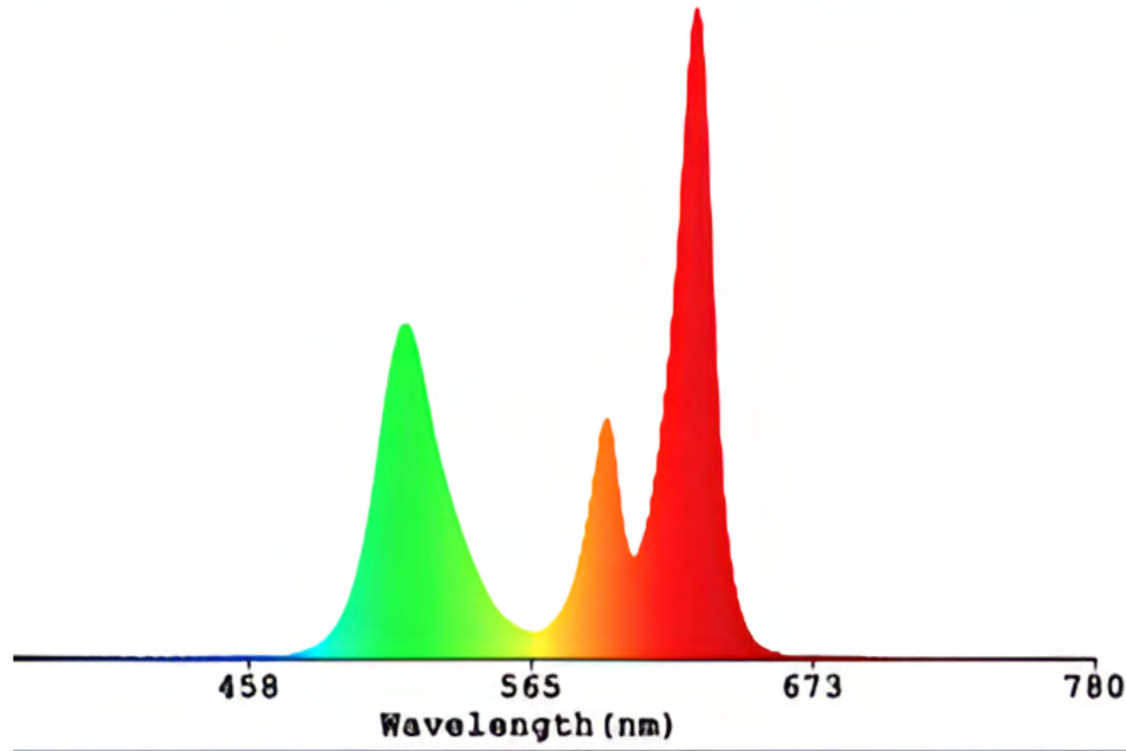


UPTA / EPTA

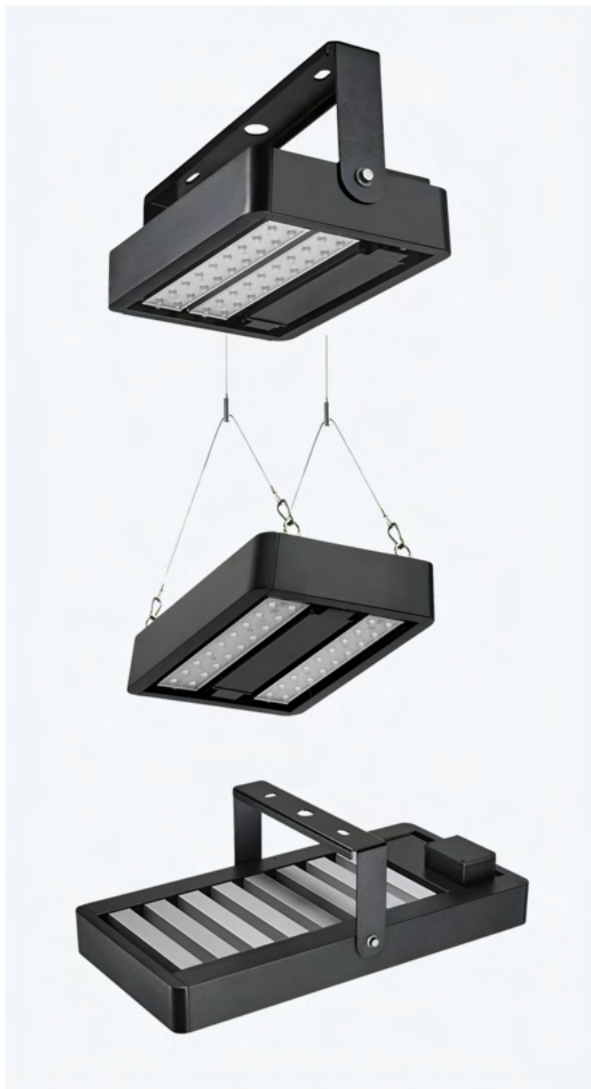
590nm AMBER, GREEN AND RED SPECTRUM



590nm Amber , Green and Red LEDs provides the most broad No UV light spectrum

-  Broad UV-Free Spectrum - The emphasis on a UV-free spectrum is crucial for environments where UV-sensitive materials or processes are involved. Some materials and substances can degrade or be damaged by exposure to ultraviolet radiation.
-  Meticulous Color Control in Manufacturing: The combination of red, amber, and green wavelengths can be precisely controlled to achieve specific color temperatures and hues. This meticulous color control is valuable in manufacturing processes where accurate color representation is critical.
-  Specialized Lighting Environments - Environments requiring specialized lighting, such as photography studios or scientific laboratories, can benefit from a spectrum that can be tailored to specific needs. The versatility of the combined spectrum allows for adaptable lighting solutions, catering to the unique requirements of these specialized environments.

NO UV UPTA FIXTURE



■ L70@200,000hrs - Exceptional heat sink design produces an EXTREME-LIFE for years of virtually maintenance-free performance.

Flawless Light: Choice of advanced Optics, Kelvin and Color rendering of up to Ra>90 facilitates premium anti-glare illumination.

ETL, CUL, DCC, CE, CB, SAA, IK10 AND IP66 listed and certified.

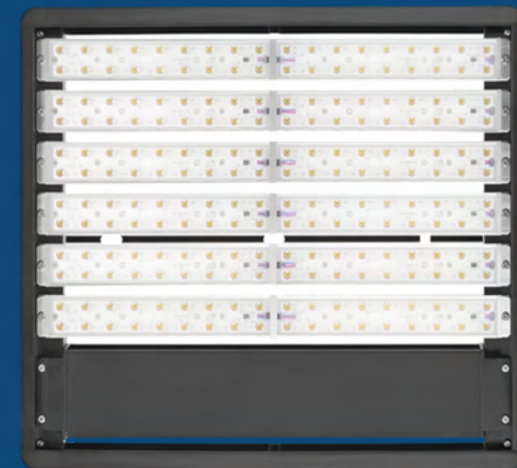
NO UV EPTA FIXTURE



■ Low weight with Three option for mounts- Surface mounted, Suspension mounted, and Knuckle mounted.

1000hr salt Spray certified and extended aluminum housing for maximum life and durability.

Marine-grade finish to protect against extreme environments where there is harsh environments where chemicals are being used or coastal areas with high amounts of salt.



- The combination of red, amber, and green LEDs ensures that the emitted light is within the visible spectrum, avoiding the harmful effects of UV light. This is particularly important in applications such as museums, art galleries, or manufacturing processes where UV-sensitive materials are present.
- Visual Comfort and Clarity - Green light provides good visibility and contrast, making it easier on the eyes. It can contribute to improved visual comfort and clarity in various settings. In workspaces or areas where tasks requiring focus and attention are performed, green LEDs can be beneficial. They help create an environment where occupants can work efficiently without experiencing eye strain.
- The inclusion of 590nm amber LEDs in lighting design brings a sense of warmth and richness that is well-suited for applications where creating a visually pleasing and inviting atmosphere is key. Whether in residential, commercial, or hospitality settings, the amber hue adds a touch of elegance and comfort, making the lighting environment more aesthetically appealing and emotionally engaging.

Tested at 120w

UPTA AND EPTA120 590NM AMBER GRREN AND RED - FIXTURE TEST REPORT - CLEAR GLASS LENS



Light Output Ratio: 100.0%

Luminaire Power: 118.1 W

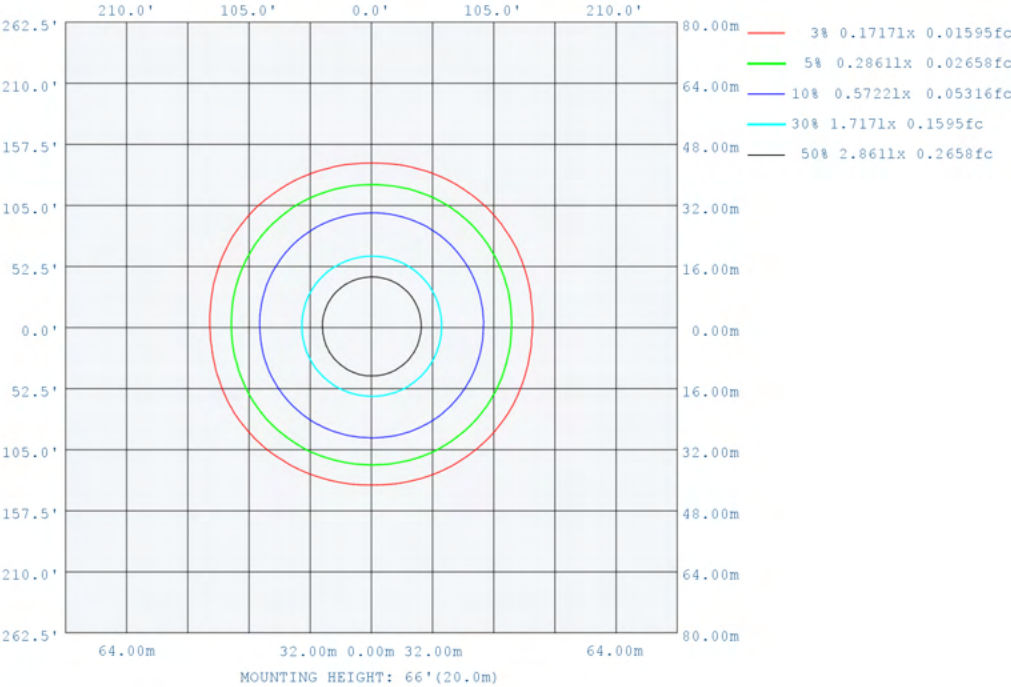
90% Beam Spread 51.5V x 51.2H

50% Beam Lumens 793.7 lumens per klm.

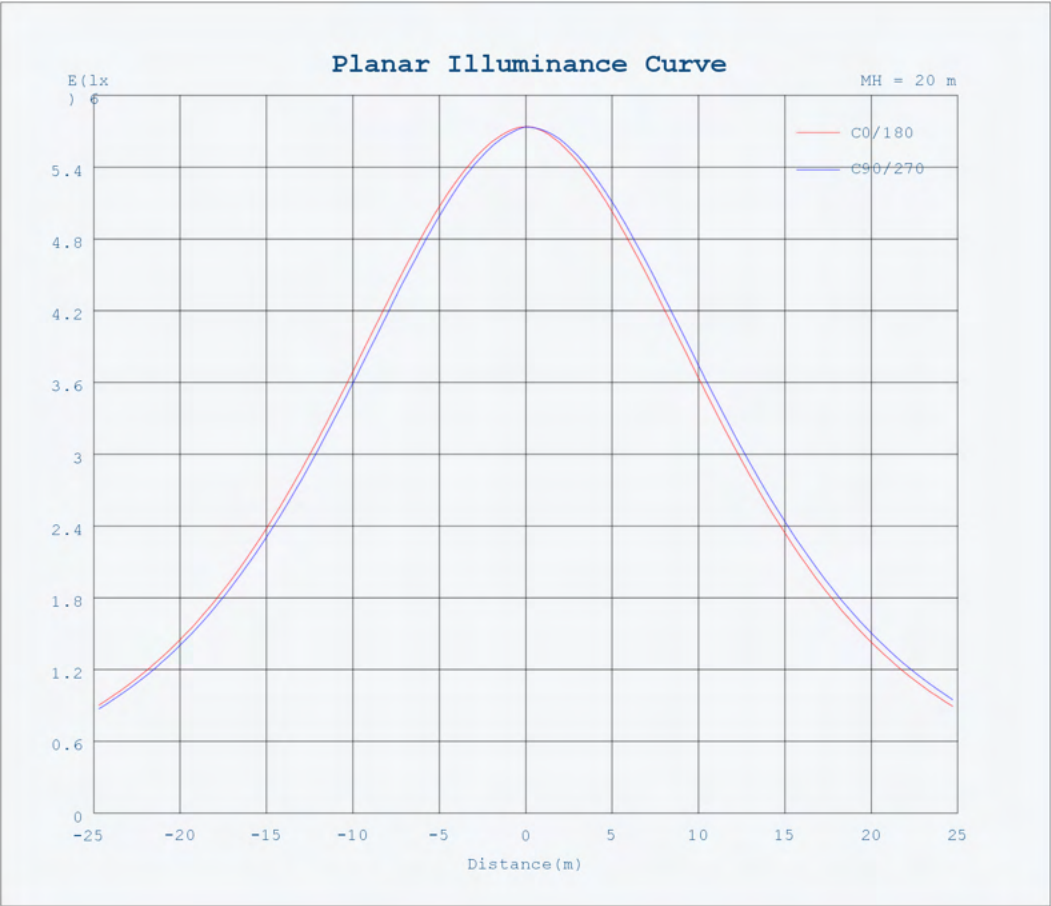
Floodlight Summary:		
Report based on lamp delivering 1000 lumens.		
Maximum Intensity (Luminaire orientation as tested.)		339.7 cd per klm. 0.0 degrees vertical 0.0 degrees horizontal
Beam Spread	At 10% of Imax At 50% of Imax At 90% of Imax	156.3V x 155.9H 118.7V x 117.7H 51.5V x 51.2H
Beam Flux	Total To 10% of Imax To 50% of Imax To 90% of Imax	999.9 lumens per klm. 986.2 lumens per klm. 793.7 lumens per klm. 200.2 lumens per klm.
Upward LOR		0.0 %
Downward LOR		100.0 %
Luminaire Efficiency(Light Output Ratio)		100.0 %

ISOLUX DIAGRAM

Test:U:235.2V I:0.5144A P:118.1W PF:0.977 Freq:49.98Hz Lamp Flux:6757.53x1 lm		
NAME:AF88X120-amber 590nm-red-green-clear glass	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

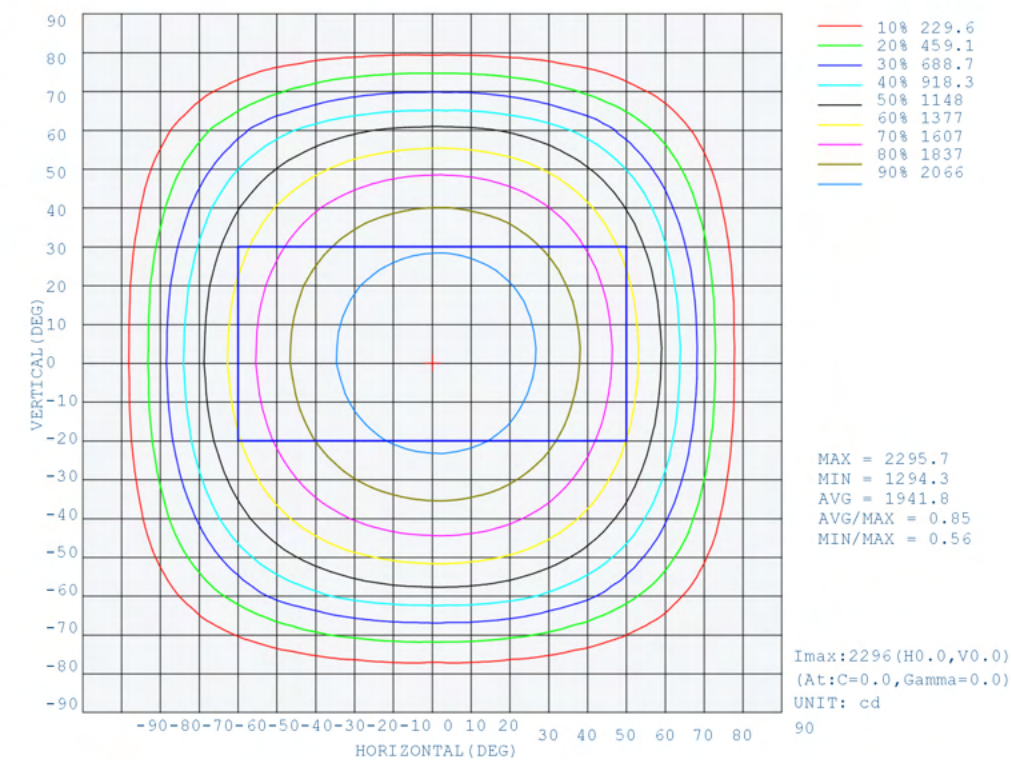


Planar Illuminance Curve



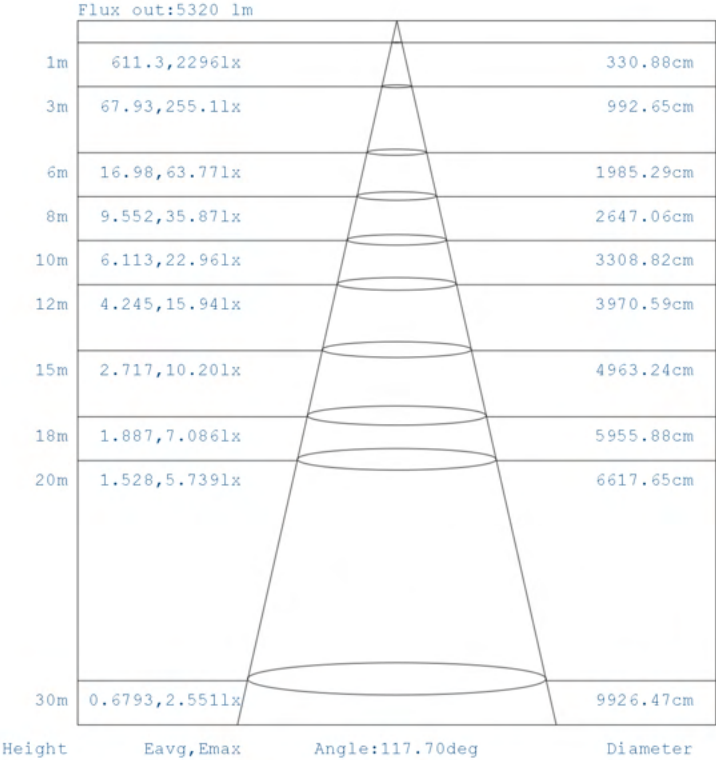
ISOCANDELA DIAGRAM

Test:U:235.2V I:0.5144A P:118.1W PF:0.977 Freq:49.98Hz Lamp Flux:6757.53x1 lm		
NAME:AF88X120-amber 590nm-red-green-clear glass	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



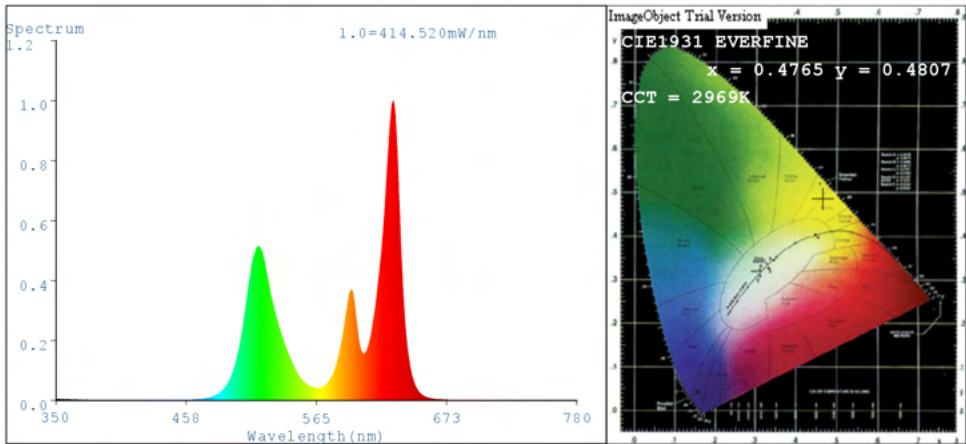
AAI Figure

Test:U:235.2V I:0.5144A P:118.1W PF:0.977 Freq:49.98Hz Lamp Flux:6757.53x1 lm		
NAME:AF88X120-amber 590nm-red-green-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.

SPECTRUM TEST REPORT - UPTA and EPTA 120 590NM AMBER, GREEN AND RED
- Clear Glass



Color Parameters:

Chromaticity Coordinate:x=0.4765 y=0.4807/u'=0.2438 v'=0.5536
CCT=2969K(Duv=0.0224) Dominant WL:Ld =577.7nm Purity=87.4%
Ratio:R=29.0% G=69.8% B=1.2% Peak WL:Lp=628.5nm FWHM=16.2nm
Render Index:Ra=49.2 CRI=43.4 AvgR=45.5
R1=52 R2=68 R3=54 R4=29 R5=51 R6=38 R7=52 R8=49 R9=36 R10=29
R11=5 R12=14 R13=54 R14=76 R15=74

Photo Parameters:

Flux = 6441 lm Eff. : 53.26 lm/W Fe = 17.86 W

Electrical parameters:

V = 219.61 V I = 0.5608 A P = 120.9 W PF = 0.9820

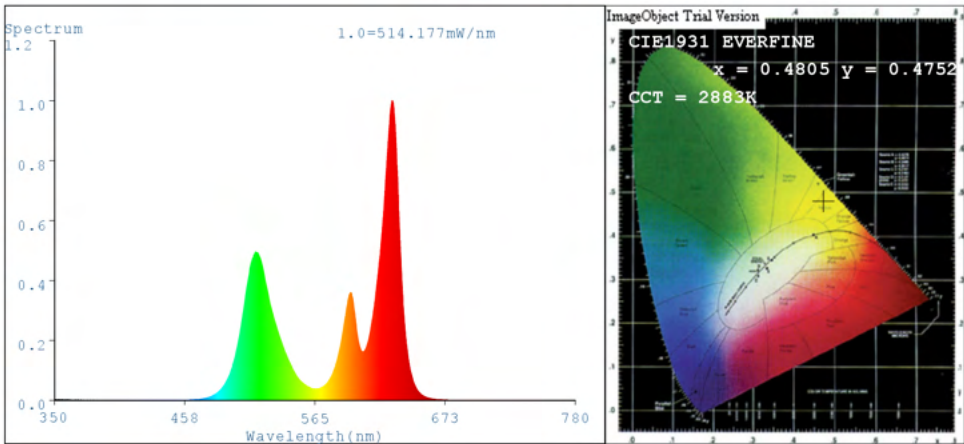
LEVEL:OUT WHITE:OUT

Status: Integral T = 17 ms Ip = 44025
(67%)

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

Number:4
Date:2024-01-03 10:19
Humidity:65.0%
Remarks:---

SPECTRUM TEST REPORT - UPTA and EPTA 160 590NM AMBER, GREEN AND RED
- Clear Glass



Color Parameters:

Chromaticity Coordinate:x=0.4805 y=0.4752/u'=0.2483 v'=0.5525
CCT=2883K(Duv=0.0202) Dominant WL:Ld =578.5nm Purity=86.9%
Ratio:R=30.1% G=68.6% B=1.3% Peak WL:Lp=628.6nm FWHM=16.8nm
Render Index:Ra=48.0 CRI=41.3 AvgR=43.3
R1=49 R2=68 R3=57 R4=26 R5=46 R6=35 R7=55 R8=48 R9=29 R10=26
R11=0 R12=10 R13=51 R14=78 R15=71

Photo Parameters:

Flux = 7869 lm Eff. : 48.46 lm/W Fe = 22.31 W

Electrical parameters:

V = 219.65 V I = 0.7479 A P = 162.4 W PF = 0.9885

LEVEL:OUT WHITE:OUT

Status: Integral T = 17 ms Ip = 54967
(84%)

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

Number:5
Date:2024-01-03 10:22
Humidity:65.0%
Remarks:---

UPTA AND EPTA 120 590NM AMBER GRREN AND RED - FIXTURE TEST REPORT - CLEAR POLYCARBONATE LENS



Light Output Ratio:	100.0%
Luminaire Power:	117.9 W
90% Beam Spread	50.2V x 50.1H
50% Beam Lumens	787.1 lumens per klm.

Floodlight Summary:

Report based on lamp delivering 1000 lumens.

Maximum Intensity	345.0 cd per klm.
(Luminaire orientation as tested.)	0.0 degrees vertical
	0.0 degrees horizontal

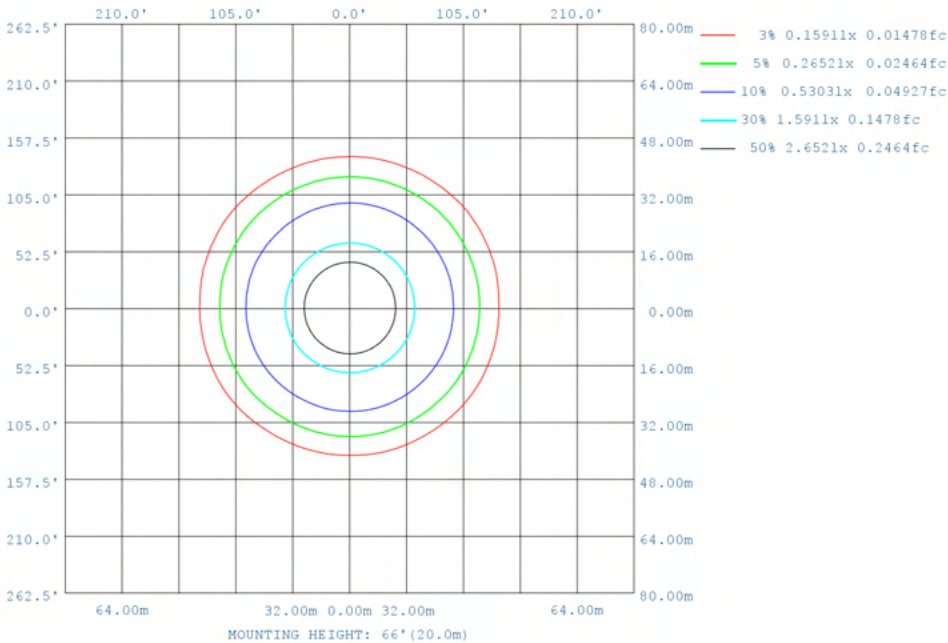
Beam Spread	At 10% of Imax	156.0V x 155.8H
	At 50% of Imax	117.8V x 117.0H
	At 90% of Imax	50.2V x 50.1H

Beam Flux	Total	999.9 lumens per klm.
	To 10% of Imax	985.6 lumens per klm.
	To 50% of Imax	787.1 lumens per klm.
	To 90% of Imax	194.4 lumens per klm.

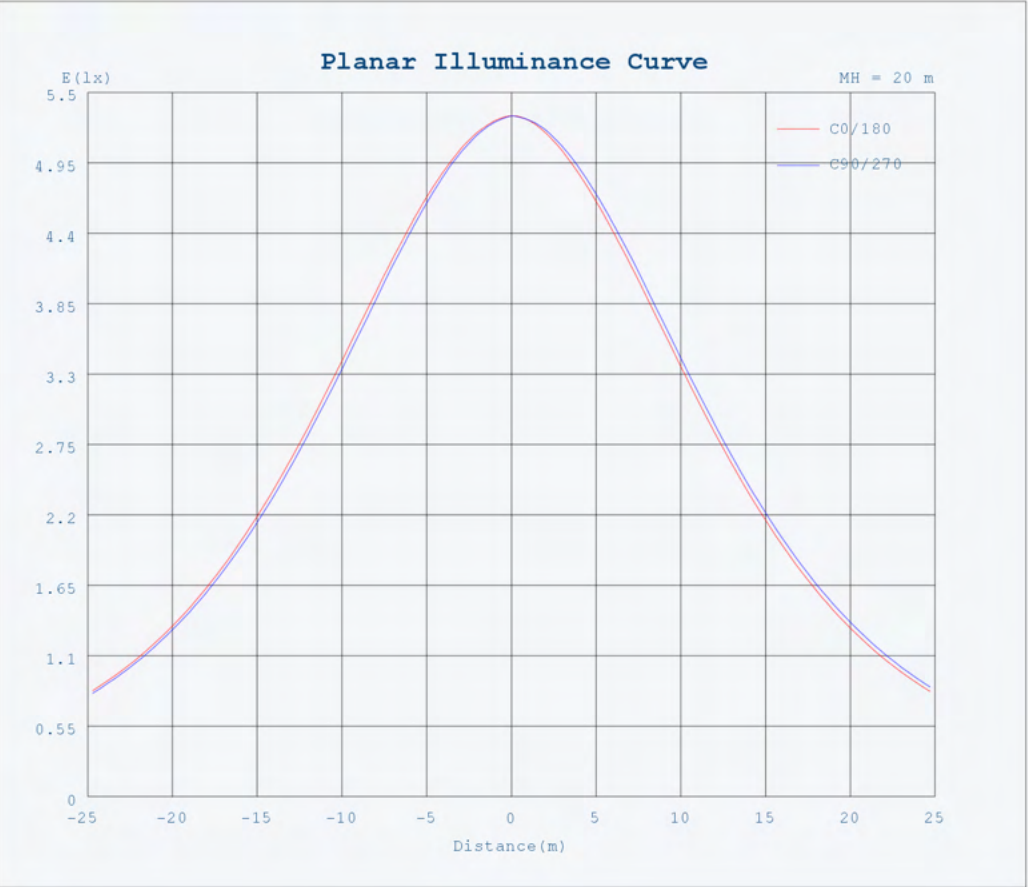
Upward LOR	0.0 %
Downward LOR	100.0 %
Luminaire Efficiency(Light Output Ratio)	100.0 %

ISOLUX DIAGRAM

Test:U:232.9V I:0.5180A P:117.9W PF:0.977 Freq:50.03Hz Lamp Flux:6165.21x1 lm		
NAME:AF88X120-amber 590nm-red-green-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:2024-01-02

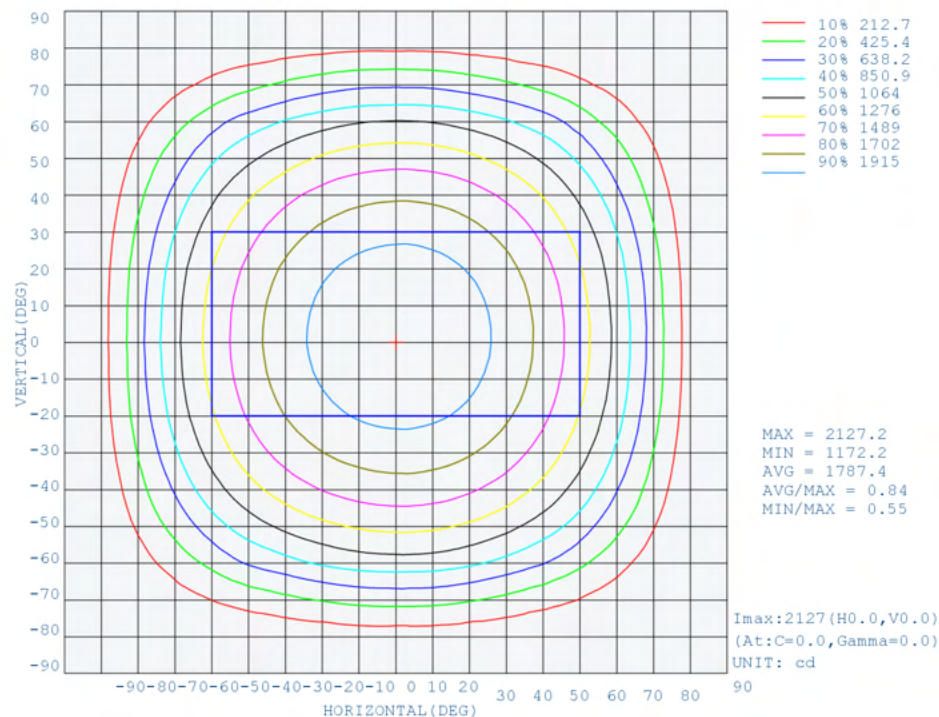
V(B) Range:-90 - 90DEG
V(B) Interval: 2.0DEG
TestSystem:EVERFINEGO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
TestDistance:8.365m [K=1.0000]
Remarks:

H(□) Range:-90 - 90DEG
H(□) Interval:1.0DEG Test
Speed: HIGH
Temperature:25.3DEG
Operators:Guohong
Test Date:2024-01-02

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:

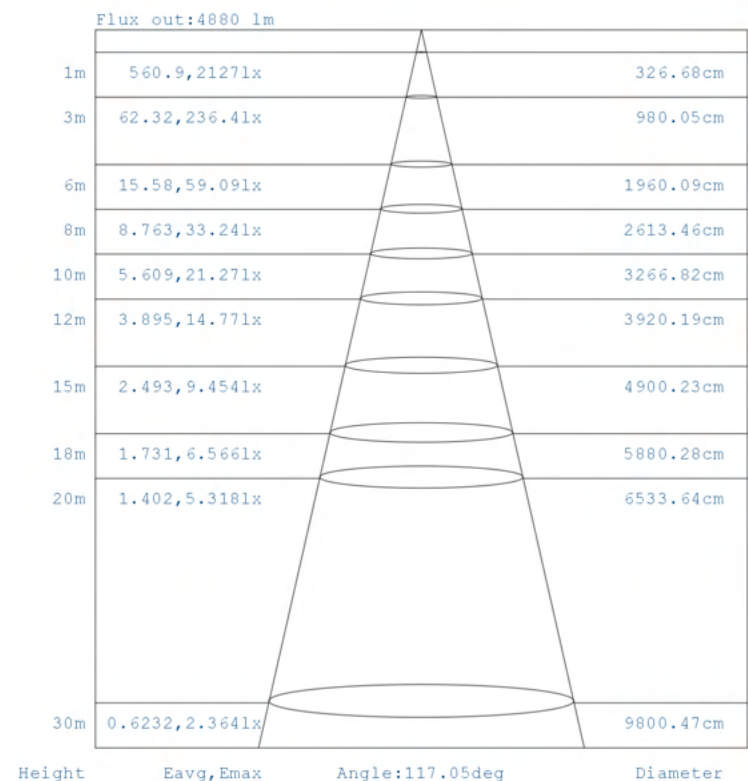
ISOCANDELA DIAGRAM

Test:U:232.9V I:0.5180A P:117.9W PF:0.977 Freq:50.03Hz Lamp Flux:6165.21x1 lm		
NAME: AF88X120-amber 590nm-red-green-clear PC	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



AAI Figure

Test:U:232.9V I:0.5180A P:117.9W PF:0.977 Freq:50.03Hz Lamp Flux:6165.21x1 lm		
NAME: AF88X120-amber 590nm-red-green-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.

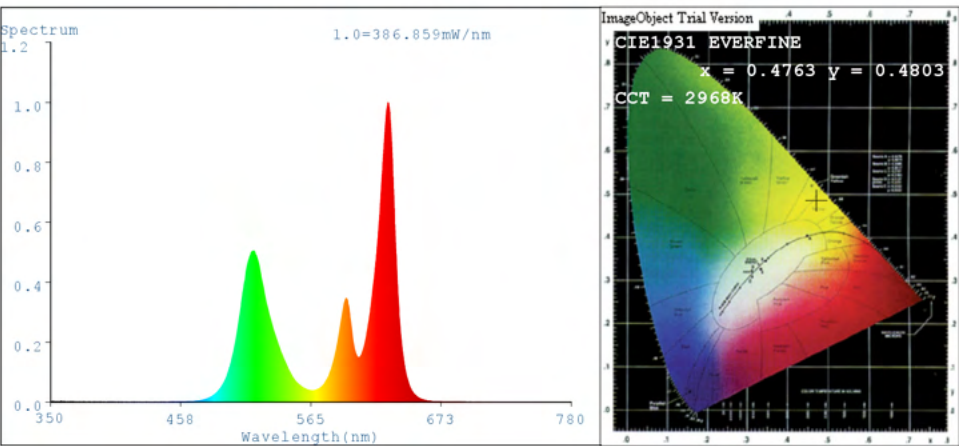
H(□) Range:-90 - 90DEG
H(□) Interval:1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Guohong
Test Date:2024-01-02

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:2024-01-02

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 590NM AMBER, GREEN AND RED -
Clear POLYCARBONATE LENS



Color Parameters:

Chromaticity Coordinate: $x=0.4763$ $y=0.4803$ $u'=0.2439$ $v'=0.5534$
 CCT=2968K (Duv=0.0223) Dominant WL:Ld =577.7nm Purity=87.2%
 Ratio:R=29.4% G=69.4% B=1.2% Peak WL:Lp=628.5nm FWHM=16.2nm
 Render Index:Ra=47.4 CRI=41.0 AvgR=43.0
 R1=49 R2=67 R3=54 R4=27 R5=49 R6=37 R7=51 R8=45 R9=25 R10=27
 R11=2 R12=13 R13=52 R14=76 R15=71

Photo Parameters:

Flux = 5864 lm Eff. : 48.65 lm/W Fe = 16.43 W

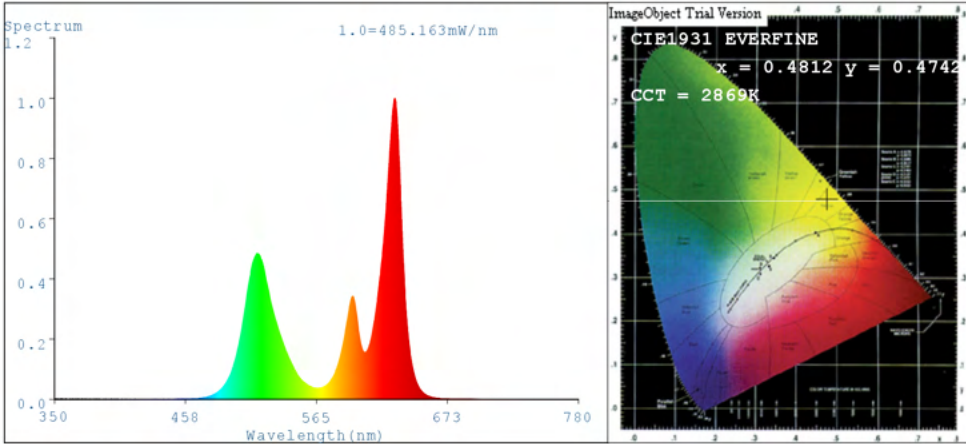
Electrical parameters:

V = 219.59 V I = 0.5591 A P = 120.5 W PF = 0.9819

LEVEL:OUT WHITE:OUT

Status: Integral T = 17 ms Ip = 41226 (63%)

SPECTRUM TEST REPORT - UPTA and EPTA 160 590NM AMBER, GREEN AND RED
- Clear POLYCARBONATE LENS



Color Parameters:

Chromaticity Coordinate: $x=0.4812$ $y=0.4742$ $u'=0.2491$ $v'=0.5522$
 CCT=2869K (Duv=0.0199) Dominant WL:Ld =578.7nm Purity=86.9%
 Ratio:R=30.5% G=68.1% B=1.4% Peak WL:Lp=629.2nm FWHM=16.7nm
 Render Index:Ra=46.6 CRI=39.5 AvgR=41.5
 R1=46 R2=67 R3=58 R4=24 R5=44 R6=34 R7=54 R8=45 R9=21 R10=25
 R11=0 R12=8 R13=49 R14=78 R15=69

Photo Parameters:

Flux = 7236 lm Eff. : 44.62 lm/W Fe = 20.69 W

Electrical parameters:

V = 219.65 V I = 0.7468 A P = 162.1 W PF = 0.9885

LEVEL:OUT WHITE:OUT

Status: Integral T = 17 ms Ip = 51992 (79%)

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

Number:3
 Date:2024-01-03 10:16
 Humidity:65.0%
 Remarks:---

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

Number:2
 Date:2024-01-03 10:15
 Humidity:65.0%
 Remarks:---

UPTA AND EPTA 120 590NM AMBER GRREN AND RED - FIXTURE TEST REPORT - FROSTED POLYCARBONATE LENS



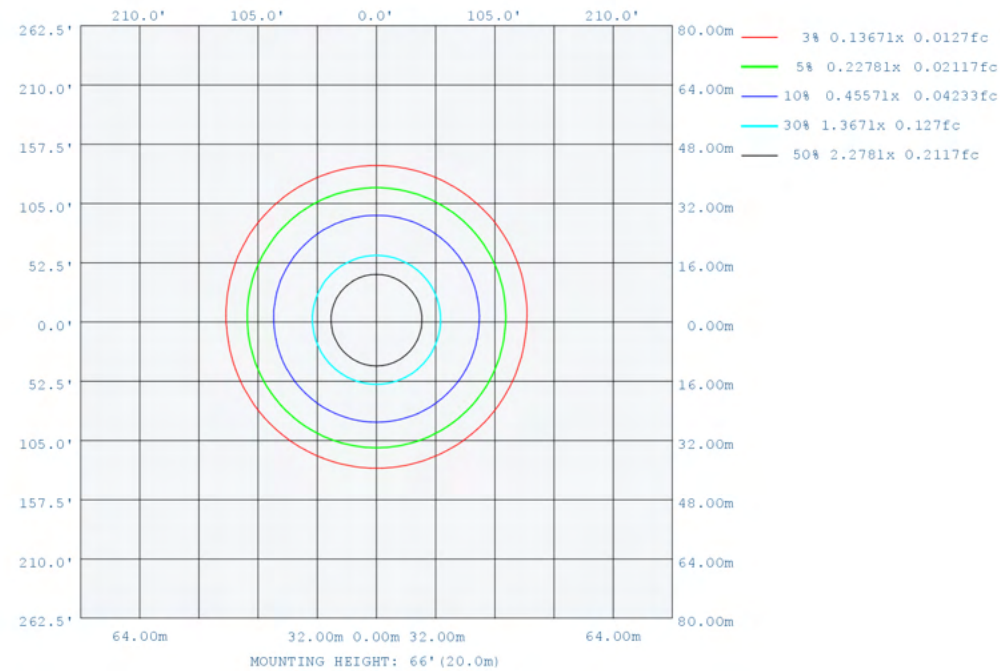
Floodlight Summary:		
Report based on lamp delivering 1000 lumens.		
Maximum Intensity (Luminaire orientation as tested.)		368.2 cd per klm. 0.0 degrees vertical 0.0 degrees horizontal
Beam Spread	At 10% of Imax At 50% of Imax At 90% of Imax	158.1V x 157.8H 109.2V x 108.5H 44.9V x 44.7H
Beam Flux	Total To 10% of Imax To 50% of Imax To 90% of Imax	999.9 lumens per klm. 983.8 lumens per klm. 717.4 lumens per klm. 164.4 lumens per klm.

Light Output Ratio:	100.0%
Luminaire Power:	117.9 W
90% Beam Spread	44.9V x 44.7H
50% Beam Lumens	717.4 lumens per klm.

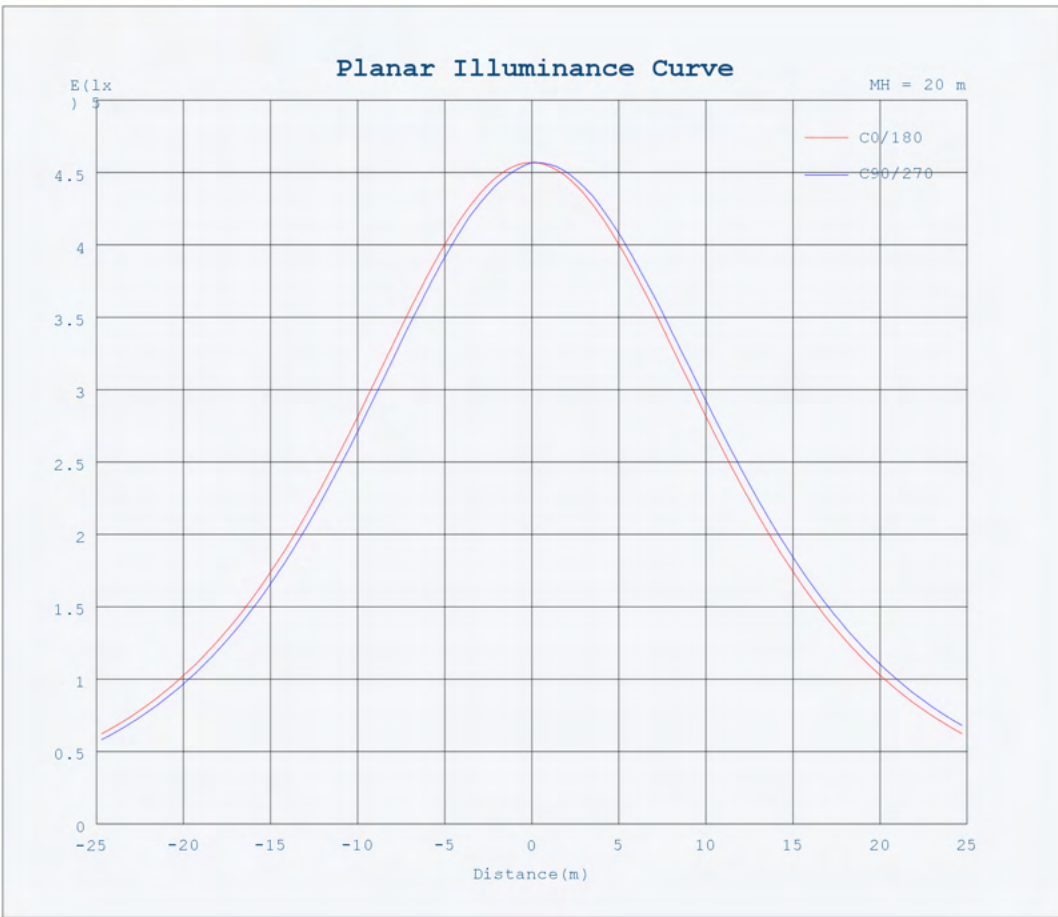
Upward LOR	0.0 %
Downward LOR	100.0 %
Luminaire Efficiency(Light Output Ratio)	100.0 %

ISOLUX DIAGRAM

Test:U:233.9V I:0.5200A P:117.9W PF:0.970 Freq:50.03Hz Lamp Flux:4970.96x1 lm		
NAME:AF88X120-amber 590nm-red-green-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:2024-01-02

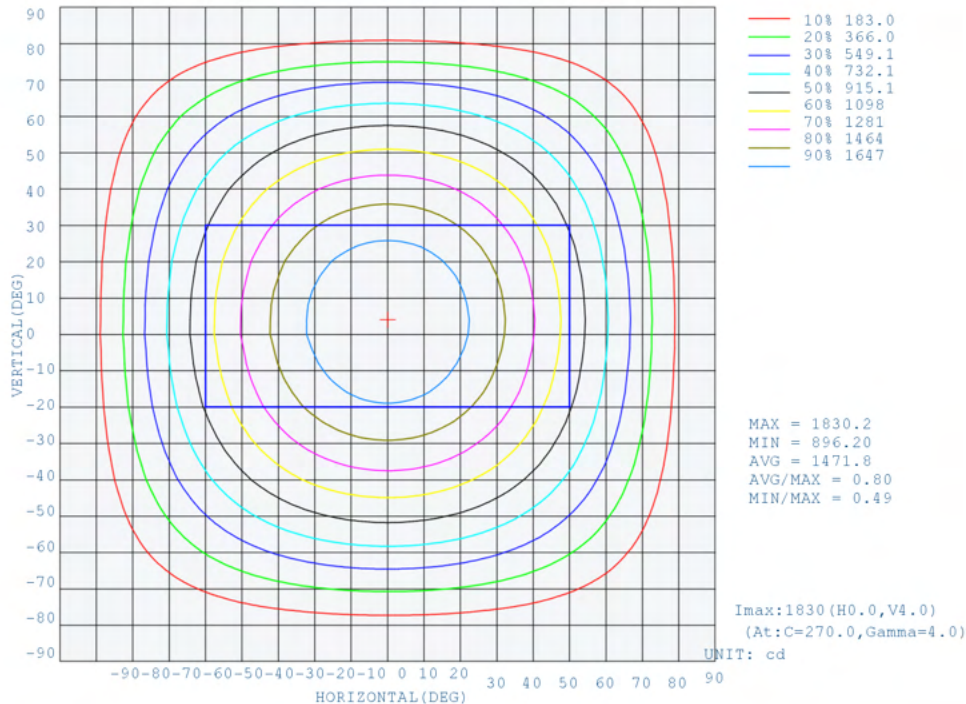
V(B) Range:-90 - 90DEG
V(B) Interval: 2.0DEG
TestSystem:EVERFINEGO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
TestDistance:8.365m [K=1.0000]
Remarks:

H(□) Range:-90 - 90DEG
H(□) Interval:1.0DEG Test
Speed: HIGH
Temperature:25.3DEG
Operators:Guohong
Test Date:2024-01-02

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:

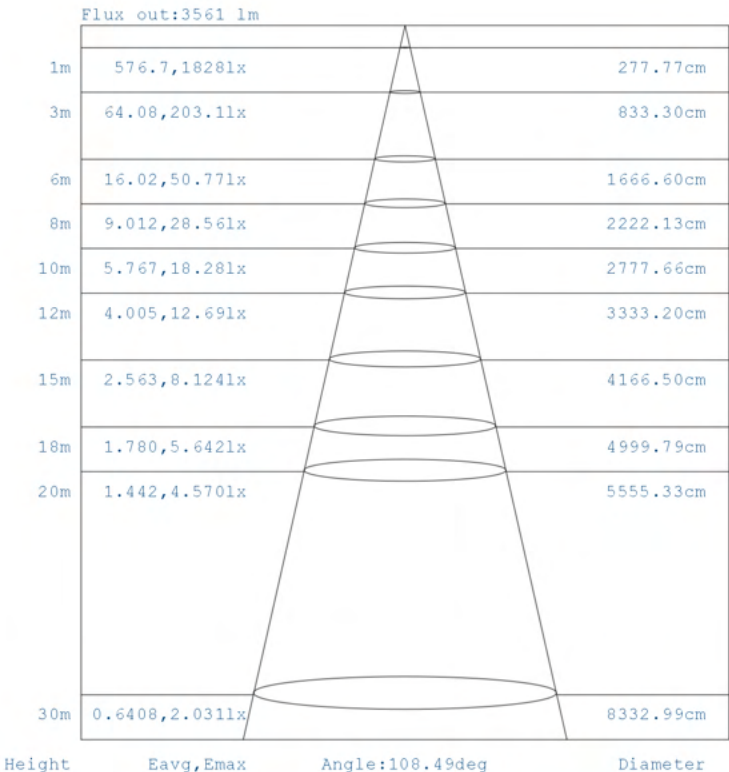
ISOCANDELA DIAGRAM

Test:U:233.9V I:0.5200A P:117.9W PF:0.970 Freq:50.03Hz Lamp Flux:4970.96x1 lm		
NAME:AF88X120-amber 590nm-red-green-frosted PC	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



AAI Figure

Test:U:233.9V I:0.5200A P:117.9W PF:0.970 Freq:50.03Hz Lamp Flux:4970.96x1 lm		
NAME: AF88X120-amber 590nm-red-green-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:2024-01-02

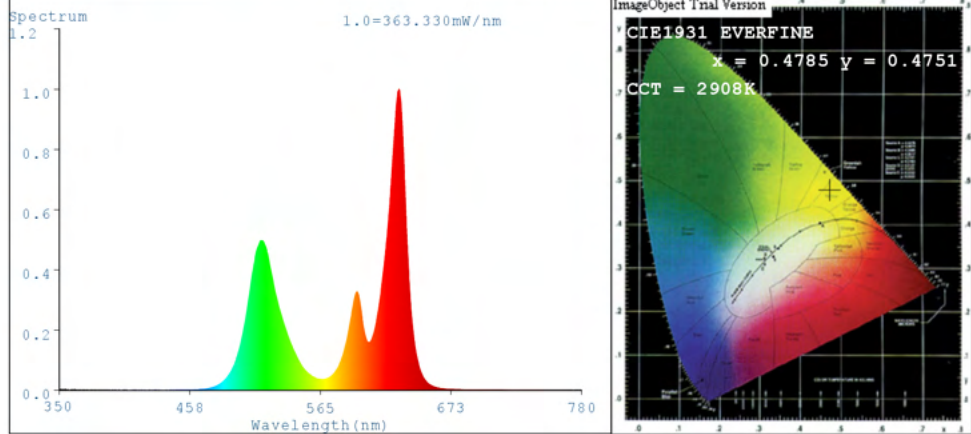
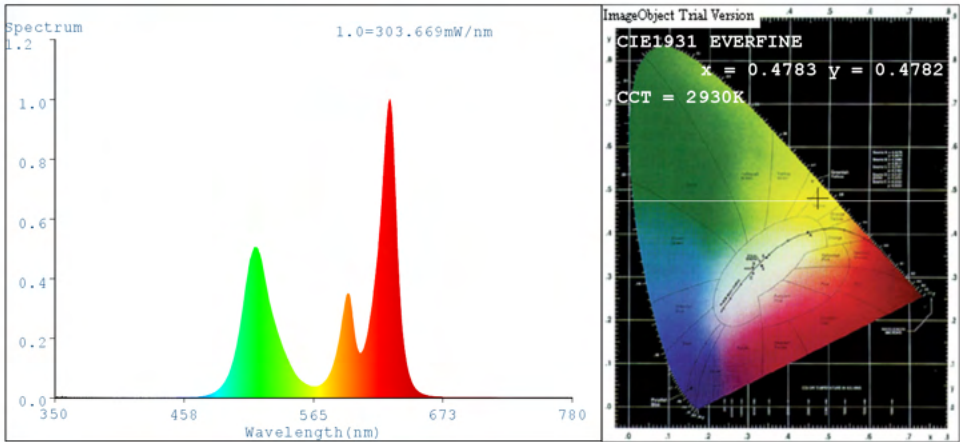
V(B) Range:-90 - 90DEG
V(B) Interval: 2.0DEG
TestSystem:EVERFINEGO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
TestDistance:8.365m [K=1.0000]
Remarks:

H(□) Range:-90 - 90DEG
H(□) Interval:1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Guohong
Test Date:2024-01-02

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 AND RED
- FROSTED POLYCARBONATE LENS

SPECTRUM TEST REPORT - UPTA and EPTA 160 590NM AMBER, GREEN AND RED
- FROSTED POLYCARBONATE LENS



Color Parameters:

Chromaticity Coordinate:x=0.4783 y=0.4782/u'=0.2459 v'=0.5531
CCT=2930K(Duv=0.0214) Dominant WL:Ld =578.1nm Purity=87.2%
Ratio:R=29.7% G=69.0% B=1.2% Peak WL:Lp=628.5nm FWHM=16.2nm
Render Index:Ra=47.6 CRI=41.1 AvgR=43.2
R1=49 R2=67 R3=55 R4=26 R5=47 R6=35 R7=53 R8=47 R9=30 R10=26
R11=0 R12=10 R13=52 R14=77 R15=72

Photo Parameters:

Flux = 4581 lm Eff. : 37.82 lm/W Fe = 12.88 W

Electrical parameters:

V = 219.59 V I = 0.5617 A P = 121.1 W PF = 0.9820

LEVEL:OUT WHITE:OUT

Status: Integral T = 28 ms Ip = 53116
(81%)

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

Number:N-00006
Date:2024-01-03 10:07
Humidity:65.0%
Remarks:---

Color Parameters:

Chromaticity Coordinate:x=0.4785 y=0.4751/u'=0.2471 v'=0.5521
CCT=2908K(Duv=0.0204) Dominant WL:Ld =578.3nm Purity=86.3%
Ratio:R=30.7% G=67.8% B=1.4% Peak WL:Lp=629.5nm FWHM=17.1nm
Render Index:Ra=44.4 CRI=37.0 AvgR=38.9
R1=43 R2=66 R3=57 R4=22 R5=41 R6=33 R7=53 R8=40 R9=10 R10=22
R11=0 R12=7 R13=47 R14=78 R15=65

Photo Parameters:

Flux = 5441 lm Eff. : 33.64 lm/W Fe = 15.76 W

Electrical parameters:

V = 219.56 V I = 0.7454 A P = 161.8 W PF = 0.9884

LEVEL:OUT WHITE:OUT

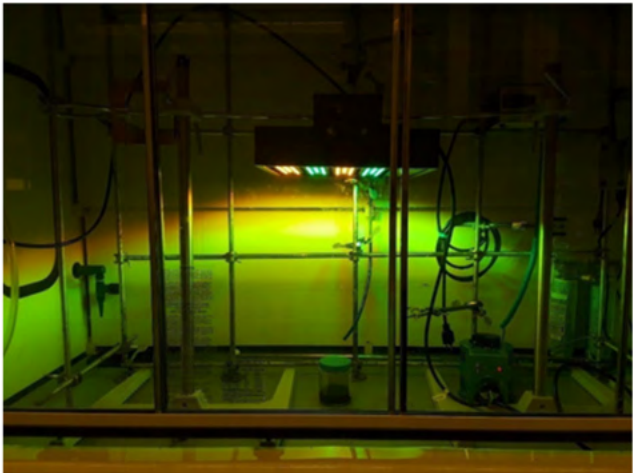
Status: Integral T = 22 ms Ip = 50409
(77%)

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

Number:1
Date:2024-01-03 10:12
Humidity:65.0%
Remarks:---

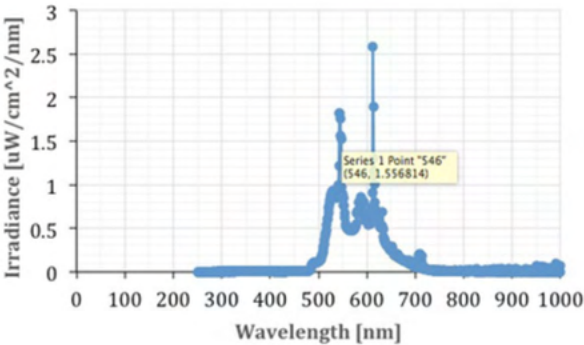
The Fixture's are is independently lab tested and prototypes have been tested by Fortune 500 companies.

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