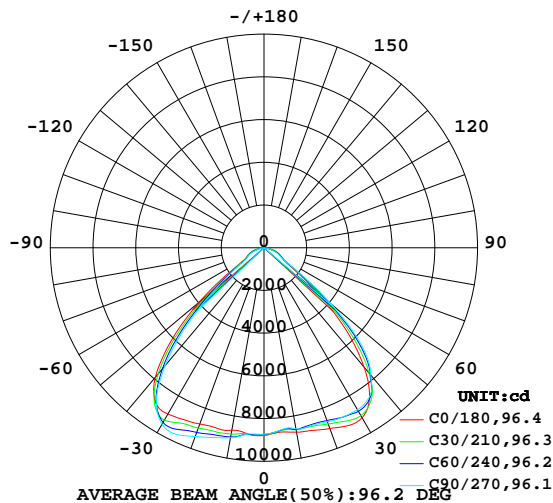


LUMINAIRE PHOTOMETRIC TEST REPORT

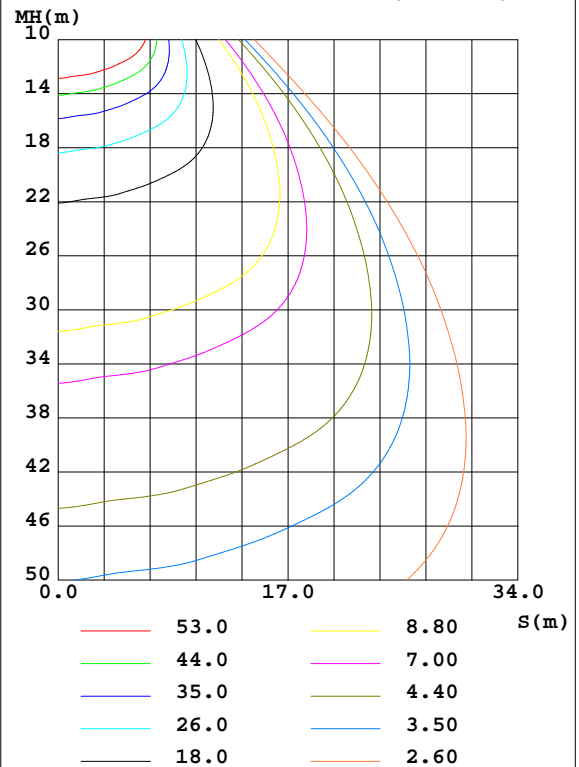
NAME: LED light	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:21cm*16cm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 135.04 lm/W
MODEL	150W 110DU	Imax(cd)	9701	S/MH(C0/180)	1.41	
NOMINAL POWER(W)	150	LOR(%)	100.0	S/MH(C90/270)	1.35	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	20256	η UP,DN(C0-180)	0.0,50.5	
NOMINAL FLUX(lm)	20250	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	8770	8636	8605	8559	8671	8938	9031	8909	0- 10	830.6	830.6	4.1,4.1
20	9006	8690	8670	8573	8781	9078	9406	9255	10- 20	2504	3334	16.5,16.5
30	9191	8947	8756	8723	8988	9442	9539	9430	20- 30	4199	7534	37.2,37.2
40	7292	7650	7782	7994	7922	7589	7206	7136	30- 40	5370	12903	63.7,63.7
50	3262	3728	4123	4280	3961	3336	2838	2978	40- 50	4376	17280	85.3,85.3
60	986.7	1040	976.8	1004	987.5	955.5	924.2	987.8	50- 60	1663	18943	93.5,93.5
70	671.8	651.4	543.5	644.3	669.4	639.5	537.4	669.1	60- 70	801.9	19745	97.5,97.5
80	266.0	178.1	86.90	180.1	262.0	175.0	83.94	191.8	70- 80	441.8	20186	99.7,99.7
90	2.643	4.377	24.01	4.724	3.206	6.102	26.02	4.865	80- 90	69.89	20256	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): 15392 lm

%lum = 76.0%

%lamp = 76.0%

Conical surface Flux(120deg): 18943 lm

%lum = 93.5%

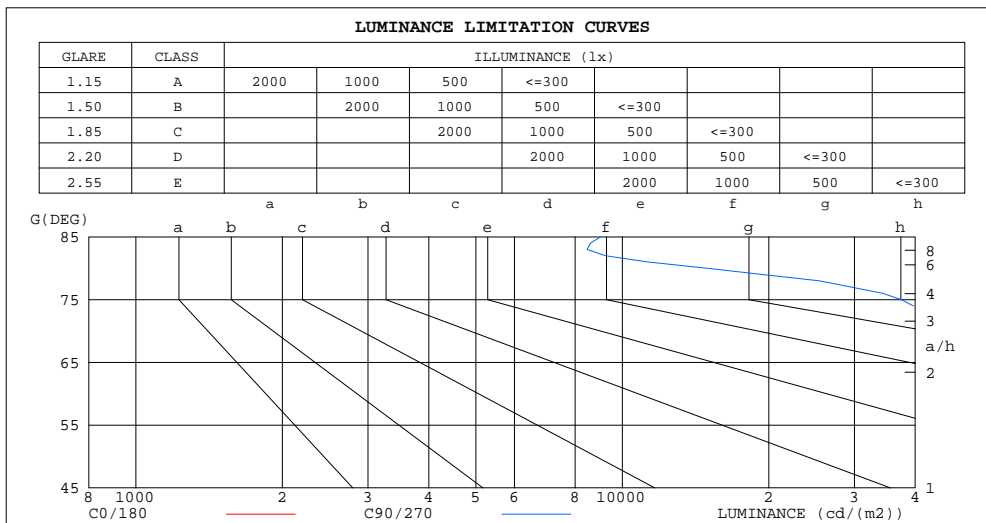
%lamp = 93.5%

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	42203	9020
80	45594	14894
75	55122	37428
70	58458	47295
65	58219	55285
60	58734	58143
55	78463	94924
50	151015	190917
45	228041	272230

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, 20250 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 10.5)

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:

UTILIZATION FACTORS TABLE

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

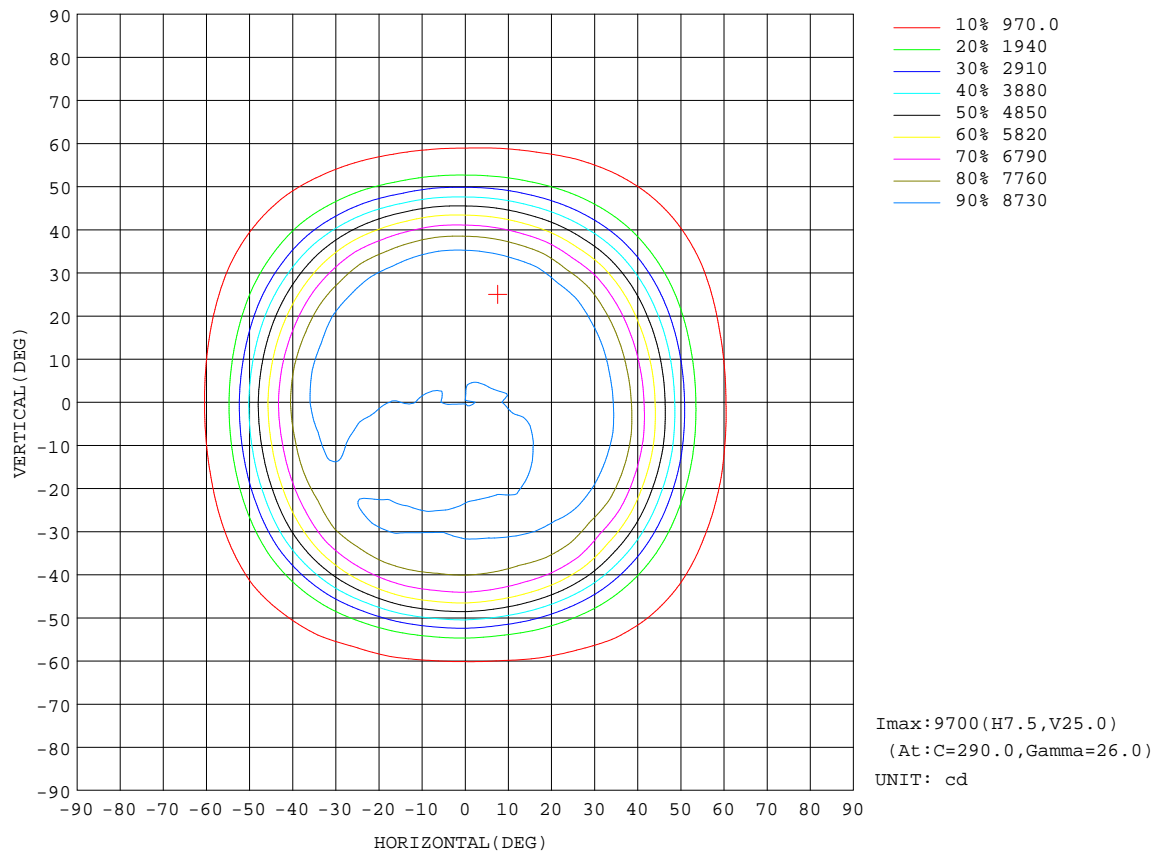
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	69	59	53	68	59	53	67	58	53	48
0.80	79	69	63	78	69	63	76	68	63	57
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										
SHRNM = 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:



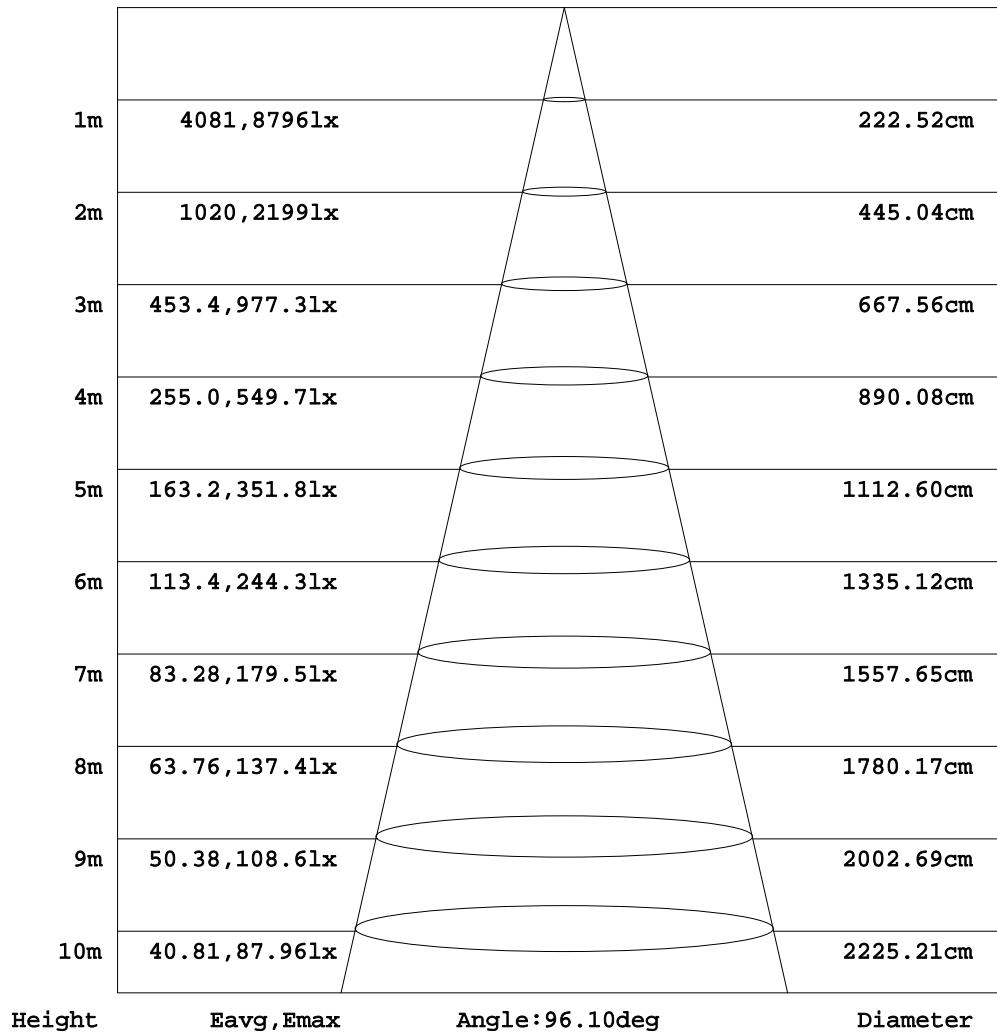
C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2017.4.26

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:16965 lm

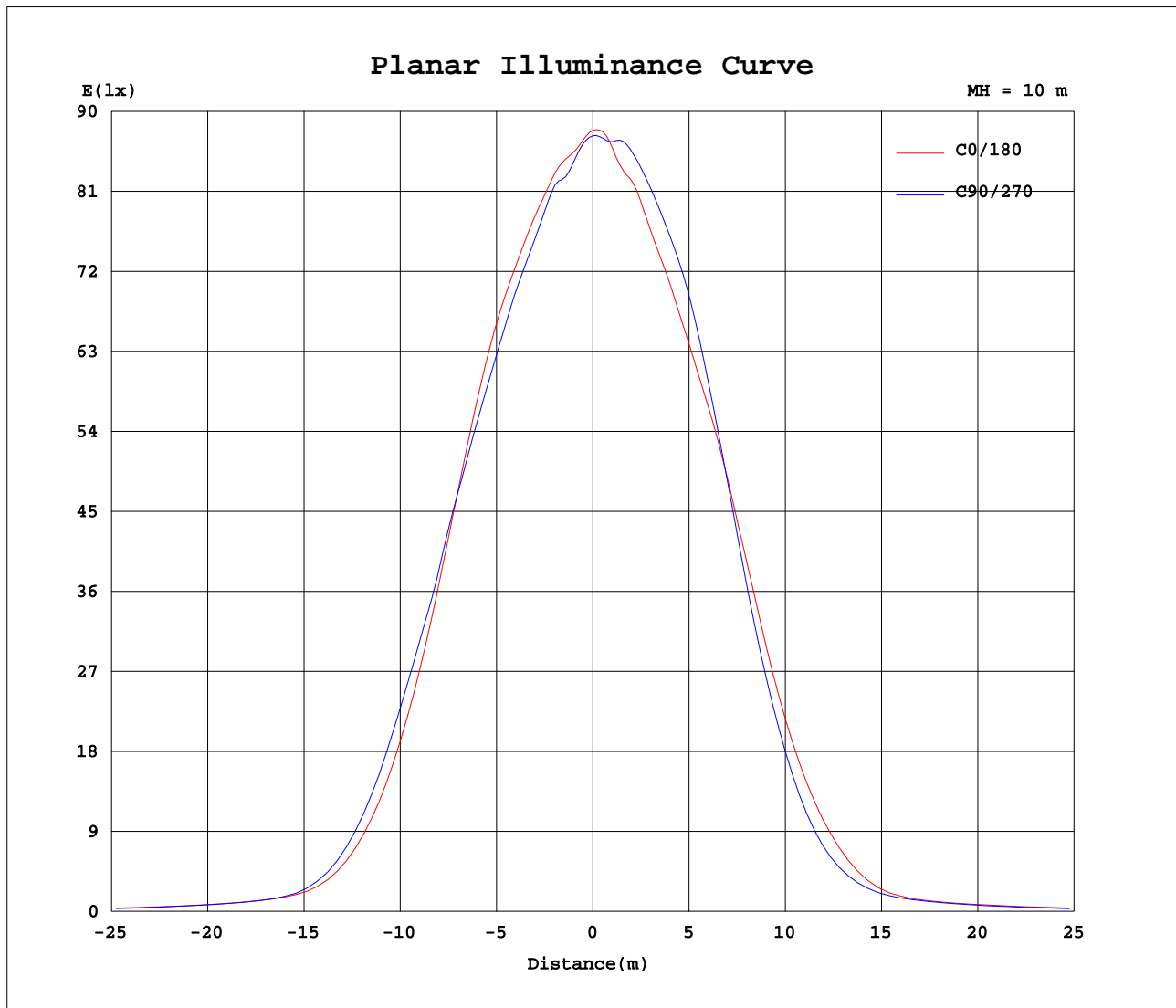


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:

