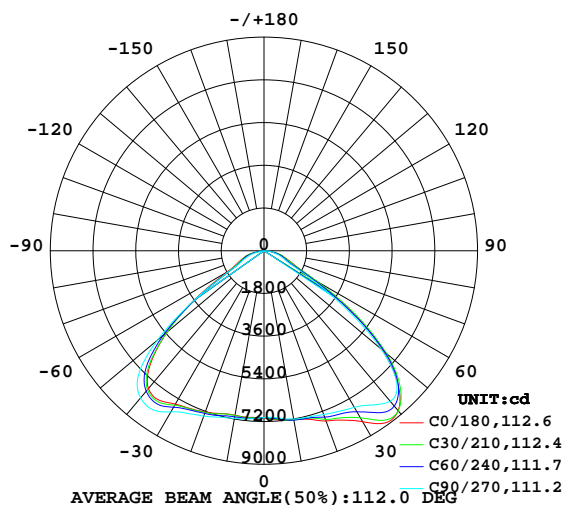


LUMINAIRE PHOTOMETRIC TEST REPORT

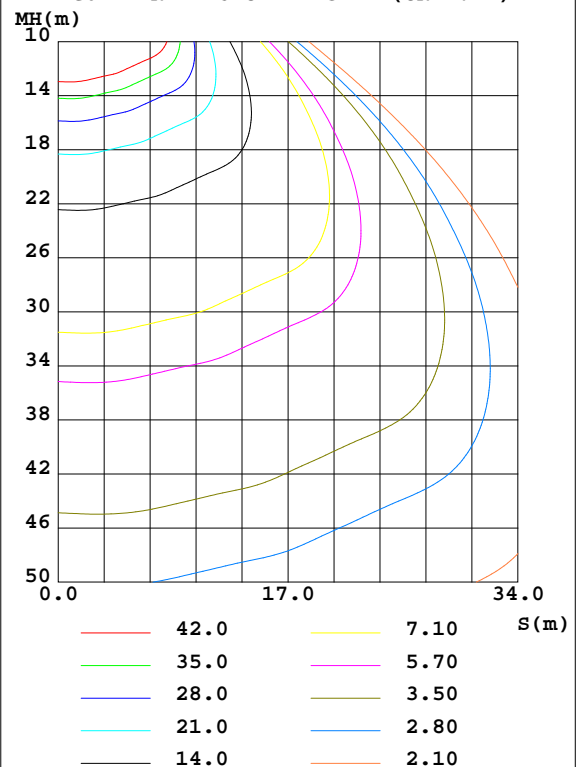
NAME: LED LIGHT	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:21cm*16cm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 125.76 lm/W
MODEL	ZGSM-GCD180H6	Imax(cd)	8943	S/MH(C0/180)	1.58	
NOMINAL POWER(W)	180	LOR(%)	100.6	S/MH(C90/270)	1.63	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	22637	η UP,DN(C0-180)	0.0,51.4	
NOMINAL FLUX(lm)	22500	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.2	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.75	
TEST VOLTAGE(V)	220.1	η down(%)	100.6	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

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:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	7228	7249	7199	7081	7039	7076	7174	7211	0- 10	679.0	679.0	3.3,0.2
20	7634	7506	7344	7247	7232	7275	7411	7557	10- 20	2059	2738	12.1,12.2
30	8319	8005	7618	7484	7462	7587	7840	8317	20- 30	3513	6251	27.6,27.8
40	8796	8687	8273	7707	7578	7652	8091	8484	30- 40	5091	11341	50.1,50.4
50	6535	6741	6449	5658	5353	5402	5886	6160	40- 50	5674	17015	75.2,75.6
60	2522	2510	2022	1869	1819	1561	1522	1881	50- 60	3506	20520	90.7,91.2
70	1026	958.1	809.2	917.1	953.0	895.6	754.9	898.2	60- 70	1246	21766	96.2,96.7
80	413.3	470.7	346.0	413.2	363.7	365.1	64.62	398.2	70- 80	697.5	22463	99.2,99.8
90	23.24	24.69	6.187	21.57	20.43	15.01	4.285	17.08	80- 90	173.3	22637	100,101
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): 14259 lm

%lum = 63.0%

%lamp = 63.4%

Conical surface Flux(120deg): 20520 lm

%lum = 90.7%

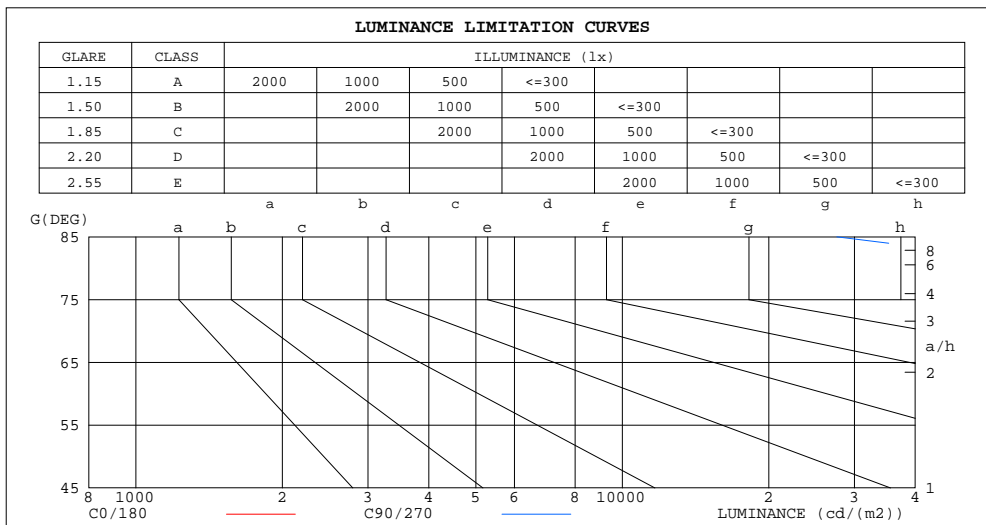
%lamp = 91.2%

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:

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	57655	27599
80	70841	59306
75	88008	66539
70	89311	70417
65	99580	75273
60	150106	120352
55	242267	214538
50	302591	298601
45	336651	333095

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:

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	.267	.152	.048	.260	.148	.047	.247	.141	.045	.235	.135	.043	.223	.130	.042		
2.0	.258	.142	.043	.252	.139	.043	.241	.134	.042	.230	.129	.040	.221	.125	.039		
3.0	.245	.130	.039	.240	.128	.039	.229	.124	.038	.220	.121	.037	.211	.117	.036		
4.0	.231	.120	.035	.226	.118	.035	.217	.115	.034	.209	.112	.034	.201	.109	.033		
5.0	.217	.110	.032	.212	.109	.032	.204	.106	.031	.197	.104	.031	.190	.102	.031		
6.0	.204	.102	.029	.200	.101	.029	.193	.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	.172	.086	.024	.166	.084	.024	.161	.083	.024		
9.0	.170	.082	.023	.168	.082	.023	.162	.080	.023	.158	.079	.023	.153	.078	.022		
10.0	.161	.077	.021	.159	.077	.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	.192	.192	.192	.164	.164	.164	.112	.112	.112	.064	.064	.064	.021	.021	.021		
1.0	.178	.157	.139	.153	.135	.119	.104	.093	.083	.060	.054	.048	.019	.017	.016		
2.0	.169	.133	.103	.144	.114	.089	.099	.079	.062	.057	.046	.036	.018	.015	.012		
3.0	.160	.115	.079	.137	.099	.068	.094	.069	.048	.055	.040	.028	.018	.013	.009		
4.0	.153	.101	.062	.131	.087	.054	.090	.061	.038	.052	.036	.022	.017	.012	.007		
5.0	.146	.091	.050	.125	.078	.043	.086	.055	.031	.050	.032	.018	.016	.010	.006		
6.0	.139	.082	.041	.120	.071	.036	.083	.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	.073	.039	.016	.042	.023	.010	.014	.008	.003		
10.0	.116	.060	.023	.100	.052	.020	.069	.037	.014	.041	.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	22.8	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	23.5	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	22.6	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	23.1				
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	22.6	22.9				
6H	22.3	23.0	22.7	23.4	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	22.7	23.1				
8H	22.5	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, 22500 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 LIGHT	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:21cm*16cm	Shielding Angle:

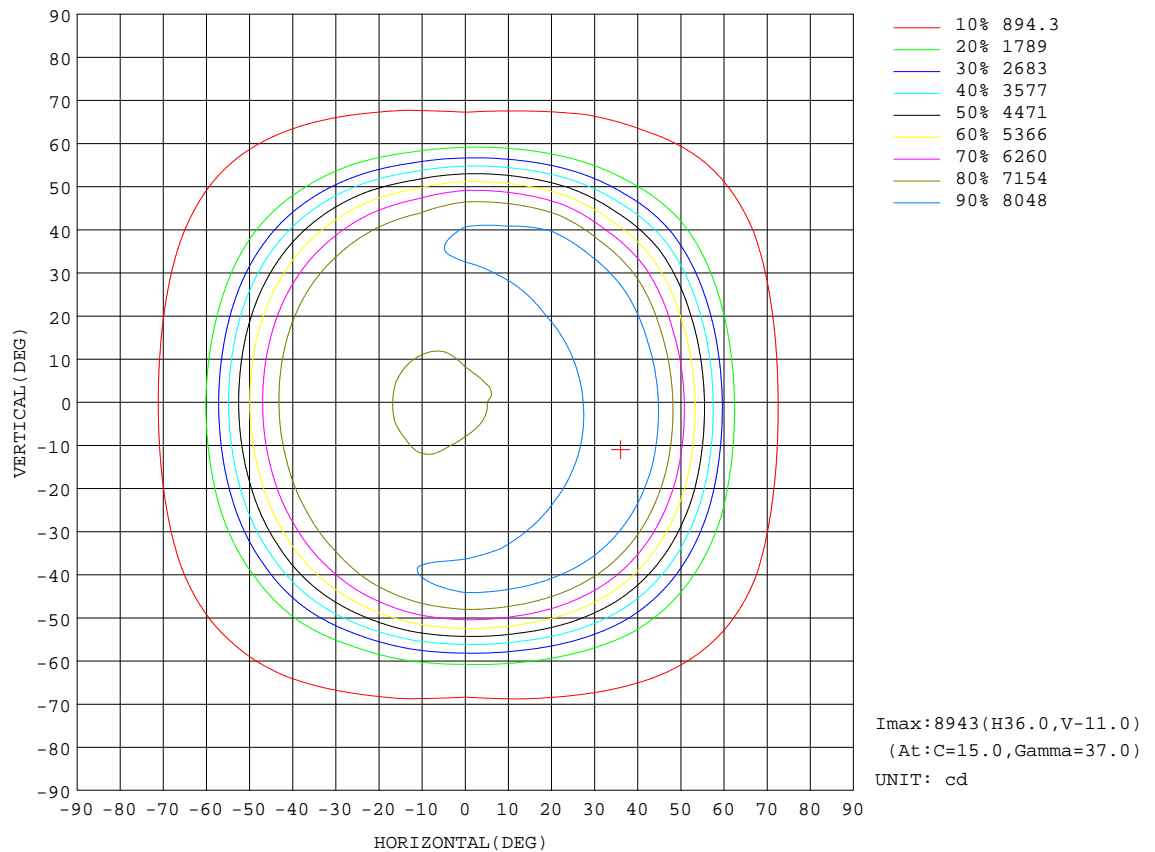
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	60	49	42	59	48	42	58	48	42	35
0.80	71	60	53	70	60	53	69	59	53	46
1.00	81	70	64	80	70	64	77	71	63	56
1.25	88	79	72	87	78	72	84	77	71	64
1.50	93	84	78	91	83	77	88	82	76	70
2.00	99	92	86	98	91	86	94	89	84	77
2.50	103	96	91	101	94	90	97	92	88	80
3.00	105	100	95	103	98	94	100	95	91	84
4.00	109	104	100	106	102	98	102	99	96	87
5.00	111	106	103	108	104	101	104	101	98	89
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

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:

ISOCANDELA DIAGRAM

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



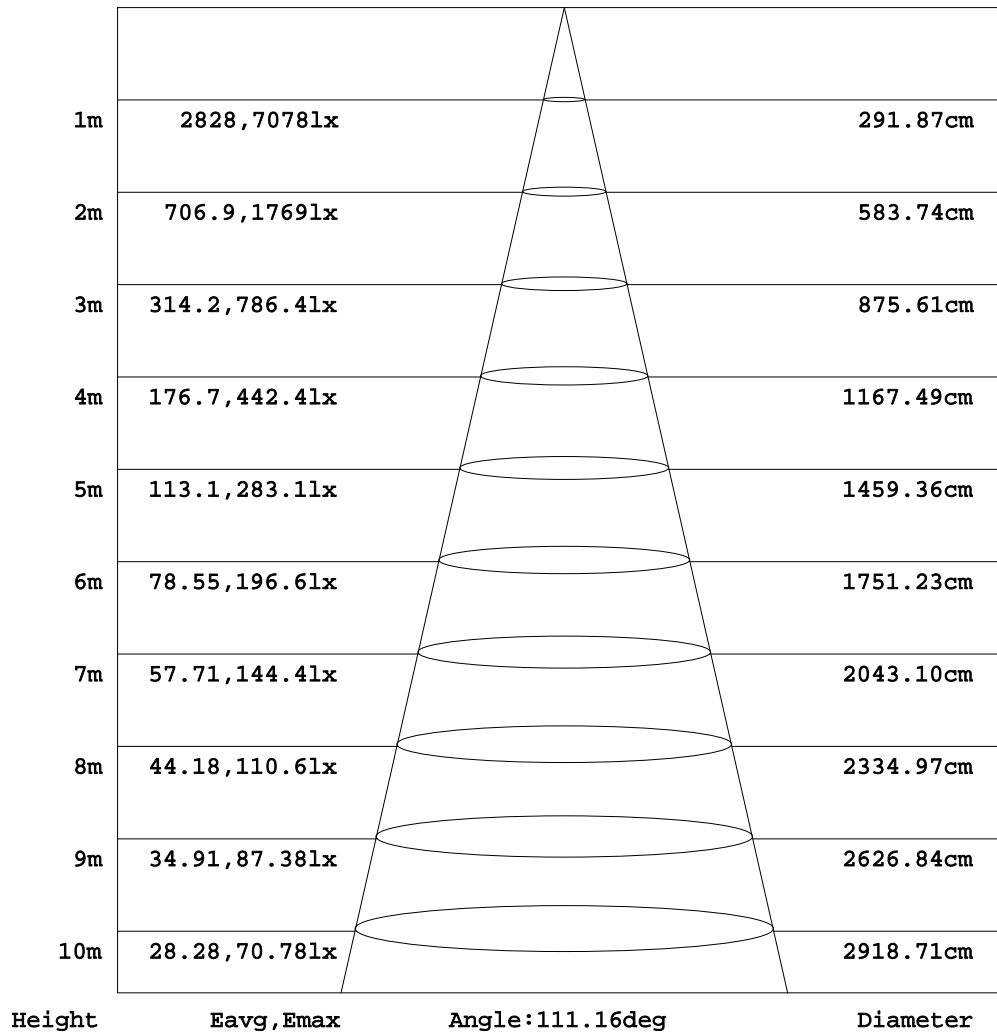
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017

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.: EVERFINE	SUR.:21cm*16cm	Shielding Angle:

Flux out:19526 lm

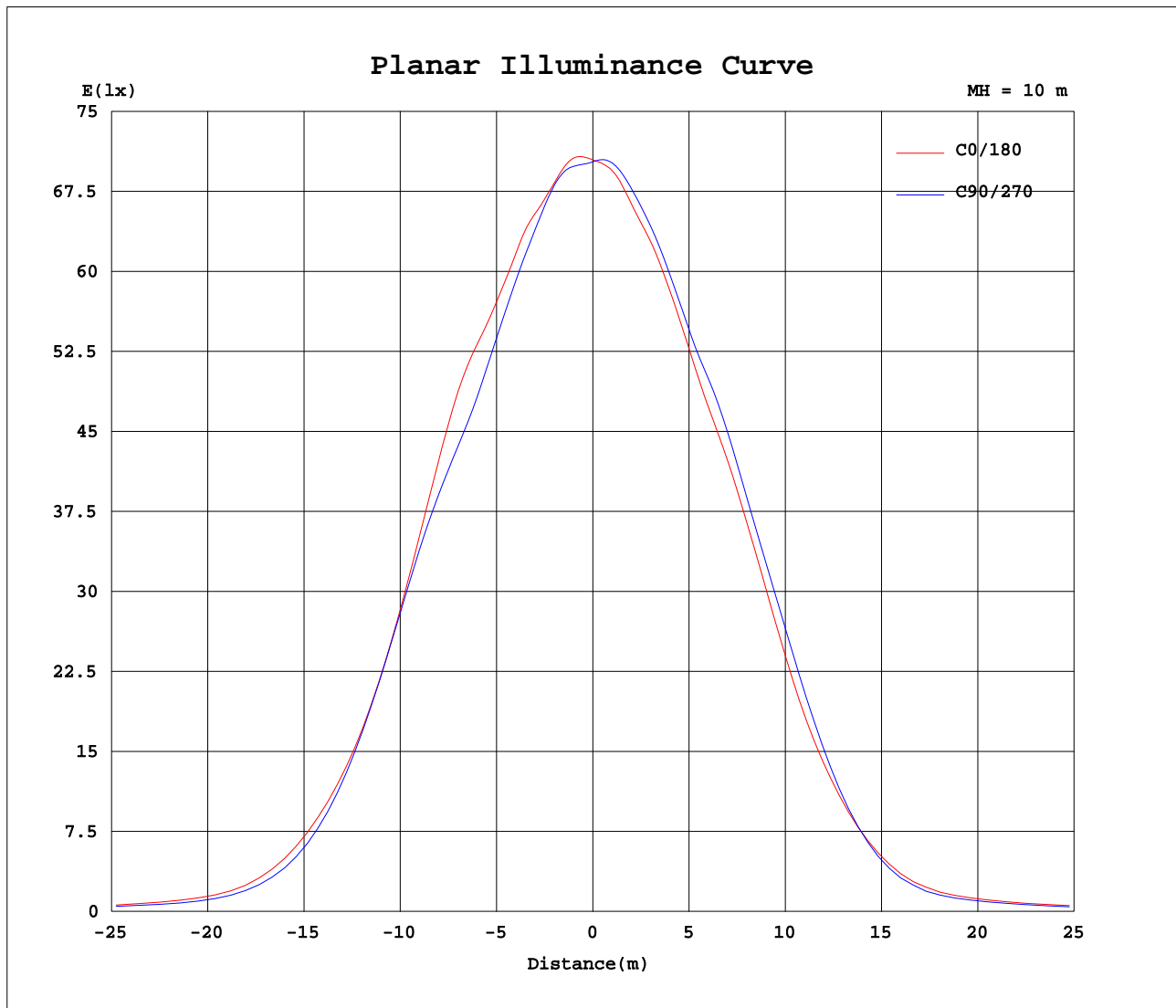


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

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:

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

UNIT: cd

[illegible]

```

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:

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