

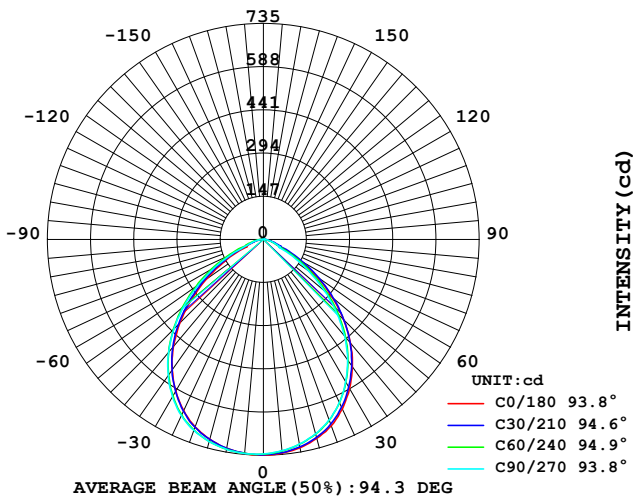
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

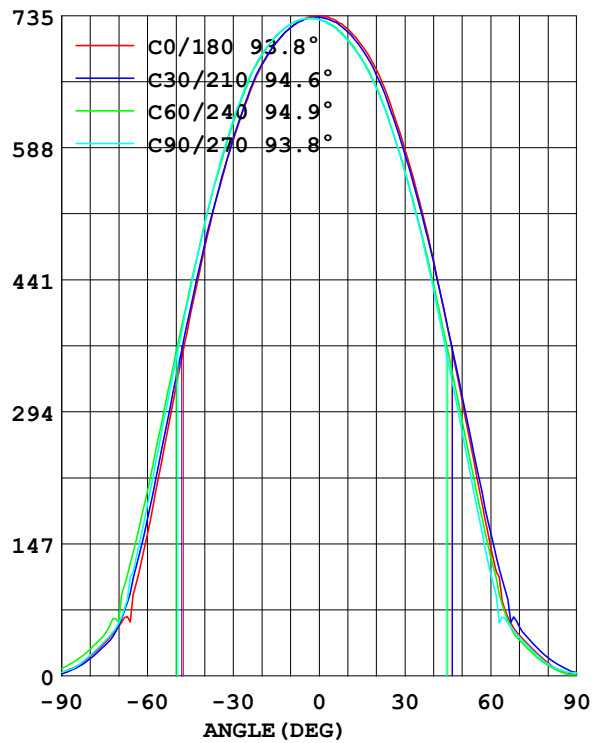
| | | | |
|---------------------------|---------------|------------|-------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: MA-HDW3016B-25W-CCT | | TYPE: | WEIGHT: |
| SPECIFICATION: | CCT (K): 5000 | DIMENSION: | SERIAL No.: |

| | | | | | |
|-------------------|--------|---------------------|--------|-------------------|-------|
| DATA OF LAMP | | Imax (cd) | 735.0 | S/MH (C0/180) | 1.21 |
| MODEL | | EFFICIENCY (%) | 100.0 | S/MH (C90/270) | 1.25 |
| NOMINAL POWER (W) | 25 | TOTAL FLUX (lm) | 1581.2 | Voltage (V) | 120.4 |
| RATED VOLTAGE (V) | 120 | EFFICIENCY (lm/W) | 67.8 | Current (A) | 0.196 |
| NOMINAL FLUX (lm) | 1581.2 | h up (%) | 1.4 | Power (W) | 23.33 |
| LAMPS QUANTITY | 1 | h down (%) | 98.6 | Power Factor (PF) | 0.988 |
| TEST VOLTAGE (V) | 120.4 | Effective Flux (lm) | 1581.2 | EEL | 0.201 |

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



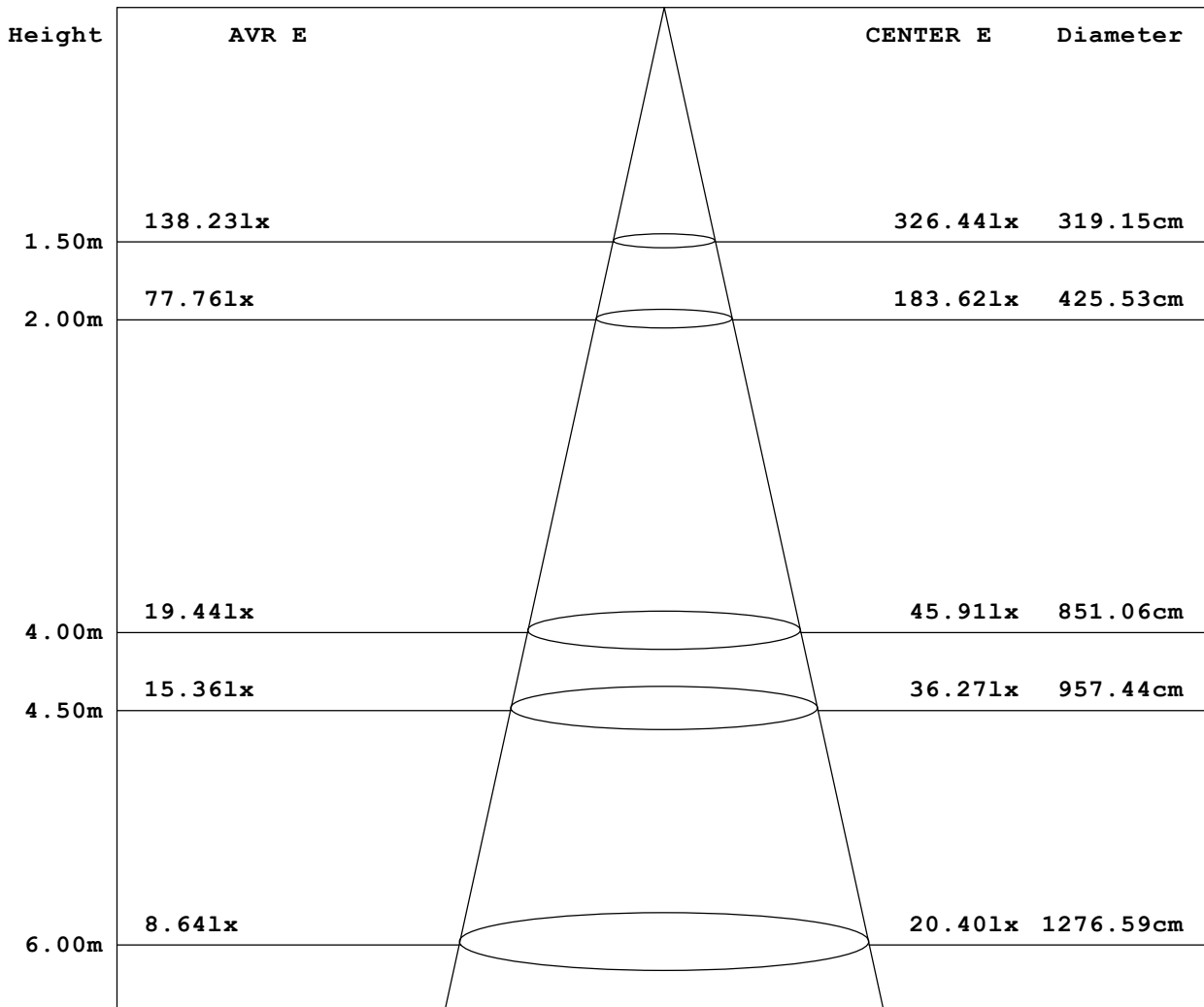
Test System: HOPOO HPG1800
 Temperature: 25.3 DEG
 Operators:
 Test Date: 2019年11月11日

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity: 65.0%
 Test Distance: 5.900 m
 Remarks:

AVERAGE AND CENTER E Figure

Report number:

| | | | |
|---------------------------|---------------|------------|-------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: MA-HDW3016B-25W-CCT | | TYPE: | WEIGHT: |
| SPECIFICATION: | CCT (K): 5000 | DIMENSION: | SERIAL No.: |



Angle: 93.5deg

Test System: HOPOO HPG1800
 Temperature: 25.3DEG
 Operators:
 Test Date: 2019年11月11日

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity: 65.0%
 Test Distance: 5.900 m
 Remarks:

ZONAL FLUX DIAGRAM

Report number:

| | | | |
|----------------------------------|----------------|-------------------|--------------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: MA-HDW3016B-25W-CCT | | TYPE: | WEIGHT: |
| SPECIFICATION: | CCT (K) : 5000 | DIMENSION: | SERIAL No.: |

| g | C0 | C45 | C90 | C135 | C180 | C225 | C270 | C315 | g | zone | tBtal |
|-------|-----------------------|-------|-------|-------|-------|-------|-------|-------|---------|---------|-------|
| 5.0 | 731.8 | 731.1 | 731.7 | 731.8 | 730.9 | 726.0 | 722.5 | 720.7 | 0- 5 | 17.44 | 17.44 |
| 10.0 | 721.7 | 723.3 | 725.7 | 726.8 | 720.2 | 712.7 | 707.6 | 704.7 | 5- 10 | 51.71 | 69.16 |
| 15.0 | 704.6 | 708.6 | 712.6 | 715.3 | 701.6 | 692.1 | 685.5 | 681.4 | 10- 15 | 84.09 | 153.2 |
| 20.0 | 679.8 | 685.8 | 691.6 | 695.8 | 675.1 | 662.4 | 654.4 | 649.4 | 15- 20 | 113.2 | 266.5 |
| 25.0 | 642.5 | 652.0 | 662.0 | 666.8 | 636.6 | 621.6 | 612.7 | 606.5 | 20- 25 | 137.6 | 404.1 |
| 30.0 | 596.4 | 607.0 | 619.4 | 625.7 | 586.3 | 571.4 | 561.2 | 552.5 | 25- 30 | 155.3 | 559.4 |
| 35.0 | 541.1 | 552.5 | 565.7 | 574.4 | 529.1 | 513.2 | 499.9 | 490.1 | 30- 35 | 165.3 | 724.8 |
| 40.0 | 476.2 | 491.2 | 502.4 | 515.5 | 461.8 | 448.0 | 430.6 | 420.8 | 35- 40 | 167.1 | 892.0 |
| 45.0 | 402.3 | 421.6 | 430.7 | 448.3 | 386.7 | 375.0 | 352.0 | 344.6 | 40- 45 | 160.0 | 1052 |
| 50.0 | 322.2 | 346.1 | 352.8 | 374.5 | 306.9 | 297.9 | 271.1 | 266.1 | 45- 50 | 144.2 | 1196 |
| 55.0 | 238.3 | 267.0 | 271.9 | 295.7 | 222.8 | 218.9 | 189.7 | 188.5 | 50- 55 | 120.9 | 1317 |
| 60.0 | 158.3 | 190.7 | 191.2 | 217.7 | 143.6 | 146.2 | 114.6 | 120.2 | 55- 60 | 92.48 | 1410 |
| 65.0 | 90.19 | 122.8 | 115.4 | 145.3 | 73.30 | 83.33 | 64.25 | 59.90 | 60- 65 | 62.54 | 1472 |
| 70.0 | 54.93 | 58.04 | 58.75 | 83.42 | 45.28 | 47.32 | 43.44 | 39.43 | 65- 70 | 37.58 | 1510 |
| 75.0 | 37.00 | 40.08 | 38.49 | 46.62 | 29.06 | 29.81 | 26.94 | 23.75 | 70- 75 | 22.84 | 1533 |
| 80.0 | 21.93 | 24.68 | 23.07 | 30.02 | 14.72 | 16.20 | 13.29 | 12.18 | 75- 80 | 14.34 | 1547 |
| 85.0 | 10.23 | 13.01 | 10.06 | 16.29 | 5.604 | 6.927 | 5.778 | 4.212 | 80- 85 | 7.755 | 1555 |
| 90.0 | 4.246 | 5.151 | 3.933 | 7.501 | 1.531 | 2.819 | 3.724 | 2.715 | 85- 90 | 3.500 | 1558 |
| 95.0 | 3.655 | 2.732 | 1.427 | 2.749 | 1.670 | 2.628 | 3.481 | 2.575 | 90- 95 | 1.712 | 1560 |
| 100.0 | 3.481 | 2.593 | 1.566 | 2.575 | 1.879 | 2.628 | 3.411 | 2.645 | 95-100 | 1.417 | 1562 |
| 105.0 | 3.446 | 2.662 | 1.775 | 2.593 | 2.088 | 2.749 | 3.446 | 2.784 | 100-105 | 1.414 | 1563 |
| 110.0 | 3.515 | 2.802 | 2.018 | 2.715 | 2.367 | 2.941 | 3.550 | 2.976 | 105-110 | 1.447 | 1564 |
| 115.0 | 3.620 | 2.976 | 2.297 | 2.889 | 2.680 | 3.132 | 3.724 | 3.219 | 110-115 | 1.495 | 1566 |
| 120.0 | 3.829 | 3.202 | 2.610 | 3.080 | 2.993 | 3.376 | 3.933 | 3.463 | 115-120 | 1.543 | 1567 |
| 125.0 | 4.037 | 3.446 | 2.924 | 3.324 | 3.341 | 3.637 | 4.142 | 3.724 | 120-125 | 1.581 | 1569 |
| 130.0 | 4.246 | 3.689 | 3.237 | 3.585 | 3.655 | 3.898 | 4.386 | 3.985 | 125-130 | 1.602 | 1571 |
| 135.0 | 4.490 | 3.968 | 3.550 | 3.846 | 4.003 | 4.177 | 4.629 | 4.281 | 130-135 | 1.598 | 1572 |
| 140.0 | 4.699 | 4.229 | 3.863 | 4.124 | 4.316 | 4.455 | 4.838 | 4.542 | 135-140 | 1.565 | 1574 |
| 145.0 | 4.943 | 4.507 | 4.177 | 4.403 | 4.629 | 4.734 | 5.082 | 4.803 | 140-145 | 1.502 | 1575 |
| 150.0 | 5.186 | 4.786 | 4.490 | 4.681 | 4.908 | 4.995 | 5.291 | 5.064 | 145-150 | 1.405 | 1577 |
| 155.0 | 5.430 | 5.047 | 4.768 | 4.925 | 5.221 | 5.238 | 5.499 | 5.308 | 150-155 | 1.274 | 1578 |
| 160.0 | 5.639 | 5.291 | 5.047 | 5.204 | 5.465 | 5.465 | 5.708 | 5.499 | 155-160 | 1.106 | 1579 |
| 165.0 | 5.848 | 5.499 | 5.325 | 5.412 | 5.743 | 5.656 | 5.882 | 5.674 | 160-165 | 0.907 | 1580 |
| 170.0 | 6.022 | 5.691 | 5.569 | 5.621 | 5.952 | 5.778 | 6.022 | 5.795 | 165-170 | 0.675 | 1581 |
| 175.0 | 6.161 | 5.813 | 5.743 | 5.778 | 6.126 | 5.865 | 6.091 | 5.865 | 170-175 | 0.418 | 1581 |
| 180.0 | 6.196 | 5.917 | 5.882 | 5.882 | 6.230 | 5.900 | 6.091 | 5.865 | 175-180 | 0.142 | 1581 |
| DEG | LUMINOUS INTENSITY:cd | | | | | | | | | UNIT:lm | |

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年11月11日

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:5.900 m
 Remarks:

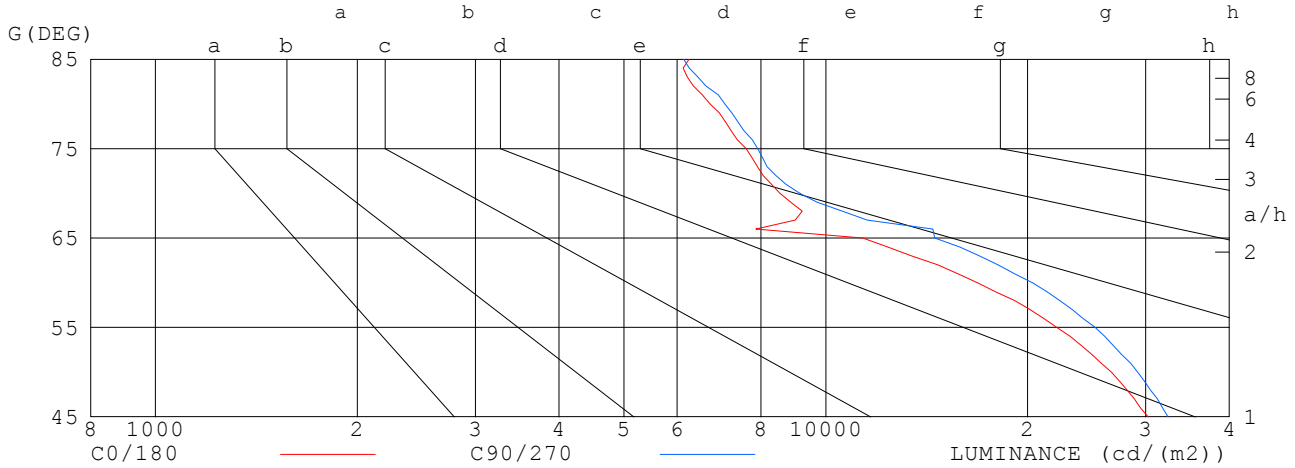
LUMINANCE LIMITATION CURVES

Report number:

| | | | |
|----------------------------------|---------------|-------------------|--------------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: MA-HDW3016B-25W-CCT | | TYPE: | WEIGHT: |
| SPECIFICATION: | CCT (K): 5000 | DIMENSION: | SERIAL No.: |

LUMINANCE LIMITATION CURVES

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



| G (DEG) | LUMINANCE cd/m2 | |
|---------|-----------------|---------|
| | C0/180 | C90/270 |
| 85 | 6246 | 6140 |
| 80 | 6718 | 7070 |
| 75 | 7605 | 7912 |
| 70 | 8543 | 9138 |
| 65 | 11352 | 14537 |
| 60 | 16842 | 20349 |
| 55 | 22100 | 25215 |
| 50 | 26668 | 29197 |
| 45 | 30268 | 32399 |

Test System: HOPOO HPG1800
Temperature: 25.3DEG
Operators:
Test Date: 2019年11月11日

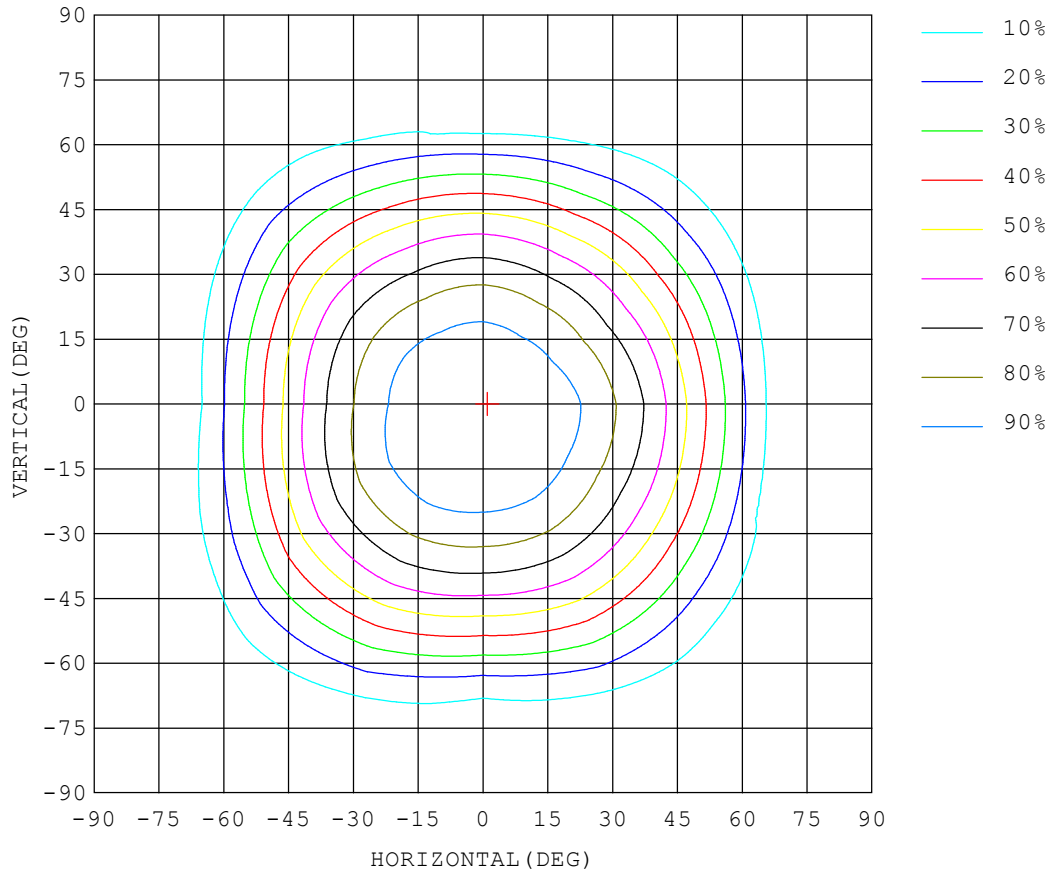
Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity: 65.0%
Test Distance: 5.900 m
Remarks:

ISOCANDELA DIAGRAM

Report number:

| | | | |
|----------------------------------|----------------------|-------------------|--------------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: MA-HDW3016B-25W-CCT | | TYPE: | WEIGHT: |
| SPECIFICATION: | CCT (K): 5000 | DIMENSION: | SERIAL No.: |

UNIT: cd



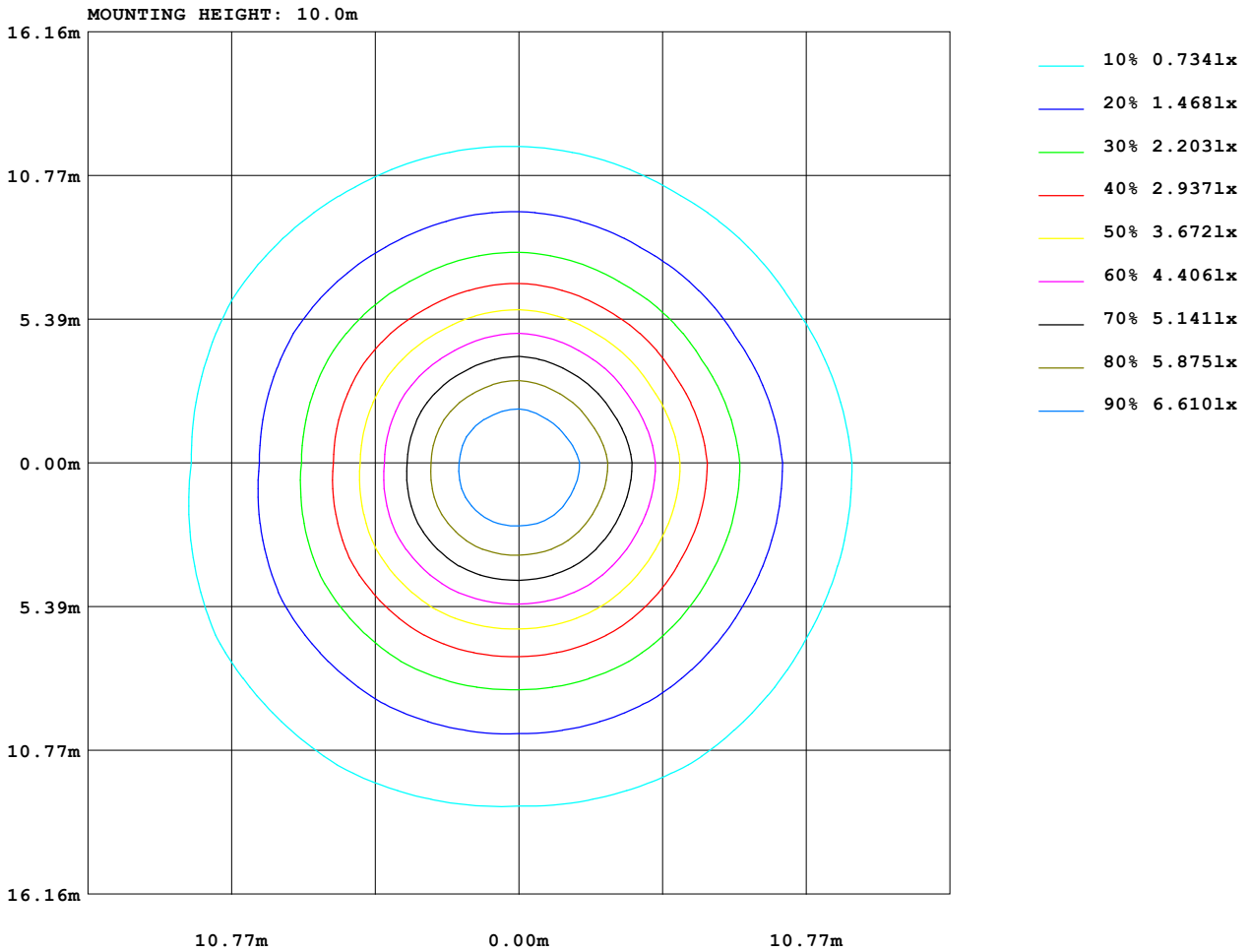
Test System: HOPOO HPG1800
Temperature: 25.3DEG
Operators:
Test Date: 2019年11月11日

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity: 65.0%
Test Distance: 5.900 m
Remarks:

ISOLUX DIAGRAM

Report number:

| | | | |
|----------------------------------|----------------------|-------------------|--------------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: MA-HDW3016B-25W-CCT | | TYPE: | WEIGHT: |
| SPECIFICATION: | CCT (K): 5000 | DIMENSION: | SERIAL No.: |



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年11月11日

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:5.900 m
Remarks:

AREA LUMINOUS FLUX

Report number:

| | | | |
|----------------------------------|--|--------------------|--|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: MA-HDW3016B-25W-CCT | | TYPE: | |
| SPECIFICATION: | | SERIAL No.: | |
| CCT (K): 5000 | | DIMENSION: | |

| VERTICAL (DEG) | AREA FLUX DIAGRAM | | | | | | | | | | | | | | | | UNIT: lm | | Φ t | Φ a |
|----------------|-------------------|------|------|------|------|------|------|------|------------------|------|------|------|------|------|------|------|----------|------|------|------|
| | 0.01 | 0.03 | 0.07 | 0.11 | 0.12 | 0.11 | 0.12 | 0.16 | 0.19 | 0.18 | 0.14 | 0.09 | 0.08 | 0.08 | 0.08 | 0.06 | 0.04 | 0.01 | 1.68 | 1.68 |
| 90 | 0.01 | 0.03 | 0.07 | 0.11 | 0.12 | 0.11 | 0.12 | 0.16 | 0.19 | 0.18 | 0.14 | 0.09 | 0.08 | 0.08 | 0.08 | 0.06 | 0.04 | 0.01 | 1.68 | 1.68 |
| 80 | 0.01 | 0.05 | 0.15 | 0.28 | 0.39 | 0.48 | 0.58 | 0.72 | 0.81 | 0.79 | 0.66 | 0.49 | 0.38 | 0.30 | 0.21 | 0.12 | 0.06 | 0.01 | 6.49 | 6.49 |
| 70 | 0.01 | 0.08 | 0.26 | 0.55 | 0.84 | 1.14 | 1.51 | 1.88 | 2.04 | 1.98 | 1.71 | 1.30 | 0.97 | 0.69 | 0.43 | 0.23 | 0.09 | 0.02 | 15.7 | 15.7 |
| 60 | 0.01 | 0.12 | 0.40 | 0.89 | 1.68 | 2.91 | 4.19 | 5.26 | 5.78 | 5.64 | 4.86 | 3.65 | 2.38 | 1.32 | 0.73 | 0.36 | 0.13 | 0.02 | 40.3 | 40.3 |
| 50 | 0.02 | 0.15 | 0.54 | 1.46 | 3.35 | 5.62 | 7.83 | 9.63 | 10.5 | 10.4 | 9.13 | 7.11 | 4.86 | 2.71 | 1.17 | 0.51 | 0.17 | 0.03 | 75.3 | 75.3 |
| 40 | 0.02 | 0.19 | 0.69 | 2.28 | 5.14 | 8.37 | 11.3 | 13.6 | 14.9 | 14.8 | 13.1 | 10.6 | 7.53 | 4.40 | 1.95 | 0.66 | 0.22 | 0.03 | 110 | 110 |
| 30 | 0.02 | 0.22 | 0.87 | 3.05 | 6.64 | 10.6 | 14.2 | 16.8 | 18.3 | 18.2 | 16.4 | 13.5 | 9.87 | 6.08 | 2.84 | 0.86 | 0.25 | 0.03 | 139 | 139 |
| | 0.02 | 0.24 | 1.02 | 3.63 | 7.70 | 12.2 | 16.2 | 19.1 | 20.5 | 20.4 | 18.7 | 15.7 | 11.8 | 7.47 | 3.58 | 1.06 | 0.28 | 0.04 | 160 | 160 |
| | 0.02 | 0.24 | 1.10 | 3.93 | 8.25 | 13.0 | 17.2 | 20.3 | 21.7 | 21.6 | 20.1 | 17.2 | 13.0 | 8.39 | 4.08 | 1.20 | 0.30 | 0.04 | 172 | 172 |
| | 0.02 | 0.25 | 1.15 | 4.04 | 8.45 | 13.2 | 17.6 | 20.6 | 22.0 | 22.0 | 20.5 | 17.5 | 13.3 | 8.60 | 4.20 | 1.24 | 0.30 | 0.04 | 176 | 176 |
| | 0.02 | 0.25 | 1.16 | 3.97 | 8.28 | 13.0 | 17.2 | 20.2 | 21.5 | 21.4 | 19.8 | 16.7 | 12.6 | 8.08 | 3.91 | 1.16 | 0.29 | 0.04 | 170 | 170 |
| -30 | 0.02 | 0.23 | 1.05 | 3.58 | 7.58 | 11.9 | 15.8 | 18.6 | 19.9 | 19.8 | 18.2 | 15.2 | 11.2 | 7.04 | 3.32 | 0.99 | 0.26 | 0.03 | 155 | 155 |
| -40 | 0.02 | 0.20 | 0.88 | 2.93 | 6.35 | 10.0 | 13.4 | 15.9 | 17.0 | 16.9 | 15.5 | 12.8 | 9.29 | 5.58 | 2.52 | 0.77 | 0.23 | 0.03 | 131 | 131 |
| -50 | 0.02 | 0.17 | 0.66 | 2.14 | 4.63 | 7.52 | 10.3 | 12.2 | 13.0 | 12.9 | 11.8 | 9.72 | 6.81 | 3.91 | 1.65 | 0.58 | 0.19 | 0.03 | 98.3 | 98.3 |
| -60 | 0.02 | 0.13 | 0.46 | 1.26 | 2.82 | 4.74 | 6.64 | 7.84 | 8.30 | 8.19 | 7.53 | 6.18 | 4.19 | 2.25 | 0.95 | 0.41 | 0.14 | 0.02 | 62.1 | 62.1 |
| -70 | 0.01 | 0.10 | 0.32 | 0.70 | 1.31 | 2.23 | 3.15 | 3.64 | 3.72 | 3.64 | 3.42 | 2.86 | 1.91 | 1.07 | 0.56 | 0.27 | 0.10 | 0.02 | 29.0 | 29.0 |
| -80 | 0.01 | 0.06 | 0.19 | 0.41 | 0.68 | 1.00 | 1.24 | 1.28 | 1.24 | 1.22 | 1.22 | 1.14 | 0.88 | 0.56 | 0.31 | 0.15 | 0.06 | 0.02 | 11.6 | 11.6 |
| -90 | 0.01 | 0.04 | 0.10 | 0.19 | 0.30 | 0.42 | 0.48 | 0.45 | 0.39 | 0.38 | 0.42 | 0.43 | 0.36 | 0.23 | 0.12 | 0.07 | 0.04 | 0.01 | 4.42 | 4.42 |
| | -90 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | HORIZONTAL (DEG) | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | | | |
| Φ t | 0.29 | 2.74 | 11.0 | 35.4 | 74.5 | 119 | 159 | 189 | 202 | 201 | 184 | 153 | 112 | 68.8 | 32.6 | 10.7 | 3.14 | 0.46 | 1581 | |
| Φ a | 0.29 | 2.74 | 11.0 | 35.4 | 74.5 | 119 | 159 | 189 | 202 | 201 | 184 | 153 | 112 | 68.8 | 32.6 | 10.7 | 3.14 | 0.46 | | 1581 |

Test System: HOPOO HPG1800
 Temperature: 25.3 DEG
 Operators:
 Test Date: 2019年11月11日

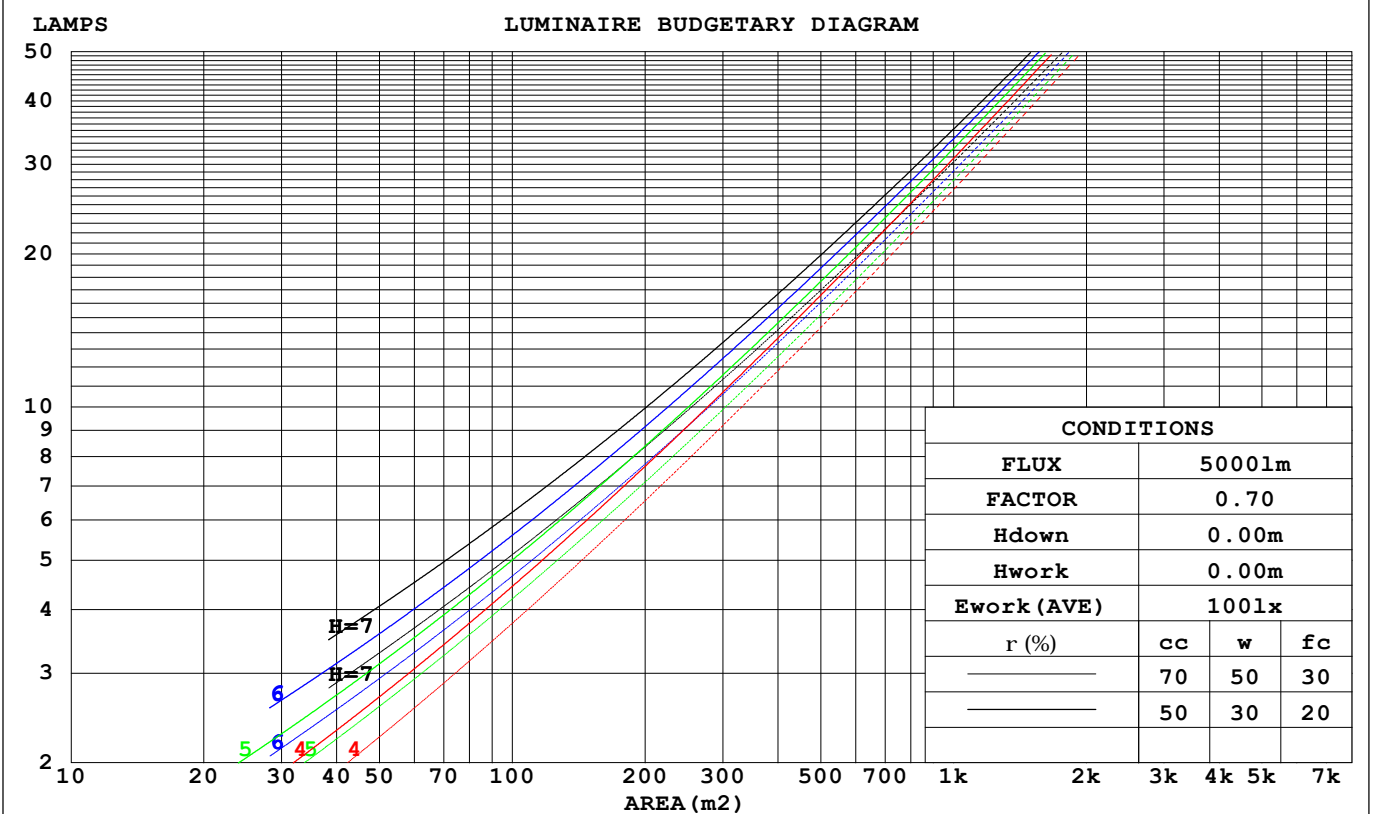
Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity: 65.0%
 Test Distance: 5.900 m
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

| | | | |
|----------------------------------|--|--------------------|--|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: MA-HDW3016B-25W-CCT | | TYPE: | |
| SPECIFICATION: | | SERIAL No.: | |
| CCT (K): 5000 | | DIMENSION: | |

| 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 | 1.19 | 1.19 | 1.19 | 1.16 | 1.16 | 1.16 | 1.10 | 1.10 | 1.10 | 1.05 | 1.05 | 1.05 | 1.01 | 1.01 | 1.01 | .99 |
| 1.0 | 1.06 | 1.03 | .90 | 1.04 | 1.01 | .98 | .90 | .97 | .95 | .96 | .94 | .92 | .92 | .90 | .89 | .87 |
| 2.0 | .95 | .89 | .84 | .93 | .88 | .83 | .89 | .85 | .81 | .86 | .82 | .79 | .83 | .80 | .77 | .75 |
| 3.0 | .85 | .78 | .72 | .83 | .77 | .72 | .80 | .75 | .70 | .77 | .73 | .69 | .75 | .71 | .67 | .65 |
| 4.0 | .76 | .69 | .63 | .75 | .68 | .62 | .72 | .66 | .61 | .70 | .65 | .60 | .68 | .63 | .59 | .57 |
| 5.0 | .69 | .61 | .55 | .68 | .60 | .55 | .66 | .59 | .54 | .64 | .58 | .53 | .62 | .57 | .53 | .51 |
| 6.0 | .63 | .55 | .49 | .62 | .54 | .48 | .60 | .53 | .48 | .58 | .52 | .47 | .56 | .51 | .47 | .45 |
| 7.0 | .57 | .49 | .44 | .56 | .49 | .43 | .55 | .48 | .43 | .53 | .47 | .43 | .52 | .46 | .42 | .40 |
| 8.0 | .52 | .45 | .39 | .52 | .44 | .39 | .50 | .44 | .39 | .49 | .43 | .38 | .48 | .42 | .38 | .36 |
| 9.0 | .48 | .41 | .36 | .48 | .40 | .35 | .47 | .40 | .35 | .45 | .39 | .35 | .44 | .39 | .35 | .33 |
| 10.0 | .45 | .37 | .32 | .44 | .37 | .32 | .43 | .37 | .32 | .42 | .36 | .32 | .41 | .36 | .32 | .30 |



Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年11月11日

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:5.900 m
 Remarks:

WEC AND CCEC

Report number:

| | | | |
|----------------------------------|---------------|-------------------|--------------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: MA-HDW3016B-25W-CCT | | TYPE: | WEIGHT: |
| SPECIFICATION: | CCT (K): 5000 | DIMENSION: | 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 | .254 | .144 | .046 | .246 | .140 | .045 | .232 | .133 | .043 | .220 | .127 | .041 | .208 | .121 | .039 | |
| 2.0 | .245 | .134 | .041 | .238 | .131 | .040 | .226 | .126 | .039 | .215 | .121 | .038 | .205 | .116 | .037 | |
| 3.0 | .232 | .123 | .037 | .226 | .121 | .036 | .216 | .117 | .036 | .206 | .113 | .035 | .197 | .109 | .034 | |
| 4.0 | .218 | .113 | .033 | .213 | .112 | .033 | .204 | .108 | .032 | .195 | .105 | .032 | .187 | .102 | .031 | |
| 5.0 | .205 | .104 | .030 | .201 | .103 | .030 | .192 | .100 | .029 | .184 | .097 | .029 | .177 | .095 | .028 | |
| 6.0 | .193 | .097 | .028 | .189 | .095 | .027 | .181 | .093 | .027 | .174 | .091 | .027 | .168 | .088 | .026 | |
| 7.0 | .181 | .090 | .025 | .178 | .089 | .025 | .171 | .086 | .025 | .165 | .084 | .025 | .159 | .083 | .024 | |
| 8.0 | .171 | .084 | .023 | .168 | .083 | .023 | .162 | .081 | .023 | .156 | .079 | .023 | .151 | .077 | .023 | |
| 9.0 | .161 | .078 | .022 | .159 | .077 | .022 | .153 | .076 | .021 | .148 | .074 | .021 | .143 | .073 | .021 | |
| 10.0 | .153 | .073 | .020 | .150 | .073 | .020 | .145 | .071 | .020 | .141 | .070 | .020 | .136 | .068 | .020 | |

| 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 | .201 | .201 | .201 | .172 | .172 | .172 | .118 | .118 | .118 | .068 | .068 | .068 | .022 | .022 | .022 | |
| 1.0 | .187 | .168 | .150 | .160 | .144 | .129 | .110 | .099 | .089 | .063 | .057 | .052 | .020 | .018 | .017 | |
| 2.0 | .177 | .143 | .115 | .152 | .123 | .099 | .104 | .085 | .069 | .060 | .050 | .041 | .019 | .016 | .013 | |
| 3.0 | .168 | .125 | .091 | .144 | .108 | .079 | .099 | .075 | .055 | .057 | .044 | .033 | .018 | .014 | .011 | |
| 4.0 | .160 | .112 | .074 | .138 | .096 | .064 | .095 | .067 | .045 | .055 | .039 | .027 | .018 | .013 | .009 | |
| 5.0 | .153 | .101 | .062 | .132 | .087 | .054 | .091 | .061 | .038 | .053 | .036 | .023 | .017 | .012 | .007 | |
| 6.0 | .146 | .092 | .054 | .126 | .080 | .047 | .087 | .056 | .033 | .050 | .033 | .020 | .016 | .011 | .006 | |
| 7.0 | .140 | .085 | .047 | .121 | .074 | .041 | .083 | .052 | .029 | .048 | .031 | .017 | .016 | .010 | .006 | |
| 8.0 | .134 | .080 | .042 | .116 | .069 | .037 | .080 | .048 | .026 | .047 | .029 | .015 | .015 | .009 | .005 | |
| 9.0 | .129 | .075 | .038 | .111 | .065 | .033 | .077 | .046 | .024 | .045 | .027 | .014 | .014 | .009 | .005 | |
| 10.0 | .123 | .070 | .035 | .106 | .061 | .031 | .074 | .043 | .022 | .043 | .025 | .013 | .014 | .008 | .004 | |

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年11月11日

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:5.900 m
 Remarks:

UGR Table

Report number:

| | | | | | | | | | | |
|--|------------------|---------------|------|------|------------|----------------|------|-------------|------|------|
| MANUFACTURER: | | | | | | | | | | |
| Address: | | | | | | | | | | |
| NAME: MA-HDW3016B-25W-CCT | | | | | TYPE: | | | WEIGHT: | | |
| SPECIFICATION: | | CCT (K): 5000 | | | DIMENSION: | | | 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 | 23.2 | 24.6 | 23.5 | 24.8 | 25.0 | 23.9 | 25.3 | 24.2 | 25.5 | 25.7 |
| 3H | 23.5 | 24.7 | 23.8 | 24.9 | 25.2 | 24.3 | 25.6 | 24.6 | 25.8 | 26.1 |
| 4H | 23.5 | 24.7 | 23.8 | 24.9 | 25.2 | 24.4 | 25.6 | 24.7 | 25.8 | 26.1 |
| 6H | 23.6 | 24.7 | 23.9 | 24.9 | 25.2 | 24.4 | 25.5 | 24.8 | 25.8 | 26.1 |
| 8H | 23.6 | 24.6 | 23.9 | 24.9 | 25.2 | 24.4 | 25.5 | 24.8 | 25.8 | 26.1 |
| 12H | 23.6 | 24.6 | 23.9 | 24.9 | 25.2 | 24.4 | 25.4 | 24.8 | 25.7 | 26.1 |
| 4H | 2H | 23.5 | 24.7 | 23.9 | 25.0 | 25.2 | 24.2 | 25.3 | 24.5 | 25.6 |
| | 3H | 23.8 | 24.8 | 24.2 | 25.2 | 25.5 | 24.7 | 25.7 | 25.0 | 26.0 |
| | 4H | 24.0 | 24.9 | 24.4 | 25.2 | 25.6 | 24.8 | 25.7 | 25.2 | 26.1 |
| | 6H | 24.1 | 24.9 | 24.5 | 25.2 | 25.6 | 24.9 | 25.7 | 25.4 | 26.1 |
| | 8H | 24.1 | 24.8 | 24.5 | 25.2 | 25.6 | 25.0 | 25.7 | 25.4 | 26.1 |
| | 12H | 24.1 | 24.8 | 24.6 | 25.2 | 25.6 | 25.0 | 25.7 | 25.4 | 26.1 |
| 8H | 4H | 24.0 | 24.7 | 24.4 | 25.1 | 25.5 | 24.8 | 25.5 | 25.2 | 25.9 |
| | 6H | 24.2 | 24.8 | 24.6 | 25.2 | 25.7 | 25.0 | 25.6 | 25.5 | 26.1 |
| | 8H | 24.2 | 24.8 | 24.7 | 25.2 | 25.7 | 25.1 | 25.7 | 25.6 | 26.1 |
| | 12H | 24.3 | 24.7 | 24.8 | 25.2 | 25.7 | 25.2 | 25.7 | 25.7 | 26.1 |
| 12H | 4H | 24.0 | 24.7 | 24.4 | 25.1 | 25.5 | 24.8 | 25.4 | 25.2 | 25.8 |
| | 6H | 24.2 | 24.7 | 24.7 | 25.2 | 25.6 | 25.0 | 25.6 | 25.5 | 26.0 |
| | 8H | 24.3 | 24.7 | 24.8 | 25.2 | 25.7 | 25.2 | 25.6 | 25.6 | 26.1 |
| Variations with the observer position at spacings: | | | | | | | | | | |
| S = 1.0H | + 0.6 / - 0.7 | | | | | + 0.5 / - 0.7 | | | | |
| 1.5H | + 0.3 / - 0.6 | | | | | + 0.3 / - 0.7 | | | | |
| 2.0H | + 1.0 / - 1.5 | | | | | + 0.8 / - 1.1 | | | | |

CIE Pub.117 Corrected 1581 lm Total Lamp Luminous Flux. (8log(F/F0) = 1.6)

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年11月11日

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:5.900 m
 Remarks:

UTILIZATION FACTORS TABLE

Report number:

| | | | |
|----------------------------------|---------------|-------------------|--------------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: MA-HDW3016B-25W-CCT | | TYPE: | WEIGHT: |
| SPECIFICATION: | CCT (K): 5000 | DIMENSION: | 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 | 64 | 53 | 47 | 63 | 53 | 47 | 62 | 53 | 47 | 41 |
| 0.80 | 74 | 64 | 58 | 73 | 64 | 57 | 71 | 63 | 57 | 51 |
| 1.00 | 82 | 73 | 67 | 81 | 72 | 66 | 79 | 73 | 66 | 60 |
| 1.25 | 89 | 80 | 74 | 88 | 80 | 74 | 85 | 78 | 73 | 67 |
| 1.50 | 94 | 85 | 80 | 92 | 85 | 79 | 89 | 83 | 78 | 71 |
| 2.00 | 100 | 93 | 87 | 98 | 91 | 86 | 94 | 89 | 85 | 78 |
| 2.50 | 103 | 96 | 91 | 101 | 95 | 90 | 97 | 92 | 88 | 81 |
| 3.00 | 105 | 100 | 95 | 103 | 98 | 94 | 99 | 95 | 92 | 84 |
| 4.00 | 109 | 104 | 100 | 106 | 102 | 99 | 102 | 99 | 96 | 87 |
| 5.00 | 110 | 106 | 103 | 108 | 104 | 101 | 103 | 101 | 98 | 89 |
| ROOM INDEX | UF(total) | | | | | | | | | Direct |
| According to DIN EN 13032-2 2004 | | | Suspended | | | | SHRNOM = 1.25 | | | |

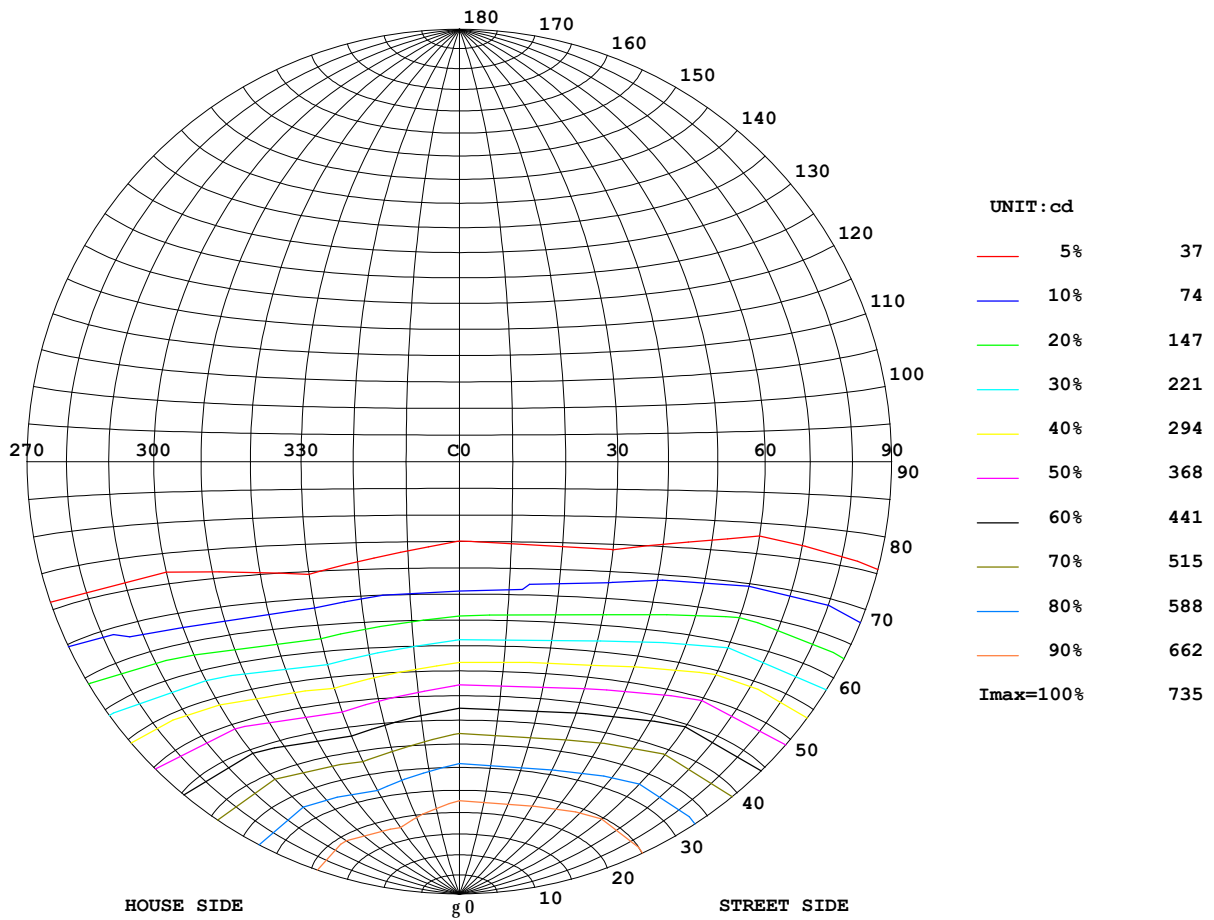
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年11月11日

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:5.900 m
 Remarks:

ISOCANDELA DIAGRAM

Report number:

| | | | |
|---------------------------|---------------|------------|-------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: MA-HDW3016B-25W-CCT | | TYPE: | WEIGHT: |
| SPECIFICATION: | CCT (K): 5000 | DIMENSION: | SERIAL No.: |



Test System: HOPOO HPG1800
 Temperature: 25.3DEG
 Operators:
 Test Date: 2019年11月11日

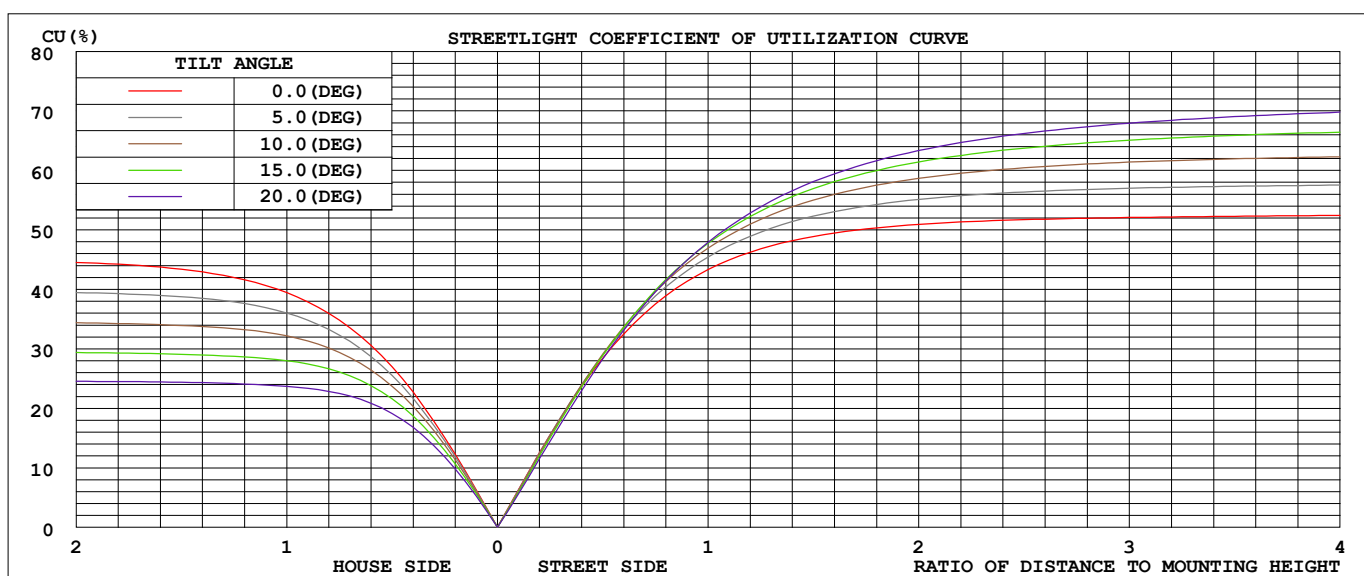
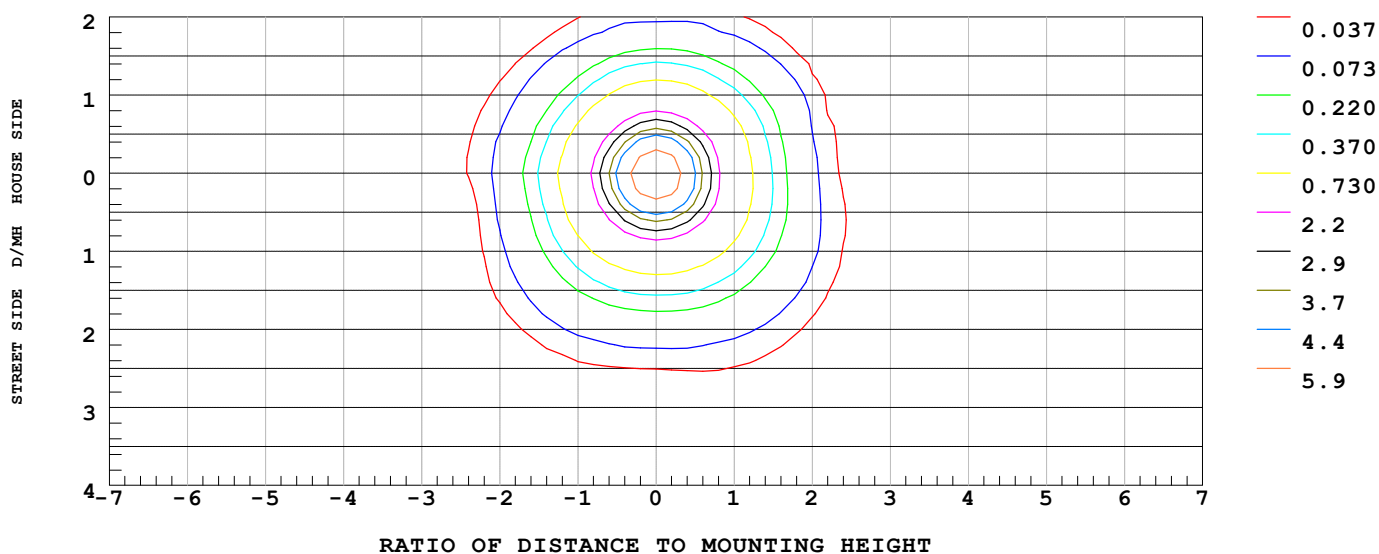
Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity: 65.0%
 Test Distance: 5.900 m
 Remarks:

ISOLUX DIAGRAM

Report number:

| | | | |
|---------------------------|---------------|------------|-------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: MA-HDW3016B-25W-CCT | | TYPE: | WEIGHT: |
| SPECIFICATION: | CCT (K): 5000 | DIMENSION: | SERIAL No.: |

ILLUMINANCE AT MH=10 m, Enadir = 7.34 lx



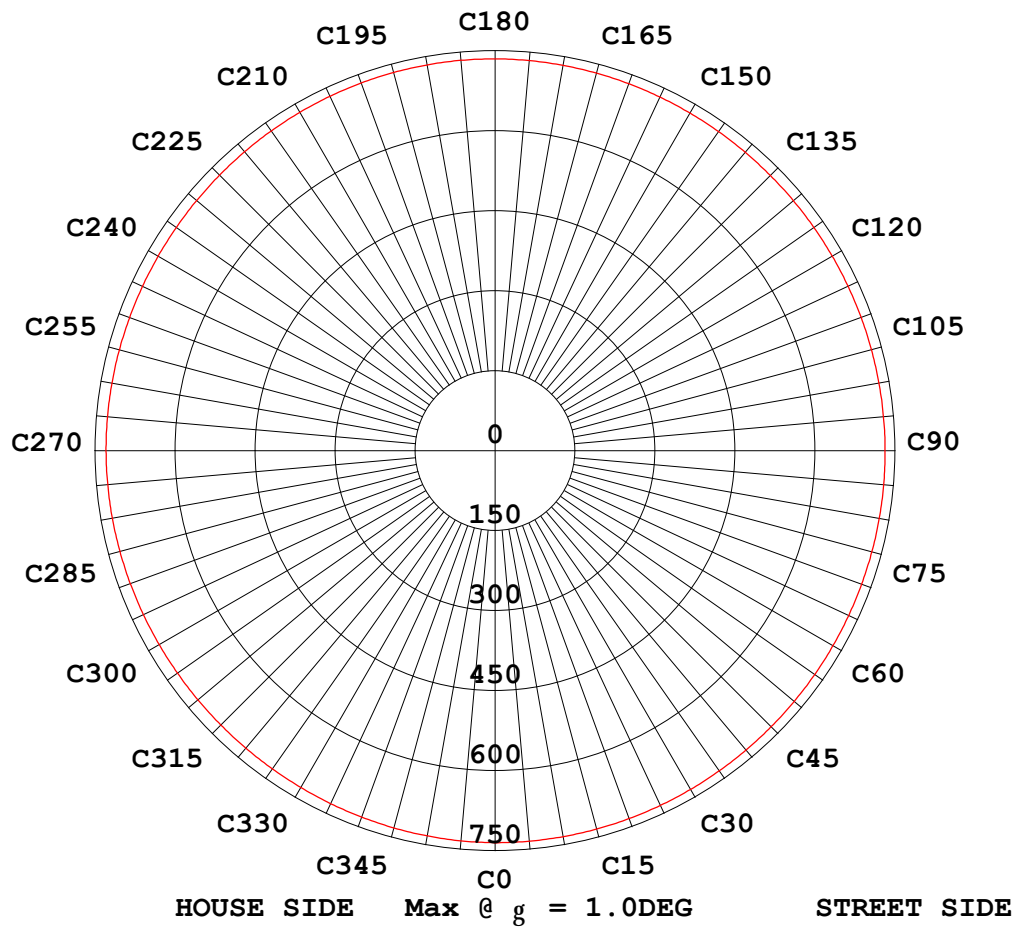
Test System: HOPOO HPG1800
 Temperature: 25.3 DEG
 Operators:
 Test Date: 2019年11月11日

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity: 65.0%
 Test Distance: 5.900 m
 Remarks:

ISOCANDELA DIAGRAM

Report number:

| | | | |
|---------------------------|---------------|------------|-------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: MA-HDW3016B-25W-CCT | | TYPE: | WEIGHT: |
| SPECIFICATION: | CCT (K): 5000 | DIMENSION: | SERIAL No.: |



Test System: HOPOO HPG1800
 Temperature: 25.3DEG
 Operators:
 Test Date: 2019年11月11日

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity: 65.0%
 Test Distance: 5.900 m
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Report number:

| | | | |
|----------------------------------|----------------------|-------------------|--------------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: MA-HDW3016B-25W-CCT | | TYPE: | WEIGHT: |
| SPECIFICATION: | CCT (K): 5000 | DIMENSION: | SERIAL No.: |

UNIT: cd

| γ (DEG) | C (DEG) | | | | | | | | | | | |
|----------------|---------|------|------|------|------|------|------|------|------|------|------|------|
| | 0 | 30 | 60 | 90 | 120 | 150 | 180 | 210 | 240 | 270 | 300 | 330 |
| 0.0 | 734 | 733 | 731 | 730 | 729 | 731 | 734 | 733 | 731 | 730 | 729 | 731 |
| 5.0 | 732 | 731 | 731 | 732 | 732 | 732 | 731 | 729 | 723 | 723 | 719 | 722 |
| 10.0 | 722 | 722 | 725 | 726 | 728 | 726 | 720 | 717 | 708 | 708 | 702 | 707 |
| 15.0 | 705 | 705 | 712 | 713 | 717 | 714 | 702 | 698 | 686 | 686 | 678 | 684 |
| 20.0 | 680 | 681 | 691 | 692 | 698 | 694 | 675 | 669 | 656 | 654 | 647 | 652 |
| 25.0 | 643 | 645 | 659 | 662 | 670 | 664 | 637 | 630 | 613 | 613 | 604 | 610 |
| 30.0 | 596 | 599 | 615 | 619 | 629 | 622 | 586 | 581 | 562 | 561 | 548 | 557 |
| 35.0 | 541 | 542 | 563 | 566 | 579 | 569 | 529 | 524 | 502 | 500 | 484 | 496 |
| 40.0 | 476 | 480 | 503 | 502 | 521 | 510 | 462 | 461 | 436 | 431 | 414 | 427 |
| 45.0 | 402 | 409 | 434 | 431 | 453 | 443 | 387 | 388 | 363 | 352 | 339 | 351 |
| 50.0 | 322 | 332 | 360 | 353 | 380 | 370 | 307 | 311 | 285 | 271 | 260 | 273 |
| 55.0 | 238 | 252 | 282 | 272 | 300 | 291 | 223 | 233 | 205 | 190 | 181 | 196 |
| 60.0 | 158 | 175 | 206 | 191 | 222 | 213 | 144 | 160 | 133 | 115 | 113 | 127 |
| 65.0 | 90.1 | 108 | 137 | 115 | 150 | 141 | 73.3 | 96.3 | 70.3 | 64.2 | 57.8 | 61.9 |
| 70.0 | 54.9 | 56.1 | 59.9 | 58.7 | 89.9 | 76.8 | 45.2 | 54.6 | 40.0 | 43.4 | 35.0 | 43.8 |
| 75.0 | 37.0 | 33.6 | 46.4 | 38.4 | 51.5 | 41.7 | 29.0 | 35.2 | 24.3 | 26.9 | 20.1 | 27.3 |
| 80.0 | 21.9 | 19.4 | 29.9 | 23.0 | 33.6 | 26.3 | 14.7 | 20.3 | 12.0 | 13.2 | 9.08 | 15.2 |
| 85.0 | 10.2 | 8.87 | 17.1 | 10.0 | 19.1 | 13.4 | 5.60 | 10.1 | 3.68 | 5.77 | 1.91 | 6.50 |
| 90.0 | 4.24 | 2.15 | 8.14 | 3.93 | 9.88 | 5.11 | 1.53 | 4.07 | 1.56 | 3.72 | 1.53 | 3.89 |
| 95.0 | 3.65 | 1.56 | 3.89 | 1.42 | 4.00 | 1.49 | 1.67 | 3.65 | 1.60 | 3.48 | 1.60 | 3.55 |
| 100.0 | 3.48 | 1.63 | 3.55 | 1.56 | 3.58 | 1.56 | 1.87 | 3.48 | 1.77 | 3.41 | 1.84 | 3.44 |
| 105.0 | 3.44 | 1.87 | 3.44 | 1.77 | 3.44 | 1.74 | 2.08 | 3.48 | 2.01 | 3.44 | 2.08 | 3.48 |
| 110.0 | 3.51 | 2.12 | 3.48 | 2.01 | 3.44 | 1.98 | 2.36 | 3.55 | 2.33 | 3.55 | 2.36 | 3.58 |
| 115.0 | 3.62 | 2.40 | 3.55 | 2.29 | 3.51 | 2.26 | 2.68 | 3.65 | 2.61 | 3.72 | 2.68 | 3.75 |
| 120.0 | 3.82 | 2.71 | 3.68 | 2.61 | 3.62 | 2.54 | 2.99 | 3.82 | 2.92 | 3.93 | 2.99 | 3.93 |
| 125.0 | 4.03 | 3.02 | 3.86 | 2.92 | 3.79 | 2.85 | 3.34 | 4.03 | 3.23 | 4.14 | 3.30 | 4.14 |
| 130.0 | 4.24 | 3.30 | 4.07 | 3.23 | 4.00 | 3.16 | 3.65 | 4.24 | 3.55 | 4.38 | 3.62 | 4.35 |
| 135.0 | 4.49 | 3.65 | 4.28 | 3.55 | 4.21 | 3.48 | 4.00 | 4.49 | 3.86 | 4.62 | 3.96 | 4.59 |
| 140.0 | 4.69 | 3.96 | 4.49 | 3.86 | 4.45 | 3.79 | 4.31 | 4.73 | 4.17 | 4.83 | 4.24 | 4.83 |
| 145.0 | 4.94 | 4.28 | 4.73 | 4.17 | 4.69 | 4.10 | 4.62 | 4.97 | 4.49 | 5.08 | 4.56 | 5.04 |
| 150.0 | 5.18 | 4.56 | 5.01 | 4.49 | 4.94 | 4.42 | 4.90 | 5.22 | 4.76 | 5.29 | 4.83 | 5.29 |
| 155.0 | 5.43 | 4.83 | 5.25 | 4.76 | 5.15 | 4.69 | 5.22 | 5.46 | 5.01 | 5.49 | 5.11 | 5.49 |
| 160.0 | 5.63 | 5.11 | 5.46 | 5.04 | 5.39 | 5.01 | 5.46 | 5.67 | 5.25 | 5.70 | 5.32 | 5.67 |
| 165.0 | 5.84 | 5.32 | 5.67 | 5.32 | 5.56 | 5.25 | 5.74 | 5.84 | 5.46 | 5.88 | 5.49 | 5.84 |
| 170.0 | 6.02 | 5.53 | 5.84 | 5.56 | 5.77 | 5.46 | 5.95 | 5.95 | 5.60 | 6.02 | 5.63 | 5.95 |
| 175.0 | 6.16 | 5.67 | 5.95 | 5.74 | 5.91 | 5.63 | 6.12 | 6.02 | 5.70 | 6.09 | 5.70 | 6.02 |
| 180.0 | 6.19 | 5.81 | 6.02 | 5.88 | 5.98 | 5.77 | 6.23 | 6.02 | 5.77 | 6.09 | 5.74 | 5.98 |

Test System: HOPOO HPG1800
Temperature: 25.3DEG
Operators:
Test Date: 2019年11月11日

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity: 65.0%
Test Distance: 5.900 m
Remarks: