Report No.: Test Time: 2024-03-13 13:46

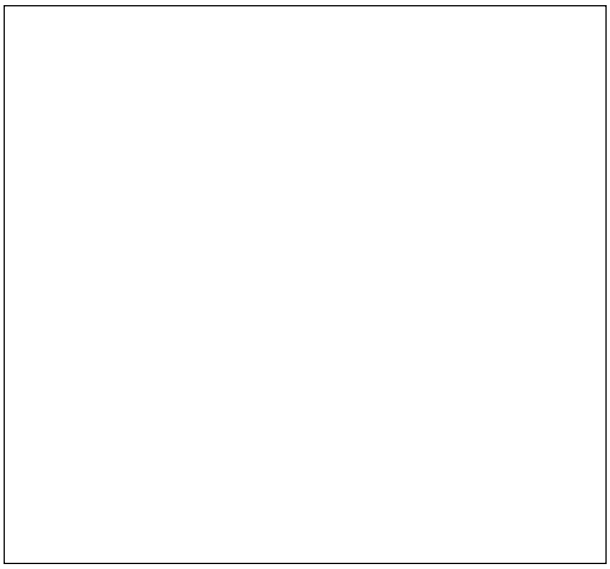
Luminaire Property

Luminaire Manufacturer:
Luminaire Description: HCP-81321000 3000K
Lamp Catalog: COB
Lamp Description: 1616
Number of Lamps: 1
Luminous Length (mm): -36
Luminous Width (mm): -36
Voltage: 230.4 V
Current: 0.042 A
Power: 8.82 W
Power Factor: 0.917

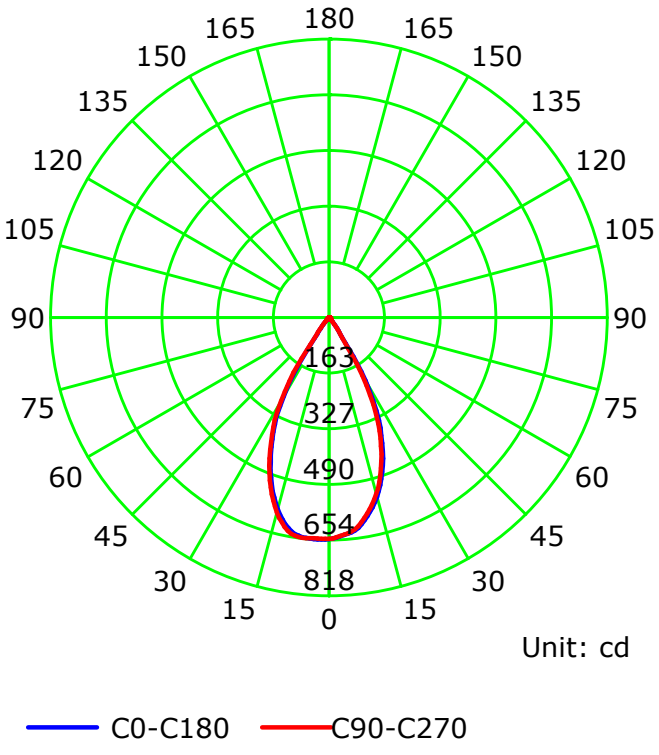
Photometric Results

CIE Class: Direct
Total Rated Lamp Lumens: 455.0 lm
Measurement Flux: 455 lm
Efficiency: 100%
Downward Ratio: 100%
Upward Ratio: 0%
Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 69.8, 69.8, 69.7, 70.0
Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 54.4, 54.2, 54.3, 54.3
Luminaire Efficacy Rating (LER): 51.64
Central Intensity: 650.86 cd
Max. Intensity: 654.48 cd
Pos of Max. Intensity: H225 V7
S/MH(C0/C180): 0.85
S/MH(C90/C270): 0.85

Picture Of Luminaire



Luminous Intensity Distribution Curve



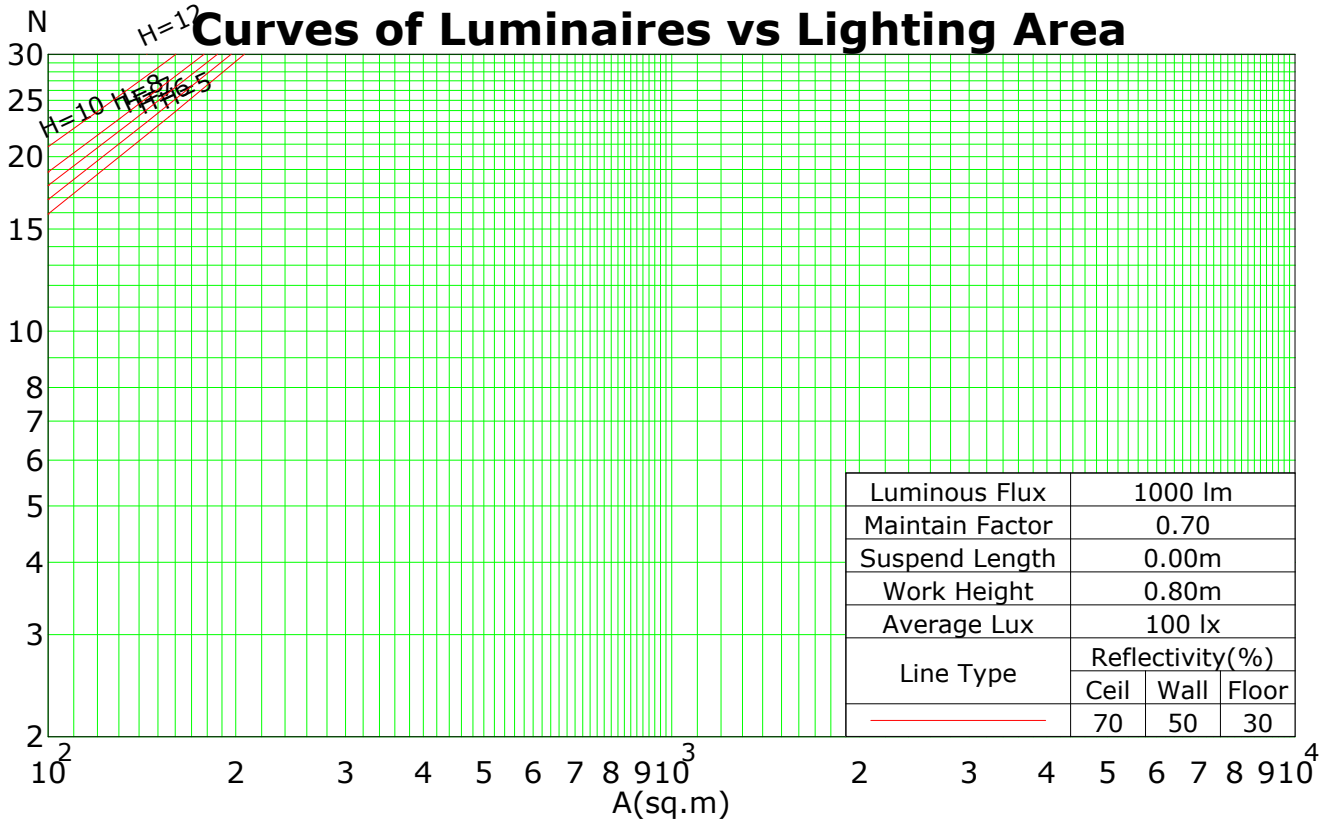
C Plane (°):0.0-360.0: 45.0
Gamma Plane (°):0.0-90.0:1.0
Test Lab: NINGBO LED LIGHTING
Test Device: GPM-1600L
Test Type: TYPE C
Distance: 6.500 m
Temperature: 25°C
Humidity:
Operator: DING LI
Inspector:

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	114	111	109	107	112	109	107	105	105	104	102	102	100	99	98	97	96	95
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	92	91	89
3	104	98	94	90	102	97	93	90	94	91	88	92	89	87	90	87	85	84
4	100	93	88	84	98	92	87	83	90	86	82	88	84	82	86	83	81	79
5	95	88	82	78	94	87	82	78	85	81	77	83	80	77	82	79	76	75
6	91	83	78	74	90	82	77	73	81	76	73	79	75	72	78	75	72	71
7	87	79	73	69	86	78	73	69	77	72	69	76	72	68	75	71	68	67
8	83	75	69	66	82	74	69	65	73	68	65	72	68	65	71	67	65	63
9	80	71	66	62	79	71	65	62	70	65	62	69	65	62	68	64	61	60
10	77	68	62	59	76	67	62	59	67	62	59	66	62	59	65	61	58	57

Spacing Criteria (0-180): 0.85
Spacing Criteria (90-270): 0.85
Spacing Criteria (Diagonal): 0.81

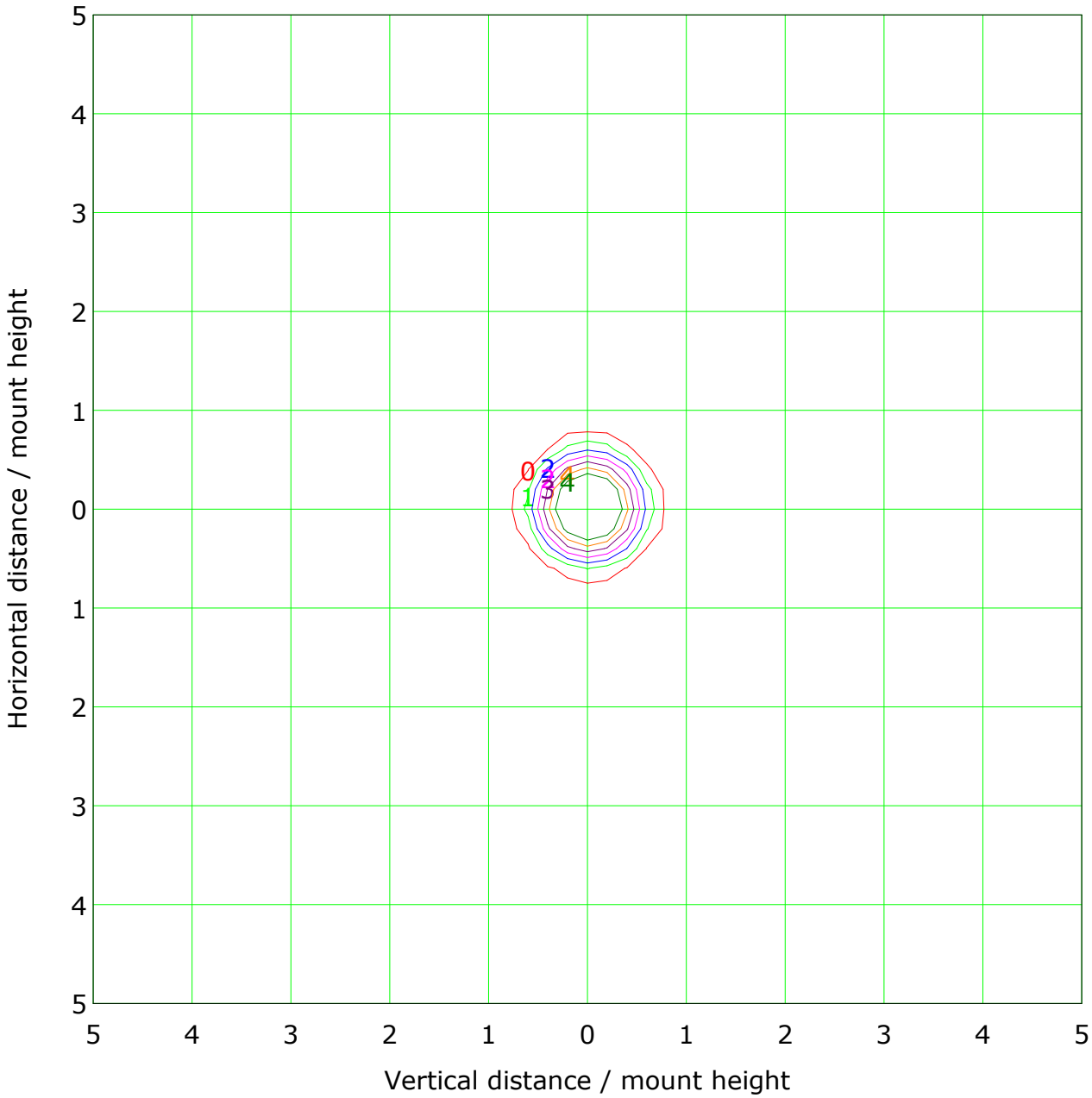
Curves of Luminaires vs Lighting Area



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%): 6.5 lx

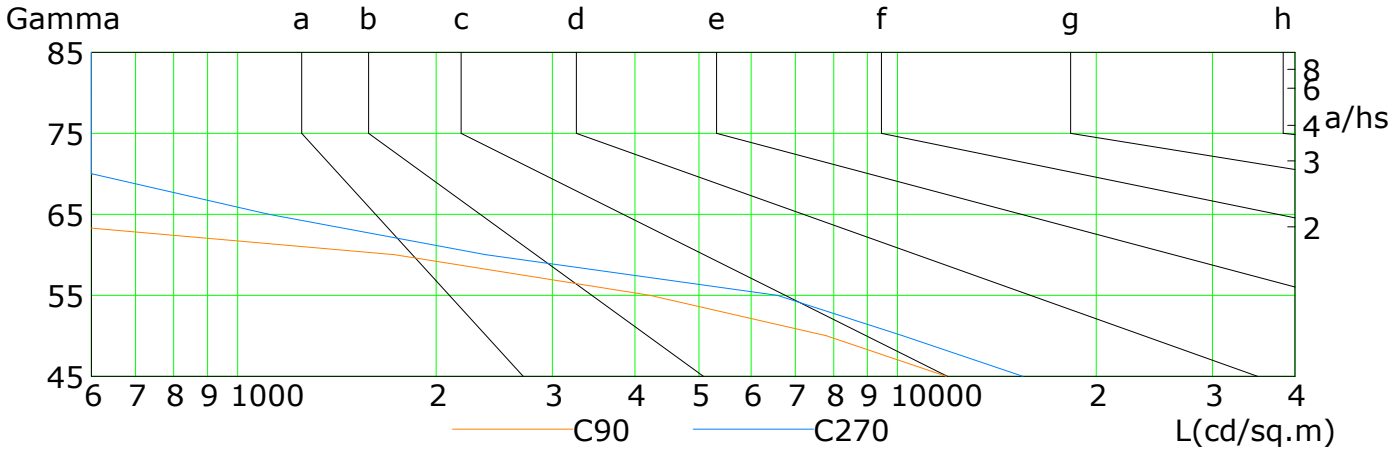
(5%): 0.3 lx	(15%): 1.0 lx
(25%): 1.6 lx	(35%): 2.3 lx
(45%): 2.9 lx	(55%): 3.6 lx
(65%): 4.2 lx	

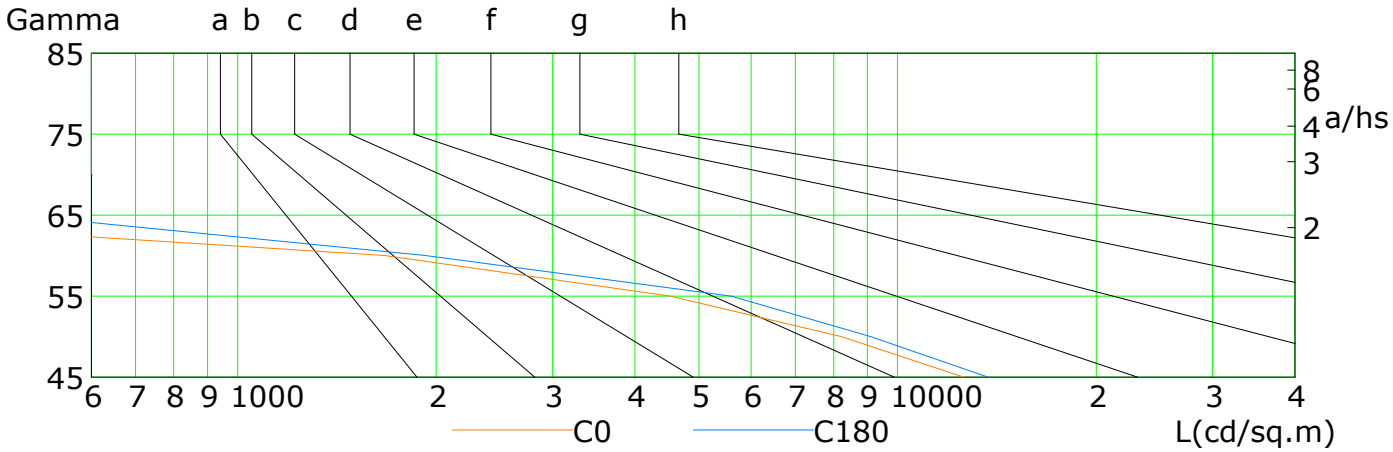
C Plane (°):0.0-360.0: 45.0
Test Lab: NINGBO LED LIGHTING
Test Type: TYPE C
Temperature: 25°C
Operator: DING LI

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



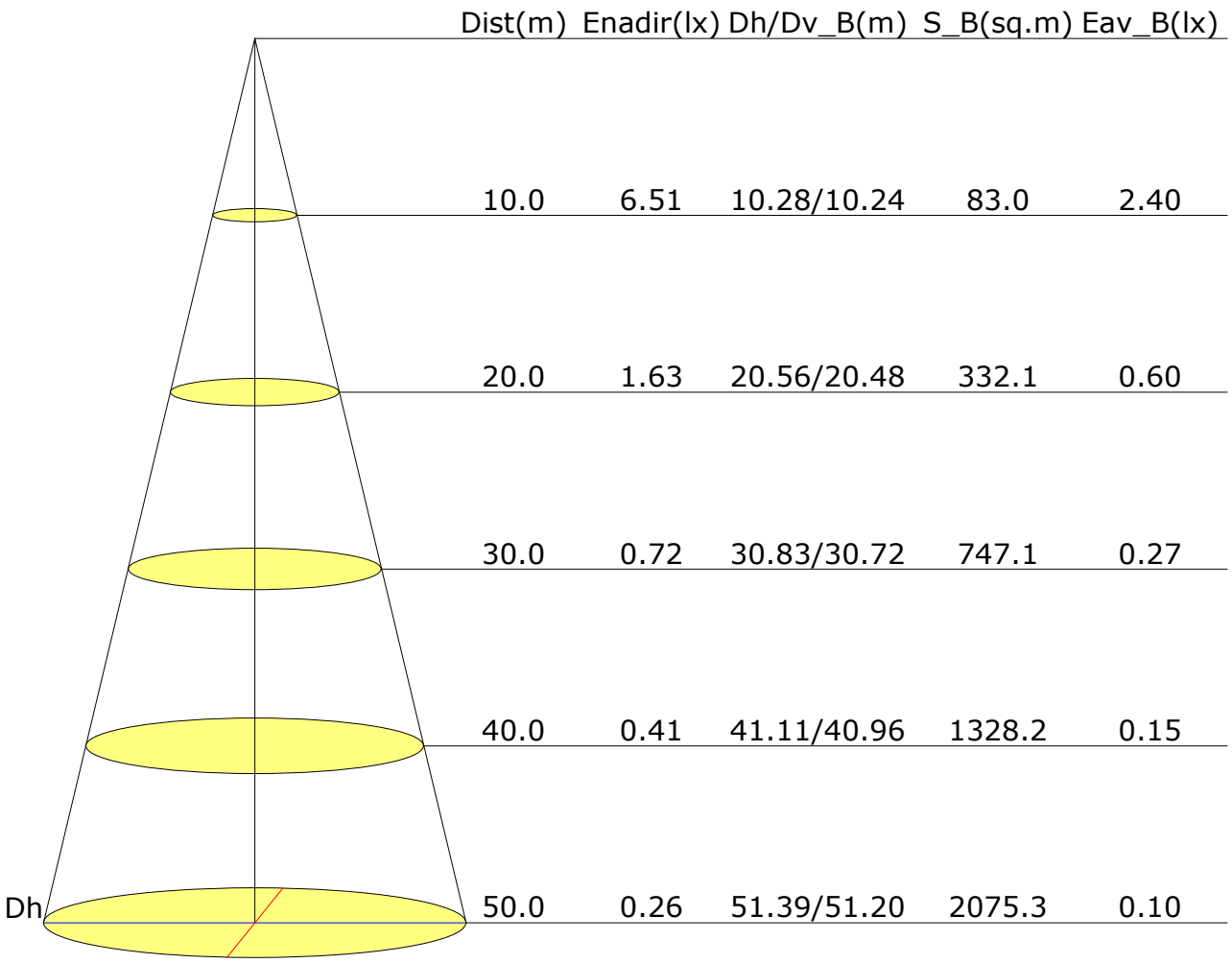


L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	12602	8208	4522	1670	186	0	0	0	0
C90	11865	7795	4214	1729	349	0	0	0	0
C180	13713	9094	5601	1926	465	0	0	0	0
C270	15492	10179	6577	2378	1116	0	0	0	0

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:

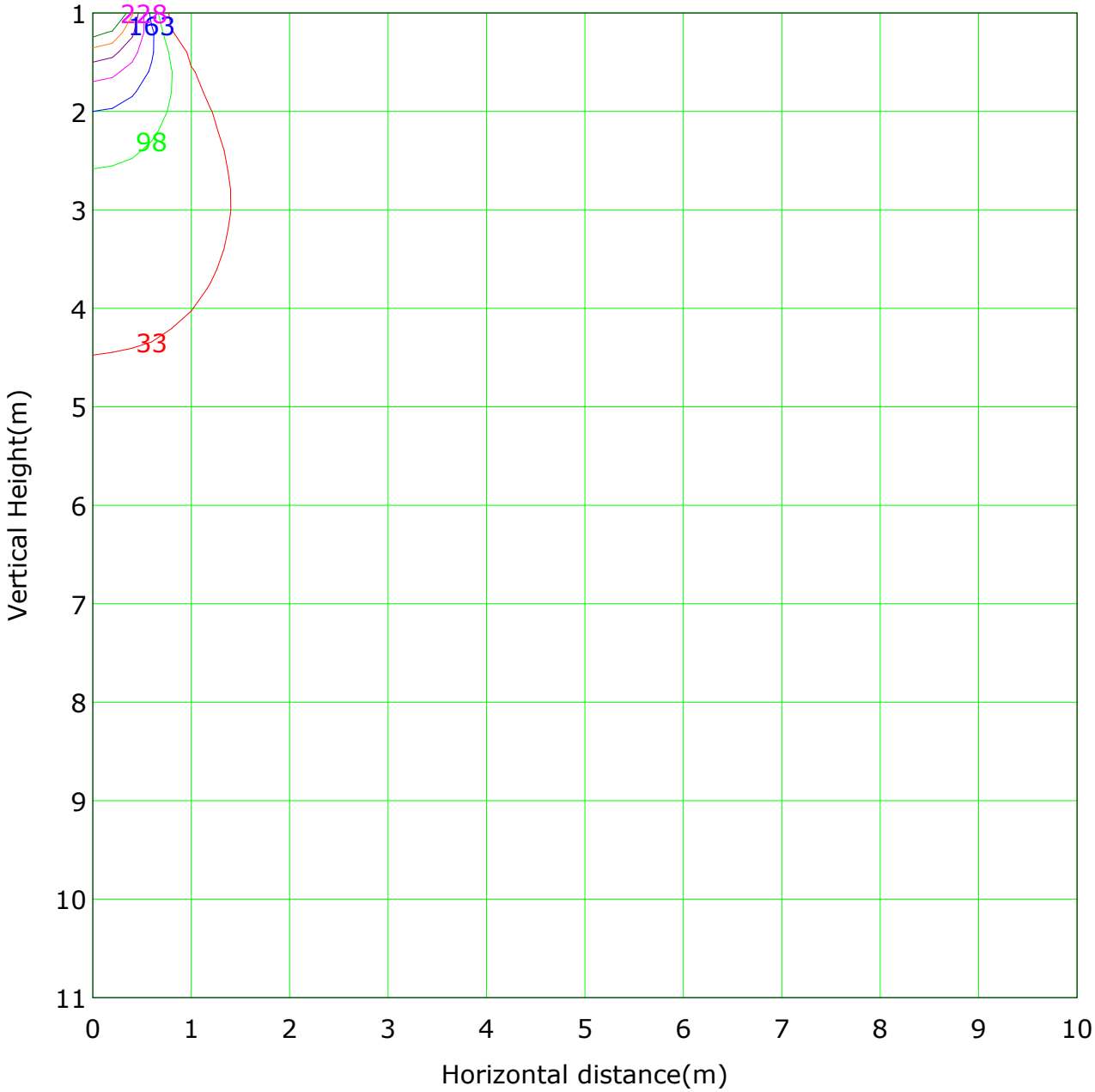
Illuminance at a Distance



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

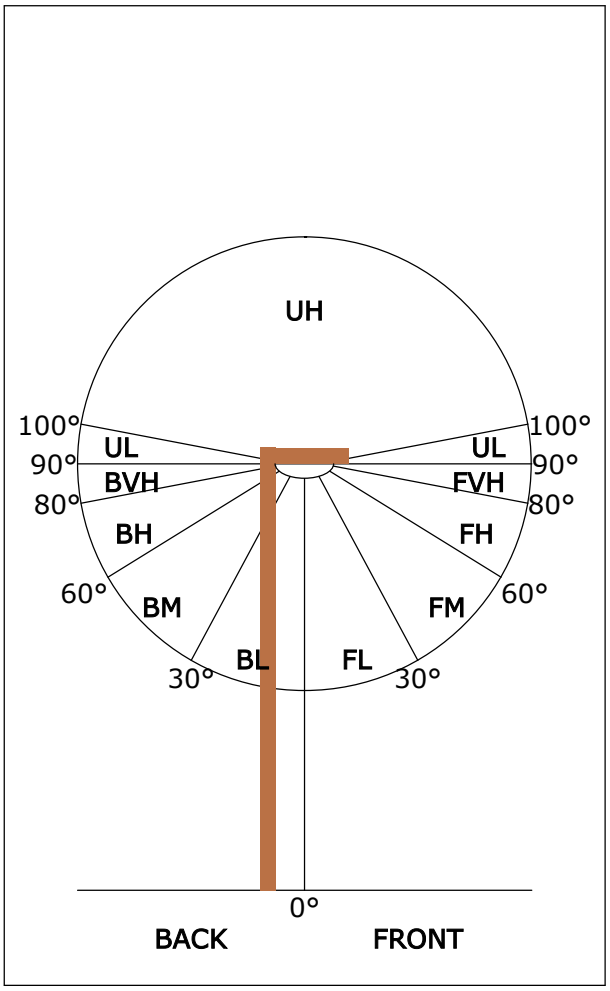


Lowest(m): 1.0m Highest(m): 11.0m Max Lux: 650.9 lx

(5%): 32.5 lx
(15%): 97.6 lx
(25%): 162.7 lx
(35%): 227.8 lx
(45%): 292.9 lx
(55%): 358.0 lx
(65%): 423.1 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:

FLUX DISTRIBUTION TABLE BASED ON THE IESNA LUMINAIRE CLASSIFICATION SYSTEM



ZONE	LUMENS	% LAMP LUMENS
FORWARD LIGHT	213	46.9
FL (0°-30°)	185	40.6
FM (30°-60°)	28	6.3
FH (60°-80°)	0	0.0
FVH (80°-90°)	0	0.0
BACK LIGHT	242	53.1
BL (0°-30°)	201	44.1
BM (30°-60°)	41	9.0
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

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: