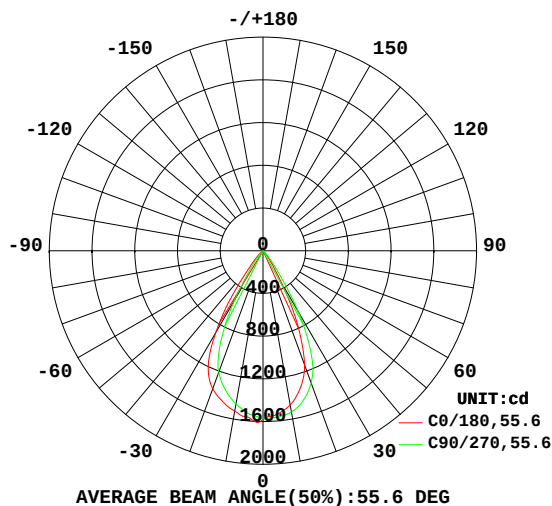


## LUMINAIRE PHOTOMETRIC TEST REPORT

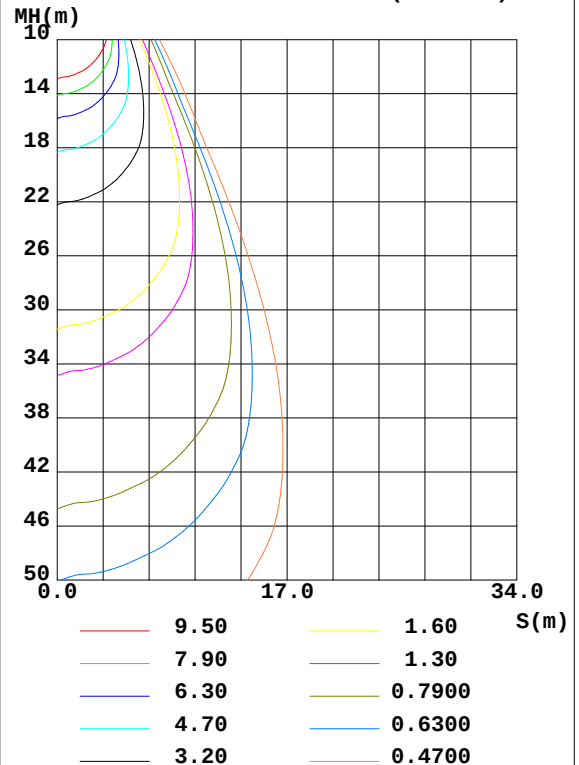
|                                                                                  |            |                  |
|----------------------------------------------------------------------------------|------------|------------------|
| Test:U:231.90V I:0.0653A P:14.702W PF:0.9711 Freq:49.99Hz Lamp Flux:1227.68x1 lm |            |                  |
| NAME: TH19-WHTC15C021P                                                           | TYPE:      | WEIGHT:          |
| SPEC.: white RA90 3000K+5700K                                                    | DIM.:      | SERIAL No.:      |
| MFR.:                                                                            | SUR.: 55mm | Shielding Angle: |

| DATA OF LAMP     |                 | PHOTOMETRIC DATA Eff: 83.51 lm/W |        |                    |           |
|------------------|-----------------|----------------------------------|--------|--------------------|-----------|
| MODEL            | TBG-1510E 4000K | I <sub>max</sub> (cd)            | 1610   | S/MH(C0/180)       | 0.91      |
| NOMINAL POWER(W) | 15              | LOR(%)                           | 100.0  | S/MH(C90/270)      | 0.79      |
| RATED VOLTAGE(V) | 220-240         | TOTAL FLUX(lm)                   | 1227.7 | η UP, DN(C0-180)   | 0.0, 50.7 |
| NOMINAL FLUX(lm) | 1227.68         | CIE CLASS                        | DIRECT | η UP, DN(C180-360) | 0.0, 49.3 |
| LAMPS INSIDE     | 1               | η up(%)                          | 0.0    | CIBSE SHR NOM      | 0.75      |
| TEST VOLTAGE(V)  | 220             | η down(%)                        | 100.0  | CIBSE SHR MAX      | 0.85      |

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:2025-07-16

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
Humidity:65.0%  
Test Distance:7.880m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

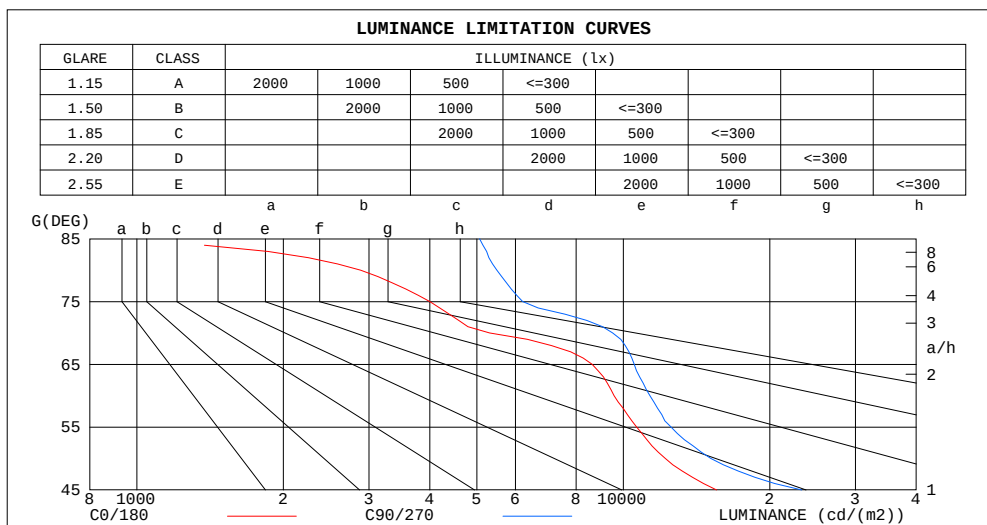
| $\gamma$ | C0                    | C45   | C90    | C135   | C180   | C225   | C270   | C315   | $\gamma$ | $\Phi$ zone | $\Phi$ total | %lum, lamp |
|----------|-----------------------|-------|--------|--------|--------|--------|--------|--------|----------|-------------|--------------|------------|
| 10       | 1467                  | 1499  | 1533   | 1542   | 1525   | 1483   | 1458   | 1447   | 0- 10    | 146.1       | 146.1        | 11.9,11.9  |
| 20       | 1139                  | 1212  | 1319   | 1381   | 1376   | 1291   | 1210   | 1142   | 10- 20   | 391.0       | 537.1        | 43.7,43.7  |
| 30       | 348.5                 | 450.4 | 668.8  | 853.1  | 889.5  | 762.2  | 531.2  | 374.3  | 20- 30   | 441.3       | 978.4        | 79.7,79.7  |
| 40       | 50.84                 | 65.57 | 106.8  | 157.2  | 173.0  | 132.3  | 84.17  | 56.12  | 30- 40   | 180.3       | 1159         | 94.4,94.4  |
| 50       | 18.65                 | 20.06 | 23.14  | 27.79  | 30.05  | 26.44  | 21.87  | 19.11  | 40- 50   | 37.74       | 1196         | 97.5,97.5  |
| 60       | 11.39                 | 12.19 | 13.49  | 14.88  | 15.48  | 14.70  | 13.05  | 11.68  | 50- 60   | 15.63       | 1212         | 98.7,98.7  |
| 70       | 4.320                 | 5.697 | 7.738  | 9.037  | 9.549  | 8.904  | 6.971  | 4.648  | 60- 70   | 10.25       | 1222         | 99.6,99.6  |
| 80       | 1.192                 | 1.560 | 2.272  | 2.925  | 3.010  | 2.496  | 1.770  | 1.238  | 70- 80   | 4.358       | 1227         | 99.9,99.9  |
| 90       | 0.0046                | 0     | 0.0367 | 0.4686 | 0.5558 | 0.2481 | 0.0092 | 0.0092 | 80- 90   | 1.040       | 1228         | 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:2025-07-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
 Humidity:65.0%  
 Test Distance:7.880m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

|                                                                                  |            |                  |
|----------------------------------------------------------------------------------|------------|------------------|
| Test:U:231.90V I:0.0653A P:14.702W PF:0.9711 Freq:49.99Hz Lamp Flux:1227.68x1 lm |            |                  |
| NAME: TH19-WHTC15C021P                                                           | TYPE:      | WEIGHT:          |
| SPEC.: white RA90 3000K+5700K                                                    | DIM.:      | SERIAL No.:      |
| MFR.:                                                                            | SUR.: 55mm | Shielding Angle: |



| LUMINANCE cd/(m2) |        |         |
|-------------------|--------|---------|
| G(DEG)            | C0/180 | C90/270 |
| 85                | 742    | 5063    |
| 80                | 2885   | 5498    |
| 75                | 4003   | 6208    |
| 70                | 5307   | 9507    |
| 65                | 8629   | 10533   |
| 60                | 9571   | 11340   |
| 55                | 10647  | 12533   |
| 50                | 12194  | 15126   |
| 45                | 15540  | 23259   |

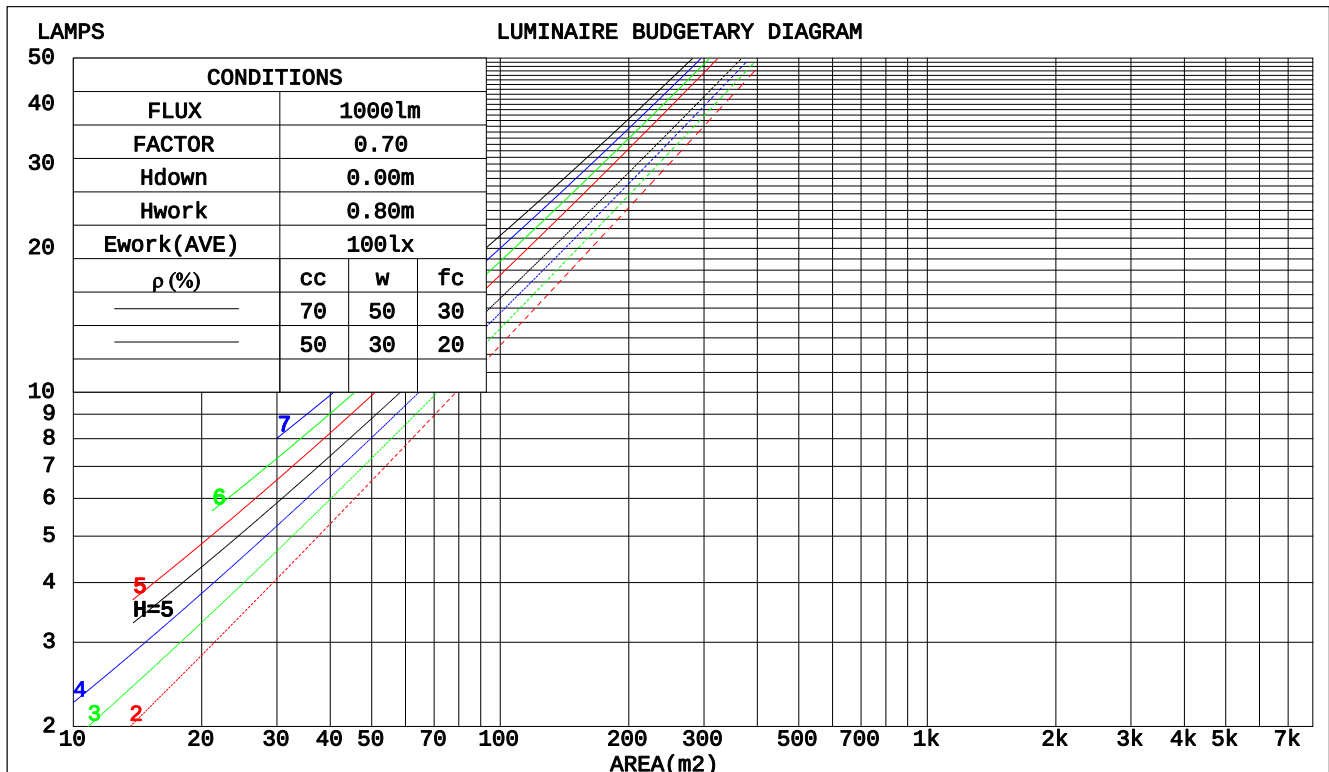
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25DEG  
Operators:  
Test Date: 2025-07-16

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
Humidity: 65.0%  
Test Distance: 7.880m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

|                                                                                  |            |                  |
|----------------------------------------------------------------------------------|------------|------------------|
| Test:U:231.90V I:0.0653A P:14.702W PF:0.9711 Freq:49.99Hz Lamp Flux:1227.68x1 lm |            |                  |
| NAME: TH19-WHTC15C021P                                                           | TYPE:      | WEIGHT:          |
| SPEC.: white RA90 3000K+5700K                                                    | DIM.:      | SERIAL No.:      |
| MFR.:                                                                            | SUR.: 55mm | 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 |      |      |      |      |      | 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         | 1.11                  | 1.09 | 1.06 | 1.09 | 1.07 | 1.05 | 1.05                            | 1.03 | 1.01 | 1.01 | .99  | .98  | .98  | .97  | .96  | .94  |
| 2.0         | 1.04                  | .99  | .96  | 1.02 | .98  | .95  | .99                             | .96  | .93  | .96  | .93  | .91  | .93  | .91  | .89  | .88  |
| 3.0         | .97                   | .92  | .88  | .96  | .91  | .88  | .93                             | .89  | .86  | .91  | .88  | .85  | .88  | .86  | .84  | .82  |
| 4.0         | .91                   | .86  | .82  | .90  | .85  | .81  | .88                             | .84  | .80  | .86  | .82  | .79  | .84  | .81  | .78  | .77  |
| 5.0         | .86                   | .80  | .76  | .85  | .80  | .76  | .83                             | .78  | .75  | .81  | .77  | .74  | .80  | .76  | .74  | .72  |
| 6.0         | .81                   | .75  | .71  | .80  | .75  | .71  | .79                             | .74  | .70  | .77  | .73  | .70  | .76  | .72  | .69  | .68  |
| 7.0         | .76                   | .71  | .67  | .76  | .70  | .66  | .74                             | .70  | .66  | .73  | .69  | .66  | .72  | .68  | .65  | .64  |
| 8.0         | .72                   | .67  | .63  | .72  | .66  | .63  | .71                             | .66  | .62  | .70  | .65  | .62  | .69  | .65  | .62  | .61  |
| 9.0         | .69                   | .63  | .59  | .68  | .63  | .59  | .67                             | .62  | .59  | .66  | .62  | .59  | .66  | .61  | .58  | .57  |
| 10.0        | .65                   | .60  | .56  | .65  | .59  | .56  | .64                             | .59  | .56  | .63  | .59  | .56  | .63  | .58  | .55  | .54  |



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25DEG  
Operators:  
Test Date: 2025-07-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 $\gamma$  Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
Humidity: 65.0%  
Test Distance: 7.880m [K=1.0000]  
Remarks:

### WEC AND CCEC

|                                                                                  |  |  |            |  |                  |
|----------------------------------------------------------------------------------|--|--|------------|--|------------------|
| Test:U:231.90V I:0.0653A P:14.702W PF:0.9711 Freq:49.99Hz Lamp Flux:1227.68x1 lm |  |  |            |  |                  |
| NAME: TH19-WHTC15C021P                                                           |  |  | TYPE:      |  | WEIGHT:          |
| SPEC.: white RA90 3000K+5700K                                                    |  |  | DIM.:      |  | SERIAL No.:      |
| MFR.:                                                                            |  |  | SUR.: 55mm |  | 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         | .174                  | .099 | .031 | .167 | .095 | .030 | .155                            | .089 | .028 | .143 | .083 | .026 | .132 | .077 | .025 |   |
| 2.0         | .166                  | .091 | .028 | .160 | .088 | .027 | .149                            | .083 | .026 | .140 | .078 | .025 | .131 | .074 | .023 |   |
| 3.0         | .157                  | .084 | .025 | .152 | .082 | .025 | .143                            | .078 | .024 | .135 | .074 | .023 | .127 | .070 | .022 |   |
| 4.0         | .149                  | .077 | .023 | .145 | .076 | .022 | .137                            | .073 | .022 | .130 | .070 | .021 | .123 | .067 | .020 |   |
| 5.0         | .142                  | .072 | .021 | .138 | .071 | .021 | .132                            | .068 | .020 | .125 | .066 | .020 | .119 | .064 | .019 |   |
| 6.0         | .135                  | .068 | .019 | .132 | .067 | .019 | .126                            | .065 | .019 | .121 | .063 | .018 | .116 | .061 | .018 |   |
| 7.0         | .129                  | .064 | .018 | .126 | .063 | .018 | .121                            | .061 | .018 | .116 | .060 | .017 | .112 | .058 | .017 |   |
| 8.0         | .124                  | .060 | .017 | .121 | .060 | .017 | .117                            | .058 | .017 | .112 | .057 | .016 | .108 | .055 | .016 |   |
| 9.0         | .118                  | .057 | .016 | .116 | .057 | .016 | .112                            | .055 | .016 | .108 | .054 | .016 | .105 | .053 | .015 |   |
| 10.0        | .114                  | .055 | .015 | .112 | .054 | .015 | .108                            | .053 | .015 | .104 | .052 | .015 | .101 | .051 | .015 |   |

| 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             | .190                  | .190 | .190 | .163 | .163 | .163 | .111                                       | .111 | .111 | .064 | .064 | .064 | .020 | .020 | .020 |   |
| 1.0             | .171                  | .157 | .145 | .146 | .135 | .125 | .100                                       | .093 | .086 | .058 | .054 | .050 | .018 | .017 | .016 |   |
| 2.0             | .155                  | .133 | .113 | .133 | .114 | .098 | .091                                       | .079 | .068 | .053 | .046 | .040 | .017 | .015 | .013 |   |
| 3.0             | .143                  | .114 | .090 | .122 | .098 | .078 | .084                                       | .068 | .055 | .049 | .040 | .032 | .016 | .013 | .011 |   |
| 4.0             | .132                  | .099 | .073 | .113 | .085 | .064 | .078                                       | .059 | .045 | .045 | .035 | .027 | .015 | .011 | .009 |   |
| 5.0             | .123                  | .087 | .060 | .106 | .075 | .052 | .073                                       | .053 | .037 | .042 | .031 | .022 | .014 | .010 | .007 |   |
| 6.0             | .116                  | .078 | .050 | .099 | .067 | .044 | .069                                       | .047 | .031 | .040 | .028 | .018 | .013 | .009 | .006 |   |
| 7.0             | .109                  | .070 | .043 | .094 | .061 | .037 | .065                                       | .043 | .026 | .038 | .025 | .016 | .012 | .008 | .005 |   |
| 8.0             | .103                  | .064 | .037 | .089 | .055 | .032 | .062                                       | .039 | .023 | .036 | .023 | .013 | .012 | .008 | .004 |   |
| 9.0             | .098                  | .059 | .032 | .085 | .051 | .028 | .059                                       | .036 | .020 | .034 | .021 | .012 | .011 | .007 | .004 |   |
| 10.0            | .094                  | .054 | .028 | .081 | .047 | .024 | .056                                       | .033 | .017 | .033 | .020 | .010 | .011 | .006 | .003 |   |

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2025-07-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
Humidity:65.0%  
Test Distance:7.880m [K=1.0000]  
Remarks:

### UGR(Unified Glare Rating) Table

|                                                                                  |               |                  |      |      |            |               |                |                  |      |      |      |
|----------------------------------------------------------------------------------|---------------|------------------|------|------|------------|---------------|----------------|------------------|------|------|------|
| Test:U:231.90V I:0.0653A P:14.702W PF:0.9711 Freq:49.99Hz Lamp Flux:1227.68x1 lm |               |                  |      |      |            |               |                |                  |      |      |      |
| NAME: TH19-WHTC15C021P                                                           |               |                  |      |      | TYPE:      |               |                | WEIGHT:          |      |      |      |
| SPEC.: white RA90 3000K+5700K                                                    |               |                  |      |      | DIM.:      |               |                | SERIAL No.:      |      |      |      |
| MFR.:                                                                            |               |                  |      |      | 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                                                                    |               | 15.4             | 16.3 | 15.6 | 16.5       | 16.6          | 18.4           | 19.3             | 18.6 | 19.5 | 19.7 |
|                                                                                  | 3H            | 15.5             | 16.4 | 15.8 | 16.6       | 16.8          | 18.5           | 19.3             | 18.7 | 19.5 | 19.7 |
|                                                                                  | 4H            | 15.5             | 16.3 | 15.8 | 16.5       | 16.8          | 18.5           | 19.3             | 18.8 | 19.5 | 19.7 |
|                                                                                  | 6H            | 15.5             | 16.2 | 15.8 | 16.5       | 16.7          | 18.5           | 19.2             | 18.7 | 19.4 | 19.7 |
|                                                                                  | 8H            | 15.5             | 16.2 | 15.8 | 16.4       | 16.7          | 18.4           | 19.1             | 18.7 | 19.4 | 19.7 |
|                                                                                  | 12H           | 15.4             | 16.1 | 15.7 | 16.4       | 16.6          | 18.4           | 19.1             | 18.7 | 19.4 | 19.6 |
| 4H                                                                               | 2H            | 15.4             | 16.2 | 15.7 | 16.4       | 16.6          | 18.3           | 19.1             | 18.5 | 19.3 | 19.5 |
|                                                                                  | 3H            | 15.6             | 16.3 | 16.0 | 16.6       | 16.9          | 18.4           | 19.1             | 18.7 | 19.4 | 19.6 |
|                                                                                  | 4H            | 15.7             | 16.3 | 16.0 | 16.6       | 16.9          | 18.4           | 19.0             | 18.8 | 19.3 | 19.6 |
|                                                                                  | 6H            | 15.6             | 16.2 | 16.0 | 16.5       | 16.9          | 18.4           | 19.0             | 18.8 | 19.3 | 19.6 |
|                                                                                  | 8H            | 15.6             | 16.1 | 16.0 | 16.5       | 16.8          | 18.4           | 18.9             | 18.8 | 19.3 | 19.6 |
|                                                                                  | 12H           | 15.6             | 16.0 | 16.0 | 16.4       | 16.8          | 18.4           | 18.8             | 18.8 | 19.2 | 19.6 |
| 8H                                                                               | 4H            | 15.6             | 16.1 | 16.0 | 16.5       | 16.8          | 18.3           | 18.8             | 18.7 | 19.2 | 19.5 |
|                                                                                  | 6H            | 15.6             | 16.0 | 16.0 | 16.4       | 16.8          | 18.3           | 18.7             | 18.7 | 19.1 | 19.5 |
|                                                                                  | 8H            | 15.6             | 16.0 | 16.0 | 16.4       | 16.8          | 18.3           | 18.7             | 18.8 | 19.1 | 19.5 |
|                                                                                  | 12H           | 15.5             | 15.9 | 16.0 | 16.3       | 16.8          | 18.3           | 18.6             | 18.8 | 19.1 | 19.5 |
| 12H                                                                              | 4H            | 15.6             | 16.0 | 16.0 | 16.4       | 16.8          | 18.3           | 18.7             | 18.7 | 19.1 | 19.5 |
|                                                                                  | 6H            | 15.6             | 15.9 | 16.0 | 16.4       | 16.8          | 18.3           | 18.6             | 18.7 | 19.1 | 19.5 |
|                                                                                  | 8H            | 15.6             | 15.9 | 16.0 | 16.3       | 16.8          | 18.3           | 18.6             | 18.7 | 19.0 | 19.5 |
| Variations with the observer position at spacings(CIE Pub.117):                  |               |                  |      |      |            |               |                |                  |      |      |      |
| S = 1.0H                                                                         | + 2.0 / - 2.1 |                  |      |      |            | + 3.3 / - 3.1 |                |                  |      |      |      |
| 1.5H                                                                             | + 3.6 / - 1.9 |                  |      |      |            | + 5.4 / - 2.7 |                |                  |      |      |      |
| 2.0H                                                                             | + 1.0 / - 0.7 |                  |      |      |            | + 2.3 / - 1.0 |                |                  |      |      |      |

CIE Pub.117, 1228 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 0.7)  
Area: 0.00238 m2

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2025-07-16

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
Humidity:65.0%  
Test Distance:7.880m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

|                                                                                  |            |                  |
|----------------------------------------------------------------------------------|------------|------------------|
| Test:U:231.90V I:0.0653A P:14.702W PF:0.9711 Freq:49.99Hz Lamp Flux:1227.68x1 lm |            |                  |
| NAME: TH19-WHTC15C021P                                                           | TYPE:      | WEIGHT:          |
| SPEC.: white RA90 3000K+5700K                                                    | DIM.:      | SERIAL No.:      |
| MFR.:                                                                            | SUR.: 55mm | Shielding Angle: |

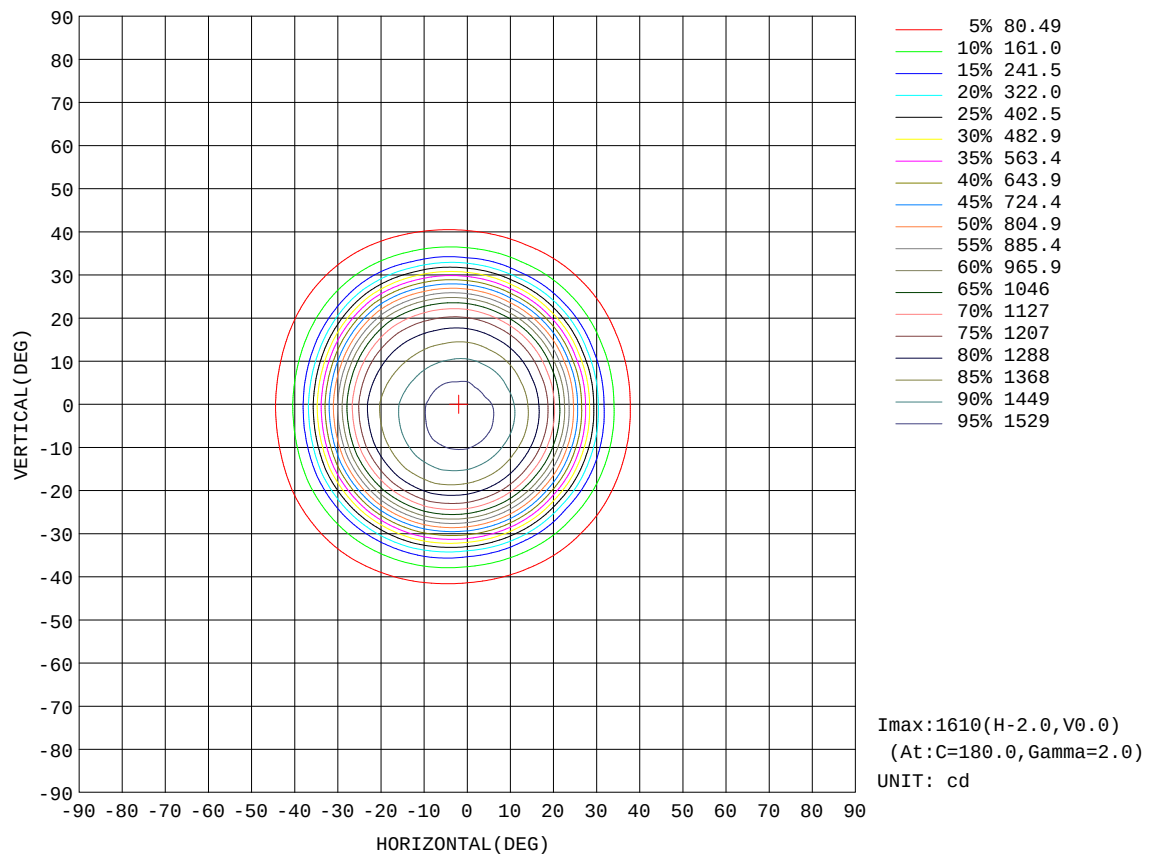
| REFLECTANCE                      |                                                     |     |           |     |     |     |     |               |     |        |
|----------------------------------|-----------------------------------------------------|-----|-----------|-----|-----|-----|-----|---------------|-----|--------|
| 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) $k(RI) \times RCR = 5$ |     |           |     |     |     |     |               |     |        |
| $k = 0.60$                       | 88                                                  | 82  | 78        | 88  | 82  | 78  | 87  | 81            | 78  | 74     |
| 0.80                             | 95                                                  | 90  | 86        | 95  | 89  | 86  | 94  | 89            | 85  | 82     |
| 1.00                             | 100                                                 | 94  | 91        | 99  | 94  | 90  | 97  | 93            | 90  | 86     |
| 1.25                             | 103                                                 | 98  | 95        | 102 | 98  | 95  | 101 | 97            | 94  | 90     |
| 1.50                             | 106                                                 | 101 | 98        | 105 | 101 | 98  | 103 | 99            | 97  | 92     |
| 2.00                             | 109                                                 | 105 | 101       | 107 | 104 | 101 | 105 | 102           | 99  | 94     |
| 2.50                             | 110                                                 | 107 | 104       | 109 | 105 | 103 | 106 | 103           | 101 | 95     |
| 3.00                             | 112                                                 | 109 | 106       | 110 | 107 | 105 | 107 | 104           | 103 | 96     |
| 4.00                             | 114                                                 | 111 | 109       | 112 | 110 | 108 | 108 | 106           | 105 | 98     |
| 5.00                             | 115                                                 | 113 | 111       | 113 | 111 | 110 | 109 | 108           | 106 | 99     |
| 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:2025-07-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
Humidity:65.0%  
Test Distance:7.880m [K=1.0000]  
Remarks:

# ISOCANDELA DIAGRAM

|                                                                                  |            |                  |
|----------------------------------------------------------------------------------|------------|------------------|
| Test:U:231.90V I:0.0653A P:14.702W PF:0.9711 Freq:49.99Hz Lamp Flux:1227.68x1 lm |            |                  |
| NAME: TH19-WHTC15C021P                                                           | TYPE:      | WEIGHT:          |
| SPEC.: white RA90 3000K+5700K                                                    | DIM.:      | SERIAL No.:      |
| MFR.:                                                                            | SUR.: 55mm | Shielding Angle: |



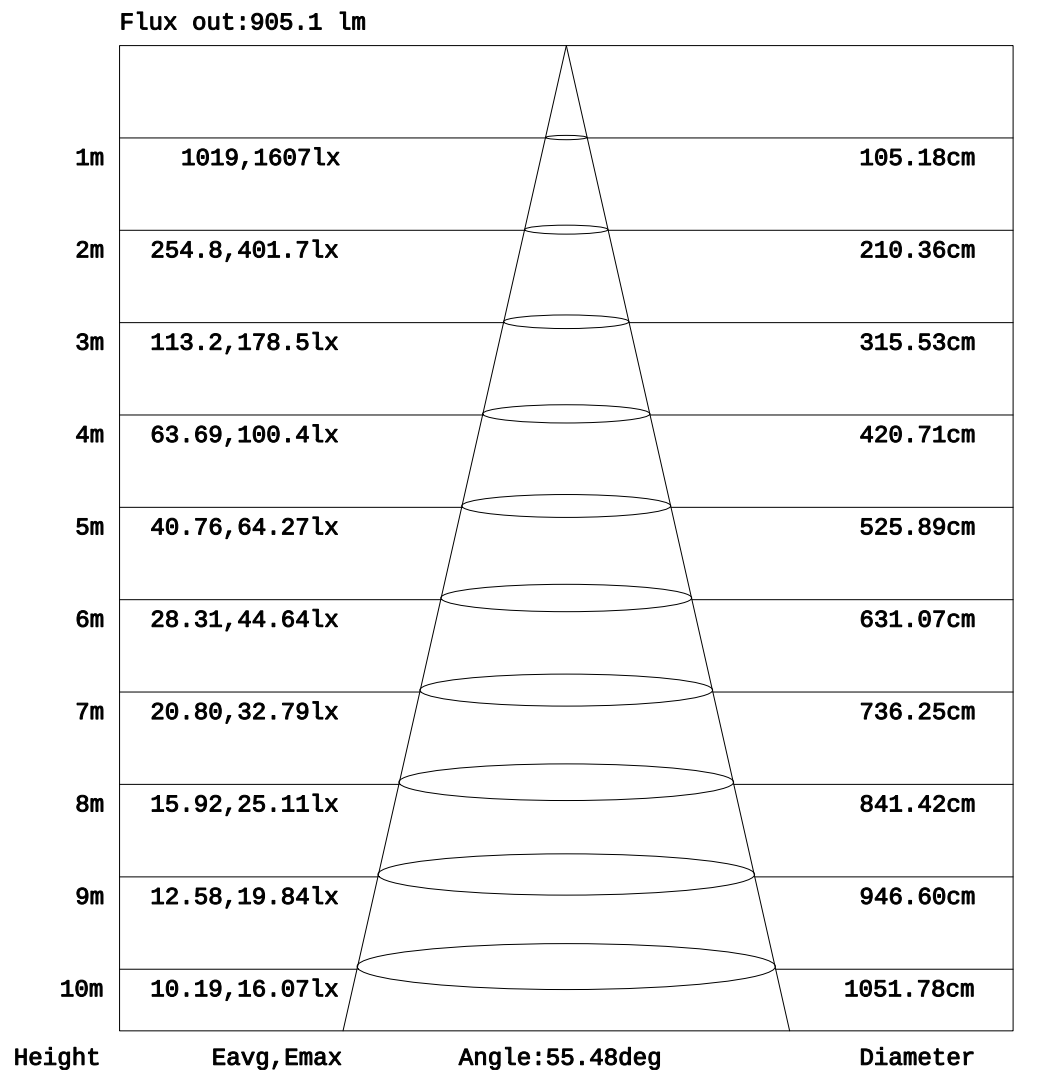
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2025-07-16

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
Humidity:65.0%  
Test Distance:7.880m [K=1.0000]  
Remarks:



### AAI Figure

|                                                                                  |            |                  |
|----------------------------------------------------------------------------------|------------|------------------|
| Test:U:231.90V I:0.0653A P:14.702W PF:0.9711 Freq:49.99Hz Lamp Flux:1227.68x1 lm |            |                  |
| NAME: TH19-WHTC15C021P                                                           | TYPE:      | WEIGHT:          |
| SPEC.: white RA90 3000K+5700K                                                    | DIM.:      | SERIAL No.:      |
| MFR.:                                                                            | SUR.: 55mm | Shielding Angle: |



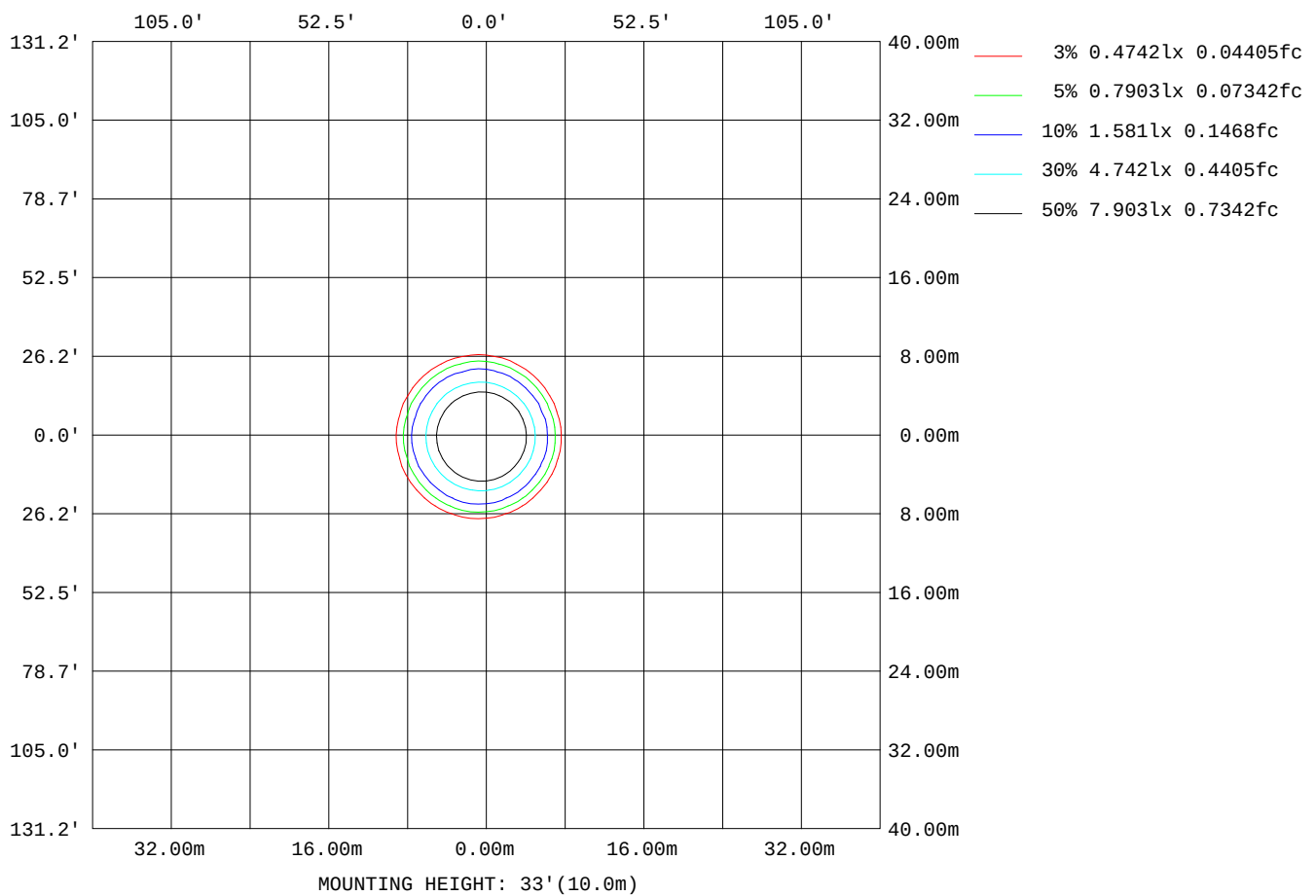
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2025-07-16

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
Humidity:65.0%  
Test Distance:7.880m [K=1.0000]  
Remarks:

# ISOLUX DIAGRAM

|                                                                                  |            |                  |
|----------------------------------------------------------------------------------|------------|------------------|
| Test:U:231.90V I:0.0653A P:14.702W PF:0.9711 Freq:49.99Hz Lamp Flux:1227.68x1 lm |            |                  |
| NAME: TH19-WHTC15C021P                                                           | TYPE:      | WEIGHT:          |
| SPEC.: white RA90 3000K+5700K                                                    | DIM.:      | SERIAL No.:      |
| MFR.:                                                                            | SUR.: 55mm | Shielding Angle: |



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2025-07-16

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
Humidity:65.0%  
Test Distance:7.880m [K=1.0000]  
Remarks:

### LED Avg.L Report

|                                                                                  |            |                  |
|----------------------------------------------------------------------------------|------------|------------------|
| Test:U:231.90V I:0.0653A P:14.702W PF:0.9711 Freq:49.99Hz Lamp Flux:1227.68x1 lm |            |                  |
| NAME: TH19-WHTC15C021P                                                           | TYPE:      | WEIGHT:          |
| SPEC.: white RA90 3000K+5700K                                                    | DIM.:      | SERIAL No.:      |
| MFR.:                                                                            | SUR.: 55mm | Shielding Angle: |

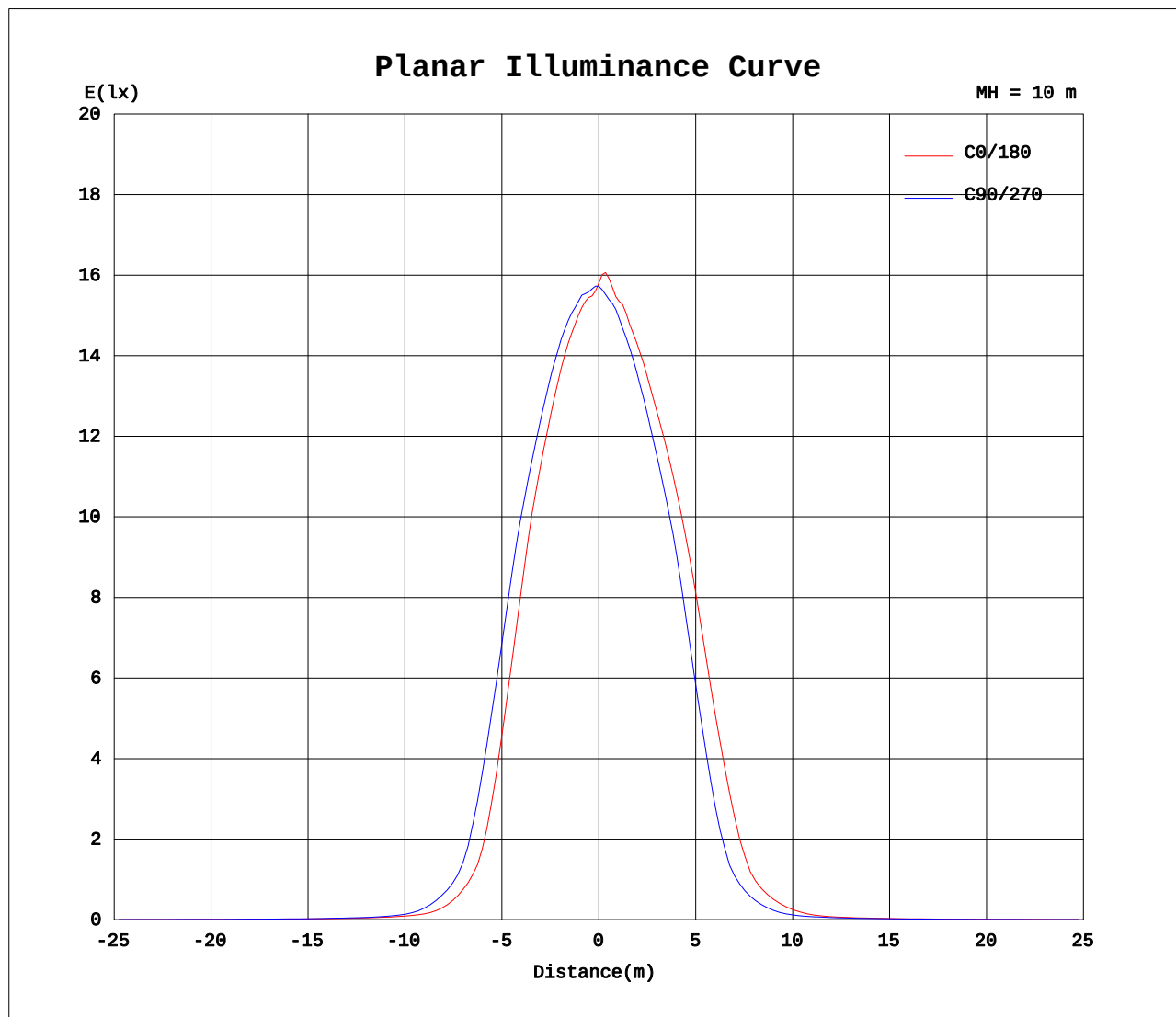
| AvgL           | cd/m2 |
|----------------|-------|
| L_0~180(65)av  | 10413 |
| L_0~180(75)av  | 7002  |
| L_0~180(85)av  | 4284  |
| L_90~270(65)av | 10386 |
| L_90~270(75)av | 5674  |
| L_90~270(85)av | 4109  |
| L_45(65)av     | 10346 |
| L_45(75)av     | 6349  |
| L_45(85)av     | 4186  |

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2025-07-16

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
Humidity:65.0%  
Test Distance:7.880m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25DEG  
 Operators:  
 Test Date: 2025-07-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.00.428  
 Humidity: 65.0%  
 Test Distance: 7.880m [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:7.880m [K=1.0000]
Remarks:

```