



Report No.:

Test Time: 2019-05-31 08:19

## Luminaire Property

Luminaire Manufacturer:

Luminous Length (mm): 160

Voltage: 229.8 V

Power: 47.06 W

Luminous Width (mm): 70

Current: 0.210 A

Power Factor: 0.977

## Photometric Results

CIE Class: Direct

Measurement Flux: 5558.2 lm

Downward Ratio: 100%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 107.5, 137.5, 119.5, 120.0

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 60.2, 90.6, 62.9, 62.6

Luminaire Efficacy Rating (LER): 118.16

Max. Intensity: 3817.92 cd

S/MH(C0/C180): 0.80

Total Rated Lamp Lumens: 5558.2 lm

Efficiency: 100%

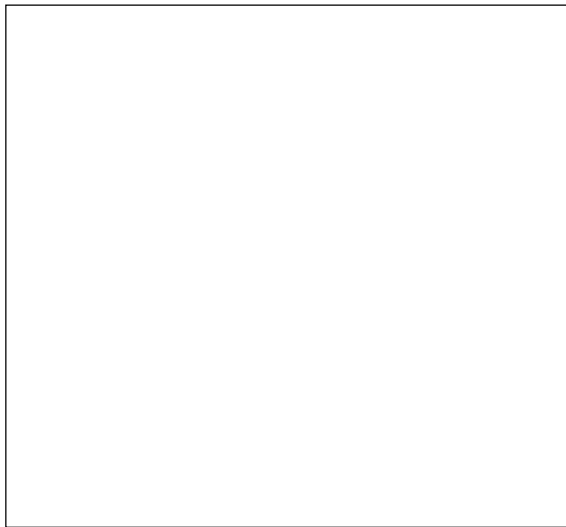
Upward Ratio: 0%

Central Intensity: 3798.24 cd

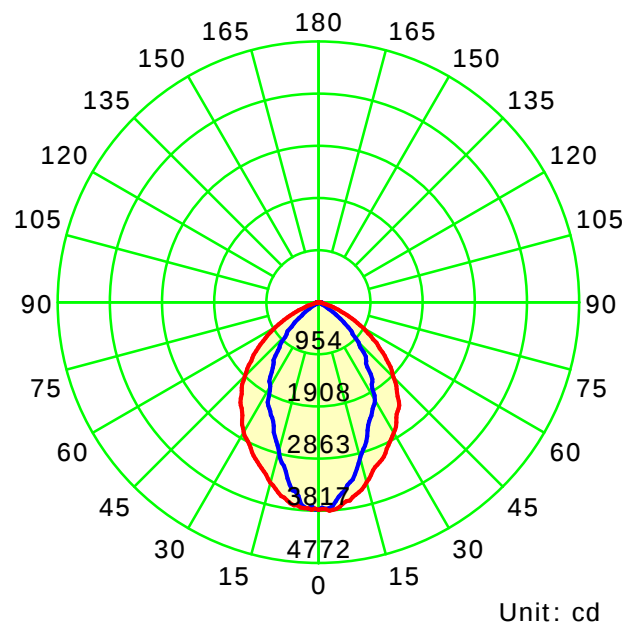
Pos of Max. Intensity: H90 V3

S/MH(C90/C270): 1.09

Picture Of Luminaire



Luminous Intensity Distribution Curve



— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 45.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-90.0:1.0

Test Device: GPM-1600

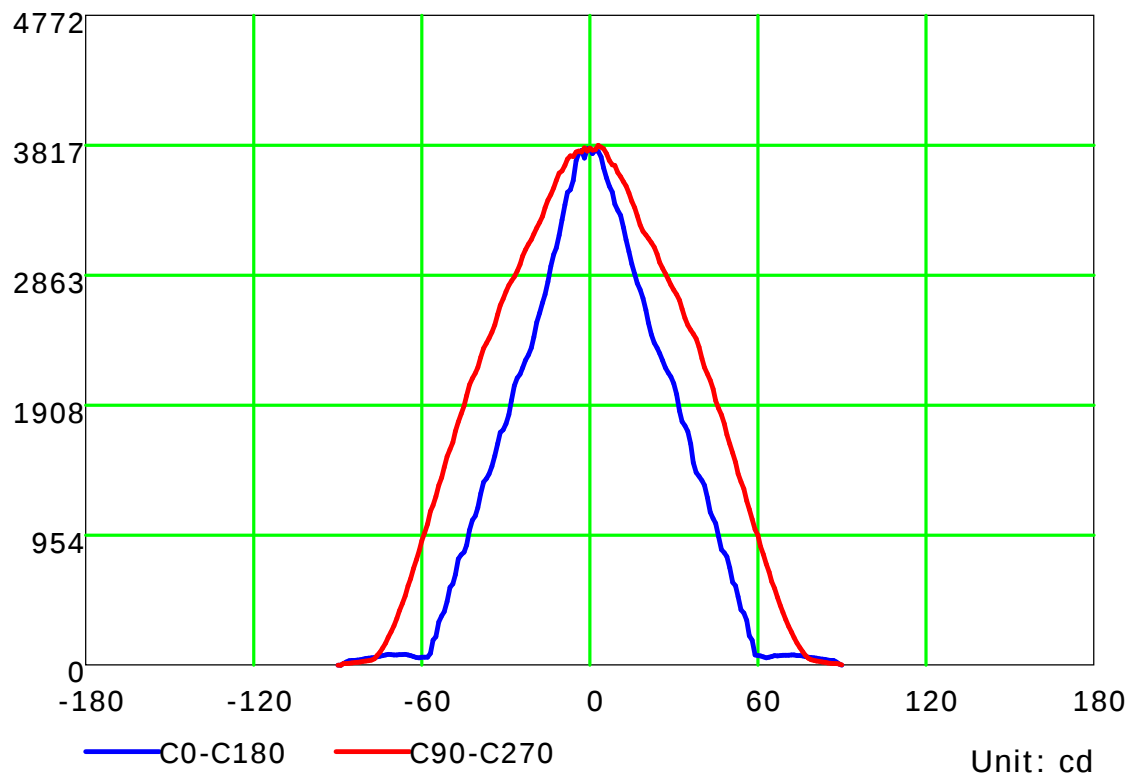
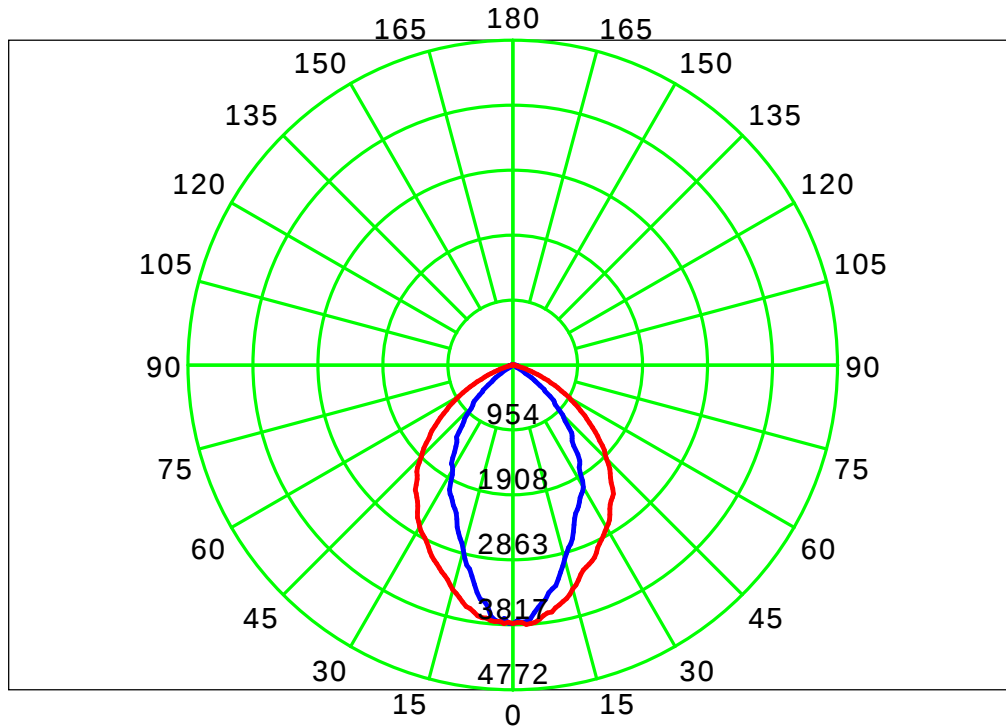
Distance: 7.517 m

Humidity:

Inspector:



## Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 45.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-90.0:1.0

Test Device: GPM-1600

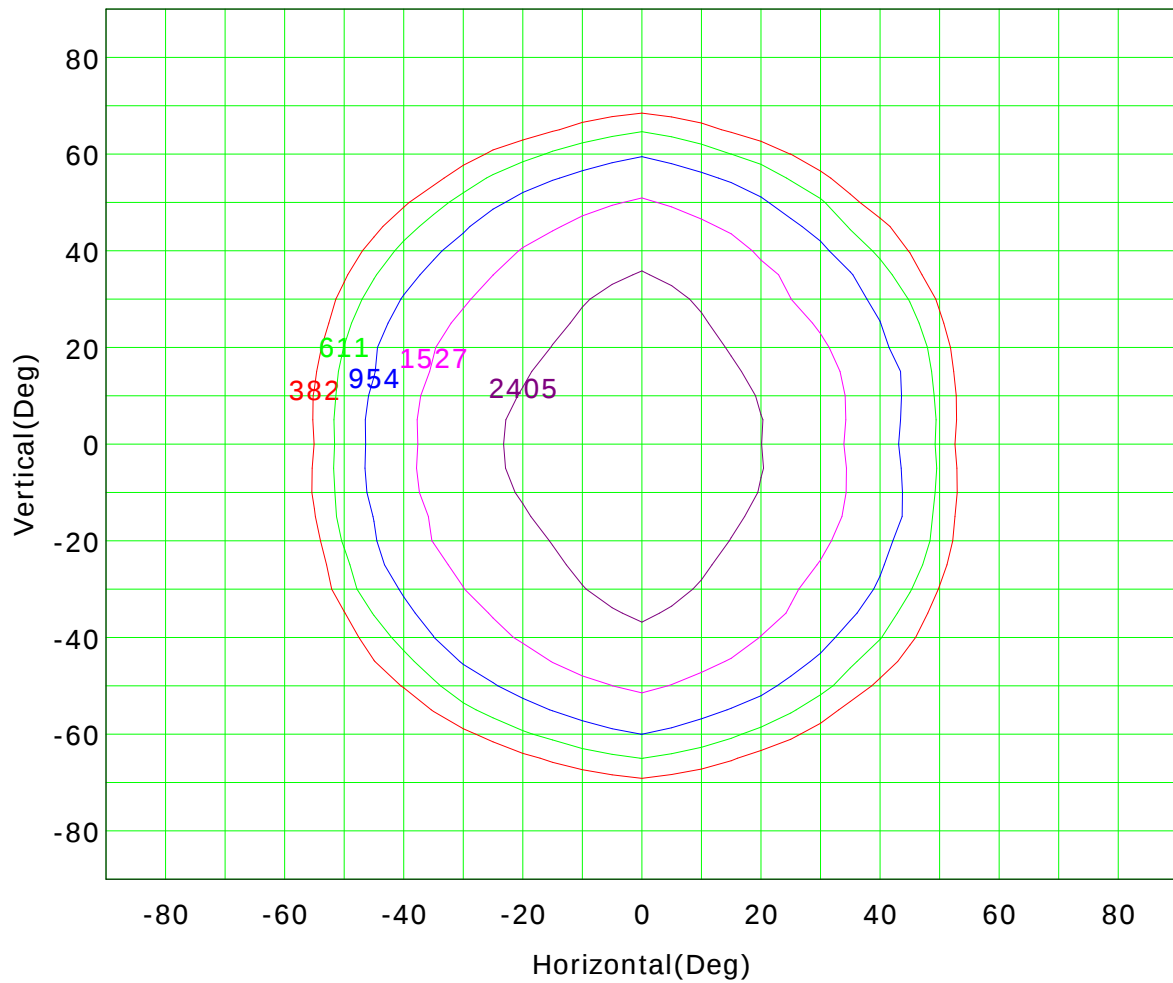
Distance: 7.517 m

Humidity:

Inspector:



## Isocandela (rectangle)



I<sub>max</sub> (100%): 3818 cd

|                 |                 |
|-----------------|-----------------|
| ( 10%): 382 cd  | ( 16%): 611 cd  |
| ( 25%): 954 cd  | ( 40%): 1527 cd |
| ( 63%): 2405 cd | (100%): 3818 cd |

C Plane (°):0.0-360.0: 45.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-90.0:1.0

Test Device: GPM-1600

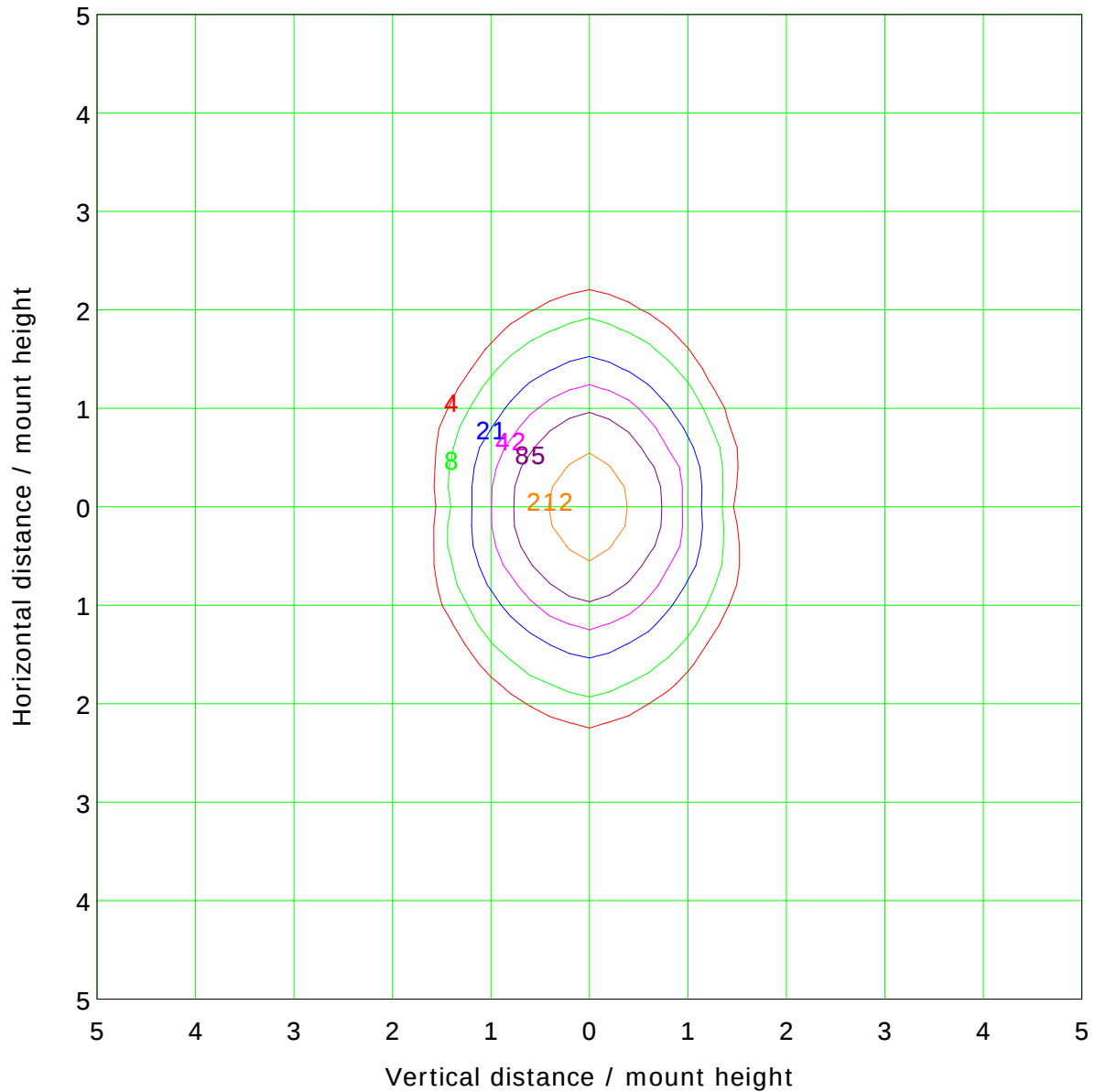
Distance: 7.517 m

Humidity:

Inspector:



## IsoLux Plot



Mounting Height: 3.0m    Max Lux(100%): 423.6 lx

|                  |                 |
|------------------|-----------------|
| ( 1%): 4.2 lx    | ( 2%): 8.5 lx   |
| ( 5%): 21.2 lx   | (10%): 42.4 lx  |
| (20%): 84.7 lx   | (50%): 211.8 lx |
| (100%): 423.6 lx |                 |

C Plane (°):0.0-360.0: 45.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-90.0:1.0

Test Device: GPM-1600

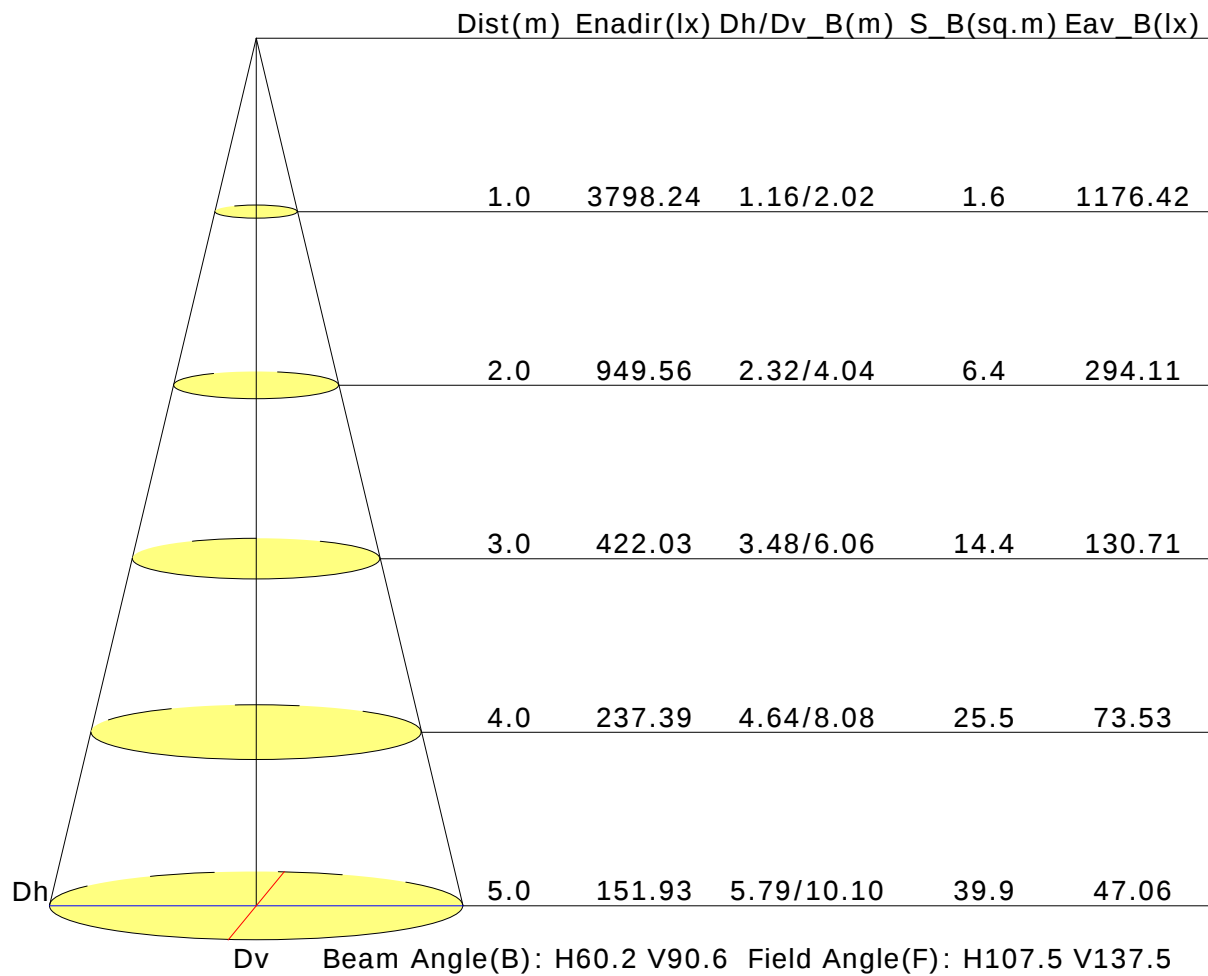
Distance: 7.517 m

Humidity:

Inspector:



## Illuminance at a Distance



C Plane (°):0.0-360.0: 45.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-90.0:1.0

Test Device: GPM-1600

Distance: 7.517 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                                          | 26.4             | 27.5 | 26.7 | 27.8 | 28.0 | 30.4           | 31.5 | 30.7 | 31.8 | 32.0 |
| 3H                                                 | 26.3             | 27.4 | 26.7 | 27.6 | 27.9 | 30.9           | 31.9 | 31.2 | 32.2 | 32.4 |
| 4H                                                 | 26.4             | 27.4 | 26.7 | 27.6 | 27.9 | 30.9           | 31.9 | 31.3 | 32.2 | 32.4 |
| 6H                                                 | 26.5             | 27.4 | 26.8 | 27.7 | 28.0 | 30.9           | 31.8 | 31.2 | 32.1 | 32.4 |
| 8H                                                 | 26.5             | 27.4 | 26.9 | 27.7 | 28.0 | 30.8           | 31.7 | 31.2 | 32.0 | 32.3 |
| 12H                                                | 26.6             | 27.4 | 27.0 | 27.7 | 28.1 | 30.8           | 31.6 | 31.2 | 32.0 | 32.3 |
| X=4H Y=2H                                          | 26.7             | 27.7 | 27.0 | 28.0 | 28.2 | 30.3           | 31.3 | 30.6 | 31.6 | 31.8 |
| 3H                                                 | 26.7             | 27.5 | 27.1 | 27.9 | 28.2 | 30.9           | 31.7 | 31.2 | 32.0 | 32.3 |
| 4H                                                 | 26.8             | 27.5 | 27.2 | 27.9 | 28.3 | 30.9           | 31.7 | 31.3 | 32.0 | 32.4 |
| 6H                                                 | 27.0             | 27.6 | 27.4 | 28.0 | 28.4 | 30.9           | 31.5 | 31.3 | 31.9 | 32.3 |
| 8H                                                 | 27.1             | 27.7 | 27.5 | 28.1 | 28.5 | 30.9           | 31.5 | 31.3 | 31.9 | 32.3 |
| 12H                                                | 27.2             | 27.7 | 27.6 | 28.1 | 28.6 | 30.9           | 31.4 | 31.3 | 31.8 | 32.2 |
| X=8H Y=4H                                          | 26.8             | 27.4 | 27.3 | 27.8 | 28.2 | 30.8           | 31.4 | 31.3 | 31.8 | 32.2 |
| 6H                                                 | 27.1             | 27.5 | 27.5 | 28.0 | 28.4 | 30.8           | 31.3 | 31.3 | 31.7 | 32.2 |
| 8H                                                 | 27.2             | 27.7 | 27.7 | 28.1 | 28.6 | 30.8           | 31.3 | 31.3 | 31.7 | 32.2 |
| 12H                                                | 27.5             | 27.8 | 28.0 | 28.3 | 28.8 | 30.8           | 31.2 | 31.3 | 31.7 | 32.2 |
| X=12H Y=4H                                         | 26.8             | 27.3 | 27.3 | 27.8 | 28.2 | 30.8           | 31.3 | 31.3 | 31.8 | 32.2 |
| 6H                                                 | 27.1             | 27.5 | 27.6 | 27.9 | 28.4 | 30.8           | 31.2 | 31.3 | 31.7 | 32.2 |
| 8H                                                 | 27.3             | 27.6 | 27.8 | 28.1 | 28.6 | 30.8           | 31.2 | 31.3 | 31.7 | 32.2 |
| Variations with the observer position at spacings: |                  |      |      |      |      |                |      |      |      |      |
| S=1.0H                                             | +0.8/-1.8        |      |      |      |      | +0.2/-0.4      |      |      |      |      |
| S=1.5H                                             | +1.9/-5.4        |      |      |      |      | +1.3/-1.8      |      |      |      |      |
| S=2.0H                                             | +3.1/-6.1        |      |      |      |      | +2.8/-4.5      |      |      |      |      |

Calculate in accordance with CIE Pub.117. The table is revised with 5558lm ( $8\log(F/F_0) = 6.0$ ).



## 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  | 3798.2 | 3798.2 | 3798.2 | 3798.2 | 3798.2 | 3798.2 | 3798.2 | 3798.2 | 3798.2 |  |
| G1.0  | 3757.9 | 3775.2 | 3784.6 | 3814.5 | 3794.1 | 3789.4 | 3777.2 | 3745.7 | 3757.9 |  |
| G2.0  | 3782.4 | 3750.4 | 3786.8 | 3801.9 | 3724.3 | 3751.9 | 3799.8 | 3785.5 | 3782.4 |  |
| G3.0  | 3773.6 | 3752.4 | 3817.9 | 3742.2 | 3780.5 | 3740.6 | 3770.5 | 3787.4 | 3773.6 |  |
| G4.0  | 3734.9 | 3763.6 | 3804.8 | 3742.9 | 3758.3 | 3754.0 | 3776.1 | 3745.8 | 3734.9 |  |
| G5.0  | 3651.9 | 3690.4 | 3792.6 | 3808.7 | 3706.7 | 3761.9 | 3769.5 | 3751.8 | 3651.9 |  |
| G6.0  | 3579.3 | 3659.1 | 3758.6 | 3796.3 | 3561.4 | 3712.1 | 3737.3 | 3674.9 | 3579.3 |  |
| G7.0  | 3519.1 | 3602.9 | 3706.8 | 3707.3 | 3492.0 | 3693.7 | 3741.1 | 3623.6 | 3519.1 |  |
| G8.0  | 3476.4 | 3553.6 | 3675.4 | 3665.8 | 3474.4 | 3549.5 | 3719.0 | 3601.2 | 3476.4 |  |
| G9.0  | 3387.6 | 3499.8 | 3670.9 | 3538.9 | 3382.1 | 3453.2 | 3672.1 | 3515.0 | 3387.6 |  |
| G10.0 | 3341.2 | 3483.7 | 3619.9 | 3442.7 | 3271.3 | 3400.6 | 3632.0 | 3478.2 | 3341.2 |  |
| G11.0 | 3304.0 | 3435.5 | 3589.4 | 3432.6 | 3159.0 | 3376.0 | 3613.6 | 3379.5 | 3304.0 |  |
| G12.0 | 3214.3 | 3329.3 | 3552.0 | 3375.4 | 3064.0 | 3281.4 | 3559.4 | 3294.6 | 3214.3 |  |
| G13.0 | 3124.8 | 3278.4 | 3521.5 | 3275.5 | 3016.8 | 3188.4 | 3505.8 | 3258.4 | 3124.8 |  |
| G14.0 | 3038.4 | 3203.7 | 3469.8 | 3164.9 | 2930.4 | 3094.5 | 3457.8 | 3210.1 | 3038.4 |  |
| G15.0 | 2945.7 | 3139.9 | 3407.1 | 3108.9 | 2817.6 | 3021.6 | 3417.1 | 3156.0 | 2945.7 |  |
| G16.0 | 2873.9 | 3053.4 | 3360.5 | 2999.0 | 2723.8 | 2911.4 | 3360.2 | 3051.5 | 2873.9 |  |
| G17.0 | 2805.0 | 2952.4 | 3301.6 | 2869.1 | 2661.7 | 2845.6 | 3296.5 | 2949.4 | 2805.0 |  |
| G18.0 | 2759.7 | 2866.3 | 3233.4 | 2817.7 | 2587.4 | 2777.8 | 3252.0 | 2824.0 | 2759.7 |  |
| G19.0 | 2695.4 | 2801.0 | 3186.9 | 2737.3 | 2518.3 | 2702.9 | 3213.1 | 2740.1 | 2695.4 |  |
| G20.0 | 2607.6 | 2707.8 | 3161.3 | 2654.0 | 2411.4 | 2632.7 | 3168.3 | 2672.7 | 2607.6 |  |
| G21.0 | 2514.4 | 2614.7 | 3134.2 | 2543.9 | 2330.9 | 2519.6 | 3124.7 | 2600.1 | 2514.4 |  |
| G22.0 | 2429.5 | 2540.5 | 3104.3 | 2459.5 | 2278.4 | 2404.3 | 3092.6 | 2503.7 | 2429.5 |  |
| G23.0 | 2368.5 | 2459.7 | 3070.9 | 2387.3 | 2240.6 | 2335.3 | 3052.8 | 2406.4 | 2368.5 |  |
| G24.0 | 2331.4 | 2389.0 | 3019.5 | 2332.8 | 2185.2 | 2286.2 | 3005.5 | 2369.2 | 2331.4 |  |
| G25.0 | 2290.8 | 2326.7 | 2958.2 | 2268.5 | 2139.0 | 2226.1 | 2943.6 | 2321.6 | 2290.8 |  |
| G26.0 | 2238.3 | 2278.7 | 2915.4 | 2202.5 | 2110.5 | 2160.0 | 2894.5 | 2254.0 | 2238.3 |  |
| G27.0 | 2185.0 | 2210.9 | 2876.1 | 2130.3 | 2053.9 | 2076.6 | 2852.6 | 2154.3 | 2185.0 |  |
| G28.0 | 2147.9 | 2128.6 | 2834.7 | 2045.8 | 1944.7 | 1996.8 | 2822.7 | 2074.9 | 2147.9 |  |
| G29.0 | 2119.5 | 2067.8 | 2793.5 | 1978.1 | 1841.9 | 1944.3 | 2792.3 | 2021.0 | 2119.5 |  |
| G30.0 | 2069.8 | 2018.0 | 2756.5 | 1933.5 | 1773.0 | 1906.9 | 2744.4 | 1973.4 | 2069.8 |  |
| G31.0 | 1990.5 | 1970.6 | 2722.7 | 1886.0 | 1728.7 | 1875.9 | 2690.0 | 1951.3 | 1990.5 |  |
| G32.0 | 1867.0 | 1925.0 | 2681.4 | 1846.8 | 1709.5 | 1835.8 | 2644.5 | 1910.6 | 1867.0 |  |
| G33.0 | 1790.1 | 1885.4 | 2618.4 | 1806.5 | 1628.6 | 1789.8 | 2577.5 | 1864.9 | 1790.1 |  |
| G34.0 | 1760.3 | 1849.6 | 2549.6 | 1777.1 | 1537.9 | 1756.2 | 2500.3 | 1825.8 | 1760.3 |  |
| G35.0 | 1716.8 | 1817.0 | 2497.4 | 1745.9 | 1461.2 | 1723.7 | 2445.9 | 1788.3 | 1716.8 |  |
| G36.0 | 1625.0 | 1783.8 | 2463.4 | 1706.1 | 1404.8 | 1675.4 | 2400.5 | 1764.2 | 1625.0 |  |

C Plane (°):0.0-360.0: 45.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-90.0:1.0  
Test Device: GPM-1600  
Distance: 7.517 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 | 1488.1 | 1751.8 | 2434.3 | 1641.8 | 1371.4 | 1598.4 | 2365.4 | 1733.0 | 1488.1 |  |
| G38.0 | 1417.0 | 1723.7 | 2399.4 | 1564.3 | 1346.4 | 1511.1 | 2329.5 | 1697.6 | 1417.0 |  |
| G39.0 | 1388.3 | 1695.4 | 2337.8 | 1494.4 | 1260.2 | 1448.9 | 2263.1 | 1655.1 | 1388.3 |  |
| G40.0 | 1356.8 | 1654.4 | 2252.7 | 1449.5 | 1158.7 | 1405.9 | 2187.6 | 1586.6 | 1356.8 |  |
| G41.0 | 1323.5 | 1578.2 | 2186.9 | 1422.0 | 1096.6 | 1392.2 | 2145.4 | 1502.2 | 1323.5 |  |
| G42.0 | 1234.2 | 1481.1 | 2139.7 | 1403.5 | 1066.5 | 1357.3 | 2108.4 | 1439.1 | 1234.2 |  |
| G43.0 | 1124.6 | 1402.0 | 2094.6 | 1331.2 | 992.7  | 1257.8 | 2060.3 | 1391.8 | 1124.6 |  |
| G44.0 | 1077.3 | 1353.7 | 2030.3 | 1242.0 | 883.9  | 1170.0 | 1980.6 | 1336.5 | 1077.3 |  |
| G45.0 | 1042.2 | 1314.3 | 1943.7 | 1168.2 | 831.4  | 1103.3 | 1905.0 | 1266.9 | 1042.2 |  |
| G46.0 | 947.4  | 1262.3 | 1886.2 | 1114.5 | 811.6  | 1064.6 | 1847.7 | 1170.1 | 947.4  |  |
| G47.0 | 850.8  | 1173.2 | 1838.9 | 1081.9 | 780.6  | 1043.2 | 1787.8 | 1102.3 | 850.8  |  |
| G48.0 | 827.5  | 1087.6 | 1774.5 | 1059.2 | 666.1  | 1018.8 | 1719.8 | 1073.6 | 827.5  |  |
| G49.0 | 797.8  | 1044.6 | 1693.6 | 1019.5 | 597.4  | 941.8  | 1636.5 | 1028.2 | 797.8  |  |
| G50.0 | 716.0  | 1007.1 | 1626.7 | 923.9  | 572.2  | 847.1  | 1586.8 | 984.6  | 716.0  |  |
| G51.0 | 610.6  | 975.3  | 1560.9 | 844.9  | 468.3  | 789.6  | 1534.6 | 924.6  | 610.6  |  |
| G52.0 | 585.0  | 932.3  | 1491.7 | 802.7  | 392.9  | 758.3  | 1454.8 | 832.8  | 585.0  |  |
| G53.0 | 505.3  | 836.6  | 1407.4 | 780.2  | 363.0  | 704.4  | 1379.5 | 789.7  | 505.3  |  |
| G54.0 | 407.8  | 766.1  | 1347.4 | 690.0  | 317.7  | 611.7  | 1322.3 | 733.8  | 407.8  |  |
| G55.0 | 383.7  | 724.3  | 1296.2 | 612.3  | 210.0  | 565.8  | 1241.1 | 659.1  | 383.7  |  |
| G56.0 | 331.1  | 677.6  | 1206.8 | 576.1  | 184.4  | 534.9  | 1174.0 | 588.3  | 331.1  |  |
| G57.0 | 216.8  | 584.0  | 1145.4 | 552.9  | 87.2   | 502.0  | 1130.9 | 564.3  | 216.8  |  |
| G58.0 | 184.7  | 541.1  | 1072.8 | 498.2  | 59.4   | 409.1  | 1037.3 | 512.6  | 184.7  |  |
| G59.0 | 76.9   | 509.9  | 998.4  | 414.0  | 59.9   | 362.9  | 974.2  | 437.8  | 76.9   |  |
| G60.0 | 71.8   | 460.3  | 956.2  | 376.8  | 60.3   | 323.0  | 916.1  | 390.2  | 71.8   |  |
| G61.0 | 70.4   | 371.8  | 872.2  | 322.4  | 54.3   | 253.0  | 842.1  | 339.7  | 70.4   |  |
| G62.0 | 63.1   | 345.5  | 814.1  | 258.0  | 57.1   | 223.3  | 775.2  | 266.4  | 63.1   |  |
| G63.0 | 54.3   | 274.8  | 744.3  | 239.5  | 64.7   | 190.9  | 710.4  | 245.9  | 54.3   |  |
| G64.0 | 60.6   | 232.6  | 685.5  | 192.7  | 71.6   | 134.1  | 636.5  | 188.2  | 60.6   |  |
| G65.0 | 63.6   | 212.1  | 614.1  | 138.9  | 76.9   | 105.4  | 583.5  | 145.3  | 63.6   |  |
| G66.0 | 72.3   | 141.5  | 566.4  | 106.8  | 81.9   | 69.8   | 509.5  | 89.2   | 72.3   |  |
| G67.0 | 70.4   | 120.1  | 500.6  | 68.1   | 78.0   | 69.4   | 451.9  | 75.6   | 70.4   |  |
| G68.0 | 71.8   | 75.8   | 438.2  | 67.2   | 79.1   | 68.1   | 399.9  | 73.7   | 71.8   |  |
| G69.0 | 75.2   | 73.2   | 390.2  | 67.0   | 77.2   | 65.5   | 344.1  | 63.2   | 75.2   |  |
| G70.0 | 73.0   | 71.0   | 335.0  | 62.9   | 75.7   | 72.0   | 291.3  | 67.1   | 73.0   |  |
| G71.0 | 72.9   | 69.9   | 285.9  | 66.7   | 79.2   | 77.7   | 246.6  | 71.2   | 72.9   |  |
| G72.0 | 76.1   | 70.6   | 243.7  | 72.6   | 81.1   | 78.3   | 206.6  | 74.4   | 76.1   |  |
| G73.0 | 75.7   | 73.5   | 203.8  | 74.9   | 76.4   | 72.5   | 163.6  | 70.5   | 75.7   |  |

C Plane (°):0.0-360.0: 45.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-90.0:1.0  
Test Device: GPM-1600  
Distance: 7.517 m  
Humidity:  
Inspector:



Inspector: