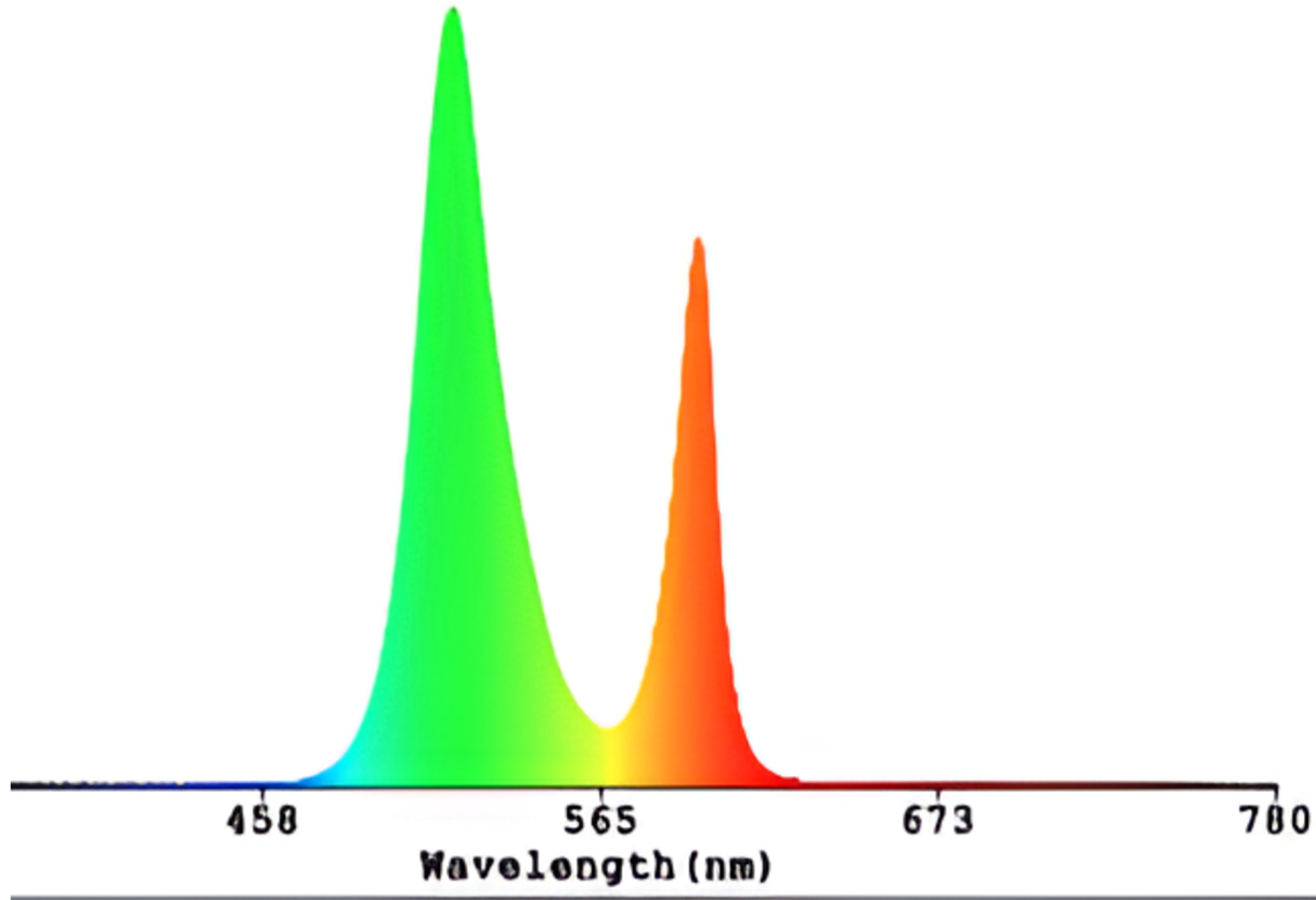


# UPTA / EPTA

## 590nm AMBER AND GREEN SPECTRUM



590nm Amber and Green LEDs increases the spectrum and lumens per watt

## Tested at 160w

### UPTA AND EPTA 160 590NM AMBER AND GREEN - FIXTURE TEST REPORT - CLEAR GLASS LENS



#### Floodlight Summary:

Report based on lamp delivering 1000 lumens.

Maximum Intensity  
(Luminaire orientation as tested.) 334.8 cd per klm.  
0.0 degrees vertical  
0.0 degrees horizontal

Beam Spread At 10% of Imax 157.0V x 155.9H  
At 50% of Imax 119.7V x 118.4H  
At 90% of Imax 53.9V x 53.1H

Beam Flux Total 999.4 lumens per klm.  
To 10% of Imax 985.7 lumens per klm.  
To 50% of Imax 799.8 lumens per klm.  
To 90% of Imax 215.0 lumens per klm.

Upward LOR 0.0 %  
Downward LOR 99.9 %  
Luminaire Efficiency(Light Output Ratio) 100.0 %

Light Output Ratio:	100.0%
Luminaire Power:	155.9 W
90% Beam Spread	53.9V x 53.1H
50% Beam Lumens	799.8 lumens per klm.

H(□) Range:-90 - 90DEG H( )Interval:1.0DEG Test Speed: HIGH Temperature:25.3DEG Operators:Guohong Test Date:2023-12-25

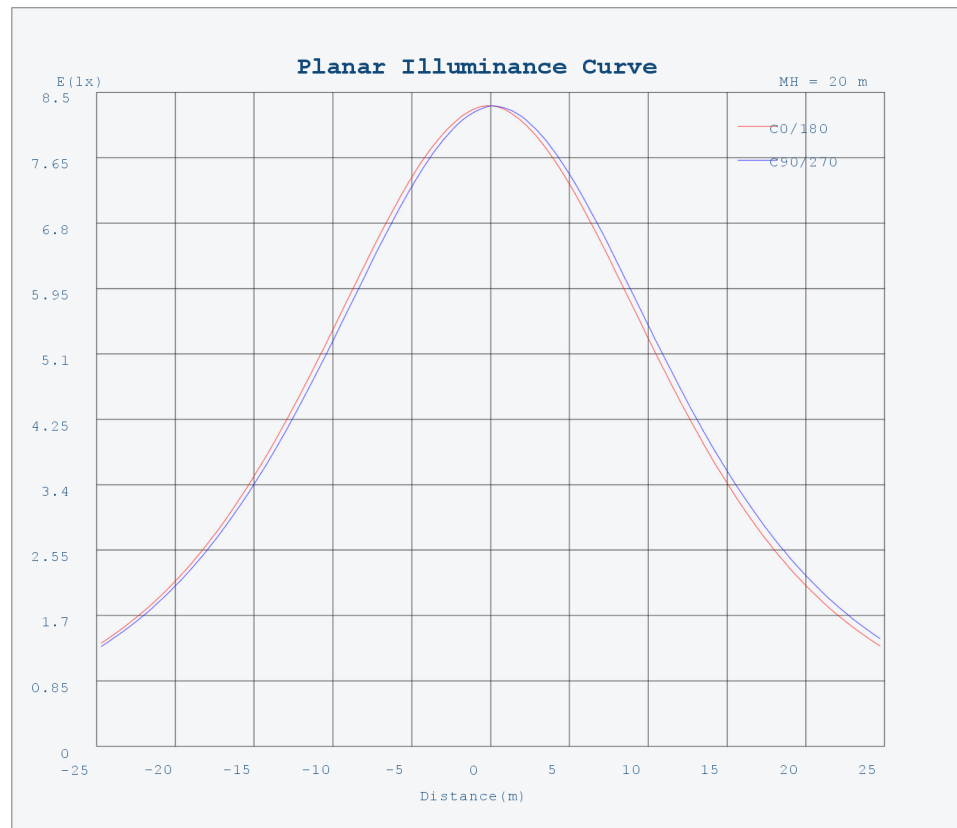
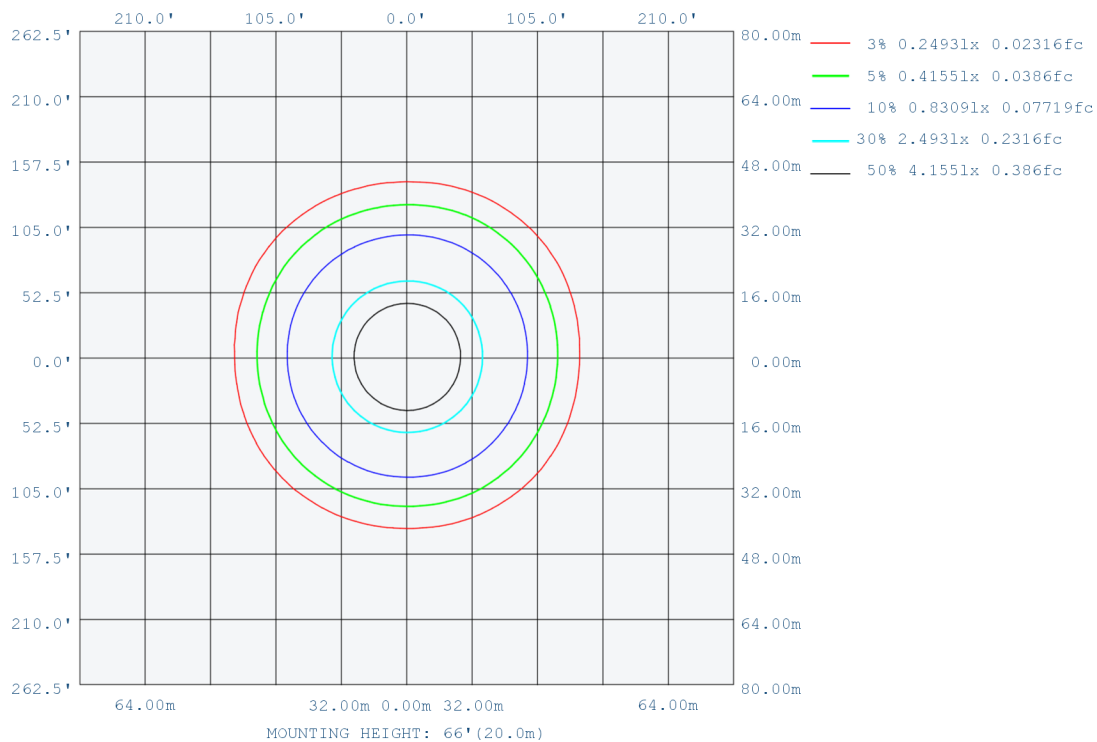
V(B) Range:-90 - 90DEG V(B) Interval: 2.0DEG TestSystem:EVERFINEGO-2000B\_V1 SYSTEM V2.0.404.7 Humidity:65.0% TestDistance:8.365m [K=1.0000] Remarks:

H(□) Range:-90 - 90DEG H(□)Interval:1.0DEG Test Speed: HIGH Temperature:25.3DEG Operators:Guohong Test Date:2023-12-25

V(B) Range:-90 - 90DEG V(B) Interval: 2.0DEG TestSystem:EVERFINEGO-2000B\_V1 SYSTEM V2.0.404.7 Humidity:65.0% TestDistance:8.365m [K=1.0000] Remarks:

## ISOLUX DIAGRAM

Test:U:236.9V I:0.6686A P:155.9W PF:0.984 Freq:50.03Hz Lamp Flux:9951.68x1 lm		
NAME: AF88X160-GRE/AMB-clear glass	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



H(□) Range:-90 - 90DEG  
H(□) Interval:1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Guohong  
Test Date:2023-12-25

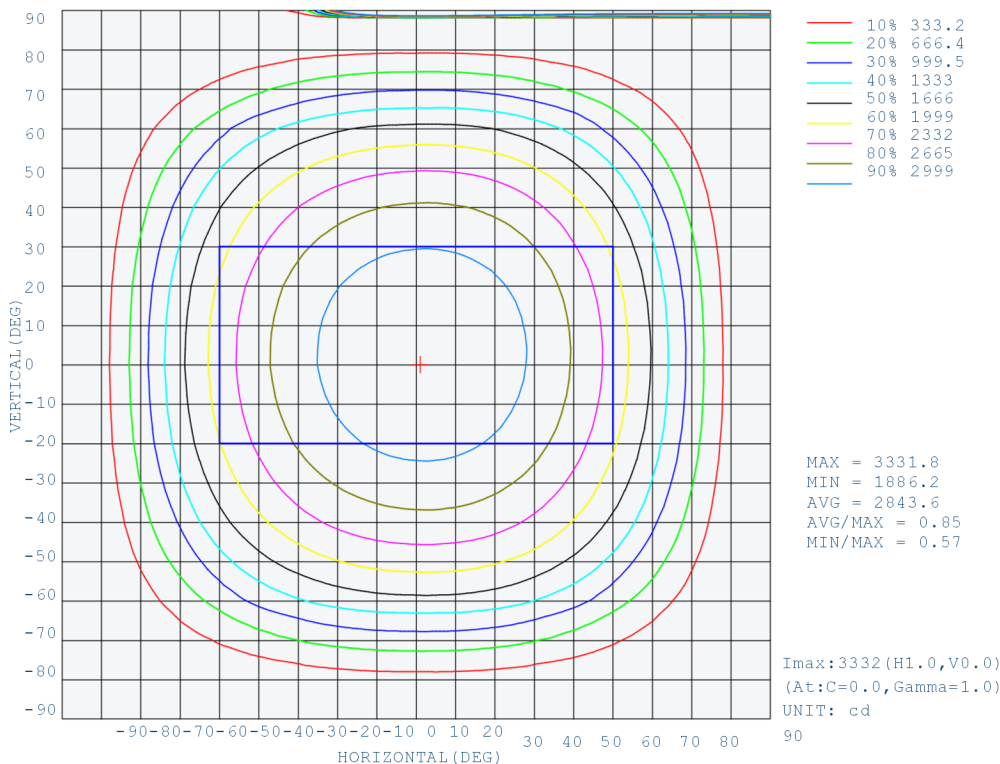
V(B) Range:-90 - 90DEG  
V(B) Interval: 2.0DEG  
TestSystem:EVERFINEGO-2000B\_V1 SYSTEM V2.0.404.7  
Humidity:65.0%  
TestDistance:8.365m [K=1.0000]  
Remarks:

H(□) Range:-90 - 90DEG  
H(□) Interval:1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Guohong  
Test Date:2023-12-25

V(B) Range:-90 - 90DEG  
V(B) Interval: 2.0DEG  
TestSystem:EVERFINEGO-2000B\_V1 SYSTEM V2.0.404.7  
Humidity:65.0%  
TestDistance:8.365m [K=1.0000]  
Remarks:

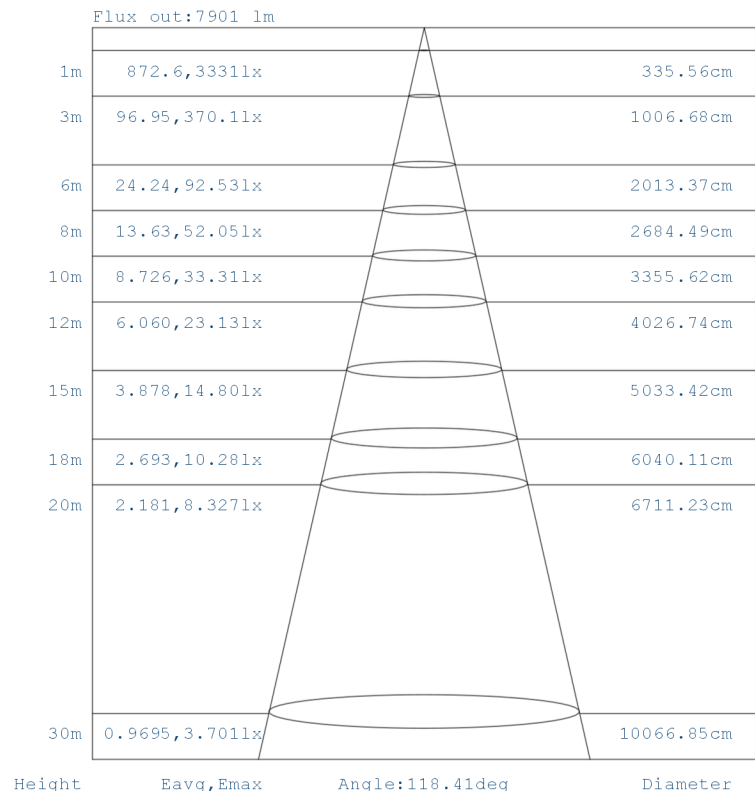
### ISOCANDELA DIAGRAM

Test:U:236.9V I:0.6686A P:155.9W PF:0.984 Freq:50.03Hz Lamp Flux:9951.68x1 lm		
NAME: AF88X160-GRE/AMB-clear glass	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



### AAI Figure

Test:U:236.9V I:0.6686A P:155.9W PF:0.984 Freq:50.03Hz Lamp Flux:9951.68x1 lm		
NAME: AF88X160-GRE/AMB-clear glass	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

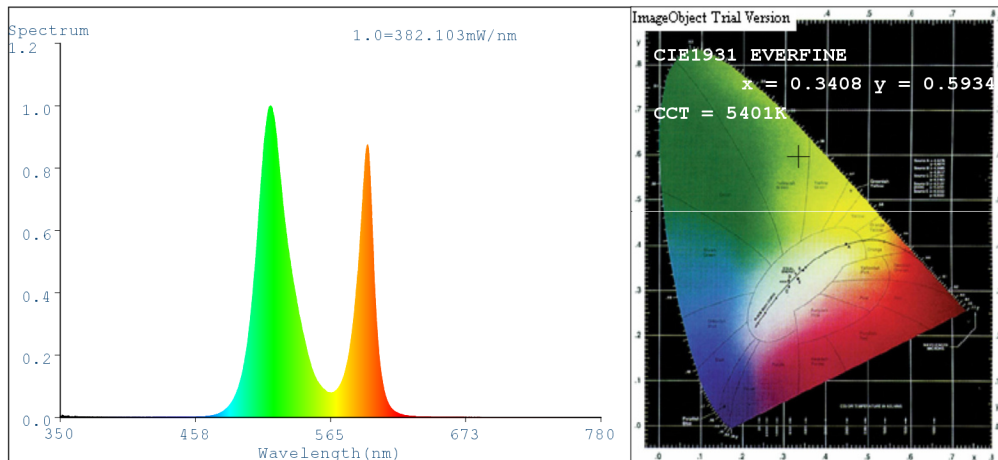
H(□) Range:-90 - 90DEG  
 H(□) Interval:1.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Guohong  
 Test Date:2023-12-25

V(B) Range:-90 - 90DEG  
 V(B) Interval: 2.0DEG  
 TestSystem:EVERFINEGO-2000B\_V1 SYSTEM V2.0.404.7  
 Humidity:65.0%  
 TestDistance:8.365m [K=1.0000]  
 Remarks:

H(□) Range:-90 - 90DEG  
 H(□) Interval:1.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Guohong  
 Test Date:2023-12-25

V(B) Range:-90 - 90DEG  
 V(B) Interval: 2.0DEG  
 TestSystem:EVERFINEGO-2000B\_V1 SYSTEM V2.0.404.7  
 Humidity:65.0%  
 TestDistance:8.365m [K=1.0000]  
 Remarks:

**SPECTRUM TEST REPORT - UPTA and EPTA 120 590NM AMBER & GRREN - Clear Glass**



**Color Parameters:**

Chromaticity Coordinate:  $x=0.3408$   $y=0.5934$  /  $u'=0.1444$   $v'=0.5658$   
 CCT=5401K (Duv=0.0858) Dominant WL:Ld =555.7nm Purity=81.1%  
 Ratio:R=4.0% G=94.6% B=1.4% Peak WL:Lp=517.1nm FWHM=27.9nm  
 Render Index:Ra=20.8 CRI=19.7 AvgR=18.5  
 R1=47 R2=34 R3=0 R4=0 R5=50 R6=32 R7=4 R8=0 R9=0 R10=0 R11=0  
 R12=17 R13=43 R14=49 R15=3

**Photo Parameters:**

Flux = 8816 lm Eff. : 72.59 lm/W Fe = 18.49 W

**Electrical parameters:**

V = 219.58 V I = 0.5631 A P = 121.4 W PF = 0.9822

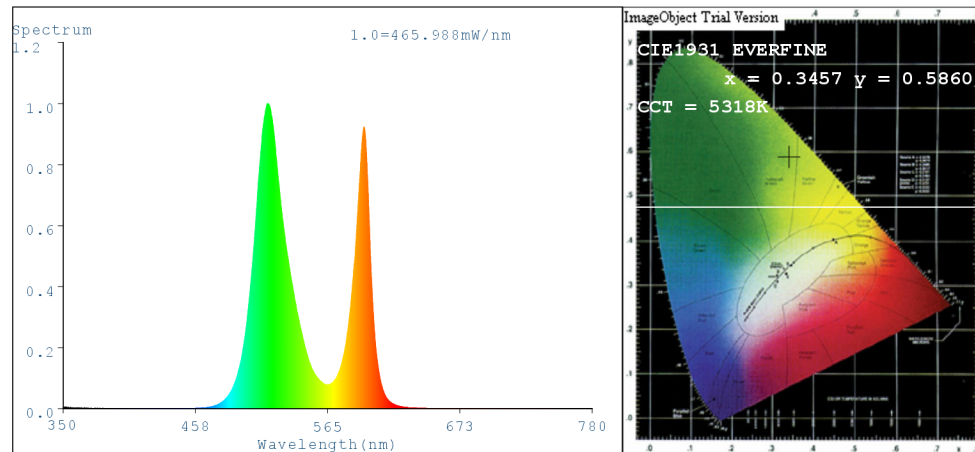
LEVEL:OUT WHITE:OUT

Status: Integral T = 20 ms Ip = 46199 (70%)

Model:LIGHT  
 Tester:DAMIN  
 Temperature:25.3Deg  
 Manufacturer:EVERFINE

Number:N-00011  
 Date:2023-12-25 17:39  
 Humidity:65.0%  
 Remarks:---

**SPECTRUM TEST REPORT - UPTA and EPTA 160 590NM AMBER & GRREN - Clear Glass**



**Color Parameters:**

Chromaticity Coordinate:  $x=0.3457$   $y=0.5860$  /  $u'=0.1480$   $v'=0.5646$   
 CCT=5318K (Duv=0.0826) Dominant WL:Ld =556.6nm Purity=80.3%  
 Ratio:R=4.4% G=94.0% B=1.6% Peak WL:Lp=516.0nm FWHM=28.3nm  
 Render Index:Ra=22.7 CRI=21.4 AvgR=20.3  
 R1=50 R2=37 R3=1 R4=0 R5=53 R6=35 R7=5 R8=0 R9=0 R10=0 R11=0  
 R12=21 R13=47 R14=50 R15=5

**Photo Parameters:**

Flux = 10946 lm Eff. : 66.80 lm/W Fe = 23.22 W

**Electrical parameters:**

V = 219.51 V I = 0.7549 A P = 163.9 W PF = 0.9888

LEVEL:OUT WHITE:OUT

Status: Integral T = 20 ms Ip = 56182 (86%)

Model:LIGHT  
 Tester:DAMIN  
 Temperature:25.3Deg  
 Manufacturer:EVERFINE

Number:1  
 Date:2023-12-25 17:46  
 Humidity:65.0%  
 Remarks:---

## UPTA AND EPTA 160 590NM AMBER AND GREEN - FIXTURE TEST REPORT - CLEAR POLYCARBONATE LENS



### Floodlight Summary:

Report based on lamp delivering 1000 lumens.

Maximum Intensity (Luminaire orientation as tested.) 340.2 cd per klm.  
0.0 degrees vertical  
0.0 degrees horizontal

Beam Spread At 10% of Imax 156.0V x 155.4H  
At 50% of Imax 117.8V x 117.8H  
At 90% of Imax 53.5V x 52.7H

Beam Flux Total 999.9 lumens per klm.  
To 10% of Imax 985.6 lumens per klm.  
To 50% of Imax 796.8 lumens per klm.  
To 90% of Imax 214.3 lumens per klm.

Upward LOR 0.0 %  
Downward LOR 100.0 %  
Luminaire Efficiency (Light Output Ratio) 100.0 %

Light Output Ratio:	100.0%
Luminaire Power:	157.9 W
90% Beam Spread	53.5V x 52.7H
50% Beam Lumens	796.8 lumens per klm.

H(□) Range:-90 - 90DEG  
H(□) Interval:1.0DEG Test  
Speed: HIGH  
Temperature:25.3DEG  
Operators:Guohong  
Test Date:2023-12-25

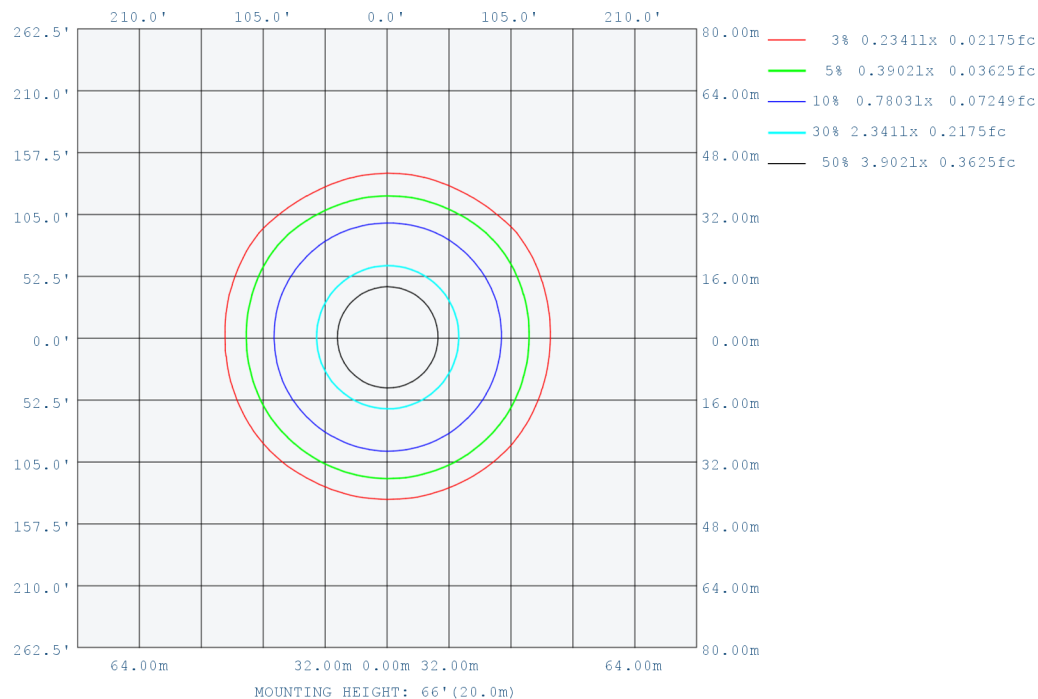
V(B) Range:-90 - 90DEG  
V(B) Interval: 2.0DEG  
TestSystem:EVERFINEGO-2000B\_V1 SYSTEM V2.0.404.7  
Humidity:65.0%  
TestDistance:8.365m [K=1.0000]  
Remarks:

H(□) Range:-90 - 90DEG  
H(□) Interval:1.0DEG Test  
Speed: HIGH  
Temperature:25.3DEG  
Operators:Guohong  
Test Date:2023-12-25

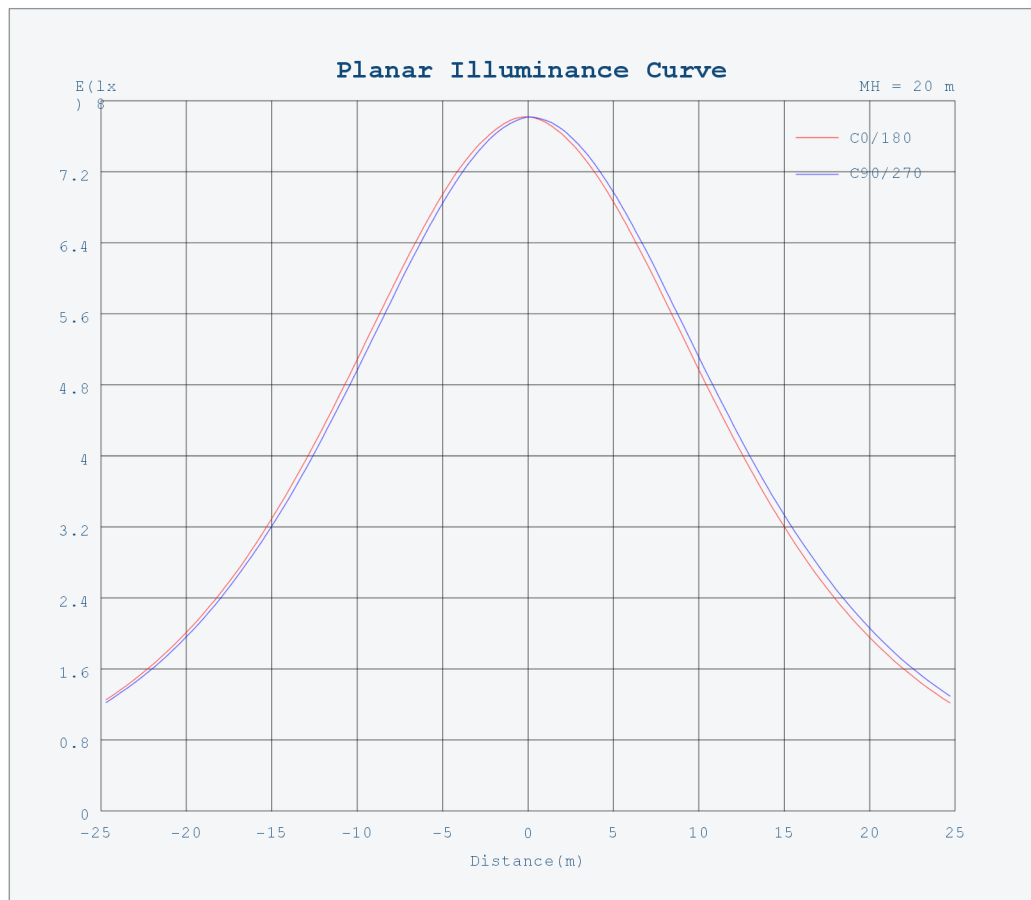
V(B) Range:-90 - 90DEG  
V(B) Interval: 2.0DEG  
TestSystem:EVERFINEGO-2000B\_V1 SYSTEM V2.0.404.7  
Humidity:65.0%  
TestDistance:8.365m [K=1.0000]  
Remarks:

### ISOLUX DIAGRAM

Test:U:233.6V I:0.6891A P:157.9W PF:0.981 Freq:49.97Hz Lamp Flux:9197.66x1 lm		
NAME: AF88X160-GRE/AMB-clear PC	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



### Planar Illuminance Curve



H(□) Range:-90 - 90DEG  
 H(□) Interval:1.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Guohong  
 Test Date:2023-12-25

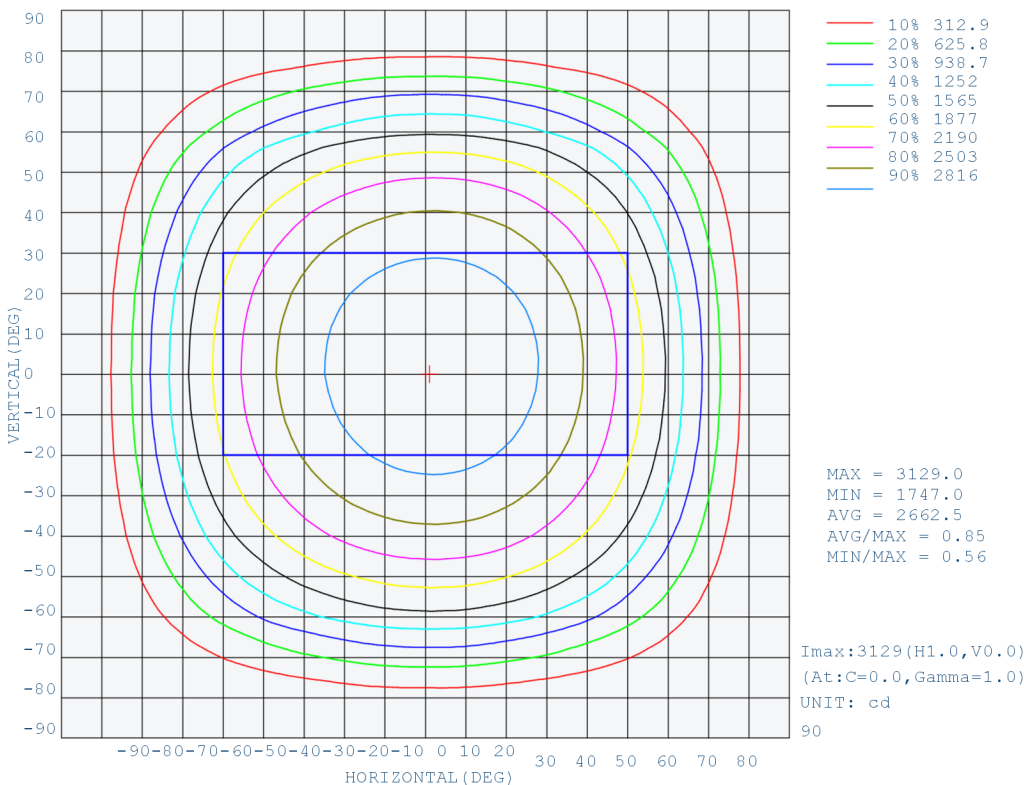
V(B) Range:-90 - 90DEG  
 V(B) Interval: 2.0DEG  
 TestSystem:EVERFINEGO-2000B\_V1 SYSTEM V2.0.404.7  
 Humidity:65.0%  
 TestDistance:8.365m [K=1.0000]  
 Remarks:

H(□) Range:-90 - 90DEG  
 H(□) Interval:1.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Guohong  
 Test Date:2023-12-25

V(B) Range:-90 - 90DEG  
 V(B) Interval: 2.0DEG  
 TestSystem:EVERFINEGO-2000B\_V1 SYSTEM V2.0.404.7  
 Humidity:65.0%  
 TestDistance:8.365m [K=1.0000]  
 Remarks:

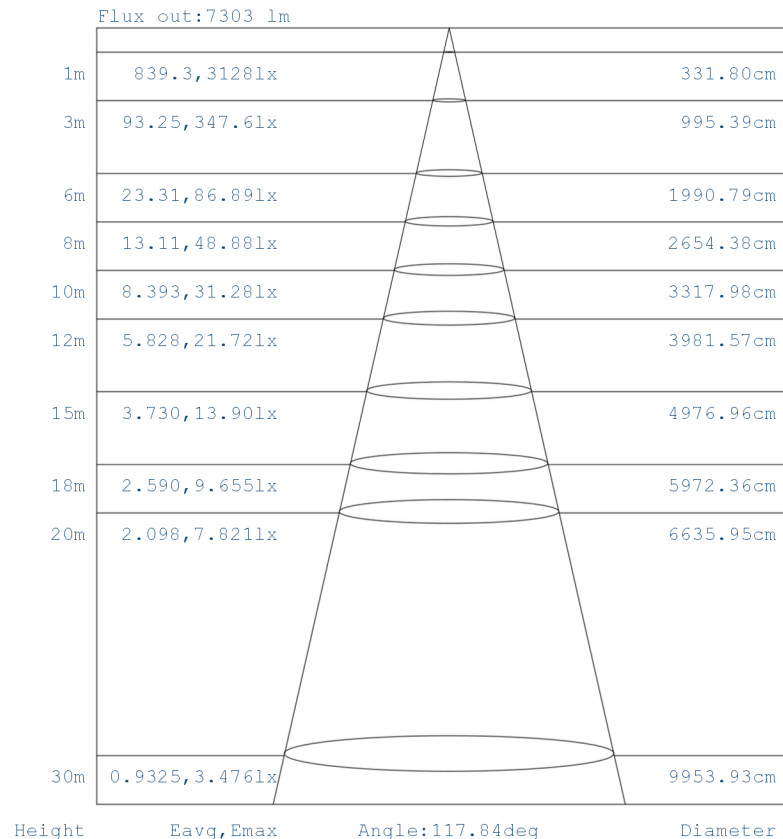
### ISOCANDELA DIAGRAM

Test:U:233.6V I:0.6891A P:157.9W PF:0.981 Freq:49.97Hz Lamp Flux:9197.66x1 lm		
NAME: AF88X160-GRE/AMB-clear PC	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



### AAI Figure

Test:U:233.6V I:0.6891A P:157.9W PF:0.981 Freq:49.97Hz Lamp Flux:9197.66x1 lm		
NAME: AF88X160-GRE/AMB-clear PC	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H(□) Range:-90 - 90DEG  
 H(□) Interval:1.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Guohong  
 Test Date:2023-12-25

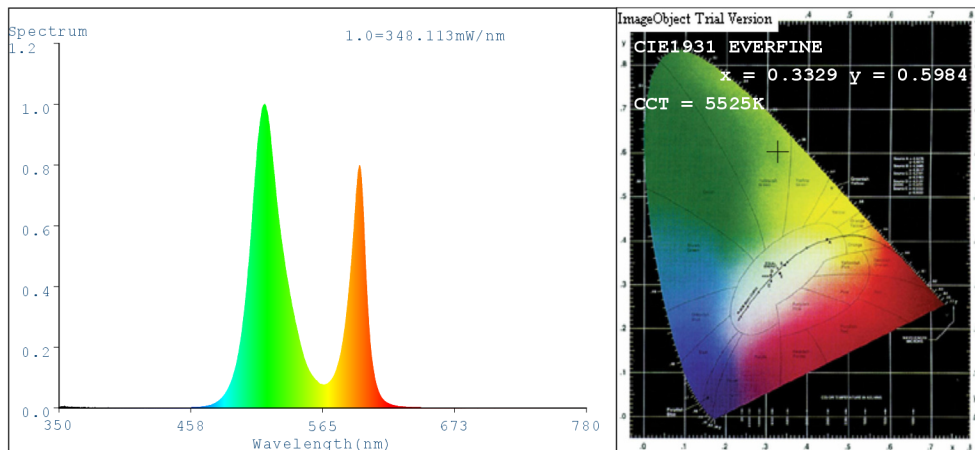
V(B) Range:-90 - 90DEG  
 V(B) Interval: 2.0DEG  
 TestSystem:EVERFINEGO-2000B\_V1 SYSTEM V2.0.404.7  
 Humidity:65.0%  
 TestDistance:8.365m [K=1.0000]  
 Remarks:

H(□) Range:-90 - 90DEG  
 H(□) Interval:1.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Guohong  
 Test Date:2023-12-25

V(B) Range:-90 - 90DEG  
 V(B) Interval: 2.0DEG  
 TestSystem:EVERFINEGO-2000B\_V1 SYSTEM V2.0.404.7  
 Humidity:65.0%  
 TestDistance:8.365m [K=1.0000]  
 Remarks:



**SPECTRUM TEST REPORT - UPTA and EPTA 120 590NM AMBER & GRREN -  
Clear Polycarbonate Lens**



**Color Parameters:**

Chromaticity Coordinate:x=0.3329 y=0.5984/u'=0.1400 v'=0.5660  
CCT=5525K(Duv=0.0892) Dominant WL:Ld =554.4nm Purity=80.3%  
Ratio:R=4.5% G=94.0% B=1.5% Peak WL:Lp=517.7nm FWHM=28.1nm  
Render Index:Ra=20.2 CRI=19.1 AvgR=18.1  
R1=46 R2=33 R3=0 R4=0 R5=49 R6=30 R7=3 R8=0 R9=0 R10=0 R11=0  
R12=15 R13=41 R14=48 R15=5

**Photo Parameters:**

Flux = 7867 lm Eff. : 65.29 lm/W Fe = 16.56 W

**Electrical parameters:**

V = 219.60 V I = 0.5587 A P = 120.5 W PF = 0.9819

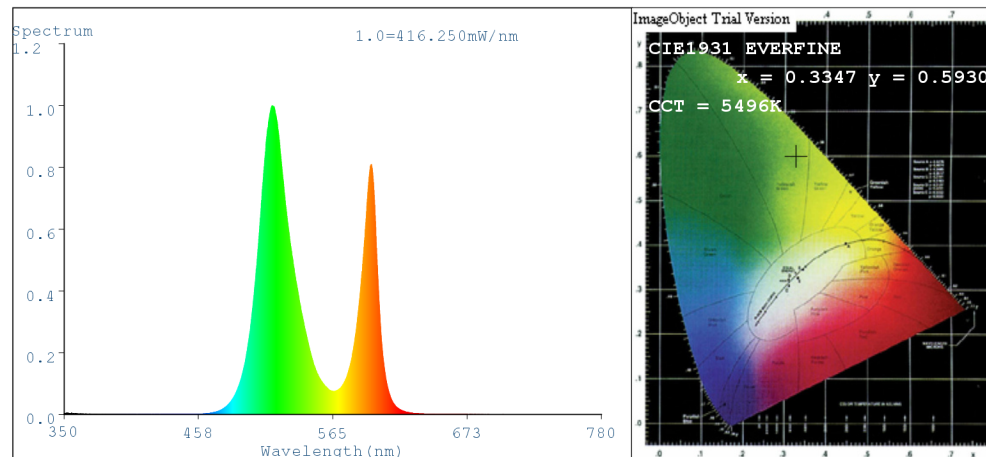
LEVEL:OUT WHITE:OUT

Status: Integral T = 20 ms Ip = 42127  
(64%)

Model:LIGHT  
Tester:DAMIN  
Temperature:25.3Deg  
Manufacturer:EVERFINE

Number:N-00010  
Date:2023-12-25 17:33  
Humidity:65.0%  
Remarks:---

**SPECTRUM TEST REPORT - UPTA and EPTA 160 590NM AMBER & GRREN -  
Clear Polycarbonate Lens**



**Color Parameters:**

Chromaticity Coordinate:x=0.3347 y=0.5930/u'=0.1417 v'=0.5650  
CCT=5496K(Duv=0.0874) Dominant WL:Ld =554.7nm Purity=79.2%  
Ratio:R=5.2% G=93.1% B=1.7% Peak WL:Lp=517.0nm FWHM=28.8nm  
Render Index:Ra=21.8 CRI=20.5 AvgR=19.7  
R1 =50R2 =35R3 =0R4 =0R5 =52R6 =32R7 =5 R8 =0R9  
=0R10=0R11=0R12=19R13=44R14=50 R15=8

**Photo Parameters:**

Flux = 9512 lm Eff. : 58.68 lm/W Fe = 20.29 W

**Electrical parameters:**

V = 219.51 V I = 0.7470 A P = 162.1 W PF = 0.9885

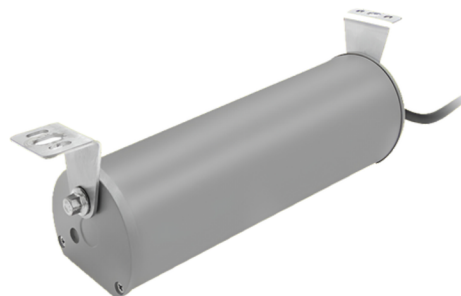
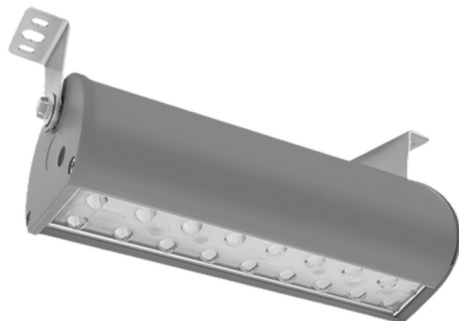
LEVEL:OUT WHITE:OUT

Status: Integral T = 20 ms Ip = 50254  
(77%)

Model:LIGHT  
Tester:DAMIN  
Temperature:25.3Deg  
Manufacturer:EVERFINE

Number:N-00009  
Date:2023-12-25 17:29  
Humidity:65.0%  
Remarks:---

## UPTA AND EPTA 160 590NM AMBER AND GREEN - FIXTURE TEST REPORT - FROSTED POLYCARBONATE LENS



### Floodlight Summary:

Report based on lamp delivering 1000 lumens.

Maximum Intensity (Luminaire orientation as tested.) 367.6 cd per klm.  
0.0 degrees vertical  
0.0 degrees horizontal

Beam Spread At 10% of Imax 160.2V x 159.3H  
At 50% of Imax 108.5V x 107.8H  
At 90% of Imax 44.6V x 44.3H

Beam Flux Total 999.8 lumens per klm.  
To 10% of Imax 983.2 lumens per klm.  
To 50% of Imax 706.8 lumens per klm.  
To 90% of Imax 162.2 lumens per klm.

Upward LOR 0.0 %  
Downward LOR 100.0 %  
Luminaire Efficiency(Light Output Ratio) 100.0 %

Light Output Ratio:	100.0%
Luminaire Power:	157.8 W
90% Beam Spread	44.6V x 44.3H
50% Beam Lumens	706.8 lumens per klm.

H(□) Range:-90 - 90DEG  
H(□) Interval:1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Guohong  
Test Date:2023-12-25

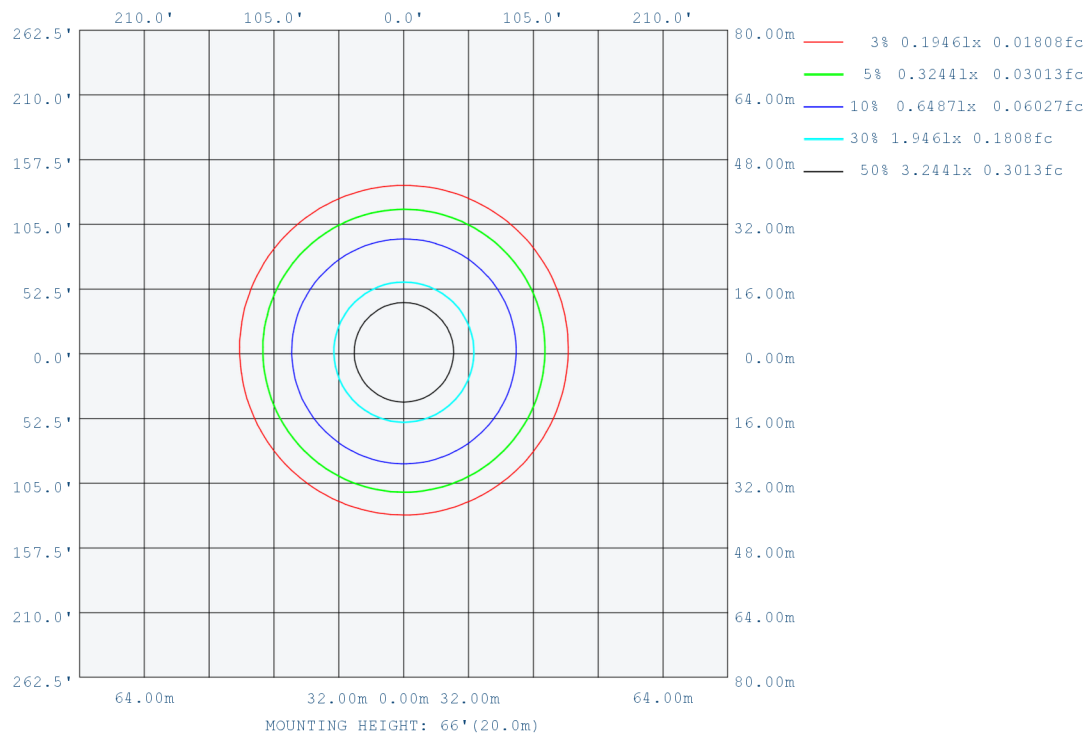
V(B) Range:-90 - 90DEG  
V(B) Interval: 2.0DEG  
TestSystem:EVERFINEGO-2000B\_V1 SYSTEM V2.0.404.7  
Humidity:65.0%  
TestDistance:8.365m [K=1.0000]  
Remarks:

H(□) Range:-90 - 90DEG  
H(□) Interval:1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Guohong  
Test Date:2023-12-25

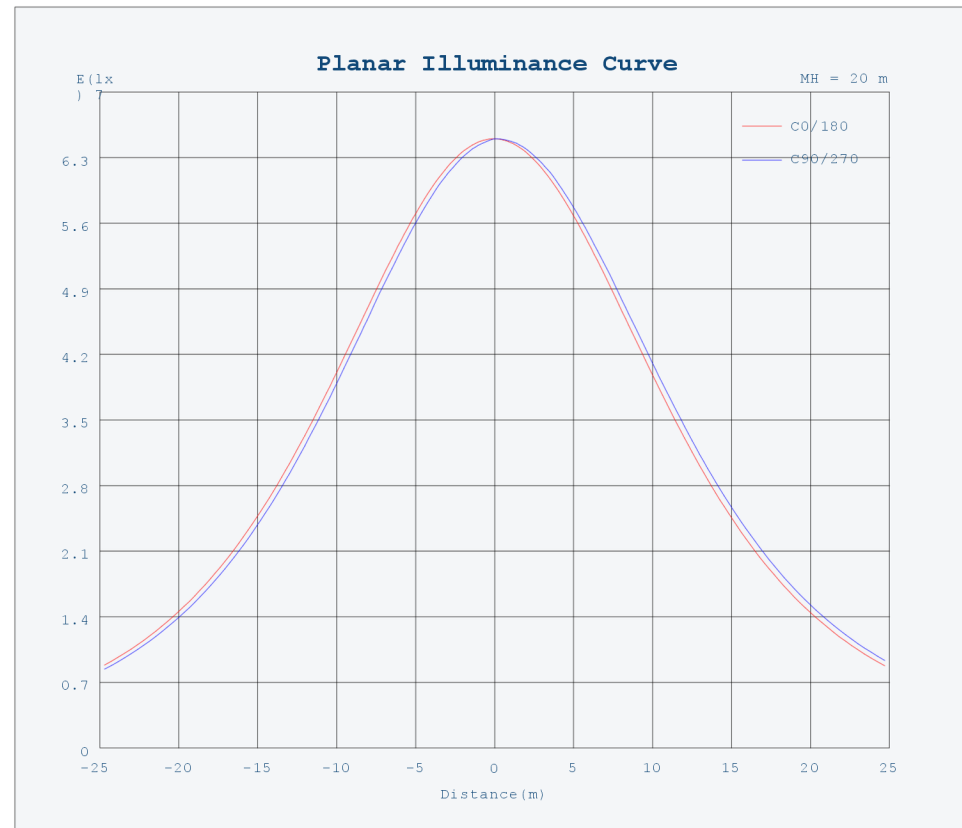
V(B) Range:-90 - 90DEG  
V(B) Interval: 2.0DEG  
TestSystem:EVERFINEGO-2000B\_V1 SYSTEM V2.0.404.7  
Humidity:65.0%  
TestDistance:8.365m [K=1.0000]  
Remarks:

### ISOLUX DIAGRAM

Test:U:233.0V I:0.6900A P:157.8W PF:0.982 Freq:49.98Hz Lamp Flux:7076.98x1 lm		
NAME: AF88X160-GRE/AMB-frosted PC	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



### Planar Illuminance Curve



H(□) Range:-90 - 90DEG  
H(□) Interval:1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Guohong  
Test Date:2023-12-25

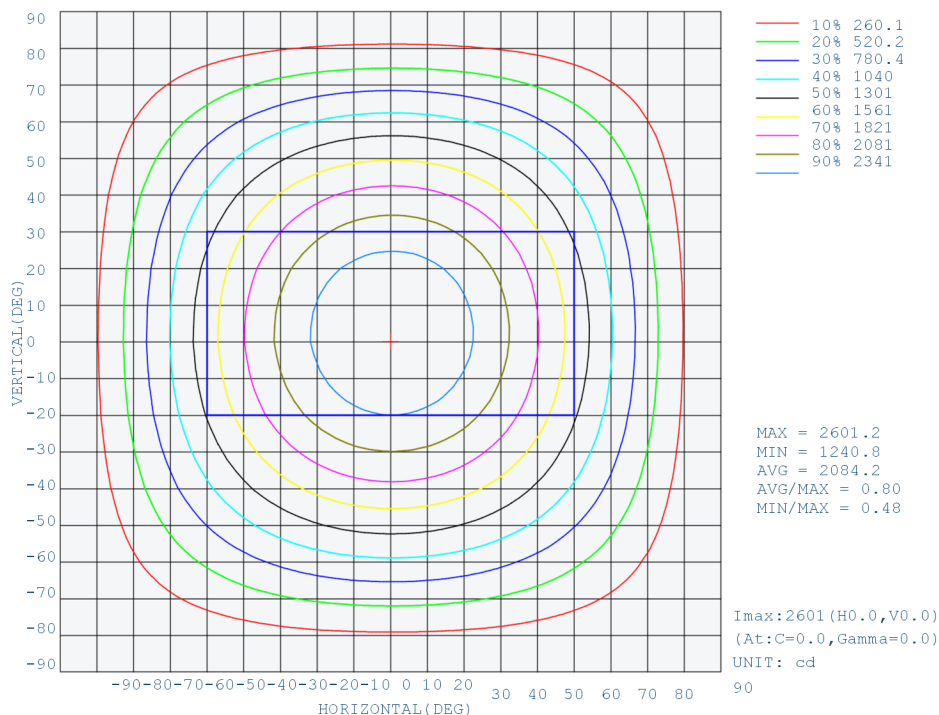
V(B) Range:-90 - 90DEG  
V(B) Interval: 2.0DEG  
TestSystem:EVERFINEGO-2000B\_V1 SYSTEM V2.0.404.7  
Humidity:65.0%  
TestDistance:8.365m [K=1.0000]  
Remarks:

H(□) Range:-90 - 90DEG  
H(□) Interval:1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Guohong  
Test Date:2023-12-25

V(B) Range:-90 - 90DEG  
V(B) Interval: 2.0DEG  
TestSystem:EVERFINEGO-2000B\_V1 SYSTEM V2.0.404.7  
Humidity:65.0%  
TestDistance:8.365m [K=1.0000]  
Remarks:

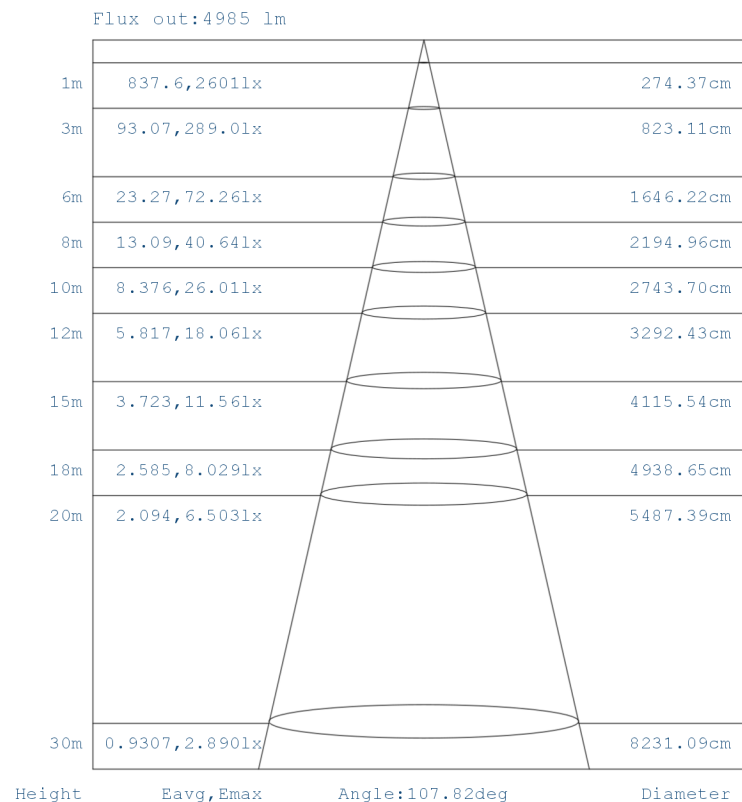
### ISOCANDELA DIAGRAM

Test:U:233.0V I:0.6900A P:157.8W PF:0.982 Freq:49.98Hz Lamp Flux:7076.98x1 lm		
NAME: AF88X160-GRE/AMB-frosted PC	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



### AAI Figure

Test:U:233.0V I:0.6900A P:157.8W PF:0.982 Freq:49.98Hz Lamp Flux:7076.98x1 lm		
NAME: AF88X160-GRE/AMB-frosted PC	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

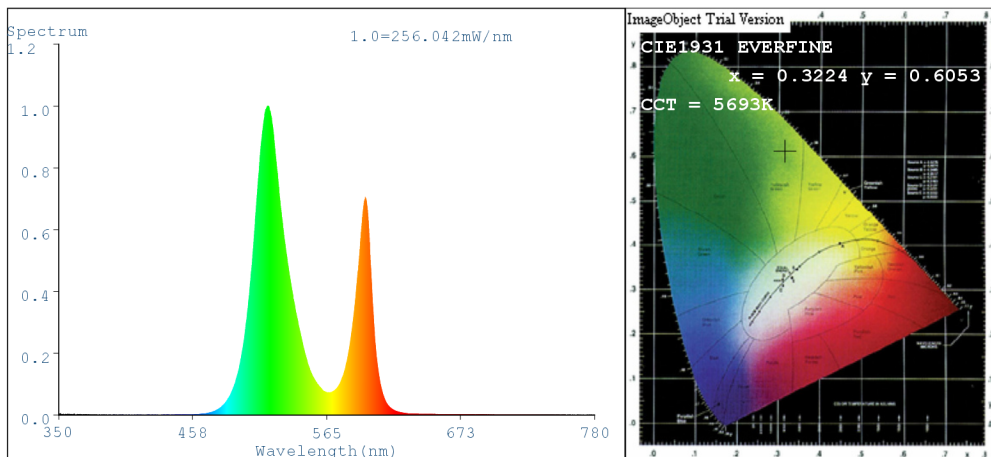
H(□) Range:-90 - 90DEG  
H(□) Interval:1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Guohong  
Test Date:2023-12-25

V(B) Range:-90 - 90DEG  
V(B) Interval: 2.0DEG  
TestSystem:EVERFINEGO-2000B\_V1 SYSTEM V2.0.404.7  
Humidity:65.0%  
TestDistance:8.365m [K=1.0000]  
Remarks:

H(□) Range:-90 - 90DEG  
H(□) Interval:1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Guohong  
Test Date:2023-12-25

V(B) Range:-90 - 90DEG  
V(B) Interval: 2.0DEG  
TestSystem:EVERFINEGO-2000B\_V1 SYSTEM V2.0.404.7  
Humidity:65.0%  
TestDistance:8.365m [K=1.0000]  
Remarks:

**SPECTRUM TEST REPORT - UPTA and EPTA 120 590NM AMBER & Green -  
Frosted Polycarbonate Lens**



**Color Parameters:**

Chromaticity Coordinate:  $x=0.3224$   $y=0.6053$  /  $u'=0.1341$   $v'=0.5663$   
 CCT=5693K (Duv=0.0938) Dominant WL:Ld =552.5nm Purity=79.4%  
 Ratio:R=5.2% G=93.2% B=1.6% Peak WL:Lp=517.7nm FWHM=28.2nm  
 Render Index:Ra=19.2 CRI=18.0 AvgR=17.3  
 R1=46 R2=30 R3=0 R4=0 R5=48 R6=27 R7=3 R8=0 R9=0 R10=0 R11=0  
 R12=13 R13=38 R14=48 R15=7

**Photo Parameters:**

Flux = 5610 lm Eff. : 46.93 lm/W Fe = 11.89 W

**Electrical parameters:**

V = 219.56 V I = 0.5546 A P = 119.5 W PF = 0.9817

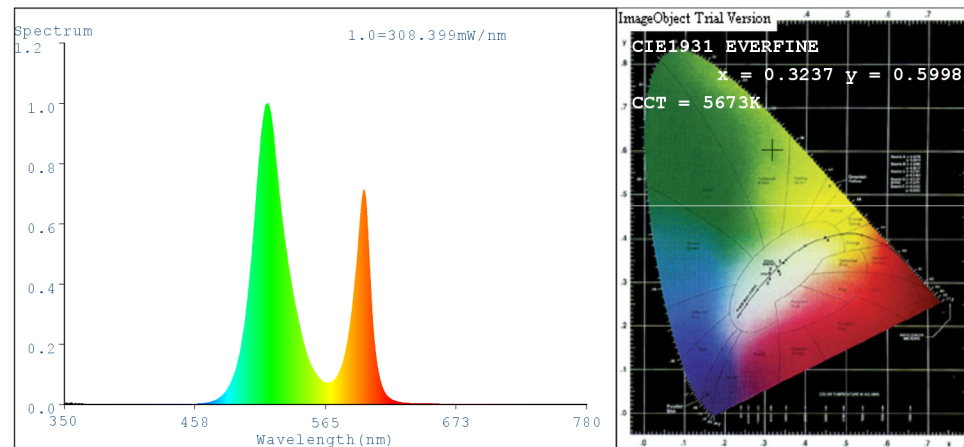
LEVEL:OUT WHITE:OUT

Status: Integral T = 33 ms Ip = 51130 (78%)

Model:LIGHT  
 Tester:DAMIN  
 Temperature:25.3Deg  
 Manufacturer:EVERFINE

Number:N-00007  
 Date:2023-12-25 17:22  
 Humidity:65.0%  
 Remarks:---

**SPECTRUM TEST REPORT - UPTA and EPTA 160 590NM AMBER & Green -  
Frosted Polycarbonate Lens**



**Color Parameters:**

Chromaticity Coordinate:  $x=0.3237$   $y=0.5998$  /  $u'=0.1356$   $v'=0.5653$   
 CCT=5673K (Duv=0.0922) Dominant WL:Ld =552.7nm  
 Purity=78.2% Ratio:R=6.0% G=92.2% B=1.8% Peak WL:Lp=517.7nm  
 FWHM=28.8nm Render Index:Ra=20.7 CRI=19.5 AvgR=18.9  
 R1=49 R2=32 R3=0 R4=0 R5=51 R6=29 R7=5 R8=0 R9=0 R10=0 R11=0  
 R12=17 R13=41 R14=49 R15=10

**Photo Parameters:**

Flux = 6823 lm Eff. : 42.41 lm/W Fe = 14.68 W

**Electrical parameters:**

V = 219.50 V I = 0.7416 A P = 160.9 W PF = 0.9884

LEVEL:OUT WHITE:OUT

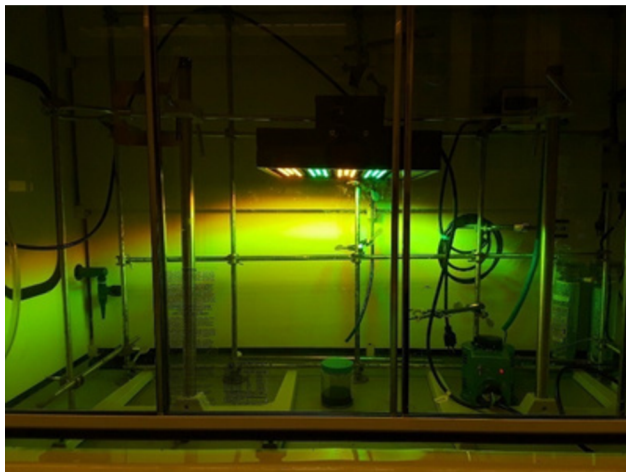
Status: Integral T = 26 ms Ip = 48519 (74%)

Model:LIGHT  
 Tester:DAMIN  
 Temperature:25.3Deg  
 Manufacturer:EVERFINE

Number:N-00008  
 Date:2023-12-25 17:25  
 Humidity:65.0%  
 Remarks:---

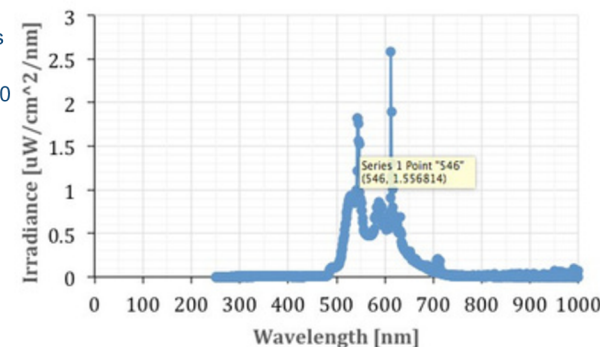
The Fixture's are is independently lab tested and prototypes have been tested by Fortune 500 companies.

The lab of a Fortune 500 company conducted the test. An Access Fixtures No UV LED luminaire equipped with 590nm Amber and Green LEDs was installed in the fume hood of R&D lab. The light wavelength and intensity were measured by spectroradiometer (ILT 950) and light meter (RDI-AR 823) (Fig2). A solution that can be impacted by UV and light under 450nm was placed under the light in the fume hood. The solution was daily inspected visually to see any gel formation caused by LED light.

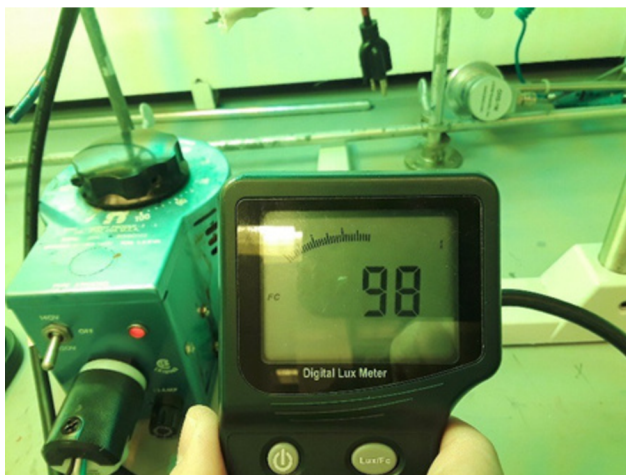


The wavelength of LED light exposed to the solution used in this study using 590nm Amber and Green LEDs ranged from 480 to 710 nm.

As shown in the table below, the sample remained free of gel over the entire 12-day study.



The electric voltage was controlled by a voltage controller and was set to 20% so that the LED light intensity would register 98fc on the light meter. The test was at a much higher footcandle level than their typical production facility targets of 40-70 fc.



The study confirmed that the wavelength of LED light used for solution gel formation ranged from 480 to 710 nm and no gel formation or change in appearance was observed visually at 98 fc light intensity, suggesting that the Access Fixtures LED light fixtures used with a target, 40-70 fc would have no impact on production.

Date inspected	Observation	Exposure time
4/25/2018	started	0 day
4/26/2018	No gel	1 day
4/27/2018	No gel	2 days
4/30/2018	No gel	5 days
5/7/2018	No gel	12 days