

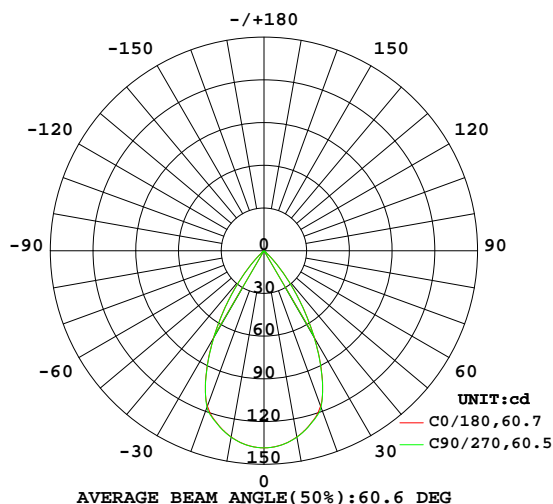
## LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.07V I:0.0417A P:8.7367W PF:0.9100 Freq:50.00Hz Lamp Flux:128.93lx1 lm		
NAME: LED Light	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Ross Gardam	SUR.:	Shielding Angle:

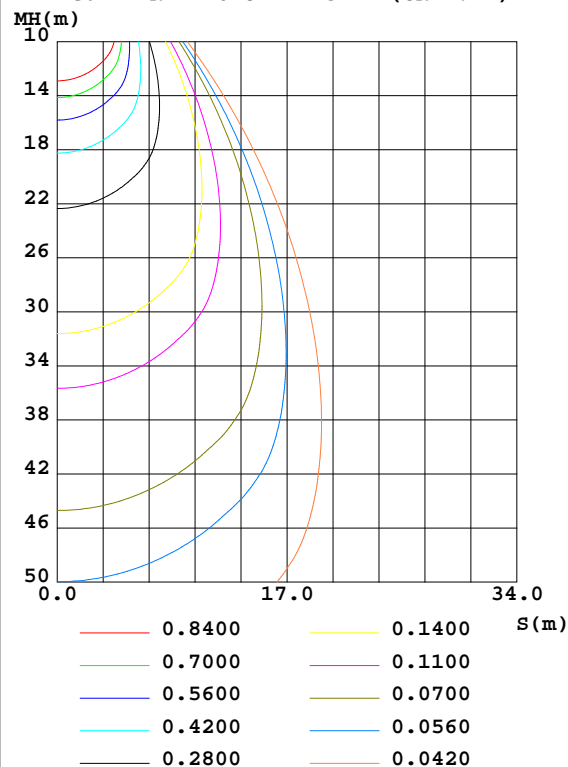
DATA OF LAMP		PHOTOMETRIC DATA Eff: 14.76 lm/W			
MODE	Hanging-Black aluminium	Imax(cd)	138.5	S/MH(C0/180)	0.90
NOMINAL POWER(W)	8.5	LOR(%)	100.0	S/MH(C90/270)	0.90
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	128.93	$\eta$ UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	128.931	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	230	$\eta$ down(%)	100.0	CIBSE SHR MAX	0.95

Silhouette of the luminaire

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.1DEG  
Operators:Wilson  
Test Date:2022-12-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.444  
Humidity:60.5%  
Test Distance:2.617m [K=1.0000]  
Remarks: File No.: WT-F-504-3206-01-A

Checker: Near Gao

Assessor: Akin Xu

### ZONAL FLUX DIAGRAM

**ZONAL FLUX DIAGRAM:**

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	132.8	132.9	132.9	132.9	132.8	132.9	132.9	132.9	0- 10	12.95	12.95	10,10
20	116.2	116.6	117.1	116.6	116.2	116.6	117.1	116.6	10- 20	35.42	48.37	37.5,37.5
30	71.05	70.89	70.59	70.89	71.05	70.89	70.59	70.89	20- 30	43.51	91.88	71.3,71.3
40	24.05	23.95	23.83	23.95	24.05	23.95	23.83	23.95	30- 40	28.44	120.3	93.3,93.3
50	2.049	2.055	2.079	2.055	2.049	2.055	2.079	2.055	40- 50	7.371	127.7	99,99
60	0.4473	0.4491	0.4591	0.4491	0.4473	0.4491	0.4591	0.4491	50- 60	0.9541	128.7	99.8,99.8
70	0.0917	0.0922	0.0921	0.0922	0.0917	0.0922	0.0921	0.0922	60- 70	0.2223	128.9	100,100
80	0.0179	0.0184	0.0173	0.0184	0.0179	0.0184	0.0173	0.0184	70- 80	0.0493	128.9	100,100
90	0	0.0001	0	0.0001	0	0.0001	0	0.0001	80- 90	0.0072	128.9	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 126.02 lm

%lum = 97.7%

%lamp = 97.7%

Conical surface Flux(120deg): 128.65 lm

%lum = 99.8%

%lamp = 99.8%

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.1DEG  
 Operators:Wilson  
 Test Date:2022-12-01

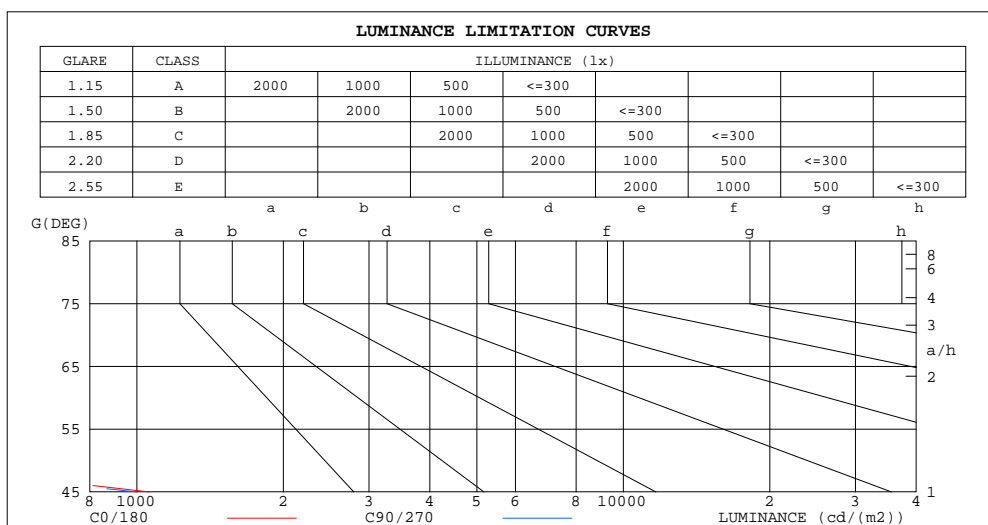
$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.444  
 Humidity:60.5%  
 Test Distance:2.617m [K=1.0000]  
 Remarks: File No.: WT-F-504-3206-01-A

Checker: Near Gao

Assessor: Akin Xu

**LUMINANCE LIMITATION CURVES**

Test:U:230.07V I:0.0417A P:8.7367W PF:0.9100 Freq:50.00Hz Lamp Flux:128.93lx1 lm		
NAME: LED Light	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Ross Gardam	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	5	6
80	9	9
75	15	15
70	24	24
65	43	43
60	80	81
55	154	155
50	285	286
45	1060	1000

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.1DEG  
 Operators: Wilson  
 Test Date: 2022-12-01

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.444  
 Humidity: 60.5%  
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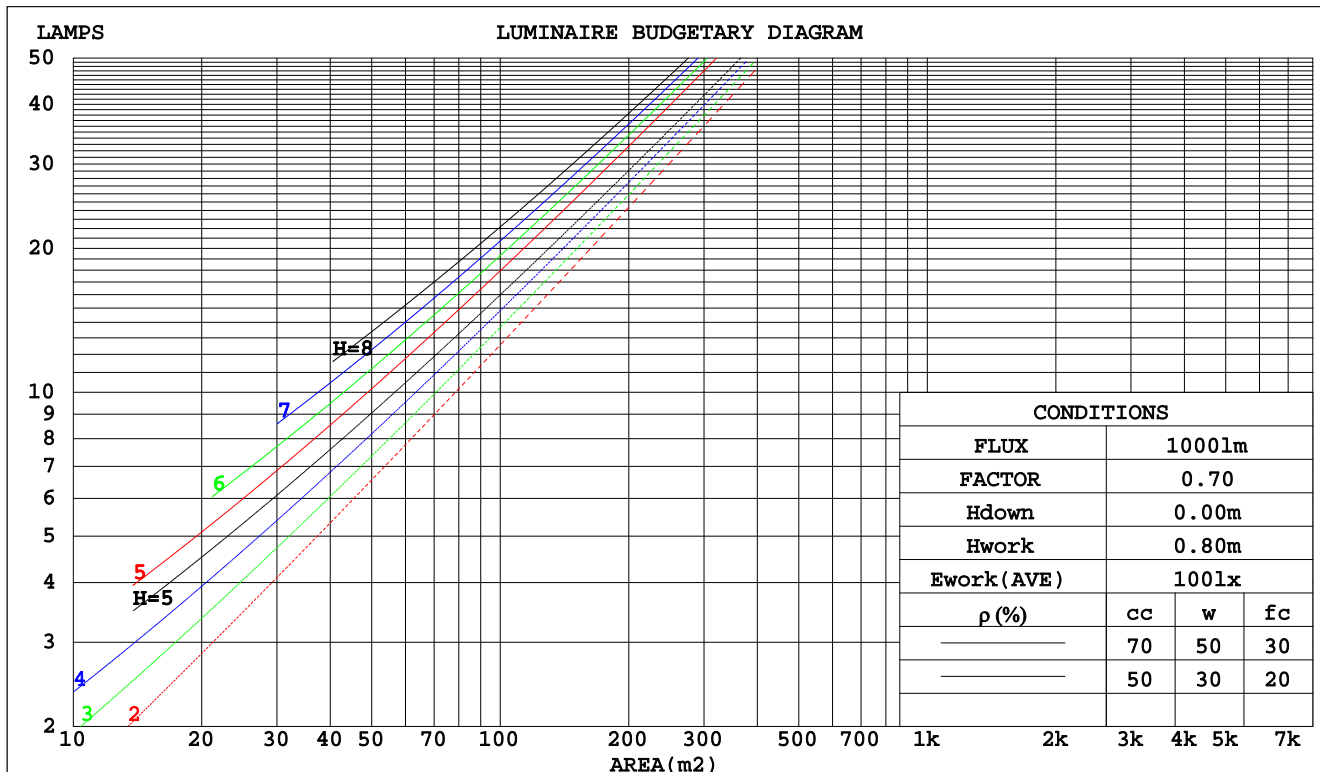
Checker: Near Gao

Assessor: Akin Xu

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:230.07V I:0.0417A P:8.7367W PF:0.9100 Freq:50.00Hz Lamp Flux:128.93lx1 lm		
NAME: LED Light	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Ross Gardam	SUR.:	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.1DEG  
 Operators: Wilson  
 Test Date: 2022-12-01

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.444  
 Humidity: 60.5%  
 Test Distance: 2.617m [K=1.0000]  
 Remarks: File No.: WT-F-504-3206-01-A

Checker: Near Gao

Assessor: Akin Xu

**WEC AND CCEC**

Test:U:230.07V I:0.0417A P:8.7367W PF:0.9100 Freq:50.00Hz Lamp Flux:128.931x1 lm		
NAME: LED Light	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Ross Gardam	SUR.:	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0	
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
pfc	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.177	.101	.032	.170	.097	.031	.158	.090	.029	.146	.084	.027	.135	.078	.025		
2.0	.170	.093	.029	.164	.090	.028	.154	.085	.027	.144	.081	.025	.135	.076	.024		
3.0	.162	.086	.026	.157	.084	.025	.148	.080	.024	.140	.077	.024	.132	.073	.023		
4.0	.155	.080	.024	.151	.079	.023	.143	.076	.023	.136	.073	.022	.129	.070	.021		
5.0	.148	.075	.022	.144	.074	.022	.138	.072	.021	.131	.069	.021	.125	.067	.020		
6.0	.141	.071	.020	.138	.070	.020	.132	.068	.020	.127	.066	.019	.121	.064	.019		
7.0	.135	.067	.019	.133	.066	.019	.127	.064	.019	.122	.063	.018	.118	.061	.018		
8.0	.130	.063	.018	.127	.063	.018	.122	.061	.017	.118	.060	.017	.114	.058	.017		
9.0	.124	.060	.017	.122	.060	.017	.118	.058	.017	.114	.057	.016	.110	.056	.016		
10.0	.120	.057	.016	.118	.057	.016	.114	.056	.016	.110	.055	.016	.107	.054	.015		

pcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.171	.157	.145	.146	.135	.125	.100	.093	.086	.058	.054	.050	.018	.017	.016	
2.0	.156	.132	.113	.134	.114	.097	.092	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.144	.114	.090	.123	.098	.078	.085	.068	.054	.049	.040	.032	.016	.013	.011	
4.0	.134	.099	.072	.115	.085	.063	.079	.060	.044	.046	.035	.026	.015	.011	.009	
5.0	.125	.087	.059	.107	.076	.052	.074	.053	.037	.043	.031	.022	.014	.010	.007	
6.0	.118	.078	.050	.101	.068	.043	.070	.047	.031	.041	.028	.018	.013	.009	.006	
7.0	.111	.071	.042	.096	.061	.036	.066	.043	.026	.038	.025	.015	.012	.008	.005	
8.0	.106	.064	.036	.091	.056	.031	.063	.039	.022	.037	.023	.013	.012	.008	.004	
9.0	.101	.059	.031	.087	.051	.027	.060	.036	.019	.035	.021	.011	.011	.007	.004	
10.0	.096	.055	.027	.083	.048	.024	.058	.034	.017	.034	.020	.010	.011	.007	.003	

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.1DEG  
 Operators:Wilson  
 Test Date:2022-12-01

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.444  
 Humidity:60.5%  
 Test Distance:2.617m [K=1.0000]  
 Remarks: File No.: WT-F-504-3206-01-A

Checker: Near Gao

Assessor: Akin Xu

**UGR(Unified Glare Rating) Table**

Test:U:230.07V I:0.0417A P:8.7367W PF:0.9100 Freq:50.00Hz Lamp Flux:128.93lx1 lm										
NAME: LED Light					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: Ross Gardam					SUR.:			Shielding Angle:		
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
working 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	9.3	10.3	9.6	10.5	10.6	9.3	10.2	9.5	10.4	10.5
3H	9.2	10.0	9.4	10.2	10.4	9.1	10.0	9.3	10.2	10.4
4H	9.1	9.9	9.4	10.1	10.3	9.0	9.8	9.3	10.0	10.3
6H	9.0	9.8	9.3	10.0	10.2	8.9	9.7	9.2	9.9	10.2
8H	8.9	9.7	9.3	9.9	10.2	8.9	9.6	9.2	9.9	10.1
12H	8.9	9.6	9.2	9.9	10.2	8.8	9.5	9.1	9.8	10.1
4H 2H	9.1	9.9	9.4	10.1	10.3	9.0	9.8	9.3	10.0	10.3
3H	8.9	9.6	9.2	9.9	10.2	8.8	9.5	9.1	9.8	10.1
4H	8.8	9.4	9.2	9.7	10.1	8.7	9.4	9.1	9.7	10.0
6H	8.7	9.3	9.1	9.6	10.0	8.6	9.2	9.0	9.5	9.9
8H	8.7	9.2	9.1	9.5	9.9	8.6	9.1	9.0	9.5	9.8
12H	8.6	9.1	9.0	9.5	9.8	8.5	9.0	8.9	9.4	9.8
8H 4H	8.7	9.2	9.1	9.5	9.9	8.6	9.1	9.0	9.5	9.8
6H	8.6	9.0	9.0	9.4	9.8	8.5	8.9	8.9	9.3	9.7
8H	8.5	8.9	9.0	9.3	9.7	8.4	8.8	8.9	9.2	9.7
12H	8.5	8.8	8.9	9.2	9.7	8.4	8.7	8.8	9.1	9.6
12H 4H	8.6	9.1	9.0	9.5	9.8	8.5	9.0	8.9	9.4	9.8
6H	8.5	8.9	9.0	9.3	9.7	8.4	8.8	8.9	9.2	9.7
8H	8.5	8.8	8.9	9.2	9.7	8.4	8.7	8.8	9.1	9.6
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 3.3 / -16.1					+ 3.3 / -16.0				
1.5H	+ 5.8 / -13.2					+ 5.8 / -13.0				
2.0H	+ 7.9 / -10.5					+ 7.8 / -10.1				

CIE Pub.117, 128.9 lm Total Lamp Luminous Flux Corrected ( $8\log(F/F_0) = -7.1$ )  
 Area: 0.011304 m<sup>2</sup>

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.1DEG  
 Operators:Wilson  
 Test Date:2022-12-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.444  
 Humidity:60.5%  
 Test Distance:2.617m [K=1.0000]  
 Remarks: File No.: WT-F-504-3206-01-A

Checker: Near Gao

Assessor: Akin Xu

**UTILIZATION FACTORS TABLE**

Test:U:230.07V I:0.0417A P:8.7367W PF:0.9100 Freq:50.00Hz Lamp Flux:128.93lx1 lm		
NAME: LED Light	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Ross Gardam	SUR.:	Shielding Angle:

REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT)    k(RI) x RCR = 5									
k = 0.60	87	81	77	87	81	77	86	80	77	73
0.80	95	89	85	94	89	85	93	88	85	81
1.00	99	94	90	99	93	90	97	93	89	86
1.25	103	98	95	102	98	95	100	97	94	90
1.50	106	101	98	105	101	98	103	99	97	92
2.00	109	105	102	107	104	101	105	102	99	94
2.50	110	107	104	109	105	103	106	103	101	95
3.00	112	109	106	110	107	105	107	105	103	96
4.00	114	111	109	112	110	108	108	106	105	98
5.00	115	113	111	113	111	109	109	108	106	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004				Suspended				SHRNM = 1.25		

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.1DEG  
 Operators:Wilson  
 Test Date:2022-12-01

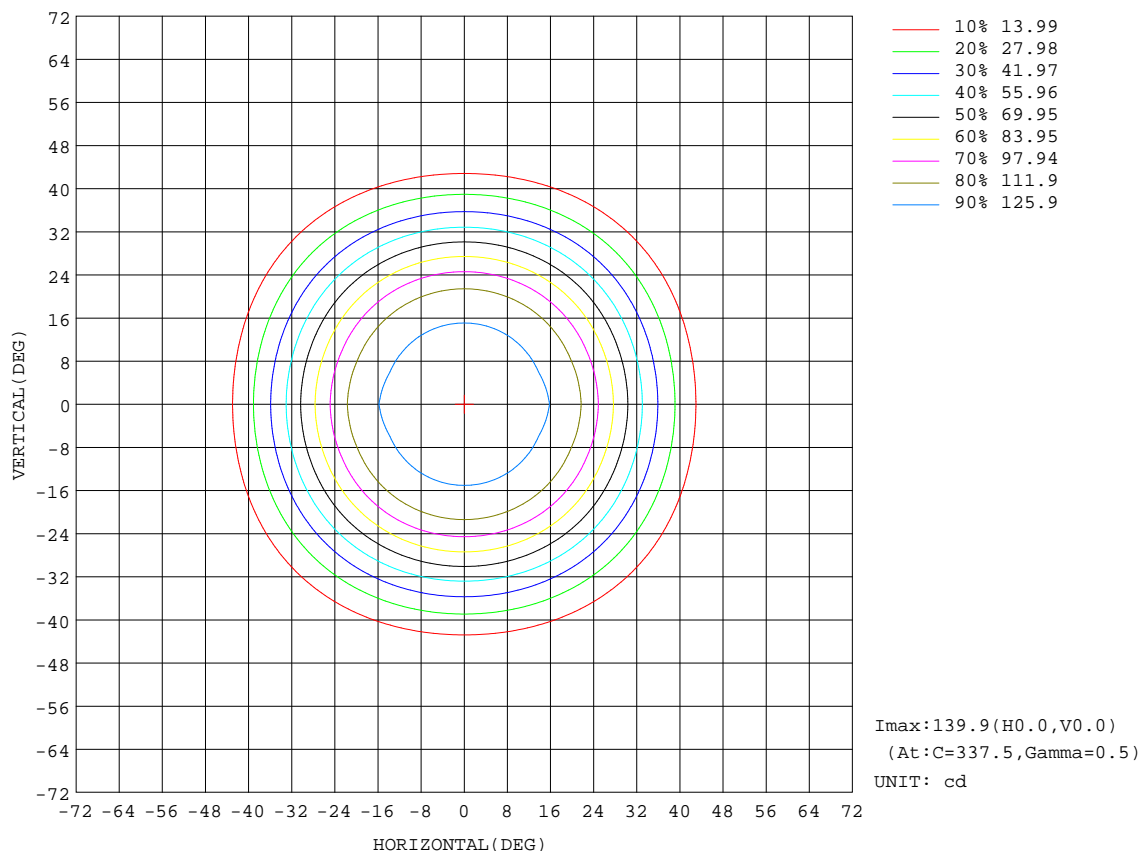
Checker: Near Gao

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.444  
 Humidity:60.5%  
 Test Distance:2.617m [K=1.0000]  
 Remarks: File No.: WT-F-504-3206-01-A

Assessor: Akin Xu

### ISOCANDELA DIAGRAM

Test:U:230.07V I:0.0417A P:8.7367W PF:0.9100 Freq:50.00Hz Lamp Flux:128.93lx1 lm		
NAME: LED Light	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Ross Gardam	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.1DEG  
 Operators: Wilson  
 Test Date: 2022-12-01

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.444  
 Humidity: 60.5%  
 Test Distance: 2.617m [K=1.0000]  
 Remarks: File No.: WT-F-504-3206-01-A

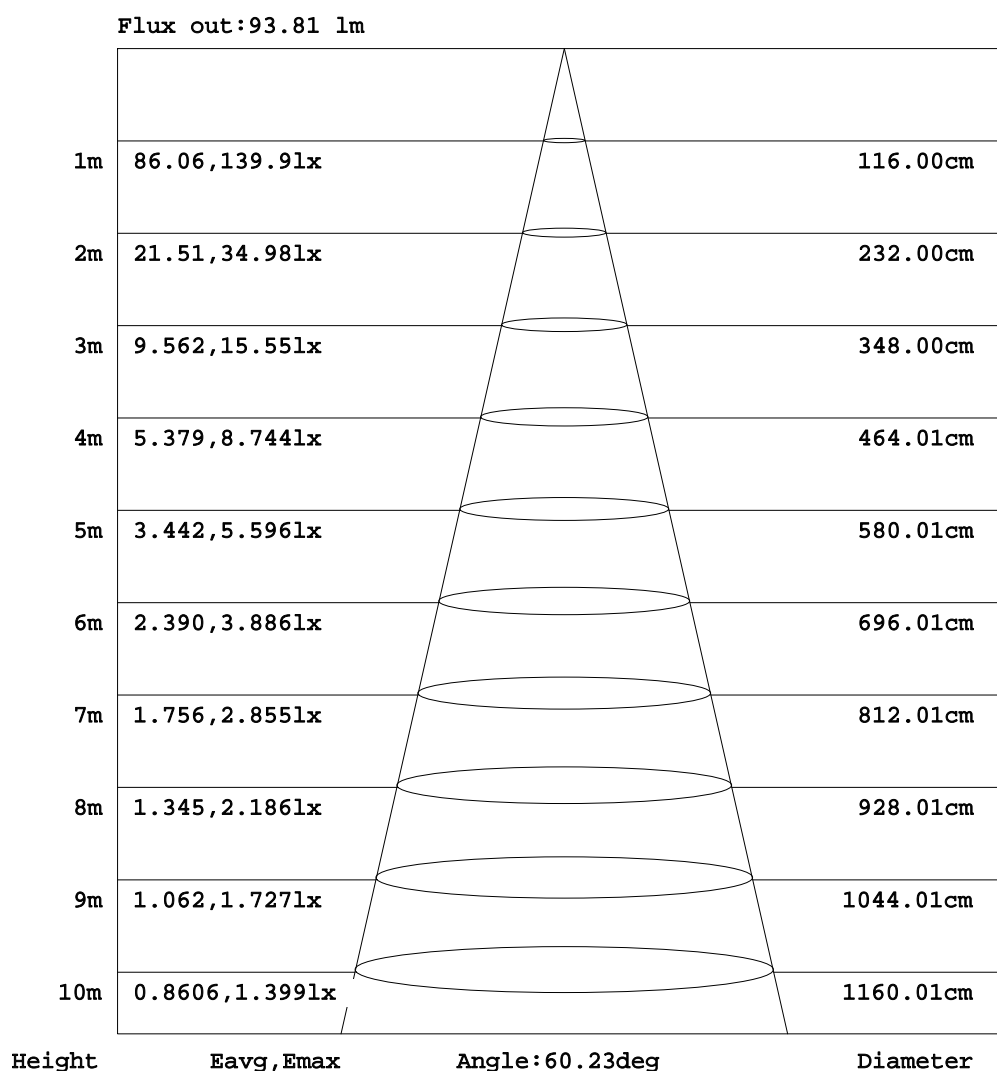
Checker: Near Gao

Assessor: Akin Xu



### AAI Figure

Test:U:230.07V I:0.0417A P:8.7367W PF:0.9100 Freq:50.00Hz Lamp Flux:128.93lx1 lm		
NAME: LED Light	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Ross Gardam	SUR.:	Shielding Angle:



Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.1DEG  
Operators:Wilson  
Test Date:2022-12-01

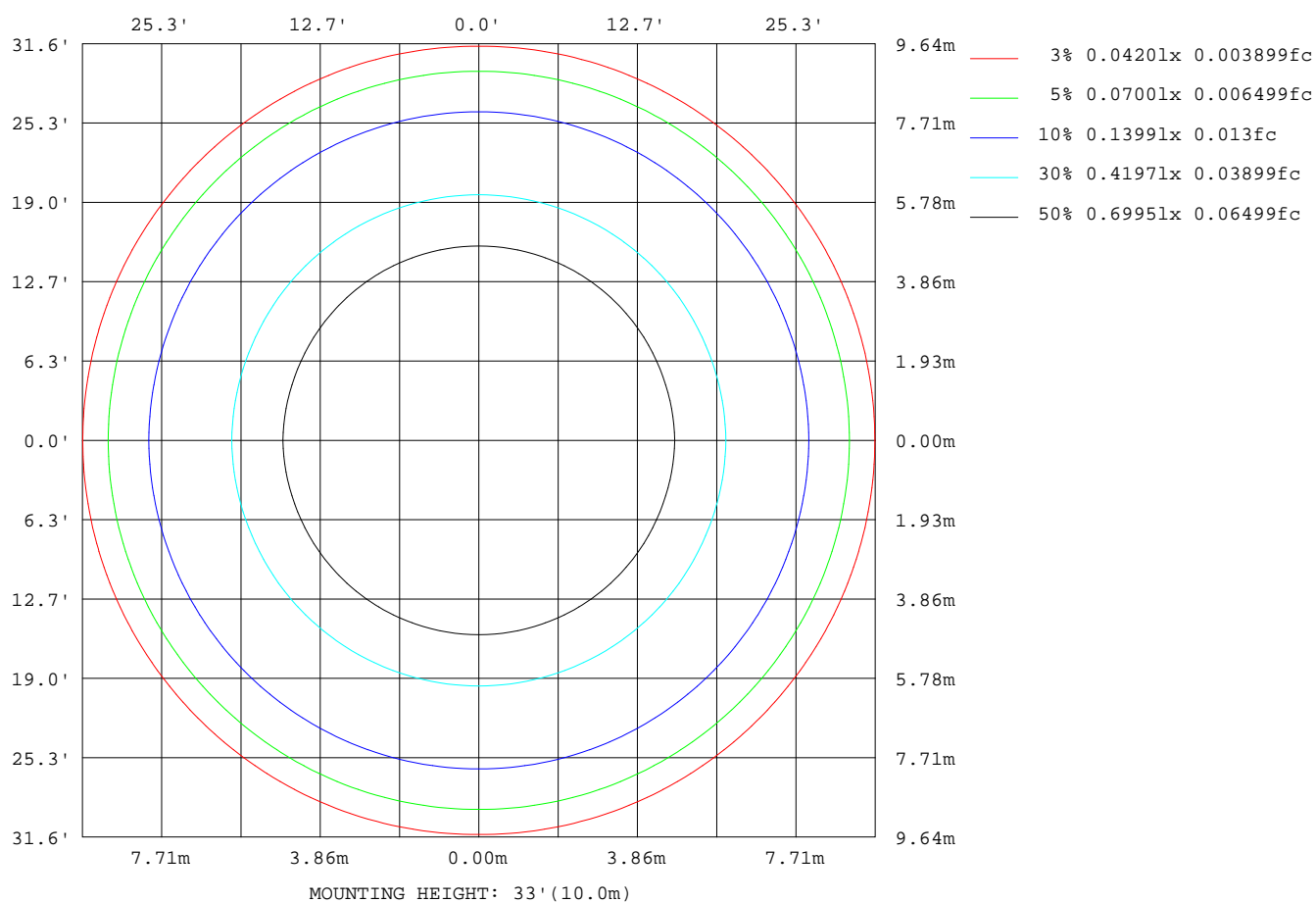
γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.444  
Humidity:60.5%  
Test Distance:2.617m [K=1.0000]  
Remarks: File No.: WT-F-504-3206-01-A

Checker: Near Gao

Assessor: Akin Xu

## ISOLUX DIAGRAM

Test:U:230.07V I:0.0417A P:8.7367W PF:0.9100 Freq:50.00Hz Lamp Flux:128.93lx1 lm		
NAME: LED Light	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Ross Gardam	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.1DEG  
Operators:Wilson  
Test Date:2022-12-01

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.444  
Humidity:60.5%  
Test Distance:2.617m [K=1.0000]  
Remarks: File No.: WT-F-504-3206-01-A

Checker: Near Gao

Assessor: Akin Xu

### LED Avg.L Report

Test:U:230.07V I:0.0417A P:8.7367W PF:0.9100 Freq:50.00Hz Lamp Flux:128.93lx1 lm		
NAME: LED Light	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Ross Gardam	SUR.:	Shielding Angle:

AvgL	cd/m2
L_0~180(65)av	42
L_0~180(75)av	15
L_0~180(85)av	5
L_90~270(65)av	43
L_90~270(75)av	15
L_90~270(85)av	6
L_45(65)av	43
L_45(75)av	15
L_45(85)av	6

Standard: GB/T 29293-2012

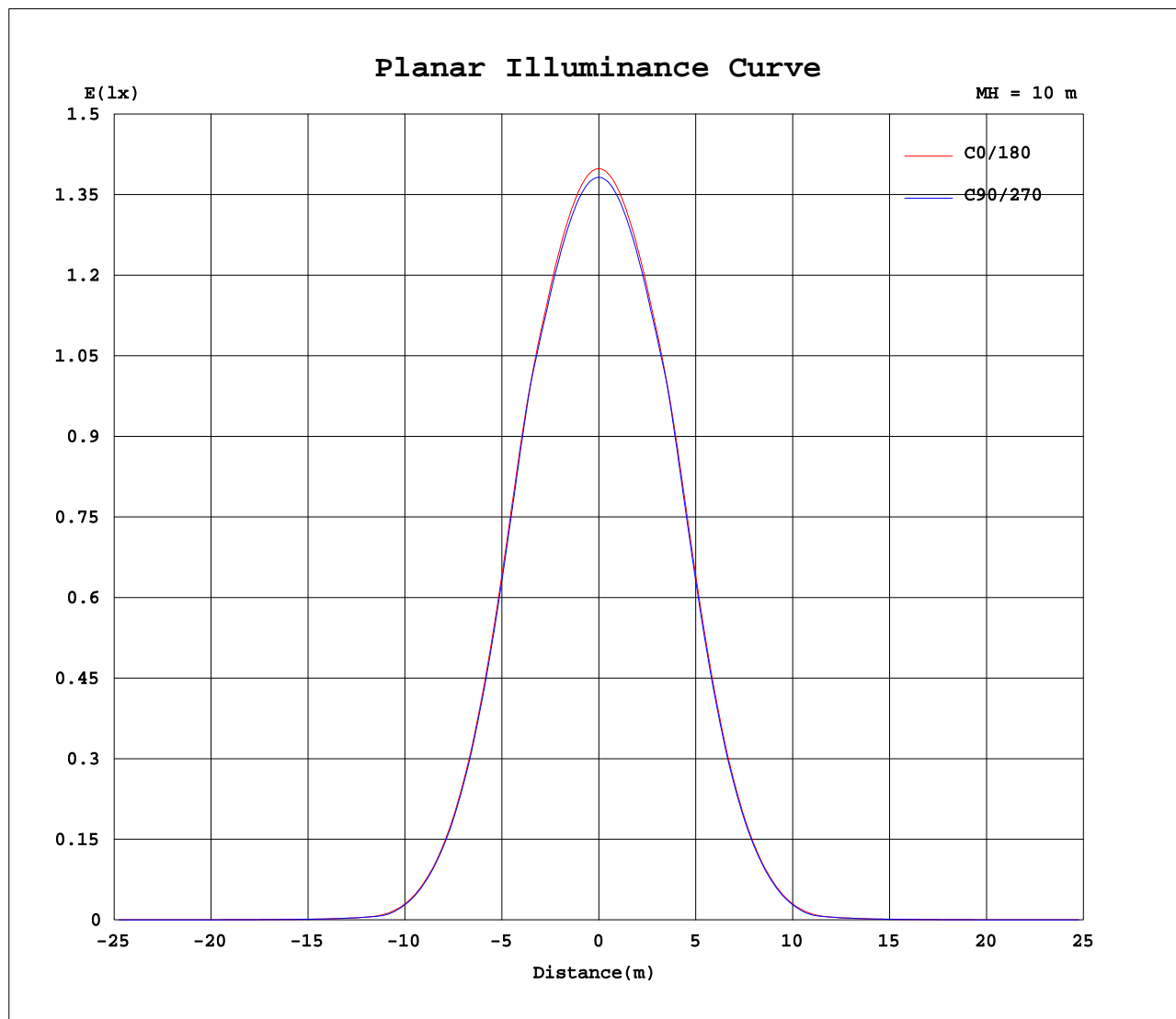
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.1DEG  
Operators:Wilson  
Test Date:2022-12-01

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.444  
Humidity:60.5%  
Test Distance:2.617m [K=1.0000]  
Remarks: File No.: WT-F-504-3206-01-A

Checker: Near Gao

Assessor: Akin Xu

## Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.1DEG  
 Operators: Wilson  
 Test Date: 2022-12-01

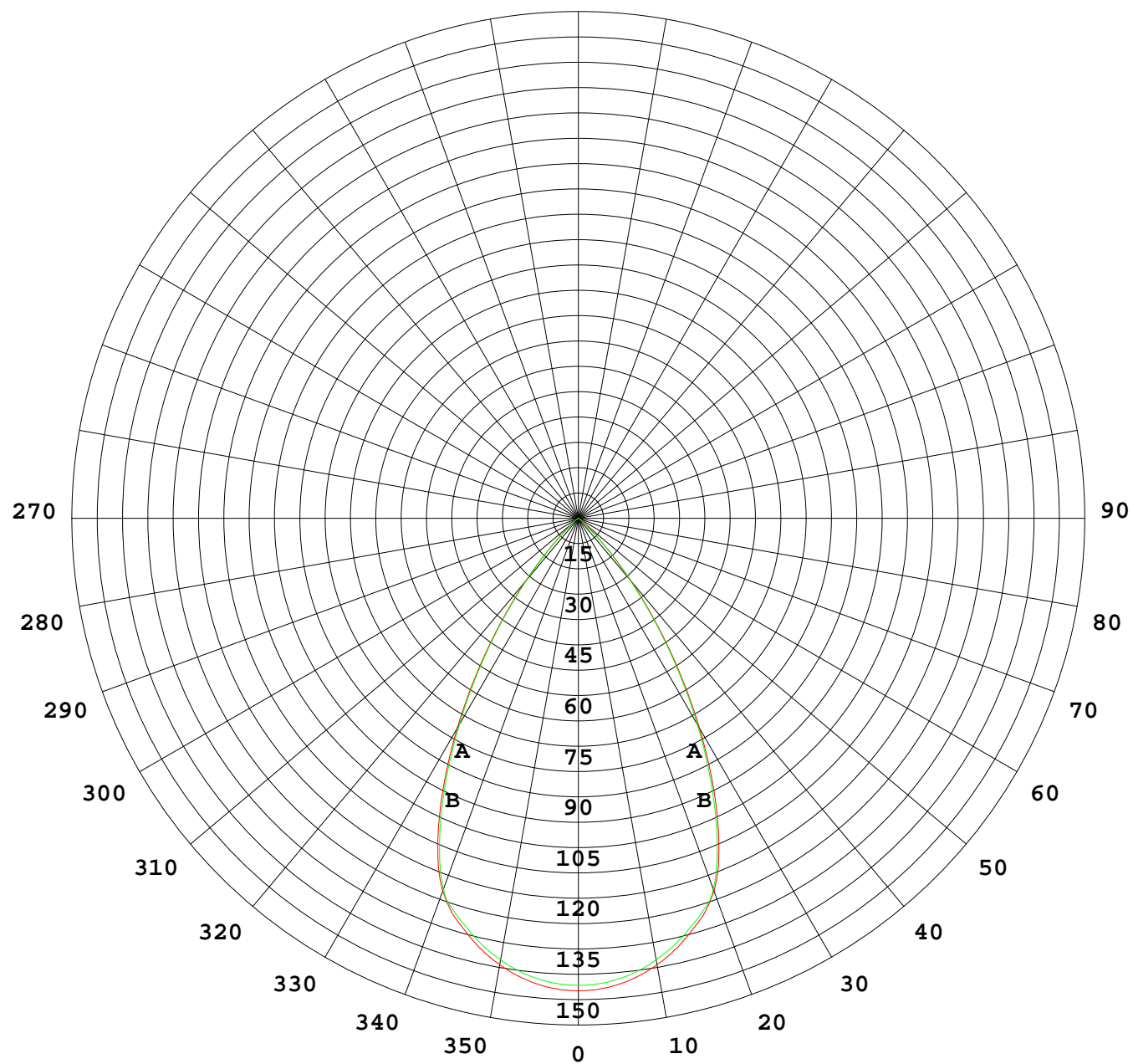
γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.444  
 Humidity: 60.5%  
 Test Distance: 2.617m [K=1.0000]  
 Remarks: File No.: WT-F-504-3206-01-A

Checker: Near Gao

Assessor: Akin Xu

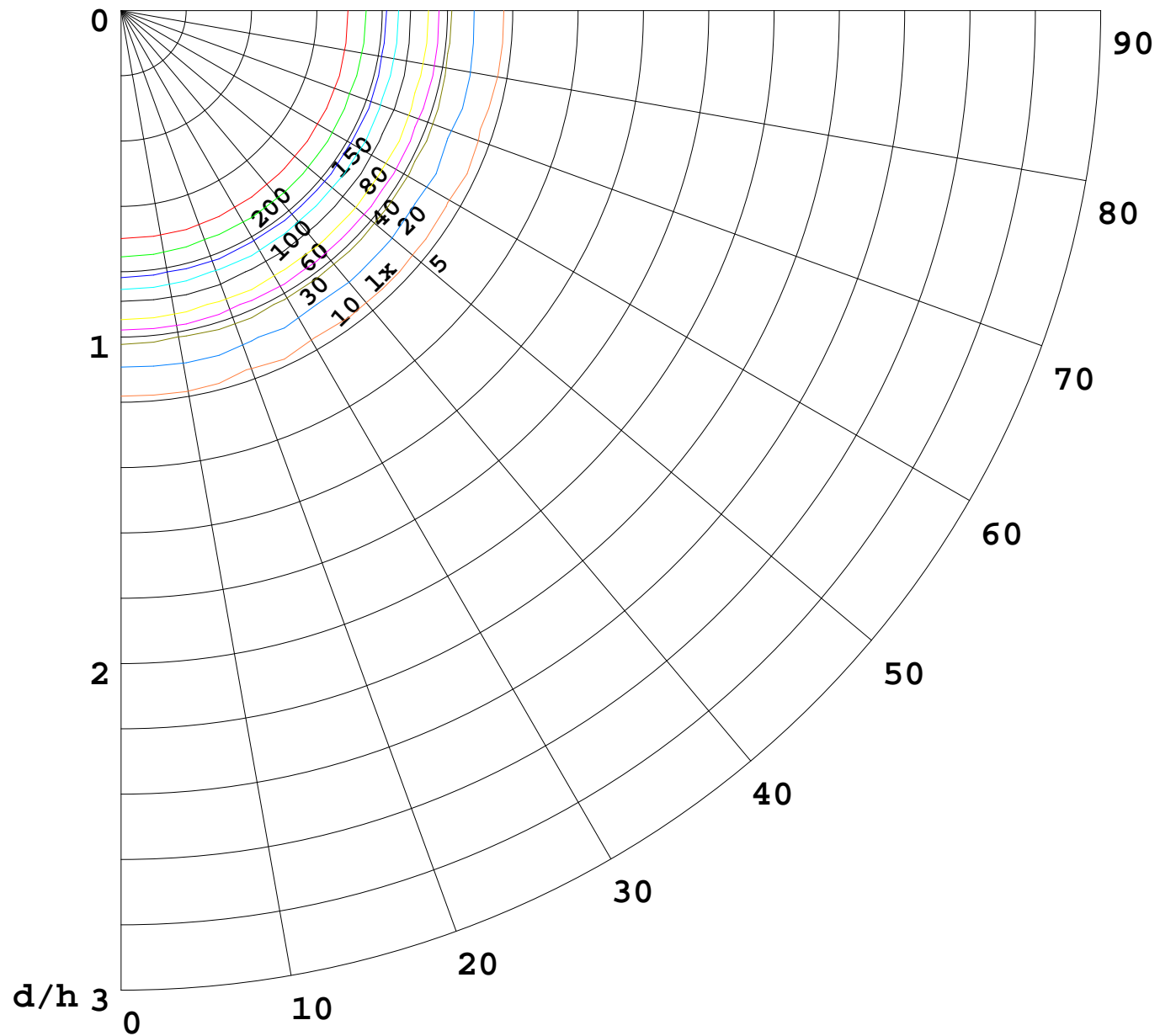
Assessor: Akin Xu

I(cd)



1000 lm

$\kappa = 1$



F = 1000 lm  
 K = 0.7  
 Hcc = 0.8 m  
 Hfc = 0.0 m  
 Eave = 100 lx

	Pcc	Pw	Pfc
—————	70	50	30
—————	50	30	20

