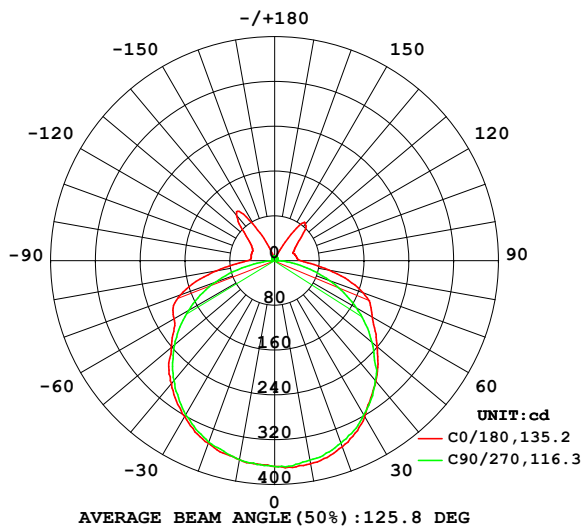


## LUMINAIRE PHOTOMETRIC TEST REPORT

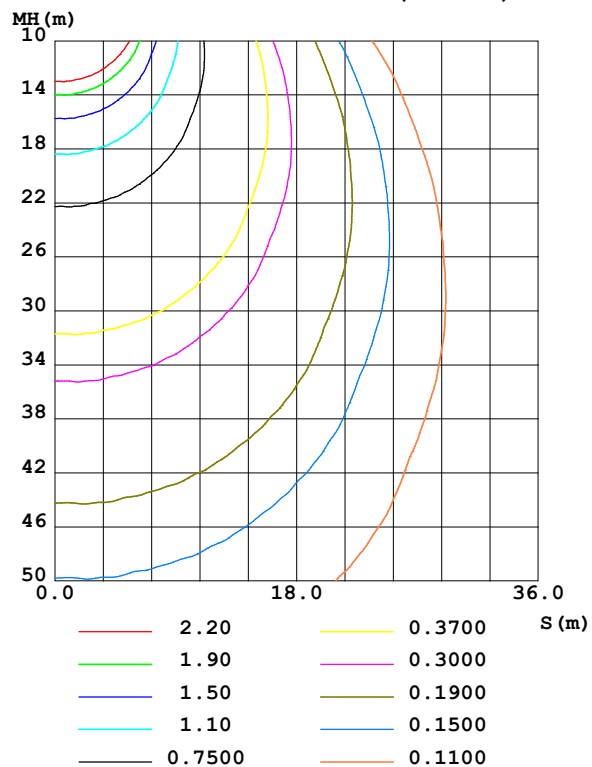
Test:U:99.100V I:0.1370A P:12.200W PF:0.9040 Freq:50.00Hz Lamp Flux:1370.3x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: COULEUR	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 112.32 lm/W
MODEL	12W灯带	I <sub>max</sub> (cd)	371.1	S/MH(C0/180)	1.30	
NOMINAL POWER(W)	12	LOR(%)	100.0	S/MH(C90/270)	1.28	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	1370.3	η UP,DN(C0-180)	5.8,43.3	
NOMINAL FLUX(lm)	1370.3	CIE CLASS	SEMI-D.	η UP,DN(C180-360)	6.9,44.1	
LAMPS INSIDE	1	η up (%)	12.7	CIBSE SHR NOM	1.50	
TEST VOLTAGE(V)	230	η down (%)	87.3	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:07 May 2024

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	368.5	361.9	361.0	361.1					0- 10	34.90	34.90	2.55,2.55
20	354.1	346.7	347.0	344.8					10- 20	100.9	135.8	9.91,9.91
30	321.6	317.8	321.6	318.4					20- 30	154.9	290.6	21.2,21.2
40	281.1	279.8	286.9	279.9					30- 40	188.9	479.6	35,35
50	238.9	227.0	241.2	233.3					40- 50	200.5	680.1	49.6,49.6
60	201.3	168.5	207.2	177.4					50- 60	189.4	869.5	63.5,63.5
70	169.0	104.0	179.1	111.7					60- 70	165.9	1035	75.6,75.6
80	98.09	42.14	105.6	38.84					70- 80	113.3	1149	83.8,83.8
90	46.46	4.863	48.09	5.184					80- 90	48.06	1197	87.3,87.3
100	39.88	3.483	42.49	4.764					90-100	25.80	1223	89.2,89.2
110	37.39	4.039	43.40	5.360					100-110	24.13	1247	91,91
120	41.44	4.604	46.61	5.987					110-120	22.97	1270	92.7,92.7
130	58.54	5.262	64.28	6.574					120-130	25.44	1295	94.5,94.5
140	86.02	5.952	105.8	7.161					130-140	33.49	1329	97,97
150	38.33	6.939	69.53	7.967					140-150	29.53	1358	99.1,99.1
160	10.12	7.647	15.78	8.323					150-160	8.942	1367	99.8,99.8
170	7.774	8.207	8.828	8.549					160-170	2.471	1369	99.9,99.9
180	8.327	8.647	8.349	8.621					170-180	0.8013	1370	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 580.14 lm

%lum = 42.3%

%lamp = 42.3%

Conical surface Flux(130deg): 956.44 lm

%lum = 69.8%

%lamp = 69.8%

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:DAMIN  
 Test Date:07 May 2024

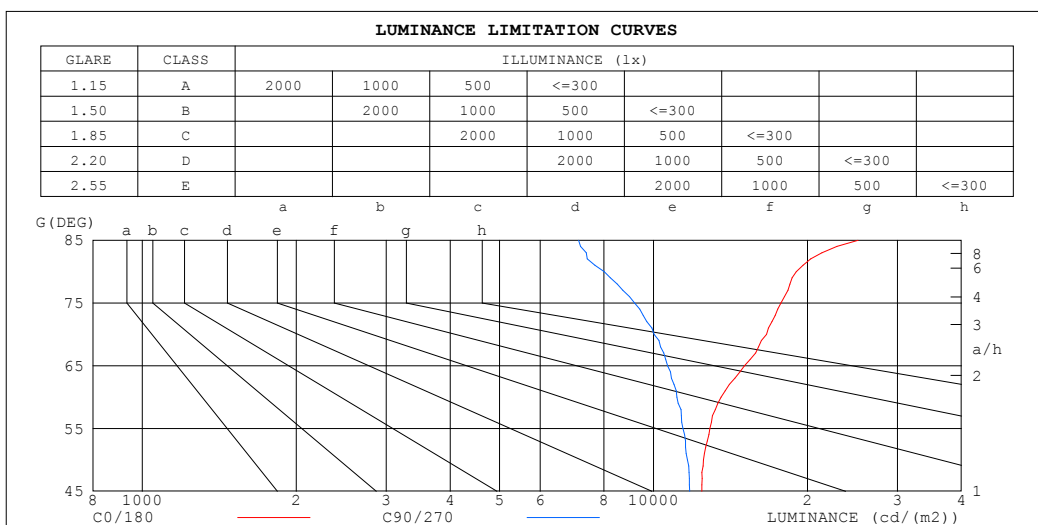
$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.459  
 Humidity:65.0%  
 Test Distance:8.186m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

Test:U:99.100V I:0.1370A P:12.200W PF:0.9040 Freq:50.00Hz

Lamp Flux:1370.3x1 lm

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



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	25137	7140
80	19028	8004
75	17747	9185
70	16644	10029
65	15068	10646
60	13559	11113
55	12891	11412
50	12520	11649
45	12436	11765

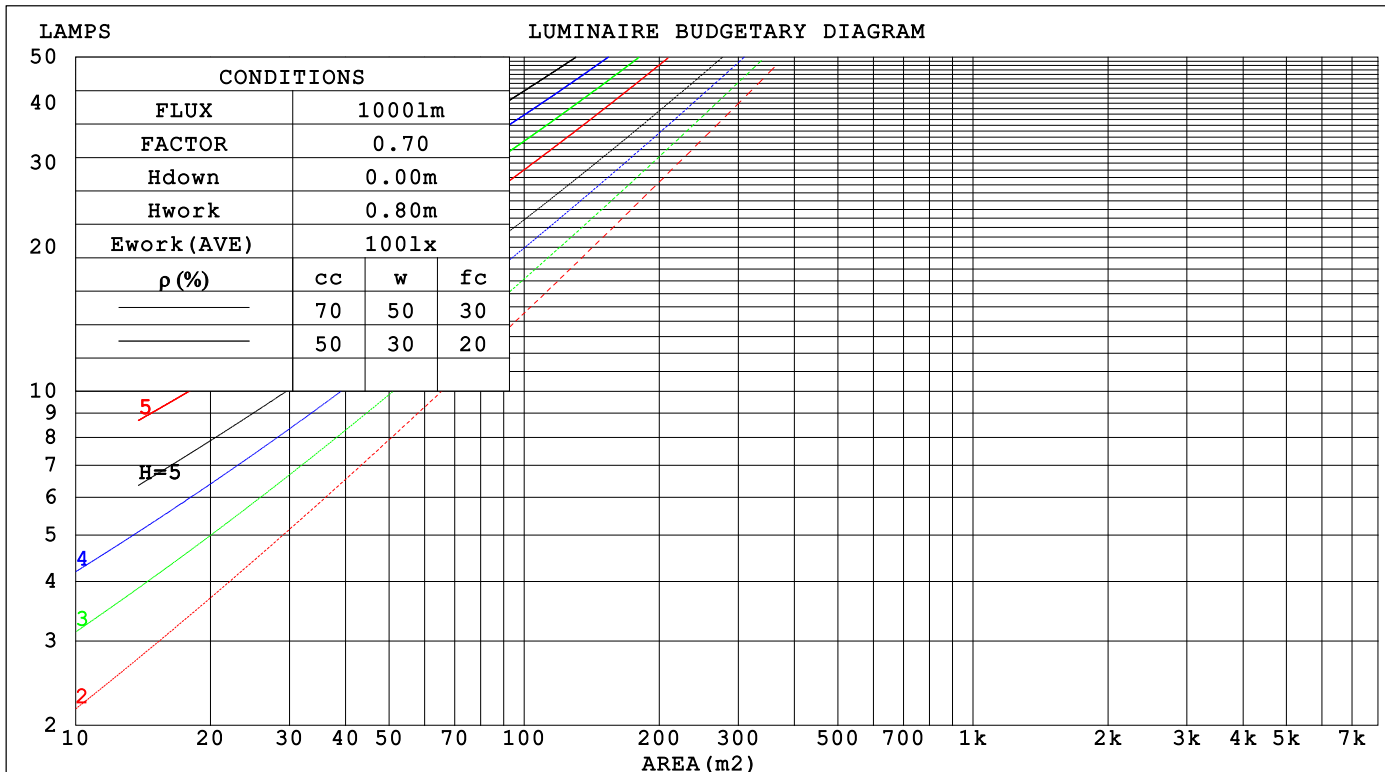
C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:DAMIN  
Test Date:07 May 2024

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 $\gamma$  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:99.100V I:0.1370A P:12.200W PF:0.9040 Freq:50.00Hz Lamp Flux:1370.3x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: COULEUR	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	1.16	1.16	1.16	1.12	1.12	1.12	1.04	1.04	1.04	.97	.97	.97	.90	.90	.90	.87
1.0	.99	.95	.90	.96	.92	.88	.89	.86	.83	.83	.80	.78	.78	.75	.73	.70
2.0	.86	.78	.72	.83	.76	.71	.77	.72	.67	.72	.67	.64	.67	.64	.60	.57
3.0	.75	.66	.59	.72	.64	.58	.67	.61	.55	.63	.57	.53	.59	.54	.50	.48
4.0	.66	.57	.50	.64	.55	.49	.60	.52	.47	.56	.50	.45	.52	.47	.43	.40
5.0	.59	.49	.43	.57	.48	.42	.53	.46	.40	.50	.43	.39	.47	.41	.37	.34
6.0	.53	.43	.37	.51	.42	.36	.48	.40	.35	.45	.38	.34	.42	.37	.32	.30
7.0	.47	.39	.32	.46	.38	.32	.43	.36	.31	.41	.34	.30	.38	.33	.29	.26
8.0	.43	.35	.29	.42	.34	.28	.40	.32	.27	.37	.31	.26	.35	.30	.25	.23
9.0	.40	.31	.26	.38	.31	.25	.36	.29	.24	.34	.28	.24	.33	.27	.23	.21
10.0	.36	.28	.23	.35	.28	.23	.34	.27	.22	.32	.26	.21	.30	.25	.21	.19



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:DAMIN  
Test Date:07 May 2024

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:99.100V I:0.1370A P:12.200W PF:0.9040 Freq:50.00Hz Lamp Flux:1370.3x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: COULEUR	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	.337	.192	.061	.326	.186	.059	.306	.175	.056	.287	.165	.053	.269	.156	.050		
2.0	.307	.169	.052	.298	.164	.051	.279	.155	.048	.262	.147	.046	.246	.139	.044		
3.0	.280	.149	.045	.271	.145	.044	.254	.138	.042	.239	.131	.040	.225	.124	.038		
4.0	.256	.133	.039	.248	.130	.038	.233	.123	.037	.219	.117	.035	.206	.112	.034		
5.0	.235	.120	.035	.227	.117	.034	.214	.111	.033	.201	.106	.032	.189	.101	.030		
6.0	.216	.108	.031	.210	.106	.030	.197	.101	.029	.186	.097	.028	.175	.092	.027		
7.0	.200	.099	.028	.195	.097	.028	.183	.093	.027	.173	.089	.026	.163	.085	.025		
8.0	.187	.091	.026	.181	.089	.025	.171	.085	.024	.161	.082	.024	.152	.078	.023		
9.0	.174	.084	.024	.169	.083	.023	.160	.079	.022	.151	.076	.022	.143	.072	.021		
10.0	.164	.078	.022	.159	.077	.021	.150	.074	.021	.142	.071	.020	.134	.068	.019		

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	.287	.287	.287	.245	.245	.245	.167	.167	.167	.096	.096	.096	.031	.031	.031		
1.0	.280	.253	.230	.239	.217	.198	.164	.150	.137	.094	.087	.079	.030	.028	.026		
2.0	.272	.230	.194	.233	.198	.168	.160	.137	.117	.092	.080	.069	.030	.026	.022		
3.0	.265	.213	.171	.227	.184	.149	.156	.128	.104	.090	.074	.061	.029	.024	.020		
4.0	.257	.200	.156	.221	.173	.136	.152	.120	.096	.088	.071	.057	.028	.023	.019		
5.0	.250	.190	.146	.215	.164	.127	.148	.115	.090	.086	.067	.053	.028	.022	.018		
6.0	.243	.182	.138	.209	.158	.120	.144	.110	.085	.084	.065	.051	.027	.021	.017		
7.0	.236	.175	.133	.203	.152	.116	.140	.107	.082	.081	.063	.049	.026	.021	.016		
8.0	.229	.170	.129	.197	.147	.112	.137	.103	.080	.079	.061	.047	.026	.020	.016		
9.0	.223	.165	.125	.192	.143	.109	.133	.101	.078	.078	.059	.046	.025	.019	.015		
10.0	.218	.161	.123	.188	.139	.107	.130	.098	.076	.076	.058	.045	.025	.019	.015		

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:07 May 2024

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:99.100V I:0.1370A P:12.200W PF:0.9040 Freq:50.00Hz Lamp Flux:1370.3x1 lm										
NAME:			TYPE:			WEIGHT:				
SPEC.:			DIM.:			SERIAL No.:				
MFR.: COULEUR			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	21.2	22.6	21.6	23.0	23.4	20.5	21.9	20.9	22.3	22.8
3H	23.5	24.8	24.0	25.3	25.8	22.1	23.4	22.5	23.8	24.3
4H	24.6	25.8	25.1	26.3	26.8	22.7	23.9	23.2	24.4	24.9
6H	25.6	26.7	26.1	27.2	27.8	23.1	24.2	23.6	24.7	25.2
8H	26.0	27.1	26.5	27.6	28.1	23.2	24.3	23.7	24.8	25.3
12H	26.4	27.5	26.9	28.0	28.5	23.2	24.3	23.8	24.8	25.4
4H 2H	21.8	23.0	22.3	23.5	24.0	21.3	22.5	21.8	23.0	23.5
3H	24.3	25.4	24.8	25.9	26.4	23.1	24.1	23.6	24.6	25.2
4H	25.5	26.5	26.1	27.0	27.6	23.8	24.8	24.4	25.3	25.9
6H	26.6	27.5	27.2	28.1	28.7	24.4	25.2	24.9	25.8	26.4
8H	27.1	27.9	27.7	28.5	29.2	24.5	25.3	25.1	25.9	26.5
12H	27.6	28.4	28.2	28.9	29.6	24.6	25.4	25.2	26.0	26.6
8H 4H	25.8	26.6	26.4	27.2	27.8	24.3	25.1	24.9	25.7	26.3
6H	27.1	27.7	27.7	28.3	29.0	25.0	25.7	25.7	26.3	27.0
8H	27.7	28.3	28.3	28.9	29.6	25.3	25.9	26.0	26.5	27.3
12H	28.3	28.9	29.0	29.5	30.2	25.5	26.1	26.2	26.7	27.4
12H 4H	25.8	26.5	26.4	27.1	27.8	24.4	25.1	25.0	25.7	26.4
6H	27.1	27.7	27.7	28.3	29.0	25.2	25.8	25.9	26.4	27.1
8H	27.8	28.3	28.4	28.9	29.7	25.6	26.1	26.2	26.7	27.5
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2				
1.5H	+ 0.1 / - 0.2					+ 0.2 / - 0.3				
2.0H	+ 0.1 / - 0.2					+ 0.2 / - 0.4				

CIE Pub.117, 1370 lm Total Lamp Luminous Flux Corrected ( $8\log(F/F_0) = 1.1$ )  
Area: 0.03 m2

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:DAMIN  
Test Date:07 May 2024

$\gamma$  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:99.100V I:0.1370A P:12.200W PF:0.9040 Freq:50.00Hz Lamp Flux:1370.3x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: COULEUR	SUR.:	Shielding Angle:

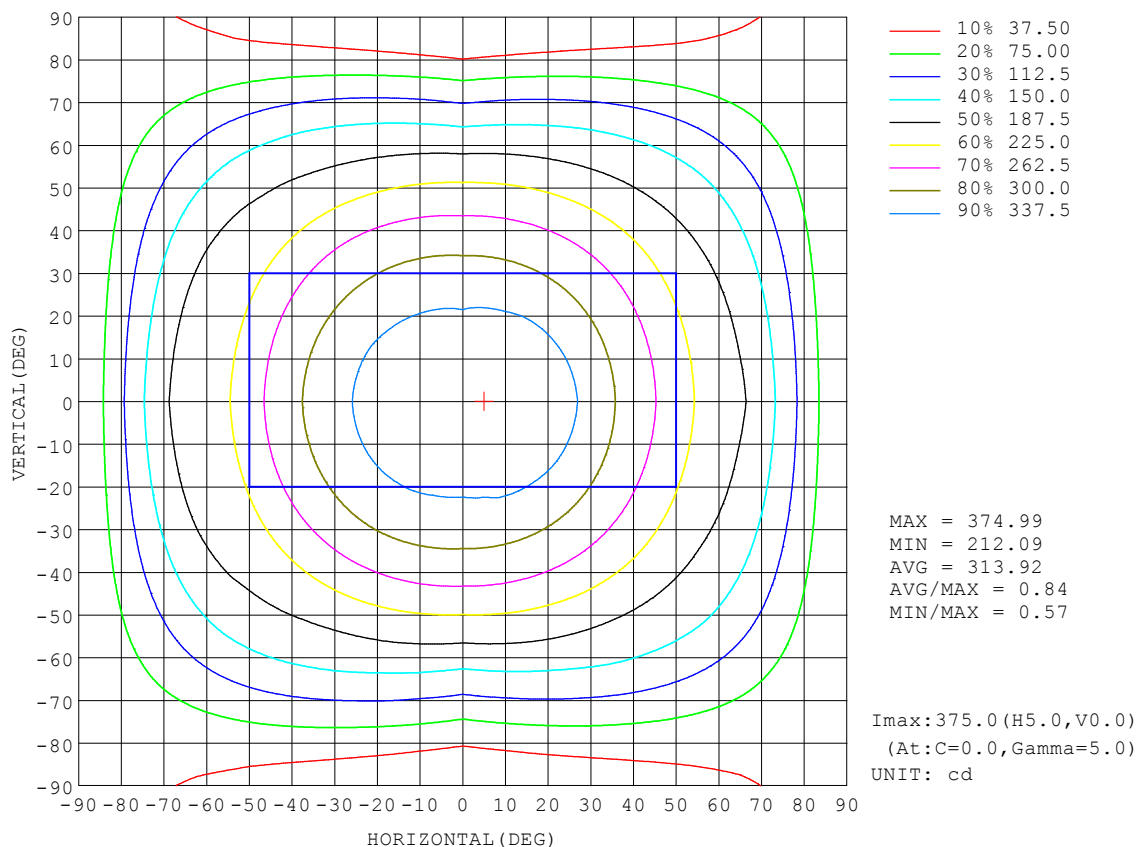
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	52	40	33	51	39	33	49	39	32	25
0.80	61	49	42	60	48	41	57	47	40	32
1.00	69	58	50	68	56	49	64	57	48	39
1.25	76	65	57	74	64	56	70	61	55	46
1.50	82	71	63	79	69	62	75	66	60	50
2.00	89	79	72	86	77	70	81	73	68	57
2.50	93	84	77	90	82	76	84	78	72	61
3.00	97	89	82	93	86	80	87	82	77	65
4.00	101	94	89	98	92	87	91	86	82	69
5.00	104	98	93	100	95	91	93	89	86	72
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: 07 May 2024

$\gamma$  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:99.100V I:0.1370A P:12.200W PF:0.9040 Freq:50.00Hz Lamp Flux:1370.3x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: COULEUR	SUR.:	Shielding Angle:



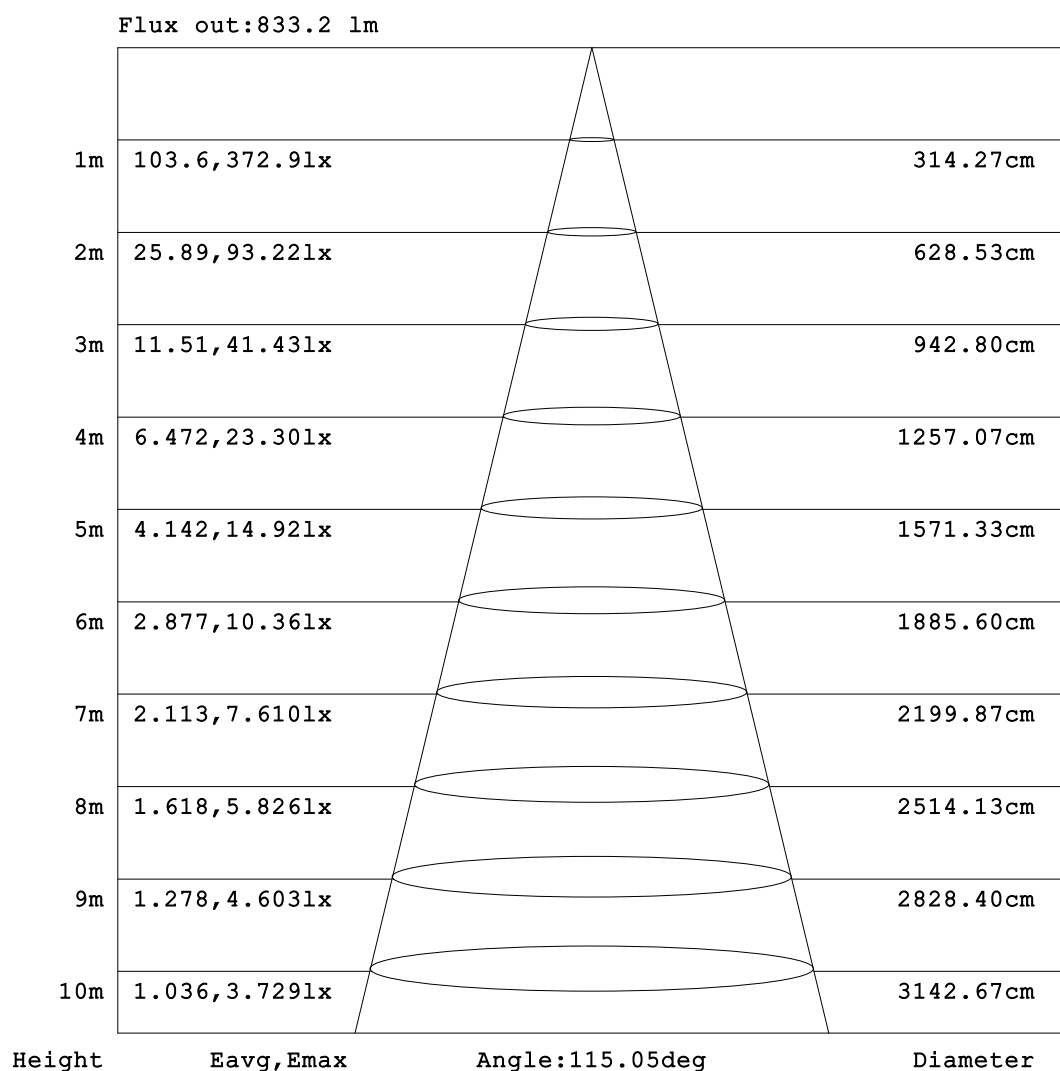
C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:DAMIN  
Test Date:07 May 2024

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:99.100V I:0.1370A P:12.200W PF:0.9040 Freq:50.00Hz Lamp Flux:1370.3x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: COULEUR	SUR.:	Shielding Angle:



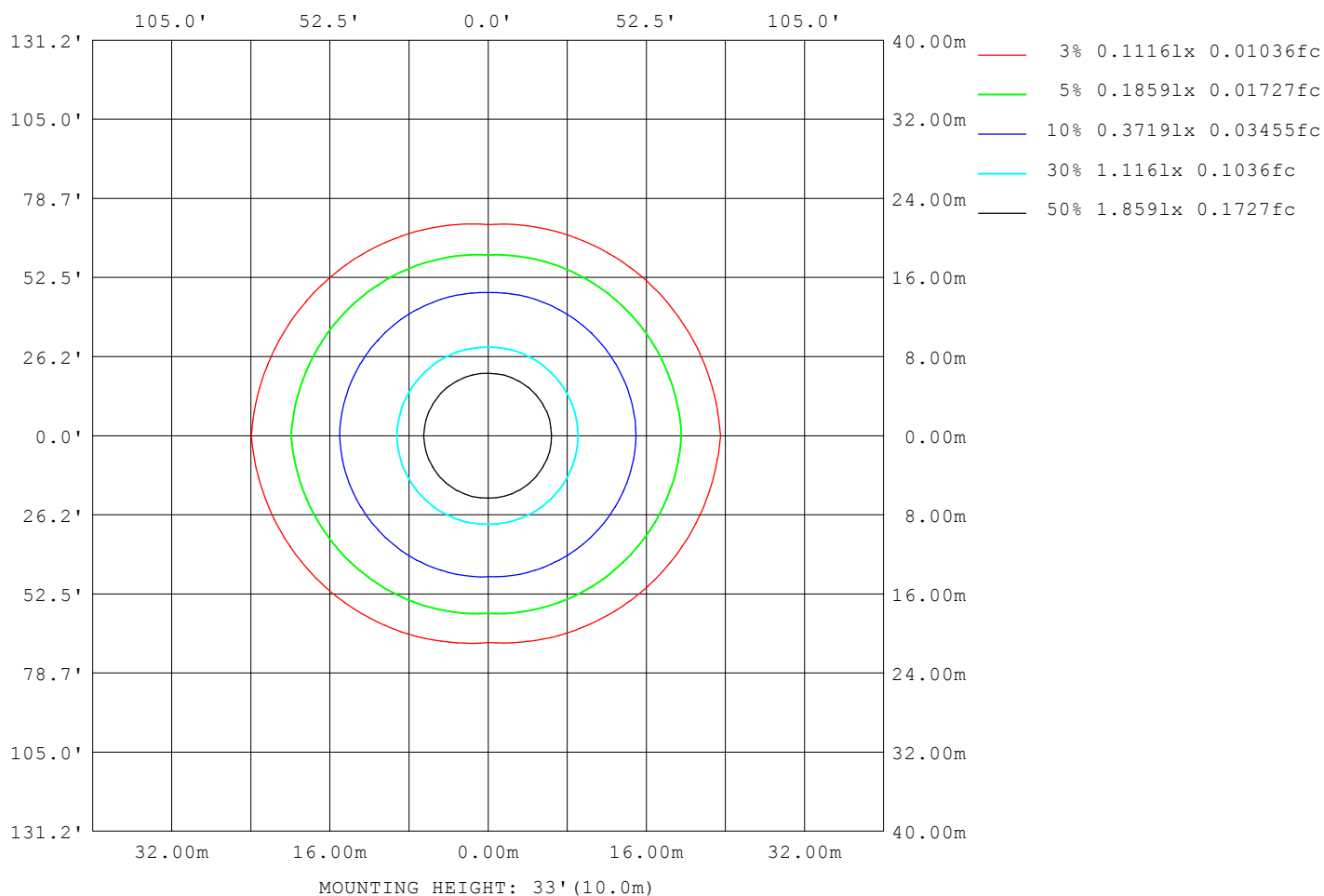
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:DAMIN  
Test Date:07 May 2024

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:99.100V I:0.1370A P:12.200W PF:0.9040 Freq:50.00Hz Lamp Flux:1370.3x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: COULEUR	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:DAMIN  
Test Date:07 May 2024

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:99.100V I:0.1370A P:12.200W PF:0.9040 Freq:50.00Hz Lamp Flux:1370.3x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: COULEUR	SUR.:	Shielding Angle:

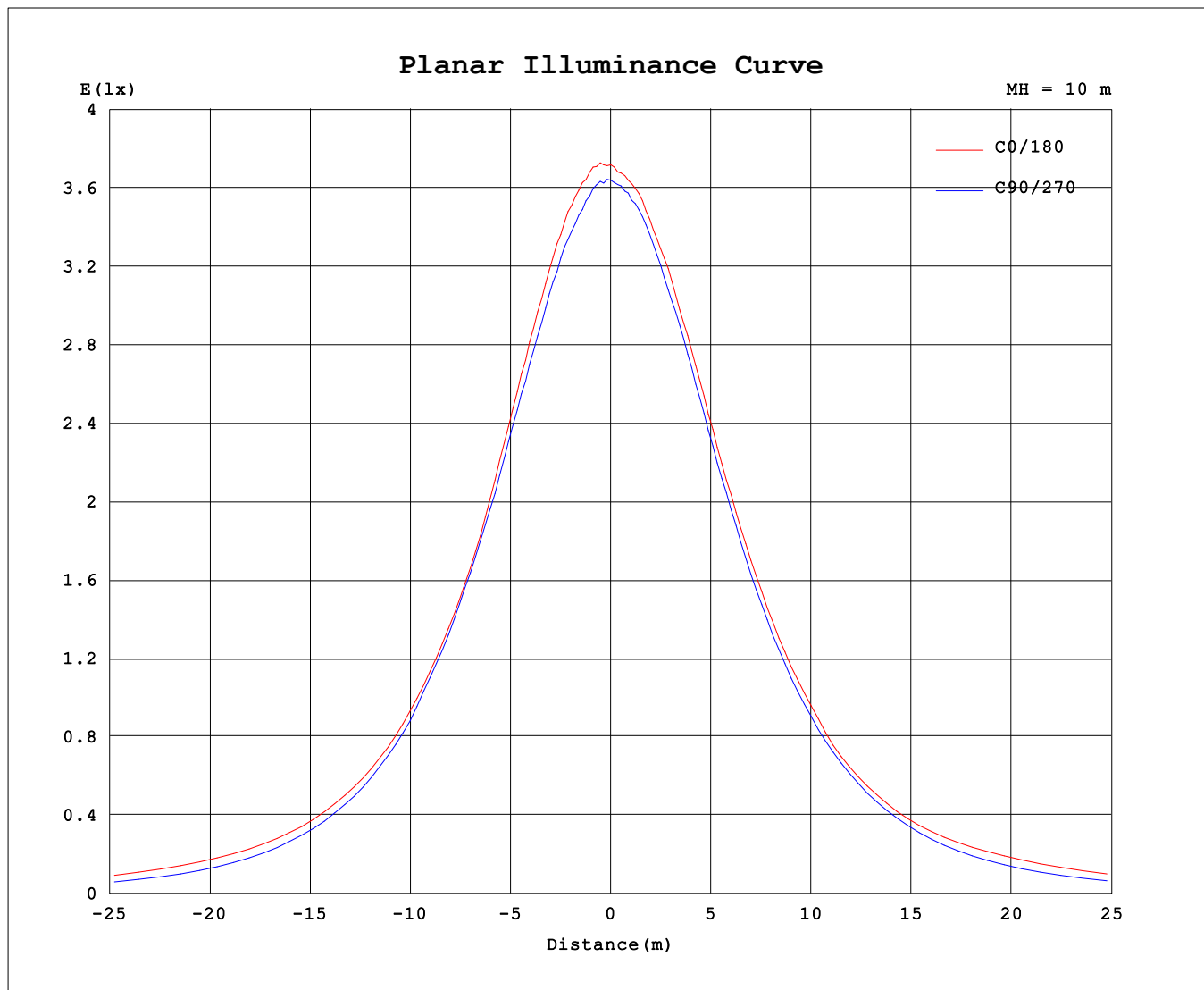
AvgL	cd/m2
L_0~180 (65) av	15357
L_0~180 (75) av	18164
L_0~180 (85) av	25664
L_90~270 (65) av	11174
L_90~270 (75) av	9563
L_90~270 (85) av	5870
L_45 (65) av	12790
L_45 (75) av	12866
L_45 (85) av	13434

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:07 May 2024

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: 07 May 2024

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:

## LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:99.100V I:0.1370A P:12.200W PF:0.9040 Freq:50.00Hz Lamp Flux:1370.3x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: COULEUR	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270														
0	368	368	368	368														
5	371	368	364	365														
10	368	362	361	361														
15	364	356	356	352														
20	354	347	347	345														
25	340	335	338	333														
30	322	318	322	318														
35	299	301	306	300														
40	281	280	287	280														
45	261	252	268	258														
50	239	227	241	233														
55	219	198	220	207														
60	201	168	207	177														
65	189	136	200	147														
70	169	104	179	112														
75	136	72.1	146	76.4														
80	98.1	42.1	106	38.8														
85	65.0	18.9	69.2	11.8														
90	46.5	4.86	48.1	5.18														
95	41.2	3.58	42.9	4.46														
100	39.9	3.48	42.5	4.76														
105	38.0	3.82	43.2	5.15														
110	37.4	4.04	43.4	5.36														
115	36.9	4.37	43.4	5.65														
120	41.4	4.60	46.6	5.99														
125	47.5	4.90	52.4	6.28														
130	58.5	5.26	64.3	6.57														
135	76.0	5.61	85.9	6.86														
140	86.0	5.95	106	7.16														
145	77.2	6.39	105	7.67														
150	38.3	6.94	69.5	7.97														
155	17.0	7.31	38.3	8.18														
160	10.1	7.65	15.8	8.32														
165	7.76	7.94	9.25	8.46														
170	7.77	8.21	8.83	8.55														
175	8.00	8.48	8.59	8.63														
180	8.33	8.65	8.35	8.62														

C Range: 0 - 360DEG

C Interval: 90.0DEG

Test Speed: HIGH

Temperature:25.3℃

Operators:DAMIN

Test Date:07 May 2024

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: