Report No.: Test Time: 2024-03-28 12:41

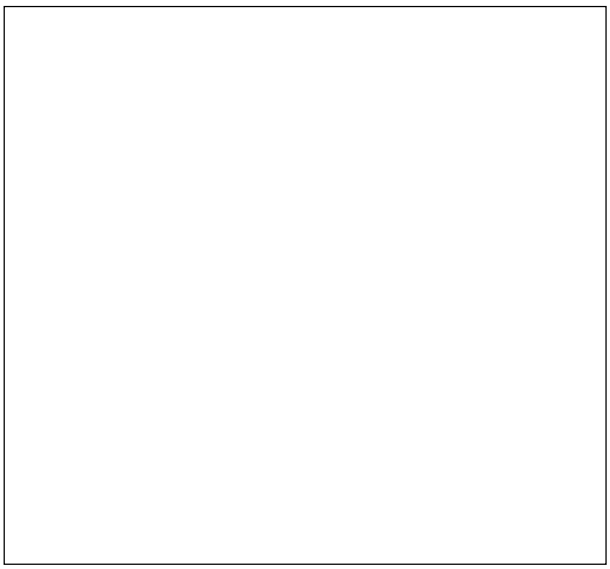
Luminaire Property

Luminaire Manufacturer:
Luminaire Description: HCP-242182-3000K Lamp Catalog: SMD
Lamp Description: 3535 Number of Lamps: 7
Luminous Length (mm): 71 Luminous Width (mm): 58
Voltage: 230.3 V Current: 0.177 A
Power: 17.01 W Power Factor: 0.416

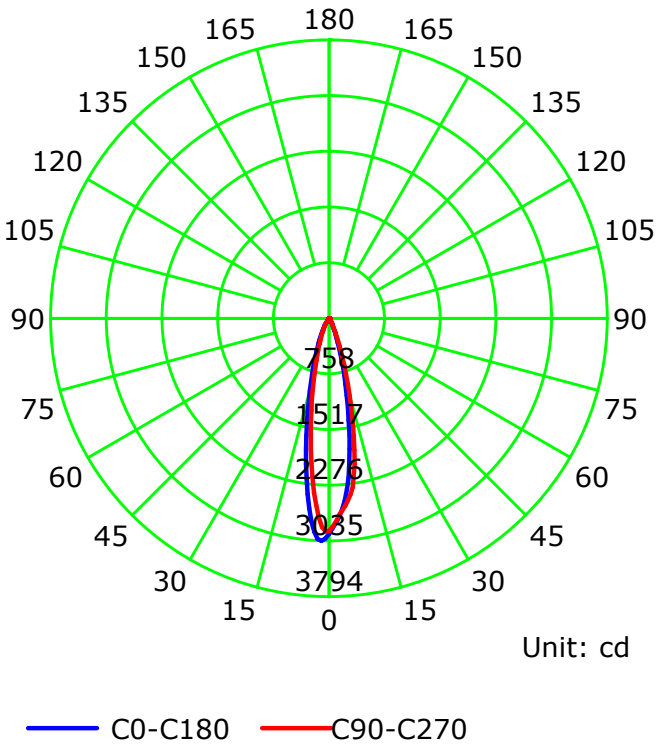
Photometric Results

CIE Class: Direct Total Rated Lamp Lumens: 613.5 lm
Measurement Flux: 613.5 lm Efficiency: 100%
Downward Ratio: 100% Upward Ratio: 0%
Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 45.5, 45.6, 47.0, 44.9
Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 22.2, 23.0, 22.4, 22.8
Luminaire Efficacy Rating (LER): 36.12 Central Intensity: 2937.14 cd
Max. Intensity: 3035.52 cd Pos of Max. Intensity: H180 V2
S/MH(C0/C180): 0.38 S/MH(C90/C270): 0.39

Picture Of Luminaire



Luminous Intensity Distribution Curve



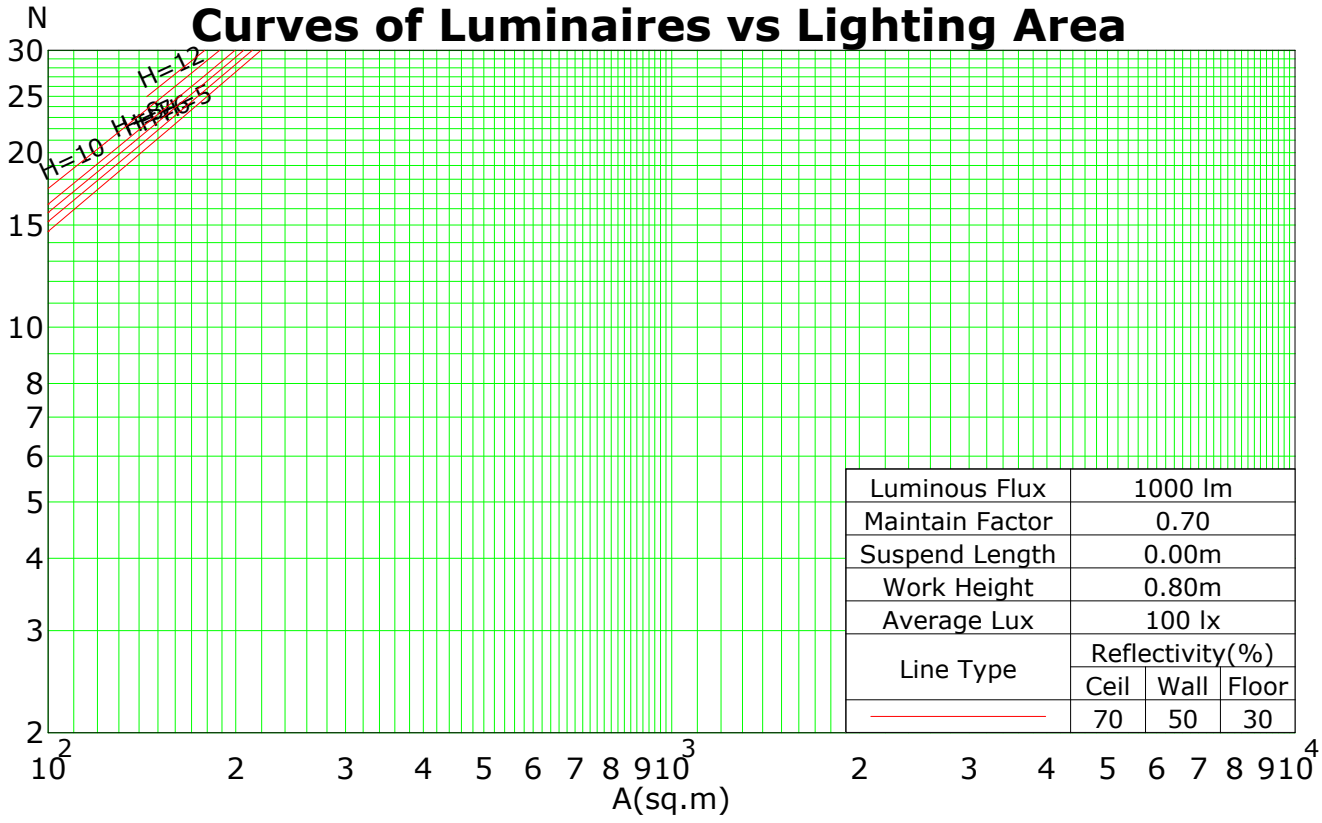
C Plane (°):0.0-360.0: 45.0 Gamma Plane (°):0.0-90.0:1.0
Test Lab: NINGBO LED LIGHTING Test Device: GPM-1600L
Test Type: TYPE C Distance: 6.500 m
Temperature: 25°C Humidity:
Operator: DING LI Inspector:

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	115	113	111	109	113	111	109	108	107	105	104	103	102	101	100	99	98	97
2	111	108	105	102	109	106	103	101	103	101	99	100	98	97	97	96	95	93
3	108	103	99	96	106	102	98	96	99	96	94	97	95	93	95	93	91	90
4	104	99	95	92	103	98	94	91	96	93	90	94	91	89	92	90	88	87
5	101	95	91	88	100	94	91	88	93	89	87	91	88	86	90	87	86	84
6	98	92	88	85	97	91	87	84	90	86	84	89	86	83	87	85	83	82
7	95	89	85	82	94	88	84	81	87	84	81	86	83	81	85	82	80	79
8	93	86	82	79	92	86	82	79	85	81	79	84	81	78	83	80	78	77
9	90	83	79	77	89	83	79	76	82	79	76	82	78	76	81	78	76	75
10	88	81	77	74	87	81	77	74	80	77	74	79	76	74	79	76	74	73

Spacing Criteria (0-180): 0.38
Spacing Criteria (90-270): 0.39
Spacing Criteria (Diagonal): 0.40

Curves of Luminaires vs Lighting Area

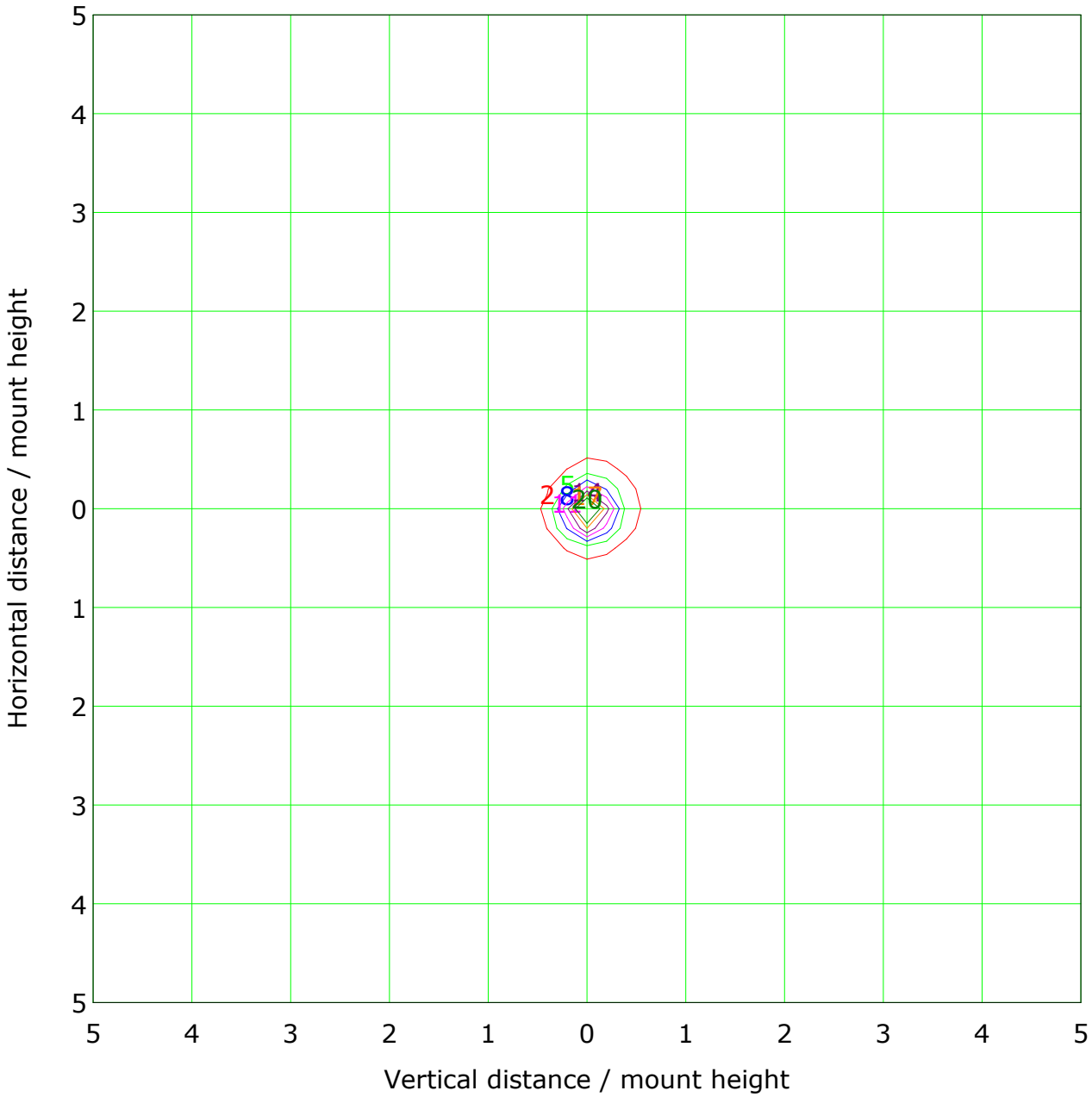


Luminous Flux	1000 lm		
Maintain Factor	0.70		
Suspend Length	0.00m		
Work Height	0.80m		
Average Lux	100 lx		
Line Type	Reflectivity(%)		
	Ceil	Wall	Floor
	70	50	30

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: 10.0m Max Lux(100%): 30.3 lx

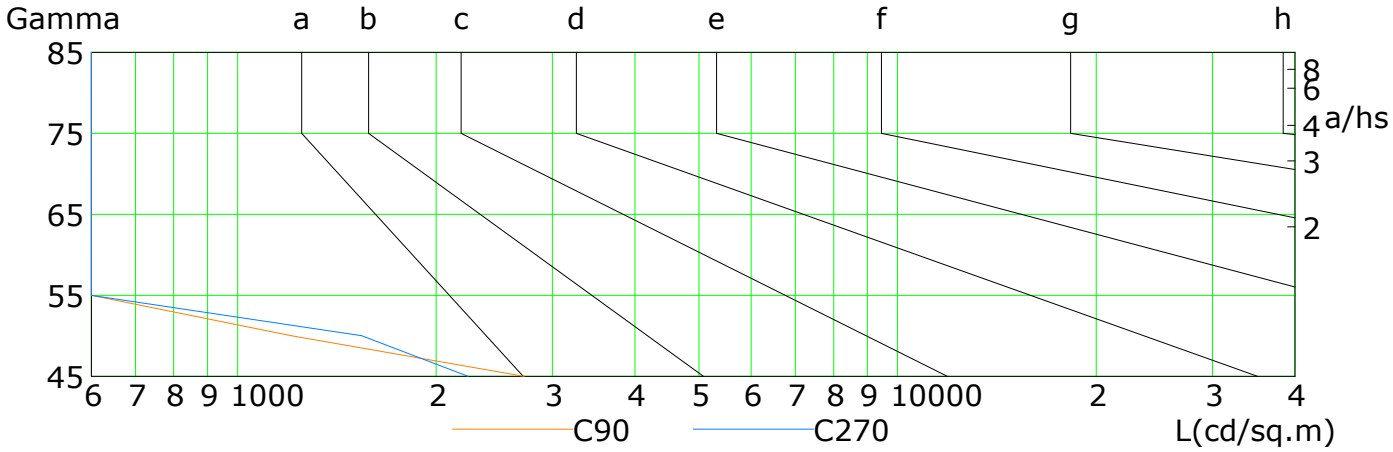
(5%): 1.5 lx	(15%): 4.5 lx
(25%): 7.6 lx	(35%): 10.6 lx
(45%): 13.6 lx	(55%): 16.7 lx
(65%): 19.7 lx	

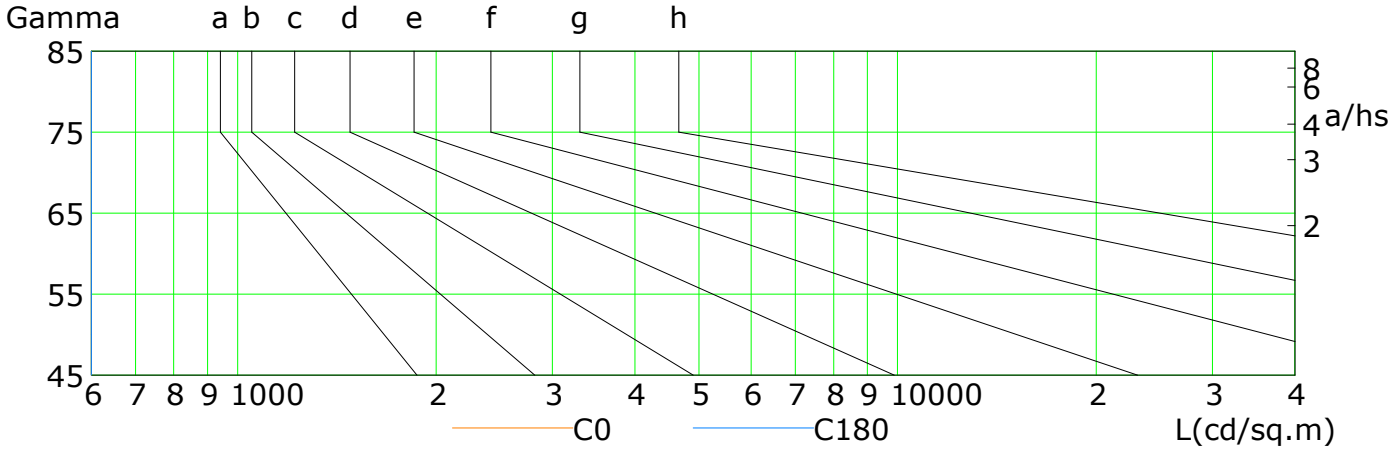
C Plane (°):0.0-360.0: 45.0
Test Lab: NINGBO LED LIGHTING
Test Type: TYPE C
Temperature: 25°C
Operator: DING LI

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

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



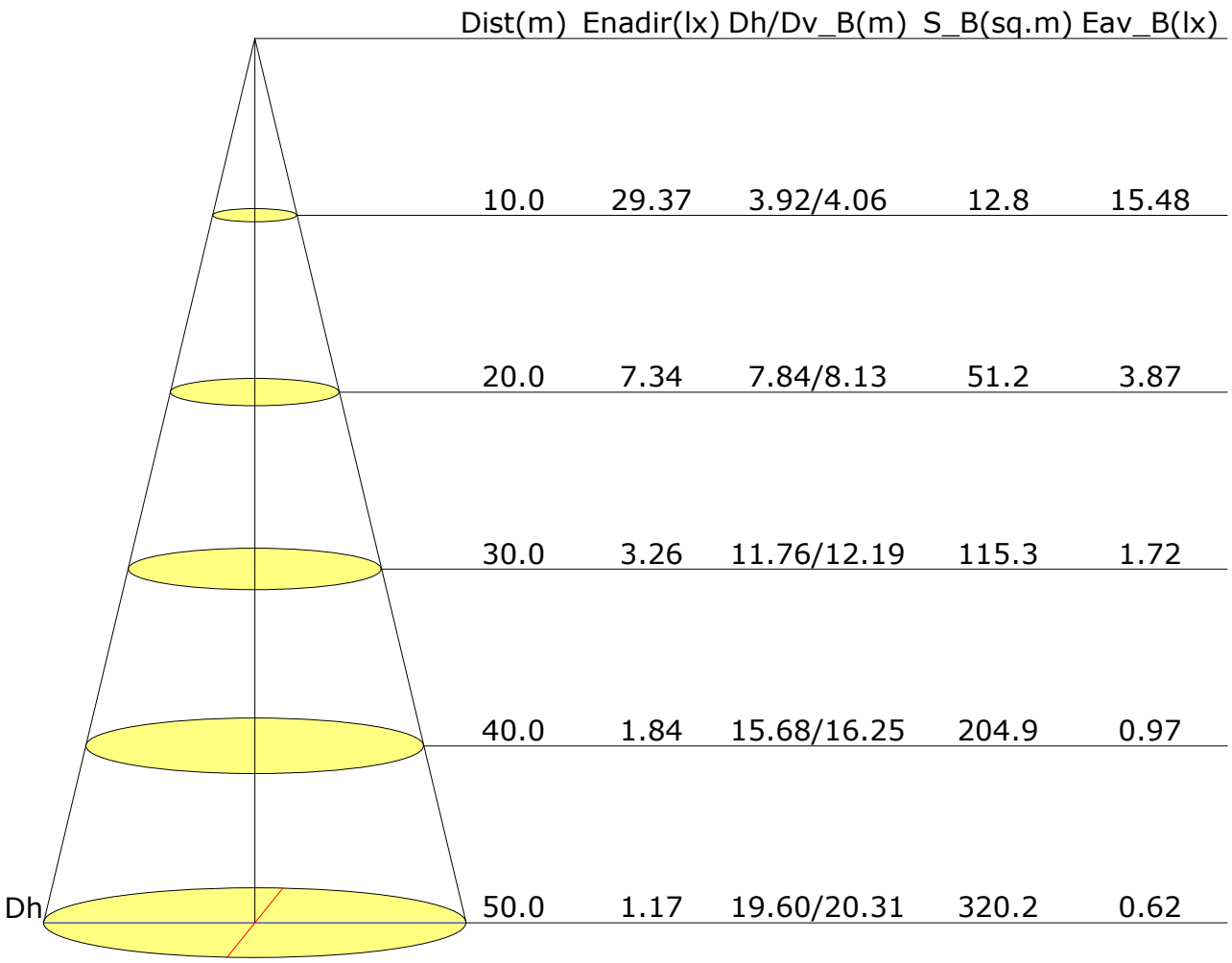


L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	0	0	0	0	0	0	0	0	0
C90	2716	1205	0	0	0	0	0	0	0
C180	0	0	0	0	0	0	0	0	0
C270	2236	1541	0	0	0	0	0	0	0

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:

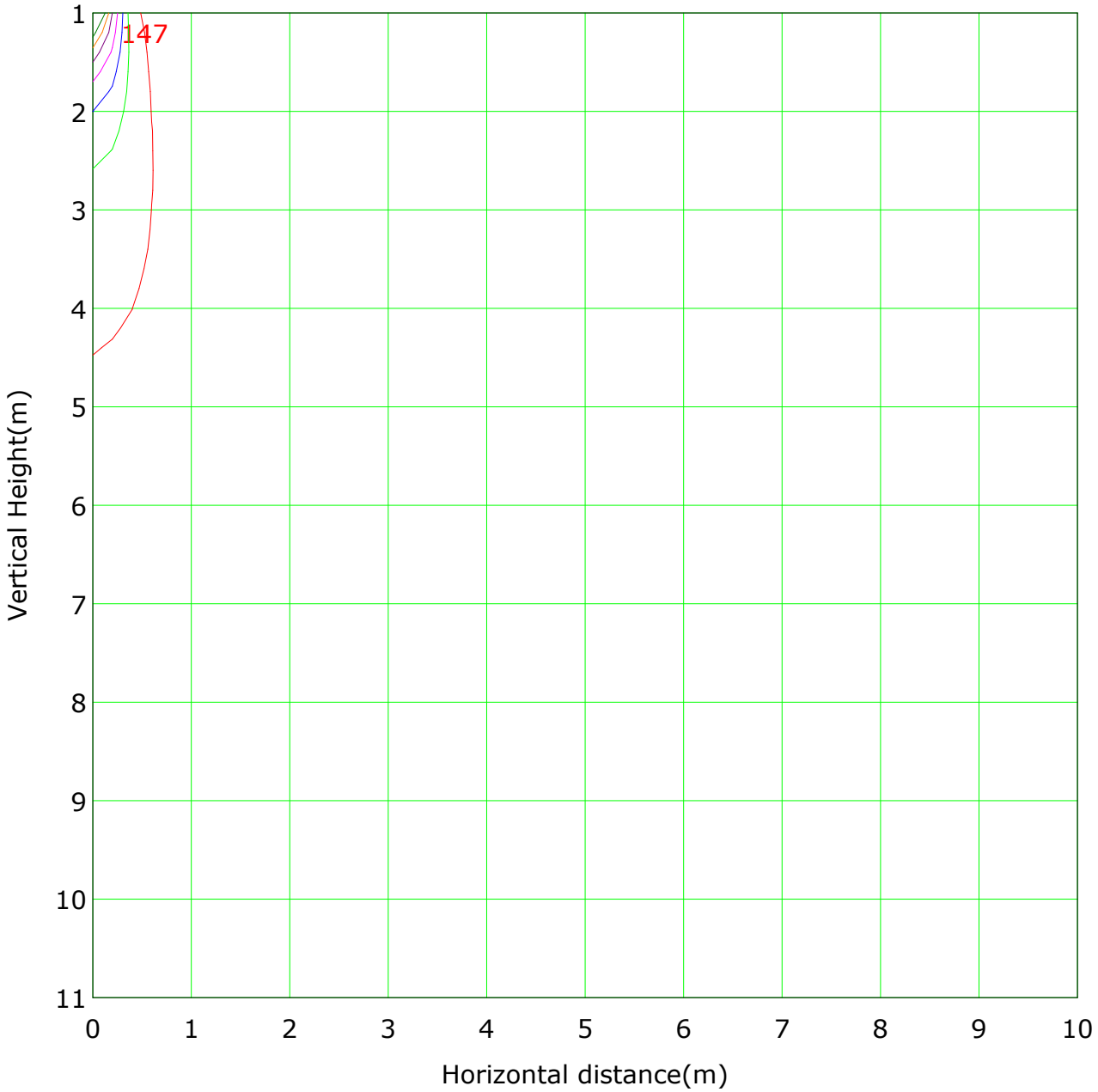
Illuminance at a Distance



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:

Vertical IsoLux Plot



Lowest(m): 1.0m Highest(m): 11.0m Max Lux: 2937.1 lx

(5%): 146.9 lx
(15%): 440.6 lx
(25%): 734.3 lx
(35%):1028.0 lx
(45%):1321.7 lx
(55%):1615.4 lx
(65%):1909.1 lx

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:

UGR Table

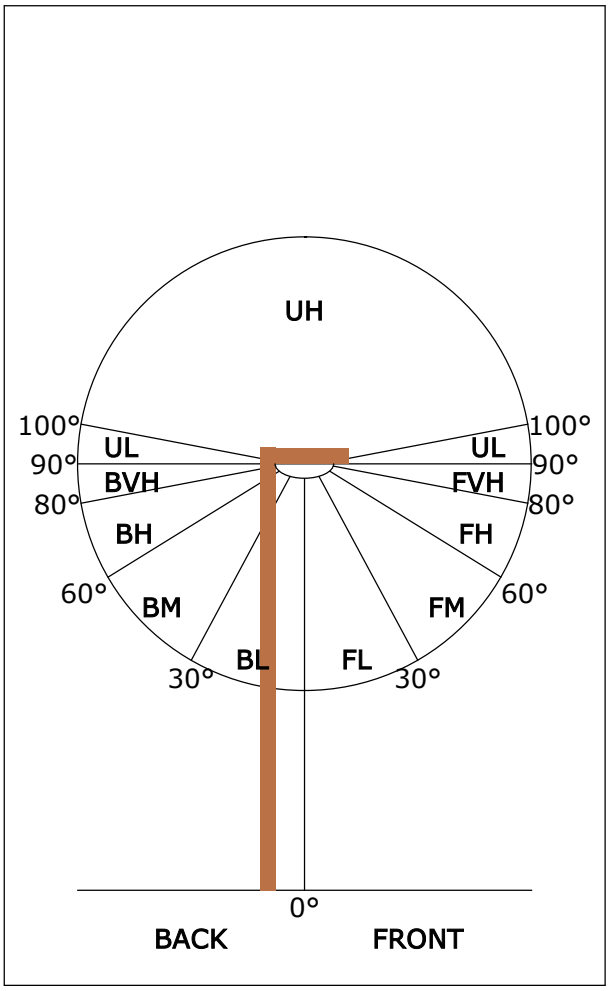
Reflectance: Ceiling (cavity)	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
X=2H Y=2H	4.8	5.4	5.1	5.6	5.8	7.2	7.8	7.5	8.0	8.2
3H	4.7	5.2	5.0	5.5	5.7	7.1	7.6	7.4	7.9	8.1
4H	4.6	5.1	4.9	5.4	5.6	7.0	7.5	7.3	7.8	8.0
6H	4.5	5.0	4.9	5.3	5.6	6.9	7.4	7.3	7.7	8.0
8H	4.5	5.0	4.8	5.3	5.6	6.9	7.4	7.2	7.7	7.9
12H	4.5	4.9	4.8	5.2	5.5	6.9	7.3	7.2	7.6	7.9
X=4H Y=2H	4.6	5.1	4.9	5.4	5.6	7.0	7.5	7.3	7.8	8.0
3H	4.5	4.9	4.8	5.2	5.5	6.9	7.3	7.2	7.6	7.9
4H	4.4	4.8	4.7	5.1	5.5	6.8	7.2	7.1	7.5	7.8
6H	4.3	4.6	4.7	5.0	5.4	6.7	7.0	7.1	7.4	7.8
8H	4.2	4.6	4.7	5.0	5.4	6.6	7.0	7.0	7.3	7.7
12H	4.2	4.5	4.6	4.9	5.3	6.6	6.9	7.0	7.3	7.7
X=8H Y=4H	4.2	4.6	4.7	5.0	5.4	6.6	7.0	7.0	7.3	7.7
6H	4.1	4.4	4.6	4.8	5.3	6.5	6.8	7.0	7.2	7.7
8H	4.1	4.3	4.6	4.8	5.2	6.5	6.7	6.9	7.2	7.6
12H	4.0	4.2	4.5	4.7	5.2	6.4	6.6	6.9	7.1	7.6
X=12H Y=4H	4.2	4.5	4.6	4.9	5.3	6.6	6.9	7.0	7.3	7.7
6H	4.1	4.3	4.6	4.8	5.2	6.5	6.7	6.9	7.2	7.6
8H	4.0	4.2	4.5	4.7	5.2	6.4	6.6	6.9	7.1	7.6
Variations with the observer position at spacings:										
S=1.0H	+5.8/-51.3					+6.6/-1.$				
S=1.5H	+8.5/-1.$					+9.5/-1.$				
S=2.0H	+10.5/-1.$					+11.5/-1.$				

Calculate in accordance with CIE Pub.117. The table is revised with 613lm (8log(F/F0) = -1.7).

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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:

FLUX DISTRIBUTION TABLE BASED ON THE IESNA LUMINAIRE CLASSIFICATION SYSTEM



ZONE	LUMENS	% LAMP LUMENS
FORWARD LIGHT	328	53.5
FL (0°-30°)	311	50.7
FM (30°-60°)	17	2.8
FH (60°-80°)	0	0.0
FVH (80°-90°)	0	0.0
BACK LIGHT	285	46.5
BL (0°-30°)	268	43.8
BM (30°-60°)	17	2.7
BH (60°-80°)	0	0.0
BVH (80°-90°)	0	0.0
UP LIGHT	0	0.0
UL (90°-100°)	0	0.0
UH (100°-180°)	0	0.0
TRAPPED LIGHT	NA	NA

BUG(**B**acklight,**U**plight,**G**lare) Rating Base On TM-15-07	
Asymmetrical Luminaire Types (Type I,II,III,IV)	B1 U0 G0
Quadrilateral Symmetrical Luminaire Types (Type V,Area Light)	B1 U0 G0

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Gamma Plane (°):0.0-90.0:1.0
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