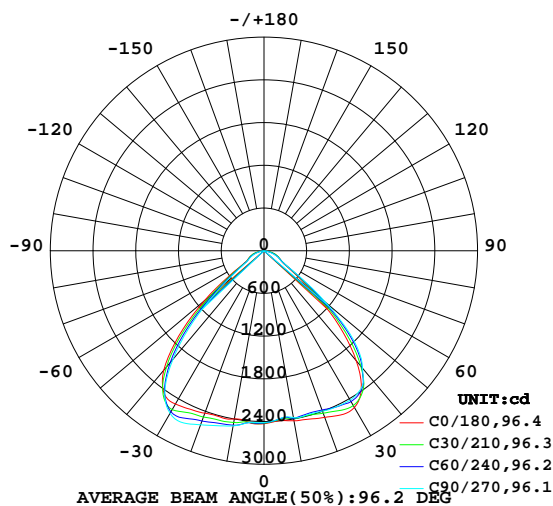


LUMINAIRE PHOTOMETRIC TEST REPORT

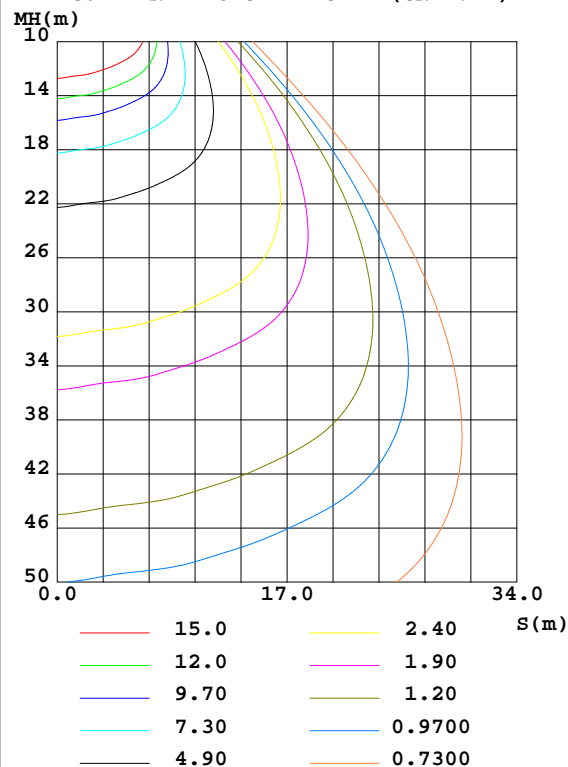
NAME: LED light	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:21cm*16cm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 140.04 lm/W			
MODEL	40W 110DU	Imax(cd)	2683	S/MH(C0/180)	1.41
NOMINAL POWER(W)	40	LOR(%)	100.0	S/MH(C90/270)	1.35
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	5601.7	η UP,DN(C0-180)	0.0,50.5
NOMINAL FLUX(lm)	5600	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.5
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	220.1	η down(%)	100.0	CIBSE SHR MAX	1.35

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:2017.4.26

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	2425	2388	2380	2367	2398	2472	2497	2464	0- 10	229.7	229.7	4.1,4.1
20	2491	2403	2398	2371	2428	2511	2601	2559	10- 20	692.4	922.1	16.5,16.5
30	2542	2474	2421	2412	2486	2611	2638	2608	20- 30	1161	2083	37.2,37.2
40	2017	2116	2152	2211	2191	2099	1993	1973	30- 40	1485	3568	63.7,63.7
50	902.0	1031	1140	1184	1095	922.5	784.8	823.4	40- 50	1210	4779	85.3,85.3
60	272.9	287.5	270.1	277.6	273.1	264.2	255.6	273.2	50- 60	459.9	5238	93.5,93.5
70	185.8	180.1	150.3	178.2	185.1	176.8	148.6	185.0	60- 70	221.8	5460	97.5,97.5
80	73.57	49.26	24.03	49.80	72.44	48.39	23.21	53.04	70- 80	122.2	5582	99.7,99.7
90	0.7310	1.211	6.641	1.306	0.8865	1.687	7.196	1.345	80- 90	19.33	5602	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): 4256.6 lm

%lum = 76.0%

%lamp = 76.0%

Conical surface Flux(120deg): 5238.5 lm

%lum = 93.5%

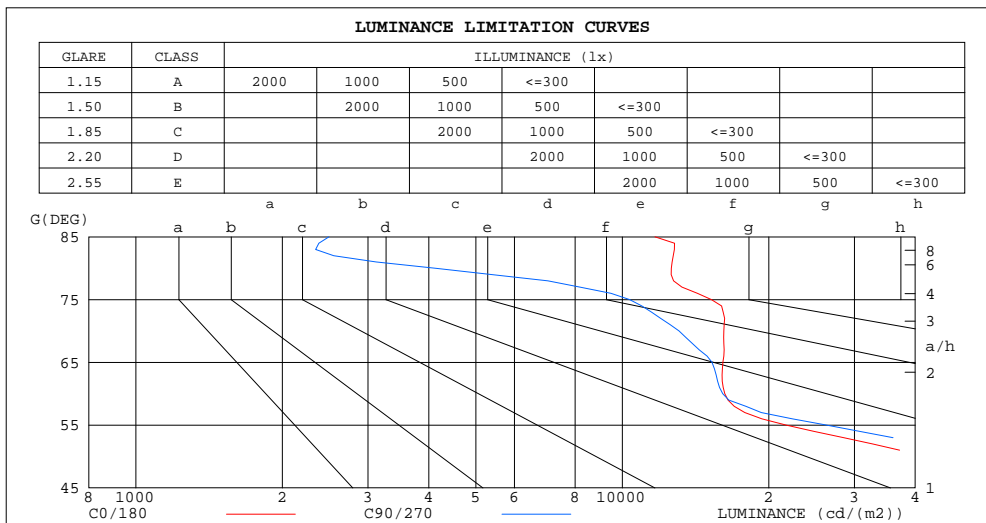
%lamp = 93.5%

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2017.4.26

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



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	11671	2495
80	12609	4119
75	15244	10351
70	16166	13079
65	16100	15289
60	16243	16079
55	21699	26251
50	41762	52797
45	63063	75283

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017.4.26

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.:	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	.238	.135	.043	.231	.132	.042	.218	.125	.040	.206	.119	.038	.195	.113	.037		
2.0	.231	.127	.039	.225	.124	.038	.214	.119	.037	.204	.114	.036	.194	.110	.035		
3.0	.220	.117	.035	.215	.115	.035	.205	.111	.034	.196	.107	.033	.188	.104	.032		
4.0	.208	.108	.032	.204	.107	.031	.195	.103	.031	.187	.100	.030	.180	.098	.030		
5.0	.197	.100	.029	.193	.099	.029	.185	.096	.028	.178	.094	.028	.171	.092	.028		
6.0	.186	.093	.027	.182	.092	.026	.175	.090	.026	.169	.088	.026	.163	.086	.026		
7.0	.176	.087	.025	.173	.086	.025	.167	.084	.024	.161	.082	.024	.156	.081	.024		
8.0	.167	.081	.023	.164	.081	.023	.158	.079	.023	.153	.078	.022	.148	.076	.022		
9.0	.158	.076	.021	.155	.076	.021	.150	.074	.021	.146	.073	.021	.141	.072	.021		
10.0	.150	.072	.020	.148	.071	.020	.143	.070	.020	.139	.069	.020	.135	.068	.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	.191	.191	.191	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020		
1.0	.175	.157	.140	.150	.135	.121	.103	.093	.083	.059	.054	.048	.019	.017	.016		
2.0	.164	.132	.105	.141	.114	.091	.096	.079	.064	.056	.046	.037	.018	.015	.012		
3.0	.155	.114	.081	.133	.098	.071	.091	.068	.050	.053	.040	.029	.017	.013	.010		
4.0	.147	.100	.064	.126	.086	.056	.087	.060	.039	.050	.035	.023	.016	.011	.008		
5.0	.139	.089	.052	.120	.077	.045	.083	.054	.032	.048	.032	.019	.015	.010	.006		
6.0	.133	.081	.043	.114	.070	.038	.079	.049	.027	.046	.029	.016	.015	.009	.005		
7.0	.127	.074	.036	.109	.064	.032	.075	.045	.022	.044	.026	.013	.014	.009	.004		
8.0	.121	.068	.031	.104	.059	.027	.072	.041	.019	.042	.024	.011	.014	.008	.004		
9.0	.116	.063	.027	.100	.055	.024	.069	.038	.017	.040	.023	.010	.013	.007	.003		
10.0	.111	.059	.024	.096	.051	.021	.066	.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:2017.4.26

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					18.3	19.6	18.5	19.8	20.0	18.7	20.0	18.9	20.2	20.4
3H					18.6	19.8	18.9	20.0	20.2	18.8	20.0	19.1	20.2	20.4
4H					18.8	19.9	19.1	20.1	20.4	18.8	20.0	19.1	20.2	20.4
6H					18.9	19.9	19.2	20.2	20.5	18.8	19.8	19.1	20.1	20.4
8H					18.9	19.9	19.2	20.2	20.5	18.8	19.8	19.1	20.0	20.3
12H					18.9	19.9	19.3	20.2	20.5	18.7	19.7	19.0	20.0	20.2
4H 2H					18.3	19.4	18.6	19.6	19.9	18.6	19.7	18.9	20.0	20.2
3H					18.7	19.7	19.1	20.0	20.3	18.9	19.8	19.2	20.1	20.4
4H					19.1	19.9	19.4	20.2	20.6	19.0	19.9	19.3	20.2	20.5
6H					19.3	20.1	19.7	20.4	20.8	19.0	19.7	19.4	20.1	20.4
8H					19.4	20.1	19.8	20.5	20.8	18.9	19.6	19.3	20.0	20.4
12H					19.4	20.1	19.8	20.5	20.8	18.9	19.5	19.3	19.9	20.3
8H 4H					19.1	19.8	19.5	20.2	20.5	19.0	19.7	19.4	20.1	20.4
6H					19.4	20.0	19.9	20.4	20.8	19.0	19.6	19.4	20.0	20.4
8H					19.5	20.1	20.0	20.5	20.9	19.0	19.5	19.4	19.9	20.4
12H					19.6	20.1	20.1	20.5	21.0	18.9	19.4	19.4	19.8	20.3
12H 4H					19.0	19.7	19.5	20.1	20.5	19.0	19.6	19.4	20.0	20.4
6H					19.4	19.9	19.9	20.3	20.8	19.0	19.5	19.4	19.9	20.4
8H					19.5	20.0	20.0	20.4	20.9	19.0	19.4	19.4	19.8	20.3
Variations with the observer position at spacings:														
S = 1.0H					+ 1.4 / - 1.9					+ 1.9 / - 2.6				
1.5H					+ 1.1 / - 2.1					+ 1.2 / - 3.0				
2.0H					+ 3.2 / - 2.0					+ 4.0 / - 3.3				

CIE Pub.117, 5600 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 6.0$)

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017.4.26

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:

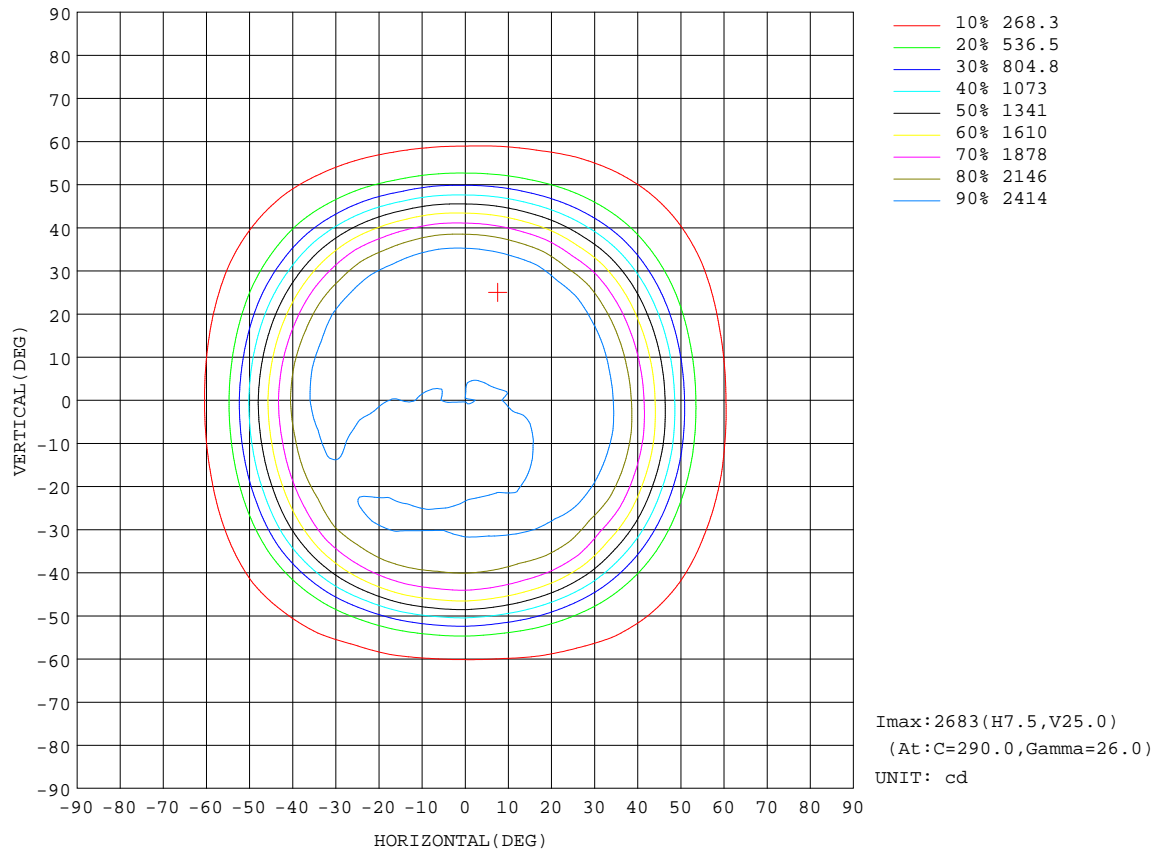
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	69	59	53	68	59	53	67	58	53	48
0.80	79	69	63	78	69	63	76	68	63	57
1.00	86	78	72	85	77	72	83	78	71	66
1.25	93	85	79	91	84	79	89	83	78	72
1.50	97	89	84	95	89	84	93	87	83	77
2.00	102	96	91	100	95	90	97	93	89	82
2.50	105	99	95	103	98	94	99	95	92	85
3.00	107	102	98	105	101	97	102	98	95	87
4.00	110	106	102	108	104	101	104	101	98	90
5.00	112	108	105	109	106	104	105	103	100	92
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:2017.4.26

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



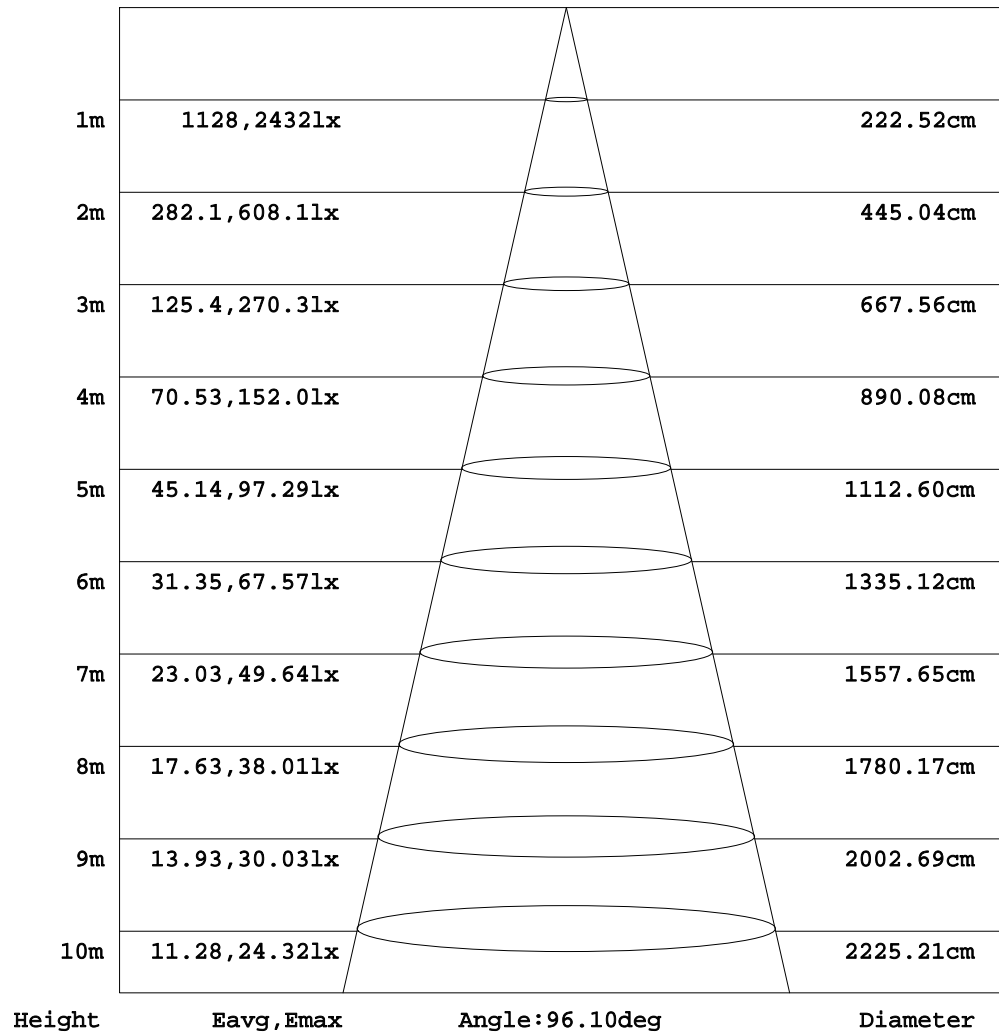
C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2017.4.26

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:4692 lm

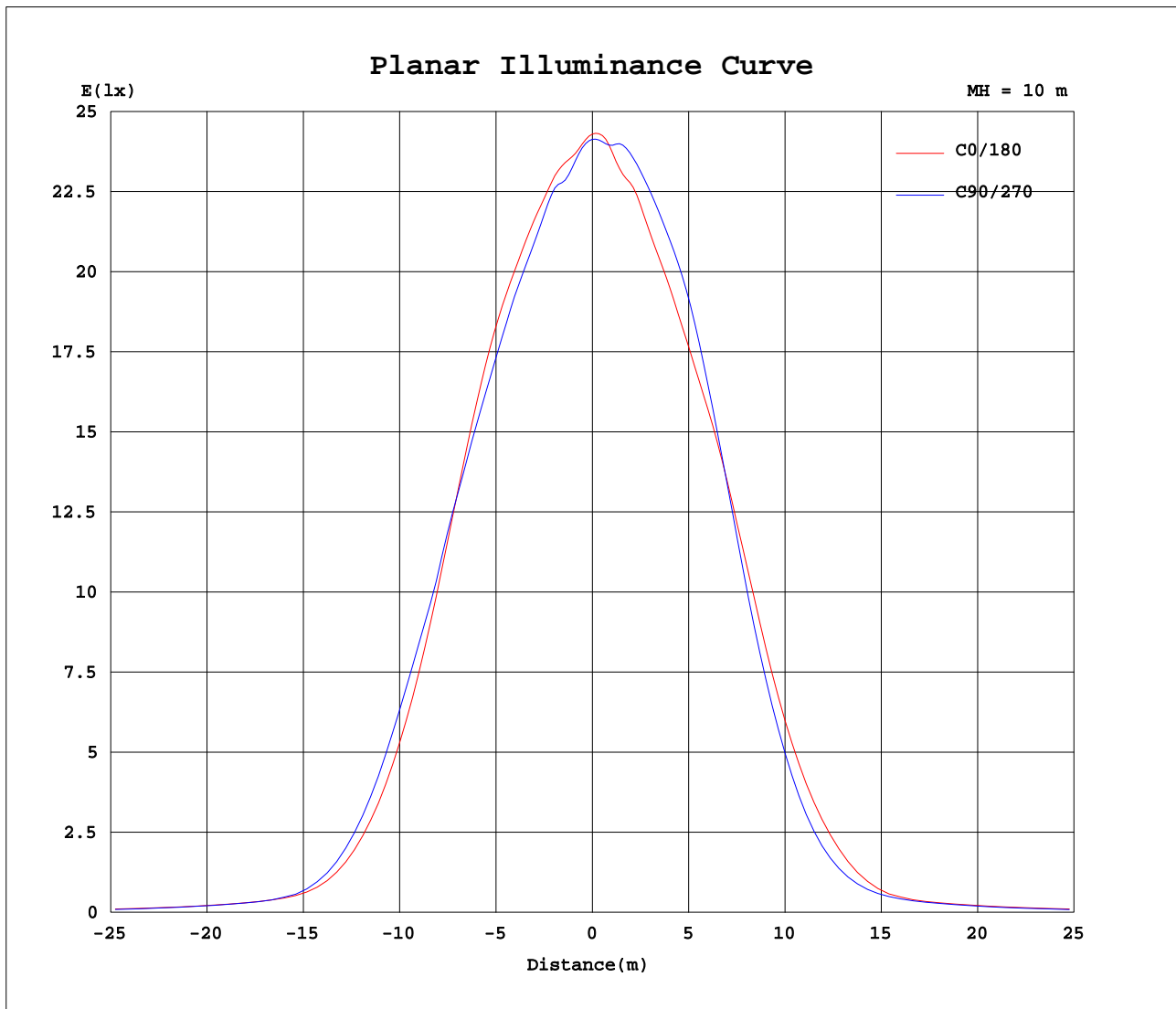


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017.4.26

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: 2017.4.26

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:

