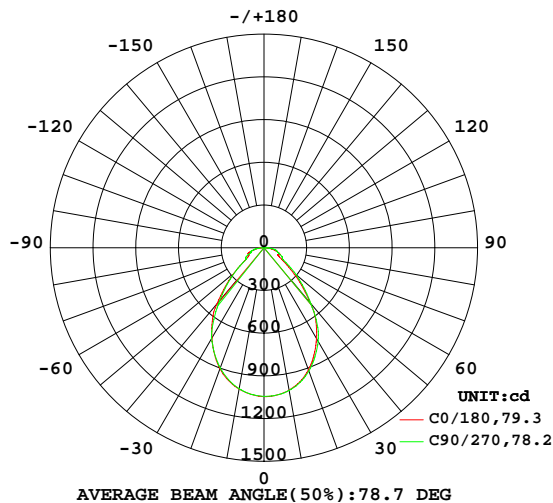


## LUMINAIRE PHOTOMETRIC TEST REPORT

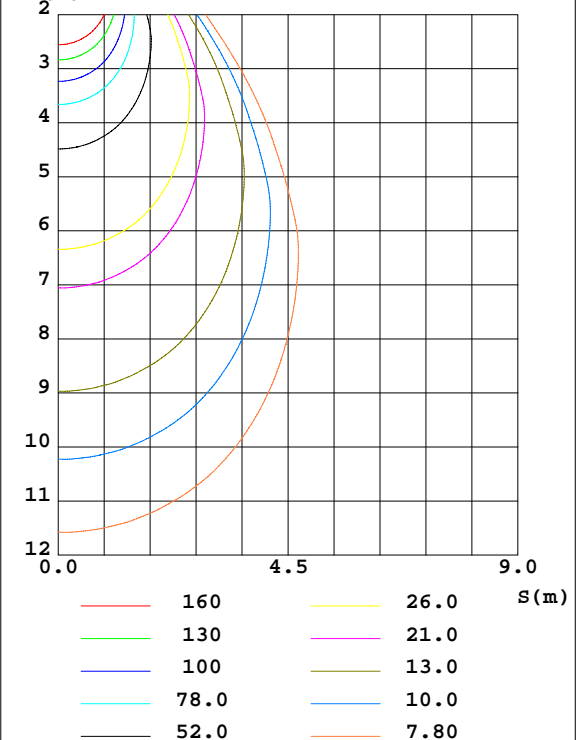
Test:U:229.55V I:0.4292A P:96.407W PF:0.9786 Freq:49.99Hz Lamp Flux:1862x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 760*240*31	SERIAL No.:
MFR.:	SUR.:0.710*0.191	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 19.31 lm/W			
MODEL		Imax(cd)	1046	S/MH(C0/180)	1.08
NOMINAL POWER(W)	20	LOR(%)	100.0	S/MH(C90/270)	1.08
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	1862.0	$\eta$ UP,DN(C0-180)	0.0,50.9
NOMINAL FLUX(lm)	1862	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,49.1
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	230.0	$\eta$ down(%)	100.0	CIBSE SHR MAX	1.15

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2024-12-19

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.406.10  
Humidity:65.0%  
Test Distance:11.700m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

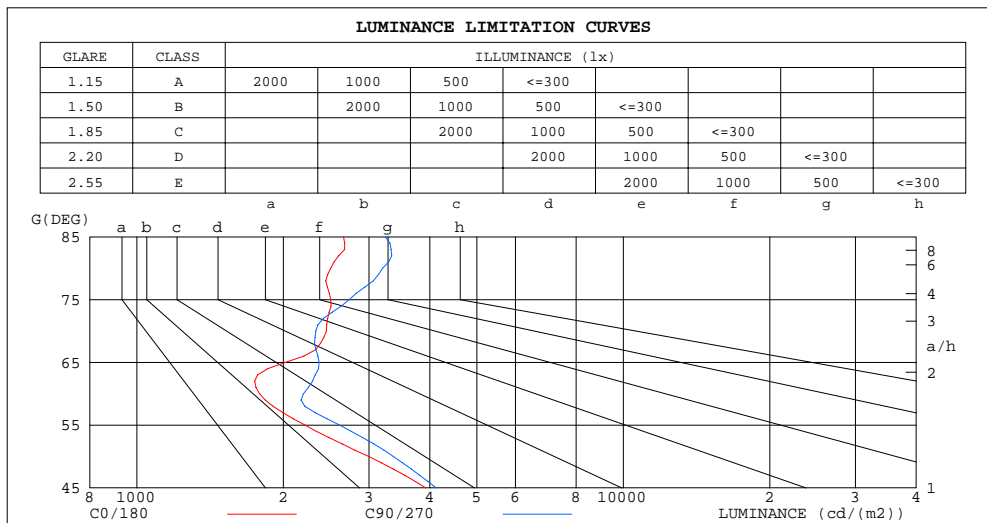
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\Phi$ lum, lamp
10	1015	1019	1017	1011	1007	1004	1005	1008	0- 10	98.06	98.06	5.27,5.27
20	912.6	919.0	922.3	911.0	904.4	894.9	899.0	901.7	10- 20	272.2	370.3	19.9,19.9
30	737.6	742.3	760.5	741.5	731.2	718.1	735.6	723.5	20- 30	379.9	750.2	40.3,40.3
40	509.4	537.1	513.8	540.6	515.2	511.5	483.7	514.6	30- 40	394.5	1145	61.5,61.5
50	261.1	300.4	293.4	309.8	270.1	285.5	266.3	292.8	40- 50	305.8	1450	77.9,77.9
60	121.2	101.6	149.2	120.4	131.7	92.73	147.8	100.4	50- 60	184.9	1635	87.8,87.8
70	113.7	60.65	108.2	67.48	119.6	65.38	95.11	66.13	60- 70	107.6	1743	93.6,93.6
80	58.94	61.13	75.34	64.07	60.63	54.18	67.88	57.53	70- 80	81.34	1824	98,98
90	0.8419	3.144	3.703	5.704	2.783	1.125	1.254	1.203	80- 90	37.71	1862	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: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2024-12-19

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 $\gamma$  Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.406.10  
Humidity:65.0%  
Test Distance:11.700m [K=1.0000]  
Remarks:

## LUMINANCE LIMITATION CURVES

Test:U:229.55V I:0.4292A P:96.407W PF:0.9786 Freq:49.99Hz Lamp Flux:1862x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 760*240*31	SERIAL No.:
MFR.:	SUR.:0.710*0.191	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	2660	3242
80	2503	3200
75	2503	2732
70	2452	2333
65	2022	2369
60	1787	2200
55	2216	2610
50	2996	3366
45	3922	4126

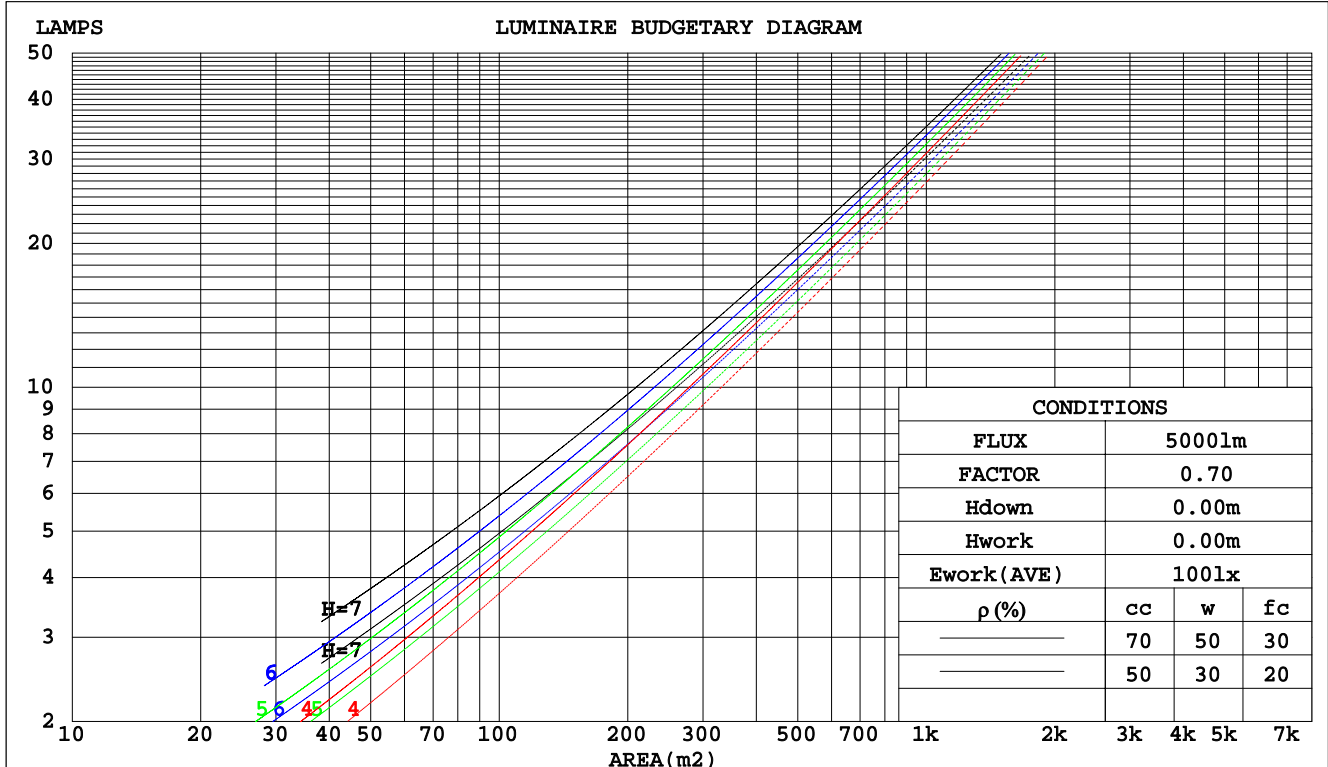
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2024-12-19

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.406.10  
Humidity:65.0%  
Test Distance:11.700m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:229.55V I:0.4292A P:96.407W PF:0.9786 Freq:49.99Hz Lamp Flux:1862x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 760*240*31	SERIAL No.:
MFR.:	SUR.:0.710*0.191	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			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	.00
1.0	1.06	1.02	.99	1.04	1.00	.97	.00	.97	.94	.96	.94	.92	.92	.90	.89	.87
2.0	.95	.89	.84	.93	.88	.83	.90	.85	.81	.86	.83	.79	.83	.80	.78	.76
3.0	.85	.78	.73	.84	.77	.72	.81	.75	.71	.78	.74	.70	.76	.72	.68	.66
4.0	.77	.70	.64	.76	.69	.63	.74	.67	.62	.71	.66	.62	.69	.65	.61	.59
5.0	.70	.62	.56	.69	.62	.56	.67	.61	.56	.65	.60	.55	.63	.58	.54	.53
6.0	.64	.56	.51	.63	.56	.50	.62	.55	.50	.60	.54	.50	.58	.53	.49	.47
7.0	.59	.51	.46	.58	.51	.45	.57	.50	.45	.55	.49	.45	.54	.49	.45	.43
8.0	.54	.47	.41	.54	.46	.41	.53	.46	.41	.51	.45	.41	.50	.45	.41	.39
9.0	.50	.43	.38	.50	.43	.38	.49	.42	.38	.48	.42	.37	.47	.41	.37	.36
10.0	.47	.40	.35	.46	.39	.35	.45	.39	.35	.45	.39	.35	.44	.38	.34	.33



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2024-12-19

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.406.10  
Humidity:65.0%  
Test Distance:11.700m [K=1.0000]  
Remarks:

## WEC AND CCEC

Test:U:229.55V I:0.4292A P:96.407W PF:0.9786 Freq:49.99Hz Lamp Flux:1862x1 lm					
NAME:		TYPE:		WEIGHT:	
SPEC.:		DIM.: 760*240*31		SERIAL No.:	
MFR.:		SUR.:0.710*0.191		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	.267	.152	.048	.260	.148	.047	.247	.142	.045	.235	.136	.044	.224	.130	.042	
2.0	.249	.137	.042	.243	.134	.041	.232	.129	.040	.222	.124	.039	.212	.120	.038	
3.0	.232	.123	.037	.227	.121	.037	.217	.117	.036	.208	.114	.035	.199	.110	.034	
4.0	.216	.112	.033	.211	.111	.033	.203	.107	.032	.195	.104	.032	.187	.102	.031	
5.0	.202	.103	.030	.198	.101	.030	.190	.099	.029	.183	.096	.029	.176	.094	.028	
6.0	.189	.095	.027	.185	.094	.027	.178	.091	.027	.172	.089	.026	.166	.087	.026	
7.0	.177	.088	.025	.174	.087	.025	.168	.085	.024	.162	.083	.024	.157	.082	.024	
8.0	.167	.082	.023	.164	.081	.023	.159	.079	.023	.154	.078	.022	.149	.076	.022	
9.0	.158	.076	.021	.155	.076	.021	.150	.074	.021	.146	.073	.021	.141	.072	.021	
10.0	.149	.072	.020	.147	.071	.020	.143	.070	.020	.138	.069	.020	.134	.068	.019	

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	.177	.157	.138	.152	.134	.119	.104	.092	.082	.060	.053	.048	.019	.017	.015	
2.0	.167	.132	.103	.143	.114	.089	.098	.079	.062	.056	.046	.036	.018	.015	.012	
3.0	.157	.114	.080	.135	.098	.069	.092	.068	.048	.053	.040	.029	.017	.013	.009	
4.0	.149	.100	.063	.128	.087	.055	.088	.060	.039	.051	.035	.023	.016	.012	.008	
5.0	.141	.089	.051	.121	.077	.045	.083	.054	.032	.048	.032	.019	.016	.010	.006	
6.0	.134	.081	.043	.115	.070	.037	.079	.049	.026	.046	.029	.016	.015	.009	.005	
7.0	.127	.074	.036	.109	.064	.031	.076	.045	.022	.044	.026	.013	.014	.009	.004	
8.0	.121	.068	.031	.104	.059	.027	.072	.041	.019	.042	.024	.011	.014	.008	.004	
9.0	.116	.063	.027	.100	.055	.024	.069	.038	.017	.040	.023	.010	.013	.007	.003	
10.0	.110	.059	.024	.095	.051	.021	.066	.036	.015	.039	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2024-12-19

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.406.10  
 Humidity:65.0%  
 Test Distance:11.700m [K=1.0000]  
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:229.55V I:0.4292A P:96.407W PF:0.9786 Freq:49.99Hz Lamp Flux:1862x1 lm											
NAME:			TYPE:			WEIGHT:					
SPEC.:			DIM.: 760*240*31			SERIAL No.:					
MFR.:			SUR.:0.710*0.191			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	2H	15.3	16.6	15.5	16.8	17.0	15.7	17.0	15.9	17.2	17.4
	3H	16.3	17.6	16.6	17.8	18.0	16.5	17.8	16.8	18.0	18.2
	4H	17.0	18.1	17.3	18.4	18.6	17.2	18.4	17.5	18.6	18.9
	6H	17.6	18.7	17.9	19.0	19.2	18.1	19.2	18.4	19.4	19.7
	8H	17.9	18.9	18.2	19.2	19.5	18.5	19.5	18.8	19.8	20.1
	12H	18.1	19.1	18.4	19.4	19.7	18.8	19.8	19.1	20.0	20.3
4H	2H	15.4	16.5	15.7	16.7	17.0	15.7	16.8	16.0	17.1	17.3
	3H	16.6	17.6	17.0	17.9	18.2	16.7	17.8	17.1	18.0	18.3
	4H	17.4	18.4	17.8	18.7	19.0	17.7	18.6	18.1	18.9	19.3
	6H	18.4	19.2	18.8	19.5	19.9	18.9	19.7	19.2	20.0	20.4
	8H	18.8	19.6	19.2	19.9	20.3	19.4	20.1	19.8	20.5	20.9
	12H	19.1	19.8	19.5	20.2	20.6	19.8	20.5	20.2	20.9	21.3
8H	4H	17.8	18.5	18.2	18.9	19.3	18.0	18.7	18.4	19.1	19.5
	6H	19.0	19.6	19.4	20.0	20.4	19.4	20.0	19.8	20.4	20.8
	8H	19.5	20.1	20.0	20.5	20.9	20.0	20.6	20.5	21.0	21.5
	12H	20.0	20.4	20.4	20.9	21.4	20.7	21.2	21.1	21.6	22.1
12H	4H	17.8	18.5	18.2	18.9	19.3	18.0	18.7	18.5	19.1	19.5
	6H	19.1	19.7	19.6	20.1	20.5	19.5	20.0	19.9	20.5	20.9
	8H	19.7	20.2	20.2	20.6	21.1	20.2	20.7	20.7	21.2	21.6
Variations with the observer position at spacings:											
S = 1.0H	+ 0.3 / - 0.5					+ 0.4 / - 0.4					
1.5H	+ 0.3 / - 0.4					+ 0.2 / - 0.2					
2.0H	+ 0.8 / - 0.6					+ 0.6 / - 0.5					

CIE Pub.117, 1862 lm Total Lamp Luminous Flux Corrected ( $8\log(F/F_0) = 2.2$ )

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2024-12-19

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.406.10  
 Humidity: 65.0%  
 Test Distance: 11.700m [K=1.0000]  
 Remarks:

## UTILIZATION FACTORS TABLE

Test:U:229.55V I:0.4292A P:96.407W PF:0.9786 Freq:49.99Hz Lamp Flux:1862x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 760*240*31	SERIAL No.:
MFR.:	SUR.:0.710*0.191	Shielding Angle:

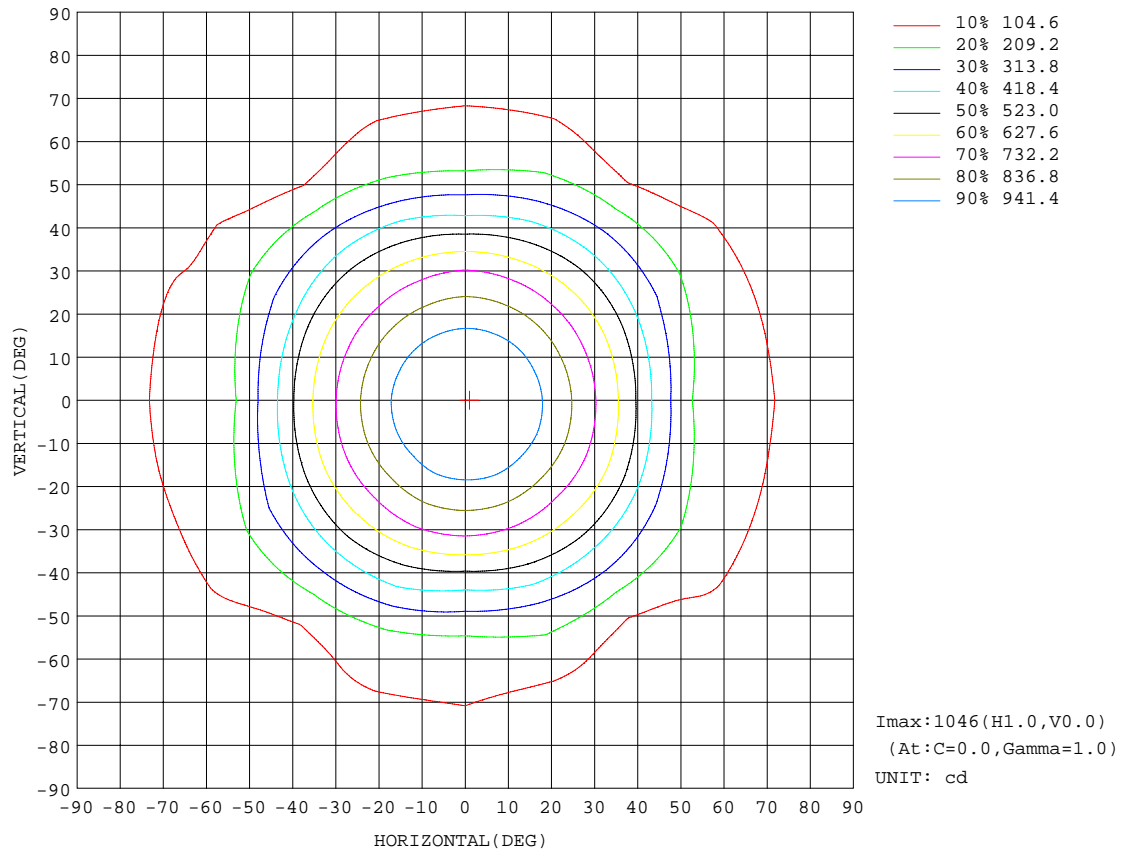
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	68	58	52	67	58	52	66	57	52	46
0.80	77	67	61	76	67	61	75	66	61	55
1.00	84	75	69	83	75	69	81	76	69	63
1.25	90	82	76	89	81	76	87	80	75	69
1.50	95	87	81	93	86	81	90	84	79	73
2.00	100	93	88	98	92	87	95	90	86	79
2.50	103	97	92	101	95	91	97	93	89	81
3.00	106	100	95	104	98	94	100	96	92	84
4.00	109	104	100	106	102	99	102	99	96	88
5.00	111	107	103	108	105	102	104	101	99	90
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2024-12-19

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.406.10  
Humidity:65.0%  
Test Distance:11.700m [K=1.0000]  
Remarks:

## ISOCANDELA DIAGRAM

Test:U:229.55V I:0.4292A P:96.407W PF:0.9786 Freq:49.99Hz Lamp Flux:1862x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 760*240*31	SERIAL No.:
MFR.:	SUR.:0.710*0.191	Shielding Angle:



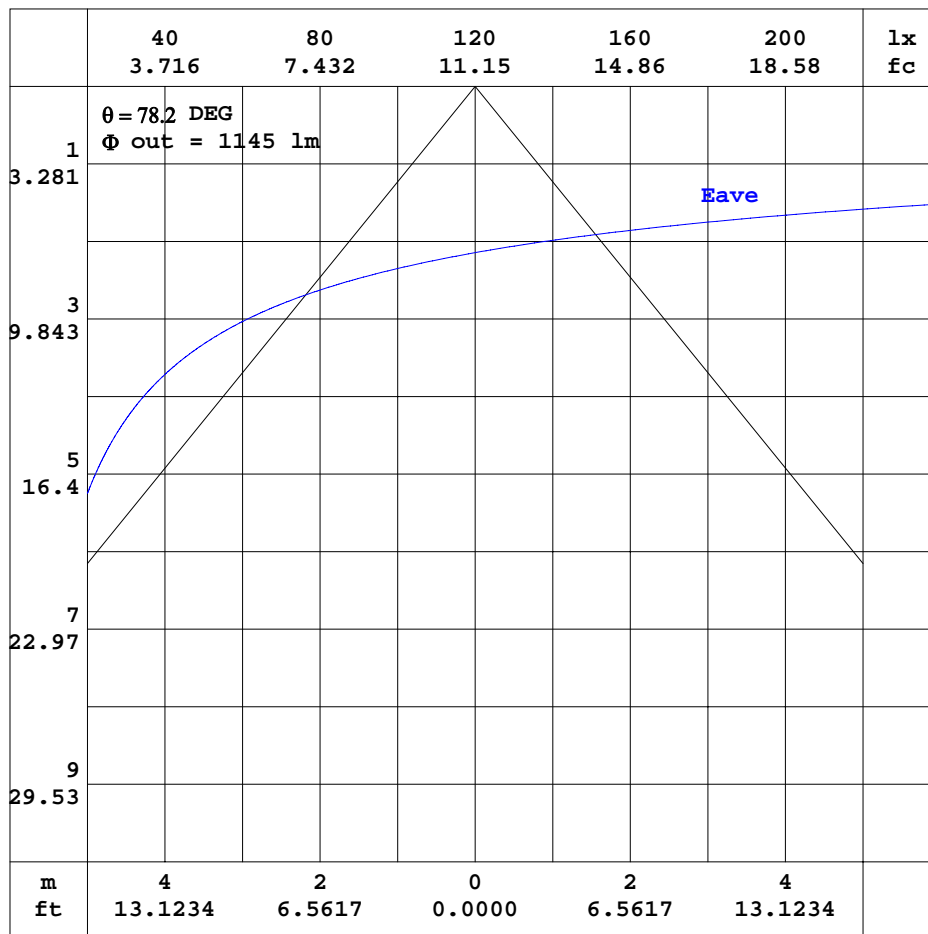
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2024-12-19

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.406.10  
Humidity:65.0%  
Test Distance:11.700m [K=1.0000]  
Remarks:



## AAI CURVES

Test:U:229.55V I:0.4292A P:96.407W PF:0.9786 Freq:49.99Hz Lamp Flux:1862x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 760*240*31	SERIAL No.:
MFR.:	SUR.:0.710*0.191	Shielding Angle:



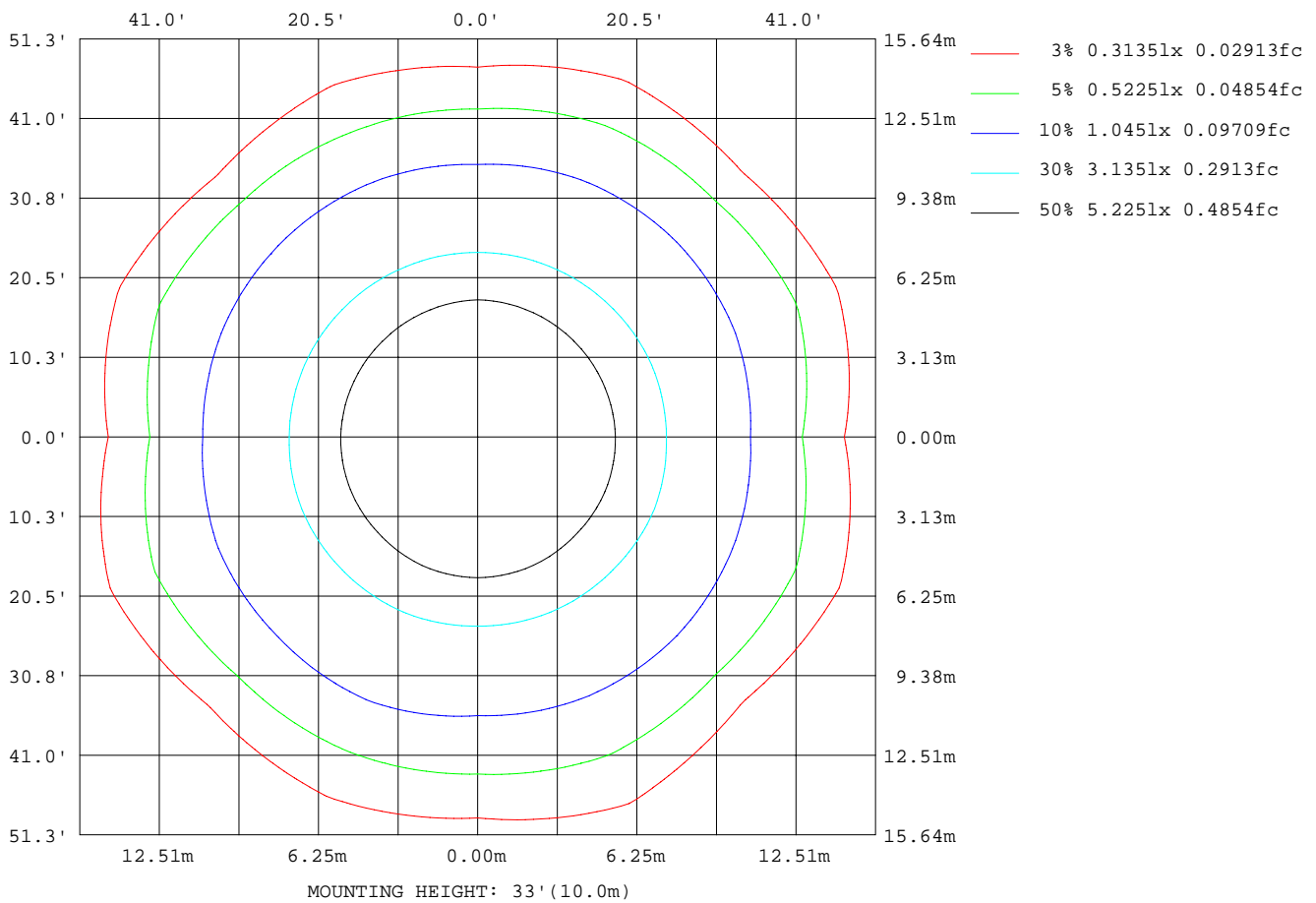
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2024-12-19

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.406.10  
Humidity:65.0%  
Test Distance:11.700m [K=1.0000]  
Remarks:

## ISOLUX DIAGRAM

Test:U:229.55V I:0.4292A P:96.407W PF:0.9786 Freq:49.99Hz Lamp Flux:1862x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 760*240*31	SERIAL No.:
MFR.:	SUR.:0.710*0.191	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators:  
Test Date: 2024-12-19

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.406.10  
Humidity: 65.0%  
Test Distance: 11.700m [K=1.0000]  
Remarks:

## LED Avg.L Report

Test:U:229.55V I:0.4292A P:96.407W PF:0.9786 Freq:49.99Hz Lamp Flux:1862x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 760*240*31	SERIAL No.:
MFR.:	SUR.:0.710*0.191	Shielding Angle:

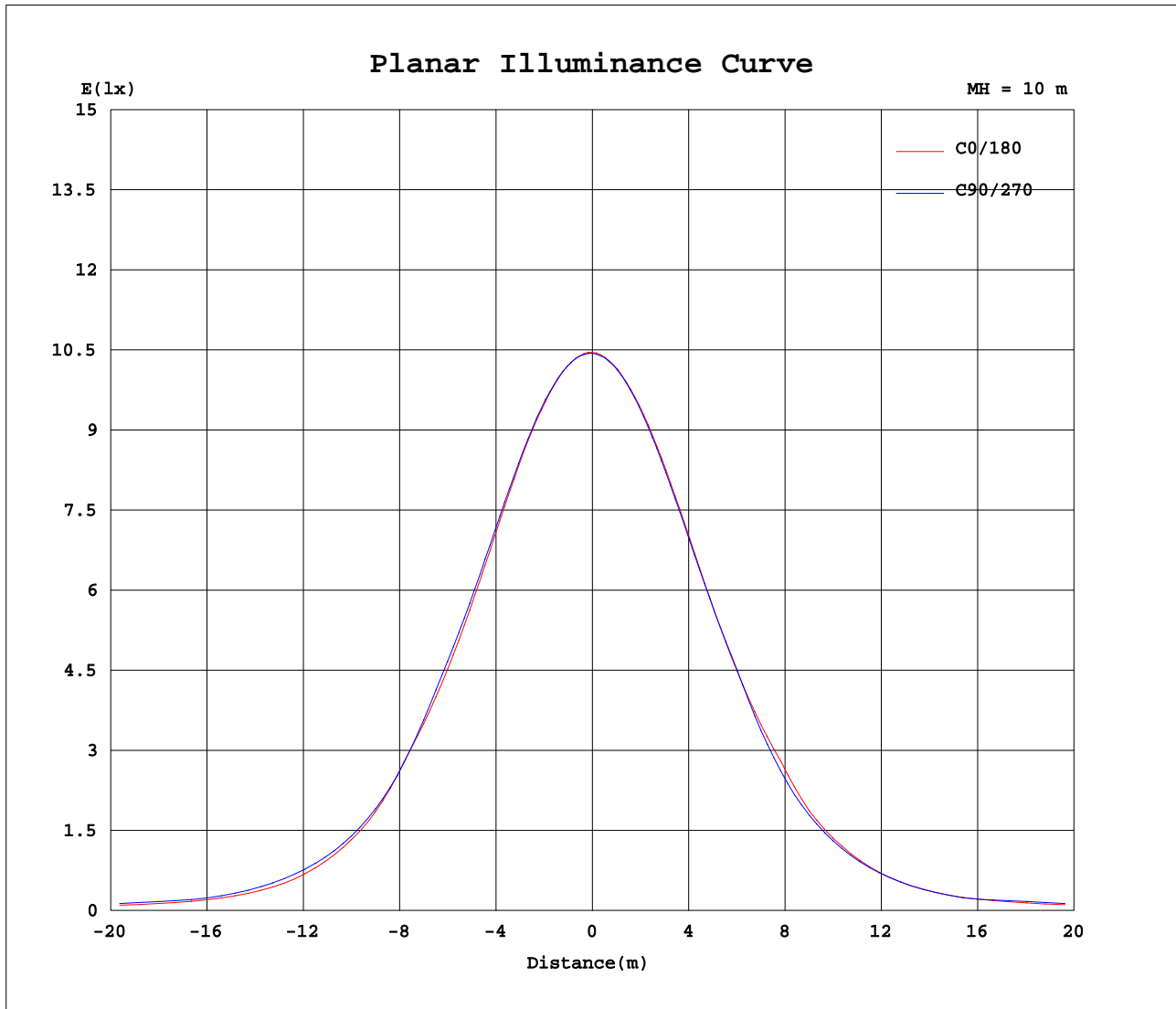
AvgL	cd/m2
L_0~180(65)av	2032
L_0~180(75)av	2526
L_0~180(85)av	2920
L_90~270(65)av	2315
L_90~270(75)av	2700
L_90~270(85)av	3090
L_45(65)av	1025
L_45(75)av	1995
L_45(85)av	2645

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2024-12-19

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.406.10  
Humidity:65.0%  
Test Distance:11.700m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators:  
Test Date: 2024-12-19

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.406.10  
Humidity: 65.0%  
Test Distance: 11.700m [K=1.0000]  
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
Humidity:65.0%
Test Distance:11.700m [K=1.0000]
Remarks:

```