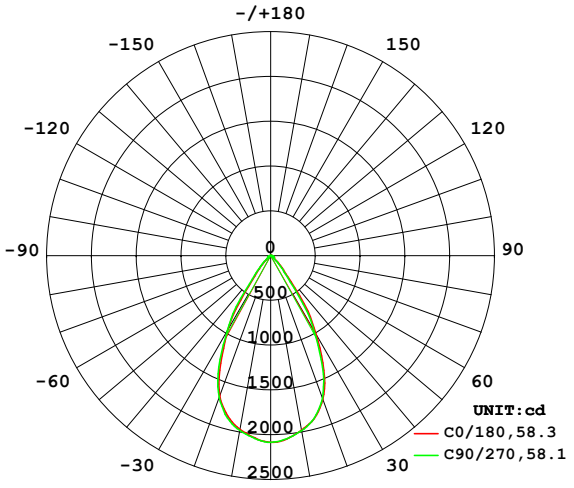
**Photometric Filename: HCP-10X2501-5700K RA90 60D WHITE**

# LUMINAIRE PHOTOMETRIC TEST REPORT

| | | |
|---|---|---|
| Test:U:240.2V I:0.1029A P:24.3W PF:0.9822 Freq:49.99Hz<br>UTHDi:0.27% ITHDi:8.57% KDisp:0.9879 Lamp Flux:1882.3x1 lm | | |
| NAME: HCP-10X2501-5700K RA90 60D WHITE | TYPE: | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: Havit Commercial | SUR.: 55mm | Shielding Angle: |

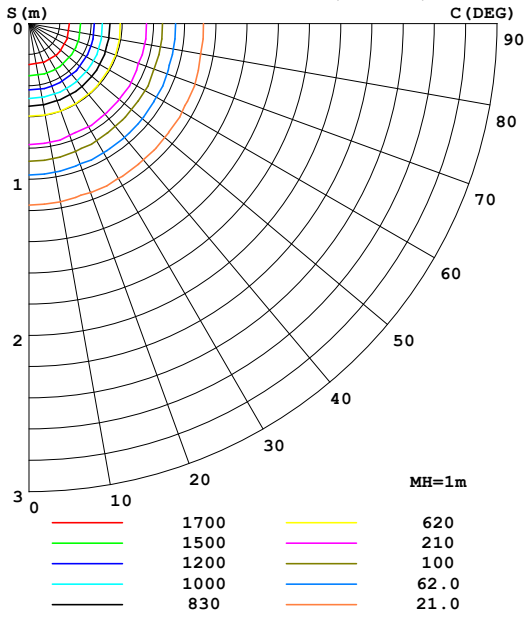
| DATA OF LAMP | | PHOTOMETRIC DATA | | Eff: 77.50 lm/W | |
|---|---|---|---|---|---|
| MODEL | | Imax(cd) | 2083 | S/MH(C0/180) | 0.87 |
| NOMINAL POWER(W) | 25 | LOR(%) | 100.0 | S/MH(C90/270) | 0.88 |
| RATED VOLTAGE(V) | 240 | TOTAL FLUX(lm) | 1882.3 | η UP,DN(C0-180) | 0.0,50.4 |
| NOMINAL FLUX(lm) | 1882.3 | CIE CLASS | DIRECT | η UP,DN(C180-360) | 0.0,49.6 |
| LAMPS INSIDE | 1 | η up(%) | 0.0 | CIBSE SHR NOM | 0.75 |
| TEST VOLTAGE(V) | 240.19 | η down(%) | 100.0 | CIBSE SHR MAX | 0.90 |

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM




AVERAGE BEAM ANGLE(50%):58.2 DEG

PLANAR ISOLUX DIAGRAM(UNIT:lx)




C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-22

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 | 1980 | 1988 | 1986 | 1985 | 1970 | 1974 | 1983 | 1987 | 0- 10 | 193.5 | 193.5 | 10.3,10.3 |
| 20 | 1704 | 1726 | 1692 | 1675 | 1662 | 1663 | 1683 | 1696 | 10- 20 | 523.1 | 716.6 | 38.1,38.1 |
| 30 | 1016 | 1020 | 978.2 | 965.9 | 951.4 | 950.1 | 976.3 | 999.9 | 20- 30 | 618.5 | 1335 | 70.9,70.9 |
| 40 | 271.2 | 249.0 | 233.4 | 227.5 | 223.3 | 230.1 | 251.4 | 255.7 | 30- 40 | 356.6 | 1692 | 89.9,89.9 |
| 50 | 63.43 | 59.14 | 52.17 | 48.34 | 48.16 | 51.18 | 58.44 | 61.64 | 40- 50 | 100.8 | 1792 | 95.2,95.2 |
| 60 | 36.70 | 35.75 | 34.37 | 33.66 | 33.81 | 34.65 | 35.93 | 36.81 | 50- 60 | 36.73 | 1829 | 97.2,97.2 |
| 70 | 25.50 | 24.27 | 22.95 | 22.47 | 22.71 | 23.62 | 25.16 | 25.94 | 60- 70 | 29.95 | 1859 | 98.8,98.8 |
| 80 | 11.48 | 10.64 | 9.674 | 9.334 | 9.576 | 10.34 | 11.41 | 11.82 | 70- 80 | 18.19 | 1877 | 99.7,99.7 |
| 90 | 0.0987 | 0.0934 | 0.1119 | 0.1008 | 0.1073 | 0.1021 | 0.1016 | 0.0889 | 80- 90 | 4.948 | 1882 | 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): 1758.1 lm

%lum = 93.4%
%lamp = 93.4%

Conical surface Flux(120deg): 1829.2 lm

%lum = 97.2%
%lamp = 97.2%

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-22

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:

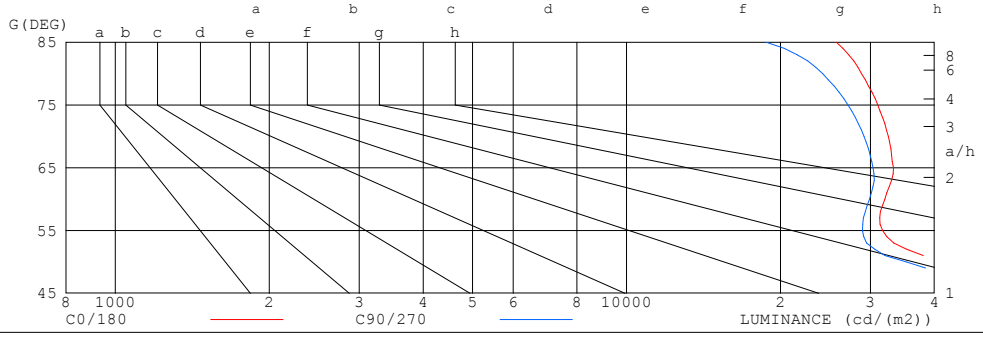
**Photometric Filename: HCP-10X2501-5700K RA90 60D WHITE**

## LUMINANCE LIMITATION CURVES

| | | |
|---|---|---|
| **Test:U:240.2V I:0.1029A P:24.3W PF:0.9822 Freq:49.99Hz**<br>**UTHDi:0.27% ITHDi:8.57% KDisp:0.9879 Lamp Flux:1882.3x1 lm** | | |
| **NAME: HCP-10X2501-5700K RA90 60D 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 | 25749 | 18777 |
| 80 | 28821 | 24196 |
| 75 | 31017 | 27128 |
| 70 | 32501 | 29147 |
| 65 | 33261 | 30328 |
| 60 | 32001 | 29853 |
| 55 | 31676 | 28930 |
| 50 | 43023 | 35248 |
| 45 | 89970 | 73653 |

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-22

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 60D WHITE**

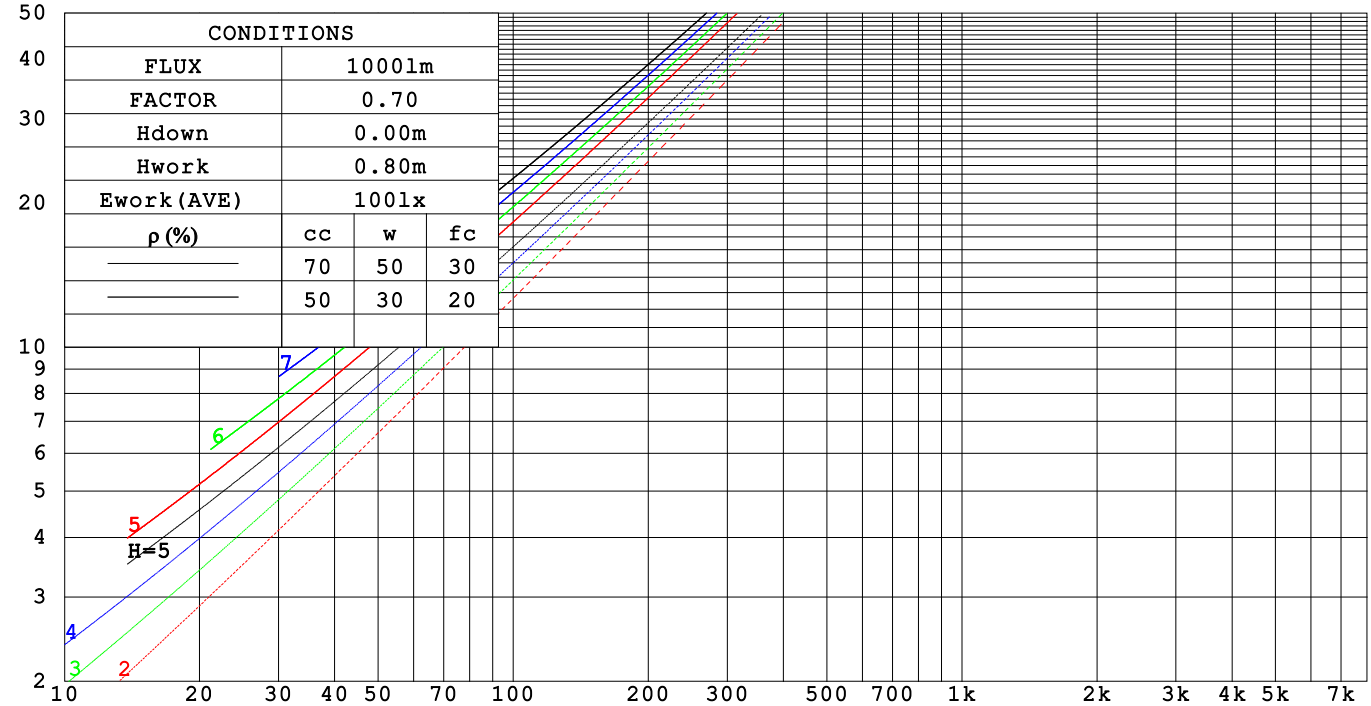
## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

| | | |
|---|---|---|
| Test:U:240.2V I:0.1029A P:24.3W PF:0.9822 Freq:49.99Hz<br>UTHDi:0.27% ITHDi:8.57% KDisp:0.9879 Lamp Flux:1882.3x1 lm | | |
| NAME: HCP-10X2501-5700K RA90 60D 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 | 1.10 | 1.08 | 1.05 | 1.08 | 1.06 | 1.04 | 1.04 | 1.02 | 1.00 | 1.00 | .99 | .97 | .97 | .96 | .95 | .93 |
| 2.0 | 1.02 | .98 | .94 | 1.00 | .97 | .93 | .97 | .94 | .91 | .94 | .92 | .89 | .91 | .89 | .87 | .86 |
| 3.0 | .95 | .90 | .86 | .94 | .89 | .85 | .91 | .87 | .84 | .89 | .85 | .82 | .86 | .83 | .81 | .79 |
| 4.0 | .89 | .83 | .79 | .87 | .82 | .78 | .85 | .81 | .77 | .83 | .79 | .76 | .81 | .78 | .75 | .74 |
| 5.0 | .83 | .77 | .72 | .82 | .76 | .72 | .80 | .75 | .72 | .78 | .74 | .71 | .77 | .73 | .70 | .69 |
| 6.0 | .78 | .72 | .67 | .77 | .71 | .67 | .75 | .70 | .67 | .74 | .70 | .66 | .73 | .69 | .66 | .64 |
| 7.0 | .73 | .67 | .63 | .72 | .67 | .63 | .71 | .66 | .62 | .70 | .65 | .62 | .69 | .65 | .61 | .60 |
| 8.0 | .69 | .63 | .59 | .68 | .63 | .58 | .67 | .62 | .58 | .66 | .61 | .58 | .65 | .61 | .58 | .56 |
| 9.0 | .65 | .59 | .55 | .65 | .59 | .55 | .64 | .58 | .55 | .63 | .58 | .55 | .62 | .58 | .54 | .53 |
| 10.0 | .62 | .56 | .52 | .61 | .55 | .52 | .60 | .55 | .52 | .59 | .55 | .51 | .59 | .54 | .51 | .50 |

LAMPS

LUMINAIRE BUDGETARY DIAGRAM




C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-22

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:

## WEC AND CCEC

| | | |
|---|---|---|
| Test:U:240.2V I:0.1029A P:24.3W PF:0.9822 Freq:49.99Hz<br>UTHDi:0.27% ITHDi:8.57% KDisp:0.9879 Lamp Flux:1882.3x1 lm | | |
| NAME: HCP-10X2501-5700K RA90 60D 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 | .189 | .107 | .034 | .182 | .104 | .033 | .169 | .097 | .031 | .157 | .091 | .029 | .147 | .085 | .027 | |
| 2.0 | .179 | .098 | .030 | .174 | .096 | .029 | .163 | .091 | .028 | .153 | .086 | .027 | .144 | .081 | .026 | |
| 3.0 | .170 | .090 | .027 | .165 | .088 | .027 | .156 | .084 | .026 | .147 | .081 | .025 | .139 | .077 | .024 | |
| 4.0 | .161 | .084 | .025 | .157 | .082 | .024 | .149 | .079 | .024 | .141 | .076 | .023 | .135 | .073 | .022 | |
| 5.0 | .153 | .078 | .023 | .149 | .076 | .022 | .142 | .074 | .022 | .136 | .072 | .021 | .130 | .069 | .021 | |
| 6.0 | .145 | .073 | .021 | .142 | .072 | .021 | .136 | .070 | .020 | .130 | .068 | .020 | .125 | .066 | .020 | |
| 7.0 | .138 | .068 | .019 | .135 | .067 | .019 | .130 | .066 | .019 | .125 | .064 | .019 | .120 | .062 | .018 | |
| 8.0 | .132 | .064 | .018 | .129 | .064 | .018 | .125 | .062 | .018 | .120 | .061 | .018 | .116 | .059 | .017 | |
| 9.0 | .126 | .061 | .017 | .124 | .060 | .017 | .120 | .059 | .017 | .116 | .058 | .017 | .112 | .057 | .016 | |
| 10.0 | .121 | .058 | .016 | .119 | .057 | .016 | .115 | .056 | .016 | .111 | .055 | .016 | .108 | .054 | .016 | |

| 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 | .172 | .157 | .144 | .147 | .135 | .124 | .101 | .093 | .086 | .058 | .054 | .050 | .019 | .017 | .016 | |
| 2.0 | .157 | .132 | .112 | .135 | .114 | .096 | .092 | .079 | .067 | .053 | .046 | .039 | .017 | .015 | .013 | |
| 3.0 | .145 | .114 | .088 | .124 | .098 | .077 | .085 | .068 | .054 | .049 | .040 | .032 | .016 | .013 | .010 | |
| 4.0 | .135 | .099 | .071 | .116 | .086 | .062 | .080 | .060 | .044 | .046 | .035 | .026 | .015 | .011 | .009 | |
| 5.0 | .126 | .087 | .059 | .109 | .076 | .051 | .075 | .053 | .036 | .043 | .031 | .021 | .014 | .010 | .007 | |
| 6.0 | .119 | .078 | .049 | .102 | .068 | .043 | .071 | .047 | .030 | .041 | .028 | .018 | .013 | .009 | .006 | |
| 7.0 | .113 | .071 | .041 | .097 | .061 | .036 | .067 | .043 | .026 | .039 | .025 | .015 | .013 | .008 | .005 | |
| 8.0 | .107 | .065 | .036 | .092 | .056 | .031 | .064 | .039 | .022 | .037 | .023 | .013 | .012 | .008 | .004 | |
| 9.0 | .102 | .059 | .031 | .088 | .052 | .027 | .061 | .036 | .019 | .035 | .021 | .011 | .011 | .007 | .004 | |
| 10.0 | .097 | .055 | .027 | .084 | .048 | .024 | .058 | .034 | .017 | .034 | .020 | .010 | .011 | .007 | .003 | |

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-22

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:240.2V I:0.1029A P:24.3W PF:0.9822 Freq:49.99Hz<br>UTHDi:0.27% ITHDi:8.57% KDisp:0.9879 Lamp Flux:1882.3x1 lm | | |
| NAME: HCP-10X2501-5700K RA90 60D 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 | 24.2 | 25.2 | 24.4 | 25.3 | 25.5 | 23.8 | 24.8 | 24.1 | 25.0 | 25.2 |
| | 3H | 24.4 | 25.3 | 24.7 | 25.5 | 25.7 | 24.1 | 25.0 | 24.3 | 25.2 | 25.4 |
| | 4H | 24.6 | 25.4 | 24.8 | 25.6 | 25.9 | 24.2 | 25.0 | 24.5 | 25.3 | 25.5 |
| | 6H | 24.7 | 25.5 | 25.0 | 25.7 | 26.0 | 24.3 | 25.1 | 24.6 | 25.3 | 25.6 |
| | 8H | 24.7 | 25.5 | 25.0 | 25.8 | 26.0 | 24.3 | 25.1 | 24.6 | 25.3 | 25.6 |
| | 12H | 24.7 | 25.5 | 25.1 | 25.8 | 26.0 | 24.3 | 25.0 | 24.6 | 25.3 | 25.6 |
| 4H | 2H | 24.1 | 24.9 | 24.4 | 25.2 | 25.4 | 23.8 | 24.6 | 24.1 | 24.9 | 25.1 |
| | 3H | 24.5 | 25.2 | 24.8 | 25.5 | 25.8 | 24.1 | 24.9 | 24.5 | 25.2 | 25.4 |
| | 4H | 24.7 | 25.4 | 25.1 | 25.7 | 26.0 | 24.4 | 25.0 | 24.7 | 25.3 | 25.7 |
| | 6H | 25.0 | 25.5 | 25.3 | 25.9 | 26.2 | 24.6 | 25.1 | 24.9 | 25.5 | 25.8 |
| | 8H | 25.0 | 25.6 | 25.4 | 25.9 | 26.3 | 24.6 | 25.2 | 25.0 | 25.5 | 25.9 |
| | 12H | 25.1 | 25.6 | 25.5 | 26.0 | 26.4 | 24.6 | 25.1 | 25.0 | 25.5 | 25.9 |
| 8H | 4H | 24.8 | 25.3 | 25.2 | 25.7 | 26.0 | 24.4 | 25.0 | 24.8 | 25.3 | 25.7 |
| | 6H | 25.1 | 25.5 | 25.5 | 25.9 | 26.3 | 24.7 | 25.1 | 25.1 | 25.5 | 26.0 |
| | 8H | 25.2 | 25.6 | 25.7 | 26.0 | 26.5 | 24.8 | 25.2 | 25.2 | 25.6 | 26.1 |
| | 12H | 25.3 | 25.6 | 25.8 | 26.1 | 26.6 | 24.9 | 25.2 | 25.3 | 25.6 | 26.1 |
| 12H | 4H | 24.7 | 25.2 | 25.1 | 25.6 | 26.0 | 24.4 | 24.9 | 24.8 | 25.3 | 25.7 |
| | 6H | 25.1 | 25.5 | 25.5 | 25.9 | 26.3 | 24.7 | 25.1 | 25.1 | 25.5 | 26.0 |
| | 8H | 25.2 | 25.6 | 25.7 | 26.0 | 26.5 | 24.8 | 25.2 | 25.3 | 25.6 | 26.1 |

| Variations with the observer position at spacings(CIE Pub.117): | | |
|---|---|---|
| S = 1.0H | + 2.0 / - 1.9 | + 1.6 / - 1.8 |
| 1.5H | + 3.8 / - 2.0 | + 3.2 / - 1.9 |
| 2.0H | + 2.4 / - 0.7 | + 1.9 / - 0.6 |

CIE Pub.117, 1882 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 2.2)
Area: 0.0023 m2

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-22

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 60D WHITE**

## UTILIZATION FACTORS TABLE

| | | |
|---|---|---|
| Test:U:240.2V I:0.1029A P:24.3W PF:0.9822 Freq:49.99Hz<br>UTHDi:0.27% ITHDi:8.57% KDisp:0.9879 Lamp Flux:1882.3x1 lm | | |
| NAME: HCP-10X2501-5700K RA90 60D 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 | 85 | 79 | 75 | 85 | 78 | 75 | 84 | 78 | 74 | 71 |
| 0.80 | 93 | 87 | 83 | 92 | 86 | 83 | 91 | 86 | 82 | 78 |
| 1.00 | 98 | 92 | 88 | 97 | 91 | 87 | 95 | 91 | 87 | 83 |
| 1.25 | 102 | 96 | 92 | 101 | 96 | 92 | 99 | 94 | 91 | 87 |
| 1.50 | 105 | 99 | 96 | 103 | 99 | 95 | 101 | 97 | 94 | 90 |
| 2.00 | 108 | 103 | 100 | 106 | 102 | 99 | 103 | 100 | 97 | 92 |
| 2.50 | 109 | 105 | 102 | 108 | 104 | 101 | 105 | 102 | 99 | 93 |
| 3.00 | 111 | 107 | 104 | 109 | 106 | 103 | 106 | 103 | 101 | 95 |
| 4.00 | 113 | 110 | 108 | 111 | 109 | 106 | 107 | 105 | 104 | 97 |
| 5.00 | 115 | 112 | 110 | 112 | 110 | 109 | 108 | 107 | 105 | 98 |
| ROOM INDEX | UF(total) | | | | | | | | | Direct |
| According to DIN EN 13032-2 2004 | | | | Suspended | | | | | SHRNOM = 1.25 | |

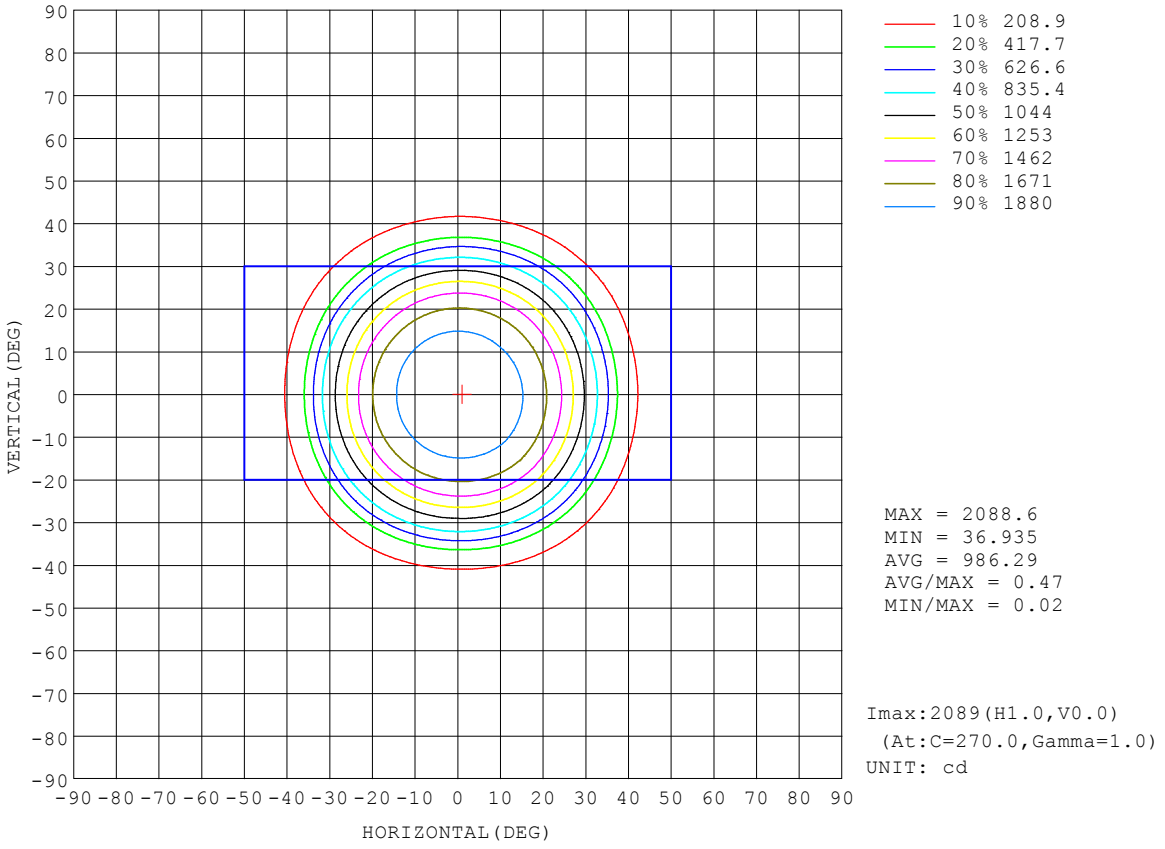
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-22

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 60D WHITE**

## ISOCANDELA DIAGRAM

| | | |
|---|---|---|
| Test:U:240.2V I:0.1029A P:24.3W PF:0.9822 Freq:49.99Hz<br>UTHDi:0.27% ITHDi:8.57% KDisp:0.9879 Lamp Flux:1882.3x1 lm | | |
| NAME: HCP-10X2501-5700K RA90 60D WHITE | TYPE: | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: Havit Commercial | SUR.: 55mm | Shielding Angle: |



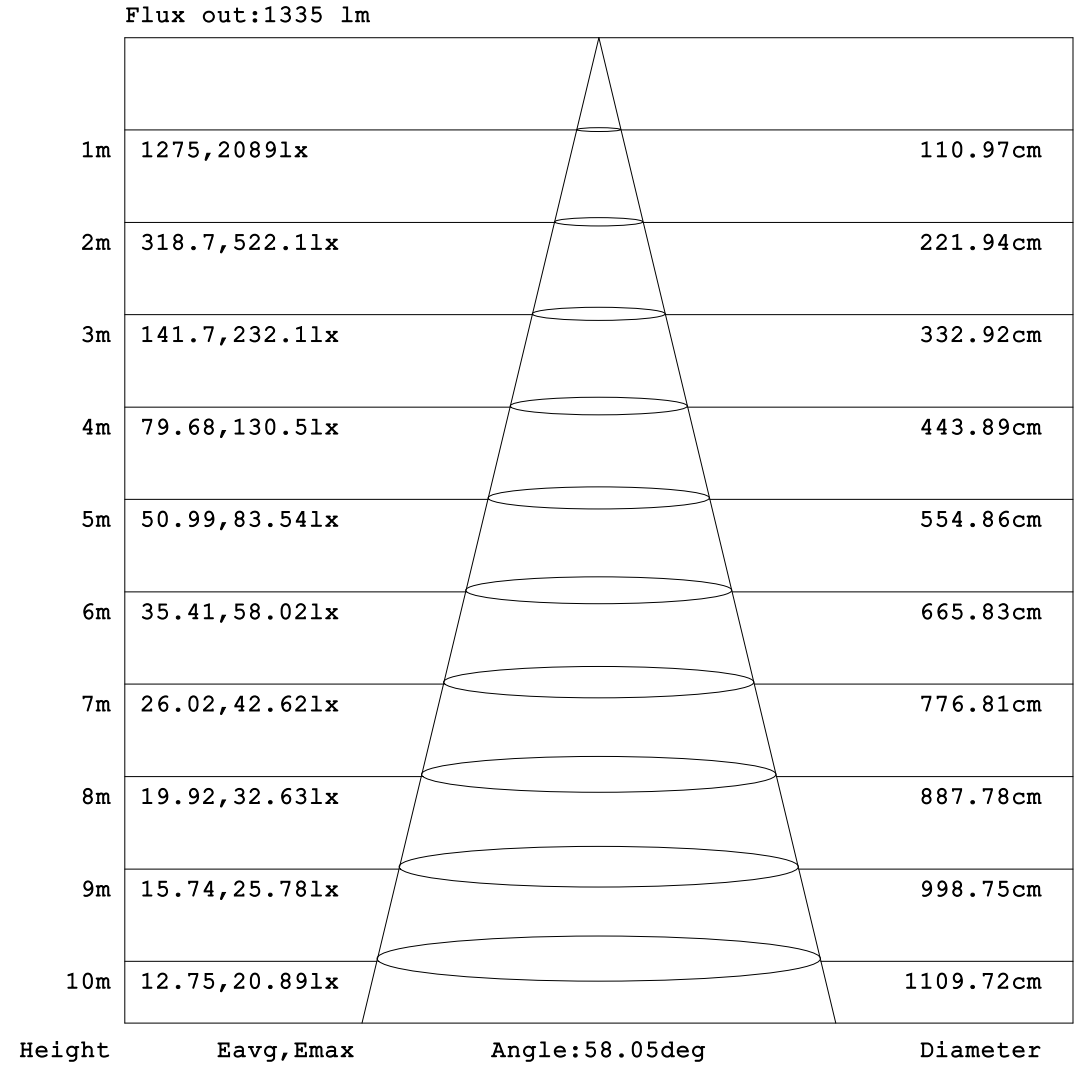

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-22

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 60D WHITE**

## AAI Figure

| | | |
|---|---|---|
| Test:U:240.2V I:0.1029A P:24.3W PF:0.9822 Freq:49.99Hz<br>UTHDi:0.27% ITHDi:8.57% KDisp:0.9879 Lamp Flux:1882.3x1 lm | | |
| NAME: HCP-10X2501-5700K RA90 60D WHITE | TYPE: | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: Havit Commercial | SUR.: 55mm | Shielding Angle: |




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

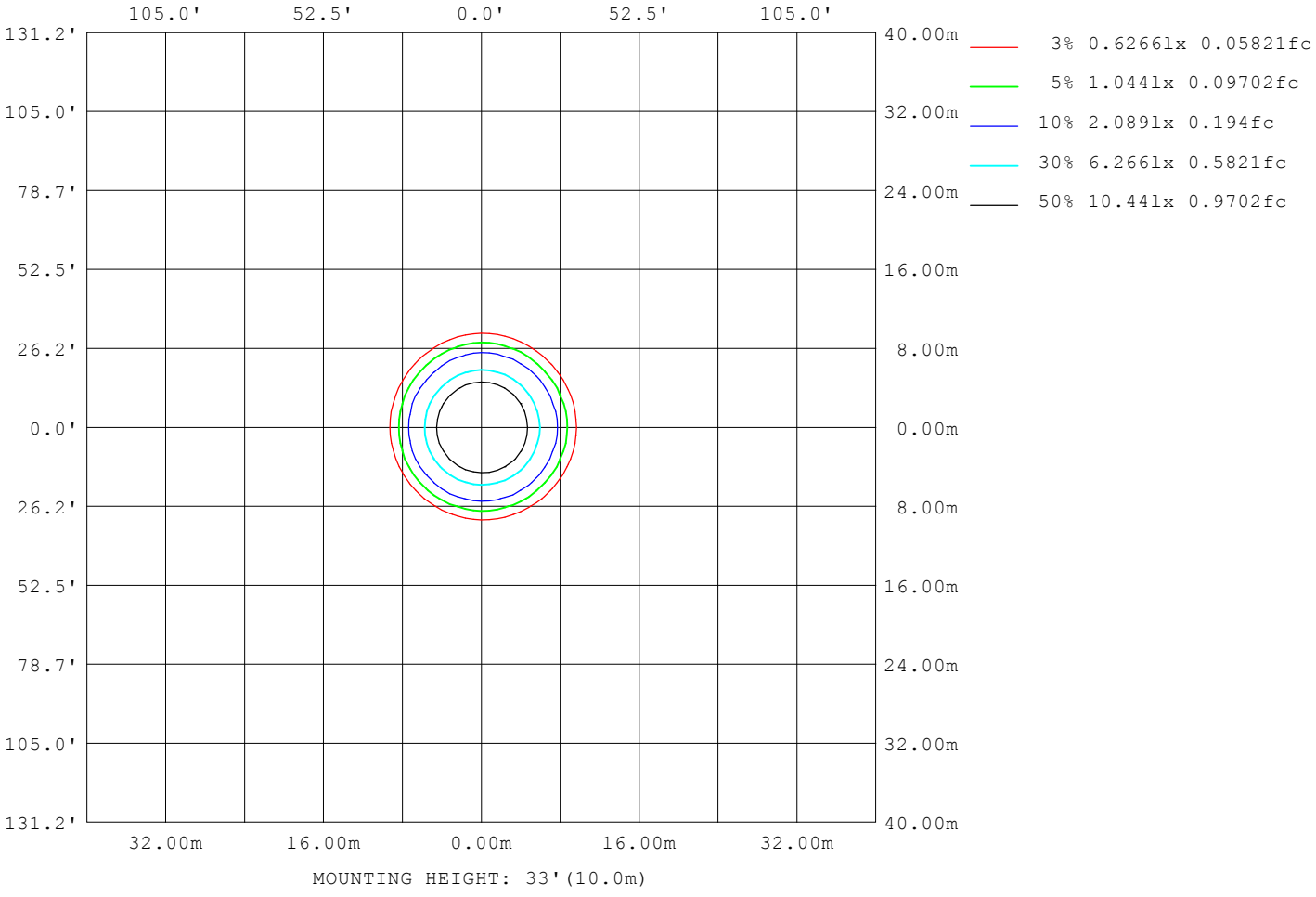
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-22

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 60D WHITE**

## ISOLUX DIAGRAM

| | | |
|---|---|---|
| **Test:U:240.2V I:0.1029A P:24.3W PF:0.9822 Freq:49.99Hz UTHDi:0.27% ITHDi:8.57% KDisp:0.9879 Lamp Flux:1882.3x1 lm** | | |
| **NAME: HCP-10X2501-5700K RA90 60D 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:2023-11-22

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:240.2V I:0.1029A P:24.3W PF:0.9822 Freq:49.99Hz<br>UTHDi:0.27% ITHDi:8.57% KDisp:0.9879 Lamp Flux:1882.3x1 lm | | |
| NAME: HCP-10X2501-5700K RA90 60D WHITE | TYPE: | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: Havit Commercial | SUR.: 55mm | Shielding Angle: |

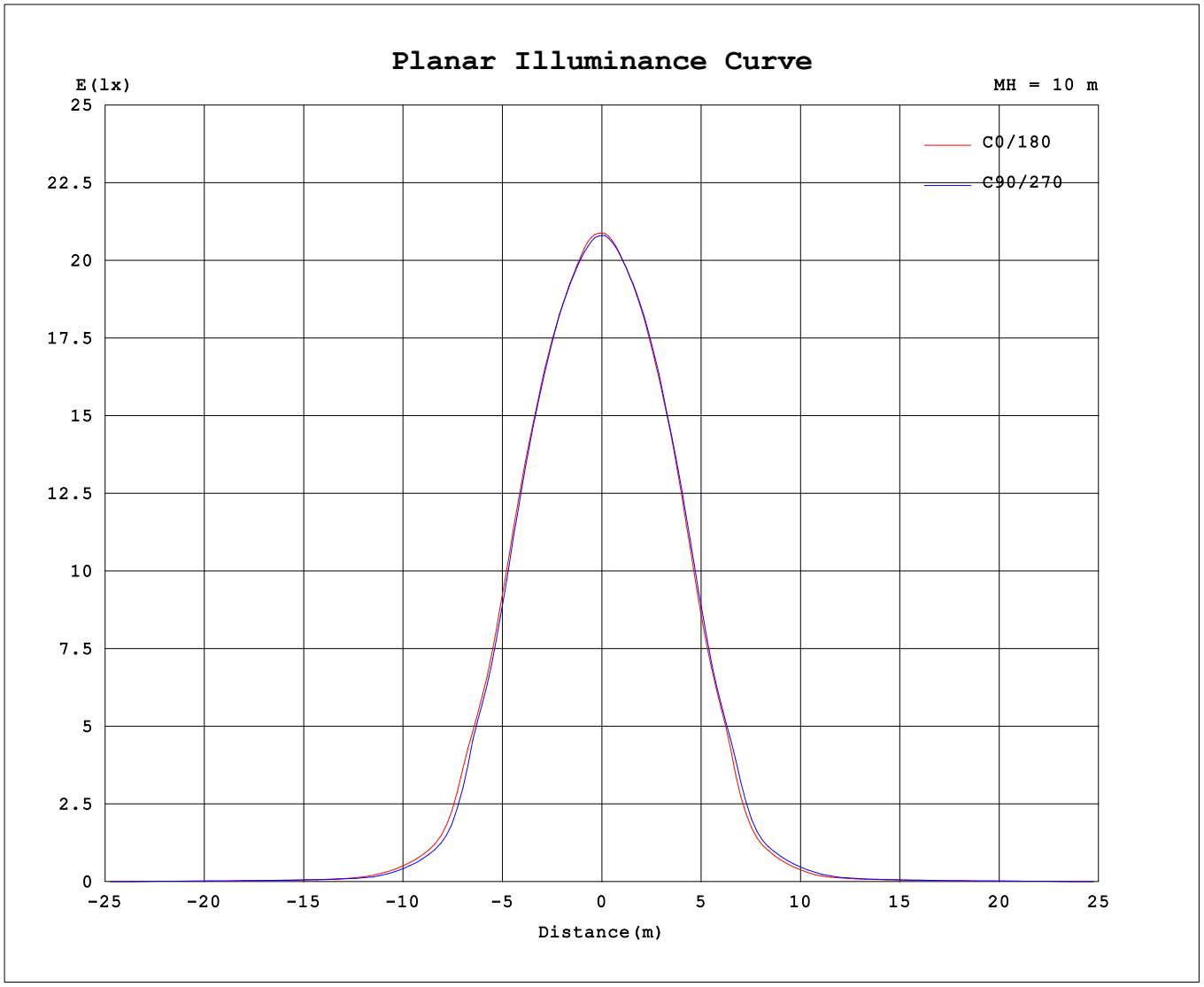
| AvgL | cd/m2 |
|---|---|
| L_0~180(65)av | 31521 |
| L_0~180(75)av | 28940 |
| L_0~180(85)av | 21676 |
| L_90~270(65)av | 31413 |
| L_90~270(75)av | 28918 |
| L_90~270(85)av | 21896 |
| L_45(65)av | 31476 |
| L_45(75)av | 28937 |
| L_45(85)av | 21715 |

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

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-22

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:2023-11-22

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 60D WHITE**

## LUMINOUS DISTRIBUTION INTENSITY DATA

| | | |
|---|---|---|
| Test:U:240.2V I:0.1029A P:24.3W PF:0.9822 Freq:49.99Hz<br>UTHDi:0.27% ITHDi:8.57% KDisp:0.9879 Lamp Flux:1882.3x1 lm | | |
| NAME: HCP-10X2501-5700K RA90 60D WHITE | TYPE: | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: Havit Commercial | SUR.: 55mm | Shielding Angle: |

Table--1 UNIT: cd

| C(DEG) / γ (DEG) | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
|---|---|---|---|---|---|---|---|---|
| 0 | 2083 | 2083 | 2083 | 2083 | 2083 | 2083 | 2083 | 2083 |
| 5 | 2058 | 2055 | 2053 | 2050 | 2043 | 2043 | 2049 | 2057 |
| 10 | 1980 | 1988 | 1986 | 1985 | 1970 | 1974 | 1983 | 1987 |
| 15 | 1882 | 1894 | 1879 | 1871 | 1854 | 1866 | 1876 | 1880 |
| 20 | 1704 | 1726 | 1692 | 1675 | 1662 | 1663 | 1683 | 1696 |
| 25 | 1411 | 1422 | 1373 | 1346 | 1326 | 1333 | 1371 | 1399 |
| 30 | 1016 | 1020 | 978 | 966 | 951 | 950 | 976 | 1000 |
| 35 | 659 | 614 | 547 | 523 | 498 | 512 | 585 | 635 |
| 40 | 271 | 249 | 233 | 227 | 223 | 230 | 251 | 256 |
| 45 | 146 | 133 | 120 | 108 | 109 | 117 | 135 | 137 |
| 50 | 63.4 | 59.1 | 52.2 | 48.3 | 48.2 | 51.2 | 58.4 | 61.6 |
| 55 | 41.7 | 40.4 | 38.2 | 37.4 | 37.3 | 38.3 | 40.4 | 41.5 |
| 60 | 36.7 | 35.7 | 34.4 | 33.7 | 33.8 | 34.7 | 35.9 | 36.8 |
| 65 | 32.2 | 31.0 | 29.5 | 28.9 | 29.0 | 30.0 | 31.6 | 32.5 |
| 70 | 25.5 | 24.3 | 23.0 | 22.5 | 22.7 | 23.6 | 25.2 | 25.9 |
| 75 | 18.4 | 17.4 | 16.2 | 15.8 | 16.0 | 16.9 | 18.3 | 18.8 |
| 80 | 11.5 | 10.6 | 9.67 | 9.33 | 9.58 | 10.3 | 11.4 | 11.8 |
| 85 | 5.15 | 4.53 | 3.77 | 3.41 | 3.54 | 4.15 | 5.01 | 5.32 |
| 90 | 0.10 | 0.09 | 0.11 | 0.10 | 0.11 | 0.10 | 0.10 | 0.09 |

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-22

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 60D 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 | 2083 | 2083 | 2083 | 2083 | 2083 | 2083 | 2083 | 2083 |
| 3.0 | 2077 | 2075 | 2073 | 2071 | 2067 | 2066 | 2069 | 2074 |
| 6.0 | 2042 | 2041 | 2042 | 2037 | 2029 | 2030 | 2036 | 2043 |
| 9.0 | 1996 | 2000 | 1999 | 2000 | 1987 | 1991 | 1998 | 2002 |
| 12.0 | 1946 | 1956 | 1952 | 1948 | 1932 | 1938 | 1948 | 1948 |
| 15.0 | 1882 | 1894 | 1879 | 1871 | 1854 | 1866 | 1876 | 1880 |
| 18.0 | 1784 | 1805 | 1779 | 1764 | 1753 | 1758 | 1768 | 1778 |
| 21.0 | 1659 | 1677 | 1641 | 1624 | 1606 | 1609 | 1632 | 1651 |
| 24.0 | 1482 | 1495 | 1452 | 1427 | 1403 | 1411 | 1443 | 1474 |
| 27.0 | 1256 | 1261 | 1211 | 1191 | 1164 | 1178 | 1209 | 1245 |
| 30.0 | 1016 | 1020 | 978.2 | 965.9 | 951.4 | 950.1 | 976.3 | 999.9 |
| 33.0 | 816.1 | 799.7 | 772.2 | 747.5 | 717.7 | 725.3 | 775.1 | 794.6 |
| 36.0 | 549.1 | 504.1 | 450.4 | 432.6 | 410.6 | 422.2 | 483.0 | 528.5 |
| 39.0 | 315.3 | 286.1 | 264.7 | 256.1 | 251.5 | 258.3 | 284.4 | 297.6 |
| 42.0 | 213.7 | 195.5 | 183.0 | 173.5 | 171.6 | 179.6 | 200.9 | 201.5 |
| 45.0 | 145.9 | 132.9 | 119.9 | 107.9 | 108.7 | 117.2 | 135.2 | 137.0 |
| 48.0 | 91.44 | 82.89 | 70.29 | 62.25 | 62.18 | 68.09 | 81.65 | 86.26 |
| 51.0 | 54.91 | 52.66 | 46.36 | 44.34 | 44.00 | 46.27 | 51.86 | 53.59 |
| 54.0 | 43.51 | 42.00 | 39.38 | 38.41 | 38.24 | 39.50 | 42.00 | 43.29 |
| 57.0 | 39.06 | 38.04 | 36.44 | 35.74 | 35.87 | 36.66 | 38.20 | 39.05 |
| 60.0 | 36.70 | 35.75 | 34.37 | 33.66 | 33.81 | 34.65 | 35.93 | 36.81 |
| 63.0 | 34.36 | 33.30 | 31.91 | 31.19 | 31.33 | 32.33 | 33.65 | 34.54 |
| 66.0 | 30.89 | 29.64 | 28.25 | 27.68 | 27.83 | 28.79 | 30.34 | 31.24 |
| 69.0 | 26.88 | 25.66 | 24.30 | 23.81 | 24.02 | 24.94 | 26.50 | 27.30 |
| 72.0 | 22.68 | 21.52 | 20.22 | 19.81 | 20.07 | 20.95 | 22.43 | 23.12 |
| 75.0 | 18.41 | 17.35 | 16.17 | 15.80 | 16.04 | 16.91 | 18.26 | 18.84 |
| 78.0 | 14.17 | 13.27 | 12.20 | 11.87 | 12.12 | 12.91 | 14.11 | 14.57 |
| 81.0 | 10.18 | 9.365 | 8.446 | 8.105 | 8.325 | 9.063 | 10.08 | 10.46 |
| 84.0 | 6.353 | 5.692 | 4.900 | 4.559 | 4.727 | 5.363 | 6.241 | 6.575 |
| 87.0 | 2.789 | 2.263 | 1.552 | 1.137 | 1.177 | 1.711 | 2.528 | 2.854 |
| 90.0 | 0.0987 | 0.0934 | 0.1119 | 0.1008 | 0.1073 | 0.1021 | 0.1016 | 0.0889 |

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-11-22

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: