



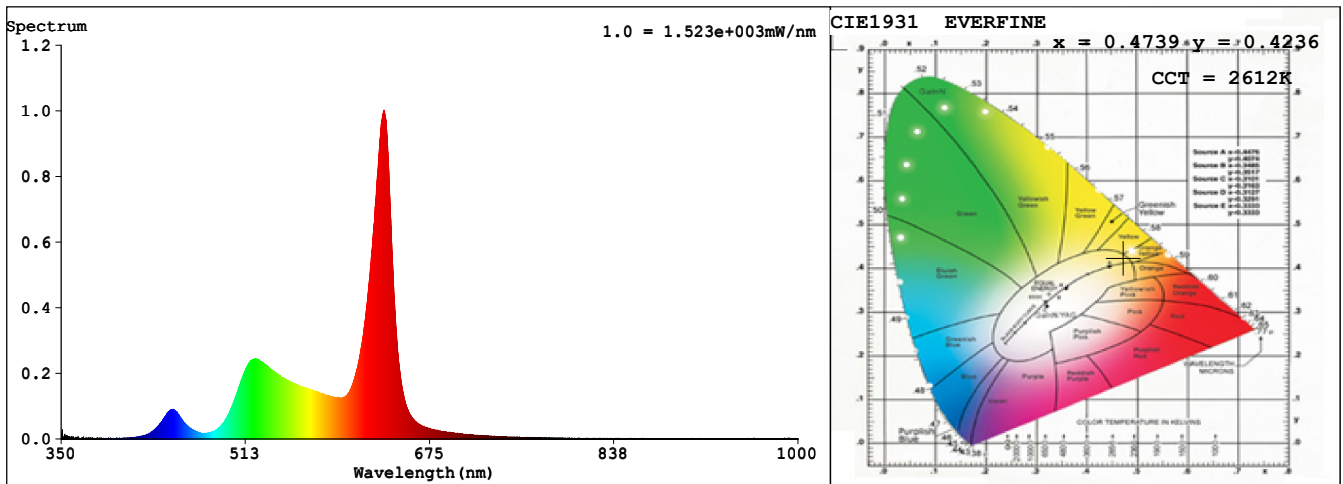
# Spectrum Test Report

Sample : Date : 2024-02-19 17:49:10  
 Specification : SERA Sam. Status :  
 Sample No. : 2700K Instrument : HAAS-2000(EVERFINE)  
 Manufacturer : CLF Test by : DANNY  
 Assessor : damin

## Test Condition

Temperature : 28Deg RH : 65.0%  
 WL Range : 350nm-1000nm IP : 48064 (73%)  
 Test Mode : Fast Test T : 16 ms  
 Sensitivity : High

## Spectrum



## Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.4739$   $y = 0.4236$  /  $u' = 0.2656$   $v' = 0.5343$  ( $duv=3.63e-03$ )

CCT= 2612K Prcp WL:  $L_d=583.6nm$  Purity=69.4%

Peak WL:  $L_p=635nm$  FWHM: =20.4nm Ratio:R=32.2% G=66.4% B=1.4%

Render Index:  $R_a = 64.4$

R1 =59 R2 =89 R3 =73 R4 =47 R5 =61 R6 =79 R7 =71

R8 =36 R9 =0 R10=82 R11=32 R12=80 R13=66 R14=81 R15=59

LEVEL:OUT WHITE:ANSI\_2700K

TLCI Parameters: TLCI = 48.8

## Photometric & Radiometric Parameters

Flux = 21935 lm Eff. : 45.92 lm/W  $F_e = 71.732 W$

## Electrical parameters

$V = 239.7 V$   $I = 2.047 A$   $P = 477.7 W$  PF = 0.9734

Freq=50.01 Hz



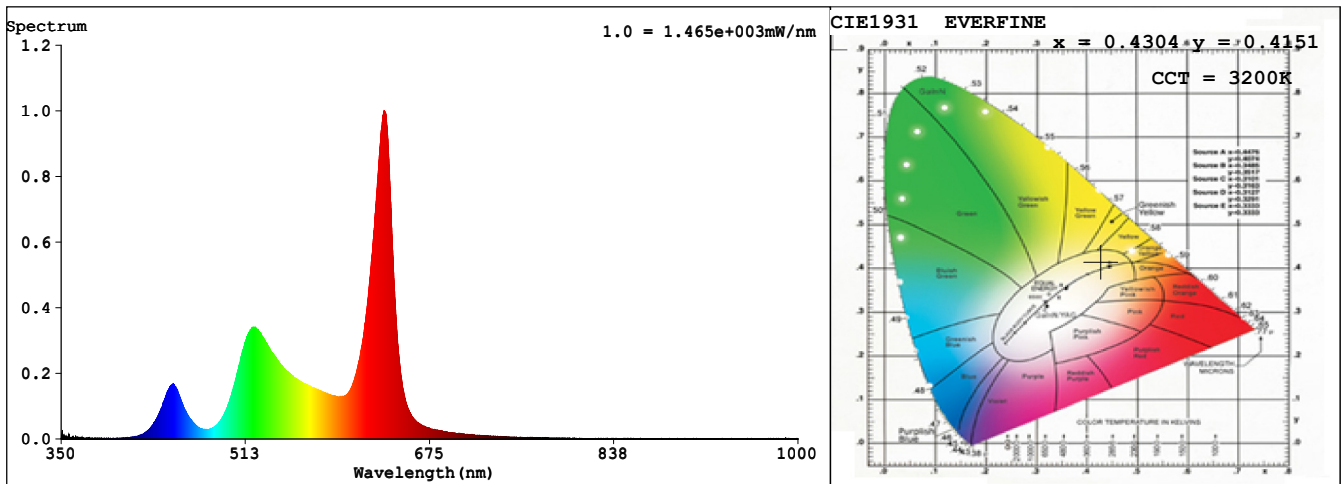
# Spectrum Test Report

Sample : Date : 2024-02-19 17:49:39  
 Specification : SERA Sam. Status :  
 Sample No. : 3200K Instrument : HAAS-2000(EVERFINE)  
 Manufacturer : CLF Test by : DANNY  
 Assessor : damin

## Test Condition

Temperature : 28Deg RH : 65.0%  
 WL Range : 350nm-1000nm IP : 46247 (71%)  
 Test Mode : Fast Test T : 16 ms  
 Sensitivity : High

## Spectrum



## Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.4304$   $y = 0.4151$  /  $u' = 0.2418$   $v' = 0.5247$  ( $duv=5.38e-03$ )

CCT= 3200K Prcp WL:  $L_d=580.2nm$  Purity=53.8%

Peak WL:  $L_p=635nm$  FWHM: =20.6nm Ratio:R=28.2% G=69.8% B=2.0%

Render Index:  $R_a = 63.3$

R1 =59 R2 =91 R3 =71 R4 =46 R5 =62 R6 =83 R7 =66

R8 =27 R9 =0 R10=83 R11=33 R12=88 R13=67 R14=81 R15=55

LEVEL:OUT WHITE:ANSI\_3000K

TLCI Parameters: TLCI = 46.5

## Photometric & Radiometric Parameters

Flux = 24123 lm Eff. : 44.81 lm/W  $F_e = 78.804 W$

## Electrical parameters

$V = 239.7 V$   $I = 2.297 A$   $P = 538.4 W$  PF = 0.9777

Freq=50.01 Hz



# Spectrum Test Report

Sample :  
 Specification : SERA  
 Sample No. : 4200K  
 Manufacturer : CLF

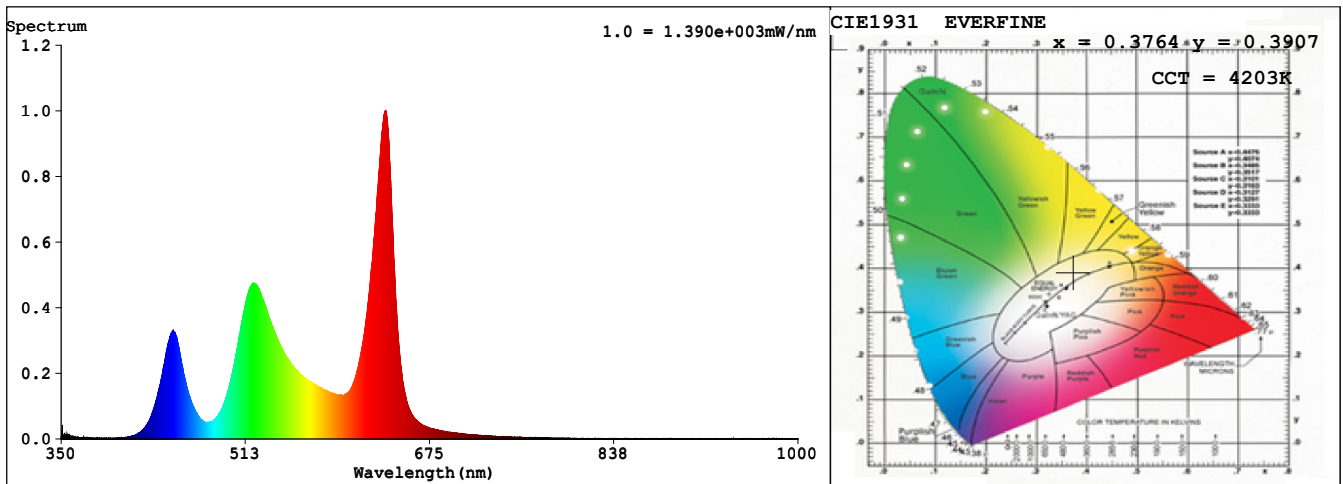
Date : 2024-02-19 17:50:12  
 Sam. Status :  
 Instrument : HAAS-2000(EVERFINE)  
 Test by : DANNY  
 Assessor : damin

## Test Condition

Temperature : 28Deg  
 WL Range : 350nm-1000nm  
 Test Mode : Fast Test

RH : 65.0%  
 IP : 43839 (67%)  
 T : 16 ms  
 Sensitivity : High

## Spectrum



## Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.3764$   $y = 0.3907$  /  $u' = 0.2171$   $v' = 0.5070$  ( $duv=7.61e-03$ )

CCT= 4203K Prcp WL:  $L_d=574.6nm$  Purity=30.2%

Peak WL:  $L_p=636nm$  FWHM: =20.9nm Ratio:R=23.8% G=73.4% B=2.8%

Render Index:  $R_a = 65.6$

R1 =62 R2 =95 R3 =69 R4 =50 R5 =68 R6 =90 R7 =65

R8 =25 R9 =0 R10=89 R11=39 R12=93 R13=72 R14=81 R15=56

LEVEL:OUT WHITE:OUT

TLCI Parameters: TLCI = 46.2

## Photometric & Radiometric Parameters

Flux = 27038 lm Eff. : 43.06 lm/W  $F_e = 90.108 W$

## Electrical parameters

$V = 239.7 V$   $I = 2.665 A$   $P = 628.0 W$  PF = 0.9829

Freq=50.01 Hz



# Spectrum Test Report

Sample :  
 Specification : SERA  
 Sample No. : 5000K  
 Manufacturer : CLF

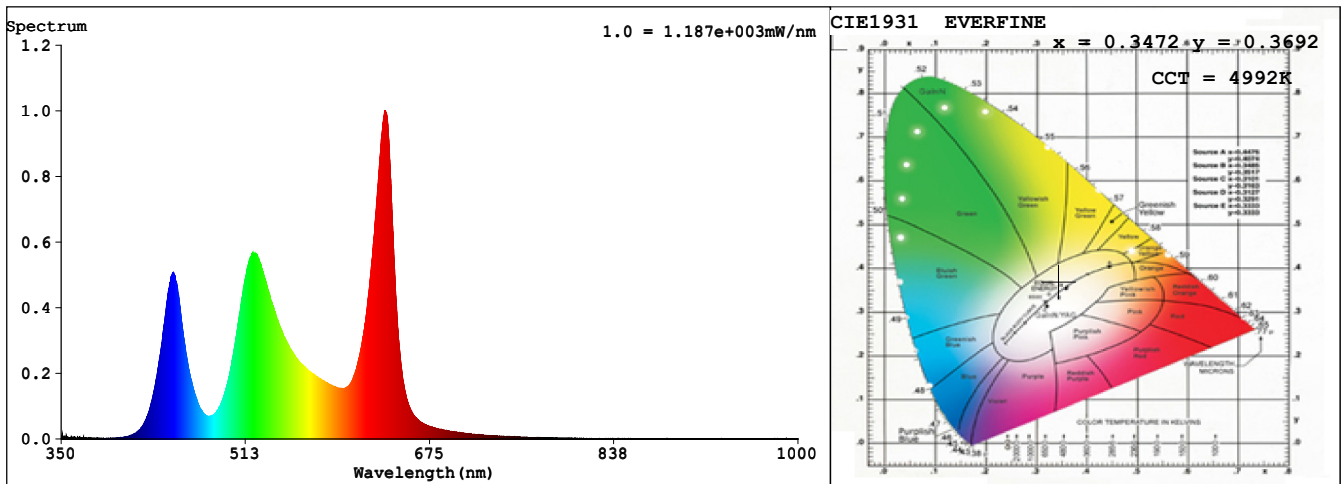
Date : 2024-02-19 17:50:32  
 Sam. Status :  
 Instrument : HAAS-2000(EVERFINE)  
 Test by : DANNY  
 Assessor : damin

## Test Condition

Temperature : 28Deg  
 WL Range : 350nm-1000nm  
 Test Mode : Fast Test

RH : 65.0%  
 IP : 58587 (89%)  
 T : 25 ms  
 Sensitivity : High

## Spectrum



## Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.3472$   $y = 0.3692$  /  $u' = 0.2062$   $v' = 0.4933$  ( $duv=7.79e-03$ )

CCT= 4992K Prcp WL:  $L_d=567.4nm$  Purity=15.0%

Peak WL:  $L_p=636nm$  FWHM: =21.3nm Ratio:R=21.3% G=75.4% B=3.3%

Render Index:  $R_a = 70.7$

R1 =70 R2 =98 R3 =70 R4 =57 R5 =75 R6 =94 R7 =68

R8 =34 R9 =0 R10=96 R11=47 R12=84 R13=78 R14=81 R15=62

LEVEL:OUT WHITE:ANSI\_5000K

TLCI Parameters: TLCI = 51.9

## Photometric & Radiometric Parameters

Flux = 26682 lm Eff. : 42.65 lm/W  $F_e = 89.973 W$

## Electrical parameters

$V = 239.7 V$   $I = 2.656 A$   $P = 625.6 W$  PF = 0.9828

Freq=50.01 Hz



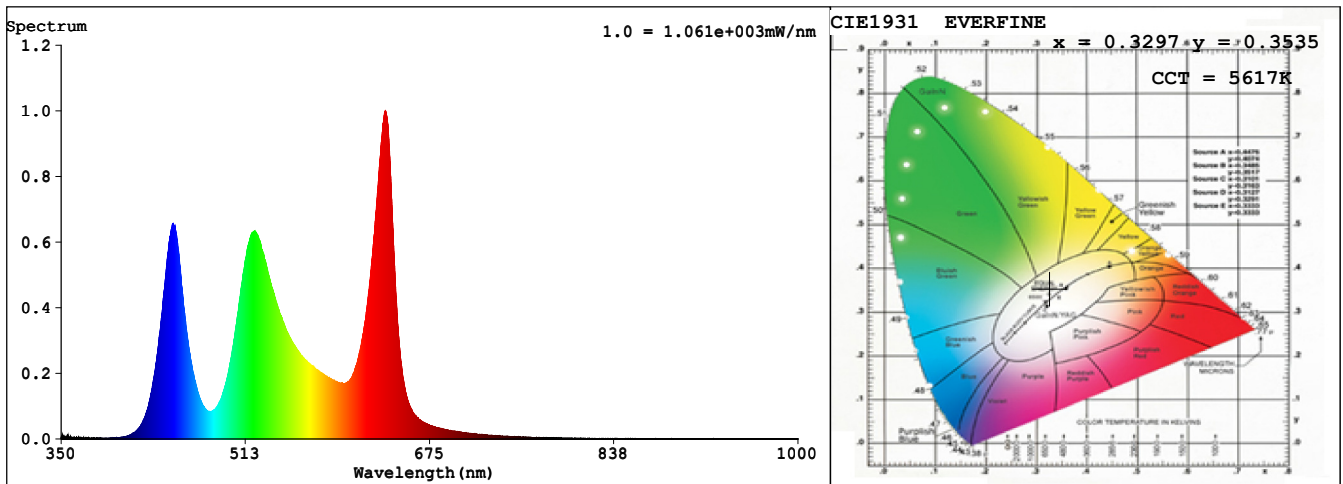
# Spectrum Test Report

Sample : Date : 2024-02-19 17:51:00  
 Specification : SERA Sam. Status :  
 Sample No. : 5600K Instrument : HAAS-2000(EVERFINE)  
 Manufacturer : CLF Test by : DANNY  
 Assessor : damin

## Test Condition

Temperature : 28Deg RH : 65.0%  
 WL Range : 350nm-1000nm IP : 52257 (80%)  
 Test Mode : Fast Test T : 25 ms  
 Sensitivity : High

## Spectrum



## Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.3297$   $y = 0.3535$  /  $u' = 0.2004$   $v' = 0.4833$  ( $duv=7.43e-03$ )

CCT= 5617K Prcp WL:  $L_d=544.5nm$  Purity=5.1%

Peak WL:  $L_p=636nm$  FWHM: =21.5nm Ratio:R=19.8% G=76.5% B=3.7%

Render Index:  $R_a = 72.6$

R1 =73 R2 =98 R3 =69 R4 =58 R5 =78 R6 =95 R7 =70

R8 =39 R9 =0 R10=95 R11=49 R12=84 R13=82 R14=81 R15=65

LEVEL:OUT WHITE:ANSI\_5700K

TLCI Parameters: TLCI = 54.9

## Photometric & Radiometric Parameters

Flux = 26156 lm Eff. : 42.23 lm/W  $F_e = 89.551 W$

## Electrical parameters

$V = 239.7 V$   $I = 2.630 A$   $P = 619.3 W$  PF = 0.9825

Freq=50.01 Hz



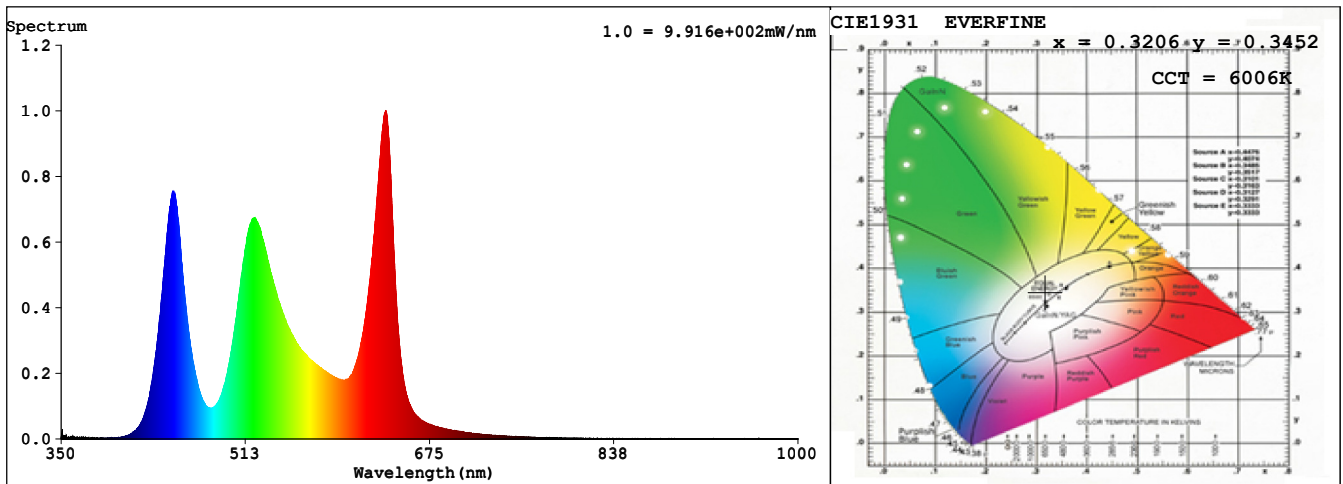
# Spectrum Test Report

Sample	:	Date	: 2024-02-19 17:51:14
Specification	: SERA	Sam. Status	:
Sample No.	: 6000K	Instrument	: HAAS-2000(EVERFINE)
Manufacturer	: CLF	Test by	: DANNY
		Assessor	: damin

## Test Condition

Temperature	: 28Deg	RH	: 65.0%
WL Range	: 350nm-1000nm	IP	: 48714 (74%)
Test Mode	: Fast Test	T	: 25 ms
		Sensitivity	: High

## Spectrum



## Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.3206$   $y = 0.3452$  /  $u' = 0.1972$   $v' = 0.4779$  ( $duv=7.54e-03$ )

CCT= 6006K Prcp WL:  $L_d=504.3nm$  Purity=3.9%

Peak WL:  $L_p=637nm$  FWHM: =21.7nm Ratio:R=18.9% G=77.1% B=3.9%

Render Index:  $R_a = 74.0$

R1 =76 R2 =97 R3 =70 R4 =61 R5 =80 R6 =95 R7 =71

R8 =43 R9 =0 R10=93 R11=52 R12=81 R13=84 R14=82 R15=68

LEVEL:OUT WHITE:ANSI\_6500K

TLCI Parameters: TLCI = 57.1

## Photometric & Radiometric Parameters

Flux = 25913 lm Eff. : 42.06 lm/W  $F_e = 89.462 W$

## Electrical parameters

$V = 239.7 V$   $I = 2.616 A$   $P = 616.1 W$  PF = 0.9823

Freq=50.01 Hz



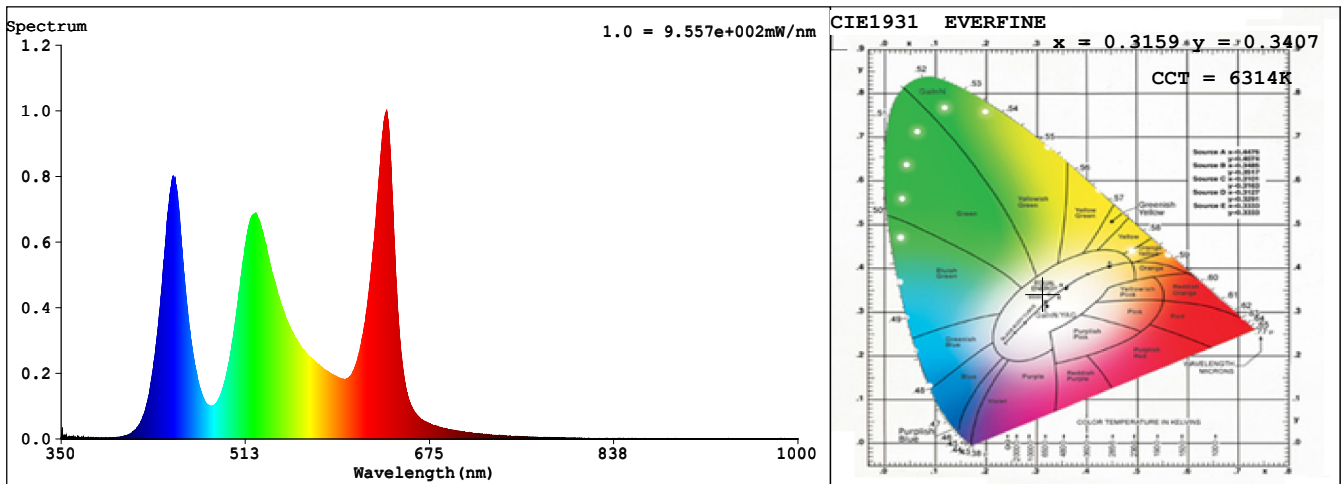
# Spectrum Test Report

Sample	:	Date	: 2024-02-19 17:54:10
Specification	: SERA	Sam. Status	:
Sample No.	: 6300K	Instrument	: HAAS-2000(EVERFINE)
Manufacturer	: CLF	Test by	: DANNY
		Assessor	: damin

## Test Condition

Temperature	: 28Deg	RH	: 65.0%
WL Range	: 350nm-1000nm	IP	: 46838 (71%)
Test Mode	: Fast Test	T	: 25 ms
		Sensitivity	: High

## Spectrum



## Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.3159$   $y = 0.3407$  /  $u' = 0.1957$   $v' = 0.4749$  ( $duv=7.53e-03$ )

CCT= 6314K Prcp WL:  $L_d=497.2nm$  Purity=5.5%

Peak WL:  $L_p=637nm$  FWHM: =21.9nm Ratio:R=18.5% G=77.5% B=4.1%

Render Index:  $R_a = 74.0$

R1 =76 R2 =96 R3 =68 R4 =61 R5 =81 R6 =95 R7 =71

R8 =43 R9 =0 R10=91 R11=52 R12=78 R13=85 R14=81 R15=68

LEVEL:OUT WHITE:ANSI\_6500K

TLCI Parameters: TLCI = 57.8

## Photometric & Radiometric Parameters

Flux = 25460 lm Eff. : 41.28 lm/W  $F_e = 88.664 W$

## Electrical parameters

$V = 239.7 V$   $I = 2.619 A$   $P = 616.7 W$  PF = 0.9823

Freq=50.01 Hz





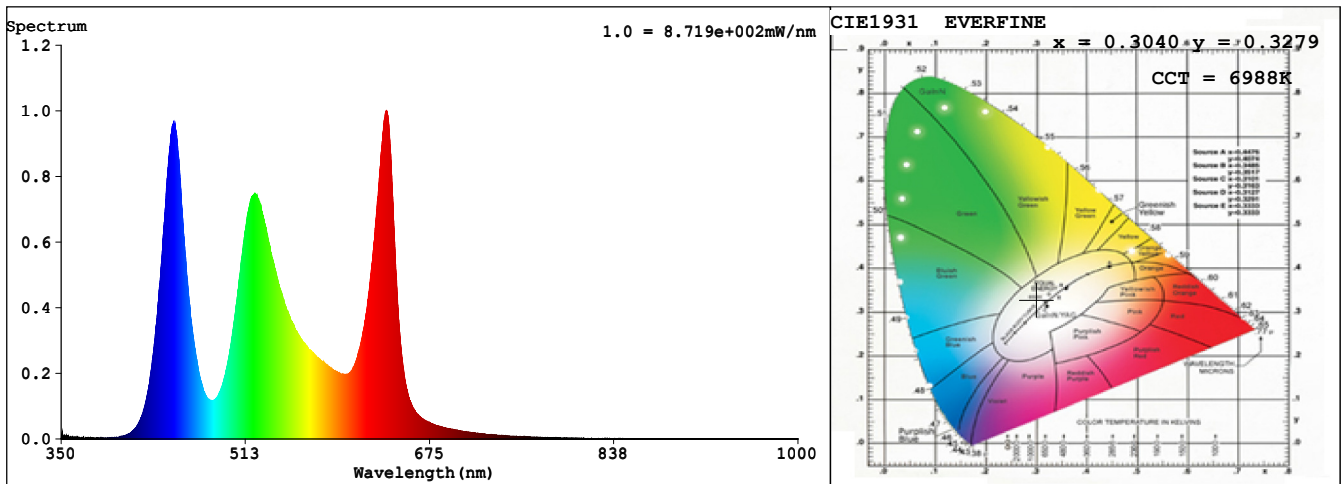
# Spectrum Test Report

Sample : Date : 2024-02-19 17:55:05  
 Specification : SERA Sam. Status :  
 Sample No. : 7000K Instrument : HAAS-2000(EVERFINE)  
 Manufacturer : CLF Test by : DANNY  
 Assessor : damin

## Test Condition

Temperature : 28Deg RH : 65.0%  
 WL Range : 350nm-1000nm IP : 42852 (65%)  
 Test Mode : Fast Test T : 25 ms  
 Sensitivity : High

## Spectrum



## Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.3040$   $y = 0.3279$  /  $u' = 0.1922$   $v' = 0.4664$  ( $duv=7.09e-03$ )

CCT= 6988K Prcp WL:  $L_d=489.3nm$  Purity=10.3%

Peak WL:  $L_p=637nm$  FWHM: =22.3nm Ratio:R=17.5% G=78.1% B=4.4%

Render Index:  $R_a = 75.7$

R1 =80 R2 =95 R3 =69 R4 =64 R5 =84 R6 =93 R7 =73

R8 =48 R9 =0 R10=88 R11=55 R12=75 R13=87 R14=81 R15=71

LEVEL:OUT WHITE:ANSI\_6500K

TLCI Parameters: TLCI = 60.4

## Photometric & Radiometric Parameters

Flux = 25065 lm Eff. : 40.70 lm/W  $F_e = 88.790 W$

## Electrical parameters

$V = 239.7 V$   $I = 2.615 A$   $P = 615.8 W$  PF = 0.9822

Freq=50.01 Hz





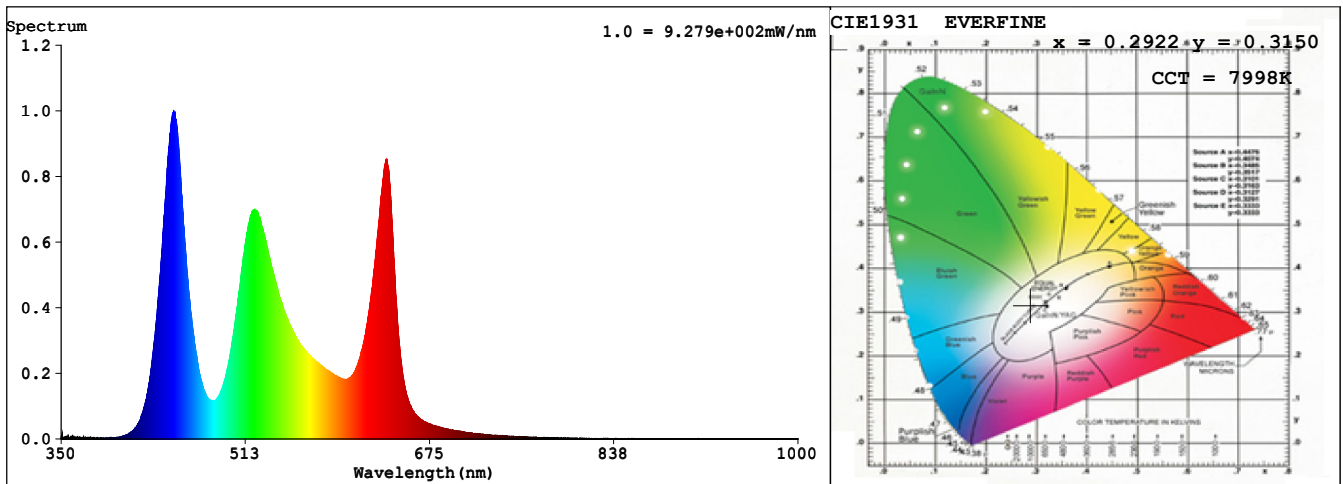
# Spectrum Test Report

Sample	:	Date	: 2024-02-19 17:55:28
Specification	: SERA	Sam. Status	:
Sample No.	: 8000K	Instrument	: HAAS-2000(EVERFINE)
Manufacturer	: CLF	Test by	: DANNY
		Assessor	: damin

## Test Condition

Temperature	: 28Deg	RH	: 65.0%
WL Range	: 350nm-1000nm	IP	: 39876 (61%)
Test Mode	: Fast Test	T	: 25 ms
		Sensitivity	: High

## Spectrum



## Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.2922$   $y = 0.3150$  /  $u' = 0.1886$   $v' = 0.4576$  ( $duv=6.99e-03$ )

CCT= 7998K Prcp WL:  $L_d=485.8nm$  Purity=15.4%

Peak WL:  $L_p=449nm$  FWHM: =24.2nm Ratio:R=16.4% G=78.8% B=4.8%

Render Index:  $R_a = 77.3$

R1 =83 R2 =93 R3 =69 R4 =67 R5 =87 R6 =92 R7 =75

R8 =53 R9 =0 R10=83 R11=58 R12=71 R13=90 R14=82 R15=75

LEVEL:OUT WHITE:OUT

TLCI Parameters: TLCI = 63.8

## Photometric & Radiometric Parameters

Flux = 24810 lm Eff. : 40.40 lm/W  $F_e = 89.422 W$

## Electrical parameters

$V = 239.7 V$   $I = 2.608 A$   $P = 614.1 W$  PF = 0.9822

Freq=50.01 Hz



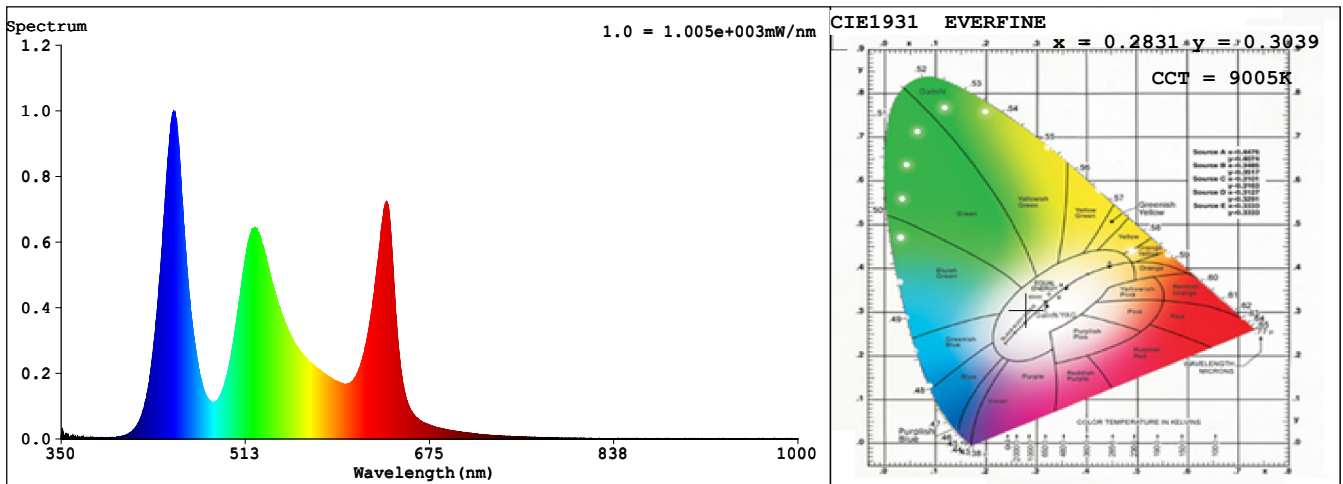
# Spectrum Test Report

Sample : Date : 2024-02-19 17:55:43  
 Specification : SERA Sam. Status :  
 Sample No. : 9000K Instrument : HAAS-2000(EVERFINE)  
 Manufacturer : CLF Test by : DANNY  
 Assessor : damin

## Test Condition

Temperature : 28Deg RH : 65.0%  
 WL Range : 350nm-1000nm IP : 39995 (61%)  
 Test Mode : Fast Test T : 25 ms  
 Sensitivity : High

## Spectrum



## Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.2831$   $y = 0.3039$  /  $u' = 0.1862$   $v' = 0.4498$  ( $duv=6.63e-03$ )

CCT= 9005K Prcp WL:  $L_d=483.8nm$  Purity=19.4%

Peak WL:  $L_p=449nm$  FWHM: =24.2nm Ratio:R=15.7% G=79.2% B=5.1%

Render Index:  $R_a = 78.6$

R1 =85 R2 =92 R3 =69 R4 =69 R5 =89 R6 =90 R7 =77

R8 =58 R9 =0 R10=81 R11=60 R12=68 R13=91 R14=82 R15=77

LEVEL:OUT WHITE:OUT

TLCI Parameters: TLCI = 66.5

## Photometric & Radiometric Parameters

Flux = 24582 lm Eff. : 40.12 lm/W  $F_e = 90.288 W$

## Electrical parameters

$V = 239.7 V$   $I = 2.603 A$   $P = 612.7 W$  PF = 0.9821

Freq=50.01 Hz



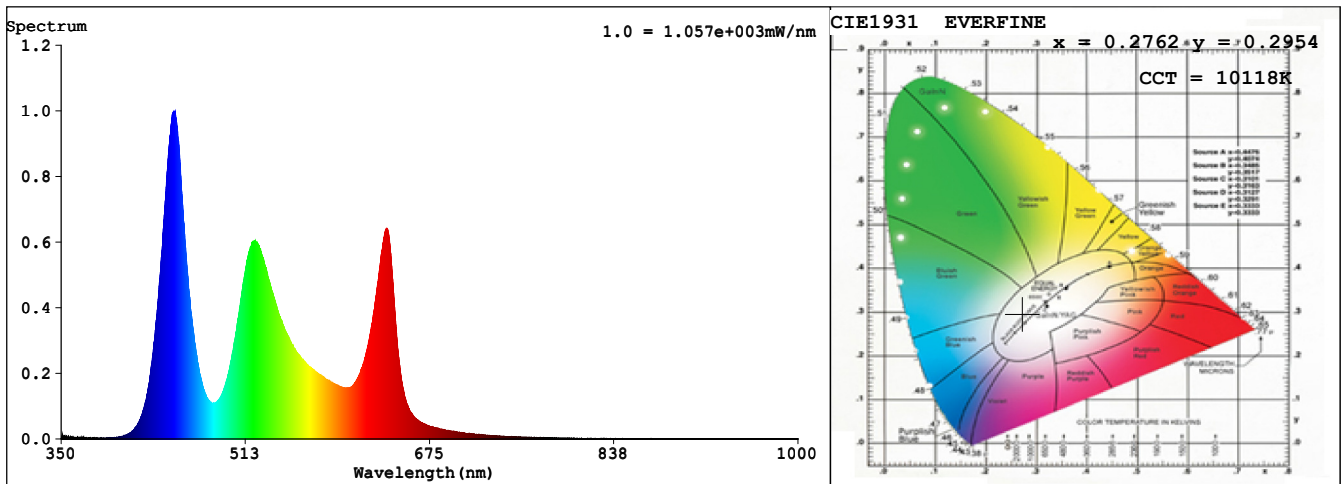
# Spectrum Test Report

Sample	:	Date	: 2024-02-19 17:56:45
Specification	: SERA	Sam. Status	:
Sample No.	: 10000K	Instrument	: HAAS-2000(EVERFINE)
Manufacturer	: CLF	Test by	: DANNY
		Assessor	: damin

## Test Condition

Temperature	: 28Deg	RH	: 65.0%
WL Range	: 350nm-1000nm	IP	: 42174 (64%)
Test Mode	: Fast Test	T	: 25 ms
		Sensitivity	: High

## Spectrum



## Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.2762$   $y = 0.2954$  /  $u' = 0.1844$   $v' = 0.4436$  ( $duv=6.41e-03$ )

CCT= 10118K Prcp WL: Ld=482.6nm Purity=22.5%

Peak WL: Lp=450nm FWHM: =24.3nm Ratio:R=15.1% G=79.5% B=5.4%

Render Index: Ra = 79.4

R1 =87 R2 =91 R3 =69 R4 =70 R5 =90 R6 =89 R7 =78

R8 =60 R9 =0 R10=78 R11=61 R12=65 R13=93 R14=82 R15=79

LEVEL:OUT WHITE:OUT

TLCI Parameters: TLCI = 68.5

## Photometric & Radiometric Parameters

Flux = 24143 lm Eff. : 39.66 lm/W Fe = 89.942 W

## Electrical parameters

V = 239.7 V I = 2.587 A P = 608.8 W PF = 0.9819

Freq=50.01 Hz