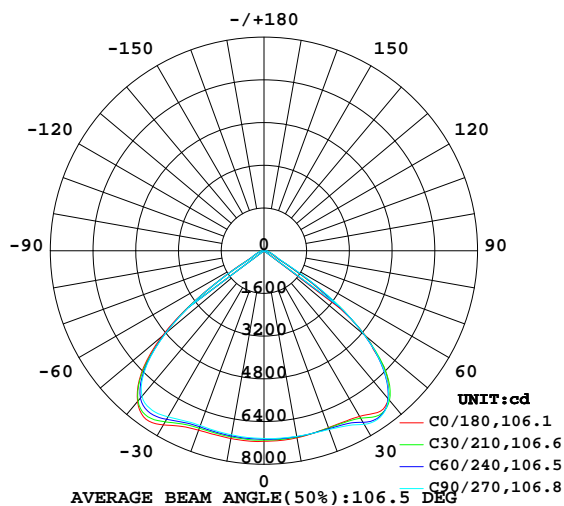


## LUMINAIRE PHOTOMETRIC TEST REPORT

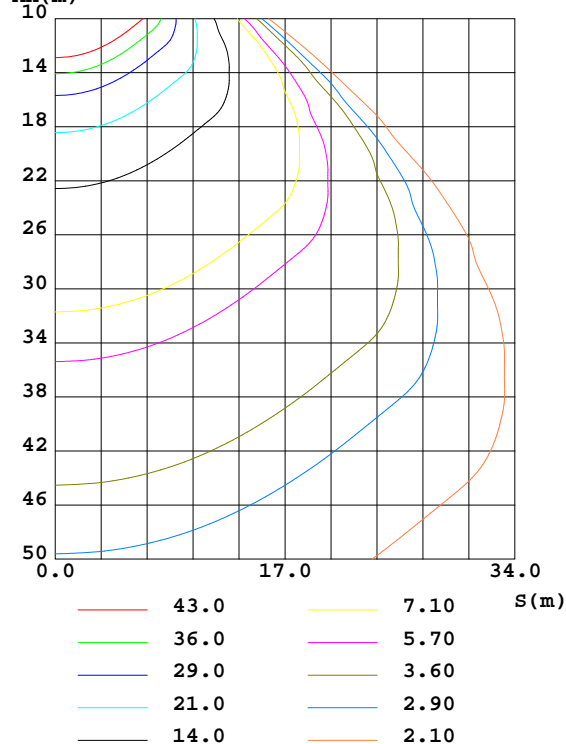
NAME: LED LIGHT	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:21cm*16cm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 154.94 lm/W
MODEL	120H6 110	Imax(cd)	7706	S/MH(C0/180)	1.55	
NOMINAL POWER(W)	120	LOR(%)	100.0	S/MH(C90/270)	1.54	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	18592	$\eta$ UP,DN(C0-180)	0.0,50.5	
NOMINAL FLUX(lm)	18600	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	7113	7077	7059	7036	7140	7061	7001	6972	0- 10	672.7	672.7	3.62,3.62
20	7054	7078	7125	7082	7153	7044	6969	6908	10- 20	1994	2667	14.3,14.3
30	7164	7331	7508	7464	7530	7347	7180	7035	20- 30	3304	5971	32.1,32.1
40	7242	7278	7251	7286	7370	7276	7112	7101	30- 40	4648	10619	57.1,57.1
50	4985	4910	4916	4899	4991	4827	4813	4860	40- 50	4833	15452	83.1,83.1
60	606.7	741.1	822.5	829.6	701.8	641.8	636.0	669.2	50- 60	2422	17875	96.1,96.1
70	234.5	297.6	274.0	289.8	266.7	271.6	246.7	278.2	60- 70	429.8	18304	98.5,98.4
80	106.4	134.3	141.4	137.9	107.6	135.3	135.8	131.4	70- 80	197.6	18502	99.5,99.5
90	15.10	42.67	54.34	50.21	16.74	50.50	55.24	49.67	80- 90	90.19	18592	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): 13156 lm

%lum = 70.8%

%lamp = 70.7%

Conical surface Flux(120deg): 17875 lm

%lum = 96.1%

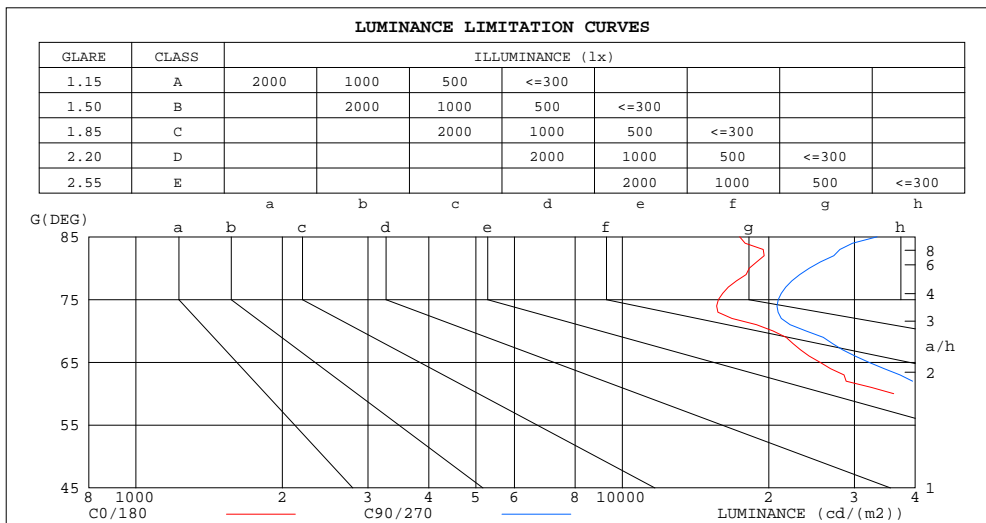
%lamp = 96.1%

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	17424	33379
80	18237	24231
75	15754	20919
70	20404	23843
65	25485	32113
60	36114	48959
55	135152	150031
50	230808	227619
45	272477	268102

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		

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	.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, 18600 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 10.2$ )

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:

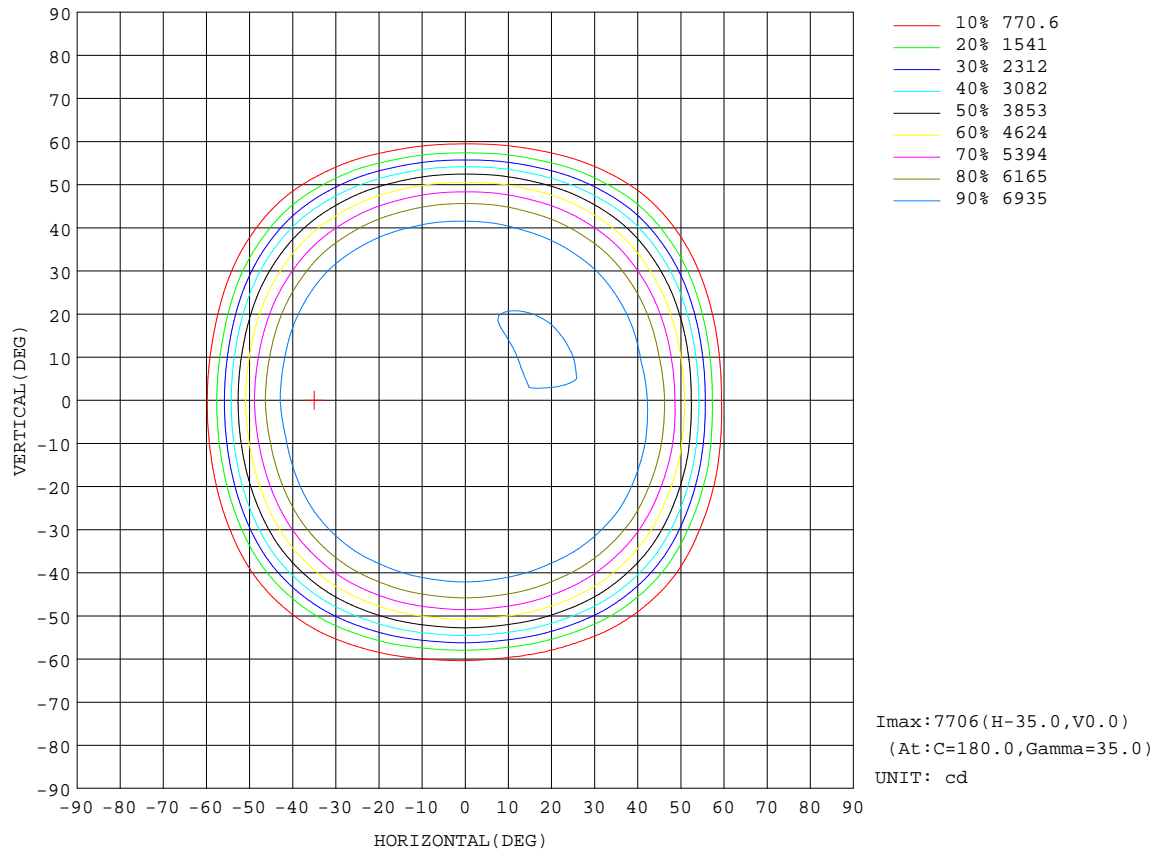
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT)    k(RI) x RCR = 5									
k = 0.60	64	53	47	63	53	47	62	52	47	41
0.80	75	65	58	74	64	58	72	64	58	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:



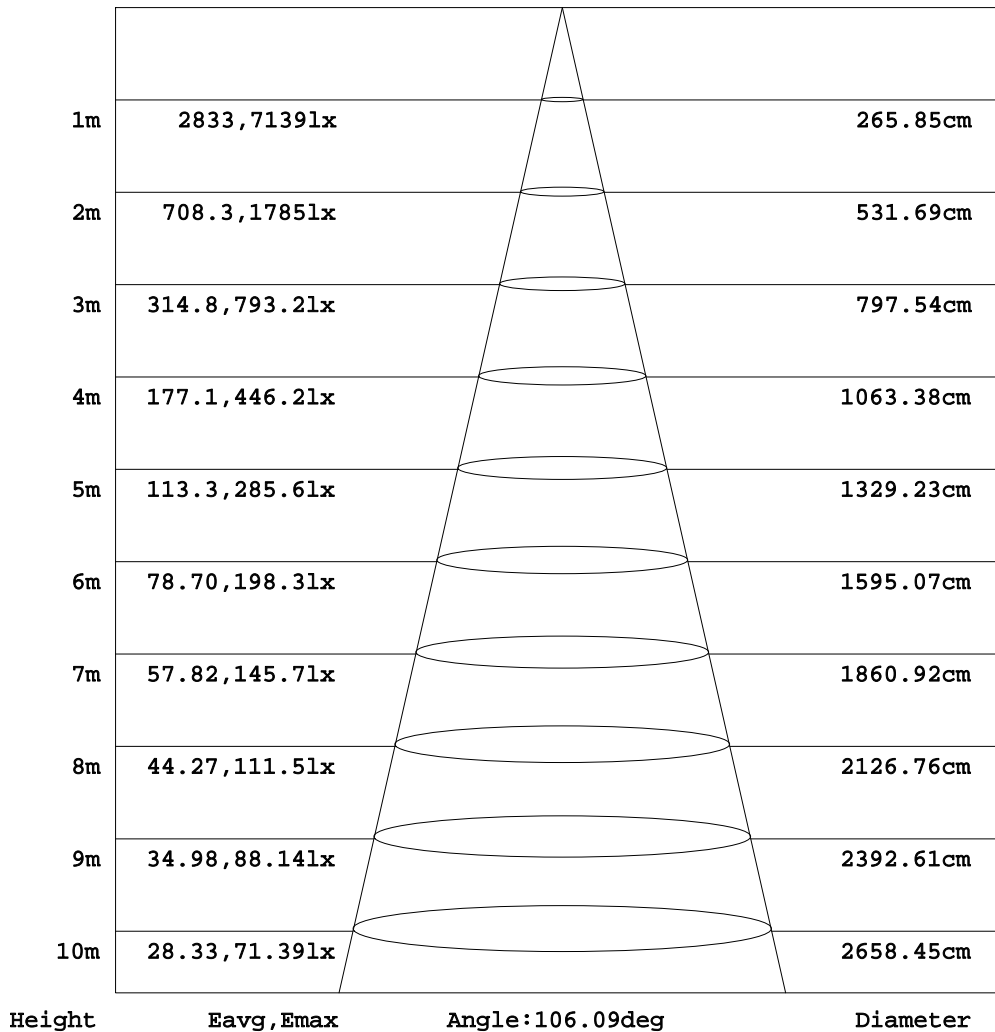
C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2017.7.13

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:16862 lm



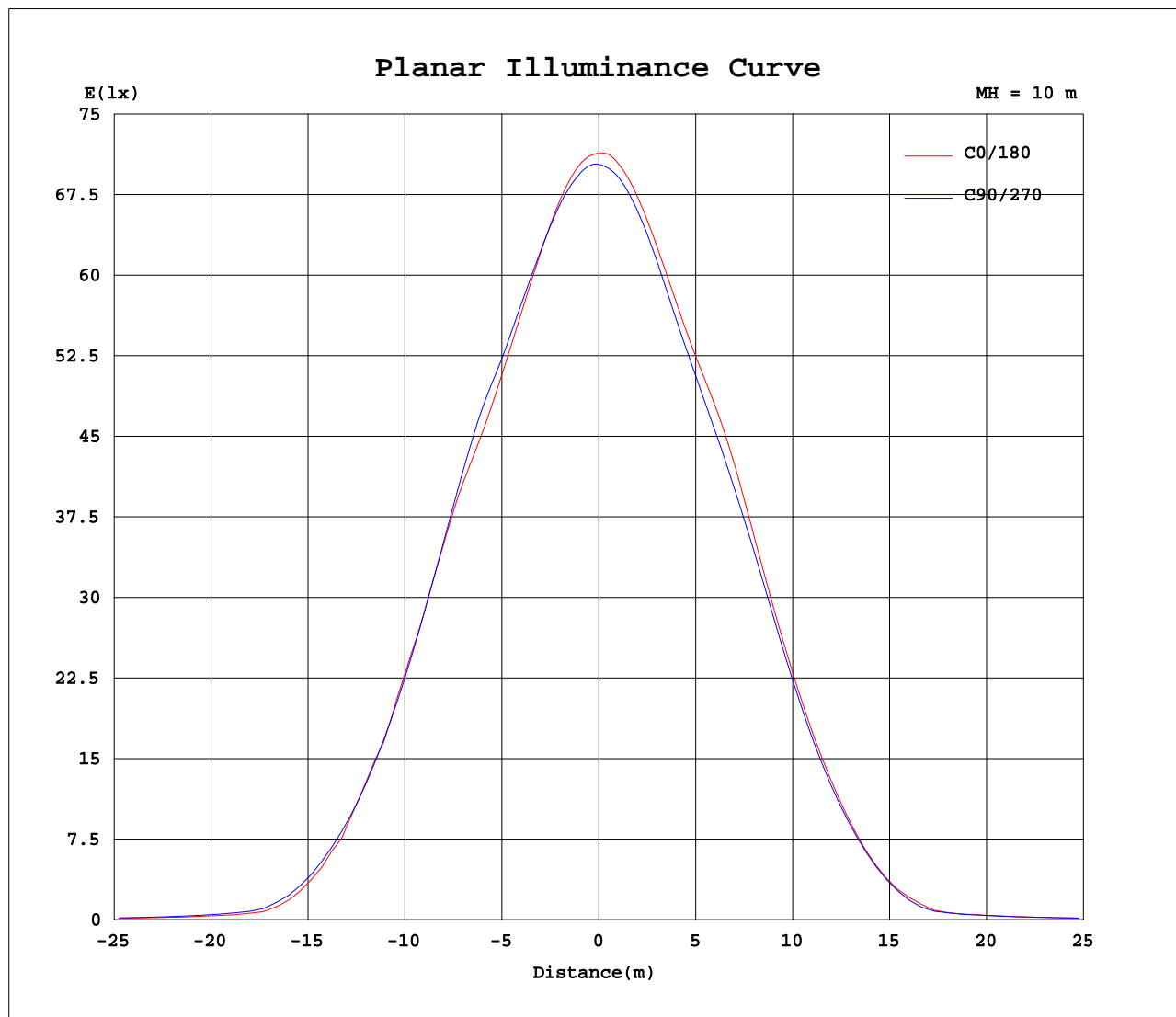
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:



