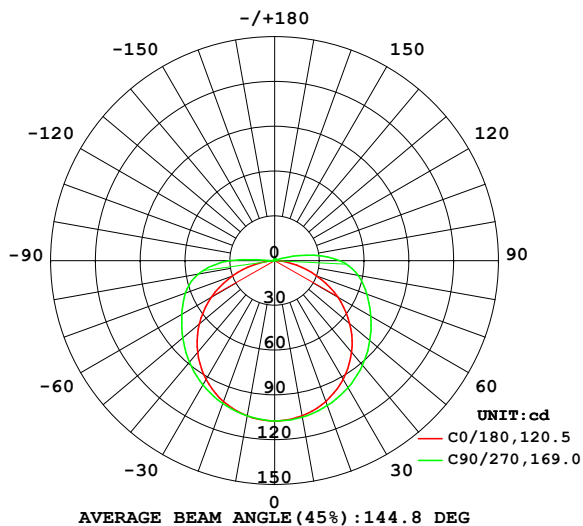


LUMINAIRE PHOTOMETRIC TEST REPORT

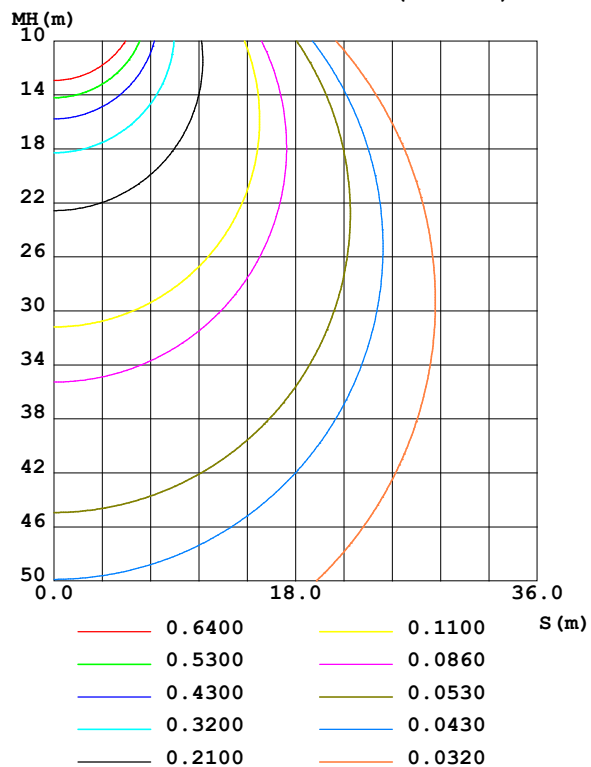
|                            |                    |                  |
|----------------------------|--------------------|------------------|
| NAME: COB 480LED 12V 3000K | TYPE: 480D COB 12V | WEIGHT:          |
| SPEC.:                     | DIM.:              | SERIAL No.:      |
| MFR.:                      | SUR.:              | Shielding Angle: |

| DATA OF LAMP     |          | PHOTOMETRIC DATA                  |        |  |           | Eff: 92.13 lm/W |
|------------------|----------|-----------------------------------|--------|--|-----------|-----------------|
| MODEL            | 3000K 5W | I <sub>max</sub> (cd)             | 107.4  | S/MH (C0/180)                              | 1.27      |                 |
| NOMINAL POWER(W) | 5        | LOR (%)                           | 100.0  | S/MH (C90/270)                             | 1.34      |                 |
| RATED VOLTAGE(V) | 12       | TOTAL FLUX(lm)                    | 417.00 | <input type="checkbox"/> UP, DN (C0-180)   | 3.4, 48.5 |                 |
| NOMINAL FLUX(lm) | 1.73751  | CIE CLASS                         | DIRECT | <input type="checkbox"/> UP, DN (C180-360) | 1.2, 46.9 |                 |
| LAMPS INSIDE     | 240      | <input type="checkbox"/> up (%)   | 4.6    | CIBSE SHR NOM                              | 1.50      |                 |
| TEST VOLTAGE(V)  | 12       | <input type="checkbox"/> down (%) | 95.4   | CIBSE SHR MAX                              | 1.55      |                 |

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators:  
Test Date: 2021-08-18

☐ Range: 0 - 180DEG  
☐ Interval: 2.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.450  
Humidity: 65.0%  
Test Distance: 5.749m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

### ZONAL FLUX DIAGRAM:

| °   | C0                    | C45    | C90    | C135   | C180   | C225   | C270   | C315   | °       | zone    | total | %lum, lamp |
|-----|-----------------------|--------|--------|--------|--------|--------|--------|--------|---------|---------|-------|------------|
| 10  | 105.6                 | 106.1  | 106.5  | 106.2  | 105.6  | 105.5  | 105.6  | 105.4  | 0- 10   | 10.18   | 10.18 | 2.44,2.44  |
| 20  | 100.4                 | 101.9  | 103.3  | 102.1  | 100.5  | 100.9  | 101.8  | 100.8  | 10- 20  | 29.37   | 39.55 | 9.48,9.48  |
| 30  | 91.82                 | 95.03  | 98.29  | 95.40  | 91.92  | 93.81  | 96.15  | 93.79  | 20- 30  | 45.35   | 84.90 | 20.4,20.4  |
| 40  | 80.17                 | 86.01  | 91.52  | 86.56  | 80.29  | 84.46  | 88.82  | 84.52  | 30- 40  | 56.47   | 141.4 | 33.9,33.9  |
| 50  | 65.71                 | 75.10  | 83.30  | 75.88  | 65.81  | 73.40  | 80.41  | 73.57  | 40- 50  | 61.71   | 203.1 | 48.7,48.7  |
| 60  | 48.79                 | 63.09  | 74.40  | 64.09  | 48.81  | 61.53  | 71.78  | 61.94  | 50- 60  | 60.94   | 264.0 | 63.3,63.3  |
| 70  | 30.09                 | 51.41  | 65.80  | 52.62  | 30.02  | 50.42  | 63.65  | 51.17  | 60- 70  | 55.16   | 319.2 | 76.5,76.5  |
| 80  | 11.74                 | 41.23  | 56.80  | 42.40  | 11.38  | 39.02  | 51.79  | 39.67  | 70- 80  | 45.96   | 365.1 | 87.6,87.6  |
| 90  | 0.1777                | 27.96  | 43.57  | 29.01  | 0.1552 | 19.79  | 30.05  | 19.89  | 80- 90  | 32.67   | 397.8 | 95.4,95.4  |
| 100 | 0.3315                | 8.019  | 22.02  | 8.921  | 0.2866 | 0.5403 | 0.7105 | 0.5510 | 90-100  | 12.49   | 410.3 | 98.4,98.4  |
| 110 | 0.5343                | 0.7592 | 2.154  | 0.7339 | 0.4680 | 0.6569 | 0.8079 | 0.6674 | 100-110 | 2.620   | 412.9 | 99,99      |
| 120 | 0.7420                | 0.8375 | 0.9502 | 0.8571 | 0.6636 | 0.7759 | 0.8886 | 0.7861 | 110-120 | 0.7572  | 413.7 | 99.2,99.2  |
| 130 | 0.9353                | 0.9637 | 1.031  | 0.9877 | 0.8402 | 0.8949 | 0.9623 | 0.8930 | 120-130 | 0.7833  | 414.5 | 99.4,99.4  |
| 140 | 1.090                 | 1.087  | 1.114  | 1.114  | 0.9882 | 1.012  | 1.031  | 1.005  | 130-140 | 0.7715  | 415.2 | 99.6,99.6  |
| 150 | 1.217                 | 1.204  | 1.207  | 1.220  | 1.112  | 1.121  | 1.103  | 1.111  | 140-150 | 0.6960  | 415.9 | 99.7,99.7  |
| 160 | 1.315                 | 1.302  | 1.316  | 1.308  | 1.234  | 1.223  | 1.226  | 1.225  | 150-160 | 0.5610  | 416.5 | 99.9,99.9  |
| 170 | 1.415                 | 1.409  | 1.423  | 1.410  | 1.363  | 1.357  | 1.362  | 1.361  | 160-170 | 0.3739  | 416.9 | 100,100    |
| 180 | 1.511                 | 1.504  | 1.521  | 1.515  | 1.506  | 1.502  | 1.516  | 1.513  | 170-180 | 0.1367  | 417.0 | 100,100    |
| DEG | LUMINOUS INTENSITY:cd |        |        |        |        |        |        |        |         | UNIT:lm |       |            |

Conical surface Flux(90deg): 178.15 lm

%lum = 42.7%

%lamp = 42.7%

Conical surface Flux(130deg): 298.05 lm

%lum = 71.5%

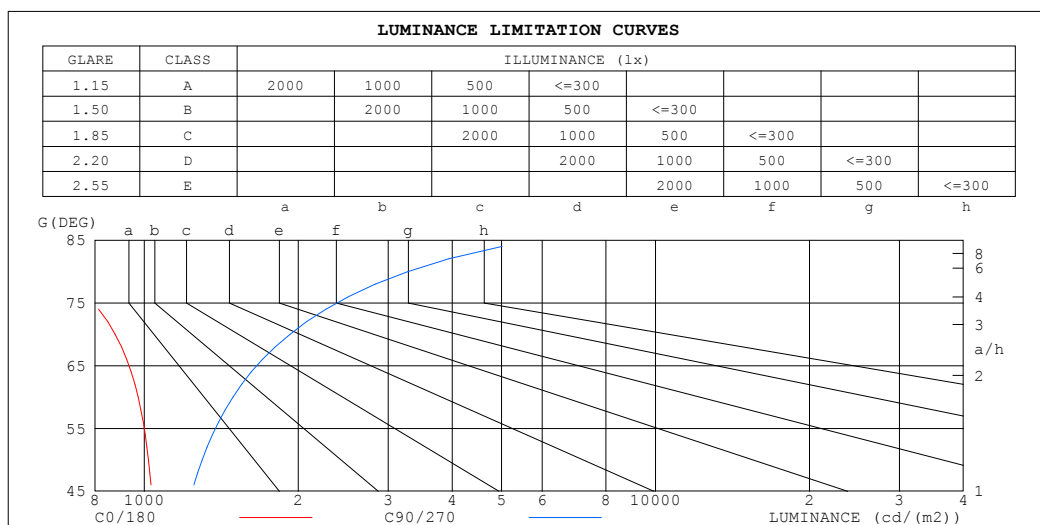
%lamp = 71.5%

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2021-08-18

□ Range: 0 - 180DEG  
□ Interval: 2.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.450  
Humidity:65.0%  
Test Distance:5.749m [K=1.0000]  
Remarks:

### LUMINANCE LIMITATION CURVES

|                            |                    |                  |
|----------------------------|--------------------|------------------|
| NAME: COB 480LED 12V 3000K | TYPE: 480D COB 12V | WEIGHT:          |
| SPEC.:                     | DIM.:              | SERIAL No.:      |
| MFR.:                      | SUR.:              | Shielding Angle: |



| LUMINANCE cd/(m2) |        |         |
|-------------------|--------|---------|
| G (DEG)           | C0/180 | C90/270 |
| 85                | 661    | 6013    |
| 80                | 674    | 3274    |
| 75                | 866    | 2413    |
| 70                | 877    | 1926    |
| 65                | 978    | 1679    |
| 60                | 972    | 1490    |
| 55                | 1029   | 1392    |
| 50                | 1019   | 1297    |
| 45                | 1053   | 1251    |

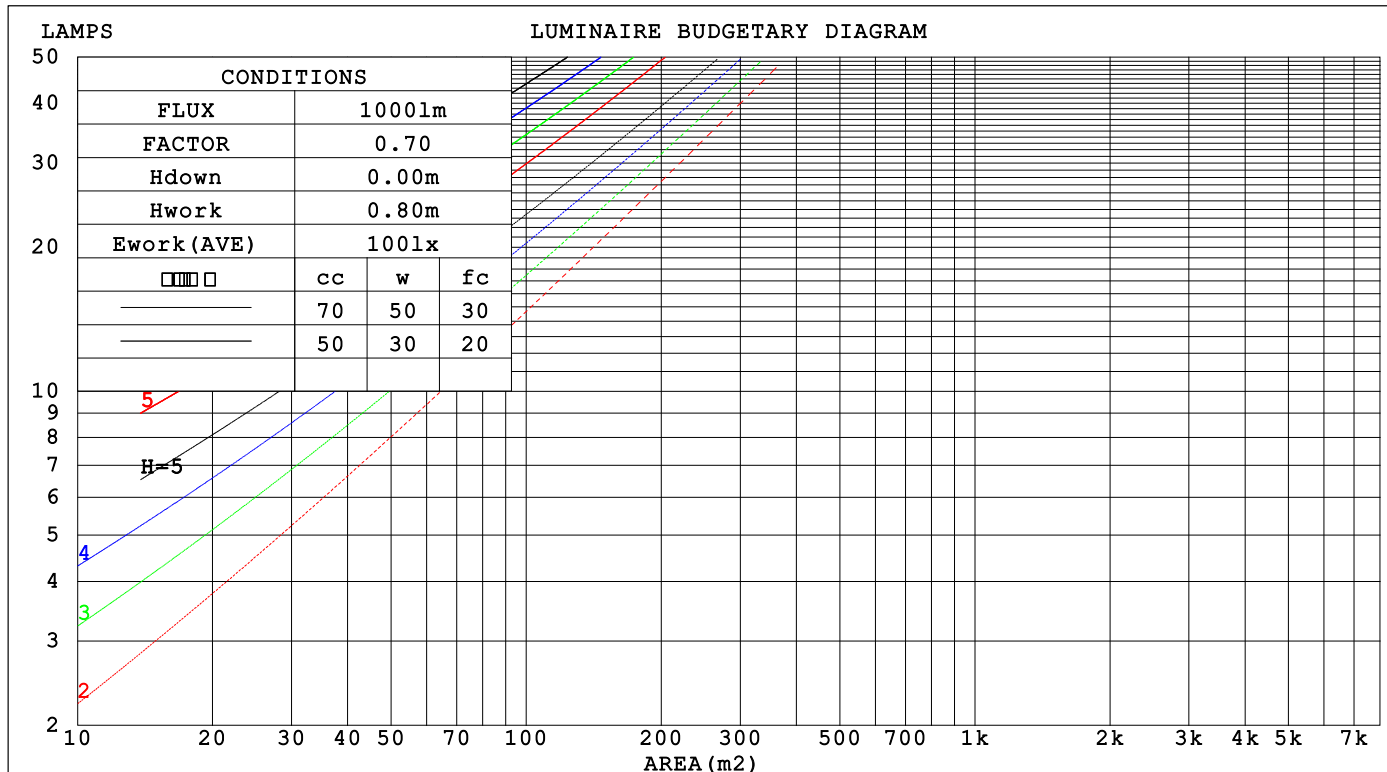
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2021-08-18

☐ Range: 0 - 180DEG  
☐ Interval: 2.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.450  
Humidity:65.0%  
Test Distance:5.749m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

|                            |                    |                  |
|----------------------------|--------------------|------------------|
| NAME: COB 480LED 12V 3000K | TYPE: 480D COB 12V | WEIGHT:          |
| SPEC.:                     | DIM.:              | SERIAL No.:      |
| MFR.:                      | SUR.:              | Shielding Angle: |

| □cc  | 80%                   |      |      | 70%  |      |      | 50%  |      |      | 30%  |      |      | 10% |     |     | 0                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------|-----------------------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|---------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| □w   | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50% | 30% | 10% | 0                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| □fc  | 20%                   |      |      | 20%  |      |      | 20%  |      |      | 20%  |      |      | 20% |     |     | 0                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RCR  | RCR:Room Cavity Ratio |      |      |      |      |      |      |      |      |      |      |      |     |     |     | Coefficients of Utilization(CU) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0.0  | 1.18                  | 1.18 | 1.18 | 1.15 | 1.15 | 1.15 | 1.09 | 1.09 | 1.09 | 1.03 | 1.03 | 1.03 | .98 | .98 | .98 | .95                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.0  | .98                   | .93  | .88  | .95  | .90  | .86  | .90  | .86  | .82  | .85  | .82  | .79  | .81 | .78 | .76 | .73                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.0  | .84                   | .76  | .69  | .81  | .74  | .68  | .77  | .71  | .65  | .73  | .68  | .63  | .69 | .65 | .61 | .58                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3.0  | .73                   | .63  | .56  | .71  | .62  | .55  | .67  | .60  | .53  | .63  | .57  | .52  | .60 | .55 | .50 | .48                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.0  | .64                   | .54  | .47  | .62  | .53  | .46  | .59  | .51  | .45  | .56  | .49  | .44  | .53 | .47 | .42 | .40                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5.0  | .57                   | .47  | .40  | .55  | .46  | .39  | .52  | .44  | .38  | .50  | .43  | .37  | .48 | .41 | .36 | .34                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6.0  | .51                   | .41  | .34  | .49  | .40  | .34  | .47  | .39  | .33  | .45  | .38  | .32  | .43 | .37 | .32 | .29                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7.0  | .46                   | .36  | .30  | .45  | .36  | .30  | .43  | .35  | .29  | .41  | .34  | .29  | .39 | .33 | .28 | .26                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8.0  | .42                   | .33  | .27  | .41  | .32  | .26  | .39  | .31  | .26  | .37  | .30  | .25  | .36 | .30 | .25 | .23                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 9.0  | .38                   | .30  | .24  | .37  | .29  | .24  | .36  | .28  | .23  | .34  | .28  | .23  | .33 | .27 | .22 | .20                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10.0 | .35                   | .27  | .21  | .34  | .27  | .21  | .33  | .26  | .21  | .32  | .25  | .21  | .31 | .25 | .20 | .18                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2021-08-18

□ Range: 0 - 180DEG  
□ Interval: 2.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.450  
Humidity:65.0%  
Test Distance:5.749m [K=1.0000]  
Remarks:

### WEC AND CCEC

|                            |                    |                  |
|----------------------------|--------------------|------------------|
| NAME: COB 480LED 12V 3000K | TYPE: 480D COB 12V | WEIGHT:          |
| SPEC.:                     | DIM.:              | SERIAL No.:      |
| MFR.:                      | SUR.:              | Shielding Angle: |

|                             |                       |                |                |                |                |                                 |
|-----------------------------|-----------------------|----------------|----------------|----------------|----------------|---------------------------------|
| <input type="checkbox"/> cc | 80%                   | 70%            | 50%            | 30%            | 10%            | 0                               |
| <input type="checkbox"/> w  | 50% 30% 10%           | 50% 30% 10%    | 50% 30% 10%    | 50% 30% 10%    | 50% 30% 10%    | 0                               |
| <input type="checkbox"/> fc | 20%                   | 20%            | 20%            | 20%            | 20%            | 0                               |
| RCR                         | RCR:Room Cavity Ratio |                |                |                |                | Wall Exitance Coefficients(WEC) |
| 0.0                         |                       |                |                |                |                |                                 |
| 1.0                         | .397 .226 .072        | .388 .222 .070 | .372 .213 .068 | .357 .206 .066 | .343 .199 .064 |                                 |
| 2.0                         | .345 .189 .058        | .337 .185 .057 | .322 .179 .056 | .309 .173 .054 | .296 .168 .053 |                                 |
| 3.0                         | .306 .163 .049        | .299 .160 .048 | .286 .155 .047 | .274 .150 .046 | .263 .145 .045 |                                 |
| 4.0                         | .275 .143 .042        | .269 .141 .042 | .257 .136 .041 | .246 .132 .040 | .236 .128 .039 |                                 |
| 5.0                         | .250 .127 .037        | .244 .125 .037 | .234 .122 .036 | .224 .118 .035 | .215 .115 .035 |                                 |
| 6.0                         | .229 .115 .033        | .224 .113 .033 | .214 .110 .032 | .205 .107 .031 | .197 .104 .031 |                                 |
| 7.0                         | .211 .104 .030        | .206 .103 .029 | .198 .100 .029 | .190 .097 .028 | .182 .095 .028 |                                 |
| 8.0                         | .195 .095 .027        | .191 .094 .027 | .184 .092 .026 | .176 .089 .026 | .170 .087 .025 |                                 |
| 9.0                         | .182 .088 .025        | .178 .087 .024 | .171 .085 .024 | .165 .083 .024 | .159 .081 .023 |                                 |
| 10.0                        | .170 .081 .023        | .167 .081 .022 | .160 .079 .022 | .154 .077 .022 | .149 .075 .021 |                                 |

|                             |                       |                |                |                |                |  |
|-----------------------------|-----------------------|----------------|----------------|----------------|----------------|--|
| <input type="checkbox"/> cc | 80%                   | 70%            | 50%            | 30%            | 10%            | 0  |
| <input type="checkbox"/> w  | 50% 30% 10%           | 50% 30% 10%    | 50% 30% 10%    | 50% 30% 10%    | 50% 30% 10%    | 0  |
| <input type="checkbox"/> fc | 20%                   | 20%            | 20%            | 20%            | 20%            | 0  |
| RCR                         | RCR:Room Cavity Ratio |                |                |                |                | Ceiling Cavity Exitance Coefficients(CCEC) |
| 0.0                         | .226 .226 .226        | .193 .193 .193 | .132 .132 .132 | .076 .076 .076 | .024 .024 .024 |  |
| 1.0                         | .222 .191 .163        | .190 .164 .140 | .130 .113 .097 | .075 .065 .056 | .024 .021 .018 |  |
| 2.0                         | .215 .167 .127        | .184 .144 .110 | .126 .100 .077 | .073 .058 .045 | .023 .019 .015 |  |
| 3.0                         | .207 .150 .105        | .178 .130 .091 | .122 .090 .064 | .070 .053 .038 | .023 .017 .012 |  |
| 4.0                         | .199 .138 .090        | .171 .119 .079 | .118 .083 .055 | .068 .049 .033 | .022 .016 .011 |  |
| 5.0                         | .191 .127 .080        | .164 .110 .070 | .113 .077 .049 | .066 .045 .029 | .021 .015 .010 |  |
| 6.0                         | .183 .119 .073        | .158 .103 .064 | .109 .072 .045 | .063 .043 .027 | .020 .014 .009 |  |
| 7.0                         | .176 .112 .068        | .151 .097 .059 | .105 .068 .042 | .061 .040 .025 | .020 .013 .008 |  |
| 8.0                         | .169 .107 .064        | .146 .093 .056 | .101 .065 .039 | .059 .038 .024 | .019 .013 .008 |  |
| 9.0                         | .163 .102 .061        | .140 .088 .053 | .097 .062 .038 | .057 .037 .022 | .018 .012 .007 |  |
| 10.0                        | .157 .098 .058        | .135 .085 .051 | .094 .060 .036 | .055 .035 .022 | .018 .012 .007 |  |

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2021-08-18

☐ Range: 0 - 180DEG  
☐ Interval: 2.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.450  
Humidity:65.0%  
Test Distance:5.749m [K=1.0000]  
Remarks:

### UGR(Unified Glare Rating) Table

|   |     |     |     |     |                    |      |      |      |      |                  |      |      |      |      |
|---|-----|-----|-----|-----|--------------------|------|------|------|------|------------------|------|------|------|------|
| NAME: COB 480LED 12V 3000K                                      |     |     |     |     | TYPE: 480D COB 12V |      |      |      |      | WEIGHT:          |      |      |      |      |
| SPEC.:  |     |     |     |     | DIM.:              |      |      |      |      | SERIAL No.:      |      |      |      |      |
| MFR.:   |     |     |     |     | SUR.:              |      |      |      |      | Shielding Angle: |      |      |      |      |
| ceiling/cavity  | 0.7 | 0.7 | 0.5 | 0.5 | 0.3                | 0.7  | 0.7  | 0.5  | 0.5  | 0.3              |      |      |      |      |
| walls   | 0.5 | 0.3 | 0.5 | 0.3 | 0.3                | 0.5  | 0.3  | 0.5  | 0.3  | 0.3              |      |      |      |      |
| working plane   | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                | 0.2  | 0.2  | 0.2  | 0.2  | 0.2              |      |      |      |      |
| Room dimensions   |     |     |     |     | Viewed crosswise   |      |      |      |      | Viewed endwise   |      |      |      |      |
| x = 2H y = 2H   |     |     |     |     | 15.3               | 16.9 | 15.7 | 17.2 | 17.5 | 17.1             | 18.6 | 17.4 | 18.9 | 19.3 |
| 3H  |     |     |     |     | 16.9               | 18.4 | 17.3 | 18.7 | 19.1 | 19.8             | 21.2 | 20.1 | 21.6 | 21.9 |
| 4H  |     |     |     |     | 17.5               | 19.0 | 17.9 | 19.3 | 19.7 | 21.3             | 22.7 | 21.7 | 23.0 | 23.4 |
| 6H  |     |     |     |     | 18.0               | 19.3 | 18.4 | 19.7 | 20.1 | 23.0             | 24.3 | 23.4 | 24.7 | 25.1 |
| 8H  |     |     |     |     | 18.1               | 19.4 | 18.6 | 19.8 | 20.2 | 23.9             | 25.2 | 24.3 | 25.6 | 26.0 |
| 12H   |     |     |     |     | 18.2               | 19.5 | 18.6 | 19.9 | 20.3 | 24.9             | 26.2 | 25.3 | 26.6 | 27.0 |
| 4H 2H   |     |     |     |     | 16.4               | 17.8 | 16.8 | 18.2 | 18.5 | 17.7             | 19.1 | 18.1 | 19.4 | 19.8 |
| 3H  |     |     |     |     | 18.3               | 19.5 | 18.7 | 19.9 | 20.3 | 20.6             | 21.9 | 21.1 | 22.3 | 22.7 |
| 4H  |     |     |     |     | 19.1               | 20.2 | 19.5 | 20.7 | 21.1 | 22.4             | 23.5 | 22.8 | 23.9 | 24.4 |
| 6H  |     |     |     |     | 19.8               | 20.8 | 20.2 | 21.2 | 21.7 | 24.3             | 25.3 | 24.7 | 25.8 | 26.2 |
| 8H  |     |     |     |     | 20.0               | 21.0 | 20.5 | 21.4 | 21.9 | 25.3             | 26.3 | 25.8 | 26.8 | 27.2 |
| 12H   |     |     |     |     | 20.2               | 21.1 | 20.7 | 21.6 | 22.1 | 26.5             | 27.4 | 27.0 | 27.9 | 28.4 |
| 8H 4H   |     |     |     |     | 20.2               | 21.1 | 20.6 | 21.6 | 22.1 | 22.8             | 23.7 | 23.2 | 24.2 | 24.7 |
| 6H  |     |     |     |     | 21.2               | 22.0 | 21.7 | 22.5 | 23.1 | 25.0             | 25.8 | 25.5 | 26.3 | 26.8 |
| 8H  |     |     |     |     | 21.7               | 22.4 | 22.2 | 22.9 | 23.5 | 26.2             | 27.0 | 26.8 | 27.5 | 28.1 |
| 12H   |     |     |     |     | 22.1               | 22.7 | 22.6 | 23.2 | 23.8 | 27.7             | 28.3 | 28.2 | 28.9 | 29.5 |
| 12H 4H  |     |     |     |     | 20.5               | 21.4 | 21.0 | 21.9 | 22.4 | 22.8             | 23.7 | 23.3 | 24.2 | 24.7 |
| 6H  |     |     |     |     | 21.8               | 22.6 | 22.3 | 23.1 | 23.6 | 25.1             | 25.9 | 25.6 | 26.4 | 26.9 |
| 8H  |     |     |     |     | 22.5               | 23.1 | 23.0 | 23.6 | 24.2 | 26.5             | 27.1 | 27.0 | 27.7 | 28.3 |
| Variations with the observer position at spacings(CIE Pub.117): |     |     |     |     |                    |      |      |      |      |                  |      |      |      |      |
| S = 1.0H  |     |     |     |     | + 0.1 / - 0.1      |      |      |      |      | + 0.1 / - 0.1    |      |      |      |      |
| 1.5H  |     |     |     |     | + 0.2 / - 0.3      |      |      |      |      | + 0.2 / - 0.3    |      |      |      |      |
| 2.0H  |     |     |     |     | + 0.2 / - 0.4      |      |      |      |      | + 0.2 / - 0.4    |      |      |      |      |

CIE Pub.117, 417.0 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -3.0)  
Area: 0.1 m2

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2021-08-18

☐ Range: 0 - 180DEG  
☐ Interval: 2.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.450  
Humidity:65.0%  
Test Distance:5.749m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

|                            |                    |                  |
|----------------------------|--------------------|------------------|
| NAME: COB 480LED 12V 3000K | TYPE: 480D COB 12V | WEIGHT:          |
| SPEC.:                     | DIM.:              | SERIAL No.:      |
| MFR.:                      | SUR.:              | Shielding Angle: |

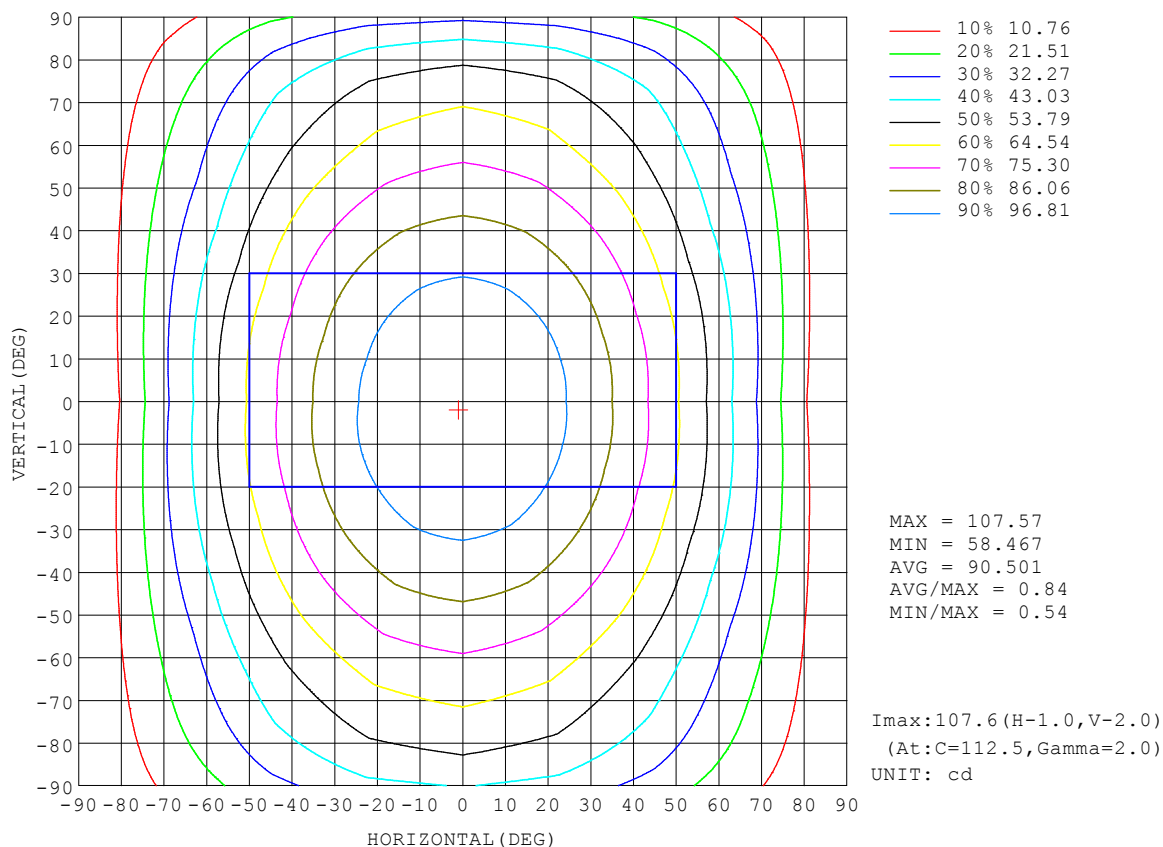
| REFLECTANCE                      |  |     |           |     |     |     |     |               |     |        |
|----------------------------------|--|-----|-----------|-----|-----|-----|-----|---------------|-----|--------|
| Ceiling                          | 0.8  | 0.8 | 0.8       | 0.7 | 0.7 | 0.7 | 0.5 | 0.5           | 0.5 | 0      |
| Walls                            | 0.7  | 0.5 | 0.3       | 0.7 | 0.5 | 0.3 | 0.7 | 0.5           | 0.3 | 0      |
| Working plane                    | 0.2  | 0.2 | 0.2       | 0.2 | 0.2 | 0.2 | 0.2 | 0.2           | 0.2 | 0      |
| ROOM INDEX                       | UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$ |     |           |     |     |     |     |               |     |        |
| $k = 0.60$                       | 51   | 39  | 32        | 51  | 39  | 31  | 49  | 38            | 31  | 24     |
| 0.80                             | 61   | 48  | 40        | 60  | 47  | 40  | 58  | 47            | 39  | 32     |
| 1.00                             | 69   | 56  | 48        | 67  | 55  | 47  | 65  | 57            | 47  | 39     |
| 1.25                             | 76   | 63  | 55        | 74  | 63  | 55  | 71  | 61            | 54  | 45     |
| 1.50                             | 81   | 69  | 61        | 79  | 68  | 60  | 75  | 66            | 59  | 50     |
| 2.00                             | 88   | 77  | 69        | 86  | 76  | 68  | 82  | 73            | 67  | 57     |
| 2.50                             | 92   | 83  | 75        | 90  | 81  | 74  | 85  | 78            | 72  | 62     |
| 3.00                             | 96   | 87  | 80        | 93  | 85  | 79  | 89  | 82            | 76  | 66     |
| 4.00                             | 101  | 93  | 87        | 98  | 91  | 85  | 93  | 87            | 82  | 71     |
| 5.00                             | 104  | 97  | 91        | 101 | 95  | 90  | 95  | 90            | 86  | 75     |
| 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: 25.3DEG  
Operators:  
Test Date: 2021-08-18

☐ Range: 0 - 180DEG  
☐ Interval: 2.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.450  
Humidity: 65.0%  
Test Distance: 5.749m [K=1.0000]  
Remarks:

### ISOCANDELA DIAGRAM

|                            |                    |                  |
|----------------------------|--------------------|------------------|
| NAME: COB 480LED 12V 3000K | TYPE: 480D COB 12V | WEIGHT:          |
| SPEC.:                     | DIM.:              | SERIAL No.:      |
| MFR.:                      | SUR.:              | Shielding Angle: |



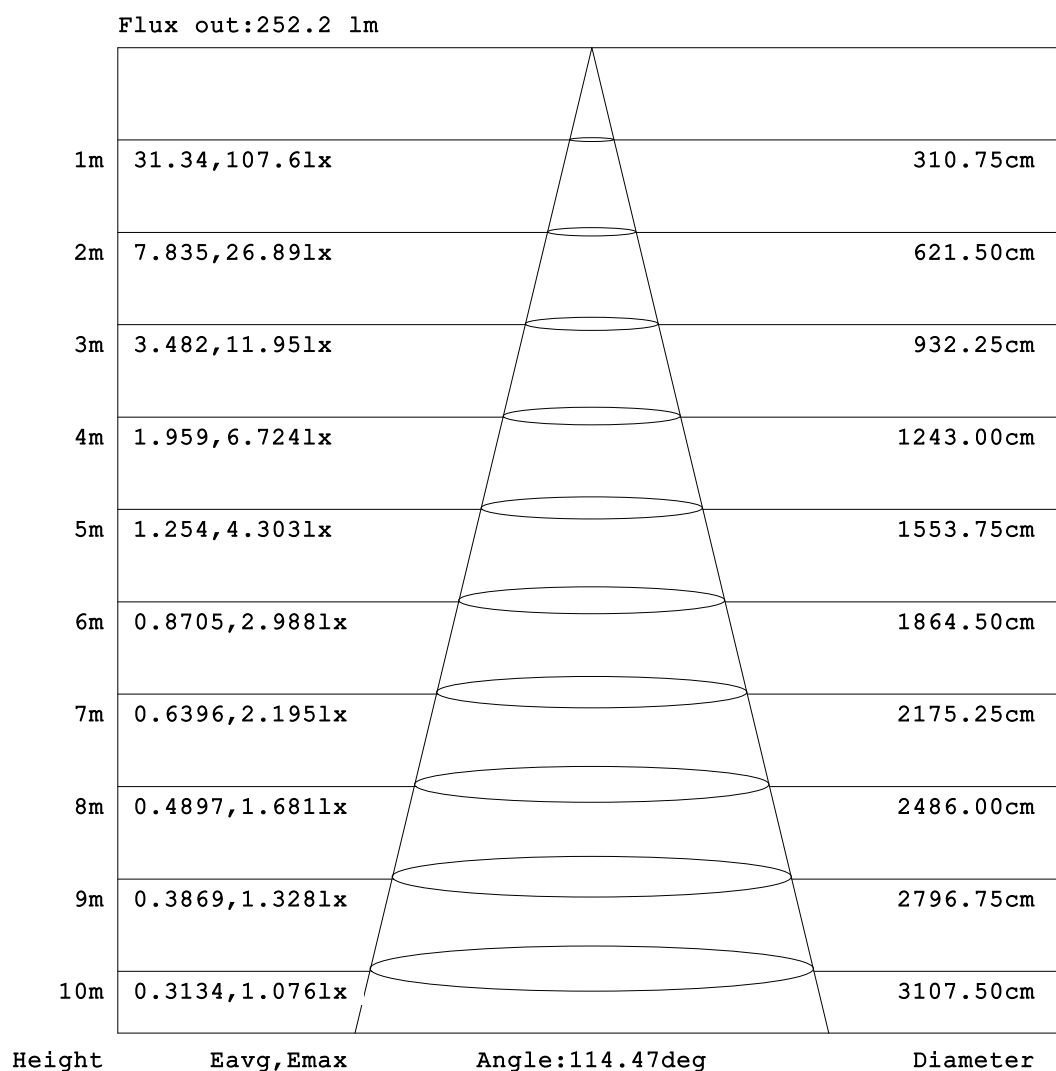
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2021-08-18

☐ Range: 0 - 180DEG  
☐ Interval: 2.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.450  
Humidity:65.0%  
Test Distance:5.749m [K=1.0000]  
Remarks:



**AAI Figure**

|                            |                    |                  |
|----------------------------|--------------------|------------------|
| NAME: COB 480LED 12V 3000K | TYPE: 480D COB 12V | WEIGHT:          |
| SPEC.:                     | DIM.:              | SERIAL No.:      |
| MFR.:                      | SUR.:              | Shielding Angle: |



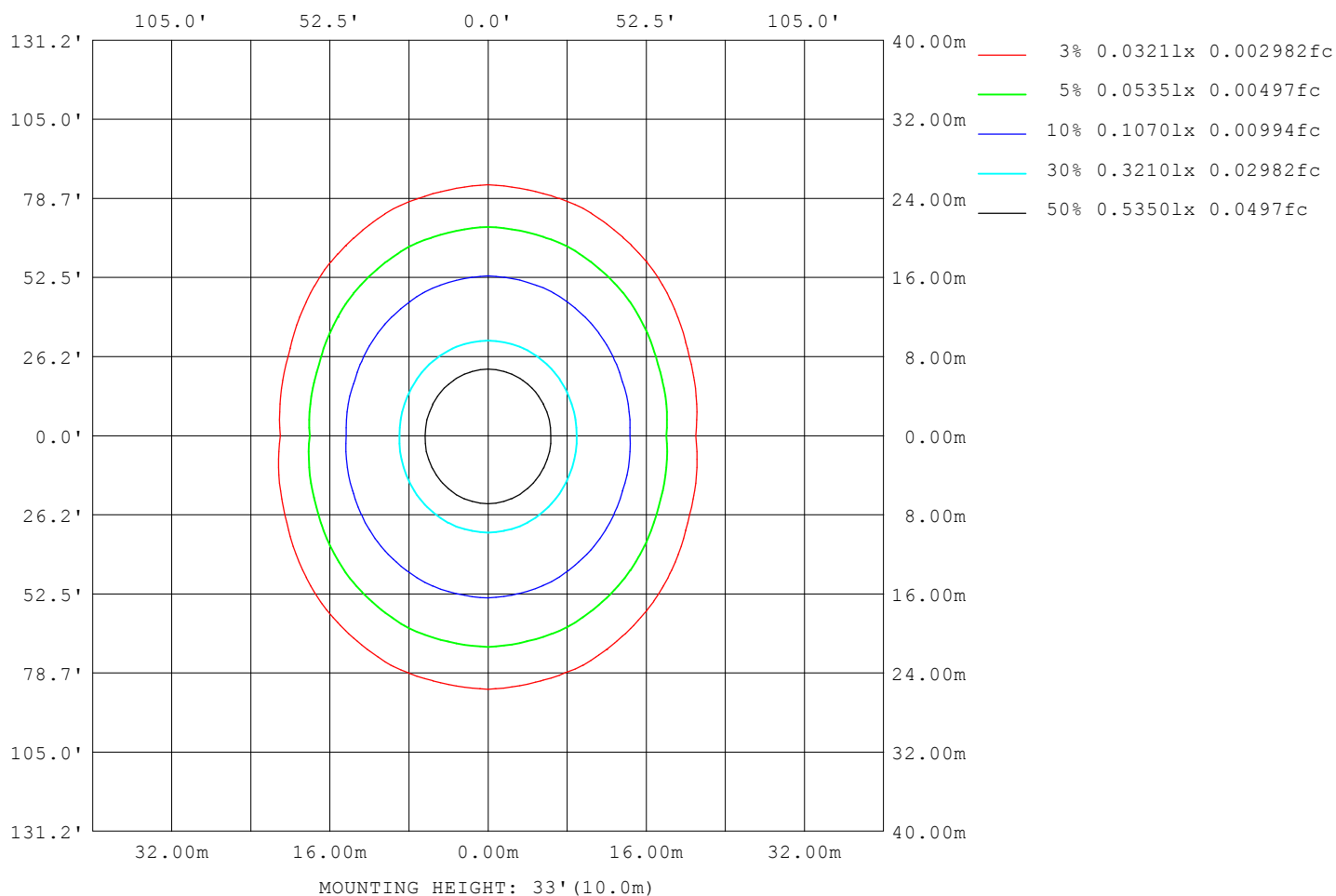
**Note:**The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-08-18

☐ Range: 0 - 180DEG  
☐ Interval: 2.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.450  
 Humidity:65.0%  
 Test Distance:5.749m [K=1.0000]  
 Remarks:

**ISOLUX DIAGRAM**

|                            |                    |                  |
|----------------------------|--------------------|------------------|
| NAME: COB 480LED 12V 3000K | TYPE: 480D COB 12V | WEIGHT:          |
| SPEC.:                     | DIM.:              | SERIAL No.:      |
| MFR.:                      | SUR.:              | Shielding Angle: |



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2021-08-18

☐ Range: 0 - 180DEG  
☐ Interval: 2.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.450  
 Humidity: 65.0%  
 Test Distance: 5.749m [K=1.0000]  
 Remarks:

### LED Avg.L Report

|                            |                    |                  |
|----------------------------|--------------------|------------------|
| NAME: COB 480LED 12V 3000K | TYPE: 480D COB 12V | WEIGHT:          |
| SPEC.:                     | DIM.:              | SERIAL No.:      |
| MFR.:                      | SUR.:              | Shielding Angle: |

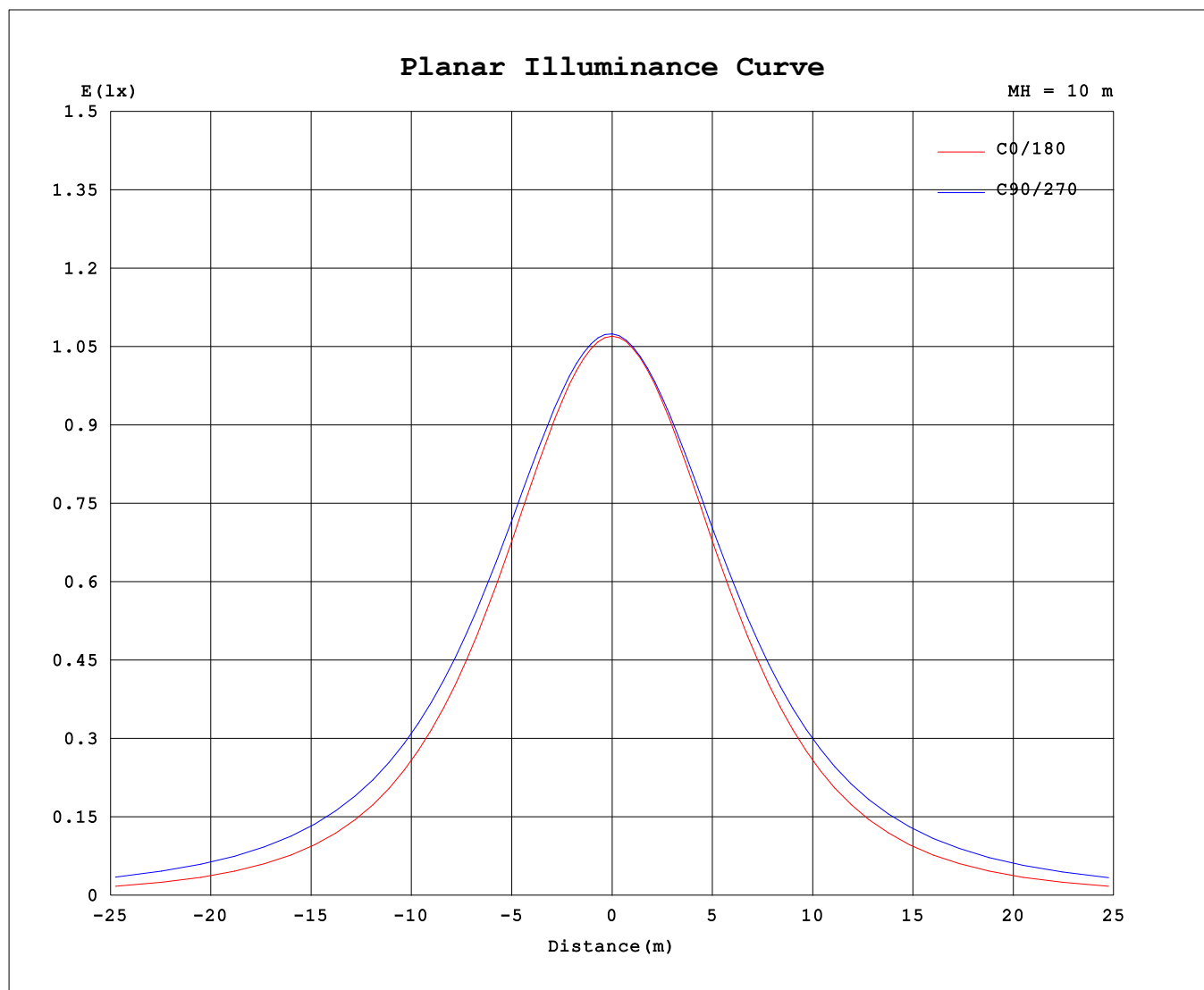
| AvgL             | cd/m2 |
|------------------|-------|
| L_0~180 (65) av  | 937   |
| L_0~180 (75) av  | 793   |
| L_0~180 (85) av  | 502   |
| L_90~270 (65) av | 1630  |
| L_90~270 (75) av | 2321  |
| L_90~270 (85) av | 5373  |
| L_45 (65) av     | 1345  |
| L_45 (75) av     | 1789  |
| L_45 (85) av     | 3834  |

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2021-08-18

☐ Range: 0 - 180DEG  
☐ Interval: 2.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.450  
Humidity:65.0%  
Test Distance:5.749m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators:  
Test Date: 2021-08-18

☐ Range: 0 - 180DEG  
☐ Interval: 2.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.450  
Humidity: 65.0%  
Test Distance: 5.749m [K=1.0000]  
Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

|                            |                    |                  |
|----------------------------|--------------------|------------------|
| NAME: COB 480LED 12V 3000K | TYPE: 480D COB 12V | WEIGHT:          |
| SPEC.:                     | DIM.:              | SERIAL No.:      |
| MFR.:                      | SUR.:              | Shielding Angle: |

Table--1

UNIT: cd

| C (DEG)<br>□ (DEG) | 0    | 22.5 | 45   | 67.5 | 90   | 112.5 | 135  | 157.5 | 180  | 202.5 | 225  | 247.5 | 270  | 292.5 | 315  | 337.5 |  |  |  |
|--------------------|------|------|------|------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|--|--|--|
| 0                  | 107  | 107  | 107  | 107  | 107  | 107   | 107  | 107   | 107  | 107   | 107  | 107   | 107  | 107   | 107  | 107   |  |  |  |
| 5                  | 107  | 107  | 107  | 107  | 107  | 107   | 107  | 107   | 107  | 107   | 107  | 107   | 107  | 107   | 107  | 107   |  |  |  |
| 10                 | 106  | 106  | 106  | 106  | 107  | 106   | 106  | 106   | 106  | 106   | 106  | 106   | 106  | 105   | 105  | 105   |  |  |  |
| 15                 | 104  | 104  | 105  | 105  | 105  | 105   | 105  | 104   | 104  | 104   | 104  | 104   | 104  | 104   | 104  | 104   |  |  |  |
| 20                 | 100  | 101  | 102  | 103  | 103  | 103   | 102  | 101   | 100  | 100   | 101  | 102   | 102  | 101   | 101  | 100   |  |  |  |
| 25                 | 97.3 | 98.1 | 99.4 | 101  | 102  | 101   | 99.7 | 98.3  | 97.4 | 97.4  | 98.3 | 99.3  | 99.8 | 99.3  | 98.3 | 97.3  |  |  |  |
| 30                 | 91.8 | 92.9 | 95.0 | 97.4 | 98.3 | 97.6  | 95.4 | 93.2  | 91.9 | 92.0  | 93.8 | 95.4  | 96.2 | 95.4  | 93.8 | 92.0  |  |  |  |
| 35                 | 87.5 | 88.9 | 91.7 | 94.6 | 95.8 | 94.9  | 92.1 | 89.2  | 87.6 | 88.0  | 90.3 | 92.5  | 93.4 | 92.4  | 90.3 | 88.0  |  |  |  |
| 40                 | 80.2 | 82.0 | 86.0 | 89.9 | 91.5 | 90.3  | 86.6 | 82.4  | 80.3 | 81.1  | 84.5 | 87.5  | 88.8 | 87.5  | 84.5 | 81.1  |  |  |  |
| 45                 | 74.7 | 77.0 | 81.8 | 86.5 | 88.4 | 87.0  | 82.5 | 77.4  | 74.8 | 76.0  | 80.2 | 84.0  | 85.5 | 84.0  | 80.3 | 76.1  |  |  |  |
| 50                 | 65.7 | 68.8 | 75.1 | 81.0 | 83.3 | 81.5  | 75.9 | 69.3  | 65.8 | 67.7  | 73.4 | 78.4  | 80.4 | 78.5  | 73.6 | 67.9  |  |  |  |
| 55                 | 59.2 | 62.9 | 70.4 | 77.1 | 79.8 | 77.7  | 71.2 | 63.6  | 59.3 | 61.8  | 68.7 | 74.6  | 76.9 | 74.7  | 68.9 | 62.1  |  |  |  |
| 60                 | 48.8 | 53.7 | 63.1 | 71.2 | 74.4 | 71.9  | 64.1 | 54.5  | 48.8 | 52.5  | 61.5 | 68.9  | 71.8 | 69.1  | 61.9 | 53.0  |  |  |  |
| 65                 | 41.5 | 47.4 | 58.3 | 67.4 | 70.9 | 68.1  | 59.4 | 48.3  | 41.5 | 46.3  | 56.9 | 65.3  | 68.6 | 65.6  | 57.4 | 46.9  |  |  |  |
| 70                 | 30.1 | 38.1 | 51.4 | 61.8 | 65.8 | 62.6  | 52.6 | 39.0  | 30.0 | 37.1  | 50.4 | 60.1  | 63.6 | 60.4  | 51.2 | 38.0  |  |  |  |
| 75                 | 22.5 | 32.2 | 47.2 | 58.3 | 62.4 | 59.1  | 48.5 | 33.2  | 22.3 | 31.3  | 46.4 | 56.2  | 59.7 | 56.5  | 47.2 | 32.5  |  |  |  |
| 80                 | 11.7 | 24.6 | 41.2 | 52.6 | 56.8 | 53.4  | 42.4 | 25.7  | 11.4 | 23.8  | 39.0 | 48.4  | 51.8 | 48.5  | 39.7 | 25.3  |  |  |  |
| 85                 | 5.79 | 20.2 | 36.6 | 48.1 | 52.4 | 48.9  | 37.8 | 21.3  | 5.39 | 18.4  | 32.5 | 41.4  | 44.6 | 41.4  | 33.0 | 19.7  |  |  |  |
| 90                 | 0.18 | 12.4 | 28.0 | 39.4 | 43.6 | 40.1  | 29.0 | 13.3  | 0.16 | 8.03  | 19.8 | 27.3  | 30.0 | 27.0  | 19.9 | 8.86  |  |  |  |
| 95                 | 0.23 | 5.96 | 20.6 | 32.0 | 36.1 | 32.7  | 21.6 | 6.71  | 0.20 | 0.30  | 2.08 | 8.87  | 12.0 | 8.42  | 2.09 | 0.32  |  |  |  |
| 100                | 0.33 | 0.49 | 8.02 | 18.2 | 22.0 | 18.9  | 8.92 | 0.52  | 0.29 | 0.38  | 0.54 | 0.67  | 0.71 | 0.67  | 0.55 | 0.39  |  |  |  |
| 105                | 0.41 | 0.47 | 1.73 | 9.34 | 12.7 | 9.96  | 2.27 | 0.50  | 0.36 | 0.44  | 0.59 | 0.71  | 0.75 | 0.71  | 0.60 | 0.44  |  |  |  |
| 110                | 0.53 | 0.57 | 0.76 | 1.15 | 2.15 | 1.37  | 0.73 | 0.60  | 0.47 | 0.53  | 0.66 | 0.77  | 0.81 | 0.78  | 0.67 | 0.53  |  |  |  |
| 115                | 0.62 | 0.64 | 0.77 | 0.88 | 0.89 | 0.86  | 0.78 | 0.66  | 0.54 | 0.59  | 0.71 | 0.81  | 0.84 | 0.81  | 0.71 | 0.60  |  |  |  |
| 120                | 0.74 | 0.75 | 0.84 | 0.92 | 0.95 | 0.92  | 0.86 | 0.78  | 0.66 | 0.69  | 0.78 | 0.86  | 0.89 | 0.87  | 0.79 | 0.69  |  |  |  |
| 125                | 0.83 | 0.82 | 0.89 | 0.95 | 0.98 | 0.96  | 0.91 | 0.84  | 0.73 | 0.76  | 0.82 | 0.89  | 0.92 | 0.90  | 0.82 | 0.75  |  |  |  |
| 130                | 0.94 | 0.92 | 0.96 | 1.01 | 1.03 | 1.03  | 0.99 | 0.94  | 0.84 | 0.85  | 0.89 | 0.95  | 0.96 | 0.95  | 0.89 | 0.85  |  |  |  |
| 135                | 1.00 | 0.99 | 1.01 | 1.05 | 1.07 | 1.07  | 1.04 | 1.01  | 0.90 | 0.91  | 0.94 | 0.98  | 0.99 | 0.98  | 0.94 | 0.91  |  |  |  |
| 140                | 1.09 | 1.07 | 1.09 | 1.10 | 1.11 | 1.13  | 1.11 | 1.09  | 0.99 | 0.99  | 1.01 | 1.04  | 1.03 | 1.03  | 1.00 | 0.99  |  |  |  |
| 145                | 1.14 | 1.13 | 1.14 | 1.14 | 1.15 | 1.17  | 1.16 | 1.14  | 1.04 | 1.04  | 1.05 | 1.07  | 1.06 | 1.06  | 1.05 | 1.05  |  |  |  |
| 150                | 1.22 | 1.20 | 1.20 | 1.19 | 1.21 | 1.23  | 1.22 | 1.21  | 1.11 | 1.11  | 1.12 | 1.13  | 1.10 | 1.11  | 1.11 | 1.12  |  |  |  |
| 155                | 1.26 | 1.25 | 1.24 | 1.23 | 1.25 | 1.27  | 1.26 | 1.25  | 1.16 | 1.16  | 1.16 | 1.17  | 1.15 | 1.15  | 1.16 | 1.17  |  |  |  |
| 160                | 1.31 | 1.31 | 1.30 | 1.29 | 1.32 | 1.32  | 1.31 | 1.31  | 1.23 | 1.23  | 1.22 | 1.24  | 1.23 | 1.21  | 1.23 | 1.25  |  |  |  |
| 165                | 1.36 | 1.35 | 1.34 | 1.33 | 1.36 | 1.35  | 1.35 | 1.35  | 1.28 | 1.28  | 1.27 | 1.28  | 1.28 | 1.26  | 1.28 | 1.30  |  |  |  |
| 170                | 1.42 | 1.42 | 1.41 | 1.40 | 1.42 | 1.41  | 1.41 | 1.41  | 1.36 | 1.36  | 1.36 | 1.36  | 1.36 | 1.34  | 1.36 | 1.38  |  |  |  |
| 175                | 1.47 | 1.46 | 1.46 | 1.45 | 1.47 | 1.45  | 1.46 | 1.46  | 1.42 | 1.42  | 1.42 | 1.42  | 1.42 | 1.41  | 1.42 | 1.44  |  |  |  |
| 180                | 1.51 | 1.50 | 1.50 | 1.50 | 1.52 | 1.50  | 1.51 | 1.53  | 1.51 | 1.51  | 1.50 | 1.50  | 1.52 | 1.51  | 1.51 | 1.52  |  |  |  |

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2021-08-18

□ Range: 0 - 180DEG  
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Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.450  
Humidity:65.0%  
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