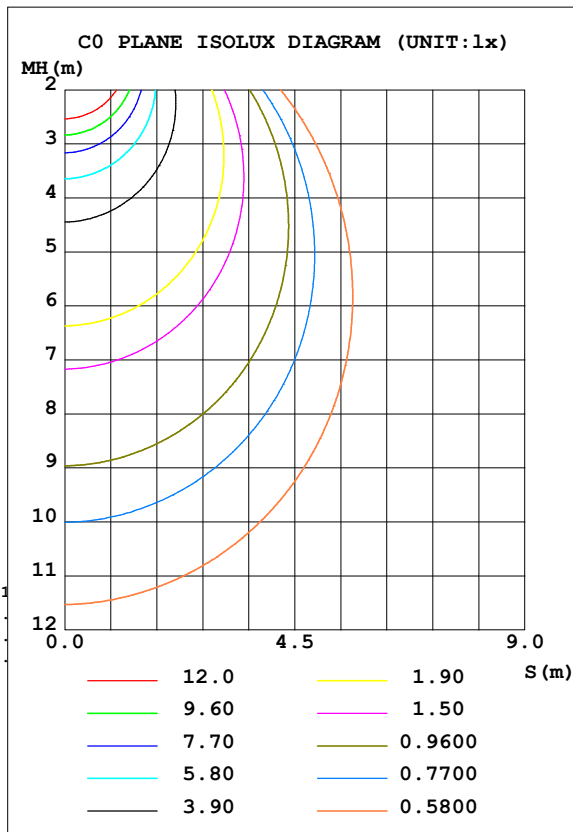
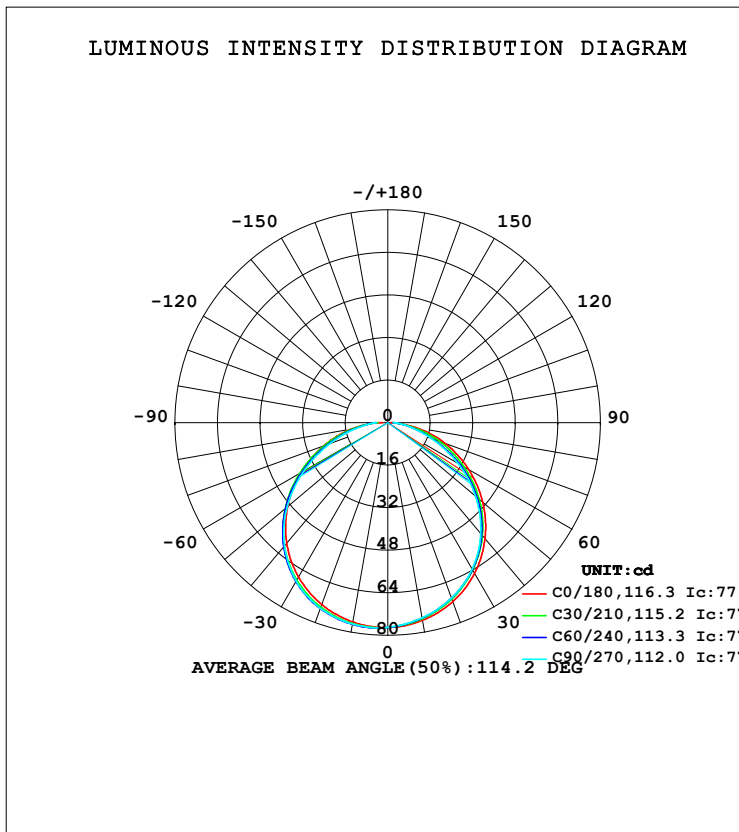


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.41V I:0.0870A P:9.9358W PF:0.9489 Freq:59.98Hz Lamp Flux:228.84x1 lm		
NAME:	TYPE:	WEIGHT:--
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:--

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	HF7000-AB	Imax (cd)	77.44	S/MH (C0/180)	1.29
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.32
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	228.84	η UP, DN (C0-180)	0.0, 48.5
NOMINAL FLUX (lm)	228.84	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 51.5
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:

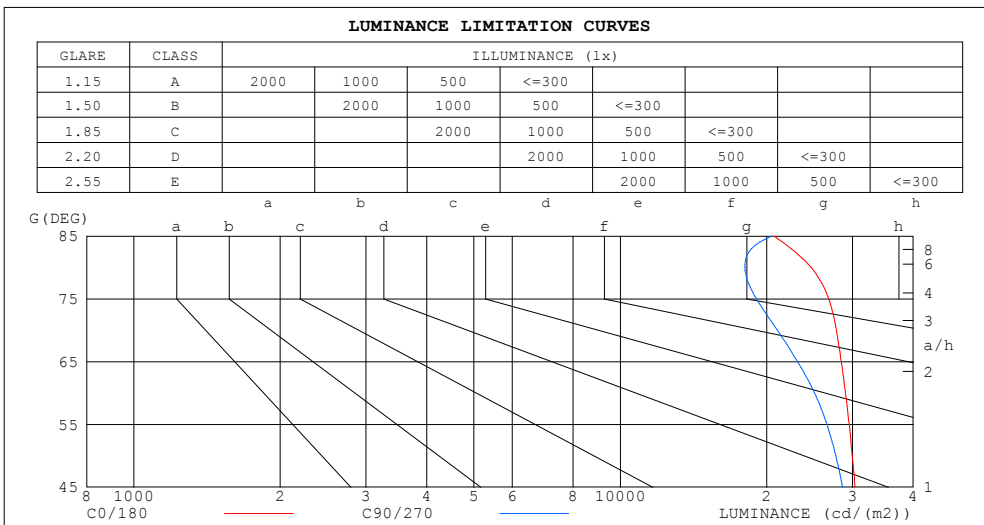
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	75.47	74.66	74.53	76.03	76.10	76.83	76.87	75.72	0- 10	7.298	7.298	3.19,3.19
20	71.60	70.23	70.18	72.59	72.78	74.10	74.26	71.98	10- 20	20.99	28.28	12.4,12.4
30	65.40	63.79	63.59	66.95	67.10	68.79	68.83	65.89	20- 30	32.08	60.36	26.4,26.4
40	56.94	55.19	54.41	58.94	59.16	60.92	60.45	57.23	30- 40	39.03	99.40	43.4,43.4
50	46.64	44.44	43.14	48.57	49.14	50.52	49.45	46.20	40- 50	40.73	140.1	61.2,61.2
60	35.12	32.35	30.35	36.57	37.66	38.04	36.49	33.42	50- 60	36.84	177.0	77.3,77.3
70	23.02	19.42	17.41	23.72	25.73	24.69	23.25	19.98	60- 70	28.17	205.1	89.6,89.6
80	10.38	8.119	7.583	11.92	13.76	12.57	11.54	8.148	70- 80	17.03	222.2	97.1,97.1
90	1.299	2.318	2.119	3.630	1.989	4.108	4.227	1.783	80- 90	6.680	228.8	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:0.0870A P:9.9358W PF:0.9489 Freq:59.98Hz Lamp Flux:228.84x1 lm		
NAME:	TYPE:	WEIGHT:--
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:--



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	20700	20494
80	24690	18044
75	26819	19043
70	27810	21040
65	28467	23141
60	29027	25079
55	29545	26578
50	29986	27733
45	30375	28644

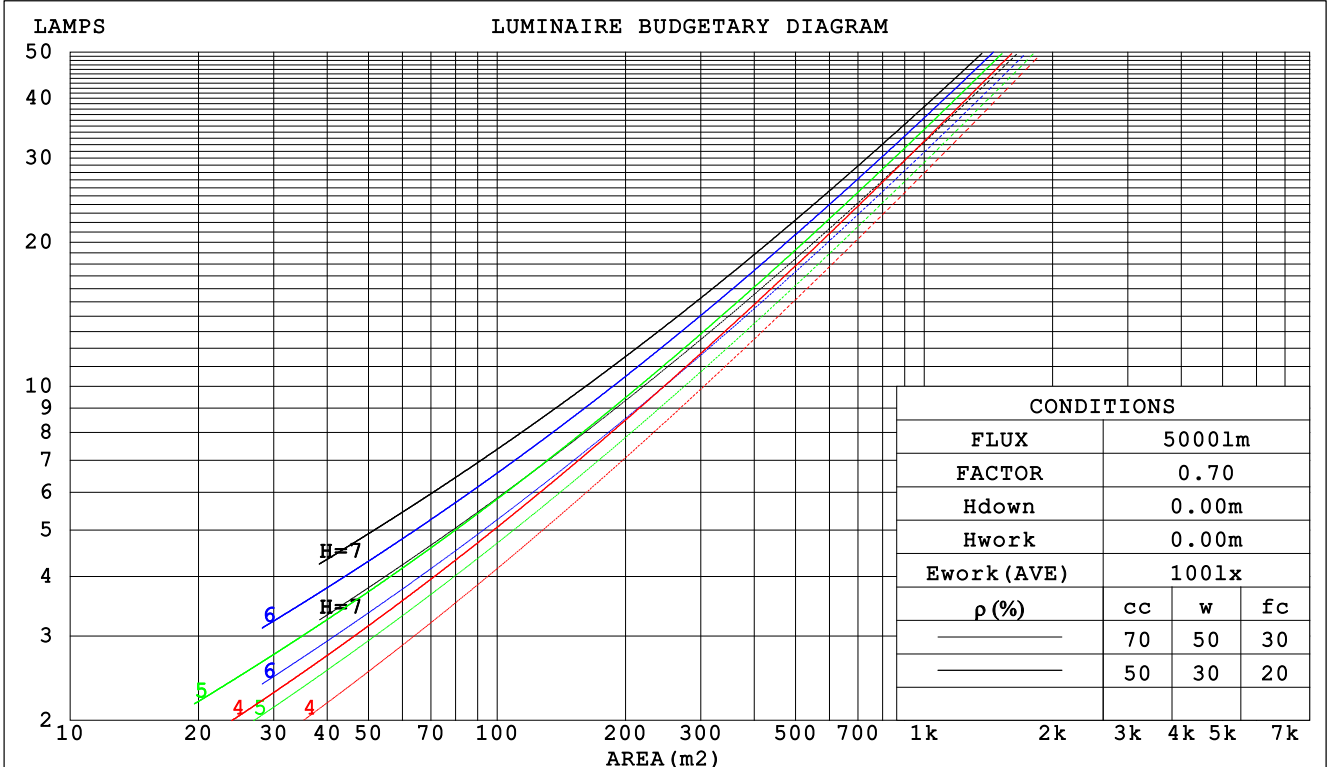
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Dingmin Zhang
 Test Date:2025-12-04

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:0.0870A P:9.9358W PF:0.9489 Freq:59.98Hz Lamp Flux:228.84x1 lm		
NAME:	TYPE:	WEIGHT:--
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:--

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
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	.99	.95	1.01	.97	.93	.97	.93	.90	.93	.90	.87	.89	.87	.85	.83
2.0	.90	.83	.77	.88	.81	.76	.84	.79	.74	.81	.76	.72	.78	.74	.71	.68
3.0	.79	.70	.63	.77	.69	.63	.74	.67	.62	.71	.65	.61	.69	.64	.60	.57
4.0	.69	.60	.54	.68	.60	.53	.66	.58	.52	.63	.57	.52	.61	.56	.51	.49
5.0	.62	.53	.46	.61	.52	.46	.59	.51	.45	.57	.50	.45	.55	.49	.44	.42
6.0	.56	.47	.40	.55	.46	.40	.53	.45	.40	.51	.44	.39	.50	.44	.39	.37
7.0	.51	.42	.35	.50	.41	.35	.48	.41	.35	.47	.40	.35	.45	.39	.34	.32
8.0	.46	.37	.32	.45	.37	.31	.44	.37	.31	.43	.36	.31	.42	.35	.31	.29
9.0	.42	.34	.28	.42	.34	.28	.40	.33	.28	.39	.33	.28	.38	.32	.28	.26
10.0	.39	.31	.26	.38	.31	.26	.37	.30	.25	.36	.30	.25	.36	.30	.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:0.0870A P:9.9358W PF:0.9489 Freq:59.98Hz Lamp Flux:228.84x1 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	.323	.184	.058	.316	.180	.057	.303	.174	.055	.290	.167	.054	.279	.162	.052	
2.0	.299	.164	.050	.293	.161	.050	.281	.156	.049	.271	.152	.048	.261	.147	.046	
3.0	.275	.146	.044	.270	.144	.043	.259	.141	.043	.250	.137	.042	.241	.133	.041	
4.0	.253	.131	.039	.248	.130	.038	.239	.127	.038	.230	.124	.037	.222	.121	.037	
5.0	.233	.119	.034	.229	.118	.034	.221	.115	.034	.213	.112	.033	.206	.110	.033	
6.0	.216	.108	.031	.212	.107	.031	.205	.105	.031	.198	.103	.030	.192	.101	.030	
7.0	.201	.099	.028	.197	.098	.028	.191	.096	.028	.185	.095	.028	.179	.093	.027	
8.0	.187	.091	.026	.184	.091	.026	.178	.089	.025	.173	.088	.025	.168	.086	.025	
9.0	.175	.085	.024	.173	.084	.024	.167	.083	.023	.162	.081	.023	.158	.080	.023	
10.0	.165	.079	.022	.162	.078	.022	.158	.077	.022	.153	.076	.022	.149	.075	.021	

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	.181	.156	.133	.155	.134	.115	.106	.092	.079	.061	.053	.046	.020	.017	.015	
2.0	.173	.132	.097	.148	.114	.084	.102	.079	.059	.059	.046	.034	.019	.015	.011	
3.0	.165	.114	.074	.142	.099	.064	.097	.069	.045	.056	.040	.026	.018	.013	.009	
4.0	.158	.101	.058	.135	.087	.050	.093	.061	.035	.054	.036	.021	.017	.012	.007	
5.0	.150	.091	.047	.129	.078	.041	.089	.055	.029	.052	.032	.017	.017	.011	.006	
6.0	.143	.082	.039	.123	.071	.034	.085	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.136	.075	.033	.117	.065	.029	.081	.046	.020	.047	.027	.012	.015	.009	.004	
8.0	.130	.070	.028	.112	.060	.025	.077	.042	.018	.045	.025	.011	.015	.008	.003	
9.0	.123	.065	.025	.106	.056	.022	.074	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.118	.060	.022	.101	.052	.019	.070	.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:0.0870A P:9.9358W PF:0.9489 Freq:59.98Hz Lamp Flux:228.84x1 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	24.4	25.9	24.7	26.1	26.3	23.9	25.4	24.2	25.6	25.8
3H	26.0	27.5	26.3	27.7	27.9	25.2	26.6	25.5	26.8	27.1
4H	26.7	28.1	27.1	28.4	28.6	25.6	27.0	25.9	27.2	27.5
6H	27.3	28.6	27.6	28.8	29.1	26.0	27.3	26.3	27.6	27.8
8H	27.4	28.7	27.8	29.0	29.3	26.2	27.4	26.5	27.7	28.0
12H	27.5	28.7	27.9	29.0	29.3	26.3	27.5	26.6	27.8	28.1
4H 2H	24.9	26.3	25.2	26.5	26.8	24.5	25.9	24.8	26.1	26.4
3H	26.7	27.9	27.1	28.2	28.5	26.0	27.1	26.3	27.4	27.7
4H	27.6	28.7	27.9	29.0	29.3	26.5	27.6	26.9	28.0	28.3
6H	28.2	29.2	28.6	29.6	29.9	27.0	28.0	27.4	28.4	28.7
8H	28.5	29.4	28.9	29.7	30.1	27.2	28.1	27.7	28.5	28.9
12H	28.6	29.5	29.1	29.8	30.3	27.4	28.3	27.9	28.7	29.1
8H 4H	27.8	28.7	28.2	29.0	29.4	26.8	27.7	27.3	28.1	28.5
6H	28.6	29.3	29.0	29.7	30.2	27.5	28.2	27.9	28.6	29.1
8H	28.9	29.6	29.4	30.0	30.4	27.8	28.5	28.2	28.9	29.3
12H	29.1	29.7	29.6	30.2	30.6	28.1	28.7	28.6	29.1	29.6
12H 4H	27.8	28.6	28.2	29.0	29.4	26.9	27.7	27.3	28.1	28.5
6H	28.6	29.3	29.1	29.7	30.2	27.6	28.2	28.0	28.7	29.1
8H	29.0	29.6	29.4	30.0	30.5	27.9	28.5	28.4	28.9	29.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.2 / - 0.2				
1.5H	+ 0.1 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.3				

CIE Pub.117, 228.8 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -5.1)

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:0.0870A P:9.9358W PF:0.9489 Freq:59.98Hz Lamp Flux:228.84x1 lm		
NAME:	TYPE:	WEIGHT:--
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:--

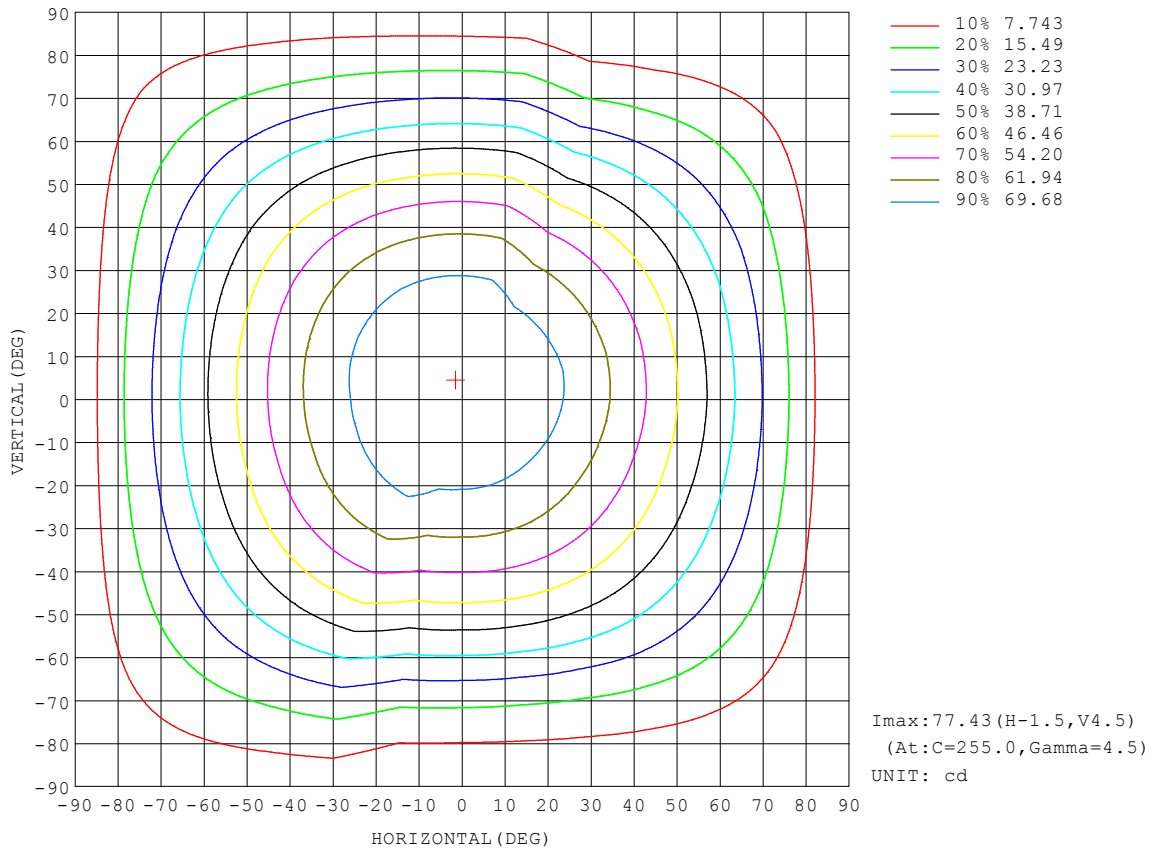
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	57	45	38	56	45	38	55	44	38	31
0.80	67	55	48	66	55	47	64	54	47	40
1.00	75	64	56	74	63	56	72	65	56	48
1.25	82	72	64	81	71	64	78	69	63	56
1.50	87	77	70	86	76	70	83	75	68	61
2.00	94	85	79	92	84	78	89	82	77	69
2.50	98	90	84	96	89	83	92	86	81	73
3.00	102	94	89	99	93	88	95	90	86	77
4.00	106	100	95	103	98	93	99	95	91	82
5.00	108	103	99	106	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
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 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:0.0870A P:9.9358W PF:0.9489 Freq:59.98Hz Lamp Flux:228.84x1 lm		
NAME:	TYPE:	WEIGHT:--
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:--

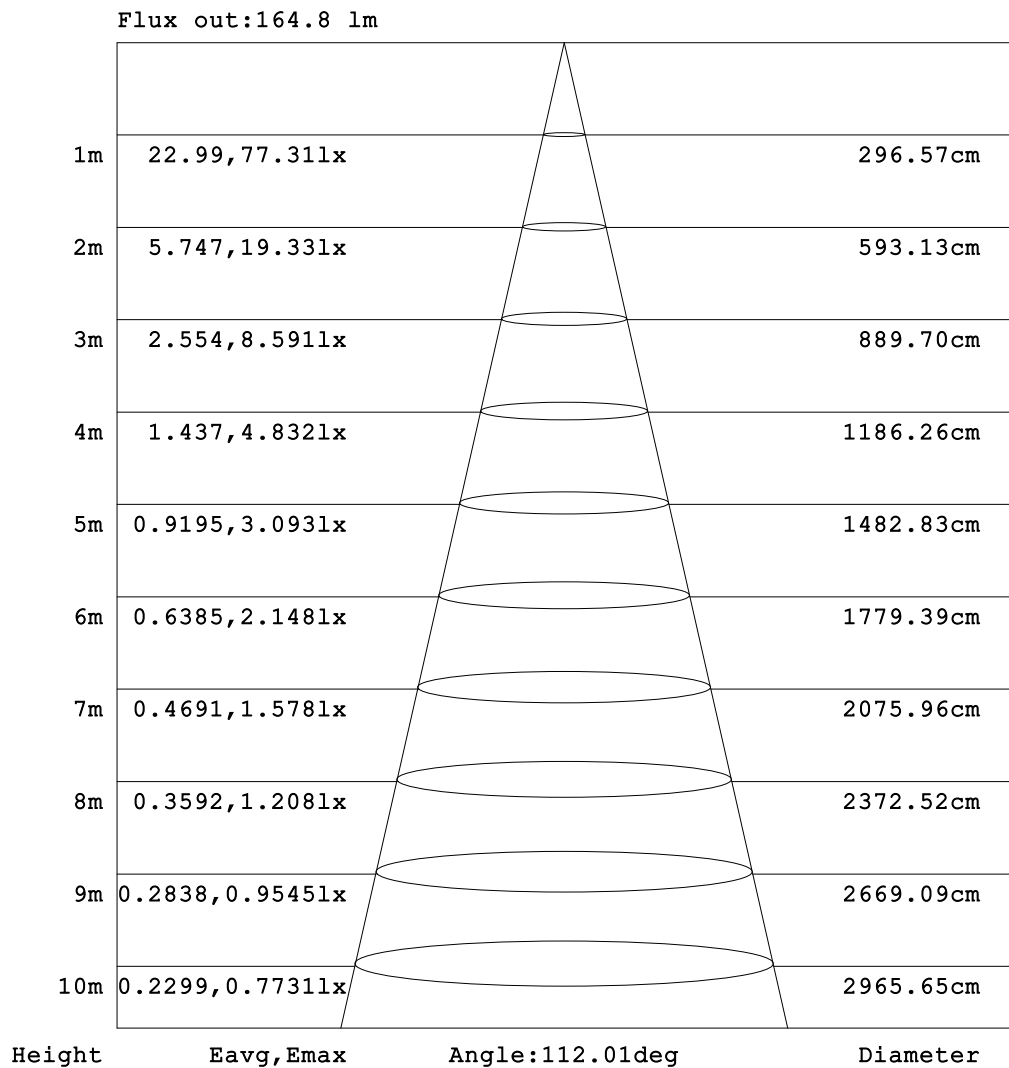


C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Dingmin Zhang
 Test Date:2025-12-04

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:0.0870A P:9.9358W PF:0.9489 Freq:59.98Hz Lamp Flux:228.84x1 lm		
NAME:	TYPE:	WEIGHT:--
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:--



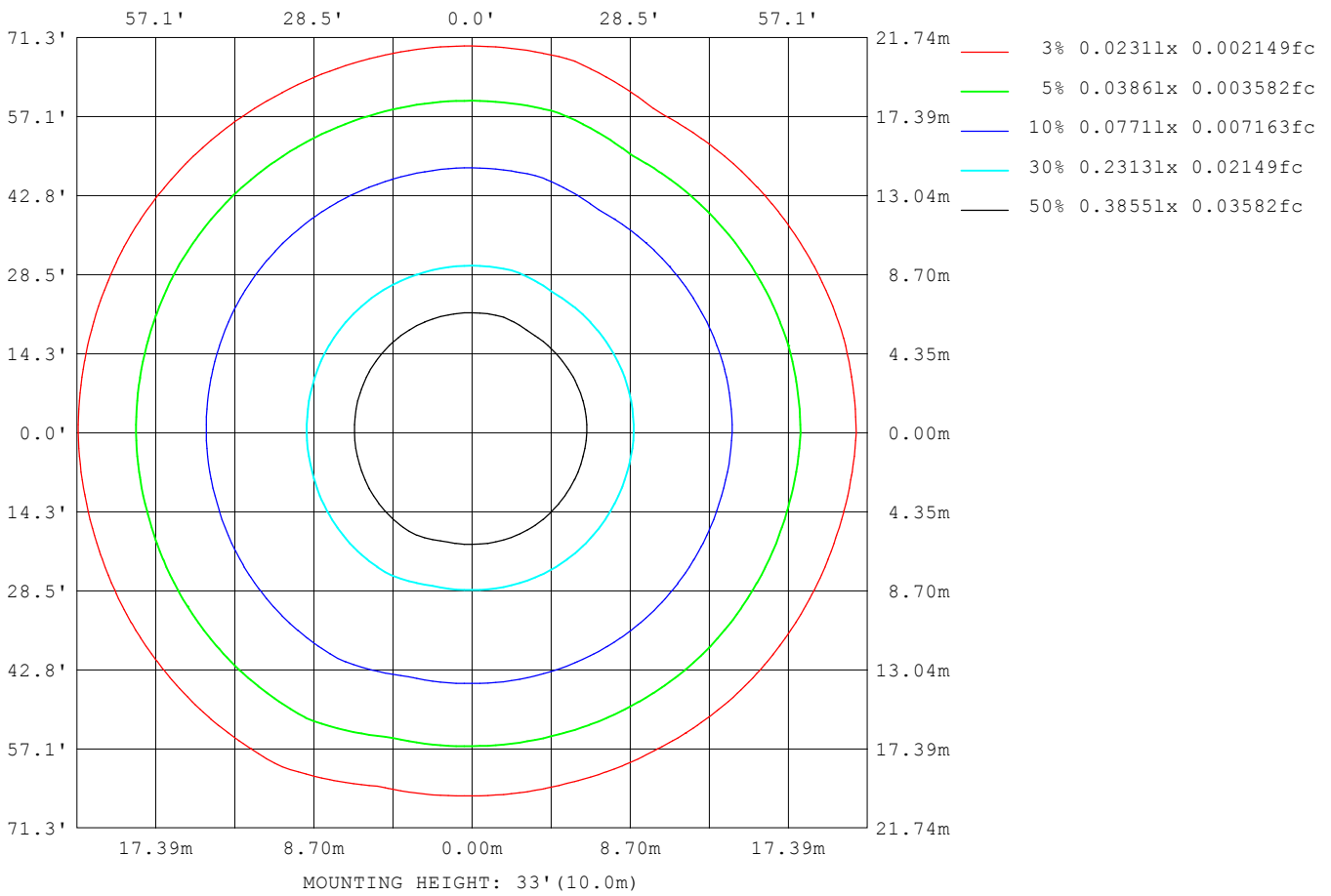
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.0870A P:9.9358W PF:0.9489 Freq:59.98Hz Lamp Flux:228.84x1 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:0.0870A P:9.9358W PF:0.9489 Freq:59.98Hz Lamp Flux:228.84x1 lm		
NAME:	TYPE:	WEIGHT:--
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:--

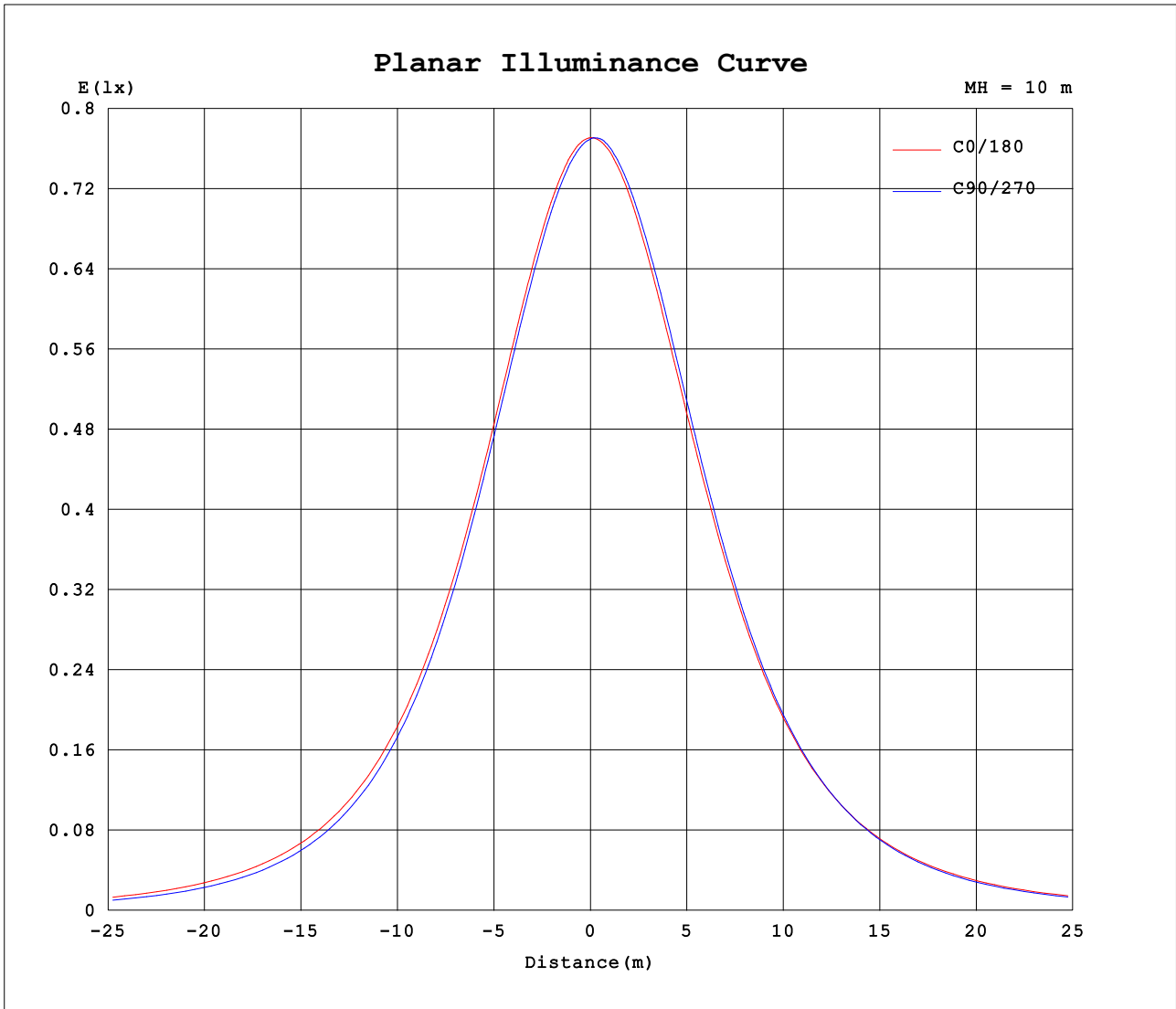
AvgL	cd/m2
L_0~180 (65) av	29720
L_0~180 (75) av	29250
L_0~180 (85) av	28212
L_90~270 (65) av	26114
L_90~270 (75) av	23191
L_90~270 (85) av	27576
L_45 (65) av	27908
L_45 (75) av	25050
L_45 (85) av	27520

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
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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
 Temperature: 24.5DEG
 Operators: Dingmin Zhang
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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:

