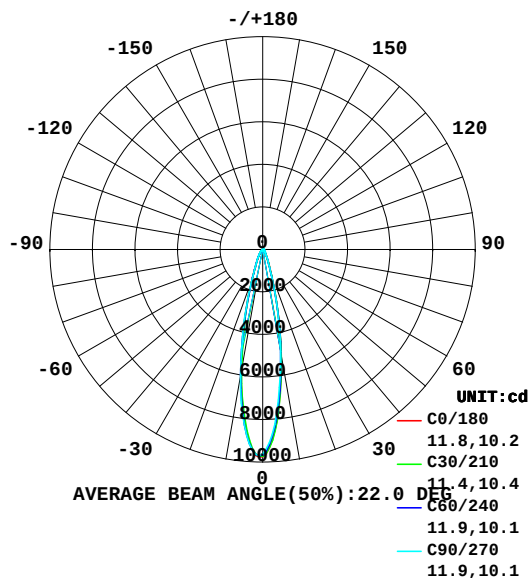


# LUMINAIRE PHOTOMETRIC TEST REPORT

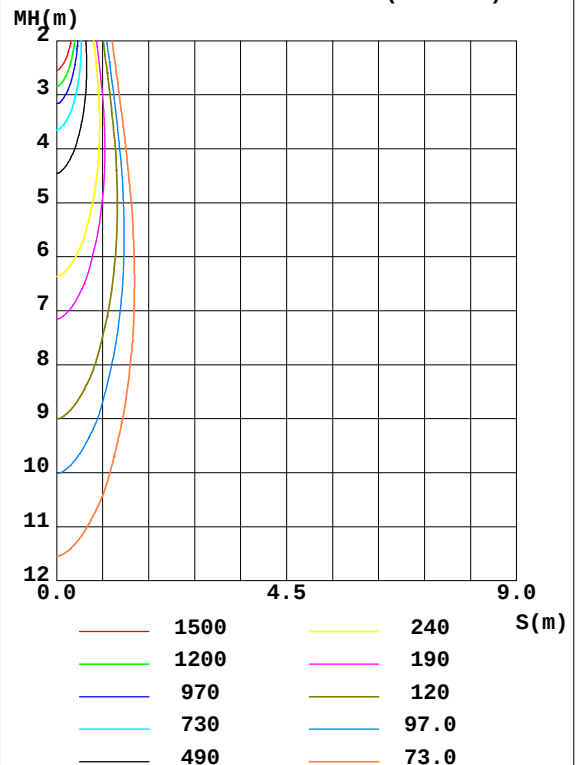
|                                                                                  |           |  |
|----------------------------------------------------------------------------------|-----------|--|
| Test:U:220.50V I:0.1120A P:23.400W PF:0.9460 Freq:50.00Hz Lamp Flux:2230.62x1 lm |           |  |
| NAME: PS-TL25W40KD2480RA-D                                                       | TYPE: LED |  |
| MFR.:                                                                            |           |  |
|                                                                                  |           |  |

| DATA OF LAMP     |                      | PHOTOMETRIC DATA Eff: 95.33 lm/W |        |                    |           |
|------------------|----------------------|----------------------------------|--------|--------------------|-----------|
| MODEL            | PS-TL25W40KD2480RA-D | I <sub>max</sub> (cd)            | 9764   | S/MH(C0/180)       | 0.35      |
| NOMINAL POWER(W) | 25                   | LOR(%)                           | 100.0  | S/MH(C90/270)      | 0.35      |
| RATED VOLTAGE(V) | 220                  | TOTAL FLUX(lm)                   | 2230.6 | η UP, DN(C0-180)   | 1.7, 42.9 |
| NOMINAL FLUX(lm) | 2230.62              | CIE CLASS                        | DIRECT | η UP, DN(C180-360) | 1.7, 53.7 |
| LAMPS INSIDE     | 1                    | η up(%)                          | 3.4    | CIBSE SHR NOM      | 0.00      |
| TEST VOLTAGE(V)  | 220.6                | η down(%)                        | 96.6   | CIBSE SHR MAX      | 1.00      |

## 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: DAMIN  
Test Date: 2018-11-12

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.0.406.11  
Humidity: 65.0%  
Test Distance: 8.000m [K=0.7063]  
Remarks:

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

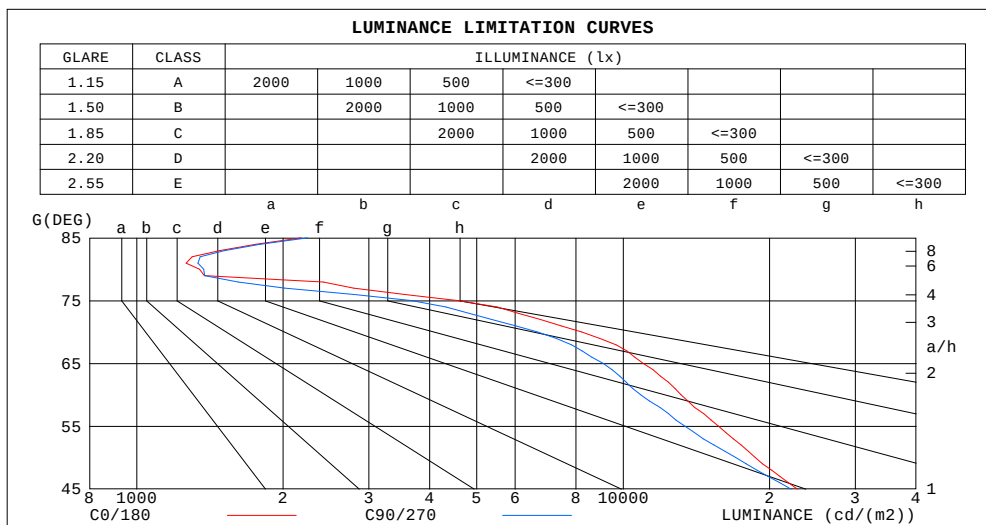
| $\gamma$ | C0                    | C45   | C90   | C135  | C180  | C225  | C270  | C315  | $\gamma$ | $\Phi$ zone | $\Phi$ total | %lum, lamp |
|----------|-----------------------|-------|-------|-------|-------|-------|-------|-------|----------|-------------|--------------|------------|
| 10       | 5011                  | 5004  | 4877  | 4705  | 5885  | 5861  | 6020  | 6188  | 0- 10    | 694.8       | 694.8        | 31.1,31.1  |
| 20       | 1124                  | 1118  | 1090  | 1062  | 1438  | 1397  | 1445  | 1574  | 10- 20   | 796.5       | 1491         | 66.9,66.9  |
| 30       | 377.4                 | 356.1 | 349.8 | 354.8 | 438.4 | 444.4 | 466.3 | 483.0 | 20- 30   | 323.3       | 1815         | 81.3,81.3  |
| 40       | 144.7                 | 141.9 | 142.5 | 147.5 | 176.5 | 174.7 | 190.6 | 201.3 | 30- 40   | 167.6       | 1982         | 88.9,88.9  |
| 50       | 72.02                 | 63.63 | 65.66 | 66.18 | 77.49 | 79.47 | 81.03 | 87.88 | 40- 50   | 84.00       | 2066         | 92.6,92.6  |
| 60       | 39.44                 | 33.99 | 32.60 | 32.79 | 40.39 | 41.22 | 40.98 | 44.79 | 50- 60   | 48.64       | 2115         | 94.8,94.8  |
| 70       | 16.88                 | 14.47 | 13.68 | 12.51 | 20.15 | 19.75 | 19.96 | 21.46 | 60- 70   | 27.19       | 2142         | 96,96      |
| 80       | 1.402                 | 1.373 | 1.430 | 1.333 | 5.492 | 5.439 | 5.470 | 5.831 | 70- 80   | 9.426       | 2151         | 96.4,96.4  |
| 90       | 1.408                 | 1.410 | 1.458 | 1.460 | 5.462 | 5.403 | 5.346 | 5.339 | 80- 90   | 3.529       | 2155         | 96.6,96.6  |
| 100      | 2.350                 | 2.359 | 2.432 | 2.460 | 5.556 | 5.479 | 5.445 | 5.460 | 90-100   | 3.980       | 2159         | 96.8,96.8  |
| 110      | 4.752                 | 4.785 | 4.957 | 4.995 | 6.416 | 6.328 | 6.260 | 6.234 | 100-110  | 4.866       | 2164         | 97,97      |
| 120      | 9.391                 | 9.421 | 9.603 | 9.632 | 8.957 | 8.877 | 8.752 | 8.680 | 110-120  | 7.181       | 2171         | 97.3,97.3  |
| 130      | 14.52                 | 14.47 | 14.52 | 14.64 | 12.01 | 11.94 | 11.80 | 11.77 | 120-130  | 10.01       | 2181         | 97.8,97.8  |
| 140      | 19.27                 | 19.17 | 19.13 | 19.38 | 16.79 | 16.61 | 16.30 | 16.24 | 130-140  | 11.86       | 2193         | 98.3,98.3  |
| 150      | 25.08                 | 24.86 | 24.06 | 25.05 | 23.93 | 23.63 | 22.62 | 23.17 | 140-150  | 13.05       | 2206         | 98.9,98.9  |
| 160      | 32.03                 | 31.33 | 29.62 | 31.28 | 31.00 | 30.08 | 28.17 | 29.74 | 150-160  | 12.56       | 2218         | 99.5,99.5  |
| 170      | 34.90                 | 33.73 | 32.30 | 33.11 | 34.29 | 32.55 | 31.01 | 32.30 | 160-170  | 9.140       | 2228         | 99.9,99.9  |
| 180      | 32.26                 | 30.84 | 29.98 | 30.52 | 32.33 | 30.86 | 29.92 | 30.52 | 170-180  | 3.055       | 2231         | 100,100    |
| DEG      | LUMINOUS INTENSITY:cd |       |       |       |       |       |       |       |          | UNIT: lm    |              |            |

**C Range: 0 - 360DEG**  
**C Interval: 30.0DEG**  
**Test Speed: HIGH**  
**Temperature:25.3DEG**  
**Operators:DAMIN**  
**Test Date:2018-11-12**

**$\gamma$  Range: 0 - 180DEG**  
 **$\gamma$  Interval: 1.0DEG**  
**Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.406.11**  
**Humidity:65.0%**  
**Test Distance:8.000m [K=0.7063]**  
**Remarks:**

## LUMINANCE LIMITATION CURVES

|                                                                                  |           |  |
|----------------------------------------------------------------------------------|-----------|--|
| Test:U:220.50V I:0.1120A P:23.400W PF:0.9460 Freq:50.00Hz Lamp Flux:2230.62x1 lm |           |  |
| NAME: PS-TL25W40KD2480RA-D                                                       | TYPE: LED |  |
| MFR.:                                                                            |           |  |
|                                                                                  |           |  |



| LUMINANCE cd/(m2) |        |         |
|-------------------|--------|---------|
| G(DEG)            | C0/180 | C90/270 |
| 85                | 2178   | 2245    |
| 80                | 1346   | 1373    |
| 75                | 4572   | 3676    |
| 70                | 8224   | 6664    |
| 65                | 11000  | 9091    |
| 60                | 13148  | 10865   |
| 55                | 15693  | 13383   |
| 50                | 18673  | 17026   |
| 45                | 22808  | 22122   |

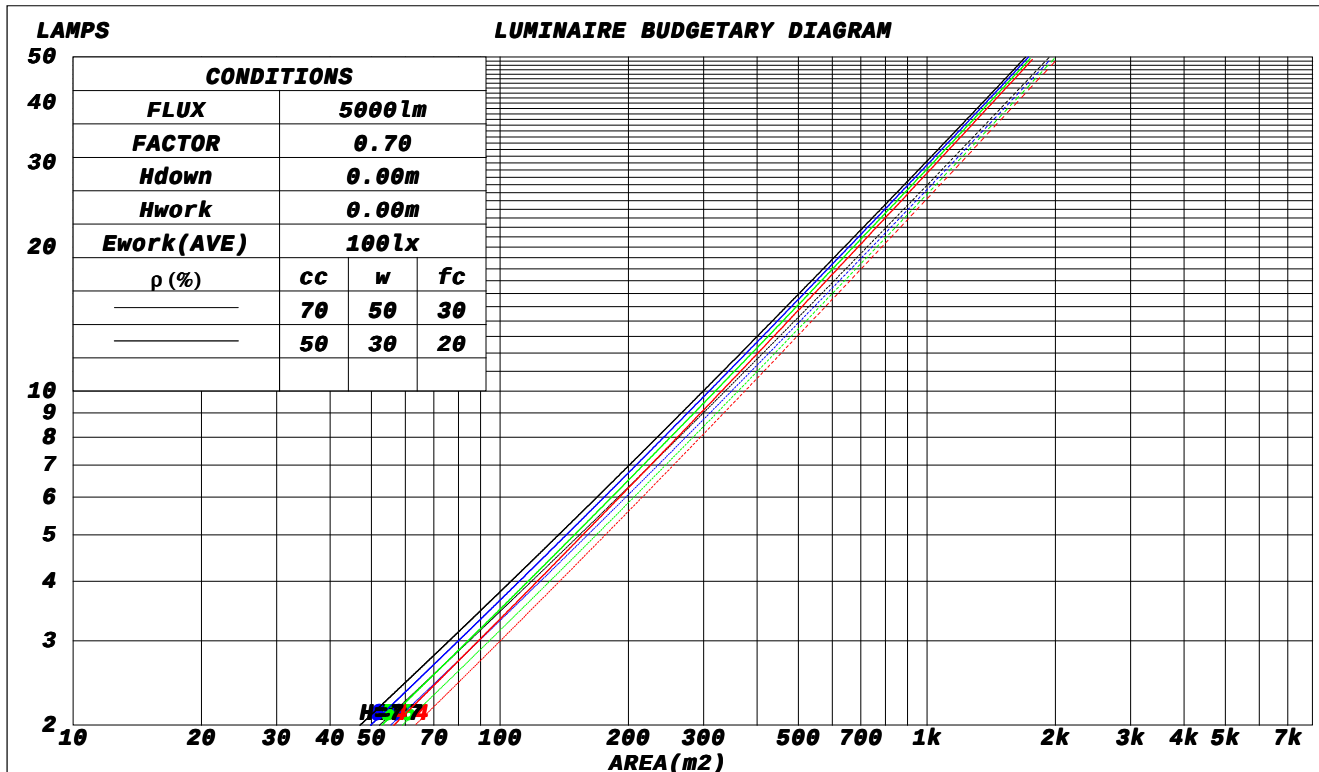
**C Range: 0 - 360DEG**  
**C Interval: 30.0DEG**  
**Test Speed: HIGH**  
**Temperature: 25.3DEG**  
**Operators: DAMIN**  
**Test Date: 2018-11-12**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.0.406.11**  
**Humidity: 65.0%**  
**Test Distance: 8.000m [K=0.7063]**  
**Remarks:**

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

|                                                                                  |           |  |
|----------------------------------------------------------------------------------|-----------|--|
| Test:U:220.50V I:0.1120A P:23.400W PF:0.9460 Freq:50.00Hz Lamp Flux:2230.62x1 lm |           |  |
| NAME: PS-TL25W40KD2480RA-D                                                       | TYPE: LED |  |
| MFR.:                                                                            |           |  |
|                                                                                  |           |  |

| $\rho_{CC}$ | 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 |      |      |      |      |      | Coefficients of Utilization(CU) |      |      |      |      |      |     |     |     |     |
| 0.0         | 1.18                  | 1.18 | 1.18 | 1.15 | 1.15 | 1.15 | 1.09                            | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | .99 | .99 | .99 | .97 |
| 1.0         | 1.11                  | 1.09 | 1.07 | 1.08 | 1.06 | 1.05 | 1.04                            | 1.02 | 1.01 | .99  | .98  | .97  | .96 | .95 | .94 | .92 |
| 2.0         | 1.04                  | 1.01 | .98  | 1.03 | .99  | .97  | .99                             | .96  | .94  | .95  | .93  | .92  | .92 | .91 | .89 | .88 |
| 3.0         | .99                   | .95  | .91  | .97  | .93  | .90  | .94                             | .91  | .89  | .92  | .89  | .87  | .89 | .87 | .85 | .83 |
| 4.0         | .94                   | .89  | .86  | .93  | .89  | .85  | .90                             | .87  | .84  | .88  | .85  | .83  | .86 | .83 | .81 | .80 |
| 5.0         | .90                   | .85  | .81  | .89  | .84  | .81  | .87                             | .83  | .80  | .85  | .82  | .79  | .83 | .80 | .78 | .77 |
| 6.0         | .86                   | .81  | .78  | .85  | .81  | .77  | .83                             | .79  | .76  | .82  | .78  | .76  | .80 | .77 | .75 | .74 |
| 7.0         | .83                   | .78  | .74  | .82  | .77  | .74  | .80                             | .76  | .73  | .79  | .76  | .73  | .78 | .75 | .72 | .71 |
| 8.0         | .80                   | .75  | .72  | .79  | .74  | .71  | .78                             | .74  | .71  | .76  | .73  | .70  | .75 | .72 | .70 | .69 |
| 9.0         | .77                   | .72  | .69  | .76  | .72  | .69  | .75                             | .71  | .68  | .74  | .71  | .68  | .73 | .70 | .68 | .67 |
| 10.0        | .74                   | .70  | .67  | .74  | .69  | .67  | .73                             | .69  | .66  | .72  | .68  | .66  | .71 | .68 | .66 | .65 |



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 2018-11-12

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.11  
 Humidity: 65.0%  
 Test Distance: 8.000m [K=0.7063]  
 Remarks:

**WEC AND CCEC**

|                                                                                  |  |  |  |  |  |           |  |  |  |  |  |
|----------------------------------------------------------------------------------|--|--|--|--|--|-----------|--|--|--|--|--|
| Test:U:220.50V I:0.1120A P:23.400W PF:0.9460 Freq:50.00Hz Lamp Flux:2230.62x1 lm |  |  |  |  |  |           |  |  |  |  |  |
| NAME: PS-TL25W40KD2480RA-D                                                       |  |  |  |  |  | TYPE: LED |  |  |  |  |  |
| MFR.:                                                                            |  |  |  |  |  |           |  |  |  |  |  |
|                                                                                  |  |  |  |  |  |           |  |  |  |  |  |

| $\rho_{CC}$ | 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         | .159                  | .091 | .029 | .152 | .086 | .027 | .137                            | .079 | .025 | .124 | .071 | .023 | .112 | .065 | .021 |   |  |
| 2.0         | .149                  | .082 | .025 | .142 | .078 | .024 | .130                            | .072 | .022 | .119 | .067 | .021 | .109 | .061 | .019 |   |  |
| 3.0         | .139                  | .074 | .022 | .134 | .072 | .022 | .123                            | .067 | .020 | .114 | .062 | .019 | .105 | .058 | .018 |   |  |
| 4.0         | .131                  | .068 | .020 | .126 | .066 | .019 | .117                            | .062 | .018 | .108 | .058 | .018 | .101 | .055 | .017 |   |  |
| 5.0         | .123                  | .063 | .018 | .119 | .061 | .018 | .111                            | .058 | .017 | .103 | .055 | .016 | .097 | .052 | .015 |   |  |
| 6.0         | .116                  | .058 | .017 | .112 | .057 | .016 | .105                            | .054 | .016 | .099 | .051 | .015 | .093 | .049 | .014 |   |  |
| 7.0         | .110                  | .054 | .015 | .106 | .053 | .015 | .100                            | .051 | .015 | .094 | .048 | .014 | .089 | .046 | .014 |   |  |
| 8.0         | .104                  | .051 | .014 | .101 | .050 | .014 | .096                            | .048 | .014 | .090 | .046 | .013 | .086 | .044 | .013 |   |  |
| 9.0         | .099                  | .048 | .013 | .096 | .047 | .013 | .091                            | .045 | .013 | .087 | .044 | .012 | .082 | .042 | .012 |   |  |
| 10.0        | .094                  | .045 | .013 | .092 | .044 | .012 | .088                            | .043 | .012 | .083 | .041 | .012 | .079 | .040 | .011 |   |  |

| $\rho_{CC}$ | 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 |      |      |      |      |      | Ceiling Cavity Exitance Coefficients(CCEC) |      |      |      |      |      |      |      |      |   |  |
| 0.0         | .216                  | .216 | .216 | .185 | .185 | .185 | .126                                       | .126 | .126 | .072 | .072 | .072 | .023 | .023 | .023 |   |  |
| 1.0         | .196                  | .184 | .172 | .168 | .158 | .148 | .115                                       | .108 | .103 | .066 | .063 | .060 | .021 | .020 | .019 |   |  |
| 2.0         | .179                  | .159 | .142 | .154 | .137 | .122 | .105                                       | .095 | .085 | .061 | .055 | .050 | .019 | .018 | .016 |   |  |
| 3.0         | .166                  | .140 | .119 | .142 | .121 | .103 | .098                                       | .084 | .072 | .056 | .049 | .043 | .018 | .016 | .014 |   |  |
| 4.0         | .154                  | .125 | .102 | .132 | .108 | .089 | .091                                       | .075 | .063 | .053 | .044 | .037 | .017 | .014 | .012 |   |  |
| 5.0         | .144                  | .113 | .090 | .124 | .098 | .078 | .085                                       | .068 | .055 | .049 | .040 | .033 | .016 | .013 | .011 |   |  |
| 6.0         | .136                  | .103 | .080 | .117 | .089 | .070 | .081                                       | .063 | .049 | .047 | .037 | .029 | .015 | .012 | .010 |   |  |
| 7.0         | .128                  | .095 | .072 | .110 | .083 | .063 | .076                                       | .058 | .045 | .044 | .034 | .027 | .014 | .011 | .009 |   |  |
| 8.0         | .122                  | .089 | .066 | .105 | .077 | .057 | .073                                       | .054 | .041 | .042 | .032 | .024 | .014 | .010 | .008 |   |  |
| 9.0         | .116                  | .083 | .061 | .100 | .072 | .053 | .070                                       | .051 | .038 | .040 | .030 | .022 | .013 | .010 | .007 |   |  |
| 10.0        | .111                  | .079 | .057 | .096 | .068 | .050 | .067                                       | .048 | .035 | .039 | .028 | .021 | .013 | .009 | .007 |   |  |

**C Range: 0 - 360DEG**  
**C Interval: 30.0DEG**  
**Test Speed: HIGH**  
**Temperature: 25.3DEG**  
**Operators: DAMIN**  
**Test Date: 2018-11-12**

**$\gamma$  Range: 0 - 180DEG**  
 **$\gamma$  Interval: 1.0DEG**  
**Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.11**  
**Humidity: 65.0%**  
**Test Distance: 8.000m [K=0.7063]**  
**Remarks:**

**UGR(Unified Glare Rating) Table**

|                                                                                  |                  |      |      |      |          |                |      |      |      |      |
|----------------------------------------------------------------------------------|------------------|------|------|------|----------|----------------|------|------|------|------|
| Test:U:220.50V I:0.1120A P:23.400W PF:0.9460 Freq:50.00Hz Lamp Flux:2230.62x1 lm |                  |      |      |      |          |                |      |      |      |      |
| NAME: PS-TL25W40KD2480RA-D                                                       |                  |      |      |      | TYPE:LED |                |      |      |      |      |
| MFR.:                                                                            |                  |      |      |      |          |                |      |      |      |      |
|                                                                                  |                  |      |      |      |          |                |      |      |      |      |
| 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                                                                    | 13.7             | 14.4 | 13.9 | 14.6 | 14.8     | 13.1           | 13.9 | 13.4 | 14.1 | 14.3 |
| 3H                                                                               | 14.1             | 14.8 | 14.4 | 15.1 | 15.3     | 13.5           | 14.2 | 13.8 | 14.4 | 14.7 |
| 4H                                                                               | 14.2             | 14.8 | 14.5 | 15.1 | 15.4     | 13.5           | 14.2 | 13.8 | 14.4 | 14.7 |
| 6H                                                                               | 14.1             | 14.7 | 14.4 | 15.0 | 15.3     | 13.4           | 14.0 | 13.8 | 14.3 | 14.6 |
| 8H                                                                               | 14.0             | 14.6 | 14.4 | 14.9 | 15.3     | 13.4           | 14.0 | 13.7 | 14.3 | 14.6 |
| 12H                                                                              | 14.0             | 14.6 | 14.4 | 14.9 | 15.2     | 13.3           | 13.9 | 13.7 | 14.2 | 14.6 |
| 4H 2H                                                                            | 13.8             | 14.4 | 14.1 | 14.7 | 15.0     | 13.3           | 13.9 | 13.6 | 14.2 | 14.5 |
| 3H                                                                               | 14.3             | 14.9 | 14.7 | 15.2 | 15.5     | 13.7           | 14.3 | 14.1 | 14.6 | 15.0 |
| 4H                                                                               | 14.4             | 14.9 | 14.8 | 15.2 | 15.6     | 13.8           | 14.3 | 14.1 | 14.6 | 15.0 |
| 6H                                                                               | 14.3             | 14.7 | 14.7 | 15.1 | 15.5     | 13.7           | 14.1 | 14.1 | 14.5 | 14.9 |
| 8H                                                                               | 14.2             | 14.7 | 14.7 | 15.1 | 15.5     | 13.6           | 14.1 | 14.1 | 14.5 | 14.9 |
| 12H                                                                              | 14.2             | 14.6 | 14.6 | 15.0 | 15.5     | 13.6           | 14.0 | 14.0 | 14.4 | 14.9 |
| 8H 4H                                                                            | 14.3             | 14.7 | 14.7 | 15.1 | 15.5     | 13.7           | 14.1 | 14.1 | 14.5 | 14.9 |
| 6H                                                                               | 14.2             | 14.5 | 14.7 | 15.0 | 15.5     | 13.6           | 13.9 | 14.1 | 14.4 | 14.9 |
| 8H                                                                               | 14.1             | 14.4 | 14.6 | 14.9 | 15.4     | 13.5           | 13.8 | 14.0 | 14.3 | 14.8 |
| 12H                                                                              | 14.1             | 14.3 | 14.6 | 14.8 | 15.4     | 13.5           | 13.8 | 14.0 | 14.3 | 14.8 |
| 12H 4H                                                                           | 14.2             | 14.6 | 14.7 | 15.0 | 15.5     | 13.6           | 14.0 | 14.1 | 14.4 | 14.9 |
| 6H                                                                               | 14.1             | 14.4 | 14.6 | 14.9 | 15.4     | 13.5           | 13.8 | 14.0 | 14.3 | 14.8 |
| 8H                                                                               | 14.1             | 14.3 | 14.6 | 14.8 | 15.4     | 13.5           | 13.7 | 14.0 | 14.2 | 14.8 |
| Variations with the observer position at spacings:                               |                  |      |      |      |          |                |      |      |      |      |
| S = 1.0H                                                                         | + 1.1 / - 1.3    |      |      |      |          | + 1.2 / - 1.6  |      |      |      |      |
| 1.5H                                                                             | + 1.9 / - 1.0    |      |      |      |          | + 2.0 / - 1.3  |      |      |      |      |
| 2.0H                                                                             | + 1.6 / - 1.3    |      |      |      |          | + 2.0 / - 1.3  |      |      |      |      |

CIE Pub.117, 2231 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 2.8$ )

**C Range: 0 - 360DEG**  
**C Interval: 30.0DEG**  
**Test Speed: HIGH**  
**Temperature:25.3DEG**  
**Operators:DAMIN**  
**Test Date:2018-11-12**

**$\gamma$  Range: 0 - 180DEG**  
 **$\gamma$  Interval: 1.0DEG**  
**Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.11**  
**Humidity:65.0%**  
**Test Distance:8.000m [K=0.7063]**  
**Remarks:**

**UTILIZATION FACTORS TABLE**

|                                                                                  |           |  |
|----------------------------------------------------------------------------------|-----------|--|
| Test:U:220.50V I:0.1120A P:23.400W PF:0.9460 Freq:50.00Hz Lamp Flux:2230.62x1 lm |           |  |
| NAME: PS-TL25W40KD2480RA-D                                                       | TYPE: LED |  |
| MFR.:                                                                            |           |  |
|                                                                                  |           |  |

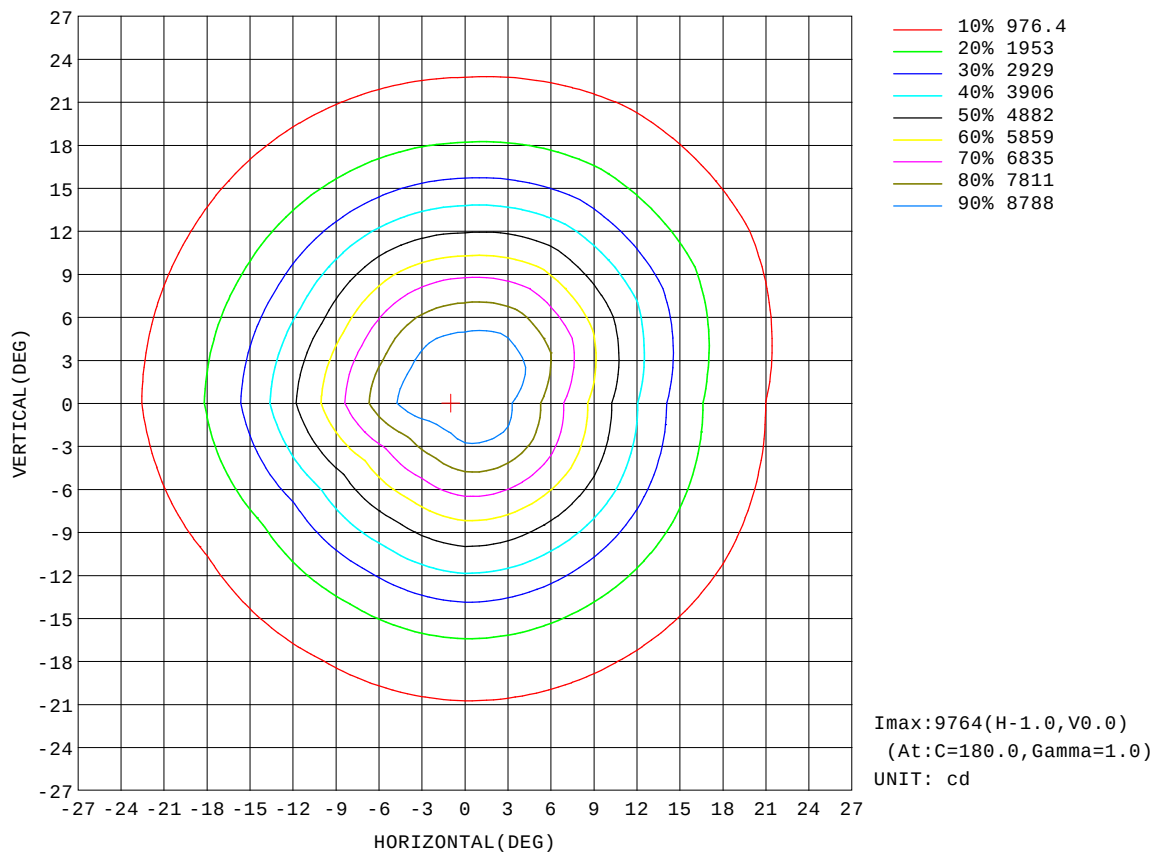
| REFLECTANCE                      |                                                     |     |           |     |     |     |     |               |     |        |
|----------------------------------|-----------------------------------------------------|-----|-----------|-----|-----|-----|-----|---------------|-----|--------|
| 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) $k(RI) \times RCR = 5$ |     |           |     |     |     |     |               |     |        |
| $k = 0.60$                       | 85                                                  | 78  | 74        | 84  | 78  | 74  | 83  | 77            | 74  | 70     |
| 0.80                             | 92                                                  | 86  | 82        | 91  | 85  | 82  | 90  | 85            | 81  | 77     |
| 1.00                             | 97                                                  | 91  | 87        | 96  | 90  | 87  | 94  | 90            | 86  | 81     |
| 1.25                             | 101                                                 | 95  | 92        | 100 | 95  | 91  | 97  | 93            | 90  | 85     |
| 1.50                             | 104                                                 | 99  | 95        | 102 | 98  | 94  | 100 | 96            | 93  | 88     |
| 2.00                             | 107                                                 | 102 | 99        | 105 | 101 | 98  | 102 | 99            | 96  | 90     |
| 2.50                             | 109                                                 | 104 | 101       | 107 | 103 | 100 | 103 | 100           | 98  | 91     |
| 3.00                             | 110                                                 | 107 | 104       | 108 | 105 | 102 | 104 | 102           | 100 | 92     |
| 4.00                             | 112                                                 | 109 | 107       | 110 | 107 | 105 | 106 | 104           | 102 | 94     |
| 5.00                             | 114                                                 | 111 | 109       | 111 | 109 | 107 | 107 | 105           | 104 | 95     |
| ROOM INDEX                       | UF(total)                                           |     |           |     |     |     |     |               |     | Direct |
| According to DIN EN 13032-2 2004 |                                                     |     | Suspended |     |     |     |     | SHRNOM = 1.25 |     |        |

**C Range: 0 - 360DEG**  
**C Interval: 30.0DEG**  
**Test Speed: HIGH**  
**Temperature: 25.3DEG**  
**Operators: DAMIN**  
**Test Date: 2018-11-12**

**$\gamma$  Range: 0 - 180DEG**  
 **$\gamma$  Interval: 1.0DEG**  
**Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.0.406.11**  
**Humidity: 65.0%**  
**Test Distance: 8.000m [K=0.7063]**  
**Remarks:**

## ISOCANDELA DIAGRAM

|                                                                                  |           |  |
|----------------------------------------------------------------------------------|-----------|--|
| Test:U:220.50V I:0.1120A P:23.400W PF:0.9460 Freq:50.00Hz Lamp Flux:2230.62x1 lm |           |  |
| NAME: PS-TL25W40KD2480RA-D                                                       | TYPE: LED |  |
| MFR.:                                                                            |           |  |
|                                                                                  |           |  |



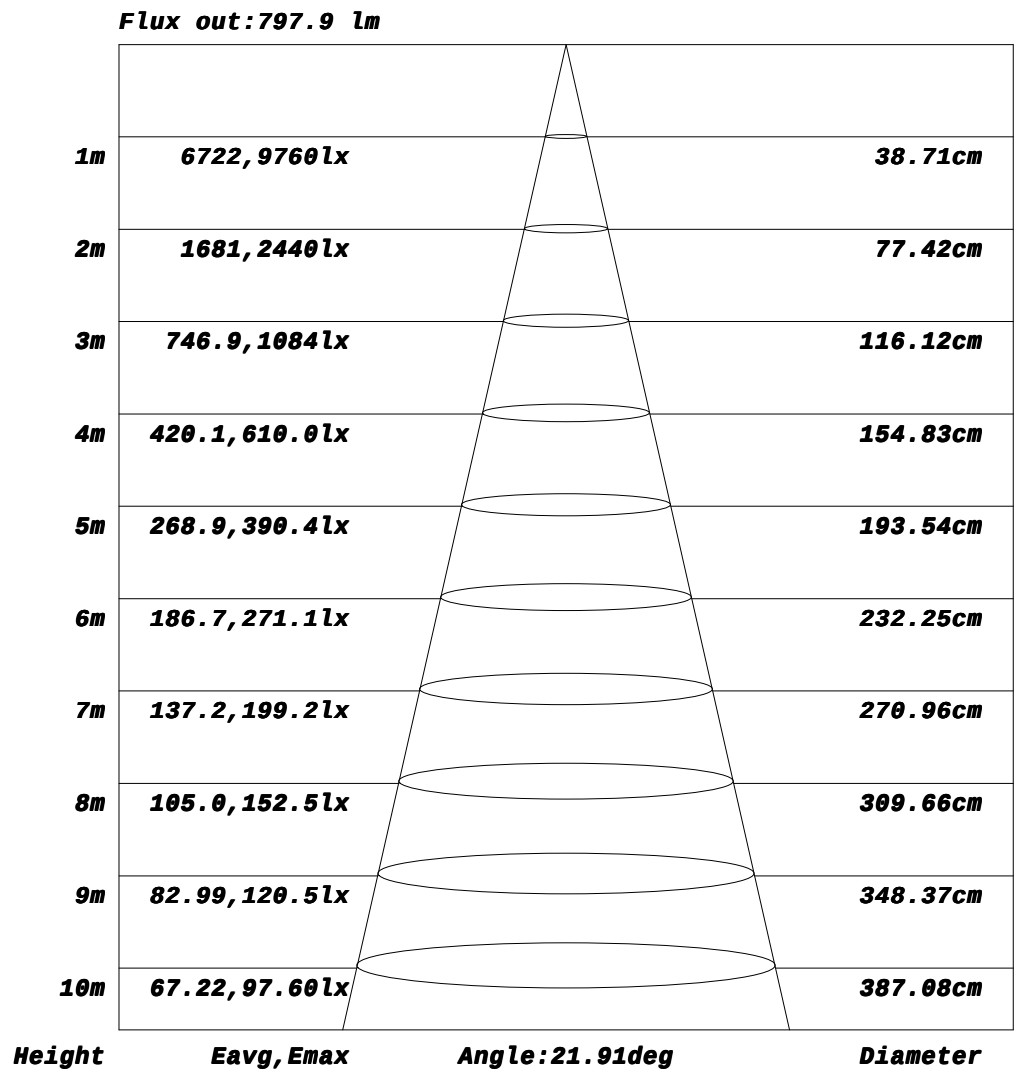
C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2018-11-12

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.406.11  
Humidity:65.0%  
Test Distance:8.000m [K=0.7063]  
Remarks:



### AAI Figure

|                                                                                  |           |  |
|----------------------------------------------------------------------------------|-----------|--|
| Test:U:220.50V I:0.1120A P:23.400W PF:0.9460 Freq:50.00Hz Lamp Flux:2230.62x1 lm |           |  |
| NAME: PS-TL25W40KD2480RA-D                                                       | TYPE: LED |  |
| MFR.:                                                                            |           |  |
|                                                                                  |           |  |



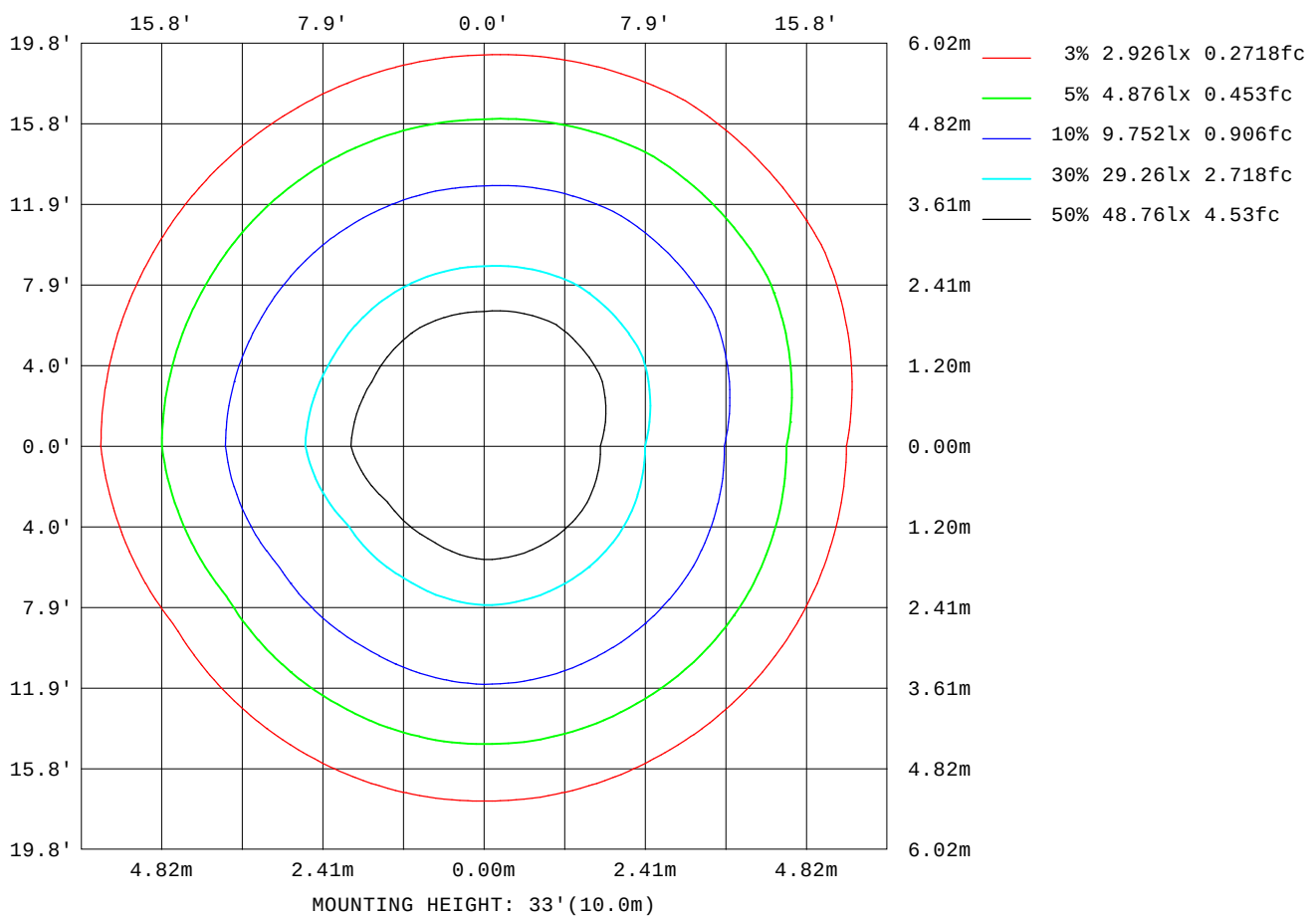
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

**C Range: 0 - 360DEG**  
**C Interval: 30.0DEG**  
**Test Speed: HIGH**  
**Temperature: 25.3DEG**  
**Operators: DAMIN**  
**Test Date: 2018-11-12**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.0.406.11**  
**Humidity: 65.0%**  
**Test Distance: 8.000m [K=0.7063]**  
**Remarks:**

## ISOLUX DIAGRAM

|                                                                                  |           |  |
|----------------------------------------------------------------------------------|-----------|--|
| Test:U:220.50V I:0.1120A P:23.400W PF:0.9460 Freq:50.00Hz Lamp Flux:2230.62x1 lm |           |  |
| NAME: PS-TL25W40KD2480RA-D                                                       | TYPE: LED |  |
| MFR.:                                                                            |           |  |
|                                                                                  |           |  |



**C Range: 0 - 360DEG**  
**C Interval: 30.0DEG**  
**Test Speed: HIGH**  
**Temperature: 25.3DEG**  
**Operators: DAMIN**  
**Test Date: 2018-11-12**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.0.406.11**  
**Humidity: 65.0%**  
**Test Distance: 8.000m [K=0.7063]**  
**Remarks:**

## LED Avg.L Report

|                                                                                  |           |  |
|----------------------------------------------------------------------------------|-----------|--|
| Test:U:220.50V I:0.1120A P:23.400W PF:0.9460 Freq:50.00Hz Lamp Flux:2230.62x1 lm |           |  |
| NAME: PS-TL25W40KD2480RA-D                                                       | TYPE: LED |  |
| MFR.:                                                                            |           |  |
|                                                                                  |           |  |

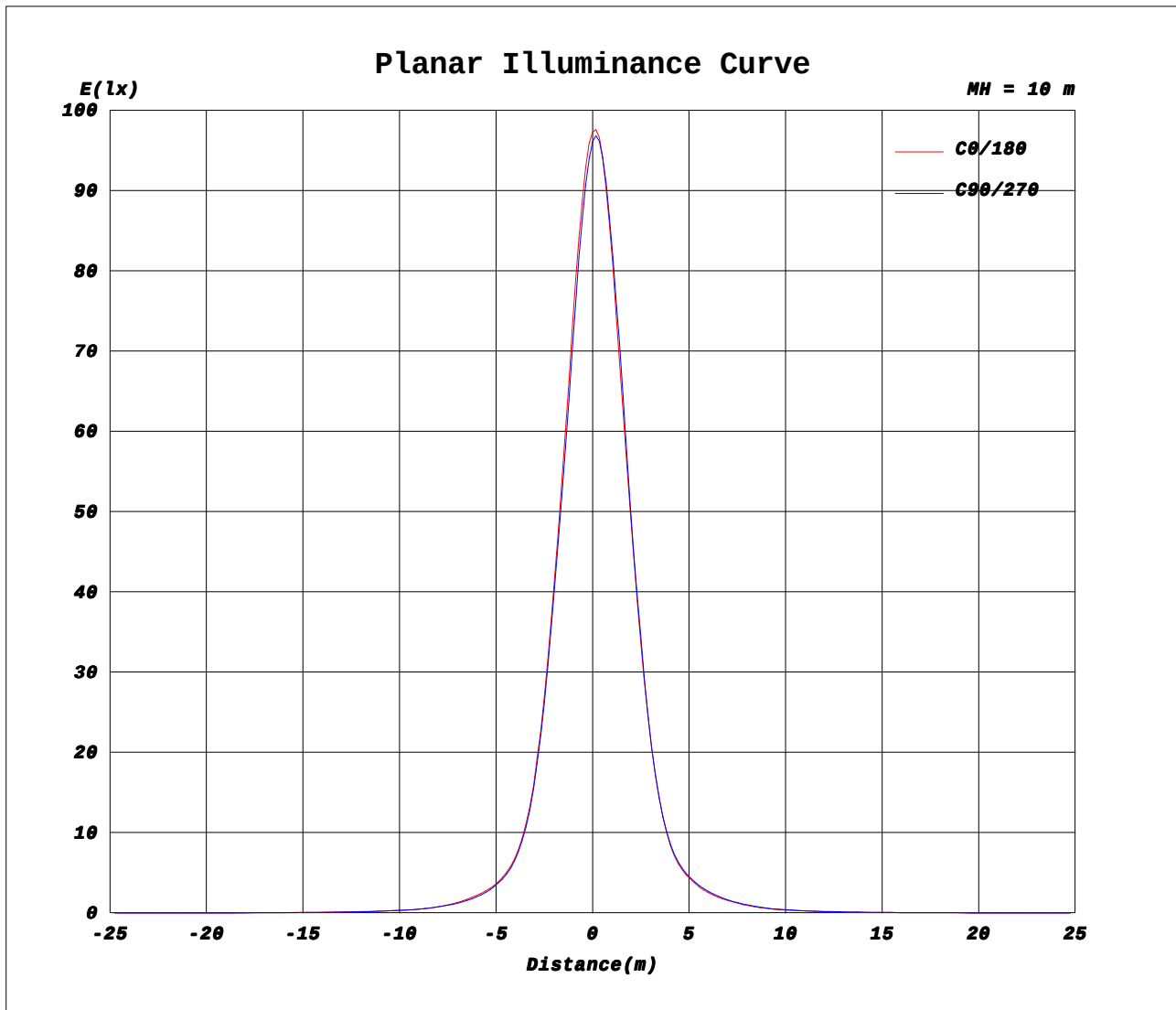
| AvgL           | cd/m2 |
|----------------|-------|
| L_0~180(65)av  | 11421 |
| L_0~180(75)av  | 5891  |
| L_0~180(85)av  | 6090  |
| L_90~270(65)av | 10465 |
| L_90~270(75)av | 5404  |
| L_90~270(85)av | 6010  |
| L_45(65)av     | 10712 |
| L_45(75)av     | 5396  |
| L_45(85)av     | 6006  |

Standard: GB/T 29293-2012

**C Range: 0 - 360DEG**  
**C Interval: 30.0DEG**  
**Test Speed: HIGH**  
**Temperature: 25.3DEG**  
**Operators: DAMIN**  
**Test Date: 2018-11-12**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.0.406.11**  
**Humidity: 65.0%**  
**Test Distance: 8.000m [K=0.7063]**  
**Remarks:**

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DAMIN  
Test Date: 2018-11-12

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.0.406.11  
Humidity: 65.0%  
Test Distance: 8.000m [K=0.7063]  
Remarks:

### LUMINOUS DISTRIBUTION INTENSITY DATA

|                                                                                  |           |  |
|----------------------------------------------------------------------------------|-----------|--|
| Test:U:220.50V I:0.1120A P:23.400W PF:0.9460 Freq:50.00Hz Lamp Flux:2230.62x1 lm |           |  |
| NAME: PS-TL25W40KD2480RA-D                                                       | TYPE: LED |  |
| MFR.:                                                                            |           |  |
|                                                                                  |           |  |

Table--1

UNIT: cd

| <div style="display: inline-block; transform: rotate(-45deg);">C (DEG)</div> <div style="display: inline-block;">γ (DEG)</div> | 0    | 30   | 60   | 90   | 120  | 150  | 180  | 210  | 240  | 270  | 300  | 330  |  |  |  |  |  |  |
|--------------------------------------------------------------------------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|--|--|--|--|
| 0                                                                                                                              | 9731 | 9721 | 9655 | 9615 | 9534 | 9572 | 9731 | 9721 | 9655 | 9615 | 9534 | 9572 |  |  |  |  |  |  |
| 5                                                                                                                              | 7987 | 8035 | 7865 | 7690 | 7428 | 7586 | 8686 | 8545 | 8755 | 8774 | 9010 | 8766 |  |  |  |  |  |  |
| 10                                                                                                                             | 5011 | 5079 | 4929 | 4877 | 4632 | 4779 | 5885 | 5731 | 5991 | 6020 | 6340 | 6035 |  |  |  |  |  |  |
| 15                                                                                                                             | 2531 | 2541 | 2464 | 2467 | 2348 | 2427 | 3220 | 3082 | 3183 | 3265 | 3537 | 3372 |  |  |  |  |  |  |
| 20                                                                                                                             | 1124 | 1137 | 1099 | 1090 | 1034 | 1090 | 1438 | 1386 | 1408 | 1445 | 1608 | 1539 |  |  |  |  |  |  |
| 25                                                                                                                             | 598  | 593  | 577  | 572  | 569  | 574  | 717  | 717  | 730  | 745  | 806  | 774  |  |  |  |  |  |  |
| 30                                                                                                                             | 377  | 362  | 350  | 350  | 352  | 358  | 438  | 439  | 449  | 466  | 494  | 471  |  |  |  |  |  |  |
| 35                                                                                                                             | 242  | 230  | 230  | 223  | 227  | 229  | 286  | 277  | 285  | 301  | 329  | 313  |  |  |  |  |  |  |
| 40                                                                                                                             | 145  | 144  | 139  | 143  | 146  | 149  | 176  | 174  | 175  | 191  | 204  | 198  |  |  |  |  |  |  |
| 45                                                                                                                             | 96.8 | 93.4 | 85.7 | 93.9 | 93.7 | 96.9 | 108  | 111  | 112  | 118  | 125  | 123  |  |  |  |  |  |  |
| 50                                                                                                                             | 72.0 | 66.6 | 60.7 | 65.7 | 64.9 | 67.4 | 77.5 | 79.0 | 79.9 | 81.0 | 88.3 | 87.5 |  |  |  |  |  |  |
| 55                                                                                                                             | 54.0 | 49.1 | 43.9 | 46.1 | 45.6 | 49.4 | 57.0 | 56.1 | 57.4 | 57.1 | 64.0 | 63.4 |  |  |  |  |  |  |
| 60                                                                                                                             | 39.4 | 35.7 | 32.3 | 32.6 | 31.7 | 33.9 | 40.4 | 40.9 | 41.6 | 41.0 | 44.6 | 45.0 |  |  |  |  |  |  |
| 65                                                                                                                             | 27.9 | 25.2 | 23.0 | 23.1 | 21.6 | 23.5 | 30.0 | 29.7 | 30.1 | 30.0 | 31.8 | 33.0 |  |  |  |  |  |  |
| 70                                                                                                                             | 16.9 | 15.1 | 13.8 | 13.7 | 12.1 | 12.9 | 20.1 | 19.6 | 19.9 | 20.0 | 21.0 | 21.9 |  |  |  |  |  |  |
| 75                                                                                                                             | 7.10 | 6.50 | 5.64 | 5.71 | 4.72 | 5.18 | 11.2 | 10.6 | 11.1 | 11.1 | 11.6 | 12.0 |  |  |  |  |  |  |
| 80                                                                                                                             | 1.40 | 1.41 | 1.34 | 1.43 | 1.34 | 1.32 | 5.49 | 5.46 | 5.41 | 5.47 | 5.87 | 5.79 |  |  |  |  |  |  |
| 85                                                                                                                             | 1.14 | 1.12 | 1.14 | 1.17 | 1.19 | 1.16 | 5.23 | 5.21 | 5.15 | 5.11 | 5.07 | 5.09 |  |  |  |  |  |  |
| 90                                                                                                                             | 1.41 | 1.40 | 1.42 | 1.46 | 1.48 | 1.44 | 5.46 | 5.42 | 5.38 | 5.35 | 5.33 | 5.35 |  |  |  |  |  |  |
| 95                                                                                                                             | 1.79 | 1.78 | 1.82 | 1.85 | 1.89 | 1.84 | 5.53 | 5.47 | 5.43 | 5.41 | 5.41 | 5.44 |  |  |  |  |  |  |
| 100                                                                                                                            | 2.35 | 2.33 | 2.38 | 2.43 | 2.50 | 2.42 | 5.56 | 5.50 | 5.46 | 5.44 | 5.45 | 5.47 |  |  |  |  |  |  |
| 105                                                                                                                            | 3.27 | 3.25 | 3.32 | 3.40 | 3.50 | 3.38 | 5.79 | 5.73 | 5.67 | 5.66 | 5.64 | 5.67 |  |  |  |  |  |  |
| 110                                                                                                                            | 4.75 | 4.74 | 4.83 | 4.96 | 5.07 | 4.92 | 6.42 | 6.37 | 6.29 | 6.26 | 6.20 | 6.27 |  |  |  |  |  |  |
| 115                                                                                                                            | 6.87 | 6.85 | 6.97 | 7.11 | 7.24 | 7.04 | 7.53 | 7.50 | 7.39 | 7.33 | 7.23 | 7.33 |  |  |  |  |  |  |
| 120                                                                                                                            | 9.39 | 9.35 | 9.49 | 9.60 | 9.75 | 9.51 | 8.96 | 8.95 | 8.80 | 8.75 | 8.61 | 8.75 |  |  |  |  |  |  |
| 125                                                                                                                            | 12.0 | 11.9 | 12.1 | 12.1 | 12.3 | 12.1 | 10.5 | 10.5 | 10.3 | 10.3 | 10.2 | 10.3 |  |  |  |  |  |  |
| 130                                                                                                                            | 14.5 | 14.4 | 14.5 | 14.5 | 14.8 | 14.5 | 12.0 | 12.0 | 11.9 | 11.8 | 11.7 | 11.8 |  |  |  |  |  |  |
| 135                                                                                                                            | 16.9 | 16.8 | 16.8 | 16.8 | 17.0 | 16.9 | 14.0 | 14.0 | 13.8 | 13.7 | 13.5 | 13.7 |  |  |  |  |  |  |
| 140                                                                                                                            | 19.3 | 19.2 | 19.1 | 19.1 | 19.4 | 19.4 | 16.8 | 16.7 | 16.5 | 16.3 | 16.1 | 16.3 |  |  |  |  |  |  |
| 145                                                                                                                            | 22.0 | 21.9 | 21.8 | 21.5 | 22.1 | 22.1 | 20.2 | 20.2 | 19.9 | 19.5 | 19.4 | 19.7 |  |  |  |  |  |  |
| 150                                                                                                                            | 25.1 | 25.0 | 24.7 | 24.1 | 24.9 | 25.2 | 23.9 | 23.9 | 23.4 | 22.6 | 23.0 | 23.3 |  |  |  |  |  |  |
| 155                                                                                                                            | 28.5 | 28.4 | 27.8 | 26.7 | 27.9 | 28.5 | 27.6 | 27.4 | 26.7 | 25.5 | 26.4 | 26.9 |  |  |  |  |  |  |
| 160                                                                                                                            | 32.0 | 31.8 | 30.9 | 29.6 | 30.7 | 31.8 | 31.0 | 30.6 | 29.5 | 28.2 | 29.3 | 30.2 |  |  |  |  |  |  |
| 165                                                                                                                            | 34.6 | 34.2 | 33.1 | 31.9 | 32.6 | 34.0 | 33.7 | 32.9 | 31.5 | 30.3 | 31.3 | 32.5 |  |  |  |  |  |  |
| 170                                                                                                                            | 34.9 | 34.3 | 33.1 | 32.3 | 32.4 | 33.8 | 34.3 | 33.2 | 31.9 | 31.0 | 31.8 | 32.8 |  |  |  |  |  |  |
| 175                                                                                                                            | 33.1 | 32.4 | 31.3 | 30.7 | 30.6 | 31.9 | 32.7 | 31.7 | 30.5 | 29.9 | 30.4 | 31.4 |  |  |  |  |  |  |
| 180                                                                                                                            | 32.3 | 31.4 | 30.3 | 30.0 | 30.0 | 31.0 | 32.3 | 31.3 | 30.4 | 29.9 | 30.0 | 31.0 |  |  |  |  |  |  |

**C Range: 0 - 360DEG**  
**C Interval: 30.0DEG**  
**Test Speed: HIGH**  
**Temperature: 25.3DEG**  
**Operators: DAMIN**  
**Test Date: 2018-11-12**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.11**  
**Humidity: 65.0%**  
**Test Distance: 8.000m [K=0.7063]**  
**Remarks:**