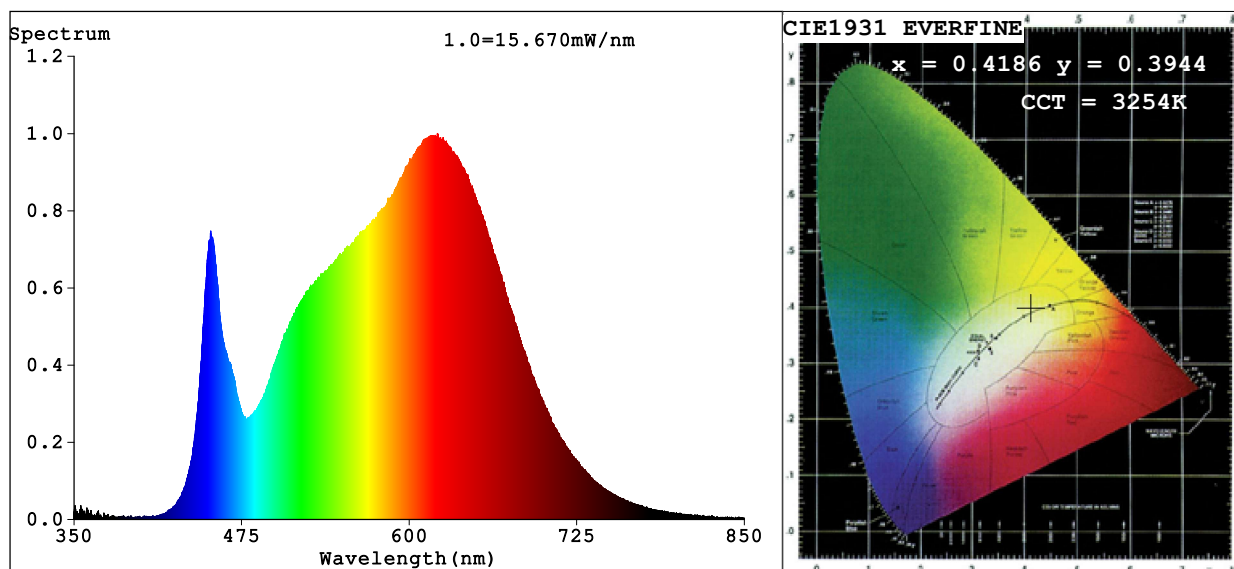


## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.4186$   $y=0.3944$   $u'=0.2428$   $v'=0.5148$   
 $CCT=3254K$  ( $Duv=-0.0011$ ) Dominant WL:  $L_d = 582.2nm$  Purity=44.0%  
 Ratio:  $R=23.1\%$   $G=73.7\%$   $B=3.2\%$ ; Peak WL:  $L_p=621.1nm$  FWHM=169.7nm  
 Render Index:  $R_a=93.9$  CRI=91.0 TM30:  $R_f=91$   $R_g=100$   

R1 =95	R2 =97	R3 =97	R4 =94	R5 =94	R6 =95	R7 =94
R8 =86	R9 =67	R10=91	R11=95	R12=77	R13=96	R14=98
						R15=92

### Photo Parameters:

Flux = 817.1 lm Eff. : 78.83 lm/W Fe = 2.826 W

### Electrical parameters:

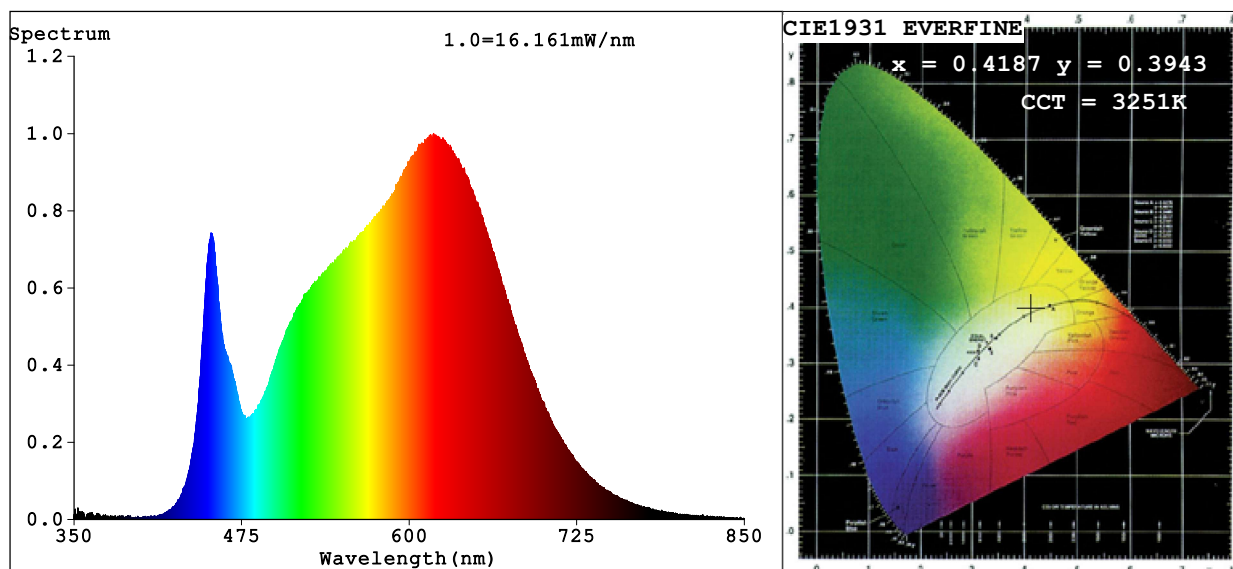
V = 230.10 V I = 0.04788 A P = 10.37 W PF = 0.9409

Status: Integral T = 500 ms Ip = 13827 (21%)

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

Number:18° 11w 3000K  
 Date:2026-02-13 09:24:05  
 Humidity:50%  
 Remarks:1 unidad

## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.4187$   $y=0.3943$   $u'=0.2429$   $v'=0.5148$   
 CCT=3251K (Duv=-0.0011) Dominant WL:Ld =582.3nm Purity=44.0%  
 Ratio:R=23.1% G=73.7% B=3.2%; Peak WL:Lp=618.1nm FWHM=169.7nm  
 Render Index:Ra=93.7 CRI=90.8 TM30:Rf=91 Rg=100  
 R1 =94 R2 =97 R3 =97 R4 =94 R5 =94 R6 =95 R7 =93  
 R8 =85 R9 =66 R10=91 R11=94 R12=77 R13=95 R14=98 R15=91

### Photo Parameters:

Flux = 842.3 lm Eff. : 81.43 lm/W Fe = 2.906 W

### Electrical parameters:

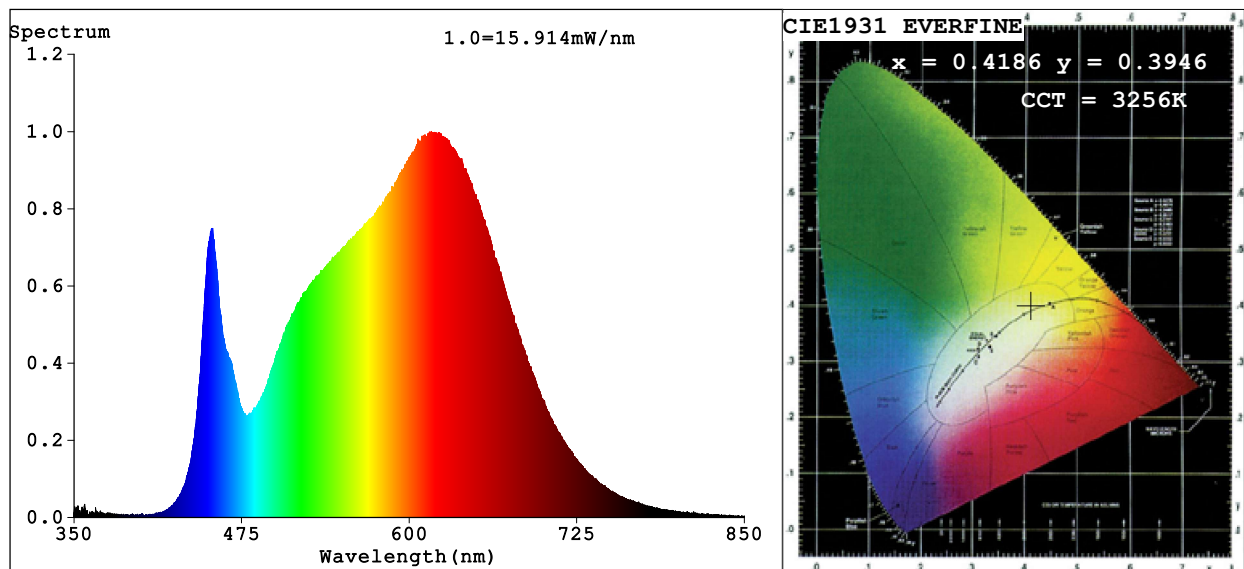
V = 230.11 V I = 0.04778 A P = 10.34 W PF = 0.9408

Status: Integral T = 500 ms Ip = 14288 (22%)

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

Number:24° 11w 3000K  
 Date:2026-02-13 09:24:59  
 Humidity:50%  
 Remarks:1 unidad

## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.4186$   $y=0.3946$   $u'=0.2427$   $v'=0.5148$   
 CCT=3256K (Duv=-0.0010) Dominant WL:Ld =582.2nm Purity=44.1%  
 Ratio:R=23.0% G=73.8% B=3.2%; Peak WL:Lp=616.4nm FWHM=170.2nm  
 Render Index:Ra=93.6 CRI=90.6 TM30:Rf=91 Rg=100  
 R1 =94 R2 =97 R3 =97 R4 =94 R5 =94 R6 =95 R7 =93  
 R8 =85 R9 =65 R10=91 R11=94 R12=77 R13=95 R14=98 R15=91

### Photo Parameters:

Flux = 836.1 lm Eff. : 80.85 lm/W Fe = 2.880 W

### Electrical parameters:

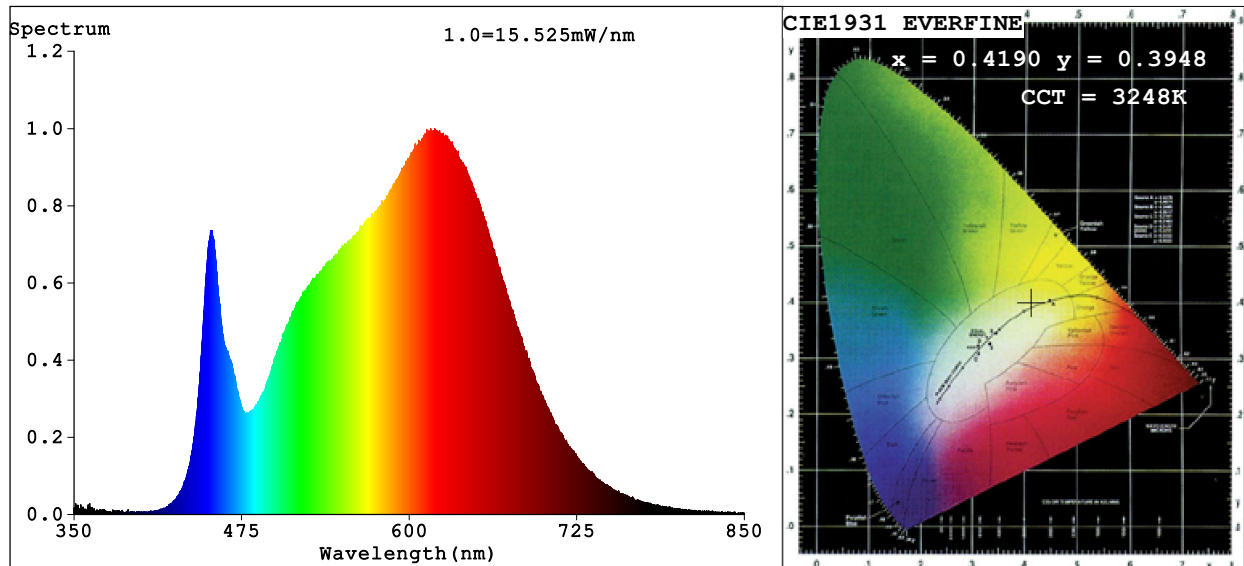
V = 230.11 V I = 0.04777 A P = 10.34 W PF = 0.9408

Status: Integral T = 500 ms Ip = 14213 (22%)

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

Number:36° 11w 3000K  
 Date:2026-02-13 09:25:29  
 Humidity:50%  
 Remarks:1 unidad

## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.4190$   $y=0.3948$   $u'=0.2429$   $v'=0.5150$   
CCT=3248K (Duv=-0.0010) Dominant WL:Ld =582.2nm Purity=44.3%  
Ratio:R=23.1% G=73.7% B=3.2%; Peak WL:Lp=616.1nm FWHM=169.1nm  
Render Index:Ra=93.6 CRI=90.7 TM30:Rf=91 Rg=100  
R1 =94 R2 =97 R3 =97 R4 =94 R5 =94 R6 =95 R7 =93  
R8 =85 R9 =65 R10=91 R11=94 R12=77 R13=95 R14=98 R15=91

### Photo Parameters:

Flux = 809.8 lm Eff. : 78.37 lm/W Fe = 2.792 W

### Electrical parameters:

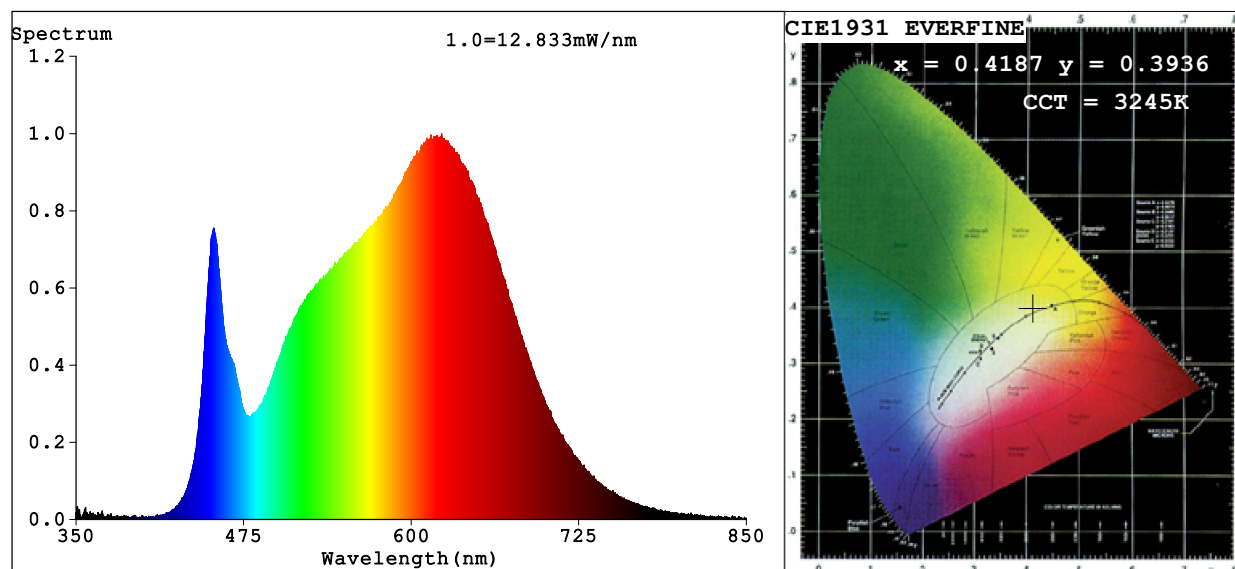
V = 230.11 V I = 0.04774 A P = 10.33 W PF = 0.9407

Status: Integral T = 500 ms Ip = 13732 (21%)

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

Number:45° 11w 3000K  
Date:2026-02-13 09:25:58  
Humidity:50%  
Remarks:1 unidad

## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.4187$   $y=0.3936$   $u'=0.2432$   $v'=0.5145$

$CCT=3245K$  ( $Duv=-0.0014$ ) Dominant WL:  $L_d = 582.4nm$  Purity=43.8%

Ratio:  $R=23.2\%$   $G=73.6\%$   $B=3.3\%$ ; Peak WL:  $L_p=622.7nm$  FWHM=170.2nm

Render Index:  $R_a=94.0$  CRI=91.2 TM30:  $R_f=91$   $R_g=100$

$R_1 = 95$   $R_2 = 97$   $R_3 = 97$   $R_4 = 94$   $R_5 = 94$   $R_6 = 95$   $R_7 = 93$

$R_8 = 86$   $R_9 = 67$   $R_{10}=92$   $R_{11}=95$   $R_{12}=77$   $R_{13}=96$   $R_{14}=98$   $R_{15}=92$

### Photo Parameters:

Flux = 665.6 lm Eff. : 80.31 lm/W  $F_e = 2.308 W$

### Electrical parameters:

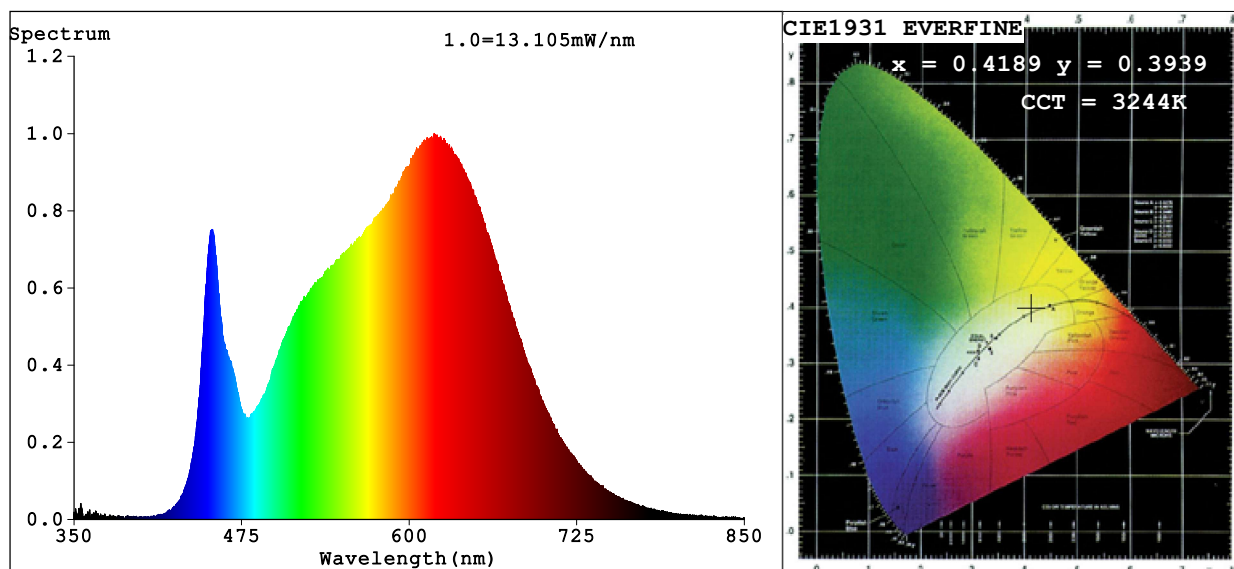
$V = 230.11 V$   $I = 0.03894 A$   $P = 8.288 W$  PF = 0.9248

Status: Integral  $T = 500 ms$   $I_p = 11334 (17\%)$

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

Number: 18° 9w 3000K  
 Date: 2026-02-13 09:26:50  
 Humidity: 50%  
 Remarks: 1 unidad

## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.4189$   $y=0.3939$   $u'=0.2432$   $v'=0.5146$   
 CCT=3244K (Duv=-0.0013) Dominant WL:Ld =582.4nm Purity=44.0%  
 Ratio:R=23.1% G=73.6% B=3.2%; Peak WL:Lp=618.7nm FWHM=170.3nm  
 Render Index:Ra=93.9 CRI=91.1 TM30:Rf=91 Rg=100  
 R1 =95 R2 =97 R3 =97 R4 =94 R5 =94 R6 =95 R7 =93  
 R8 =85 R9 =67 R10=92 R11=94 R12=77 R13=96 R14=98 R15=92

### Photo Parameters:

Flux = 680.0 lm Eff. : 82.10 lm/W Fe = 2.352 W

### Electrical parameters:

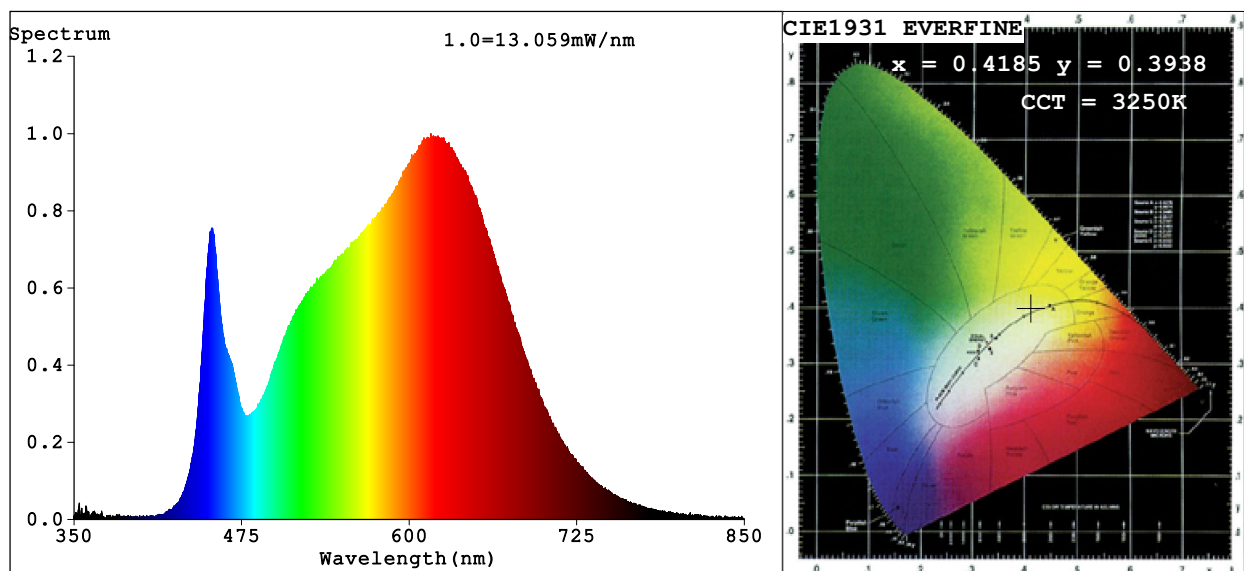
V = 230.11 V I = 0.03892 A P = 8.282 W PF = 0.9248

Status: Integral T = 500 ms Ip = 11549 (18%)

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

Number:24° 9w 3000K  
 Date:2026-02-13 09:27:37  
 Humidity:50%  
 Remarks:1 unidad

## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.4185$   $y=0.3938$   $u'=0.2430$   $v'=0.5145$   
CCT=3250K (Duv=-0.0013) Dominant WL:Ld =582.3nm Purity=43.8%  
Ratio:R=23.1% G=73.6% B=3.3%; Peak WL:Lp=616.1nm FWHM=170.1nm  
Render Index:Ra=93.9 CRI=91.0 TM30:Rf=91 Rg=100  
R1 =95 R2 =97 R3 =97 R4 =94 R5 =94 R6 =95 R7 =93  
R8 =85 R9 =66 R10=92 R11=94 R12=77 R13=96 R14=98 R15=92

### Photo Parameters:

Flux = 679.1 lm Eff. : 81.93 lm/W Fe = 2.347 W

### Electrical parameters:

V = 230.11 V I = 0.03895 A P = 8.290 W PF = 0.9249

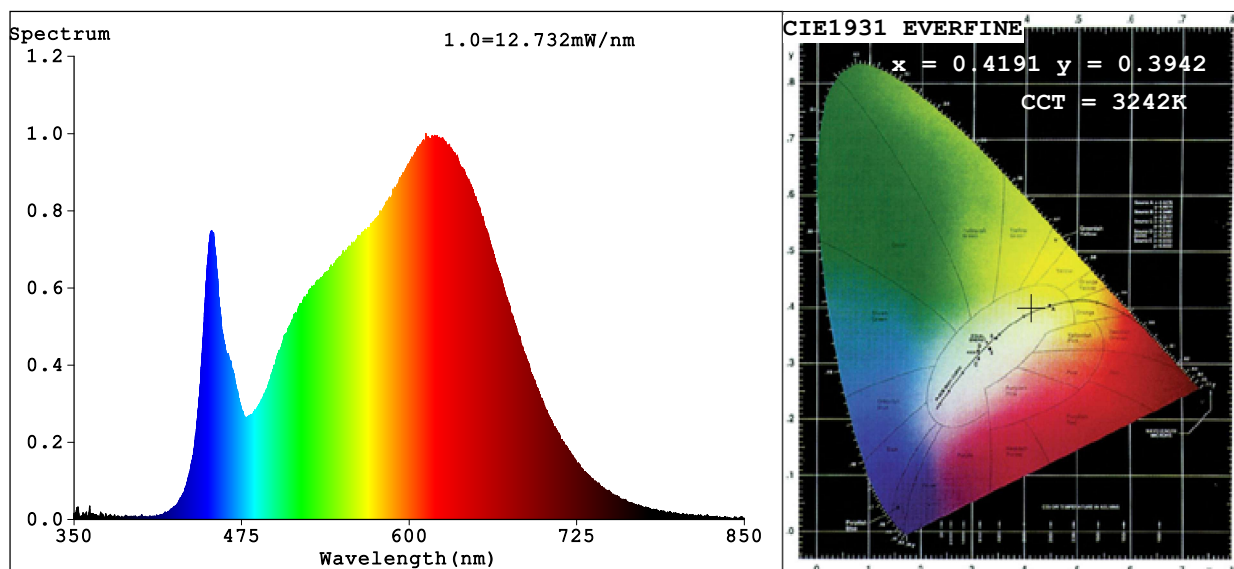
Status: Integral T = 500 ms Ip = 11553 (18%)

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

Number:36° 9w 3000K  
Date:2026-02-13 09:28:10  
Humidity:50%  
Remarks:1 unidad



## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.4191$   $y=0.3942$   $u'=0.2432$   $v'=0.5148$   
 CCT=3242K (Duv=-0.0013) Dominant WL:Ld =582.3nm Purity=44.1%  
 Ratio:R=23.2% G=73.6% B=3.2%; Peak WL:Lp=612.5nm FWHM=169.5nm  
 Render Index:Ra=93.9 CRI=91.0 TM30:Rf=91 Rg=100  
 R1 =95 R2 =97 R3 =97 R4 =94 R5 =94 R6 =95 R7 =93  
 R8 =85 R9 =66 R10=92 R11=94 R12=77 R13=96 R14=98 R15=92

### Photo Parameters:

Flux = 661.3 lm Eff. : 79.64 lm/W Fe = 2.285 W

### Electrical parameters:

V = 230.09 V I = 0.03901 A P = 8.304 W PF = 0.9251

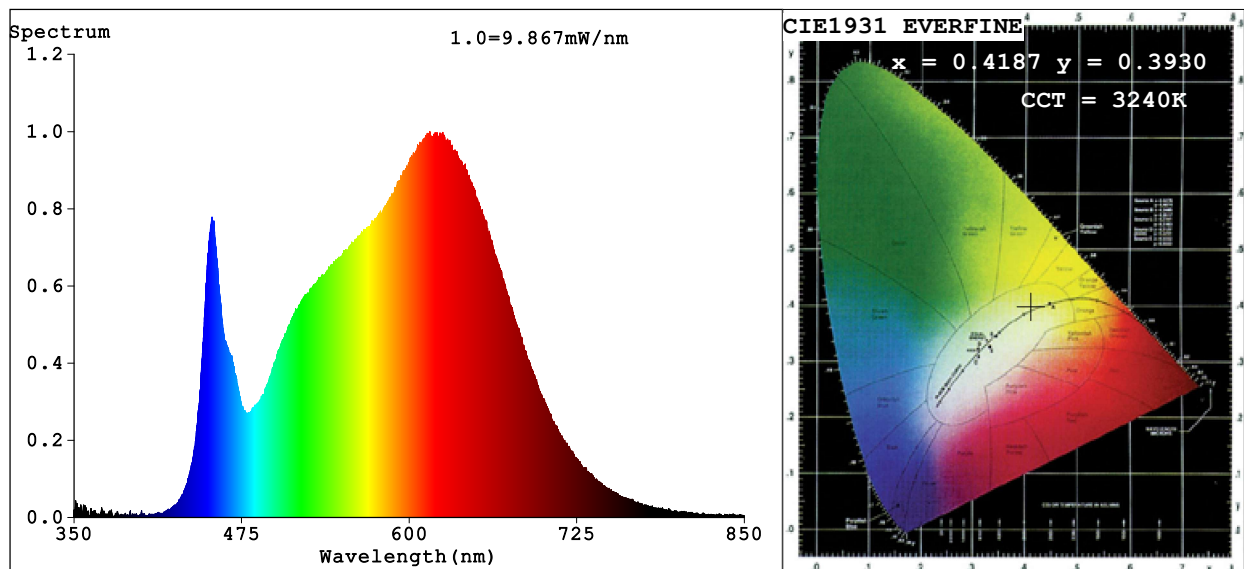
Status: Integral T = 500 ms Ip = 11342 (17%)

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

Number:45° 9w 3000K  
 Date:2026-02-13 09:28:51  
 Humidity:50%  
 Remarks:1 unidad



## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.4187$   $y=0.3930$   $u'=0.2435$   $v'=0.5142$

CCT=3240K (Duv=-0.0017) Dominant WL:Ld =582.5nm Purity=43.6%

Ratio:R=23.3% G=73.4% B=3.3%; Peak WL:Lp=615.4nm FWHM=169.2nm

Render Index:Ra=94.3 CRI=91.6 TM30:Rf=91 Rg=100

R1 =95 R2 =98 R3 =98 R4 =94 R5 =95 R6 =96 R7 =93

R8 =86 R9 =68 R10=93 R11=95 R12=77 R13=96 R14=98 R15=93

### Photo Parameters:

Flux = 510.2 lm Eff. : 80.11 lm/W Fe = 1.775 W

### Electrical parameters:

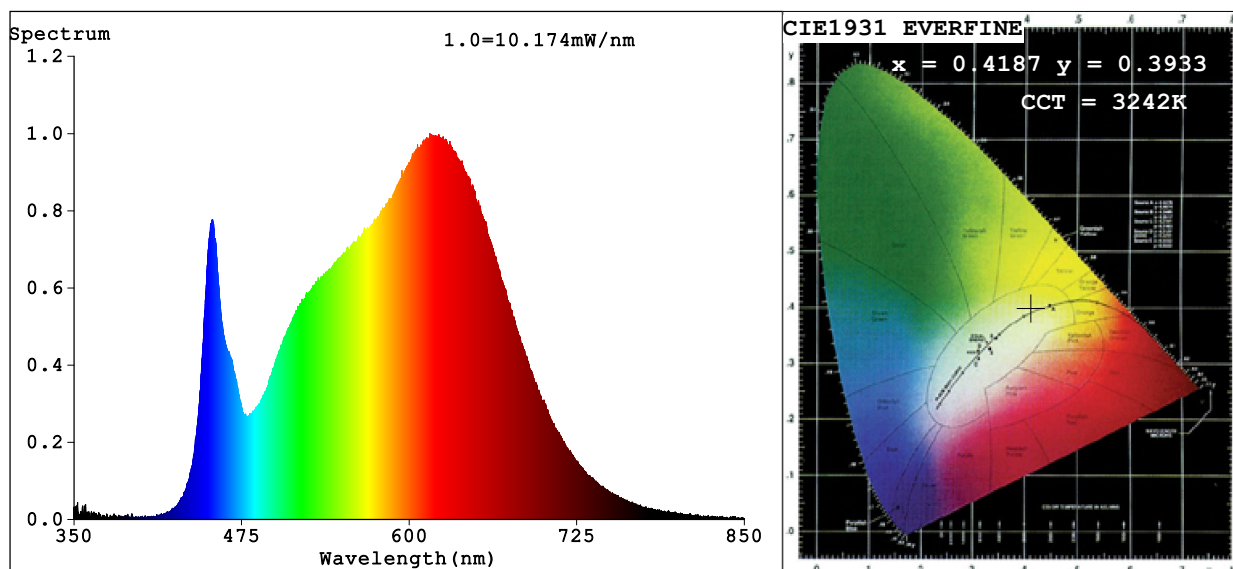
V = 230.11 V I = 0.03202 A P = 6.369 W PF = 0.8643

Status: Integral T = 500 ms Ip = 8712 (13%)

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

Number:18° 7w 3000K  
Date:2026-02-13 09:29:27  
Humidity:50%  
Remarks:1 unidad

## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.4187$   $y=0.3933$   $u'=0.2434$   $v'=0.5143$   
 CCT=3242K (Duv=-0.0016) Dominant WL:Ld =582.5nm Purity=43.7%  
 Ratio:R=23.2% G=73.5% B=3.3%; Peak WL:Lp=615.4nm FWHM=169.4nm  
 Render Index:Ra=94.2 CRI=91.4 TM30:Rf=91 Rg=100  
 R1 =95 R2 =98 R3 =98 R4 =94 R5 =94 R6 =95 R7 =93  
 R8 =86 R9 =68 R10=93 R11=95 R12=77 R13=96 R14=98 R15=92

### Photo Parameters:

Flux = 527.7 lm Eff. : 82.54 lm/W Fe = 1.829 W

### Electrical parameters:

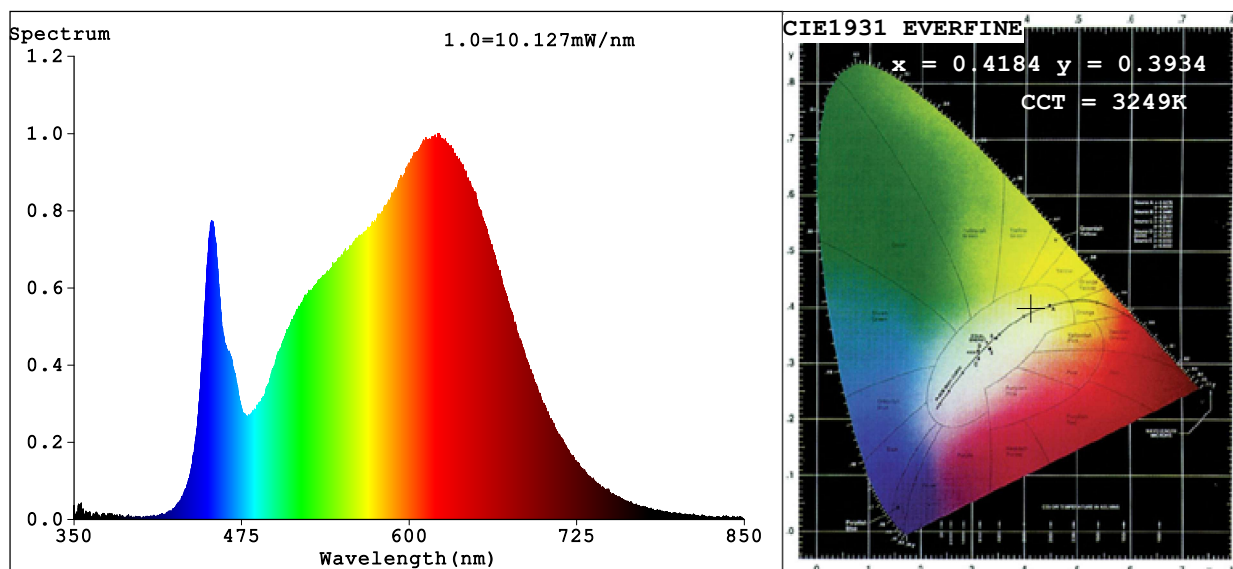
V = 230.10 V I = 0.03210 A P = 6.393 W PF = 0.8656

Status: Integral T = 500 ms Ip = 9013 (14%)

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

Number:24° 7w 3000K  
 Date:2026-02-13 09:31:01  
 Humidity:50%  
 Remarks:1 unidad

## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.4184$   $y=0.3934$   $u'=0.2431$   $v'=0.5143$   
 CCT=3249K (Duv=-0.0015) Dominant WL:Ld =582.4nm Purity=43.7%  
 Ratio:R=23.2% G=73.6% B=3.3%; Peak WL:Lp=621.4nm FWHM=169.3nm  
 Render Index:Ra=94.1 CRI=91.3 TM30:Rf=91 Rg=100  
 R1 =95 R2 =97 R3 =97 R4 =94 R5 =94 R6 =95 R7 =93  
 R8 =86 R9 =68 R10=92 R11=95 R12=77 R13=96 R14=98 R15=92

### Photo Parameters:

Flux = 524.9 lm Eff. : 82.18 lm/W Fe = 1.817 W

### Electrical parameters:

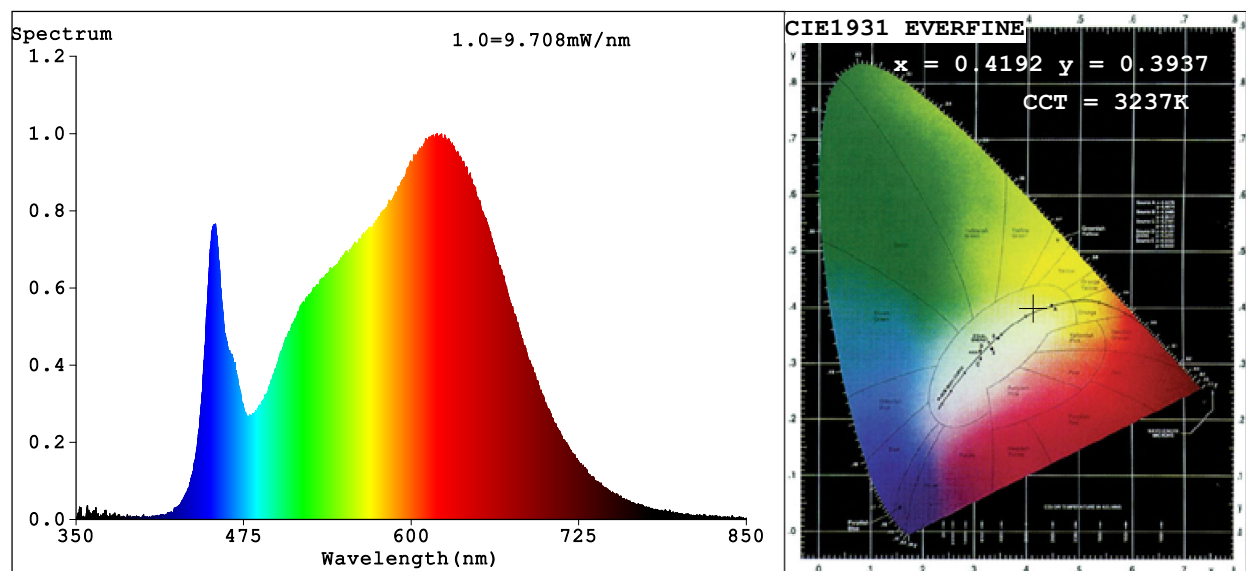
V = 230.11 V I = 0.03215 A P = 6.388 W PF = 0.8635

Status: Integral T = 500 ms Ip = 8931 (14%)

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

Number:36° 7w 3000K  
 Date:2026-02-13 09:31:54  
 Humidity:50%  
 Remarks:1 unidad

## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.4192$   $y=0.3937$   $u'=0.2435$   $v'=0.5146$   
 CCT=3237K (Duv=-0.0015) Dominant WL:Ld =582.4nm Purity=44.0%  
 Ratio:R=23.2% G=73.5% B=3.3%; Peak WL:Lp=619.4nm FWHM=169.3nm  
 Render Index:Ra=94.1 CRI=91.3 TM30:Rf=91 Rg=100  
 R1 =95 R2 =97 R3 =98 R4 =94 R5 =94 R6 =95 R7 =93  
 R8 =86 R9 =67 R10=92 R11=95 R12=77 R13=96 R14=98 R15=92

### Photo Parameters:

Flux = 503.2 lm Eff. : 79.24 lm/W Fe = 1.743 W

### Electrical parameters:

V = 230.11 V I = 0.03200 A P = 6.350 W PF = 0.8623

Status: Integral T = 500 ms Ip = 8575 (13%)

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

Number:45° 7w 3000K  
 Date:2026-02-13 09:32:25  
 Humidity:50%  
 Remarks:1 unidad