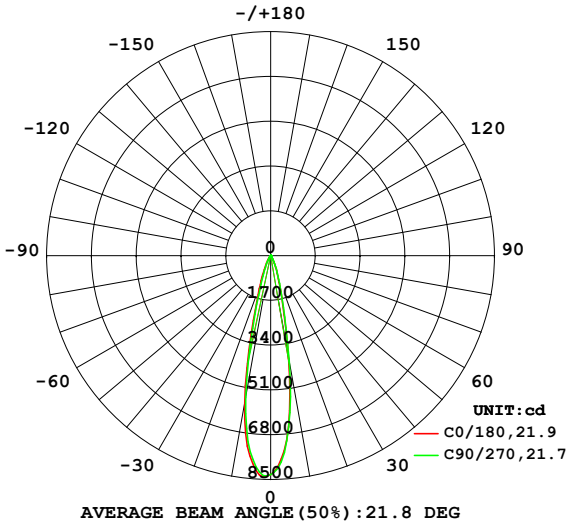
**Photometric Filename: HCP-10X2501-5700K RA90 18D WHITE**

# LUMINAIRE PHOTOMETRIC TEST REPORT

| | | |
|---|---|---|
| Test:U:240.3V I:0.0782A P:18.2W PF:0.9686 Freq:49.99Hz<br>UTHDi:0.22% ITHDi:12.91% KDisp:0.9790 Lamp Flux:1584.52x1 lm | | |
| NAME: HCP-10X2501-5700K RA90 18D WHITE | TYPE: | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: Havit Commercial | SUR.: 55mm | Shielding Angle: |

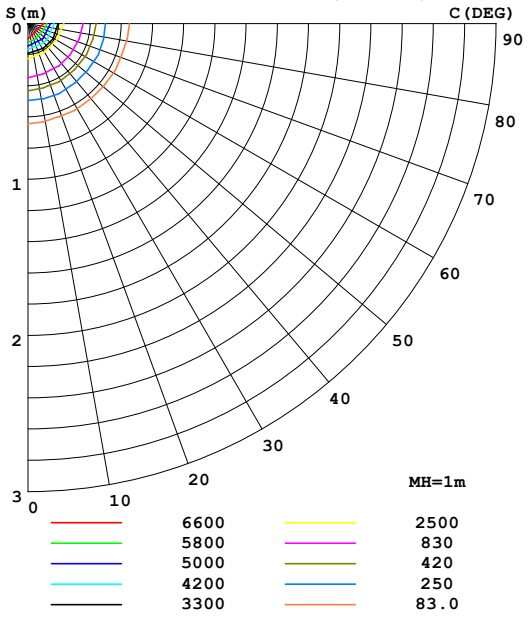
| DATA OF LAMP | | PHOTOMETRIC DATA Eff: 87.05 lm/W | | | |
|---|---|---|---|---|---|
| MODEL | | Imax(cd) | 8437 | S/MH(C0/180) | 0.39 |
| NOMINAL POWER(W) | 19 | LOR(%) | 100.0 | S/MH(C90/270) | 0.38 |
| RATED VOLTAGE(V) | 240 | TOTAL FLUX(lm) | 1584.5 | η UP,DN(C0-180) | 0.0,45.2 |
| NOMINAL FLUX(lm) | 1584.52 | CIE CLASS | DIRECT | η UP,DN(C180-360) | 0.0,54.8 |
| LAMPS INSIDE | 1 | η up(%) | 0.0 | CIBSE SHR NOM | 0.00 |
| TEST VOLTAGE(V) | 240.24 | η down(%) | 100.0 | CIBSE SHR MAX | 0.30 |

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM




AVERAGE BEAM ANGLE(50%):21.8 DEG

PLANAR ISOLUX DIAGRAM(UNIT:lx)




C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-20

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

## ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

| γ | C0 | C45 | C90 | C135 | C180 | C225 | C270 | C315 | γ | Φ zone | Φ total | %lum,lamp |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 3981 | 3751 | 4059 | 4887 | 5684 | 5864 | 5480 | 4666 | 0- 10 | 625.5 | 625.5 | 39.5,39.5 |
| 20 | 802.5 | 773.6 | 851.9 | 1086 | 1168 | 1089 | 976.2 | 916.4 | 10- 20 | 613.5 | 1239 | 78.2,78.2 |
| 30 | 195.6 | 186.8 | 205.9 | 267.4 | 280.6 | 243.2 | 233.3 | 222.5 | 20- 30 | 229.4 | 1468 | 92.7,92.7 |
| 40 | 33.45 | 31.65 | 36.04 | 49.12 | 56.85 | 52.99 | 47.95 | 40.37 | 30- 40 | 71.32 | 1540 | 97.2,97.2 |
| 50 | 14.20 | 13.62 | 13.79 | 15.69 | 18.05 | 18.21 | 16.97 | 14.94 | 40- 50 | 19.47 | 1559 | 98.4,98.4 |
| 60 | 9.869 | 9.430 | 9.587 | 10.49 | 11.40 | 11.55 | 11.14 | 10.47 | 50- 60 | 11.09 | 1570 | 99.1,99.1 |
| 70 | 5.540 | 5.179 | 5.506 | 6.385 | 7.219 | 7.449 | 7.089 | 6.300 | 60- 70 | 8.425 | 1579 | 99.6,99.6 |
| 80 | 2.057 | 1.841 | 2.073 | 2.616 | 3.161 | 3.282 | 3.055 | 2.501 | 70- 80 | 4.598 | 1583 | 99.9,99.9 |
| 90 | 0.0699 | 0.0494 | 0.0736 | 0.0444 | 0.0892 | 0.1817 | 0.0556 | 0.0409 | 80- 90 | 1.250 | 1585 | 100,100 |
| 100 | | | | | | | | | 90-100 | | | |
| 110 | | | | | | | | | 100-110 | | | |
| 120 | | | | | | | | | 110-120 | | | |
| 130 | | | | | | | | | 120-130 | | | |
| 140 | | | | | | | | | 130-140 | | | |
| 150 | | | | | | | | | 140-150 | | | |
| 160 | | | | | | | | | 150-160 | | | |
| 170 | | | | | | | | | 160-170 | | | |
| 180 | | | | | | | | | 170-180 | | | |
| DEG | LUMINOUS INTENSITY:cd | | | | | | | | | UNIT:lm | | |

Conical surface Flux(90deg): 1551.2 lm

%lum = 97.9%
%lamp = 97.9%

Conical surface Flux(120deg): 1570.2 lm

%lum = 99.1%
%lamp = 99.1%

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-20

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

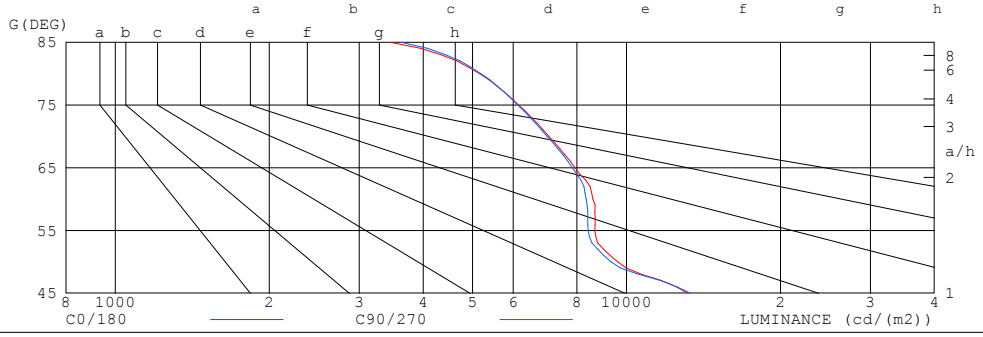
**Photometric Filename: HCP-10X2501-5700K RA90 18D WHITE**

## LUMINANCE LIMITATION CURVES

| | | |
|---|---|---|
| **Test:U:240.3V I:0.0782A P:18.2W PF:0.9686 Freq:49.99Hz**<br>**UTHDi:0.22% ITHDi:12.91% KDisp:0.9790 Lamp Flux:1584.52x1 lm** | | |
| **NAME: HCP-10X2501-5700K RA90 18D WHITE** | **TYPE:** | **WEIGHT:** |
| **SPEC.:** | **DIM.:** | **SERIAL No.:** |
| **MFR.: Havit Commercial** | **SUR.: 55mm** | **Shielding Angle:** |

**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 |
| | | a | b | c | d | e | f | g | h |




| LUMINANCE cd/(m2) | | |
|---|---|---|
| G(DEG) | C0/180 | C90/270 |
| 85 | 3452 | 3621 |
| 80 | 5160 | 5187 |
| 75 | 6152 | 6127 |
| 70 | 7055 | 6996 |
| 65 | 7931 | 7839 |
| 60 | 8598 | 8333 |
| 55 | 8674 | 8410 |
| 50 | 9623 | 9325 |
| 45 | 13162 | 13336 |

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-20

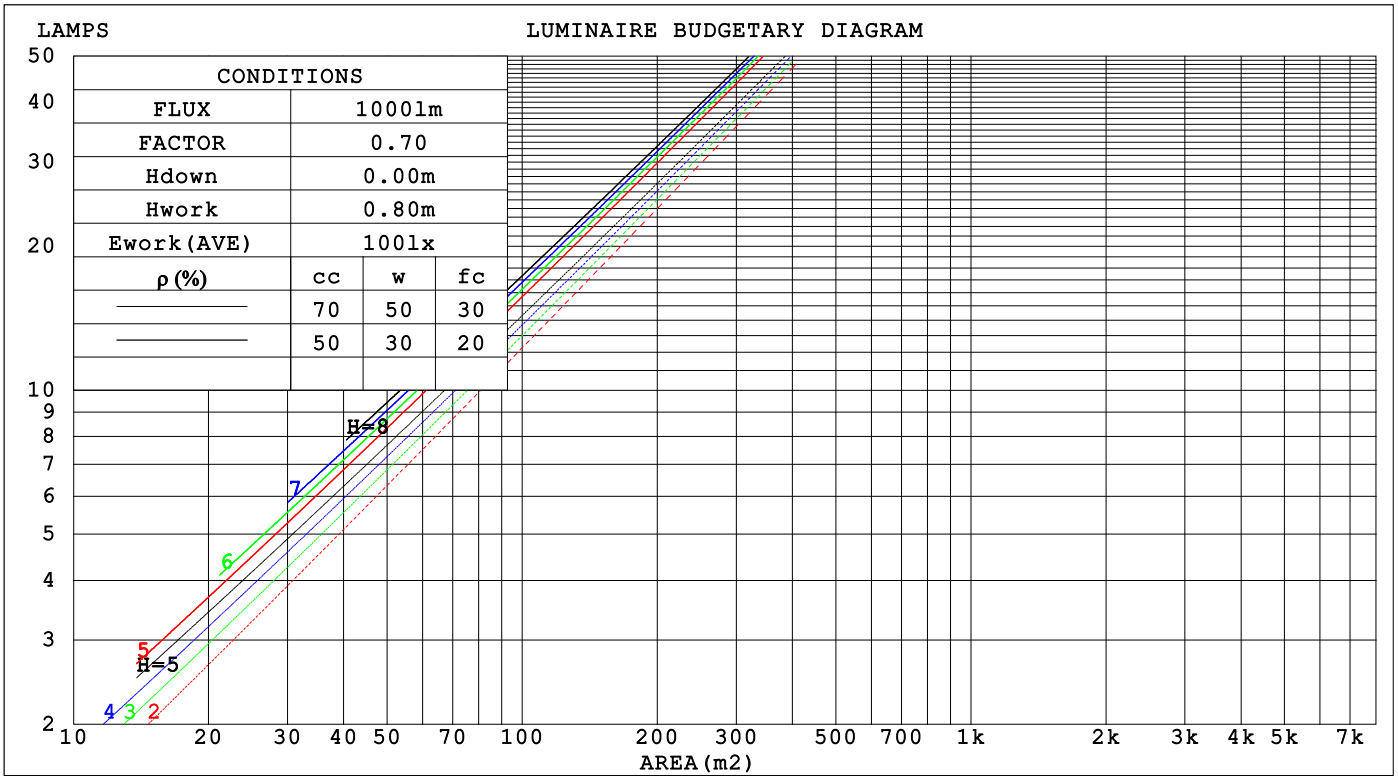
γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

**Photometric Filename: HCP-10X2501-5700K RA90 18D WHITE**

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

| | | |
|---|---|---|
| Test:U:240.3V I:0.0782A P:18.2W PF:0.9686 Freq:49.99Hz<br>UTHDi:0.22% ITHDi:12.91% KDisp:0.9790 Lamp Flux:1584.52x1 lm | | |
| NAME: HCP-10X2501-5700K RA90 18D WHITE | TYPE: | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: Havit Commercial | SUR.: 55mm | Shielding Angle: |

| ρcc | 80% | | | 70% | | | 50% | | | 30% | | | 10% | | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ρw | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| ρfc | 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 | 1.11 | 1.11 | 1.11 | 1.06 | 1.06 | 1.06 | 1.02 | 1.02 | 1.02 | 1.00 |
| 1.0 | 1.13 | 1.11 | 1.09 | 1.11 | 1.09 | 1.07 | 1.07 | 1.05 | 1.04 | 1.03 | 1.02 | 1.01 | .00 | .99 | .98 | .96 |
| 2.0 | 1.07 | 1.04 | 1.02 | 1.06 | 1.03 | 1.01 | 1.03 | 1.00 | .99 | .00 | .98 | .96 | .97 | .96 | .94 | .93 |
| 3.0 | 1.03 | .99 | .96 | 1.01 | .98 | .95 | .99 | .96 | .94 | .97 | .94 | .93 | .95 | .93 | .91 | .90 |
| 4.0 | .99 | .95 | .92 | .98 | .94 | .91 | .96 | .93 | .90 | .94 | .91 | .89 | .92 | .90 | .88 | .87 |
| 5.0 | .95 | .91 | .88 | .94 | .90 | .88 | .93 | .89 | .87 | .91 | .88 | .86 | .90 | .87 | .85 | .84 |
| 6.0 | .92 | .88 | .85 | .91 | .87 | .84 | .90 | .87 | .84 | .89 | .86 | .83 | .88 | .85 | .83 | .82 |
| 7.0 | .89 | .85 | .82 | .88 | .85 | .82 | .87 | .84 | .81 | .86 | .83 | .81 | .85 | .83 | .81 | .80 |
| 8.0 | .86 | .82 | .79 | .86 | .82 | .79 | .85 | .82 | .79 | .84 | .81 | .79 | .83 | .81 | .78 | .77 |
| 9.0 | .84 | .80 | .77 | .84 | .80 | .77 | .83 | .79 | .77 | .82 | .79 | .77 | .81 | .79 | .76 | .75 |
| 10.0 | .82 | .78 | .75 | .81 | .78 | .75 | .81 | .77 | .75 | .80 | .77 | .75 | .79 | .77 | .75 | .74 |




C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-20

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

**Photometric Filename: HCP-10X2501-5700K RA90 18D WHITE**

## WEC AND CCEC

| | | |
|---|---|---|
| Test:U:240.3V I:0.0782A P:18.2W PF:0.9686 Freq:49.99Hz<br>UTHDi:0.22% ITHDi:12.91% KDisp:0.9790 Lamp Flux:1584.52x1 lm | | |
| NAME: HCP-10X2501-5700K RA90 18D WHITE | TYPE: | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: Havit Commercial | SUR.: 55mm | Shielding Angle: |

| ρcc | 80% | | | 70% | | | 50% | | | 30% | | | 10% | | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ρw | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| ρfc | 20% | | | 20% | | | 20% | | | 20% | | | 20% | | | 0 |
| RCR | RCR:Room Cavity Ratio | | | | | | Wall Exitance Coeffcients(WEC) | | | | | | | | | |
| 0.0 | | | | | | | | | | | | | | | | |
| 1.0 | .139 | .079 | .025 | .133 | .076 | .024 | .120 | .069 | .022 | .109 | .063 | .020 | .099 | .057 | .018 | |
| 2.0 | .129 | .071 | .022 | .124 | .068 | .021 | .113 | .063 | .020 | .104 | .058 | .018 | .095 | .054 | .017 | |
| 3.0 | .120 | .064 | .019 | .115 | .062 | .019 | .107 | .058 | .018 | .099 | .054 | .017 | .092 | .051 | .016 | |
| 4.0 | .112 | .058 | .017 | .108 | .057 | .017 | .101 | .054 | .016 | .094 | .051 | .015 | .088 | .048 | .015 | |
| 5.0 | .105 | .054 | .016 | .102 | .052 | .015 | .096 | .050 | .015 | .090 | .048 | .014 | .085 | .045 | .014 | |
| 6.0 | .099 | .050 | .014 | .097 | .049 | .014 | .091 | .047 | .014 | .086 | .045 | .013 | .082 | .043 | .013 | |
| 7.0 | .094 | .047 | .013 | .092 | .046 | .013 | .087 | .044 | .013 | .083 | .042 | .012 | .079 | .041 | .012 | |
| 8.0 | .090 | .044 | .012 | .087 | .043 | .012 | .083 | .042 | .012 | .080 | .040 | .012 | .076 | .039 | .011 | |
| 9.0 | .085 | .041 | .012 | .083 | .041 | .011 | .080 | .040 | .011 | .077 | .038 | .011 | .073 | .037 | .011 | |
| 10.0 | .082 | .039 | .011 | .080 | .039 | .011 | .077 | .038 | .011 | .074 | .037 | .010 | .071 | .036 | .010 | |

| ρcc | 80% | | | 70% | | | 50% | | | 30% | | | 10% | | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ρw | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| ρfc | 20% | | | 20% | | | 20% | | | 20% | | | 20% | | | 0 |
| RCR | RCR:Room Cavity Ratio | | | | | | Ceiling Cavity Exitance Coefficients(CCEC) | | | | | | | | | |
| 0.0 | .190 | .190 | .190 | .163 | .163 | .163 | .111 | .111 | .111 | .064 | .064 | .064 | .020 | .020 | .020 | |
| 1.0 | .169 | .158 | .148 | .144 | .135 | .127 | .099 | .093 | .088 | .057 | .054 | .051 | .018 | .017 | .017 | |
| 2.0 | .151 | .133 | .118 | .129 | .114 | .102 | .088 | .079 | .071 | .051 | .046 | .042 | .016 | .015 | .014 | |
| 3.0 | .136 | .113 | .096 | .116 | .098 | .083 | .080 | .068 | .058 | .046 | .040 | .034 | .015 | .013 | .011 | |
| 4.0 | .123 | .098 | .079 | .106 | .085 | .068 | .073 | .059 | .048 | .042 | .035 | .028 | .014 | .011 | .009 | |
| 5.0 | .113 | .086 | .066 | .097 | .074 | .057 | .067 | .052 | .040 | .039 | .030 | .024 | .012 | .010 | .008 | |
| 6.0 | .104 | .076 | .056 | .089 | .065 | .048 | .061 | .046 | .034 | .036 | .027 | .020 | .011 | .009 | .007 | |
| 7.0 | .096 | .067 | .047 | .082 | .058 | .041 | .057 | .041 | .029 | .033 | .024 | .017 | .011 | .008 | .006 | |
| 8.0 | .089 | .061 | .041 | .077 | .053 | .036 | .053 | .037 | .025 | .031 | .022 | .015 | .010 | .007 | .005 | |
| 9.0 | .084 | .055 | .036 | .072 | .048 | .031 | .050 | .034 | .022 | .029 | .020 | .013 | .009 | .007 | .004 | |
| 10.0 | .079 | .050 | .031 | .068 | .044 | .027 | .047 | .031 | .019 | .027 | .018 | .012 | .009 | .006 | .004 | |

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-20

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

## UGR(Unified Glare Rating) Table

| | | |
|---|---|---|
| Test:U:240.3V I:0.0782A P:18.2W PF:0.9686 Freq:49.99Hz<br>UTHDi:0.22% ITHDi:12.91% KDisp:0.9790 Lamp Flux:1584.52x1 lm | | |
| NAME: HCP-10X2501-5700K RA90 18D WHITE | TYPE: | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: Havit Commercial | SUR.: 55mm | Shielding Angle: |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 12.5 | 13.1 | 12.7 | 13.3 | 13.4 | 12.6 | 13.2 | 12.8 | 13.4 | 13.5 |
| 3H | 13.0 | 13.6 | 13.3 | 13.8 | 14.0 | 13.1 | 13.7 | 13.4 | 13.9 | 14.1 |
| 4H | 13.3 | 13.8 | 13.5 | 14.1 | 14.3 | 13.3 | 13.9 | 13.6 | 14.1 | 14.3 |
| 6H | 13.4 | 14.0 | 13.7 | 14.2 | 14.4 | 13.5 | 14.0 | 13.8 | 14.3 | 14.5 |
| 8H | 13.4 | 14.0 | 13.7 | 14.2 | 14.5 | 13.5 | 14.0 | 13.8 | 14.3 | 14.5 |
| 12H | 13.4 | 14.0 | 13.7 | 14.2 | 14.5 | 13.5 | 14.0 | 13.8 | 14.3 | 14.6 |
| 4H 2H | 12.6 | 13.2 | 12.9 | 13.4 | 13.6 | 12.7 | 13.3 | 13.0 | 13.5 | 13.7 |
| 3H | 13.3 | 13.8 | 13.6 | 14.1 | 14.4 | 13.4 | 13.9 | 13.7 | 14.2 | 14.4 |
| 4H | 13.6 | 14.1 | 14.0 | 14.4 | 14.7 | 13.7 | 14.2 | 14.0 | 14.5 | 14.8 |
| 6H | 13.9 | 14.3 | 14.2 | 14.6 | 15.0 | 13.9 | 14.3 | 14.3 | 14.7 | 15.0 |
| 8H | 13.9 | 14.3 | 14.3 | 14.7 | 15.0 | 14.0 | 14.4 | 14.4 | 14.7 | 15.1 |
| 12H | 13.9 | 14.3 | 14.3 | 14.7 | 15.0 | 14.0 | 14.4 | 14.4 | 14.7 | 15.1 |
| 8H 4H | 13.7 | 14.1 | 14.1 | 14.4 | 14.8 | 13.7 | 14.1 | 14.1 | 14.5 | 14.8 |
| 6H | 14.0 | 14.3 | 14.4 | 14.7 | 15.1 | 14.0 | 14.4 | 14.5 | 14.8 | 15.2 |
| 8H | 14.1 | 14.4 | 14.5 | 14.8 | 15.2 | 14.1 | 14.4 | 14.6 | 14.8 | 15.3 |
| 12H | 14.1 | 14.4 | 14.6 | 14.8 | 15.3 | 14.2 | 14.4 | 14.6 | 14.9 | 15.3 |
| 12H 4H | 13.7 | 14.0 | 14.1 | 14.4 | 14.8 | 13.7 | 14.1 | 14.1 | 14.4 | 14.8 |
| 6H | 14.0 | 14.3 | 14.4 | 14.7 | 15.1 | 14.0 | 14.3 | 14.5 | 14.7 | 15.2 |
| 8H | 14.1 | 14.3 | 14.5 | 14.8 | 15.2 | 14.1 | 14.4 | 14.6 | 14.8 | 15.3 |
| Variations with the observer position at spacings(CIE Pub.117): | | | | | | | | | | |
| S = 1.0H | + 1.3 / - 0.9 | | | | | + 1.5 / - 1.0 | | | | |
| 1.5H | + 2.5 / - 0.8 | | | | | + 2.9 / - 1.0 | | | | |
| 2.0H | + 0.8 / - 0.5 | | | | | + 0.9 / - 0.5 | | | | |

CIE Pub.117, 1585 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 1.6)
Area: 0.0023 m2

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-20

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

**Photometric Filename: HCP-10X2501-5700K RA90 18D WHITE**

## UTILIZATION FACTORS TABLE

| | | |
|---|---|---|
| Test:U:240.3V I:0.0782A P:18.2W PF:0.9686 Freq:49.99Hz<br>UTHDi:0.22% ITHDi:12.91% KDisp:0.9790 Lamp Flux:1584.52x1 lm | | |
| NAME: HCP-10X2501-5700K RA90 18D WHITE | TYPE: | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: Havit Commercial | SUR.: 55mm | Shielding Angle: |

| 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) x RCR = 5 | | | | | | | | | |
| k = 0.60 | 90 | 84 | 80 | 89 | 84 | 80 | 89 | 83 | 80 | 77 |
| 0.80 | 97 | 91 | 88 | 96 | 91 | 88 | 95 | 91 | 88 | 84 |
| 1.00 | 101 | 96 | 92 | 100 | 95 | 92 | 98 | 95 | 91 | 88 |
| 1.25 | 104 | 100 | 96 | 103 | 99 | 96 | 102 | 98 | 95 | 91 |
| 1.50 | 107 | 103 | 99 | 106 | 102 | 99 | 104 | 100 | 98 | 94 |
| 2.00 | 109 | 105 | 102 | 108 | 104 | 102 | 105 | 102 | 100 | 95 |
| 2.50 | 111 | 107 | 104 | 109 | 106 | 104 | 106 | 104 | 102 | 96 |
| 3.00 | 112 | 109 | 107 | 111 | 108 | 105 | 107 | 105 | 103 | 97 |
| 4.00 | 114 | 112 | 110 | 112 | 110 | 108 | 109 | 107 | 105 | 99 |
| 5.00 | 115 | 113 | 112 | 113 | 112 | 110 | 109 | 108 | 107 | 100 |
| ROOM INDEX | UF(total) | | | | | | | | | Direct |
| According to DIN EN 13032-2 2004 | | | | Suspended | | | | | SHRNOM = 1.25 | |

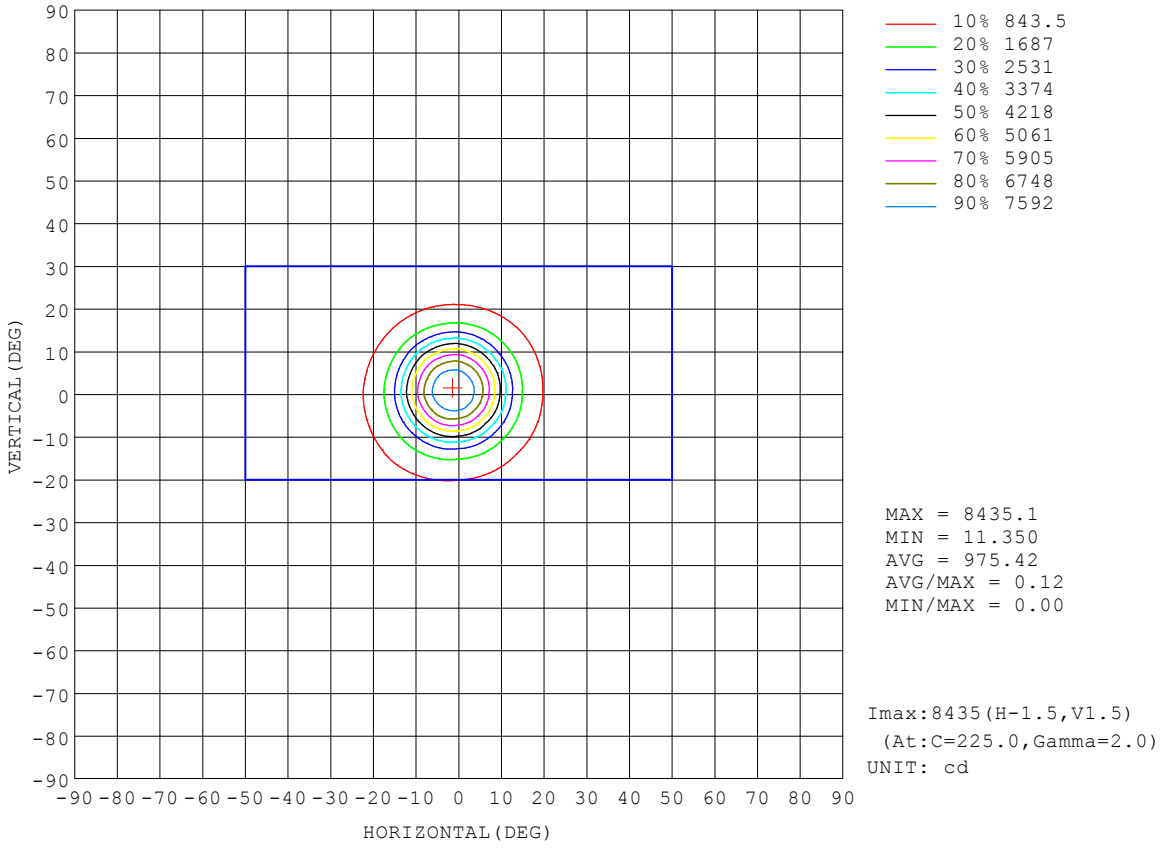
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-20

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

**Photometric Filename: HCP-10X2501-5700K RA90 18D WHITE**

## ISOCANDELA DIAGRAM

| | | |
|---|---|---|
| Test:U:240.3V I:0.0782A P:18.2W PF:0.9686 Freq:49.99Hz<br>UTHDi:0.22% ITHDi:12.91% KDisp:0.9790 Lamp Flux:1584.52x1 lm | | |
| NAME: HCP-10X2501-5700K RA90 18D WHITE | TYPE: | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: Havit Commercial | SUR.: 55mm | Shielding Angle: |




C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-20

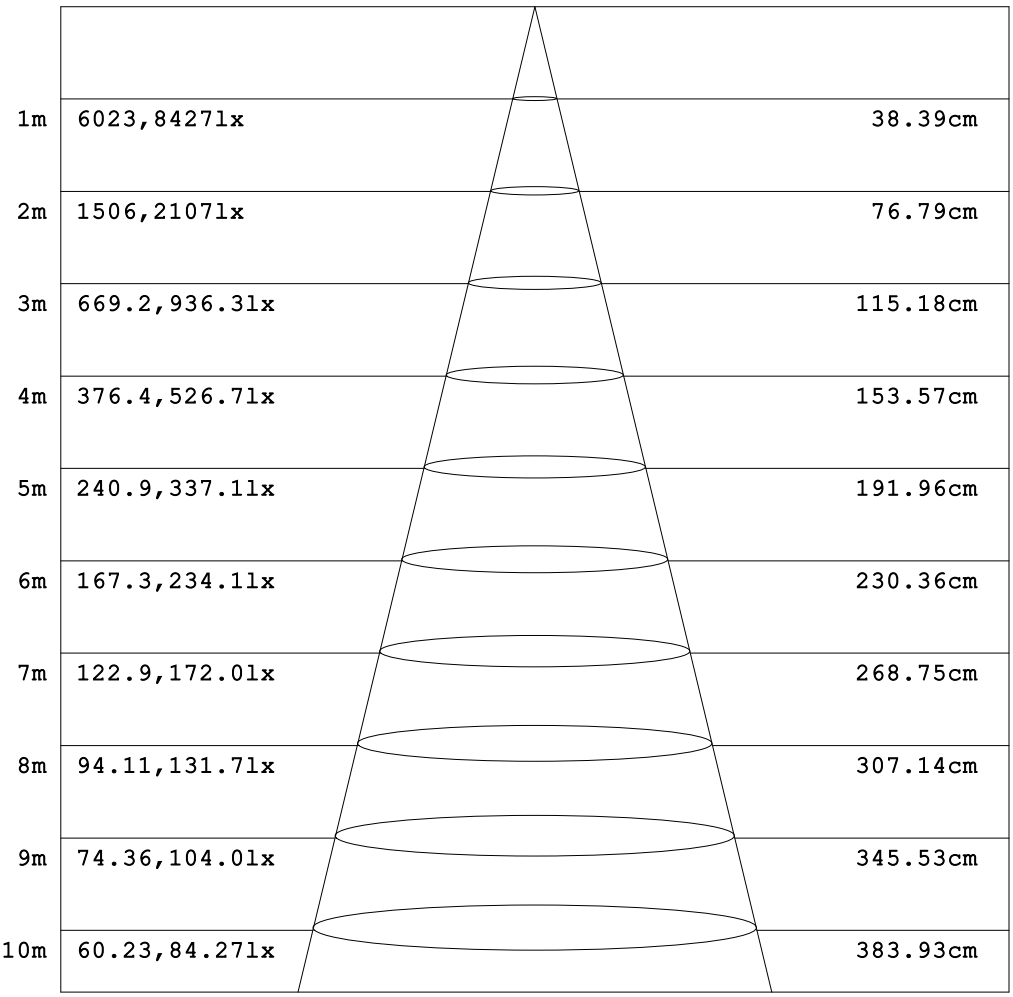
γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

**Photometric Filename: HCP-10X2501-5700K RA90 18D WHITE**

## AAI Figure

| | | |
|---|---|---|
| Test:U:240.3V I:0.0782A P:18.2W PF:0.9686 Freq:49.99Hz<br>UTHDi:0.22% ITHDi:12.91% KDisp:0.9790 Lamp Flux:1584.52x1 lm | | |
| NAME: HCP-10X2501-5700K RA90 18D WHITE | TYPE: | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: Havit Commercial | SUR.: 55mm | Shielding Angle: |

Flux out:714.9 lm




**Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.**

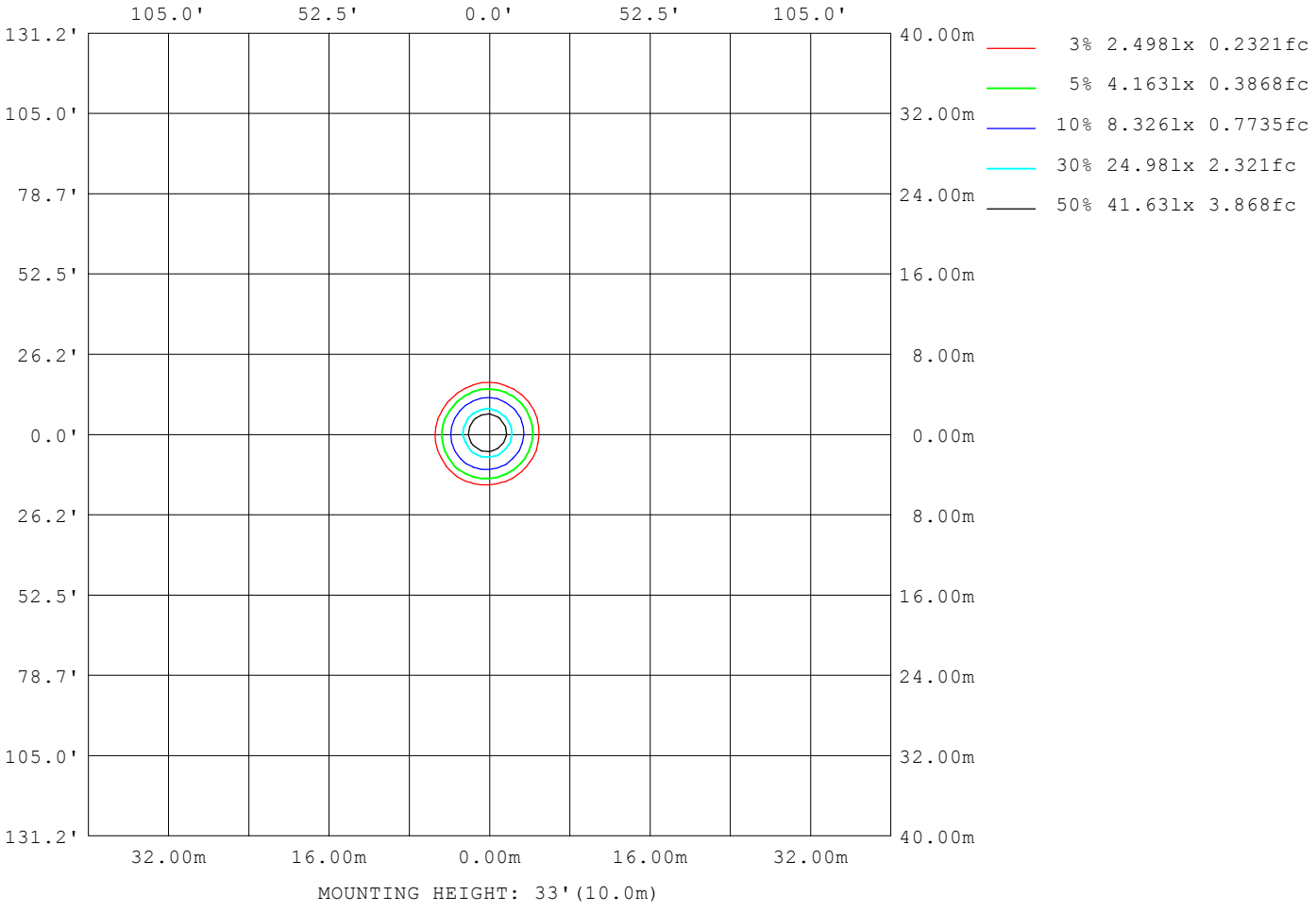
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-20

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

**Photometric Filename: HCP-10X2501-5700K RA90 18D WHITE**

## ISOLUX DIAGRAM

| | | |
|---|---|---|
| **Test:U:240.3V I:0.0782A P:18.2W PF:0.9686 Freq:49.99Hz**<br>**UTHDi:0.22% ITHDi:12.91% KDisp:0.9790 Lamp Flux:1584.52x1 lm** | | |
| **NAME: HCP-10X2501-5700K RA90 18D WHITE** | **TYPE:** | **WEIGHT:** |
| **SPEC.:** | **DIM.:** | **SERIAL No.:** |
| **MFR.: Havit Commercial** | **SUR.: 55mm** | **Shielding Angle:** |




C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-20

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

## LED Avg.L Report

| | | |
|---|---|---|
| Test:U:240.3V I:0.0782A P:18.2W PF:0.9686 Freq:49.99Hz<br>UTHDi:0.22% ITHDi:12.91% KDisp:0.9790 Lamp Flux:1584.52x1 lm | | |
| NAME: HCP-10X2501-5700K RA90 18D WHITE | TYPE: | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: Havit Commercial | SUR.: 55mm | Shielding Angle: |

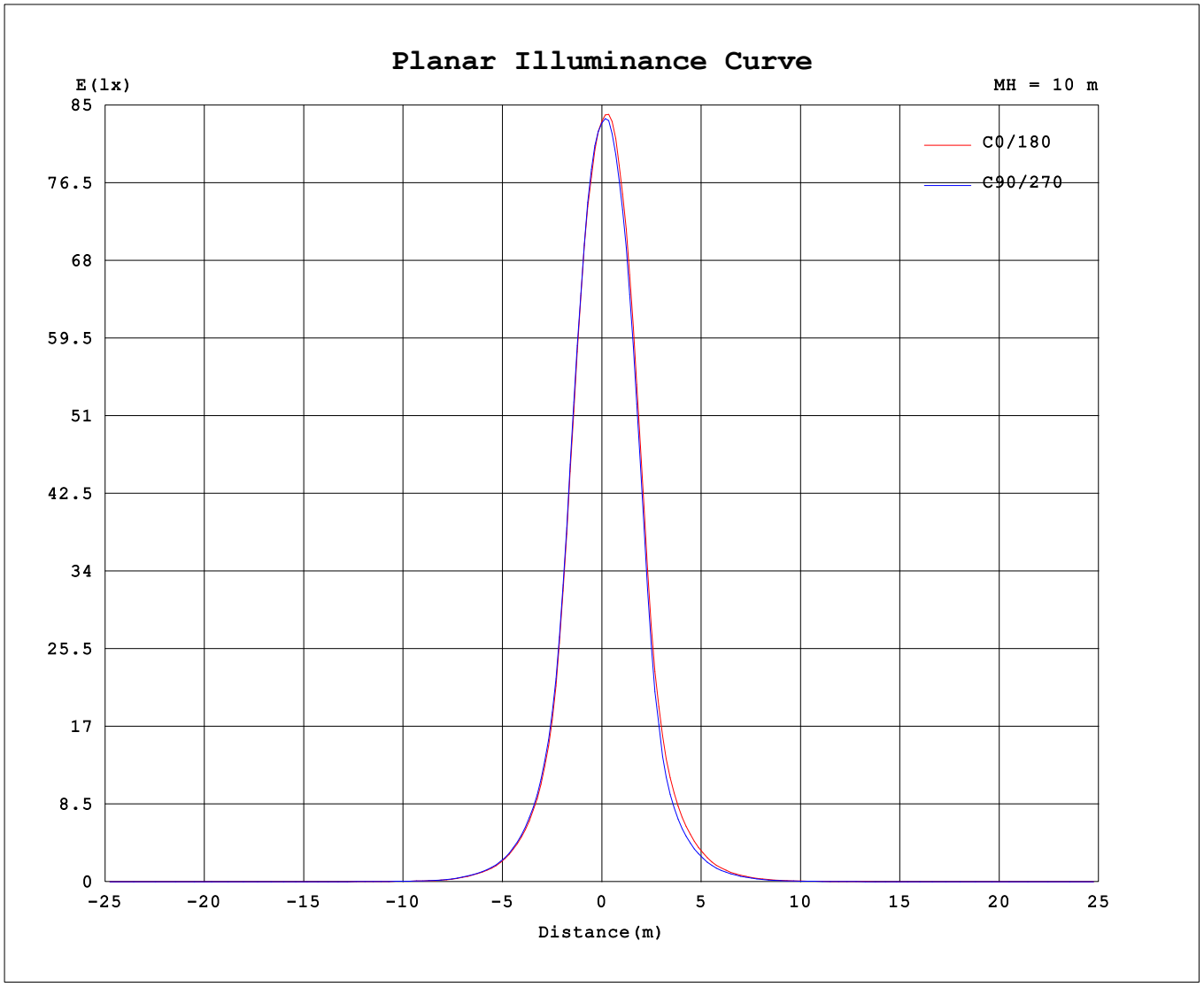
| AvgL | cd/m2 |
|---|---|
| L_0~180(65)av | 8916 |
| L_0~180(75)av | 7307 |
| L_0~180(85)av | 5569 |
| L_90~270(65)av | 8760 |
| L_90~270(75)av | 7210 |
| L_90~270(85)av | 5410 |
| L_45(65)av | 8818 |
| L_45(75)av | 7229 |
| L_45(85)av | 5328 |

**Standard: GB/T 29293-2012**

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-20

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

## Planar Illuminance Curve




C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-20

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

**Photometric Filename: HCP-10X2501-5700K RA90 18D WHITE**

## LUMINOUS DISTRIBUTION INTENSITY DATA

| | | |
|---|---|---|
| Test:U:240.3V I:0.0782A P:18.2W PF:0.9686 Freq:49.99Hz<br>UTHDi:0.22% ITHDi:12.91% KDisp:0.9790 Lamp Flux:1584.52x1 lm | | |
| NAME: HCP-10X2501-5700K RA90 18D WHITE | TYPE: | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: Havit Commercial | SUR.: 55mm | Shielding Angle: |

Table--1 UNIT: cd

| γ (DEG) \ C(DEG) | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
|---|---|---|---|---|---|---|---|---|
| 0 | 8311 | 8311 | 8311 | 8311 | 8311 | 8311 | 8311 | 8311 |
| 5 | 7030 | 6847 | 7064 | 7544 | 7915 | 8027 | 7768 | 7367 |
| 10 | 3981 | 3751 | 4059 | 4887 | 5684 | 5864 | 5480 | 4666 |
| 15 | 1649 | 1595 | 1731 | 2150 | 2551 | 2656 | 2310 | 1906 |
| 20 | 802 | 774 | 852 | 1086 | 1168 | 1089 | 976 | 916 |
| 25 | 406 | 385 | 425 | 564 | 598 | 523 | 487 | 464 |
| 30 | 196 | 187 | 206 | 267 | 281 | 243 | 233 | 223 |
| 35 | 90.8 | 82.6 | 96.6 | 127 | 132 | 115 | 112 | 106 |
| 40 | 33.5 | 31.6 | 36.0 | 49.1 | 56.9 | 53.0 | 47.9 | 40.4 |
| 45 | 21.4 | 20.7 | 21.7 | 25.8 | 27.4 | 26.4 | 24.7 | 23.0 |
| 50 | 14.2 | 13.6 | 13.8 | 15.7 | 18.0 | 18.2 | 17.0 | 14.9 |
| 55 | 11.4 | 11.0 | 11.1 | 11.9 | 13.0 | 13.2 | 12.8 | 12.0 |
| 60 | 9.87 | 9.43 | 9.59 | 10.5 | 11.4 | 11.5 | 11.1 | 10.5 |
| 65 | 7.70 | 7.28 | 7.62 | 8.60 | 9.64 | 9.87 | 9.41 | 8.54 |
| 70 | 5.54 | 5.18 | 5.51 | 6.39 | 7.22 | 7.45 | 7.09 | 6.30 |
| 75 | 3.66 | 3.37 | 3.65 | 4.37 | 5.04 | 5.21 | 4.93 | 4.26 |
| 80 | 2.06 | 1.84 | 2.07 | 2.62 | 3.16 | 3.28 | 3.05 | 2.50 |
| 85 | 0.69 | 0.54 | 0.73 | 1.12 | 1.54 | 1.62 | 1.44 | 0.99 |
| 90 | 0.07 | 0.05 | 0.07 | 0.04 | 0.09 | 0.18 | 0.06 | 0.04 |

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-20

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

**Photometric Filename: HCP-10X2501-5700K RA90 18D WHITE**

## Photometric Data Table [cd]

| G/C | 0.0 | 45.0 | 90.0 | 135.0 | 180.0 | 225.0 | 270.0 | 315.0 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 8311 | 8311 | 8311 | 8311 | 8311 | 8311 | 8311 | 8311 |
| 3.0 | 7732 | 7703 | 7833 | 8052 | 8340 | 8377 | 8227 | 7974 |
| 6.0 | 6512 | 6328 | 6552 | 7185 | 7640 | 7755 | 7481 | 6999 |
| 9.0 | 4655 | 4383 | 4742 | 5517 | 6288 | 6438 | 6083 | 5328 |
| 12.0 | 2790 | 2642 | 2861 | 3574 | 4358 | 4550 | 4133 | 3311 |
| 15.0 | 1649 | 1595 | 1731 | 2150 | 2551 | 2656 | 2310 | 1906 |
| 18.0 | 1060 | 1019 | 1113 | 1411 | 1561 | 1509 | 1332 | 1200 |
| 21.0 | 703.2 | 675.9 | 737.9 | 953.4 | 1017 | 944.5 | 844.0 | 792.4 |
| 24.0 | 468.3 | 447.2 | 489.2 | 648.7 | 682.3 | 601.5 | 559.6 | 532.3 |
| 27.0 | 301.1 | 284.4 | 316.0 | 422.2 | 446.3 | 390.5 | 365.1 | 345.6 |
| 30.0 | 195.6 | 186.8 | 205.9 | 267.4 | 280.6 | 243.2 | 233.3 | 222.5 |
| 33.0 | 126.4 | 118.2 | 133.8 | 171.7 | 178.1 | 155.3 | 152.0 | 145.5 |
| 36.0 | 74.46 | 67.96 | 81.77 | 107.6 | 112.4 | 99.81 | 96.52 | 90.17 |
| 39.0 | 39.59 | 36.77 | 43.45 | 60.66 | 69.04 | 63.17 | 58.28 | 49.49 |
| 42.0 | 26.50 | 25.69 | 27.86 | 35.15 | 39.57 | 37.37 | 33.77 | 29.97 |
| 45.0 | 21.37 | 20.70 | 21.70 | 25.75 | 27.36 | 26.44 | 24.71 | 23.01 |
| 48.0 | 16.47 | 15.61 | 16.28 | 19.84 | 21.63 | 21.28 | 20.00 | 18.24 |
| 51.0 | 13.43 | 12.89 | 13.08 | 14.63 | 16.30 | 16.54 | 15.47 | 14.15 |
| 54.0 | 11.75 | 11.33 | 11.44 | 12.44 | 13.72 | 13.87 | 13.41 | 12.35 |
| 57.0 | 10.85 | 10.48 | 10.52 | 11.34 | 12.22 | 12.36 | 12.03 | 11.36 |
| 60.0 | 9.869 | 9.430 | 9.587 | 10.49 | 11.40 | 11.55 | 11.14 | 10.47 |
| 63.0 | 8.672 | 8.188 | 8.512 | 9.467 | 10.38 | 10.56 | 10.14 | 9.443 |
| 66.0 | 7.249 | 6.840 | 7.191 | 8.151 | 9.114 | 9.384 | 8.936 | 8.086 |
| 69.0 | 5.947 | 5.576 | 5.921 | 6.817 | 7.678 | 7.925 | 7.551 | 6.735 |
| 72.0 | 4.750 | 4.418 | 4.726 | 5.542 | 6.313 | 6.520 | 6.196 | 5.450 |
| 75.0 | 3.655 | 3.370 | 3.649 | 4.367 | 5.045 | 5.214 | 4.935 | 4.262 |
| 78.0 | 2.666 | 2.423 | 2.673 | 3.286 | 3.880 | 4.020 | 3.775 | 3.175 |
| 81.0 | 1.764 | 1.564 | 1.787 | 2.292 | 2.817 | 2.928 | 2.712 | 2.178 |
| 84.0 | 0.9509 | 0.7838 | 0.9820 | 1.397 | 1.850 | 1.934 | 1.747 | 1.277 |
| 87.0 | 0.1901 | 0.0677 | 0.2323 | 0.5667 | 0.9450 | 1.033 | 0.8577 | 0.4545 |
| 90.0 | 0.0699 | 0.0494 | 0.0736 | 0.0444 | 0.0892 | 0.1817 | 0.0556 | 0.0409 |

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-20

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks: