

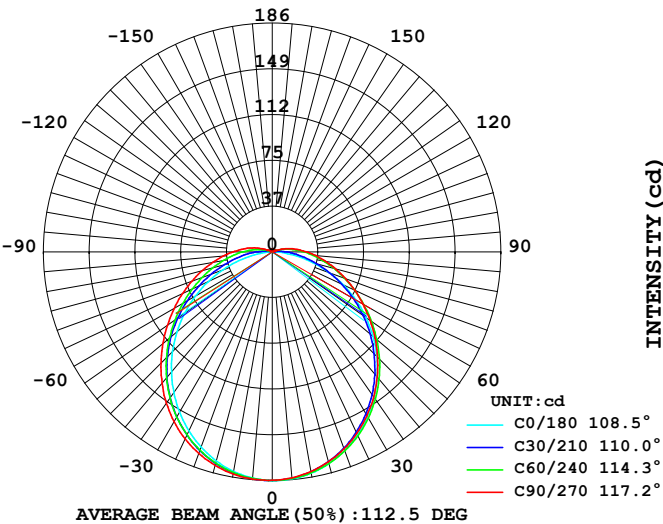
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

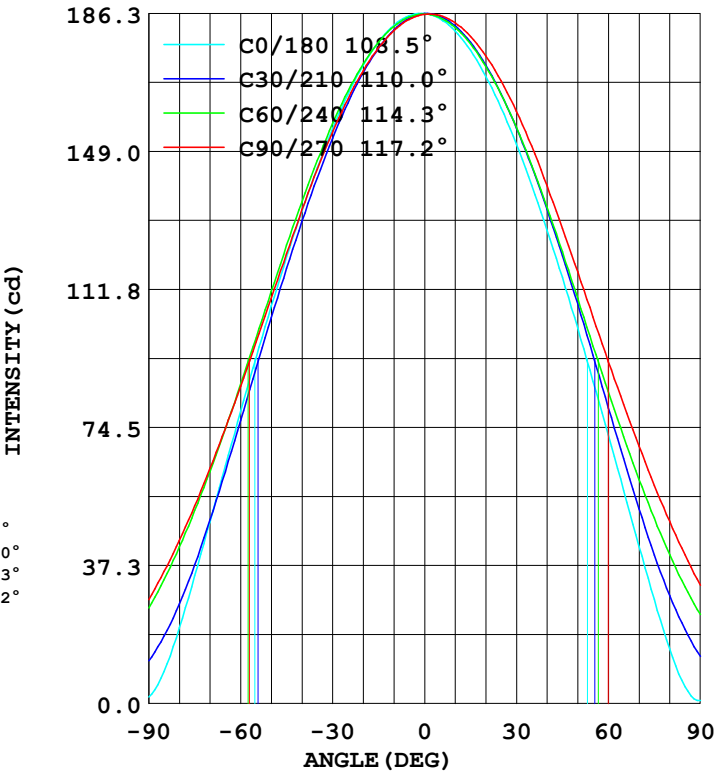
|                             |                              |             |
|-----------------------------|------------------------------|-------------|
| MANUFACTURER:               |                              |             |
| Address:                    |                              |             |
| NAME: 250mA 3000K with trim | TYPE:                        | WEIGHT:     |
| SPECIFICATION:              | DIMENSION: 0.265*0.135*0.118 | SERIAL No.: |

|                  |       |                    |        |                  |          |
|------------------|-------|--------------------|--------|------------------|----------|
| DATA OF LAMP     |       | Imax(cd)           | 186.2  | S/MH(C0/180)     | 1.24     |
| MODEL            |       | EFFICIENCY(%)      | 100.0  | S/MH(C90/270)    | 1.24     |
| NOMINAL POWER(W) | 8     | TOTAL FLUX(lm)     | 582.54 | Voltage(V)       | 229.5    |
| RATED VOLTAGE(V) | 230   | EFFICIENCY(lm/W)   | 71.6   | Current(A)       | 0.040    |
| NOMINAL FLUX(lm) | 582.5 | η up(%)            | 4.7    | Power(W)         | 8.139    |
| LAMPS QUANTITY   | 1     | η down(%)          | 95.3   | Power Factor(PF) | 0.884    |
| TEST VOLTAGE(V)  | 229.5 | Effective Flux(lm) | 558.9  | EEI              | 0.000(E) |

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



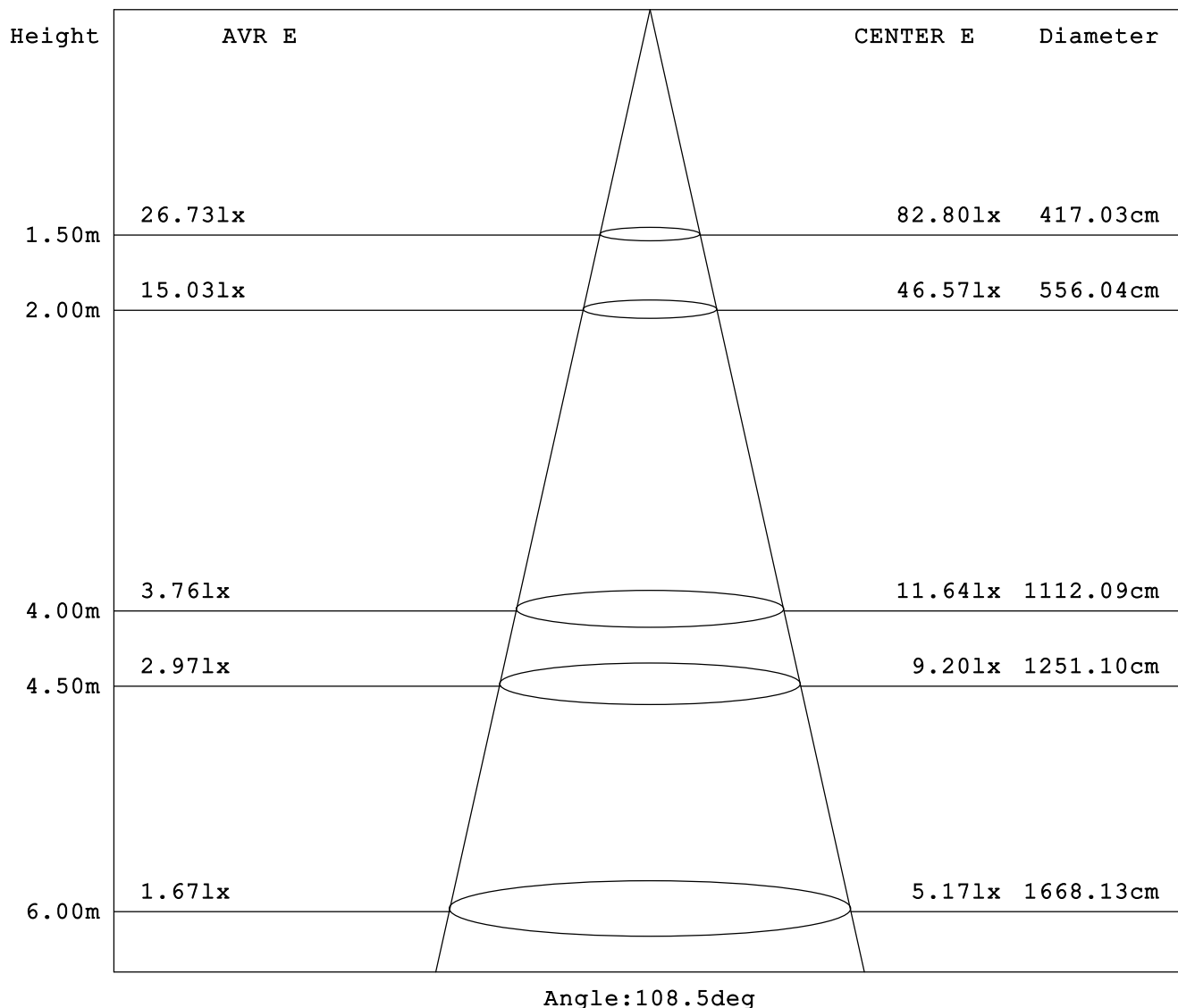
Test System:HopooColor HPG1800  
Temperature:25.3DEG  
Operators:W  
Test Date:2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.450 m  
Remarks:

### AVERAGE AND CENTER E Figure

Report number:

|                             |                              |             |
|-----------------------------|------------------------------|-------------|
| MANUFACTURER:               |                              |             |
| Address:                    |                              |             |
| NAME: 250mA 3000K with trim | TYPE:                        | WEIGHT:     |
| SPECIFICATION:              | DIMENSION: 0.265*0.135*0.118 | SERIAL No.: |



Test System: HopooColor HPG1800  
 Temperature: 25.3DEG  
 Operators: W  
 Test Date: 2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity: 65.0%  
 Test Distance: 8.450 m  
 Remarks:

ZONAL FLUX DIAGRAM

Report number:

|                             |                              |             |
|-----------------------------|------------------------------|-------------|
| MANUFACTURER:               |                              |             |
| Address:                    |                              |             |
| NAME: 250mA 3000K with trim | TYPE:                        | WEIGHT:     |
| SPECIFICATION:              | DIMENSION: 0.265*0.135*0.118 | SERIAL No.: |

| γ     | C0                    | C45   | C90   | C135  | C180  | C225  | C270  | C315  | γ       | Zone    | total |
|-------|-----------------------|-------|-------|-------|-------|-------|-------|-------|---------|---------|-------|
| 5.0   | 185.6                 | 185.1 | 184.6 | 184.6 | 184.8 | 185.3 | 185.7 | 185.3 | 0- 5    | 4.437   | 4.437 |
| 10.0  | 183.0                 | 182.2 | 181.5 | 181.5 | 181.5 | 182.6 | 183.7 | 182.9 | 5- 10   | 13.14   | 17.58 |
| 15.0  | 178.5                 | 177.6 | 177.0 | 176.7 | 176.2 | 178.2 | 180.0 | 178.8 | 10- 15  | 21.37   | 38.95 |
| 20.0  | 172.3                 | 171.4 | 170.7 | 170.2 | 169.2 | 172.1 | 174.8 | 172.9 | 15- 20  | 28.81   | 67.77 |
| 25.0  | 164.3                 | 163.6 | 163.0 | 162.1 | 160.7 | 164.4 | 168.0 | 165.4 | 20- 25  | 35.21   | 102.9 |
| 30.0  | 155.2                 | 154.5 | 154.3 | 153.0 | 151.0 | 155.4 | 159.7 | 156.6 | 25- 30  | 40.35   | 143.3 |
| 35.0  | 144.5                 | 144.1 | 144.1 | 142.4 | 139.8 | 145.1 | 150.4 | 146.5 | 30- 35  | 44.10   | 187.4 |
| 40.0  | 132.8                 | 132.7 | 133.2 | 130.9 | 127.6 | 133.6 | 139.7 | 135.2 | 35- 40  | 46.34   | 233.7 |
| 45.0  | 120.5                 | 120.5 | 121.4 | 118.5 | 115.0 | 121.3 | 128.1 | 123.1 | 40- 45  | 47.05   | 280.8 |
| 50.0  | 107.2                 | 107.6 | 109.3 | 105.6 | 101.3 | 108.6 | 116.5 | 110.4 | 45- 50  | 46.30   | 327.1 |
| 55.0  | 93.25                 | 94.57 | 97.60 | 92.50 | 86.96 | 95.25 | 104.3 | 97.21 | 50- 55  | 44.18   | 371.3 |
| 60.0  | 79.04                 | 81.39 | 85.68 | 79.36 | 72.54 | 82.00 | 92.25 | 84.07 | 55- 60  | 40.87   | 412.2 |
| 65.0  | 64.19                 | 68.36 | 74.18 | 66.44 | 57.47 | 69.08 | 80.75 | 71.15 | 60- 65  | 36.61   | 448.8 |
| 70.0  | 49.05                 | 56.12 | 63.54 | 54.33 | 42.41 | 56.51 | 69.47 | 58.65 | 65- 70  | 31.66   | 480.5 |
| 75.0  | 34.48                 | 44.80 | 53.33 | 43.23 | 28.13 | 45.05 | 58.83 | 47.12 | 70- 75  | 26.33   | 506.8 |
| 80.0  | 20.42                 | 34.55 | 43.98 | 33.20 | 14.70 | 34.70 | 49.19 | 36.66 | 75- 80  | 20.91   | 527.7 |
| 85.0  | 8.639                 | 25.81 | 35.62 | 24.74 | 4.569 | 25.74 | 40.12 | 27.48 | 80- 85  | 15.84   | 543.5 |
| 90.0  | 1.785                 | 18.63 | 28.06 | 17.81 | 0.785 | 18.38 | 31.91 | 19.88 | 85- 90  | 11.49   | 555.0 |
| 95.0  | 1.142                 | 12.92 | 21.49 | 12.35 | 0.857 | 12.63 | 24.99 | 13.92 | 90- 95  | 8.251   | 563.3 |
| 100.0 | 1.142                 | 8.354 | 15.92 | 7.925 | 0.928 | 7.711 | 18.77 | 8.711 | 95-100  | 5.737   | 569.0 |
| 105.0 | 1.142                 | 4.819 | 9.924 | 4.534 | 1.000 | 3.998 | 12.28 | 4.605 | 100-105 | 3.597   | 572.6 |
| 110.0 | 1.213                 | 2.463 | 4.069 | 2.391 | 1.142 | 2.249 | 6.354 | 2.463 | 105-110 | 1.931   | 574.6 |
| 115.0 | 1.285                 | 1.856 | 2.713 | 1.856 | 1.285 | 1.785 | 3.498 | 1.856 | 110-115 | 1.126   | 575.7 |
| 120.0 | 1.356                 | 1.606 | 2.070 | 1.677 | 1.428 | 1.606 | 2.499 | 1.642 | 115-120 | 0.881   | 576.6 |
| 125.0 | 1.428                 | 1.606 | 1.713 | 1.606 | 1.499 | 1.606 | 1.999 | 1.606 | 120-125 | 0.761   | 577.3 |
| 130.0 | 1.570                 | 1.677 | 1.713 | 1.713 | 1.642 | 1.713 | 1.856 | 1.677 | 125-130 | 0.718   | 578.1 |
| 135.0 | 1.642                 | 1.749 | 1.785 | 1.749 | 1.713 | 1.785 | 1.927 | 1.785 | 130-135 | 0.701   | 578.8 |
| 140.0 | 1.785                 | 1.820 | 1.856 | 1.892 | 1.856 | 1.892 | 1.999 | 1.892 | 135-140 | 0.677   | 579.4 |
| 145.0 | 1.856                 | 1.927 | 1.999 | 1.963 | 1.999 | 1.999 | 2.070 | 1.999 | 140-145 | 0.641   | 580.1 |
| 150.0 | 1.927                 | 1.999 | 2.070 | 2.034 | 2.070 | 2.070 | 2.142 | 2.070 | 145-150 | 0.590   | 580.7 |
| 155.0 | 1.999                 | 2.070 | 2.070 | 2.070 | 2.142 | 2.177 | 2.213 | 2.142 | 150-155 | 0.528   | 581.2 |
| 160.0 | 2.070                 | 2.142 | 2.142 | 2.142 | 2.213 | 2.213 | 2.213 | 2.213 | 155-160 | 0.451   | 581.6 |
| 165.0 | 2.142                 | 2.213 | 2.213 | 2.213 | 2.284 | 2.284 | 2.284 | 2.284 | 160-165 | 0.363   | 582.0 |
| 170.0 | 2.213                 | 2.249 | 2.284 | 2.284 | 2.356 | 2.284 | 2.356 | 2.320 | 165-170 | 0.268   | 582.3 |
| 175.0 | 2.284                 | 2.284 | 2.284 | 2.284 | 2.356 | 2.320 | 2.356 | 2.356 | 170-175 | 0.165   | 582.4 |
| 180.0 | 2.356                 | 2.320 | 2.356 | 2.356 | 2.356 | 2.320 | 2.356 | 2.356 | 175-180 | 0.056   | 582.5 |
| DEG   | LUMINOUS INTENSITY:cd |       |       |       |       |       |       |       |         | UNIT:lm |       |

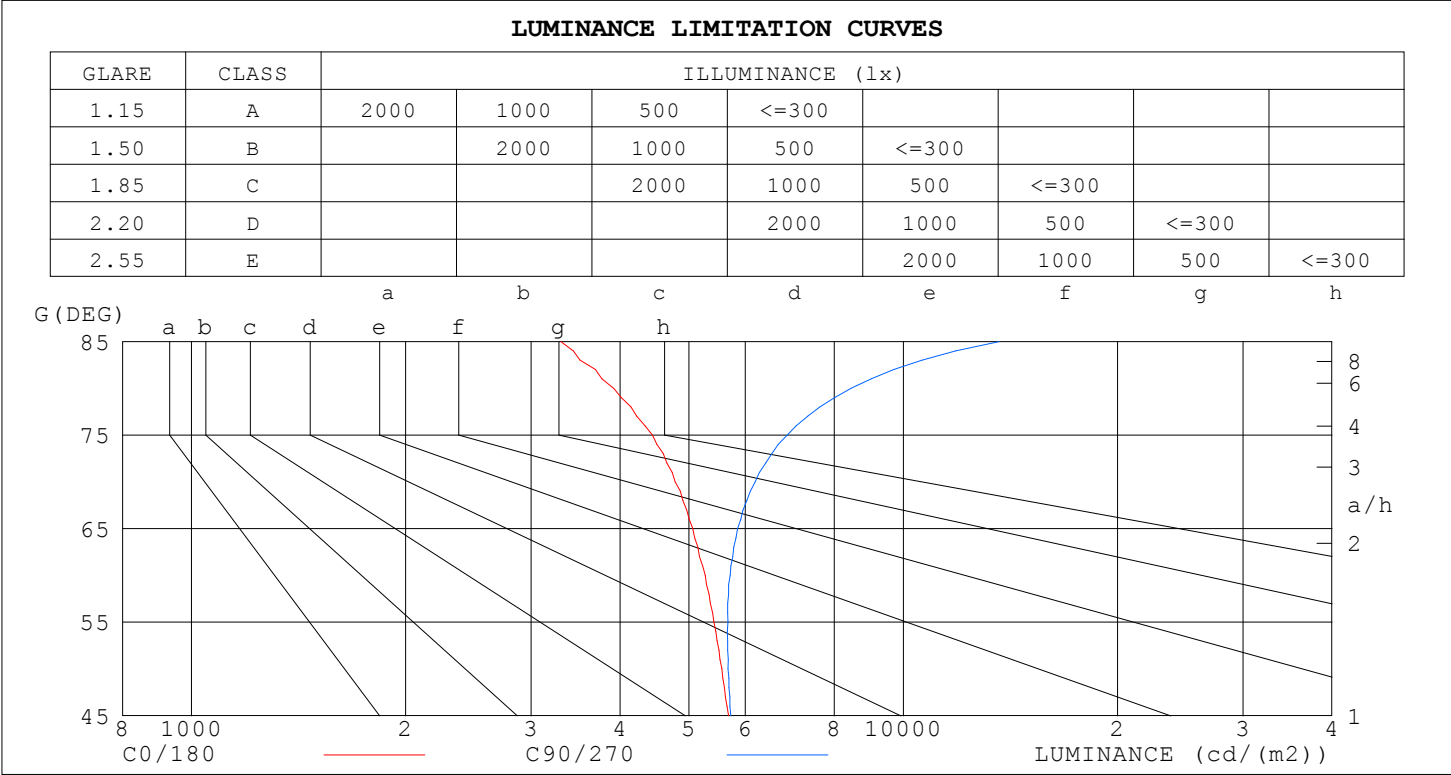
Test System:HopooColor HPG1800  
Temperature:25.3DEG  
Operators:W  
Test Date:2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.450 m  
Remarks:

LUMINANCE LIMITATION CURVES

Report number:

|                             |  |                              |  |             |  |
|-----------------------------|--|------------------------------|--|-------------|--|
| MANUFACTURER:               |  |                              |  |             |  |
| Address:                    |  |                              |  |             |  |
| NAME: 250mA 3000K with trim |  | TYPE:                        |  | WEIGHT:     |  |
| SPECIFICATION:              |  | DIMENSION: 0.265*0.135*0.118 |  | SERIAL No.: |  |



| LUMINANCE cd/m2 |        |         |
|-----------------|--------|---------|
| G (DEG)         | C0/180 | C90/270 |
| 85              | 3304   | 13627   |
| 80              | 3920   | 8443    |
| 75              | 4442   | 6869    |
| 70              | 4781   | 6193    |
| 65              | 5063   | 5851    |
| 60              | 5270   | 5712    |
| 55              | 5419   | 5672    |
| 50              | 5562   | 5673    |
| 45              | 5685   | 5725    |

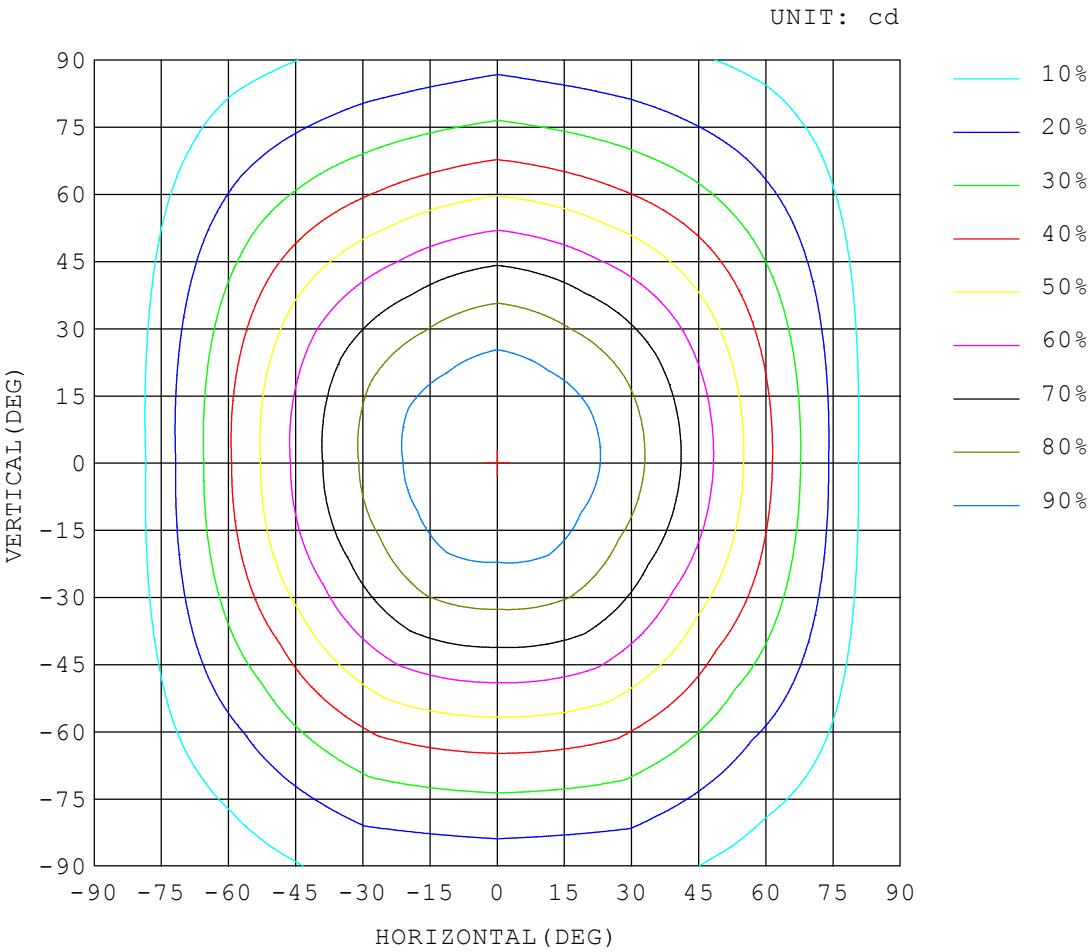
Test System:HopooColor HPG1800  
Temperature:25.3DEG  
Operators:W  
Test Date:2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.450 m  
Remarks:

ISOCANDELA DIAGRAM

Report number:

|                             |                              |             |
|-----------------------------|------------------------------|-------------|
| MANUFACTURER:               |                              |             |
| Address:                    |                              |             |
| NAME: 250mA 3000K with trim | TYPE:                        | WEIGHT:     |
| SPECIFICATION:              | DIMENSION: 0.265*0.135*0.118 | SERIAL No.: |



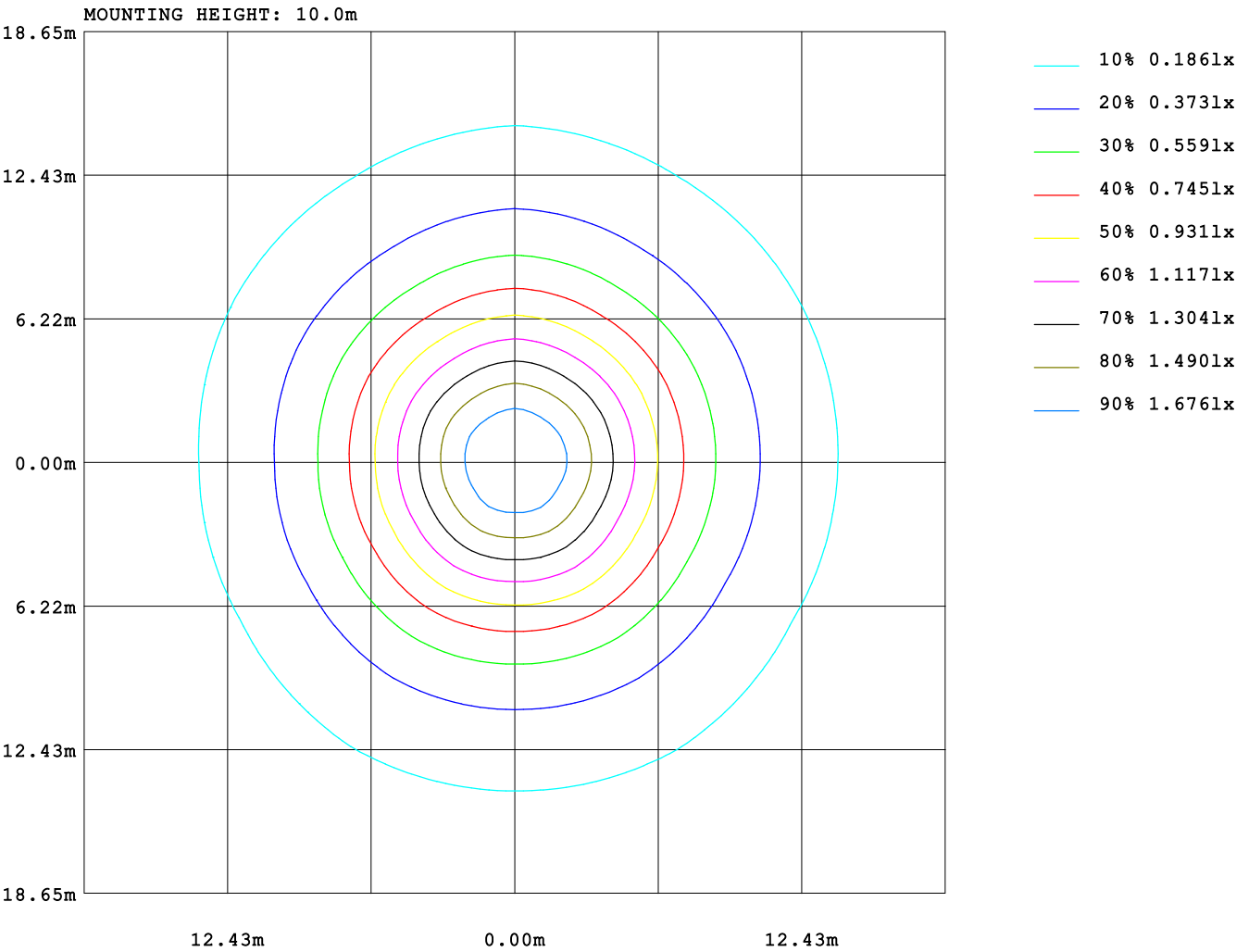
Test System:HopooColor HPG1800  
Temperature:25.3DEG  
Operators:W  
Test Date:2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.450 m  
Remarks:

ISOLUX DIAGRAM

Report number:

|                             |                              |             |
|-----------------------------|------------------------------|-------------|
| MANUFACTURER:               |                              |             |
| Address:                    |                              |             |
| NAME: 250mA 3000K with trim | TYPE:                        | WEIGHT:     |
| SPECIFICATION:              | DIMENSION: 0.265*0.135*0.118 | SERIAL No.: |



Test System:HopooColor HPG1800  
Temperature:25.3DEG  
Operators:W  
Test Date:2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.450 m  
Remarks:

AREA LUMINOUS FLUX

Report number:

|                             |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |             |  |  |  |  |  |
|-----------------------------|--|--|--|--|--|--|--|--|------------------------------|--|--|--|--|--|-------------|--|--|--|--|--|
| MANUFACTURER:               |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |             |  |  |  |  |  |
| Address:                    |  |  |  |  |  |  |  |  |                              |  |  |  |  |  |             |  |  |  |  |  |
| NAME: 250mA 3000K with trim |  |  |  |  |  |  |  |  | TYPE:                        |  |  |  |  |  | WEIGHT:     |  |  |  |  |  |
| SPECIFICATION:              |  |  |  |  |  |  |  |  | DIMENSION: 0.265*0.135*0.118 |  |  |  |  |  | SERIAL No.: |  |  |  |  |  |

| VERTICAL (DEG) | AREA FLUX DIAGRAM |      |      |      |      |      |      |      |                  |      |      |      |      |      |      |      |      |      | UNIT:lm |      |  | Φ t | Φ a |
|----------------|-------------------|------|------|------|------|------|------|------|------------------|------|------|------|------|------|------|------|------|------|---------|------|--|-----|-----|
|                | 0.01              | 0.06 | 0.17 | 0.33 | 0.51 | 0.70 | 0.89 | 1.04 | 1.17             | 1.18 | 1.06 | 0.92 | 0.74 | 0.54 | 0.36 | 0.20 | 0.08 | 0.01 | 10.0    | 9.24 |  |     |     |
| 90             |                   |      |      |      |      |      |      |      |                  |      |      |      |      |      |      |      |      |      |         |      |  |     |     |
| 80             | 0.01              | 0.09 | 0.25 | 0.49 | 0.77 | 1.05 | 1.33 | 1.56 | 1.73             | 1.74 | 1.58 | 1.37 | 1.10 | 0.81 | 0.53 | 0.29 | 0.11 | 0.02 | 14.8    | 14.5 |  |     |     |
| 70             | 0.01              | 0.11 | 0.34 | 0.68 | 1.07 | 1.47 | 1.85 | 2.17 | 2.39             | 2.39 | 2.19 | 1.88 | 1.52 | 1.11 | 0.72 | 0.39 | 0.14 | 0.02 | 20.5    | 20.3 |  |     |     |
| 60             | 0.02              | 0.15 | 0.44 | 0.88 | 1.40 | 1.93 | 2.41 | 2.82 | 3.09             | 3.10 | 2.85 | 2.45 | 1.98 | 1.45 | 0.93 | 0.49 | 0.18 | 0.02 | 26.6    | 26.5 |  |     |     |
| 50             | 0.02              | 0.18 | 0.54 | 1.08 | 1.73 | 2.39 | 2.99 | 3.49 | 3.81             | 3.82 | 3.52 | 3.03 | 2.44 | 1.78 | 1.14 | 0.60 | 0.21 | 0.03 | 32.8    | 32.7 |  |     |     |
| 40             | 0.02              | 0.20 | 0.63 | 1.26 | 2.04 | 2.83 | 3.54 | 4.11 | 4.48             | 4.49 | 4.13 | 3.58 | 2.88 | 2.09 | 1.33 | 0.69 | 0.24 | 0.03 | 38.6    | 38.5 |  |     |     |
| 30             | 0.02              | 0.22 | 0.70 | 1.40 | 2.27 | 3.19 | 4.00 | 4.62 | 5.01             | 5.02 | 4.65 | 4.04 | 3.24 | 2.34 | 1.48 | 0.76 | 0.27 | 0.03 | 43.3    | 43.2 |  |     |     |
|                | 0.02              | 0.23 | 0.74 | 1.49 | 2.42 | 3.41 | 4.32 | 4.99 | 5.38             | 5.38 | 5.02 | 4.36 | 3.48 | 2.51 | 1.58 | 0.81 | 0.28 | 0.03 | 46.5    | 46.4 |  |     |     |
|                | 0.02              | 0.24 | 0.75 | 1.53 | 2.48 | 3.49 | 4.43 | 5.17 | 5.57             | 5.58 | 5.21 | 4.51 | 3.59 | 2.58 | 1.63 | 0.83 | 0.29 | 0.03 | 47.9    | 47.9 |  |     |     |
|                | 0.02              | 0.23 | 0.75 | 1.51 | 2.46 | 3.46 | 4.39 | 5.12 | 5.54             | 5.56 | 5.17 | 4.47 | 3.56 | 2.56 | 1.62 | 0.83 | 0.28 | 0.03 | 47.6    | 47.5 |  |     |     |
|                | 0.02              | 0.23 | 0.72 | 1.46 | 2.36 | 3.31 | 4.21 | 4.93 | 5.33             | 5.34 | 4.97 | 4.26 | 3.39 | 2.45 | 1.54 | 0.80 | 0.27 | 0.03 | 45.6    | 45.6 |  |     |     |
| -30            | 0.02              | 0.21 | 0.67 | 1.34 | 2.17 | 3.06 | 3.91 | 4.59 | 4.92             | 4.93 | 4.62 | 3.96 | 3.12 | 2.24 | 1.42 | 0.73 | 0.26 | 0.03 | 42.2    | 42.2 |  |     |     |
| -40            | 0.02              | 0.19 | 0.59 | 1.18 | 1.91 | 2.73 | 3.50 | 4.07 | 4.34             | 4.35 | 4.11 | 3.54 | 2.78 | 1.98 | 1.25 | 0.65 | 0.23 | 0.03 | 37.5    | 37.4 |  |     |     |
| -50            | 0.02              | 0.16 | 0.50 | 1.00 | 1.63 | 2.33 | 2.98 | 3.43 | 3.66             | 3.67 | 3.46 | 3.02 | 2.38 | 1.68 | 1.05 | 0.55 | 0.20 | 0.03 | 31.7    | 31.6 |  |     |     |
| -60            | 0.01              | 0.13 | 0.40 | 0.80 | 1.32 | 1.89 | 2.41 | 2.76 | 2.93             | 2.94 | 2.78 | 2.45 | 1.93 | 1.36 | 0.84 | 0.44 | 0.16 | 0.02 | 25.6    | 25.4 |  |     |     |
| -70            | 0.01              | 0.10 | 0.30 | 0.61 | 1.01 | 1.45 | 1.85 | 2.09 | 2.23             | 2.24 | 2.11 | 1.88 | 1.49 | 1.05 | 0.64 | 0.34 | 0.13 | 0.02 | 19.6    | 19.3 |  |     |     |
| -80            | 0.01              | 0.07 | 0.22 | 0.44 | 0.73 | 1.05 | 1.33 | 1.50 | 1.60             | 1.60 | 1.51 | 1.36 | 1.08 | 0.76 | 0.46 | 0.24 | 0.09 | 0.01 | 14.1    | 13.6 |  |     |     |
| -90            | 0.01              | 0.05 | 0.14 | 0.29 | 0.49 | 0.71 | 0.90 | 1.00 | 1.06             | 1.07 | 1.01 | 0.91 | 0.74 | 0.51 | 0.31 | 0.16 | 0.06 | 0.01 | 9.44    | 8.55 |  |     |     |
|                | -90               | -80  | -70  | -60  | -50  | -40  | -30  | -20  | HORIZONTAL (DEG) |      |      |      | 20   | 30   | 40   | 50   | 60   | 70   | 80      | 90   |  |     |     |
| Φ t            | 0.30              | 2.87 | 8.88 | 17.8 | 28.8 | 40.5 | 51.3 | 59.5 | 64.3             | 64.4 | 60.0 | 52.0 | 41.5 | 29.8 | 18.8 | 9.80 | 3.47 | 0.46 | 583     |      |  |     |     |
| Φ a            | 0.00              | 2.06 | 8.30 | 17.4 | 28.7 | 40.5 | 51.3 | 59.5 | 64.3             | 64.4 | 60.0 | 52.0 | 41.5 | 29.8 | 18.6 | 9.32 | 2.86 | 0.04 |         | 559  |  |     |     |

Test System:HopooColor HPG1800  
Temperature:25.3DEG  
Operators:W  
Test Date:2023年06月16日

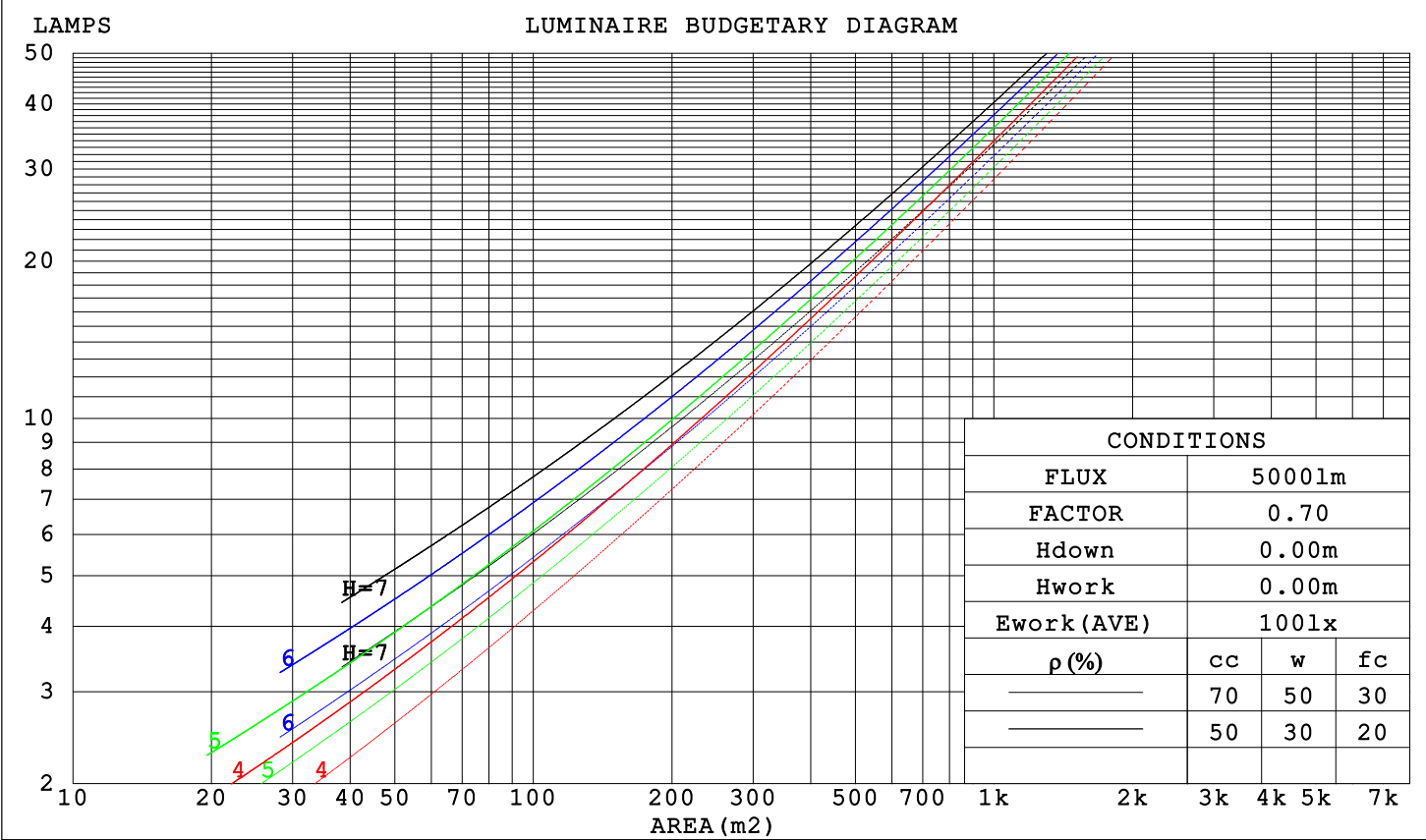
Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.450 m  
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

|                             |  |  |  |  |  |  |  |                              |  |  |  |             |  |  |  |
|-----------------------------|--|--|--|--|--|--|--|------------------------------|--|--|--|-------------|--|--|--|
| MANUFACTURER:               |  |  |  |  |  |  |  |                              |  |  |  |             |  |  |  |
| Address:                    |  |  |  |  |  |  |  |                              |  |  |  |             |  |  |  |
| NAME: 250mA 3000K with trim |  |  |  |  |  |  |  | TYPE:                        |  |  |  | WEIGHT:     |  |  |  |
| SPECIFICATION:              |  |  |  |  |  |  |  | DIMENSION: 0.265*0.135*0.118 |  |  |  | SERIAL No.: |  |  |  |

|     |                       |     |     |     |     |     |     |     |     |     |     |     |     |     |     |   |
|-----|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|
| pcc | 80%                   |     |     | 70% |     |     | 50% |     |     | 30% |     |     | 10% |     |     | 0 |
| pw  | 50%                   | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| pfc | 20%                   |     |     | 20% |     |     | 20% |     |     | 20% |     |     | 20% |     |     | 0 |
| RCR | RCR:Room Cavity Ratio |     |     |     |     |     |     |     |     |     |     |     |     |     |     |   |



Test System:HopooColor HPG1800  
Temperature:25.3DEG  
Operators:W  
Test Date:2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.450 m  
Remarks:



### WEC AND CCEC

Report number:

|                             |  |  |  |  |  |  |  |                              |  |  |  |             |  |  |  |
|-----------------------------|--|--|--|--|--|--|--|------------------------------|--|--|--|-------------|--|--|--|
| MANUFACTURER:               |  |  |  |  |  |  |  |                              |  |  |  |             |  |  |  |
| Address:                    |  |  |  |  |  |  |  |                              |  |  |  |             |  |  |  |
| NAME: 250mA 3000K with trim |  |  |  |  |  |  |  | TYPE:                        |  |  |  | WEIGHT:     |  |  |  |
| SPECIFICATION:              |  |  |  |  |  |  |  | DIMENSION: 0.265*0.135*0.118 |  |  |  | SERIAL No.: |  |  |  |

|                 |                       |      |      |      |      |      |                                  |      |      |      |      |      |      |      |      |   |
|-----------------|-----------------------|------|------|------|------|------|----------------------------------|------|------|------|------|------|------|------|------|---|
| pcc             | 80%                   |      |      | 70%  |      |      | 50%                              |      |      | 30%  |      |      | 10%  |      |      | 0 |
| pw              | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%                              | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |
| pf <sub>c</sub> | 20%                   |      |      | 20%  |      |      | 20%                              |      |      | 20%  |      |      | 20%  |      |      | 0 |
| RCR             | RCR:Room Cavity Ratio |      |      |      |      |      | Wall Exitance Coefficients (WEC) |      |      |      |      |      |      |      |      |   |
| 0.0             |                       |      |      |      |      |      |                                  |      |      |      |      |      |      |      |      |   |
| 1.0             | .344                  | .196 | .062 | .336 | .191 | .061 | .319                             | .183 | .059 | .305 | .176 | .056 | .291 | .169 | .054 |   |
| 2.0             | .310                  | .170 | .052 | .302 | .167 | .051 | .288                             | .160 | .050 | .275 | .154 | .048 | .262 | .148 | .047 |   |
| 3.0             | .281                  | .150 | .045 | .274 | .147 | .044 | .261                             | .142 | .043 | .250 | .137 | .042 | .239 | .132 | .041 |   |
| 4.0             | .256                  | .133 | .039 | .250 | .131 | .039 | .239                             | .127 | .038 | .228 | .123 | .037 | .218 | .119 | .036 |   |
| 5.0             | .235                  | .120 | .035 | .230 | .118 | .034 | .220                             | .114 | .034 | .210 | .111 | .033 | .201 | .107 | .032 |   |
| 6.0             | .217                  | .109 | .031 | .212 | .107 | .031 | .203                             | .104 | .030 | .194 | .101 | .030 | .186 | .098 | .029 |   |
| 7.0             | .201                  | .099 | .028 | .197 | .098 | .028 | .189                             | .095 | .027 | .181 | .093 | .027 | .173 | .090 | .026 |   |
| 8.0             | .187                  | .092 | .026 | .183 | .090 | .026 | .176                             | .088 | .025 | .169 | .086 | .025 | .162 | .083 | .024 |   |
| 9.0             | .175                  | .085 | .024 | .172 | .084 | .023 | .165                             | .081 | .023 | .158 | .079 | .023 | .152 | .077 | .022 |   |
| 10.0            | .164                  | .079 | .022 | .161 | .078 | .022 | .155                             | .076 | .021 | .149 | .074 | .021 | .144 | .072 | .021 |   |

| pcc             | 80%                   |      |      | 70%  |      |      | 50%   |      |      | 30%  |      |      | 10%  |      |      | 0 |
|-----------------|-----------------------|------|------|------|------|------|---|------|------|------|------|------|------|------|------|---|
| pw              | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |
| pf <sub>c</sub> | 20%                   |      |      | 20%  |      |      | 20%   |      |      | 20%  |      |      | 20%  |      |      | 0 |
| RCR             | RCR:Room Cavity Ratio |      |      |      |      |      | Ceiling Cavity Exitance Coefficients (CCEC) |      |      |      |      |      |      |      |      |   |
| 0.0             | .226                  | .226 | .226 | .193 | .193 | .193 | .132  | .132 | .132 | .076 | .076 | .076 | .024 | .024 | .024 |   |
| 1.0             | .219                  | .192 | .168 | .187 | .165 | .144 | .128  | .113 | .100 | .074 | .066 | .058 | .024 | .021 | .019 |   |
| 2.0             | .211                  | .168 | .132 | .181 | .145 | .114 | .124  | .100 | .080 | .071 | .058 | .047 | .023 | .019 | .015 |   |
| 3.0             | .203                  | .151 | .109 | .174 | .130 | .095 | .120  | .090 | .067 | .069 | .053 | .039 | .022 | .017 | .013 |   |
| 4.0             | .195                  | .138 | .094 | .168 | .119 | .082 | .115  | .083 | .058 | .067 | .049 | .034 | .021 | .016 | .011 |   |
| 5.0             | .188                  | .128 | .083 | .161 | .110 | .073 | .111  | .077 | .051 | .064 | .045 | .030 | .021 | .015 | .010 |   |
| 6.0             | .180                  | .119 | .076 | .155 | .103 | .066 | .107  | .072 | .047 | .062 | .043 | .028 | .020 | .014 | .009 |   |
| 7.0             | .173                  | .113 | .070 | .149 | .098 | .061 | .103  | .068 | .043 | .060 | .040 | .026 | .019 | .013 | .009 |   |
| 8.0             | .167                  | .107 | .066 | .144 | .093 | .057 | .099  | .065 | .041 | .058 | .038 | .024 | .019 | .013 | .008 |   |
| 9.0             | .161                  | .102 | .062 | .138 | .088 | .054 | .096  | .062 | .039 | .056 | .037 | .023 | .018 | .012 | .008 |   |
| 10.0            | .155                  | .098 | .060 | .134 | .085 | .052 | .093  | .060 | .037 | .054 | .035 | .022 | .018 | .012 | .007 |   |

Test System:HopooColor HPG1800  
Temperature:25.3DEG  
Operators:W  
Test Date:2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.450 m  
Remarks:

### Uncorrected UGR Table

Report number:

|  |               |                  |      |      |                              |               |                |             |      |      |      |
|--|---------------|------------------|------|------|------------------------------|---------------|----------------|-------------|------|------|------|
| MANUFACTURER:                                      |               |                  |      |      |                              |               |                |             |      |      |      |
| Address:   |               |                  |      |      |                              |               |                |             |      |      |      |
| NAME: 250mA 3000K with trim                        |               |                  |      |      | TYPE:                        |               |                | WEIGHT:     |      |      |      |
| SPECIFICATION:                                     |               |                  |      |      | DIMENSION: 0.265*0.135*0.118 |               |                | 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                                      | 18.1          | 19.6             | 18.5 | 19.9 | 20.2                         | 18.7          | 20.2           | 19.0        | 20.4 | 20.7 |      |
|  | 19.7          | 21.0             | 20.0 | 21.4 | 21.7                         | 20.6          | 22.0           | 21.0        | 22.3 | 22.6 |      |
|  | 20.3          | 21.6             | 20.7 | 21.9 | 22.3                         | 21.6          | 22.9           | 22.0        | 23.3 | 23.6 |      |
|  | 20.7          | 22.0             | 21.1 | 22.3 | 22.7                         | 22.7          | 23.9           | 23.1        | 24.3 | 24.7 |      |
|  | 20.9          | 22.1             | 21.3 | 22.4 | 22.8                         | 23.2          | 24.4           | 23.7        | 24.8 | 25.2 |      |
|  | 21.0          | 22.1             | 21.4 | 22.5 | 22.9                         | 23.9          | 25.1           | 24.3        | 25.4 | 25.8 |      |
| 4H   | 2H            | 18.8             | 20.1 | 19.2 | 20.5                         | 20.8          | 19.2           | 20.6        | 19.6 | 20.9 | 21.3 |
|  | 3H            | 20.5             | 21.7 | 20.9 | 22.1                         | 22.5          | 21.4           | 22.6        | 21.9 | 23.0 | 23.4 |
|  | 4H            | 21.3             | 22.3 | 21.7 | 22.7                         | 23.2          | 22.6           | 23.7        | 23.1 | 24.1 | 24.5 |
|  | 6H            | 21.9             | 22.8 | 22.4 | 23.3                         | 23.7          | 23.9           | 24.9        | 24.4 | 25.3 | 25.8 |
|  | 8H            | 22.1             | 23.0 | 22.6 | 23.4                         | 23.9          | 24.6           | 25.5        | 25.1 | 25.9 | 26.4 |
|  | 12H           | 22.3             | 23.1 | 22.8 | 23.5                         | 24.1          | 25.4           | 26.2        | 25.9 | 26.6 | 27.2 |
| 8H   | 4H            | 21.8             | 22.7 | 22.3 | 23.1                         | 23.6          | 23.0           | 23.8        | 23.4 | 24.3 | 24.8 |
|  | 6H            | 22.6             | 23.3 | 23.1 | 23.8                         | 24.4          | 24.5           | 25.3        | 25.0 | 25.7 | 26.3 |
|  | 8H            | 23.0             | 23.6 | 23.5 | 24.1                         | 24.7          | 25.4           | 26.1        | 25.9 | 26.6 | 27.1 |
|  | 12H           | 23.2             | 23.8 | 23.8 | 24.3                         | 24.9          | 26.4           | 27.0        | 26.9 | 27.5 | 28.1 |
| 12H  | 4H            | 21.9             | 22.7 | 22.4 | 23.2                         | 23.7          | 23.0           | 23.8        | 23.5 | 24.3 | 24.8 |
|  | 6H            | 22.9             | 23.5 | 23.4 | 24.0                         | 24.6          | 24.6           | 25.3        | 25.1 | 25.8 | 26.3 |
|  | 8H            | 23.3             | 23.9 | 23.9 | 24.4                         | 25.0          | 25.6           | 26.2        | 26.1 | 26.7 | 27.3 |
| Variations with the observer position at spacings: |               |                  |      |      |                              |               |                |             |      |      |      |
| S = 1.0H   | + 0.1 / - 0.2 |                  |      |      |                              | + 0.1 / - 0.1 |                |             |      |      |      |
| 1.5H   | + 0.1 / - 0.3 |                  |      |      |                              | + 0.2 / - 0.3 |                |             |      |      |      |
| 2.0H   | + 0.1 / - 0.3 |                  |      |      |                              | + 0.2 / - 0.3 |                |             |      |      |      |

CIE Pub.117 Corrected 582.5 lm Total Lamp Luminous Flux.(8log(F/F0) = -1.9)

Test System:HopooColor HPG1800  
 Temperature:25.3DEG  
 Operators:W  
 Test Date:2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.450 m  
 Remarks:

UTILIZATION FACTORS TABLE

Report number:

|                             |  |  |  |  |                              |  |  |             |  |  |
|-----------------------------|--|--|--|--|------------------------------|--|--|-------------|--|--|
| MANUFACTURER:               |  |  |  |  |                              |  |  |             |  |  |
| Address:                    |  |  |  |  |                              |  |  |             |  |  |
| NAME: 250mA 3000K with trim |  |  |  |  | TYPE:                        |  |  | WEIGHT:     |  |  |
| SPECIFICATION:              |  |  |  |  | DIMENSION: 0.265*0.135*0.118 |  |  | 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) $k(RI) \times RCR = 5$ |     |     |           |     |     |     |               |     |        |
| $k = 0.60$                       | 55   | 43  | 36  | 54        | 43  | 36  | 53  | 42            | 36  | 29     |
| 0.80                             | 64   | 52  | 45  | 63        | 52  | 45  | 61  | 51            | 44  | 37     |
| 1.00                             | 73   | 61  | 53  | 71        | 60  | 53  | 69  | 61            | 52  | 45     |
| 1.25                             | 80   | 68  | 61  | 78        | 67  | 60  | 75  | 66            | 59  | 51     |
| 1.50                             | 84   | 74  | 66  | 83        | 73  | 66  | 79  | 71            | 64  | 56     |
| 2.00                             | 91   | 82  | 75  | 89        | 80  | 74  | 85  | 78            | 72  | 63     |
| 2.50                             | 95   | 87  | 80  | 93        | 85  | 79  | 89  | 82            | 77  | 67     |
| 3.00                             | 99   | 91  | 85  | 96        | 89  | 83  | 92  | 86            | 81  | 71     |
| 4.00                             | 103  | 96  | 91  | 100       | 94  | 89  | 95  | 90            | 86  | 76     |
| 5.00                             | 106  | 100 | 95  | 103       | 98  | 93  | 98  | 93            | 90  | 79     |
| ROOM INDEX                       | UF(total)  |     |     |           |     |     |     |               |     | Direct |
| According to DIN EN 13032-2 2004 |  |     |     | Suspended |     |     |     | SHRNOM = 1.25 |     |        |

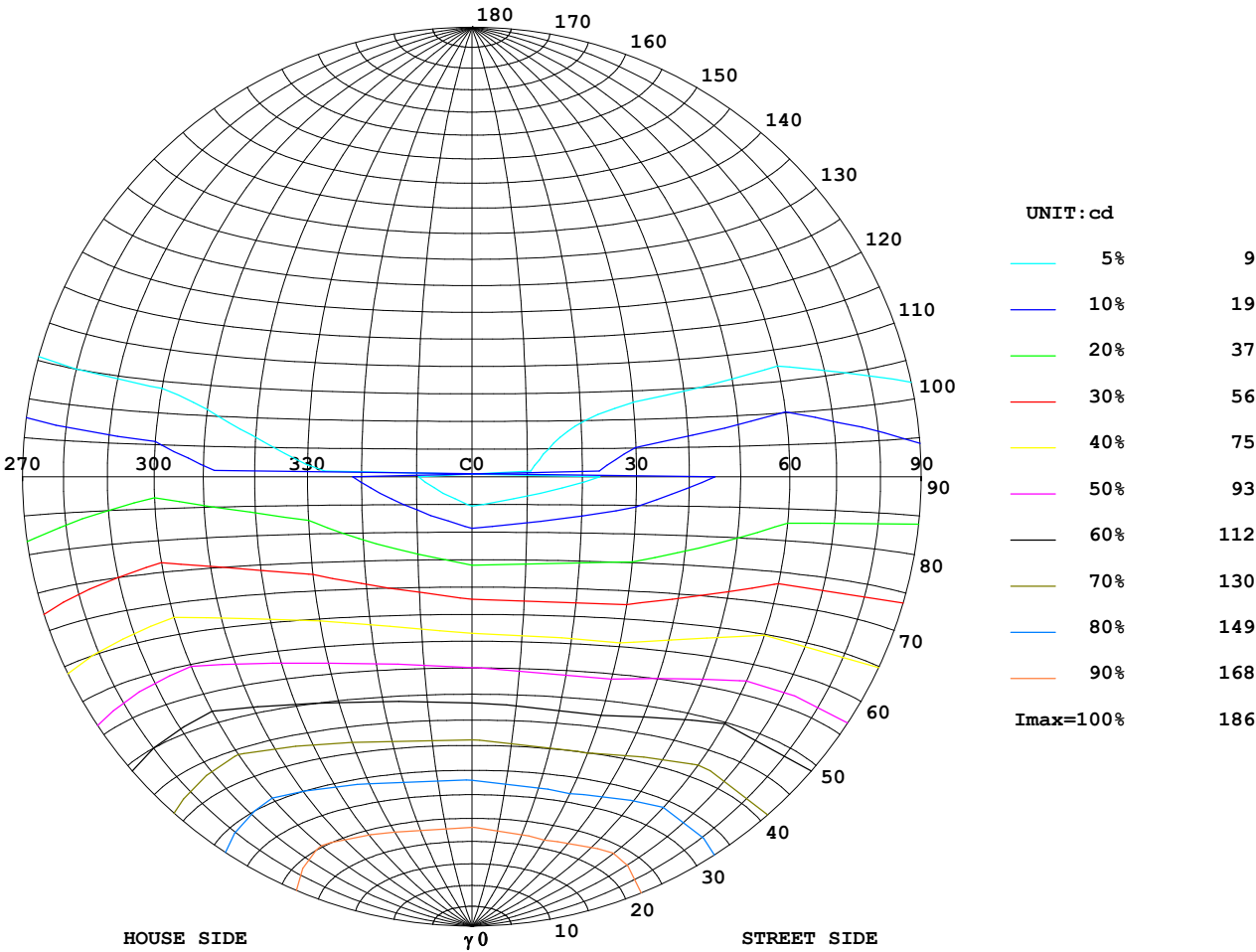
Test System:HopooColor HPG1800  
Temperature:25.3DEG  
Operators:W  
Test Date:2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.450 m  
Remarks:

ISOCANDELA DIAGRAM

Report number:

|                             |                              |             |
|-----------------------------|------------------------------|-------------|
| MANUFACTURER:               |                              |             |
| Address:                    |                              |             |
| NAME: 250mA 3000K with trim | TYPE:                        | WEIGHT:     |
| SPECIFICATION:              | DIMENSION: 0.265*0.135*0.118 | SERIAL No.: |



Test System:HopooColor HPG1800  
Temperature:25.3DEG  
Operators:W  
Test Date:2023年06月16日

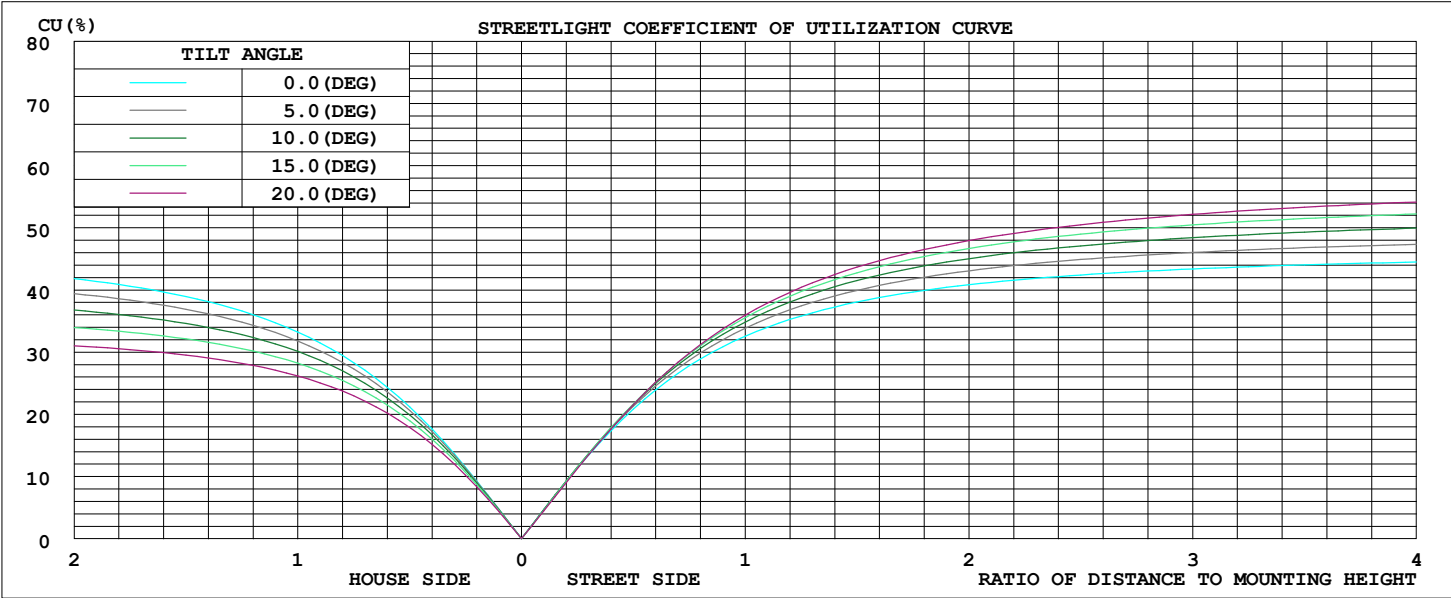
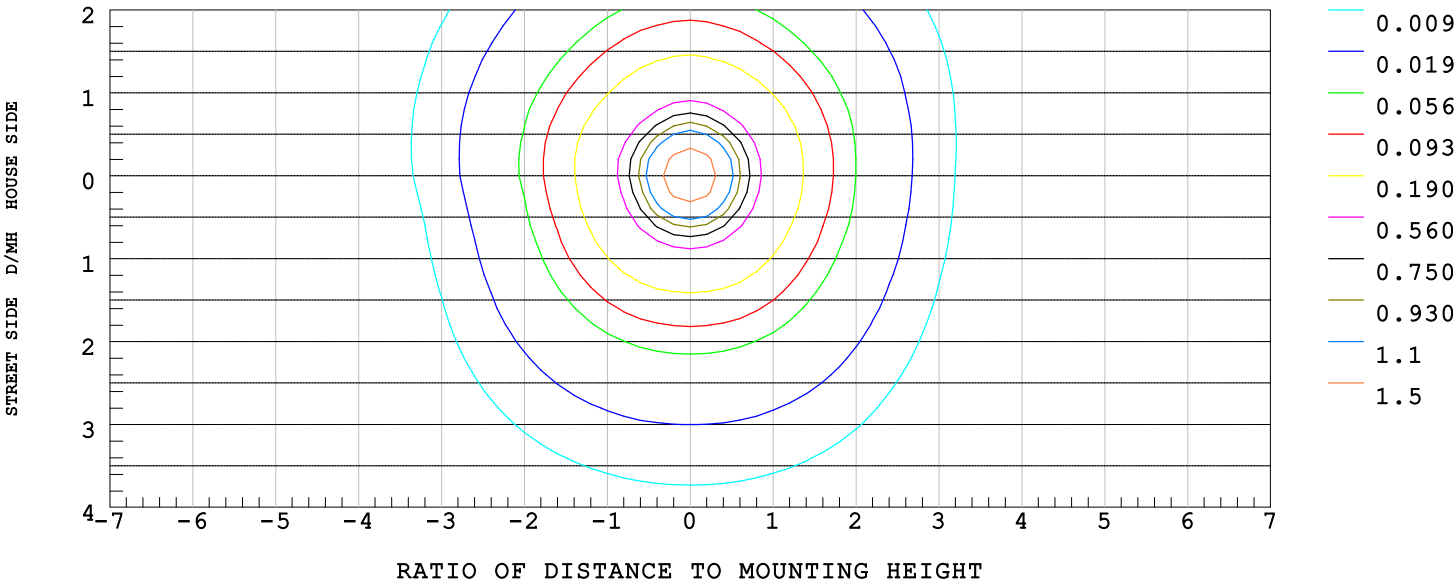
Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.450 m  
Remarks:

ISOLUX DIAGRAM

Report number:

|                             |                              |             |
|-----------------------------|------------------------------|-------------|
| MANUFACTURER:               |                              |             |
| Address:                    |                              |             |
| NAME: 250mA 3000K with trim | TYPE:                        | WEIGHT:     |
| SPECIFICATION:              | DIMENSION: 0.265*0.135*0.118 | SERIAL No.: |

ILLUMINANCE AT MH=10 m,Enadir = 1.86 lx



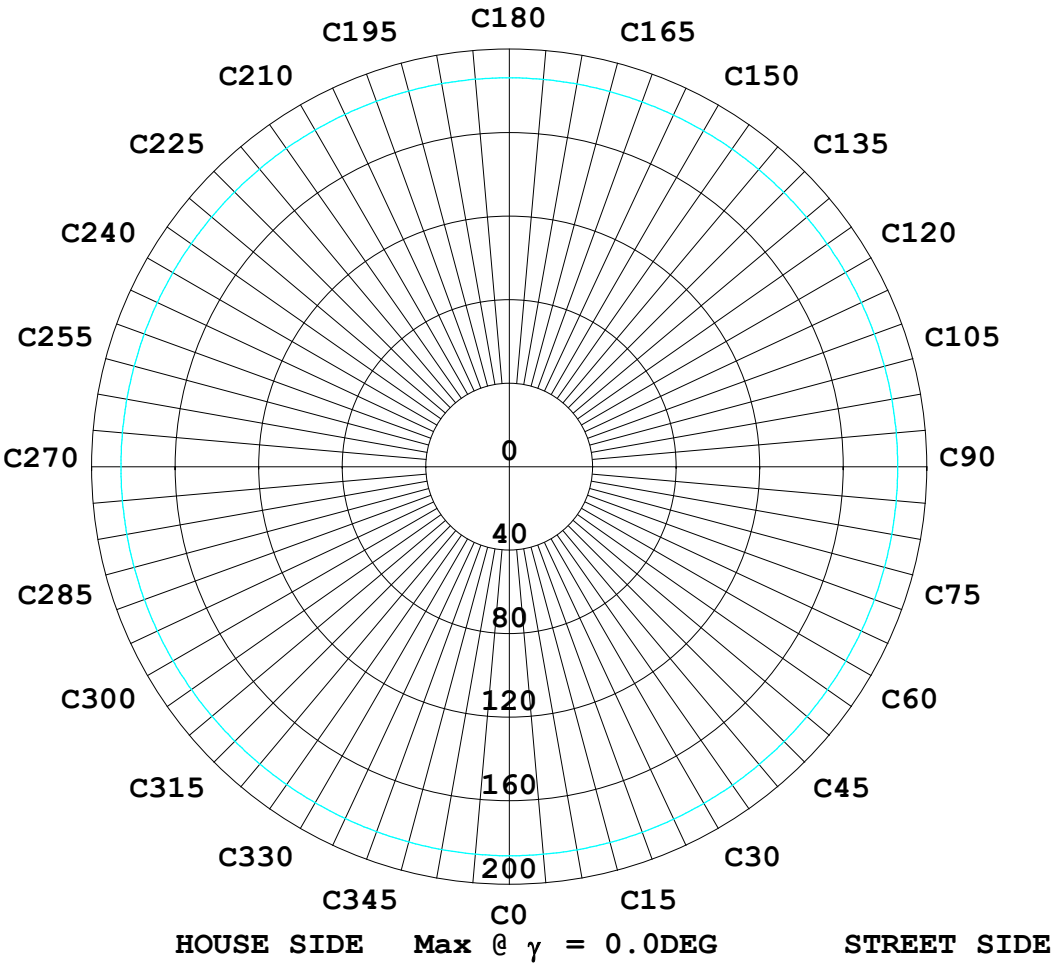
Test System:HopooColor HPG1800  
Temperature:25.3DEG  
Operators:W  
Test Date:2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.450 m  
Remarks:

ISOCANDELA DIAGRAM

Report number:

|                             |                              |             |
|-----------------------------|------------------------------|-------------|
| MANUFACTURER:               |                              |             |
| Address:                    |                              |             |
| NAME: 250mA 3000K with trim | TYPE:                        | WEIGHT:     |
| SPECIFICATION:              | DIMENSION: 0.265*0.135*0.118 | SERIAL No.: |



Test System:HopooColor HPG1800  
Temperature:25.3DEG  
Operators:W  
Test Date:2023年06月16日

Test Set: 5.0deg/s    C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.450 m  
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Report number:

|                             |                              |             |
|-----------------------------|------------------------------|-------------|
| MANUFACTURER:               |                              |             |
| Address:                    |                              |             |
| NAME: 250mA 3000K with trim | TYPE:                        | WEIGHT:     |
| SPECIFICATION:              | DIMENSION: 0.265*0.135*0.118 | SERIAL No.: |

UNIT: cd

| C (DEG)<br>γ (DEG) | 0    | 30   | 60   | 90   | 120  | 150  | 180  | 210  | 240  | 270  | 300  | 330  |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0.0                | 186  | 186  | 186  | 186  | 186  | 186  | 186  | 186  | 186  | 186  | 186  | 186  |
| 5.0                | 186  | 185  | 185  | 185  | 185  | 184  | 185  | 186  | 185  | 186  | 185  | 186  |
| 10.0               | 183  | 182  | 183  | 182  | 182  | 181  | 182  | 183  | 182  | 184  | 183  | 183  |
| 15.0               | 179  | 177  | 178  | 177  | 178  | 176  | 176  | 178  | 178  | 180  | 179  | 179  |
| 20.0               | 172  | 170  | 173  | 171  | 172  | 169  | 169  | 172  | 172  | 175  | 173  | 173  |
| 25.0               | 164  | 162  | 165  | 163  | 164  | 160  | 161  | 165  | 164  | 168  | 165  | 166  |
| 30.0               | 155  | 153  | 157  | 154  | 156  | 151  | 151  | 155  | 156  | 160  | 157  | 157  |
| 35.0               | 145  | 142  | 147  | 144  | 145  | 140  | 140  | 145  | 145  | 150  | 146  | 147  |
| 40.0               | 133  | 130  | 135  | 133  | 134  | 128  | 128  | 133  | 134  | 140  | 135  | 135  |
| 45.0               | 121  | 117  | 124  | 121  | 122  | 115  | 115  | 121  | 122  | 128  | 123  | 123  |
| 50.0               | 107  | 104  | 111  | 109  | 110  | 101  | 101  | 108  | 109  | 117  | 111  | 110  |
| 55.0               | 93.2 | 90.5 | 98.6 | 97.6 | 97.1 | 87.8 | 86.9 | 94.0 | 96.4 | 104  | 97.9 | 96.4 |
| 60.0               | 79.0 | 76.4 | 86.3 | 85.6 | 84.9 | 73.7 | 72.5 | 79.8 | 84.1 | 92.2 | 85.7 | 82.3 |
| 65.0               | 64.1 | 62.5 | 74.1 | 74.1 | 72.9 | 59.9 | 57.4 | 66.1 | 72.0 | 80.7 | 73.5 | 68.7 |
| 70.0               | 49.0 | 49.6 | 62.6 | 63.5 | 61.4 | 47.2 | 42.4 | 52.5 | 60.4 | 69.4 | 62.0 | 55.2 |
| 75.0               | 34.4 | 37.4 | 52.1 | 53.3 | 51.0 | 35.4 | 28.1 | 40.0 | 50.0 | 58.8 | 51.5 | 42.6 |
| 80.0               | 20.4 | 26.8 | 42.2 | 43.9 | 41.2 | 25.1 | 14.7 | 29.2 | 40.1 | 49.1 | 41.6 | 31.7 |
| 85.0               | 8.63 | 18.2 | 33.4 | 35.6 | 32.5 | 16.9 | 4.56 | 19.9 | 31.4 | 40.1 | 32.7 | 22.2 |
| 90.0               | 1.78 | 11.4 | 25.7 | 28.0 | 25.1 | 10.4 | 0.79 | 12.7 | 24.0 | 31.9 | 25.2 | 14.5 |
| 95.0               | 1.14 | 6.64 | 19.2 | 21.4 | 18.7 | 5.99 | 0.86 | 7.64 | 17.6 | 24.9 | 18.7 | 9.13 |
| 100.0              | 1.14 | 2.99 | 13.7 | 15.9 | 13.2 | 2.64 | 0.93 | 3.57 | 11.8 | 18.7 | 12.8 | 4.56 |
| 105.0              | 1.14 | 1.57 | 8.06 | 9.92 | 7.56 | 1.49 | 1.00 | 1.85 | 6.14 | 12.2 | 6.92 | 2.28 |
| 110.0              | 1.21 | 1.21 | 3.71 | 4.06 | 3.57 | 1.21 | 1.14 | 1.42 | 3.07 | 6.35 | 3.35 | 1.57 |
| 115.0              | 1.28 | 1.28 | 2.42 | 2.71 | 2.42 | 1.28 | 1.28 | 1.42 | 2.14 | 3.49 | 2.28 | 1.42 |
| 120.0              | 1.35 | 1.35 | 1.85 | 2.07 | 1.92 | 1.42 | 1.42 | 1.49 | 1.71 | 2.49 | 1.78 | 1.49 |
| 125.0              | 1.42 | 1.49 | 1.71 | 1.71 | 1.71 | 1.49 | 1.49 | 1.64 | 1.57 | 1.99 | 1.64 | 1.57 |
| 130.0              | 1.57 | 1.64 | 1.71 | 1.71 | 1.78 | 1.64 | 1.64 | 1.71 | 1.71 | 1.85 | 1.71 | 1.64 |
| 135.0              | 1.64 | 1.71 | 1.78 | 1.78 | 1.78 | 1.71 | 1.71 | 1.78 | 1.78 | 1.92 | 1.78 | 1.78 |
| 140.0              | 1.78 | 1.78 | 1.85 | 1.85 | 1.92 | 1.85 | 1.85 | 1.85 | 1.92 | 1.99 | 1.92 | 1.85 |
| 145.0              | 1.85 | 1.92 | 1.92 | 1.99 | 1.99 | 1.92 | 1.99 | 1.99 | 1.99 | 2.07 | 1.99 | 1.99 |
| 150.0              | 1.92 | 1.99 | 1.99 | 2.07 | 2.07 | 1.99 | 2.07 | 2.07 | 2.07 | 2.14 | 2.07 | 2.07 |
| 155.0              | 1.99 | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 | 2.14 | 2.21 | 2.14 | 2.21 | 2.14 | 2.14 |
| 160.0              | 2.07 | 2.14 | 2.14 | 2.14 | 2.14 | 2.14 | 2.21 | 2.21 | 2.21 | 2.21 | 2.21 | 2.21 |
| 165.0              | 2.14 | 2.21 | 2.21 | 2.21 | 2.21 | 2.21 | 2.28 | 2.28 | 2.28 | 2.28 | 2.28 | 2.28 |
| 170.0              | 2.21 | 2.21 | 2.28 | 2.28 | 2.28 | 2.28 | 2.35 | 2.28 | 2.28 | 2.35 | 2.28 | 2.35 |
| 175.0              | 2.28 | 2.28 | 2.28 | 2.28 | 2.28 | 2.28 | 2.35 | 2.35 | 2.28 | 2.35 | 2.35 | 2.35 |
| 180.0              | 2.35 | 2.28 | 2.35 | 2.35 | 2.35 | 2.35 | 2.35 | 2.35 | 2.28 | 2.35 | 2.35 | 2.35 |

Test System:HopooColor HPG1800  
Temperature:25.3DEG  
Operators:W  
Test Date:2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.450 m  
Remarks: