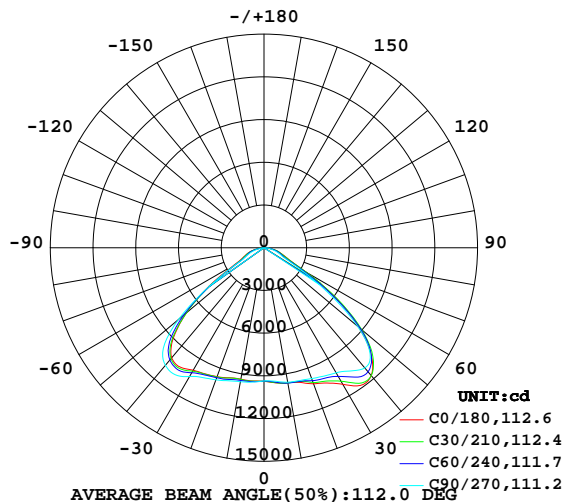


## LUMINAIRE PHOTOMETRIC TEST REPORT

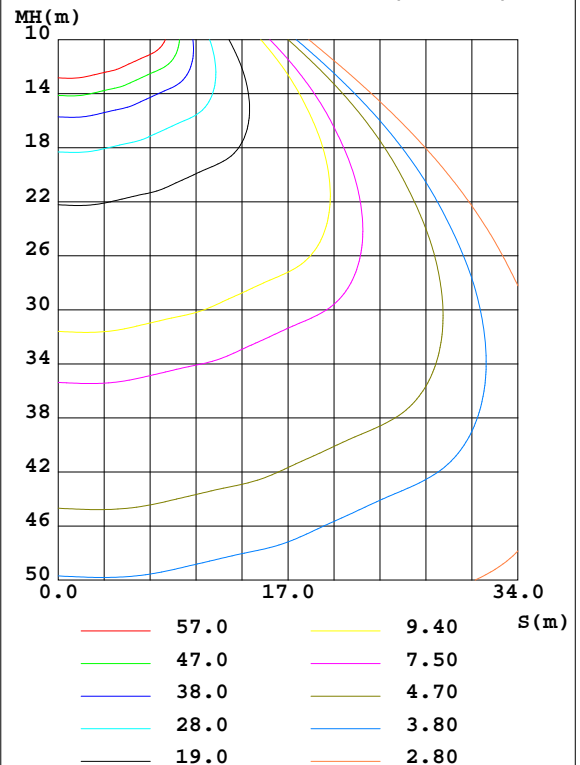
NAME: LED LIGHT	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:21cm*16cm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 125.60 lm/W
MODEL	ZGSM-GCD240H6	Imax(cd)	11909	S/MH(C0/180)	1.58	
NOMINAL POWER(W)	240	LOR(%)	100.5	S/MH(C90/270)	1.63	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	30144	$\eta$ UP,DN(C0-180)	0.0,51.3	
NOMINAL FLUX(lm)	30000	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,49.1	
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	1.75	
TEST VOLTAGE(V)	220.1	$\eta$ down(%)	100.5	CIBSE SHR MAX	1.75	

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	962.5	965.3	958.7	943.0	937.3	942.3	955.3	960.2	0- 10	904.2	904.2	3,3.01
20	1017	999.6	978.0	965.1	963.1	968.8	987.0	1006	10- 20	2742	3646	12.1,12.2
30	1108	1066	1014	996.6	993.6	1010	1044	1108	20- 30	4677	8324	27.6,27.7
40	1171	1157	1102	1026	1009	1019	1077	1130	30- 40	6779	15102	50.1,50.3
50	870.3	897.7	858.8	753.4	712.8	719.4	783.8	820.3	40- 50	7555	22658	75.2,75.5
60	335.8	334.2	269.2	248.9	242.3	207.9	202.7	250.5	50- 60	4668	27326	90.7,91.1
70	136.7	127.6	107.8	122.1	126.9	119.3	100.5	119.6	60- 70	1659	28985	96.2,96.6
80	55.04	62.68	46.08	55.03	48.44	48.62	8.605	53.02	70- 80	928.8	29914	99.2,99.7
90	3.095	3.288	0.8239	2.872	2.721	1.999	0.5707	2.275	80- 90	230.8	30144	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): 18988 lm

%lum = 63.0%

%lamp = 63.3%

Conical surface Flux(120deg): 27326 lm

%lum = 90.7%

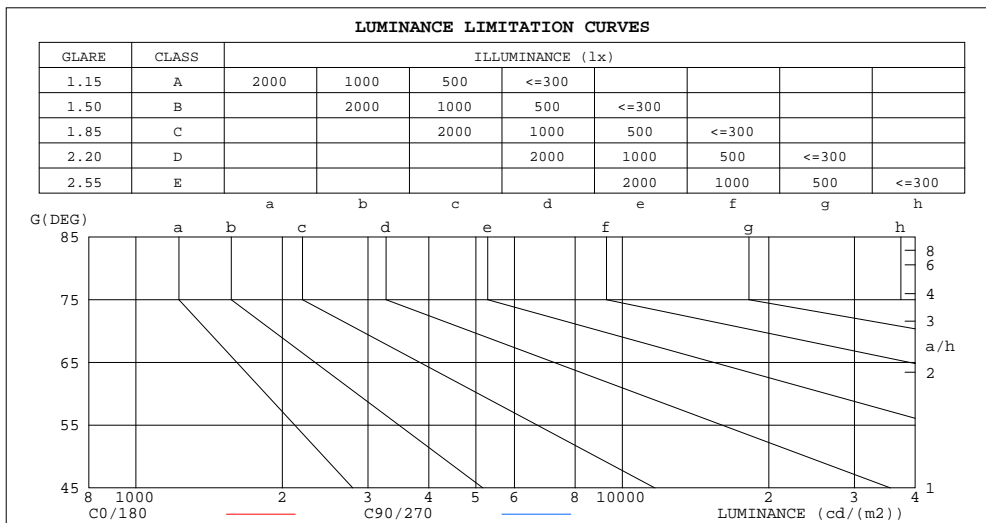
%lamp = 91.1%

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



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	76776	36752
80	94336	78975
75	117196	88607
70	118932	93771
65	132606	100238
60	199890	160267
55	322616	285690
50	402947	397633
45	448303	443567

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 LIGHT	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	.266	.152	.048	.259	.148	.047	.246	.141	.045	.234	.135	.043	.223	.129	.042	
2.0	.258	.141	.043	.252	.139	.043	.241	.134	.042	.230	.129	.040	.220	.125	.039	
3.0	.245	.130	.039	.239	.128	.039	.229	.124	.038	.220	.120	.037	.211	.117	.036	
4.0	.230	.120	.035	.226	.118	.035	.217	.115	.034	.208	.112	.034	.201	.109	.033	
5.0	.216	.110	.032	.212	.109	.032	.204	.106	.031	.197	.104	.031	.190	.101	.030	
6.0	.203	.102	.029	.200	.101	.029	.192	.099	.029	.186	.097	.028	.180	.095	.028	
7.0	.191	.095	.027	.188	.094	.027	.182	.092	.026	.176	.090	.026	.170	.088	.026	
8.0	.180	.088	.025	.177	.087	.025	.171	.086	.024	.166	.084	.024	.161	.083	.024	
9.0	.170	.082	.023	.167	.082	.023	.162	.080	.023	.157	.079	.023	.153	.078	.022	
10.0	.161	.077	.021	.158	.076	.021	.154	.075	.021	.149	.074	.021	.145	.073	.021	

ρcc	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	.191	.191	.191	.164	.164	.164	.112	.112	.112	.064	.064	.064	.021	.021	.021		
1.0	.178	.157	.139	.152	.135	.119	.104	.093	.082	.060	.054	.048	.019	.017	.016		
2.0	.168	.133	.103	.144	.114	.089	.099	.079	.062	.057	.046	.036	.018	.015	.012		
3.0	.160	.115	.078	.137	.099	.068	.094	.069	.048	.054	.040	.028	.017	.013	.009		
4.0	.153	.101	.062	.131	.087	.054	.090	.061	.038	.052	.036	.022	.017	.012	.007		
5.0	.146	.090	.050	.125	.078	.043	.086	.055	.030	.050	.032	.018	.016	.010	.006		
6.0	.139	.082	.041	.120	.071	.036	.082	.050	.025	.048	.029	.015	.015	.010	.005		
7.0	.133	.075	.035	.114	.065	.030	.079	.046	.021	.046	.027	.013	.015	.009	.004		
8.0	.127	.069	.030	.109	.060	.026	.076	.042	.018	.044	.025	.011	.014	.008	.004		
9.0	.121	.064	.026	.105	.056	.023	.072	.039	.016	.042	.023	.010	.014	.008	.003		
10.0	.116	.060	.023	.100	.052	.020	.069	.037	.014	.040	.022	.008	.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 LIGHT					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	21.3	22.7	21.6	22.9	23.1	20.9	22.3	21.1	22.5	22.7				
3H	21.5	22.8	21.8	23.1	23.3	21.0	22.3	21.2	22.5	22.7				
4H	21.7	22.9	22.0	23.1	23.4	21.0	22.3	21.3	22.5	22.8				
6H	21.8	22.9	22.1	23.2	23.5	21.1	22.2	21.4	22.5	22.8				
8H	21.8	22.9	22.1	23.2	23.4	21.1	22.2	21.4	22.5	22.8				
12H	21.8	22.8	22.1	23.1	23.4	21.1	22.1	21.4	22.4	22.7				
4H 2H	21.3	22.6	21.6	22.8	23.1	20.9	22.2	21.2	22.4	22.7				
3H	21.7	22.7	22.0	23.0	23.3	21.2	22.2	21.5	22.5	22.8				
4H	21.9	22.9	22.3	23.2	23.5	21.3	22.3	21.7	22.6	22.9				
6H	22.2	23.0	22.5	23.4	23.7	21.5	22.3	21.9	22.7	23.0				
8H	22.2	23.0	22.6	23.4	23.7	21.5	22.3	21.9	22.7	23.0				
12H	22.2	23.0	22.7	23.3	23.7	21.5	22.2	21.9	22.6	23.0				
8H 4H	22.0	22.7	22.4	23.1	23.5	21.4	22.2	21.8	22.5	22.9				
6H	22.3	22.9	22.7	23.3	23.8	21.6	22.3	22.1	22.7	23.1				
8H	22.4	23.0	22.9	23.4	23.9	21.7	22.3	22.2	22.7	23.2				
12H	22.5	23.0	23.0	23.4	23.9	21.8	22.3	22.3	22.7	23.2				
12H 4H	21.9	22.7	22.4	23.0	23.4	21.4	22.1	21.8	22.5	22.9				
6H	22.3	22.9	22.8	23.3	23.7	21.7	22.2	22.1	22.6	23.1				
8H	22.4	22.9	22.9	23.4	23.9	21.8	22.3	22.3	22.7	23.2				
Variations with the observer position at spacings:														
S = 1.0H	+ 0.5 / - 0.7					+ 0.8 / - 0.8								
1.5H	+ 0.4 / - 1.0					+ 0.5 / - 1.4								
2.0H	+ 1.6 / - 2.6					+ 1.9 / - 3.0								

CIE Pub.117, 30000 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 11.8)

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

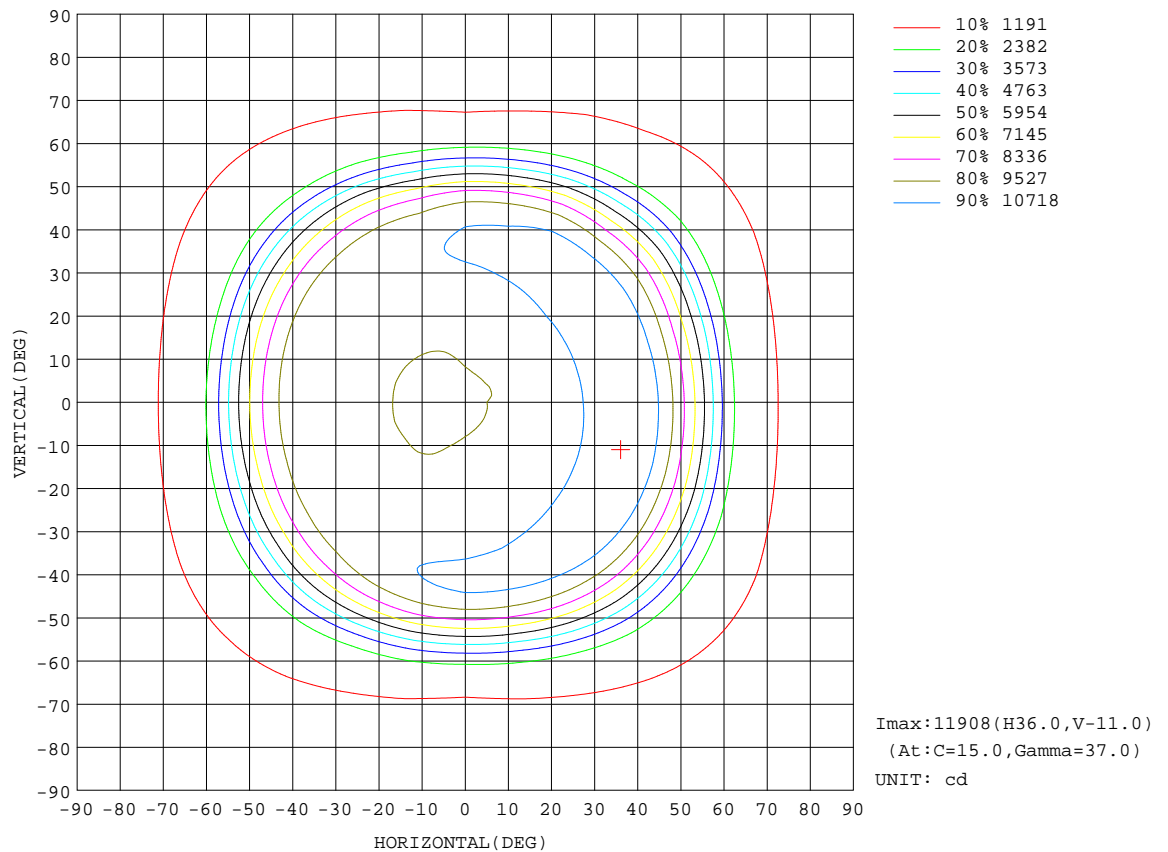
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT)    k(RI) x RCR = 5									
k = 0.60	60	49	42	59	48	42	58	48	42	35
0.80	71	60	53	70	60	53	68	59	53	46
1.00	81	70	64	79	70	63	77	71	63	56
1.25	88	79	72	87	78	72	84	76	71	64
1.50	93	84	78	91	83	77	88	81	76	69
2.00	99	92	86	97	91	85	94	88	84	77
2.50	102	96	90	100	94	90	97	92	88	80
3.00	105	99	95	103	98	94	99	95	91	83
4.00	109	104	100	106	102	98	102	99	95	87
5.00	110	106	103	108	104	101	104	101	98	89
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004										
Suspended										
SHRNM = 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 LIGHT	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:21cm*16cm	Shielding Angle:

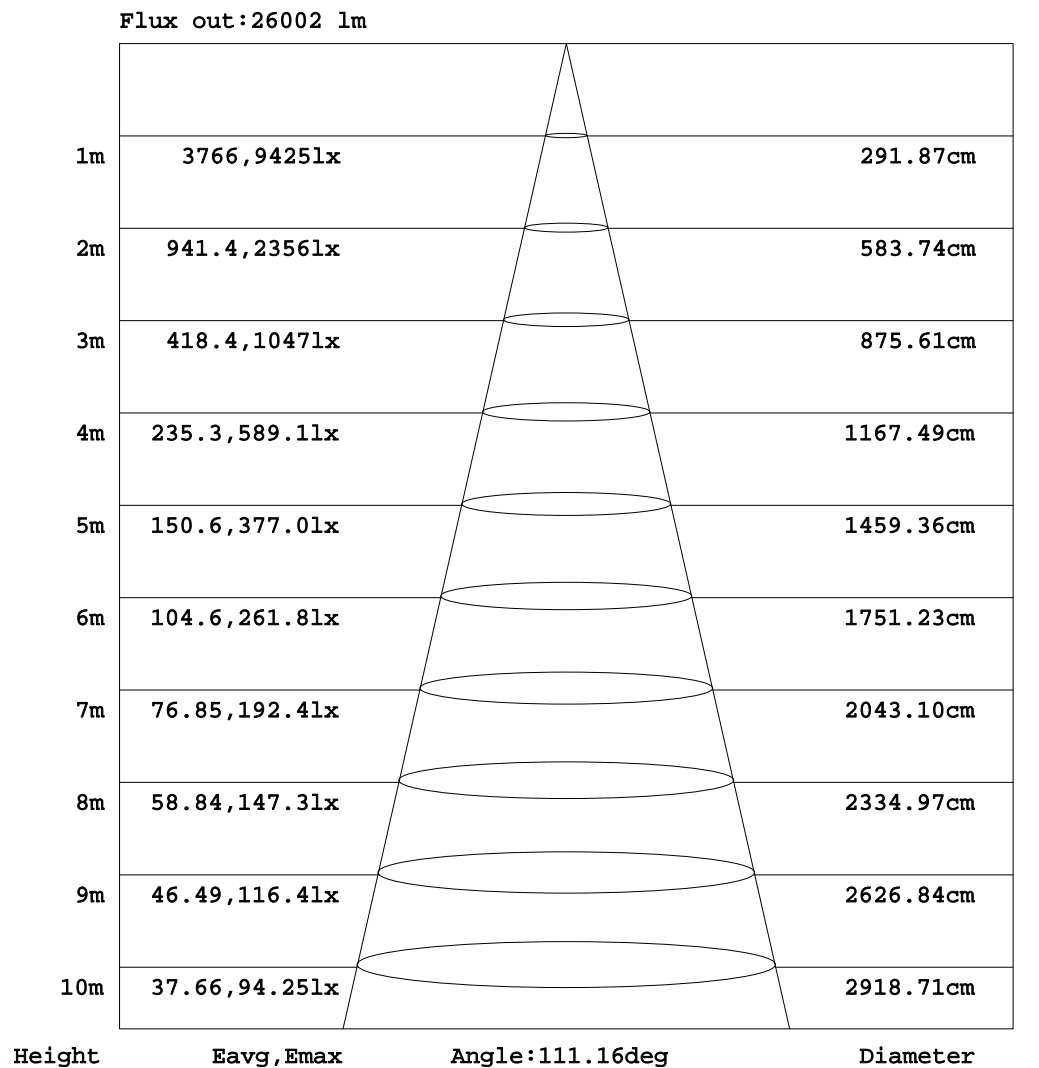


C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2017

$\gamma$  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 LIGHT	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:21cm*16cm	Shielding Angle:



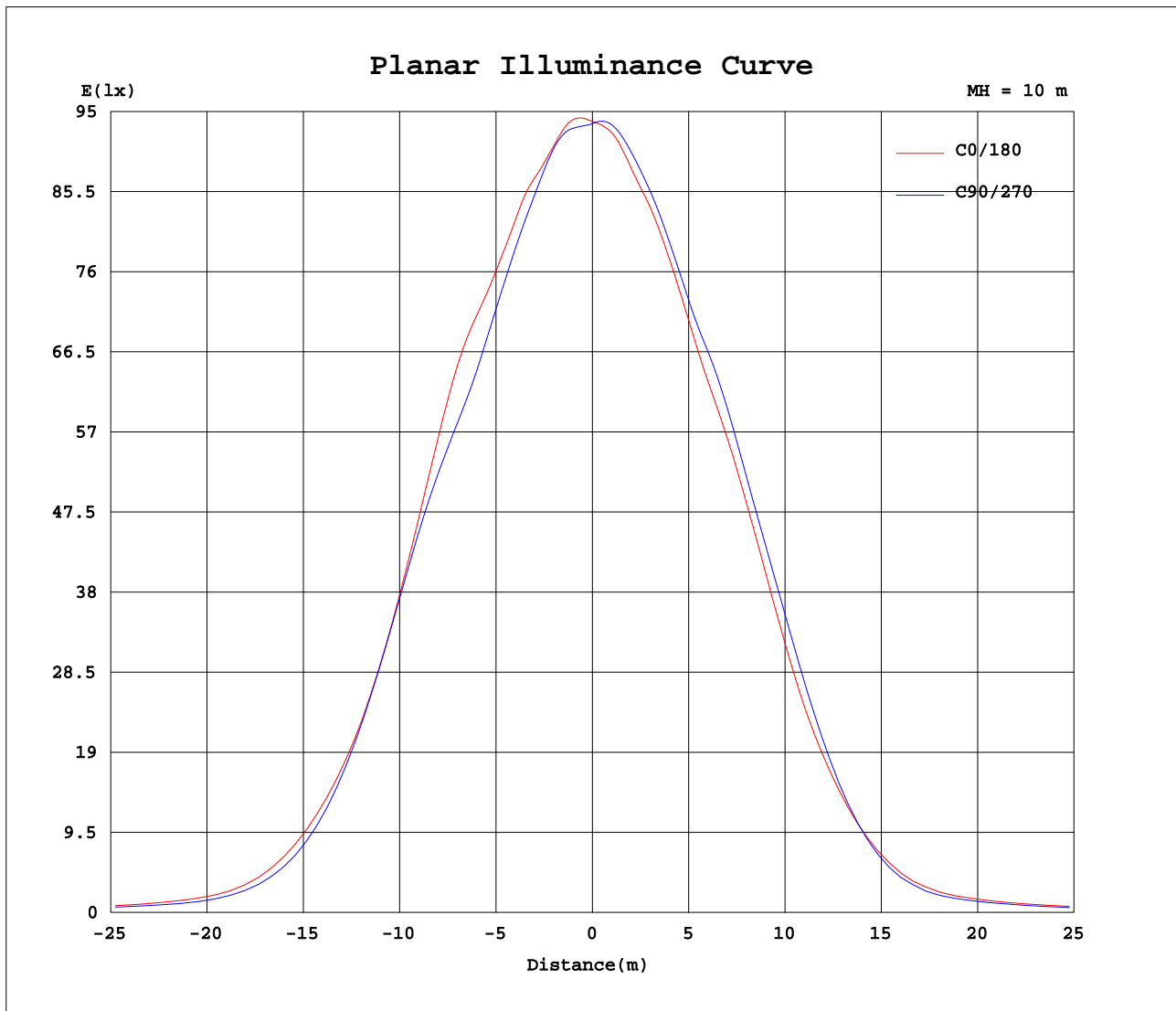
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 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:



