

# HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

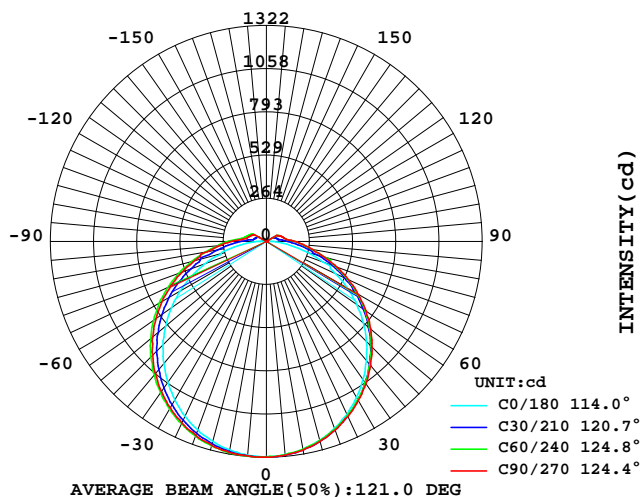
## LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

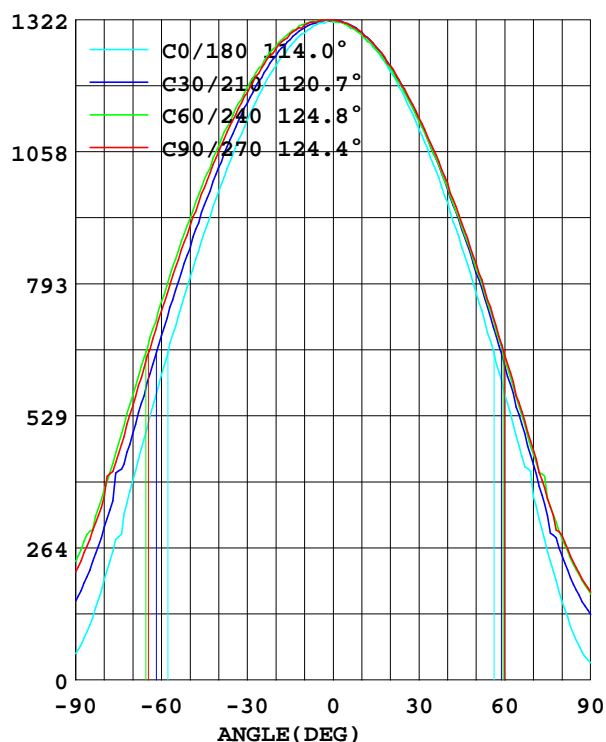
|                              |                      |             |
|------------------------------|----------------------|-------------|
| MANUFACTURER:                |                      |             |
| Address:                     |                      |             |
| NAME: RE-T014D3-50WCFF-TC-TL | TYPE:                | WEIGHT:     |
| SPECIFICATION:               | DIMENSION: 1210*85mm | SERIAL No.: |

|                  |        |                       |        |                  |       |
|------------------|--------|-----------------------|--------|------------------|-------|
| DATA OF LAMP     |        | I <sub>max</sub> (cd) | 1322   | S/MH(C0/180)     | 1.26  |
| MODEL            |        | EFFICIENCY(%)         | 100.0  | S/MH(C90/270)    | 1.32  |
| NOMINAL POWER(W) | 36     | TOTAL FLUX(lm)        | 4395.6 | Voltage(V)       | 218.0 |
| RATED VOLTAGE(V) | 218    | EFFICIENCY(lm/W)      | 122.7  | Current(A)       | 0.175 |
| NOMINAL FLUX(lm) | 4395.6 | h up(%)               | 4.9    | Power(W)         | 35.81 |
| LAMPS QUANTITY   | 1      | h down(%)             | 95.1   | Power Factor(PF) | 0.937 |
| TEST VOLTAGE(V)  | 218.0  | Effective Flux(lm)    | 4207.8 | EEI              | 0.116 |

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021年04月22日

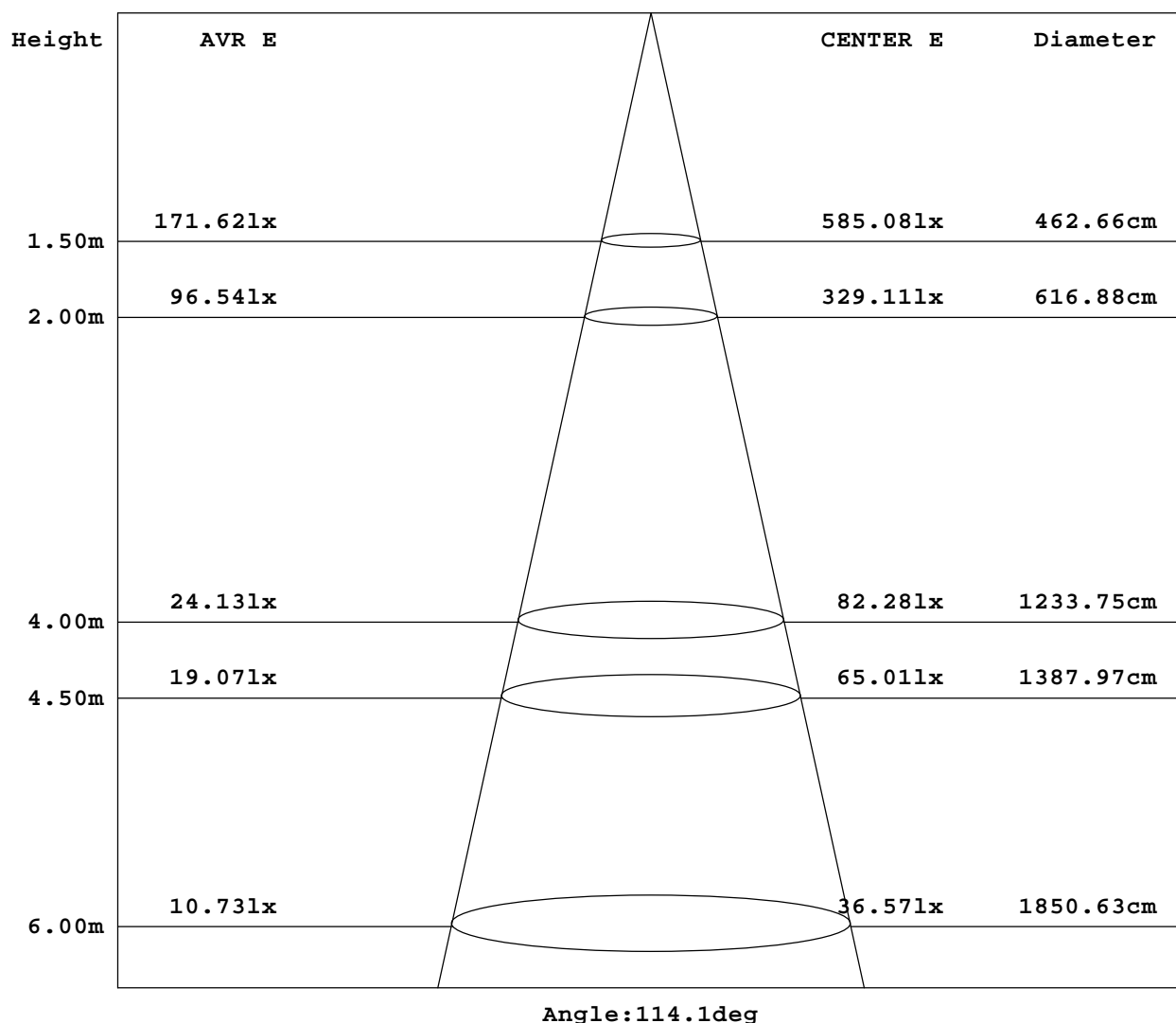
Test Set: 10.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:11.000 m  
 Remarks:

# HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

## AVERAGE AND CENTER E Figure

Report number:

|                              |                      |             |
|------------------------------|----------------------|-------------|
| MANUFACTURER:                |                      |             |
| Address:                     |                      |             |
| NAME: RE-T014D3-50WCFF-TC-TL | TYPE:                | WEIGHT:     |
| SPECIFICATION:               | DIMENSION: 1210*85mm | SERIAL No.: |



Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021年04月22日

Test Set: 10.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:11.000 m  
 Remarks:

# HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

## ZONAL FLUX DIAGRAM

Report number:

|                              |                      |             |
|------------------------------|----------------------|-------------|
| MANUFACTURER:                |                      |             |
| Address:                     |                      |             |
| NAME: RE-T014D3-50WCFF-TC-TL | TYPE:                | WEIGHT:     |
| SPECIFICATION:               | DIMENSION: 1210*85mm | SERIAL No.: |

| g     | C0                    | C45   | C90   | C135  | C180  | C225  | C270  | C315  | g       | Zone    | tStal |
|-------|-----------------------|-------|-------|-------|-------|-------|-------|-------|---------|---------|-------|
| 5.0   | 1314                  | 1319  | 1319  | 1314  | 1309  | 1313  | 1314  | 1312  | 0- 5    | 31.49   | 31.49 |
| 10.0  | 1295                  | 1309  | 1312  | 1300  | 1293  | 1295  | 1297  | 1294  | 5- 10   | 93.51   | 125.0 |
| 15.0  | 1269                  | 1289  | 1293  | 1275  | 1261  | 1264  | 1268  | 1261  | 10- 15  | 152.5   | 277.5 |
| 20.0  | 1229                  | 1258  | 1263  | 1238  | 1219  | 1226  | 1230  | 1221  | 15- 20  | 206.7   | 484.3 |
| 25.0  | 1180                  | 1218  | 1225  | 1192  | 1168  | 1177  | 1184  | 1170  | 20- 25  | 254.3   | 738.6 |
| 30.0  | 1121                  | 1170  | 1176  | 1135  | 1103  | 1120  | 1126  | 1107  | 25- 30  | 293.8   | 1033  |
| 35.0  | 1052                  | 1112  | 1121  | 1067  | 1033  | 1055  | 1064  | 1039  | 30- 35  | 324.1   | 1357  |
| 40.0  | 976.7                 | 1047  | 1057  | 996.0 | 955.8 | 984.0 | 993.9 | 961.9 | 35- 40  | 344.5   | 1701  |
| 45.0  | 895.9                 | 976.6 | 985.1 | 915.8 | 866.1 | 904.7 | 914.9 | 874.3 | 40- 45  | 354.3   | 2056  |
| 50.0  | 804.2                 | 893.4 | 908.1 | 826.2 | 775.4 | 817.8 | 833.8 | 786.8 | 45- 50  | 353.5   | 2409  |
| 55.0  | 707.8                 | 811.6 | 826.6 | 734.7 | 678.7 | 732.5 | 746.7 | 692.9 | 50- 55  | 342.1   | 2751  |
| 60.0  | 611.8                 | 724.0 | 739.0 | 637.6 | 571.6 | 634.5 | 650.8 | 586.3 | 55- 60  | 320.6   | 3072  |
| 65.0  | 503.9                 | 628.6 | 648.1 | 536.3 | 468.7 | 539.7 | 554.9 | 487.2 | 60- 65  | 289.8   | 3362  |
| 70.0  | 398.5                 | 531.3 | 547.3 | 433.1 | 366.9 | 441.7 | 460.4 | 389.8 | 65- 70  | 251.7   | 3613  |
| 75.0  | 286.8                 | 446.2 | 453.4 | 330.2 | 256.7 | 345.7 | 362.5 | 283.3 | 70- 75  | 207.2   | 3821  |
| 80.0  | 200.6                 | 343.4 | 366.7 | 228.2 | 158.2 | 266.5 | 290.2 | 189.1 | 75- 80  | 160.9   | 3982  |
| 85.0  | 110.1                 | 258.5 | 281.0 | 145.2 | 78.96 | 199.9 | 224.2 | 113.9 | 80- 85  | 116.8   | 4099  |
| 90.0  | 52.82                 | 197.8 | 216.4 | 86.82 | 34.07 | 151.9 | 175.8 | 66.86 | 85- 90  | 81.56   | 4180  |
| 95.0  | 30.68                 | 143.9 | 153.2 | 58.81 | 18.22 | 116.8 | 131.8 | 48.65 | 90- 95  | 57.69   | 4238  |
| 100.0 | 16.16                 | 110.1 | 122.2 | 35.67 | 9.026 | 94.45 | 112.9 | 30.92 | 95-100  | 41.59   | 4279  |
| 105.0 | 12.41                 | 99.77 | 112.1 | 33.49 | 4.428 | 87.79 | 104.4 | 27.56 | 100-105 | 34.08   | 4313  |
| 110.0 | 10.72                 | 92.45 | 103.8 | 31.25 | 2.976 | 79.38 | 94.93 | 24.72 | 105-110 | 30.48   | 4344  |
| 115.0 | 9.389                 | 83.07 | 94.33 | 28.53 | 1.887 | 71.22 | 85.37 | 21.99 | 110-115 | 26.78   | 4371  |
| 120.0 | 5.759                 | 73.51 | 85.37 | 25.14 | 1.887 | 61.90 | 74.48 | 19.39 | 115-120 | 22.82   | 4394  |
| 125.0 | 0                     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 120-125 | 2.076   | 4396  |
| 130.0 | 0                     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 125-130 | 0       | 4396  |
| 135.0 | 0                     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 130-135 | 0       | 4396  |
| 140.0 | 0                     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 135-140 | 0       | 4396  |
| 145.0 | 0                     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 140-145 | 0       | 4396  |
| 150.0 | 0                     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 145-150 | 0       | 4396  |
| 155.0 | 0                     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 150-155 | 0       | 4396  |
| 160.0 | 0                     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 155-160 | 0       | 4396  |
| 165.0 | 0                     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 160-165 | 0       | 4396  |
| 170.0 | 0                     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 165-170 | 0       | 4396  |
| 175.0 | 0                     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 170-175 | 0       | 4396  |
| 180.0 | 0                     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 175-180 | 0       | 4396  |
| DEG   | LUMINOUS INTENSITY:cd |       |       |       |       |       |       |       |         | UNIT:lm |       |

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021年04月22日

Test Set: 10.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:11.000 m  
 Remarks:

# HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

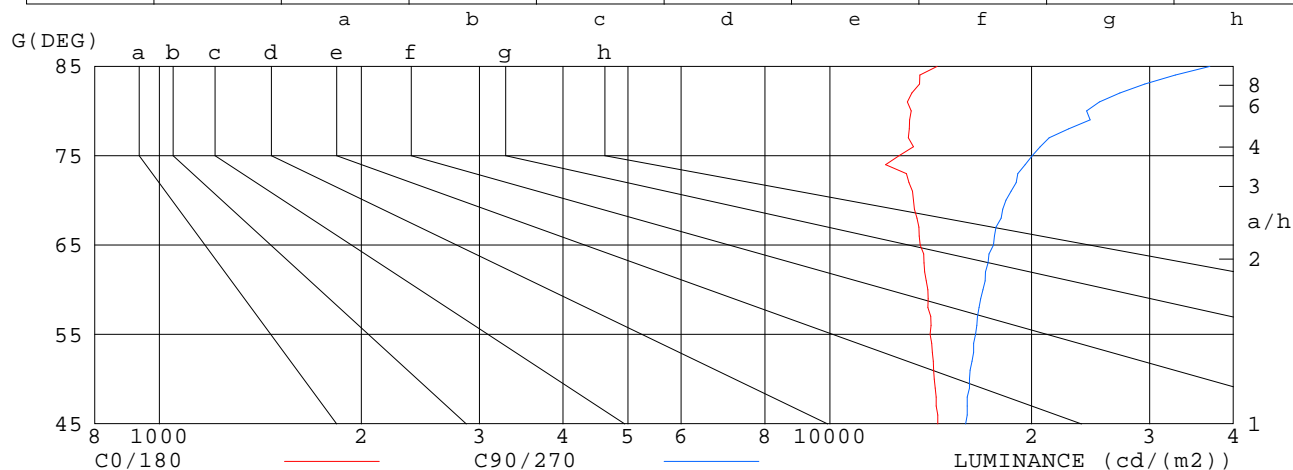
## LUMINANCE LIMITATION CURVES

Report number:

|                              |                      |             |
|------------------------------|----------------------|-------------|
| MANUFACTURER:                |                      |             |
| Address:                     |                      |             |
| NAME: RE-T014D3-50WCFF-TC-TL | TYPE:                | WEIGHT:     |
| SPECIFICATION:               | DIMENSION: 1210*85mm | SERIAL No.: |

### LUMINANCE LIMITATION CURVES

| GLARE | CLASS | ILLUMINANCE (lx) |      |      |       |       |       |       |       |
|-------|-------|------------------|------|------|-------|-------|-------|-------|-------|
| 1.15  | A     | 2000             | 1000 | 500  | <=300 |       |       |       |       |
| 1.50  | B     |                  | 2000 | 1000 | 500   | <=300 |       |       |       |
| 1.85  | C     |                  |      | 2000 | 1000  | 500   | <=300 |       |       |
| 2.20  | D     |                  |      |      | 2000  | 1000  | 500   | <=300 |       |
| 2.55  | E     |                  |      |      |       | 2000  | 1000  | 500   | <=300 |



| LUMINANCE cd/(m2) |        |         |
|-------------------|--------|---------|
| G (DEG)           | C0/180 | C90/270 |
| 85                | 14465  | 36894   |
| 80                | 13223  | 24162   |
| 75                | 12680  | 20046   |
| 70                | 13332  | 18311   |
| 65                | 13643  | 17547   |
| 60                | 14001  | 16911   |
| 55                | 14119  | 16489   |
| 50                | 14315  | 16166   |
| 45                | 14497  | 15940   |

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021年04月22日

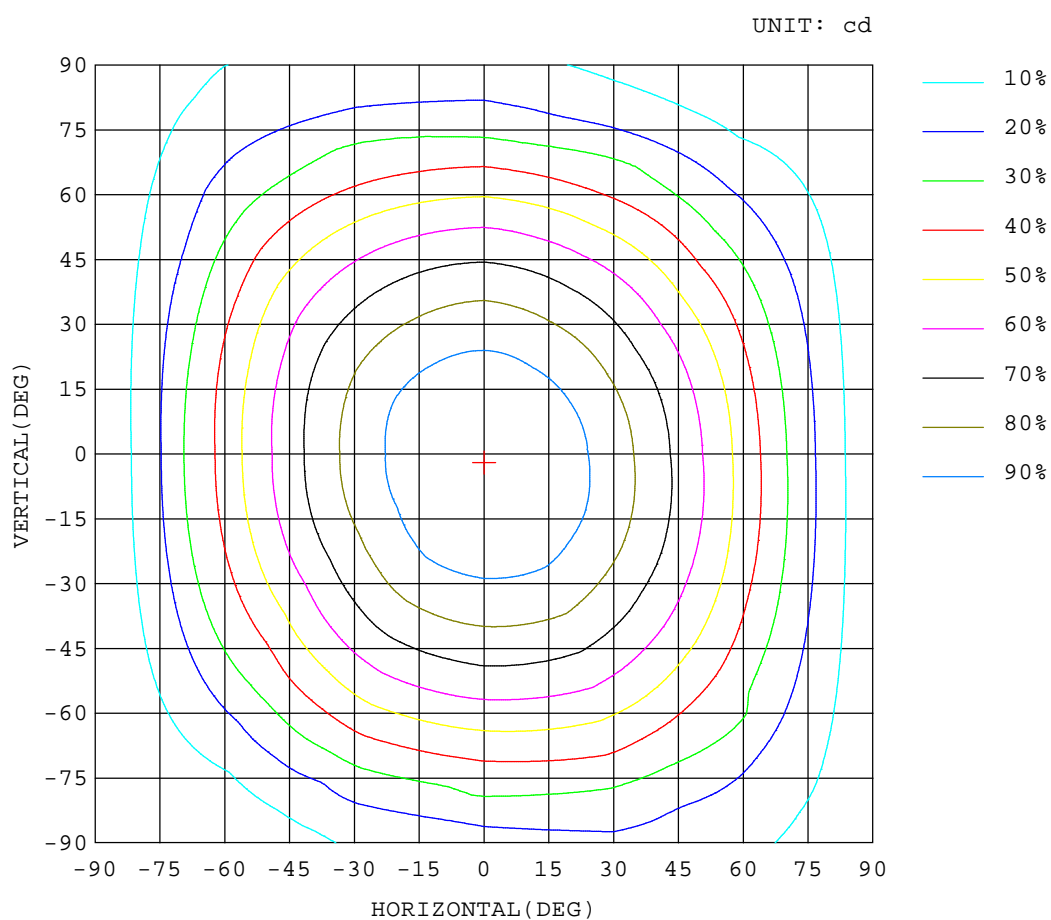
Test Set: 10.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:11.000 m  
 Remarks:

# HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

## ISOCANDELA DIAGRAM

Report number:

|                              |                      |             |
|------------------------------|----------------------|-------------|
| MANUFACTURER:                |                      |             |
| Address:                     |                      |             |
| NAME: RE-T014D3-50WCFF-TC-TL | TYPE:                | WEIGHT:     |
| SPECIFICATION:               | DIMENSION: 1210*85mm | SERIAL No.: |



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2021年04月22日

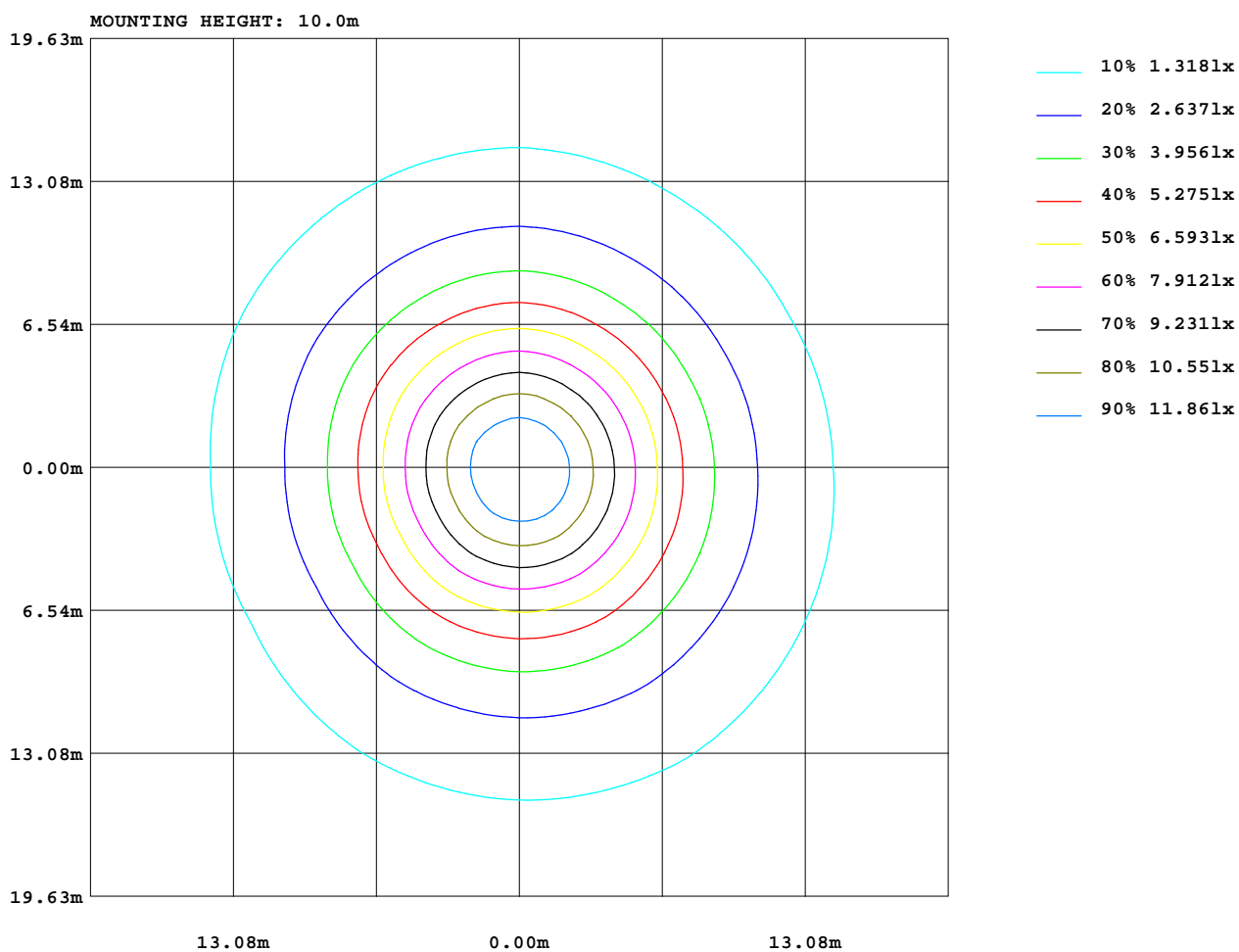
Test Set: 10.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:

# HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

## ISOLUX DIAGRAM

Report number:

|                              |                      |             |
|------------------------------|----------------------|-------------|
| MANUFACTURER:                |                      |             |
| Address:                     |                      |             |
| NAME: RE-T014D3-50WCFF-TC-TL | TYPE:                | WEIGHT:     |
| SPECIFICATION:               | DIMENSION: 1210*85mm | SERIAL No.: |



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2021年04月22日

Test Set: 10.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:

# HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

## AREA LUMINOUS FLUX

Report number:

|                              |                      |             |
|------------------------------|----------------------|-------------|
| MANUFACTURER:                |                      |             |
| Address:                     |                      |             |
| NAME: RE-T014D3-50WCFF-TC-TL | TYPE:                | WEIGHT:     |
| SPECIFICATION:               | DIMENSION: 1210*85mm | SERIAL No.: |

| VERTICAL (DEG) | AREA FLUX DIAGRAM |      |      |      |      |      |      |      |                  |      |      |      |      |      |      |      |      | UNIT:lm |      |      | Φ t | Φ a |
|----------------|-------------------|------|------|------|------|------|------|------|------------------|------|------|------|------|------|------|------|------|---------|------|------|-----|-----|
|                | 0.16              | 0.74 | 1.72 | 2.87 | 3.99 | 5.12 | 6.01 | 6.55 | 6.85             | 6.52 | 5.57 | 4.48 | 3.30 | 2.13 | 1.13 | 0.62 | 0.39 | 0.14    | 58.3 | 50.5 |     |     |
| 90             | 0.18              | 0.93 | 2.30 | 4.07 | 5.90 | 7.83 | 9.50 | 10.5 | 11.0             | 10.7 | 9.65 | 8.05 | 6.21 | 4.28 | 2.48 | 1.31 | 0.62 | 0.16    | 95.8 | 92.2 |     |     |
| 80             | 0.20              | 1.15 | 3.02 | 5.49 | 8.41 | 11.3 | 13.8 | 15.6 | 16.7             | 16.4 | 15.0 | 12.8 | 10.0 | 7.02 | 4.27 | 2.26 | 0.92 | 0.20    | 145  | 143  |     |     |
| 70             | 0.22              | 1.40 | 3.75 | 7.22 | 11.0 | 14.9 | 18.4 | 20.9 | 22.3             | 22.1 | 20.3 | 17.4 | 13.8 | 9.85 | 6.01 | 3.23 | 1.26 | 0.23    | 195  | 194  |     |     |
| 60             | 0.25              | 1.63 | 4.57 | 8.80 | 13.6 | 18.3 | 22.6 | 25.7 | 27.5             | 27.3 | 25.2 | 21.7 | 17.3 | 12.4 | 7.89 | 4.11 | 1.59 | 0.27    | 241  | 241  |     |     |
| 50             | 0.27              | 1.84 | 5.27 | 10.0 | 15.7 | 21.3 | 26.2 | 29.8 | 31.9             | 31.8 | 29.4 | 25.5 | 20.4 | 14.8 | 9.51 | 4.98 | 1.86 | 0.30    | 281  | 281  |     |     |
| 40             | 0.28              | 2.01 | 5.78 | 11.0 | 17.3 | 23.6 | 29.1 | 33.2 | 35.5             | 35.4 | 32.9 | 28.6 | 22.9 | 16.8 | 10.8 | 5.69 | 2.09 | 0.33    | 314  | 313  |     |     |
| 30             | 0.29              | 2.11 | 6.09 | 11.6 | 18.3 | 25.1 | 31.1 | 35.6 | 38.0             | 38.0 | 35.4 | 30.8 | 24.8 | 18.2 | 11.7 | 6.21 | 2.26 | 0.35    | 337  | 336  |     |     |
| -30            | 0.28              | 2.14 | 6.19 | 11.9 | 18.7 | 25.7 | 32.0 | 36.9 | 39.4             | 39.4 | 36.9 | 32.2 | 25.9 | 19.0 | 12.3 | 6.50 | 2.36 | 0.37    | 349  | 348  |     |     |
|                | 0.28              | 2.12 | 6.14 | 11.8 | 18.6 | 25.6 | 31.9 | 36.8 | 39.6             | 39.7 | 37.2 | 32.6 | 26.3 | 19.3 | 12.5 | 6.63 | 2.42 | 0.38    | 350  | 350  |     |     |
|                | 0.27              | 2.05 | 5.94 | 11.4 | 18.0 | 24.7 | 31.0 | 36.0 | 38.8             | 39.0 | 36.6 | 32.0 | 25.9 | 19.1 | 12.3 | 6.58 | 2.42 | 0.38    | 343  | 343  |     |     |
|                | 0.26              | 1.90 | 5.53 | 10.6 | 16.7 | 23.2 | 29.3 | 34.1 | 36.7             | 37.0 | 34.9 | 30.6 | 24.8 | 18.2 | 11.8 | 6.32 | 2.35 | 0.37    | 325  | 325  |     |     |
|                | 0.23              | 1.68 | 4.94 | 9.45 | 15.0 | 21.1 | 26.9 | 31.2 | 33.5             | 33.8 | 32.1 | 28.2 | 22.9 | 16.9 | 11.0 | 5.85 | 2.22 | 0.35    | 298  | 298  |     |     |
| -40            | 0.20              | 1.41 | 4.12 | 8.03 | 12.9 | 18.5 | 23.6 | 27.3 | 29.5             | 29.8 | 28.3 | 25.1 | 20.3 | 15.0 | 9.81 | 5.25 | 2.02 | 0.33    | 262  | 262  |     |     |
| -50            | 0.17              | 1.11 | 3.18 | 6.39 | 10.6 | 15.2 | 19.6 | 22.7 | 24.6             | 25.0 | 23.8 | 21.3 | 17.3 | 12.7 | 8.35 | 4.61 | 1.75 | 0.30    | 219  | 219  |     |     |
| -60            | 0.14              | 0.80 | 2.20 | 4.52 | 7.94 | 11.6 | 15.0 | 17.5 | 19.1             | 19.5 | 18.7 | 16.9 | 13.8 | 10.2 | 6.90 | 3.71 | 1.46 | 0.28    | 171  | 170  |     |     |
| -70            | 0.12              | 0.52 | 1.27 | 2.74 | 5.08 | 7.74 | 10.2 | 12.1 | 13.4             | 13.9 | 13.4 | 12.2 | 10.1 | 7.56 | 5.06 | 2.85 | 1.19 | 0.24    | 120  | 117  |     |     |
| -80            | 0.09              | 0.30 | 0.56 | 1.29 | 2.75 | 4.51 | 6.11 | 7.30 | 8.28             | 8.70 | 8.54 | 8.04 | 6.86 | 5.19 | 3.59 | 2.12 | 0.95 | 0.22    | 75.4 | 70.7 |     |     |
| -90            |                   |      |      |      |      |      |      |      |                  |      |      |      |      |      |      |      |      |         |      |      |     |     |
|                | -90               | -80  | -70  | -60  | -50  | -40  | -30  | -20  | HORIZONTAL (DEG) |      |      |      | 20   | 30   | 40   | 50   | 60   | 70      | 80   | 90   |     |     |
| Φ t            | 3.89              | 25.9 | 72.6 | 140  | 221  | 306  | 383  | 441  | 473              | 475  | 445  | 389  | 314  | 229  | 148  | 78.8 | 30.2 | 5.21    | 4396 |      |     |     |
| Φ a            | 0.69              | 22.0 | 70.0 | 138  | 220  | 306  | 383  | 441  | 473              | 475  | 445  | 389  | 312  | 228  | 146  | 77.0 | 27.4 | 2.20    |      | 4208 |     |     |

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021年04月22日

Test Set: 10.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:11.000 m  
 Remarks:

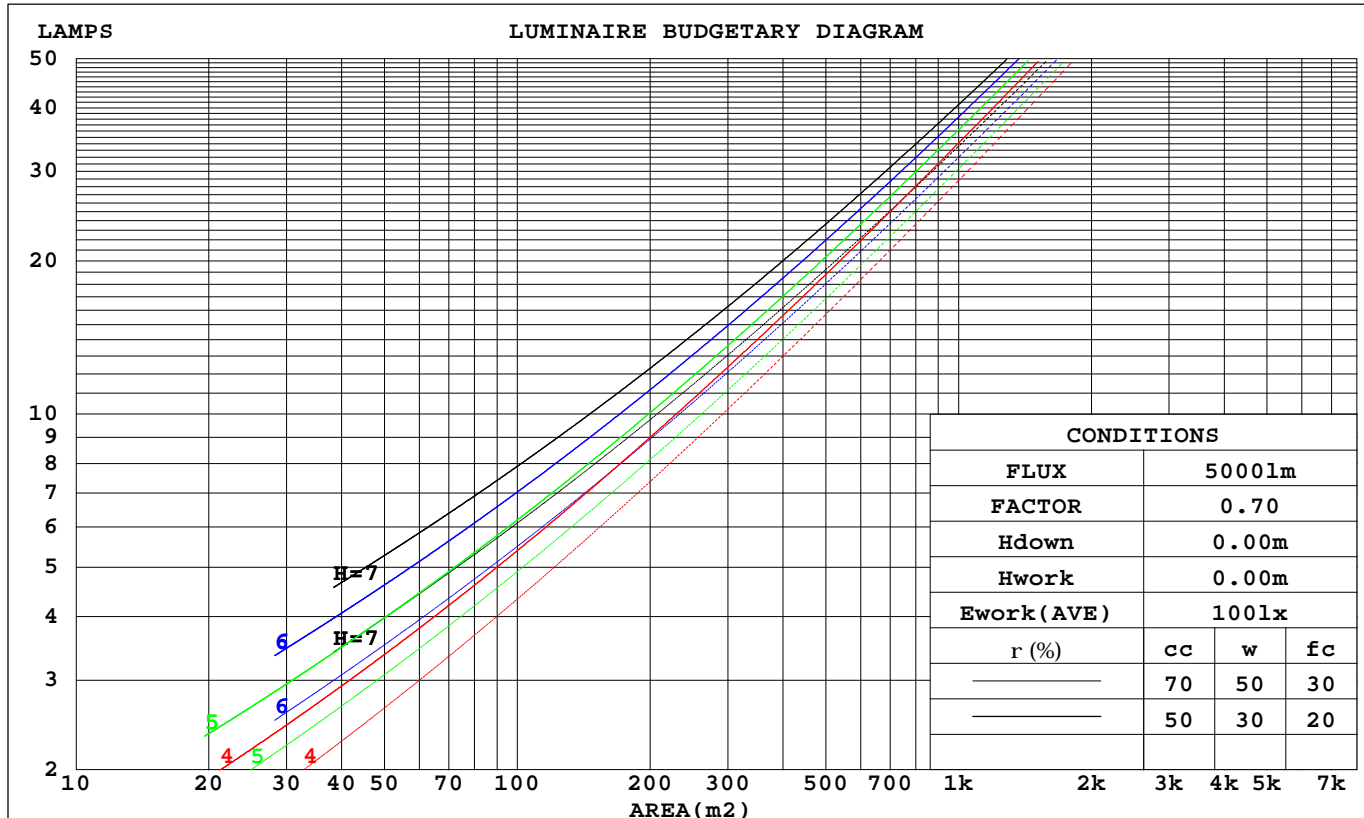
# HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

|                              |  |  |  |  |  |  |  |                      |  |  |  |             |  |  |  |
|------------------------------|--|--|--|--|--|--|--|----------------------|--|--|--|-------------|--|--|--|
| MANUFACTURER:                |  |  |  |  |  |  |  |                      |  |  |  |             |  |  |  |
| Address:                     |  |  |  |  |  |  |  |                      |  |  |  |             |  |  |  |
| NAME: RE-T014D3-50WCFF-TC-TL |  |  |  |  |  |  |  | TYPE:                |  |  |  | WEIGHT:     |  |  |  |
| SPECIFICATION:               |  |  |  |  |  |  |  | DIMENSION: 1210*85mm |  |  |  | SERIAL No.: |  |  |  |

| rcc | 80%                   |     |     | 70% |     |     | 50% |     |     | 30% |     |     | 10% |     |     | 0 |
|-----|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|
| rw  | 50%                   | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| rfc | 20%                   |     |     | 20% |     |     | 20% |     |     | 20% |     |     | 20% |     |     | 0 |
| RCR | RCR:Room Cavity Ratio |     |     |     |     |     |     |     |     |     |     |     |     |     |     |   |



Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021年04月22日

Test Set: 10.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:11.000 m  
 Remarks:



# HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

## WEC AND CCEC

Report number:

|                              |  |  |  |  |  |  |  |                      |  |  |  |             |  |  |
|------------------------------|--|--|--|--|--|--|--|----------------------|--|--|--|-------------|--|--|
| MANUFACTURER:                |  |  |  |  |  |  |  |                      |  |  |  |             |  |  |
| Address:                     |  |  |  |  |  |  |  |                      |  |  |  |             |  |  |
| NAME: RE-T014D3-50WCFF-TC-TL |  |  |  |  |  |  |  | TYPE:                |  |  |  | WEIGHT:     |  |  |
| SPECIFICATION:               |  |  |  |  |  |  |  | DIMENSION: 1210*85mm |  |  |  | SERIAL No.: |  |  |

| rcc  | 80%                   |      |      | 70%  |      |      | 50%  |      |      | 30%  |      |      | 10%  |      |      | 0                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| rw   | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| rfc  | 20%                   |      |      | 20%  |      |      | 20%  |      |      | 20%  |      |      | 20%  |      |      | 0                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RCR  | RCR:Room Cavity Ratio |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Wall Exitance Coefficients(WEC) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0.0  |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.0  | .346                  | .197 | .062 | .338 | .193 | .061 | .321 | .184 | .059 | .307 | .177 | .057 | .293 | .170 | .055 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.0  | .313                  | .171 | .053 | .305 | .168 | .052 | .291 | .162 | .050 | .277 | .156 | .049 | .265 | .150 | .047 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3.0  | .284                  | .151 | .045 | .277 | .148 | .045 | .264 | .143 | .043 | .252 | .138 | .042 | .241 | .133 | .041 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.0  | .259                  | .135 | .040 | .253 | .132 | .039 | .241 | .128 | .038 | .230 | .124 | .037 | .221 | .120 | .036 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5.0  | .237                  | .121 | .035 | .232 | .119 | .035 | .222 | .115 | .034 | .212 | .112 | .033 | .203 | .108 | .033 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6.0  | .219                  | .110 | .031 | .214 | .108 | .031 | .205 | .105 | .031 | .196 | .102 | .030 | .188 | .099 | .029 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7.0  | .203                  | .100 | .028 | .198 | .099 | .028 | .190 | .096 | .028 | .182 | .093 | .027 | .175 | .091 | .027 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8.0  | .189                  | .092 | .026 | .185 | .091 | .026 | .177 | .089 | .025 | .170 | .086 | .025 | .163 | .084 | .024 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 9.0  | .176                  | .085 | .024 | .173 | .084 | .024 | .166 | .082 | .023 | .159 | .080 | .023 | .153 | .078 | .023 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10.0 | .166                  | .079 | .022 | .162 | .078 | .022 | .156 | .076 | .022 | .150 | .075 | .021 | .144 | .073 | .021 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

| rcc  | 80%                   |      |      | 70%  |      |      | 50%  |      |      | 30%  |      |      | 10%  |      |      | 0 |
|------|-----------------------|------|------|------|------|------|--|------|------|------|------|------|------|------|------|---|
| rw   | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |
| rfc  | 20%                   |      |      | 20%  |      |      | 20%  |      |      | 20%  |      |      | 20%  |      |      | 0 |
| RCR  | RCR:Room Cavity Ratio |      |      |      |      |      | Ceiling Cavity Exitance Coefficients(CCEC) |      |      |      |      |      |      |      |      |   |
| 0.0  | .228                  | .228 | .228 | .195 | .195 | .195 | .133                                       | .133 | .133 | .076 | .076 | .076 | .024 | .024 | .024 |   |
| 1.0  | .221                  | .193 | .169 | .189 | .166 | .146 | .129                                       | .114 | .101 | .074 | .066 | .059 | .024 | .021 | .019 |   |
| 2.0  | .213                  | .170 | .133 | .182 | .146 | .115 | .125                                       | .101 | .080 | .072 | .059 | .047 | .023 | .019 | .015 |   |
| 3.0  | .205                  | .153 | .110 | .176 | .132 | .096 | .121                                       | .091 | .067 | .070 | .053 | .040 | .022 | .017 | .013 |   |
| 4.0  | .198                  | .140 | .095 | .170 | .121 | .083 | .117                                       | .084 | .058 | .067 | .049 | .034 | .022 | .016 | .011 |   |
| 5.0  | .190                  | .129 | .085 | .163 | .112 | .074 | .112                                       | .078 | .052 | .065 | .046 | .031 | .021 | .015 | .010 |   |
| 6.0  | .183                  | .121 | .077 | .157 | .105 | .067 | .108                                       | .073 | .047 | .063 | .043 | .028 | .020 | .014 | .009 |   |
| 7.0  | .176                  | .114 | .071 | .151 | .099 | .062 | .104                                       | .069 | .044 | .061 | .041 | .026 | .020 | .013 | .009 |   |
| 8.0  | .169                  | .109 | .067 | .145 | .094 | .058 | .101                                       | .066 | .041 | .059 | .039 | .025 | .019 | .013 | .008 |   |
| 9.0  | .163                  | .104 | .064 | .140 | .090 | .056 | .097                                       | .063 | .039 | .057 | .037 | .024 | .018 | .012 | .008 |   |
| 10.0 | .157                  | .099 | .061 | .135 | .086 | .053 | .094                                       | .061 | .038 | .055 | .036 | .023 | .018 | .012 | .007 |   |

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021年04月22日

Test Set: 10.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:11.000 m  
 Remarks:

# HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

## Uncorrected UGR Table

Report number:

|  |               |                  |      |      |                      |               |                |             |      |      |      |
|--|---------------|------------------|------|------|----------------------|---------------|----------------|-------------|------|------|------|
| MANUFACTURER:                                      |               |                  |      |      |                      |               |                |             |      |      |      |
| Address:   |               |                  |      |      |                      |               |                |             |      |      |      |
| NAME: RE-T014D3-50WCFF-TC-TL                       |               |                  |      |      | TYPE:                |               |                | WEIGHT:     |      |      |      |
| SPECIFICATION:                                     |               |                  |      |      | DIMENSION: 1210*85mm |               |                | SERIAL No.: |      |      |      |
| ceiling/cavity                                     | 0.7           | 0.7              | 0.5  | 0.5  | 0.3                  | 0.7           | 0.7            | 0.5         | 0.5  | 0.3  |      |
| walls  | 0.5           | 0.3              | 0.5  | 0.3  | 0.3                  | 0.5           | 0.3            | 0.5         | 0.3  | 0.3  |      |
| working plane                                      | 0.2           | 0.2              | 0.2  | 0.2  | 0.2                  | 0.2           | 0.2            | 0.2         | 0.2  | 0.2  |      |
| Room dimensions                                    |               | Viewed crosswise |      |      |                      |               | Viewed endwise |             |      |      |      |
| x = 2H y = 2H                                      | 2H            | 22.1             | 23.6 | 22.4 | 23.9                 | 24.2          | 22.8           | 24.3        | 23.1 | 24.6 | 24.9 |
|  | 3H            | 23.7             | 25.1 | 24.1 | 25.4                 | 25.8          | 24.9           | 26.3        | 25.2 | 26.6 | 26.9 |
|  | 4H            | 24.4             | 25.8 | 24.8 | 26.1                 | 26.5          | 25.9           | 27.2        | 26.3 | 27.5 | 27.9 |
|  | 6H            | 25.1             | 26.3 | 25.5 | 26.7                 | 27.1          | 26.9           | 28.2        | 27.3 | 28.5 | 28.9 |
|  | 8H            | 25.3             | 26.5 | 25.7 | 26.9                 | 27.3          | 27.4           | 28.7        | 27.9 | 29.0 | 29.4 |
|  | 12H           | 25.5             | 26.6 | 25.9 | 27.0                 | 27.4          | 28.0           | 29.2        | 28.4 | 29.6 | 30.0 |
| 4H   | 2H            | 22.9             | 24.3 | 23.3 | 24.6                 | 25.0          | 23.5           | 24.8        | 23.9 | 25.2 | 25.5 |
|  | 3H            | 24.8             | 26.0 | 25.3 | 26.4                 | 26.8          | 25.8           | 27.0        | 26.2 | 27.4 | 27.8 |
|  | 4H            | 25.8             | 26.8 | 26.2 | 27.2                 | 27.7          | 27.0           | 28.1        | 27.4 | 28.5 | 28.9 |
|  | 6H            | 26.6             | 27.5 | 27.0 | 27.9                 | 28.4          | 28.2           | 29.2        | 28.7 | 29.6 | 30.1 |
|  | 8H            | 26.9             | 27.8 | 27.4 | 28.2                 | 28.7          | 28.9           | 29.8        | 29.4 | 30.2 | 30.7 |
|  | 12H           | 27.1             | 28.0 | 27.7 | 28.4                 | 29.0          | 29.5           | 30.4        | 30.0 | 30.8 | 31.3 |
| 8H   | 4H            | 26.4             | 27.3 | 26.9 | 27.7                 | 28.2          | 27.4           | 28.3        | 27.9 | 28.8 | 29.3 |
|  | 6H            | 27.5             | 28.2 | 28.0 | 28.7                 | 29.2          | 28.9           | 29.7        | 29.5 | 30.2 | 30.7 |
|  | 8H            | 28.0             | 28.6 | 28.5 | 29.1                 | 29.7          | 29.7           | 30.4        | 30.3 | 30.9 | 31.5 |
|  | 12H           | 28.4             | 29.0 | 29.0 | 29.5                 | 30.1          | 30.6           | 31.2        | 31.2 | 31.8 | 32.3 |
| 12H  | 4H            | 26.5             | 27.4 | 27.0 | 27.8                 | 28.3          | 27.5           | 28.3        | 28.0 | 28.8 | 29.3 |
|  | 6H            | 27.7             | 28.4 | 28.3 | 28.9                 | 29.5          | 29.1           | 29.7        | 29.6 | 30.3 | 30.8 |
|  | 8H            | 28.3             | 28.9 | 28.9 | 29.5                 | 30.0          | 30.0           | 30.6        | 30.5 | 31.1 | 31.7 |
| Variations with the observer position at spacings: |               |                  |      |      |                      |               |                |             |      |      |      |
| S = 1.0H   | + 0.1 / - 0.2 |                  |      |      |                      | + 0.1 / - 0.1 |                |             |      |      |      |
| 1.5H   | + 0.2 / - 0.3 |                  |      |      |                      | + 0.2 / - 0.3 |                |             |      |      |      |
| 2.0H   | + 0.3 / - 0.4 |                  |      |      |                      | + 0.2 / - 0.3 |                |             |      |      |      |

CIE Pub.117 Corrected 4396 lm Total Lamp Luminous Flux.(8log(F/F0) = 5.1)

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021年04月22日

Test Set: 10.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:11.000 m  
 Remarks:

# HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

## UTILIZATION FACTORS TABLE

Report number:

|                              |                      |             |
|------------------------------|----------------------|-------------|
| MANUFACTURER:                |                      |             |
| Address:                     |                      |             |
| NAME: RE-T014D3-50WCFF-TC-TL | TYPE:                | WEIGHT:     |
| SPECIFICATION:               | DIMENSION: 1210*85mm | SERIAL No.: |

| REFLECTANCE                      |   |     |           |     |     |     |     |               |     |        |
|----------------------------------|---|-----|-----------|-----|-----|-----|-----|---------------|-----|--------|
| Ceiling                          | 0.8   | 0.8 | 0.8       | 0.7 | 0.7 | 0.7 | 0.5 | 0.5           | 0.5 | 0      |
| Walls                            | 0.7   | 0.5 | 0.3       | 0.7 | 0.5 | 0.3 | 0.7 | 0.5           | 0.3 | 0      |
| Working plane                    | 0.2   | 0.2 | 0.2       | 0.2 | 0.2 | 0.2 | 0.2 | 0.2           | 0.2 | 0      |
| ROOM INDEX                       | UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$ |     |           |     |     |     |     |               |     |        |
| $k = 0.60$                       | 54  | 42  | 35        | 53  | 42  | 35  | 52  | 41            | 34  | 28     |
| 0.80                             | 64  | 51  | 44        | 62  | 51  | 43  | 60  | 50            | 43  | 36     |
| 1.00                             | 72  | 60  | 52        | 70  | 59  | 52  | 68  | 60            | 51  | 43     |
| 1.25                             | 79  | 67  | 60        | 77  | 67  | 59  | 74  | 65            | 58  | 50     |
| 1.50                             | 84  | 73  | 65        | 82  | 72  | 65  | 78  | 70            | 63  | 55     |
| 2.00                             | 91  | 81  | 74        | 89  | 80  | 73  | 85  | 77            | 71  | 62     |
| 2.50                             | 95  | 86  | 79        | 93  | 85  | 78  | 88  | 81            | 76  | 67     |
| 3.00                             | 99  | 91  | 84        | 96  | 89  | 83  | 91  | 85            | 80  | 71     |
| 4.00                             | 103   | 96  | 91        | 100 | 94  | 89  | 95  | 90            | 86  | 76     |
| 5.00                             | 106   | 100 | 95        | 103 | 98  | 93  | 97  | 93            | 90  | 79     |
| ROOM INDEX                       | UF(total)   |     |           |     |     |     |     |               |     | Direct |
| According to DIN EN 13032-2 2004 |   |     | Suspended |     |     |     |     | SHRNOM = 1.25 |     |        |

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021年04月22日

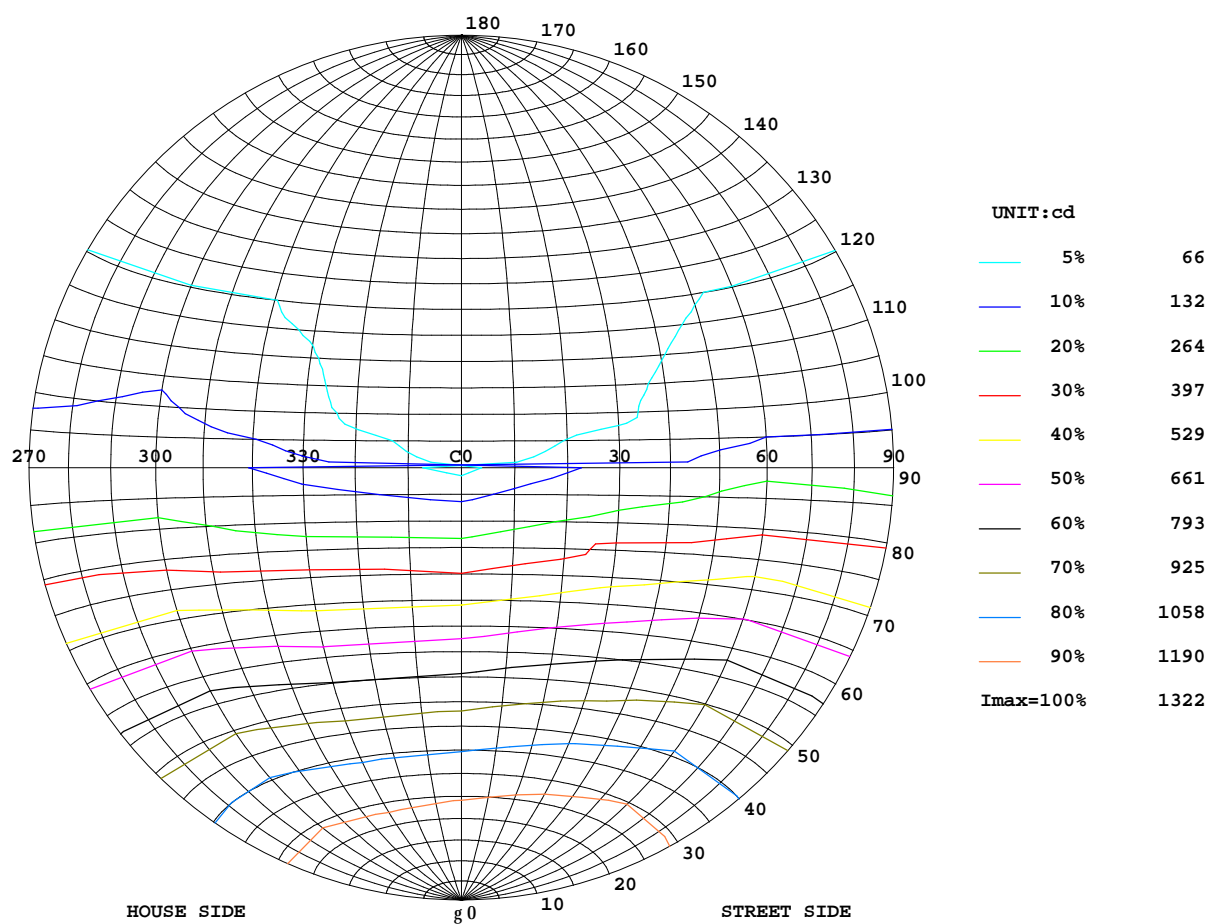
Test Set: 10.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:11.000 m  
 Remarks:

# HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

## ISOCANDELA DIAGRAM

Report number:

|                              |                      |             |
|------------------------------|----------------------|-------------|
| MANUFACTURER:                |                      |             |
| Address:                     |                      |             |
| NAME: RE-T014D3-50WCFF-TC-TL | TYPE:                | WEIGHT:     |
| SPECIFICATION:               | DIMENSION: 1210*85mm | SERIAL No.: |



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2021年04月22日

Test Set: 10.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:

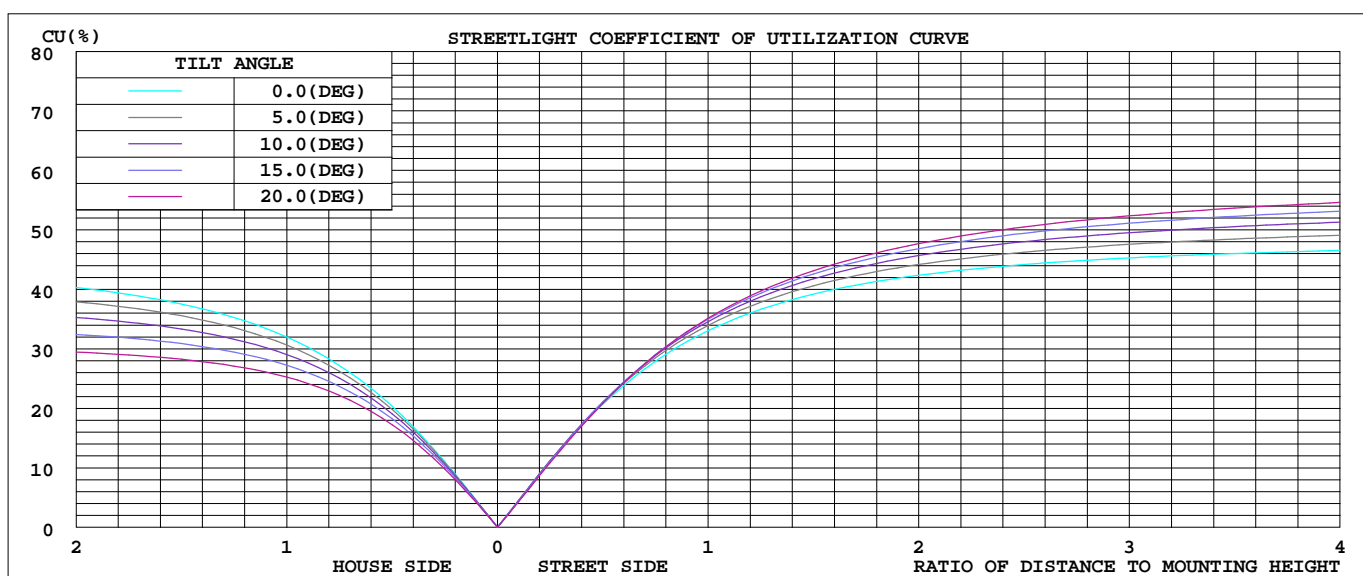
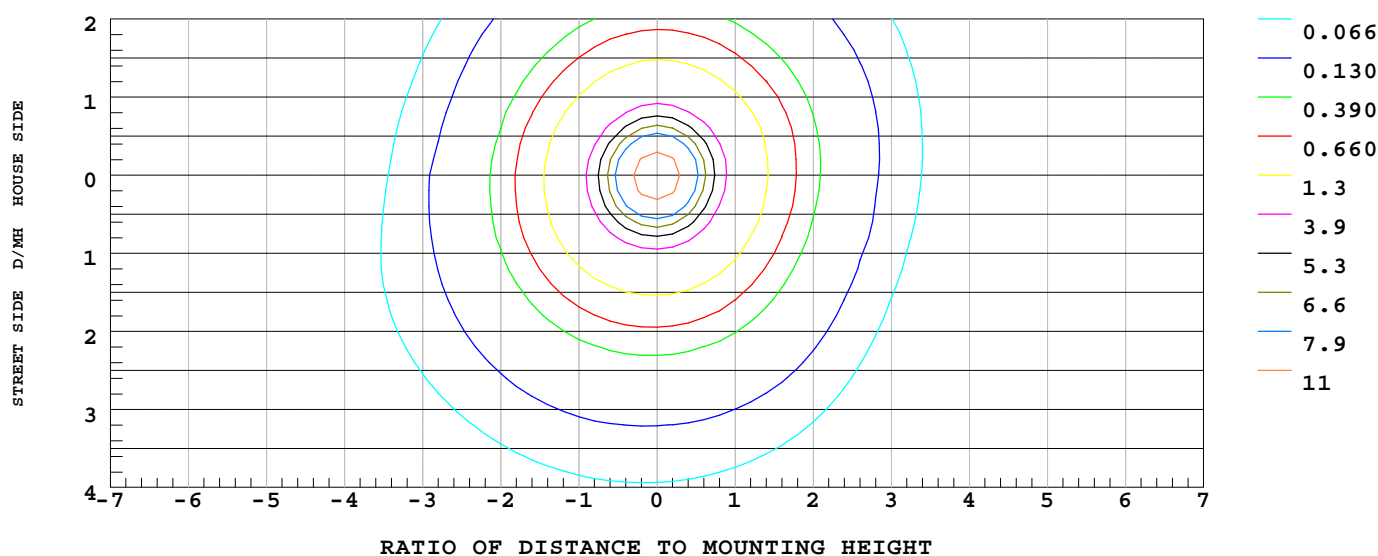
# HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

## ISOLUX DIAGRAM

Report number:

|                              |                      |             |
|------------------------------|----------------------|-------------|
| MANUFACTURER:                |                      |             |
| Address:                     |                      |             |
| NAME: RE-T014D3-50WCFF-TC-TL | TYPE:                | WEIGHT:     |
| SPECIFICATION:               | DIMENSION: 1210*85mm | SERIAL No.: |

ILLUMINANCE AT MH=10 m, Enadir = 13.16 lx



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2021年04月22日

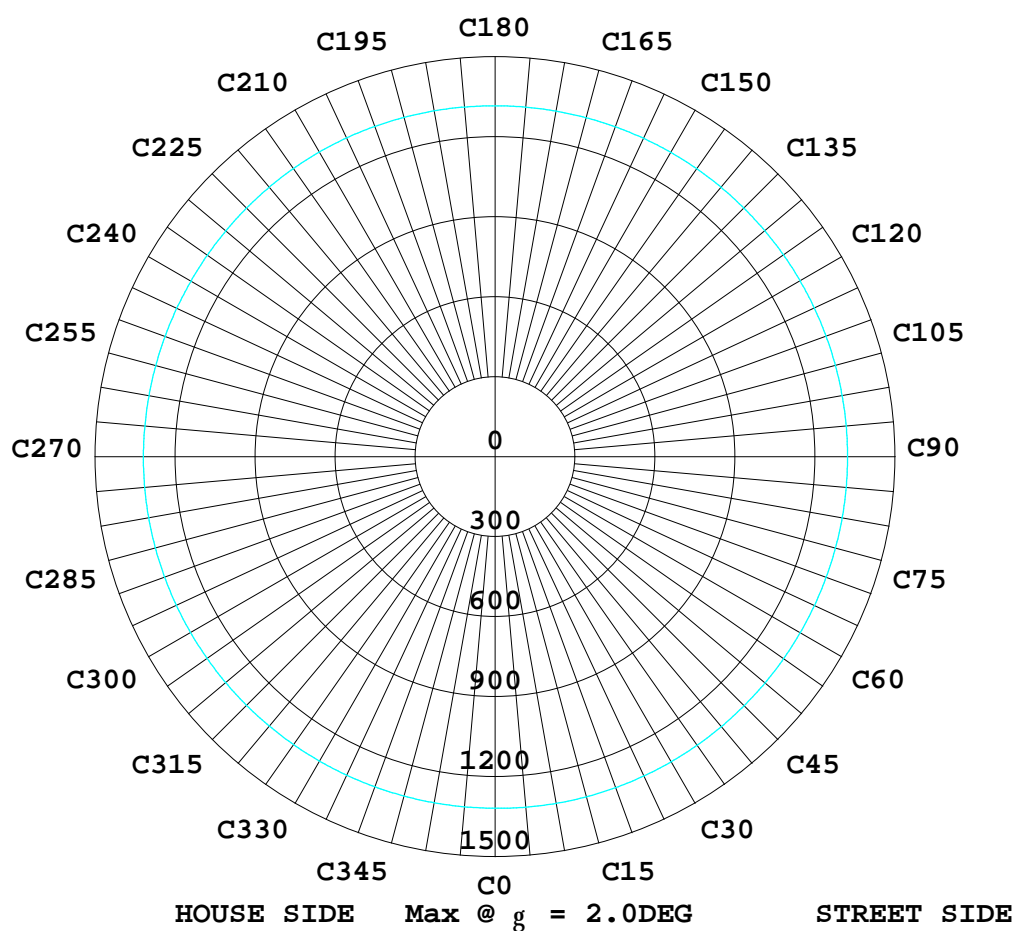
Test Set: 10.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:

# HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

## ISOCANDELA DIAGRAM

Report number:

|                              |                      |             |
|------------------------------|----------------------|-------------|
| MANUFACTURER:                |                      |             |
| Address:                     |                      |             |
| NAME: RE-T014D3-50WCFF-TC-TL | TYPE:                | WEIGHT:     |
| SPECIFICATION:               | DIMENSION: 1210*85mm | SERIAL No.: |



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2021年04月22日

Test Set: 10.0deg/s    C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:

# HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINOUS DISTRIBUTION INTENSITY DATA

Report number:

|                              |                      |             |
|------------------------------|----------------------|-------------|
| MANUFACTURER:                |                      |             |
| Address:                     |                      |             |
| NAME: RE-T014D3-50WCFF-TC-TL | TYPE:                | WEIGHT:     |
| SPECIFICATION:               | DIMENSION: 1210*85mm | SERIAL No.: |

UNIT: cd

| C(DEG)<br>γ (DEG) | 0    | 30   | 60   | 90   | 120  | 150  | 180  | 210  | 240  | 270  | 300  | 330  |
|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0.0               | 1316 | 1322 | 1320 | 1321 | 1321 | 1320 | 1316 | 1322 | 1320 | 1321 | 1321 | 1320 |
| 5.0               | 1314 | 1318 | 1321 | 1319 | 1319 | 1310 | 1309 | 1314 | 1311 | 1314 | 1311 | 1312 |
| 10.0              | 1295 | 1306 | 1313 | 1312 | 1308 | 1293 | 1293 | 1297 | 1292 | 1297 | 1293 | 1295 |
| 15.0              | 1269 | 1282 | 1297 | 1293 | 1287 | 1263 | 1261 | 1267 | 1261 | 1268 | 1259 | 1263 |
| 20.0              | 1229 | 1249 | 1268 | 1263 | 1253 | 1223 | 1219 | 1229 | 1224 | 1230 | 1221 | 1222 |
| 25.0              | 1180 | 1206 | 1229 | 1225 | 1211 | 1172 | 1168 | 1177 | 1176 | 1184 | 1170 | 1170 |
| 30.0              | 1121 | 1155 | 1185 | 1176 | 1157 | 1112 | 1103 | 1121 | 1119 | 1126 | 1108 | 1106 |
| 35.0              | 1052 | 1093 | 1131 | 1121 | 1095 | 1039 | 1033 | 1055 | 1054 | 1064 | 1041 | 1036 |
| 40.0              | 977  | 1026 | 1068 | 1057 | 1030 | 962  | 956  | 982  | 986  | 994  | 967  | 957  |
| 45.0              | 896  | 951  | 1002 | 985  | 956  | 876  | 866  | 902  | 907  | 915  | 880  | 869  |
| 50.0              | 804  | 864  | 923  | 908  | 869  | 783  | 775  | 814  | 822  | 834  | 796  | 778  |
| 55.0              | 708  | 781  | 842  | 827  | 783  | 686  | 679  | 726  | 739  | 747  | 704  | 682  |
| 60.0              | 612  | 690  | 758  | 739  | 692  | 583  | 572  | 629  | 640  | 651  | 601  | 572  |
| 65.0              | 504  | 596  | 662  | 648  | 592  | 481  | 469  | 532  | 548  | 555  | 506  | 469  |
| 70.0              | 399  | 493  | 569  | 547  | 493  | 374  | 367  | 431  | 452  | 460  | 419  | 360  |
| 75.0              | 287  | 418  | 474  | 453  | 393  | 268  | 257  | 328  | 363  | 363  | 308  | 259  |
| 80.0              | 201  | 306  | 381  | 367  | 290  | 166  | 158  | 250  | 283  | 290  | 220  | 158  |
| 85.0              | 110  | 219  | 298  | 281  | 214  | 76.0 | 78.9 | 180  | 220  | 224  | 153  | 74.8 |
| 90.0              | 52.8 | 158  | 238  | 216  | 150  | 23.4 | 34.0 | 131  | 173  | 176  | 108  | 25.7 |
| 95.0              | 30.6 | 113  | 175  | 153  | 111  | 6.84 | 18.2 | 101  | 133  | 132  | 85.6 | 11.6 |
| 100.0             | 16.1 | 79.3 | 141  | 122  | 71.3 | 0.00 | 9.02 | 73.6 | 115  | 113  | 58.8 | 2.97 |
| 105.0             | 12.4 | 73.7 | 126  | 112  | 66.9 | 0.00 | 4.42 | 69.5 | 106  | 104  | 55.1 | 0.00 |
| 110.0             | 10.7 | 69.4 | 116  | 104  | 62.5 | 0.00 | 2.97 | 62.1 | 96.6 | 94.9 | 49.4 | 0.00 |
| 115.0             | 9.38 | 61.2 | 105  | 94.3 | 57.0 | 0.00 | 1.88 | 55.9 | 86.4 | 85.3 | 43.9 | 0.00 |
| 120.0             | 5.75 | 53.6 | 93.3 | 85.3 | 50.2 | 0.00 | 1.88 | 47.2 | 76.5 | 74.4 | 38.7 | 0.00 |
| 125.0             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 130.0             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 135.0             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 140.0             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 145.0             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 150.0             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 155.0             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 160.0             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 165.0             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 170.0             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 175.0             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 180.0             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021年04月22日

Test Set: 10.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:11.000 m  
 Remarks: