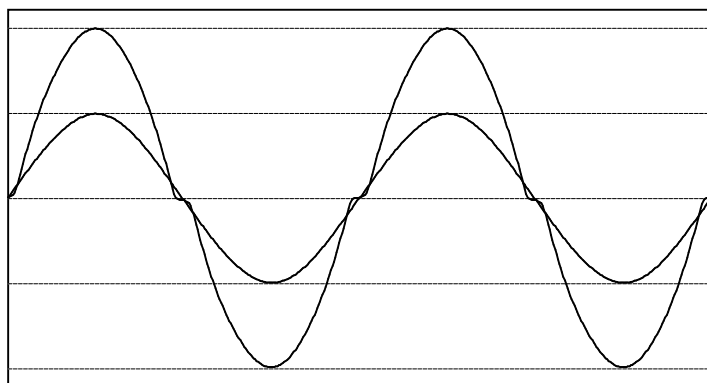


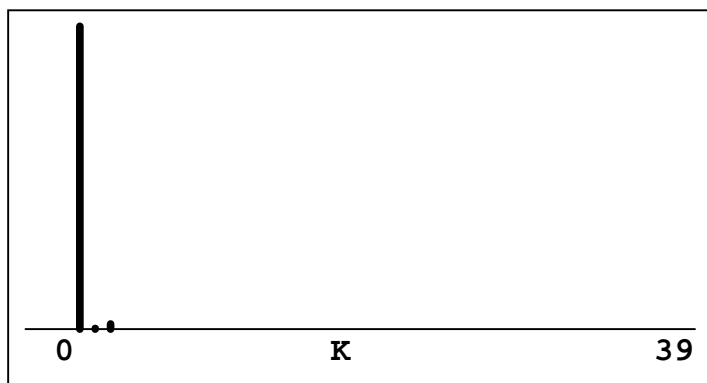
## Electronic Ballast Test Report

### Input Characteristics[Narrow Band](I)

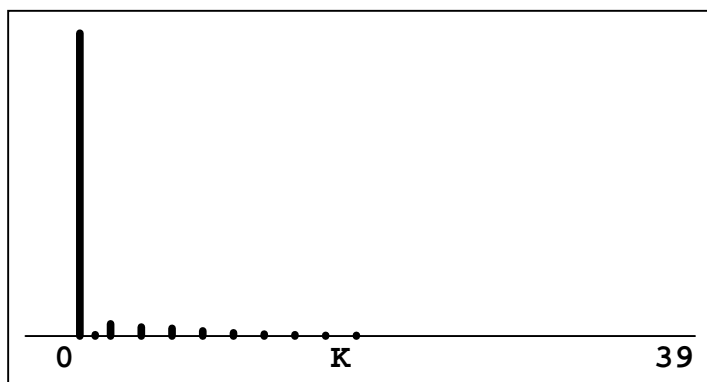
| Vrms     | Arms     | Power    | PF    | Freq.     |
|----------|----------|----------|-------|-----------|
| 103.1(V) | 0.942(A) | 96.97(W) | 0.999 | 59.99(Hz) |



Voltage  
Sensitivity :149.15 V/Div  
Peak Voltage:149.1 V  
Current  
Sensitivity: 0.684 A/Div  
Peak Current:1.369 A  
Start Phase: 5.6 ~  
Peak Phase: 88.6 ~  
End Phase: 170.2~



Voltage Spec.  
Vthd: 1.8%(IEC)  
Vh3 : 1.8%  
Vh5 : 0.0%  
Vh7 : 0.1%  
Vh9 : 0.0%



Current Spec.  
Athd: 6.2%(IEC)  
Ah3 : 4.0%  
Ah5 : 3.0%  
Ah7 : 2.6%  
Ah9 : 1.9%

Test Instrument:Everfine HB-5A System  
Manufacturer:Mosdesign  
Type:dimmer  
Temperature:25deg  
Operator:

Number:1  
Humidity:75%  
Inspector:

## Electronic Ballast Test Report

### Input Characteristics[Narrow Band](II)

Vrms:103.1(V)  
VCF :1.45  
Vthd: 1.8%(IEC)

Arms:0.942(A)  
Acf : 1.45  
Athd: 6.2%(IEC)

#### Voltage Spectrum

| K  | relat. | Vrmsk |
|----|--------|-------|
| 0  | 0.0%   | 0.0   |
| 1  | 100.0% | 103.1 |
| 2  | 0.4%   | 0.4   |
| 3  | 1.8%   | 1.8   |
| 4  | 0.1%   | 0.1   |
| 5  | 0.0%   | 0.0   |
| 6  | 0.0%   | 0.0   |
| 7  | 0.1%   | 0.1   |
| 8  | 0.0%   | 0.0   |
| 9  | 0.0%   | 0.0   |
| 10 | 0.0%   | 0.0   |
| 11 | 0.0%   | 0.0   |
| 12 | 0.0%   | 0.0   |
| 13 | 0.0%   | 0.0   |
| 14 | 0.0%   | 0.0   |
| 15 | 0.0%   | 0.0   |
| 16 | 0.0%   | 0.0   |
| 17 | 0.0%   | 0.0   |
| 18 | 0.0%   | 0.0   |
| 19 | 0.0%   | 0.0   |
| 20 | 0.0%   | 0.0   |
| 21 | 0.0%   | 0.0   |
| 22 | 0.0%   | 0.0   |
| 23 | 0.0%   | 0.0   |
| 24 | 0.0%   | 0.0   |
| 25 | 0.0%   | 0.0   |
| 26 | 0.0%   | 0.0   |
| 27 | 0.0%   | 0.0   |
| 28 | 0.0%   | 0.0   |
| 29 | 0.0%   | 0.0   |
| 30 | 0.0%   | 0.0   |
| 31 | 0.0%   | 0.0   |
| 32 | 0.0%   | 0.0   |
| 33 | 0.0%   | 0.0   |
| 34 | 0.0%   | 0.0   |
| 35 | 0.0%   | 0.0   |
| 36 | 0.0%   | 0.0   |
| 37 | 0.0%   | 0.0   |
| 38 | 0.0%   | 0.0   |
| 39 | 0.0%   | 0.0   |

#### Current Spectrum

| K  | relat. | Armsk | mA/W |
|----|--------|-------|------|
| 0  | 0.0%   | 0.000 | 0.00 |
| 1  | 100.0% | 0.940 | 9.69 |
| 2  | 0.4%   | 0.004 | 0.04 |
| 3  | 4.0%   | 0.038 | 0.39 |
| 4  | 0.1%   | 0.001 | 0.01 |
| 5  | 3.0%   | 0.028 | 0.29 |
| 6  | 0.0%   | 0.000 | 0.00 |
| 7  | 2.6%   | 0.025 | 0.26 |
| 8  | 0.0%   | 0.000 | 0.00 |
| 9  | 1.9%   | 0.018 | 0.18 |
| 10 | 0.0%   | 0.000 | 0.00 |
| 11 | 1.2%   | 0.011 | 0.12 |
| 12 | 0.0%   | 0.000 | 0.00 |
| 13 | 0.8%   | 0.008 | 0.08 |
| 14 | 0.0%   | 0.000 | 0.00 |
| 15 | 0.6%   | 0.005 | 0.06 |
| 16 | 0.0%   | 0.000 | 0.00 |
| 17 | 0.4%   | 0.004 | 0.04 |
| 18 | 0.0%   | 0.000 | 0.00 |
| 19 | 0.2%   | 0.002 | 0.02 |
| 20 | 0.0%   | 0.000 | 0.00 |
| 21 | 0.1%   | 0.001 | 0.01 |
| 22 | 0.0%   | 0.000 | 0.00 |
| 23 | 0.0%   | 0.000 | 0.00 |
| 24 | 0.0%   | 0.000 | 0.00 |
| 25 | 0.0%   | 0.000 | 0.00 |
| 26 | 0.0%   | 0.000 | 0.00 |
| 27 | 0.1%   | 0.001 | 0.01 |
| 28 | 0.0%   | 0.000 | 0.00 |
| 29 | 0.1%   | 0.001 | 0.01 |
| 30 | 0.0%   | 0.000 | 0.00 |
| 31 | 0.1%   | 0.001 | 0.01 |
| 32 | 0.0%   | 0.000 | 0.00 |
| 33 | 0.1%   | 0.001 | 0.01 |
| 34 | 0.0%   | 0.000 | 0.00 |
| 35 | 0.1%   | 0.001 | 0.01 |
| 36 | 0.0%   | 0.000 | 0.00 |
| 37 | 0.1%   | 0.001 | 0.01 |
| 38 | 0.0%   | 0.000 | 0.00 |
| 39 | 0.1%   | 0.001 | 0.01 |

Test Instrument:Everfine HB-5A System

Manufacturer:Mosdesign

Type:dimmer

Temperature:25deg

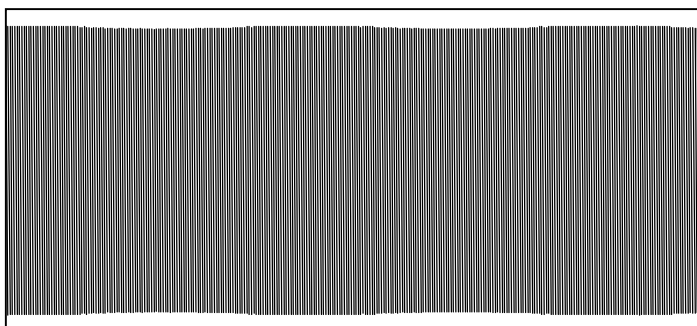
Operator:

Number:1

Humidity:75%

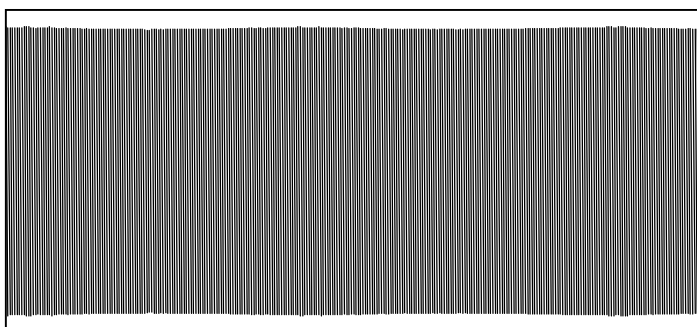
Inspector:

## Steady State Characterictics



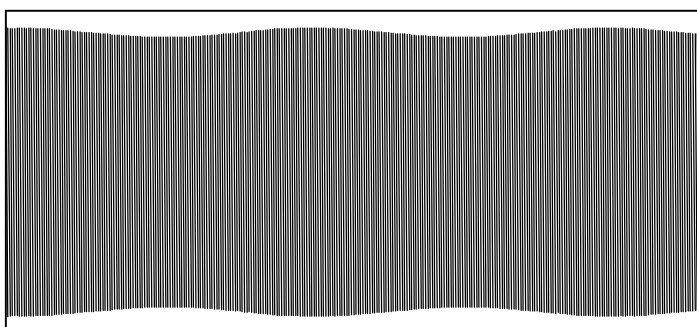
### Lamp Voltage

Vlrms : 117.6(V)  
Vlp : 163.6(V)  
Vlcf : 1.39  
Vlhfrms: 118.8(V)  
Vlcfhf : 1.38



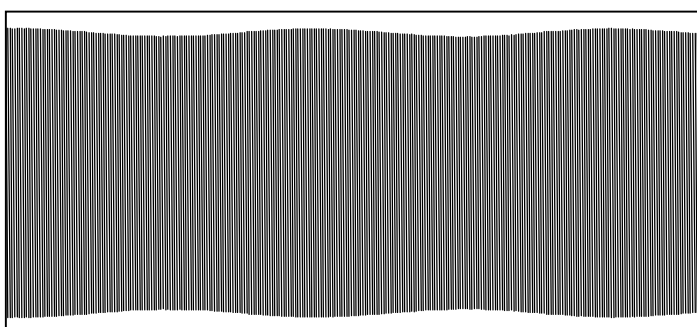
### Filament Current

Afrms : 0.313(A)  
Afp : 0.551(A)  
Afcf : 1.76  
Afrmshf: 0.317(A)  
Afcfhf : 1.74



### Lamp Current

Alrms : 0.725(A)  
Alp : 1.028(A)  
Alcf : 1.42  
Aldhc : 0.00 %  
Alrmshf: 0.748(A)  
Alcfhf : 1.37  
Pout : 85.2 (W)



### Cathode Current

Akrms : 0.795(A)  
Akp : 1.092(A)  
Akcf : 1.37  
Akrmshf: 0.817(A)  
Akcfhf : 1.34  
Freq : 49.78(kHz)

---

Test Instrument:Everfine HB-5A System

Manufacturer:Mosdesign

Type:dimmer

Temperature:25deg

Operator:

Number:1

Humidity:75%

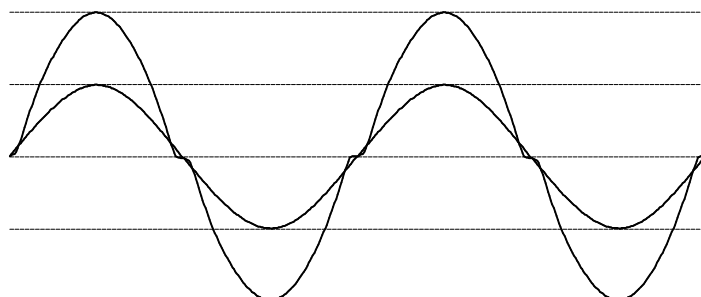
Inspector:

## Electronic Ballast Test Report

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### Input & Output Characteristics Test Report

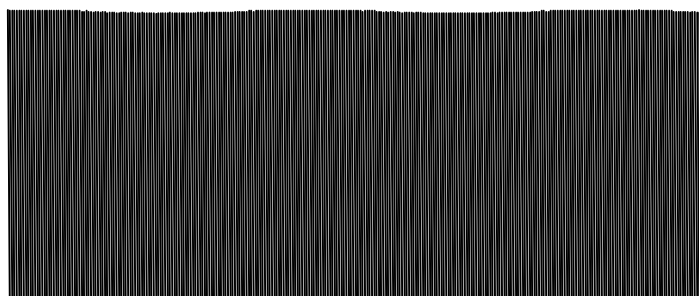
#### I. Input Characteristics



Vrms : 103.1(V)  
Vp : 149.1(V)  
Vthd : 1.8%(IEC)  
Arms : 0.942(A)  
Ap : 1.369(A)  
Athd : 6.2%(IEC)  
Power: 96.97(W)  
PF : 0.999  
Freq : 59.99(Hz)

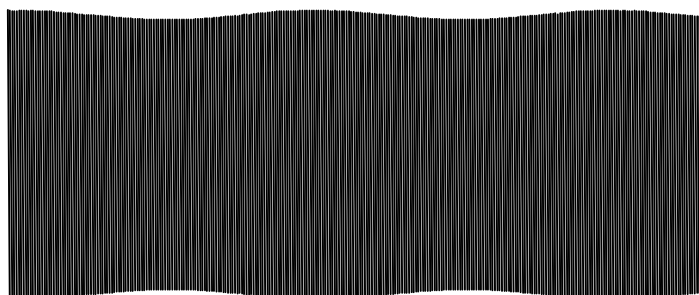
#### II. Output Characteristics

##### Lamp Voltage Wave



Vlrms: 117.6(V)  
Alrms: 0.725(A)  
Afrms: 0.313(A)  
Akrms: 0.795(A)  
Pout : 85.2 (W)

##### Lamp Current Wave



Freq : 49.780(kHz)  
Alcf : 1.42

---

Test Instrument: Everfine HB-5A System  
Manufacturer: Mosdesign  
Type: dimmer  
Temperature: 25deg  
Operator:

Number: 1  
Humidity: 75%  
Inspector: