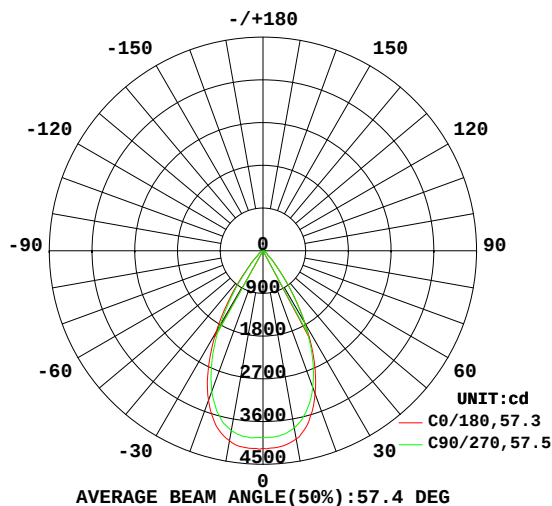


## LUMINAIRE PHOTOMETRIC TEST REPORT

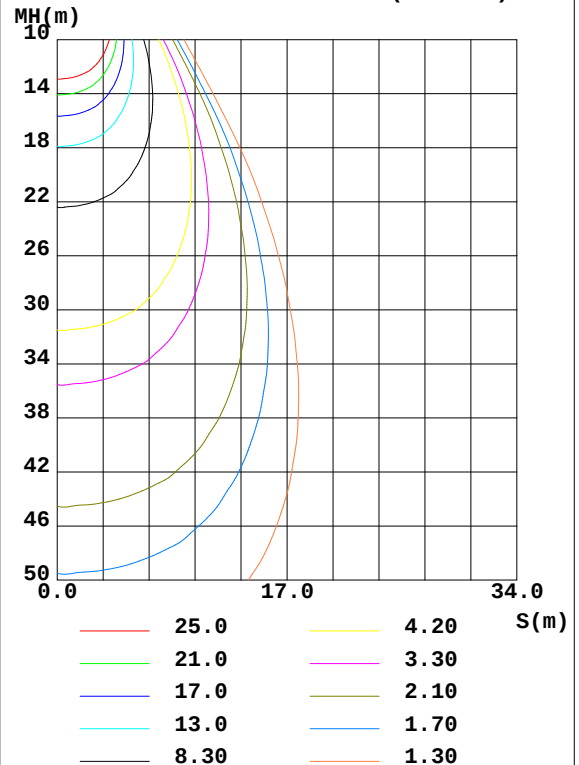
|                                                                                  |            |                  |
|----------------------------------------------------------------------------------|------------|------------------|
| Test:U:230.17V I:0.1533A P:33.015W PF:0.9356 Freq:49.99Hz Lamp Flux:3569.91x1 lm |            |                  |
| NAME: TH41-BKTC40C023P                                                           | TYPE:      | WEIGHT:          |
| SPEC.: white RA90 3000K+5700K                                                    | DIM.:      | SERIAL No.:      |
| MFR.:                                                                            | SUR.: 77mm | Shielding Angle: |

| DATA OF LAMP     |                  | PHOTOMETRIC DATA Eff: 108.13 lm/W |        |                    |           |
|------------------|------------------|-----------------------------------|--------|--------------------|-----------|
| MODEL            | TB32171211 4000K | I <sub>max</sub> (cd)             | 4181   | S/MH(C0/180)       | 0.88      |
| NOMINAL POWER(W) | 40               | LOR(%)                            | 100.0  | S/MH(C90/270)      | 0.87      |
| RATED VOLTAGE(V) | 220-240          | TOTAL FLUX(lm)                    | 3569.9 | η UP, DN(C0-180)   | 0.0, 49.4 |
| NOMINAL FLUX(lm) | 3569.91          | CIE CLASS                         | DIRECT | η UP, DN(C180-360) | 0.0, 50.6 |
| LAMPS INSIDE     | 1                | η up(%)                           | 0.0    | CIBSE SHR NOM      | 0.75      |
| TEST VOLTAGE(V)  | 220              | η down(%)                         | 100.0  | CIBSE SHR MAX      | 0.90      |

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25DEG  
Operators:  
Test Date: 2024-06-22

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
Humidity: 65.0%  
Test Distance: 7.450m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

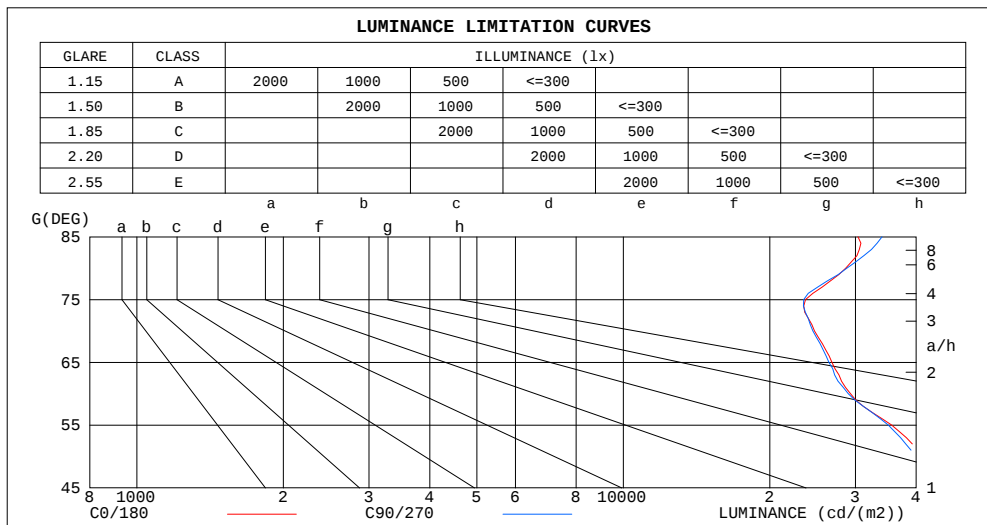
| $\gamma$ | C0                    | C45    | C90    | C135   | C180   | C225   | C270   | C315   | $\gamma$ | $\Phi$ zone | $\Phi$ total | %lum, lamp |
|----------|-----------------------|--------|--------|--------|--------|--------|--------|--------|----------|-------------|--------------|------------|
| 10       | 4027                  | 3794   | 3790   | 3747   | 4063   | 3861   | 3848   | 3767   | 0- 10    | 373.7       | 373.7        | 10.5,10.5  |
| 20       | 3211                  | 3045   | 3057   | 3054   | 3356   | 3181   | 3154   | 3057   | 10- 20   | 993.7       | 1367         | 38.3,38.3  |
| 30       | 1777                  | 1714   | 1749   | 1774   | 1978   | 1868   | 1820   | 1730   | 20- 30   | 1136        | 2503         | 70.1,70.1  |
| 40       | 511.9                 | 487.2  | 505.3  | 509.4  | 591.2  | 559.7  | 530.0  | 502.7  | 30- 40   | 678.1       | 3181         | 89.1,89.1  |
| 50       | 125.6                 | 121.1  | 121.8  | 121.3  | 133.5  | 126.7  | 123.9  | 118.7  | 40- 50   | 208.7       | 3390         | 95,95      |
| 60       | 68.26                 | 65.79  | 67.54  | 67.27  | 73.32  | 68.09  | 66.52  | 64.27  | 50- 60   | 83.60       | 3473         | 97.3,97.3  |
| 70       | 39.38                 | 38.18  | 39.08  | 38.92  | 42.50  | 39.69  | 39.23  | 37.64  | 60- 70   | 51.83       | 3525         | 98.7,98.7  |
| 80       | 23.18                 | 22.42  | 23.30  | 23.03  | 24.59  | 23.14  | 23.13  | 22.27  | 70- 80   | 31.17       | 3556         | 99.6,99.6  |
| 90       | 0.4941                | 0.4748 | 0.4787 | 0.5366 | 0.4324 | 0.1892 | 0.1814 | 0.1737 | 80- 90   | 13.59       | 3570         | 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     |              |            |

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25DEG  
 Operators:  
 Test Date:2024-06-22

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
 Humidity:65.0%  
 Test Distance:7.450m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

|                                                                                  |            |                  |
|----------------------------------------------------------------------------------|------------|------------------|
| Test:U:230.17V I:0.1533A P:33.015W PF:0.9356 Freq:49.99Hz Lamp Flux:3569.91x1 lm |            |                  |
| NAME: TH41-BKTC40C023P                                                           | TYPE:      | WEIGHT:          |
| SPEC.: white RA90 3000K+5700K                                                    | DIM.:      | SERIAL No.:      |
| MFR.:                                                                            | SUR.: 77mm | Shielding Angle: |



| LUMINANCE cd/(m2) |        |         |
|-------------------|--------|---------|
| G(DEG)            | C0/180 | C90/270 |
| 85                | 30363  | 34032   |
| 80                | 28648  | 28793   |
| 75                | 23685  | 23495   |
| 70                | 24711  | 24519   |
| 65                | 26836  | 26456   |
| 60                | 29298  | 28988   |
| 55                | 35602  | 35044   |
| 50                | 41942  | 40671   |
| 45                | 79873  | 77416   |

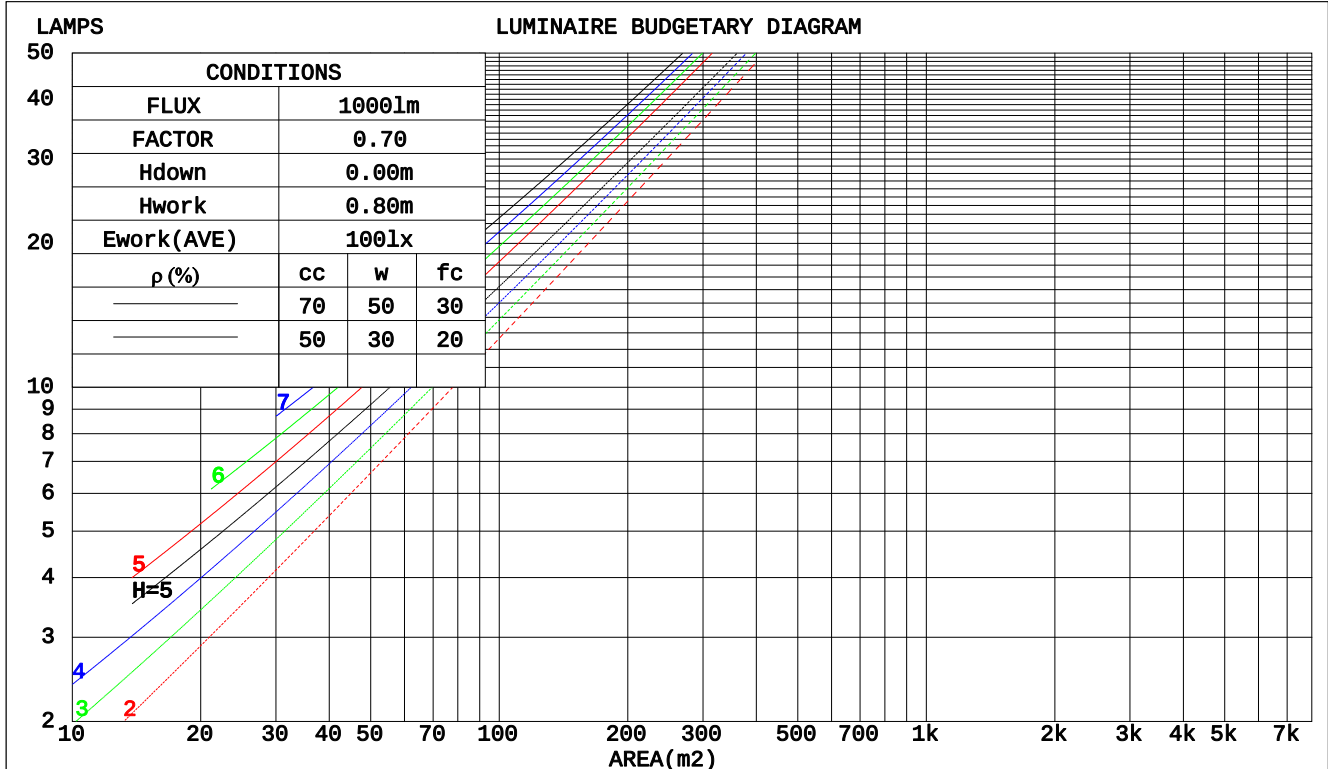
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25DEG  
Operators:  
Test Date: 2024-06-22

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
Humidity: 65.0%  
Test Distance: 7.450m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

|                                                                                  |            |                  |
|----------------------------------------------------------------------------------|------------|------------------|
| Test:U:230.17V I:0.1533A P:33.015W PF:0.9356 Freq:49.99Hz Lamp Flux:3569.91x1 lm |            |                  |
| NAME: TH41-BKTC40C023P                                                           | TYPE:      | WEIGHT:          |
| SPEC.: white RA90 3000K+5700K                                                    | DIM.:      | SERIAL No.:      |
| MFR.:                                                                            | SUR.: 77mm | 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) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| RCR:Room Cavity Ratio |                                 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 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 | 1.03 | 1.04 | 1.02 | 1.00 | 1.00 | .99  | .97  | .97  | .96  | .94  | .93  |
| 2.0                   | 1.02                            | .98  | .94  | 1.00 | .96  | .93  | .97  | .94  | .91  | .94  | .91  | .89  | .91  | .89  | .87  | .86  |
| 3.0                   | .95                             | .90  | .86  | .93  | .89  | .85  | .91  | .87  | .84  | .88  | .85  | .82  | .86  | .83  | .81  | .79  |
| 4.0                   | .88                             | .83  | .78  | .87  | .82  | .78  | .85  | .81  | .77  | .83  | .79  | .76  | .81  | .78  | .75  | .74  |
| 5.0                   | .83                             | .77  | .72  | .82  | .76  | .72  | .80  | .75  | .71  | .78  | .74  | .71  | .77  | .73  | .70  | .69  |
| 6.0                   | .78                             | .71  | .67  | .77  | .71  | .67  | .75  | .70  | .66  | .74  | .69  | .66  | .73  | .69  | .65  | .64  |
| 7.0                   | .73                             | .67  | .62  | .72  | .66  | .62  | .71  | .66  | .62  | .70  | .65  | .62  | .69  | .64  | .61  | .60  |
| 8.0                   | .69                             | .63  | .58  | .68  | .62  | .58  | .67  | .62  | .58  | .66  | .61  | .58  | .65  | .61  | .58  | .56  |
| 9.0                   | .65                             | .59  | .55  | .64  | .59  | .55  | .63  | .58  | .55  | .63  | .58  | .54  | .62  | .57  | .54  | .53  |
| 10.0                  | .61                             | .56  | .52  | .61  | .55  | .52  | .60  | .55  | .51  | .59  | .55  | .51  | .59  | .54  | .51  | .50  |



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25DEG  
Operators:  
Test Date: 2024-06-22

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
Humidity: 65.0%  
Test Distance: 7.450m [K=1.0000]  
Remarks:

### WEC AND CCEC

|                                                                                  |  |  |            |  |                  |
|----------------------------------------------------------------------------------|--|--|------------|--|------------------|
| Test:U:230.17V I:0.1533A P:33.015W PF:0.9356 Freq:49.99Hz Lamp Flux:3569.91x1 lm |  |  |            |  |                  |
| NAME: TH41-BKTC40C023P                                                           |  |  | TYPE:      |  | WEIGHT:          |
| SPEC.: white RA90 3000K+5700K                                                    |  |  | DIM.:      |  | SERIAL No.:      |
| MFR.:                                                                            |  |  | SUR.: 77mm |  | 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         | .190                  | .108 | .034 | .183 | .104 | .033 | .170                            | .098 | .031 | .159 | .091 | .029 | .148 | .086 | .028 |   |
| 2.0         | .180                  | .099 | .030 | .174 | .096 | .030 | .164                            | .091 | .028 | .154 | .086 | .027 | .145 | .082 | .026 |   |
| 3.0         | .170                  | .091 | .027 | .166 | .089 | .027 | .156                            | .085 | .026 | .148 | .081 | .025 | .140 | .078 | .024 |   |
| 4.0         | .161                  | .084 | .025 | .157 | .082 | .024 | .149                            | .079 | .024 | .142 | .076 | .023 | .135 | .073 | .022 |   |
| 5.0         | .153                  | .078 | .023 | .149 | .077 | .022 | .143                            | .074 | .022 | .136 | .072 | .021 | .130 | .070 | .021 |   |
| 6.0         | .146                  | .073 | .021 | .142 | .072 | .021 | .136                            | .070 | .020 | .131 | .068 | .020 | .125 | .066 | .020 |   |
| 7.0         | .139                  | .069 | .019 | .136 | .068 | .019 | .130                            | .066 | .019 | .125 | .064 | .019 | .121 | .063 | .018 |   |
| 8.0         | .132                  | .065 | .018 | .130 | .064 | .018 | .125                            | .062 | .018 | .120 | .061 | .018 | .116 | .060 | .017 |   |
| 9.0         | .127                  | .061 | .017 | .124 | .061 | .017 | .120                            | .059 | .017 | .116 | .058 | .017 | .112 | .057 | .016 |   |
| 10.0        | .121                  | .058 | .016 | .119 | .058 | .016 | .115                            | .056 | .016 | .112 | .055 | .016 | .108 | .054 | .016 |   |

| $\rho_{cc}$ | 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 |      |      | 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 | .125                                       | .098 | .077 | .086 | .068 | .054 | .049 | .040 | .032 | .016 | .013 | .010 |   |
| 4.0         | .135                  | .099 | .071 | .116                                       | .086 | .062 | .080 | .060 | .044 | .046 | .035 | .026 | .015 | .011 | .008 |   |
| 5.0         | .127                  | .088 | .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: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25DEG  
 Operators:  
 Test Date:2024-06-22

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
 Humidity:65.0%  
 Test Distance:7.450m [K=1.0000]  
 Remarks:

### UGR(Unified Glare Rating) Table

|                                                                                  |               |                  |      |      |            |               |                |                  |      |      |      |
|----------------------------------------------------------------------------------|---------------|------------------|------|------|------------|---------------|----------------|------------------|------|------|------|
| Test:U:230.17V I:0.1533A P:33.015W PF:0.9356 Freq:49.99Hz Lamp Flux:3569.91x1 lm |               |                  |      |      |            |               |                |                  |      |      |      |
| NAME: TH41-BKTC40C023P                                                           |               |                  |      |      | TYPE:      |               |                | WEIGHT:          |      |      |      |
| SPEC.: white RA90 3000K+5700K                                                    |               |                  |      |      | DIM.:      |               |                | SERIAL No.:      |      |      |      |
| MFR.:                                                                            |               |                  |      |      | SUR.: 77mm |               |                | 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                                                                    | 19.0          | 20.0             | 19.2 | 20.2 | 20.3       | 19.0          | 20.0           | 19.2             | 20.1 | 20.3 |      |
|                                                                                  | 3H            | 19.2             | 20.1 | 19.4 | 20.3       | 20.5          | 19.1           | 20.0             | 19.4 | 20.2 | 20.4 |
|                                                                                  | 4H            | 19.3             | 20.1 | 19.6 | 20.4       | 20.6          | 19.2           | 20.1             | 19.5 | 20.3 | 20.5 |
|                                                                                  | 6H            | 19.4             | 20.2 | 19.7 | 20.5       | 20.7          | 19.4           | 20.2             | 19.7 | 20.4 | 20.7 |
|                                                                                  | 8H            | 19.5             | 20.3 | 19.8 | 20.6       | 20.8          | 19.5           | 20.3             | 19.8 | 20.5 | 20.8 |
|                                                                                  | 12H           | 19.6             | 20.3 | 19.9 | 20.6       | 20.9          | 19.6           | 20.3             | 19.9 | 20.6 | 20.9 |
| 4H                                                                               | 2H            | 18.9             | 19.8 | 19.2 | 20.0       | 20.2          | 18.9           | 19.7             | 19.2 | 20.0 | 20.2 |
|                                                                                  | 3H            | 19.2             | 20.0 | 19.5 | 20.2       | 20.5          | 19.2           | 19.9             | 19.5 | 20.2 | 20.5 |
|                                                                                  | 4H            | 19.4             | 20.1 | 19.8 | 20.4       | 20.7          | 19.4           | 20.0             | 19.7 | 20.3 | 20.6 |
|                                                                                  | 6H            | 19.7             | 20.3 | 20.1 | 20.6       | 21.0          | 19.6           | 20.2             | 20.0 | 20.6 | 20.9 |
|                                                                                  | 8H            | 19.9             | 20.4 | 20.3 | 20.8       | 21.1          | 19.8           | 20.4             | 20.2 | 20.7 | 21.1 |
|                                                                                  | 12H           | 20.0             | 20.5 | 20.4 | 20.9       | 21.3          | 20.0           | 20.5             | 20.4 | 20.9 | 21.3 |
| 8H                                                                               | 4H            | 19.4             | 20.0 | 19.8 | 20.3       | 20.7          | 19.4           | 19.9             | 19.8 | 20.3 | 20.7 |
|                                                                                  | 6H            | 19.9             | 20.3 | 20.3 | 20.7       | 21.1          | 19.8           | 20.3             | 20.2 | 20.7 | 21.1 |
|                                                                                  | 8H            | 20.1             | 20.5 | 20.6 | 20.9       | 21.4          | 20.1           | 20.5             | 20.5 | 20.9 | 21.3 |
|                                                                                  | 12H           | 20.3             | 20.7 | 20.8 | 21.1       | 21.6          | 20.4           | 20.7             | 20.8 | 21.1 | 21.6 |
| 12H                                                                              | 4H            | 19.4             | 19.9 | 19.8 | 20.3       | 20.7          | 19.4           | 19.9             | 19.8 | 20.2 | 20.6 |
|                                                                                  | 6H            | 19.9             | 20.3 | 20.3 | 20.7       | 21.1          | 19.8           | 20.2             | 20.3 | 20.7 | 21.1 |
|                                                                                  | 8H            | 20.2             | 20.5 | 20.6 | 21.0       | 21.4          | 20.2           | 20.5             | 20.6 | 20.9 | 21.4 |
| Variations with the observer position at spacings(CIE Pub.117):                  |               |                  |      |      |            |               |                |                  |      |      |      |
| S = 1.0H                                                                         | + 1.9 / - 1.9 |                  |      |      |            | + 1.9 / - 1.9 |                |                  |      |      |      |
| 1.5H                                                                             | + 3.5 / - 1.7 |                  |      |      |            | + 3.6 / - 1.8 |                |                  |      |      |      |
| 2.0H                                                                             | + 2.2 / - 0.6 |                  |      |      |            | + 2.0 / - 0.6 |                |                  |      |      |      |

CIE Pub.117, 3570 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 4.4)  
Area: 0.00466 m2

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2024-06-22

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
Humidity:65.0%  
Test Distance:7.450m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

|                                                                                  |            |                  |
|----------------------------------------------------------------------------------|------------|------------------|
| Test:U:230.17V I:0.1533A P:33.015W PF:0.9356 Freq:49.99Hz Lamp Flux:3569.91x1 lm |            |                  |
| NAME: TH41-BKTC40C023P                                                           | TYPE:      | WEIGHT:          |
| SPEC.: white RA90 3000K+5700K                                                    | DIM.:      | SERIAL No.:      |
| MFR.:                                                                            | SUR.: 77mm | Shielding Angle: |

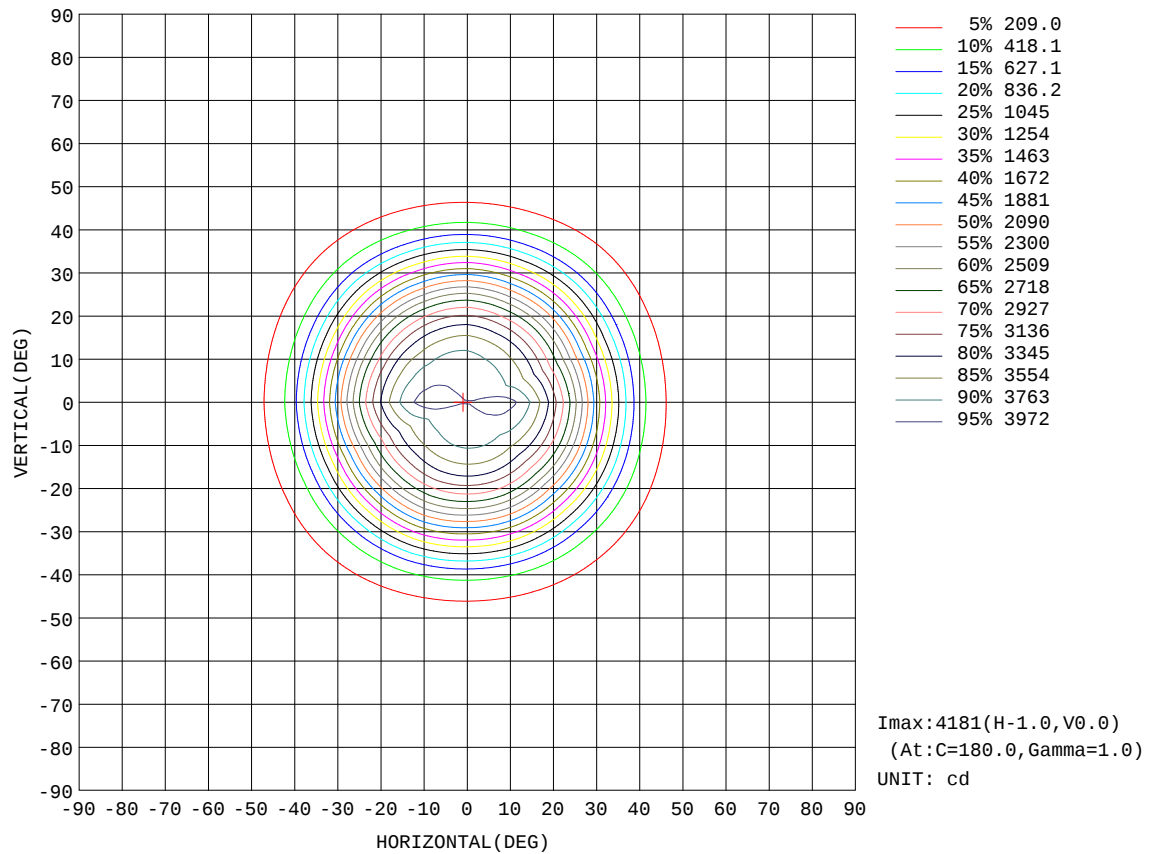
| REFLECTANCE                      |                                                     |     |           |     |     |     |     |               |     |        |
|----------------------------------|-----------------------------------------------------|-----|-----------|-----|-----|-----|-----|---------------|-----|--------|
| 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) $k(RI) \times RCR = 5$ |     |           |     |     |     |     |               |     |        |
| $k = 0.60$                       | 85                                                  | 78  | 74        | 84  | 78  | 74  | 83  | 77            | 74  | 70     |
| 0.80                             | 92                                                  | 86  | 82        | 92  | 86  | 82  | 91  | 85            | 82  | 78     |
| 1.00                             | 97                                                  | 91  | 87        | 96  | 91  | 87  | 95  | 91            | 86  | 82     |
| 1.25                             | 101                                                 | 96  | 92        | 100 | 95  | 92  | 98  | 94            | 91  | 86     |
| 1.50                             | 104                                                 | 99  | 96        | 103 | 98  | 95  | 101 | 97            | 94  | 89     |
| 2.00                             | 107                                                 | 103 | 99        | 106 | 102 | 99  | 103 | 100           | 97  | 92     |
| 2.50                             | 109                                                 | 105 | 102       | 108 | 104 | 101 | 104 | 101           | 99  | 93     |
| 3.00                             | 111                                                 | 107 | 104       | 109 | 106 | 103 | 106 | 103           | 101 | 94     |
| 4.00                             | 113                                                 | 110 | 108       | 111 | 108 | 106 | 107 | 105           | 104 | 96     |
| 5.00                             | 114                                                 | 112 | 110       | 112 | 110 | 108 | 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: 22.5DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2024-06-22

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
Humidity:65.0%  
Test Distance:7.450m [K=1.0000]  
Remarks:

## ISOCANDELA DIAGRAM

|                                                                                  |            |                  |
|----------------------------------------------------------------------------------|------------|------------------|
| Test:U:230.17V I:0.1533A P:33.015W PF:0.9356 Freq:49.99Hz Lamp Flux:3569.91x1 lm |            |                  |
| NAME: TH41-BKTC40C023P                                                           | TYPE:      | WEIGHT:          |
| SPEC.: white RA90 3000K+5700K                                                    | DIM.:      | SERIAL No.:      |
| MFR.:                                                                            | SUR.: 77mm | Shielding Angle: |

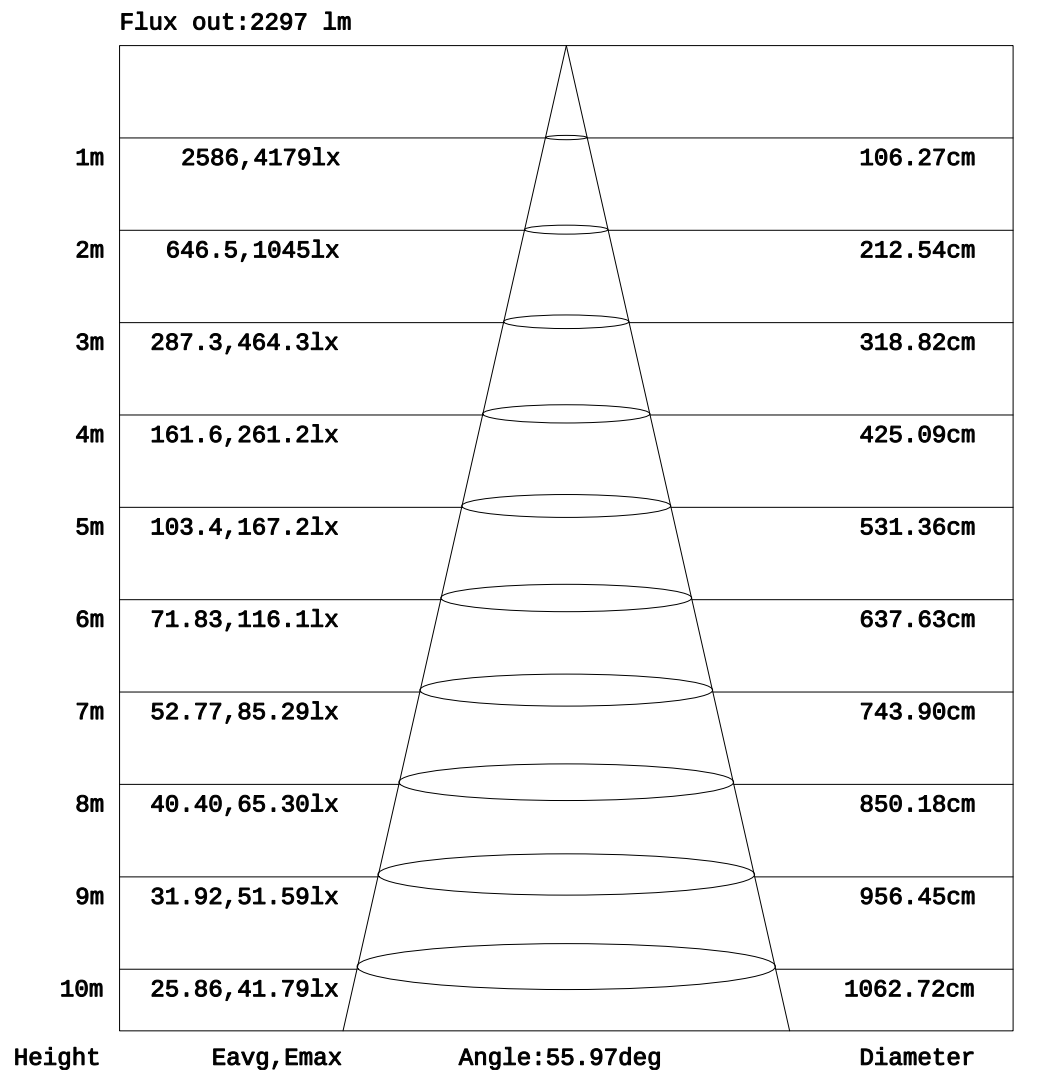


C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25DEG  
Operators:  
Test Date: 2024-06-22

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
Humidity: 65.0%  
Test Distance: 7.450m [K=1.0000]  
Remarks:

### AAI Figure

|                                                                                  |            |                  |
|----------------------------------------------------------------------------------|------------|------------------|
| Test:U:230.17V I:0.1533A P:33.015W PF:0.9356 Freq:49.99Hz Lamp Flux:3569.91x1 lm |            |                  |
| NAME: TH41-BKTC40C023P                                                           | TYPE:      | WEIGHT:          |
| SPEC.: white RA90 3000K+5700K                                                    | DIM.:      | SERIAL No.:      |
| MFR.:                                                                            | SUR.: 77mm | Shielding Angle: |



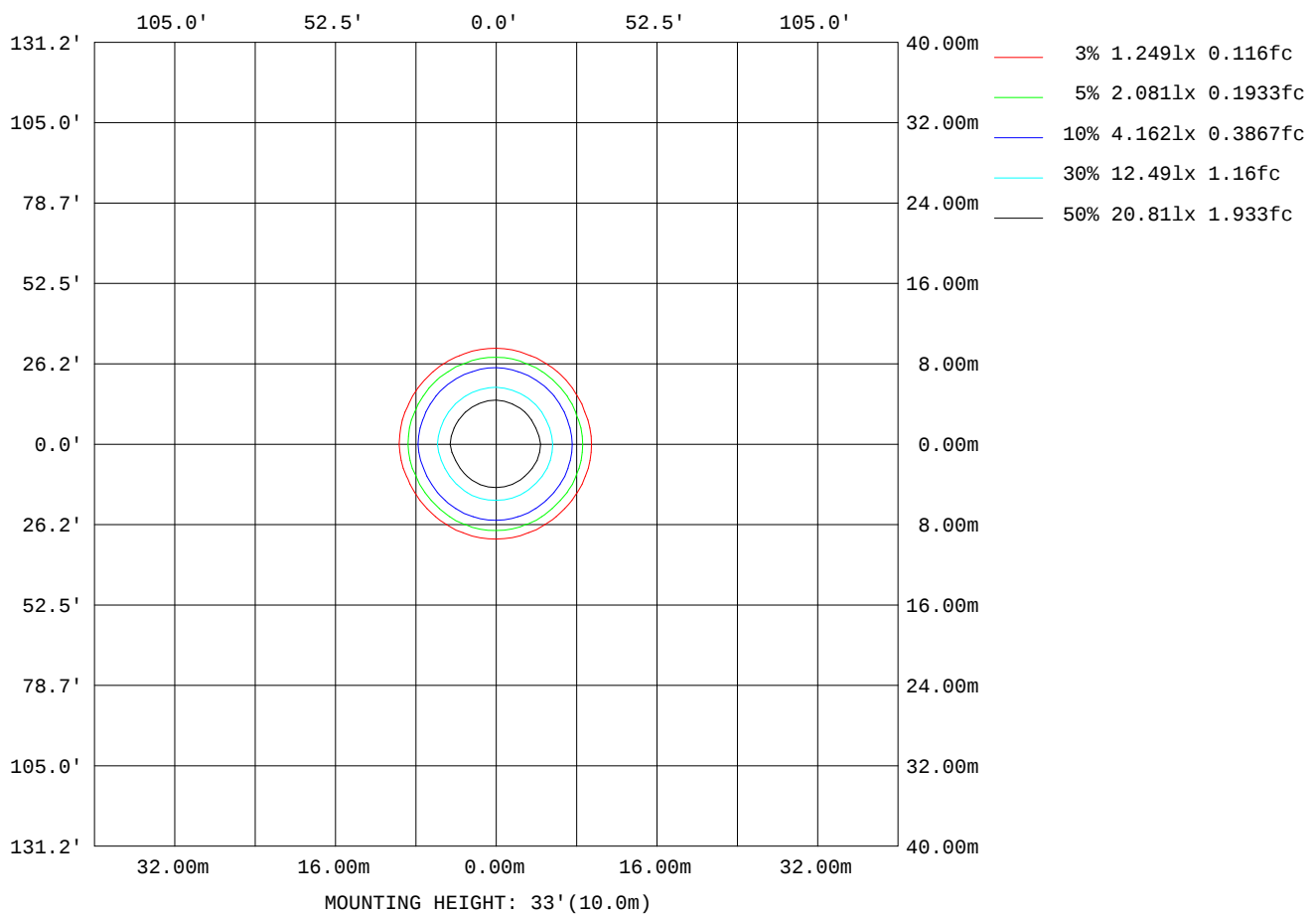
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2024-06-22

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
Humidity:65.0%  
Test Distance:7.450m [K=1.0000]  
Remarks:

### ISOLUX DIAGRAM

|                                                                                  |            |                  |
|----------------------------------------------------------------------------------|------------|------------------|
| Test:U:230.17V I:0.1533A P:33.015W PF:0.9356 Freq:49.99Hz Lamp Flux:3569.91x1 lm |            |                  |
| NAME: TH41-BKTC40C023P                                                           | TYPE:      | WEIGHT:          |
| SPEC.: white RA90 3000K+5700K                                                    | DIM.:      | SERIAL No.:      |
| MFR.:                                                                            | SUR.: 77mm | Shielding Angle: |



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2024-06-22

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
Humidity:65.0%  
Test Distance:7.450m [K=1.0000]  
Remarks:

## LED Avg.L Report

|                                                                                  |            |                  |
|----------------------------------------------------------------------------------|------------|------------------|
| Test:U:230.17V I:0.1533A P:33.015W PF:0.9356 Freq:49.99Hz Lamp Flux:3569.91x1 lm |            |                  |
| NAME: TH41-BKTC40C023P                                                           | TYPE:      | WEIGHT:          |
| SPEC.: white RA90 3000K+5700K                                                    | DIM.:      | SERIAL No.:      |
| MFR.:                                                                            | SUR.: 77mm | Shielding Angle: |

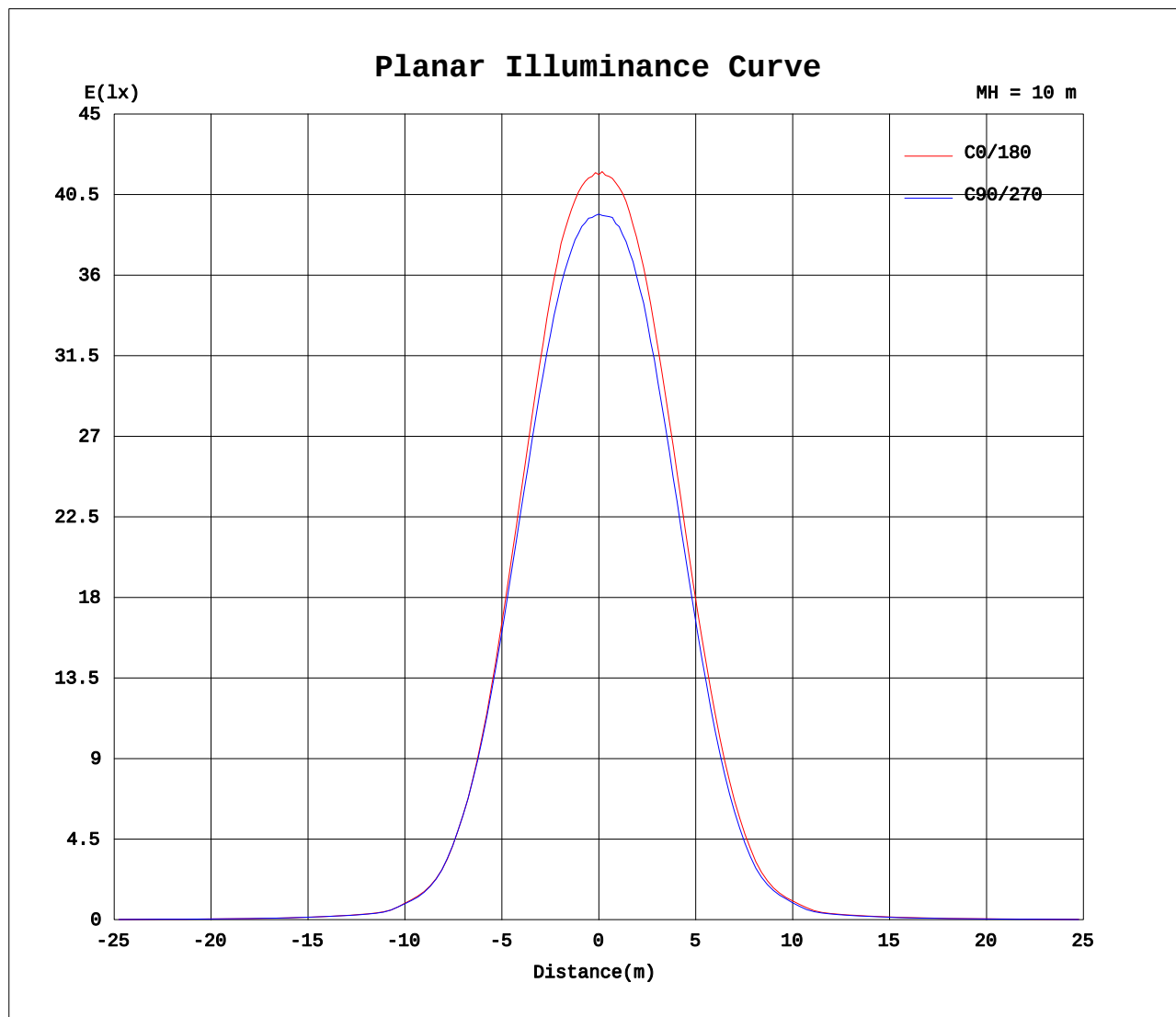
| AvgL           | cd/m2 |
|----------------|-------|
| L_0~180(65)av  | 27733 |
| L_0~180(75)av  | 24419 |
| L_0~180(85)av  | 33691 |
| L_90~270(65)av | 26449 |
| L_90~270(75)av | 23510 |
| L_90~270(85)av | 32934 |
| L_45(65)av     | 26094 |
| L_45(75)av     | 23113 |
| L_45(85)av     | 32101 |

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2024-06-22

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
Humidity:65.0%  
Test Distance:7.450m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25DEG  
Operators:  
Test Date: 2024-06-22

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
Humidity: 65.0%  
Test Distance: 7.450m [K=1.0000]  
Remarks:

```

Range: 0 - 90DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

```