

Report No.: 1

Test Time: 17.01.2020 15:22

## Luminaire Property

Luminaire Manufacturer:

Luminaire Description: FG 100 DALI 44LED 300W 5000K 60x150gr.

Luminous Length (mm): 355 mm

Luminous Width (mm): 338 mm

Luminous Height (mm): 210 mm

Voltage: 221.1 V

Current: 1.354 A

Power: 295.57 W

Power Factor: 0.987

## Photometric Results

CIE Class: Direct

Measurement Flux: 43170.5 lm

Downward Ratio: 99%

Total Rated Lamp Lumens: 43170.5 lm

Efficiency: 100%

Upward Ratio: 1%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 104.9, 141.7, 126.7, 125.4

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 44.3, 131.2, 82.4, 58.1

Luminaire Efficacy Rating (LER): 146.11

Central Intensity: 11527.43 cd

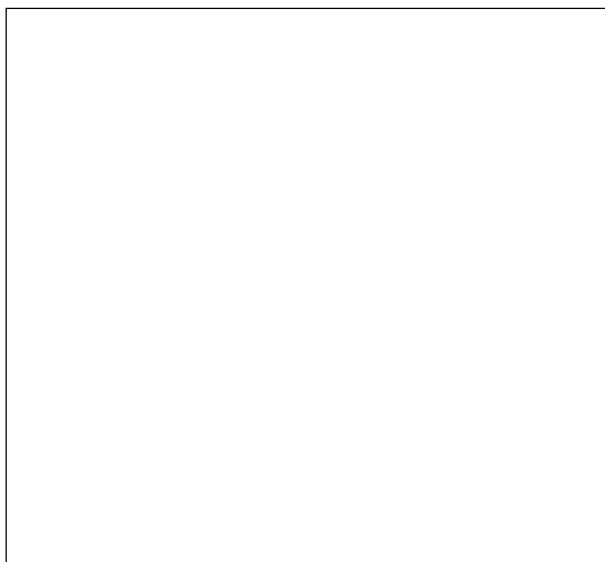
Max. Intensity: 24932.59 cd

Pos of Max. Intensity: H135 V35

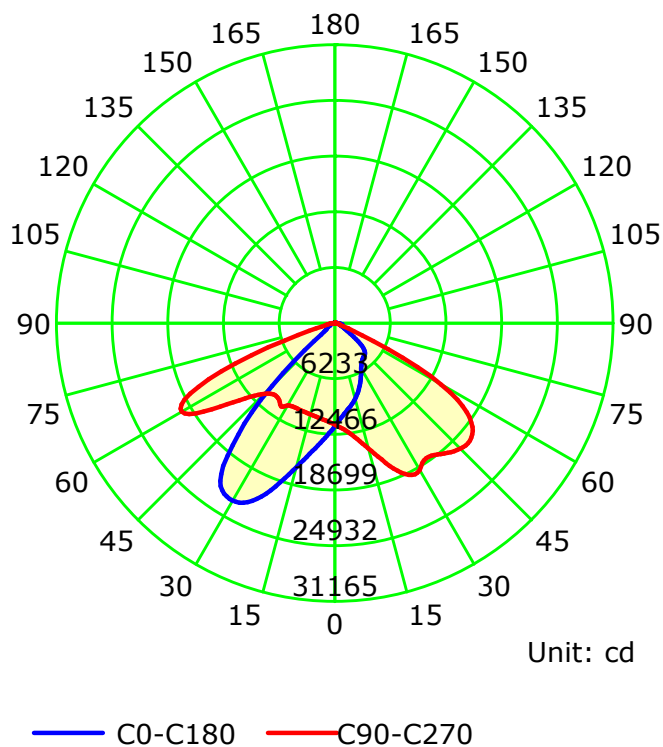
S/MH(C0/C180): 1.61

S/MH(C90/C270): 1.94

Picture Of Luminaire



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

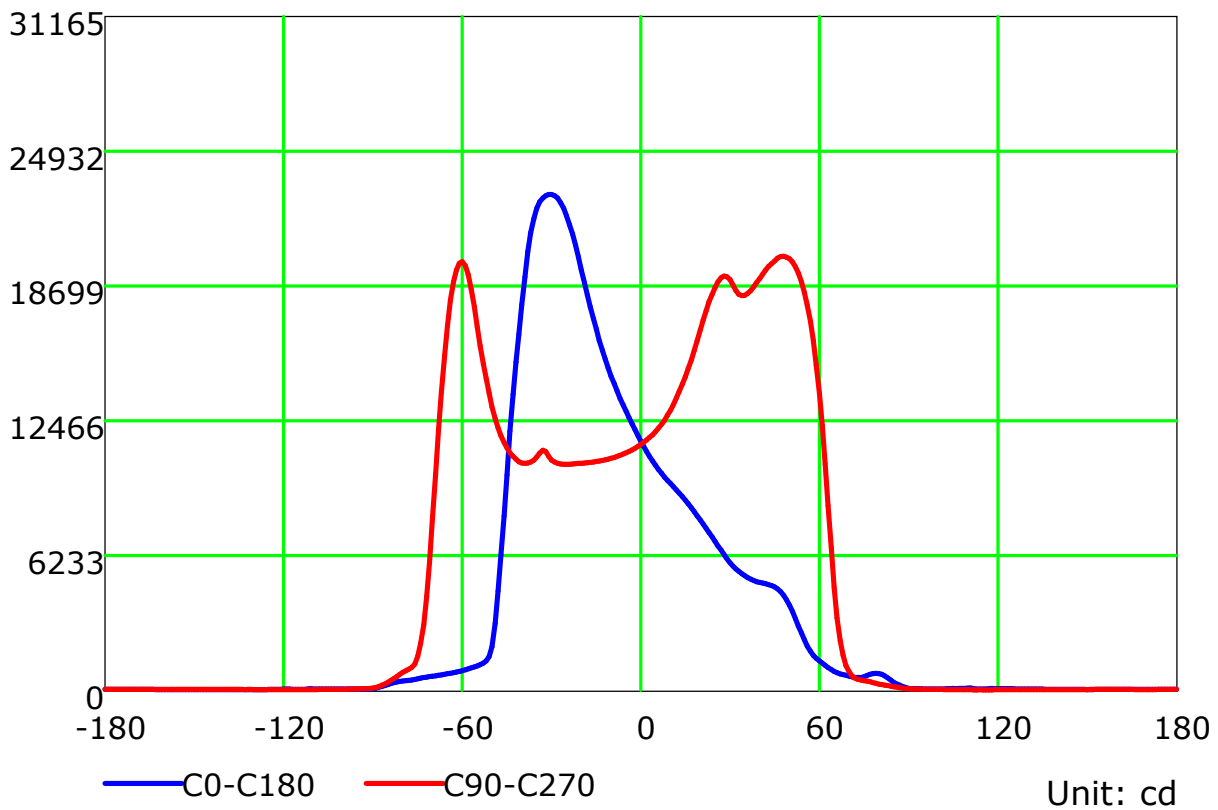
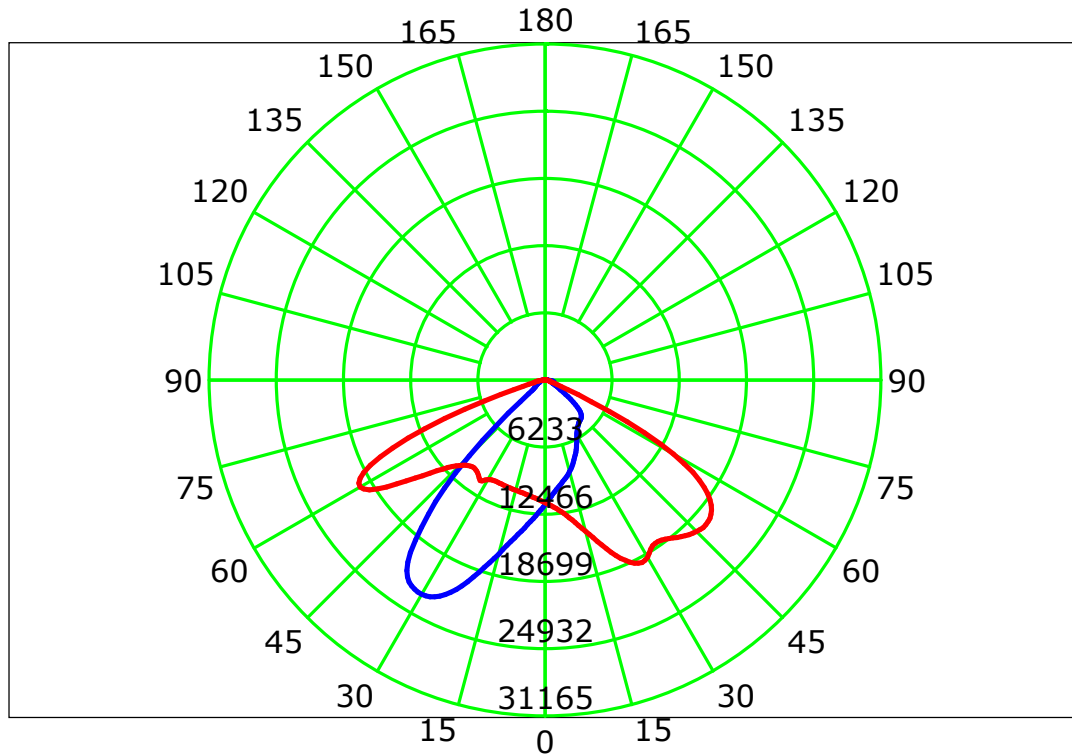
Test Device: LSG-1800B

Distance: 12.677 m

Humidity:

Inspector:

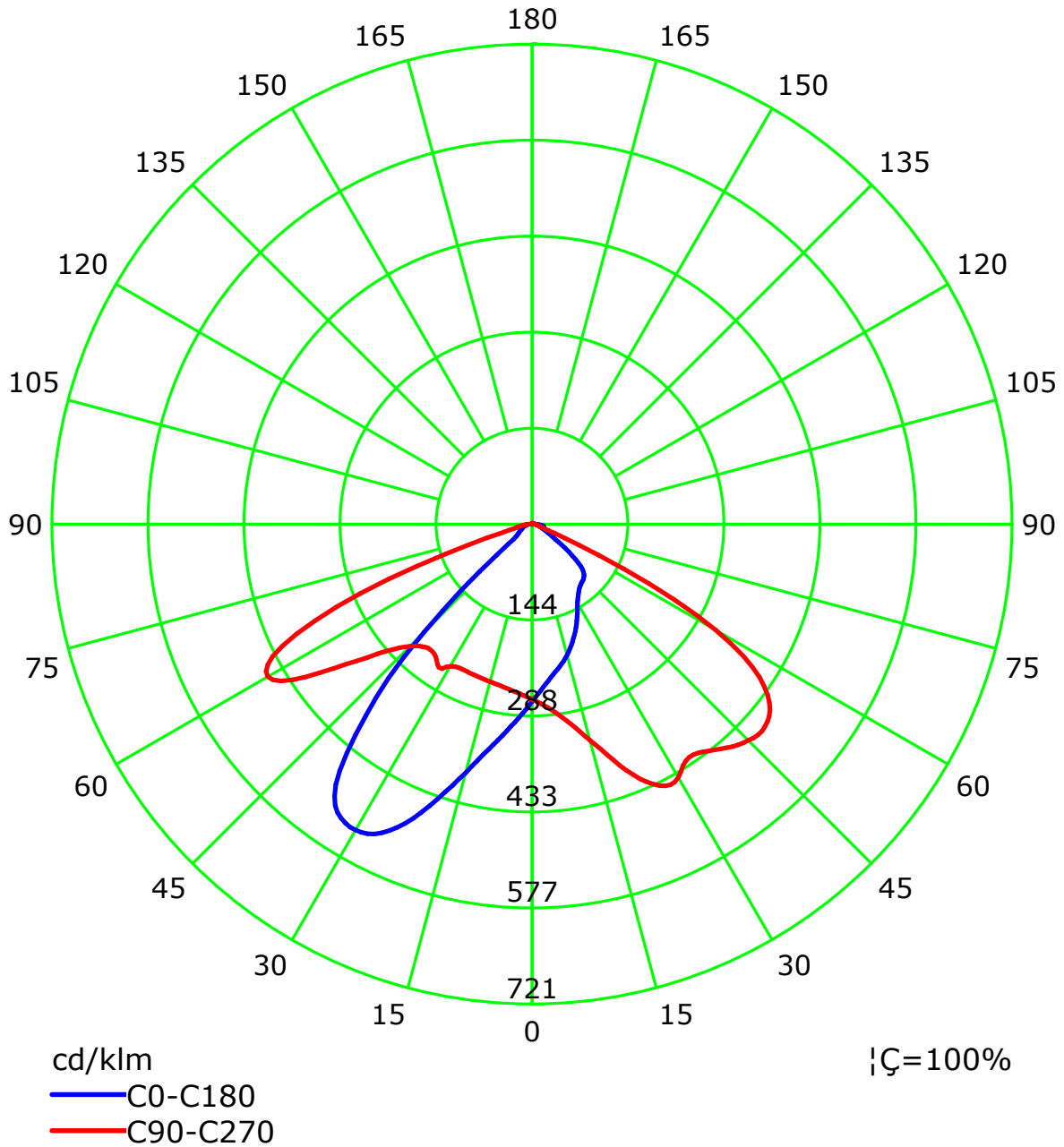
## Luminous Intensity Distribution Curve



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)



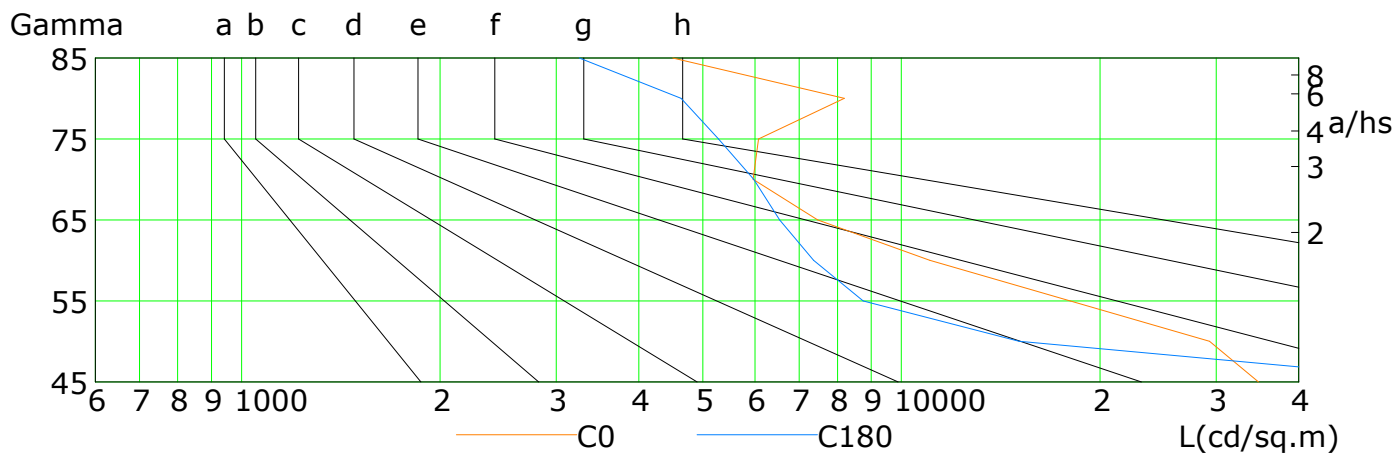
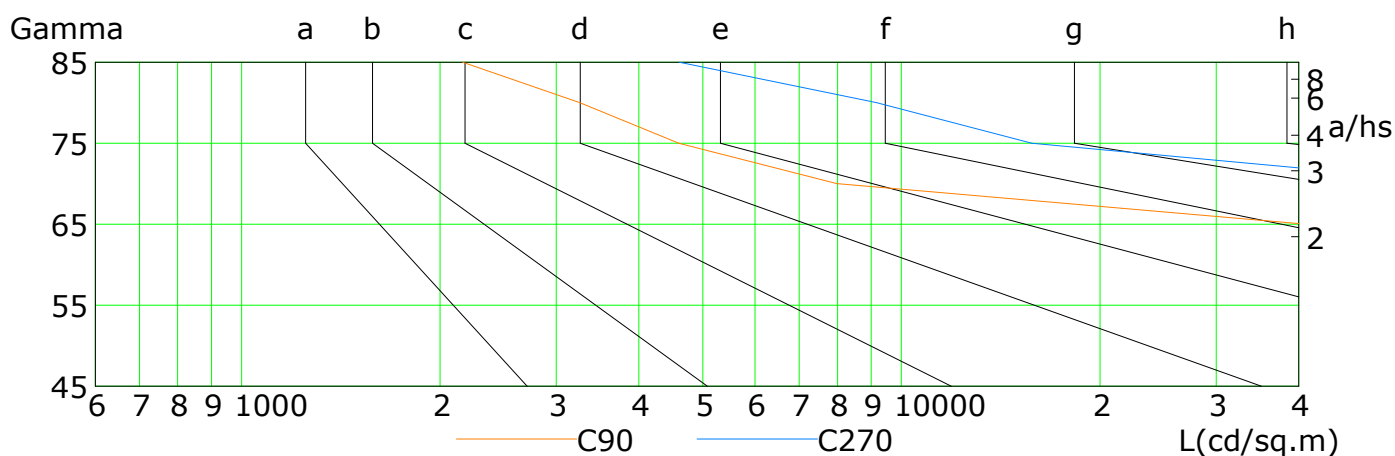
C Plane (°):0.0-360.0: 22.5  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

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) |      |      |       |       |       |       |       |
|--------|---------|------------------|------|------|-------|-------|-------|-------|-------|
| 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

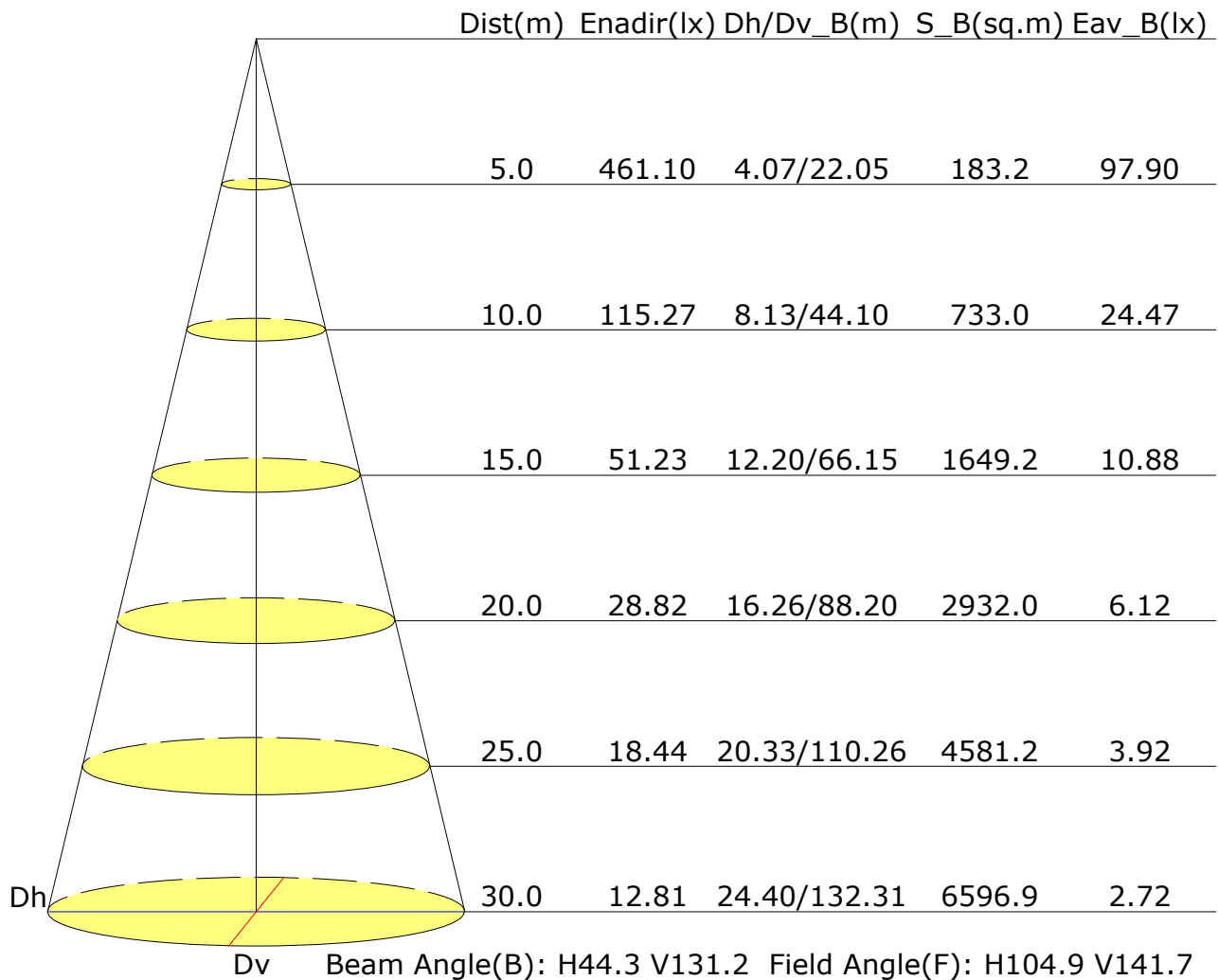


| L(cd/sq.m) | G45    | G50    | G55    | G60    | G65    | G70   | G75   | G80  | G85  |
|------------|--------|--------|--------|--------|--------|-------|-------|------|------|
| C0         | 34783  | 29294  | 18037  | 11042  | 7467   | 5960  | 6075  | 8194 | 4502 |
| C90        | 147094 | 151783 | 145062 | 113332 | 41562  | 7973  | 4598  | 3255 | 2165 |
| C180       | 72455  | 15086  | 8755   | 7360   | 6540   | 5970  | 5285  | 4635 | 3250 |
| C270       | 83021  | 99648  | 132409 | 163237 | 146706 | 73796 | 15760 | 9161 | 4612 |

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  | 20.4             | 21.7 | 20.7 | 22.0 | 22.2 | 29.6           | 30.9 | 29.9 | 31.1 | 31.4 |
| 3H   | 20.5             | 21.7 | 20.8 | 22.0 | 22.3 | 30.6           | 31.8 | 30.9 | 32.0 | 32.3 |
| 4H   | 20.6             | 21.7 | 20.9 | 22.0 | 22.3 | 30.6           | 31.7 | 30.9 | 32.0 | 32.3 |
| 6H   | 20.8             | 21.9 | 21.2 | 22.2 | 22.5 | 30.5           | 31.5 | 30.9 | 31.8 | 32.2 |
| 8H   | 21.0             | 21.9 | 21.3 | 22.3 | 22.6 | 30.5           | 31.4 | 30.8 | 31.8 | 32.1 |
| 12H  | 21.0             | 22.0 | 21.4 | 22.3 | 22.7 | 30.4           | 31.4 | 30.8 | 31.7 | 32.1 |
| X=4H Y=2H  | 21.7             | 22.9 | 22.1 | 23.2 | 23.5 | 29.4           | 30.5 | 29.8 | 30.8 | 31.1 |
| 3H   | 21.8             | 22.8 | 22.2 | 23.1 | 23.5 | 30.5           | 31.4 | 30.9 | 31.8 | 32.1 |
| 4H   | 21.9             | 22.8 | 22.4 | 23.1 | 23.5 | 30.5           | 31.3 | 30.9 | 31.7 | 32.1 |
| 6H   | 22.2             | 22.9 | 22.6 | 23.3 | 23.7 | 30.4           | 31.2 | 30.9 | 31.5 | 32.0 |
| 8H   | 22.3             | 23.0 | 22.8 | 23.4 | 23.8 | 30.4           | 31.1 | 30.8 | 31.5 | 31.9 |
| 12H  | 22.4             | 23.0 | 22.9 | 23.4 | 23.9 | 30.4           | 31.0 | 30.8 | 31.4 | 31.9 |
| X=8H Y=4H  | 22.0             | 22.7 | 22.5 | 23.1 | 23.6 | 30.4           | 31.0 | 30.8 | 31.5 | 31.9 |
| 6H   | 22.3             | 22.9 | 22.8 | 23.3 | 23.8 | 30.3           | 30.9 | 30.8 | 31.3 | 31.8 |
| 8H   | 22.5             | 23.0 | 23.0 | 23.4 | 23.9 | 30.3           | 30.8 | 30.8 | 31.2 | 31.7 |
| 12H  | 22.6             | 23.0 | 23.1 | 23.5 | 24.0 | 30.3           | 30.7 | 30.8 | 31.2 | 31.7 |
| X=12H Y=4H   | 22.0             | 22.6 | 22.5 | 23.0 | 23.5 | 30.3           | 30.9 | 30.8 | 31.4 | 31.8 |
| 6H   | 22.3             | 22.8 | 22.8 | 23.2 | 23.7 | 30.3           | 30.8 | 30.8 | 31.2 | 31.7 |
| 8H   | 22.5             | 22.9 | 23.0 | 23.4 | 23.9 | 30.3           | 30.7 | 30.8 | 31.2 | 31.7 |
| Variations with the observer position at spacings: |                  |      |      |      |      |                |      |      |      |      |
| S=1.0H   | +0.4/-1.1        |      |      |      |      | +0.6/-0.6      |      |      |      |      |
| S=1.5H   | +1.6/-3.5        |      |      |      |      | +2.3/-2.4      |      |      |      |      |
| S=2.0H   | +2.4/-5.1        |      |      |      |      | +4.1/-5.5      |      |      |      |      |

Calculate in accordance with CIE Pub.117. The table is revised with 43171lm ( $8\log(F/F_0) = 13.1$ ).

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 = 1.75 |      |      |      |      |      |      |      |      |  |
|--|------|-------|----------------|------|------|------|------|------|------|------|------|--|
| 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  | NA             | 0.75 | 0.82 | 0.87 | 0.94 | 0.98 | 1.01 | 1.04 | 1.06 |  |
|  | 0.30 |       | NA             | 0.69 | 0.76 | 0.81 | 0.89 | 0.93 | 0.97 | 1.01 | 1.04 |  |
|  | 0.20 |       | NA             | 0.64 | 0.71 | 0.77 | 0.85 | 0.90 | 0.93 | 0.98 | 1.01 |  |
| 0.50   | 0.50 | 0.20  | NA             | 0.73 | 0.80 | 0.85 | 0.91 | 0.94 | 0.97 | 1.00 | 1.02 |  |
|  | 0.30 |       | NA             | 0.68 | 0.74 | 0.80 | 0.87 | 0.91 | 0.94 | 0.97 | 1.00 |  |
|  | 0.20 |       | NA             | 0.63 | 0.70 | 0.76 | 0.83 | 0.88 | 0.91 | 0.95 | 0.98 |  |
| 0.30   | 0.50 | 0.20  | NA             | 0.71 | 0.78 | 0.82 | 0.88 | 0.91 | 0.93 | 0.96 | 0.98 |  |
|  | 0.30 |       | NA             | 0.67 | 0.73 | 0.78 | 0.84 | 0.88 | 0.91 | 0.94 | 0.96 |  |
|  | 0.20 |       | NA             | 0.63 | 0.69 | 0.75 | 0.81 | 0.86 | 0.88 | 0.92 | 0.95 |  |
| 0.00   | 0.00 | 0.00  | NA             | 0.60 | 0.67 | 0.72 | 0.78 | 0.82 | 0.84 | 0.88 | 0.90 |  |
| Rating:296W 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 = 1.75 |      |      |      |      |      |      |      |      |  |
|--|------|-------|----------------|------|------|------|------|------|------|------|------|--|
| 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  | NA             | 0.69 | 0.58 | 0.50 | 0.38 | 0.32 | 0.27 | 0.21 | 0.17 |  |
|  | 0.30 |       | NA             | 0.59 | 0.51 | 0.44 | 0.35 | 0.29 | 0.25 | 0.20 | 0.16 |  |
|  | 0.20 |       | NA             | 0.52 | 0.45 | 0.39 | 0.32 | 0.27 | 0.23 | 0.18 | 0.15 |  |
| 0.50   | 0.50 | 0.20  | NA             | 0.66 | 0.55 | 0.47 | 0.36 | 0.34 | 0.25 | 0.19 | 0.16 |  |
|  | 0.30 |       | NA             | 0.58 | 0.49 | 0.42 | 0.33 | 0.28 | 0.24 | 0.18 | 0.15 |  |
|  | 0.20 |       | NA             | 0.51 | 0.44 | 0.38 | 0.31 | 0.26 | 0.22 | 0.18 | 0.15 |  |
| 0.30   | 0.50 | 0.20  | NA             | 0.63 | 0.53 | 0.45 | 0.34 | 0.28 | 0.24 | 0.18 | 0.15 |  |
|  | 0.30 |       | NA             | 0.56 | 0.47 | 0.41 | 0.32 | 0.26 | 0.23 | 0.17 | 0.14 |  |
|  | 0.20 |       | NA             | 0.50 | 0.43 | 0.37 | 0.30 | 0.25 | 0.21 | 0.17 | 0.14 |  |
| 0.00   | 0.00 | 0.00  | 0.99           | 0.39 | 0.33 | 0.28 | 0.21 | 0.18 | 0.15 | 0.12 | 0.09 |  |
| Rating:296W 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 = 1.75 |      |      |      |      |      |      |      |      |  |
|--|------|-------|----------------|------|------|------|------|------|------|------|------|--|
| 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  | NA             | 0.17 | 0.18 | 0.19 | 0.20 | 0.20 | 0.21 | 0.22 | 0.22 |  |
|  | 0.30 |       | NA             | 0.12 | 0.13 | 0.14 | 0.16 | 0.17 | 0.18 | 0.19 | 0.20 |  |
|  | 0.20 |       | NA             | 0.08 | 0.09 | 0.11 | 0.13 | 0.14 | 0.15 | 0.17 | 0.18 |  |
| 0.50   | 0.50 | 0.20  | NA             | 0.17 | 0.17 | 0.18 | 0.19 | 0.20 | 0.20 | 0.21 | 0.21 |  |
|  | 0.30 |       | NA             | 0.11 | 0.13 | 0.14 | 0.15 | 0.16 | 0.17 | 0.18 | 0.19 |  |
|  | 0.20 |       | NA             | 0.07 | 0.09 | 0.10 | 0.12 | 0.14 | 0.15 | 0.17 | 0.18 |  |
| 0.30   | 0.50 | 0.20  | NA             | 0.16 | 0.17 | 0.17 | 0.18 | 0.19 | 0.19 | 0.20 | 0.20 |  |
|  | 0.30 |       | NA             | 0.11 | 0.12 | 0.13 | 0.15 | 0.16 | 0.17 | 0.18 | 0.19 |  |
|  | 0.20 |       | NA             | 0.07 | 0.09 | 0.10 | 0.12 | 0.14 | 0.15 | 0.16 | 0.17 |  |
| 0.00   | 0.00 | 0.00  | 0.01           | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |  |
| Rating:296W Photometrically tested without ceiling board.<br>Multiply UF values by service correction factors<br>Calculate in accordance with CIBSE Technical Memorandum NO.5 1980 |      |       |                |      |      |      |      |      |      |      |      |  |