

Lightsource Test Report

Product Information

Product Number: 77

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.4392$ $y=0.4068$ $u(u')=0.2508$ $v=0.3485$ $v'=0.5228$ CCT: $T_c=2985K$ ($duv=0.00076$)Color Ratio: $R=0.232$ $G=0.744$ $B=0.024$

Peak Wavelength: 605.2nm

Half Bandwidth: 132.4nm

Dominant Wavelength: 582.6nm

Color Purity: 0.539

Central Wave: 592.2nm

Gravity Wave: 596.5nm

CRI: $R_a=83.6$ TM30: $R_f=85$, $R_g=96$ GAI: $GAI_BB_8=92.0$, $GAI_BB_15=99.3$, $GAI_EES=52.5$

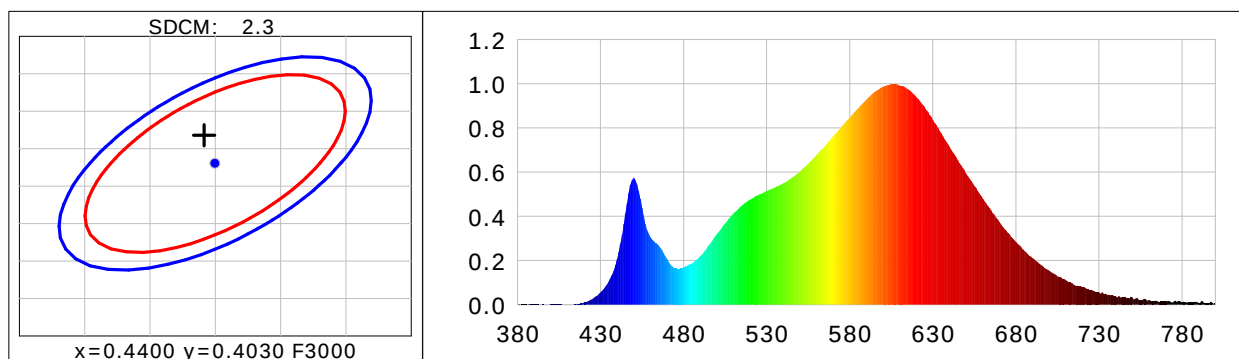
$R_1=82$	$R_2=91$	$R_3=97$	$R_4=83$	$R_5=83$	$R_6=90$	$R_7=83$	$R_8=61$
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$R_9=11$	$R_{10}=79$	$R_{11}=83$	$R_{12}=71$	$R_{13}=84$	$R_{14}=99$	$R_{15}=75$	
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Color Quality Scale: $Q_a=83.5$, $Q_f=85.2$, $Q_p=84.5$, $Q_g=91.7$

$Q_1=79$	$Q_2=95$	$Q_3=84$	$Q_4=82$	$Q_5=84$	$Q_6=85$	$Q_7=85$	$Q_8=87$
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$Q_9=96$	$Q_{10}=90$	$Q_{11}=88$	$Q_{12}=85$	$Q_{13}=84$	$Q_{14}=73$	$Q_{15}=75$	
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Photometric Parameters

Luminous Flux: 1632.2 lm

Efficiency: 127.52 lm/W

Radiant Power: 4.952 W

Total mains efficacy: 149.96 lm/W Energy Efficiency Class: D (EU 2019/2015)

Auxiliary lamp correction factor: 1.00

Electric Parameters

Voltage: 230.50V

Current: 0.0690A

Power: 12.80W

Power Factor: 0.8050

Frequency: 49.98Hz

Test Information

Scan Range: 380~800:1nm

Stabilization Time: 0 ms ALC.: 1.0000

Max of Signal: 53572 (3558)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 2 π

CCD Integration Time: 628.53 ms

Lightsource Test Report

Product Information

Product Number: 78

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3892$ $y=0.3802$ $u(u')=0.2295$ $v=0.3363$ $v'=0.5044$ CCT: $T_c=3796K$ ($duv=-0.00083$)Color Ratio: $R=0.195$ $G=0.769$ $B=0.035$

Peak Wavelength: 449.8nm

Half Bandwidth: 17.4nm

Dominant Wavelength: 580.2nm

Color Purity: 0.309

Central Wave: 451.0nm

Gravity Wave: 450.7nm

CRI: $R_a=85.3$ TM30: $R_f=85$, $R_g=97$ GAI: $GAI_BB_8=95.2$, $GAI_BB_15=101.6$, $GAI_EES=71.8$

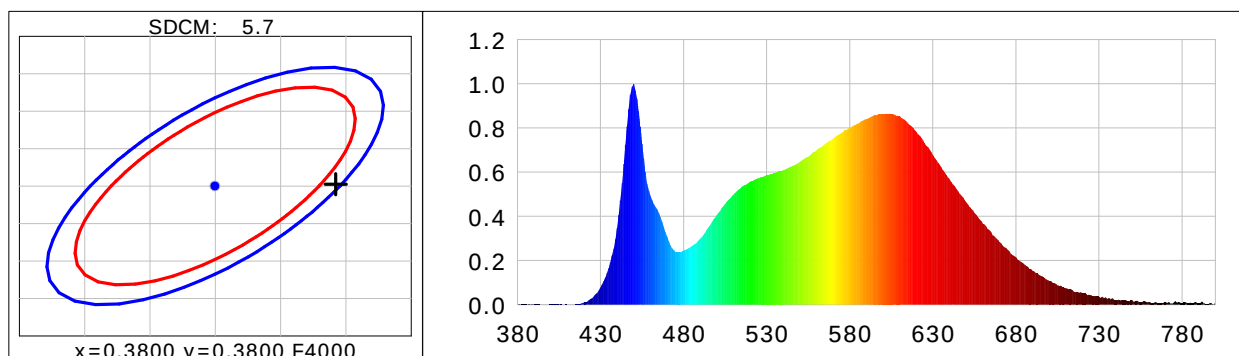
$R_1=84$	$R_2=91$	$R_3=96$	$R_4=85$	$R_5=85$	$R_6=88$	$R_7=86$	$R_8=67$
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$R_9=17$	$R_{10}=79$	$R_{11}=85$	$R_{12}=67$	$R_{13}=86$	$R_{14}=98$	$R_{15}=78$	
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Color Quality Scale: $Q_a=84.7$, $Q_f=84.8$, $Q_p=85.0$, $Q_g=94.2$

$Q_1=83$	$Q_2=98$	$Q_3=81$	$Q_4=80$	$Q_5=85$	$Q_6=87$	$Q_7=88$	$Q_8=90$
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$Q_9=98$	$Q_{10}=90$	$Q_{11}=87$	$Q_{12}=86$	$Q_{13}=85$	$Q_{14}=75$	$Q_{15}=78$	
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Photometric Parameters

Luminous Flux: 1725.9 lm

Efficiency: 137.85 lm/W

Radiant Power: 5.255 W

Total mains efficacy: 162.11 lm/W Energy Efficiency Class: C (EU 2019/2015)

Auxiliary lamp correction factor: 1.00

Electric Parameters

Voltage: 230.50V

Current: 0.0680A

Power: 12.52W

Power Factor: 0.8030

Frequency: 49.99Hz

Test Information

Scan Range: 380~800:1nm

Stabilization Time: 0 ms ALC.: 1.0000

Max of Signal: 45798 (3344)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 2 π

CCD Integration Time: 435.51 ms

Condition: Tx:29.4°C, Ti:28.1°C, R.H.:60%
Test Lab:
Operator:Test Device: CMS-2S (Plus)
Test Time: 2023-10-25 08:33:11
Inspector:

Lightsource Test Report

Product Information

Product Number: 79

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3470$ $y=0.3592$ $u(u')=0.2098$ $v=0.3258$ $v'=0.4886$ CCT: $T_c=4955K$ ($duv=0.00302$)Color Ratio: $R=0.158$ $G=0.797$ $B=0.045$

Peak Wavelength: 448.9nm

Half Bandwidth: 17.1nm

Dominant Wavelength: 570.6nm

Color Purity: 0.119

Central Wave: 449.7nm

Gravity Wave: 449.5nm

CRI: $R_a=83.1$ TM30: $R_f=84$, $R_g=95$ GAI: $GAI_BB_8=89.3$, $GAI_BB_15=95.4$, $GAI_EES=81.1$

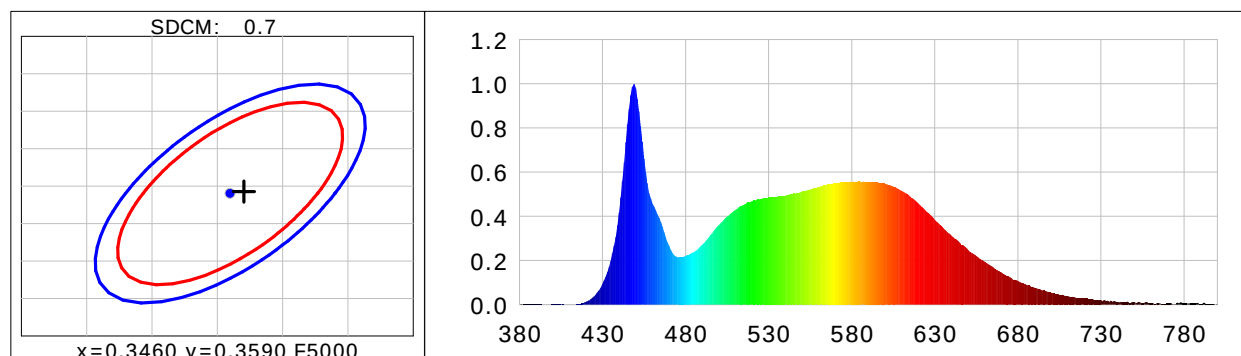
$R_1=81$	$R_2=88$	$R_3=94$	$R_4=83$	$R_5=82$	$R_6=84$	$R_7=87$	$R_8=67$
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$R_9=5$	$R_{10}=72$	$R_{11}=82$	$R_{12}=58$	$R_{13}=83$	$R_{14}=97$	$R_{15}=75$	
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Color Quality Scale: $Q_a=83.0$, $Q_f=83.2$, $Q_p=82.5$, $Q_g=91.7$

$Q_1=82$	$Q_2=99$	$Q_3=80$	$Q_4=76$	$Q_5=82$	$Q_6=84$	$Q_7=86$	$Q_8=90$
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$Q_9=98$	$Q_{10}=89$	$Q_{11}=86$	$Q_{12}=85$	$Q_{13}=84$	$Q_{14}=72$	$Q_{15}=76$	
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Photometric Parameters

Luminous Flux: 1728.1 lm

Efficiency: 135.22 lm/W

Radiant Power: 5.286 W

Total mains efficacy: 159.02 lm/W Energy Efficiency Class: D (EU 2019/2015)

Auxiliary lamp correction factor: 1.00

Electric Parameters

Voltage: 230.50V

Current: 0.0690A

Power: 12.78W

Power Factor: 0.8060

Frequency: 49.99Hz

Test Information

Scan Range: 380~800:1nm

Stabilization Time: 0 ms ALC.: 1.0000

Max of Signal: 53159 (3345)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 2 π

CCD Integration Time: 370.18 ms

Condition: Tx:29.4°C, Ti:28.1°C, R.H.:60%
Test Lab:
Operator:Test Device: CMS-2S (Plus)
Test Time: 2023-10-25 08:33:36
Inspector:

Lightsource Test Report

Product Information

Product Number: 80

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.4395$ $y=0.4068$ $u(u')=0.2511$ $v=0.3486$ $v'=0.5228$ CCT: $T_c=2979K$ ($duv=0.00074$)Color Ratio: $R=0.232$ $G=0.744$ $B=0.024$

Peak Wavelength: 607.9nm

Half Bandwidth: 131.5nm

Dominant Wavelength: 582.7nm

Color Purity: 0.540

Central Wave: 592.2nm

Gravity Wave: 597.5nm

CRI: $R_a=83.3$ TM30: $R_f=85$, $R_g=96$ GAI: $GAI_BB_8=92.1$, $GAI_BB_15=99.1$, $GAI_EES=52.4$

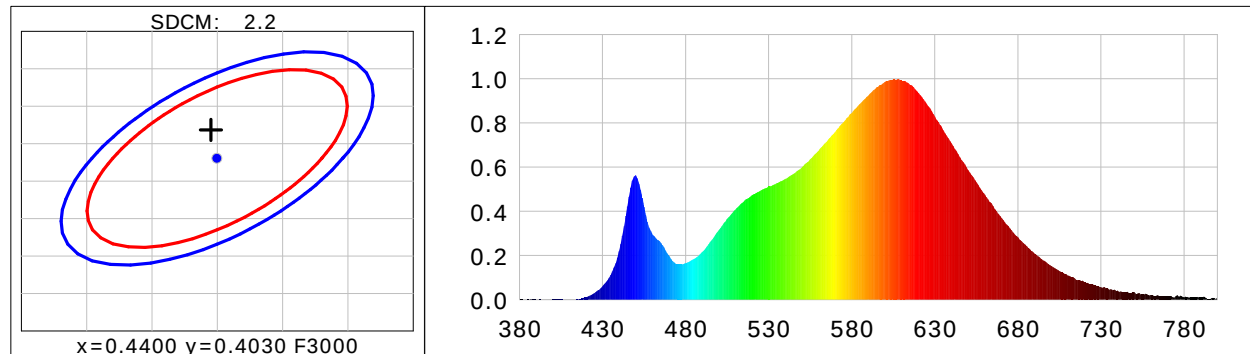
$R_1=82$	$R_2=90$	$R_3=97$	$R_4=83$	$R_5=82$	$R_6=89$	$R_7=83$	$R_8=60$
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$R_9=10$	$R_{10}=79$	$R_{11}=82$	$R_{12}=71$	$R_{13}=84$	$R_{14}=99$	$R_{15}=74$	
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Color Quality Scale: $Q_a=83.2$, $Q_f=84.9$, $Q_p=84.3$, $Q_g=91.7$

$Q_1=79$	$Q_2=95$	$Q_3=83$	$Q_4=81$	$Q_5=84$	$Q_6=84$	$Q_7=84$	$Q_8=87$
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$Q_9=96$	$Q_{10}=90$	$Q_{11}=87$	$Q_{12}=85$	$Q_{13}=84$	$Q_{14}=73$	$Q_{15}=75$	
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Photometric Parameters

Luminous Flux: 2086.4 lm

Efficiency: 125.23 lm/W

Radiant Power: 6.326 W

Total mains efficacy: 147.27 lm/W Energy Efficiency Class: D (EU 2019/2015)

Auxiliary lamp correction factor: 1.00

Electric Parameters

Voltage: 230.50V

Current: 0.0870A

Power: 16.66W

Power Factor: 0.8260

Frequency: 49.99Hz

Test Information

Scan Range: 380~800:1nm

Stabilization Time: 0 ms ALC.: 1.0000

Max of Signal: 45077 (3372)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 2 π

CCD Integration Time: 411.84 ms

Condition: Tx:29.4°C, Ti:28.1°C, R.H.:60%
Test Lab:
Operator:Test Device: CMS-2S (Plus)
Test Time: 2023-10-25 08:34:22
Inspector:

Lightsource Test Report

Product Information

Product Number: 82

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3889$ $y=0.3803$ $u(u')=0.2293$ $v=0.3363$ $v'=0.5044$ CCT: $T_c=3803K$ ($duv=-0.00072$)Color Ratio: $R=0.195$ $G=0.770$ $B=0.035$

Peak Wavelength: 449.7nm

Half Bandwidth: 17.5nm

Dominant Wavelength: 580.2nm

Color Purity: 0.309

Central Wave: 450.8nm

Gravity Wave: 450.6nm

CRI: $R_a=85.1$ TM30: $R_f=85$, $R_g=97$ GAI: $GAI_BB_8=95.1$, $GAI_BB_15=101.4$, $GAI_EES=71.8$

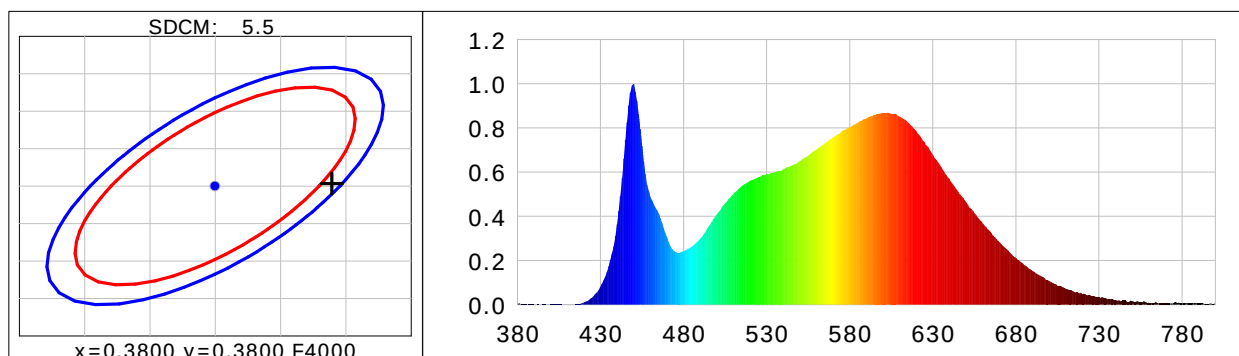
$R_1=84$	$R_2=91$	$R_3=96$	$R_4=85$	$R_5=84$	$R_6=88$	$R_7=86$	$R_8=66$
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$R_9=16$	$R_{10}=79$	$R_{11}=85$	$R_{12}=66$	$R_{13}=86$	$R_{14}=98$	$R_{15}=78$	
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Color Quality Scale: $Q_a=84.6$, $Q_f=84.7$, $Q_p=84.9$, $Q_g=94.2$

$Q_1=83$	$Q_2=98$	$Q_3=81$	$Q_4=80$	$Q_5=85$	$Q_6=86$	$Q_7=87$	$Q_8=90$
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$Q_9=98$	$Q_{10}=90$	$Q_{11}=87$	$Q_{12}=86$	$Q_{13}=85$	$Q_{14}=75$	$Q_{15}=78$	
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Photometric Parameters

Luminous Flux: 2203.0 lm

Efficiency: 135.90 lm/W

Radiant Power: 6.690 W

Total mains efficacy: 159.82 lm/W Energy Efficiency Class: D (EU 2019/2015)

Auxiliary lamp correction factor: 1.00

Electric Parameters

Voltage: 230.60V

Current: 0.0850A

Power: 16.21W

Power Factor: 0.8240

Frequency: 49.99Hz

Test Information

Scan Range: 380~800:1nm

Stabilization Time: 0 ms ALC.: 1.0000

Max of Signal: 46470 (3287)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 2 π

CCD Integration Time: 347.13 ms

Condition: Tx:29.4°C, Ti:28.1°C, R.H.:60%
Test Lab:
Operator:Test Device: CMS-2S (Plus)
Test Time: 2023-10-25 08:35:12
Inspector:

Lightsource Test Report

Product Information

Product Number: 83

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3469$ $y=0.3591$ $u(u')=0.2098$ $v=0.3257$ $v'=0.4885$ CCT: $T_c=4958K$ ($duv=0.00299$)Color Ratio: $R=0.158$ $G=0.797$ $B=0.044$

Peak Wavelength: 448.7nm

Half Bandwidth: 17.4nm

Dominant Wavelength: 570.6nm

Color Purity: 0.119

Central Wave: 449.5nm

Gravity Wave: 449.3nm

CRI: $R_a=83.1$ TM30: $R_f=84$, $R_g=95$ GAI: $GAI_BB_8=89.5$, $GAI_BB_15=95.4$, $GAI_EES=81.3$

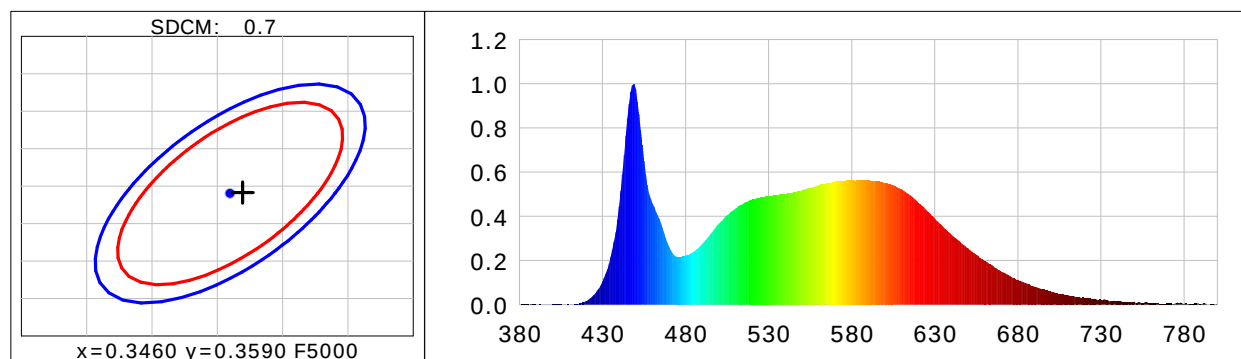
$R_1=81$	$R_2=88$	$R_3=93$	$R_4=83$	$R_5=82$	$R_6=84$	$R_7=87$	$R_8=67$
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$R_9=6$	$R_{10}=72$	$R_{11}=82$	$R_{12}=59$	$R_{13}=83$	$R_{14}=97$	$R_{15}=75$	
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Color Quality Scale: $Q_a=83.1$, $Q_f=83.3$, $Q_p=82.7$, $Q_g=91.9$

$Q_1=83$	$Q_2=99$	$Q_3=80$	$Q_4=77$	$Q_5=82$	$Q_6=84$	$Q_7=86$	$Q_8=90$
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$Q_9=98$	$Q_{10}=89$	$Q_{11}=86$	$Q_{12}=85$	$Q_{13}=84$	$Q_{14}=72$	$Q_{15}=76$	
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Photometric Parameters

Luminous Flux: 2178.7 lm

Efficiency: 130.93 lm/W

Radiant Power: 6.685 W

Total mains efficacy: 153.97 lm/W Energy Efficiency Class: D (EU 2019/2015)

Auxiliary lamp correction factor: 1.00

Electric Parameters

Voltage: 230.50V

Current: 0.0870A

Power: 16.64W

Power Factor: 0.8260

Frequency: 49.99Hz

Test Information

Scan Range: 380~800:1nm

Stabilization Time: 0 ms ALC.: 1.0000

Max of Signal: 52822 (3288)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 2 π

CCD Integration Time: 295.06 ms

Condition: Tx:29.4°C, Ti:28.1°C, R.H.:60%
Test Lab:
Operator:Test Device: CMS-2S (Plus)
Test Time: 2023-10-25 08:35:44
Inspector:

Lightsource Test Report

Product Information

Product Number: 84

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.4401$ $y=0.4076$ $u(u')=0.2511$ $v=0.3488$ $v'=0.5232$ CCT: $T_c=2977K$ ($duv=0.00097$)Color Ratio: $R=0.232$ $G=0.745$ $B=0.023$

Peak Wavelength: 605.6nm

Half Bandwidth: 131.1nm

Dominant Wavelength: 582.6nm

Color Purity: 0.544

Central Wave: 592.0nm

Gravity Wave: 596.7nm

CRI: $R_a=83.1$ TM30: $R_f=85$, $R_g=96$ GAI: $GAI_BB_8=91.5$, $GAI_BB_15=98.3$, $GAI_EES=52.0$

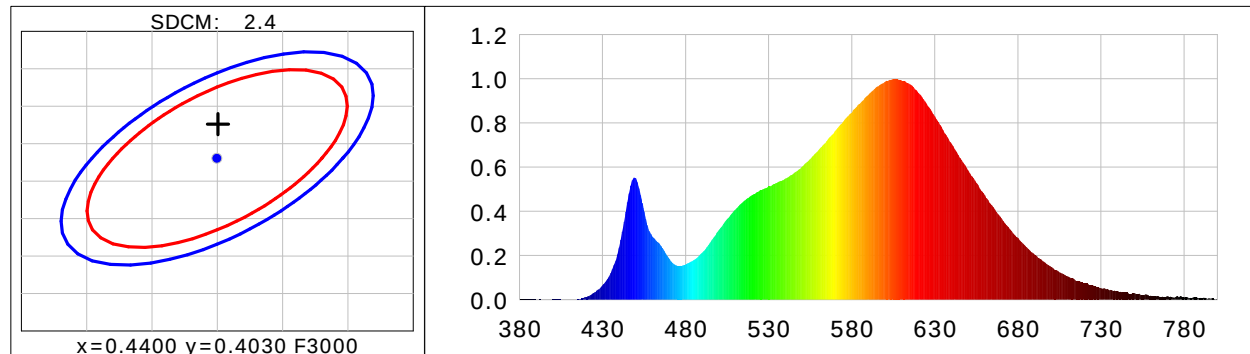
$R_1=81$	$R_2=90$	$R_3=97$	$R_4=82$	$R_5=82$	$R_6=89$	$R_7=83$	$R_8=60$
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$R_9=8$	$R_{10}=78$	$R_{11}=82$	$R_{12}=70$	$R_{13}=83$	$R_{14}=99$	$R_{15}=74$	
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Color Quality Scale: $Q_a=83.0$, $Q_f=84.8$, $Q_p=84.0$, $Q_g=91.5$

$Q_1=78$	$Q_2=95$	$Q_3=83$	$Q_4=81$	$Q_5=84$	$Q_6=84$	$Q_7=84$	$Q_8=87$
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$Q_9=96$	$Q_{10}=90$	$Q_{11}=87$	$Q_{12}=85$	$Q_{13}=84$	$Q_{14}=72$	$Q_{15}=74$	
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Photometric Parameters

Luminous Flux: 2676.6 lm

Efficiency: 119.92 lm/W

Radiant Power: 8.072 W

Total mains efficacy: 141.02 lm/W Energy Efficiency Class: D (EU 2019/2015)

Auxiliary lamp correction factor: 1.00

Electric Parameters

Voltage: 230.60V

Current: 0.1150A

Power: 22.32W

Power Factor: 0.8390

Frequency: 49.99Hz

Test Information

Scan Range: 380~800:1nm

Stabilization Time: 0 ms ALC.: 1.0000

Max of Signal: 45279 (3290)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 2 π

CCD Integration Time: 323.09 ms

Condition: Tx:29.4°C, Ti:28.1°C, R.H.:60%
Test Lab:
Operator:Test Device: CMS-2S (Plus)
Test Time: 2023-10-25 08:36:17
Inspector:

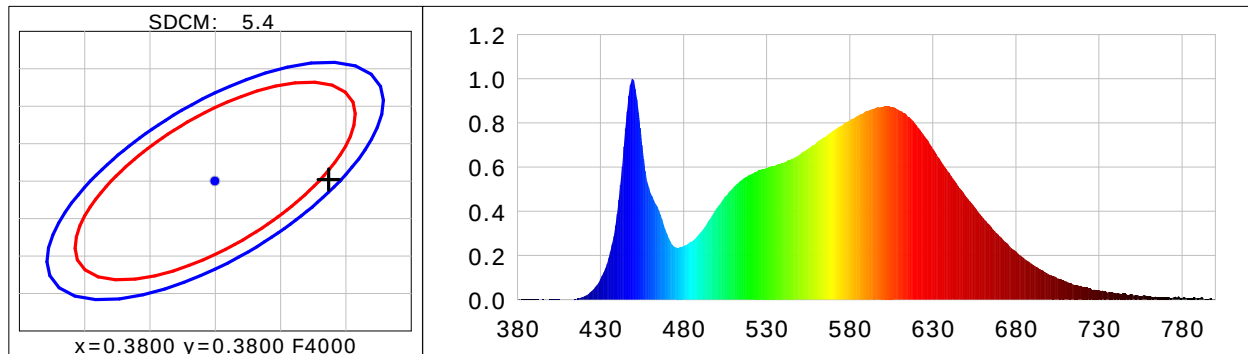
Lightsource Test Report

Product Information

Product Number: 85

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3887$ $y=0.3802$ $u(u')=0.2291$ $v=0.3362$ $v'=0.5043$
CCT: $T_c=3809K$ ($duv=-0.00071$) Color Ratio: $R=0.194$ $G=0.771$ $B=0.035$
Peak Wavelength: 449.4nm Half Bandwidth: 17.7nm
Dominant Wavelength: 580.1nm Color Purity: 0.308
Central Wave: 450.5nm Gravity Wave: 450.0nm
CRI: $R_a=85.0$ TM30: $R_f=85$, $R_g=97$
GAI: $GAI_BB_8=95.2$, $GAI_BB_15=101.3$, $GAI_EES=72.0$
 $R1=84$ $R2=91$ $R3=96$ $R4=85$ $R5=84$ $R6=88$ $R7=86$ $R8=67$
 $R9=16$ $R10=78$ $R11=85$ $R12=67$ $R13=86$ $R14=98$ $R15=78$
Color Quality Scale: $Q_a=84.6$, $Q_f=84.6$, $Q_p=85.0$, $Q_g=94.3$
 $Q1=83$ $Q2=98$ $Q3=81$ $Q4=80$ $Q5=85$ $Q6=86$ $Q7=87$ $Q8=90$
 $Q9=98$ $Q10=90$ $Q11=87$ $Q12=86$ $Q13=85$ $Q14=75$ $Q15=78$



Photometric Parameters

Luminous Flux: 2880.0 lm Efficiency: 133.33 lm/W Radiant Power: 8.788 W
Total mains efficacy: 156.80 lm/W Energy Efficiency Class: D (EU 2019/2015)
Auxiliary lamp correction factor: 1.00

Electric Parameters

Voltage: 230.50V Current: 0.1120A Power: 21.60W
Power Factor: 0.8370 Frequency: 49.99Hz

Test Information

Scan Range: 380~800:1nm Photometric Method: sphere-spectroradiometer
Stabilization Time: 0 ms ALC.: 1.0000 Photometric Condition: Sphere diameter: 1.50m, 2 π
Max of Signal: 47533 (3268) CCD Integration Time: 274.62 ms

Condition: Tx:29.4°C, Ti:28.1°C, R.H.:60%
Test Lab:
Operator:

Test Device: CMS-2S (Plus)
Test Time: 2023-10-25 08:36:46
Inspector:

Lightsource Test Report

Product Information

Product Number: 86

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3471$ $y=0.3595$ $u(u')=0.2097$ $v=0.3258$ $v'=0.4888$ CCT: $T_c=4954K$ ($duv=0.00312$)Color Ratio: $R=0.158$ $G=0.798$ $B=0.044$

Peak Wavelength: 448.3nm

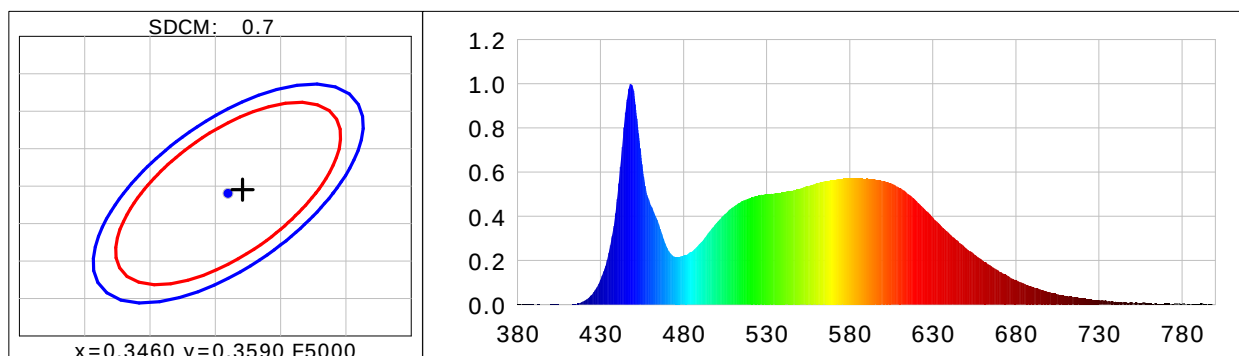
Half Bandwidth: 17.7nm

Dominant Wavelength: 570.6nm

Color Purity: 0.120

Central Wave: 449.1nm

Gravity Wave: 448.8nm

CRI: $R_a=82.9$ TM30: $R_f=84$, $R_g=95$ GAI: $GAI_BB_8=89.4$, $GAI_BB_15=95.2$, $GAI_EES=81.2$ $R1=81$ $R2=88$ $R3=93$ $R4=83$ $R5=82$ $R6=83$ $R7=87$ $R8=67$ $R9=5$ $R10=71$ $R11=82$ $R12=59$ $R13=82$ $R14=96$ $R15=75$ Color Quality Scale: $Q_a=83.0$, $Q_f=83.2$, $Q_p=82.7$, $Q_g=91.9$ $Q1=83$ $Q2=99$ $Q3=80$ $Q4=77$ $Q5=82$ $Q6=84$ $Q7=86$ $Q8=90$ $Q9=97$ $Q10=89$ $Q11=86$ $Q12=85$ $Q13=84$ $Q14=71$ $Q15=76$ 

Photometric Parameters

Luminous Flux: 2818.4 lm

Efficiency: 126.38 lm/W

Radiant Power: 8.621 W

Total mains efficacy: 148.63 lm/W Energy Efficiency Class: D (EU 2019/2015)

Auxiliary lamp correction factor: 1.00

Electric Parameters

Voltage: 230.60V

Current: 0.1150A

Power: 22.30W

Power Factor: 0.8390

Frequency: 49.99Hz

Test Information

Scan Range: 380~800:1nm

Stabilization Time: 0 ms ALC.: 1.0000

Max of Signal: 53311 (3222)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 2 π

CCD Integration Time: 233.42 ms

Condition: Tx:29.4°C, Ti:28.1°C, R.H.:60%
Test Lab:
Operator:Test Device: CMS-2S (Plus)
Test Time: 2023-10-25 08:37:12
Inspector: