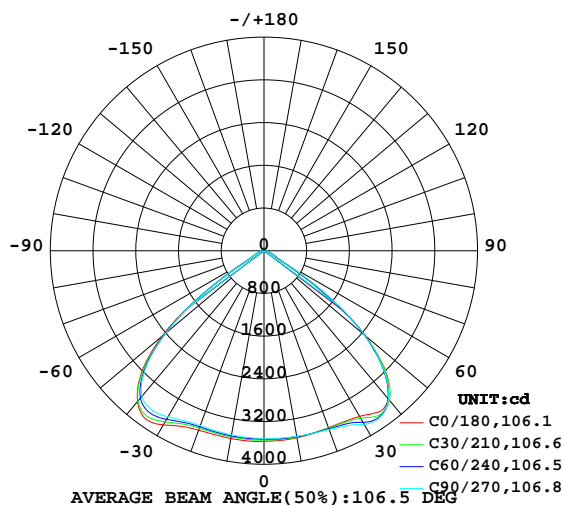


## LUMINAIRE PHOTOMETRIC TEST REPORT

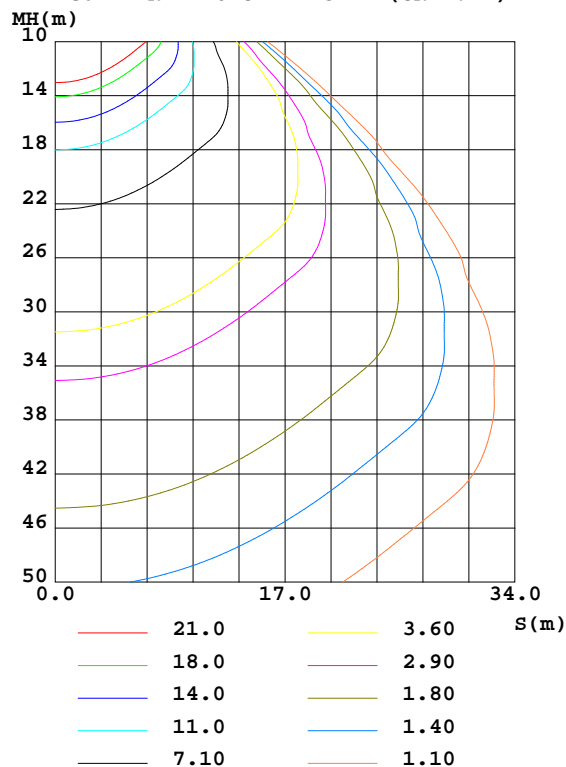
NAME: LED LIGHT	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:21cm*16cm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 154.94 lm/W			
MODEL	60H6 110	Imax(cd)	3853	S/MH(C0/180)	1.55
NOMINAL POWER(W)	60	LOR(%)	100.0	S/MH(C90/270)	1.54
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	9296.1	$\eta$ UP,DN(C0-180)	0.0,50.5
NOMINAL FLUX(lm)	9300	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,49.5
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	220.1	$\eta$ down(%)	100.0	CIBSE SHR MAX	1.55

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2017.7.13

$\gamma$  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	3557	3539	3529	3518	3570	3531	3500	3486	0- 10	336.3	336.3	3.62,3.62
20	3527	3539	3562	3541	3577	3522	3485	3454	10- 20	997.1	1333	14.3,14.3
30	3582	3666	3754	3732	3765	3674	3590	3517	20- 30	1652	2985	32.1,32.1
40	3621	3639	3625	3643	3685	3638	3556	3550	30- 40	2324	5309	57.1,57.1
50	2492	2455	2458	2450	2495	2414	2407	2430	40- 50	2417	7726	83.1,83.1
60	303.4	370.5	411.3	414.8	350.9	320.9	318.0	334.6	50- 60	1211	8937	96.1,96.1
70	117.2	148.8	137.0	144.9	133.3	135.8	123.4	139.1	60- 70	214.9	9152	98.5,98.4
80	53.20	67.13	70.69	68.96	53.78	67.67	67.89	65.69	70- 80	98.80	9251	99.5,99.5
90	7.550	21.34	27.17	25.10	8.371	25.25	27.62	24.83	80- 90	45.10	9296	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): 6577.8 lm

%lum = 70.8%

%lamp = 70.7%

Conical surface Flux(120deg): 8937.3 lm

%lum = 96.1%

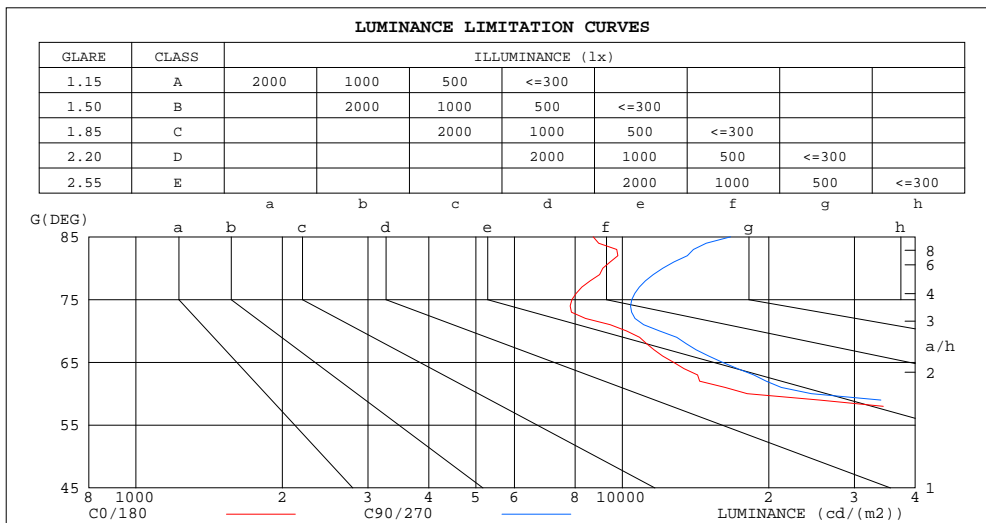
%lamp = 96.1%

C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2017.7.13

$\gamma$  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.:	SUR.:21cm*16cm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	8712	16690
80	9119	12116
75	7877	10459
70	10202	11922
65	12743	16057
60	18057	24480
55	67576	75015
50	115404	113810
45	136239	134051

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2017.7.13

$\gamma$  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.:	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	.240	.136	.043	.233	.133	.042	.220	.126	.040	.208	.120	.038	.197	.114	.037		
2.0	.234	.128	.039	.228	.126	.039	.217	.121	.037	.207	.116	.036	.197	.112	.035		
3.0	.224	.119	.036	.219	.117	.035	.209	.113	.034	.200	.110	.034	.192	.106	.033		
4.0	.213	.111	.033	.209	.109	.032	.200	.106	.032	.192	.103	.031	.185	.100	.031		
5.0	.202	.103	.030	.198	.102	.030	.190	.099	.029	.183	.097	.029	.176	.094	.028		
6.0	.191	.096	.027	.188	.095	.027	.181	.093	.027	.174	.091	.027	.168	.089	.026		
7.0	.181	.090	.025	.178	.089	.025	.172	.087	.025	.166	.085	.025	.160	.083	.025		
8.0	.171	.084	.024	.169	.083	.023	.163	.081	.023	.158	.080	.023	.153	.078	.023		
9.0	.162	.079	.022	.160	.078	.022	.155	.077	.022	.150	.075	.022	.146	.074	.021		
10.0	.154	.074	.021	.152	.073	.020	.147	.072	.020	.143	.071	.020	.139	.070	.020		

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	.175	.157	.140	.150	.134	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016	
2.0	.164	.132	.105	.141	.114	.091	.097	.079	.063	.056	.046	.037	.018	.015	.012	
3.0	.156	.114	.081	.133	.098	.070	.092	.068	.049	.053	.040	.029	.017	.013	.009	
4.0	.148	.100	.064	.127	.087	.055	.087	.060	.039	.051	.035	.023	.016	.012	.008	
5.0	.141	.089	.051	.121	.077	.045	.083	.054	.032	.048	.032	.019	.016	.010	.006	
6.0	.135	.081	.042	.116	.070	.037	.080	.049	.026	.046	.029	.016	.015	.009	.005	
7.0	.129	.074	.036	.111	.064	.031	.076	.045	.022	.044	.026	.013	.014	.009	.004	
8.0	.123	.068	.030	.106	.059	.027	.073	.042	.019	.043	.024	.011	.014	.008	.004	
9.0	.118	.063	.027	.101	.055	.023	.070	.039	.016	.041	.023	.010	.013	.007	.003	
10.0	.113	.059	.023	.097	.051	.020	.067	.036	.015	.039	.021	.009	.013	.007	.003	

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2017.7.13

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.:					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	19.9	21.3	20.2	21.5	21.6				
3H	19.7	21.0	20.0	21.2	21.4	19.8	21.0	20.1	21.2	21.5				
4H	19.7	20.8	20.0	21.1	21.3	19.7	20.9	20.0	21.1	21.4				
6H	19.6	20.7	19.9	20.9	21.2	19.7	20.7	20.0	21.0	21.3				
8H	19.5	20.6	19.9	20.9	21.1	19.6	20.7	20.0	20.9	21.2				
12H	19.5	20.5	19.9	20.8	21.1	19.6	20.6	20.0	20.9	21.2				
4H 2H	19.7	20.9	20.0	21.1	21.4	19.8	20.9	20.1	21.2	21.4				
3H	19.6	20.6	20.0	20.9	21.2	19.7	20.7	20.0	21.0	21.2				
4H	19.6	20.5	19.9	20.8	21.1	19.6	20.5	20.0	20.8	21.2				
6H	19.5	20.3	19.9	20.7	21.0	19.6	20.4	20.0	20.7	21.1				
8H	19.5	20.2	19.9	20.6	21.0	19.6	20.3	20.0	20.7	21.1				
12H	19.5	20.1	19.9	20.5	20.9	19.6	20.3	20.0	20.6	21.0				
8H 4H	19.5	20.2	19.9	20.6	20.9	19.5	20.3	19.9	20.6	21.0				
6H	19.5	20.1	19.9	20.5	20.9	19.5	20.1	20.0	20.5	20.9				
8H	19.5	20.0	19.9	20.4	20.9	19.5	20.1	20.0	20.5	20.9				
12H	19.5	19.9	19.9	20.4	20.8	19.6	20.0	20.1	20.5	20.9				
12H 4H	19.4	20.1	19.9	20.5	20.9	19.5	20.2	19.9	20.5	20.9				
6H	19.4	20.0	19.9	20.4	20.8	19.5	20.0	20.0	20.4	20.9				
8H	19.5	19.9	19.9	20.3	20.8	19.5	20.0	20.0	20.4	20.9				
Variations with the observer position at spacings:														
S = 1.0H	+ 1.8 / - 2.9					+ 1.6 / - 2.3								
1.5H	+ 0.9 / - 1.6					+ 0.8 / - 1.5								
2.0H	+ 3.6 / - 7.1					+ 3.4 / - 6.7								

CIE Pub.117, 9300 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 7.7$ )

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2017.7.13

$\gamma$  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:

### UTILIZATION FACTORS TABLE

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

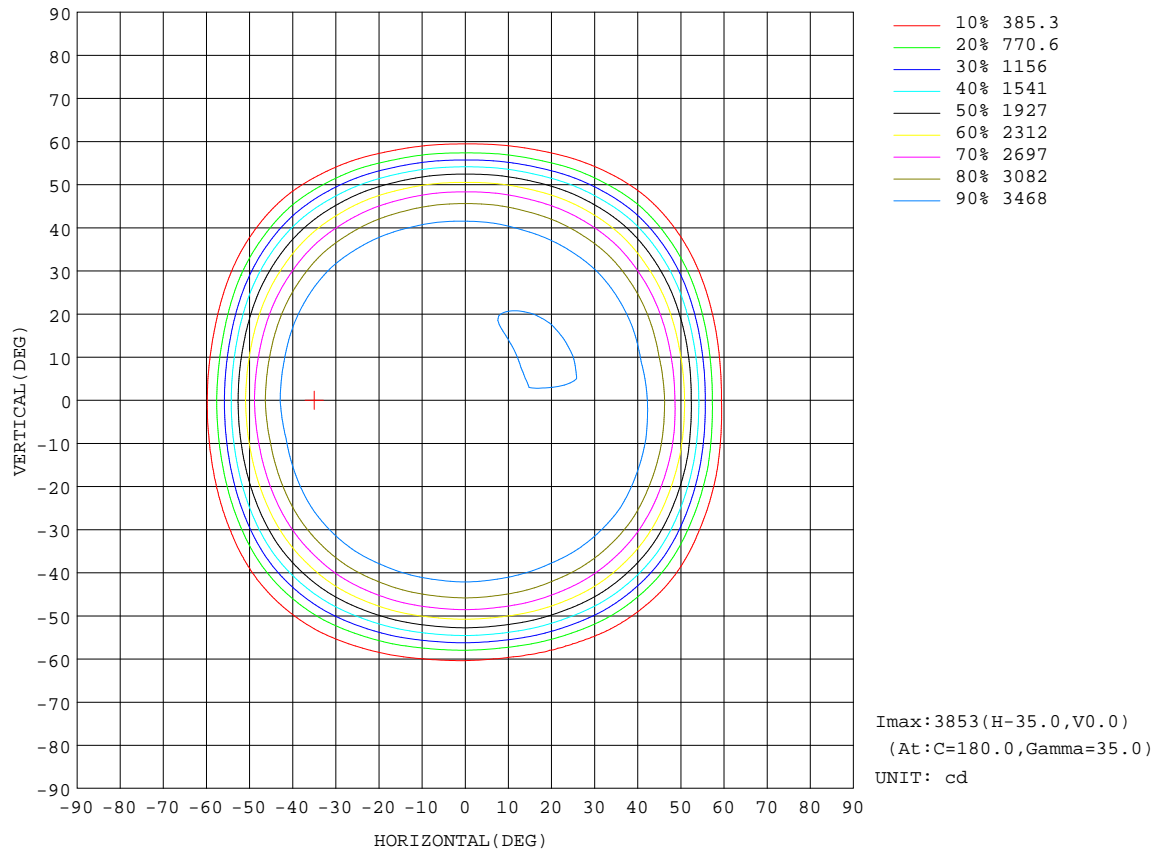
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT)    k(RI) x RCR = 5									
k = 0.60	64	53	47	63	53	47	62	52	47	41
0.80	75	65	58	74	64	58	72	64	58	52
1.00	84	75	69	83	74	68	81	75	68	62
1.25	91	83	77	90	82	76	87	81	76	70
1.50	95	88	82	94	87	82	91	85	81	74
2.00	101	95	90	100	94	89	96	91	88	81
2.50	104	98	93	102	97	92	99	94	91	83
3.00	107	101	97	105	100	96	101	97	94	86
4.00	109	105	101	107	103	100	103	100	97	89
5.00	111	107	104	109	105	102	104	102	99	91
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004										
Suspended										
SHRNM = 1.25										

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2017.7.13

$\gamma$  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.:	SUR.:21cm*16cm	Shielding Angle:



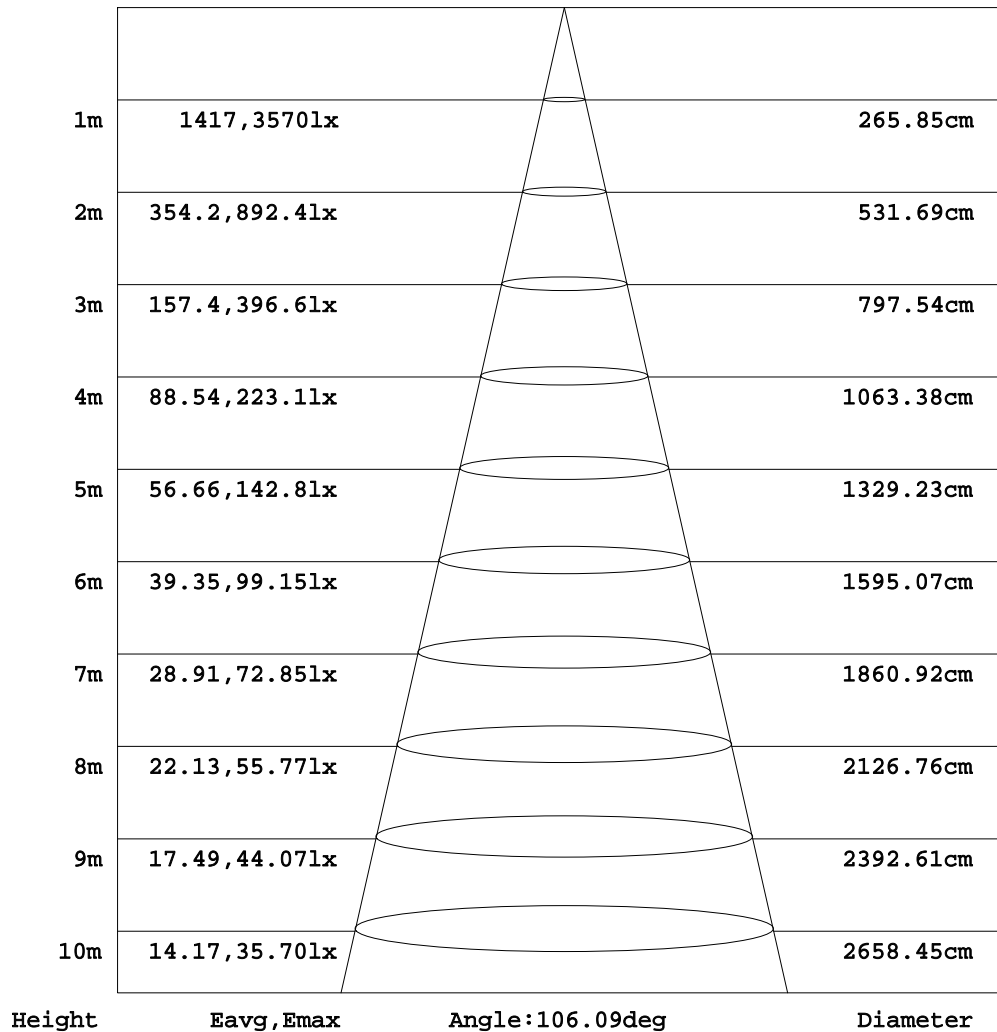
C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2017.7.13

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:

AAI Figure

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

Flux out:8431 lm



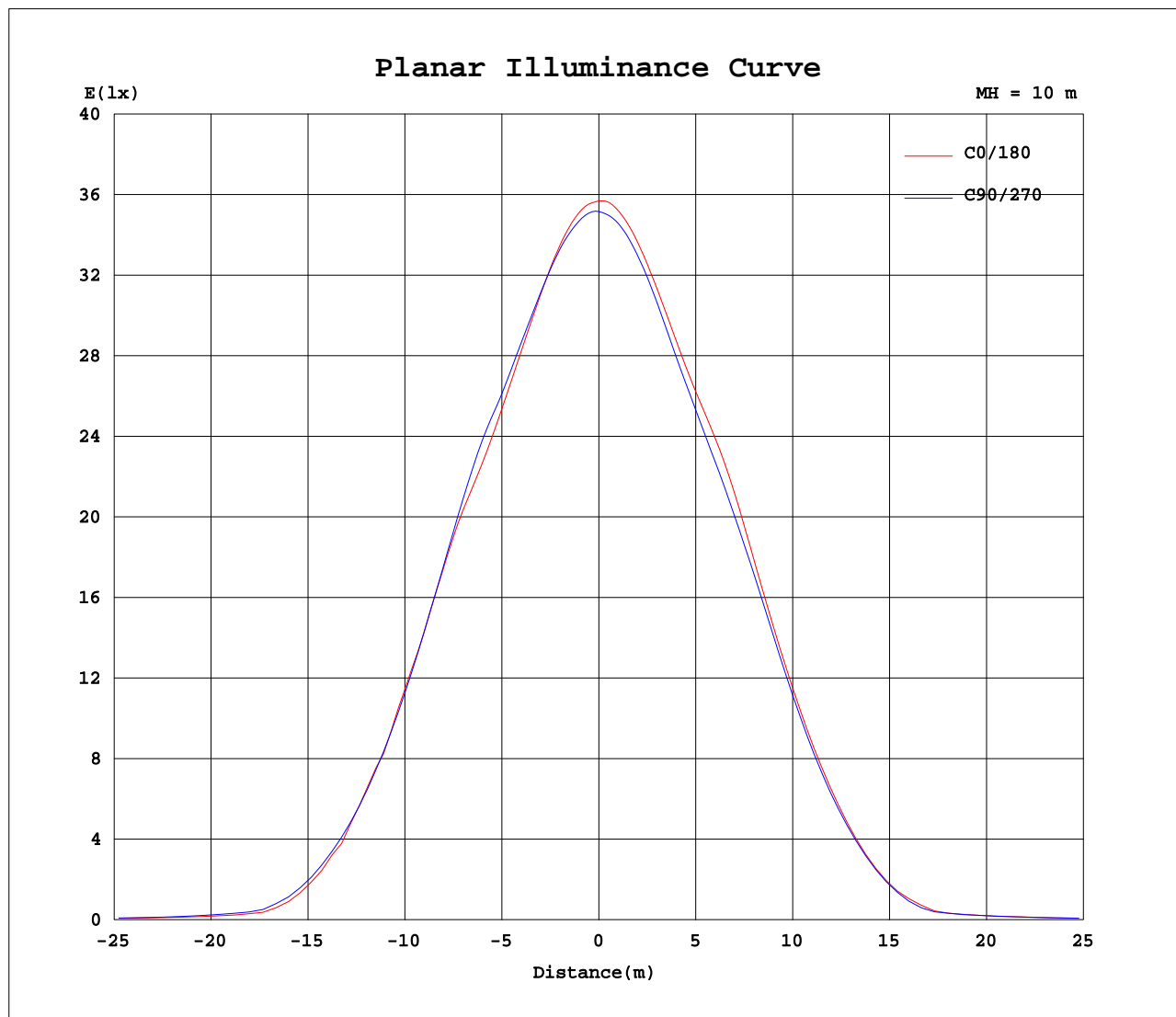
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2017.7.13

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: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DAMIN  
Test Date: 2017.7.13

$\gamma$  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:



