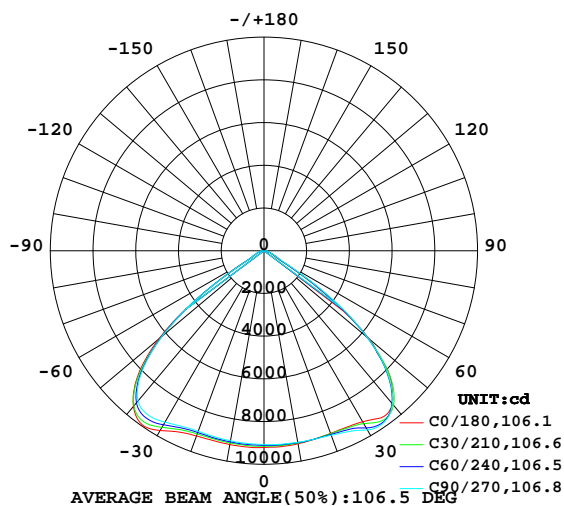


## LUMINAIRE PHOTOMETRIC TEST REPORT

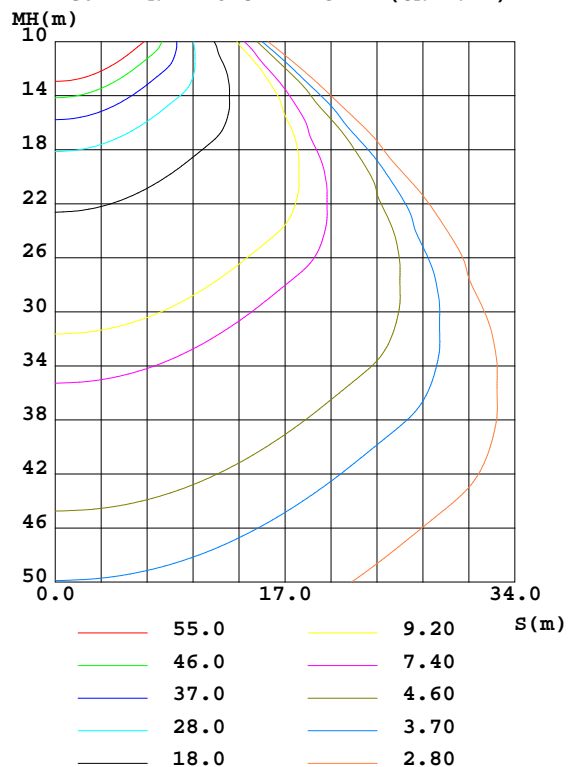
|                 |                |                  |
|-----------------|----------------|------------------|
| NAME: LED LIGHT | TYPE:          | WEIGHT:          |
| SPEC.:          | DIM.:          | SERIAL No.:      |
| MFR.:           | SUR.:21cm*16cm | Shielding Angle: |

| DATA OF LAMP     |           | PHOTOMETRIC DATA      |        |                   |          | Eff: 159.93 lm/W |
|------------------|-----------|-----------------------|--------|-------------------|----------|------------------|
| MODEL            | 150H5 110 | I <sub>max</sub> (cd) | 9943   | S/MH(C0/180)      | 1.55     |                  |
| NOMINAL POWER(W) | 150       | LOR(%)                | 100.0  | S/MH(C90/270)     | 1.54     |                  |
| RATED VOLTAGE(V) | 220       | TOTAL FLUX(lm)        | 23990  | η UP,DN(C0-180)   | 0.0,50.5 |                  |
| NOMINAL FLUX(lm) | 24000     | CIE CLASS             | DIRECT | η UP,DN(C180-360) | 0.0,49.5 |                  |
| LAMPS INSIDE     | 1         | η up(%)               | 0.0    | CIBSE SHR NOM     | 1.50     |                  |
| TEST VOLTAGE(V)  | 220.1     | η down(%)             | 100.0  | CIBSE SHR MAX     | 1.55     |                  |

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2017.7.13

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity:65.0%  
 Test Distance:10.480m [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       | 9178                  | 9132  | 9108  | 9079  | 9213  | 9111  | 9033  | 8996  | 0- 10    | 867.9       | 867.9        | 3.62,3.62  |
| 20       | 9102                  | 9133  | 9193  | 9138  | 9230  | 9089  | 8993  | 8914  | 10- 20   | 2573        | 3441         | 14.3,14.3  |
| 30       | 9244                  | 9460  | 9687  | 9630  | 9716  | 9480  | 9265  | 9077  | 20- 30   | 4263        | 7704         | 32.1,32.1  |
| 40       | 9345                  | 9392  | 9356  | 9401  | 9510  | 9388  | 9176  | 9162  | 30- 40   | 5997        | 13702        | 57.1,57.1  |
| 50       | 6432                  | 6335  | 6343  | 6321  | 6440  | 6229  | 6211  | 6271  | 40- 50   | 6237        | 19938        | 83.1,83.1  |
| 60       | 782.9                 | 956.2 | 1061  | 1070  | 905.5 | 828.2 | 820.7 | 863.5 | 50- 60   | 3126        | 23064        | 96.1,96.1  |
| 70       | 302.6                 | 384.1 | 353.6 | 374.0 | 344.1 | 350.4 | 318.4 | 359.0 | 60- 70   | 554.5       | 23619        | 98.5,98.4  |
| 80       | 137.3                 | 173.2 | 182.4 | 178.0 | 138.8 | 174.6 | 175.2 | 169.5 | 70- 80   | 255.0       | 23874        | 99.5,99.5  |
| 90       | 19.48                 | 55.06 | 70.11 | 64.78 | 21.60 | 65.16 | 71.28 | 64.08 | 80- 90   | 116.4       | 23990        | 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     |              |            |

Conical surface Flux(90deg): 16975 lm

%lum = 70.8%

%lamp = 70.7%

Conical surface Flux(120deg): 23064 lm

%lum = 96.1%

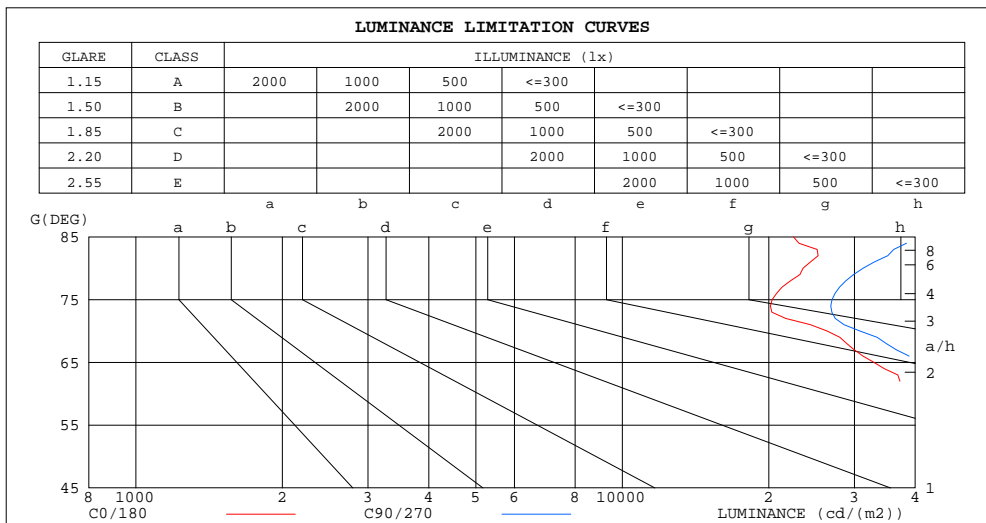
%lamp = 96.1%

C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2017.7.13

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity:65.0%  
 Test Distance:10.480m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

|                 |                |                  |
|-----------------|----------------|------------------|
| NAME: LED LIGHT | TYPE:          | WEIGHT:          |
| SPEC.:          | DIM.:          | SERIAL No.:      |
| MFR.:           | SUR.:21cm*16cm | Shielding Angle: |



| LUMINANCE cd/(m2) |        |         |
|-------------------|--------|---------|
| G(DEG)            | C0/180 | C90/270 |
| 85                | 22482  | 43070   |
| 80                | 23532  | 31266   |
| 75                | 20327  | 26992   |
| 70                | 26328  | 30765   |
| 65                | 32884  | 41436   |
| 60                | 46598  | 63173   |
| 55                | 174390 | 193588  |
| 50                | 297817 | 293702  |
| 45                | 351583 | 345937  |

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2017.7.13

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.480m [K=1.0000]  
Remarks:

## WEC AND CCEC

|                 |                |                  |
|-----------------|----------------|------------------|
| NAME: LED LIGHT | TYPE:          | WEIGHT:          |
| SPEC.:          | DIM.:          | SERIAL No.:      |
| MFR.:           | SUR.:21cm*16cm | Shielding Angle: |

| pcc  | 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  | .240                  | .136 | .043 | .233 | .133 | .042 | .220                            | .126 | .040 | .208 | .120 | .038 | .197 | .114 | .037 |   |  |
| 2.0  | .234                  | .128 | .039 | .228 | .126 | .039 | .217                            | .121 | .037 | .207 | .116 | .036 | .197 | .112 | .035 |   |  |
| 3.0  | .224                  | .119 | .036 | .219 | .117 | .035 | .209                            | .113 | .034 | .200 | .110 | .034 | .192 | .106 | .033 |   |  |
| 4.0  | .213                  | .111 | .033 | .209 | .109 | .032 | .200                            | .106 | .032 | .192 | .103 | .031 | .185 | .100 | .031 |   |  |
| 5.0  | .202                  | .103 | .030 | .198 | .102 | .030 | .190                            | .099 | .029 | .183 | .097 | .029 | .176 | .094 | .028 |   |  |
| 6.0  | .191                  | .096 | .027 | .188 | .095 | .027 | .181                            | .093 | .027 | .174 | .091 | .027 | .168 | .089 | .026 |   |  |
| 7.0  | .181                  | .090 | .025 | .178 | .089 | .025 | .172                            | .087 | .025 | .166 | .085 | .025 | .160 | .083 | .025 |   |  |
| 8.0  | .171                  | .084 | .024 | .169 | .083 | .023 | .163                            | .081 | .023 | .158 | .080 | .023 | .153 | .078 | .023 |   |  |
| 9.0  | .162                  | .079 | .022 | .160 | .078 | .022 | .155                            | .077 | .022 | .150 | .075 | .022 | .146 | .074 | .021 |   |  |
| 10.0 | .154                  | .074 | .021 | .152 | .073 | .020 | .147                            | .072 | .020 | .143 | .071 | .020 | .139 | .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  | .190                  | .190 | .190 | .163 | .163 | .163 | .111                                       | .111 | .111 | .064 | .064 | .064 | .020 | .020 | .020 |   |  |
| 1.0  | .175                  | .157 | .140 | .150 | .134 | .120 | .103                                       | .093 | .083 | .059 | .054 | .048 | .019 | .017 | .016 |   |  |
| 2.0  | .164                  | .132 | .105 | .141 | .114 | .091 | .097                                       | .079 | .063 | .056 | .046 | .037 | .018 | .015 | .012 |   |  |
| 3.0  | .156                  | .114 | .081 | .133 | .098 | .070 | .092                                       | .068 | .049 | .053 | .040 | .029 | .017 | .013 | .009 |   |  |
| 4.0  | .148                  | .100 | .064 | .127 | .087 | .055 | .087                                       | .060 | .039 | .051 | .035 | .023 | .016 | .012 | .008 |   |  |
| 5.0  | .141                  | .089 | .051 | .121 | .077 | .045 | .083                                       | .054 | .032 | .048 | .032 | .019 | .016 | .010 | .006 |   |  |
| 6.0  | .135                  | .081 | .042 | .116 | .070 | .037 | .080                                       | .049 | .026 | .046 | .029 | .016 | .015 | .009 | .005 |   |  |
| 7.0  | .129                  | .074 | .036 | .111 | .064 | .031 | .076                                       | .045 | .022 | .044 | .026 | .013 | .014 | .009 | .004 |   |  |
| 8.0  | .123                  | .068 | .030 | .106 | .059 | .027 | .073                                       | .042 | .019 | .043 | .024 | .011 | .014 | .008 | .004 |   |  |
| 9.0  | .118                  | .063 | .027 | .101 | .055 | .023 | .070                                       | .039 | .016 | .041 | .023 | .010 | .013 | .007 | .003 |   |  |
| 10.0 | .113                  | .059 | .023 | .097 | .051 | .020 | .067                                       | .036 | .015 | .039 | .021 | .009 | .013 | .007 | .003 |   |  |

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2017.7.13

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.480m [K=1.0000]  
Remarks:

## UGR(Unified Glare Rating) Table

|  |     |     |     |     |                  |      |      |      |      |                  |      |      |      |      |
|--|-----|-----|-----|-----|------------------|------|------|------|------|------------------|------|------|------|------|
| NAME: LED LIGHT                                    |     |     |     |     | TYPE:            |      |      |      |      | WEIGHT:          |      |      |      |      |
| SPEC.:   |     |     |     |     | DIM.:            |      |      |      |      | SERIAL No.:      |      |      |      |      |
| MFR.:  |     |     |     |     | SUR.:21cm*16cm   |      |      |      |      | Shielding Angle: |      |      |      |      |
| ceiling/cavity                                     | 0.7 | 0.7 | 0.5 | 0.5 | 0.3              | 0.7  | 0.7  | 0.5  | 0.5  | 0.3              |      |      |      |      |
| walls  | 0.5 | 0.3 | 0.5 | 0.3 | 0.3              | 0.5  | 0.3  | 0.5  | 0.3  | 0.3              |      |      |      |      |
| working plane                                      | 0.2 | 0.2 | 0.2 | 0.2 | 0.2              | 0.2  | 0.2  | 0.2  | 0.2  | 0.2              |      |      |      |      |
| Room dimensions                                    |     |     |     |     | Viewed crosswise |      |      |      |      | Viewed endwise   |      |      |      |      |
| x = 2H y = 2H                                      |     |     |     |     | 19.9             | 21.2 | 20.1 | 21.4 | 21.6 | 19.9             | 21.3 | 20.2 | 21.5 | 21.6 |
| 3H   |     |     |     |     | 19.7             | 21.0 | 20.0 | 21.2 | 21.4 | 19.8             | 21.0 | 20.1 | 21.2 | 21.5 |
| 4H   |     |     |     |     | 19.7             | 20.8 | 20.0 | 21.1 | 21.3 | 19.7             | 20.9 | 20.0 | 21.1 | 21.4 |
| 6H   |     |     |     |     | 19.6             | 20.7 | 19.9 | 20.9 | 21.2 | 19.7             | 20.7 | 20.0 | 21.0 | 21.3 |
| 8H   |     |     |     |     | 19.5             | 20.6 | 19.9 | 20.9 | 21.1 | 19.6             | 20.7 | 20.0 | 20.9 | 21.2 |
| 12H  |     |     |     |     | 19.5             | 20.5 | 19.9 | 20.8 | 21.1 | 19.6             | 20.6 | 20.0 | 20.9 | 21.2 |
| 4H 2H  |     |     |     |     | 19.7             | 20.9 | 20.0 | 21.1 | 21.4 | 19.8             | 20.9 | 20.1 | 21.2 | 21.4 |
| 3H   |     |     |     |     | 19.6             | 20.6 | 20.0 | 20.9 | 21.2 | 19.7             | 20.7 | 20.0 | 21.0 | 21.2 |
| 4H   |     |     |     |     | 19.6             | 20.5 | 19.9 | 20.8 | 21.1 | 19.6             | 20.5 | 20.0 | 20.8 | 21.2 |
| 6H   |     |     |     |     | 19.5             | 20.3 | 19.9 | 20.7 | 21.0 | 19.6             | 20.4 | 20.0 | 20.7 | 21.1 |
| 8H   |     |     |     |     | 19.5             | 20.2 | 19.9 | 20.6 | 21.0 | 19.6             | 20.3 | 20.0 | 20.7 | 21.1 |
| 12H  |     |     |     |     | 19.5             | 20.1 | 19.9 | 20.5 | 20.9 | 19.6             | 20.3 | 20.0 | 20.6 | 21.0 |
| 8H 4H  |     |     |     |     | 19.5             | 20.2 | 19.9 | 20.6 | 20.9 | 19.5             | 20.3 | 19.9 | 20.6 | 21.0 |
| 6H   |     |     |     |     | 19.5             | 20.1 | 19.9 | 20.5 | 20.9 | 19.5             | 20.1 | 20.0 | 20.5 | 20.9 |
| 8H   |     |     |     |     | 19.5             | 20.0 | 19.9 | 20.4 | 20.9 | 19.5             | 20.1 | 20.0 | 20.5 | 20.9 |
| 12H  |     |     |     |     | 19.5             | 19.9 | 19.9 | 20.4 | 20.8 | 19.6             | 20.0 | 20.1 | 20.5 | 20.9 |
| 12H 4H   |     |     |     |     | 19.4             | 20.1 | 19.9 | 20.5 | 20.9 | 19.5             | 20.2 | 19.9 | 20.5 | 20.9 |
| 6H   |     |     |     |     | 19.4             | 20.0 | 19.9 | 20.4 | 20.8 | 19.5             | 20.0 | 20.0 | 20.4 | 20.9 |
| 8H   |     |     |     |     | 19.5             | 19.9 | 19.9 | 20.3 | 20.8 | 19.5             | 20.0 | 20.0 | 20.4 | 20.9 |
| Variations with the observer position at spacings: |     |     |     |     |                  |      |      |      |      |                  |      |      |      |      |
| S = 1.0H   |     |     |     |     | + 1.8 / - 2.9    |      |      |      |      | + 1.6 / - 2.3    |      |      |      |      |
| 1.5H   |     |     |     |     | + 0.9 / - 1.6    |      |      |      |      | + 0.8 / - 1.5    |      |      |      |      |
| 2.0H   |     |     |     |     | + 3.6 / - 7.1    |      |      |      |      | + 3.4 / - 6.7    |      |      |      |      |

CIE Pub.117, 24000 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 11.0)

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2017.7.13

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.480m [K=1.0000]  
Remarks:

## UTILIZATION FACTORS TABLE

|                 |                |                  |
|-----------------|----------------|------------------|
| NAME: LED LIGHT | TYPE:          | WEIGHT:          |
| SPEC.:          | DIM.:          | SERIAL No.:      |
| MFR.:           | SUR.:21cm*16cm | Shielding Angle: |

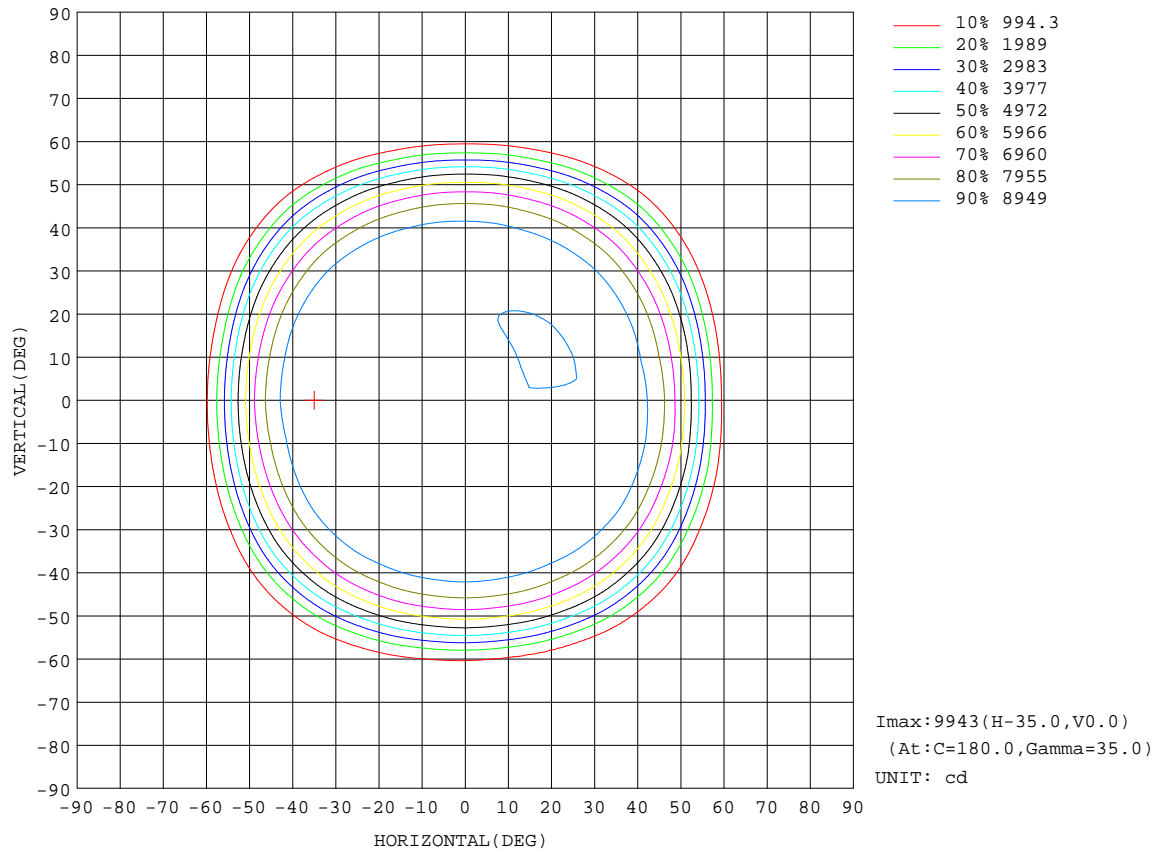
| REFLECTANCE                      |   |     |     |     |     |     |     |     |     |        |
|----------------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|--------|
| Ceiling                          | 0.8   | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.5 | 0.5 | 0.5 | 0      |
| Walls                            | 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) $k(RI) \times RCR = 5$ |     |     |     |     |     |     |     |     |        |
| $k = 0.60$                       | 64  | 53  | 47  | 63  | 53  | 47  | 62  | 52  | 47  | 41     |
| 0.80                             | 75  | 65  | 58  | 74  | 64  | 58  | 72  | 64  | 58  | 52     |
| 1.00                             | 84  | 75  | 69  | 83  | 74  | 68  | 81  | 75  | 68  | 62     |
| 1.25                             | 91  | 83  | 77  | 90  | 82  | 76  | 87  | 81  | 76  | 70     |
| 1.50                             | 95  | 88  | 82  | 94  | 87  | 82  | 91  | 85  | 81  | 74     |
| 2.00                             | 101   | 95  | 90  | 100 | 94  | 89  | 96  | 91  | 88  | 81     |
| 2.50                             | 104   | 98  | 93  | 102 | 97  | 92  | 99  | 94  | 91  | 83     |
| 3.00                             | 107   | 101 | 97  | 105 | 100 | 96  | 101 | 97  | 94  | 86     |
| 4.00                             | 109   | 105 | 101 | 107 | 103 | 100 | 103 | 100 | 97  | 89     |
| 5.00                             | 111   | 107 | 104 | 109 | 105 | 102 | 104 | 102 | 99  | 91     |
| ROOM INDEX                       | UF(total)   |     |     |     |     |     |     |     |     | Direct |
| According to DIN EN 13032-2 2004 |   |     |     |     |     |     |     |     |     |        |
| Suspended                        |   |     |     |     |     |     |     |     |     |        |
| SHRNOM = 1.25                    |   |     |     |     |     |     |     |     |     |        |

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2017.7.13

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.480m [K=1.0000]  
Remarks:

ISOCANDELA DIAGRAM

|                 |                |                  |
|-----------------|----------------|------------------|
| NAME: LED LIGHT | TYPE:          | WEIGHT:          |
| SPEC.:          | DIM.:          | SERIAL No.:      |
| MFR.:           | SUR.:21cm*16cm | Shielding Angle: |

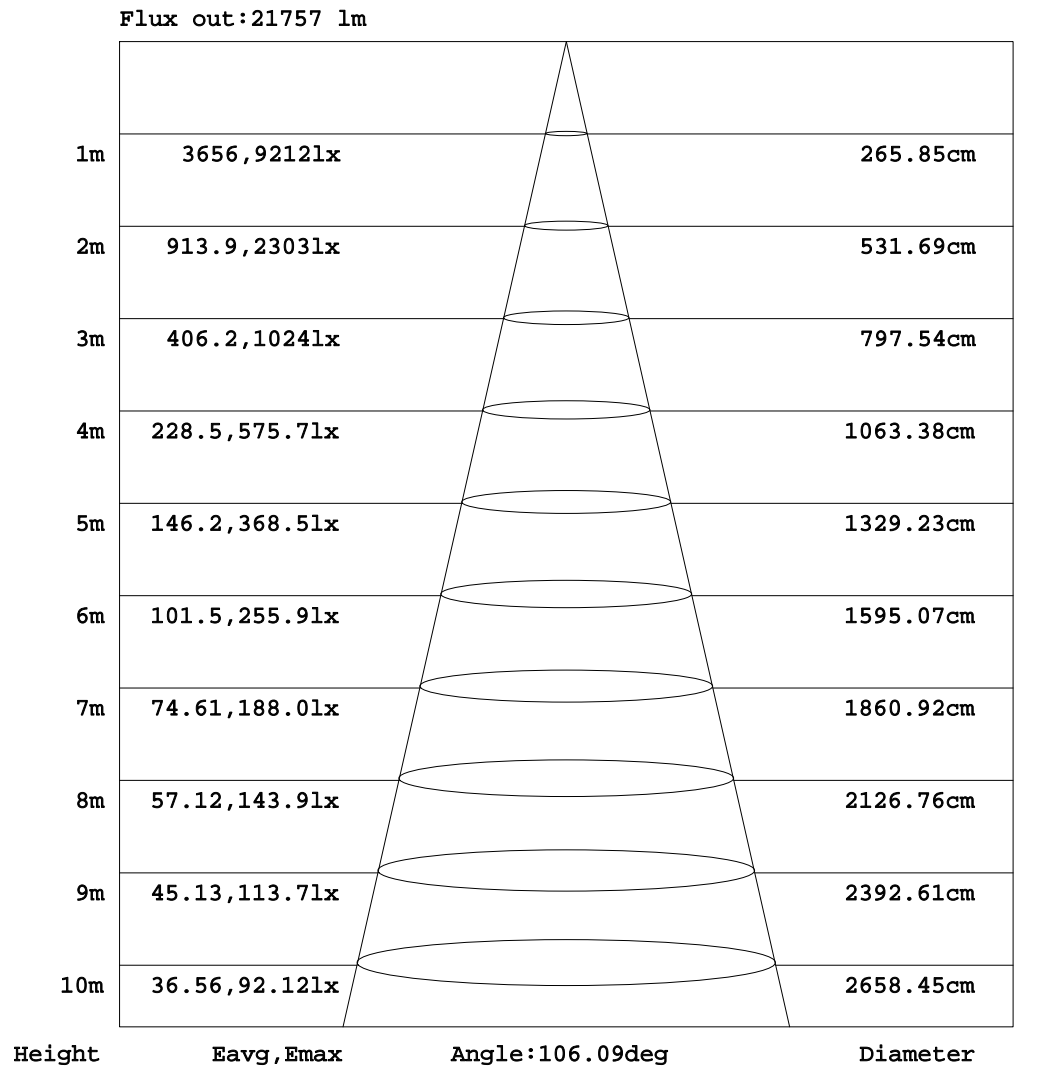


C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2017.7.13

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.480m [K=1.0000]  
Remarks:

AAI Figure

|                 |                |                  |
|-----------------|----------------|------------------|
| NAME: LED LIGHT | TYPE:          | WEIGHT:          |
| SPEC.:          | DIM.:          | SERIAL No.:      |
| MFR.:           | SUR.:21cm*16cm | Shielding Angle: |



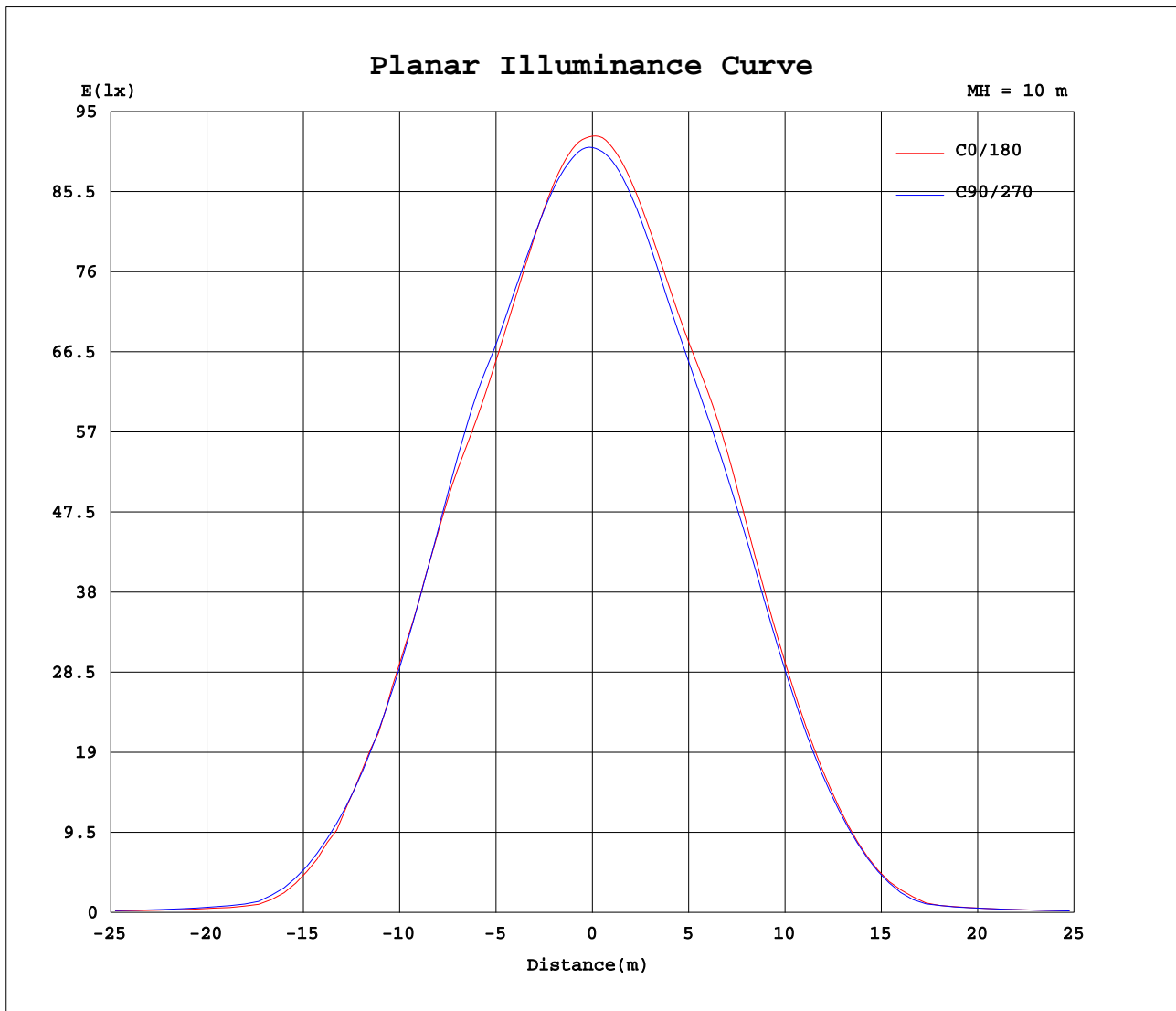
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2017.7.13

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.480m [K=1.0000]  
Remarks:



## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DAMIN  
Test Date: 2017.7.13

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity: 65.0%  
Test Distance: 10.480m [K=1.0000]  
Remarks:

E:\ies文件夹\H4 H5 H6工厂灯嵌灯5050\110\ZGSM-XXX150H5 110.GOS

