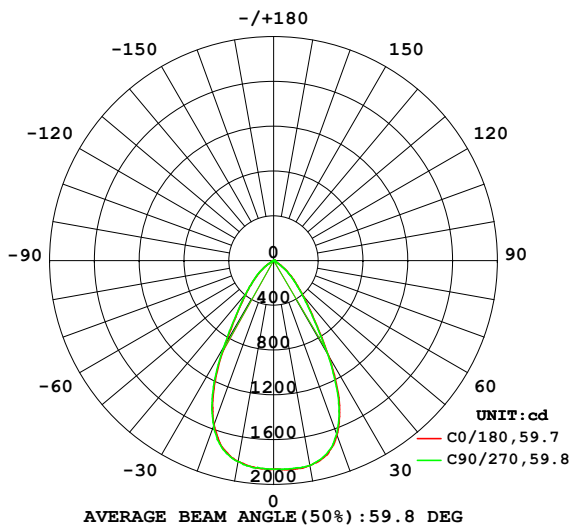


## LUMINAIRE PHOTOMETRIC TEST REPORT

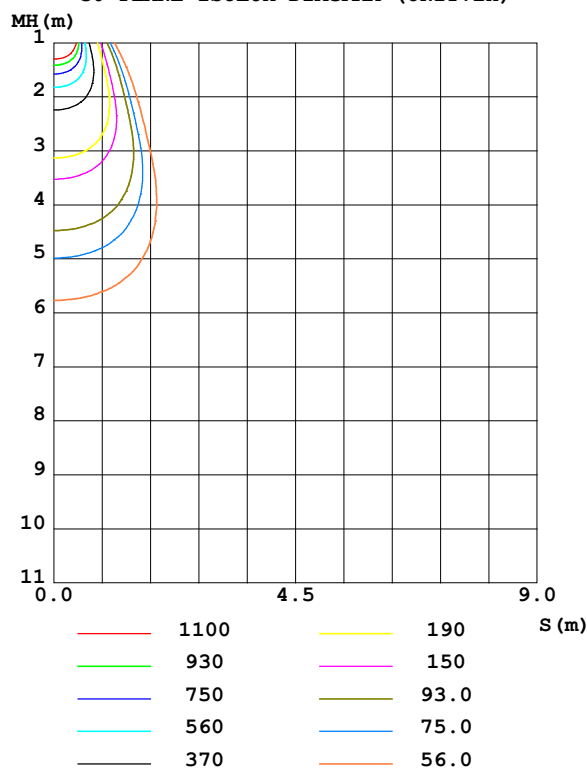
|                                                                                                                     |              |                  |
|---------------------------------------------------------------------------------------------------------------------|--------------|------------------|
| Test:U:230.35V I:0.0662A P:13.803W PF:0.9047 Freq:49.99Hz<br>UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1952.37x1 lm |              |                  |
| NAME: 136-133_4000K_15W                                                                                             | TYPE: 15W    | WEIGHT:          |
| SPEC.: 4000K                                                                                                        | DIM.:        | SERIAL No.:      |
| MFR.: Tronix Lighting                                                                                               | SUR.: 0.0715 | Shielding Angle: |

| DATA OF LAMP     |                   | PHOTOMETRIC DATA Eff: 141.45 lm/W |        |                   |          |
|------------------|-------------------|-----------------------------------|--------|-------------------|----------|
| MODEL            | 136-133_4000K_15W | I <sub>max</sub> (cd)             | 1872   | S/MH(C0/180)      | 0.87     |
| NOMINAL POWER(W) | 15                | LOR(%)                            | 100.0  | S/MH(C90/270)     | 0.90     |
| RATED VOLTAGE(V) | 230               | TOTAL FLUX(lm)                    | 1952.4 | η UP,DN(C0-180)   | 0.0,49.0 |
| NOMINAL FLUX(lm) | 1952.37           | CIE CLASS                         | DIRECT | η UP,DN(C180-360) | 0.0,51.0 |
| LAMPS INSIDE     | 1                 | η up (%)                          | 0.0    | CIBSE SHR NOM     | 0.75     |
| TEST VOLTAGE(V)  | 230               | η down (%)                        | 100.0  | CIBSE SHR MAX     | 0.90     |

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:2023-07-27

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:9.640m [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       | 1824                  | 1815   | 1824   | 1846   | 1858   | 1863   | 1857   | 1839   | 0- 10    | 177.2       | 177.2        | 9.07,9.07  |
| 20       | 1559                  | 1550   | 1570   | 1619   | 1656   | 1665   | 1648   | 1596   | 10- 20   | 494.0       | 671.2        | 34.4,34.4  |
| 30       | 869.4                 | 867.5  | 893.8  | 947.4  | 984.8  | 984.5  | 965.7  | 915.4  | 20- 30   | 594.5       | 1266         | 64.8,64.8  |
| 40       | 379.8                 | 376.2  | 385.2  | 400.8  | 410.3  | 407.1  | 398.8  | 385.8  | 30- 40   | 378.3       | 1644         | 84.2,84.2  |
| 50       | 164.8                 | 167.5  | 168.3  | 174.3  | 177.8  | 174.6  | 170.2  | 167.0  | 40- 50   | 207.2       | 1851         | 94.8,94.8  |
| 60       | 31.83                 | 31.72  | 28.32  | 31.80  | 32.37  | 31.20  | 28.32  | 31.13  | 50- 60   | 81.55       | 1933         | 99,99      |
| 70       | 5.559                 | 5.572  | 5.729  | 5.916  | 5.796  | 5.484  | 5.429  | 5.478  | 60- 70   | 12.45       | 1945         | 99.6,99.6  |
| 80       | 3.671                 | 3.567  | 3.551  | 3.630  | 3.617  | 3.400  | 3.381  | 3.541  | 70- 80   | 4.754       | 1950         | 99.9,99.9  |
| 90       | 0.0564                | 0.0504 | 0.0445 | 0.0445 | 0.0564 | 0.0534 | 0.0504 | 0.0564 | 80- 90   | 2.366       | 1952         | 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): 1764.1 lm

%lum = 90.4%

%lamp = 90.4%

Conical surface Flux(120deg): 1932.8 lm

%lum = 99.0%

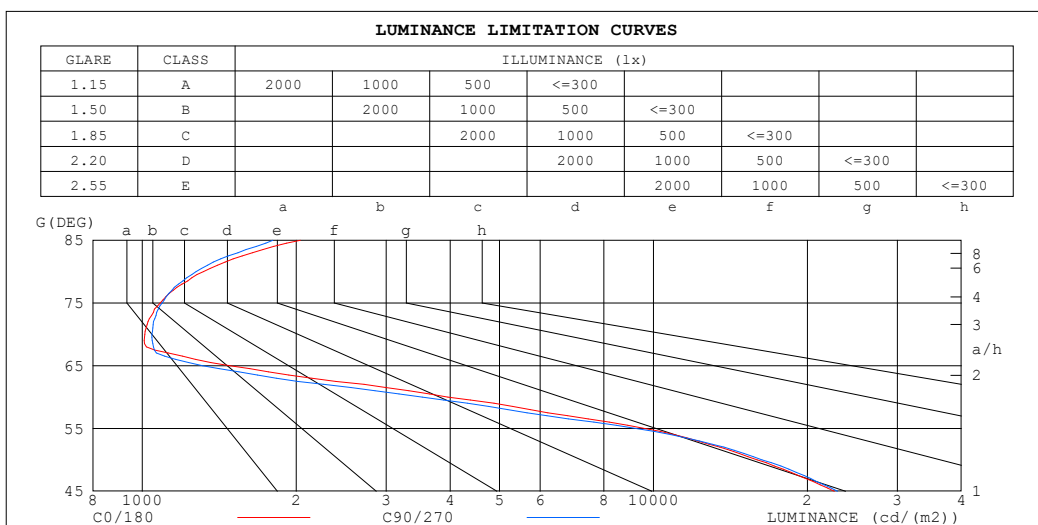
%lamp = 99.0%

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3℃  
 Operators:DAMIN  
 Test Date:2023-07-27

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
 Humidity:65.0%  
 Test Distance:9.640m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

|                                                                                                                     |              |                  |
|---------------------------------------------------------------------------------------------------------------------|--------------|------------------|
| Test:U:230.35V I:0.0662A P:13.803W PF:0.9047 Freq:49.99Hz<br>UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1952.37x1 lm |              |                  |
| NAME: 136-133_4000K_15W                                                                                             | TYPE: 15W    | WEIGHT:          |
| SPEC.: 4000K                                                                                                        | DIM.:        | SERIAL No.:      |
| MFR.: Tronix Lighting                                                                                               | SUR.: 0.0715 | Shielding Angle: |



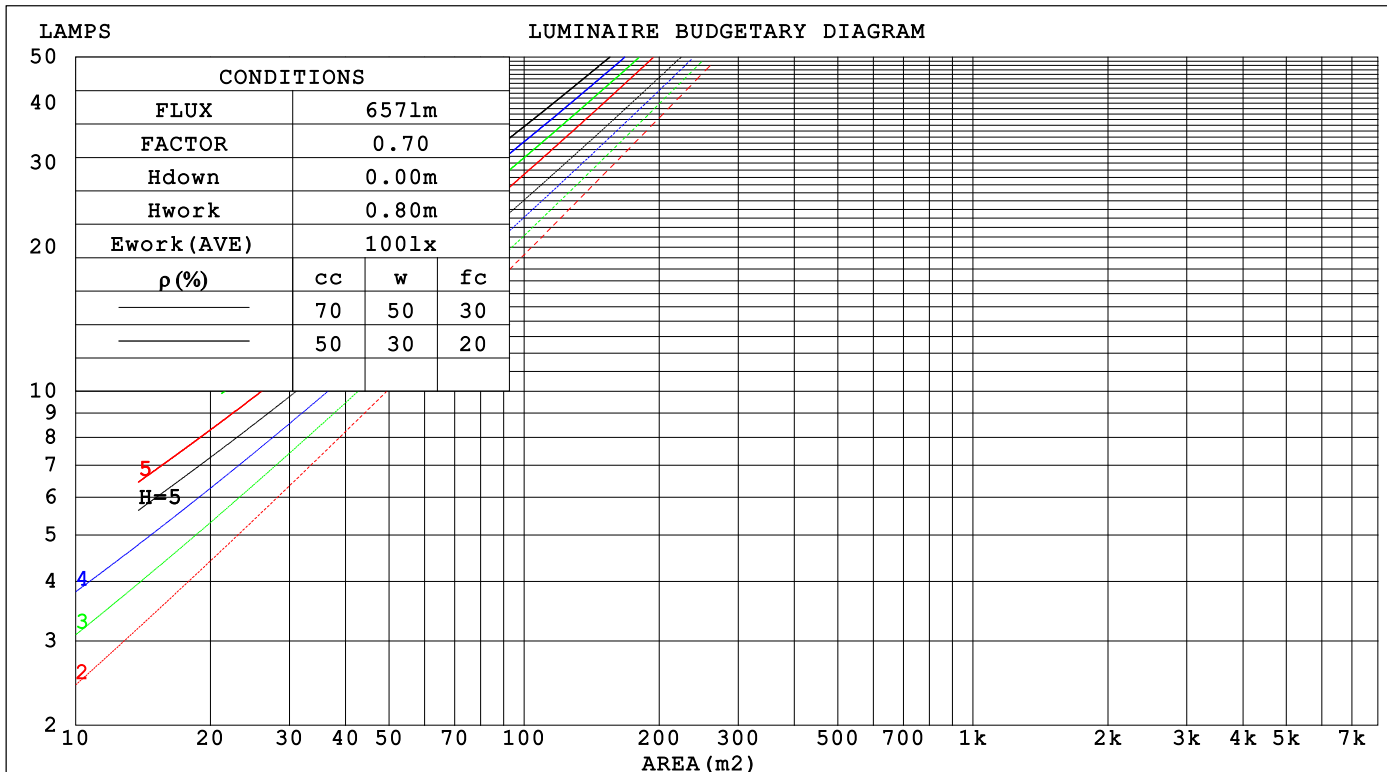
C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: DAMIN  
Test Date: 2023-07-27

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
Humidity: 65.0%  
Test Distance: 9.640m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

|                                                           |  |              |                                 |                  |  |                        |  |  |
|-----------------------------------------------------------|--|--------------|---------------------------------|------------------|--|------------------------|--|--|
| Test:U:230.35V I:0.0662A P:13.803W PF:0.9047 Freq:49.99Hz |  |              | UTHDi:0.00% ITHDi:0.00% KDisp:0 |                  |  | Lamp Flux:1952.37x1 lm |  |  |
| NAME: 136-133_4000K_15W                                   |  | TYPE: 15W    |                                 | WEIGHT:          |  |                        |  |  |
| SPEC.: 4000K                                              |  | DIM.:        |                                 | SERIAL No.:      |  |                        |  |  |
| MFR.: Tronix Lighting                                     |  | SUR.: 0.0715 |                                 | Shielding Angle: |  |                        |  |  |

| pcc             | 80%                                                                        |      |      | 70%  |      |      | 50%  |      |      | 30%  |      |      | 10%  |      |      | 0    |
|-----------------|----------------------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| p <sub>w</sub>  | 50%                                                                        | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0    |
| p <sub>fc</sub> | 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             | 1.10                                                                       | 1.07 | 1.05 | 1.08 | 1.06 | 1.03 | 1.04 | 1.02 | 1.00 | 1.00 | .99  | .97  | .97  | .96  | .94  | .93  |
| 2.0             | 1.02                                                                       | .97  | .94  | 1.00 | .96  | .93  | .97  | .94  | .91  | .94  | .91  | .89  | .91  | .89  | .87  | .85  |
| 3.0             | .94                                                                        | .89  | .85  | .93  | .88  | .84  | .90  | .86  | .83  | .88  | .84  | .81  | .85  | .82  | .80  | .78  |
| 4.0             | .87                                                                        | .81  | .77  | .86  | .81  | .76  | .84  | .79  | .76  | .82  | .78  | .75  | .80  | .77  | .74  | .72  |
| 5.0             | .81                                                                        | .75  | .70  | .80  | .75  | .70  | .79  | .73  | .70  | .77  | .72  | .69  | .75  | .71  | .68  | .67  |
| 6.0             | .76                                                                        | .69  | .65  | .75  | .69  | .65  | .73  | .68  | .64  | .72  | .67  | .64  | .71  | .67  | .63  | .62  |
| 7.0             | .71                                                                        | .65  | .60  | .70  | .64  | .60  | .69  | .64  | .60  | .68  | .63  | .59  | .67  | .62  | .59  | .57  |
| 8.0             | .67                                                                        | .60  | .56  | .66  | .60  | .56  | .65  | .59  | .55  | .64  | .59  | .55  | .63  | .58  | .55  | .54  |
| 9.0             | .63                                                                        | .56  | .52  | .62  | .56  | .52  | .61  | .56  | .52  | .60  | .55  | .52  | .59  | .55  | .51  | .50  |
| 10.0            | .59                                                                        | .53  | .49  | .58  | .53  | .49  | .58  | .52  | .49  | .57  | .52  | .48  | .56  | .52  | .48  | .47  |



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:2023-07-27

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:9.640m [K=1.0000]  
Remarks:

### WEC AND CCEC

|                                                           |              |                  |
|-----------------------------------------------------------|--------------|------------------|
| Test:U:230.35V I:0.0662A P:13.803W PF:0.9047 Freq:49.99Hz |              |                  |
| UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1952.37x1 lm    |              |                  |
| NAME: 136-133_4000K_15W                                   | TYPE: 15W    | WEIGHT:          |
| SPEC.: 4000K                                              | DIM.:        | SERIAL No.:      |
| MFR.: Tronix Lighting                                     | SUR.: 0.0715 | 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  | .190                  | .108 | .034 | .183 | .105 | .033 | .171                            | .098 | .031 | .159 | .092 | .029 | .148 | .086 | .028 |   |  |
| 2.0  | .183                  | .100 | .031 | .177 | .098 | .030 | .167                            | .093 | .029 | .157 | .088 | .028 | .148 | .084 | .026 |   |  |
| 3.0  | .175                  | .093 | .028 | .170 | .091 | .027 | .161                            | .087 | .026 | .152 | .083 | .026 | .144 | .080 | .025 |   |  |
| 4.0  | .167                  | .087 | .025 | .162 | .085 | .025 | .154                            | .082 | .024 | .147 | .079 | .024 | .140 | .076 | .023 |   |  |
| 5.0  | .159                  | .081 | .023 | .155 | .080 | .023 | .148                            | .077 | .023 | .142 | .075 | .022 | .135 | .072 | .022 |   |  |
| 6.0  | .151                  | .076 | .022 | .148 | .075 | .022 | .142                            | .073 | .021 | .136 | .071 | .021 | .131 | .069 | .020 |   |  |
| 7.0  | .144                  | .071 | .020 | .141 | .070 | .020 | .136                            | .069 | .020 | .131 | .067 | .019 | .126 | .065 | .019 |   |  |
| 8.0  | .138                  | .067 | .019 | .135 | .067 | .019 | .130                            | .065 | .019 | .126 | .064 | .018 | .121 | .062 | .018 |   |  |
| 9.0  | .132                  | .064 | .018 | .129 | .063 | .018 | .125                            | .062 | .017 | .121 | .061 | .017 | .117 | .059 | .017 |   |  |
| 10.0 | .126                  | .060 | .017 | .124 | .060 | .017 | .120                            | .059 | .017 | .116 | .058 | .016 | .113 | .057 | .016 |   |  |

| 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  | .172                  | .157 | .144 | .147 | .135 | .124 | .101                                        | .093 | .086 | .058 | .054 | .050 | .019 | .017 | .016 |   |  |
| 2.0  | .158                  | .132 | .111 | .135 | .114 | .096 | .093                                        | .079 | .067 | .053 | .046 | .039 | .017 | .015 | .013 |   |  |
| 3.0  | .146                  | .114 | .088 | .125 | .098 | .076 | .086                                        | .068 | .053 | .050 | .040 | .031 | .016 | .013 | .010 |   |  |
| 4.0  | .137                  | .099 | .071 | .117 | .086 | .061 | .081                                        | .060 | .043 | .047 | .035 | .026 | .015 | .011 | .008 |   |  |
| 5.0  | .128                  | .088 | .058 | .110 | .076 | .050 | .076                                        | .053 | .036 | .044 | .031 | .021 | .014 | .010 | .007 |   |  |
| 6.0  | .121                  | .079 | .048 | .104 | .068 | .042 | .072                                        | .048 | .030 | .042 | .028 | .018 | .013 | .009 | .006 |   |  |
| 7.0  | .115                  | .071 | .041 | .099 | .062 | .035 | .068                                        | .043 | .025 | .040 | .025 | .015 | .013 | .008 | .005 |   |  |
| 8.0  | .109                  | .065 | .035 | .094 | .056 | .030 | .065                                        | .040 | .022 | .038 | .023 | .013 | .012 | .008 | .004 |   |  |
| 9.0  | .104                  | .060 | .030 | .090 | .052 | .026 | .062                                        | .037 | .019 | .036 | .022 | .011 | .012 | .007 | .004 |   |  |
| 10.0 | .099                  | .056 | .027 | .086 | .048 | .023 | .059                                        | .034 | .016 | .035 | .020 | .010 | .011 | .007 | .003 |   |  |

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:2023-07-27

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:9.640m [K=1.0000]  
Remarks:

### UGR(Unified Glare Rating) Table

|                                                                                                                     |                  |      |      |      |      |                |      |      |                  |      |
|---------------------------------------------------------------------------------------------------------------------|------------------|------|------|------|------|----------------|------|------|------------------|------|
| Test:U:230.35V I:0.0662A P:13.803W PF:0.9047 Freq:49.99Hz<br>UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1952.37x1 lm |                  |      |      |      |      |                |      |      |                  |      |
| NAME: 136-133_4000K_15W                                                                                             |                  |      |      |      |      | TYPE: 15W      |      |      | WEIGHT:          |      |
| SPEC.: 4000K                                                                                                        |                  |      |      |      |      | DIM.:          |      |      | SERIAL No.:      |      |
| MFR.: Tronix Lighting                                                                                               |                  |      |      |      |      | SUR.: 0.0715   |      |      | 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                                                                                                       | 18.8             | 19.8 | 19.0 | 20.0 | 20.1 | 18.8           | 19.8 | 19.0 | 20.0             | 20.2 |
| 3H                                                                                                                  | 18.6             | 19.5 | 18.9 | 19.7 | 20.0 | 18.7           | 19.6 | 18.9 | 19.8             | 20.0 |
| 4H                                                                                                                  | 18.5             | 19.4 | 18.8 | 19.6 | 19.9 | 18.6           | 19.5 | 18.9 | 19.7             | 19.9 |
| 6H                                                                                                                  | 18.4             | 19.3 | 18.7 | 19.5 | 19.8 | 18.5           | 19.3 | 18.8 | 19.6             | 19.8 |
| 8H                                                                                                                  | 18.4             | 19.2 | 18.7 | 19.5 | 19.7 | 18.5           | 19.3 | 18.8 | 19.5             | 19.8 |
| 12H                                                                                                                 | 18.4             | 19.1 | 18.7 | 19.4 | 19.7 | 18.4           | 19.2 | 18.7 | 19.5             | 19.7 |
| 4H 2H                                                                                                               | 18.6             | 19.5 | 18.9 | 19.7 | 19.9 | 18.6           | 19.5 | 18.9 | 19.7             | 20.0 |
| 3H                                                                                                                  | 18.4             | 19.2 | 18.7 | 19.5 | 19.7 | 18.5           | 19.2 | 18.8 | 19.5             | 19.8 |
| 4H                                                                                                                  | 18.3             | 19.0 | 18.7 | 19.3 | 19.6 | 18.4           | 19.1 | 18.7 | 19.4             | 19.7 |
| 6H                                                                                                                  | 18.3             | 18.9 | 18.6 | 19.2 | 19.6 | 18.3           | 18.9 | 18.7 | 19.3             | 19.6 |
| 8H                                                                                                                  | 18.2             | 18.8 | 18.6 | 19.2 | 19.5 | 18.3           | 18.8 | 18.7 | 19.2             | 19.6 |
| 12H                                                                                                                 | 18.2             | 18.7 | 18.6 | 19.1 | 19.5 | 18.3           | 18.8 | 18.7 | 19.1             | 19.5 |
| 8H 4H                                                                                                               | 18.2             | 18.8 | 18.6 | 19.1 | 19.5 | 18.3           | 18.8 | 18.6 | 19.2             | 19.5 |
| 6H                                                                                                                  | 18.1             | 18.6 | 18.6 | 19.0 | 19.4 | 18.2           | 18.7 | 18.6 | 19.0             | 19.5 |
| 8H                                                                                                                  | 18.1             | 18.5 | 18.6 | 18.9 | 19.4 | 18.2           | 18.6 | 18.6 | 19.0             | 19.4 |
| 12H                                                                                                                 | 18.1             | 18.5 | 18.6 | 18.9 | 19.4 | 18.1           | 18.5 | 18.6 | 18.9             | 19.4 |
| 12H 4H                                                                                                              | 18.2             | 18.7 | 18.6 | 19.0 | 19.4 | 18.2           | 18.7 | 18.6 | 19.1             | 19.5 |
| 6H                                                                                                                  | 18.1             | 18.5 | 18.5 | 18.9 | 19.4 | 18.1           | 18.6 | 18.6 | 19.0             | 19.4 |
| 8H                                                                                                                  | 18.1             | 18.4 | 18.5 | 18.9 | 19.3 | 18.1           | 18.5 | 18.6 | 18.9             | 19.4 |
| Variations with the observer position at spacings(CIE Pub.117):                                                     |                  |      |      |      |      |                |      |      |                  |      |
| S = 1.0H                                                                                                            | + 2.1 / - 5.0    |      |      |      |      | + 2.1 / - 5.5  |      |      |                  |      |
| 1.5H                                                                                                                | + 2.3 / - 3.1    |      |      |      |      | + 2.3 / - 3.3  |      |      |                  |      |
| 2.0H                                                                                                                | + 4.2 / - 8.5    |      |      |      |      | + 4.3 / - 8.7  |      |      |                  |      |

CIE Pub.117, 1952 lm Total Lamp Luminous Flux Corrected ( $8\log(F/F_0) = 2.3$ )  
Area: 0.01606 m<sup>2</sup>

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:2023-07-27

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:9.640m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

|                                                                                                                     |              |                  |
|---------------------------------------------------------------------------------------------------------------------|--------------|------------------|
| Test:U:230.35V I:0.0662A P:13.803W PF:0.9047 Freq:49.99Hz<br>UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1952.37x1 lm |              |                  |
| NAME: 136-133_4000K_15W                                                                                             | TYPE: 15W    | WEIGHT:          |
| SPEC.: 4000K                                                                                                        | DIM.:        | SERIAL No.:      |
| MFR.: Tronix Lighting                                                                                               | SUR.: 0.0715 | Shielding Angle: |

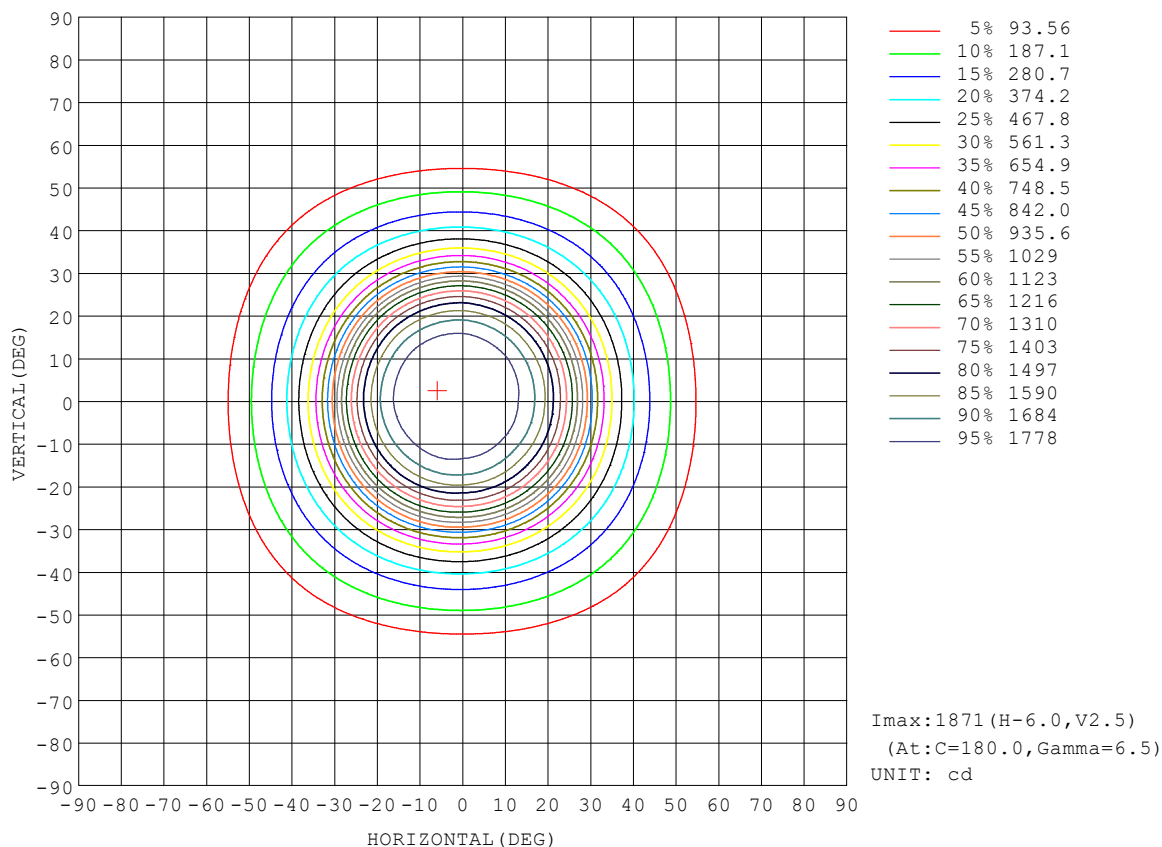
| REFLECTANCE                      |                                                      |     |           |     |     |     |     |               |     |        |
|----------------------------------|------------------------------------------------------|-----|-----------|-----|-----|-----|-----|---------------|-----|--------|
| 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) $k(RI) \times RCR = 5$ |     |           |     |     |     |     |               |     |        |
| $k = 0.60$                       | 81                                                   | 74  | 69        | 81  | 74  | 69  | 80  | 73            | 69  | 65     |
| 0.80                             | 90                                                   | 83  | 78        | 89  | 83  | 78  | 88  | 82            | 78  | 74     |
| 1.00                             | 96                                                   | 89  | 85        | 95  | 89  | 85  | 93  | 89            | 84  | 80     |
| 1.25                             | 100                                                  | 94  | 90        | 99  | 94  | 90  | 97  | 93            | 89  | 85     |
| 1.50                             | 103                                                  | 98  | 94        | 102 | 97  | 94  | 100 | 96            | 93  | 88     |
| 2.00                             | 107                                                  | 102 | 99        | 105 | 101 | 98  | 103 | 99            | 96  | 91     |
| 2.50                             | 109                                                  | 105 | 101       | 107 | 103 | 100 | 104 | 101           | 98  | 92     |
| 3.00                             | 111                                                  | 107 | 104       | 109 | 105 | 103 | 105 | 103           | 100 | 94     |
| 4.00                             | 113                                                  | 110 | 107       | 111 | 108 | 106 | 107 | 105           | 103 | 96     |
| 5.00                             | 114                                                  | 111 | 109       | 112 | 110 | 108 | 108 | 106           | 105 | 97     |
| 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: 25.3°C  
Operators: DAMIN  
Test Date: 2023-07-27

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
Humidity: 65.0%  
Test Distance: 9.640m [K=1.0000]  
Remarks:

### ISOCANDELA DIAGRAM

|                                                                                                                     |              |                  |
|---------------------------------------------------------------------------------------------------------------------|--------------|------------------|
| Test:U:230.35V I:0.0662A P:13.803W PF:0.9047 Freq:49.99Hz<br>UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1952.37x1 lm |              |                  |
| NAME: 136-133_4000K_15W                                                                                             | TYPE: 15W    | WEIGHT:          |
| SPEC.: 4000K                                                                                                        | DIM.:        | SERIAL No.:      |
| MFR.: Tronix Lighting                                                                                               | SUR.: 0.0715 | Shielding Angle: |

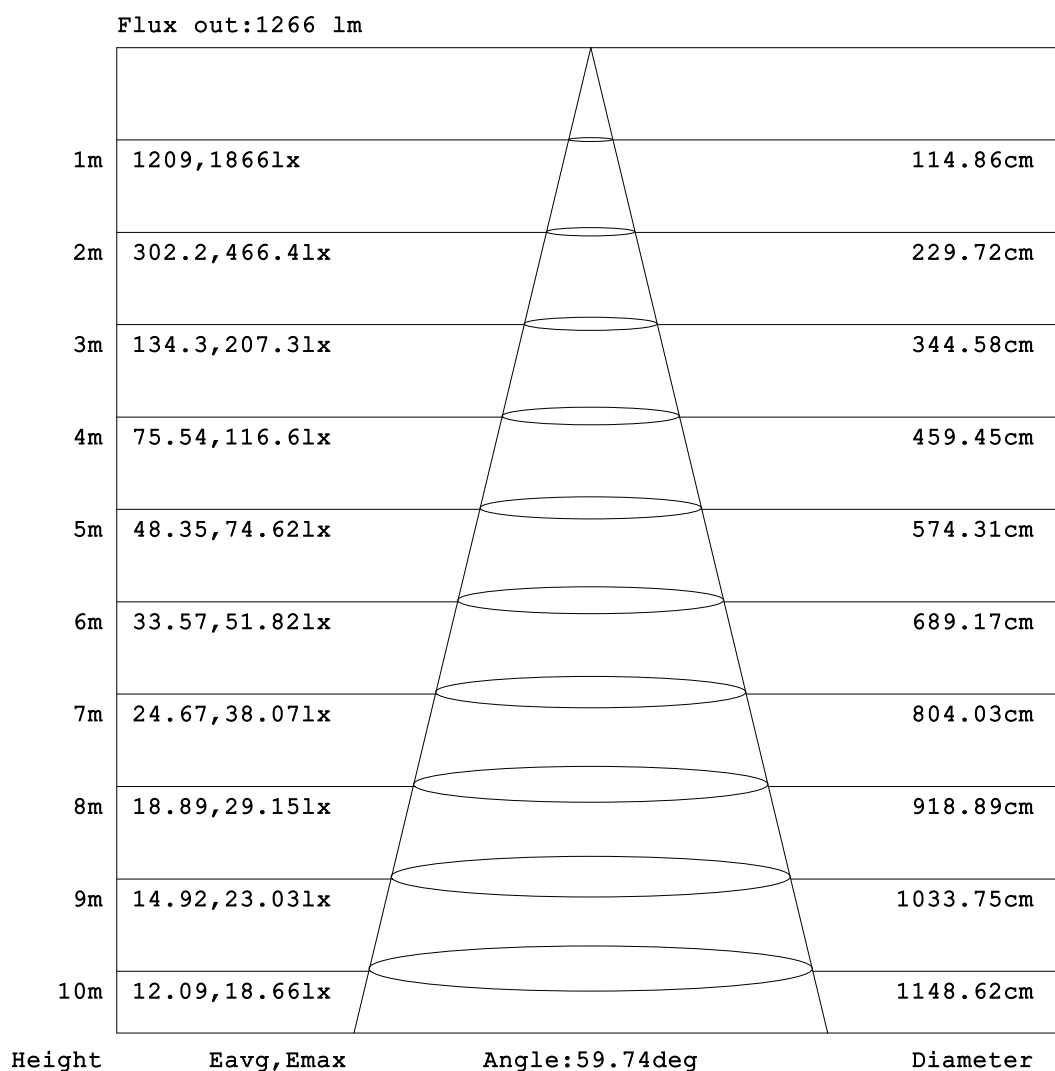


C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:2023-07-27

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:9.640m [K=1.0000]  
Remarks:

**AAI Figure**

|                                                                                                                     |              |                  |
|---------------------------------------------------------------------------------------------------------------------|--------------|------------------|
| Test:U:230.35V I:0.0662A P:13.803W PF:0.9047 Freq:49.99Hz<br>UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1952.37x1 lm |              |                  |
| NAME: 136-133_4000K_15W                                                                                             | TYPE: 15W    | WEIGHT:          |
| SPEC.: 4000K                                                                                                        | DIM.:        | SERIAL No.:      |
| MFR.: Tronix Lighting                                                                                               | SUR.: 0.0715 | Shielding Angle: |



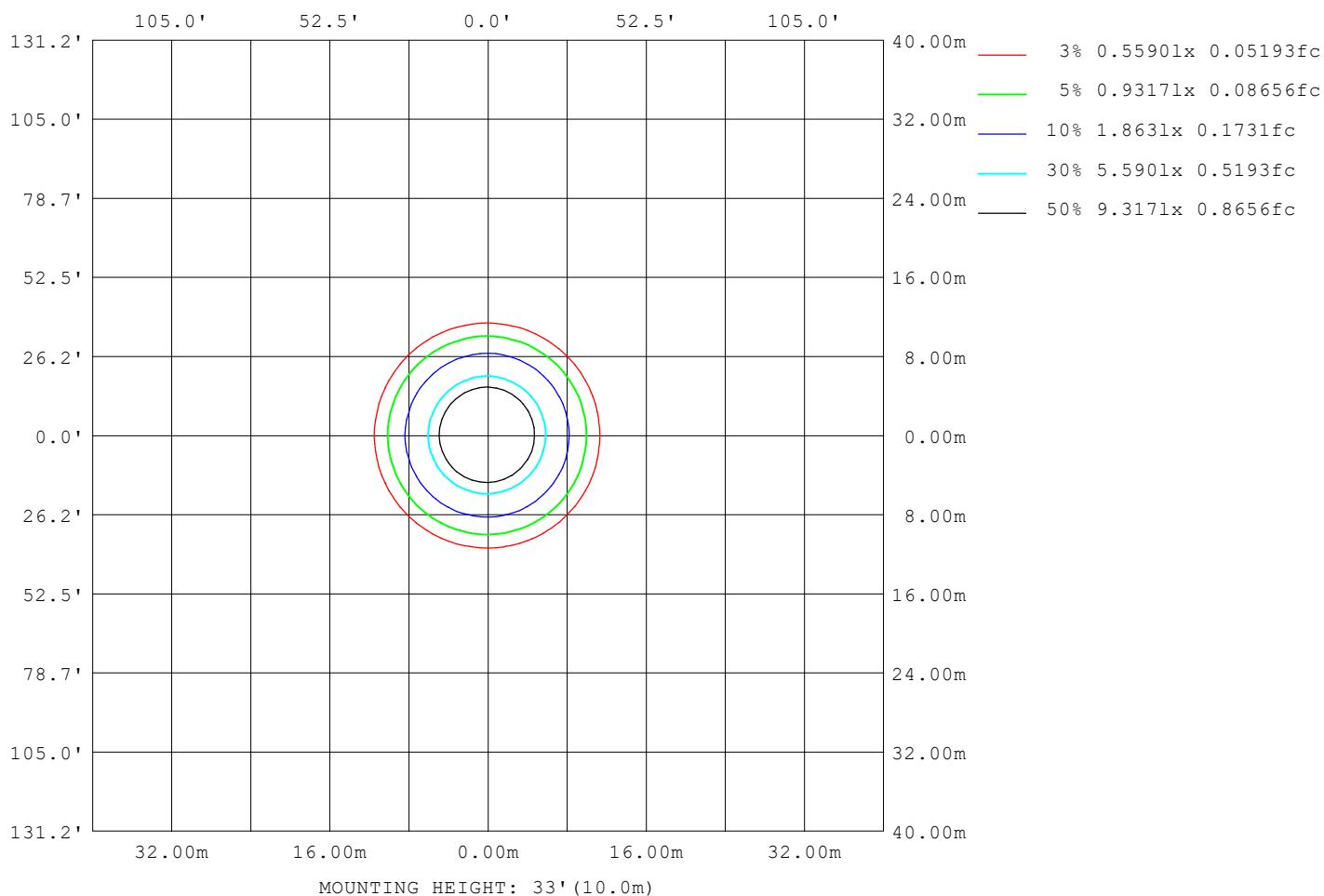
**Note:** The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators: DAMIN  
 Test Date: 2023-07-27

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
 Humidity: 65.0%  
 Test Distance: 9.640m [K=1.0000]  
 Remarks:

### ISOLUX DIAGRAM

|                                                                                                                     |              |                  |
|---------------------------------------------------------------------------------------------------------------------|--------------|------------------|
| Test:U:230.35V I:0.0662A P:13.803W PF:0.9047 Freq:49.99Hz<br>UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1952.37x1 lm |              |                  |
| NAME: 136-133_4000K_15W                                                                                             | TYPE: 15W    | WEIGHT:          |
| SPEC.: 4000K                                                                                                        | DIM.:        | SERIAL No.:      |
| MFR.: Tronix Lighting                                                                                               | SUR.: 0.0715 | Shielding Angle: |



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:2023-07-27

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:9.640m [K=1.0000]  
Remarks:

## LED Avg.L Report

|                                                                                                                     |              |                  |
|---------------------------------------------------------------------------------------------------------------------|--------------|------------------|
| Test:U:230.35V I:0.0662A P:13.803W PF:0.9047 Freq:49.99Hz<br>UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1952.37x1 lm |              |                  |
| NAME: 136-133_4000K_15W                                                                                             | TYPE: 15W    | WEIGHT:          |
| SPEC.: 4000K                                                                                                        | DIM.:        | SERIAL No.:      |
| MFR.: Tronix Lighting                                                                                               | SUR.: 0.0715 | Shielding Angle: |

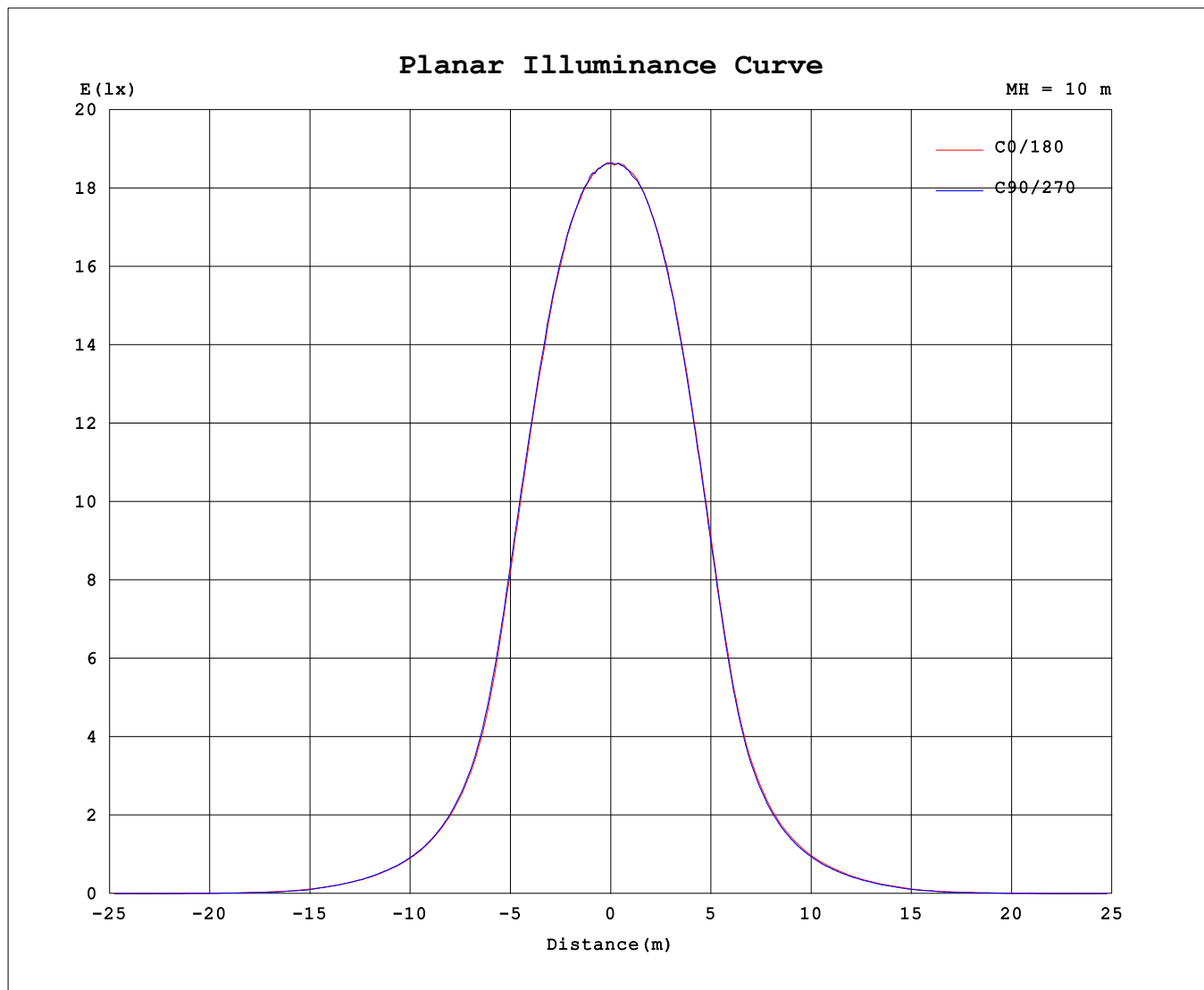
| AvgL             | cd/m2 |
|------------------|-------|
| L_0~180 (65) av  | 1535  |
| L_0~180 (75) av  | 1092  |
| L_0~180 (85) av  | 1977  |
| L_90~270 (65) av | 1299  |
| L_90~270 (75) av | 1059  |
| L_90~270 (85) av | 1825  |
| L_45 (65) av     | 1503  |
| L_45 (75) av     | 1072  |
| L_45 (85) av     | 1868  |

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:2023-07-27

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:9.640m [K=1.0000]  
Remarks:

### Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3 °C  
 Operators: DAMIN  
 Test Date: 2023-07-27

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
 Humidity: 65.0%  
 Test Distance: 9.640m [K=1.0000]  
 Remarks:

|                                                                                                                                   |                     |                         |
|-----------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------|
| <b>Test:U:230.35V I:0.0662A P:13.803W PF:0.9047 Freq:49.99Hz</b><br><b>UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1952.37x1 lm</b> |                     |                         |
| <b>NAME: 136-133_4000K_15W</b>                                                                                                    | <b>TYPE: 15W</b>    | <b>WEIGHT:</b>          |
| <b>SPEC.: 4000K</b>                                                                                                               | <b>DIM.:</b>        | <b>SERIAL No.:</b>      |
| <b>MFR.: Tronix Lighting</b>                                                                                                      | <b>SUR.: 0.0715</b> | <b>Shielding Angle:</b> |

UNIT: cd

[illegible]

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:9.640m [K=1.0000]
Remarks:

```