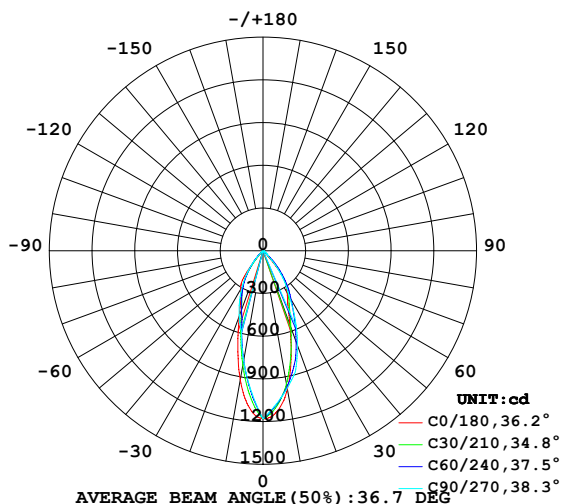


LUMINAIRE PHOTOMETRIC TEST REPORT

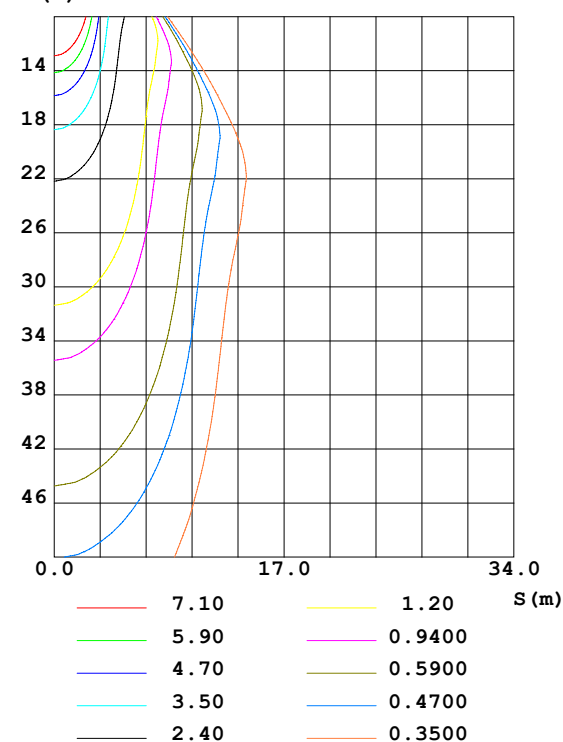
|                                          |        |                   |
|------------------------------------------|--------|-------------------|
| NAME: Batumi Single Head-8W-35D-3000K-80 | TYPE:  | WEIGHT:           |
| DIM.:                                    | SPEC.: | SERIAL No.:       |
| MFR.: DOBAC                              | SUR.:  | PROTECTION ANGLE: |

| DATA OF LAMP      |                                    | PHOTOMETRIC DATA Eff: 87.39 lm/W |        |                    |          |
|-------------------|------------------------------------|----------------------------------|--------|--------------------|----------|
| MODEL             | Batumi Single Head-8W-35D-3000K-80 | I <sub>max</sub> (cd)            | 1181   | S/MH (C0/180)      | 0.56     |
| NOMINAL POWER (W) | 8                                  | LOR (%)                          | 100.0  | S/MH (C90/270)     | 0.48     |
| RATED VOLTAGE (V) | 228                                | TOTAL FLUX (lm)                  | 687.80 | η UP,DN (C0-180)   | 0.0,44.1 |
| NOMINAL FLUX (lm) | 687.797                            | CIE CLASS                        | DIRECT | η UP,DN (C180-360) | 0.0,55.9 |
| LAMPS INSIDE      | 1                                  | η up (%)                         | 0.0    | CIBSE SHR NOM      | 0.50     |
| TEST VOLTAGE (V)  | 227.8                              | η down (%)                       | 100.0  | CIBSE SHR MAX      | 0.60     |

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DOBAC  
Test Date: 2017-11-06

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V1.0.260  
Humidity: 65.0%  
Test Distance: 6.960m [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 |
|----------|-----------------------|--------|-------|--------|--------|-------|-------|-------|----------|-------------|--------------|-----------|
| 5        | 1106                  | 1005   | 982.6 | 1022   | 1134   | 1090  | 1080  | 1071  | 0- 5     | 26.36       | 26.36        | 3.83,3.83 |
| 10       | 920.7                 | 793.7  | 784.5 | 833.9  | 987.6  | 956.9 | 980.0 | 911.9 | 5- 10    | 69.13       | 95.49        | 13.9,13.9 |
| 15       | 684.9                 | 589.0  | 586.5 | 640.1  | 764.3  | 795.4 | 879.7 | 732.1 | 10- 15   | 93.60       | 189.1        | 27.5,27.5 |
| 20       | 487.8                 | 429.0  | 488.5 | 473.3  | 552.3  | 633.2 | 708.8 | 568.2 | 15- 20   | 101.0       | 290.1        | 42.2,42.2 |
| 25       | 374.9                 | 336.7  | 390.6 | 373.6  | 413.8  | 482.5 | 537.9 | 434.0 | 20- 25   | 99.22       | 389.4        | 56.6,56.6 |
| 30       | 313.4                 | 245.6  | 292.6 | 285.0  | 341.5  | 376.9 | 367.0 | 346.0 | 25- 30   | 93.44       | 482.8        | 70.2,70.2 |
| 35       | 251.0                 | 136.4  | 199.0 | 183.4  | 282.2  | 299.8 | 261.2 | 277.5 | 30- 35   | 83.27       | 566.1        | 82.3,82.3 |
| 40       | 77.08                 | 29.20  | 105.3 | 71.76  | 143.3  | 217.4 | 155.4 | 181.6 | 35- 40   | 61.09       | 627.2        | 91.2,91.2 |
| 45       | 13.04                 | 13.77  | 11.70 | 24.06  | 21.73  | 107.2 | 49.51 | 77.93 | 40- 45   | 28.61       | 655.8        | 95.3,95.3 |
| 50       | 11.93                 | 11.60  | 10.67 | 13.69  | 11.63  | 35.57 | 36.66 | 22.85 | 45- 50   | 9.466       | 665.2        | 96.7,96.7 |
| 55       | 11.34                 | 10.55  | 9.633 | 10.31  | 11.04  | 11.49 | 23.80 | 11.84 | 50- 55   | 5.649       | 670.9        | 97.5,97.5 |
| 60       | 10.02                 | 8.981  | 8.599 | 8.117  | 9.801  | 10.19 | 10.95 | 10.52 | 55- 60   | 4.921       | 675.8        | 98.3,98.3 |
| 65       | 8.214                 | 7.451  | 6.463 | 6.342  | 8.048  | 8.756 | 9.372 | 9.094 | 60- 65   | 4.247       | 680.1        | 98.9,98.9 |
| 70       | 6.696                 | 5.477  | 4.327 | 4.658  | 6.543  | 6.877 | 7.794 | 7.106 | 65- 70   | 3.532       | 683.6        | 99.4,99.4 |
| 75       | 4.125                 | 2.862  | 2.191 | 2.535  | 4.813  | 4.421 | 6.215 | 4.403 | 70- 75   | 2.690       | 686.3        | 99.8,99.8 |
| 80       | 0.7755                | 0.4840 | 0     | 0.5908 | 1.130  | 1.794 | 0     | 1.639 | 75- 80   | 1.331       | 687.6        | 100,100   |
| 85       | 0.0731                | 0      | 0     | 0      | 0.1557 | 0     | 0     | 0     | 80- 85   | 0.1735      | 687.8        | 100,100   |
| 90       | 0                     | 0      | 0     | 0      | 0.0093 | 0     | 0     | 0     | 85- 90   | 0.0097      | 687.8        | 100,100   |
| 95       |                       |        |       |        |        |       |       |       | 90- 95   |             |              |           |
| 100      |                       |        |       |        |        |       |       |       | 95-100   |             |              |           |
| 105      |                       |        |       |        |        |       |       |       | 100-105  |             |              |           |
| 110      |                       |        |       |        |        |       |       |       | 105-110  |             |              |           |
| 115      |                       |        |       |        |        |       |       |       | 110-115  |             |              |           |
| 120      |                       |        |       |        |        |       |       |       | 115-120  |             |              |           |
| 125      |                       |        |       |        |        |       |       |       | 120-125  |             |              |           |
| 130      |                       |        |       |        |        |       |       |       | 125-130  |             |              |           |
| 135      |                       |        |       |        |        |       |       |       | 130-135  |             |              |           |
| 140      |                       |        |       |        |        |       |       |       | 135-140  |             |              |           |
| 145      |                       |        |       |        |        |       |       |       | 140-145  |             |              |           |
| 150      |                       |        |       |        |        |       |       |       | 145-150  |             |              |           |
| 155      |                       |        |       |        |        |       |       |       | 150-155  |             |              |           |
| 160      |                       |        |       |        |        |       |       |       | 155-160  |             |              |           |
| 165      |                       |        |       |        |        |       |       |       | 160-165  |             |              |           |
| 170      |                       |        |       |        |        |       |       |       | 165-170  |             |              |           |
| 175      |                       |        |       |        |        |       |       |       | 170-175  |             |              |           |
| 180      |                       |        |       |        |        |       |       |       | 175-180  |             |              |           |
| DEG      | LUMINOUS INTENSITY:cd |        |       |        |        |       |       |       |          | UNIT:lm     |              |           |

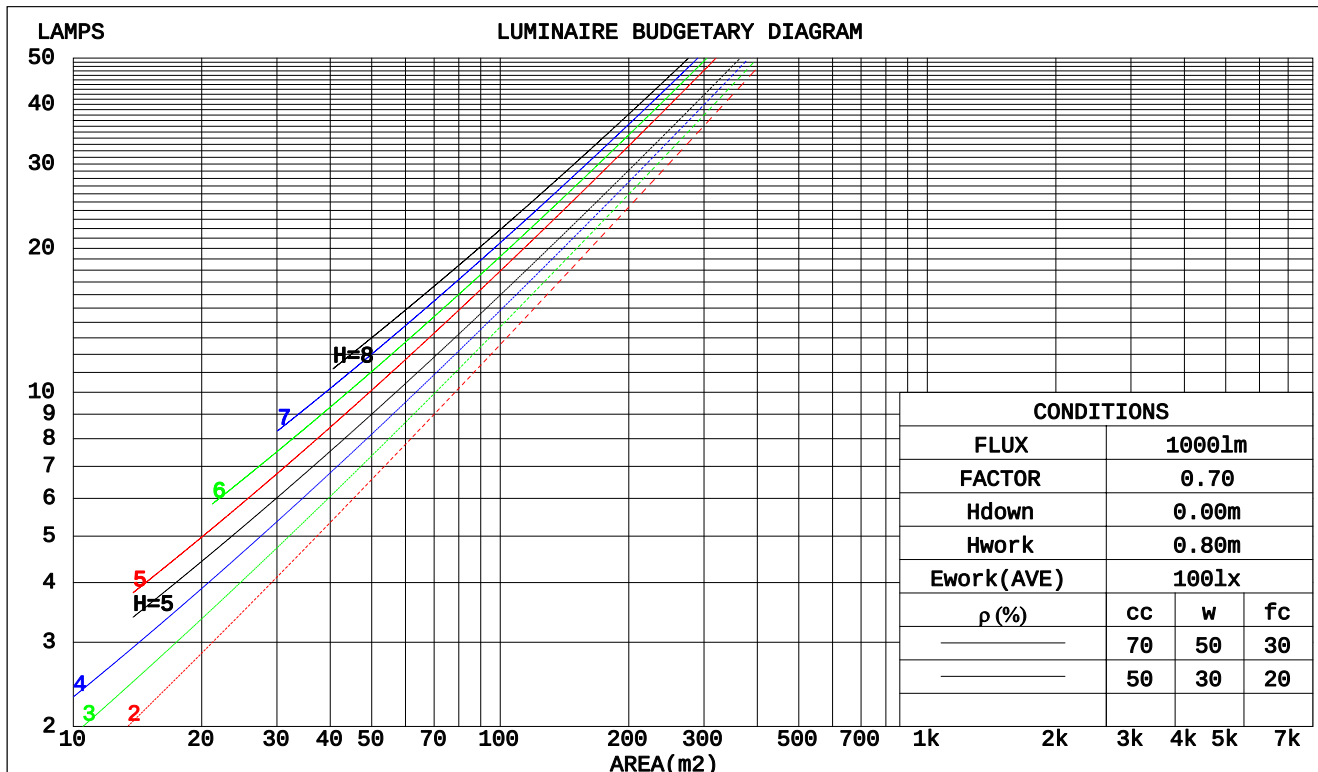
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DOBAC  
Test Date:2017-11-06

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V1.0.260  
Humidity:65.0%  
Test Distance:6.960m [K=1.0000]  
Remarks:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

|                                          |        |                   |
|------------------------------------------|--------|-------------------|
| NAME: Batumi Single Head-8W-35D-3000K-80 | TYPE:  | WEIGHT:           |
| DIM.:                                    | SPEC.: | SERIAL No.:       |
| MFR.: DOBAC                              | SUR.:  | PROTECTION 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 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |   |



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DOBAC  
Test Date: 2017-11-06

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE G0-2000B\_V1 SYSTEM V1.0.260  
Humidity: 65.0%  
Test Distance: 6.960m [K=1.0000]  
Remarks:

**WEC AND CCEC**

|                                          |        |                   |
|------------------------------------------|--------|-------------------|
| NAME: Batumi Single Head-8W-35D-3000K-80 | TYPE:  | WEIGHT:           |
| DIM.:                                    | SPEC.: | SERIAL No.:       |
| MFR.: DOBAC                              | SUR.:  | PROTECTION 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         | .180                  | .102 | .032 | .173 | .099 | .031 | .160                            | .092 | .029 | .149 | .086 | .028 | .138 | .080 | .026 |   |  |
| 2.0         | .172                  | .094 | .029 | .166 | .092 | .028 | .156                            | .086 | .027 | .146 | .082 | .026 | .137 | .077 | .024 |   |  |
| 3.0         | .163                  | .087 | .026 | .158 | .085 | .026 | .149                            | .081 | .025 | .141 | .077 | .024 | .133 | .074 | .023 |   |  |
| 4.0         | .155                  | .081 | .024 | .151 | .079 | .023 | .143                            | .076 | .023 | .136 | .073 | .022 | .129 | .070 | .021 |   |  |
| 5.0         | .147                  | .075 | .022 | .144 | .074 | .021 | .137                            | .071 | .021 | .131 | .069 | .020 | .125 | .067 | .020 |   |  |
| 6.0         | .140                  | .070 | .020 | .137 | .069 | .020 | .131                            | .067 | .020 | .125 | .065 | .019 | .120 | .063 | .019 |   |  |
| 7.0         | .134                  | .066 | .019 | .131 | .065 | .019 | .126                            | .064 | .018 | .121 | .062 | .018 | .116 | .060 | .018 |   |  |
| 8.0         | .128                  | .062 | .018 | .125 | .062 | .017 | .121                            | .060 | .017 | .116 | .059 | .017 | .112 | .057 | .017 |   |  |
| 9.0         | .122                  | .059 | .017 | .120 | .058 | .016 | .116                            | .057 | .016 | .112 | .056 | .016 | .108 | .055 | .016 |   |  |
| 10.0        | .117                  | .056 | .016 | .115 | .056 | .016 | .111                            | .054 | .015 | .108 | .053 | .015 | .104 | .052 | .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 | .147 | .135 | .125 | .100                                       | .093 | .086 | .058 | .054 | .050 | .018 | .017 | .016 |   |
| 2.0             | .156                  | .132 | .113 | .134 | .114 | .097 | .092                                       | .079 | .068 | .053 | .046 | .040 | .017 | .015 | .013 |   |
| 3.0             | .144                  | .114 | .089 | .123 | .098 | .078 | .085                                       | .068 | .054 | .049 | .040 | .032 | .016 | .013 | .010 |   |
| 4.0             | .134                  | .099 | .072 | .115 | .085 | .063 | .079                                       | .060 | .044 | .046 | .035 | .026 | .015 | .011 | .009 |   |
| 5.0             | .125                  | .087 | .060 | .107 | .076 | .052 | .074                                       | .053 | .037 | .043 | .031 | .022 | .014 | .010 | .007 |   |
| 6.0             | .117                  | .078 | .050 | .101 | .068 | .043 | .070                                       | .047 | .031 | .040 | .028 | .018 | .013 | .009 | .006 |   |
| 7.0             | .111                  | .070 | .042 | .095 | .061 | .037 | .066                                       | .043 | .026 | .038 | .025 | .015 | .012 | .008 | .005 |   |
| 8.0             | .105                  | .064 | .036 | .090 | .056 | .031 | .063                                       | .039 | .022 | .036 | .023 | .013 | .012 | .008 | .004 |   |
| 9.0             | .100                  | .059 | .031 | .086 | .051 | .027 | .060                                       | .036 | .019 | .035 | .021 | .012 | .011 | .007 | .004 |   |
| 10.0            | .095                  | .055 | .027 | .082 | .047 | .024 | .057                                       | .033 | .017 | .033 | .020 | .010 | .011 | .006 | .003 |   |

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DOBAC  
Test Date:2017-11-06

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V1.0.260  
Humidity:65.0%  
Test Distance:6.960m [K=1.0000]  
Remarks:

### Uncorrected UGR Table

|                                                    |               |      |      |      |      |                  |      |      |      |      |                   |  |  |  |  |
|----------------------------------------------------|---------------|------|------|------|------|------------------|------|------|------|------|-------------------|--|--|--|--|
| NAME: Batumi Single Head-8W-35D-3000K-80           |               |      |      |      |      | TYPE:            |      |      |      |      | WEIGHT:           |  |  |  |  |
| DIM.:                                              |               |      |      |      |      | SPEC.:           |      |      |      |      | SERIAL No.:       |  |  |  |  |
| MFR.: DOBAC                                        |               |      |      |      |      | SUR.:            |      |      |      |      | PROTECTION 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                                      | 15.6          | 16.5 | 15.8 | 16.7 | 16.9 | 16.2             | 17.2 | 16.5 | 17.3 | 17.5 |                   |  |  |  |  |
| 3H                                                 | 15.8          | 16.6 | 16.0 | 16.8 | 17.0 | 16.2             | 17.1 | 16.5 | 17.3 | 17.5 |                   |  |  |  |  |
| 4H                                                 | 15.8          | 16.7 | 16.1 | 16.9 | 17.1 | 16.2             | 17.0 | 16.5 | 17.2 | 17.5 |                   |  |  |  |  |
| 6H                                                 | 15.8          | 16.6 | 16.1 | 16.8 | 17.0 | 16.1             | 16.9 | 16.4 | 17.1 | 17.4 |                   |  |  |  |  |
| 8H                                                 | 15.7          | 16.5 | 16.0 | 16.7 | 17.0 | 16.1             | 16.8 | 16.4 | 17.1 | 17.3 |                   |  |  |  |  |
| 12H                                                | 15.7          | 16.4 | 16.0 | 16.7 | 17.0 | 16.0             | 16.7 | 16.3 | 17.0 | 17.3 |                   |  |  |  |  |
| 4H 2H                                              | 15.5          | 16.3 | 15.8 | 16.5 | 16.7 | 16.1             | 16.9 | 16.4 | 17.1 | 17.4 |                   |  |  |  |  |
| 3H                                                 | 15.8          | 16.5 | 16.1 | 16.7 | 17.0 | 16.1             | 16.8 | 16.5 | 17.1 | 17.4 |                   |  |  |  |  |
| 4H                                                 | 15.9          | 16.5 | 16.2 | 16.8 | 17.1 | 16.1             | 16.8 | 16.5 | 17.1 | 17.4 |                   |  |  |  |  |
| 6H                                                 | 15.8          | 16.4 | 16.2 | 16.7 | 17.1 | 16.0             | 16.6 | 16.4 | 16.9 | 17.3 |                   |  |  |  |  |
| 8H                                                 | 15.8          | 16.3 | 16.2 | 16.7 | 17.0 | 16.0             | 16.5 | 16.4 | 16.9 | 17.2 |                   |  |  |  |  |
| 12H                                                | 15.7          | 16.2 | 16.1 | 16.6 | 17.0 | 15.9             | 16.4 | 16.3 | 16.8 | 17.2 |                   |  |  |  |  |
| 8H 4H                                              | 15.8          | 16.3 | 16.2 | 16.7 | 17.0 | 16.0             | 16.6 | 16.4 | 16.9 | 17.3 |                   |  |  |  |  |
| 6H                                                 | 15.8          | 16.2 | 16.2 | 16.6 | 17.0 | 15.9             | 16.4 | 16.4 | 16.8 | 17.2 |                   |  |  |  |  |
| 8H                                                 | 15.7          | 16.1 | 16.2 | 16.5 | 16.9 | 15.9             | 16.3 | 16.3 | 16.7 | 17.1 |                   |  |  |  |  |
| 12H                                                | 15.7          | 16.0 | 16.1 | 16.4 | 16.9 | 15.8             | 16.2 | 16.3 | 16.6 | 17.1 |                   |  |  |  |  |
| 12H 4H                                             | 15.7          | 16.2 | 16.1 | 16.6 | 17.0 | 16.0             | 16.5 | 16.4 | 16.8 | 17.2 |                   |  |  |  |  |
| 6H                                                 | 15.7          | 16.1 | 16.1 | 16.5 | 16.9 | 15.9             | 16.3 | 16.3 | 16.7 | 17.1 |                   |  |  |  |  |
| 8H                                                 | 15.7          | 16.0 | 16.1 | 16.4 | 16.9 | 15.8             | 16.2 | 16.3 | 16.6 | 17.1 |                   |  |  |  |  |
| Variations with the observer position at spacings: |               |      |      |      |      |                  |      |      |      |      |                   |  |  |  |  |
| S = 1.0H                                           | + 4.5 / - 3.7 |      |      |      |      | + 2.7 / - 6.1    |      |      |      |      |                   |  |  |  |  |
| 1.5H                                               | + 7.1 / - 3.7 |      |      |      |      | + 5.3 / - 6.0    |      |      |      |      |                   |  |  |  |  |
| 2.0H                                               | + 0.4 / - 0.5 |      |      |      |      | + 0.3 / - 0.7    |      |      |      |      |                   |  |  |  |  |

CIE Pub.117 Corrected 687.8 lm Total Lamp Luminous Flux.(8log(F/F0) = -1.3)

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DOBAC  
Test Date:2017-11-06

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V1.0.260  
Humidity:65.0%  
Test Distance:6.960m [K=1.0000]  
Remarks:

UTILIZATION FACTORS TABLE

|                                          |        |                   |
|------------------------------------------|--------|-------------------|
| NAME: Batumi Single Head-8W-35D-3000K-80 | TYPE:  | WEIGHT:           |
| DIM.:                                    | SPEC.: | SERIAL No.:       |
| MFR.: DOBAC                              | SUR.:  | PROTECTION ANGLE: |

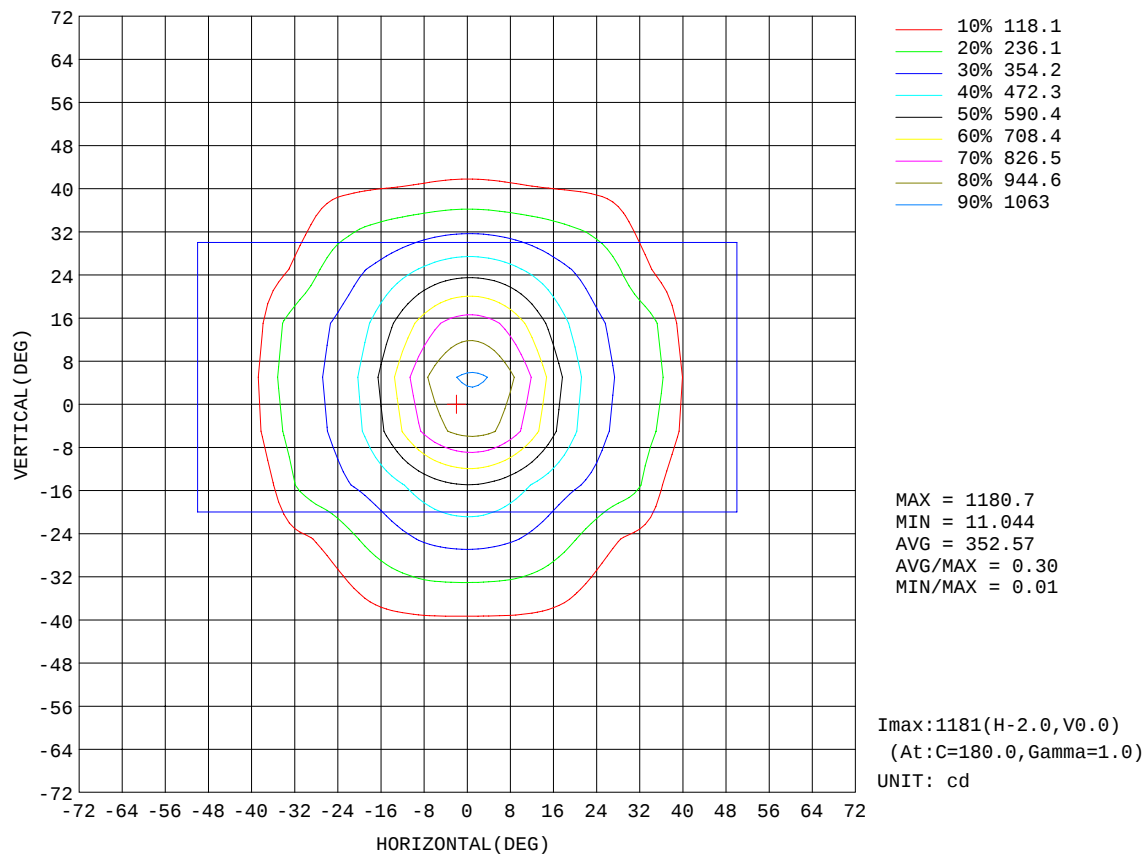
| REFLECTANCE                      |                                                 |     |     |     |     |     |     |     |     |        |
|----------------------------------|-------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|--------|
| Ceiling                          | 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                         | 86                                              | 80  | 76  | 86  | 79  | 76  | 85  | 79  | 75  | 72     |
| 0.80                             | 94                                              | 88  | 84  | 93  | 87  | 84  | 92  | 87  | 83  | 79     |
| 1.00                             | 98                                              | 92  | 89  | 97  | 92  | 88  | 96  | 92  | 88  | 84     |
| 1.25                             | 102                                             | 97  | 93  | 101 | 96  | 93  | 99  | 95  | 92  | 88     |
| 1.50                             | 105                                             | 100 | 97  | 104 | 100 | 96  | 102 | 98  | 95  | 91     |
| 2.00                             | 108                                             | 104 | 100 | 107 | 103 | 100 | 104 | 101 | 98  | 93     |
| 2.50                             | 110                                             | 106 | 103 | 108 | 105 | 102 | 105 | 102 | 100 | 94     |
| 3.00                             | 111                                             | 108 | 105 | 110 | 106 | 104 | 106 | 104 | 102 | 95     |
| 4.00                             | 114                                             | 111 | 108 | 111 | 109 | 107 | 108 | 106 | 104 | 97     |
| 5.00                             | 115                                             | 112 | 111 | 113 | 111 | 109 | 109 | 107 | 106 | 98     |
| ROOM INDEX                       | UF(total)                                       |     |     |     |     |     |     |     |     | Direct |
| According to DIN EN 13032-2 2004 |                                                 |     |     |     |     |     |     |     |     |        |
| Suspended                        |                                                 |     |     |     |     |     |     |     |     |        |
| SHRNOM = 1.25                    |                                                 |     |     |     |     |     |     |     |     |        |

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DOBAC  
Test Date:2017-11-06

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 $\gamma$  Test System:EVERFINE G0-2000B\_V1 SYSTEM V1.0.260  
Humidity:65.0%  
Test Distance:6.960m [K=1.0000]  
Remarks:

# ISOCANDELA DIAGRAM

|                                          |        |                   |
|------------------------------------------|--------|-------------------|
| NAME: Batumi Single Head-8W-35D-3000K-80 | TYPE:  | WEIGHT:           |
| DIM.:                                    | SPEC.: | SERIAL No.:       |
| MFR.: DOBAC                              | SUR.:  | PROTECTION ANGLE: |

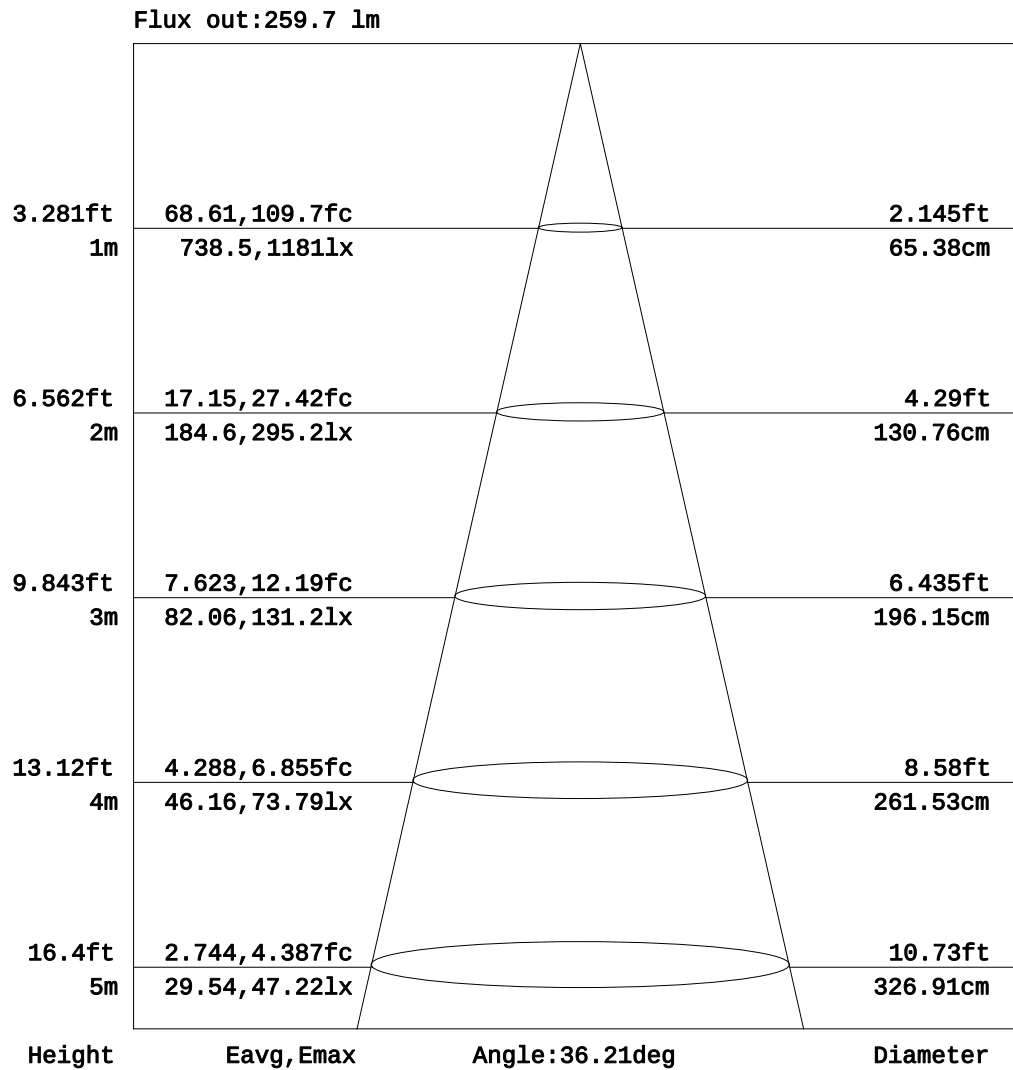


C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DOBAC  
Test Date:2017-11-06

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V1.0.260  
Humidity:65.0%  
Test Distance:6.960m [K=1.0000]  
Remarks:

### AAI Figure

|                                          |        |                   |
|------------------------------------------|--------|-------------------|
| NAME: Batumi Single Head-8W-35D-3000K-80 | TYPE:  | WEIGHT:           |
| DIM.:                                    | SPEC.: | SERIAL No.:       |
| MFR.: DOBAC                              | SUR.:  | PROTECTION ANGLE: |



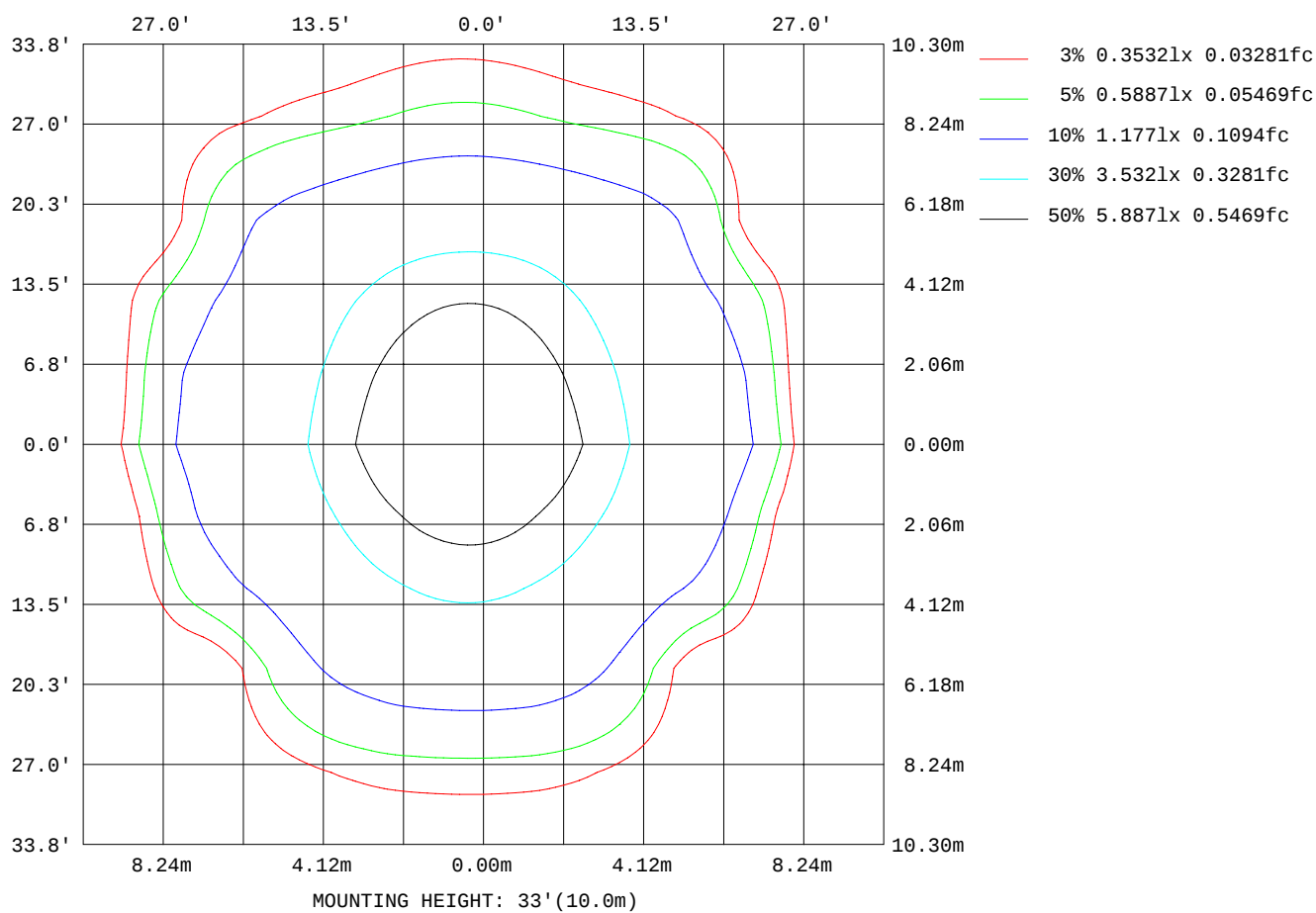
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DOBAC  
Test Date: 2017-11-06

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE G0-2000B\_V1 SYSTEM V1.0.260  
Humidity: 65.0%  
Test Distance: 6.960m [K=1.0000]  
Remarks:

### ISOLUX DIAGRAM

|                                          |        |                   |
|------------------------------------------|--------|-------------------|
| NAME: Batumi Single Head-8W-35D-3000K-80 | TYPE:  | WEIGHT:           |
| DIM.:                                    | SPEC.: | SERIAL No.:       |
| MFR.: DOBAC                              | SUR.:  | PROTECTION ANGLE: |



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DOBAC  
Test Date: 2017-11-06

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE G0-2000B\_V1 SYSTEM V1.0.260  
Humidity: 65.0%  
Test Distance: 6.960m [K=1.0000]  
Remarks:

### Average Luminance Table(CIBSE)

|                                          |        |                   |
|------------------------------------------|--------|-------------------|
| NAME: Batumi Single Head-8W-35D-3000K-80 | TYPE:  | WEIGHT:           |
| DIM.:                                    | SPEC.: | SERIAL No.:       |
| MFR.: DOBAC                              | SUR.:  | PROTECTION ANGLE: |

| Parameter description for average Luminance            | Symbol | Value         | Unit     |
|--------------------------------------------------------|--------|---------------|----------|
| Luminance in Azimuth Plane                             | Bc     | refer Table 2 | cd/sq.m. |
| Intensity at angle Gamma in given azimuth plane        | I      | from data     | cd/klm   |
| Number of lamps                                        | N      | 1             |          |
| Output of each lamp(initial lumens as specified)       | F      | 687.797       | lm       |
| Multiplying factor                                     | K      | 1             |          |
| Luminous area in horizontal plane used in calculations | A      | 0.0055        | sq.m.    |
| Angle to the downward vertical from light centre       | Gamma  | from data     | deg      |

Table 1. Calculation parameters for determination of CIBSE LG3:1996 Average Luminance

| G<br>deg | C plane(deg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|----------|--------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|          | 0            | 10   | 20   | 30   | 40   | 50   | 60   | 70   | 80   | 90   | 100  | 110  | 120  | 130  | 140  | 150  | 160  | 170  | 180  |
| 55       | 3593         | 3506 | 3429 | 3341 | 3304 | 3286 | 3165 | 3084 | 3057 | 3054 | 3057 | 3079 | 3148 | 3220 | 3017 | 3010 | 3346 | 3464 | 3500 |
| 60       | 3643         | 3485 | 3438 | 3301 | 3303 | 3217 | 3125 | 3090 | 3109 | 3127 | 3120 | 3101 | 3132 | 2983 | 2677 | 2730 | 3063 | 3412 | 3564 |
| 65       | 3534         | 3367 | 3316 | 3222 | 3240 | 3152 | 2959 | 2817 | 2777 | 2781 | 2809 | 2865 | 2995 | 2688 | 2570 | 2482 | 2476 | 2699 | 3462 |
| 70       | 3559         | 3383 | 3299 | 2997 | 3179 | 2683 | 2397 | 2281 | 2271 | 2300 | 2338 | 2393 | 2486 | 2254 | 2704 | 2787 | 2817 | 1569 | 3478 |
| 75       | 2898         | 2320 | 2383 | 2175 | 2304 | 1767 | 1494 | 1426 | 1468 | 1539 | 1594 | 1640 | 1673 | 1517 | 2074 | 3007 | 2746 | 2228 | 3381 |
| 80       | 812          | 724  | 982  | 1165 | 633  | 477  | 375  | 214  | 63   | 0    | 69   | 256  | 465  | 453  | 823  | 1648 | 1323 | 1243 | 1183 |
| 85       | 153          | 987  | 545  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 380  | 541  | 325  |

Table 2. Average Luminance(cd/sq.m.) for defined C plane,Gamma angle

| CIBSE<br>Category | Gamma<br>(deg) | Average Luminance     |                      | Patch Luminance     |                      |
|-------------------|----------------|-----------------------|----------------------|---------------------|----------------------|
|                   |                | maximum<br>calculated | specified<br>maximum | maximum<br>measured | specified<br>maximum |
| Category 1        | 55 to 90       | 3643                  | 200                  | ---                 | 500                  |
| Category 2        | 65 to 90       | 3559                  | 200                  | ---                 | 500                  |
| Category 3        | 75 to 90       | 3381                  | 200                  | ---                 | 500                  |

Table 3. Tabulation of Average and Patch Luminance(cd/sq.m.) for defined CIBSE categories

No match

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DOBAC  
Test Date:2017-11-06

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V1.0.260  
Humidity:65.0%  
Test Distance:6.960m [K=1.0000]  
Remarks:

### Average Luminance Table(CIBSE)

|                                          |        |                   |
|------------------------------------------|--------|-------------------|
| NAME: Batumi Single Head-8W-35D-3000K-80 | TYPE:  | WEIGHT:           |
| DIM.:                                    | SPEC.: | SERIAL No.:       |
| MFR.: DOBAC                              | SUR.:  | PROTECTION ANGLE: |

| Parameter description for average Luminance            | Symbol | Value         | Unit     |
|--------------------------------------------------------|--------|---------------|----------|
| Luminance in Azimuth Plane                             | Bc     | refer Table 2 | cd/sq.m. |
| Intensity at angle Gamma in given azimuth plane        | I      | from data     | cd/klm   |
| Number of lamps                                        | N      | 1             |          |
| Output of each lamp(initial lumens as specified)       | F      | 687.797       | lm       |
| Multiplying factor                                     | K      | 1             |          |
| Luminous area in horizontal plane used in calculations | A      | 0.0055        | sq.m.    |
| Angle to the downward vertical from light centre       | Gamma  | from data     | deg      |

Table 1. Calculation parameters for determination of CIBSE LG3:2001 Average Luminance

| G<br>deg | C plane(deg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|----------|--------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|          | 0            | 10   | 20   | 30   | 40   | 50   | 60   | 70   | 80   | 90   | 100  | 110  | 120  | 130  | 140  | 150  | 160  | 170  | 180  |
| 55       | 3593         | 3506 | 3429 | 3341 | 3304 | 3286 | 3165 | 3084 | 3057 | 3054 | 3057 | 3079 | 3148 | 3220 | 3017 | 3010 | 3346 | 3464 | 3500 |
| 60       | 3643         | 3485 | 3438 | 3301 | 3303 | 3217 | 3125 | 3090 | 3109 | 3127 | 3120 | 3101 | 3132 | 2983 | 2677 | 2730 | 3063 | 3412 | 3564 |
| 65       | 3534         | 3367 | 3316 | 3222 | 3240 | 3152 | 2959 | 2817 | 2777 | 2781 | 2809 | 2865 | 2995 | 2688 | 2570 | 2482 | 2476 | 2699 | 3462 |
| 70       | 3559         | 3383 | 3299 | 2997 | 3179 | 2683 | 2397 | 2281 | 2271 | 2300 | 2338 | 2393 | 2486 | 2254 | 2704 | 2787 | 2817 | 1569 | 3478 |
| 75       | 2898         | 2320 | 2383 | 2175 | 2304 | 1767 | 1494 | 1426 | 1468 | 1539 | 1594 | 1640 | 1673 | 1517 | 2074 | 3007 | 2746 | 2228 | 3381 |
| 80       | 812          | 724  | 982  | 1165 | 633  | 477  | 375  | 214  | 63   | 0    | 69   | 256  | 465  | 453  | 823  | 1648 | 1323 | 1243 | 1183 |
| 85       | 153          | 987  | 545  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 380  | 541  | 325  |

Table 2. Average Luminance(cd/sq.m.) for defined C plane,Gamma angle

| range<br>(deg) | Maximum<br>measured | Average Luminance(cd/sq.m)                             |                                     |                                    |                                    |
|----------------|---------------------|--------------------------------------------------------|-------------------------------------|------------------------------------|------------------------------------|
|                |                     | Maximum limit for screen type & software category used |                                     |                                    |                                    |
|                |                     | Type I,II screen<br>Some neg.s'ware                    | Type I,II screen<br>Only pos.s'ware | Type III screen<br>Some neg.s'ware | Type III screen<br>Only pos.s'ware |
| 55 to 90       | 3643                | 1000                                                   | 1500                                | 200                                | 500                                |
| 65 to 90       | 3559                | 1000                                                   | 1500                                | 200                                | 500                                |

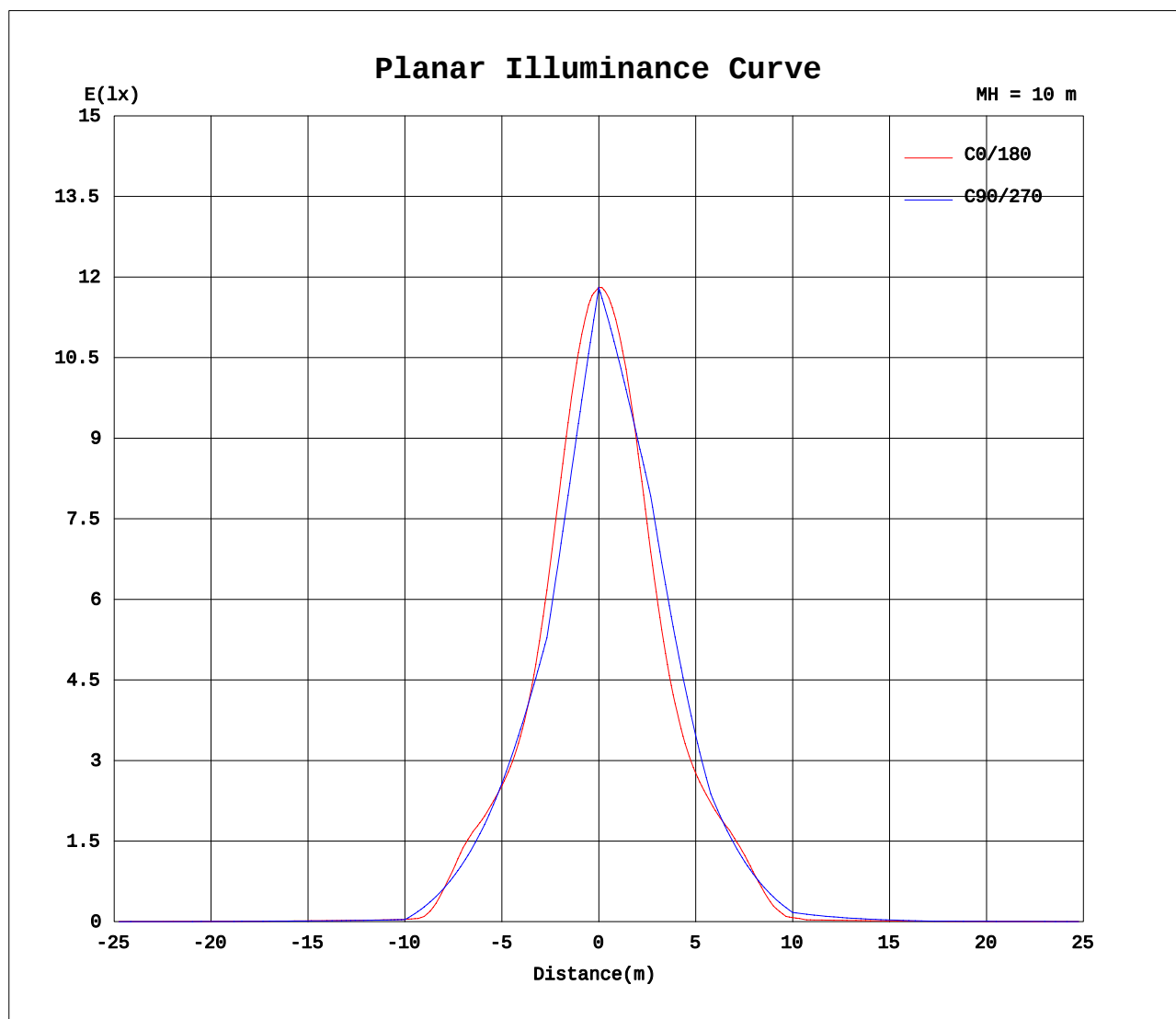
Table 3. Tabulation of average luminance(cd/sq.m.) and luminance limits

No match

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DOBAC  
Test Date:2017-11-06

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V1.0.260  
Humidity:65.0%  
Test Distance:6.960m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DOBAC  
Test Date: 2017-11-06

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE G0-2000B\_V1 SYSTEM V1.0.260  
Humidity: 65.0%  
Test Distance: 6.960m [K=1.0000]  
Remarks:







