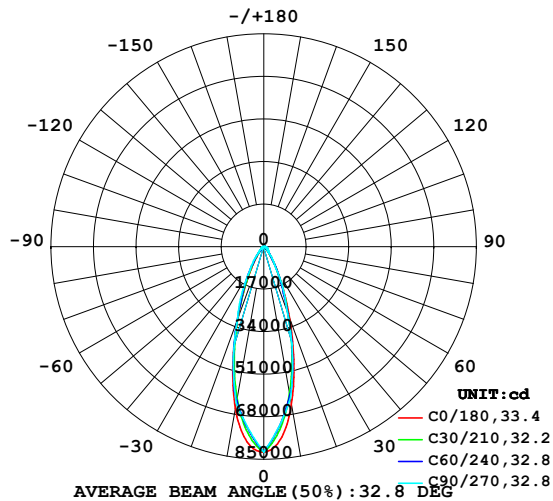


## LUMINAIRE PHOTOMETRIC TEST REPORT

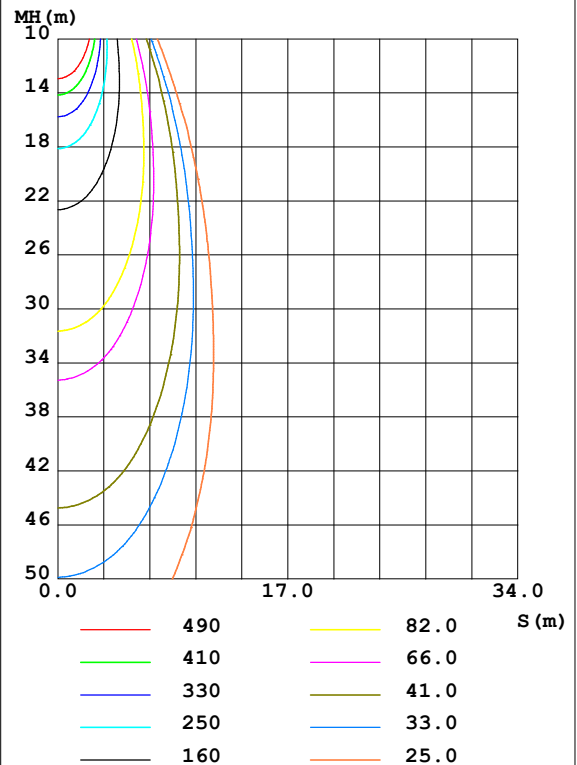
Test:U:219.7V I:1.311A P:285.9W PF:0.9928 Lamp Flux:35568.7x1 lm		
NAME:	TYPE:LED	WEIGHT:
SPEC.:C470SP-Q2-P-03A 230V50HZ	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 124.40 lm/W			
MODEL	LHB-300W-3030	I <sub>max</sub> (cd)	82130	S/MH(C0/180)	0.55
NOMINAL POWER(W)	300	LOR(%)	100.0	S/MH(C90/270)	0.55
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	35569	η UP,DN(C0-180)	0.0,48.7
NOMINAL FLUX(lm)	35568.7	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,51.3
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	0.55

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:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
5	7734	7248	7188	7298	7817	7362	7276	7321	0- 5	1838	1838	5.17,5.17
10	6395	5951	6162	6026	6566	6173	6340	6120	5- 10	4813	6652	18.7,18.7
15	4660	4465	4432	4497	4771	4727	4713	4720	10- 15	6314	12966	36.5,36.5
20	3002	2874	2702	2879	3026	3120	3086	3148	15- 20	6087	19053	53.6,53.6
25	1815	1681	1812	1675	1796	1886	2108	1919	20- 25	4871	23925	67.3,67.3
30	1044	971.6	922.3	959.3	992.8	1120	1130	1145	25- 30	3543	27467	77.2,77.2
35	562.2	547.7	612.6	532.7	534.3	629.4	743.4	655.5	30- 35	2318	29785	83.7,83.7
40	300.9	281.2	302.9	274.7	277.4	321.9	356.9	345.8	35- 40	1481	31266	87.9,87.9
45	175.6	189.3	236.8	188.1	158.1	196.0	245.2	211.3	40- 45	909.1	32175	90.5,90.5
50	130.7	137.8	170.6	139.3	117.6	126.3	133.6	131.8	45- 50	658.5	32834	92.3,92.3
55	111.2	123.5	153.4	123.6	99.59	107.1	119.5	110.8	50- 55	548.6	33382	93.9,93.9
60	104.5	113.2	136.2	112.1	93.65	94.98	105.3	97.40	55- 60	514.7	33897	95.3,95.3
65	98.21	100.1	108.4	97.95	84.52	85.66	90.71	87.12	60- 65	486.1	34383	96.7,96.7
70	89.84	82.47	80.69	79.27	75.19	72.82	76.07	73.33	65- 70	436.2	34819	97.9,97.9
75	68.81	60.30	56.41	56.24	54.15	56.08	54.57	56.98	70- 75	359.5	35179	98.9,98.9
80	38.50	37.92	32.13	35.42	28.97	34.75	33.07	35.85	75- 80	246.7	35426	99.6,99.6
85	23.55	10.59	0	9.930	15.81	9.382	0	9.852	80- 85	124.5	35550	99.9,99.9
90	9.120	0	0	0	5.983	0	0	0	85- 90	18.56	35569	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:×10cd									UNIT:lm		

Conical surface Flux(90deg): 32175 lm

%lum = 90.5%

%lamp = 90.5%

Conical surface Flux(120deg): 33897 lm

%lum = 95.3%

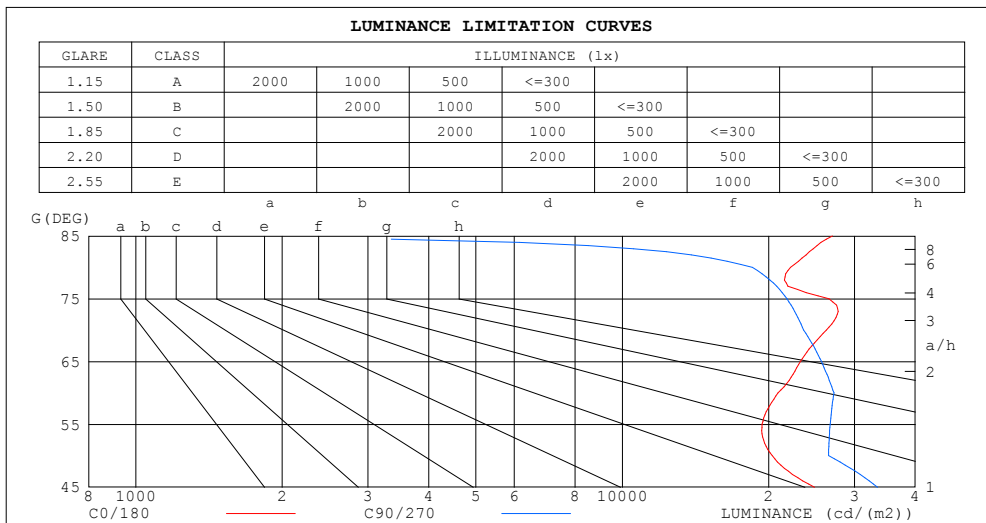
%lamp = 95.3%

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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:219.7V I:1.311A P:285.9W PF:0.9928 Lamp Flux:35568.7x1 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	27018	0
80	22170	18505
75	26587	21796
70	26267	23593
65	23239	25660
60	20894	27240
55	19386	26747
50	20331	26546
45	24827	33487

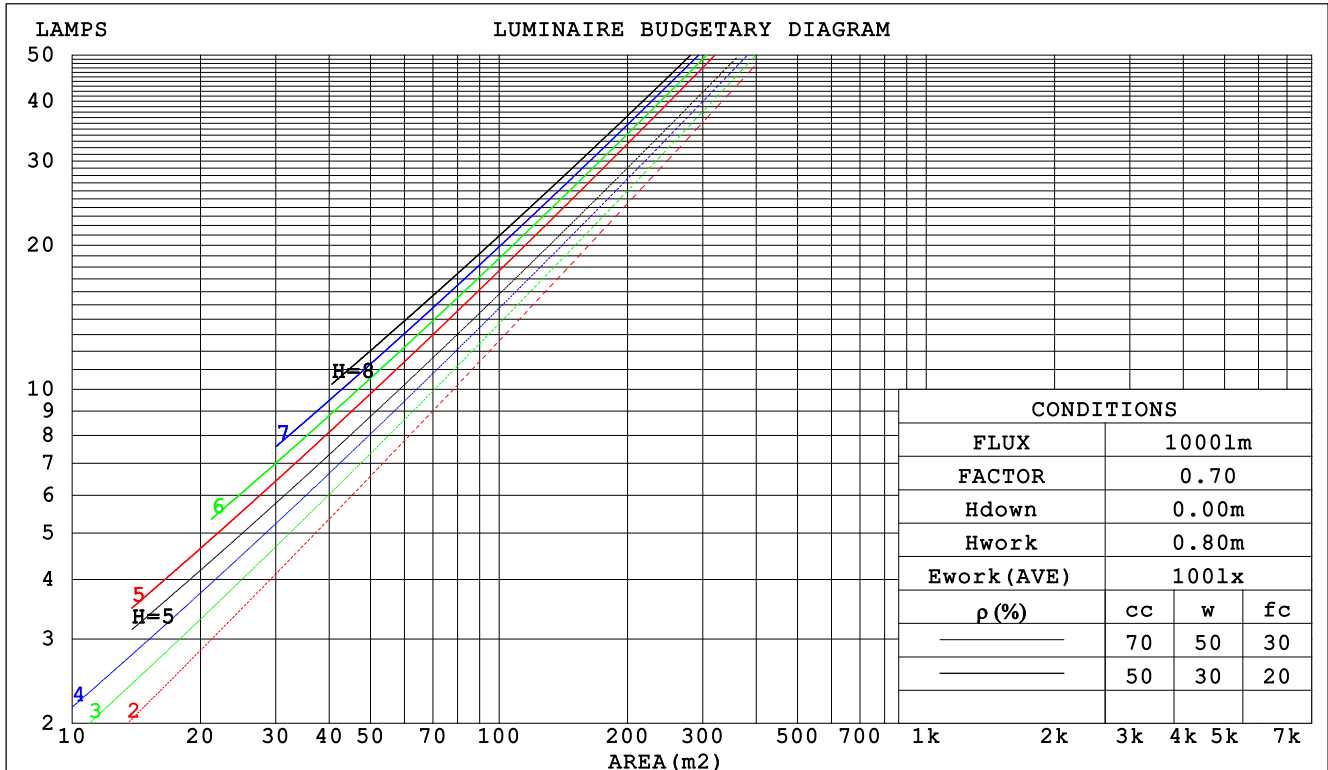
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2017-02-17

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:219.7V I:1.311A P:285.9W PF:0.9928 Lamp Flux:35568.7x1 lm		
NAME:	TYPE:LED	WEIGHT:
SPEC.:C470SP-Q2-P-03A 230V50HZ	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	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	.00
1.0	1.10	1.08	1.06	1.08	1.06	1.04	1.04	1.02	1.01	1.00	.99	.98	.97	.96	.95	.93
2.0	1.03	.99	.95	1.01	.97	.94	.98	.95	.92	.95	.92	.90	.92	.90	.88	.87
3.0	.96	.91	.87	.95	.90	.87	.92	.88	.85	.90	.87	.84	.88	.85	.83	.81
4.0	.91	.85	.81	.89	.84	.81	.87	.83	.80	.85	.82	.79	.83	.80	.78	.76
5.0	.86	.80	.76	.85	.79	.76	.83	.78	.75	.81	.77	.74	.80	.76	.74	.72
6.0	.81	.75	.71	.80	.75	.71	.79	.74	.71	.77	.73	.70	.76	.73	.70	.68
7.0	.77	.71	.68	.76	.71	.67	.75	.70	.67	.74	.70	.67	.73	.69	.66	.65
8.0	.74	.68	.64	.73	.68	.64	.72	.67	.64	.71	.67	.63	.70	.66	.63	.62
9.0	.70	.65	.61	.70	.65	.61	.69	.64	.61	.68	.64	.61	.67	.63	.60	.59
10.0	.67	.62	.58	.67	.62	.58	.66	.61	.58	.65	.61	.58	.65	.61	.58	.57



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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:219.7V I:1.311A P:285.9W PF:0.9928 Lamp Flux:35568.7x1 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	.184	.105	.033	.177	.101	.032	.165	.095	.030	.153	.088	.028	.143	.083	.027	
2.0	.173	.095	.029	.167	.092	.028	.157	.087	.027	.147	.082	.026	.138	.078	.025	
3.0	.162	.086	.026	.157	.084	.025	.148	.080	.024	.139	.076	.023	.132	.073	.023	
4.0	.151	.079	.023	.147	.077	.023	.140	.074	.022	.132	.071	.021	.126	.068	.021	
5.0	.142	.073	.021	.139	.071	.021	.132	.069	.020	.126	.066	.020	.120	.064	.019	
6.0	.134	.067	.019	.131	.066	.019	.125	.064	.019	.120	.062	.018	.115	.060	.018	
7.0	.127	.063	.018	.124	.062	.018	.119	.060	.017	.114	.059	.017	.110	.057	.017	
8.0	.121	.059	.017	.118	.058	.016	.114	.057	.016	.109	.055	.016	.105	.054	.016	
9.0	.115	.056	.016	.113	.055	.015	.109	.054	.015	.105	.053	.015	.101	.051	.015	
10.0	.110	.053	.015	.108	.052	.015	.104	.051	.014	.101	.050	.014	.097	.049	.014	

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	.100	.093	.086	.058	.054	.050	.019	.017	.016	
2.0	.156	.132	.112	.134	.114	.097	.092	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.144	.114	.090	.123	.098	.078	.085	.068	.055	.049	.040	.032	.016	.013	.011	
4.0	.133	.099	.073	.114	.085	.063	.078	.059	.045	.045	.035	.026	.015	.011	.009	
5.0	.123	.087	.060	.106	.075	.052	.073	.053	.037	.042	.031	.022	.014	.010	.007	
6.0	.115	.078	.051	.099	.067	.044	.068	.047	.031	.040	.028	.019	.013	.009	.006	
7.0	.108	.070	.043	.093	.061	.037	.064	.042	.027	.037	.025	.016	.012	.008	.005	
8.0	.102	.064	.037	.088	.055	.032	.061	.039	.023	.035	.023	.014	.011	.007	.005	
9.0	.097	.058	.032	.083	.050	.028	.058	.035	.020	.034	.021	.012	.011	.007	.004	
10.0	.092	.054	.028	.079	.047	.025	.055	.033	.018	.032	.019	.010	.010	.006	.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:219.7V I:1.311A P:285.9W PF:0.9928 Lamp Flux:35568.7x1 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	19.2	20.1	19.4	20.2	20.4	19.9	20.8	20.1	20.9	21.1
3H	20.8	21.7	21.1	21.9	22.1	21.3	22.1	21.5	22.3	22.5
4H	21.7	22.5	22.0	22.8	23.0	21.9	22.7	22.1	22.9	23.1
6H	22.3	23.0	22.6	23.3	23.5	22.2	23.0	22.5	23.2	23.5
8H	22.5	23.2	22.8	23.4	23.7	22.3	23.0	22.6	23.3	23.6
12H	22.6	23.3	22.9	23.6	23.9	22.3	23.0	22.6	23.2	23.5
4H 2H	19.8	20.6	20.1	20.8	21.0	20.4	21.2	20.6	21.4	21.6
3H	21.7	22.4	22.0	22.7	22.9	22.1	22.8	22.4	23.0	23.3
4H	22.7	23.3	23.0	23.6	23.9	22.8	23.4	23.2	23.7	24.1
6H	23.3	23.9	23.7	24.2	24.6	23.3	23.9	23.7	24.2	24.6
8H	23.6	24.1	24.0	24.5	24.8	23.4	23.9	23.8	24.3	24.7
12H	23.8	24.3	24.2	24.6	25.0	23.4	23.9	23.8	24.2	24.6
8H 4H	23.0	23.5	23.4	23.9	24.2	23.1	23.6	23.5	24.0	24.3
6H	23.8	24.2	24.2	24.6	25.0	23.8	24.2	24.2	24.6	25.0
8H	24.1	24.5	24.6	24.9	25.4	23.9	24.3	24.4	24.7	25.2
12H	24.4	24.8	24.9	25.2	25.7	23.9	24.2	24.4	24.7	25.1
12H 4H	23.0	23.5	23.4	23.8	24.2	23.1	23.6	23.5	24.0	24.4
6H	23.9	24.2	24.3	24.7	25.1	23.8	24.2	24.3	24.6	25.1
8H	24.2	24.6	24.7	25.0	25.5	24.0	24.3	24.5	24.8	25.2
Variations with the observer position at spacings:										
S = 1.0H	+ 0.3 / - 0.3					+ 0.4 / - 0.3				
1.5H	+ 0.6 / - 0.3					+ 0.8 / - 0.3				
2.0H	+ 0.2 / - 0.2					+ 0.3 / - 0.3				

CIE Pub.117 Corrected 35569 lm Total Lamp Luminous Flux.(8log(F/F0) = 12.4)

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:219.7V I:1.311A P:285.9W PF:0.9928 Lamp Flux:35568.7x1 lm		
NAME:	TYPE:LED	WEIGHT:
SPEC.:C470SP-Q2-P-03A 230V50HZ	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:

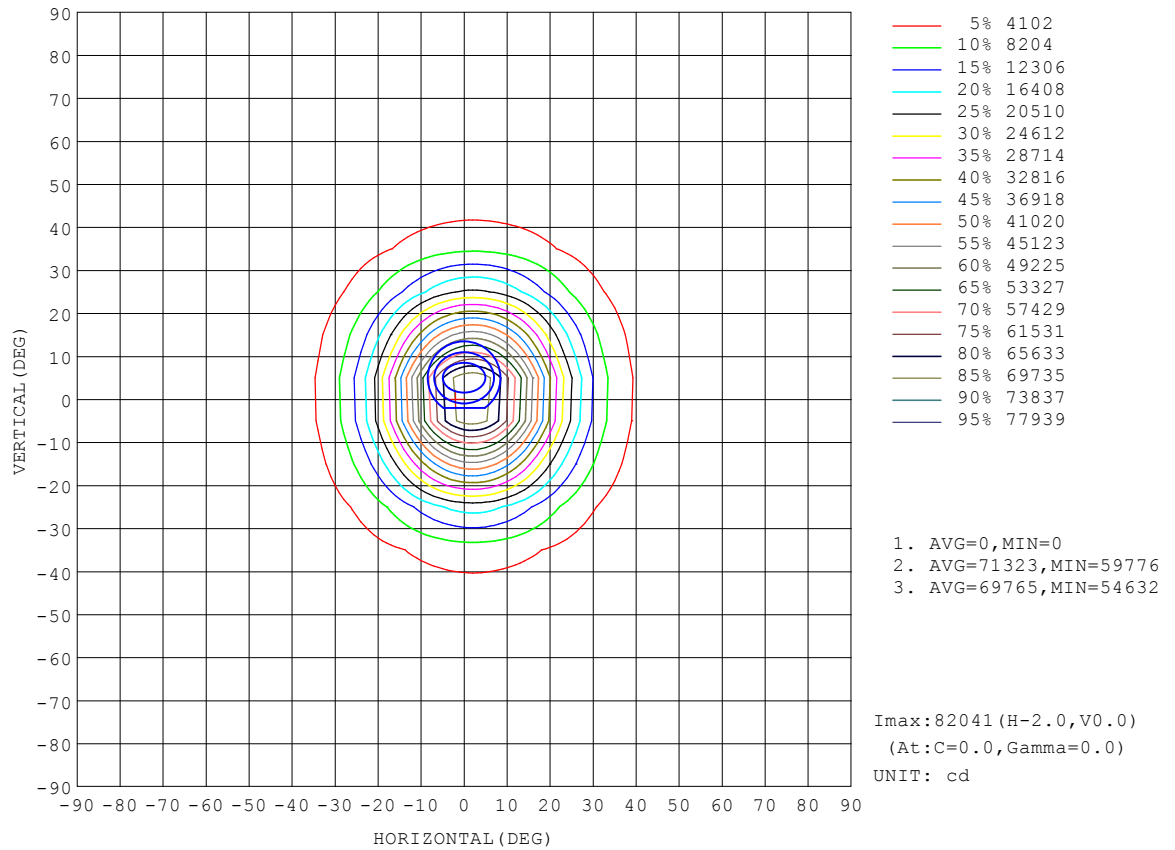
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	84	77	73	84	77	73	83	77	73	69
0.80	92	85	81	91	85	81	90	84	81	77
1.00	96	90	86	96	90	86	94	90	85	81
1.25	101	95	91	100	94	90	98	93	90	85
1.50	104	98	94	102	97	94	100	96	93	88
2.00	107	102	98	105	101	98	102	99	96	90
2.50	109	104	101	107	103	100	104	101	98	92
3.00	110	107	103	109	105	102	105	102	100	94
4.00	113	110	107	111	108	106	107	105	103	96
5.00	114	112	110	112	110	108	108	106	105	97
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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:219.7V I:1.311A P:285.9W PF:0.9928 Lamp Flux:35568.7x1 lm		
NAME:	TYPE:LED	WEIGHT:
SPEC.:C470SP-Q2-P-03A 230V50HZ	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:



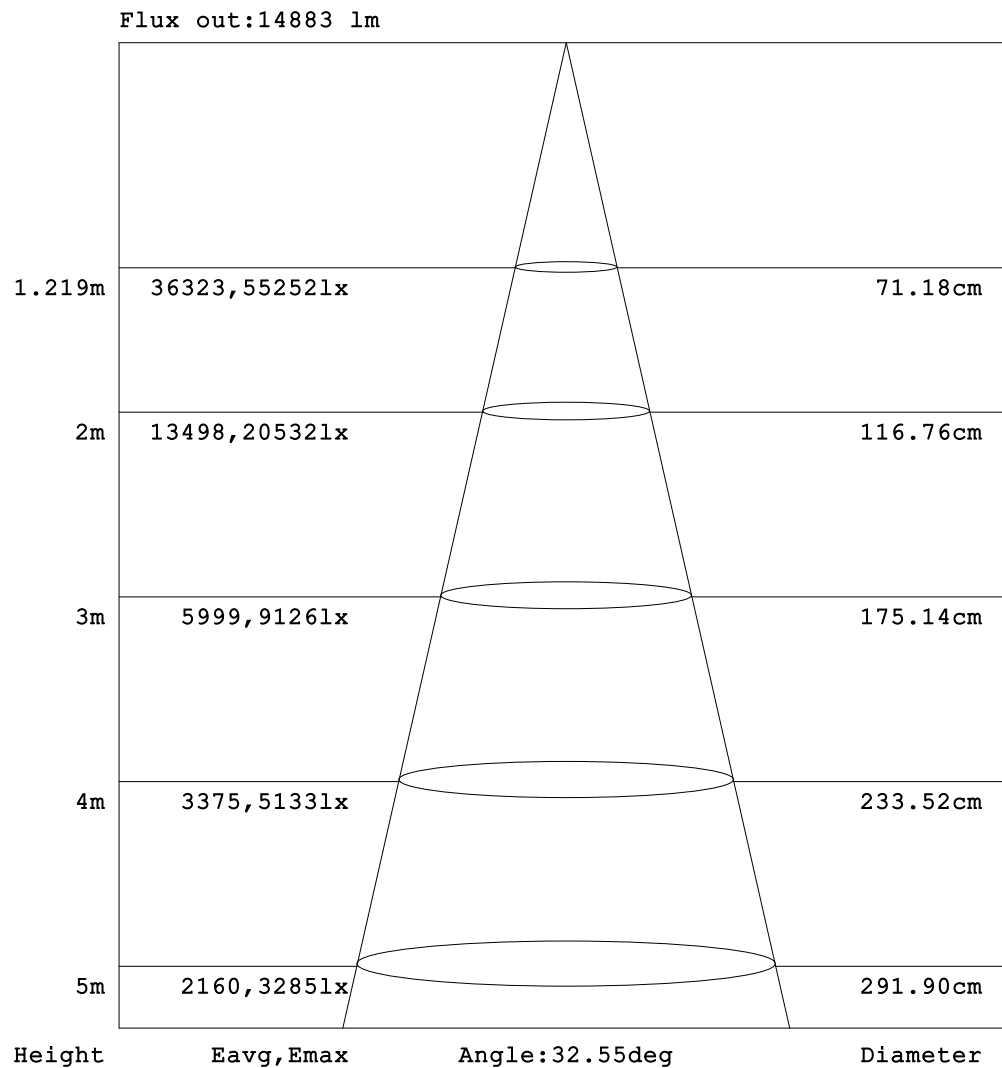
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2017-02-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:219.7V I:1.311A P:285.9W PF:0.9928 Lamp Flux:35568.7x1 lm		
NAME:	TYPE:LED	WEIGHT:
SPEC.:C470SP-Q2-P-03A 230V50HZ	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:



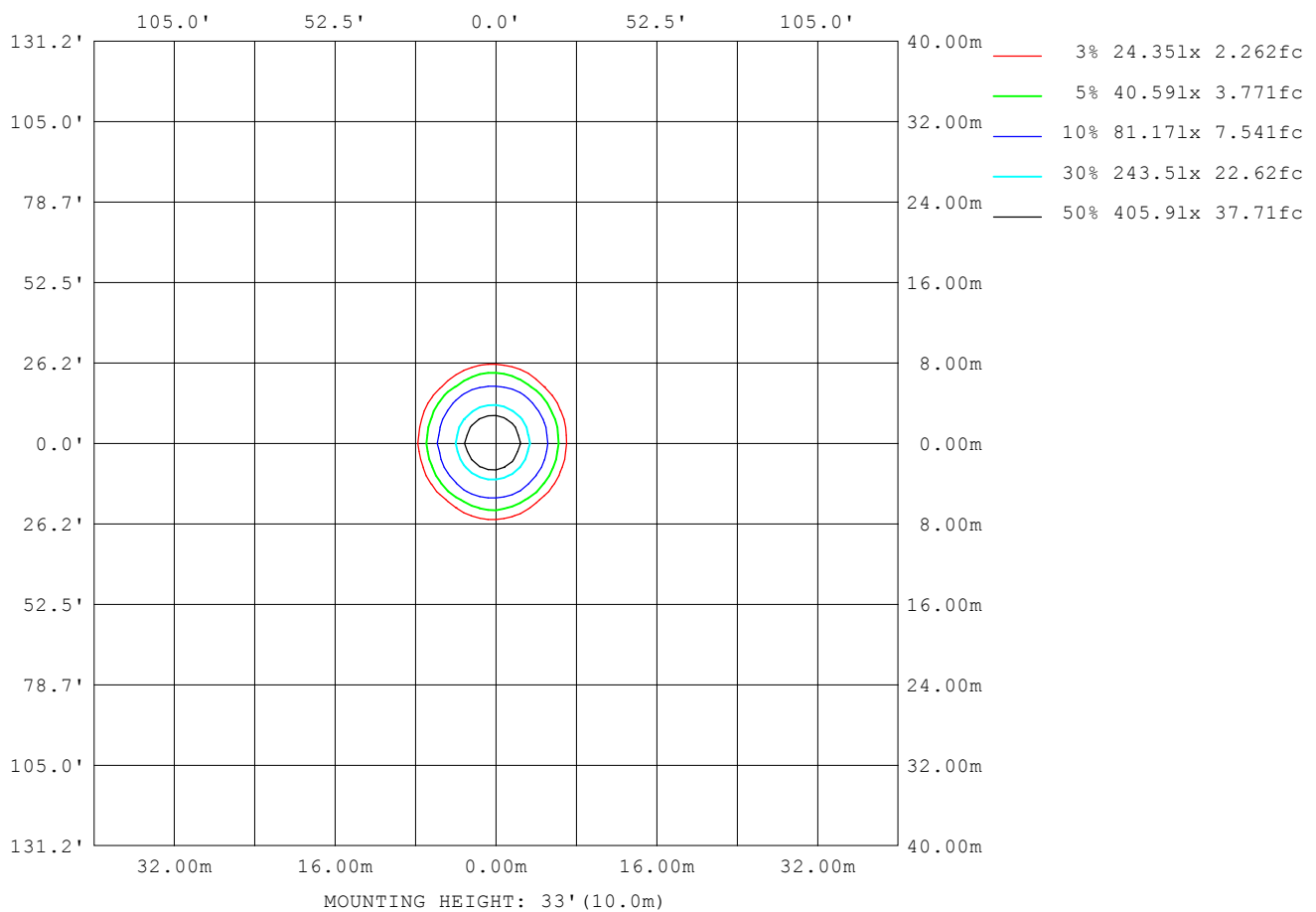
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:219.7V I:1.311A P:285.9W PF:0.9928 Lamp Flux:35568.7x1 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:219.7V I:1.311A P:285.9W PF:0.9928 Lamp Flux:35568.7x1 lm		
NAME:	TYPE:LED	WEIGHT:
SPEC.:C470SP-Q2-P-03A 230V50HZ	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:

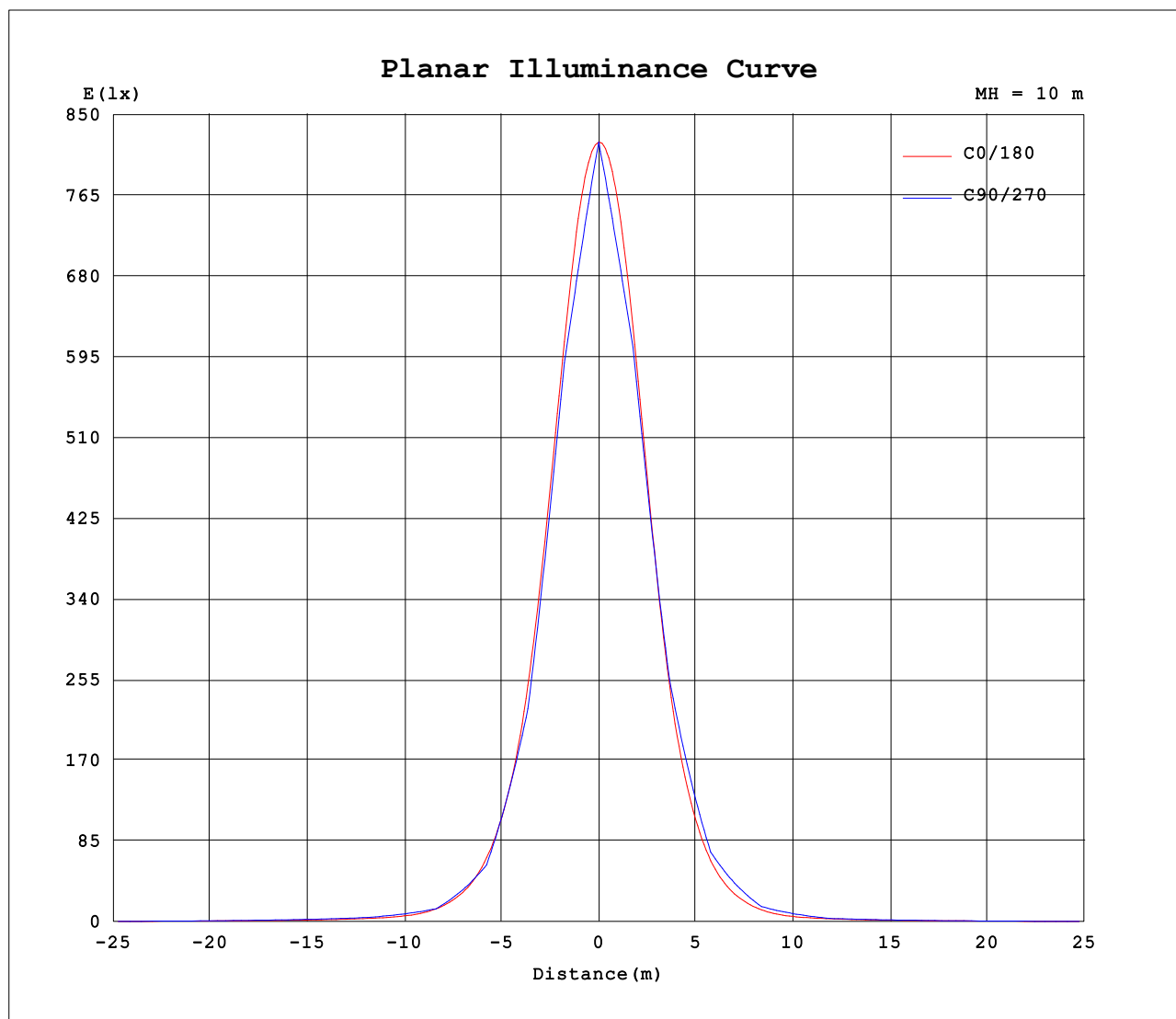
AvgL	cd/m2
L_0~180 (65) av	21619
L_0~180 (75) av	23755
L_0~180 (85) av	22579
L_90~270 (65) av	23562
L_90~270 (75) av	21439
L_90~270 (85) av	0
L_45 (65) av	21938
L_45 (75) av	22178
L_45 (85) av	11403

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  
Humidity:65.0%  
Test Distance:7.290m [K=1.0000]  
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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.351  
Humidity: 65.0%  
Test Distance: 7.290m [K=1.0000]  
Remarks:

```

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:

```

```

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:

```

```

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:

```

```

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:

```