB] | LAFmax [dB] | LAFmin [dB] |
|---|---|---|---|---|---|---|---|
| Value | | | | 0.00 | 55.3 | 76.3 | 29.6 |
| Time | 11:40:33 AM | 11:50:33 AM | 0:10:00 | | | | |
| Date | 12/14/2023 | 12/14/2023 | | | | | |

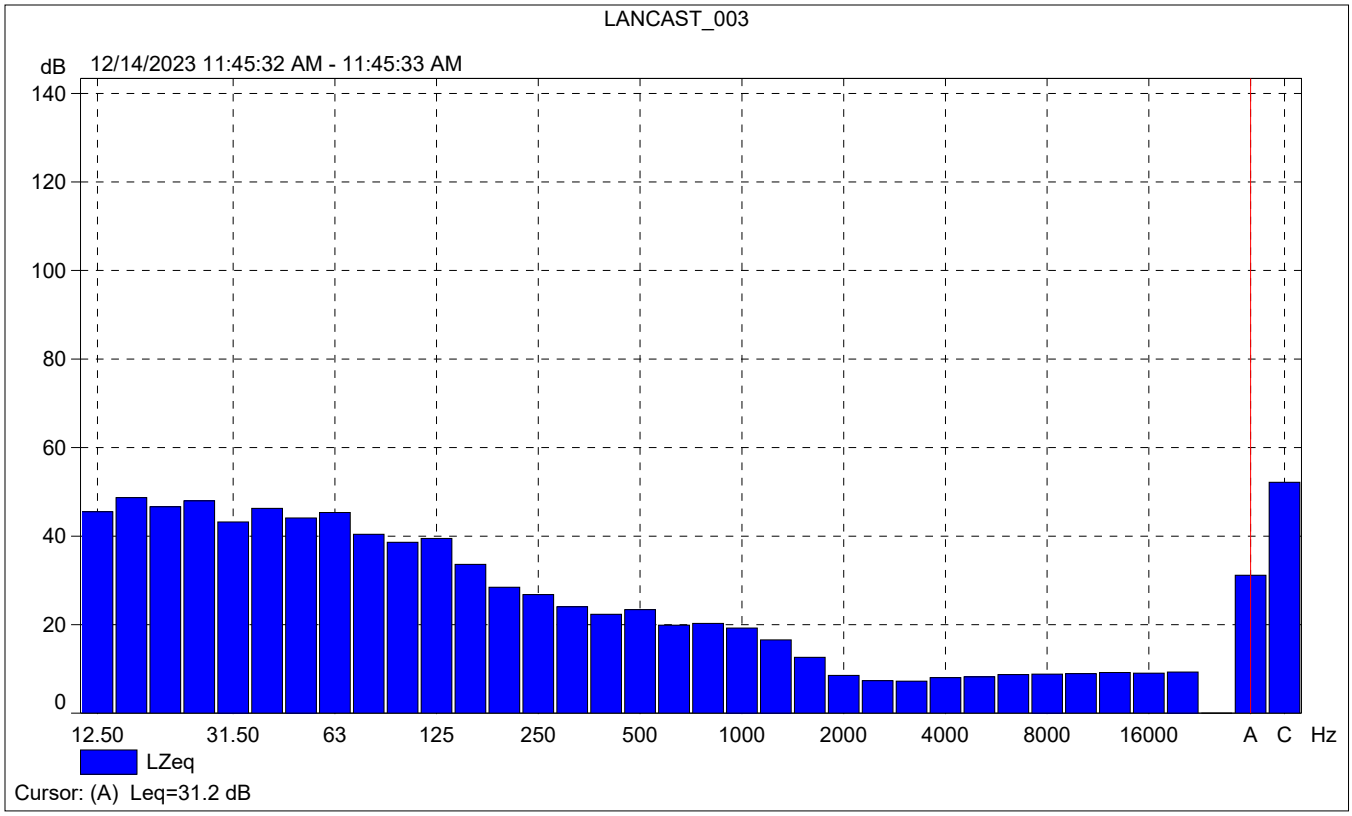

LANCAST_003
dB
12/14/2023 11:40:33 AM - 11:50:33 AM
130
120
110
100
90
80
70
60
50
40
30
20
10
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
LZFmax
LZFmin
Cursor: (A) Leq=55.3 dB LFmax=76.3 dB LFmin=29.6 dB

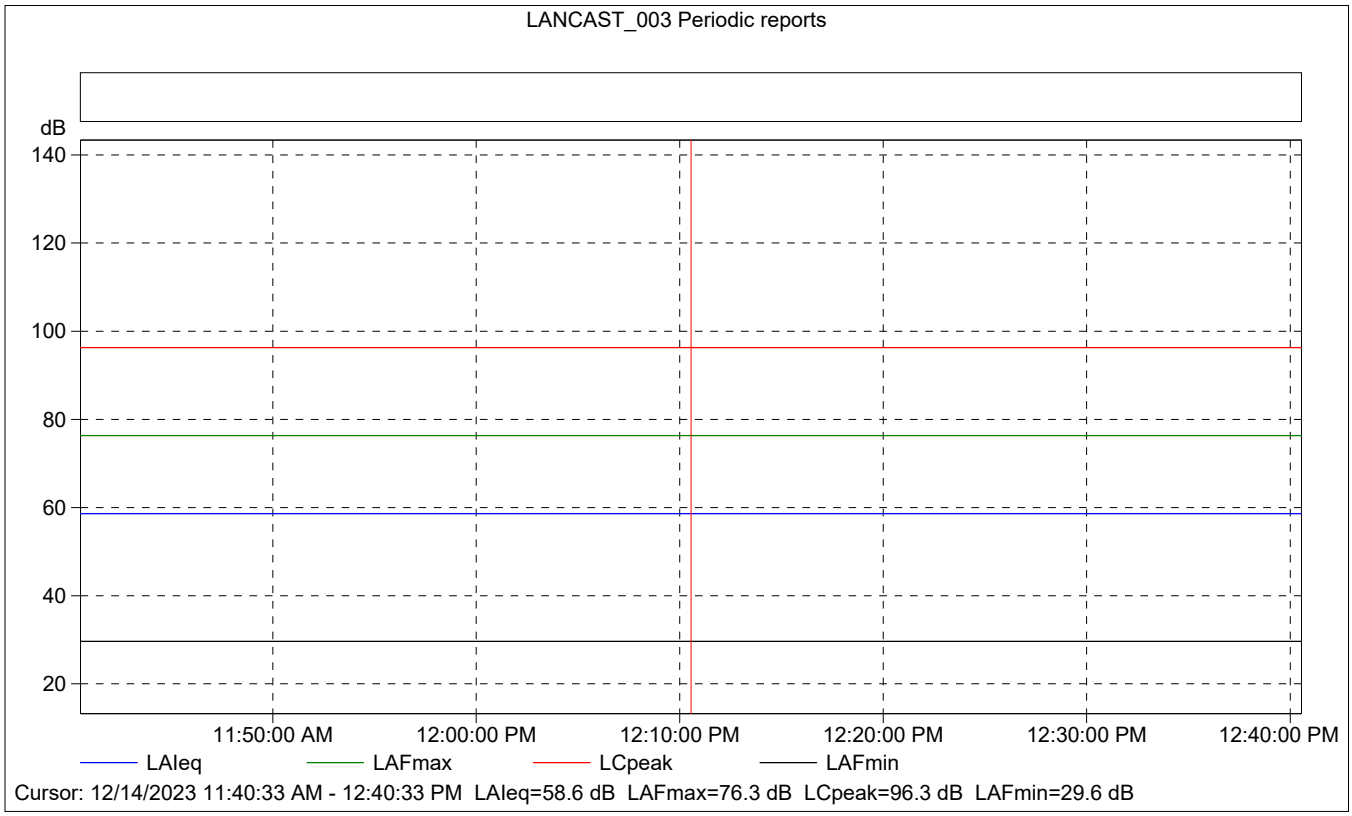

LANCAST_003
%
Based on LAF , 10ms Class width: 0.2 dB 12/14/2023 11:40:33 AM - 11:50:33 AM
100
90
80
70
60
50
40
30
20
10
0
20
30
40
50
60
70
80
90
100
110
120
130
140
dB
L1 = 71.2 dB
L5 = 49.7 dB
L10 = 43.3 dB
L50 = 35.3 dB
L90 = 32.7 dB
L95 = 31.9 dB
L99 = 30.9 dB
Level
Cumulative
Cursor: [78.0 ; 78.2[ dB Level: 0.0% Cumulative: 0.0%




## LANCAST_003

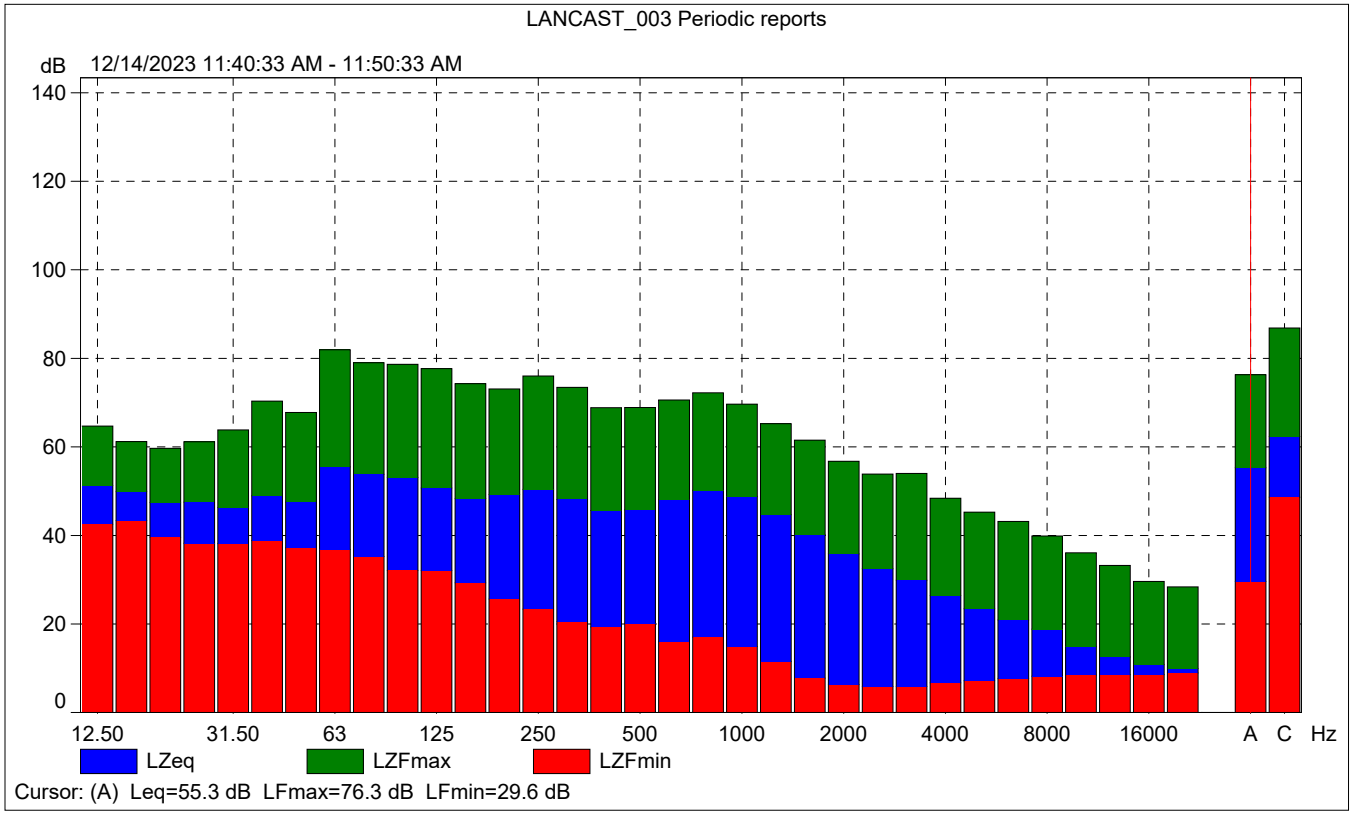
| | Start time | Elapsed time | Overload [%] | LAIeq [dB] | LAFmax [dB] | LAFmin [dB] |
|---|---|---|---|---|---|---|
| Value | | | 0.00 | 31.9 | 31.7 | 30.6 |
| Time | 11:45:32 AM | 0:00:01 | | | | |
| Date | 12/14/2023 | | | | | |

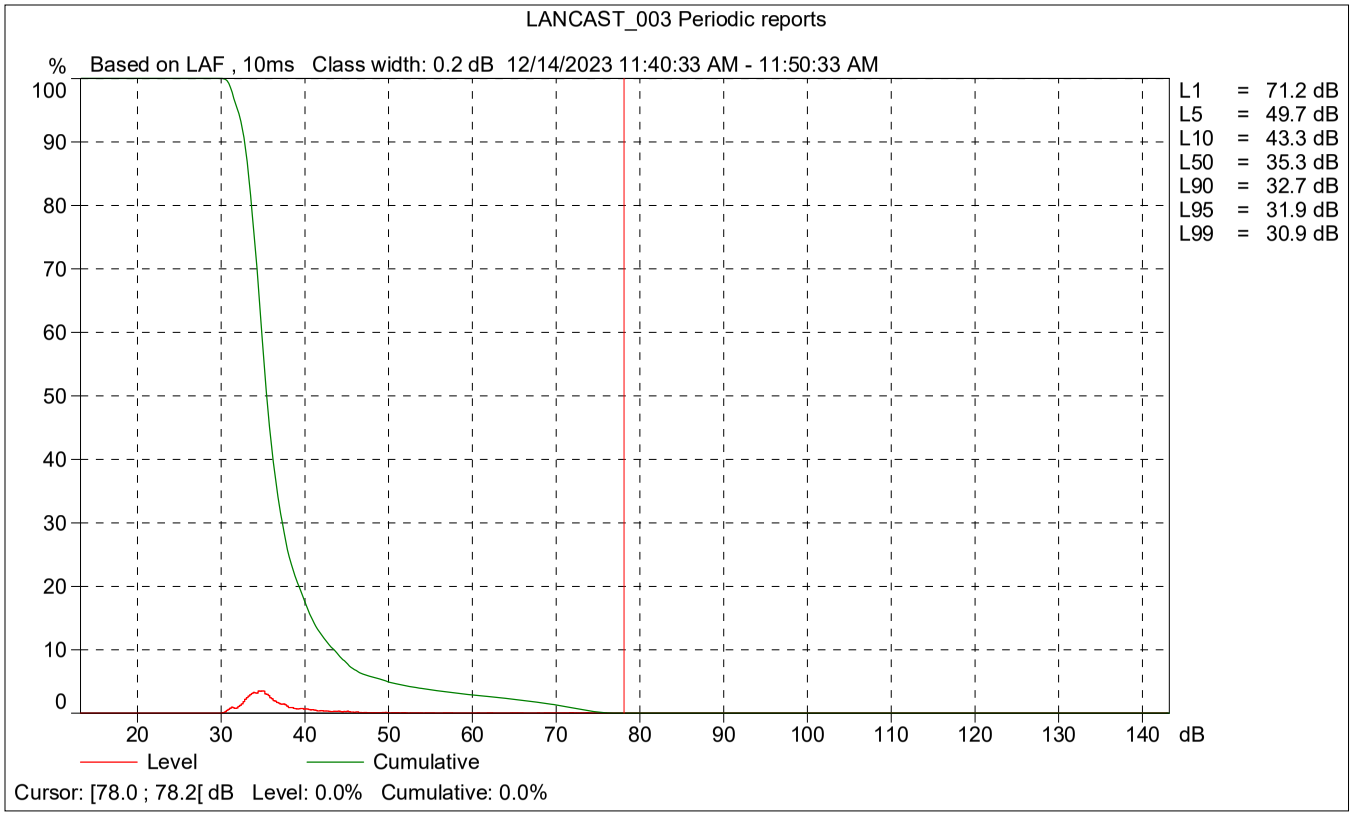

LANCAST_003
dB
12/14/2023 11:45:32 AM - 11:45:33 AM
140
120
100
80
60
40
20
0
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
Cursor: (A) Leq=31.2 dB


LANCAST_003 Periodic reports
dB
140
120
100
80
60
40
20
11:50:00 AM
12:00:00 PM
12:10:00 PM
12:20:00 PM
12:30:00 PM
12:40:00 PM
LAIeq
LAFmax
LCpeak
LAFmin
Cursor: 12/14/2023 11:40:33 AM - 12:40:33 PM LAIeq=58.6 dB LAFmax=76.3 dB LCpeak=96.3 dB LAFmin=29.6 dB

# LANCAST_003 Periodic reports

| | Start time | Elapsed time | Overload [%] | LAIeq [dB] | LAFmax [dB] | LAFmin [dB] |
|---|---|---|---|---|---|---|
| Value | | | 0.00 | 58.6 | 76.3 | 29.6 |
| Time | 11:40:33 AM | 0:10:00 | | | | |
| Date | 12/14/2023 | | | | | |




LANCAST_003 Periodic reports
% Based on LAF , 10ms Class width: 0.2 dB 12/14/2023 11:40:33 AM - 11:50:33 AM
100
90
80
70
60
50
40
30
20
10
0
20 30 40 50 60 70 80 90 100 110 120 130 140 dB
L1 = 71.2 dB
L5 = 49.7 dB
L10 = 43.3 dB
L50 = 35.3 dB
L90 = 32.7 dB
L95 = 31.9 dB
L99 = 30.9 dB
Level
Cumulative
Cursor: [78.0 ; 78.2[ dB Level: 0.0% Cumulative: 0.0%

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/16/2024
Case Description: Lancaster Solar Project

---- Receptor #1 ----

| Description | Land Use | Baselines (dBA) Daytime | Evening | Night |
|---|---|---|---|---|
| All Construction Phases | Residential | 75 | 75 | 75 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Man Lift | No | 20 | | 74.7 | 1385 | 0 |
| Man Lift | No | 20 | | 74.7 | 1385 | 0 |
| Man Lift | No | 20 | | 74.7 | 1385 | 0 |
| Man Lift | No | 20 | | 74.7 | 1385 | 0 |
| Compressor (air) | No | 40 | | 77.7 | 1385 | 0 |
| Concrete Mixer Truck | No | 40 | | 78.8 | 1385 | 0 |
| Concrete Saw | No | 20 | | 89.6 | 1385 | 0 |
| Tractor | No | 40 | 84 | | 1385 | 0 |
| Tractor | No | 40 | 84 | | 1385 | 0 |
| Excavator | No | 40 | | 80.7 | 1385 | 0 |
| Pickup Truck | No | 40 | | 75 | 1385 | 0 |
| Grader | No | 40 | 85 | | 1385 | 0 |
| Grader | No | 40 | 85 | | 1385 | 0 |
| Tractor | No | 40 | 84 | | 1385 | 0 |
| Tractor | No | 40 | 84 | | 1385 | 0 |
| Flat Bed Truck | No | 40 | | 74.3 | 1385 | 0 |
| Roller | No | 20 | | 80 | 1385 | 0 |
| Paver | No | 50 | | 77.2 | 1385 | 0 |
| Front End Loader | No | 40 | | 79.1 | 1385 | 0 |
| Scraper | No | 40 | | 83.6 | 1385 | 0 |

Results

| Equipment | Calculated (dBA) *Lmax | Leq |
|---|---|---|
| Man Lift | 45.9 | 38.9 |
| Man Lift | 45.9 | 38.9 |
| Man Lift | 45.9 | 38.9 |
| Man Lift | 45.9 | 38.9 |
| Compressor (air) | 48.8 | 44.8 |
| Concrete Mixer Truck | 50 | 46 |
| Concrete Saw | 60.7 | 53.7 |
| Tractor | 55.2 | 51.2 |
| Tractor | 55.2 | 51.2 |
| Excavator | 51.9 | 47.9 |
| Pickup Truck | 46.2 | 42.2 |
| Grader | 56.2 | 52.2 |
| Grader | 56.2 | 52.2 |
| Tractor | 55.2 | 51.2 |
| Tractor | 55.2 | 51.2 |
| Flat Bed Truck | 45.4 | 41.4 |
| Roller | 51.2 | 44.2 |
| Paver | 48.4 | 45.4 |
| Front End Loader | 50.3 | 46.3 |
| Scraper | 54.7 | 50.8 |
| Total | 60.7 | 61.8 |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/16/2024
Case Description: Lancaster Solar Project

| | | Baselines (dBA) | | ---- Receptor #1 ---- |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| All Construction Phases | Residential | 75 | 75 | 75 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Front End Loader | No | 40 | | 79.1 | 1385 | 0 |
| Paver | No | 50 | | 77.2 | 1385 | 0 |
| Backhoe | No | 40 | | 77.6 | 1385 | 0 |
| Slurry Trenching Machine | No | 50 | | 80.4 | 1385 | 0 |

Results

| | Calculated (dBA) | |
|---|---|---|
| Equipment | *Lmax | Leq |
| Front End Loader | 50.3 | 46.3 |
| Paver | 48.4 | 45.4 |
| Backhoe | 48.7 | 44.7 |
| Slurry Trenching Machine | 51.5 | 48.5 |
| Total | 51.5 | 52.5 |

*Calculated Lmax is the Loudest value.