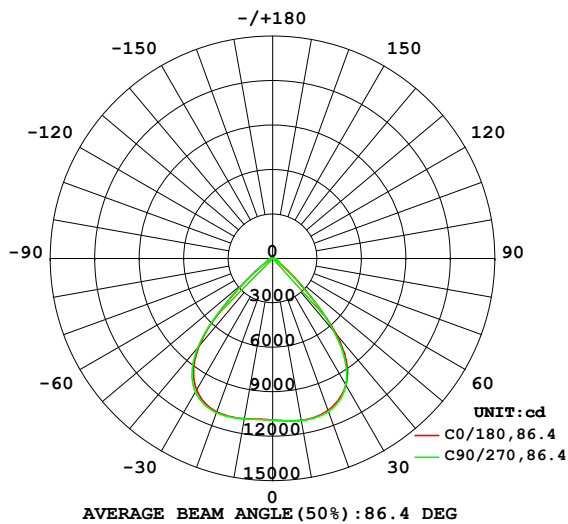


## LUMINAIRE PHOTOMETRIC TEST REPORT

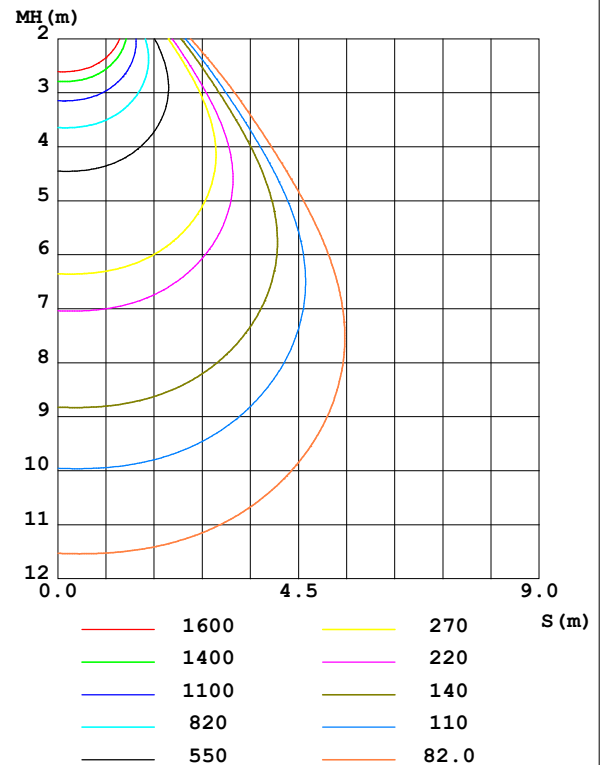
Test:U:230.53V I:0.5296A P:118.62W PF:0.9715 Freq:50.01Hz Lamp Flux:19579.2x1 lm		
NAME: PA-120W	TYPE: 4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 165.06 lm/W
MODEL	SMD	I <sub>max</sub> (cd)	11127	S/MH (C0/180)	1.29	
NOMINAL POWER(W)	120	LOR (%)	100.0	S/MH (C90/270)	1.30	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	19579	η UP,DN (C0-180)	0.0,47.3	
NOMINAL FLUX(lm)	19579.2	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,52.7	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25	
TEST VOLTAGE(V)	230	η down (%)	100.0	CIBSE SHR MAX	1.30	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.1℃  
Operators:  
Test Date: 2024-12-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity: 50.0%  
Test Distance: 10.026m [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	1109	1109	1110	1106	1098	1098	1099	1103	0- 10	1048	1048	5.35, 5.35
20	1091	1091	1099	1100	1102	1103	1108	1108	10- 20	3136	4184	21.4, 21.4
30	987.0	985.8	986.1	990.9	1026	1031	1041	1035	20- 30	4919	9102	46.5, 46.5
40	669.5	659.0	643.5	655.8	773.6	784.9	790.4	783.9	30- 40	5560	14662	74.9, 74.9
50	165.5	158.0	147.3	160.3	243.3	247.6	241.6	242.2	40- 50	3388	18050	92.2, 92.2
60	42.77	42.60	42.76	42.79	52.27	49.63	51.00	49.77	50- 60	854.0	18903	96.5, 96.5
70	26.31	26.83	27.22	27.10	29.80	29.95	30.28	29.83	60- 70	356.9	19260	98.4, 98.4
80	13.90	14.00	13.27	14.49	19.07	19.70	19.16	18.66	70- 80	243.1	19504	99.6, 99.6
90	0.1688	0.1688	0.1697	0.1697	0.1924	0.2436	0.2671	0.2461	80- 90	75.61	19579	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:X10cd									UNIT: lm		

Conical surface Flux(90deg): 16813 lm

%lum = 85.9%

%lamp = 85.9%

Conical surface Flux(120deg): 18903 lm

%lum = 96.5%

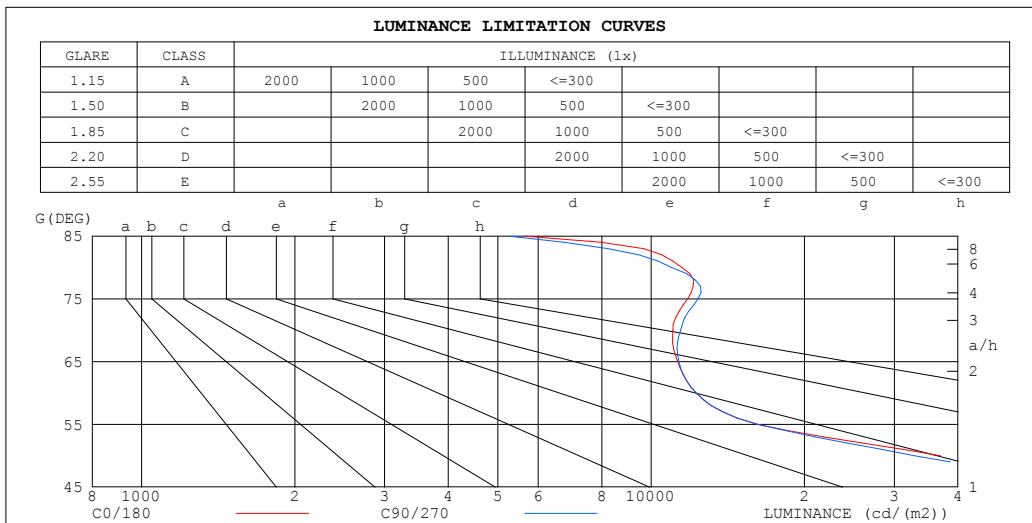
%lamp = 96.5%

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature: 25.1℃  
 Operators:  
 Test Date: 2024-12-11

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
 Humidity: 50.0%  
 Test Distance: 10.026m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

Test:U:230.53V I:0.5296A P:118.62W PF:0.9715 Freq:50.01Hz Lamp Flux:19579.2x1 lm		
NAME: PA-120W	TYPE: 4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:



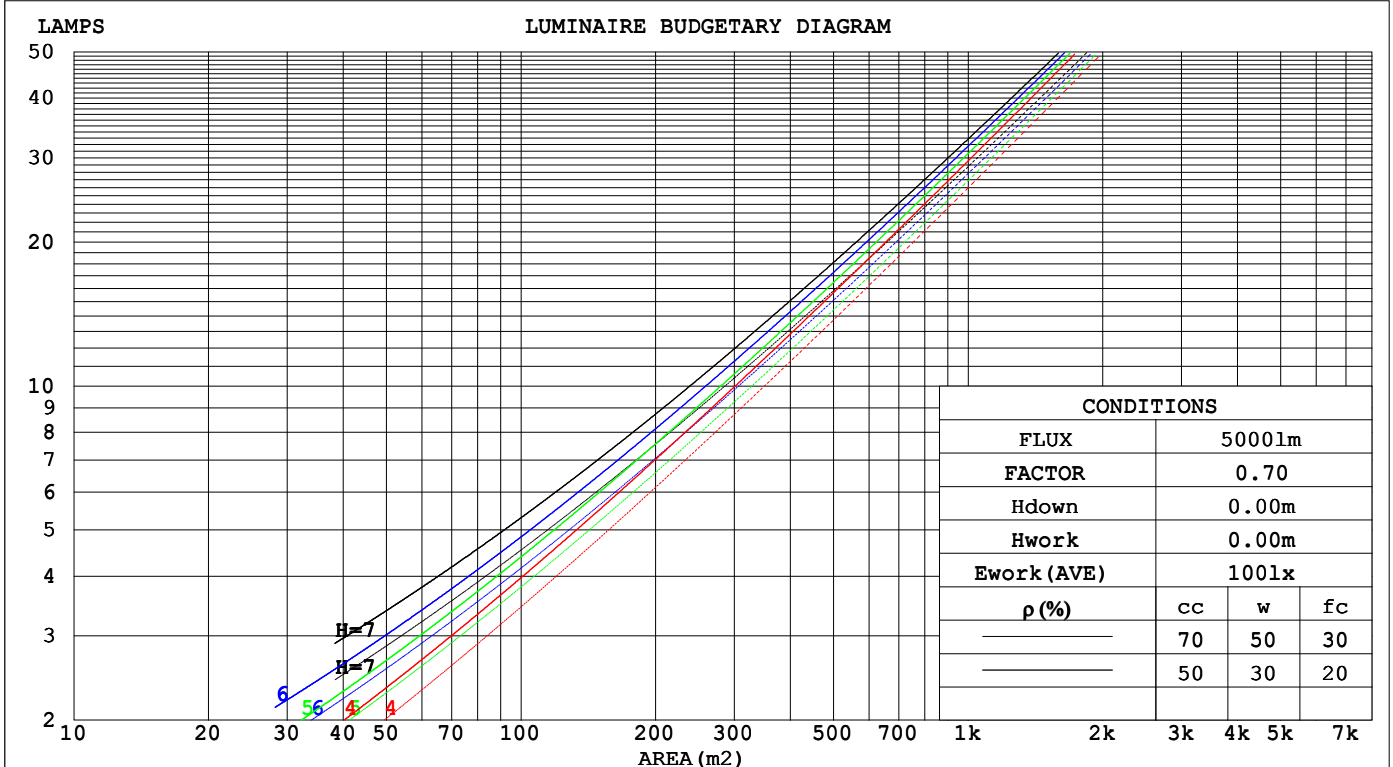
C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.1°C  
Operators:  
Test Date: 2024-12-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity: 50.0%  
Test Distance: 10.026m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.53V I:0.5296A P:118.62W PF:0.9715 Freq:50.01Hz Lamp Flux:19579.2x1 lm		
NAME: PA-120W	TYPE: 4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	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	1.09	1.06	1.03	1.07	1.04	1.01	1.02	1.00	.98	.99	.97	.95	.95	.94	.92	.91
2.0	.99	.94	.90	.97	.93	.89	.94	.90	.87	.91	.88	.85	.88	.85	.83	.81
3.0	.90	.84	.79	.89	.83	.79	.86	.81	.77	.84	.80	.76	.81	.78	.75	.73
4.0	.83	.76	.71	.81	.75	.70	.79	.74	.69	.77	.72	.69	.75	.71	.68	.66
5.0	.76	.69	.63	.75	.68	.63	.73	.67	.62	.71	.66	.62	.69	.65	.61	.60
6.0	.70	.62	.57	.69	.62	.57	.67	.61	.57	.66	.60	.56	.64	.59	.56	.54
7.0	.64	.57	.52	.63	.57	.52	.62	.56	.51	.61	.55	.51	.60	.55	.51	.49
8.0	.59	.52	.47	.59	.52	.47	.58	.51	.47	.56	.51	.47	.55	.50	.46	.45
9.0	.55	.48	.43	.54	.48	.43	.53	.47	.43	.52	.47	.43	.52	.46	.43	.41
10.0	.51	.44	.40	.51	.44	.40	.50	.44	.40	.49	.43	.39	.48	.43	.39	.38



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1℃  
Operators:  
Test Date:2024-12-11

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity:50.0%  
Test Distance:10.026m [K=1.0000]  
Remarks:

### WEC AND CCEC

Test:U:230.53V I:0.5296A P:118.62W PF:0.9715 Freq:50.01Hz																	
Lamp Flux:19579.2x1 lm																	
NAME: PA-120W						TYPE: 4000K						WEIGHT:					
SPEC.:						DIM.:						SERIAL No.:					
MFR.:						SUR.: 0.149m*0.149m*3.14						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	.217	.123	.039	.210	.120	.038	.197	.113	.036	.186	.107	.034	.175	.101	.033															
2.0	.209	.115	.035	.204	.112	.035	.193	.107	.033	.183	.102	.032	.173	.098	.031															
3.0	.200	.106	.032	.195	.104	.031	.185	.100	.031	.176	.097	.030	.168	.093	.029															
4.0	.190	.099	.029	.185	.097	.029	.177	.094	.028	.169	.091	.027	.162	.088	.027															
5.0	.180	.092	.027	.176	.091	.026	.169	.088	.026	.162	.086	.025	.156	.083	.025															
6.0	.171	.086	.025	.168	.085	.024	.161	.083	.024	.155	.081	.024	.150	.079	.023															
7.0	.163	.081	.023	.160	.080	.023	.154	.078	.022	.149	.076	.022	.143	.075	.022															
8.0	.155	.076	.021	.152	.075	.021	.147	.073	.021	.142	.072	.021	.138	.071	.021															
9.0	.148	.071	.020	.145	.071	.020	.141	.069	.020	.136	.068	.020	.132	.067	.019															
10.0	.141	.068	.019	.139	.067	.019	.134	.066	.019	.130	.065	.018	.127	.064	.018															

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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.174	.157	.142	.149	.135	.122	.102	.093	.084	.059	.054	.049	.019	.017	.016	
2.0	.161	.132	.108	.138	.114	.093	.095	.079	.065	.055	.046	.038	.018	.015	.012	
3.0	.151	.114	.084	.129	.098	.073	.089	.068	.051	.051	.040	.030	.016	.013	.010	
4.0	.142	.100	.067	.122	.086	.058	.084	.060	.041	.049	.035	.024	.016	.011	.008	
5.0	.135	.089	.055	.116	.077	.048	.080	.054	.034	.046	.031	.020	.015	.010	.007	
6.0	.128	.080	.045	.110	.069	.039	.076	.048	.028	.044	.028	.017	.014	.009	.005	
7.0	.122	.073	.038	.105	.063	.033	.072	.044	.024	.042	.026	.014	.014	.009	.005	
8.0	.116	.067	.033	.100	.058	.028	.069	.041	.020	.040	.024	.012	.013	.008	.004	
9.0	.111	.062	.028	.096	.054	.025	.066	.038	.018	.039	.022	.010	.013	.007	.003	
10.0	.106	.057	.025	.092	.050	.022	.064	.035	.015	.037	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1℃  
Operators:  
Test Date:2024-12-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity:50.0%  
Test Distance:10.026m [K=1.0000]  
Remarks:

## UGR(Unified Glare Rating) Table

Test:U:230.53V I:0.5296A P:118.62W PF:0.9715 Freq:50.01Hz Lamp Flux:19579.2x1 lm												
NAME: PA-120W					TYPE: 4000K			WEIGHT:				
SPEC.:					DIM.:			SERIAL No.:				
MFR.:					SUR.: 0.149m*0.149m*3.14			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		15.3	16.5	15.7	16.8	17.1	15.1	16.3	15.4	16.6	16.9	
		3H	16.8	17.8	17.1	18.2	18.5	16.7	17.8	17.1	18.1	18.5
		4H	17.5	18.5	17.9	18.9	19.3	17.5	18.5	17.9	18.9	19.3
		6H	18.2	19.1	18.6	19.5	19.9	18.2	19.1	18.6	19.5	19.9
		8H	18.4	19.3	18.8	19.7	20.1	18.3	19.2	18.8	19.6	20.0
		12H	18.5	19.3	18.9	19.7	20.1	18.4	19.2	18.8	19.6	20.0
4H 2H		15.7	16.7	16.1	17.0	17.4	15.5	16.5	15.9	16.9	17.3	
		3H	17.5	18.3	17.9	18.7	19.1	17.4	18.3	17.9	18.7	19.1
		4H	18.5	19.2	18.9	19.6	20.1	18.4	19.2	18.9	19.6	20.0
		6H	19.3	19.9	19.8	20.4	20.8	19.2	19.9	19.7	20.3	20.8
		8H	19.5	20.1	20.0	20.6	21.0	19.4	20.0	19.9	20.5	20.9
		12H	19.6	20.1	20.1	20.6	21.1	19.5	20.0	20.0	20.5	20.9
8H 4H		18.8	19.4	19.3	19.9	20.3	18.8	19.4	19.3	19.8	20.3	
		6H	19.8	20.3	20.3	20.8	21.3	19.7	20.2	20.2	20.7	21.2
		8H	20.1	20.5	20.6	21.0	21.5	20.0	20.4	20.5	20.9	21.4
		12H	20.2	20.6	20.7	21.1	21.7	20.1	20.4	20.6	20.9	21.5
12H 4H		18.9	19.4	19.4	19.9	20.3	18.9	19.4	19.3	19.9	20.3	
		6H	19.9	20.3	20.4	20.8	21.3	19.8	20.2	20.3	20.7	21.3
		8H	20.2	20.6	20.7	21.0	21.6	20.1	20.5	20.6	21.0	21.5
CIE190: 2010												

CIE190: 2010  
Area: 0.0697111 m2

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1℃  
Operators:  
Test Date:2024-12-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity:50.0%  
Test Distance:10.026m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:230.53V I:0.5296A P:118.62W PF:0.9715 Freq:50.01Hz Lamp Flux:19579.2x1 lm		
NAME: PA-120W	TYPE: 4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:

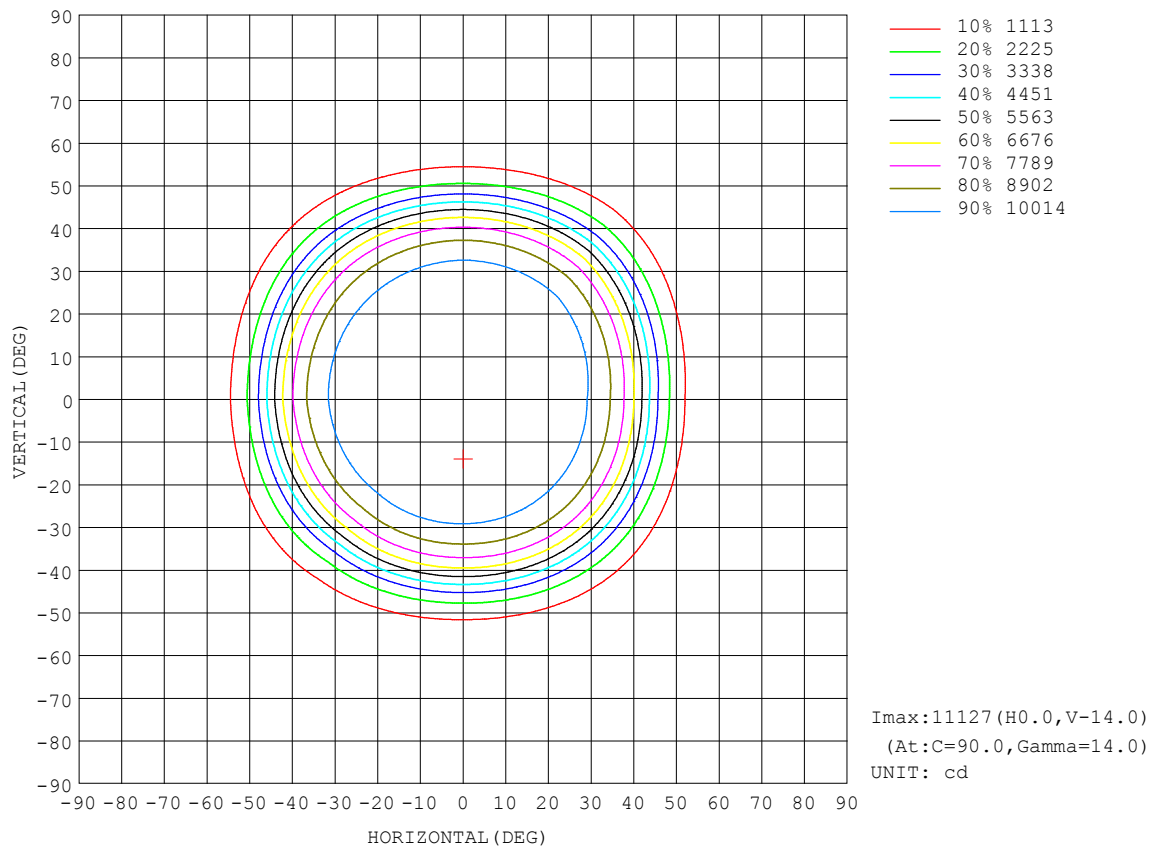
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	76	67	62	75	67	62	74	67	62	57
0.80	85	77	72	84	77	72	83	76	71	66
1.00	91	84	79	91	84	79	89	84	78	73
1.25	97	90	85	96	89	85	94	88	84	79
1.50	100	94	90	99	93	89	97	92	88	83
2.00	105	99	95	103	98	94	100	96	93	87
2.50	107	102	98	105	101	97	102	98	95	89
3.00	109	105	101	107	103	100	104	100	98	91
4.00	111	108	105	109	106	103	106	103	101	93
5.00	113	110	107	111	108	106	107	104	103	94
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.1℃  
Operators:  
Test Date: 2024-12-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity: 50.0%  
Test Distance: 10.026m [K=1.0000]  
Remarks:

### ISOCANDELA DIAGRAM

Test:U:230.53V I:0.5296A P:118.62W PF:0.9715 Freq:50.01Hz Lamp Flux:19579.2x1 lm		
NAME: PA-120W	TYPE: 4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:



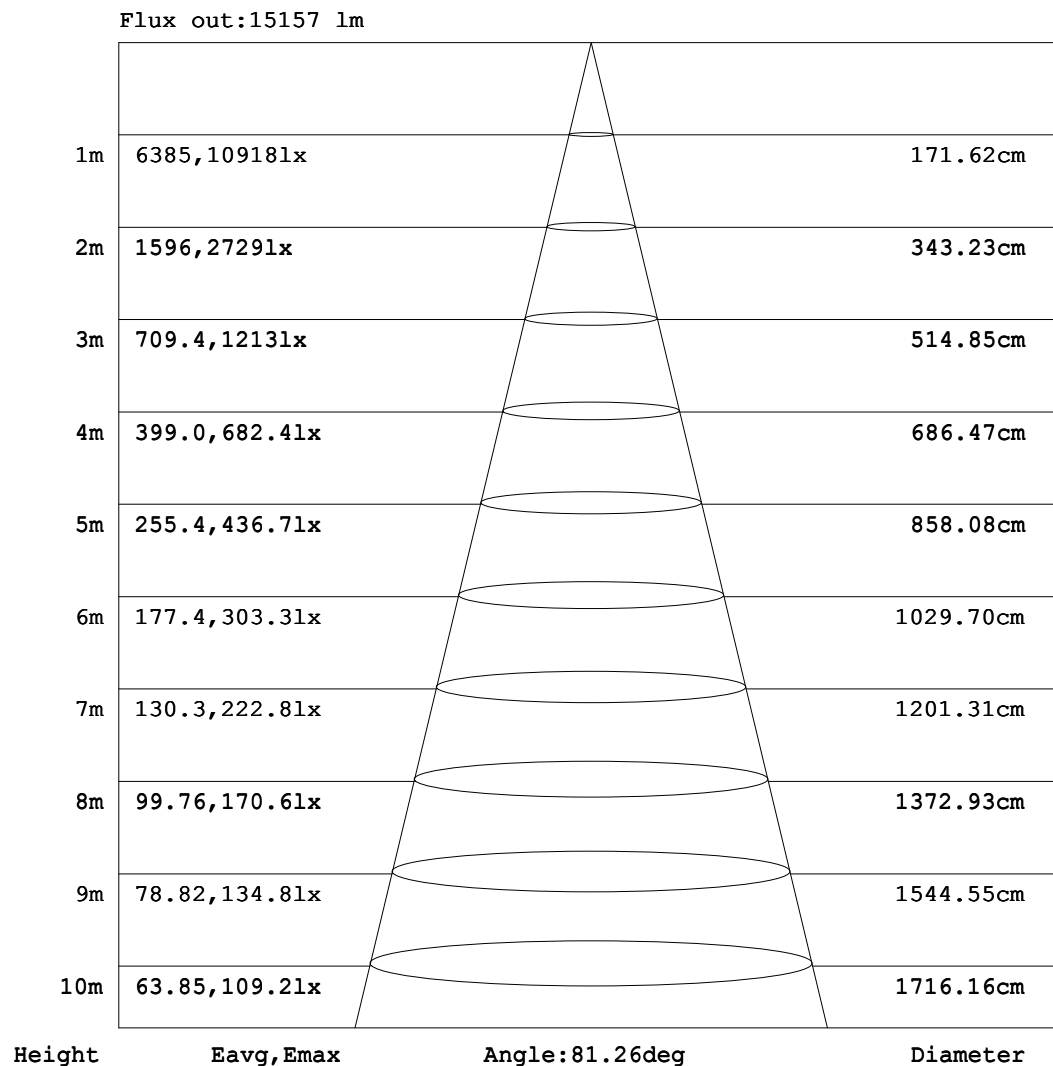
C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1℃  
Operators:  
Test Date:2024-12-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity:50.0%  
Test Distance:10.026m [K=1.0000]  
Remarks:



### AAI Figure

Test:U:230.53V I:0.5296A P:118.62W PF:0.9715 Freq:50.01Hz Lamp Flux:19579.2x1 lm		
NAME: PA-120W	TYPE: 4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:



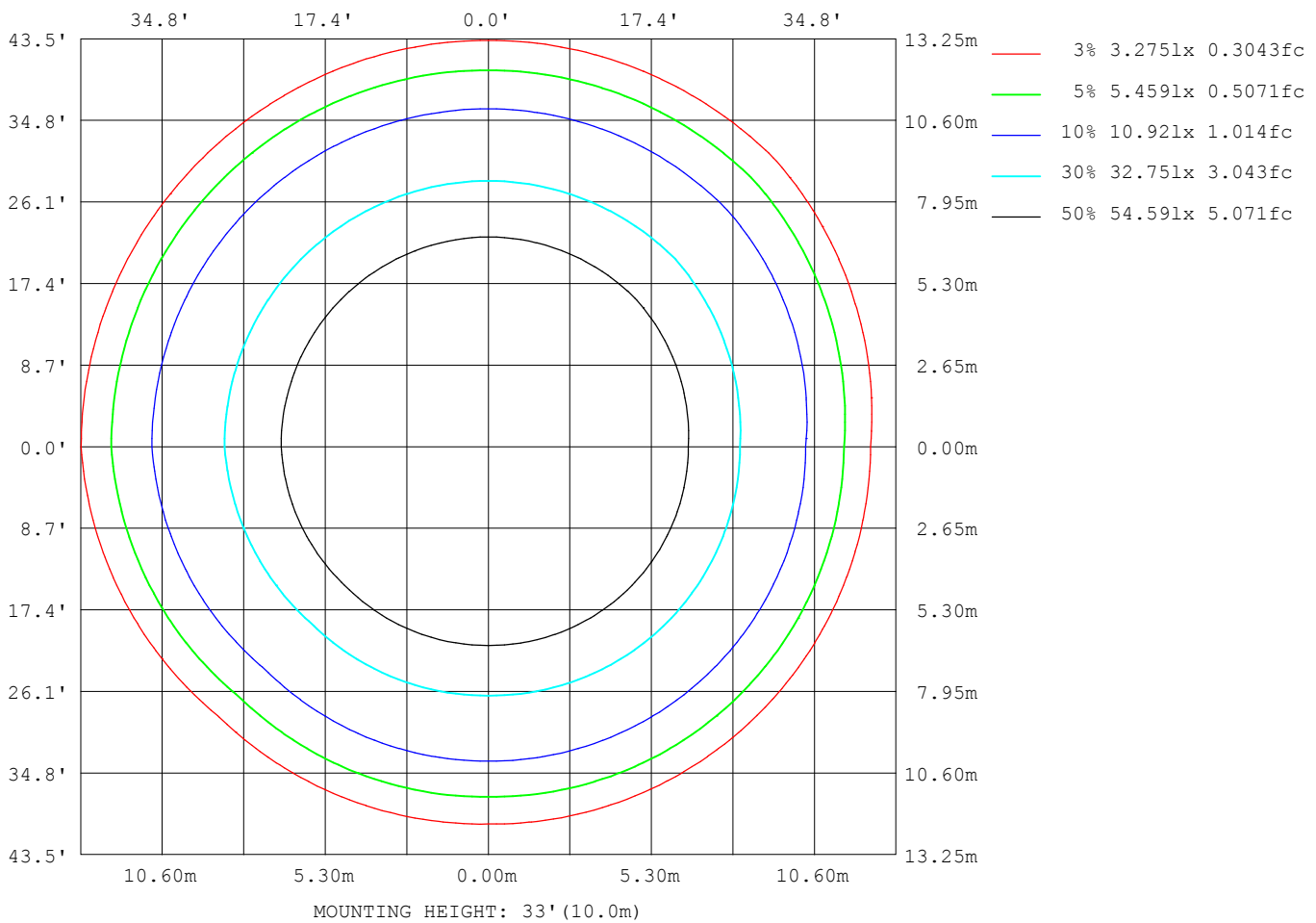
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.1℃  
Operators:  
Test Date: 2024-12-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity: 50.0%  
Test Distance: 10.026m [K=1.0000]  
Remarks:

**ISOLUX DIAGRAM**

Test:U:230.53V I:0.5296A P:118.62W PF:0.9715 Freq:50.01Hz Lamp Flux:19579.2x1 lm		
NAME: PA-120W	TYPE: 4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.1°C  
Operators:  
Test Date: 2024-12-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity: 50.0%  
Test Distance: 10.026m [K=1.0000]  
Remarks:

## LED Avg.L Report

Test:U:230.53V I:0.5296A P:118.62W PF:0.9715 Freq:50.01Hz Lamp Flux:19579.2x1 lm		
NAME: PA-120W	TYPE: 4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:

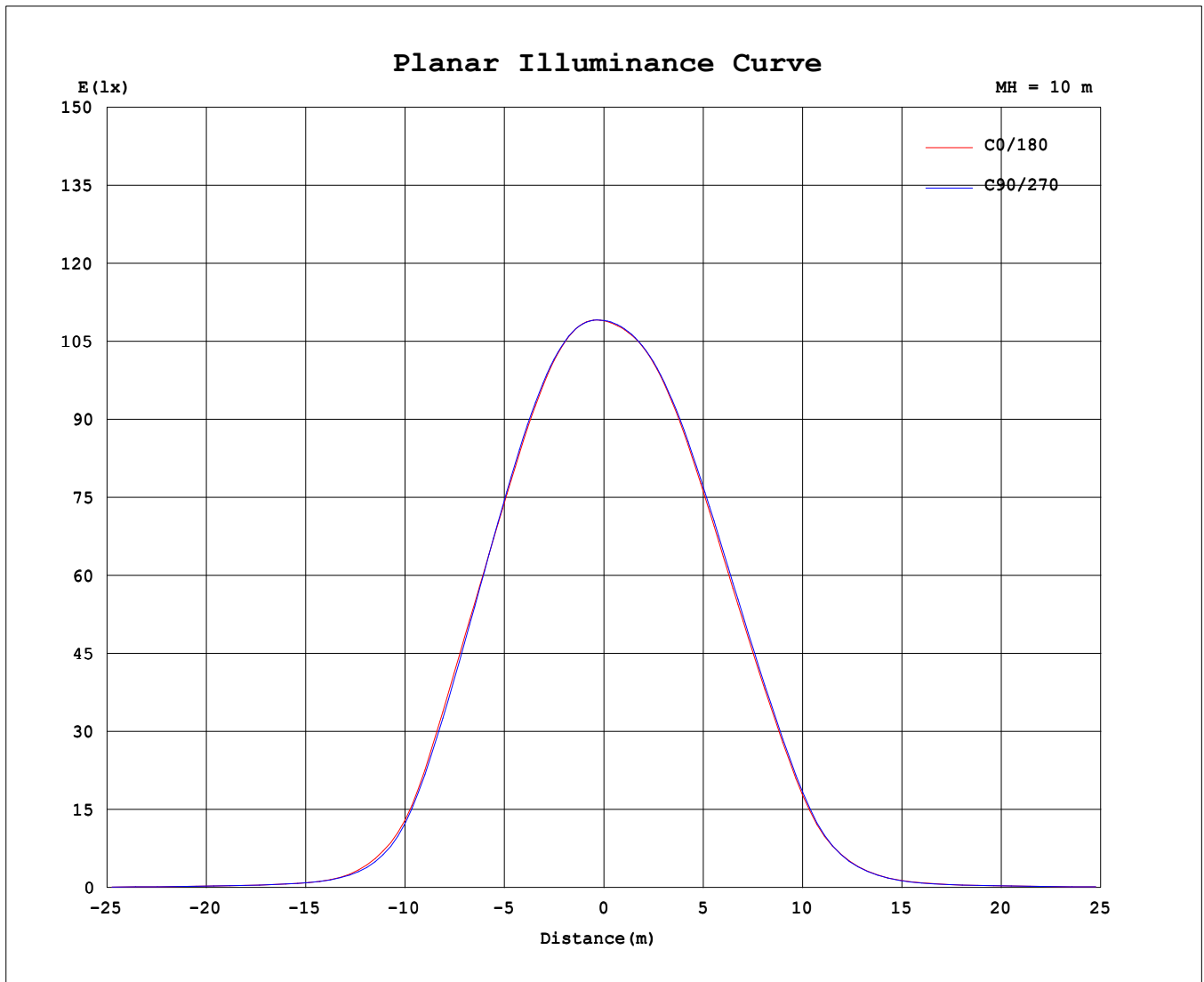
AvgL	cd/m2
L_0~180 (65) av	12022
L_0~180 (75) av	12600
L_0~180 (85) av	10347
L_90~270 (65) av	12083
L_90~270 (75) av	13086
L_90~270 (85) av	10217
L_45 (65) av	11992
L_45 (75) av	12932
L_45 (85) av	10357

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1℃  
Operators:  
Test Date:2024-12-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity:50.0%  
Test Distance:10.026m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature: 25.1℃  
 Operators:  
 Test Date: 2024-12-11

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
 Humidity: 50.0%  
 Test Distance: 10.026m [K=1.0000]  
 Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity:50.0%
Test Distance:10.026m [K=1.0000]
Remarks:

```