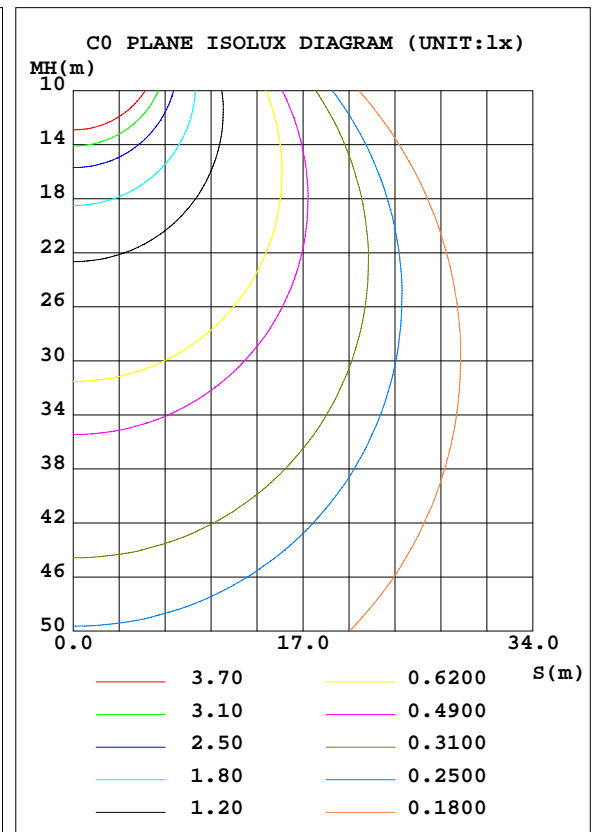
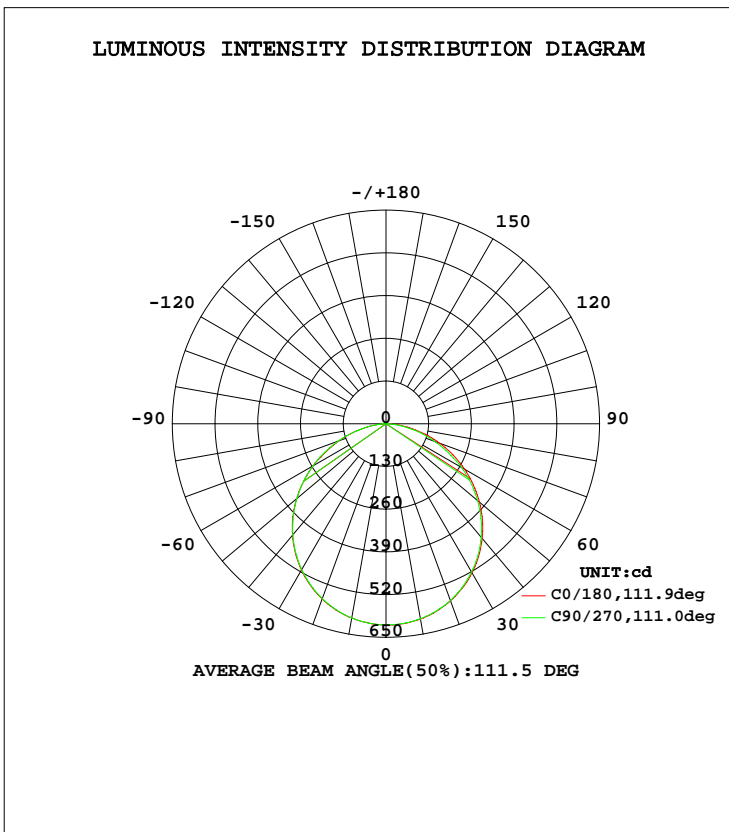


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.4V I:0.0980A P:21.70W PF:0.9580 Lamp Flux:1725.69x1 lm		
NAME: LED panel light	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 79.52 lm/W			
MODEL	20838LEDD	Imax(cd)	612.7	S/MH(C0/180)	1.25
NOMINAL POWER(W)	24	LOR(%)	100.0	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	1725.7	η UP, DN(C0-180)	0.0,51.0
NOMINAL FLUX(lm)	1725.69	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,49.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:27 March 2019

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:65.0%  
 Test Distance:8.600m [K=1.0000]  
 Remarks: 最新方案

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

$\gamma$	C0	C90	C180	C270				$\gamma$	$\Phi$ zone	$\Phi$ total	$\Phi$ lum, lamp
10	603.5	603.1	600.0	599.8				0- 10	57.94	57.94	3.36,3.36
20	574.0	572.6	567.8	566.4				10- 20	166.1	224.0	13,13
30	523.9	520.9	514.3	512.4				20- 30	251.8	475.8	27.6,27.6
40	455.5	451.0	442.0	440.6				30- 40	303.2	779.0	45.1,45.1
50	371.5	364.0	354.6	354.5				40- 50	313.1	1092	63.3,63.3
60	275.7	265.5	256.9	256.7				50- 60	280.1	1372	79.5,79.5
70	173.8	158.4	151.9	154.9				60- 70	208.9	1581	91.6,91.6
80	74.07	62.91	57.76	58.51				70- 80	116.4	1697	98.4,98.4
90	0.3076	0	0	0.0039				80- 90	27.52	1725	100,100
100	0	0	0	0				90-100	0.0043	1725	100,100
110	0	0	0	0.0118				100-110	0.0002	1725	100,100
120	0	0	0.0120	0.2714				110-120	0.0407	1725	100,100
130	0	0.0041	0.1699	0.2397				120-130	0.0810	1725	100,100
140	0.1106	0.1239	0.3320	0.2954				130-140	0.1189	1725	100,100
150	0.2367	0.2556	0.4664	0.4071				140-150	0.1751	1725	100,100
160	0.3791	0.3754	0.5573	0.4911				150-160	0.1822	1725	100,100
170	0.5491	0.5112	0.6204	0.5631				160-170	0.1427	1726	100,100
180	0.6124	0.5830	0.6243	0.5790				170-180	0.0553	1726	100,100
DEG	LUMINOUS INTENSITY:cd								UNIT:lm		

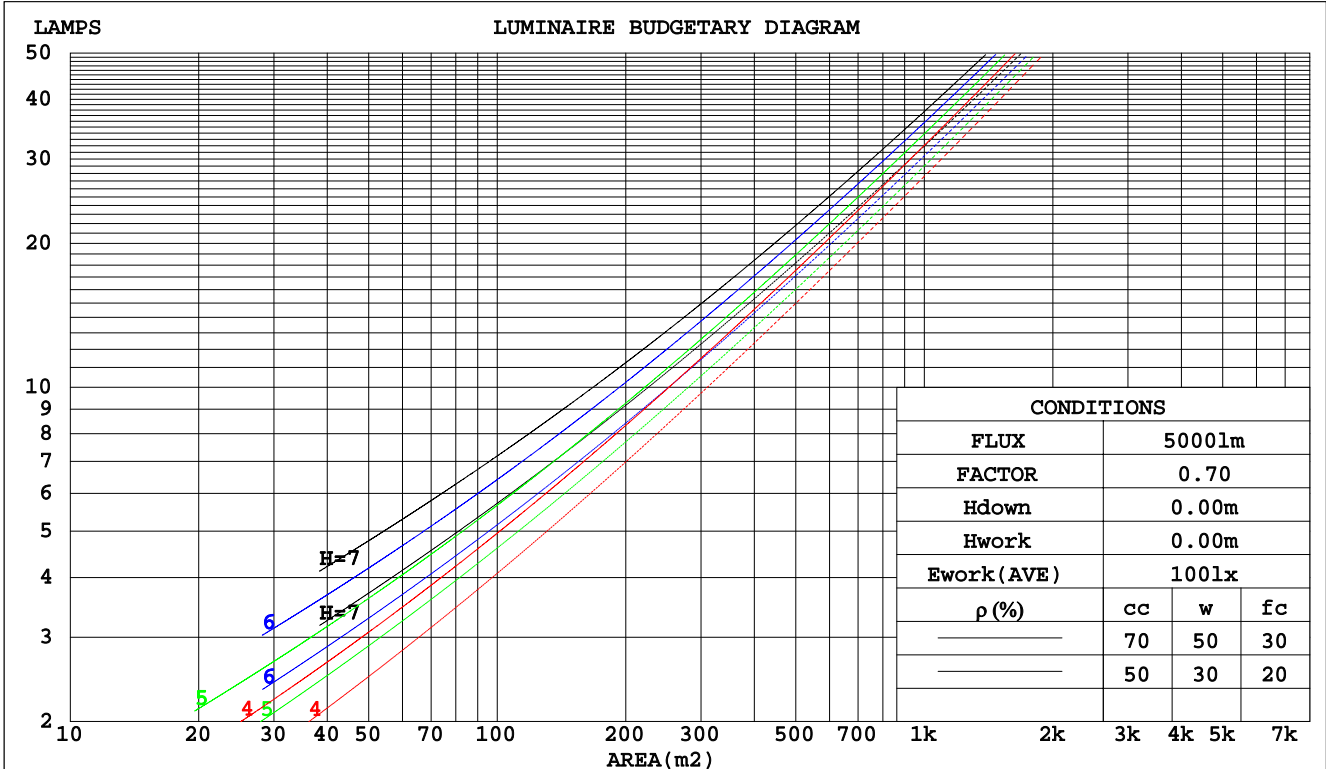
C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:27 March 2019

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:8.600m [K=1.0000]  
Remarks: 最新方案

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.4V I:0.0980A P:21.70W PF:0.9580 Lamp Flux:1725.69x1 lm		
NAME: LED panel light	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															
	Coefficients of Utilization(CU)															
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	.00
1.0	1.04	.00	.96	1.02	.98	.94	.98	.94	.91	.94	.91	.89	.90	.88	.86	.84
2.0	.91	.84	.78	.89	.83	.77	.85	.80	.76	.82	.78	.74	.79	.75	.72	.70
3.0	.80	.72	.65	.78	.71	.64	.75	.69	.63	.72	.67	.62	.70	.65	.61	.59
4.0	.71	.62	.55	.69	.61	.55	.67	.60	.54	.64	.58	.53	.62	.57	.52	.50
5.0	.63	.54	.47	.62	.53	.47	.60	.52	.47	.58	.51	.46	.56	.50	.46	.43
6.0	.57	.48	.41	.56	.47	.41	.54	.46	.41	.52	.46	.40	.51	.45	.40	.38
7.0	.51	.43	.37	.51	.42	.36	.49	.42	.36	.48	.41	.36	.46	.40	.36	.34
8.0	.47	.38	.33	.46	.38	.32	.45	.38	.32	.44	.37	.32	.42	.36	.32	.30
9.0	.43	.35	.29	.42	.35	.29	.41	.34	.29	.40	.34	.29	.39	.33	.29	.27
10.0	.40	.32	.27	.39	.32	.26	.38	.31	.26	.37	.31	.26	.36	.30	.26	.24



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:27 March 2019

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:65.0%  
 Test Distance:8.600m [K=1.0000]  
 Remarks: 最新方案

WEC AND CCEC

Test:U:230.4V I:0.0980A P:21.70W PF:0.9580 Lamp Flux:1725.69x1 lm		
NAME: LED panel light	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	Shielding Angle:

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						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.305	.173	.055	.298	.170	.054	.285	.163	.052	.272	.157	.050	.261	.151	.049	
2.0	.288	.158	.049	.282	.155	.048	.271	.150	.047	.260	.146	.046	.250	.141	.045	
3.0	.268	.142	.043	.262	.140	.042	.252	.136	.041	.242	.133	.041	.233	.129	.040	
4.0	.247	.129	.038	.243	.127	.038	.233	.124	.037	.225	.121	.036	.217	.118	.036	
5.0	.229	.117	.034	.225	.115	.034	.217	.113	.033	.209	.110	.033	.202	.108	.032	
6.0	.213	.107	.031	.209	.105	.030	.202	.103	.030	.195	.101	.030	.188	.099	.029	
7.0	.198	.098	.028	.195	.097	.028	.188	.095	.027	.182	.093	.027	.176	.092	.027	
8.0	.185	.090	.025	.182	.090	.025	.176	.088	.025	.171	.087	.025	.166	.085	.025	
9.0	.173	.084	.023	.171	.083	.023	.166	.082	.023	.161	.081	.023	.156	.079	.023	
10.0	.163	.078	.022	.161	.078	.022	.156	.076	.022	.152	.075	.021	.147	.074	.021	

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	.180	.157	.135	.154	.134	.116	.106	.092	.080	.061	.053	.047	.019	.017	.015	
2.0	.172	.132	.099	.147	.114	.085	.101	.079	.060	.058	.046	.035	.019	.015	.011	
3.0	.164	.115	.075	.141	.099	.065	.097	.069	.046	.056	.040	.027	.018	.013	.009	
4.0	.157	.101	.059	.135	.088	.051	.093	.061	.036	.054	.036	.021	.017	.012	.007	
5.0	.149	.091	.048	.128	.079	.042	.088	.055	.029	.051	.032	.017	.016	.011	.006	
6.0	.142	.083	.040	.122	.071	.035	.084	.050	.024	.049	.029	.015	.016	.010	.005	
7.0	.135	.076	.034	.117	.066	.029	.081	.046	.021	.047	.027	.012	.015	.009	.004	
8.0	.129	.070	.029	.111	.061	.025	.077	.043	.018	.045	.025	.011	.014	.008	.004	
9.0	.123	.065	.026	.106	.056	.022	.073	.040	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.061	.023	.101	.053	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:27 March 2019

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:65.0%  
 Test Distance:8.600m [K=1.0000]  
 Remarks: 最新方案

## UGR(Unified Glare Rating) Table

Test:U:230.4V I:0.0980A P:21.70W PF:0.9580 Lamp Flux:1725.69x1 lm										
NAME: LED panel light					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:1		
MFR.:					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	19.0	20.5	19.3	20.7	20.9	18.8	20.3	19.1	20.5	20.8
3H	20.6	22.0	20.9	22.2	22.4	20.2	21.6	20.5	21.9	22.1
4H	21.2	22.5	21.5	22.8	23.0	20.8	22.1	21.1	22.4	22.6
6H	21.6	22.9	22.0	23.1	23.4	21.2	22.4	21.5	22.7	23.0
8H	21.8	23.0	22.1	23.3	23.6	21.3	22.5	21.6	22.8	23.1
12H	21.8	23.0	22.2	23.3	23.6	21.3	22.5	21.7	22.8	23.1
4H 2H	19.6	20.9	19.9	21.2	21.4	19.4	20.8	19.8	21.0	21.3
3H	21.3	22.5	21.7	22.8	23.1	21.1	22.2	21.4	22.5	22.8
4H	22.1	23.1	22.4	23.5	23.8	21.7	22.8	22.1	23.1	23.4
6H	22.6	23.6	23.0	23.9	24.3	22.2	23.2	22.6	23.5	23.9
8H	22.8	23.7	23.2	24.1	24.5	22.4	23.2	22.8	23.6	24.0
12H	23.0	23.8	23.4	24.2	24.6	22.4	23.3	22.9	23.6	24.0
8H 4H	22.3	23.2	22.7	23.6	23.9	22.0	22.9	22.4	23.3	23.6
6H	23.0	23.7	23.5	24.2	24.6	22.6	23.4	23.1	23.8	24.2
8H	23.3	23.9	23.8	24.4	24.8	22.9	23.5	23.3	23.9	24.4
12H	23.5	24.1	24.0	24.5	25.0	23.0	23.6	23.5	24.0	24.5
12H 4H	22.3	23.1	22.7	23.5	23.9	22.0	22.8	22.4	23.2	23.6
6H	23.1	23.7	23.5	24.1	24.6	22.7	23.3	23.2	23.8	24.2
8H	23.4	23.9	23.9	24.4	24.9	23.0	23.5	23.4	24.0	24.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.2 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117 Corrected 1726 lm Total Lamp Luminous Flux.(8log(F/F0) = 1.9)

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:27 March 2019

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:8.600m [K=1.0000]  
Remarks: 最新方案

## UTILIZATION FACTORS TABLE

Test:U:230.4V I:0.0980A P:21.70W PF:0.9580 Lamp Flux:1725.69x1 lm		
NAME: LED panel light	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	Shielding Angle:

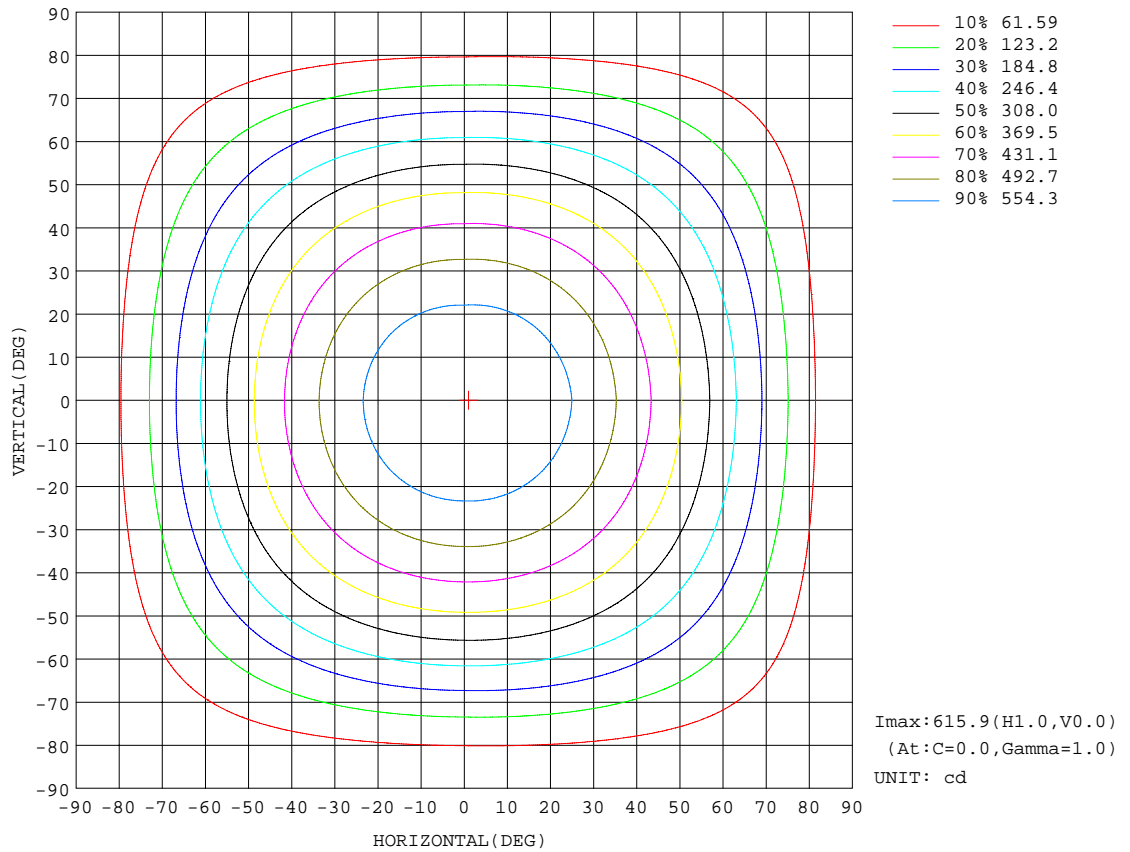
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	58	46	39	57	46	39	56	45	39	33
0.80	68	56	49	67	56	49	65	55	48	41
1.00	76	65	58	75	65	58	73	66	57	50
1.25	83	73	66	82	72	66	79	71	65	57
1.50	88	79	72	87	78	71	84	76	70	63
2.00	95	87	80	93	86	80	90	83	78	70
2.50	99	91	85	97	90	85	93	87	83	74
3.00	102	96	90	100	94	89	96	91	87	79
4.00	106	101	96	104	99	95	100	96	92	83
5.00	109	104	100	106	102	98	102	98	95	86
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:25.3DEG  
 Operators:  
 Test Date:27 March 2019

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:65.0%  
 Test Distance:8.600m [K=1.0000]  
 Remarks: 最新方案

ISOCANDELA DIAGRAM

Test:U:230.4V I:0.0980A P:21.70W PF:0.9580 Lamp Flux:1725.69x1 lm		
NAME: LED panel light	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	Shielding Angle:

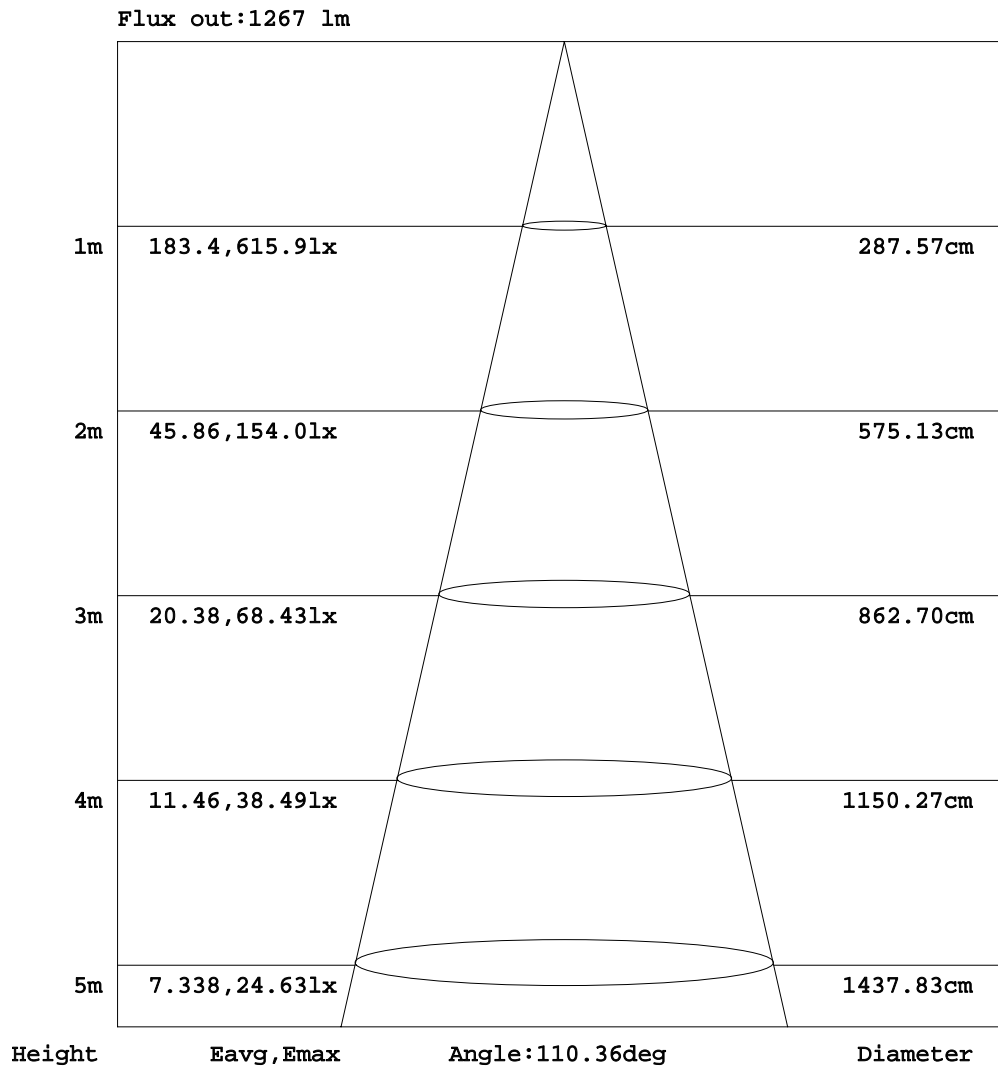


C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:27 March 2019

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:65.0%  
 Test Distance:8.600m [K=1.0000]  
 Remarks: 最新方案

AAI Figure

Test:U:230.4V I:0.0980A P:21.70W PF:0.9580 Lamp Flux:1725.69x1 lm		
NAME: LED panel light	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	Shielding Angle:



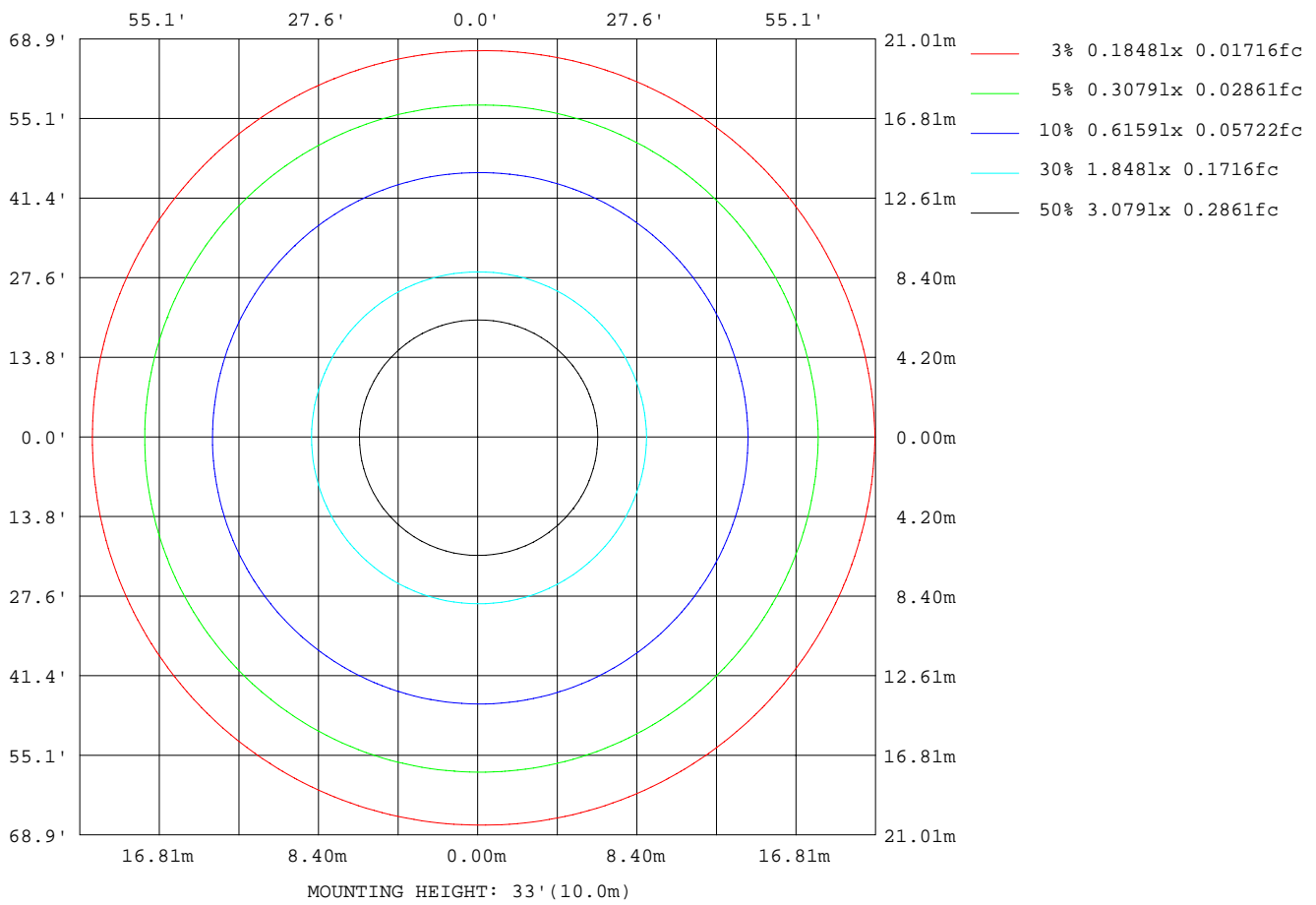
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:27 March 2019

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:65.0%  
 Test Distance:8.600m [K=1.0000]  
 Remarks: 最新方案

ISOLUX DIAGRAM

Test:U:230.4V I:0.0980A P:21.70W PF:0.9580 Lamp Flux:1725.69x1 lm		
NAME: LED panel light	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:27 March 2019

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:65.0%  
 Test Distance:8.600m [K=1.0000]  
 Remarks: 最新方案

## LED Avg.L Report

Test:U:230.4V I:0.0980A P:21.70W PF:0.9580 Lamp Flux:1725.69x1 lm		
NAME: LED panel light	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	Shielding Angle:

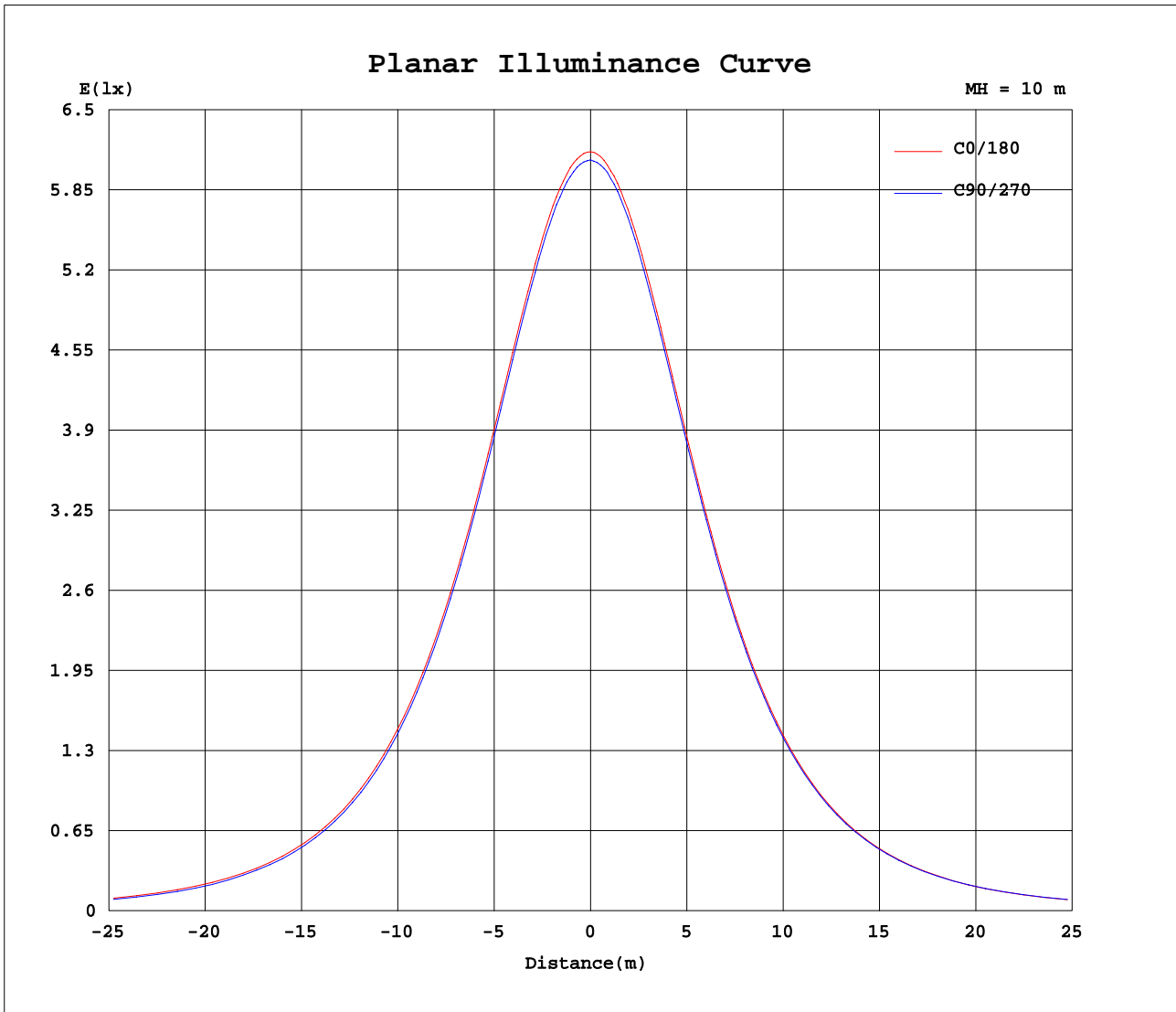
AvgL	cd/m2
L_0~180(65)av	5057
L_0~180(75)av	4384
L_0~180(85)av	2799
L_90~270(65)av	4918
L_90~270(75)av	4092
L_90~270(85)av	2393
L_45(65)av	4953
L_45(75)av	4178
L_45(85)av	2497

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:27 March 2019

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:65.0%  
 Test Distance:8.600m [K=1.0000]  
 Remarks: 最新方案

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 27 March 2019

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity: 65.0%  
 Test Distance: 8.600m [K=1.0000]  
 Remarks: 最新方案

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.4V I:0.0980A P:21.70W PF:0.9580 Lamp Flux:1725.69x1 lm		
NAME: LED panel light	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	90	180	270															
0	613	613	613	613															
5	611	610	609	609															
10	604	603	600	600															
15	591	590	587	586															
20	574	573	568	566															
25	551	549	544	542															
30	524	521	514	512															
35	492	488	481	479															
40	455	451	442	441															
45	416	409	401	399															
50	371	364	355	354															
55	324	316	307	307															
60	276	266	257	257															
65	225	210	202	206															
70	174	158	152	155															
75	124	109	103	103															
80	74.1	62.9	57.8	58.5															
85	31.4	22.7	17.4	19.0															
90	0.31	0.00	0.00	0.00															
95	0.00	0.00	0.00	0.00															
100	0.00	0.00	0.00	0.00															
105	0.00	0.00	0.00	0.00															
110	0.00	0.00	0.00	0.01															
115	0.00	0.00	0.00	0.18															
120	0.00	0.00	0.01	0.27															
125	0.00	0.00	0.09	0.28															
130	0.00	0.00	0.17	0.24															
135	0.04	0.07	0.25	0.25															
140	0.11	0.12	0.33	0.30															
145	0.17	0.21	0.41	0.35															
150	0.24	0.26	0.47	0.41															
155	0.31	0.32	0.52	0.45															
160	0.38	0.38	0.56	0.49															
165	0.47	0.45	0.60	0.52															
170	0.55	0.51	0.62	0.56															
175	0.59	0.55	0.64	0.57															
180	0.61	0.58	0.62	0.58															

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:27 March 2019

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:65.0%  
 Test Distance:8.600m [K=1.0000]  
 Remarks: 最新方案