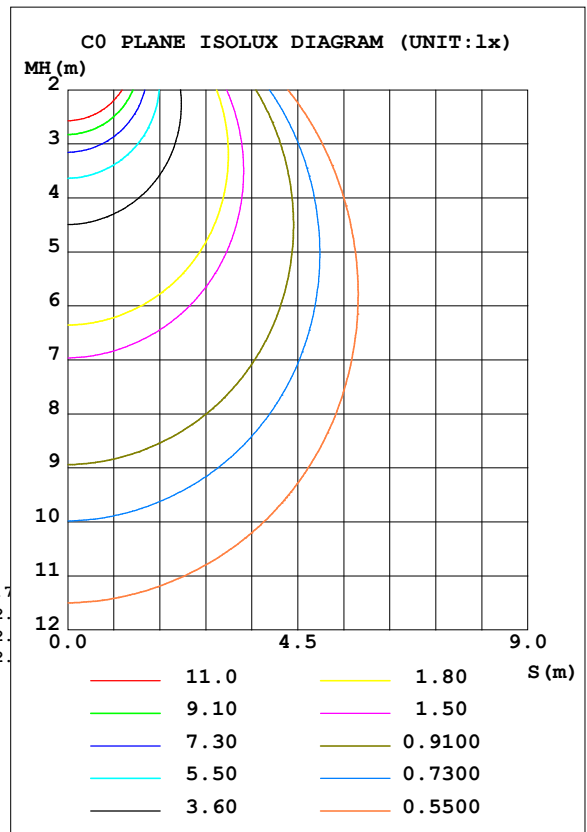
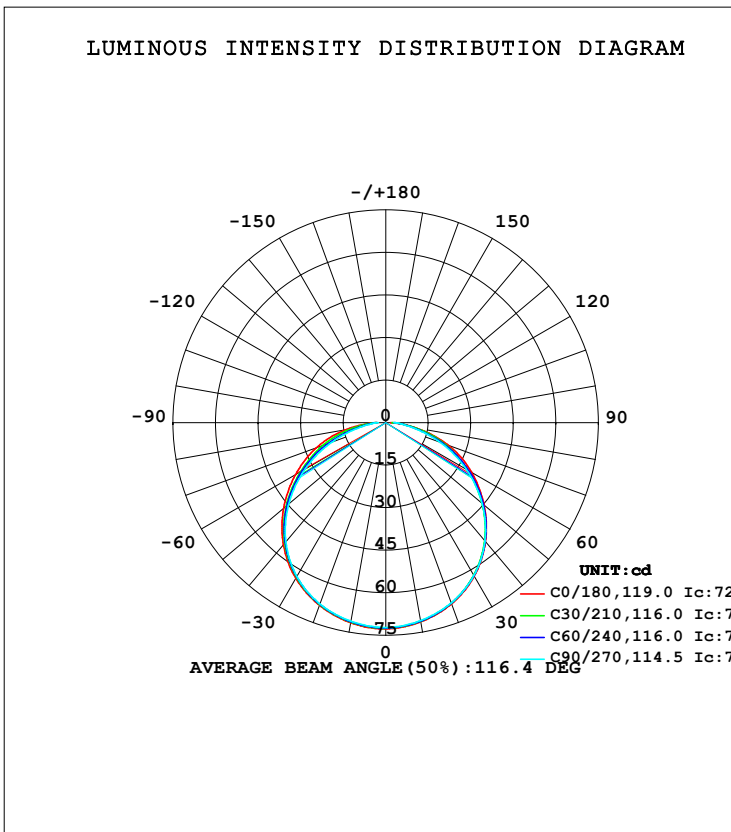


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.41V I:0.0888A P:10.140W PF:0.9489 Freq:0Hz Lamp Flux:219.973x1 lm		
NAME:	TYPE:	WEIGHT:--
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:--

DATA OF LAMP		PHOTOMETRIC DATA Eff: 21.69 lm/W			
MODEL	HF7001-AB	I _{max} (cd)	72.74	S/MH (C0/180)	1.30
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.29
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	219.97	η UP, DN (C0-180)	0.0, 49.7
NOMINAL FLUX (lm)	219.973	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 50.3
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	120.378	η down (%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 24.5DEG
 Operators: Dingmin Zhang
 Test Date: 2025-12-04

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000 SYSTEM V2.0.366
 Humidity: 60%
 Test Distance: 9.480m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

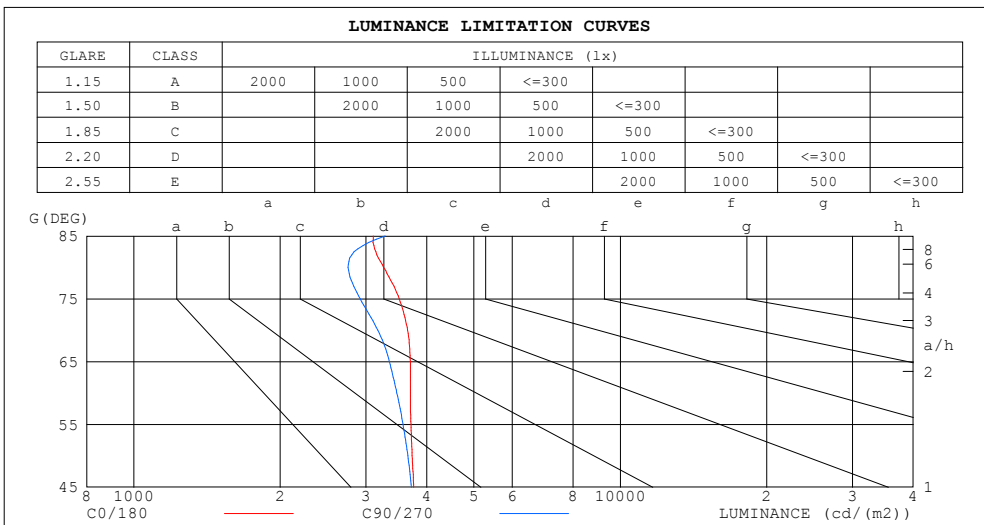
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	71.33	71.04	70.86	70.79	71.61	71.25	71.07	70.97	0- 10	6.843	6.843	3.11,3.11
20	67.99	67.64	67.61	67.49	68.52	68.10	68.01	67.86	10- 20	19.70	26.54	12.1,12.1
30	62.48	62.10	62.20	62.11	63.40	62.81	62.67	62.51	20- 30	30.19	56.73	25.8,25.8
40	54.71	54.37	54.40	54.51	56.18	55.22	54.82	54.78	30- 40	36.88	93.62	42.6,42.6
50	45.27	44.69	44.35	44.98	47.04	45.56	44.71	45.04	40- 50	38.73	132.3	60.2,60.2
60	34.93	33.79	32.75	34.32	36.80	34.49	32.88	34.13	50- 60	35.52	167.9	76.3,76.3
70	23.58	22.07	20.48	23.08	26.16	22.78	20.25	22.45	60- 70	28.07	195.9	89.1,89.1
80	10.68	10.17	9.033	11.28	14.05	10.87	8.764	10.36	70- 80	17.30	213.2	96.9,96.9
90	1.861	2.558	2.912	3.172	2.946	3.236	2.676	2.614	80- 90	6.744	220.0	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Dingmin Zhang
 Test Date:2025-12-04

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:9.480m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:120.41V I:0.0888A P:10.140W PF:0.9489 Freq:0Hz Lamp Flux:219.973x1 lm		
NAME:	TYPE:	WEIGHT:--
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:--



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	3108	3289
80	3261	2758
75	3511	2921
70	3655	3176
65	3703	3352
60	3704	3473
55	3715	3576
50	3734	3659
45	3763	3722

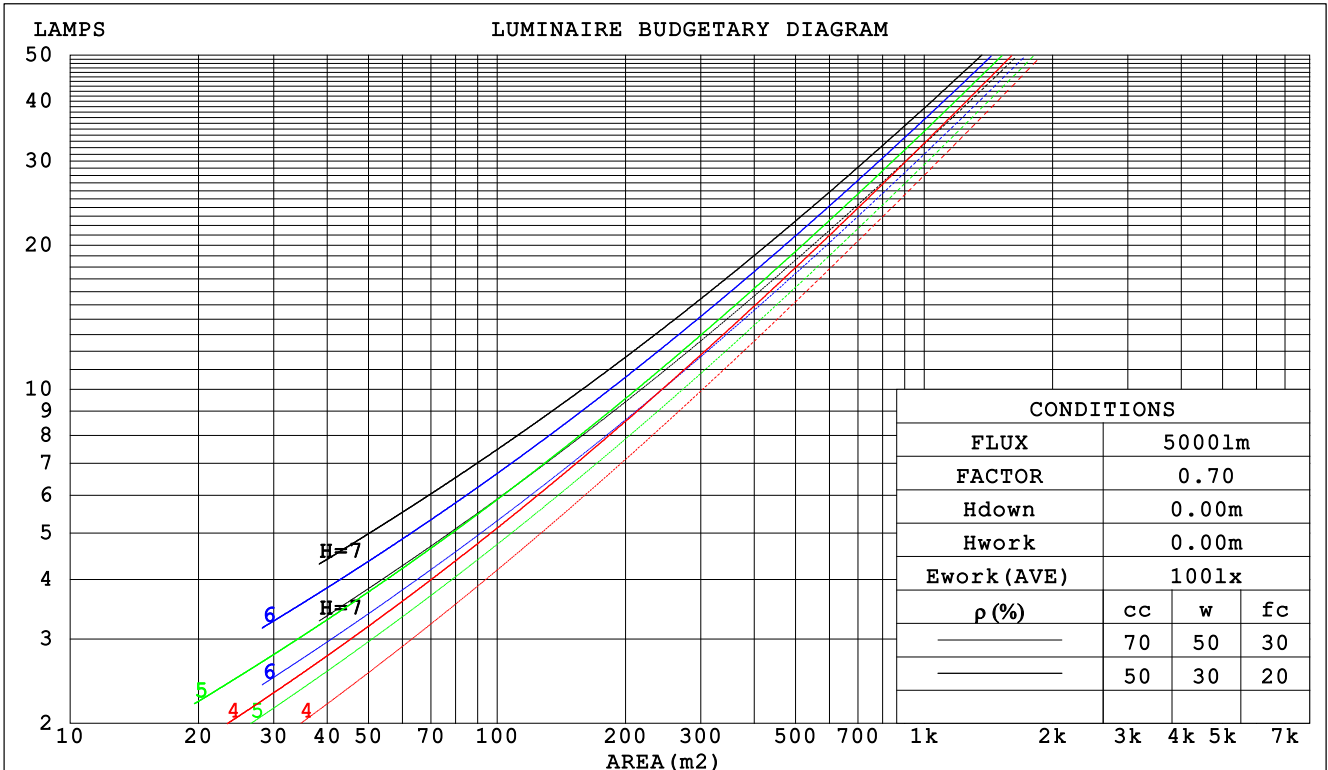
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Dingmin Zhang
 Test Date:2025-12-04

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:9.480m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.41V I:0.0888A P:10.140W PF:0.9489 Freq:0Hz Lamp Flux:219.973x1 lm		
NAME:	TYPE:	WEIGHT:--
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:--

ρcc	80%			70%			50%			30%			10%			0
	ρw	30%	10%	ρw	30%	10%	ρw	30%	10%	ρw	30%	10%	ρw	30%	10%	
ρfc	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	1.03	.98	.94	1.01	.96	.93	.96	.93	.90	.92	.90	.87	.89	.86	.84	.82
2.0	.89	.82	.76	.87	.81	.75	.84	.78	.73	.80	.76	.72	.77	.73	.70	.68
3.0	.78	.70	.63	.76	.69	.62	.73	.67	.61	.71	.65	.60	.68	.63	.59	.57
4.0	.69	.60	.53	.68	.59	.53	.65	.58	.52	.63	.56	.51	.61	.55	.50	.48
5.0	.61	.52	.45	.60	.52	.45	.58	.51	.45	.56	.49	.44	.54	.48	.44	.41
6.0	.55	.46	.40	.54	.46	.39	.52	.45	.39	.51	.44	.39	.49	.43	.38	.36
7.0	.50	.41	.35	.49	.41	.35	.48	.40	.34	.46	.39	.34	.45	.39	.34	.32
8.0	.46	.37	.31	.45	.37	.31	.44	.36	.31	.42	.35	.30	.41	.35	.30	.28
9.0	.42	.33	.28	.41	.33	.28	.40	.33	.28	.39	.32	.27	.38	.32	.27	.25
10.0	.39	.31	.25	.38	.30	.25	.37	.30	.25	.36	.30	.25	.35	.29	.25	.23



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Dingmin Zhang
 Test Date:2025-12-04

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:9.480m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:120.41V I:0.0888A P:10.140W PF:0.9489 Freq:0Hz Lamp Flux:219.973x1 lm		
NAME:	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	.328	.187	.059	.321	.183	.058	.308	.177	.056	.295	.170	.055	.284	.165	.053	
2.0	.303	.166	.051	.297	.164	.050	.285	.159	.049	.274	.154	.048	.264	.150	.047	
3.0	.278	.148	.044	.273	.146	.044	.262	.142	.043	.253	.138	.042	.244	.135	.042	
4.0	.255	.133	.039	.251	.131	.039	.241	.128	.038	.233	.125	.038	.225	.122	.037	
5.0	.235	.120	.035	.231	.119	.035	.223	.116	.034	.215	.113	.034	.208	.111	.033	
6.0	.218	.109	.031	.214	.108	.031	.206	.106	.031	.199	.104	.030	.193	.102	.030	
7.0	.202	.100	.028	.199	.099	.028	.192	.097	.028	.186	.095	.028	.180	.094	.028	
8.0	.188	.092	.026	.185	.091	.026	.179	.090	.026	.174	.088	.025	.169	.087	.025	
9.0	.176	.085	.024	.173	.085	.024	.168	.083	.024	.163	.082	.023	.159	.081	.023	
10.0	.166	.079	.022	.163	.079	.022	.158	.078	.022	.154	.076	.022	.150	.075	.022	

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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.182	.156	.133	.155	.134	.114	.106	.092	.079	.061	.053	.046	.020	.017	.015	
2.0	.174	.132	.097	.149	.114	.084	.102	.079	.058	.059	.046	.034	.019	.015	.011	
3.0	.166	.114	.073	.142	.099	.063	.098	.069	.044	.056	.040	.026	.018	.013	.009	
4.0	.158	.101	.057	.136	.087	.050	.093	.061	.035	.054	.036	.021	.017	.012	.007	
5.0	.151	.091	.046	.130	.079	.040	.089	.055	.029	.052	.032	.017	.017	.011	.006	
6.0	.144	.082	.039	.123	.071	.034	.085	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.137	.076	.033	.118	.065	.029	.081	.046	.020	.047	.027	.012	.015	.009	.004	
8.0	.130	.070	.028	.112	.061	.025	.077	.042	.018	.045	.025	.010	.015	.008	.003	
9.0	.124	.065	.025	.107	.056	.022	.074	.040	.015	.043	.023	.009	.014	.008	.003	
10.0	.118	.061	.022	.102	.053	.019	.071	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Dingmin Zhang
 Test Date:2025-12-04

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:9.480m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.41V I:0.0888A P:10.140W PF:0.9489 Freq:0Hz Lamp Flux:219.973x1 lm										
NAME:					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	17.4	18.9	17.7	19.1	19.4	17.3	18.8	17.5	19.0	19.2
3H	19.1	20.6	19.4	20.8	21.1	18.8	20.2	19.1	20.5	20.7
4H	19.9	21.2	20.2	21.5	21.8	19.4	20.7	19.7	21.0	21.2
6H	20.4	21.7	20.8	22.0	22.3	19.8	21.1	20.1	21.4	21.7
8H	20.6	21.9	21.0	22.2	22.5	20.0	21.2	20.3	21.5	21.8
12H	20.8	22.0	21.1	22.3	22.6	20.1	21.4	20.5	21.7	22.0
4H 2H	18.0	19.4	18.3	19.6	19.9	17.9	19.3	18.2	19.5	19.8
3H	19.9	21.1	20.3	21.4	21.7	19.6	20.8	20.0	21.1	21.4
4H	20.8	21.9	21.2	22.2	22.6	20.3	21.4	20.7	21.8	22.1
6H	21.5	22.5	21.9	22.9	23.2	20.9	21.9	21.3	22.2	22.6
8H	21.8	22.7	22.2	23.1	23.4	21.1	22.1	21.6	22.4	22.8
12H	22.0	22.8	22.4	23.2	23.6	21.4	22.2	21.8	22.6	23.0
8H 4H	21.1	22.0	21.5	22.4	22.8	20.7	21.6	21.1	22.0	22.3
6H	22.0	22.7	22.4	23.1	23.6	21.4	22.2	21.8	22.6	23.0
8H	22.3	23.0	22.8	23.4	23.9	21.7	22.4	22.2	22.9	23.3
12H	22.6	23.2	23.1	23.7	24.2	22.1	22.7	22.6	23.1	23.6
12H 4H	21.1	22.0	21.5	22.3	22.7	20.7	21.6	21.1	21.9	22.3
6H	22.0	22.7	22.5	23.1	23.6	21.5	22.2	22.0	22.6	23.1
8H	22.5	23.0	22.9	23.5	24.0	21.9	22.5	22.4	22.9	23.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.1 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.1 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117, 220.0 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -5.3)

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Dingmin Zhang
 Test Date:2025-12-04

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:9.480m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.41V I:0.0888A P:10.140W PF:0.9489 Freq:0Hz Lamp Flux:219.973x1 lm		
NAME:	TYPE:	WEIGHT:--
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:--

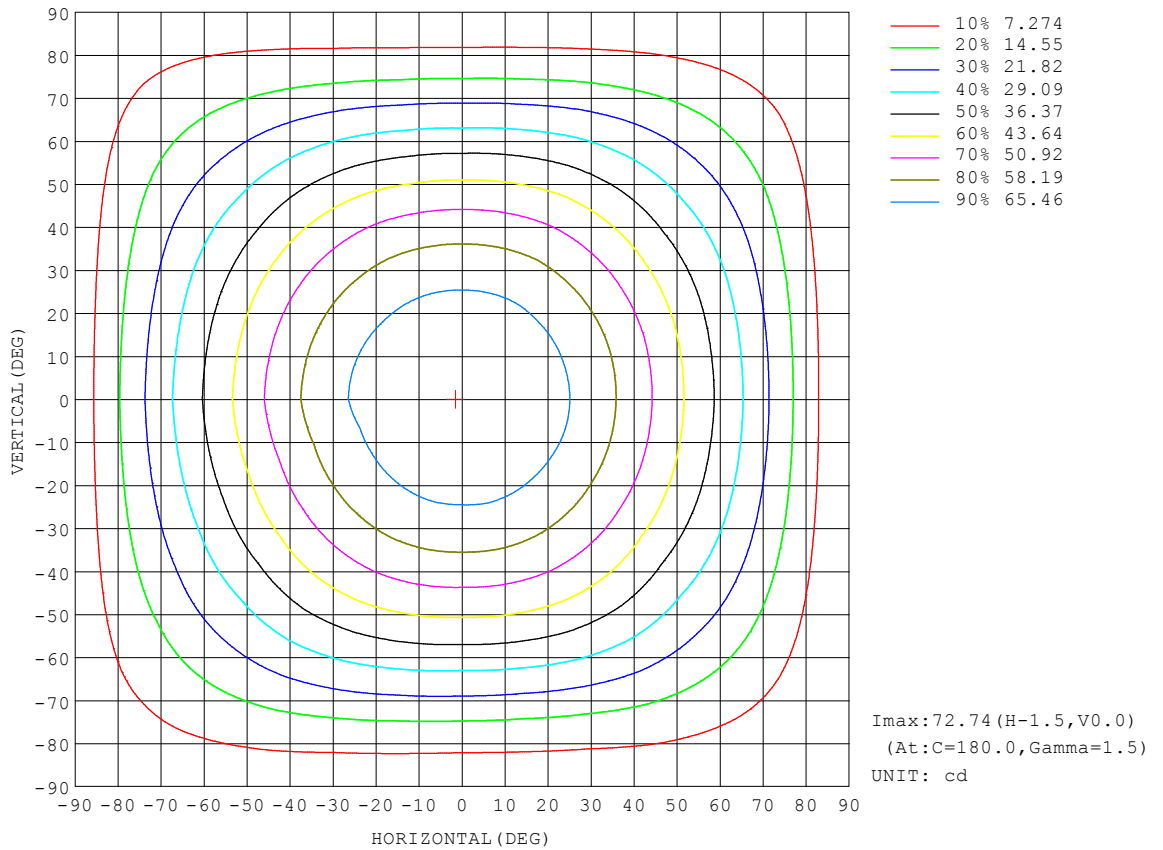
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	45	37	56	44	37	54	44	37	31
0.80	66	54	47	65	54	47	63	53	46	39
1.00	75	63	56	73	63	56	71	64	55	48
1.25	82	71	64	80	70	63	78	69	62	55
1.50	87	77	69	85	76	69	82	74	68	60
2.00	94	85	78	92	84	77	88	81	76	68
2.50	98	90	83	96	88	82	92	86	81	72
3.00	101	94	88	99	92	87	95	90	85	76
4.00	105	99	94	103	98	93	99	94	90	81
5.00	108	103	99	105	101	97	101	97	94	85
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Dingmin Zhang
 Test Date:2025-12-04

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:9.480m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.41V I:0.0888A P:10.140W PF:0.9489 Freq:0Hz Lamp Flux:219.973x1 lm		
NAME:	TYPE:	WEIGHT:--
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:--

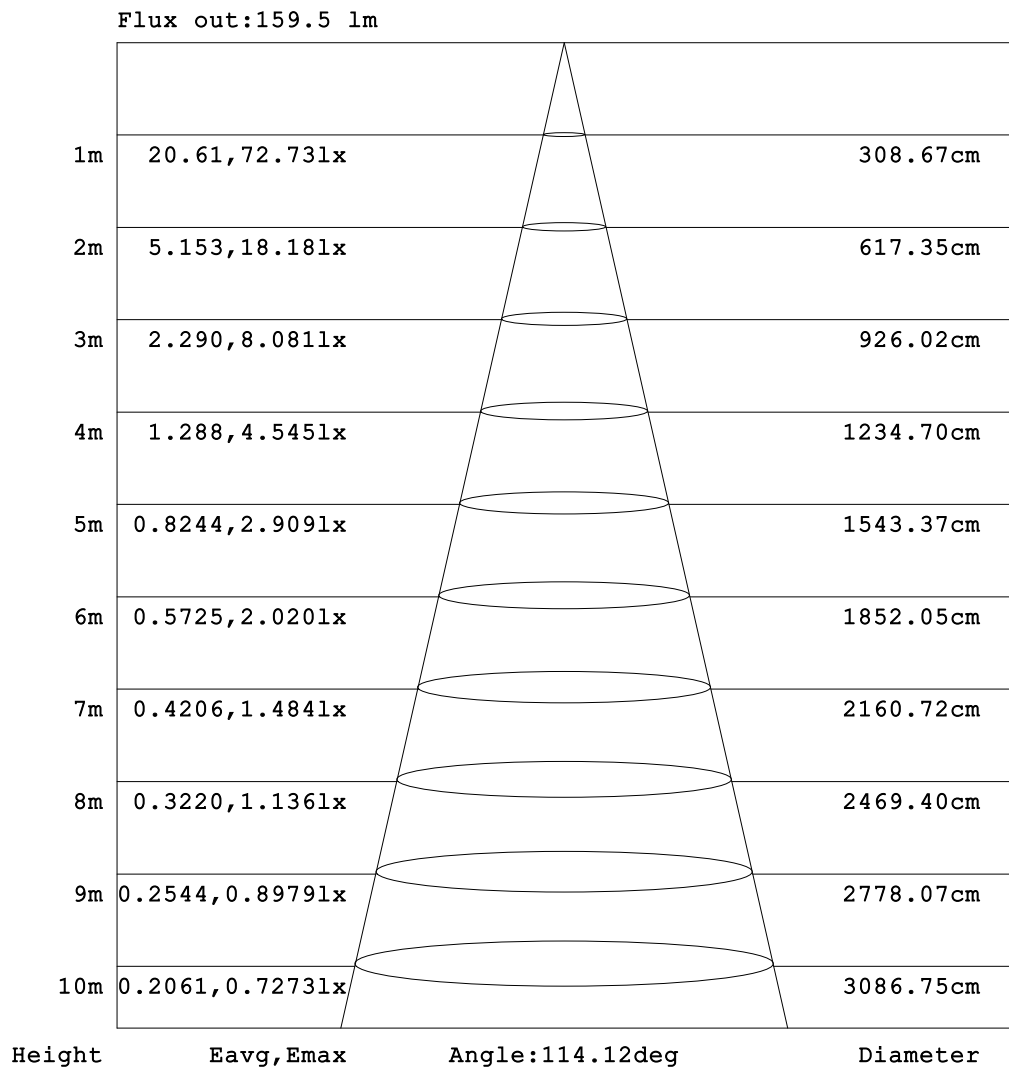


C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Dingmin Zhang
 Test Date:2025-12-04

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:9.480m [K=1.0000]
 Remarks:

AAI Figure

Test:U:120.41V I:0.0888A P:10.140W PF:0.9489 Freq:0Hz Lamp Flux:219.973x1 lm		
NAME:	TYPE:	WEIGHT:--
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:--



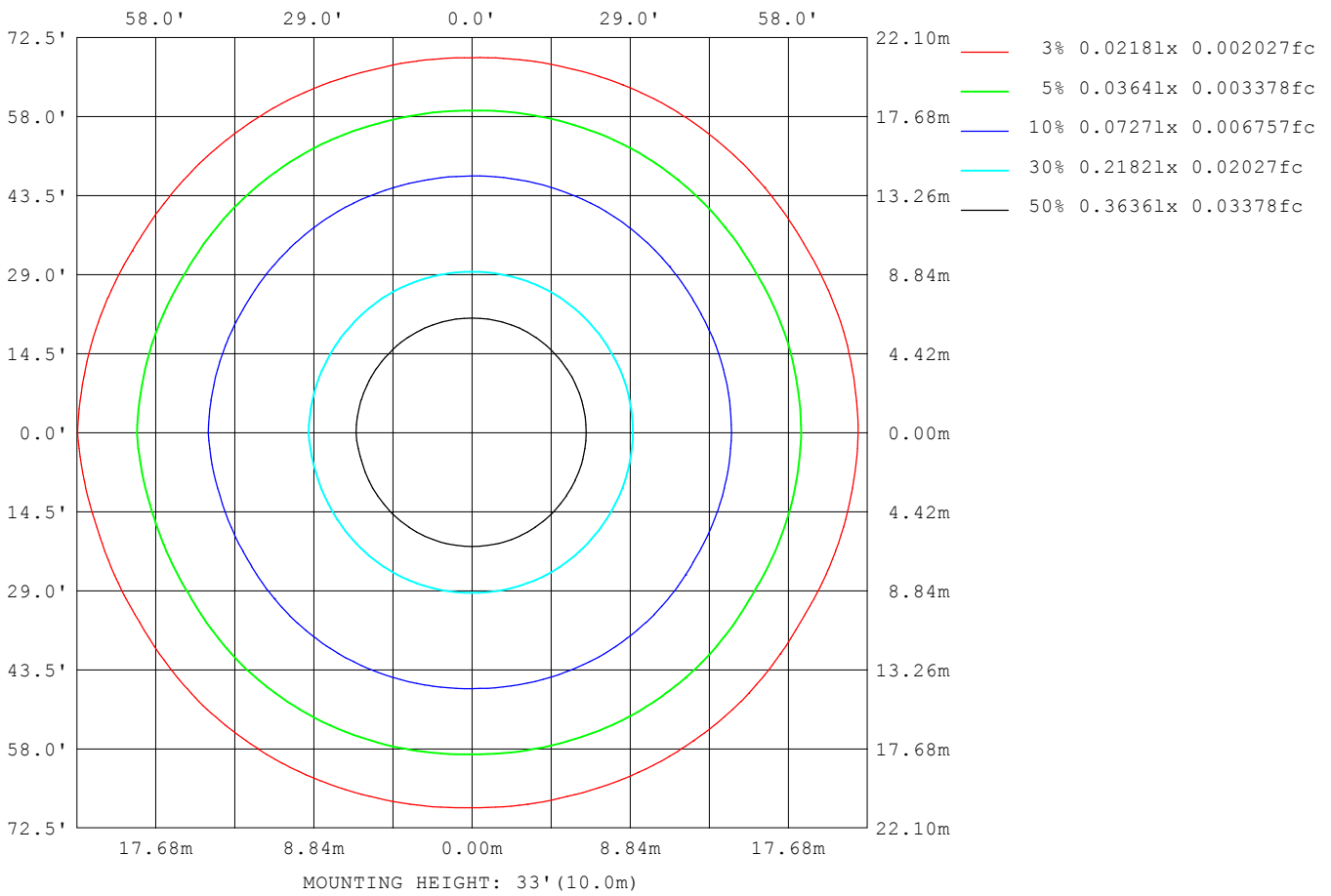
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Dingmin Zhang
 Test Date:2025-12-04

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:9.480m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:120.41V I:0.0888A P:10.140W PF:0.9489 Freq:0Hz Lamp Flux:219.973x1 lm		
NAME:	TYPE:	WEIGHT:--
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:--



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Dingmin Zhang
 Test Date:2025-12-04

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:9.480m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:120.41V I:0.0888A P:10.140W PF:0.9489 Freq:0Hz Lamp Flux:219.973x1 lm		
NAME:	TYPE:	WEIGHT:--
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:--

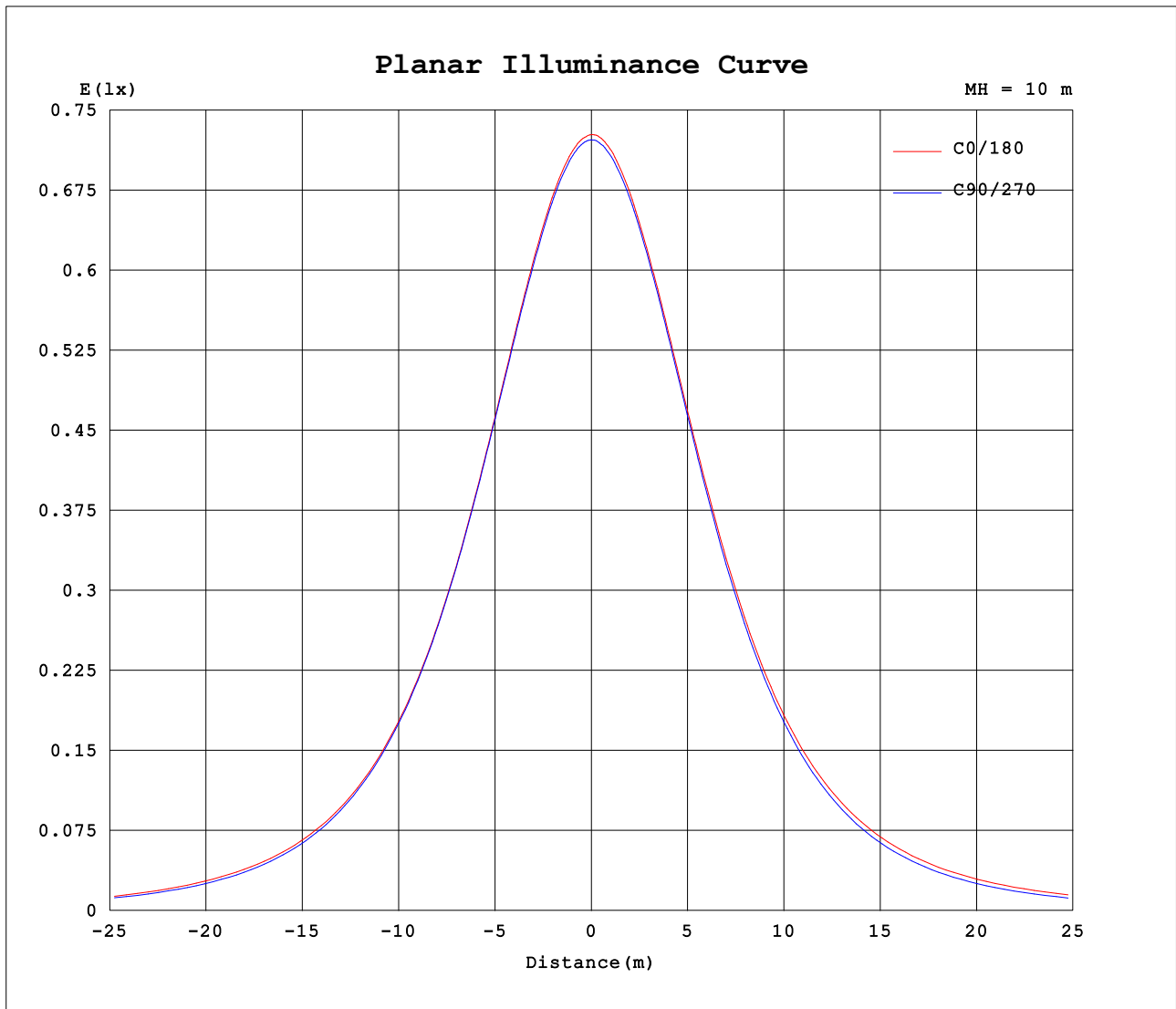
AvgL	cd/m2
L_0~180 (65) av	3833
L_0~180 (75) av	3835
L_0~180 (85) av	3984
L_90~270 (65) av	3348
L_90~270 (75) av	2896
L_90~270 (85) av	3190
L_45 (65) av	3576
L_45 (75) av	3384
L_45 (85) av	3667

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
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 Test Speed: HIGH
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γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:9.480m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
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γ Range: 0 - 90DEG
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 Test System: EVERFINE GO-2000 SYSTEM V2.0.366
 Humidity: 60%
 Test Distance: 9.480m [K=1.0000]
 Remarks:

