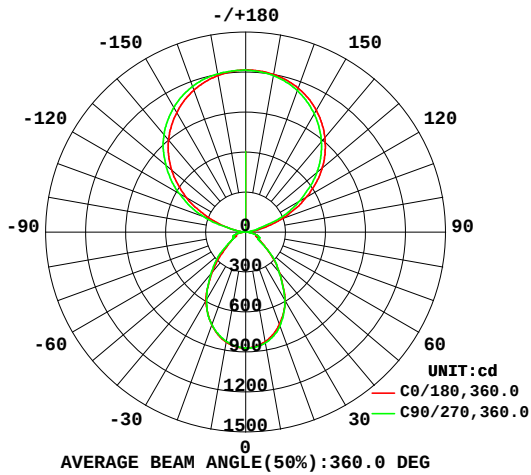


LUMINAIRE PHOTOMETRIC TEST REPORT

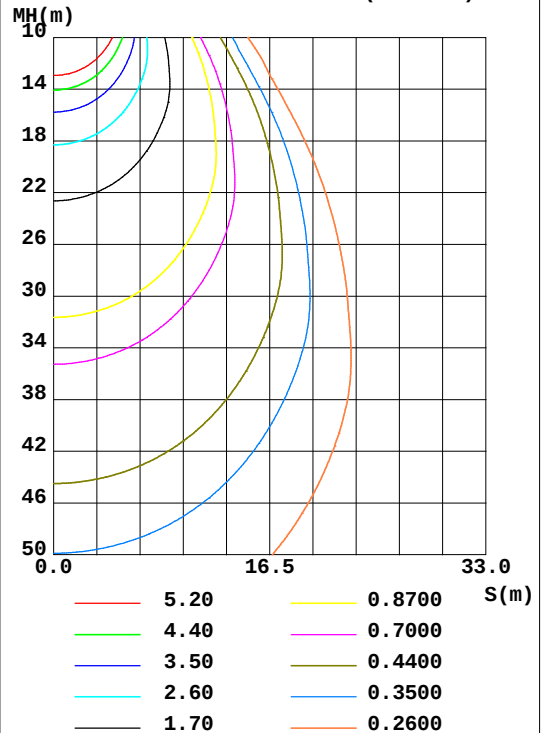
Test:U:220.8V I:0.1890A P:40.70W PF:0.9760 Lamp Flux:4851.5x1 lm		
NAME: LAFA壁灯 上下 4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 119.20 lm/W			
MODEL		I _{max} (cd)	1217	S/MH(C0/180)	1.06
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.06
RATED VOLTAGE(V)	220.0	TOTAL FLUX(lm)	4851.5	η UP, DN(C0-180)	35.9,15.8
NOMINAL FLUX(lm)	4851.5	CIE CLASS	SEMI-IND.	η UP, DN(C180-360)	33.2,15.1
LAMPS INSIDE	1	η up(%)	69.1	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	220.0	η down(%)	30.9	CIBSE SHR MAX	1.10

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.526m [K=1.0498]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	ϕ zone	ϕ total	%lum,lamp
5	862.8	861.4	859.1	859.4	861.6	863.2	866.0	864.4	0- 5	20.71	20.71	0.43,0.43
10	839.3	838.1	833.8	833.8	836.5	839.2	845.3	842.1	5- 10	60.84	81.56	1.68,1.68
15	799.2	798.7	793.9	792.6	795.6	796.5	807.8	801.8	10- 15	97.10	178.7	3.68,3.68
20	742.8	744.1	741.7	737.4	739.0	736.8	751.7	744.3	15- 20	127.0	305.6	6.3,6.3
25	674.4	678.7	676.6	672.4	670.9	657.6	675.4	667.0	20- 25	148.2	453.9	9.36,9.36
30	597.6	599.3	587.0	598.3	592.4	573.3	588.8	580.2	25- 30	159.6	613.4	12.6,12.6
35	492.5	501.1	495.5	496.8	489.5	471.5	485.0	485.6	30- 35	159.0	772.4	15.9,15.9
40	390.1	395.2	404.2	388.3	394.2	359.2	390.2	372.7	35- 40	145.4	917.9	18.9,18.9
45	296.1	331.4	326.9	328.8	310.8	302.6	316.5	307.8	40- 45	129.1	1047	21.6,21.6
50	210.6	262.1	248.1	267.0	225.5	236.2	226.6	241.5	45- 50	112.4	1159	23.9,23.9
55	158.3	194.4	169.5	205.3	160.6	176.0	149.0	176.6	50- 55	89.63	1249	25.7,25.7
60	118.8	128.0	120.9	128.6	121.7	107.3	109.1	113.6	55- 60	67.25	1316	27.1,27.1
65	92.98	77.43	102.3	82.03	97.96	63.09	109.5	71.36	60- 65	48.79	1365	28.1,28.1
70	83.56	55.66	103.5	59.17	81.56	56.21	101.9	56.64	65- 70	39.66	1405	29,29
75	79.35	63.66	88.92	57.87	80.38	52.68	80.29	55.23	70- 75	37.58	1442	29.7,29.7
80	54.22	59.12	61.65	51.71	54.08	40.09	44.58	46.38	75- 80	32.71	1475	30.4,30.4
85	22.65	28.67	29.07	27.30	20.37	10.64	8.443	15.28	80- 85	19.85	1495	30.8,30.8
90	2.575	4.836	3.833	5.561	1.537	5.891	3.775	5.793	85- 90	4.417	1499	30.9,30.9
95	13.57	19.15	23.87	19.43	14.13	9.855	6.810	8.951	90- 95	4.038	1503	31,31
100	64.78	67.02	73.77	71.95	67.75	41.56	36.26	39.32	95-100	17.32	1521	31.3,31.3
105	155.3	179.0	156.1	189.0	164.0	128.4	89.00	125.6	100-105	52.30	1573	32.4,32.4
110	264.8	298.6	331.3	305.8	280.4	243.5	181.4	240.4	105-110	109.0	1682	34.7,34.7
115	382.3	420.2	458.4	426.6	403.7	359.0	348.0	352.6	110-115	168.5	1850	38.1,38.1
120	510.3	536.0	573.2	547.3	528.4	487.3	464.9	475.8	115-120	221.0	2071	42.7,42.7
125	619.5	654.0	683.3	667.2	643.6	606.4	585.6	593.2	120-125	265.0	2336	48.2,48.2
130	725.9	760.0	781.7	772.2	750.8	714.2	699.3	702.6	125-130	298.1	2634	54.3,54.3
135	819.1	851.9	875.5	865.5	843.2	812.5	797.4	800.7	130-135	317.7	2952	60.8,60.8
140	901.5	930.8	954.8	947.2	924.7	900.2	884.1	886.8	135-140	324.1	3276	67.5,67.5
145	972.9	1001	1023	1019	997.0	977.3	961.4	963.3	140-145	318.0	3594	74.1,74.1
150	1036	1062	1080	1077	1059	1043	1028	1031	145-150	300.7	3895	80.3,80.3
155	1091	1111	1128	1124	1110	1097	1085	1087	150-155	272.9	4168	85.9,85.9
160	1135	1150	1164	1160	1151	1141	1132	1133	155-160	236.0	4404	90.8,90.8
165	1169	1178	1191	1187	1181	1174	1167	1168	160-165	191.5	4595	94.7,94.7
170	1194	1198	1206	1204	1202	1197	1193	1194	165-170	140.9	4736	97.6,97.6
175	1210	1210	1213	1214	1213	1209	1208	1209	170-175	86.19	4822	99.4,99.4
180	1217	1217	1217	1217	1217	1217	1217	1217	175-180	29.01	4851	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 1046.9 lm

%lum = 21.6%

%lamp = 21.6%

Conical surface Flux(120deg): 1316.2 lm

%lum = 27.1%

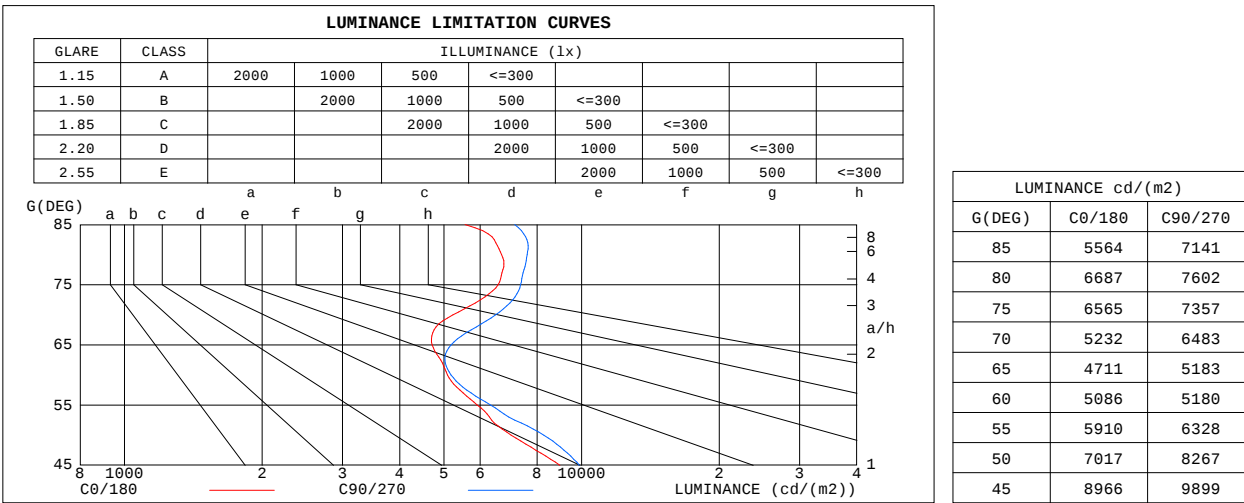
%lamp = 27.1%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity:65.0%
 Test Distance:9.526m [K=1.0498]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:220.8V I:0.1890A P:40.70W PF:0.9760 Lamp Flux:4851.5x1 lm		
NAME: LAFA壁灯 上下 4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



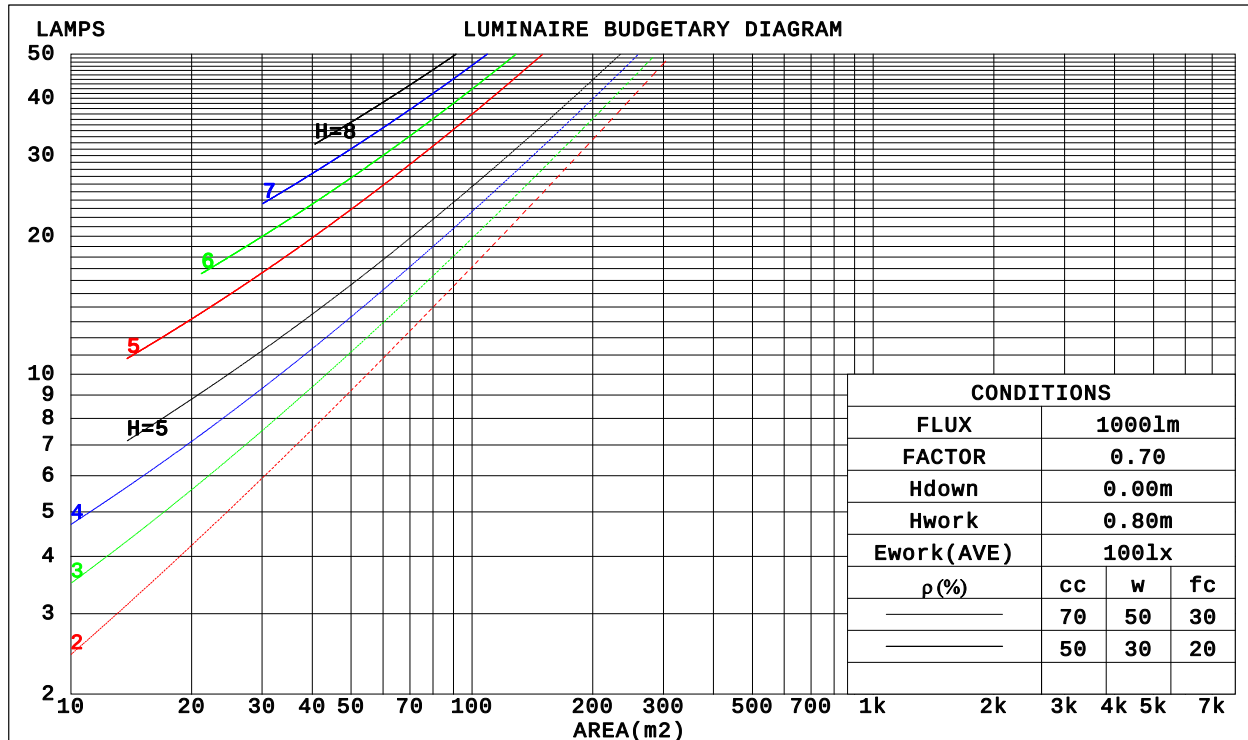
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.526m [K=1.0498]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.8V I:0.1890A P:40.70W PF:0.9760 Lamp Flux:4851.5x1 lm		
NAME: LAFA壁灯 上下 4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Coefficients of Utilization(CU)												
0.0	1.03	1.03	1.03	.92	.92	.92	.73	.73	.73	.55	.55	.55	.39	.39	.39	.31
1.0	.90	.86	.83	.81	.78	.75	.64	.62	.60	.49	.48	.46	.35	.34	.33	.27
2.0	.79	.73	.69	.71	.67	.63	.57	.54	.51	.44	.41	.40	.31	.30	.29	.23
3.0	.70	.63	.58	.63	.58	.53	.51	.47	.43	.39	.36	.34	.28	.27	.25	.21
4.0	.62	.55	.49	.56	.50	.45	.45	.41	.37	.35	.32	.30	.26	.24	.22	.18
5.0	.56	.48	.43	.51	.44	.39	.41	.36	.33	.32	.29	.26	.23	.21	.20	.16
6.0	.50	.43	.37	.46	.39	.34	.37	.32	.29	.29	.26	.23	.21	.19	.18	.15
7.0	.45	.38	.33	.41	.35	.30	.34	.29	.25	.27	.23	.21	.20	.18	.16	.13
8.0	.41	.34	.29	.38	.31	.27	.31	.26	.23	.24	.21	.19	.18	.16	.15	.12
9.0	.38	.31	.26	.34	.28	.24	.28	.24	.20	.22	.19	.17	.17	.15	.13	.11
10.0	.35	.28	.23	.32	.26	.22	.26	.22	.18	.21	.18	.15	.16	.14	.12	.10



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000_V1 SYSTEM V2.0.295T
 Humidity: 65.0%
 Test Distance: 9.526m [K=1.0498]
 Remarks:

WEC AND CCEC

Test:U:220.8V I:0.1890A P:40.70W PF:0.9760 Lamp Flux:4851.5x1 lm					
NAME: LAFA壁灯 上下 4000K			TYPE:		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:
MFR.:			SUR.:		Shielding Angle:

ρ_{CC}	80%			70%			50%			30%			10%			0	
ρ_W	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρ_{fc}	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.260	.148	.047	.232	.132	.042	.180	.103	.033	.132	.076	.024	.088	.051	.016		
2.0	.240	.132	.040	.215	.118	.036	.167	.093	.029	.124	.069	.022	.083	.047	.015		
3.0	.222	.118	.035	.199	.107	.032	.156	.084	.026	.115	.063	.019	.078	.043	.013		
4.0	.206	.107	.032	.185	.097	.029	.145	.077	.023	.108	.058	.017	.073	.040	.012		
5.0	.192	.098	.028	.173	.089	.026	.135	.071	.021	.101	.053	.016	.069	.037	.011		
6.0	.179	.090	.026	.161	.081	.023	.127	.065	.019	.095	.049	.014	.065	.034	.010		
7.0	.168	.083	.024	.151	.075	.021	.119	.060	.017	.089	.046	.013	.061	.032	.009		
8.0	.158	.077	.022	.142	.070	.020	.112	.056	.016	.084	.043	.012	.058	.030	.009		
9.0	.148	.072	.020	.134	.065	.018	.106	.052	.015	.080	.040	.011	.055	.028	.008		
10.0	.140	.067	.019	.126	.061	.017	.100	.049	.014	.075	.037	.011	.052	.026	.008		

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Ceiling Cavity Exitance Coefficients(CCEC)												
0.0	.717	.717	.717	.613	.613	.613	.418	.418	.418	.240	.240	.240	.077	.077	.077	
1.0	.708	.687	.669	.605	.590	.576	.414	.406	.398	.238	.235	.232	.076	.076	.075	
2.0	.700	.667	.639	.599	.574	.552	.411	.397	.385	.237	.231	.226	.076	.075	.074	
3.0	.693	.651	.618	.594	.562	.536	.408	.390	.376	.235	.228	.222	.076	.074	.073	
4.0	.686	.640	.604	.589	.553	.525	.405	.385	.370	.234	.226	.219	.075	.073	.072	
5.0	.680	.631	.594	.584	.546	.517	.402	.381	.365	.233	.224	.217	.075	.073	.071	
6.0	.674	.623	.587	.579	.540	.511	.400	.378	.362	.232	.222	.215	.075	.073	.071	
7.0	.668	.617	.582	.575	.535	.507	.397	.375	.359	.231	.221	.214	.075	.072	.071	
8.0	.663	.612	.578	.571	.531	.504	.395	.373	.357	.230	.220	.213	.074	.072	.071	
9.0	.658	.608	.575	.567	.528	.501	.393	.371	.356	.229	.219	.212	.074	.072	.070	
10.0	.653	.605	.572	.563	.525	.499	.391	.369	.355	.228	.218	.212	.074	.072	.070	

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity:65.0%
 Test Distance:9.526m [K=1.0498]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.8V I:0.1890A P:40.70W PF:0.9760 Lamp Flux:4851.5x1 lm											
NAME: LAFA壁灯 上下 4000K					TYPE:			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:			
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	13.2	13.9	14.2	15.0	16.3	13.3	14.1	14.4	15.1	16.5	
	3H	13.8	14.4	14.8	15.5	16.9	14.3	15.0	15.4	16.0	17.4
	4H	14.4	15.1	15.5	16.1	17.5	15.1	15.8	16.2	16.8	18.2
	6H	15.2	15.8	16.3	16.8	18.3	15.9	16.5	17.0	17.6	19.0
	8H	15.5	16.0	16.5	17.1	18.5	16.2	16.8	17.3	17.8	19.3
	12H	15.6	16.1	16.7	17.2	18.7	16.4	16.9	17.5	18.0	19.4
4H	2H	13.1	13.8	14.2	14.8	16.2	13.3	13.9	14.3	15.0	16.4
	3H	13.9	14.4	15.0	15.5	16.9	14.5	15.0	15.5	16.1	17.5
	4H	14.8	15.2	15.9	16.3	17.8	15.5	16.0	16.6	17.1	18.5
	6H	15.8	16.2	16.9	17.3	18.8	16.5	16.9	17.7	18.1	19.6
	8H	16.2	16.5	17.3	17.7	19.2	16.9	17.3	18.1	18.4	19.9
	12H	16.4	16.7	17.5	17.8	19.4	17.2	17.5	18.3	18.7	20.2
8H	4H	15.0	15.4	16.1	16.5	18.0	15.6	16.0	16.8	17.1	18.6
	6H	16.3	16.6	17.4	17.7	19.2	16.9	17.2	18.1	18.3	19.9
	8H	16.8	17.1	17.9	18.2	19.7	17.4	17.7	18.6	18.8	20.4
	12H	17.1	17.3	18.3	18.5	20.1	17.8	18.0	19.0	19.2	20.8
12H	4H	15.0	15.4	16.2	16.5	18.0	15.6	16.0	16.8	17.1	18.6
	6H	16.4	16.7	17.5	17.8	19.3	17.0	17.3	18.1	18.4	19.9
	8H	17.0	17.2	18.1	18.3	19.9	17.6	17.8	18.7	19.0	20.5
Variations with the observer position at spacings:											
S = 1.0H	+ 0.3 / - 0.3					+ 0.2 / - 0.3					
1.5H	+ 0.1 / - 0.3					+ 0.1 / - 0.1					
2.0H	+ 0.5 / - 0.4					+ 0.6 / - 0.5					

CIE Pub.117 Corrected 4851 lm Total Lamp Luminous Flux.(8log(F/F0) = 5.5)

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity:65.0%
 Test Distance:9.526m [K=1.0498]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.8V I:0.1890A P:40.70W PF:0.9760 Lamp Flux:4851.5x1 lm		
NAME: LAFA壁灯 上下 4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

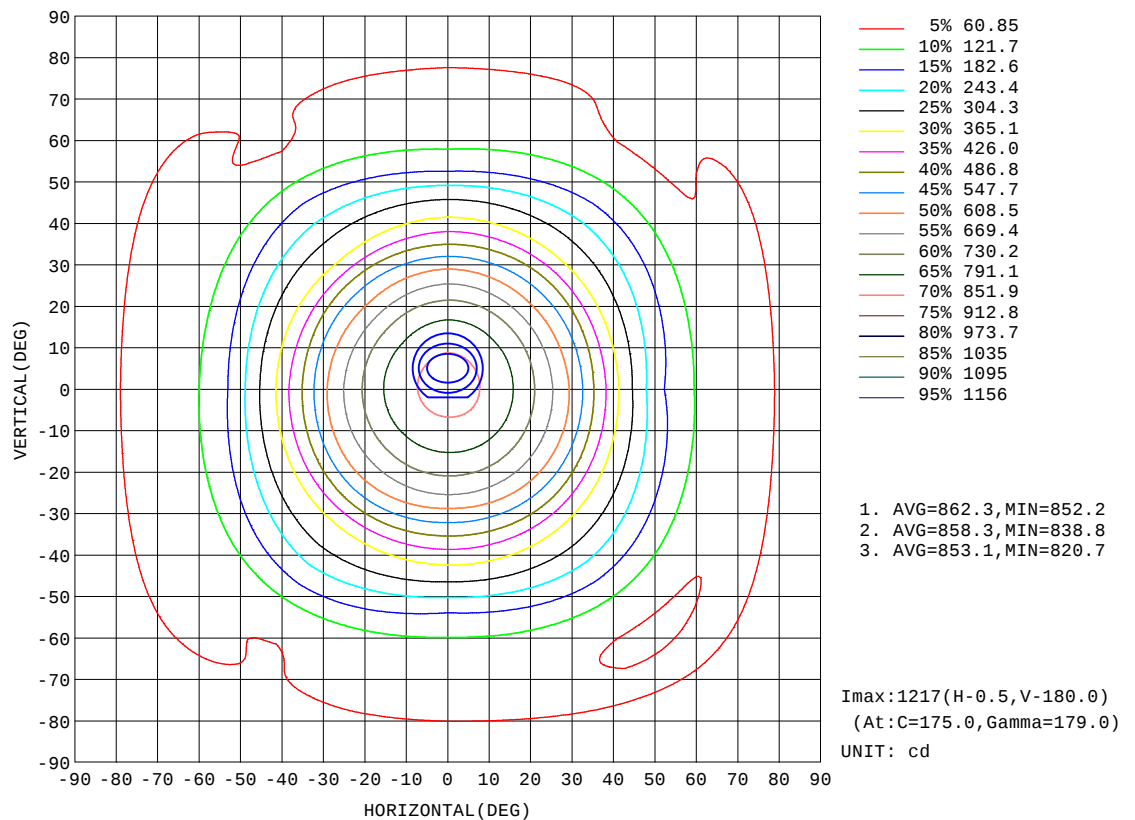
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	53	41	34	48	38	32	38	31	27	13
0.80	61	50	43	55	46	39	44	37	33	16
1.00	68	57	50	61	52	46	48	42	38	18
1.25	73	64	56	66	58	52	52	47	42	20
1.50	77	68	62	70	62	56	55	50	46	21
2.00	83	76	70	75	68	63	59	55	52	24
2.50	87	80	75	78	72	68	61	58	55	25
3.00	89	83	78	80	75	71	63	60	57	26
4.00	92	88	83	83	79	75	65	63	61	27
5.00	94	90	87	85	81	78	67	65	63	27
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Ceiling Mounted					SHRNOM = 1.00		

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity:65.0%
 Test Distance:9.526m [K=1.0498]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:220.8V I:0.1890A P:40.70W PF:0.9760 Lamp Flux:4851.5x1 lm		
NAME: LAFA壁灯 上下 4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



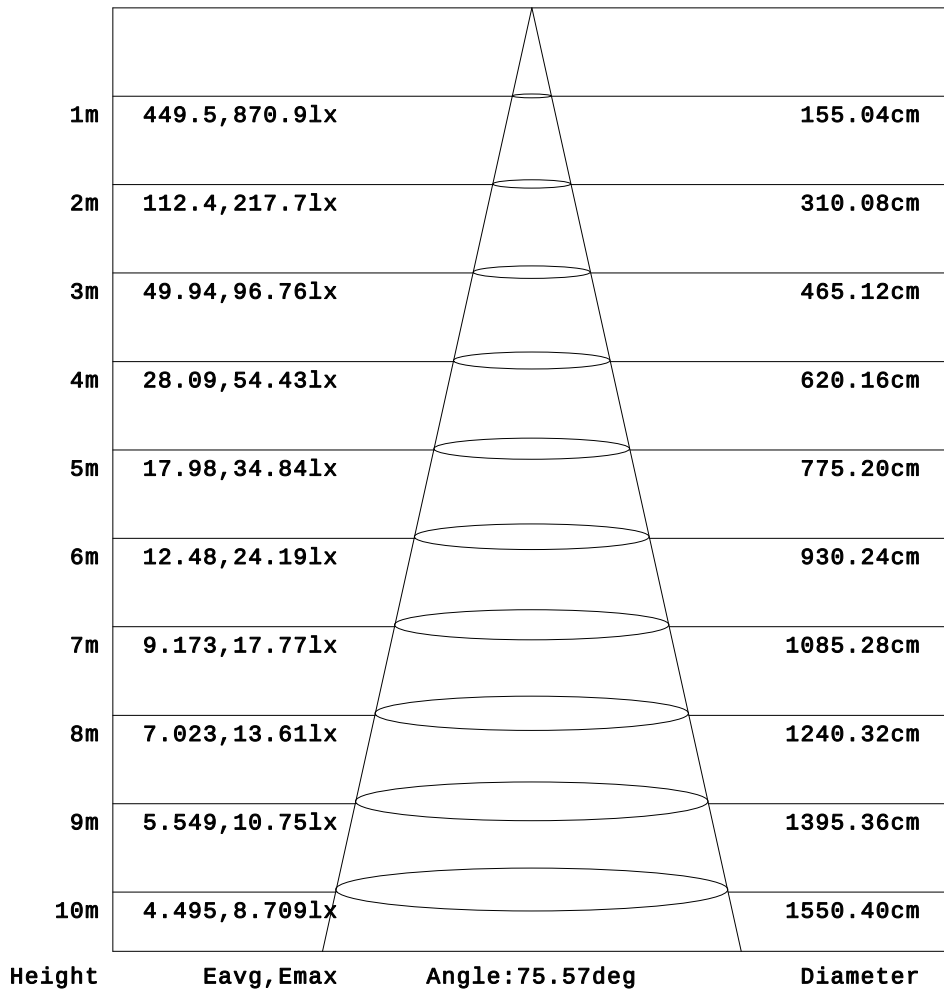
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.526m [K=1.0498]
Remarks:

AAI Figure

Test:U:220.8V I:0.1890A P:40.70W PF:0.9760 Lamp Flux:4851.5x1 lm		
NAME: LAFA壁灯 上下 4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Flux out:861.9 lm



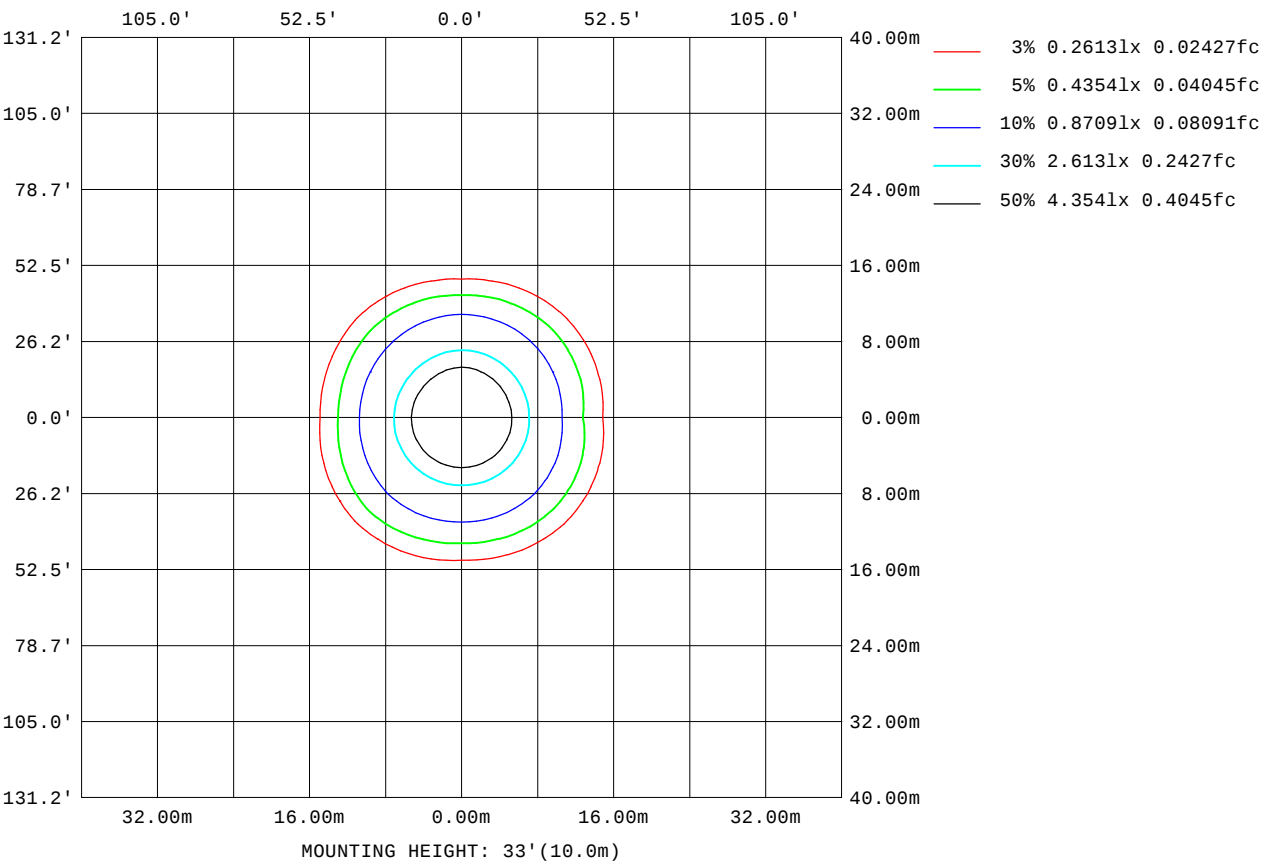
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity: 65.0%
 Test Distance: 9.526m [K=1.0498]
 Remarks:

ISOLUX DIAGRAM

Test:U:220.8V I:0.1890A P:40.70W PF:0.9760 Lamp Flux:4851.5x1 lm		
NAME: LAFA壁灯 上下 4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.526m [K=1.0498]
Remarks:

LED Avg.L Report

Test:U:220.8V I:0.1890A P:40.70W PF:0.9760 Lamp Flux:4851.5x1 lm		
NAME: LAFA壁灯 上下 4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

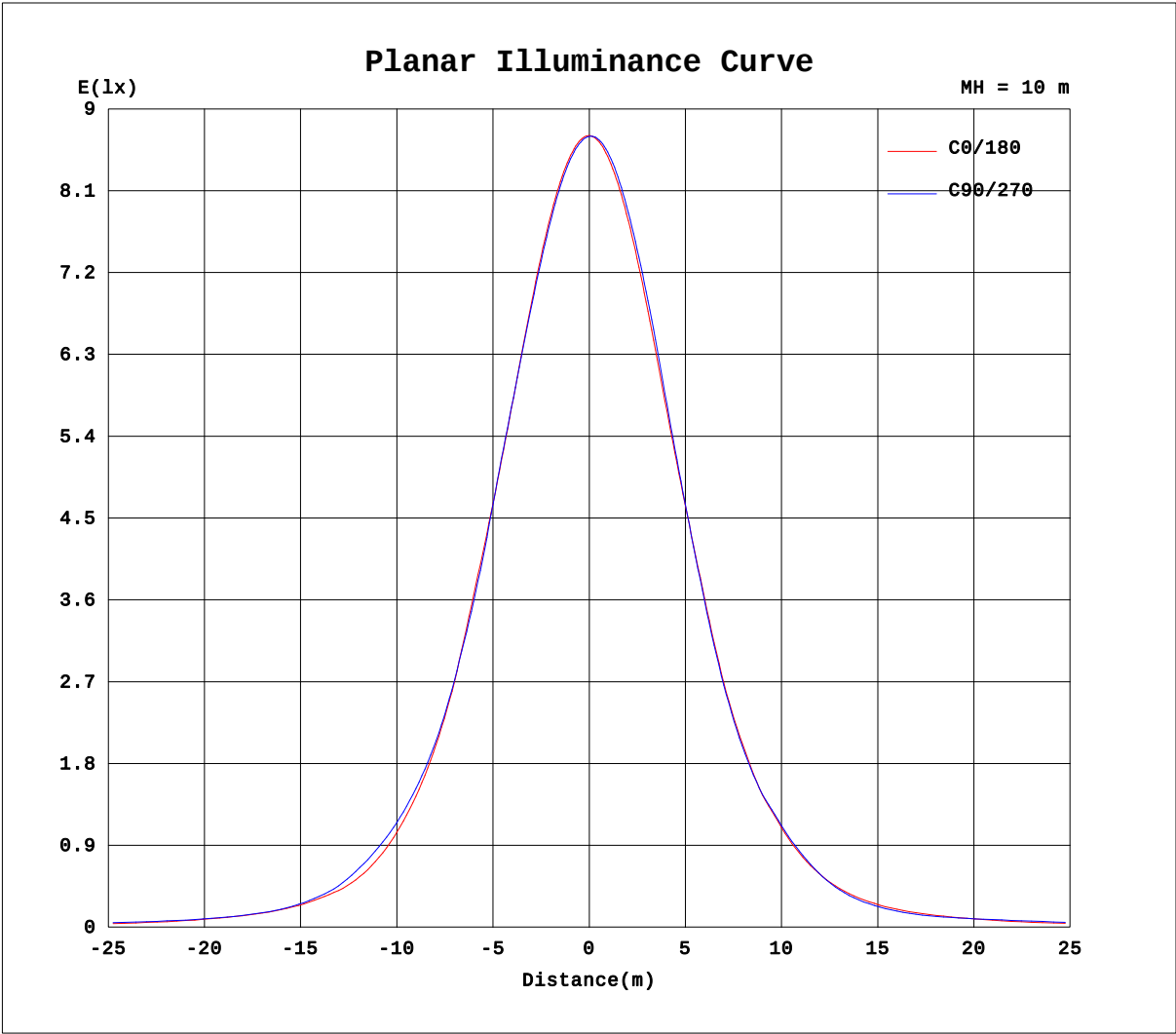
AvgL	cd/m2
L_0~180(65)av	4837
L_0~180(75)av	6607
L_0~180(85)av	5284
L_90~270(65)av	5366
L_90~270(75)av	7000
L_90~270(85)av	4608
L_45(65)av	3723
L_45(75)av	4745
L_45(85)av	5030

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.526m [K=1.0498]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.526m [K=1.0498]
Remarks: