

## Lightsource Test Report

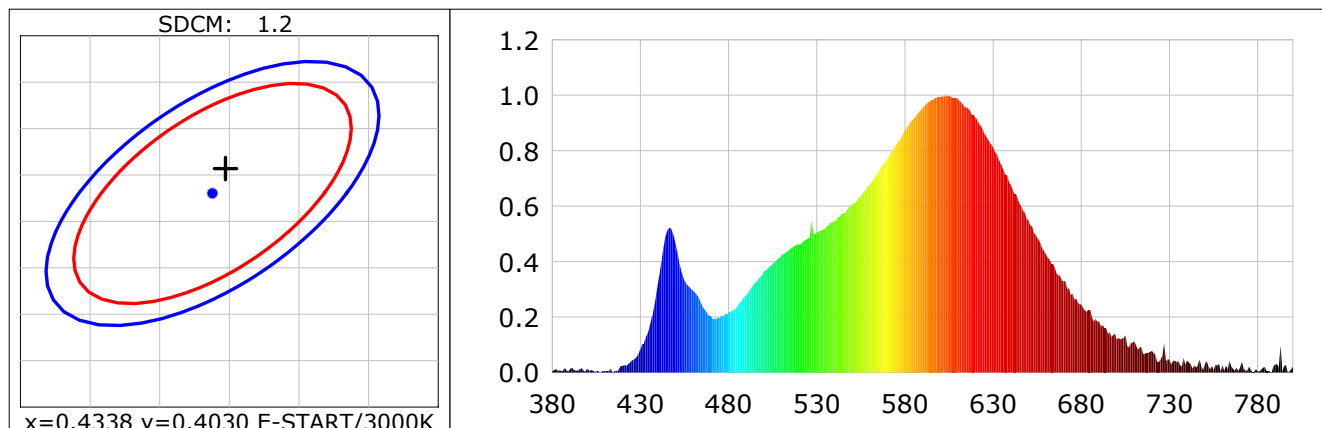
### Product Infomation

Product Type: C 6W 3000K 圆暗

Product Number: 1

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4347$   $y=0.4057$   $u(u')=0.2485$   $v=0.3478$   $v'=0.5217$   
 CCT:  $T_c=3051K$  ( $duv=0.00095$ ) Color Ratio:  $R=0.225$   $G=0.748$   $B=0.027$   
 Peak Wavelength: 603.0nm Half Bandwidth: 124.4nm  
 Dominant Wavelength: 582.3nm Color Purity: 0.523  
 CRI:  $R_a=82.4$  TM30:  $R_f=84$ ,  $R_g=96$   
 $R1=80$   $R2=91$   $R3=96$   $R4=81$   $R5=82$   $R6=90$   $R7=82$   $R8=57$   
 $R9=2$   $R10=80$   $R11=81$   $R12=75$   $R13=83$   $R14=98$   $R15=72$   
 Color Quality Scale:  $Q_a=82.9$ ,  $Q_f=84.7$ ,  $Q_p=82.9$ ,  $Q_g=90.2$   
 $Q1=77$   $Q2=95$   $Q3=86$   $Q4=83$   $Q5=85$   $Q6=85$   $Q7=85$   $Q8=88$   
 $Q9=95$   $Q10=91$   $Q11=88$   $Q12=85$   $Q13=83$   $Q14=70$   $Q15=73$



### Photometric Parameters

Luminous Flux: 483.05 lm  
EEI: 0.13

Efficiency: 84.75 lm/W

Radiant Power: 1.443 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.0470A

Power: 5.70W

Power Factor: 0.5230

Frequency: 50.00Hz

### Test Infomation

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 42261 (4039)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 CCD Integration Time: 4265.12 ms

Condition: Tx:0.0'C, Ti:0.0'C, R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2021-07-05 14:30:08  
 Inspector:

## Lightsource Test Report

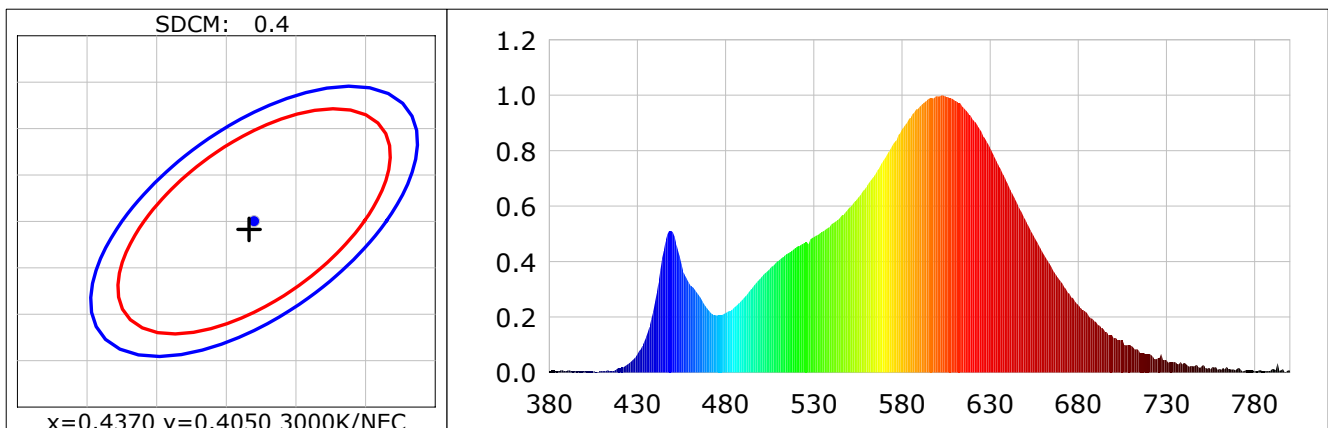
### Product Infomation

Product Type: C 15W 3000K 圆暗

Product Number: 2

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4366$   $y=0.4041$   $u(u')=0.2504$   $v=0.3476$   $v'=0.5214$   
 CCT:  $T_c=3006K$  ( $duv=0.00006$ ) Color Ratio:  $R=0.227$   $G=0.745$   $B=0.027$   
 Peak Wavelength: 602.8nm Half Bandwidth: 120.9nm  
 Dominant Wavelength: 582.8nm Color Purity: 0.524  
 CRI:  $R_a=81.8$  TM30:  $R_f=83$ ,  $R_g=95$   
 $R1=80$   $R2=91$   $R3=95$   $R4=80$   $R5=81$   $R6=90$   $R7=80$   $R8=56$   
 $R9=1$   $R10=81$   $R11=79$   $R12=74$   $R13=83$   $R14=98$   $R15=72$   
 Color Quality Scale:  $Q_a=82.2$ ,  $Q_f=84.0$ ,  $Q_p=82.7$ ,  $Q_g=90.2$   
 $Q1=77$   $Q2=95$   $Q3=85$   $Q4=81$   $Q5=83$   $Q6=84$   $Q7=84$   $Q8=86$   
 $Q9=95$   $Q10=91$   $Q11=87$   $Q12=83$   $Q13=82$   $Q14=70$   $Q15=72$



### Photometric Parameters

Luminous Flux: 1347.91 lm  
EEI: 0.15

Efficiency: 91.69 lm/W

Radiant Power: 4.030 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.50V

Current: 0.1180A

Power: 14.70W

Power Factor: 0.5420

Frequency: 50.00Hz

### Test Infomation

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 44475 (3523)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 CCD Integration Time: 1601.99 ms

Condition: Tx:0.0'C, Ti:0.0'C, R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2021-07-05 14:31:53  
 Inspector:

## Lightsource Test Report

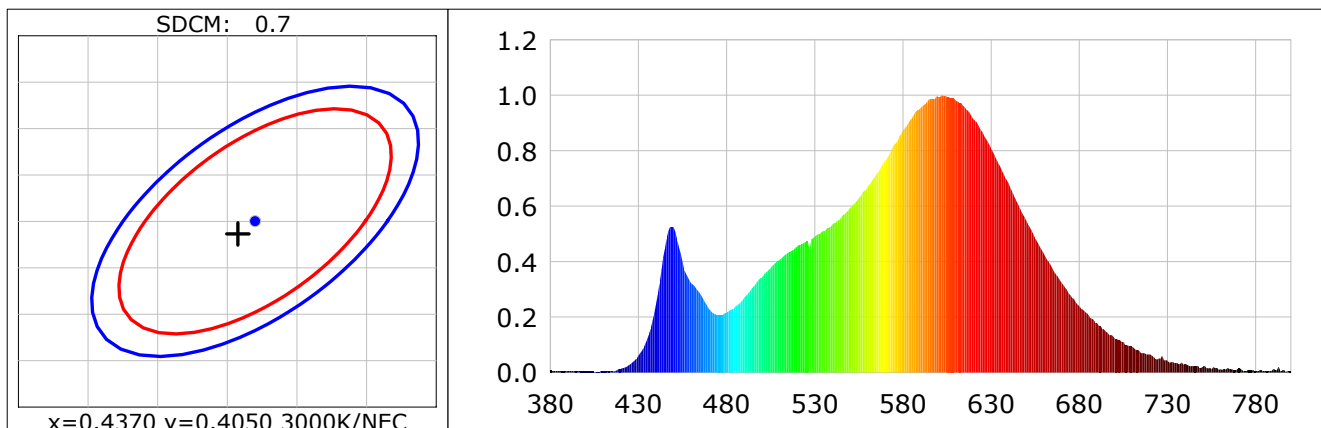
### Product Infomation

Product Type: C 20W 3000K 圆暗

Product Number: 3

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4358$   $y=0.4036$   $u(u')=0.2500$   $v=0.3474$   $v'=0.5210$   
 CCT:  $T_c=3016K$  ( $duv=-0.00002$ ) Color Ratio:  $R=0.227$   $G=0.745$   $B=0.028$   
 Peak Wavelength: 602.2nm Half Bandwidth: 121.3nm  
 Dominant Wavelength: 582.8nm Color Purity: 0.519  
 CRI:  $R_a=82.0$  TM30:  $R_f=83$ ,  $R_g=95$   
 $R1=80$   $R2=91$   $R3=95$   $R4=80$   $R5=82$   $R6=91$   $R7=80$   $R8=56$   
 $R9=2$   $R10=81$   $R11=80$   $R12=75$   $R13=83$   $R14=98$   $R15=72$   
 Color Quality Scale:  $Q_a=82.4$ ,  $Q_f=84.2$ ,  $Q_p=82.9$ ,  $Q_g=90.3$   
 $Q1=77$   $Q2=95$   $Q3=85$   $Q4=81$   $Q5=84$   $Q6=84$   $Q7=84$   $Q8=87$   
 $Q9=95$   $Q10=91$   $Q11=87$   $Q12=84$   $Q13=82$   $Q14=70$   $Q15=73$



### Photometric Parameters

Luminous Flux: 2011.16 lm Efficiency: 99.56 lm/W Radiant Power: 6.008 W  
 EEI: 0.14 Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V Current: 0.1600A Power: 20.20W  
 Power Factor: 0.5490 Frequency: 50.00Hz

### Test Infomation

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 44296 (3440)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 CCD Integration Time: 1070.36 ms

Condition: Tx:0.0'C, Ti:0.0'C, R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2021-07-05 14:33:21  
 Inspector:

## Lightsource Test Report

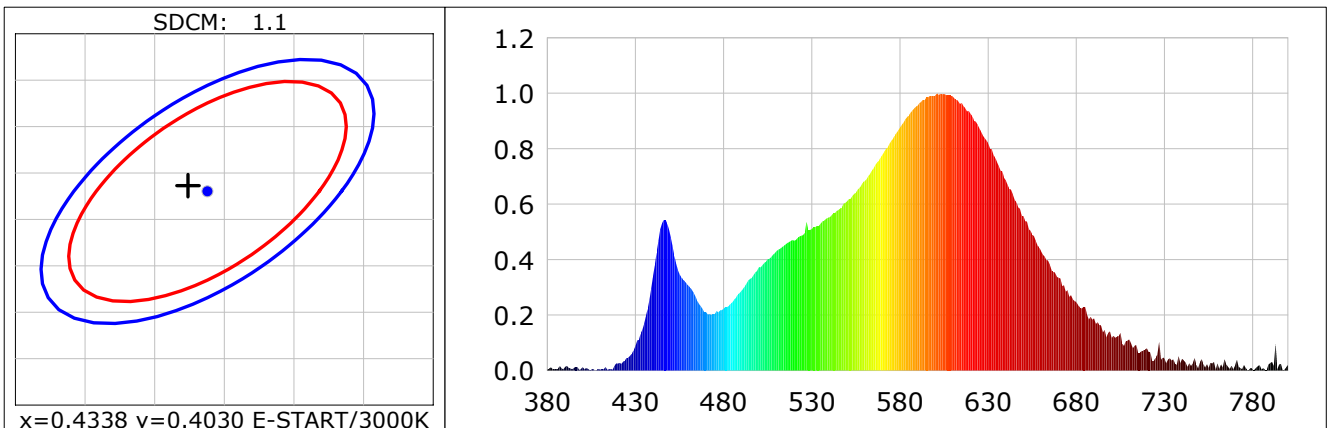
### Product Information

Product Type: C 6W 3000K 方暗

Product Number: 4

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4324$   $y=0.4036$   $u(u')=0.2478$   $v=0.3470$   $v'(v')=0.5205$   
 CCT:  $T_c=3074K$  ( $duv=0.00047$ ) Color Ratio:  $R=0.224$   $G=0.748$   $B=0.028$   
 Peak Wavelength: 601.1nm Half Bandwidth: 128.3nm  
 Dominant Wavelength: 582.3nm Color Purity: 0.510  
 CRI:  $R_a=82.8$  TM30:  $R_f=84$ ,  $R_g=96$   
 $R_1=81$   $R_2=91$   $R_3=96$   $R_4=82$   $R_5=82$   $R_6=90$   $R_7=82$   $R_8=58$   
 $R_9=5$   $R_{10}=81$   $R_{11}=82$   $R_{12}=76$   $R_{13}=83$   $R_{14}=98$   $R_{15}=73$   
 Color Quality Scale:  $Q_a=83.1$ ,  $Q_f=84.9$ ,  $Q_p=83.5$ ,  $Q_g=90.8$   
 $Q_1=78$   $Q_2=95$   $Q_3=86$   $Q_4=83$   $Q_5=85$   $Q_6=85$   $Q_7=85$   $Q_8=88$   
 $Q_9=95$   $Q_{10}=91$   $Q_{11}=88$   $Q_{12}=85$   $Q_{13}=83$   $Q_{14}=71$   $Q_{15}=73$



### Photometric Parameters

Luminous Flux: 503.12 lm  
EEI: 0.13

Efficiency: 88.27 lm/W

Radiant Power: 1.509 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.70V

Current: 0.0470A

Power: 5.70W

Power Factor: 0.5280

Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm  
Stabilization Time: 0 Sec  
Max of Signal: 50278 (4002)

Photometric Method: sphere-spectroradiometer  
Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
CCD Integration Time: 4916.90 ms

Condition: Tx:0.0°C, Ti:0.0°C, R.H.:60%  
Test Lab:  
Operator:

Test Device: Inventfine CMS-2S (Plus)  
Test Time: 2021-07-05 14:34:52  
Inspector:

## Lightsource Test Report

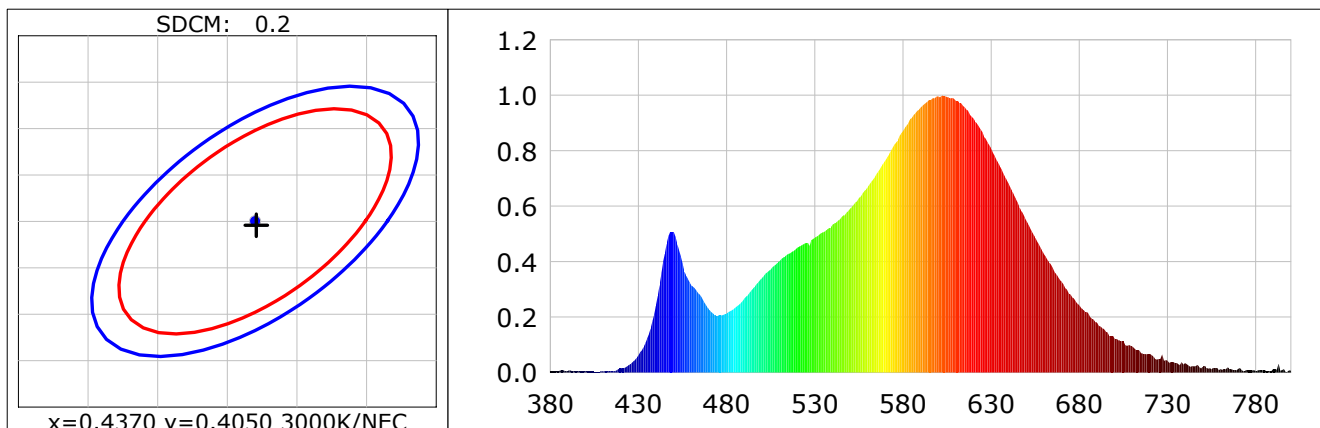
### Product Information

Product Type: C 15W 3000K 方暗

Product Number: 5

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4371$   $y=0.4046$   $u(u')=0.2505$   $v=0.3477$   $v'=0.5216$   
 CCT:  $T_c=3002K$  ( $duv=0.00018$ ) Color Ratio:  $R=0.228$   $G=0.745$   $B=0.027$   
 Peak Wavelength: 602.1nm Half Bandwidth: 120.8nm  
 Dominant Wavelength: 582.7nm Color Purity: 0.527  
 CRI:  $R_a=81.8$  TM30:  $R_f=83$ ,  $R_g=95$   
 $R_1=80$   $R_2=91$   $R_3=95$   $R_4=80$   $R_5=81$   $R_6=90$   $R_7=80$   $R_8=56$   
 $R_9=1$   $R_{10}=81$   $R_{11}=80$   $R_{12}=74$   $R_{13}=83$   $R_{14}=98$   $R_{15}=72$   
 Color Quality Scale:  $Q_a=82.2$ ,  $Q_f=84.1$ ,  $Q_p=82.6$ ,  $Q_g=90.0$   
 $Q_1=77$   $Q_2=95$   $Q_3=85$   $Q_4=81$   $Q_5=83$   $Q_6=84$   $Q_7=84$   $Q_8=87$   
 $Q_9=95$   $Q_{10}=91$   $Q_{11}=87$   $Q_{12}=84$   $Q_{13}=82$   $Q_{14}=70$   $Q_{15}=72$



### Photometric Parameters

Luminous Flux: 1455.95 lm  
EEI: 0.14

Efficiency: 97.06 lm/W

Radiant Power: 4.346 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.1200A

Power: 15.00W

Power Factor: 0.5450

Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 44937 (3501)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4π  
 CCD Integration Time: 1494.54 ms

Condition: Tx:0.0°C, Ti:0.0°C, R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2021-07-05 14:36:43  
 Inspector:

## Lightsource Test Report

### Product Infomation

Product Type: C 20W 4000K 方暗

Product Number: 6

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3761$   $y=0.3771$   $u(u')=0.2221$   $v=0.3341$   $v'=0.5011$

CCT:  $T_c=4123K$  ( $duv=0.00145$ )

Color Ratio:  $R=0.178$   $G=0.783$   $B=0.039$

Peak Wavelength: 453.7nm

Half Bandwidth: 24.4nm

Dominant Wavelength: 577.8nm

Color Purity: 0.260

CRI:  $R_a=82.4$

TM30:  $R_f=81$ ,  $R_g=93$

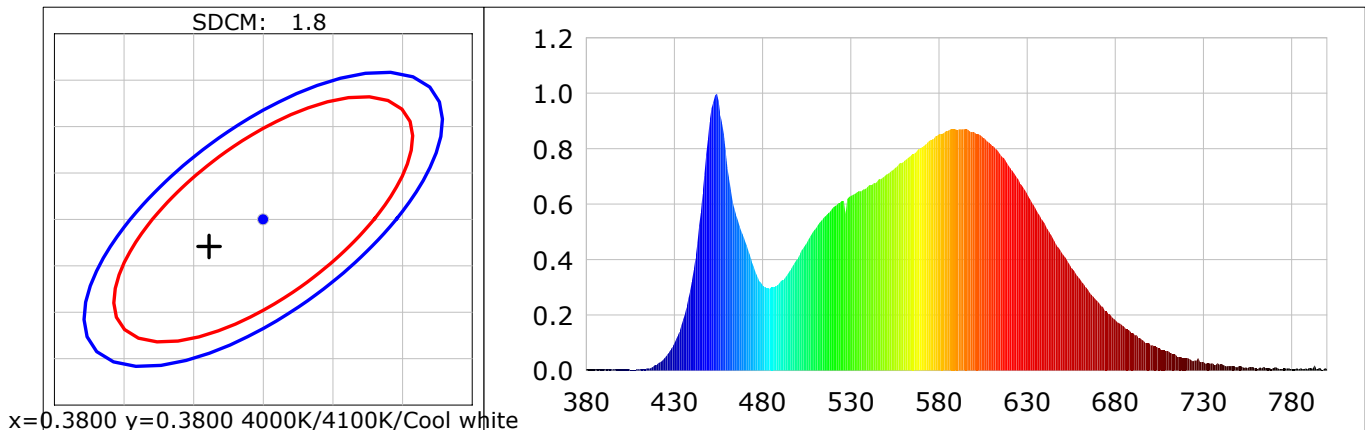
$R_1=81$   $R_2=90$   $R_3=96$   $R_4=80$   $R_5=81$   $R_6=86$   $R_7=85$   $R_8=63$

$R_9=4$   $R_{10}=76$   $R_{11}=78$   $R_{12}=59$   $R_{13}=83$   $R_{14}=98$   $R_{15}=74$

Color Quality Scale:  $Q_a=81.9$ ,  $Q_f=82.4$ ,  $Q_p=80.8$ ,  $Q_g=90.7$

$Q_1=80$   $Q_2=97$   $Q_3=80$   $Q_4=75$   $Q_5=79$   $Q_6=81$   $Q_7=84$   $Q_8=88$

$Q_9=98$   $Q_{10}=90$   $Q_{11}=86$   $Q_{12}=84$   $Q_{13}=83$   $Q_{14}=71$   $Q_{15}=75$



### Photometric Parameters

Luminous Flux: 2376.16 lm  
EEI: 0.13

Efficiency: 106.55 lm/W

Radiant Power: 7.121 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.40V

Current: 0.1740A

Power: 22.30W

Power Factor: 0.5580

Frequency: 50.00Hz

### Test Infomation

Scan Range: 380~800:1nm

Stabilization Time: 0 Sec

Max of Signal: 45673 (3389)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$

CCD Integration Time: 978.26 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%

Test Lab:

Operator:

Test Device: Inventfine CMS-2S (Plus)

Test Time: 2021-07-05 14:37:56

Inspector:

## Lightsource Test Report

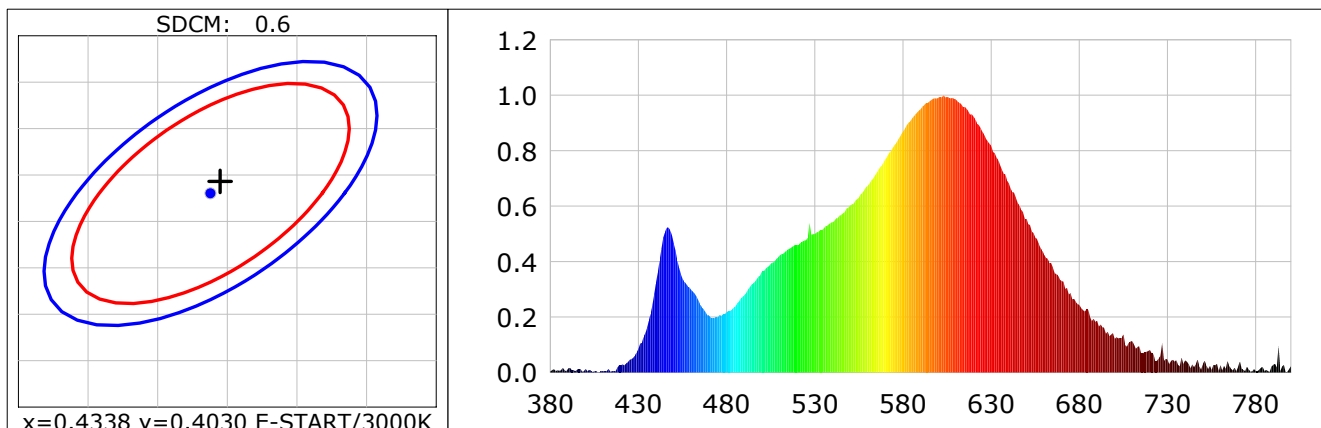
### Product Infomation

Product Type: C 6W 3000K 圆明

Product Number: 7

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4345$   $y=0.4043$   $u(u')=0.2489$   $v=0.3474$   $v'=0.5211$   
 CCT:  $T_c=3044K$  ( $duv=0.00044$ ) Color Ratio:  $R=0.226$   $G=0.746$   $B=0.028$   
 Peak Wavelength: 603.0nm Half Bandwidth: 124.3nm  
 Dominant Wavelength: 582.5nm Color Purity: 0.518  
 CRI:  $R_a=82.7$  TM30:  $R_f=84$ ,  $R_g=96$   
 $R1=81$   $R2=91$   $R3=96$   $R4=82$   $R5=82$   $R6=91$   $R7=81$   $R8=58$   
 $R9=4$   $R10=81$   $R11=82$   $R12=76$   $R13=83$   $R14=98$   $R15=73$   
 Color Quality Scale:  $Q_a=83.0$ ,  $Q_f=84.8$ ,  $Q_p=83.4$ ,  $Q_g=90.7$   
 $Q1=77$   $Q2=95$   $Q3=86$   $Q4=83$   $Q5=85$   $Q6=85$   $Q7=85$   $Q8=87$   
 $Q9=95$   $Q10=91$   $Q11=87$   $Q12=84$   $Q13=83$   $Q14=71$   $Q15=73$



### Photometric Parameters

Luminous Flux: 492.83 lm  
EEI: 0.13

Efficiency: 86.46 lm/W

Radiant Power: 1.480 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.70V

Current: 0.0470A

Power: 5.70W

Power Factor: 0.5230

Frequency: 50.00Hz

### Test Infomation

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 47231 (4055)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 CCD Integration Time: 4673.98 ms

Condition: Tx:0.0'C, Ti:0.0'C, R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2021-07-05 14:44:54  
 Inspector:

## Lightsource Test Report

### Product Infomation

Product Type: C 12W 4000K 圆明

Product Number: 8

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3774$   $y=0.3779$   $u(u')=0.2227$   $v=0.3344$   $v'=0.5016$

CCT:  $T_c=4092K$  ( $duv=0.00143$ )

Color Ratio:  $R=0.178$   $G=0.784$   $B=0.038$

Peak Wavelength: 453.6nm

Half Bandwidth: 25.2nm

Dominant Wavelength: 577.9nm

Color Purity: 0.267

CRI:  $R_a=82.1$

TM30:  $R_f=81$ ,  $R_g=93$

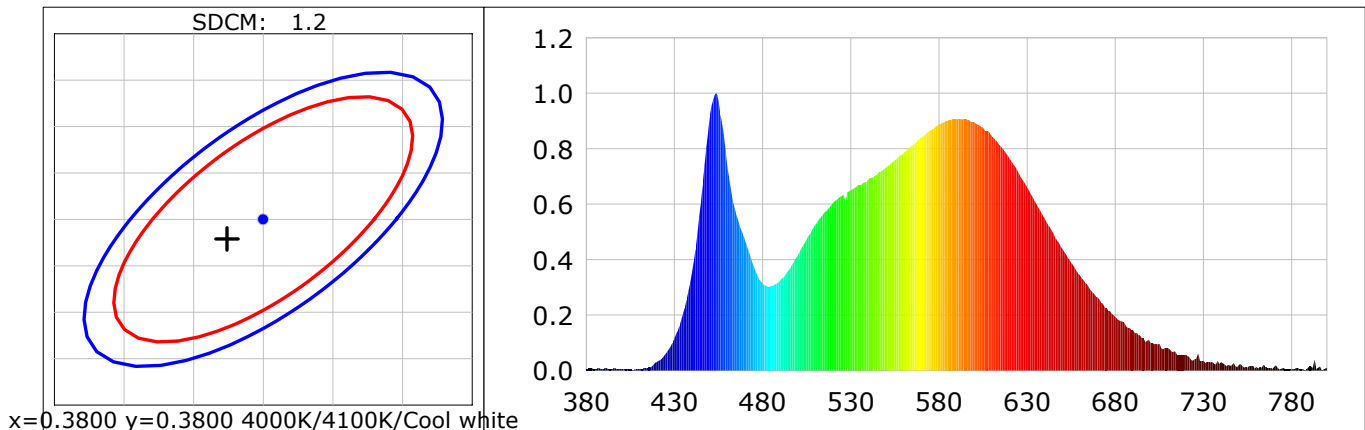
$R_1=80$   $R_2=89$   $R_3=95$   $R_4=80$   $R_5=80$   $R_6=85$   $R_7=85$   $R_8=62$

$R_9=3$   $R_{10}=75$   $R_{11}=78$   $R_{12}=60$   $R_{13}=83$   $R_{14}=98$   $R_{15}=74$

Color Quality Scale:  $Q_a=81.7$ ,  $Q_f=82.2$ ,  $Q_p=80.7$ ,  $Q_g=90.7$

$Q_1=80$   $Q_2=98$   $Q_3=80$   $Q_4=75$   $Q_5=79$   $Q_6=81$   $Q_7=84$   $Q_8=88$

$Q_9=97$   $Q_{10}=90$   $Q_{11}=85$   $Q_{12}=84$   $Q_{13}=83$   $Q_{14}=71$   $Q_{15}=75$



### Photometric Parameters

Luminous Flux: 1262.68 lm  
EEI: 0.14

Efficiency: 97.13 lm/W

Radiant Power: 3.787 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.1070A

Power: 13.00W

Power Factor: 0.5280

Frequency: 50.00Hz

### Test Infomation

Scan Range: 380~800:1nm

Stabilization Time: 0 Sec

Max of Signal: 45333 (3556)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$

CCD Integration Time: 1898.45 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%

Test Lab:

Operator:

Test Device: Inventfine CMS-2S (Plus)

Test Time: 2021-07-05 14:46:43

Inspector:



## Lightsource Test Report

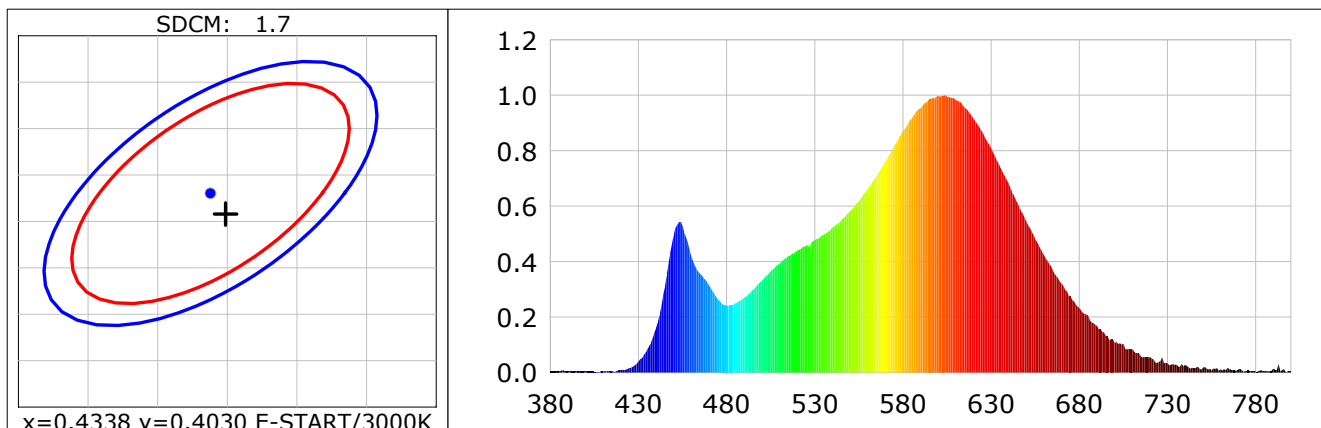
### Product Infomation

Product Type: C 18W 3000K 圆明

Product Number: 9

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4349$   $y=0.4008$   $u(u')=0.2507$   $v=0.3465$   $v'=0.5198$   
 CCT:  $T_c=3008K$  ( $duv=-0.00104$ ) Color Ratio:  $R=0.229$   $G=0.741$   $B=0.030$   
 Peak Wavelength: 603.8nm Half Bandwidth: 118.0nm  
 Dominant Wavelength: 583.2nm Color Purity: 0.508  
 CRI:  $R_a=81.9$  TM30:  $R_f=82$ ,  $R_g=94$   
 $R1=81$   $R2=93$   $R3=93$   $R4=79$   $R5=82$   $R6=92$   $R7=79$   $R8=56$   
 $R9=3$   $R10=84$   $R11=79$   $R12=74$   $R13=84$   $R14=97$   $R15=73$   
 Color Quality Scale:  $Q_a=82.0$ ,  $Q_f=83.8$ ,  $Q_p=82.6$ ,  $Q_g=89.8$   
 $Q1=77$   $Q2=94$   $Q3=85$   $Q4=80$   $Q5=82$   $Q6=83$   $Q7=83$   $Q8=86$   
 $Q9=94$   $Q10=91$   $Q11=87$   $Q12=83$   $Q13=82$   $Q14=71$   $Q15=73$



### Photometric Parameters

Luminous Flux: 1518.39 lm  
EEI: 0.17

Efficiency: 82.08 lm/W

Radiant Power: 4.538 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.1500A

Power: 18.50W

Power Factor: 0.5340

Frequency: 50.00Hz

### Test Infomation

Scan Range: 380~800:1nm  
Stabilization Time: 0 Sec  
Max of Signal: 45451 (3487)

Photometric Method: sphere-spectroradiometer  
Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
CCD Integration Time: 1443.00 ms

Condition: Tx:0.0'C, Ti:0.0'C, R.H.:60%  
Test Lab:  
Operator:

Test Device: Inventfine CMS-2S (Plus)  
Test Time: 2021-07-05 14:49:05  
Inspector:

## Lightsource Test Report

### Product Information

Product Type: C 6W 4000K 方明

Product Number: 10

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3748$   $y=0.3779$   $u(u')=0.2210$   $v=0.3342$   $v'=0.5012$

CCT:  $T_c=4165K$  ( $duv=0.00222$ )

Color Ratio:  $R=0.177$   $G=0.786$   $B=0.038$

Peak Wavelength: 446.1nm

Half Bandwidth: 20.2nm

Dominant Wavelength: 577.2nm

Color Purity: 0.259

CRI:  $R_a=83.1$

TM30:  $R_f=83$ ,  $R_g=96$

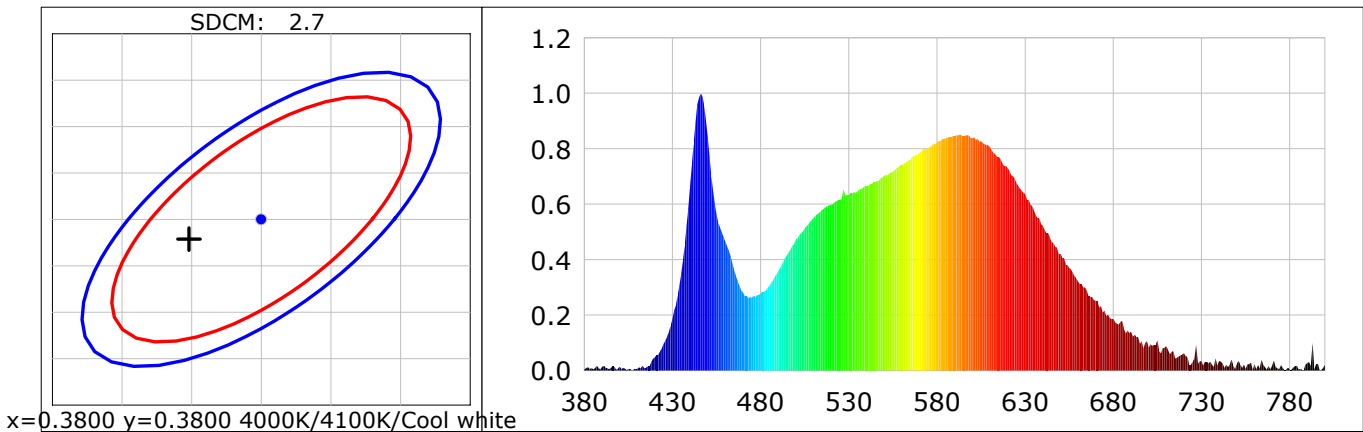
$R_1=81$   $R_2=88$   $R_3=95$   $R_4=83$   $R_5=82$   $R_6=85$   $R_7=86$   $R_8=65$

$R_9=6$   $R_{10}=73$   $R_{11}=83$   $R_{12}=67$   $R_{13}=82$   $R_{14}=97$   $R_{15}=74$

Color Quality Scale:  $Q_a=83.7$ ,  $Q_f=84.1$ ,  $Q_p=83.3$ ,  $Q_g=92.6$

$Q_1=82$   $Q_2=99$   $Q_3=82$   $Q_4=80$   $Q_5=84$   $Q_6=85$   $Q_7=86$   $Q_8=90$

$Q_9=98$   $Q_{10}=89$   $Q_{11}=87$   $Q_{12}=85$   $Q_{13}=84$   $Q_{14}=72$   $Q_{15}=75$



### Photometric Parameters

Luminous Flux: 498.11 lm  
EEI: 0.13

Efficiency: 87.39 lm/W

Radiant Power: 1.504 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.0470A

Power: 5.70W

Power Factor: 0.5260

Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm

Stabilization Time: 0 Sec

Max of Signal: 41313 (3921)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$

CCD Integration Time: 4313.63 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%

Test Lab:

Operator:

Test Device: Inventfine CMS-2S (Plus)

Test Time: 2021-07-05 14:50:48

Inspector:

## Lightsource Test Report

### Product Information

Product Type: C 12W 4000K 方明

Product Number: 11

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3778$   $y=0.3811$   $u(u')=0.2217$   $v=0.3354$   $v'=0.5031$

CCT:  $T_c=4103K$  ( $duv=0.00281$ )

Color Ratio:  $R=0.175$   $G=0.790$   $B=0.035$

Peak Wavelength: 447.8nm

Half Bandwidth: 20.0nm

Dominant Wavelength: 577.2nm

Color Purity: 0.278

CRI:  $R_a=81.0$

TM30:  $R_f=81$ ,  $R_g=95$

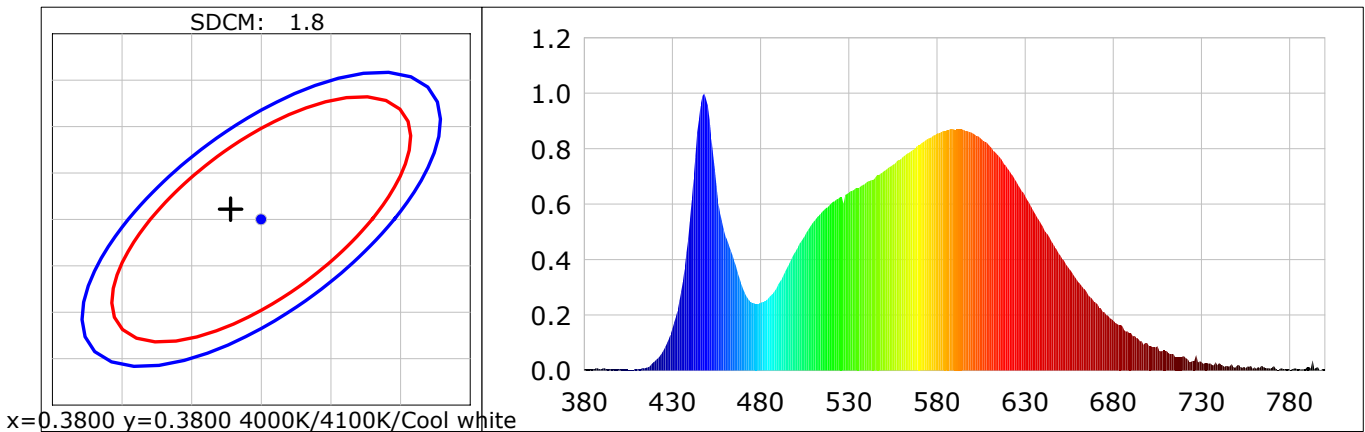
$R_1=78$   $R_2=87$   $R_3=94$   $R_4=81$   $R_5=79$   $R_6=82$   $R_7=85$   $R_8=62$

$R_9=0$   $R_{10}=69$   $R_{11}=79$   $R_{12}=60$   $R_{13}=80$   $R_{14}=97$   $R_{15}=72$

Color Quality Scale:  $Q_a=81.7$ ,  $Q_f=82.0$ ,  $Q_p=81.1$ ,  $Q_g=91.5$

$Q_1=80$   $Q_2=98$   $Q_3=79$   $Q_4=77$   $Q_5=81$   $Q_6=82$   $Q_7=84$   $Q_8=89$

$Q_9=97$   $Q_{10}=88$   $Q_{11}=85$   $Q_{12}=83$   $Q_{13}=82$   $Q_{14}=69$   $Q_{15}=73$



### Photometric Parameters

Luminous Flux: 1243.13 lm  
EEI: 0.13

Efficiency: 104.46 lm/W

Radiant Power: 3.681 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.1000A

Power: 11.90W

Power Factor: 0.5200

Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm

Stabilization Time: 0 Sec

Max of Signal: 45723 (3521)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$

CCD Integration Time: 1966.93 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%

Test Lab:

Operator:

Test Device: Inventfine CMS-2S (Plus)

Test Time: 2021-07-05 14:52:35

Inspector:

## Lightsource Test Report

### Product Infomation

Product Type: C 18W 4000K 方明

Product Number: 12

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3752$   $y=0.3761$   $u(u')=0.2219$   $v=0.3337$   $v'=0.5005$

CCT:  $T_c=4141K$  ( $duv=0.00124$ )

Color Ratio:  $R=0.178$   $G=0.783$   $B=0.039$

Peak Wavelength: 452.7nm

Half Bandwidth: 24.6nm

Dominant Wavelength: 577.8nm

Color Purity: 0.255

CRI:  $R_a=83.0$

TM30:  $R_f=81$ ,  $R_g=94$

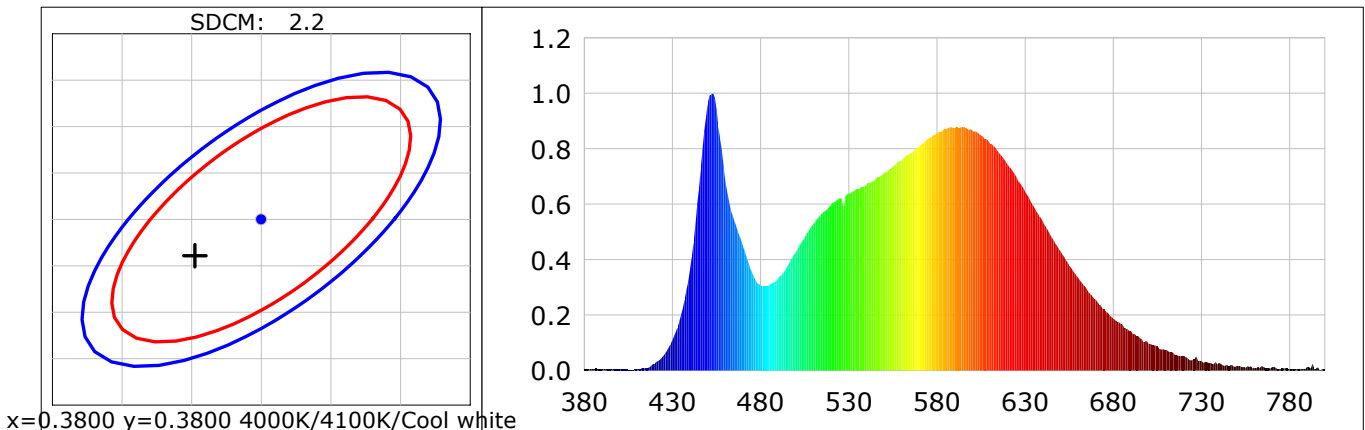
$R_1=81$   $R_2=90$   $R_3=96$   $R_4=81$   $R_5=81$   $R_6=86$   $R_7=85$   $R_8=64$

$R_9=6$   $R_{10}=76$   $R_{11}=80$   $R_{12}=61$   $R_{13}=83$   $R_{14}=98$   $R_{15}=75$

Color Quality Scale:  $Q_a=82.5$ ,  $Q_f=82.9$ ,  $Q_p=81.6$ ,  $Q_g=91.3$

$Q_1=81$   $Q_2=98$   $Q_3=81$   $Q_4=76$   $Q_5=80$   $Q_6=82$   $Q_7=85$   $Q_8=89$

$Q_9=98$   $Q_{10}=90$   $Q_{11}=86$   $Q_{12}=84$   $Q_{13}=83$   $Q_{14}=72$   $Q_{15}=75$



### Photometric Parameters

Luminous Flux: 1980.66 lm  
EEI: 0.13

Efficiency: 107.06 lm/W

Radiant Power: 5.969 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.1510A

Power: 18.50W

Power Factor: 0.5340

Frequency: 50.00Hz

### Test Infomation

Scan Range: 380~800:1nm

Stabilization Time: 0 Sec

Max of Signal: 45467 (3461)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$

CCD Integration Time: 1188.86 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%

Test Lab:

Operator:

Test Device: Inventfine CMS-2S (Plus)

Test Time: 2021-07-05 14:53:51

Inspector:

## Lightsource Test Report

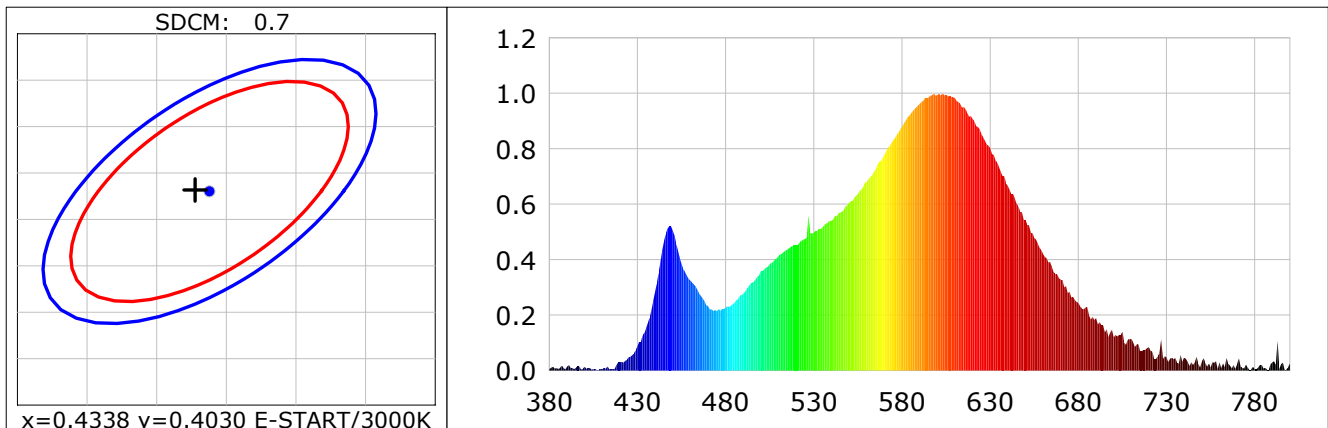
### Product Information

Product Type: H 6W 3000K 圆暗

Product Number: 1

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4328$   $y=0.4032$   $u(u')=0.2483$   $v=0.3469$   $v'(v')=0.5204$   
 CCT:  $T_c=3064K$  ( $duv=0.00022$ ) Color Ratio:  $R=0.224$   $G=0.748$   $B=0.028$   
 Peak Wavelength: 603.0nm Half Bandwidth: 122.6nm  
 Dominant Wavelength: 582.5nm Color Purity: 0.509  
 CRI:  $R_a=81.8$  TM30:  $R_f=83$ ,  $R_g=95$   
 $R1=80$   $R2=91$   $R3=95$   $R4=80$   $R5=81$   $R6=90$   $R7=81$   $R8=56$   
 $R9=0$   $R10=80$   $R11=80$   $R12=75$   $R13=82$   $R14=98$   $R15=72$   
 Color Quality Scale:  $Q_a=82.2$ ,  $Q_f=83.9$ ,  $Q_p=82.5$ ,  $Q_g=90.1$   
 $Q1=77$   $Q2=95$   $Q3=85$   $Q4=81$   $Q5=83$   $Q6=84$   $Q7=84$   $Q8=87$   
 $Q9=95$   $Q10=90$   $Q11=87$   $Q12=83$   $Q13=82$   $Q14=70$   $Q15=72$



### Photometric Parameters

Luminous Flux: 454.55 lm  
EEI: 0.14

Efficiency: 79.74 lm/W

Radiant Power: 1.363 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.0480A

Power: 5.70W

Power Factor: 0.5160

Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 40553 (4038)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 CCD Integration Time: 4320.35 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2021-07-05 15:23:06  
 Inspector:

## Lightsource Test Report

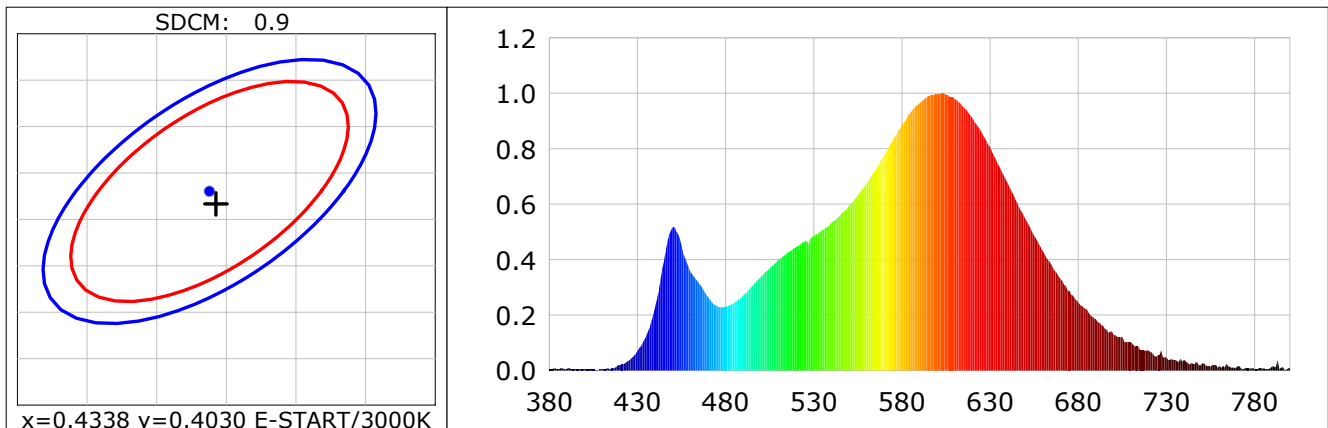
### Product Information

Product Type: H 15W 3000K 圆暗

Product Number: 2

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4343$   $y=0.4017$   $u(u')=0.2499$   $v=0.3467$   $v'=0.5200$   
 CCT:  $T_c=3026K$  ( $duv=-0.00060$ ) Color Ratio:  $R=0.226$   $G=0.746$   $B=0.029$   
 Peak Wavelength: 602.8nm Half Bandwidth: 120.5nm  
 Dominant Wavelength: 582.9nm Color Purity: 0.509  
 CRI:  $R_a=81.4$  TM30:  $R_f=82$ ,  $R_g=94$   
 $R_1=80$   $R_2=91$   $R_3=94$   $R_4=79$   $R_5=81$   $R_6=91$   $R_7=80$   $R_8=55$   
 $R_9=0$   $R_{10}=81$   $R_{11}=78$   $R_{12}=74$   $R_{13}=83$   $R_{14}=98$   $R_{15}=72$   
 Color Quality Scale:  $Q_a=81.7$ ,  $Q_f=83.4$ ,  $Q_p=82.3$ ,  $Q_g=90.0$   
 $Q_1=77$   $Q_2=95$   $Q_3=84$   $Q_4=80$   $Q_5=82$   $Q_6=83$   $Q_7=83$   $Q_8=86$   
 $Q_9=94$   $Q_{10}=90$   $Q_{11}=86$   $Q_{12}=83$   $Q_{13}=81$   $Q_{14}=70$   $Q_{15}=72$



### Photometric Parameters

Luminous Flux: 1247.48 lm  
EEI: 0.15

Efficiency: 87.85 lm/W

Radiant Power: 3.746 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.1170A

Power: 14.20W

Power Factor: 0.5270

Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 45426 (3560)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4π  
 CCD Integration Time: 1764.10 ms

Condition:  $T_x:0.0^{\circ}C$ ,  $T_i:0.0^{\circ}C$ , R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2021-07-05 15:24:53  
 Inspector:

## Lightsource Test Report

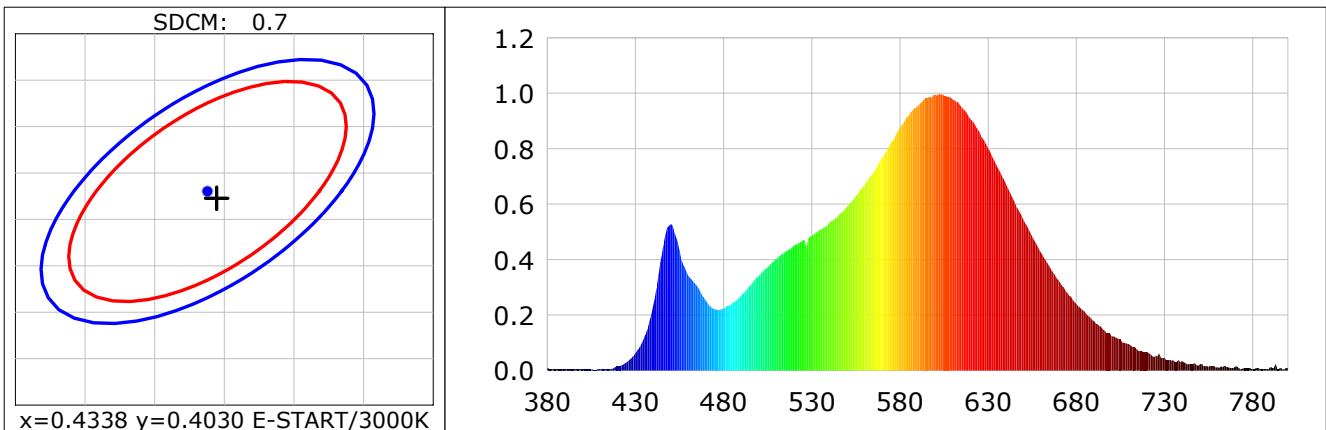
### Product Information

Product Type: H 20W 3000K 圆暗

Product Number: 3

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4345$   $y=0.4023$   $u(u')=0.2497$   $v=0.3469$   $v'=0.5203$   
 CCT:  $T_c=3028K$  ( $duv=-0.00038$ ) Color Ratio:  $R=0.227$   $G=0.745$   $B=0.028$   
 Peak Wavelength: 602.1nm Half Bandwidth: 120.5nm  
 Dominant Wavelength: 582.8nm Color Purity: 0.512  
 CRI:  $R_a=81.8$  TM30:  $R_f=83$ ,  $R_g=95$   
 $R1=80$   $R2=92$   $R3=95$   $R4=80$   $R5=81$   $R6=91$   $R7=80$   $R8=56$   
 $R9=1$   $R10=82$   $R11=79$   $R12=74$   $R13=83$   $R14=98$   $R15=72$   
 Color Quality Scale:  $Q_a=82.1$ ,  $Q_f=83.9$ ,  $Q_p=82.7$ ,  $Q_g=90.2$   
 $Q1=77$   $Q2=95$   $Q3=85$   $Q4=81$   $Q5=83$   $Q6=84$   $Q7=83$   $Q8=86$   
 $Q9=95$   $Q10=91$   $Q11=87$   $Q12=83$   $Q13=82$   $Q14=70$   $Q15=73$



### Photometric Parameters

Luminous Flux: 1934.93 lm  
EEI: 0.14

Efficiency: 98.22 lm/W

Radiant Power: 5.795 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.40V

Current: 0.1580A

Power: 19.70W

Power Factor: 0.5440

Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 44893 (3458)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 CCD Integration Time: 1127.67 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2021-07-05 15:26:22  
 Inspector:

## Lightsource Test Report

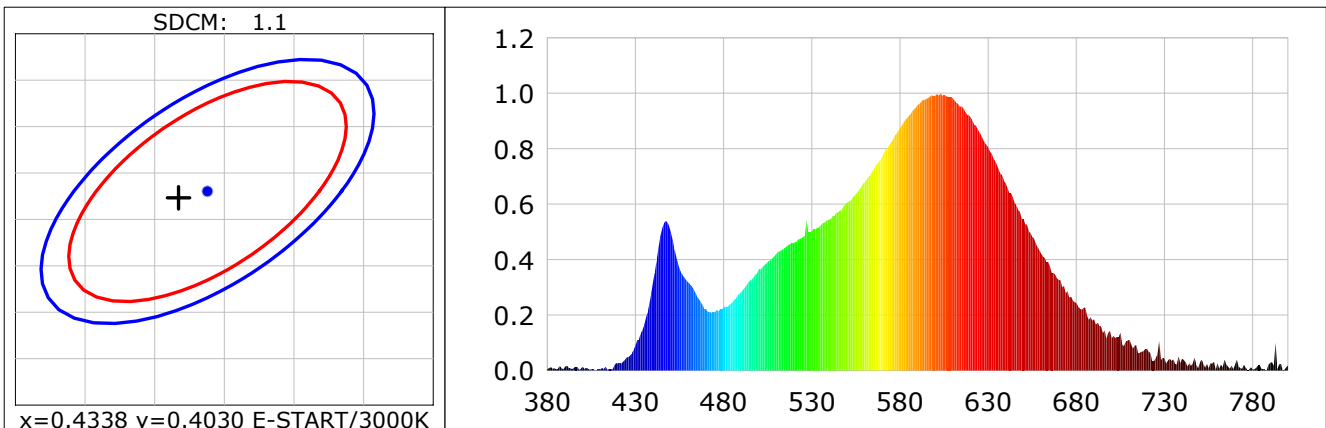
### Product Infomation

Product Type: H 6W 3000K 方暗

Product Number: 4

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4317$   $y=0.4023$   $u(u')=0.2480$   $v=0.3466$   $v'=0.5199$   
 CCT:  $T_c=3076K$  ( $duv=0.00004$ ) Color Ratio:  $R=0.224$   $G=0.748$   $B=0.028$   
 Peak Wavelength: 603.0nm Half Bandwidth: 124.2nm  
 Dominant Wavelength: 582.5nm Color Purity: 0.503  
 CRI:  $R_a=82.4$  TM30:  $R_f=83$ ,  $R_g=96$   
 $R1=81$   $R2=91$   $R3=96$   $R4=81$   $R5=82$   $R6=90$   $R7=81$   $R8=57$   
 $R9=3$   $R10=81$   $R11=81$   $R12=76$   $R13=83$   $R14=98$   $R15=72$   
 Color Quality Scale:  $Q_a=82.7$ ,  $Q_f=84.4$ ,  $Q_p=83.2$ ,  $Q_g=90.7$   
 $Q1=77$   $Q2=95$   $Q3=85$   $Q4=82$   $Q5=84$   $Q6=85$   $Q7=84$   $Q8=87$   
 $Q9=95$   $Q10=91$   $Q11=87$   $Q12=84$   $Q13=82$   $Q14=71$   $Q15=73$



### Photometric Parameters

Luminous Flux: 493.15 lm  
EEI: 0.13

Efficiency: 86.52 lm/W  
Energy Efficiency Class: A+ (EU 874-2012)

Radiant Power: 1.479 W

### Electric Parameters

Voltage: 229.60V  
Power Factor: 0.5230

Current: 0.0470A  
Frequency: 50.00Hz

Power: 5.70W

### Test Infomation

Scan Range: 380~800:1nm  
Stabilization Time: 0 Sec  
Max of Signal: 41419 (3869)

Photometric Method: sphere-spectroradiometer  
Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
CCD Integration Time: 4095.22 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%  
Test Lab:  
Operator:

Test Device: Inventfine CMS-2S (Plus)  
Test Time: 2021-07-05 15:28:42  
Inspector:



## Lightsource Test Report

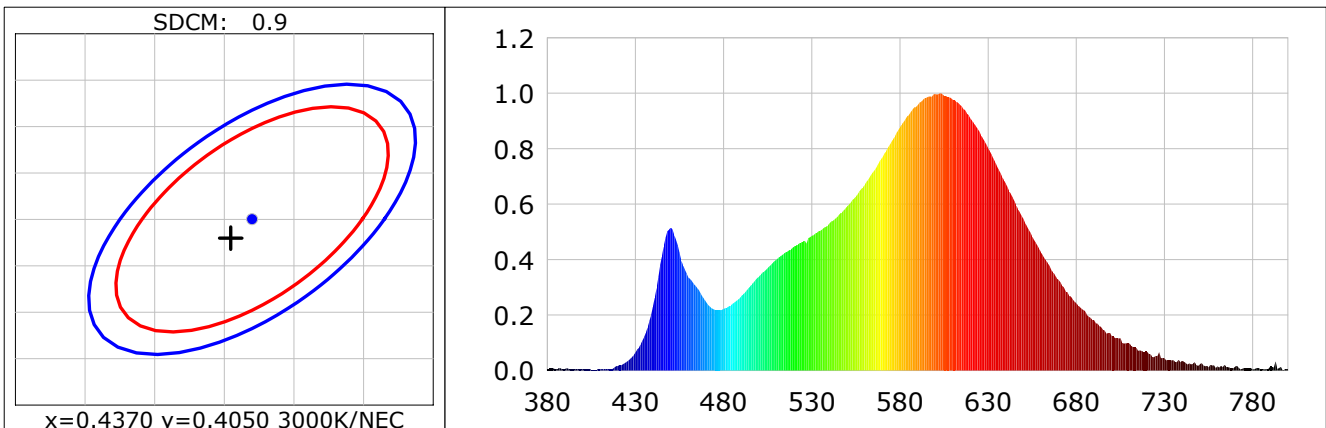
### Product Information

Product Type: H 15W 3000K 方暗

Product Number: 5

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4355$   $y=0.4030$   $u(u')=0.2501$   $v=0.3472$   $v'=0.5207$   
 CCT:  $T_c=3016K$  ( $duv=-0.00024$ ) Color Ratio:  $R=0.227$   $G=0.745$   $B=0.028$   
 Peak Wavelength: 602.9nm Half Bandwidth: 120.4nm  
 Dominant Wavelength: 582.8nm Color Purity: 0.517  
 CRI:  $R_a=81.6$  TM30:  $R_f=82$ ,  $R_g=95$   
 $R1=80$   $R2=91$   $R3=95$   $R4=79$   $R5=81$   $R6=91$   $R7=80$   $R8=56$   
 $R9=1$   $R10=81$   $R11=79$   $R12=74$   $R13=83$   $R14=98$   $R15=72$   
 Color Quality Scale:  $Q_a=81.9$ ,  $Q_f=83.7$ ,  $Q_p=82.5$ ,  $Q_g=90.0$   
 $Q1=77$   $Q2=95$   $Q3=84$   $Q4=80$   $Q5=83$   $Q6=83$   $Q7=83$   $Q8=86$   
 $Q9=95$   $Q10=91$   $Q11=86$   $Q12=83$   $Q13=81$   $Q14=70$   $Q15=72$



### Photometric Parameters

Luminous Flux: 1400.07 lm  
EEI: 0.14

Efficiency: 95.89 lm/W

Radiant Power: 4.190 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.1180A

Power: 14.60W

Power Factor: 0.5380

Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 44362 (3536)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4π  
 CCD Integration Time: 1536.37 ms

Condition: Tx:0.0°C, Ti:0.0°C, R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventive CMS-2S (Plus)  
 Test Time: 2021-07-05 15:30:07  
 Inspector:

## Lightsource Test Report

### Product Infomation

Product Type: H 20W 4000K 方暗

Product Number: 6

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3747$   $y=0.3758$   $u(u')=0.2217$   $v=0.3335$   $v'(v')=0.5003$

CCT:  $T_c=4154K$  ( $duv=0.00129$ )

Color Ratio:  $R=0.177$   $G=0.783$   $B=0.040$

Peak Wavelength: 454.0nm

Half Bandwidth: 25.6nm

Dominant Wavelength: 577.7nm

Color Purity: 0.252

CRI:  $R_a=82.3$

TM30:  $R_f=80$ ,  $R_g=93$

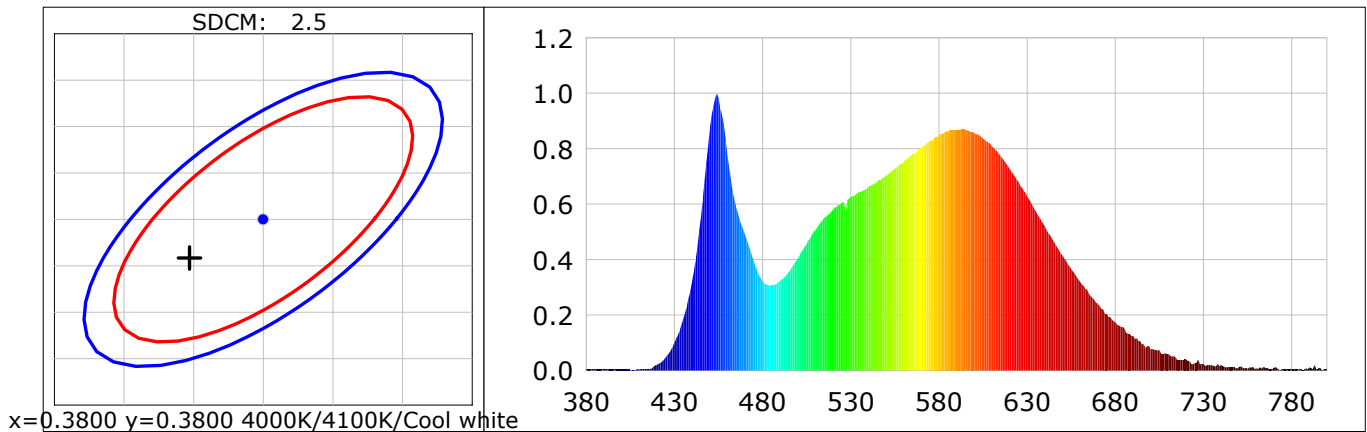
$R_1=80$   $R_2=90$   $R_3=96$   $R_4=79$   $R_5=80$   $R_6=86$   $R_7=84$   $R_8=62$

$R_9=3$   $R_{10}=76$   $R_{11}=78$   $R_{12}=59$   $R_{13}=83$   $R_{14}=98$   $R_{15}=74$

Color Quality Scale:  $Q_a=81.7$ ,  $Q_f=82.2$ ,  $Q_p=80.4$ ,  $Q_g=90.4$

$Q_1=80$   $Q_2=97$   $Q_3=81$   $Q_4=74$   $Q_5=78$   $Q_6=80$   $Q_7=84$   $Q_8=88$

$Q_9=97$   $Q_{10}=90$   $Q_{11}=86$   $Q_{12}=84$   $Q_{13}=83$   $Q_{14}=71$   $Q_{15}=75$



### Photometric Parameters

Luminous Flux: 1998.09 lm  
EEI: 0.15

Efficiency: 91.66 lm/W

Radiant Power: 5.968 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.50V

Current: 0.1730A

Power: 21.80W

Power Factor: 0.5490

Frequency: 50.00Hz

### Test Infomation

Scan Range: 380~800:1nm

Stabilization Time: 0 Sec

Max of Signal: 46605 (3435)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$

CCD Integration Time: 1168.99 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%

Test Lab:

Operator:

Test Device: Inventfine CMS-2S (Plus)

Test Time: 2021-07-05 15:31:24

Inspector:

## Lightsource Test Report

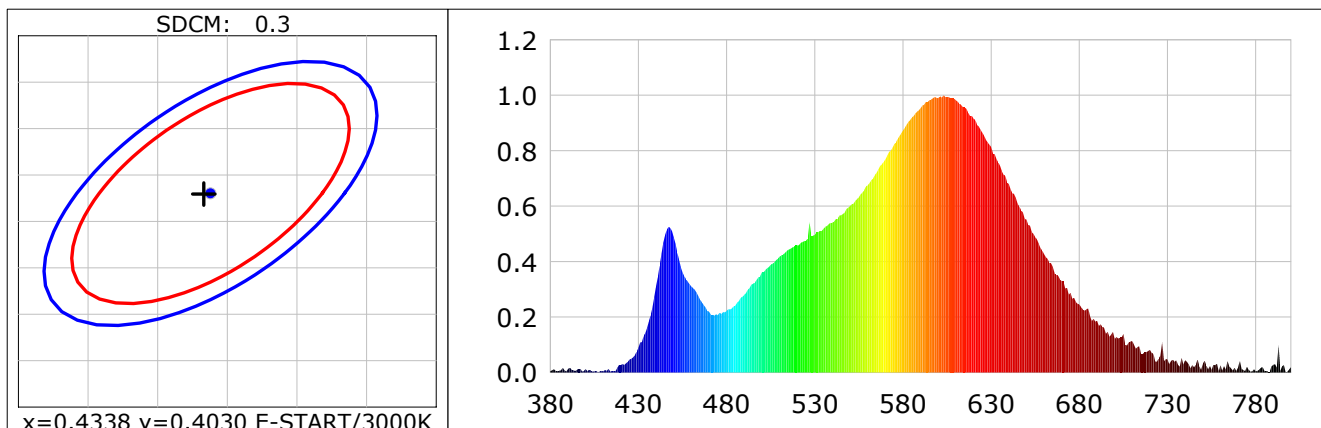
### Product Information

Product Type: H 6W 3000K 圆明

Product Number: 7

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4333$   $y=0.4029$   $u(u')=0.2487$   $v=0.3469$   $v'(v')=0.5204$   
 CCT:  $T_c=3053K$  ( $duv=0.00006$ ) Color Ratio:  $R=0.225$   $G=0.747$   $B=0.028$   
 Peak Wavelength: 603.1nm Half Bandwidth: 123.7nm  
 Dominant Wavelength: 582.6nm Color Purity: 0.510  
 CRI:  $R_a=82.4$  TM30:  $R_f=83$ ,  $R_g=96$   
 $R_1=81$   $R_2=91$   $R_3=96$   $R_4=81$   $R_5=82$   $R_6=91$   $R_7=81$   $R_8=57$   
 $R_9=3$   $R_{10}=81$   $R_{11}=81$   $R_{12}=76$   $R_{13}=83$   $R_{14}=98$   $R_{15}=73$   
 Color Quality Scale:  $Q_a=82.7$ ,  $Q_f=84.5$ ,  $Q_p=83.2$ ,  $Q_g=90.7$   
 $Q_1=77$   $Q_2=95$   $Q_3=85$   $Q_4=82$   $Q_5=84$   $Q_6=85$   $Q_7=84$   $Q_8=87$   
 $Q_9=95$   $Q_{10}=91$   $Q_{11}=87$   $Q_{12}=84$   $Q_{13}=82$   $Q_{14}=71$   $Q_{15}=73$



### Photometric Parameters

Luminous Flux: 483.39 lm  
EEI: 0.13

Efficiency: 86.32 lm/W

Radiant Power: 1.454 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.0470A

Power: 5.60W

Power Factor: 0.5180

Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 44131 (3957)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 CCD Integration Time: 4430.12 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2021-07-05 15:34:20  
 Inspector:

## Lightsource Test Report

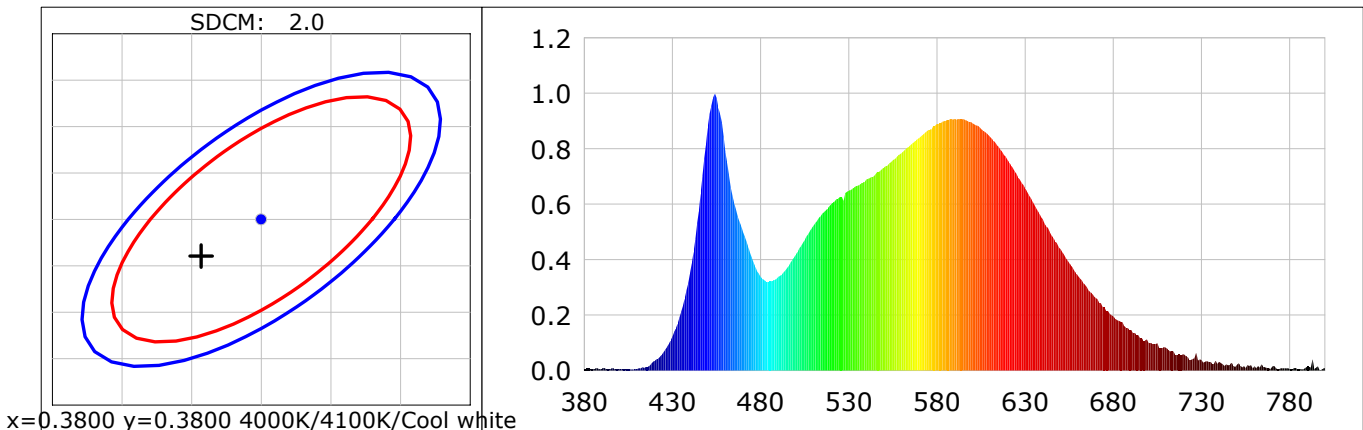
### Product Information

Product Type: H 12W 4000K 圆明

Product Number: 8

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3757$   $y=0.3761$   $u(u')=0.2223$   $v=0.3337$   $v'=0.5006$   
 CCT:  $T_c=4127K$  ( $duv=0.00109$ ) Color Ratio:  $R=0.177$   $G=0.783$   $B=0.040$   
 Peak Wavelength: 454.0nm Half Bandwidth: 26.6nm  
 Dominant Wavelength: 577.9nm Color Purity: 0.256  
 CRI:  $R_a=82.3$  TM30:  $R_f=81$ ,  $R_g=93$   
 $R1=80$   $R2=90$   $R3=96$   $R4=79$   $R5=80$   $R6=86$   $R7=84$   $R8=62$   
 $R9=4$   $R10=76$   $R11=78$   $R12=60$   $R13=83$   $R14=98$   $R15=74$   
 Color Quality Scale:  $Q_a=81.7$ ,  $Q_f=82.1$ ,  $Q_p=80.5$ ,  $Q_g=90.6$   
 $Q1=80$   $Q2=97$   $Q3=81$   $Q4=74$   $Q5=79$   $Q6=80$   $Q7=84$   $Q8=88$   
 $Q9=97$   $Q10=90$   $Q11=85$   $Q12=84$   $Q13=83$   $Q14=71$   $Q15=75$



### Photometric Parameters

Luminous Flux: 1216.68 lm  
EEI: 0.14

Efficiency: 96.56 lm/W

Radiant Power: 3.669 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.1050A

Power: 12.60W

Power Factor: 0.5190

Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm  
Stabilization Time: 0 Sec  
Max of Signal: 45092 (3590)

Photometric Method: sphere-spectroradiometer  
Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
CCD Integration Time: 1933.17 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%  
Test Lab:  
Operator:

Test Device: Inventfine CMS-2S (Plus)  
Test Time: 2021-07-05 15:35:39  
Inspector:

## Lightsource Test Report

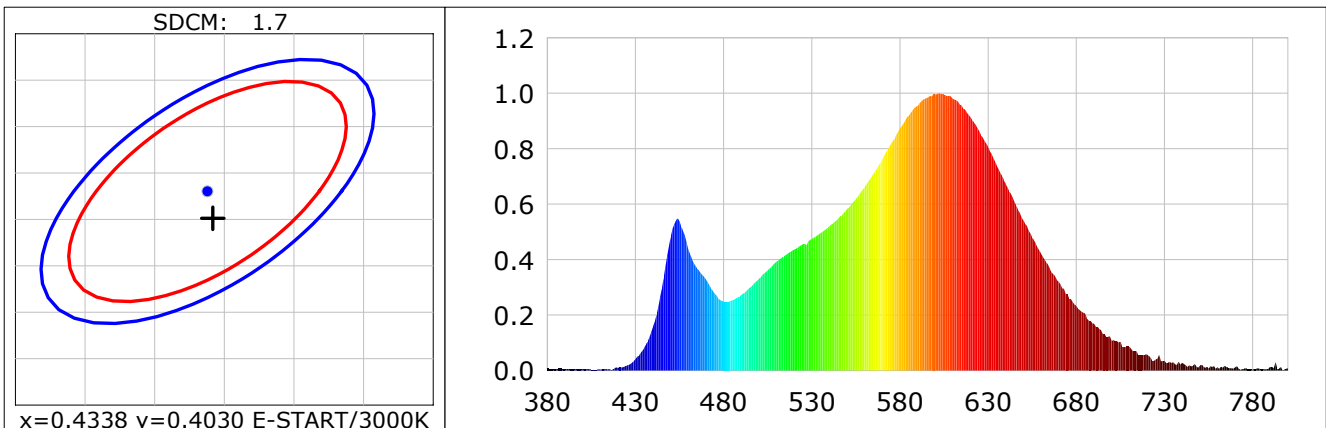
### Product Information

Product Type: H 18W 3000K 圆明

Product Number: 9

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4342$   $y=0.4001$   $u(u')=0.2505$   $v=0.3463$   $v'=0.5194$   
 CCT:  $T_c=3015K$  ( $duv=-0.00121$ ) Color Ratio: R=0.229 G=0.741 B=0.030  
 Peak Wavelength: 602.0nm Half Bandwidth: 117.2nm  
 Dominant Wavelength: 583.2nm Color Purity: 0.504  
 CRI:  $R_a=81.7$  TM30:  $R_f=82$ ,  $R_g=93$   
 R1 =81 R2 =93 R3 =93 R4 =79 R5 =82 R6 =92 R7 =79 R8 =55  
 R9 =2 R10=85 R11=78 R12=74 R13=84 R14=97 R15=73  
 Color Quality Scale:  $Q_a=81.9$ ,  $Q_f=83.6$ ,  $Q_p=82.5$ ,  $Q_g=89.7$   
 Q1 =77 Q2 =94 Q3 =85 Q4 =79 Q5 =81 Q6 =83 Q7 =83 Q8 =86  
 Q9 =94 Q10=91 Q11=87 Q12=83 Q13=81 Q14=71 Q15=73



### Photometric Parameters

Luminous Flux: 1453.39 lm  
EEI: 0.17

Efficiency: 80.30 lm/W

Radiant Power: 4.349 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.1490A

Power: 18.10W

Power Factor: 0.5290

Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 44739 (3502)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 CCD Integration Time: 1481.06 ms

Condition: Tx:0.0'C, Ti:0.0'C, R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2021-07-05 15:36:58  
 Inspector:

## Lightsource Test Report

### Product Information

Product Type: H 6W 4000K 方明

Product Number: 10

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3736$   $y=0.3760$   $u(u')=0.2209$   $v=0.3335$   $v'=0.5002$

CCT:  $T_c=4187K$  ( $duv=0.00171$ )

Color Ratio:  $R=0.176$   $G=0.785$   $B=0.038$

Peak Wavelength: 446.7nm

Half Bandwidth: 21.3nm

Dominant Wavelength: 577.3nm

Color Purity: 0.250

CRI:  $R_a=83.1$

TM30:  $R_f=83$ ,  $R_g=96$

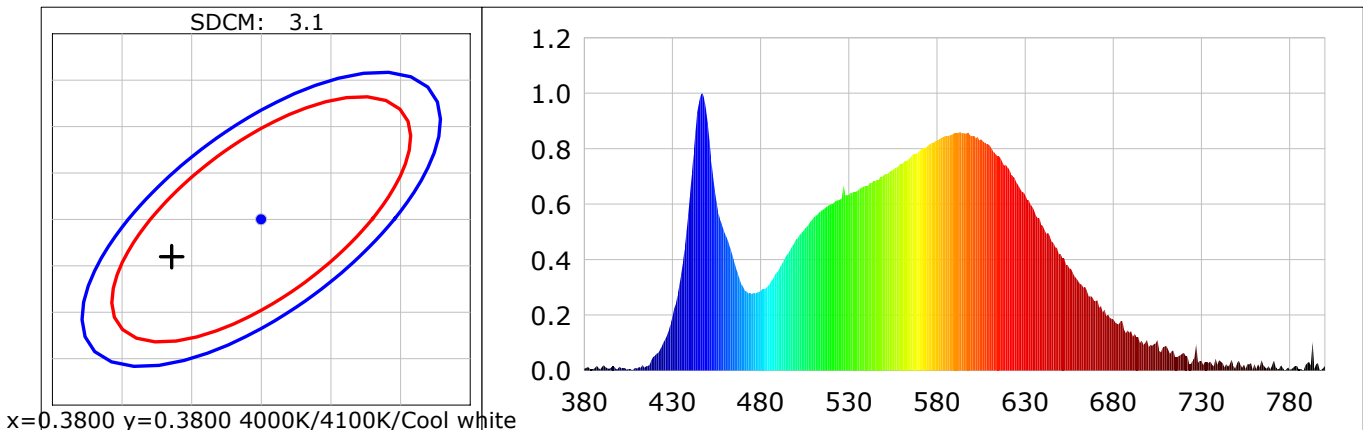
$R_1=81$   $R_2=88$   $R_3=95$   $R_4=83$   $R_5=82$   $R_6=85$   $R_7=86$   $R_8=65$

$R_9=6$   $R_{10}=73$   $R_{11}=83$   $R_{12}=66$   $R_{13}=83$   $R_{14}=97$   $R_{15}=74$

Color Quality Scale:  $Q_a=83.5$ ,  $Q_f=83.8$ ,  $Q_p=83.1$ ,  $Q_g=92.5$

$Q_1=82$   $Q_2=99$   $Q_3=82$   $Q_4=80$   $Q_5=84$   $Q_6=85$   $Q_7=86$   $Q_8=90$

$Q_9=98$   $Q_{10}=89$   $Q_{11}=86$   $Q_{12}=85$   $Q_{13}=84$   $Q_{14}=72$   $Q_{15}=75$



### Photometric Parameters

Luminous Flux: 485.52 lm  
EEI: 0.13

Efficiency: 86.70 lm/W

Radiant Power: 1.471 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.0470A

Power: 5.60W

Power Factor: 0.5210

Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm

Stabilization Time: 0 Sec

Max of Signal: 35623 (3862)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$

CCD Integration Time: 3866.12 ms

Condition:  $T_x:0.0^{\circ}C$ ,  $T_i:0.0^{\circ}C$ , R.H.:60%

Test Lab:

Operator:

Test Device: Inventfine CMS-2S (Plus)

Test Time: 2021-07-05 15:39:05

Inspector:

## Lightsource Test Report

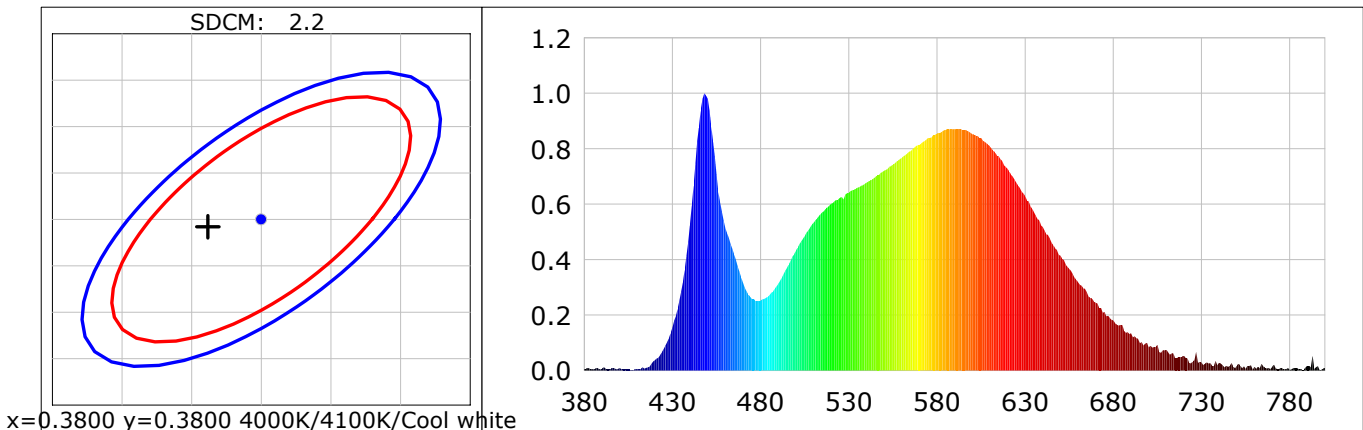
### Product Infomation

Product Type: H 12W 4000K 方明

Product Number: 11

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3762$   $y=0.3792$   $u(u')=0.2213$   $v=0.3347$   $v'(v')=0.5020$   
 CCT:  $T_c=4136K$  ( $duv=0.00242$ ) Color Ratio:  $R=0.174$   $G=0.790$   $B=0.036$   
 Peak Wavelength: 448.2nm Half Bandwidth: 21.2nm  
 Dominant Wavelength: 577.2nm Color Purity: 0.267  
 CRI:  $R_a=81.1$  TM30:  $R_f=81$ ,  $R_g=95$   
 $R_1=79$   $R_2=87$   $R_3=94$   $R_4=81$   $R_5=79$   $R_6=83$   $R_7=85$   $R_8=62$   
 $R_9=0$   $R_{10}=69$   $R_{11}=79$   $R_{12}=60$   $R_{13}=80$   $R_{14}=97$   $R_{15}=72$   
 Color Quality Scale:  $Q_a=81.6$ ,  $Q_f=81.9$ ,  $Q_p=81.1$ ,  $Q_g=91.5$   
 $Q_1=81$   $Q_2=98$   $Q_3=79$   $Q_4=76$   $Q_5=81$   $Q_6=82$   $Q_7=84$   $Q_8=88$   
 $Q_9=97$   $Q_{10}=88$   $Q_{11}=84$   $Q_{12}=83$   $Q_{13}=82$   $Q_{14}=70$   $Q_{15}=74$



### Photometric Parameters

Luminous Flux: 885.18 lm  
EEI: 0.17

Efficiency: 76.31 lm/W

Radiant Power: 2.630 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.0980A

Power: 11.60W

Power Factor: 0.5150

Frequency: 50.00Hz

### Test Infomation

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 43664 (3753)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 CCD Integration Time: 2625.60 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2021-07-05 15:40:30  
 Inspector:

## Lightsource Test Report

### Product Infomation

Product Type: H 18W 4000K 方明

Product Number: 12

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3738$   $y=0.3746$   $u(u')=0.2216$   $v=0.3331$   $v'=0.4996$

CCT:  $T_c=4171K$  ( $duv=0.00099$ )

Color Ratio:  $R=0.177$   $G=0.782$   $B=0.040$

Peak Wavelength: 453.1nm

Half Bandwidth: 25.3nm

Dominant Wavelength: 577.8nm

Color Purity: 0.246

CRI:  $R_a=83.1$

TM30:  $R_f=81$ ,  $R_g=94$

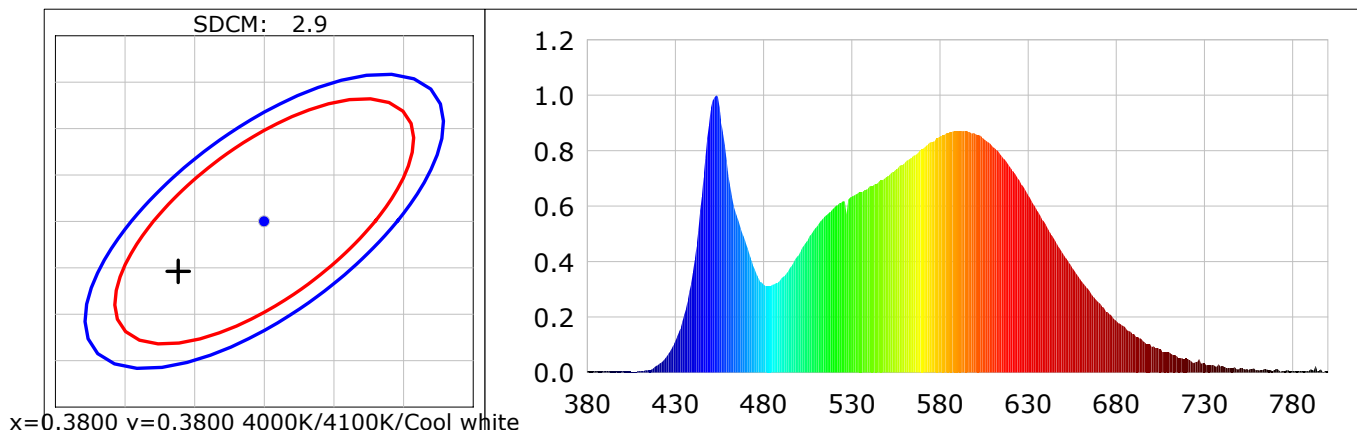
$R_1=81$   $R_2=90$   $R_3=96$   $R_4=81$   $R_5=81$   $R_6=86$   $R_7=85$   $R_8=64$

$R_9=7$   $R_{10}=77$   $R_{11}=80$   $R_{12}=61$   $R_{13}=84$   $R_{14}=98$   $R_{15}=75$

Color Quality Scale:  $Q_a=82.5$ ,  $Q_f=82.9$ ,  $Q_p=81.6$ ,  $Q_g=91.2$

$Q_1=81$   $Q_2=98$   $Q_3=81$   $Q_4=76$   $Q_5=80$   $Q_6=82$   $Q_7=85$   $Q_8=89$

$Q_9=98$   $Q_{10}=90$   $Q_{11}=86$   $Q_{12}=84$   $Q_{13}=83$   $Q_{14}=72$   $Q_{15}=76$



### Photometric Parameters

Luminous Flux: 1964.63 lm  
EEI: 0.13

Efficiency: 107.95 lm/W

Radiant Power: 5.934 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.1490A

Power: 18.20W

Power Factor: 0.5310

Frequency: 50.00Hz

### Test Infomation

Scan Range: 380~800:1nm

Stabilization Time: 0 Sec

Max of Signal: 46560 (3422)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$

CCD Integration Time: 1221.95 ms

Condition: Tx:0.0'C, Ti:0.0'C, R.H.:60%

Test Lab:

Operator:

Test Device: Inventfine CMS-2S (Plus)

Test Time: 2021-07-05 15:41:55

Inspector:



## Lightsource Test Report

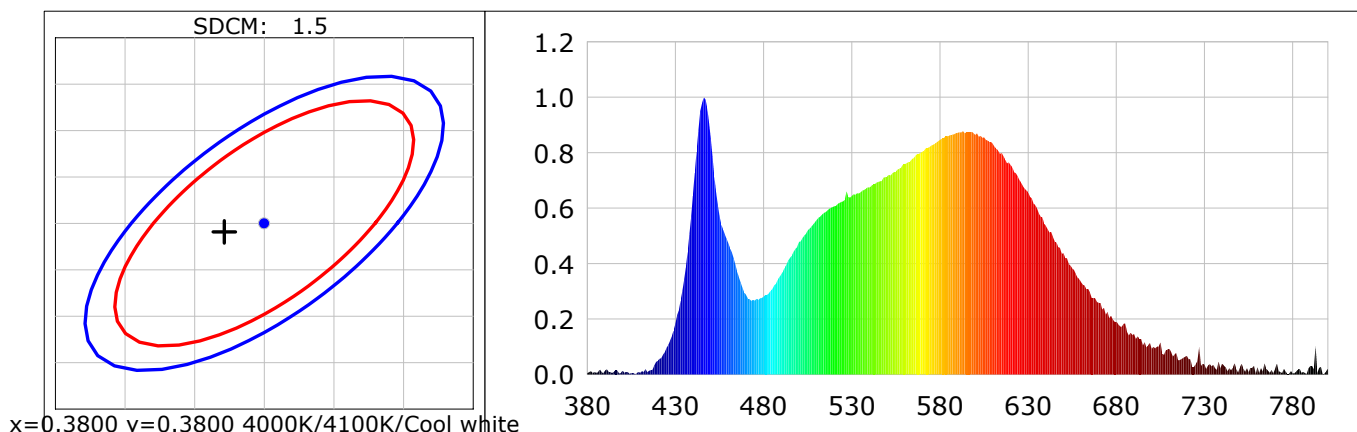
### Product Information

Product Type: C 6W 4000K 圆明

Product Number: 13

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3771$   $y=0.3791$   $u(u')=0.2220$   $v=0.3347$   $v'=0.5021$   
 CCT:  $T_c=4108K$  ( $duv=0.00207$ ) Color Ratio:  $R=0.179$   $G=0.784$   $B=0.037$   
 Peak Wavelength: 446.2nm Half Bandwidth: 20.4nm  
 Dominant Wavelength: 577.5nm Color Purity: 0.270  
 CRI:  $R_a=83.1$  TM30:  $R_f=83$ ,  $R_g=96$   
 $R_1=81$   $R_2=88$   $R_3=95$   $R_4=83$   $R_5=82$   $R_6=85$   $R_7=86$   $R_8=65$   
 $R_9=6$   $R_{10}=73$   $R_{11}=83$   $R_{12}=67$   $R_{13}=82$   $R_{14}=97$   $R_{15}=74$   
 Color Quality Scale:  $Q_a=83.7$ ,  $Q_f=84.0$ ,  $Q_p=83.2$ ,  $Q_g=92.6$   
 $Q_1=82$   $Q_2=99$   $Q_3=82$   $Q_4=80$   $Q_5=84$   $Q_6=85$   $Q_7=86$   $Q_8=90$   
 $Q_9=98$   $Q_{10}=89$   $Q_{11}=87$   $Q_{12}=85$   $Q_{13}=84$   $Q_{14}=72$   $Q_{15}=75$



### Photometric Parameters

Luminous Flux: 495.51 lm  
EEI: 0.13

Efficiency: 88.48 lm/W

Radiant Power: 1.496 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.0470A

Power: 5.60W

Power Factor: 0.5170

Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 40529 (4032)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 CCD Integration Time: 4359.73 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2021-07-05 16:37:51  
 Inspector:

## Lightsource Test Report

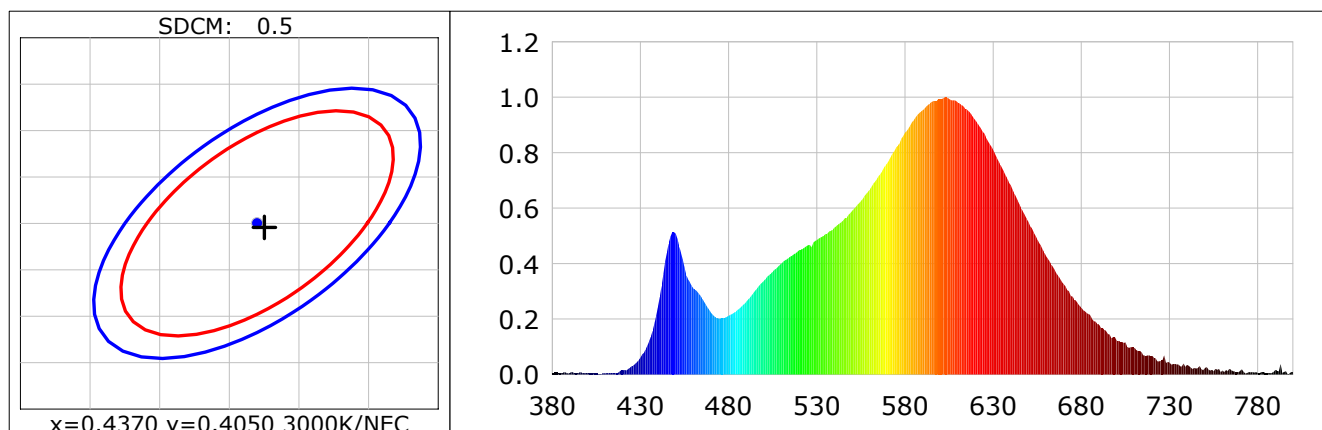
### Product Information

Product Type: C 12W 3000K 圆明

Product Number: 14

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4375$   $y=0.4046$   $u(u')=0.2507$   $v=0.3478$   $v'=0.5217$   
 CCT:  $T_c=2994K$  ( $duv=0.00011$ ) Color Ratio:  $R=0.228$   $G=0.744$   $B=0.027$   
 Peak Wavelength: 603.2nm Half Bandwidth: 120.5nm  
 Dominant Wavelength: 582.8nm Color Purity: 0.528  
 CRI:  $R_a=81.8$  TM30:  $R_f=83$ ,  $R_g=95$   
 $R1=80$   $R2=91$   $R3=95$   $R4=80$   $R5=81$   $R6=90$   $R7=80$   $R8=56$   
 $R9=1$   $R10=81$   $R11=80$   $R12=74$   $R13=83$   $R14=98$   $R15=72$   
 Color Quality Scale:  $Q_a=82.2$ ,  $Q_f=84.0$ ,  $Q_p=82.7$ ,  $Q_g=90.1$   
 $Q1=77$   $Q2=95$   $Q3=85$   $Q4=81$   $Q5=83$   $Q6=84$   $Q7=84$   $Q8=86$   
 $Q9=95$   $Q10=91$   $Q11=87$   $Q12=84$   $Q13=82$   $Q14=70$   $Q15=72$



### Photometric Parameters

Luminous Flux: 1240.21 lm  
EEI: 0.14

Efficiency: 97.65 lm/W

Radiant Power: 3.705 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.1050A

Power: 12.70W

Power Factor: 0.5240

Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 45595 (3574)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4π  
 CCD Integration Time: 1778.82 ms

Condition:  $T_x:0.0^{\circ}C$ ,  $T_i:0.0^{\circ}C$ , R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2021-07-05 16:43:11  
 Inspector:

## Lightsource Test Report

### Product Information

Product Type: C 18W 4000K 圆明

Product Number: 15

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3754$   $y=0.3778$   $u(u')=0.2214$   $v=0.3342$   $v'(v')=0.5013$

CCT:  $T_c=4146K$  ( $duv=0.00198$ )

Color Ratio:  $R=0.175$   $G=0.789$   $B=0.036$

Peak Wavelength: 447.8nm

Half Bandwidth: 19.9nm

Dominant Wavelength: 577.4nm

Color Purity: 0.261

CRI:  $R_a=81.5$

TM30:  $R_f=81$ ,  $R_g=95$

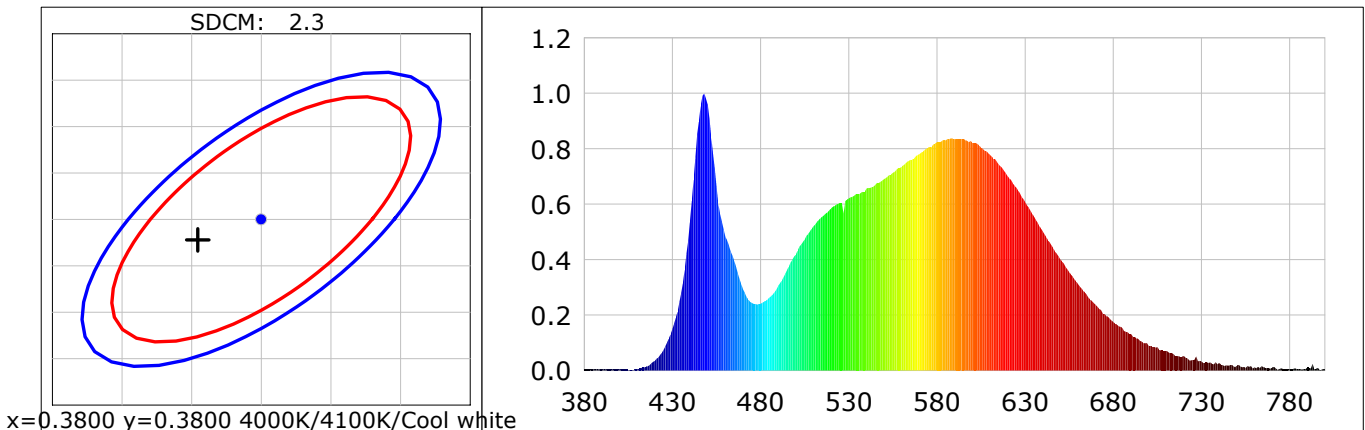
$R_1=79$   $R_2=87$   $R_3=94$   $R_4=81$   $R_5=80$   $R_6=83$   $R_7=85$   $R_8=63$

$R_9=1$   $R_{10}=70$   $R_{11}=80$   $R_{12}=61$   $R_{13}=81$   $R_{14}=97$   $R_{15}=73$

Color Quality Scale:  $Q_a=82.0$ ,  $Q_f=82.2$ ,  $Q_p=81.7$ ,  $Q_g=92.0$

$Q_1=81$   $Q_2=98$   $Q_3=79$   $Q_4=77$   $Q_5=81$   $Q_6=83$   $Q_7=84$   $Q_8=89$

$Q_9=97$   $Q_{10}=88$   $Q_{11}=85$   $Q_{12}=83$   $Q_{13}=83$   $Q_{14}=70$   $Q_{15}=74$



### Photometric Parameters

Luminous Flux: 1981.11 lm  
EEI: 0.13

Efficiency: 105.38 lm/W

Radiant Power: 5.920 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.40V

Current: 0.1500A

Power: 18.80W

Power Factor: 0.5460

Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm

Stabilization Time: 0 Sec

Max of Signal: 49409 (3498)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$

CCD Integration Time: 1285.19 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%

Test Lab:

Operator:

Test Device: Inventfine CMS-2S (Plus)

Test Time: 2021-07-05 16:45:09

Inspector:

## Lightsource Test Report

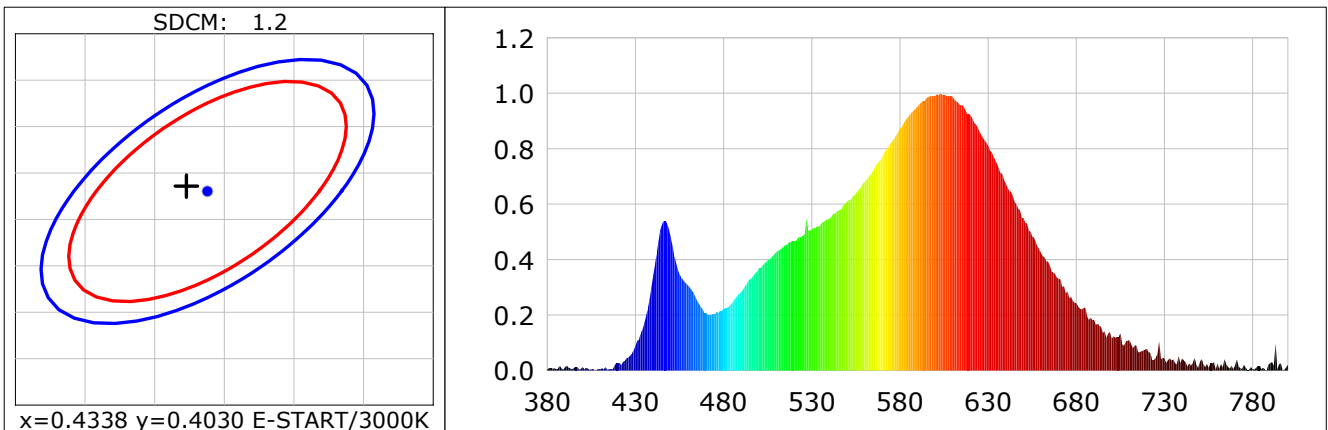
### Product Information

Product Type: C 6W 3000K 方明

Product Number: 16

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4323$   $y=0.4036$   $u(u')=0.2478$   $v=0.3470$   $v'=0.5205$   
 CCT:  $T_c=3076K$  ( $duv=0.00046$ ) Color Ratio:  $R=0.224$   $G=0.748$   $B=0.028$   
 Peak Wavelength: 603.1nm Half Bandwidth: 127.9nm  
 Dominant Wavelength: 582.3nm Color Purity: 0.509  
 CRI:  $R_a=82.7$  TM30:  $R_f=84$ ,  $R_g=96$   
 $R1=81$   $R2=91$   $R3=96$   $R4=82$   $R5=82$   $R6=90$   $R7=82$   $R8=58$   
 $R9=4$   $R10=80$   $R11=82$   $R12=76$   $R13=83$   $R14=98$   $R15=73$   
 Color Quality Scale:  $Q_a=83.0$ ,  $Q_f=84.8$ ,  $Q_p=83.4$ ,  $Q_g=90.7$   
 $Q1=78$   $Q2=95$   $Q3=86$   $Q4=83$   $Q5=85$   $Q6=85$   $Q7=85$   $Q8=87$   
 $Q9=95$   $Q10=91$   $Q11=87$   $Q12=84$   $Q13=83$   $Q14=71$   $Q15=73$



### Photometric Parameters

Luminous Flux: 494.00 lm  
EEI: 0.13

Efficiency: 88.21 lm/W

Radiant Power: 1.480 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.0470A

Power: 5.60W

Power Factor: 0.5210

Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 43653 (3964)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 CCD Integration Time: 4324.94 ms

Condition: Tx:0.0°C, Ti:0.0°C, R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2021-07-05 16:47:22  
 Inspector:

## Lightsource Test Report

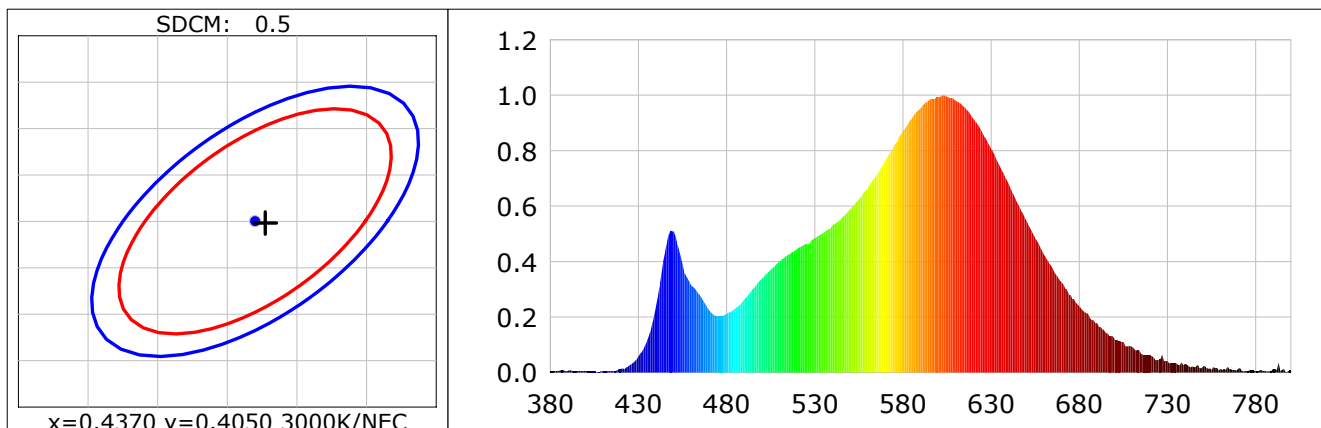
### Product Infomation

Product Type: C 12W 3000K 方明

Product Number: 17

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4377$   $y=0.4048$   $u(u')=0.2508$   $v=0.3479$   $v'=0.5218$   
 CCT:  $T_c=2993K$  ( $duv=0.00018$ ) Color Ratio:  $R=0.228$   $G=0.744$   $B=0.027$   
 Peak Wavelength: 602.9nm Half Bandwidth: 119.9nm  
 Dominant Wavelength: 582.8nm Color Purity: 0.529  
 CRI:  $R_a=81.7$  TM30:  $R_f=83$ ,  $R_g=95$   
 $R_1=80$   $R_2=91$   $R_3=95$   $R_4=80$   $R_5=81$   $R_6=90$   $R_7=80$   $R_8=56$   
 $R_9=1$   $R_{10}=81$   $R_{11}=79$   $R_{12}=74$   $R_{13}=83$   $R_{14}=98$   $R_{15}=72$   
 Color Quality Scale:  $Q_a=82.2$ ,  $Q_f=84.0$ ,  $Q_p=82.6$ ,  $Q_g=90.0$   
 $Q_1=77$   $Q_2=95$   $Q_3=85$   $Q_4=81$   $Q_5=83$   $Q_6=84$   $Q_7=84$   $Q_8=86$   
 $Q_9=95$   $Q_{10}=91$   $Q_{11}=87$   $Q_{12}=84$   $Q_{13}=82$   $Q_{14}=70$   $Q_{15}=72$



### Photometric Parameters

Luminous Flux: 1265.72 lm Efficiency: 97.36 lm/W Radiant Power: 3.771 W  
 EEI: 0.14 Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V Current: 0.1060A Power: 13.00W  
 Power Factor: 0.5340 Frequency: 50.00Hz

### Test Infomation

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 45275 (3514)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4π  
 CCD Integration Time: 1730.61 ms

Condition: Tx:0.0'C, Ti:0.0'C, R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2021-07-05 16:49:05  
 Inspector:

## Lightsource Test Report

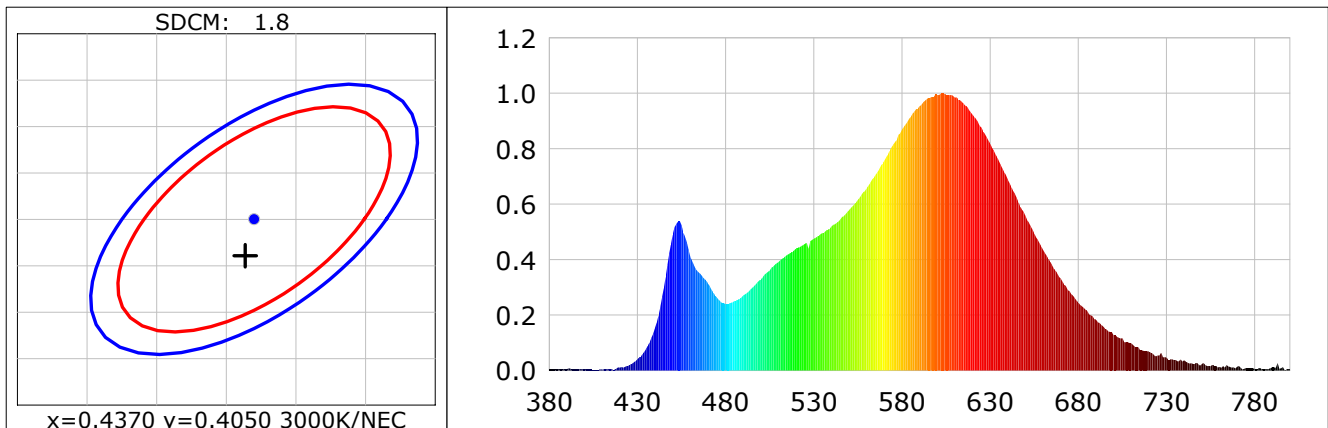
### Product Information

Product Type: C 18W 3000K 方明

Product Number: 18

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4364$   $y=0.4011$   $u(u')=0.2515$   $v=0.3467$   $v'(v')=0.5201$   
 CCT:  $T_c=2985K$  ( $duv=-0.00113$ ) Color Ratio:  $R=0.231$   $G=0.739$   $B=0.030$   
 Peak Wavelength: 602.6nm Half Bandwidth: 118.4nm  
 Dominant Wavelength: 583.3nm Color Purity: 0.514  
 CRI:  $R_a=82.2$  TM30:  $R_f=82$ ,  $R_g=94$   
 $R_1=81$   $R_2=93$   $R_3=93$   $R_4=79$   $R_5=83$   $R_6=93$   $R_7=79$   $R_8=56$   
 $R_9=5$   $R_{10}=85$   $R_{11}=79$   $R_{12}=75$   $R_{13}=84$   $R_{14}=97$   $R_{15}=73$   
 Color Quality Scale:  $Q_a=82.4$ ,  $Q_f=84.1$ ,  $Q_p=83.1$ ,  $Q_g=90.1$   
 $Q_1=78$   $Q_2=94$   $Q_3=85$   $Q_4=80$   $Q_5=82$   $Q_6=83$   $Q_7=84$   $Q_8=86$   
 $Q_9=94$   $Q_{10}=92$   $Q_{11}=87$   $Q_{12}=83$   $Q_{13}=82$   $Q_{14}=71$   $Q_{15}=74$



### Photometric Parameters

Luminous Flux: 1823.49 lm  
EEI: 0.14

Efficiency: 100.75 lm/W  
Energy Efficiency Class: A+ (EU 874-2012)

Radiant Power: 5.509 W

### Electric Parameters

Voltage: 229.60V  
Power Factor: 0.5320

Current: 0.1480A  
Frequency: 50.00Hz

Power: 18.10W

### Test Information

Scan Range: 380~800:1nm  
Stabilization Time: 0 Sec  
Max of Signal: 47372 (3496)

Photometric Method: sphere-spectroradiometer  
Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
CCD Integration Time: 1250.35 ms

Condition: Tx:0.0'C, Ti:0.0'C, R.H.:60%  
Test Lab:  
Operator:

Test Device: Inventfine CMS-2S (Plus)  
Test Time: 2021-07-05 16:50:36  
Inspector:

## Lightsource Test Report

### Product Infomation

Product Type: C 6W 4000K 圆暗

Product Number: 19

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3747$   $y=0.3780$   $u(u')=0.2209$   $v=0.3342$   $v'(v')=0.5013$

CCT:  $T_c=4169K$  ( $duv=0.00230$ )

Color Ratio:  $R=0.176$   $G=0.786$   $B=0.038$

Peak Wavelength: 446.3nm

Half Bandwidth: 20.7nm

Dominant Wavelength: 577.1nm

Color Purity: 0.259

CRI:  $R_a=82.9$

TM30:  $R_f=83$ ,  $R_g=96$

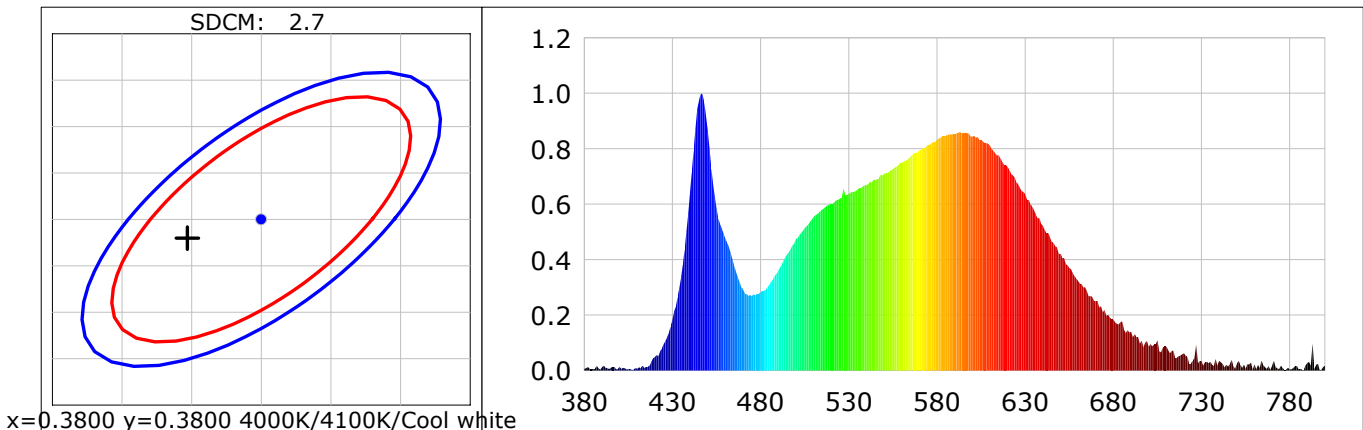
$R_1=81$   $R_2=88$   $R_3=95$   $R_4=83$   $R_5=82$   $R_6=85$   $R_7=86$   $R_8=64$

$R_9=5$   $R_{10}=73$   $R_{11}=83$   $R_{12}=66$   $R_{13}=82$   $R_{14}=97$   $R_{15}=74$

Color Quality Scale:  $Q_a=83.5$ ,  $Q_f=83.9$ ,  $Q_p=83.0$ ,  $Q_g=92.3$

$Q_1=82$   $Q_2=99$   $Q_3=82$   $Q_4=80$   $Q_5=84$   $Q_6=85$   $Q_7=86$   $Q_8=90$

$Q_9=98$   $Q_{10}=89$   $Q_{11}=86$   $Q_{12}=85$   $Q_{13}=84$   $Q_{14}=71$   $Q_{15}=75$



### Photometric Parameters

Luminous Flux: 504.11 lm  
EEI: 0.13

Efficiency: 88.44 lm/W

Radiant Power: 1.520 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.0480A

Power: 5.70W

Power Factor: 0.5210

Frequency: 50.00Hz

### Test Infomation

Scan Range: 380~800:1nm

Stabilization Time: 0 Sec

Max of Signal: 37989 (3921)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$

CCD Integration Time: 3964.47 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%

Test Lab:

Operator:

Test Device: Inventfine CMS-2S (Plus)

Test Time: 2021-07-05 17:03:12

Inspector:

## Lightsource Test Report

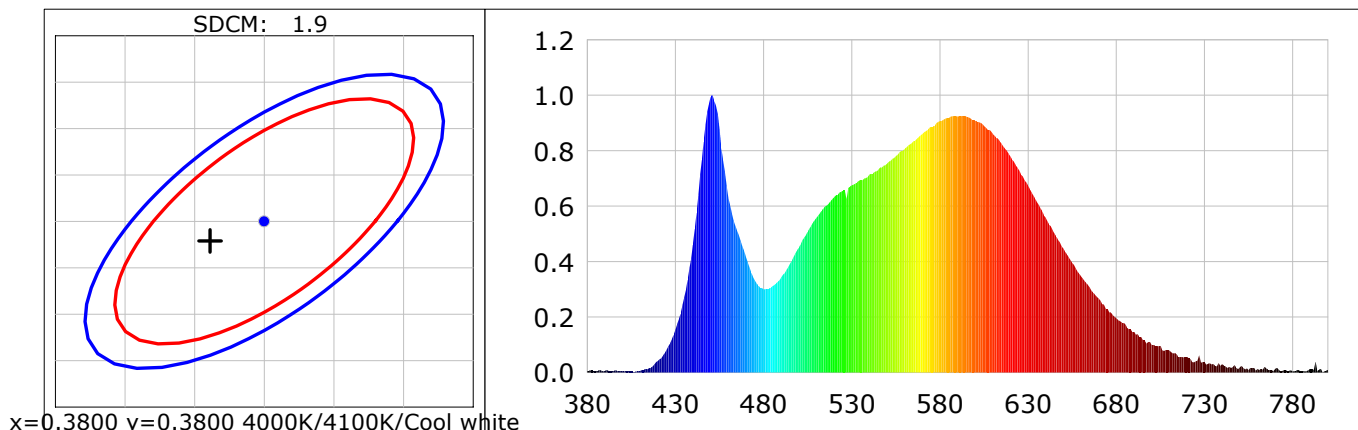
### Product Infomation

Product Type: C 15W 4000K 圆暗

Product Number: 20

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3761$   $y=0.3779$   $u(u')=0.2218$   $v=0.3343$   $v'(v')=0.5014$   
 CCT:  $T_c=4128K$  ( $duv=0.00182$ ) Color Ratio: R=0.176 G=0.786 B=0.038  
 Peak Wavelength: 450.6nm Half Bandwidth: 25.1nm  
 Dominant Wavelength: 577.6nm Color Purity: 0.263  
 CRI: Ra= 82.1 TM30: Rf= 81, Rg= 94  
 R1 =80 R2 =88 R3 =95 R4 =81 R5 =80 R6 =84 R7 =85 R8 =63  
 R9 =2 R10=73 R11=79 R12=61 R13=82 R14=97 R15=73  
 Color Quality Scale: Qa= 82.1, Qf= 82.5, Qp= 81.4, Qg= 91.3  
 Q1 =81 Q2 =98 Q3 =80 Q4 =76 Q5 =81 Q6 =82 Q7 =84 Q8 =89  
 Q9 =98 Q10=89 Q11=85 Q12=84 Q13=83 Q14=71 Q15=75



### Photometric Parameters

Luminous Flux: 1355.87 lm  
EEI: 0.14

Efficiency: 94.16 lm/W

Radiant Power: 4.064 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.1170A

Power: 14.40W

Power Factor: 0.5350

Frequency: 50.00Hz

### Test Infomation

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 45456 (3594)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 CCD Integration Time: 1870.48 ms

Condition: Tx:0.0'C, Ti:0.0'C, R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2021-07-05 17:05:58  
 Inspector:



## Lightsource Test Report

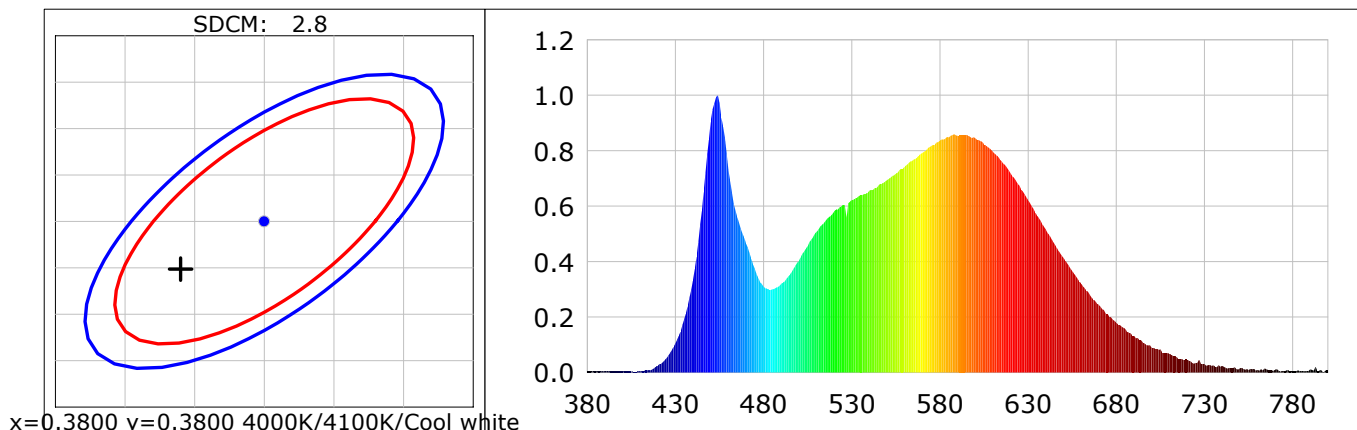
### Product Information

Product Type: C 20W 4000K 圆暗

Product Number: 21

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3740$   $y=0.3749$   $u(u')=0.2216$   $v=0.3332$   $v'=0.4998$   
 CCT:  $T_c=4167K$  ( $duv=0.00105$ ) Color Ratio:  $R=0.177$   $G=0.783$   $B=0.040$   
 Peak Wavelength: 453.7nm Half Bandwidth: 24.6nm  
 Dominant Wavelength: 577.8nm Color Purity: 0.247  
 CRI:  $R_a=82.6$  TM30:  $R_f=81$ ,  $R_g=93$   
 $R_1=81$   $R_2=90$   $R_3=95$   $R_4=80$   $R_5=81$   $R_6=86$   $R_7=85$   $R_8=63$   
 $R_9=5$   $R_{10}=76$   $R_{11}=79$   $R_{12}=60$   $R_{13}=83$   $R_{14}=98$   $R_{15}=75$   
 Color Quality Scale:  $Q_a=82.0$ ,  $Q_f=82.4$ ,  $Q_p=80.9$ ,  $Q_g=90.9$   
 $Q_1=81$   $Q_2=97$   $Q_3=80$   $Q_4=75$   $Q_5=79$   $Q_6=81$   $Q_7=84$   $Q_8=89$   
 $Q_9=98$   $Q_{10}=90$   $Q_{11}=86$   $Q_{12}=84$   $Q_{13}=83$   $Q_{14}=72$   $Q_{15}=75$



### Photometric Parameters

Luminous Flux: 2093.25 lm Efficiency: 103.63 lm/W Radiant Power: 6.300 W  
 EEI: 0.13 Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.50V Current: 0.1620A Power: 20.20W  
 Power Factor: 0.5430 Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 46121 (3423)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 CCD Integration Time: 1104.88 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2021-07-05 17:09:23  
 Inspector:

## Lightsource Test Report

### Product Infomation

Product Type: C 6W 4000K 方暗

Product Number: 22

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3746$   $y=0.3775$   $u(u')=0.2210$   $v=0.3340$   $v'=0.5010$

CCT:  $T_c=4167K$  ( $duv=0.00209$ )

Color Ratio:  $R=0.177$   $G=0.786$   $B=0.038$

Peak Wavelength: 446.2nm

Half Bandwidth: 20.2nm

Dominant Wavelength: 577.2nm

Color Purity: 0.257

CRI:  $R_a=83.0$

TM30:  $R_f=83$ ,  $R_g=96$

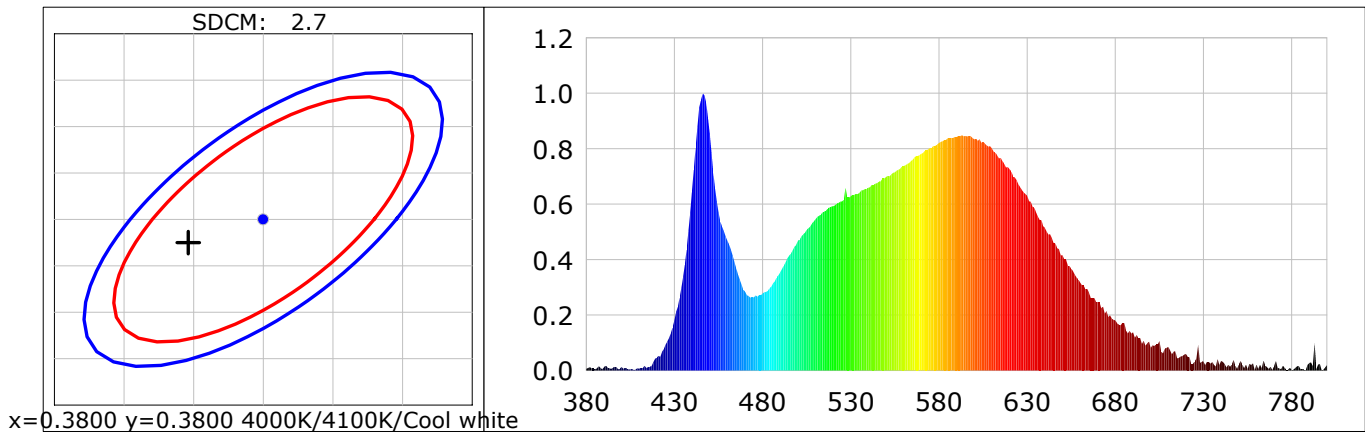
$R_1=81$   $R_2=88$   $R_3=95$   $R_4=83$   $R_5=82$   $R_6=85$   $R_7=86$   $R_8=65$

$R_9=5$   $R_{10}=73$   $R_{11}=83$   $R_{12}=66$   $R_{13}=82$   $R_{14}=97$   $R_{15}=74$

Color Quality Scale:  $Q_a=83.5$ ,  $Q_f=83.9$ ,  $Q_p=83.1$ ,  $Q_g=92.5$

$Q_1=82$   $Q_2=99$   $Q_3=82$   $Q_4=80$   $Q_5=84$   $Q_6=85$   $Q_7=86$   $Q_8=90$

$Q_9=98$   $Q_{10}=89$   $Q_{11}=86$   $Q_{12}=85$   $Q_{13}=84$   $Q_{14}=72$   $Q_{15}=75$



### Photometric Parameters

Luminous Flux: 504.44 lm  
EEI: 0.13

Efficiency: 90.08 lm/W

Radiant Power: 1.522 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.0470A

Power: 5.60W

Power Factor: 0.5240

Frequency: 50.00Hz

### Test Infomation

Scan Range: 380~800:1nm

Stabilization Time: 0 Sec

Max of Signal: 37306 (3901)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$

CCD Integration Time: 3837.78 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%

Test Lab:

Operator:

Test Device: Inventfine CMS-2S (Plus)

Test Time: 2021-07-05 17:13:30

Inspector:

## Lightsource Test Report

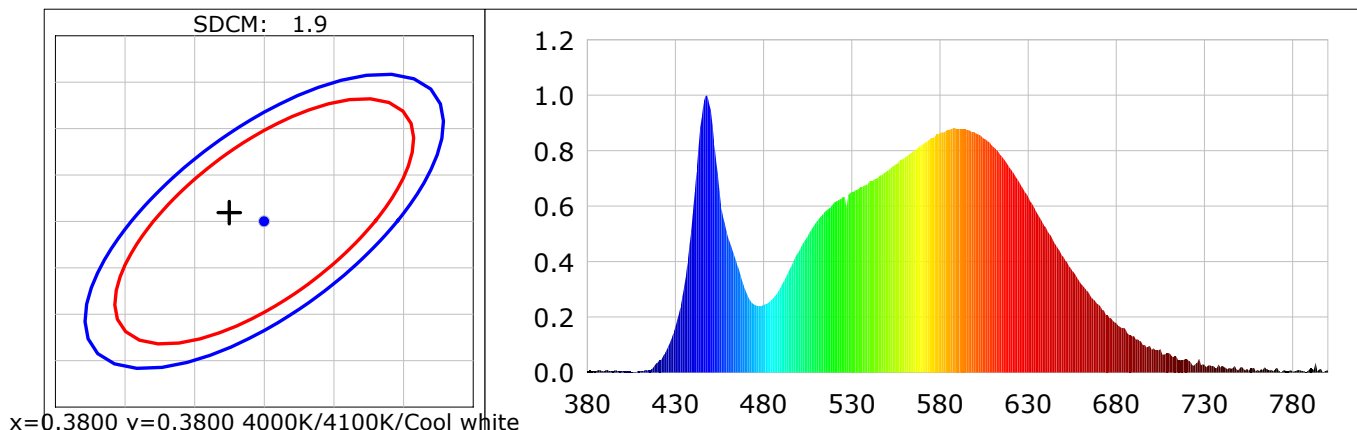
### Product Information

Product Type: C 15W 4000K 方暗

Product Number: 23

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3775$   $y=0.3809$   $u(u')=0.2215$   $v=0.3353$   $v'(v')=0.5030$   
 CCT:  $T_c=4111K$  ( $duv=0.00282$ ) Color Ratio:  $R=0.175$   $G=0.791$   $B=0.035$   
 Peak Wavelength: 447.6nm Half Bandwidth: 20.4nm  
 Dominant Wavelength: 577.1nm Color Purity: 0.276  
 CRI:  $R_a=80.8$  TM30:  $R_f=81$ ,  $R_g=95$   
 $R_1=78$   $R_2=86$   $R_3=93$   $R_4=81$   $R_5=79$   $R_6=82$   $R_7=85$   $R_8=62$   
 $R_9=0$   $R_{10}=68$   $R_{11}=79$   $R_{12}=60$   $R_{13}=80$   $R_{14}=96$   $R_{15}=71$   
 Color Quality Scale:  $Q_a=81.6$ ,  $Q_f=81.9$ ,  $Q_p=81.1$ ,  $Q_g=91.5$   
 $Q_1=80$   $Q_2=98$   $Q_3=79$   $Q_4=77$   $Q_5=81$   $Q_6=82$   $Q_7=84$   $Q_8=88$   
 $Q_9=97$   $Q_{10}=88$   $Q_{11}=84$   $Q_{12}=83$   $Q_{13}=82$   $Q_{14}=69$   $Q_{15}=73$



### Photometric Parameters

Luminous Flux: 1544.59 lm Efficiency: 102.97 lm/W Radiant Power: 4.564 W  
 EEI: 0.13 Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V Current: 0.1200A Power: 15.00W  
 Power Factor: 0.5450 Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 42414 (3566)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 CCD Integration Time: 1480.70 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2021-07-05 17:16:41  
 Inspector:

## Lightsource Test Report

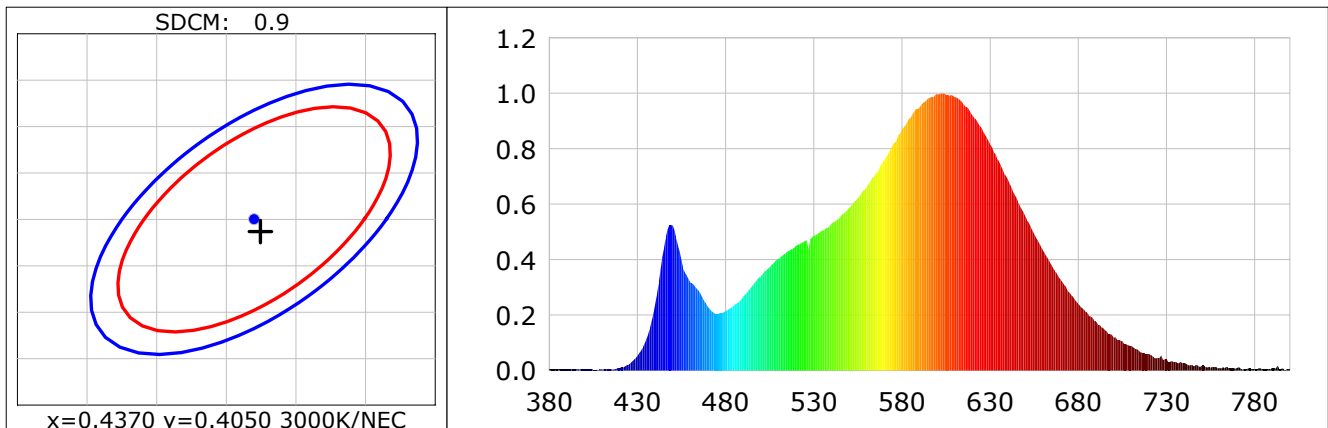
### Product Infomation

Product Type: C 20W 3000K 方暗

Product Number: 24

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4375$   $y=0.4037$   $u(u')=0.2511$   $v=0.3475$   $v'=0.5213$   
 CCT:  $T_c=2988K$  ( $duv=-0.00023$ ) Color Ratio:  $R=0.230$   $G=0.743$   $B=0.028$   
 Peak Wavelength: 602.2nm Half Bandwidth: 120.8nm  
 Dominant Wavelength: 602.3nm Color Purity: 0.525  
 CRI:  $R_a=82.2$  TM30:  $R_f=83$ ,  $R_g=95$   
 $R_1=81$   $R_2=92$   $R_3=95$   $R_4=80$   $R_5=82$   $R_6=91$   $R_7=80$   $R_8=57$   
 $R_9=3$   $R_{10}=82$   $R_{11}=80$   $R_{12}=75$   $R_{13}=83$   $R_{14}=98$   $R_{15}=72$   
 Color Quality Scale:  $Q_a=82.5$ ,  $Q_f=84.3$ ,  $Q_p=83.2$ ,  $Q_g=90.4$   
 $Q_1=77$   $Q_2=95$   $Q_3=85$   $Q_4=81$   $Q_5=84$   $Q_6=84$   $Q_7=84$   $Q_8=87$   
 $Q_9=95$   $Q_{10}=91$   $Q_{11}=87$   $Q_{12}=84$   $Q_{13}=82$   $Q_{14}=71$   $Q_{15}=73$



### Photometric Parameters

Luminous Flux: 2244.07 lm  
EEI: 0.14

Efficiency: 100.18 lm/W  
Energy Efficiency Class: A+ (EU 874-2012)

Radiant Power: 6.704 W

### Electric Parameters

Voltage: 229.40V  
Power Factor: 0.5570

Current: 0.1750A  
Frequency: 50.00Hz

Power: 22.40W

### Test Infomation

Scan Range: 380~800:1nm  
Stabilization Time: 0 Sec  
Max of Signal: 46042 (3384)

Photometric Method: sphere-spectroradiometer  
Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
CCD Integration Time: 992.57 ms

Condition: Tx:0.0'C, Ti:0.0'C, R.H.:60%  
Test Lab:  
Operator:

Test Device: Inventfine CMS-2S (Plus)  
Test Time: 2021-07-05 17:17:54  
Inspector:

## Lightsource Test Report

### Product Information

Product Type: H 6W 4000K 圆暗

Product Number: 13

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3720$   $y=0.3743$   $u(u')=0.2206$   $v=0.3328$   $v'(v')=0.4992$

CCT:  $T_c=4220K$  ( $duv=0.00138$ )

Color Ratio:  $R=0.175$   $G=0.785$   $B=0.039$

Peak Wavelength: 447.6nm

Half Bandwidth: 23.6nm

Dominant Wavelength: 577.4nm

Color Purity: 0.240

CRI:  $R_a=83.2$

TM30:  $R_f=83$ ,  $R_g=96$

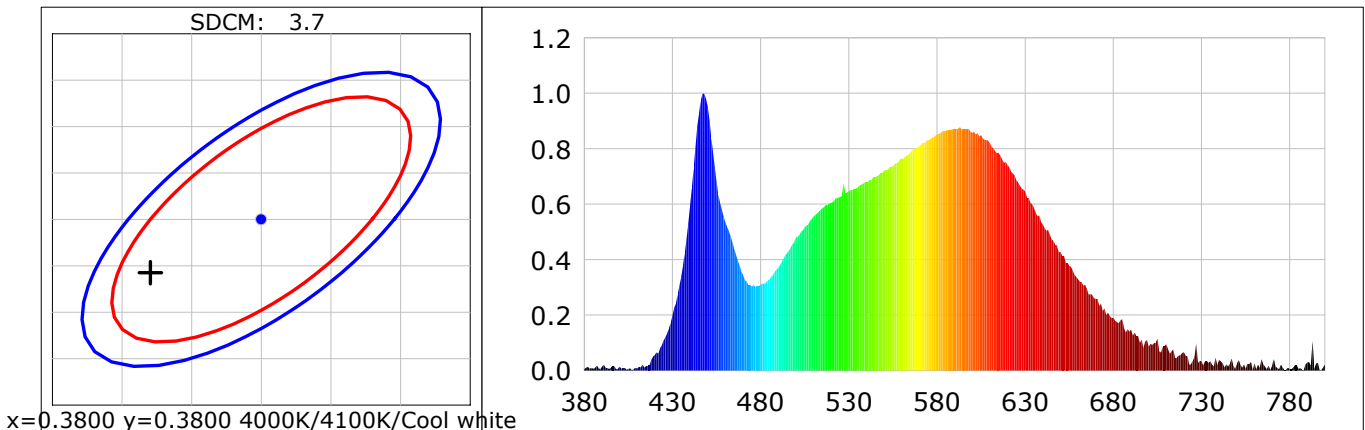
$R_1=81$   $R_2=89$   $R_3=95$   $R_4=83$   $R_5=82$   $R_6=85$   $R_7=86$   $R_8=65$

$R_9=6$   $R_{10}=74$   $R_{11}=82$   $R_{12}=66$   $R_{13}=83$   $R_{14}=97$   $R_{15}=75$

Color Quality Scale:  $Q_a=83.3$ ,  $Q_f=83.6$ ,  $Q_p=82.9$ ,  $Q_g=92.3$

$Q_1=82$   $Q_2=99$   $Q_3=81$   $Q_4=79$   $Q_5=83$   $Q_6=84$   $Q_7=86$   $Q_8=90$

$Q_9=98$   $Q_{10}=89$   $Q_{11}=86$   $Q_{12}=84$   $Q_{13}=84$   $Q_{14}=72$   $Q_{15}=75$



### Photometric Parameters

Luminous Flux: 486.05 lm  
EEI: 0.13

Efficiency: 85.27 lm/W

Radiant Power: 1.477 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.0480A

Power: 5.70W

Power Factor: 0.5130

Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm

Stabilization Time: 0 Sec

Max of Signal: 36655 (3867)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$

CCD Integration Time: 4061.46 ms

Condition: Tx:0.0°C, Ti:0.0°C, R.H.:60%

Test Lab:

Operator:

Test Device: Inventfine CMS-2S (Plus)

Test Time: 2021-07-05 17:33:45

Inspector:

## Lightsource Test Report

### Product Information

Product Type: H 15W 4000K 圆暗

Product Number: 14

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3733$   $y=0.3746$   $u(u')=0.2213$   $v=0.3330$   $v'(v')=0.4996$

CCT:  $T_c=4185K$  ( $duv=0.00112$ )

Color Ratio:  $R=0.175$   $G=0.785$   $B=0.040$

Peak Wavelength: 452.7nm

Half Bandwidth: 28.0nm

Dominant Wavelength: 577.7nm

Color Purity: 0.245

CRI:  $R_a=82.4$

TM30:  $R_f=81$ ,  $R_g=94$

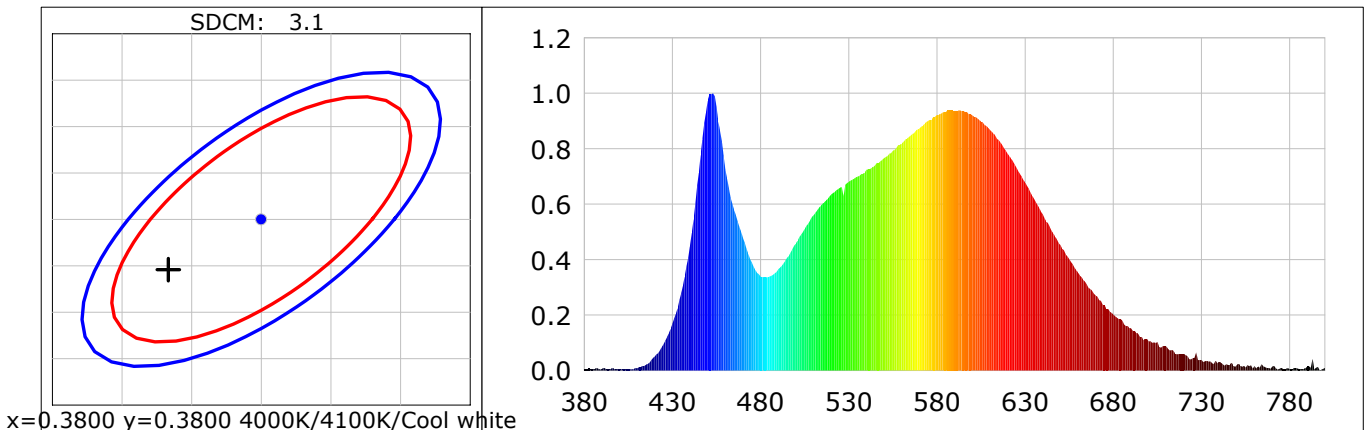
$R_1=80$   $R_2=89$   $R_3=95$   $R_4=80$   $R_5=81$   $R_6=85$   $R_7=85$   $R_8=63$

$R_9=4$   $R_{10}=75$   $R_{11}=79$   $R_{12}=62$   $R_{13}=83$   $R_{14}=98$   $R_{15}=74$

Color Quality Scale:  $Q_a=82.0$ ,  $Q_f=82.5$ ,  $Q_p=81.2$ ,  $Q_g=91.1$

$Q_1=81$   $Q_2=98$   $Q_3=81$   $Q_4=76$   $Q_5=80$   $Q_6=82$   $Q_7=84$   $Q_8=89$

$Q_9=98$   $Q_{10}=89$   $Q_{11}=85$   $Q_{12}=83$   $Q_{13}=83$   $Q_{14}=71$   $Q_{15}=75$



### Photometric Parameters

Luminous Flux: 1280.95 lm  
EEI: 0.15

Efficiency: 91.50 lm/W

Radiant Power: 3.875 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.1160A

Power: 14.00W

Power Factor: 0.5270

Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm

Stabilization Time: 0 Sec

Max of Signal: 46292 (3596)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$

CCD Integration Time: 2000.93 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%

Test Lab:

Operator:

Test Device: Inventfine CMS-2S (Plus)

Test Time: 2021-07-05 17:35:46

Inspector:

## Lightsource Test Report

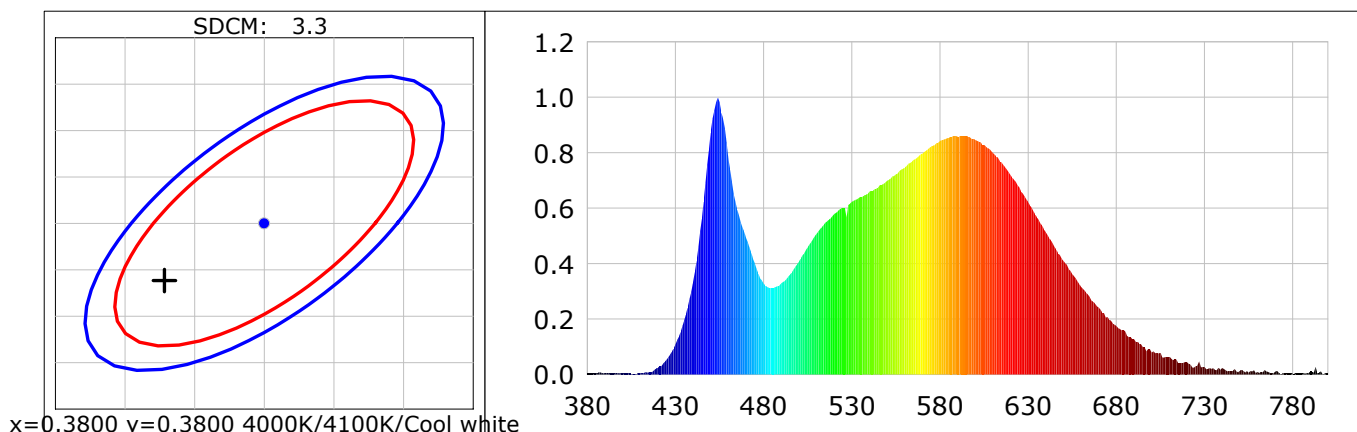
### Product Infomation

Product Type: H 20W 4000K 圆暗

Product Number: 15

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3728$   $y=0.3738$   $u(u')=0.2212$   $v=0.3328$   $v'(v')=0.4992$   
 CCT:  $T_c=4194K$  ( $duv=0.00094$ ) Color Ratio: R=0.176 G=0.783 B=0.041  
 Peak Wavelength: 454.0nm Half Bandwidth: 26.0nm  
 Dominant Wavelength: 577.7nm Color Purity: 0.241  
 CRI: Ra= 82.6 TM30: Rf= 81, Rg= 93  
 R1 =81 R2 =90 R3 =96 R4 =80 R5 =81 R6 =86 R7 =84 R8 =63  
 R9 =5 R10=77 R11=78 R12=60 R13=84 R14=98 R15=75  
 Color Quality Scale: Qa= 81.8, Qf= 82.3, Qp= 80.6, Qg= 90.6  
 Q1 =80 Q2 =97 Q3 =81 Q4 =74 Q5 =79 Q6 =81 Q7 =84 Q8 =88  
 Q9 =98 Q10=90 Q11=86 Q12=84 Q13=83 Q14=71 Q15=75



### Photometric Parameters

Luminous Flux: 1709.54 lm Efficiency: 86.34 lm/W Radiant Power: 5.139 W  
 EEI: 0.16 Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.50V Current: 0.1600A Power: 19.80W  
 Power Factor: 0.5360 Frequency: 50.00Hz

### Test Infomation

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 49137 (3512)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4π  
 CCD Integration Time: 1430.61 ms

Condition: Tx:0.0'C, Ti:0.0'C, R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2021-07-05 17:37:20  
 Inspector:

## Lightsource Test Report

### Product Information

Product Type: H 6W 4000K 方暗

Product Number: 16

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3718$   $y=0.3734$   $u(u')=0.2208$   $v=0.3325$   $v'(v')=0.4988$

CCT:  $T_c=4220K$  ( $duv=0.00103$ )

Color Ratio:  $R=0.176$   $G=0.785$   $B=0.039$

Peak Wavelength: 447.7nm

Half Bandwidth: 23.5nm

Dominant Wavelength: 577.6nm

Color Purity: 0.236

CRI:  $R_a=83.3$

TM30:  $R_f=83$ ,  $R_g=96$

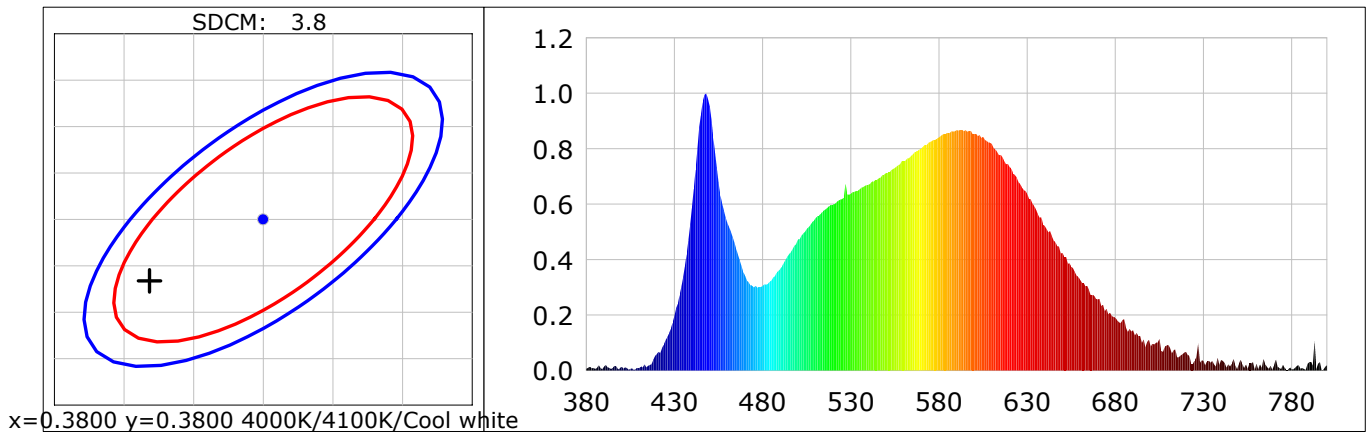
$R_1=81$   $R_2=89$   $R_3=95$   $R_4=83$   $R_5=82$   $R_6=85$   $R_7=86$   $R_8=65$

$R_9=7$   $R_{10}=74$   $R_{11}=82$   $R_{12}=66$   $R_{13}=83$   $R_{14}=97$   $R_{15}=75$

Color Quality Scale:  $Q_a=83.3$ ,  $Q_f=83.6$ ,  $Q_p=82.9$ ,  $Q_g=92.4$

$Q_1=82$   $Q_2=99$   $Q_3=81$   $Q_4=79$   $Q_5=83$   $Q_6=85$   $Q_7=86$   $Q_8=90$

$Q_9=98$   $Q_{10}=89$   $Q_{11}=86$   $Q_{12}=84$   $Q_{13}=84$   $Q_{14}=72$   $Q_{15}=75$



### Photometric Parameters

Luminous Flux: 479.14 lm  
EEI: 0.13

Efficiency: 84.06 lm/W

Radiant Power: 1.460 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.70V

Current: 0.0470A

Power: 5.70W

Power Factor: 0.5220

Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm

Stabilization Time: 0 Sec

Max of Signal: 35145 (3861)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$

CCD Integration Time: 3920.70 ms

Condition: Tx:0.0°C, Ti:0.0°C, R.H.:60%

Test Lab:

Operator:

Test Device: Inventfine CMS-2S (Plus)

Test Time: 2021-07-05 17:39:17

Inspector:



## Lightsource Test Report

### Product Infomation

Product Type: H 6W 4000K 方暗

Product Number: 17

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3740$   $y=0.3765$   $u(u')=0.2210$   $v=0.3337$   $v'=0.5005$

CCT:  $T_c=4179K$  ( $duv=0.00182$ )

Color Ratio:  $R=0.174$   $G=0.789$   $B=0.037$

Peak Wavelength: 449.8nm

Half Bandwidth: 23.9nm

Dominant Wavelength: 577.3nm

Color Purity: 0.252

CRI:  $R_a=81.4$

TM30:  $R_f=81$ ,  $R_g=95$

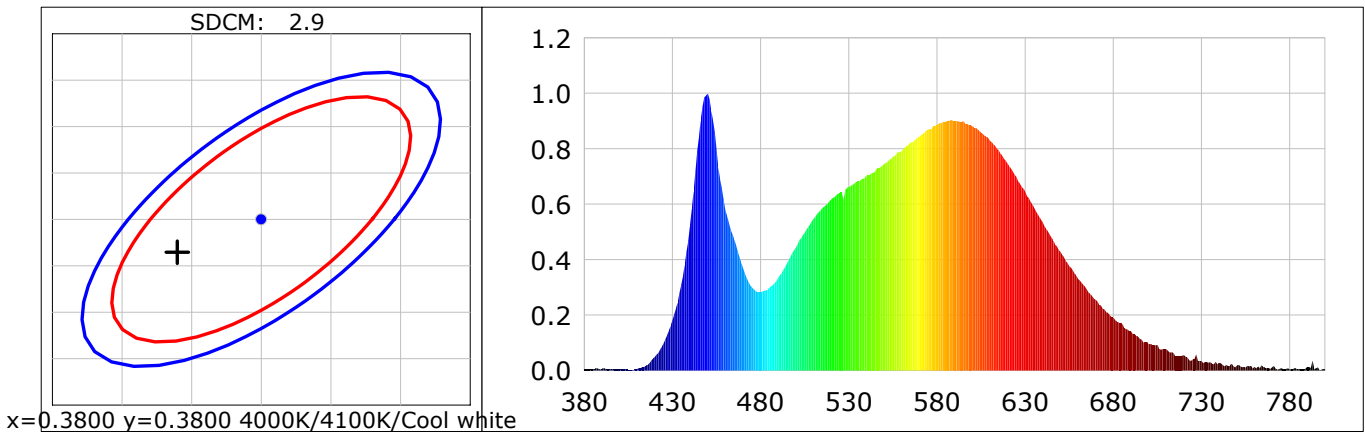
$R_1=79$   $R_2=87$   $R_3=94$   $R_4=80$   $R_5=80$   $R_6=83$   $R_7=85$   $R_8=62$

$R_9=0$   $R_{10}=71$   $R_{11}=79$   $R_{12}=61$   $R_{13}=81$   $R_{14}=97$   $R_{15}=72$

Color Quality Scale:  $Q_a=81.5$ ,  $Q_f=81.9$ ,  $Q_p=81.0$ ,  $Q_g=91.4$

$Q_1=81$   $Q_2=98$   $Q_3=79$   $Q_4=76$   $Q_5=80$   $Q_6=82$   $Q_7=84$   $Q_8=88$

$Q_9=97$   $Q_{10}=88$   $Q_{11}=84$   $Q_{12}=83$   $Q_{13}=82$   $Q_{14}=70$   $Q_{15}=74$



### Photometric Parameters

Luminous Flux: 1415.70 lm  
EEI: 0.14

Efficiency: 99.00 lm/W

Radiant Power: 4.240 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.1170A

Power: 14.30W

Power Factor: 0.5310

Frequency: 50.00Hz

### Test Infomation

Scan Range: 380~800:1nm

Stabilization Time: 0 Sec

Max of Signal: 46309 (3519)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$

CCD Integration Time: 1804.16 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%

Test Lab:

Operator:

Test Device: Inventfine CMS-2S (Plus)

Test Time: 2021-07-05 17:40:24

Inspector:

## Lightsource Test Report

### Product Infomation

Product Type: H 20W 3000K 方暗

Product Number: 18

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4366$   $y=0.4027$   $u(u')=0.2509$   $v=0.3472$   $v'=0.5208$

CCT:  $T_c=2994K$  ( $duv=-0.00050$ )

Color Ratio: R=0.229 G=0.743 B=0.028

Peak Wavelength: 602.3nm

Half Bandwidth: 119.0nm

Dominant Wavelength: 583.0nm

Color Purity: 0.520

CRI:  $R_a=81.7$

TM30:  $R_f=82$ ,  $R_g=95$

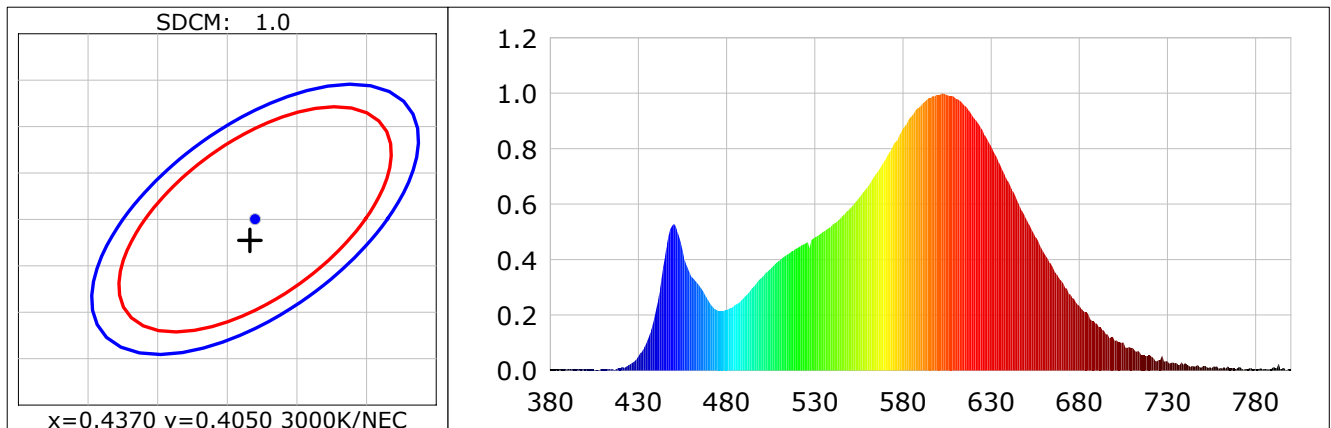
R1 =80 R2 =92 R3 =94 R4 =79 R5 =81 R6 =91 R7 =80 R8 =55

R9 =1 R10=82 R11=79 R12=74 R13=83 R14=98 R15=72

Color Quality Scale:  $Q_a=82.0$ ,  $Q_f=83.8$ ,  $Q_p=82.7$ ,  $Q_g=90.2$

Q1 =77 Q2 =94 Q3 =84 Q4 =80 Q5 =83 Q6 =84 Q7 =83 Q8 =86

Q9 =94 Q10=91 Q11=86 Q12=83 Q13=81 Q14=70 Q15=72



### Photometric Parameters

Luminous Flux: 1745.41 lm  
EEI: 0.17

Efficiency: 80.81 lm/W

Radiant Power: 5.189 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.50V

Current: 0.1720A

Power: 21.60W

Power Factor: 0.5470

Frequency: 50.00Hz

### Test Infomation

Scan Range: 380~800:1nm

Stabilization Time: 0 Sec

Max of Signal: 46988 (3475)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$

CCD Integration Time: 1296.09 ms

Condition: Tx:0.0'C, Ti:0.0'C, R.H.:60%

Test Lab:

Operator:

Test Device: Inventfine CMS-2S (Plus)

Test Time: 2021-07-05 17:42:00

Inspector:

## Lightsource Test Report

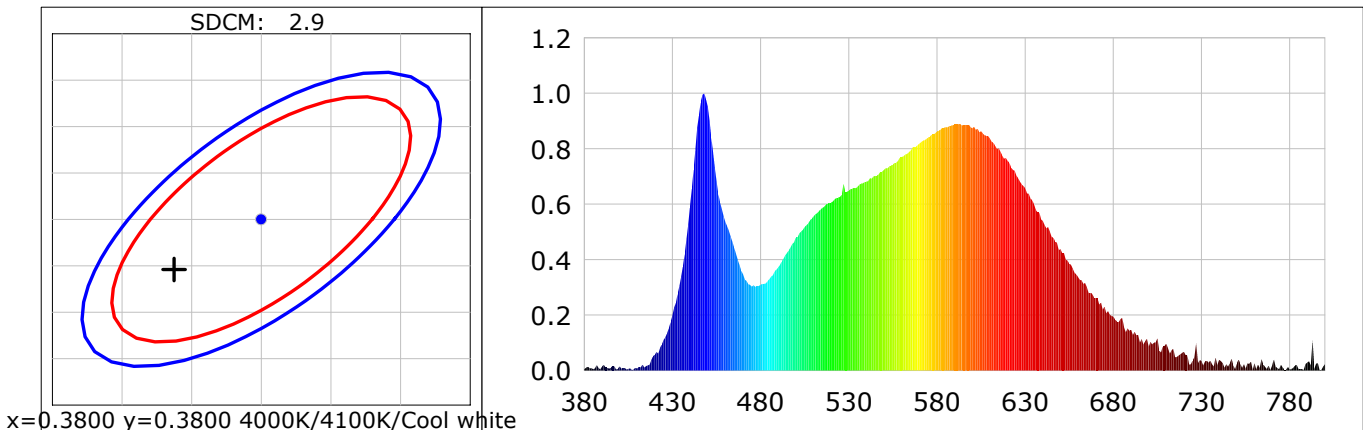
### Product Infomation

Product Type: H 6W 4000K 圆明

Product Number: 19

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3737$   $y=0.3746$   $u(u')=0.2215$   $v=0.3331$   $v'=0.4996$   
 CCT:  $T_c=4173K$  ( $duv=0.00101$ ) Color Ratio:  $R=0.177$   $G=0.784$   $B=0.039$   
 Peak Wavelength: 447.7nm Half Bandwidth: 23.7nm  
 Dominant Wavelength: 577.8nm Color Purity: 0.246  
 CRI:  $R_a=83.3$  TM30:  $R_f=83$ ,  $R_g=96$   
 $R_1=81$   $R_2=89$   $R_3=95$   $R_4=83$   $R_5=82$   $R_6=86$   $R_7=86$   $R_8=65$   
 $R_9=7$   $R_{10}=74$   $R_{11}=82$   $R_{12}=67$   $R_{13}=83$   $R_{14}=97$   $R_{15}=75$   
 Color Quality Scale:  $Q_a=83.3$ ,  $Q_f=83.7$ ,  $Q_p=83.0$ ,  $Q_g=92.5$   
 $Q_1=82$   $Q_2=99$   $Q_3=82$   $Q_4=79$   $Q_5=83$   $Q_6=85$   $Q_7=86$   $Q_8=90$   
 $Q_9=98$   $Q_{10}=89$   $Q_{11}=86$   $Q_{12}=84$   $Q_{13}=84$   $Q_{14}=72$   $Q_{15}=76$



### Photometric Parameters

Luminous Flux: 482.71 lm  
EEI: 0.13

Efficiency: 86.20 lm/W  
Energy Efficiency Class: A+ (EU 874-2012)

Radiant Power: 1.468 W

### Electric Parameters

Voltage: 229.70V  
Power Factor: 0.5110

Current: 0.0470A  
Frequency: 50.00Hz

Power: 5.60W

### Test Infomation

Scan Range: 380~800:1nm  
Stabilization Time: 0 Sec  
Max of Signal: 35750 (3863)

Photometric Method: sphere-spectroradiometer  
Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
CCD Integration Time: 4038.38 ms

Condition: Tx:0.0'C, Ti:0.0'C, R.H.:60%  
Test Lab:  
Operator:

Test Device: Inventfine CMS-2S (Plus)  
Test Time: 2021-07-05 17:45:00  
Inspector:

## Lightsource Test Report

### Product Information

Product Type: H 12W 3000K 圆明

Product Number: 20

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4352$   $y=0.4024$   $u(u')=0.2502$   $v=0.3470$   $v'=0.5205$

CCT:  $T_c=3015K$  ( $duv=-0.00044$ )

Color Ratio:  $R=0.227$   $G=0.745$   $B=0.028$

Peak Wavelength: 603.2nm

Half Bandwidth: 119.6nm

Dominant Wavelength: 582.9nm

Color Purity: 0.514

CRI:  $R_a=81.3$

TM30:  $R_f=82$ ,  $R_g=94$

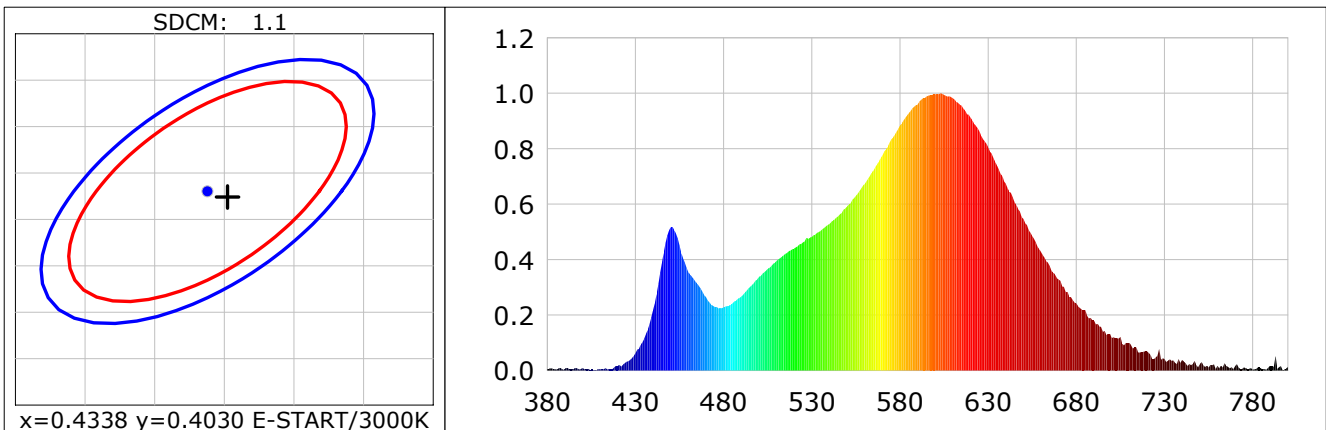
$R_1=80$   $R_2=91$   $R_3=94$   $R_4=79$   $R_5=81$   $R_6=90$   $R_7=80$   $R_8=55$

$R_9=0$   $R_{10}=81$   $R_{11}=78$   $R_{12}=74$   $R_{13}=82$   $R_{14}=98$   $R_{15}=72$

Color Quality Scale:  $Q_a=81.6$ ,  $Q_f=83.4$ ,  $Q_p=82.2$ ,  $Q_g=89.9$

$Q_1=77$   $Q_2=94$   $Q_3=84$   $Q_4=80$   $Q_5=82$   $Q_6=83$   $Q_7=83$   $Q_8=86$

$Q_9=94$   $Q_{10}=91$   $Q_{11}=86$   $Q_{12}=83$   $Q_{13}=81$   $Q_{14}=70$   $Q_{15}=72$



### Photometric Parameters

Luminous Flux: 880.94 lm  
EEI: 0.17

Efficiency: 72.80 lm/W

Radiant Power: 2.635 W

Energy Efficiency Class: A (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.1030A

Power: 12.10W

Power Factor: 0.5120

Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm

Stabilization Time: 0 Sec

Max of Signal: 48216 (3769)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$

CCD Integration Time: 2644.73 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%

Test Lab:

Operator:

Test Device: Inventfine CMS-2S (Plus)

Test Time: 2021-07-05 17:46:31

Inspector:

## Lightsource Test Report

### Product Infomation

Product Type: H 18W 4000K 圆明

Product Number: 21

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3734$   $y=0.3752$   $u(u')=0.2211$   $v=0.3332$   $v'=0.4999$

CCT:  $T_c=4188K$  ( $duv=0.00141$ )

Color Ratio:  $R=0.174$   $G=0.789$   $B=0.037$

Peak Wavelength: 449.7nm

Half Bandwidth: 22.3nm

Dominant Wavelength: 577.5nm

Color Purity: 0.247

CRI:  $R_a=81.6$

TM30:  $R_f=81$ ,  $R_g=95$

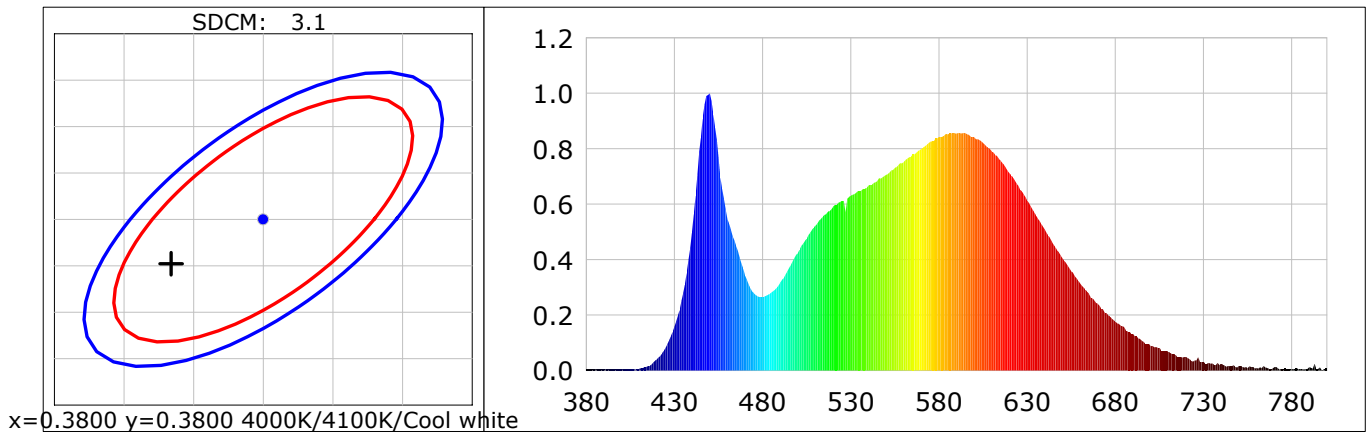
$R_1=79$   $R_2=88$   $R_3=94$   $R_4=81$   $R_5=80$   $R_6=83$   $R_7=85$   $R_8=63$

$R_9=1$   $R_{10}=71$   $R_{11}=79$   $R_{12}=61$   $R_{13}=81$   $R_{14}=97$   $R_{15}=73$

Color Quality Scale:  $Q_a=81.6$ ,  $Q_f=81.9$ ,  $Q_p=81.3$ ,  $Q_g=91.7$

$Q_1=81$   $Q_2=98$   $Q_3=79$   $Q_4=76$   $Q_5=81$   $Q_6=82$   $Q_7=84$   $Q_8=88$

$Q_9=97$   $Q_{10}=88$   $Q_{11}=84$   $Q_{12}=83$   $Q_{13}=82$   $Q_{14}=70$   $Q_{15}=74$



### Photometric Parameters

Luminous Flux: 1867.01 lm  
EEI: 0.13

Efficiency: 102.58 lm/W

Radiant Power: 5.594 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.1480A

Power: 18.20W

Power Factor: 0.5330

Frequency: 50.00Hz

### Test Infomation

Scan Range: 380~800:1nm

Stabilization Time: 0 Sec

Max of Signal: 45091 (3454)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$

CCD Integration Time: 1263.77 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%

Test Lab:

Operator:

Test Device: Inventfine CMS-2S (Plus)

Test Time: 2021-07-05 17:48:05

Inspector:

## Lightsource Test Report

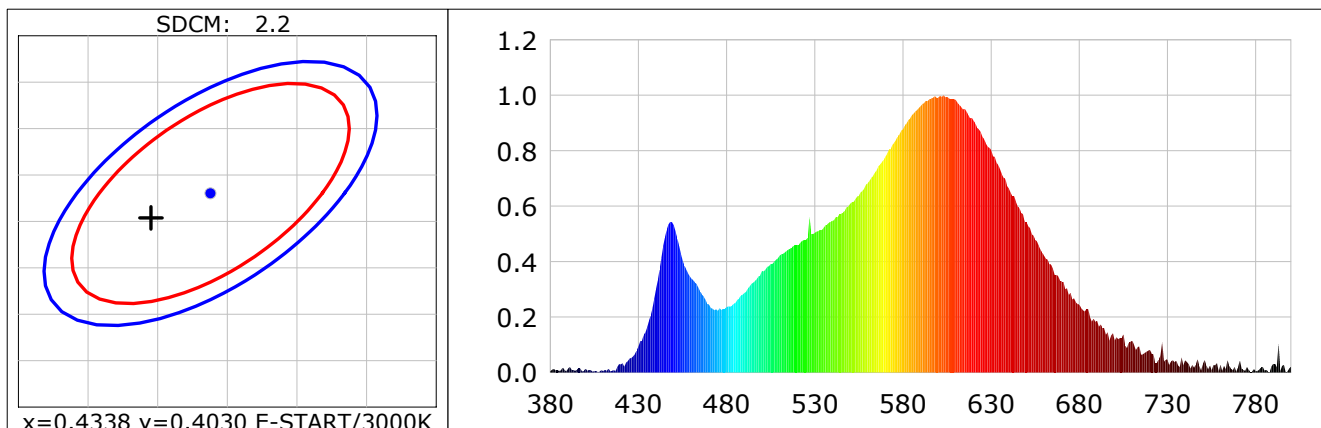
### Product Information

Product Type: H 6W 3000K 方明

Product Number: 22

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4295$   $y=0.4004$   $u(u')=0.2474$   $v=0.3459$   $v'(v')=0.5188$   
 CCT:  $T_c=3099K$  ( $duv=-0.00042$ ) Color Ratio:  $R=0.222$   $G=0.749$   $B=0.029$   
 Peak Wavelength: 603.0nm Half Bandwidth: 123.8nm  
 Dominant Wavelength: 582.6nm Color Purity: 0.491  
 CRI:  $R_a=82.2$  TM30:  $R_f=83$ ,  $R_g=95$   
 $R_1=80$   $R_2=91$   $R_3=95$   $R_4=81$   $R_5=82$   $R_6=90$   $R_7=81$   $R_8=57$   
 $R_9=2$   $R_{10}=81$   $R_{11}=80$   $R_{12}=75$   $R_{13}=83$   $R_{14}=98$   $R_{15}=72$   
 Color Quality Scale:  $Q_a=82.4$ ,  $Q_f=84.0$ ,  $Q_p=83.0$ ,  $Q_g=90.7$   
 $Q_1=77$   $Q_2=95$   $Q_3=85$   $Q_4=81$   $Q_5=84$   $Q_6=84$   $Q_7=84$   $Q_8=87$   
 $Q_9=95$   $Q_{10}=90$   $Q_{11}=86$   $Q_{12}=83$   $Q_{13}=82$   $Q_{14}=70$   $Q_{15}=73$



### Photometric Parameters

Luminous Flux: 472.26 lm  
EEI: 0.13

Efficiency: 82.85 lm/W

Radiant Power: 1.421 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.70V

Current: 0.0480A

Power: 5.70W

Power Factor: 0.5190

Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 38907 (3888)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 CCD Integration Time: 4008.36 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2021-07-05 17:50:43  
 Inspector:

## Lightsource Test Report

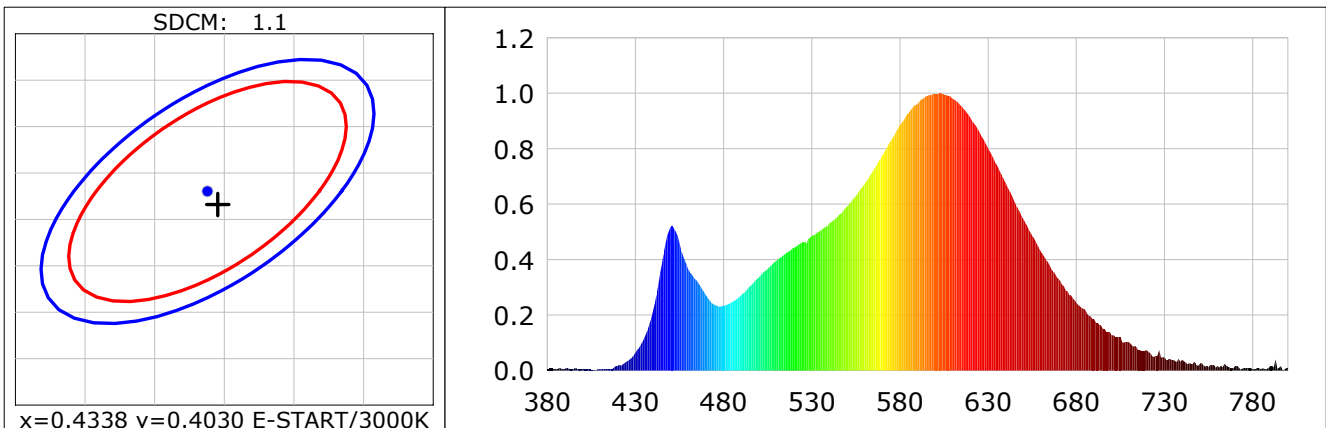
### Product Information

Product Type: H 12W 3000K 方明

Product Number: 23

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4345$   $y=0.4016$   $u(u')=0.2501$   $v=0.3467$   $v'=0.5200$   
 CCT:  $T_c=3021K$  ( $duv=-0.00066$ ) Color Ratio:  $R=0.226$   $G=0.745$   $B=0.029$   
 Peak Wavelength: 602.8nm Half Bandwidth: 120.1nm  
 Dominant Wavelength: 602.3nm Color Purity: 0.510  
 CRI:  $R_a=81.4$  TM30:  $R_f=82$ ,  $R_g=94$   
 $R_1=80$   $R_2=92$   $R_3=94$   $R_4=79$   $R_5=81$   $R_6=91$   $R_7=80$   $R_8=55$   
 $R_9=0$   $R_{10}=82$   $R_{11}=78$   $R_{12}=74$   $R_{13}=83$   $R_{14}=97$   $R_{15}=72$   
 Color Quality Scale:  $Q_a=81.7$ ,  $Q_f=83.5$ ,  $Q_p=82.3$ ,  $Q_g=90.0$   
 $Q_1=77$   $Q_2=94$   $Q_3=84$   $Q_4=80$   $Q_5=82$   $Q_6=83$   $Q_7=83$   $Q_8=86$   
 $Q_9=94$   $Q_{10}=91$   $Q_{11}=86$   $Q_{12}=83$   $Q_{13}=81$   $Q_{14}=70$   $Q_{15}=72$



### Photometric Parameters

Luminous Flux: 1166.24 lm  
EEI: 0.14

Efficiency: 94.05 lm/W

Radiant Power: 3.504 W

Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V

Current: 0.1030A

Power: 12.40W

Power Factor: 0.5220

Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 44758 (3589)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 CCD Integration Time: 1857.07 ms

Condition: Tx:0.0°C, Ti:0.0°C, R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2021-07-05 17:52:04  
 Inspector:

## Lightsource Test Report

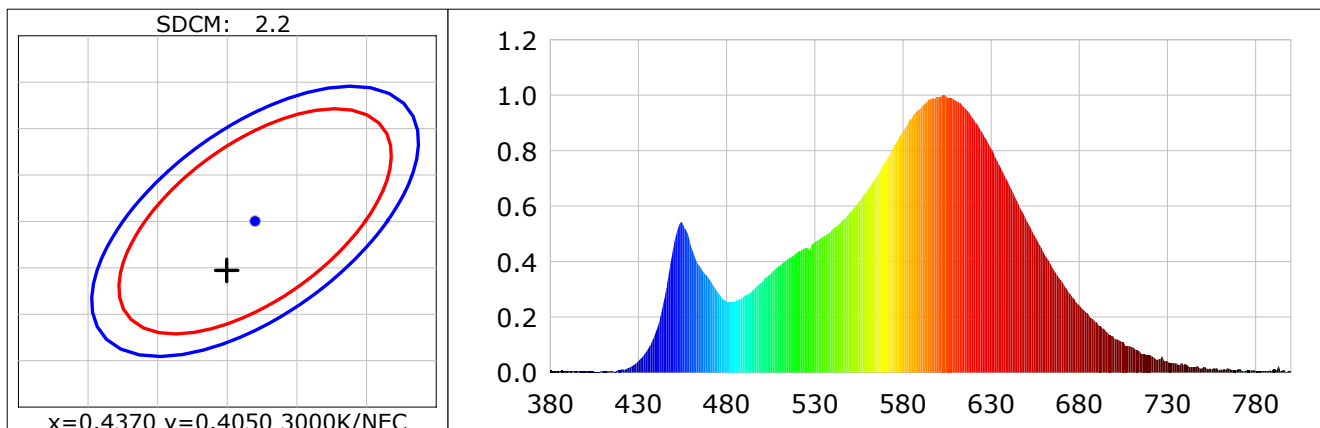
### Product Information

Product Type: H 18W 3000K 方明

Product Number: 24

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.4350$   $y=0.3997$   $u(u')=0.2512$   $v=0.3462$   $v'=0.5194$   
 CCT:  $T_c=2998K$  ( $duv=-0.00148$ ) Color Ratio:  $R=0.230$   $G=0.740$   $B=0.031$   
 Peak Wavelength: 602.4nm Half Bandwidth: 116.8nm  
 Dominant Wavelength: 583.4nm Color Purity: 0.505  
 CRI:  $R_a=81.8$  TM30:  $R_f=82$ ,  $R_g=93$   
 $R_1=81$   $R_2=93$   $R_3=92$   $R_4=79$   $R_5=82$   $R_6=93$   $R_7=79$   $R_8=55$   
 $R_9=3$   $R_{10}=86$   $R_{11}=78$   $R_{12}=75$   $R_{13}=84$   $R_{14}=96$   $R_{15}=73$   
 Color Quality Scale:  $Q_a=81.9$ ,  $Q_f=83.7$ ,  $Q_p=82.6$ ,  $Q_g=89.7$   
 $Q_1=77$   $Q_2=94$   $Q_3=85$   $Q_4=79$   $Q_5=81$   $Q_6=82$   $Q_7=83$   $Q_8=86$   
 $Q_9=94$   $Q_{10}=92$   $Q_{11}=87$   $Q_{12}=83$   $Q_{13}=81$   $Q_{14}=71$   $Q_{15}=73$



### Photometric Parameters

Luminous Flux: 1731.45 lm Efficiency: 98.38 lm/W Radiant Power: 5.221 W  
 EEI: 0.14 Energy Efficiency Class: A+ (EU 874-2012)

### Electric Parameters

Voltage: 229.60V Current: 0.1460A Power: 17.60W  
 Power Factor: 0.5230 Frequency: 50.00Hz

### Test Information

Scan Range: 380~800:1nm  
 Stabilization Time: 0 Sec  
 Max of Signal: 44895 (3427)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 CCD Integration Time: 1247.11 ms

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2021-07-05 17:53:14  
 Inspector: