

Report No.: GFB1829

Test Time: 2018-02-01 09:31

## Luminaire Property

Luminaire Manufacturer:

Luminaire Description: WMQ10W 4#

Current: 0.084 A

Power Factor: 0.994

Voltage: 120.0 V

Power: 10.03 W

## Photometric Results

CIE Class: General Diffuse

Measurement Flux: 169.9 lm

Downward Ratio: 50%

Horizontal Diffuse Angle(50%): H60.4

Vertical Diffuse Angle(50%): V234.6

Luminaire Efficacy Rating (LER): 16.99

Max. Intensity: 228.64 cd

S/MH(C0/C180): 1.12

Total Rated Lamp Lumens: 169.9 lm

Efficiency: 100%

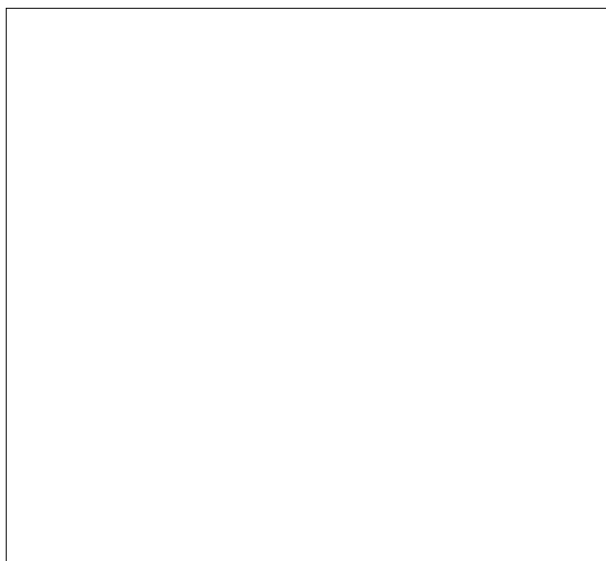
Upward Ratio: 50%

Central Intensity: 122.57 cd

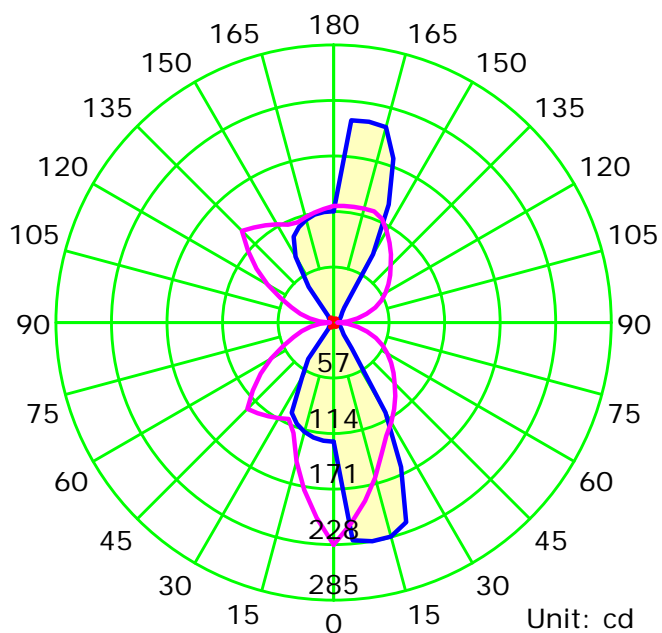
Pos of Max. Intensity: H0 V10

S/MH(C90/C270): 2.13

Picture Of Luminaire



Luminous Intensity Distribution Curve



— C0-C180 — C90-C270 — G10

C Plane (°):0.0-360.0: 22.5

Test Lab:

Test Type: TYPE C

Temperature:

Operator: 韩顺

Gamma Plane (°):0.0-180.0:5.0

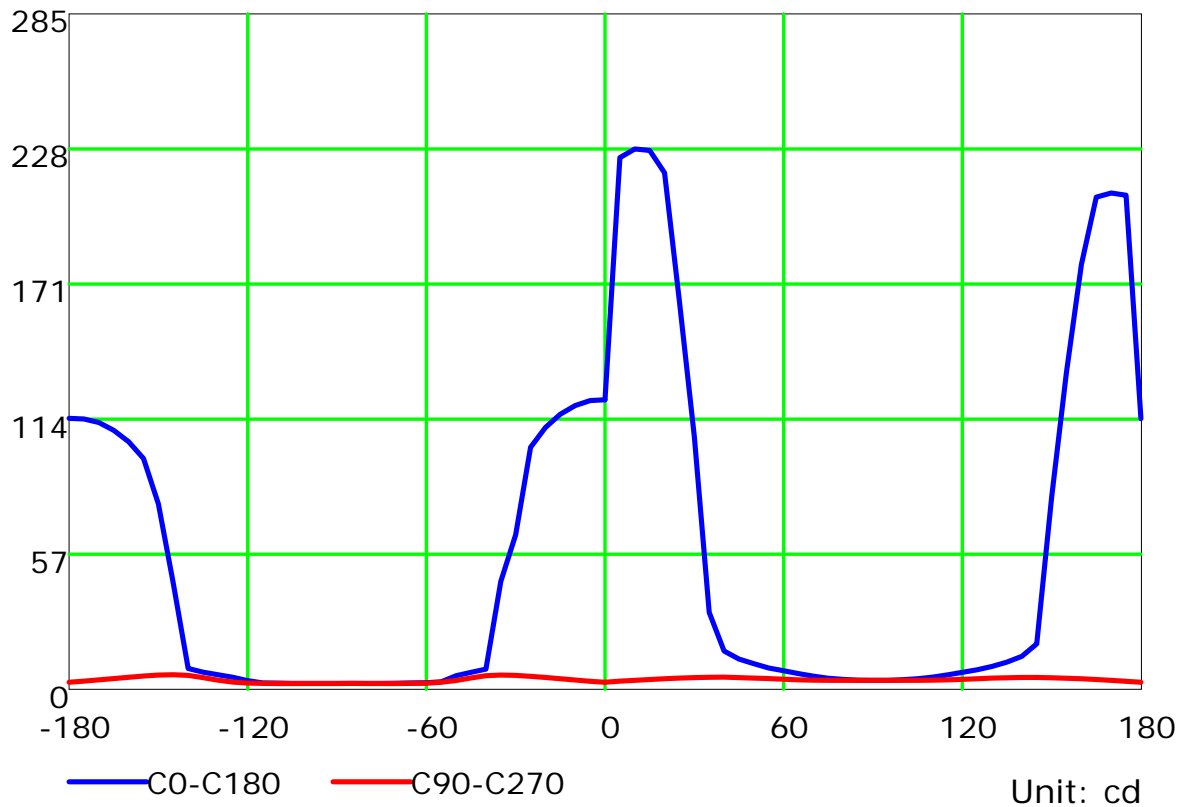
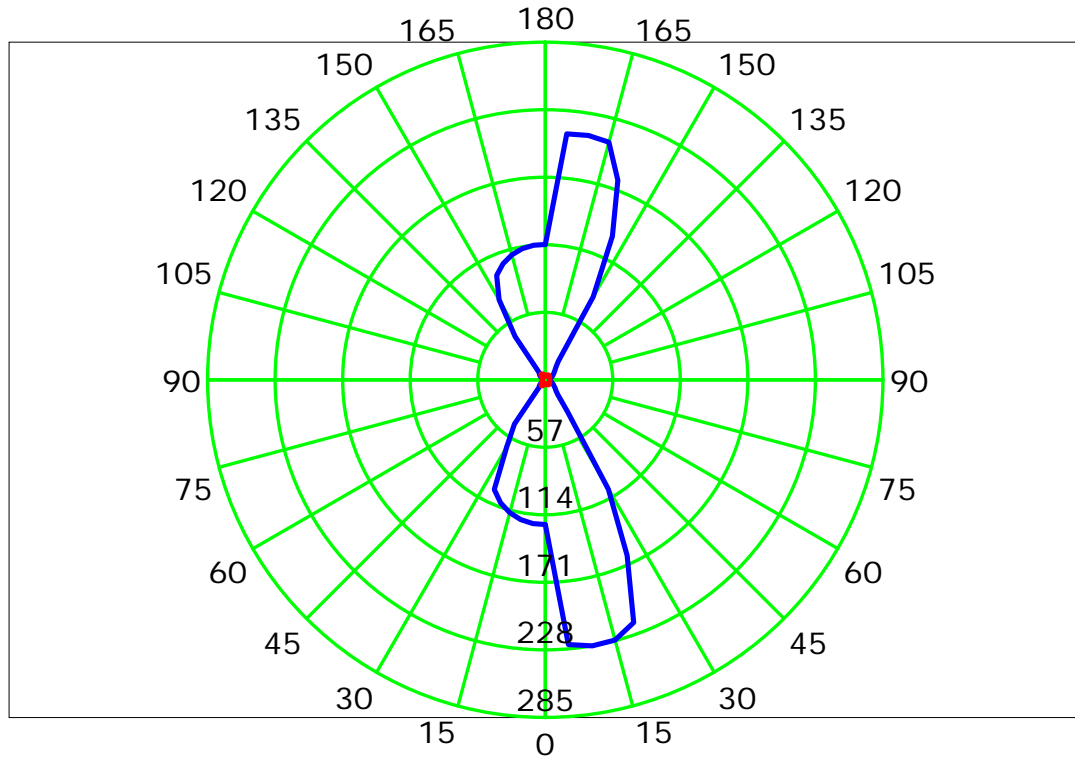
Test Device: GPM-1600L

Distance: 8.154 m

Humidity:

Inspector:

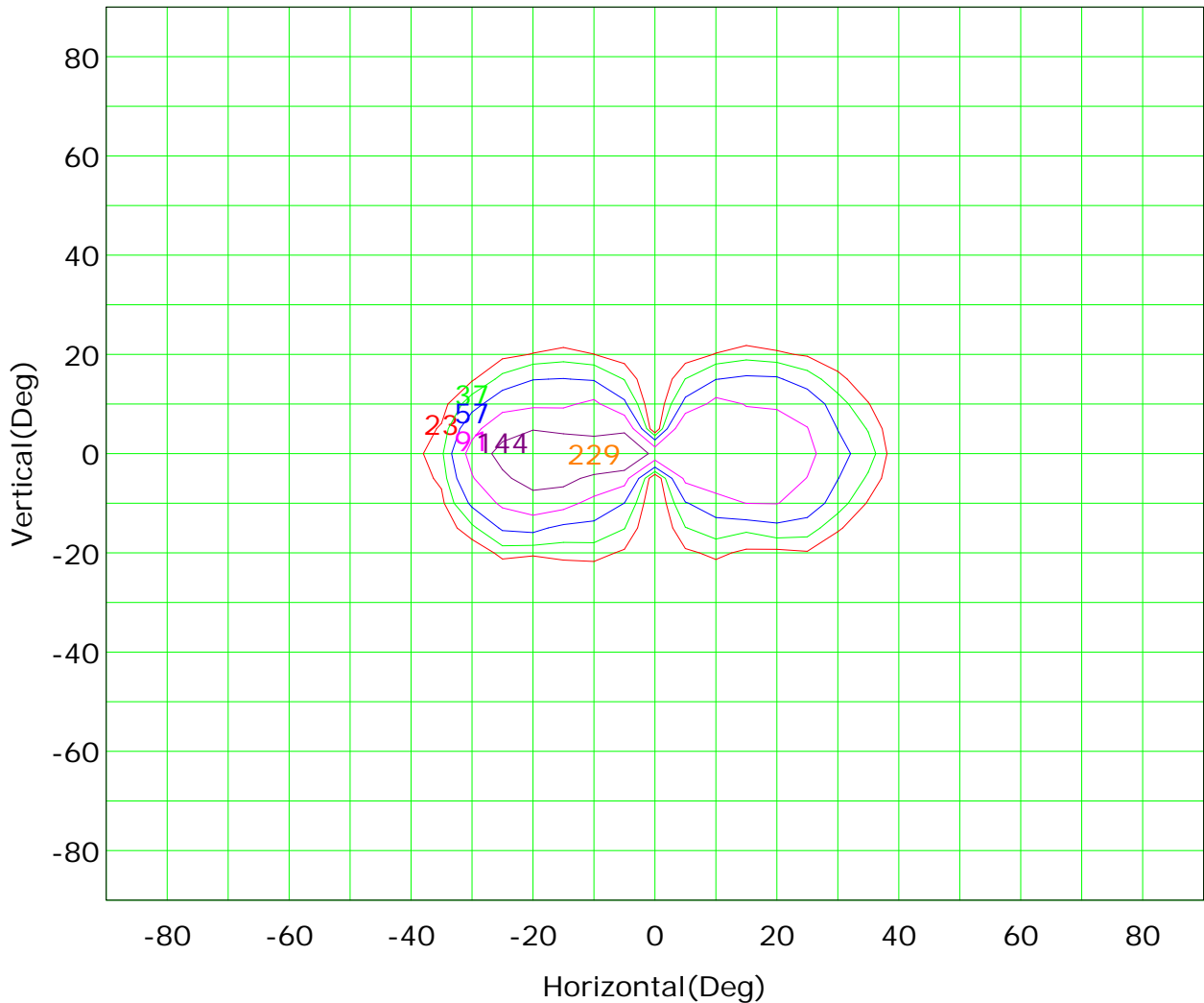
## Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 22.5  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator: 韩顺

Gamma Plane (°):0.0-180.0:5.0  
 Test Device: GPM-1600L  
 Distance: 8.154 m  
 Humidity:  
 Inspector:

## Isocandela (rectangle)



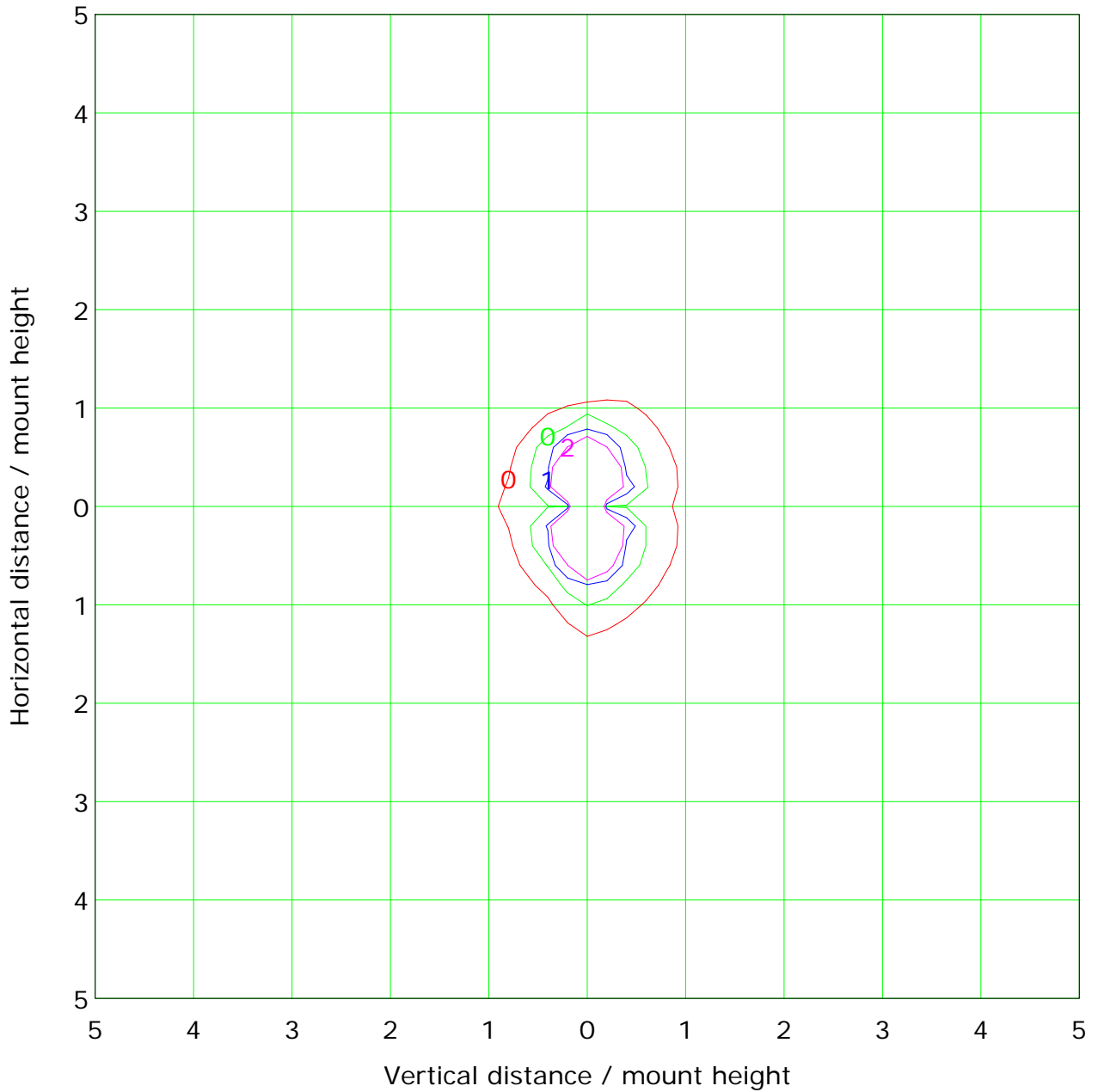
Imax (100%): 229 cd

<p>— ( 10%): 23 cd</p> <p>— ( 25%): 57 cd</p> <p>— ( 63%): 144 cd</p>	<p>— ( 16%): 37 cd</p> <p>— ( 40%): 91 cd</p> <p>— (100%): 229 cd</p>
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C Plane (°):0.0-360.0: 22.5  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator: 韩顺

Gamma Plane (°):0.0-180.0:5.0  
 Test Device: GPM-1600L  
 Distance: 8.154 m  
 Humidity:  
 Inspector:

# IsoLux Plot



Mounting Height: 3.0m    Max Lux(100%): 24.7 lx

— ( 1%): 0.2 lx	— ( 2%): 0.5 lx
— ( 5%): 1.2 lx	— (10%): 2.5 lx

C Plane (°):0.0-360.0: 22.5  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator: 韩顺

Gamma Plane (°):0.0-180.0:5.0  
 Test Device: GPM-1600L  
 Distance: 8.154 m  
 Humidity:  
 Inspector:

## Area Flux Table

Unit: lm

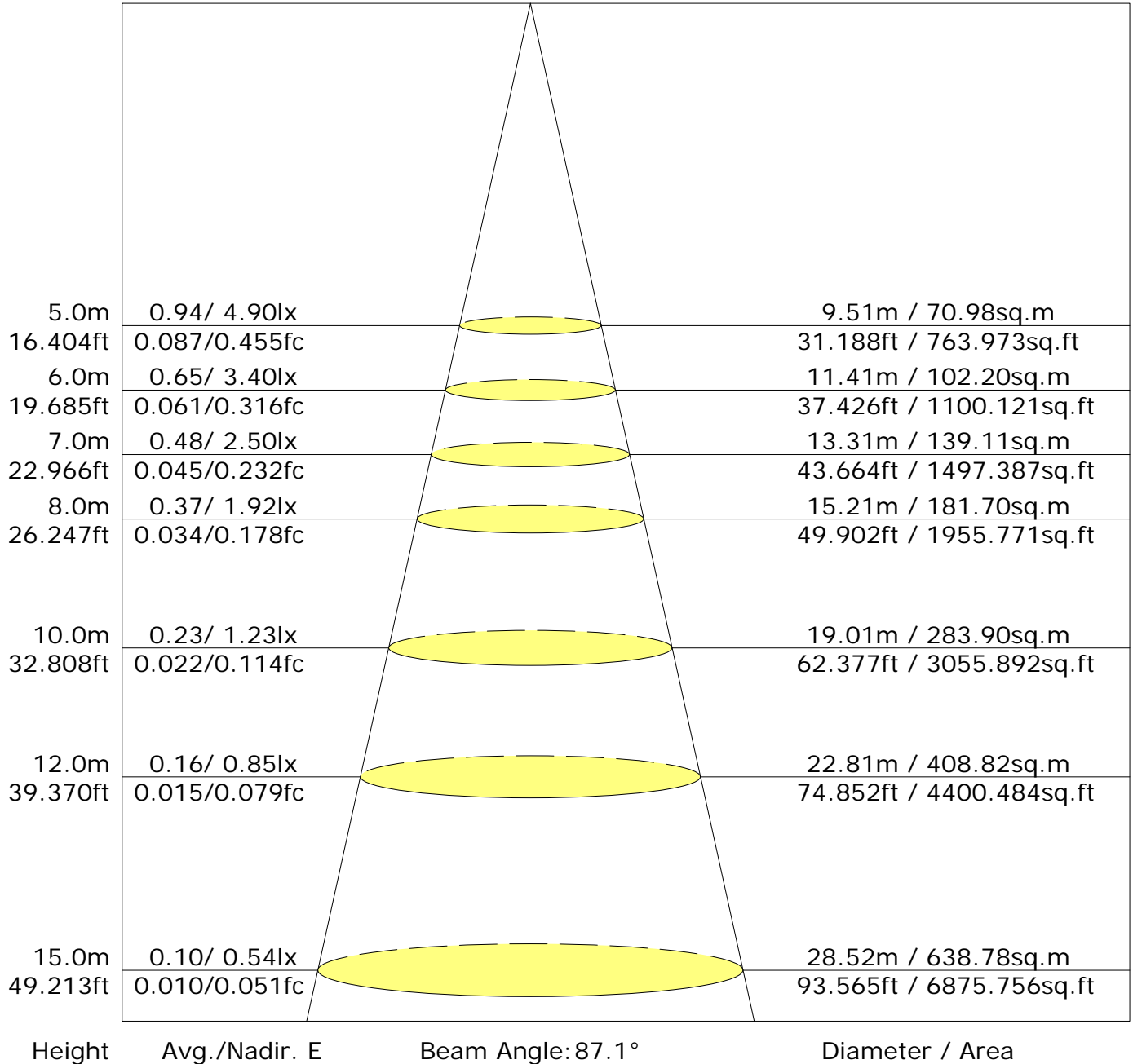
		Vertical plane																				
		-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90		
Flux(E)	Flux(T)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	Flux(T)	Flux(E)
		0.0	0.4	0.8	1.3	1.9	4.0	1.7	7.1	9.7	7.2	7.8	12.2	9.6	1.7	0.0	0.0	0.0	0.0	0.0		
0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0
0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0
0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0
0.0	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2	0.0	0.0
0.0	11.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.9	0.0	0.0
0.0	9.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.6	0.0	0.0
0.0	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	0.0	0.0
0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	0.0	0.0
0.0	11.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.6	0.0	0.0
0.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0
0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0
0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0
0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
0.0	85	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	85	0.0	0.0
0.0	57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57	0.0	0.0

C Plane (°):0.0-360.0: 22.5  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator: 韩顺

Gamma Plane (°):0.0-180.0:5.0  
 Test Device: GPM-1600L  
 Distance: 8.154 m  
 Humidity:  
 Inspector:

## The Average Illuminance Effective Figure

Flux Out: 66.70lm



C Plane (°):0.0-360.0: 22.5  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator: 韩顺

Gamma Plane (°):0.0-180.0:5.0  
 Test Device: GPM-1600L  
 Distance: 8.154 m  
 Humidity:  
 Inspector:

## UGR Table

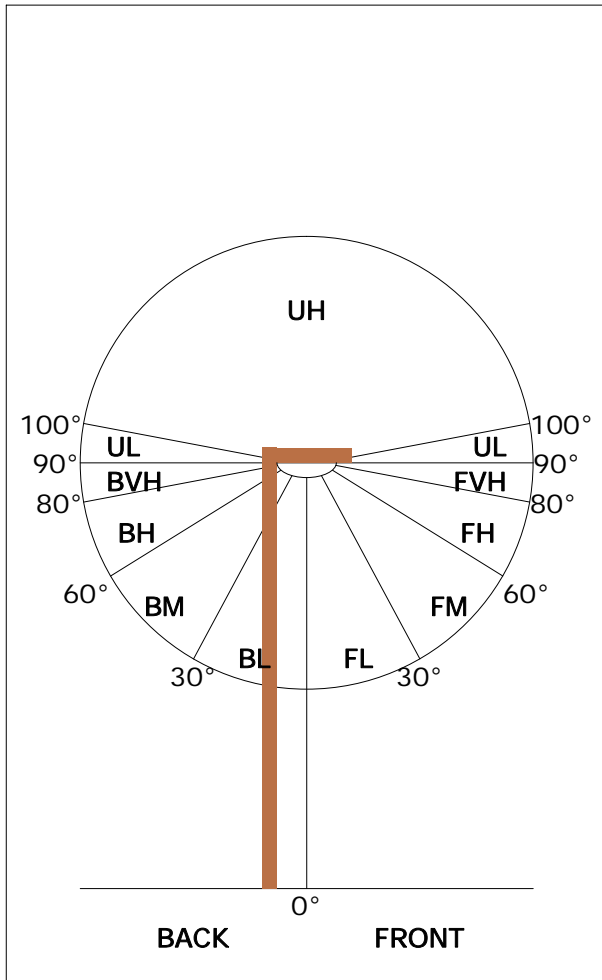
Reflectance:										
Ceiling (cavity)	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
X=2H Y=2H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-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  $170\text{lm}$  ( $8\log(F/F_0) = -6.2$ ).

C Plane (°):0.0-360.0: 22.5  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator: 韩顺

Gamma Plane (°):0.0-180.0:5.0  
 Test Device: GPM-1600L  
 Distance: 8.154 m  
 Humidity:  
 Inspector:

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



ZONE	LUMENS	% LAMP LUMENS
FORWARD LIGHT	46	27.1
FL ( 0°-30°)	30	17.8
FM (30°-60°)	10	5.9
FH (60°-80°)	4	2.3
FVH (80°-90°)	2	1.0
BACK LIGHT	39	23.2
BL ( 0°-30°)	25	14.7
BM (30°-60°)	9	5.4
BH (60°-80°)	4	2.1
BVH (80°-90°)	2	1.0
UP LIGHT	84	49.7
UL (90°-100°)	3	2.0
UH (100°-180°)	81	47.7
TRAPPED LIGHT	NA	NA

BUG(Backlight,Uplight,Glare) Rating Base On TM-15-07	
Asymmetrical Luminaire Types (Type I,II,III,IV)	B0 U2 G0
Quadrilateral Symmetrical Luminaire Types (Type V,Area Light)	B0 U2 G0

C Plane (°):0.0-360.0: 22.5  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator: 韩顺

Gamma Plane (°):0.0-180.0:5.0  
 Test Device: GPM-1600L  
 Distance: 8.154 m  
 Humidity:  
 Inspector:



## Candlepower Table

Unit: cd

GVC	C0.0	C22.5	C45.0	C67.5	C90.0	C112.5	C135.0	C157.5	C180.0	C202.5
G0.0	122.6	112.8	135.8	52.0	3.0	50.5	128.5	106.4	122.6	112.8
G5.0	225.0	122.7	117.8	52.4	3.5	51.2	110.7	112.9	122.2	173.2
G10.0	228.6	133.6	88.8	51.6	3.8	50.9	83.1	122.1	120.1	108.5
G15.0	228.1	148.7	73.5	46.3	4.2	44.8	70.1	138.3	116.5	103.1
G20.0	218.6	145.4	49.5	31.5	4.5	30.6	41.4	117.1	110.8	97.6
G25.0	164.1	107.4	31.2	16.1	4.8	17.1	20.2	84.3	102.4	89.4
G30.0	107.0	70.9	11.5	7.9	5.0	9.2	11.2	50.9	65.5	46.8
G35.0	32.5	13.7	9.6	7.0	5.1	7.0	9.4	12.5	45.7	18.1
G40.0	16.3	10.2	8.3	6.6	5.2	6.5	8.0	9.5	8.6	7.7
G45.0	12.8	9.0	7.1	6.0	5.0	6.0	7.0	8.4	7.2	6.7
G50.0	10.9	8.0	6.3	5.4	4.8	5.4	6.2	7.5	5.8	5.4
G55.0	9.1	7.3	5.7	4.9	4.6	4.9	5.6	6.9	3.2	4.8
G60.0	7.9	6.7	5.2	4.5	4.3	4.5	5.0	6.3	2.8	4.3
G65.0	6.7	5.9	4.8	4.2	4.1	4.2	4.7	5.6	2.7	3.5
G70.0	5.6	5.1	4.4	4.0	3.9	4.0	4.3	4.9	2.6	3.0
G75.0	4.7	4.5	4.2	3.9	3.8	3.9	4.1	4.4	2.6	2.7
G80.0	4.2	4.1	4.0	3.8	3.8	3.8	3.9	4.0	2.5	2.5
G85.0	3.9	3.9	3.8	3.8	3.8	3.8	3.8	3.8	2.5	2.5
G90.0	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.7	2.5	2.5
G95.0	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	2.5	2.5
G100.0	4.1	4.0	3.9	3.8	3.8	3.8	3.9	4.0	2.5	2.6
G105.0	4.5	4.4	4.1	3.9	3.8	3.9	4.1	4.4	2.6	2.7
G110.0	5.2	4.9	4.3	4.0	3.9	4.0	4.3	4.9	2.7	3.0
G115.0	6.2	5.6	4.6	4.2	4.1	4.2	4.6	5.6	2.8	3.5
G120.0	7.2	6.3	5.0	4.4	4.3	4.5	5.1	6.3	3.7	4.2
G125.0	8.3	7.0	5.5	4.8	4.5	5.0	5.7	7.0	5.1	4.8
G130.0	9.7	7.6	6.2	5.4	4.8	5.6	6.5	7.7	6.2	5.4
G135.0	11.5	8.6	6.9	6.0	4.9	6.2	7.4	8.6	7.3	6.7
G140.0	14.0	9.6	8.1	6.5	5.1	6.8	8.7	9.8	8.8	7.8
G145.0	19.3	12.5	9.3	7.0	5.0	7.6	10.3	13.3	44.8	29.1
G150.0	81.2	50.4	11.2	7.9	4.9	11.3	12.6	63.6	78.5	45.6
G155.0	134.3	81.8	28.7	16.1	4.7	23.7	33.6	95.4	97.7	84.3
G160.0	179.8	124.2	44.7	29.5	4.5	40.6	57.7	139.2	104.8	91.5
G165.0	208.3	141.5	68.2	44.1	4.2	50.3	77.2	140.3	109.6	95.9
G170.0	210.1	133.6	80.3	49.0	3.8	53.4	96.5	132.3	112.9	99.8
G175.0	209.1	121.3	107.1	49.3	3.5	53.9	125.6	116.9	114.4	146.0
G180.0	114.6	104.6	124.9	48.6	3.0	53.5	138.1	115.9	114.7	104.6

C Plane (°):0.0-360.0: 22.5

Test Lab:

Test Type: TYPE C

Temperature:

Operator: 韩顺

Gamma Plane (°):0.0-180.0:5.0

Test Device: GPM-1600L

Distance: 8.154 m

Humidity:

Inspector:

## Candlepower Table (Continue 1)

Unit: cd

GVC	C225.0	C247.5	C270.0	C292.5	C315.0	C337.5	C360.0			
G0.0	135.8	52.0	3.0	50.5	128.5	106.4	122.6			
G5.0	136.3	52.2	3.4	50.4	128.9	154.4	225.0			
G10.0	133.5	51.4	4.0	49.2	125.8	107.6	228.6			
G15.0	96.7	47.5	4.5	45.8	93.7	97.5	228.1			
G20.0	66.2	22.4	5.0	22.6	62.5	91.7	218.6			
G25.0	37.5	7.6	5.5	7.4	35.0	83.5	164.1			
G30.0	11.4	6.9	5.9	6.6	10.7	43.4	107.0			
G35.0	8.5	5.0	6.1	4.6	8.1	9.7	32.5			
G40.0	6.5	4.7	5.8	4.4	5.9	7.3	16.3			
G45.0	5.2	4.8	4.8	4.6	4.9	6.3	12.8			
G50.0	4.5	3.8	3.8	3.7	4.3	5.1	10.9			
G55.0	4.0	3.1	3.0	3.0	3.7	4.5	9.1			
G60.0	3.4	2.8	2.6	2.7	3.2	4.0	7.9			
G65.0	3.1	2.7	2.5	2.6	2.9	3.3	6.7			
G70.0	2.8	2.6	2.5	2.6	2.8	2.9	5.6			
G75.0	2.7	2.6	2.5	2.5	2.6	2.6	4.7			
G80.0	2.6	2.5	2.5	2.5	2.5	2.5	4.2			
G85.0	2.5	2.5	2.5	2.5	2.5	2.5	3.9			
G90.0	2.5	2.5	2.5	2.5	2.5	2.5	3.8			
G95.0	2.5	2.5	2.5	2.5	2.5	2.5	3.8			
G100.0	2.6	2.5	2.5	2.5	2.6	2.5	4.1			
G105.0	2.7	2.6	2.5	2.5	2.7	2.7	4.5			
G110.0	2.8	2.6	2.5	2.6	2.8	3.0	5.2			
G115.0	3.0	2.7	2.5	2.7	3.1	3.6	6.2			
G120.0	3.4	2.8	2.7	2.8	3.4	4.4	7.2			
G125.0	3.9	3.1	3.1	3.2	4.0	4.9	8.3			
G130.0	4.5	3.7	3.9	4.0	4.6	5.4	9.7			
G135.0	5.1	4.1	5.0	5.3	5.5	6.9	11.5			
G140.0	6.3	4.3	5.9	5.3	7.1	8.1	14.0			
G145.0	8.1	4.8	6.2	4.7	9.4	26.1	19.3			
G150.0	8.9	7.0	6.0	5.7	12.0	48.4	81.2			
G155.0	34.5	7.5	5.6	8.4	38.3	90.9	134.3			
G160.0	62.0	21.0	5.1	27.0	68.4	98.7	179.8			
G165.0	88.7	44.4	4.6	51.0	110.1	103.6	208.3			
G170.0	122.9	47.8	4.0	53.3	136.6	108.5	210.1			
G175.0	125.7	48.5	3.5	53.8	139.0	186.9	209.1			
G180.0	125.0	48.6	3.0	53.5	138.1	116.0	114.6			

C Plane (°):0.0-360.0: 22.5

Test Lab:

Test Type: TYPE C

Temperature:

Operator: 韩顺

Gamma Plane (°):0.0-180.0:5.0

Test Device: GPM-1600L

Distance: 8.154 m

Humidity:

Inspector: