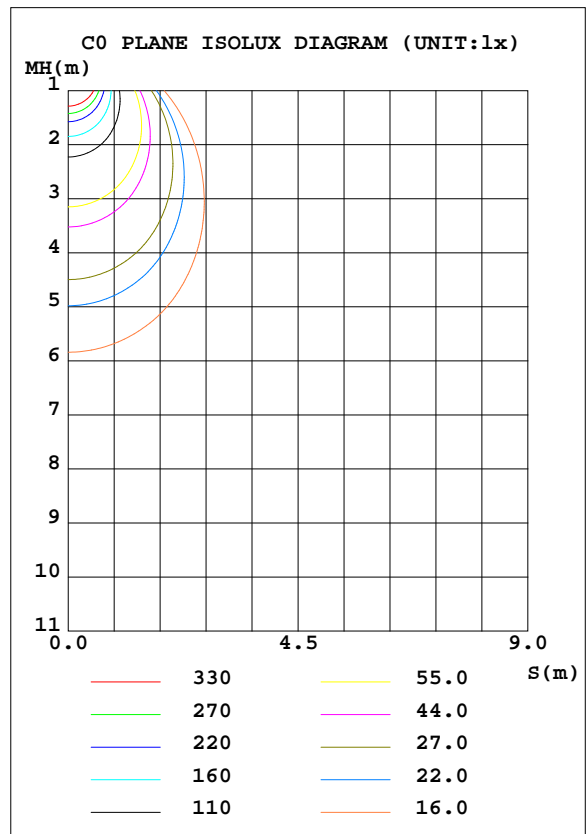
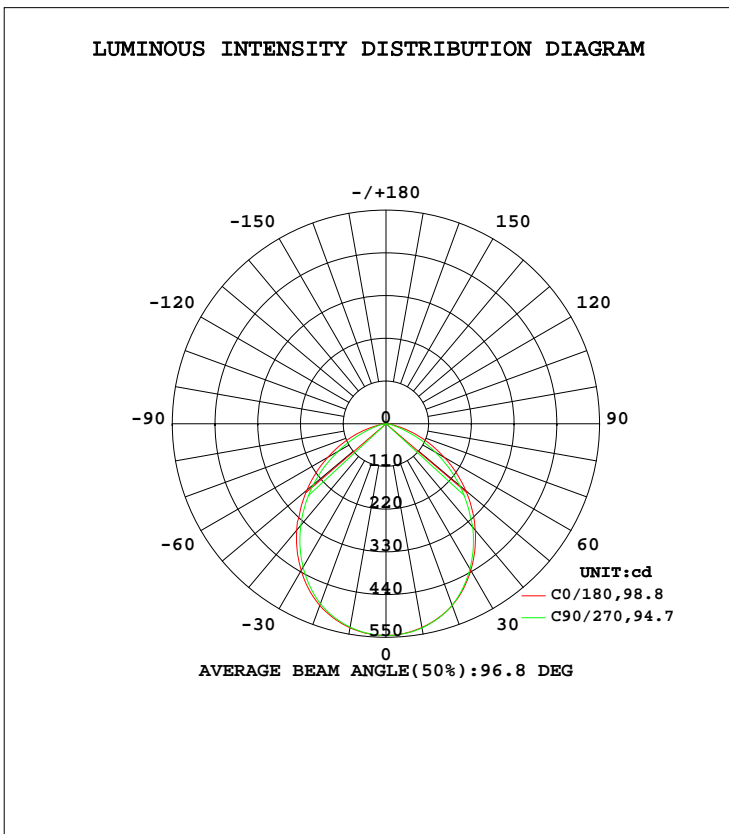


**LUMINAIRE PHOTOMETRIC TEST REPORT**

|   |             |                  |
|---|-------------|------------------|
| Test:U:230.24V I:0.0584A P:12.124W PF:0.9021 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0<br>Lamp Flux:1246.28x1 lm |             |                  |
| NAME: D12W-CC 3000K   | TYPE: 12W   | WEIGHT:          |
| SPEC.: 3000K  | DIM.:       | SERIAL No.: #1   |
| MFR.:   | SUR.: 0.016 | Shielding Angle: |

| DATA OF LAMP     |               | PHOTOMETRIC DATA Eff: 102.80 lm/W |        |                    |          |
|------------------|---------------|-----------------------------------|--------|--------------------|----------|
| MODEL            | D12W-CC 3000K | I <sub>max</sub> (cd)             | 545.1  | S/MH(C0/180)       | 1.20     |
| NOMINAL POWER(W) | 12            | LOR(%)                            | 100.0  | S/MH(C90/270)      | 1.17     |
| RATED VOLTAGE(V) | 230           | TOTAL FLUX(lm)                    | 1246.3 | η UP, DN(C0-180)   | 0.4,49.8 |
| NOMINAL FLUX(lm) | 1246.28       | CIE CLASS                         | DIRECT | η UP, DN(C180-360) | 0.4,49.4 |
| LAMPS INSIDE     | 1             | η up(%)                           | 0.8    | CIBSE SHR NOM      | 1.25     |
| TEST VOLTAGE(V)  | 230           | η down(%)                         | 99.2   | CIBSE SHR MAX      | 1.30     |



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-09-14

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
 Humidity:65.0%  
 Test Distance:8.690m [K=1.0000]  
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

| $\gamma$ | C0                    | C90    | C180   | C270   |  |  |  | $\gamma$ | $\Phi$ zone | $\Phi$ total | %lum,lamp |
|----------|-----------------------|--------|--------|--------|--|--|--|----------|-------------|--------------|-----------|
| 10       | 532.8                 | 533.8  | 533.4  | 531.8  |  |  |  | 0- 10    | 51.46       | 51.46        | 4.13,4.13 |
| 20       | 498.0                 | 497.6  | 498.2  | 493.3  |  |  |  | 10- 20   | 146.0       | 197.4        | 15.8,15.8 |
| 30       | 436.6                 | 432.0  | 436.7  | 426.9  |  |  |  | 20- 30   | 215.2       | 412.6        | 33.1,33.1 |
| 40       | 357.8                 | 347.6  | 358.0  | 341.5  |  |  |  | 30- 40   | 246.0       | 658.6        | 52.8,52.8 |
| 50       | 268.3                 | 247.9  | 266.0  | 244.2  |  |  |  | 40- 50   | 234.4       | 893.0        | 71.7,71.7 |
| 60       | 173.6                 | 147.1  | 173.4  | 142.2  |  |  |  | 50- 60   | 185.7       | 1079         | 86.6,86.6 |
| 70       | 84.13                 | 55.60  | 85.40  | 52.64  |  |  |  | 60- 70   | 111.4       | 1190         | 95.5,95.5 |
| 80       | 19.90                 | 12.60  | 19.21  | 11.62  |  |  |  | 70- 80   | 39.83       | 1230         | 98.7,98.7 |
| 90       | 0.2861                | 0.1618 | 0.1781 | 0.1366 |  |  |  | 80- 90   | 6.441       | 1236         | 99.2,99.2 |
| 100      | 0.4892                | 0.4297 | 0.4674 | 0.3122 |  |  |  | 90-100   | 0.3112      | 1237         | 99.2,99.2 |
| 110      | 0.9451                | 0.8814 | 0.9011 | 0.7576 |  |  |  | 100-110  | 0.6721      | 1237         | 99.3,99.3 |
| 120      | 1.490                 | 1.416  | 1.424  | 1.282  |  |  |  | 110-120  | 1.117       | 1238         | 99.4,99.4 |
| 130      | 2.091                 | 2.002  | 1.964  | 1.828  |  |  |  | 120-130  | 1.504       | 1240         | 99.5,99.5 |
| 140      | 2.597                 | 2.549  | 2.492  | 2.357  |  |  |  | 130-140  | 1.724       | 1242         | 99.6,99.6 |
| 150      | 3.047                 | 3.044  | 2.976  | 2.898  |  |  |  | 140-150  | 1.722       | 1243         | 99.8,99.8 |
| 160      | 3.443                 | 3.474  | 3.387  | 3.338  |  |  |  | 150-160  | 1.477       | 1245         | 99.9,99.9 |
| 170      | 3.715                 | 3.746  | 3.715  | 3.624  |  |  |  | 160-170  | 1.006       | 1246         | 100,100   |
| 180      | 3.882                 | 3.841  | 3.882  | 3.808  |  |  |  | 170-180  | 0.3600      | 1246         | 100,100   |
| DEG      | LUMINOUS INTENSITY:cd |        |        |        |  |  |  |          | UNIT:lm     |              |           |

0 - 45 DEG Zonal Flux:779.77 %lum: 62.6%

0 - 60 DEG Zonal Flux:1078.7 %lum: 86.6%

All measured values may vary less than 35 %

from the average measured value in the 0 to 130 deg. zone: 11.1%

All measured values in the 0 to 130 deg. zone

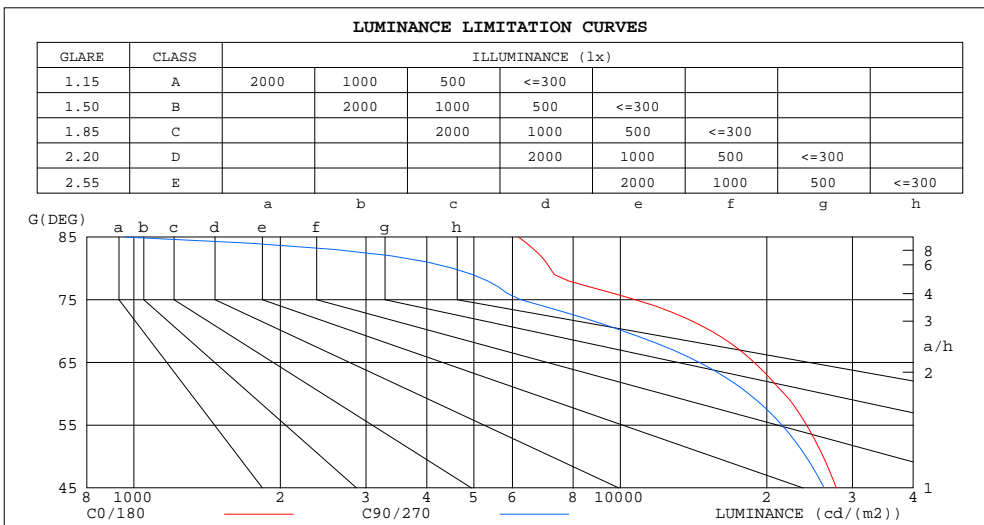
may vary less than 50% from the average value of itself: 16.0%

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-09-14

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
 Humidity:65.0%  
 Test Distance:8.690m [K=1.0000]  
 Remarks:

**LUMINANCE LIMITATION CURVES**

|   |             |                  |
|---|-------------|------------------|
| Test:U:230.24V I:0.0584A P:12.124W PF:0.9021 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0<br>Lamp Flux:1246.28x1 lm |             |                  |
| NAME: D12W-CC 3000K   | TYPE: 12W   | WEIGHT:          |
| SPEC.: 3000K  | DIM.:       | SERIAL No.: #1   |
| MFR.:   | SUR.: 0.016 | Shielding Angle: |



| LUMINANCE cd/(m2) |        |         |
|-------------------|--------|---------|
| G(DEG)            | C0/180 | C90/270 |
| 85                | 6172   | 956     |
| 80                | 7169   | 4530    |
| 75                | 10730  | 6242    |
| 70                | 15392  | 10148   |
| 65                | 18849  | 14536   |
| 60                | 21728  | 18364   |
| 55                | 24160  | 21493   |
| 50                | 26116  | 24073   |
| 45                | 27791  | 26230   |

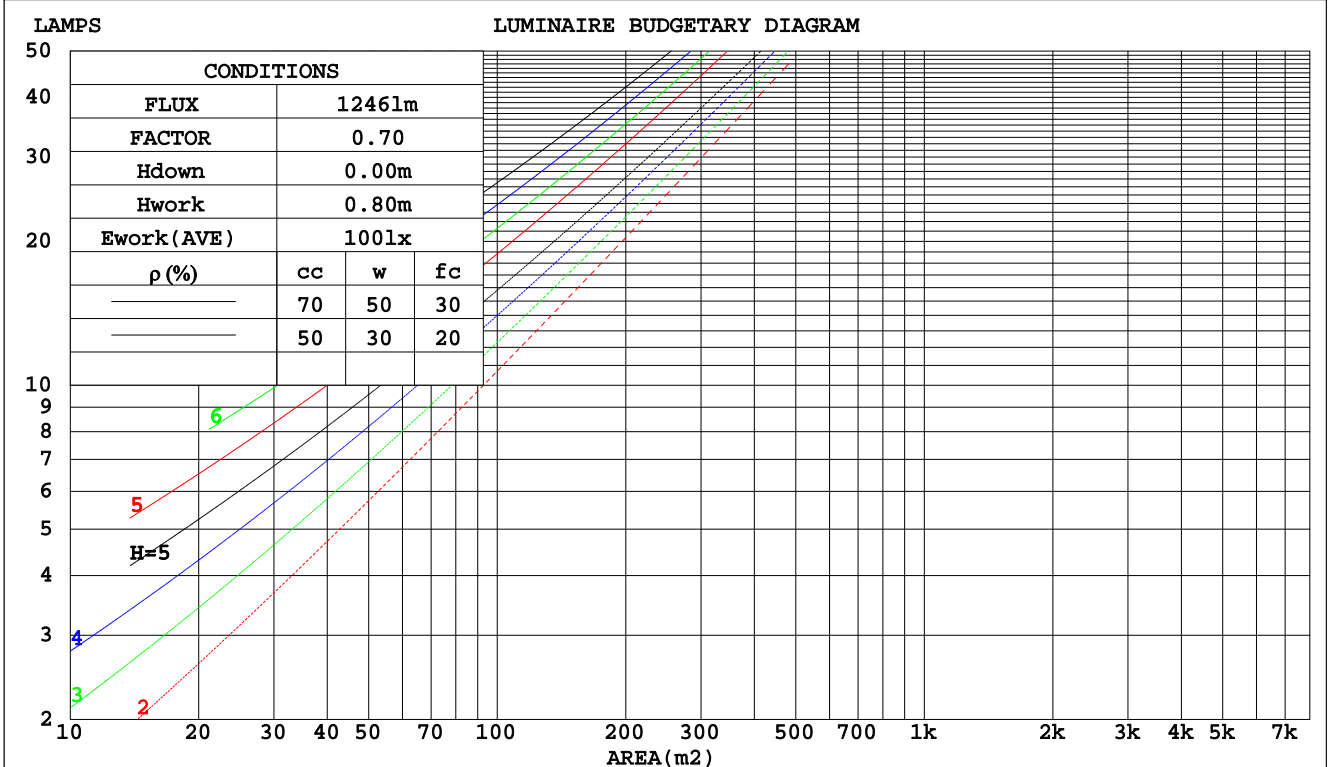
C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-09-14

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
 Humidity:65.0%  
 Test Distance:8.690m [K=1.0000]  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

|   |             |                  |
|---|-------------|------------------|
| Test:U:230.24V I:0.0584A P:12.124W PF:0.9021 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0<br>Lamp Flux:1246.28x1 lm |             |                  |
| NAME: D12W-CC 3000K   | TYPE: 12W   | WEIGHT:          |
| SPEC.: 3000K  | DIM.:       | SERIAL No.: #1   |
| MFR.:   | SUR.: 0.016 | Shielding Angle: |

| pcc  | 80%                             |      |      | 70%  |      |      | 50%  |      |      | 30%  |      |      | 10%  |      |      | 0   |
|------|---------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
|      | 50%                             | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0   |
| pw   |                                 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |     |
| pfc  | 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 | 1.01 | 1.01 | 1.01 | .99 |
| 1.0  | 1.06                            | 1.02 | .99  | 1.04 | 1.00 | .97  | .99  | .97  | .94  | .95  | .93  | .91  | .92  | .90  | .88  | .86 |
| 2.0  | .94                             | .88  | .83  | .92  | .87  | .82  | .88  | .84  | .80  | .85  | .81  | .78  | .82  | .79  | .76  | .74 |
| 3.0  | .84                             | .76  | .70  | .82  | .75  | .70  | .79  | .73  | .68  | .76  | .71  | .67  | .74  | .69  | .66  | .64 |
| 4.0  | .75                             | .67  | .61  | .73  | .66  | .60  | .71  | .64  | .59  | .68  | .63  | .58  | .66  | .61  | .57  | .55 |
| 5.0  | .67                             | .59  | .53  | .66  | .58  | .52  | .64  | .57  | .52  | .62  | .56  | .51  | .60  | .55  | .51  | .49 |
| 6.0  | .61                             | .53  | .46  | .60  | .52  | .46  | .58  | .51  | .46  | .56  | .50  | .45  | .55  | .49  | .45  | .43 |
| 7.0  | .55                             | .47  | .41  | .55  | .47  | .41  | .53  | .46  | .41  | .52  | .45  | .41  | .50  | .45  | .40  | .38 |
| 8.0  | .51                             | .43  | .37  | .50  | .42  | .37  | .49  | .42  | .37  | .47  | .41  | .37  | .46  | .41  | .36  | .34 |
| 9.0  | .47                             | .39  | .34  | .46  | .39  | .34  | .45  | .38  | .33  | .44  | .38  | .33  | .43  | .37  | .33  | .31 |
| 10.0 | .43                             | .36  | .31  | .43  | .35  | .31  | .42  | .35  | .30  | .41  | .35  | .30  | .40  | .34  | .30  | .28 |



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2021-09-14

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
 Humidity: 65.0%  
 Test Distance: 8.690m [K=1.0000]  
 Remarks:

WEC AND CCEC

|   |             |                  |
|---|-------------|------------------|
| Test:U:230.24V I:0.0584A P:12.124W PF:0.9021 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0<br>Lamp Flux:1246.28x1 lm |             |                  |
| NAME: D12W-CC 3000K   | TYPE: 12W   | WEIGHT:          |
| SPEC.: 3000K  | DIM.:       | SERIAL No.: #1   |
| MFR.:   | SUR.: 0.016 | Shielding Angle: |

| ρcc  | 80%                   |      |      | 70%  |      |      | 50%                             |      |      | 30%  |      |      | 10%  |      |      | 0 |
|------|-----------------------|------|------|------|------|------|---------------------------------|------|------|------|------|------|------|------|------|---|
| ρw   | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%                             | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |
| ρfc  | 20%                   |      |      | 20%  |      |      | 20%                             |      |      | 20%  |      |      | 20%  |      |      | 0 |
| RCR  | RCR:Room Cavity Ratio |      |      |      |      |      | Wall Exitance Coefficients(WEC) |      |      |      |      |      |      |      |      |   |
| 0.0  |                       |      |      |      |      |      |                                 |      |      |      |      |      |      |      |      |   |
| 1.0  | .264                  | .150 | .048 | .257 | .147 | .047 | .244                            | .140 | .045 | .231 | .133 | .043 | .220 | .127 | .041 |   |
| 2.0  | .256                  | .140 | .043 | .250 | .138 | .042 | .238                            | .132 | .041 | .227 | .127 | .040 | .217 | .123 | .039 |   |
| 3.0  | .242                  | .129 | .039 | .236 | .127 | .038 | .226                            | .122 | .037 | .216 | .119 | .036 | .207 | .115 | .036 |   |
| 4.0  | .227                  | .118 | .035 | .222 | .116 | .034 | .213                            | .113 | .034 | .204 | .110 | .033 | .196 | .107 | .032 |   |
| 5.0  | .212                  | .108 | .031 | .208 | .107 | .031 | .200                            | .104 | .031 | .192 | .101 | .030 | .185 | .099 | .030 |   |
| 6.0  | .199                  | .100 | .029 | .195 | .098 | .028 | .188                            | .096 | .028 | .181 | .094 | .028 | .174 | .092 | .027 |   |
| 7.0  | .186                  | .092 | .026 | .183 | .091 | .026 | .176                            | .089 | .026 | .170 | .087 | .025 | .165 | .085 | .025 |   |
| 8.0  | .175                  | .086 | .024 | .172 | .085 | .024 | .166                            | .083 | .024 | .161 | .081 | .023 | .156 | .080 | .023 |   |
| 9.0  | .165                  | .080 | .022 | .162 | .079 | .022 | .157                            | .078 | .022 | .152 | .076 | .022 | .147 | .075 | .022 |   |
| 10.0 | .156                  | .075 | .021 | .154 | .074 | .021 | .149                            | .073 | .021 | .144 | .072 | .020 | .140 | .070 | .020 |   |

| ρcc  | 80%                   |      |      | 70%  |      |      | 50%  |      |      | 30%  |      |      | 10%  |      |      | 0 |
|------|-----------------------|------|------|------|------|------|--|------|------|------|------|------|------|------|------|---|
| ρw   | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |
| ρfc  | 20%                   |      |      | 20%  |      |      | 20%  |      |      | 20%  |      |      | 20%  |      |      | 0 |
| RCR  | RCR:Room Cavity Ratio |      |      |      |      |      | Ceiling Cavity Exitance Coefficients(CCEC) |      |      |      |      |      |      |      |      |   |
| 0.0  | .197                  | .197 | .197 | .168 | .168 | .168 | .115                                       | .115 | .115 | .066 | .066 | .066 | .021 | .021 | .021 |   |
| 1.0  | .183                  | .163 | .144 | .157 | .140 | .124 | .107                                       | .096 | .086 | .062 | .056 | .050 | .020 | .018 | .016 |   |
| 2.0  | .174                  | .138 | .108 | .149 | .119 | .094 | .102                                       | .082 | .065 | .059 | .048 | .038 | .019 | .015 | .012 |   |
| 3.0  | .165                  | .120 | .084 | .142 | .104 | .073 | .097                                       | .072 | .051 | .056 | .042 | .030 | .018 | .014 | .010 |   |
| 4.0  | .158                  | .107 | .068 | .135 | .092 | .059 | .093                                       | .064 | .042 | .054 | .038 | .025 | .017 | .012 | .008 |   |
| 5.0  | .150                  | .096 | .056 | .129 | .083 | .049 | .089                                       | .058 | .034 | .052 | .034 | .020 | .017 | .011 | .007 |   |
| 6.0  | .143                  | .088 | .048 | .123 | .076 | .041 | .085                                       | .053 | .029 | .049 | .031 | .017 | .016 | .010 | .006 |   |
| 7.0  | .137                  | .081 | .041 | .118 | .070 | .036 | .081                                       | .049 | .025 | .047 | .029 | .015 | .015 | .009 | .005 |   |
| 8.0  | .131                  | .075 | .036 | .113 | .065 | .032 | .078                                       | .046 | .022 | .045 | .027 | .013 | .015 | .009 | .004 |   |
| 9.0  | .125                  | .070 | .033 | .108 | .061 | .028 | .075                                       | .043 | .020 | .044 | .025 | .012 | .014 | .008 | .004 |   |
| 10.0 | .120                  | .066 | .030 | .103 | .057 | .026 | .072                                       | .040 | .018 | .042 | .024 | .011 | .014 | .008 | .004 |   |

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-09-14

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
 Humidity:65.0%  
 Test Distance:8.690m [K=1.0000]  
 Remarks:

UGR(Unified Glare Rating) Table

|   |             |                  |
|---|-------------|------------------|
| Test:U:230.24V I:0.0584A P:12.124W PF:0.9021 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0<br>Lamp Flux:1246.28x1 lm |             |                  |
| NAME: D12W-CC 3000K   | TYPE: 12W   | WEIGHT:          |
| SPEC.: 3000K  | DIM.:       | SERIAL No.: #1   |
| MFR.:   | SUR.: 0.016 | 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   | 22.9             | 24.3 | 23.2 | 24.5 | 24.7 | 22.4           | 23.8 | 22.7 | 24.0 | 24.2 |
| 3H  | 23.8             | 25.1 | 24.1 | 25.3 | 25.6 | 23.0           | 24.3 | 23.3 | 24.5 | 24.8 |
| 4H  | 24.0             | 25.2 | 24.3 | 25.5 | 25.7 | 23.1           | 24.3 | 23.4 | 24.5 | 24.8 |
| 6H  | 24.0             | 25.2 | 24.4 | 25.4 | 25.7 | 23.0           | 24.2 | 23.4 | 24.5 | 24.7 |
| 8H  | 24.0             | 25.1 | 24.4 | 25.4 | 25.7 | 23.0           | 24.1 | 23.4 | 24.4 | 24.7 |
| 12H   | 24.0             | 25.1 | 24.4 | 25.4 | 25.7 | 23.0           | 24.0 | 23.3 | 24.3 | 24.6 |
| 4H 2H   | 23.2             | 24.4 | 23.5 | 24.7 | 25.0 | 22.8           | 24.0 | 23.1 | 24.3 | 24.5 |
| 3H  | 24.2             | 25.3 | 24.6 | 25.6 | 25.9 | 23.5           | 24.6 | 23.9 | 24.9 | 25.2 |
| 4H  | 24.5             | 25.4 | 24.9 | 25.8 | 26.1 | 23.6           | 24.6 | 24.0 | 24.9 | 25.3 |
| 6H  | 24.6             | 25.4 | 25.0 | 25.8 | 26.2 | 23.7           | 24.5 | 24.1 | 24.9 | 25.2 |
| 8H  | 24.6             | 25.4 | 25.0 | 25.7 | 26.1 | 23.6           | 24.4 | 24.1 | 24.8 | 25.2 |
| 12H   | 24.6             | 25.3 | 25.0 | 25.7 | 26.1 | 23.6           | 24.3 | 24.0 | 24.7 | 25.1 |
| 8H 4H   | 24.5             | 25.3 | 24.9 | 25.6 | 26.0 | 23.7           | 24.4 | 24.1 | 24.8 | 25.2 |
| 6H  | 24.6             | 25.3 | 25.1 | 25.7 | 26.1 | 23.8           | 24.4 | 24.2 | 24.8 | 25.2 |
| 8H  | 24.7             | 25.2 | 25.1 | 25.7 | 26.1 | 23.8           | 24.3 | 24.2 | 24.8 | 25.2 |
| 12H   | 24.7             | 25.2 | 25.2 | 25.6 | 26.1 | 23.7           | 24.2 | 24.2 | 24.7 | 25.2 |
| 12H 4H  | 24.4             | 25.2 | 24.9 | 25.5 | 26.0 | 23.6           | 24.4 | 24.1 | 24.7 | 25.2 |
| 6H  | 24.6             | 25.2 | 25.1 | 25.6 | 26.1 | 23.7           | 24.3 | 24.2 | 24.7 | 25.2 |
| 8H  | 24.7             | 25.1 | 25.1 | 25.6 | 26.1 | 23.7           | 24.2 | 24.2 | 24.7 | 25.2 |
| Variations with the observer position at spacings(CIE Pub.117): |                  |      |      |      |      |                |      |      |      |      |
| S = 1.0H  | + 0.3 / - 0.4    |      |      |      |      | + 0.4 / - 0.6  |      |      |      |      |
| 1.5H  | + 0.2 / - 0.4    |      |      |      |      | + 0.2 / - 0.5  |      |      |      |      |
| 2.0H  | + 0.7 / - 0.7    |      |      |      |      | + 0.7 / - 0.8  |      |      |      |      |

CIE Pub.117, 1246 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 0.8)  
Area: 0.016 m2

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2021-09-14

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
Humidity:65.0%  
Test Distance:8.690m [K=1.0000]  
Remarks:

UTILIZATION FACTORS TABLE

|   |             |                  |
|---|-------------|------------------|
| Test:U:230.24V I:0.0584A P:12.124W PF:0.9021 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0<br>Lamp Flux:1246.28x1 lm |             |                  |
| NAME: D12W-CC 3000K   | TYPE: 12W   | WEIGHT:          |
| SPEC.: 3000K  | DIM.:       | SERIAL No.: #1   |
| MFR.:   | SUR.: 0.016 | Shielding Angle: |

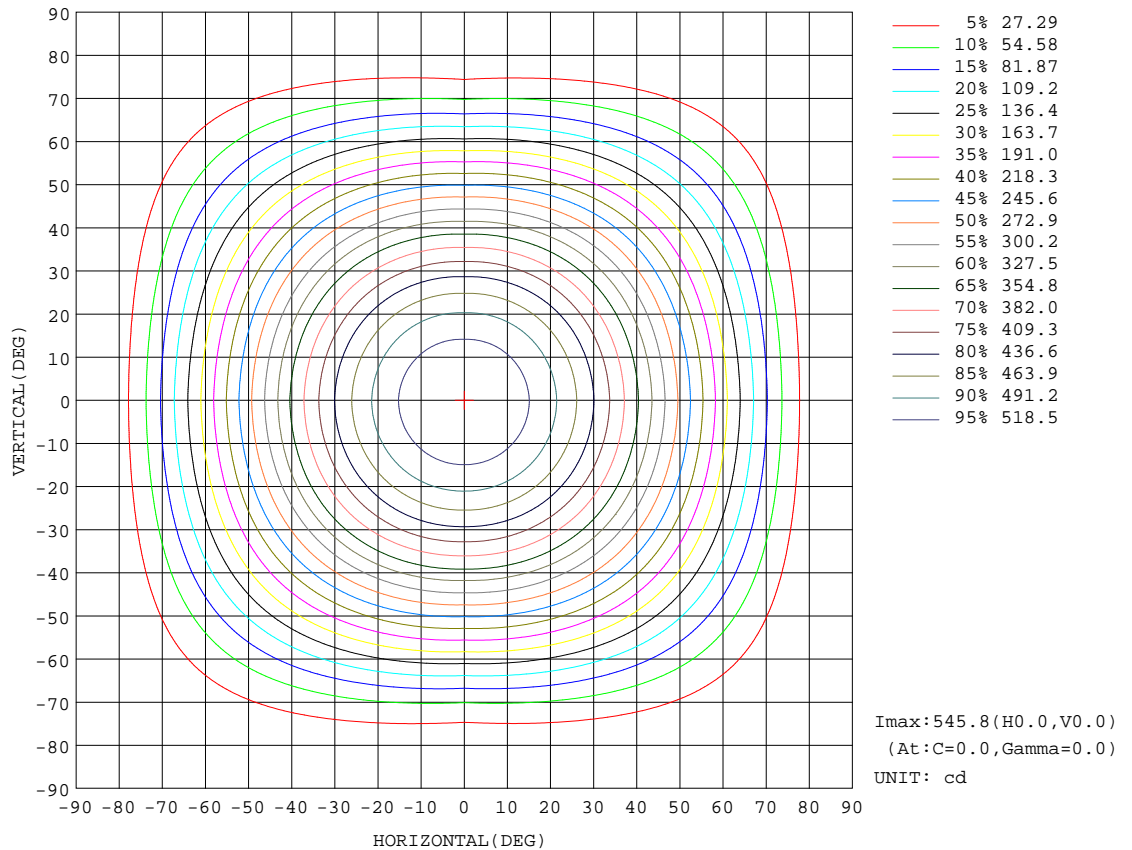
| REFLECTANCE                      |  |     |           |     |     |     |               |     |     |        |
|----------------------------------|--|-----|-----------|-----|-----|-----|---------------|-----|-----|--------|
| Ceiling                          | 0.8  | 0.8 | 0.8       | 0.7 | 0.7 | 0.7 | 0.5           | 0.5 | 0.5 | 0      |
| Walls                            | 0.7  | 0.5 | 0.3       | 0.7 | 0.5 | 0.3 | 0.7           | 0.5 | 0.3 | 0      |
| Working plane                    | 0.2  | 0.2 | 0.2       | 0.2 | 0.2 | 0.2 | 0.2           | 0.2 | 0.2 | 0      |
| ROOM INDEX                       | UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5 |     |           |     |     |     |               |     |     |        |
| k = 0.60                         | 62   | 51  | 45        | 61  | 51  | 45  | 60            | 50  | 44  | 38     |
| 0.80                             | 72   | 62  | 55        | 71  | 61  | 55  | 69            | 60  | 54  | 48     |
| 1.00                             | 81   | 71  | 64        | 79  | 70  | 64  | 77            | 71  | 63  | 57     |
| 1.25                             | 87   | 78  | 72        | 86  | 77  | 71  | 83            | 76  | 71  | 64     |
| 1.50                             | 92   | 84  | 77        | 91  | 83  | 77  | 88            | 81  | 76  | 69     |
| 2.00                             | 98   | 91  | 85        | 97  | 90  | 85  | 93            | 88  | 83  | 76     |
| 2.50                             | 102  | 95  | 90        | 100 | 94  | 89  | 96            | 91  | 87  | 79     |
| 3.00                             | 105  | 99  | 94        | 103 | 97  | 93  | 99            | 94  | 91  | 83     |
| 4.00                             | 108  | 103 | 99        | 106 | 102 | 98  | 102           | 98  | 95  | 87     |
| 5.00                             | 110  | 106 | 103       | 108 | 104 | 101 | 103           | 100 | 98  | 89     |
| ROOM INDEX                       | UF(total)                                    |     |           |     |     |     |               |     |     | Direct |
| According to DIN EN 13032-2 2004 |  |     | Suspended |     |     |     | SHRNOM = 1.25 |     |     |        |

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-09-14

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
 Humidity:65.0%  
 Test Distance:8.690m [K=1.0000]  
 Remarks:

**ISOCANDELA DIAGRAM**

|   |             |                  |
|---|-------------|------------------|
| Test:U:230.24V I:0.0584A P:12.124W PF:0.9021 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0<br>Lamp Flux:1246.28x1 lm |             |                  |
| NAME: D12W-CC 3000K   | TYPE: 12W   | WEIGHT:          |
| SPEC.: 3000K  | DIM.:       | SERIAL No.: #1   |
| MFR.:   | SUR.: 0.016 | Shielding Angle: |



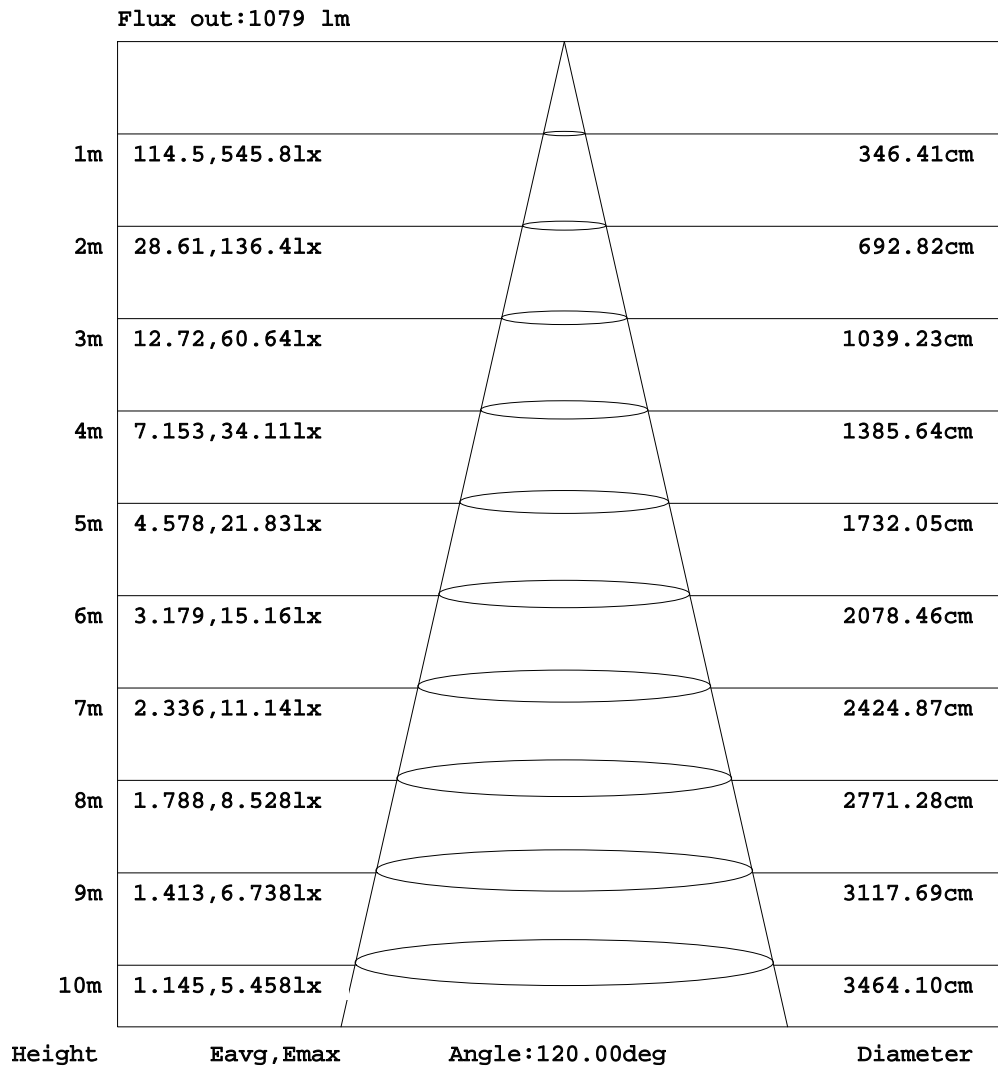
C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2021-09-14

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
 Humidity: 65.0%  
 Test Distance: 8.690m [K=1.0000]  
 Remarks:



**AAI Figure**

|   |             |                  |
|---|-------------|------------------|
| Test:U:230.24V I:0.0584A P:12.124W PF:0.9021 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0<br>Lamp Flux:1246.28x1 lm |             |                  |
| NAME: D12W-CC 3000K   | TYPE: 12W   | WEIGHT:          |
| SPEC.: 3000K  | DIM.:       | SERIAL No.: #1   |
| MFR.:   | SUR.: 0.016 | Shielding Angle: |



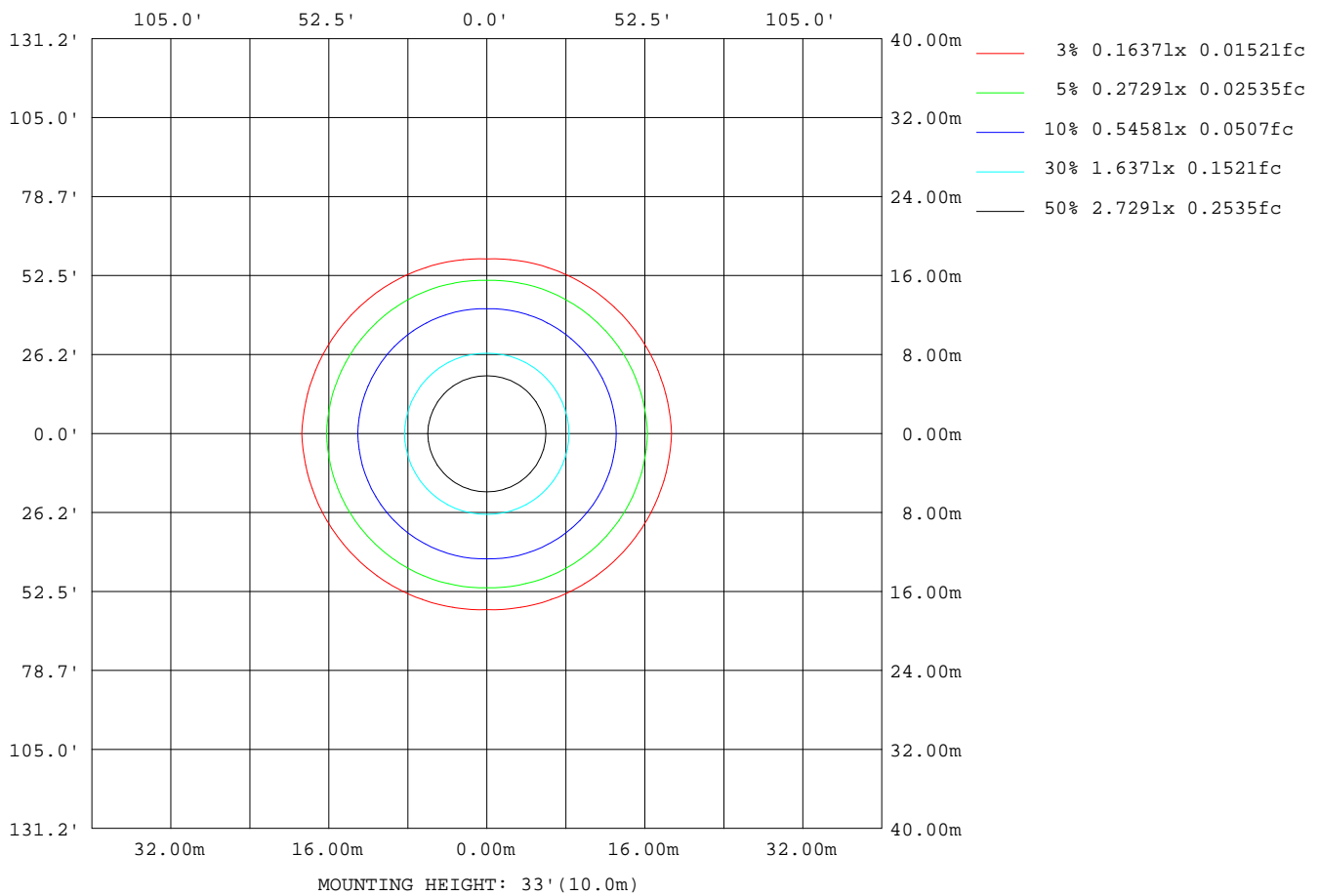
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators:  
Test Date: 2021-09-14

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
Humidity: 65.0%  
Test Distance: 8.690m [K=1.0000]  
Remarks:

**ISOLUX DIAGRAM**

|   |             |                  |
|---|-------------|------------------|
| Test:U:230.24V I:0.0584A P:12.124W PF:0.9021 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0<br>Lamp Flux:1246.28x1 lm |             |                  |
| NAME: D12W-CC 3000K   | TYPE: 12W   | WEIGHT:          |
| SPEC.: 3000K  | DIM.:       | SERIAL No.: #1   |
| MFR.:   | SUR.: 0.016 | Shielding Angle: |



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-09-14

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
 Humidity:65.0%  
 Test Distance:8.690m [K=1.0000]  
 Remarks:

LED Avg.L Report

|   |             |                  |
|---|-------------|------------------|
| Test:U:230.24V I:0.0584A P:12.124W PF:0.9021 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0<br>Lamp Flux:1246.28x1 lm |             |                  |
| NAME: D12W-CC 3000K   | TYPE: 12W   | WEIGHT:          |
| SPEC.: 3000K  | DIM.:       | SERIAL No.: #1   |
| MFR.:   | SUR.: 0.016 | Shielding Angle: |

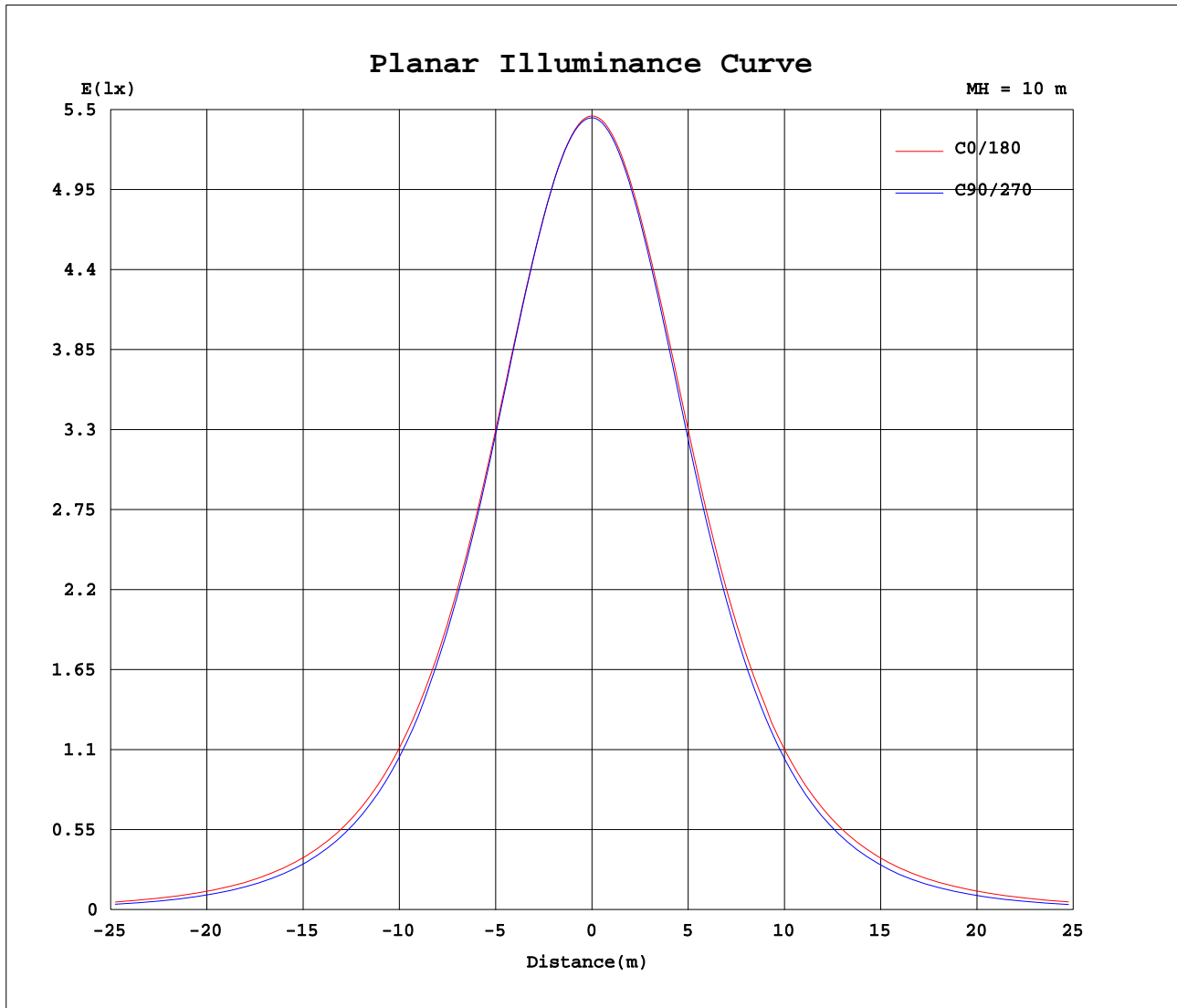
| AvgL           | cd/m2 |
|----------------|-------|
| L_0~180(65)av  | 18910 |
| L_0~180(75)av  | 10854 |
| L_0~180(85)av  | 6017  |
| L_90~270(65)av | 14256 |
| L_90~270(75)av | 6104  |
| L_90~270(85)av | 793   |
| L_45(65)av     | 16009 |
| L_45(75)av     | 7897  |
| L_45(85)av     | 2746  |

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-09-14

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
 Humidity:65.0%  
 Test Distance:8.690m [K=1.0000]  
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2021-09-14

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
 Humidity: 65.0%  
 Test Distance: 8.690m [K=1.0000]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

|   |             |                  |
|---|-------------|------------------|
| Test:U:230.24V I:0.0584A P:12.124W PF:0.9021 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0<br>Lamp Flux:1246.28x1 lm |             |                  |
| NAME: D12W-CC 3000K   | TYPE: 12W   | WEIGHT:          |
| SPEC.: 3000K  | DIM.:       | SERIAL No.: #1   |
| MFR.:   | SUR.: 0.016 | Shielding Angle: |

Table--1

UNIT: cd

| C(DEG)<br>γ (DEG) | 0    | 90   | 180  | 270  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------|------|------|------|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 0                 | 545  | 545  | 545  | 545  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5                 | 542  | 542  | 542  | 542  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10                | 533  | 534  | 533  | 532  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15                | 518  | 519  | 519  | 516  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 20                | 498  | 498  | 498  | 493  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 25                | 470  | 468  | 470  | 463  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 30                | 437  | 432  | 437  | 427  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 35                | 399  | 392  | 399  | 386  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 40                | 358  | 348  | 358  | 341  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 45                | 314  | 297  | 311  | 294  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 50                | 268  | 248  | 266  | 244  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 55                | 221  | 197  | 220  | 194  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 60                | 174  | 147  | 173  | 142  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 65                | 127  | 98.4 | 128  | 94.4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 70                | 84.1 | 55.6 | 85.4 | 52.6 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 75                | 44.4 | 25.9 | 45.5 | 24.7 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 80                | 19.9 | 12.6 | 19.2 | 11.6 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 85                | 8.60 | 1.33 | 8.19 | 0.88 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 90                | 0.29 | 0.16 | 0.18 | 0.14 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 95                | 0.31 | 0.31 | 0.30 | 0.16 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 100               | 0.49 | 0.43 | 0.47 | 0.31 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 105               | 0.70 | 0.63 | 0.67 | 0.51 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 110               | 0.95 | 0.88 | 0.90 | 0.76 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 115               | 1.22 | 1.13 | 1.15 | 0.99 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 120               | 1.49 | 1.42 | 1.42 | 1.28 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 125               | 1.78 | 1.71 | 1.70 | 1.57 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 130               | 2.09 | 2.00 | 1.96 | 1.83 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 135               | 2.35 | 2.28 | 2.23 | 2.10 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 140               | 2.60 | 2.55 | 2.49 | 2.36 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 145               | 2.81 | 2.82 | 2.75 | 2.64 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 150               | 3.05 | 3.04 | 2.98 | 2.90 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 155               | 3.25 | 3.28 | 3.19 | 3.10 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 160               | 3.44 | 3.47 | 3.39 | 3.34 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 165               | 3.60 | 3.63 | 3.56 | 3.49 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 170               | 3.72 | 3.75 | 3.72 | 3.62 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 175               | 3.81 | 3.83 | 3.83 | 3.74 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 180               | 3.88 | 3.84 | 3.88 | 3.81 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-09-14

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.446  
 Humidity:65.0%  
 Test Distance:8.690m [K=1.0000]  
 Remarks: