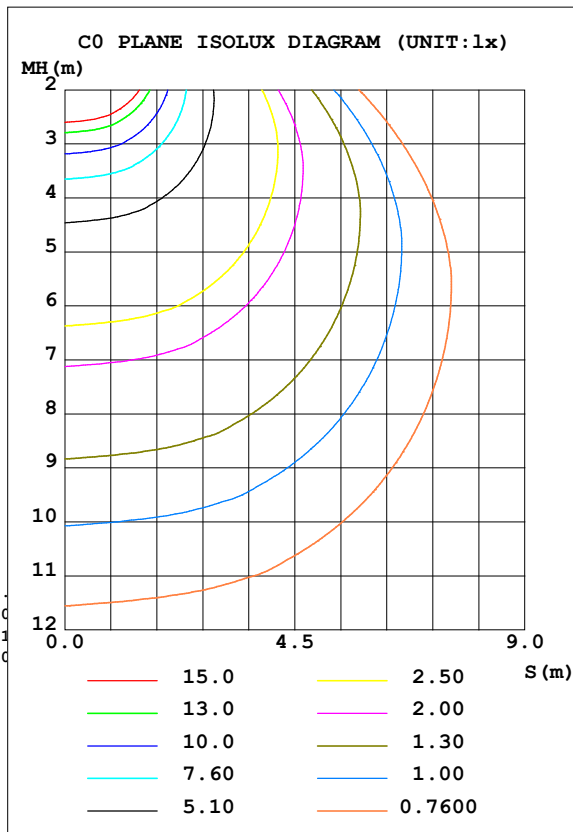
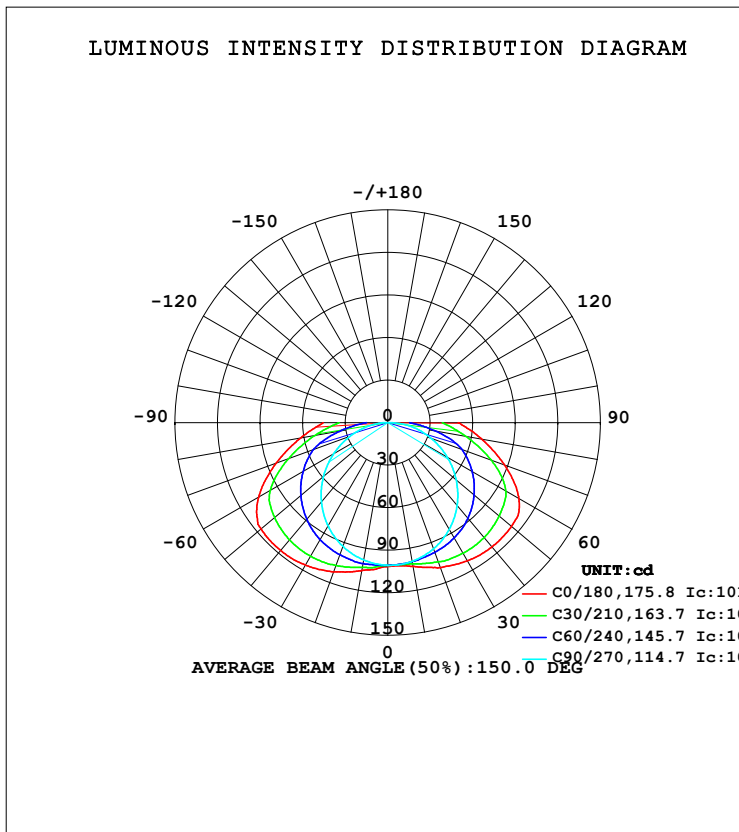


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.43V I:0.0980A P:11.471W PF:0.9717 Freq:0Hz Lamp Flux:464.059x1 lm		
NAME:	TYPE:	WEIGHT:--
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:--

DATA OF LAMP		PHOTOMETRIC DATA Eff: 40.45 lm/W			
MODEL	HF2955-AB	I <sub>max</sub> (cd)	117.7	S/MH (C0/180)	1.74
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.25
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	464.06	η UP, DN (C0-180)	0.0, 50.3
NOMINAL FLUX (lm)	464.059	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 49.7
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.50
TEST VOLTAGE (V)	120.407	η down (%)	100.0	CIBSE SHR MAX	1.55



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:

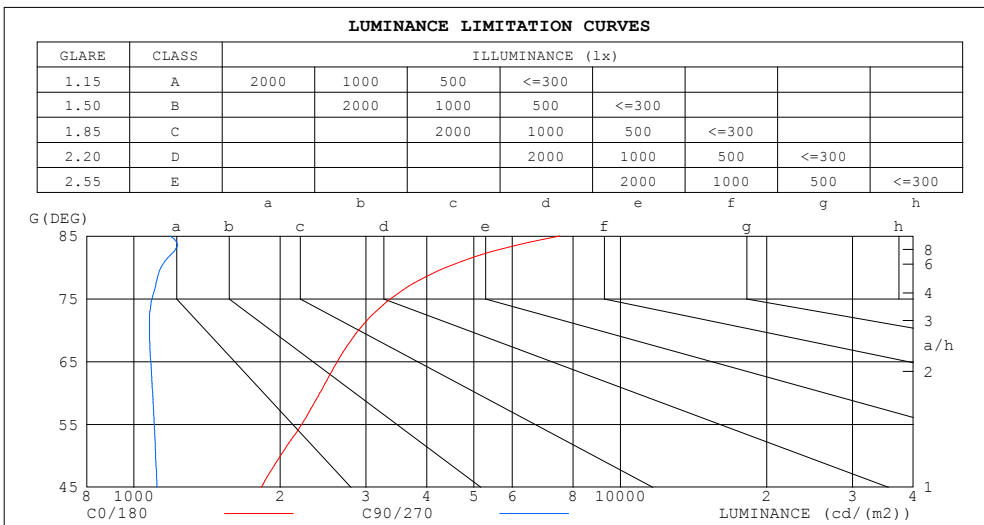
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	102.9	100.3	99.33	103.1	105.9	102.6	98.34	99.62	0- 10	9.655	9.655	2.08,2.08
20	108.9	101.0	94.64	104.9	112.0	103.5	92.82	100.4	10- 20	28.88	38.53	8.3,8.3
30	112.4	100.7	86.84	104.6	116.0	102.6	84.23	100.0	20- 30	47.07	85.60	18.4,18.4
40	114.4	97.50	76.19	101.4	117.7	99.07	72.86	97.20	30- 40	62.31	147.9	31.9,31.9
50	113.8	91.81	63.10	95.50	116.7	92.91	59.27	91.91	40- 50	72.93	220.8	47.6,47.6
60	106.8	83.52	48.39	87.10	105.2	84.20	44.15	84.25	50- 60	77.53	298.4	64.3,64.3
70	87.76	68.37	32.60	67.87	83.79	66.66	28.41	69.50	60- 70	72.27	370.6	79.9,79.9
80	67.31	45.60	17.48	43.71	62.36	43.63	13.43	47.32	70- 80	56.74	427.4	92.1,92.1
90	49.82	27.61	0.8405	25.80	45.74	25.50	0.7945	29.18	80- 90	36.68	464.1	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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:120.43V I:0.0980A P:11.471W PF:0.9717 Freq:0Hz Lamp Flux:464.059x1 lm		
NAME:	TYPE:	WEIGHT:--
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:--



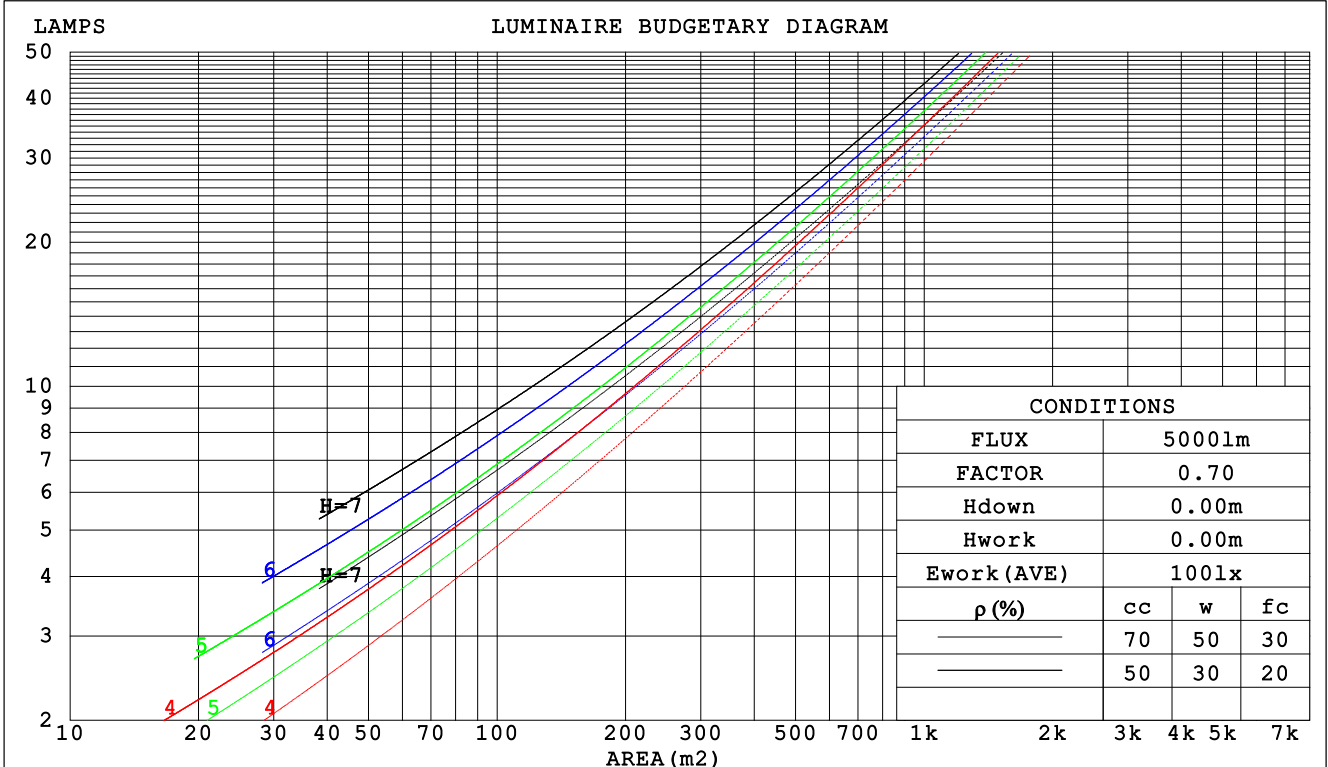
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:24.5DEG  
 Operators:Dingmin Zhang  
 Test Date:2025-12-04

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:120.43V I:0.0980A P:11.471W PF:0.9717 Freq:0Hz Lamp Flux:464.059x1 lm		
NAME:	TYPE:	WEIGHT:--
SPEC.:	DIM.:	SERIAL No.:
MFR.:	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	1.00
1.0	.99	.93	.88	.96	.91	.86	.92	.87	.83	.88	.84	.81	.84	.81	.78	.76
2.0	.83	.75	.68	.81	.74	.67	.78	.71	.65	.74	.69	.64	.71	.66	.62	.60
3.0	.72	.62	.54	.70	.61	.54	.67	.59	.53	.64	.57	.52	.61	.56	.51	.48
4.0	.63	.52	.45	.61	.52	.44	.59	.50	.44	.56	.49	.43	.54	.48	.42	.40
5.0	.55	.45	.38	.54	.45	.37	.52	.43	.37	.50	.42	.36	.48	.41	.36	.34
6.0	.49	.39	.32	.48	.39	.32	.46	.38	.32	.45	.37	.31	.43	.36	.31	.29
7.0	.44	.35	.28	.44	.34	.28	.42	.34	.28	.40	.33	.27	.39	.32	.27	.25
8.0	.40	.31	.25	.39	.31	.24	.38	.30	.24	.37	.29	.24	.36	.29	.24	.22
9.0	.37	.28	.22	.36	.28	.22	.35	.27	.22	.34	.27	.21	.33	.26	.21	.19
10.0	.34	.25	.20	.33	.25	.20	.32	.25	.19	.31	.24	.19	.30	.24	.19	.17



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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:120.43V I:0.0980A P:11.471W PF:0.9717 Freq:0Hz Lamp Flux:464.059x1 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						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.411	.234	.074	.404	.230	.073	.390	.224	.071	.378	.218	.070	.366	.212	.068	
2.0	.359	.197	.060	.352	.194	.060	.340	.189	.059	.328	.184	.058	.318	.180	.057	
3.0	.318	.169	.051	.313	.167	.050	.302	.163	.050	.292	.160	.049	.282	.156	.048	
4.0	.286	.149	.044	.281	.147	.043	.271	.144	.043	.262	.141	.042	.254	.138	.042	
5.0	.259	.132	.038	.255	.131	.038	.246	.128	.038	.238	.126	.037	.230	.123	.037	
6.0	.237	.119	.034	.233	.118	.034	.225	.115	.034	.218	.113	.033	.211	.111	.033	
7.0	.218	.108	.031	.214	.107	.030	.207	.105	.030	.201	.103	.030	.195	.101	.030	
8.0	.201	.098	.028	.198	.098	.028	.192	.096	.027	.186	.094	.027	.181	.093	.027	
9.0	.187	.091	.025	.184	.090	.025	.179	.088	.025	.174	.087	.025	.169	.086	.025	
10.0	.175	.084	.023	.172	.083	.023	.167	.082	.023	.163	.081	.023	.158	.080	.023	

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						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.187	.155	.126	.160	.133	.109	.110	.092	.075	.063	.053	.044	.020	.017	.014	
2.0	.181	.132	.090	.155	.113	.078	.106	.078	.054	.061	.046	.032	.020	.015	.010	
3.0	.174	.115	.067	.149	.099	.058	.102	.069	.041	.059	.040	.024	.019	.013	.008	
4.0	.166	.102	.053	.142	.088	.046	.098	.061	.032	.057	.036	.019	.018	.012	.006	
5.0	.158	.092	.043	.136	.079	.037	.093	.055	.026	.054	.033	.016	.017	.011	.005	
6.0	.150	.084	.036	.129	.072	.031	.089	.051	.022	.052	.030	.013	.017	.010	.004	
7.0	.143	.077	.031	.123	.067	.027	.085	.047	.019	.049	.027	.011	.016	.009	.004	
8.0	.135	.071	.027	.117	.062	.023	.081	.043	.017	.047	.025	.010	.015	.008	.003	
9.0	.129	.066	.024	.111	.057	.021	.077	.040	.015	.045	.024	.009	.014	.008	.003	
10.0	.122	.062	.021	.106	.054	.019	.073	.038	.013	.043	.022	.008	.014	.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:120.43V I:0.0980A P:11.471W PF:0.9717 Freq:0Hz Lamp Flux:464.059x1 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	16.4	18.1	16.7	18.3	18.5	13.1	14.8	13.4	15.0	15.2
3H	19.0	20.6	19.3	20.9	21.1	14.8	16.4	15.1	16.6	16.9
4H	20.4	21.9	20.7	22.2	22.4	15.5	17.0	15.8	17.3	17.6
6H	21.8	23.2	22.1	23.5	23.8	16.1	17.6	16.5	17.9	18.2
8H	22.5	24.0	22.9	24.3	24.6	16.4	17.8	16.7	18.1	18.4
12H	23.4	24.8	23.8	25.1	25.4	16.6	17.9	16.9	18.2	18.6
4H 2H	17.0	18.5	17.3	18.8	19.0	14.7	16.2	15.0	16.5	16.8
3H	19.8	21.2	20.2	21.5	21.8	16.6	18.0	17.0	18.3	18.6
4H	21.4	22.6	21.8	23.0	23.3	17.5	18.8	17.9	19.1	19.5
6H	23.0	24.2	23.4	24.5	24.9	18.3	19.4	18.7	19.8	20.1
8H	23.9	25.0	24.3	25.4	25.8	18.5	19.6	19.0	20.0	20.4
12H	24.9	25.9	25.4	26.3	26.7	18.8	19.7	19.2	20.1	20.6
8H 4H	21.7	22.8	22.1	23.2	23.6	18.6	19.7	19.1	20.1	20.5
6H	23.6	24.5	24.1	24.9	25.4	19.7	20.6	20.1	21.0	21.4
8H	24.7	25.5	25.2	26.0	26.4	20.1	20.9	20.6	21.4	21.8
12H	26.0	26.7	26.5	27.2	27.7	20.4	21.1	20.9	21.6	22.1
12H 4H	21.7	22.7	22.2	23.1	23.5	19.0	20.0	19.4	20.3	20.8
6H	23.7	24.5	24.2	25.0	25.4	20.2	21.0	20.6	21.4	21.9
8H	24.9	25.6	25.4	26.1	26.6	20.7	21.5	21.2	21.9	22.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.3 / - 0.4					+ 0.2 / - 0.5				

CIE Pub.117, 464.1 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -2.7)

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:120.43V I:0.0980A P:11.471W PF:0.9717 Freq:0Hz Lamp Flux:464.059x1 lm		
NAME:	TYPE:	WEIGHT:--
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:--

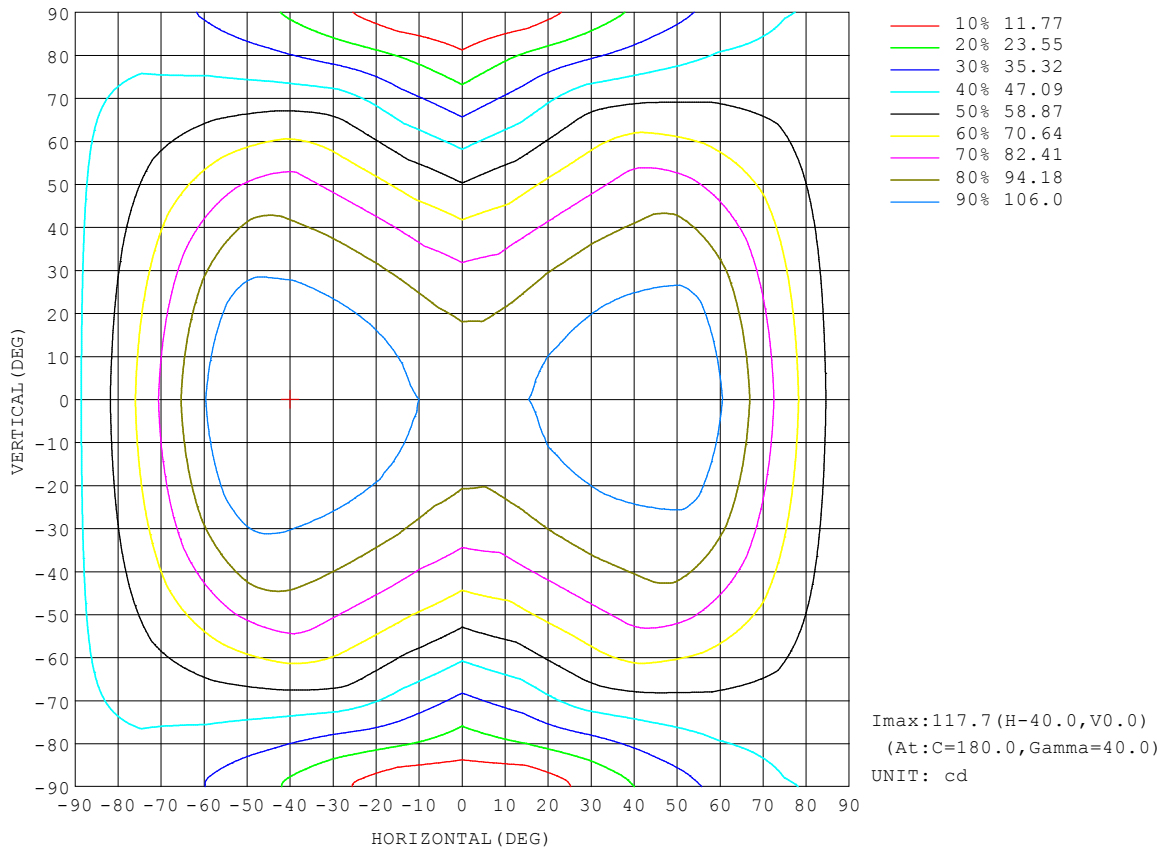
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	51	38	30	50	38	30	49	37	30	23
0.80	60	47	39	59	46	38	57	46	38	30
1.00	68	55	47	67	55	47	65	57	46	38
1.25	76	63	54	74	62	54	71	61	53	45
1.50	81	69	60	79	68	60	76	66	59	50
2.00	88	78	70	86	76	69	82	74	67	58
2.50	93	83	76	91	82	75	86	79	73	63
3.00	97	88	81	94	86	80	90	83	78	68
4.00	102	94	88	99	92	87	94	89	84	74
5.00	105	98	93	102	96	91	97	92	88	78
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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:120.43V I:0.0980A P:11.471W PF:0.9717 Freq:0Hz Lamp Flux:464.059x1 lm		
NAME:	TYPE:	WEIGHT:--
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:--

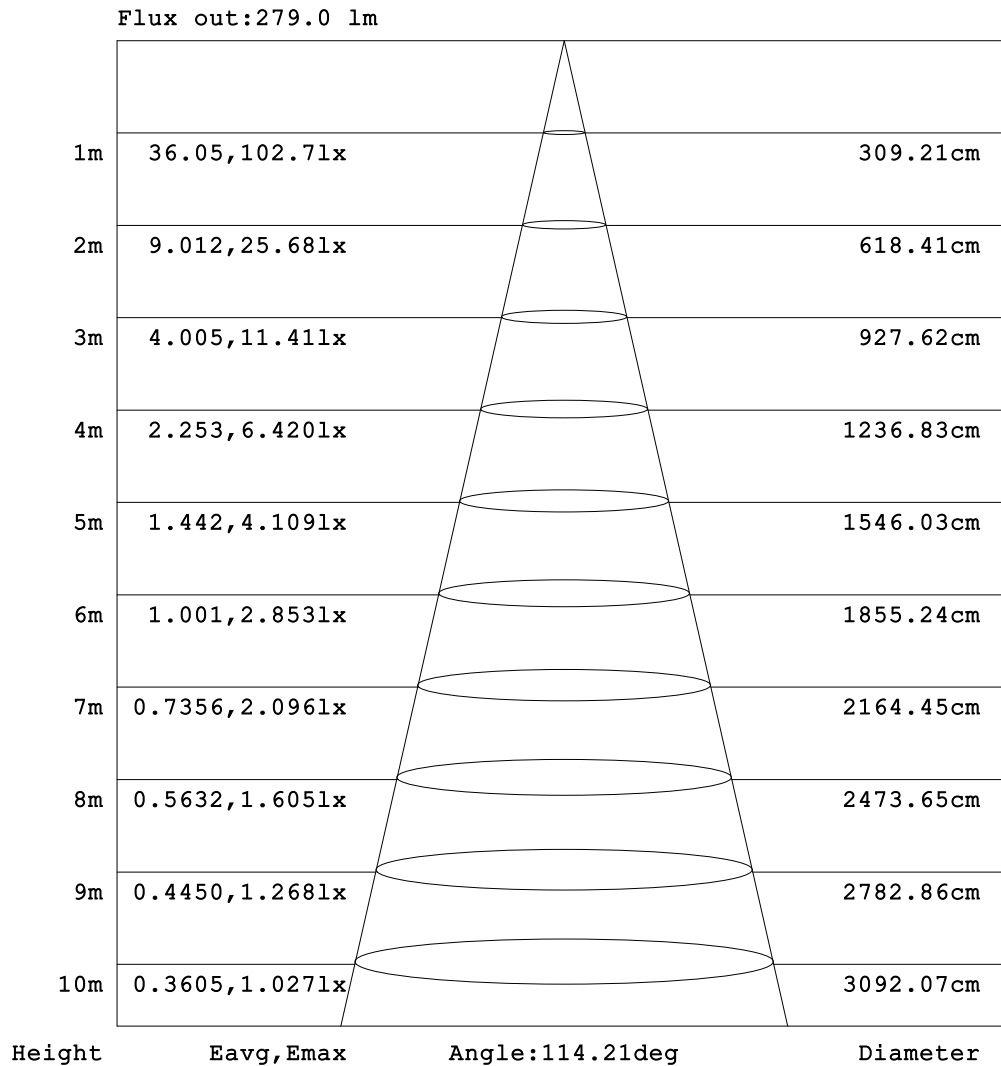


C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:24.5DEG  
 Operators:Dingmin Zhang  
 Test Date:2025-12-04

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:120.43V I:0.0980A P:11.471W PF:0.9717 Freq:0Hz Lamp Flux:464.059x1 lm		
NAME:	TYPE:	WEIGHT:--
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:--



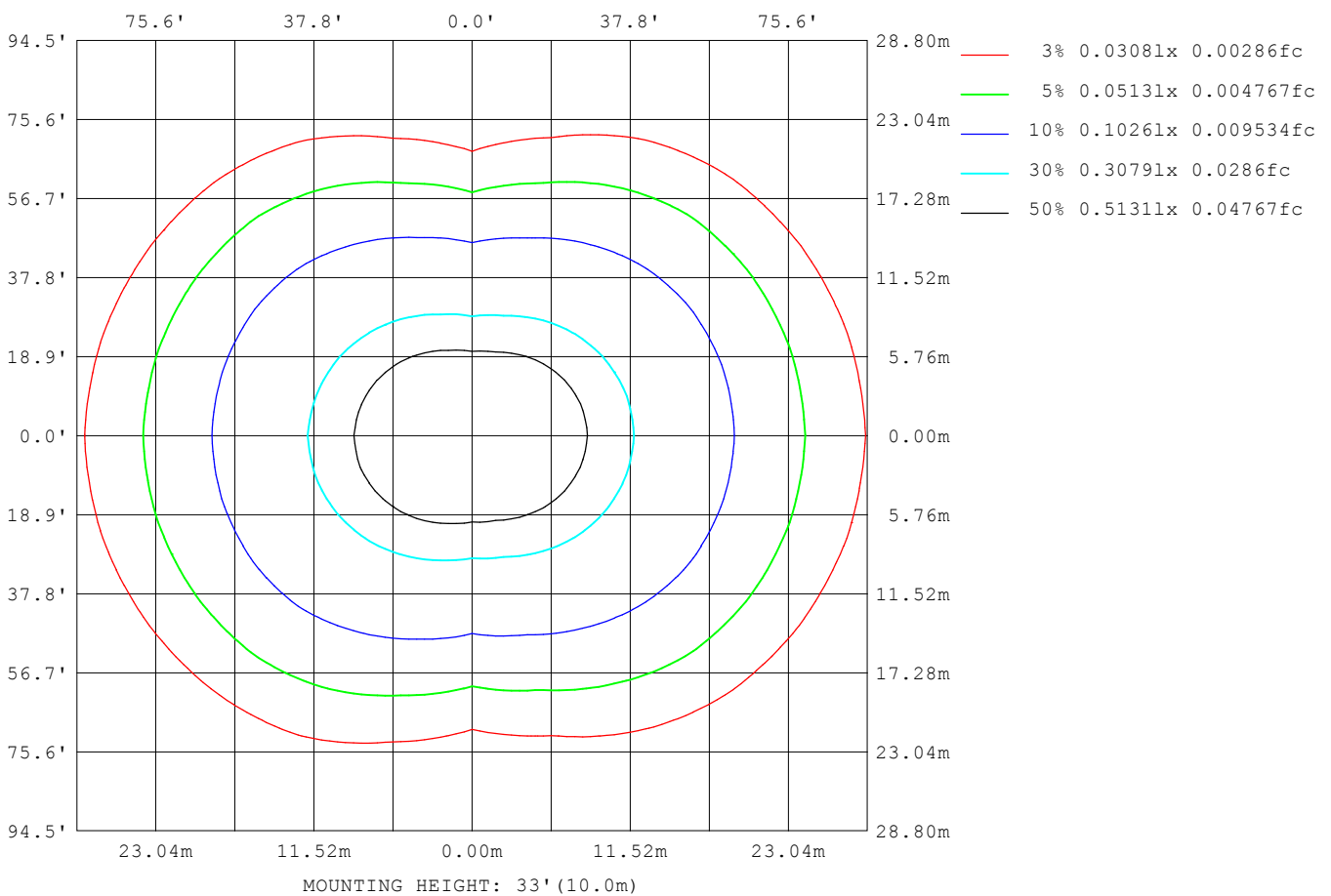
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:120.43V I:0.0980A P:11.471W PF:0.9717 Freq:0Hz Lamp Flux:464.059x1 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:120.43V I:0.0980A P:11.471W PF:0.9717 Freq:0Hz Lamp Flux:464.059x1 lm		
NAME:	TYPE:	WEIGHT:--
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:--

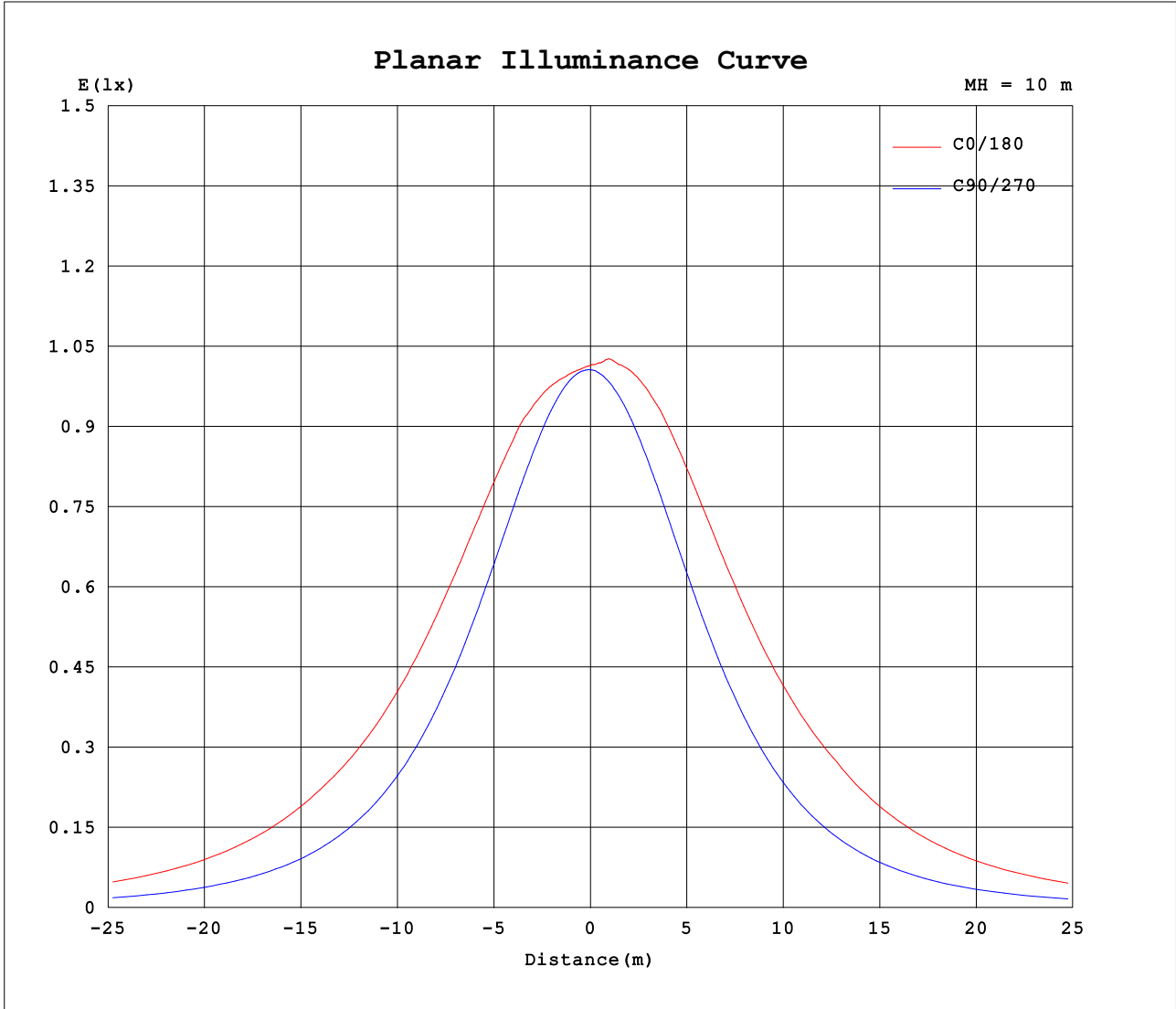
AvgL	cd/m2
L_0~180 (65) av	2580
L_0~180 (75) av	3273
L_0~180 (85) av	7196
L_90~270 (65) av	1027
L_90~270 (75) av	998
L_90~270 (85) av	1020
L_45 (65) av	2091
L_45 (75) av	2466
L_45 (85) av	4518

Standard: GB/T 29293-2012

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:

### Planar Illuminance Curve



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

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



