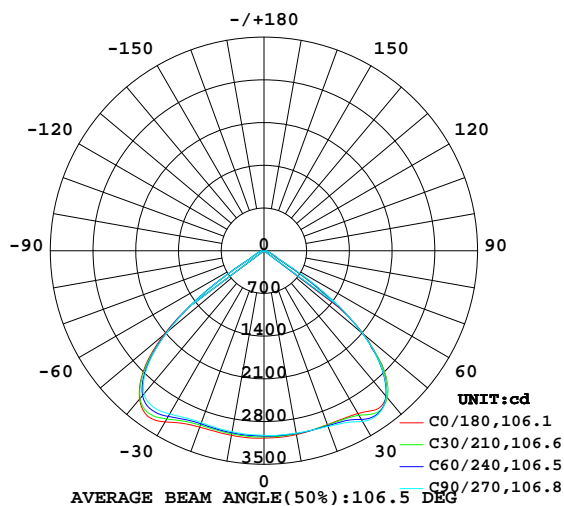


LUMINAIRE PHOTOMETRIC TEST REPORT

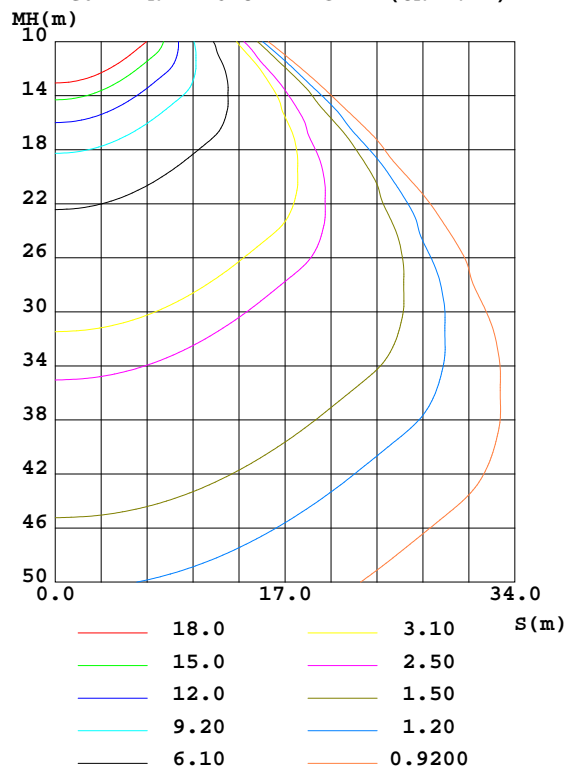
NAME: LED LIGHT	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:21cm*16cm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 159.93 lm/W			
MODEL	50H5 110	Imax(cd)	3314	S/MH(C0/180)	1.55
NOMINAL POWER(W)	50	LOR(%)	100.0	S/MH(C90/270)	1.54
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	7996.6	η UP,DN(C0-180)	0.0,50.5
NOMINAL FLUX(lm)	8000	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.5
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	220.1	η down(%)	100.0	CIBSE SHR MAX	1.55

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:2017.7.13

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	3059	3044	3036	3026	3071	3037	3011	2999	0- 10	289.3	289.3	3.62,3.62
20	3034	3044	3064	3046	3077	3030	2998	2971	10- 20	857.7	1147	14.3,14.3
30	3081	3153	3229	3210	3239	3160	3088	3026	20- 30	1421	2568	32.1,32.1
40	3115	3131	3119	3134	3170	3129	3059	3054	30- 40	1999	4567	57.1,57.1
50	2144	2112	2114	2107	2147	2076	2070	2090	40- 50	2079	6646	83.1,83.1
60	261.0	318.7	353.8	356.8	301.8	276.1	273.6	287.8	50- 60	1042	7688	96.1,96.1
70	100.9	128.0	117.9	124.7	114.7	116.8	106.1	119.7	60- 70	184.8	7873	98.5,98.4
80	45.77	57.75	60.81	59.32	46.26	58.21	58.40	56.51	70- 80	84.99	7958	99.5,99.5
90	6.495	18.35	23.37	21.59	7.201	21.72	23.76	21.36	80- 90	38.79	7997	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): 5658.4 lm

%lum = 70.8%

%lamp = 70.7%

Conical surface Flux(120deg): 7688 lm

%lum = 96.1%

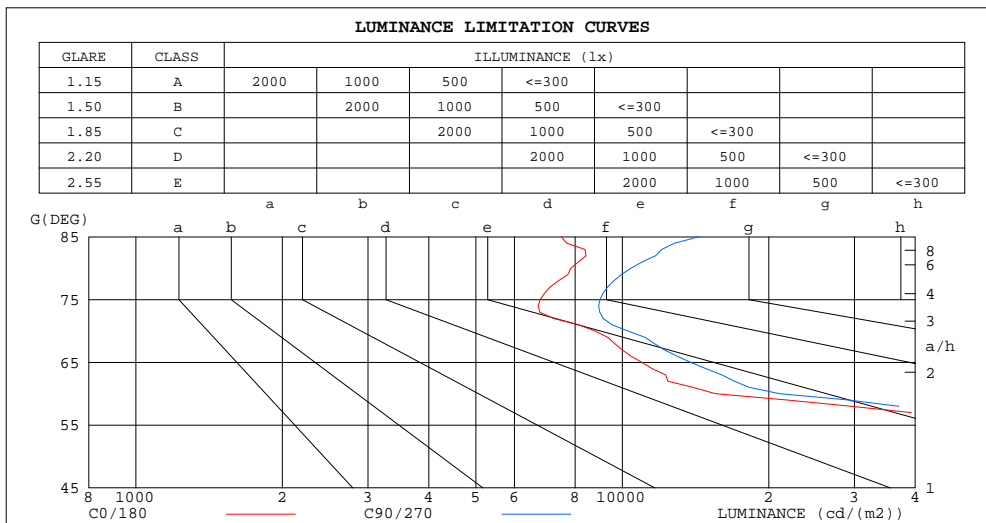
%lamp = 96.1%

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2017.7.13

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	7494	14357
80	7844	10422
75	6776	8997
70	8776	10255
65	10961	13812
60	15533	21058
55	58130	64529
50	99272	97901
45	117194	115312

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017.7.13

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	.240	.136	.043	.233	.133	.042	.220	.126	.040	.208	.120	.038	.197	.114	.037	
2.0	.234	.128	.039	.228	.126	.039	.217	.121	.037	.207	.116	.036	.197	.112	.035	
3.0	.224	.119	.036	.219	.117	.035	.209	.113	.034	.200	.110	.034	.192	.106	.033	
4.0	.213	.111	.033	.209	.109	.032	.200	.106	.032	.192	.103	.031	.185	.100	.031	
5.0	.202	.103	.030	.198	.102	.030	.190	.099	.029	.183	.097	.029	.176	.094	.028	
6.0	.191	.096	.027	.188	.095	.027	.181	.093	.027	.174	.091	.027	.168	.089	.026	
7.0	.181	.090	.025	.178	.089	.025	.172	.087	.025	.166	.085	.025	.160	.083	.025	
8.0	.171	.084	.024	.169	.083	.023	.163	.081	.023	.158	.080	.023	.153	.078	.023	
9.0	.162	.079	.022	.160	.078	.022	.155	.077	.022	.150	.075	.022	.146	.074	.021	
10.0	.154	.074	.021	.152	.073	.020	.147	.072	.020	.143	.071	.020	.139	.070	.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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020		
1.0	.175	.157	.140	.150	.134	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016		
2.0	.164	.132	.105	.141	.114	.091	.097	.079	.063	.056	.046	.037	.018	.015	.012		
3.0	.156	.114	.081	.133	.098	.070	.092	.068	.049	.053	.040	.029	.017	.013	.009		
4.0	.148	.100	.064	.127	.087	.055	.087	.060	.039	.051	.035	.023	.016	.012	.008		
5.0	.141	.089	.051	.121	.077	.045	.083	.054	.032	.048	.032	.019	.016	.010	.006		
6.0	.135	.081	.042	.116	.070	.037	.080	.049	.026	.046	.029	.016	.015	.009	.005		
7.0	.129	.074	.036	.111	.064	.031	.076	.045	.022	.044	.026	.013	.014	.009	.004		
8.0	.123	.068	.030	.106	.059	.027	.073	.042	.019	.043	.024	.011	.014	.008	.004		
9.0	.118	.063	.027	.101	.055	.023	.070	.039	.016	.041	.023	.010	.013	.007	.003		
10.0	.113	.059	.023	.097	.051	.020	.067	.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:2017.7.13

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					19.9	21.2	20.1	21.4	21.6	19.9	21.3	20.2	21.5	21.6
3H					19.7	21.0	20.0	21.2	21.4	19.8	21.0	20.1	21.2	21.5
4H					19.7	20.8	20.0	21.1	21.3	19.7	20.9	20.0	21.1	21.4
6H					19.6	20.7	19.9	20.9	21.2	19.7	20.7	20.0	21.0	21.3
8H					19.5	20.6	19.9	20.9	21.1	19.6	20.7	20.0	20.9	21.2
12H					19.5	20.5	19.9	20.8	21.1	19.6	20.6	20.0	20.9	21.2
4H 2H					19.7	20.9	20.0	21.1	21.4	19.8	20.9	20.1	21.2	21.4
3H					19.6	20.6	20.0	20.9	21.2	19.7	20.7	20.0	21.0	21.2
4H					19.6	20.5	19.9	20.8	21.1	19.6	20.5	20.0	20.8	21.2
6H					19.5	20.3	19.9	20.7	21.0	19.6	20.4	20.0	20.7	21.1
8H					19.5	20.2	19.9	20.6	21.0	19.6	20.3	20.0	20.7	21.1
12H					19.5	20.1	19.9	20.5	20.9	19.6	20.3	20.0	20.6	21.0
8H 4H					19.5	20.2	19.9	20.6	20.9	19.5	20.3	19.9	20.6	21.0
6H					19.5	20.1	19.9	20.5	20.9	19.5	20.1	20.0	20.5	20.9
8H					19.5	20.0	19.9	20.4	20.9	19.5	20.1	20.0	20.5	20.9
12H					19.5	19.9	19.9	20.4	20.8	19.6	20.0	20.1	20.5	20.9
12H 4H					19.4	20.1	19.9	20.5	20.9	19.5	20.2	19.9	20.5	20.9
6H					19.4	20.0	19.9	20.4	20.8	19.5	20.0	20.0	20.4	20.9
8H					19.5	19.9	19.9	20.3	20.8	19.5	20.0	20.0	20.4	20.9
Variations with the observer position at spacings:														
S = 1.0H					+ 1.8 / - 2.9					+ 1.6 / - 2.3				
1.5H					+ 0.9 / - 1.6					+ 0.8 / - 1.5				
2.0H					+ 3.6 / - 7.1					+ 3.4 / - 6.7				

CIE Pub.117, 8000 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 7.2$)

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017.7.13

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:

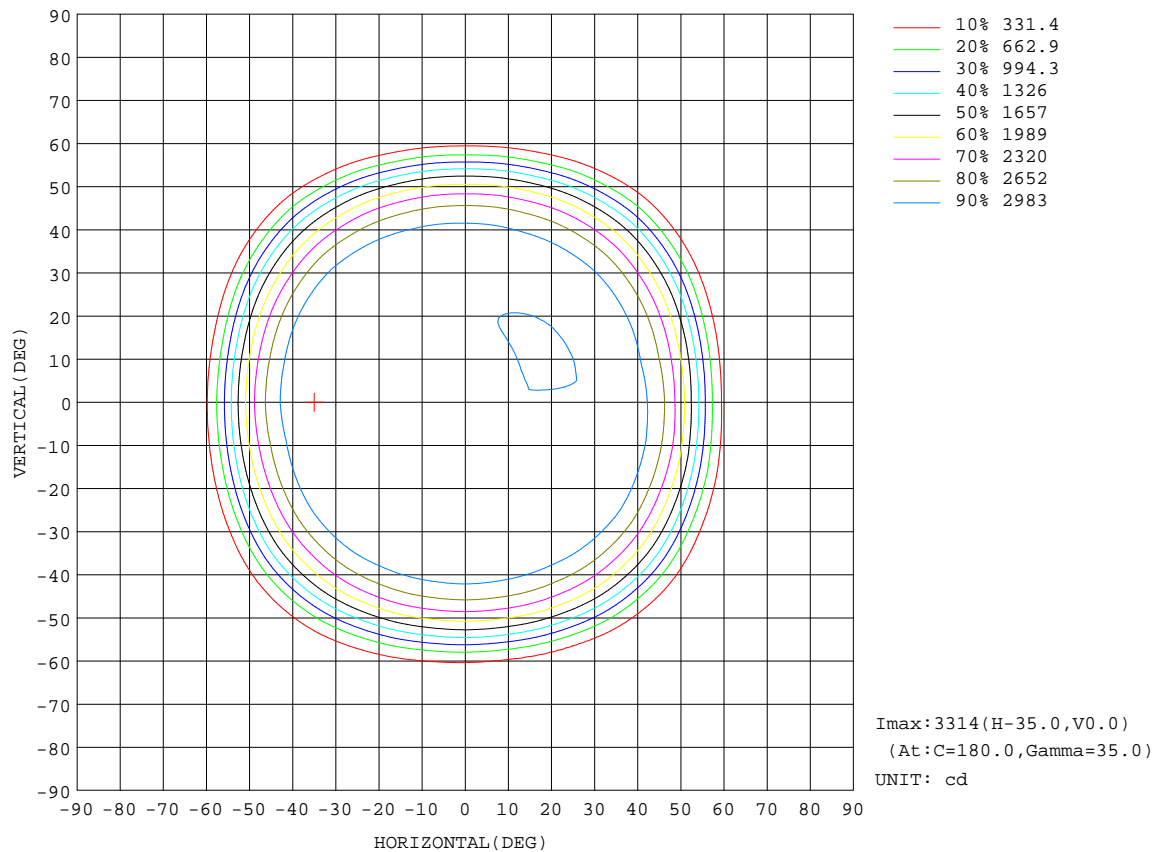
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	64	53	47	63	53	47	62	52	47	41
0.80	75	65	58	74	64	58	72	64	58	52
1.00	84	75	69	83	74	68	81	75	68	62
1.25	91	83	77	90	82	76	87	81	76	70
1.50	95	88	82	94	87	82	91	85	81	74
2.00	101	95	90	100	94	89	96	91	88	81
2.50	104	98	93	102	97	92	99	94	91	83
3.00	107	101	97	105	100	96	101	97	94	86
4.00	109	105	101	107	103	100	103	100	97	89
5.00	111	107	104	109	105	102	104	102	99	91
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:2017.7.13

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:



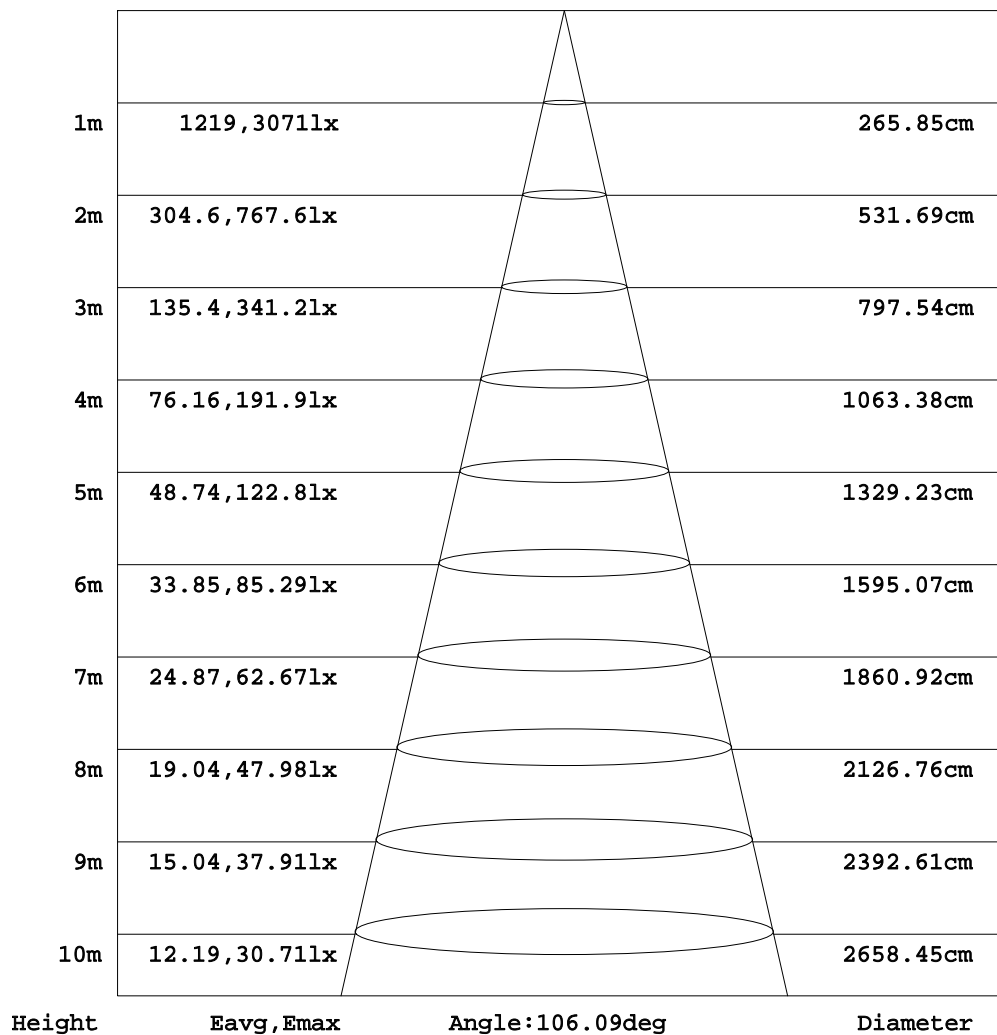
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2017.7.13

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:7252 lm

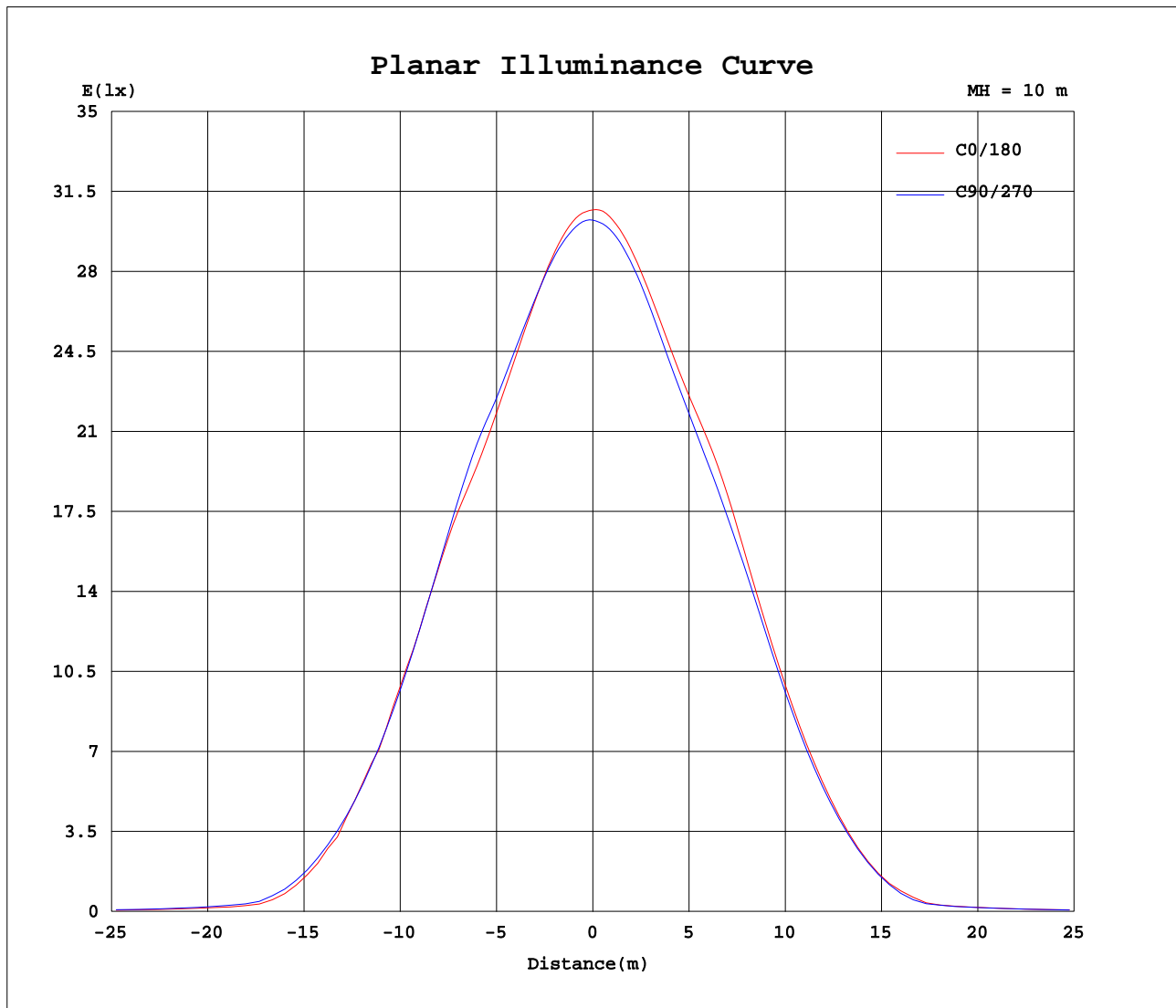


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2017.7.13

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: 2017.7.13

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:

