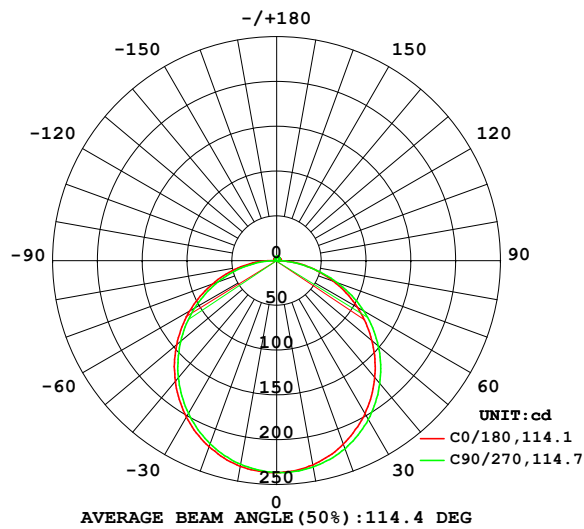


## LUMINAIRE PHOTOMETRIC TEST REPORT

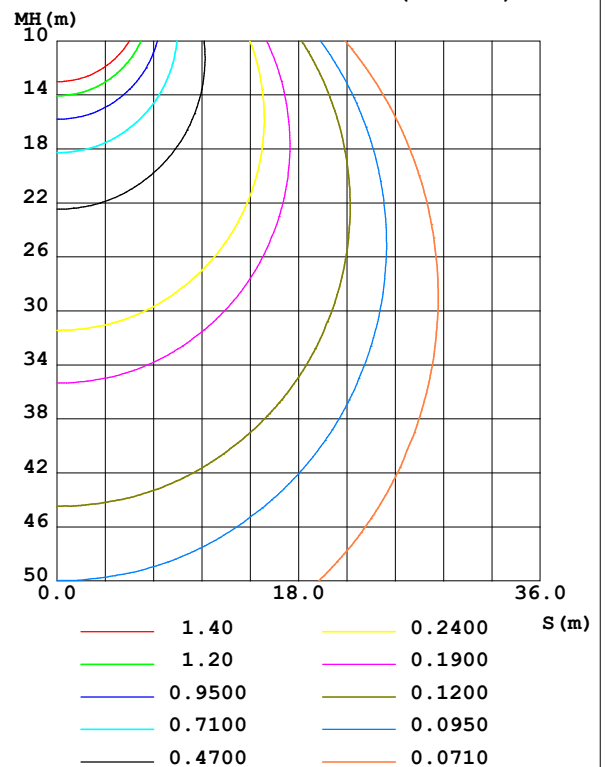
Test:U:101.40V I:0.1800A P:16.100W PF:0.8820 Freq:50.00Hz Lamp Flux:721.551x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 44.82 lm/W
MODEL	80016-30MP	I <sub>max</sub> (cd)	236.8	S/MH(C0/180)	1.24	
NOMINAL POWER(W)	15	LOR(%)	100.0	S/MH(C90/270)	1.29	
RATED VOLTAGE(V)	100	TOTAL FLUX(lm)	721.55	η UP,DN(C0-180)	1.4,48.9	
NOMINAL FLUX(lm)	721.551	CIE CLASS	DIRECT	η UP,DN(C180-360)	1.5,48.2	
LAMPS INSIDE	1	η up (%)	2.9	CIBSE SHR NOM	1.25	
TEST VOLTAGE(V)	100	η down (%)	97.1	CIBSE SHR MAX	1.35	

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:02 January 2025

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	233.3	230.9	231.8	234.0					0- 10	22.38	22.38	3.1,3.1
20	220.9	217.5	218.0	223.5					10- 20	64.11	86.49	12,12
30	201.7	197.1	197.3	204.8					20- 30	97.20	183.7	25.5,25.5
40	176.1	170.8	170.4	179.3					30- 40	117.5	301.2	41.7,41.7
50	145.6	139.7	138.9	148.2					40- 50	122.8	424.0	58.8,58.8
60	111.9	105.7	104.0	112.4					50- 60	112.8	536.8	74.4,74.4
70	76.28	69.71	67.51	71.81					60- 70	89.10	625.9	86.7,86.7
80	40.80	33.45	32.54	30.58					70- 80	55.61	681.5	94.4,94.4
90	7.022	2.635	3.021	2.392					80- 90	18.97	700.5	97.1,97.1
100	3.001	1.775	3.239	2.203					90-100	2.789	703.3	97.5,97.5
110	3.225	2.221	3.782	2.600					100-110	2.906	706.2	97.9,97.9
120	3.435	2.636	3.988	3.068					110-120	3.114	709.3	98.3,98.3
130	3.532	3.108	4.006	3.545					120-130	3.053	712.3	98.7,98.7
140	3.821	3.638	4.230	3.814					130-140	2.869	715.2	99.1,99.1
150	4.115	4.115	4.471	4.216					140-150	2.543	717.7	99.5,99.5
160	4.453	4.561	4.638	4.547					150-160	2.033	719.8	99.8,99.8
170	4.677	4.874	4.708	4.772					160-170	1.319	721.1	99.9,99.9
180	4.822	5.033	4.826	5.024					170-180	0.4576	721.6	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 362.91 lm

%lum = 50.3%

%lamp = 50.3%

Conical surface Flux(130deg): 585.04 lm

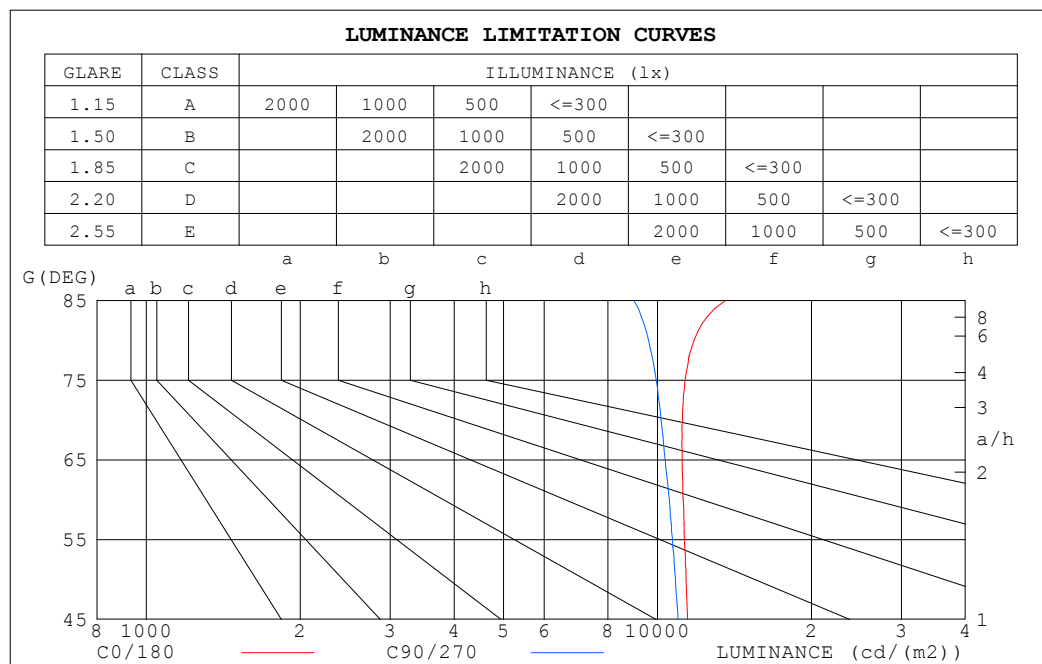
%lum = 81.1%

%lamp = 81.1%

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:DAMIN  
Test Date:02 January 2025

$\gamma$  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



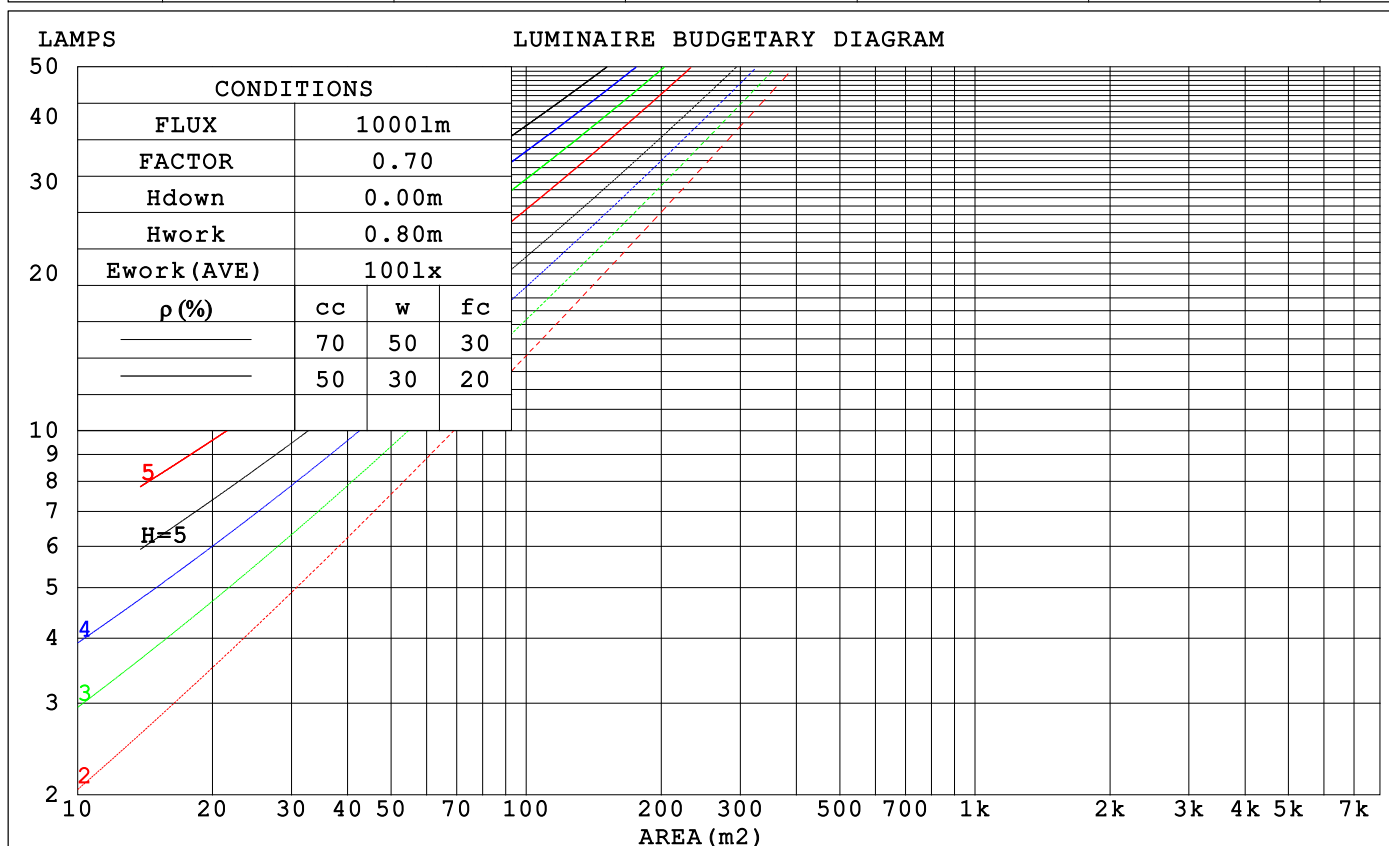
LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	13580	8983
80	11784	9600
75	11321	9936
70	11186	10159
65	11180	10353
60	11220	10541
55	11292	10696
50	11361	10835
45	11449	10970

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:DAMIN  
Test Date:02 January 2025

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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	1.18	1.18	1.18	1.15	1.15	1.15	1.09	1.09	1.09	1.04	1.04	1.04	.99	.99	.99	.97
1.0	1.03	.98	.94	.00	.96	.92	.95	.92	.89	.91	.88	.85	.87	.84	.82	.80
2.0	.89	.82	.76	.87	.80	.75	.83	.77	.73	.79	.74	.71	.76	.72	.69	.66
3.0	.78	.69	.63	.76	.68	.62	.73	.66	.61	.69	.64	.59	.67	.62	.58	.55
4.0	.69	.60	.53	.67	.59	.52	.64	.57	.51	.62	.55	.50	.59	.54	.49	.47
5.0	.61	.52	.45	.60	.51	.45	.58	.50	.44	.55	.49	.44	.53	.47	.43	.41
6.0	.55	.46	.40	.54	.45	.39	.52	.44	.39	.50	.43	.38	.48	.42	.38	.35
7.0	.50	.41	.35	.49	.41	.35	.47	.40	.34	.45	.39	.34	.44	.38	.33	.31
8.0	.46	.37	.31	.45	.37	.31	.43	.36	.30	.42	.35	.30	.40	.34	.30	.28
9.0	.42	.33	.28	.41	.33	.28	.40	.32	.27	.38	.32	.27	.37	.31	.27	.25
10.0	.39	.31	.25	.38	.30	.25	.37	.30	.25	.36	.29	.25	.34	.29	.24	.23



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:02 January 2025

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

$\rho_{cc}$	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						Wall Exitance Coefficients (WEC)										
0.0																	
1.0	.322	.183	.058	.314	.179	.057	.299	.172	.055	.286	.165	.053	.273	.158	.051		
2.0	.299	.164	.050	.292	.161	.050	.279	.155	.048	.267	.150	.047	.255	.144	.046		
3.0	.275	.146	.044	.269	.144	.043	.257	.139	.042	.246	.135	.041	.236	.131	.040		
4.0	.253	.131	.039	.247	.129	.038	.237	.125	.037	.227	.122	.037	.218	.118	.036		
5.0	.233	.119	.034	.228	.117	.034	.218	.114	.033	.210	.111	.033	.201	.108	.032		
6.0	.215	.108	.031	.211	.107	.031	.203	.104	.030	.195	.101	.030	.187	.099	.029		
7.0	.200	.099	.028	.196	.098	.028	.189	.095	.027	.181	.093	.027	.175	.091	.027		
8.0	.187	.091	.026	.183	.090	.025	.176	.088	.025	.170	.086	.025	.164	.084	.024		
9.0	.175	.085	.024	.172	.084	.023	.165	.082	.023	.160	.080	.023	.154	.078	.023		
10.0	.164	.079	.022	.161	.078	.022	.156	.076	.021	.150	.075	.021	.145	.073	.021		

$\rho_{cc}$	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						Ceiling Cavity Exitance Coefficients (CCEC)										
0.0	.213	.213	.213	.182	.182	.182	.124	.124	.124	.071	.071	.071	.023	.023	.023		
1.0	.204	.178	.156	.174	.153	.134	.119	.105	.093	.069	.061	.054	.022	.020	.017		
2.0	.196	.154	.120	.168	.133	.103	.115	.092	.072	.066	.054	.042	.021	.017	.014		
3.0	.188	.137	.096	.161	.118	.083	.111	.082	.059	.064	.048	.035	.021	.016	.011		
4.0	.181	.124	.081	.155	.107	.070	.107	.075	.049	.062	.044	.029	.020	.014	.010		
5.0	.173	.114	.070	.149	.098	.061	.102	.069	.043	.059	.040	.025	.019	.013	.008		
6.0	.166	.105	.062	.143	.091	.054	.098	.064	.038	.057	.038	.023	.018	.012	.007		
7.0	.159	.098	.056	.137	.085	.049	.094	.060	.035	.055	.035	.021	.018	.012	.007		
8.0	.152	.093	.052	.131	.080	.045	.091	.056	.032	.053	.033	.019	.017	.011	.006		
9.0	.146	.088	.048	.126	.076	.042	.087	.054	.030	.051	.032	.018	.016	.010	.006		
10.0	.141	.083	.046	.121	.073	.040	.084	.051	.028	.049	.030	.017	.016	.010	.006		

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: DAMIN  
Test Date: 02 January 2025

$\gamma$  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:

UGR(Unified Glare Rating) Table

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	2H	21.2	22.7	21.5	22.9	23.2	20.9	22.4	21.3	22.7	23.0
	3H	22.9	24.3	23.3	24.6	24.9	22.6	24.0	22.9	24.3	24.6
	4H	23.7	25.0	24.1	25.4	25.7	23.3	24.6	23.7	24.9	25.3
	6H	24.4	25.7	24.8	26.0	26.3	23.9	25.1	24.3	25.5	25.8
	8H	24.7	25.9	25.1	26.3	26.6	24.1	25.3	24.5	25.6	26.0
	12H	25.0	26.1	25.4	26.5	26.8	24.2	25.4	24.6	25.7	26.1
4H	2H	21.8	23.1	22.2	23.4	23.7	21.6	22.9	22.0	23.2	23.6
	3H	23.8	24.9	24.1	25.3	25.6	23.5	24.6	23.9	25.0	25.4
	4H	24.7	25.7	25.1	26.1	26.5	24.3	25.4	24.8	25.8	26.2
	6H	25.5	26.5	26.0	26.9	27.3	25.0	26.0	25.5	26.4	26.8
	8H	25.9	26.8	26.4	27.2	27.7	25.3	26.2	25.8	26.6	27.1
	12H	26.2	27.0	26.7	27.5	28.0	25.5	26.3	26.0	26.8	27.2
8H	4H	25.0	25.9	25.5	26.3	26.8	24.7	25.6	25.2	26.0	26.4
	6H	26.0	26.8	26.5	27.2	27.7	25.6	26.3	26.1	26.8	27.3
	8H	26.5	27.2	27.0	27.7	28.2	26.0	26.6	26.5	27.1	27.6
	12H	27.0	27.6	27.5	28.1	28.6	26.3	26.8	26.8	27.3	27.9
12H	4H	25.0	25.8	25.5	26.3	26.7	24.7	25.5	25.2	26.0	26.5
	6H	26.1	26.8	26.6	27.3	27.8	25.7	26.4	26.2	26.8	27.4
	8H	26.7	27.2	27.2	27.7	28.3	26.2	26.7	26.7	27.2	27.8
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H		+ 0.1 / - 0.2					+ 0.1 / - 0.2				
1.5H		+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H		+ 0.1 / - 0.3					+ 0.1 / - 0.3				

CIE Pub.117, 721.6 lm Total Lamp Luminous Flux Corrected ( $8\log(F/F_0) = -1.1$ )  
Area: 0.02 m<sup>2</sup>

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:02 January 2025

$\gamma$  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:

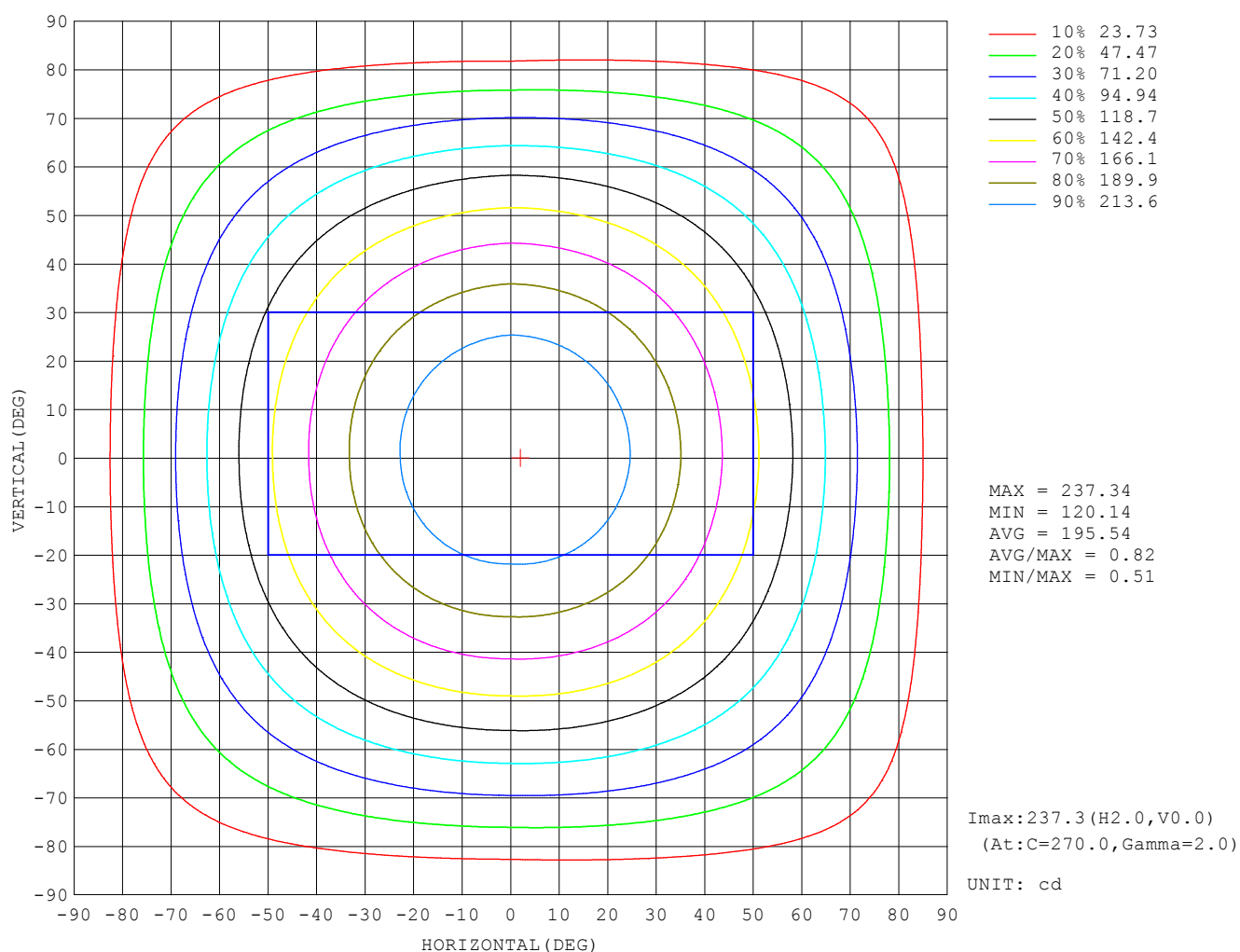
### UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	56	44	37	55	44	37	54	43	37	30
0.80	66	54	46	65	53	46	63	52	46	39
1.00	74	63	55	73	62	55	70	63	54	47
1.25	81	70	63	80	69	62	76	68	61	54
1.50	86	76	69	84	75	68	81	73	67	59
2.00	93	84	77	91	83	77	87	80	75	66
2.50	97	89	83	95	87	82	91	84	79	70
3.00	101	93	88	98	92	86	94	88	84	74
4.00	105	99	94	102	97	92	97	93	89	79
5.00	107	102	98	105	100	96	100	96	93	82
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: 02 January 2025

$\gamma$  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

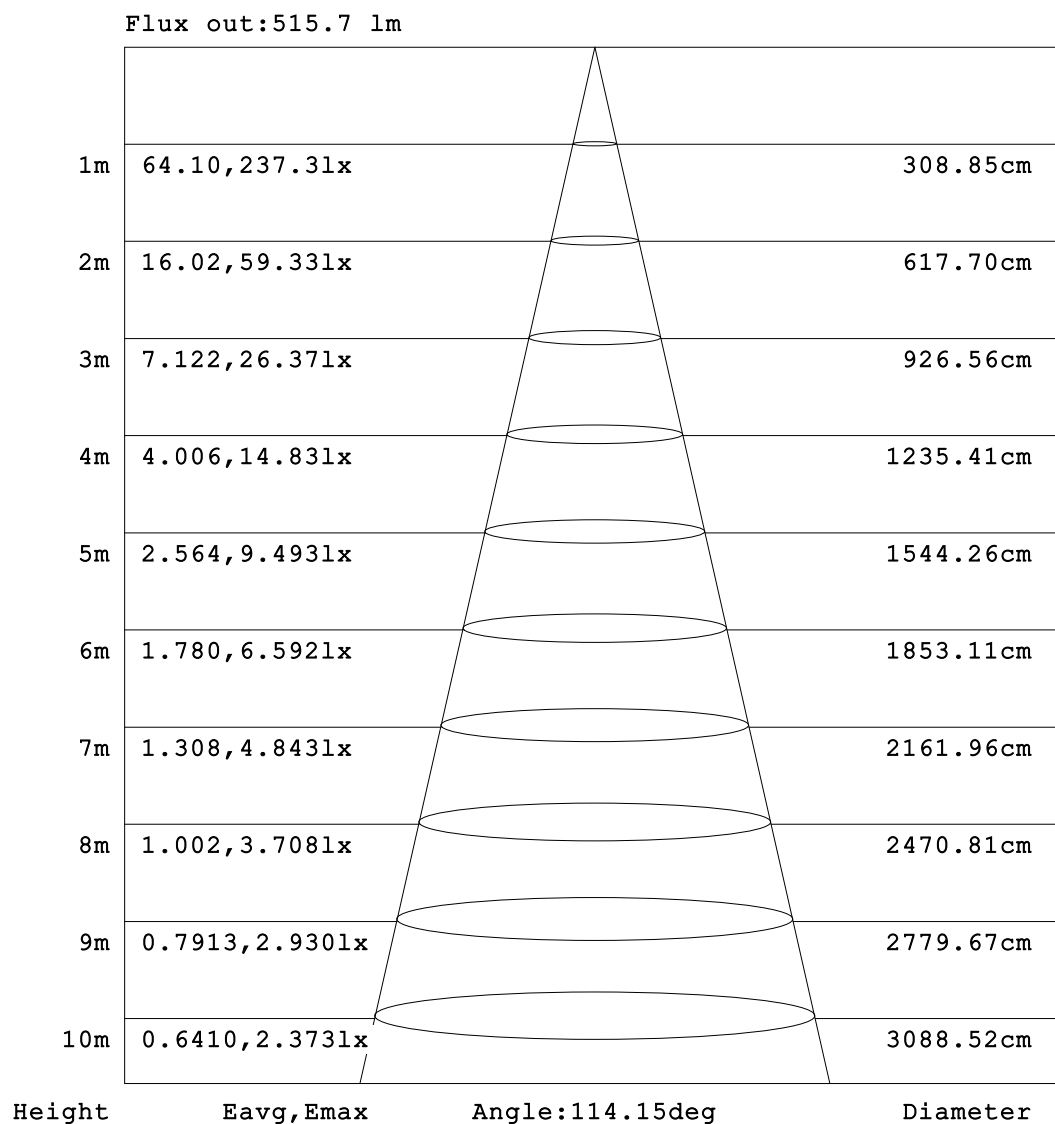


C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:DAMIN  
 Test Date:02 January 2025

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

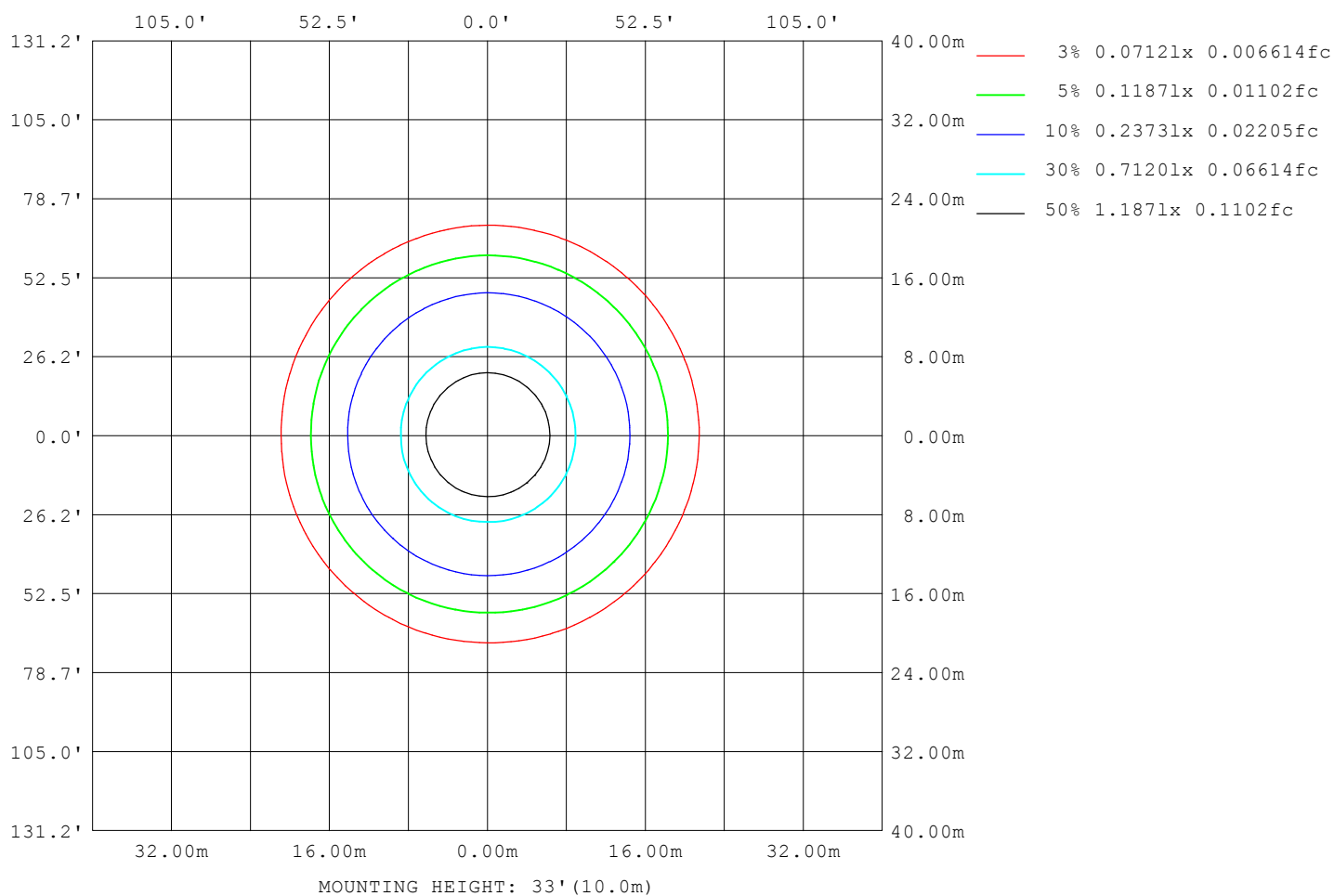


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators: DAMIN  
 Test Date: 02 January 2025

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



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:DAMIN  
Test Date:02 January 2025

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:101.40V I:0.1800A P:16.100W PF:0.8820 Freq:50.00Hz Lamp Flux:721.551x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:

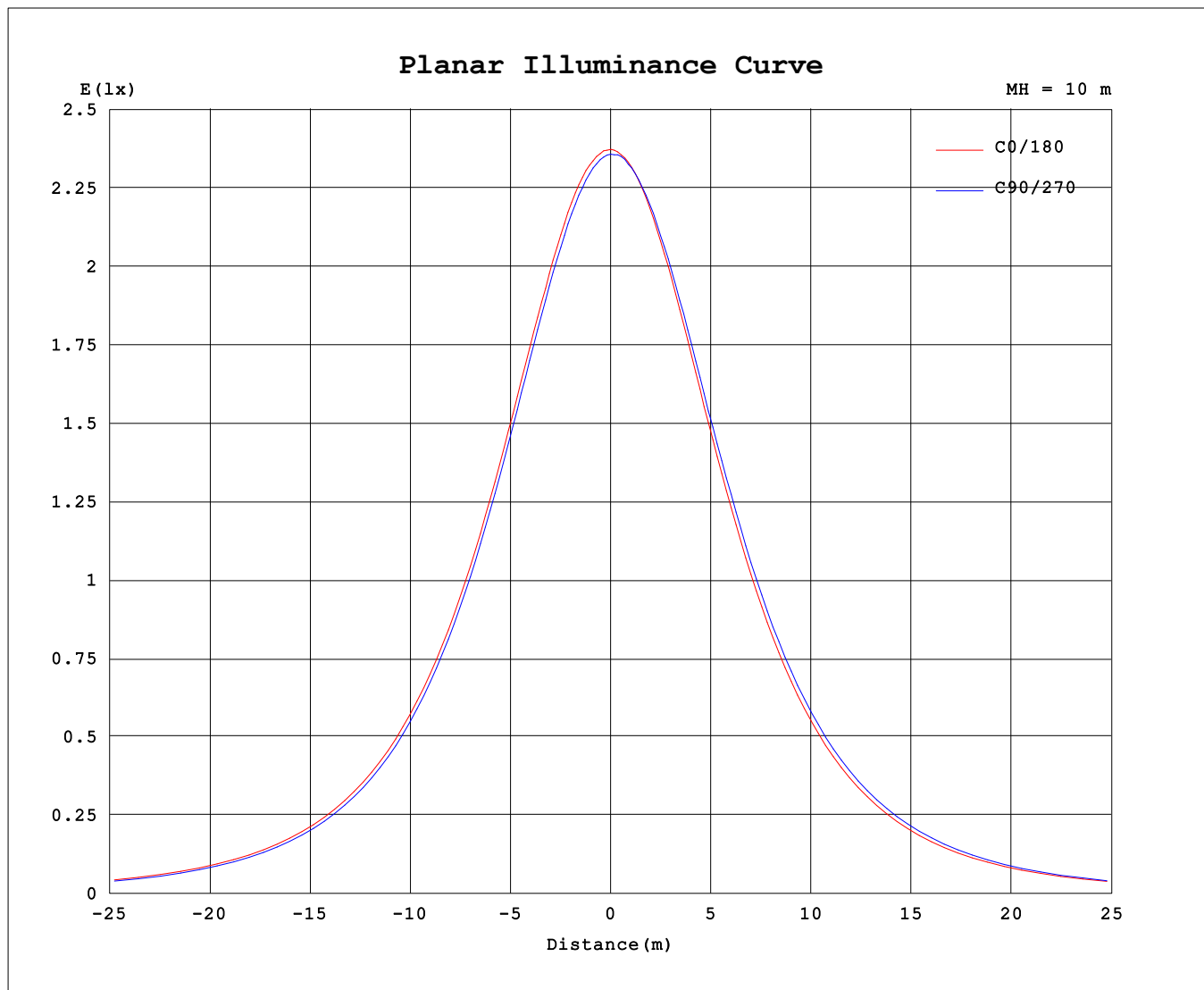
AvgL	cd/m2
L_0~180 (65) av	10648
L_0~180 (75) av	10445
L_0~180 (85) av	11156
L_90~270 (65) av	10676
L_90~270 (75) av	9910
L_90~270 (85) av	8121
L_45 (65) av	10635
L_45 (75) av	10059
L_45 (85) av	9115

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:02 January 2025

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: 02 January 2025

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

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270															
0	237	237	237	237															
5	236	235	235	236															
10	233	231	232	234															
15	228	225	226	230															
20	221	218	218	224															
25	212	208	208	215															
30	202	197	197	205															
35	190	185	185	193															
40	176	171	170	179															
45	161	156	155	164															
50	146	140	139	148															
55	129	123	122	131															
60	112	106	104	112															
65	94.2	87.8	85.8	92.7															
70	76.3	69.7	67.5	71.8															
75	58.4	51.6	49.7	51.0															
80	40.8	33.4	32.5	30.6															
85	23.6	15.7	15.3	12.6															
90	7.02	2.64	3.02	2.39															
95	3.00	1.65	2.94	1.91															
100	3.00	1.78	3.24	2.20															
105	3.08	1.98	3.53	2.40															
110	3.22	2.22	3.78	2.60															
115	3.35	2.43	3.95	2.83															
120	3.44	2.64	3.99	3.07															
125	3.45	2.88	3.98	3.30															
130	3.53	3.11	4.01	3.54															
135	3.66	3.38	4.11	3.67															
140	3.82	3.64	4.23	3.81															
145	3.95	3.88	4.37	4.01															
150	4.12	4.11	4.47	4.22															
155	4.30	4.34	4.59	4.41															
160	4.45	4.56	4.64	4.55															
165	4.60	4.73	4.69	4.68															
170	4.68	4.87	4.71	4.77															
175	4.75	5.00	4.66	4.82															
180	4.82	5.03	4.83	5.02															

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators: DAMIN  
 Test Date: 02 January 2025

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: