

Report No.:

Test Time: 2022/11/25 14:07

## Luminaire Property

Luminaire Manufacturer: Acolyte

Luminaire Category: Neon Apex

Luminaire Description: Neon Apex RGBW-White only

Lamp Catalog: NLA4.5RGB30-White only

Luminous Length (mm): 1000

Luminous Height (mm): 17

Current: 0.229 A

Power Factor: 1.000

Number of Lamps: 1

Luminous Width (mm): 16

Voltage: 24.0 V

Power: 5.49 W

## Photometric Results

CIE Class: Direct

Measurement Flux: 230.6 lm

Downward Ratio: 98%

Horizontal Diffuse Angle(10%,50%): H165.2,H112

Vertical Diffuse Angle(10%,50%): V166.1,V112

Luminaire Efficacy Rating (LER): 42

Max. Intensity: 78.02 cd

Total Rated Lamp Lumens: 230.6 lm

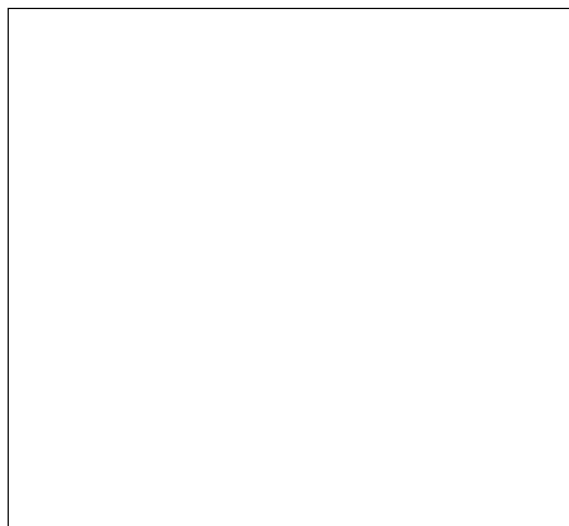
Efficiency: 100%

Upward Ratio: 2%

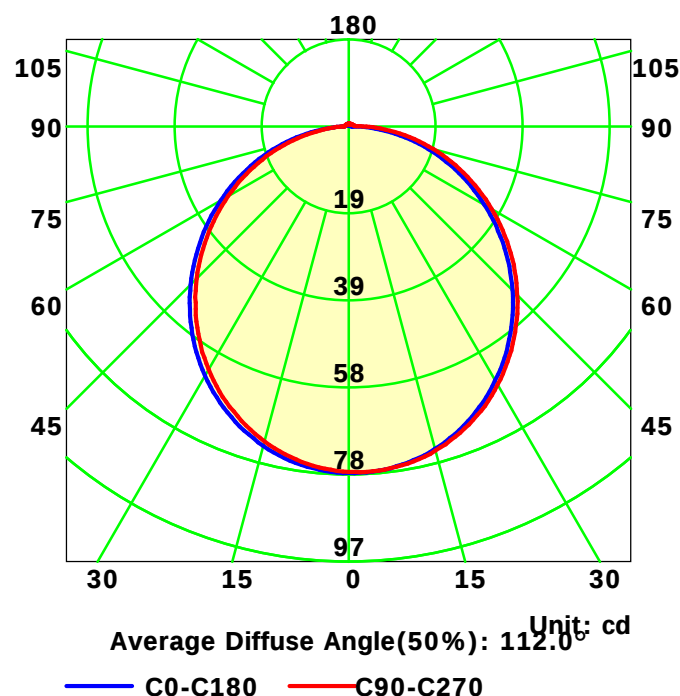
Central Intensity: 77.95 cd

Pos of Max. Intensity: H180 V1

Picture Of Luminaire



Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-1800B

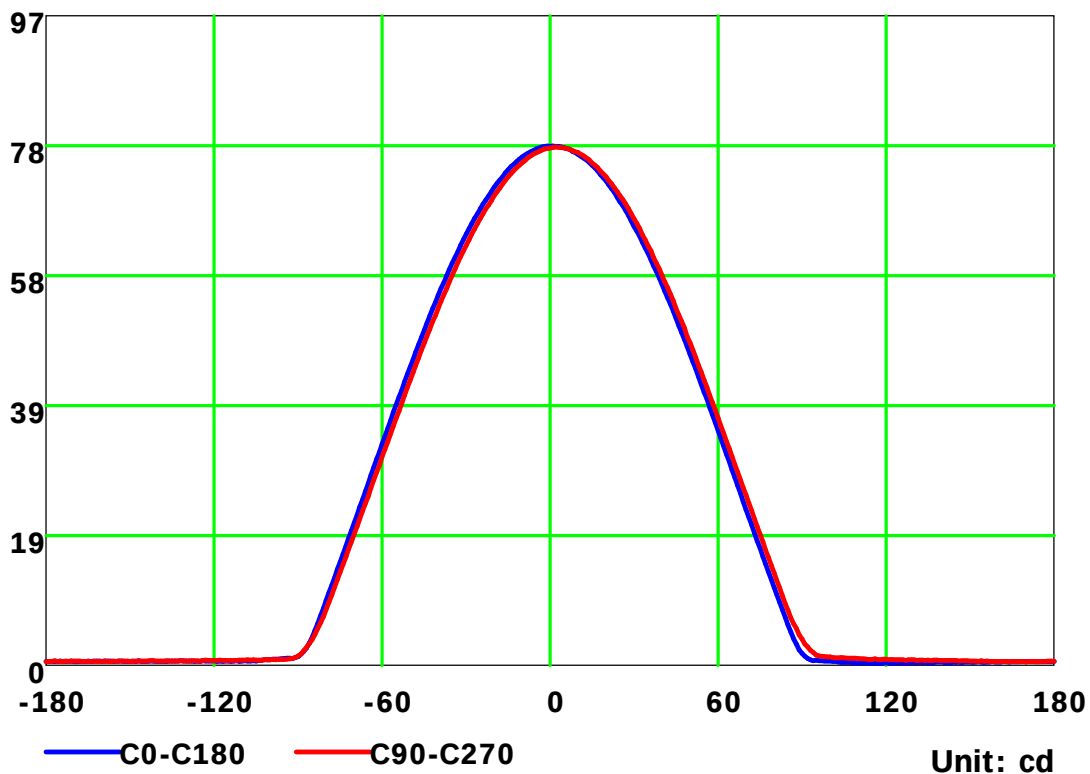
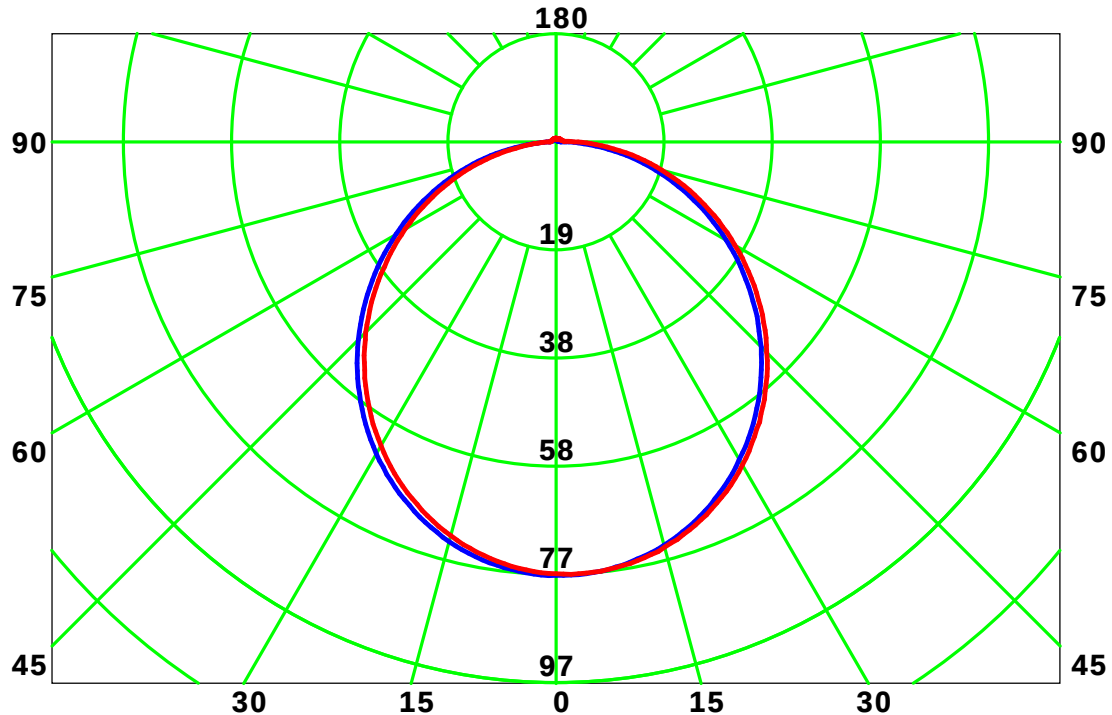
Distance: 9.028 m

Humidity: 60%

Inspector:



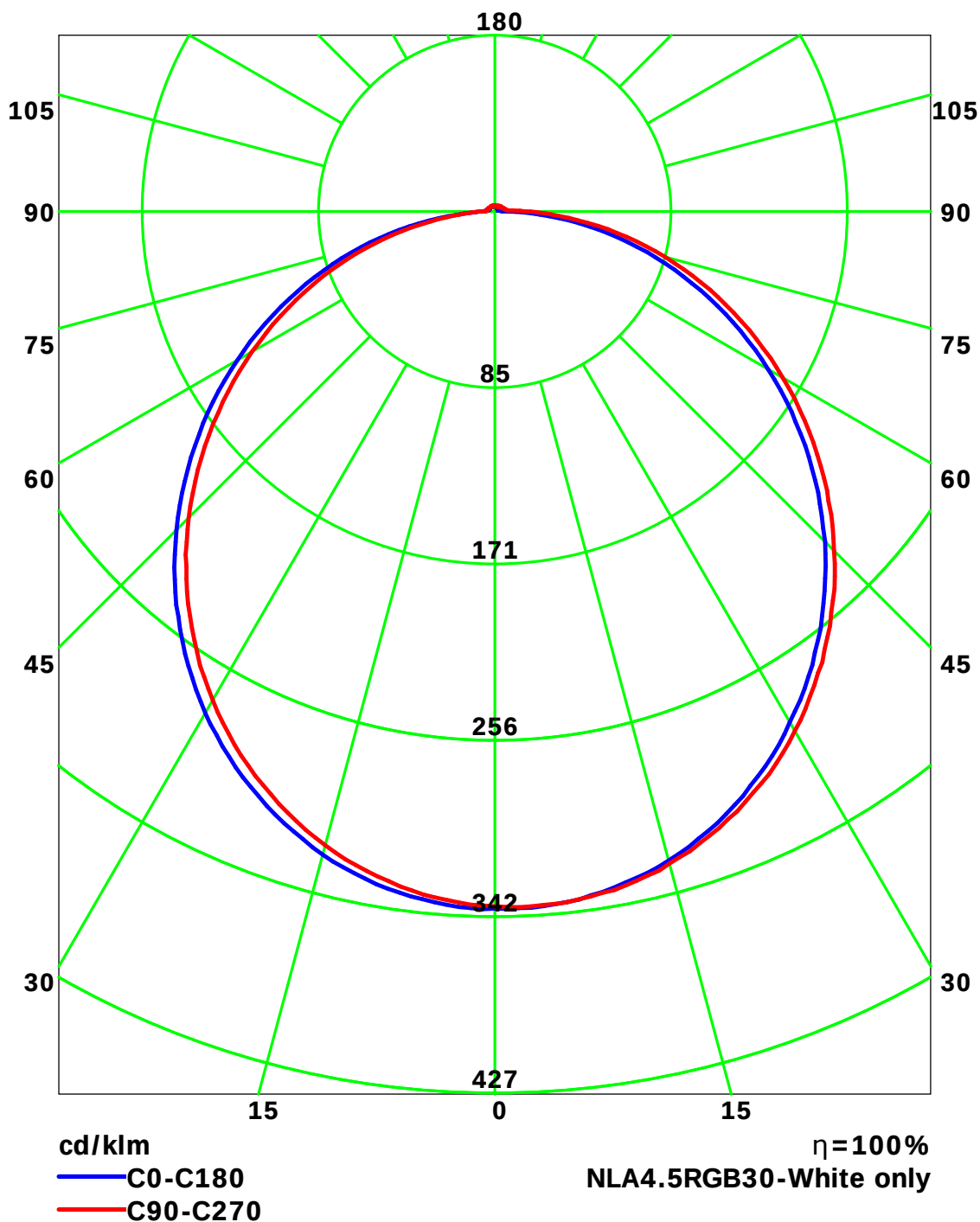
## Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 30.0  
Test Lab:  
Test Type: TYPE C  
Temperature: 25  
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 9.028 m  
Humidity: 60%  
Inspector:

## Luminous Intensity Distribution Curve(cd / klm)



C Plane (°):0.0-360.0: 30.0  
Test Lab:  
Test Type: TYPE C  
Temperature: 25  
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 9.028 m  
Humidity: 60%  
Inspector:

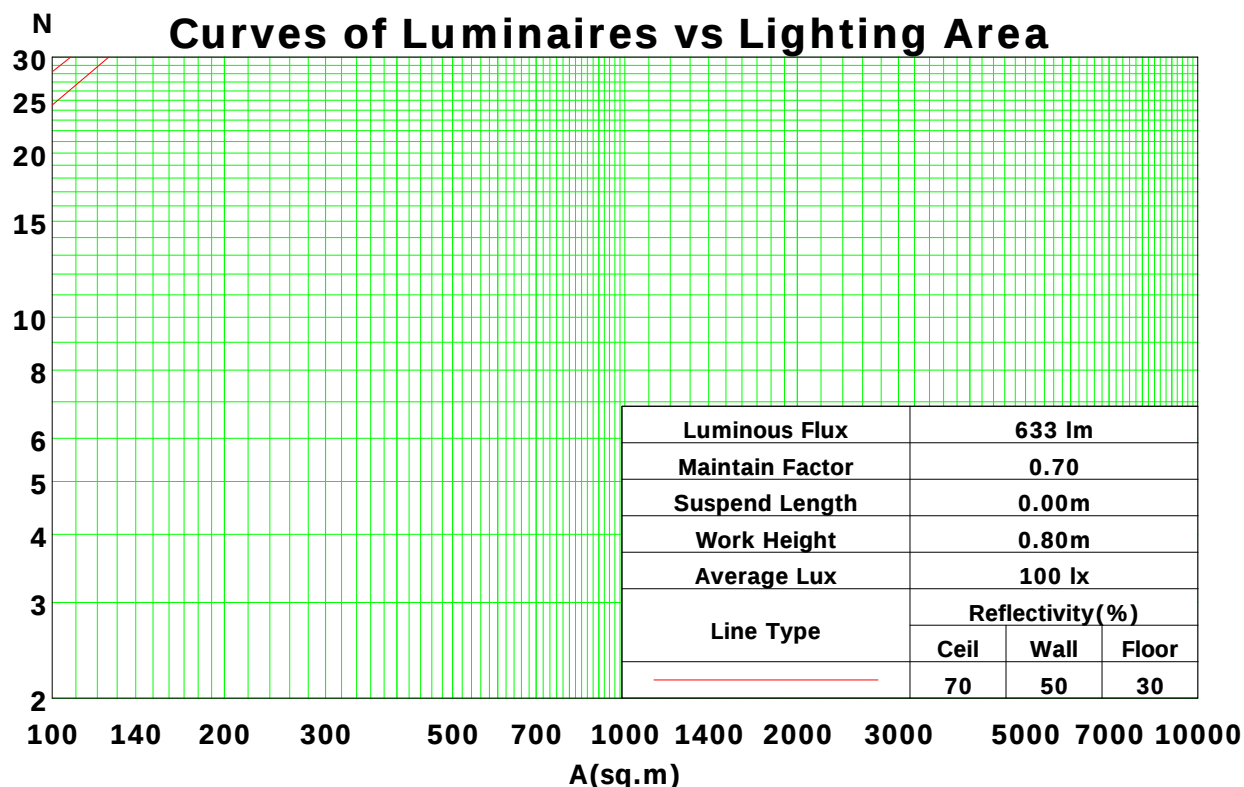
## Coefficients Of Utilization - Zonal Cavity Method

|     |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
|-----|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| 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   | 119      | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 110 | 110 | 110 | 105 | 105 | 105 | 100 | 100 | 100 | 98 |
| 1   | 108      | 103 | 98  | 94  | 105 | 100 | 96  | 92  | 96  | 92  | 89  | 91  | 88  | 86  | 87  | 85  | 83  | 81 |
| 2   | 98       | 89  | 82  | 76  | 95  | 87  | 81  | 75  | 83  | 78  | 73  | 80  | 75  | 71  | 76  | 72  | 69  | 67 |
| 3   | 89       | 78  | 70  | 63  | 86  | 76  | 69  | 62  | 73  | 66  | 61  | 70  | 64  | 60  | 67  | 62  | 58  | 56 |
| 4   | 81       | 69  | 60  | 53  | 79  | 68  | 59  | 53  | 65  | 58  | 52  | 62  | 56  | 51  | 60  | 54  | 50  | 48 |
| 5   | 75       | 62  | 53  | 46  | 72  | 60  | 52  | 45  | 58  | 51  | 45  | 56  | 49  | 44  | 54  | 48  | 43  | 41 |
| 6   | 69       | 56  | 46  | 40  | 67  | 54  | 46  | 40  | 52  | 45  | 39  | 51  | 44  | 39  | 49  | 43  | 38  | 36 |
| 7   | 64       | 50  | 41  | 35  | 62  | 49  | 41  | 35  | 48  | 40  | 35  | 46  | 39  | 34  | 44  | 38  | 34  | 32 |
| 8   | 60       | 46  | 37  | 31  | 58  | 45  | 37  | 31  | 44  | 36  | 31  | 42  | 35  | 31  | 41  | 35  | 30  | 28 |
| 9   | 56       | 42  | 34  | 28  | 54  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 32  | 28  | 38  | 32  | 27  | 25 |
| 10  | 52       | 39  | 31  | 26  | 51  | 38  | 31  | 25  | 37  | 30  | 25  | 36  | 30  | 25  | 35  | 29  | 25  | 23 |

Spacing Criteria (0-180): 1.25

Spacing Criteria (90-270): 1.25

Spacing Criteria (Diagonal): 1.36



C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0

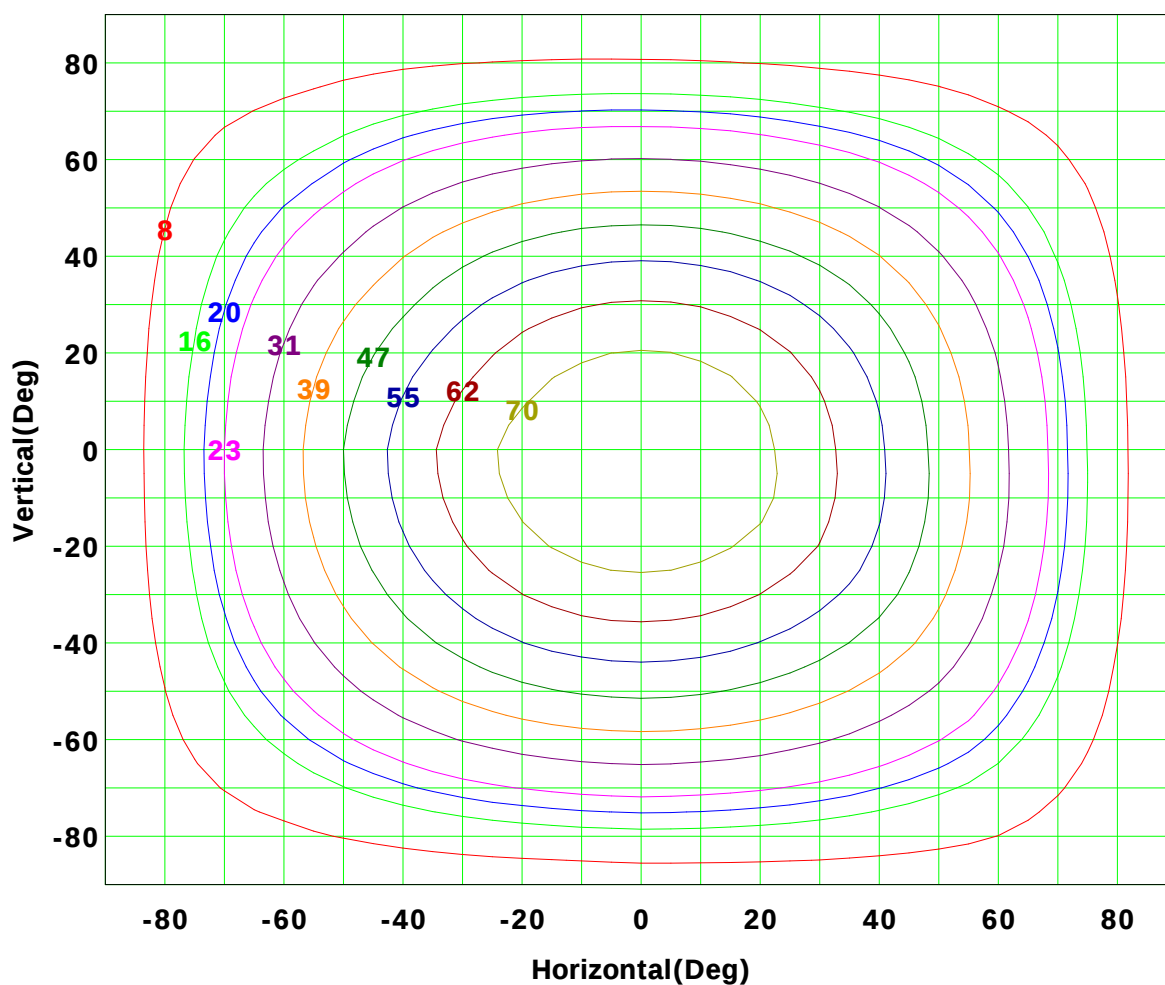
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

## Isocandela (rectangle)



I<sub>max</sub> (100%): 78 cd

|         |       |         |       |
|---------|-------|---------|-------|
| ( 10%): | 8 cd  | ( 20%): | 16 cd |
| ( 25%): | 20 cd | ( 30%): | 23 cd |
| ( 40%): | 31 cd | ( 50%): | 39 cd |
| ( 60%): | 47 cd | ( 70%): | 55 cd |
| ( 80%): | 62 cd | ( 90%): | 70 cd |

C Plane (°):0.0-360.0: 30.0  
Test Lab:  
Test Type: TYPE C  
Temperature: 25  
Operator: Jacky

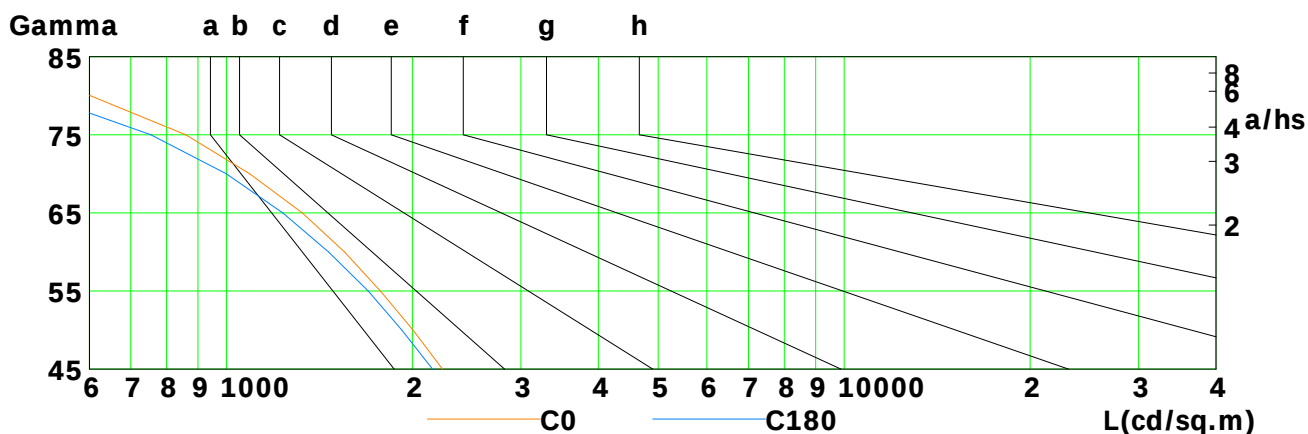
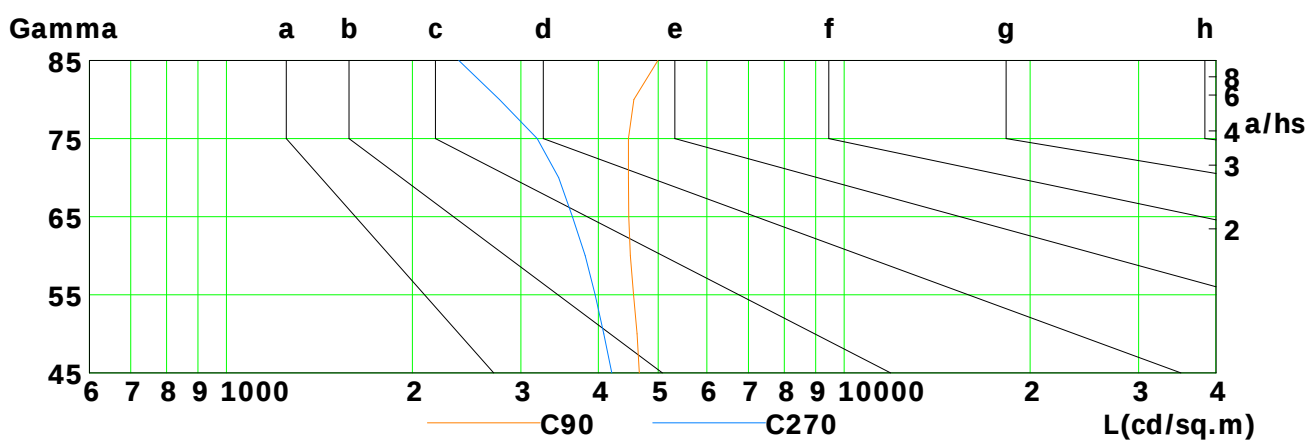
Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 9.028 m  
Humidity: 60%  
Inspector:

**Gamma Plane (°):0.0-180.0:1.0**  
**Test Device: GPM-1800B**  
**Distance: 9.028 m**  
**Humidity: 60%**  
**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

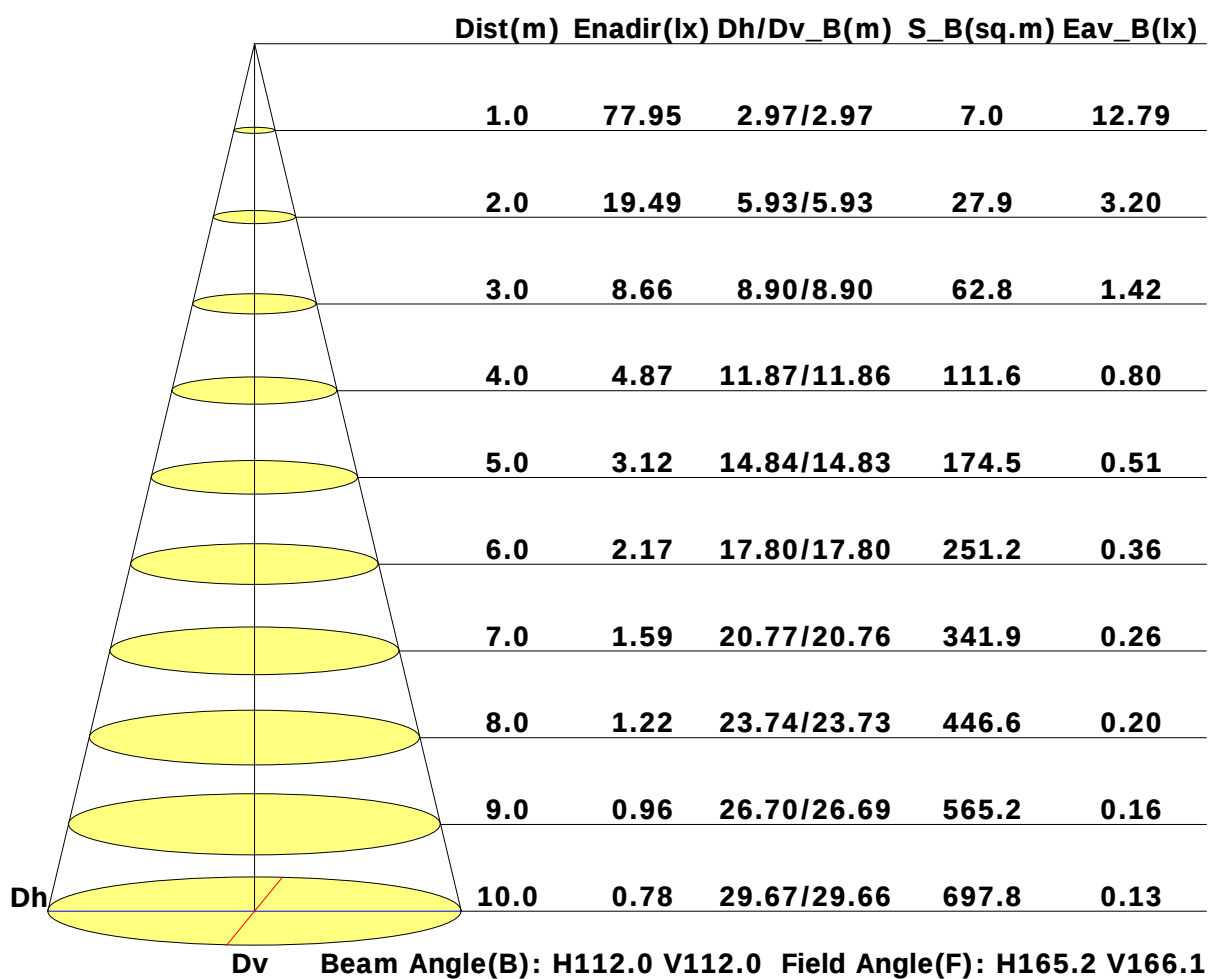


| L(cd/sq.m) | G45  | G50  | G55  | G60  | G65  | G70  | G75  | G80  | G85  |
|------------|------|------|------|------|------|------|------|------|------|
| C0         | 2238 | 2006 | 1776 | 1554 | 1327 | 1092 | 859  | 602  | 334  |
| C90        | 4661 | 4622 | 4563 | 4510 | 4485 | 4475 | 4478 | 4570 | 4996 |
| C180       | 2158 | 1923 | 1697 | 1464 | 1234 | 1001 | 755  | 500  | 235  |
| C270       | 4210 | 4085 | 3954 | 3812 | 3631 | 3453 | 3186 | 2767 | 2378 |

C Plane (°):0.0-360.0: 30.0  
Test Lab:  
Test Type: TYPE C  
Temperature: 25  
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 9.028 m  
Humidity: 60%  
Inspector:

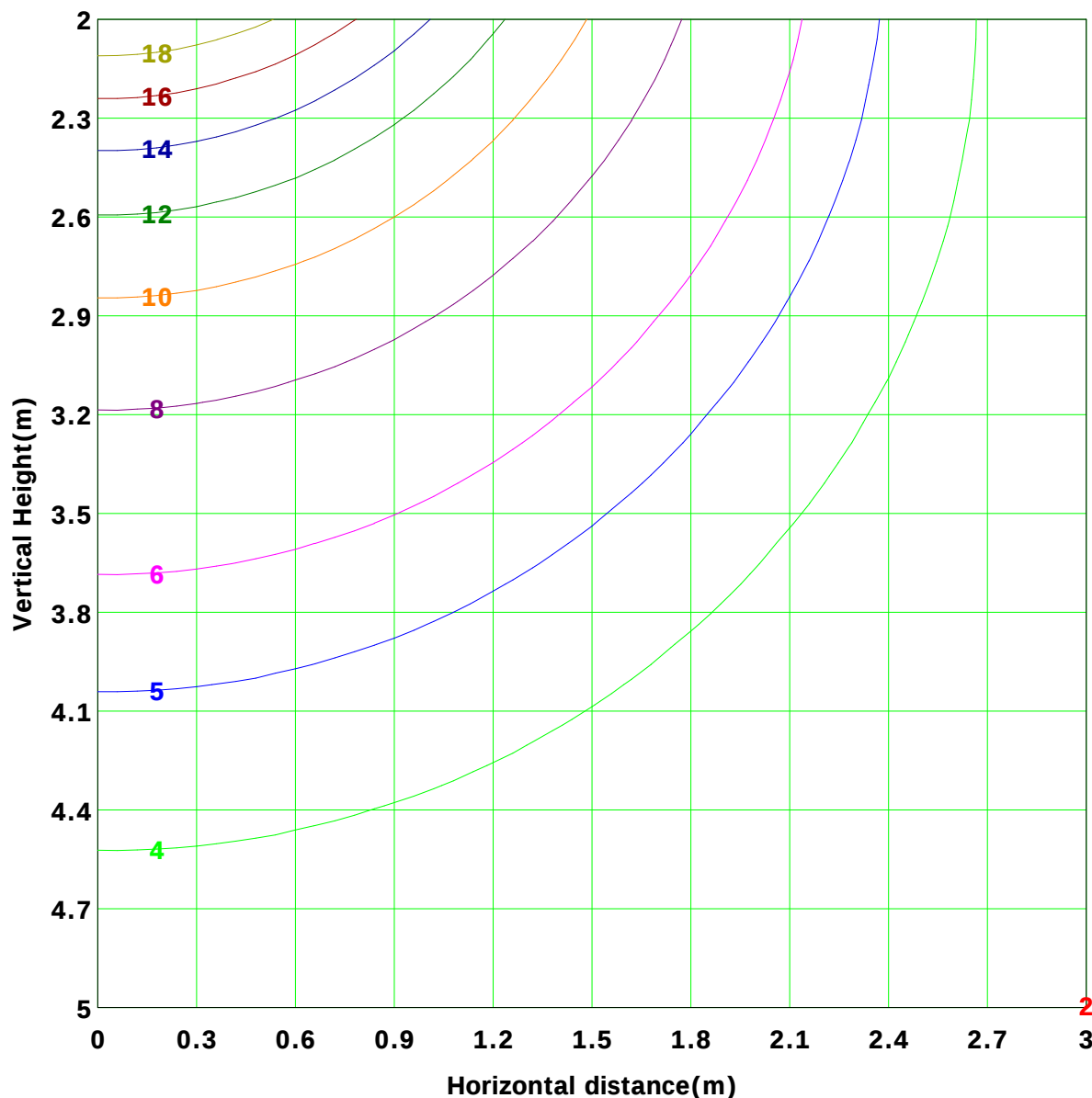
## Illuminance at a Distance



C Plane (°):0.0-360.0: 30.0  
Test Lab:  
Test Type: TYPE C  
Temperature: 25  
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 9.028 m  
Humidity: 60%  
Inspector:

## Vertical IsoLux Plot



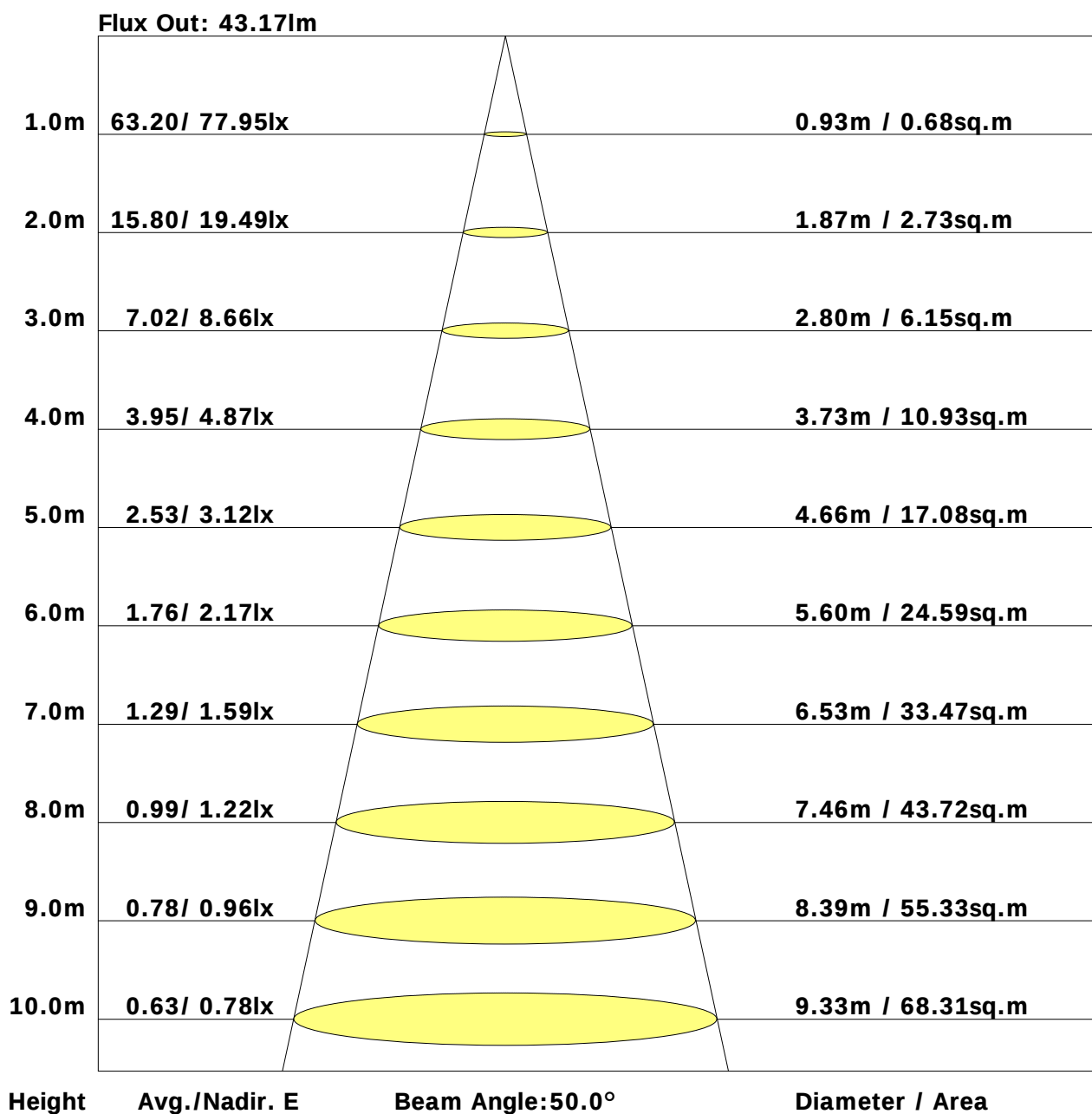
|                  |                  |                  |
|------------------|------------------|------------------|
| Lowest(m): 2.0m  | Highest(m): 5.0m | Max Lux: 19.5 lx |
| ( 10 %): 1.9 lx  | ( 20 %): 3.9 lx  |                  |
| ( 25 %): 4.9 lx  | ( 30 %): 5.8 lx  |                  |
| ( 40 %): 7.8 lx  | ( 50 %): 9.7 lx  |                  |
| ( 60 %): 11.7 lx | ( 70 %): 13.6 lx |                  |
| ( 80 %): 15.6 lx | ( 90 %): 17.5 lx |                  |

C Plane (°):0.0-360.0: 30.0  
Test Lab:  
Test Type: TYPE C  
Temperature: 25  
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 9.028 m  
Humidity: 60%  
Inspector:

**Gamma Plane (°):0.0-180.0:1.0**  
**Test Device: GPM-1800B**  
**Distance: 9.028 m**  
**Humidity: 60%**  
**Inspector:**

## The Average Illuminance Effective Figure



C Plane (°): 0.0-360.0: 30.0  
Test Lab:  
Test Type: TYPE C  
Temperature: 25  
Operator: Jacky

Gamma Plane (°): 0.0-180.0: 1.0  
Test Device: GPM-1800B  
Distance: 9.028 m  
Humidity: 60%  
Inspector:

## UGR Table

|                         |                         |             |             |             |             |                       |             |             |             |             |
|-------------------------|-------------------------|-------------|-------------|-------------|-------------|-----------------------|-------------|-------------|-------------|-------------|
| <b>Reflectance:</b>     |                         |             |             |             |             |                       |             |             |             |             |
| <b>Ceiling (cavity)</b> | <b>0.7</b>              | <b>0.7</b>  | <b>0.5</b>  | <b>0.5</b>  | <b>0.3</b>  | <b>0.7</b>            | <b>0.7</b>  | <b>0.5</b>  | <b>0.5</b>  | <b>0.3</b>  |
| <b>Wall</b>             | <b>0.5</b>              | <b>0.3</b>  | <b>0.5</b>  | <b>0.3</b>  | <b>0.3</b>  | <b>0.5</b>            | <b>0.3</b>  | <b>0.5</b>  | <b>0.3</b>  | <b>0.3</b>  |
| <b>Reference plane</b>  | <b>0.2</b>              | <b>0.2</b>  | <b>0.2</b>  | <b>0.2</b>  | <b>0.2</b>  | <b>0.2</b>            | <b>0.2</b>  | <b>0.2</b>  | <b>0.2</b>  | <b>0.2</b>  |
| <b>Room dimensions</b>  | <b>Viewed crosswise</b> |             |             |             |             | <b>Viewed endwise</b> |             |             |             |             |
| <b>X=2H Y=2H</b>        | <b>20.7</b>             | <b>22.3</b> | <b>21.1</b> | <b>22.6</b> | <b>23.0</b> | <b>19.3</b>           | <b>20.9</b> | <b>19.7</b> | <b>21.3</b> | <b>21.7</b> |
| <b>3H</b>               | <b>22.7</b>             | <b>24.1</b> | <b>23.1</b> | <b>24.5</b> | <b>24.9</b> | <b>20.9</b>           | <b>22.4</b> | <b>21.3</b> | <b>22.7</b> | <b>23.2</b> |
| <b>4H</b>               | <b>23.5</b>             | <b>24.8</b> | <b>23.9</b> | <b>25.2</b> | <b>25.7</b> | <b>21.5</b>           | <b>22.9</b> | <b>21.9</b> | <b>23.3</b> | <b>23.7</b> |
| <b>6H</b>               | <b>24.1</b>             | <b>25.4</b> | <b>24.6</b> | <b>25.8</b> | <b>26.3</b> | <b>21.9</b>           | <b>23.2</b> | <b>22.4</b> | <b>23.6</b> | <b>24.0</b> |
| <b>8H</b>               | <b>24.4</b>             | <b>25.6</b> | <b>24.8</b> | <b>26.0</b> | <b>26.5</b> | <b>22.0</b>           | <b>23.3</b> | <b>22.5</b> | <b>23.7</b> | <b>24.1</b> |
| <b>12H</b>              | <b>24.6</b>             | <b>25.8</b> | <b>25.1</b> | <b>26.2</b> | <b>26.7</b> | <b>22.1</b>           | <b>23.3</b> | <b>22.6</b> | <b>23.7</b> | <b>24.2</b> |
| <b>X=4H Y=2H</b>        | <b>21.0</b>             | <b>22.4</b> | <b>21.4</b> | <b>22.8</b> | <b>23.2</b> | <b>20.0</b>           | <b>21.4</b> | <b>20.4</b> | <b>21.8</b> | <b>22.2</b> |
| <b>3H</b>               | <b>23.1</b>             | <b>24.3</b> | <b>23.6</b> | <b>24.7</b> | <b>25.2</b> | <b>21.8</b>           | <b>23.0</b> | <b>22.2</b> | <b>23.4</b> | <b>23.8</b> |
| <b>4H</b>               | <b>24.0</b>             | <b>25.1</b> | <b>24.5</b> | <b>25.5</b> | <b>26.0</b> | <b>22.5</b>           | <b>23.5</b> | <b>22.9</b> | <b>24.0</b> | <b>24.5</b> |
| <b>6H</b>               | <b>24.8</b>             | <b>25.7</b> | <b>25.3</b> | <b>26.2</b> | <b>26.7</b> | <b>23.0</b>           | <b>23.9</b> | <b>23.5</b> | <b>24.4</b> | <b>24.9</b> |
| <b>8H</b>               | <b>25.1</b>             | <b>26.0</b> | <b>25.6</b> | <b>26.4</b> | <b>27.0</b> | <b>23.2</b>           | <b>24.1</b> | <b>23.7</b> | <b>24.5</b> | <b>25.0</b> |
| <b>12H</b>              | <b>25.3</b>             | <b>26.1</b> | <b>25.9</b> | <b>26.6</b> | <b>27.1</b> | <b>23.3</b>           | <b>24.1</b> | <b>23.8</b> | <b>24.6</b> | <b>25.1</b> |
| <b>X=8H Y=4H</b>        | <b>24.2</b>             | <b>25.0</b> | <b>24.6</b> | <b>25.5</b> | <b>26.0</b> | <b>22.8</b>           | <b>23.7</b> | <b>23.3</b> | <b>24.2</b> | <b>24.7</b> |
| <b>6H</b>               | <b>25.0</b>             | <b>25.7</b> | <b>25.5</b> | <b>26.2</b> | <b>26.7</b> | <b>23.4</b>           | <b>24.2</b> | <b>24.0</b> | <b>24.7</b> | <b>25.2</b> |
| <b>8H</b>               | <b>25.3</b>             | <b>26.0</b> | <b>25.9</b> | <b>26.5</b> | <b>27.0</b> | <b>23.7</b>           | <b>24.4</b> | <b>24.2</b> | <b>24.9</b> | <b>25.4</b> |
| <b>12H</b>              | <b>25.6</b>             | <b>26.2</b> | <b>26.2</b> | <b>26.7</b> | <b>27.3</b> | <b>23.9</b>           | <b>24.5</b> | <b>24.4</b> | <b>25.0</b> | <b>25.6</b> |
| <b>X=12H Y=4H</b>       | <b>24.2</b>             | <b>24.9</b> | <b>24.7</b> | <b>25.4</b> | <b>26.0</b> | <b>22.9</b>           | <b>23.6</b> | <b>23.4</b> | <b>24.2</b> | <b>24.7</b> |
| <b>6H</b>               | <b>25.0</b>             | <b>25.6</b> | <b>25.5</b> | <b>26.1</b> | <b>26.7</b> | <b>23.5</b>           | <b>24.2</b> | <b>24.1</b> | <b>24.7</b> | <b>25.3</b> |
| <b>8H</b>               | <b>25.4</b>             | <b>25.9</b> | <b>25.9</b> | <b>26.5</b> | <b>27.1</b> | <b>23.8</b>           | <b>24.4</b> | <b>24.4</b> | <b>24.9</b> | <b>25.5</b> |

Calculate in accordance with CIE 190:2010

 C Plane (°):0.0-360.0: 30.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature: 25  
 Operator: Jacky

 Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 9.028 m  
 Humidity: 60%  
 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  | 0.55           | 0.65 | 0.73 | 0.78 | 0.85 | 0.90 | 0.94 | 0.99 | 1.02 |
|                                                                                                                                                                                  | 0.30 |       | 0.47           | 0.58 | 0.65 | 0.71 | 0.79 | 0.85 | 0.89 | 0.94 | 0.98 |
|                                                                                                                                                                                  | 0.20 |       | 0.41           | 0.52 | 0.59 | 0.65 | 0.74 | 0.80 | 0.84 | 0.91 | 0.95 |
| 0.50                                                                                                                                                                             | 0.50 | 0.20  | 0.53           | 0.63 | 0.70 | 0.75 | 0.82 | 0.87 | 0.90 | 0.94 | 0.97 |
|                                                                                                                                                                                  | 0.30 |       | 0.46           | 0.56 | 0.63 | 0.69 | 0.76 | 0.82 | 0.86 | 0.91 | 0.94 |
|                                                                                                                                                                                  | 0.20 |       | 0.41           | 0.51 | 0.58 | 0.64 | 0.72 | 0.78 | 0.82 | 0.88 | 0.91 |
| 0.30                                                                                                                                                                             | 0.50 | 0.20  | 0.52           | 0.61 | 0.67 | 0.72 | 0.79 | 0.83 | 0.86 | 0.90 | 0.93 |
|                                                                                                                                                                                  | 0.30 |       | 0.45           | 0.55 | 0.62 | 0.67 | 0.74 | 0.79 | 0.83 | 0.87 | 0.90 |
|                                                                                                                                                                                  | 0.20 |       | 0.41           | 0.50 | 0.57 | 0.63 | 0.70 | 0.75 | 0.79 | 0.85 | 0.88 |
| 0.00                                                                                                                                                                             | 0.00 | 0.00  | 0.38           | 0.47 | 0.54 | 0.59 | 0.66 | 0.71 | 0.75 | 0.80 | 0.83 |
| Rating:5W 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 = 1.25 |      |      |      |      |      |      |      |      |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------|----------------|------|------|------|------|------|------|------|------|--|
| 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  | 1.01           | 0.84 | 0.72 | 0.63 | 0.50 | 0.42 | 0.36 | 0.28 | 0.23 |  |
|                                                                                                                                                                                  | 0.30 |       | 0.84           | 0.72 | 0.62 | 0.55 | 0.46 | 0.39 | 0.33 | 0.26 | 0.22 |  |
|                                                                                                                                                                                  | 0.20 |       | 0.72           | 0.63 | 0.55 | 0.50 | 0.42 | 0.36 | 0.31 | 0.25 | 0.21 |  |
| 0.50                                                                                                                                                                             | 0.50 | 0.20  | 0.97           | 0.80 | 0.68 | 0.60 | 0.48 | 0.43 | 0.34 | 0.27 | 0.22 |  |
|                                                                                                                                                                                  | 0.30 |       | 0.82           | 0.70 | 0.61 | 0.54 | 0.44 | 0.37 | 0.32 | 0.25 | 0.21 |  |
|                                                                                                                                                                                  | 0.20 |       | 0.71           | 0.61 | 0.54 | 0.49 | 0.40 | 0.34 | 0.30 | 0.24 | 0.20 |  |
| 0.30                                                                                                                                                                             | 0.50 | 0.20  | 0.94           | 0.77 | 0.66 | 0.57 | 0.46 | 0.38 | 0.33 | 0.25 | 0.21 |  |
|                                                                                                                                                                                  | 0.30 |       | 0.80           | 0.68 | 0.59 | 0.52 | 0.42 | 0.36 | 0.31 | 0.24 | 0.20 |  |
|                                                                                                                                                                                  | 0.20 |       | 0.70           | 0.60 | 0.53 | 0.47 | 0.39 | 0.33 | 0.29 | 0.23 | 0.19 |  |
| 0.00                                                                                                                                                                             | 0.00 | 0.00  | 0.60           | 0.51 | 0.44 | 0.39 | 0.32 | 0.27 | 0.23 | 0.18 | 0.15 |  |
| Rating:5W 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 = 1.25 |      |      |      |      |      |      |      |      |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------|----------------|------|------|------|------|------|------|------|------|--|
| 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  | 0.18           | 0.20 | 0.21 | 0.21 | 0.22 | 0.23 | 0.23 | 0.24 | 0.24 |  |
|                                                                                                                                                                                  | 0.30 |       | 0.12           | 0.13 | 0.14 | 0.15 | 0.17 | 0.18 | 0.19 | 0.20 | 0.21 |  |
|                                                                                                                                                                                  | 0.20 |       | 0.07           | 0.08 | 0.10 | 0.11 | 0.13 | 0.14 | 0.16 | 0.17 | 0.19 |  |
| 0.50                                                                                                                                                                             | 0.50 | 0.20  | 0.18           | 0.19 | 0.20 | 0.20 | 0.21 | 0.22 | 0.22 | 0.23 | 0.23 |  |
|                                                                                                                                                                                  | 0.30 |       | 0.11           | 0.13 | 0.14 | 0.15 | 0.17 | 0.18 | 0.18 | 0.20 | 0.20 |  |
|                                                                                                                                                                                  | 0.20 |       | 0.07           | 0.08 | 0.10 | 0.11 | 0.13 | 0.14 | 0.15 | 0.17 | 0.18 |  |
| 0.30                                                                                                                                                                             | 0.50 | 0.20  | 0.17           | 0.18 | 0.19 | 0.20 | 0.20 | 0.21 | 0.21 | 0.22 | 0.22 |  |
|                                                                                                                                                                                  | 0.30 |       | 0.11           | 0.13 | 0.14 | 0.15 | 0.16 | 0.17 | 0.18 | 0.19 | 0.20 |  |
|                                                                                                                                                                                  | 0.20 |       | 0.06           | 0.08 | 0.09 | 0.11 | 0.12 | 0.14 | 0.15 | 0.16 | 0.18 |  |
| 0.00                                                                                                                                                                             | 0.00 | 0.00  | 0.02           | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |  |
| Rating:5W Photometrically tested without ceiling board.<br>Multiply UF values by service correction factors<br>Calculate in accordance with CIBSE Technical Memorandum NO.5 1980 |      |       |                |      |      |      |      |      |      |      |      |  |

## 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>[%] |
|--------------|---------------------------|--------------------|------------------------|-----------------------|---------------------------|
| 0.0-1.0      | 77.8                      | 0.1                | 0.1                    | 0.03                  | 0.03                      |
| 1.0-2.0      | 77.8                      | 0.2                | 0.3                    | 0.10                  | 0.13                      |
| 2.0-3.0      | 77.7                      | 0.4                | 0.7                    | 0.16                  | 0.29                      |
| 3.0-4.0      | 77.6                      | 0.5                | 1.2                    | 0.23                  | 0.52                      |
| 4.0-5.0      | 77.5                      | 0.7                | 1.9                    | 0.29                  | 0.81                      |
| 5.0-6.0      | 77.4                      | 0.8                | 2.7                    | 0.35                  | 1.16                      |
| 6.0-7.0      | 77.2                      | 1.0                | 3.6                    | 0.42                  | 1.57                      |
| 7.0-8.0      | 77.0                      | 1.1                | 4.7                    | 0.48                  | 2.05                      |
| 8.0-9.0      | 76.7                      | 1.2                | 6.0                    | 0.54                  | 2.59                      |
| 9.0-10.0     | 76.5                      | 1.4                | 7.4                    | 0.60                  | 3.19                      |
| 10.0-11.0    | 76.2                      | 1.5                | 8.9                    | 0.66                  | 3.85                      |
| 11.0-12.0    | 75.9                      | 1.7                | 10.5                   | 0.72                  | 4.57                      |
| 12.0-13.0    | 75.5                      | 1.8                | 12.3                   | 0.78                  | 5.35                      |
| 13.0-14.0    | 75.2                      | 1.9                | 14.3                   | 0.83                  | 6.18                      |
| 14.0-15.0    | 74.8                      | 2.1                | 16.3                   | 0.89                  | 7.07                      |
| 15.0-16.0    | 74.3                      | 2.2                | 18.5                   | 0.94                  | 8.02                      |
| 16.0-17.0    | 73.9                      | 2.3                | 20.8                   | 1.00                  | 9.02                      |
| 17.0-18.0    | 73.4                      | 2.4                | 23.2                   | 1.05                  | 10.07                     |
| 18.0-19.0    | 72.8                      | 2.5                | 25.7                   | 1.10                  | 11.17                     |
| 19.0-20.0    | 72.3                      | 2.6                | 28.4                   | 1.15                  | 12.31                     |
| 20.0-21.0    | 71.8                      | 2.8                | 31.1                   | 1.20                  | 13.51                     |
| 21.0-22.0    | 71.2                      | 2.9                | 34.0                   | 1.24                  | 14.75                     |
| 22.0-23.0    | 70.5                      | 3.0                | 37.0                   | 1.28                  | 16.03                     |
| 23.0-24.0    | 69.9                      | 3.1                | 40.0                   | 1.33                  | 17.36                     |
| 24.0-25.0    | 69.2                      | 3.1                | 43.2                   | 1.37                  | 18.73                     |
| 25.0-26.0    | 68.6                      | 3.2                | 46.4                   | 1.40                  | 20.13                     |
| 26.0-27.0    | 67.9                      | 3.3                | 49.7                   | 1.44                  | 21.57                     |
| 27.0-28.0    | 67.1                      | 3.4                | 53.1                   | 1.47                  | 23.04                     |
| 28.0-29.0    | 66.3                      | 3.5                | 56.6                   | 1.51                  | 24.55                     |
| 29.0-30.0    | 65.6                      | 3.5                | 60.1                   | 1.54                  | 26.09                     |
| 30.0-31.0    | 64.8                      | 3.6                | 63.7                   | 1.56                  | 27.65                     |
| 31.0-32.0    | 64.0                      | 3.7                | 67.4                   | 1.59                  | 29.24                     |
| 32.0-33.0    | 63.1                      | 3.7                | 71.1                   | 1.61                  | 30.85                     |
| 33.0-34.0    | 62.3                      | 3.8                | 74.9                   | 1.63                  | 32.49                     |
| 34.0-35.0    | 61.4                      | 3.8                | 78.7                   | 1.65                  | 34.14                     |
| 35.0-36.0    | 60.5                      | 3.9                | 82.6                   | 1.67                  | 35.81                     |

C Plane (°): 0.0-360.0: 30.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature: 25  
 Operator: Jacky

Gamma Plane (°): 0.0-180.0: 1.0  
 Test Device: GPM-1800B  
 Distance: 9.028 m  
 Humidity: 60%  
 Inspector:

## Zonal Lumen (Continue 1)

| 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>[%] |
|--------------|---------------------------|--------------------|------------------------|-----------------------|---------------------------|
| 36.0-37.0    | 59.6                      | 3.9                | 86.4                   | 1.68                  | 37.50                     |
| 37.0-38.0    | 58.6                      | 3.9                | 90.4                   | 1.70                  | 39.19                     |
| 38.0-39.0    | 57.7                      | 3.9                | 94.3                   | 1.71                  | 40.90                     |
| 39.0-40.0    | 56.7                      | 4.0                | 98.2                   | 1.72                  | 42.62                     |
| 40.0-41.0    | 55.7                      | 4.0                | 102.2                  | 1.72                  | 44.34                     |
| 41.0-42.0    | 54.7                      | 4.0                | 106.2                  | 1.72                  | 46.06                     |
| 42.0-43.0    | 53.7                      | 4.0                | 110.2                  | 1.73                  | 47.79                     |
| 43.0-44.0    | 52.7                      | 4.0                | 114.1                  | 1.72                  | 49.51                     |
| 44.0-45.0    | 51.6                      | 4.0                | 118.1                  | 1.72                  | 51.23                     |
| 45.0-46.0    | 50.6                      | 4.0                | 122.1                  | 1.72                  | 52.95                     |
| 46.0-47.0    | 49.5                      | 3.9                | 126.0                  | 1.71                  | 54.66                     |
| 47.0-48.0    | 48.4                      | 3.9                | 129.9                  | 1.70                  | 56.35                     |
| 48.0-49.0    | 47.3                      | 3.9                | 133.8                  | 1.69                  | 58.04                     |
| 49.0-50.0    | 46.2                      | 3.9                | 137.7                  | 1.67                  | 59.71                     |
| 50.0-51.0    | 45.1                      | 3.8                | 141.5                  | 1.66                  | 61.37                     |
| 51.0-52.0    | 44.0                      | 3.8                | 145.3                  | 1.64                  | 63.01                     |
| 52.0-53.0    | 42.9                      | 3.7                | 149.0                  | 1.62                  | 64.62                     |
| 53.0-54.0    | 41.7                      | 3.7                | 152.7                  | 1.60                  | 66.22                     |
| 54.0-55.0    | 40.6                      | 3.6                | 156.3                  | 1.57                  | 67.79                     |
| 55.0-56.0    | 39.5                      | 3.6                | 159.9                  | 1.55                  | 69.34                     |
| 56.0-57.0    | 38.3                      | 3.5                | 163.4                  | 1.52                  | 70.86                     |
| 57.0-58.0    | 37.2                      | 3.4                | 166.8                  | 1.49                  | 72.35                     |
| 58.0-59.0    | 36.0                      | 3.4                | 170.2                  | 1.46                  | 73.81                     |
| 59.0-60.0    | 34.8                      | 3.3                | 173.5                  | 1.43                  | 75.24                     |
| 60.0-61.0    | 33.6                      | 3.2                | 176.7                  | 1.39                  | 76.63                     |
| 61.0-62.0    | 32.5                      | 3.1                | 179.8                  | 1.36                  | 77.99                     |
| 62.0-63.0    | 31.3                      | 3.0                | 182.8                  | 1.32                  | 79.31                     |
| 63.0-64.0    | 30.1                      | 3.0                | 185.8                  | 1.28                  | 80.59                     |
| 64.0-65.0    | 29.0                      | 2.9                | 188.7                  | 1.24                  | 81.83                     |
| 65.0-66.0    | 27.8                      | 2.8                | 191.4                  | 1.20                  | 83.03                     |
| 66.0-67.0    | 26.6                      | 2.7                | 194.1                  | 1.16                  | 84.20                     |
| 67.0-68.0    | 25.4                      | 2.6                | 196.7                  | 1.12                  | 85.31                     |
| 68.0-69.0    | 24.2                      | 2.5                | 199.2                  | 1.07                  | 86.39                     |
| 69.0-70.0    | 23.1                      | 2.4                | 201.5                  | 1.03                  | 87.41                     |
| 70.0-71.0    | 21.9                      | 2.3                | 203.8                  | 0.98                  | 88.40                     |
| 71.0-72.0    | 20.7                      | 2.2                | 206.0                  | 0.94                  | 89.33                     |

C Plane (°): 0.0-360.0: 30.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature: 25  
 Operator: Jacky

Gamma Plane (°): 0.0-180.0: 1.0  
 Test Device: GPM-1800B  
 Distance: 9.028 m  
 Humidity: 60%  
 Inspector:

## Zonal Lumen (Continue 2)

| 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>[%] |
|--------------|---------------------------|--------------------|------------------------|-----------------------|---------------------------|
| 72.0-73.0    | 19.6                      | 2.0                | 208.0                  | 0.89                  | 90.22                     |
| 73.0-74.0    | 18.4                      | 1.9                | 209.9                  | 0.84                  | 91.06                     |
| 74.0-75.0    | 17.3                      | 1.8                | 211.8                  | 0.79                  | 91.85                     |
| 75.0-76.0    | 16.1                      | 1.7                | 213.5                  | 0.74                  | 92.59                     |
| 76.0-77.0    | 14.9                      | 1.6                | 215.1                  | 0.69                  | 93.28                     |
| 77.0-78.0    | 13.8                      | 1.5                | 216.5                  | 0.64                  | 93.92                     |
| 78.0-79.0    | 12.6                      | 1.4                | 217.9                  | 0.59                  | 94.51                     |
| 79.0-80.0    | 11.5                      | 1.2                | 219.1                  | 0.54                  | 95.05                     |
| 80.0-81.0    | 10.4                      | 1.1                | 220.3                  | 0.49                  | 95.53                     |
| 81.0-82.0    | 9.3                       | 1.0                | 221.3                  | 0.44                  | 95.97                     |
| 82.0-83.0    | 8.2                       | 0.9                | 222.1                  | 0.38                  | 96.35                     |
| 83.0-84.0    | 7.1                       | 0.8                | 222.9                  | 0.34                  | 96.69                     |
| 84.0-85.0    | 6.1                       | 0.7                | 223.6                  | 0.29                  | 96.98                     |
| 85.0-86.0    | 5.1                       | 0.6                | 224.1                  | 0.24                  | 97.22                     |
| 86.0-87.0    | 4.3                       | 0.5                | 224.6                  | 0.20                  | 97.42                     |
| 87.0-88.0    | 3.5                       | 0.4                | 225.0                  | 0.17                  | 97.59                     |
| 88.0-89.0    | 2.9                       | 0.3                | 225.3                  | 0.14                  | 97.73                     |
| 89.0-90.0    | 2.3                       | 0.3                | 225.6                  | 0.11                  | 97.84                     |
| 90.0-91.0    | 1.9                       | 0.2                | 225.8                  | 0.09                  | 97.93                     |
| 91.0-92.0    | 1.6                       | 0.2                | 225.9                  | 0.08                  | 98.00                     |
| 92.0-93.0    | 1.4                       | 0.2                | 226.1                  | 0.07                  | 98.07                     |
| 93.0-94.0    | 1.2                       | 0.1                | 226.2                  | 0.06                  | 98.13                     |
| 94.0-95.0    | 1.1                       | 0.1                | 226.4                  | 0.05                  | 98.18                     |
| 95.0-96.0    | 1.0                       | 0.1                | 226.5                  | 0.05                  | 98.23                     |
| 96.0-97.0    | 1.0                       | 0.1                | 226.6                  | 0.05                  | 98.28                     |
| 97.0-98.0    | 1.0                       | 0.1                | 226.7                  | 0.05                  | 98.32                     |
| 98.0-99.0    | 0.9                       | 0.1                | 226.8                  | 0.04                  | 98.36                     |
| 99.0-100.0   | 0.9                       | 0.1                | 226.9                  | 0.04                  | 98.41                     |
| 100.0-101.0  | 0.9                       | 0.1                | 227.0                  | 0.04                  | 98.45                     |
| 101.0-102.0  | 0.9                       | 0.1                | 227.1                  | 0.04                  | 98.49                     |
| 102.0-103.0  | 0.8                       | 0.1                | 227.2                  | 0.04                  | 98.53                     |
| 103.0-104.0  | 0.8                       | 0.1                | 227.2                  | 0.04                  | 98.57                     |
| 104.0-105.0  | 0.8                       | 0.1                | 227.3                  | 0.04                  | 98.60                     |
| 105.0-106.0  | 0.8                       | 0.1                | 227.4                  | 0.04                  | 98.64                     |
| 106.0-107.0  | 0.8                       | 0.1                | 227.5                  | 0.04                  | 98.68                     |
| 107.0-108.0  | 0.8                       | 0.1                | 227.6                  | 0.04                  | 98.71                     |

C Plane (°):0.0-360.0: 30.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature: 25  
 Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 9.028 m  
 Humidity: 60%  
 Inspector:

## Zonal Lumen (Continue 3)

| 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>[%] |
|--------------|---------------------------|--------------------|------------------------|-----------------------|---------------------------|
| 108.0-109.0  | 0.8                       | 0.1                | 227.7                  | 0.03                  | 98.75                     |
| 109.0-110.0  | 0.8                       | 0.1                | 227.7                  | 0.03                  | 98.78                     |
| 110.0-111.0  | 0.7                       | 0.1                | 227.8                  | 0.03                  | 98.81                     |
| 111.0-112.0  | 0.7                       | 0.1                | 227.9                  | 0.03                  | 98.84                     |
| 112.0-113.0  | 0.7                       | 0.1                | 228.0                  | 0.03                  | 98.88                     |
| 113.0-114.0  | 0.7                       | 0.1                | 228.0                  | 0.03                  | 98.91                     |
| 114.0-115.0  | 0.7                       | 0.1                | 228.1                  | 0.03                  | 98.94                     |
| 115.0-116.0  | 0.7                       | 0.1                | 228.2                  | 0.03                  | 98.97                     |
| 116.0-117.0  | 0.7                       | 0.1                | 228.2                  | 0.03                  | 99.00                     |
| 117.0-118.0  | 0.7                       | 0.1                | 228.3                  | 0.03                  | 99.03                     |
| 118.0-119.0  | 0.7                       | 0.1                | 228.4                  | 0.03                  | 99.06                     |
| 119.0-120.0  | 0.7                       | 0.1                | 228.4                  | 0.03                  | 99.09                     |
| 120.0-121.0  | 0.7                       | 0.1                | 228.5                  | 0.03                  | 99.12                     |
| 121.0-122.0  | 0.7                       | 0.1                | 228.6                  | 0.03                  | 99.14                     |
| 122.0-123.0  | 0.7                       | 0.1                | 228.6                  | 0.03                  | 99.17                     |
| 123.0-124.0  | 0.7                       | 0.1                | 228.7                  | 0.03                  | 99.20                     |
| 124.0-125.0  | 0.7                       | 0.1                | 228.8                  | 0.03                  | 99.23                     |
| 125.0-126.0  | 0.7                       | 0.1                | 228.8                  | 0.03                  | 99.25                     |
| 126.0-127.0  | 0.7                       | 0.1                | 228.9                  | 0.03                  | 99.28                     |
| 127.0-128.0  | 0.7                       | 0.1                | 228.9                  | 0.03                  | 99.30                     |
| 128.0-129.0  | 0.7                       | 0.1                | 229.0                  | 0.03                  | 99.33                     |
| 129.0-130.0  | 0.7                       | 0.1                | 229.1                  | 0.02                  | 99.36                     |
| 130.0-131.0  | 0.7                       | 0.1                | 229.1                  | 0.02                  | 99.38                     |
| 131.0-132.0  | 0.7                       | 0.1                | 229.2                  | 0.02                  | 99.40                     |
| 132.0-133.0  | 0.7                       | 0.1                | 229.2                  | 0.02                  | 99.43                     |
| 133.0-134.0  | 0.7                       | 0.1                | 229.3                  | 0.02                  | 99.45                     |
| 134.0-135.0  | 0.7                       | 0.1                | 229.3                  | 0.02                  | 99.47                     |
| 135.0-136.0  | 0.7                       | 0.1                | 229.4                  | 0.02                  | 99.50                     |
| 136.0-137.0  | 0.7                       | 0.1                | 229.4                  | 0.02                  | 99.52                     |
| 137.0-138.0  | 0.7                       | 0.1                | 229.5                  | 0.02                  | 99.54                     |
| 138.0-139.0  | 0.7                       | 0.0                | 229.5                  | 0.02                  | 99.56                     |
| 139.0-140.0  | 0.7                       | 0.0                | 229.6                  | 0.02                  | 99.58                     |
| 140.0-141.0  | 0.7                       | 0.0                | 229.6                  | 0.02                  | 99.60                     |
| 141.0-142.0  | 0.7                       | 0.0                | 229.7                  | 0.02                  | 99.62                     |
| 142.0-143.0  | 0.7                       | 0.0                | 229.7                  | 0.02                  | 99.64                     |
| 143.0-144.0  | 0.7                       | 0.0                | 229.8                  | 0.02                  | 99.66                     |

C Plane (°):0.0-360.0: 30.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature: 25  
 Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 9.028 m  
 Humidity: 60%  
 Inspector:

## Zonal Lumen (Continue 4)

| 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>[%] |
|--------------|---------------------------|--------------------|------------------------|-----------------------|---------------------------|
| 144.0-145.0  | 0.7                       | 0.0                | 229.8                  | 0.02                  | 99.68                     |
| 145.0-146.0  | 0.7                       | 0.0                | 229.8                  | 0.02                  | 99.70                     |
| 146.0-147.0  | 0.7                       | 0.0                | 229.9                  | 0.02                  | 99.71                     |
| 147.0-148.0  | 0.7                       | 0.0                | 229.9                  | 0.02                  | 99.73                     |
| 148.0-149.0  | 0.7                       | 0.0                | 230.0                  | 0.02                  | 99.75                     |
| 149.0-150.0  | 0.7                       | 0.0                | 230.0                  | 0.02                  | 99.76                     |
| 150.0-151.0  | 0.7                       | 0.0                | 230.0                  | 0.02                  | 99.78                     |
| 151.0-152.0  | 0.6                       | 0.0                | 230.1                  | 0.01                  | 99.79                     |
| 152.0-153.0  | 0.6                       | 0.0                | 230.1                  | 0.01                  | 99.81                     |
| 153.0-154.0  | 0.7                       | 0.0                | 230.1                  | 0.01                  | 99.82                     |
| 154.0-155.0  | 0.7                       | 0.0                | 230.2                  | 0.01                  | 99.83                     |
| 155.0-156.0  | 0.7                       | 0.0                | 230.2                  | 0.01                  | 99.85                     |
| 156.0-157.0  | 0.7                       | 0.0                | 230.2                  | 0.01                  | 99.86                     |
| 157.0-158.0  | 0.6                       | 0.0                | 230.3                  | 0.01                  | 99.87                     |
| 158.0-159.0  | 0.7                       | 0.0                | 230.3                  | 0.01                  | 99.88                     |
| 159.0-160.0  | 0.7                       | 0.0                | 230.3                  | 0.01                  | 99.89                     |
| 160.0-161.0  | 0.6                       | 0.0                | 230.3                  | 0.01                  | 99.90                     |
| 161.0-162.0  | 0.6                       | 0.0                | 230.3                  | 0.01                  | 99.91                     |
| 162.0-163.0  | 0.6                       | 0.0                | 230.4                  | 0.01                  | 99.92                     |
| 163.0-164.0  | 0.6                       | 0.0                | 230.4                  | 0.01                  | 99.93                     |
| 164.0-165.0  | 0.7                       | 0.0                | 230.4                  | 0.01                  | 99.94                     |
| 165.0-166.0  | 0.6                       | 0.0                | 230.4                  | 0.01                  | 99.95                     |
| 166.0-167.0  | 0.6                       | 0.0                | 230.4                  | 0.01                  | 99.95                     |
| 167.0-168.0  | 0.6                       | 0.0                | 230.5                  | 0.01                  | 99.96                     |
| 168.0-169.0  | 0.7                       | 0.0                | 230.5                  | 0.01                  | 99.97                     |
| 169.0-170.0  | 0.6                       | 0.0                | 230.5                  | 0.01                  | 99.97                     |
| 170.0-171.0  | 0.6                       | 0.0                | 230.5                  | 0.01                  | 99.98                     |
| 171.0-172.0  | 0.7                       | 0.0                | 230.5                  | 0.00                  | 99.98                     |
| 172.0-173.0  | 0.6                       | 0.0                | 230.5                  | 0.00                  | 99.99                     |
| 173.0-174.0  | 0.7                       | 0.0                | 230.5                  | 0.00                  | 99.99                     |
| 174.0-175.0  | 0.7                       | 0.0                | 230.5                  | 0.00                  | 99.99                     |
| 175.0-176.0  | 0.7                       | 0.0                | 230.5                  | 0.00                  | 100.00                    |
| 176.0-177.0  | 0.7                       | 0.0                | 230.5                  | 0.00                  | 100.00                    |
| 177.0-178.0  | 0.7                       | 0.0                | 230.5                  | 0.00                  | 100.00                    |
| 178.0-179.0  | 0.7                       | 0.0                | 230.5                  | 0.00                  | 100.00                    |
| 179.0-180.0  | 0.7                       | 0.0                | 230.5                  | 0.00                  | 100.00                    |

C Plane (°):0.0-360.0: 30.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature: 25  
 Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 9.028 m  
 Humidity: 60%  
 Inspector: