Report No.:

Test Time: 2026-04-26 09:45

# Luminaire Property

Luminaire Manufacturer:
Luminaire Category:
Lamp Catalog:
Number of Lamps:
Luminous Length (mm):
Luminous Height (mm):
Current: 2.5170 A
Power Factor: 0.9980

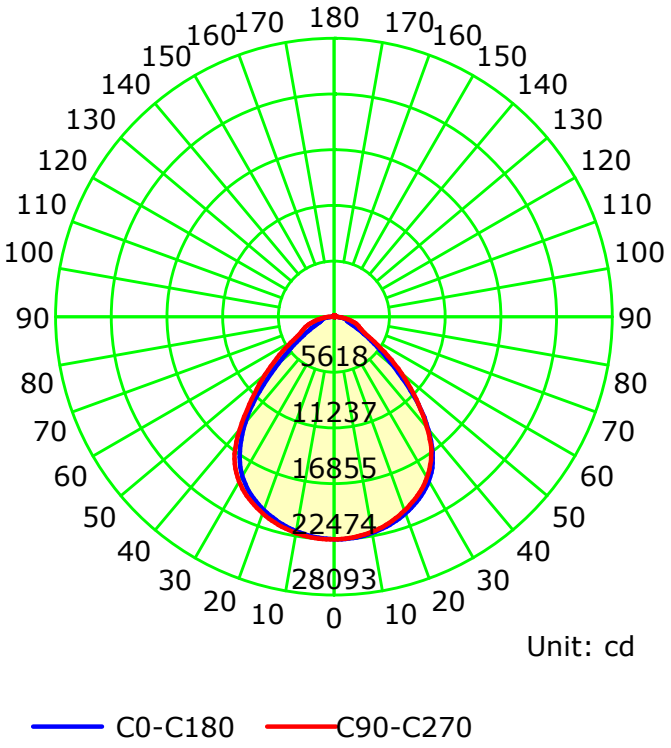
Luminaire Description:
Lamp Description:
Lumens per Lamp:
Luminous Width (mm):
Voltage: 119.30 V
Power: 299.70 W

# Photometric Results

CIE Class: Direct
Total Rated Lamp Lumens: 47930.2 lm
Measurement Flux: 47930.2 lm
Efficiency: 100%
Downward Ratio: 99%
Upward Ratio: 1%
Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 129.6, 149.1, 138.6, 138.4
Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 89.6, 91.8, 90.5, 90.5
Luminous Efficacy (lm/w): 159.93
C0r0 Intensity: 22453.08 cd
Max. Intensity: 22474.62 cd
Pos of Max. Intensity: H270 V1
S/MH(C0/C180): 1.24
S/MH(C90/C270): 1.25

Picture Of Luminaire

Luminous Intensity Distribution Curve

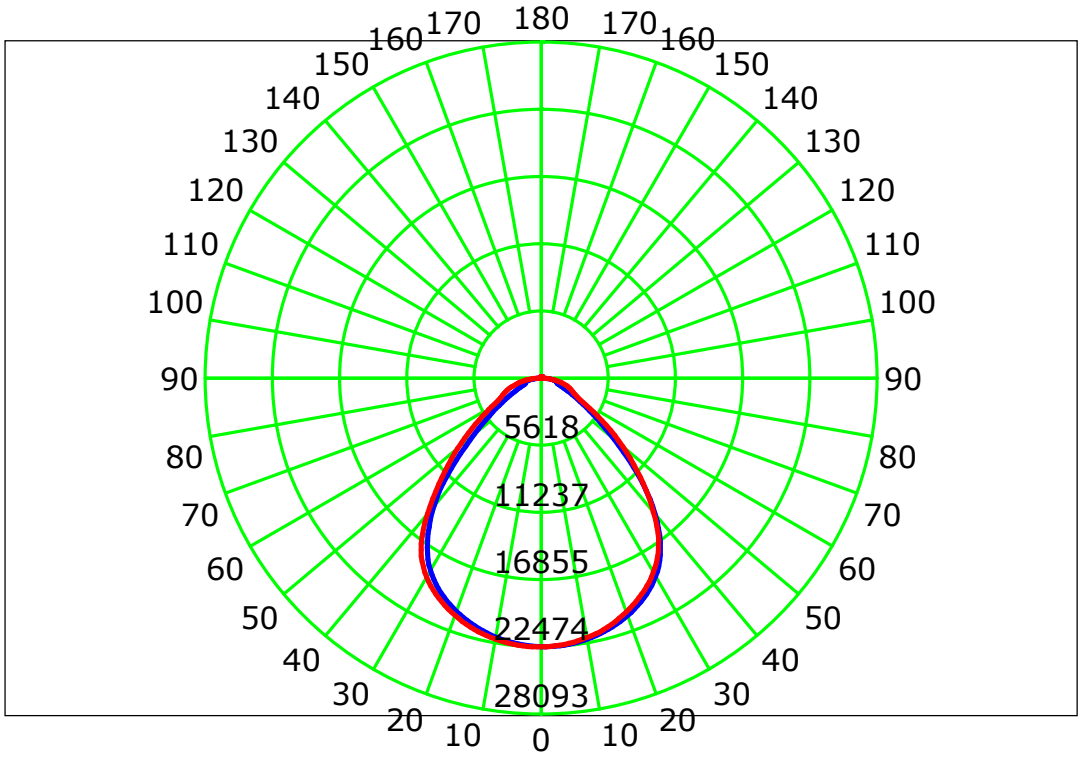


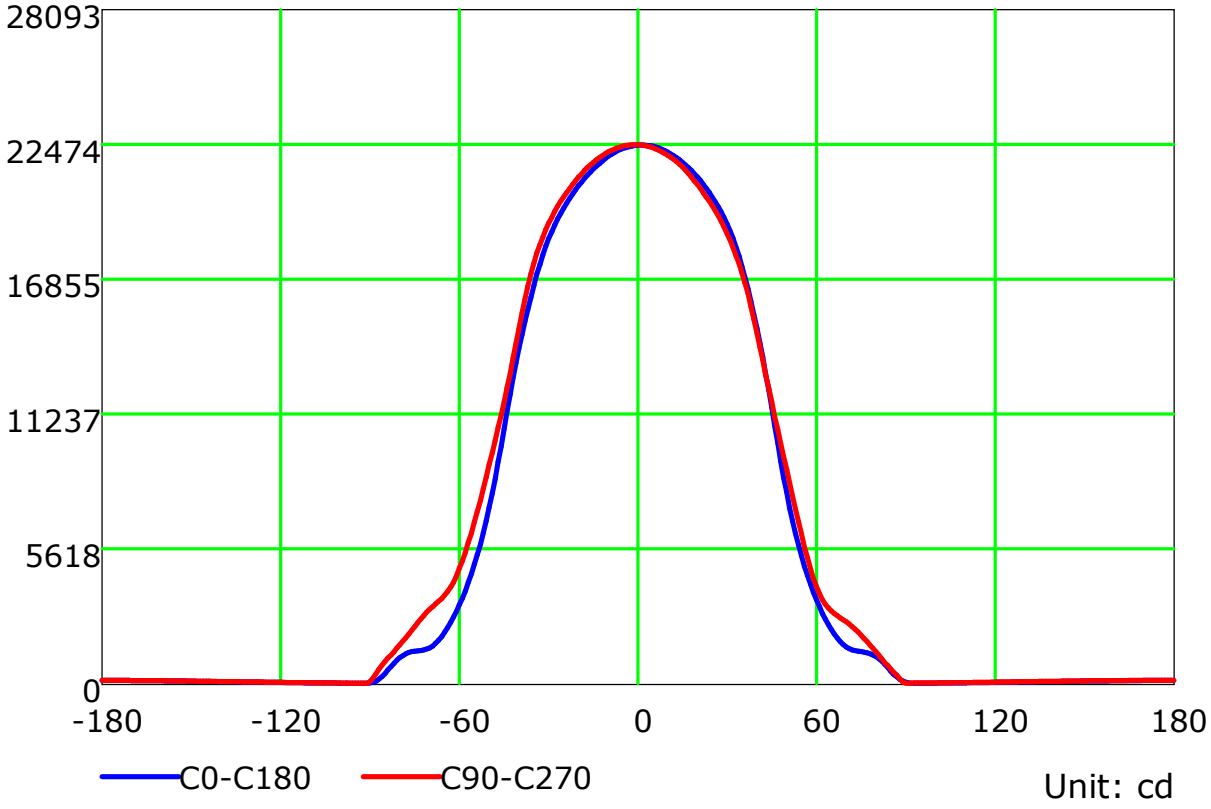

Unit: cd

C0-C180 C90-C270

C Plane (°):0.0-360.0: 90.0
Gamma Plane (°):0.0-180.0:1.0
Test Lab:
Test Device: GPM-1600L
Test Type: TYPE C
Distance: 9.913 m [K=1.0000]
Temperature:
Humidity:
Operator:
Inspector:

# Luminous Intensity Distribution Curve




C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

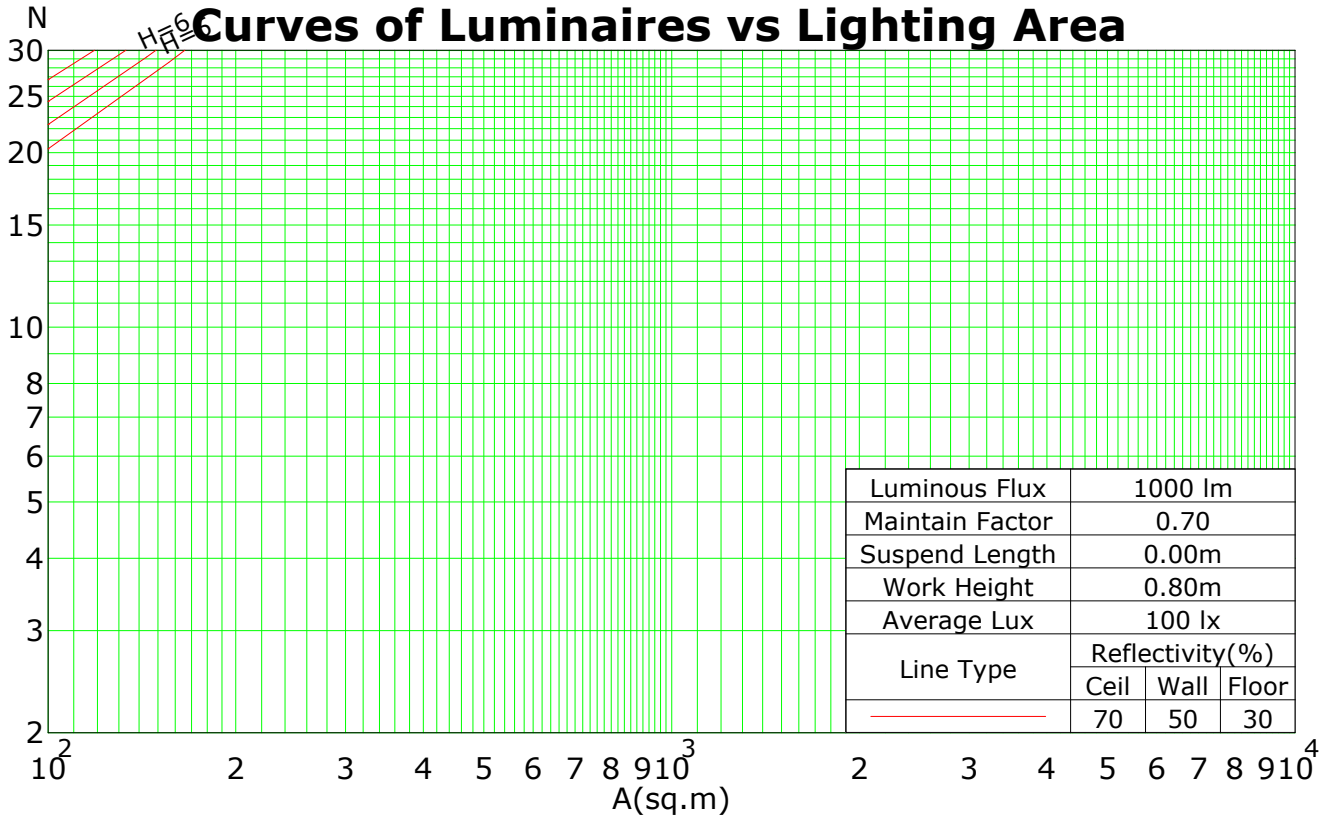
Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 9.913 m [K=1.0000]
Humidity:
Inspector:

# Coefficients Of Utilization - Zonal Cavity Method

| RC | 0.8 | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 | 0.5 | 0.5 | 0.5 | 0.3 | 0.3 | 0.3 | 0.1 | 0.1 | 0.1 | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RW | 0.7 | 0.5 | 0.3 | 0.1 | 0.7 | 0.5 | 0.3 | 0.1 | 0.5 | 0.3 | 0.1 | 0.5 | 0.3 | 0.1 | 0.5 | 0.3 | 0.1 | 0 |
| RCR | RF = 0.2 | | | | | | | | | | | | | | | | | |
| 0 | 1.19 | 1.19 | 1.19 | 1.19 | 1.16 | 1.16 | 1.16 | 1.16 | 1.11 | 1.11 | 1.11 | 1.06 | 1.06 | 1.06 | 1.01 | 1.01 | 1.01 | 0.99 |
| 1 | 1.10 | 1.06 | 1.02 | 0.99 | 1.07 | 1.04 | 1.00 | 0.97 | 0.99 | 0.97 | 0.94 | 0.95 | 0.93 | 0.91 | 0.92 | 0.90 | 0.88 | 0.86 |
| 2 | 1.02 | 0.95 | 0.89 | 0.84 | 0.99 | 0.93 | 0.87 | 0.83 | 0.89 | 0.85 | 0.81 | 0.86 | 0.82 | 0.79 | 0.83 | 0.80 | 0.77 | 0.75 |
| 3 | 0.94 | 0.85 | 0.78 | 0.72 | 0.92 | 0.83 | 0.77 | 0.71 | 0.80 | 0.75 | 0.70 | 0.77 | 0.73 | 0.69 | 0.75 | 0.71 | 0.67 | 0.65 |
| 4 | 0.87 | 0.76 | 0.69 | 0.63 | 0.85 | 0.75 | 0.68 | 0.62 | 0.73 | 0.66 | 0.61 | 0.70 | 0.65 | 0.60 | 0.68 | 0.63 | 0.60 | 0.58 |
| 5 | 0.81 | 0.69 | 0.61 | 0.55 | 0.79 | 0.68 | 0.60 | 0.55 | 0.66 | 0.59 | 0.54 | 0.64 | 0.58 | 0.54 | 0.62 | 0.57 | 0.53 | 0.51 |
| 6 | 0.75 | 0.63 | 0.55 | 0.49 | 0.73 | 0.62 | 0.54 | 0.49 | 0.60 | 0.53 | 0.48 | 0.59 | 0.52 | 0.48 | 0.57 | 0.52 | 0.47 | 0.46 |
| 7 | 0.70 | 0.58 | 0.50 | 0.44 | 0.68 | 0.57 | 0.49 | 0.44 | 0.55 | 0.48 | 0.43 | 0.54 | 0.48 | 0.43 | 0.52 | 0.47 | 0.43 | 0.41 |
| 8 | 0.65 | 0.53 | 0.45 | 0.40 | 0.64 | 0.52 | 0.45 | 0.40 | 0.51 | 0.44 | 0.39 | 0.50 | 0.44 | 0.39 | 0.48 | 0.43 | 0.39 | 0.37 |
| 9 | 0.61 | 0.49 | 0.41 | 0.36 | 0.60 | 0.48 | 0.41 | 0.36 | 0.47 | 0.40 | 0.36 | 0.46 | 0.40 | 0.36 | 0.45 | 0.39 | 0.35 | 0.34 |
| 10 | 0.58 | 0.45 | 0.38 | 0.33 | 0.56 | 0.45 | 0.38 | 0.33 | 0.44 | 0.37 | 0.33 | 0.43 | 0.37 | 0.33 | 0.42 | 0.36 | 0.32 | 0.31 |

Spacing Criteria (0-180): 1.24
Spacing Criteria (90-270): 1.25
Spacing Criteria (Diagonal): 1.26

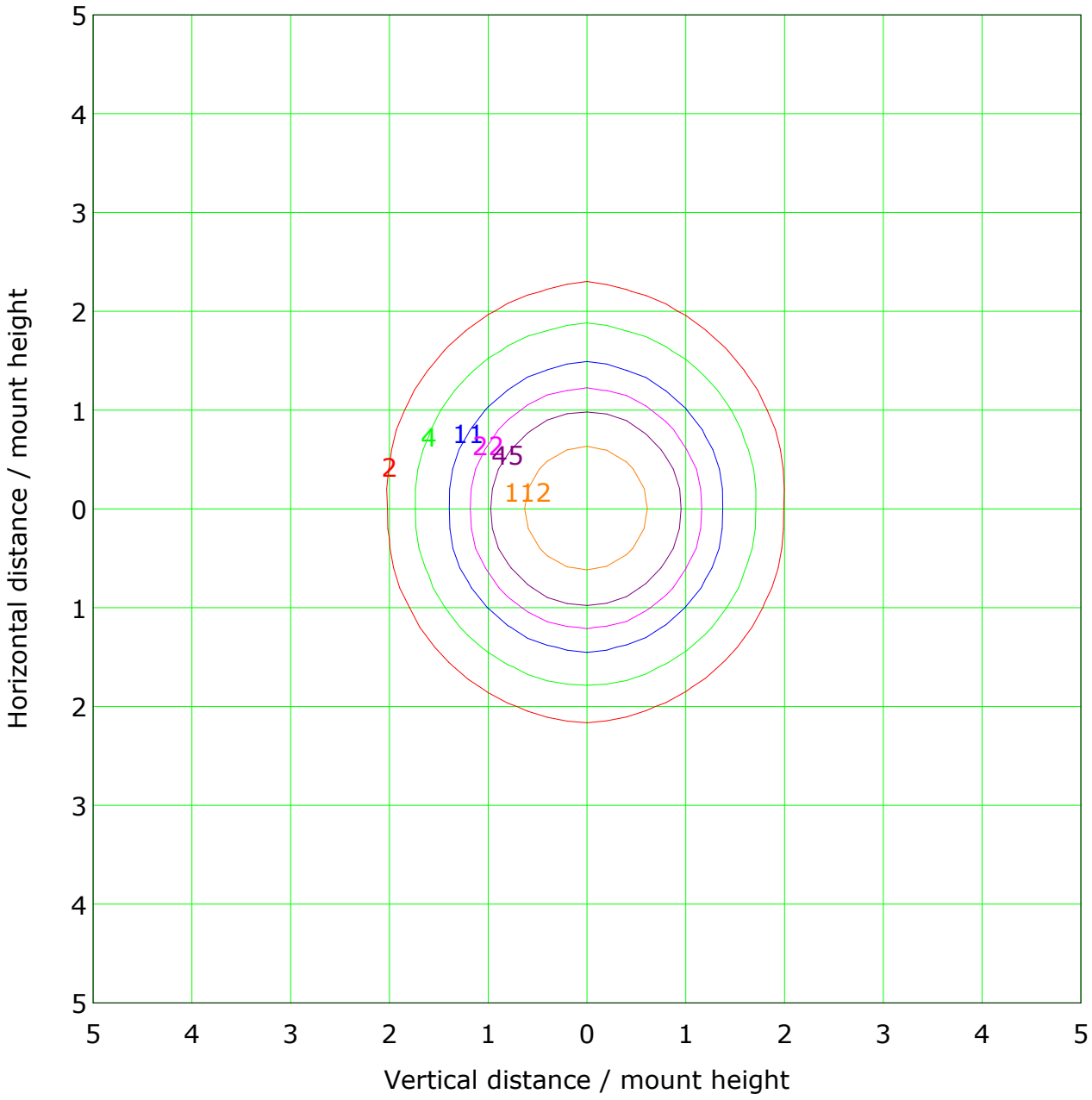
## Curves of Luminaires vs Lighting Area




C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 9.913 m [K=1.0000]
Humidity:
Inspector:

# IsoLux Plot



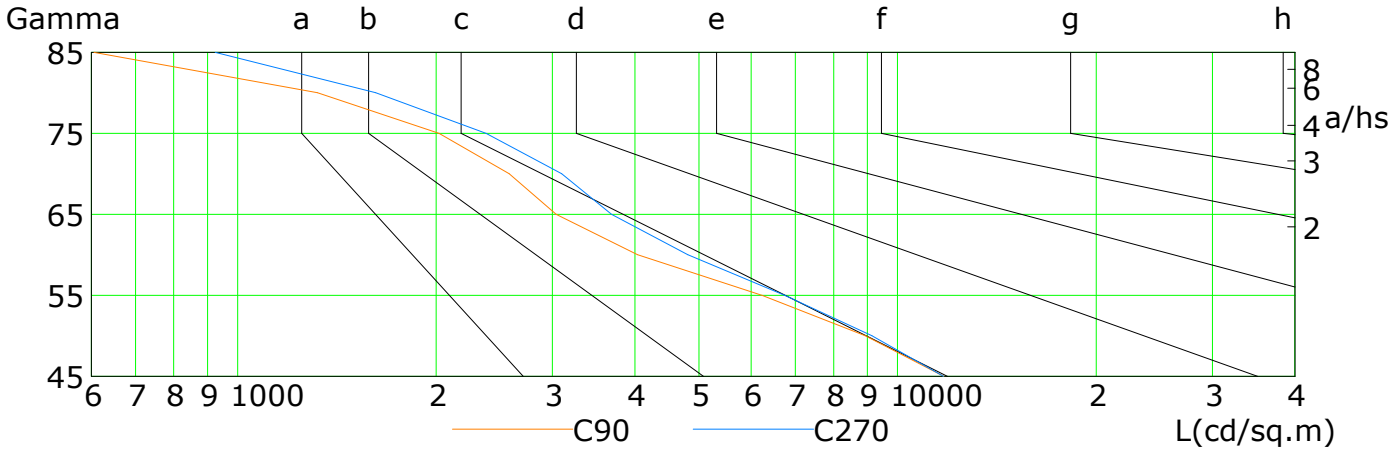

Mounting Height: 10.0m  Max Lux(100%): 224.7 lx

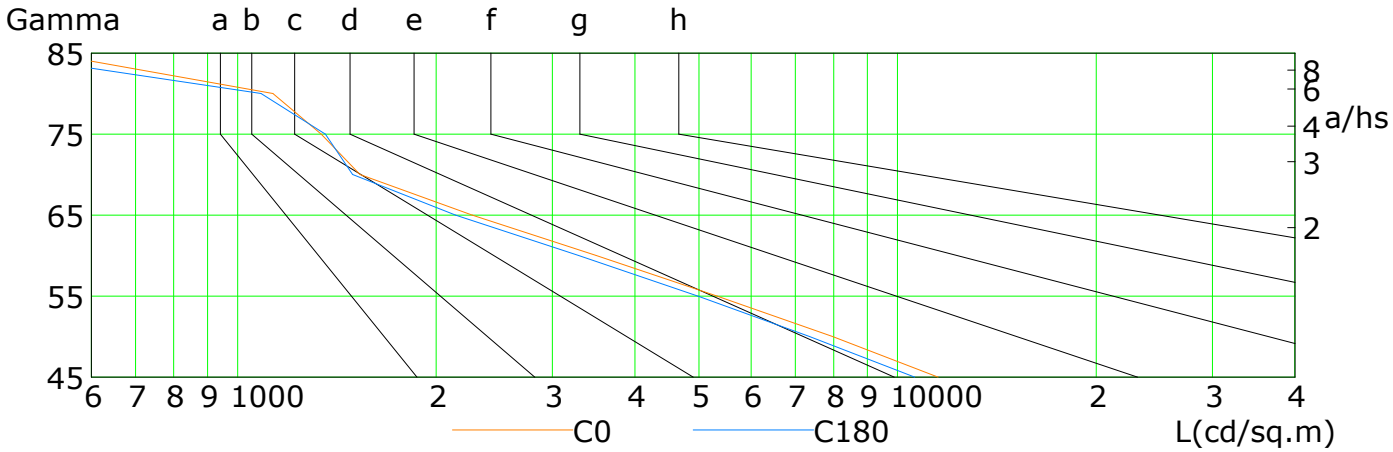
( 1%): 2.2 lx
( 2%): 4.5 lx
( 5%): 11.2 lx
( 10%): 22.5 lx
( 20%): 44.9 lx
( 50%): 112.4 lx
(100%): 224.7 lx

C Plane (°):0.0-360.0: 90.0
Gamma Plane (°):0.0-180.0:1.0
Test Lab:
Test Device: GPM-1600L
Test Type: TYPE C
Distance: 9.913 m [K=1.0000]
Temperature:
Humidity:
Operator:
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 |



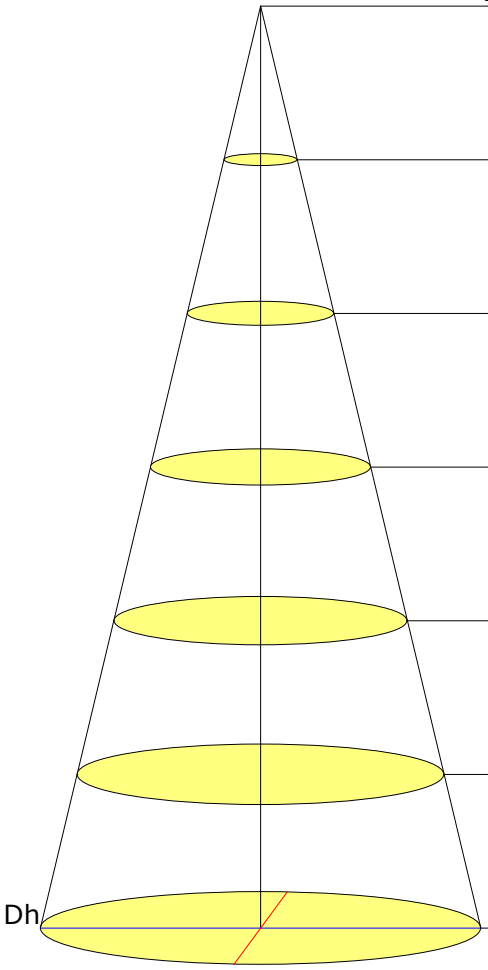




| L(cd/sq.m) | G45 | G50 | G55 | G60 | G65 | G70 | G75 | G80 | G85 |
|---|---|---|---|---|---|---|---|---|---|
| C0 | 11523 | 7968 | 5329 | 3496 | 2267 | 1533 | 1339 | 1131 | 516 |
| C90 | 11758 | 8928 | 6234 | 4034 | 3039 | 2580 | 2018 | 1322 | 605 |
| C180 | 10613 | 7351 | 4986 | 3288 | 2140 | 1493 | 1359 | 1085 | 426 |
| C270 | 11737 | 9139 | 6747 | 4807 | 3686 | 3097 | 2379 | 1619 | 925 |

C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 9.913 m [K=1.0000]
Humidity:
Inspector:

# Illuminance at a Distance



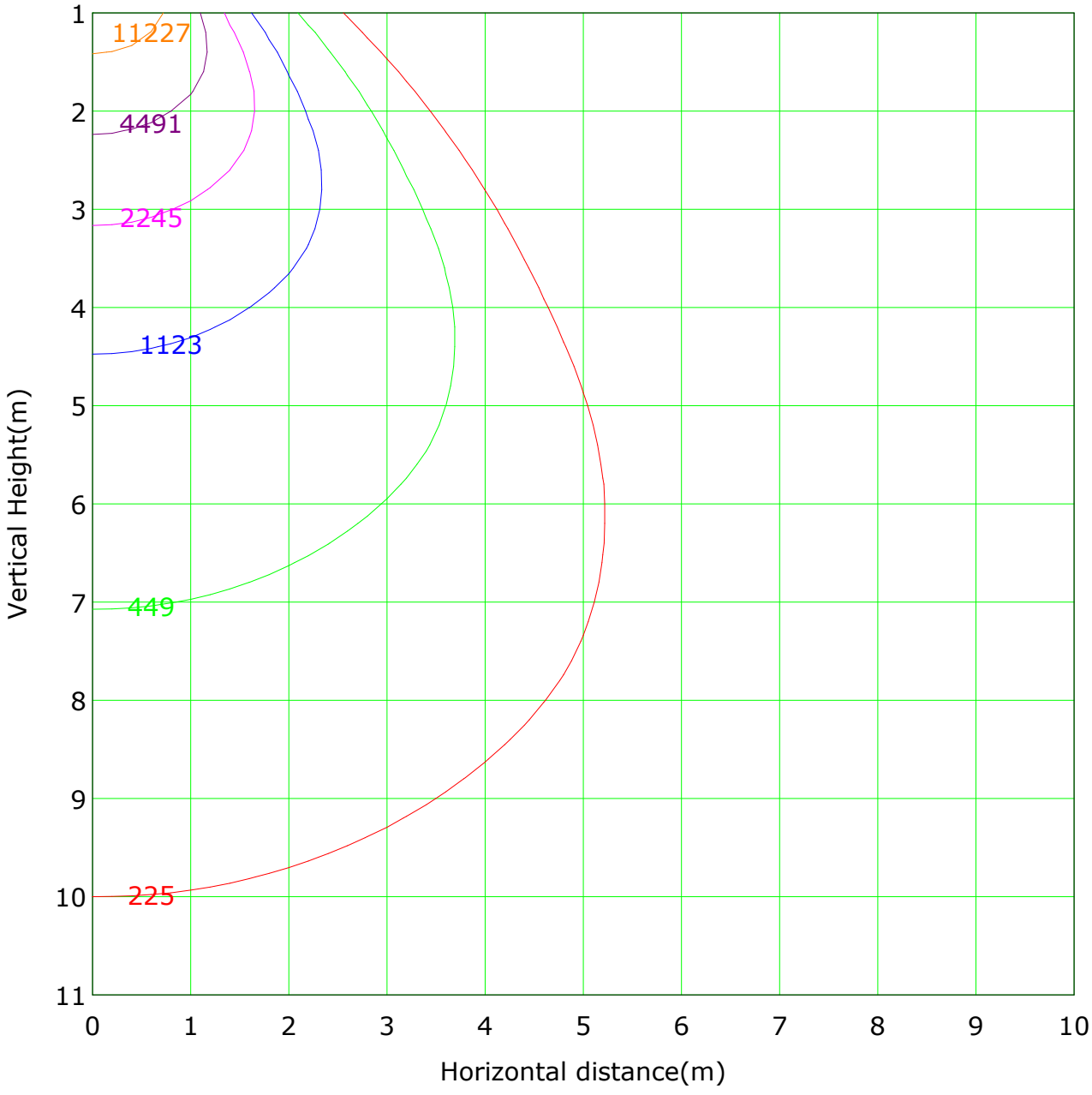

| Dist(m) | Enadir(lx) | Dh/Dv_B(m) | S_B(sq.m) | Eav_B(lx) |
|---|---|---|---|---|
| 5.0 | 898.12 | 9.92/10.32 | 80.5 | 233.73 |
| 10.0 | 224.53 | 19.84/20.63 | 321.8 | 58.43 |
| 15.0 | 99.79 | 29.77/30.95 | 724.1 | 25.97 |
| 20.0 | 56.13 | 39.69/41.27 | 1287.3 | 14.61 |
| 25.0 | 35.92 | 49.61/51.58 | 2011.4 | 9.35 |
| 30.0 | 24.95 | 59.53/61.90 | 2896.4 | 6.49 |

Beam Angle(B): H89.6 V91.8 Field Angle(F): H129.6 V149.1

C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 9.913 m [K=1.0000]
Humidity:
Inspector:

# Vertical IsoLux Plot




Lowest(m): 1.0m  Highest(m): 11.0m  Max Lux: 22453.1 lx

( 1%): 224.5 lx
( 2%): 449.1 lx
( 5%):1122.7 lx
( 10%):2245.3 lx
( 20%):4490.6 lx
( 50%):11226.5 lx
(100%):22453.1 lx

C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 9.913 m [K=1.0000]
Humidity:
Inspector:

# UGR Table

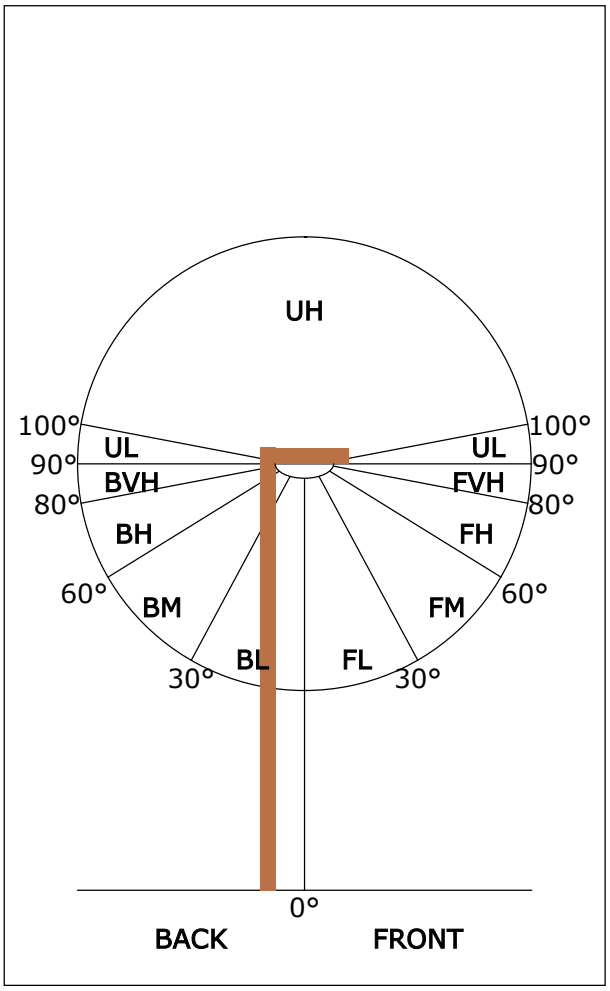
| Reflectance: | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ceiling (cavity) | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 |
| Wall | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 |
| Reference plane | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Room dimensions | Viewed crosswise | | | | | Viewed endwise | | | | |
| X=2H Y=2H | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ |
| 3H | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ |
| 4H | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ |
| 6H | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ |
| 8H | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ |
| 12H | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ |
| X=4H Y=2H | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ |
| 3H | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ |
| 4H | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ |
| 6H | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ |
| 8H | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ |
| 12H | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ |
| X=8H Y=4H | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ |
| 6H | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ |
| 8H | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ |
| 12H | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ |
| X=12H Y=4H | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ |
| 6H | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ |
| 8H | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ | -1.$ |
| Variations with the observer position at spacings: | | | | | | | | | | |
| S=1.0H | -1.$/-1.$ | | | | | -1.$/-1.$ | | | | |
| S=1.5H | -1.$/-1.$ | | | | | -1.$/-1.$ | | | | |
| S=2.0H | -1.$/-1.$ | | | | | -1.$/-1.$ | | | | |

Calculate in accordance with CIE Pub.117. The table is revised with 47930lm (8log(F/F0) = 13.4).

C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 9.913 m [K=1.0000]
Humidity:
Inspector:

## FLUX DISTRIBUTION TABLE BASED ON THE IESNA LUMINAIRE CLASSIFICATION SYSTEM




| ZONE | LUMENS | % LAMP LUMENS |
|---|---|---|
| FORWARD LIGHT | 23471 | 49.0 |
| FL ( 0°-30°) | 8705 | 18.2 |
| FM (30°-60°) | 12239 | 25.5 |
| FH (60°-80°) | 2217 | 4.6 |
| FVH (80°-90°) | 309 | 0.6 |
| BACK LIGHT | 24055 | 50.2 |
| BL ( 0°-30°) | 8766 | 18.3 |
| BM (30°-60°) | 12429 | 25.9 |
| BH (60°-80°) | 2477 | 5.2 |
| BVH (80°-90°) | 383 | 0.8 |
| UP LIGHT | 404 | 0.8 |
| UL (90°-100°) | 28 | 0.1 |
| UH (100°-180°) | 376 | 0.8 |
| TRAPPED LIGHT | NA | NA |

| **BUG**(**B**acklight,**U**plight,**G**lare) Rating Base On TM-15-07 | |
|---|---|
| Asymmetrical Luminaire Types<br>(Type I,II,III,IV) | B5 U5 G3 |
| Quadrilateral Symmetrical Luminaire Types<br>(Type V,Area Light) | B5 U5 G3 |

C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 9.913 m [K=1.0000]
Humidity:
Inspector: