

Report No.: PKS190228001-10

Test Time: 2019-2-28 11:27

## Luminaire Property

Luminaire Manufacturer:

Luminaire Category:

Luminaire Description: CLAF1418LAJD1SNGY Lamp Catalog:

Lamp Description:

Number of Lamps:

Lumens per Lamp:

Luminous Length (mm):

Luminous Width (mm):

Luminous Height (mm):

Voltage: 120.0 V

Current: 0.159 A

Power: 18.80 W

Power Factor: 0.988

## Photometric Results

CIE Class: Semi-Direct

Total Rated Lamp Lumens: 1270.1 lm

Measurement Flux: 1270.1 lm

Efficiency: 100%

Downward Ratio: 77%

Upward Ratio: 23%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 353.2, 353.6, 353.1, 353.3

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 113.2, 114.5, 113.9, 113.8

Luminaire Efficacy Rating (LER): 67.61

C0r0 Intensity: 339.1 cd

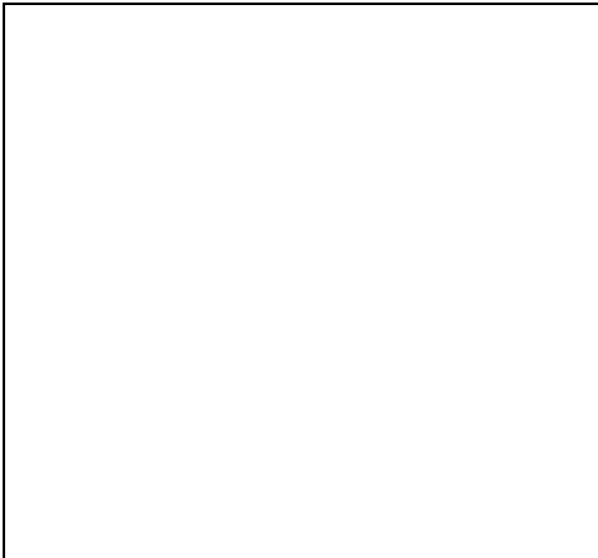
Max. Intensity: 339.1 cd

Pos of Max. Intensity: H0 V0

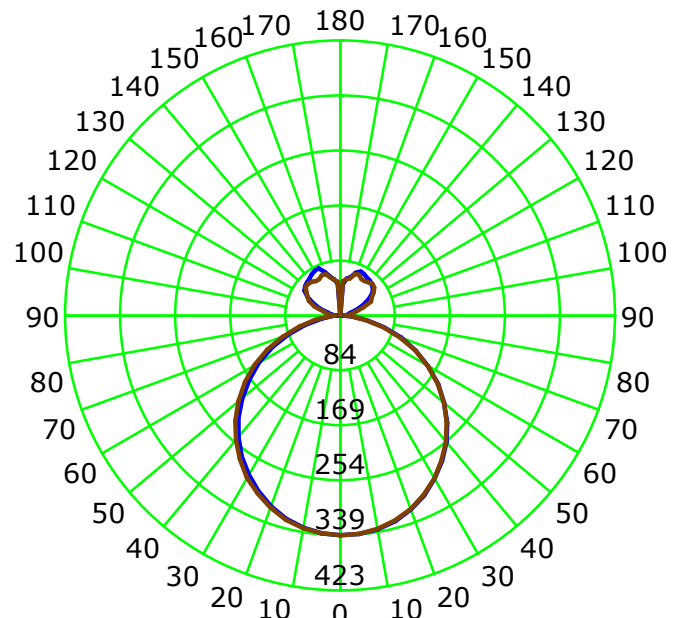
S/MH(C0/C180): 1.26

S/MH(C90/C270): 1.27

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd

Average Diffuse Angle(50%): 113.8°

— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 22.5

Gamma Plane (°):0.0-180.0:5.0

Test Lab: Bacl

Test Device: GPM-3000

Test Type: TYPE C

Distance: 14.073 m

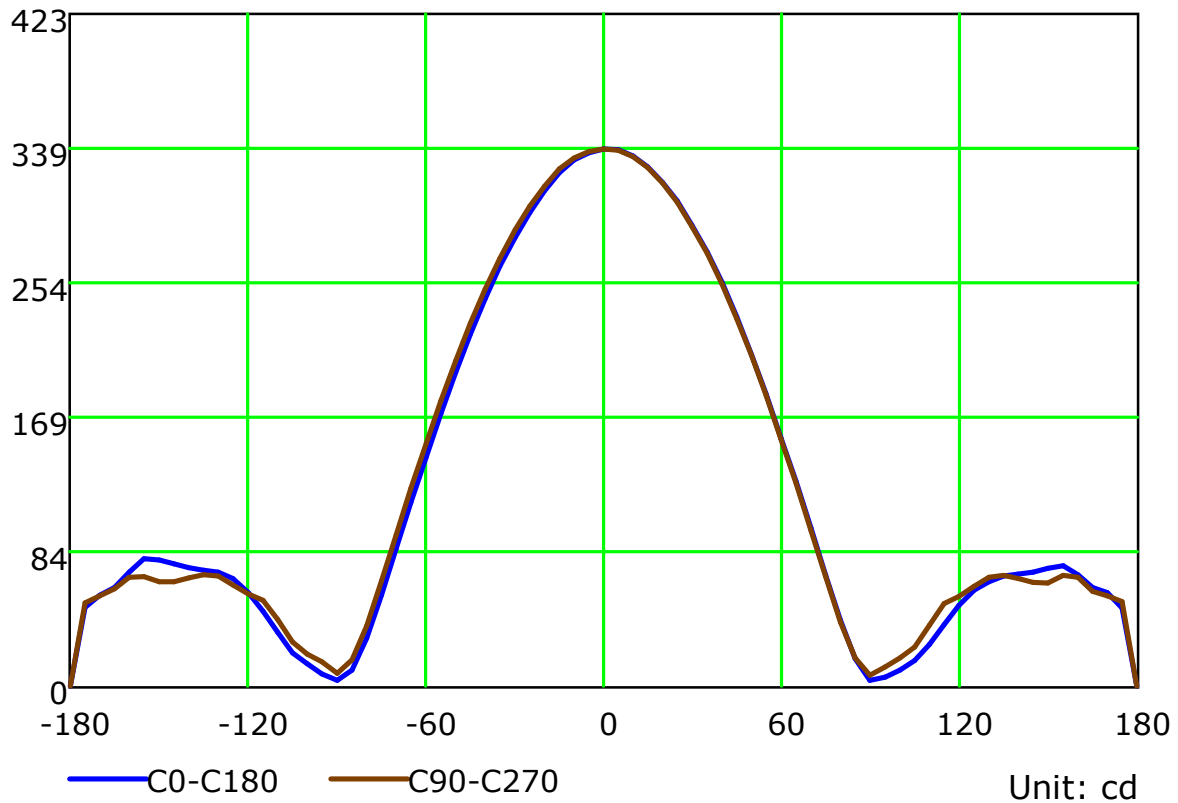
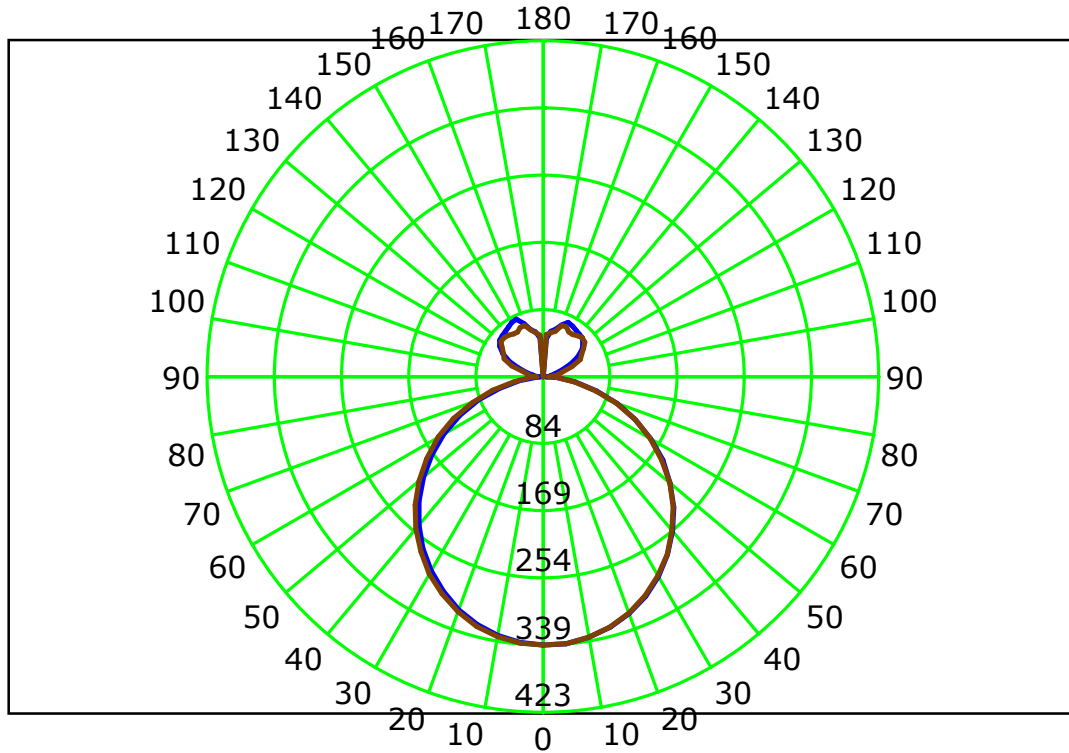
Temperature: 24.6 °C

Humidity: 48

Operator: KOBE

Inspector:

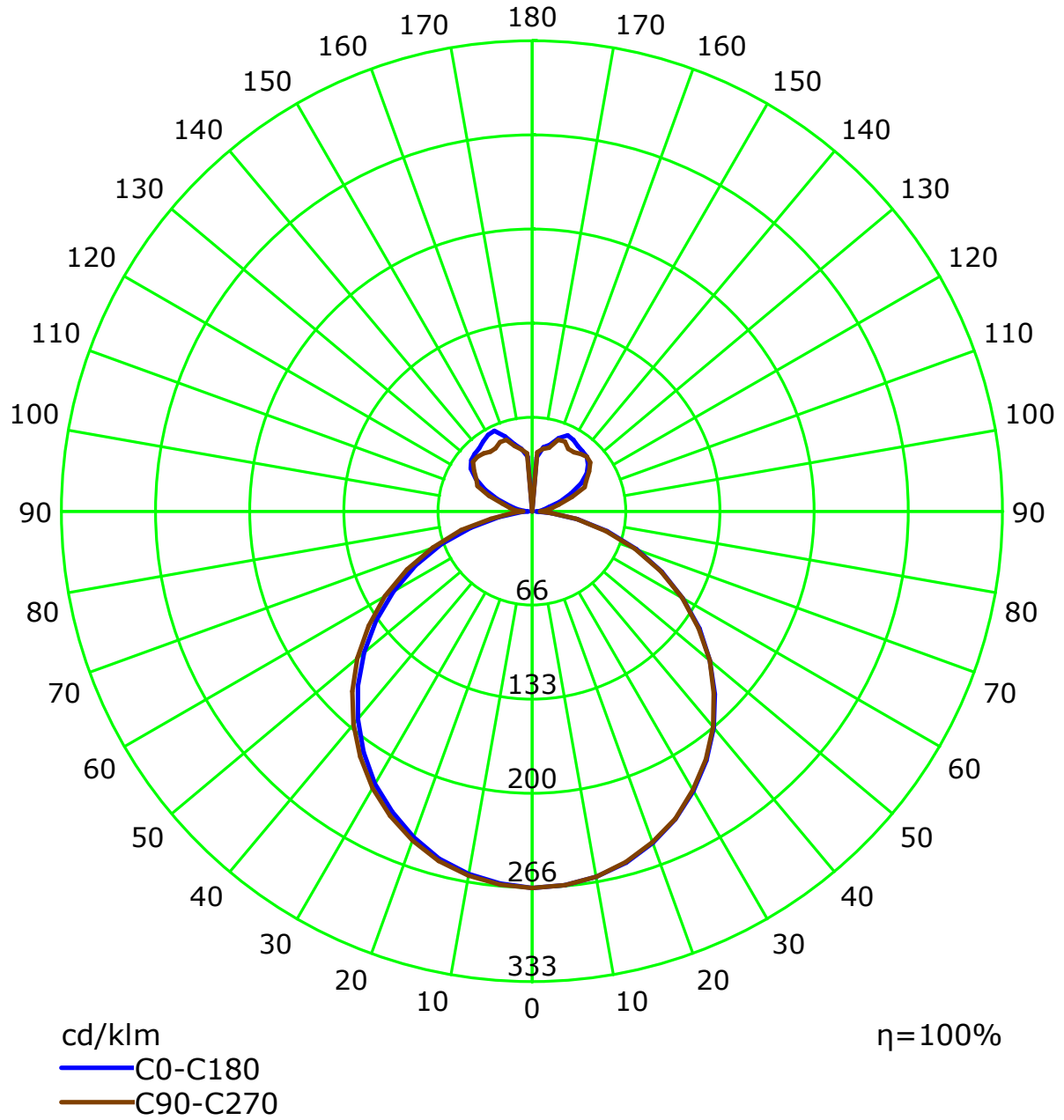
## Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 22.5  
 Test Lab: Bacl  
 Test Type: TYPE C  
 Temperature: 24.6 'C  
 Operator: KOBE

Gamma Plane (°):0.0-180.0:5.0  
 Test Device: GPM-3000  
 Distance: 14.073 m  
 Humidity: 48  
 Inspector:

## Luminous Intensity Distribution Curve(cd/klm)



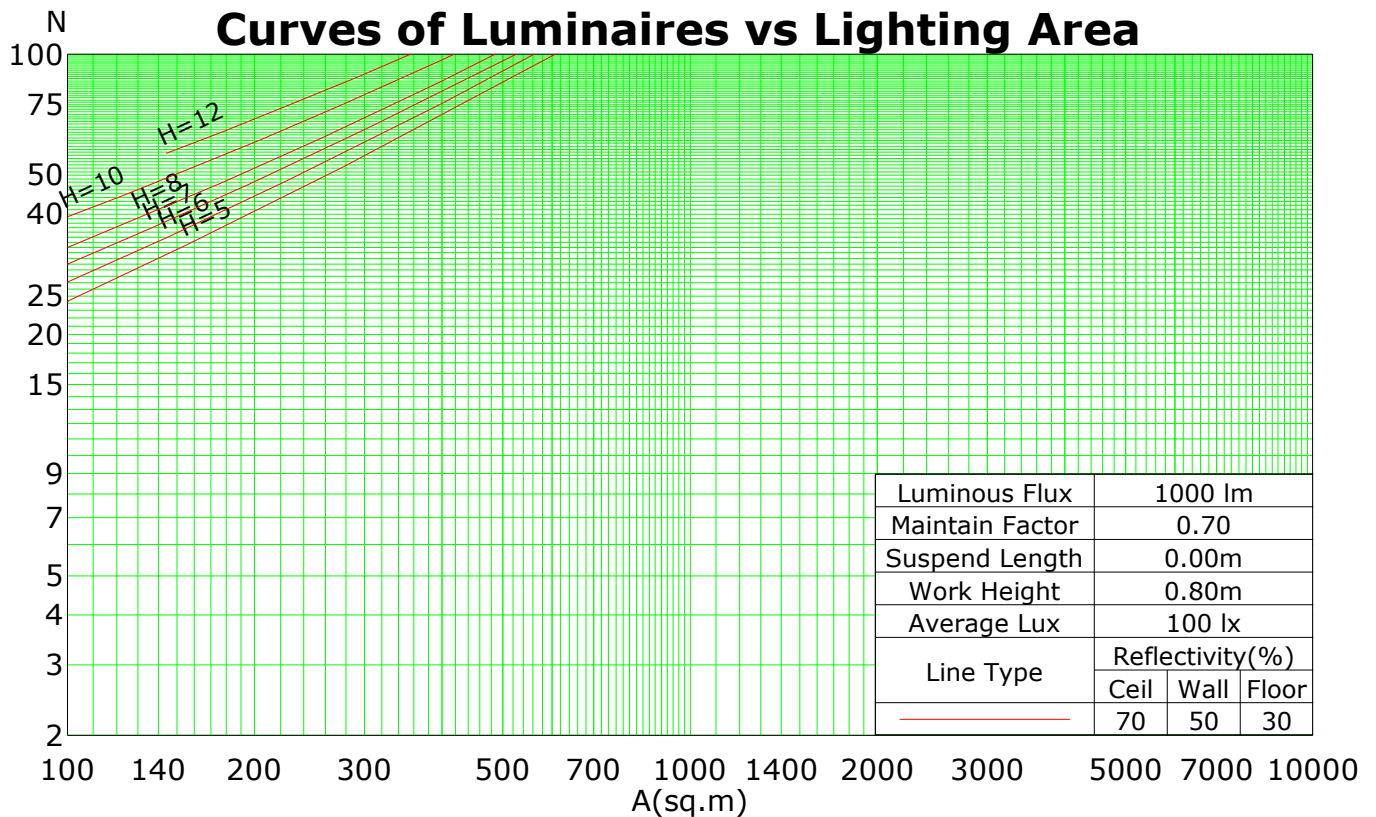
C Plane (°):0.0-360.0: 22.5  
 Test Lab: Bacl  
 Test Type: TYPE C  
 Temperature: 24.6 °C  
 Operator: KOBE

Gamma Plane (°):0.0-180.0:5.0  
 Test Device: GPM-3000  
 Distance: 14.073 m  
 Humidity: 48  
 Inspector:

## Coefficients Of Utilization - Zonal Cavity Method

|     |          |      |      |      |      |      |      |      |     |     |     |     |     |     |     |     |     |     |
|-----|----------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RC  | 0.8      | 0.8  | 0.8  | 0.8  | 0.7  | 0.7  | 0.7  | 0.7  | 0.5 | 0.5 | 0.5 | 0.3 | 0.3 | 0.3 | 0.1 | 0.1 | 0.1 | 0   |
| RW  | 0.7      | 0.5  | 0.3  | 0.1  | 0.7  | 0.5  | 0.3  | 0.1  | 0.5 | 0.3 | 0.1 | 0.5 | 0.3 | 0.1 | 0.5 | 0.3 | 0.1 | 0   |
| RCR | RF = 0.2 |      |      |      |      |      |      |      |     |     |     |     |     |     |     |     |     |     |
| 0   | 1.14     | 1.14 | 1.14 | 1.14 | 1.08 | 1.08 | 1.08 | 1.08 | .99 | .99 | .99 | .90 | .90 | .90 | .81 | .81 | .81 | .77 |
| 1   | 1.04     | .99  | .95  | .91  | .99  | .95  | .91  | .87  | .86 | .83 | .81 | .79 | .76 | .74 | .71 | .70 | .68 | .65 |
| 2   | .94      | .86  | .80  | .74  | .89  | .82  | .76  | .71  | .75 | .70 | .66 | .69 | .65 | .61 | .62 | .60 | .57 | .54 |
| 3   | .86      | .75  | .68  | .61  | .81  | .72  | .65  | .59  | .66 | .60 | .55 | .60 | .56 | .52 | .55 | .51 | .48 | .45 |
| 4   | .78      | .67  | .58  | .52  | .74  | .64  | .56  | .50  | .59 | .52 | .47 | .54 | .48 | .44 | .49 | .45 | .41 | .38 |
| 5   | .72      | .59  | .51  | .44  | .68  | .57  | .49  | .43  | .52 | .46 | .41 | .48 | .43 | .38 | .44 | .39 | .36 | .33 |
| 6   | .66      | .53  | .45  | .38  | .63  | .51  | .43  | .37  | .47 | .40 | .35 | .43 | .38 | .33 | .40 | .35 | .31 | .29 |
| 7   | .61      | .48  | .40  | .34  | .58  | .46  | .38  | .33  | .43 | .36 | .31 | .40 | .34 | .29 | .36 | .31 | .28 | .25 |
| 8   | .57      | .44  | .36  | .30  | .54  | .42  | .35  | .29  | .39 | .32 | .28 | .36 | .30 | .26 | .33 | .28 | .25 | .23 |
| 9   | .53      | .40  | .32  | .27  | .51  | .39  | .31  | .26  | .36 | .29 | .25 | .33 | .28 | .24 | .31 | .26 | .22 | .20 |
| 10  | .50      | .37  | .29  | .24  | .47  | .36  | .28  | .24  | .33 | .27 | .22 | .31 | .25 | .21 | .29 | .24 | .20 | .18 |

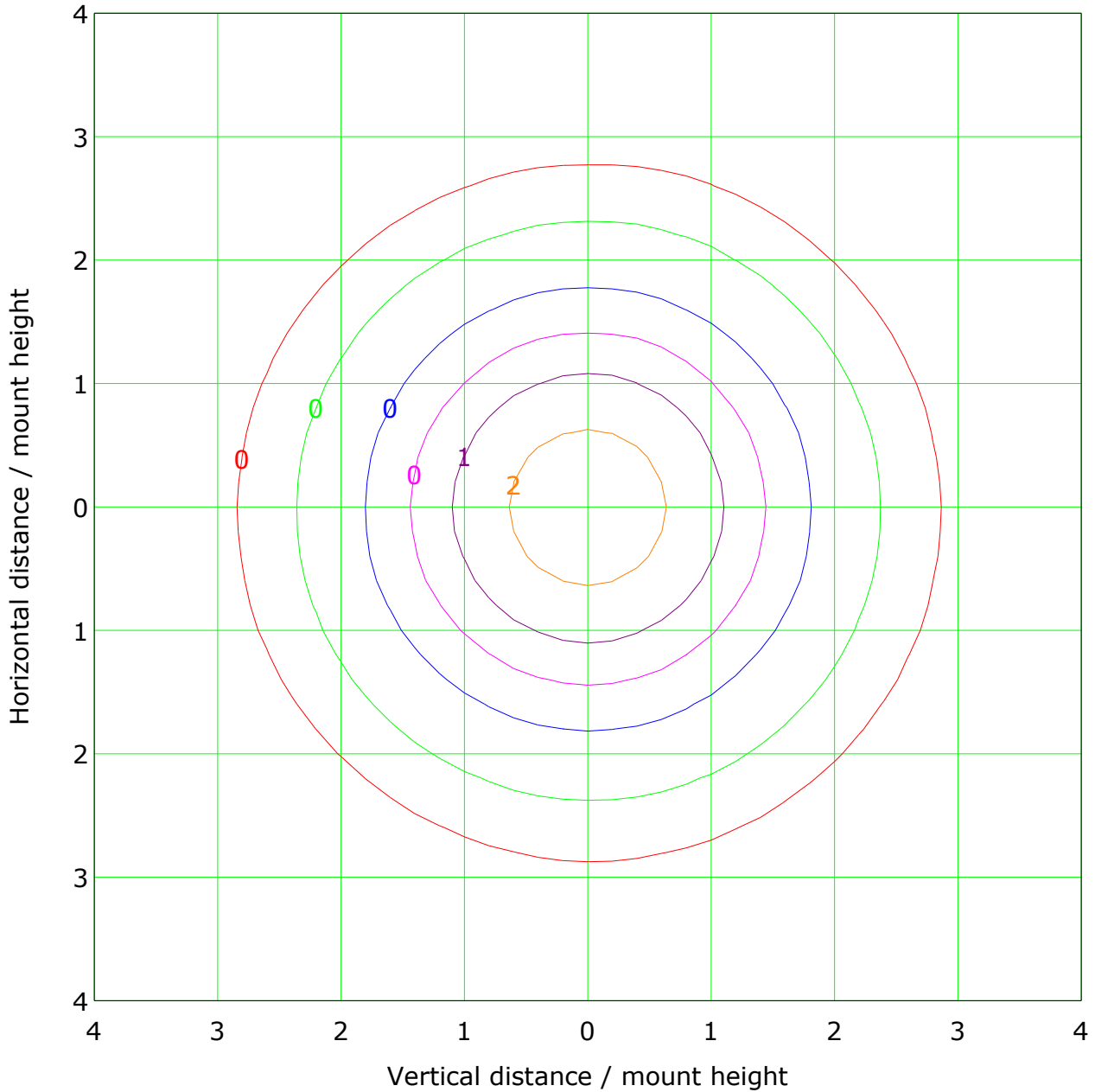
Spacing Criteria (0-180): 1.26  
 Spacing Criteria (90-270): 1.27  
 Spacing Criteria (Diagonal): 1.38



C Plane (°):0.0-360.0: 22.5  
 Test Lab: Bacl  
 Test Type: TYPE C  
 Temperature: 24.6 'C  
 Operator: KOBE

Gamma Plane (°):0.0-180.0:5.0  
 Test Device: GPM-3000  
 Distance: 14.073 m  
 Humidity: 48  
 Inspector:

## IsoLux Plot



Mounting Height: 10.0m    Max Lux(100%): 3.4 lx

|                |                |
|----------------|----------------|
| ( 1%): 0.0 lx  | ( 2%): 0.1 lx  |
| ( 5%): 0.2 lx  | ( 10%): 0.3 lx |
| ( 20%): 0.7 lx | ( 50%): 1.7 lx |

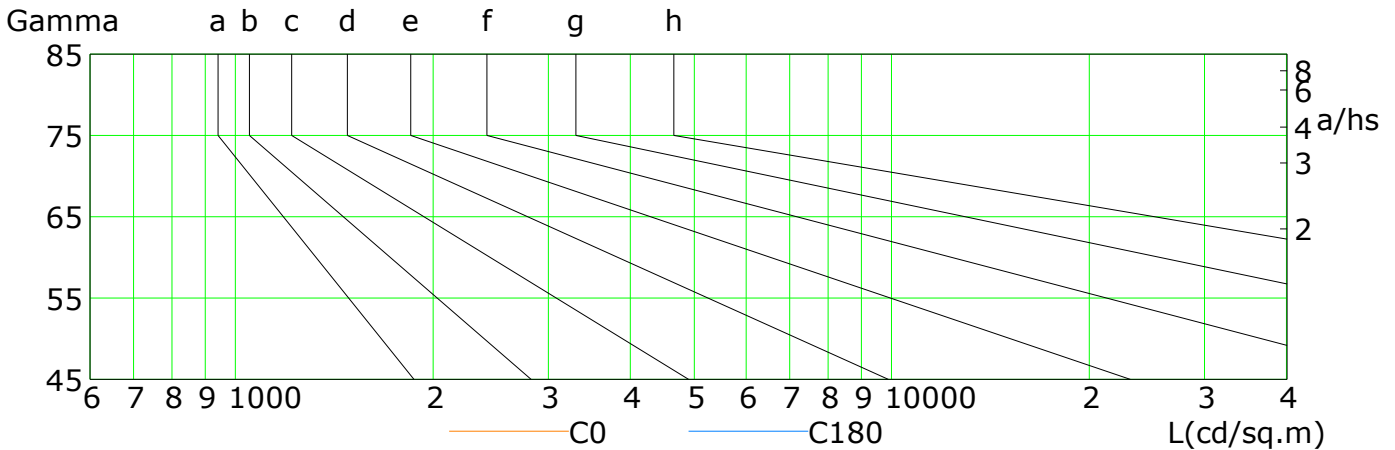
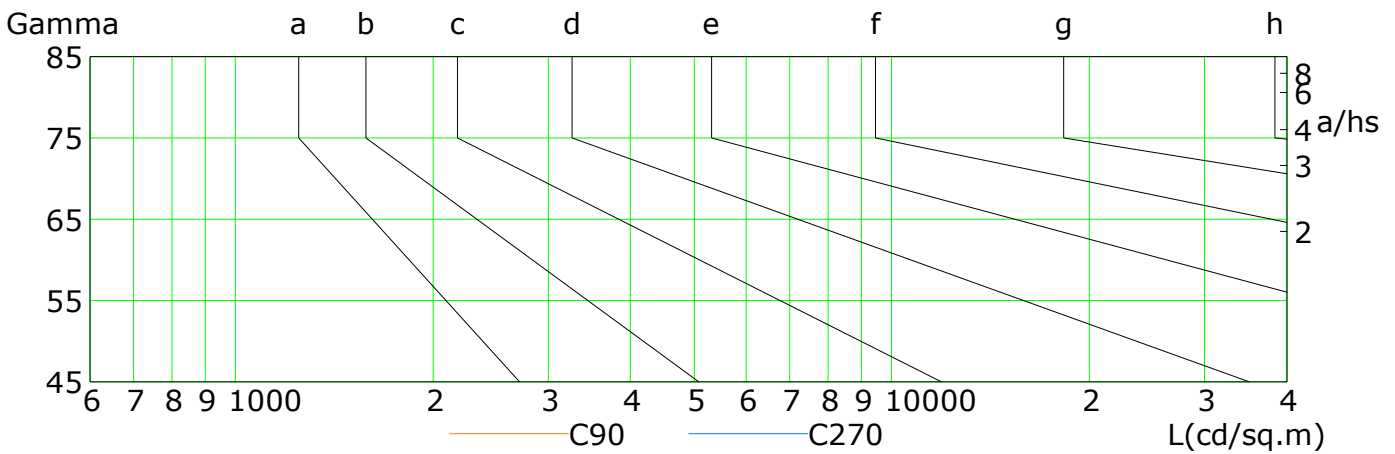
C Plane (°):0.0-360.0: 22.5  
 Test Lab: Bacl  
 Test Type: TYPE C  
 Temperature: 24.6 'C  
 Operator: KOBE

Gamma Plane (°):0.0-180.0:5.0  
 Test Device: GPM-3000  
 Distance: 14.073 m  
 Humidity: 48  
 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

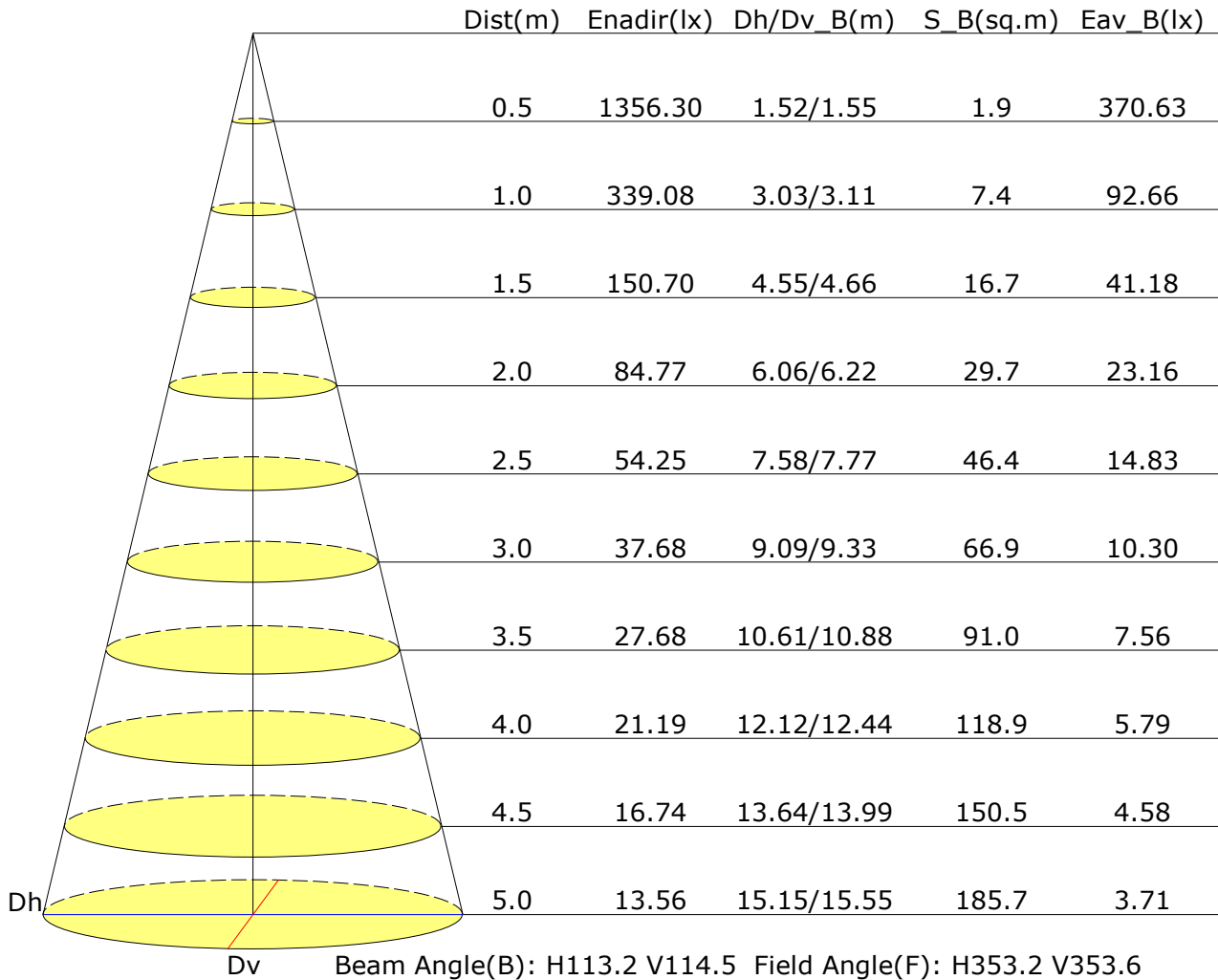


| L(cd/sq.m) | G45 | G50 | G55 | G60 | G65 | G70 | G75 | G80 | G85 |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| C0         | 233 | 209 | 184 | 157 | 129 | 100 | 70  | 42  | 17  |
| C90        | 232 | 209 | 183 | 156 | 128 | 98  | 69  | 41  | 18  |
| C180       | 222 | 198 | 172 | 145 | 116 | 87  | 58  | 30  | 10  |
| C270       | 229 | 205 | 180 | 153 | 125 | 95  | 66  | 38  | 17  |

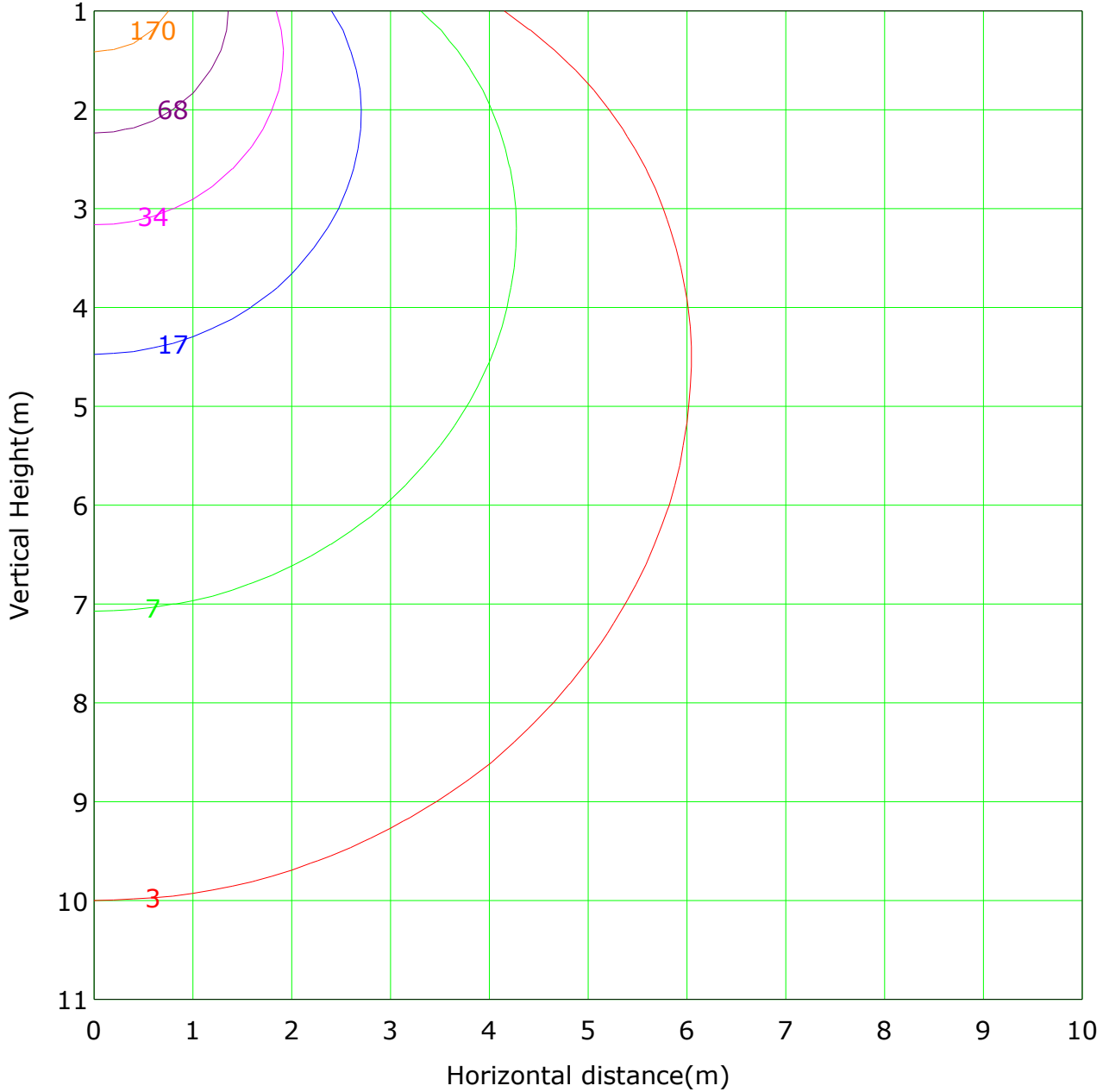
C Plane (°):0.0-360.0: 22.5  
Test Lab: Bacl  
Test Type: TYPE C  
Temperature: 24.6 'C  
Operator: KOBE

Gamma Plane (°):0.0-180.0:5.0  
Test Device: GPM-3000  
Distance: 14.073 m  
Humidity: 48  
Inspector:

## Illuminance at a Distance



## Vertical IsoLux Plot



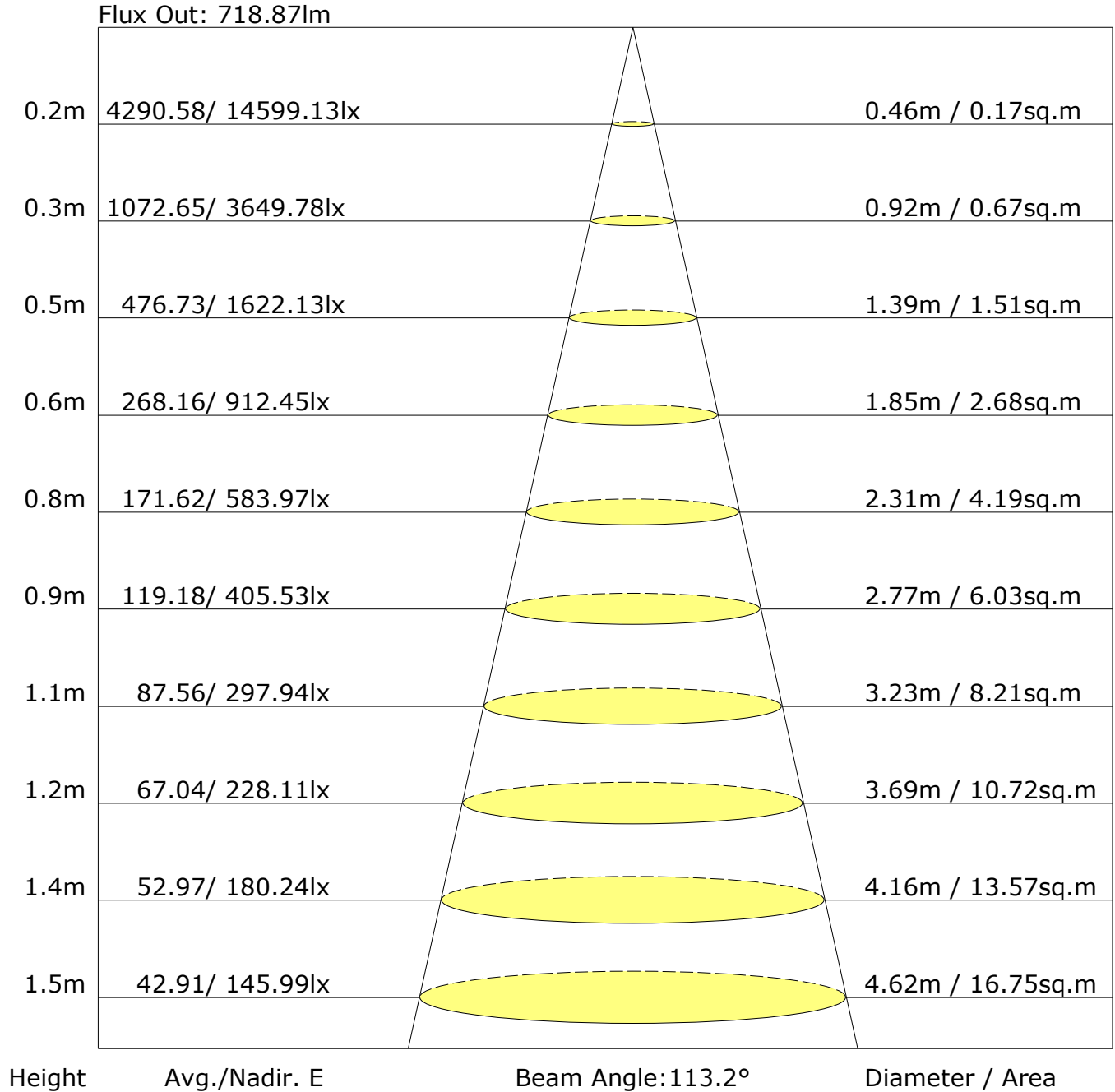
|                   |                    |                   |
|-------------------|--------------------|-------------------|
| Lowest(m): 1.0m   | Highest(m): 11.0m  | Max Lux: 339.1 lx |
| — ( 1%): 3.4 lx   | — ( 2%): 6.8 lx    |                   |
| — ( 5%): 17.0 lx  | — ( 10%): 33.9 lx  |                   |
| — ( 20%): 67.8 lx | — ( 50%): 169.5 lx |                   |

C Plane (°):0.0-360.0: 22.5  
 Test Lab: Bacl  
 Test Type: TYPE C  
 Temperature: 24.6 'C  
 Operator: KOBE

Gamma Plane (°):0.0-180.0:5.0  
 Test Device: GPM-3000  
 Distance: 14.073 m  
 Humidity: 48  
 Inspector:



## The Average Illuminance Effective Figure



C Plane (°):0.0-360.0: 22.5  
 Test Lab: Bacl  
 Test Type: TYPE C  
 Temperature: 24.6 °C  
 Operator: KOBE

Gamma Plane (°):0.0-180.0:5.0  
 Test Device: GPM-3000  
 Distance: 14.073 m  
 Humidity: 48  
 Inspector:

## 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  | -1.\$            | -1.\$ | -1.\$       | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$       | -1.\$ | -1.\$ |
| 3H   | -1.\$            | -1.\$ | -1.\$       | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$       | -1.\$ | -1.\$ |
| 4H   | -1.\$            | -1.\$ | -1.\$       | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$       | -1.\$ | -1.\$ |
| 6H   | -1.\$            | -1.\$ | -1.\$       | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$       | -1.\$ | -1.\$ |
| 8H   | -1.\$            | -1.\$ | -1.\$       | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$       | -1.\$ | -1.\$ |
| 12H  | -1.\$            | -1.\$ | -1.\$       | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$       | -1.\$ | -1.\$ |
| X=4H Y=2H  | -1.\$            | -1.\$ | -1.\$       | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$       | -1.\$ | -1.\$ |
| 3H   | -1.\$            | -1.\$ | -1.\$       | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$       | -1.\$ | -1.\$ |
| 4H   | -1.\$            | -1.\$ | -1.\$       | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$       | -1.\$ | -1.\$ |
| 6H   | -1.\$            | -1.\$ | -1.\$       | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$       | -1.\$ | -1.\$ |
| 8H   | -1.\$            | -1.\$ | -1.\$       | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$       | -1.\$ | -1.\$ |
| 12H  | -1.\$            | -1.\$ | -1.\$       | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$       | -1.\$ | -1.\$ |
| X=8H Y=4H  | -1.\$            | -1.\$ | -1.\$       | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$       | -1.\$ | -1.\$ |
| 6H   | -1.\$            | -1.\$ | -1.\$       | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$       | -1.\$ | -1.\$ |
| 8H   | -1.\$            | -1.\$ | -1.\$       | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$       | -1.\$ | -1.\$ |
| 12H  | -1.\$            | -1.\$ | -1.\$       | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$       | -1.\$ | -1.\$ |
| X=12H Y=4H   | -1.\$            | -1.\$ | -1.\$       | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$       | -1.\$ | -1.\$ |
| 6H   | -1.\$            | -1.\$ | -1.\$       | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$       | -1.\$ | -1.\$ |
| 8H   | -1.\$            | -1.\$ | -1.\$       | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$       | -1.\$ | -1.\$ |
| Variations with the observer position at spacings: |                  |       |             |       |       |                |       |             |       |       |
| S=1.0H   |                  |       |             |       |       |                |       |             |       |       |
|  |                  |       | -1.\$/-1.\$ |       |       |                |       | -1.\$/-1.\$ |       |       |
| S=1.5H   |                  |       |             |       |       |                |       |             |       |       |
|  |                  |       | -1.\$/-1.\$ |       |       |                |       | -1.\$/-1.\$ |       |       |
| S=2.0H   |                  |       |             |       |       |                |       |             |       |       |
|  |                  |       | -1.\$/-1.\$ |       |       |                |       | -1.\$/-1.\$ |       |       |

Calculate in accordance with CIE Pub.117. The table is revised with 1270lm ( $8\log(F/F_0) = 0.8$ ).

C Plane (°):0.0-360.0: 22.5  
 Test Lab: Bacl  
 Test Type: TYPE C  
 Temperature: 24.6 'C  
 Operator: KOBE

Gamma Plane (°):0.0-180.0:5.0  
 Test Device: GPM-3000  
 Distance: 14.073 m  
 Humidity: 48  
 Inspector:

## Utilisation Factor Table(Floor cavity)

| Utilisation Factors UF(F)  |      |       | SHR NOM = 1.25 |      |      |      |      |      |      |      |      |  |
|--|------|-------|----------------|------|------|------|------|------|------|------|------|--|
| 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  | 0.51           | 0.61 | 0.68 | 0.73 | 0.80 | 0.85 | 0.88 | 0.93 | 0.96 |  |
|  | 0.30 |       | 0.44           | 0.54 | 0.61 | 0.66 | 0.74 | 0.80 | 0.84 | 0.89 | 0.92 |  |
|  | 0.20 |       | 0.38           | 0.48 | 0.55 | 0.61 | 0.69 | 0.75 | 0.79 | 0.85 | 0.89 |  |
| 0.50   | 0.50 | 0.20  | 0.48           | 0.56 | 0.63 | 0.67 | 0.74 | 0.78 | 0.81 | 0.85 | 0.87 |  |
|  | 0.30 |       | 0.41           | 0.50 | 0.57 | 0.62 | 0.69 | 0.74 | 0.77 | 0.82 | 0.85 |  |
|  | 0.20 |       | 0.36           | 0.46 | 0.52 | 0.57 | 0.65 | 0.70 | 0.74 | 0.79 | 0.82 |  |
| 0.30   | 0.50 | 0.20  | 0.44           | 0.52 | 0.58 | 0.62 | 0.68 | 0.71 | 0.74 | 0.78 | 0.80 |  |
|  | 0.30 |       | 0.39           | 0.47 | 0.53 | 0.58 | 0.64 | 0.68 | 0.71 | 0.75 | 0.78 |  |
|  | 0.20 |       | 0.35           | 0.43 | 0.49 | 0.54 | 0.60 | 0.65 | 0.68 | 0.73 | 0.76 |  |
| 0.00   | 0.00 | 0.00  | 0.31           | 0.38 | 0.44 | 0.48 | 0.53 | 0.57 | 0.60 | 0.64 | 0.66 |  |
| <p>Rating:19W 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 = 1.25 |      |      |      |      |      |      |      |      |
|--|------|-------|----------------|------|------|------|------|------|------|------|------|
| 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  | 0.95           | 0.79 | 0.67 | 0.59 | 0.47 | 0.39 | 0.33 | 0.26 | 0.21 |
|  | 0.30 |       | 0.80           | 0.68 | 0.59 | 0.52 | 0.42 | 0.36 | 0.31 | 0.24 | 0.20 |
|  | 0.20 |       | 0.68           | 0.59 | 0.52 | 0.47 | 0.39 | 0.33 | 0.29 | 0.23 | 0.19 |
| 0.50   | 0.50 | 0.20  | 0.87           | 0.72 | 0.61 | 0.53 | 0.43 | 0.38 | 0.30 | 0.23 | 0.19 |
|  | 0.30 |       | 0.74           | 0.62 | 0.54 | 0.48 | 0.39 | 0.33 | 0.28 | 0.22 | 0.18 |
|  | 0.20 |       | 0.64           | 0.55 | 0.49 | 0.43 | 0.36 | 0.30 | 0.26 | 0.21 | 0.17 |
| 0.30   | 0.50 | 0.20  | 0.80           | 0.65 | 0.56 | 0.48 | 0.38 | 0.32 | 0.27 | 0.21 | 0.17 |
|  | 0.30 |       | 0.68           | 0.58 | 0.50 | 0.44 | 0.35 | 0.30 | 0.26 | 0.20 | 0.17 |
|  | 0.20 |       | 0.60           | 0.51 | 0.45 | 0.40 | 0.33 | 0.28 | 0.24 | 0.19 | 0.16 |
| 0.00   | 0.00 | 0.00  | 0.47           | 0.39 | 0.34 | 0.30 | 0.24 | 0.20 | 0.17 | 0.14 | 0.11 |
| <p>Rating:19W 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 = 1.25 |      |      |      |      |      |      |      |      |
|--|------|-------|----------------|------|------|------|------|------|------|------|------|
| 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  | 0.38           | 0.39 | 0.40 | 0.41 | 0.41 | 0.42 | 0.42 | 0.43 | 0.43 |
|  | 0.30 |       | 0.31           | 0.33 | 0.34 | 0.35 | 0.37 | 0.38 | 0.39 | 0.40 | 0.40 |
|  | 0.20 |       | 0.27           | 0.28 | 0.30 | 0.31 | 0.33 | 0.34 | 0.35 | 0.37 | 0.38 |
| 0.50   | 0.50 | 0.20  | 0.37           | 0.38 | 0.38 | 0.39 | 0.40 | 0.40 | 0.40 | 0.41 | 0.41 |
|  | 0.30 |       | 0.31           | 0.32 | 0.33 | 0.34 | 0.36 | 0.37 | 0.37 | 0.38 | 0.39 |
|  | 0.20 |       | 0.27           | 0.28 | 0.29 | 0.30 | 0.32 | 0.33 | 0.34 | 0.36 | 0.37 |
| 0.30   | 0.50 | 0.20  | 0.36           | 0.36 | 0.37 | 0.38 | 0.38 | 0.39 | 0.39 | 0.39 | 0.39 |
|  | 0.30 |       | 0.30           | 0.32 | 0.33 | 0.33 | 0.35 | 0.35 | 0.36 | 0.37 | 0.38 |
|  | 0.20 |       | 0.26           | 0.28 | 0.29 | 0.30 | 0.31 | 0.33 | 0.34 | 0.35 | 0.36 |
| 0.00   | 0.00 | 0.00  | 0.23           | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| <p>Rating:19W 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> |      |       |                |      |      |      |      |      |      |      |      |

## Zonal Lumen

| Gamma<br>[°] | I <sub>mean</sub><br>[cd] | Zonal Flux<br>[lm] | Sum Zonal Flux<br>[lm] | Rel Zonal Flux<br>[%] | Sum Rel Zonal Flux<br>[%] |
|--------------|---------------------------|--------------------|------------------------|-----------------------|---------------------------|
| 0.0-5.0      | 338.4                     | 8.1                | 8.1                    | 0.64                  | 0.64                      |
| 5.0-10.0     | 335.5                     | 24.0               | 32.1                   | 1.89                  | 2.53                      |
| 10.0-15.0    | 329.8                     | 39.1               | 71.2                   | 3.08                  | 5.61                      |
| 15.0-20.0    | 321.1                     | 52.9               | 124.1                  | 4.17                  | 9.77                      |
| 20.0-25.0    | 309.7                     | 65.0               | 189.1                  | 5.12                  | 14.89                     |
| 25.0-30.0    | 295.8                     | 74.9               | 264.0                  | 5.90                  | 20.79                     |
| 30.0-35.0    | 279.4                     | 82.3               | 346.3                  | 6.48                  | 27.26                     |
| 35.0-40.0    | 260.7                     | 87.0               | 433.3                  | 6.85                  | 34.12                     |
| 40.0-45.0    | 240.0                     | 88.9               | 522.1                  | 7.00                  | 41.11                     |
| 45.0-50.0    | 217.2                     | 87.8               | 609.9                  | 6.91                  | 48.02                     |
| 50.0-55.0    | 192.7                     | 83.8               | 693.7                  | 6.60                  | 54.62                     |
| 55.0-60.0    | 166.5                     | 77.0               | 770.7                  | 6.06                  | 60.68                     |
| 60.0-65.0    | 138.9                     | 67.5               | 838.2                  | 5.32                  | 66.00                     |
| 65.0-70.0    | 109.9                     | 55.7               | 893.8                  | 4.38                  | 70.38                     |
| 70.0-75.0    | 80.4                      | 42.0               | 935.8                  | 3.31                  | 73.68                     |
| 75.0-80.0    | 51.7                      | 27.7               | 963.5                  | 2.18                  | 75.86                     |
| 80.0-85.0    | 26.7                      | 14.5               | 978.0                  | 1.14                  | 77.01                     |
| 85.0-90.0    | 10.7                      | 5.9                | 983.9                  | 0.46                  | 77.47                     |
| 90.0-95.0    | 8.1                       | 4.4                | 988.3                  | 0.35                  | 77.82                     |
| 95.0-100.0   | 13.1                      | 7.1                | 995.4                  | 0.56                  | 78.38                     |
| 100.0-105.0  | 18.7                      | 10.0               | 1005.4                 | 0.79                  | 79.16                     |
| 105.0-110.0  | 27.2                      | 14.2               | 1019.6                 | 1.12                  | 80.28                     |
| 110.0-115.0  | 38.4                      | 19.5               | 1039.1                 | 1.53                  | 81.82                     |
| 115.0-120.0  | 48.8                      | 23.7               | 1062.8                 | 1.87                  | 83.68                     |
| 120.0-125.0  | 56.4                      | 26.1               | 1088.9                 | 2.05                  | 85.74                     |
| 125.0-130.0  | 61.7                      | 26.9               | 1115.8                 | 2.11                  | 87.85                     |
| 130.0-135.0  | 66.2                      | 26.8               | 1142.5                 | 2.11                  | 89.96                     |
| 135.0-140.0  | 69.7                      | 25.8               | 1168.3                 | 2.03                  | 91.99                     |
| 140.0-145.0  | 72.0                      | 24.0               | 1192.4                 | 1.89                  | 93.88                     |
| 145.0-150.0  | 73.3                      | 21.6               | 1214.0                 | 1.70                  | 95.58                     |
| 150.0-155.0  | 73.8                      | 18.7               | 1232.6                 | 1.47                  | 97.05                     |
| 155.0-160.0  | 71.5                      | 15.0               | 1247.6                 | 1.18                  | 98.23                     |
| 160.0-165.0  | 65.8                      | 10.8               | 1258.5                 | 0.85                  | 99.09                     |
| 165.0-170.0  | 59.8                      | 7.1                | 1265.6                 | 0.56                  | 99.65                     |
| 170.0-175.0  | 54.2                      | 3.9                | 1269.4                 | 0.31                  | 99.95                     |
| 175.0-180.0  | 25.5                      | 0.6                | 1270.1                 | 0.05                  | 100.00                    |

C Plane (°):0.0-360.0: 22.5  
 Test Lab: Bacl  
 Test Type: TYPE C  
 Temperature: 24.6 'C  
 Operator: KOBE

Gamma Plane (°):0.0-180.0:5.0  
 Test Device: GPM-3000  
 Distance: 14.073 m  
 Humidity: 48  
 Inspector:

## Candlepower Table

Unit: cd

| G\C    | C0.0  | C22.5 | C45.0 | C67.5 | C90.0 | C112.5 | C135.0 | C157.5 | C180.0 | C202.5 |
|--------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|
| G0.0   | 339.1 | 339.1 | 339.1 | 339.1 | 339.1 | 339.1  | 339.1  | 339.1  | 339.1  | 339.1  |
| G5.0   | 338.3 | 338.1 | 338.5 | 338.5 | 338.0 | 337.7  | 337.2  | 337.7  | 336.5  | 337.2  |
| G10.0  | 334.4 | 334.8 | 334.3 | 334.5 | 334.1 | 333.4  | 333.0  | 332.9  | 331.8  | 331.7  |
| G15.0  | 327.6 | 328.0 | 327.5 | 327.7 | 327.1 | 326.5  | 325.1  | 325.0  | 323.9  | 323.9  |
| G20.0  | 317.9 | 318.5 | 318.1 | 318.5 | 317.3 | 316.3  | 314.9  | 314.6  | 312.8  | 313.2  |
| G25.0  | 306.2 | 306.1 | 305.8 | 306.0 | 305.4 | 304.0  | 302.2  | 302.2  | 298.9  | 300.2  |
| G30.0  | 290.9 | 291.9 | 290.9 | 291.2 | 289.9 | 289.1  | 287.0  | 285.6  | 283.3  | 283.5  |
| G35.0  | 274.1 | 274.7 | 274.2 | 274.2 | 273.1 | 271.2  | 269.2  | 267.8  | 265.1  | 265.9  |
| G40.0  | 254.7 | 254.8 | 254.6 | 254.5 | 253.5 | 251.4  | 249.0  | 248.0  | 244.5  | 245.4  |
| G45.0  | 233.2 | 233.6 | 233.0 | 233.4 | 231.9 | 229.8  | 227.8  | 225.9  | 222.3  | 223.4  |
| G50.0  | 209.1 | 209.6 | 209.7 | 209.7 | 209.0 | 206.0  | 203.5  | 201.8  | 197.8  | 198.8  |
| G55.0  | 184.4 | 185.0 | 184.9 | 184.6 | 183.3 | 180.6  | 178.0  | 176.0  | 172.0  | 173.5  |
| G60.0  | 157.0 | 158.2 | 157.7 | 157.9 | 156.0 | 153.8  | 150.9  | 148.8  | 144.6  | 146.2  |
| G65.0  | 129.0 | 129.9 | 130.3 | 129.9 | 127.8 | 125.8  | 122.3  | 120.5  | 116.2  | 117.6  |
| G70.0  | 100.1 | 100.5 | 100.0 | 99.7  | 98.4  | 96.1   | 92.1   | 90.7   | 87.0   | 87.4   |
| G75.0  | 70.0  | 70.7  | 70.5  | 70.6  | 69.3  | 66.6   | 63.2   | 60.9   | 57.5   | 58.3   |
| G80.0  | 41.8  | 42.2  | 42.0  | 42.4  | 40.7  | 38.8   | 35.9   | 34.1   | 30.4   | 31.2   |
| G85.0  | 17.5  | 18.1  | 18.4  | 18.4  | 17.8  | 16.7   | 14.3   | 12.3   | 10.1   | 10.9   |
| G90.0  | 4.0   | 4.4   | 5.5   | 6.5   | 7.2   | 6.5    | 4.8    | 4.3    | 4.0    | 5.6    |
| G95.0  | 5.8   | 6.5   | 7.7   | 9.5   | 12.3  | 11.0   | 10.3   | 10.4   | 7.7    | 12.8   |
| G100.0 | 10.4  | 12.7  | 13.1  | 15.9  | 18.1  | 17.0   | 15.0   | 15.5   | 14.2   | 16.7   |
| G105.0 | 16.3  | 18.0  | 17.8  | 21.3  | 24.9  | 22.8   | 20.3   | 21.8   | 21.2   | 23.3   |
| G110.0 | 26.6  | 25.4  | 29.0  | 31.2  | 38.7  | 33.9   | 33.3   | 29.5   | 34.0   | 31.6   |
| G115.0 | 39.0  | 33.1  | 41.8  | 42.7  | 52.3  | 45.8   | 46.6   | 39.5   | 47.3   | 41.4   |
| G120.0 | 51.0  | 43.6  | 45.7  | 56.6  | 56.8  | 60.9   | 51.2   | 49.8   | 59.0   | 52.5   |
| G125.0 | 60.6  | 50.5  | 47.7  | 63.8  | 63.1  | 68.1   | 53.3   | 56.2   | 67.8   | 58.1   |
| G130.0 | 65.9  | 55.0  | 53.1  | 67.7  | 68.9  | 72.9   | 58.5   | 61.6   | 72.0   | 63.1   |
| G135.0 | 69.7  | 59.3  | 63.6  | 69.0  | 70.2  | 73.8   | 68.7   | 65.9   | 73.4   | 66.6   |
| G140.0 | 71.0  | 64.3  | 71.9  | 67.6  | 68.1  | 73.3   | 76.8   | 70.0   | 74.9   | 71.1   |
| G145.0 | 72.2  | 70.2  | 73.7  | 65.9  | 65.6  | 73.7   | 79.4   | 75.7   | 77.4   | 77.3   |
| G150.0 | 74.5  | 73.2  | 73.1  | 65.6  | 65.4  | 74.8   | 78.5   | 78.5   | 79.9   | 79.7   |
| G155.0 | 75.9  | 72.6  | 71.0  | 66.9  | 69.9  | 74.1   | 76.2   | 78.8   | 80.6   | 79.9   |
| G160.0 | 70.3  | 67.9  | 67.0  | 66.5  | 68.8  | 68.6   | 70.8   | 72.9   | 72.0   | 73.2   |
| G165.0 | 62.2  | 62.4  | 61.0  | 62.4  | 59.9  | 63.2   | 62.1   | 62.4   | 62.5   | 61.6   |
| G170.0 | 59.0  | 56.0  | 57.4  | 55.6  | 57.2  | 58.4   | 55.6   | 55.4   | 57.7   | 55.3   |
| G175.0 | 49.4  | 53.7  | 48.1  | 48.3  | 53.6  | 52.7   | 51.1   | 51.2   | 49.8   | 49.1   |
| G180.0 | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

C Plane (°):0.0-360.0: 22.5  
 Test Lab: Bacl  
 Test Type: TYPE C  
 Temperature: 24.6 'C  
 Operator: KOBE

Gamma Plane (°):0.0-180.0:5.0  
 Test Device: GPM-3000  
 Distance: 14.073 m  
 Humidity: 48  
 Inspector:

## Candlepower Table (Continue 1)

Unit: cd

| G\C    | C225.0 | C247.5 | C270.0 | C292.5 | C315.0 | C337.5 | C360.0 |  |  |  |
|--------|--------|--------|--------|--------|--------|--------|--------|--|--|--|
| G0.0   | 339.1  | 339.1  | 339.1  | 339.1  | 339.1  | 339.1  | 339.1  |  |  |  |
| G5.0   | 337.2  | 338.0  | 337.3  | 337.7  | 337.3  | 338.3  | 338.3  |  |  |  |
| G10.0  | 331.9  | 333.0  | 333.2  | 333.7  | 333.2  | 333.6  | 334.4  |  |  |  |
| G15.0  | 324.5  | 325.8  | 326.3  | 326.2  | 326.6  | 326.8  | 327.6  |  |  |  |
| G20.0  | 313.6  | 315.7  | 315.6  | 316.1  | 316.1  | 317.0  | 317.9  |  |  |  |
| G25.0  | 300.8  | 302.1  | 302.9  | 303.9  | 304.2  | 304.3  | 306.2  |  |  |  |
| G30.0  | 285.4  | 287.3  | 288.0  | 289.0  | 288.6  | 289.7  | 290.9  |  |  |  |
| G35.0  | 266.9  | 269.2  | 270.0  | 271.3  | 271.3  | 271.8  | 274.1  |  |  |  |
| G40.0  | 247.3  | 249.8  | 250.4  | 252.0  | 251.6  | 252.1  | 254.7  |  |  |  |
| G45.0  | 224.5  | 227.4  | 229.0  | 229.7  | 229.9  | 230.1  | 233.2  |  |  |  |
| G50.0  | 200.7  | 204.0  | 205.4  | 205.9  | 206.3  | 207.5  | 209.1  |  |  |  |
| G55.0  | 175.2  | 178.4  | 180.2  | 181.4  | 181.4  | 181.5  | 184.4  |  |  |  |
| G60.0  | 148.3  | 151.0  | 153.1  | 154.6  | 154.8  | 154.7  | 157.0  |  |  |  |
| G65.0  | 119.3  | 123.0  | 124.9  | 126.7  | 126.6  | 126.2  | 129.0  |  |  |  |
| G70.0  | 89.7   | 93.0   | 95.3   | 96.8   | 96.7   | 97.2   | 100.1  |  |  |  |
| G75.0  | 60.2   | 63.8   | 66.3   | 67.4   | 67.2   | 68.2   | 70.0   |  |  |  |
| G80.0  | 33.0   | 36.1   | 38.1   | 39.2   | 39.5   | 39.1   | 41.8   |  |  |  |
| G85.0  | 12.7   | 15.3   | 16.6   | 17.3   | 17.2   | 16.0   | 17.5   |  |  |  |
| G90.0  | 7.4    | 7.9    | 8.2    | 7.4    | 5.6    | 3.6    | 4.0    |  |  |  |
| G95.0  | 13.4   | 14.1   | 15.4   | 11.7   | 9.8    | 8.3    | 5.8    |  |  |  |
| G100.0 | 17.2   | 19.8   | 20.4   | 17.5   | 15.0   | 13.4   | 10.4   |  |  |  |
| G105.0 | 23.1   | 25.6   | 28.1   | 23.2   | 19.3   | 19.2   | 16.3   |  |  |  |
| G110.0 | 37.3   | 37.2   | 42.1   | 34.0   | 32.4   | 27.0   | 26.6   |  |  |  |
| G115.0 | 49.3   | 49.6   | 54.4   | 44.7   | 44.3   | 35.2   | 39.0   |  |  |  |
| G120.0 | 52.6   | 64.1   | 58.3   | 58.8   | 48.9   | 46.1   | 51.0   |  |  |  |
| G125.0 | 55.7   | 70.8   | 63.9   | 66.0   | 51.1   | 52.4   | 60.6   |  |  |  |
| G130.0 | 60.9   | 73.9   | 69.8   | 70.7   | 56.0   | 57.0   | 65.9   |  |  |  |
| G135.0 | 71.8   | 73.7   | 70.3   | 70.6   | 65.6   | 60.8   | 69.7   |  |  |  |
| G140.0 | 79.2   | 72.7   | 68.5   | 70.0   | 72.3   | 65.3   | 71.0   |  |  |  |
| G145.0 | 81.2   | 71.9   | 66.1   | 70.0   | 75.0   | 70.9   | 72.2   |  |  |  |
| G150.0 | 79.7   | 73.2   | 66.0   | 70.1   | 74.0   | 73.5   | 74.5   |  |  |  |
| G155.0 | 76.4   | 72.8   | 69.4   | 70.5   | 72.2   | 73.1   | 75.9   |  |  |  |
| G160.0 | 69.8   | 69.2   | 68.8   | 66.9   | 67.4   | 68.7   | 70.3   |  |  |  |
| G165.0 | 63.9   | 63.9   | 61.4   | 61.5   | 62.2   | 63.8   | 62.2   |  |  |  |
| G170.0 | 58.5   | 60.7   | 57.0   | 59.1   | 55.9   | 59.3   | 59.0   |  |  |  |
| G175.0 | 49.8   | 53.4   | 52.8   | 49.4   | 50.9   | 51.9   | 49.4   |  |  |  |
| G180.0 | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |  |  |

C Plane (°):0.0-360.0: 22.5  
 Test Lab: Bacl  
 Test Type: TYPE C  
 Temperature: 24.6 'C  
 Operator: KOBE

Gamma Plane (°):0.0-180.0:5.0  
 Test Device: GPM-3000  
 Distance: 14.073 m  
 Humidity: 48  
 Inspector: