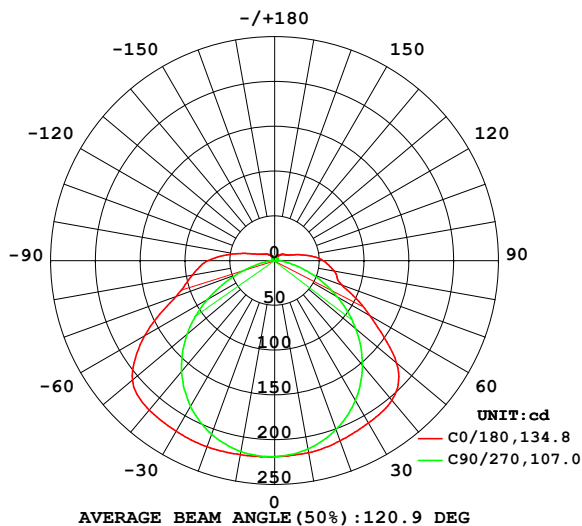


## LUMINAIRE PHOTOMETRIC TEST REPORT

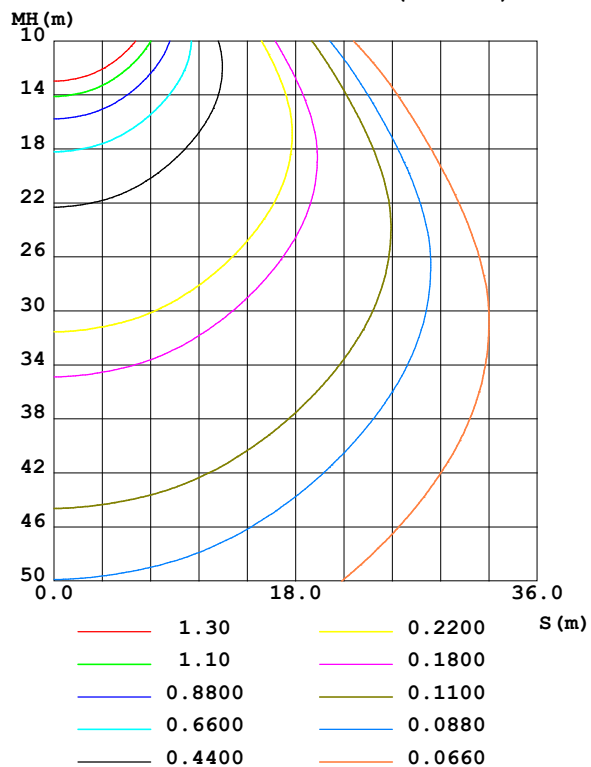
Test:U:99.000V I:0.1320A P:11.700W PF:0.9000 Freq:50.00Hz Lamp Flux:826.059x1 lm		
NAME: 1	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 70.60 lm/W
MODEL		I <sub>max</sub> (cd)	221.1	S/MH(C0/180)	1.53	
NOMINAL POWER(W)	18	LOR(%)	100.0	S/MH(C90/270)	1.27	
RATED VOLTAGE(V)	100	TOTAL FLUX(lm)	826.06	η UP,DN(C0-180)	4.3,42.5	
NOMINAL FLUX(lm)	826.059	CIE CLASS	DIRECT	η UP,DN(C180-360)	5.1,48.2	
LAMPS INSIDE	1	η up (%)	9.4	CIBSE SHR NOM	1.50	
TEST VOLTAGE(V)	100	η down (%)	90.6	CIBSE SHR MAX	1.50	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:20 December 2023

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.459  
Humidity:65.0%  
Test Distance:8.186m [K=1.0000]  
Remarks:

### ZONAL FLUX DIAGRAM

#### ZONAL FLUX DIAGRAM:

$\gamma$	C0	C90	C180	C270					$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	217.7	213.4	220.0	216.4					0- 10	20.80	20.80	2.52,2.52
20	214.0	200.6	221.1	206.2					10- 20	60.61	81.40	9.85,9.85
30	209.3	180.4	219.9	188.2					20- 30	94.87	176.3	21.3,21.3
40	203.6	152.5	217.9	161.7					30- 40	120.5	296.8	35.9,35.9
50	177.6	118.4	207.4	127.7					40- 50	133.2	429.9	52,52
60	122.7	80.78	167.6	86.40					50- 60	122.2	552.1	66.8,66.8
70	79.99	44.43	117.2	44.61					60- 70	91.46	643.6	77.9,77.9
80	67.58	16.18	93.38	13.60					70- 80	61.69	705.3	85.4,85.4
90	54.38	2.745	74.64	2.459					80- 90	43.45	748.7	90.6,90.6
100	35.54	2.278	44.93	2.546					90-100	30.22	778.9	94.3,94.3
110	19.08	2.656	21.90	2.999					100-110	16.98	795.9	96.3,96.3
120	13.82	3.000	14.80	3.409					110-120	9.850	805.8	97.5,97.5
130	11.14	3.401	11.45	3.837					120-130	7.261	813.0	98.4,98.4
140	8.497	3.841	8.264	4.246					130-140	5.310	818.3	99.1,99.1
150	6.127	4.291	5.276	4.665					140-150	3.522	821.9	99.5,99.5
160	4.868	4.753	4.824	5.066					150-160	2.298	824.1	99.8,99.8
170	5.039	5.163	4.991	5.321					160-170	1.413	825.6	99.9,99.9
180	5.167	5.427	5.198	5.418					170-180	0.4966	826.1	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 362.92 lm

%lum = 43.9%

%lamp = 43.9%

Conical surface Flux(130deg): 602.33 lm

%lum = 72.9%

%lamp = 72.9%

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:DAMIN  
Test Date:20 December 2023

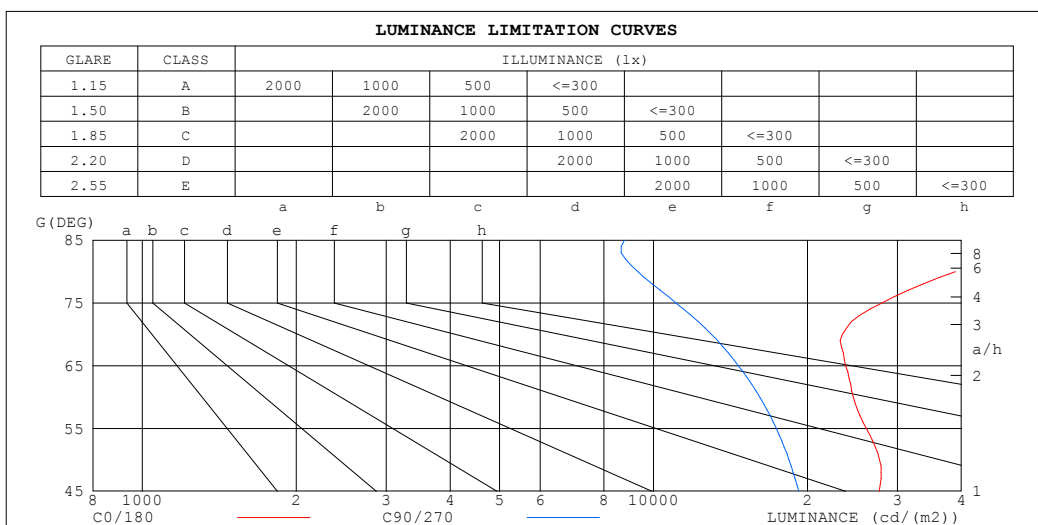
$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.459  
Humidity:65.0%  
Test Distance:8.186m [K=1.0000]  
Remarks:

## LUMINANCE LIMITATION CURVES

Test:U:99.000V I:0.1320A P:11.700W PF:0.9000 Freq:50.00Hz

Lamp Flux:826.059x1 lm

NAME: 1	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	69788	8769
80	38949	9311
75	27949	11064
70	23408	12978
65	23763	14659
60	24571	16141
55	26093	17386
50	27657	18407
45	27626	19236

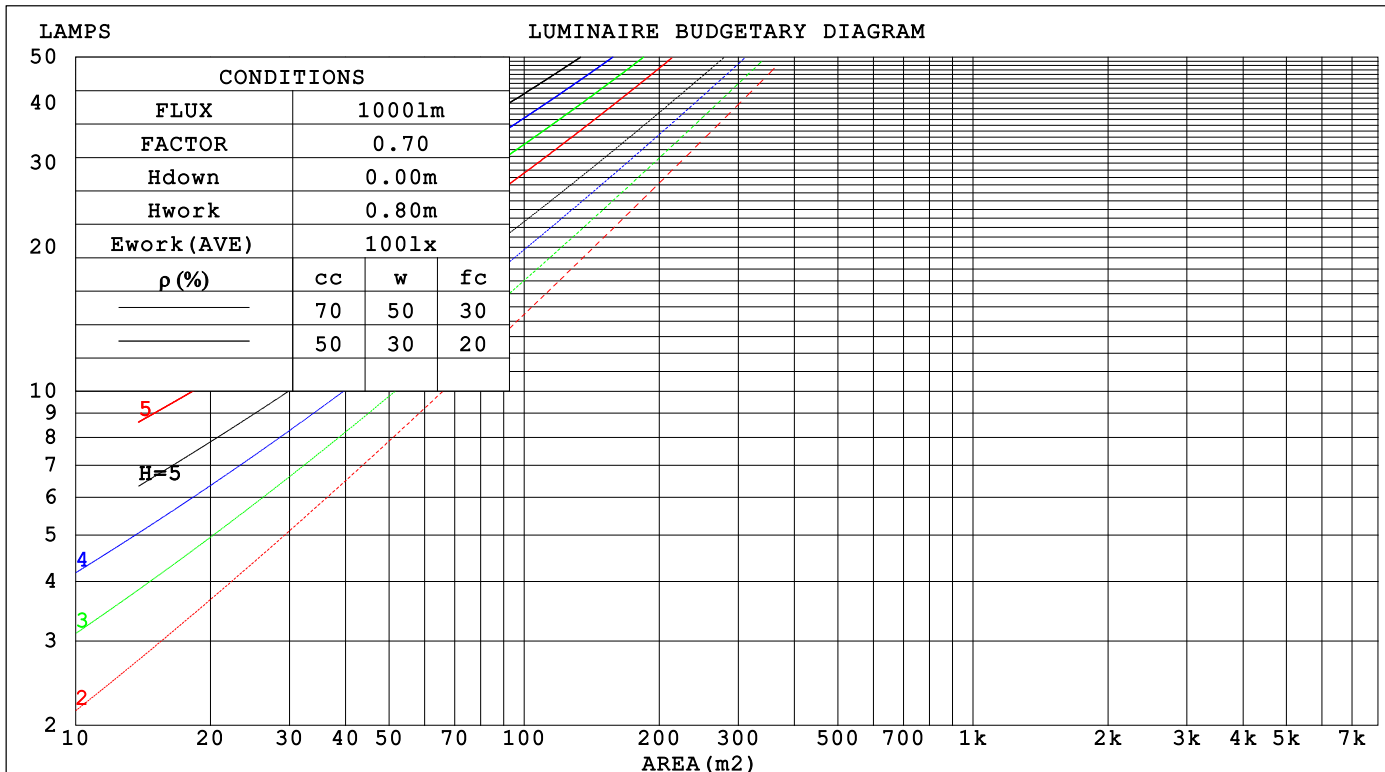
C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:DAMIN  
Test Date:20 December 2023

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.459  
Humidity:65.0%  
Test Distance:8.186m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:99.000V I:0.1320A P:11.700W PF:0.9000 Freq:50.00Hz Lamp Flux:826.059x1 lm		
NAME: 1	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	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															Coefficients of Utilization(CU)														
0.0	1.17	1.17	1.17	1.13	1.13	1.13	1.06	1.06	1.06	.99	.99	.99	.93	.93	.93	.91														
1.0	.00	.95	.90	.96	.92	.88	.90	.87	.83	.85	.82	.79	.80	.77	.75	.72														
2.0	.86	.79	.72	.83	.77	.71	.78	.73	.68	.73	.69	.65	.69	.65	.62	.59														
3.0	.75	.66	.60	.73	.65	.58	.68	.62	.56	.64	.59	.54	.61	.56	.52	.49														
4.0	.66	.57	.50	.64	.56	.49	.60	.53	.47	.57	.51	.46	.54	.49	.44	.42														
5.0	.59	.50	.43	.57	.49	.42	.54	.46	.41	.51	.45	.39	.48	.43	.38	.36														
6.0	.53	.44	.37	.51	.43	.36	.49	.41	.35	.46	.39	.34	.44	.38	.33	.31														
7.0	.48	.39	.32	.46	.38	.32	.44	.37	.31	.42	.35	.30	.40	.34	.29	.27														
8.0	.43	.35	.29	.42	.34	.28	.40	.33	.28	.38	.32	.27	.36	.31	.26	.24														
9.0	.40	.31	.26	.39	.31	.25	.37	.30	.25	.35	.29	.24	.33	.28	.24	.22														
10.0	.36	.28	.23	.36	.28	.23	.34	.27	.22	.32	.26	.22	.31	.25	.21	.19														



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:20 December 2023

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.459  
Humidity:65.0%  
Test Distance:8.186m [K=1.0000]  
Remarks:

### WEC AND CCEC

Test:U:99.000V I:0.1320A P:11.700W PF:0.9000 Freq:50.00Hz Lamp Flux:826.059x1 lm		
NAME: 1	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	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	.349	.199	.063	.339	.194	.062	.321	.184	.059	.303	.175	.056	.288	.167	.054		
2.0	.312	.171	.053	.303	.167	.051	.287	.159	.050	.271	.152	.048	.257	.145	.046		
3.0	.283	.151	.045	.275	.147	.044	.260	.141	.043	.246	.135	.041	.233	.129	.040		
4.0	.258	.134	.039	.251	.131	.039	.237	.126	.038	.224	.120	.036	.213	.116	.035		
5.0	.236	.120	.035	.230	.118	.034	.218	.113	.033	.206	.109	.032	.196	.105	.031		
6.0	.218	.109	.031	.212	.107	.031	.201	.103	.030	.191	.099	.029	.181	.095	.028		
7.0	.202	.100	.028	.197	.098	.028	.187	.094	.027	.177	.091	.026	.168	.088	.026		
8.0	.188	.092	.026	.183	.090	.026	.174	.087	.025	.166	.084	.024	.157	.081	.024		
9.0	.176	.085	.024	.172	.084	.023	.163	.081	.023	.155	.078	.022	.148	.075	.022		
10.0	.165	.079	.022	.161	.078	.022	.153	.075	.021	.146	.073	.021	.139	.070	.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	.262	.262	.262	.224	.224	.224	.153	.153	.153	.088	.088	.088	.028	.028	.028		
1.0	.255	.228	.203	.218	.195	.175	.149	.134	.121	.086	.078	.070	.028	.025	.023		
2.0	.247	.204	.168	.212	.176	.145	.145	.122	.101	.084	.071	.059	.027	.023	.019		
3.0	.240	.187	.145	.206	.161	.126	.141	.112	.088	.082	.066	.052	.026	.021	.017		
4.0	.232	.174	.130	.199	.151	.113	.137	.105	.080	.079	.061	.047	.025	.020	.015		
5.0	.225	.164	.120	.193	.142	.104	.133	.099	.073	.077	.058	.044	.025	.019	.014		
6.0	.217	.156	.112	.187	.135	.098	.129	.095	.069	.075	.056	.041	.024	.018	.014		
7.0	.210	.149	.107	.181	.129	.093	.125	.091	.066	.073	.053	.039	.023	.018	.013		
8.0	.204	.144	.102	.176	.125	.089	.121	.087	.063	.071	.052	.038	.023	.017	.012		
9.0	.198	.139	.099	.170	.120	.086	.118	.085	.061	.069	.050	.037	.022	.016	.012		
10.0	.192	.135	.096	.166	.117	.084	.115	.082	.060	.067	.049	.036	.022	.016	.012		

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:20 December 2023

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.459  
Humidity:65.0%  
Test Distance:8.186m [K=1.0000]  
Remarks:

### UGR(Unified Glare Rating) Table

Test:U:99.000V I:0.1320A P:11.700W PF:0.9000 Freq:50.00Hz Lamp Flux:826.059x1 lm											
NAME: 1					TYPE:			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:			
MFR.: EVERFINE					SUR.:			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	2H	23.5	24.9	23.9	25.3	25.7	21.9	23.3	22.2	23.7	24.1
	3H	25.0	26.3	25.4	26.7	27.2	23.0	24.3	23.4	24.7	25.1
	4H	25.9	27.2	26.4	27.6	28.1	23.4	24.6	23.8	25.0	25.5
	6H	27.2	28.4	27.7	28.8	29.3	23.6	24.8	24.1	25.3	25.7
	8H	27.9	29.1	28.4	29.5	30.0	23.7	24.9	24.2	25.3	25.8
	12H	28.8	30.0	29.3	30.4	30.9	23.8	24.9	24.3	25.3	25.8
4H	2H	23.8	25.1	24.3	25.5	25.9	22.6	23.8	23.0	24.2	24.7
	3H	25.6	26.7	26.1	27.1	27.6	23.9	25.0	24.4	25.4	25.9
	4H	26.7	27.7	27.2	28.2	28.7	24.4	25.5	25.0	25.9	26.5
	6H	28.2	29.1	28.7	29.6	30.2	24.9	25.8	25.4	26.3	26.9
	8H	29.1	29.9	29.6	30.5	31.0	25.1	25.9	25.6	26.4	27.0
	12H	30.2	30.9	30.7	31.5	32.1	25.2	26.0	25.7	26.5	27.1
8H	4H	26.9	27.8	27.5	28.3	28.9	25.0	25.8	25.5	26.3	26.9
	6H	28.7	29.4	29.2	29.9	30.6	25.7	26.4	26.3	27.0	27.6
	8H	29.8	30.4	30.4	31.0	31.6	26.1	26.7	26.7	27.3	27.9
	12H	31.1	31.6	31.7	32.2	32.9	26.4	26.9	27.0	27.5	28.2
12H	4H	26.9	27.7	27.5	28.3	28.9	25.1	25.9	25.7	26.5	27.1
	6H	28.7	29.4	29.3	30.0	30.6	26.1	26.7	26.6	27.3	27.9
	8H	29.9	30.5	30.5	31.1	31.7	26.5	27.1	27.1	27.7	28.3
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H		+ 0.1 / - 0.1					+ 0.2 / - 0.2				
1.5H		+ 0.2 / - 0.3					+ 0.2 / - 0.4				
2.0H		+ 0.2 / - 0.4					+ 0.2 / - 0.5				

CIE Pub.117, 826.1 lm Total Lamp Luminous Flux Corrected ( $8\log(F/F_0) = -0.7$ )  
Area: 0.01 m2

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:DAMIN  
Test Date:20 December 2023

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.459  
Humidity:65.0%  
Test Distance:8.186m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:99.000V I:0.1320A P:11.700W PF:0.9000 Freq:50.00Hz Lamp Flux:826.059x1 lm		
NAME: 1	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:

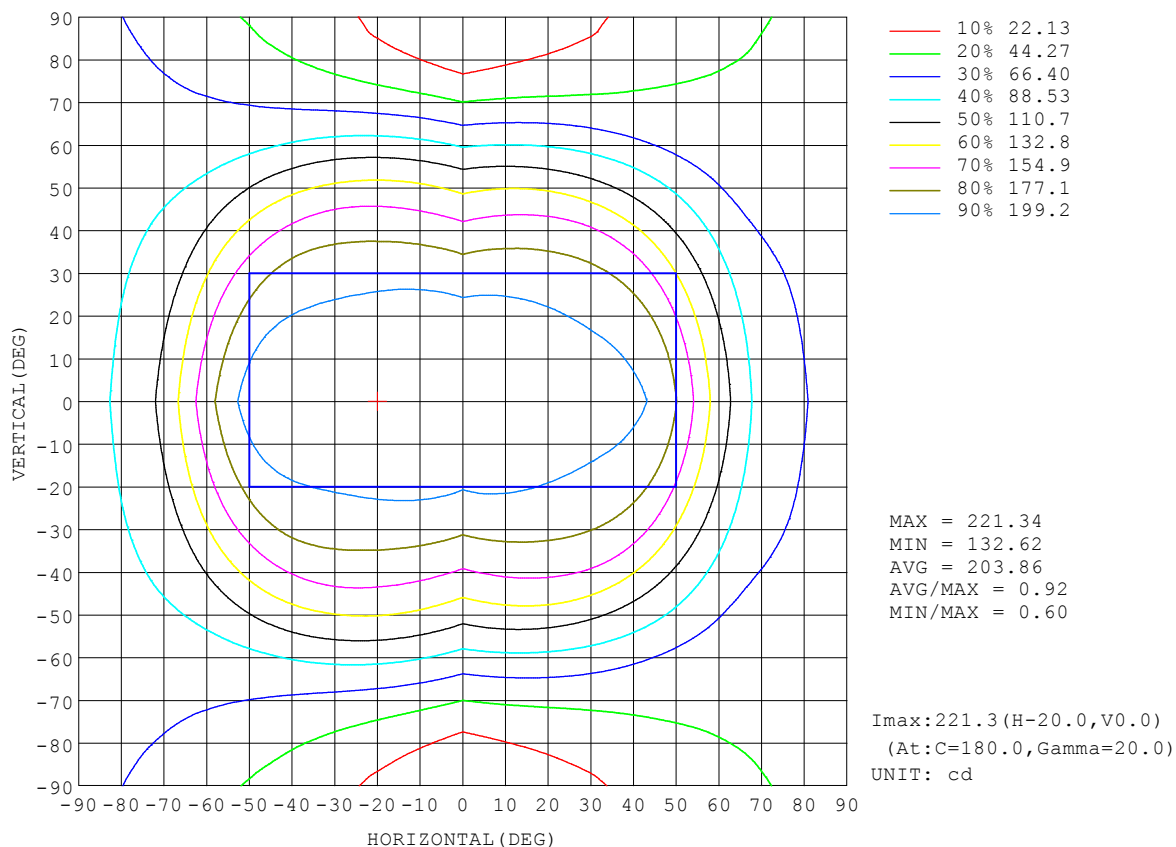
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	52	40	33	51	39	32	49	39	32	26
0.80	62	49	42	60	49	41	58	48	41	33
1.00	70	58	50	68	57	50	66	58	49	41
1.25	77	65	58	75	64	57	72	62	56	47
1.50	82	71	63	80	70	62	76	67	61	52
2.00	89	79	72	87	78	71	82	75	69	59
2.50	93	84	77	91	82	76	86	79	73	63
3.00	97	89	82	94	87	81	89	83	78	67
4.00	101	94	89	98	92	87	92	87	83	71
5.00	104	98	93	101	95	91	95	90	86	74
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: DAMIN  
Test Date: 20 December 2023

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.459  
Humidity: 65.0%  
Test Distance: 8.186m [K=1.0000]  
Remarks:

# ISOCANDELA DIAGRAM

Test:U:99.000V I:0.1320A P:11.700W PF:0.9000 Freq:50.00Hz Lamp Flux:826.059x1 lm		
NAME: 1	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:



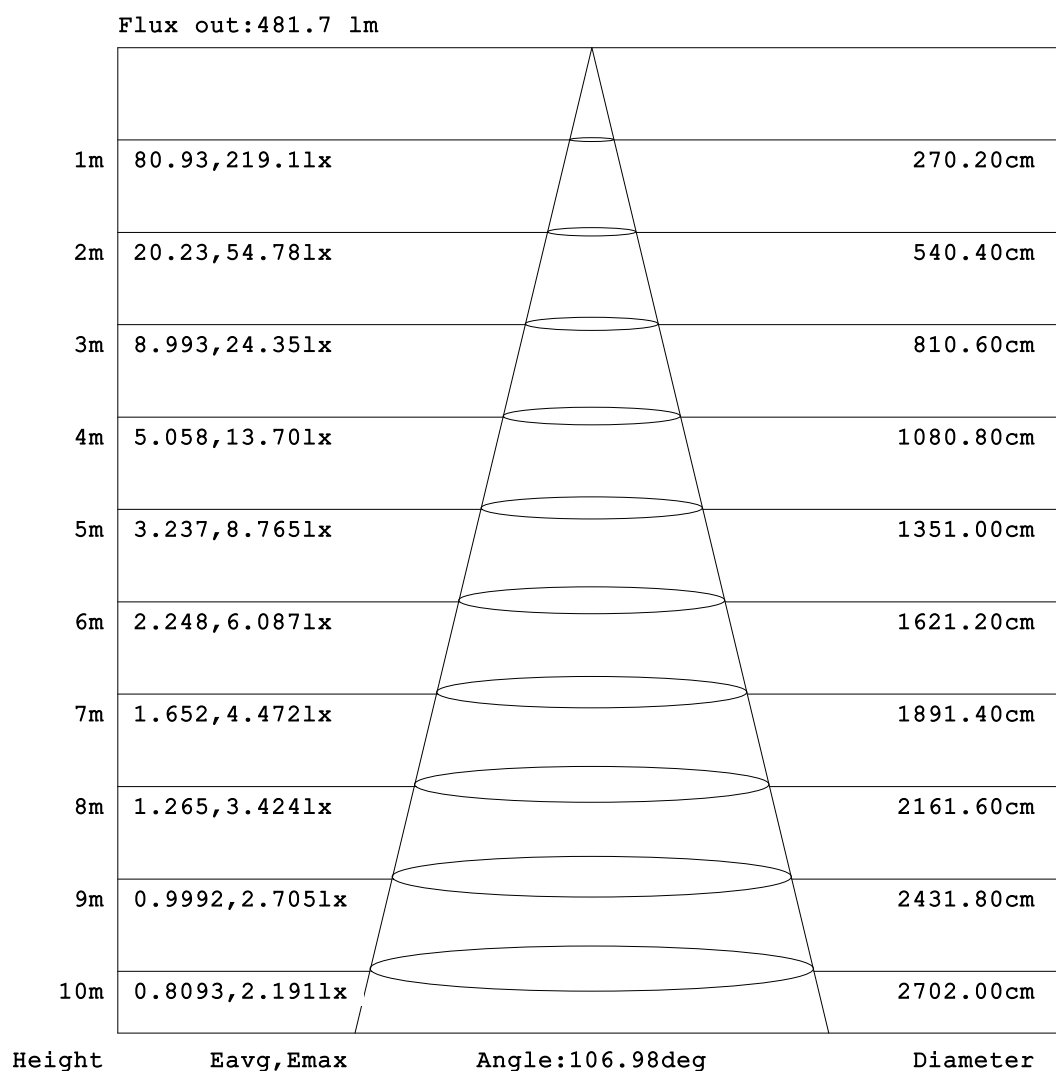
C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:DAMIN  
Test Date:20 December 2023

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.459  
Humidity:65.0%  
Test Distance:8.186m [K=1.0000]  
Remarks:



**AAI Figure**

Test:U:99.000V I:0.1320A P:11.700W PF:0.9000 Freq:50.00Hz Lamp Flux:826.059x1 lm		
NAME: 1	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:



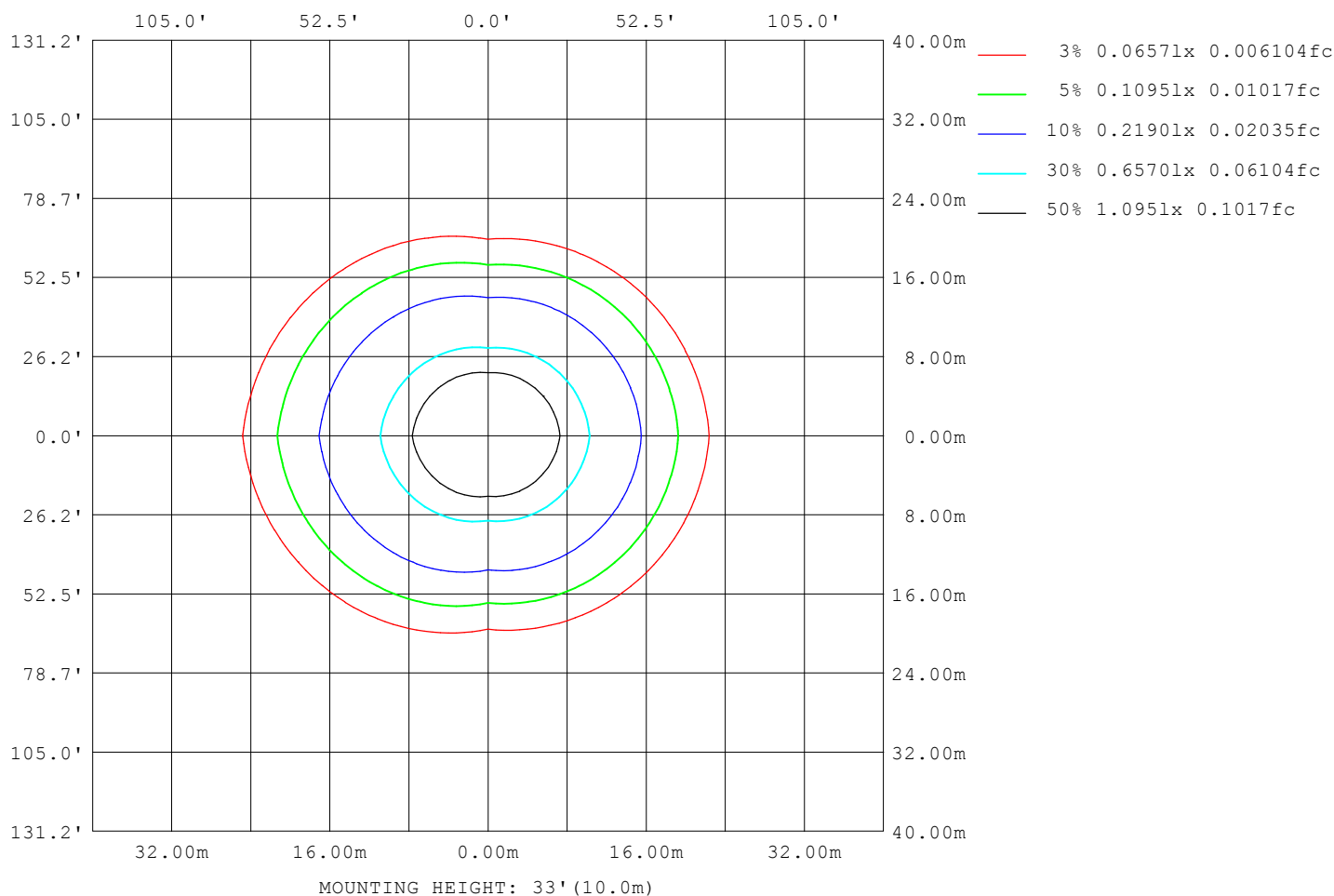
**Note:**The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:DAMIN  
 Test Date:20 December 2023

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.459  
 Humidity:65.0%  
 Test Distance:8.186m [K=1.0000]  
 Remarks:

### ISOLUX DIAGRAM

Test:U:99.000V I:0.1320A P:11.700W PF:0.9000 Freq:50.00Hz Lamp Flux:826.059x1 lm		
NAME: 1	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:DAMIN  
Test Date:20 December 2023

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.459  
Humidity:65.0%  
Test Distance:8.186m [K=1.0000]  
Remarks:

### LED Avg.L Report

Test:U:99.000V I:0.1320A P:11.700W PF:0.9000 Freq:50.00Hz Lamp Flux:826.059x1 lm		
NAME: 1	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:

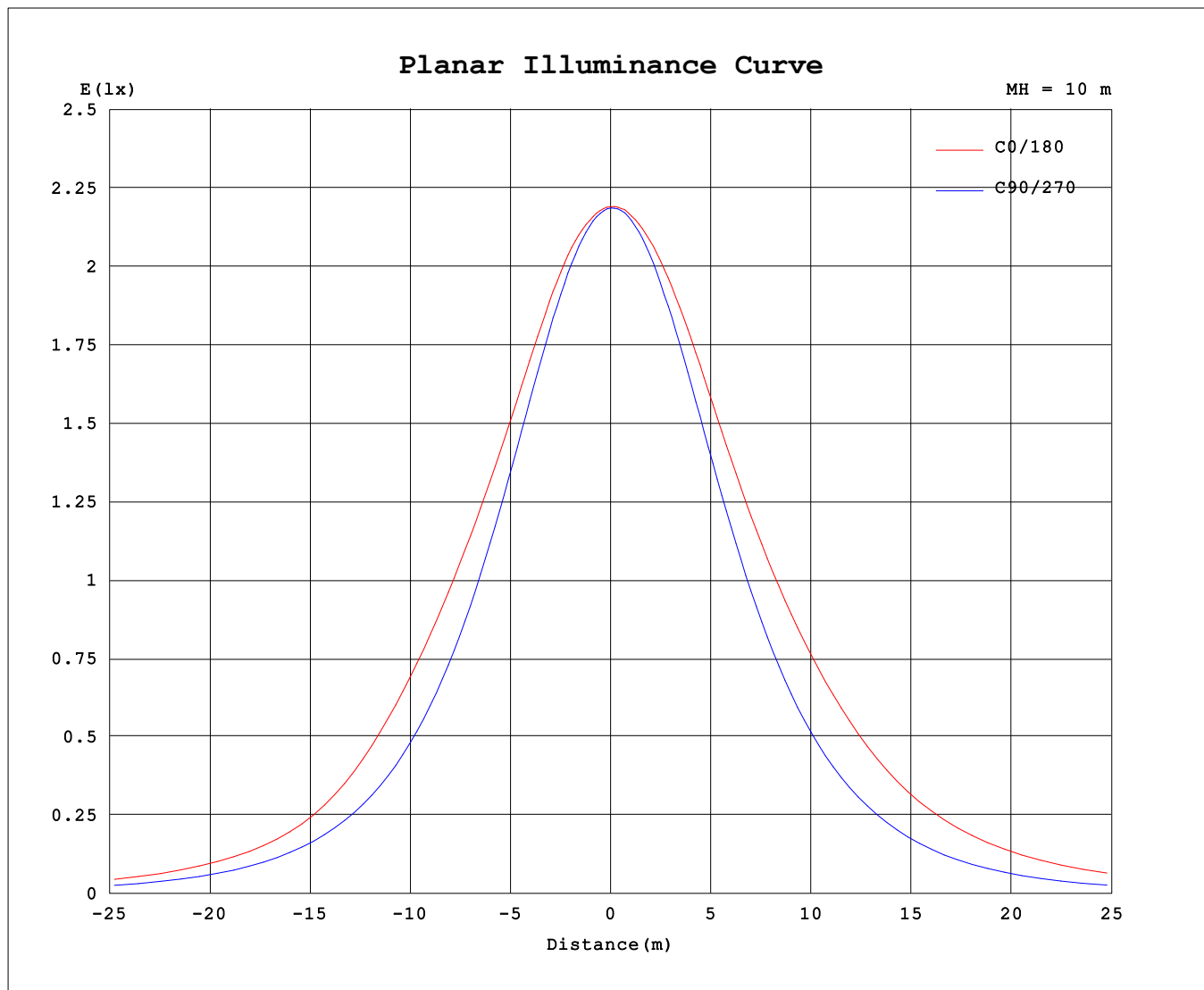
AvgL	cd/m2
L_0~180 (65) av	28637
L_0~180 (75) av	33900
L_0~180 (85) av	83315
L_90~270 (65) av	15007
L_90~270 (75) av	10740
L_90~270 (85) av	7173
L_45 (65) av	20429
L_45 (75) av	19807
L_45 (85) av	36604

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:20 December 2023

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.459  
Humidity:65.0%  
Test Distance:8.186m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: DAMIN  
Test Date: 20 December 2023

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.459  
Humidity: 65.0%  
Test Distance: 8.186m [K=1.0000]  
Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:99.000V I:0.1320A P:11.700W PF:0.9000 Freq:50.00Hz Lamp Flux:826.059x1 lm		
NAME: 1	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270														
0	219	219	219	219														
5	218	217	219	219														
10	218	213	220	216														
15	216	208	221	212														
20	214	201	221	206														
25	211	191	221	198														
30	209	180	220	188														
35	207	167	219	176														
40	204	153	218	162														
45	195	136	215	146														
50	178	118	207	128														
55	150	99.8	190	108														
60	123	80.8	168	86.4														
65	100	62.0	142	64.8														
70	80.0	44.4	117	44.6														
75	72.3	28.7	103	26.9														
80	67.6	16.2	93.4	13.6														
85	60.8	7.65	84.5	4.85														
90	54.4	2.74	74.6	2.46														
95	46.2	2.10	60.6	2.39														
100	35.5	2.28	44.9	2.55														
105	26.4	2.47	31.4	2.74														
110	19.1	2.66	21.9	3.00														
115	15.4	2.83	17.5	3.21														
120	13.8	3.00	14.8	3.41														
125	12.4	3.19	13.0	3.65														
130	11.1	3.40	11.4	3.84														
135	9.77	3.61	9.91	4.05														
140	8.50	3.84	8.26	4.25														
145	7.00	4.07	6.65	4.48														
150	6.13	4.29	5.28	4.66														
155	5.52	4.54	4.75	4.90														
160	4.87	4.75	4.82	5.07														
165	4.91	4.96	4.93	5.22														
170	5.04	5.16	4.99	5.32														
175	5.12	5.31	5.12	5.38														
180	5.17	5.43	5.20	5.42														

C Range: 0 - 360DEG

C Interval: 90.0DEG

Test Speed: HIGH

Temperature:25.3℃

Operators:DAMIN

Test Date:20 December 2023

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.459

Humidity:65.0%

Test Distance:8.186m [K=1.0000]

Remarks: