



RAWBEAM 350

NOISE MEASUREMENTS

AYRTON

1 Test instructions

This test was conducted in the semi-anechoic room of Guangzhou Quality Supervision and Testing Institute, with indoor ambient noise less than 10dB (A).

The test was carried out in accordance with the requirements of Article 9.4.1 of GB/T 6882-2016.

The stage light is placed on the standard test bench of the semi-anechoic room and connected to the power supply of 220V~/50Hz.

The indoor ambient temperature is 25°C, the relative humidity is 53%, and the air pressure is 101.1kPa. When the stage light is in the set normal working state, the test microphone is 1m away from the outlet of the measured luminaire in four horizontal directions to detect its sound pressure level.

During the test, there is no additional vibration of the ground and surrounding structures.

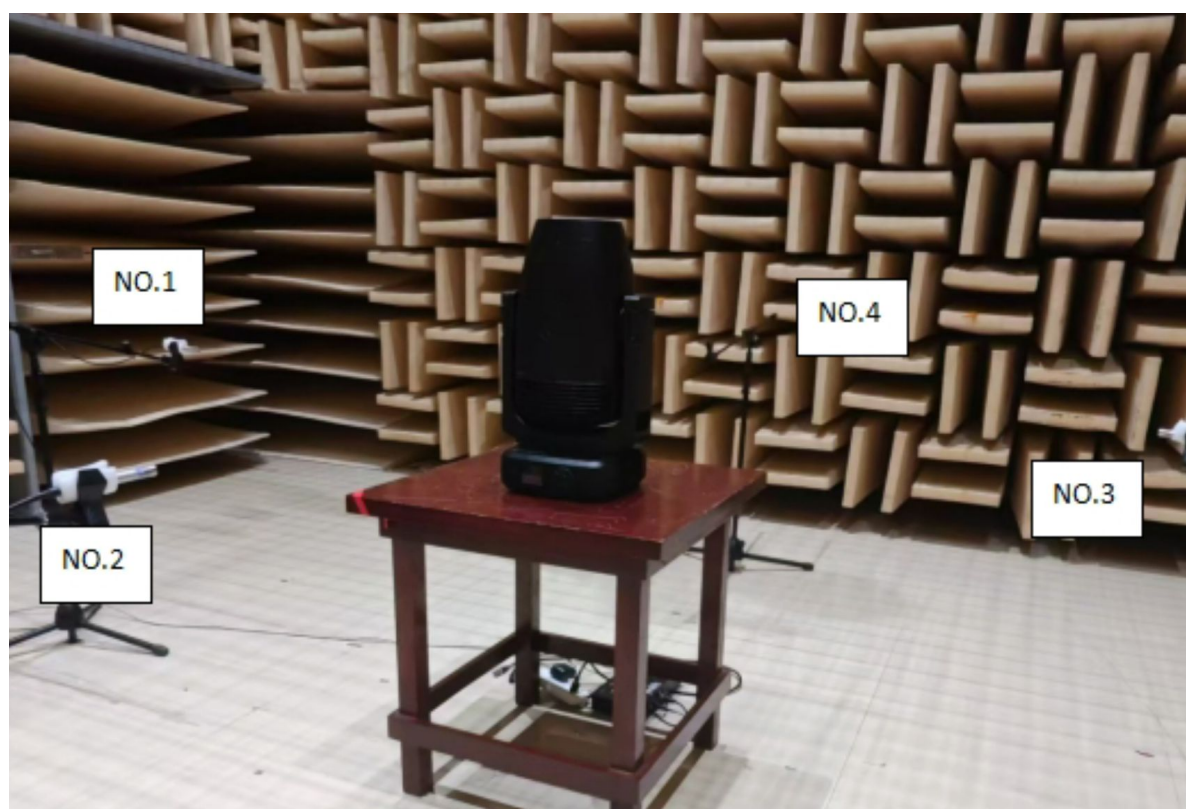


Figure 1 Test setup



Figure 2 Sample serial number information

2 Noise Detection Results of Stage Luminaires (The Auto mode)

Frequency (Hz)	Sound Pressure Level in Auto mode (dB)							
	Static				Dynamic			
	No 1	No 2	No 3	No 4	No 1	No 2	No 3	No 4
50	22.1	22.1	24.7	21.6	23.3	21.8	25.1	20.6
63	15.5	17.7	15.7	19.6	18.3	21.0	19.6	18.1
80	13.3	16.2	11.8	17.9	20.1	24.6	21.1	22.0
100	18.2	19.1	17.3	20.3	24.3	23.7	23.2	23.3
125	22.2	23.8	22.4	25.3	24.4	25.1	24.2	25.2
160	12.9	18.6	13.7	19.9	29.8	30.5	29.5	30.0
200	16.3	25.9	16.5	23.9	34.8	39.1	39.8	39.9
250	18.0	28.9	17.5	28.2	39.5	40.2	39.0	39.6
315	19.5	31.6	19.3	31.0	34.8	34.1	32.9	34.1
400	26.1	33.8	22.9	30.8	30.7	32.2	31.3	32.2
500	25.0	30.6	22.8	29.4	29.8	29.5	29.2	30.0
630	27.5	30.6	27.2	28.2	32.2	32.9	33.1	33.4
800	35.1	33.9	35.8	34.0	35.3	38.7	36.3	37.7
1000	31.1	34.5	32.3	35.6	37.3	38.4	36.8	39.3
1250	32.1	32.3	32.8	34.4	39.4	39.4	38.3	39.1
1600	30.2	31.4	31.2	35.7	36.7	35.7	40.5	38.8
2000	28.9	31.7	29.6	32.8	33.0	33.2	35.8	33.9
2500	28.3	29.2	28.5	29.8	29.8	28.6	28.4	28.3
3150	31.8	33.6	29.4	27.9	32.5	32.2	29.3	29.5
4000	25.8	28.1	25.4	25.8	30.4	28.6	29.1	28.7
5000	20.1	21.5	17.6	22.1	22.5	21.0	21.4	20.5
6300	14.6	16.5	13.7	19.3	17.3	17.0	17.0	16.5
8000	11.3	13.4	11.6	19.3	14.4	13.6	15.3	14.2
10000	9.8	10.2	9.7	14.4	12.3	11.7	12.1	11.4
12500	10.6	10.1	9.9	15.0	11.8	12.0	13.0	11.6
16000	11.2	12.9	12.4	21.7	14.4	15.1	17.1	15.4
20000	21.3	27.7	24.3	36.8	27.9	27.8	30.7	28.6

Frequency (Hz)	Sound Pressure Level in Auto mode (dB)							
	Static				Dynamic			
	No 1	No 2	No 3	No 4	No 1	No 2	No 3	No 4
Leq	41.6	44.1	41.8	44.7	47.1	47.9	47.9	48.2
A-weighted dB(A)	41.0	42.6	41.2	43.3	45.6	46.0	46.4	46.5
Average sound pressure level dB(A)	42.0				46.1			



Figure 3 Noise Spectrum of Stage Luminaires (The Auto mode, Static, No 1)

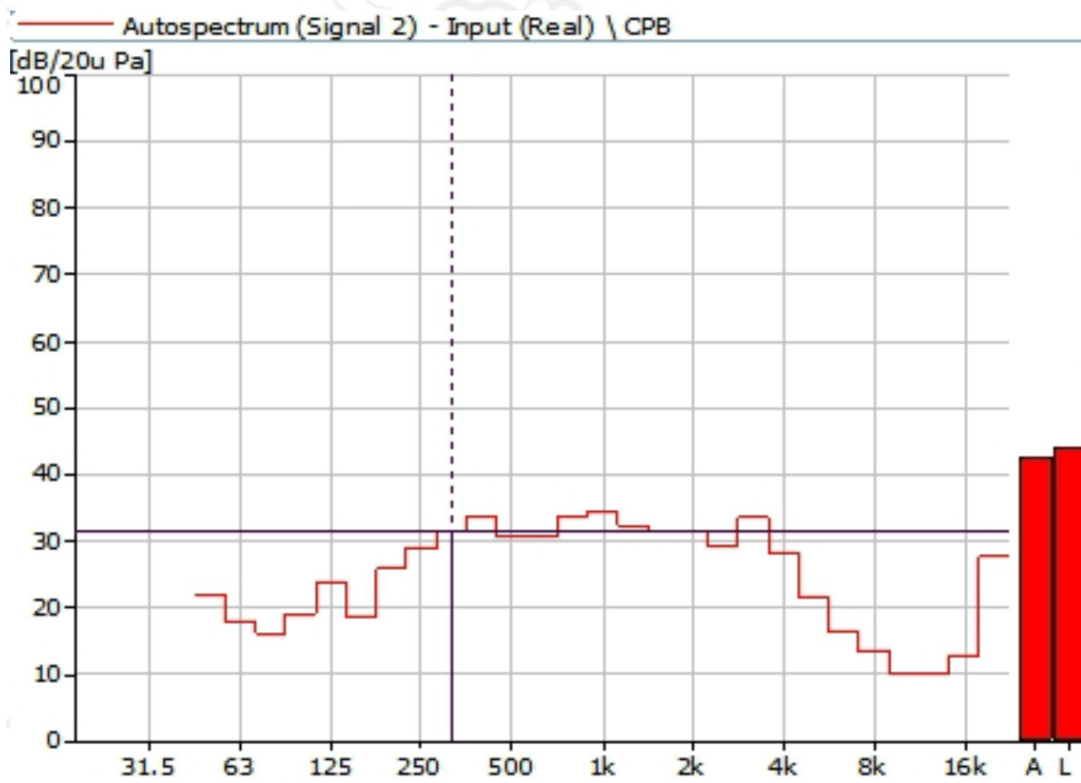


Figure 4 Noise Spectrum of Stage Luminaires (The Auto mode, Static, No 2)

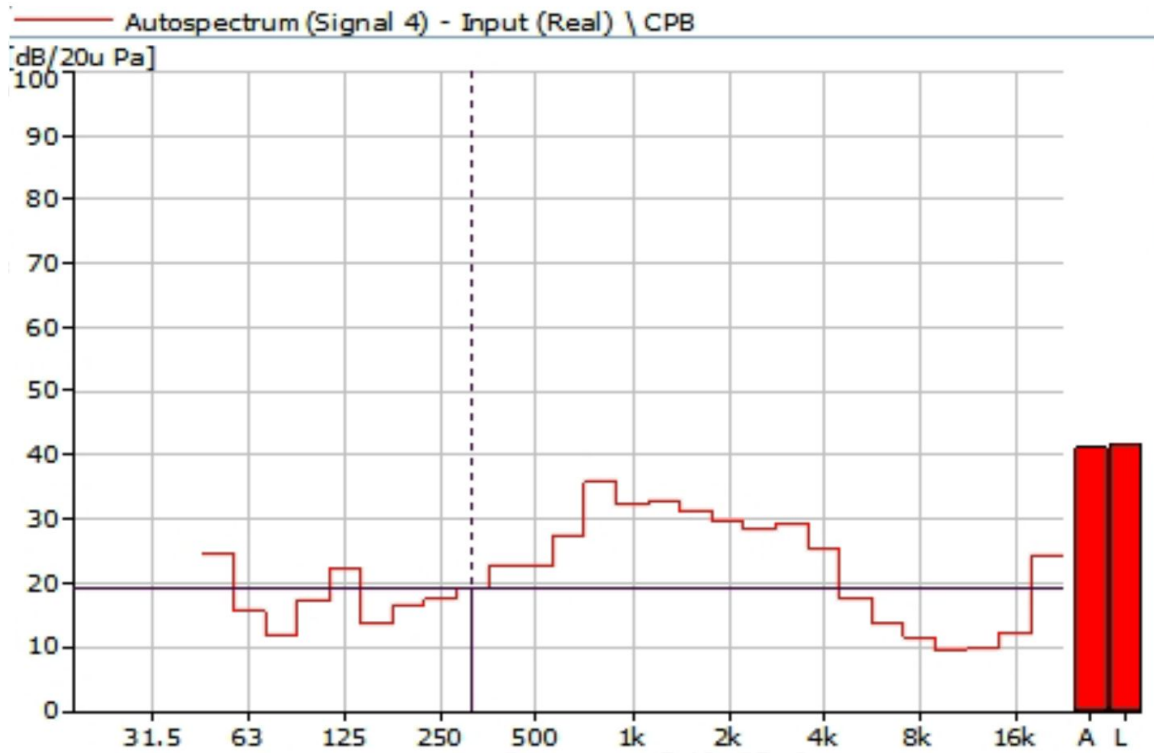


Figure 5 Noise Spectrum of Stage Luminaires (The Auto mode, Static, No 3)

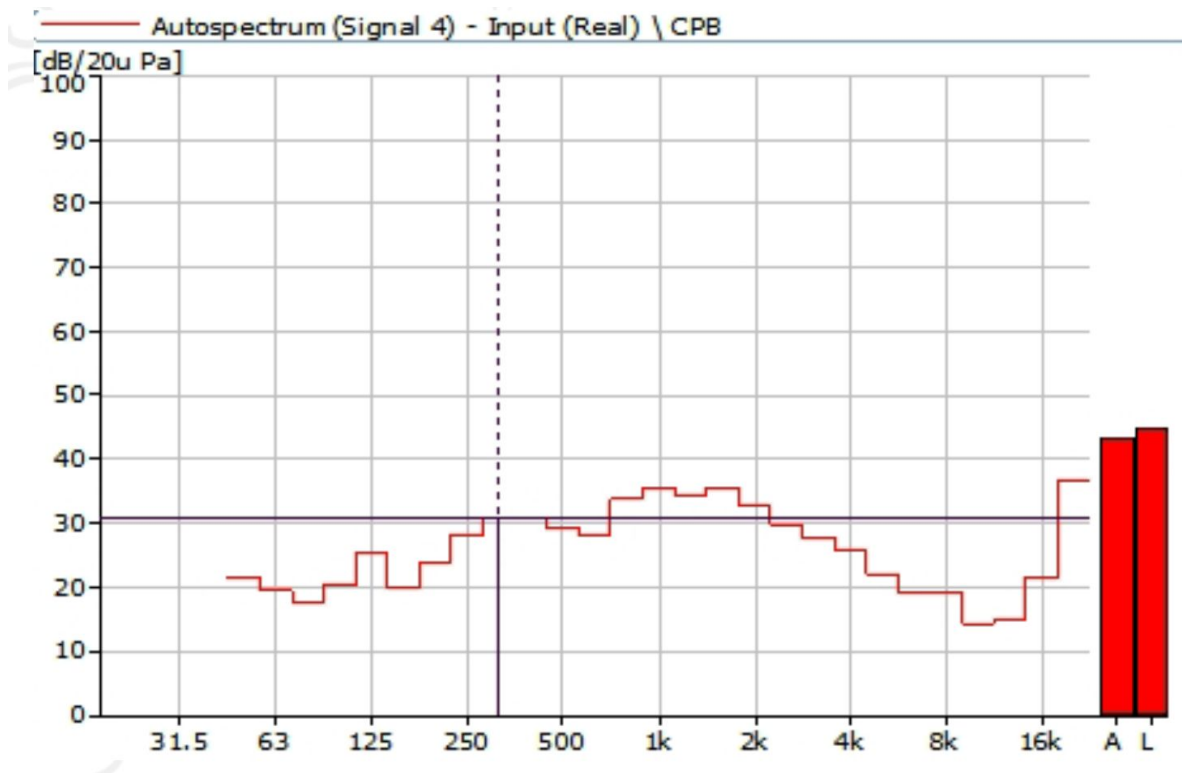


Figure 6 Noise Spectrum of Stage Luminaires (The Auto mode, Static, No 4)

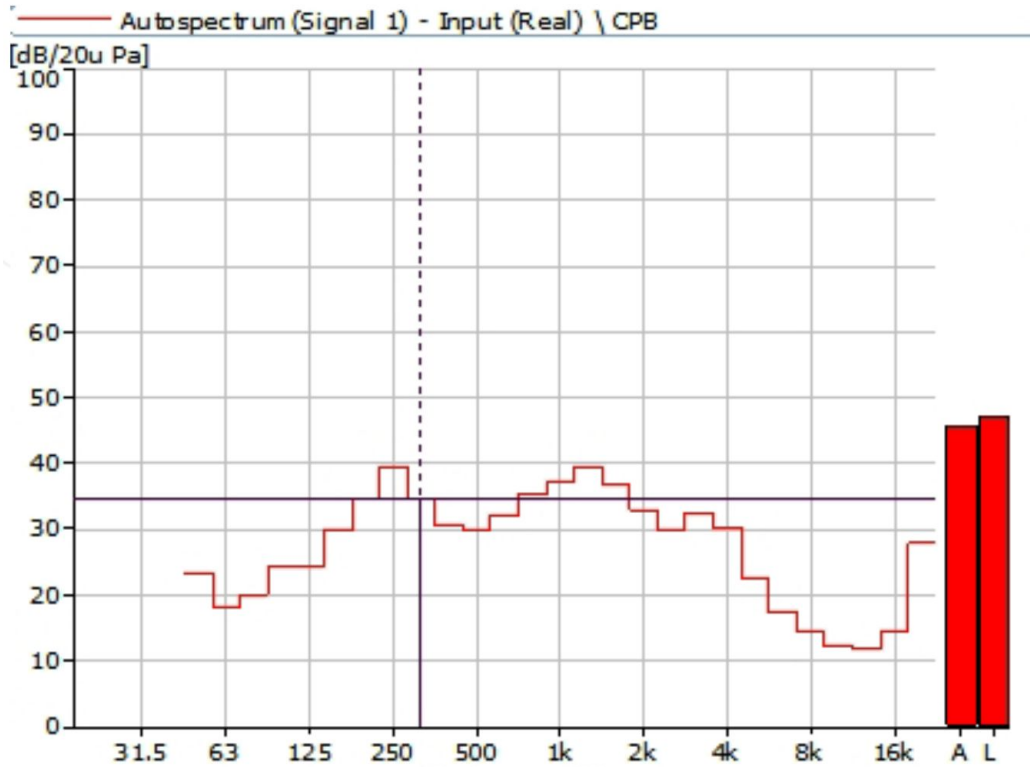


Figure 7 Noise Spectrum of Stage Luminaires (The Auto mode, Dynamic, No 1)

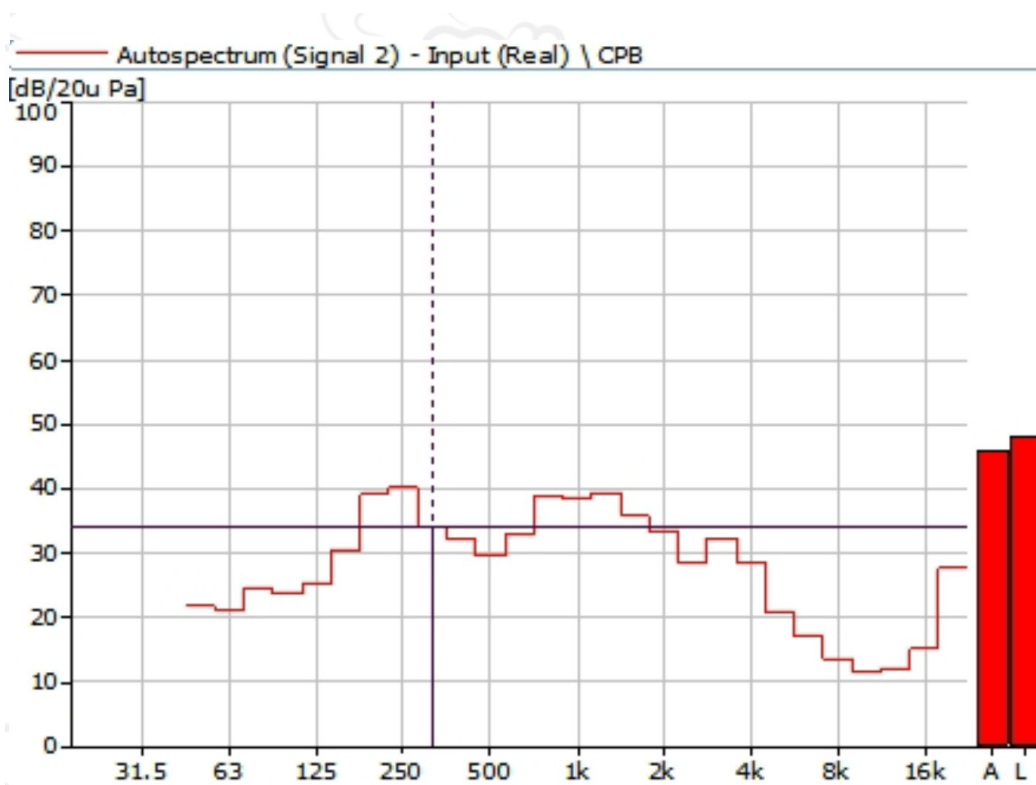


Figure 8 Noise Spectrum of Stage Luminaires (The Auto mode, Dynamic, No 2)

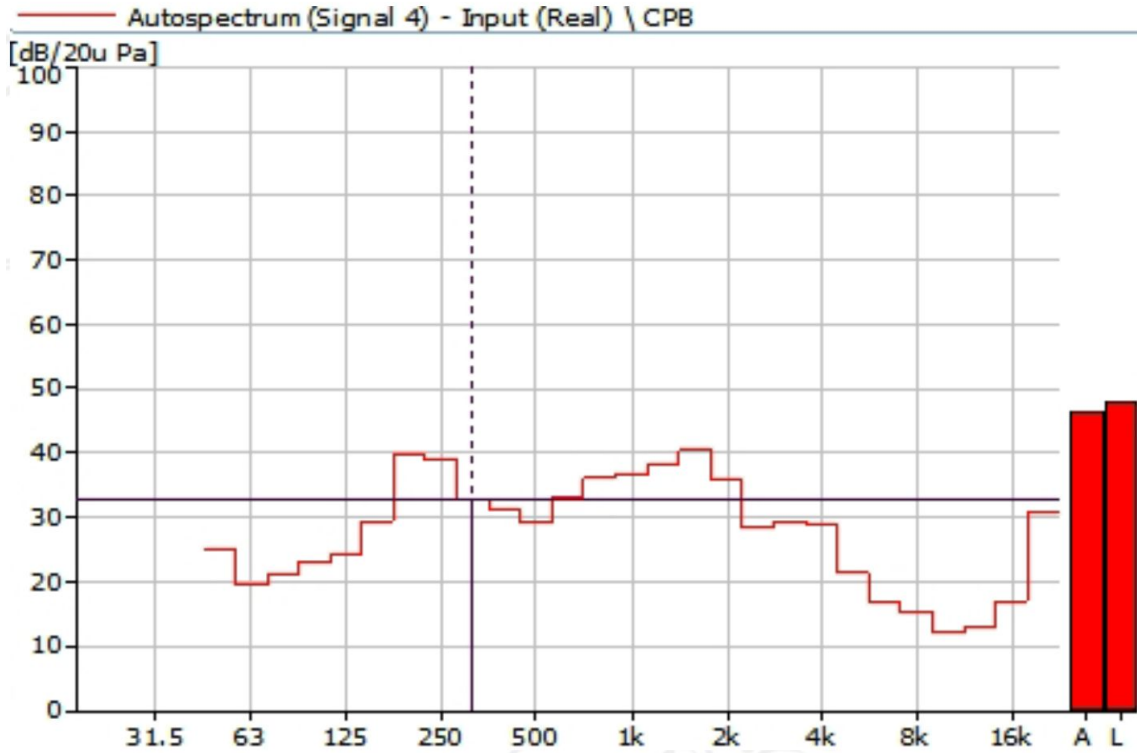


Figure 9 Noise Spectrum of Stage Luminaires (The Auto mode, Dynamic, No 3)

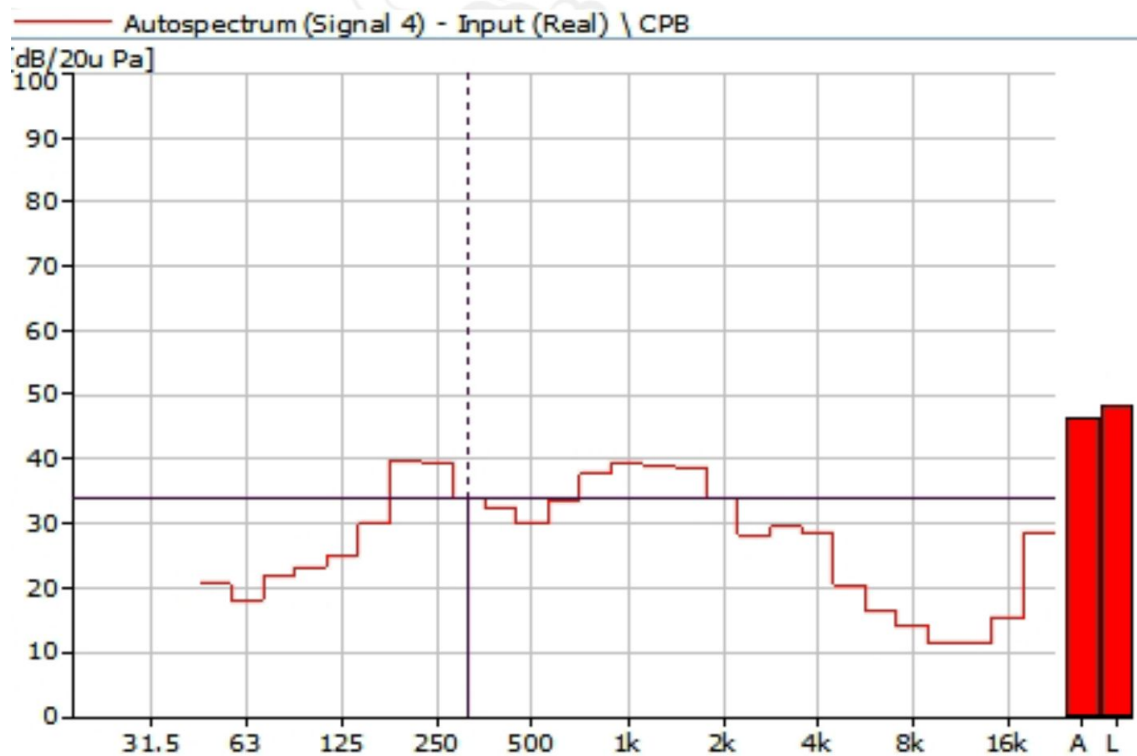


Figure 10 Noise Spectrum of Stage Luminaires (The Auto mode, Dynamic, No 4)

3 Noise Detection Results of Stage Luminaires (The Stage mode)

Frequency (Hz)	Sound Pressure Level in Stage Mode (dB)							
	Static				Dynamic			
	No 1	No 2	No 3	No 4	No 1	No 2	No 3	No 4
50	23.0	22.9	24.5	21.6	22.8	21.1	25.4	20.6
63	15.4	17.5	16.2	19.3	18.8	21.8	18.6	20.0
80	14.2	17.5	12.4	21.7	20.3	25.0	19.5	21.7
100	18.6	20.0	17.7	22.9	24.1	23.3	22.6	22.9
125	21.3	23.3	22.9	25.4	23.6	24.0	23.3	24.7
160	16.5	20.8	13.7	23.9	28.5	29.2	29.7	29.1
200	28.1	27.5	22.7	28.9	34.2	37.7	38.9	38.5
250	19.1	29.3	17.8	31.5	39.5	39.6	38.5	39.6
315	20.5	32.5	19.7	34.8	34.9	34.0	32.9	34.0
400	25.8	34.6	24.4	32.5	31.0	30.5	32.2	31.4
500	26.9	33.0	25.2	40.7	35.4	35.2	30.1	34.6
630	28.7	31.7	28.6	36.6	33.8	33.6	33.2	33.5
800	36.4	33.4	35.6	38.3	36.0	39.1	36.0	38.2
1000	36.6	35.3	34.1	42.3	38.5	39.1	37.5	39.1
1250	33.4	33.2	33.9	40.9	39.8	40.3	38.2	39.7
1600	34.0	33.5	33.3	39.9	37.5	37.4	39.3	38.1
2000	29.9	31.4	30.8	38.9	34.3	34.3	35.8	34.4
2500	25.0	29.9	24.2	36.2	31.9	31.2	28.8	30.2
3150	28.6	30.9	26.3	34.6	34.1	33.2	29.9	31.3
4000	23.4	28.4	24.7	33.4	33.2	30.8	30.8	31.0
5000	18.3	22.5	19.1	30.7	26.4	25.4	22.1	24.3
6300	15.3	18.3	14.5	28.8	23.0	22.0	18.8	21.2
8000	12.3	14.7	13.0	28.6	19.4	18.4	16.7	18.8
10000	10.4	10.7	10.2	23.9	15.8	15.5	13.2	14.4
12500	10.8	10.2	9.9	20.9	13.5	13.9	13.8	13.0
16000	11.2	12.2	12.0	23.4	16.2	15.7	17.6	16.4
20000	19.1	25.9	23.6	31.2	26.8	27.1	30.1	27.7

Frequency (Hz)	Sound Pressure Level in Stage Mode (dB)							
	Static				Dynamic			
	No 1	No 2	No 3	No 4	No 1	No 2	No 3	No 4
Leq	43.3	45.8	42.5	49.7	47.9	48.3	47.6	48.2
A-weighted dB(A)	42.5	42.9	41.7	49.3	46.7	47.0	46.1	46.7
Average sound pressure level dB(A)	44.1				46.6			

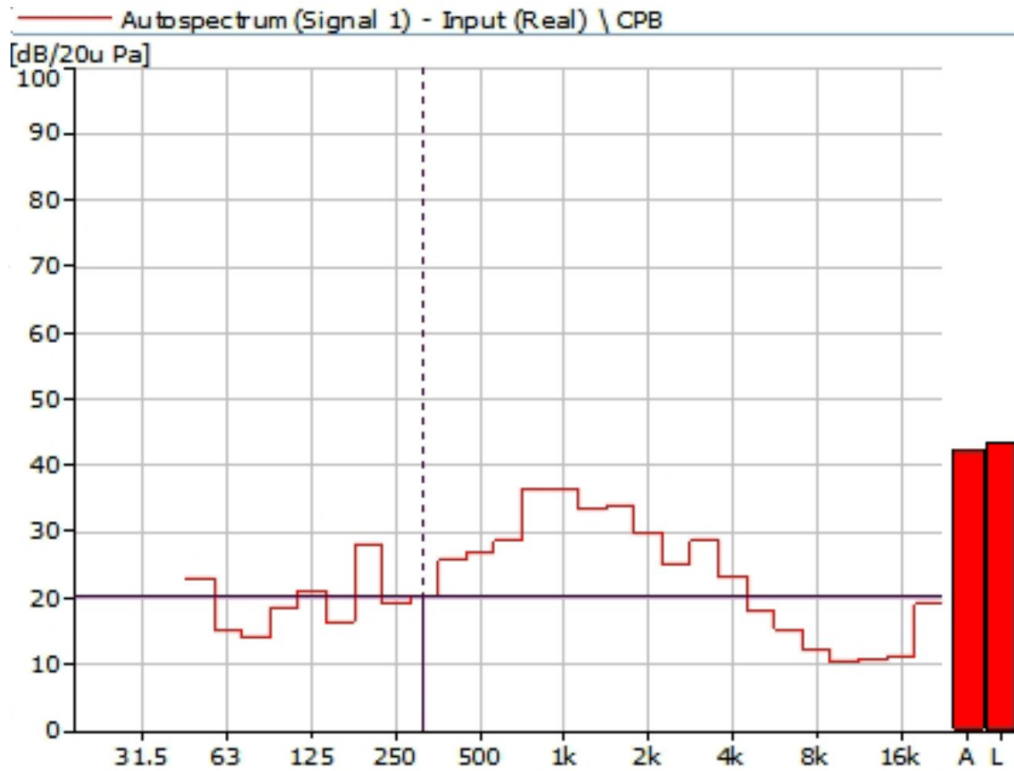


Figure 11 Noise Spectrum of Stage Luminaires (The Stage mode, Static, No 1)

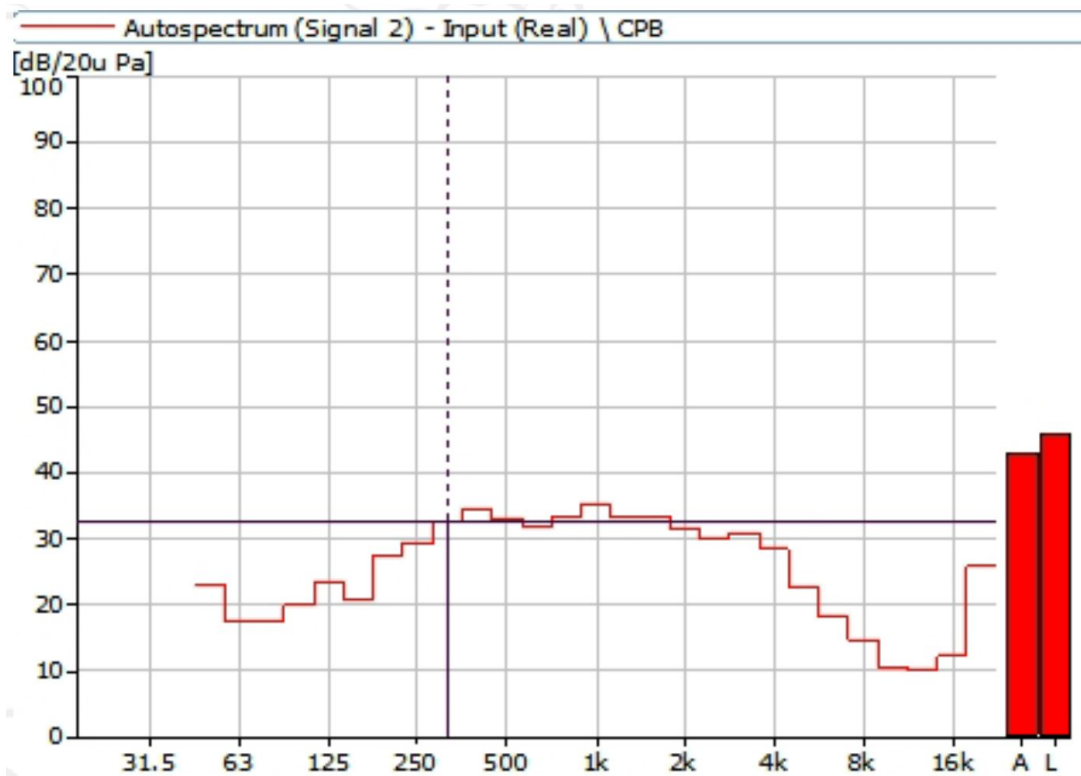


Figure 12 Noise Spectrum of Stage Luminaires (The Stage mode, Static, No 2)

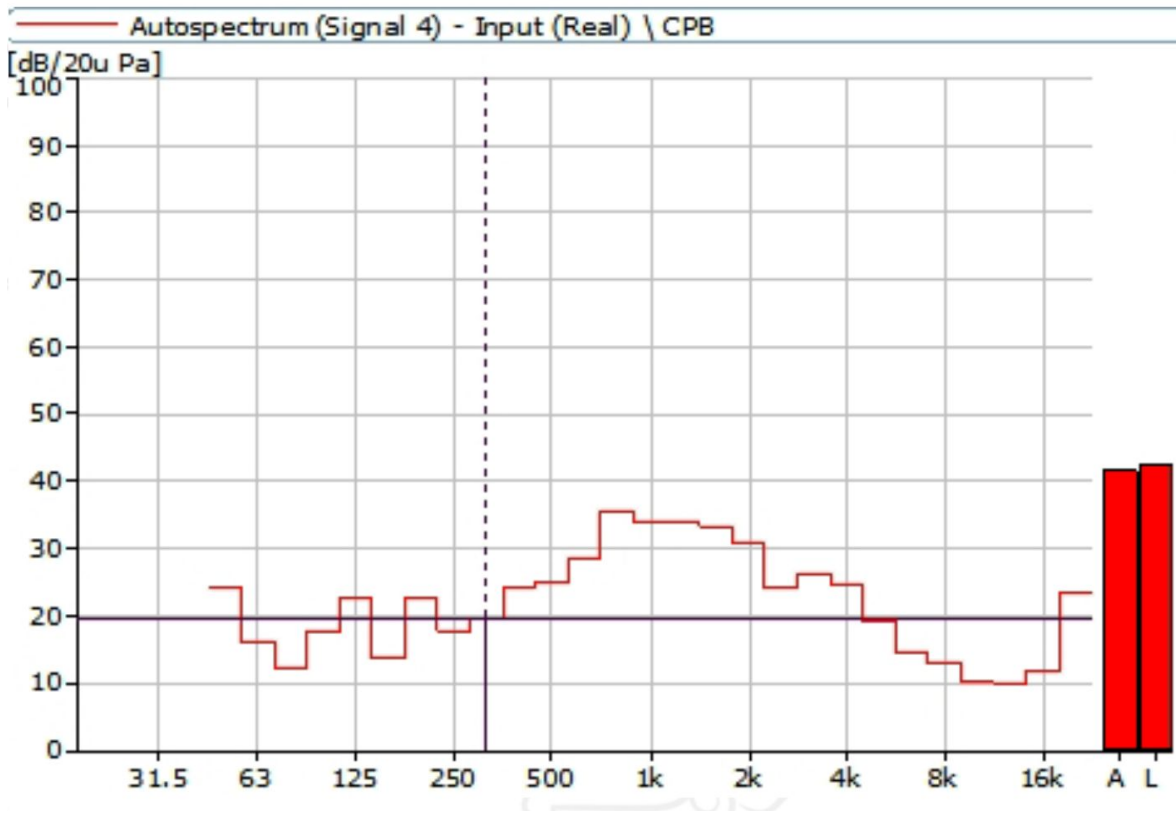


Figure 13 Noise Spectrum of Stage Luminaires (The Stage mode, Static, No 3)

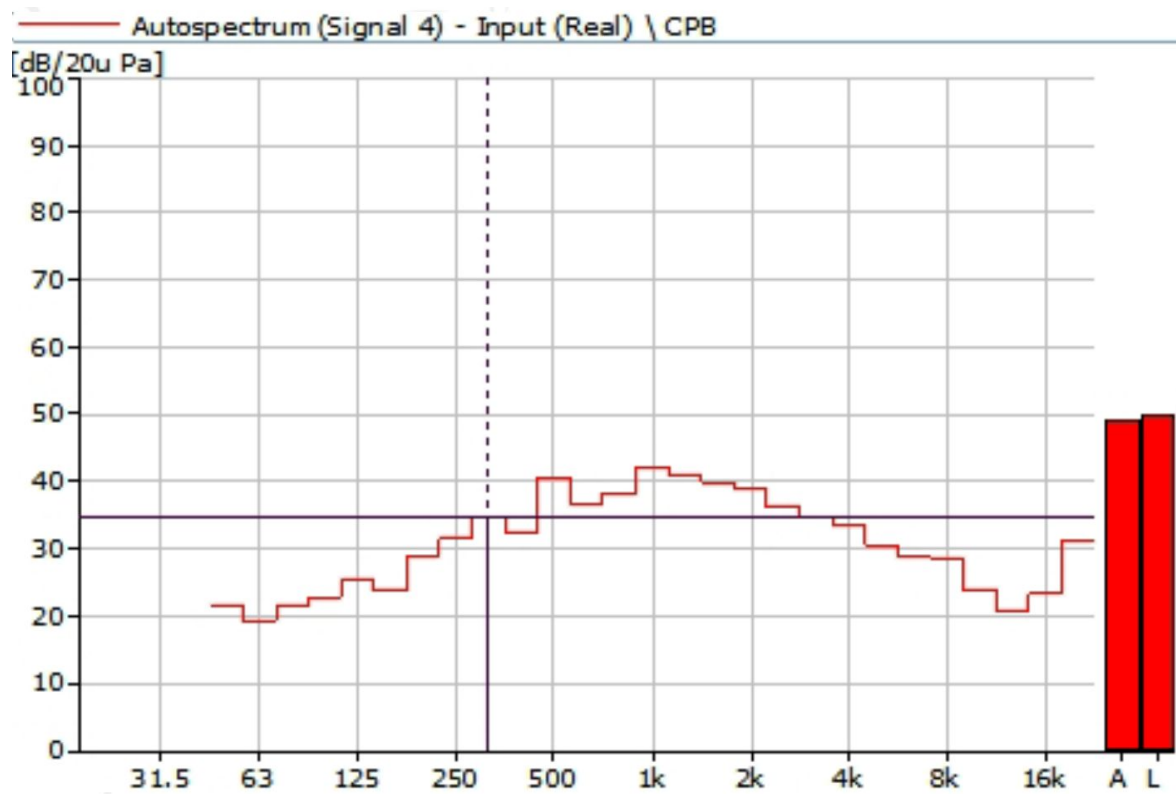


Figure 14 Noise Spectrum of Stage Luminaires (The Stage mode, Static, No 4)

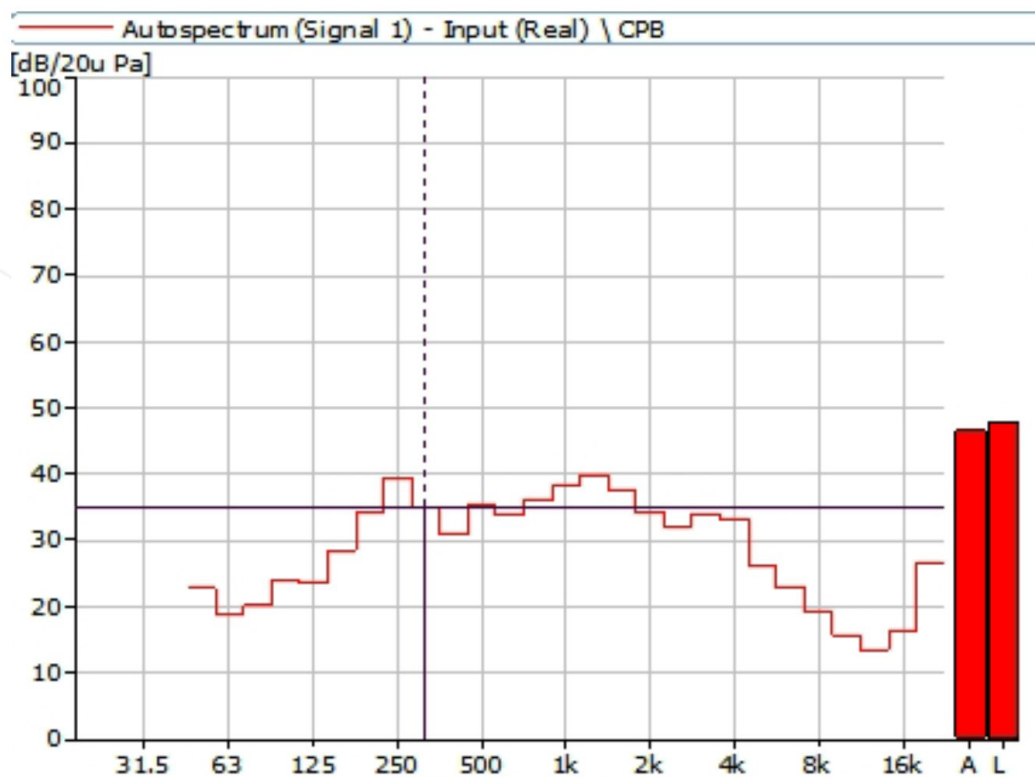


Figure 15 Noise Spectrum of Stage Luminaires (The Stage mode, Dynamic, No 1)

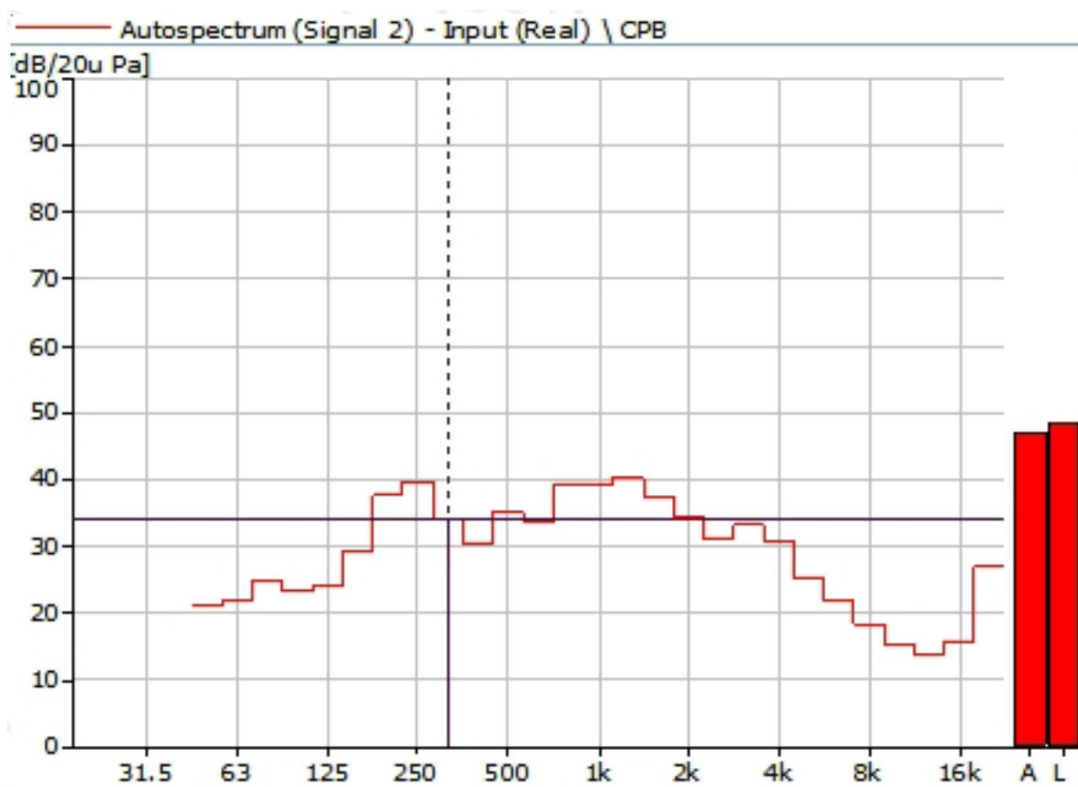


Figure 16 Noise Spectrum of Stage Luminaires (The Stage mode, Dynamic, No 2)

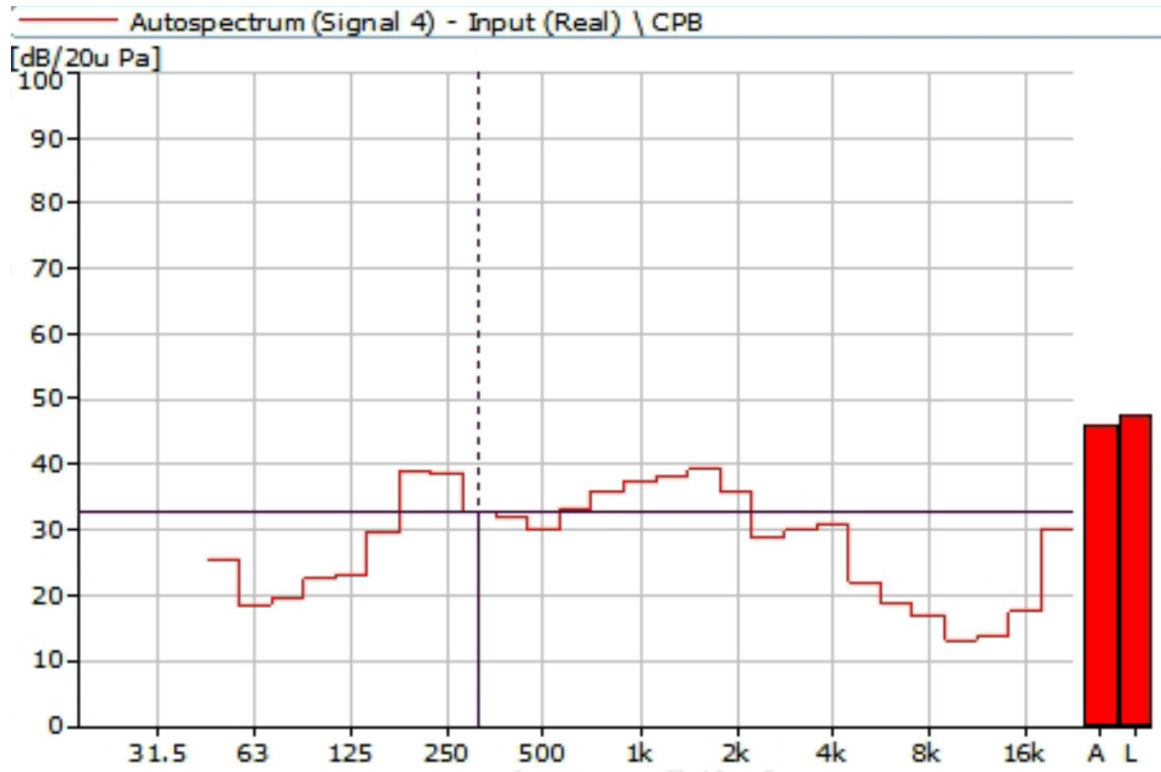


Figure 17 Noise Spectrum of Stage Luminaires (The Stage mode, Dynamic, No 3)

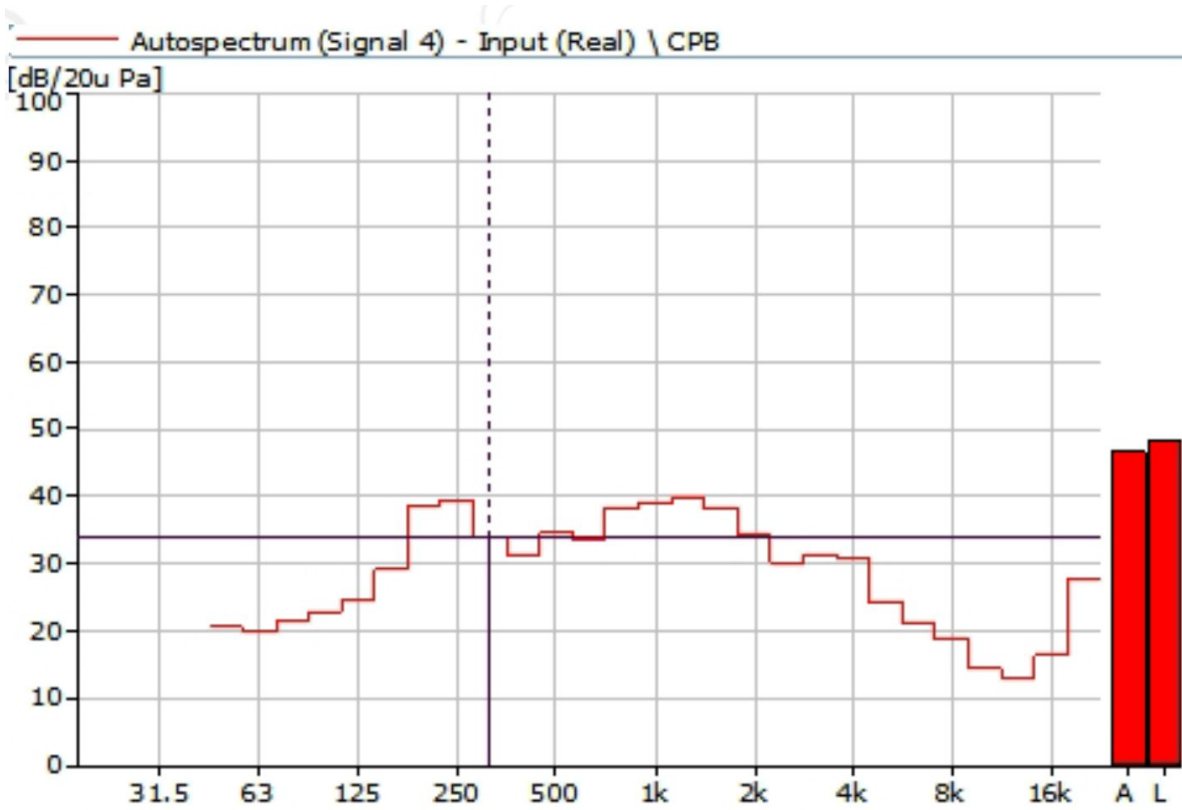


Figure 18 Noise Spectrum of Stage Luminaires (The Stage mode, Dynamic, No 4)

4 Noise Detection Results of Stage Luminaires (The Silence mode)

Frequency (Hz)	Sound Pressure Level in Silence mode (dB)							
	Static				Dynamic			
	No 1	No 2	No 3	No 4	No 1	No 2	No 3	No 4
50	22.2	23.3	24.7	19.9	22.1	21.4	19.4	24.2
63	15.2	17.8	15.4	15.9	17.6	20.6	19.3	18.9
80	13.4	17.4	13.8	15.4	19.2	23.7	20.4	19.6
100	18.8	17.8	17.0	18.5	22.8	21.8	21.6	21.8
125	22.8	23.0	22.6	24.5	24.2	24.4	25.5	22.8
160	17.5	19.8	20.2	22.7	29.2	29.9	28.9	30.3
200	19.5	23.5	22.2	25.6	34.6	37.1	38.6	38.3
250	15.9	26.0	14.8	25.5	39.3	39.3	39.6	38.3
315	22.1	32.6	22.8	31.9	32.9	32.4	32.5	32.6
400	16.1	23.6	15.1	22.1	29.4	29.0	29.6	29.4
500	20.4	25.0	19.4	24.5	27.6	28.0	28.1	26.5
630	24.7	26.5	24.6	25.7	30.9	32.1	32.4	32.5
800	27.9	25.2	26.4	28.9	32.9	36.7	34.2	33.4
1000	25.4	23.7	24.9	27.7	35.8	36.1	36.4	34.7
1250	25.7	27.5	26.9	28.5	39.0	38.7	39.5	37.9
1600	26.6	34.0	28.3	28.6	34.3	35.4	37.5	38.5
2000	25.6	28.2	26.5	27.2	31.6	31.5	32.4	34.6
2500	25.1	25.3	22.5	24.5	28.1	25.8	25.5	25.8
3150	25.0	26.4	21.8	21.2	29.0	28.4	27.4	26.9
4000	20.1	24.9	25.0	25.2	30.8	28.9	29.2	28.0
5000	14.6	18.5	17.4	18.3	18.5	18.1	18.3	18.5
6300	10.5	11.3	9.8	13.4	13.6	13.5	13.5	13.6
8000	9.0	9.8	8.8	13.7	11.4	11.1	11.4	12.1
10000	8.6	9.0	8.3	10.8	10.1	9.8	9.6	9.9
12500	9.2	9.0	8.8	11.7	10.6	10.3	10.0	10.7
16000	10.0	12.3	11.4	19.0	17.8	14.7	15.9	17.0
20000	19.5	26.4	21.9	36.5	26.6	27.5	27.7	29.2

Frequency (Hz)	Sound Pressure Level in Silence mode (dB)							
	Static				Dynamic			
	No 1	No 2	No 3	No 4	No 1	No 2	No 3	No 4
Leq	37.9	46.5	38.0	41.7	46.0	46.5	47.0	46.6
A-weighted dB (A)	35.7	38.8	35.9	37.9	44.2	44.6	45.1	44.8
Average sound pressure level dB (A)	37.1				44.7			

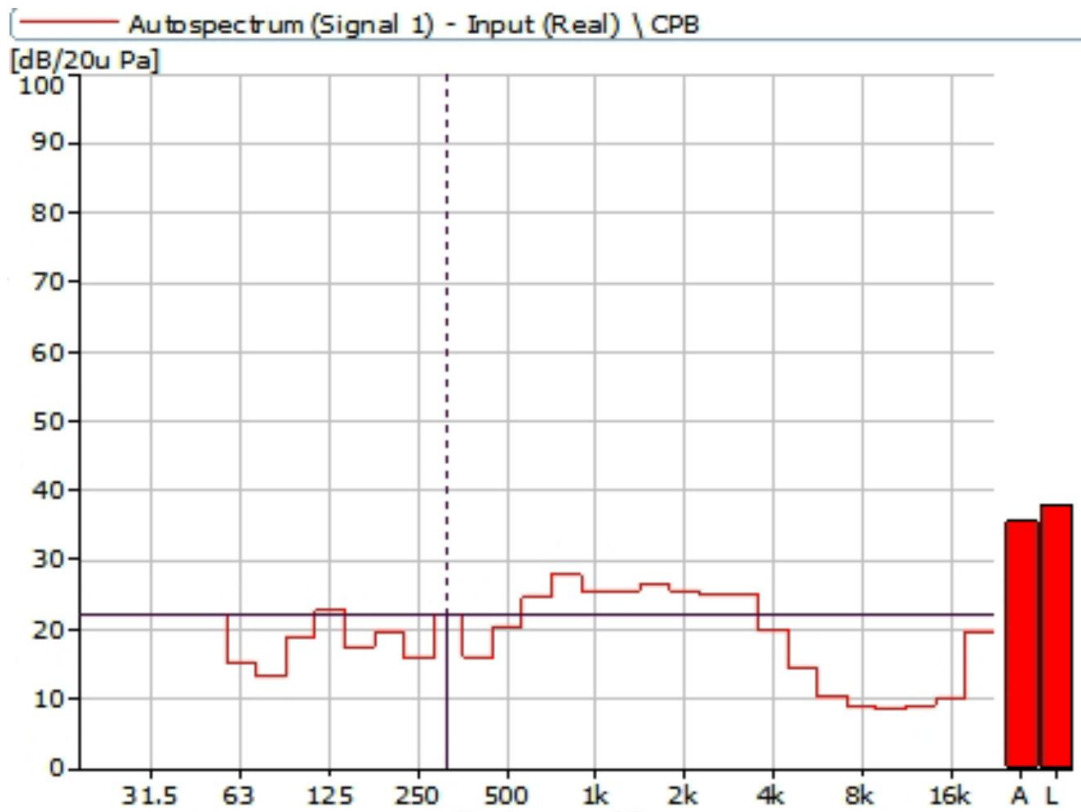


Figure 19 Noise Spectrum of Stage Luminaires (The Silence mode, Static, No 1)

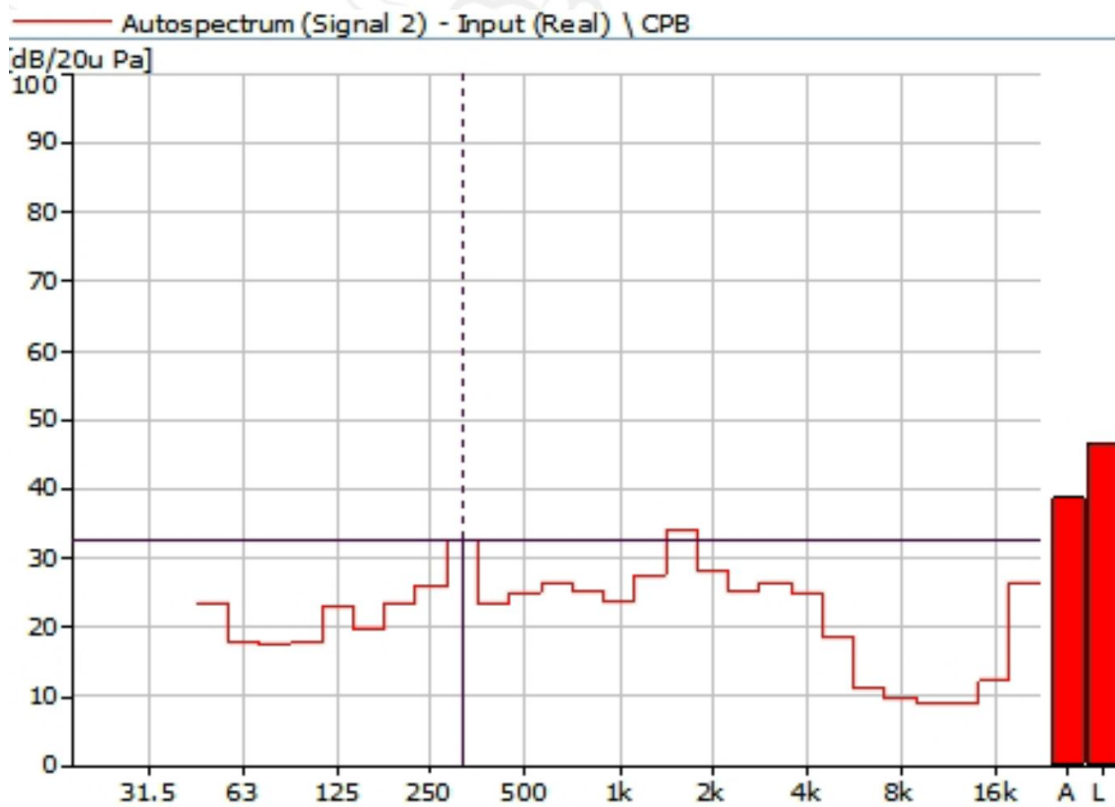


Figure 20 Noise Spectrum of Stage Luminaires (The Silence mode, Static, No 2)

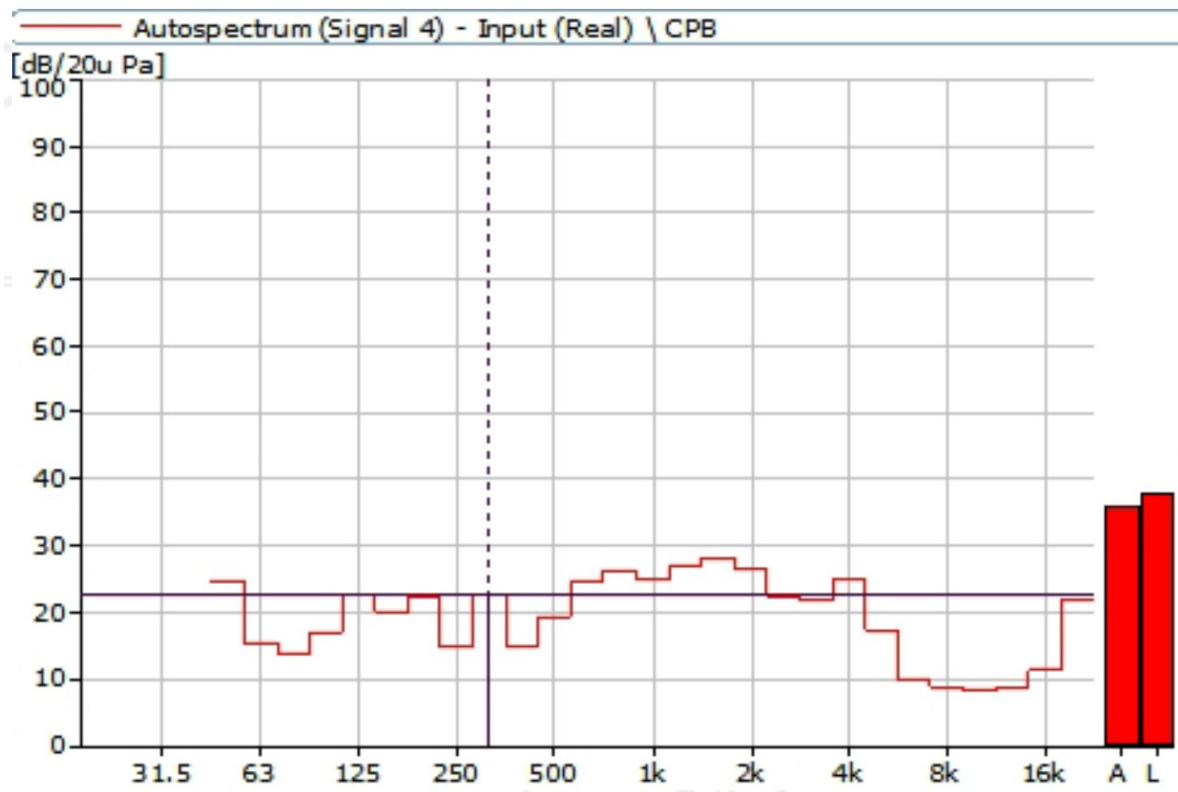


Figure 21 Noise Spectrum of Stage Luminaires (The Silence mode, Static, No 3)

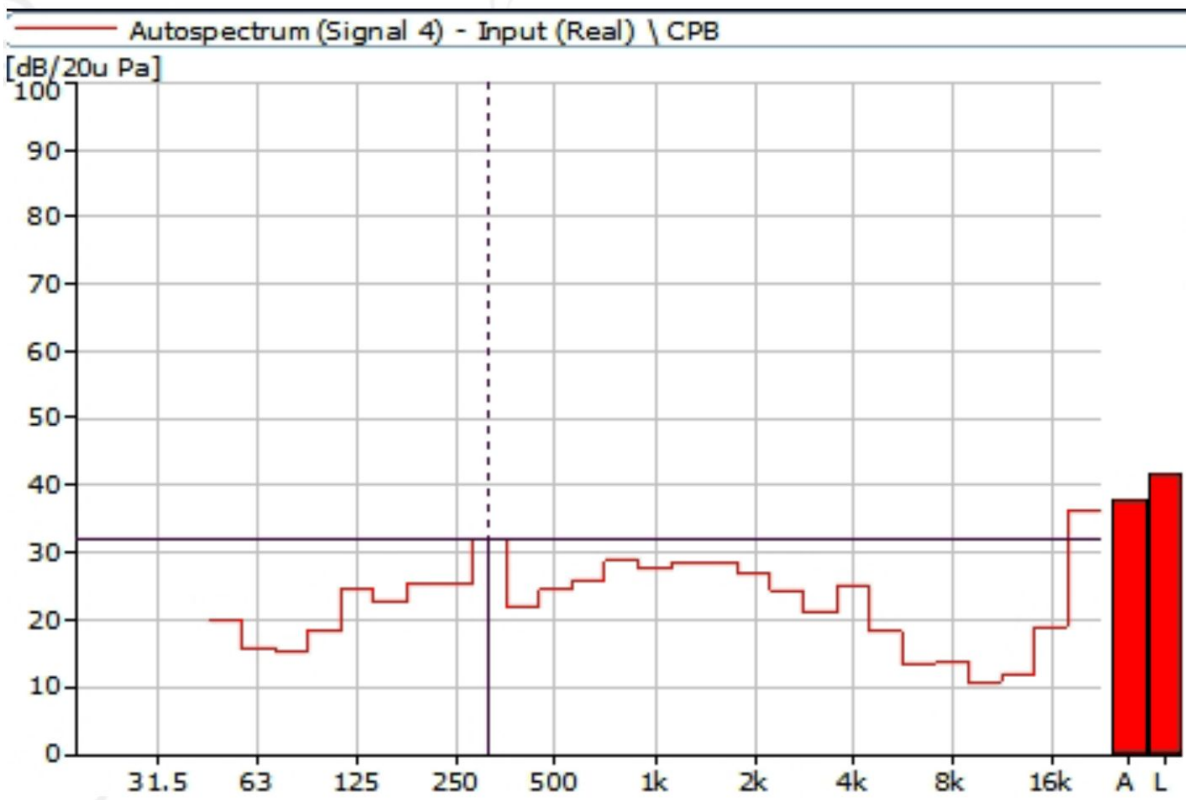


Figure 22 Noise Spectrum of Stage Luminaires (The Silence mode, Static, No 4)

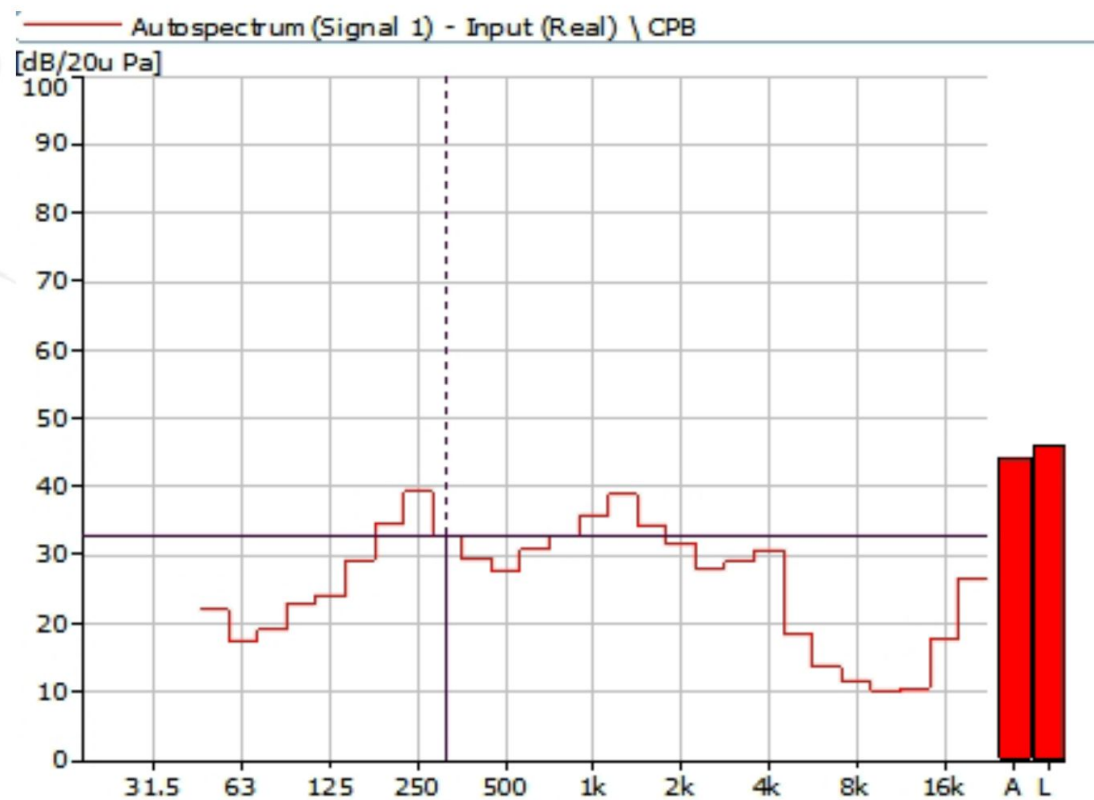


Figure 23 Noise Spectrum of Stage Luminaires (The Silence mode, Dynamic, No 1)

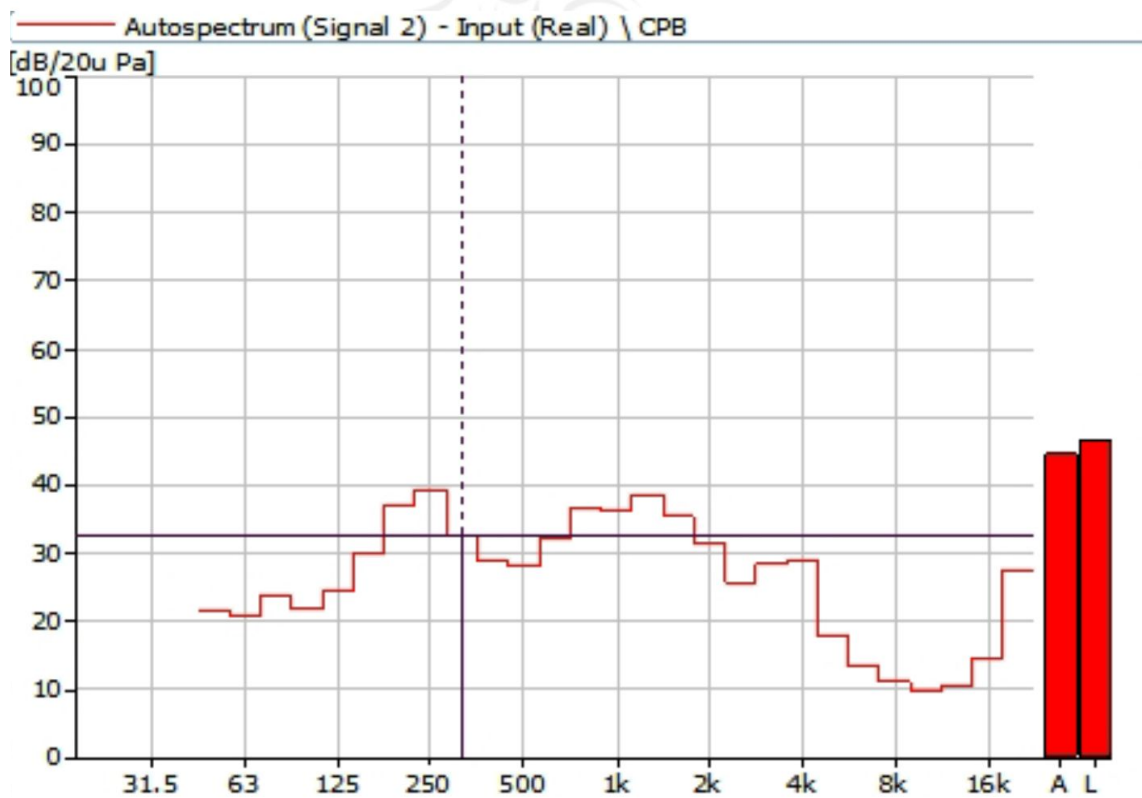


Figure 24 Noise Spectrum of Stage Luminaires (The Silence mode, Dynamic, No 2)

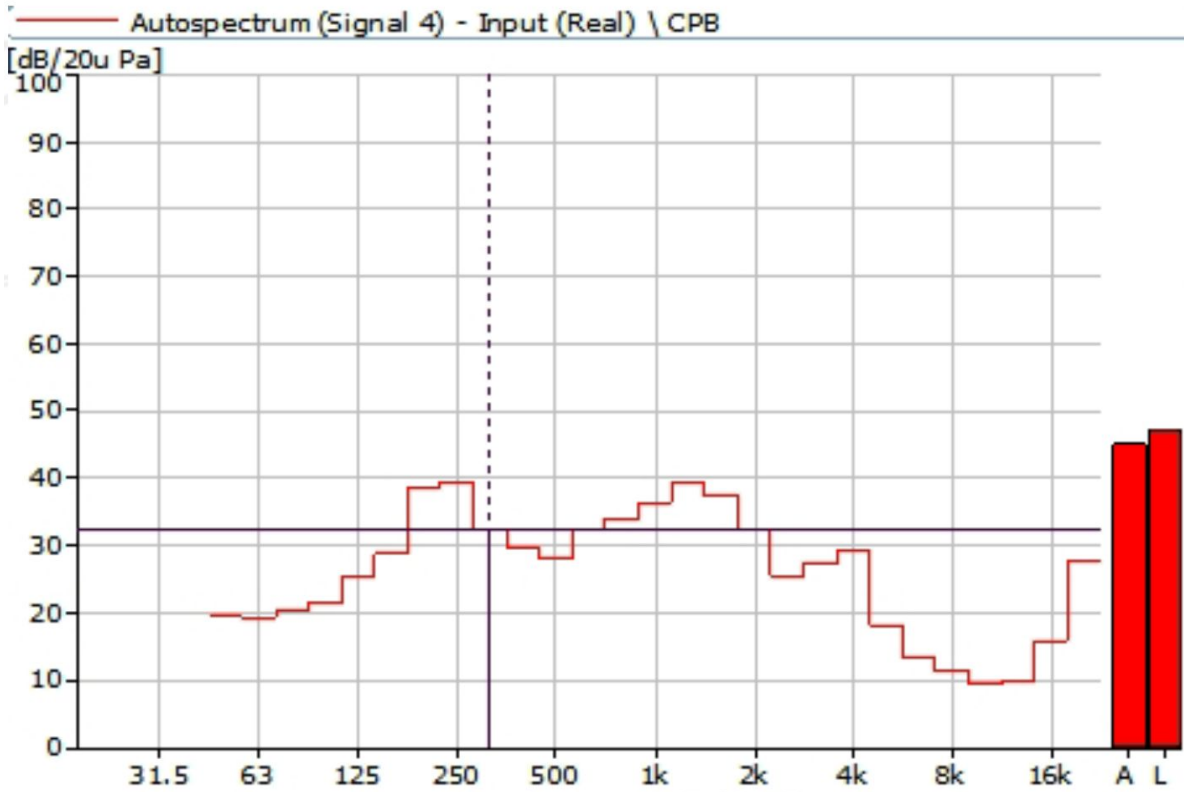


Figure 25 Noise Spectrum of Stage Luminaires (The Silence mode, Dynamic, No 3)

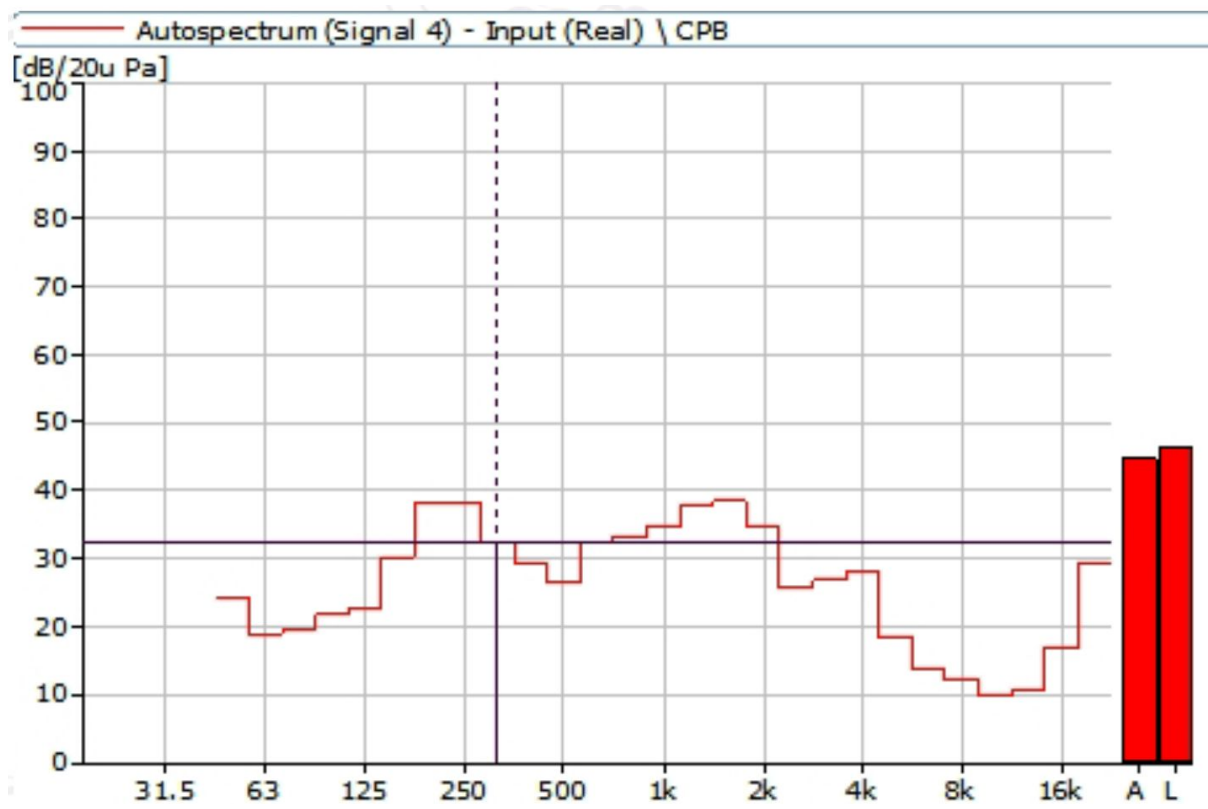


Figure 26 Noise Spectrum of Stage Luminaires (The Silence mode, Dynamic, No 4)

4 Noise Detection Results of Stage Luminaires (The Super Silence mode)

Frequency (Hz)	Sound Pressure Level in Super Silence mode (dB)							
	Static				Dynamic			
	No 1	No 2	No 3	No 4	No 1	No 2	No 3	No 4
50	23.6	21.3	24.7	20.8	22.8	21.1	24.5	20.1
63	16.4	15.0	13.6	18.2	18.0	20.2	16.2	19.2
80	13.9	13.2	11.5	14.7	18.7	22.9	18.5	19.6
100	17.8	15.9	18.7	18.5	22.7	21.6	22.1	21.6
125	19.9	20.4	18.4	21.5	23.2	24.1	22.6	24.5
160	24.6	29.4	26.3	25.5	30.2	32.5	31.3	30.8
200	10.1	18.3	9.9	18.1	33.3	35.3	37.1	37.3
250	15.9	25.4	14.3	24.2	39.1	39.7	38.2	39.6
315	12.5	20.6	12.6	19.9	32.4	32.2	31.6	32.0
400	13.0	17.0	10.7	16.1	28.2	28.2	28.6	28.5
500	17.6	20.4	15.3	20.4	26.3	27.4	25.4	26.6
630	23.0	30.7	26.4	29.2	30.9	30.8	32.9	31.3
800	24.5	23.3	23.8	25.3	31.5	35.1	32.8	32.9
1000	20.1	20.1	19.8	22.8	35.3	35.2	34.3	36.3
1250	22.2	23.9	25.5	24.2	39.0	37.6	37.8	40.5
1600	26.5	25.7	26.9	26.4	33.7	34.4	38.9	37.2
2000	23.6	24.2	20.6	26.3	32.3	30.6	35.6	32.3
2500	21.3	22.2	19.2	21.5	25.9	23.4	24.8	24.1
3150	24.1	26.5	20.6	21.6	29.1	28.2	26.6	28.8
4000	19.5	26.6	23.4	21.1	32.8	32.3	29.2	33.3
5000	13.5	21.8	19.9	13.9	15.4	18.0	19.3	19.8
6300	9.5	9.9	8.9	10.1	12.5	12.1	12.7	12.5
8000	9.2	9.6	8.6	10.8	12.2	10.6	11.2	11.1
10000	8.4	8.6	8.0	9.3	9.6	9.3	9.3	9.0
12500	8.4	9.1	7.9	9.8	9.9	9.5	9.8	9.2
16000	10.4	12.3	10.7	17.3	15.5	15.9	16.7	16.5
20000	23.1	25.6	24.5	36.3	26.9	27.0	28.7	27.2

Frequency (Hz)	Sound Pressure Level in Super Silence mode (dB)							
	Static				Dynamic			
	No 1	No 2	No 3	No 4	No 1	No 2	No 3	No 4
Leq	37.2	38.8	37.7	40.5	45.8	46.0	46.4	47.0
A-weighted dB (A)	33.5	36.0	34.0	35.6	44.1	43.9	44.9	45.4
Average sound pressure level dB (A)	34.8				44.6			

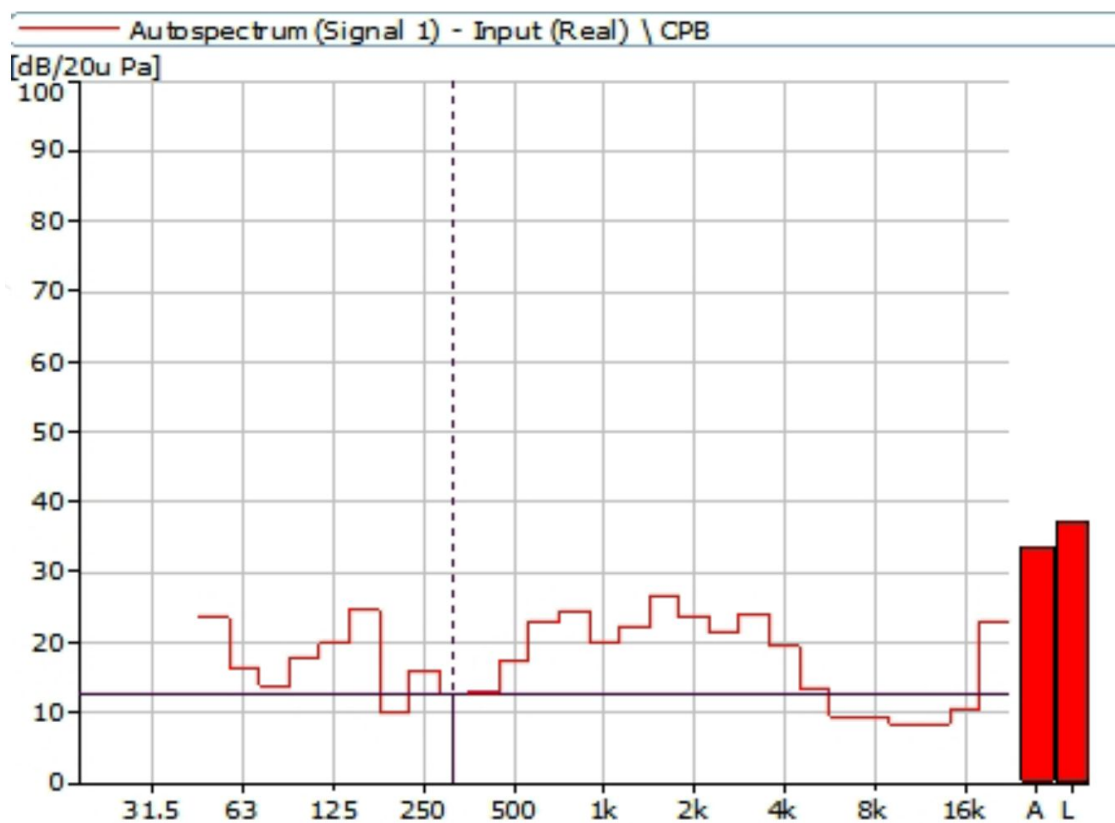


Figure 27 Noise Spectrum of Stage Luminaires (The Super Silence mode, Static, No 1)

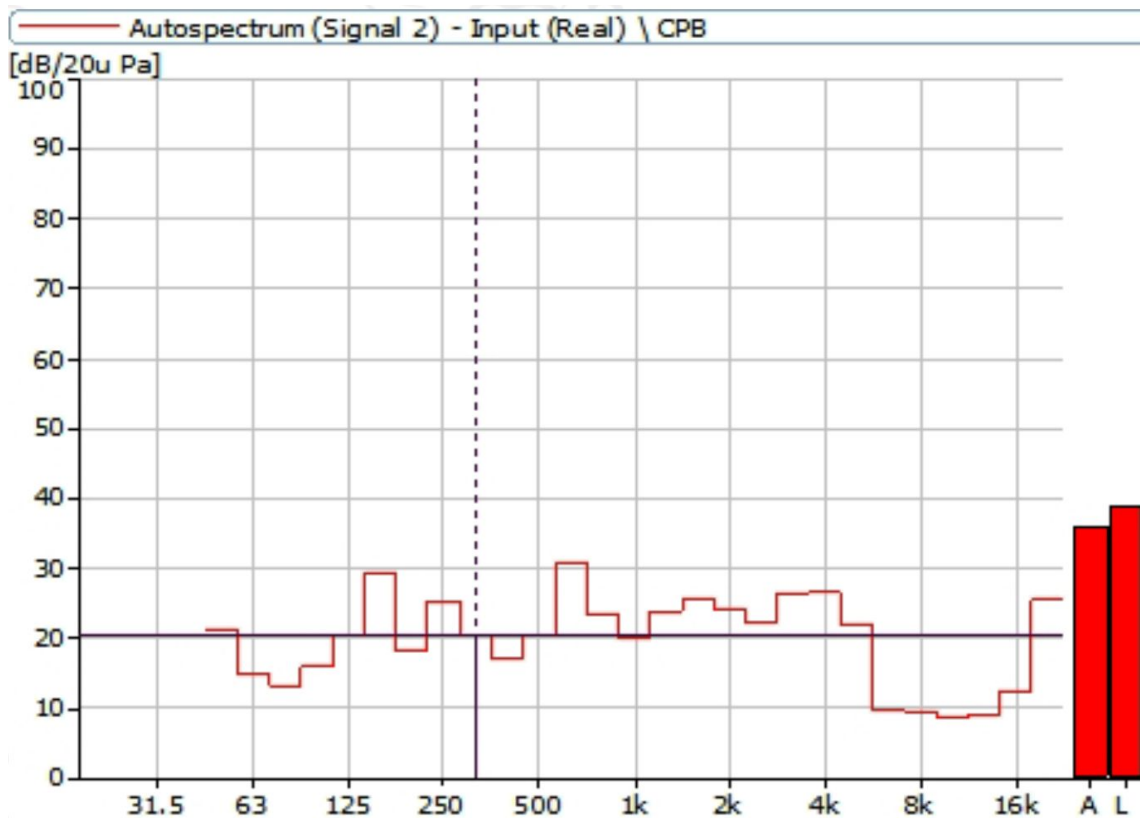


Figure 28 Noise Spectrum of Stage Luminaires (The Super Silence mode, Static, No 2)

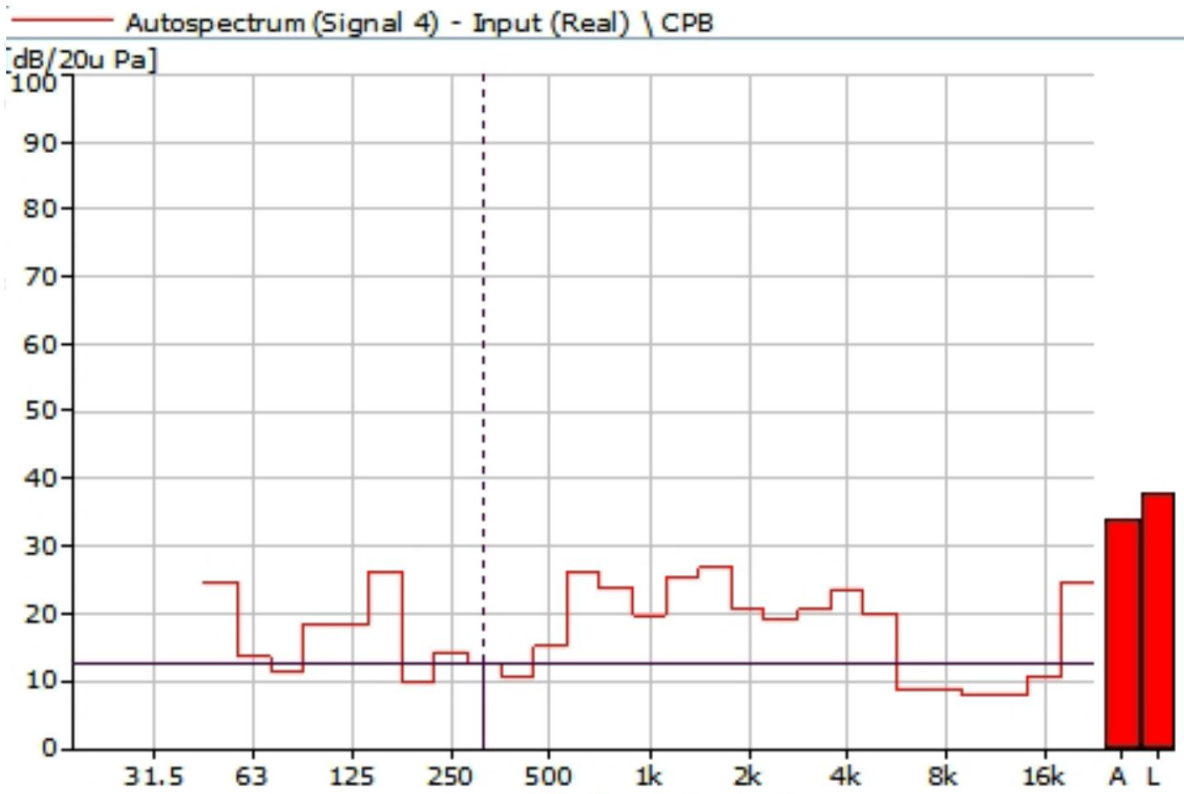


Figure 29 Noise Spectrum of Stage Luminaires (The Super Silence mode, Static, No 3)

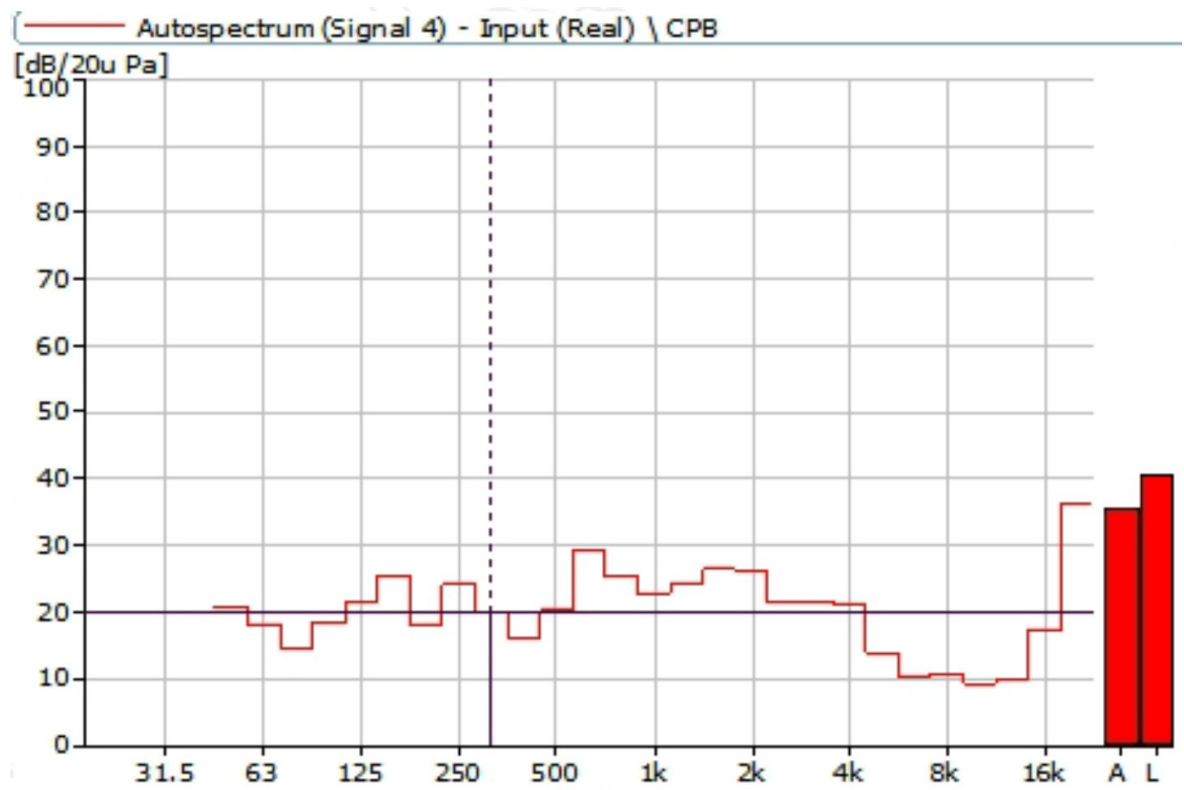


Figure 30 Noise Spectrum of Stage Luminaires (The Super Silence mode, Static, No 4)

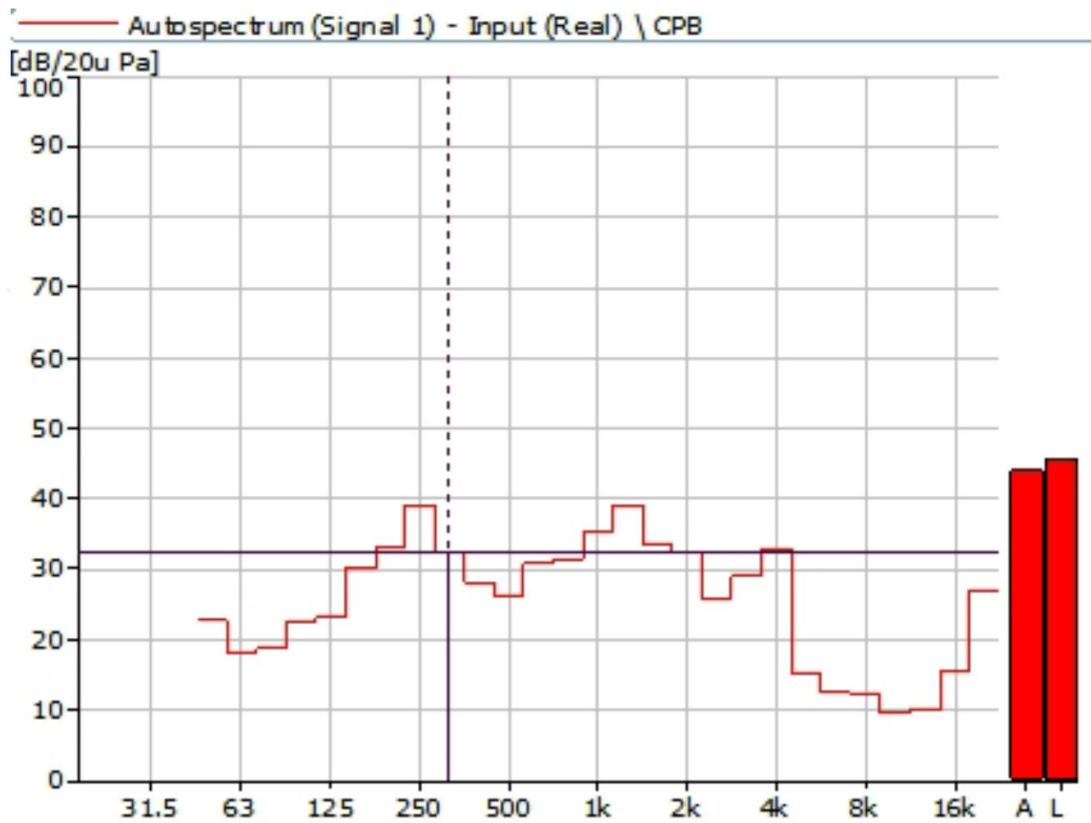


Figure 31 Noise Spectrum of Stage Luminaires (The Super Silence mode, Static, No 1)

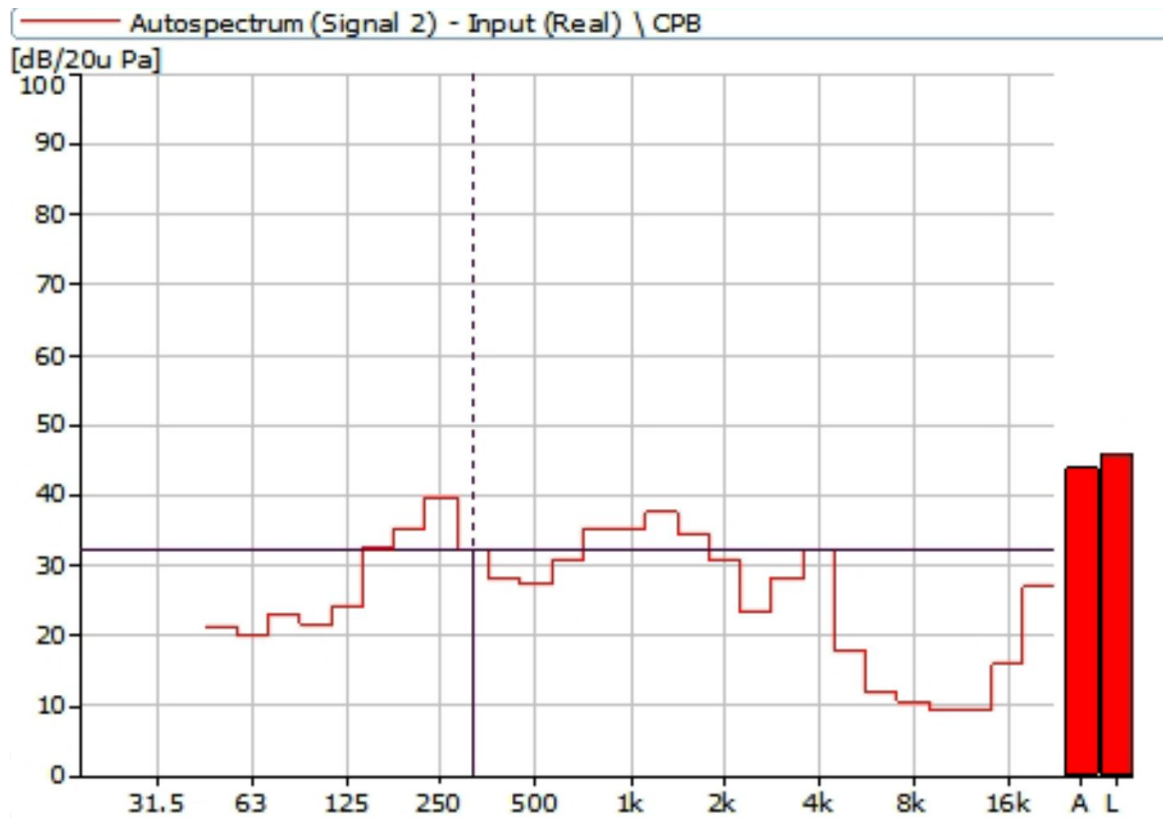


Figure 32 Noise Spectrum of Stage Luminaires (The Super Silence mode, Static, No 2)

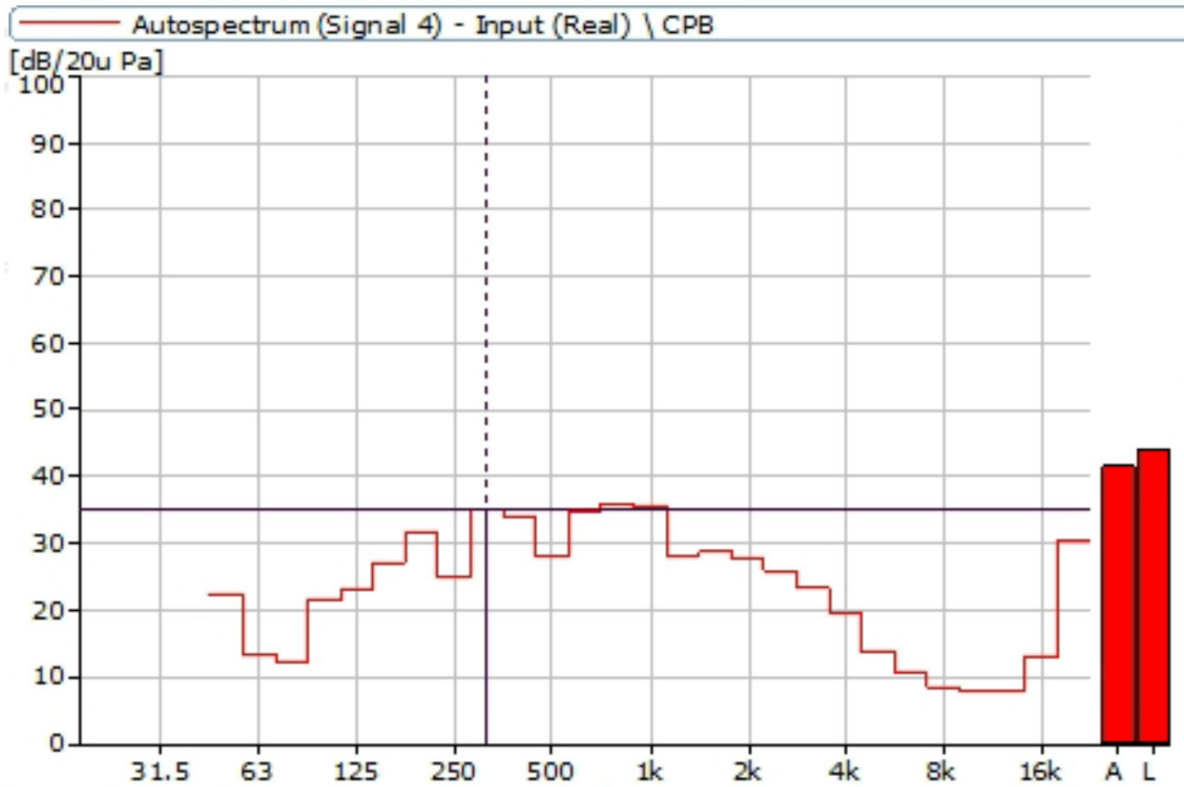


Figure 33 Noise Spectrum of Stage Luminaires (The Super Silence mode, Static, No 3)

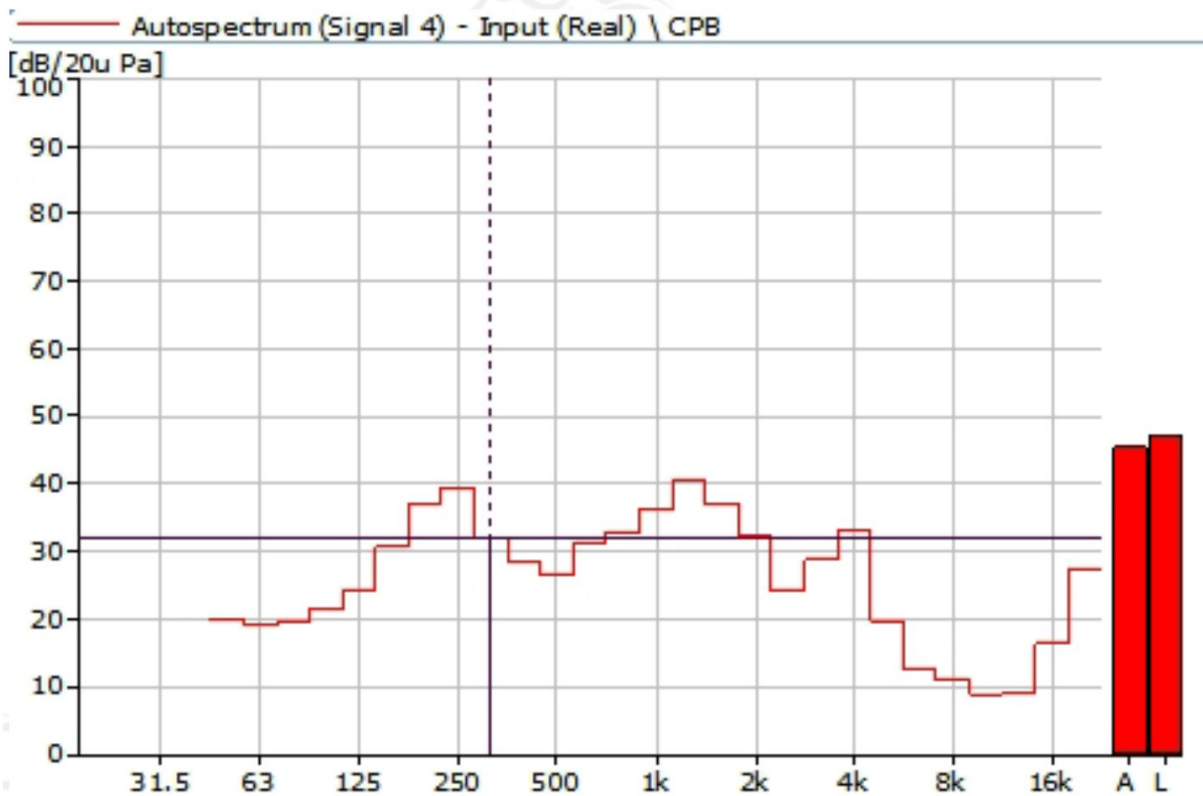


Figure 34 Noise Spectrum of Stage Luminaires (The Super Silence mode, Static, No 4)



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