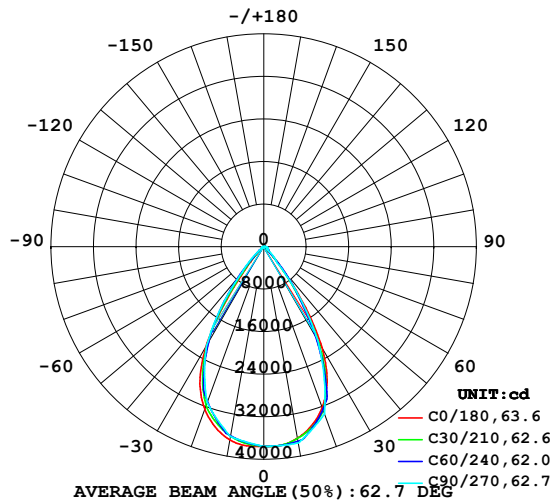


LUMINAIRE PHOTOMETRIC TEST REPORT

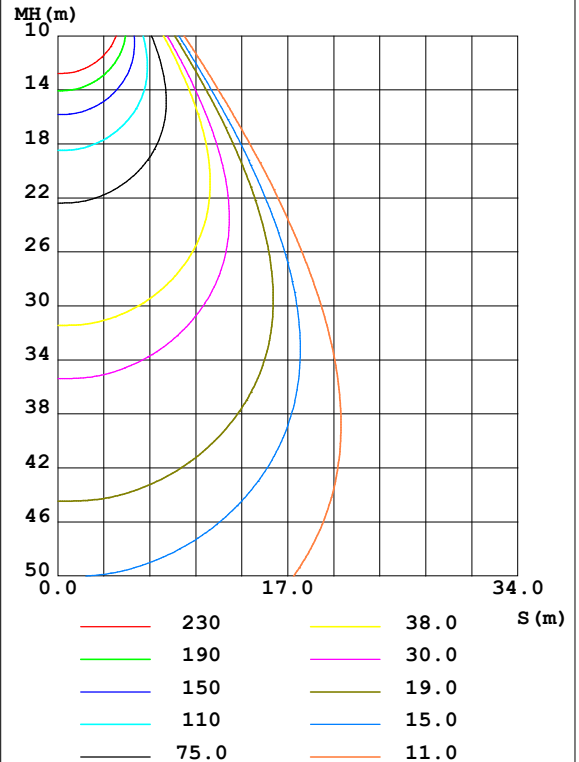
Test:U:219.8V I:1.309A P:285.6W PF:0.9926 Lamp Flux:36851.8x1 lm		
NAME:	TYPE:LED	WEIGHT:
SPEC.:C470SP-Q2-P-03A 230V50HZ	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 129.03 lm/W			
MODEL	LHB-300W-6060	Imax(cd)	37603	S/MH(C0/180)	0.93
NOMINAL POWER(W)	300	LOR(%)	100.0	S/MH(C90/270)	0.94
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	36852	η UP,DN(C0-180)	0.0,49.6
NOMINAL FLUX(lm)	36851.8	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.4
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	0.95

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2017-02-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.351
 Humidity:65.0%
 Test Distance:7.290m [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
5	3751	3748	3753	3751	3756	3705	3690	3702	0- 5	894.4	894.4	2.43, 2.43
10	3659	3687	3750	3706	3689	3608	3624	3592	5- 10	2644	3539	9.6, 9.6
15	3484	3548	3548	3569	3517	3428	3372	3414	10- 15	4234	7772	21.1, 21.1
20	3218	3220	3346	3243	3252	3107	3120	3098	15- 20	5498	13270	36, 36
25	2819	2787	2685	2807	2847	2720	2639	2716	20- 25	6249	19519	53, 53
30	2190	2051	2024	2039	2180	2113	2158	2137	25- 30	6125	25644	69.6, 69.6
35	1295	1146	1208	1113	1216	1315	1403	1376	30- 35	4922	30566	82.9, 82.9
40	514.4	454.7	392.6	416.1	461.4	578.9	647.9	652.2	35- 40	2925	33491	90.9, 90.9
45	169.5	211.0	243.0	189.3	132.6	240.7	353.9	270.4	40- 45	1308	34800	94.4, 94.4
50	69.73	83.14	93.44	82.67	60.25	59.05	59.95	62.09	45- 50	551.3	35351	95.9, 95.9
55	59.43	76.01	87.09	75.46	49.75	50.01	52.98	51.57	50- 55	299.1	35650	96.7, 96.7
60	56.35	70.95	80.74	70.97	47.10	46.02	46.01	46.59	55- 60	275.6	35926	97.5, 97.5
65	53.36	63.49	66.95	63.28	44.02	42.40	40.51	42.99	60- 65	268.3	36194	98.2, 98.2
70	49.19	53.45	53.17	52.31	39.65	36.54	35.02	37.13	65- 70	243.8	36438	98.9, 98.9
75	40.72	39.12	37.51	36.74	30.81	26.72	24.36	27.48	70- 75	199.6	36638	99.4, 99.4
80	23.18	24.70	21.85	23.12	13.16	14.92	13.71	15.56	75- 80	136.3	36774	99.8, 99.8
85	14.46	7.036	0	6.619	6.432	3.584	0	3.790	80- 85	66.99	36841	100, 100
90	9.401	0	0	0	6.083	0	0	0	85- 90	10.85	36852	100, 100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY: $\times 10\text{cd}$								UNIT: lm			

Conical surface Flux(90deg): 34800 lm

%lum = 94.4%

%lamp = 94.4%

Conical surface Flux(120deg): 35926 lm

%lum = 97.5%

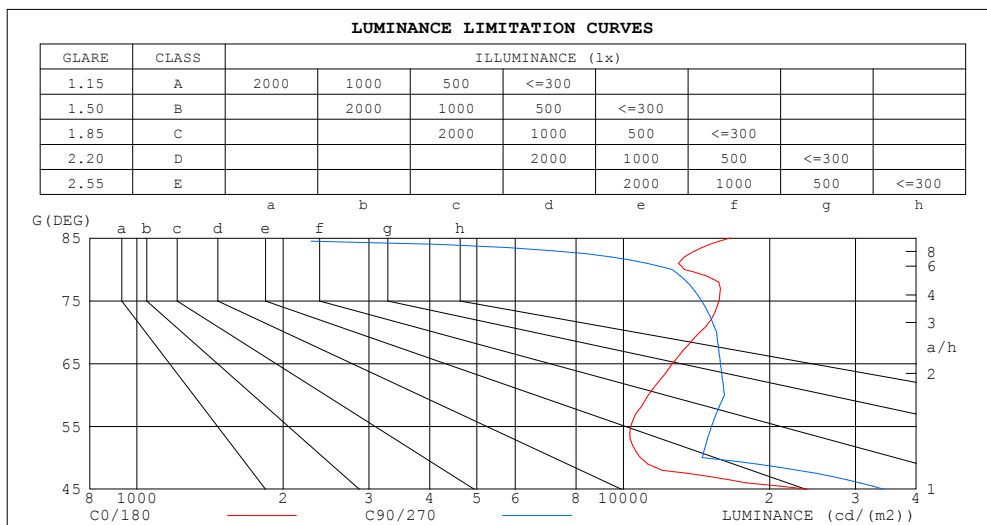
%lamp = 97.5%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2017-02-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.351
 Humidity: 65.0%
 Test Distance: 7.290m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:219.8V I:1.309A P:285.6W PF:0.9926 Lamp Flux:36851.8x1 lm		
NAME:	TYPE:LED	WEIGHT:
SPEC.:C470SP-Q2-P-03A 230V50HZ	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	16593	0
80	13349	12585
75	15735	14493
70	14382	15545
65	12627	15842
60	11270	16147
55	10362	15183
50	10848	14537
45	23976	34370

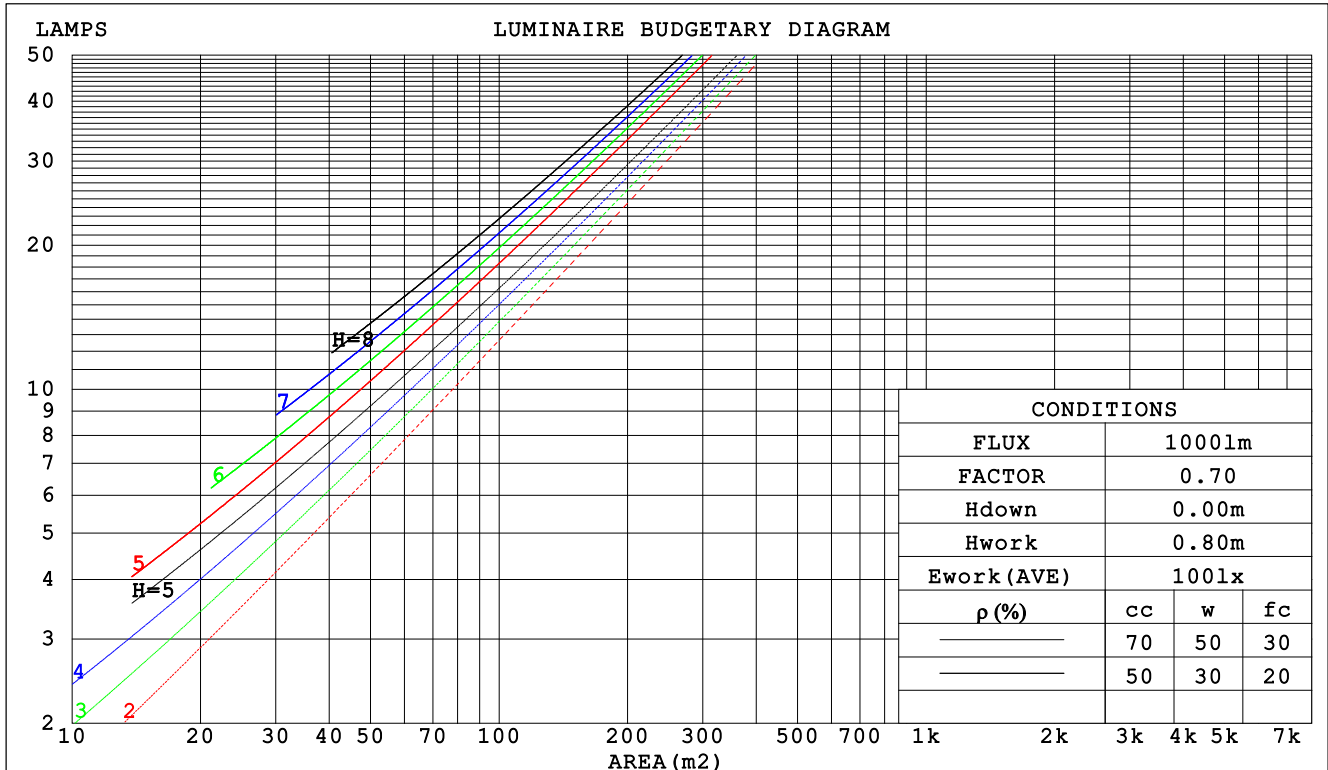
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-02-17

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:7.290m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:219.8V I:1.309A P:285.6W PF:0.9926 Lamp Flux:36851.8x1 lm		
NAME:	TYPE:LED	WEIGHT:
SPEC.:C470SP-Q2-P-03A 230V50HZ	DIM.:	SERIAL No.:1
MFR.: EVERFINE	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	1.19	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	1.00
1.0	1.10	1.08	1.05	1.08	1.06	1.04	1.04	1.02	1.00	1.00	.99	.97	.97	.96	.95	.93
2.0	1.02	.98	.94	1.00	.97	.93	.97	.94	.91	.94	.92	.89	.91	.89	.87	.86
3.0	.95	.90	.86	.94	.89	.85	.91	.87	.84	.88	.85	.82	.86	.83	.81	.79
4.0	.88	.83	.78	.87	.82	.78	.85	.81	.77	.83	.79	.76	.81	.78	.75	.74
5.0	.83	.77	.72	.82	.76	.72	.80	.75	.71	.78	.74	.71	.77	.73	.70	.68
6.0	.77	.71	.67	.77	.71	.67	.75	.70	.66	.74	.69	.66	.72	.68	.65	.64
7.0	.73	.67	.62	.72	.66	.62	.71	.66	.62	.70	.65	.61	.68	.64	.61	.60
8.0	.68	.62	.58	.68	.62	.58	.67	.61	.58	.66	.61	.57	.65	.60	.57	.56
9.0	.65	.58	.54	.64	.58	.54	.63	.58	.54	.62	.57	.54	.61	.57	.54	.52
10.0	.61	.55	.51	.60	.55	.51	.60	.54	.51	.59	.54	.51	.58	.54	.51	.49



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2017-02-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.351
 Humidity:65.0%
 Test Distance:7.290m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:219.8V I:1.309A P:285.6W PF:0.9926 Lamp Flux:36851.8x1 lm					
NAME:			TYPE:LED		WEIGHT:
SPEC.:C470SP-Q2-P-03A 230V50HZ			DIM.:		SERIAL No.:1
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	.188	.107	.034	.182	.104	.033	.169	.097	.031	.157	.091	.029	.147	.085	.027		
2.0	.180	.098	.030	.174	.096	.029	.163	.091	.028	.153	.086	.027	.144	.082	.026		
3.0	.170	.091	.027	.165	.089	.027	.156	.085	.026	.148	.081	.025	.140	.077	.024		
4.0	.161	.084	.025	.157	.082	.024	.149	.079	.024	.142	.076	.023	.135	.073	.022		
5.0	.153	.078	.023	.150	.077	.022	.143	.074	.022	.136	.072	.021	.130	.070	.021		
6.0	.146	.073	.021	.143	.072	.021	.137	.070	.020	.131	.068	.020	.126	.066	.020		
7.0	.139	.069	.020	.136	.068	.019	.131	.066	.019	.126	.065	.019	.121	.063	.019		
8.0	.133	.065	.018	.131	.064	.018	.126	.063	.018	.121	.061	.018	.117	.060	.017		
9.0	.127	.062	.017	.125	.061	.017	.121	.060	.017	.117	.058	.017	.113	.057	.017		
10.0	.122	.059	.016	.120	.058	.016	.116	.057	.016	.112	.056	.016	.109	.055	.016		

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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.172	.157	.144	.147	.135	.124	.101	.093	.086	.058	.054	.050	.019	.017	.016	
2.0	.157	.132	.112	.135	.114	.096	.092	.079	.067	.053	.046	.039	.017	.015	.013	
3.0	.145	.114	.088	.125	.098	.077	.085	.068	.054	.049	.040	.032	.016	.013	.010	
4.0	.135	.099	.071	.116	.086	.062	.080	.060	.044	.046	.035	.026	.015	.011	.008	
5.0	.127	.088	.059	.109	.076	.051	.075	.053	.036	.043	.031	.021	.014	.010	.007	
6.0	.119	.078	.049	.103	.068	.043	.071	.047	.030	.041	.028	.018	.013	.009	.006	
7.0	.113	.071	.041	.097	.061	.036	.067	.043	.026	.039	.025	.015	.013	.008	.005	
8.0	.107	.065	.035	.092	.056	.031	.064	.039	.022	.037	.023	.013	.012	.008	.004	
9.0	.102	.060	.031	.088	.052	.027	.061	.036	.019	.036	.021	.011	.012	.007	.004	
10.0	.098	.055	.027	.084	.048	.023	.058	.034	.017	.034	.020	.010	.011	.007	.003	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-02-17

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:7.290m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:219.8V I:1.309A P:285.6W PF:0.9926 Lamp Flux:36851.8x1 lm										
NAME:					TYPE:LED			WEIGHT:		
SPEC.:C470SP-Q2-P-03A 230V50HZ					DIM.:			SERIAL No.:1		
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	21.0	22.0	21.2	22.1	22.3	21.1	22.1	21.3	22.3	22.4
3H	21.2	22.1	21.5	22.3	22.5	21.4	22.3	21.7	22.5	22.8
4H	21.4	22.3	21.7	22.5	22.7	21.6	22.5	21.9	22.7	22.9
6H	21.6	22.4	21.9	22.6	22.9	21.8	22.6	22.1	22.8	23.1
8H	21.6	22.4	21.9	22.6	22.9	21.8	22.5	22.1	22.8	23.1
12H	21.7	22.4	22.0	22.7	23.0	21.7	22.5	22.1	22.7	23.0
4H 2H	20.9	21.8	21.2	22.0	22.2	21.0	21.9	21.3	22.1	22.4
3H	21.3	22.1	21.6	22.3	22.6	21.6	22.3	21.9	22.6	22.9
4H	21.6	22.3	22.0	22.6	22.9	21.9	22.6	22.3	22.9	23.2
6H	21.9	22.5	22.3	22.8	23.2	22.2	22.8	22.5	23.1	23.4
8H	22.0	22.5	22.4	22.9	23.3	22.2	22.8	22.6	23.1	23.5
12H	22.1	22.6	22.5	23.0	23.4	22.2	22.7	22.6	23.0	23.4
8H 4H	21.7	22.3	22.1	22.6	23.0	22.0	22.5	22.4	22.9	23.3
6H	22.1	22.5	22.5	22.9	23.4	22.4	22.8	22.8	23.2	23.6
8H	22.3	22.7	22.7	23.1	23.5	22.4	22.8	22.9	23.2	23.7
12H	22.5	22.8	22.9	23.2	23.7	22.4	22.7	22.9	23.2	23.7
12H 4H	21.7	22.2	22.1	22.6	23.0	22.0	22.5	22.4	22.9	23.2
6H	22.1	22.5	22.6	22.9	23.4	22.4	22.8	22.8	23.2	23.6
8H	22.3	22.7	22.8	23.1	23.6	22.5	22.8	22.9	23.2	23.7
Variations with the observer position at spacings:										
S = 1.0H	+ 2.3 / - 1.9					+ 1.8 / - 1.8				
1.5H	+ 4.3 / - 1.9					+ 3.6 / - 2.0				
2.0H	+ 1.1 / - 0.3					+ 1.7 / - 0.5				

CIE Pub.117 Corrected 36852 lm Total Lamp Luminous Flux.(8log(F/F0) = 12.5)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-02-17

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:7.290m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:219.8V I:1.309A P:285.6W PF:0.9926 Lamp Flux:36851.8x1 lm		
NAME:	TYPE:LED	WEIGHT:
SPEC.:C470SP-Q2-P-03A 230V50HZ	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:

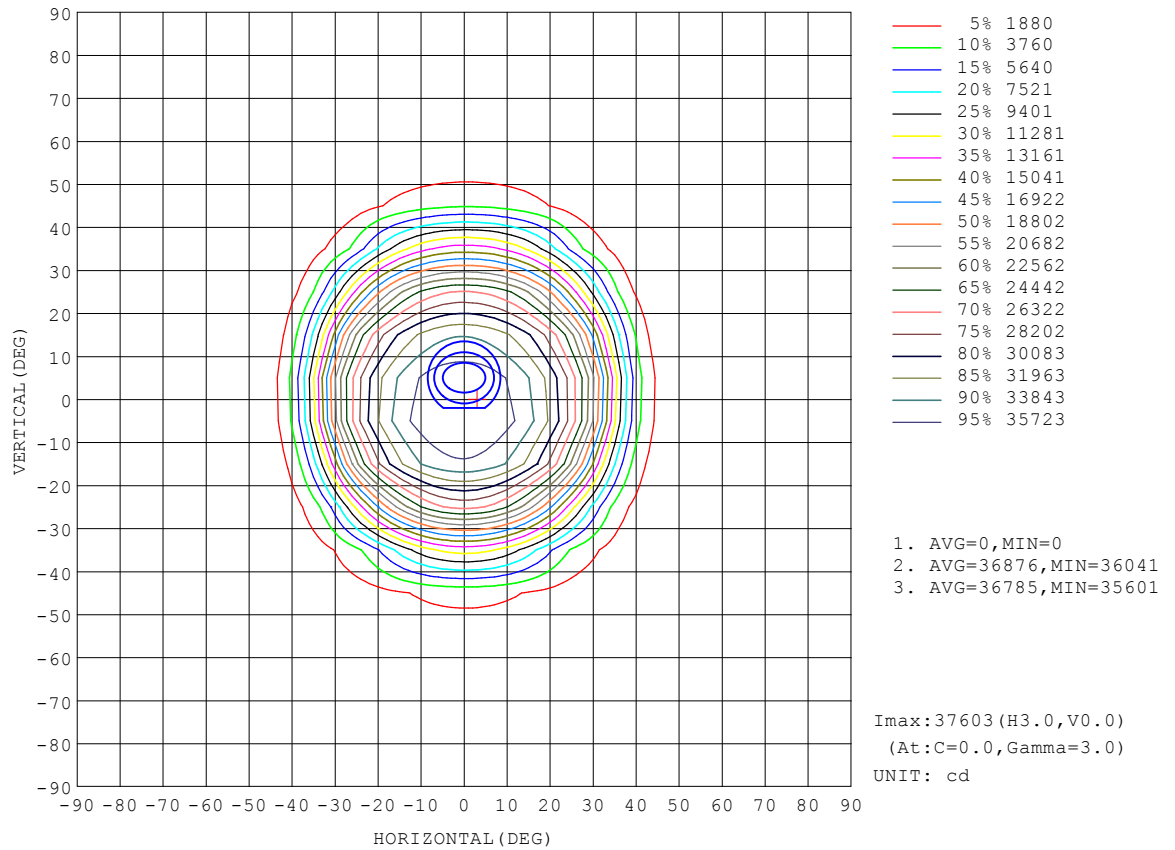
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	86	79	75	85	79	75	85	79	75	72
0.80	93	87	83	93	87	83	92	86	83	79
1.00	98	92	88	97	92	88	96	92	88	83
1.25	102	97	93	101	96	93	99	95	92	87
1.50	105	100	96	104	99	96	101	98	95	90
2.00	108	103	100	106	102	99	104	100	98	92
2.50	110	106	102	108	104	102	105	102	100	94
3.00	111	108	105	109	106	104	106	104	101	95
4.00	113	110	108	111	109	107	108	106	104	97
5.00	115	112	110	113	110	109	109	107	106	98
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-02-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:7.290m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:219.8V I:1.309A P:285.6W PF:0.9926 Lamp Flux:36851.8x1 lm		
NAME:	TYPE:LED	WEIGHT:
SPEC.:C470SP-Q2-P-03A 230V50HZ	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:

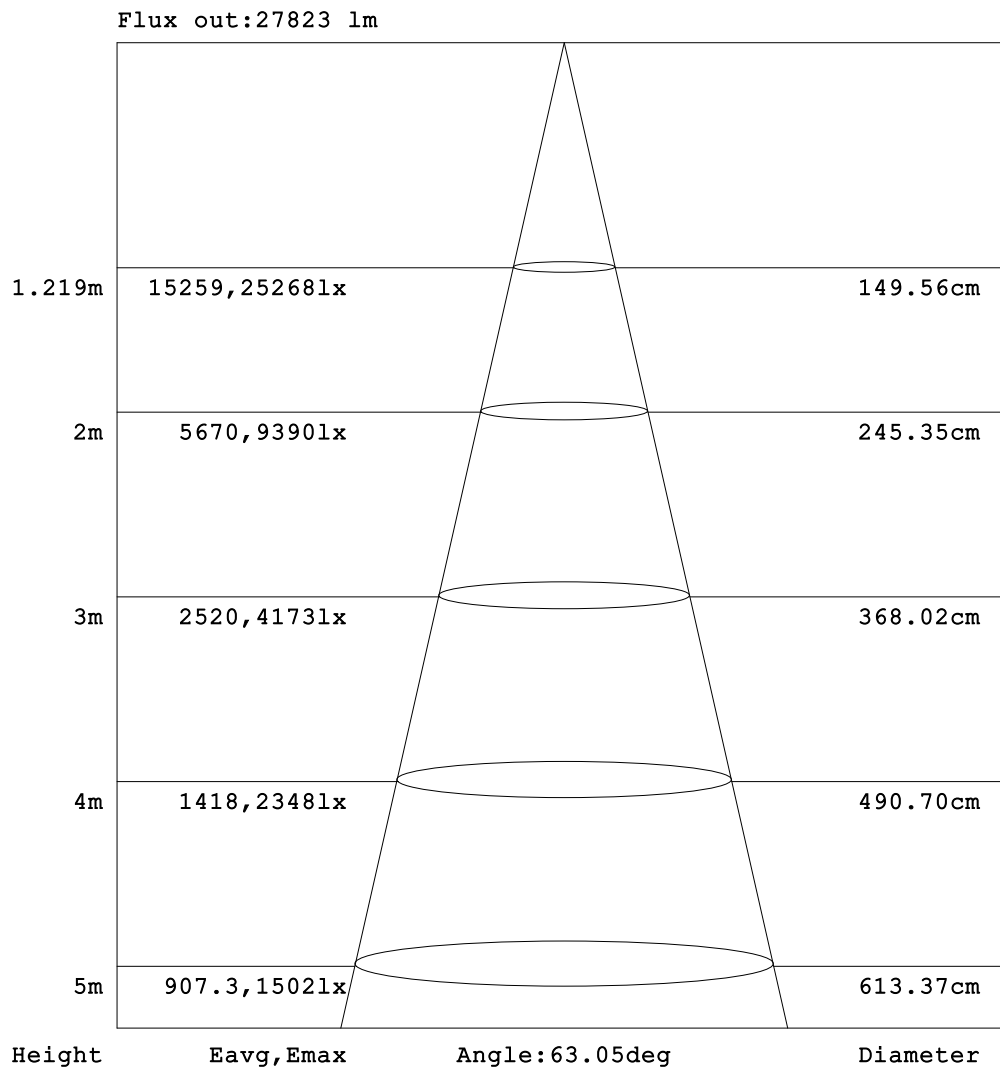


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-02-17

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:7.290m [K=1.0000]
Remarks:

AAI Figure

Test:U:219.8V I:1.309A P:285.6W PF:0.9926 Lamp Flux:36851.8x1 lm		
NAME:	TYPE:LED	WEIGHT:
SPEC.:C470SP-Q2-P-03A 230V50HZ	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:



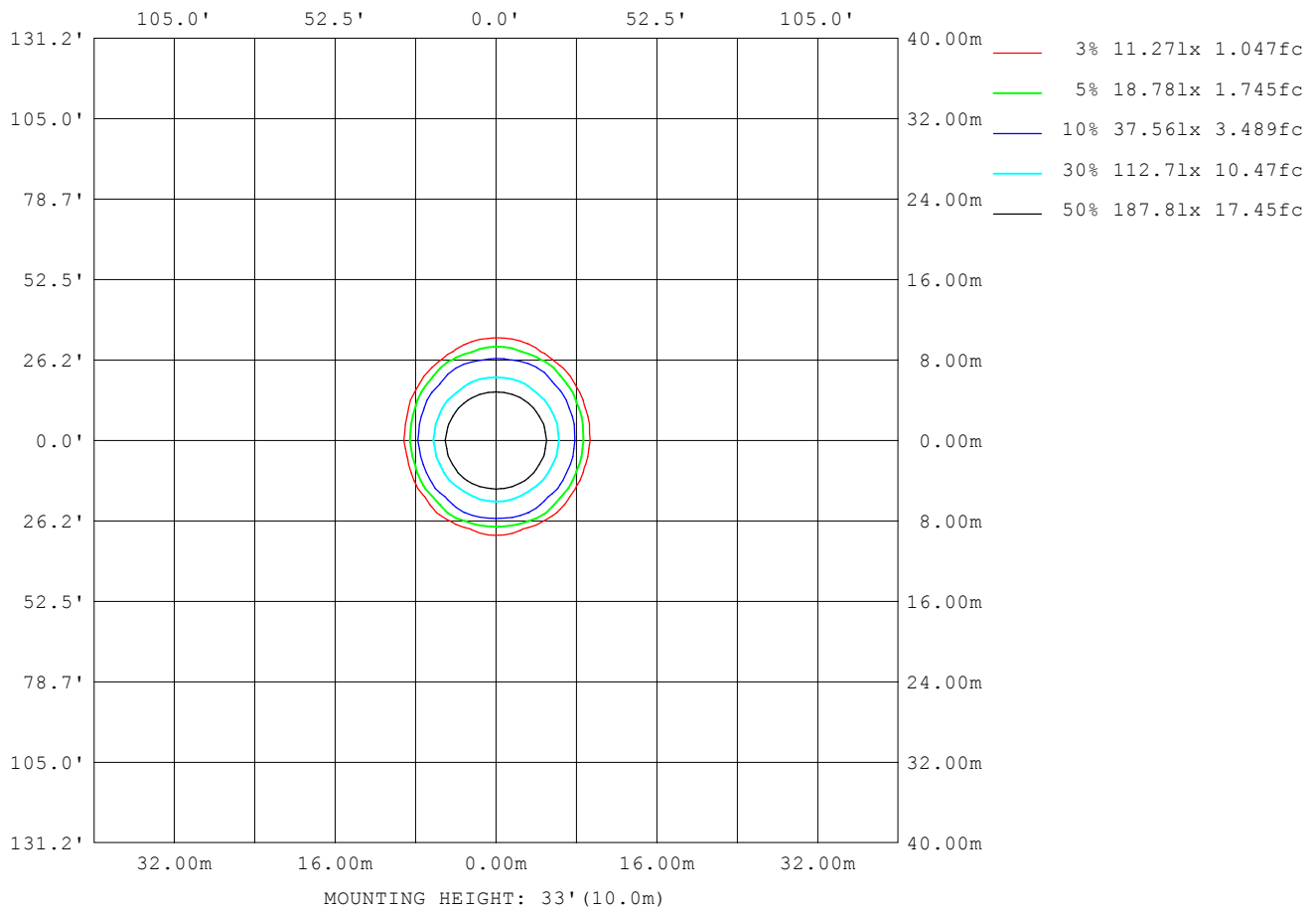
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2017-02-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.351
 Humidity:65.0%
 Test Distance:7.290m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:219.8V I:1.309A P:285.6W PF:0.9926 Lamp Flux:36851.8x1 lm		
NAME:	TYPE:LED	WEIGHT:
SPEC.:C470SP-Q2-P-03A 230V50HZ	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-02-17

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:7.290m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:219.8V I:1.309A P:285.6W PF:0.9926 Lamp Flux:36851.8x1 lm		
NAME:	TYPE:LED	WEIGHT:
SPEC.:C470SP-Q2-P-03A 230V50HZ	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:

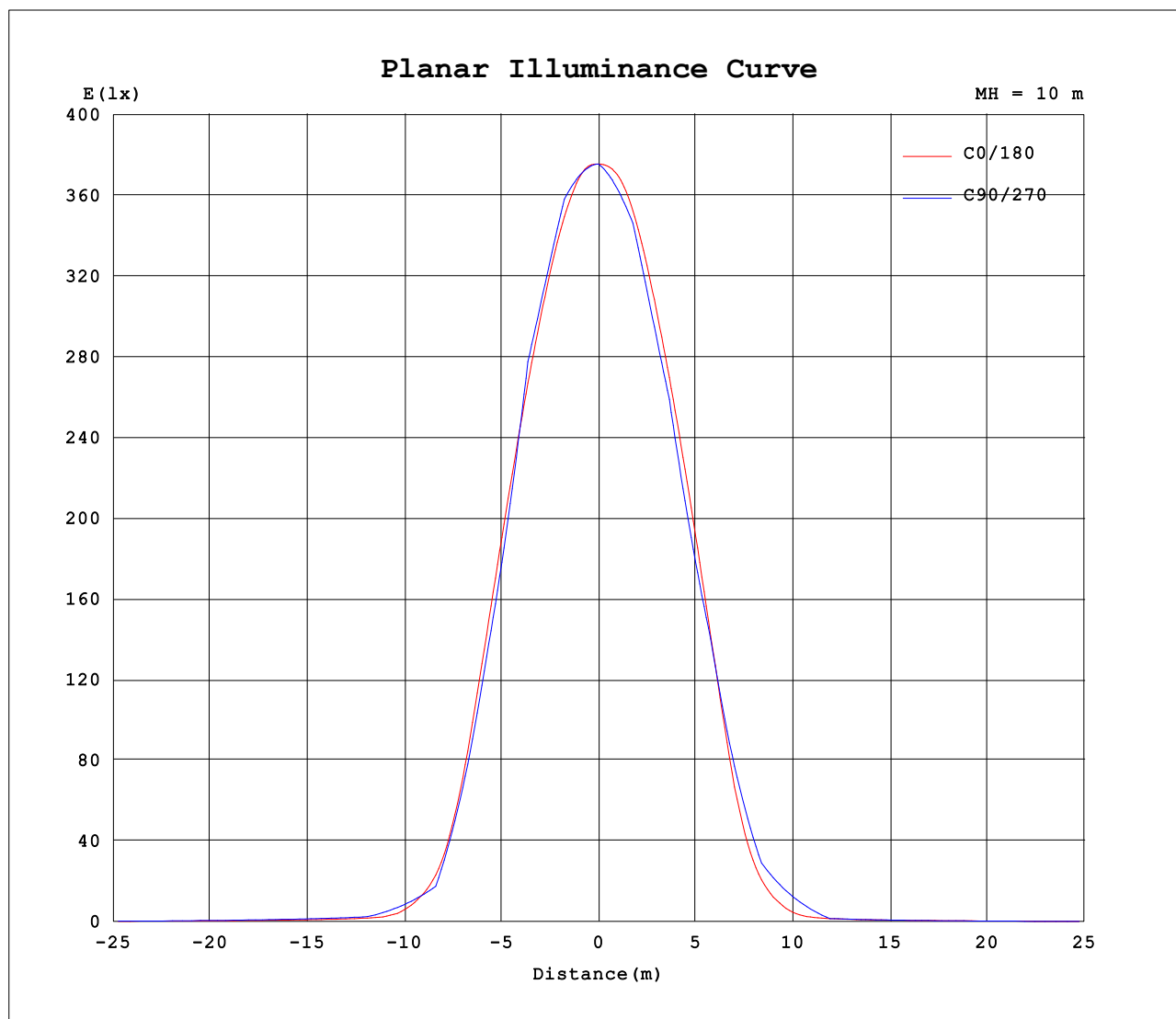
AvgL	cd/m2
L_0~180 (65) av	11521
L_0~180 (75) av	13819
L_0~180 (85) av	11986
L_90~270 (65) av	12714
L_90~270 (75) av	11953
L_90~270 (85) av	0
L_45 (65) av	12550
L_45 (75) av	12563
L_45 (85) av	6032

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-02-17

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.351
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Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2017-02-17

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