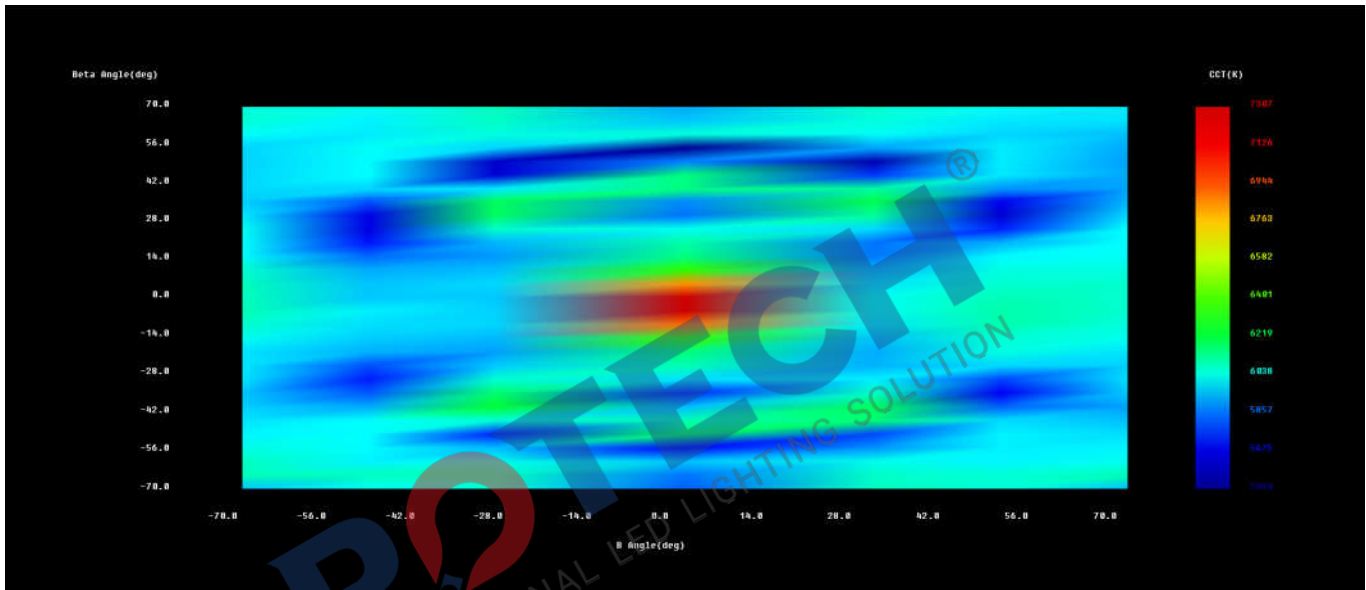


## Spatial Color Distribution Report

|                       |         |             |
|-----------------------|---------|-------------|
| NAME: PHA PT-FL3 100W | TYPE:GO | WEIGHT:     |
| DIM.: 130             | SPEC.:  | SERIAL No.: |
| MFR.: LAB VILAS 317   |         |             |



**Color Parameters:**

Average:  $x=0.3177, y=0.3339$   $u'=0.1994, v'=0.4717$  CCT=6214K Ra=83.1 Rf=82 Rg=94  
Center :  $x=0.3031, y=0.3108$   $u'=0.1980, v'=0.4568$  CCT=7300K Ra=85.4 Rf=82 Rg=95  
IESNA LM-79-2008 Max.  $du'v'$ : 0.0231 / max. $du'v'$ : 0.0000[Set Range]  
GB/T 24908: max. color nonuniformity  $du'v'$ :0.0149  
Average: R1=82 R2=89 R3=91 R4=81 R5=81 R6=83 R7=88 R8=70 R9=11 R10=72  
R11=80 R12=54 R13=84 R14=96 R15=78

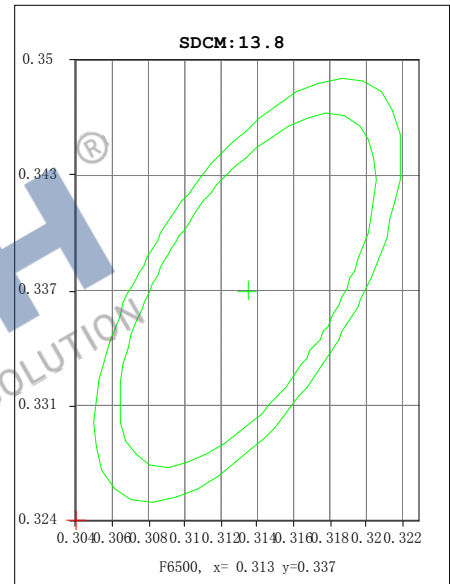
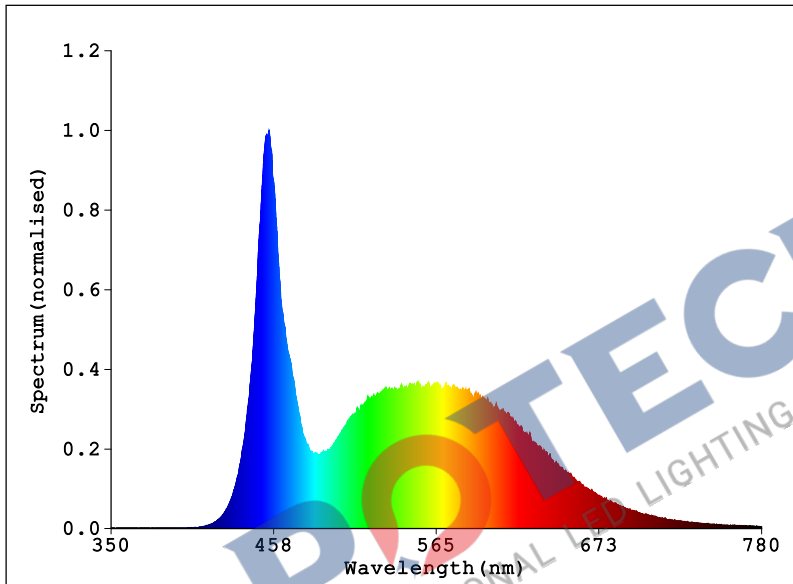
Tester:GONIOPHOTOMETERS  
Temperature:25.2Deg  
Manufactory:LAB VILAS 317

Date:15 July 2023  
Humidity:61%  
Remarks:2855-NCPT-2023

System:HAAS-2000A (CAN)

### Spectrum Test Report

|                       |         |             |
|-----------------------|---------|-------------|
| NAME: PHA PT-FL3 100W | TYPE:GO | WEIGHT:     |
| DIM.: 130             | SPEC.:  | SERIAL No.: |
| MFR.: LAB VILAS 317   |         |             |



**Color Parameters:**

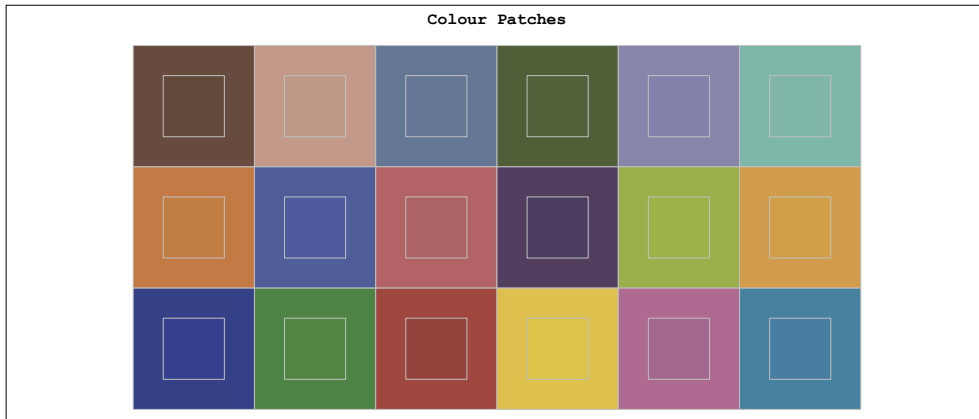
Chromaticity Coordinates:  $x=0.3031$   $y=0.3106$  /  $u'=0.1981$   $v'=0.4567$   $duv=-0.00140$   
 $T_c=7303K$  Dominant WL:  $\lambda_d=481.2nm$  Purity=12.2%  
 Ratio: R=13.5% G=80.2% B=6.3% Peak WL:  $\lambda_p=454.4nm$  HWL: 20.3nm  
 Rendering Index:  $R_a=85.4$  TLCI = 72  
 R1 =86 R2 =91 R3 =90 R4 =84 R5 =84 R6 =83 R7 =89  
 R8 =76 R9 =26 R10=75 R11=83 R12=54 R13=88 R14=95 R15=84  
 $E = 132.9 lx$   $E_e = 0.4489 W/m^2$

Status:  $T=19.80ms$   $I_p=53694 (82\%)$  [ HAAS-2000A(CAN) ]  
 Electrical:  $U=220.11V$   $I=0.47333A$   $P=102.55W$   $PF=0.9844$   
 Test position: Center

Tester: GONIOPHOTOMETERS  
 Temperature: 25.2Deg  
 Manufactory: LAB VILAS 317

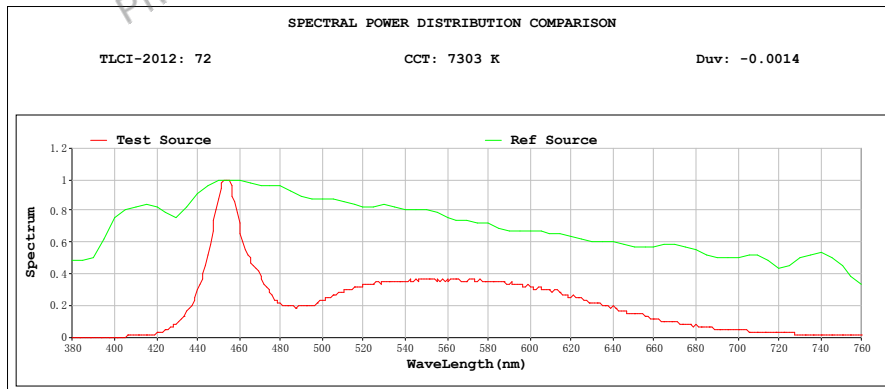
Date: 15 July 2023  
 Humidity: 61%  
 Remarks: 2855-NCPT-2023

System: HAAS-2000A (CAN)



**Colourist's Advice Report**

| Sector | Lightness | Chroma | Hue |
|--------|-----------|--------|-----|
| R      | -3        | -2     | -1  |
| R/Y    | 0         | -1     | 3   |
| Y      | 1         | 1      | 4   |
| Y/G    | 1         | 1      | 0   |
| G      | 1         | 1      | -2  |
| G/C    | 0         | 0      | -1  |
| C      | -1        | -1     | -1  |
| C/B    | -2        | 1      | 5   |
| B      | -1        | 2      | 2   |
| B/M    | -2        | 0      | -4  |
| M      | -3        | -1     | -4  |
| M/R    | -4        | -1     | -3  |



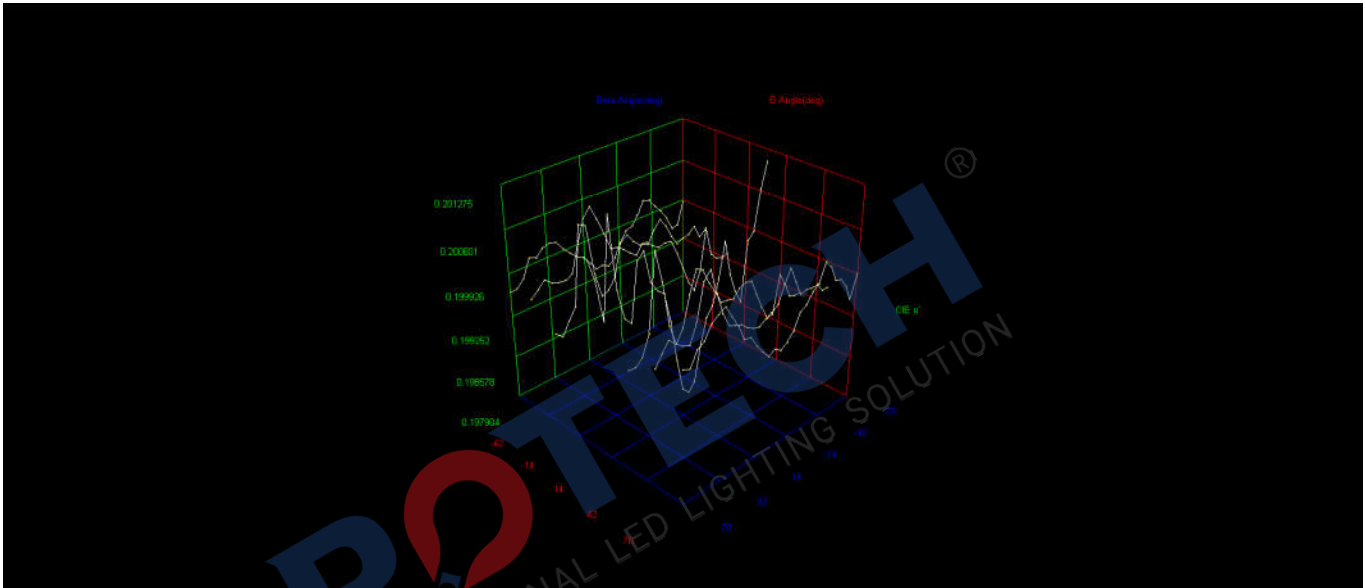
Tester:GONIOPHOTOMETERS  
Temperature:25.2Deg  
Manufactory:LAB VILAS 317

Date:15 July 2023  
Humidity:61%  
Remarks:2855-NCPT-2023

System:HAAS-2000A (CAN)

## Spatial Color Distribution Report

|                       |         |             |
|-----------------------|---------|-------------|
| NAME: PHA PT-FL3 100W | TYPE:GO | WEIGHT:     |
| DIM.: 130             | SPEC.:  | SERIAL No.: |
| MFR.: LAB VILAS 317   |         |             |



### Color Parameters:

Average:  $x=0.3177, y=0.3339$   $u'=0.1994, v'=0.4717$  CCT=6214K Ra=83.1 Rf=82 Rg=94

Center:  $x=0.3031, y=0.3108$   $u'=0.1980, v'=0.4568$  CCT=7300K Ra=85.4 Rf=82 Rg=95

IESNA LM-79-2008 Max.  $du'v'$ : 0.0231 / max. $du'v'$ : 0.0000[Set Range]

GB/T 24908: max. color nonuniformity  $du'v'$ :0.0149

Average: R1=82 R2=89 R3=91 R4=81 R5=81 R6=83 R7=88 R8=70 R9=11 R10=72

R11=80 R12=54 R13=84 R14=96 R15=78

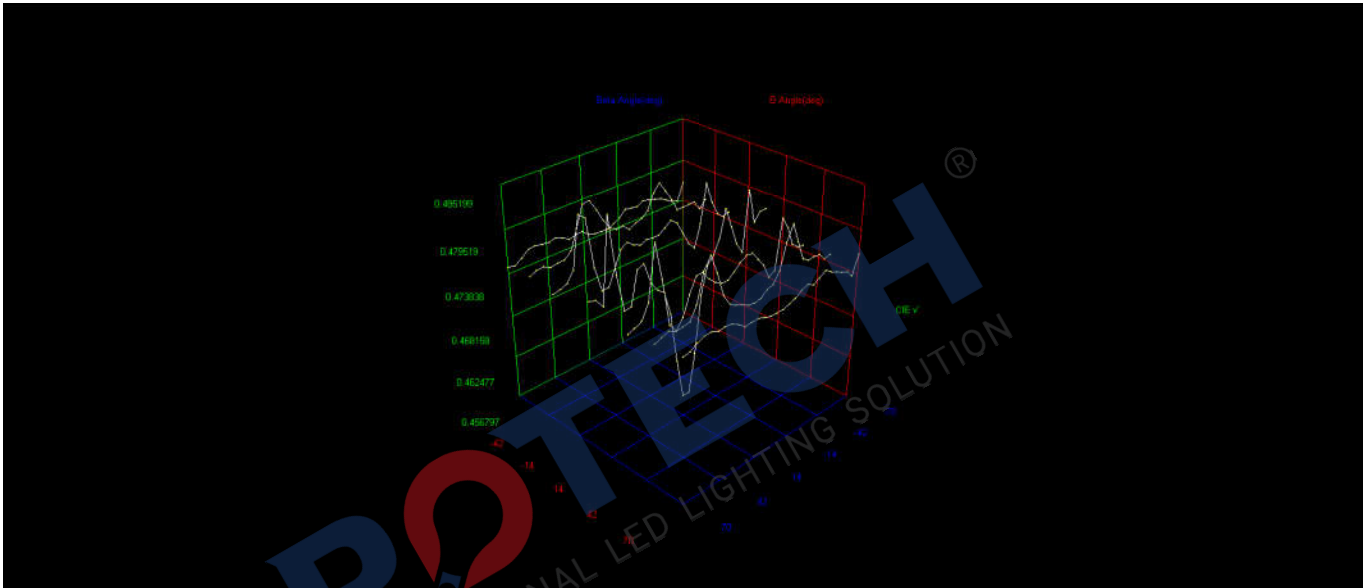
Tester:GONIOPHOTOMETERS  
Temperature:25.2Deg  
Manufactory:LAB VILAS 317

Date:15 July 2023  
Humidity:61%  
Remarks:2855-NCPT-2023

System:HAAS-2000A (CAN)

## Spatial Color Distribution Report

|                       |         |             |
|-----------------------|---------|-------------|
| NAME: PHA PT-FL3 100W | TYPE:GO | WEIGHT:     |
| DIM.: 130             | SPEC.:  | SERIAL No.: |
| MFR.: LAB VILAS 317   |         |             |



### Color Parameters:

Average:  $x=0.3177, y=0.3339$   $u'=0.1994, v'=0.4717$  CCT=6214K Ra=83.1 Rf=82 Rg=94

Center :  $x=0.3031, y=0.3108$   $u'=0.1980, v'=0.4568$  CCT=7300K Ra=85.4 Rf=82 Rg=95

IESNA LM-79-2008 Max.  $du'v'$ : 0.0231 / max. $du'v'$ : 0.0000[Set Range]

GB/T 24908: max. color nonuniformity  $du'v'$ :0.0149

Average: R1=82 R2=89 R3=91 R4=81 R5=81 R6=83 R7=88 R8=70 R9=11 R10=72

R11=80 R12=54 R13=84 R14=96 R15=78

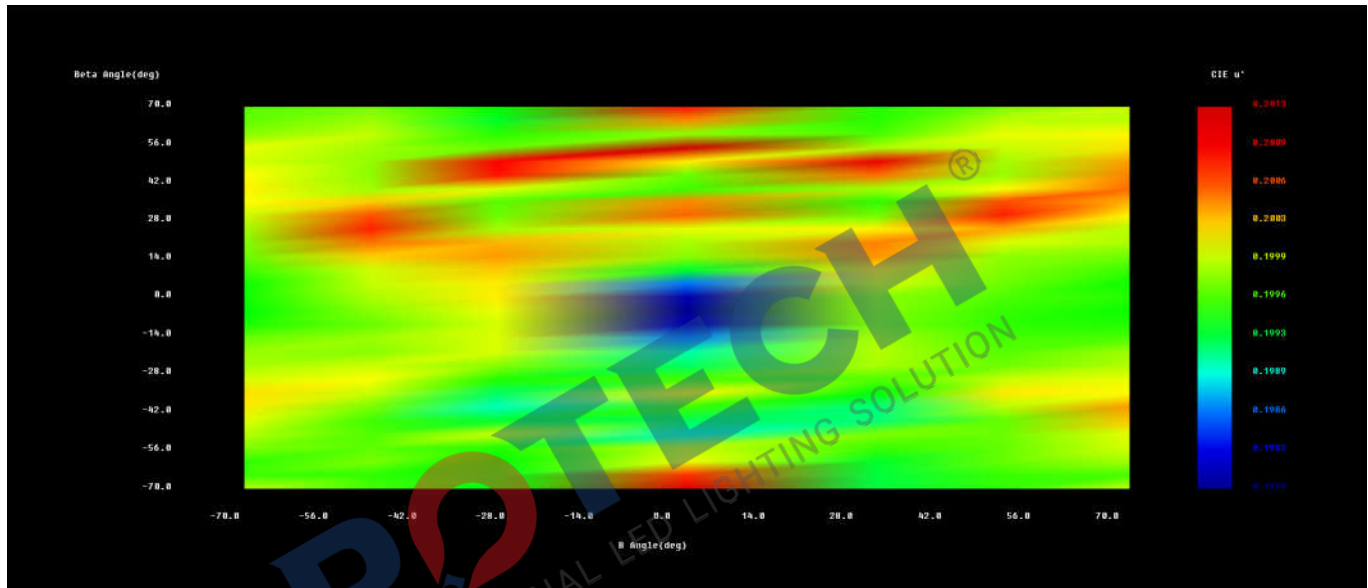
Tester:GONIOPHOTOMETERS  
Temperature:25.2Deg  
Manufactory:LAB VILAS 317

Date:15 July 2023  
Humidity:61%  
Remarks:2855-NCPT-2023

System:HAAS-2000A (CAN)

### Spatial Color Distribution Report

|                       |         |             |
|-----------------------|---------|-------------|
| NAME: PHA PT-FL3 100W | TYPE:GO | WEIGHT:     |
| DIM.: 130             | SPEC.:  | SERIAL No.: |
| MFR.: LAB VILAS 317   |         |             |



**Color Parameters:**

Average:  $x=0.3177, y=0.3339$   $u'=0.1994, v'=0.4717$  CCT=6214K Ra=83.1 Rf=82 Rg=94  
Center :  $x=0.3031, y=0.3108$   $u'=0.1980, v'=0.4568$  CCT=7300K Ra=85.4 Rf=82 Rg=95  
IESNA LM-79-2008 Max.  $du'v'$ : 0.0231 / max. $du'v'$ : 0.0000[Set Range]  
GB/T 24908: max. color nonuniformity  $du'v'$ :0.0149  
Average: R1=82 R2=89 R3=91 R4=81 R5=81 R6=83 R7=88 R8=70 R9=11 R10=72  
R11=80 R12=54 R13=84 R14=96 R15=78

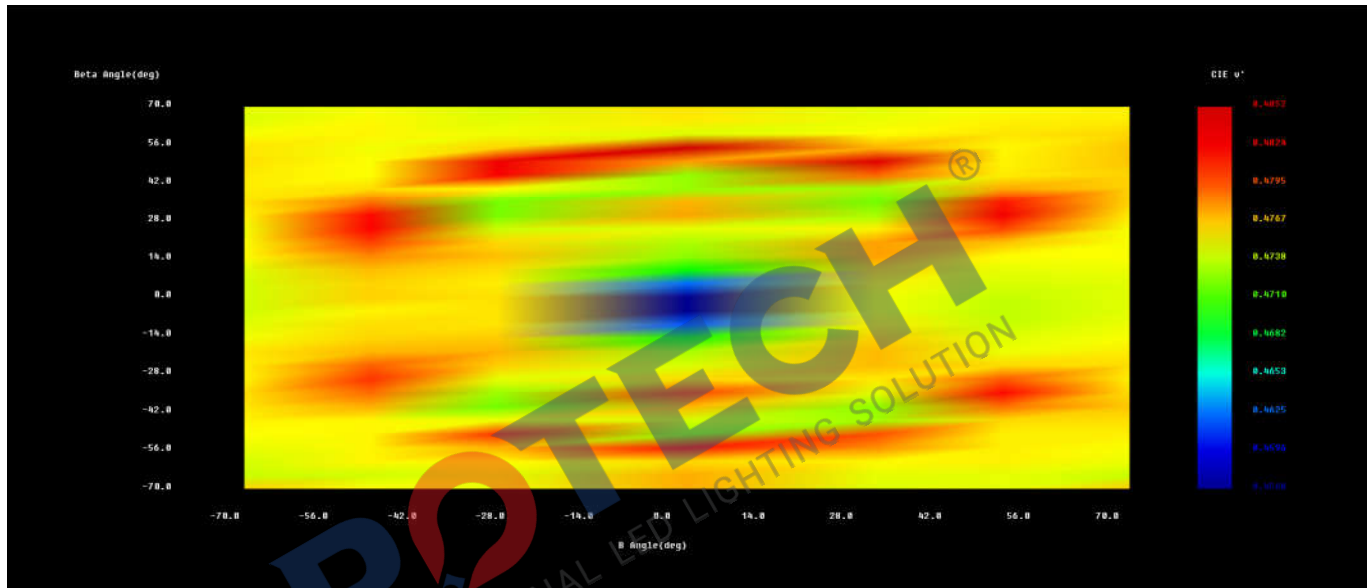
Tester:GONIOPHOTOMETERS  
Temperature:25.2Deg  
Manufactory:LAB VILAS 317

Date:15 July 2023  
Humidity:61%  
Remarks:2855-NCPT-2023

System:HAAS-2000A (CAN)

## Spatial Color Distribution Report

|                       |         |             |
|-----------------------|---------|-------------|
| NAME: PHA PT-FL3 100W | TYPE:GO | WEIGHT:     |
| DIM.: 130             | SPEC.:  | SERIAL No.: |
| MFR.: LAB VILAS 317   |         |             |



**Color Parameters:**

Average:  $x=0.3177, y=0.3339, u'=0.1994, v'=0.4717$  CCT=6214K Ra=83.1 Rf=82 Rg=94  
Center :  $x=0.3031, y=0.3108, u'=0.1980, v'=0.4568$  CCT=7300K Ra=85.4 Rf=82 Rg=95  
IESNA LM-79-2008 Max.  $du'v'$ : 0.0231 / max. $du'v'$ : 0.0000[Set Range]  
GB/T 24908: max. color nonuniformity  $du'v'$ :0.0149  
Average: R1=82 R2=89 R3=91 R4=81 R5=81 R6=83 R7=88 R8=70 R9=11 R10=72  
R11=80 R12=54 R13=84 R14=96 R15=78

Tester:GONIOPHOTOMETERS  
Temperature:25.2Deg  
Manufactory:LAB VILAS 317

Date:15 July 2023  
Humidity:61%  
Remarks:2855-NCPT-2023

System:HAAS-2000A (CAN)



| Beta\B | B-70  |                |                |         |      |        |      |
|--------|-------|----------------|----------------|---------|------|--------|------|
|        | I (8) | CIE x, y       | u', v'         | CCT (K) | Ra   | du'v'  | TLCI |
| -70.0  | 1.00  | 0.3226, 0.3417 | 0.1999, 0.4764 | 5944    | 83.9 | 0.0197 | 75   |
| -65.0  | 1.28  | 0.3199, 0.3378 | 0.1995, 0.4740 | 6085    | 84.2 | 0.0173 | 74   |
| -60.0  | 1.57  | 0.3202, 0.3383 | 0.1995, 0.4743 | 6070    | 84.0 | 0.0176 | 74   |
| -55.0  | 1.78  | 0.3209, 0.3391 | 0.1997, 0.4748 | 6031    | 83.9 | 0.0181 | 74   |
| -50.0  | 2.00  | 0.3216, 0.3399 | 0.1999, 0.4753 | 5997    | 83.8 | 0.0186 | 74   |
| -45.0  | 2.24  | 0.3220, 0.3402 | 0.2000, 0.4756 | 5979    | 83.7 | 0.0189 | 73   |
| -40.0  | 2.43  | 0.3224, 0.3407 | 0.2002, 0.4758 | 5958    | 83.6 | 0.0191 | 73   |
| -35.0  | 2.46  | 0.3227, 0.3411 | 0.2002, 0.4761 | 5944    | 83.6 | 0.0194 | 73   |
| -30.0  | 2.48  | 0.3219, 0.3403 | 0.2000, 0.4756 | 5979    | 83.6 | 0.0189 | 73   |
| -25.0  | 2.53  | 0.3219, 0.3405 | 0.1999, 0.4757 | 5982    | 83.6 | 0.0190 | 73   |
| -20.0  | 2.60  | 0.3220, 0.3409 | 0.1998, 0.4759 | 5975    | 83.6 | 0.0192 | 73   |
| -15.0  | 2.66  | 0.3211, 0.3395 | 0.1997, 0.4751 | 6024    | 83.7 | 0.0184 | 73   |
| -10.0  | 2.69  | 0.3203, 0.3388 | 0.1994, 0.4746 | 6060    | 83.7 | 0.0179 | 73   |
| -5.0   | 2.71  | 0.3199, 0.3382 | 0.1994, 0.4742 | 6085    | 83.8 | 0.0175 | 73   |
| 0.0    | 2.73  | 0.3200, 0.3382 | 0.1994, 0.4742 | 6080    | 83.7 | 0.0175 | 73   |
| 5.0    | 2.70  | 0.3200, 0.3383 | 0.1994, 0.4743 | 6078    | 83.7 | 0.0176 | 73   |
| 10.0   | 2.70  | 0.3205, 0.3387 | 0.1995, 0.4746 | 6056    | 83.7 | 0.0179 | 73   |
| 15.0   | 2.70  | 0.3213, 0.3400 | 0.1997, 0.4753 | 6011    | 83.6 | 0.0186 | 73   |
| 20.0   | 2.67  | 0.3213, 0.3397 | 0.1997, 0.4752 | 6011    | 83.7 | 0.0185 | 73   |
| 25.0   | 2.61  | 0.3212, 0.3394 | 0.1998, 0.4750 | 6016    | 83.7 | 0.0183 | 74   |
| 30.0   | 2.57  | 0.3219, 0.3402 | 0.2000, 0.4756 | 5982    | 83.6 | 0.0189 | 73   |
| 35.0   | 2.55  | 0.3224, 0.3408 | 0.2001, 0.4759 | 5956    | 83.6 | 0.0192 | 73   |
| 40.0   | 2.46  | 0.3223, 0.3404 | 0.2001, 0.4757 | 5965    | 83.6 | 0.0190 | 73   |
| 45.0   | 2.26  | 0.3223, 0.3406 | 0.2001, 0.4758 | 5963    | 83.7 | 0.0191 | 73   |
| 50.0   | 2.01  | 0.3223, 0.3410 | 0.2000, 0.4760 | 5958    | 83.6 | 0.0193 | 74   |
| 55.0   | 1.78  | 0.3223, 0.3408 | 0.2000, 0.4759 | 5961    | 83.8 | 0.0192 | 74   |
| 60.0   | 1.58  | 0.3213, 0.3397 | 0.1998, 0.4752 | 6013    | 83.9 | 0.0185 | 74   |
| 65.0   | 1.32  | 0.3205, 0.3386 | 0.1996, 0.4745 | 6051    | 84.1 | 0.0178 | 75   |
| 70.0   | 1.08  | 0.3207, 0.3389 | 0.1996, 0.4747 | 6043    | 84.2 | 0.0180 | 75   |
|        | B-70  |                |                |         |      |        |      |
| -70.0  | 1.00  | 0.3226, 0.3417 | 0.1999, 0.4764 | 5944    | 83.9 | 0.0197 | 75   |
| -65.0  | 1.28  | 0.3199, 0.3378 | 0.1995, 0.4740 | 6085    | 84.2 | 0.0173 | 74   |
| -60.0  | 1.57  | 0.3202, 0.3383 | 0.1995, 0.4743 | 6070    | 84.0 | 0.0176 | 74   |
| -55.0  | 1.78  | 0.3209, 0.3391 | 0.1997, 0.4748 | 6031    | 83.9 | 0.0181 | 74   |
| -50.0  | 2.00  | 0.3216, 0.3399 | 0.1999, 0.4753 | 5997    | 83.8 | 0.0186 | 74   |
| -45.0  | 2.24  | 0.3220, 0.3402 | 0.2000, 0.4756 | 5979    | 83.7 | 0.0189 | 73   |
| -40.0  | 2.43  | 0.3224, 0.3407 | 0.2002, 0.4758 | 5958    | 83.6 | 0.0191 | 73   |
| -35.0  | 2.46  | 0.3227, 0.3411 | 0.2002, 0.4761 | 5944    | 83.6 | 0.0194 | 73   |
| -30.0  | 2.48  | 0.3219, 0.3403 | 0.2000, 0.4756 | 5979    | 83.6 | 0.0189 | 73   |
| -25.0  | 2.53  | 0.3219, 0.3405 | 0.1999, 0.4757 | 5982    | 83.6 | 0.0190 | 73   |
| -20.0  | 2.60  | 0.3220, 0.3409 | 0.1998, 0.4759 | 5975    | 83.6 | 0.0192 | 73   |
| -15.0  | 2.66  | 0.3211, 0.3395 | 0.1997, 0.4751 | 6024    | 83.7 | 0.0184 | 73   |
| -10.0  | 2.69  | 0.3203, 0.3388 | 0.1994, 0.4746 | 6060    | 83.7 | 0.0179 | 73   |
| -5.0   | 2.71  | 0.3199, 0.3382 | 0.1994, 0.4742 | 6085    | 83.8 | 0.0175 | 73   |
| 0.0    | 2.73  | 0.3200, 0.3382 | 0.1994, 0.4742 | 6080    | 83.7 | 0.0175 | 73   |
| 5.0    | 2.70  | 0.3200, 0.3383 | 0.1994, 0.4743 | 6078    | 83.7 | 0.0176 | 73   |
| 10.0   | 2.70  | 0.3205, 0.3387 | 0.1995, 0.4746 | 6056    | 83.7 | 0.0179 | 73   |
| 15.0   | 2.70  | 0.3213, 0.3400 | 0.1997, 0.4753 | 6011    | 83.6 | 0.0186 | 73   |
| 20.0   | 2.67  | 0.3213, 0.3397 | 0.1997, 0.4752 | 6011    | 83.7 | 0.0185 | 73   |
| 25.0   | 2.61  | 0.3212, 0.3394 | 0.1998, 0.4750 | 6016    | 83.7 | 0.0183 | 74   |
| 30.0   | 2.57  | 0.3219, 0.3402 | 0.2000, 0.4756 | 5982    | 83.6 | 0.0189 | 73   |
| 35.0   | 2.55  | 0.3224, 0.3408 | 0.2001, 0.4759 | 5956    | 83.6 | 0.0192 | 73   |
| 40.0   | 2.46  | 0.3223, 0.3404 | 0.2001, 0.4757 | 5965    | 83.6 | 0.0190 | 73   |
| 45.0   | 2.26  | 0.3223, 0.3406 | 0.2001, 0.4758 | 5963    | 83.7 | 0.0191 | 73   |
| 50.0   | 2.01  | 0.3223, 0.3410 | 0.2000, 0.4760 | 5958    | 83.6 | 0.0193 | 74   |
| 55.0   | 1.78  | 0.3223, 0.3408 | 0.2000, 0.4759 | 5961    | 83.8 | 0.0192 | 74   |
| 60.0   | 1.58  | 0.3213, 0.3397 | 0.1998, 0.4752 | 6013    | 83.9 | 0.0185 | 74   |
| 65.0   | 1.32  | 0.3205, 0.3386 | 0.1996, 0.4745 | 6051    | 84.1 | 0.0178 | 75   |
| 70.0   | 1.08  | 0.3207, 0.3389 | 0.1996, 0.4747 | 6043    | 84.2 | 0.0180 | 75   |

Tester: GONIOPHOTOMETERS  
 Temperature: 25.2 Deg  
 Manufactory: LAB VILAS 317

Date: 15 July 2023  
 Humidity: 61%  
 Remarks: 2855-NCPT-2023

System: HAAS-2000A (CAN)





| Beta\B | B-50  |                |                |         |      |        |      |
|--------|-------|----------------|----------------|---------|------|--------|------|
|        | I (8) | CIE x, y       | u', v'         | CCT (K) | Ra   | du'v'  | TLCI |
| -70.0  | 1.68  | 0.3211, 0.3399 | 0.1996, 0.4753 | 6019    | 83.8 | 0.0186 | 74   |
| -65.0  | 2.26  | 0.3201, 0.3382 | 0.1995, 0.4742 | 6076    | 83.9 | 0.0175 | 74   |
| -60.0  | 2.60  | 0.3216, 0.3403 | 0.1997, 0.4755 | 5997    | 83.5 | 0.0188 | 73   |
| -55.0  | 2.82  | 0.3214, 0.3403 | 0.1996, 0.4755 | 6004    | 83.5 | 0.0188 | 73   |
| -50.0  | 3.10  | 0.3214, 0.3403 | 0.1996, 0.4755 | 6006    | 83.4 | 0.0188 | 73   |
| -45.0  | 3.43  | 0.3213, 0.3403 | 0.1996, 0.4755 | 6009    | 83.4 | 0.0188 | 73   |
| -40.0  | 3.91  | 0.3232, 0.3432 | 0.1997, 0.4773 | 5915    | 83.1 | 0.0206 | 73   |
| -35.0  | 4.75  | 0.3250, 0.3459 | 0.1999, 0.4789 | 5826    | 82.7 | 0.0222 | 72   |
| -30.0  | 6.02  | 0.3264, 0.3482 | 0.2001, 0.4802 | 5760    | 82.3 | 0.0235 | 72   |
| -25.0  | 7.38  | 0.3253, 0.3464 | 0.2000, 0.4792 | 5814    | 82.3 | 0.0225 | 71   |
| -20.0  | 8.59  | 0.3230, 0.3429 | 0.1998, 0.4771 | 5922    | 82.6 | 0.0204 | 72   |
| -15.0  | 9.60  | 0.3224, 0.3416 | 0.1998, 0.4763 | 5954    | 82.7 | 0.0196 | 71   |
| -10.0  | 10.35 | 0.3220, 0.3413 | 0.1997, 0.4761 | 5972    | 82.7 | 0.0194 | 71   |
| -5.0   | 10.81 | 0.3217, 0.3403 | 0.1998, 0.4756 | 5992    | 82.8 | 0.0189 | 71   |
| 0.0    | 10.91 | 0.3226, 0.3418 | 0.1999, 0.4764 | 5947    | 82.7 | 0.0197 | 71   |
| 5.0    | 10.60 | 0.3226, 0.3416 | 0.1999, 0.4764 | 5944    | 82.7 | 0.0197 | 71   |
| 10.0   | 10.01 | 0.3231, 0.3425 | 0.2000, 0.4769 | 5917    | 82.6 | 0.0202 | 71   |
| 15.0   | 9.14  | 0.3247, 0.3446 | 0.2002, 0.4782 | 5843    | 82.5 | 0.0215 | 71   |
| 20.0   | 8.11  | 0.3267, 0.3475 | 0.2005, 0.4799 | 5751    | 82.3 | 0.0232 | 71   |
| 25.0   | 6.89  | 0.3284, 0.3501 | 0.2007, 0.4815 | 5673    | 82.1 | 0.0248 | 71   |
| 30.0   | 5.64  | 0.3281, 0.3499 | 0.2006, 0.4813 | 5685    | 82.2 | 0.0246 | 71   |
| 35.0   | 4.65  | 0.3251, 0.3454 | 0.2002, 0.4787 | 5821    | 82.8 | 0.0220 | 72   |
| 40.0   | 4.02  | 0.3222, 0.3412 | 0.1998, 0.4761 | 5965    | 83.3 | 0.0194 | 73   |
| 45.0   | 3.61  | 0.3214, 0.3398 | 0.1998, 0.4753 | 6006    | 83.5 | 0.0186 | 73   |
| 50.0   | 3.26  | 0.3214, 0.3398 | 0.1998, 0.4753 | 6006    | 83.6 | 0.0186 | 73   |
| 55.0   | 2.93  | 0.3213, 0.3394 | 0.1998, 0.4750 | 6013    | 83.6 | 0.0183 | 73   |
| 60.0   | 2.70  | 0.3218, 0.3402 | 0.1999, 0.4755 | 5986    | 83.7 | 0.0188 | 74   |
| 65.0   | 2.39  | 0.3216, 0.3401 | 0.1998, 0.4755 | 5995    | 83.8 | 0.0188 | 74   |
| 70.0   | 1.83  | 0.3211, 0.3395 | 0.1997, 0.4751 | 6019    | 84.0 | 0.0184 | 75   |
|        | B-70  |                |                |         |      |        |      |
| -70.0  | 1.00  | 0.3226, 0.3417 | 0.1999, 0.4764 | 5944    | 83.9 | 0.0197 | 75   |
| -65.0  | 1.28  | 0.3199, 0.3378 | 0.1995, 0.4740 | 6085    | 84.2 | 0.0173 | 74   |
| -60.0  | 1.57  | 0.3202, 0.3383 | 0.1995, 0.4743 | 6070    | 84.0 | 0.0176 | 74   |
| -55.0  | 1.78  | 0.3209, 0.3391 | 0.1997, 0.4748 | 6031    | 83.9 | 0.0181 | 74   |
| -50.0  | 2.00  | 0.3216, 0.3399 | 0.1999, 0.4753 | 5997    | 83.8 | 0.0186 | 74   |
| -45.0  | 2.24  | 0.3220, 0.3402 | 0.2000, 0.4756 | 5979    | 83.7 | 0.0189 | 73   |
| -40.0  | 2.43  | 0.3224, 0.3407 | 0.2002, 0.4758 | 5958    | 83.6 | 0.0191 | 73   |
| -35.0  | 2.46  | 0.3227, 0.3411 | 0.2002, 0.4761 | 5944    | 83.6 | 0.0194 | 73   |
| -30.0  | 2.48  | 0.3219, 0.3403 | 0.2000, 0.4756 | 5979    | 83.6 | 0.0189 | 73   |
| -25.0  | 2.53  | 0.3219, 0.3405 | 0.1999, 0.4757 | 5982    | 83.6 | 0.0190 | 73   |
| -20.0  | 2.60  | 0.3220, 0.3409 | 0.1998, 0.4759 | 5975    | 83.6 | 0.0192 | 73   |
| -15.0  | 2.66  | 0.3211, 0.3395 | 0.1997, 0.4751 | 6024    | 83.7 | 0.0184 | 73   |
| -10.0  | 2.69  | 0.3203, 0.3388 | 0.1994, 0.4746 | 6060    | 83.7 | 0.0179 | 73   |
| -5.0   | 2.71  | 0.3199, 0.3382 | 0.1994, 0.4742 | 6085    | 83.8 | 0.0175 | 73   |
| 0.0    | 2.73  | 0.3200, 0.3382 | 0.1994, 0.4742 | 6080    | 83.7 | 0.0175 | 73   |
| 5.0    | 2.70  | 0.3200, 0.3383 | 0.1994, 0.4743 | 6078    | 83.7 | 0.0176 | 73   |
| 10.0   | 2.70  | 0.3205, 0.3387 | 0.1995, 0.4746 | 6056    | 83.7 | 0.0179 | 73   |
| 15.0   | 2.70  | 0.3213, 0.3400 | 0.1997, 0.4753 | 6011    | 83.6 | 0.0186 | 73   |
| 20.0   | 2.67  | 0.3213, 0.3397 | 0.1997, 0.4752 | 6011    | 83.7 | 0.0185 | 73   |
| 25.0   | 2.61  | 0.3212, 0.3394 | 0.1998, 0.4750 | 6016    | 83.7 | 0.0183 | 74   |
| 30.0   | 2.57  | 0.3219, 0.3402 | 0.2000, 0.4756 | 5982    | 83.6 | 0.0189 | 73   |
| 35.0   | 2.55  | 0.3224, 0.3408 | 0.2001, 0.4759 | 5956    | 83.6 | 0.0192 | 73   |
| 40.0   | 2.46  | 0.3223, 0.3404 | 0.2001, 0.4757 | 5965    | 83.6 | 0.0190 | 73   |
| 45.0   | 2.26  | 0.3223, 0.3406 | 0.2001, 0.4758 | 5963    | 83.7 | 0.0191 | 73   |
| 50.0   | 2.01  | 0.3223, 0.3410 | 0.2000, 0.4760 | 5958    | 83.6 | 0.0193 | 74   |
| 55.0   | 1.78  | 0.3223, 0.3408 | 0.2000, 0.4759 | 5961    | 83.8 | 0.0192 | 74   |
| 60.0   | 1.58  | 0.3213, 0.3397 | 0.1998, 0.4752 | 6013    | 83.9 | 0.0185 | 74   |
| 65.0   | 1.32  | 0.3205, 0.3386 | 0.1996, 0.4745 | 6051    | 84.1 | 0.0178 | 75   |
| 70.0   | 1.08  | 0.3207, 0.3389 | 0.1996, 0.4747 | 6043    | 84.2 | 0.0180 | 75   |

Tester: GONIOPHOTOMETERS  
 Temperature: 25.2 Deg  
 Manufactory: LAB VILAS 317

Date: 15 July 2023  
 Humidity: 61%  
 Remarks: 2855-NCPT-2023

System: HAAS-2000A (CAN)



| Beta\B | B-30  |                |                |         |      |        |      |
|--------|-------|----------------|----------------|---------|------|--------|------|
|        | I (8) | CIE x, y       | u', v'         | CCT (K) | Ra   | du'v'  | TLCI |
| -70.0  | 2.22  | 0.3204, 0.3392 | 0.1994, 0.4748 | 6053    | 83.8 | 0.0181 | 74   |
| -65.0  | 2.71  | 0.3201, 0.3387 | 0.1993, 0.4745 | 6073    | 83.7 | 0.0177 | 74   |
| -60.0  | 3.16  | 0.3209, 0.3401 | 0.1994, 0.4753 | 6029    | 83.5 | 0.0186 | 74   |
| -55.0  | 3.85  | 0.3228, 0.3432 | 0.1995, 0.4772 | 5934    | 83.0 | 0.0205 | 73   |
| -50.0  | 6.19  | 0.3262, 0.3482 | 0.1999, 0.4802 | 5769    | 82.2 | 0.0235 | 71   |
| -45.0  | 9.86  | 0.3205, 0.3395 | 0.1993, 0.4750 | 6051    | 82.9 | 0.0182 | 71   |
| -40.0  | 13.29 | 0.3174, 0.3346 | 0.1990, 0.4720 | 6223    | 83.3 | 0.0152 | 72   |
| -35.0  | 16.32 | 0.3185, 0.3361 | 0.1992, 0.4729 | 6161    | 83.0 | 0.0161 | 71   |
| -30.0  | 19.24 | 0.3205, 0.3390 | 0.1995, 0.4747 | 6053    | 82.7 | 0.0180 | 71   |
| -25.0  | 22.87 | 0.3224, 0.3418 | 0.1998, 0.4764 | 5951    | 82.4 | 0.0197 | 70   |
| -20.0  | 27.34 | 0.3234, 0.3430 | 0.2000, 0.4772 | 5904    | 82.3 | 0.0205 | 70   |
| -15.0  | 32.13 | 0.3229, 0.3419 | 0.2000, 0.4766 | 5931    | 82.3 | 0.0199 | 70   |
| -10.0  | 35.36 | 0.3223, 0.3409 | 0.2000, 0.4759 | 5963    | 82.5 | 0.0192 | 70   |
| -5.0   | 37.76 | 0.3224, 0.3408 | 0.2000, 0.4759 | 5958    | 82.5 | 0.0192 | 70   |
| 0.0    | 37.92 | 0.3226, 0.3410 | 0.2001, 0.4760 | 5947    | 82.4 | 0.0193 | 70   |
| 5.0    | 36.84 | 0.3223, 0.3404 | 0.2001, 0.4757 | 5965    | 82.6 | 0.0190 | 70   |
| 10.0   | 34.07 | 0.3228, 0.3411 | 0.2002, 0.4761 | 5937    | 82.5 | 0.0194 | 70   |
| 15.0   | 30.17 | 0.3236, 0.3423 | 0.2004, 0.4768 | 5897    | 82.4 | 0.0201 | 70   |
| 20.0   | 25.81 | 0.3230, 0.3413 | 0.2003, 0.4762 | 5929    | 82.5 | 0.0195 | 70   |
| 25.0   | 21.80 | 0.3204, 0.3378 | 0.1998, 0.4741 | 6063    | 82.9 | 0.0174 | 71   |
| 30.0   | 18.61 | 0.3183, 0.3345 | 0.1997, 0.4720 | 6178    | 83.3 | 0.0153 | 71   |
| 35.0   | 15.41 | 0.3182, 0.3344 | 0.1996, 0.4720 | 6182    | 83.3 | 0.0153 | 71   |
| 40.0   | 12.09 | 0.3218, 0.3399 | 0.2000, 0.4754 | 5986    | 82.8 | 0.0187 | 71   |
| 45.0   | 8.49  | 0.3290, 0.3511 | 0.2008, 0.4820 | 5646    | 81.8 | 0.0254 | 71   |
| 50.0   | 5.45  | 0.3298, 0.3524 | 0.2008, 0.4828 | 5612    | 81.9 | 0.0262 | 71   |
| 55.0   | 3.96  | 0.3222, 0.3417 | 0.1997, 0.4763 | 5963    | 83.2 | 0.0196 | 73   |
| 60.0   | 3.35  | 0.3207, 0.3394 | 0.1995, 0.4750 | 6040    | 83.6 | 0.0183 | 74   |
| 65.0   | 2.86  | 0.3202, 0.3389 | 0.1993, 0.4746 | 6070    | 83.7 | 0.0178 | 74   |
| 70.0   | 2.38  | 0.3201, 0.3385 | 0.1994, 0.4744 | 6073    | 83.8 | 0.0177 | 74   |
|        | B-70  |                |                |         |      |        |      |
| -70.0  | 1.00  | 0.3226, 0.3417 | 0.1999, 0.4764 | 5944    | 83.9 | 0.0197 | 75   |
| -65.0  | 1.28  | 0.3199, 0.3378 | 0.1995, 0.4740 | 6085    | 84.2 | 0.0173 | 74   |
| -60.0  | 1.57  | 0.3202, 0.3383 | 0.1995, 0.4743 | 6070    | 84.0 | 0.0176 | 74   |
| -55.0  | 1.78  | 0.3209, 0.3391 | 0.1997, 0.4748 | 6031    | 83.9 | 0.0181 | 74   |
| -50.0  | 2.00  | 0.3216, 0.3399 | 0.1999, 0.4753 | 5997    | 83.8 | 0.0186 | 74   |
| -45.0  | 2.24  | 0.3220, 0.3402 | 0.2000, 0.4756 | 5979    | 83.7 | 0.0189 | 73   |
| -40.0  | 2.43  | 0.3224, 0.3407 | 0.2002, 0.4758 | 5958    | 83.6 | 0.0191 | 73   |
| -35.0  | 2.46  | 0.3227, 0.3411 | 0.2002, 0.4761 | 5944    | 83.6 | 0.0194 | 73   |
| -30.0  | 2.48  | 0.3219, 0.3403 | 0.2000, 0.4756 | 5979    | 83.6 | 0.0189 | 73   |
| -25.0  | 2.53  | 0.3219, 0.3405 | 0.1999, 0.4757 | 5982    | 83.6 | 0.0190 | 73   |
| -20.0  | 2.60  | 0.3220, 0.3409 | 0.1998, 0.4759 | 5975    | 83.6 | 0.0192 | 73   |
| -15.0  | 2.66  | 0.3211, 0.3395 | 0.1997, 0.4751 | 6024    | 83.7 | 0.0184 | 73   |
| -10.0  | 2.69  | 0.3203, 0.3388 | 0.1994, 0.4746 | 6060    | 83.7 | 0.0179 | 73   |
| -5.0   | 2.71  | 0.3199, 0.3382 | 0.1994, 0.4742 | 6085    | 83.8 | 0.0175 | 73   |
| 0.0    | 2.73  | 0.3200, 0.3382 | 0.1994, 0.4742 | 6080    | 83.7 | 0.0175 | 73   |
| 5.0    | 2.70  | 0.3200, 0.3383 | 0.1994, 0.4743 | 6078    | 83.7 | 0.0176 | 73   |
| 10.0   | 2.70  | 0.3205, 0.3387 | 0.1995, 0.4746 | 6056    | 83.7 | 0.0179 | 73   |
| 15.0   | 2.70  | 0.3213, 0.3400 | 0.1997, 0.4753 | 6011    | 83.6 | 0.0186 | 73   |
| 20.0   | 2.67  | 0.3213, 0.3397 | 0.1997, 0.4752 | 6011    | 83.7 | 0.0185 | 73   |
| 25.0   | 2.61  | 0.3212, 0.3394 | 0.1998, 0.4750 | 6016    | 83.7 | 0.0183 | 74   |
| 30.0   | 2.57  | 0.3219, 0.3402 | 0.2000, 0.4756 | 5982    | 83.6 | 0.0189 | 73   |
| 35.0   | 2.55  | 0.3224, 0.3408 | 0.2001, 0.4759 | 5956    | 83.6 | 0.0192 | 73   |
| 40.0   | 2.46  | 0.3223, 0.3404 | 0.2001, 0.4757 | 5965    | 83.6 | 0.0190 | 73   |
| 45.0   | 2.26  | 0.3223, 0.3406 | 0.2001, 0.4758 | 5963    | 83.7 | 0.0191 | 73   |
| 50.0   | 2.01  | 0.3223, 0.3410 | 0.2000, 0.4760 | 5958    | 83.6 | 0.0193 | 74   |
| 55.0   | 1.78  | 0.3223, 0.3408 | 0.2000, 0.4759 | 5961    | 83.8 | 0.0192 | 74   |
| 60.0   | 1.58  | 0.3213, 0.3397 | 0.1998, 0.4752 | 6013    | 83.9 | 0.0185 | 74   |
| 65.0   | 1.32  | 0.3205, 0.3386 | 0.1996, 0.4745 | 6051    | 84.1 | 0.0178 | 75   |
| 70.0   | 1.08  | 0.3207, 0.3389 | 0.1996, 0.4747 | 6043    | 84.2 | 0.0180 | 75   |

Tester: GONIOPHOTOMETERS  
 Temperature: 25.2 Deg  
 Manufactory: LAB VILAS 317

Date: 15 July 2023  
 Humidity: 61%  
 Remarks: 2855-NCPT-2023

System: HAAS-2000A (CAN)