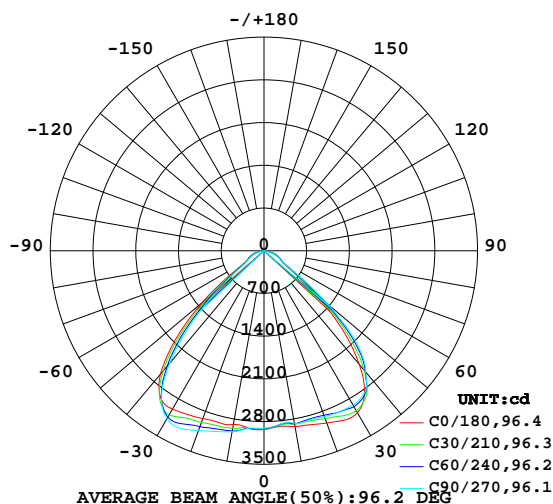


LUMINAIRE PHOTOMETRIC TEST REPORT

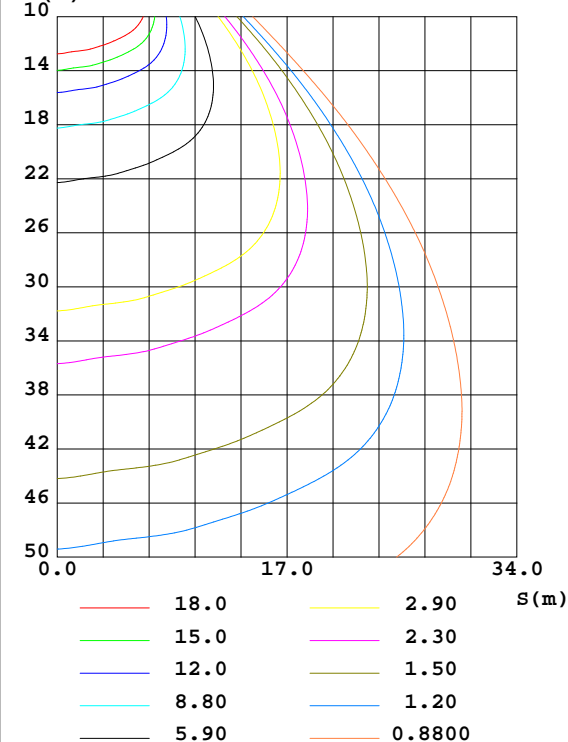
NAME: LED light	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:21cm*16cm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 135.04 lm/W			
MODEL	50W 110DU	Imax(cd)	3234	S/MH(C0/180)	1.41
NOMINAL POWER(W)	50	LOR(%)	100.0	S/MH(C90/270)	1.35
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	6752.1	η UP,DN(C0-180)	0.0,50.5
NOMINAL FLUX(lm)	6750	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	2923	2879	2868	2853	2890	2979	3010	2970	0- 10	276.9	276.9	4.1,4.1
20	3002	2897	2890	2858	2927	3026	3135	3085	10- 20	834.6	1111	16.5,16.5
30	3064	2982	2919	2908	2996	3147	3180	3143	20- 30	1400	2511	37.2,37.2
40	2431	2550	2594	2665	2641	2530	2402	2379	30- 40	1790	4301	63.7,63.7
50	1087	1243	1374	1427	1320	1112	946.0	992.5	40- 50	1459	5760	85.3,85.3
60	328.9	346.6	325.6	334.6	329.2	318.5	308.1	329.3	50- 60	554.3	6314	93.5,93.5
70	223.9	217.1	181.2	214.8	223.1	213.2	179.1	223.0	60- 70	267.3	6582	97.5,97.5
80	88.67	59.38	28.97	60.02	87.32	58.33	27.98	63.93	70- 80	147.3	6729	99.7,99.7
90	0.8811	1.459	8.005	1.575	1.069	2.034	8.673	1.622	80- 90	23.30	6752	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): 5130.7 lm

%lum = 76.0%

%lamp = 76.0%

Conical surface Flux(120deg): 6314.2 lm

%lum = 93.5%

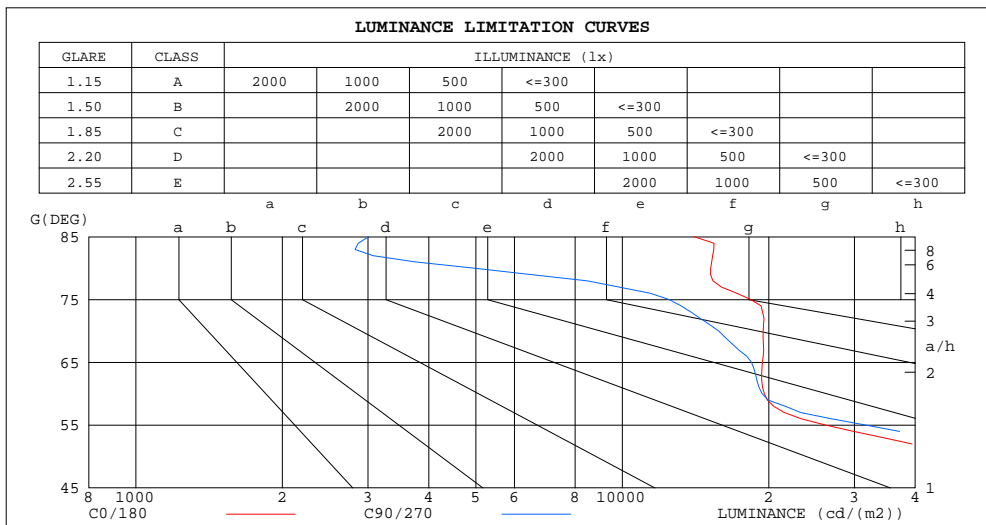
%lamp = 93.5%

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	14068	3007
80	15198	4965
75	18374	12476
70	19486	15765
65	19406	18428
60	19578	19381
55	26154	31641
50	50338	63639
45	76014	90743

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, 6750 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 6.6$)

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:

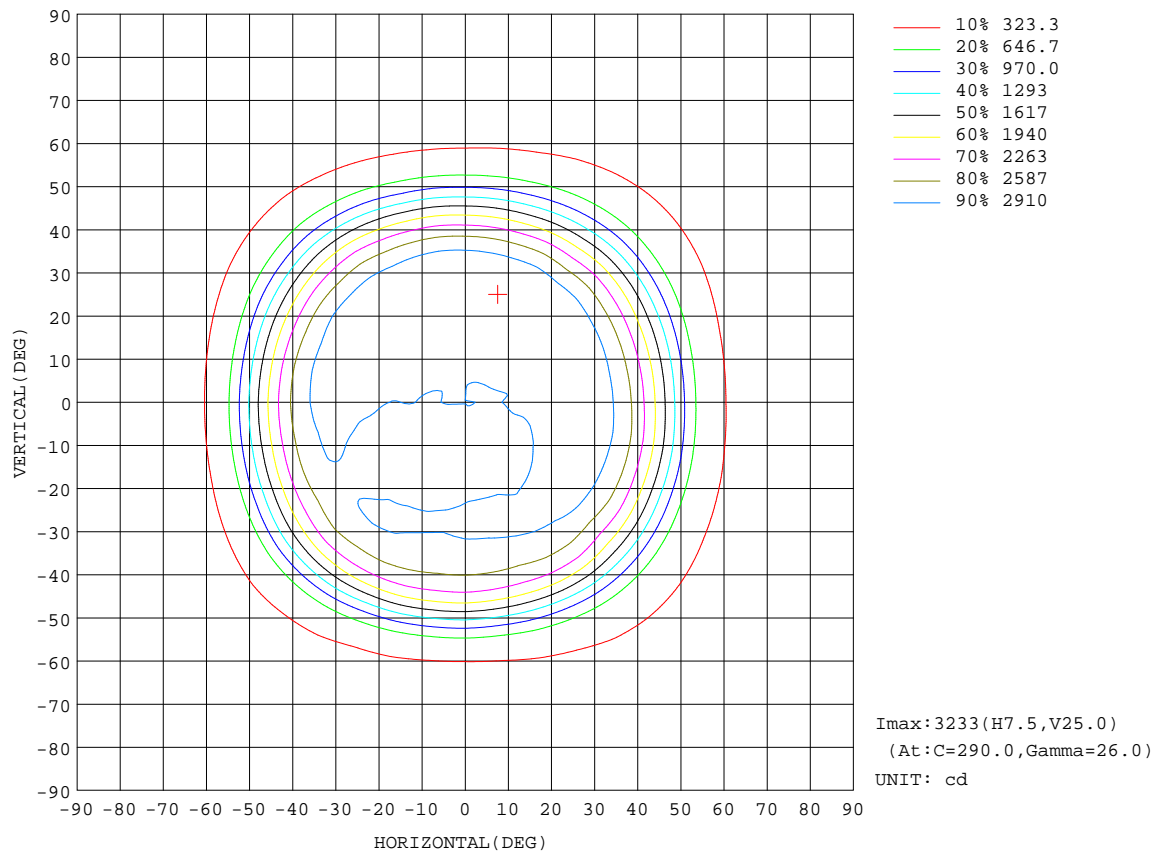
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	69	59	53	68	59	53	67	58	53	48
0.80	79	69	63	78	69	63	76	68	63	57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

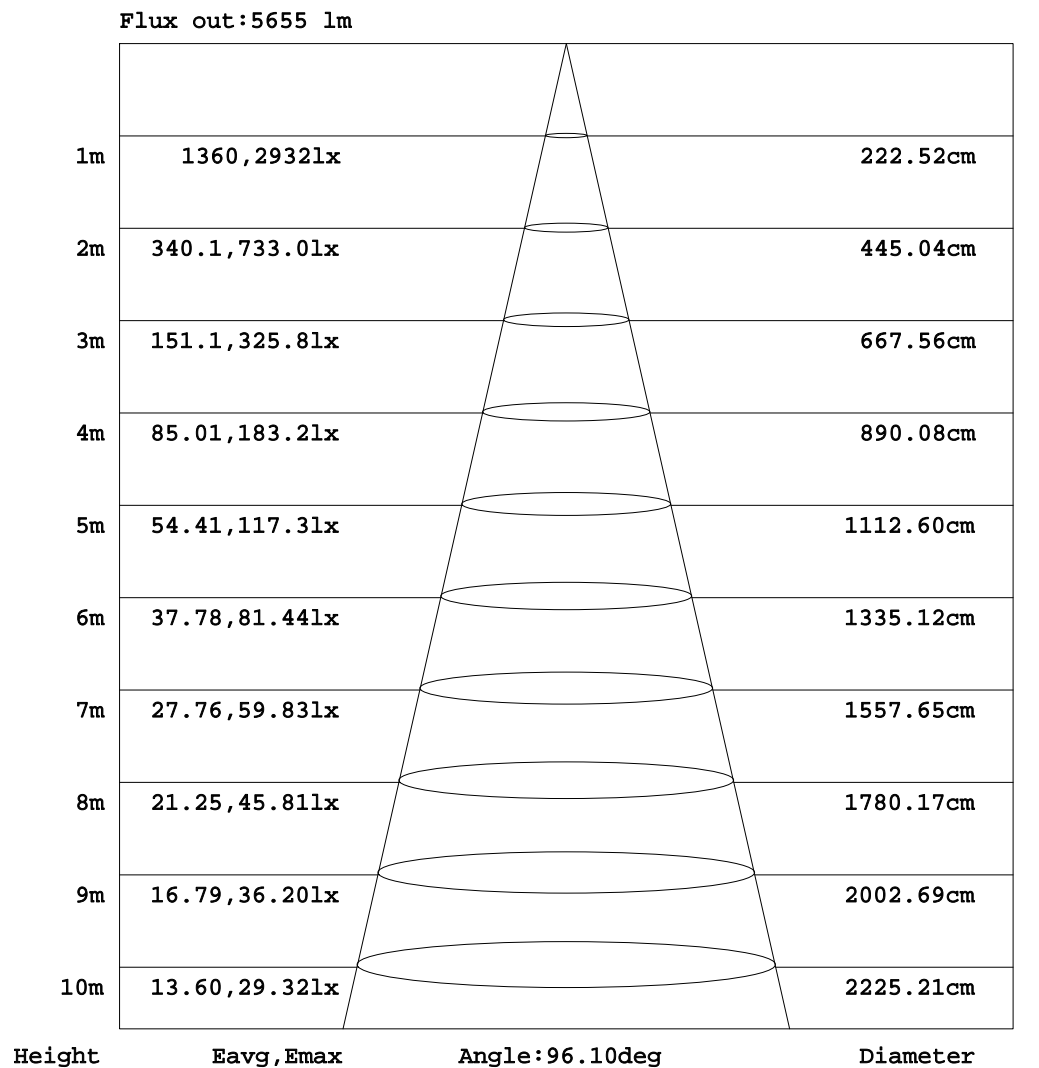


C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2017.4.26

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:

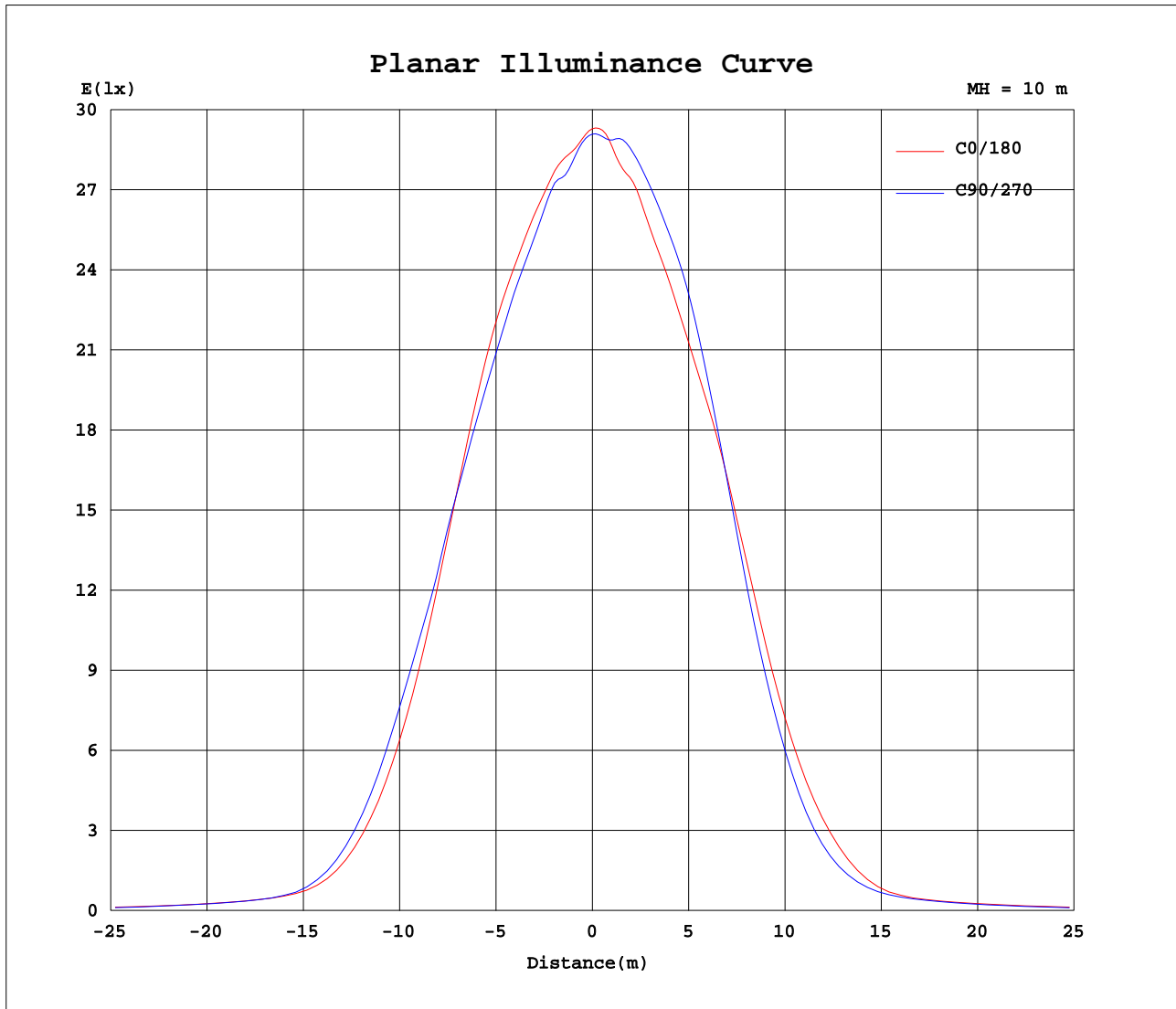


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:

