



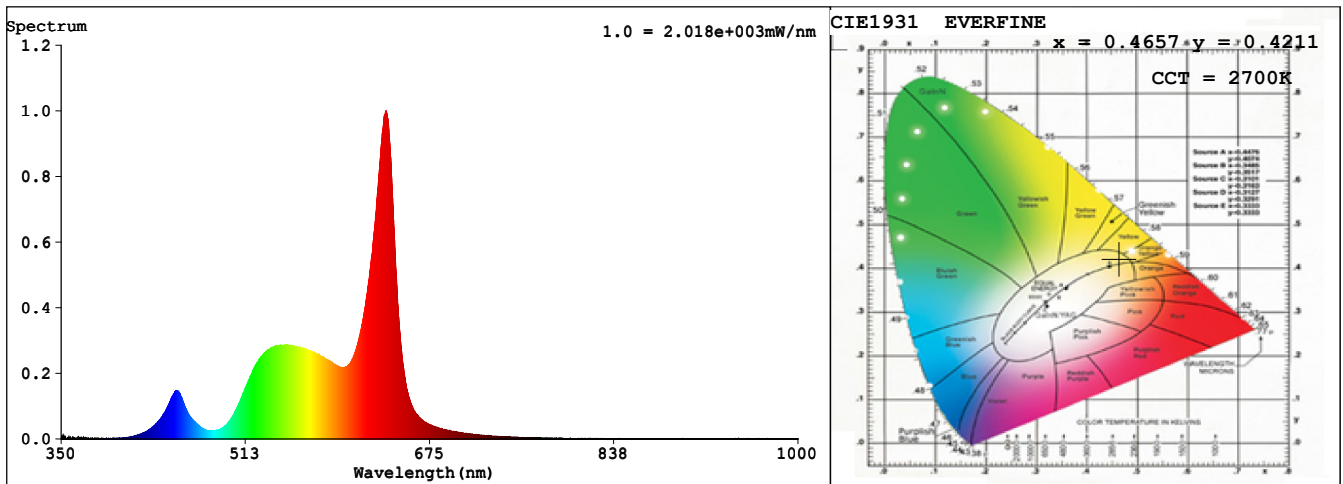
Spectrum Test Report

Sample : Date : 2024-02-19 14:52:00
 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 : 51542 (79%)
 Test Mode : Fast Test T : 13 ms
 Sensitivity : High

Spectrum



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.4657, y = 0.4211 / u' = 0.2616, v' = 0.5321$ (duv=3.33e-03)

CCT= 2700K Prcp WL: $L_d=583.2nm$ Purity=66.2%

Peak WL: $L_p=637nm$ FWHM: =23.6nm Ratio:R=27.8% G=71.0% B=1.2%

Render Index: $R_a = 84.0$

R1 =89 R2 =95 R3 =70 R4 =82 R5 =94 R6 =91 R7 =82

R8 =69 R9 =51 R10=80 R11=82 R12=70 R13=94 R14=80 R15=85

LEVEL:OUT WHITE:ANSI_2700K

TLCI Parameters: TLCI = 77.1

Photometric & Radiometric Parameters

Flux = 38752 lm Eff. : 59.57 lm/W $F_e = 119.14 W$

Electrical parameters

$V = 239.7 V, I = 2.778 A, P = 650.5 W, PF = 0.9771$

Freq=50.01 Hz



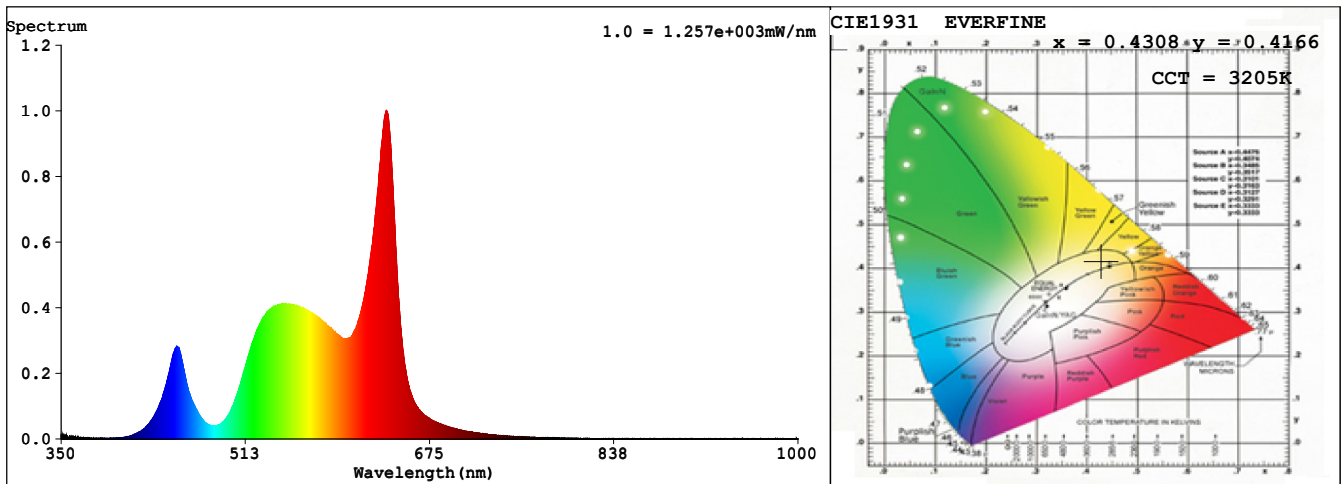
Spectrum Test Report

Sample : Date : 2024-02-19 14:55:38
 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 : 54351 (83%)
 Test Mode : Fast Test T : 22 ms
 Sensitivity : High

Spectrum



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.4308$ $y = 0.4166$ / $u' = 0.2415$ $v' = 0.5253$ ($duv=5.87e-03$)

CCT= 3205K Prcp WL: $L_d=580.0nm$ Purity=54.4%

Peak WL: $L_p=637nm$ FWHM: =25.8nm Ratio:R=23.0% G=75.5% B=1.5%

Render Index: $R_a = 85.9$

R1 =97 R2 =88 R3 =71 R4 =90 R5 =92 R6 =80 R7 =85

R8 =84 R9 =81 R10=65 R11=90 R12=53 R13=93 R14=82 R15=98

LEVEL:OUT WHITE:ANSI_3000K

TLCI Parameters: TLCI = 80.4

Photometric & Radiometric Parameters

Flux = 32669 lm Eff. : 62.60 lm/W $F_e = 96.803 W$

Electrical parameters

$V = 239.7 V$ $I = 2.248 A$ $P = 521.9 W$ PF = 0.9684

Freq=50.01 Hz



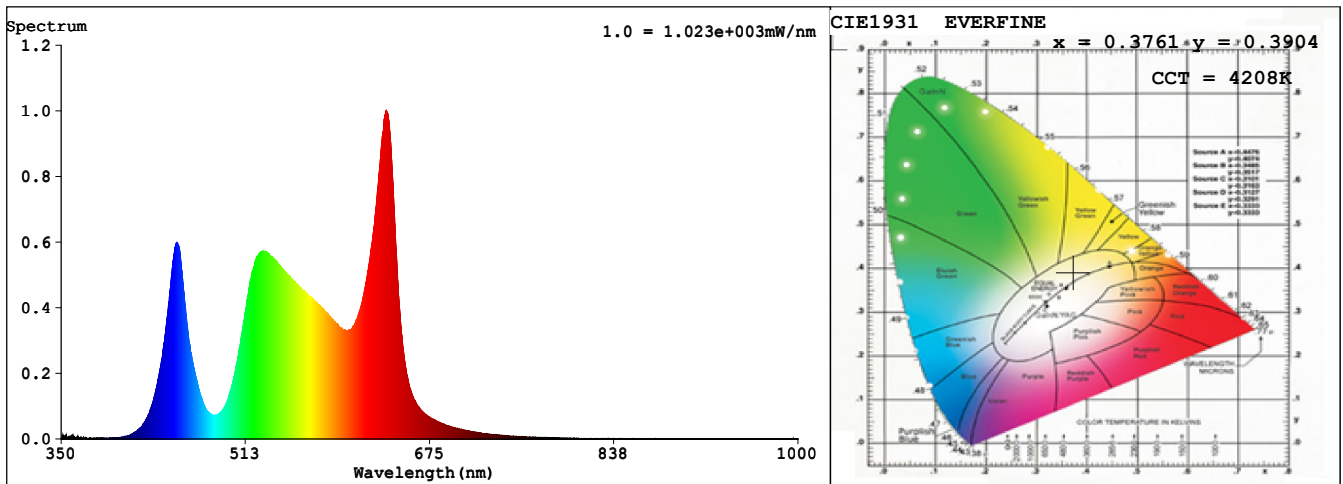
Spectrum Test Report

Sample : Date : 2024-02-19 14:56:49
 Specification : SERA Sam. Status :
 Sample No. : 4200K Instrument : HAAS-2000(EVERFINE)
 Manufacturer : CLF Test by : DANNY
 Assessor : damin

Test Condition

Temperature : 28Deg RH : 65.0%
 WL Range : 350nm-1000nm IP : 44217 (67%)
 Test Mode : Fast Test T : 22 ms
 Sensitivity : High

Spectrum



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.3761$ $y = 0.3904$ / $u' = 0.2170$ $v' = 0.5068$ ($duv=7.58e-03$)

CCT= 4208K Prcp WL: $L_d=574.5nm$ Purity=30.0%

Peak WL: $L_p=637nm$ FWHM: =26.7nm Ratio:R=19.2% G=78.4% B=2.4%

Render Index: $R_a = 85.5$

R1 =97 R2 =87 R3 =73 R4 =88 R5 =93 R6 =81 R7 =84

R8 =82 R9 =74 R10=66 R11=86 R12=52 R13=94 R14=83 R15=97

LEVEL:OUT WHITE:OUT

TLCI Parameters: TLCI = 83.2

Photometric & Radiometric Parameters

Flux = 32687 lm Eff. : 61.44 lm/W $F_e = 98.822 W$

Electrical parameters

$V = 239.7 V$ $I = 2.290 A$ $P = 532.0 W$ PF = 0.9693

Freq=50.01 Hz



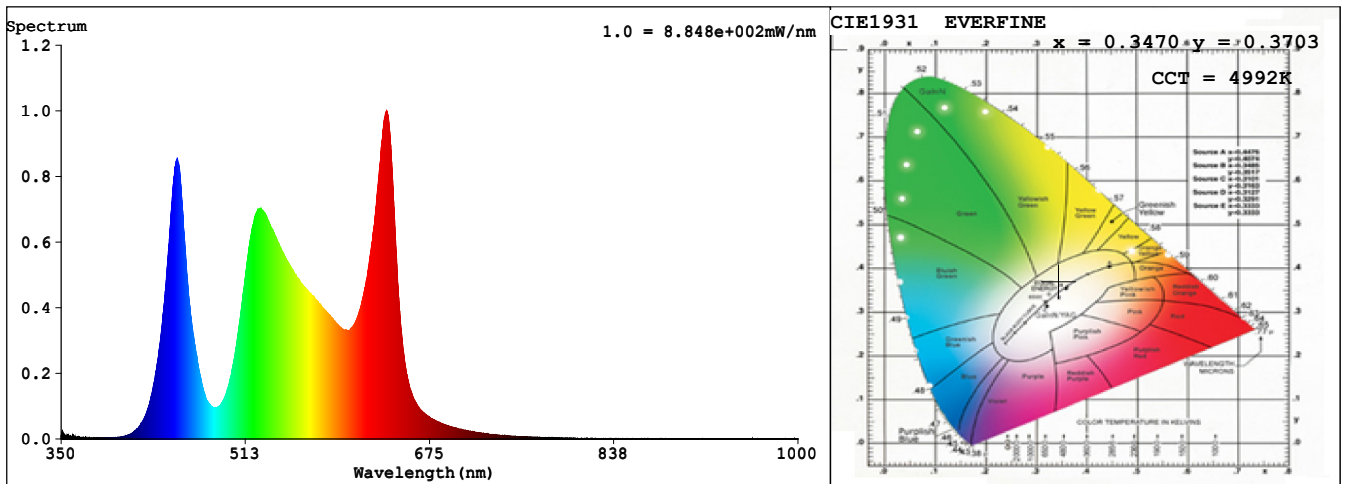
Spectrum Test Report

Sample	:	Date	: 2024-02-19 14:57:44
Specification	: SERA	Sam. Status	:
Sample No.	: 5000K	Instrument	: HAAS-2000(EVERFINE)
Manufacturer	: CLF	Test by	: DANNY
		Assessor	: damin

Test Condition

Temperature	: 28Deg	RH	: 65.0%
WL Range	: 350nm-1000nm	IP	: 55500 (85%)
Test Mode	: Fast Test	T	: 32 ms
		Sensitivity	: High

Spectrum



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.3470$ $y = 0.3703$ / $u' = 0.2057$ $v' = 0.4938$ ($duv=8.35e-03$)

CCT= 4992K Prcp WL: $L_d=567.0nm$ Purity=15.3%

Peak WL: $L_p=637nm$ FWHM: =26.4nm Ratio:R=17.6% G=79.4% B=3.0%

Render Index: $R_a = 85.3$

R1 =96 R2 =87 R3 =73 R4 =86 R5 =93 R6 =82 R7 =84

R8 =80 R9 =67 R10=67 R11=82 R12=51 R13=94 R14=84 R15=96

LEVEL:OUT WHITE:OUT

TLCI Parameters: TLCI = 83.8

Photometric & Radiometric Parameters

Flux = 30880 lm Eff. : 59.63 lm/W $F_e = 96.171 W$

Electrical parameters

$V = 239.7 V$ $I = 2.232 A$ $P = 517.9 W$ PF = 0.9682

Freq=50.01 Hz



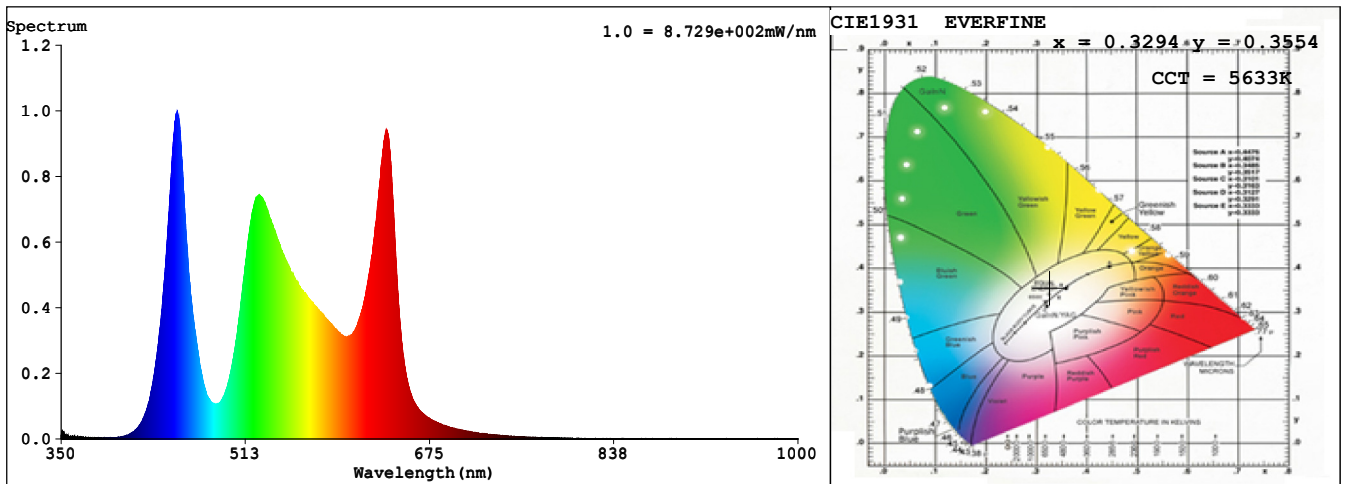
Spectrum Test Report

Sample	:	Date	: 2024-02-19 14:58:51
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	: 51758 (79%)
Test Mode	: Fast Test	T	: 32 ms
		Sensitivity	: High

Spectrum



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.3294$ $y = 0.3554$ / $u' = 0.1995$ $v' = 0.4842$ ($duv=8.49e-03$)

CCT= 5633K Prcp WL: $L_d=544.7nm$ Purity=5.6%

Peak WL: $L_p=453nm$ FWHM: =21.6nm Ratio:R=16.6% G=79.9% B=3.5%

Render Index: $R_a = 84.7$

R1 =97 R2 =87 R3 =72 R4 =83 R5 =94 R6 =83 R7 =83

R8 =78 R9 =61 R10=67 R11=79 R12=56 R13=95 R14=83 R15=94

LEVEL:OUT WHITE:OUT

TLCI Parameters: TLCI = 84.4

Photometric & Radiometric Parameters

Flux = 30304 lm Eff. : 58.19 lm/W $F_e = 96.698 W$

Electrical parameters

$V = 239.7 V$ $I = 2.244 A$ $P = 520.8 W$ PF = 0.9684

Freq=50.01 Hz



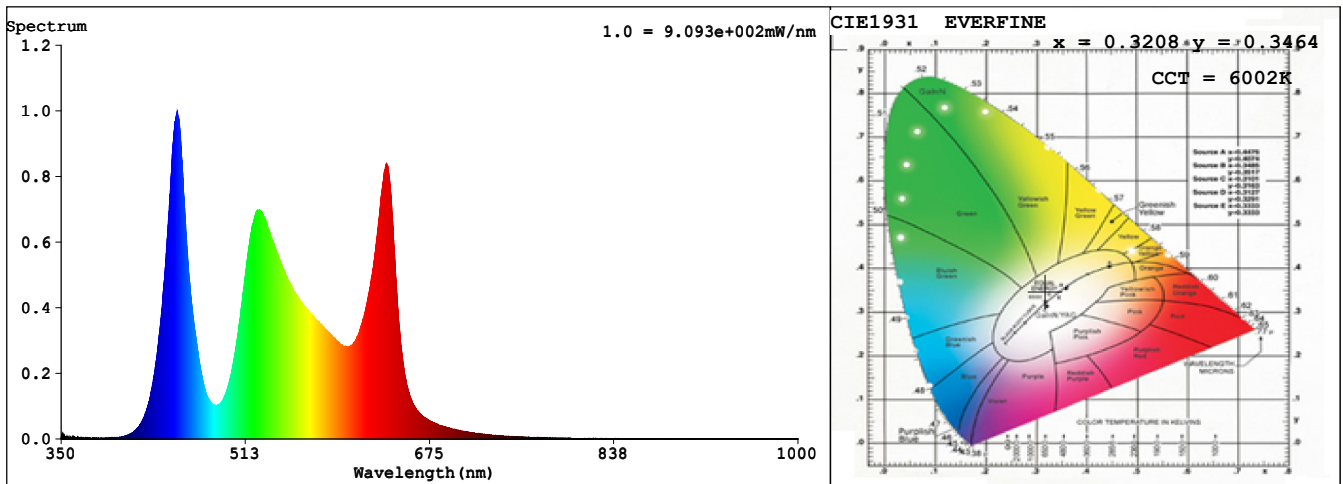
Spectrum Test Report

Sample	:	Date	: 2024-02-19 14:59:23
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	: 50427 (77%)
Test Mode	: Fast Test	T	: 32 ms
		Sensitivity	: High

Spectrum



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.3208$ $y = 0.3464$ / $u' = 0.1969$ $v' = 0.4785$ ($duv=8.04e-03$)

CCT= 6002K Prcp WL: $L_d=506.0nm$ Purity=3.8%

Peak WL: $L_p=453nm$ FWHM: =21.5nm Ratio:R=16.1% G=80.1% B=3.7%

Render Index: $R_a = 84.7$

R1 =97 R2 =87 R3 =72 R4 =83 R5 =94 R6 =83 R7 =83

R8 =78 R9 =60 R10=67 R11=78 R12=55 R13=95 R14=83 R15=94

LEVEL:OUT WHITE:OUT

TLCI Parameters: TLCI = 84.4

Photometric & Radiometric Parameters

Flux = 28994 lm Eff. : 57.98 lm/W $F_e = 93.753 W$

Electrical parameters

$V = 239.7 V$ $I = 2.159 A$ $P = 500.1 W$ PF = 0.9664

Freq=50.01 Hz



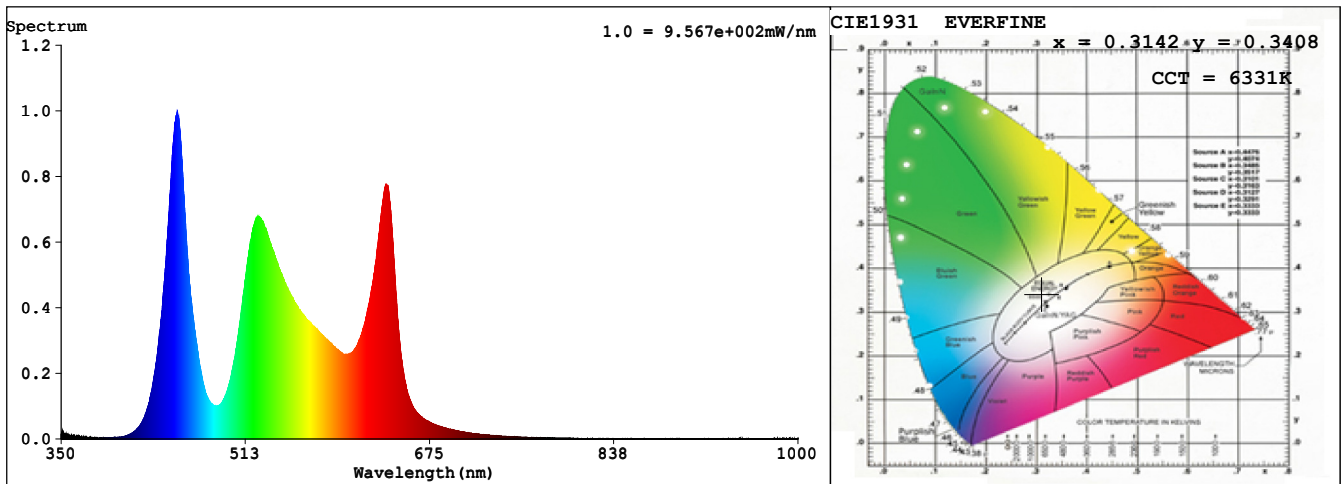
Spectrum Test Report

Sample	:	Date	: 2024-02-19 15:01:17
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	: 40220 (61%)
Test Mode	: Fast Test	T	: 25 ms
		Sensitivity	: High

Spectrum



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.3142$ $y = 0.3408$ / $u' = 0.1945$ $v' = 0.4747$ ($duv=8.37e-03$)

CCT= 6331K Prcp WL: $L_d=496.8nm$ Purity=6.0%

Peak WL: $L_p=453nm$ FWHM: =21.5nm Ratio:R=15.8% G=80.3% B=3.9%

Render Index: $R_a = 84.6$

R1 =96 R2 =87 R3 =72 R4 =82 R5 =95 R6 =83 R7 =83

R8 =78 R9 =57 R10=67 R11=77 R12=55 R13=95 R14=83 R15=93

LEVEL:OUT WHITE:ANSI_6500K

TLCI Parameters: TLCI = 84.3

Photometric & Radiometric Parameters

Flux = 28789 lm Eff. : 57.27 lm/W $F_e = 94.270 W$

Electrical parameters

$V = 239.7 V$ $I = 2.170 A$ $P = 502.7 W$ PF = 0.9666

Freq=50.01 Hz



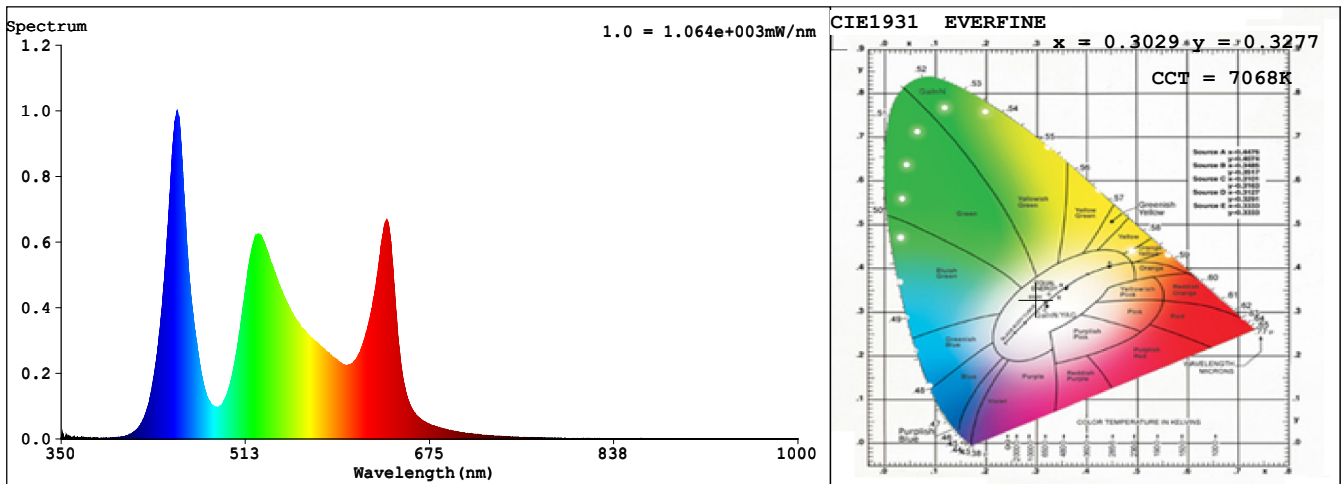
Spectrum Test Report

Sample	:	Date	: 2024-02-19 15:01:36
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	: 43257 (66%)
Test Mode	: Fast Test	T	: 25 ms
		Sensitivity	: High

Spectrum



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.3029$ $y = 0.3277$ / $u' = 0.1915$ $v' = 0.4662$ ($duv=7.62e-03$)

CCT= 7068K Prcp WL: $L_d=489.3nm$ Purity=10.7%

Peak WL: $L_p=453nm$ FWHM: =21.4nm Ratio:R=15.2% G=80.5% B=4.3%

Render Index: $R_a = 84.5$

R1 =96 R2 =87 R3 =71 R4 =82 R5 =95 R6 =83 R7 =84

R8 =78 R9 =54 R10=67 R11=77 R12=54 R13=95 R14=83 R15=93

LEVEL:OUT WHITE:OUT

TLCI Parameters: TLCI = 84.2

Photometric & Radiometric Parameters

Flux = 28718 lm Eff. : 56.62 lm/W $F_e = 96.043 W$

Electrical parameters

$V = 239.7 V$ $I = 2.188 A$ $P = 507.2 W$ PF = 0.9672

Freq=50.00 Hz



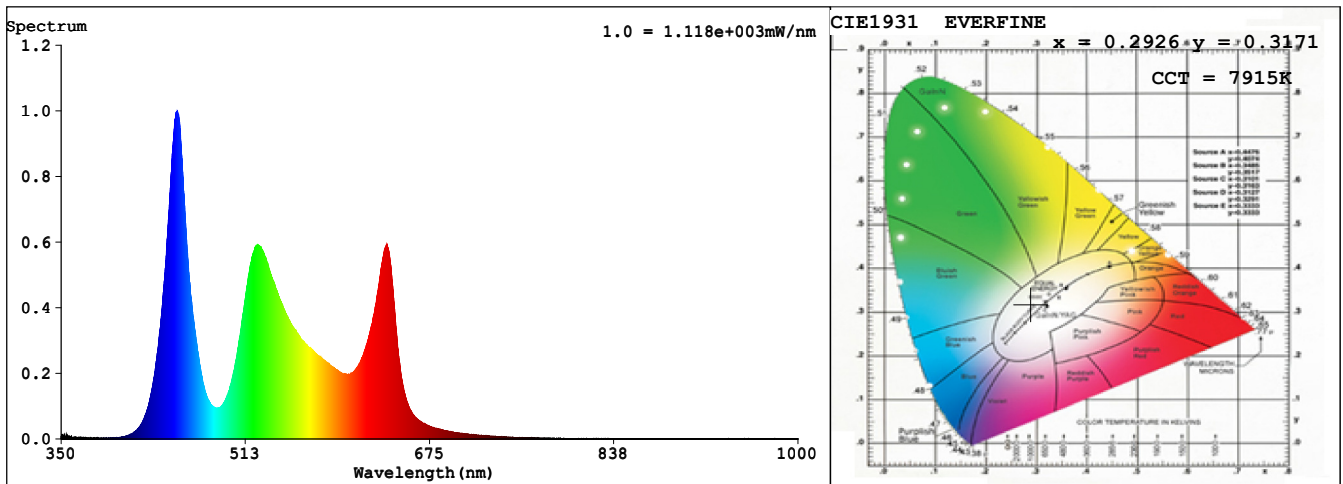
Spectrum Test Report

Sample	:	Date	: 2024-02-19 15:03:21
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	: 45585 (70%)
Test Mode	: Fast Test	T	: 25 ms
		Sensitivity	: High

Spectrum



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.2926$ $y = 0.3171$ / $u' = 0.1881$ $v' = 0.4588$ ($duv=7.84e-03$)

CCT= 7915K Prcp WL: $L_d=486.5nm$ Purity=15.0%

Peak WL: $L_p=453nm$ FWHM: =21.4nm Ratio:R=14.7% G=80.7% B=4.6%

Render Index: $R_a = 84.4$

R1 =96 R2 =87 R3 =71 R4 =82 R5 =95 R6 =83 R7 =84

R8 =77 R9 =51 R10=67 R11=75 R12=53 R13=95 R14=83 R15=92

LEVEL:OUT WHITE:OUT

TLCI Parameters: TLCI = 83.6

Photometric & Radiometric Parameters

Flux = 27566 lm Eff. : 55.48 lm/W $F_e = 94.265 W$

Electrical parameters

$V = 239.7 V$ $I = 2.145 A$ $P = 496.8 W$ PF = 0.9660

Freq=50.01 Hz



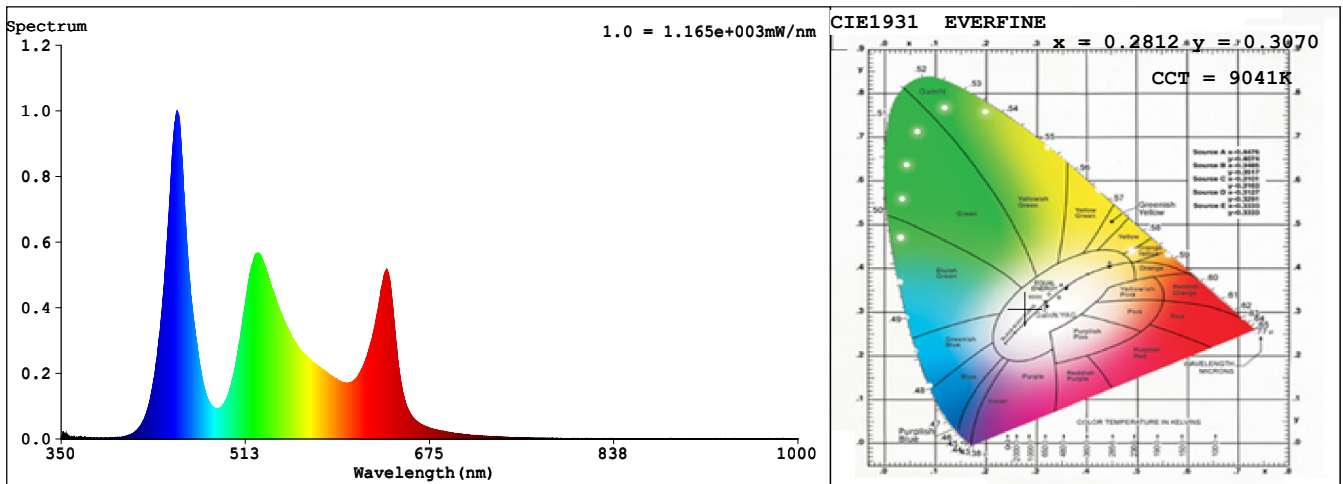
Spectrum Test Report

Sample	:	Date	: 2024-02-19 15:03:35
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	: 47651 (73%)
Test Mode	: Fast Test	T	: 25 ms
		Sensitivity	: High

Spectrum



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.2812$ $y = 0.3070$ / $u' = 0.1837$ $v' = 0.4514$ ($duv=9.28e-03$)

CCT= 9041K Prcp WL: $L_d=485.0nm$ Purity=19.7%

Peak WL: $L_p=453nm$ FWHM: =21.4nm Ratio:R=13.9% G=81.0% B=5.1%

Render Index: $R_a = 84.4$

R1 =96 R2 =87 R3 =71 R4 =82 R5 =94 R6 =83 R7 =84

R8 =79 R9 =53 R10=66 R11=74 R12=51 R13=93 R14=83 R15=93

LEVEL:OUT WHITE:OUT

TLCI Parameters: TLCI = 82.9

Photometric & Radiometric Parameters

Flux = 26228 lm Eff. : 54.27 lm/W $F_e = 91.648 W$

Electrical parameters

$V = 239.7 V$ $I = 2.090 A$ $P = 483.3 W$ PF = 0.9646

Freq=50.01 Hz



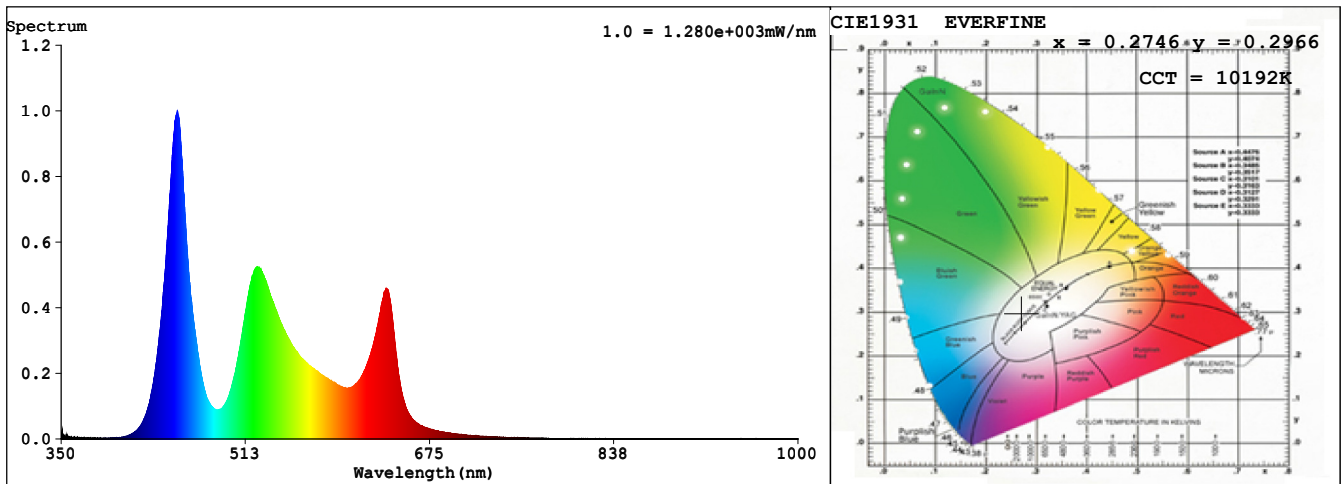
Spectrum Test Report

Sample	:	Date	: 2024-02-19 15:04:18
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	: 52195 (80%)
Test Mode	: Fast Test	T	: 25 ms
		Sensitivity	: High

Spectrum



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.2746$ $y = 0.2966$ / $u' = 0.1828$ $v' = 0.4442$ ($duv=8.00e-03$)

CCT= 10192K Prcp WL: Ld=483.2nm Purity=22.9%

Peak WL: Lp=453nm FWHM: =21.4nm Ratio:R=13.6% G=81.0% B=5.4%

Render Index: Ra = 84.4

R1 =96 R2 =87 R3 =70 R4 =82 R5 =94 R6 =82 R7 =85

R8 =79 R9 =53 R10=65 R11=74 R12=50 R13=94 R14=83 R15=92

LEVEL:OUT WHITE:OUT

TLCI Parameters: TLCI = 82.7

Photometric & Radiometric Parameters

Flux = 26597 lm Eff. : 53.89 lm/W Fe = 94.937 W

Electrical parameters

V = 239.7 V I = 2.132 A P = 493.5 W PF = 0.9657

Freq=50.01 Hz