Report No.: Test Time: 2024-03-28 15:57

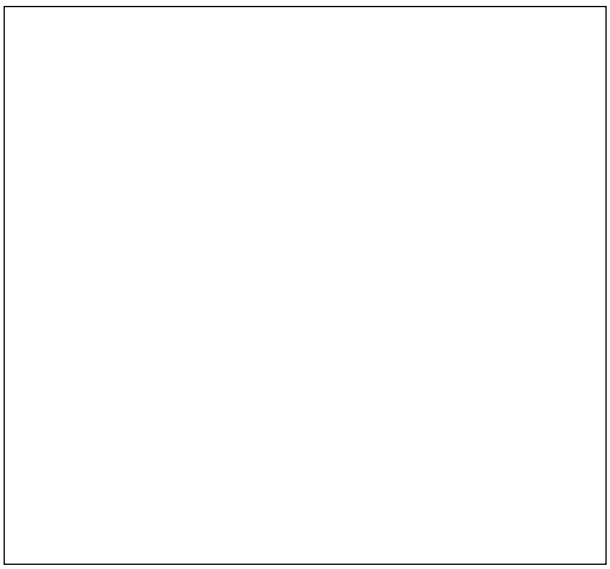
Luminaire Property

Luminaire Manufacturer:
Luminaire Description: HCP-242302-3000K
Lamp Catalog: SMD
Lamp Description: 3535
Number of Lamps: 14
Luminous Length (mm): 88
Luminous Width (mm): 88
Voltage: 230.3 V
Current: 0.290 A
Power: 28.04 W
Power Factor: 0.418

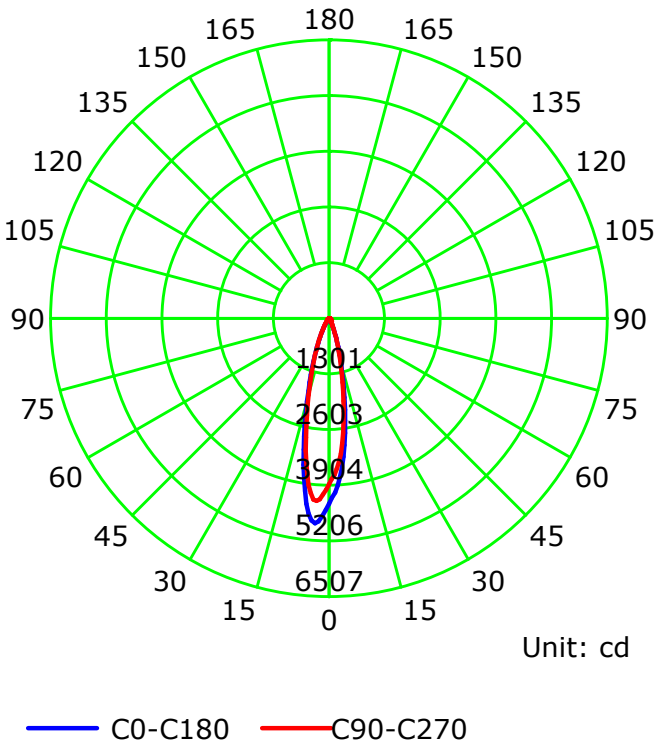
Photometric Results

CIE Class: Direct
Total Rated Lamp Lumens: 1037.0 lm
Measurement Flux: 1037 lm
Efficiency: 100%
Downward Ratio: 100%
Upward Ratio: 0%
Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 46.4, 47.6, 46.6, 47.7
Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 22.6, 23.0, 22.2, 23.6
Luminaire Efficacy Rating (LER): 37.03
Central Intensity: 4334.65 cd
Max. Intensity: 5206.15 cd
Pos of Max. Intensity: H225 V6
S/MH(C0/C180): 0.42
S/MH(C90/C270): 0.42

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd

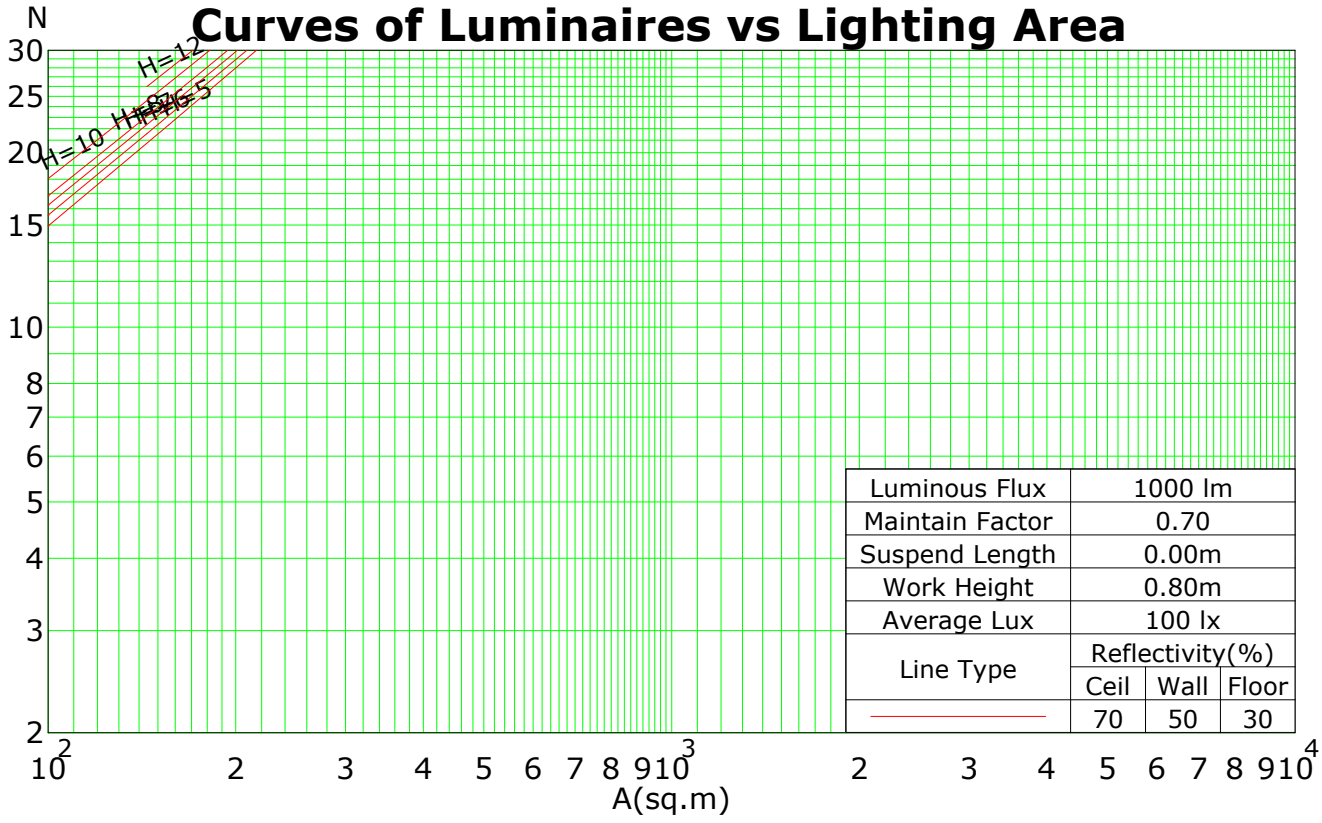
C Plane (°):0.0-360.0: 45.0
Gamma Plane (°):0.0-90.0:1.0
Test Lab: NINGBO LED LIGHTING
Test Device: GPM-1600L
Test Type: TYPE C
Distance: 6.500 m
Temperature: 25°C
Humidity:
Operator: DING LI
Inspector:

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	112	110	109	112	110	109	107	106	105	104	103	102	101	99	98	98	96
2	111	107	104	101	108	105	102	100	102	100	98	99	97	96	96	95	94	92
3	107	102	98	95	105	100	97	94	98	95	93	96	93	91	93	91	90	88
4	103	97	93	90	101	96	92	89	94	91	88	92	89	87	91	88	86	85
5	100	93	89	85	98	92	88	85	91	87	84	89	86	84	88	85	83	82
6	96	90	85	82	95	89	85	82	87	84	81	86	83	81	85	82	80	79
7	93	86	82	79	92	86	81	78	85	81	78	84	80	78	83	80	77	76
8	90	83	79	76	89	83	79	76	82	78	75	81	78	75	80	77	75	74
9	88	81	76	73	87	80	76	73	79	76	73	79	75	73	78	75	72	71
10	85	78	74	71	84	78	74	71	77	73	71	76	73	70	76	73	70	69

Spacing Criteria (0-180): 0.42
Spacing Criteria (90-270): 0.42
Spacing Criteria (Diagonal): 0.42

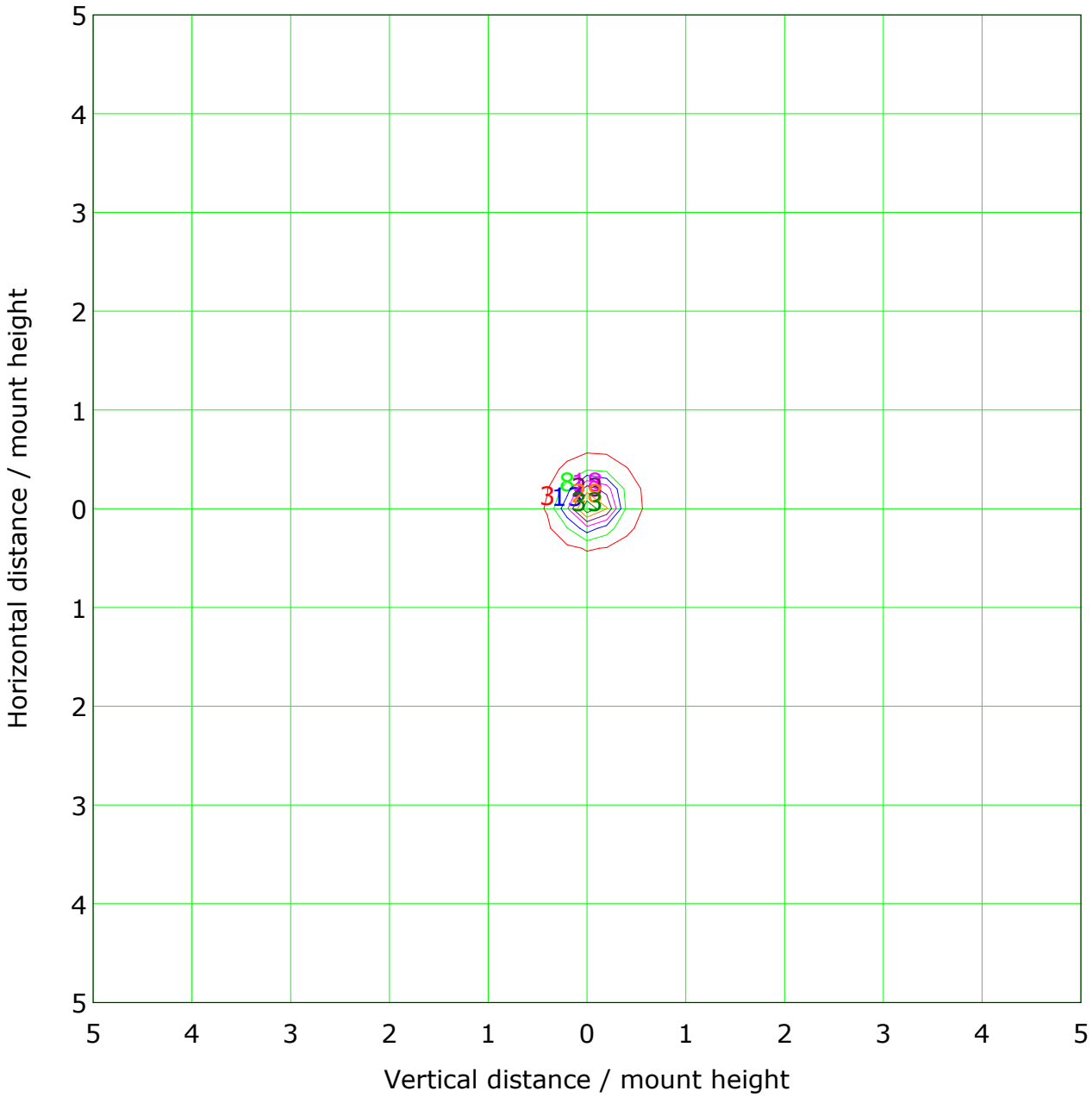
Curves of Luminaires vs Lighting Area



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



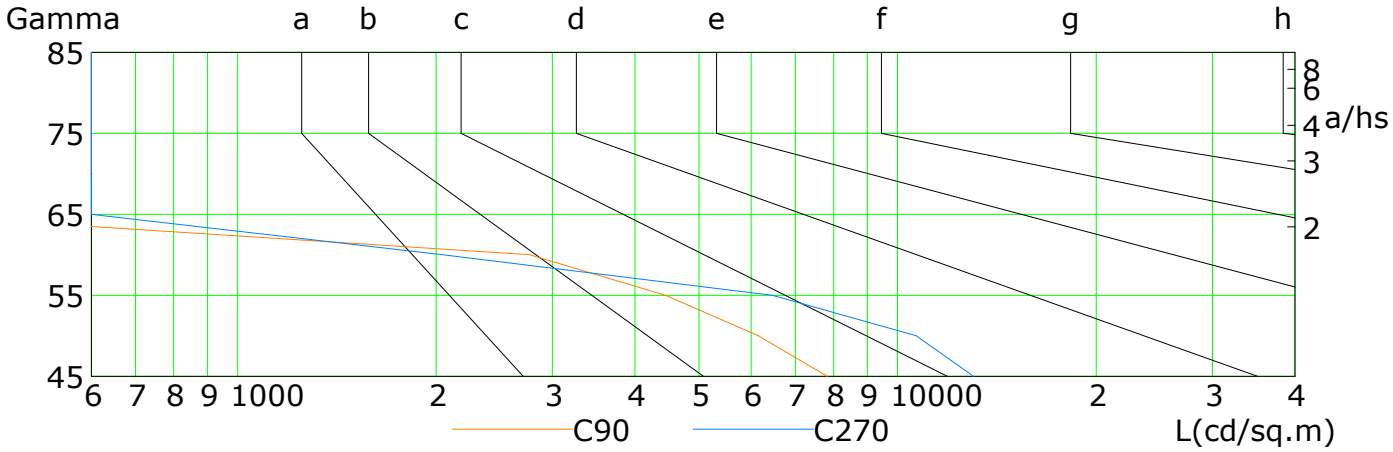
Mounting Height: 10.0m Max Lux(100%): 51.2 lx

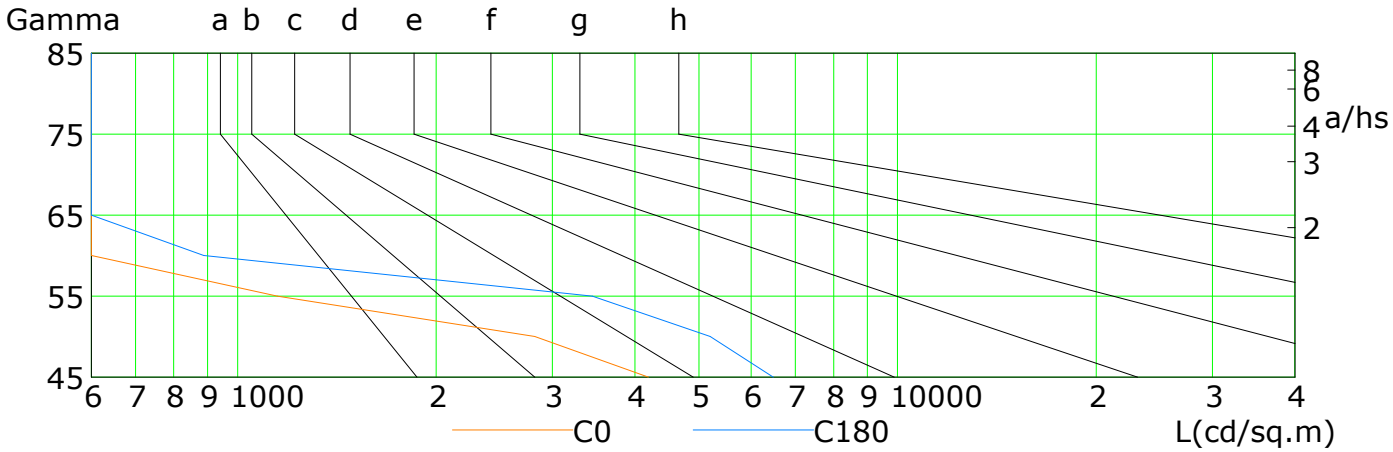
(5%): 2.6 lx
(15%): 7.7 lx
(25%): 12.8 lx
(35%): 17.9 lx
(45%): 23.0 lx
(55%): 28.2 lx
(65%): 33.3 lx

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:

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



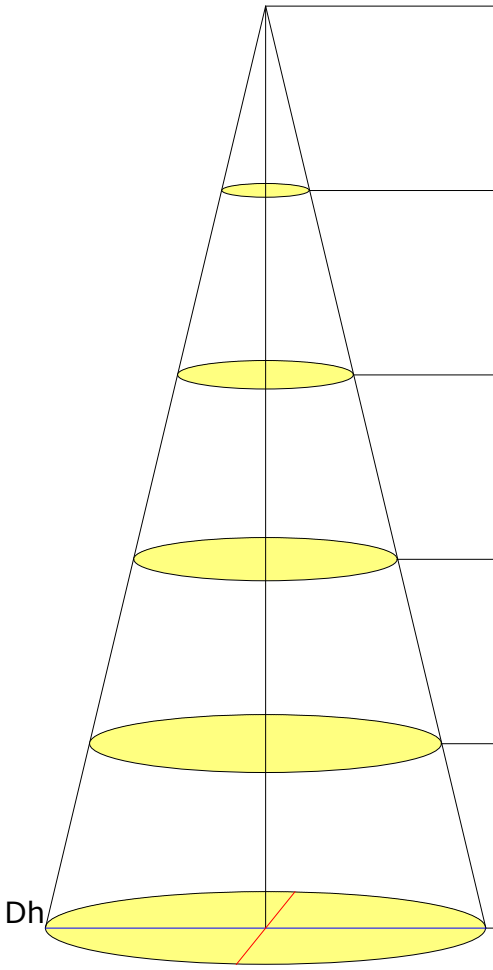


L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	4193	2819	1148	0	0	0	0	0	0
C90	7829	6151	4451	2769	312	0	0	0	0
C180	6478	5203	3447	888	0	0	0	0	0
C270	13046	10661	6464	2043	0	0	0	0	0

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



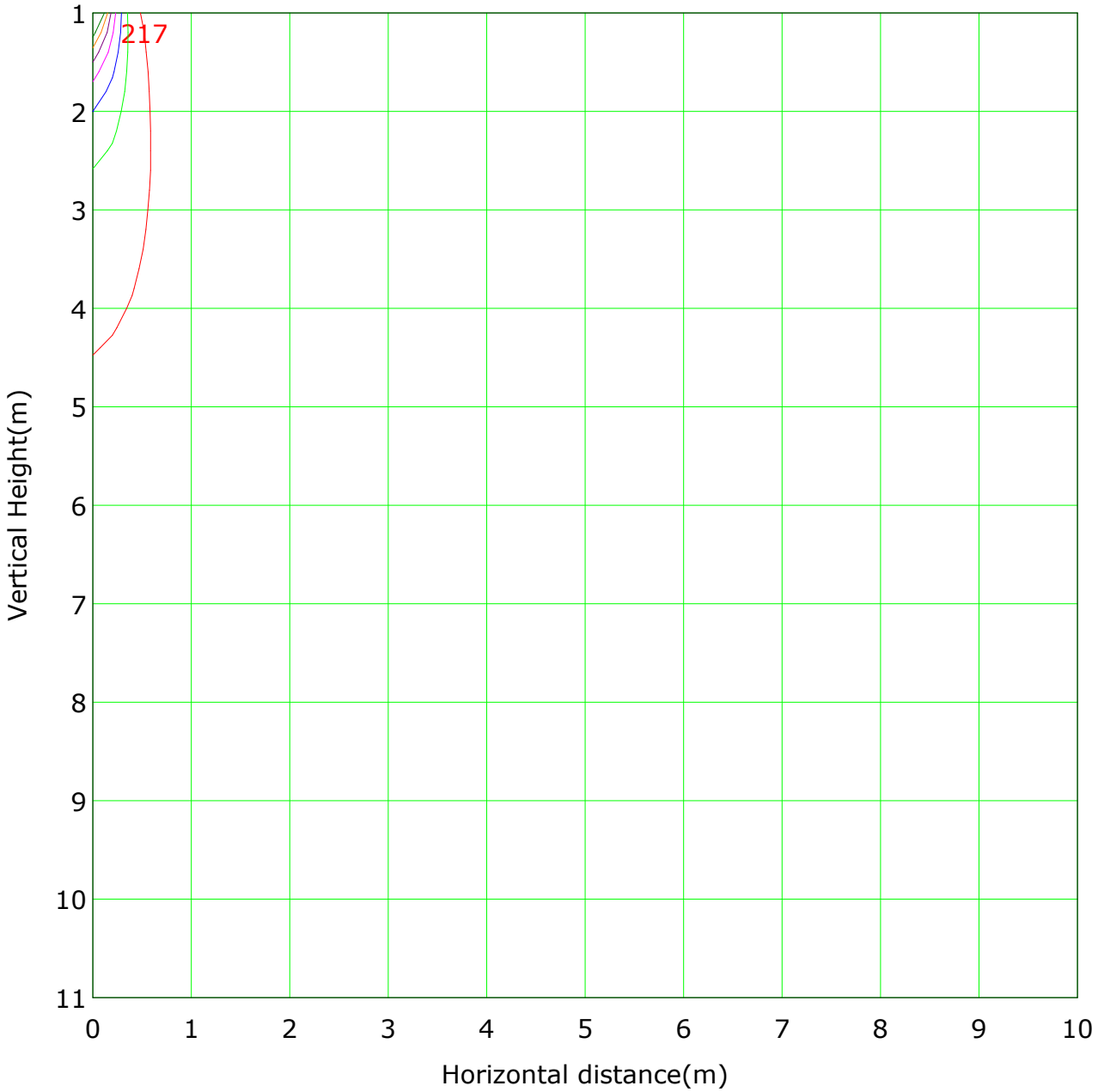
Dist(m)	Enadir(lx)	Dh/Dv_B(m)	S_B(sq.m)	Eav_B(lx)
10.0	43.35	3.99/4.07	14.3	22.71
20.0	10.84	7.98/8.14	57.0	5.68
30.0	4.82	11.97/12.21	128.3	2.52
40.0	2.71	15.97/16.29	228.1	1.42
50.0	1.73	19.96/20.36	356.5	0.91

Beam Angle(B): H22.6 V23.0 Field Angle(F): H46.4 V47.6

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: 4334.6 lx

(5%): 216.7 lx
(15%): 650.2 lx
(25%):1083.7 lx
(35%):1517.1 lx
(45%):1950.6 lx
(55%):2384.1 lx
(65%):2817.5 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

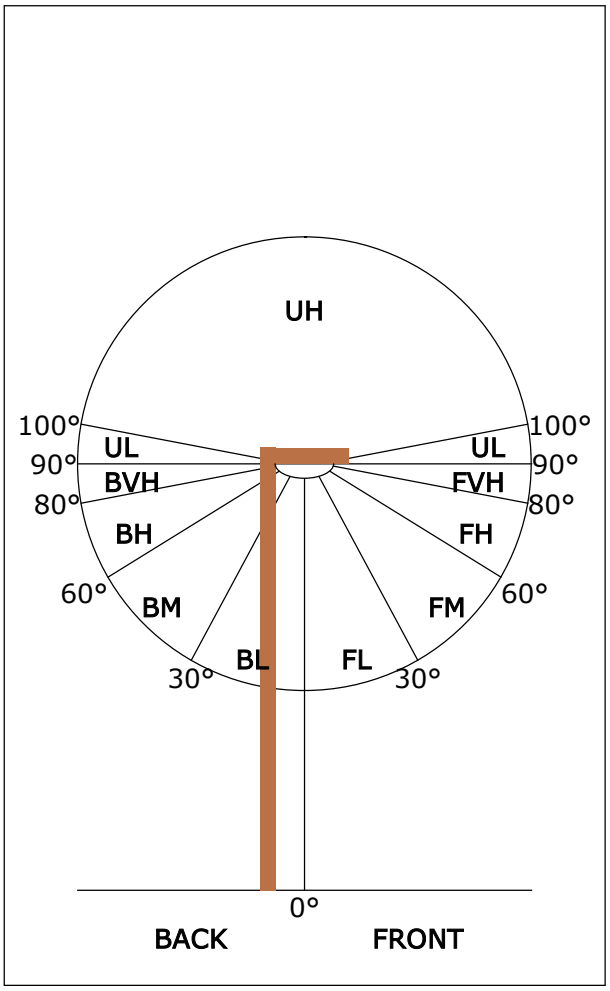
Reflectance: Ceiling (cavity)	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
X=2H Y=2H	7.0	7.6	7.2	7.8	8.0	11.4	12.1	11.7	12.2	12.4
3H	6.8	7.4	7.1	7.6	7.9	11.3	11.9	11.5	12.1	12.3
4H	6.7	7.3	7.0	7.6	7.8	11.2	11.8	11.5	12.0	12.3
6H	6.7	7.2	7.0	7.5	7.7	11.1	11.6	11.4	11.9	12.2
8H	6.6	7.1	7.0	7.4	7.7	11.1	11.6	11.4	11.9	12.2
12H	6.6	7.1	6.9	7.4	7.7	11.0	11.5	11.4	11.8	12.1
X=4H Y=2H	7.0	7.6	7.3	7.8	8.1	11.2	11.8	11.5	12.1	12.3
3H	6.9	7.3	7.2	7.6	8.0	11.1	11.6	11.4	11.9	12.2
4H	6.8	7.2	7.1	7.5	7.9	11.0	11.4	11.4	11.8	12.1
6H	6.7	7.1	7.1	7.4	7.8	10.9	11.3	11.3	11.7	12.1
8H	6.6	7.0	7.1	7.4	7.8	10.9	11.2	11.3	11.6	12.0
12H	6.6	6.9	7.0	7.3	7.7	10.8	11.1	11.3	11.5	12.0
X=8H Y=4H	6.6	7.0	7.1	7.4	7.8	10.9	11.2	11.3	11.6	12.0
6H	6.5	6.8	7.0	7.2	7.7	10.8	11.1	11.2	11.5	11.9
8H	6.5	6.7	7.0	7.2	7.7	10.7	11.0	11.2	11.4	11.9
12H	6.4	6.7	6.9	7.1	7.6	10.7	10.9	11.2	11.4	11.9
X=12H Y=4H	6.6	6.9	7.0	7.3	7.7	10.8	11.1	11.3	11.5	12.0
6H	6.5	6.7	7.0	7.2	7.7	10.7	11.0	11.2	11.4	11.9
8H	6.4	6.7	6.9	7.1	7.6	10.7	10.9	11.2	11.4	11.9
Variations with the observer position at spacings:										
S=1.0H	+3.1/-4.3					+3.6/-2.7				
S=1.5H	+5.5/-22.9					+6.1/-40.8				
S=2.0H	+7.4/-1.$					+8.1/-1.$				

Calculate in accordance with CIE Pub.117. The table is revised with 1037lm (8log(F/F0) = 0.1).

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:

FLUX DISTRIBUTION TABLE BASED ON THE IESNA LUMINAIRE CLASSIFICATION SYSTEM



ZONE	LUMENS	% LAMP LUMENS
FORWARD LIGHT	420	40.5
FL (0°-30°)	380	36.7
FM (30°-60°)	39	3.7
FH (60°-80°)	1	0.1
FVH (80°-90°)	0	0.0
BACK LIGHT	617	59.5
BL (0°-30°)	556	53.6
BM (30°-60°)	60	5.8
BH (60°-80°)	1	0.1
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)	B2 U0 G0
Quadrilateral Symmetrical Luminaire Types (Type V,Area Light)	B2 U0 G0

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