

Report No.:

Test Time: 2023/3/1 17:02

## Luminaire Property

Luminaire Manufacturer: Acolyte

Luminaire Category: WALL WASHER

Luminaire Description: FORTEACNS12RGBW4065-ALL ON

Luminous Length (mm): 330

Luminous Width (mm): 96

Luminous Height (mm): 162.5

Voltage: 119.5 V

Current: 0.272 A

Power: 32.23 W

Power Factor: 0.990

## Photometric Results

CIE Class: Direct

Measurement Flux: 1079.2 lm

Downward Ratio: 98%

Horizontal Diffuse Angle(10%,50%): H119.7,H68.9

Vertical Diffuse Angle(10%,50%): V105.1,V67.3

Luminaire Efficacy Rating (LER): 33

Max. Intensity: 818.83 cd

Total Rated Lamp Lumens: 1079.2 lm

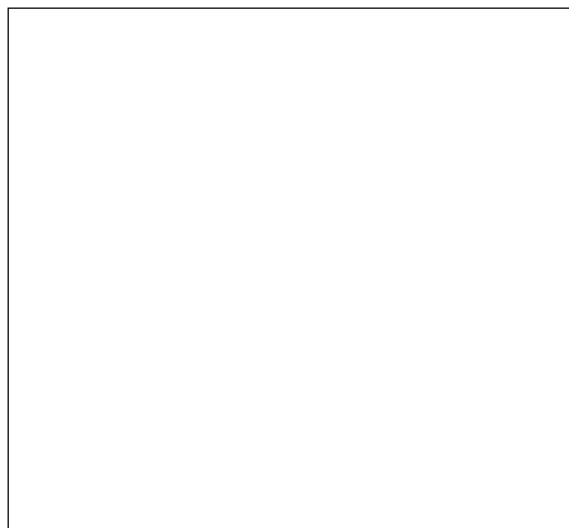
Efficiency: 100%

Upward Ratio: 2%

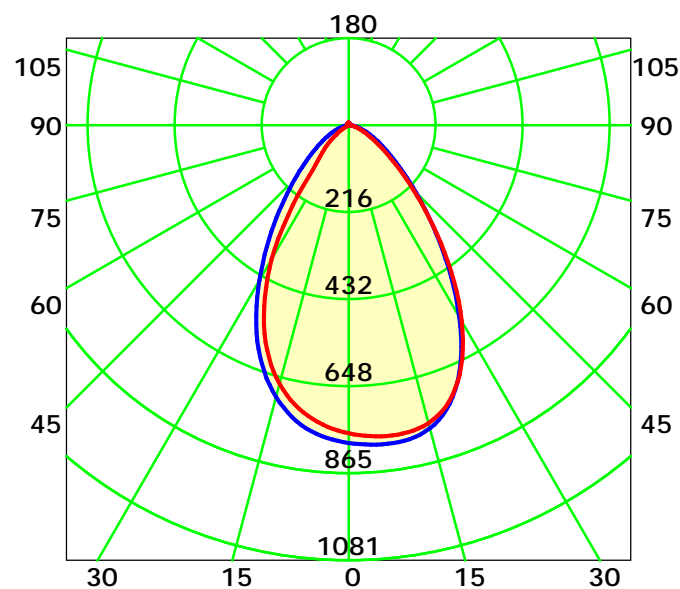
Central Intensity: 789.62 cd

Pos of Max. Intensity: H30 V14

Picture Of Luminaire



Luminous Intensity Distribution Curve



Average Diffuse Angle(50%): 68.1° Unit: cd

— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Nick

Gamma Plane (°):0.0-180.0: 1.0

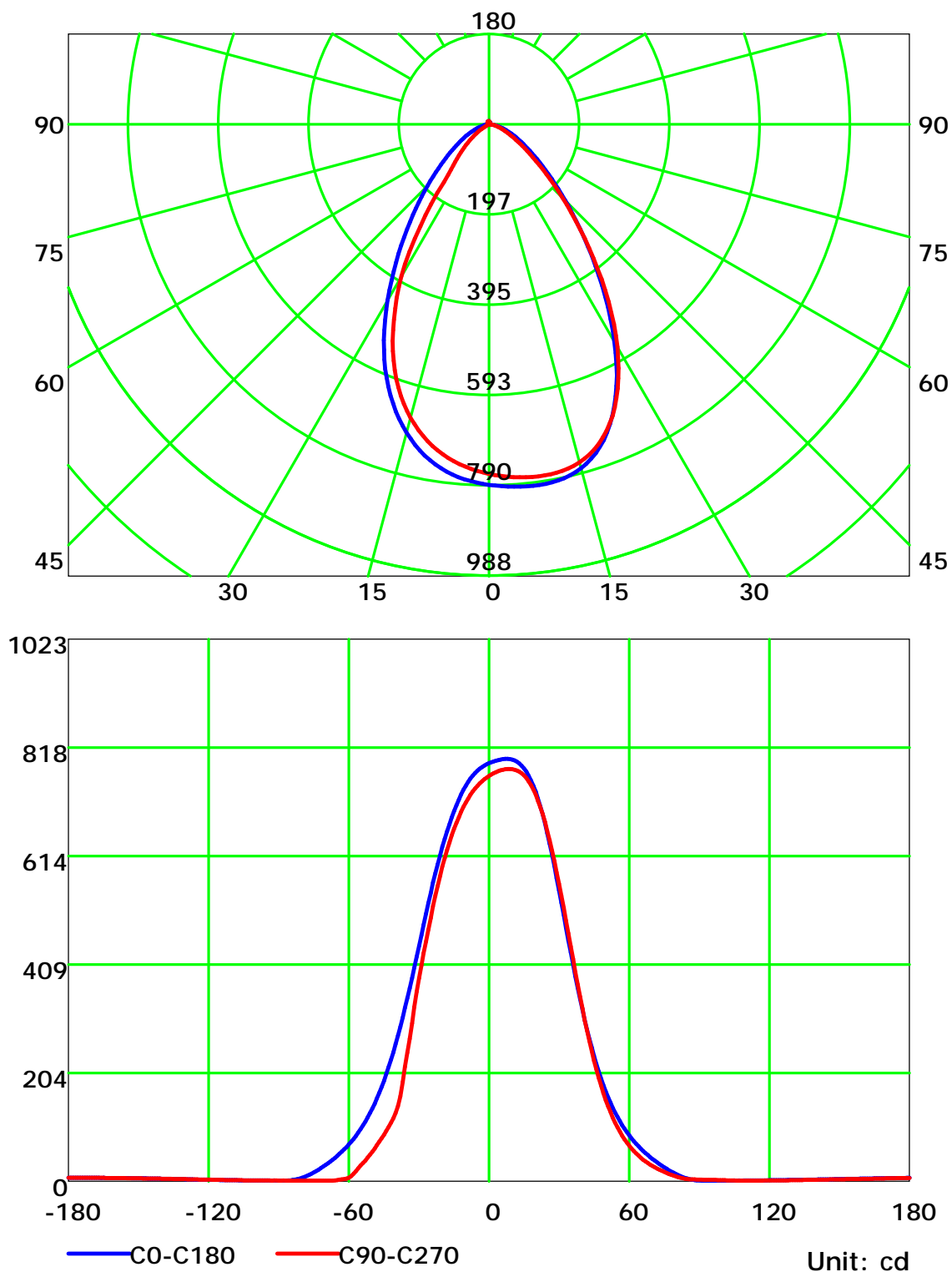
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

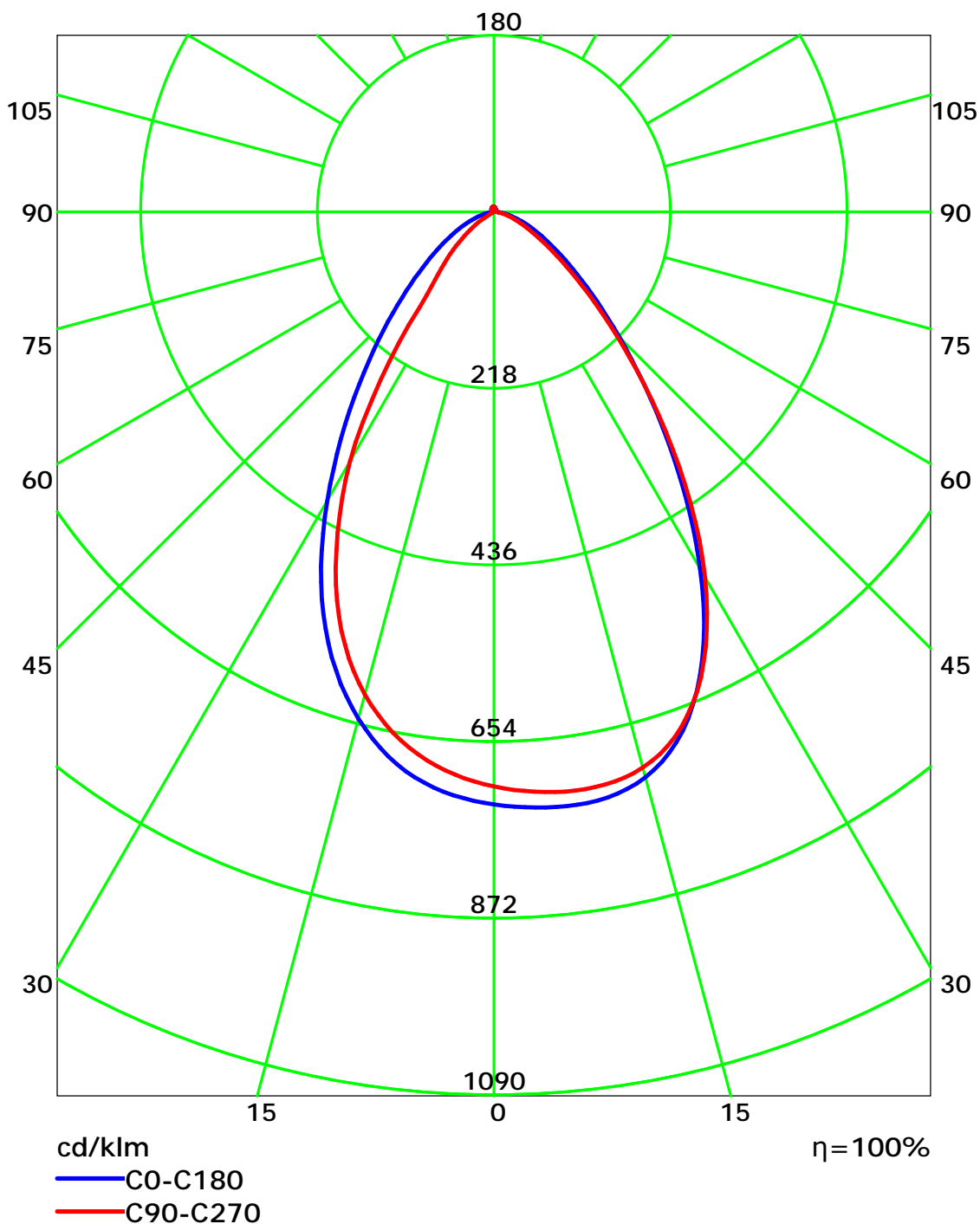
## Luminous Intensity Distribution Curve



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

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: Nick

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

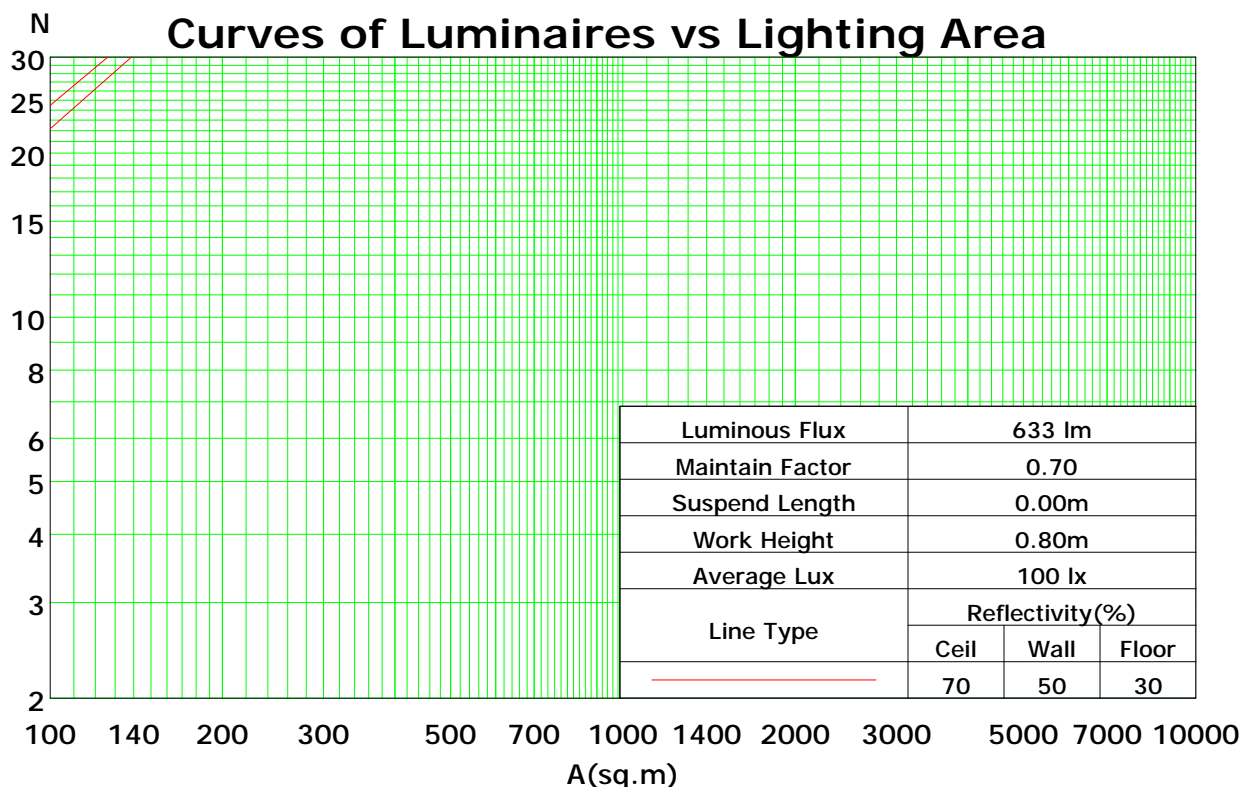
## Coefficients Of Utilization - Zonal Cavity Method

|     |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
|-----|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| 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   | 111      | 108 | 105 | 102 | 109 | 106 | 103 | 100 | 101 | 99  | 97  | 97  | 95  | 94  | 93  | 92  | 91  | 89 |
| 2   | 104      | 98  | 93  | 89  | 102 | 96  | 92  | 88  | 93  | 89  | 86  | 89  | 86  | 83  | 86  | 84  | 81  | 79 |
| 3   | 98       | 90  | 83  | 79  | 95  | 88  | 82  | 78  | 85  | 80  | 76  | 82  | 78  | 75  | 80  | 76  | 73  | 71 |
| 4   | 91       | 82  | 75  | 70  | 89  | 81  | 74  | 70  | 78  | 73  | 68  | 76  | 71  | 67  | 74  | 70  | 66  | 65 |
| 5   | 85       | 75  | 68  | 63  | 84  | 74  | 68  | 63  | 72  | 66  | 62  | 70  | 65  | 61  | 68  | 64  | 60  | 59 |
| 6   | 80       | 70  | 62  | 57  | 78  | 69  | 62  | 57  | 67  | 61  | 56  | 65  | 60  | 56  | 63  | 59  | 55  | 53 |
| 7   | 75       | 64  | 57  | 52  | 74  | 64  | 57  | 52  | 62  | 56  | 52  | 61  | 55  | 51  | 59  | 54  | 51  | 49 |
| 8   | 71       | 60  | 53  | 48  | 70  | 59  | 52  | 48  | 58  | 52  | 47  | 56  | 51  | 47  | 55  | 50  | 47  | 45 |
| 9   | 67       | 56  | 49  | 44  | 66  | 55  | 49  | 44  | 54  | 48  | 44  | 53  | 47  | 44  | 52  | 47  | 43  | 42 |
| 10  | 63       | 52  | 45  | 41  | 62  | 52  | 45  | 41  | 51  | 45  | 41  | 50  | 44  | 40  | 49  | 44  | 40  | 39 |

Spacing Criteria (0-180): 1.02

Spacing Criteria (90-270): 1.02

Spacing Criteria (Diagonal): 1.01



C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Nick

Gamma Plane (°):0.0-180.0:1.0

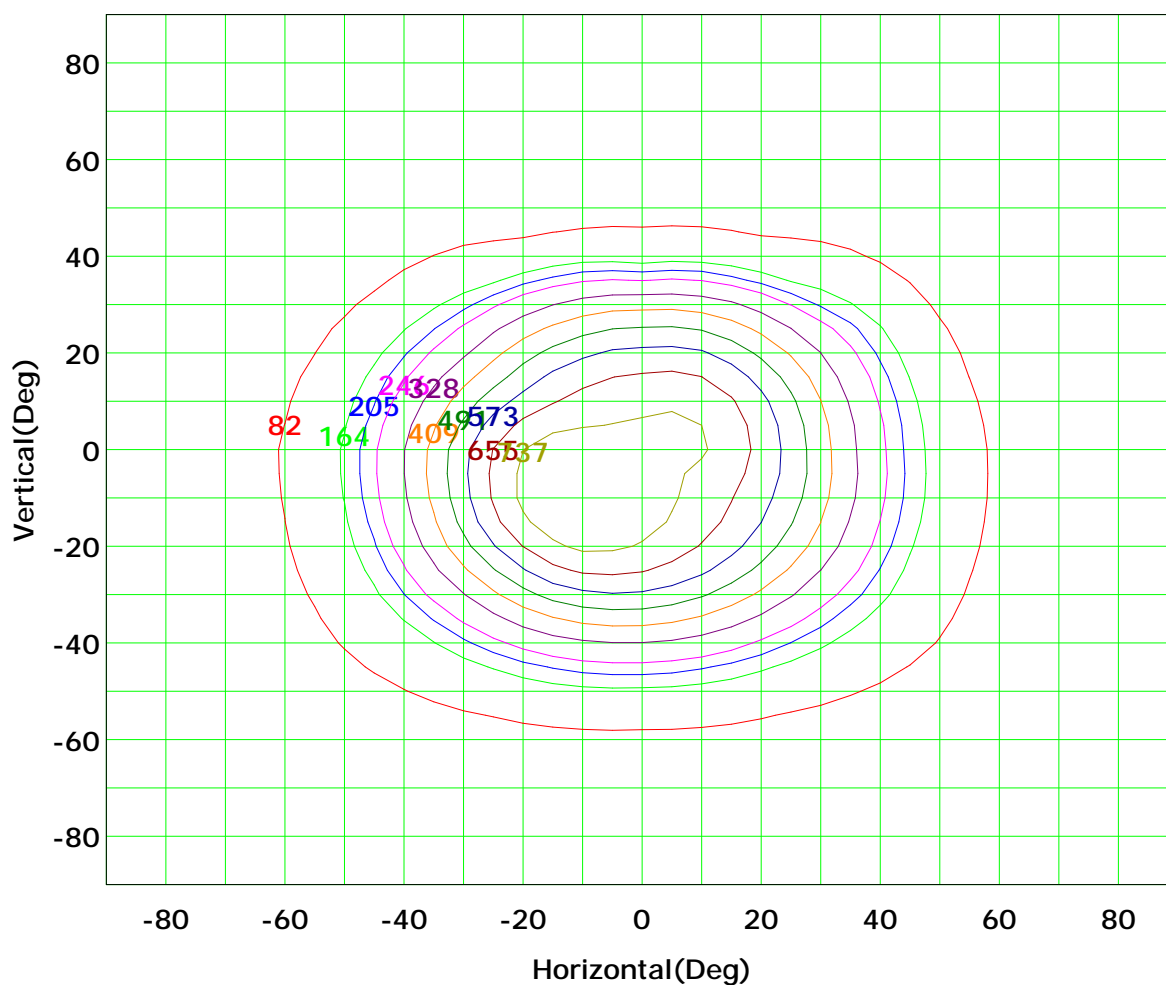
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

## Isocandela (rectangle)



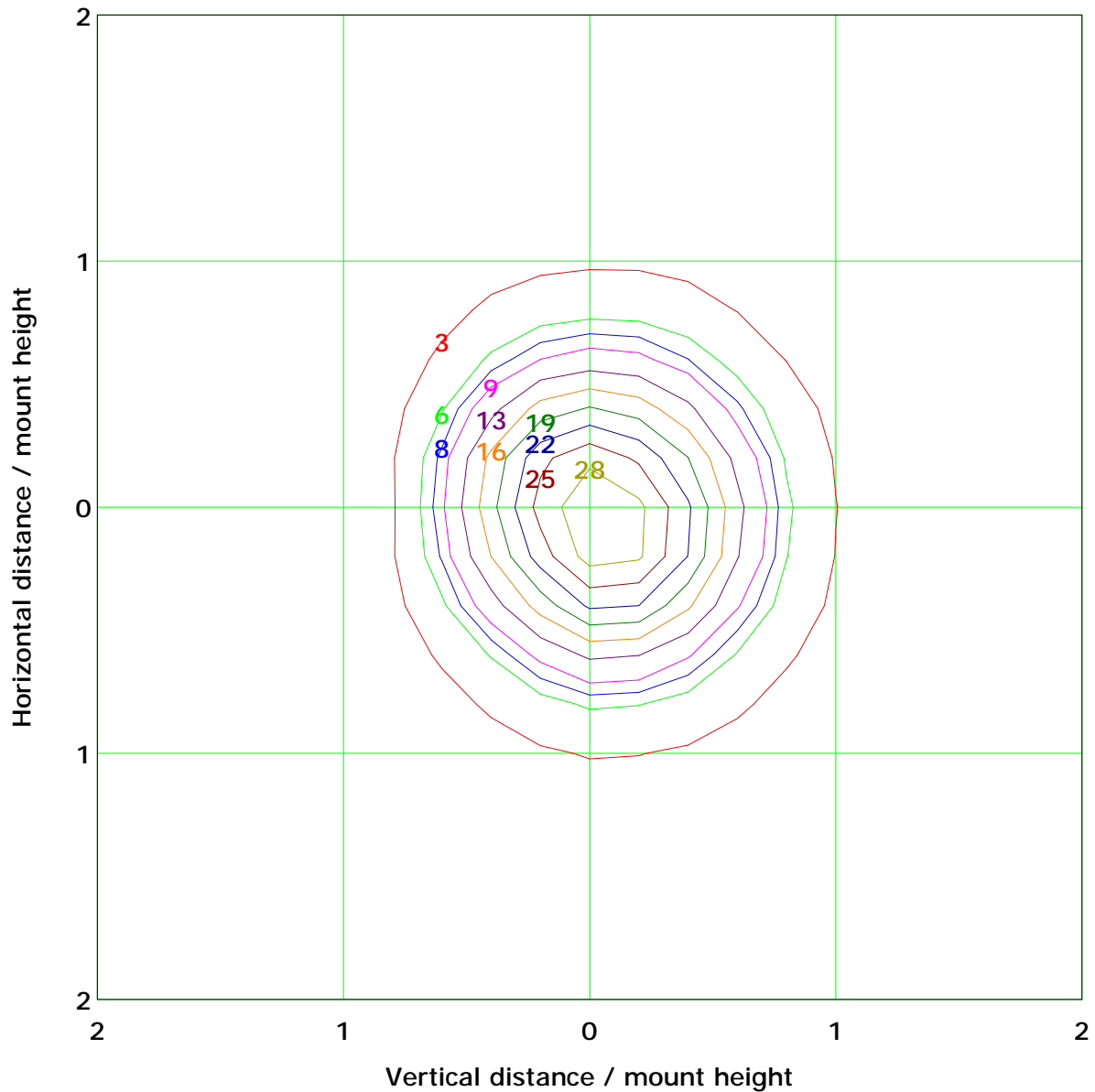
I<sub>max</sub> (100%): 819 cd

|                |                |
|----------------|----------------|
| ( 10%): 82 cd  | ( 20%): 164 cd |
| ( 25%): 205 cd | ( 30%): 246 cd |
| ( 40%): 328 cd | ( 50%): 409 cd |
| ( 60%): 491 cd | ( 70%): 573 cd |
| ( 80%): 655 cd | ( 90%): 737 cd |

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

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

## IsoLux Plot



|   |                 |
|---|-----------------|
| Mounting Height: 5.0m    Max Lux(100%): 31.7 lx |                 |
| ( 10%): 3.2 lx                                  | ( 20%): 6.3 lx  |
| ( 25%): 7.9 lx                                  | ( 30%): 9.5 lx  |
| ( 40%): 12.7 lx                                 | ( 50%): 15.8 lx |
| ( 60%): 19.0 lx                                 | ( 70%): 22.2 lx |
| ( 80%): 25.3 lx                                 | ( 90%): 28.5 lx |

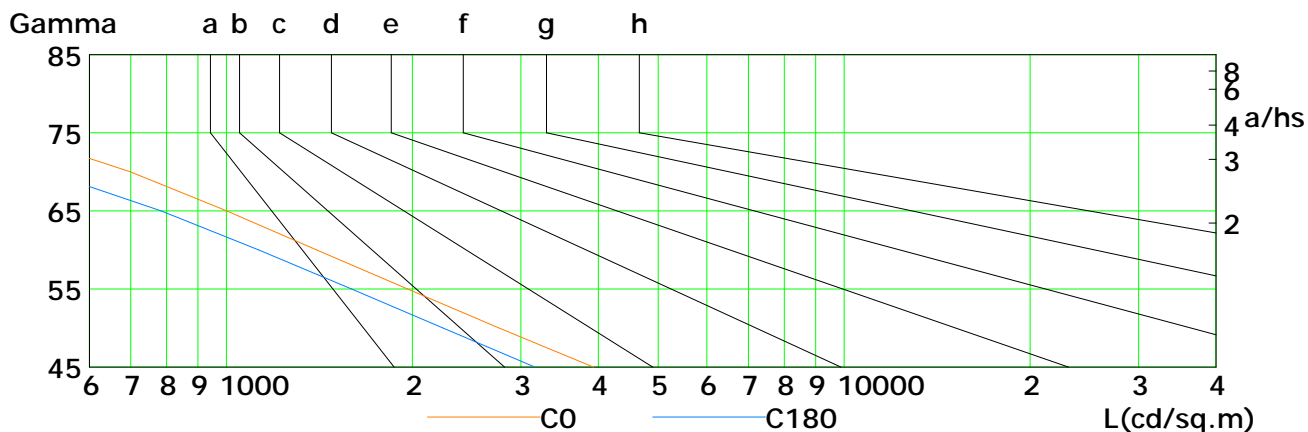
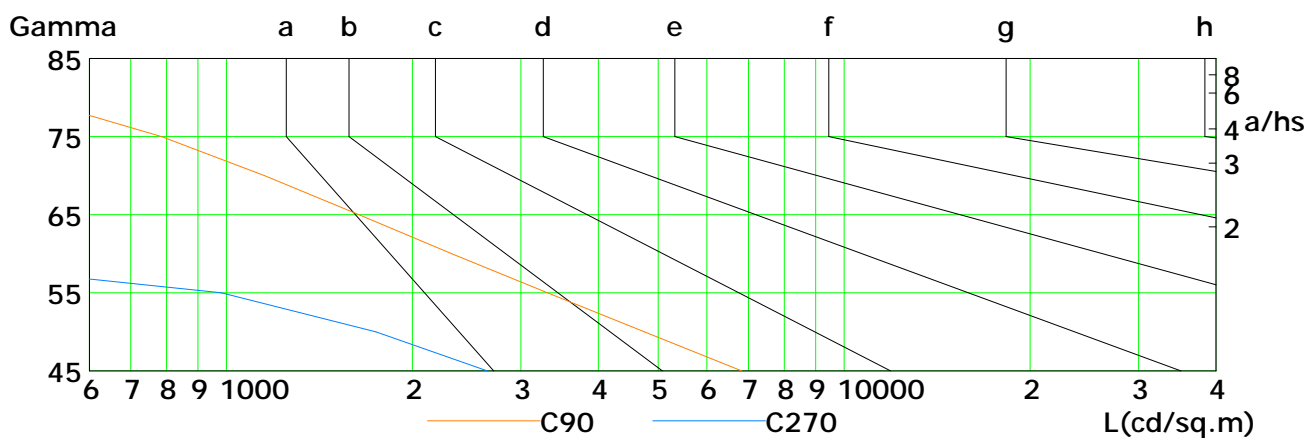
C Plane (°):0.0-360.0: 30.0  
Test Lab:  
Test Type: TYPE C  
Temperature: 25  
Operator: Nick

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

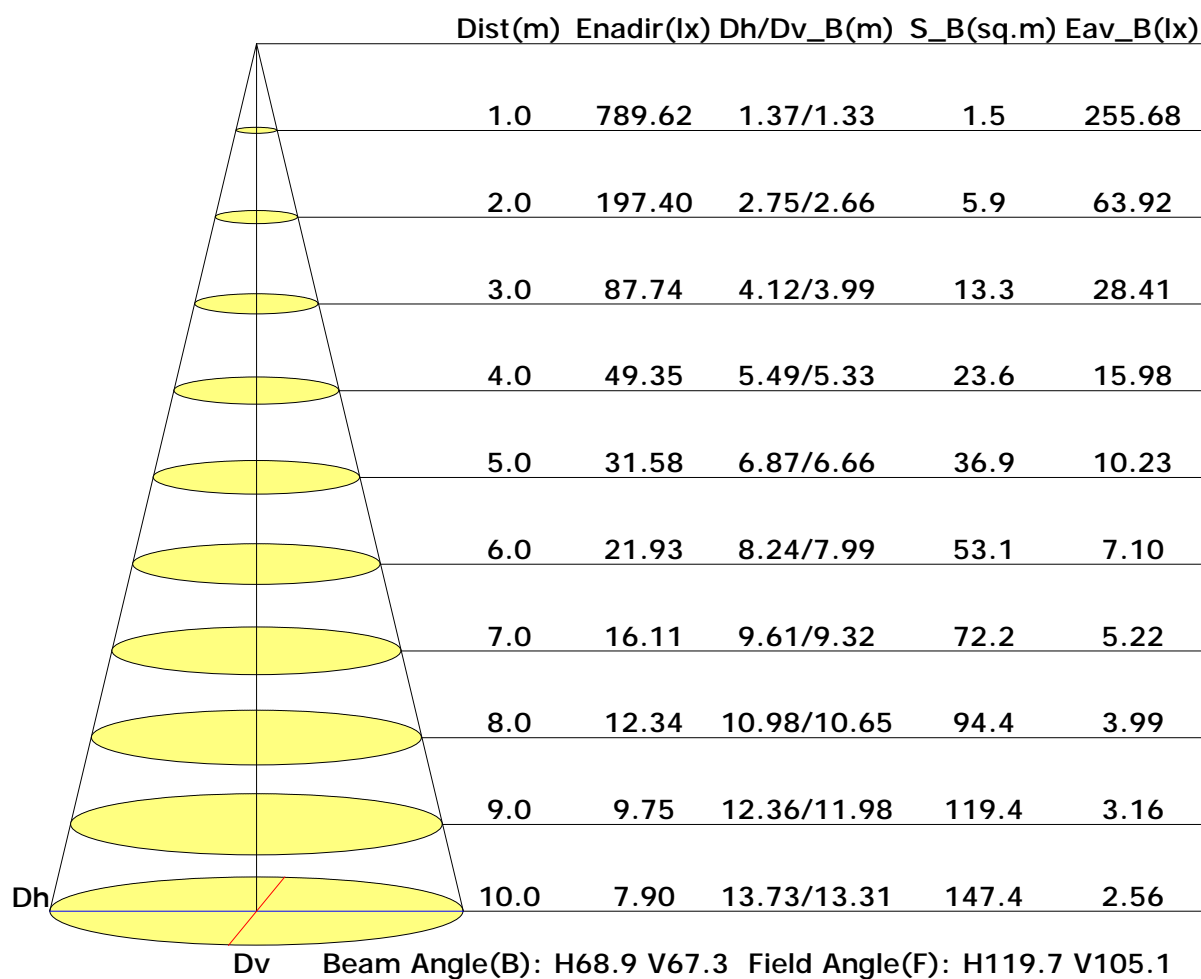


| L(cd/sq.m) | G45  | G50  | G55  | G60  | G65  | G70  | G75 | G80 | G85 |
|------------|------|------|------|------|------|------|-----|-----|-----|
| C0         | 3930 | 2766 | 1965 | 1401 | 1002 | 699  | 452 | 246 | 99  |
| C90        | 6827 | 4755 | 3309 | 2318 | 1640 | 1153 | 785 | 478 | 251 |
| C180       | 3159 | 2245 | 1594 | 1129 | 784  | 512  | 288 | 125 | 45  |
| C270       | 2644 | 1746 | 981  | 245  | 94   | 70   | 82  | 90  | 105 |

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

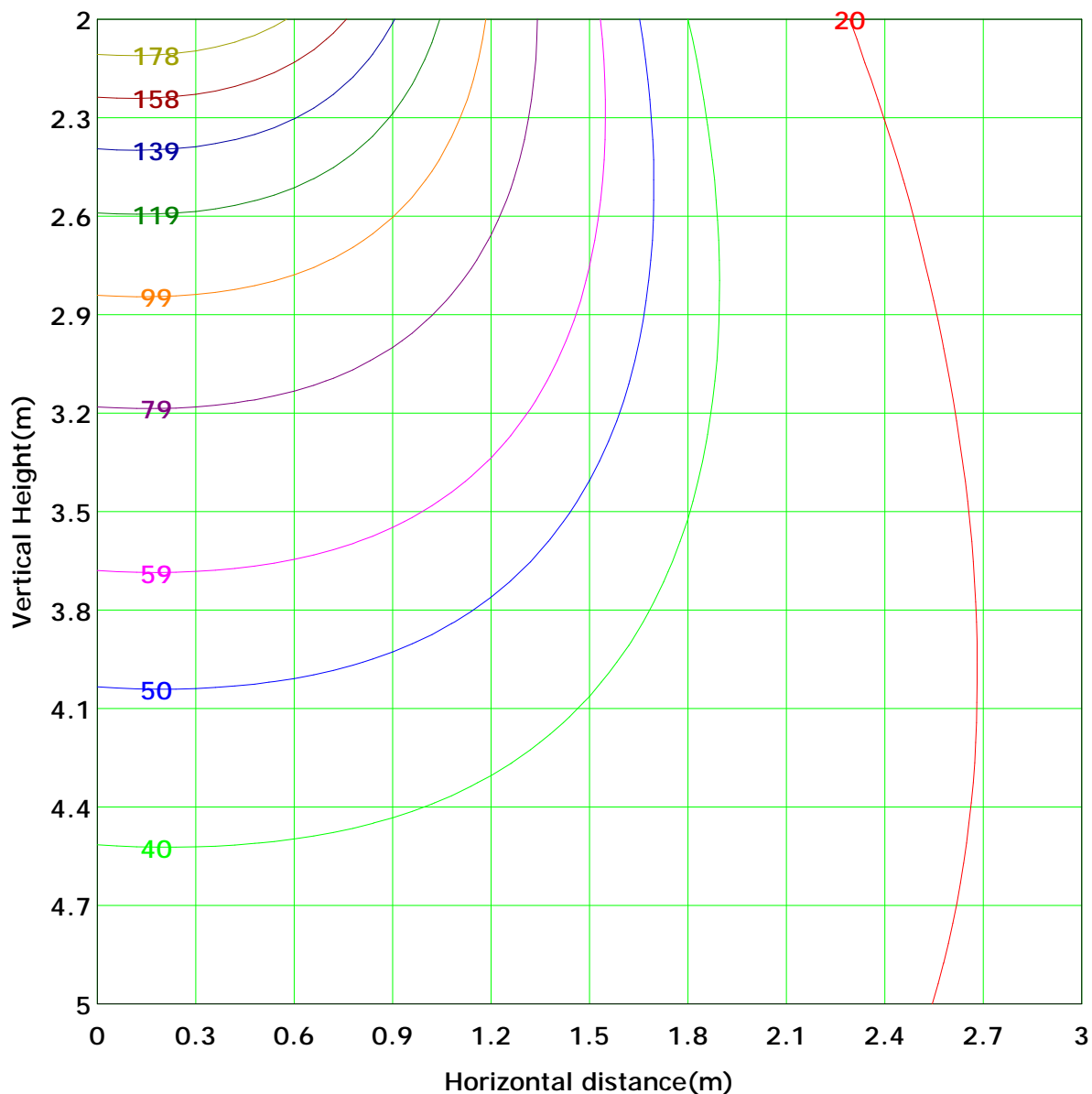
Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 9.028 m  
Humidity: 60%  
Inspector:

## Illuminance at a Distance





## Vertical IsoLux Plot



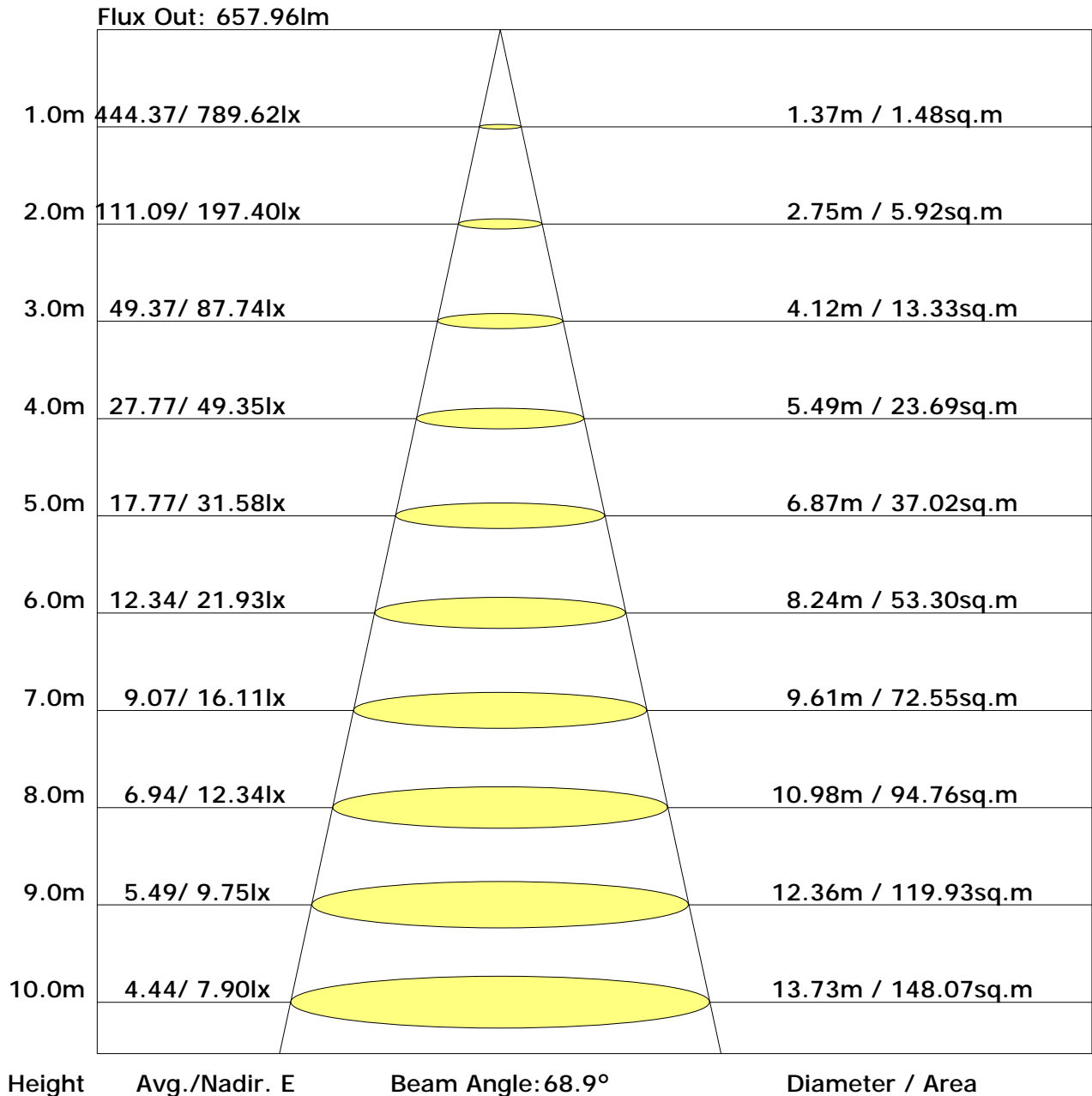
|                  |                  |                   |
|------------------|------------------|-------------------|
| Lowest(m): 2.0m  | Highest(m): 5.0m | Max Lux: 198.0 lx |
| ( 10%): 19.8 lx  | ( 20%): 39.6 lx  |                   |
| ( 25%): 49.5 lx  | ( 30%): 59.4 lx  |                   |
| ( 40%): 79.2 lx  | ( 50%): 99.0 lx  |                   |
| ( 60%): 118.8 lx | ( 70%): 138.6 lx |                   |
| ( 80%): 158.4 lx | ( 90%): 178.2 lx |                   |

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

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



## 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        | 12.4             | 13.6 | 12.8 | 13.9 | 14.3 | 10.8           | 12.0 | 11.2 | 12.3 | 12.7 |
| 3H               | 13.3             | 14.4 | 13.7 | 14.7 | 15.2 | 11.3           | 12.3 | 11.7 | 12.7 | 13.1 |
| 4H               | 13.5             | 14.5 | 14.0 | 14.9 | 15.4 | 11.4           | 12.4 | 11.8 | 12.8 | 13.2 |
| 6H               | 13.7             | 14.6 | 14.1 | 15.0 | 15.4 | 11.4           | 12.3 | 11.8 | 12.7 | 13.2 |
| 8H               | 13.7             | 14.5 | 14.1 | 15.0 | 15.4 | 11.4           | 12.2 | 11.8 | 12.7 | 13.1 |
| 12H              | 13.7             | 14.5 | 14.1 | 14.9 | 15.4 | 11.3           | 12.1 | 11.8 | 12.6 | 13.1 |
| X=4H Y=2H        | 12.3             | 13.3 | 12.8 | 13.7 | 14.2 | 11.1           | 12.1 | 11.5 | 12.5 | 12.9 |
| 3H               | 13.3             | 14.2 | 13.8 | 14.6 | 15.1 | 11.7           | 12.5 | 12.1 | 12.9 | 13.4 |
| 4H               | 13.6             | 14.4 | 14.1 | 14.8 | 15.3 | 11.8           | 12.5 | 12.3 | 13.0 | 13.5 |
| 6H               | 13.8             | 14.4 | 14.3 | 14.9 | 15.4 | 11.9           | 12.5 | 12.4 | 13.0 | 13.5 |
| 8H               | 13.8             | 14.4 | 14.3 | 14.9 | 15.4 | 11.8           | 12.4 | 12.4 | 12.9 | 13.4 |
| 12H              | 13.8             | 14.3 | 14.3 | 14.8 | 15.4 | 11.8           | 12.3 | 12.3 | 12.8 | 13.4 |
| X=8H Y=4H        | 13.5             | 14.1 | 14.0 | 14.6 | 15.1 | 11.9           | 12.4 | 12.4 | 12.9 | 13.5 |
| 6H               | 13.7             | 14.2 | 14.3 | 14.7 | 15.3 | 11.9           | 12.4 | 12.5 | 12.9 | 13.5 |
| 8H               | 13.7             | 14.2 | 14.3 | 14.7 | 15.3 | 11.9           | 12.3 | 12.5 | 12.9 | 13.4 |
| 12H              | 13.7             | 14.1 | 14.3 | 14.7 | 15.3 | 11.9           | 12.3 | 12.5 | 12.8 | 13.4 |
| X=12H Y=4H       | 13.5             | 14.0 | 14.0 | 14.5 | 15.0 | 11.8           | 12.3 | 12.4 | 12.9 | 13.4 |
| 6H               | 13.7             | 14.1 | 14.2 | 14.6 | 15.2 | 11.9           | 12.3 | 12.5 | 12.8 | 13.4 |
| 8H               | 13.7             | 14.1 | 14.3 | 14.6 | 15.2 | 11.9           | 12.3 | 12.5 | 12.8 | 13.4 |

Calculate in accordance with CIE 190:2010

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

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 = 1.00 |      |      |      |      |      |      |      |      |
|--|------|-------|----------------|------|------|------|------|------|------|------|------|
| 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  | 0.73           | 0.82 | 0.87 | 0.91 | 0.97 | 1.00 | 1.03 | 1.06 | 1.08 |
|  | 0.30 |       | 0.67           | 0.76 | 0.82 | 0.86 | 0.92 | 0.96 | 0.99 | 1.03 | 1.05 |
|  | 0.20 |       | 0.63           | 0.72 | 0.78 | 0.82 | 0.89 | 0.93 | 0.96 | 1.00 | 1.03 |
| 0.50   | 0.50 | 0.20  | 0.71           | 0.80 | 0.85 | 0.89 | 0.93 | 0.97 | 0.99 | 1.01 | 1.03 |
|  | 0.30 |       | 0.66           | 0.75 | 0.80 | 0.84 | 0.90 | 0.93 | 0.96 | 0.99 | 1.01 |
|  | 0.20 |       | 0.62           | 0.71 | 0.77 | 0.81 | 0.87 | 0.91 | 0.93 | 0.97 | 0.99 |
| 0.30   | 0.50 | 0.20  | 0.70           | 0.78 | 0.83 | 0.86 | 0.90 | 0.93 | 0.95 | 0.98 | 0.99 |
|  | 0.30 |       | 0.65           | 0.74 | 0.79 | 0.82 | 0.87 | 0.91 | 0.93 | 0.96 | 0.98 |
|  | 0.20 |       | 0.62           | 0.70 | 0.76 | 0.80 | 0.85 | 0.88 | 0.91 | 0.94 | 0.96 |
| 0.00   | 0.00 | 0.00  | 0.60           | 0.68 | 0.73 | 0.77 | 0.81 | 0.84 | 0.87 | 0.89 | 0.91 |
| Rating: 32W 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 = 1.00 |      |      |      |      |      |      |      |      |
|--|------|-------|----------------|------|------|------|------|------|------|------|------|
| 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  | 0.74           | 0.60 | 0.50 | 0.43 | 0.34 | 0.28 | 0.24 | 0.18 | 0.15 |
|  | 0.30 |       | 0.62           | 0.51 | 0.44 | 0.38 | 0.31 | 0.26 | 0.22 | 0.17 | 0.14 |
|  | 0.20 |       | 0.53           | 0.45 | 0.39 | 0.34 | 0.28 | 0.24 | 0.20 | 0.16 | 0.13 |
| 0.50   | 0.50 | 0.20  | 0.71           | 0.56 | 0.47 | 0.40 | 0.32 | 0.30 | 0.22 | 0.17 | 0.14 |
|  | 0.30 |       | 0.60           | 0.49 | 0.42 | 0.36 | 0.29 | 0.24 | 0.21 | 0.16 | 0.13 |
|  | 0.20 |       | 0.52           | 0.43 | 0.37 | 0.33 | 0.27 | 0.22 | 0.19 | 0.15 | 0.13 |
| 0.30   | 0.50 | 0.20  | 0.68           | 0.54 | 0.45 | 0.38 | 0.30 | 0.24 | 0.20 | 0.16 | 0.13 |
|  | 0.30 |       | 0.58           | 0.47 | 0.40 | 0.35 | 0.27 | 0.23 | 0.19 | 0.15 | 0.12 |
|  | 0.20 |       | 0.51           | 0.42 | 0.36 | 0.32 | 0.25 | 0.21 | 0.18 | 0.14 | 0.12 |
| 0.00   | 0.00 | 0.00  | 0.38           | 0.31 | 0.25 | 0.22 | 0.17 | 0.14 | 0.12 | 0.09 | 0.07 |
| Rating: 32W 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 = 1.00 |      |      |      |      |      |      |      |      |  |
|--|------|-------|----------------|------|------|------|------|------|------|------|------|--|
| Room Reflectance   |      |       | Room Index(RI) |      |      |      |      |      |      |      |      |  |
| Ceiling  | Wall | Floor | 0.75           | 1.00 | 1.25 | 1.50 | 2.00 | 2.50 | 3.00 | 4.00 | 5.00 |  |
| 0.70   | 0.50 | 0.20  | 0.16           | 0.18 | 0.19 | 0.19 | 0.20 | 0.21 | 0.22 | 0.23 | 0.23 |  |
|  | 0.30 |       | 0.11           | 0.13 | 0.14 | 0.15 | 0.17 | 0.18 | 0.19 | 0.20 | 0.21 |  |
|  | 0.20 |       | 0.07           | 0.09 | 0.11 | 0.12 | 0.14 | 0.16 | 0.17 | 0.19 | 0.20 |  |
| 0.50   | 0.50 | 0.20  | 0.16           | 0.17 | 0.18 | 0.19 | 0.20 | 0.20 | 0.21 | 0.22 | 0.22 |  |
|  | 0.30 |       | 0.11           | 0.13 | 0.14 | 0.15 | 0.17 | 0.18 | 0.19 | 0.20 | 0.21 |  |
|  | 0.20 |       | 0.07           | 0.09 | 0.11 | 0.12 | 0.14 | 0.15 | 0.17 | 0.18 | 0.19 |  |
| 0.30   | 0.50 | 0.20  | 0.15           | 0.16 | 0.17 | 0.18 | 0.19 | 0.20 | 0.20 | 0.21 | 0.21 |  |
|  | 0.30 |       | 0.11           | 0.12 | 0.14 | 0.15 | 0.16 | 0.17 | 0.18 | 0.19 | 0.20 |  |
|  | 0.20 |       | 0.07           | 0.09 | 0.11 | 0.12 | 0.14 | 0.15 | 0.16 | 0.18 | 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: 32W 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      | 771.5                     | 0.7                | 0.7                    | 0.07                  | 0.07                      |
| 1.0-2.0      | 771.2                     | 2.2                | 3.0                    | 0.21                  | 0.27                      |
| 2.0-3.0      | 770.6                     | 3.7                | 6.6                    | 0.34                  | 0.62                      |
| 3.0-4.0      | 769.7                     | 5.2                | 11.8                   | 0.48                  | 1.09                      |
| 4.0-5.0      | 768.5                     | 6.6                | 18.4                   | 0.61                  | 1.71                      |
| 5.0-6.0      | 766.9                     | 8.1                | 26.5                   | 0.75                  | 2.45                      |
| 6.0-7.0      | 764.9                     | 9.5                | 36.0                   | 0.88                  | 3.33                      |
| 7.0-8.0      | 762.5                     | 10.9               | 46.9                   | 1.01                  | 4.34                      |
| 8.0-9.0      | 759.5                     | 12.3               | 59.2                   | 1.14                  | 5.48                      |
| 9.0-10.0     | 756.0                     | 13.7               | 72.9                   | 1.27                  | 6.75                      |
| 10.0-11.0    | 751.8                     | 15.0               | 87.9                   | 1.39                  | 8.14                      |
| 11.0-12.0    | 746.9                     | 16.3               | 104.2                  | 1.51                  | 9.66                      |
| 12.0-13.0    | 741.3                     | 17.6               | 121.8                  | 1.63                  | 11.29                     |
| 13.0-14.0    | 734.9                     | 18.8               | 140.6                  | 1.74                  | 13.03                     |
| 14.0-15.0    | 727.7                     | 20.0               | 160.6                  | 1.85                  | 14.88                     |
| 15.0-16.0    | 719.6                     | 21.1               | 181.7                  | 1.95                  | 16.84                     |
| 16.0-17.0    | 710.6                     | 22.1               | 203.8                  | 2.05                  | 18.89                     |
| 17.0-18.0    | 700.5                     | 23.1               | 226.9                  | 2.14                  | 21.03                     |
| 18.0-19.0    | 689.3                     | 24.0               | 250.9                  | 2.22                  | 23.25                     |
| 19.0-20.0    | 677.1                     | 24.8               | 275.7                  | 2.30                  | 25.55                     |
| 20.0-21.0    | 663.8                     | 25.5               | 301.2                  | 2.36                  | 27.91                     |
| 21.0-22.0    | 649.2                     | 26.1               | 327.3                  | 2.42                  | 30.33                     |
| 22.0-23.0    | 633.7                     | 26.6               | 353.9                  | 2.46                  | 32.79                     |
| 23.0-24.0    | 617.0                     | 27.0               | 380.9                  | 2.50                  | 35.29                     |
| 24.0-25.0    | 599.1                     | 27.2               | 408.1                  | 2.52                  | 37.82                     |
| 25.0-26.0    | 580.3                     | 27.4               | 435.5                  | 2.54                  | 40.35                     |
| 26.0-27.0    | 560.6                     | 27.4               | 462.9                  | 2.54                  | 42.90                     |
| 27.0-28.0    | 540.1                     | 27.3               | 490.3                  | 2.53                  | 45.43                     |
| 28.0-29.0    | 519.0                     | 27.2               | 517.4                  | 2.52                  | 47.95                     |
| 29.0-30.0    | 497.2                     | 26.8               | 544.3                  | 2.49                  | 50.43                     |
| 30.0-31.0    | 475.0                     | 26.4               | 570.7                  | 2.45                  | 52.88                     |
| 31.0-32.0    | 452.4                     | 25.9               | 596.6                  | 2.40                  | 55.28                     |
| 32.0-33.0    | 429.6                     | 25.3               | 622.0                  | 2.35                  | 57.63                     |
| 33.0-34.0    | 406.7                     | 24.6               | 646.6                  | 2.28                  | 59.91                     |
| 34.0-35.0    | 384.0                     | 23.8               | 670.4                  | 2.21                  | 62.12                     |
| 35.0-36.0    | 361.5                     | 23.0               | 693.4                  | 2.13                  | 64.25                     |

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

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    | 338.9                     | 22.1               | 715.5                  | 2.05                  | 66.30                     |
| 37.0-38.0    | 316.7                     | 21.1               | 736.7                  | 1.96                  | 68.26                     |
| 38.0-39.0    | 295.7                     | 20.2               | 756.9                  | 1.87                  | 70.13                     |
| 39.0-40.0    | 275.8                     | 19.2               | 776.1                  | 1.78                  | 71.91                     |
| 40.0-41.0    | 256.8                     | 18.3               | 794.4                  | 1.69                  | 73.61                     |
| 41.0-42.0    | 238.9                     | 17.4               | 811.8                  | 1.61                  | 75.22                     |
| 42.0-43.0    | 222.2                     | 16.5               | 828.2                  | 1.53                  | 76.74                     |
| 43.0-44.0    | 206.8                     | 15.6               | 843.8                  | 1.45                  | 78.19                     |
| 44.0-45.0    | 192.7                     | 14.8               | 858.6                  | 1.37                  | 79.56                     |
| 45.0-46.0    | 179.5                     | 14.0               | 872.7                  | 1.30                  | 80.86                     |
| 46.0-47.0    | 167.1                     | 13.3               | 886.0                  | 1.23                  | 82.09                     |
| 47.0-48.0    | 155.4                     | 12.6               | 898.5                  | 1.16                  | 83.26                     |
| 48.0-49.0    | 144.4                     | 11.9               | 910.4                  | 1.10                  | 84.36                     |
| 49.0-50.0    | 134.0                     | 11.2               | 921.6                  | 1.04                  | 85.39                     |
| 50.0-51.0    | 124.1                     | 10.5               | 932.1                  | 0.97                  | 86.37                     |
| 51.0-52.0    | 114.9                     | 9.9                | 941.9                  | 0.91                  | 87.28                     |
| 52.0-53.0    | 106.2                     | 9.2                | 951.2                  | 0.86                  | 88.14                     |
| 53.0-54.0    | 98.0                      | 8.6                | 959.8                  | 0.80                  | 88.94                     |
| 54.0-55.0    | 90.3                      | 8.1                | 967.9                  | 0.75                  | 89.68                     |
| 55.0-56.0    | 83.1                      | 7.5                | 975.4                  | 0.70                  | 90.38                     |
| 56.0-57.0    | 76.3                      | 7.0                | 982.4                  | 0.65                  | 91.03                     |
| 57.0-58.0    | 70.0                      | 6.5                | 988.9                  | 0.60                  | 91.63                     |
| 58.0-59.0    | 64.3                      | 6.0                | 994.9                  | 0.56                  | 92.18                     |
| 59.0-60.0    | 59.0                      | 5.6                | 1000.4                 | 0.52                  | 92.70                     |
| 60.0-61.0    | 54.0                      | 5.2                | 1005.6                 | 0.48                  | 93.18                     |
| 61.0-62.0    | 49.6                      | 4.8                | 1010.4                 | 0.44                  | 93.62                     |
| 62.0-63.0    | 45.4                      | 4.4                | 1014.8                 | 0.41                  | 94.03                     |
| 63.0-64.0    | 41.6                      | 4.1                | 1018.9                 | 0.38                  | 94.41                     |
| 64.0-65.0    | 38.3                      | 3.8                | 1022.6                 | 0.35                  | 94.76                     |
| 65.0-66.0    | 35.1                      | 3.5                | 1026.2                 | 0.32                  | 95.08                     |
| 66.0-67.0    | 32.2                      | 3.2                | 1029.4                 | 0.30                  | 95.38                     |
| 67.0-68.0    | 29.5                      | 3.0                | 1032.4                 | 0.28                  | 95.66                     |
| 68.0-69.0    | 27.0                      | 2.8                | 1035.1                 | 0.26                  | 95.92                     |
| 69.0-70.0    | 24.6                      | 2.5                | 1037.7                 | 0.23                  | 96.15                     |
| 70.0-71.0    | 22.4                      | 2.3                | 1040.0                 | 0.21                  | 96.36                     |
| 71.0-72.0    | 20.2                      | 2.1                | 1042.1                 | 0.19                  | 96.56                     |

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

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    | 18.2                      | 1.9                | 1044.0                 | 0.18                  | 96.74                     |
| 73.0-74.0    | 16.3                      | 1.7                | 1045.7                 | 0.16                  | 96.89                     |
| 74.0-75.0    | 14.7                      | 1.6                | 1047.3                 | 0.14                  | 97.04                     |
| 75.0-76.0    | 13.1                      | 1.4                | 1048.7                 | 0.13                  | 97.17                     |
| 76.0-77.0    | 11.7                      | 1.2                | 1049.9                 | 0.12                  | 97.28                     |
| 77.0-78.0    | 10.3                      | 1.1                | 1051.0                 | 0.10                  | 97.39                     |
| 78.0-79.0    | 9.1                       | 1.0                | 1052.0                 | 0.09                  | 97.48                     |
| 79.0-80.0    | 7.9                       | 0.9                | 1052.8                 | 0.08                  | 97.55                     |
| 80.0-81.0    | 6.9                       | 0.7                | 1053.6                 | 0.07                  | 97.62                     |
| 81.0-82.0    | 6.0                       | 0.6                | 1054.2                 | 0.06                  | 97.68                     |
| 82.0-83.0    | 5.1                       | 0.6                | 1054.8                 | 0.05                  | 97.74                     |
| 83.0-84.0    | 4.4                       | 0.5                | 1055.3                 | 0.04                  | 97.78                     |
| 84.0-85.0    | 3.8                       | 0.4                | 1055.7                 | 0.04                  | 97.82                     |
| 85.0-86.0    | 3.4                       | 0.4                | 1056.1                 | 0.03                  | 97.85                     |
| 86.0-87.0    | 3.1                       | 0.3                | 1056.4                 | 0.03                  | 97.88                     |
| 87.0-88.0    | 2.9                       | 0.3                | 1056.7                 | 0.03                  | 97.91                     |
| 88.0-89.0    | 2.7                       | 0.3                | 1057.0                 | 0.03                  | 97.94                     |
| 89.0-90.0    | 2.6                       | 0.3                | 1057.3                 | 0.03                  | 97.97                     |
| 90.0-91.0    | 2.5                       | 0.3                | 1057.6                 | 0.03                  | 97.99                     |
| 91.0-92.0    | 2.5                       | 0.3                | 1057.8                 | 0.03                  | 98.02                     |
| 92.0-93.0    | 2.5                       | 0.3                | 1058.1                 | 0.02                  | 98.04                     |
| 93.0-94.0    | 2.4                       | 0.3                | 1058.4                 | 0.02                  | 98.07                     |
| 94.0-95.0    | 2.4                       | 0.3                | 1058.6                 | 0.02                  | 98.09                     |
| 95.0-96.0    | 2.4                       | 0.3                | 1058.9                 | 0.02                  | 98.12                     |
| 96.0-97.0    | 2.4                       | 0.3                | 1059.2                 | 0.02                  | 98.14                     |
| 97.0-98.0    | 2.4                       | 0.3                | 1059.4                 | 0.02                  | 98.16                     |
| 98.0-99.0    | 2.3                       | 0.3                | 1059.7                 | 0.02                  | 98.19                     |
| 99.0-100.0   | 2.3                       | 0.2                | 1059.9                 | 0.02                  | 98.21                     |
| 100.0-101.0  | 2.3                       | 0.2                | 1060.2                 | 0.02                  | 98.23                     |
| 101.0-102.0  | 2.3                       | 0.2                | 1060.4                 | 0.02                  | 98.26                     |
| 102.0-103.0  | 2.2                       | 0.2                | 1060.6                 | 0.02                  | 98.28                     |
| 103.0-104.0  | 2.2                       | 0.2                | 1060.9                 | 0.02                  | 98.30                     |
| 104.0-105.0  | 2.2                       | 0.2                | 1061.1                 | 0.02                  | 98.32                     |
| 105.0-106.0  | 2.2                       | 0.2                | 1061.3                 | 0.02                  | 98.34                     |
| 106.0-107.0  | 2.2                       | 0.2                | 1061.6                 | 0.02                  | 98.36                     |
| 107.0-108.0  | 2.3                       | 0.2                | 1061.8                 | 0.02                  | 98.39                     |

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

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  | 2.3                       | 0.2                | 1062.1                 | 0.02                  | 98.41                     |
| 109.0-110.0  | 2.4                       | 0.2                | 1062.3                 | 0.02                  | 98.43                     |
| 110.0-111.0  | 2.4                       | 0.2                | 1062.5                 | 0.02                  | 98.45                     |
| 111.0-112.0  | 2.4                       | 0.2                | 1062.8                 | 0.02                  | 98.48                     |
| 112.0-113.0  | 2.5                       | 0.3                | 1063.0                 | 0.02                  | 98.50                     |
| 113.0-114.0  | 2.5                       | 0.3                | 1063.3                 | 0.02                  | 98.52                     |
| 114.0-115.0  | 2.6                       | 0.3                | 1063.6                 | 0.02                  | 98.55                     |
| 115.0-116.0  | 2.6                       | 0.3                | 1063.8                 | 0.02                  | 98.57                     |
| 116.0-117.0  | 2.7                       | 0.3                | 1064.1                 | 0.02                  | 98.60                     |
| 117.0-118.0  | 2.8                       | 0.3                | 1064.4                 | 0.02                  | 98.62                     |
| 118.0-119.0  | 2.8                       | 0.3                | 1064.6                 | 0.03                  | 98.65                     |
| 119.0-120.0  | 2.9                       | 0.3                | 1064.9                 | 0.03                  | 98.67                     |
| 120.0-121.0  | 3.0                       | 0.3                | 1065.2                 | 0.03                  | 98.70                     |
| 121.0-122.0  | 3.0                       | 0.3                | 1065.5                 | 0.03                  | 98.73                     |
| 122.0-123.0  | 3.1                       | 0.3                | 1065.8                 | 0.03                  | 98.75                     |
| 123.0-124.0  | 3.2                       | 0.3                | 1066.0                 | 0.03                  | 98.78                     |
| 124.0-125.0  | 3.2                       | 0.3                | 1066.3                 | 0.03                  | 98.81                     |
| 125.0-126.0  | 3.3                       | 0.3                | 1066.6                 | 0.03                  | 98.83                     |
| 126.0-127.0  | 3.4                       | 0.3                | 1066.9                 | 0.03                  | 98.86                     |
| 127.0-128.0  | 3.5                       | 0.3                | 1067.2                 | 0.03                  | 98.89                     |
| 128.0-129.0  | 3.5                       | 0.3                | 1067.5                 | 0.03                  | 98.92                     |
| 129.0-130.0  | 3.6                       | 0.3                | 1067.8                 | 0.03                  | 98.95                     |
| 130.0-131.0  | 3.7                       | 0.3                | 1068.2                 | 0.03                  | 98.97                     |
| 131.0-132.0  | 3.8                       | 0.3                | 1068.5                 | 0.03                  | 99.00                     |
| 132.0-133.0  | 3.9                       | 0.3                | 1068.8                 | 0.03                  | 99.03                     |
| 133.0-134.0  | 4.0                       | 0.3                | 1069.1                 | 0.03                  | 99.06                     |
| 134.0-135.0  | 4.1                       | 0.3                | 1069.4                 | 0.03                  | 99.09                     |
| 135.0-136.0  | 4.2                       | 0.3                | 1069.7                 | 0.03                  | 99.12                     |
| 136.0-137.0  | 4.2                       | 0.3                | 1070.1                 | 0.03                  | 99.15                     |
| 137.0-138.0  | 4.3                       | 0.3                | 1070.4                 | 0.03                  | 99.18                     |
| 138.0-139.0  | 4.4                       | 0.3                | 1070.7                 | 0.03                  | 99.21                     |
| 139.0-140.0  | 4.5                       | 0.3                | 1071.0                 | 0.03                  | 99.24                     |
| 140.0-141.0  | 4.6                       | 0.3                | 1071.3                 | 0.03                  | 99.27                     |
| 141.0-142.0  | 4.7                       | 0.3                | 1071.7                 | 0.03                  | 99.30                     |
| 142.0-143.0  | 4.8                       | 0.3                | 1072.0                 | 0.03                  | 99.33                     |
| 143.0-144.0  | 4.8                       | 0.3                | 1072.3                 | 0.03                  | 99.36                     |

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

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  | 4.9                       | 0.3                | 1072.6                 | 0.03                  | 99.39                     |
| 145.0-146.0  | 5.0                       | 0.3                | 1072.9                 | 0.03                  | 99.42                     |
| 146.0-147.0  | 5.1                       | 0.3                | 1073.2                 | 0.03                  | 99.44                     |
| 147.0-148.0  | 5.2                       | 0.3                | 1073.5                 | 0.03                  | 99.47                     |
| 148.0-149.0  | 5.2                       | 0.3                | 1073.8                 | 0.03                  | 99.50                     |
| 149.0-150.0  | 5.3                       | 0.3                | 1074.1                 | 0.03                  | 99.53                     |
| 150.0-151.0  | 5.4                       | 0.3                | 1074.4                 | 0.03                  | 99.55                     |
| 151.0-152.0  | 5.5                       | 0.3                | 1074.7                 | 0.03                  | 99.58                     |
| 152.0-153.0  | 5.6                       | 0.3                | 1075.0                 | 0.03                  | 99.61                     |
| 153.0-154.0  | 5.6                       | 0.3                | 1075.3                 | 0.03                  | 99.63                     |
| 154.0-155.0  | 5.7                       | 0.3                | 1075.5                 | 0.02                  | 99.66                     |
| 155.0-156.0  | 5.8                       | 0.3                | 1075.8                 | 0.02                  | 99.68                     |
| 156.0-157.0  | 5.8                       | 0.3                | 1076.0                 | 0.02                  | 99.70                     |
| 157.0-158.0  | 5.9                       | 0.2                | 1076.3                 | 0.02                  | 99.73                     |
| 158.0-159.0  | 6.0                       | 0.2                | 1076.5                 | 0.02                  | 99.75                     |
| 159.0-160.0  | 6.1                       | 0.2                | 1076.8                 | 0.02                  | 99.77                     |
| 160.0-161.0  | 6.1                       | 0.2                | 1077.0                 | 0.02                  | 99.79                     |
| 161.0-162.0  | 6.2                       | 0.2                | 1077.2                 | 0.02                  | 99.81                     |
| 162.0-163.0  | 6.3                       | 0.2                | 1077.4                 | 0.02                  | 99.83                     |
| 163.0-164.0  | 6.3                       | 0.2                | 1077.6                 | 0.02                  | 99.85                     |
| 164.0-165.0  | 6.4                       | 0.2                | 1077.8                 | 0.02                  | 99.87                     |
| 165.0-166.0  | 6.5                       | 0.2                | 1078.0                 | 0.02                  | 99.88                     |
| 166.0-167.0  | 6.5                       | 0.2                | 1078.1                 | 0.02                  | 99.90                     |
| 167.0-168.0  | 6.6                       | 0.2                | 1078.3                 | 0.01                  | 99.91                     |
| 168.0-169.0  | 6.6                       | 0.1                | 1078.4                 | 0.01                  | 99.93                     |
| 169.0-170.0  | 6.7                       | 0.1                | 1078.6                 | 0.01                  | 99.94                     |
| 170.0-171.0  | 6.7                       | 0.1                | 1078.7                 | 0.01                  | 99.95                     |
| 171.0-172.0  | 6.8                       | 0.1                | 1078.8                 | 0.01                  | 99.96                     |
| 172.0-173.0  | 6.9                       | 0.1                | 1078.9                 | 0.01                  | 99.97                     |
| 173.0-174.0  | 6.9                       | 0.1                | 1079.0                 | 0.01                  | 99.98                     |
| 174.0-175.0  | 6.9                       | 0.1                | 1079.1                 | 0.01                  | 99.98                     |
| 175.0-176.0  | 7.0                       | 0.1                | 1079.1                 | 0.01                  | 99.99                     |
| 176.0-177.0  | 7.0                       | 0.0                | 1079.2                 | 0.00                  | 99.99                     |
| 177.0-178.0  | 7.0                       | 0.0                | 1079.2                 | 0.00                  | 100.00                    |
| 178.0-179.0  | 7.1                       | 0.0                | 1079.2                 | 0.00                  | 100.00                    |
| 179.0-180.0  | 7.1                       | 0.0                | 1079.2                 | 0.00                  | 100.00                    |

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

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