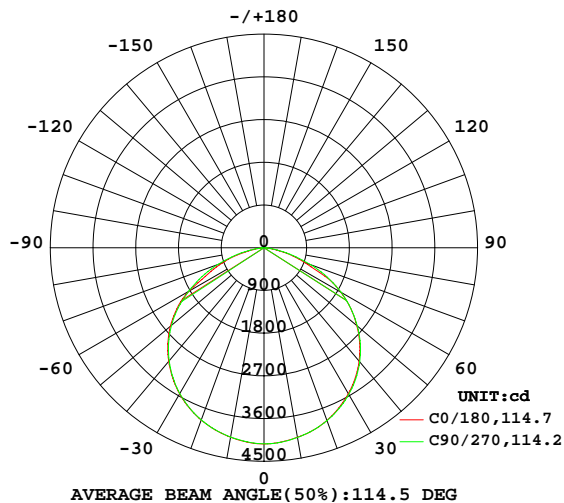


## LUMINAIRE PHOTOMETRIC TEST REPORT

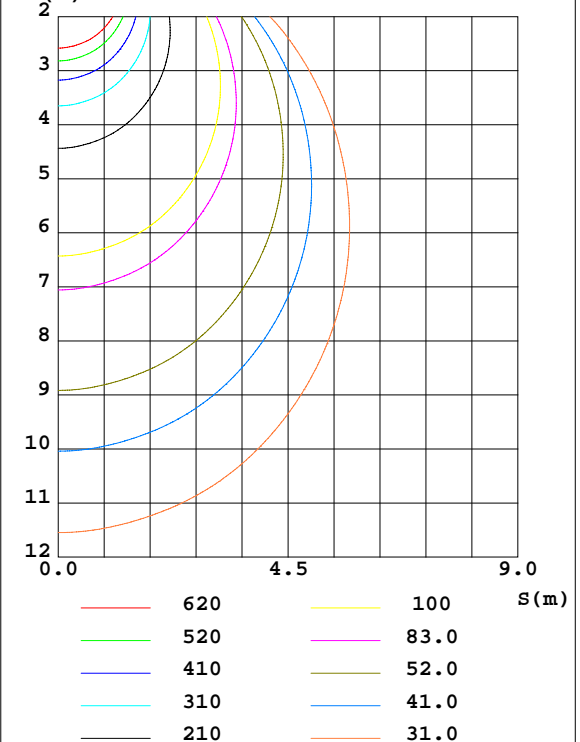
Test:U:229.54V I:0.4295A P:96.484W PF:0.9786 Freq:49.99Hz Lamp Flux:11591.6x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 760*240*31	SERIAL No.:
MFR.:	SUR.:0.705*0.102	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 120.14 lm/W			
MODEL		Imax(cd)	4134	S/MH(C0/180)	1.28
NOMINAL POWER(W)	80	LOR(%)	100.0	S/MH(C90/270)	1.28
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	11592	$\eta$ UP,DN(C0-180)	0.0,50.2
NOMINAL FLUX(lm)	11591.6	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,49.8
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230.0	$\eta$ down(%)	100.0	CIBSE SHR MAX	1.35

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:

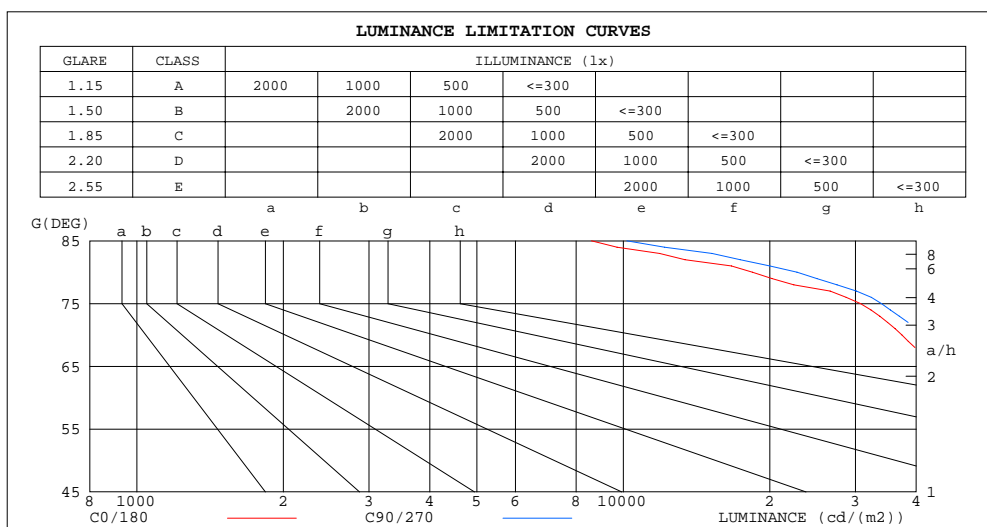
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\%lum, lamp$
10	4056	4056	4058	4059	4053	4051	4050	4052	0- 10	390.5	390.5	3.37,3.37
20	3873	3870	3877	3873	3864	3860	3860	3862	10- 20	1123	1513	13.1,13.1
30	3553	3562	3571	3562	3555	3544	3546	3551	20- 30	1718	3232	27.9,27.9
40	3118	3121	3138	3128	3123	3103	3109	3111	30- 40	2097	5328	46,46
50	2554	2549	2568	2570	2576	2538	2544	2552	40- 50	2196	7525	64.9,64.9
60	1868	1843	1872	1870	1812	1840	1827	1862	50- 60	1972	9497	81.9,81.9
70	919.3	1038	1045	976.0	936.8	949.7	1032	1043	60- 70	1387	10884	93.9,93.9
80	230.0	255.6	284.2	253.3	234.1	263.5	295.9	266.7	70- 80	617.8	11502	99.2,99.2
90	7.749	7.371	7.577	8.514	11.48	12.51	10.58	11.98	80- 90	90.07	11592	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  
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:229.54V I:0.4295A P:96.484W PF:0.9786 Freq:49.99Hz Lamp Flux:11591.6x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 760*240*31	SERIAL No.:
MFR.:	SUR.:0.705*0.102	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	8604	10169
80	18422	22761
75	30716	33922
70	37378	42490
65	46602	48483
60	51943	52074
55	54083	54123
50	55253	55546
45	56065	56471

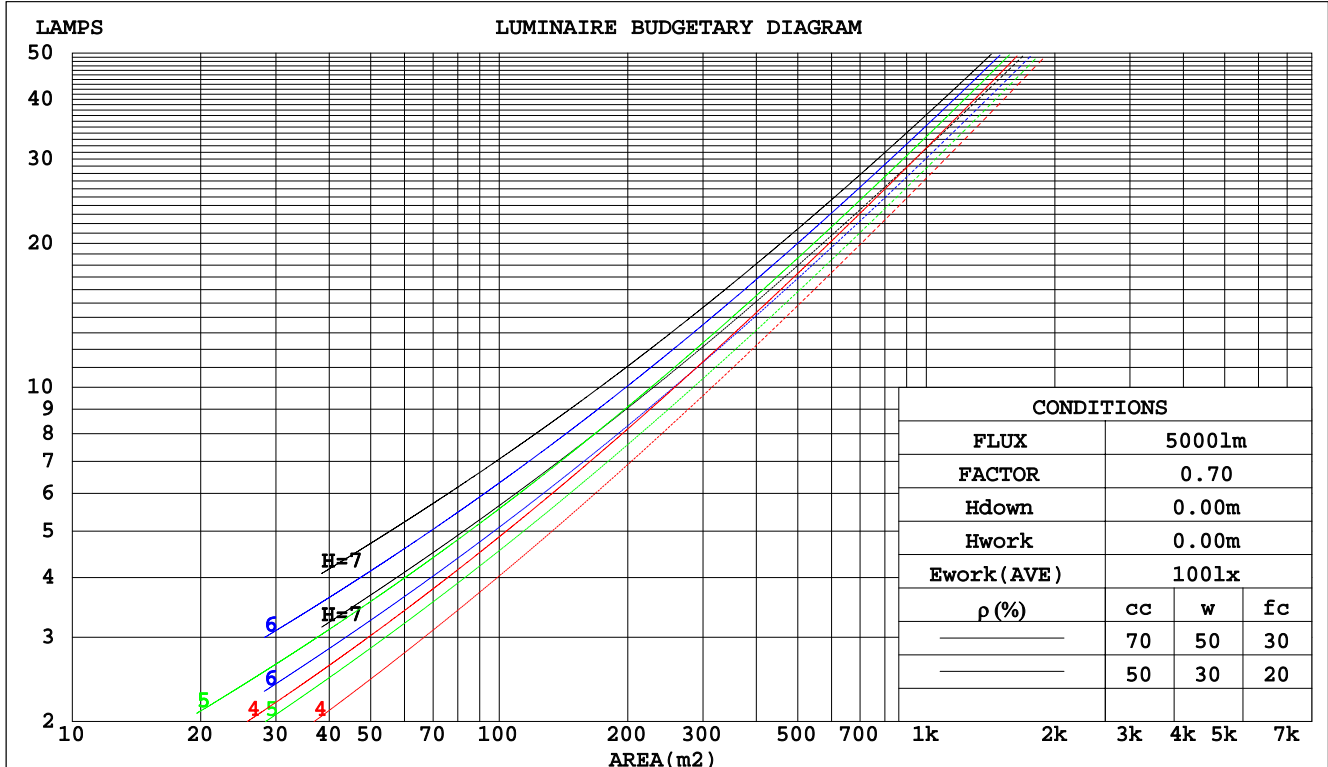
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2024-12-19

$\gamma$  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:229.54V I:0.4295A P:96.484W PF:0.9786 Freq:49.99Hz Lamp Flux:11591.6x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 760*240*31	SERIAL No.:
MFR.:	SUR.:0.705*0.102	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	1.00
1.0	1.05	1.01	.97	1.03	.99	.96	.98	.95	.93	.95	.92	.90	.91	.89	.87	.85
2.0	.92	.85	.80	.90	.84	.79	.86	.81	.77	.83	.79	.75	.80	.77	.73	.71
3.0	.81	.73	.66	.79	.72	.66	.76	.70	.65	.73	.68	.63	.71	.66	.62	.60
4.0	.71	.63	.56	.70	.62	.56	.68	.61	.55	.65	.59	.54	.63	.58	.54	.51
5.0	.64	.55	.48	.63	.54	.48	.61	.53	.48	.59	.52	.47	.57	.51	.47	.44
6.0	.57	.49	.42	.56	.48	.42	.55	.47	.42	.53	.46	.41	.51	.46	.41	.39
7.0	.52	.43	.37	.51	.43	.37	.50	.42	.37	.48	.42	.37	.47	.41	.36	.34
8.0	.47	.39	.33	.47	.39	.33	.45	.38	.33	.44	.38	.33	.43	.37	.32	.31
9.0	.44	.35	.30	.43	.35	.30	.42	.35	.30	.41	.34	.29	.40	.34	.29	.27
10.0	.40	.32	.27	.40	.32	.27	.39	.32	.27	.38	.31	.27	.37	.31	.27	.25



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:229.54V I:0.4295A P:96.484W PF:0.9786 Freq:49.99Hz Lamp Flux:11591.6x1 lm								
NAME:			TYPE:			WEIGHT:		
SPEC.:			DIM.: 760*240*31			SERIAL No.:		
MFR.:			SUR.:0.705*0.102			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	.290	.165	.052	.283	.161	.051	.270	.155	.049	.258	.149	.048	.246	.143	.046	
2.0	.279	.153	.047	.273	.150	.046	.261	.145	.045	.251	.141	.044	.241	.136	.043	
3.0	.262	.139	.042	.256	.137	.041	.246	.133	.040	.236	.130	.040	.228	.126	.039	
4.0	.243	.126	.037	.238	.125	.037	.229	.122	.036	.221	.119	.036	.213	.116	.035	
5.0	.226	.115	.033	.222	.114	.033	.214	.111	.033	.206	.109	.032	.199	.106	.032	
6.0	.211	.106	.030	.207	.104	.030	.200	.102	.030	.193	.100	.029	.186	.098	.029	
7.0	.196	.097	.028	.193	.096	.027	.187	.094	.027	.181	.093	.027	.175	.091	.027	
8.0	.184	.090	.025	.181	.089	.025	.175	.087	.025	.170	.086	.025	.165	.084	.025	
9.0	.173	.083	.023	.170	.083	.023	.165	.081	.023	.160	.080	.023	.155	.079	.023	
10.0	.162	.078	.022	.160	.077	.022	.155	.076	.021	.151	.075	.021	.147	.074	.021	

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	.179	.156	.136	.153	.134	.117	.105	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.171	.132	.100	.146	.114	.086	.100	.079	.060	.058	.046	.035	.019	.015	.011	
3.0	.163	.114	.075	.140	.099	.065	.096	.068	.046	.055	.040	.027	.018	.013	.009	
4.0	.155	.101	.059	.133	.087	.051	.092	.061	.036	.053	.036	.021	.017	.012	.007	
5.0	.148	.090	.048	.127	.078	.042	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.141	.082	.040	.121	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.135	.075	.034	.116	.065	.029	.080	.046	.021	.046	.027	.012	.015	.009	.004	
8.0	.128	.069	.029	.110	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.122	.064	.025	.105	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.023	.101	.052	.020	.070	.037	.014	.041	.022	.008	.013	.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:229.54V I:0.4295A P:96.484W PF:0.9786 Freq:49.99Hz Lamp Flux:11591.6x1 lm												
NAME:					TYPE:			WEIGHT:				
SPEC.:					DIM.: 760*240*31			SERIAL No.:				
MFR.:					SUR.:0.705*0.102			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	26.9	28.4	27.2	28.6	28.8	26.8	28.3	27.1	28.5	28.7	
	3H	28.0	29.4	28.3	29.6	29.9	28.1	29.4	28.4	29.7	29.9	
	4H	28.3	29.6	28.7	29.9	30.2	28.4	29.7	28.7	30.0	30.2	
	6H	28.4	29.7	28.8	29.9	30.2	28.6	29.8	28.9	30.1	30.4	
	8H	28.4	29.6	28.8	29.9	30.2	28.6	29.8	28.9	30.0	30.3	
	12H	28.4	29.5	28.7	29.8	30.1	28.5	29.7	28.9	30.0	30.3	
	4H	2H	27.4	28.8	27.8	29.0	29.3	27.4	28.7	27.7	28.9	29.2
		3H	28.7	29.8	29.1	30.1	30.4	28.7	29.9	29.1	30.2	30.5
		4H	29.1	30.2	29.5	30.5	30.8	29.2	30.2	29.5	30.5	30.9
		6H	29.3	30.2	29.7	30.5	30.9	29.4	30.3	29.8	30.7	31.0
		8H	29.3	30.1	29.7	30.5	30.9	29.4	30.3	29.8	30.6	31.0
		12H	29.3	30.0	29.7	30.4	30.8	29.4	30.2	29.8	30.6	31.0
8H	4H	29.2	30.1	29.6	30.4	30.8	29.3	30.1	29.7	30.5	30.9	
	6H	29.5	30.2	29.9	30.6	31.0	29.6	30.3	30.0	30.7	31.1	
	8H	29.5	30.1	29.9	30.5	31.0	29.6	30.2	30.1	30.7	31.1	
	12H	29.5	30.0	30.0	30.5	30.9	29.6	30.1	30.1	30.6	31.1	
12H	4H	29.2	30.0	29.6	30.4	30.8	29.3	30.0	29.7	30.4	30.8	
	6H	29.5	30.1	29.9	30.5	30.9	29.6	30.2	30.0	30.6	31.1	
	8H	29.5	30.0	30.0	30.5	30.9	29.6	30.1	30.1	30.6	31.1	
Variations with the observer position at spacings:												
S = 1.0H		+ 0.2 / - 0.3					+ 0.2 / - 0.3					
1.5H		+ 0.3 / - 0.5					+ 0.2 / - 0.3					
2.0H		+ 0.3 / - 0.5					+ 0.4 / - 0.4					

CIE Pub.117, 11592 lm Total Lamp Luminous Flux Corrected ( $8\log(F/F_0) = 8.5$ )

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:229.54V I:0.4295A P:96.484W PF:0.9786 Freq:49.99Hz Lamp Flux:11591.6x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 760*240*31	SERIAL No.:
MFR.:	SUR.:0.705*0.102	Shielding Angle:

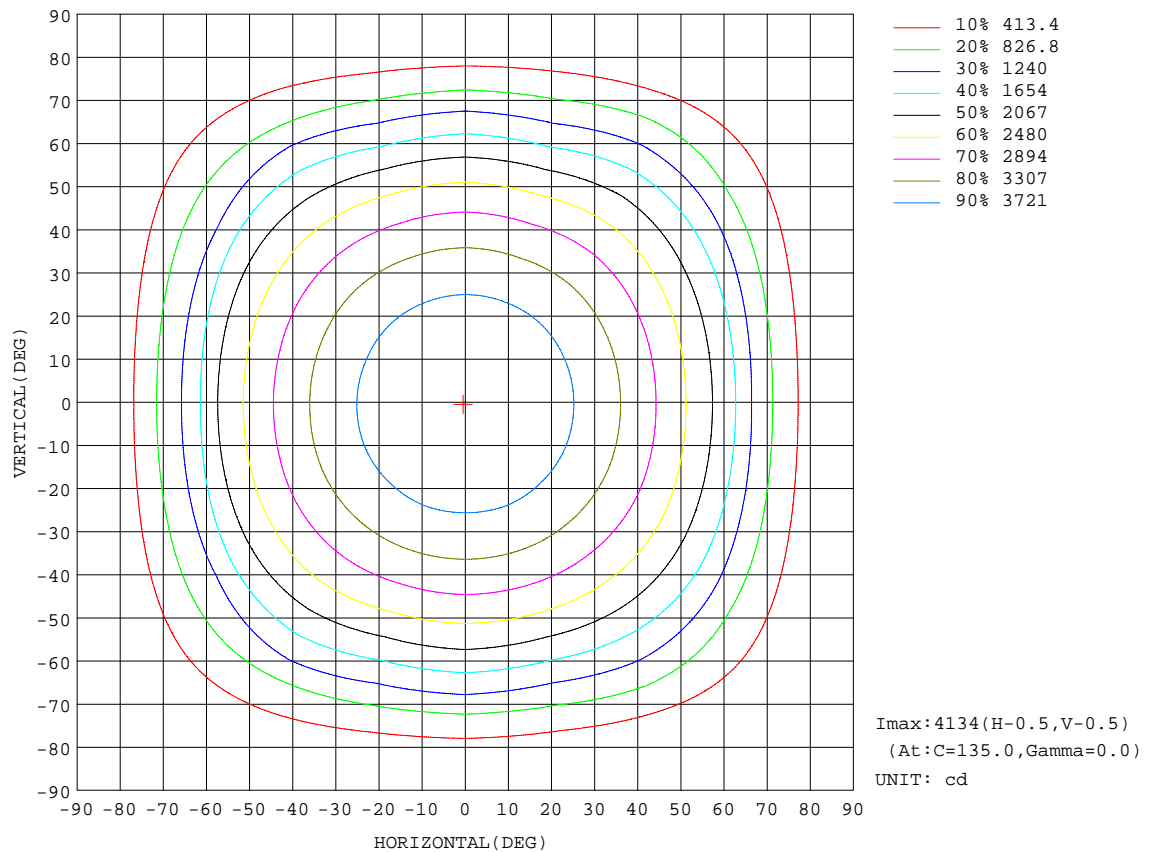
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	58	47	40	57	46	39	56	46	39	33
0.80	68	57	50	67	56	49	66	56	49	42
1.00	77	66	59	76	66	59	74	67	58	51
1.25	84	74	67	83	73	67	80	72	66	59
1.50	89	80	73	88	79	72	85	77	71	64
2.00	96	88	82	94	87	81	91	85	79	72
2.50	100	93	87	98	91	86	94	89	84	76
3.00	103	97	91	101	95	90	97	92	88	80
4.00	107	102	97	105	100	96	101	97	93	85
5.00	109	105	101	107	103	99	103	99	96	87
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:229.54V I:0.4295A P:96.484W PF:0.9786 Freq:49.99Hz Lamp Flux:11591.6x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 760*240*31	SERIAL No.:
MFR.:	SUR.:0.705*0.102	Shielding Angle:



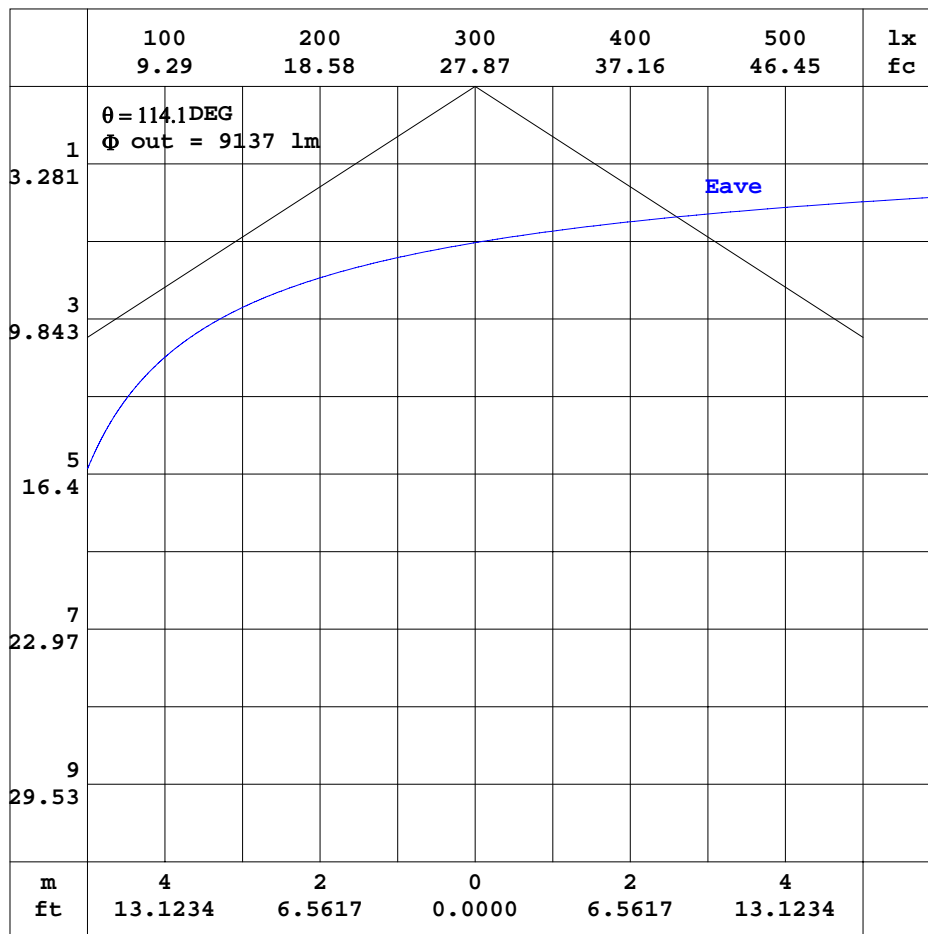
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators:  
Test Date: 2024-12-19

$\gamma$  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:229.54V I:0.4295A P:96.484W PF:0.9786 Freq:49.99Hz Lamp Flux:11591.6x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 760*240*31	SERIAL No.:
MFR.:	SUR.:0.705*0.102	Shielding Angle:



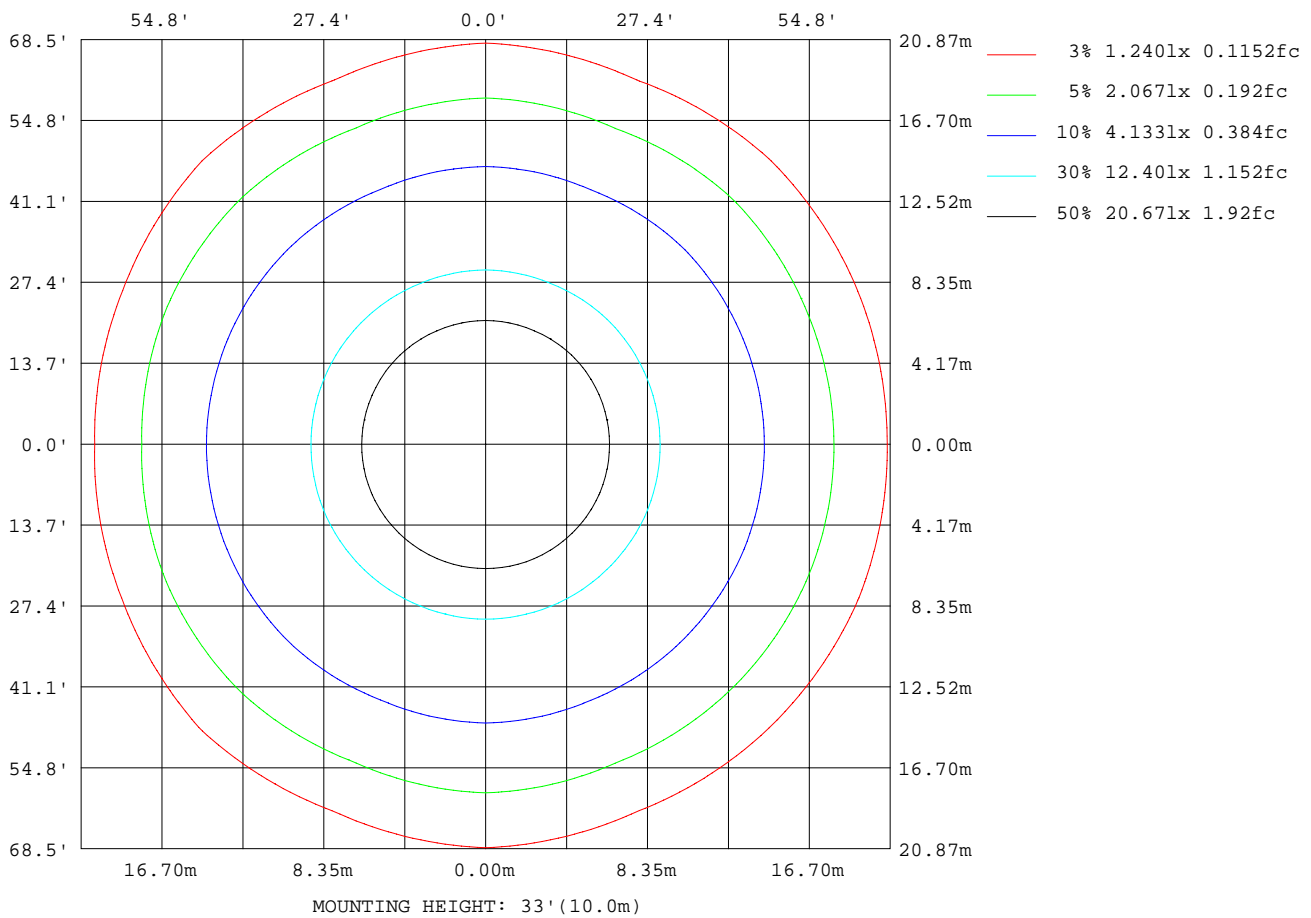
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:229.54V I:0.4295A P:96.484W PF:0.9786 Freq:49.99Hz Lamp Flux:11591.6x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 760*240*31	SERIAL No.:
MFR.:	SUR.:0.705*0.102	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:229.54V I:0.4295A P:96.484W PF:0.9786 Freq:49.99Hz Lamp Flux:11591.6x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 760*240*31	SERIAL No.:
MFR.:	SUR.:0.705*0.102	Shielding Angle:

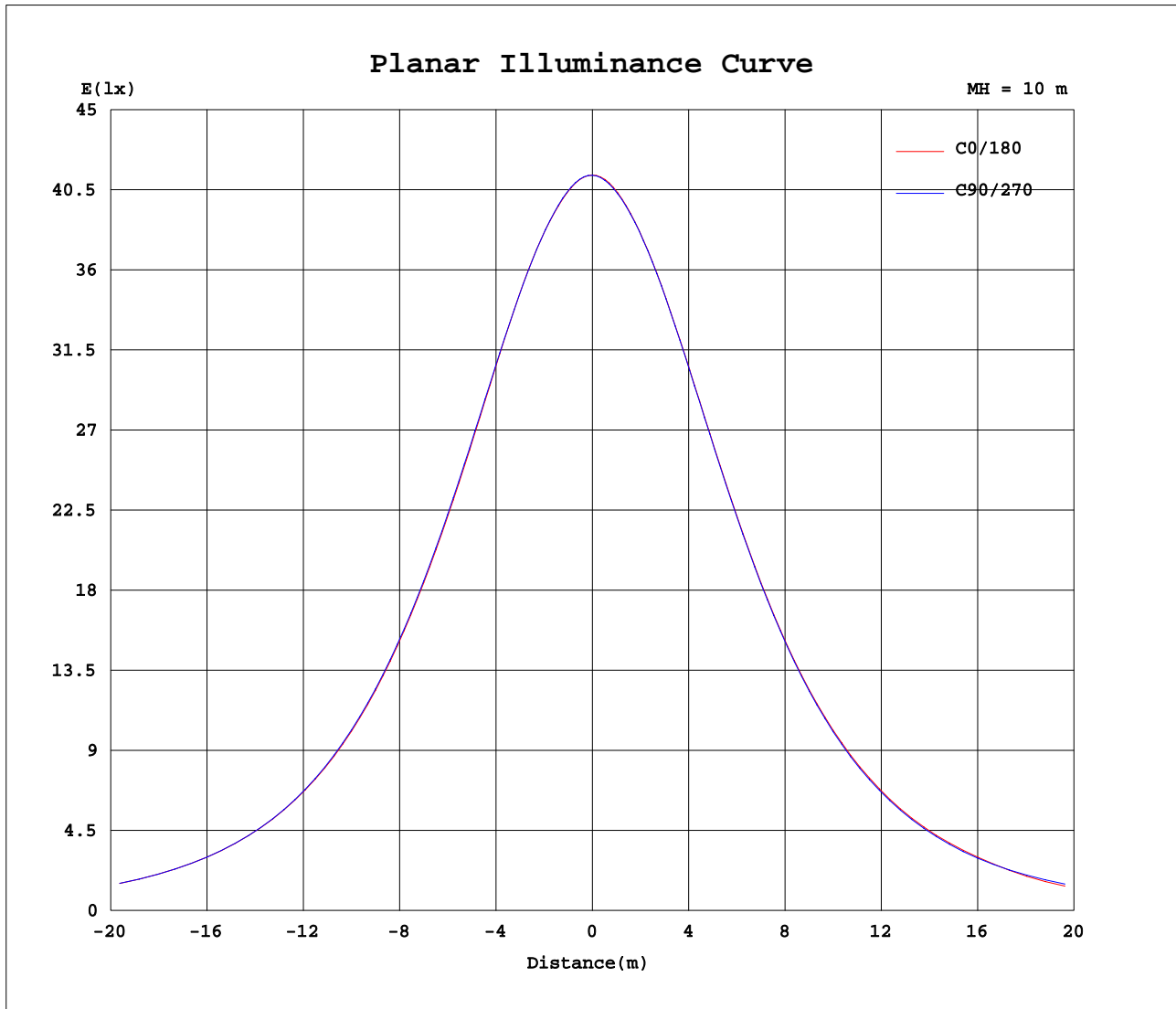
AvgL	cd/m2
L_0~180(65)av	44695
L_0~180(75)av	30872
L_0~180(85)av	8320
L_90~270(65)av	47957
L_90~270(75)av	34230
L_90~270(85)av	10742
L_45(65)av	47736
L_45(75)av	30672
L_45(85)av	9118

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:

```