

Report No.: 6

Test Time: 2018/7/6 09:19

## Luminaire Property

Luminaire Manufacturer: Havit Commercial

Luminaire Description: HCP-8020704 + HCP-8030704 (3000K)

Voltage: 220 V

Current: 0.038 A

Power: 7.47 W

Power Factor: 0.875

## Photometric Results

CIE Class: Direct

Measurement Flux: 708.1 lm

Downward Ratio: 100%

Horizontal Diffuse Angle(50%): H48

Vertical Diffuse Angle(50%): V47.7

Luminaire Efficacy Rating (LER): 94.84

Max. Intensity: 719.6 cd

S/MH(C0/C180): 0.75

Total Rated Lamp Lumens: 708.1 lm

Efficiency: 100%

Upward Ratio: 0%

Central Intensity: 706.46 cd

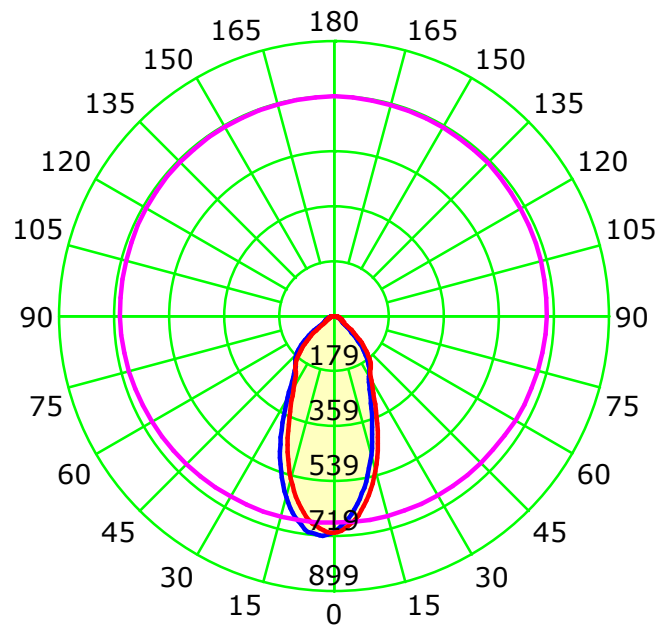
Pos of Max. Intensity: H180 V3

S/MH(C90/C270): 0.74

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd

Average Diffuse Angle(50%): 47.7°

— C0-C180 — C90-C270 — G3

C Plane (°):0.0-360.0: 45.0

Test Lab: Inventfine instruments

Test Type: TYPE C

Temperature: 26

Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0

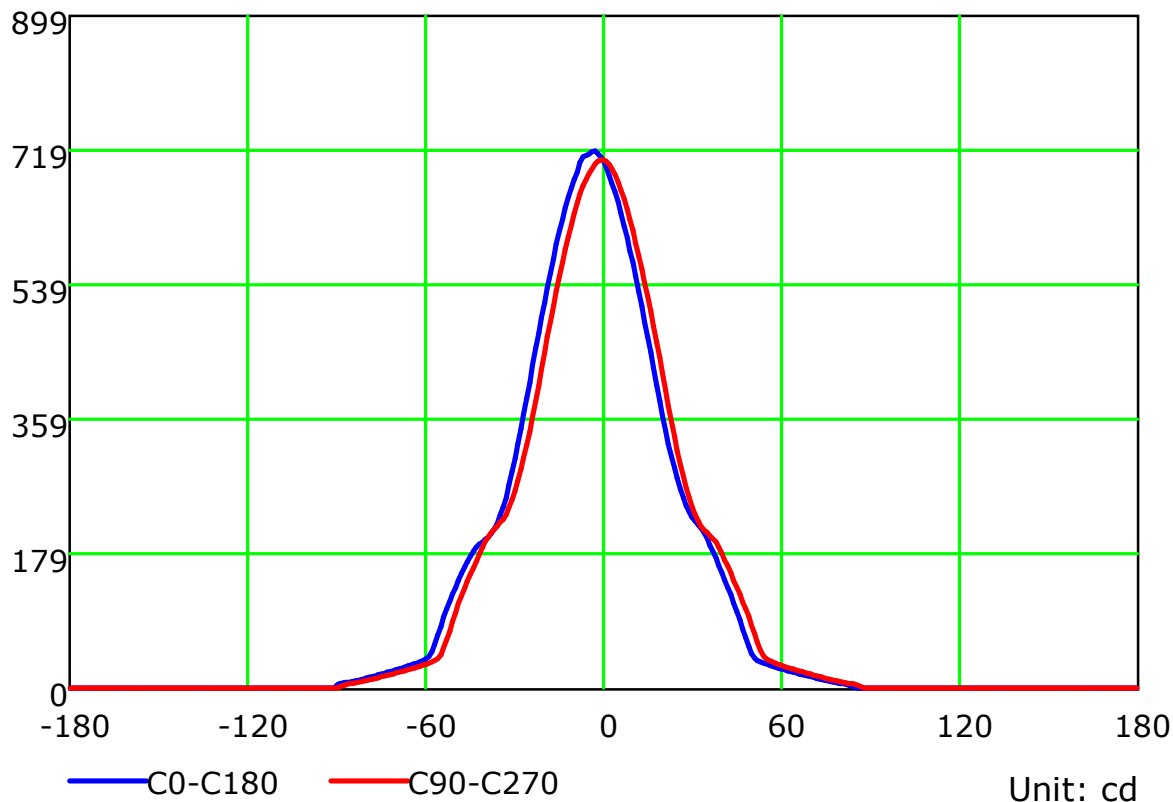
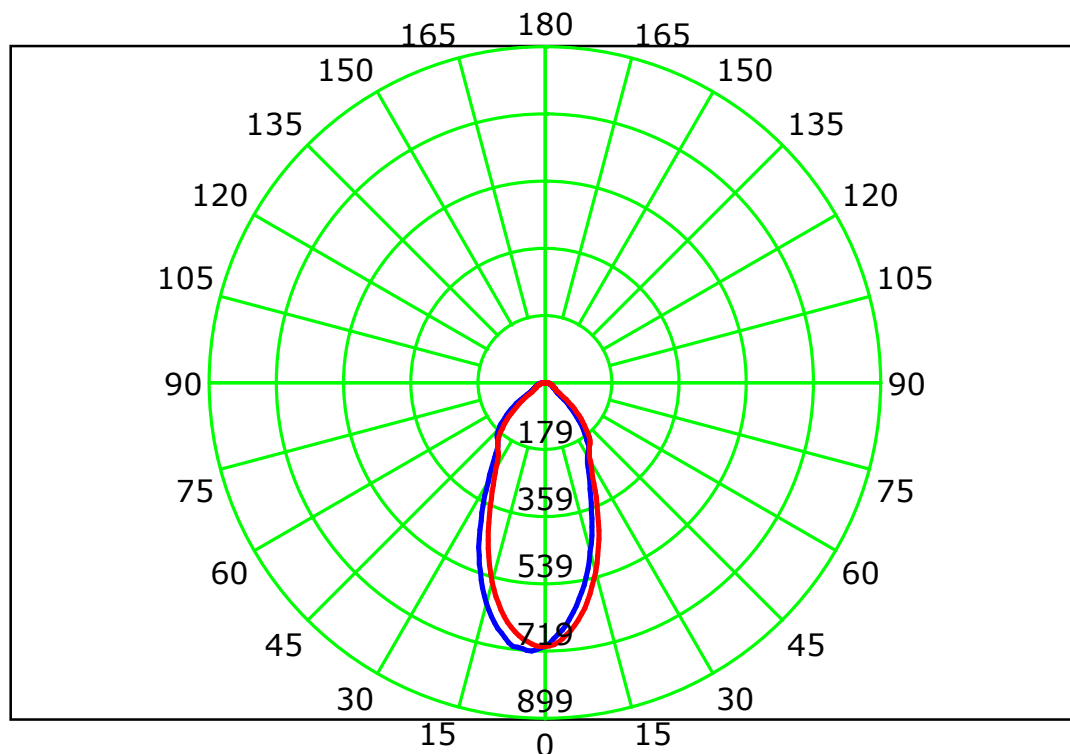
Test Device: GPM-1800B

Distance: 8.551 m

Humidity: 58

Inspector:

## Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 45.0  
Test Lab: Inventfine instruments  
Test Type: TYPE C  
Temperature: 26  
Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.551 m  
Humidity: 58  
Inspector:

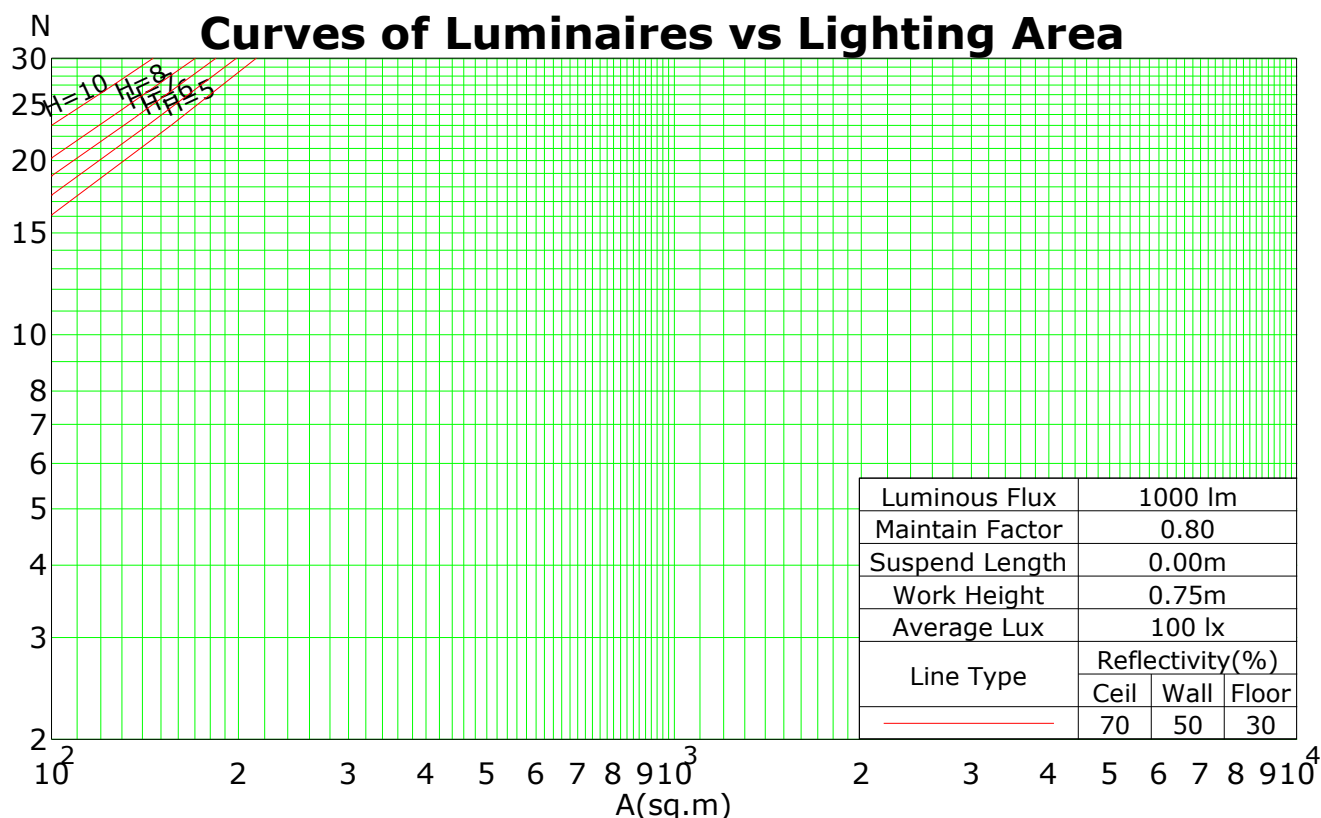
## Coefficients Of Utilization - Zonal Cavity Method

|     |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 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 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1   | 112      | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98  | 98  | 96  | 95  | 95  | 93  | 92  | 90  |
| 2   | 105      | 99  | 93  | 89  | 102 | 97  | 92  | 88  | 93  | 90  | 86  | 90  | 87  | 84  | 87  | 85  | 83  | 81  |
| 3   | 98       | 90  | 84  | 79  | 96  | 89  | 83  | 78  | 86  | 81  | 77  | 83  | 79  | 76  | 81  | 77  | 75  | 73  |
| 4   | 92       | 83  | 76  | 71  | 90  | 81  | 75  | 70  | 79  | 74  | 69  | 77  | 72  | 69  | 75  | 71  | 68  | 66  |
| 5   | 86       | 76  | 69  | 64  | 84  | 75  | 69  | 64  | 73  | 67  | 63  | 71  | 66  | 62  | 70  | 65  | 62  | 60  |
| 6   | 81       | 70  | 63  | 58  | 79  | 70  | 63  | 58  | 68  | 62  | 58  | 66  | 61  | 57  | 65  | 60  | 57  | 55  |
| 7   | 76       | 65  | 58  | 53  | 75  | 65  | 58  | 53  | 63  | 57  | 53  | 62  | 57  | 53  | 61  | 56  | 52  | 51  |
| 8   | 72       | 61  | 54  | 49  | 71  | 60  | 54  | 49  | 59  | 53  | 49  | 58  | 53  | 49  | 57  | 52  | 49  | 47  |
| 9   | 68       | 57  | 50  | 46  | 67  | 57  | 50  | 46  | 56  | 50  | 46  | 55  | 49  | 45  | 54  | 49  | 45  | 44  |
| 10  | 65       | 54  | 47  | 43  | 64  | 53  | 47  | 43  | 52  | 47  | 43  | 52  | 46  | 42  | 51  | 46  | 42  | 41  |

Spacing Criteria (0-180): 0.75

Spacing Criteria (90-270): 0.74

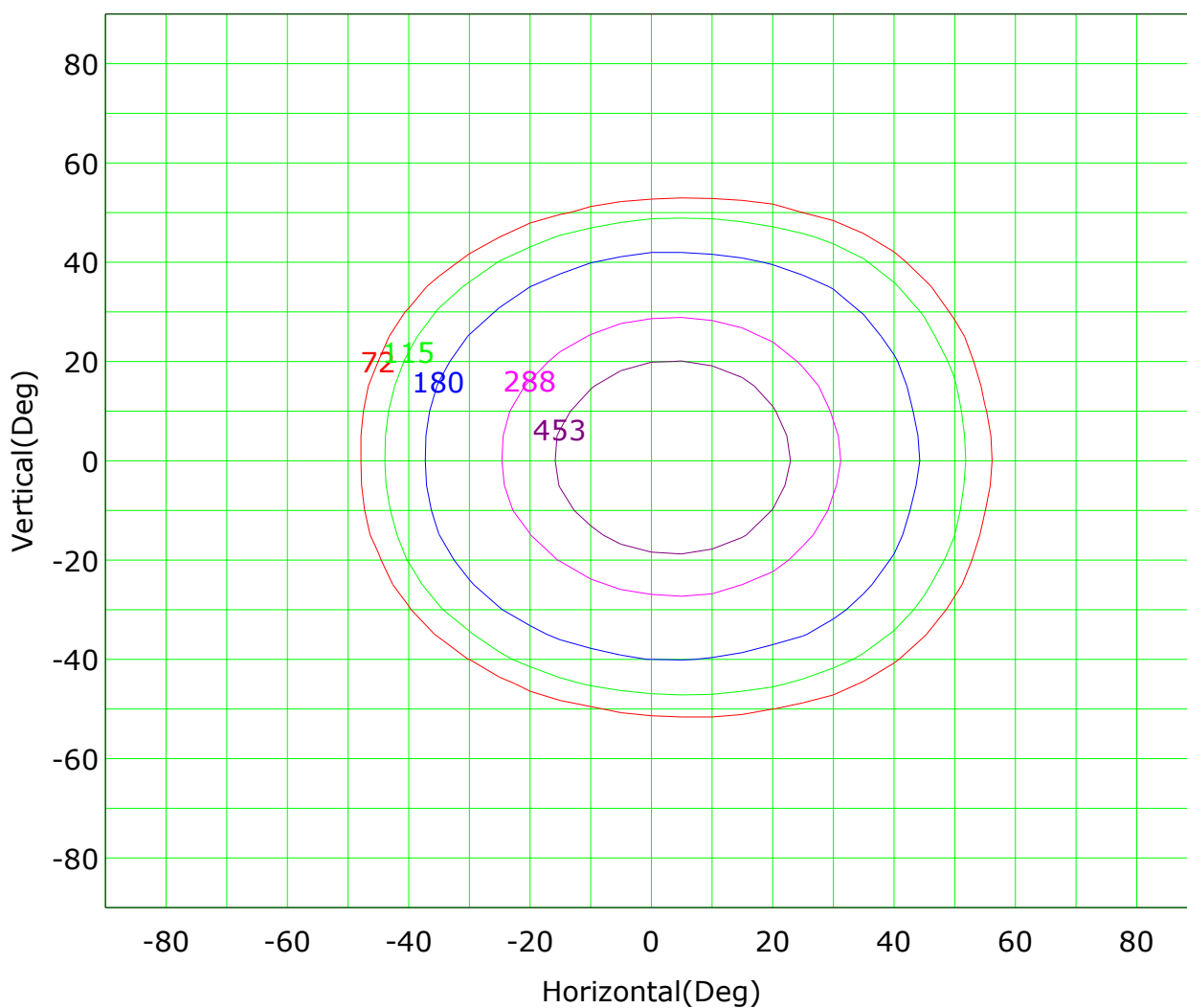
Spacing Criteria (Diagonal): 0.80



C Plane (°):0.0-360.0: 45.0  
Test Lab: Inventfine instruments  
Test Type: TYPE C  
Temperature: 26  
Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.551 m  
Humidity: 58  
Inspector:

## Isocandela (rectangle)



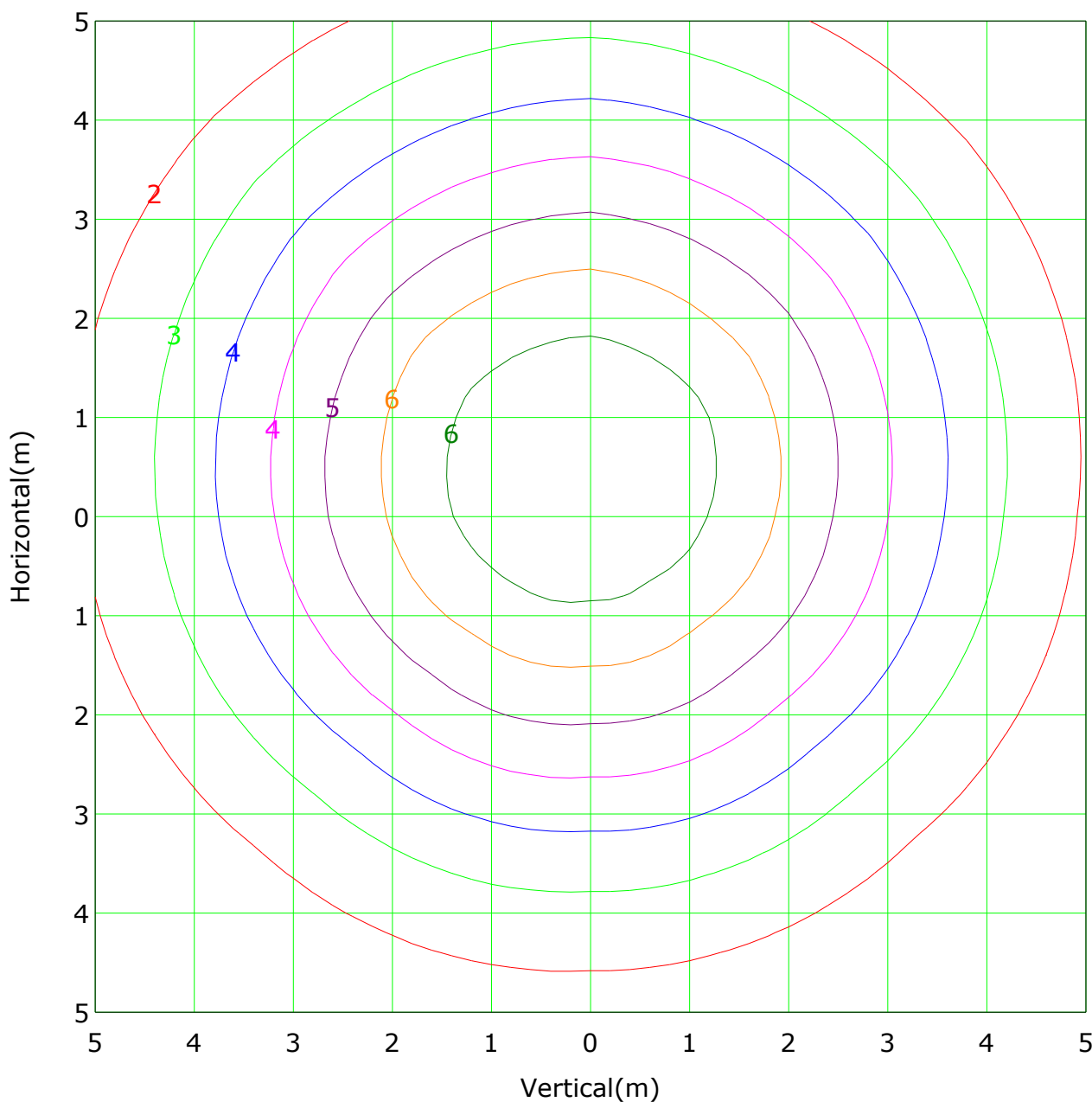
Imax (100%): 720 cd

|                |                |
|----------------|----------------|
| ( 10%): 72 cd  | ( 16%): 115 cd |
| ( 25%): 180 cd | ( 40%): 288 cd |
| ( 63%): 453 cd | (100%): 720 cd |

C Plane (°):0.0-360.0: 45.0  
Test Lab: Inventfine instruments  
Test Type: TYPE C  
Temperature: 26  
Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.551 m  
Humidity: 58  
Inspector:

## IsoLux Plot



|   |                 |
|---|-----------------|
| Mounting Height: 10.0m    Max Lux(100%): 7.2 lx |                 |
| ( 30%): 2.1 lx                                  | ( 40%): 2.9 lx  |
| ( 50%): 3.6 lx                                  | ( 60%): 4.3 lx  |
| ( 70%): 5.0 lx                                  | ( 80%): 5.7 lx  |
| ( 90%): 6.4 lx                                  | (100%): 7.2 lx  |
| (120%): 8.6 lx                                  | (150%): 10.7 lx |

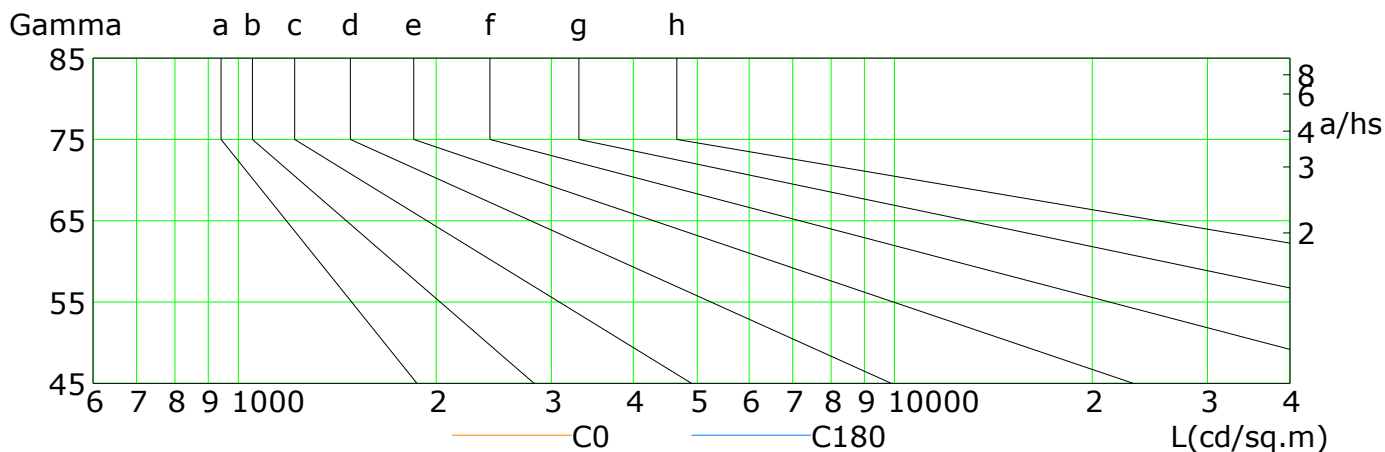
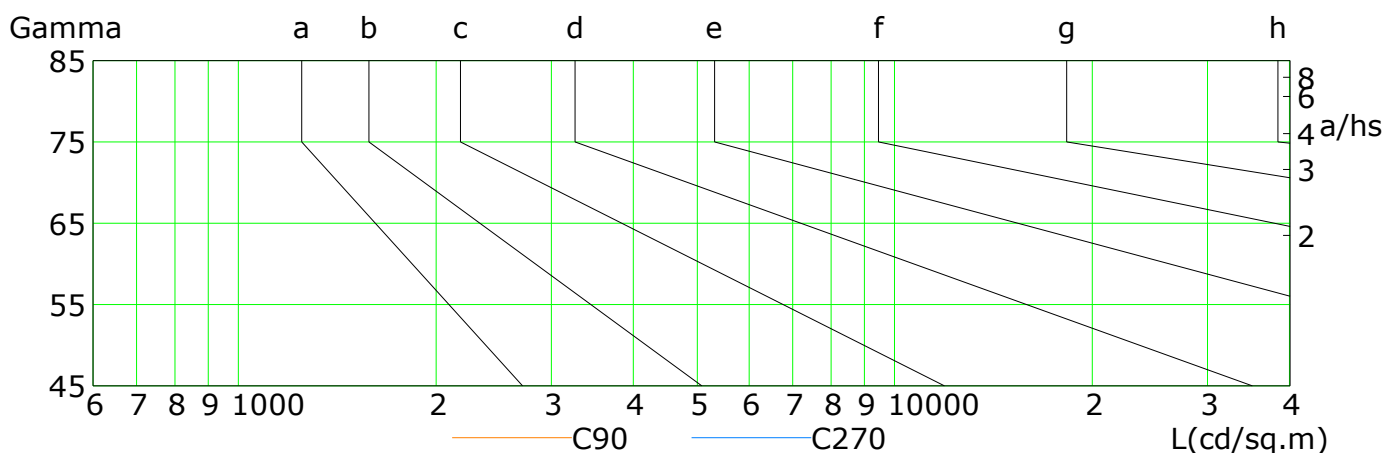
C Plane (°):0.0-360.0: 45.0  
Test Lab: Inventfine instruments  
Test Type: TYPE C  
Temperature: 26  
Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.551 m  
Humidity: 58  
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

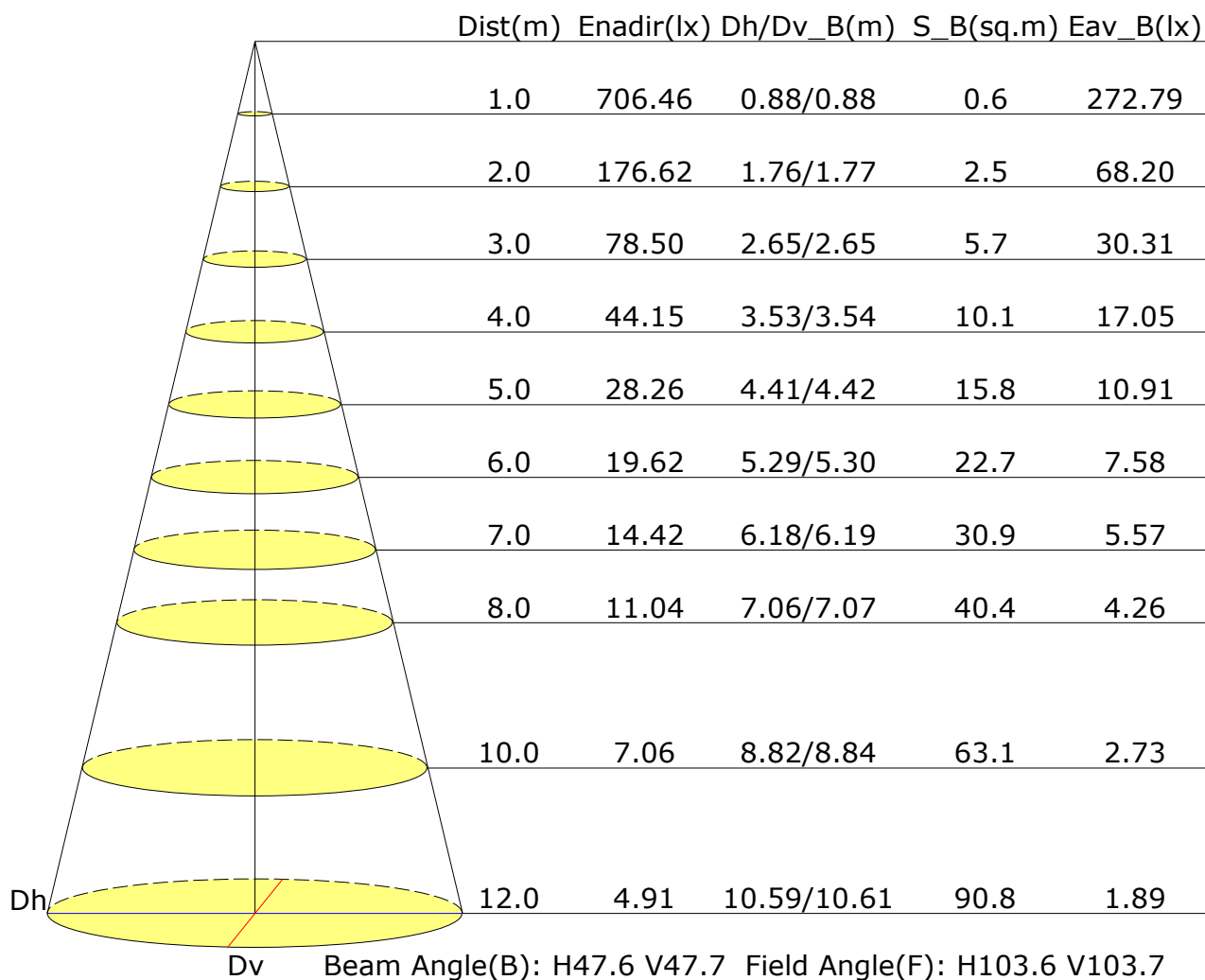


| L(cd/sq.m) | G45 | G50 | G55 | G60 | G65 | G70 | G75 | G80 | G85 |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| C0         | 103 | 47  | 33  | 26  | 21  | 16  | 11  | 7   | 1   |
| C90        | 136 | 85  | 39  | 31  | 24  | 19  | 14  | 9   | 5   |
| C180       | 177 | 135 | 83  | 39  | 31  | 25  | 19  | 14  | 9   |
| C270       | 153 | 102 | 45  | 32  | 26  | 21  | 16  | 11  | 7   |

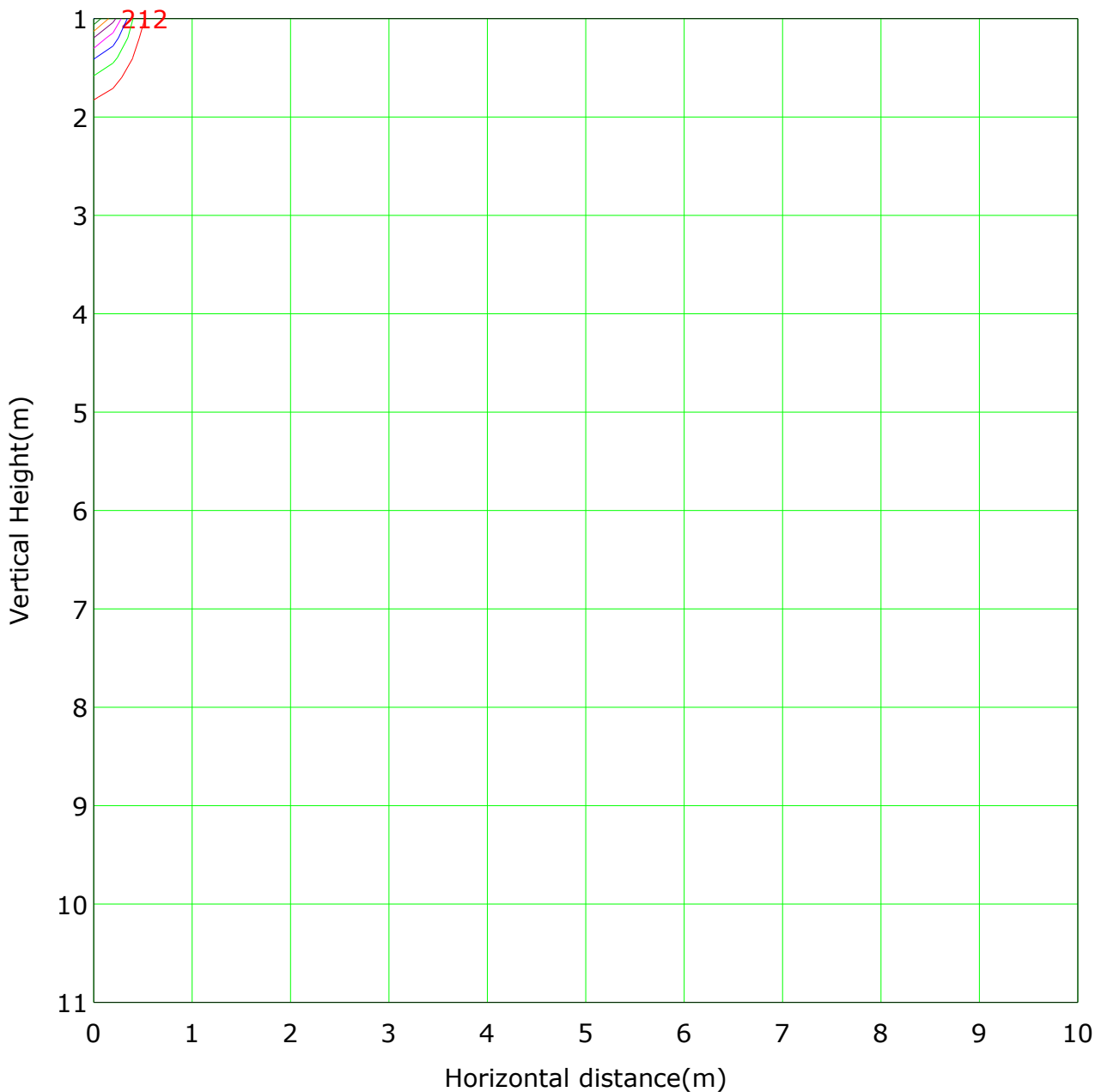
C Plane (°):0.0-360.0: 45.0  
Test Lab: Inventfine instruments  
Test Type: TYPE C  
Temperature: 26  
Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.551 m  
Humidity: 58  
Inspector:

## Illuminance at a Distance



## Vertical IsoLux Plot



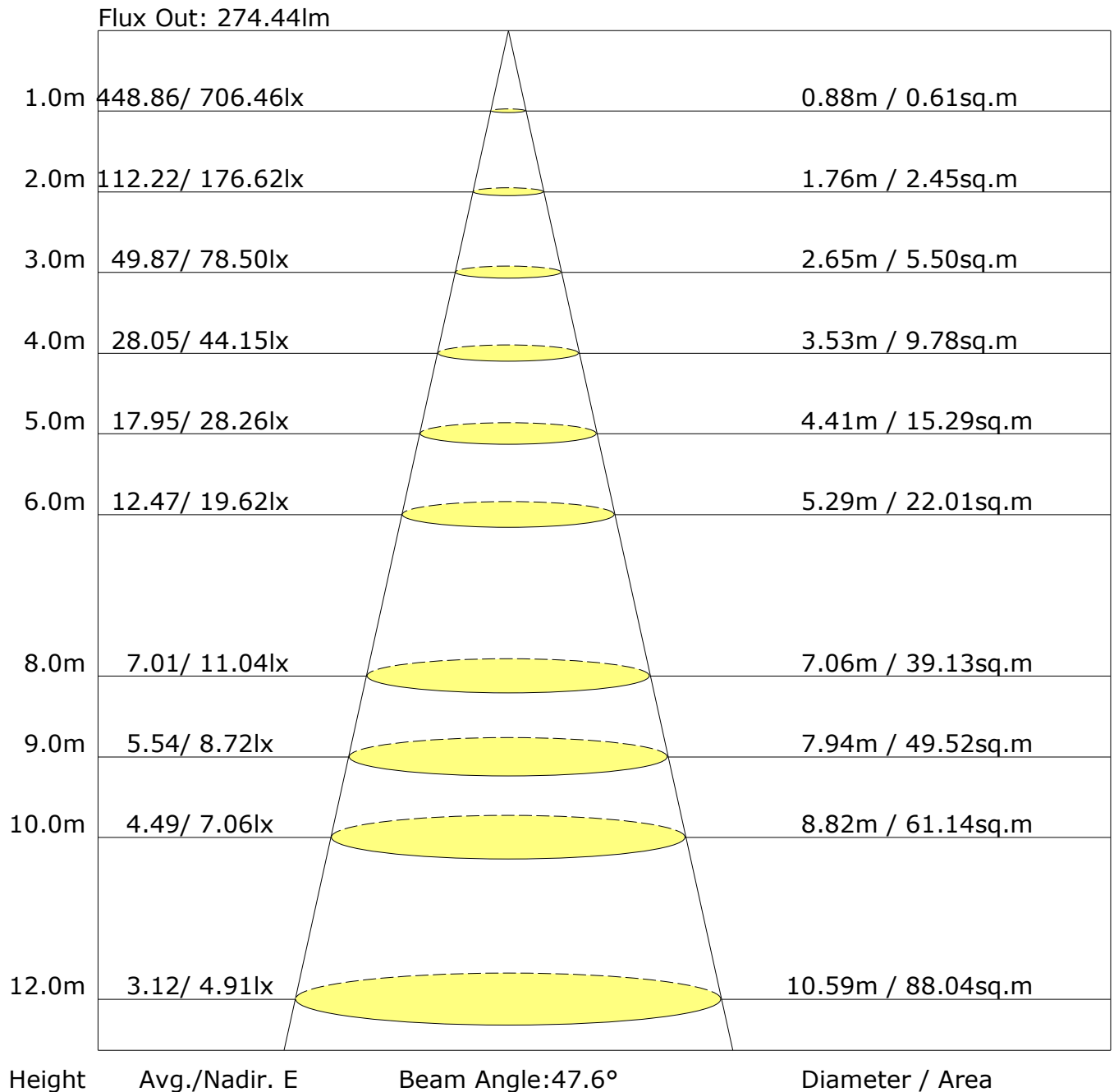
|                  |                   |                   |
|------------------|-------------------|-------------------|
| Lowest(m): 1.0m  | Highest(m): 11.0m | Max Lux: 706.5 lx |
| ( 30%): 211.9 lx | ( 40%): 282.6 lx  |                   |
| ( 50%): 353.2 lx | ( 60%): 423.9 lx  |                   |
| ( 70%): 494.5 lx | ( 80%): 565.2 lx  |                   |
| ( 90%): 635.8 lx | (100%): 706.5 lx  |                   |
| (120%): 847.8 lx | (150%): 1059.7 lx |                   |

C Plane (°):0.0-360.0: 45.0  
Test Lab: Inventfine instruments  
Test Type: TYPE C  
Temperature: 26  
Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.551 m  
Humidity: 58  
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  | -1.\$            | -1.\$ | -1.\$ | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$ | -1.\$ | -1.\$ |
| 3H   | -1.\$            | -1.\$ | -1.\$ | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$ | -1.\$ | -1.\$ |
| 4H   | -1.\$            | -1.\$ | -1.\$ | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$ | -1.\$ | -1.\$ |
| 6H   | -1.\$            | -1.\$ | -1.\$ | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$ | -1.\$ | -1.\$ |
| 8H   | -1.\$            | -1.\$ | -1.\$ | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$ | -1.\$ | -1.\$ |
| 12H  | -1.\$            | -1.\$ | -1.\$ | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$ | -1.\$ | -1.\$ |
| X=4H Y=2H  | -1.\$            | -1.\$ | -1.\$ | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$ | -1.\$ | -1.\$ |
| 3H   | -1.\$            | -1.\$ | -1.\$ | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$ | -1.\$ | -1.\$ |
| 4H   | -1.\$            | -1.\$ | -1.\$ | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$ | -1.\$ | -1.\$ |
| 6H   | -1.\$            | -1.\$ | -1.\$ | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$ | -1.\$ | -1.\$ |
| 8H   | -1.\$            | -1.\$ | -1.\$ | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$ | -1.\$ | -1.\$ |
| 12H  | -1.\$            | -1.\$ | -1.\$ | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$ | -1.\$ | -1.\$ |
| X=8H Y=4H  | -1.\$            | -1.\$ | -1.\$ | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$ | -1.\$ | -1.\$ |
| 6H   | -1.\$            | -1.\$ | -1.\$ | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$ | -1.\$ | -1.\$ |
| 8H   | -1.\$            | -1.\$ | -1.\$ | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$ | -1.\$ | -1.\$ |
| 12H  | -1.\$            | -1.\$ | -1.\$ | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$ | -1.\$ | -1.\$ |
| X=12H Y=4H   | -1.\$            | -1.\$ | -1.\$ | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$ | -1.\$ | -1.\$ |
| 6H   | -1.\$            | -1.\$ | -1.\$ | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$ | -1.\$ | -1.\$ |
| 8H   | -1.\$            | -1.\$ | -1.\$ | -1.\$ | -1.\$ | -1.\$          | -1.\$ | -1.\$ | -1.\$ | -1.\$ |
| Variations with the observer position at spacings: |                  |       |       |       |       |                |       |       |       |       |
| S=1.0H   | -1.\$/-1.\$      |       |       |       |       | -1.\$/-1.\$    |       |       |       |       |
| S=1.5H   | -1.\$/-1.\$      |       |       |       |       | -1.\$/-1.\$    |       |       |       |       |
| S=2.0H   | -1.\$/-1.\$      |       |       |       |       | -1.\$/-1.\$    |       |       |       |       |

Calculate in accordance with CIE Pub.117. The table is revised with  $708\text{lm}$  ( $8\log(F/F_0) = -1.2$ ).

## Candlepower Table

Unit: cd

| G\C   | C0.0  | C45.0 | C90.0 | C135.0 | C180.0 | C225.0 | C270.0 | C315.0 | C360.0 |  |
|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--|
| G0.0  | 706.5 | 706.7 | 707.5 | 707.8  | 706.5  | 706.7  | 707.5  | 707.8  | 706.5  |  |
| G1.0  | 697.8 | 699.4 | 705.5 | 710.5  | 710.8  | 710.4  | 707.6  | 700.5  | 697.8  |  |
| G2.0  | 686.0 | 688.8 | 701.4 | 710.7  | 715.5  | 713.1  | 705.8  | 691.7  | 686.0  |  |
| G3.0  | 675.5 | 677.8 | 695.4 | 710.2  | 719.6  | 714.5  | 701.7  | 683.8  | 675.5  |  |
| G4.0  | 663.9 | 666.8 | 687.6 | 708.0  | 718.5  | 714.0  | 695.6  | 675.2  | 663.9  |  |
| G5.0  | 650.7 | 653.9 | 677.6 | 703.9  | 715.3  | 711.8  | 688.7  | 663.9  | 650.7  |  |
| G6.0  | 636.0 | 640.9 | 666.9 | 697.8  | 712.8  | 708.8  | 681.5  | 651.4  | 636.0  |  |
| G7.0  | 619.3 | 625.6 | 655.5 | 690.6  | 711.3  | 703.7  | 673.1  | 635.8  | 619.3  |  |
| G8.0  | 603.6 | 608.3 | 641.0 | 682.8  | 704.1  | 695.6  | 662.0  | 620.8  | 603.6  |  |
| G9.0  | 585.2 | 590.2 | 627.7 | 672.5  | 690.6  | 685.4  | 649.8  | 606.3  | 585.2  |  |
| G10.0 | 569.8 | 574.5 | 612.9 | 660.1  | 680.7  | 675.3  | 635.3  | 590.4  | 569.8  |  |
| G11.0 | 551.8 | 557.7 | 596.0 | 645.7  | 670.5  | 664.2  | 620.6  | 573.8  | 551.8  |  |
| G12.0 | 530.8 | 538.5 | 578.9 | 630.8  | 657.3  | 651.4  | 604.1  | 555.0  | 530.8  |  |
| G13.0 | 510.9 | 519.8 | 560.9 | 615.2  | 642.7  | 638.4  | 587.3  | 535.4  | 510.9  |  |
| G14.0 | 490.8 | 499.5 | 543.0 | 599.8  | 627.8  | 622.4  | 570.4  | 515.3  | 490.8  |  |
| G15.0 | 470.0 | 478.5 | 524.7 | 582.5  | 611.7  | 602.7  | 551.6  | 492.5  | 470.0  |  |
| G16.0 | 449.5 | 458.0 | 504.1 | 563.9  | 595.2  | 584.8  | 531.8  | 473.5  | 449.5  |  |
| G17.0 | 428.7 | 437.3 | 484.2 | 543.3  | 574.9  | 566.5  | 511.5  | 450.4  | 428.7  |  |
| G18.0 | 405.4 | 416.4 | 463.1 | 524.0  | 555.2  | 548.1  | 490.9  | 429.0  | 405.4  |  |
| G19.0 | 384.6 | 393.9 | 442.5 | 504.8  | 535.7  | 529.3  | 470.3  | 407.6  | 384.6  |  |
| G20.0 | 364.3 | 373.1 | 421.6 | 484.8  | 516.3  | 509.2  | 449.5  | 386.6  | 364.3  |  |
| G21.0 | 345.1 | 352.5 | 398.9 | 464.5  | 496.5  | 486.2  | 426.9  | 366.9  | 345.1  |  |
| G22.0 | 326.9 | 332.9 | 377.9 | 443.0  | 476.2  | 464.6  | 406.0  | 348.0  | 326.9  |  |
| G23.0 | 310.4 | 314.6 | 357.5 | 419.8  | 455.0  | 443.2  | 384.5  | 330.2  | 310.4  |  |
| G24.0 | 295.2 | 297.9 | 337.4 | 398.9  | 433.2  | 422.4  | 363.9  | 312.2  | 295.2  |  |
| G25.0 | 281.1 | 283.1 | 317.8 | 378.3  | 409.2  | 401.8  | 343.9  | 297.2  | 281.1  |  |
| G26.0 | 266.8 | 269.8 | 299.7 | 358.3  | 388.1  | 381.4  | 325.6  | 283.0  | 266.8  |  |
| G27.0 | 254.8 | 255.8 | 283.0 | 338.2  | 367.4  | 361.0  | 308.8  | 269.4  | 254.8  |  |
| G28.0 | 244.5 | 244.4 | 268.8 | 318.8  | 347.1  | 340.8  | 293.8  | 256.8  | 244.5  |  |
| G29.0 | 236.2 | 234.6 | 254.8 | 298.1  | 327.2  | 321.0  | 278.2  | 245.8  | 236.2  |  |
| G30.0 | 229.1 | 227.4 | 243.4 | 280.2  | 308.0  | 300.8  | 264.8  | 237.3  | 229.1  |  |
| G31.0 | 223.7 | 222.3 | 232.8 | 264.0  | 289.5  | 284.5  | 252.6  | 230.7  | 223.7  |  |
| G32.0 | 219.3 | 218.0 | 223.9 | 249.8  | 272.0  | 269.7  | 241.7  | 225.6  | 219.3  |  |
| G33.0 | 214.5 | 213.4 | 217.4 | 237.7  | 255.2  | 256.3  | 232.6  | 220.6  | 214.5  |  |
| G34.0 | 208.5 | 208.3 | 212.2 | 226.3  | 242.1  | 244.3  | 225.9  | 215.9  | 208.5  |  |
| G35.0 | 200.5 | 203.1 | 208.3 | 217.6  | 230.5  | 233.7  | 222.0  | 210.8  | 200.5  |  |
| G36.0 | 191.6 | 197.4 | 204.3 | 210.9  | 220.9  | 225.1  | 217.4  | 204.2  | 191.6  |  |

C Plane (°):0.0-360.0: 45.0  
Test Lab: Inventfine instruments  
Test Type: TYPE C  
Temperature: 26  
Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.551 m  
Humidity: 58  
Inspector:

## Candlepower Table (Continue 1)

Unit: cd

| G\C   | C0.0  | C45.0 | C90.0 | C135.0 | C180.0 | C225.0 | C270.0 | C315.0 | C360.0 |  |
|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--|
| G37.0 | 182.8 | 188.4 | 200.3 | 205.7  | 213.2  | 218.5  | 212.5  | 195.8  | 182.8  |  |
| G38.0 | 174.5 | 179.4 | 196.1 | 201.5  | 207.2  | 213.9  | 207.4  | 186.5  | 174.5  |  |
| G39.0 | 164.2 | 169.7 | 189.1 | 198.4  | 202.8  | 209.8  | 202.5  | 177.9  | 164.2  |  |
| G40.0 | 154.8 | 159.0 | 180.7 | 195.4  | 199.1  | 205.9  | 196.3  | 169.9  | 154.8  |  |
| G41.0 | 144.9 | 149.0 | 171.9 | 191.4  | 196.1  | 202.2  | 188.5  | 160.7  | 144.9  |  |
| G42.0 | 134.5 | 139.6 | 163.7 | 185.9  | 193.3  | 197.9  | 179.8  | 150.2  | 134.5  |  |
| G43.0 | 125.3 | 130.4 | 154.9 | 178.0  | 189.2  | 192.3  | 169.6  | 141.4  | 125.3  |  |
| G44.0 | 114.4 | 120.3 | 144.5 | 170.0  | 183.5  | 184.4  | 161.1  | 131.4  | 114.4  |  |
| G45.0 | 103.5 | 109.1 | 136.0 | 162.3  | 176.7  | 176.0  | 152.6  | 121.2  | 103.5  |  |
| G46.0 | 91.7  | 99.7  | 126.4 | 154.4  | 169.5  | 167.4  | 143.4  | 110.7  | 91.7   |  |
| G47.0 | 79.8  | 88.5  | 115.8 | 144.8  | 162.0  | 158.8  | 133.7  | 99.9   | 79.8   |  |
| G48.0 | 67.8  | 75.5  | 106.5 | 135.6  | 154.0  | 150.6  | 123.5  | 87.3   | 67.8   |  |
| G49.0 | 56.0  | 64.3  | 96.4  | 126.3  | 144.4  | 141.4  | 113.1  | 75.1   | 56.0   |  |
| G50.0 | 46.9  | 52.3  | 84.5  | 117.0  | 134.8  | 131.8  | 101.6  | 63.8   | 46.9   |  |
| G51.0 | 41.0  | 44.2  | 73.0  | 107.9  | 126.1  | 122.0  | 89.7   | 53.5   | 41.0   |  |
| G52.0 | 37.6  | 39.7  | 61.8  | 98.3   | 116.8  | 111.2  | 76.3   | 44.9   | 37.6   |  |
| G53.0 | 35.3  | 37.0  | 50.6  | 85.9   | 106.5  | 100.1  | 65.3   | 39.5   | 35.3   |  |
| G54.0 | 33.9  | 35.0  | 43.5  | 74.7   | 95.6   | 85.9   | 54.5   | 36.7   | 33.9   |  |
| G55.0 | 32.6  | 33.6  | 39.4  | 63.2   | 82.7   | 72.6   | 45.3   | 34.9   | 32.6   |  |
| G56.0 | 31.2  | 32.2  | 37.0  | 52.4   | 71.5   | 61.4   | 40.2   | 33.5   | 31.2   |  |
| G57.0 | 30.0  | 30.9  | 35.3  | 44.6   | 58.9   | 50.5   | 37.0   | 32.2   | 30.0   |  |
| G58.0 | 28.6  | 29.6  | 33.7  | 40.0   | 48.9   | 42.9   | 35.2   | 30.7   | 28.6   |  |
| G59.0 | 27.4  | 28.2  | 32.3  | 37.6   | 42.7   | 39.3   | 33.8   | 29.5   | 27.4   |  |
| G60.0 | 26.3  | 27.0  | 30.9  | 36.0   | 39.4   | 36.8   | 32.4   | 28.2   | 26.3   |  |
| G61.0 | 25.1  | 25.9  | 29.4  | 34.5   | 37.2   | 35.3   | 31.1   | 27.0   | 25.1   |  |
| G62.0 | 23.9  | 24.7  | 28.1  | 32.8   | 35.7   | 33.8   | 29.7   | 25.9   | 23.9   |  |
| G63.0 | 22.9  | 23.6  | 26.9  | 31.4   | 34.1   | 32.5   | 28.4   | 24.8   | 22.9   |  |
| G64.0 | 21.8  | 22.5  | 25.8  | 30.0   | 32.7   | 31.1   | 27.2   | 23.7   | 21.8   |  |
| G65.0 | 20.8  | 21.5  | 24.5  | 28.7   | 31.3   | 29.8   | 26.0   | 22.6   | 20.8   |  |
| G66.0 | 19.7  | 20.3  | 23.4  | 27.3   | 30.0   | 28.5   | 24.9   | 21.6   | 19.7   |  |
| G67.0 | 18.7  | 19.4  | 22.3  | 26.1   | 28.7   | 27.3   | 23.9   | 20.5   | 18.7   |  |
| G68.0 | 17.7  | 18.3  | 21.1  | 25.0   | 27.4   | 26.1   | 22.7   | 19.5   | 17.7   |  |
| G69.0 | 16.8  | 17.3  | 20.1  | 23.7   | 26.2   | 25.0   | 21.6   | 18.5   | 16.8   |  |
| G70.0 | 15.6  | 16.2  | 19.1  | 22.5   | 25.1   | 23.9   | 20.6   | 17.6   | 15.6   |  |
| G71.0 | 14.6  | 15.2  | 17.9  | 21.5   | 23.9   | 22.9   | 19.6   | 16.6   | 14.6   |  |
| G72.0 | 13.6  | 14.1  | 16.9  | 20.4   | 22.7   | 21.7   | 18.6   | 15.5   | 13.6   |  |
| G73.0 | 12.6  | 13.2  | 15.8  | 19.2   | 21.6   | 20.7   | 17.6   | 14.5   | 12.6   |  |

C Plane (°):0.0-360.0: 45.0  
Test Lab: Inventfine instruments  
Test Type: TYPE C  
Temperature: 26  
Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.551 m  
Humidity: 58  
Inspector:

## Candlepower Table (Continue 2)

Unit: cd

| G\C    | C0.0 | C45.0 | C90.0 | C135.0 | C180.0 | C225.0 | C270.0 | C315.0 | C360.0 |  |
|--------|------|-------|-------|--------|--------|--------|--------|--------|--------|--|
| G74.0  | 11.6 | 12.1  | 14.6  | 18.1   | 20.5   | 19.6   | 16.6   | 13.5   | 11.6   |  |
| G75.0  | 10.6 | 11.1  | 13.6  | 16.9   | 19.4   | 18.6   | 15.5   | 12.5   | 10.6   |  |
| G76.0  | 9.8  | 10.3  | 12.6  | 15.7   | 18.2   | 17.5   | 14.5   | 11.6   | 9.8    |  |
| G77.0  | 9.0  | 9.4   | 11.7  | 14.6   | 17.1   | 16.4   | 13.5   | 10.6   | 9.0    |  |
| G78.0  | 8.2  | 8.6   | 10.6  | 13.6   | 16.0   | 15.3   | 12.5   | 9.7    | 8.2    |  |
| G79.0  | 7.4  | 7.8   | 9.8   | 12.6   | 14.8   | 14.2   | 11.6   | 8.9    | 7.4    |  |
| G80.0  | 6.8  | 7.1   | 9.0   | 11.6   | 13.8   | 13.2   | 10.6   | 8.2    | 6.8    |  |
| G81.0  | 6.1  | 6.4   | 8.1   | 10.6   | 12.8   | 12.2   | 9.7    | 7.5    | 6.1    |  |
| G82.0  | 5.2  | 5.8   | 7.4   | 9.8    | 11.9   | 11.3   | 8.9    | 6.7    | 5.2    |  |
| G83.0  | 4.1  | 4.8   | 6.7   | 9.0    | 10.9   | 10.4   | 8.2    | 6.1    | 4.1    |  |
| G84.0  | 2.8  | 3.6   | 6.1   | 8.1    | 10.0   | 9.5    | 7.4    | 5.2    | 2.8    |  |
| G85.0  | 1.4  | 2.3   | 5.2   | 7.4    | 9.2    | 8.7    | 6.8    | 4.0    | 1.4    |  |
| G86.0  | 0.2  | 0.6   | 3.9   | 6.8    | 8.5    | 8.0    | 6.0    | 2.8    | 0.2    |  |
| G87.0  | 0.0  | 0.0   | 2.5   | 6.0    | 7.7    | 7.3    | 4.9    | 1.4    | 0.0    |  |
| G88.0  | 0.0  | 0.0   | 0.8   | 4.8    | 7.1    | 6.6    | 3.6    | 0.2    | 0.0    |  |
| G89.0  | 0.0  | 0.0   | 0.0   | 3.3    | 6.2    | 5.4    | 2.2    | 0.0    | 0.0    |  |
| G90.0  | 0.0  | 0.0   | 0.0   | 1.7    | 4.9    | 4.1    | 0.7    | 0.0    | 0.0    |  |
| G91.0  | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G92.0  | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G93.0  | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G94.0  | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G95.0  | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G96.0  | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G97.0  | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G98.0  | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G99.0  | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G100.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G101.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G102.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G103.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G104.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G105.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G106.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G107.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G108.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G109.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G110.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |

C Plane (°):0.0-360.0: 45.0  
Test Lab: Inventfine instruments  
Test Type: TYPE C  
Temperature: 26  
Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.551 m  
Humidity: 58  
Inspector:

## Candlepower Table (Continue 3)

Unit: cd

| G\C    | C0.0 | C45.0 | C90.0 | C135.0 | C180.0 | C225.0 | C270.0 | C315.0 | C360.0 |  |
|--------|------|-------|-------|--------|--------|--------|--------|--------|--------|--|
| G111.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G112.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G113.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G114.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G115.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G116.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G117.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G118.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G119.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G120.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G121.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G122.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G123.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G124.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G125.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G126.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G127.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G128.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G129.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G130.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G131.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G132.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G133.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G134.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G135.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G136.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G137.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G138.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G139.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G140.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G141.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G142.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G143.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G144.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G145.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G146.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G147.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |

C Plane (°):0.0-360.0: 45.0  
Test Lab: Inventfine instruments  
Test Type: TYPE C  
Temperature: 26  
Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.551 m  
Humidity: 58  
Inspector:

## Candlepower Table (Continue 4)

Unit: cd

| G\C    | C0.0 | C45.0 | C90.0 | C135.0 | C180.0 | C225.0 | C270.0 | C315.0 | C360.0 |  |
|--------|------|-------|-------|--------|--------|--------|--------|--------|--------|--|
| G148.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G149.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G150.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G151.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G152.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G153.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G154.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G155.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G156.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G157.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G158.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G159.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G160.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G161.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G162.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G163.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G164.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G165.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G166.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G167.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G168.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G169.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G170.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G171.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G172.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G173.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G174.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G175.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G176.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G177.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G178.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G179.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
| G180.0 | 0.0  | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |  |
|        |      |       |       |        |        |        |        |        |        |  |
|        |      |       |       |        |        |        |        |        |        |  |
|        |      |       |       |        |        |        |        |        |        |  |
|        |      |       |       |        |        |        |        |        |        |  |

C Plane (°):0.0-360.0: 45.0  
Test Lab: Inventfine instruments  
Test Type: TYPE C  
Temperature: 26  
Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.551 m  
Humidity: 58  
Inspector: