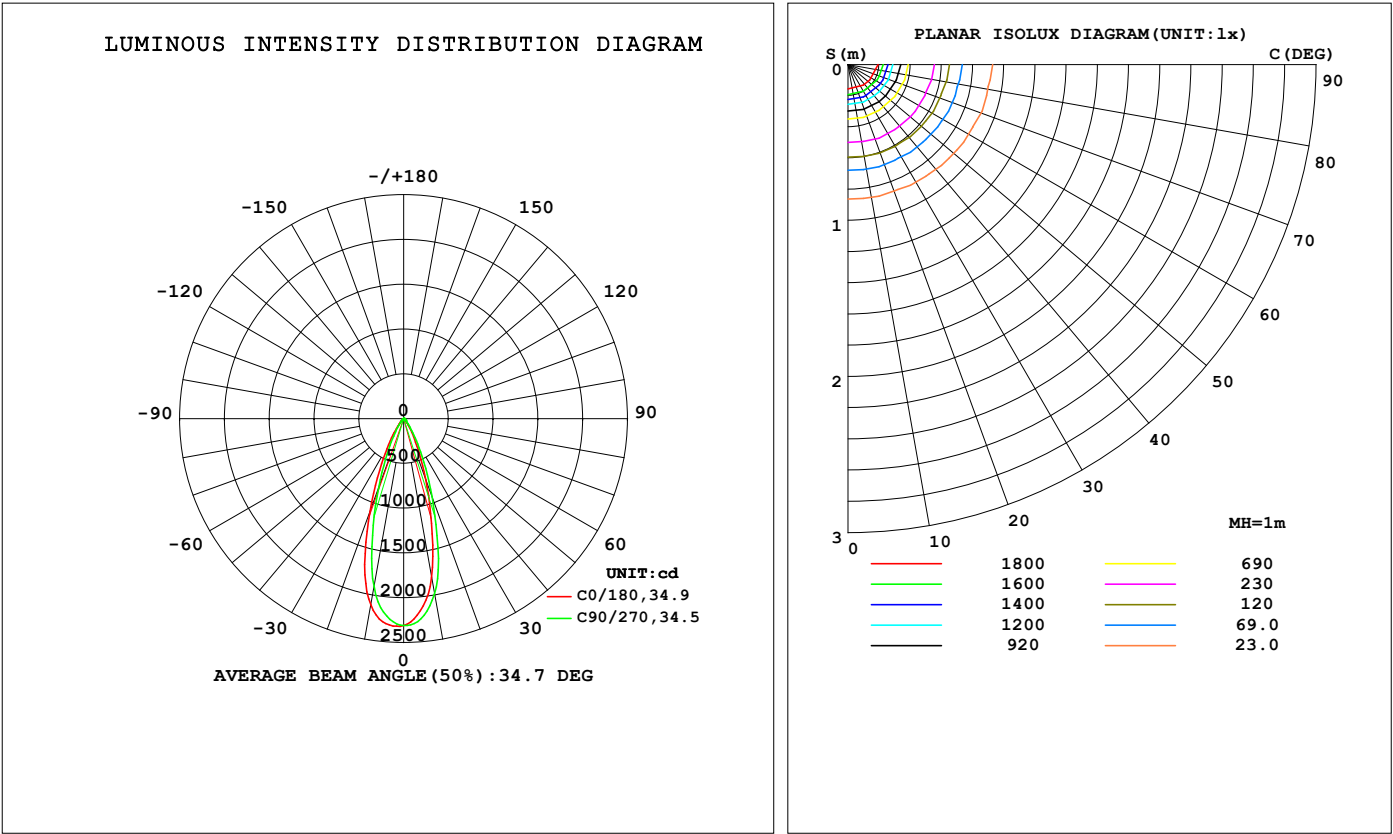


LUMINAIRE PHOTOMETRIC TEST REPORT

|  |            |                  |
|--|------------|------------------|
| Test:U:240.3V I:0.0556A P:12.7W PF:0.9519 Freq:49.99Hz       |            |                  |
| UTHDi:0.17% ITHDi:18.25% KDisp:0.9682 Lamp Flux:979.467x1 lm |            |                  |
| NAME: TR01-12-XX-01 3000K RA90 36D WHITE                     | TYPE:      | WEIGHT:          |
| SPEC.:   | DIM.:      | SERIAL No.:      |
| MFR.: Norming lighting                                       | SUR.: 57mm | Shielding Angle: |

| DATA OF LAMP     |         | PHOTOMETRIC DATA |        |                    |          | Eff: 77.04 lm/W |
|------------------|---------|------------------|--------|--------------------|----------|-----------------|
| MODEL            |         | Imax (cd)        | 2319   | S/MH (C0/180)      | 0.62     |                 |
| NOMINAL POWER(W) | 12      | LOR (%)          | 100.0  | S/MH (C90/270)     | 0.55     |                 |
| RATED VOLTAGE(V) | 240     | TOTAL FLUX(lm)   | 979.47 | η UP,DN (C0-180)   | 0.0,49.8 |                 |
| NOMINAL FLUX(lm) | 979.467 | CIE CLASS        | DIRECT | η UP,DN (C180-360) | 0.0,50.2 |                 |
| LAMPS INSIDE     | 1       | η up (%)         | 0.0    | CIBSE SHR NOM      | 0.50     |                 |
| TEST VOLTAGE (V) | 240.28  | η down (%)       | 100.0  | CIBSE SHR MAX      | 0.60     |                 |



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2024-08-06

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.453  
Humidity:65.0%  
Test Distance:3.090m [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       | 1796                  | 1871   | 1989   | 2095   | 2113   | 2034   | 1908   | 1812   | 0- 10    | 204.1       | 204.1        | 20.8,20.8  |
| 20       | 722.6                 | 802.6  | 929.7  | 1068   | 1102   | 974.8  | 821.4  | 715.3  | 10- 20   | 388.9       | 593.0        | 60.5,60.5  |
| 30       | 200.8                 | 228.7  | 287.7  | 331.0  | 337.0  | 281.5  | 227.6  | 195.5  | 20- 30   | 234.5       | 827.5        | 84.5,84.5  |
| 40       | 54.23                 | 62.58  | 78.35  | 85.05  | 78.39  | 64.96  | 57.64  | 53.92  | 30- 40   | 87.09       | 914.6        | 93.4,93.4  |
| 50       | 25.81                 | 27.62  | 29.42  | 29.16  | 28.60  | 27.94  | 27.01  | 25.12  | 40- 50   | 31.78       | 946.4        | 96.6,96.6  |
| 60       | 11.03                 | 11.79  | 14.41  | 16.23  | 15.77  | 13.59  | 11.59  | 10.73  | 50- 60   | 18.50       | 964.9        | 98.5,98.5  |
| 70       | 6.039                 | 6.682  | 7.418  | 7.833  | 7.624  | 7.094  | 6.373  | 5.520  | 60- 70   | 9.410       | 974.3        | 99.5,99.5  |
| 80       | 0.8814                | 1.293  | 2.148  | 2.926  | 2.920  | 2.149  | 1.361  | 0.8607 | 70- 80   | 4.628       | 978.9        | 99.9,99.9  |
| 90       | 0.0342                | 0.0237 | 0.0322 | 0.0278 | 0.0310 | 0.0212 | 0.0322 | 0.0278 | 80- 90   | 0.5390      | 979.5        | 100,100    |
| 100      |                       |        |        |        |        |        |        |        | 90-100   |             |              |            |
| 110      |                       |        |        |        |        |        |        |        | 100-110  |             |              |            |
| 120      |                       |        |        |        |        |        |        |        | 110-120  |             |              |            |
| 130      |                       |        |        |        |        |        |        |        | 120-130  |             |              |            |
| 140      |                       |        |        |        |        |        |        |        | 130-140  |             |              |            |
| 150      |                       |        |        |        |        |        |        |        | 140-150  |             |              |            |
| 160      |                       |        |        |        |        |        |        |        | 150-160  |             |              |            |
| 170      |                       |        |        |        |        |        |        |        | 160-170  |             |              |            |
| 180      |                       |        |        |        |        |        |        |        | 170-180  |             |              |            |
| DEG      | LUMINOUS INTENSITY:cd |        |        |        |        |        |        |        |          | UNIT:lm     |              |            |

Conical surface Flux(90deg): 933.49 lm

%lum = 95.3%

%lamp = 95.3%

Conical surface Flux(120deg): 964.89 lm

%lum = 98.5%

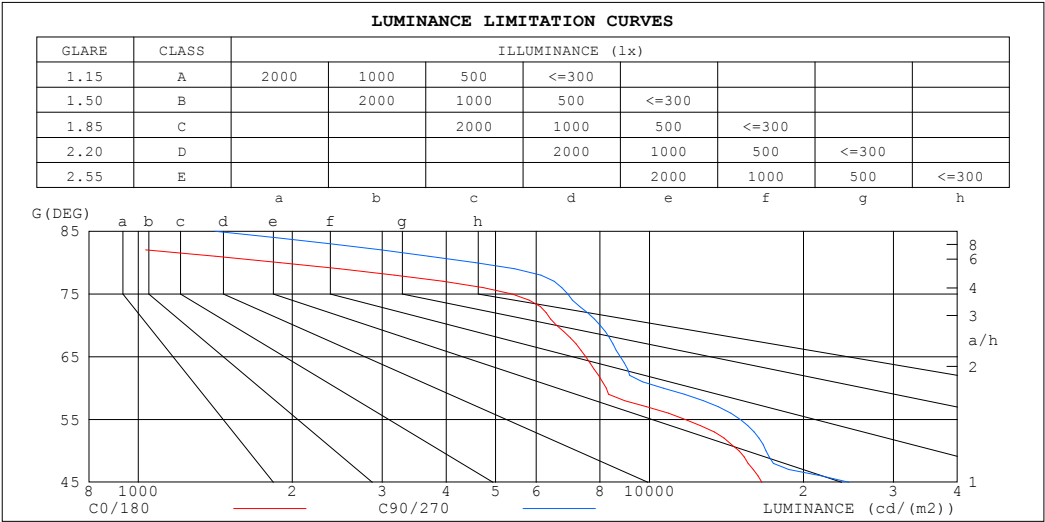
%lamp = 98.5%

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2024-08-06

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.453  
Humidity:65.0%  
Test Distance:3.090m [K=1.0000]  
Remarks:

LUMINANCE LIMITATION CURVES

|  |            |                  |
|--|------------|------------------|
| Test:U:240.3V I:0.0556A P:12.7W PF:0.9519 Freq:49.99Hz       |            |                  |
| UTHDi:0.17% ITHDi:18.25% KDisp:0.9682 Lamp Flux:979.467x1 lm |            |                  |
| NAME: TR01-12-XX-01 3000K RA90 36D WHITE                     | TYPE:      | WEIGHT:          |
| SPEC.:   | DIM.:      | SERIAL No.:      |
| MFR.: Norming lighting                                       | SUR.: 57mm | Shielding Angle: |



| LUMINANCE cd/(m2) |        |         |
|-------------------|--------|---------|
| G (DEG)           | C0/180 | C90/270 |
| 85                | 340    | 1414    |
| 80                | 1893   | 4568    |
| 75                | 5387   | 6924    |
| 70                | 6583   | 8008    |
| 65                | 7501   | 8774    |
| 60                | 8228   | 10642   |
| 55                | 11755  | 15050   |
| 50                | 14971  | 16902   |
| 45                | 16586  | 24548   |

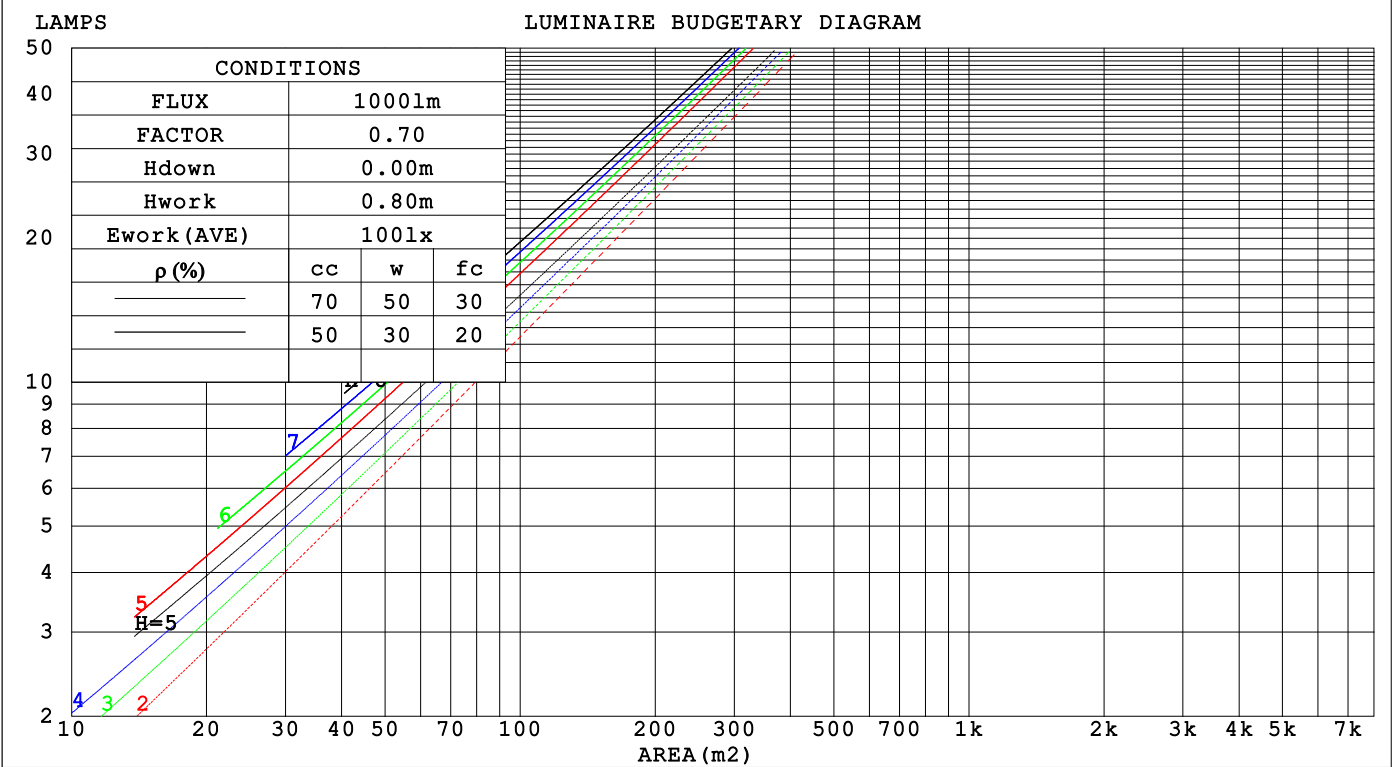
C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2024-08-06

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.453  
Humidity:65.0%  
Test Distance:3.090m [K=1.0000]  
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

|  |            |                  |
|--|------------|------------------|
| Test:U:240.3V I:0.0556A P:12.7W PF:0.9519 Freq:49.99Hz |            |                  |
| UTHDi:0.17% ITHDi:18.25% KDisp:0.9682                  |            |                  |
| Lamp Flux:979.467x1 lm                                 |            |                  |
| NAME: TR01-12-XX-01 3000K RA90 36D WHITE               | TYPE:      | WEIGHT:          |
| SPEC.:   | DIM.:      | SERIAL No.:      |
| MFR.: Norming lighting                                 | SUR.: 57mm | 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  | 1.19                  | 1.19 | 1.19 | 1.16                            | 1.16 | 1.16 | 1.11 | 1.11 | 1.11 | 1.06 | 1.06 | 1.06 | 1.02 | 1.02 | 1.02 | 1.00 |
| 1.0  | 1.12                  | 1.09 | 1.07 | 1.09                            | 1.07 | 1.06 | 1.05 | 1.04 | 1.02 | 1.02 | 1.00 | .99  | .98  | .97  | .96  | .95  |
| 2.0  | 1.05                  | 1.01 | .98  | 1.03                            | .00  | .97  | .00  | .97  | .95  | .97  | .95  | .93  | .94  | .93  | .91  | .89  |
| 3.0  | .99                   | .95  | .91  | .98                             | .94  | .90  | .95  | .92  | .89  | .93  | .90  | .88  | .90  | .88  | .86  | .85  |
| 4.0  | .94                   | .89  | .85  | .93                             | .88  | .85  | .91  | .87  | .84  | .89  | .85  | .83  | .87  | .84  | .82  | .80  |
| 5.0  | .89                   | .84  | .80  | .88                             | .83  | .80  | .86  | .82  | .79  | .85  | .81  | .79  | .83  | .80  | .78  | .77  |
| 6.0  | .85                   | .80  | .76  | .84                             | .79  | .76  | .83  | .78  | .75  | .81  | .78  | .75  | .80  | .77  | .74  | .73  |
| 7.0  | .81                   | .76  | .72  | .80                             | .75  | .72  | .79  | .75  | .72  | .78  | .74  | .71  | .77  | .74  | .71  | .70  |
| 8.0  | .78                   | .72  | .69  | .77                             | .72  | .69  | .76  | .72  | .68  | .75  | .71  | .68  | .74  | .71  | .68  | .67  |
| 9.0  | .74                   | .69  | .66  | .74                             | .69  | .66  | .73  | .69  | .66  | .72  | .68  | .65  | .71  | .68  | .65  | .64  |
| 10.0 | .71                   | .66  | .63  | .71                             | .66  | .63  | .70  | .66  | .63  | .70  | .66  | .63  | .69  | .65  | .63  | .61  |



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2024-08-06

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.453  
Humidity:65.0%  
Test Distance:3.090m [K=1.0000]  
Remarks:

## WEC AND CCEC

|  |            |                  |
|--|------------|------------------|
| Test:U:240.3V I:0.0556A P:12.7W PF:0.9519 Freq:49.99Hz       |            |                  |
| UTHDi:0.17% ITHDi:18.25% KDisp:0.9682 Lamp Flux:979.467x1 lm |            |                  |
| NAME: TR01-12-XX-01 3000K RA90 36D WHITE                     | TYPE:      | WEIGHT:          |
| SPEC.:   | DIM.:      | SERIAL No.:      |
| MFR.: Norming lighting                                       | SUR.: 57mm | 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  | .163                  | .092 | .029 | .156 | .089 | .028 | .143 | .082 | .026 | .132 | .076 | .024 | .121 | .070 | .023 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.0  | .153                  | .084 | .026 | .148 | .081 | .025 | .137 | .076 | .024 | .128 | .072 | .022 | .119 | .067 | .021 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3.0  | .144                  | .077 | .023 | .140 | .075 | .023 | .131 | .071 | .022 | .123 | .067 | .021 | .115 | .064 | .020 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.0  | .136                  | .071 | .021 | .132 | .069 | .020 | .125 | .066 | .020 | .118 | .063 | .019 | .111 | .060 | .018 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5.0  | .129                  | .066 | .019 | .126 | .064 | .019 | .119 | .062 | .018 | .113 | .060 | .018 | .107 | .057 | .017 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6.0  | .122                  | .061 | .018 | .119 | .060 | .017 | .114 | .058 | .017 | .108 | .056 | .017 | .103 | .054 | .016 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7.0  | .116                  | .058 | .016 | .114 | .057 | .016 | .109 | .055 | .016 | .104 | .053 | .016 | .100 | .052 | .015 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8.0  | .111                  | .054 | .015 | .109 | .054 | .015 | .104 | .052 | .015 | .100 | .051 | .015 | .096 | .049 | .014 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 9.0  | .106                  | .051 | .014 | .104 | .051 | .014 | .100 | .050 | .014 | .096 | .048 | .014 | .093 | .047 | .014 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10.0 | .102                  | .049 | .014 | .100 | .048 | .013 | .096 | .047 | .013 | .093 | .046 | .013 | .090 | .045 | .013 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

| 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  | .190                  | .190 | .190 | .163 | .163 | .163 | .111  | .111 | .111 | .064 | .064 | .064 | .020 | .020 | .020 |   |
| 1.0  | .170                  | .157 | .146 | .146 | .135 | .126 | .100  | .093 | .087 | .057 | .054 | .051 | .018 | .017 | .016 |   |
| 2.0  | .154                  | .133 | .115 | .132 | .114 | .099 | .090  | .079 | .069 | .052 | .046 | .041 | .017 | .015 | .013 |   |
| 3.0  | .140                  | .113 | .092 | .120 | .098 | .080 | .083  | .068 | .056 | .048 | .040 | .033 | .015 | .013 | .011 |   |
| 4.0  | .129                  | .098 | .075 | .111 | .085 | .065 | .076  | .059 | .046 | .044 | .035 | .027 | .014 | .011 | .009 |   |
| 5.0  | .119                  | .087 | .062 | .103 | .075 | .054 | .071  | .052 | .038 | .041 | .031 | .023 | .013 | .010 | .007 |   |
| 6.0  | .111                  | .077 | .052 | .096 | .067 | .046 | .066  | .047 | .032 | .038 | .027 | .019 | .012 | .009 | .006 |   |
| 7.0  | .104                  | .069 | .044 | .090 | .060 | .039 | .062  | .042 | .027 | .036 | .025 | .016 | .012 | .008 | .005 |   |
| 8.0  | .098                  | .063 | .038 | .085 | .054 | .033 | .058  | .038 | .024 | .034 | .023 | .014 | .011 | .007 | .005 |   |
| 9.0  | .093                  | .057 | .033 | .080 | .050 | .029 | .055  | .035 | .021 | .032 | .021 | .012 | .010 | .007 | .004 |   |
| 10.0 | .088                  | .053 | .029 | .076 | .046 | .025 | .053  | .032 | .018 | .031 | .019 | .011 | .010 | .006 | .004 |   |

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2024-08-06

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.453  
Humidity:65.0%  
Test Distance:3.090m [K=1.0000]  
Remarks:

### UGR(Unified Glare Rating) Table

|   |                  |      |      |      |            |                |      |                  |      |      |
|---|------------------|------|------|------|------------|----------------|------|------------------|------|------|
| Test:U:240.3V I:0.0556A P:12.7W PF:0.9519 Freq:49.99Hz<br>UTHDi:0.17% ITHDi:18.25% KDisp:0.9682Lamp Flux:979.467x1 lm |                  |      |      |      |            |                |      |                  |      |      |
| NAME: TR01-12-XX-01 3000K RA90 36D WHITE  |                  |      |      |      | TYPE:      |                |      | WEIGHT:          |      |      |
| SPEC.:  |                  |      |      |      | DIM.:      |                |      | SERIAL No.:      |      |      |
| MFR.: Norming lighting  |                  |      |      |      | SUR.: 57mm |                |      | Shielding Angle: |      |      |
|   |                  |      |      |      |            |                |      |                  |      |      |
| ceiling/cavity  | 0.7              | 0.7  | 0.5  | 0.5  | 0.3        | 0.7            | 0.7  | 0.5              | 0.5  | 0.3  |
| walls   | 0.5              | 0.3  | 0.5  | 0.3  | 0.3        | 0.5            | 0.3  | 0.5              | 0.3  | 0.3  |
| working plane   | 0.2              | 0.2  | 0.2  | 0.2  | 0.2        | 0.2            | 0.2  | 0.2              | 0.2  | 0.2  |
| Room dimensions   | Viewed crosswise |      |      |      |            | Viewed endwise |      |                  |      |      |
| x = 2H y = 2H   | 15.8             | 16.6 | 16.0 | 16.8 | 16.9       | 17.0           | 17.8 | 17.2             | 18.0 | 18.1 |
|   | 3H               | 16.1 | 16.9 | 16.4 | 17.1       | 17.3           | 17.3 | 18.1             | 17.6 | 18.3 |
|   | 4H               | 16.3 | 17.0 | 16.5 | 17.2       | 17.4           | 17.4 | 18.2             | 17.7 | 18.4 |
|   | 6H               | 16.2 | 16.9 | 16.5 | 17.1       | 17.4           | 17.5 | 18.2             | 17.8 | 18.4 |
|   | 8H               | 16.2 | 16.8 | 16.5 | 17.1       | 17.3           | 17.5 | 18.1             | 17.8 | 18.4 |
|   | 12H              | 16.1 | 16.8 | 16.5 | 17.0       | 17.3           | 17.4 | 18.1             | 17.7 | 18.3 |
| 4H  | 2H               | 15.9 | 16.6 | 16.2 | 16.8       | 17.0           | 17.0 | 17.7             | 17.3 | 17.9 |
|   | 3H               | 16.4 | 17.0 | 16.7 | 17.3       | 17.5           | 17.4 | 18.1             | 17.8 | 18.3 |
|   | 4H               | 16.6 | 17.1 | 16.9 | 17.4       | 17.7           | 17.6 | 18.2             | 18.0 | 18.5 |
|   | 6H               | 16.6 | 17.1 | 16.9 | 17.4       | 17.8           | 17.7 | 18.2             | 18.1 | 18.6 |
|   | 8H               | 16.5 | 17.0 | 16.9 | 17.3       | 17.7           | 17.7 | 18.2             | 18.1 | 18.5 |
|   | 12H              | 16.5 | 16.9 | 16.9 | 17.3       | 17.7           | 17.7 | 18.1             | 18.1 | 18.5 |
| 8H  | 4H               | 16.6 | 17.1 | 17.0 | 17.4       | 17.8           | 17.6 | 18.1             | 18.0 | 18.4 |
|   | 6H               | 16.6 | 17.0 | 17.0 | 17.4       | 17.8           | 17.7 | 18.1             | 18.2 | 18.5 |
|   | 8H               | 16.6 | 16.9 | 17.0 | 17.3       | 17.8           | 17.7 | 18.0             | 18.2 | 18.5 |
|   | 12H              | 16.5 | 16.8 | 17.0 | 17.2       | 17.7           | 17.7 | 18.0             | 18.1 | 18.4 |
| 12H   | 4H               | 16.6 | 17.0 | 17.0 | 17.4       | 17.7           | 17.6 | 18.0             | 18.0 | 18.4 |
|   | 6H               | 16.6 | 16.9 | 17.0 | 17.3       | 17.8           | 17.7 | 18.0             | 18.1 | 18.4 |
|   | 8H               | 16.5 | 16.8 | 17.0 | 17.2       | 17.7           | 17.7 | 17.9             | 18.1 | 18.4 |
| Variations with the observer position at spacings(CIE Pub.117):   |                  |      |      |      |            |                |      |                  |      |      |
| S = 1.0H  | + 1.2 / - 1.6    |      |      |      |            | + 1.8 / - 1.6  |      |                  |      |      |
| 1.5H  | + 1.8 / - 0.9    |      |      |      |            | + 3.1 / - 1.4  |      |                  |      |      |
| 2.0H  | + 1.3 / - 1.6    |      |      |      |            | + 2.3 / - 1.6  |      |                  |      |      |

CIE Pub.117, 979.5 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -0.1)  
Area: 0.0027 m2

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2024-08-06

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.453  
Humidity:65.0%  
Test Distance:3.090m [K=1.0000]  
Remarks:

## UTILIZATION FACTORS TABLE

|  |            |                  |
|--|------------|------------------|
| Test:U:240.3V I:0.0556A P:12.7W PF:0.9519 Freq:49.99Hz       |            |                  |
| UTHDi:0.17% ITHDi:18.25% KDisp:0.9682 Lamp Flux:979.467x1 lm |            |                  |
| NAME: TR01-12-XX-01 3000K RA90 36D WHITE                     | TYPE:      | WEIGHT:          |
| SPEC.:   | DIM.:      | SERIAL No.:      |
| MFR.: Norming lighting                                       | SUR.: 57mm | Shielding Angle: |

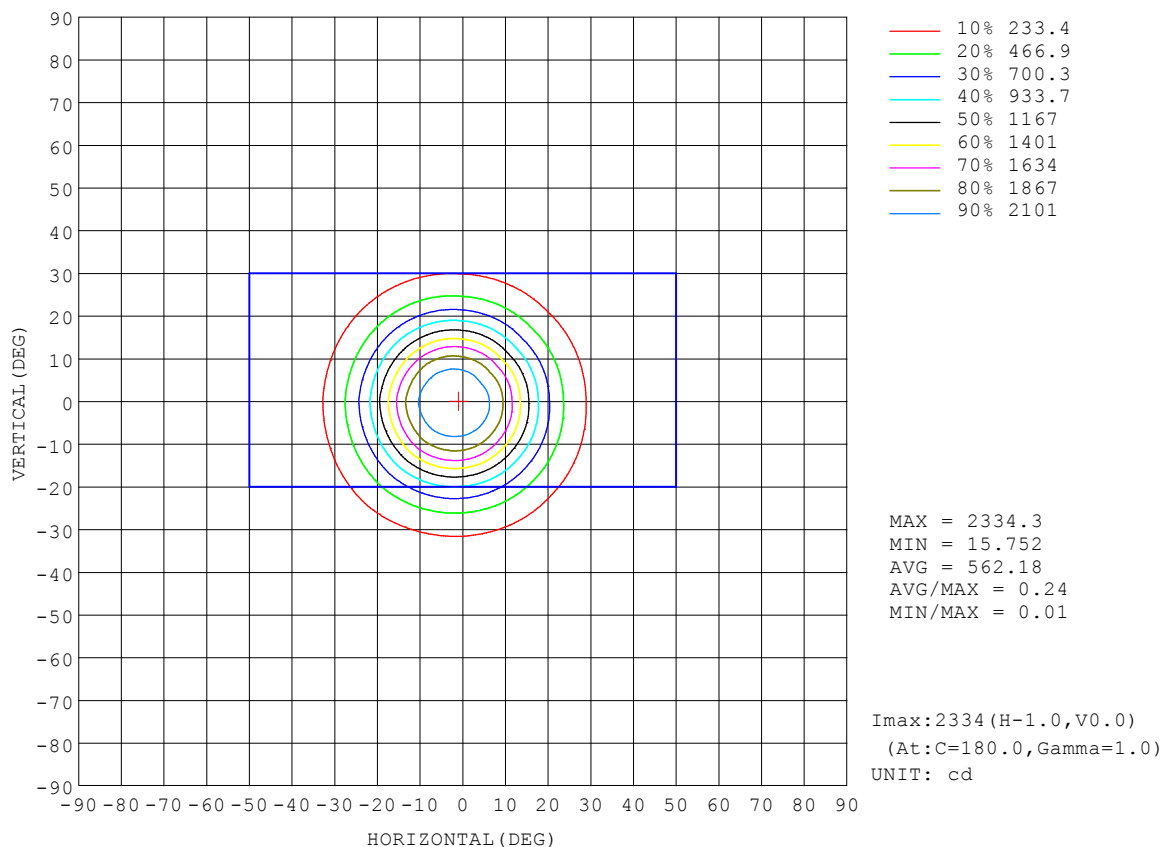
| REFLECTANCE                      |  |     |           |     |     |     |     |               |     |        |
|----------------------------------|--|-----|-----------|-----|-----|-----|-----|---------------|-----|--------|
| Ceiling                          | 0.8  | 0.8 | 0.8       | 0.7 | 0.7 | 0.7 | 0.5 | 0.5           | 0.5 | 0      |
| Walls                            | 0.7  | 0.5 | 0.3       | 0.7 | 0.5 | 0.3 | 0.7 | 0.5           | 0.3 | 0      |
| Working plane                    | 0.2  | 0.2 | 0.2       | 0.2 | 0.2 | 0.2 | 0.2 | 0.2           | 0.2 | 0      |
| ROOM INDEX                       | UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$ |     |           |     |     |     |     |               |     |        |
| $k = 0.60$                       | 87   | 81  | 77        | 87  | 81  | 77  | 86  | 81            | 77  | 74     |
| 0.80                             | 95   | 89  | 85        | 94  | 89  | 85  | 93  | 88            | 85  | 81     |
| 1.00                             | 99   | 94  | 90        | 98  | 93  | 90  | 97  | 93            | 89  | 85     |
| 1.25                             | 103  | 98  | 94        | 102 | 97  | 94  | 100 | 96            | 93  | 89     |
| 1.50                             | 106  | 101 | 98        | 105 | 100 | 97  | 102 | 99            | 96  | 92     |
| 2.00                             | 108  | 104 | 101       | 107 | 103 | 100 | 104 | 101           | 99  | 94     |
| 2.50                             | 110  | 106 | 103       | 109 | 105 | 102 | 105 | 103           | 101 | 95     |
| 3.00                             | 112  | 108 | 106       | 110 | 107 | 104 | 107 | 104           | 102 | 96     |
| 4.00                             | 114  | 111 | 109       | 112 | 109 | 107 | 108 | 106           | 105 | 98     |
| 5.00                             | 115  | 113 | 111       | 113 | 111 | 109 | 109 | 108           | 106 | 99     |
| ROOM INDEX                       | UF (total)   |     |           |     |     |     |     |               |     | Direct |
| According to DIN EN 13032-2 2004 |  |     | Suspended |     |     |     |     | SHRNOM = 1.25 |     |        |

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DAMIN  
Test Date: 2024-08-06

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 $\gamma$  Test System: EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.453  
Humidity: 65.0%  
Test Distance: 3.090m [K=1.0000]  
Remarks:

## ISOCANDELA DIAGRAM

|  |            |                  |
|--|------------|------------------|
| Test:U:240.3V I:0.0556A P:12.7W PF:0.9519 Freq:49.99Hz       |            |                  |
| UTHDi:0.17% ITHDi:18.25% KDisp:0.9682 Lamp Flux:979.467x1 lm |            |                  |
| NAME: TR01-12-XX-01 3000K RA90 36D WHITE                     | TYPE:      | WEIGHT:          |
| SPEC.:   | DIM.:      | SERIAL No.:      |
| MFR.: Norming lighting                                       | SUR.: 57mm | Shielding Angle: |



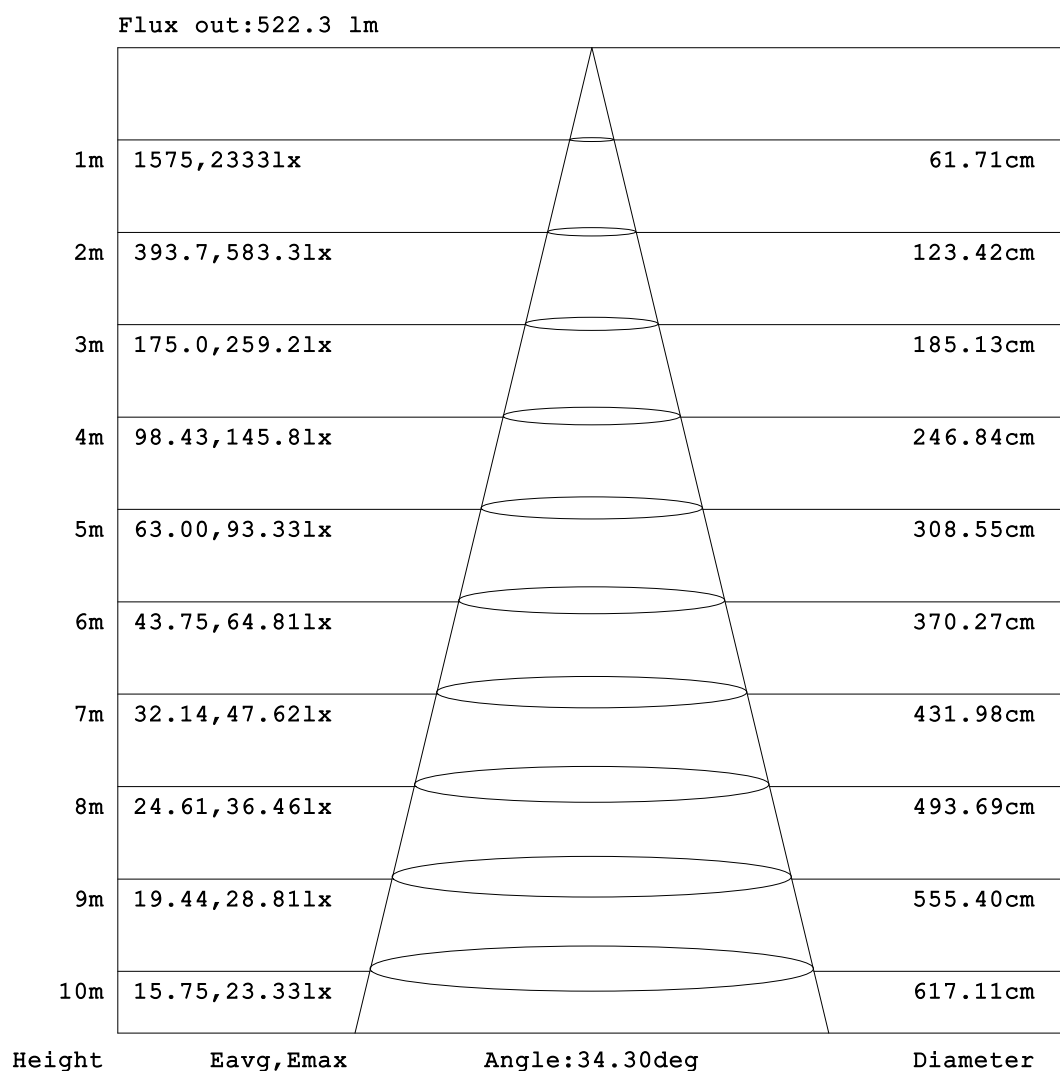
C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2024-08-06

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.453  
Humidity:65.0%  
Test Distance:3.090m [K=1.0000]  
Remarks:



## AAI Figure

|  |            |                  |
|--|------------|------------------|
| Test:U:240.3V I:0.0556A P:12.7W PF:0.9519 Freq:49.99Hz       |            |                  |
| UTHDi:0.17% ITHDi:18.25% KDisp:0.9682 Lamp Flux:979.467x1 lm |            |                  |
| NAME: TR01-12-XX-01 3000K RA90 36D WHITE                     | TYPE:      | WEIGHT:          |
| SPEC.:   | DIM.:      | SERIAL No.:      |
| MFR.: Norming lighting                                       | SUR.: 57mm | Shielding Angle: |



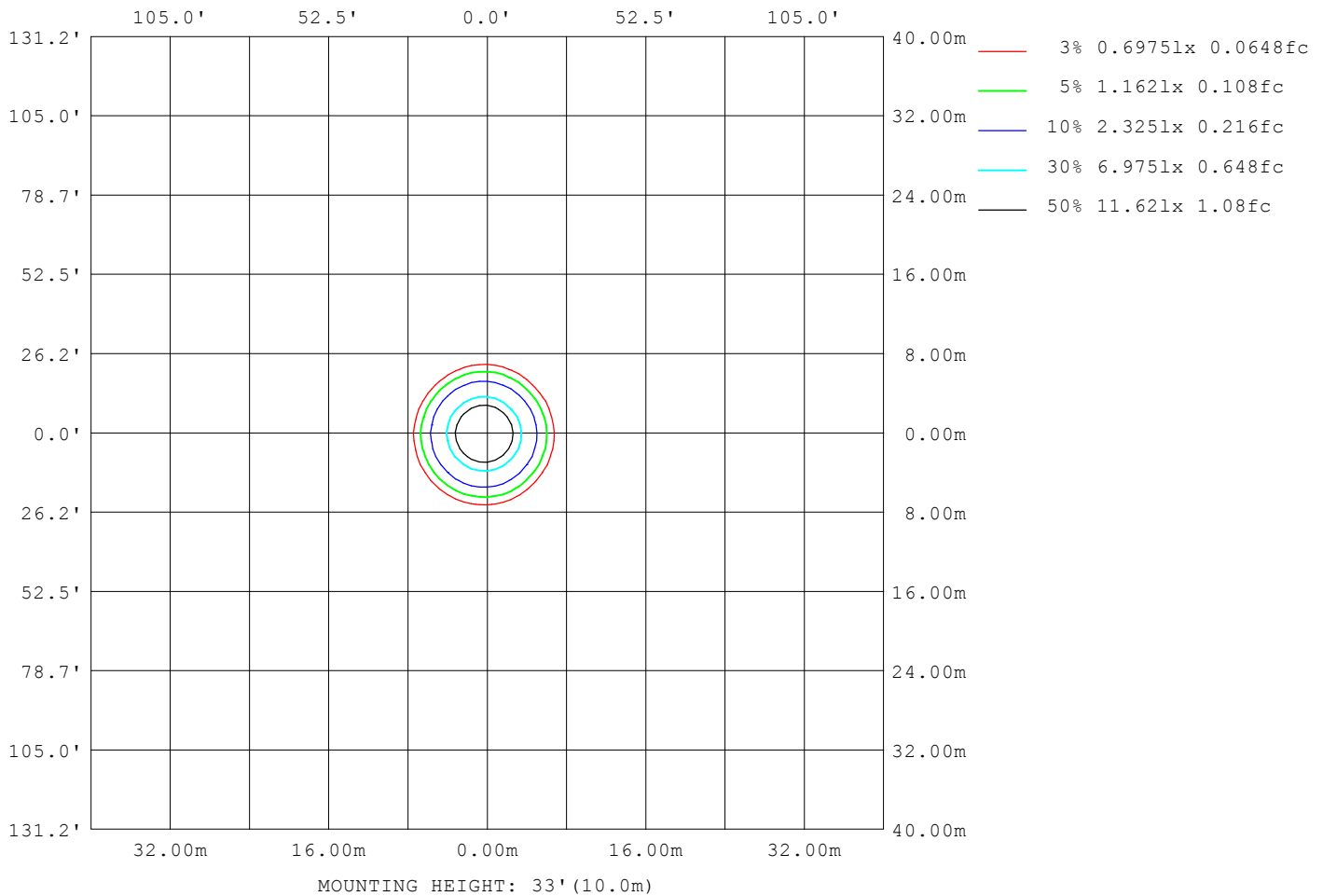
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DAMIN  
Test Date: 2024-08-06

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.453  
Humidity: 65.0%  
Test Distance: 3.090m [K=1.0000]  
Remarks:

## ISOLUX DIAGRAM

|  |            |                  |
|--|------------|------------------|
| Test:U:240.3V I:0.0556A P:12.7W PF:0.9519 Freq:49.99Hz       |            |                  |
| UTHDi:0.17% ITHDi:18.25% KDisp:0.9682 Lamp Flux:979.467x1 lm |            |                  |
| NAME: TR01-12-XX-01 3000K RA90 36D WHITE                     | TYPE:      | WEIGHT:          |
| SPEC.:   | DIM.:      | SERIAL No.:      |
| MFR.: Norming lighting                                       | SUR.: 57mm | Shielding Angle: |



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2024-08-06

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.453  
Humidity:65.0%  
Test Distance:3.090m [K=1.0000]  
Remarks:

## LED Avg.L Report

|  |            |                  |
|--|------------|------------------|
| Test:U:240.3V I:0.0556A P:12.7W PF:0.9519 Freq:49.99Hz<br>UTHDi:0.17% ITHDi:18.25% KDisp:0.9682 Lamp Flux:979.467x1 lm |            |                  |
| NAME: TR01-12-XX-01 3000K RA90 36D WHITE   | TYPE:      | WEIGHT:          |
| SPEC.:   | DIM.:      | SERIAL No.:      |
| MFR.: Norming lighting   | SUR.: 57mm | Shielding Angle: |

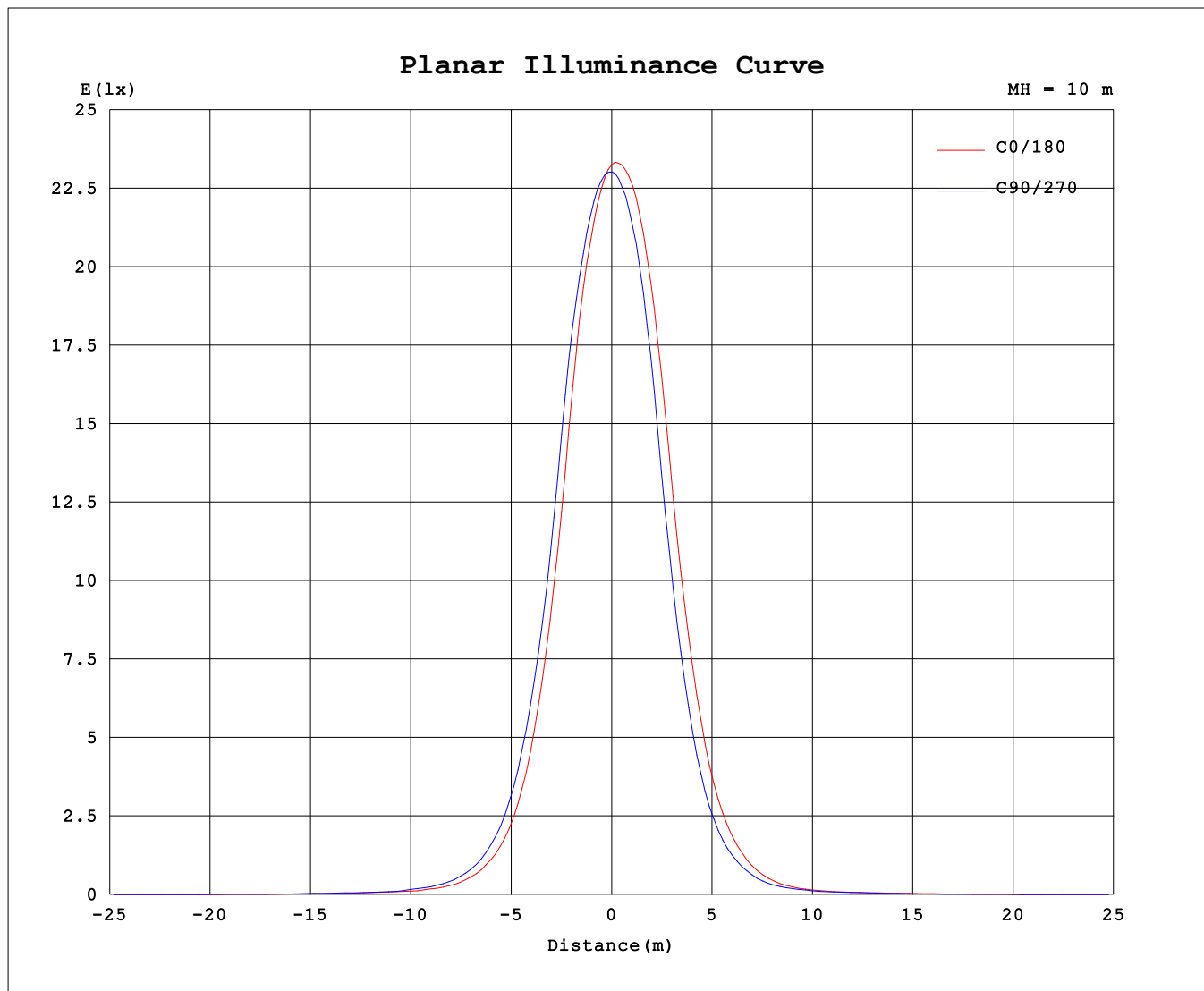
| AvgL             | cd/m2 |
|------------------|-------|
| L_0~180 (65) av  | 8181  |
| L_0~180 (75) av  | 6279  |
| L_0~180 (85) av  | 1390  |
| L_90~270 (65) av | 8287  |
| L_90~270 (75) av | 6457  |
| L_90~270 (85) av | 1030  |
| L_45 (65) av     | 8190  |
| L_45 (75) av     | 6411  |
| L_45 (85) av     | 1160  |

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2024-08-06

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.453  
Humidity:65.0%  
Test Distance:3.090m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DAMIN  
Test Date: 2024-08-06

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.453  
Humidity: 65.0%  
Test Distance: 3.090m [K=1.0000]  
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

```

## Photometric Data Table [cd]

| G/C  | 0.0    | 45.0   | 90.0   | 135.0  | 180.0  | 225.0  | 270.0  | 315.0  |
|------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.0  | 2310   | 2310   | 2310   | 2310   | 2310   | 2310   | 2310   | 2310   |
| 3.0  | 2240   | 2261   | 2290   | 2315   | 2318   | 2301   | 2271   | 2242   |
| 6.0  | 2101   | 2142   | 2206   | 2273   | 2280   | 2239   | 2170   | 2112   |
| 9.0  | 1895   | 1958   | 2051   | 2148   | 2169   | 2097   | 1993   | 1905   |
| 12.0 | 1570   | 1672   | 1827   | 1959   | 1978   | 1877   | 1716   | 1586   |
| 15.0 | 1212   | 1311   | 1485   | 1671   | 1690   | 1535   | 1351   | 1215   |
| 18.0 | 901.6  | 988.4  | 1132   | 1293   | 1325   | 1184   | 1018   | 899.6  |
| 21.0 | 641.9  | 719.8  | 842.6  | 967.2  | 1000   | 880.5  | 734.1  | 632.5  |
| 24.0 | 441.6  | 499.2  | 607.3  | 698.1  | 723.4  | 615.0  | 504.2  | 431.5  |
| 27.0 | 296.7  | 340.3  | 420.4  | 487.5  | 496.9  | 417.7  | 340.5  | 290.7  |
| 30.0 | 200.8  | 228.7  | 287.7  | 331.0  | 337.0  | 281.5  | 227.6  | 195.5  |
| 33.0 | 133.6  | 154.5  | 193.3  | 223.7  | 225.0  | 182.4  | 152.0  | 131.0  |
| 36.0 | 89.89  | 102.0  | 131.0  | 148.3  | 142.9  | 116.2  | 97.46  | 86.18  |
| 39.0 | 60.90  | 69.58  | 88.73  | 97.55  | 90.73  | 73.60  | 65.92  | 59.51  |
| 42.0 | 45.02  | 50.27  | 62.13  | 65.02  | 59.98  | 49.92  | 48.49  | 45.44  |
| 45.0 | 31.46  | 35.37  | 47.01  | 47.79  | 42.80  | 37.87  | 34.55  | 30.99  |
| 48.0 | 27.99  | 29.80  | 31.65  | 34.00  | 31.66  | 29.88  | 29.25  | 27.54  |
| 51.0 | 24.40  | 26.29  | 28.42  | 28.22  | 27.60  | 26.88  | 25.84  | 23.85  |
| 54.0 | 19.82  | 21.95  | 24.79  | 25.20  | 24.54  | 23.24  | 21.81  | 19.39  |
| 57.0 | 14.43  | 16.77  | 20.12  | 21.27  | 20.71  | 18.76  | 16.63  | 14.00  |
| 60.0 | 11.03  | 11.79  | 14.41  | 16.23  | 15.77  | 13.59  | 11.59  | 10.73  |
| 63.0 | 9.492  | 10.29  | 11.14  | 11.41  | 11.20  | 10.60  | 9.970  | 9.171  |
| 66.0 | 8.014  | 8.770  | 9.487  | 9.841  | 9.627  | 9.087  | 8.367  | 7.640  |
| 69.0 | 6.532  | 7.234  | 7.949  | 8.328  | 8.121  | 7.592  | 6.869  | 6.063  |
| 72.0 | 5.204  | 5.627  | 6.329  | 6.843  | 6.587  | 6.087  | 5.407  | 4.603  |
| 75.0 | 3.739  | 4.329  | 4.853  | 5.412  | 5.037  | 4.772  | 4.171  | 3.408  |
| 78.0 | 1.768  | 2.501  | 3.451  | 4.146  | 3.835  | 3.401  | 2.456  | 1.719  |
| 81.0 | 0.5946 | 0.8960 | 1.568  | 2.269  | 2.274  | 1.594  | 0.9572 | 0.5756 |
| 84.0 | 0.1391 | 0.2377 | 0.5203 | 0.8488 | 0.8559 | 0.5245 | 0.2583 | 0.1181 |
| 87.0 | 0.0336 | 0.0359 | 0.1188 | 0.2102 | 0.2141 | 0.1034 | 0.0477 | 0.0249 |
| 90.0 | 0.0342 | 0.0237 | 0.0322 | 0.0278 | 0.0310 | 0.0212 | 0.0322 | 0.0278 |

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2024-08-06

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.453  
Humidity:65.0%  
Test Distance:3.090m [K=1.0000]  
Remarks: