



LEVANTE

NOISE MEASUREMENTS



AYRTON
Digital Lighting

Inspection instructions

This test was carried out in the semi-silencing room of Guangzhou Quality Supervision and Testing Institute (GQT). The indoor environmental noise was less than 5dB (A). The stage lamp was placed on the standard test table of the semi-silencing room. When the stage lamp was turned on, the test microphone was 1m away from the four directions of the stage lamp to detect its sound pressure level.

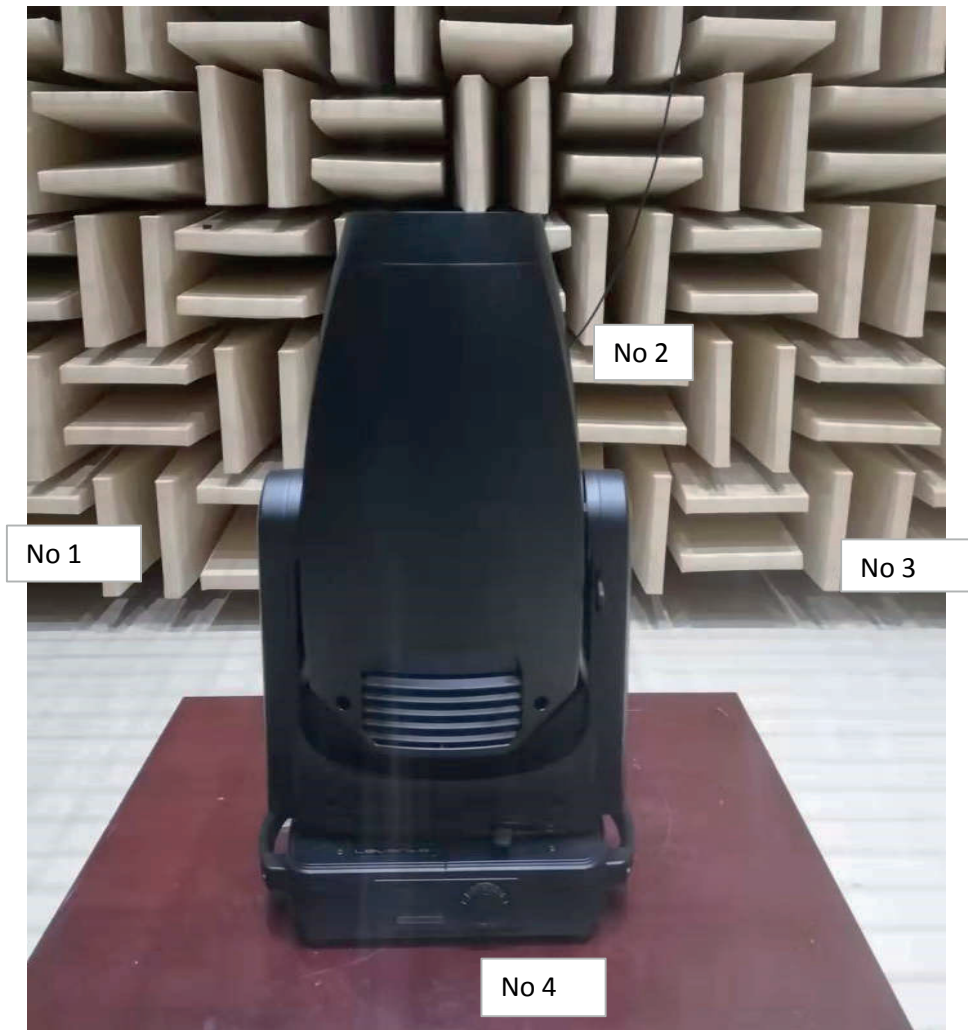


Figure 1: Test setup



Figure 2 Sample serial number information

Instrumentation

No	Equipment	Type	Number	Calibration period
1	Anechoicrooms	---	R40010	2023.05
2	Noise Analyzer	3160-A-042	R40011-2	2022.05

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
20	40.5	35.8	36.4	40.3	43.0	37.9	38.2	43.2
25	32.9	30.8	30.6	32.5	36.2	29.5	29.9	34.1
31.5	32.1	29.1	26.0	28.7	32.2	30.3	30.3	29.3
40	22.9	22.0	23.1	23.4	29.3	26.7	27.8	28.6
50	26.5	27.3	25.5	25.5	27.3	27.6	26.4	27.7
63	15.1	14.2	14.8	16.1	17.7	16.1	17.0	17.6
80	17.2	16.3	16.9	17.3	18.1	19.8	20.7	18.8
100	25.0	22.5	21.9	24.2	33.5	31.9	32.4	33.8
125	15.7	14.9	15.3	16.5	38.0	37.5	37.8	38.4
160	20.4	21.0	21.8	20.2	34.6	35.3	34.4	35.1
200	26.4	27.2	27.9	26.8	44.1	45.1	44.2	42.5
250	32.7	31.5	31.5	32.1	45.4	45.6	46.2	45.7
315	32.9	30.2	31.4	31.4	44.9	44.2	44.6	45.0
400	26.0	27.8	27.3	29.7	42.4	45.3	47.5	44.8
500	29.9	31.7	31.1	32.4	45.4	48.1	46.1	44.0
630	29.6	31.4	30.9	32.0	37.8	38.4	37.1	35.8
800	30.4	30.7	30.1	30.4	30.7	31.7	30.3	31.6
1000	30.4	28.7	27.9	30.4	34.4	33.3	32.1	32.9
1250	24.2	29.6	24.7	28.7	29.1	27.9	27.9	29.8
1600	26.5	31.9	28.9	30.0	32.2	29.6	29.6	32.6
2000	26.7	28.5	26.7	31.4	30.7	29.7	29.2	31.0
2500	29.1	32.7	28.8	32.9	32.6	30.4	30.7	32.4
3150	26.6	28.9	26.9	29.4	29.7	27.8	28.9	30.5
4000	23.9	25.0	22.7	28.8	26.6	25.7	26.0	27.0
5000	21.8	24.0	20.8	27.1	26.1	25.3	24.9	26.1
6300	18.6	18.1	18.4	24.3	22.3	21.6	21.3	22.7
8000	17.1	18.6	17.5	22.2	19.7	18.5	19.3	20.9
10000	15.7	13.3	15.8	19.9	17.6	16.7	17.1	18.4
12500	11.1	11.2	14.9	17.2	14.8	13.8	15.9	16.8
16000	11.5	13.6	15.9	17.3	16.9	16.4	18.0	18.5
20000	28.9	32.7	30.1	26.2	33.9	33.8	34.3	34.3
Leq	44.6	43.8	43.0	45.2	53.1	53.6	53.6	53.0
A-weighted dB (A)	38.9	40.9	38.9	41.6	47.3	48.4	48.1	47.1
Average sound pressure level dB(A)	40.3				47.8			

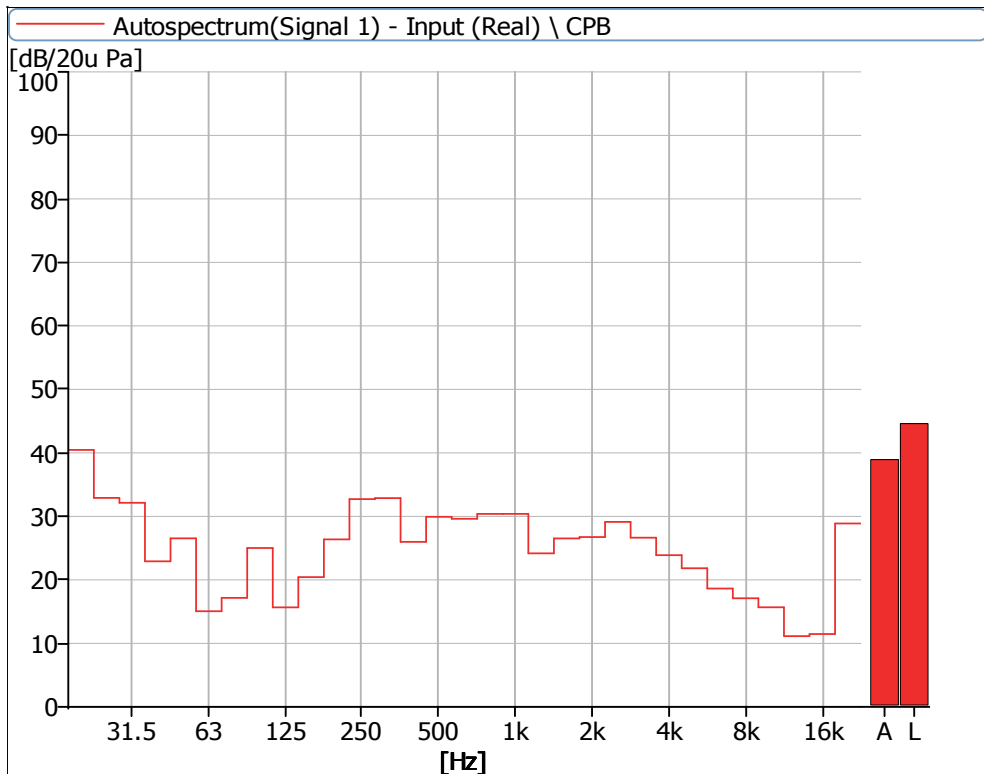


Figure 3 Noise Spectrum of Stage Luminaires
(The Auto mode, static, No 1)

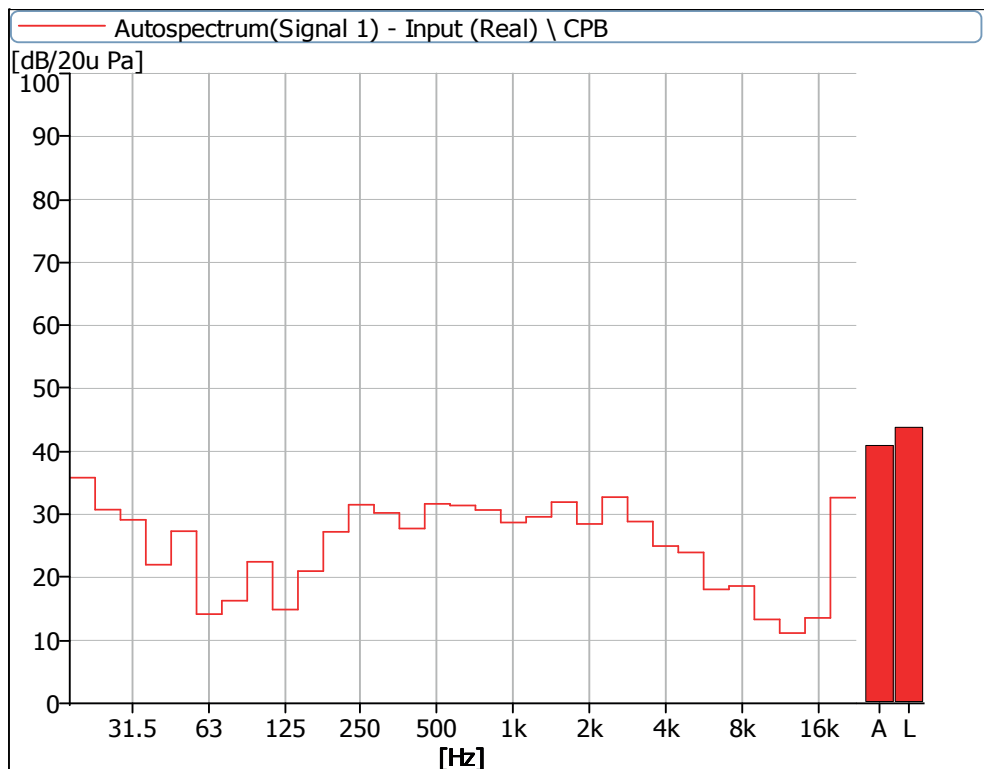


Figure 4 Noise Spectrum of Stage Luminaires
(The Auto mode, static, No 2)

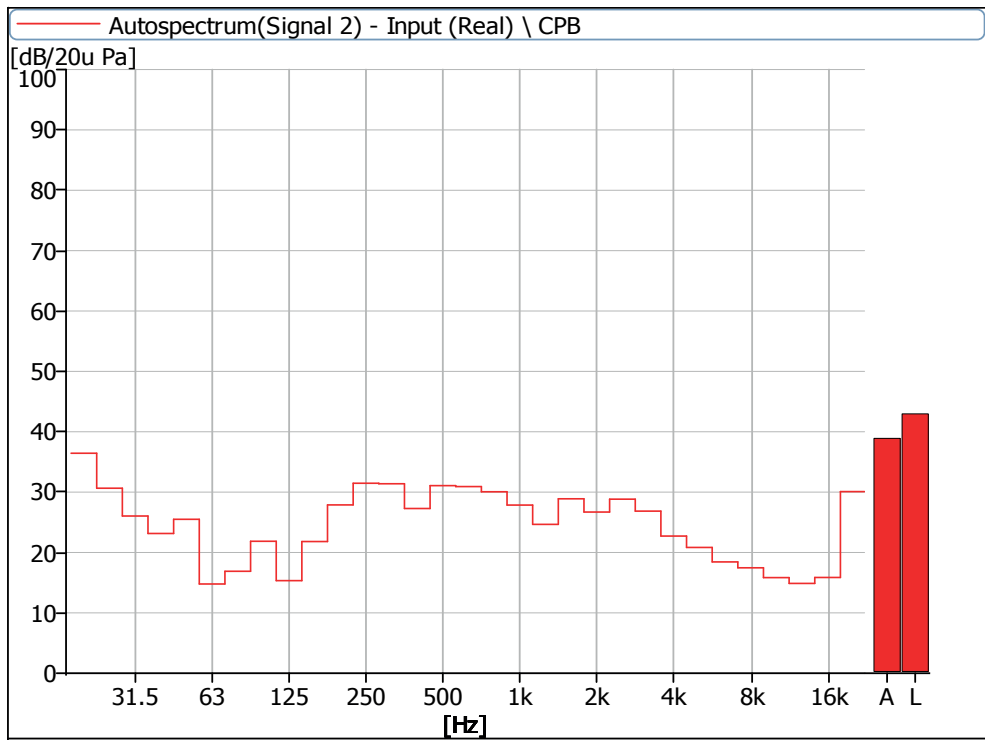


Figure 5 Noise Spectrum of Stage Luminaires
(The Auto mode, static, No 3)

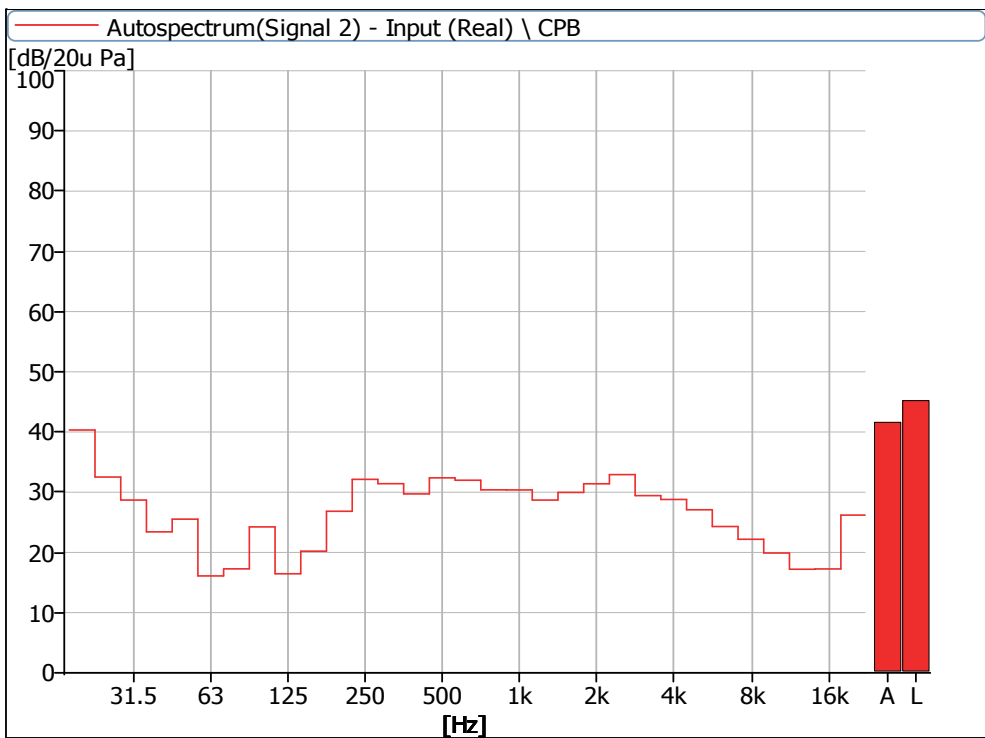


Figure 6 Noise Spectrum of Stage Luminaires
(The Auto mode, static, No 4)

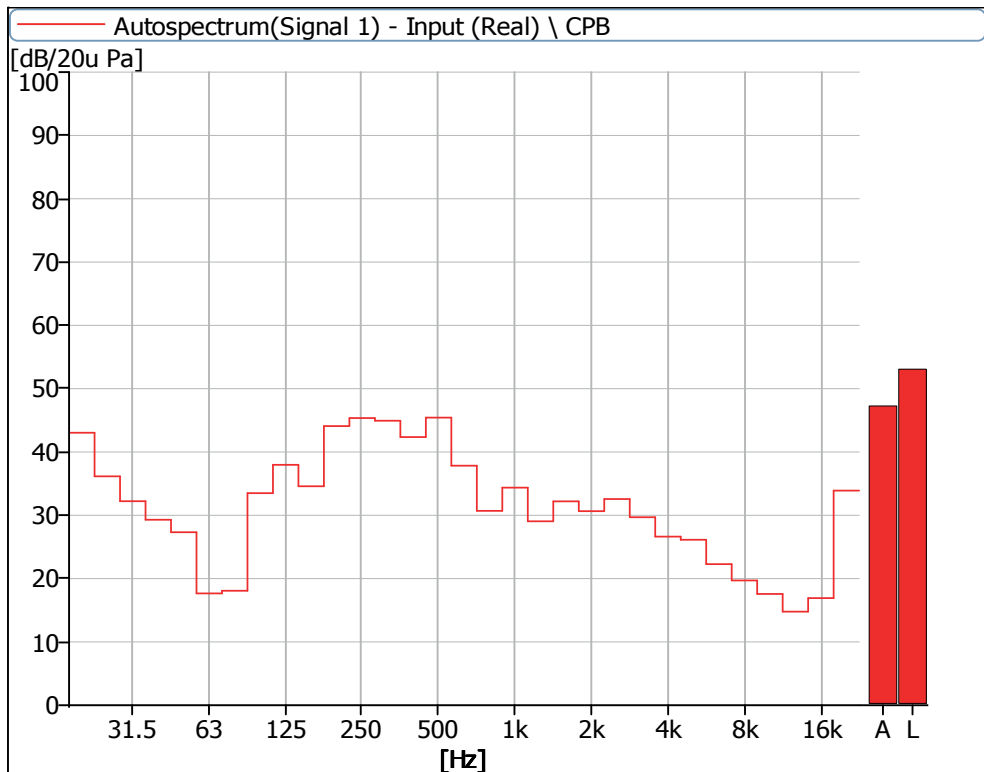


Figure 7 Noise Spectrum of Stage Luminaires
(The Auto mode, Dynamic, No 1)

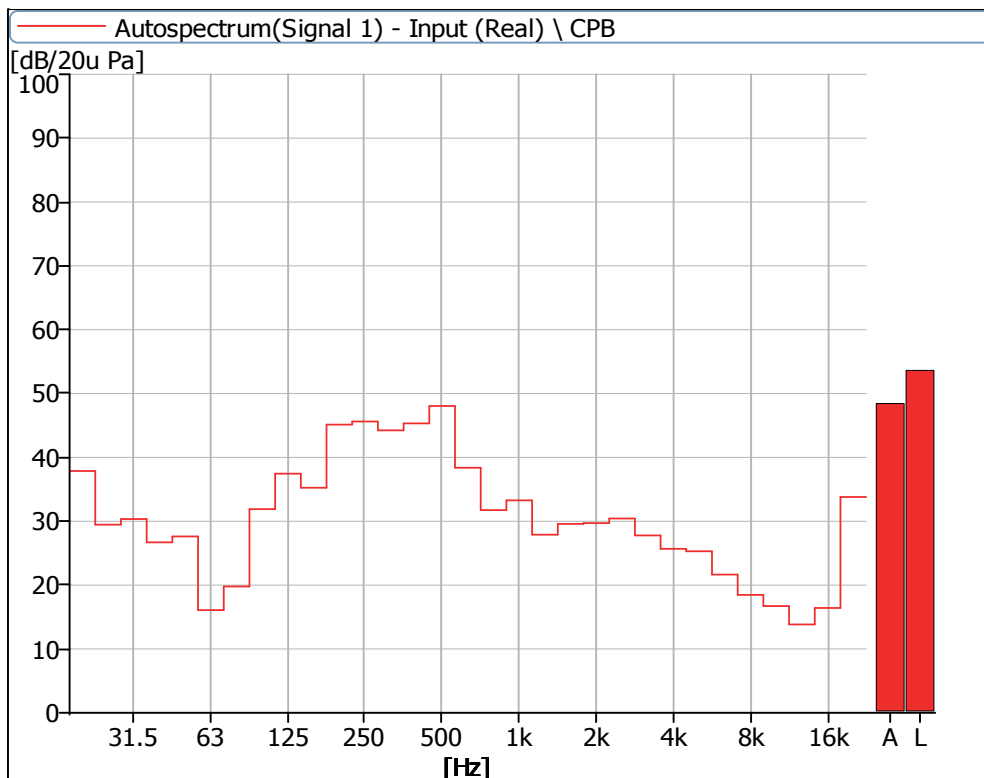


Figure 8 Noise Spectrum of Stage Luminaires
(The Auto mode, Dynamic, No 2)

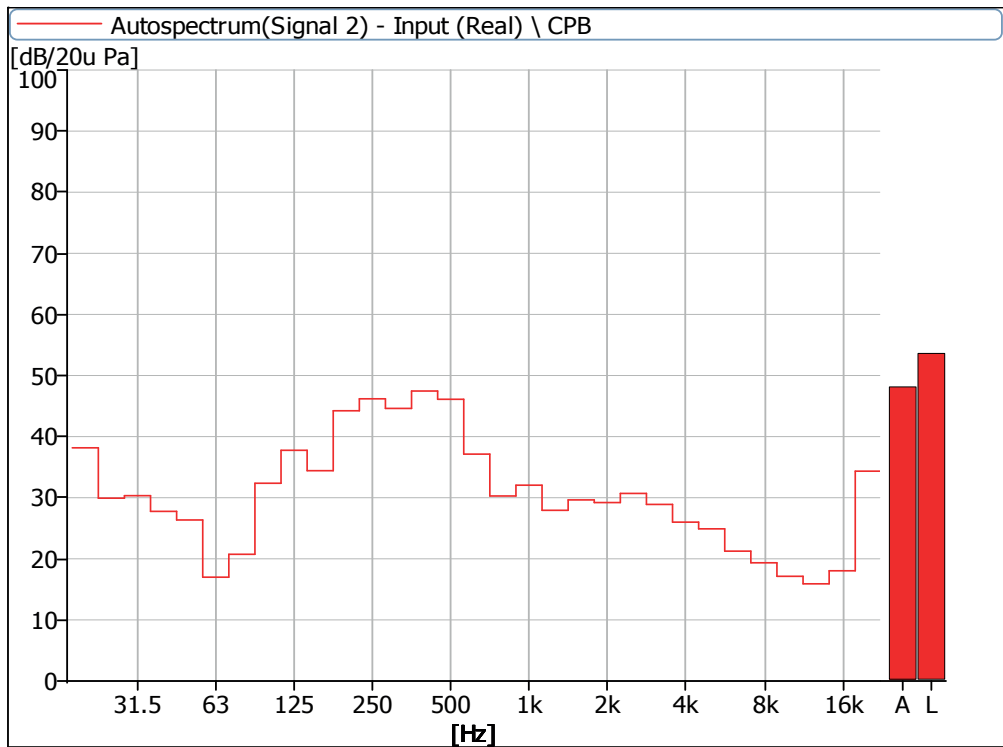


Figure 9 Noise Spectrum of Stage Luminaires
(The Auto mode, Dynamic, No 3)

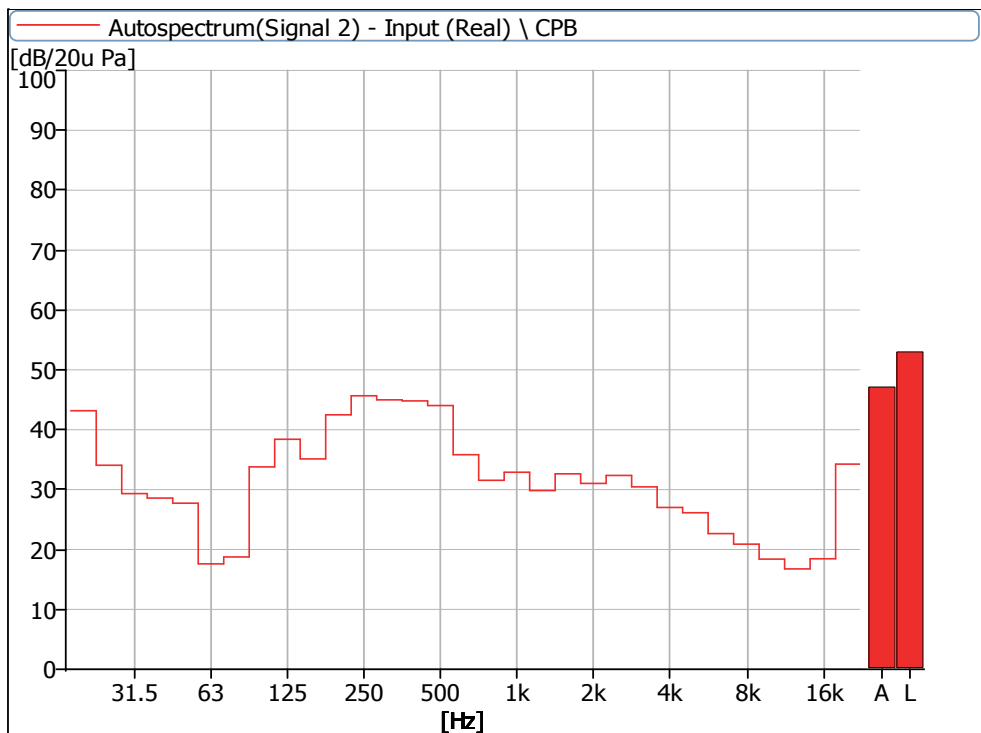


Figure 10 Noise Spectrum of Stage Luminaires
(The Auto mode, Dynamic, No 4)

**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
20	41.5	40.6	40.5	41.5	39.9	40.4	40.4	40.6
25	33.7	31.0	30.6	31.8	31.9	30.6	30.2	31.1
31.5	30.9	29.1	26.5	28.7	31.3	31.9	31.0	27.7
40	22.8	24.5	25.2	22.0	25.7	27.5	27.8	26.1
50	27.6	27.4	26.3	27.3	27.3	27.4	27.0	27.2
63	16.0	15.5	15.8	16.2	17.0	15.8	17.2	16.9
80	16.8	16.0	16.7	16.9	17.9	19.1	19.7	17.9
100	34.2	27.9	29.8	33.8	35.7	32.7	33.3	35.4
125	29.2	23.2	24.9	28.8	40.1	37.4	37.9	39.8
160	22.6	22.6	23.3	21.4	35.6	34.6	34.5	35.4
200	31.1	30.0	31.2	29.9	44.1	43.6	42.8	41.0
250	36.5	34.3	34.9	35.2	47.3	47.4	47.8	46.8
315	34.6	31.9	32.8	33.9	44.2	44.1	44.6	44.2
400	32.2	32.6	33.0	33.3	43.6	45.3	47.9	44.9
500	33.6	35.3	33.7	34.5	46.6	47.4	45.5	44.6
630	31.0	34.9	34.7	33.9	38.3	39.2	37.8	36.8
800	34.2	34.2	34.4	33.4	34.3	35.0	33.5	34.3
1000	30.4	30.7	30.4	31.1	36.6	34.0	33.5	34.3
1250	27.5	33.1	28.4	30.9	32.8	31.3	31.2	33.4
1600	29.9	34.0	31.2	32.9	35.1	31.9	32.5	34.8
2000	30.4	32.1	30.5	34.9	34.7	33.2	32.7	34.5
2500	32.5	31.9	32.6	36.8	35.1	33.0	33.3	34.9
3150	30.6	33.8	30.4	33.8	34.4	31.9	33.5	34.7
4000	29.4	29.0	28.2	34.5	33.2	30.7	31.7	32.7
5000	26.4	28.1	26.0	32.6	31.7	29.9	29.8	31.2
6300	23.3	23.4	23.7	29.6	28.2	26.5	26.1	27.7
8000	21.9	23.9	22.7	27.7	25.9	23.5	24.2	26.2
10000	19.8	16.7	19.7	25.2	23.8	21.6	21.2	23.0
12500	14.8	14.3	16.6	21.2	20.5	18.0	18.7	20.3
16000	13.5	14.1	16.5	20.8	20.4	18.5	19.2	20.4
20000	31.3	29.1	30.9	30.5	34.7	33.9	34.5	34.7
Leq	47.8	46.7	46.3	47.9	53.8	53.9	54.1	53.2
A-weighted dB (A)	42.1	43.7	42.4	45.1	49.0	48.9	48.9	48.3
Average sound pressure level dB(A)	43.5				48.8			

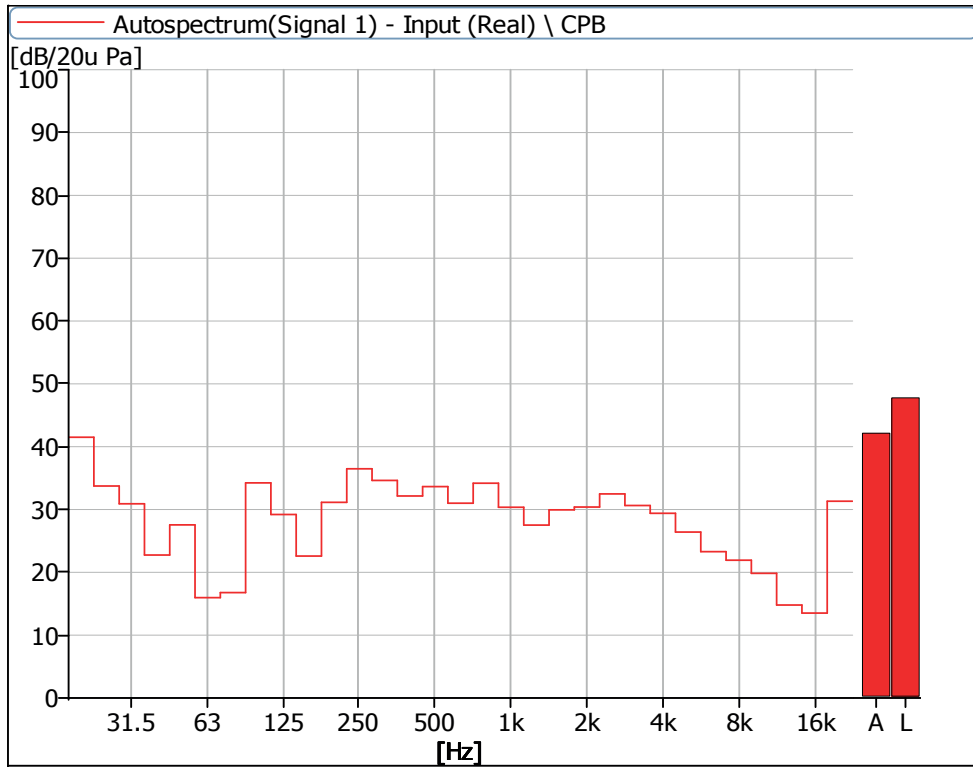


Figure 11 Noise Spectrum of Stage Luminaires
(The Stage mode, static, No 1)

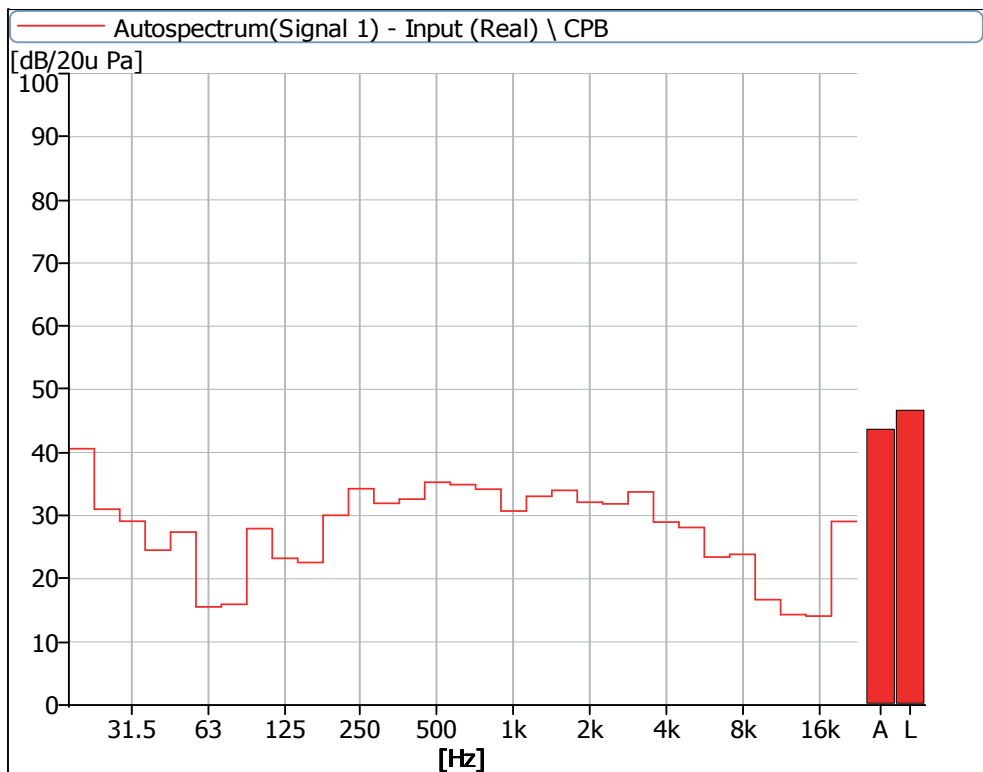


Figure 12 Noise Spectrum of Stage Luminaires
(The Stage mode, static, No 2)

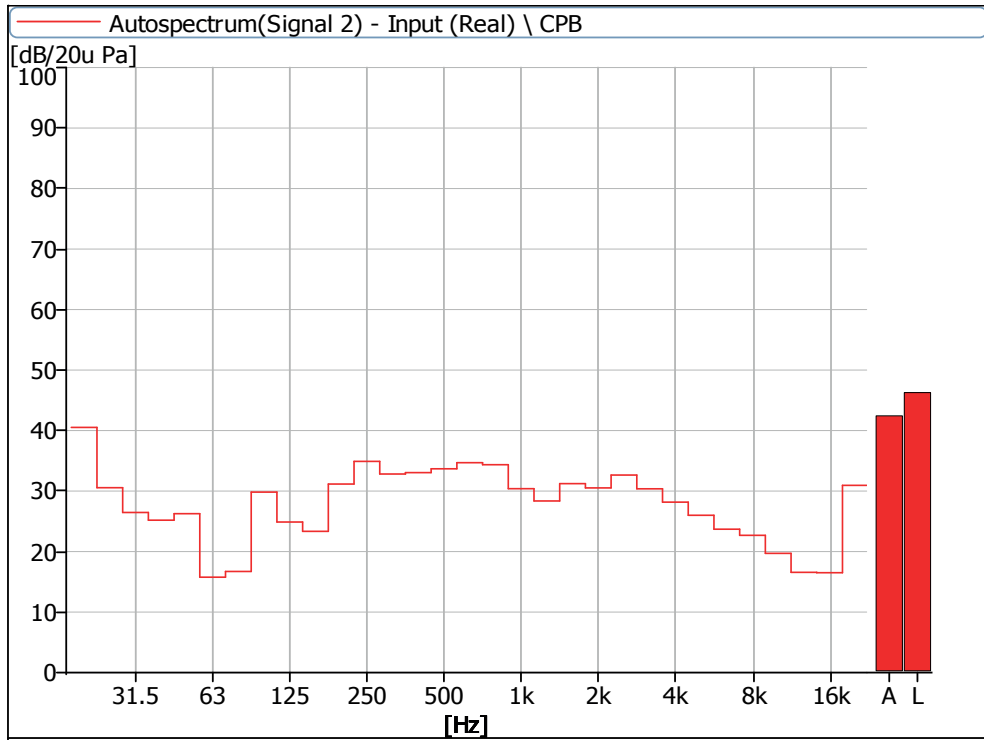


Figure 13 Noise Spectrum of Stage Luminaires
(The Stage mode, static, No 3)

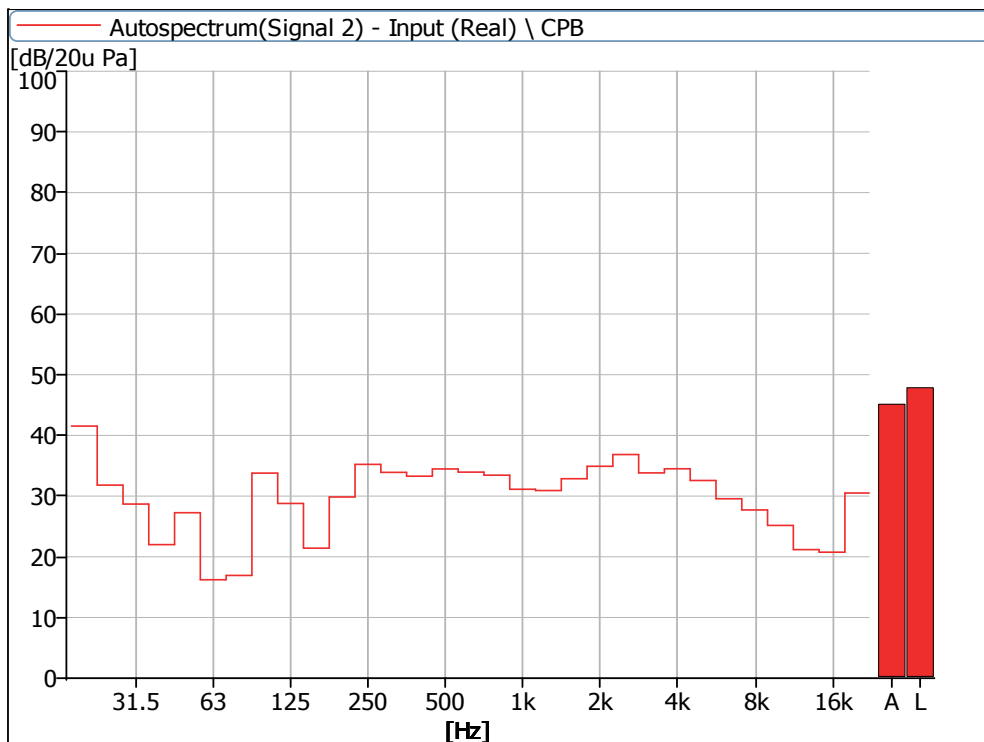


Figure 14 Noise Spectrum of Stage Luminaires
(The Stage mode, static, No 4)

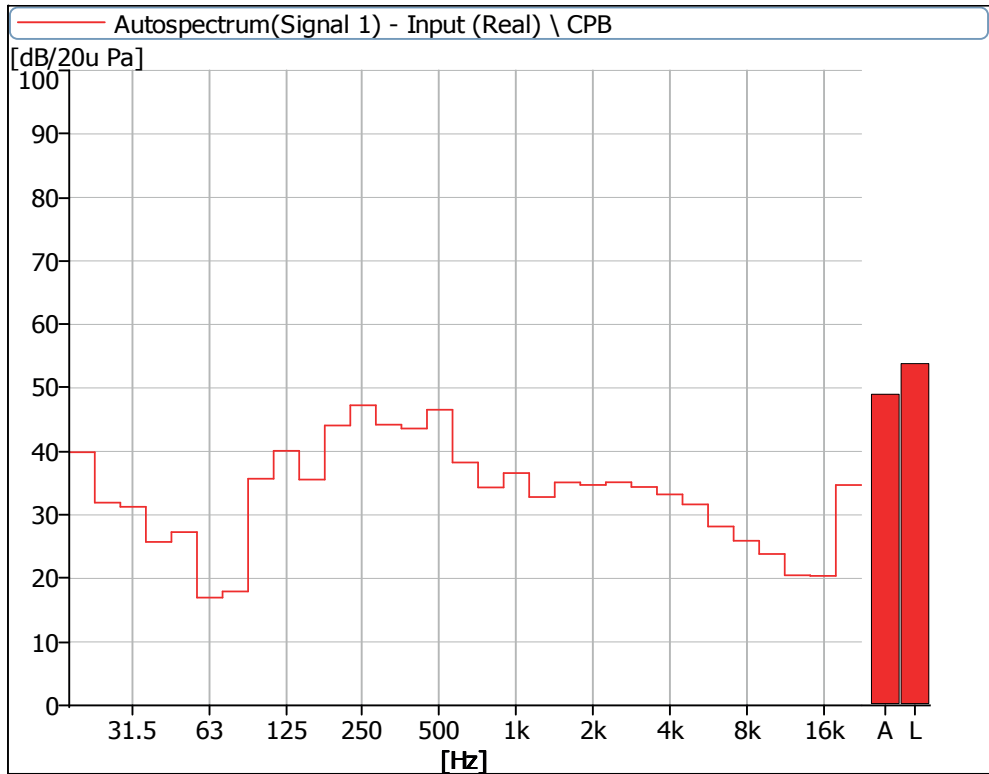


Figure 15 Noise Spectrum of Stage Luminaires
(The Stage mode, Dynamic, No 1)

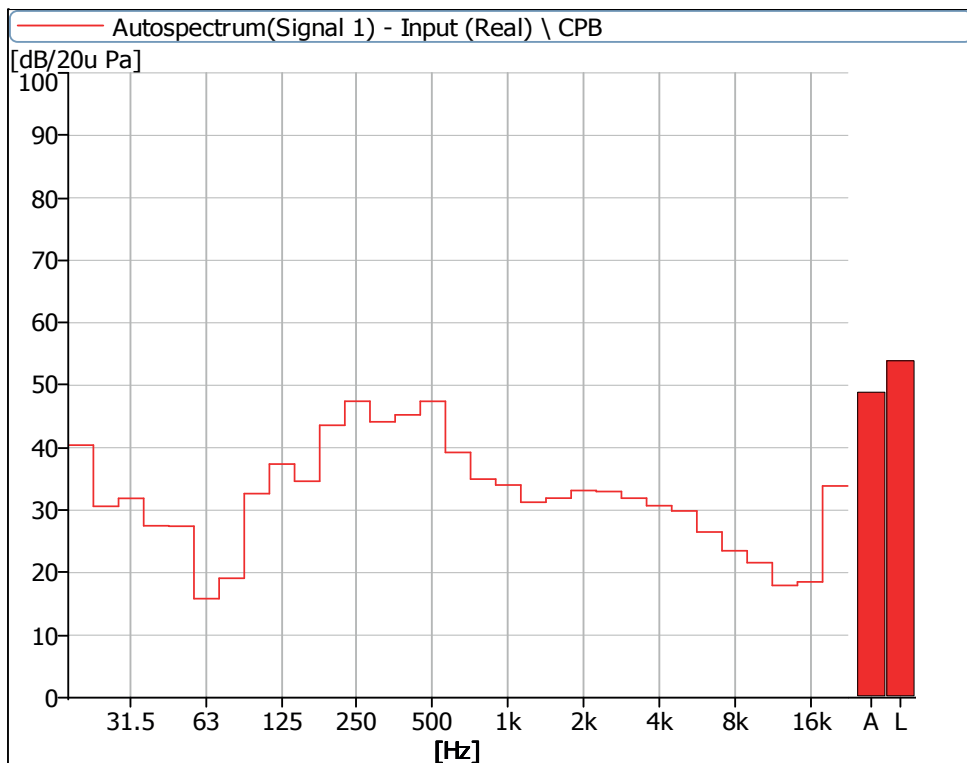


Figure 16 Noise Spectrum of Stage Luminaires
(The Stage mode, Dynamic, No 2)

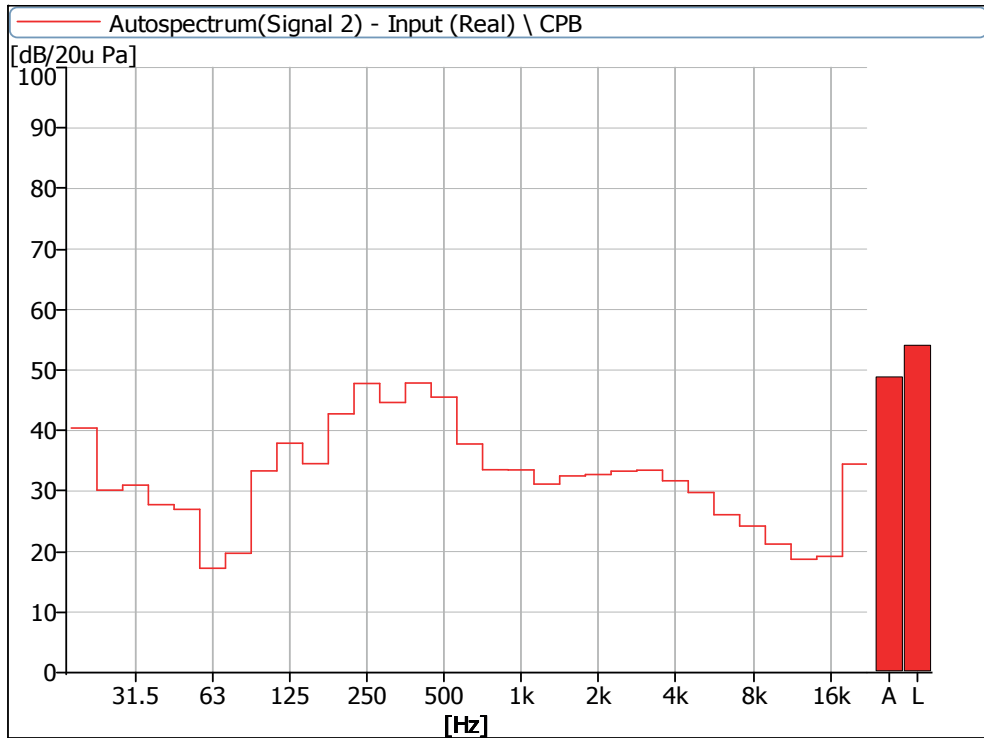


Figure 17 Noise Spectrum of Stage Luminaires
(The Stage mode, Dynamic, No 3)

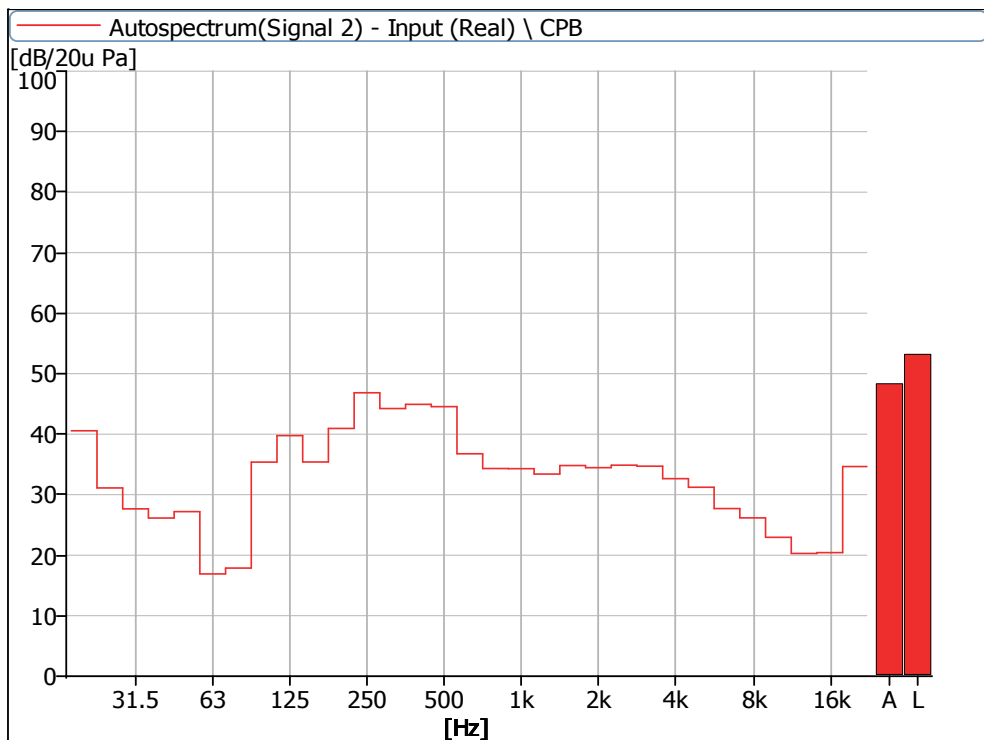


Figure 18 Noise Spectrum of Stage Luminaires
(The Stage mode, Dynamic, No 4)

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
20	41.0	41.0	40.7	41.4	40.5	41.0	40.7	40.9
25	33.0	31.1	31.0	31.4	31.7	30.6	30.2	32.0
31.5	31.2	29.1	26.7	28.3	30.1	29.8	28.2	28.9
40	21.4	22.1	23.0	21.5	25.9	28.1	28.5	26.3
50	27.4	27.0	26.0	26.2	28.2	27.2	26.1	27.4
63	15.2	13.8	14.6	15.7	16.0	14.9	16.6	16.1
80	15.4	13.9	14.6	15.2	17.1	18.6	20.0	17.5
100	20.1	18.0	19.4	20.2	33.0	30.8	31.2	32.5
125	15.1	12.7	14.2	13.5	39.0	37.6	38.0	38.7
160	16.5	15.6	17.3	15.6	34.9	34.5	34.4	34.8
200	20.3	20.4	21.2	20.0	43.7	43.8	42.9	40.8
250	27.5	26.1	26.4	26.1	46.8	47.2	47.6	46.4
315	25.3	25.6	25.6	25.9	44.0	43.3	43.9	44.2
400	22.9	24.2	23.2	25.4	43.0	45.2	47.4	44.4
500	28.9	28.0	27.9	27.2	45.6	47.3	44.6	43.4
630	23.8	25.7	25.4	25.2	36.7	37.8	35.7	34.0
800	24.3	26.3	24.0	24.2	29.2	30.2	27.8	29.3
1000	20.6	22.2	21.2	21.2	35.2	32.8	31.2	31.8
1250	18.4	24.0	20.0	21.9	25.0	24.4	24.0	24.7
1600	22.0	26.9	23.1	22.4	27.0	24.9	25.3	27.2
2000	18.2	21.4	19.2	20.6	23.7	24.0	23.1	24.6
2500	16.2	18.6	17.2	19.4	24.6	24.0	23.4	25.0
3150	15.5	15.4	16.0	16.7	18.2	18.0	18.3	19.0
4000	16.5	15.1	15.7	16.9	17.5	18.3	18.1	19.5
5000	14.0	11.9	14.5	15.5	17.3	17.0	17.3	18.5
6300	11.5	11.8	13.8	14.2	13.8	14.5	15.5	15.9
8000	8.9	9.4	13.9	14.2	11.3	11.2	14.6	14.9
10000	10.5	10.5	14.2	14.6	11.3	11.7	14.6	15.3
12500	9.4	9.4	14.5	14.7	12.1	11.0	15.1	15.2
16000	10.1	10.4	16.5	15.9	17.0	16.0	18.0	18.4
20000	26.1	28.2	33.0	29.5	35.0	34.1	34.8	35.0
Leq	43.3	43.2	43.1	43.4	52.9	53.5	53.4	52.3
A-weighted dB (A)	32.3	34.2	33.1	33.2	46.7	47.7	47.2	45.8
Average sound pressure level dB(A)	33.3				46.9			

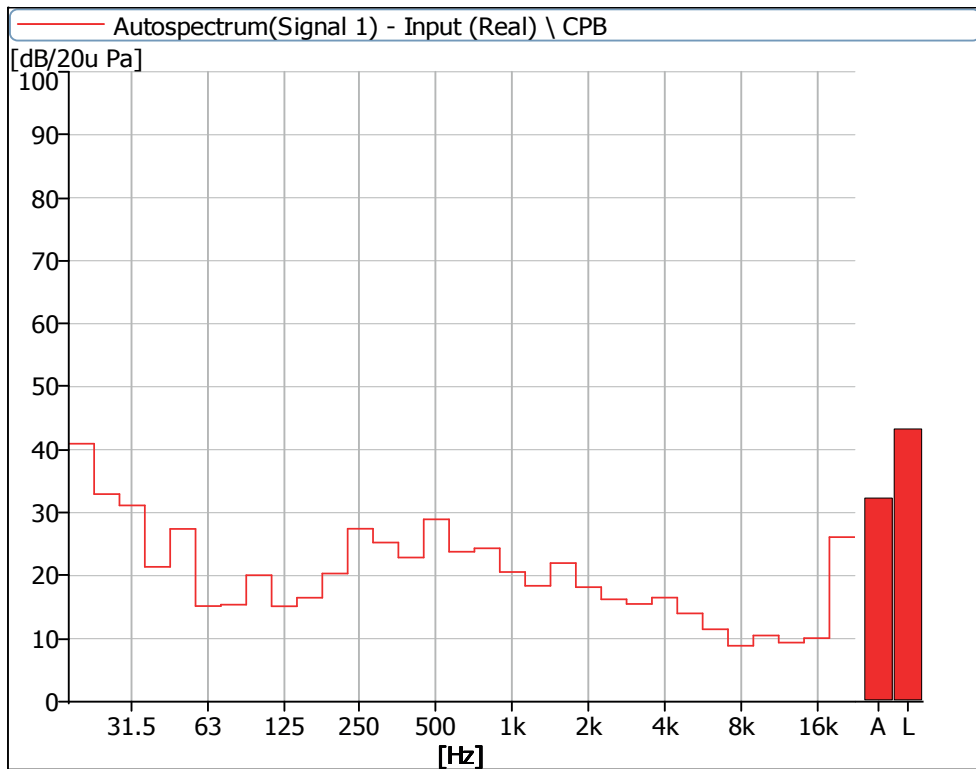


Figure 19 Noise Spectrum of Stage Luminaires
(The Silence mode, static, No 1)

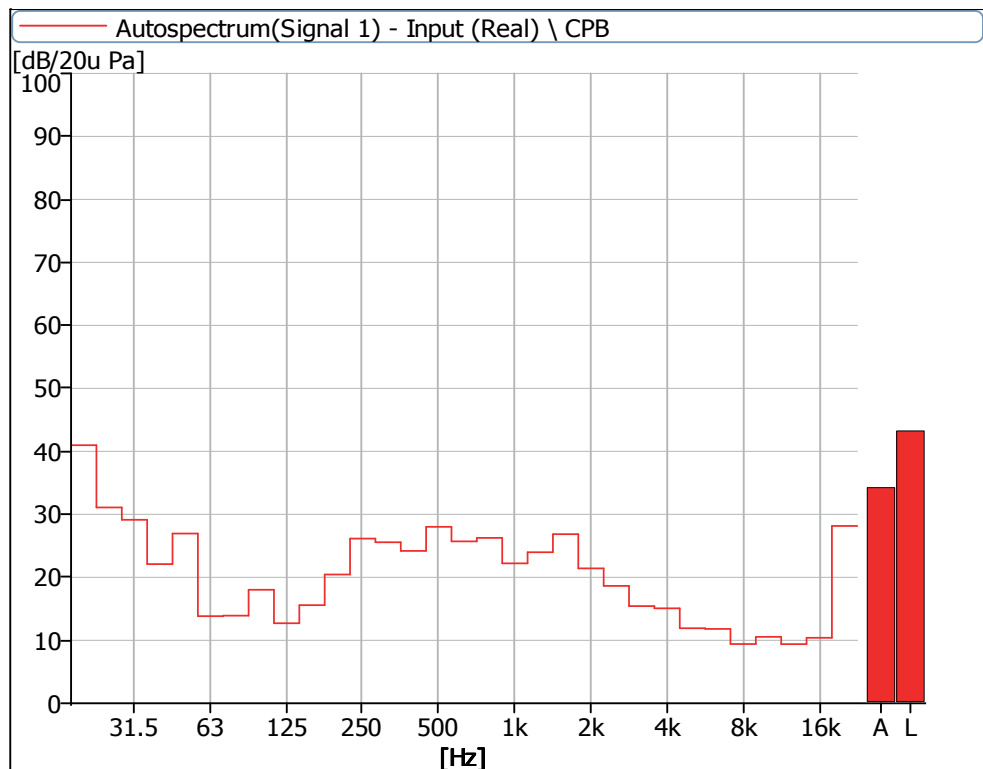


Figure 20 Noise Spectrum of Stage Luminaires
(The Silence mode, static, No 2)

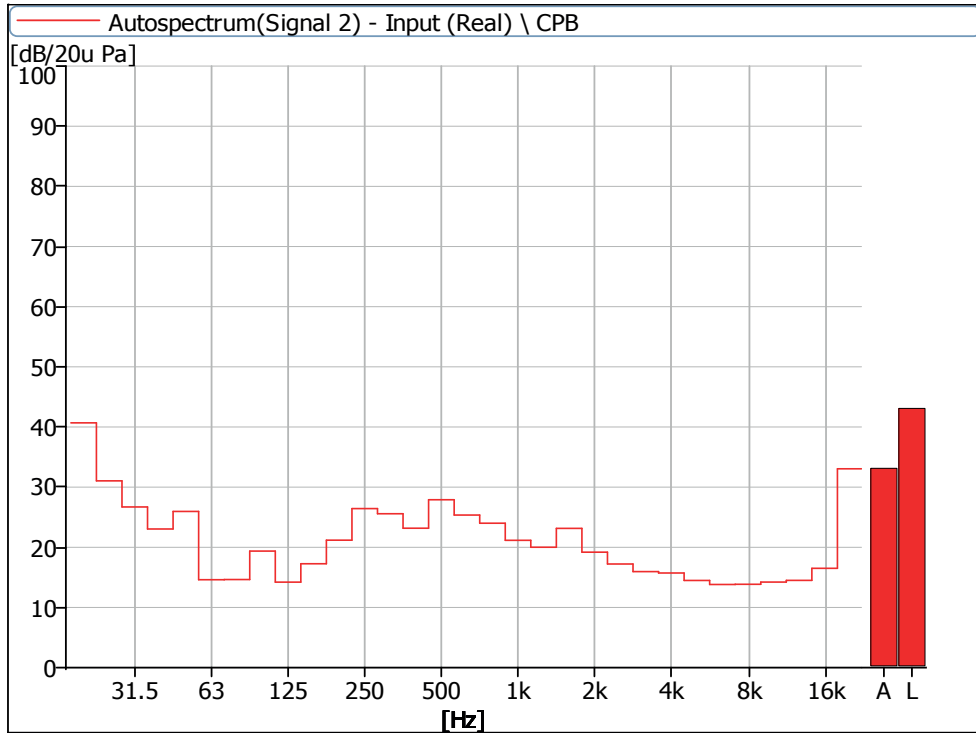


Figure 21 Noise Spectrum of Stage Luminaires
(The Silence mode, static, No 3)

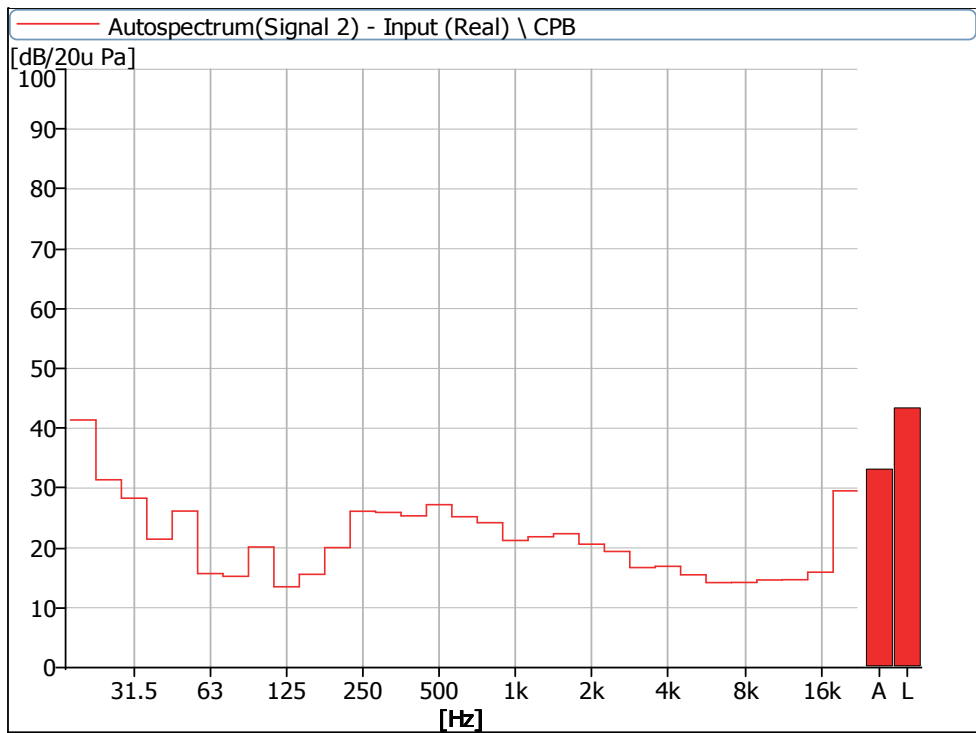


Figure 22 Noise Spectrum of Stage Luminaires

(The Silence mode, static, No 4)

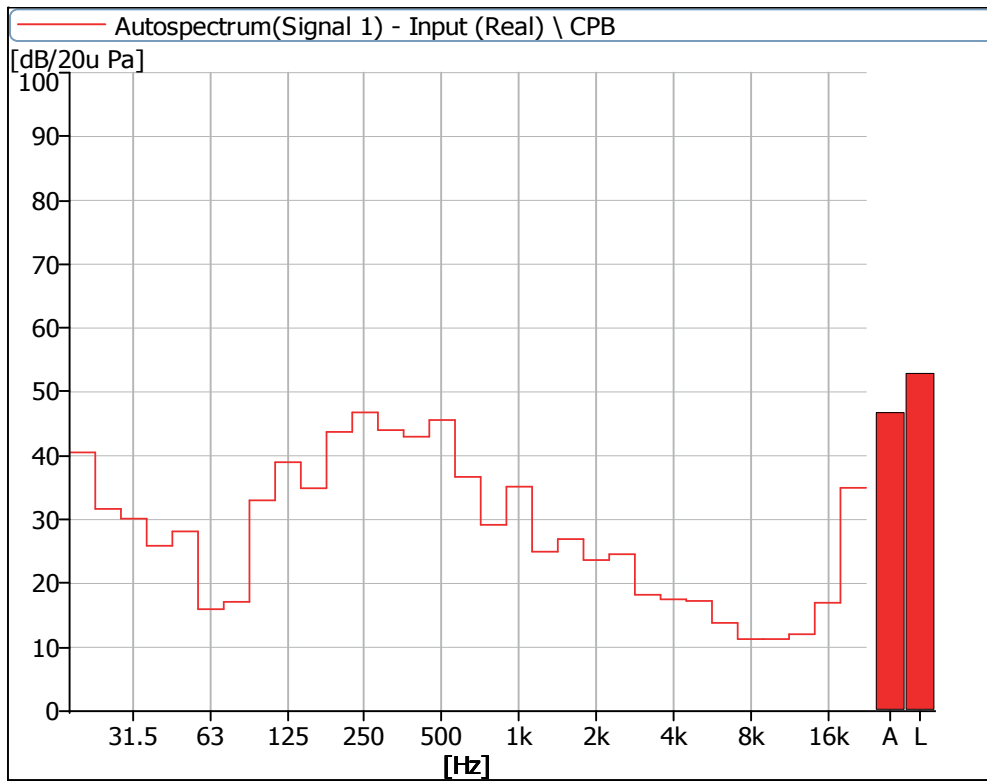


Figure 23 Noise Spectrum of Stage Luminaires
(The Silence mode, Dynamic, No 1)

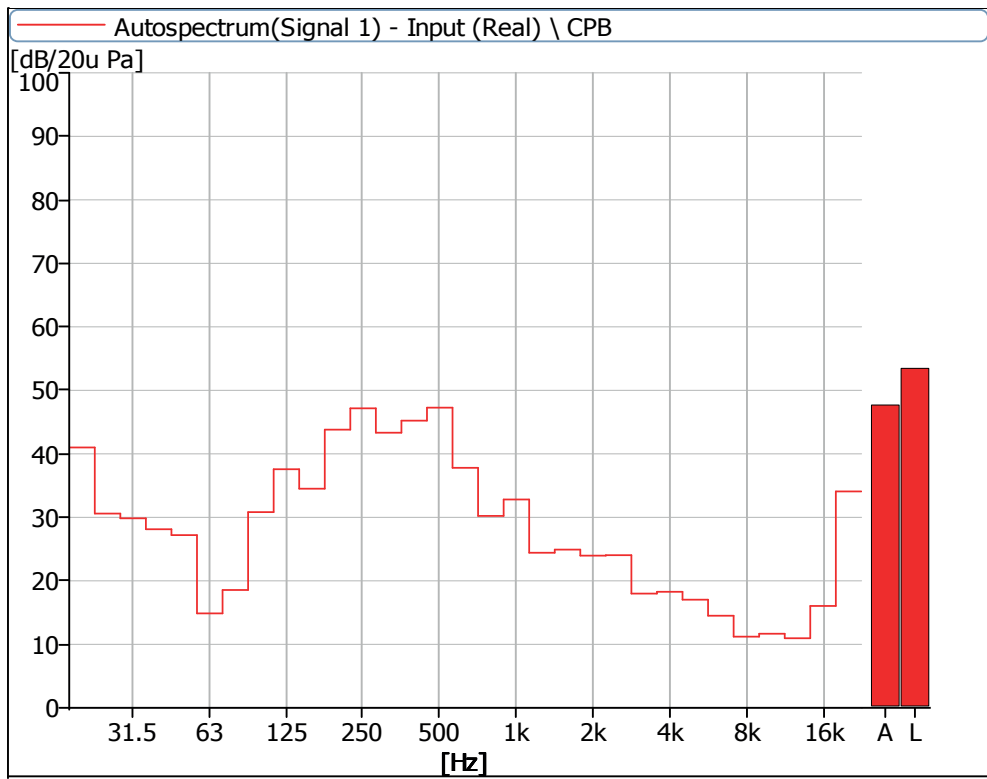


Figure 24 Noise Spectrum of Stage Luminaires

(The Silence mode, Dynamic, No 2)

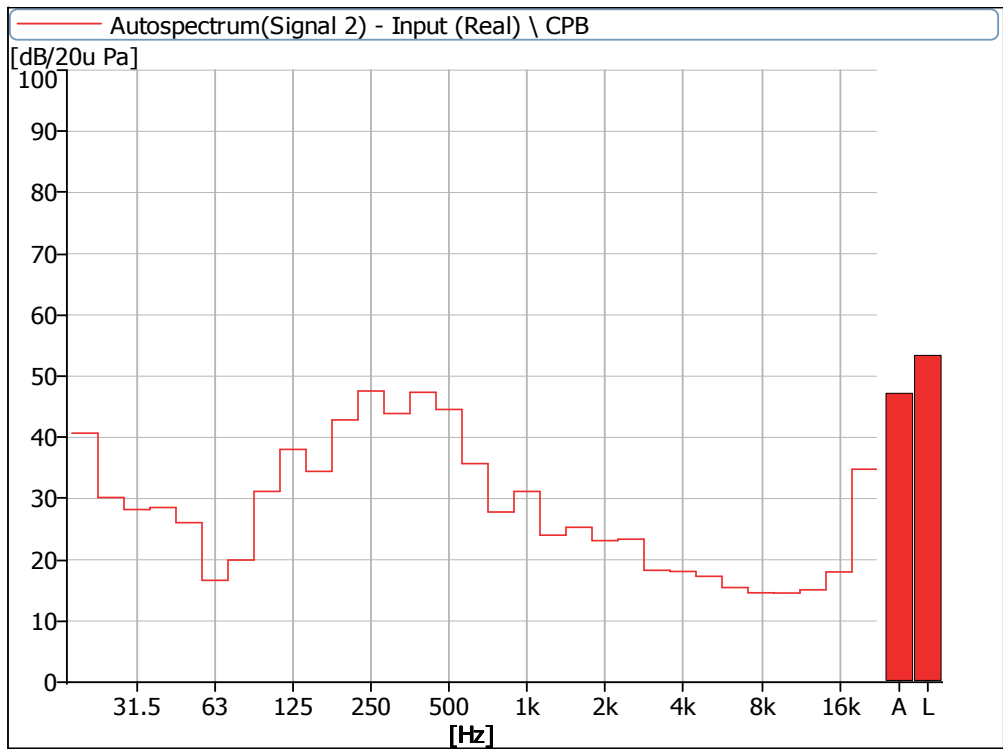


Figure 25 Noise Spectrum of Stage Luminaires
(The Silence mode, Dynamic, No 3)

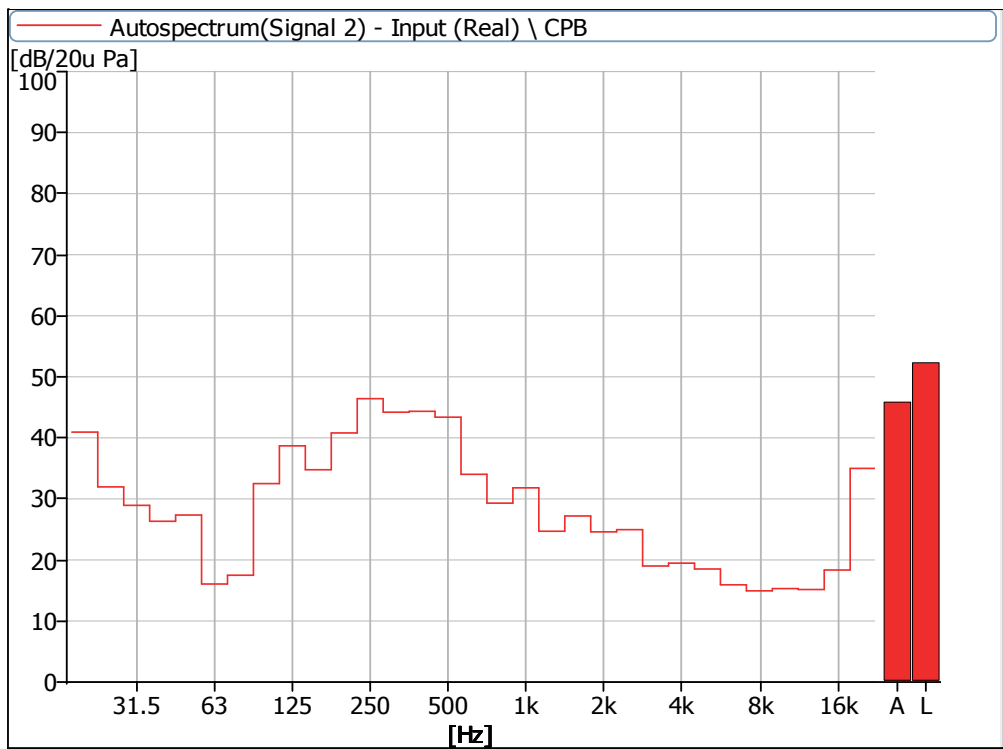


Figure 26 Noise Spectrum of Stage Luminaires
(The Silence mode, Dynamic, No 4)

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
20	41.7	42.7	42.7	42.4	42.4	42.2	42.3	42.9
25	30.6	30.5	30.2	31.4	32.3	29.8	29.9	31.8
31.5	30.1	28.8	26.5	27.8	31.0	29.3	27.8	28.3
40	21.5	25.9	26.3	21.4	25.9	26.6	27.6	26.1
50	27.1	26.7	26.6	26.2	26.4	27.8	26.8	27.0
63	15.6	13.9	14.2	15.2	16.2	14.9	15.8	16.8
80	15.1	14.3	14.5	14.9	17.3	17.0	17.9	17.7
100	19.7	16.5	16.5	18.7	32.8	31.0	31.2	32.3
125	12.6	10.9	11.8	12.1	39.1	37.4	37.9	38.7
160	15.3	14.8	15.9	15.2	35.3	34.2	34.0	34.9
200	17.6	17.9	19.4	17.4	43.5	43.4	42.3	40.4
250	22.8	23.0	24.0	23.0	46.7	46.5	47.1	46.3
315	23.8	25.0	24.8	25.4	44.1	43.2	43.8	44.0
400	22.2	23.8	22.8	25.1	42.8	45.2	47.2	44.0
500	29.1	26.3	27.2	26.7	45.4	47.1	44.5	43.2
630	23.2	26.2	24.3	25.4	36.1	37.3	35.3	33.0
800	22.1	24.7	21.4	22.6	28.3	28.9	26.9	28.2
1000	18.2	20.0	19.3	19.7	35.1	32.3	31.2	31.2
1250	17.3	23.0	19.8	21.4	23.8	22.9	23.0	23.1
1600	18.4	22.1	20.1	20.8	23.6	22.3	22.7	23.6
2000	15.8	19.6	17.2	19.0	21.7	21.9	21.6	22.3
2500	13.7	16.4	15.4	17.2	23.9	22.4	22.4	23.6
3150	12.4	13.6	14.8	15.3	16.1	15.9	16.6	16.8
4000	11.4	12.8	14.2	15.4	15.3	15.8	16.3	17.1
5000	10.7	10.8	13.7	15.0	16.3	15.5	16.4	17.3
6300	9.7	11.3	14.0	14.0	12.9	13.7	15.0	15.2
8000	8.4	8.8	13.9	14.2	10.8	10.5	14.4	14.7
10000	9.1	10.4	14.2	14.7	11.1	11.4	14.5	15.0
12500	8.9	9.5	14.5	14.6	10.9	10.7	14.8	15.1
16000	12.3	13.9	15.8	16.6	16.9	15.9	17.9	18.3
20000	32.0	34.3	30.4	32.4	35.2	34.2	34.6	35.1
Leq	43.5	44.5	44.0	44.0	52.9	53.3	53.2	52.3
A-weighted dB (A)	31.3	33.0	31.6	32.5	46.5	47.4	47.0	45.5
Average sound pressure level dB(A)	32.1				46.7			

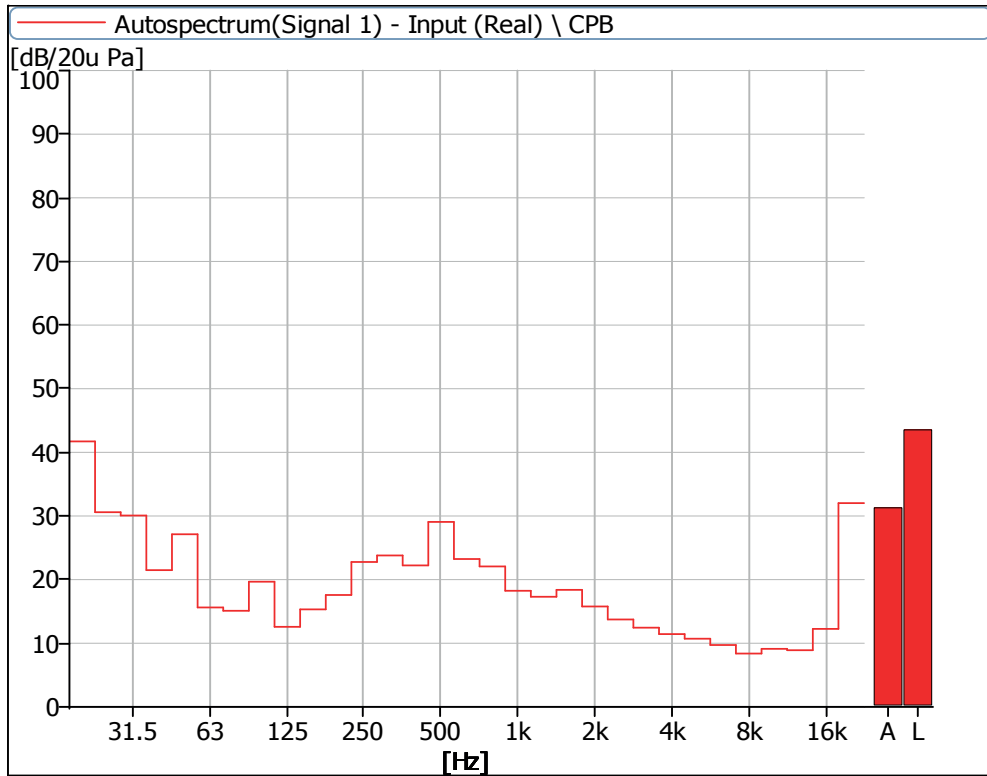


Figure 27 Noise Spectrum of Stage Luminaires
(The Super Silence mode, static, No 1)

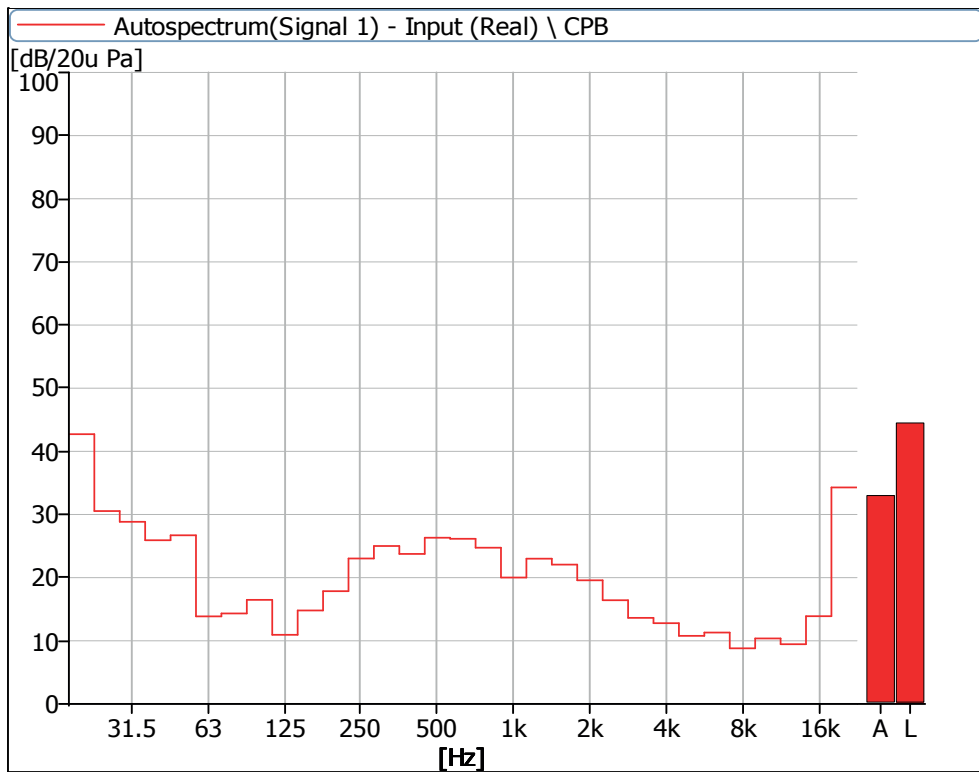


Figure 28 Noise Spectrum of Stage Luminaires
(The Super Silence mode, static, No 2)

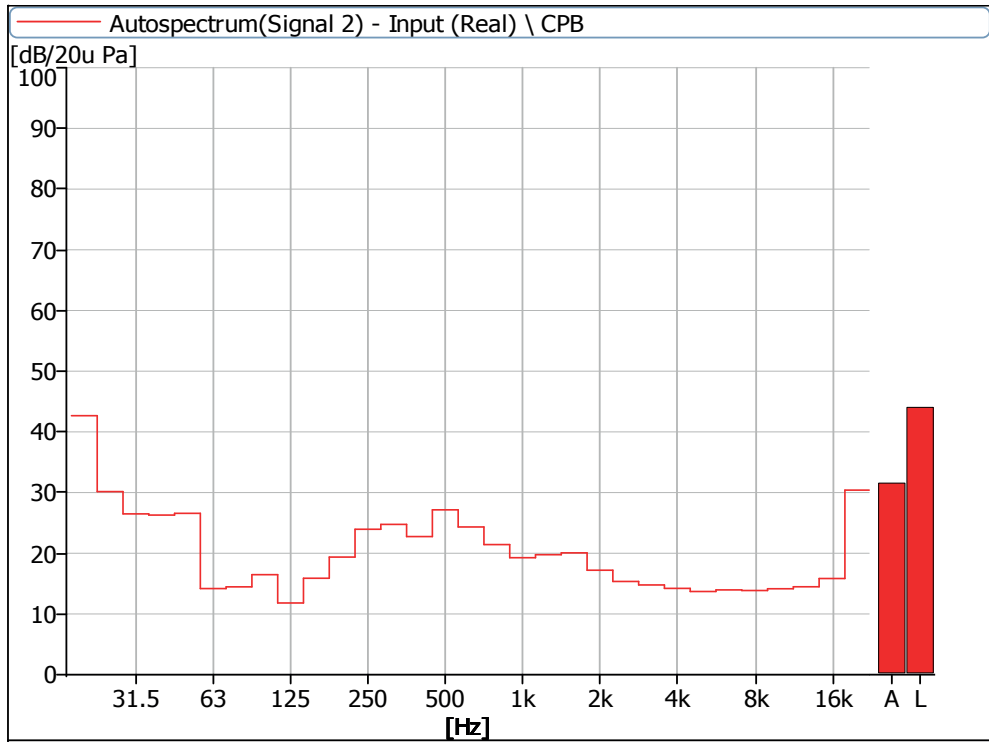


Figure 29 Noise Spectrum of Stage Luminaires
(The Super Silence mode, static, No 3)

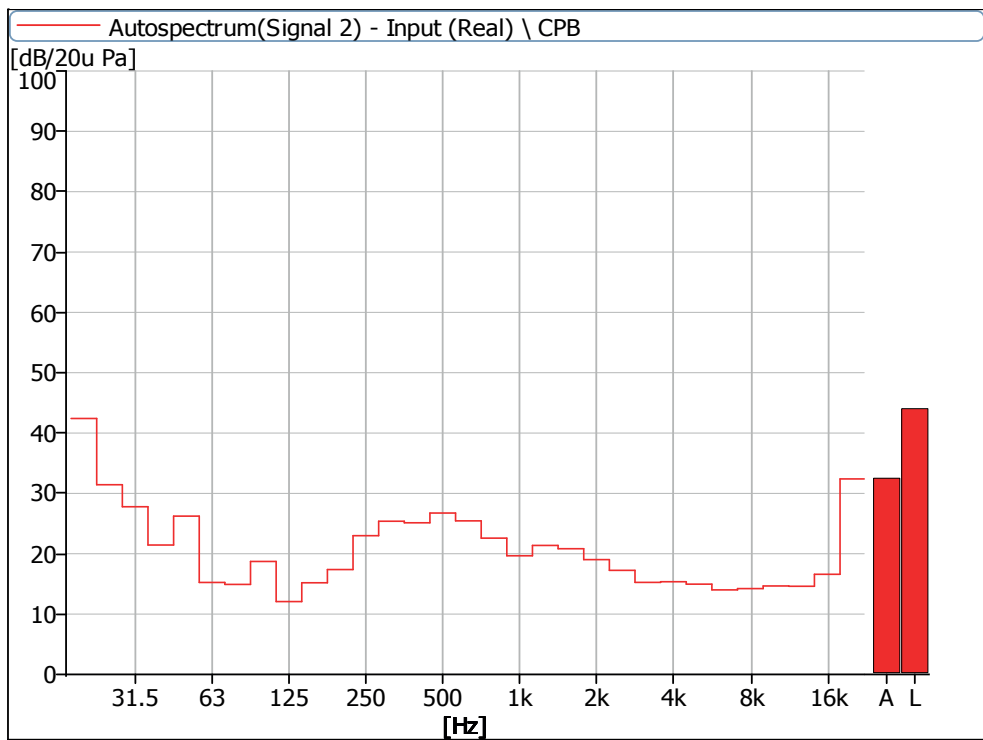


Figure 30 Noise Spectrum of Stage Luminaires
(The Super Silence mode, static, No 4)

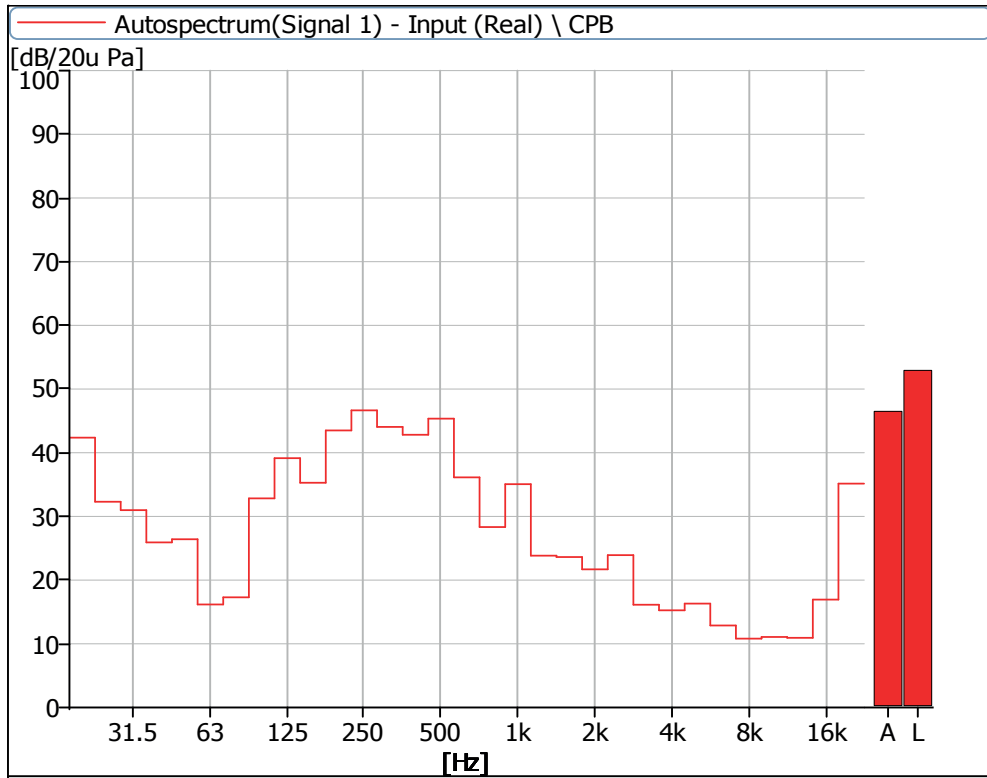


Figure 31 Noise Spectrum of Stage Luminaires
(The Super Silence mode, Dynamic, No 1)

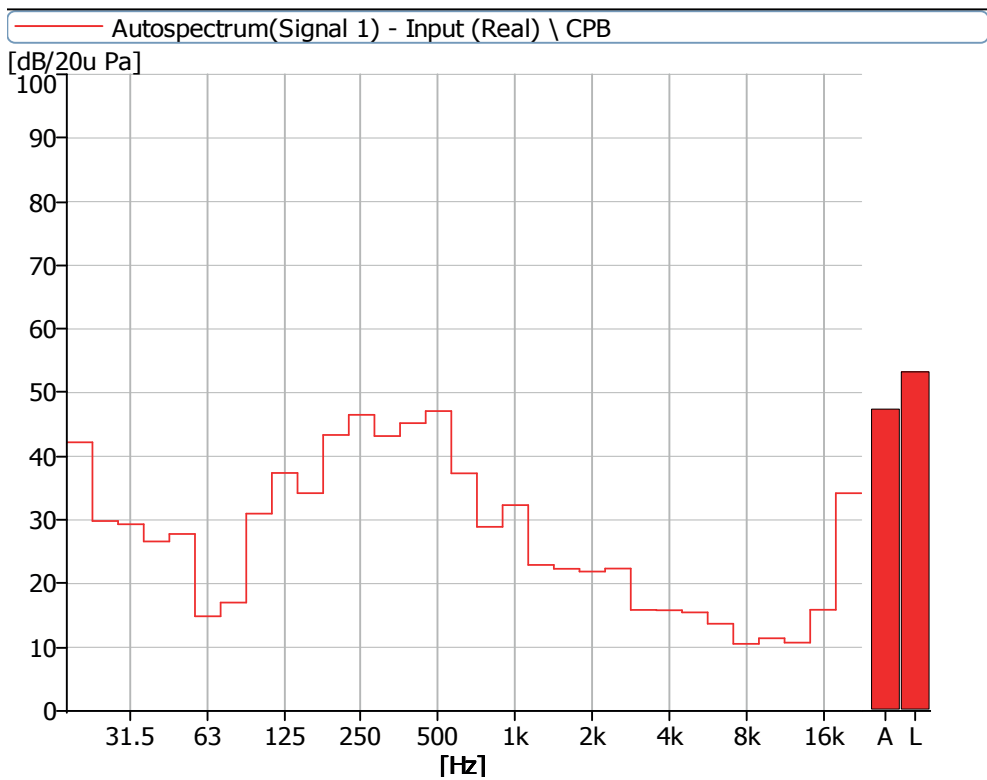


Figure 32 Noise Spectrum of Stage Luminaires
(The Super Silence mode, Dynamic, No 2)

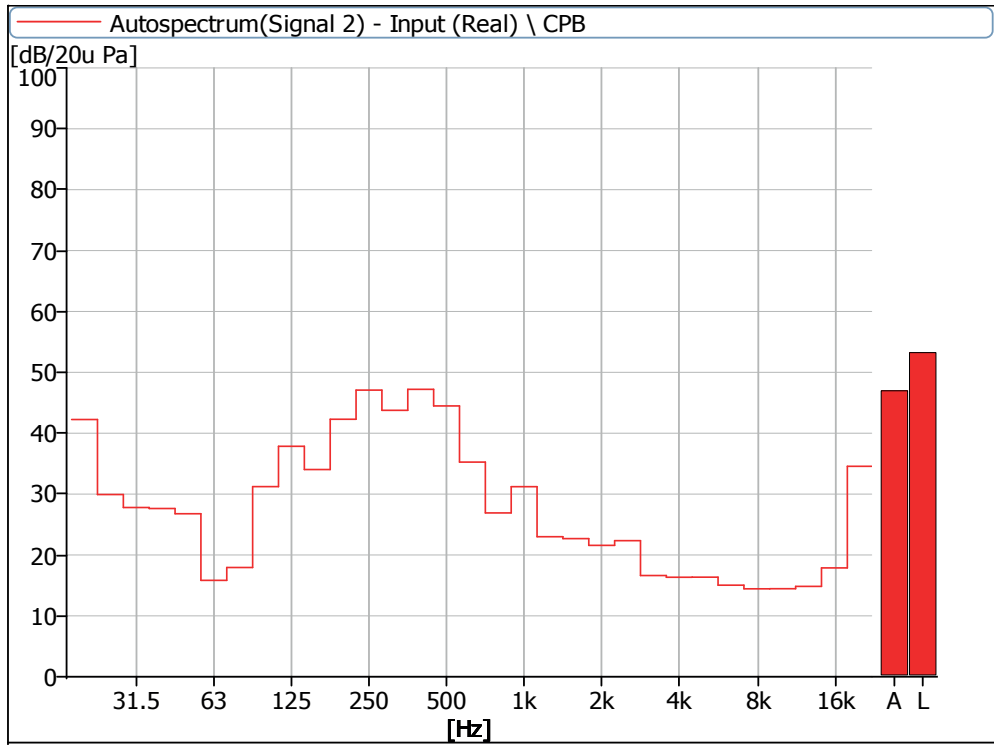


Figure 33 Noise Spectrum of Stage Luminaires
(The Super Silence mode, Dynamic, No 3)

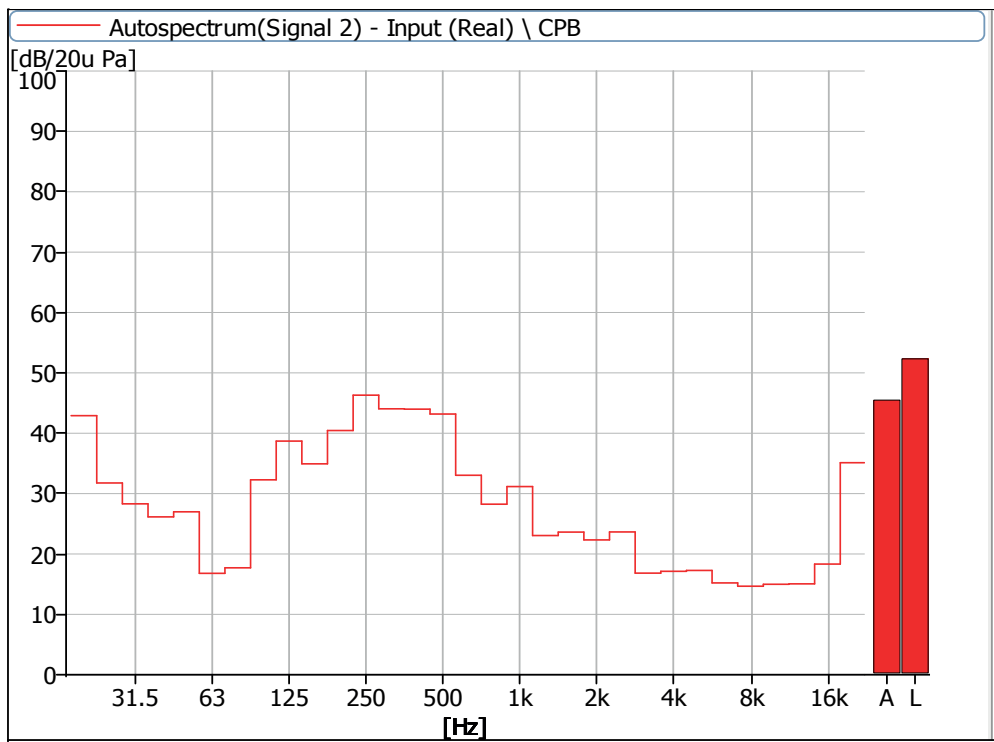


Figure 34 Noise Spectrum of Stage Luminaires
(The Super Silence mode, Dynamic, No 4)



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