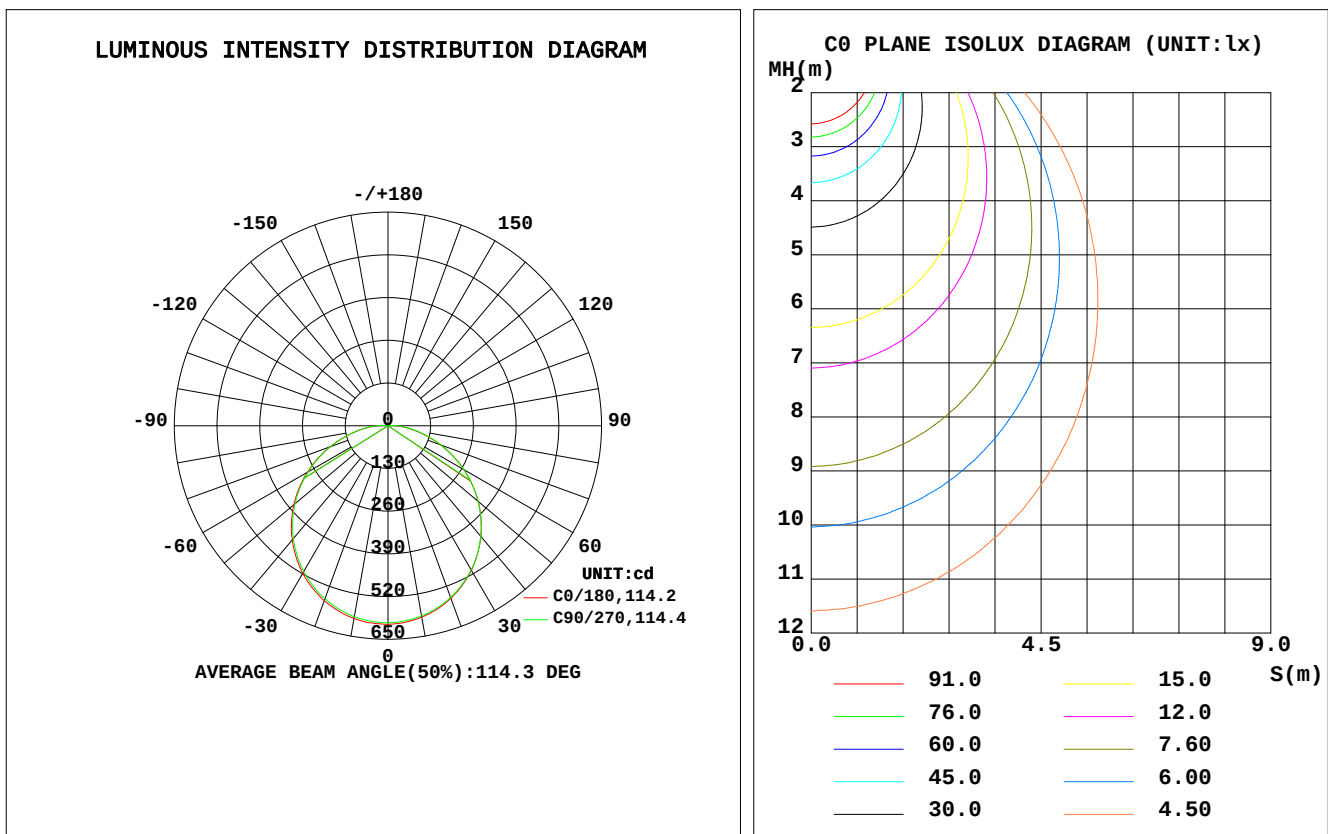


# LUMINAIRE PHOTOMETRIC TEST REPORT

|                                                                         |          |                       |
|-------------------------------------------------------------------------|----------|-----------------------|
| Test:U:220-240V I:0.105A P:21W PF:0.75 Freq:50.00Hz Lamp Flux:1880x1 lm |          |                       |
| NAME: BHD3S-TC-S-21W-3000K                                              | TYPE:LED | WEIGHT:               |
| SPEC.:0028920257 21W 3000K 1880lm                                       | DIM.:    | SERIAL No.:250328001G |
| MFR.: LIT by CARDI                                                      | SUR.:    | Shielding Angle:      |

| DATA OF LAMP     |         | PHOTOMETRIC DATA Eff: 89.5 lm/W |        |                         |           |
|------------------|---------|---------------------------------|--------|-------------------------|-----------|
| MODEL            |         | Imax(cd)                        | 580    | S/MH(C0/180)            | 1.27      |
| NOMINAL POWER(W) | 21W     | LOR(%)                          | 100.0  | S/MH(C90/270)           | 1.27      |
| RATED VOLTAGE(V) | 220-240 | TOTAL FLUX(lm)                  | 1880   | $\eta$ UP, DN(C0-180)   | 0.7, 48.4 |
| NOMINAL FLUX(lm) | 1880    | CIE CLASS                       | DIRECT | $\eta$ UP, DN(C180-360) | 0.8, 50.0 |
| LAMPS INSIDE     | 1       | $\eta$ up(%)                    | 1.5    | CIBSE SHR NOM           | 1.25      |
| TEST VOLTAGE(V)  |         | $\eta$ down(%)                  | 98.5   | CIBSE SHR MAX           | 1.35      |



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1DEG  
Operators:  
Test Date:2025-03-24

Checker: CHENXIAOFU

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE G0-2000A\_V1 SYSTEM V2.0.366  
Humidity:56%  
Test Distance:11.834m [K=1.0000]  
Remarks:

Assessor: Ju Hongli

## ZONAL FLUX DIAGRAM

### ZONAL FLUX DIAGRAM:

| $\gamma$ | C0                    | C45   | C90   | C135  | C180  | C225  | C270  | C315  | $\gamma$ | $\phi$ zone | $\phi$ total | %lum, lamp |
|----------|-----------------------|-------|-------|-------|-------|-------|-------|-------|----------|-------------|--------------|------------|
| 5        | 600.8                 | 597.6 | 595.7 | 594.6 | 602.2 | 599.3 | 596.8 | 593.2 | 0- 5     | 14.32       | 14.32        | 0.79,0.79  |
| 10       | 591.3                 | 588.9 | 587.8 | 586.4 | 595.2 | 592.1 | 589.8 | 585.4 | 5- 10    | 42.48       | 56.80        | 3.12,3.12  |
| 15       | 578.0                 | 575.6 | 574.3 | 575.1 | 583.2 | 580.1 | 577.5 | 572.4 | 10- 15   | 69.22       | 126.0        | 6.92,6.92  |
| 20       | 559.2                 | 557.0 | 556.3 | 557.0 | 566.6 | 563.5 | 560.5 | 554.8 | 15- 20   | 93.64       | 219.7        | 12.1,12.1  |
| 25       | 535.3                 | 533.7 | 533.2 | 534.7 | 544.8 | 541.5 | 538.9 | 532.2 | 20- 25   | 115.0       | 334.6        | 18.4,18.4  |
| 30       | 507.5                 | 505.8 | 506.0 | 508.2 | 518.1 | 515.7 | 512.8 | 505.7 | 25- 30   | 132.5       | 467.1        | 25.7,25.7  |
| 35       | 475.0                 | 473.9 | 474.9 | 477.8 | 487.8 | 485.4 | 482.4 | 474.6 | 30- 35   | 145.6       | 612.7        | 33.7,33.7  |
| 40       | 439.4                 | 438.3 | 439.5 | 443.3 | 453.6 | 451.3 | 448.0 | 439.8 | 35- 40   | 154.0       | 766.7        | 42.1,42.1  |
| 45       | 400.2                 | 398.8 | 400.3 | 404.9 | 415.7 | 413.4 | 410.3 | 401.8 | 40- 45   | 157.3       | 924.1        | 50.8,50.8  |
| 50       | 357.9                 | 356.2 | 358.2 | 363.2 | 374.1 | 372.6 | 369.8 | 360.8 | 45- 50   | 155.5       | 1080         | 59.3,59.3  |
| 55       | 313.0                 | 311.5 | 313.7 | 319.6 | 330.1 | 328.8 | 326.0 | 316.7 | 50- 55   | 148.7       | 1228         | 67.5,67.5  |
| 60       | 266.0                 | 264.8 | 266.9 | 273.4 | 283.6 | 283.4 | 280.4 | 271.0 | 55- 60   | 137.2       | 1366         | 75,75      |
| 65       | 218.2                 | 217.0 | 219.4 | 225.9 | 236.1 | 236.4 | 233.5 | 223.9 | 60- 65   | 121.5       | 1487         | 81.7,81.7  |
| 70       | 170.3                 | 169.5 | 171.8 | 178.7 | 188.0 | 189.2 | 186.1 | 176.4 | 65- 70   | 102.5       | 1589         | 87.3,87.3  |
| 75       | 123.6                 | 123.6 | 126.7 | 132.6 | 141.0 | 142.6 | 139.9 | 130.2 | 70- 75   | 81.20       | 1671         | 91.8,91.8  |
| 80       | 82.18                 | 83.24 | 86.43 | 91.17 | 97.23 | 99.76 | 97.80 | 88.81 | 75- 80   | 59.46       | 1730         | 95,95      |
| 85       | 48.68                 | 50.23 | 53.18 | 56.53 | 60.67 | 63.11 | 61.90 | 54.26 | 80- 85   | 39.56       | 1770         | 97.2,97.2  |
| 90       | 24.51                 | 25.97 | 28.58 | 30.26 | 32.77 | 34.15 | 34.43 | 28.83 | 85- 90   | 23.15       | 1793         | 98.5,98.5  |
| 95       | 9.703                 | 8.585 | 12.19 | 7.454 | 14.13 | 8.336 | 15.49 | 9.536 | 90- 95   | 11.03       | 1804         | 99.1,99.1  |
| 100      | 2.575                 | 1.570 | 1.468 | 1.385 | 3.310 | 1.229 | 1.302 | 1.374 | 95-100   | 2.519       | 1806         | 99.2,99.2  |
| 105      | 1.682                 | 1.729 | 1.631 | 1.634 | 1.521 | 1.426 | 1.551 | 1.426 | 100-105  | 0.8203      | 1807         | 99.3,99.3  |
| 110      | 1.870                 | 2.015 | 1.952 | 1.881 | 1.766 | 1.712 | 1.861 | 1.727 | 105-110  | 0.8978      | 1808         | 99.3,99.3  |
| 115      | 2.096                 | 2.274 | 2.432 | 2.253 | 1.975 | 1.931 | 2.149 | 2.096 | 110-115  | 1.005       | 1809         | 99.4,99.4  |
| 120      | 2.469                 | 2.533 | 2.707 | 2.586 | 2.254 | 2.118 | 2.345 | 2.406 | 115-120  | 1.110       | 1810         | 99.4,99.4  |
| 125      | 2.603                 | 2.831 | 3.130 | 2.852 | 2.490 | 2.253 | 2.671 | 2.625 | 120-125  | 1.185       | 1811         | 99.5,99.5  |
| 130      | 2.779                 | 3.162 | 3.306 | 2.810 | 2.667 | 2.570 | 3.090 | 2.665 | 125-130  | 1.209       | 1813         | 99.6,99.6  |
| 135      | 3.132                 | 3.389 | 3.740 | 2.998 | 2.935 | 2.818 | 3.441 | 3.100 | 130-135  | 1.229       | 1814         | 99.6,99.6  |
| 140      | 3.399                 | 3.475 | 3.926 | 3.193 | 3.255 | 3.097 | 3.535 | 3.088 | 135-140  | 1.220       | 1815         | 99.7,99.7  |
| 145      | 3.771                 | 3.576 | 3.709 | 3.441 | 3.471 | 3.222 | 3.542 | 3.265 | 140-145  | 1.142       | 1816         | 99.8,99.8  |
| 150      | 3.719                 | 3.885 | 3.781 | 3.668 | 3.534 | 3.594 | 3.720 | 3.491 | 145-150  | 1.055       | 1817         | 99.8,99.8  |
| 155      | 3.771                 | 3.862 | 3.778 | 3.771 | 3.699 | 3.699 | 3.668 | 3.586 | 150-155  | 0.9398      | 1818         | 99.9,99.9  |
| 160      | 3.930                 | 4.052 | 3.905 | 3.926 | 3.906 | 3.781 | 3.957 | 3.936 | 155-160  | 0.7971      | 1819         | 99.9,99.9  |
| 165      | 3.998                 | 4.423 | 4.401 | 4.020 | 3.988 | 3.843 | 4.299 | 4.381 | 160-165  | 0.6644      | 1820         | 99.9,99.9  |
| 170      | 4.174                 | 4.815 | 4.597 | 4.123 | 4.217 | 4.050 | 4.546 | 4.742 | 165-170  | 0.5051      | 1820         | 100,100    |
| 175      | 5.058                 | 5.528 | 5.090 | 4.536 | 4.702 | 4.452 | 4.990 | 5.268 | 170-175  | 0.3285      | 1821         | 100,100    |
| 180      | 6.075                 | 5.775 | 5.868 | 5.775 | 6.065 | 5.744 | 5.848 | 5.765 | 175-180  | 0.1255      | 1821         | 100,100    |
| DEG      | LUMINOUS INTENSITY:cd |       |       |       |       |       |       |       |          | UNIT: lm    |              |            |

Conical surface Flux(90deg): 924.07 lm

%lum = 50.8%

%lamp = 50.8%

Conical surface Flux(120deg): 1365.5 lm

%lum = 75.0%

%lamp = 75.0%

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1DEG  
Operators:  
Test Date:2025-03-24

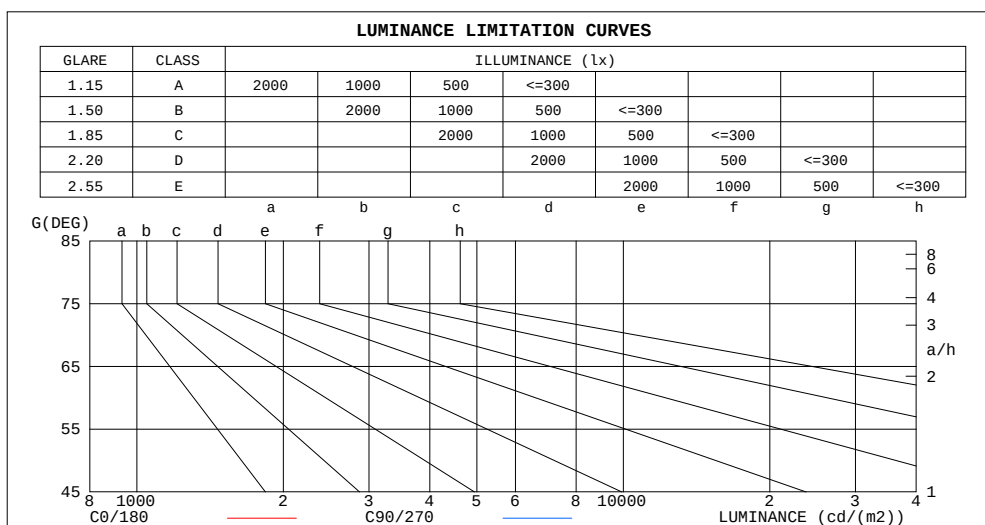
Checker: CHENXIAOFU

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
 $\gamma$  Test System:EVERFINE G0-2000A\_V1 SYSTEM V2.0.366  
Humidity:56%  
Test Distance:11.834m [K=1.0000]  
Remarks:

Assessor: Ju Hongli

## LUMINANCE LIMITATION CURVES

|                                                                         |          |                       |
|-------------------------------------------------------------------------|----------|-----------------------|
| Test:U:220-240V I:0.105A P:21W PF:0.75 Freq:50.00Hz Lamp Flux:1880x1 lm |          |                       |
| NAME: BHD3S-TC-S-21W-3000K                                              | TYPE:LED | WEIGHT:               |
| SPEC.:0028920257 21W 3000K 1880lm                                       | DIM.:    | SERIAL No.:250328001G |
| MFR.: LIT by CARDI                                                      | SUR.:    | Shielding Angle:      |



| LUMINANCE cd/(m2) |        |         |
|-------------------|--------|---------|
| G(DEG)            | C0/180 | C90/270 |
| 85                | 55858  | 61016   |
| 80                | 47324  | 49775   |
| 75                | 47759  | 48959   |
| 70                | 49792  | 50238   |
| 65                | 51624  | 51903   |
| 60                | 53207  | 53376   |
| 55                | 54571  | 54695   |
| 50                | 55679  | 55725   |
| 45                | 56602  | 56615   |

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.1DEG  
 Operators:  
 Test Date:2025-03-24

Checker: CHENXIAOFU

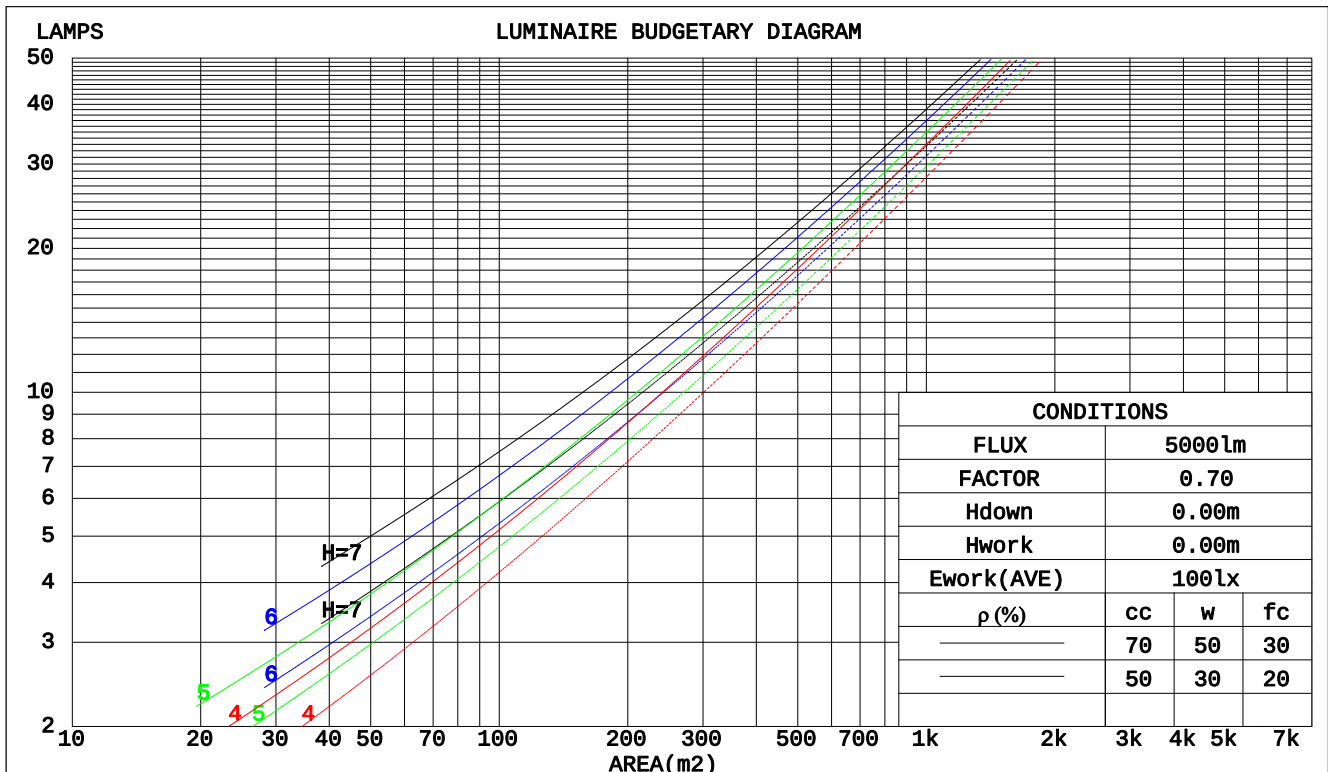
γ Range: 0 - 180DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE G0-2000A\_V1 SYSTEM V2.0.366  
 Humidity:56%  
 Test Distance:11.834m [K=1.0000]  
 Remarks:

Assessor: Ju Hongli

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

|                                                                         |           |                       |
|-------------------------------------------------------------------------|-----------|-----------------------|
| Test:U:220-240V I:0.105A P:21W PF:0.75 Freq:50.00Hz Lamp Flux:1880x1 lm |           |                       |
| NAME: BHD3S-TC-S-21W-3000K                                              | TYPE: LED | WEIGHT:               |
| SPEC.:0028920257 21W 3000K 1880lm                                       | DIM.:     | SERIAL No.:250328001G |
| MFR.: LIT by CARDI                                                      | SUR.:     | Shielding Angle:      |

| $\rho_{CC}$ | 80%                             |      |      | 70%  |      |      | 50%  |      |      | 30%  |      |      | 10%  |      |      | 0   |
|-------------|---------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| $\rho_W$    | 50%                             | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0   |
| $\rho_{fc}$ | 20%                             |      |      | 20%  |      |      | 20%  |      |      | 20%  |      |      | 20%  |      |      | 0   |
| RCR         | 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 | .98 |
| 1.0         | 1.02                            | .98  | .94  | .90  | .96  | .92  | .95  | .92  | .89  | .91  | .88  | .86  | .87  | .85  | .83  | .81 |
| 2.0         | .89                             | .82  | .76  | .87  | .80  | .75  | .83  | .77  | .73  | .79  | .75  | .71  | .76  | .72  | .69  | .67 |
| 3.0         | .78                             | .69  | .63  | .76  | .68  | .62  | .73  | .66  | .61  | .70  | .64  | .59  | .67  | .62  | .58  | .56 |
| 4.0         | .69                             | .60  | .53  | .67  | .59  | .52  | .65  | .57  | .51  | .62  | .56  | .51  | .60  | .54  | .50  | .47 |
| 5.0         | .61                             | .52  | .45  | .60  | .51  | .45  | .58  | .50  | .44  | .56  | .49  | .44  | .54  | .48  | .43  | .41 |
| 6.0         | .55                             | .46  | .39  | .54  | .45  | .39  | .52  | .44  | .39  | .50  | .43  | .38  | .49  | .43  | .38  | .36 |
| 7.0         | .50                             | .41  | .35  | .49  | .41  | .35  | .47  | .40  | .34  | .46  | .39  | .34  | .44  | .38  | .34  | .31 |
| 8.0         | .46                             | .37  | .31  | .45  | .37  | .31  | .43  | .36  | .31  | .42  | .35  | .30  | .41  | .35  | .30  | .28 |
| 9.0         | .42                             | .33  | .28  | .41  | .33  | .28  | .40  | .33  | .27  | .39  | .32  | .27  | .38  | .31  | .27  | .25 |
| 10.0        | .39                             | .31  | .25  | .38  | .30  | .25  | .37  | .30  | .25  | .36  | .29  | .25  | .35  | .29  | .25  | .23 |



C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature: 25.1DEG  
 Operators:  
 Test Date: 2025-03-24

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System: EVERFINE G0-2000A\_V1 SYSTEM V2.0.366  
 Humidity: 56%  
 Test Distance: 11.834m [K=1.0000]  
 Remarks:

Checker: CHENXIAOFU

Assessor: Ju Hongli

# WEC AND CCEC

|                                                                         |          |                       |
|-------------------------------------------------------------------------|----------|-----------------------|
| Test:U:220-240V I:0.105A P:21W PF:0.75 Freq:50.00Hz Lamp Flux:1880x1 lm |          |                       |
| NAME: BHD3S-TC-S-21W-3000K                                              | TYPE:LED | WEIGHT:               |
| SPEC.:0028920257 21W 3000K 1880lm                                       | DIM.:    | SERIAL No.:250328001G |
| MFR.: LIT by CARDI                                                      | SUR.:    | Shielding Angle:      |

| $\rho_{CC}$ | 80%                   |      |      | 70%  |      |      | 50%                             |      |      | 30%  |      |      | 10%  |      |      | 0 |  |
|-------------|-----------------------|------|------|------|------|------|---------------------------------|------|------|------|------|------|------|------|------|---|--|
| $\rho_W$    | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%                             | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |  |
| $\rho_{fc}$ | 20%                   |      |      | 20%  |      |      | 20%                             |      |      | 20%  |      |      | 20%  |      |      | 0 |  |
| RCR         | RCR:Room Cavity Ratio |      |      |      |      |      | Wall Exitance Coefficients(WEC) |      |      |      |      |      |      |      |      |   |  |
| 0.0         |                       |      |      |      |      |      |                                 |      |      |      |      |      |      |      |      |   |  |
| 1.0         | .330                  | .188 | .060 | .323 | .184 | .058 | .308                            | .177 | .057 | .295 | .170 | .055 | .283 | .164 | .053 |   |  |
| 2.0         | .303                  | .166 | .051 | .297 | .163 | .050 | .284                            | .158 | .049 | .273 | .153 | .048 | .262 | .148 | .047 |   |  |
| 3.0         | .278                  | .148 | .044 | .272 | .146 | .044 | .261                            | .141 | .043 | .250 | .137 | .042 | .241 | .133 | .041 |   |  |
| 4.0         | .255                  | .132 | .039 | .249 | .130 | .039 | .239                            | .127 | .038 | .230 | .124 | .037 | .222 | .120 | .037 |   |  |
| 5.0         | .234                  | .119 | .035 | .230 | .118 | .034 | .221                            | .115 | .034 | .213 | .112 | .033 | .205 | .109 | .033 |   |  |
| 6.0         | .217                  | .109 | .031 | .212 | .107 | .031 | .205                            | .105 | .030 | .197 | .102 | .030 | .190 | .100 | .030 |   |  |
| 7.0         | .201                  | .099 | .028 | .197 | .098 | .028 | .190                            | .096 | .028 | .184 | .094 | .027 | .177 | .092 | .027 |   |  |
| 8.0         | .188                  | .092 | .026 | .184 | .091 | .026 | .178                            | .089 | .025 | .172 | .087 | .025 | .166 | .085 | .025 |   |  |
| 9.0         | .176                  | .085 | .024 | .173 | .084 | .024 | .167                            | .082 | .023 | .161 | .081 | .023 | .156 | .079 | .023 |   |  |
| 10.0        | .165                  | .079 | .022 | .162 | .078 | .022 | .157                            | .077 | .022 | .152 | .075 | .021 | .147 | .074 | .021 |   |  |

| ρ <sub>CC</sub> | 80%                   |      |      | 70%  |      |      | 50%                                        |      |      | 30%  |      |      | 10%  |      |      | 0 |  |
|-----------------|-----------------------|------|------|------|------|------|--------------------------------------------|------|------|------|------|------|------|------|------|---|--|
| ρ <sub>W</sub>  | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%                                        | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |  |
| ρ <sub>fc</sub> | 20%                   |      |      | 20%  |      |      | 20%                                        |      |      | 20%  |      |      | 20%  |      |      | 0 |  |
| RCR             | RCR:Room Cavity Ratio |      |      |      |      |      | Ceiling Cavity Exitance Coefficients(CCEC) |      |      |      |      |      |      |      |      |   |  |
| 0.0             | .202                  | .202 | .202 | .173 | .173 | .173 | .118                                       | .118 | .118 | .068 | .068 | .068 | .022 | .022 | .022 |   |  |
| 1.0             | .193                  | .168 | .144 | .166 | .144 | .124 | .113                                       | .099 | .086 | .065 | .057 | .050 | .021 | .018 | .016 |   |  |
| 2.0             | .186                  | .144 | .108 | .159 | .124 | .094 | .109                                       | .086 | .065 | .063 | .050 | .038 | .020 | .016 | .012 |   |  |
| 3.0             | .178                  | .126 | .085 | .152 | .109 | .074 | .105                                       | .076 | .052 | .060 | .044 | .030 | .019 | .014 | .010 |   |  |
| 4.0             | .170                  | .113 | .069 | .146 | .098 | .060 | .100                                       | .068 | .042 | .058 | .040 | .025 | .019 | .013 | .008 |   |  |
| 5.0             | .163                  | .103 | .059 | .140 | .089 | .051 | .096                                       | .062 | .036 | .056 | .036 | .021 | .018 | .012 | .007 |   |  |
| 6.0             | .155                  | .094 | .051 | .133 | .082 | .044 | .092                                       | .057 | .031 | .053 | .034 | .019 | .017 | .011 | .006 |   |  |
| 7.0             | .148                  | .088 | .045 | .128 | .076 | .039 | .088                                       | .053 | .028 | .051 | .031 | .017 | .017 | .010 | .005 |   |  |
| 8.0             | .142                  | .082 | .041 | .122 | .071 | .035 | .084                                       | .050 | .025 | .049 | .029 | .015 | .016 | .010 | .005 |   |  |
| 9.0             | .136                  | .077 | .037 | .117 | .067 | .032 | .081                                       | .047 | .023 | .047 | .028 | .014 | .015 | .009 | .005 |   |  |
| 10.0            | .130                  | .073 | .034 | .112 | .063 | .030 | .078                                       | .044 | .021 | .045 | .026 | .013 | .015 | .009 | .004 |   |  |

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1DEG  
Operators:  
Test Date:2025-03-24

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE G0-2000A\_V1 SYSTEM V2.0.366  
Humidity:56%  
Test Distance:11.834m [K=1.0000]  
Remarks:

Checker: CHENXIAOFU

Assessor: Ju Hongli

## UGR(Unified Glare Rating) Table

|                                                                         |               |                  |      |      |          |               |                |                       |      |      |      |
|-------------------------------------------------------------------------|---------------|------------------|------|------|----------|---------------|----------------|-----------------------|------|------|------|
| Test:U:220-240V I:0.105A P:21W PF:0.75 Freq:50.00Hz Lamp Flux:1880x1 lm |               |                  |      |      |          |               |                |                       |      |      |      |
| NAME: BHD3S-TC-S-21W-3000K                                              |               |                  |      |      | TYPE:LED |               |                | WEIGHT:               |      |      |      |
| SPEC.:0028920257 21W 3000K 1880lm                                       |               |                  |      |      | DIM.:    |               |                | SERIAL No.:250328001G |      |      |      |
| MFR.: LIT by CARDI                                                      |               |                  |      |      | SUR.:    |               |                | 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                                                           |               | 24.5             | 26.0 | 24.8 | 26.2     | 26.5          | 24.5           | 26.0                  | 24.8 | 26.2 | 26.5 |
|                                                                         | 3H            | 26.0             | 27.5 | 26.4 | 27.7     | 28.0          | 26.1           | 27.5                  | 26.4 | 27.7 | 28.0 |
|                                                                         | 4H            | 26.7             | 28.1 | 27.0 | 28.3     | 28.6          | 26.7           | 28.1                  | 27.1 | 28.4 | 28.7 |
|                                                                         | 6H            | 27.2             | 28.5 | 27.6 | 28.8     | 29.1          | 27.3           | 28.6                  | 27.7 | 28.9 | 29.2 |
|                                                                         | 8H            | 27.5             | 28.7 | 27.8 | 29.0     | 29.3          | 27.6           | 28.8                  | 27.9 | 29.1 | 29.4 |
|                                                                         | 12H           | 27.7             | 28.9 | 28.1 | 29.2     | 29.5          | 27.8           | 29.0                  | 28.2 | 29.3 | 29.7 |
| 4H                                                                      | 2H            | 25.1             | 26.4 | 25.4 | 26.7     | 27.0          | 25.1           | 26.4                  | 25.4 | 26.7 | 27.0 |
|                                                                         | 3H            | 26.8             | 28.0 | 27.2 | 28.4     | 28.7          | 26.9           | 28.0                  | 27.2 | 28.4 | 28.7 |
|                                                                         | 4H            | 27.6             | 28.7 | 28.0 | 29.1     | 29.4          | 27.7           | 28.8                  | 28.1 | 29.1 | 29.5 |
|                                                                         | 6H            | 28.3             | 29.3 | 28.8 | 29.7     | 30.1          | 28.4           | 29.4                  | 28.8 | 29.8 | 30.2 |
|                                                                         | 8H            | 28.6             | 29.5 | 29.1 | 29.9     | 30.3          | 28.7           | 29.6                  | 29.2 | 30.0 | 30.5 |
|                                                                         | 12H           | 28.9             | 29.7 | 29.4 | 30.2     | 30.6          | 29.1           | 29.9                  | 29.5 | 30.3 | 30.7 |
| 8H                                                                      | 4H            | 27.9             | 28.8 | 28.4 | 29.2     | 29.7          | 28.0           | 28.9                  | 28.4 | 29.3 | 29.7 |
|                                                                         | 6H            | 28.8             | 29.6 | 29.3 | 30.0     | 30.5          | 28.9           | 29.7                  | 29.4 | 30.1 | 30.5 |
|                                                                         | 8H            | 29.2             | 29.9 | 29.7 | 30.4     | 30.8          | 29.3           | 30.0                  | 29.8 | 30.5 | 31.0 |
|                                                                         | 12H           | 29.7             | 30.2 | 30.2 | 30.7     | 31.2          | 29.8           | 30.4                  | 30.3 | 30.9 | 31.4 |
| 12H                                                                     | 4H            | 28.0             | 28.8 | 28.4 | 29.2     | 29.7          | 28.0           | 28.8                  | 28.5 | 29.3 | 29.7 |
|                                                                         | 6H            | 28.9             | 29.6 | 29.4 | 30.0     | 30.5          | 29.0           | 29.7                  | 29.5 | 30.1 | 30.6 |
|                                                                         | 8H            | 29.4             | 30.0 | 29.9 | 30.5     | 31.0          | 29.5           | 30.1                  | 30.0 | 30.6 | 31.1 |
| Variations with the observer position at spacings:                      |               |                  |      |      |          |               |                |                       |      |      |      |
| S = 1.0H                                                                | + 0.1 / - 0.2 |                  |      |      |          | + 0.1 / - 0.2 |                |                       |      |      |      |
| 1.5H                                                                    | + 0.2 / - 0.3 |                  |      |      |          | + 0.2 / - 0.3 |                |                       |      |      |      |
| 2.0H                                                                    | + 0.1 / - 0.3 |                  |      |      |          | + 0.1 / - 0.3 |                |                       |      |      |      |

CIE Pub.117, 1821 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 2.1$ )

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1DEG  
Operators:  
Test Date:2025-03-24

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
 $\gamma$  Test System:EVERFINE G0-2000A\_V1 SYSTEM V2.0.366  
Humidity:56%  
Test Distance:11.834m [K=1.0000]  
Remarks:

Checker: CHENXIAOFU

Assessor: Ju Hongli

## UTILIZATION FACTORS TABLE

|                                                                         |          |                       |
|-------------------------------------------------------------------------|----------|-----------------------|
| Test:U:220-240V I:0.105A P:21W PF:0.75 Freq:50.00Hz Lamp Flux:1880x1 lm |          |                       |
| NAME: BHD3S-TC-S-21W-3000K                                              | TYPE:LED | WEIGHT:               |
| SPEC.:0028920257 21W 3000K 1880lm                                       | DIM.:    | SERIAL No.:250328001G |
| MFR.: LIT by CARDI                                                      | SUR.:    | 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) $k(RI) \times RCR = 5$ |     |           |     |     |     |     |              |     |        |
| $k = 0.60$                       | 56                                                  | 44  | 37        | 55  | 44  | 37  | 54  | 43           | 37  | 30     |
| 0.80                             | 66                                                  | 54  | 47        | 65  | 54  | 46  | 63  | 53           | 46  | 39     |
| 1.00                             | 74                                                  | 63  | 55        | 73  | 62  | 55  | 71  | 64           | 54  | 47     |
| 1.25                             | 81                                                  | 70  | 63        | 80  | 70  | 63  | 77  | 68           | 62  | 54     |
| 1.50                             | 86                                                  | 76  | 69        | 85  | 75  | 68  | 81  | 73           | 67  | 59     |
| 2.00                             | 93                                                  | 84  | 77        | 91  | 83  | 77  | 88  | 81           | 75  | 67     |
| 2.50                             | 97                                                  | 89  | 83        | 95  | 88  | 82  | 91  | 85           | 80  | 71     |
| 3.00                             | 101                                                 | 93  | 87        | 98  | 92  | 86  | 94  | 89           | 84  | 75     |
| 4.00                             | 105                                                 | 99  | 94        | 102 | 97  | 92  | 98  | 93           | 89  | 80     |
| 5.00                             | 107                                                 | 102 | 98        | 105 | 100 | 96  | 100 | 96           | 93  | 83     |
| ROOM INDEX                       | UF(total)                                           |     |           |     |     |     |     |              |     | Direct |
| According to DIN EN 13032-2 2004 |                                                     |     | Suspended |     |     |     |     | SHRNM = 1.25 |     |        |

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.1DEG  
 Operators:  
 Test Date:2025-03-24

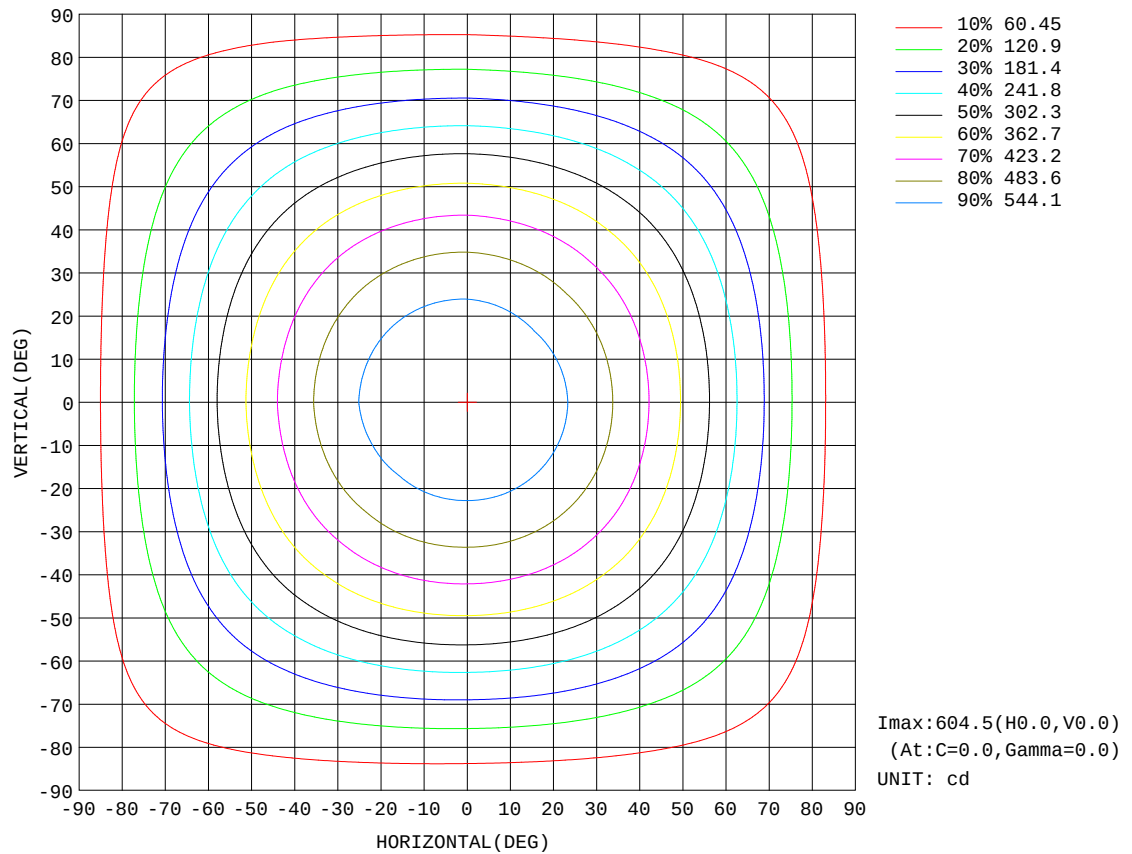
Checker: CHENXIAOFU

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
 $\gamma$  Test System:EVERFINE G0-2000A\_V1 SYSTEM V2.0.366  
 Humidity:56%  
 Test Distance:11.834m [K=1.0000]  
 Remarks:

Assessor: Ju Hongli

## ISOCANDELA DIAGRAM

|                                                                         |          |                       |
|-------------------------------------------------------------------------|----------|-----------------------|
| Test:U:220-240V I:0.105A P:21W PF:0.75 Freq:50.00Hz Lamp Flux:1880x1 lm |          |                       |
| NAME: BHD3S-TC-S-21W-3000K                                              | TYPE:LED | WEIGHT:               |
| SPEC.:0028920257 21W 3000K 1880lm                                       | DIM.:    | SERIAL No.:250328001G |
| MFR.: LIT by CARDI                                                      | SUR.:    | Shielding Angle:      |



C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.1DEG  
 Operators:  
 Test Date:2025-03-24

Checker: CHENXIAOFU

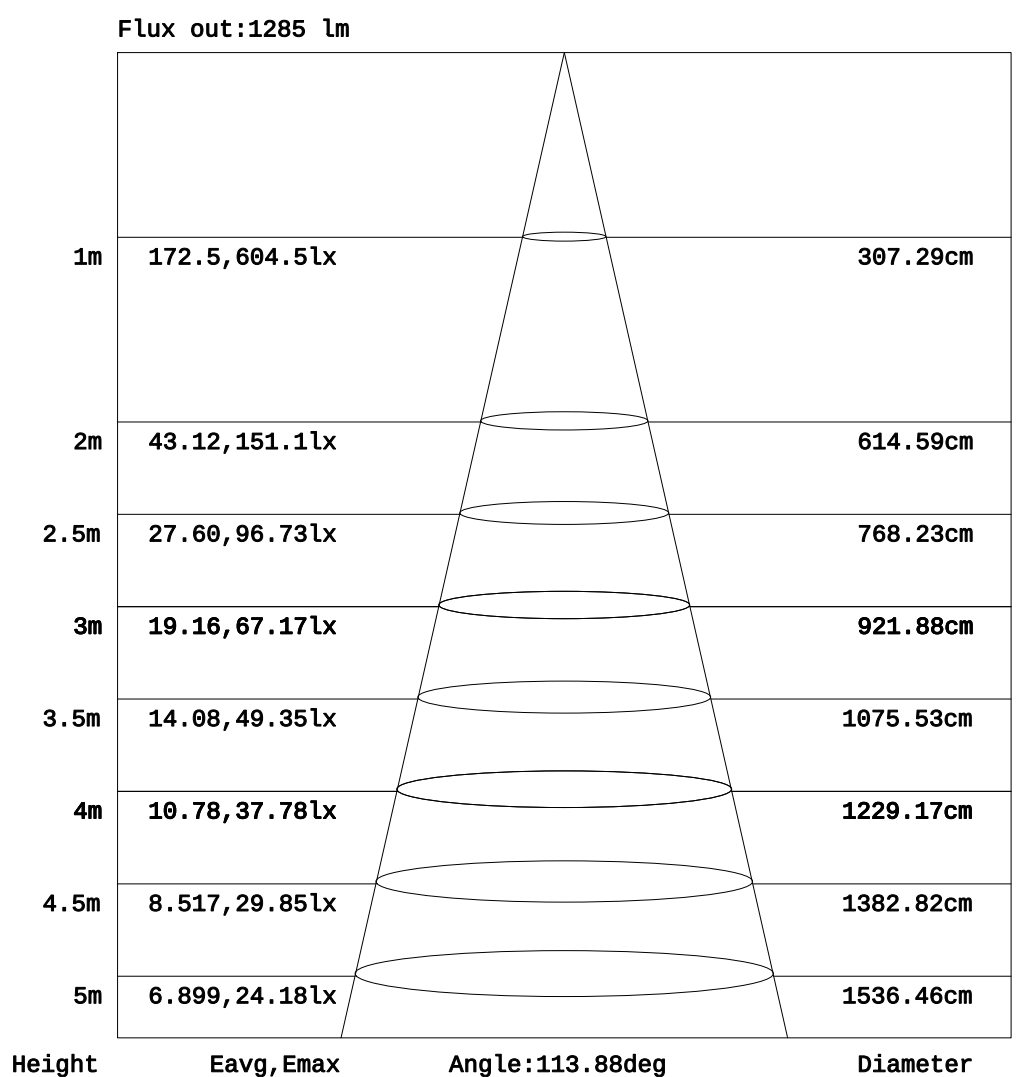
γ Range: 0 - 180DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE G0-2000A\_V1 SYSTEM V2.0.366  
 Humidity:56%  
 Test Distance:11.834m [K=1.0000]  
 Remarks:

Assessor: Ju Hongli



## AAI Figure

|                                                                         |          |                       |
|-------------------------------------------------------------------------|----------|-----------------------|
| Test:U:220-240V I:0.105A P:21W PF:0.75 Freq:50.00Hz Lamp Flux:1880x1 lm |          |                       |
| NAME: BHD3S-TC-S-21W-3000K                                              | TYPE:LED | WEIGHT:               |
| SPEC.:0028920257 21W 3000K 1880lm                                       | DIM.:    | SERIAL No.:250328001G |
| MFR.: LIT by CARDI                                                      | SUR.:    | 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:25.1DEG  
Operators:  
Test Date:2025-03-24

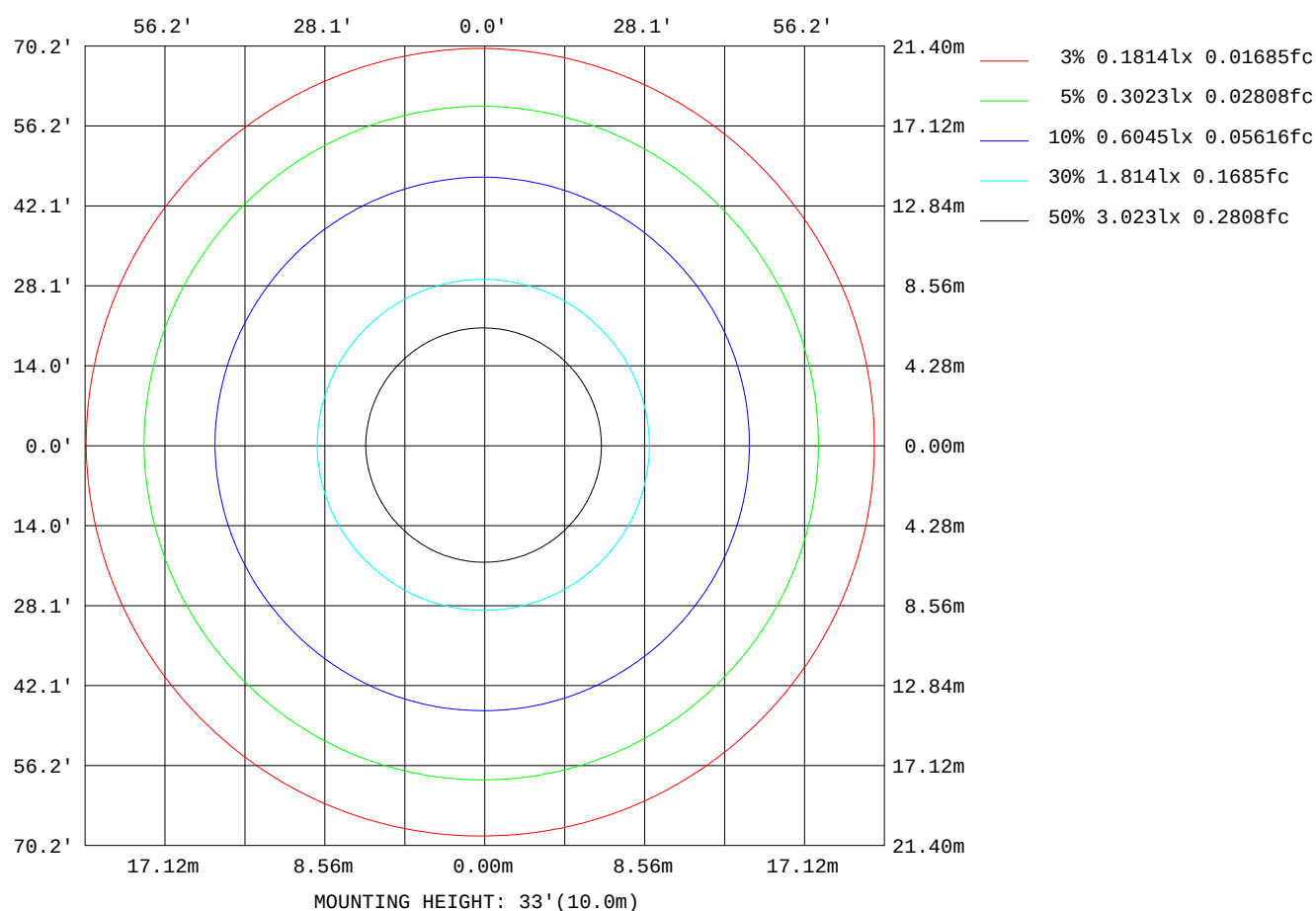
γ Range: 0 - 180DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE G0-2000A\_V1 SYSTEM V2.0.366  
Humidity:56%  
Test Distance:11.834m [K=1.0000]  
Remarks:

Checker: CHENXIAOFU

Assessor: Ju Hongli

## ISOLUX DIAGRAM

|                                                                         |           |                       |
|-------------------------------------------------------------------------|-----------|-----------------------|
| Test:U:220-240V I:0.105A P:21W PF:0.75 Freq:50.00Hz Lamp Flux:1880x1 lm |           |                       |
| NAME: BHD3S-TC-S-21W-3000K                                              | TYPE: LED | WEIGHT:               |
| SPEC.:0028920257 21W 3000K 1880lm                                       | DIM.:     | SERIAL No.:250328001G |
| MFR.: LIT by CARDI                                                      | SUR.:     | Shielding Angle:      |



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1DEG  
Operators:  
Test Date:2025-03-24

Checker: CHENXIAOFU

γ Range: 0 - 180DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE G0-2000A\_V1 SYSTEM V2.0.366  
Humidity:56%  
Test Distance:11.834m [K=1.0000]  
Remarks:

Assessor: Ju Hongli

## LED Avg.L Report

|                                                                         |          |                       |
|-------------------------------------------------------------------------|----------|-----------------------|
| Test:U:220-240V I:0.105A P:21W PF:0.75 Freq:50.00Hz Lamp Flux:1880x1 lm |          |                       |
| NAME: BHD3S-TC-S-21W-3000K                                              | TYPE:LED | WEIGHT:               |
| SPEC.:0028920257 21W 3000K 1880lm                                       | DIM.:    | SERIAL No.:250328001G |
| MFR.: LIT by CARDI                                                      | SUR.:    | Shielding Angle:      |

| AvgL           | cd/m2 |
|----------------|-------|
| L_0~180(65)av  | 53741 |
| L_0~180(75)av  | 51112 |
| L_0~180(85)av  | 62737 |
| L_90~270(65)av | 53572 |
| L_90~270(75)av | 51511 |
| L_90~270(85)av | 66021 |
| L_45(65)av     | 53429 |
| L_45(75)av     | 51106 |
| L_45(85)av     | 64287 |

Standard: GB/T 29293-2012

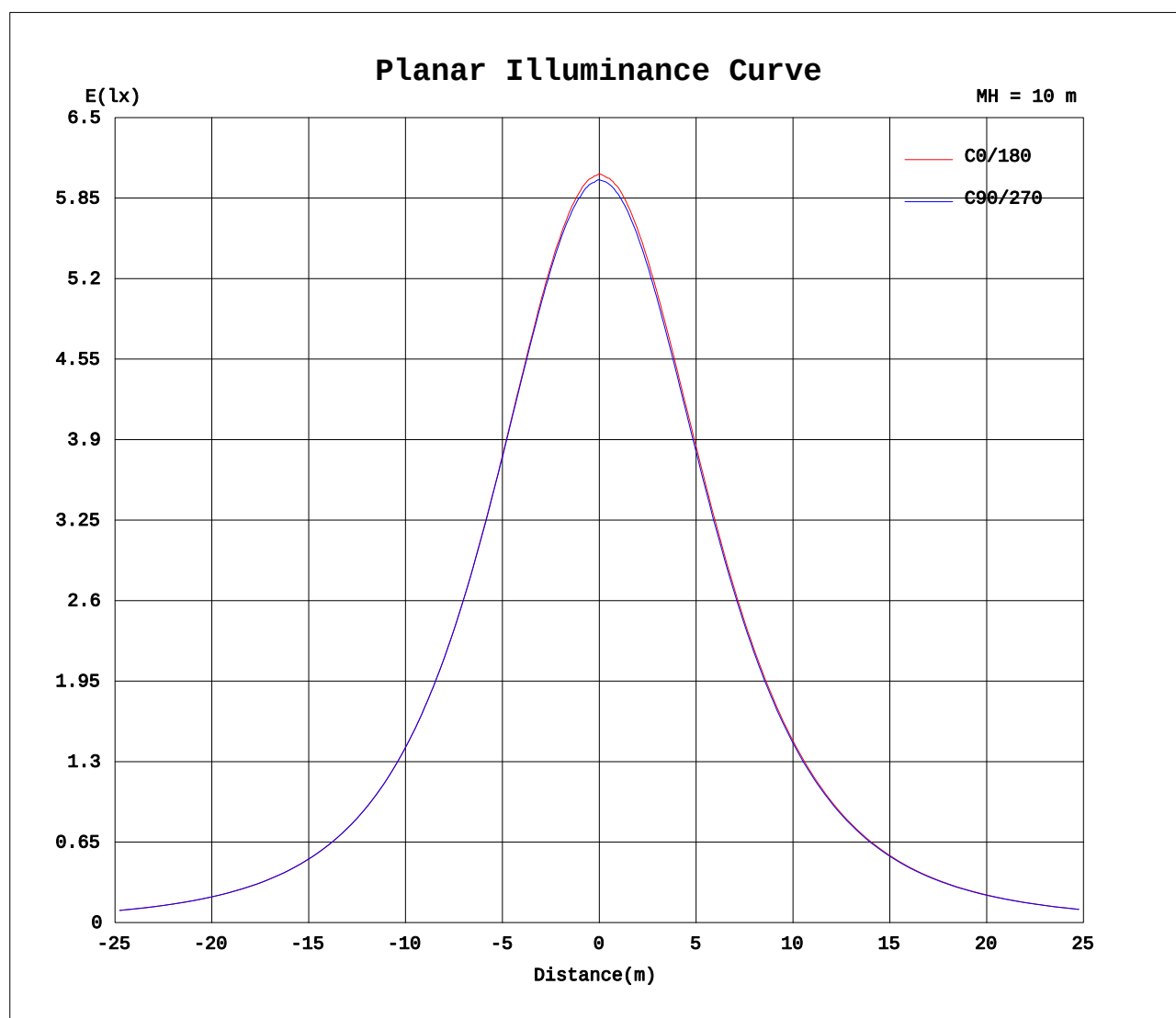
C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1DEG  
Operators:  
Test Date:2025-03-24

Checker: CHENXIAOFU

γ Range: 0 - 180DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE G0-2000A\_V1 SYSTEM V2.0.366  
Humidity:56%  
Test Distance:11.834m [K=1.0000]  
Remarks:

Assessor: Ju Hongli

# Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.1DEG  
Operators:  
Test Date: 2025-03-24

Checker: CHENXIAOFU

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE G0-2000A\_V1 SYSTEM V2.0.366  
Humidity: 56%  
Test Distance: 11.834m [K=1.0000]  
Remarks:

Assessor: Ju Hongli

## LUMINOUS DISTRIBUTION INTENSITY DATA

|                                                                         |          |                       |
|-------------------------------------------------------------------------|----------|-----------------------|
| Test:U:220-240V I:0.105A P:21W PF:0.75 Freq:50.00Hz Lamp Flux:1880x1 lm |          |                       |
| NAME: BHD3S-TC-S-21W-3000K                                              | TYPE:LED | WEIGHT:               |
| SPEC.:0028920257 21W 3000K 1880lm                                       | DIM.:    | SERIAL No.:250328001G |
| MFR.: LIT by CARDI                                                      | SUR.:    | Shielding Angle:      |

Table--1

UNIT: cd

| C(DEG)<br>γ (DEG) | 0    | 45   | 90   | 135  | 180  | 225  | 270  | 315  |  |  |  |  |  |  |  |  |  |  |
|-------------------|------|------|------|------|------|------|------|------|--|--|--|--|--|--|--|--|--|--|
| 0                 | 605  | 601  | 600  | 596  | 605  | 601  | 600  | 596  |  |  |  |  |  |  |  |  |  |  |
| 5                 | 601  | 598  | 596  | 595  | 602  | 599  | 597  | 593  |  |  |  |  |  |  |  |  |  |  |
| 10                | 591  | 589  | 588  | 586  | 595  | 592  | 590  | 585  |  |  |  |  |  |  |  |  |  |  |
| 15                | 578  | 576  | 574  | 575  | 583  | 580  | 577  | 572  |  |  |  |  |  |  |  |  |  |  |
| 20                | 559  | 557  | 556  | 557  | 567  | 563  | 561  | 555  |  |  |  |  |  |  |  |  |  |  |
| 25                | 535  | 534  | 533  | 535  | 545  | 541  | 539  | 532  |  |  |  |  |  |  |  |  |  |  |
| 30                | 507  | 506  | 506  | 508  | 518  | 516  | 513  | 506  |  |  |  |  |  |  |  |  |  |  |
| 35                | 475  | 474  | 475  | 478  | 488  | 485  | 482  | 475  |  |  |  |  |  |  |  |  |  |  |
| 40                | 439  | 438  | 440  | 443  | 454  | 451  | 448  | 440  |  |  |  |  |  |  |  |  |  |  |
| 45                | 400  | 399  | 400  | 405  | 416  | 413  | 410  | 402  |  |  |  |  |  |  |  |  |  |  |
| 50                | 358  | 356  | 358  | 363  | 374  | 373  | 370  | 361  |  |  |  |  |  |  |  |  |  |  |
| 55                | 313  | 311  | 314  | 320  | 330  | 329  | 326  | 317  |  |  |  |  |  |  |  |  |  |  |
| 60                | 266  | 265  | 267  | 273  | 284  | 283  | 280  | 271  |  |  |  |  |  |  |  |  |  |  |
| 65                | 218  | 217  | 219  | 226  | 236  | 236  | 233  | 224  |  |  |  |  |  |  |  |  |  |  |
| 70                | 170  | 169  | 172  | 179  | 188  | 189  | 186  | 176  |  |  |  |  |  |  |  |  |  |  |
| 75                | 124  | 124  | 127  | 133  | 141  | 143  | 140  | 130  |  |  |  |  |  |  |  |  |  |  |
| 80                | 82.2 | 83.2 | 86.4 | 91.2 | 97.2 | 99.8 | 97.8 | 88.8 |  |  |  |  |  |  |  |  |  |  |
| 85                | 48.7 | 50.2 | 53.2 | 56.5 | 60.7 | 63.1 | 61.9 | 54.3 |  |  |  |  |  |  |  |  |  |  |
| 90                | 24.5 | 26.0 | 28.6 | 30.3 | 32.8 | 34.1 | 34.4 | 28.8 |  |  |  |  |  |  |  |  |  |  |
| 95                | 9.70 | 8.59 | 12.2 | 7.45 | 14.1 | 8.34 | 15.5 | 9.54 |  |  |  |  |  |  |  |  |  |  |
| 100               | 2.58 | 1.57 | 1.47 | 1.39 | 3.31 | 1.23 | 1.30 | 1.37 |  |  |  |  |  |  |  |  |  |  |
| 105               | 1.68 | 1.73 | 1.63 | 1.63 | 1.52 | 1.43 | 1.55 | 1.43 |  |  |  |  |  |  |  |  |  |  |
| 110               | 1.87 | 2.02 | 1.95 | 1.88 | 1.77 | 1.71 | 1.86 | 1.73 |  |  |  |  |  |  |  |  |  |  |
| 115               | 2.10 | 2.27 | 2.43 | 2.25 | 1.97 | 1.93 | 2.15 | 2.10 |  |  |  |  |  |  |  |  |  |  |
| 120               | 2.47 | 2.53 | 2.71 | 2.59 | 2.25 | 2.12 | 2.35 | 2.41 |  |  |  |  |  |  |  |  |  |  |
| 125               | 2.60 | 2.83 | 3.13 | 2.85 | 2.49 | 2.25 | 2.67 | 2.63 |  |  |  |  |  |  |  |  |  |  |
| 130               | 2.78 | 3.16 | 3.31 | 2.81 | 2.67 | 2.57 | 3.09 | 2.67 |  |  |  |  |  |  |  |  |  |  |
| 135               | 3.13 | 3.39 | 3.74 | 3.00 | 2.94 | 2.82 | 3.44 | 3.10 |  |  |  |  |  |  |  |  |  |  |
| 140               | 3.40 | 3.48 | 3.93 | 3.19 | 3.25 | 3.10 | 3.54 | 3.09 |  |  |  |  |  |  |  |  |  |  |
| 145               | 3.77 | 3.58 | 3.71 | 3.44 | 3.47 | 3.22 | 3.54 | 3.26 |  |  |  |  |  |  |  |  |  |  |
| 150               | 3.72 | 3.89 | 3.78 | 3.67 | 3.53 | 3.59 | 3.72 | 3.49 |  |  |  |  |  |  |  |  |  |  |
| 155               | 3.77 | 3.86 | 3.78 | 3.77 | 3.70 | 3.70 | 3.67 | 3.59 |  |  |  |  |  |  |  |  |  |  |
| 160               | 3.93 | 4.05 | 3.91 | 3.93 | 3.91 | 3.78 | 3.96 | 3.94 |  |  |  |  |  |  |  |  |  |  |
| 165               | 4.00 | 4.42 | 4.40 | 4.02 | 3.99 | 3.84 | 4.30 | 4.38 |  |  |  |  |  |  |  |  |  |  |
| 170               | 4.17 | 4.82 | 4.60 | 4.12 | 4.22 | 4.05 | 4.55 | 4.74 |  |  |  |  |  |  |  |  |  |  |
| 175               | 5.06 | 5.53 | 5.09 | 4.54 | 4.70 | 4.45 | 4.99 | 5.27 |  |  |  |  |  |  |  |  |  |  |
| 180               | 6.08 | 5.78 | 5.87 | 5.78 | 6.06 | 5.74 | 5.85 | 5.77 |  |  |  |  |  |  |  |  |  |  |

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1DEG  
Operators:  
Test Date:2025-03-24

γ Range: 0 - 180DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE G0-2000A\_V1 SYSTEM V2.0.366  
Humidity:56%  
Test Distance:11.834m [K=1.0000]  
Remarks:

Checker: CHENXIAOFU

Assessor: Ju Hongli