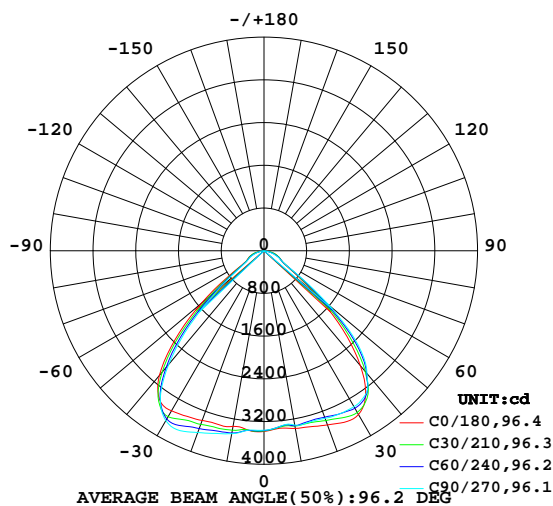


LUMINAIRE PHOTOMETRIC TEST REPORT

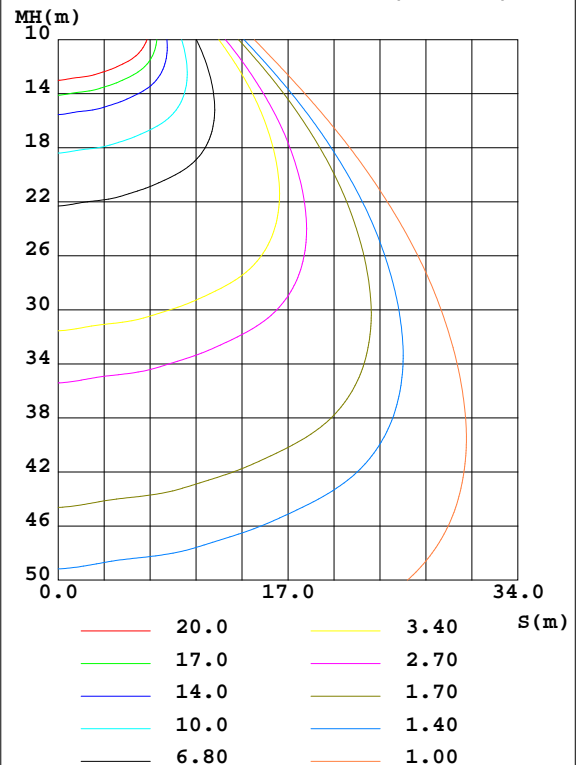
NAME: LED light	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:21cm*16cm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 130.04 lm/W
MODEL	60W 110DU	Imax(cd)	3737	S/MH(C0/180)	1.41	
NOMINAL POWER(W)	60	LOR(%)	100.0	S/MH(C90/270)	1.35	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	7802.4	η UP,DN(C0-180)	0.0,50.5	
NOMINAL FLUX(lm)	7800	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	3378	3326	3314	3297	3340	3443	3479	3432	0- 10	319.9	319.9	4.1,4.1
20	3469	3347	3340	3302	3382	3497	3623	3565	10- 20	964.5	1284	16.5,16.5
30	3540	3446	3372	3360	3462	3637	3674	3632	20- 30	1617	2902	37.2,37.2
40	2809	2947	2997	3079	3052	2923	2775	2749	30- 40	2068	4970	63.7,63.7
50	1256	1436	1588	1649	1526	1285	1093	1147	40- 50	1686	6656	85.3,85.3
60	380.1	400.5	376.3	386.7	380.4	368.0	356.0	380.5	50- 60	640.6	7296	93.5,93.5
70	258.8	250.9	209.4	248.2	257.8	246.3	207.0	257.7	60- 70	308.9	7605	97.5,97.5
80	102.5	68.62	33.47	69.36	100.9	67.40	32.33	73.88	70- 80	170.2	7775	99.7,99.7
90	1.018	1.686	9.250	1.820	1.235	2.350	10.02	1.874	80- 90	26.92	7802	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): 5928.8 lm

%lum = 76.0%

%lamp = 76.0%

Conical surface Flux(120deg): 7296.4 lm

%lum = 93.5%

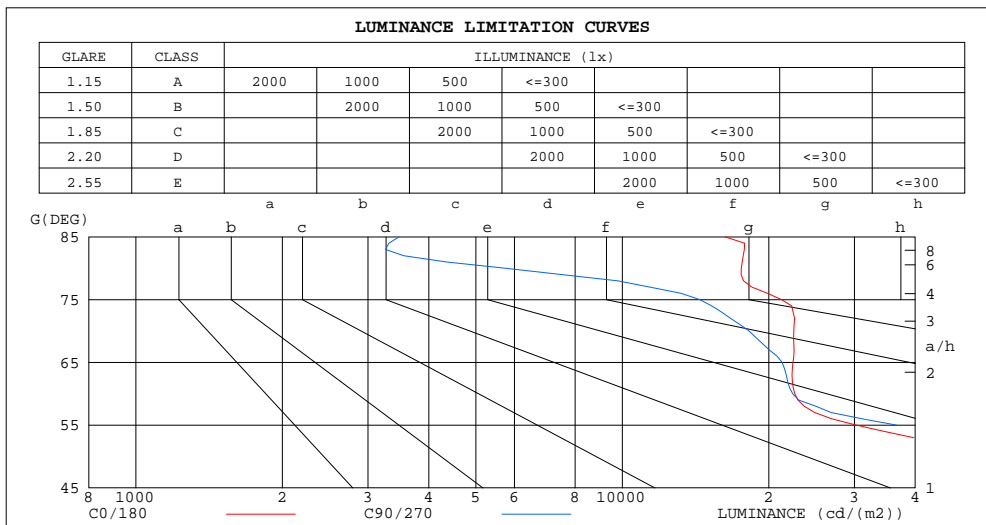
%lamp = 93.5%

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	16256	3474
80	17562	5737
75	21232	14417
70	22517	18217
65	22425	21295
60	22624	22396
55	30223	36563
50	58169	73538
45	87838	104859

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
pw	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
pfc	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	

pcc	80%	70%	50%	30%	10%	0
pw	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
pfc	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, 7800 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 7.1$)

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:

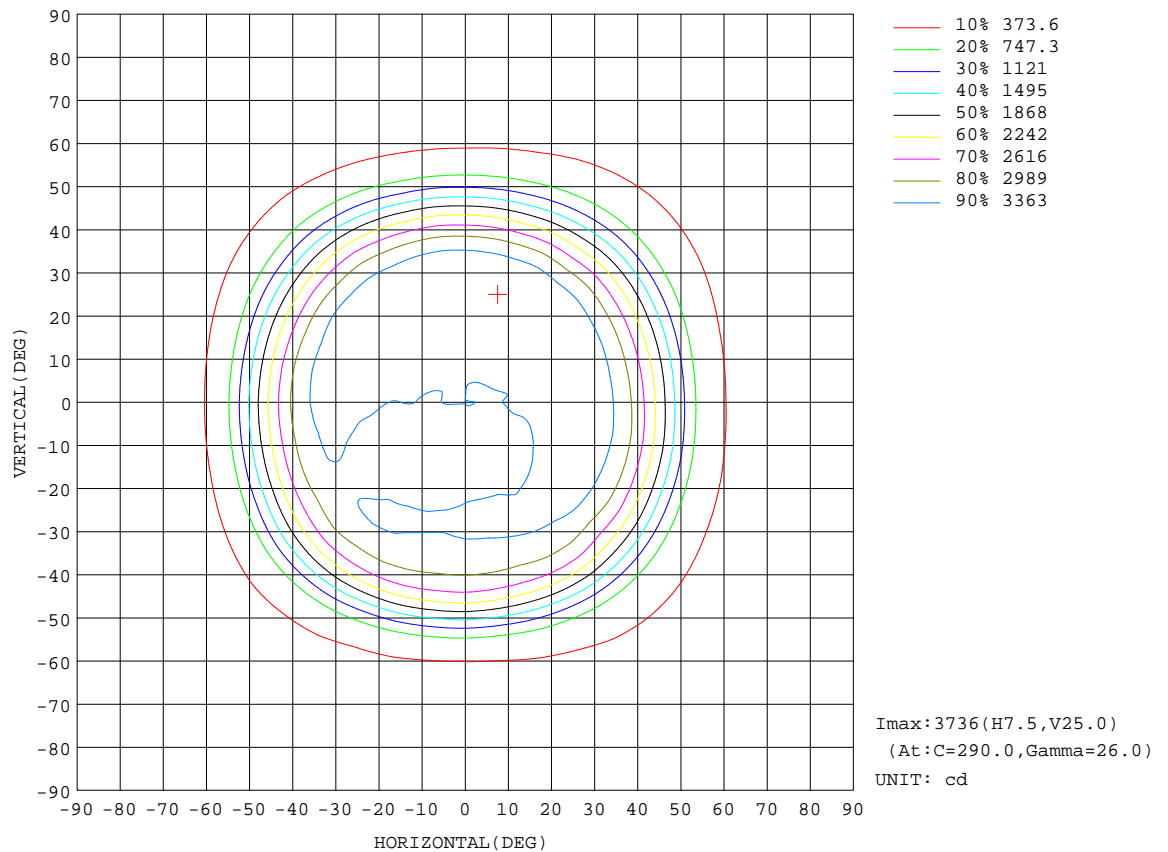
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	69	59	53	68	59	53	67	58	53	48
0.80	79	69	63	78	69	63	76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

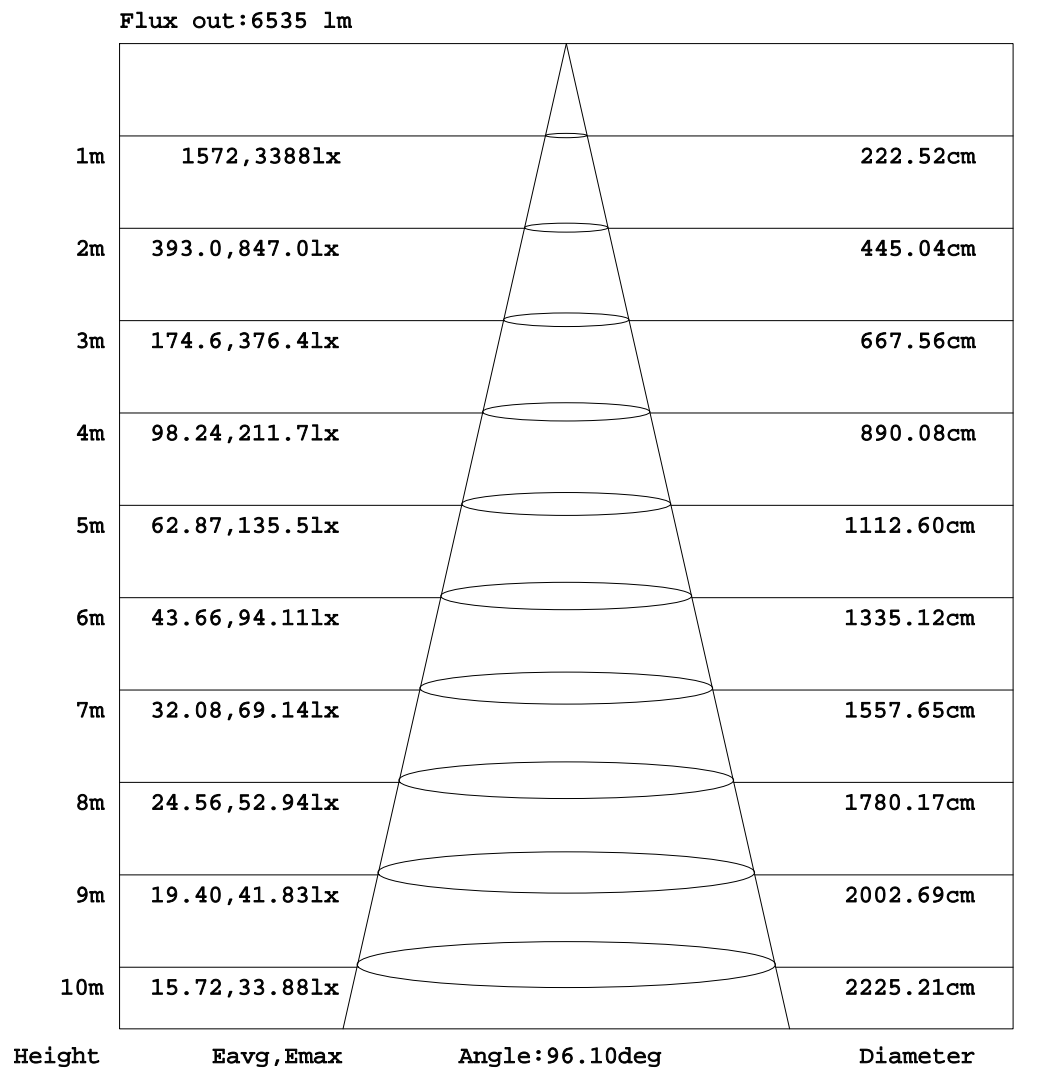


C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2017.4.26

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:

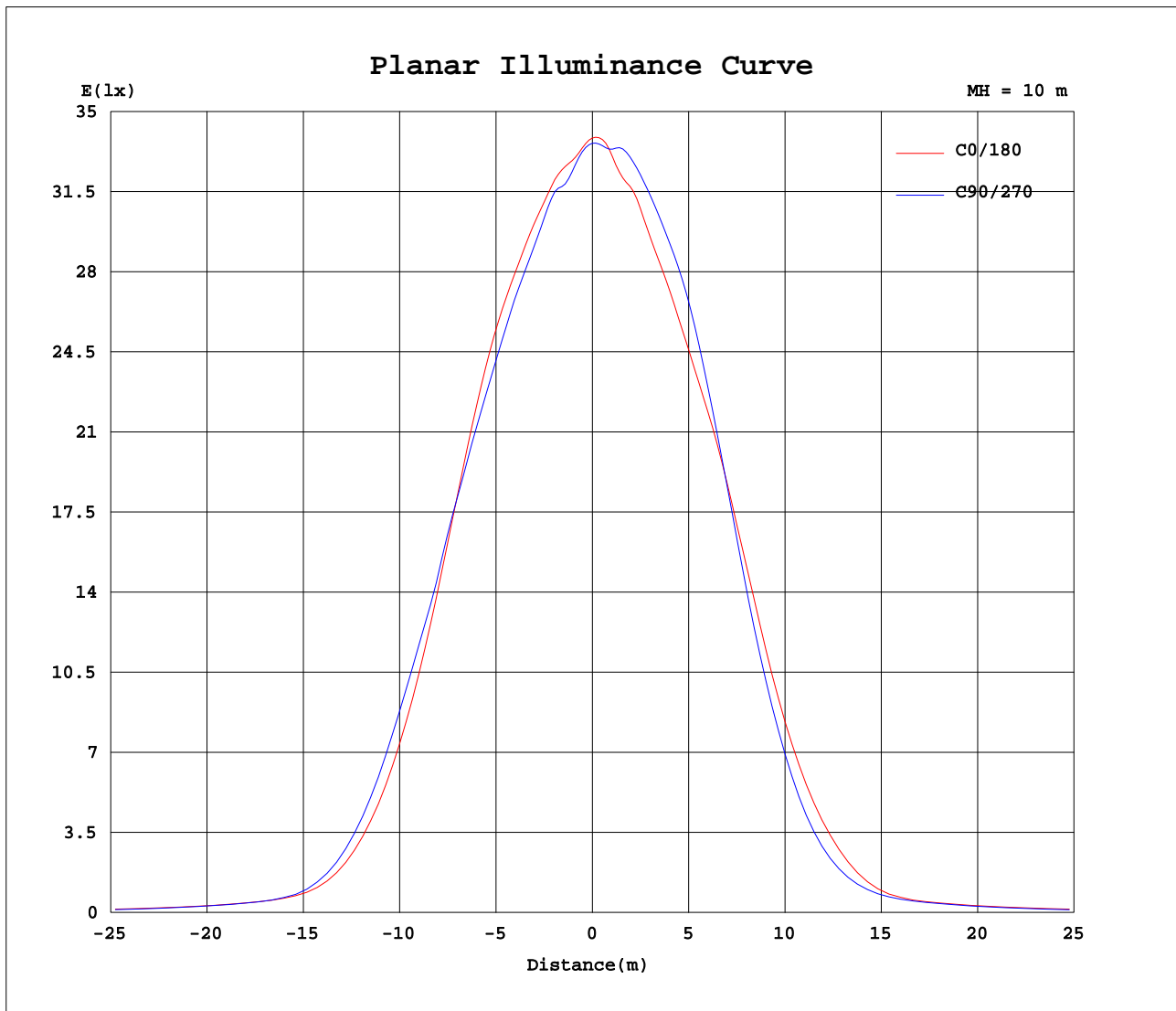


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:

