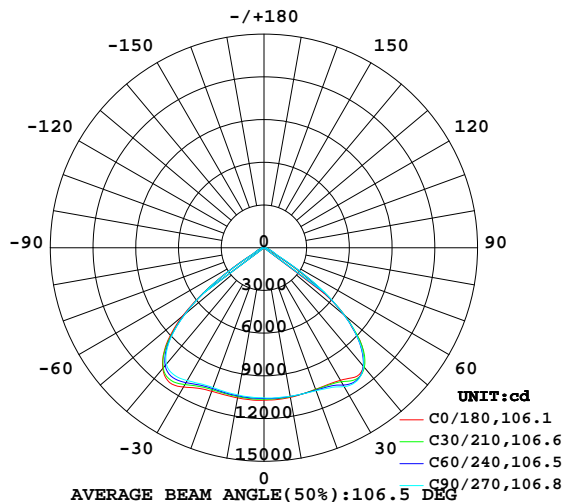


## LUMINAIRE PHOTOMETRIC TEST REPORT

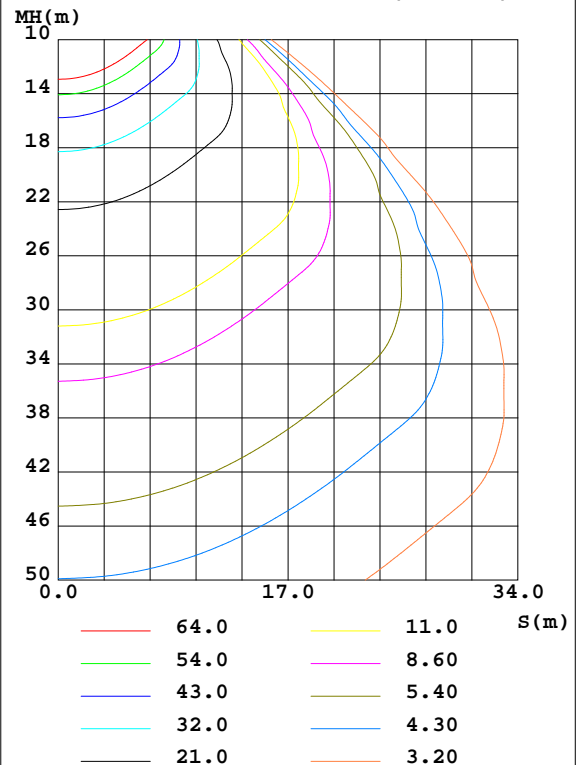
NAME: LED LIGHT	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:21cm*16cm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 154.93 lm/W
MODEL	180H6 110	Imax(cd)	11559	S/MH(C0/180)	1.55	
NOMINAL POWER(W)	180	LOR(%)	100.0	S/MH(C90/270)	1.54	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	27888	$\eta$ UP,DN(C0-180)	0.0,50.5	
NOMINAL FLUX(lm)	27900	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	1067	1062	1059	1055	1071	1059	1050	1046	0- 10	1009	1009	3.62,3.62
20	1058	1062	1069	1062	1073	1057	1045	1036	10- 20	2991	4000	14.3,14.3
30	1075	1100	1126	1120	1130	1102	1077	1055	20- 30	4956	8956	32.1,32.1
40	1086	1092	1088	1093	1106	1091	1067	1065	30- 40	6972	15928	57.1,57.1
50	747.7	736.4	737.4	734.9	748.6	724.1	722.0	729.0	40- 50	7250	23178	83.1,83.1
60	91.01	111.2	123.4	124.4	105.3	96.28	95.40	100.4	50- 60	3634	26812	96.1,96.1
70	35.17	44.65	41.10	43.48	40.00	40.74	37.01	41.73	60- 70	644.6	27457	98.5,98.4
80	15.96	20.14	21.21	20.69	16.13	20.30	20.37	19.71	70- 80	296.4	27753	99.5,99.5
90	2.265	6.401	8.151	7.531	2.511	7.575	8.286	7.450	80- 90	135.3	27888	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): 19734 lm

%lum = 70.8%

%lamp = 70.7%

Conical surface Flux(120deg): 26812 lm

%lum = 96.1%

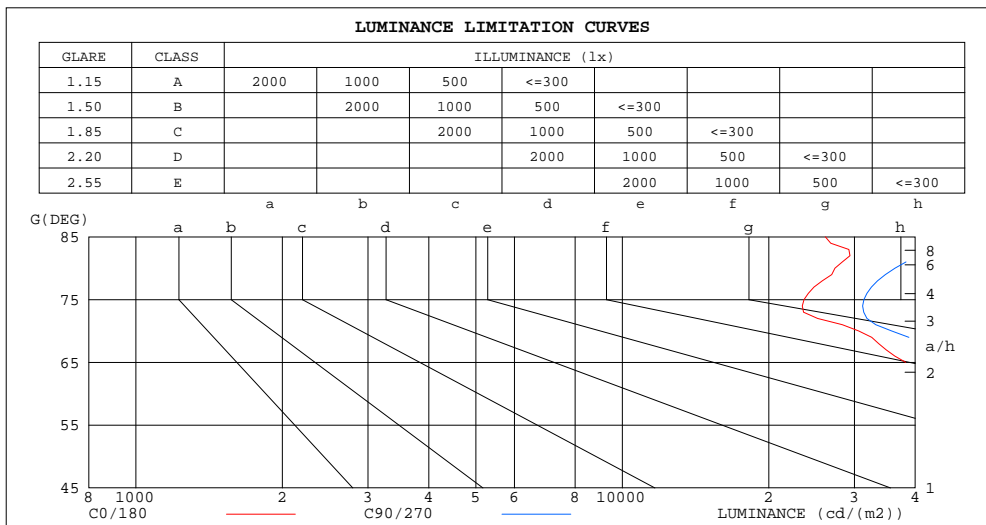
%lamp = 96.1%

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	26136	50069
80	27356	36347
75	23631	31378
70	30606	35765
65	38228	48170
60	54171	73439
55	202728	225046
50	346212	341429
45	408716	402152

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, 27900 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 11.6)

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:

### UTILIZATION FACTORS TABLE

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

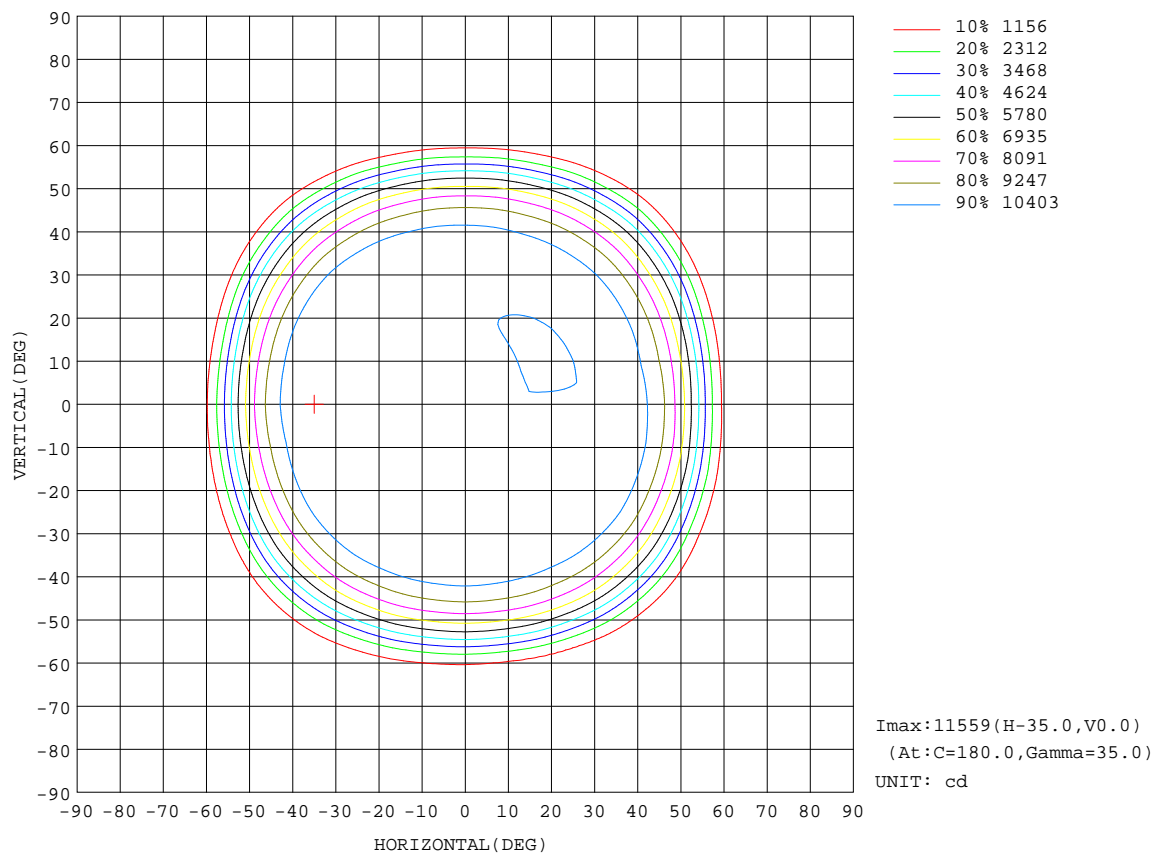
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT)    k(RI) x RCR = 5									
k = 0.60	64	53	47	63	53	47	62	52	47	41
0.80	75	65	58	74	64	58	72	64	58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

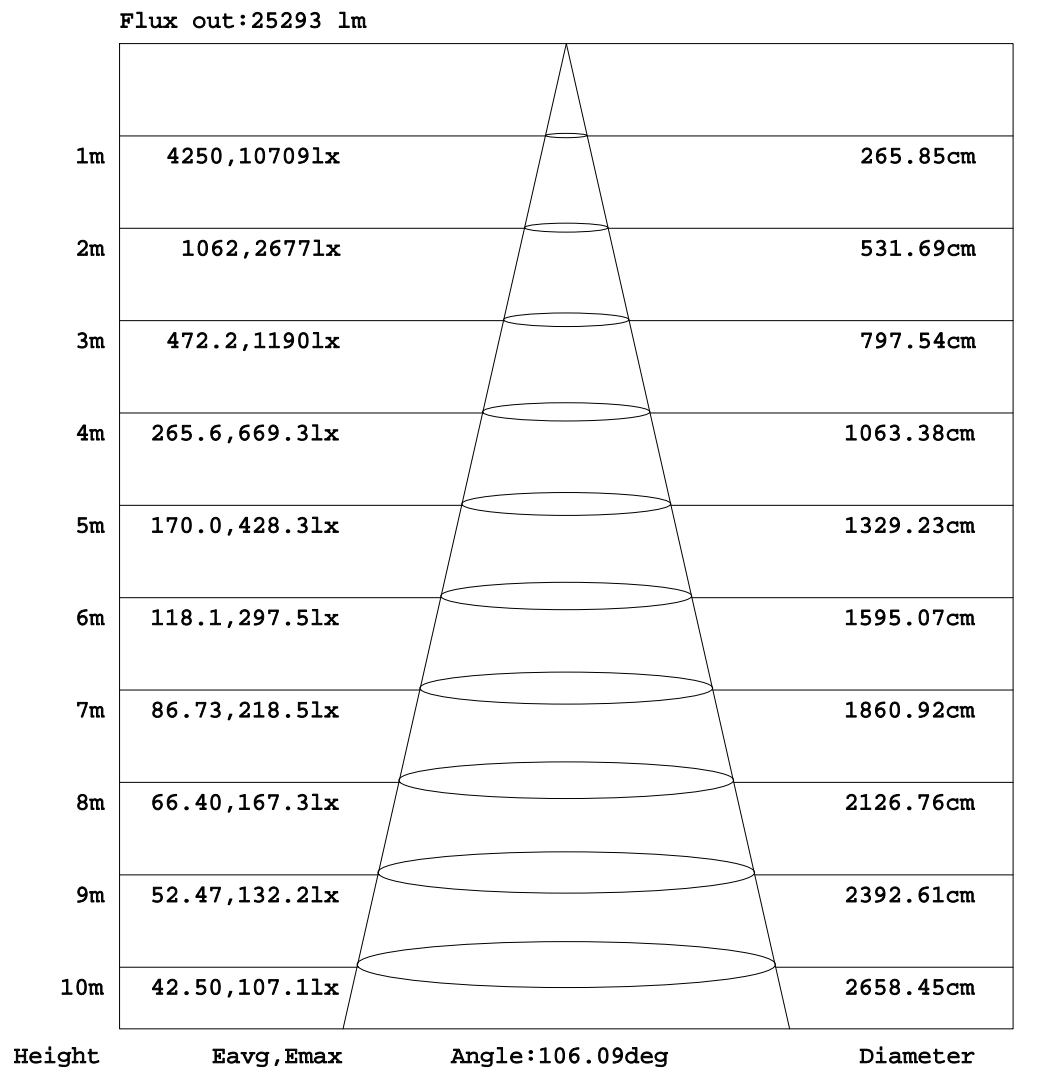


C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2017.7.13

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:



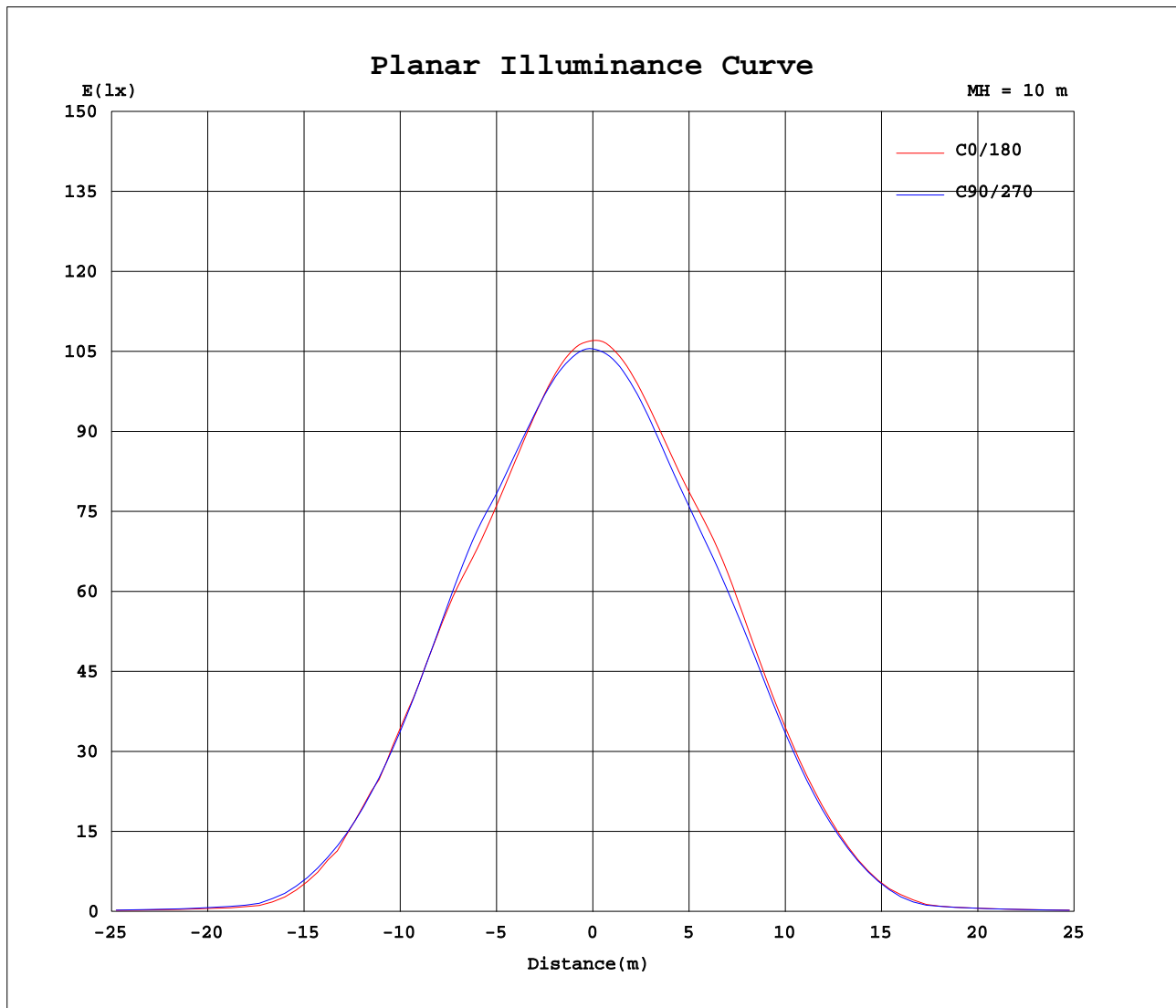
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:



