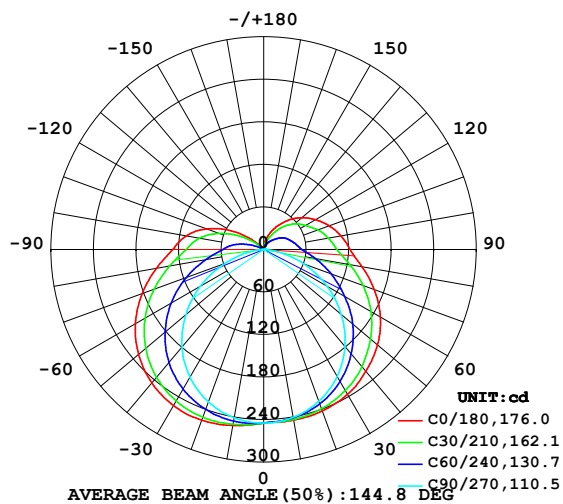


## LUMINAIRE PHOTOMETRIC TEST REPORT

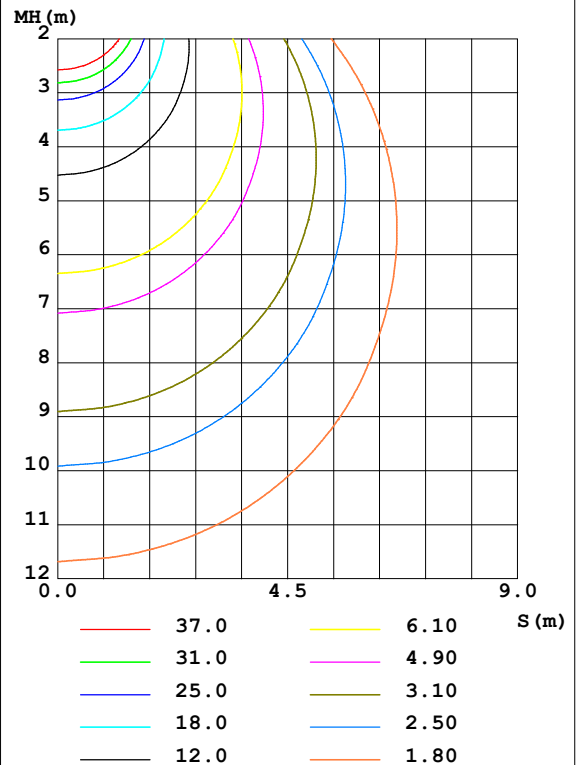
|  |             |                  |
|--|-------------|------------------|
| Test:U:230.39V I:0.0488A P:9.9334W PF:0.8840 Freq:49.99Hz Lamp Flux:1230.16x1 lm |             |                  |
| NAME: UP-ML13-600-10W-C3-5700K   | TYPE:10W    | WEIGHT:          |
| SPEC.:5700K  | DIM.:       | SERIAL No.:      |
| MFR.:  | SUR.:0.0327 | Shielding Angle: |

| DATA OF LAMP                |         | PHOTOMETRIC DATA Eff: 123.84 lm/W |         |                     |            |
|-----------------------------|---------|-----------------------------------|---------|---------------------|------------|
| MODEL-ML13-600-10W-C3-5700K |         | I <sub>max</sub> (cd)             | 256.4   | S/MH (C0/180)       | 1.55       |
| NOMINAL POWER (W)           | 10      | LOR (%)                           | 100.0   | S/MH (C90/270)      | 1.26       |
| RATED VOLTAGE (V)           | 230     | TOTAL FLUX (lm)                   | 1230.2  | η UP, DN (C0-180)   | 10.0, 40.3 |
| NOMINAL FLUX (lm)           | 1230.16 | CIE CLASS                         | SEMI-D. | η UP, DN (C180-360) | 8.9, 40.9  |
| LAMPS INSIDE                | 1       | η up (%)                          | 18.8    | CIBSE SHR NOM       | 1.50       |
| TEST VOLTAGE (V)            | 230     | η down (%)                        | 81.2    | CIBSE SHR MAX       | 1.55       |

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators:  
Test Date: 2019-07-25

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000H\_V1 SYSTEM V2.0.405.8  
Humidity: 65.0%  
Test Distance: 8.690m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

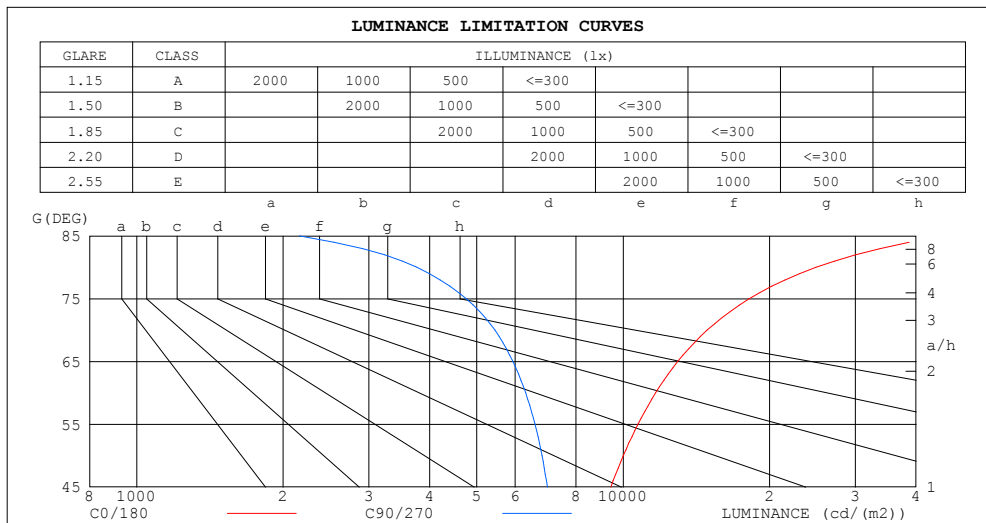
| $\gamma$ | C0                    | C45   | C90   | C135  | C180  | C225  | C270  | C315  | $\gamma$ | $\Phi$ zone | $\Phi$ total | %lum, lamp |
|----------|-----------------------|-------|-------|-------|-------|-------|-------|-------|----------|-------------|--------------|------------|
| 10       | 244.4                 | 242.3 | 240.5 | 247.8 | 252.2 | 248.1 | 241.0 | 242.7 | 0- 10    | 23.41       | 23.41        | 1.9,1.9    |
| 20       | 242.4                 | 235.3 | 228.0 | 245.0 | 256.3 | 245.9 | 228.8 | 235.9 | 10- 20   | 68.80       | 92.21        | 7.5,7.5    |
| 30       | 236.2                 | 222.6 | 207.2 | 236.0 | 254.3 | 237.2 | 208.1 | 223.3 | 20- 30   | 108.5       | 200.8        | 16.3,16.3  |
| 40       | 224.2                 | 204.0 | 178.5 | 219.9 | 245.6 | 221.7 | 179.4 | 204.5 | 30- 40   | 138.1       | 338.9        | 27.5,27.5  |
| 50       | 209.6                 | 180.5 | 143.1 | 197.6 | 230.4 | 199.5 | 143.6 | 180.3 | 40- 50   | 154.0       | 492.8        | 40.1,40.1  |
| 60       | 190.0                 | 153.2 | 103.0 | 170.3 | 209.0 | 171.8 | 102.6 | 151.9 | 50- 60   | 154.9       | 647.7        | 52.7,52.7  |
| 70       | 166.0                 | 125.4 | 60.94 | 139.5 | 182.2 | 140.5 | 58.77 | 122.0 | 60- 70   | 141.4       | 789.1        | 64.1,64.1  |
| 80       | 141.0                 | 98.77 | 21.36 | 108.2 | 153.7 | 108.8 | 18.86 | 94.15 | 70- 80   | 117.6       | 906.8        | 73.7,73.7  |
| 90       | 121.8                 | 78.57 | 1.128 | 82.10 | 128.4 | 83.41 | 1.456 | 76.17 | 80- 90   | 91.69       | 998.5        | 81.2,81.2  |
| 100      | 110.9                 | 69.38 | 1.322 | 64.90 | 111.0 | 66.68 | 1.515 | 68.05 | 90-100   | 75.64       | 1074         | 87.3,87.3  |
| 110      | 98.34                 | 60.47 | 1.700 | 41.57 | 85.50 | 42.68 | 1.752 | 56.72 | 100-110  | 59.74       | 1134         | 92.2,92.2  |
| 120      | 84.49                 | 50.47 | 1.446 | 20.03 | 53.03 | 19.66 | 1.696 | 47.57 | 110-120  | 41.44       | 1175         | 95.5,95.5  |
| 130      | 69.83                 | 40.26 | 1.609 | 6.819 | 22.00 | 5.724 | 1.546 | 39.27 | 120-130  | 25.99       | 1201         | 97.7,97.7  |
| 140      | 53.90                 | 28.80 | 1.964 | 3.244 | 4.506 | 2.483 | 1.789 | 27.26 | 130-140  | 14.75       | 1216         | 98.9,98.9  |
| 150      | 37.73                 | 17.86 | 2.326 | 2.737 | 3.009 | 2.034 | 2.063 | 18.74 | 140-150  | 8.217       | 1224         | 99.5,99.5  |
| 160      | 22.99                 | 9.679 | 2.818 | 2.593 | 2.561 | 2.177 | 2.269 | 10.91 | 150-160  | 4.044       | 1228         | 99.8,99.8  |
| 170      | 10.41                 | 4.774 | 3.011 | 2.584 | 2.257 | 2.367 | 2.837 | 5.070 | 160-170  | 1.552       | 1230         | 100,100    |
| 180      | 2.350                 | 2.815 | 2.986 | 2.872 | 2.325 | 2.697 | 2.968 | 2.884 | 170-180  | 0.3252      | 1230         | 100,100    |
| DEG      | LUMINOUS INTENSITY:cd |       |       |       |       |       |       |       |          | UNIT:lm     |              |            |

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2019-07-25

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.405.8  
 Humidity:65.0%  
 Test Distance:8.690m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

|  |             |                  |
|--|-------------|------------------|
| Test:U:230.39V I:0.0488A P:9.9334W PF:0.8840 Freq:49.99Hz Lamp Flux:1230.16x1 lm |             |                  |
| NAME: UP-ML13-600-10W-C3-5700K   | TYPE:10W    | WEIGHT:          |
| SPEC.:5700K  | DIM.:       | SERIAL No.:      |
| MFR.:  | SUR.:0.0327 | Shielding Angle: |



| LUMINANCE cd/(m2) |        |         |
|-------------------|--------|---------|
| G (DEG)           | C0/180 | C90/270 |
| 85                | 45705  | 2161    |
| 80                | 24915  | 3764    |
| 75                | 18167  | 4756    |
| 70                | 14894  | 5451    |
| 65                | 12952  | 5936    |
| 60                | 11659  | 6303    |
| 55                | 10726  | 6585    |
| 50                | 10005  | 6811    |
| 45                | 9439   | 6986    |

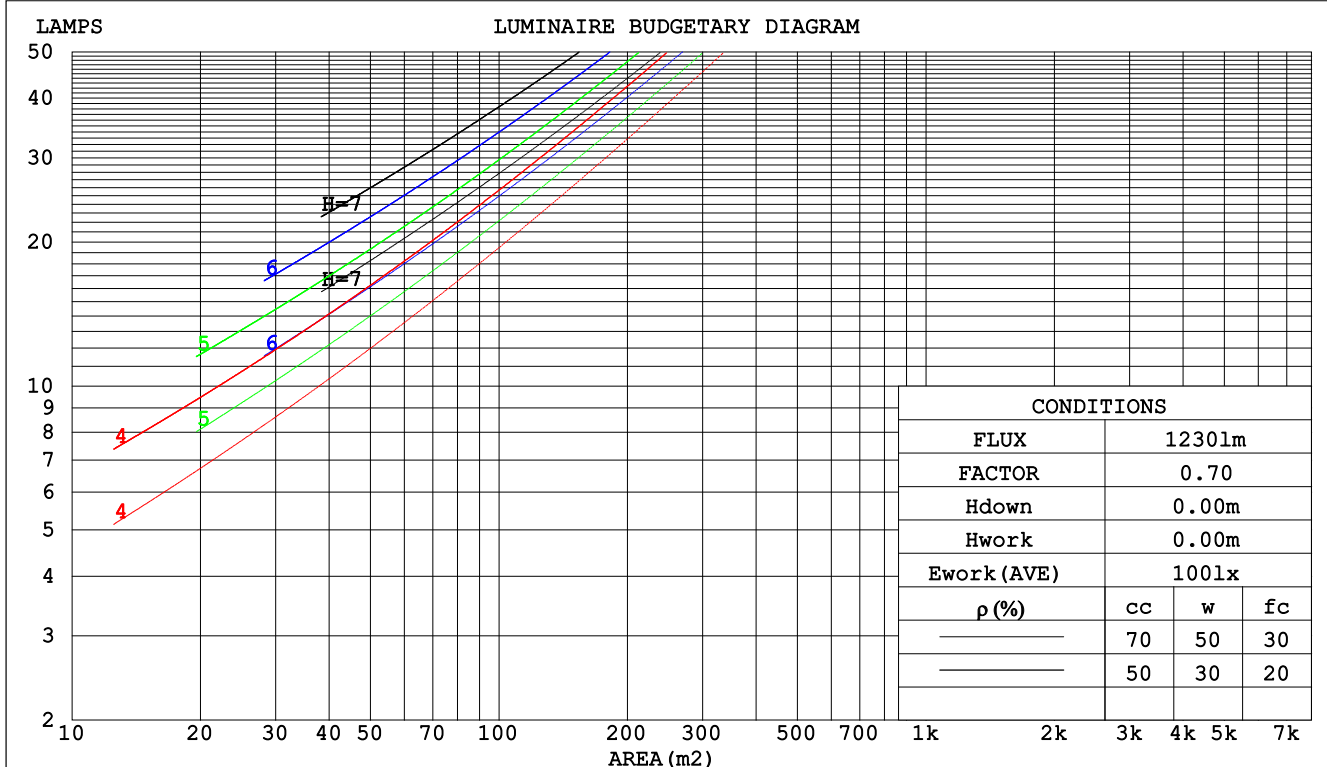
C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2019-07-25

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.405.8  
Humidity:65.0%  
Test Distance:8.690m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

|  |             |                  |
|--|-------------|------------------|
| Test:U:230.39V I:0.0488A P:9.9334W PF:0.8840 Freq:49.99Hz Lamp Flux:1230.16x1 lm |             |                  |
| NAME: UP-ML13-600-10W-C3-5700K   | TYPE:10W    | WEIGHT:          |
| SPEC.:5700K  | DIM.:       | SERIAL No.:      |
| MFR.:  | SUR.:0.0327 | Shielding Angle: |

| pcc  | 80%                   |      |      | 70%  |      |      | 50%                             |      |      | 30% |     |     | 10% |     |     | 0   |
|------|-----------------------|------|------|------|------|------|---------------------------------|------|------|-----|-----|-----|-----|-----|-----|-----|
| pw   | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%                             | 30%  | 10%  | 50% | 30% | 10% | 50% | 30% | 10% | 0   |
| pfc  | 20%                   |      |      | 20%  |      |      | 20%                             |      |      | 20% |     |     | 20% |     |     | 0   |
| RCR  | RCR:Room Cavity Ratio |      |      |      |      |      | Coefficients of Utilization(CU) |      |      |     |     |     |     |     |     |     |
| 0.0  | 1.15                  | 1.15 | 1.15 | 1.10 | 1.10 | 1.10 | 1.01                            | 1.01 | 1.01 | .92 | .92 | .92 | .85 | .85 | .85 | .81 |
| 1.0  | .95                   | .90  | .85  | .91  | .86  | .82  | .83                             | .79  | .76  | .76 | .73 | .70 | .70 | .67 | .65 | .61 |
| 2.0  | .81                   | .74  | .67  | .78  | .71  | .65  | .71                             | .65  | .60  | .65 | .60 | .56 | .59 | .55 | .52 | .49 |
| 3.0  | .71                   | .61  | .54  | .67  | .59  | .52  | .62                             | .55  | .49  | .56 | .51 | .46 | .51 | .47 | .43 | .40 |
| 4.0  | .62                   | .52  | .45  | .59  | .50  | .44  | .54                             | .47  | .41  | .50 | .43 | .38 | .45 | .40 | .36 | .33 |
| 5.0  | .55                   | .45  | .38  | .53  | .44  | .37  | .48                             | .41  | .35  | .44 | .38 | .33 | .40 | .35 | .31 | .28 |
| 6.0  | .49                   | .40  | .33  | .47  | .38  | .32  | .43                             | .36  | .30  | .40 | .33 | .28 | .36 | .31 | .27 | .24 |
| 7.0  | .44                   | .35  | .29  | .42  | .34  | .28  | .39                             | .32  | .26  | .36 | .30 | .25 | .33 | .28 | .23 | .21 |
| 8.0  | .40                   | .31  | .25  | .39  | .30  | .25  | .36                             | .28  | .23  | .33 | .27 | .22 | .30 | .25 | .21 | .19 |
| 9.0  | .37                   | .28  | .22  | .35  | .27  | .22  | .33                             | .26  | .21  | .30 | .24 | .20 | .28 | .23 | .19 | .17 |
| 10.0 | .34                   | .26  | .20  | .32  | .25  | .20  | .30                             | .23  | .19  | .28 | .22 | .18 | .26 | .21 | .17 | .15 |



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2019-07-25

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.405.8  
 Humidity:65.0%  
 Test Distance:8.690m [K=1.0000]  
 Remarks:

### WEC AND CCEC

|  |             |                  |
|--|-------------|------------------|
| Test:U:230.39V I:0.0488A P:9.9334W PF:0.8840 Freq:49.99Hz Lamp Flux:1230.16x1 lm |             |                  |
| NAME: UP-ML13-600-10W-C3-5700K   | TYPE:10W    | WEIGHT:          |
| SPEC.:5700K  | DIM.:       | SERIAL No.:      |
| MFR.:  | SUR.:0.0327 | Shielding Angle: |

| pcc  | 80%                   |      |      | 70%  |      |      | 50%                             |      |      | 30%  |      |      | 10%  |      |      | 0 |  |
|------|-----------------------|------|------|------|------|------|---------------------------------|------|------|------|------|------|------|------|------|---|--|
| pw   | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%                             | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |  |
| pfc  | 20%                   |      |      | 20%  |      |      | 20%                             |      |      | 20%  |      |      | 20%  |      |      | 0 |  |
| RCR  | RCR:Room Cavity Ratio |      |      |      |      |      | Wall Exitance Coefficients(WEC) |      |      |      |      |      |      |      |      |   |  |
| 0.0  |                       |      |      |      |      |      |                                 |      |      |      |      |      |      |      |      |   |  |
| 1.0  | .387                  | .220 | .070 | .374 | .213 | .068 | .349                            | .200 | .064 | .327 | .189 | .061 | .306 | .178 | .057 |   |  |
| 2.0  | .335                  | .184 | .056 | .323 | .178 | .055 | .301                            | .167 | .052 | .281 | .158 | .049 | .262 | .148 | .047 |   |  |
| 3.0  | .297                  | .158 | .047 | .287 | .154 | .046 | .267                            | .145 | .044 | .249 | .136 | .042 | .231 | .128 | .040 |   |  |
| 4.0  | .268                  | .139 | .041 | .258 | .135 | .040 | .240                            | .127 | .038 | .223 | .120 | .036 | .208 | .113 | .034 |   |  |
| 5.0  | .243                  | .124 | .036 | .235 | .120 | .035 | .218                            | .114 | .033 | .203 | .107 | .032 | .189 | .101 | .030 |   |  |
| 6.0  | .223                  | .112 | .032 | .215 | .109 | .031 | .200                            | .102 | .030 | .186 | .097 | .028 | .173 | .091 | .027 |   |  |
| 7.0  | .205                  | .102 | .029 | .198 | .099 | .028 | .185                            | .093 | .027 | .172 | .088 | .026 | .160 | .083 | .024 |   |  |
| 8.0  | .191                  | .093 | .026 | .184 | .091 | .026 | .171                            | .086 | .024 | .160 | .081 | .023 | .148 | .076 | .022 |   |  |
| 9.0  | .178                  | .086 | .024 | .171 | .084 | .023 | .160                            | .079 | .022 | .149 | .075 | .021 | .139 | .070 | .020 |   |  |
| 10.0 | .166                  | .080 | .022 | .160 | .078 | .022 | .150                            | .073 | .021 | .140 | .069 | .020 | .130 | .065 | .019 |   |  |

| pcc  | 80%                   |      |      | 70%  |      |      | 50%  |      |      | 30%  |      |      | 10%  |      |      | 0 |
|------|-----------------------|------|------|--|------|------|------|------|------|------|------|------|------|------|------|---|
| pw   | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |
| pfc  | 20%                   |      |      | 20%  |      |      | 20%  |      |      | 20%  |      |      | 20%  |      |      | 0 |
| RCR  | RCR:Room Cavity Ratio |      |      | Ceiling Cavity Exitance Coefficients(CCEC) |      |      |      |      |      |      |      |      |      |      |      |   |
| 0.0  | .334                  | .334 | .334 | .285                                       | .285 | .285 | .195 | .195 | .195 | .112 | .112 | .112 | .036 | .036 | .036 |   |
| 1.0  | .330                  | .300 | .273 | .283                                       | .258 | .235 | .193 | .177 | .162 | .111 | .103 | .094 | .036 | .033 | .031 |   |
| 2.0  | .324                  | .277 | .238 | .277                                       | .239 | .206 | .190 | .165 | .144 | .110 | .096 | .084 | .035 | .031 | .027 |   |
| 3.0  | .316                  | .261 | .217 | .271                                       | .225 | .188 | .186 | .156 | .132 | .107 | .091 | .078 | .035 | .030 | .025 |   |
| 4.0  | .309                  | .248 | .203 | .265                                       | .215 | .176 | .182 | .150 | .124 | .105 | .088 | .073 | .034 | .029 | .024 |   |
| 5.0  | .301                  | .239 | .193 | .258                                       | .207 | .168 | .178 | .144 | .118 | .103 | .085 | .070 | .033 | .028 | .023 |   |
| 6.0  | .293                  | .231 | .186 | .252                                       | .200 | .162 | .174 | .140 | .115 | .101 | .082 | .068 | .033 | .027 | .022 |   |
| 7.0  | .286                  | .224 | .181 | .246                                       | .194 | .157 | .170 | .136 | .112 | .099 | .080 | .066 | .032 | .026 | .022 |   |
| 8.0  | .280                  | .219 | .177 | .241                                       | .190 | .154 | .167 | .133 | .109 | .097 | .079 | .065 | .031 | .026 | .022 |   |
| 9.0  | .273                  | .214 | .174 | .236                                       | .186 | .152 | .163 | .130 | .108 | .095 | .077 | .064 | .031 | .025 | .021 |   |
| 10.0 | .268                  | .210 | .171 | .231                                       | .182 | .150 | .160 | .128 | .106 | .093 | .076 | .063 | .030 | .025 | .021 |   |

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2019-07-25

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.405.8  
Humidity:65.0%  
Test Distance:8.690m [K=1.0000]  
Remarks:

UGR(Unified Glare Rating) Table

|  |                  |      |      |      |             |                |      |                  |      |      |
|--|------------------|------|------|------|-------------|----------------|------|------------------|------|------|
| Test:U:230.39V I:0.0488A P:9.9334W PF:0.8840 Freq:49.99Hz Lamp Flux:1230.16x1 lm |                  |      |      |      |             |                |      |                  |      |      |
| NAME: UP-ML13-600-10W-C3-5700K   |                  |      |      |      | TYPE:10W    |                |      | WEIGHT:          |      |      |
| SPEC.:5700K  |                  |      |      |      | DIM.:       |                |      | SERIAL No.:      |      |      |
| MFR.:  |                  |      |      |      | SUR.:0.0327 |                |      | 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  | 20.3             | 21.7 | 20.8 | 22.2 | 22.8        | 17.9           | 19.3 | 18.4             | 19.8 | 20.4 |
| 3H   | 23.0             | 24.2 | 23.5 | 24.8 | 25.4        | 19.4           | 20.7 | 19.9             | 21.2 | 21.8 |
| 4H   | 24.4             | 25.7 | 25.0 | 26.2 | 26.9        | 20.0           | 21.2 | 20.5             | 21.7 | 22.4 |
| 6H   | 26.1             | 27.2 | 26.7 | 27.8 | 28.5        | 20.4           | 21.5 | 20.9             | 22.1 | 22.7 |
| 8H   | 27.0             | 28.1 | 27.6 | 28.7 | 29.3        | 20.4           | 21.5 | 21.0             | 22.1 | 22.8 |
| 12H  | 28.0             | 29.1 | 28.6 | 29.7 | 30.4        | 20.5           | 21.5 | 21.1             | 22.1 | 22.8 |
| 4H 2H  | 20.8             | 22.0 | 21.4 | 22.6 | 23.3        | 19.1           | 20.3 | 19.7             | 20.9 | 21.5 |
| 3H   | 23.8             | 24.8 | 24.4 | 25.4 | 26.1        | 20.9           | 21.9 | 21.5             | 22.5 | 23.2 |
| 4H   | 25.4             | 26.4 | 26.1 | 27.0 | 27.8        | 21.7           | 22.6 | 22.3             | 23.3 | 24.0 |
| 6H   | 27.3             | 28.1 | 27.9 | 28.8 | 29.6        | 22.3           | 23.2 | 23.0             | 23.8 | 24.6 |
| 8H   | 28.3             | 29.1 | 29.0 | 29.8 | 30.6        | 22.5           | 23.3 | 23.2             | 24.0 | 24.8 |
| 12H  | 29.5             | 30.2 | 30.2 | 30.9 | 31.7        | 22.6           | 23.4 | 23.3             | 24.1 | 24.9 |
| 8H 4H  | 25.8             | 26.6 | 26.4 | 27.3 | 28.0        | 22.8           | 23.6 | 23.5             | 24.3 | 25.1 |
| 6H   | 27.9             | 28.6 | 28.6 | 29.3 | 30.1        | 23.9           | 24.5 | 24.6             | 25.2 | 26.1 |
| 8H   | 29.2             | 29.8 | 29.9 | 30.5 | 31.3        | 24.3           | 24.9 | 25.0             | 25.6 | 26.5 |
| 12H  | 30.6             | 31.1 | 31.3 | 31.9 | 32.7        | 24.6           | 25.2 | 25.4             | 25.9 | 26.8 |
| 12H 4H   | 25.8             | 26.5 | 26.5 | 27.2 | 28.0        | 23.2           | 23.9 | 23.9             | 24.6 | 25.4 |
| 6H   | 28.0             | 28.6 | 28.8 | 29.4 | 30.2        | 24.5           | 25.1 | 25.2             | 25.8 | 26.6 |
| 8H   | 29.4             | 29.9 | 30.1 | 30.7 | 31.5        | 25.1           | 25.6 | 25.8             | 26.4 | 27.2 |
| Variations with the observer position at spacings:                               |                  |      |      |      |             |                |      |                  |      |      |
| 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 / - 0.3    |      |      |      |             | + 0.2 / - 0.4  |      |                  |      |      |

CIE Pub.117, 1230 lm Total Lamp Luminous Flux Corrected ( $8\log(F/F_0) = 0.7$ )

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2019-07-25

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.405.8  
Humidity:65.0%  
Test Distance:8.690m [K=1.0000]  
Remarks:

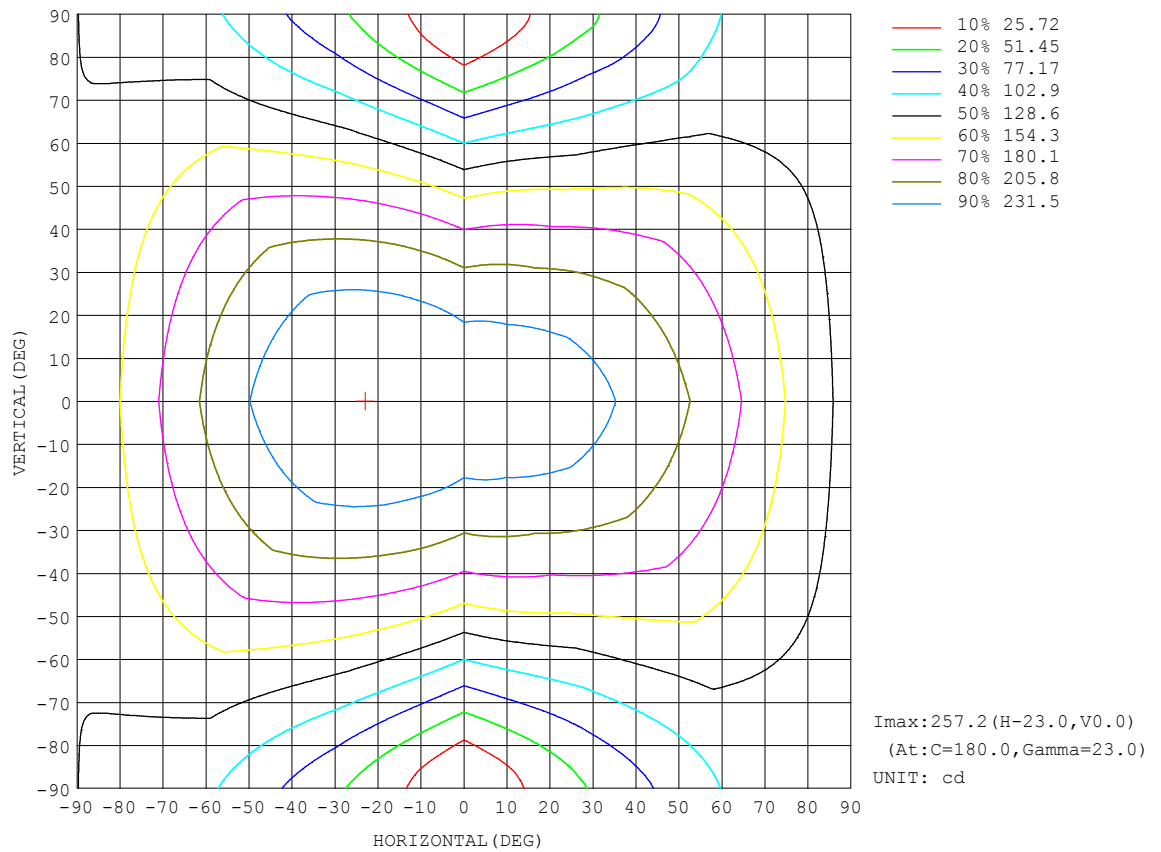
```

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.405.8
Humidity:65.0%
Test Distance:8.690m [K=1.0000]
Remarks:

```

## ISOCANDELA DIAGRAM

|  |             |                  |
|--|-------------|------------------|
| Test:U:230.39V I:0.0488A P:9.9334W PF:0.8840 Freq:49.99Hz Lamp Flux:1230.16x1 lm |             |                  |
| NAME: UP-ML13-600-10W-C3-5700K   | TYPE:10W    | WEIGHT:          |
| SPEC.:5700K  | DIM.:       | SERIAL No.:      |
| MFR.:  | SUR.:0.0327 | Shielding Angle: |



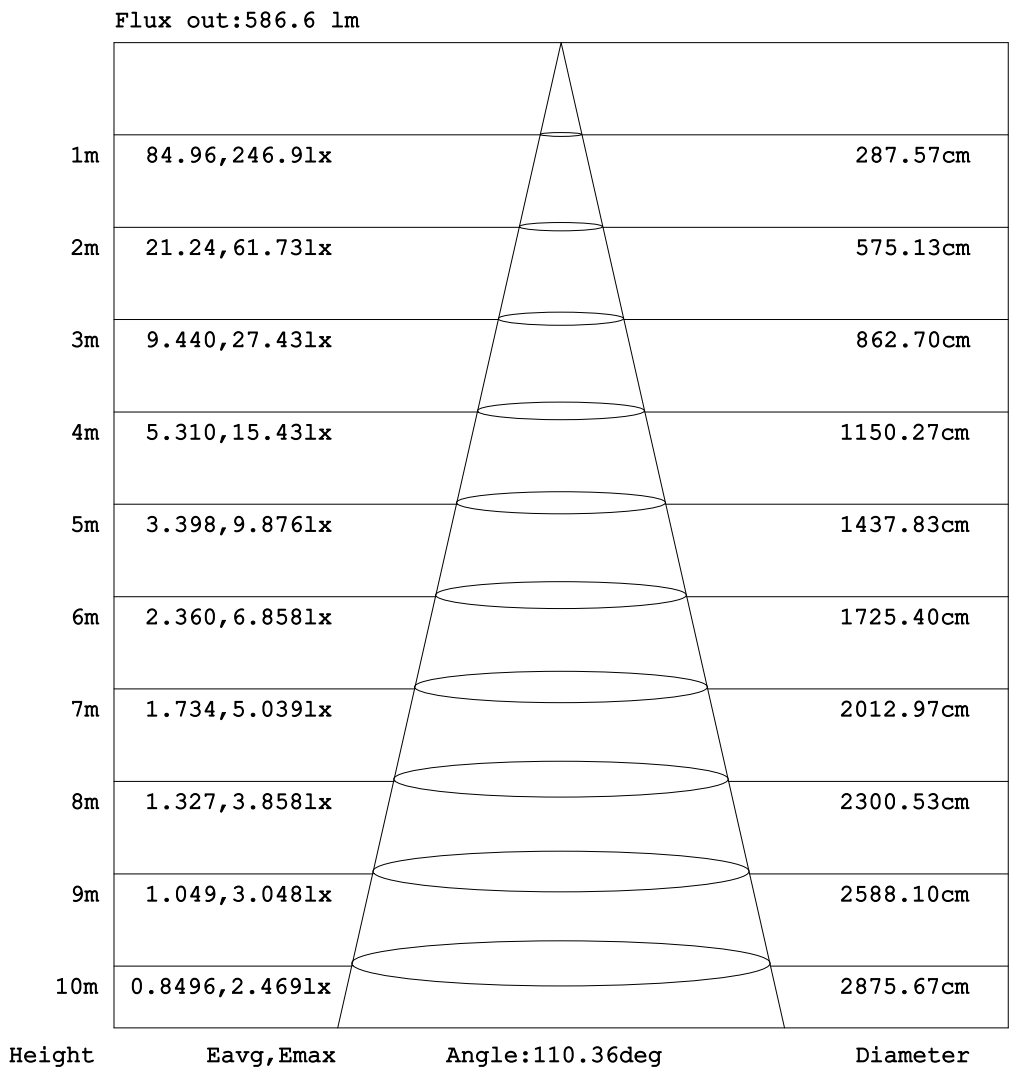
C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2019-07-25

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.405.8  
Humidity:65.0%  
Test Distance:8.690m [K=1.0000]  
Remarks:



### AAI Figure

|  |             |                  |
|--|-------------|------------------|
| Test:U:230.39V I:0.0488A P:9.9334W PF:0.8840 Freq:49.99Hz Lamp Flux:1230.16x1 lm |             |                  |
| NAME: UP-ML13-600-10W-C3-5700K   | TYPE:10W    | WEIGHT:          |
| SPEC.:5700K  | DIM.:       | SERIAL No.:      |
| MFR.:  | SUR.:0.0327 | Shielding Angle: |



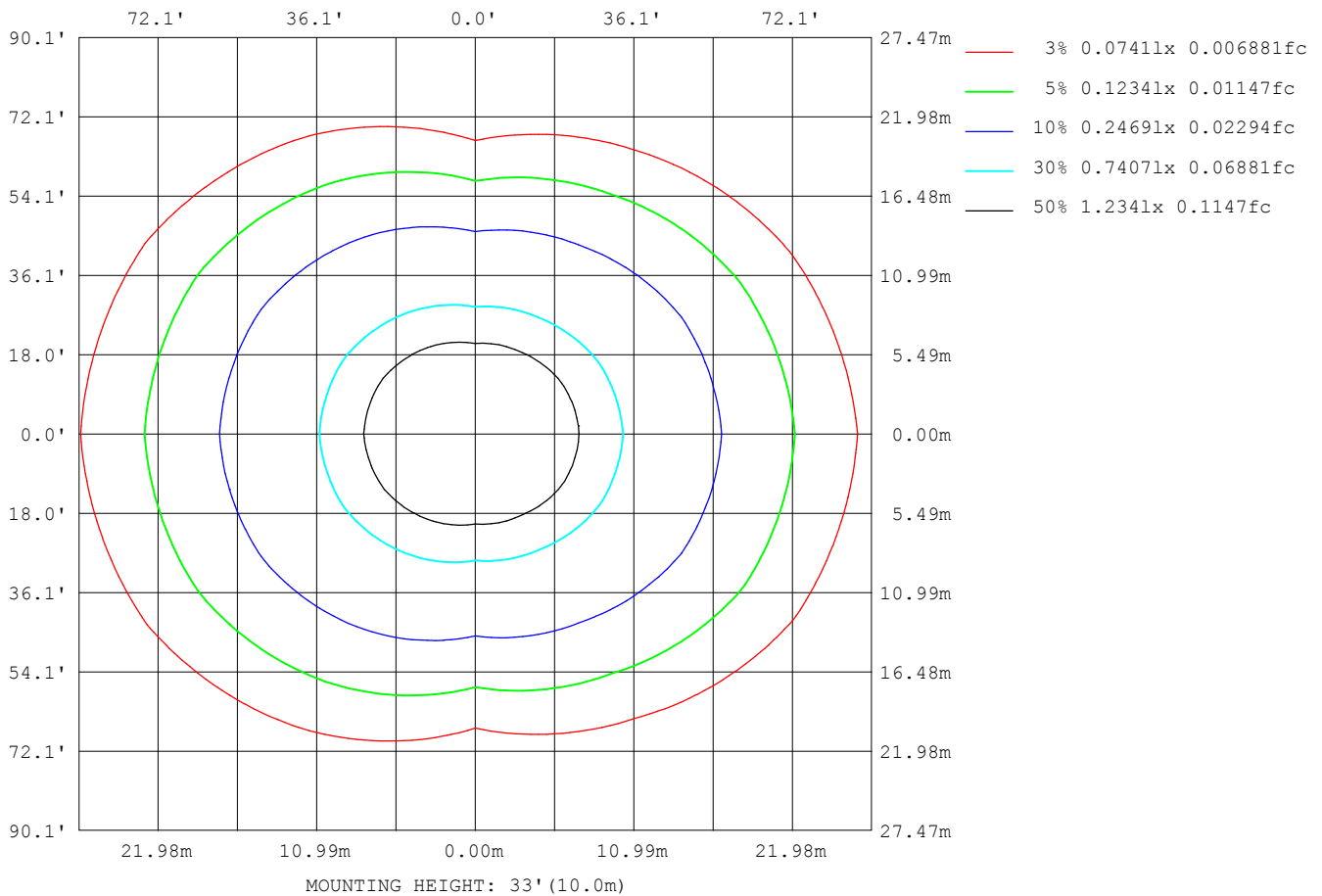
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2019-07-25

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.405.8  
 Humidity:65.0%  
 Test Distance:8.690m [K=1.0000]  
 Remarks:

## ISOLUX DIAGRAM

|  |             |                  |
|--|-------------|------------------|
| Test:U:230.39V I:0.0488A P:9.9334W PF:0.8840 Freq:49.99Hz Lamp Flux:1230.16x1 lm |             |                  |
| NAME: UP-ML13-600-10W-C3-5700K   | TYPE:10W    | WEIGHT:          |
| SPEC.:5700K  | DIM.:       | SERIAL No.:      |
| MFR.:  | SUR.:0.0327 | Shielding Angle: |



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2019-07-25

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.405.8  
Humidity:65.0%  
Test Distance:8.690m [K=1.0000]  
Remarks:

## LED Avg.L Report

|  |             |                  |
|--|-------------|------------------|
| Test:U:230.39V I:0.0488A P:9.9334W PF:0.8840 Freq:49.99Hz Lamp Flux:1230.16x1 lm |             |                  |
| NAME: UP-ML13-600-10W-C3-5700K   | TYPE:10W    | WEIGHT:          |
| SPEC.:5700K  | DIM.:       | SERIAL No.:      |
| MFR.:  | SUR.:0.0327 | Shielding Angle: |

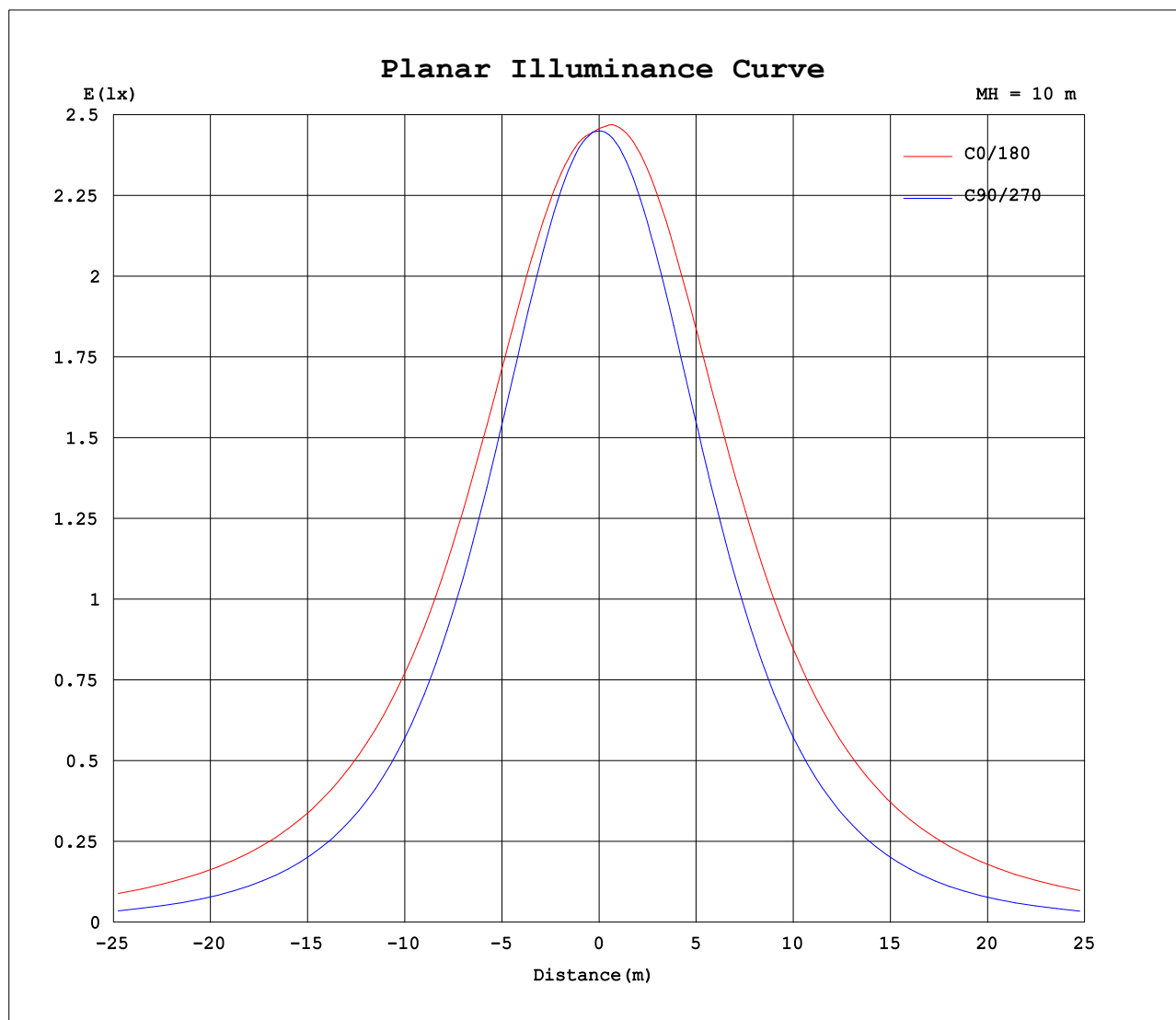
| AvgL             | cd/m2 |
|------------------|-------|
| L_0~180 (65) av  | 13556 |
| L_0~180 (75) av  | 18978 |
| L_0~180 (85) av  | 47341 |
| L_90~270 (65) av | 5888  |
| L_90~270 (75) av | 4596  |
| L_90~270 (85) av | 2001  |
| L_45 (65) av     | 10740 |
| L_45 (75) av     | 14055 |
| L_45 (85) av     | 32422 |

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2019-07-25

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.405.8  
 Humidity:65.0%  
 Test Distance:8.690m [K=1.0000]  
 Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators:  
Test Date: 2019-07-25

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000H\_V1 SYSTEM V2.0.405.8  
Humidity: 65.0%  
Test Distance: 8.690m [K=1.0000]  
Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

|  |             |                  |
|--|-------------|------------------|
| Test:U:230.39V I:0.0488A P:9.9334W PF:0.8840 Freq:49.99Hz Lamp Flux:1230.16x1 lm |             |                  |
| NAME: UP-ML13-600-10W-C3-5700K   | TYPE:10W    | WEIGHT:          |
| SPEC.:5700K  | DIM.:       | SERIAL No.:      |
| MFR.:  | SUR.:0.0327 | Shielding Angle: |

Table--1

UNIT: cd

| C (DEG)<br>γ (DEG) | 0    | 30   | 60   | 90   | 120  | 150  | 180  | 210  | 240  | 270  | 300  | 330  |  |  |  |  |  |  |  |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|--|--|--|--|--|
| 0                  | 245  | 245  | 245  | 245  | 245  | 245  | 245  | 245  | 245  | 245  | 245  | 245  |  |  |  |  |  |  |  |
| 5                  | 245  | 244  | 243  | 244  | 246  | 248  | 249  | 248  | 246  | 244  | 244  | 244  |  |  |  |  |  |  |  |
| 10                 | 244  | 243  | 241  | 240  | 245  | 250  | 252  | 250  | 246  | 241  | 242  | 244  |  |  |  |  |  |  |  |
| 15                 | 244  | 242  | 237  | 235  | 243  | 251  | 255  | 252  | 244  | 236  | 238  | 242  |  |  |  |  |  |  |  |
| 20                 | 242  | 239  | 232  | 228  | 239  | 251  | 256  | 252  | 240  | 229  | 232  | 239  |  |  |  |  |  |  |  |
| 25                 | 240  | 235  | 224  | 219  | 233  | 249  | 256  | 250  | 235  | 219  | 225  | 235  |  |  |  |  |  |  |  |
| 30                 | 236  | 230  | 215  | 207  | 226  | 246  | 254  | 247  | 227  | 208  | 216  | 230  |  |  |  |  |  |  |  |
| 35                 | 231  | 224  | 204  | 194  | 217  | 241  | 251  | 242  | 219  | 195  | 206  | 224  |  |  |  |  |  |  |  |
| 40                 | 224  | 216  | 192  | 178  | 206  | 234  | 246  | 235  | 208  | 179  | 193  | 216  |  |  |  |  |  |  |  |
| 45                 | 218  | 206  | 179  | 161  | 193  | 226  | 239  | 227  | 196  | 162  | 179  | 206  |  |  |  |  |  |  |  |
| 50                 | 210  | 197  | 164  | 143  | 179  | 216  | 230  | 217  | 182  | 144  | 165  | 196  |  |  |  |  |  |  |  |
| 55                 | 201  | 186  | 148  | 123  | 165  | 204  | 220  | 206  | 166  | 124  | 149  | 184  |  |  |  |  |  |  |  |
| 60                 | 190  | 175  | 132  | 103  | 149  | 192  | 209  | 193  | 151  | 103  | 132  | 172  |  |  |  |  |  |  |  |
| 65                 | 178  | 162  | 116  | 82.0 | 132  | 178  | 196  | 179  | 134  | 80.7 | 116  | 157  |  |  |  |  |  |  |  |
| 70                 | 166  | 149  | 101  | 60.9 | 115  | 164  | 182  | 165  | 116  | 58.8 | 100  | 144  |  |  |  |  |  |  |  |
| 75                 | 153  | 136  | 87.2 | 40.2 | 98.7 | 149  | 168  | 149  | 99.1 | 37.6 | 85.6 | 130  |  |  |  |  |  |  |  |
| 80                 | 141  | 123  | 74.1 | 21.4 | 82.5 | 134  | 154  | 135  | 82.8 | 18.9 | 70.7 | 118  |  |  |  |  |  |  |  |
| 85                 | 130  | 112  | 62.5 | 6.16 | 68.0 | 120  | 140  | 121  | 68.6 | 5.25 | 57.5 | 110  |  |  |  |  |  |  |  |
| 90                 | 122  | 103  | 53.8 | 1.13 | 56.1 | 108  | 128  | 109  | 57.5 | 1.46 | 48.9 | 104  |  |  |  |  |  |  |  |
| 95                 | 117  | 98.2 | 49.5 | 1.10 | 48.3 | 100  | 120  | 102  | 50.4 | 1.41 | 48.1 | 98.3 |  |  |  |  |  |  |  |
| 100                | 111  | 92.9 | 45.8 | 1.32 | 39.2 | 90.6 | 111  | 92.1 | 41.2 | 1.51 | 43.2 | 92.9 |  |  |  |  |  |  |  |
| 105                | 105  | 87.5 | 42.5 | 1.76 | 28.3 | 79.1 | 99.5 | 80.6 | 30.0 | 1.68 | 37.7 | 82.4 |  |  |  |  |  |  |  |
| 110                | 98.3 | 81.4 | 39.5 | 1.70 | 17.7 | 65.5 | 85.5 | 66.6 | 18.8 | 1.75 | 35.8 | 77.7 |  |  |  |  |  |  |  |
| 115                | 91.6 | 74.2 | 36.3 | 1.40 | 8.31 | 50.7 | 69.5 | 51.4 | 8.25 | 1.75 | 30.2 | 74.5 |  |  |  |  |  |  |  |
| 120                | 84.5 | 68.2 | 32.7 | 1.45 | 3.85 | 36.3 | 53.0 | 36.5 | 2.79 | 1.70 | 28.8 | 66.4 |  |  |  |  |  |  |  |
| 125                | 77.3 | 62.4 | 29.0 | 1.52 | 3.32 | 22.7 | 36.9 | 22.2 | 1.94 | 1.57 | 27.1 | 59.5 |  |  |  |  |  |  |  |
| 130                | 69.8 | 56.5 | 24.0 | 1.61 | 3.02 | 10.6 | 22.0 | 9.85 | 1.60 | 1.55 | 24.0 | 54.6 |  |  |  |  |  |  |  |
| 135                | 62.2 | 49.1 | 19.7 | 1.75 | 2.78 | 4.87 | 9.42 | 4.16 | 1.58 | 1.61 | 20.2 | 46.8 |  |  |  |  |  |  |  |
| 140                | 53.9 | 41.5 | 16.1 | 1.96 | 2.63 | 3.86 | 4.51 | 3.31 | 1.65 | 1.79 | 17.2 | 37.3 |  |  |  |  |  |  |  |
| 145                | 45.6 | 33.3 | 13.0 | 2.19 | 2.56 | 3.23 | 3.75 | 2.69 | 1.74 | 1.96 | 14.5 | 31.9 |  |  |  |  |  |  |  |
| 150                | 37.7 | 25.3 | 10.4 | 2.33 | 2.55 | 2.92 | 3.01 | 2.19 | 1.88 | 2.06 | 11.8 | 25.7 |  |  |  |  |  |  |  |
| 155                | 30.2 | 18.5 | 8.21 | 2.43 | 2.55 | 2.69 | 2.69 | 2.01 | 2.06 | 2.08 | 9.32 | 20.1 |  |  |  |  |  |  |  |
| 160                | 23.0 | 13.0 | 6.34 | 2.82 | 2.55 | 2.64 | 2.56 | 2.15 | 2.21 | 2.27 | 6.90 | 14.9 |  |  |  |  |  |  |  |
| 165                | 16.4 | 8.66 | 5.27 | 2.92 | 2.56 | 2.56 | 2.44 | 2.26 | 2.34 | 2.66 | 5.21 | 10.3 |  |  |  |  |  |  |  |
| 170                | 10.4 | 5.07 | 4.48 | 3.01 | 2.66 | 2.51 | 2.26 | 2.26 | 2.47 | 2.84 | 4.29 | 5.85 |  |  |  |  |  |  |  |
| 175                | 4.81 | 3.31 | 3.77 | 3.00 | 2.71 | 2.54 | 2.23 | 2.32 | 2.57 | 2.94 | 3.63 | 3.75 |  |  |  |  |  |  |  |
| 180                | 2.35 | 2.64 | 2.99 | 2.99 | 2.94 | 2.81 | 2.33 | 2.63 | 2.76 | 2.97 | 2.98 | 2.79 |  |  |  |  |  |  |  |

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2019-07-25

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.405.8  
Humidity:65.0%  
Test Distance:8.690m [K=1.0000]  
Remarks: