

Description:

RX-PT5 plant factory special economic plant light tube, used for shelf structure plant factory, 2. PPF is increased by 50% compared to T5 and T8 lamps, Build your plant farm with fewer lights! New design patent product waterproof IP64, suitable for the cultivation of seedlings and vegetable vegetative growth, is ideal for plant factories and home planting.



1. Urban Vertical Agriculture - High cost performance plant factory grow tube, Patented one-piece condenser lens, Patent No.: ZL201820677848
2. PPF is increased by 50% (90D) compared to T5 and T8 lamps, Build your plant farm with fewer lights!
3. 90D is recommended for Tissue culture seedlings, and 60D is used for vegetative growth of leafy vegetables
4. No flicker, long-life LED power supply, PF> 0.9, Meet the safety requirements around the world
5. Waterproof IP64, Water splashing against the enclosure from shall have no harmful effect
6. Input: AC100 ~240V, Rated power 18W
7. CE RoHS FCC

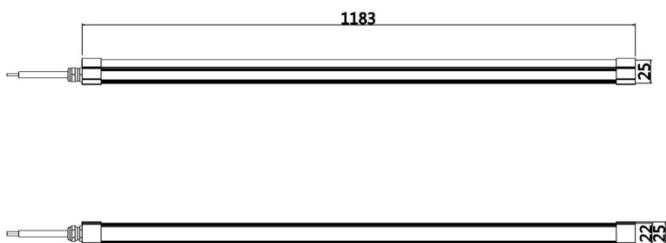
Model	Dimension	CRI & Color temperature	Photon PPF $\mu\text{mol}/\text{m}^2/\text{s}$	Luminous flux Radiation Power	Power Test Input	Comment
RX-PT5-90D-6K6R1B1	22x25x1183mm	Ra 90 9000K	108 μmol @0.2m 6351Lx	1649Lm	18W AC230V	Tissue culture, Nursery, rhizome plants Aquarium
68 μmol @0.3m 3973Lx						
35 μmol @0.5m 2007Lx						
RX-PT5-90D-6K2R6		Ra 63 3000K	110 μmol @0.2m 4293Lx	1124Lm	19W AC230V	Leaf vegetable production
70 μmol @0.3m 2752Lx						
36 μmol @0.5m 1403Lx						
RX-PT5-90D-G1		Ra 89 2500K	92 μmol @0.2m 4463Lx	1134Lm	18W AC230V	Ornamental plants Red is redder, green is greener, blue is bluer
60 μmol @0.3m 2895Lx						
30 μmol @0.5m 1465Lx						

Surface temperature rise T_c 28 K, Operating temperature: $-30^\circ\text{C} \sim 40^\circ\text{C}$, Lifespan: 25,000 hours (Note: $T_a \leq 25^\circ\text{C}$)

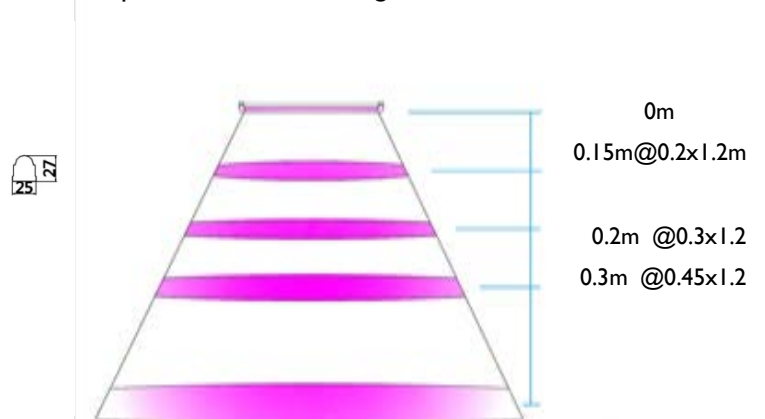
Tolerance range for optical and electrical data: $\pm 10\%$.

Beam angle: 70° Recommended irradiation distance: 0.2~0.5m (Tissue culture and nursery) 0.1~0.3m (Vegetable production)

Dimension:



90D Depth distance & Coverage:

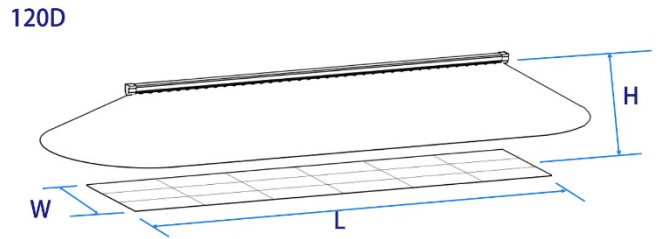
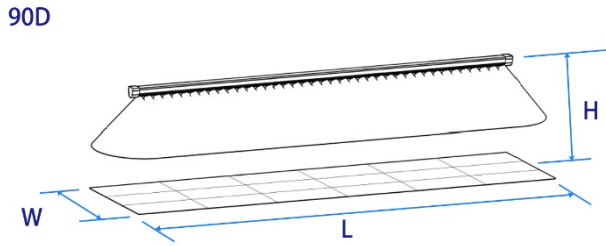


- Patented one-piece condenser lens, Patent No.: ZL201820677848, Urban Vertical Agriculture - High cost performance plant factory grow LED tube



Optional illuminating angle lens LED plant grow tube
Patent number ZL201820677848

- 50% increase in PPFD compared to T5 and T8 lamps, building plant factories with fewer lamps
Single comparison test, the test height is 0.2m, the radiation area is 0.3x1.2m, and the 90D product is 53% higher than the 120D product.

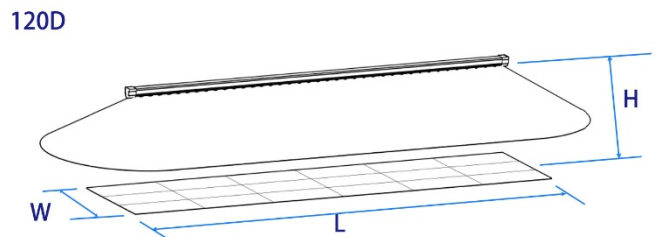
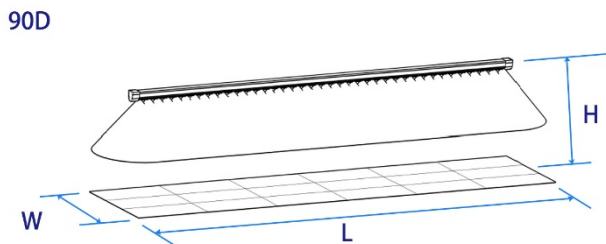


62	81	80	80	75	64
80	95	98	98	92	70
55	71	74	73	68	51
90D Test W 0.3m, L 1.2m, H 0.2m					
18 test point average PPFD 75.9 μ mol/m ² /s					

35	46	48	48	46	34
51	65	66	67	66	50
38	50	50	49	48	34
120D Test W 0.3m, L 1.2m, H 0.2m					
18 test point average PPFD 49.5 μ mol/m ² /s					

90D compared to 120D, PPFD increased by 53%

- Single comparison test, test height 0.3m, radiation area 0.45x1.2m, 90D products than 120D products, PPFD increased by 55%.

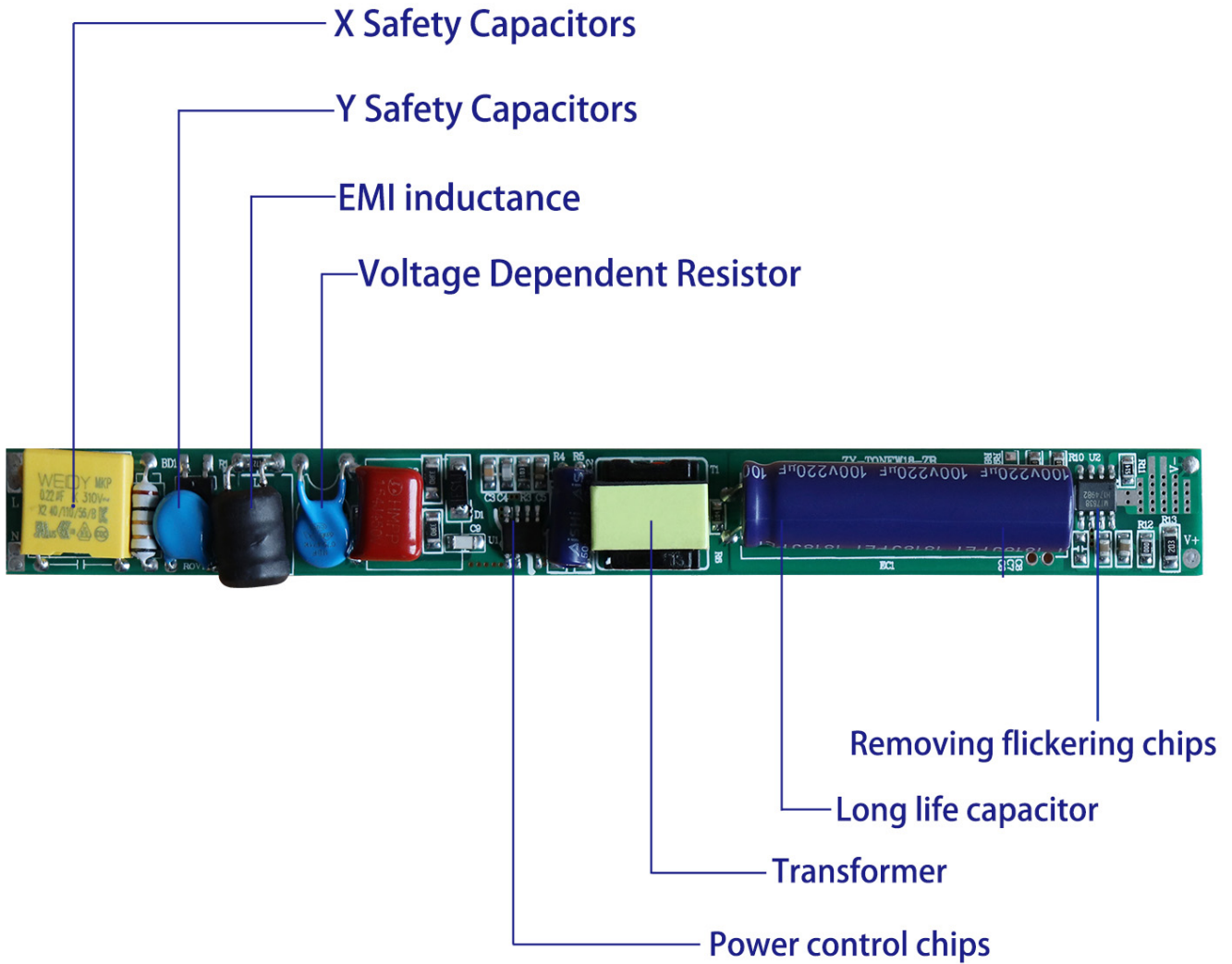


31	46	51	51	47	34
45	62	66	66	61	44
40	57	56	59	57	38
90D Test W 0.3m, L 1.2m, H 0.2m					
18 test point average PPFD 50.6 μ mol/m ² /s					

21	30	32	31	30	22
31	43	45	45	42	32
25	34	34	34	32	22
120D Test W 0.3m, L 1.2m, H 0.2m					
18 test point average PPFD 32.5 μ mol/m ² /s					

90D compared to 120D, PPFD increased by 55%

- No flicker, long-life LED power supply, PF > 0.9, Meet the safety requirements around the world



No flicker, Long life, High PF, High quality LED power

No flicker, Long life, High PF, High quality LED power

Removing flickering chips

Long life capacitor

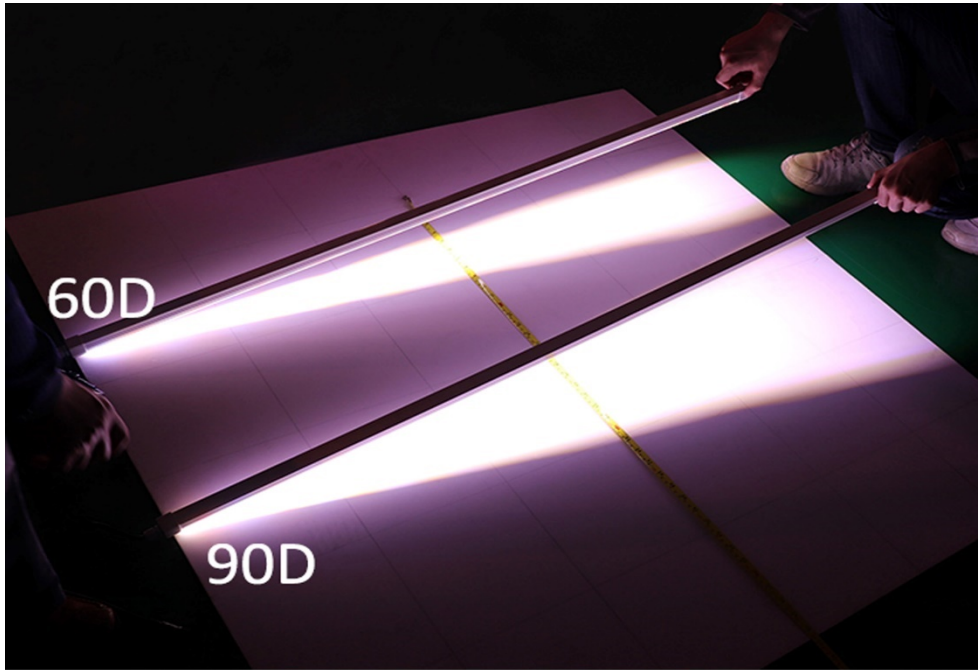
Transformer

Power control chips

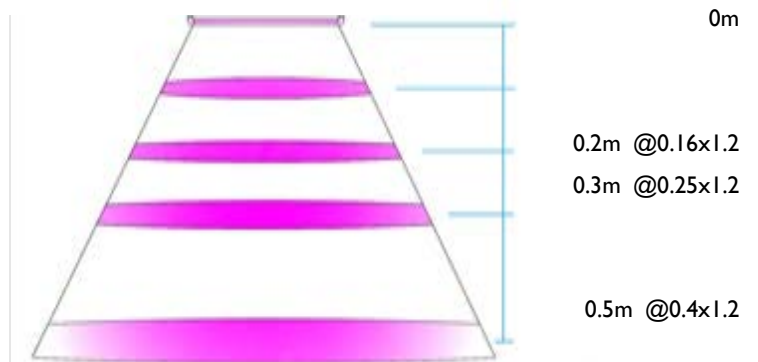
X Safety Capacitors Y Safety Capacitors

EMI inductance Voltage Dependent Resistor

- Optional lighting angle, you can customize 60D products, lighting angle 45°, PPF increase 80%, 60D is recommended for the vegetative growth, and 90D is recommended for the cultivation of seedlings.

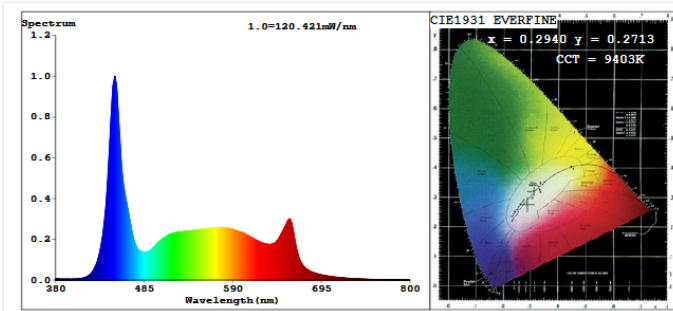


60D Depth distance & Coverage:



Model	Dimension	CRI & Color temperature	Photon PPFD $\mu\text{mol}/\text{m}^2/\text{s}$	Luminous flux Radiation Power	Power Test Input	Comment
RX-PT5-60D-6K6R1B1	22x25x1183mm	Ra 90 9000K	147 μmol @0.2m 8620Lx	Flux: 1846Lm PPF: 32 $\mu\text{mol}/\text{s}$ PAR: 7118mW	18W AC230V	Tissue culture, Nursery, rhizome plants Aquarium
97 μmol @0.3m 5659Lx						
50 μmol @0.5m 2935Lx						
RX-PT5-60D-6K2R6		Ra 63 3000K	163 μmol @0.2m 6476Lx	Flux: 1406Lm PPF: 35 $\mu\text{mol}/\text{s}$ PAR: 7044mW	20W AC230V	Leaf vegetable production
107 μmol @0.3m 4337Lx						
55 μmol @0.5m 2249Lx						
RX-PT5-60D-G1		Ra 89 10000K	105 μmol @0.2m 2934Lx	Flux: 616Lm PPF: 22 $\mu\text{mol}/\text{s}$ PAR: 4553mW	16W AC230V	Ornamental plants Red is redder, green is greener,
70 μmol @0.3m 1922Lx						
36 μmol @0.5m 997Lx						

● Testing report



Color Parameters:

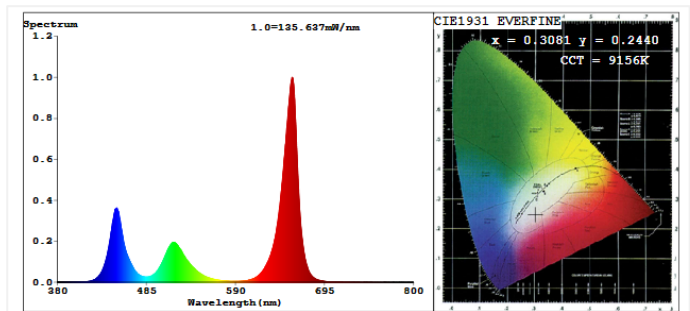
Chromaticity Coordinate: $x=0.2940$ $y=0.2713$ / $u'=0.2075$ $v'=0.4308$
 CCT=9403K (Duv=-0.0182) Dominant WL:Ld =461.1nm Purity=20.6%
 Ratio:R=15.3% G=77.9% B=6.8% Peak WL:Lp=450.5nm FWHM=18.0nm
 Render Index:Ra=89.1 AvgR=85.6
 R1 =89 R2 =91 R3 =81 R4 =93 R5 =90 R6 =81 R7 =94
 R8 =92 R9 =75 R10=81 R11=90 R12=60 R13=89 R14=89 R15=87

Photo Parameters:

Flux = 2069 lm Eff. : 116.72 lm/W Fe = 8.041 W
 Scotopic:5227.9 S/P:2.5268
 Photosynthetic:PPF:35.511umol/s PAR WATT:7948.9mW(400-700nm)

Electrical parameters:

V = 231.00 V I = 0.07983 A P = 17.73 W PF = 0.9612
 LEVEL:OUT WHITE:OUT



Color Parameters:

Chromaticity Coordinate: $x=0.3081$ $y=0.2440$ / $u'=0.2320$ $v'=0.4134$
 CCT=9156K (Duv=-0.0452) Dominant WL:Ld =564.7nm Purity=34.6%
 Ratio:R=31.4% G=62.0% B=6.6% Peak WL:Lp=657.0nm FWHM=18.6nm
 Render Index:Ra=12.6 AvgR=12.0
 R1 =0 R2 =35 R3 =27 R4 =0 R5 =0 R6 =39 R7 =0
 R8 =0 R9 =0 R10=0 R11=0 R12=24 R13=0 R14=54 R15=0

Photo Parameters:

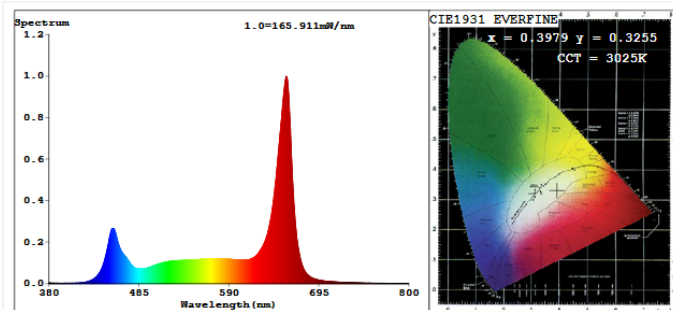
Flux = 726.8 lm Eff. : 44.24 lm/W Fe = 5.204 W
 Scotopic:2296.9 S/P:3.1604
 Photosynthetic:PPF:25.329umol/s PAR WATT:5189.7mW(400-700nm)

Electrical parameters:

V = 231.11 V I = 0.07704 A P = 16.43 W PF = 0.9227
 LEVEL:OUT WHITE:OUT

RX-PT5-D90-6K6R1B1 18W LED tube PPF TEST

RX-PT5-D90-G1 16W LED tube PPF TEST



Color Parameters:

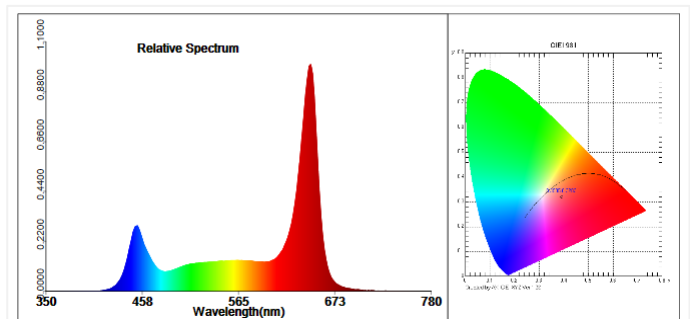
Chromaticity Coordinate: $x=0.3979$ $y=0.3255$ / $u'=0.2605$ $v'=0.4794$
 CCT=3025K (Duv=-0.0297) Dominant WL:Ld =633.9nm Purity=17.0%
 Ratio:R=28.5% G=66.4% B=5.1% Peak WL:Lp=656.7nm FWHM=19.7nm
 Render Index:Ra=62.0 AvgR=54.1
 R1 =56 R2 =72 R3 =93 R4 =63 R5 =54 R6 =70 R7 =75
 R8 =14 R9 =0 R10=42 R11=55 R12=34 R13=57 R14=94 R15=34

Photo Parameters:

Flux = 1557 lm Eff. : 78.68 lm/W Fe = 7.761 W
 Scotopic:2924.9 S/P:1.8783
 Photosynthetic:PPF:38.105umol/s PAR WATT:7693.5mW(400-700nm)

Electrical parameters:

V = 231.13 V I = 0.09114 A P = 19.79 W PF = 0.9396
 LEVEL:OUT WHITE:OUT

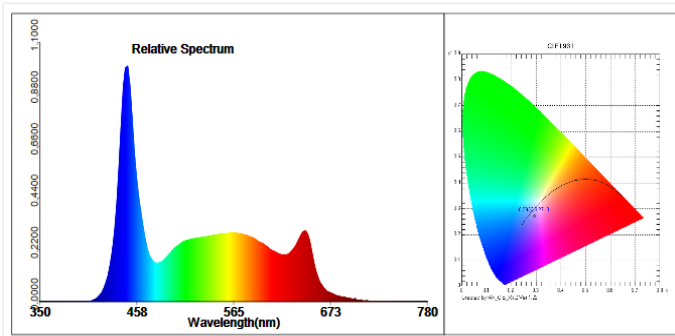


Test parameter:

E= 6476.0 lx E(fc)=601.858 fc
 CIE x= 0.3905 CIE y= 0.3202 CIE u'=0.2577 CIE v'=0.4754
 Tc=3154 K Lp=659.0 nm HW=23.8 nm Ld=700.0 nm
 Pur=14.4 % Ratio_R=28.1 % Ratio_G=66.4 % Ratio_B=5.5 %
 Duv=-0.03108
 Ra=61.8 R1= 55 R2= 71 R3= 94
 R4= 63 R5= 53 R6= 69 R7= 75
 R8= 13 R9=96 R10= 39 R11= 57
 R12= 32 R13= 56 R14= 95 R15= 32
 SDCM=29.8(3500K/White) White Class:OUT
 E1=32.959 W/m2 E2=33.069 W/m2 PPF=163.39 umol/(m·s)
 Ech-A=10.132 W/m2 Ech-B=7.0853 W/m2 Ef=0.11079 W/m2
 Eb=6.0352 W/m2 Ey=7.6817 W/m2 Er=19.255 W/m2
 Ep=29.098 W/phyto/m2 Erb_Ratio=3.1905
 PPFdf=6.6224E-001 umol/(m2·s)

RX-PT5-D90-6K2R6 20W LED tube PPF TEST

RX-PT5-D90-6K2R6 20W LED tube PPF TEST



Test parameter:

E= 6163.6 lx E(fc)=572.828 fc

CIE x= 0.2933 CIE y= 0.2718 CIE u'=0.2067 CIE v'=0.4311

Tc=9471 K Lp=452.0 nm HW=22.2 nm Ld=463.0 nm

Pur=20.6 % Ratio_R=15.2 % Ratio_G=77.8 % Ratio_B=7.0 %

Duv=-0.01732

Ra=89.9 R1= 89 R2= 91 R3= 83

R4= 95 R5= 90 R6= 82 R7= 95

R8= 94 R9= 79 R10= 82 R11= 91

R12= 61 R13= 90 R14= 90 R15= 88

SDCM=21.3(8000K/EDF)
White Class:OUT

E1=23.661 W/m2 E2=23.752 W/m2 PPF=105.69 μmol/(m·s)

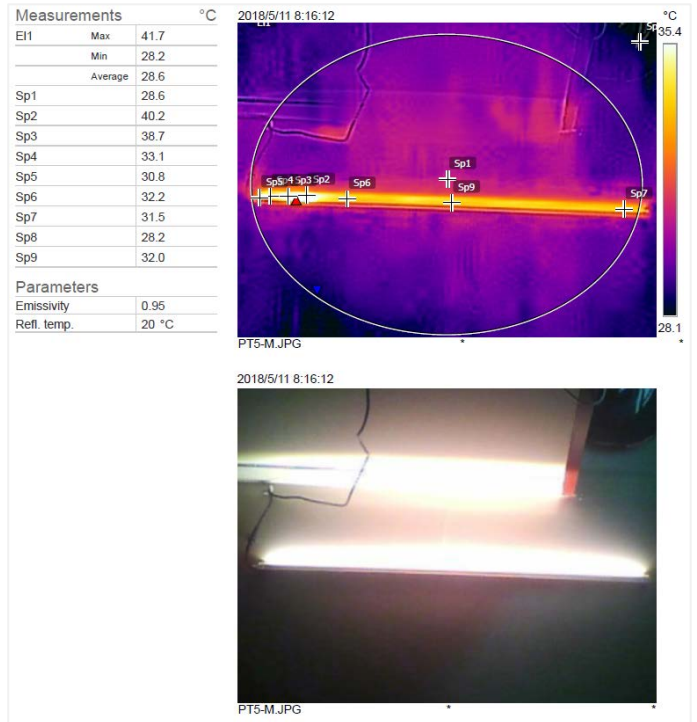
Ech-A=3.3153 W/m2 Ech-B=7.2598 W/m2 Ef=0.091387 W/m2

Eb=9.4664 W/m2 Ey=8.5645 W/m2 Er=5.6447 W/m2

Ep=19.694 Wphyto/m2 Erb_Ratio=0.59629

PPFDf=5.4606E-001 μmol/(m2·s)

RX-PT5-D90-6K6R1B1 20W LED tube PPFD TEST



Surface temperature Test