



Report No.:

Test Time: 24/09/2018 16:21

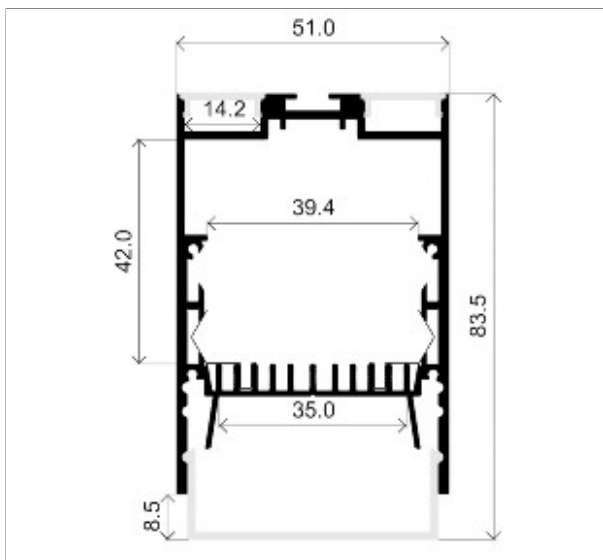
## Luminaire Property

Luminaire Manufacturer: Lighting Line  
 Luminaire Description: LLP-CL02-07 + LLD-07-CM  
 Lamp Description: Strip 14,4W/m 60led/m      Number of Lamps: 2  
 Lumens per Lamp: 3158 lm      Voltage: 24.0 V  
 Current: 1.162 A      Power: 27.89 W  
 Power Factor: 1.000

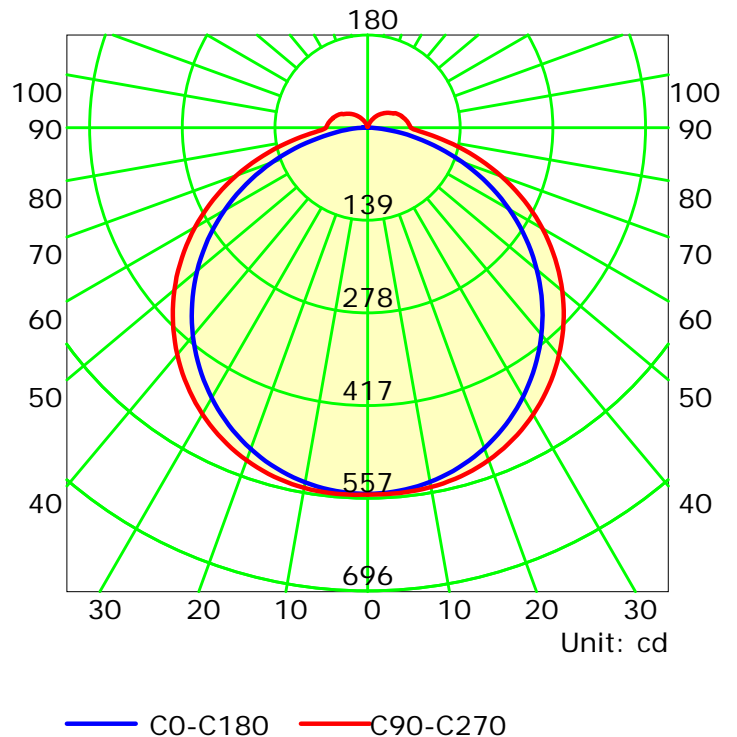
## Photometric Results

|   |                                    |
|---|------------------------------------|
| CIE Class: Direct   | Total Rated Lamp Lumens: 6316.0 lm |
| Measurement Flux: 1913 lm   | Efficiency: 30.29%                 |
| Downward Ratio: 28.06%  | Upward Ratio: 2.23%                |
| Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 161.2, 210.5, 172.4, 172.0 |                                    |
| Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 113.8, 125.9, 122.1, 122.0  |                                    |
| Luminaire Efficacy Rating (LER): 68.64                                      | Central Intensity: 550.24 cd       |
| Max. Intensity: 554.77 cd   | Pos of Max. Intensity: H170 V1     |
| S/MH(C0/C180): 1.26   | S/MH(C90/C270): 1.34               |

Picture Of Luminaire



Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

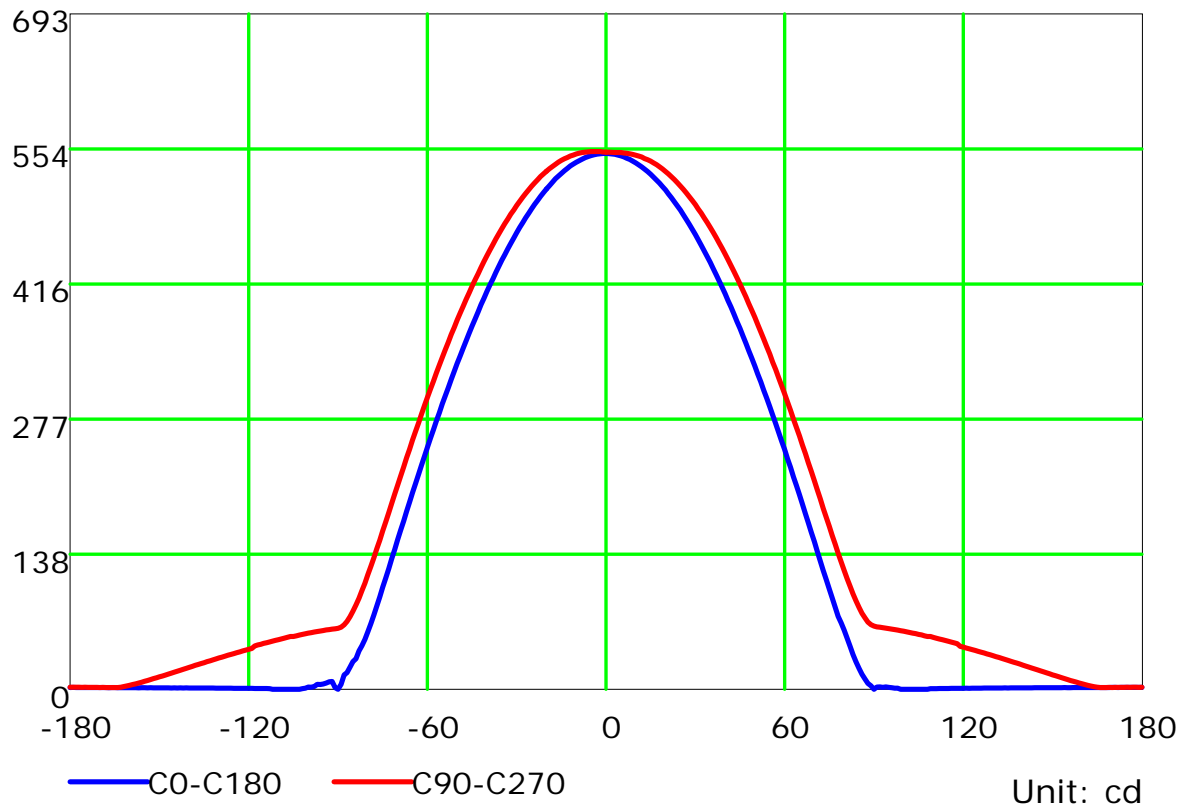
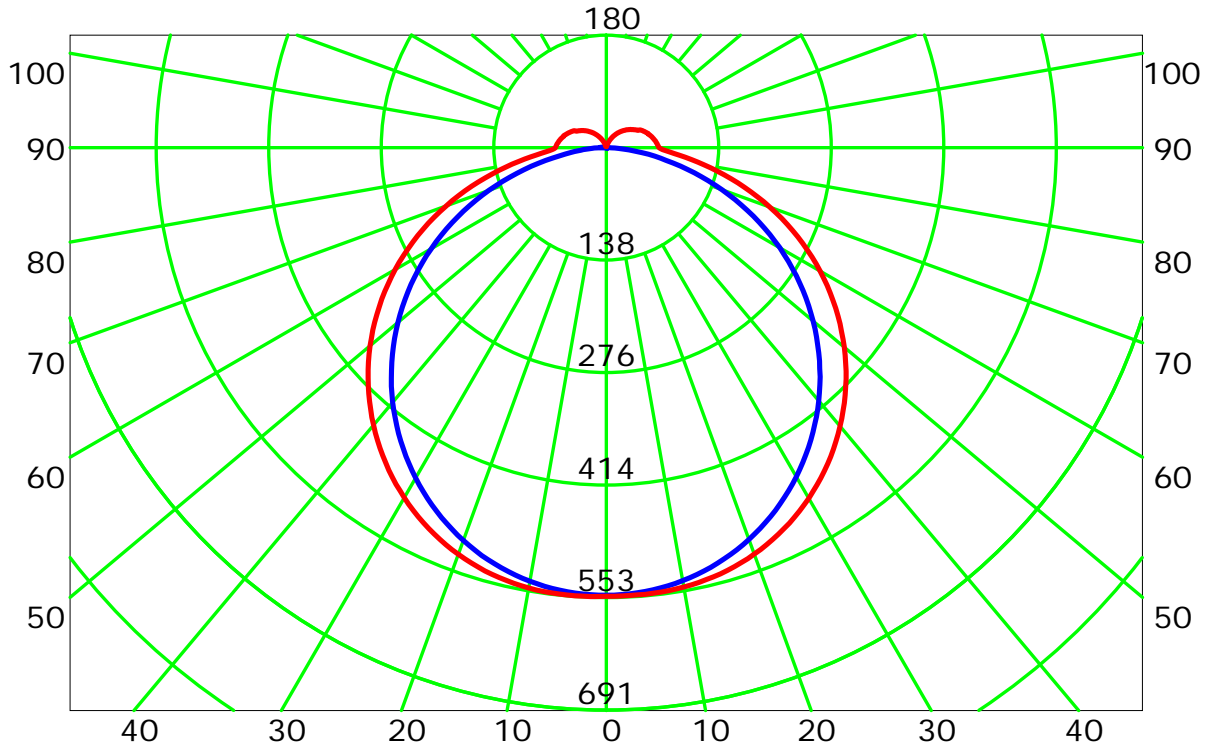
Distance: 7.970 m

Humidity:

Inspector:



## Luminous Intensity Distribution Curve

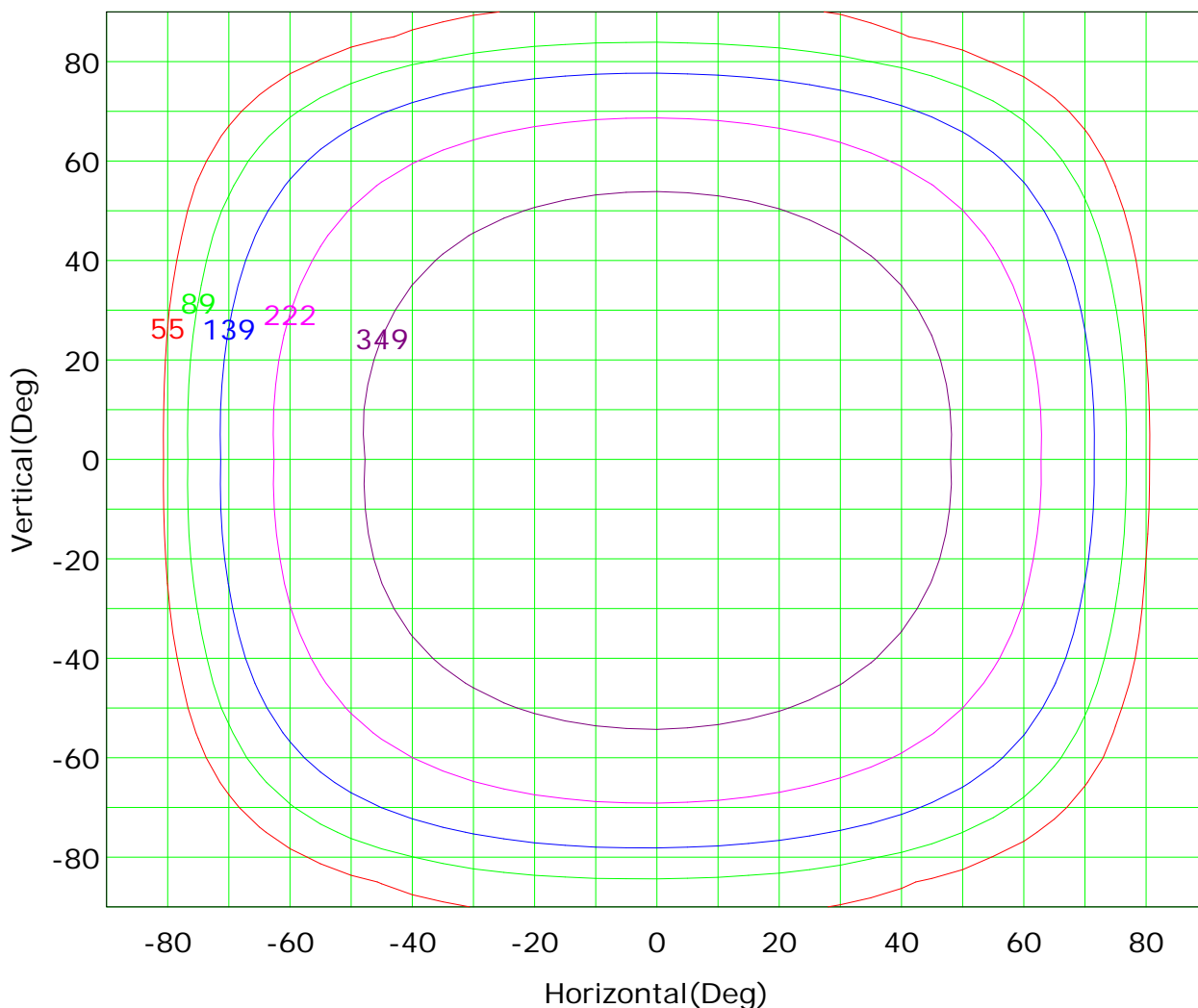


C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## Isocandela (rectangle)



Imax (100%): 555 cd

- |           |        |           |        |
|-----------|--------|-----------|--------|
| — ( 10%): | 55 cd  | — ( 16%): | 89 cd  |
| — ( 25%): | 139 cd | — ( 40%): | 222 cd |
| — ( 63%): | 349 cd | — (100%): | 555 cd |

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

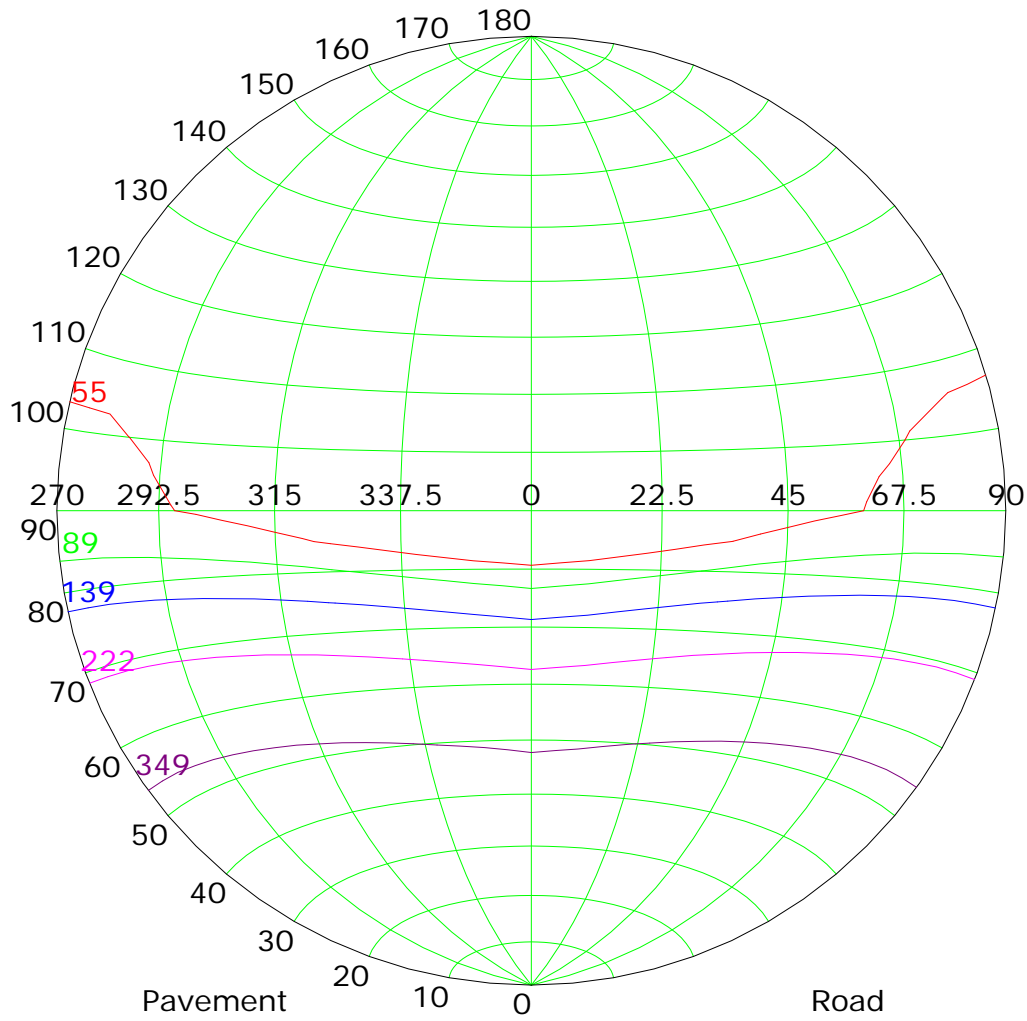
Distance: 7.970 m

Humidity:

Inspector:



## Isocandela (sphere)



Imax (100%): 555 cd

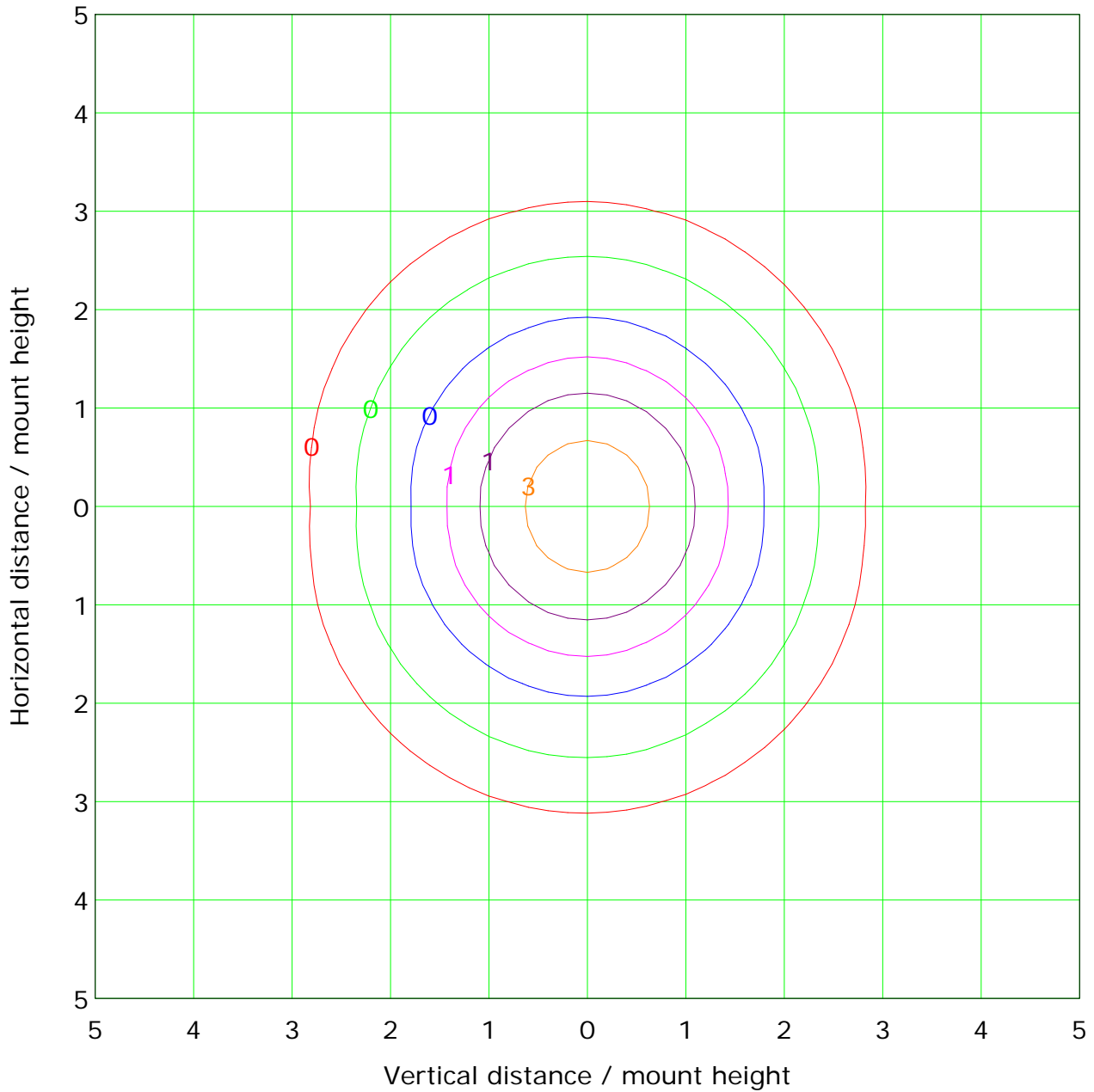
|           |        |           |        |
|-----------|--------|-----------|--------|
| — ( 10%): | 55 cd  | — ( 16%): | 89 cd  |
| — ( 25%): | 139 cd | — ( 40%): | 222 cd |
| — ( 63%): | 349 cd | — (100%): | 555 cd |

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## IsoLux Plot



|                        |        |                       |        |
|------------------------|--------|-----------------------|--------|
| Mounting Height: 10.0m |        | Max Lux(100%): 5.5 lx |        |
| — ( 1%):               | 0.1 lx | — ( 2%):              | 0.1 lx |
| — ( 5%):               | 0.3 lx | — (10%):              | 0.6 lx |
| — (20%):               | 1.1 lx | — (50%):              | 2.8 lx |
| — (100%):              | 5.5 lx |                       |        |

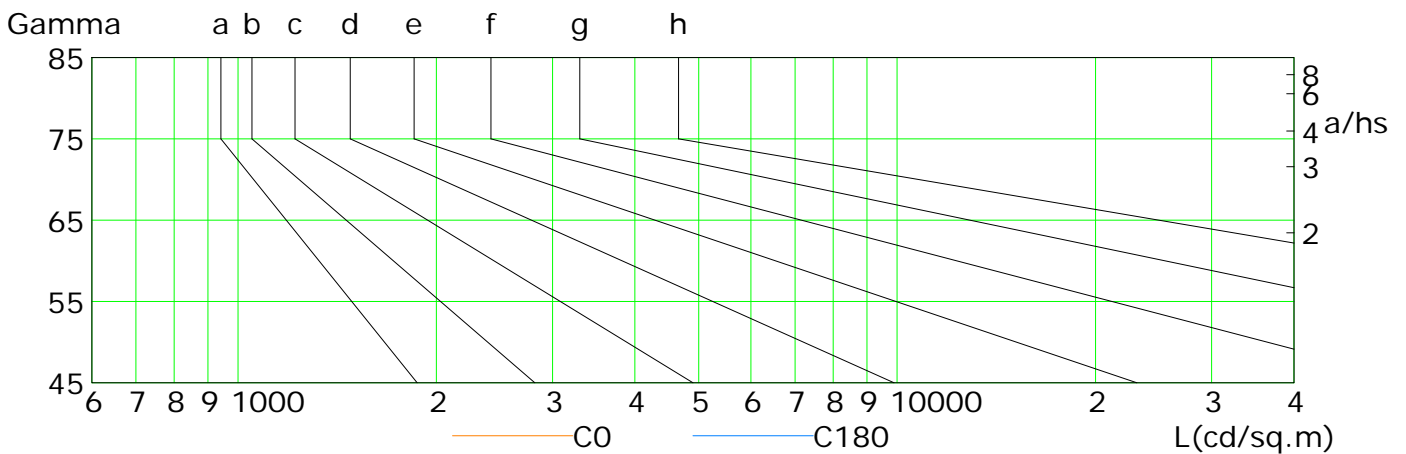
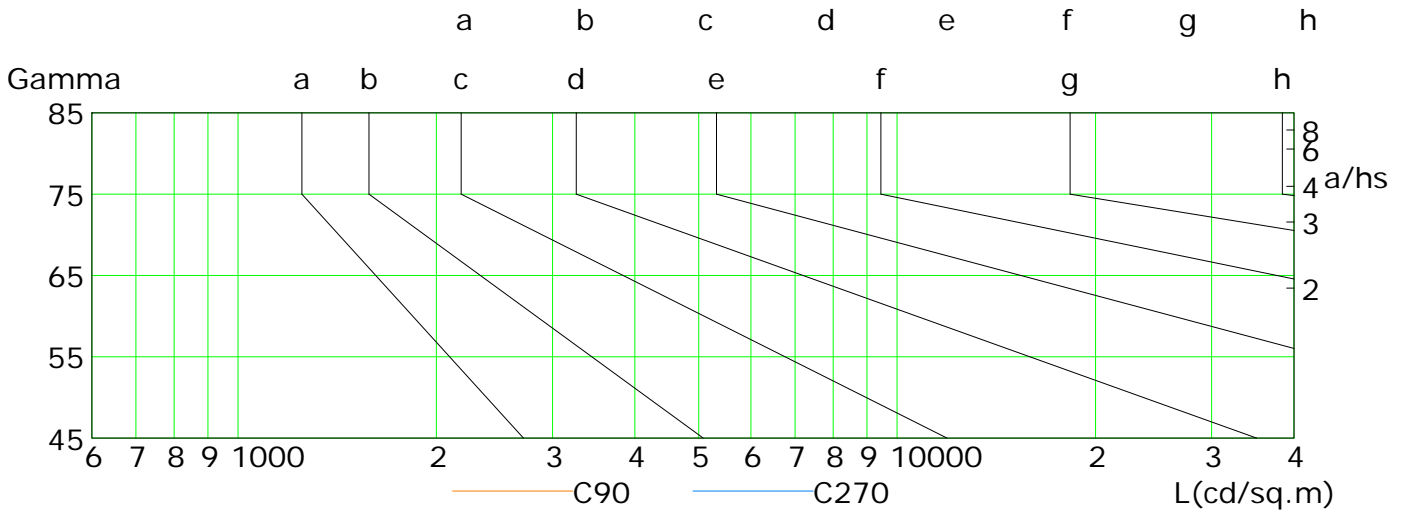
C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## Lum Limit Curve

| Dazzle | Quality | Illuminance (lx) |      |      |       |       |       |       |       |
|--------|---------|------------------|------|------|-------|-------|-------|-------|-------|
|        |         | a                | b    | c    | d     | e     | f     | g     | h     |
| 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 |



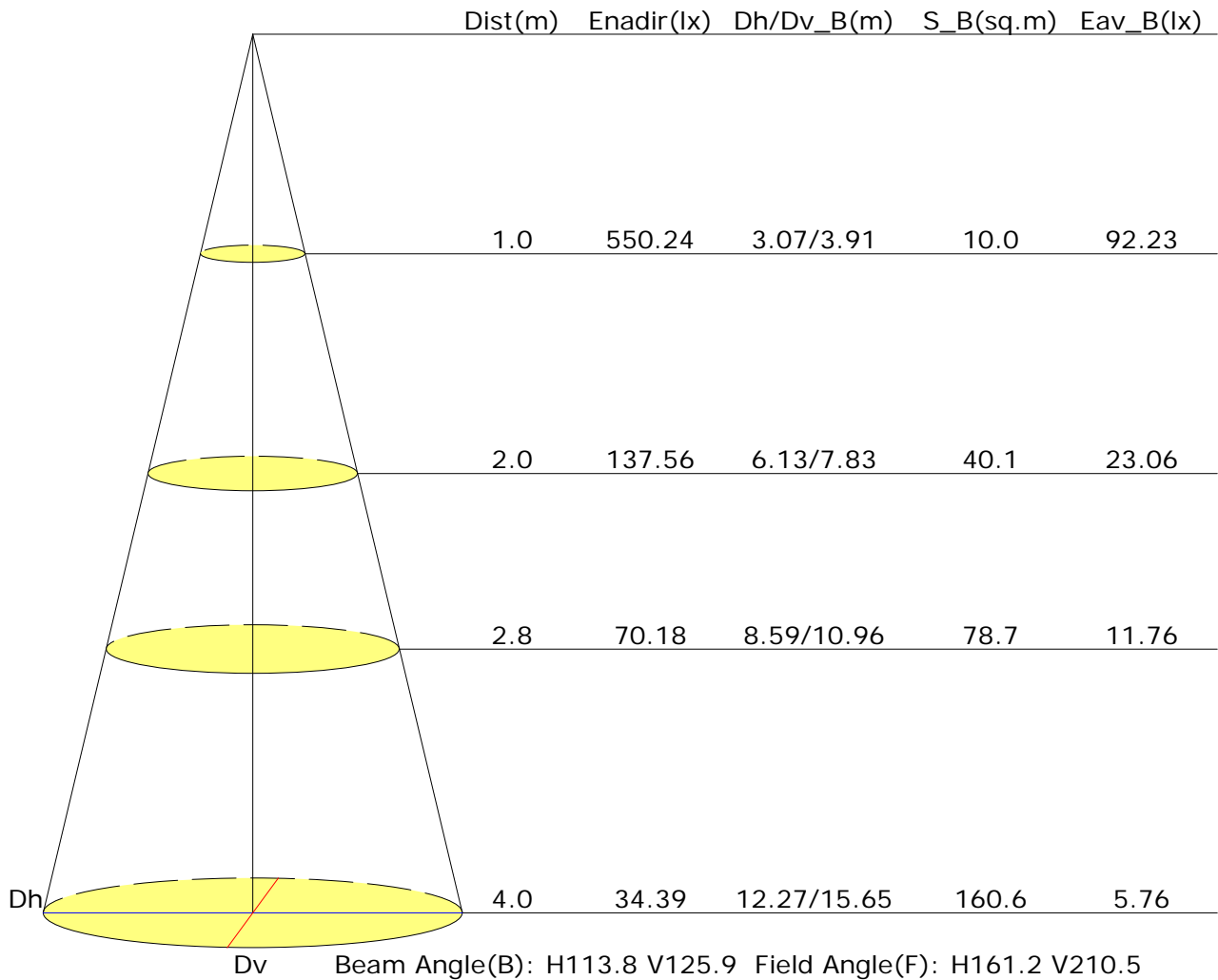
| L(cd/sq.m) | G45 | G50 | G55 | G60 | G65 | G70 | G75 | G80 | G85 |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| C0         | 371 | 332 | 290 | 246 | 200 | 152 | 103 | 61  | 21  |
| C90        | 416 | 382 | 344 | 303 | 260 | 214 | 167 | 122 | 84  |
| C180       | 373 | 335 | 293 | 248 | 202 | 154 | 105 | 59  | 28  |
| C270       | 414 | 379 | 341 | 300 | 256 | 209 | 163 | 118 | 80  |

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## Illuminance at a Distance



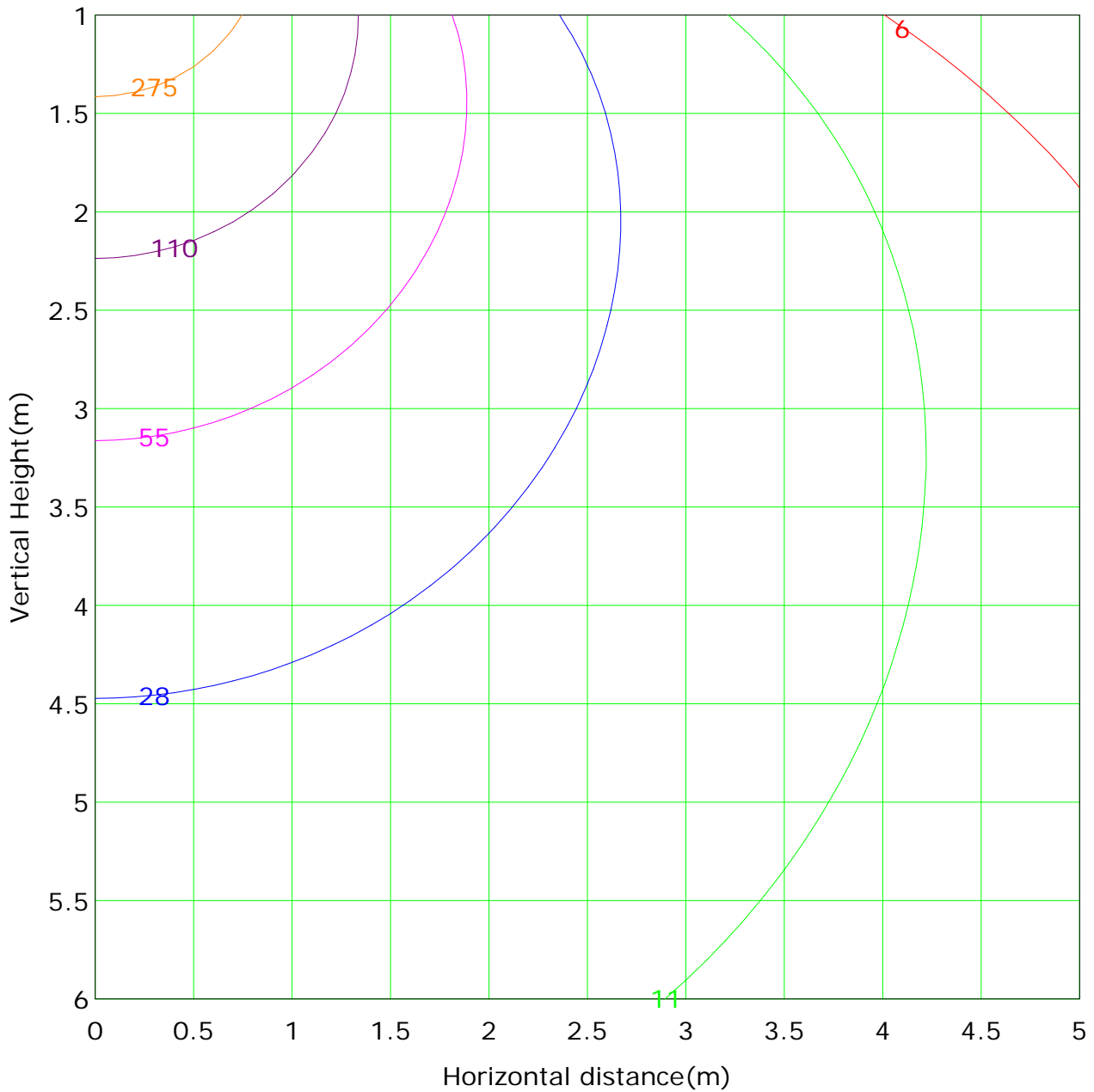
C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:





## Vertical IsoLux Plot



|                    |                   |                   |
|--------------------|-------------------|-------------------|
| Lowest(m): 1.0m    | Highest(m): 6.0m  | Max Lux: 550.2 lx |
| — ( 1%): 5.5 lx    | — ( 2%): 11.0 lx  |                   |
| — ( 5%): 27.5 lx   | — (10%): 55.0 lx  |                   |
| — (20%): 110.0 lx  | — (50%): 275.1 lx |                   |
| — (100%): 550.2 lx |                   |                   |

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



Report No.:

Test Time: 25/09/2018 09:37

## Luminaire Property

Luminaire Manufacturer: Lighting Line

Luminaire Description: LLP-CL02-07 + LLD-07-CM

Lamp Description: Strip 14,4W/m 60led/m Lumens per Lamp: 3158 lm

Voltage: 24.0 V Current: 1.164 A

Power: 27.92 W Power Factor: 1.000

## Photometric Results

CIE Class: Direct

Measurement Flux: 1887.3 lm

Downward Ratio: 100%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 160.4, 160.2, 160.3, 160.3

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 113.9, 113.2, 113.6, 113.6

Luminaire Efficacy Rating (LER): 67.65

Max. Intensity: 659.47 cd

S/MH(C0/C180): 1.26

Total Rated Lamp Lumens: 1887.3 lm

Efficiency: 100%

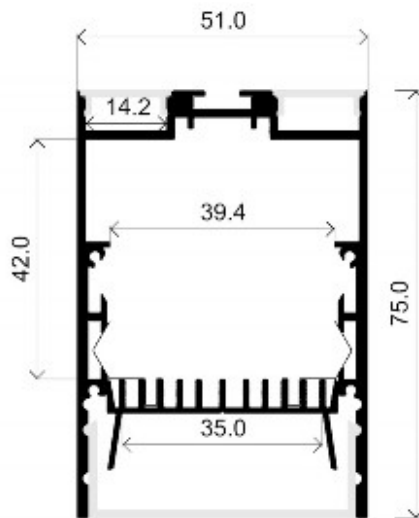
Upward Ratio: 0%

Central Intensity: 658.88 cd

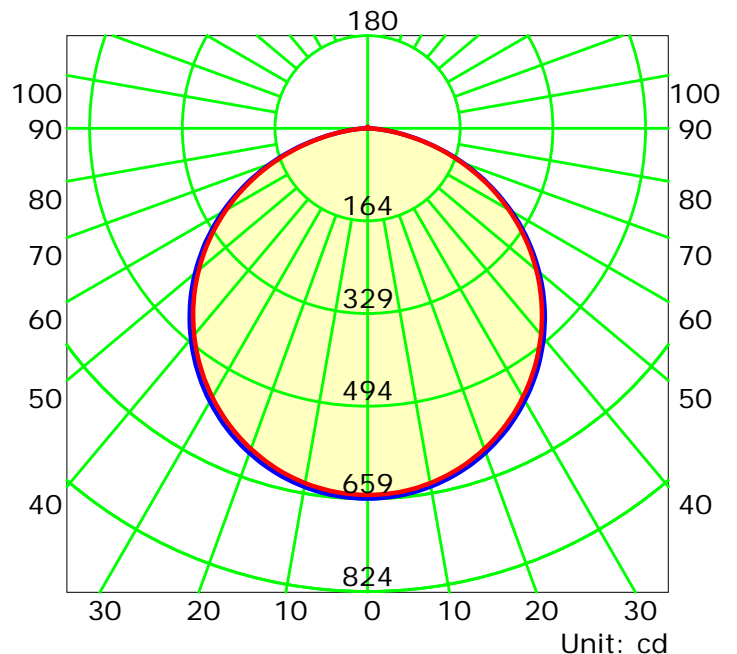
Pos of Max. Intensity: H10 V0

S/MH(C90/C270): 1.26

Picture Of Luminaire



Luminous Intensity Distribution Curve



— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

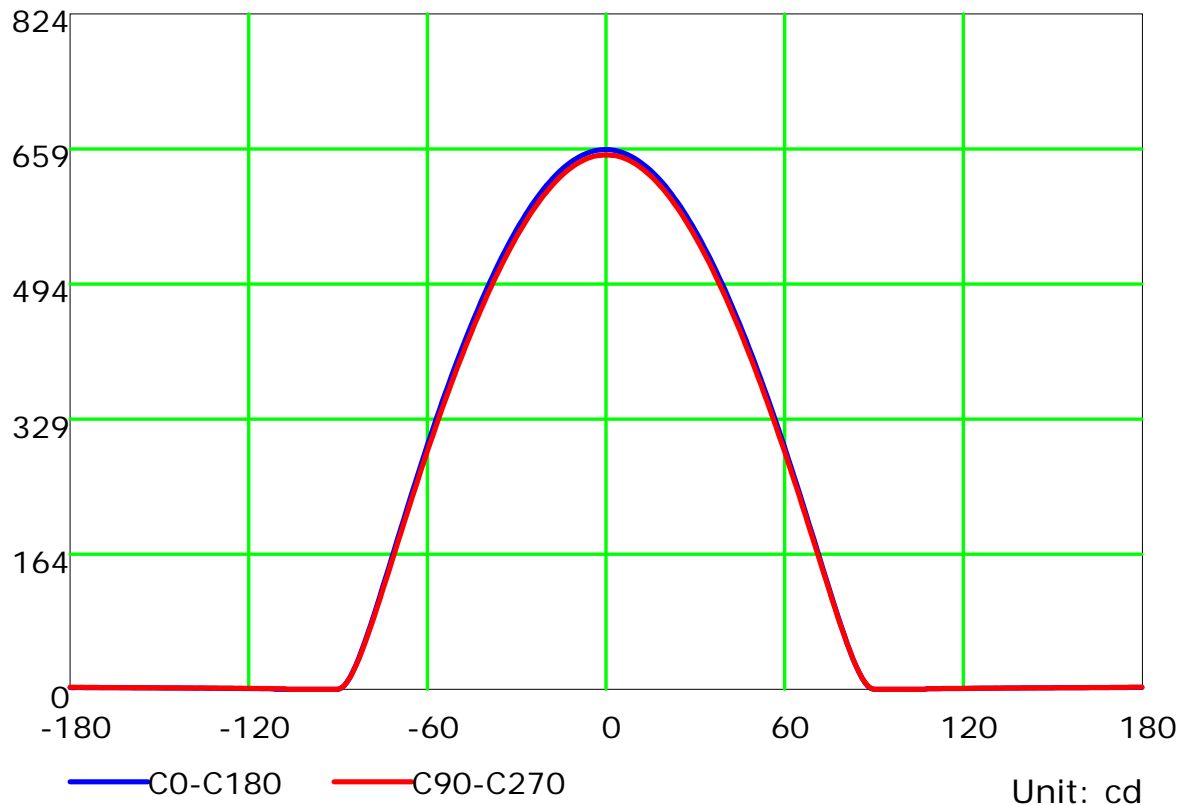
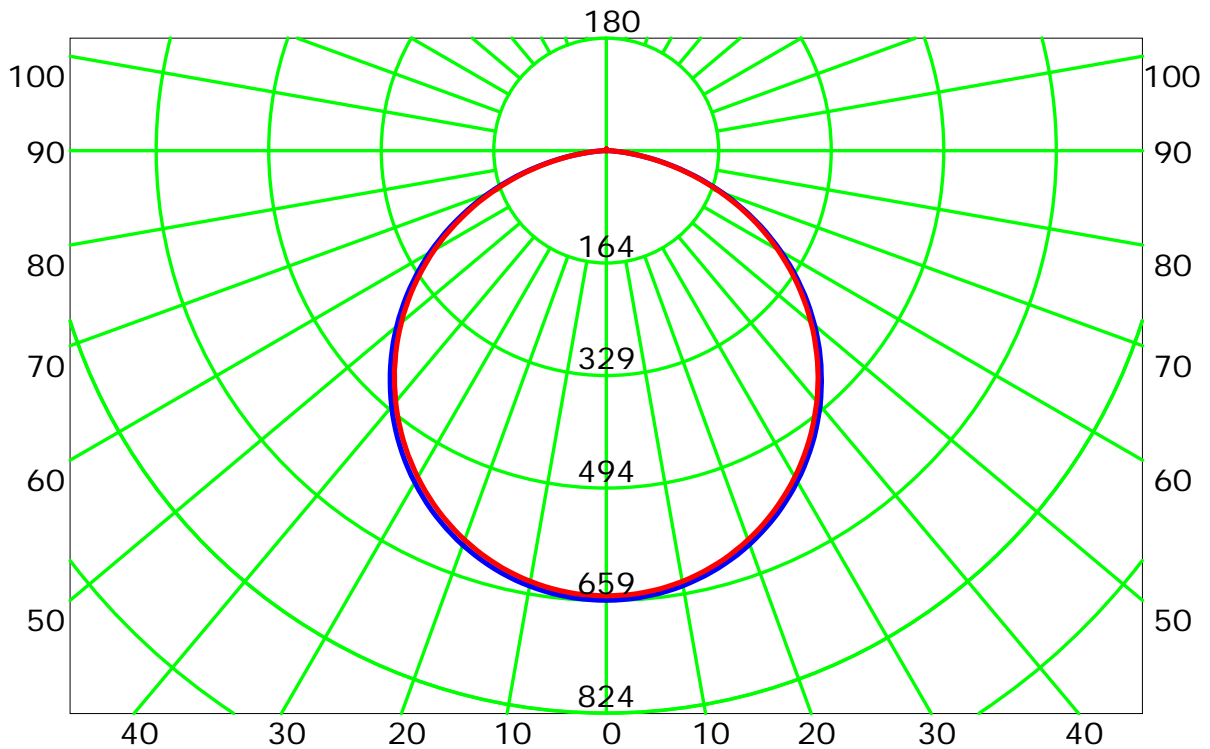
Distance: 7.970 m

Humidity:

Inspector:



## Luminous Intensity Distribution Curve

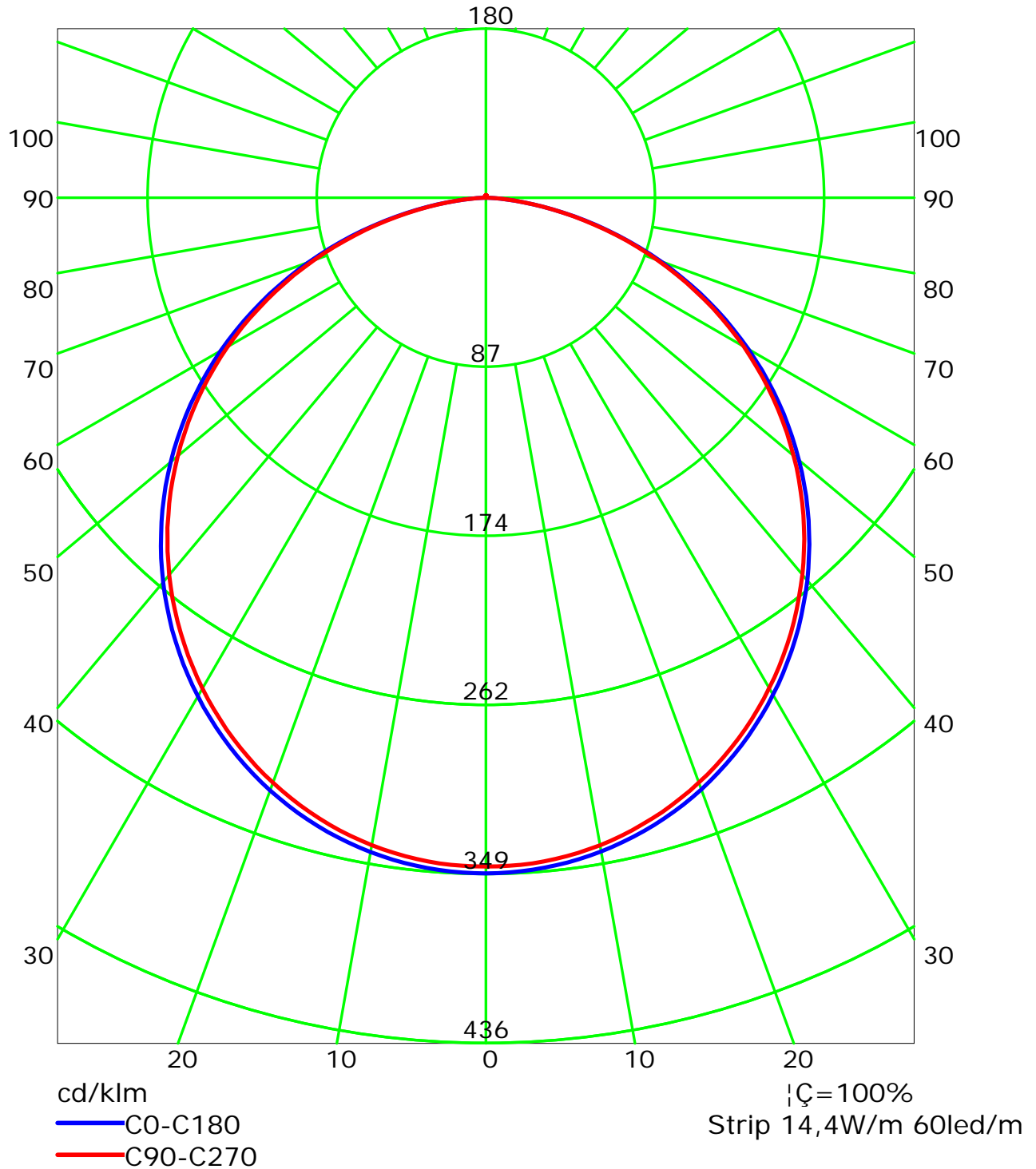


C Plane (°):0.0-360.0: 10.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-2000  
Distance: 7.970 m  
Humidity:  
Inspector:



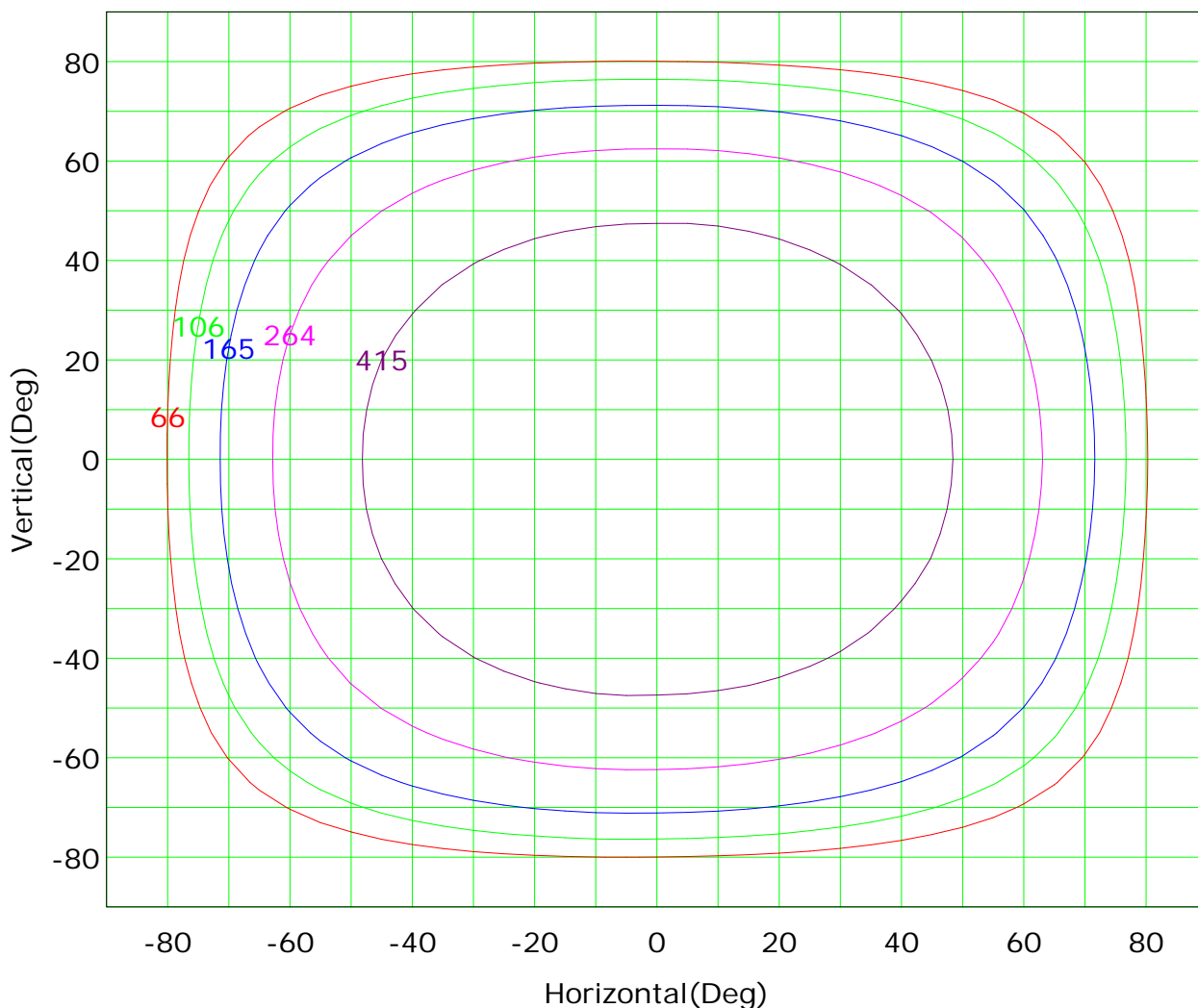
## Luminous Intensity Distribution Curve(cd/klm)



C Plane (°):0.0-360.0: 10.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-2000  
Distance: 7.970 m  
Humidity:  
Inspector:

## Isocandela (rectangle)



Imax (100%): 659 cd

- |           |        |           |        |
|-----------|--------|-----------|--------|
| — ( 10%): | 66 cd  | — ( 16%): | 106 cd |
| — ( 25%): | 165 cd | — ( 40%): | 264 cd |
| — ( 63%): | 415 cd | — (100%): | 659 cd |

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

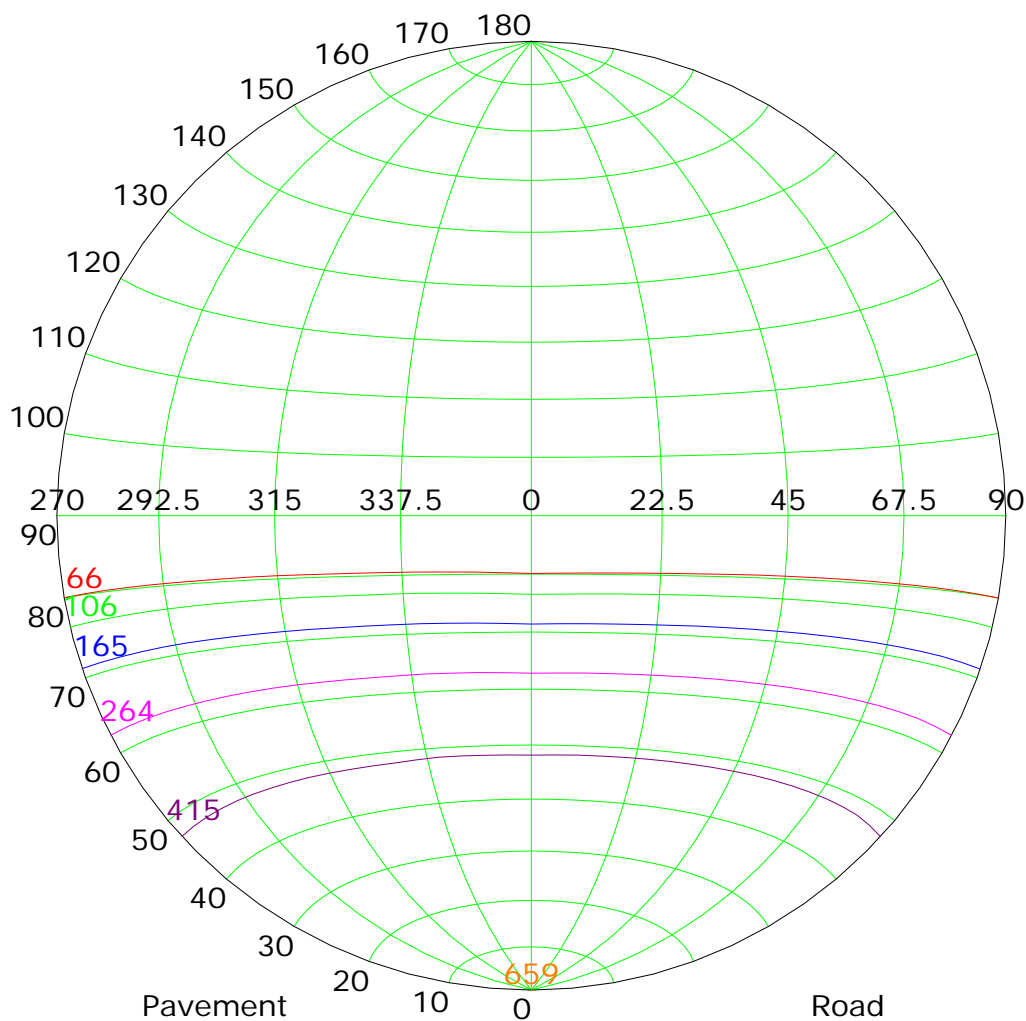
Distance: 7.970 m

Humidity:

Inspector:



## Isocandela (sphere)



Imax (100%): 659 cd

|           |        |           |        |
|-----------|--------|-----------|--------|
| — ( 10%): | 66 cd  | — ( 16%): | 106 cd |
| — ( 25%): | 165 cd | — ( 40%): | 264 cd |
| — ( 63%): | 415 cd | — (100%): | 659 cd |

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

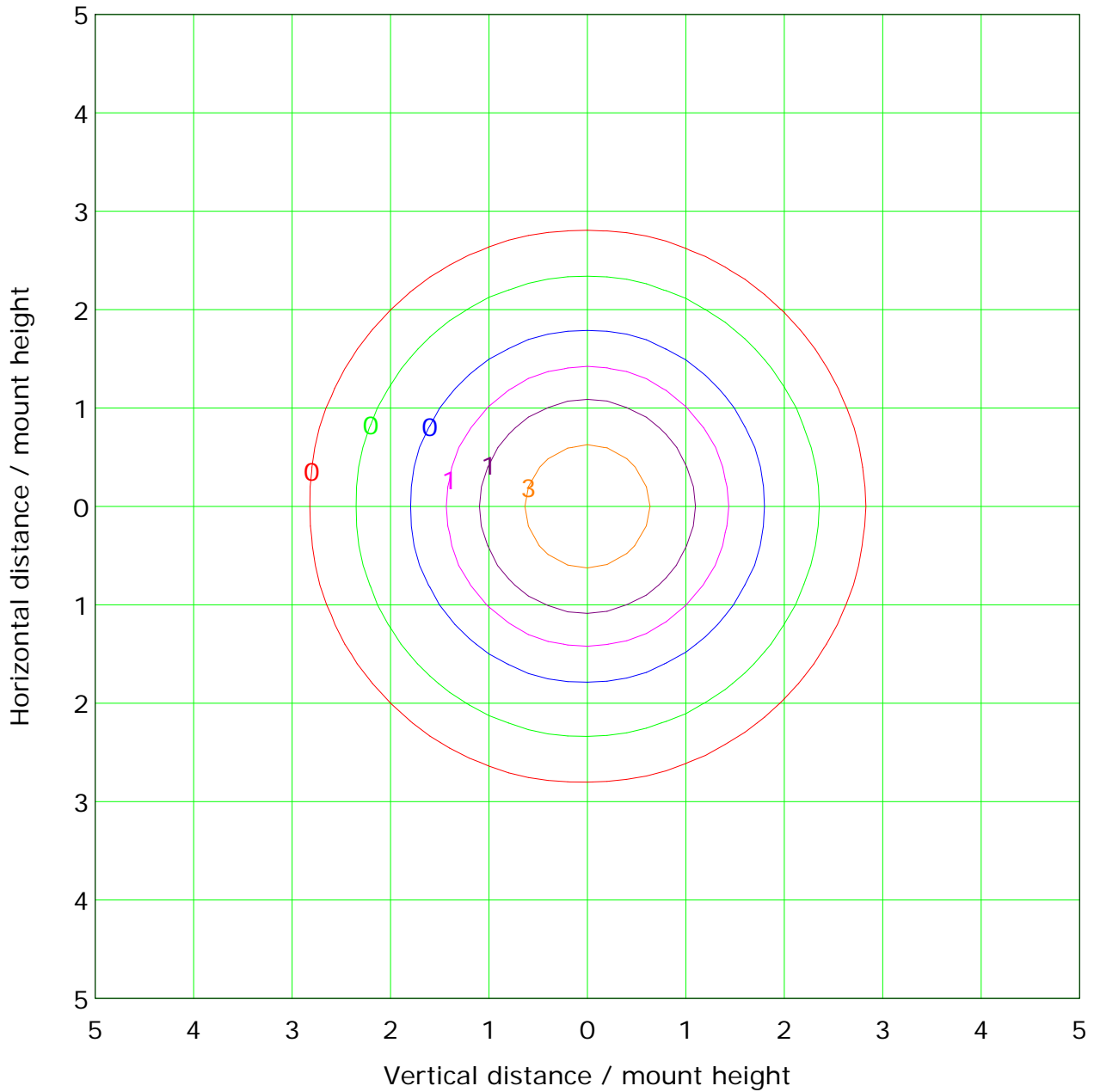
Distance: 7.970 m

Humidity:

Inspector:



## IsoLux Plot



|                        |        |                       |        |
|------------------------|--------|-----------------------|--------|
| Mounting Height: 10.0m |        | Max Lux(100%): 6.6 lx |        |
| — ( 1%):               | 0.1 lx | — ( 2%):              | 0.1 lx |
| — ( 5%):               | 0.3 lx | — (10%):              | 0.7 lx |
| — (20%):               | 1.3 lx | — (50%):              | 3.3 lx |
| — (100%):              | 6.6 lx |                       |        |

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

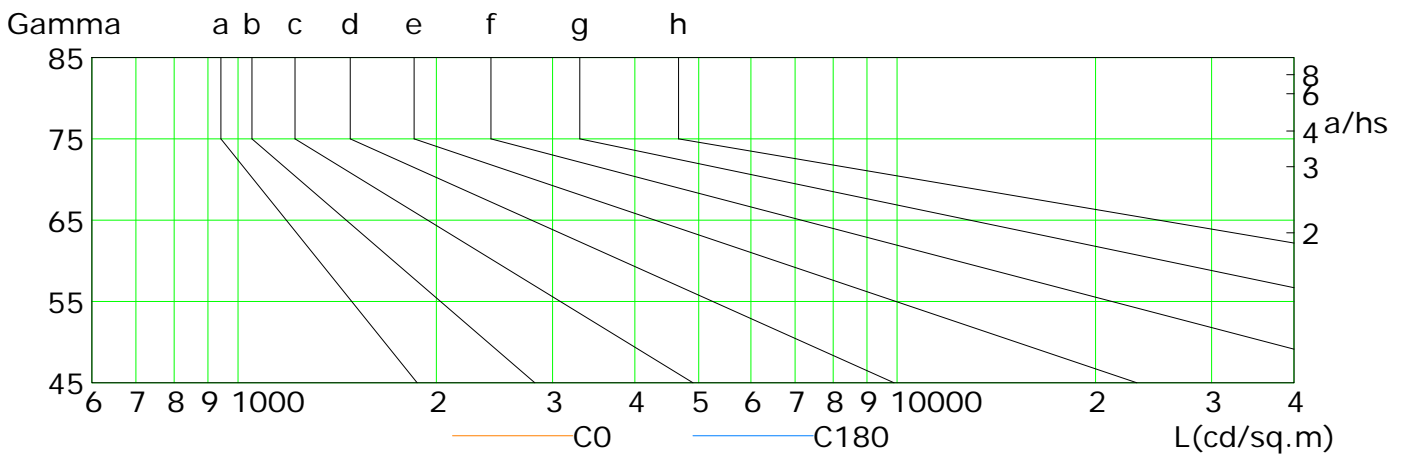
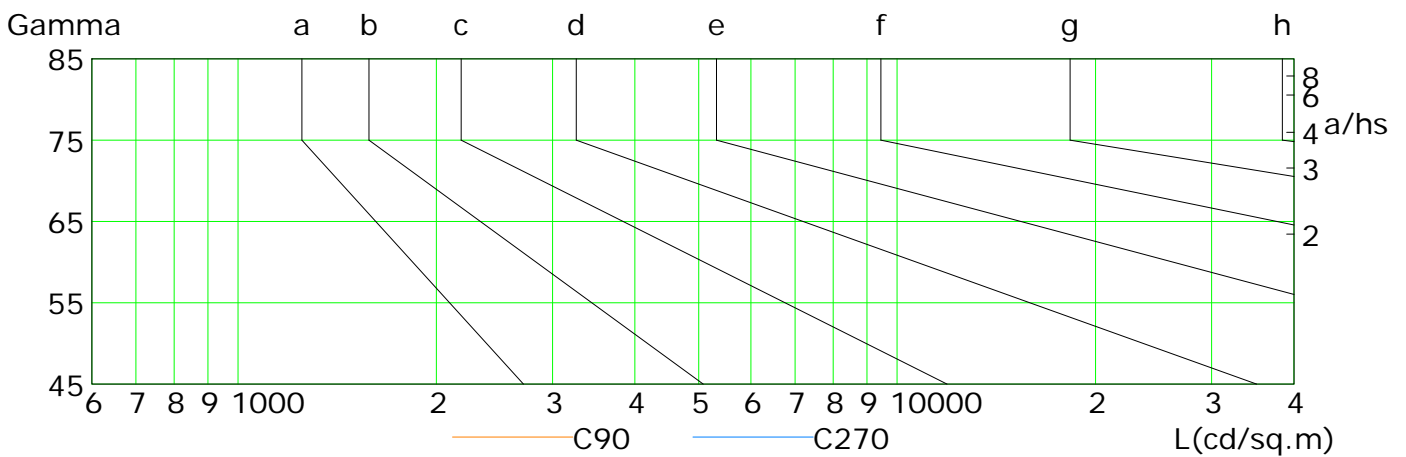
Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## Lum Limit Curve

| Dazzle | Quality | Illuminance (lx) |      |     |       |  |  |  |  |
|--------|---------|------------------|------|-----|-------|--|--|--|--|
|        |         | 2000             | 1000 | 500 | <=300 |  |  |  |  |
| 1.15   | A       |                  |      |     |       |  |  |  |  |
| 1.50   | B       |                  |      |     |       |  |  |  |  |
| 1.85   | C       |                  |      |     |       |  |  |  |  |
| 2.20   | D       |                  |      |     |       |  |  |  |  |
| 2.55   | E       |                  |      |     |       |  |  |  |  |

a b c d e f g h



| L(cd/sq.m) | G45 | G50 | G55 | G60 | G65 | G70 | G75 | G80 | G85 |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| C0         | 445 | 398 | 348 | 295 | 239 | 181 | 122 | 67  | 21  |
| C90        | 438 | 392 | 342 | 290 | 235 | 178 | 121 | 66  | 21  |
| C180       | 447 | 401 | 351 | 298 | 242 | 184 | 125 | 69  | 22  |
| C270       | 438 | 392 | 343 | 291 | 235 | 179 | 121 | 66  | 21  |

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

Distance: 7.970 m

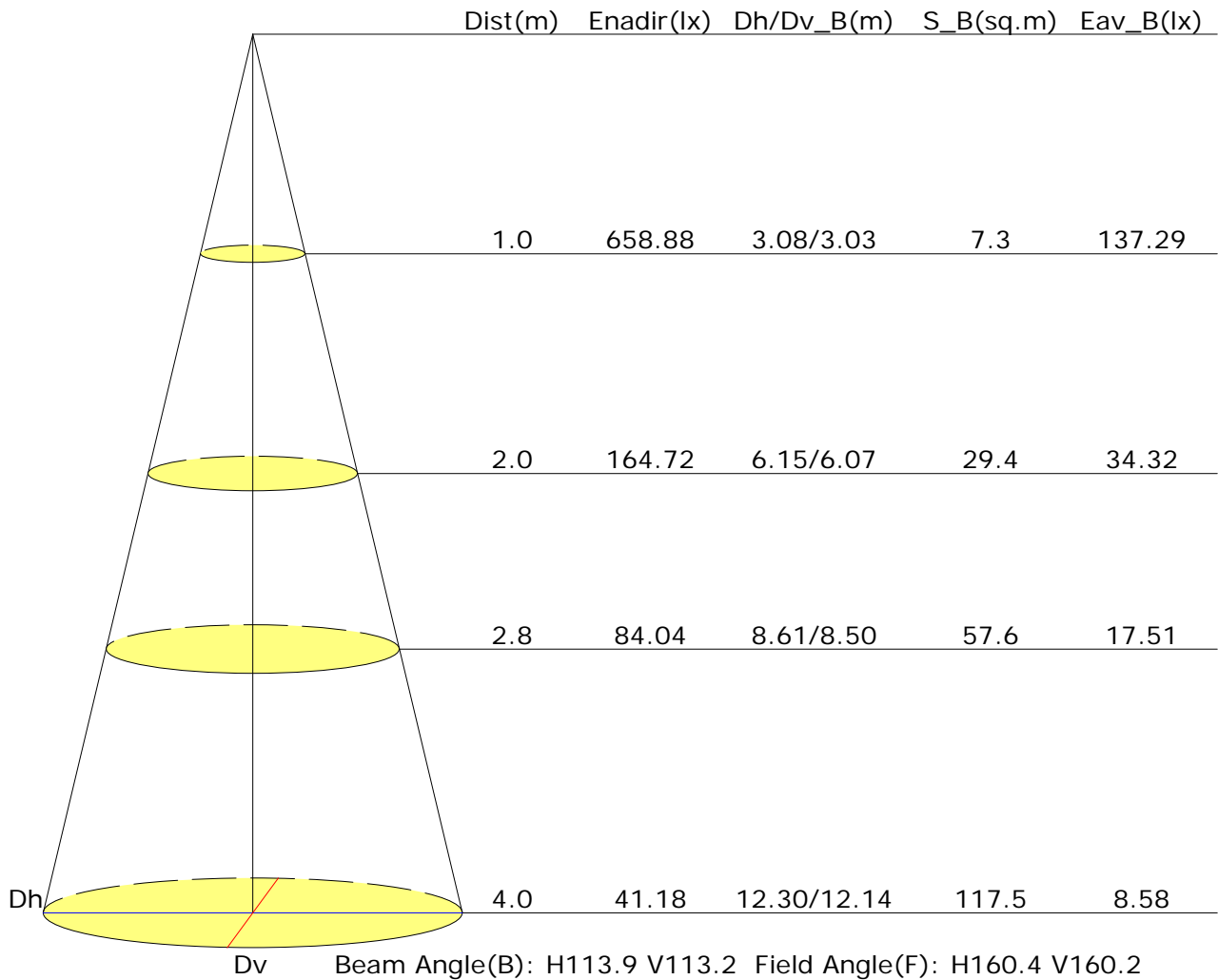
Humidity:

Inspector:





## Illuminance at a Distance

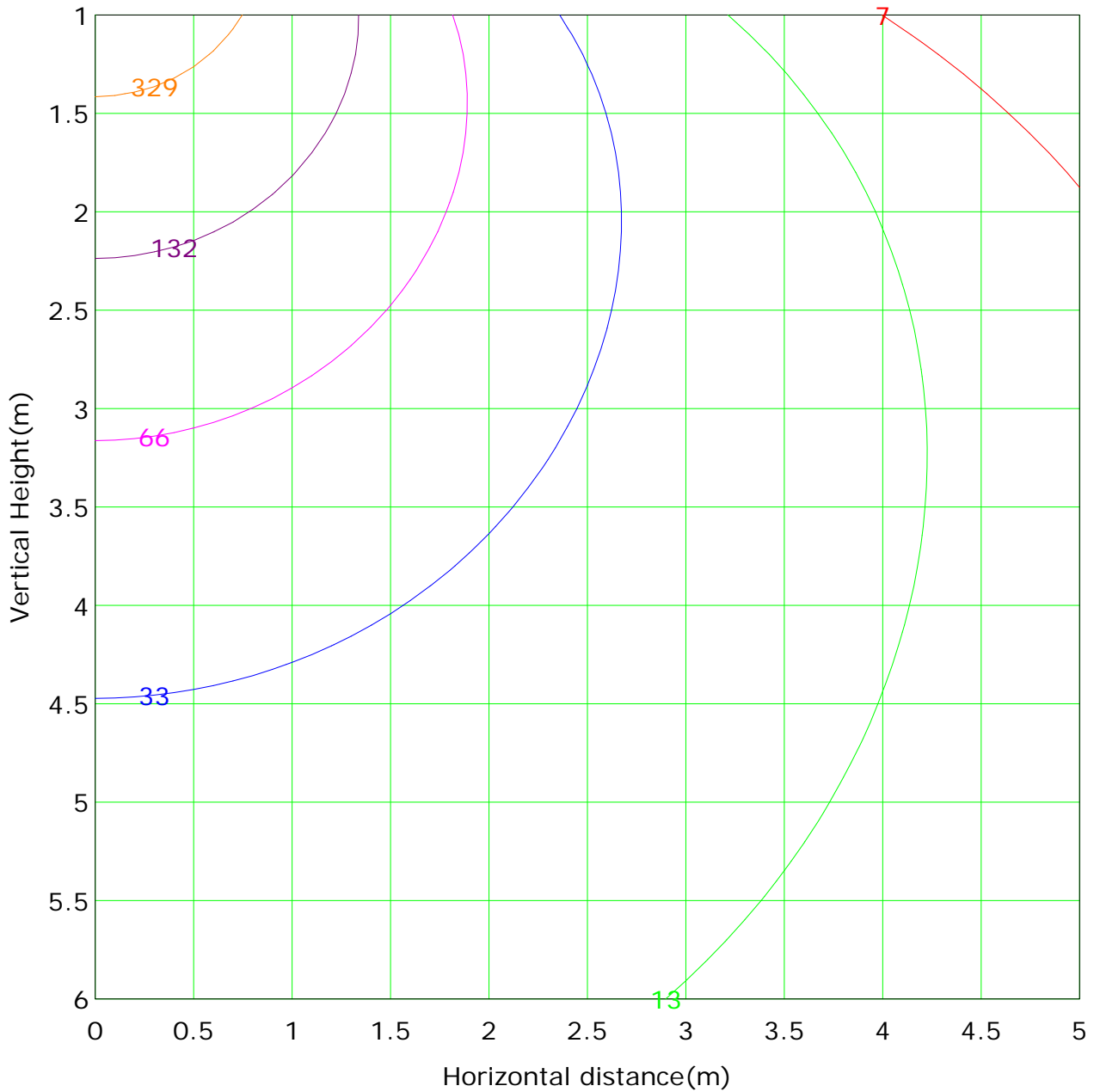


C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## Vertical IsoLux Plot



|                    |                   |                   |
|--------------------|-------------------|-------------------|
| Lowest(m): 1.0m    | Highest(m): 6.0m  | Max Lux: 658.9 lx |
| — ( 1%): 6.6 lx    | — ( 2%): 13.2 lx  |                   |
| — ( 5%): 32.9 lx   | — (10%): 65.9 lx  |                   |
| — (20%): 131.8 lx  | — (50%): 329.4 lx |                   |
| — (100%): 658.9 lx |                   |                   |

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



Report No.:

Test Time: 25/09/2018 11:22

## Luminaire Property

Luminaire Manufacturer: Lighting Line

Luminaire Description: LLP-CL02-07 + LLD-07-CS

Lamp Description: Strip 14,4W/m 60led/m Lumens per Lamp: 3158 lm

Voltage: 24.0 V Current: 1.163 A

Power: 27.92 W Power Factor: 1.000

## Photometric Results

CIE Class: Direct

Measurement Flux: 1836.1 lm

Downward Ratio: 92%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 165.9, 221.9, 177.0, 176.1

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 112.3, 126.5, 121.9, 121.4

Luminaire Efficacy Rating (LER): 65.81

Max. Intensity: 522.97 cd

S/MH(C0/C180): 1.25

Total Rated Lamp Lumens: 1836.1 lm

Efficiency: 100%

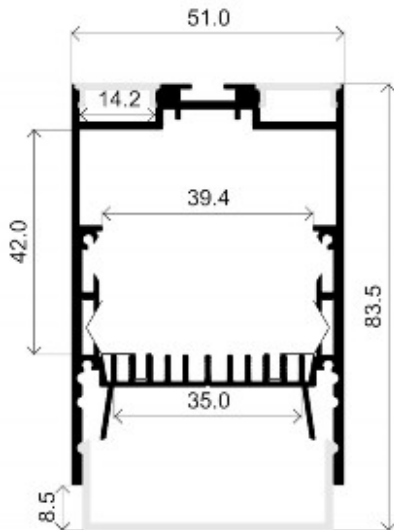
Upward Ratio: 8%

Central Intensity: 520.99 cd

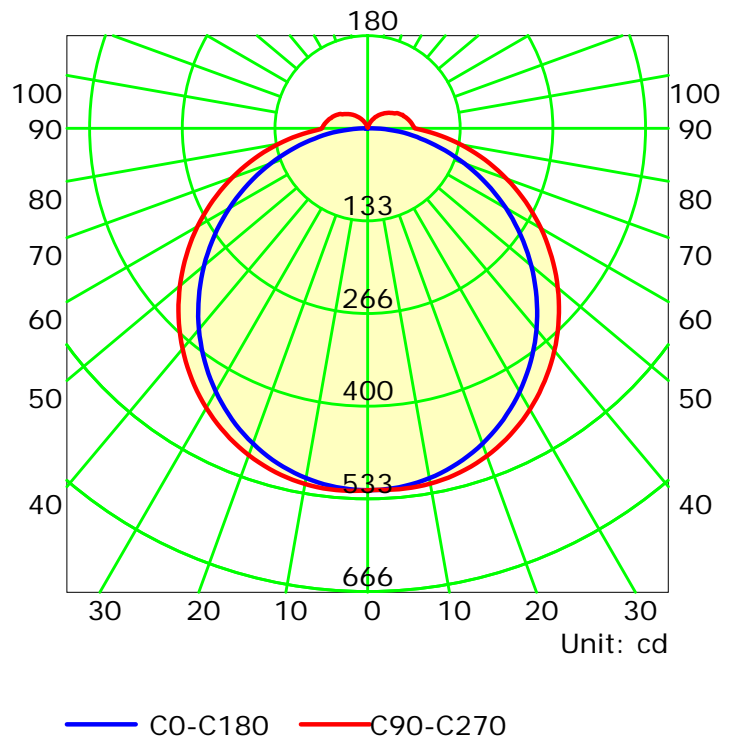
Pos of Max. Intensity: H280 V5

S/MH(C90/C270): 1.33

Picture Of Luminaire



Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

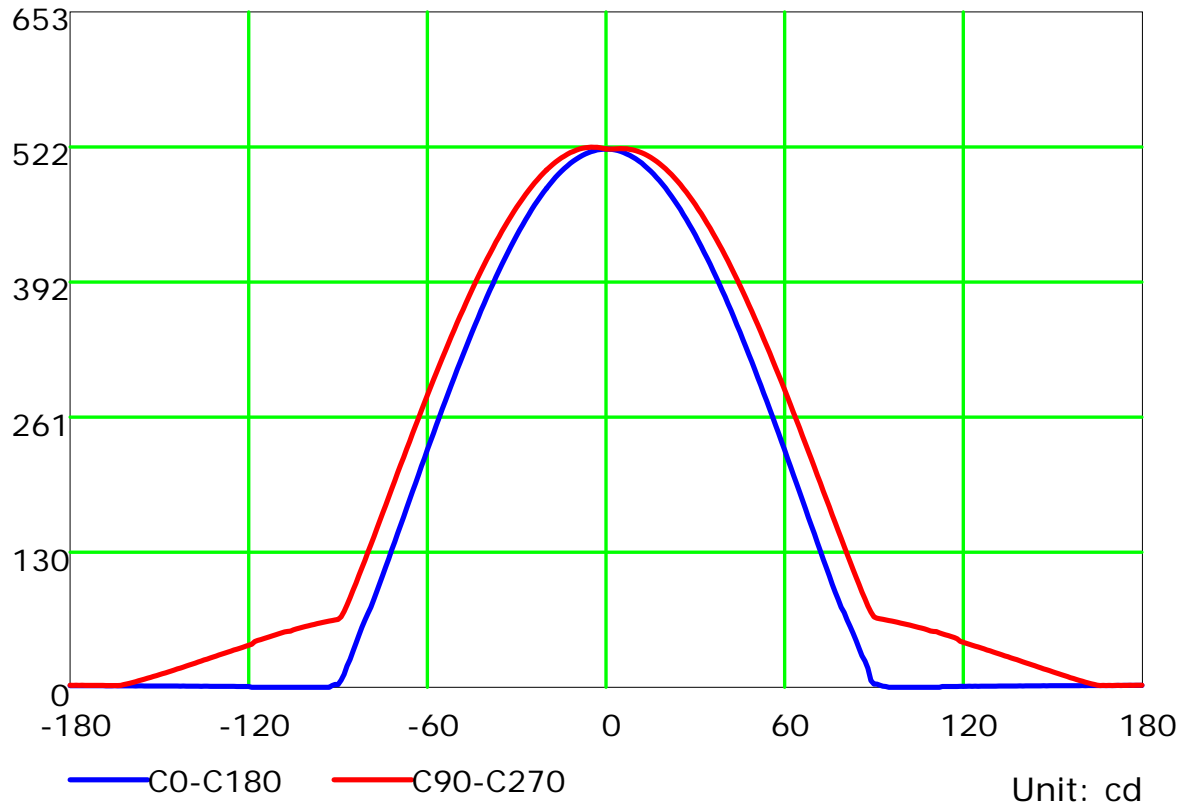
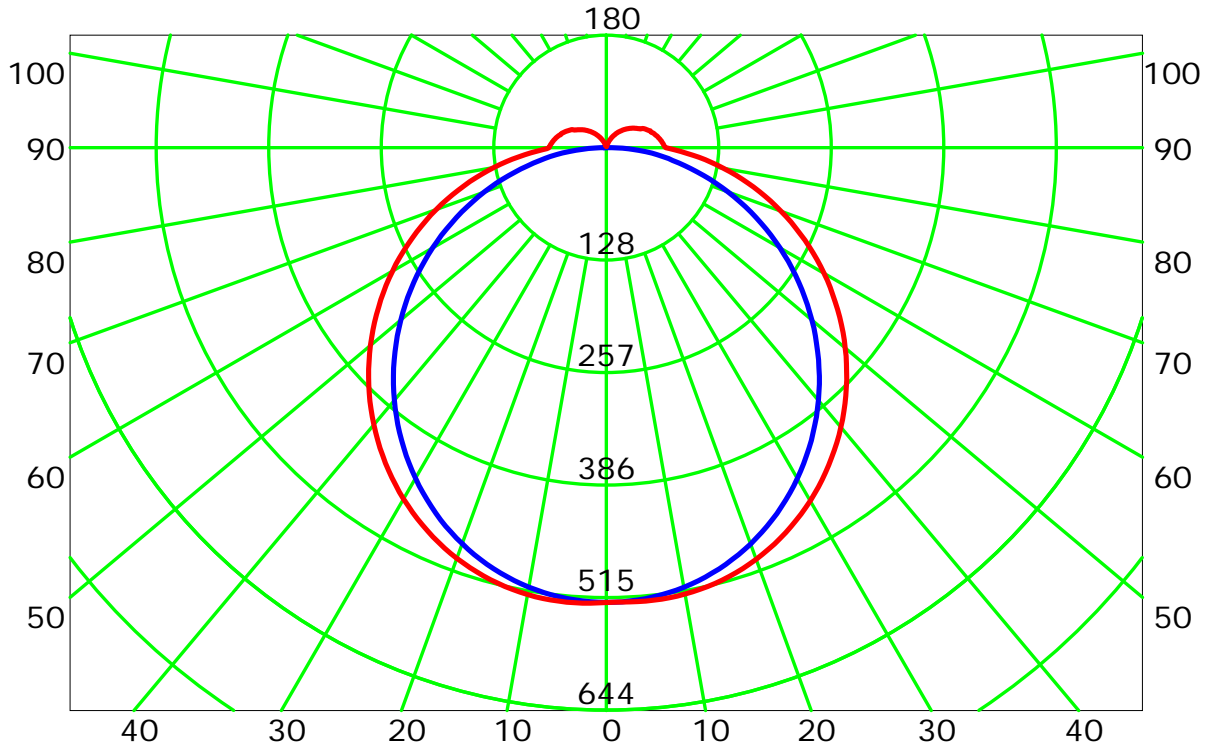
Distance: 7.970 m

Humidity:

Inspector:



## Luminous Intensity Distribution Curve

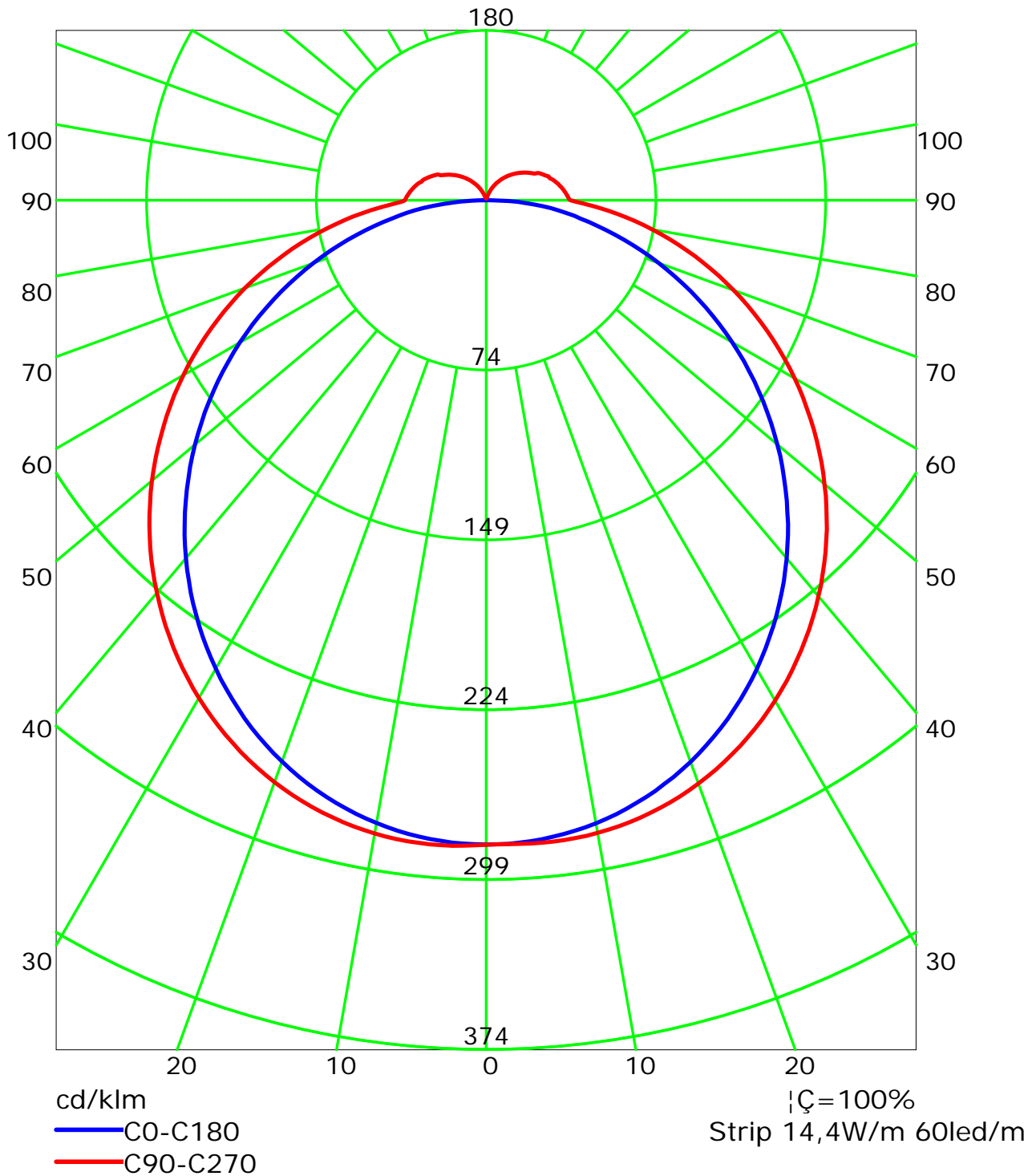


C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## Luminous Intensity Distribution Curve(cd/klm)

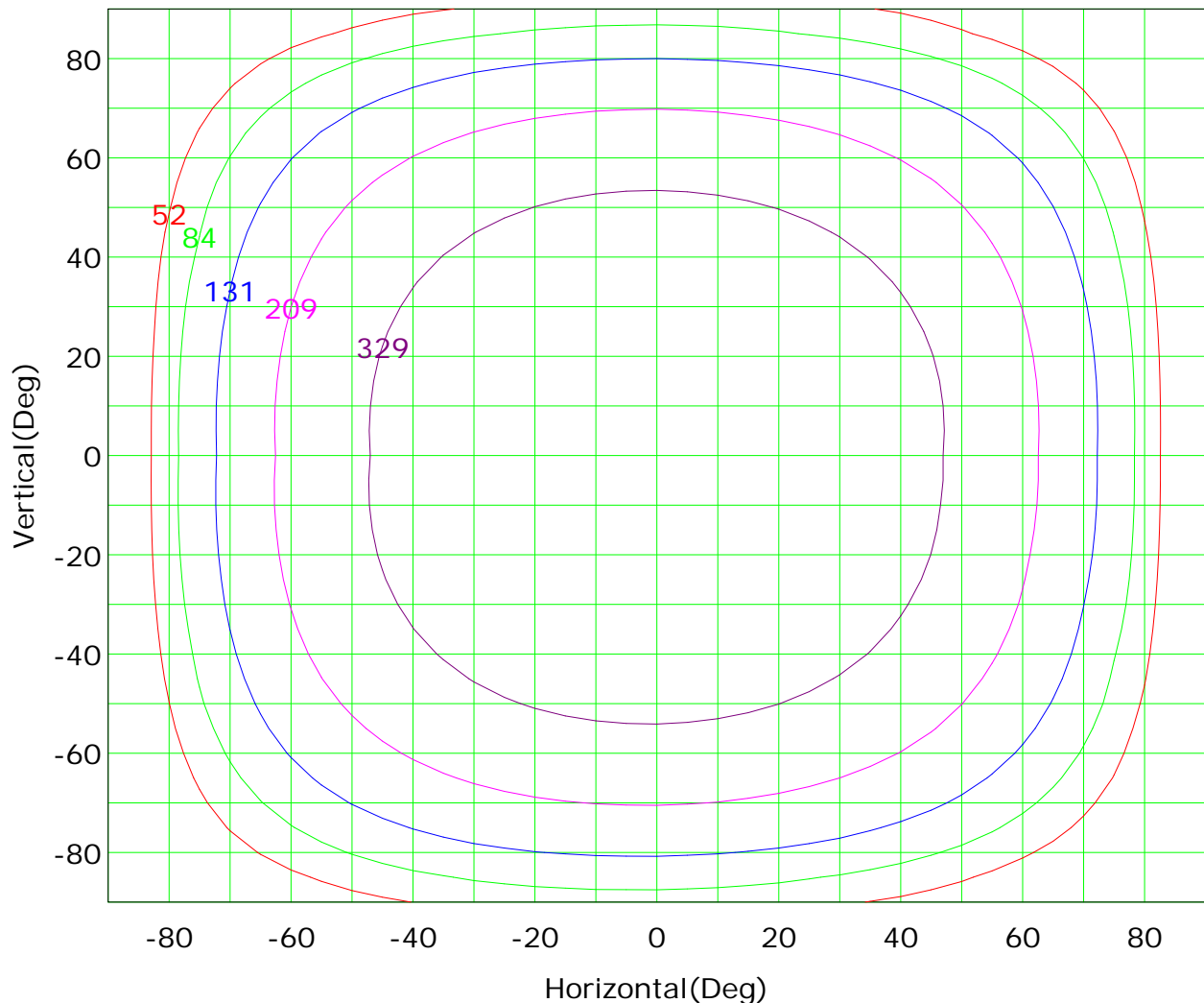


C Plane (°):0.0-360.0: 10.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-2000  
Distance: 7.970 m  
Humidity:  
Inspector:



## Isocandela (rectangle)



Imax (100%): 523 cd

|           |        |           |        |
|-----------|--------|-----------|--------|
| — ( 10%): | 52 cd  | — ( 16%): | 84 cd  |
| — ( 25%): | 131 cd | — ( 40%): | 209 cd |
| — ( 63%): | 329 cd | — (100%): | 523 cd |

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

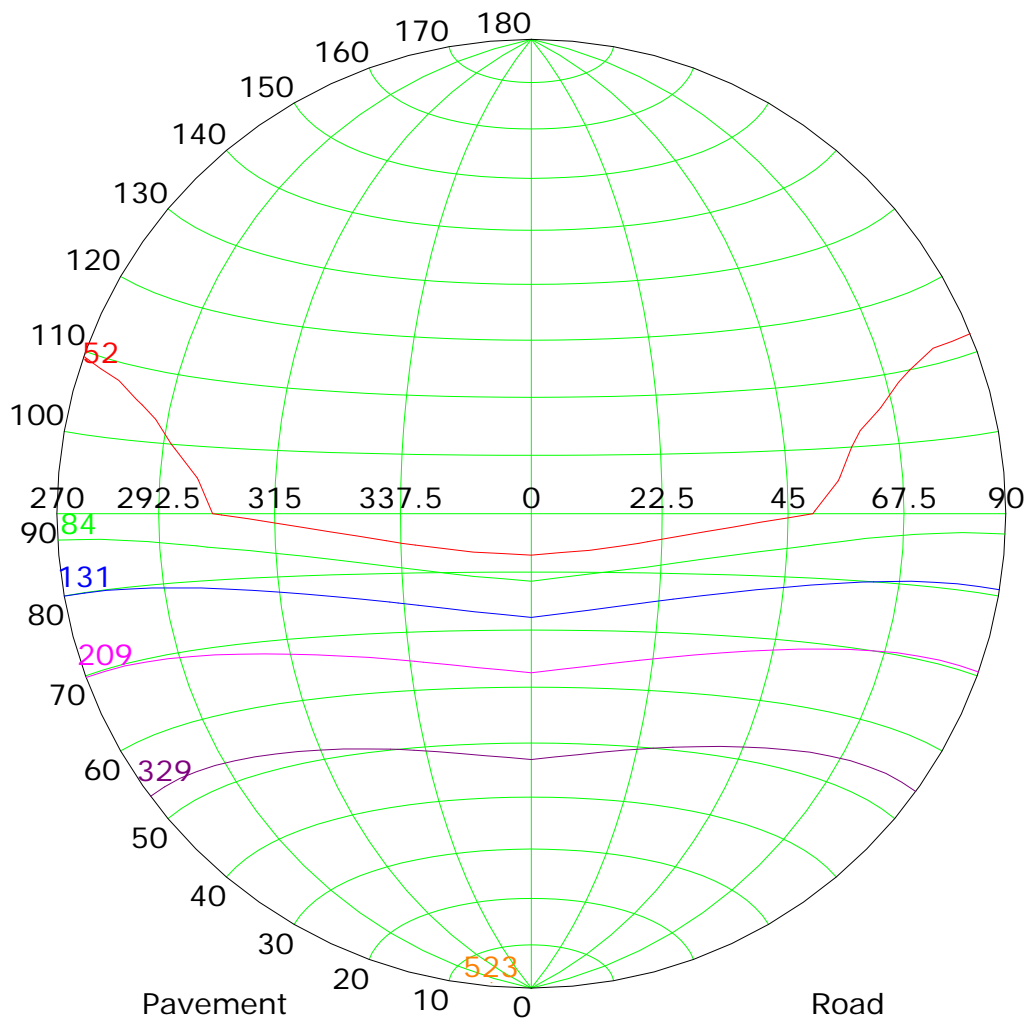
Distance: 7.970 m

Humidity:

Inspector:



## Isocandela (sphere)



Imax (100%): 523 cd

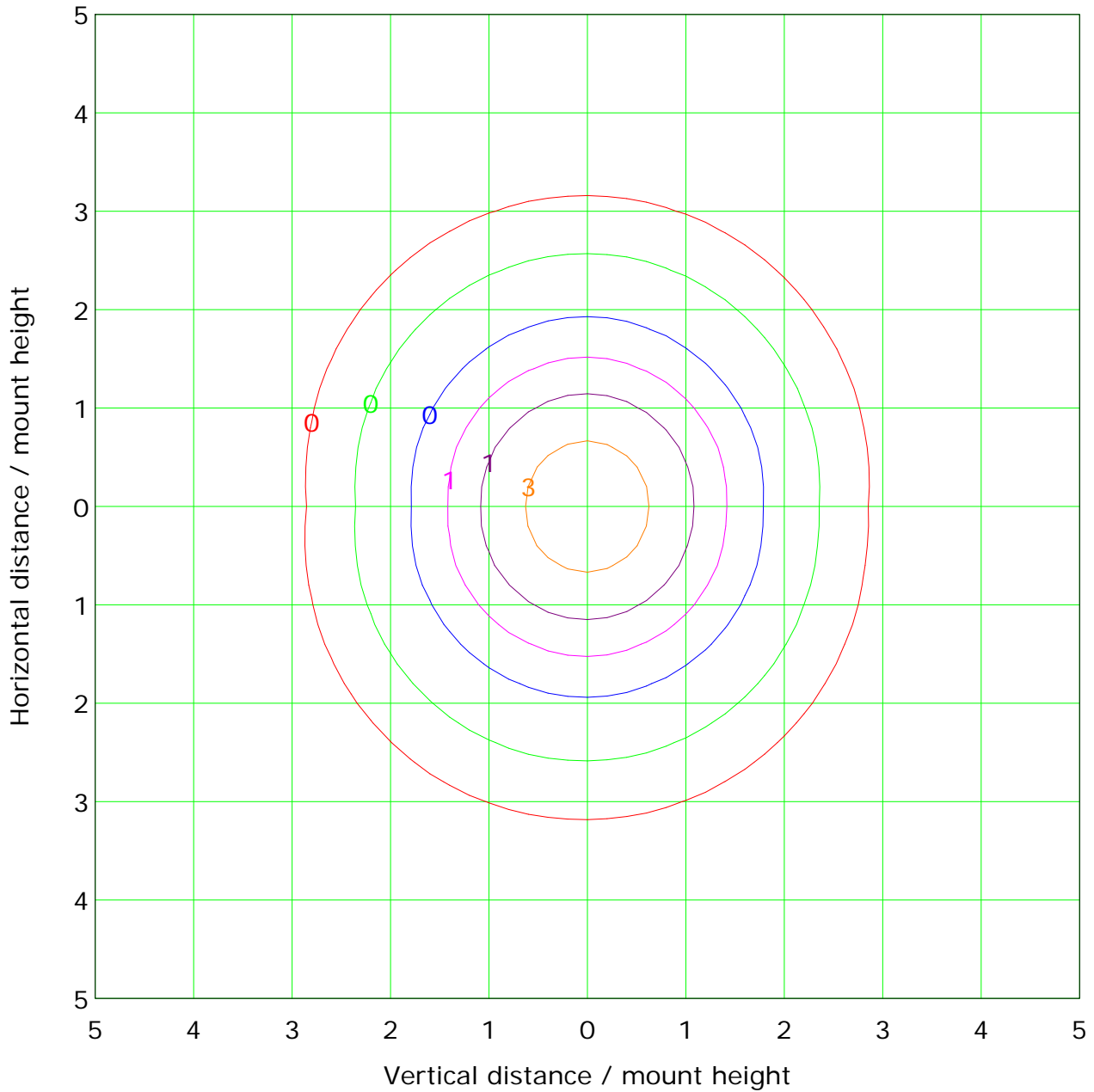
|           |        |           |        |
|-----------|--------|-----------|--------|
| — ( 10%): | 52 cd  | — ( 16%): | 84 cd  |
| — ( 25%): | 131 cd | — ( 40%): | 209 cd |
| — ( 63%): | 329 cd | — (100%): | 523 cd |

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## IsoLux Plot



|                        |        |                       |        |
|------------------------|--------|-----------------------|--------|
| Mounting Height: 10.0m |        | Max Lux(100%): 5.2 lx |        |
| — ( 1%):               | 0.1 lx | — ( 2%):              | 0.1 lx |
| — ( 5%):               | 0.3 lx | — (10%):              | 0.5 lx |
| — (20%):               | 1.0 lx | — (50%):              | 2.6 lx |
| — (100%):              | 5.2 lx |                       |        |

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

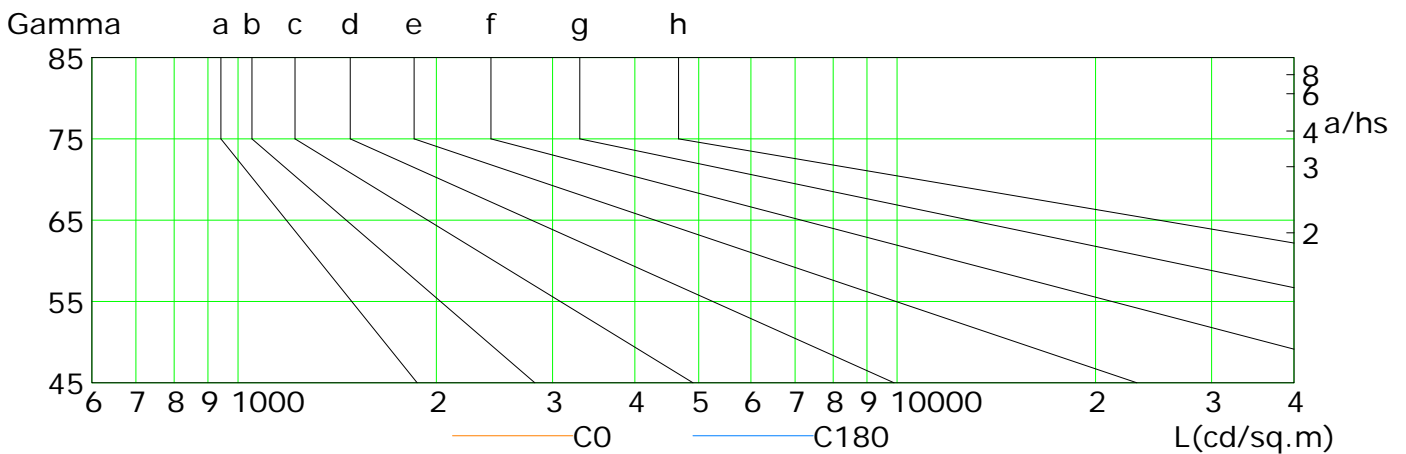
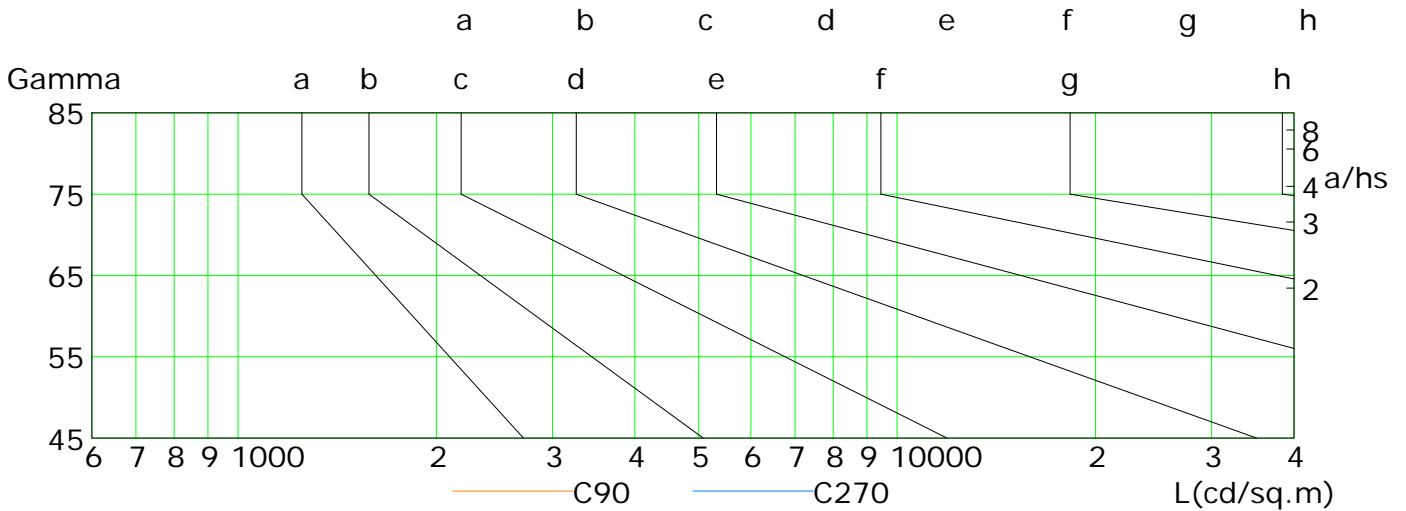
Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:





## Lum Limit Curve

| Dazzle | Quality | Illuminance (lx) |      |      |       |       |       |       |       |
|--------|---------|------------------|------|------|-------|-------|-------|-------|-------|
|        |         | a                | b    | c    | d     | e     | f     | g     | h     |
| 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 |



| L(cd/sq.m) | G45 | G50 | G55 | G60 | G65 | G70 | G75 | G80 | G85 |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| C0         | 344 | 307 | 269 | 230 | 189 | 149 | 108 | 72  | 38  |
| C90        | 389 | 357 | 324 | 288 | 251 | 213 | 175 | 136 | 100 |
| C180       | 344 | 308 | 269 | 230 | 189 | 149 | 108 | 71  | 35  |
| C270       | 385 | 353 | 319 | 283 | 246 | 208 | 169 | 131 | 94  |

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

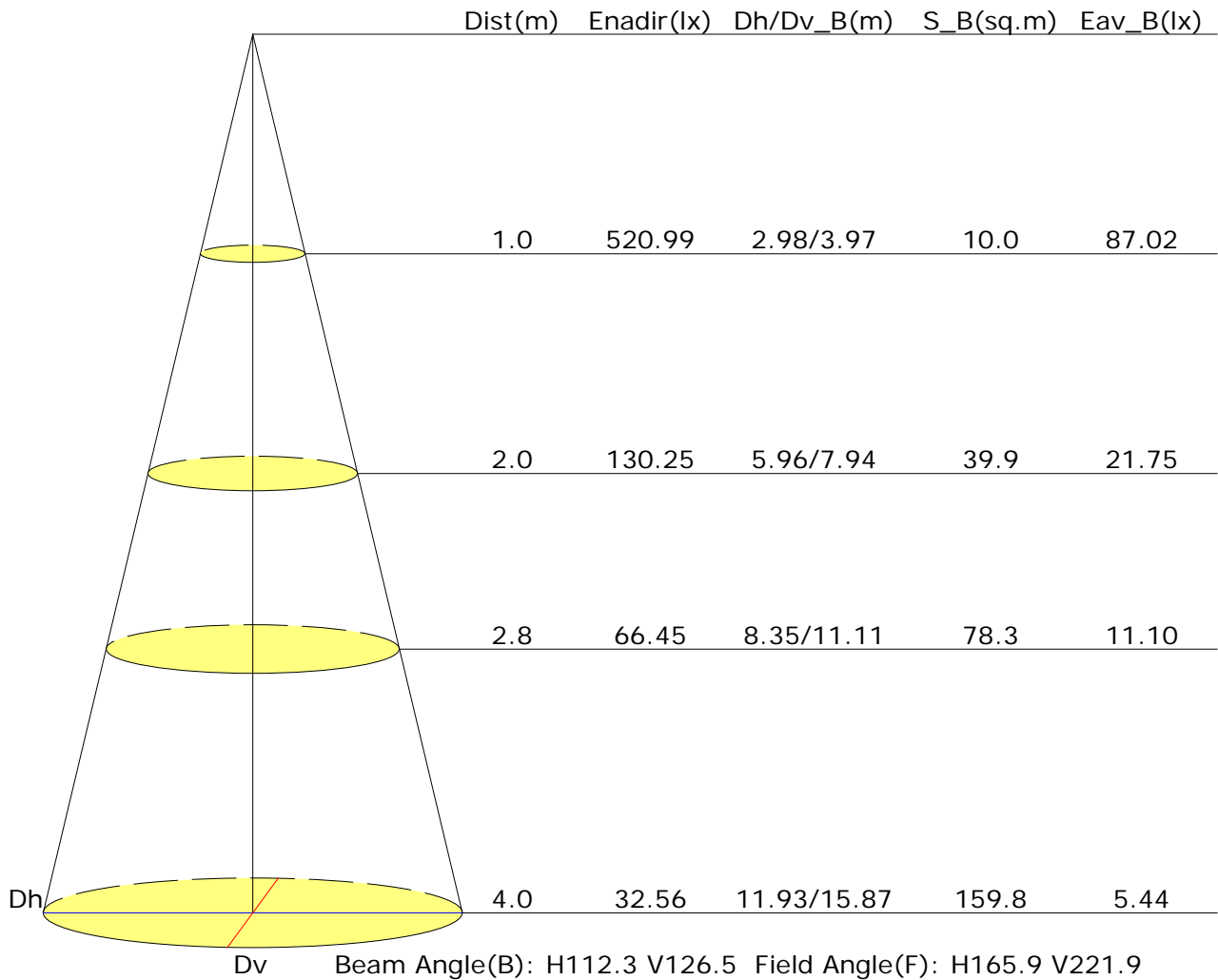
Distance: 7.970 m

Humidity:

Inspector:



## Illuminance at a Distance

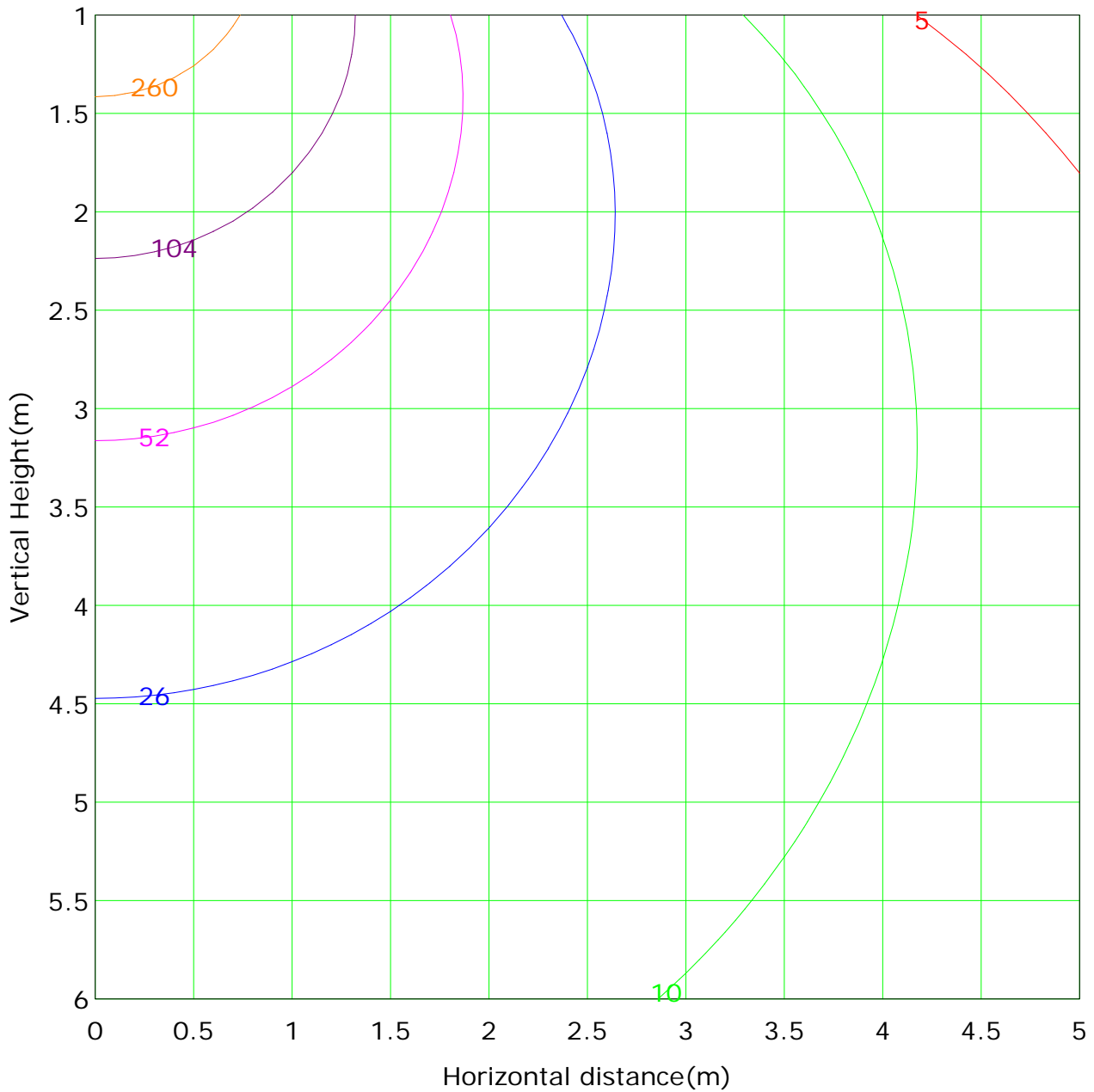


C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## Vertical IsoLux Plot



|                  |                  |                   |
|------------------|------------------|-------------------|
| Lowest(m): 1.0m  | Highest(m): 6.0m | Max Lux: 521.0 lx |
| ( 1%): 5.2 lx    | ( 2%): 10.4 lx   | ( 10%): 52.1 lx   |
| ( 5%): 26.0 lx   | ( 20%): 104.2 lx | ( 50%): 260.5 lx  |
| (100%): 521.0 lx |                  |                   |

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



Report No.:

Test Time: 25/09/2018 12:36

## Luminaire Property

Luminaire Manufacturer: Lighting Line

Luminaire Description: LLP-CL02-07 + LLD-07-CS

Lamp Description: Strip 14,4W/m 60led/m Lumens per Lamp: 3158 lm

Voltage: 24.0 V Current: 1.167 A

Power: 28.01 W Power Factor: 1.000

## Photometric Results

CIE Class: Direct

Measurement Flux: 1795.8 lm

Downward Ratio: 100%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 164.2, 163.7, 163.9, 164.0

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 112.5, 111.4, 111.8, 112.0

Luminaire Efficacy Rating (LER): 64.16

Max. Intensity: 624.41 cd

S/MH(C0/C180): 1.25

Total Rated Lamp Lumens: 1795.8 lm

Efficiency: 100%

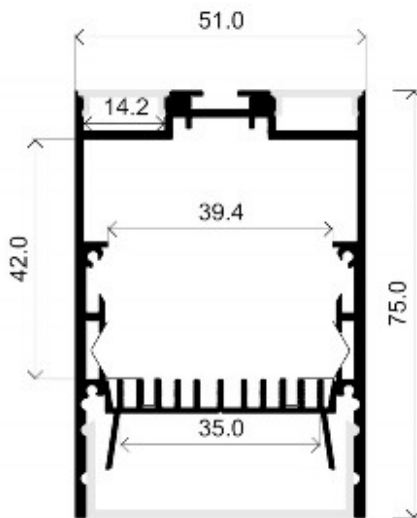
Upward Ratio: 0%

Central Intensity: 623.14 cd

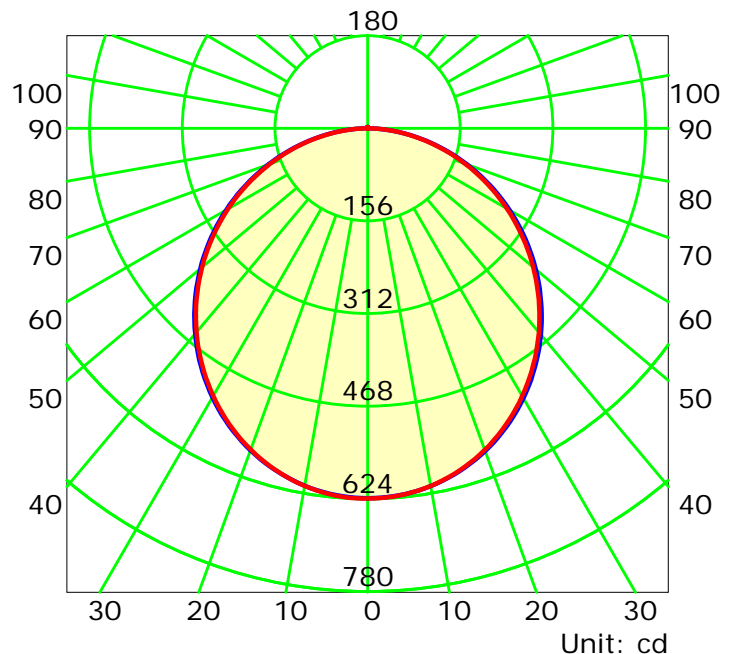
Pos of Max. Intensity: H20 V0

S/MH(C90/C270): 1.24

Picture Of Luminaire



Luminous Intensity Distribution Curve



— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

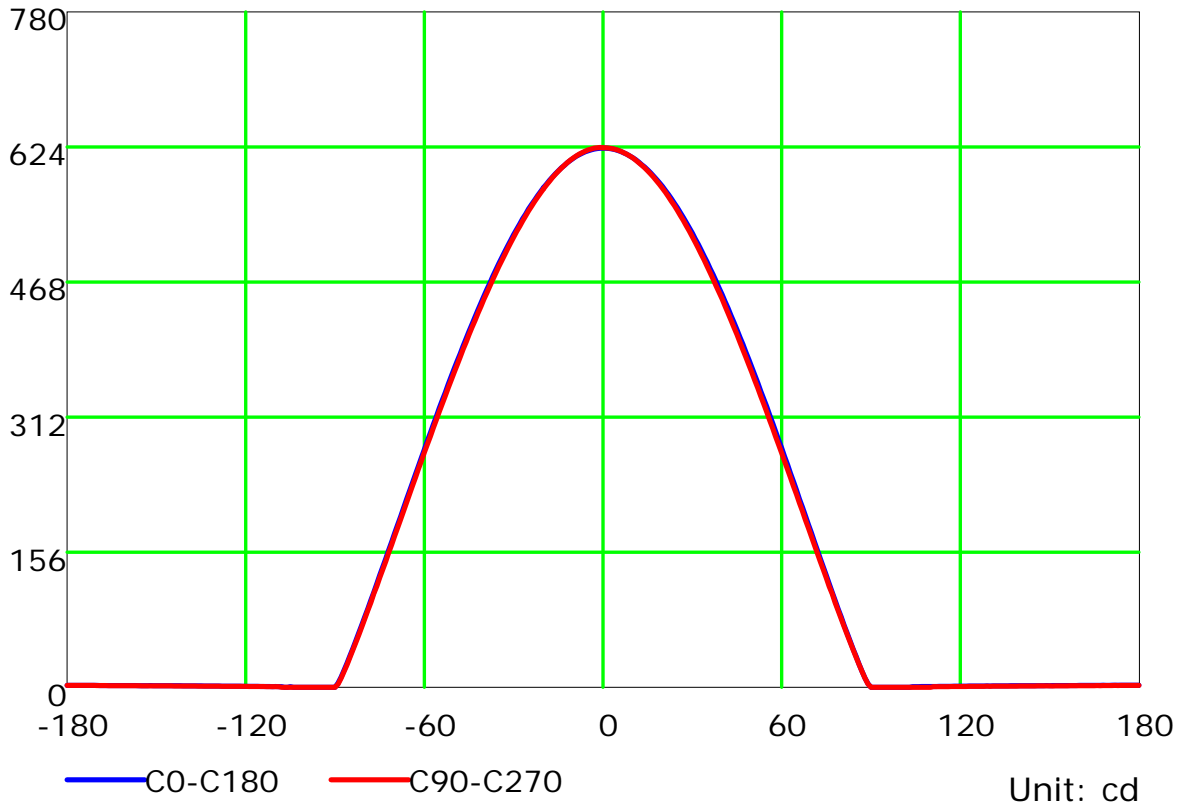
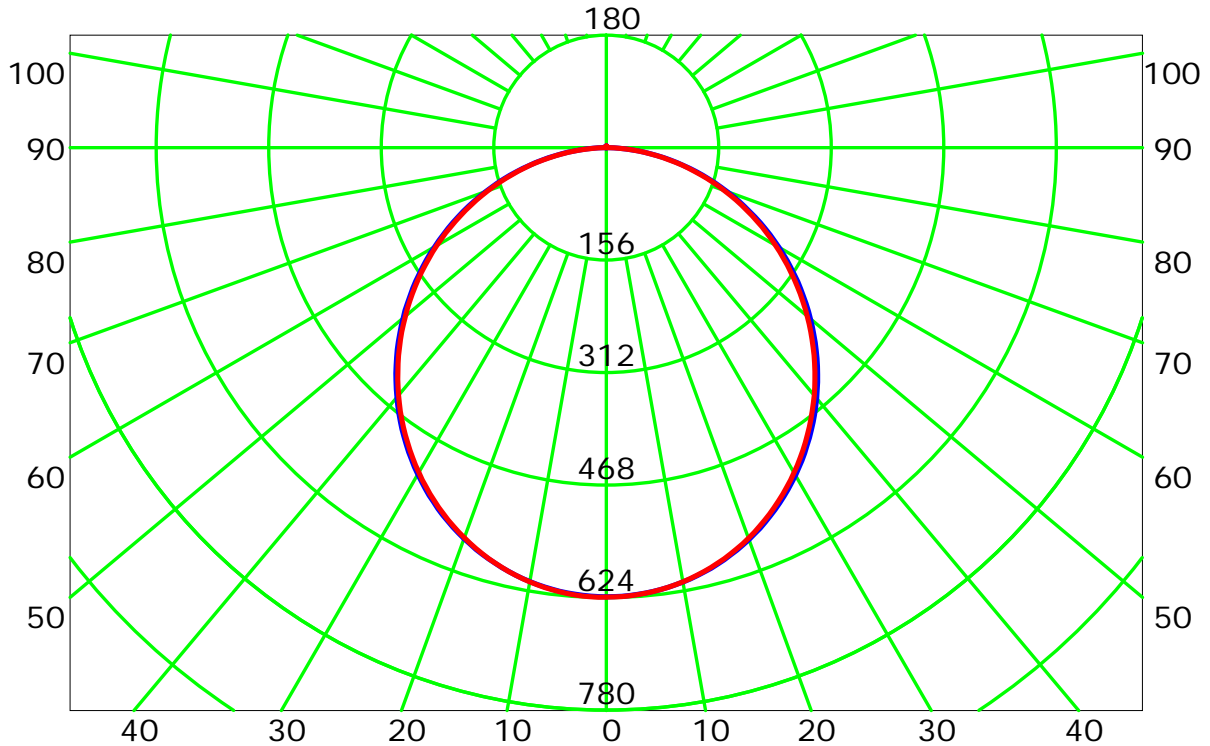
Distance: 7.970 m

Humidity:

Inspector:



## Luminous Intensity Distribution Curve

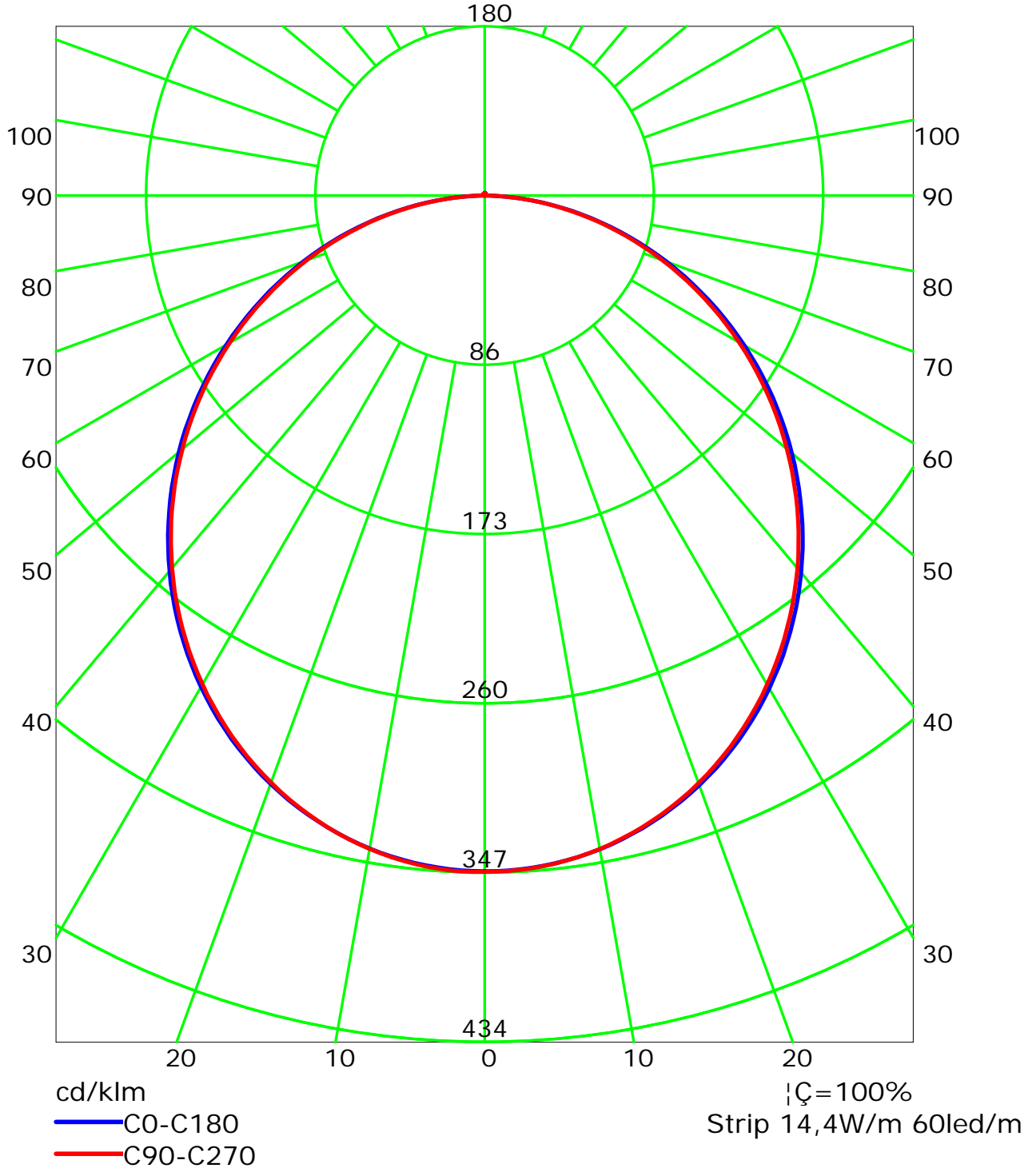


C Plane (°):0.0-360.0: 10.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-2000  
Distance: 7.970 m  
Humidity:  
Inspector:



## Luminous Intensity Distribution Curve(cd/klm)

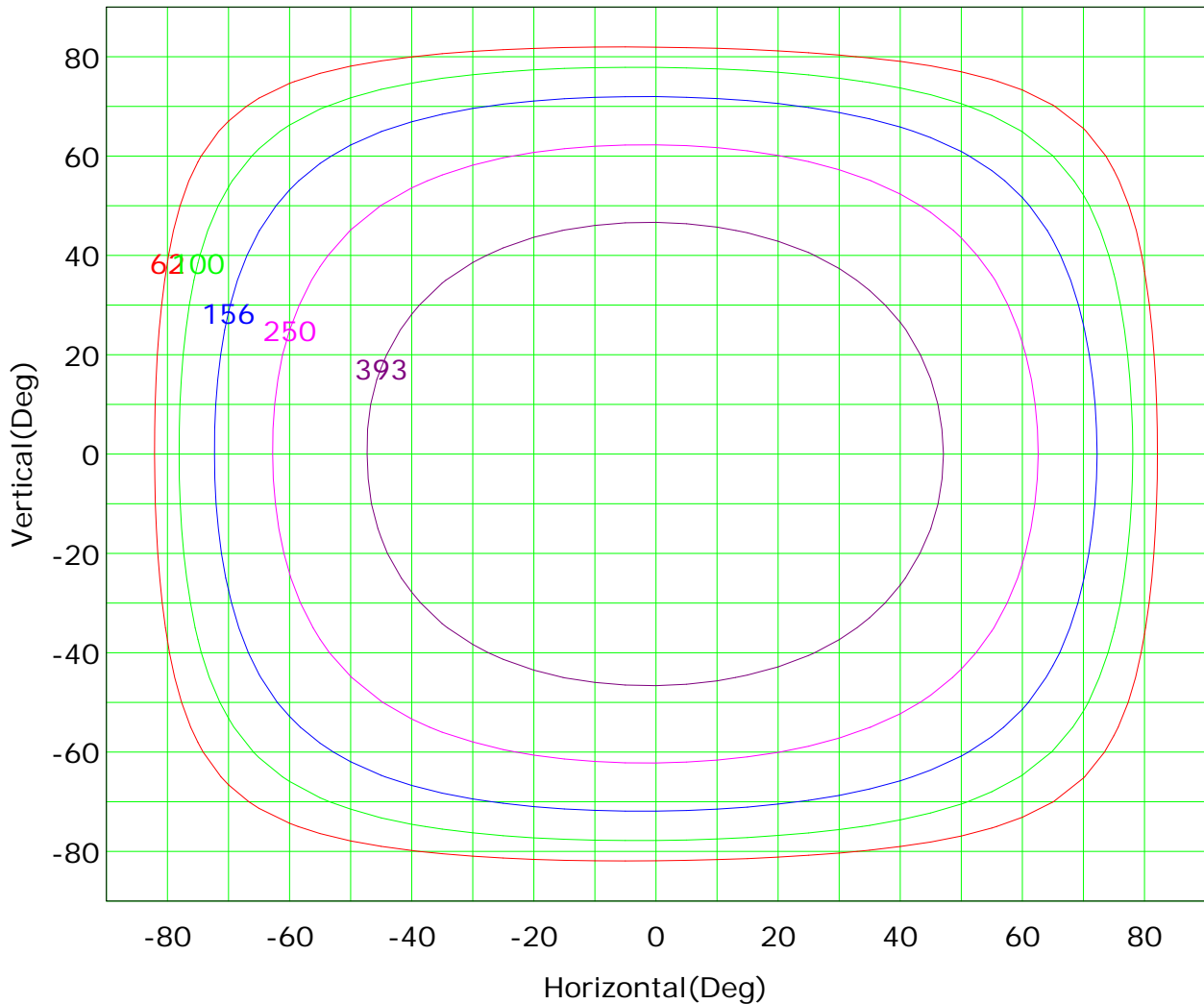


C Plane (°):0.0-360.0: 10.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-2000  
Distance: 7.970 m  
Humidity:  
Inspector:



## Isocandela (rectangle)



Imax (100%): 624 cd

|           |        |           |        |
|-----------|--------|-----------|--------|
| — ( 10%): | 62 cd  | — ( 16%): | 100 cd |
| — ( 25%): | 156 cd | — ( 40%): | 250 cd |
| — ( 63%): | 393 cd | — (100%): | 624 cd |

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

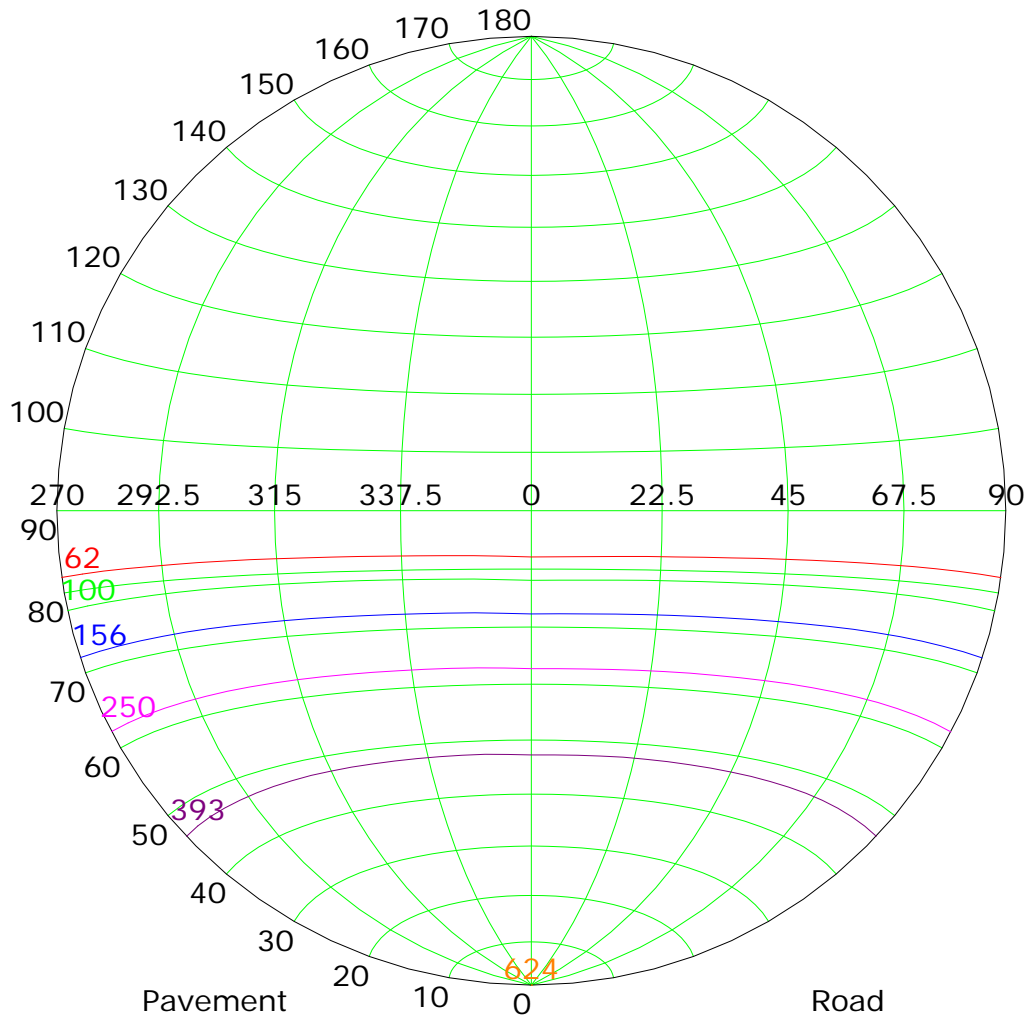
Distance: 7.970 m

Humidity:

Inspector:



## Isocandela (sphere)



Imax (100%): 624 cd

|           |        |           |        |
|-----------|--------|-----------|--------|
| — ( 10%): | 62 cd  | — ( 16%): | 100 cd |
| — ( 25%): | 156 cd | — ( 40%): | 250 cd |
| — ( 63%): | 393 cd | — (100%): | 624 cd |

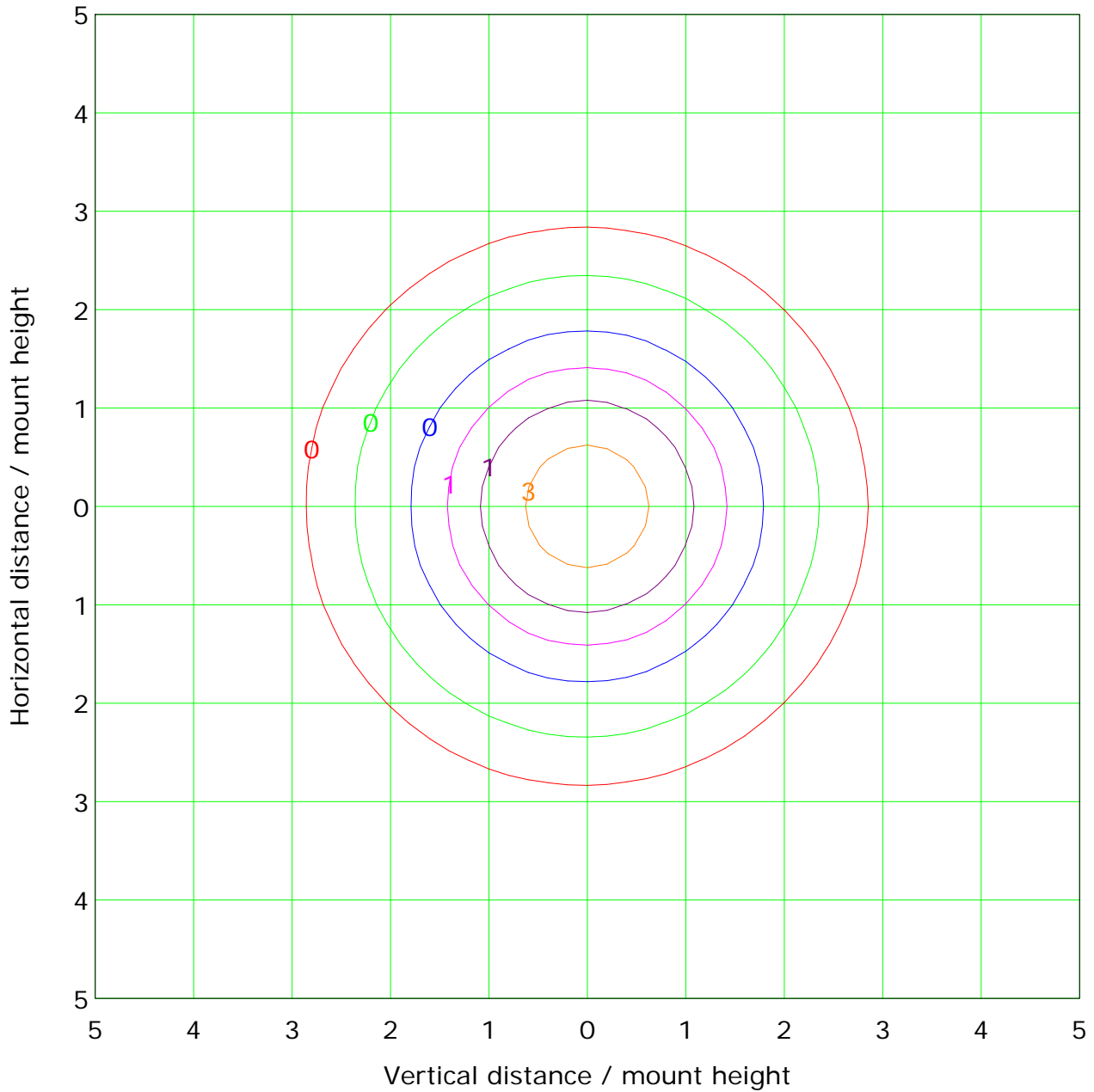
C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:





## IsoLux Plot



|                        |        |                       |        |
|------------------------|--------|-----------------------|--------|
| Mounting Height: 10.0m |        | Max Lux(100%): 6.2 lx |        |
| — ( 1%):               | 0.1 lx | — ( 2%):              | 0.1 lx |
| — ( 5%):               | 0.3 lx | — (10%):              | 0.6 lx |
| — (20%):               | 1.2 lx | — (50%):              | 3.1 lx |
| — (100%):              | 6.2 lx |                       |        |

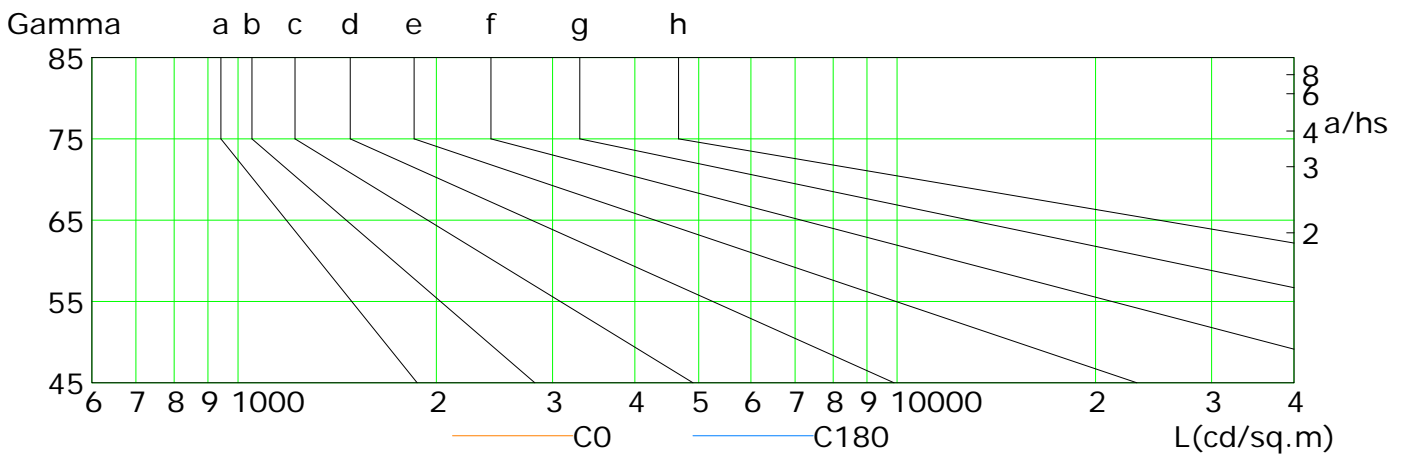
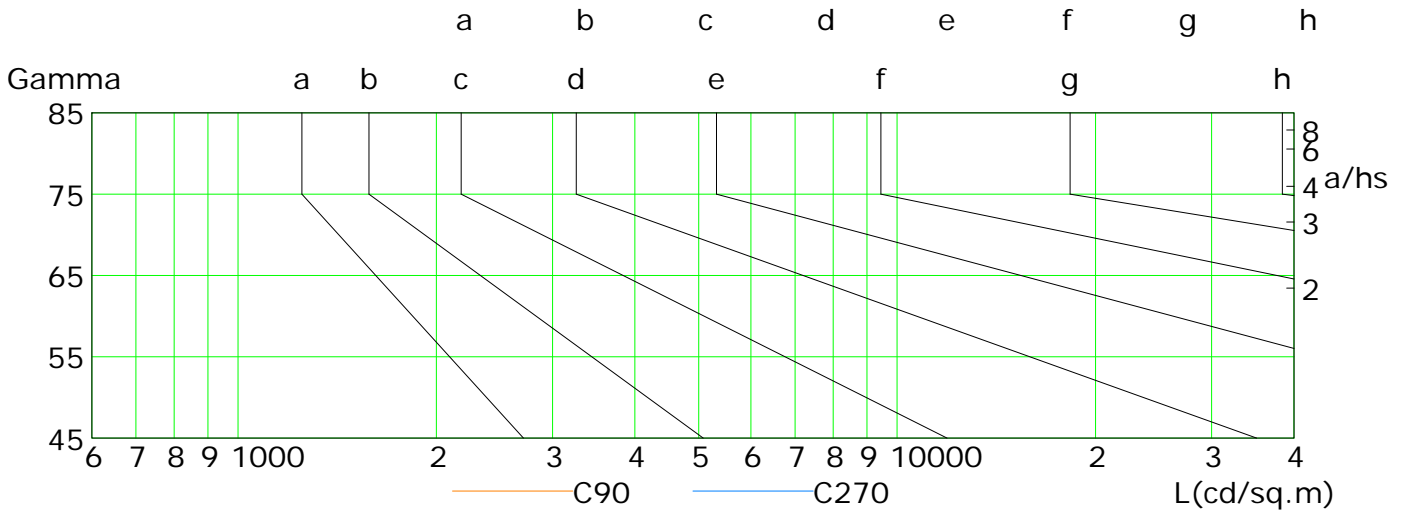
C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## Lum Limit Curve

| Dazzle | Quality | Illuminance (lx) |      |      |       |       |       |       |       |
|--------|---------|------------------|------|------|-------|-------|-------|-------|-------|
|        |         | a                | b    | c    | d     | e     | f     | g     | h     |
| 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 |



| L(cd/sq.m) | G45 | G50 | G55 | G60 | G65 | G70 | G75 | G80 | G85 |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| C0         | 413 | 370 | 324 | 277 | 228 | 179 | 129 | 81  | 36  |
| C90        | 408 | 364 | 318 | 271 | 223 | 174 | 126 | 79  | 35  |
| C180       | 411 | 368 | 323 | 275 | 227 | 178 | 130 | 82  | 37  |
| C270       | 408 | 364 | 319 | 272 | 223 | 175 | 127 | 79  | 35  |

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

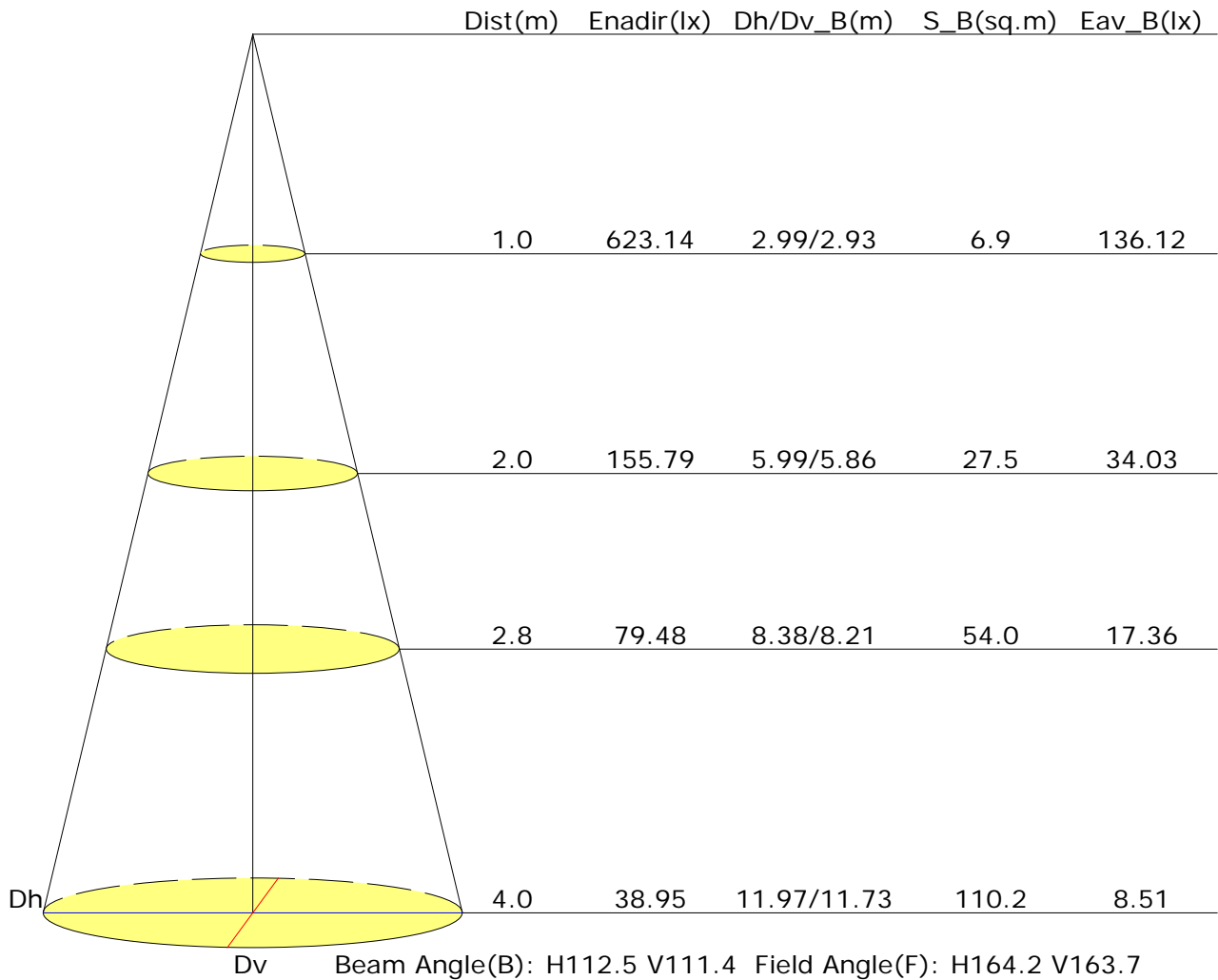
Distance: 7.970 m

Humidity:

Inspector:

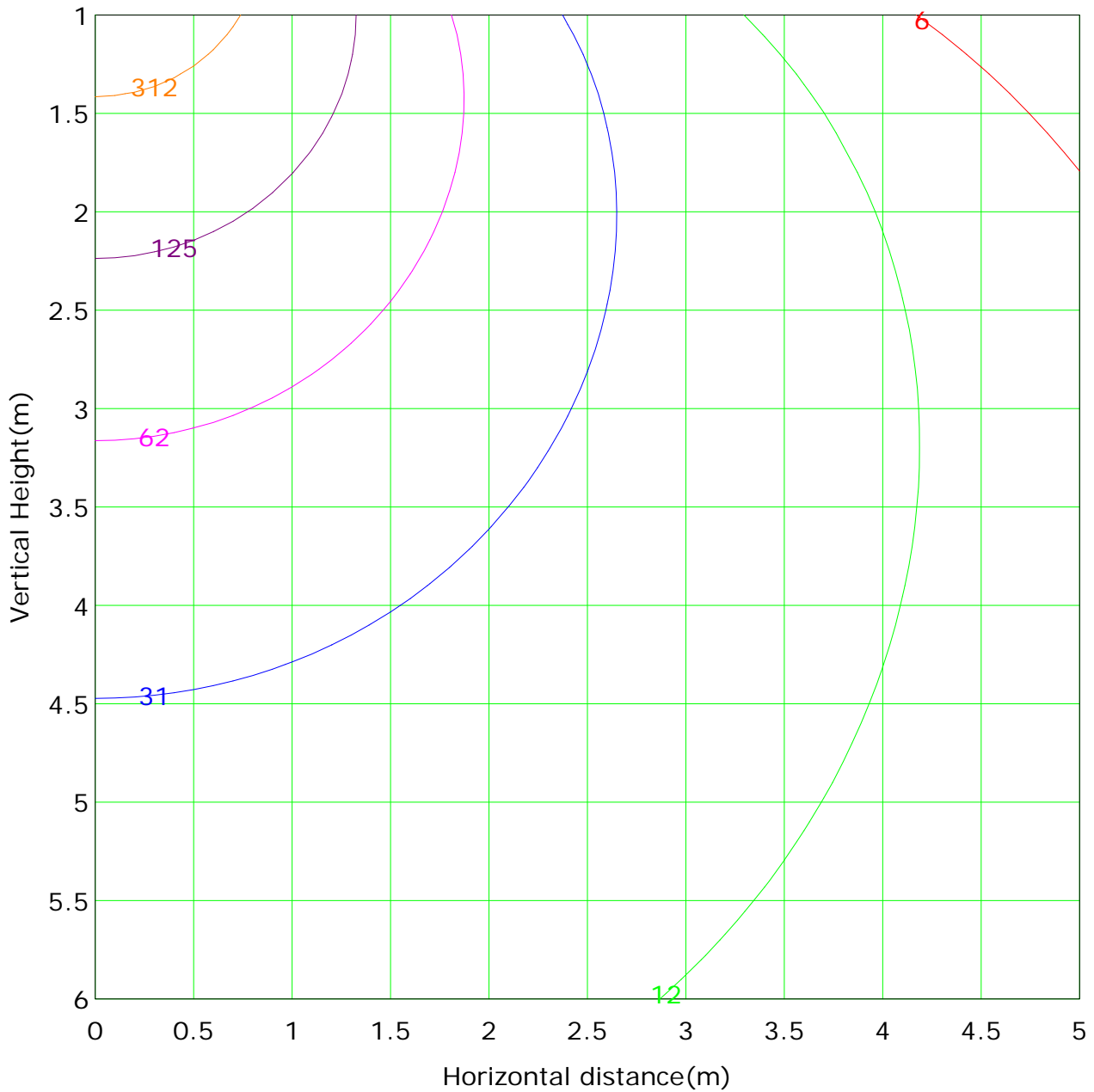


## Illuminance at a Distance





## Vertical IsoLux Plot



|                    |                    |                    |
|--------------------|--------------------|--------------------|
| Lowest(m): 1.0m    | Highest(m): 6.0m   | Max Lux: 623.1 lx  |
| — ( 1%): 6.2 lx    | — ( 2%): 12.5 lx   | — ( 10%): 62.3 lx  |
| — ( 5%): 31.2 lx   | — ( 20%): 124.6 lx | — ( 50%): 311.6 lx |
| — (100%): 623.1 lx |                    |                    |

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



Report No.:

Test Time: 05/10/2018 12:58

## Luminaire Property

Luminaire Manufacturer: Lighting Line

Luminaire Description: LLP-CL02-07 + LLD-07-CS

Lamp Description: Strip 14,4W/m 60led/m Lumens per Lamp: 3158 lm

Voltage: 24.0 V Current: 1.157 A

Power: 27.77 W Power Factor: 1.000

## Photometric Results

CIE Class: Direct

Measurement Flux: 1867.7 lm

Downward Ratio: 100%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 164.2, 157.9, 159.8, 160.0

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 112.8, 109.5, 110.7, 110.8

Luminaire Efficacy Rating (LER): 67.31

Max. Intensity: 665.61 cd

S/MH(C0/C180): 1.25

Total Rated Lamp Lumens: 1867.7 lm

Efficiency: 100%

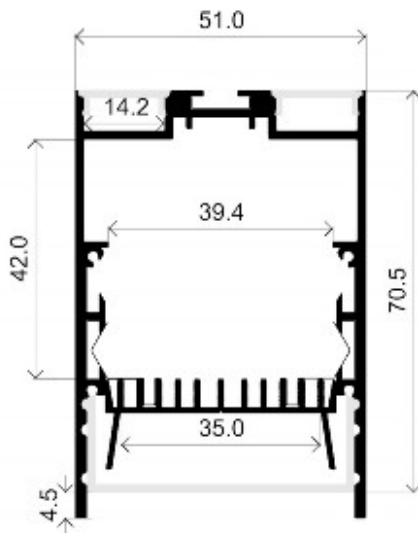
Upward Ratio: 0%

Central Intensity: 665.15 cd

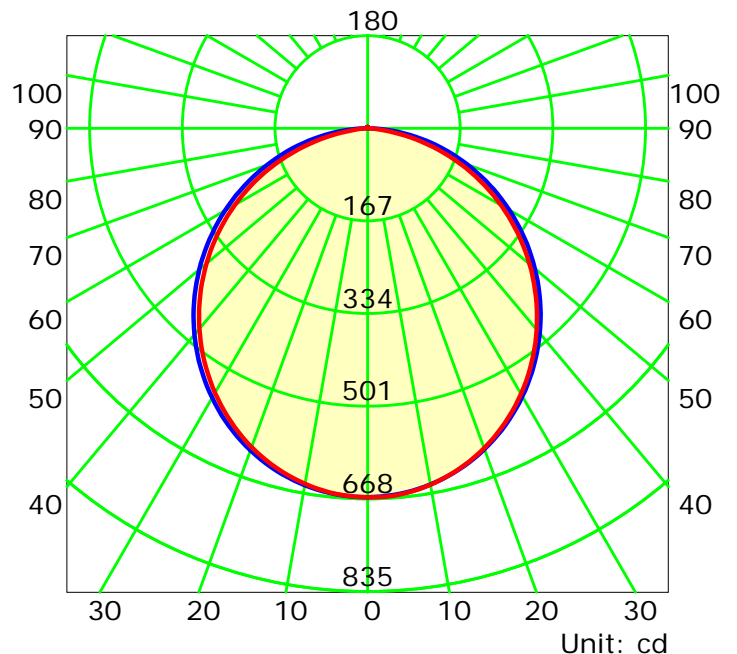
Pos of Max. Intensity: H100 V1

S/MH(C90/C270): 1.23

Picture Of Luminaire



Luminous Intensity Distribution Curve



— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

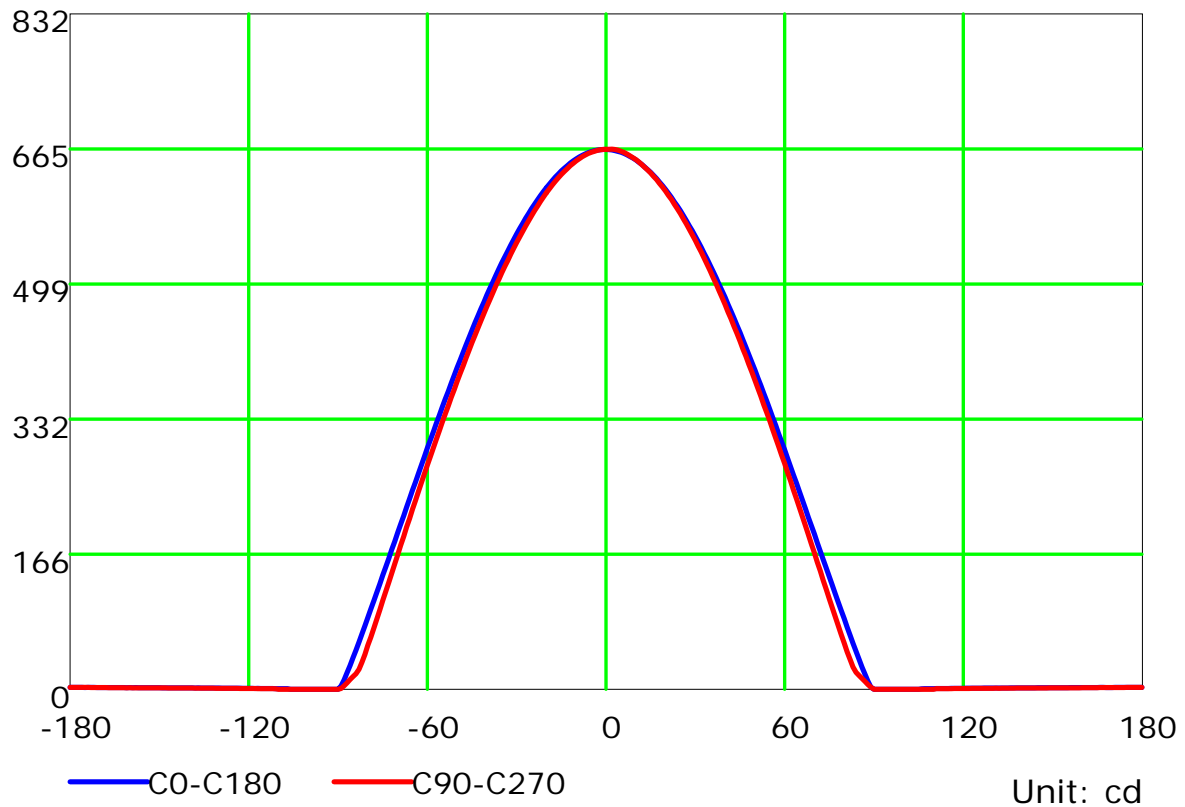
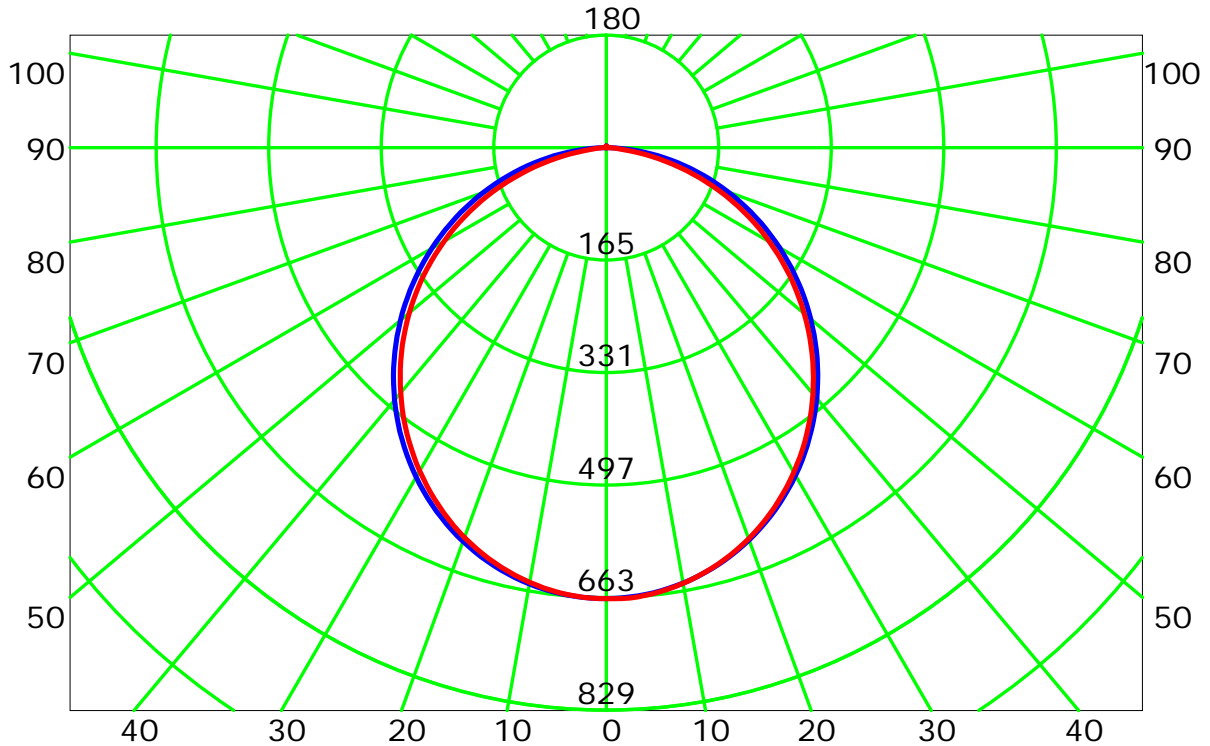
Distance: 7.970 m

Humidity:

Inspector:



## Luminous Intensity Distribution Curve

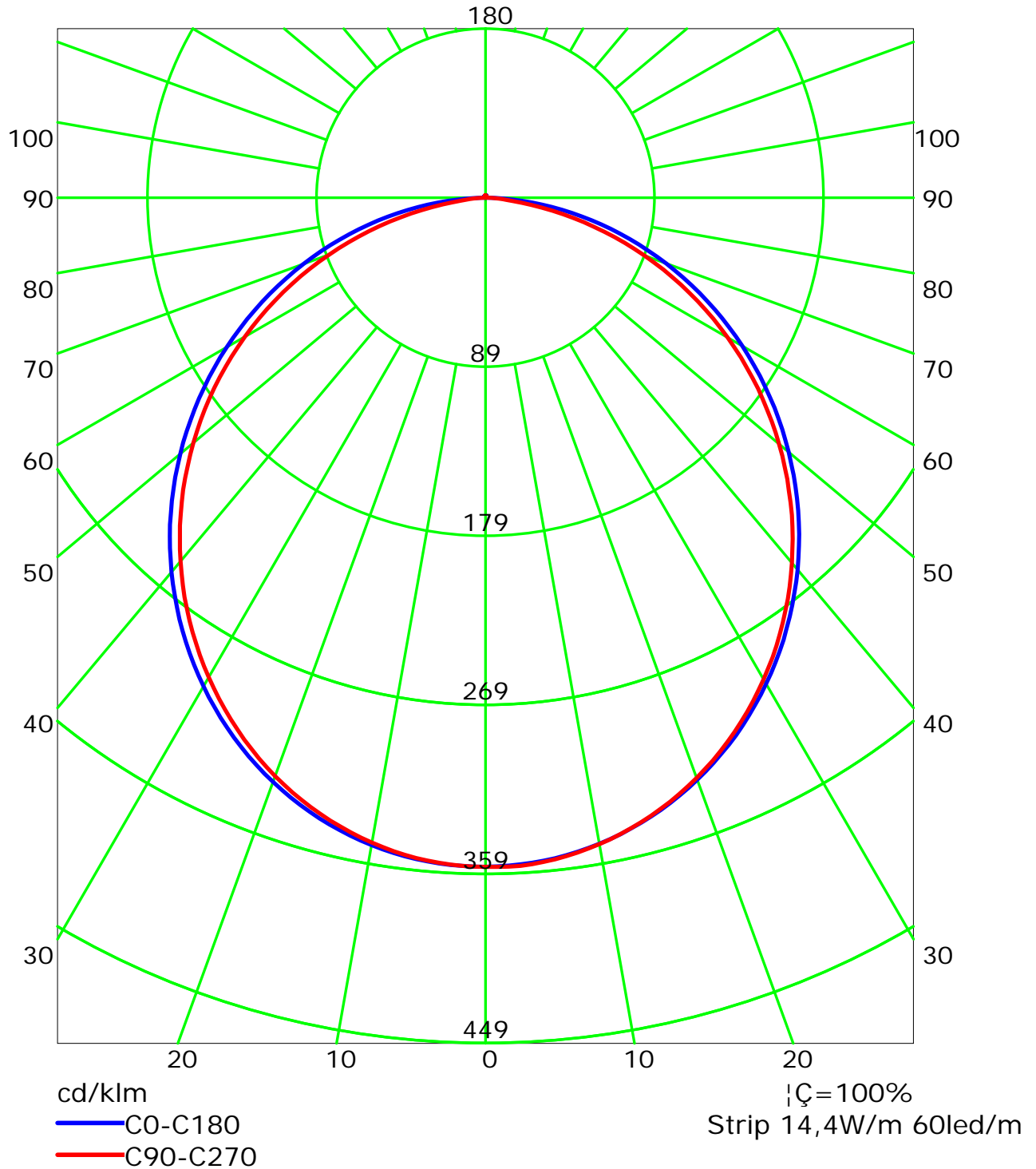


C Plane (°):0.0-360.0: 10.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-2000  
Distance: 7.970 m  
Humidity:  
Inspector:



## Luminous Intensity Distribution Curve(cd/klm)

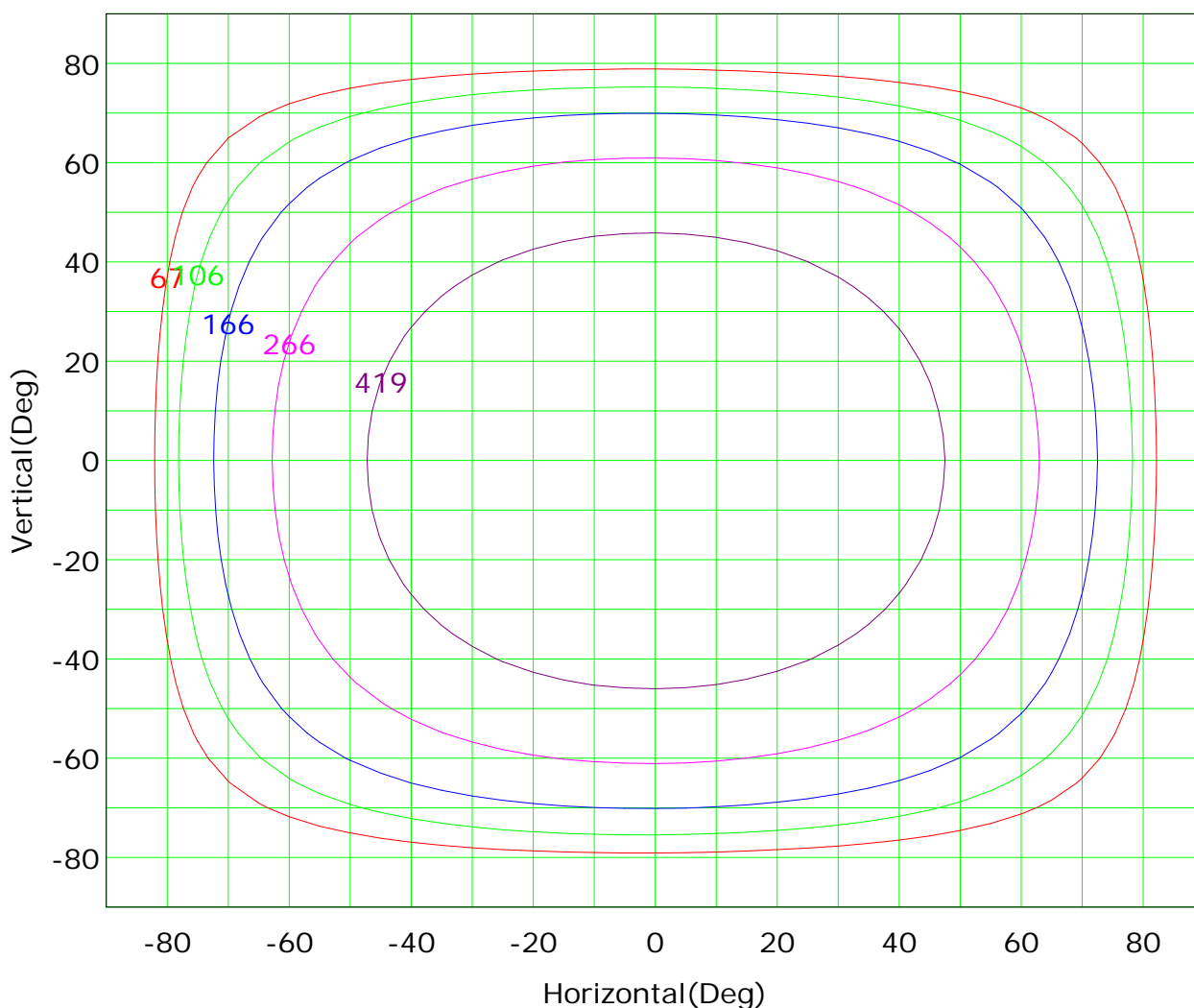


C Plane (°):0.0-360.0: 10.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-2000  
Distance: 7.970 m  
Humidity:  
Inspector:



## Isocandela (rectangle)



Imax (100%): 666 cd

|           |        |           |        |
|-----------|--------|-----------|--------|
| — ( 10%): | 67 cd  | — ( 16%): | 106 cd |
| — ( 25%): | 166 cd | — ( 40%): | 266 cd |
| — ( 63%): | 419 cd | — (100%): | 666 cd |

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

Distance: 7.970 m

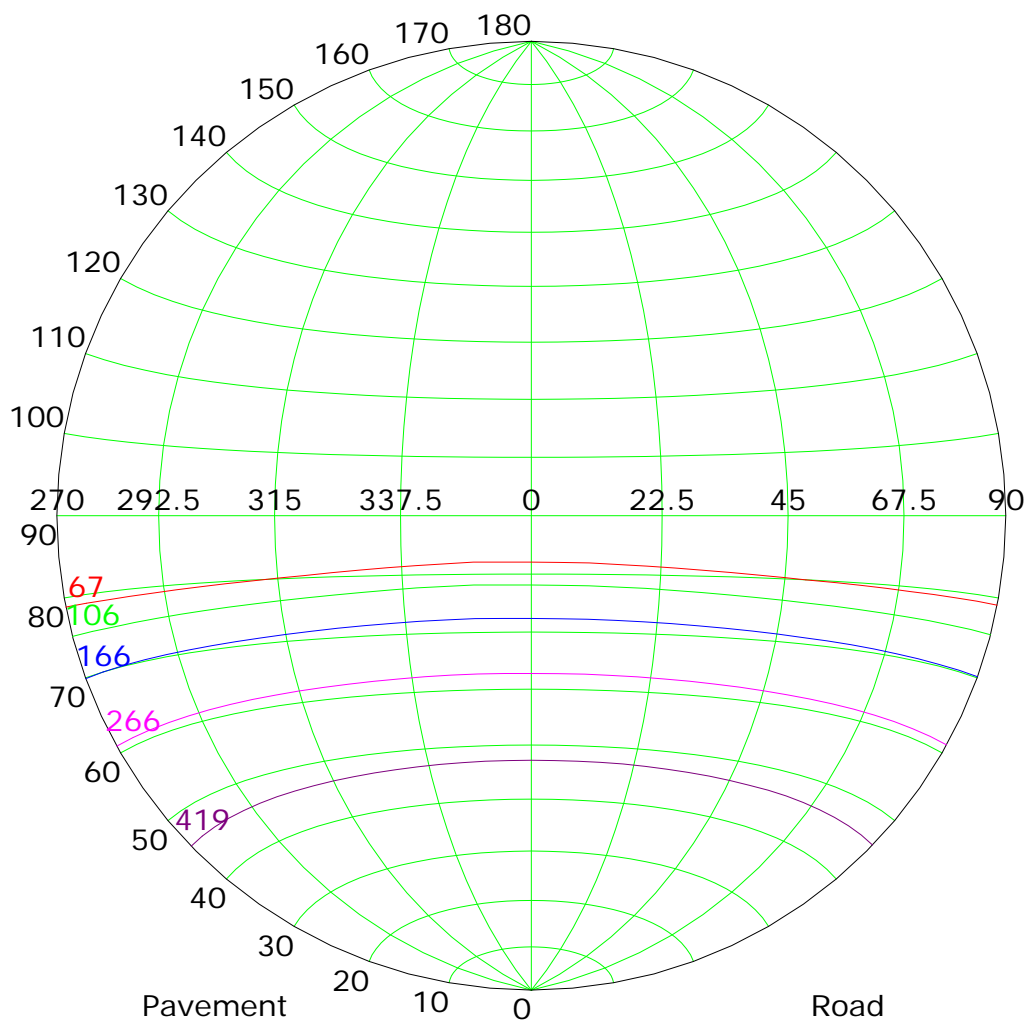
Humidity:

Inspector:





## Isocandela (sphere)



Imax (100%): 666 cd

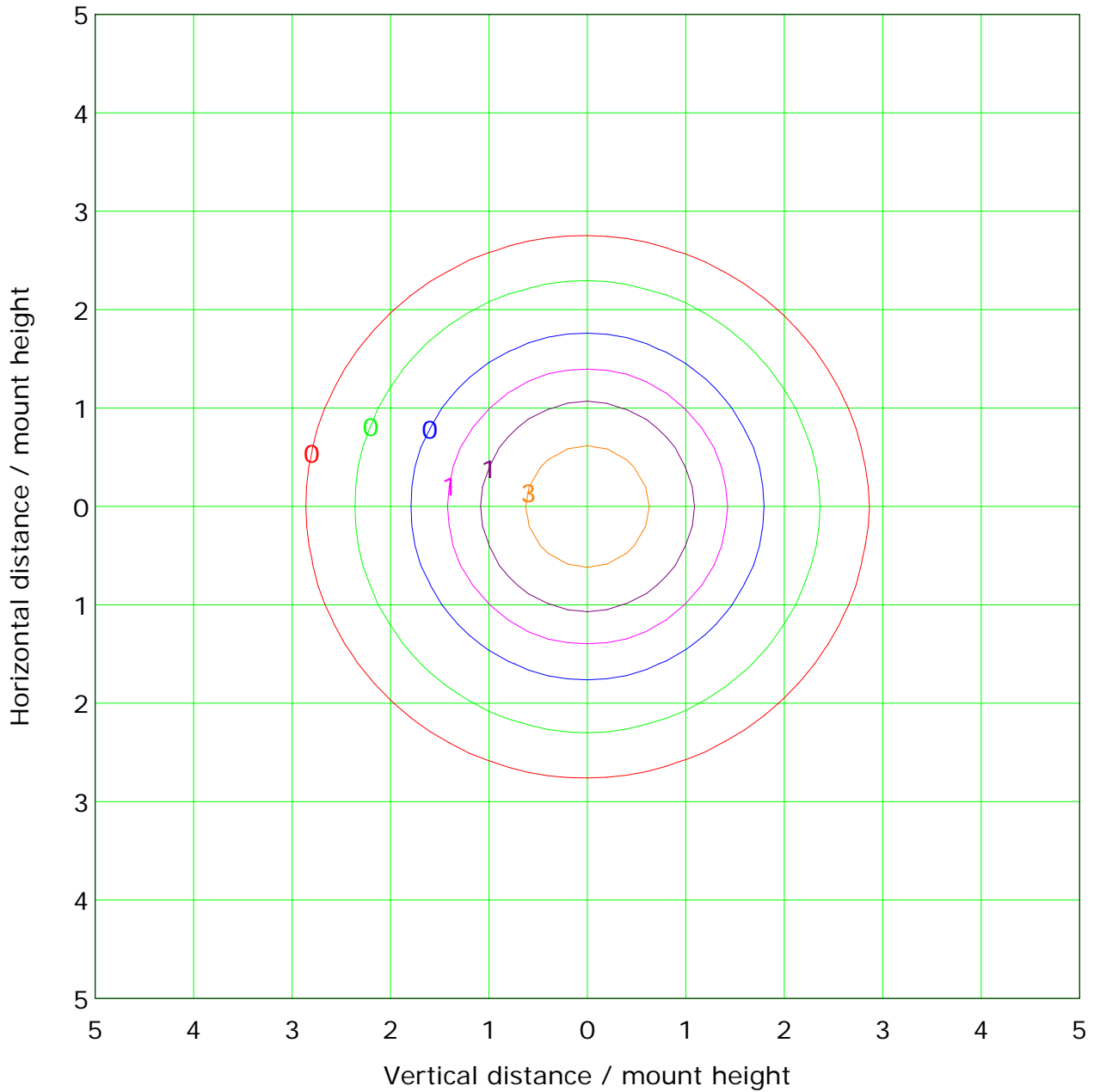
|           |        |           |        |
|-----------|--------|-----------|--------|
| — ( 10%): | 67 cd  | — ( 16%): | 106 cd |
| — ( 25%): | 166 cd | — ( 40%): | 266 cd |
| — ( 63%): | 419 cd | — (100%): | 666 cd |

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## IsoLux Plot



|                        |        |                       |        |
|------------------------|--------|-----------------------|--------|
| Mounting Height: 10.0m |        | Max Lux(100%): 6.7 lx |        |
| — ( 1%):               | 0.1 lx | — ( 2%):              | 0.1 lx |
| — ( 5%):               | 0.3 lx | — (10%):              | 0.7 lx |
| — (20%):               | 1.3 lx | — (50%):              | 3.3 lx |
| — (100%):              | 6.7 lx |                       |        |

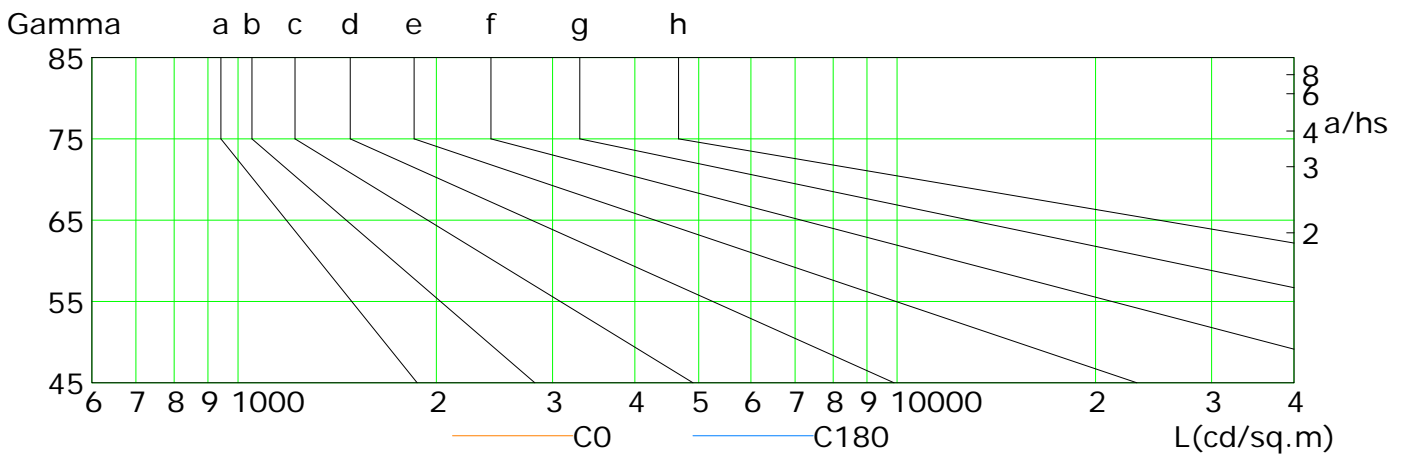
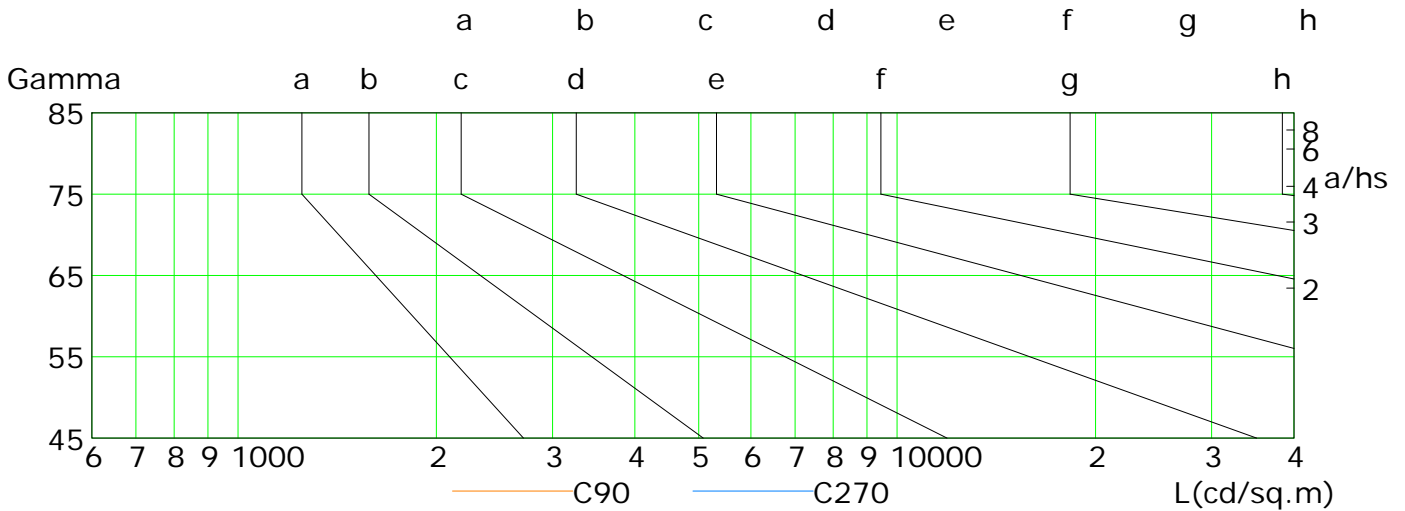
C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## Lum Limit Curve

| Dazzle | Quality | Illuminance (lx) |      |      |       |       |       |       |       |
|--------|---------|------------------|------|------|-------|-------|-------|-------|-------|
|        |         | a                | b    | c    | d     | e     | f     | g     | h     |
| 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 |



| L(cd/sq.m) | G45 | G50 | G55 | G60 | G65 | G70 | G75 | G80 | G85 |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| C0         | 440 | 394 | 345 | 295 | 243 | 191 | 139 | 87  | 37  |
| C90        | 429 | 381 | 331 | 278 | 224 | 168 | 112 | 57  | 17  |
| C180       | 442 | 396 | 348 | 297 | 245 | 193 | 140 | 88  | 39  |
| C270       | 427 | 379 | 329 | 276 | 222 | 165 | 109 | 54  | 16  |

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

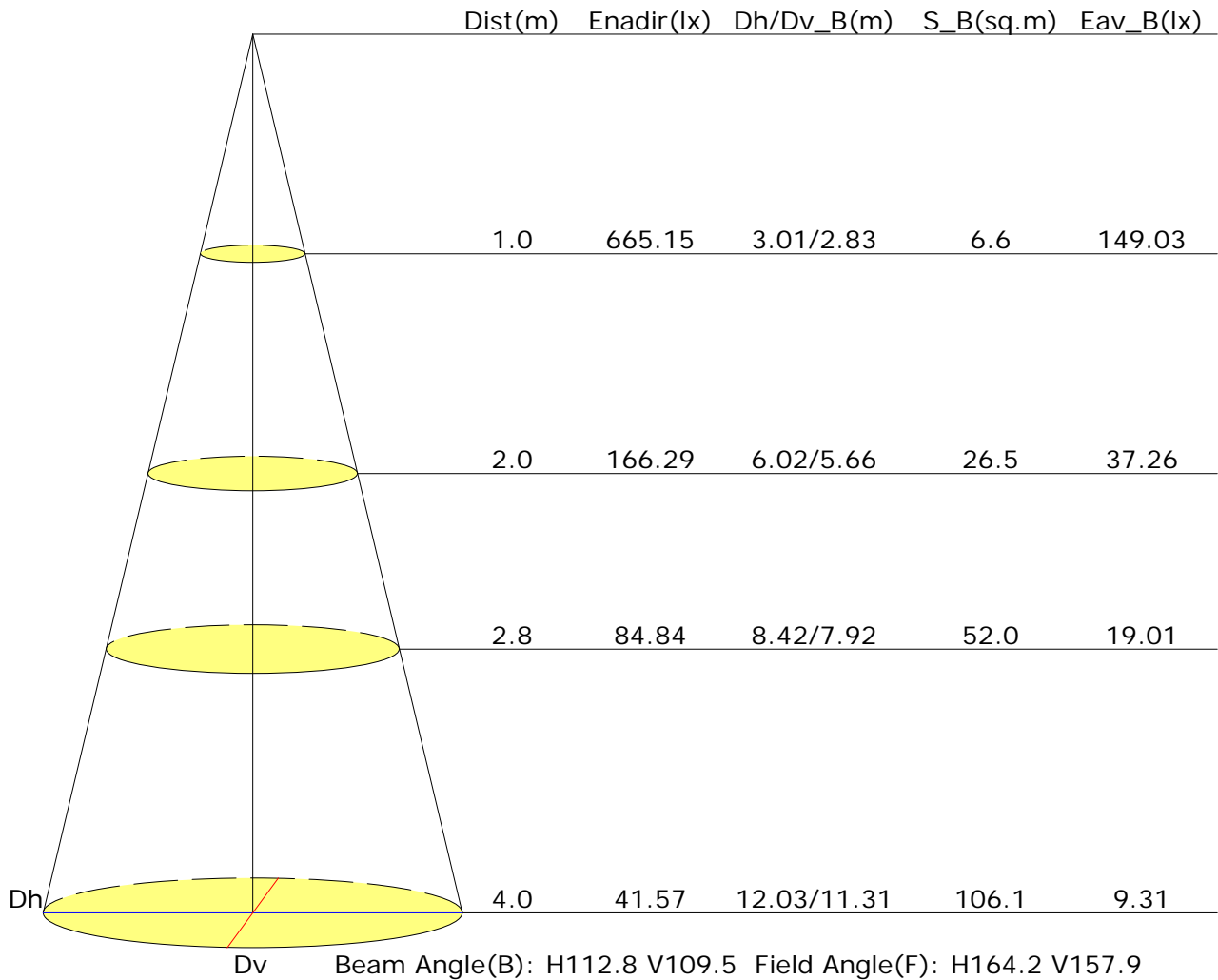
Distance: 7.970 m

Humidity:

Inspector:

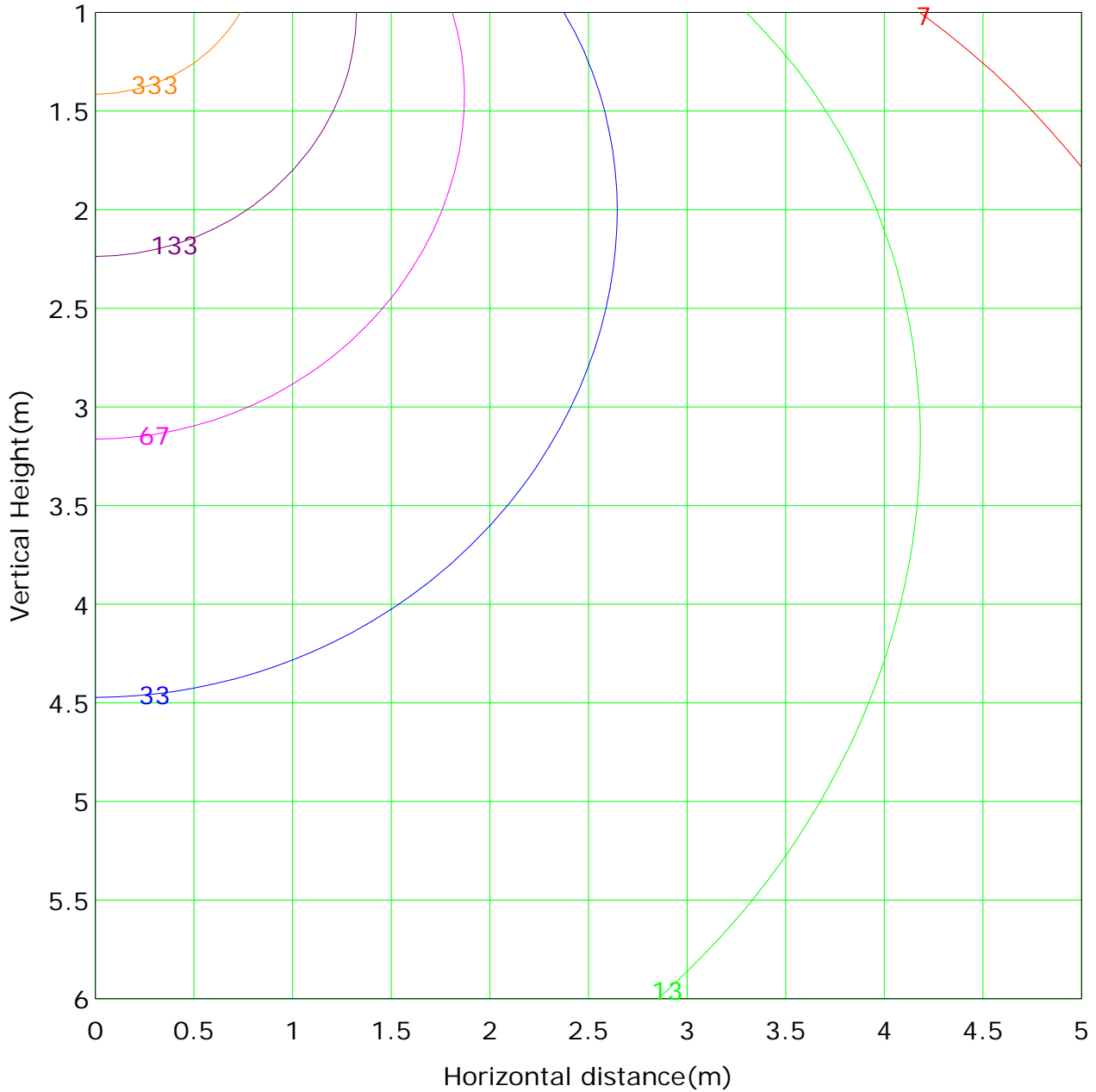


## Illuminance at a Distance





## Vertical IsoLux Plot



|                    |                    |                    |
|--------------------|--------------------|--------------------|
| Lowest(m): 1.0m    | Highest(m): 6.0m   | Max Lux: 665.2 lx  |
| — ( 1%): 6.7 lx    | — ( 2%): 13.3 lx   | — ( 10%): 66.5 lx  |
| — ( 5%): 33.3 lx   | — ( 20%): 133.0 lx | — ( 50%): 332.6 lx |
| — (100%): 665.2 lx |                    |                    |

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



Report No.:

Test Time: 25/09/2018 14:48

## Luminaire Property

Luminaire Manufacturer: Lighting Line

Luminaire Description: LLP-CL02-07 + LLD-07-CM

Lamp Description: Strip 14,4W/m 60led/m Lumens per Lamp: 3158 lm

Voltage: 24.0 V Current: 1.160 A

Power: 27.83 W Power Factor: 1.000

## Photometric Results

CIE Class: Direct

Measurement Flux: 1366.9 lm

Downward Ratio: 93%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 162.7, 205.3, 171.8, 171.6

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 113.8, 125.2, 121.6, 121.5

Luminaire Efficacy Rating (LER): 49.16

Max. Intensity: 399.3 cd

S/MH(C0/C180): 1.26

Total Rated Lamp Lumens: 1366.9 lm

Efficiency: 100%

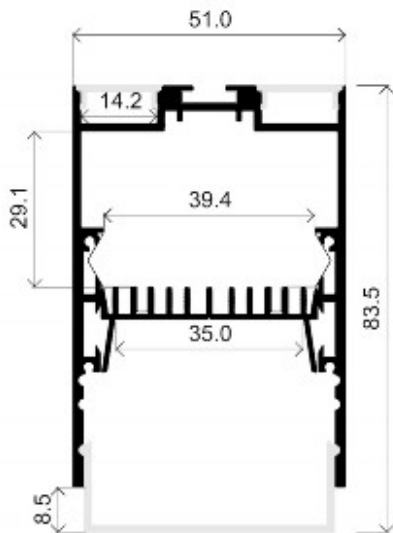
Upward Ratio: 7%

Central Intensity: 399.29 cd

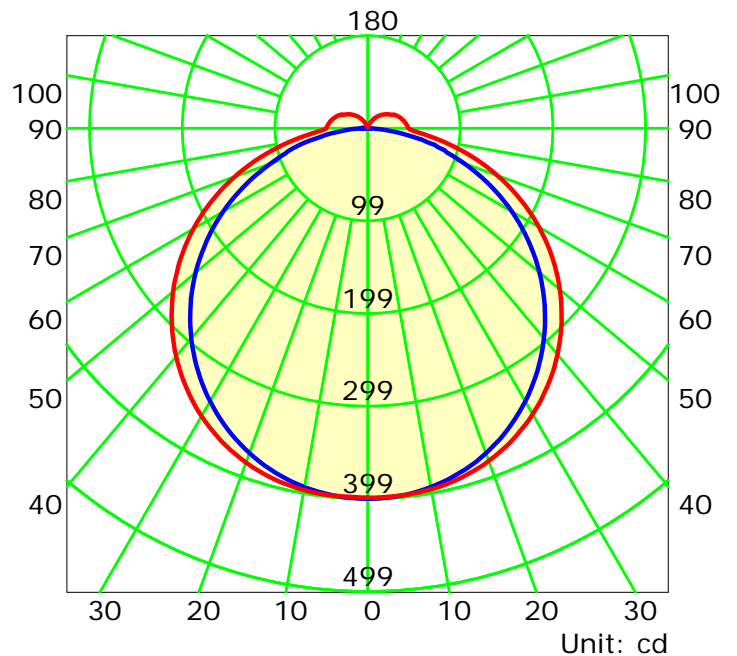
Pos of Max. Intensity: H0 V0

S/MH(C90/C270): 1.33

Picture Of Luminaire



Luminous Intensity Distribution Curve



— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

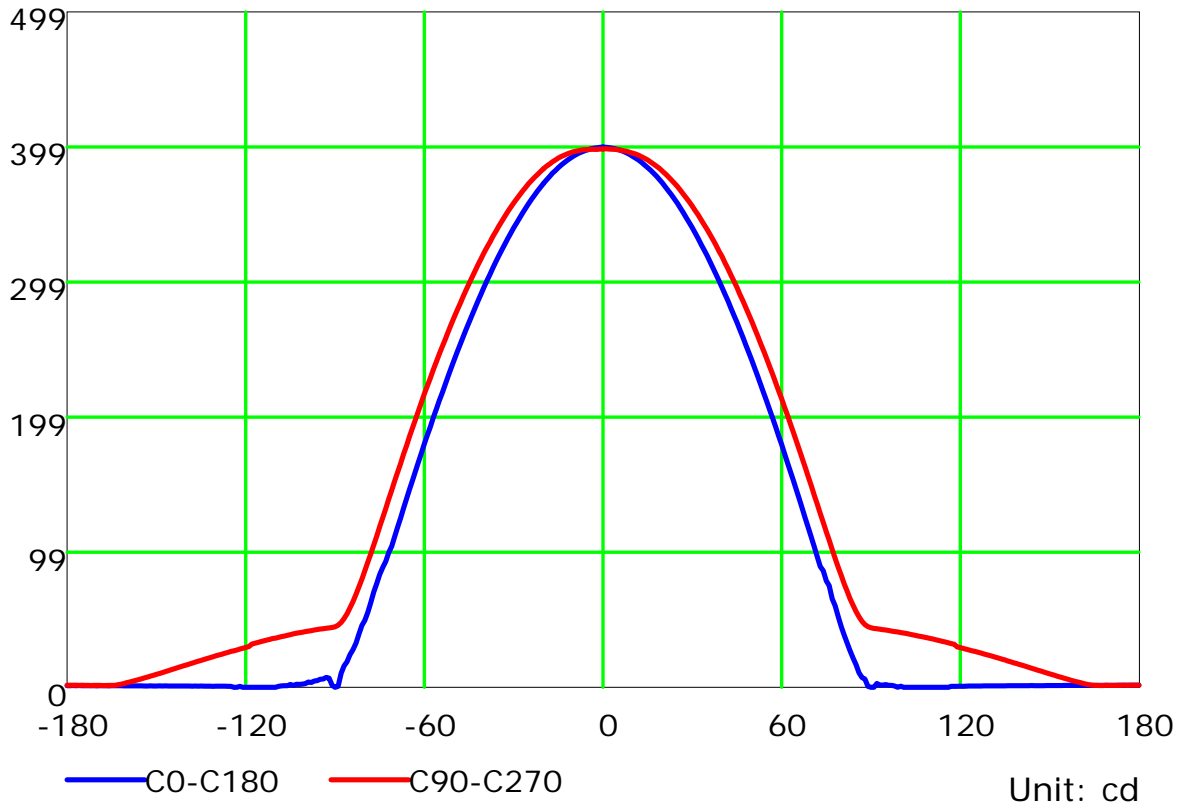
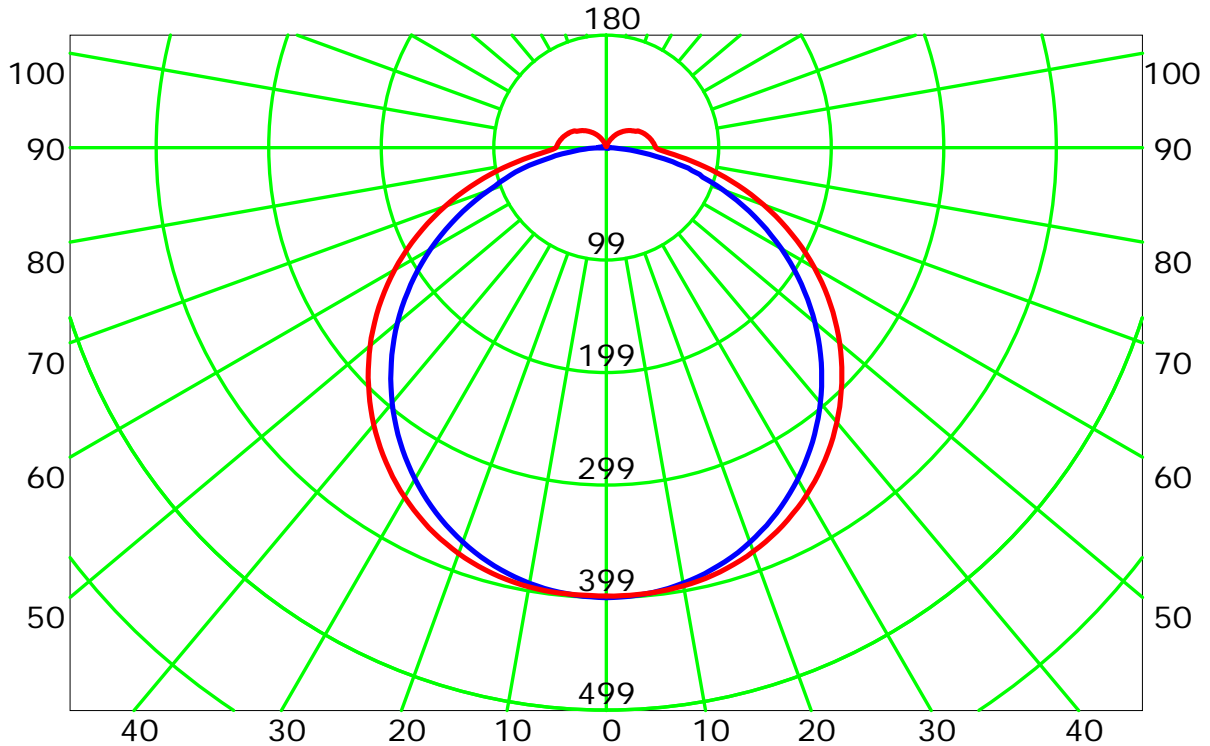
Distance: 7.970 m

Humidity:

Inspector:



## Luminous Intensity Distribution Curve

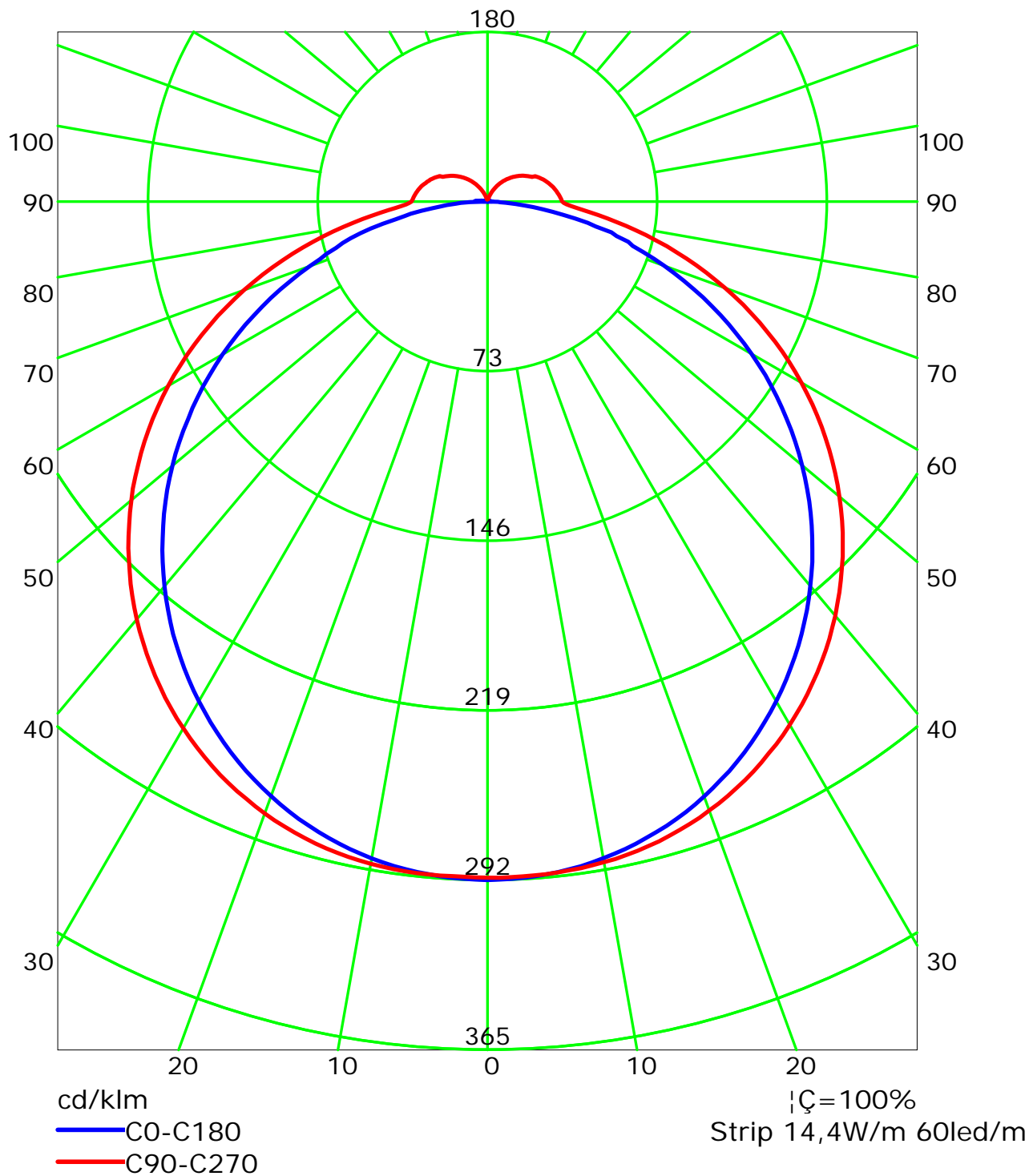


C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## Luminous Intensity Distribution Curve(cd/klm)



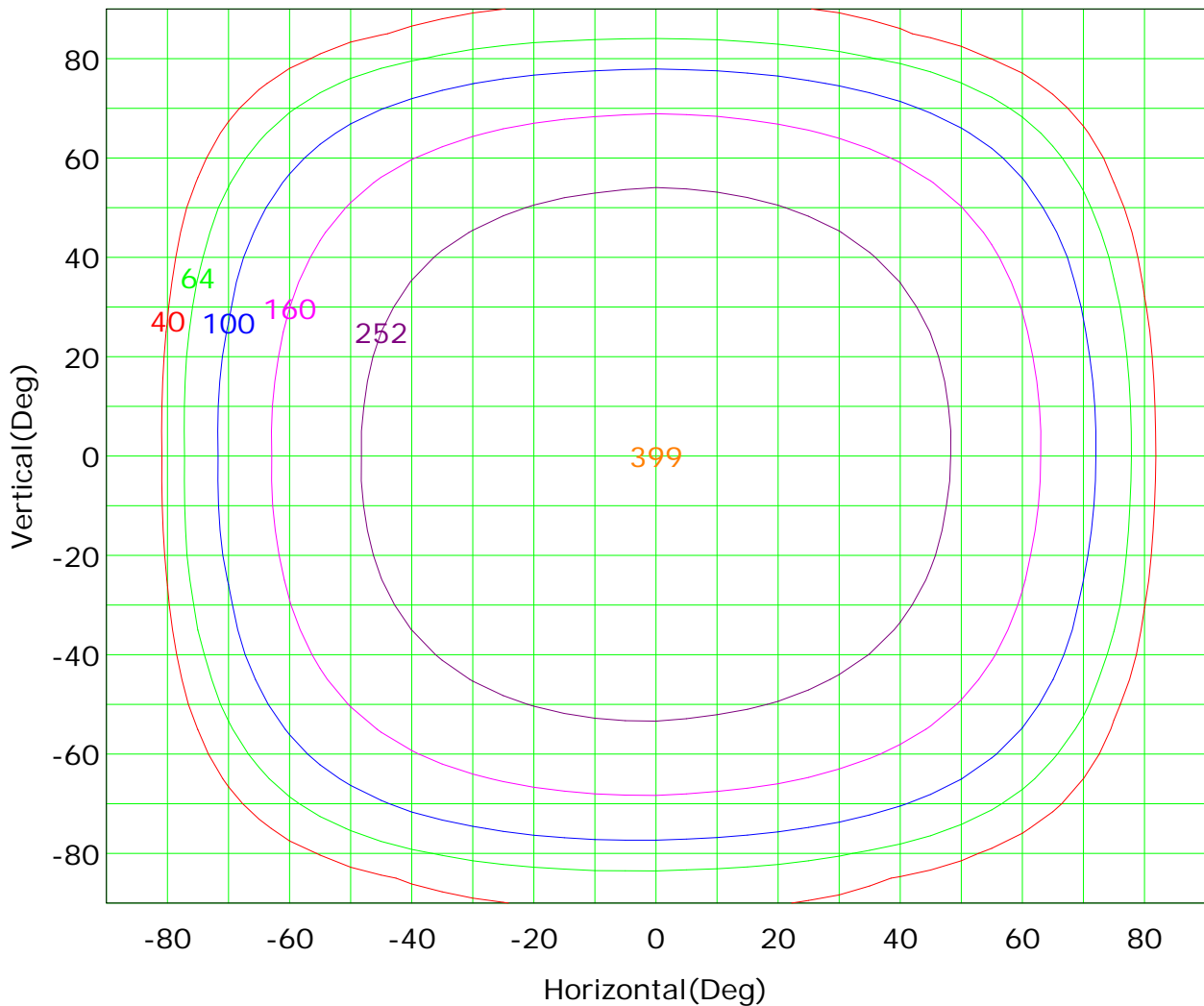
C Plane (°):0.0-360.0: 10.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-2000  
Distance: 7.970 m  
Humidity:  
Inspector:





## Isocandela (rectangle)



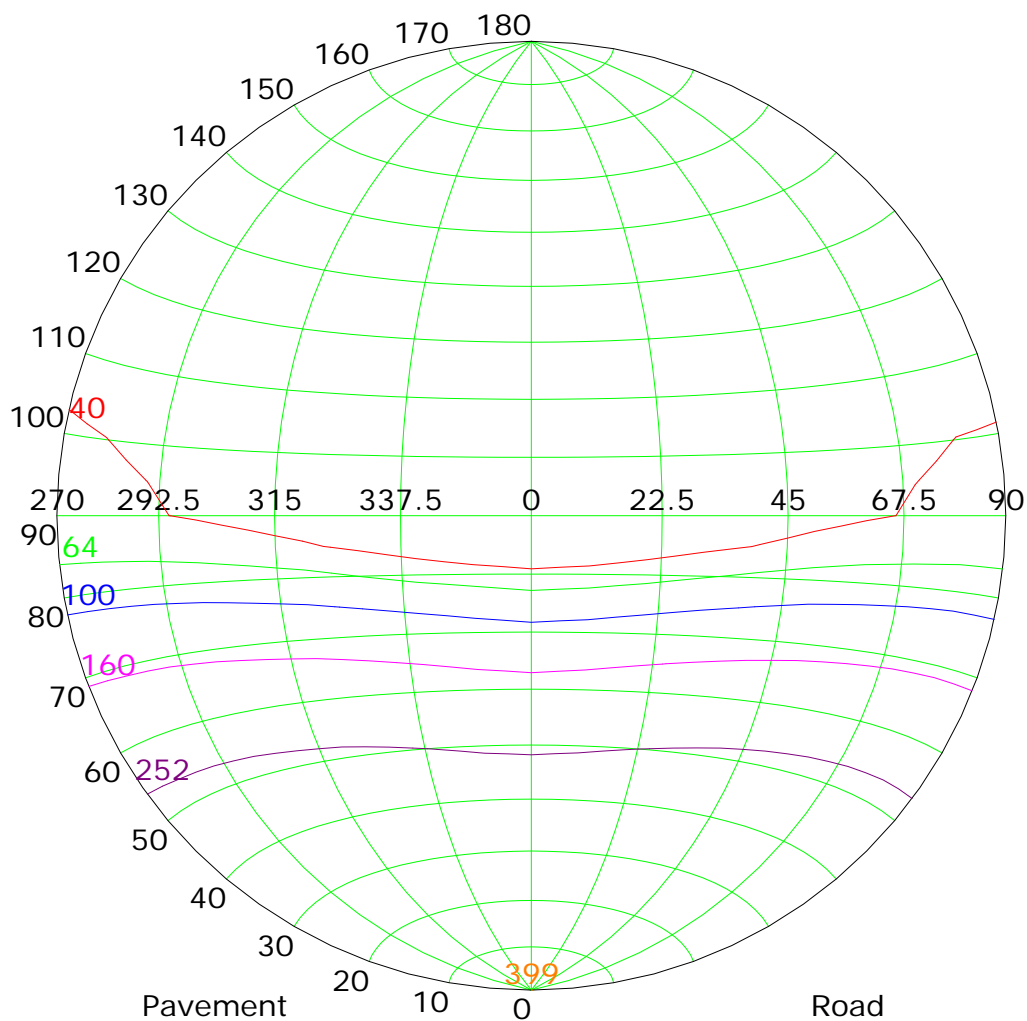
Imax (100%): 399 cd

|           |        |           |        |
|-----------|--------|-----------|--------|
| — ( 10%): | 40 cd  | — ( 16%): | 64 cd  |
| — ( 25%): | 100 cd | — ( 40%): | 160 cd |
| — ( 63%): | 252 cd | — (100%): | 399 cd |

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:

## Isocandela (sphere)



Imax (100%): 399 cd

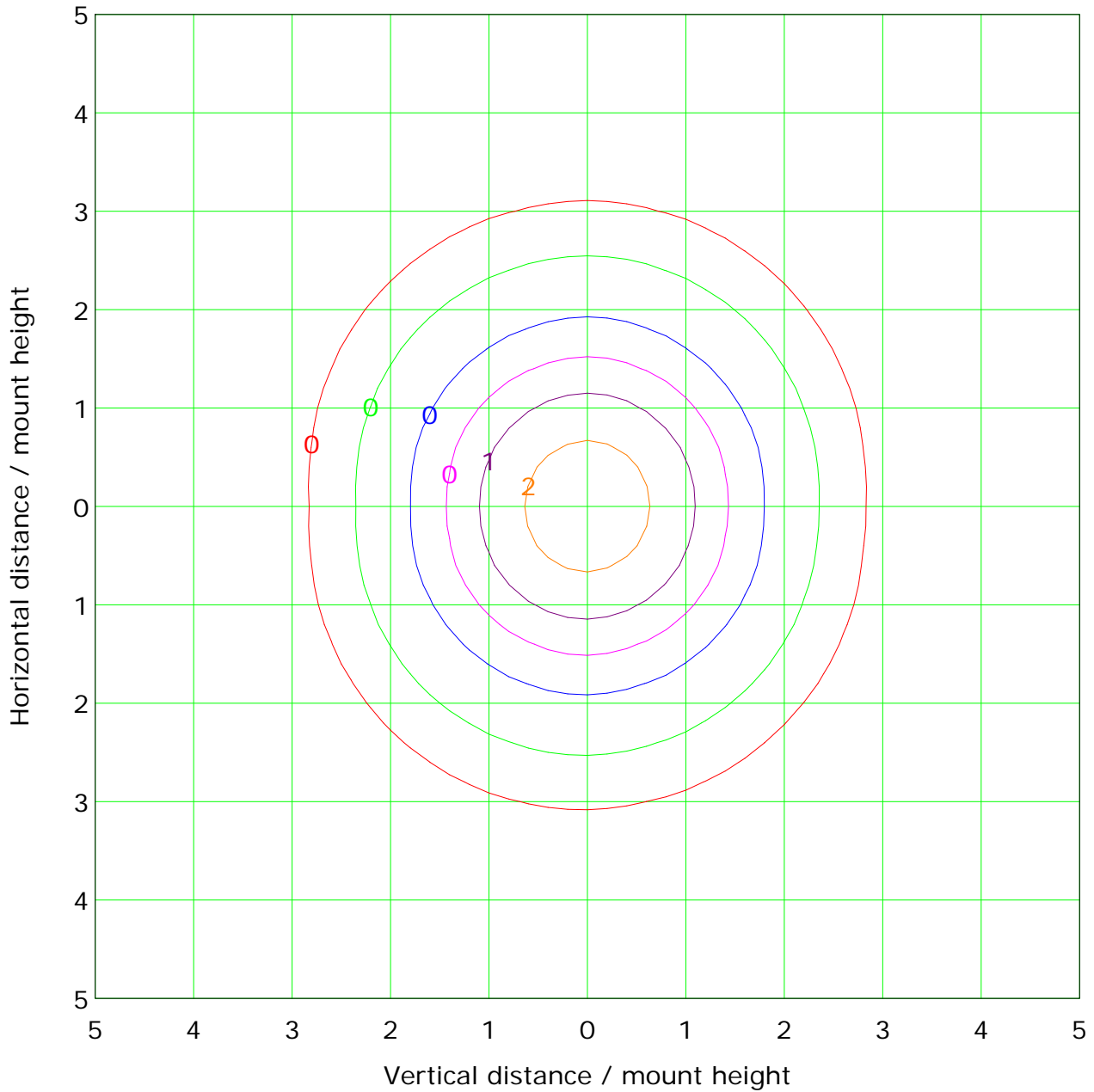
|           |        |           |        |
|-----------|--------|-----------|--------|
| — ( 10%): | 40 cd  | — ( 16%): | 64 cd  |
| — ( 25%): | 100 cd | — ( 40%): | 160 cd |
| — ( 63%): | 252 cd | — (100%): | 399 cd |

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## IsoLux Plot



|                        |        |                       |        |
|------------------------|--------|-----------------------|--------|
| Mounting Height: 10.0m |        | Max Lux(100%): 4.0 lx |        |
| — ( 1%):               | 0.0 lx | — ( 2%):              | 0.1 lx |
| — ( 5%):               | 0.2 lx | — (10%):              | 0.4 lx |
| — (20%):               | 0.8 lx | — (50%):              | 2.0 lx |
| — (100%):              | 4.0 lx |                       |        |

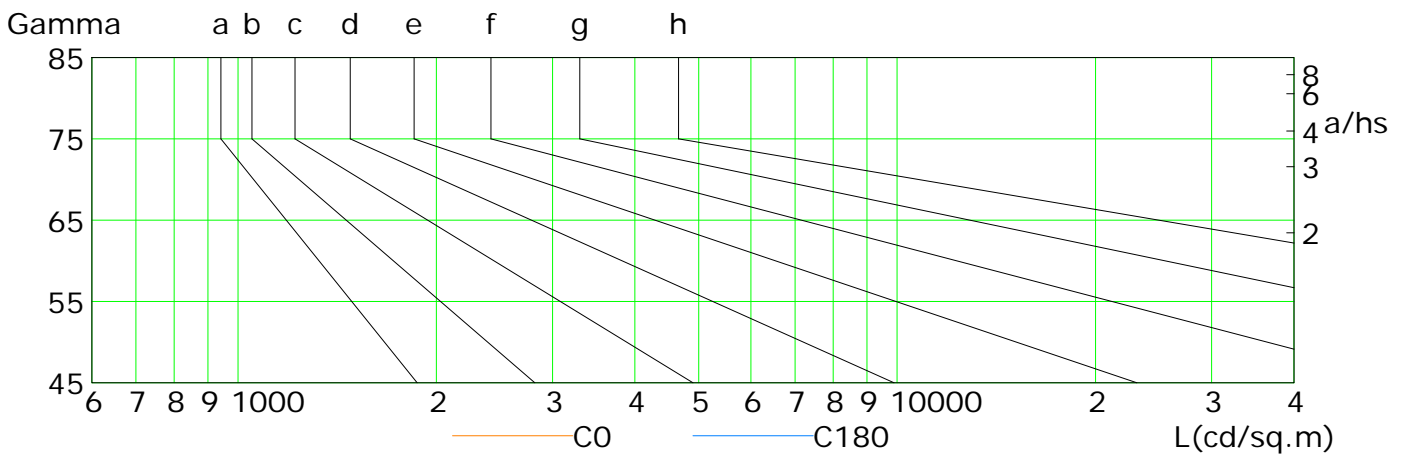
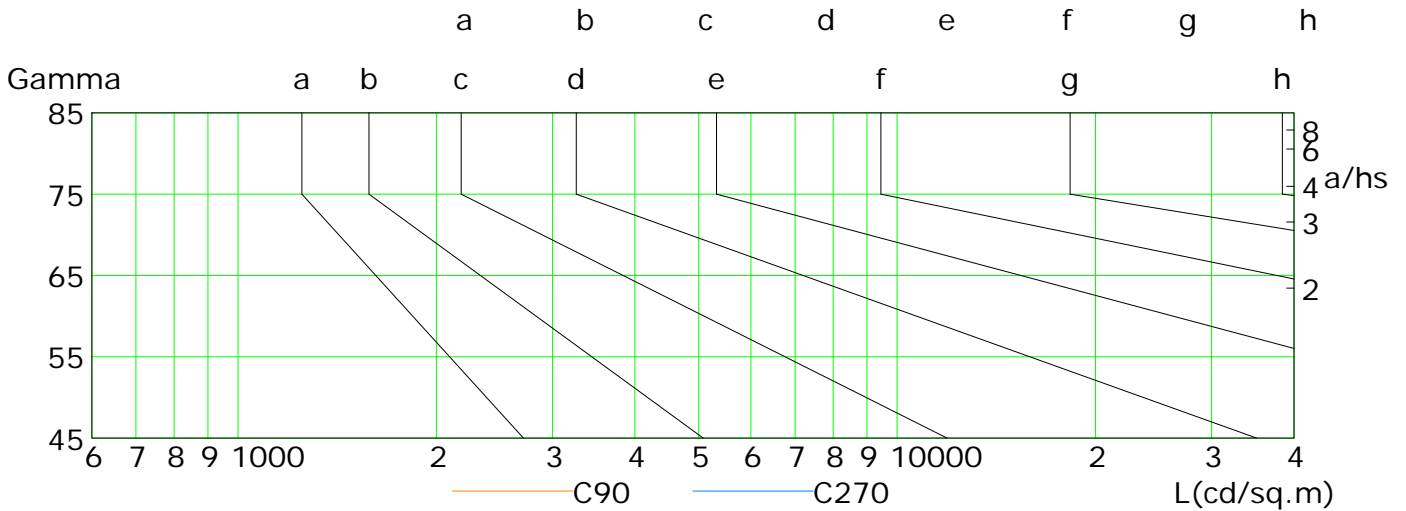
C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## Lum Limit Curve

| Dazzle | Quality | Illuminance (lx) |      |      |       |       |       |       |       |
|--------|---------|------------------|------|------|-------|-------|-------|-------|-------|
|        |         | a                | b    | c    | d     | e     | f     | g     | h     |
| 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 |



| L(cd/sq.m) | G45 | G50 | G55 | G60 | G65 | G70 | G75 | G80 | G85 |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| C0         | 270 | 242 | 211 | 179 | 146 | 111 | 79  | 45  | 17  |
| C90        | 296 | 270 | 243 | 213 | 182 | 149 | 115 | 83  | 56  |
| C180       | 270 | 242 | 212 | 180 | 146 | 111 | 83  | 50  | 24  |
| C270       | 298 | 274 | 246 | 217 | 185 | 152 | 119 | 86  | 59  |

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

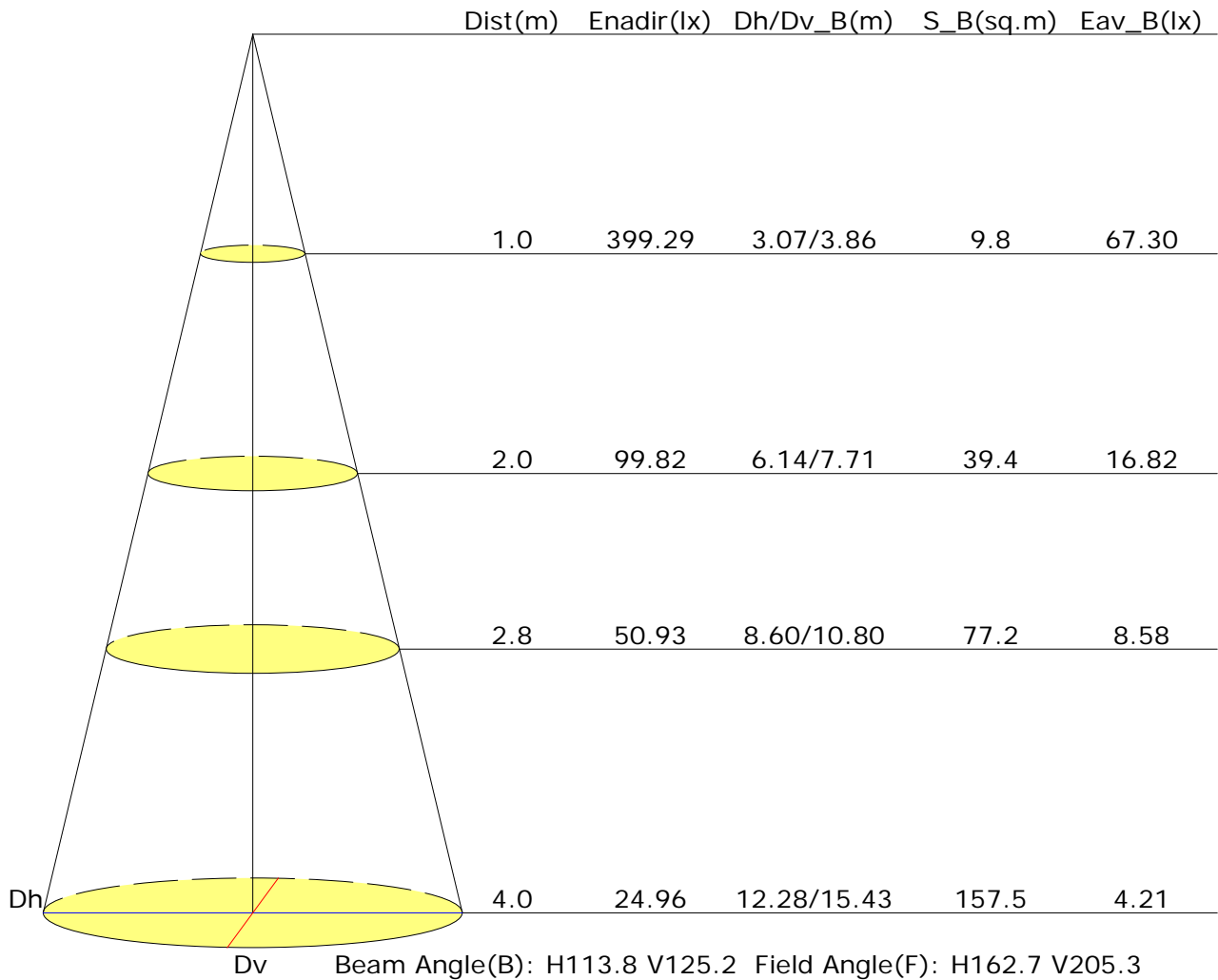
Distance: 7.970 m

Humidity:

Inspector:

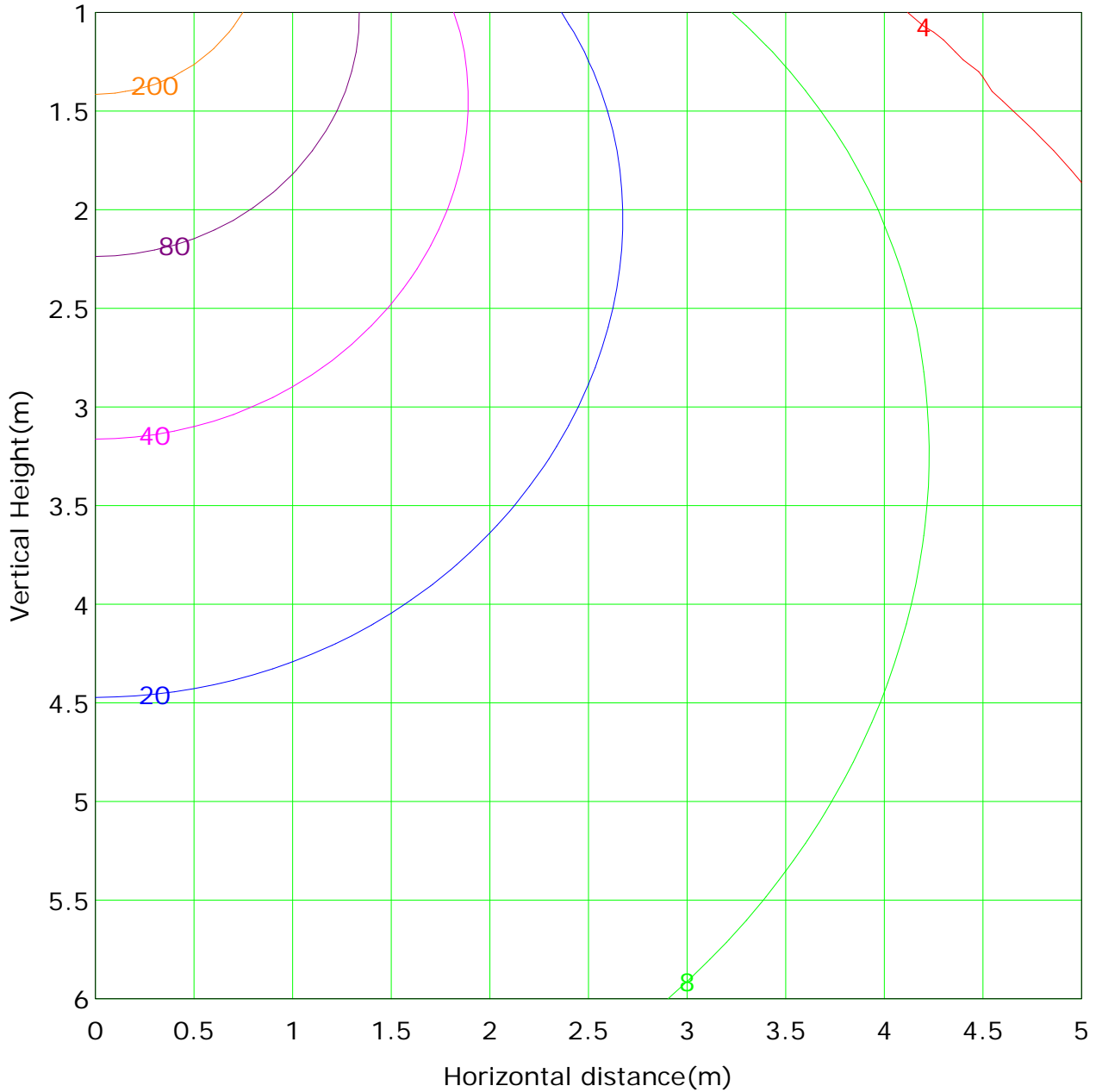


## Illuminance at a Distance





## Vertical IsoLux Plot



|                  |                  |                   |
|------------------|------------------|-------------------|
| Lowest(m): 1.0m  | Highest(m): 6.0m | Max Lux: 399.3 lx |
| ( 1%): 4.0 lx    | ( 2%): 8.0 lx    | ( 10%): 39.9 lx   |
| ( 5%): 20.0 lx   | ( 20%): 79.9 lx  | ( 50%): 199.6 lx  |
| (100%): 399.3 lx |                  |                   |

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



Report No.:

Test Time: 25/09/2018 15:51

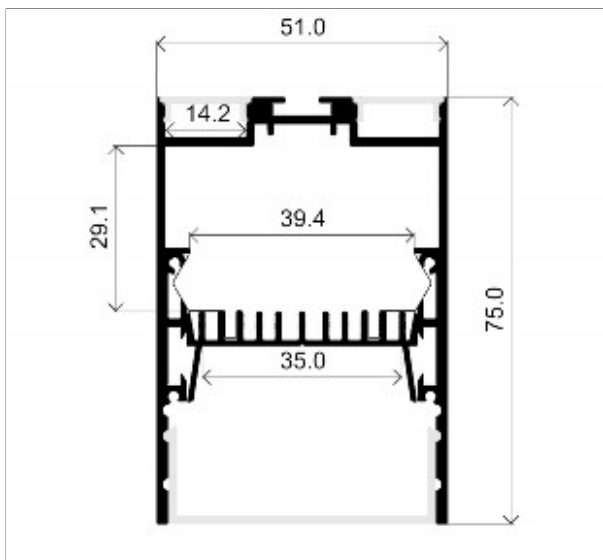
## Luminaire Property

Luminaire Manufacturer: Lighting Line  
 Luminaire Description: LLP-CL02-07 + LLD-07-CM  
 Lamp Description: Strip 14,4W/m 60led/m Number of Lamps: 2  
 Lumens per Lamp: 3158 lm Voltage: 24.0 V  
 Current: 1.156 A Power: 27.74 W  
 Power Factor: 1.000

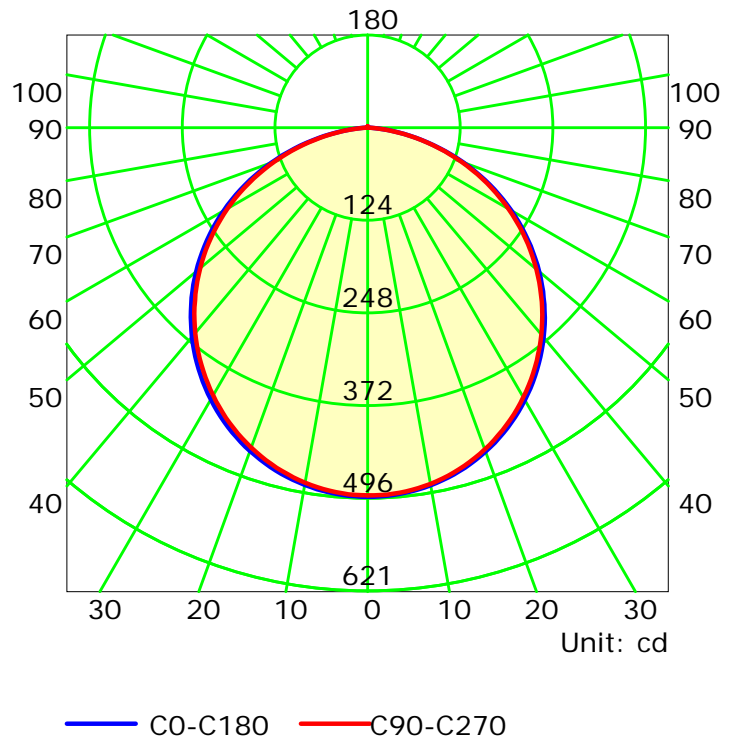
## Photometric Results

|   |                                    |
|---|------------------------------------|
| CIE Class: Direct   | Total Rated Lamp Lumens: 6316.0 lm |
| Measurement Flux: 1414.1 lm   | Efficiency: 22.39%                 |
| Downward Ratio: 22.32%  | Upward Ratio: 0.07%                |
| Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 160.3, 159.9, 160.1, 160.1 |                                    |
| Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 113.9, 112.7, 113.3, 113.3  |                                    |
| Luminaire Efficacy Rating (LER): 51.03                                      | Central Intensity: 494.9 cd        |
| Max. Intensity: 494.93 cd   | Pos of Max. Intensity: H0 V1       |
| S/MH(C0/C180): 1.26   | S/MH(C90/C270): 1.25               |

Picture Of Luminaire



Luminous Intensity Distribution Curve

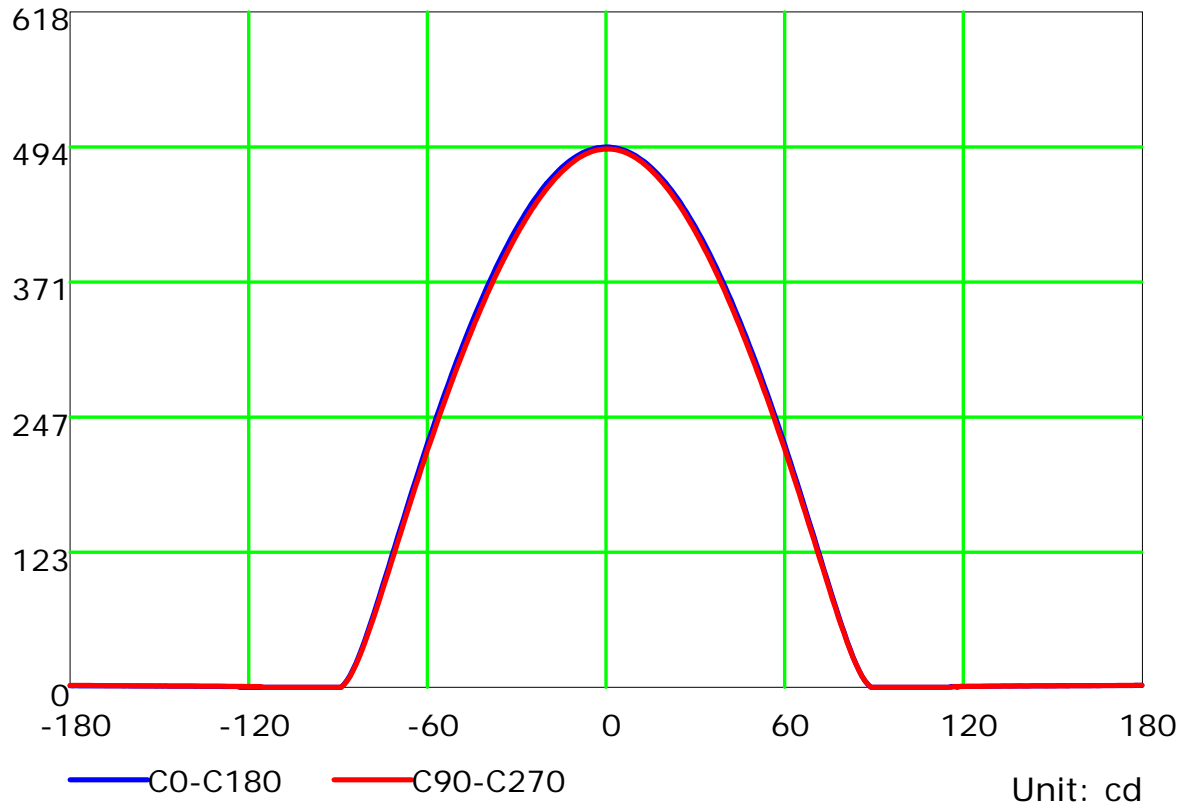
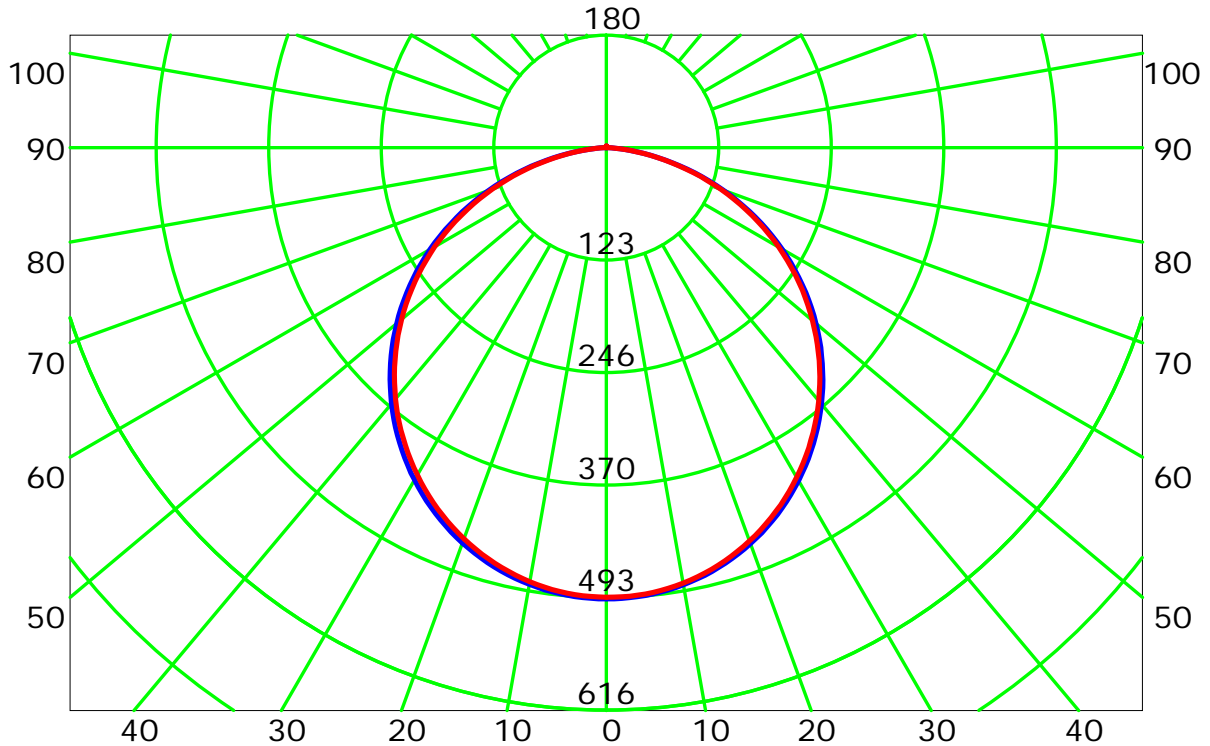


C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## Luminous Intensity Distribution Curve



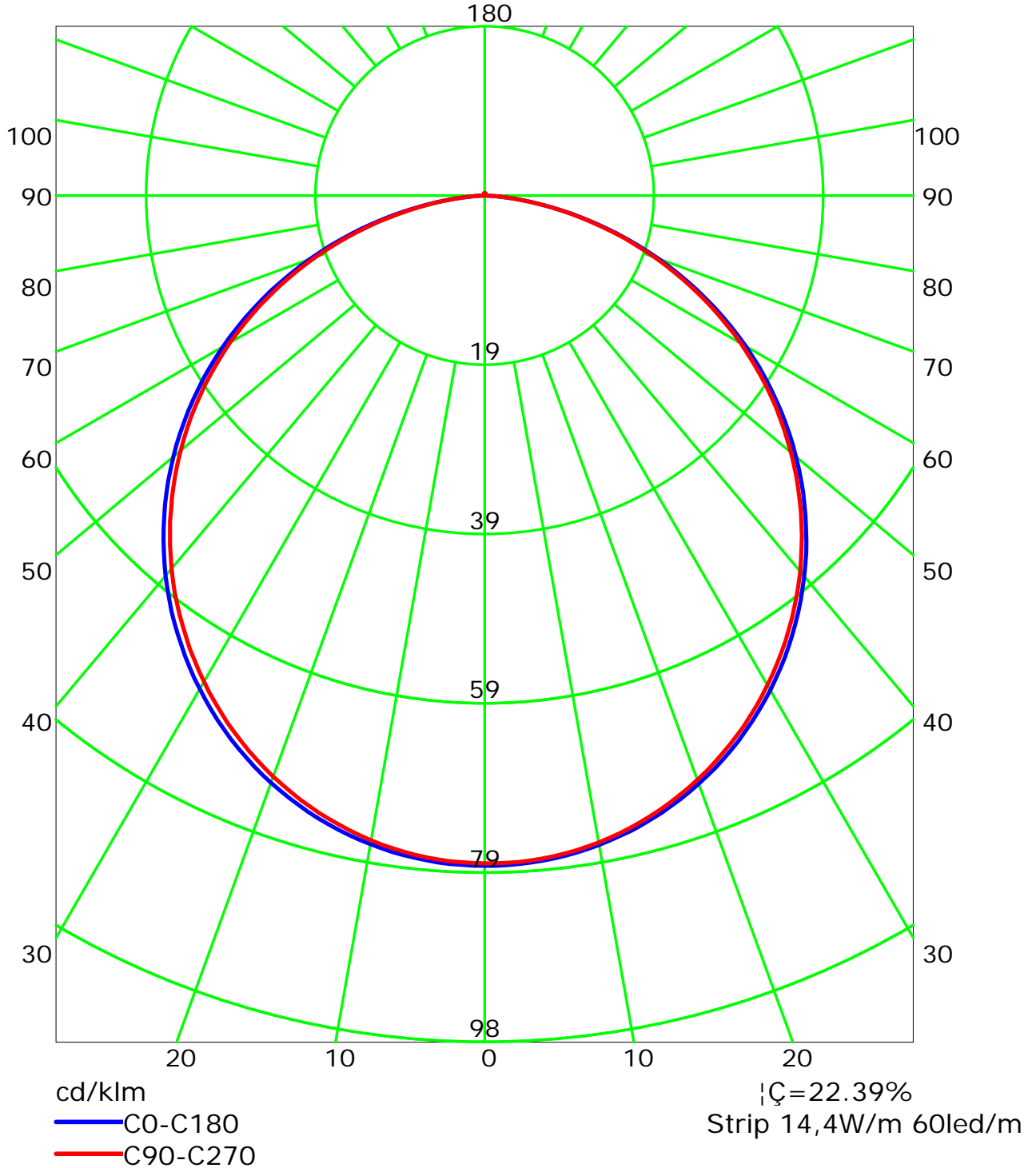
C Plane (°):0.0-360.0: 10.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-2000  
Distance: 7.970 m  
Humidity:  
Inspector:





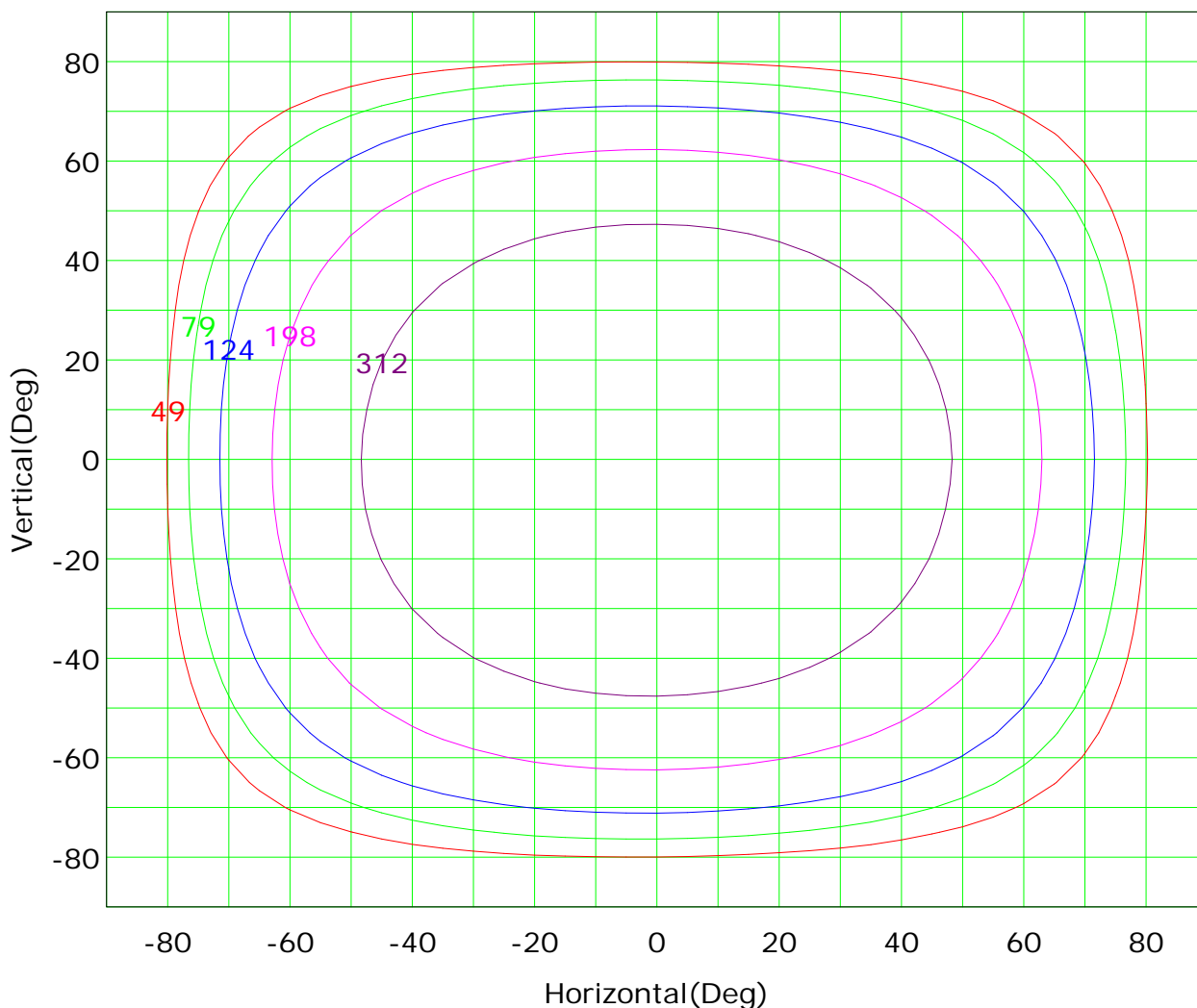
## Luminous Intensity Distribution Curve(cd/klm)



C Plane (°):0.0-360.0: 10.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-2000  
Distance: 7.970 m  
Humidity:  
Inspector:

## Isocandela (rectangle)



Imax (100%): 495 cd

- |           |        |           |        |
|-----------|--------|-----------|--------|
| — ( 10%): | 49 cd  | — ( 16%): | 79 cd  |
| — ( 25%): | 124 cd | — ( 40%): | 198 cd |
| — ( 63%): | 312 cd | — (100%): | 495 cd |

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

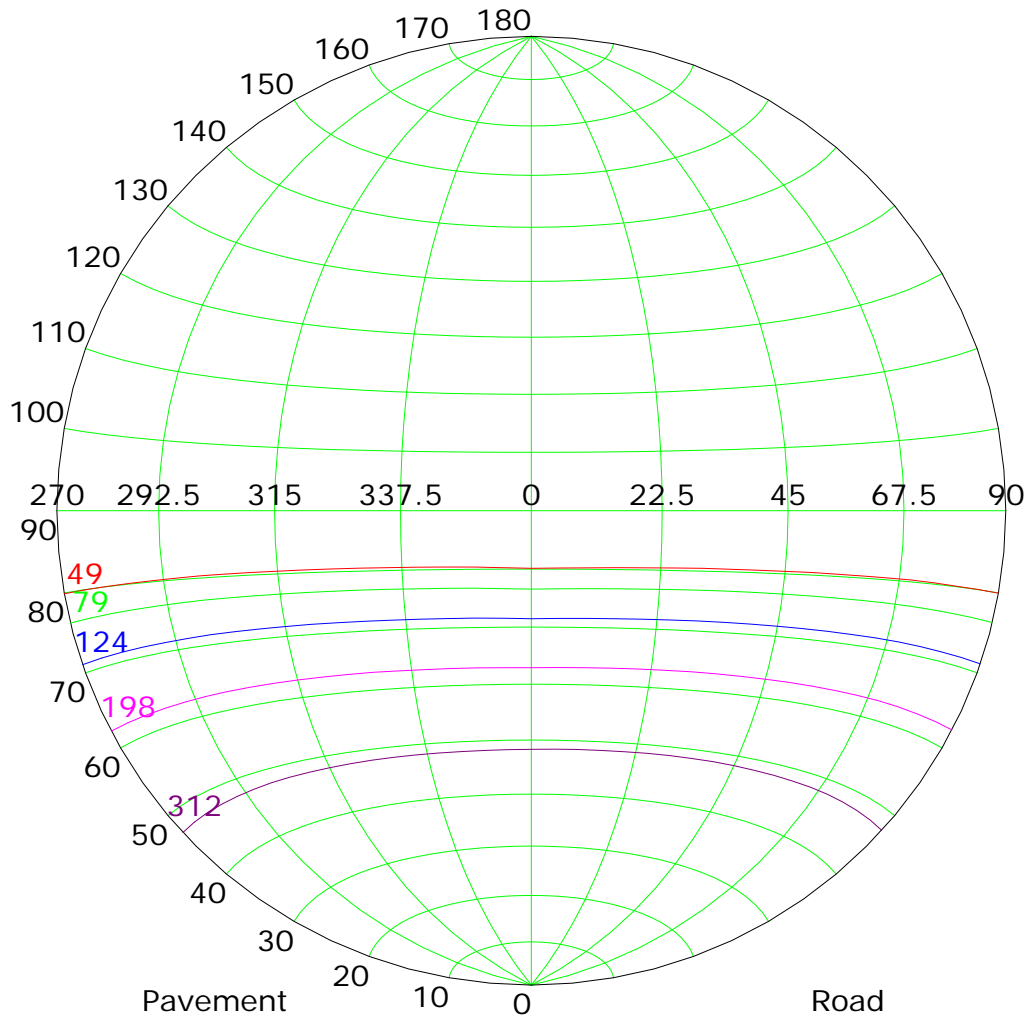
Distance: 7.970 m

Humidity:

Inspector:



## Isocandela (sphere)



Imax (100%): 495 cd

|           |        |           |        |
|-----------|--------|-----------|--------|
| — ( 10%): | 49 cd  | — ( 16%): | 79 cd  |
| — ( 25%): | 124 cd | — ( 40%): | 198 cd |
| — ( 63%): | 312 cd | — (100%): | 495 cd |

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

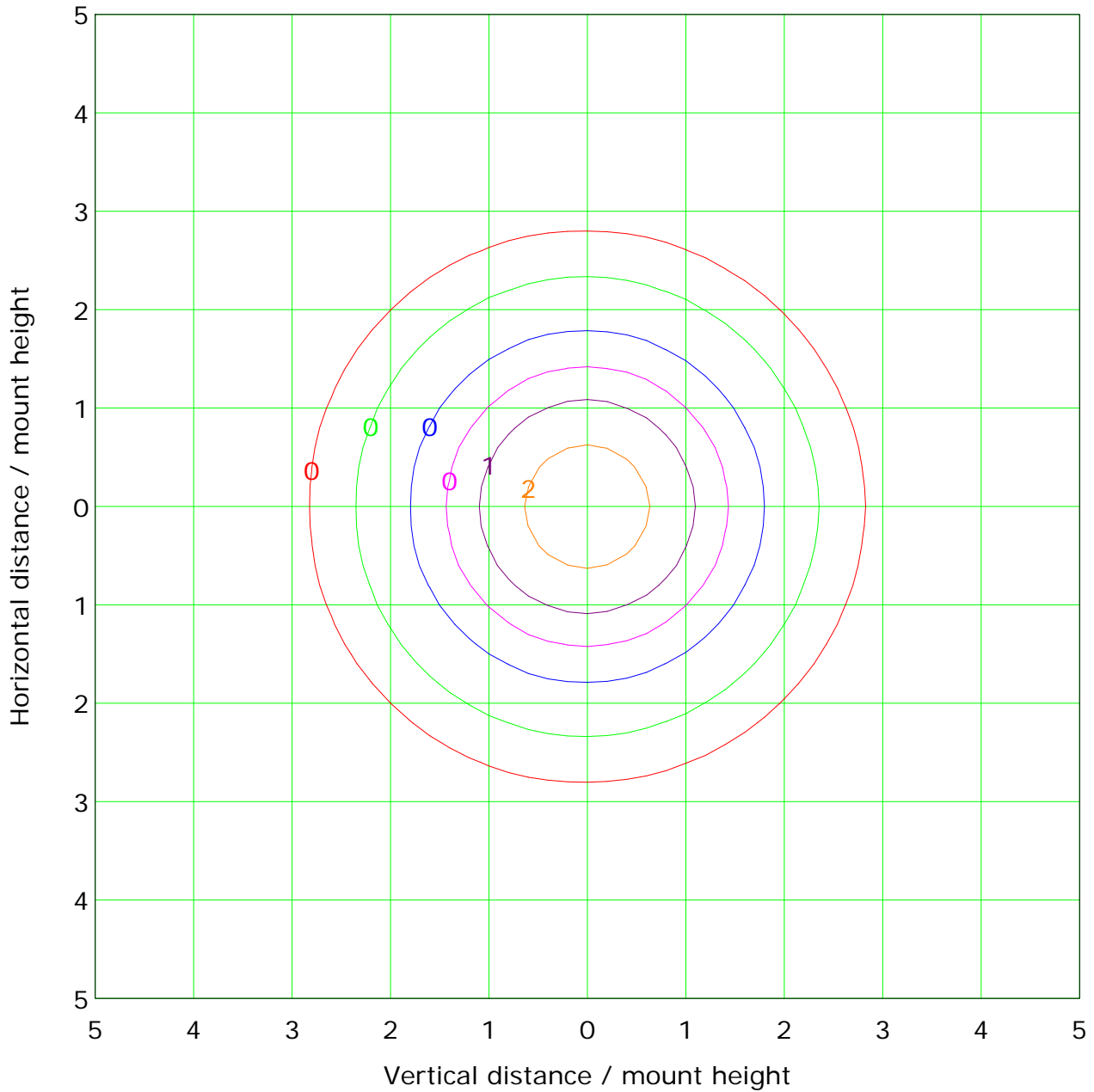
Distance: 7.970 m

Humidity:

Inspector:



## IsoLux Plot



|                        |        |                       |        |
|------------------------|--------|-----------------------|--------|
| Mounting Height: 10.0m |        | Max Lux(100%): 4.9 lx |        |
| — ( 1%):               | 0.0 lx | — ( 2%):              | 0.1 lx |
| — ( 5%):               | 0.2 lx | — ( 10%):             | 0.5 lx |
| — ( 20%):              | 1.0 lx | — ( 50%):             | 2.5 lx |
| — (100%):              | 4.9 lx |                       |        |

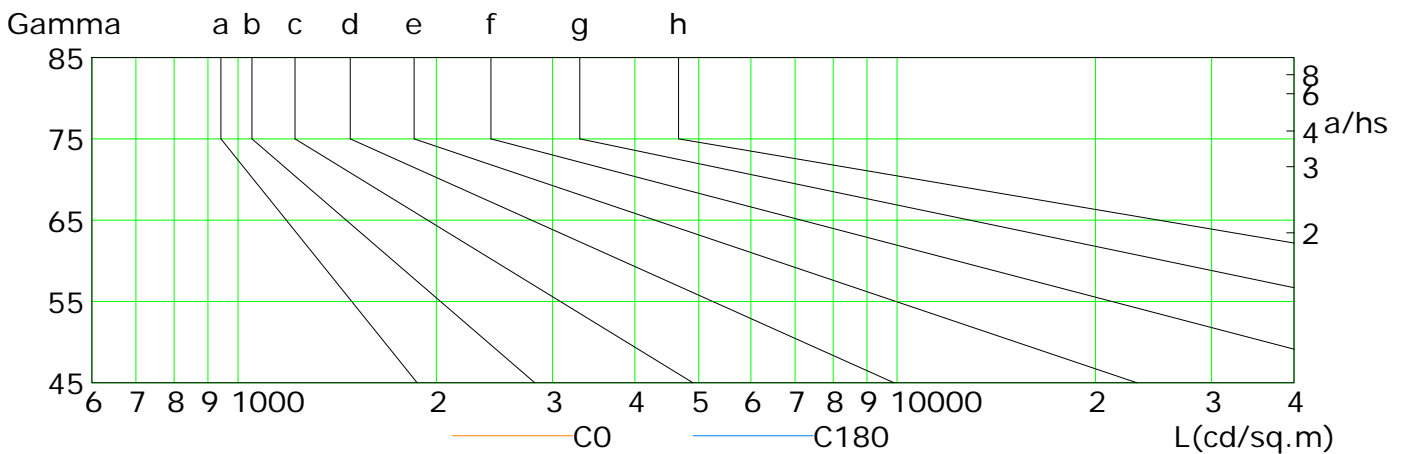
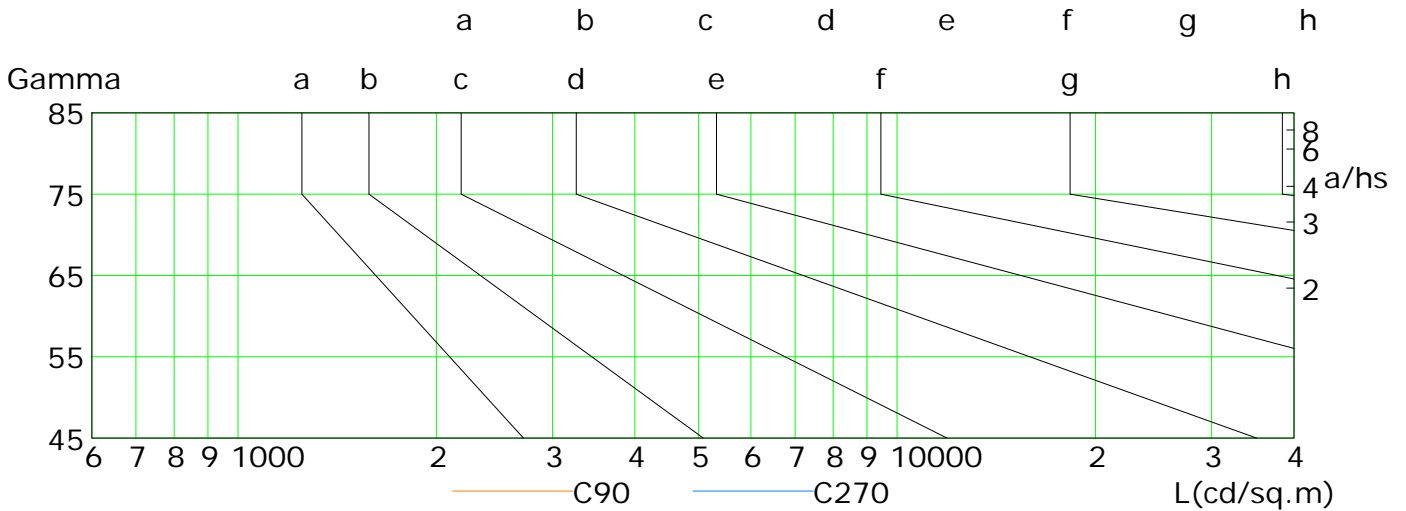
C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## Lum Limit Curve

| Dazzle | Quality | Illuminance (lx) |      |      |       |       |       |       |       |
|--------|---------|------------------|------|------|-------|-------|-------|-------|-------|
|        |         | a                | b    | c    | d     | e     | f     | g     | h     |
| 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 |



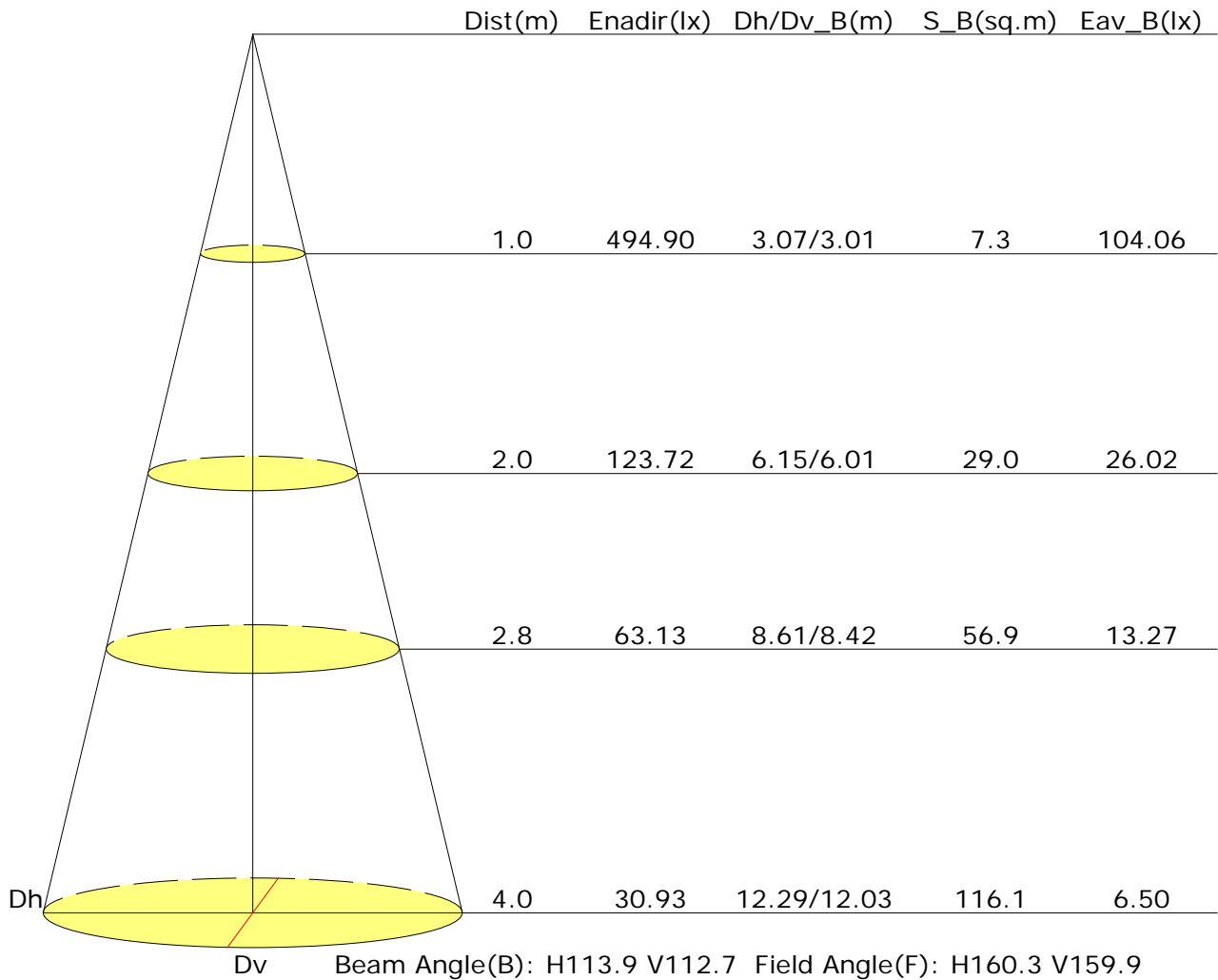
| L(cd/sq.m) | G45 | G50 | G55 | G60 | G65 | G70 | G75 | G80 | G85 |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| C0         | 335 | 300 | 262 | 223 | 180 | 137 | 92  | 50  | 15  |
| C90        | 330 | 295 | 258 | 219 | 177 | 134 | 90  | 49  | 15  |
| C180       | 335 | 300 | 263 | 223 | 181 | 138 | 94  | 51  | 16  |
| C270       | 327 | 293 | 256 | 217 | 175 | 133 | 90  | 49  | 15  |

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:

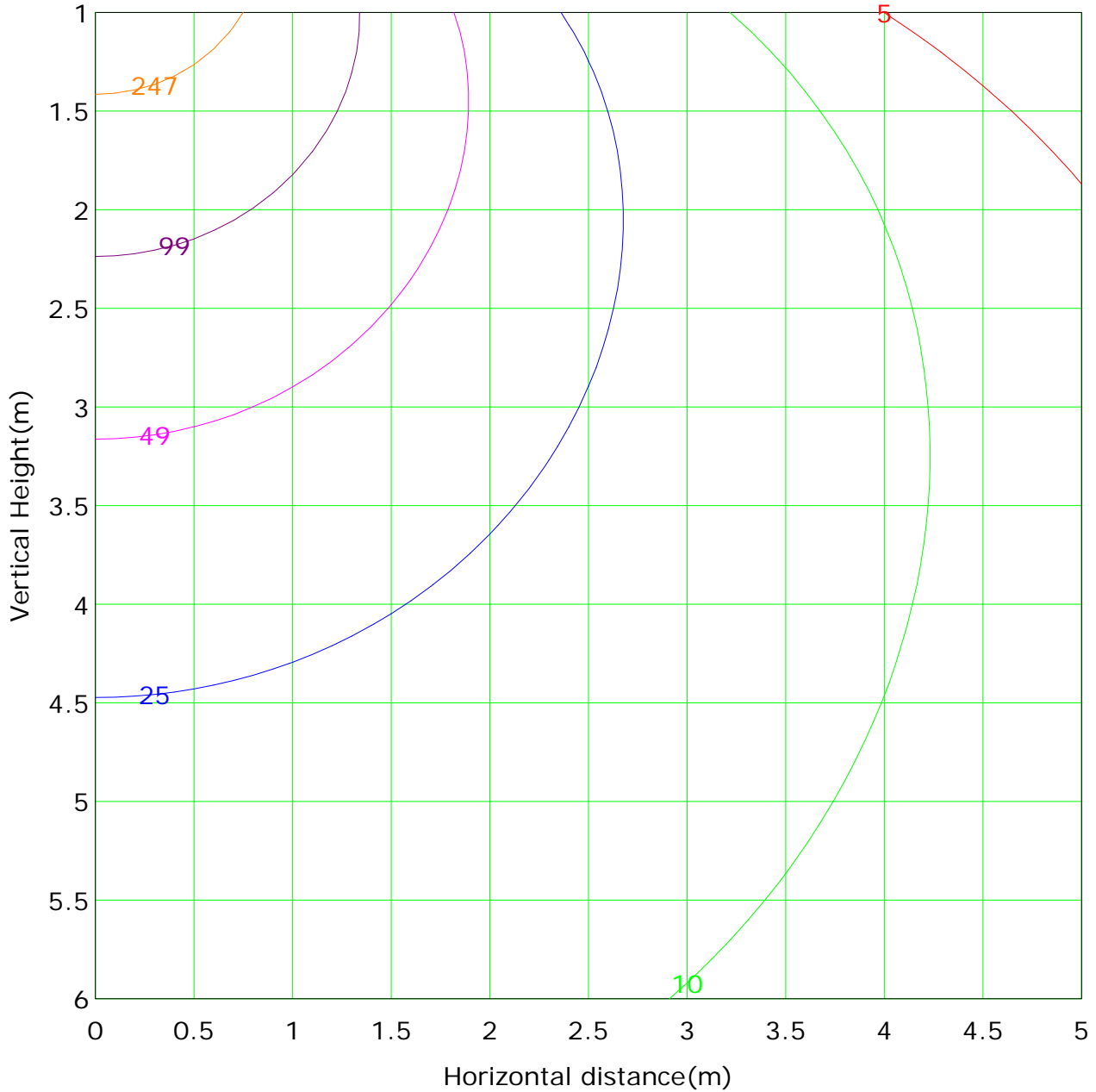


## Illuminance at a Distance





## Vertical IsoLux Plot



|                    |                   |                    |
|--------------------|-------------------|--------------------|
| Lowest(m): 1.0m    | Highest(m): 6.0m  | Max Lux: 494.9 lx  |
| — ( 1%): 4.9 lx    | — ( 2%): 9.9 lx   | — ( 10%): 49.5 lx  |
| — ( 5%): 24.7 lx   | — ( 20%): 99.0 lx | — ( 50%): 247.4 lx |
| — (100%): 494.9 lx |                   |                    |

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



Report No.:

Test Time: 25/09/2018 16:50

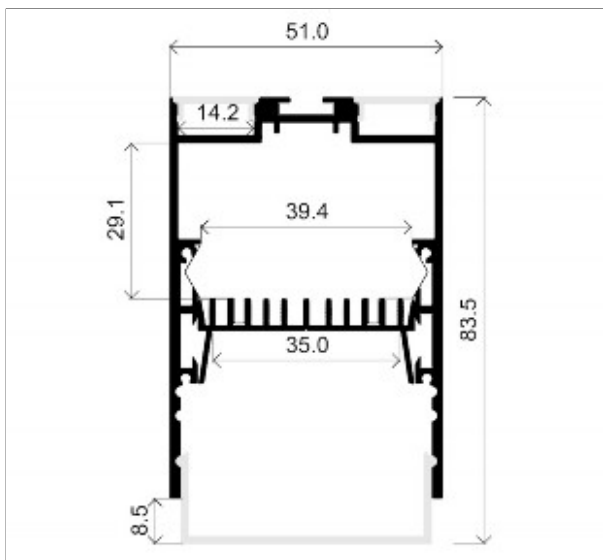
## Luminaire Property

Luminaire Manufacturer: Lighting Line  
 Luminaire Description: LLP-CL02-07 + LLD-07-CS  
 Lamp Description: Strip 14,4W/m 60led/m      Number of Lamps: 2  
 Lumens per Lamp: 3158 lm      Voltage: 24.0 V  
 Current: 1.154 A      Power: 27.69 W  
 Power Factor: 1.000

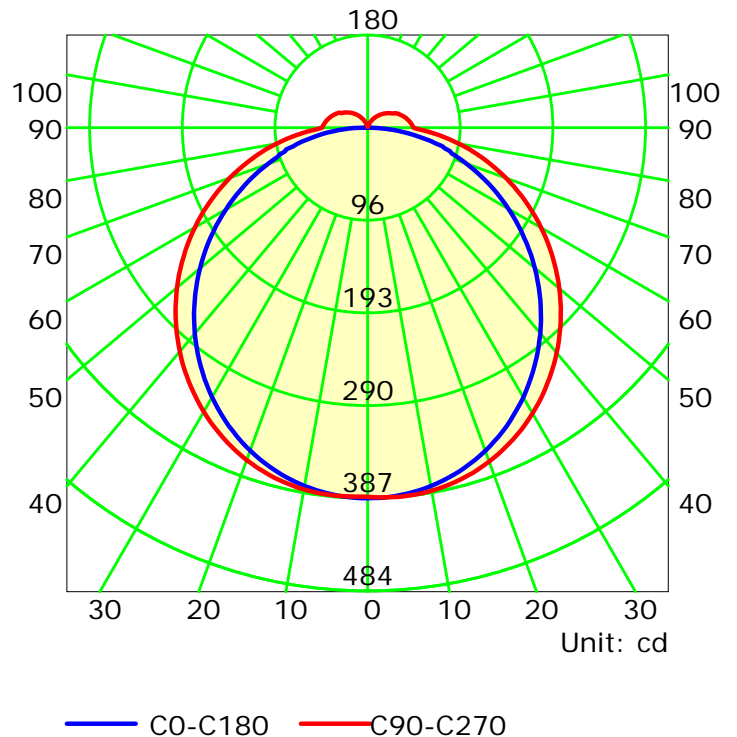
## Photometric Results

|   |                                    |
|---|------------------------------------|
| CIE Class: Direct   | Total Rated Lamp Lumens: 6316.0 lm |
| Measurement Flux: 1348.8 lm   | Efficiency: 21.35%                 |
| Downward Ratio: 19.72%  | Upward Ratio: 1.63%                |
| Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 166.3, 218.1, 176.5, 175.7 |                                    |
| Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 112.2, 125.7, 121.5, 120.9  |                                    |
| Luminaire Efficacy Rating (LER): 48.76                                      | Central Intensity: 387.55 cd       |
| Max. Intensity: 387.55 cd   | Pos of Max. Intensity: H0 V0       |
| S/MH(C0/C180): 1.25   | S/MH(C90/C270): 1.32               |

Picture Of Luminaire



Luminous Intensity Distribution Curve



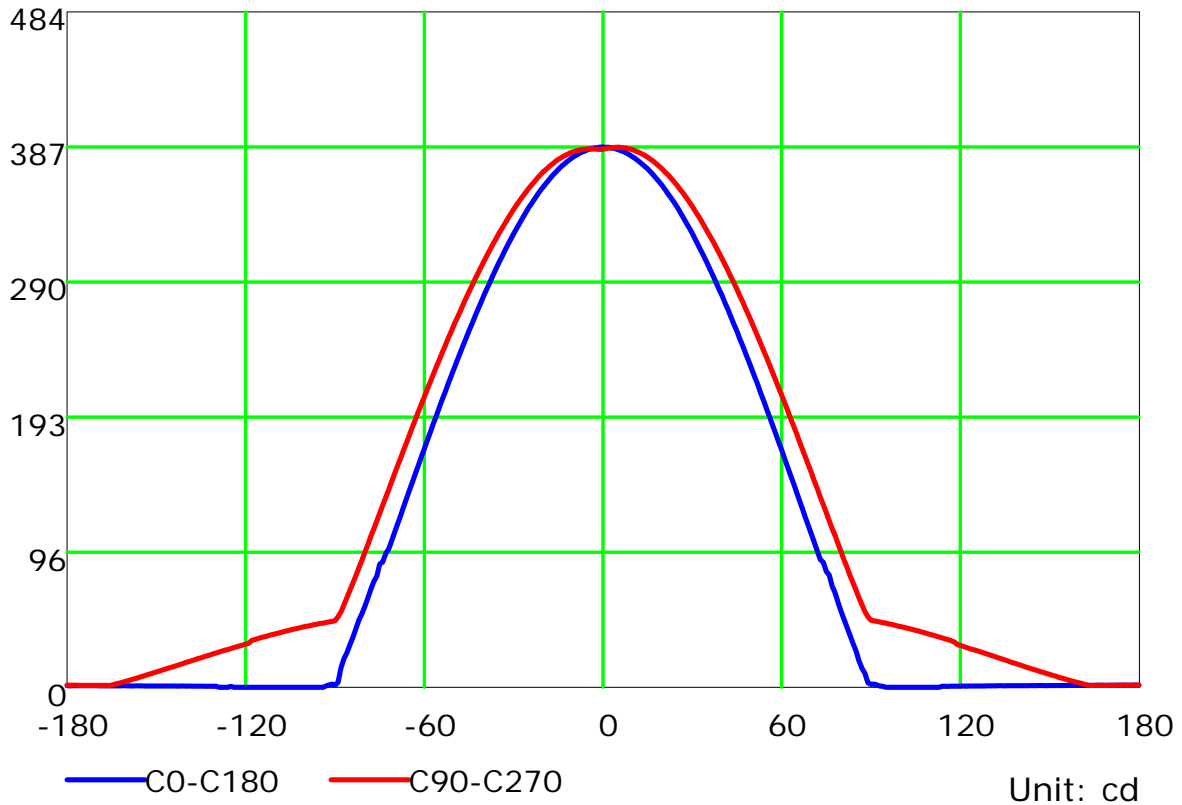
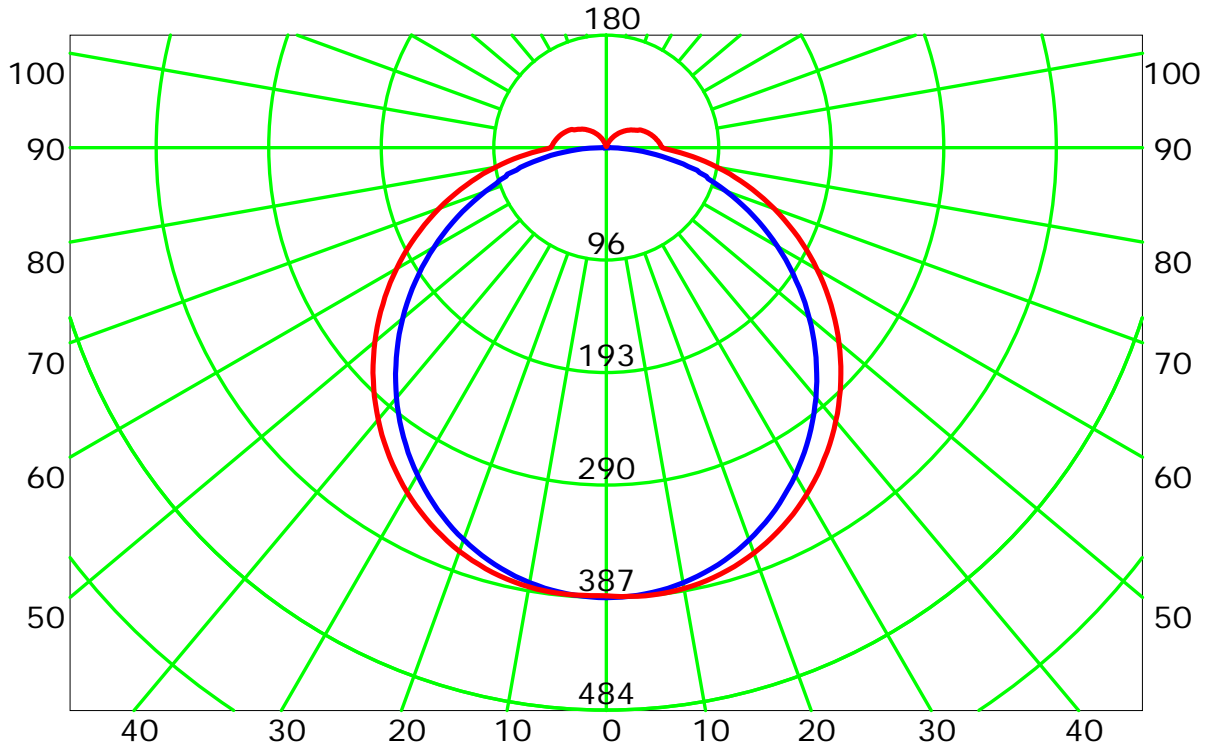
C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:





## Luminous Intensity Distribution Curve

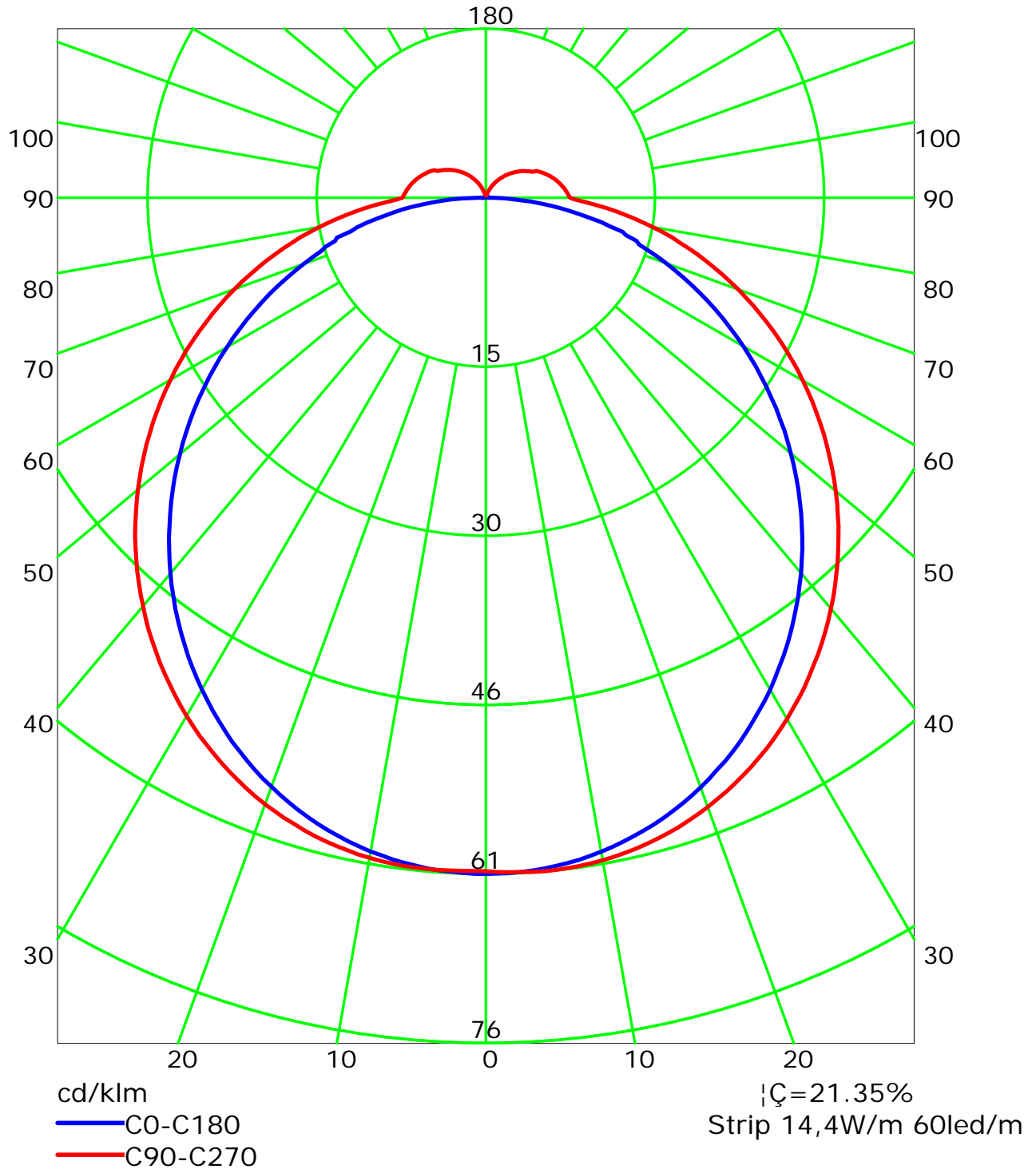


C Plane (°):0.0-360.0: 10.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-2000  
Distance: 7.970 m  
Humidity:  
Inspector:



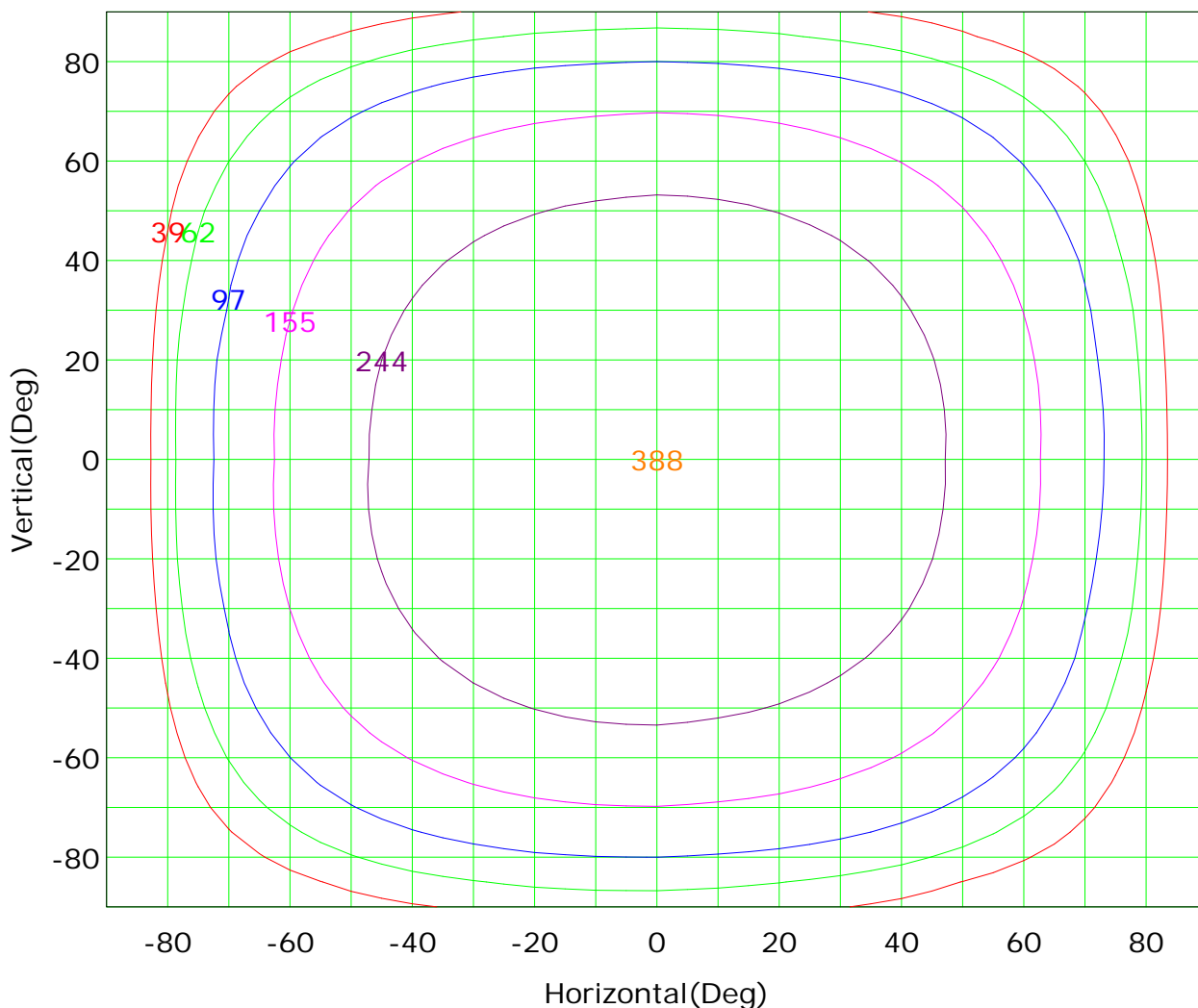
## Luminous Intensity Distribution Curve(cd/klm)



C Plane (°):0.0-360.0: 10.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-2000  
Distance: 7.970 m  
Humidity:  
Inspector:

## Isocandela (rectangle)



Imax (100%): 388 cd

|           |        |           |        |
|-----------|--------|-----------|--------|
| — ( 10%): | 39 cd  | — ( 16%): | 62 cd  |
| — ( 25%): | 97 cd  | — ( 40%): | 155 cd |
| — ( 63%): | 244 cd | — (100%): | 388 cd |

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

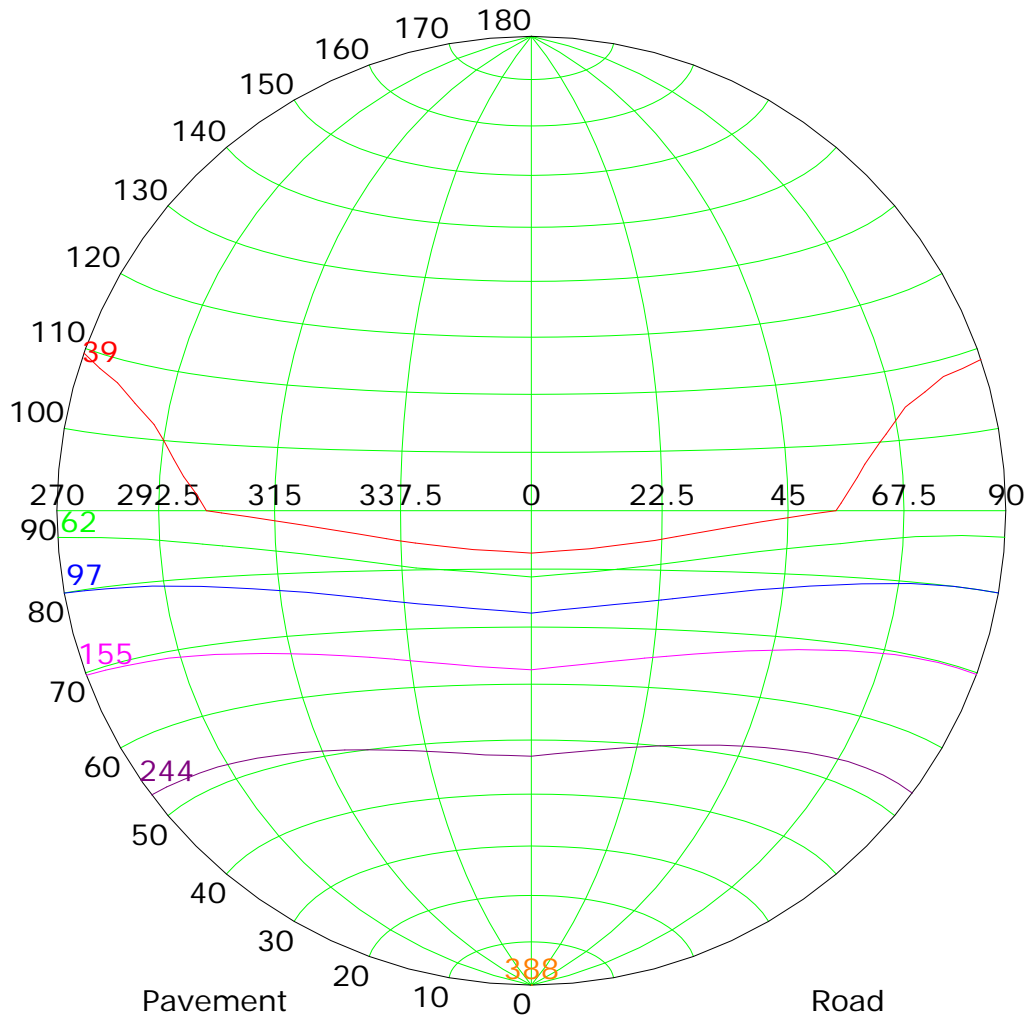
Distance: 7.970 m

Humidity:

Inspector:



## Isocandela (sphere)



Imax (100%): 388 cd

|           |        |           |        |
|-----------|--------|-----------|--------|
| — ( 10%): | 39 cd  | — ( 16%): | 62 cd  |
| — ( 25%): | 97 cd  | — ( 40%): | 155 cd |
| — ( 63%): | 244 cd | — (100%): | 388 cd |

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

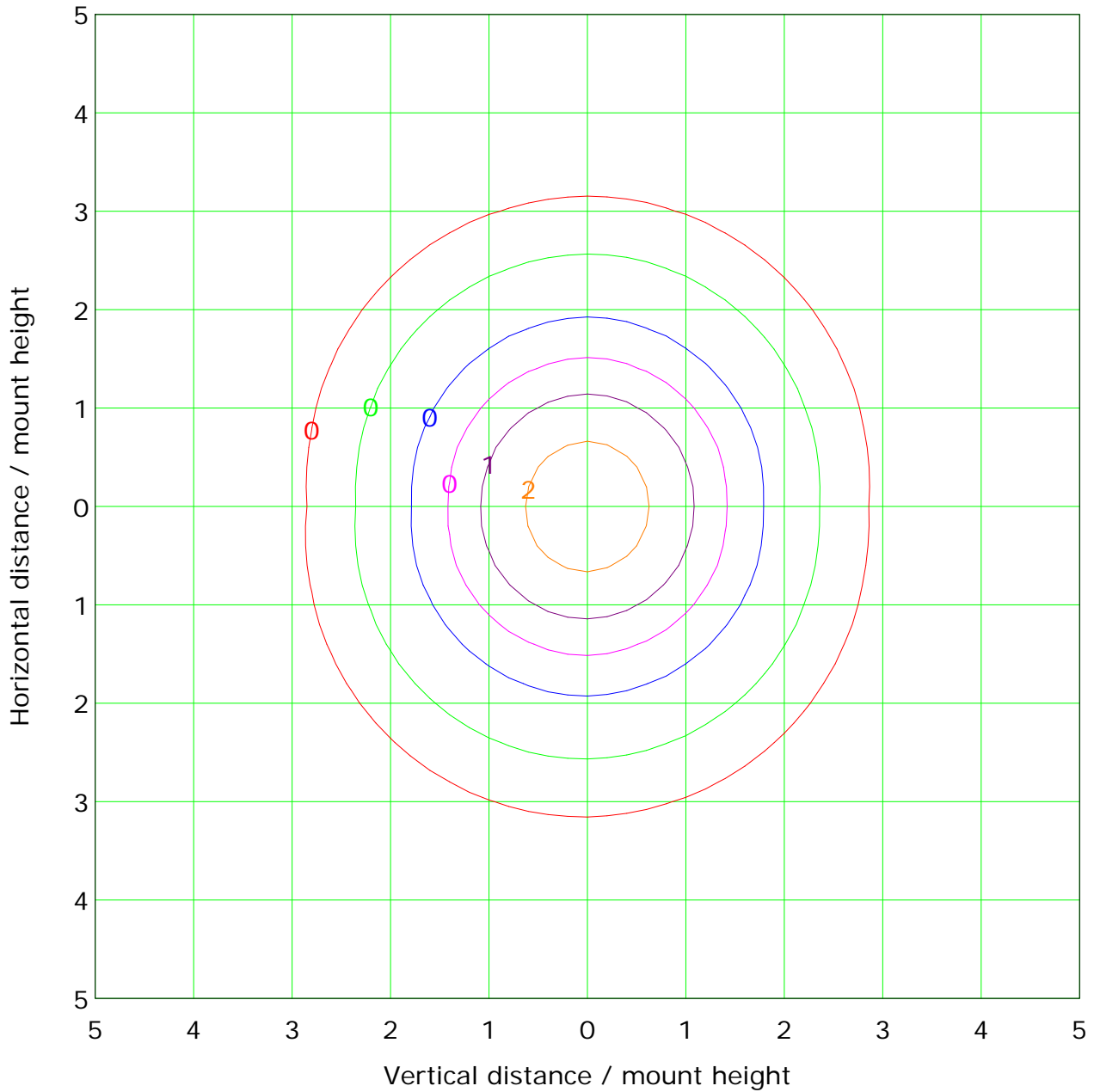
Distance: 7.970 m

Humidity:

Inspector:



## IsoLux Plot



|                        |        |                       |        |
|------------------------|--------|-----------------------|--------|
| Mounting Height: 10.0m |        | Max Lux(100%): 3.9 lx |        |
| — ( 1%):               | 0.0 lx | — ( 2%):              | 0.1 lx |
| — ( 5%):               | 0.2 lx | — (10%):              | 0.4 lx |
| — (20%):               | 0.8 lx | — (50%):              | 1.9 lx |
| — (100%):              | 3.9 lx |                       |        |

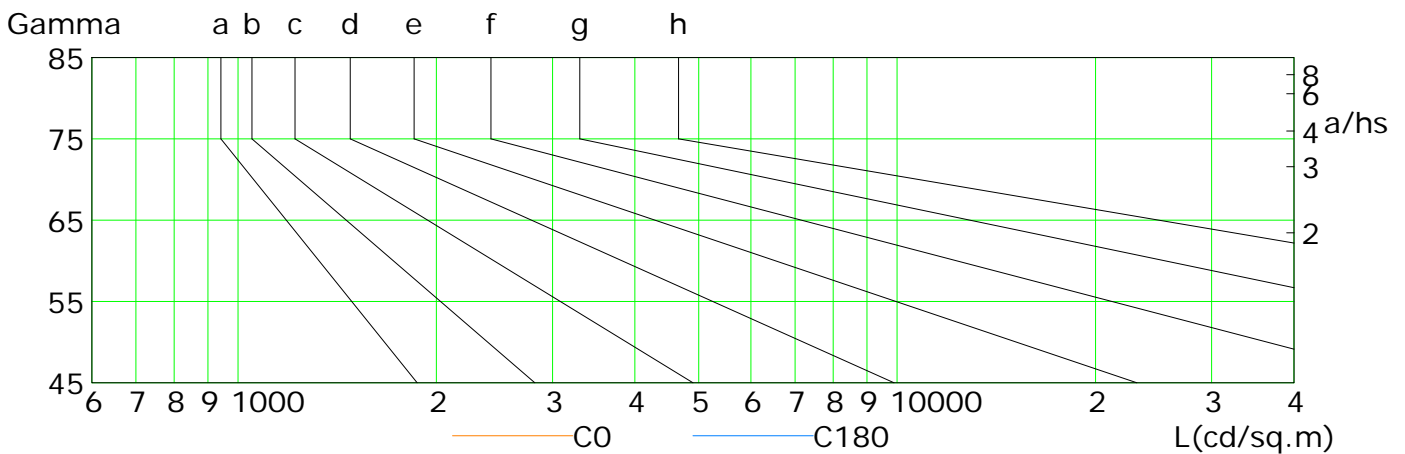
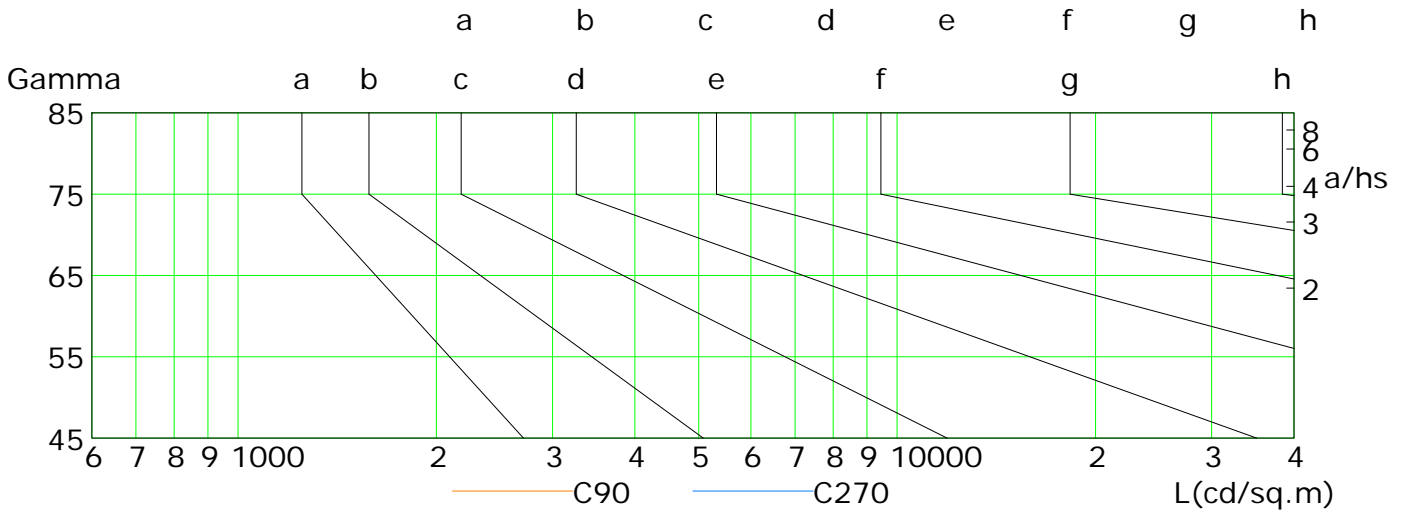
C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## Lum Limit Curve

| Dazzle | Quality | Illuminance (lx) |      |      |       |       |       |       |       |
|--------|---------|------------------|------|------|-------|-------|-------|-------|-------|
|        |         | a                | b    | c    | d     | e     | f     | g     | h     |
| 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 |



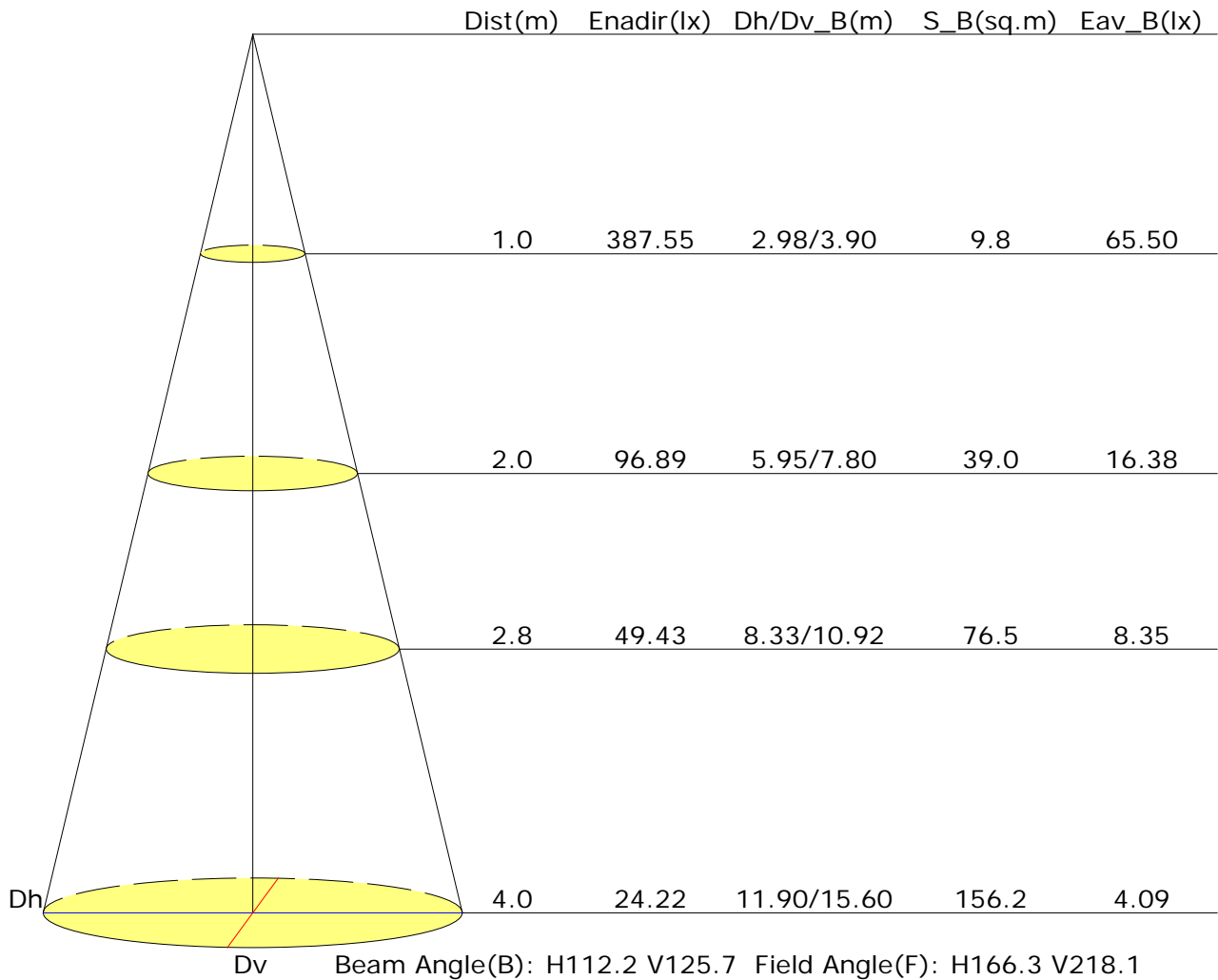
| L(cd/sq.m) | G45 | G50 | G55 | G60 | G65 | G70 | G75 | G80 | G85 |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| C0         | 255 | 228 | 199 | 170 | 140 | 110 | 83  | 54  | 26  |
| C90        | 285 | 262 | 236 | 210 | 182 | 154 | 125 | 97  | 70  |
| C180       | 256 | 229 | 201 | 171 | 142 | 111 | 88  | 58  | 31  |
| C270       | 284 | 260 | 235 | 208 | 181 | 153 | 125 | 97  | 70  |

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## Illuminance at a Distance

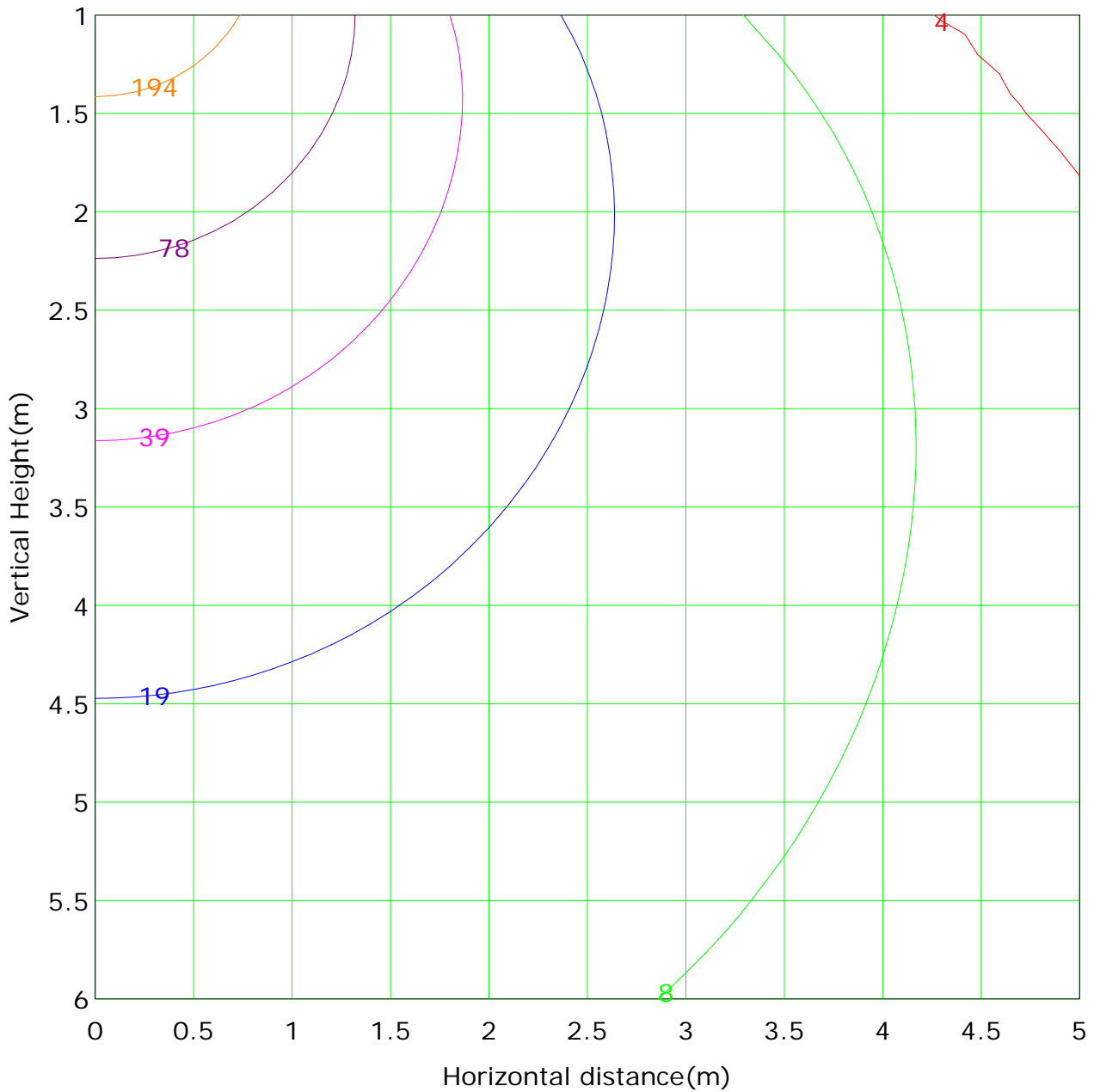


C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## Vertical IsoLux Plot



|                  |                  |                   |
|------------------|------------------|-------------------|
| Lowest(m): 1.0m  | Highest(m): 6.0m | Max Lux: 387.5 lx |
| ( 1%): 3.9 lx    | ( 2%): 7.8 lx    | ( 10%): 38.8 lx   |
| ( 5%): 19.4 lx   | ( 20%): 77.5 lx  | ( 50%): 193.8 lx  |
| (100%): 387.5 lx |                  |                   |

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:





Report No.:

Test Time: 26/09/2018 09:10

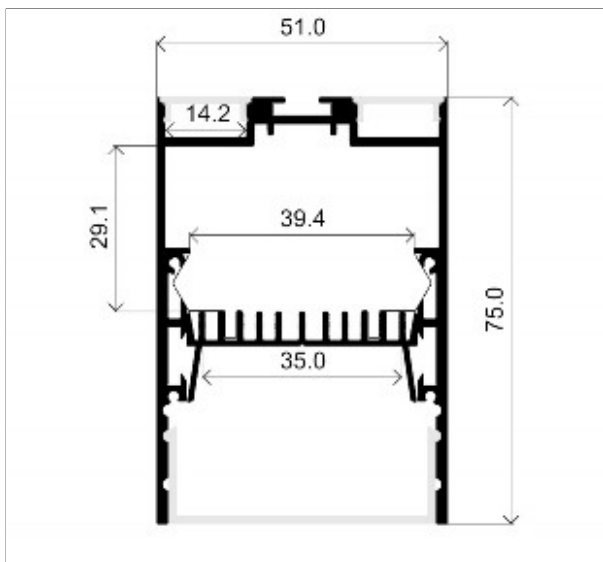
## Luminaire Property

Luminaire Manufacturer: Lighting Line  
 Luminaire Description: LLP-CL02-07 + LLD-07-CS  
 Lamp Description: Strip 14,4W/m 60led/m      Number of Lamps: 2  
 Lumens per Lamp: 3158 lm      Voltage: 24.0 V  
 Current: 1.143 A      Power: 27.44 W  
 Power Factor: 1.000

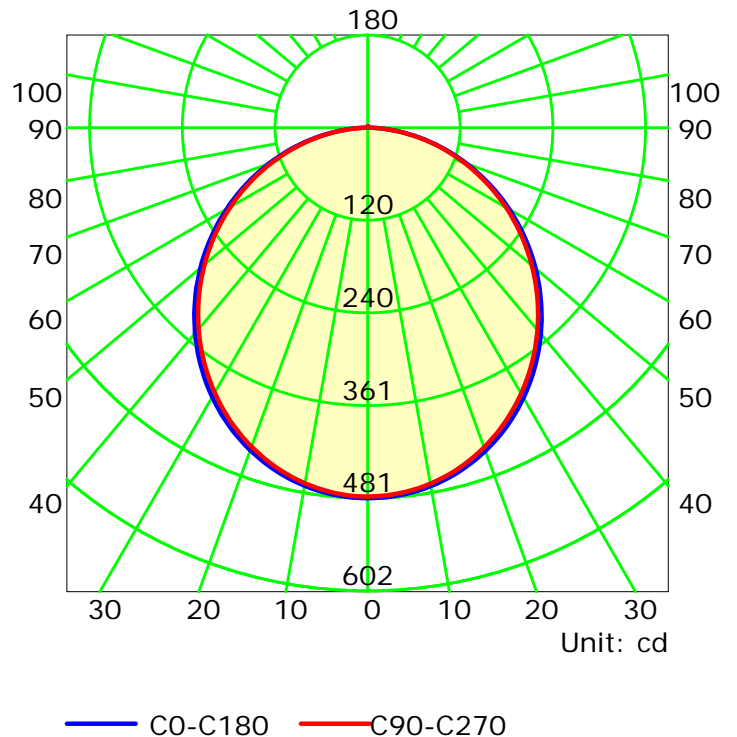
## Photometric Results

|   |                                    |
|---|------------------------------------|
| CIE Class: Direct   | Total Rated Lamp Lumens: 6316.0 lm |
| Measurement Flux: 1373.2 lm   | Efficiency: 21.74%                 |
| Downward Ratio: 21.68%  | Upward Ratio: 0.06%                |
| Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 163.9, 163.6, 163.7, 163.8 |                                    |
| Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 112.2, 110.9, 111.5, 111.6  |                                    |
| Luminaire Efficacy Rating (LER): 50.09                                      | Central Intensity: 481.6 cd        |
| Max. Intensity: 481.65 cd   | Pos of Max. Intensity: H10 V0      |
| S/MH(C0/C180): 1.25   | S/MH(C90/C270): 1.24               |

Picture Of Luminaire



Luminous Intensity Distribution Curve

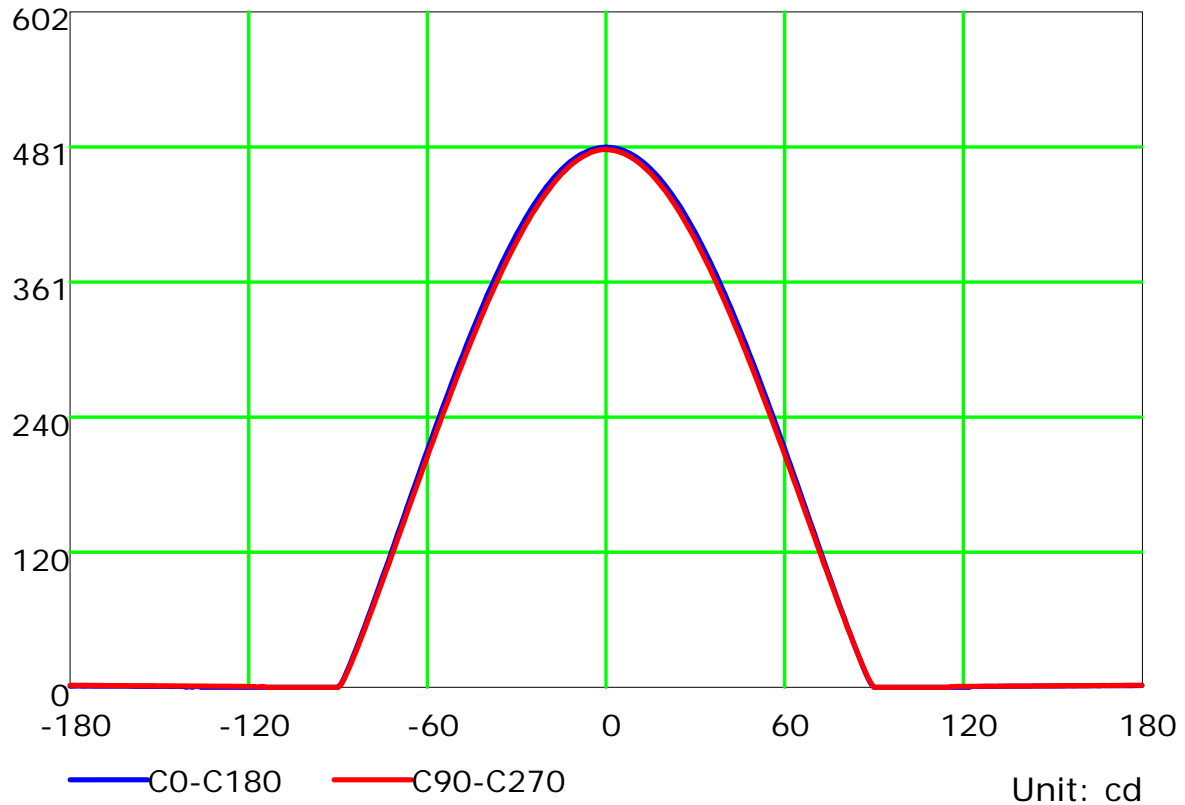
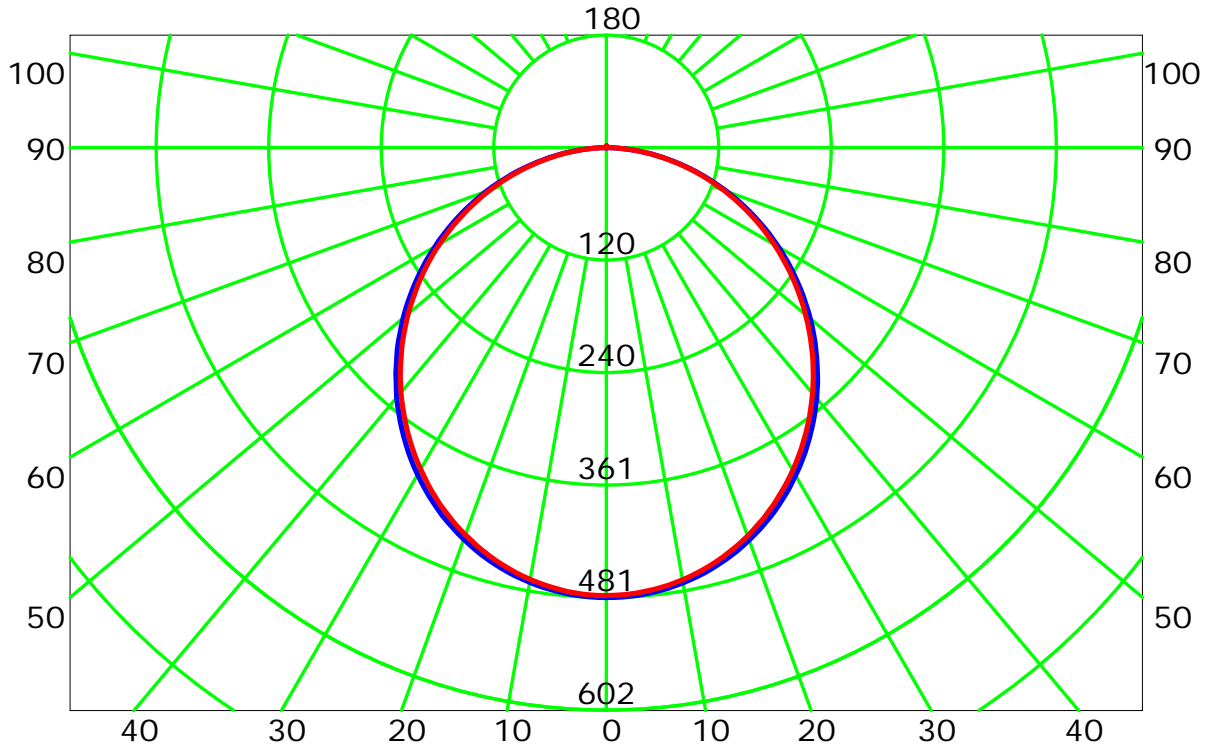


C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## Luminous Intensity Distribution Curve

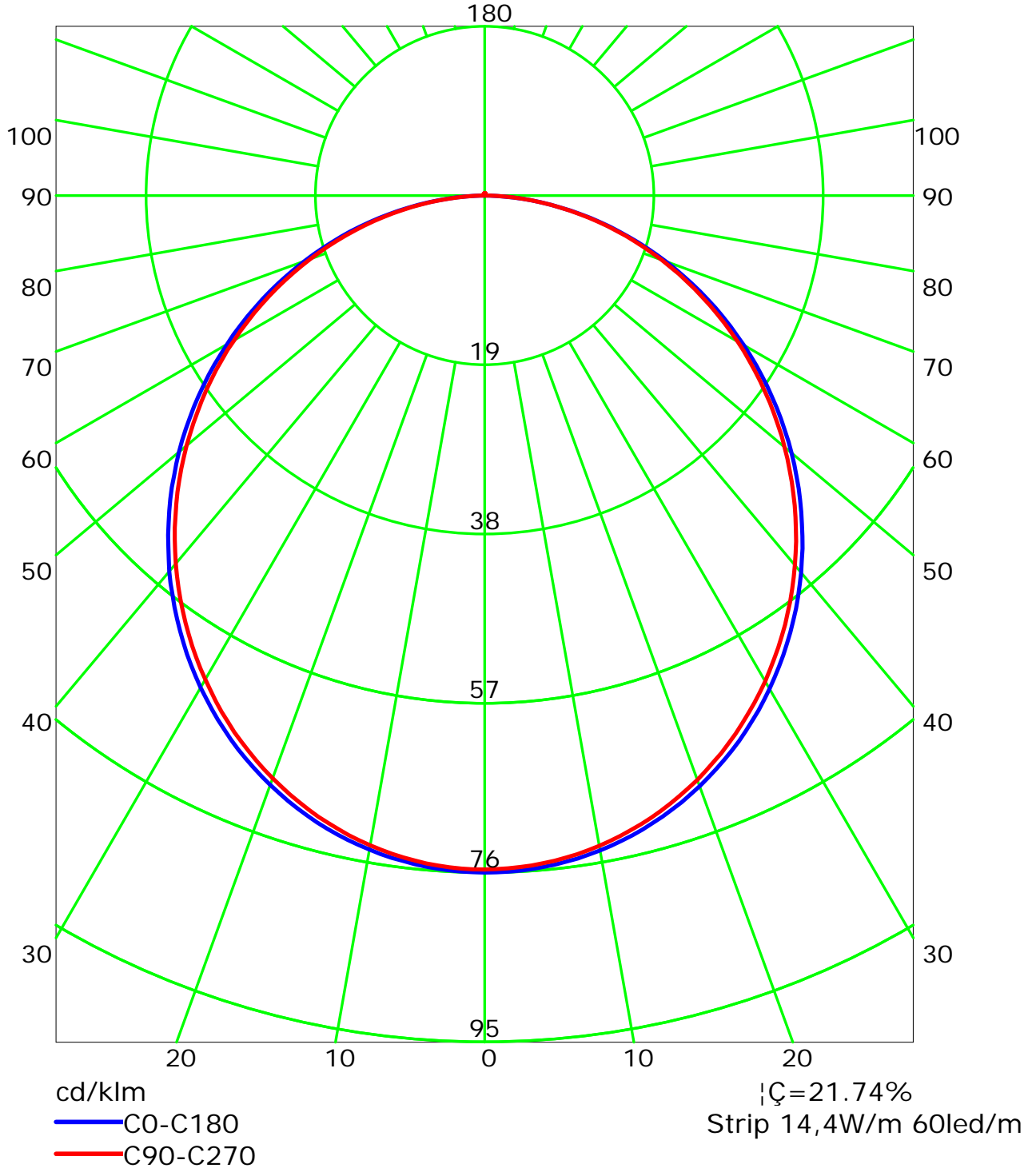


C Plane (°):0.0-360.0: 10.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-2000  
Distance: 7.970 m  
Humidity:  
Inspector:



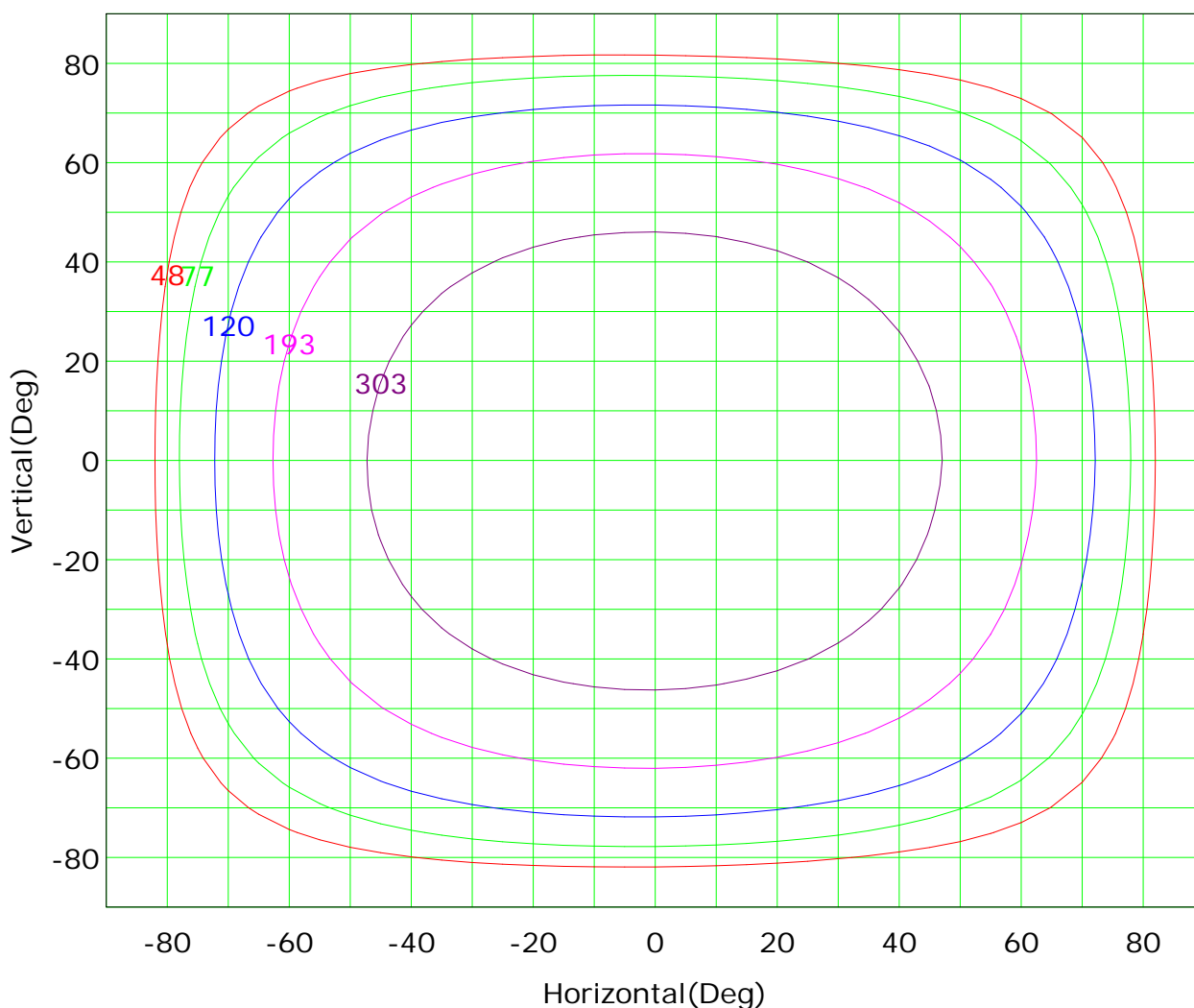
## Luminous Intensity Distribution Curve(cd/klm)



C Plane (°):0.0-360.0: 10.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-2000  
Distance: 7.970 m  
Humidity:  
Inspector:

## Isocandela (rectangle)



Imax (100%): 482 cd

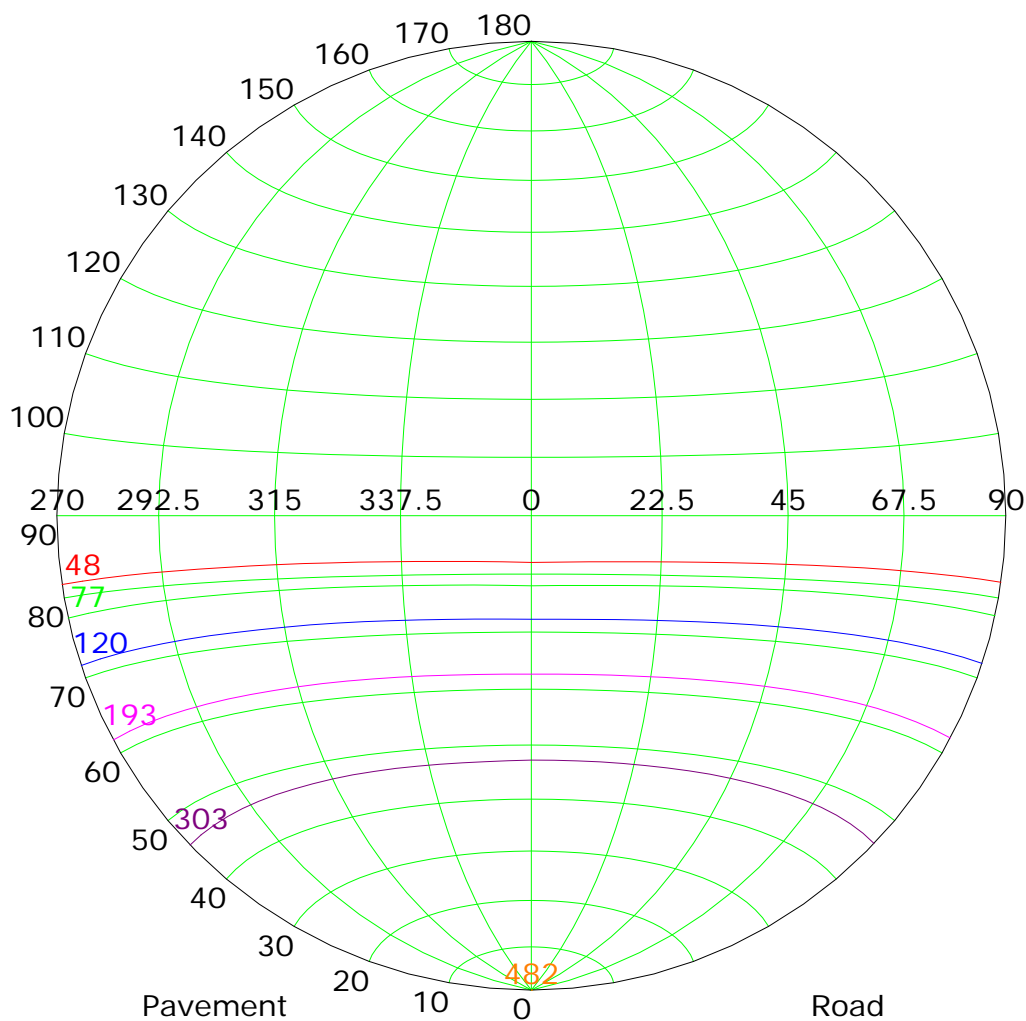
|           |        |           |        |
|-----------|--------|-----------|--------|
| — ( 10%): | 48 cd  | — ( 16%): | 77 cd  |
| — ( 25%): | 120 cd | — ( 40%): | 193 cd |
| — ( 63%): | 303 cd | — (100%): | 482 cd |

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## Isocandela (sphere)



Imax (100%): 482 cd

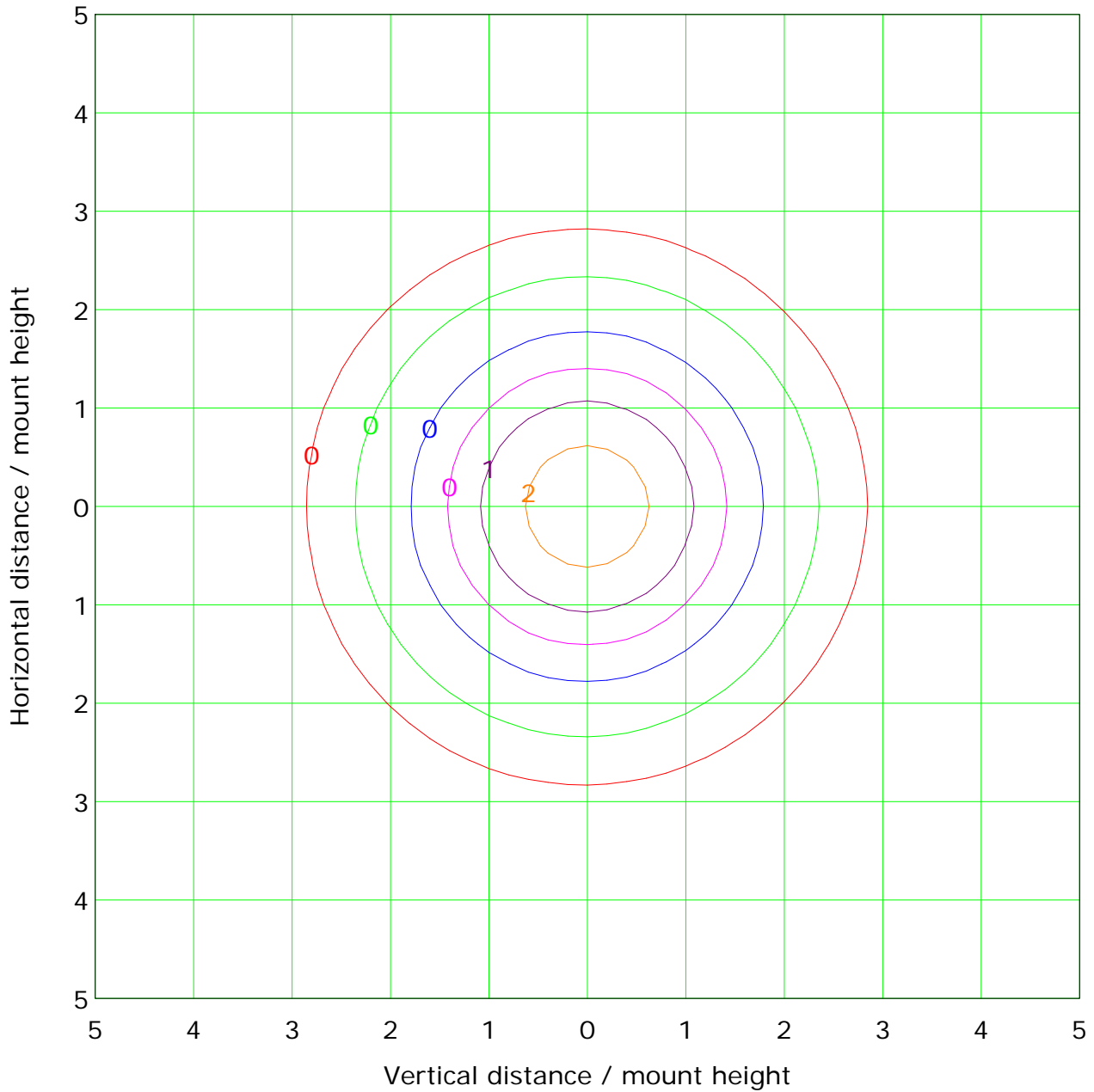
|           |        |           |        |
|-----------|--------|-----------|--------|
| — ( 10%): | 48 cd  | — ( 16%): | 77 cd  |
| — ( 25%): | 120 cd | — ( 40%): | 193 cd |
| — ( 63%): | 303 cd | — (100%): | 482 cd |

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## IsoLux Plot



|                        |        |                       |        |
|------------------------|--------|-----------------------|--------|
| Mounting Height: 10.0m |        | Max Lux(100%): 4.8 lx |        |
| — ( 1%):               | 0.0 lx | — ( 2%):              | 0.1 lx |
| — ( 5%):               | 0.2 lx | — ( 10%):             | 0.5 lx |
| — ( 20%):              | 1.0 lx | — ( 50%):             | 2.4 lx |
| — (100%):              | 4.8 lx |                       |        |

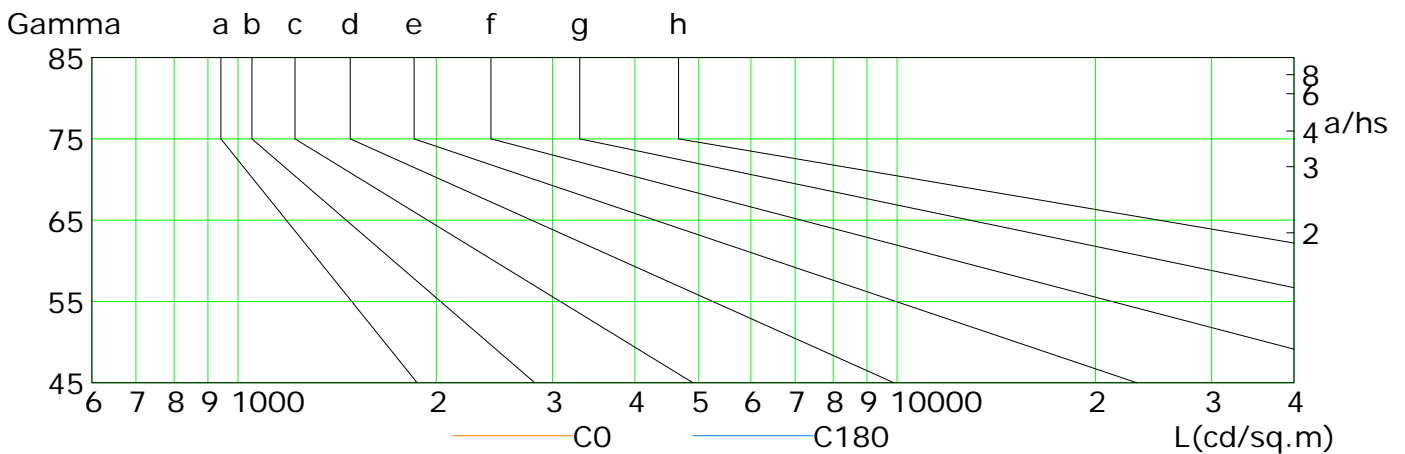
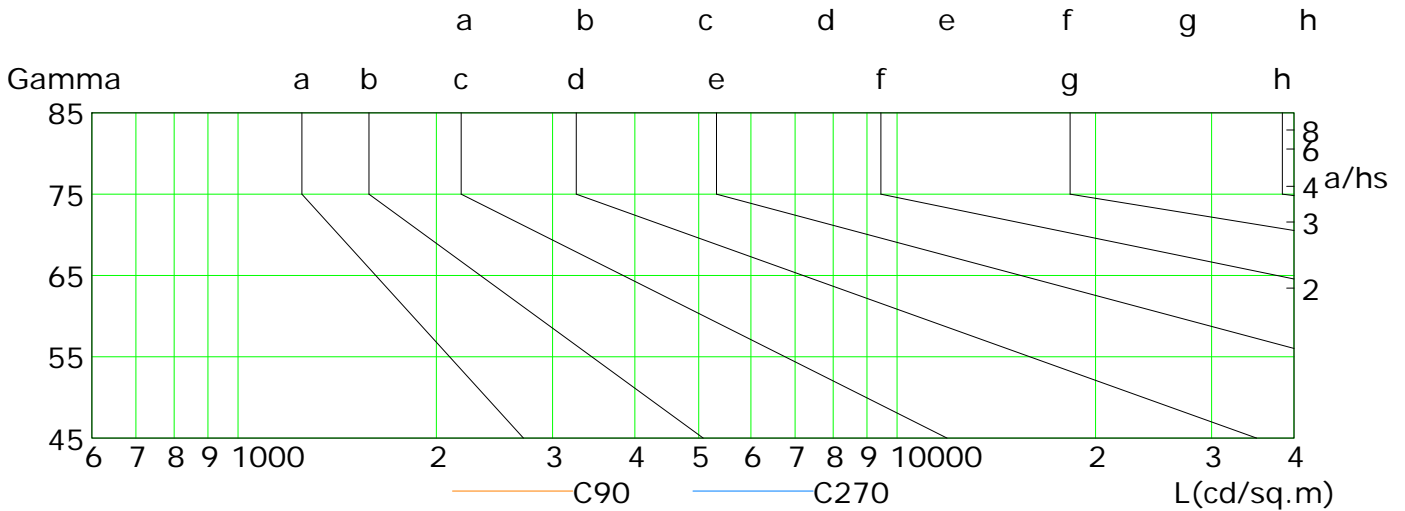
C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector:



## Lum Limit Curve

| Dazzle | Quality | Illuminance (lx) |      |      |       |       |       |       |       |
|--------|---------|------------------|------|------|-------|-------|-------|-------|-------|
|        |         | a                | b    | c    | d     | e     | f     | g     | h     |
| 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 |



| L(cd/sq.m) | G45 | G50 | G55 | G60 | G65 | G70 | G75 | G80 | G85 |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| C0         | 319 | 285 | 249 | 213 | 175 | 137 | 99  | 62  | 27  |
| C90        | 312 | 278 | 243 | 208 | 171 | 134 | 97  | 61  | 27  |
| C180       | 317 | 284 | 249 | 212 | 174 | 137 | 99  | 62  | 27  |
| C270       | 310 | 277 | 242 | 206 | 169 | 132 | 95  | 59  | 25  |

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

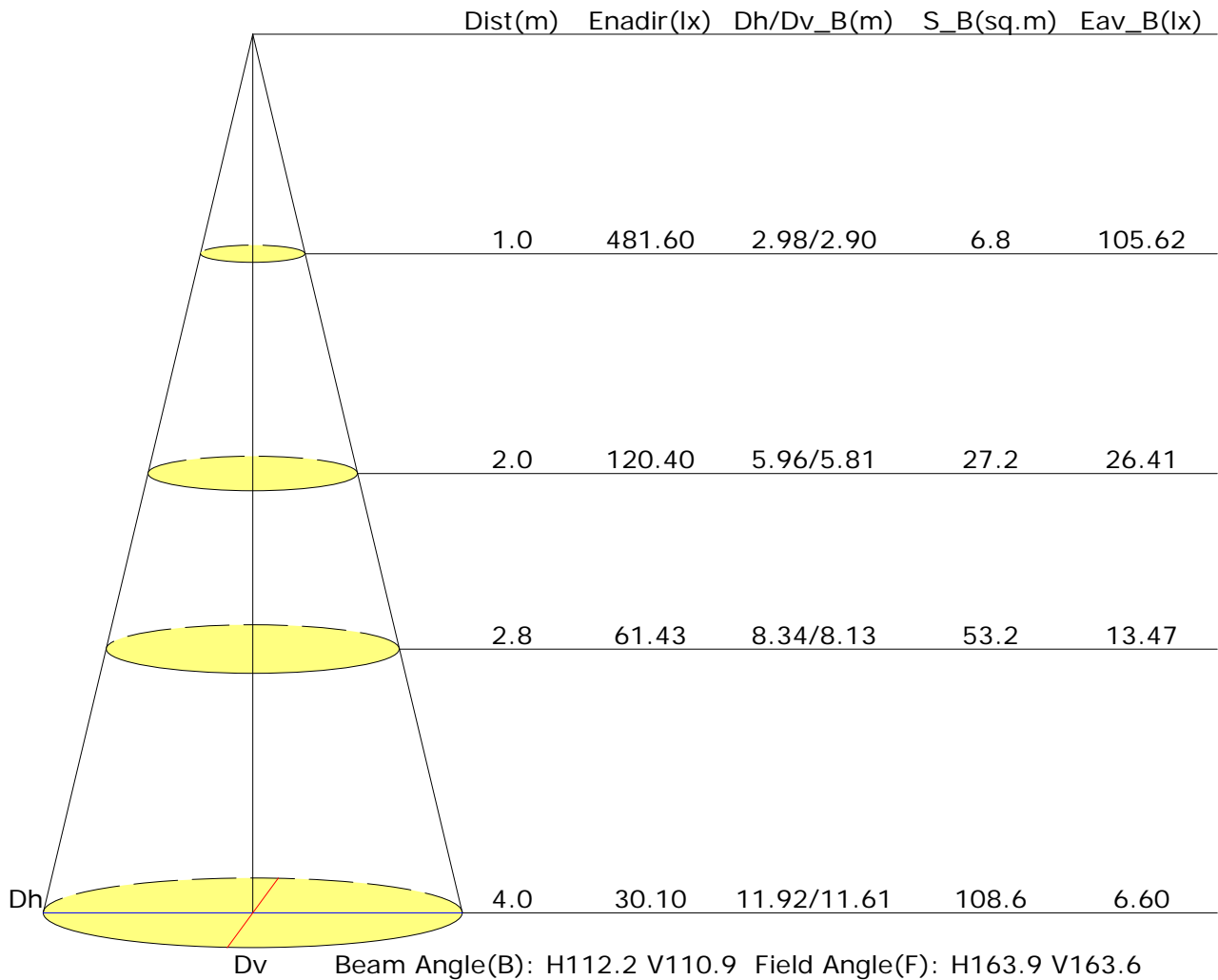
Distance: 7.970 m

Humidity:

Inspector:



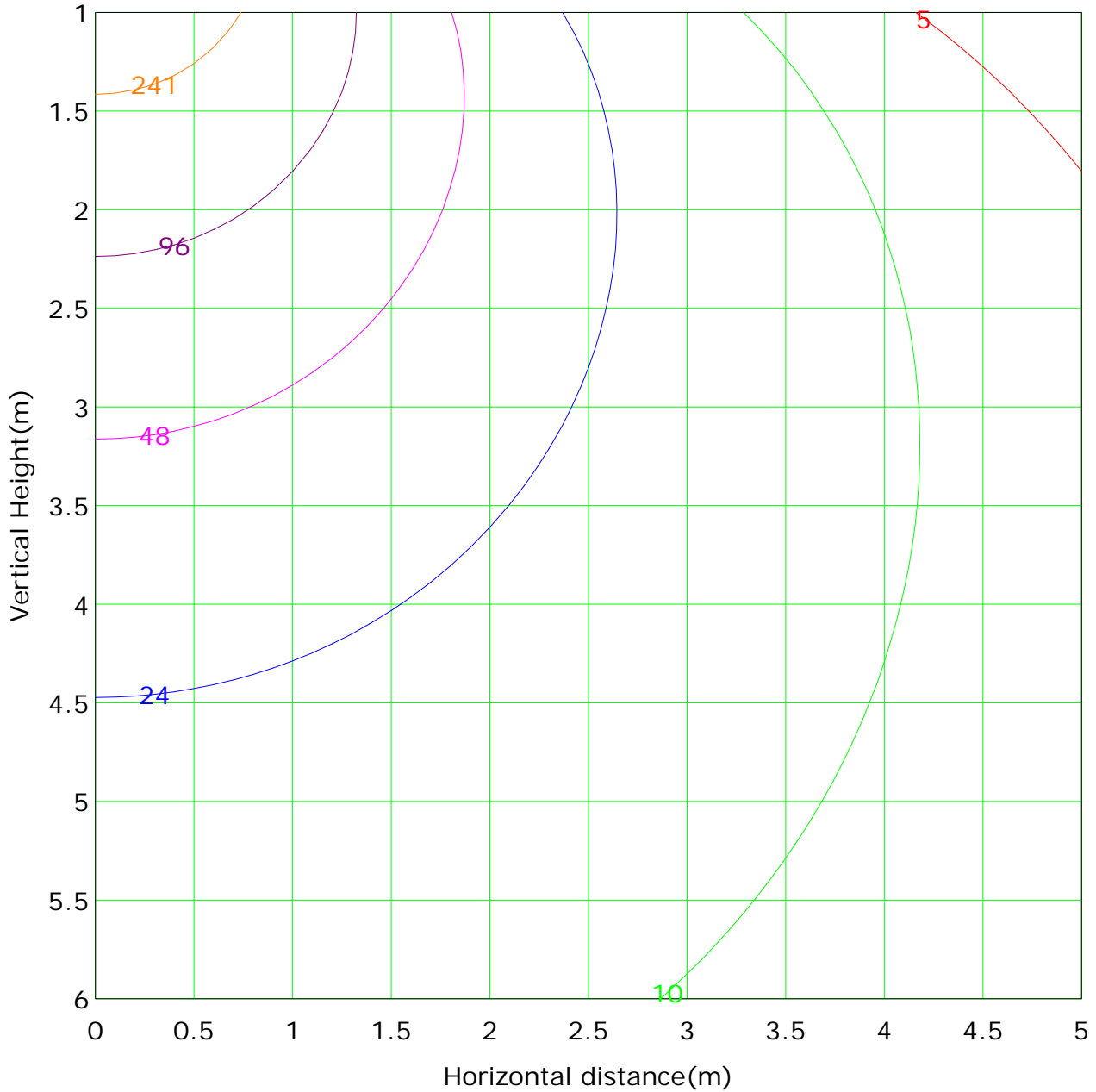
## Illuminance at a Distance







## Vertical IsoLux Plot



|                    |                    |                   |
|--------------------|--------------------|-------------------|
| Lowest(m): 1.0m    | Highest(m): 6.0m   | Max Lux: 481.6 lx |
| — ( 1%): 4.8 lx    | — ( 2%): 9.6 lx    |                   |
| — ( 5%): 24.1 lx   | — ( 10%): 48.2 lx  |                   |
| — ( 20%): 96.3 lx  | — ( 50%): 240.8 lx |                   |
| — (100%): 481.6 lx |                    |                   |

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-2000  
 Distance: 7.970 m  
 Humidity:  
 Inspector: