

Report No.: 1

Test Time: 26.02.2020 20:22

## Luminaire Property

Luminaire Manufacturer:

Luminaire Description: FG 100 36LED 400W 5000K 30gr.

Number of Lamps: 1

Luminous Width (mm): 337

Voltage: 228.8 V

Power: 402.10 W

Luminous Length (mm): 439

Luminous Height (mm): 320

Current: 1.802 A

Power Factor: 0.975

## Photometric Results

CIE Class: Direct

Measurement Flux: 55481 lm

Downward Ratio: 97%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 59.4, 58.9, 62.4, 62.3

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 31.0, 29.3, 31.6, 31.4

Luminaire Efficacy Rating (LER): 138.03

Max. Intensity: 124256.35 cd

S/MH(C0/C180): 0.52

Total Rated Lamp Lumens: 55481.0 lm

Efficiency: 100%

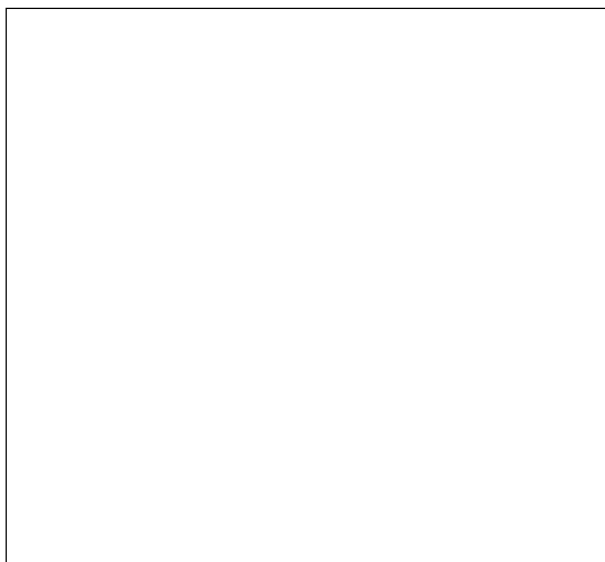
Upward Ratio: 3%

Central Intensity: 121163.95 cd

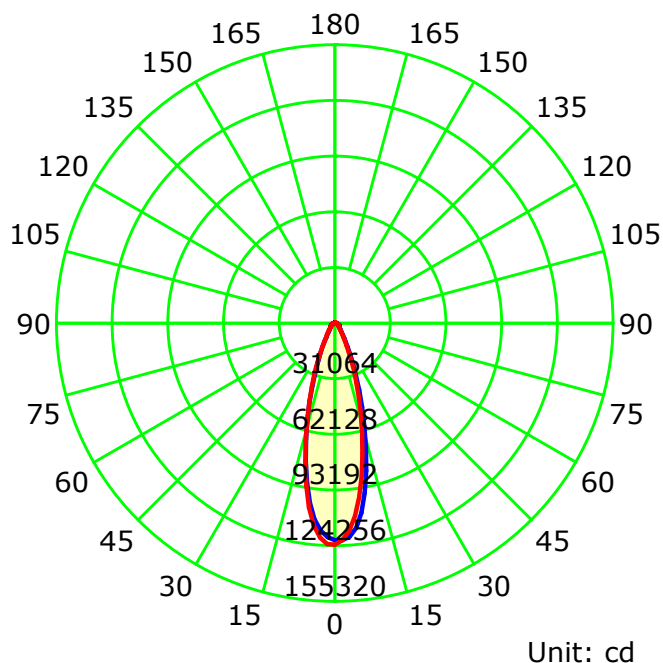
Pos of Max. Intensity: H315 V2

S/MH(C90/C270): 0.49

Picture Of Luminaire



Luminous Intensity Distribution Curve



— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 22.5

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:2.0

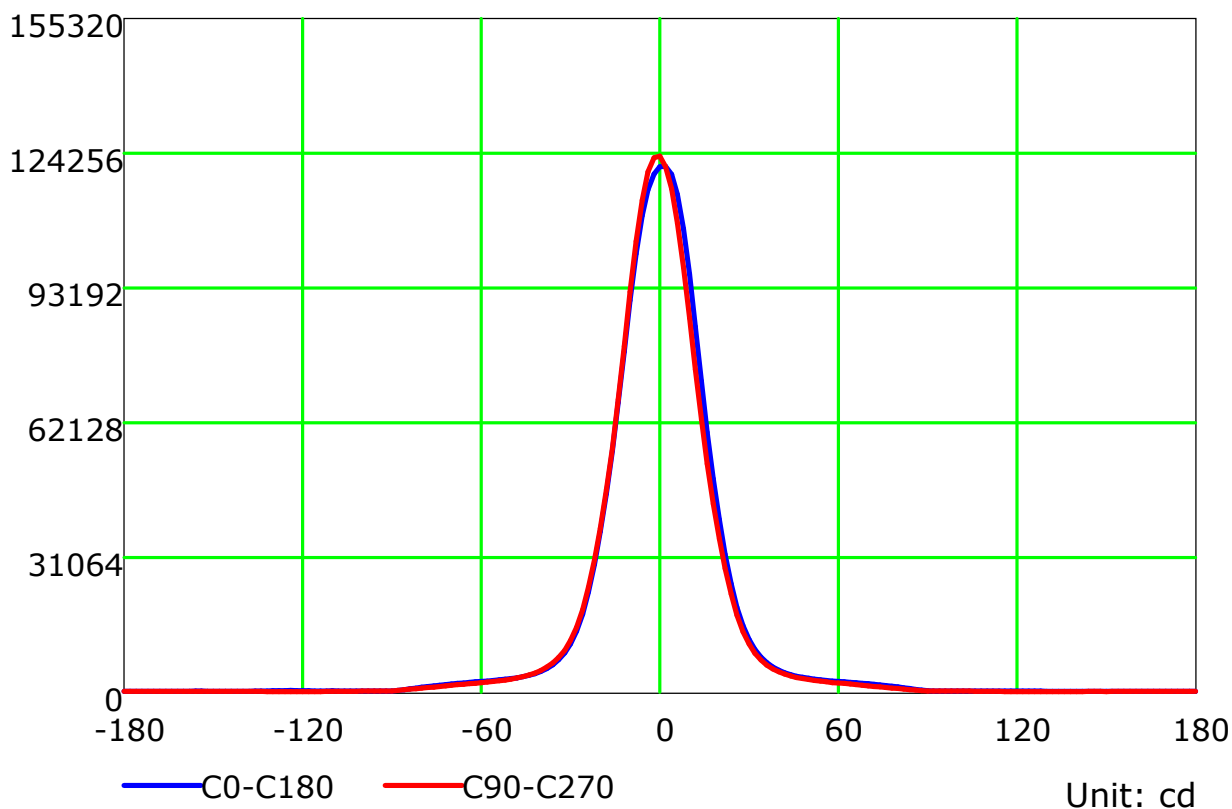
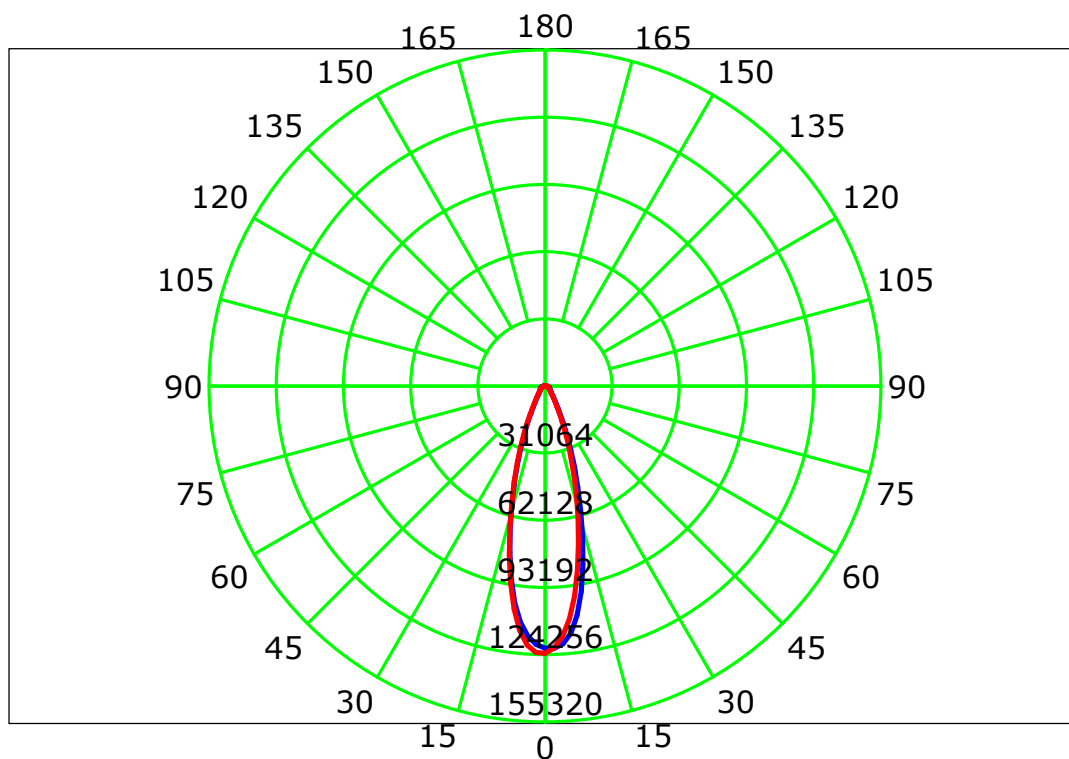
Test Device: LSG-1800B

Distance: 12.677 m

Humidity:

Inspector:

## Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 22.5

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:2.0

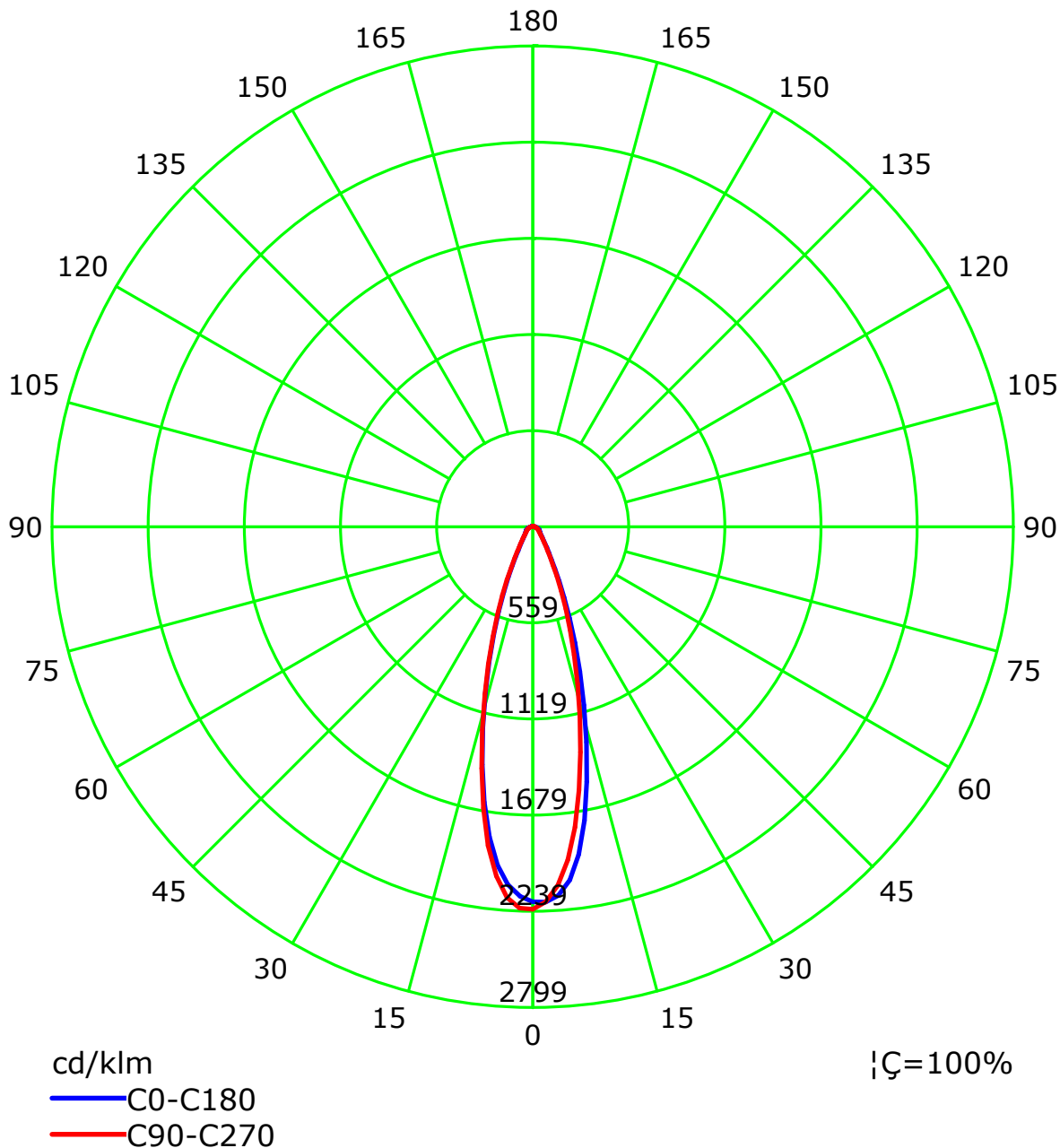
Test Device: LSG-1800B

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 (°):0.0-180.0:2.0

Test Device: LSG-1800B

Distance: 12.677 m

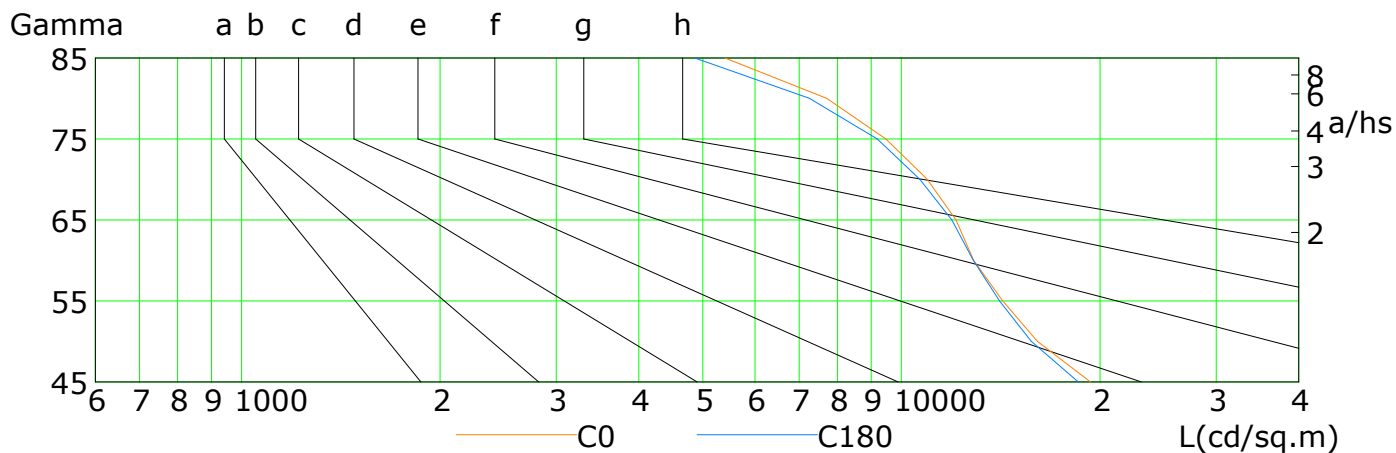
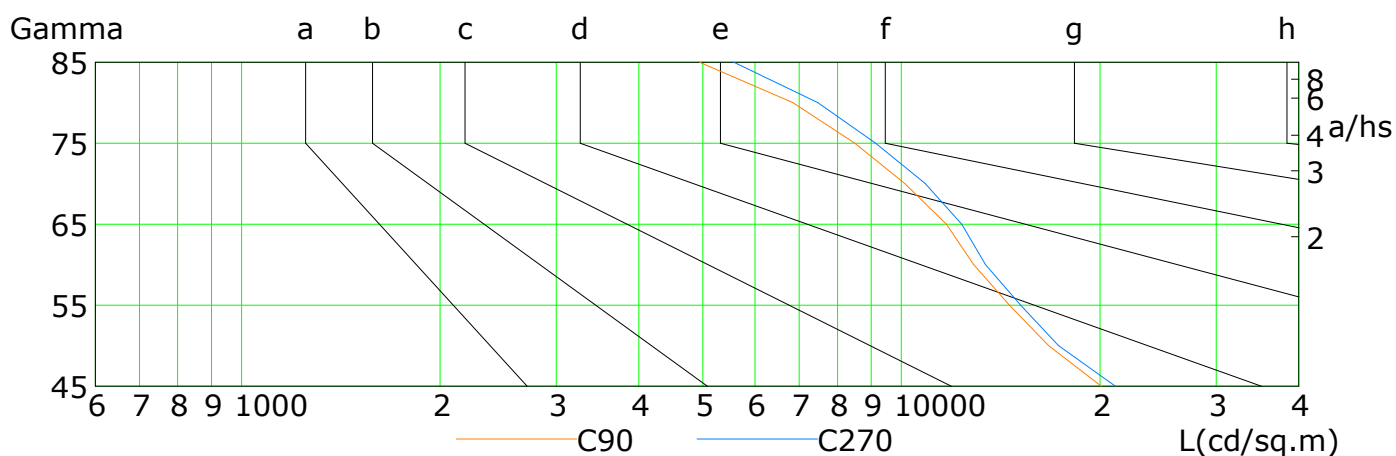
Humidity:

Inspector:

## Lum Limit Curve

| Dazzle | Quality | Illuminance (lx) |      |      |       |       |       |       |       |
|--------|---------|------------------|------|------|-------|-------|-------|-------|-------|
| 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         | 19334 | 16065 | 14247 | 12870 | 12097 | 10940 | 9477 | 7702 | 5401 |
| C90        | 20086 | 16709 | 14576 | 12863 | 11697 | 10117 | 8501 | 6847 | 4947 |
| C180       | 18540 | 15728 | 14087 | 12846 | 11929 | 10665 | 9188 | 7257 | 4864 |
| C270       | 21095 | 17299 | 15169 | 13408 | 12352 | 10867 | 9141 | 7470 | 5572 |

C Plane (°):0.0-360.0: 22.5

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:2.0

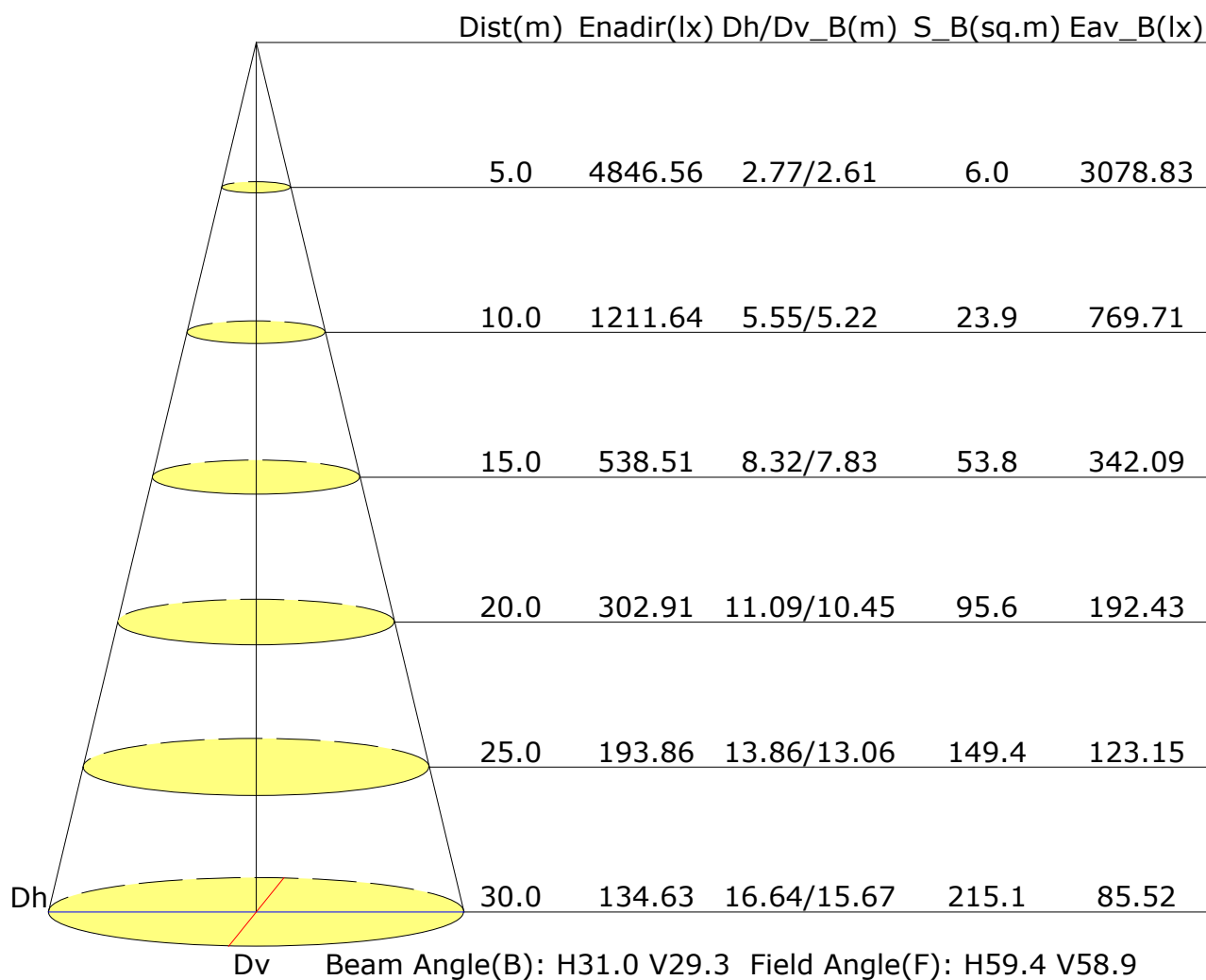
Test Device: LSG-1800B

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                                          | 18.0             | 18.9 | 18.3 | 19.1 | 19.4 | 17.8           | 18.7 | 18.2 | 19.0 | 19.3 |
| 3H                                                 | 19.4             | 20.2 | 19.8 | 20.5 | 20.8 | 19.1           | 19.9 | 19.4 | 20.2 | 20.5 |
| 4H                                                 | 20.1             | 20.8 | 20.4 | 21.1 | 21.5 | 19.6           | 20.4 | 20.0 | 20.7 | 21.0 |
| 6H                                                 | 20.6             | 21.3 | 21.0 | 21.7 | 22.0 | 20.1           | 20.8 | 20.4 | 21.1 | 21.5 |
| 8H                                                 | 20.8             | 21.5 | 21.2 | 21.9 | 22.2 | 20.2           | 20.9 | 20.6 | 21.3 | 21.6 |
| 12H                                                | 21.0             | 21.6 | 21.4 | 22.0 | 22.4 | 20.4           | 21.0 | 20.8 | 21.4 | 21.8 |
| X=4H Y=2H                                          | 18.4             | 19.2 | 18.8 | 19.5 | 19.8 | 18.3           | 19.1 | 18.7 | 19.4 | 19.7 |
| 3H                                                 | 20.1             | 20.7 | 20.5 | 21.1 | 21.5 | 19.7           | 20.4 | 20.2 | 20.8 | 21.2 |
| 4H                                                 | 20.9             | 21.4 | 21.3 | 21.8 | 22.3 | 20.4           | 21.0 | 20.9 | 21.4 | 21.8 |
| 6H                                                 | 21.5             | 22.1 | 22.0 | 22.5 | 23.0 | 21.0           | 21.5 | 21.5 | 22.0 | 22.4 |
| 8H                                                 | 21.8             | 22.3 | 22.3 | 22.7 | 23.2 | 21.2           | 21.7 | 21.7 | 22.2 | 22.6 |
| 12H                                                | 22.0             | 22.5 | 22.5 | 22.9 | 23.4 | 21.4           | 21.9 | 21.9 | 22.3 | 22.8 |
| X=8H Y=4H                                          | 21.1             | 21.6 | 21.6 | 22.0 | 22.5 | 20.7           | 21.2 | 21.2 | 21.6 | 22.1 |
| 6H                                                 | 21.9             | 22.3 | 22.4 | 22.8 | 23.3 | 21.4           | 21.8 | 22.0 | 22.3 | 22.8 |
| 8H                                                 | 22.3             | 22.6 | 22.8 | 23.1 | 23.7 | 21.8           | 22.1 | 22.3 | 22.6 | 23.2 |
| 12H                                                | 22.6             | 22.9 | 23.1 | 23.4 | 24.0 | 22.0           | 22.4 | 22.6 | 22.9 | 23.4 |
| X=12H Y=4H                                         | 21.1             | 21.5 | 21.6 | 22.0 | 22.5 | 20.7           | 21.2 | 21.2 | 21.6 | 22.1 |
| 6H                                                 | 22.0             | 22.3 | 22.5 | 22.8 | 23.4 | 21.5           | 21.9 | 22.0 | 22.4 | 22.9 |
| 8H                                                 | 22.4             | 22.7 | 22.9 | 23.2 | 23.8 | 21.9           | 22.2 | 22.4 | 22.7 | 23.3 |
| Variations with the observer position at spacings: |                  |      |      |      |      |                |      |      |      |      |
| S=1.0H                                             | +0.4/-0.3        |      |      |      |      | +0.5/-0.4      |      |      |      |      |
| S=1.5H                                             | +0.9/-0.6        |      |      |      |      | +1.2/-0.7      |      |      |      |      |
| S=2.0H                                             | +1.6/-0.9        |      |      |      |      | +1.9/-1.0      |      |      |      |      |

Calculate in accordance with CIE Pub.117. The table is revised with 55481lm ( $8\log(F/F_0) = 14.0$ ).

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

Gamma Plane (°):0.0-180.0:2.0  
 Test Device: LSG-1800B  
 Distance: 12.677 m  
 Humidity:  
 Inspector:

## Utilisation Factor Table(Floor cavity)

| Utilisation Factors UF(F)                                                                                                                                                          |      |       | SHR NOM = 0.75 |      |      |      |      |      |      |      |      |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------|----------------|------|------|------|------|------|------|------|------|--|
| 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  | 0.82           | 0.88 | 0.92 | 0.95 | 0.99 | 1.02 | 1.04 | 1.07 | 1.09 |  |
|                                                                                                                                                                                    | 0.30 |       | 0.77           | 0.83 | 0.87 | 0.90 | 0.95 | 0.98 | 1.01 | 1.04 | 1.06 |  |
|                                                                                                                                                                                    | 0.20 |       | 0.73           | 0.79 | 0.83 | 0.87 | 0.92 | 0.95 | 0.98 | 1.02 | 1.04 |  |
| 0.50                                                                                                                                                                               | 0.50 | 0.20  | 0.80           | 0.85 | 0.89 | 0.92 | 0.96 | 0.98 | 1.00 | 1.02 | 1.04 |  |
|                                                                                                                                                                                    | 0.30 |       | 0.76           | 0.81 | 0.85 | 0.88 | 0.92 | 0.95 | 0.97 | 1.00 | 1.02 |  |
|                                                                                                                                                                                    | 0.20 |       | 0.73           | 0.78 | 0.82 | 0.85 | 0.90 | 0.93 | 0.95 | 0.98 | 1.00 |  |
| 0.30                                                                                                                                                                               | 0.50 | 0.20  | 0.79           | 0.84 | 0.87 | 0.89 | 0.93 | 0.95 | 0.96 | 0.98 | 1.00 |  |
|                                                                                                                                                                                    | 0.30 |       | 0.75           | 0.80 | 0.84 | 0.86 | 0.90 | 0.92 | 0.94 | 0.97 | 0.98 |  |
|                                                                                                                                                                                    | 0.20 |       | 0.72           | 0.77 | 0.81 | 0.84 | 0.88 | 0.90 | 0.92 | 0.95 | 0.97 |  |
| 0.00                                                                                                                                                                               | 0.00 | 0.00  | 0.70           | 0.75 | 0.78 | 0.80 | 0.84 | 0.86 | 0.88 | 0.90 | 0.91 |  |
| Rating:402W Photometrically tested without ceiling board.<br>Multiply UF values by service correction factors<br>Calculate in accordance with CIBSE Technical Memorandum NO.5 1980 |      |       |                |      |      |      |      |      |      |      |      |  |

## Utilisation Factor Table(Wall)

| Utilisation Factors UF(W)                                                                                                                                                          |      |       | SHR NOM = 0.75 |      |      |      |      |      |      |      |      |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------|----------------|------|------|------|------|------|------|------|------|--|
| 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  | 0.62           | 0.52 | 0.45 | 0.39 | 0.31 | 0.26 | 0.23 | 0.18 | 0.15 |  |
|                                                                                                                                                                                    | 0.30 |       | 0.52           | 0.44 | 0.39 | 0.35 | 0.28 | 0.24 | 0.21 | 0.17 | 0.14 |  |
|                                                                                                                                                                                    | 0.20 |       | 0.45           | 0.39 | 0.34 | 0.31 | 0.26 | 0.22 | 0.20 | 0.16 | 0.13 |  |
| 0.50                                                                                                                                                                               | 0.50 | 0.20  | 0.59           | 0.49 | 0.42 | 0.36 | 0.29 | 0.28 | 0.21 | 0.16 | 0.13 |  |
|                                                                                                                                                                                    | 0.30 |       | 0.50           | 0.42 | 0.37 | 0.33 | 0.27 | 0.23 | 0.20 | 0.15 | 0.13 |  |
|                                                                                                                                                                                    | 0.20 |       | 0.43           | 0.37 | 0.33 | 0.30 | 0.25 | 0.21 | 0.18 | 0.15 | 0.12 |  |
| 0.30                                                                                                                                                                               | 0.50 | 0.20  | 0.56           | 0.46 | 0.39 | 0.34 | 0.27 | 0.22 | 0.19 | 0.15 | 0.12 |  |
|                                                                                                                                                                                    | 0.30 |       | 0.48           | 0.40 | 0.35 | 0.31 | 0.25 | 0.21 | 0.18 | 0.14 | 0.12 |  |
|                                                                                                                                                                                    | 0.20 |       | 0.42           | 0.36 | 0.32 | 0.28 | 0.23 | 0.20 | 0.17 | 0.14 | 0.11 |  |
| 0.00                                                                                                                                                                               | 0.00 | 0.00  | 0.28           | 0.24 | 0.20 | 0.18 | 0.14 | 0.12 | 0.11 | 0.08 | 0.07 |  |
| Rating:402W Photometrically tested without ceiling board.<br>Multiply UF values by service correction factors<br>Calculate in accordance with CIBSE Technical Memorandum NO.5 1980 |      |       |                |      |      |      |      |      |      |      |      |  |

## Utilisation Factor Table(Ceiling cavity)

| Utilisation Factors UF(C)                                                                                                                                                          |      |       | SHR NOM = 0.75 |      |      |      |      |      |      |      |      |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------|----------------|------|------|------|------|------|------|------|------|--|
| 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 | 0.20 | 0.21 | 0.22 | 0.23 | 0.24 | 0.24 |  |
|                                                                                                                                                                                    | 0.30 |       | 0.12           | 0.14 | 0.15 | 0.17 | 0.18 | 0.20 | 0.20 | 0.22 | 0.23 |  |
|                                                                                                                                                                                    | 0.20 |       | 0.09           | 0.11 | 0.12 | 0.14 | 0.16 | 0.17 | 0.18 | 0.20 | 0.21 |  |
| 0.50                                                                                                                                                                               | 0.50 | 0.20  | 0.16           | 0.17 | 0.19 | 0.19 | 0.21 | 0.21 | 0.22 | 0.23 | 0.23 |  |
|                                                                                                                                                                                    | 0.30 |       | 0.12           | 0.14 | 0.15 | 0.16 | 0.18 | 0.19 | 0.20 | 0.21 | 0.22 |  |
|                                                                                                                                                                                    | 0.20 |       | 0.09           | 0.11 | 0.12 | 0.14 | 0.15 | 0.17 | 0.18 | 0.19 | 0.20 |  |
| 0.30                                                                                                                                                                               | 0.50 | 0.20  | 0.15           | 0.17 | 0.18 | 0.19 | 0.20 | 0.21 | 0.21 | 0.22 | 0.22 |  |
|                                                                                                                                                                                    | 0.30 |       | 0.12           | 0.13 | 0.15 | 0.16 | 0.17 | 0.18 | 0.19 | 0.20 | 0.21 |  |
|                                                                                                                                                                                    | 0.20 |       | 0.09           | 0.11 | 0.12 | 0.13 | 0.15 | 0.16 | 0.17 | 0.19 | 0.20 |  |
| 0.00                                                                                                                                                                               | 0.00 | 0.00  | 0.03           | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |  |
| Rating:402W Photometrically tested without ceiling board.<br>Multiply UF values by service correction factors<br>Calculate in accordance with CIBSE Technical Memorandum NO.5 1980 |      |       |                |      |      |      |      |      |      |      |      |  |