

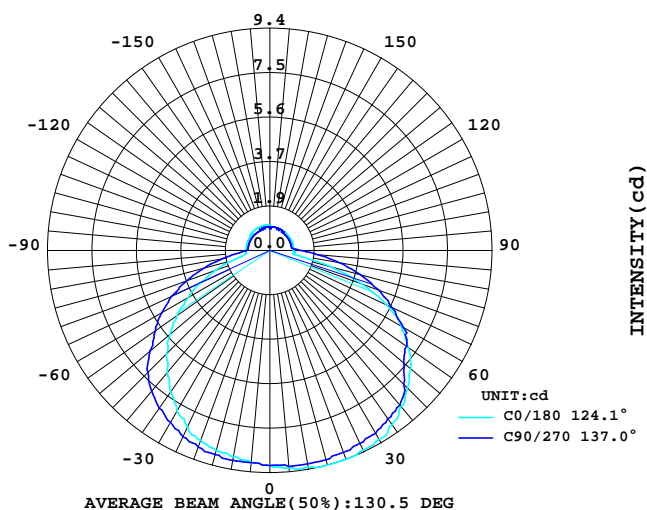
## LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

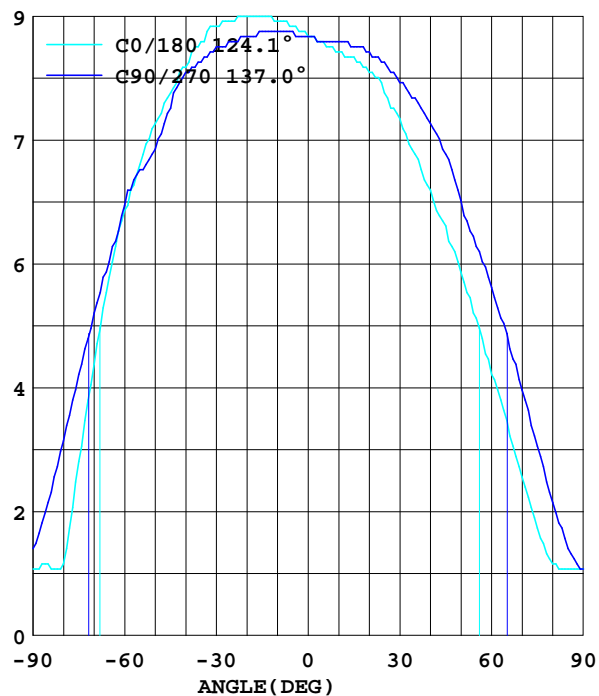
|                                   |           |                      |                         |
|-----------------------------------|-----------|----------------------|-------------------------|
| MANUFACTURER:                     |           |                      |                         |
| Address:                          |           |                      |                         |
| NAME: 36-RS-5050-12V-48Z-08-X-Y B |           | TYPE: LED Strip      | WEIGHT:                 |
| SPECIFICATION: 5050/48D           | CCT(K): 0 | DIMENSION: 1M*0.008M | SERIAL No.: 20211124015 |

|                  |      |                    |        |                  |       |
|------------------|------|--------------------|--------|------------------|-------|
| DATA OF LAMP     |      | Imax(cd)           | 9.370  | S/MH(C0/180)     | 1.51  |
| MODEL            | 5050 | EFFICIENCY(%)      | 100.0  | S/MH(C90/270)    | 1.47  |
| NOMINAL POWER(W) | 3    | TOTAL FLUX(lm)     | 40.580 | Voltage(V)       | 12.00 |
| RATED VOLTAGE(V) | 12   | EFFICIENCY(lm/W)   | 15.7   | Current(A)       | 0.213 |
| NOMINAL FLUX(lm) | 40.6 | h up(%)            | 15.1   | Power(W)         | 2.590 |
| LAMPS QUANTITY   | 1    | h down(%)          | 84.9   | Power Factor(PF) | 1.000 |
| TEST VOLTAGE(V)  | 12.0 | Effective Flux(lm) | 38.1   | EEL              | 0.355 |

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021年11月24日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.800 m  
 Remarks:

## Color Temperature Data List

Report number:

|                                   |           |                      |                         |
|-----------------------------------|-----------|----------------------|-------------------------|
| MANUFACTURER:                     |           |                      |                         |
| Address:                          |           |                      |                         |
| NAME: 36-RS-5050-12V-48Z-08-X-Y B |           | TYPE: LED Strip      | WEIGHT:                 |
| SPECIFICATION: 5050/48D           | CCT(K): 0 | DIMENSION: 1M*0.008M | SERIAL No.: 20211124015 |

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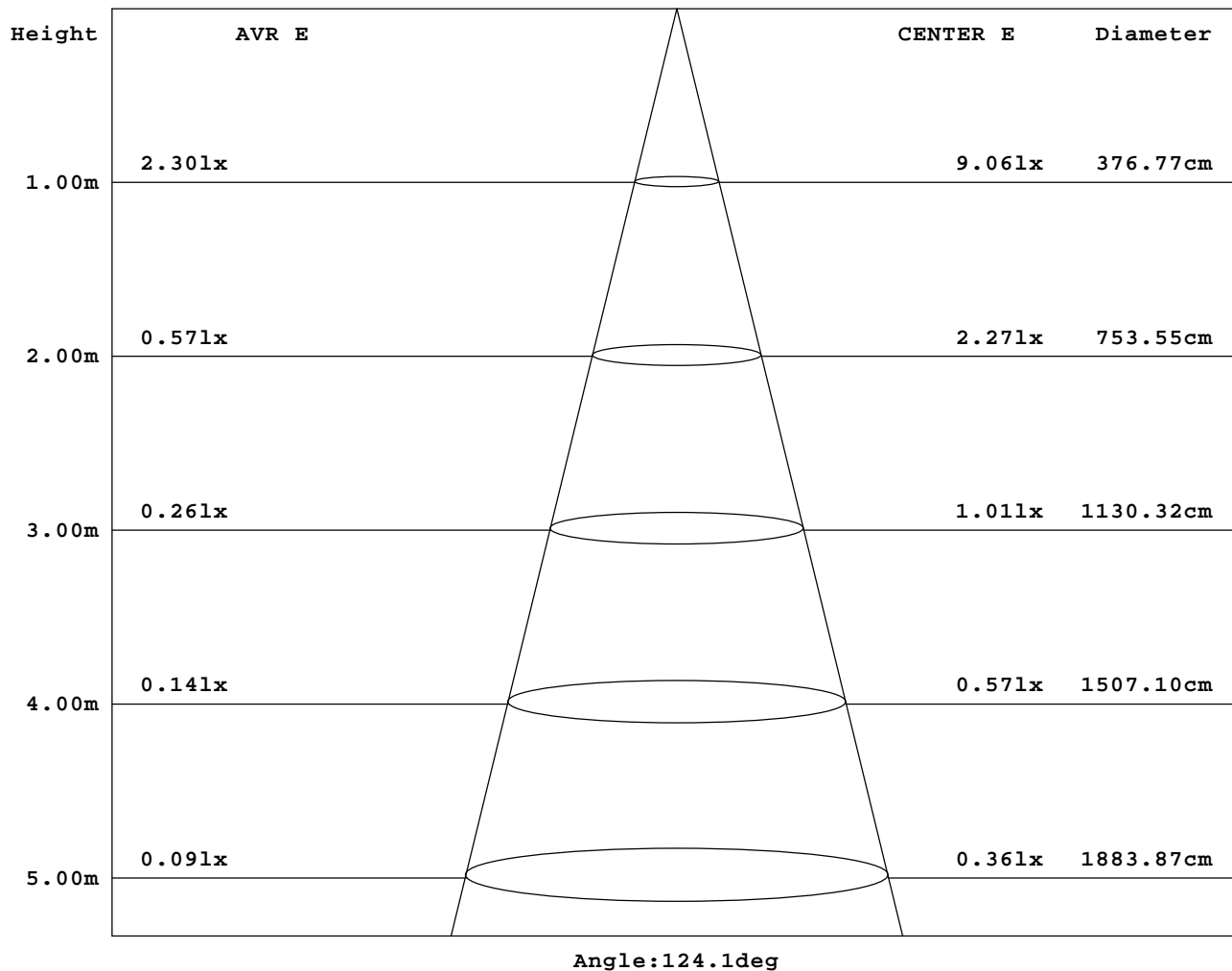
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2021年11月24日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.800 m  
Remarks:

## AVERAGE AND CENTER E Figure

Report number:

|                                   |           |                      |                         |
|-----------------------------------|-----------|----------------------|-------------------------|
| MANUFACTURER:                     |           |                      |                         |
| Address:                          |           |                      |                         |
| NAME: 36-RS-5050-12V-48Z-08-X-Y B |           | TYPE: LED Strip      | WEIGHT:                 |
| SPECIFICATION: 5050/48D           | CCT(K): 0 | DIMENSION: 1M*0.008M | SERIAL No.: 20211124015 |



Test System: HOPOO HPG1800  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2021年11月24日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
 Humidity: 65.0%  
 Test Distance: 8.800 m  
 Remarks:

# GONIOPHOTOMETERS SYSTEM TEST REPORT

## ZONAL FLUX DIAGRAM

Report number:

|                                   |           |                      |                         |
|-----------------------------------|-----------|----------------------|-------------------------|
| MANUFACTURER:                     |           |                      |                         |
| Address:                          |           |                      |                         |
| NAME: 36-RS-5050-12V-48Z-08-X-Y B |           | TYPE: LED Strip      | WEIGHT:                 |
| SPECIFICATION: 5050/48D           | CCT(K): 0 | DIMENSION: 1M*0.008M | SERIAL No.: 20211124015 |

| g     | C0                    | C45   | C90   | C135  | C180  | C225  | C270  | C315  | g       | 4one    | tBtal |
|-------|-----------------------|-------|-------|-------|-------|-------|-------|-------|---------|---------|-------|
| 5.0   | 9.215                 | 9.215 | 9.137 | 8.983 | 8.983 | 8.983 | 8.983 | 9.060 | 0- 5    | 0.217   | 0.217 |
| 10.0  | 9.292                 | 9.292 | 9.137 | 8.905 | 8.828 | 8.828 | 8.983 | 9.137 | 5- 10   | 0.649   | 0.866 |
| 15.0  | 9.370                 | 9.292 | 9.137 | 8.828 | 8.750 | 8.750 | 8.905 | 9.137 | 10- 15  | 1.072   | 1.938 |
| 20.0  | 9.370                 | 9.292 | 9.060 | 8.673 | 8.518 | 8.673 | 8.828 | 9.215 | 15- 20  | 1.481   | 3.419 |
| 25.0  | 9.292                 | 9.292 | 8.983 | 8.518 | 8.208 | 8.440 | 8.673 | 9.137 | 20- 25  | 1.865   | 5.285 |
| 30.0  | 9.215                 | 9.215 | 8.905 | 8.286 | 7.821 | 8.208 | 8.363 | 9.060 | 25- 30  | 2.208   | 7.493 |
| 35.0  | 8.983                 | 9.060 | 8.673 | 8.053 | 7.279 | 7.898 | 8.131 | 8.905 | 30- 35  | 2.505   | 9.999 |
| 40.0  | 8.595                 | 8.905 | 8.518 | 7.744 | 6.737 | 7.511 | 7.744 | 8.750 | 35- 40  | 2.742   | 12.74 |
| 45.0  | 8.208                 | 8.673 | 7.976 | 7.356 | 6.195 | 7.124 | 7.279 | 8.518 | 40- 45  | 2.913   | 15.65 |
| 50.0  | 7.744                 | 8.363 | 7.356 | 6.969 | 5.498 | 6.582 | 6.582 | 8.208 | 45- 50  | 2.993   | 18.64 |
| 55.0  | 7.124                 | 7.666 | 7.047 | 6.195 | 4.801 | 6.040 | 5.885 | 7.744 | 50- 55  | 2.988   | 21.63 |
| 60.0  | 6.427                 | 6.737 | 6.504 | 5.343 | 3.949 | 5.111 | 5.265 | 6.969 | 55- 60  | 2.868   | 24.50 |
| 65.0  | 5.420                 | 6.117 | 5.653 | 4.568 | 3.252 | 4.181 | 4.568 | 6.117 | 60- 65  | 2.614   | 27.12 |
| 70.0  | 4.104                 | 5.188 | 4.878 | 3.794 | 2.400 | 3.329 | 3.717 | 5.033 | 65- 70  | 2.285   | 29.40 |
| 75.0  | 2.632                 | 4.104 | 3.949 | 2.865 | 1.626 | 2.710 | 2.865 | 4.104 | 70- 75  | 1.883   | 31.29 |
| 80.0  | 1.084                 | 3.175 | 2.942 | 2.090 | 1.084 | 1.936 | 2.013 | 3.175 | 75- 80  | 1.400   | 32.69 |
| 85.0  | 1.084                 | 2.090 | 2.013 | 1.393 | 1.006 | 1.471 | 1.316 | 2.245 | 80- 85  | 1.022   | 33.71 |
| 90.0  | 1.006                 | 1.161 | 1.316 | 1.006 | 1.006 | 1.084 | 1.006 | 1.316 | 85- 90  | 0.725   | 34.43 |
| 95.0  | 1.006                 | 0.929 | 1.006 | 0.929 | 1.006 | 1.006 | 0.929 | 1.006 | 90- 95  | 0.560   | 34.99 |
| 100.0 | 1.006                 | 0.929 | 0.929 | 0.929 | 1.006 | 1.006 | 0.929 | 1.006 | 95-100  | 0.526   | 35.52 |
| 105.0 | 1.006                 | 0.929 | 0.929 | 0.929 | 1.006 | 1.006 | 0.929 | 1.006 | 100-105 | 0.517   | 36.04 |
| 110.0 | 1.006                 | 0.929 | 0.929 | 0.929 | 1.006 | 1.006 | 0.929 | 1.006 | 105-110 | 0.505   | 36.54 |
| 115.0 | 1.006                 | 0.929 | 0.929 | 0.929 | 1.006 | 1.006 | 0.929 | 1.006 | 110-115 | 0.488   | 37.03 |
| 120.0 | 1.006                 | 0.929 | 0.929 | 0.929 | 1.006 | 1.006 | 0.929 | 0.929 | 115-120 | 0.468   | 37.50 |
| 125.0 | 1.006                 | 0.929 | 0.929 | 0.929 | 1.006 | 1.006 | 0.929 | 0.929 | 120-125 | 0.445   | 37.94 |
| 130.0 | 1.006                 | 0.929 | 0.929 | 0.929 | 1.006 | 1.006 | 0.929 | 0.929 | 125-130 | 0.419   | 38.36 |
| 135.0 | 1.006                 | 0.929 | 0.929 | 0.929 | 1.006 | 1.006 | 0.929 | 1.006 | 130-135 | 0.392   | 38.75 |
| 140.0 | 1.006                 | 0.929 | 0.929 | 0.929 | 1.084 | 1.006 | 0.929 | 1.006 | 135-140 | 0.362   | 39.12 |
| 145.0 | 1.006                 | 0.929 | 0.929 | 0.929 | 1.084 | 1.006 | 0.929 | 1.006 | 140-145 | 0.327   | 39.44 |
| 150.0 | 1.006                 | 0.929 | 1.006 | 0.929 | 1.084 | 1.006 | 0.929 | 1.006 | 145-150 | 0.289   | 39.73 |
| 155.0 | 1.006                 | 1.006 | 1.006 | 0.929 | 1.084 | 1.006 | 0.929 | 1.006 | 150-155 | 0.252   | 39.98 |
| 160.0 | 1.006                 | 1.006 | 1.006 | 0.929 | 1.084 | 1.006 | 1.006 | 1.006 | 155-160 | 0.210   | 40.19 |
| 165.0 | 1.006                 | 1.006 | 1.006 | 1.006 | 1.084 | 1.006 | 1.006 | 1.006 | 160-165 | 0.166   | 40.36 |
| 170.0 | 1.006                 | 1.006 | 1.006 | 0.929 | 1.084 | 1.006 | 1.006 | 1.006 | 165-170 | 0.119   | 40.48 |
| 175.0 | 1.006                 | 1.006 | 1.006 | 0.929 | 1.084 | 1.006 | 1.006 | 1.006 | 170-175 | 0.072   | 40.55 |
| 180.0 | 1.006                 | 1.006 | 1.006 | 0.929 | 1.084 | 1.006 | 1.006 | 1.006 | 175-180 | 0.024   | 40.58 |
| DEG   | LUMINOUS INTENSITY:cd |       |       |       |       |       |       |       |         | UNIT:lm |       |

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021年11月24日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.800 m  
 Remarks:

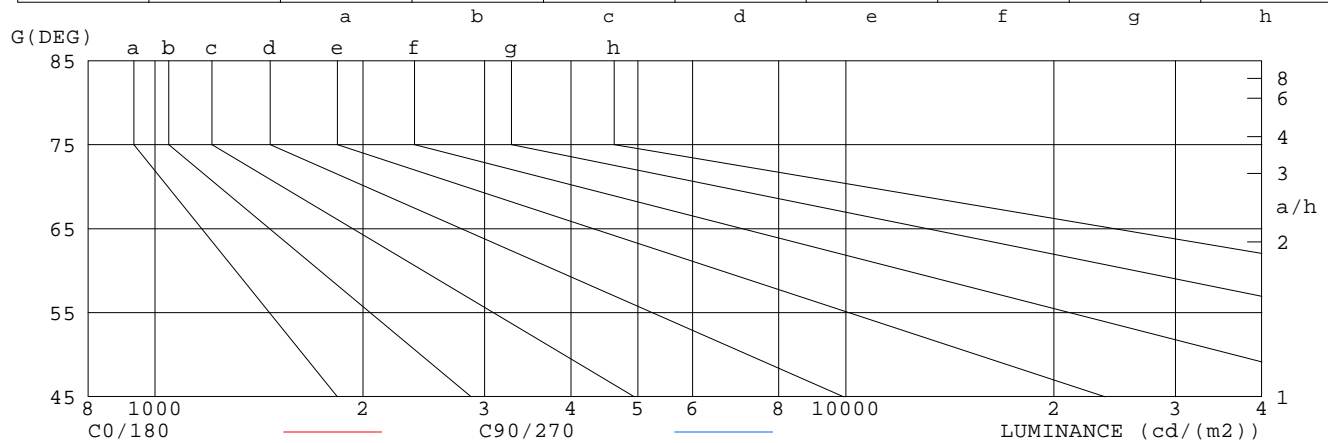
## LUMINANCE LIMITATION CURVES

Report number:

|                                   |           |                      |                         |
|-----------------------------------|-----------|----------------------|-------------------------|
| MANUFACTURER:                     |           |                      |                         |
| Address:                          |           |                      |                         |
| NAME: 36-RS-5050-12V-48Z-08-X-Y B |           | TYPE: LED Strip      | WEIGHT:                 |
| SPECIFICATION: 5050/48D           | CCT(K): 0 | DIMENSION: 1M*0.008M | SERIAL No.: 20211124015 |

## 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(°)            | C0/180 | C90/270 |
| 85              | 124    | 231     |
| 80              | 62     | 169     |
| 75              | 102    | 153     |
| 70              | 120    | 143     |
| 65              | 128    | 134     |
| 60              | 129    | 130     |
| 55              | 124    | 123     |
| 50              | 120    | 114     |
| 45              | 116    | 113     |

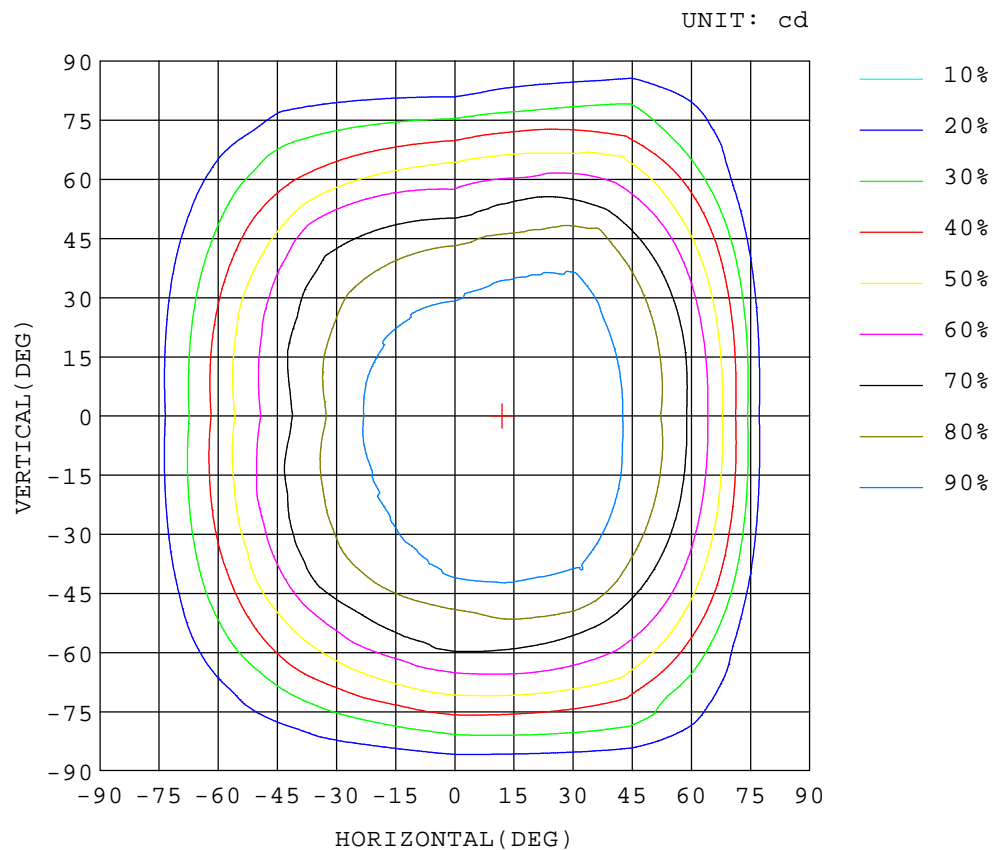
Test System: HOPOO HPG1800  
 Temperature: 25.3 DEG  
 Operators:  
 Test Date: 2021年11月24日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
 Humidity: 65.0%  
 Test Distance: 8.800 m  
 Remarks:

## ISOCANDELA DIAGRAM

Report number:

|                                   |           |                      |                         |
|-----------------------------------|-----------|----------------------|-------------------------|
| MANUFACTURER:                     |           |                      |                         |
| Address:                          |           |                      |                         |
| NAME: 36-RS-5050-12V-48Z-08-X-Y B |           | TYPE: LED Strip      | WEIGHT:                 |
| SPECIFICATION: 5050/48D           | CCT(K): 0 | DIMENSION: 1M*0.008M | SERIAL No.: 20211124015 |



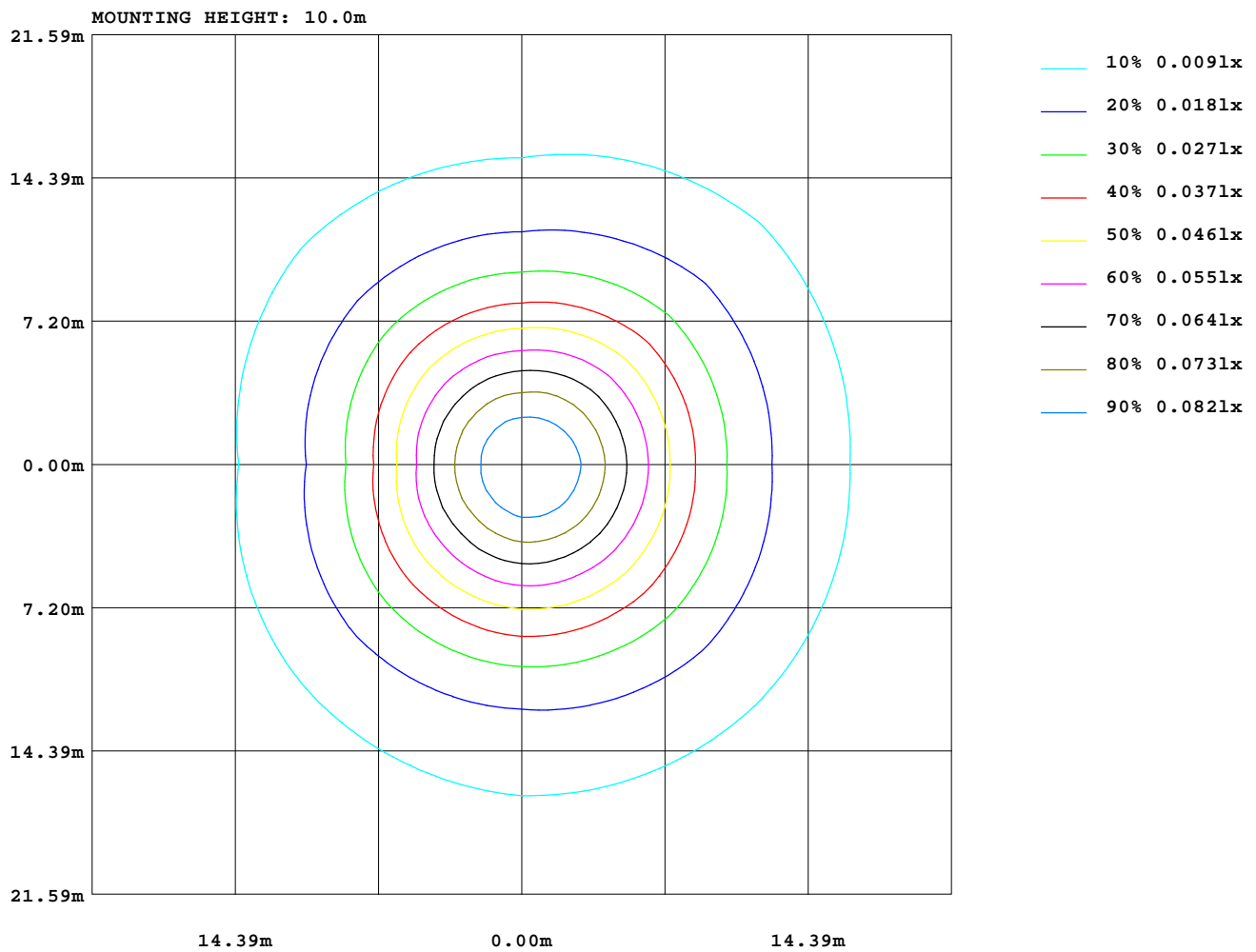
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2021年11月24日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.800 m  
Remarks:

## ISOLUX DIAGRAM

Report number:

|                                   |           |                      |                         |
|-----------------------------------|-----------|----------------------|-------------------------|
| MANUFACTURER:                     |           |                      |                         |
| Address:                          |           |                      |                         |
| NAME: 36-RS-5050-12V-48Z-08-X-Y B |           | TYPE: LED Strip      | WEIGHT:                 |
| SPECIFICATION: 5050/48D           | CCT(K): 0 | DIMENSION: 1M*0.008M | SERIAL No.: 20211124015 |



Test System: HOPOO HPG1800  
Temperature: 25.3DEG  
Operators:  
Test Date: 2021年11月24日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
Humidity: 65.0%  
Test Distance: 8.800 m  
Remarks:

# GONIOPHOTOMETERS SYSTEM TEST REPORT

## AREA LUMINOUS FLUX

Report number:

|                                   |           |                      |                         |
|-----------------------------------|-----------|----------------------|-------------------------|
| MANUFACTURER:                     |           |                      |                         |
| Address:                          |           |                      |                         |
| NAME: 36-RS-5050-12V-48Z-08-X-Y B |           | TYPE: LED Strip      | WEIGHT:                 |
| SPECIFICATION: 5050/48D           | CCT(K): 0 | DIMENSION: 1M*0.008M | SERIAL No.: 20211124015 |

| VERTICAL( DEG ) | AREA FLUX DIAGRAM |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | UNIT:lm | Φ t  | Φ a  |
|-----------------|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---------|------|------|
|                 | 90                | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   | 0    | 10   | 20   | 30   | 40   | 50   | 60   | 70   | 80      | 90   |      |
| 90              | 0.00              | 0.01 | 0.01 | 0.02 | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 0.05 | 0.05 | 0.05 | 0.05 | 0.04 | 0.03 | 0.02 | 0.01 | 0.00    | 0.52 | 0.52 |
| 80              | 0.00              | 0.01 | 0.02 | 0.03 | 0.04 | 0.06 | 0.07 | 0.08 | 0.09 | 0.09 | 0.09 | 0.09 | 0.08 | 0.07 | 0.04 | 0.02 | 0.01 | 0.00    | 0.90 | 0.90 |
| 70              | 0.00              | 0.01 | 0.02 | 0.04 | 0.06 | 0.09 | 0.11 | 0.12 | 0.14 | 0.14 | 0.14 | 0.14 | 0.12 | 0.10 | 0.06 | 0.03 | 0.01 | 0.00    | 1.33 | 1.33 |
| 60              | 0.00              | 0.01 | 0.03 | 0.05 | 0.08 | 0.12 | 0.15 | 0.17 | 0.18 | 0.19 | 0.19 | 0.18 | 0.16 | 0.12 | 0.08 | 0.04 | 0.01 | 0.00    | 1.76 | 1.76 |
| 50              | 0.00              | 0.01 | 0.03 | 0.06 | 0.11 | 0.15 | 0.18 | 0.20 | 0.22 | 0.22 | 0.22 | 0.21 | 0.19 | 0.15 | 0.10 | 0.05 | 0.02 | 0.00    | 2.13 | 2.13 |
| 40              | 0.00              | 0.01 | 0.04 | 0.07 | 0.12 | 0.17 | 0.20 | 0.23 | 0.24 | 0.25 | 0.25 | 0.23 | 0.21 | 0.16 | 0.11 | 0.06 | 0.02 | 0.00    | 2.37 | 2.37 |
| 30              | 0.00              | 0.01 | 0.04 | 0.08 | 0.13 | 0.18 | 0.22 | 0.24 | 0.26 | 0.26 | 0.26 | 0.25 | 0.21 | 0.17 | 0.12 | 0.06 | 0.02 | 0.00    | 2.52 | 2.52 |
|                 | 0.00              | 0.01 | 0.04 | 0.08 | 0.13 | 0.18 | 0.22 | 0.25 | 0.27 | 0.27 | 0.27 | 0.25 | 0.22 | 0.18 | 0.12 | 0.07 | 0.02 | 0.00    | 2.60 | 2.60 |
|                 | 0.00              | 0.01 | 0.04 | 0.08 | 0.13 | 0.18 | 0.23 | 0.26 | 0.27 | 0.28 | 0.27 | 0.26 | 0.22 | 0.18 | 0.12 | 0.07 | 0.02 | 0.00    | 2.63 | 2.63 |
|                 | 0.00              | 0.01 | 0.04 | 0.09 | 0.13 | 0.18 | 0.23 | 0.26 | 0.27 | 0.28 | 0.27 | 0.26 | 0.22 | 0.18 | 0.12 | 0.07 | 0.02 | 0.00    | 2.64 | 2.64 |
|                 | 0.00              | 0.01 | 0.04 | 0.09 | 0.14 | 0.18 | 0.23 | 0.25 | 0.27 | 0.28 | 0.27 | 0.25 | 0.22 | 0.18 | 0.12 | 0.07 | 0.02 | 0.00    | 2.63 | 2.63 |
| -30             | 0.00              | 0.01 | 0.04 | 0.08 | 0.13 | 0.18 | 0.22 | 0.25 | 0.27 | 0.27 | 0.27 | 0.25 | 0.22 | 0.17 | 0.12 | 0.06 | 0.02 | 0.00    | 2.57 | 2.57 |
| -40             | 0.00              | 0.01 | 0.04 | 0.08 | 0.12 | 0.17 | 0.21 | 0.24 | 0.26 | 0.27 | 0.26 | 0.24 | 0.21 | 0.16 | 0.11 | 0.06 | 0.02 | 0.00    | 2.46 | 2.46 |
| -50             | 0.00              | 0.01 | 0.03 | 0.07 | 0.11 | 0.16 | 0.19 | 0.22 | 0.24 | 0.24 | 0.24 | 0.22 | 0.19 | 0.14 | 0.10 | 0.05 | 0.02 | 0.00    | 2.23 | 2.23 |
| -60             | 0.00              | 0.01 | 0.03 | 0.06 | 0.09 | 0.13 | 0.16 | 0.19 | 0.21 | 0.21 | 0.21 | 0.19 | 0.16 | 0.12 | 0.08 | 0.04 | 0.01 | 0.00    | 1.91 | 1.91 |
| -70             | 0.00              | 0.01 | 0.02 | 0.04 | 0.07 | 0.10 | 0.13 | 0.15 | 0.17 | 0.17 | 0.17 | 0.15 | 0.13 | 0.10 | 0.06 | 0.03 | 0.01 | 0.00    | 1.51 | 1.51 |
| -80             | 0.00              | 0.01 | 0.02 | 0.03 | 0.05 | 0.07 | 0.08 | 0.10 | 0.11 | 0.12 | 0.11 | 0.10 | 0.09 | 0.07 | 0.04 | 0.02 | 0.01 | 0.00    | 1.04 | 1.04 |
| -90             | 0.00              | 0.01 | 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | 0.05 | 0.06 | 0.06 | 0.06 | 0.06 | 0.05 | 0.04 | 0.03 | 0.02 | 0.01 | 0.00    | 0.59 | 0.59 |
|                 | -90               | -80  | -70  | -60  | -50  | -40  | -30  | -20  | -10  | 0    | 10   | 20   | 30   | 40   | 50   | 60   | 70   | 80      | 90   |      |
| Φ t             | 0.05              | 0.20 | 0.55 | 1.07 | 1.71 | 2.36 | 2.91 | 3.32 | 3.56 | 3.66 | 3.61 | 3.38 | 2.95 | 2.32 | 1.57 | 0.84 | 0.28 | 0.05    | 41   |      |
| Φ a             | 0.05              | 0.20 | 0.55 | 1.07 | 1.71 | 2.36 | 2.91 | 3.32 | 3.56 | 3.66 | 3.61 | 3.38 | 2.95 | 2.32 | 1.57 | 0.84 | 0.28 | 0.05    |      | 38   |

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021年11月24日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.800 m  
 Remarks:



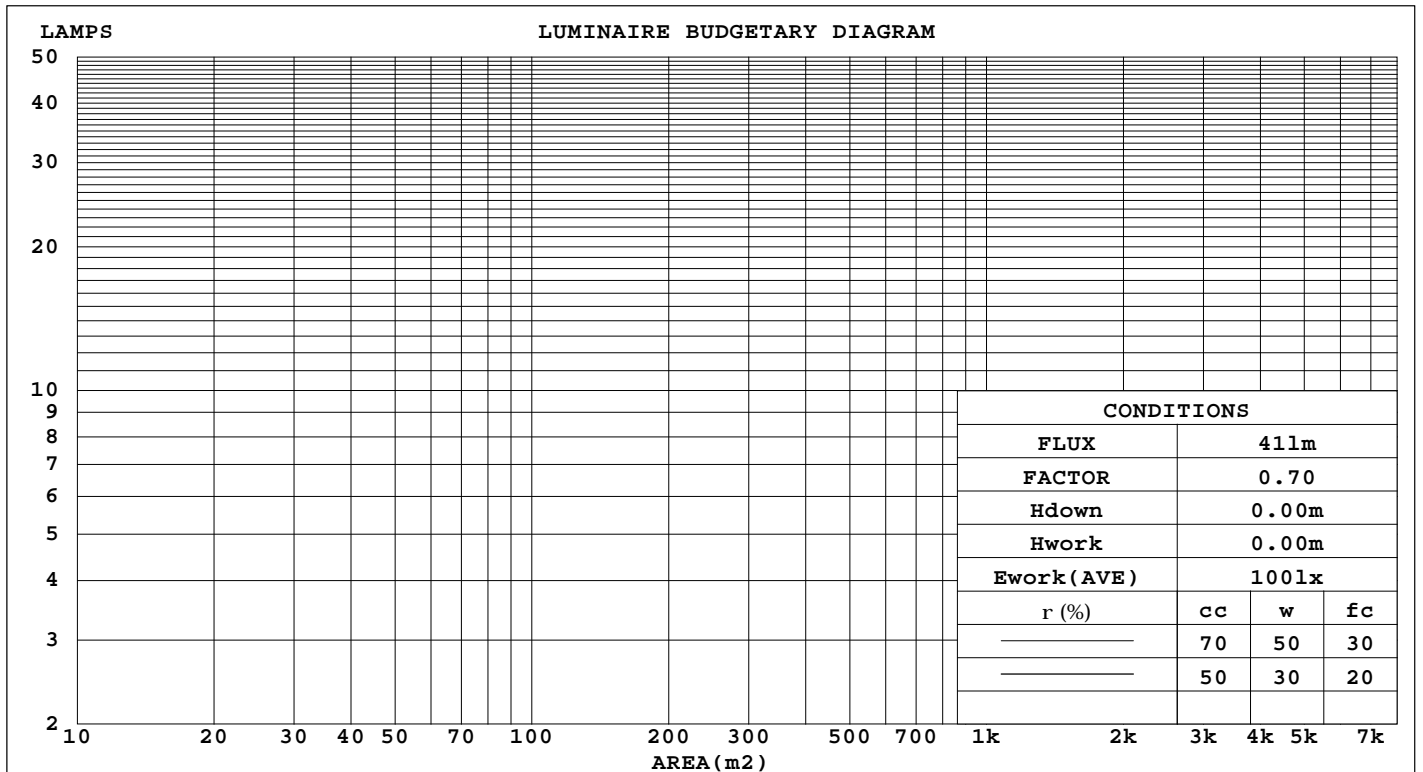
# GONIOPHOTOMETERS SYSTEM TEST REPORT

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

|                                   |  |  |  |           |  |  |  |                      |  |  |  |                         |  |  |  |
|-----------------------------------|--|--|--|-----------|--|--|--|----------------------|--|--|--|-------------------------|--|--|--|
| MANUFACTURER:                     |  |  |  |           |  |  |  |                      |  |  |  |                         |  |  |  |
| Address:                          |  |  |  |           |  |  |  |                      |  |  |  |                         |  |  |  |
| NAME: 36-RS-5050-12V-48Z-08-X-Y B |  |  |  |           |  |  |  | TYPE: LED Strip      |  |  |  | WEIGHT:                 |  |  |  |
| SPECIFICATION: 5050/48D           |  |  |  | CCT(K): 0 |  |  |  | DIMENSION: 1M*0.008M |  |  |  | SERIAL No.: 20211124015 |  |  |  |

| rcc  | 80%                   |      |      | 70%  |      |      | 50%                             |      |      | 30% |     |     | 10% |     |     | 0   |
|------|-----------------------|------|------|------|------|------|---------------------------------|------|------|-----|-----|-----|-----|-----|-----|-----|
| rw   | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%                             | 30%  | 10%  | 50% | 30% | 10% | 50% | 30% | 10% | 0   |
| r fc | 20%                   |      |      | 20%  |      |      | 20%                             |      |      | 20% |     |     | 20% |     |     | 0   |
| RCR  | RCR:Room Cavity Ratio |      |      |      |      |      | Coefficients of Utilization(CU) |      |      |     |     |     |     |     |     |     |
| 0.0  | 1.15                  | 1.15 | 1.15 | 1.11 | 1.11 | 1.11 | 1.03                            | 1.03 | 1.03 | .95 | .95 | .95 | .88 | .88 | .88 | .85 |
| 1.0  | .98                   | .93  | .89  | .94  | .90  | .86  | .87                             | .84  | .81  | .81 | .78 | .76 | .75 | .73 | .71 | .67 |
| 2.0  | .84                   | .77  | .71  | .81  | .75  | .69  | .75                             | .70  | .65  | .70 | .65 | .61 | .64 | .61 | .58 | .55 |
| 3.0  | .73                   | .65  | .58  | .71  | .63  | .56  | .65                             | .59  | .53  | .61 | .55 | .51 | .56 | .52 | .48 | .45 |
| 4.0  | .64                   | .55  | .48  | .62  | .54  | .47  | .58                             | .50  | .45  | .53 | .47 | .42 | .50 | .45 | .40 | .38 |
| 5.0  | .57                   | .48  | .41  | .55  | .46  | .40  | .51                             | .44  | .38  | .48 | .41 | .36 | .44 | .39 | .35 | .32 |
| 6.0  | .51                   | .42  | .35  | .49  | .41  | .34  | .46                             | .38  | .33  | .43 | .36 | .31 | .40 | .34 | .30 | .28 |
| 7.0  | .46                   | .37  | .31  | .44  | .36  | .30  | .42                             | .34  | .29  | .39 | .32 | .28 | .36 | .31 | .26 | .24 |
| 8.0  | .42                   | .33  | .27  | .40  | .32  | .27  | .38                             | .31  | .25  | .35 | .29 | .24 | .33 | .28 | .23 | .21 |
| 9.0  | .38                   | .30  | .24  | .37  | .29  | .24  | .35                             | .28  | .23  | .32 | .26 | .22 | .30 | .25 | .21 | .19 |
| 10.0 | .35                   | .27  | .22  | .34  | .26  | .21  | .32                             | .25  | .20  | .30 | .24 | .20 | .28 | .23 | .19 | .17 |



Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021年11月24日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.800 m  
 Remarks:

# GONIOPHOTOMETERS SYSTEM TEST REPORT

## WEC AND CCEC

Report number:

|                                   |  |  |  |           |  |                      |  |  |                         |  |  |
|-----------------------------------|--|--|--|-----------|--|----------------------|--|--|-------------------------|--|--|
| MANUFACTURER:                     |  |  |  |           |  |                      |  |  |                         |  |  |
| Address:                          |  |  |  |           |  |                      |  |  |                         |  |  |
| NAME: 36-RS-5050-12V-48Z-08-X-Y B |  |  |  |           |  | TYPE: LED Strip      |  |  | WEIGHT:                 |  |  |
| SPECIFICATION: 5050/48D           |  |  |  | CCT(K): 0 |  | DIMENSION: 1M*0.008M |  |  | SERIAL No.: 20211124015 |  |  |

| rcc  | 80%                   |      |      | 70%  |      |      | 50%                             |      |      | 30%  |      |      | 10%  |      |      | 0 |
|------|-----------------------|------|------|------|------|------|---------------------------------|------|------|------|------|------|------|------|------|---|
| rw   | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%                             | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |
| r fc | 20%                   |      |      | 20%  |      |      | 20%                             |      |      | 20%  |      |      | 20%  |      |      | 0 |
| RCR  | RCR:Room Cavity Ratio |      |      |      |      |      | Wall Exitance Coefficients(WEC) |      |      |      |      |      |      |      |      |   |
| 0.0  |                       |      |      |      |      |      |                                 |      |      |      |      |      |      |      |      |   |
| 1.0  | .348                  | .198 | .063 | .336 | .192 | .061 | .314                            | .180 | .058 | .294 | .170 | .054 | .275 | .160 | .051 |   |
| 2.0  | .314                  | .172 | .053 | .304 | .167 | .052 | .284                            | .158 | .049 | .265 | .149 | .047 | .249 | .141 | .044 |   |
| 3.0  | .285                  | .152 | .045 | .275 | .147 | .044 | .257                            | .140 | .042 | .241 | .132 | .040 | .225 | .125 | .039 |   |
| 4.0  | .260                  | .135 | .040 | .251 | .131 | .039 | .235                            | .124 | .037 | .220 | .118 | .036 | .206 | .112 | .034 |   |
| 5.0  | .238                  | .121 | .035 | .230 | .118 | .034 | .215                            | .112 | .033 | .202 | .106 | .032 | .189 | .101 | .030 |   |
| 6.0  | .219                  | .110 | .031 | .212 | .107 | .031 | .199                            | .102 | .030 | .186 | .097 | .028 | .174 | .092 | .027 |   |
| 7.0  | .203                  | .100 | .028 | .196 | .098 | .028 | .184                            | .093 | .027 | .173 | .089 | .026 | .162 | .084 | .025 |   |
| 8.0  | .189                  | .092 | .026 | .183 | .090 | .025 | .172                            | .086 | .024 | .161 | .082 | .024 | .151 | .078 | .023 |   |
| 9.0  | .176                  | .085 | .024 | .171 | .083 | .023 | .160                            | .079 | .022 | .151 | .076 | .022 | .142 | .072 | .021 |   |
| 10.0 | .165                  | .079 | .022 | .160 | .077 | .022 | .151                            | .074 | .021 | .142 | .070 | .020 | .133 | .067 | .019 |   |

| rcc  | 80%                   |      |      | 70%  |      |      | 50%  |      |      | 30%  |      |      | 10%  |      |      | 0 |  |
|------|-----------------------|------|------|------|------|------|--|------|------|------|------|------|------|------|------|---|--|
| rw   | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |  |
| r fc | 20%                   |      |      | 20%  |      |      | 20%  |      |      | 20%  |      |      | 20%  |      |      | 0 |  |
| RCR  | RCR:Room Cavity Ratio |      |      |      |      |      | Ceiling Cavity Exitance Coefficients(CCEC) |      |      |      |      |      |      |      |      |   |  |
| 0.0  | .306                  | .306 | .306 | .261 | .261 | .261 | .178                                       | .178 | .178 | .102 | .102 | .102 | .033 | .033 | .033 |   |  |
| 1.0  | .299                  | .272 | .248 | .256 | .233 | .213 | .175                                       | .161 | .147 | .101 | .093 | .086 | .032 | .030 | .028 |   |  |
| 2.0  | .292                  | .249 | .212 | .250 | .214 | .184 | .172                                       | .148 | .128 | .099 | .086 | .075 | .032 | .028 | .024 |   |  |
| 3.0  | .285                  | .232 | .190 | .244 | .200 | .165 | .168                                       | .139 | .115 | .097 | .081 | .068 | .031 | .026 | .022 |   |  |
| 4.0  | .278                  | .219 | .175 | .238 | .190 | .152 | .164                                       | .132 | .107 | .095 | .077 | .063 | .030 | .025 | .021 |   |  |
| 5.0  | .270                  | .209 | .165 | .232 | .181 | .143 | .160                                       | .127 | .101 | .093 | .074 | .060 | .030 | .024 | .020 |   |  |
| 6.0  | .263                  | .201 | .157 | .226 | .175 | .137 | .156                                       | .122 | .097 | .091 | .072 | .058 | .029 | .023 | .019 |   |  |
| 7.0  | .256                  | .195 | .152 | .220 | .169 | .132 | .152                                       | .118 | .094 | .088 | .070 | .056 | .029 | .023 | .018 |   |  |
| 8.0  | .250                  | .189 | .148 | .215 | .164 | .129 | .149                                       | .115 | .091 | .087 | .068 | .054 | .028 | .022 | .018 |   |  |
| 9.0  | .244                  | .184 | .145 | .210 | .160 | .126 | .145                                       | .113 | .090 | .085 | .066 | .053 | .027 | .022 | .018 |   |  |
| 10.0 | .238                  | .180 | .142 | .205 | .157 | .124 | .142                                       | .110 | .088 | .083 | .065 | .053 | .027 | .021 | .017 |   |  |

Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2021年11月24日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.800 m  
Remarks:

# GONIOPHOTOMETERS SYSTEM TEST REPORT

## UGR Table

Report number:

|  |               |                  |      |      |                      |               |                |                         |      |      |  |
|--|---------------|------------------|------|------|----------------------|---------------|----------------|-------------------------|------|------|--|
| MANUFACTURER:                                      |               |                  |      |      |                      |               |                |                         |      |      |  |
| Address:   |               |                  |      |      |                      |               |                |                         |      |      |  |
| NAME: 36-RS-5050-12V-48Z-08-X-Y B                  |               |                  |      |      | TYPE: LED Strip      |               |                | WEIGHT:                 |      |      |  |
| SPECIFICATION: 5050/48D                            |               | CCT(K): 0        |      |      | DIMENSION: 1M*0.008M |               |                | SERIAL No.: 20211124015 |      |      |  |
| 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                                      | 5.5           | 6.9              | 5.9  | 7.3  | 7.8                  | 5.5           | 6.9            | 6.0                     | 7.3  | 7.8  |  |
|  | 7.3           | 8.5              | 7.8  | 9.0  | 9.6                  | 7.6           | 8.8            | 8.1                     | 9.3  | 9.9  |  |
|  | 7.9           | 9.1              | 8.4  | 9.6  | 10.2                 | 8.5           | 9.7            | 9.1                     | 10.3 | 10.8 |  |
|  | 8.1           | 9.3              | 8.7  | 9.8  | 10.4                 | 9.4           | 10.6           | 10.0                    | 11.1 | 11.7 |  |
|  | 8.2           | 9.3              | 8.8  | 9.8  | 10.5                 | 9.9           | 11.0           | 10.4                    | 11.5 | 12.1 |  |
|  | 8.4           | 9.4              | 8.9  | 10.0 | 10.6                 | 10.3          | 11.3           | 10.8                    | 11.9 | 12.5 |  |
| 4H   | 2H            | 6.3              | 7.5  | 6.8  | 8.0                  | 8.6           | 6.3            | 7.5                     | 6.8  | 8.0  |  |
|  | 3H            | 8.3              | 9.3  | 8.8  | 9.9                  | 10.5          | 8.5            | 9.6                     | 9.1  | 10.1 |  |
|  | 4H            | 9.0              | 10.0 | 9.6  | 10.6                 | 11.2          | 9.7            | 10.6                    | 10.2 | 11.2 |  |
|  | 6H            | 9.4              | 10.3 | 10.0 | 10.9                 | 11.6          | 10.7           | 11.6                    | 11.3 | 12.2 |  |
|  | 8H            | 9.6              | 10.4 | 10.2 | 11.0                 | 11.7          | 11.2           | 12.0                    | 11.8 | 12.6 |  |
|  | 12H           | 9.8              | 10.5 | 10.5 | 11.2                 | 11.9          | 11.7           | 12.4                    | 12.4 | 13.1 |  |
| 8H   | 4H            | 9.5              | 10.3 | 10.2 | 10.9                 | 11.6          | 10.1           | 10.9                    | 10.7 | 11.5 |  |
|  | 6H            | 10.2             | 10.9 | 10.9 | 11.5                 | 12.3          | 11.4           | 12.0                    | 12.0 | 12.7 |  |
|  | 8H            | 10.5             | 11.1 | 11.2 | 11.8                 | 12.6          | 12.0           | 12.6                    | 12.7 | 13.3 |  |
|  | 12H           | 10.9             | 11.4 | 11.6 | 12.1                 | 12.9          | 12.7           | 13.2                    | 13.4 | 13.9 |  |
| 12H  | 4H            | 9.6              | 10.3 | 10.3 | 11.0                 | 11.7          | 10.1           | 10.8                    | 10.7 | 11.5 |  |
|  | 6H            | 10.5             | 11.0 | 11.1 | 11.7                 | 12.5          | 11.5           | 12.1                    | 12.2 | 12.8 |  |
|  | 8H            | 10.9             | 11.4 | 11.6 | 12.1                 | 12.9          | 12.3           | 12.8                    | 13.0 | 13.5 |  |
| 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   | + 0.2 / - 0.6 |                  |      |      |                      | + 0.2 / - 0.5 |                |                         |      |      |  |

CIE Pub.117 Corrected 40.58 lm Total Lamp Luminous Flux.(8log(F/F0) = -11.1)

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021年11月24日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.800 m  
 Remarks:

## UTILIZATION FACTORS TABLE

Report number:

|                                   |           |                      |                         |
|-----------------------------------|-----------|----------------------|-------------------------|
| MANUFACTURER:                     |           |                      |                         |
| Address:                          |           |                      |                         |
| NAME: 36-RS-5050-12V-48Z-08-X-Y B |           | TYPE: LED Strip      | WEIGHT:                 |
| SPECIFICATION: 5050/48D           | CCT(K): 0 | DIMENSION: 1M*0.008M | SERIAL No.: 20211124015 |

| 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) $k(RI) \times RCR = 5$ |     |           |     |     |     |     |               |     |        |
| $k = 0.60$                       | 49  | 37  | 30        | 48  | 37  | 30  | 46  | 36            | 29  | 22     |
| 0.80                             | 59  | 47  | 39        | 57  | 46  | 38  | 55  | 44            | 37  | 29     |
| 1.00                             | 67  | 55  | 47        | 65  | 54  | 46  | 62  | 54            | 45  | 36     |
| 1.25                             | 74  | 63  | 55        | 72  | 61  | 54  | 68  | 59            | 52  | 42     |
| 1.50                             | 80  | 68  | 60        | 77  | 67  | 59  | 72  | 64            | 57  | 47     |
| 2.00                             | 87  | 77  | 69        | 84  | 75  | 68  | 79  | 71            | 65  | 54     |
| 2.50                             | 91  | 82  | 75        | 88  | 80  | 73  | 82  | 75            | 70  | 58     |
| 3.00                             | 95  | 87  | 80        | 92  | 84  | 78  | 85  | 79            | 74  | 62     |
| 4.00                             | 100   | 93  | 87        | 96  | 90  | 85  | 89  | 84            | 80  | 66     |
| 5.00                             | 102   | 96  | 91        | 99  | 93  | 89  | 91  | 87            | 84  | 69     |
| ROOM INDEX                       | UF(total)   |     |           |     |     |     |     |               |     | Direct |
| According to DIN EN 13032-2 2004 |   |     | Suspended |     |     |     |     | SHRNOM = 1.25 |     |        |

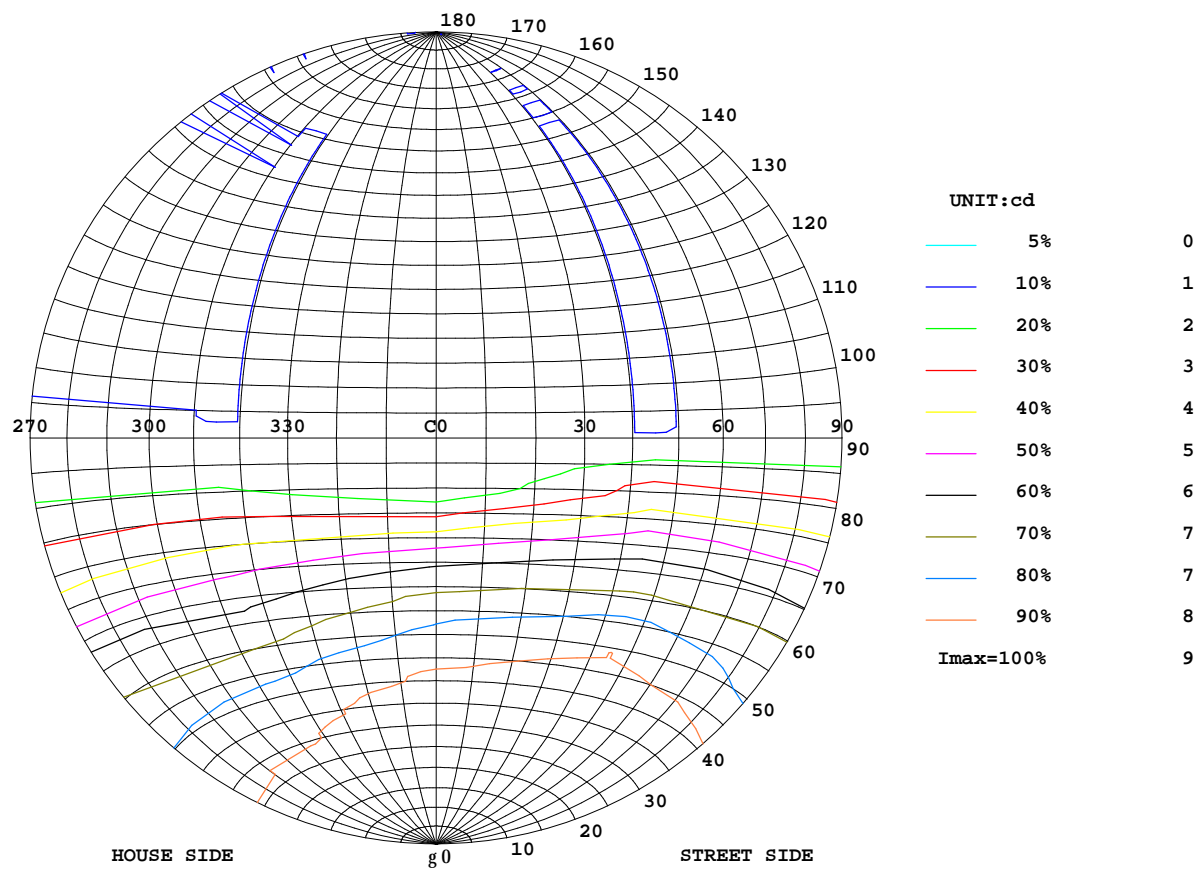
Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021年11月24日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.800 m  
 Remarks:

## ISOCANDELA DIAGRAM

Report number:

|                                   |           |                      |                         |
|-----------------------------------|-----------|----------------------|-------------------------|
| MANUFACTURER:                     |           |                      |                         |
| Address:                          |           |                      |                         |
| NAME: 36-RS-5050-12V-48Z-08-X-Y B |           | TYPE: LED Strip      | WEIGHT:                 |
| SPECIFICATION: 5050/48D           | CCT(K): 0 | DIMENSION: 1M*0.008M | SERIAL No.: 20211124015 |



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2021年11月24日

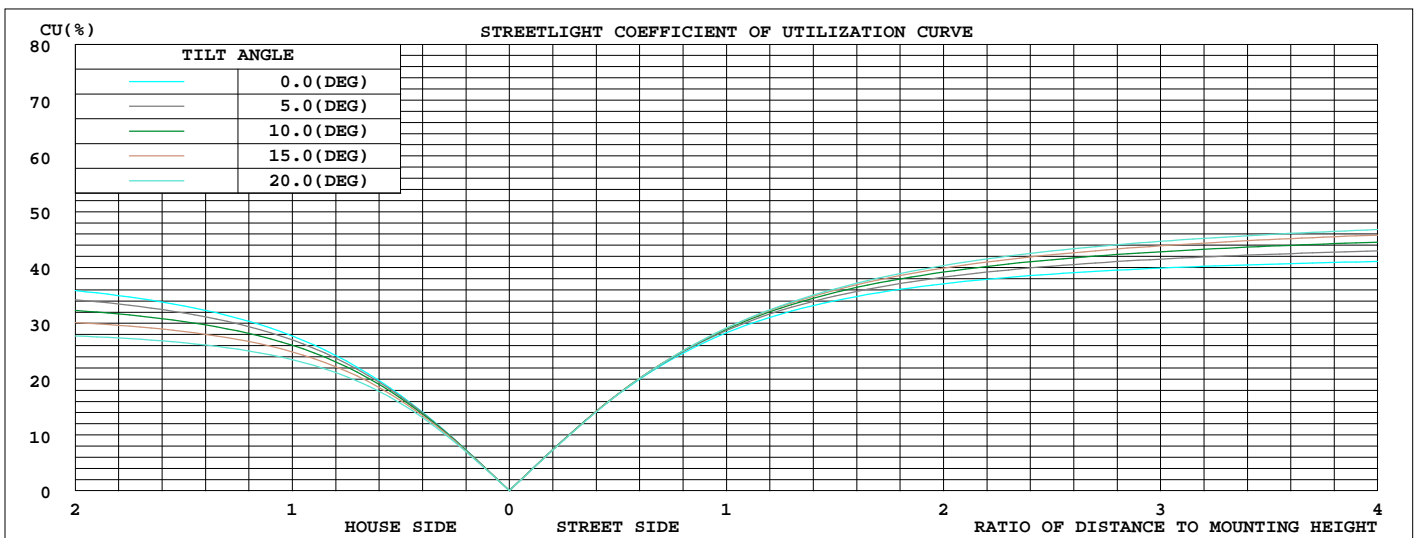
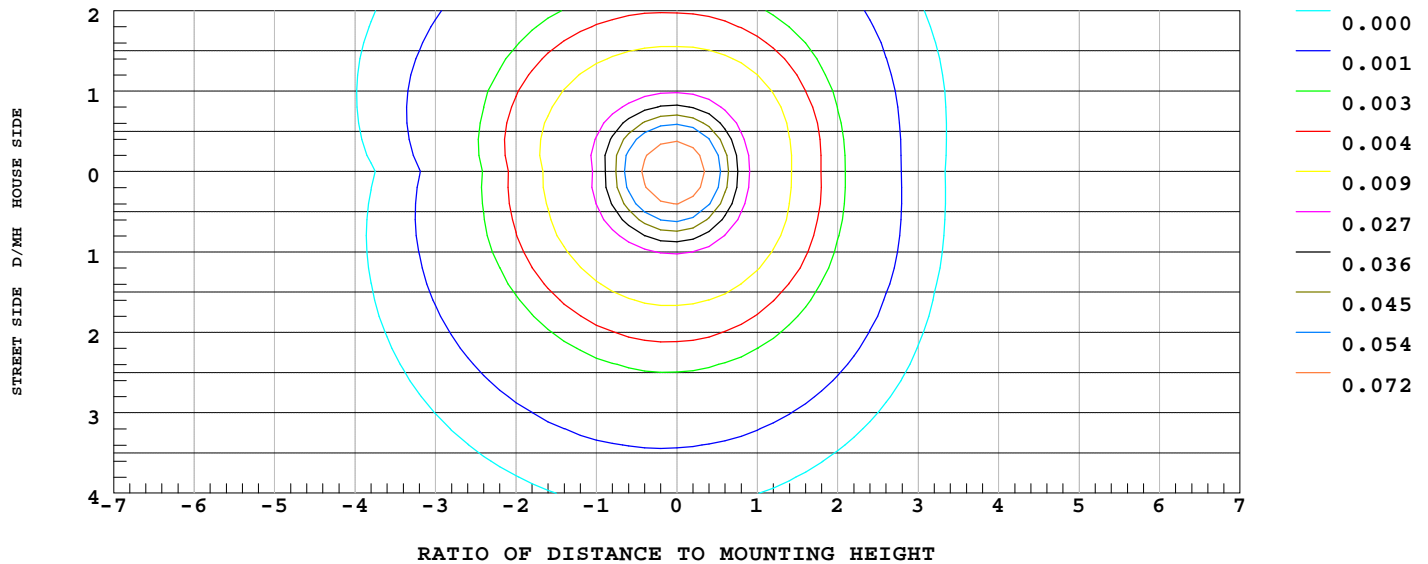
Test Set: 8.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.800 m  
Remarks:

## ISOLUX DIAGRAM

Report number:

|                                   |           |                      |                         |
|-----------------------------------|-----------|----------------------|-------------------------|
| MANUFACTURER:                     |           |                      |                         |
| Address:                          |           |                      |                         |
| NAME: 36-RS-5050-12V-48Z-08-X-Y B |           | TYPE: LED Strip      | WEIGHT:                 |
| SPECIFICATION: 5050/48D           | CCT(K): 0 | DIMENSION: 1M*0.008M | SERIAL No.: 20211124015 |

ILLUMINANCE AT MH=10 m, Enadir = 0.09 lx



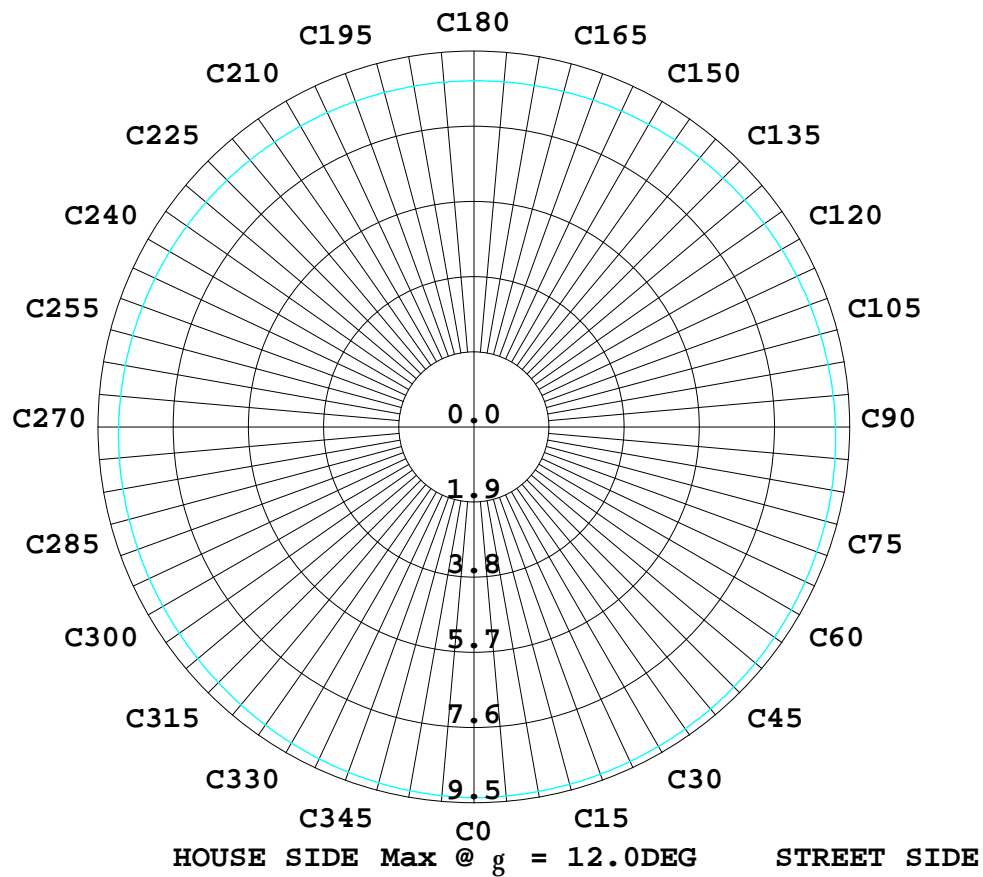
Test System: HOPOO HPG1800  
Temperature: 25.3 DEG  
Operators:  
Test Date: 2021年11月24日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
Humidity: 65.0%  
Test Distance: 8.800 m  
Remarks:

## ISOCANDELA DIAGRAM

Report number:

|                                   |           |                      |                         |
|-----------------------------------|-----------|----------------------|-------------------------|
| MANUFACTURER:                     |           |                      |                         |
| Address:                          |           |                      |                         |
| NAME: 36-RS-5050-12V-48Z-08-X-Y B |           | TYPE: LED Strip      | WEIGHT:                 |
| SPECIFICATION: 5050/48D           | CCT(K): 0 | DIMENSION: 1M*0.008M | SERIAL No.: 20211124015 |



Test System: HOPOO HPG1800  
Temperature: 25.3DEG  
Operators:  
Test Date: 2021年11月24日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
Humidity: 65.0%  
Test Distance: 8.800 m  
Remarks: