Report No.: 001 Test Time: 2022-08-03 15:26

# Luminaire Property

Luminaire Manufacturer:
Luminaire Category: Outdoor lighting
Luminaire Description: HCP-242091-5K
Lamp Catalog: SMT
Voltage: 230.7 V
Current: 0.037 A
Power: 8.15 W
Power Factor: 0.968

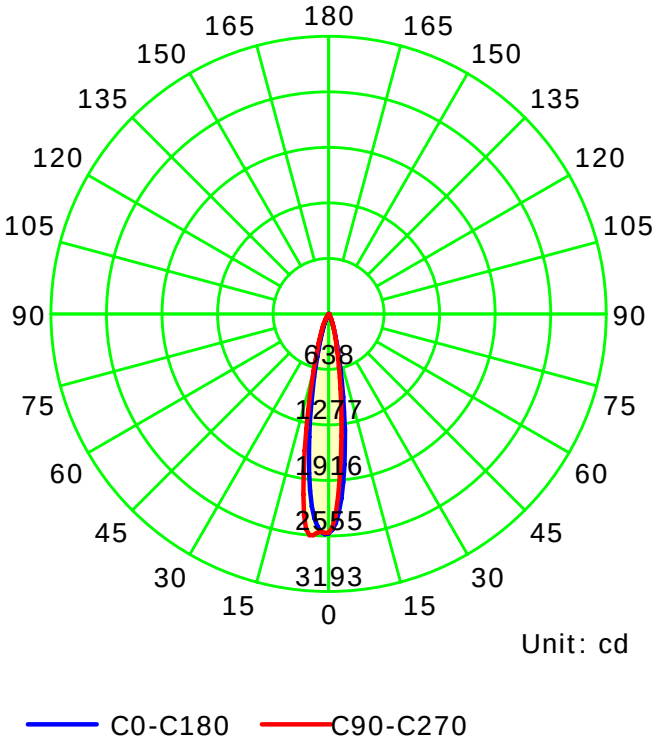
# Photometric Results

CIE Class: Direct
Total Rated Lamp Lumens: 360.8 lm
Measurement Flux: 360.8 lm
Efficiency: 100%
Downward Ratio: 100%
Upward Ratio: 0%
Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 36.3, 38.4, 37.4, 37.3
Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 18.3, 18.0, 18.4, 18.0
Luminaire Efficacy Rating (LER): 44.32
Central Intensity: 2525.57 cd
Max. Intensity: 2555.05 cd
Pos of Max. Intensity: H270 V5
S/MH(C0/C180): 0.31
S/MH(C90/C270): 0.33

Picture Of Luminaire

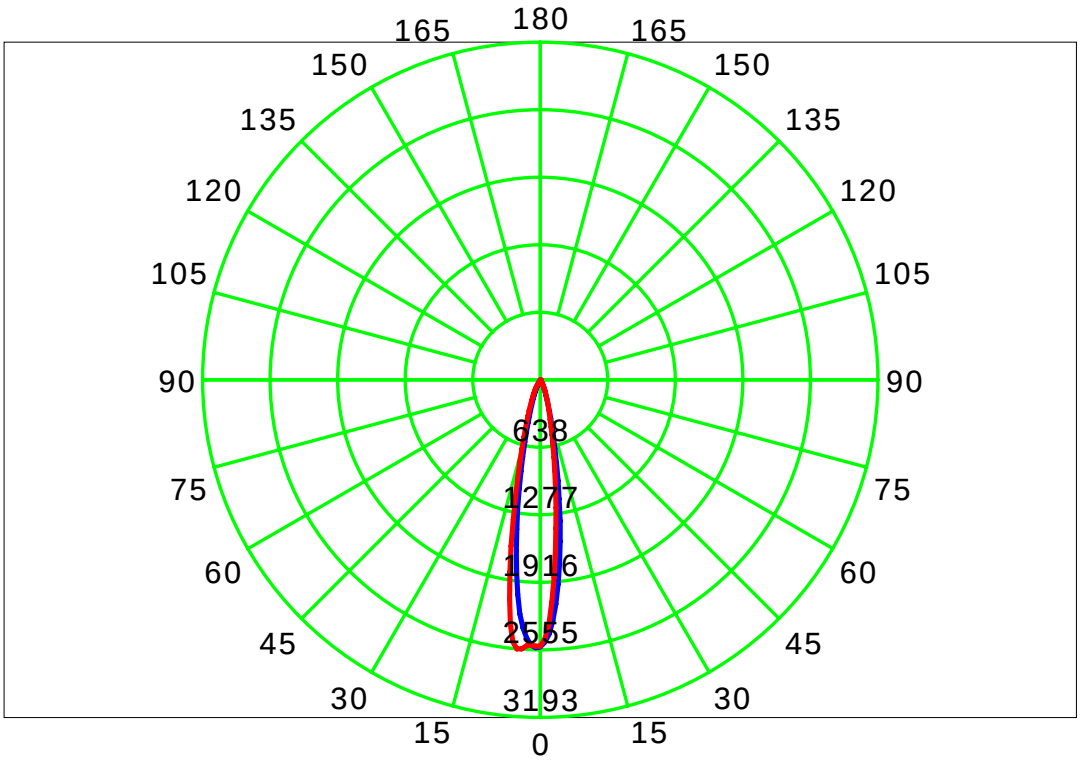


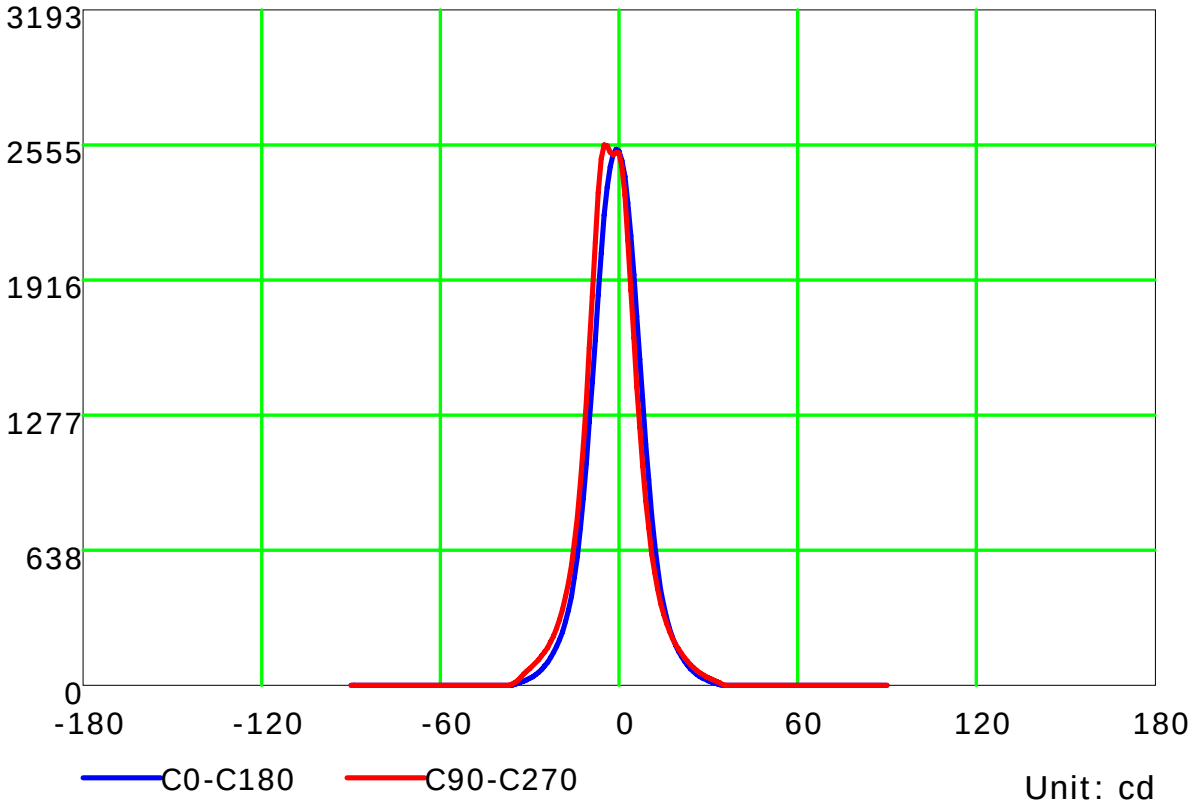
Luminous Intensity Distribution Curve




C Plane (°):0.0-360.0: 45.0
Gamma Plane (°):0.0-90.0:1.0
Test Lab: NINGBO LED LIGHTING
Test Device: GPM-1600L
Test Type: TYPE C
Distance: 6.500 m
Temperature: 25°C
Humidity:
Operator: DING LI
Inspector:

# Luminous Intensity Distribution Curve

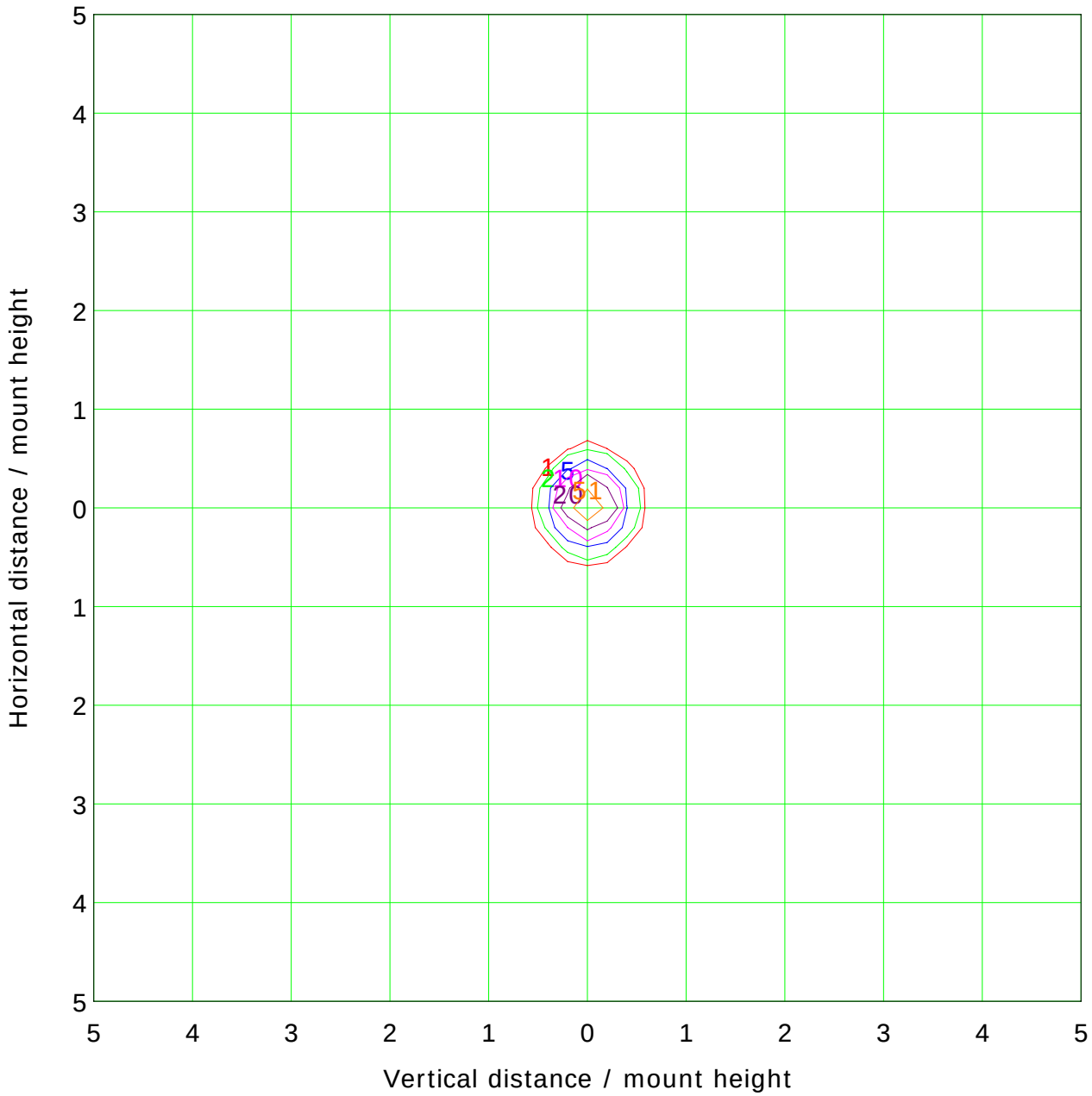



C Plane (°):0.0-360.0: 45.0
Test Lab: NINGBO LED LIGHTING
Test Type: TYPE C
Temperature: 25°C
Operator: DING LI

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.500 m
Humidity:
Inspector:

# IsoLux Plot



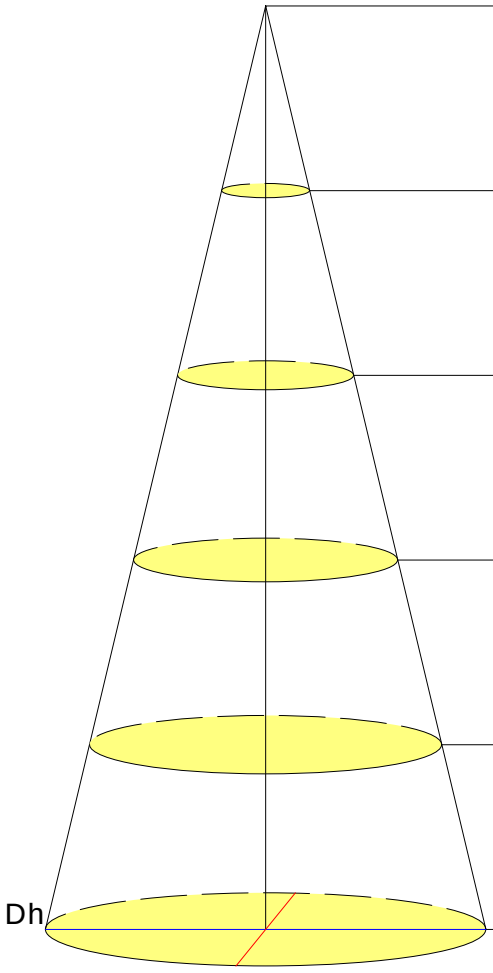

Mounting Height: 5.0m  Max Lux(100%): 101.4 lx

| | |
|---|---|
| ( 1%): 1.0 lx | ( 2%): 2.0 lx |
| ( 5%): 5.1 lx | ( 10%): 10.1 lx |
| ( 20%): 20.3 lx | ( 50%): 50.7 lx |
| (100%): 101.4 lx | |

C Plane (°):0.0-360.0: 45.0
Test Lab: NINGBO LED LIGHTING
Test Type: TYPE C
Temperature: 25°C
Operator: DING LI

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.500 m
Humidity:
Inspector:

# Illuminance at a Distance




| Dist(m) | Enadir(lx) | Dh/Dv_B(m) | S_B(sq.m) | Eav_B(lx) |
|---|---|---|---|---|
| 1.0 | 2525.57 | 0.32/0.32 | 0.1 | 1508.33 |
| 2.0 | 631.39 | 0.64/0.63 | 0.3 | 377.08 |
| 3.0 | 280.62 | 0.96/0.95 | 0.8 | 167.59 |
| 4.0 | 157.85 | 1.29/1.27 | 1.3 | 94.27 |
| 5.0 | 101.02 | 1.61/1.58 | 2.1 | 60.33 |

Beam Angle(B): H18.3 V18.0 Field Angle(F): H36.3 V38.4

C Plane (°):0.0-360.0: 45.0
Test Lab: NINGBO LED LIGHTING
Test Type: TYPE C
Temperature: 25°C
Operator: DING LI

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.500 m
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 361lm (8log(F/F0) = -3.5).

C Plane (°):0.0-360.0: 45.0
Test Lab: NINGBO LED LIGHTING
Test Type: TYPE C
Temperature: 25°C
Operator: DING LI

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.500 m
Humidity:
Inspector:

# 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 | 2525.6 | 2515.1 | 2517.3 | 2510.5 | 2525.6 | 2515.1 | 2517.3 | 2510.5 | 2525.6 | |
| G1.0 | 2481.9 | 2446.3 | 2453.1 | 2475.3 | 2535.1 | 2533.1 | 2519.2 | 2499.0 | 2481.9 | |
| G2.0 | 2406.5 | 2308.6 | 2318.6 | 2382.4 | 2510.1 | 2528.0 | 2508.6 | 2472.4 | 2406.5 | |
| G3.0 | 2281.3 | 2105.7 | 2103.9 | 2222.8 | 2451.6 | 2516.3 | 2520.3 | 2431.8 | 2281.3 | |
| G4.0 | 2126.1 | 1885.6 | 1868.0 | 2024.4 | 2354.6 | 2512.8 | 2551.9 | 2375.0 | 2126.1 | |
| G5.0 | 1942.4 | 1659.4 | 1643.0 | 1823.5 | 2223.6 | 2486.5 | 2555.0 | 2280.4 | 1942.4 | |
| G6.0 | 1744.3 | 1436.7 | 1411.3 | 1601.3 | 2043.8 | 2398.6 | 2491.0 | 2129.2 | 1744.3 | |
| G7.0 | 1540.7 | 1242.3 | 1217.9 | 1394.2 | 1845.2 | 2254.6 | 2329.7 | 1943.9 | 1540.7 | |
| G8.0 | 1349.2 | 1049.6 | 1037.5 | 1192.9 | 1633.2 | 2067.2 | 2095.4 | 1747.3 | 1349.2 | |
| G9.0 | 1139.9 | 887.8 | 871.9 | 1024.5 | 1431.8 | 1826.9 | 1839.2 | 1527.9 | 1139.9 | |
| G10.0 | 970.6 | 753.5 | 744.4 | 875.5 | 1244.8 | 1608.9 | 1596.5 | 1316.2 | 970.6 | |
| G11.0 | 805.7 | 627.3 | 621.6 | 729.9 | 1051.1 | 1362.9 | 1343.3 | 1108.7 | 805.7 | |
| G12.0 | 667.4 | 525.8 | 532.9 | 620.8 | 885.3 | 1161.0 | 1133.4 | 930.3 | 667.4 | |
| G13.0 | 556.5 | 447.4 | 457.0 | 528.4 | 745.5 | 972.0 | 960.0 | 784.4 | 556.5 | |
| G14.0 | 452.4 | 374.6 | 387.3 | 438.8 | 609.8 | 802.9 | 796.5 | 647.5 | 452.4 | |
| G15.0 | 380.6 | 318.6 | 336.2 | 379.3 | 511.0 | 673.1 | 674.9 | 539.4 | 380.6 | |
| G16.0 | 320.2 | 271.4 | 293.2 | 322.0 | 420.4 | 561.6 | 567.6 | 454.6 | 320.2 | |
| G17.0 | 267.5 | 234.8 | 254.5 | 276.6 | 355.4 | 467.2 | 483.4 | 379.3 | 267.5 | |
| G18.0 | 227.6 | 201.8 | 222.0 | 240.1 | 302.0 | 400.5 | 420.1 | 324.3 | 227.6 | |
| G19.0 | 190.4 | 173.5 | 194.6 | 207.6 | 252.7 | 335.7 | 359.0 | 274.4 | 190.4 | |
| G20.0 | 161.1 | 149.9 | 171.9 | 178.5 | 215.6 | 289.2 | 310.3 | 235.1 | 161.1 | |
| G21.0 | 137.5 | 128.1 | 151.1 | 153.0 | 184.5 | 248.4 | 270.1 | 204.4 | 137.5 | |
| G22.0 | 114.4 | 108.8 | 130.8 | 133.2 | 155.6 | 209.9 | 233.9 | 170.8 | 114.4 | |
| G23.0 | 95.9 | 93.5 | 114.3 | 113.8 | 132.4 | 182.7 | 206.9 | 147.1 | 95.9 | |
| G24.0 | 78.6 | 77.6 | 98.4 | 96.6 | 108.9 | 157.2 | 178.6 | 124.3 | 78.6 | |
| G25.0 | 65.4 | 65.7 | 84.7 | 81.8 | 92.2 | 131.8 | 157.7 | 104.1 | 65.4 | |
| G26.0 | 53.7 | 54.5 | 72.6 | 68.0 | 75.5 | 112.9 | 141.0 | 87.7 | 53.7 | |
| G27.0 | 42.6 | 43.8 | 61.2 | 55.6 | 61.5 | 94.9 | 121.5 | 72.5 | 42.6 | |
| G28.0 | 35.2 | 36.4 | 52.6 | 46.3 | 51.0 | 79.3 | 107.9 | 60.3 | 35.2 | |
| G29.0 | 28.7 | 29.0 | 43.6 | 37.6 | 40.8 | 67.1 | 93.1 | 49.1 | 28.7 | |
| G30.0 | 21.9 | 22.8 | 36.5 | 29.7 | 33.4 | 53.3 | 79.3 | 39.0 | 21.9 | |
| G31.0 | 16.3 | 17.4 | 29.9 | 23.4 | 26.1 | 44.4 | 67.4 | 30.5 | 16.3 | |
| G32.0 | 12.3 | 11.6 | 23.9 | 17.6 | 19.8 | 34.3 | 54.2 | 21.4 | 12.3 | |
| G33.0 | 6.9 | 5.9 | 17.5 | 12.9 | 15.4 | 26.5 | 38.7 | 14.2 | 6.9 | |
| G34.0 | 2.5 | 1.4 | 11.0 | 6.9 | 10.3 | 14.3 | 24.1 | 5.9 | 2.5 | |
| G35.0 | 0.4 | 0.0 | 2.3 | 0.8 | 4.5 | 5.7 | 13.4 | 0.0 | 0.4 | |
| G36.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.1 | 5.9 | 0.0 | 0.0 | |

C Plane (°):0.0-360.0: 45.0
Test Lab: NINGBO LED LIGHTING
Test Type: TYPE C
Temperature: 25°C
Operator: DING LI

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.500 m
Humidity:
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 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G38.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G39.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G40.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G41.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G42.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G43.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G44.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G45.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G46.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G47.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G48.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G49.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G51.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G52.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G53.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G54.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G55.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G56.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G57.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G58.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G59.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G60.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G61.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G62.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G63.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G64.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G65.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G66.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G67.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G68.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G69.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G70.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G71.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G72.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G73.0 | 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: NINGBO LED LIGHTING
Test Type: TYPE C
Temperature: 25°C
Operator: DING LI

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.500 m
Humidity:
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 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G75.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G76.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G77.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G78.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G79.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G80.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G81.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G82.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G83.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G84.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G85.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G86.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G87.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G88.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G89.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| G90.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
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C Plane (°):0.0-360.0: 45.0
Test Lab: NINGBO LED LIGHTING
Test Type: TYPE C
Temperature: 25°C
Operator: DING LI

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.500 m
Humidity:
Inspector: