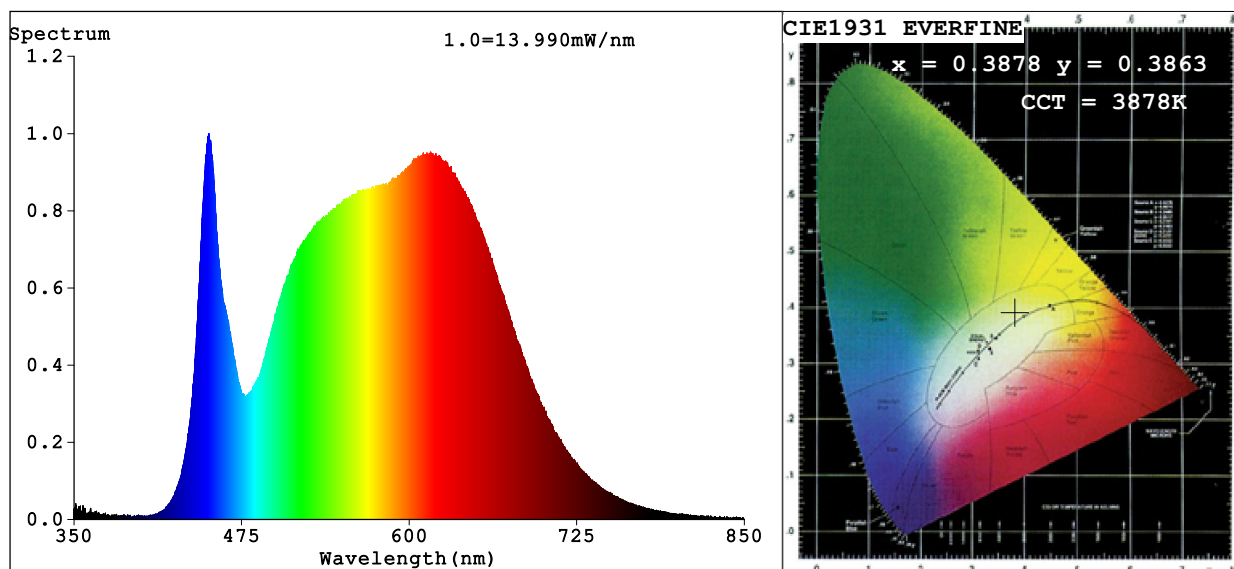


## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.3878$   $y=0.3863$   $u'=0.2261$   $v'=0.5068$   
 CCT=3878K (Duv=0.0023) Dominant WL:Ld =578.4nm Purity=32.3%  
 Ratio:R=19.9% G=76.4% B=3.7%; Peak WL:Lp=450.5nm FWHM=23.9nm  
 Render Index:Ra=91.8 CRI=87.9 TM30:Rf=91 Rg=99  
 R1 =92 R2 =93 R3 =94 R4 =93 R5 =91 R6 =90 R7 =95  
 R8 =86 R9 =63 R10=84 R11=92 R12=69 R13=92 R14=96 R15=89

### Photo Parameters:

Flux = 811.1 lm Eff. : 71.61 lm/W Fe = 2.740 W

### Electrical parameters:

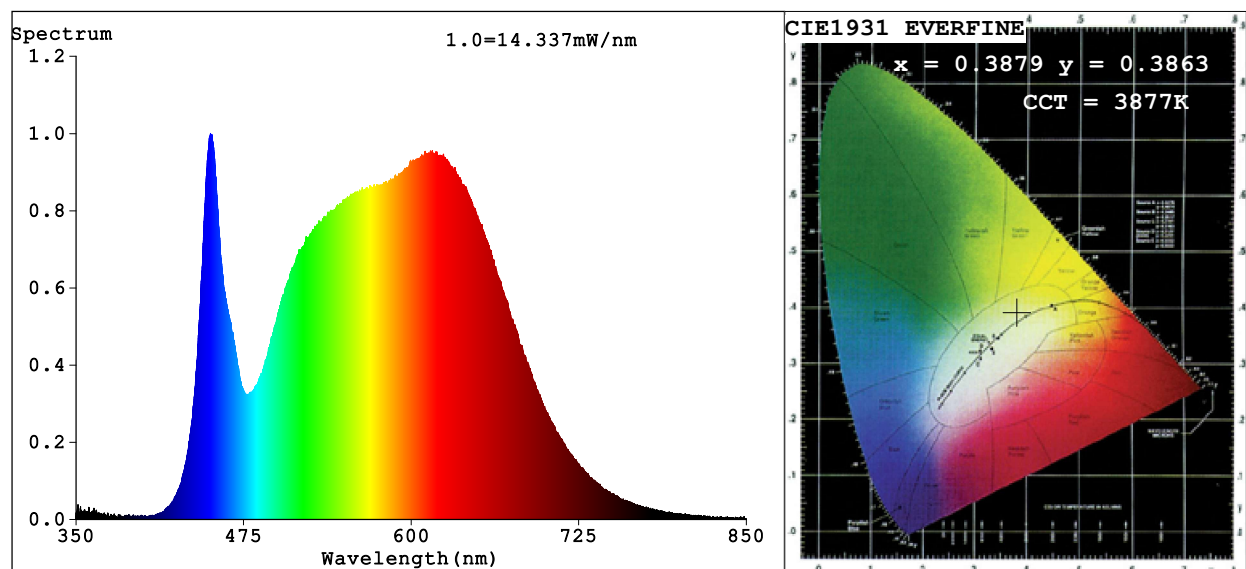
V = 230.15 V I = 0.05189 A P = 11.33 W PF = 0.9485

Status: Integral T = 500 ms Ip = 12050 (18%)

Model:Focalis Vex 7-9-11w  
 Tester:Sergio Carneros  
 Temperature:20Deg  
 Manufacturer:Luz Negra

Number:18° 11w 4000k  
 Date:2026-02-13 08:49:19  
 Humidity:50%  
 Remarks:1 unidad

## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.3879$   $y=0.3863$   $u'=0.2262$   $v'=0.5068$   
 CCT=3877K (Duv=0.0023) Dominant WL:Ld =578.4nm Purity=32.3%  
 Ratio:R=19.9% G=76.4% B=3.7%; Peak WL:Lp=450.2nm FWHM=24.0nm  
 Render Index:Ra=91.6 CRI=87.7 TM30:Rf=91 Rg=99  
 R1 =92 R2 =93 R3 =94 R4 =92 R5 =91 R6 =90 R7 =95  
 R8 =86 R9 =62 R10=83 R11=92 R12=69 R13=92 R14=96 R15=89

### Photo Parameters:

Flux = 835.2 lm Eff. : 74.03 lm/W Fe = 2.815 W

### Electrical parameters:

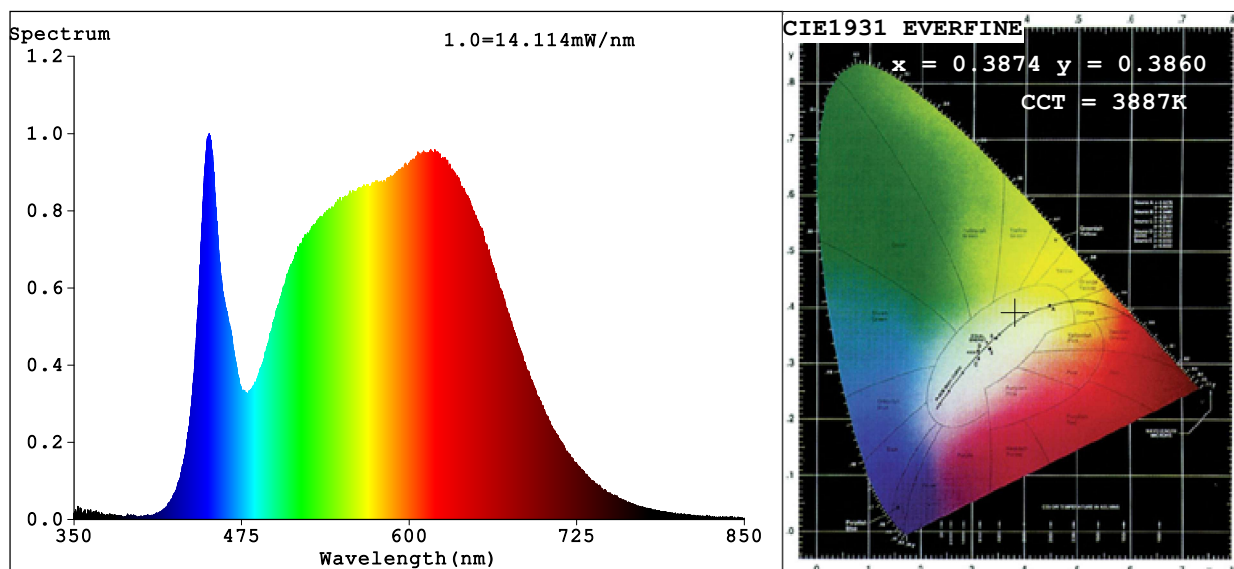
V = 230.14 V I = 0.05170 A P = 11.28 W PF = 0.9482

Status: Integral T = 500 ms Ip = 12470 (19%)

Model:Focalis Vex 7-9-11w  
 Tester:Sergio Carneros  
 Temperature:20Deg  
 Manufacturer:Luz Negra

Number:24° 11w 4000k  
 Date:2026-02-13 08:50:59  
 Humidity:50%  
 Remarks:1 unidad

## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.3874$   $y=0.3860$   $u'=0.2259$   $v'=0.5066$   
 CCT=3887K (Duv=0.0023) Dominant WL:Ld =578.4nm Purity=32.1%  
 Ratio:R=19.8% G=76.5% B=3.7%; Peak WL:Lp=450.9nm FWHM=24.6nm  
 Render Index:Ra=91.6 CRI=87.7 TM30:Rf=91 Rg=99  
 R1 =92 R2 =93 R3 =94 R4 =92 R5 =90 R6 =90 R7 =95  
 R8 =86 R9 =62 R10=83 R11=92 R12=69 R13=92 R14=96 R15=89

### Photo Parameters:

Flux = 825.8 lm Eff. : 73.20 lm/W Fe = 2.782 W

### Electrical parameters:

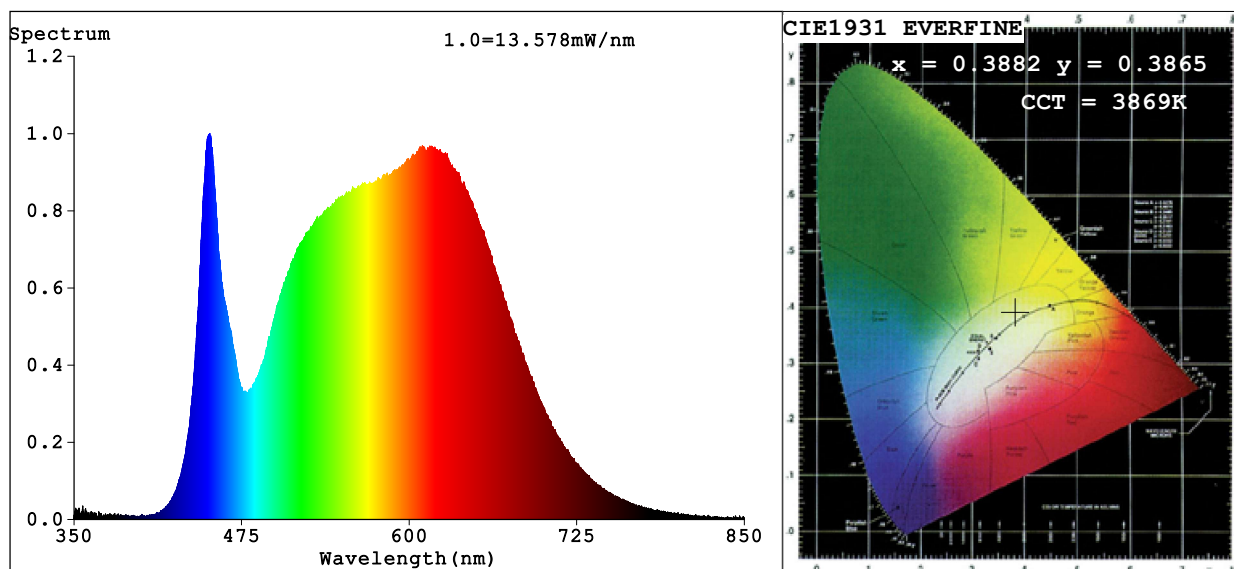
V = 230.15 V I = 0.05169 A P = 11.28 W PF = 0.9484

Status: Integral T = 500 ms Ip = 12305 (19%)

Model:Focalis Vex 7-9-11w  
 Tester:Sergio Carneros  
 Temperature:20Deg  
 Manufacturer:Luz Negra

Number:36° 11w 4000k  
 Date:2026-02-13 08:51:30  
 Humidity:50%  
 Remarks:1 unidad

## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.3882$   $y=0.3865$   $u'=0.2263$   $v'=0.5069$

CCT=3869K (Duv=0.0023) Dominant WL:Ld =578.5nm Purity=32.5%

Ratio:R=19.9% G=76.4% B=3.7%; Peak WL:Lp=451.2nm FWHM=24.2nm

Render Index:Ra=91.6 CRI=87.7 TM30:Rf=91 Rg=99

R1 =92 R2 =93 R3 =94 R4 =92 R5 =90 R6 =90 R7 =95

R8 =86 R9 =62 R10=83 R11=92 R12=69 R13=92 R14=96 R15=89

### Photo Parameters:

Flux = 801.0 lm Eff. : 71.11 lm/W Fe = 2.698 W

### Electrical parameters:

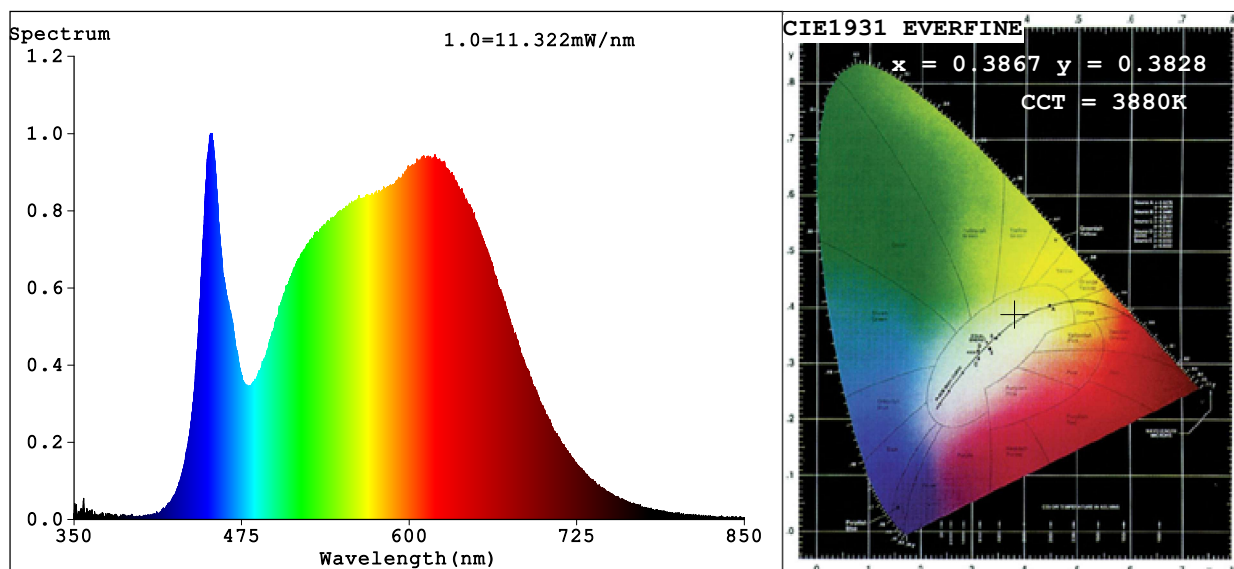
V = 230.13 V I = 0.05162 A P = 11.26 W PF = 0.9482

Status: Integral T = 500 ms Ip = 11923 (18%)

Model:Focalis Vex 7-9-11w  
 Tester:Sergio Carneros  
 Temperature:20Deg  
 Manufacturer:Luz Negra

Number:45° 11w 4000k  
 Date:2026-02-13 08:52:10  
 Humidity:50%  
 Remarks:1 unidad

## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.3867$   $y=0.3828$   $u'=0.2268$   $v'=0.5051$

CCT=3880K (Duv=0.0010) Dominant WL:Ld =579.0nm Purity=30.9%

Ratio:R=20.1% G=76.1% B=3.9%; Peak WL:Lp=452.9nm FWHM=25.5nm

Render Index:Ra=92.5 CRI=88.9 TM30:Rf=91 Rg=99

R1 =93 R2 =95 R3 =95 R4 =93 R5 =92 R6 =92 R7 =95

R8 =87 R9 =65 R10=86 R11=92 R12=70 R13=93 R14=97 R15=90

### Photo Parameters:

Flux = 644.6 lm Eff. : 73.96 lm/W Fe = 2.195 W

### Electrical parameters:

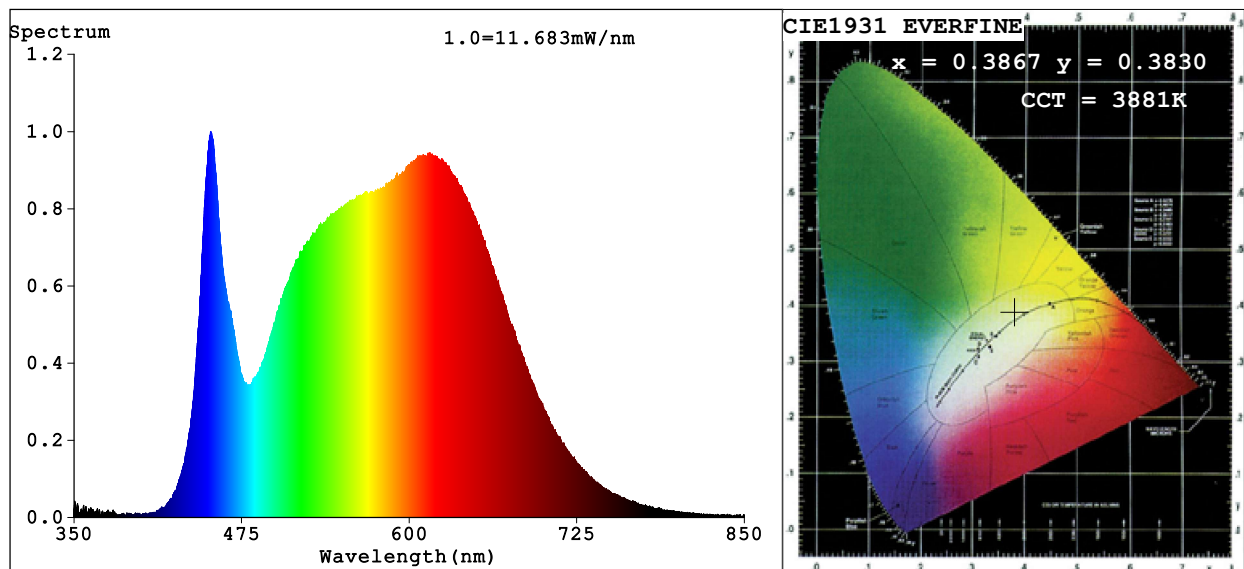
V = 230.13 V I = 0.04079 A P = 8.715 W PF = 0.9284

Status: Integral T = 500 ms Ip = 9713 (15%)

Model:Focalis Vex 7-9-11w  
 Tester:Sergio Carneros  
 Temperature:20Deg  
 Manufacturer:Luz Negra

Number:18° 9w 4000k  
 Date:2026-02-13 09:04:32  
 Humidity:50%  
 Remarks:1 unidad

## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.3867$   $y=0.3830$   $u'=0.2267$   $v'=0.5052$

CCT=3881K (Duv=0.0011) Dominant WL:Ld =579.0nm Purity=31.0%

Ratio:R=20.0% G=76.1% B=3.9%; Peak WL:Lp=451.9nm FWHM=25.5nm

Render Index:Ra=92.3 CRI=88.6 TM30:Rf=90 Rg=99

R1 =93 R2 =95 R3 =95 R4 =93 R5 =91 R6 =92 R7 =95

R8 =86 R9 =64 R10=86 R11=92 R12=70 R13=93 R14=97 R15=90

### Photo Parameters:

Flux = 666.6 lm Eff. : 76.43 lm/W Fe = 2.264 W

### Electrical parameters:

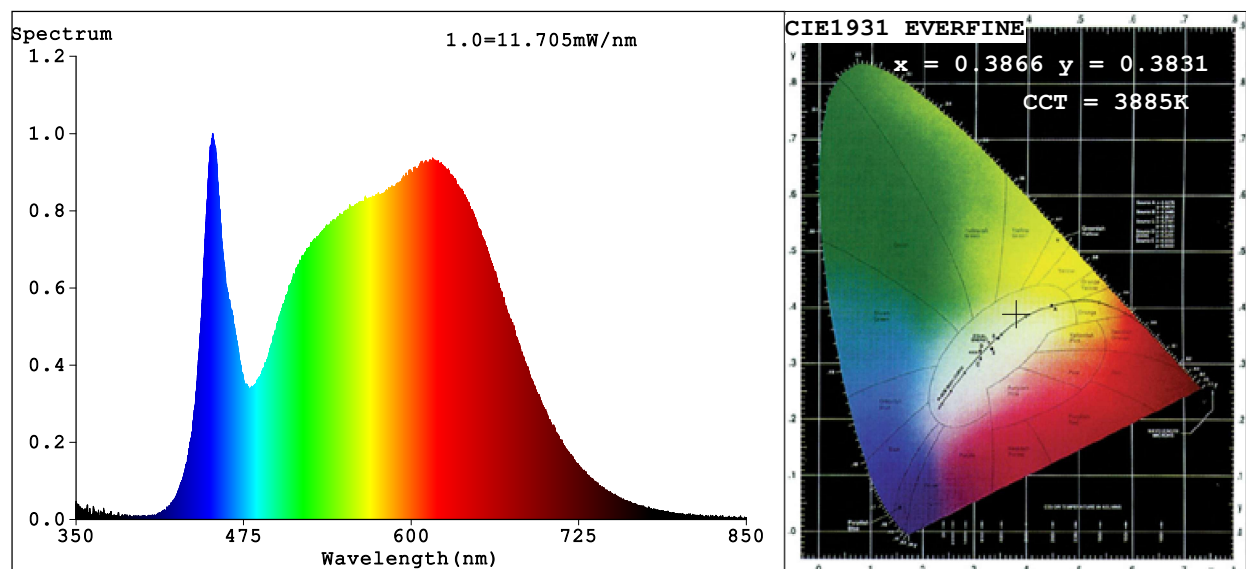
V = 230.12 V I = 0.04081 A P = 8.721 W PF = 0.9286

Status: Integral T = 500 ms Ip = 10005 (15%)

Model:Focalis Vex 7-9-11w  
Tester:Sergio Carneros  
Temperature:20Deg  
Manufacturer:Luz Negra

Number:24° 9w 4000k  
Date:2026-02-13 09:05:31  
Humidity:50%  
Remarks:1 unidad

## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.3866$   $y=0.3831$   $u'=0.2266$   $v'=0.5052$

CCT=3885K (Duv=0.0012) Dominant WL:Ld =578.9nm Purity=31.0%

Ratio:R=20.0% G=76.2% B=3.9%; Peak WL:Lp=451.9nm FWHM=24.9nm

Render Index:Ra=92.3 CRI=88.6 TM30:Rf=90 Rg=99

R1 =93 R2 =95 R3 =95 R4 =92 R5 =91 R6 =91 R7 =95

R8 =86 R9 =64 R10=86 R11=92 R12=70 R13=93 R14=97 R15=90

### Photo Parameters:

Flux = 661.5 lm Eff. : 75.77 lm/W Fe = 2.246 W

### Electrical parameters:

V = 230.13 V I = 0.04086 A P = 8.731 W PF = 0.9286

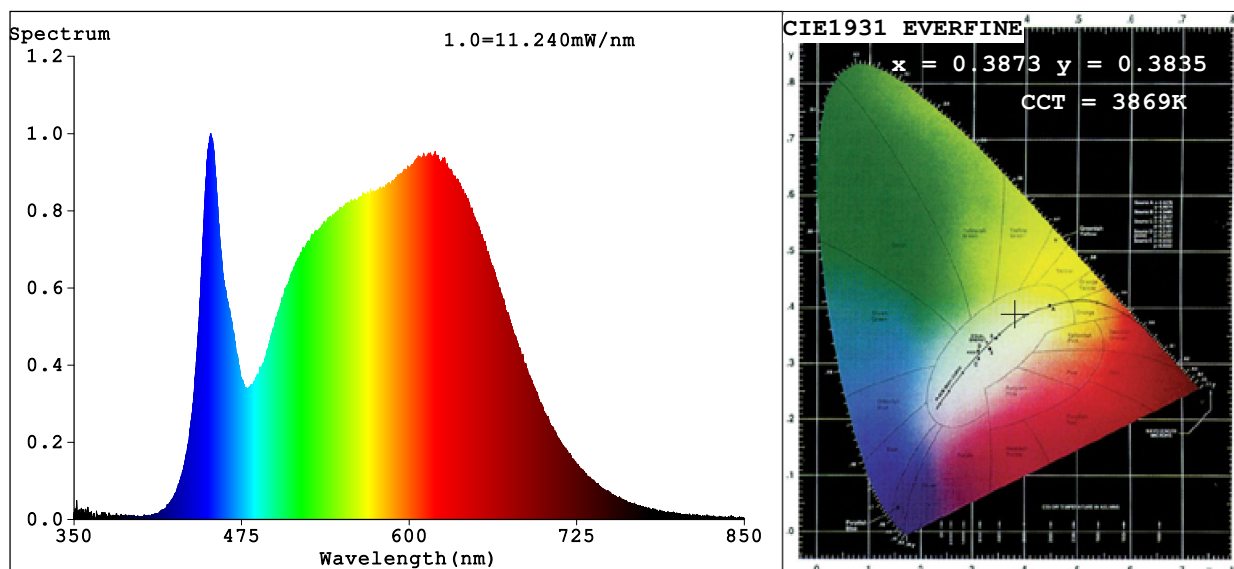
Status: Integral T = 500 ms Ip = 9975 (15%)

Model:Focalis Vex 7-9-11w  
 Tester:Sergio Carneros  
 Temperature:20Deg  
 Manufacturer:Luz Negra

Number:36° 9w 4000k  
 Date:2026-02-13 09:06:20  
 Humidity:50%  
 Remarks:1 unidad



## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.3873$   $y=0.3835$   $u'=0.2269$   $v'=0.5055$

$CCT=3869K$  ( $Duv=0.0012$ ) Dominant WL:Ld =579.0nm Purity=31.3%

Ratio:R=20.0% G=76.1% B=3.8%; Peak WL:Lp=451.9nm FWHM=25.5nm

Render Index:Ra=92.4 CRI=88.7 TM30:Rf=90 Rg=99

R1 =93 R2 =95 R3 =95 R4 =93 R5 =91 R6 =92 R7 =95

R8 =86 R9 =64 R10=86 R11=92 R12=70 R13=93 R14=97 R15=90

### Photo Parameters:

Flux = 643.0 lm Eff. : 73.57 lm/W Fe = 2.183 W

### Electrical parameters:

V = 230.11 V I = 0.04089 A P = 8.740 W PF = 0.9287

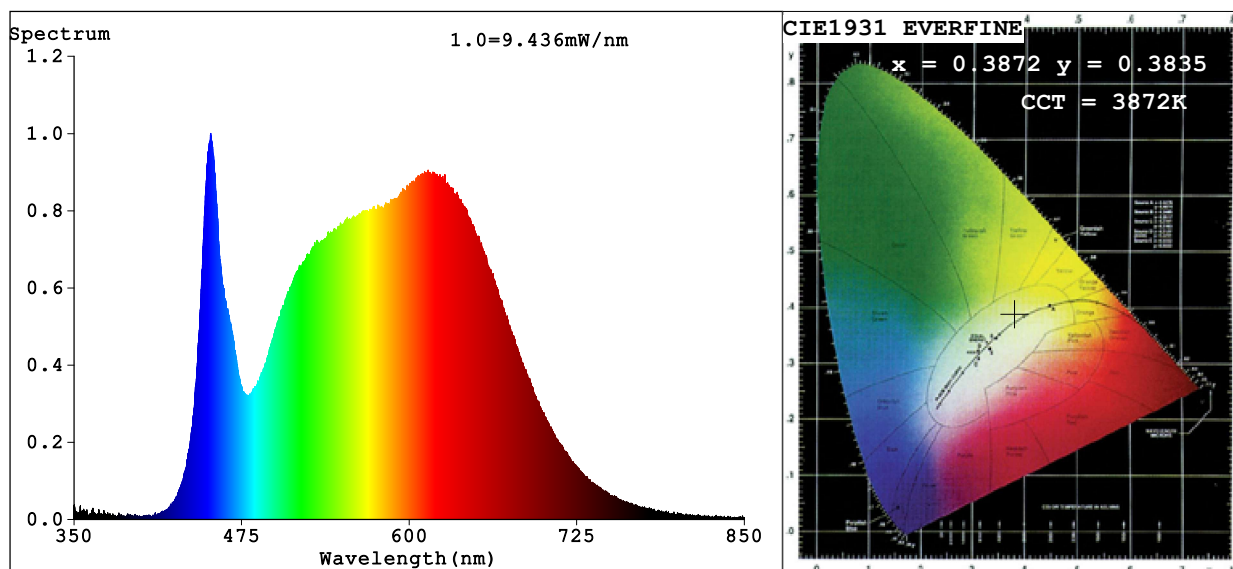
Status: Integral T = 500 ms Ip = 9667 (15%)

Model:Focalis Vex 7-9-11w  
 Tester:Sergio Carneros  
 Temperature:20Deg  
 Manufacturer:Luz Negra

Number:45° 9w 4000k  
 Date:2026-02-13 09:06:59  
 Humidity:50%  
 Remarks:1 unidad



## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.3872$   $y=0.3835$   $u'=0.2268$   $v'=0.5055$   
 CCT=3872K (Duv=0.0012) Dominant WL:Ld =578.9nm Purity=31.3%  
 Ratio:R=20.1% G=76.0% B=3.9%; Peak WL:Lp=451.9nm FWHM=23.9nm  
 Render Index:Ra=92.7 CRI=89.1 TM30:Rf=91 Rg=99  
 R1 =93 R2 =95 R3 =95 R4 =93 R5 =92 R6 =92 R7 =95  
 R8 =87 R9 =66 R10=87 R11=93 R12=70 R13=94 R14=97 R15=91

### Photo Parameters:

Flux = 512.8 lm Eff. : 76.35 lm/W Fe = 1.745 W

### Electrical parameters:

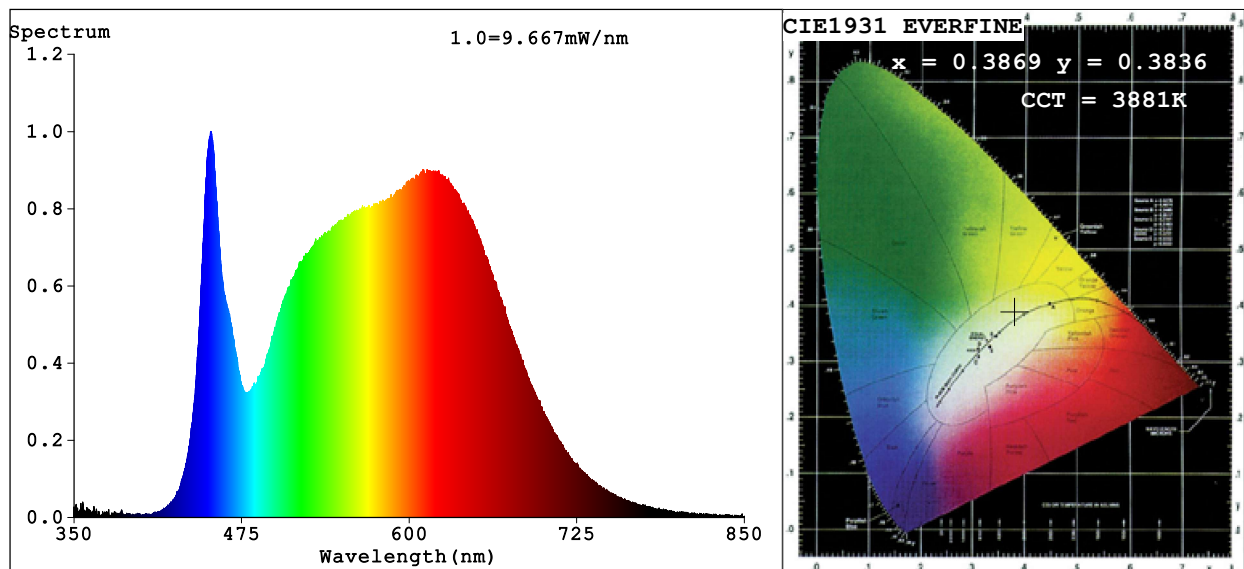
V = 230.14 V I = 0.03333 A P = 6.716 W PF = 0.8757

Status: Integral T = 500 ms Ip = 7688 (12%)

Model:Focalis Vex 7-9-11w  
 Tester:Sergio Carneros  
 Temperature:20Deg  
 Manufacturer:Luz Negra

Number:18° 7w 4000k  
 Date:2026-02-13 09:11:46  
 Humidity:50%  
 Remarks:1 unidad

## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.3869$   $y=0.3836$   $u'=0.2266$   $v'=0.5055$

CCT=3881K (Duv=0.0013) Dominant WL:Ld =578.8nm Purity=31.2%

Ratio:R=20.0% G=76.1% B=3.8%; Peak WL:Lp=451.9nm FWHM=23.7nm

Render Index:Ra=92.5 CRI=88.8 TM30:Rf=90 Rg=99

R1 =93 R2 =95 R3 =95 R4 =93 R5 =91 R6 =92 R7 =95

R8 =87 R9 =65 R10=86 R11=92 R12=69 R13=93 R14=97 R15=90

### Photo Parameters:

Flux = 528.1 lm Eff. : 78.99 lm/W Fe = 1.793 W

### Electrical parameters:

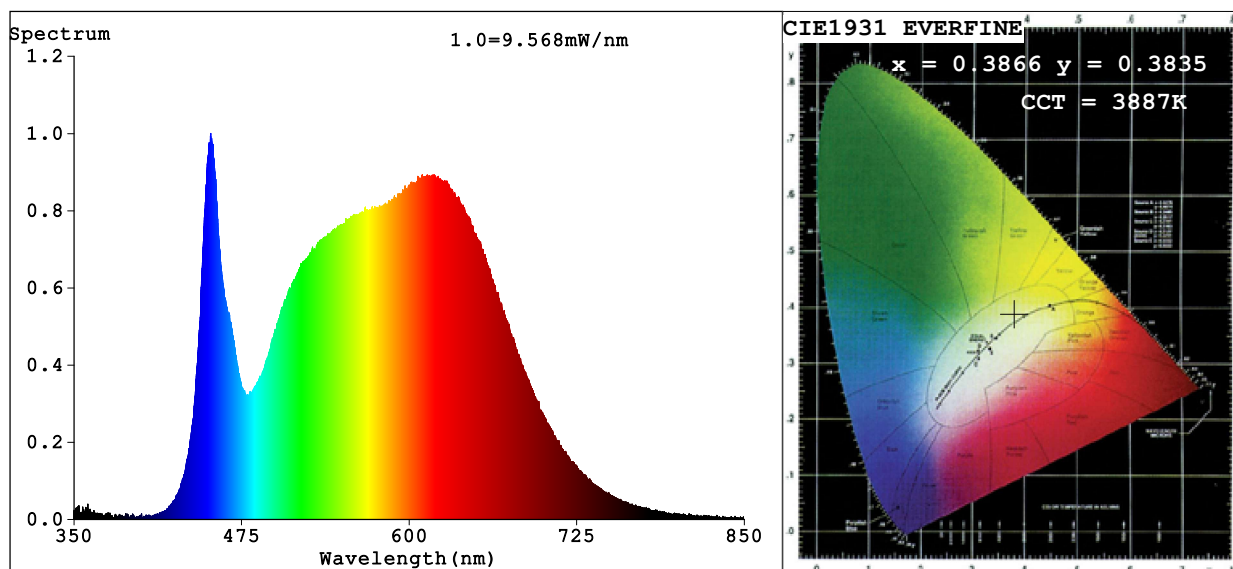
V = 230.14 V I = 0.03317 A P = 6.685 W PF = 0.8759

Status: Integral T = 500 ms Ip = 7917 (12%)

Model:Focalis Vex 7-9-11w  
Tester:Sergio Carneros  
Temperature:20Deg  
Manufacturer:Luz Negra

Number:24° 7w 4000k  
Date:2026-02-13 09:12:29  
Humidity:50%  
Remarks:1 unidad

## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.3866$   $y=0.3835$   $u'=0.2265$   $v'=0.5054$   
 CCT=3887K (Duv=0.0014) Dominant WL:Ld =578.8nm Purity=31.1%  
 Ratio:R=20.0% G=76.1% B=3.9%; Peak WL:Lp=451.9nm FWHM=24.0nm  
 Render Index:Ra=92.4 CRI=88.7 TM30:Rf=90 Rg=99  
 R1 =93 R2 =95 R3 =95 R4 =93 R5 =91 R6 =92 R7 =95  
 R8 =87 R9 =65 R10=86 R11=92 R12=69 R13=93 R14=97 R15=90

### Photo Parameters:

Flux = 519.6 lm Eff. : 78.47 lm/W Fe = 1.764 W

### Electrical parameters:

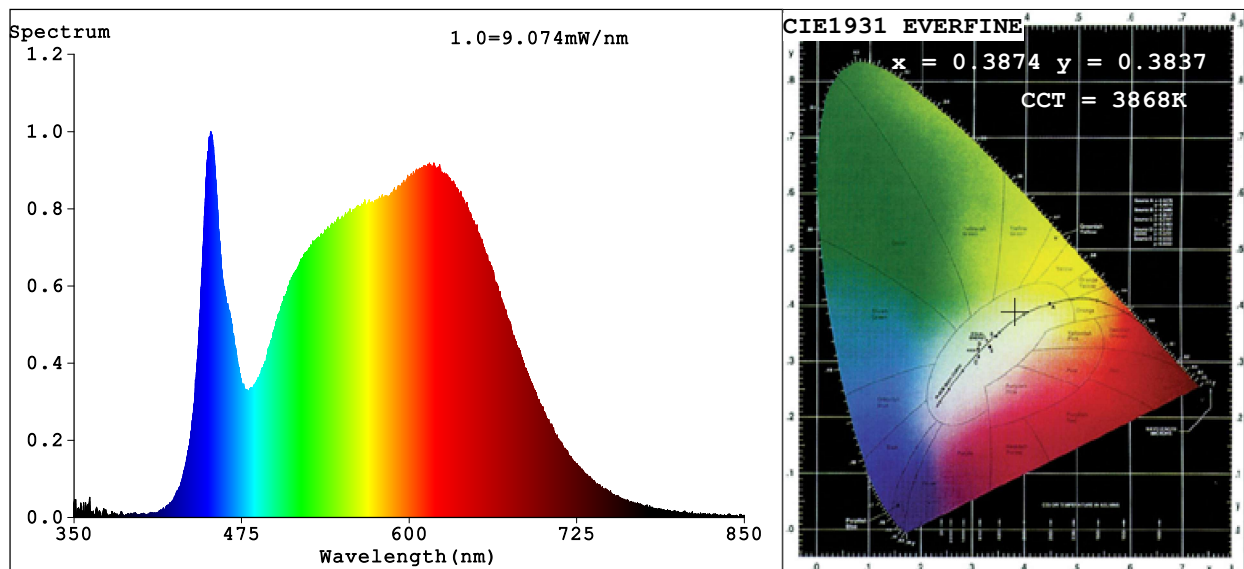
V = 230.15 V I = 0.03282 A P = 6.621 W PF = 0.8765

Status: Integral T = 500 ms Ip = 7825 (12%)

Model:Focalis Vex 7-9-11w  
 Tester:Sergio Carneros  
 Temperature:20Deg  
 Manufacturer:Luz Negra

Number:36° 7w 4000k  
 Date:2026-02-13 09:15:01  
 Humidity:50%  
 Remarks:1 unidad

## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.3874$   $y=0.3837$   $u'=0.2269$   $v'=0.5057$

CCT=3868K (Duv=0.0013) Dominant WL:Ld =578.9nm Purity=31.5%

Ratio:R=20.1% G=76.1% B=3.8%; Peak WL:Lp=451.9nm FWHM=24.4nm

Render Index:Ra=92.4 CRI=88.7 TM30:Rf=90 Rg=99

R1 =93 R2 =95 R3 =95 R4 =93 R5 =91 R6 =92 R7 =95

R8 =86 R9 =65 R10=86 R11=92 R12=69 R13=93 R14=97 R15=90

### Photo Parameters:

Flux = 501.5 lm Eff. : 76.17 lm/W Fe = 1.702 W

### Electrical parameters:

V = 230.13 V I = 0.03266 A P = 6.583 W PF = 0.8760

Status: Integral T = 500 ms Ip = 7547 (12%)

Model:Focalis Vex 7-9-11w  
Tester:Sergio Carneros  
Temperature:20Deg  
Manufacturer:Luz Negra

Number:45° 7w 4000k  
Date:2026-02-13 09:21:12  
Humidity:50%  
Remarks:1 unidad