

Report No.: 1

Test Time: 10.02.2020 15:15

## Luminaire Property

Luminaire Manufacturer:

Luminaire Description: FG 120 100W 5000K 13-13gr.

Luminous Length (mm): 350

Luminous Width (mm): 140

Luminous Height (mm): 130

Voltage: 221.0 V

Current: 0.463 A

Power: 101.25 W

Power Factor: 0.989

## Photometric Results

CIE Class: Direct

Total Rated Lamp Lumens: 13792.9 lm

Measurement Flux: 13792.9 lm

Efficiency: 100%

Downward Ratio: 98%

Upward Ratio: 2%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 36.6, 37.4, 37.2, 36.5

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 18.0, 18.4, 18.2, 18.1

Luminaire Efficacy Rating (LER): 136.28

Central Intensity: 52930.81 cd

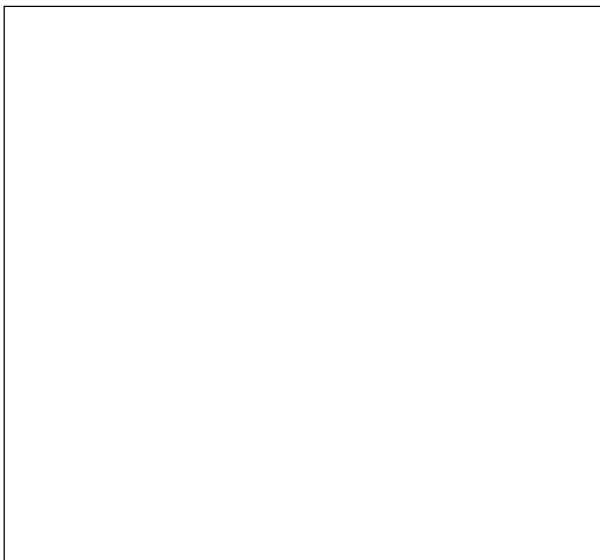
Max. Intensity: 54701.81 cd

Pos of Max. Intensity: H157.5 V0

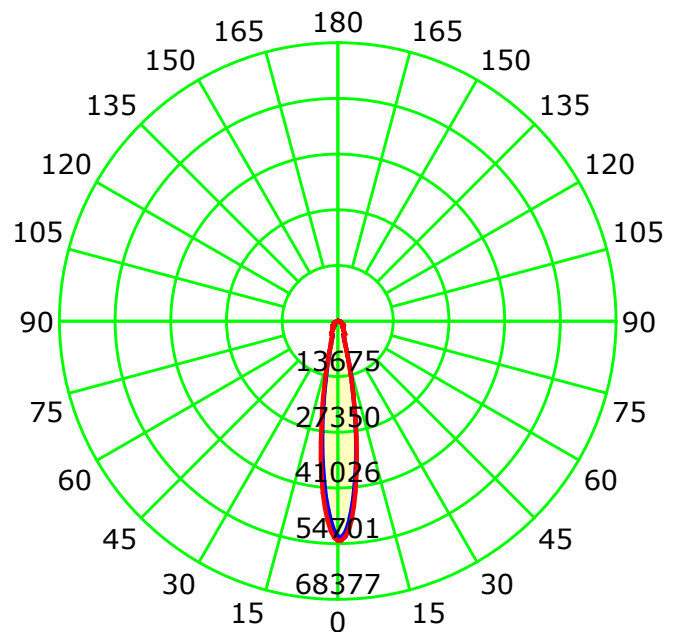
S/MH(C0/C180): 0.31

S/MH(C90/C270): 0.31

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd

— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 22.5

Gamma Plane (°):0.0-180.0:1.0

Test Lab:

Test Device: LSG-1800B

Test Type: TYPE C

Distance: 12.677 m

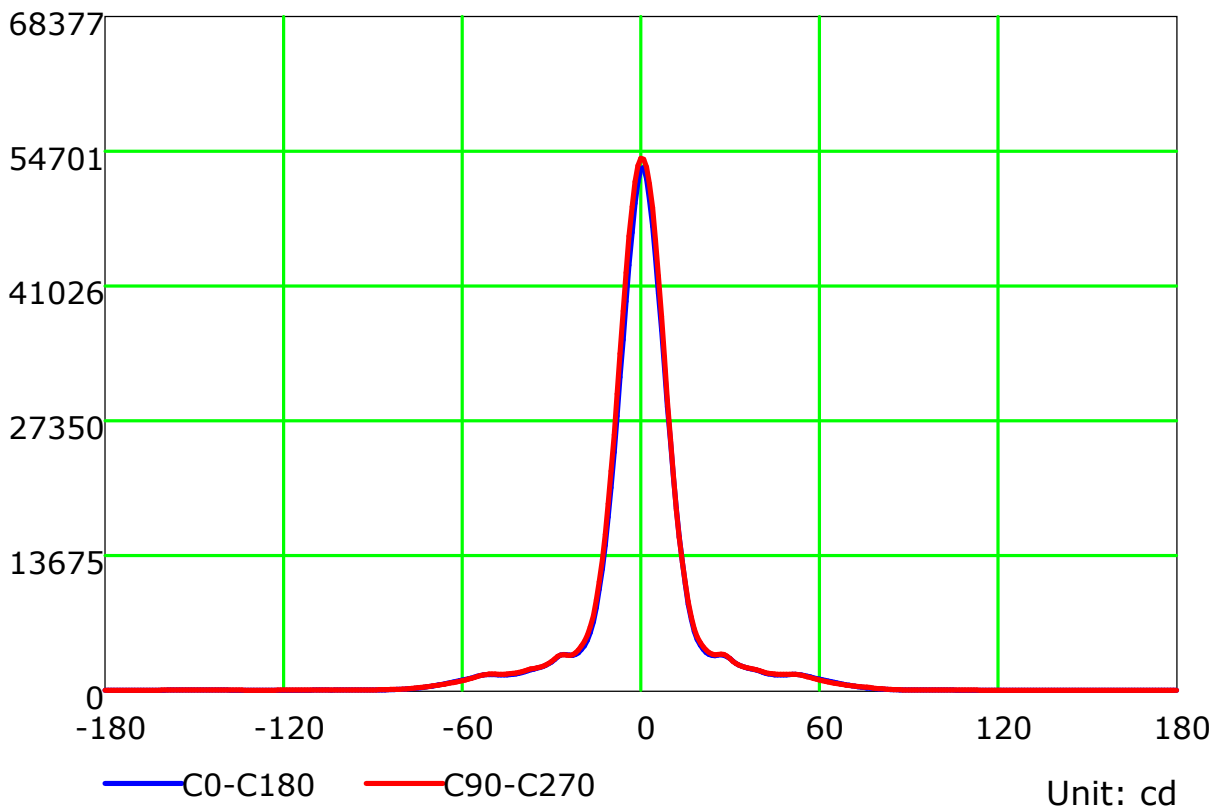
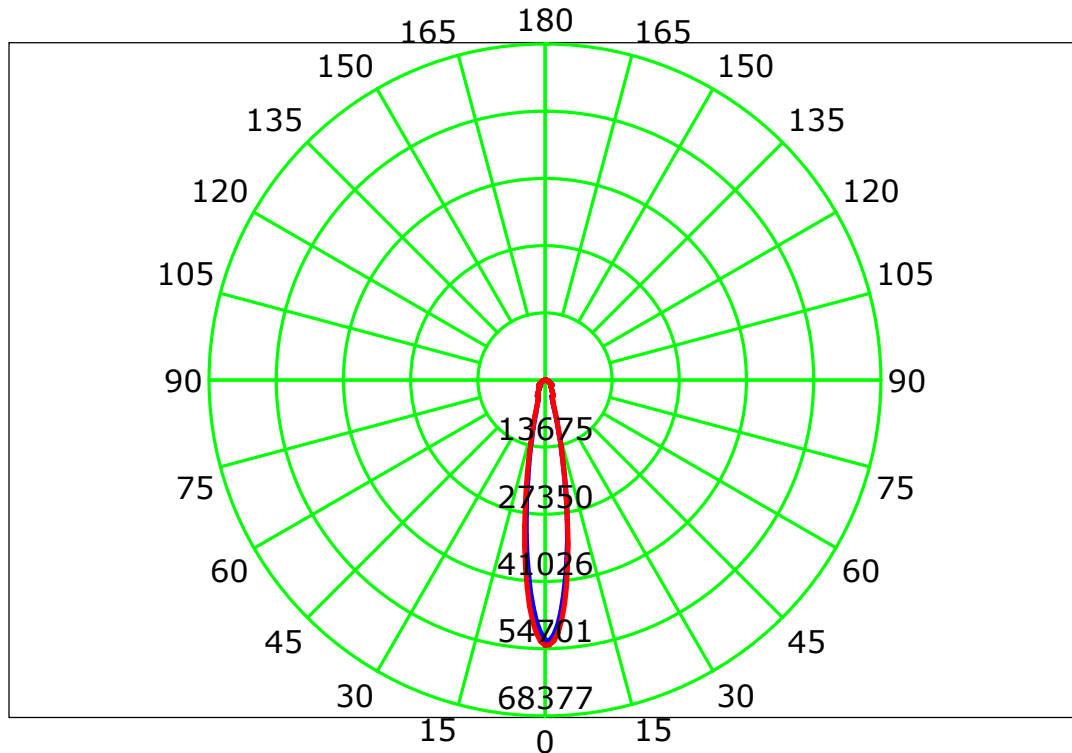
Temperature:

Humidity:

Operator:

Inspector:

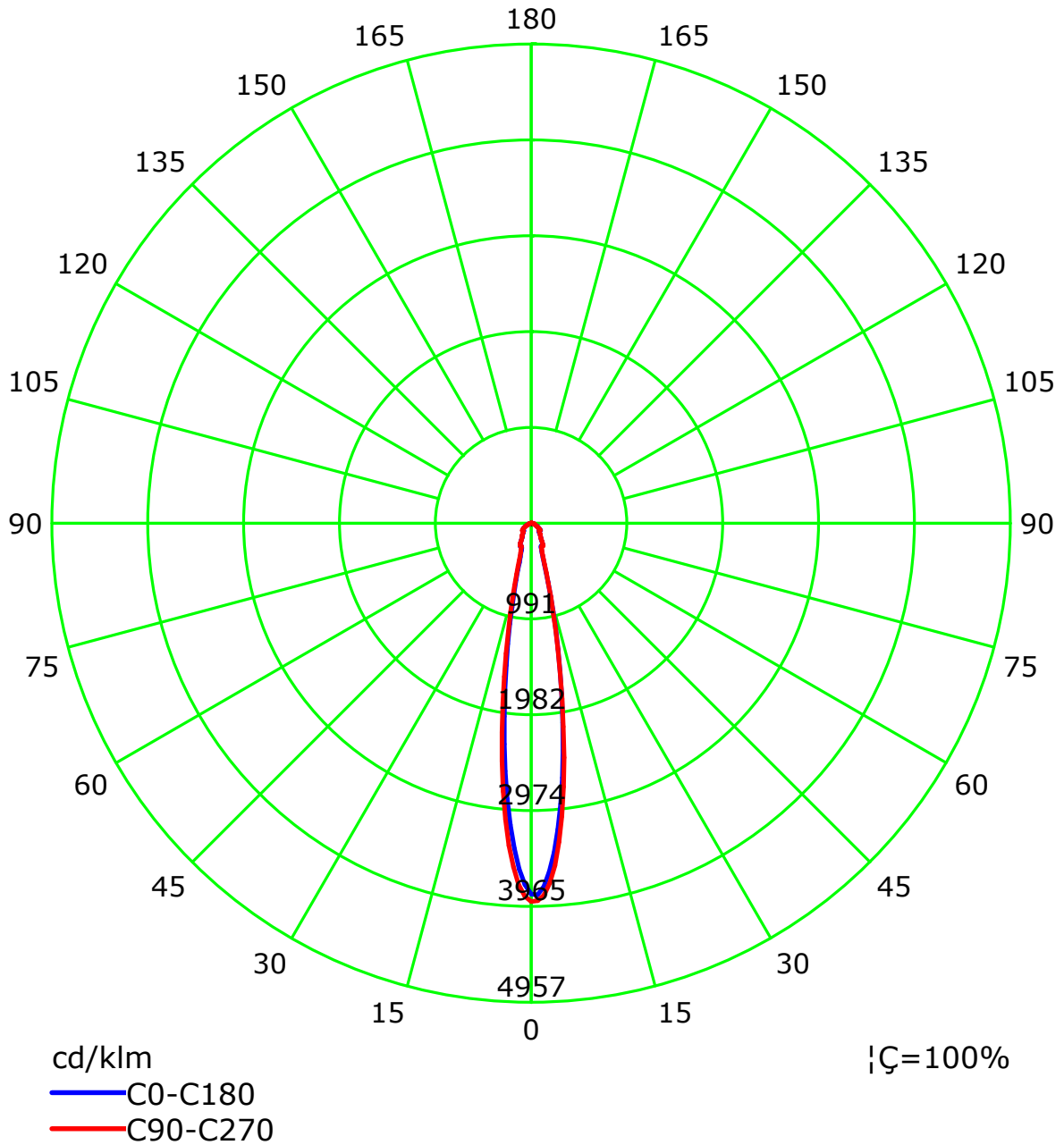
## Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 22.5  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: LSG-1800B  
 Distance: 12.677 m  
 Humidity:  
 Inspector:

## Luminous Intensity Distribution Curve(cd/klm)



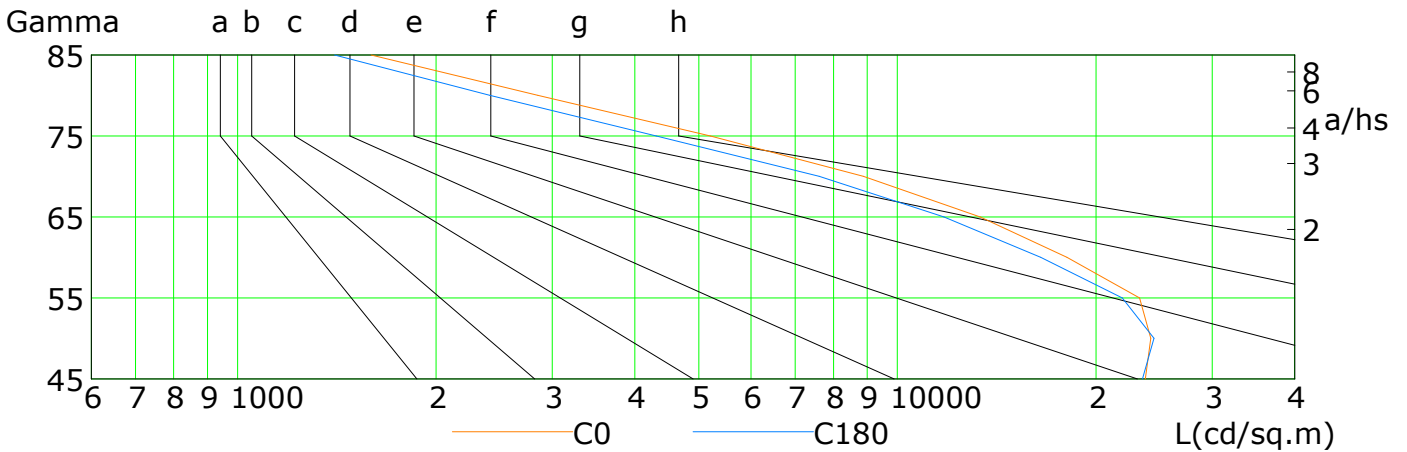
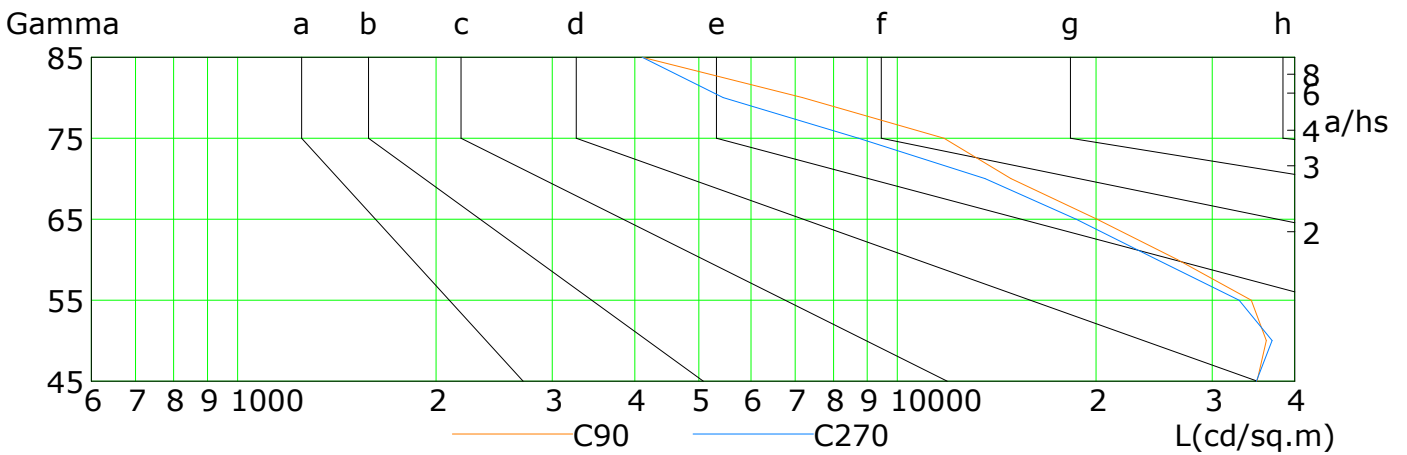
C Plane (°):0.0-360.0: 22.5  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: LSG-1800B  
 Distance: 12.677 m  
 Humidity:  
 Inspector:

## Lum Limit Curve

| Dazzle | Quality | Illuminance (lx) |      |      |       |       |       |       |       |
|--------|---------|------------------|------|------|-------|-------|-------|-------|-------|
|        |         | 2000             | 1000 | 500  | <=300 |       |       |       |       |
| 1.15   | A       | 2000             | 1000 | 500  | <=300 |       |       |       |       |
| 1.50   | B       |                  | 2000 | 1000 | 500   | <=300 |       |       |       |
| 1.85   | C       |                  |      | 2000 | 1000  | 500   | <=300 |       |       |
| 2.20   | D       |                  |      |      | 2000  | 1000  | 500   | <=300 |       |
| 2.55   | E       |                  |      |      |       | 2000  | 1000  | 500   | <=300 |

a      b      c      d      e      f      g      h



| L(cd/sq.m) | G45   | G50   | G55   | G60   | G65   | G70   | G75   | G80  | G85  |
|------------|-------|-------|-------|-------|-------|-------|-------|------|------|
| C0         | 23768 | 24221 | 23284 | 18064 | 13343 | 8876  | 5205  | 2853 | 1593 |
| C90        | 35087 | 36225 | 34375 | 26562 | 20062 | 14869 | 11767 | 7182 | 4106 |
| C180       | 23521 | 24470 | 21931 | 16495 | 11763 | 7608  | 4310  | 2410 | 1403 |
| C270       | 35012 | 36978 | 32949 | 24717 | 18668 | 13580 | 8728  | 5442 | 4106 |

C Plane (°):0.0-360.0: 22.5

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

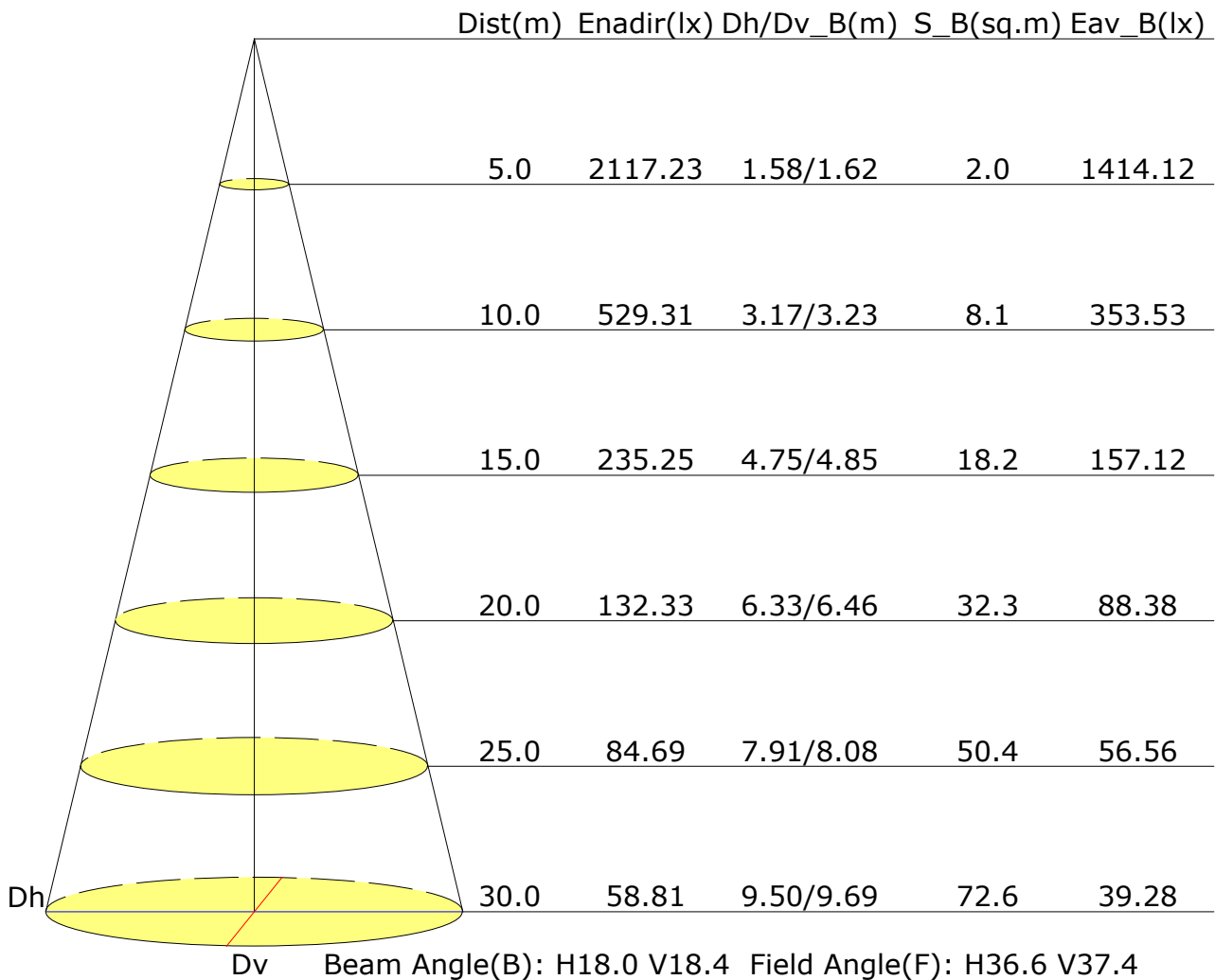
Test Device: LSG-1800B

Distance: 12.677 m

Humidity:

Inspector:

## Illuminance at a Distance



## UGR Table

|  |                  |      |      |      |      |                |      |      |      |      |
|--|------------------|------|------|------|------|----------------|------|------|------|------|
| Reflectance:                                       |                  |      |      |      |      |                |      |      |      |      |
| Ceiling (cavity)                                   | 0.7              | 0.7  | 0.5  | 0.5  | 0.3  | 0.7            | 0.7  | 0.5  | 0.5  | 0.3  |
| Wall   | 0.5              | 0.3  | 0.5  | 0.3  | 0.3  | 0.5            | 0.3  | 0.5  | 0.3  | 0.3  |
| Reference 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  | 21.7             | 22.6 | 22.0 | 22.9 | 23.1 | 22.3           | 23.2 | 22.5 | 23.4 | 23.7 |
| 3H   | 22.3             | 23.2 | 22.6 | 23.4 | 23.7 | 22.9           | 23.8 | 23.2 | 24.0 | 24.3 |
| 4H   | 22.4             | 23.2 | 22.7 | 23.5 | 23.8 | 23.1           | 23.9 | 23.4 | 24.2 | 24.5 |
| 6H   | 22.4             | 23.2 | 22.8 | 23.5 | 23.8 | 23.2           | 23.9 | 23.5 | 24.2 | 24.6 |
| 8H   | 22.4             | 23.1 | 22.8 | 23.5 | 23.8 | 23.2           | 23.9 | 23.5 | 24.2 | 24.6 |
| 12H  | 22.4             | 23.1 | 22.8 | 23.4 | 23.8 | 23.2           | 23.9 | 23.5 | 24.2 | 24.6 |
| X=4H Y=2H  | 22.1             | 22.9 | 22.5 | 23.2 | 23.5 | 22.6           | 23.4 | 22.9 | 23.7 | 24.0 |
| 3H   | 22.8             | 23.5 | 23.2 | 23.9 | 24.2 | 23.3           | 24.0 | 23.7 | 24.4 | 24.7 |
| 4H   | 23.0             | 23.6 | 23.4 | 24.0 | 24.4 | 23.6           | 24.2 | 24.0 | 24.6 | 25.0 |
| 6H   | 23.1             | 23.6 | 23.5 | 24.0 | 24.5 | 23.7           | 24.3 | 24.2 | 24.7 | 25.1 |
| 8H   | 23.1             | 23.6 | 23.5 | 24.0 | 24.4 | 23.8           | 24.3 | 24.2 | 24.7 | 25.1 |
| 12H  | 23.0             | 23.5 | 23.5 | 23.9 | 24.4 | 23.8           | 24.2 | 24.2 | 24.7 | 25.1 |
| X=8H Y=4H  | 23.0             | 23.6 | 23.5 | 24.0 | 24.4 | 23.6           | 24.1 | 24.0 | 24.5 | 25.0 |
| 6H   | 23.2             | 23.6 | 23.7 | 24.0 | 24.5 | 23.8           | 24.2 | 24.3 | 24.7 | 25.2 |
| 8H   | 23.2             | 23.6 | 23.7 | 24.0 | 24.5 | 23.9           | 24.2 | 24.4 | 24.7 | 25.2 |
| 12H  | 23.2             | 23.5 | 23.7 | 24.0 | 24.5 | 23.9           | 24.2 | 24.4 | 24.7 | 25.3 |
| X=12H Y=4H   | 23.0             | 23.5 | 23.5 | 23.9 | 24.4 | 23.6           | 24.0 | 24.0 | 24.5 | 24.9 |
| 6H   | 23.2             | 23.5 | 23.7 | 24.0 | 24.5 | 23.8           | 24.2 | 24.3 | 24.6 | 25.2 |
| 8H   | 23.2             | 23.5 | 23.7 | 24.0 | 24.5 | 23.9           | 24.2 | 24.4 | 24.7 | 25.2 |
| Variations with the observer position at spacings: |                  |      |      |      |      |                |      |      |      |      |
| S=1.0H   | +0.2/-0.2        |      |      |      |      | +0.2/-0.2      |      |      |      |      |
| S=1.5H   | +0.9/-1.2        |      |      |      |      | +0.8/-1.2      |      |      |      |      |
| S=2.0H   | +1.6/-2.3        |      |      |      |      | +1.8/-2.3      |      |      |      |      |

Calculate in accordance with CIE Pub.117. The table is revised with  $13793\text{lm}$  ( $8\log(F/F_0) = 9.1$ ).

C Plane (°):0.0-360.0: 22.5  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: LSG-1800B  
 Distance: 12.677 m  
 Humidity:  
 Inspector:

## Utilisation Factor Table(Floor cavity)

| Utilisation Factors UF(F)   |      |       | SHR NOM = 0.50 |      |      |      |      |      |      |      |      |  |
|---|------|-------|----------------|------|------|------|------|------|------|------|------|--|
| Room Reflectance  |      |       | Room Index(RI) |      |      |      |      |      |      |      |      |  |
| Ceiling   | Wall | Floor | 0.75           | 1.00 | 1.25 | 1.50 | 2.00 | 2.50 | 3.00 | 4.00 | 5.00 |  |
| 0.70  | 0.50 | 0.20  | 0.76           | 0.84 | 0.89 | 0.93 | 0.99 | 1.02 | 1.05 | 1.08 | 1.10 |  |
|   | 0.30 |       | 0.70           | 0.78 | 0.83 | 0.88 | 0.94 | 0.98 | 1.01 | 1.05 | 1.08 |  |
|   | 0.20 |       | 0.66           | 0.73 | 0.79 | 0.84 | 0.90 | 0.95 | 0.98 | 1.02 | 1.05 |  |
| 0.50  | 0.50 | 0.20  | 0.74           | 0.81 | 0.87 | 0.90 | 0.95 | 0.99 | 1.01 | 1.04 | 1.06 |  |
|   | 0.30 |       | 0.69           | 0.76 | 0.82 | 0.86 | 0.91 | 0.95 | 0.98 | 1.01 | 1.04 |  |
|   | 0.20 |       | 0.65           | 0.73 | 0.78 | 0.82 | 0.88 | 0.92 | 0.95 | 0.99 | 1.02 |  |
| 0.30  | 0.50 | 0.20  | 0.73           | 0.80 | 0.84 | 0.88 | 0.92 | 0.95 | 0.97 | 1.00 | 1.02 |  |
|   | 0.30 |       | 0.68           | 0.75 | 0.80 | 0.84 | 0.89 | 0.92 | 0.95 | 0.98 | 1.00 |  |
|   | 0.20 |       | 0.65           | 0.72 | 0.77 | 0.81 | 0.86 | 0.90 | 0.93 | 0.96 | 0.98 |  |
| 0.00  | 0.00 | 0.00  | 0.63           | 0.69 | 0.74 | 0.78 | 0.83 | 0.86 | 0.88 | 0.91 | 0.93 |  |
| <p>Rating:101W Photometrically tested without ceiling board.<br/>           Multiply UF values by service correction factors<br/>           Calculate in accordance with CIBSE Technical Memorandum NO.5 1980</p> |      |       |                |      |      |      |      |      |      |      |      |  |

## Utilisation Factor Table(Wall)

| Utilisation Factors UF(W)   |      |       | SHR NOM = 0.50 |      |      |      |      |      |      |      |      |  |
|---|------|-------|----------------|------|------|------|------|------|------|------|------|--|
| Room Reflectance  |      |       | Room Index(RI) |      |      |      |      |      |      |      |      |  |
| Ceiling   | Wall | Floor | 0.75           | 1.00 | 1.25 | 1.50 | 2.00 | 2.50 | 3.00 | 4.00 | 5.00 |  |
| 0.70  | 0.50 | 0.20  | 0.76           | 0.62 | 0.53 | 0.46 | 0.36 | 0.30 | 0.26 | 0.20 | 0.16 |  |
|   | 0.30 |       | 0.63           | 0.53 | 0.46 | 0.41 | 0.33 | 0.28 | 0.24 | 0.19 | 0.15 |  |
|   | 0.20 |       | 0.54           | 0.47 | 0.41 | 0.37 | 0.30 | 0.26 | 0.22 | 0.18 | 0.15 |  |
| 0.50  | 0.50 | 0.20  | 0.72           | 0.59 | 0.50 | 0.43 | 0.34 | 0.32 | 0.24 | 0.19 | 0.15 |  |
|   | 0.30 |       | 0.61           | 0.51 | 0.44 | 0.39 | 0.31 | 0.26 | 0.23 | 0.18 | 0.14 |  |
|   | 0.20 |       | 0.53           | 0.45 | 0.40 | 0.35 | 0.29 | 0.24 | 0.21 | 0.17 | 0.14 |  |
| 0.30  | 0.50 | 0.20  | 0.69           | 0.56 | 0.48 | 0.41 | 0.32 | 0.27 | 0.23 | 0.17 | 0.14 |  |
|   | 0.30 |       | 0.59           | 0.50 | 0.43 | 0.37 | 0.30 | 0.25 | 0.21 | 0.17 | 0.14 |  |
|   | 0.20 |       | 0.52           | 0.44 | 0.39 | 0.34 | 0.28 | 0.23 | 0.20 | 0.16 | 0.13 |  |
| 0.00  | 0.00 | 0.00  | 0.39           | 0.32 | 0.28 | 0.24 | 0.19 | 0.16 | 0.13 | 0.10 | 0.09 |  |
| <p>Rating:101W Photometrically tested without ceiling board.<br/>           Multiply UF values by service correction factors<br/>           Calculate in accordance with CIBSE Technical Memorandum NO.5 1980</p> |      |       |                |      |      |      |      |      |      |      |      |  |



## Utilisation Factor Table(Ceiling cavity)

| Utilisation Factors UF(C)   |      |       | SHR NOM = 0.50 |      |      |      |      |      |      |      |      |
|---|------|-------|----------------|------|------|------|------|------|------|------|------|
| Room Reflectance  |      |       | Room Index(RI) |      |      |      |      |      |      |      |      |
| Ceiling   | Wall | Floor | 0.75           | 1.00 | 1.25 | 1.50 | 2.00 | 2.50 | 3.00 | 4.00 | 5.00 |
| 0.70  | 0.50 | 0.20  | 0.16           | 0.18 | 0.19 | 0.19 | 0.21 | 0.21 | 0.22 | 0.23 | 0.23 |
|   | 0.30 |       | 0.11           | 0.13 | 0.14 | 0.15 | 0.17 | 0.18 | 0.19 | 0.20 | 0.21 |
|   | 0.20 |       | 0.07           | 0.09 | 0.11 | 0.12 | 0.14 | 0.16 | 0.17 | 0.18 | 0.19 |
| 0.50  | 0.50 | 0.20  | 0.15           | 0.17 | 0.18 | 0.19 | 0.20 | 0.21 | 0.21 | 0.22 | 0.22 |
|   | 0.30 |       | 0.11           | 0.12 | 0.14 | 0.15 | 0.16 | 0.18 | 0.19 | 0.20 | 0.21 |
|   | 0.20 |       | 0.07           | 0.09 | 0.10 | 0.12 | 0.14 | 0.15 | 0.16 | 0.18 | 0.19 |
| 0.30  | 0.50 | 0.20  | 0.15           | 0.16 | 0.17 | 0.18 | 0.19 | 0.20 | 0.20 | 0.21 | 0.21 |
|   | 0.30 |       | 0.10           | 0.12 | 0.13 | 0.14 | 0.16 | 0.17 | 0.18 | 0.19 | 0.20 |
|   | 0.20 |       | 0.07           | 0.09 | 0.10 | 0.12 | 0.13 | 0.15 | 0.16 | 0.17 | 0.18 |
| 0.00  | 0.00 | 0.00  | 0.01           | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| <p>Rating:101W Photometrically tested without ceiling board.<br/>           Multiply UF values by service correction factors<br/>           Calculate in accordance with CIBSE Technical Memorandum NO.5 1980</p> |      |       |                |      |      |      |      |      |      |      |      |