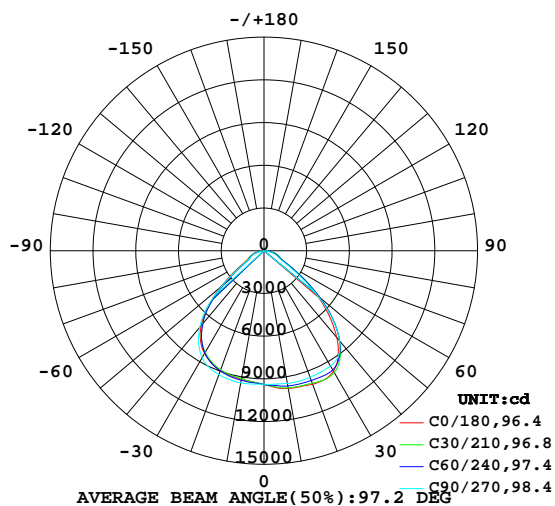


## LUMINAIRE PHOTOMETRIC TEST REPORT

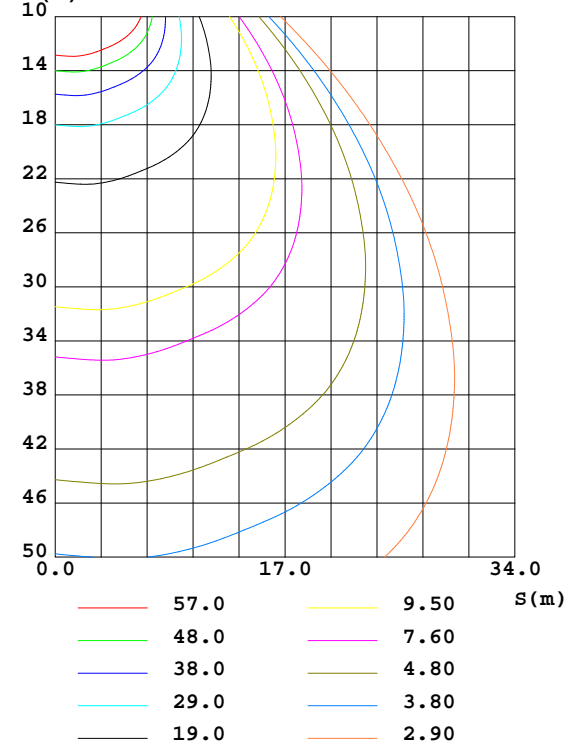
NAME: LED灯	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:21cm*16cm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 140.06 lm/W			
MODEL	ZGSM-GCD160H4	Imax(cd)	10038	S/MH(C0/180)	1.31
NOMINAL POWER(W)	160	LOR(%)	100.0	S/MH(C90/270)	1.34
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	22410	$\eta$ UP,DN(C0-180)	0.0,52.6
NOMINAL FLUX(lm)	22400	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,47.5
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	220.1	$\eta$ down(%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2017

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity:65.0%  
 Test Distance:10.480m [K=1.0000]  
 Remarks:

## ZONAL FLUX DIAGRAM

### ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	982.0	972.0	946.3	923.0	916.9	916.1	942.4	967.5	0- 10	900.3	900.3	4.02,4.02
20	997.5	979.4	945.3	911.3	896.0	889.2	926.1	970.7	10- 20	2673	3574	15.9,16
30	976.1	979.4	934.1	878.5	833.6	820.9	869.0	927.9	20- 30	4283	7856	35.1,35.1
40	796.3	832.9	825.1	754.9	685.5	666.6	703.5	739.5	30- 40	5258	13114	58.5,58.5
50	486.4	523.6	496.8	437.3	397.5	369.9	384.0	423.5	40- 50	4662	17777	79.3,79.4
60	193.8	201.3	169.7	150.1	148.0	128.9	123.1	151.7	50- 60	2492	20269	90.4,90.5
70	109.4	108.1	93.54	95.55	94.42	90.04	81.32	98.38	60- 70	1193	21462	95.8,95.8
80	53.59	59.25	36.85	43.83	36.68	34.23	16.92	45.32	70- 80	748.6	22210	99.1,99.2
90	6.705	6.759	1.097	3.560	2.298	1.785	0.4646	2.447	80- 90	200.0	22410	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:×10cd									UNIT:lm		

Conical surface Flux(90deg): 15648 lm

%lum = 69.8%

%lamp = 69.9%

Conical surface Flux(120deg): 20269 lm

%lum = 90.4%

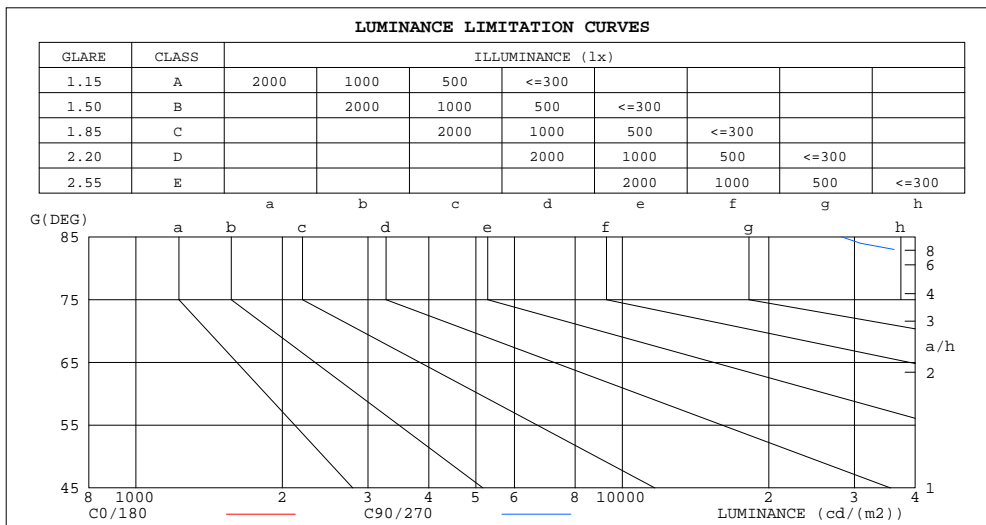
%lamp = 90.5%

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2017

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity:65.0%  
 Test Distance:10.480m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

NAME: LED灯	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:21cm*16cm	Shielding Angle:



LUMINANCE cd/(m2)		
G( DEG )	C0/180	C90/270
85	76305	28217
80	91847	63152
75	102264	77352
70	95238	81397
65	92426	81709
60	115373	101005
55	168840	156924
50	225206	230035
45	273678	287520

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2017

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.480m [K=1.0000]  
Remarks:

## WEC AND CCEC

NAME: LED灯	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:21cm*16cm	Shielding Angle:

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						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.256	.146	.046	.250	.142	.045	.237	.136	.043	.225	.130	.042	.214	.124	.040		
2.0	.246	.135	.041	.240	.132	.041	.229	.127	.040	.218	.122	.038	.209	.118	.037		
3.0	.232	.124	.037	.227	.121	.037	.217	.118	.036	.208	.114	.035	.199	.110	.034		
4.0	.218	.113	.033	.213	.112	.033	.205	.109	.032	.197	.106	.032	.189	.103	.031		
5.0	.205	.104	.030	.201	.103	.030	.193	.100	.030	.186	.098	.029	.179	.096	.029		
6.0	.193	.097	.028	.189	.095	.027	.182	.093	.027	.176	.091	.027	.170	.089	.027		
7.0	.181	.090	.025	.178	.089	.025	.172	.087	.025	.166	.085	.025	.161	.084	.025		
8.0	.171	.084	.024	.168	.083	.023	.163	.081	.023	.158	.080	.023	.153	.078	.023		
9.0	.162	.078	.022	.159	.078	.022	.154	.076	.022	.150	.075	.021	.145	.074	.021		
10.0	.153	.074	.020	.151	.073	.020	.146	.072	.020	.142	.071	.020	.138	.070	.020		

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						Ceiling Cavity Exitance Coefficients(CCEC)										
0.0	.191	.191	.191	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020		
1.0	.177	.157	.139	.151	.134	.119	.103	.093	.083	.060	.054	.048	.019	.017	.016		
2.0	.166	.132	.104	.142	.114	.090	.098	.079	.062	.056	.046	.037	.018	.015	.012		
3.0	.157	.114	.080	.135	.098	.069	.093	.068	.048	.053	.040	.029	.017	.013	.009		
4.0	.149	.100	.063	.128	.087	.055	.088	.060	.039	.051	.035	.023	.016	.012	.007		
5.0	.142	.090	.051	.122	.078	.044	.084	.054	.031	.049	.032	.019	.016	.010	.006		
6.0	.135	.081	.042	.116	.070	.037	.080	.049	.026	.046	.029	.015	.015	.009	.005		
7.0	.129	.074	.036	.111	.064	.031	.077	.045	.022	.044	.027	.013	.014	.009	.004		
8.0	.123	.068	.031	.106	.059	.027	.073	.042	.019	.043	.025	.011	.014	.008	.004		
9.0	.117	.063	.027	.101	.055	.023	.070	.039	.017	.041	.023	.010	.013	.007	.003		
10.0	.112	.059	.024	.097	.051	.021	.067	.036	.015	.039	.021	.009	.013	.007	.003		

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2017

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.480m [K=1.0000]  
Remarks:

## UGR(Unified Glare Rating) Table

NAME: LED灯					TYPE:			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:			
MFR.: EVERFINE					SUR.:21cm*16cm			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	19.9	21.2	20.1	21.4	21.6	19.7	21.1	20.0	21.3	21.5	
	3H	20.3	21.5	20.6	21.8	22.0	20.1	21.3	20.4	21.5	21.8
	4H	20.6	21.8	20.9	22.0	22.3	20.3	21.5	20.6	21.7	22.0
	6H	20.9	22.0	21.3	22.3	22.6	20.4	21.5	20.8	21.8	22.1
	8H	21.0	22.1	21.4	22.4	22.6	20.5	21.5	20.8	21.8	22.1
	12H	21.1	22.1	21.4	22.4	22.7	20.4	21.4	20.8	21.7	22.0
4H	2H	19.9	21.1	20.2	21.3	21.6	19.8	21.0	20.1	21.3	21.5
	3H	20.6	21.6	20.9	21.9	22.2	20.4	21.4	20.7	21.7	22.0
	4H	21.1	22.0	21.5	22.3	22.7	20.8	21.7	21.1	22.0	22.3
	6H	21.6	22.4	22.0	22.7	23.1	21.0	21.8	21.4	22.2	22.5
	8H	21.8	22.5	22.2	22.9	23.2	21.1	21.8	21.5	22.2	22.6
	12H	21.9	22.5	22.3	22.9	23.3	21.1	21.8	21.5	22.2	22.6
8H	4H	21.3	22.0	21.7	22.4	22.7	20.9	21.7	21.3	22.1	22.4
	6H	21.9	22.5	22.4	22.9	23.4	21.4	22.0	21.8	22.4	22.8
	8H	22.2	22.7	22.6	23.1	23.6	21.5	22.1	22.0	22.5	22.9
	12H	22.4	22.8	22.9	23.3	23.8	21.6	22.1	22.1	22.5	23.0
12H	4H	21.3	21.9	21.7	22.3	22.7	21.0	21.6	21.4	22.0	22.4
	6H	22.0	22.5	22.4	22.9	23.4	21.4	22.0	21.9	22.4	22.9
	8H	22.3	22.7	22.7	23.2	23.7	21.6	22.1	22.1	22.5	23.0
Variations with the observer position at spacings:											
S = 1.0H	+ 0.6 / - 0.7					+ 0.7 / - 0.9					
1.5H	+ 0.3 / - 0.4					+ 0.5 / - 0.5					
2.0H	+ 1.5 / - 1.3					+ 1.9 / - 1.7					

CIE Pub.117, 22400 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 10.8)

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2017

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.480m [K=1.0000]  
Remarks:

## UTILIZATION FACTORS TABLE

NAME: LED灯	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:21cm*16cm	Shielding Angle:

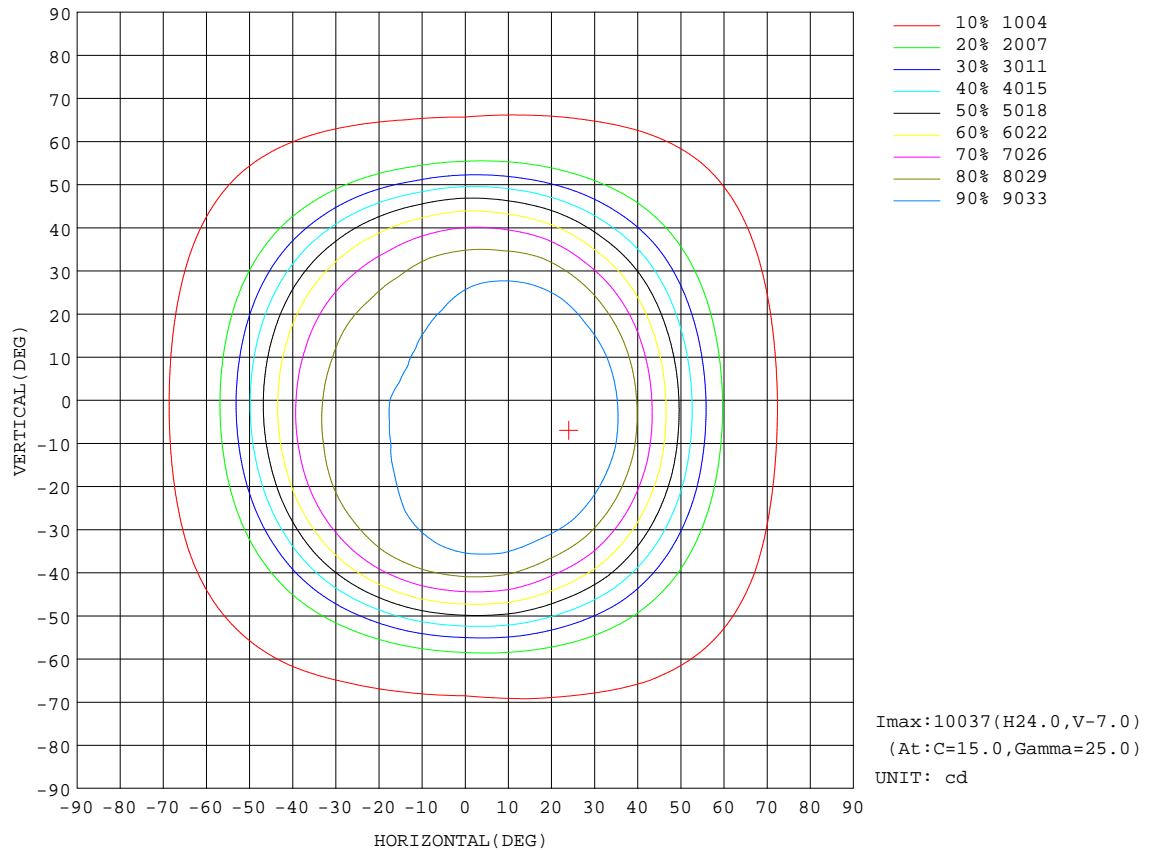
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	65	55	49	65	55	49	64	55	49	43
0.80	76	66	59	75	65	59	73	64	59	53
1.00	84	74	68	83	74	68	81	75	68	61
1.25	90	82	76	89	81	75	86	80	75	68
1.50	95	87	81	93	86	80	90	84	79	73
2.00	100	93	88	99	92	87	95	90	86	79
2.50	103	97	92	101	96	91	98	93	89	82
3.00	106	100	96	104	99	95	100	96	93	85
4.00	109	104	101	107	103	99	103	99	97	88
5.00	111	107	104	109	105	102	104	101	99	90
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004										
Suspended										
SHRNOM = 1.25										

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2017

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.480m [K=1.0000]  
Remarks:

## ISOCANDELA DIAGRAM

NAME: LED灯	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:21cm*16cm	Shielding Angle:



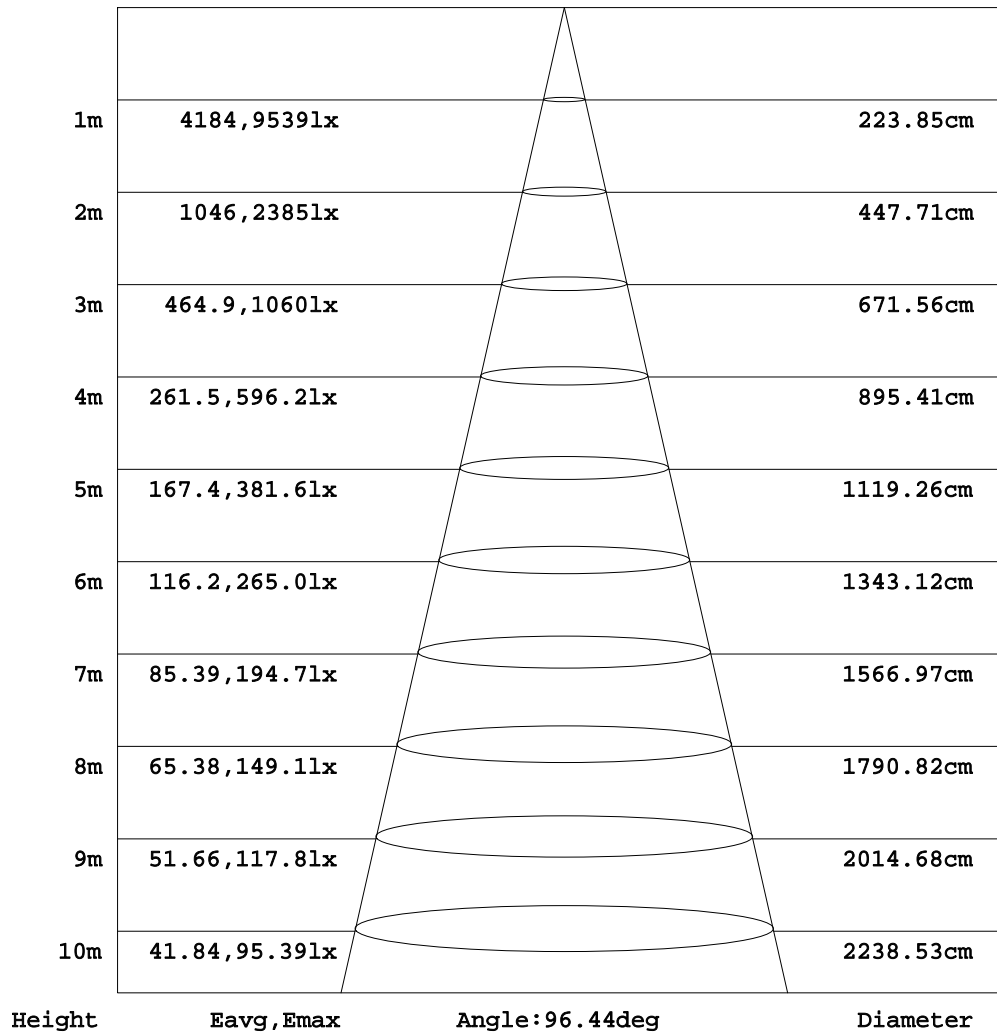
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2017

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity:65.0%  
 Test Distance:10.480m [K=1.0000]  
 Remarks:

### AAI Figure

NAME: LED灯	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:21cm*16cm	Shielding Angle:

Flux out:17395 lm



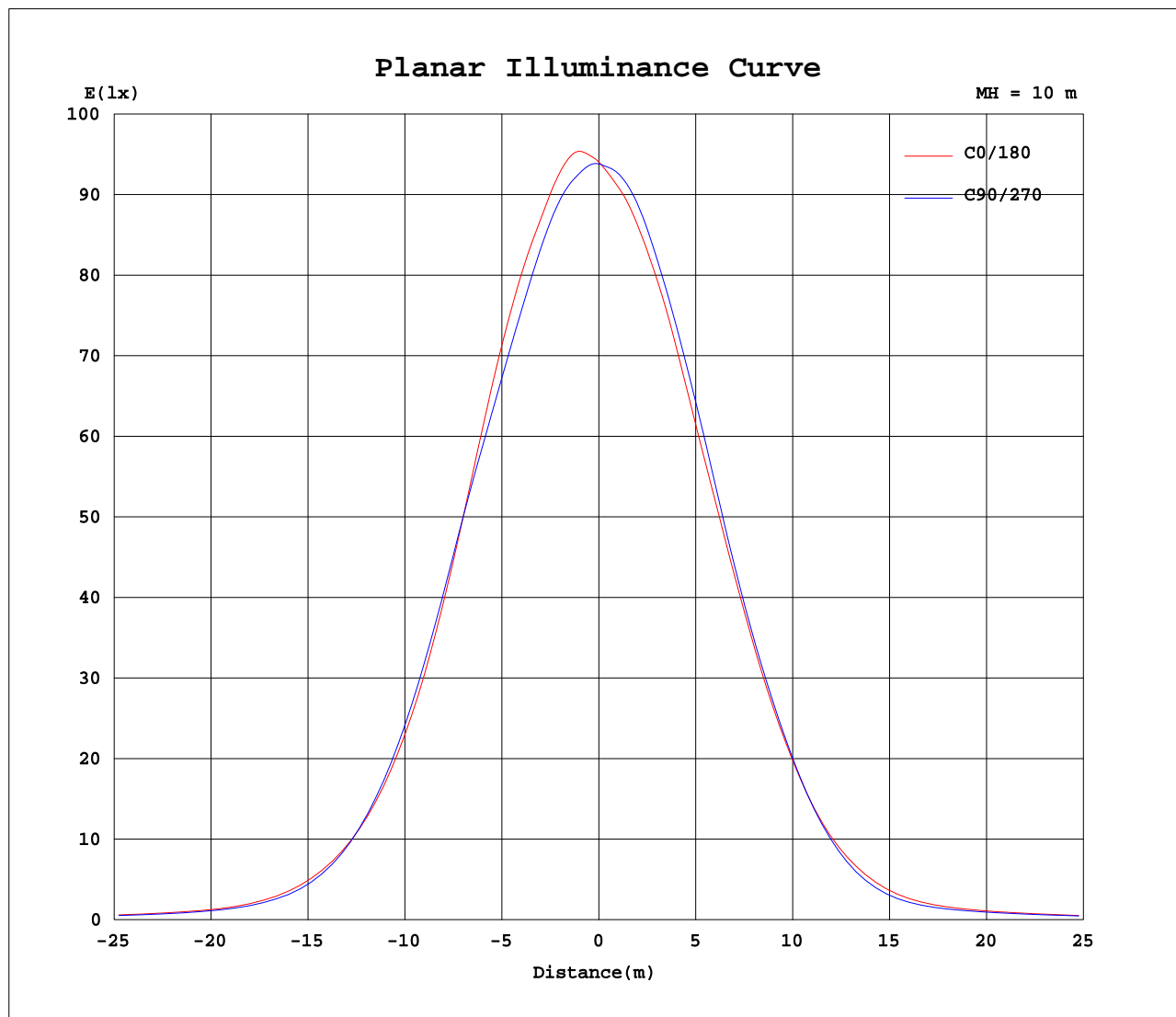
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2017

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.480m [K=1.0000]  
Remarks:



## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DAMIN  
Test Date: 2017

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity: 65.0%  
Test Distance: 10.480m [K=1.0000]  
Remarks:



E:\ies文件夹\H4 H5 H6 工厂灯嵌灯 3030 GOS\90\ZGSM-XXX160H4 90.GOS