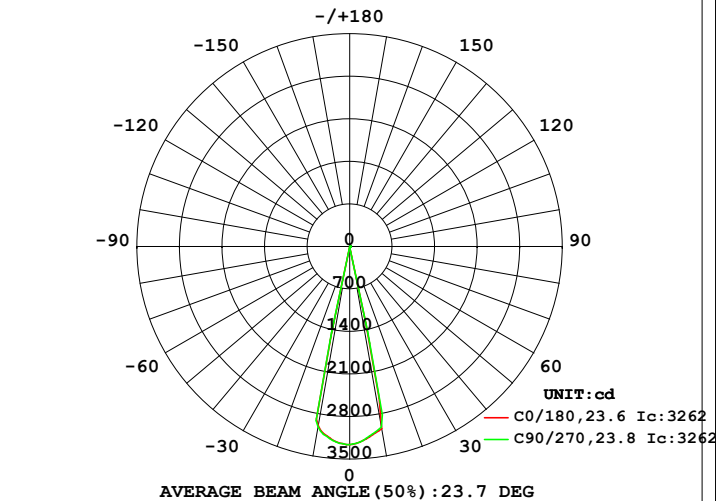


## LUMINAIRE PHOTOMETRIC TEST REPORT

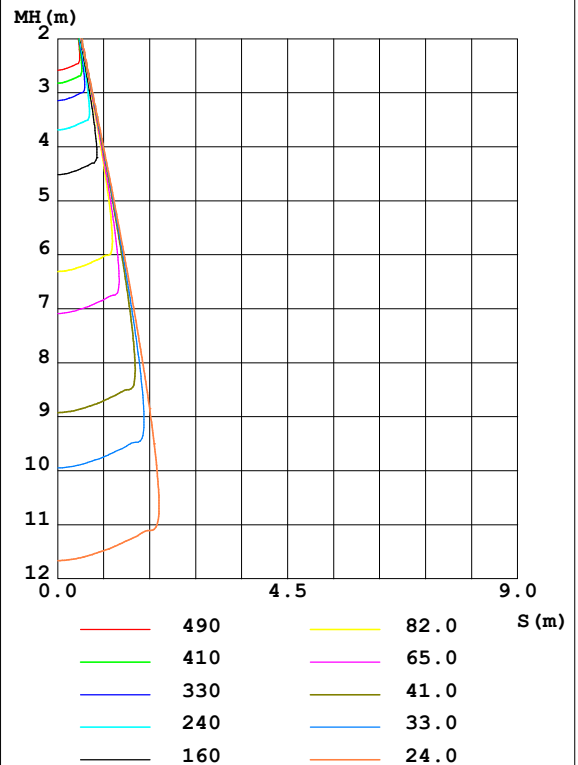
Test:U:224.9V I:0.0590A P:11.90W PF:0.8920 Freq:50.00Hz Lamp Flux:431.382x1 lm		
NAME: ALT55F-12G40-Z2-Min	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:25	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 36.25 lm/W			
MODEL	4000K CRI90	I <sub>max</sub> (cd)	3263	S/MH(C0/180)	0.31
NOMINAL POWER(W)	12	LOR(%)	100.0	S/MH(C90/270)	0.31
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	431.38	η UP,DN(C0-180)	0.0,46.3
NOMINAL FLUX(lm)	431.382	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,53.7
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE(V)	36	η down(%)	100.0	CIBSE SHR MAX	1.00

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:ZR  
 Test Date:2021-07-16

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
 Humidity:65.0%  
 Test Distance:8.402m [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	3043	3041	3016	2995	2994	2983	3009	3037	0- 10	298.9	298.9	69.3, 69.3
20	0.1647	0.1860	0.2387	0.3337	5.491	5.468	5.402	5.514	10- 20	123.6	422.6	98, 98
30	0	0	0	0	8.798	8.772	8.759	8.771	20- 30	1.821	424.4	98.4, 98.4
40	0	0	0	0	6.096	6.158	6.049	5.855	30- 40	2.471	426.9	99, 99
50	0	0	0	0	3.285	3.367	3.273	3.284	40- 50	1.605	428.5	99.3, 99.3
60	0	0	0	0	2.126	2.143	2.117	2.060	50- 60	1.261	429.7	99.6, 99.6
70	0	0	0	0	1.221	1.227	1.211	1.175	60- 70	0.8035	430.5	99.8, 99.8
80	0.0263	0.0633	0.0632	0.0158	0.7316	0.7374	0.7321	0.7217	70- 80	0.5300	431.1	99.9, 99.9
90	0.0263	0.0263	0.0369	0.0158	0.3791	0.3793	0.3584	0.3584	80- 90	0.3268	431.4	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		

Conical surface Flux(90deg): 427.75 lm

%lum = 99.2%

%lamp = 99.2%

Conical surface Flux(120deg): 429.72 lm

%lum = 99.6%

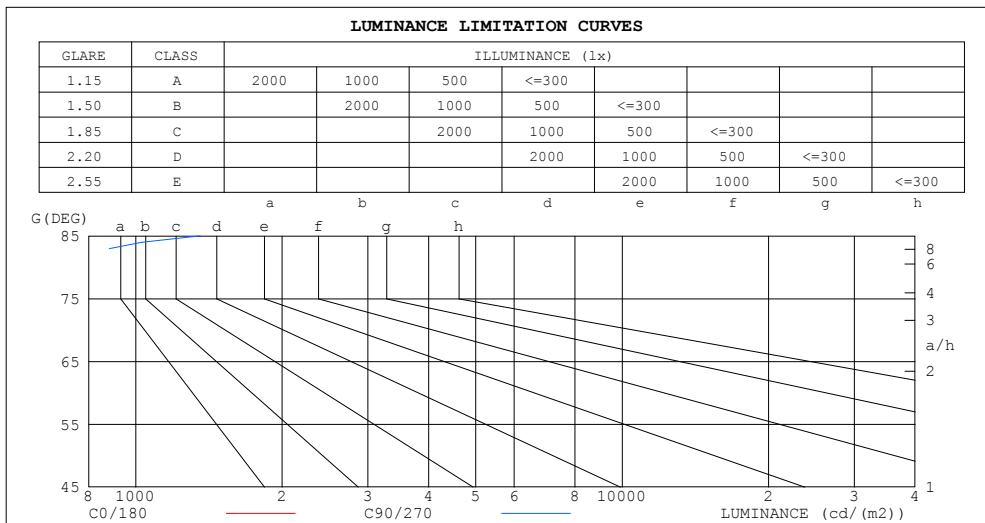
%lamp = 99.6%

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:ZR  
 Test Date:2021-07-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
 Humidity:65.0%  
 Test Distance:8.402m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

Test:U:224.9V I:0.0590A P:11.90W PF:0.8920 Freq:50.00Hz Lamp Flux:431.382x1 lm		
NAME: ALT55F-12G40-Z2-Min	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:25	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	617	1356
80	310	743
75	0	287
70	0	0
65	0	0
60	0	0
55	0	0
50	0	0
45	0	0

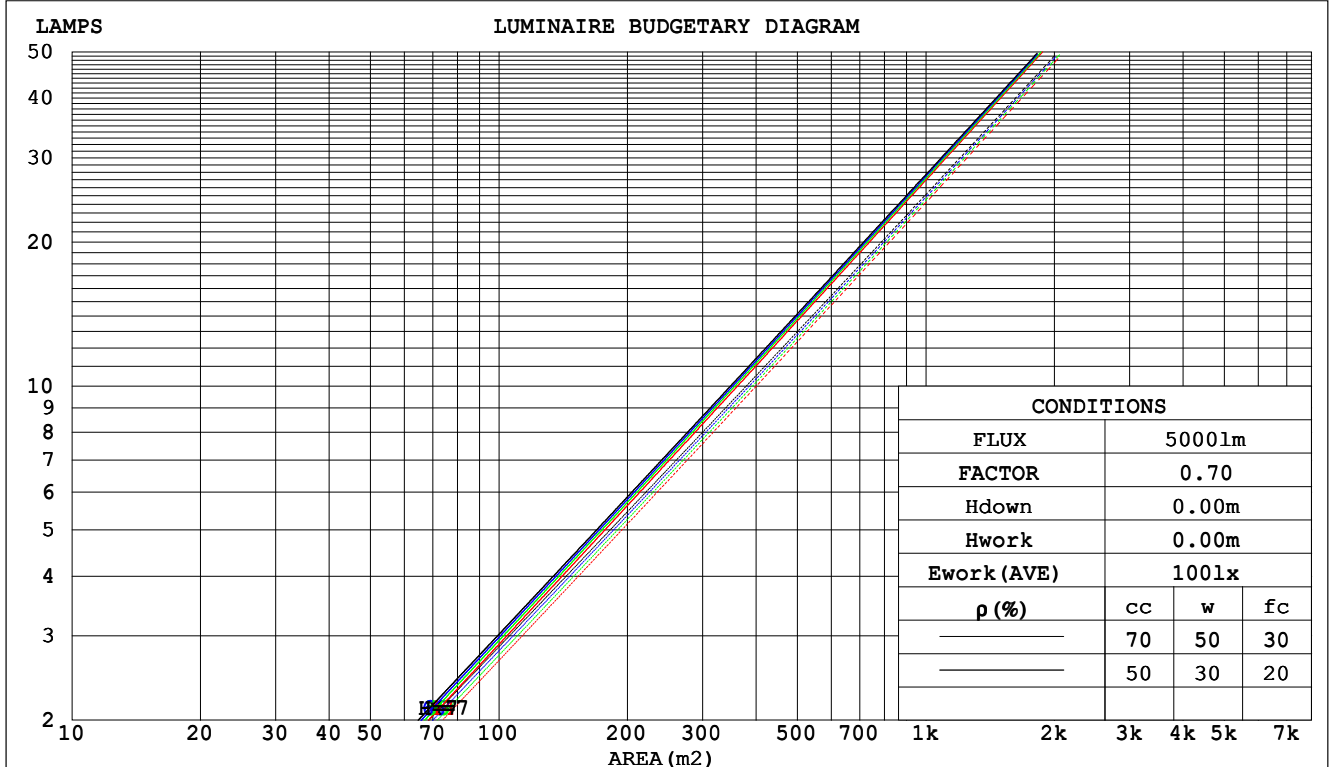
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZR  
Test Date:2021-07-16

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
Humidity:65.0%  
Test Distance:8.402m [K=1.0000]  
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:224.9V I:0.0590A P:11.90W PF:0.8920 Freq:50.00Hz Lamp Flux:431.382x1 lm		
NAME: ALT55F-12G40-Z2-Min	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:25	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	1.14	1.13	1.11	1.12	1.11	1.10	1.08	1.07	1.06	1.05	1.04	1.03	1.01	1.01	1.00	.98
2.0	1.10	1.08	1.06	1.09	1.07	1.05	1.06	1.04	1.03	1.03	1.02	1.01	1.00	.99	.98	.97
3.0	1.07	1.04	1.02	1.06	1.03	1.01	1.04	1.02	.00	1.01	.00	.98	.99	.98	.97	.96
4.0	1.05	1.02	.99	1.04	1.01	.99	1.02	.00	.98	1.00	.98	.97	.98	.97	.96	.95
5.0	1.02	.99	.97	1.02	.99	.97	1.00	.98	.96	.99	.97	.95	.98	.96	.95	.94
6.0	1.01	.98	.95	.00	.97	.95	.99	.96	.95	.98	.96	.94	.97	.95	.93	.93
7.0	.99	.96	.94	.98	.96	.94	.97	.95	.93	.97	.94	.93	.96	.94	.92	.92
8.0	.97	.95	.93	.97	.94	.92	.96	.94	.92	.95	.93	.92	.95	.93	.91	.91
9.0	.96	.93	.91	.96	.93	.91	.95	.93	.91	.94	.92	.91	.94	.92	.91	.90
10.0	.95	.92	.90	.95	.92	.90	.94	.92	.90	.93	.91	.90	.93	.91	.90	.89



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:ZR  
 Test Date:2021-07-16

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
 Humidity:65.0%  
 Test Distance:8.402m [K=1.0000]  
 Remarks:

## WEC AND CCEC

Test:U:224.9V I:0.0590A P:11.90W PF:0.8920 Freq:50.00Hz Lamp Flux:431.382x1 lm					
NAME: ALT55F-12G40-Z2-Min			TYPE:		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:
MFR.:			SUR.:25		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	.112	.064	.020	.105	.060	.019	.093	.053	.017	.082	.047	.015	.071	.041	.013	
2.0	.100	.055	.017	.095	.052	.016	.085	.047	.015	.076	.043	.013	.067	.038	.012	
3.0	.091	.049	.015	.087	.047	.014	.079	.043	.013	.071	.039	.012	.064	.035	.011	
4.0	.084	.043	.013	.080	.042	.012	.073	.039	.012	.067	.036	.011	.061	.033	.010	
5.0	.077	.039	.011	.074	.038	.011	.068	.036	.010	.063	.033	.010	.058	.031	.009	
6.0	.072	.036	.010	.069	.035	.010	.064	.033	.010	.060	.031	.009	.056	.029	.009	
7.0	.067	.033	.009	.065	.032	.009	.061	.031	.009	.057	.029	.008	.053	.028	.008	
8.0	.063	.031	.009	.061	.030	.008	.057	.029	.008	.054	.027	.008	.051	.026	.008	
9.0	.059	.029	.008	.058	.028	.008	.055	.027	.008	.052	.026	.007	.049	.025	.007	
10.0	.056	.027	.007	.055	.026	.007	.052	.025	.007	.049	.025	.007	.047	.024	.007	

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	.167	.158	.150	.143	.136	.129	.098	.093	.089	.056	.054	.052	.018	.017	.017	
2.0	.147	.133	.121	.126	.114	.105	.086	.079	.073	.050	.046	.043	.016	.015	.014	
3.0	.130	.113	.100	.111	.098	.086	.077	.068	.061	.044	.040	.036	.014	.013	.012	
4.0	.116	.097	.083	.100	.084	.072	.068	.059	.051	.040	.034	.030	.013	.011	.010	
5.0	.104	.084	.070	.089	.073	.061	.062	.051	.043	.036	.030	.025	.012	.010	.008	
6.0	.094	.074	.060	.081	.064	.052	.056	.045	.037	.032	.026	.022	.010	.009	.007	
7.0	.086	.065	.051	.074	.057	.045	.051	.040	.032	.030	.023	.019	.010	.008	.006	
8.0	.078	.058	.044	.067	.050	.039	.047	.035	.027	.027	.021	.016	.009	.007	.005	
9.0	.072	.052	.039	.062	.045	.034	.043	.032	.024	.025	.019	.014	.008	.006	.005	
10.0	.067	.047	.034	.057	.041	.030	.040	.029	.021	.023	.017	.013	.008	.006	.004	

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZR  
Test Date:2021-07-16

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
Humidity:65.0%  
Test Distance:8.402m [K=1.0000]  
Remarks:

UGR(Unified Glare Rating) Table

Test:U:224.9V I:0.0590A P:11.90W PF:0.8920 Freq:50.00Hz Lamp Flux:431.382x1 lm										
NAME: ALT55F-12G40-Z2-Min					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.:					SUR.:25			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	---	---	---	---	---	---	---	---	---	---
3H	-24.8	-24.4	-24.6	-24.2	-24.0	-26.0	-25.5	-25.7	-25.3	-25.2
4H	-21.2	-20.8	-21.0	-20.6	-20.4	-16.7	-16.2	-16.4	-16.0	-15.8
6H	-15.3	-14.8	-15.0	-14.6	-14.4	-9.1	-8.7	-8.9	-8.5	-8.3
8H	-12.9	-12.5	-12.6	-12.2	-12.0	-7.4	-7.0	-7.1	-6.8	-6.5
12H	-10.8	-10.4	-10.5	-10.1	-9.9	-5.5	-5.2	-5.2	-4.9	-4.7
4H 2H	-46.4	-46.0	-46.2	-45.8	-45.6	-48.1	-47.7	-47.9	-47.5	-47.3
3H	-21.5	-21.1	-21.2	-20.8	-20.6	-19.9	-19.5	-19.6	-19.3	-19.0
4H	-16.8	-16.4	-16.5	-16.2	-15.9	-13.7	-13.3	-13.3	-13.0	-12.7
6H	-12.5	-12.2	-12.1	-11.9	-11.5	-7.7	-7.4	-7.3	-7.1	-6.7
8H	-10.5	-10.2	-10.1	-9.9	-9.5	-6.0	-5.7	-5.6	-5.3	-5.0
12H	-8.6	-8.3	-8.2	-7.9	-7.6	-4.0	-3.7	-3.6	-3.4	-3.0
8H 4H	-12.3	-12.0	-12.0	-11.7	-11.3	-11.1	-10.8	-10.7	-10.5	-10.1
6H	-9.0	-8.8	-8.6	-8.4	-8.0	-6.3	-6.0	-5.9	-5.7	-5.2
8H	-7.6	-7.4	-7.2	-7.0	-6.6	-4.7	-4.4	-4.2	-4.0	-3.6
12H	-6.1	-6.0	-5.7	-5.5	-5.0	-2.7	-2.5	-2.3	-2.1	-1.6
12H 4H	-11.4	-11.1	-11.0	-10.7	-10.3	-10.6	-10.3	-10.2	-9.9	-9.5
6H	-7.8	-7.6	-7.3	-7.1	-6.7	-5.7	-5.5	-5.3	-5.1	-4.7
8H	-6.3	-6.1	-5.9	-5.7	-5.2	-4.0	-3.9	-3.6	-3.4	-2.9
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.2					+ 0.4 / - 0.3				
2.0H	+ 0.3 / - 0.6					+ 0.4 / - 0.5				

CIE Pub.117, 431.4 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -2.9)

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZR  
Test Date:2021-07-16

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
Humidity:65.0%  
Test Distance:8.402m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:224.9V I:0.0590A P:11.90W PF:0.8920 Freq:50.00Hz Lamp Flux:431.382x1 lm		
NAME: ALT55F-12G40-Z2-Min	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:25	Shielding Angle:

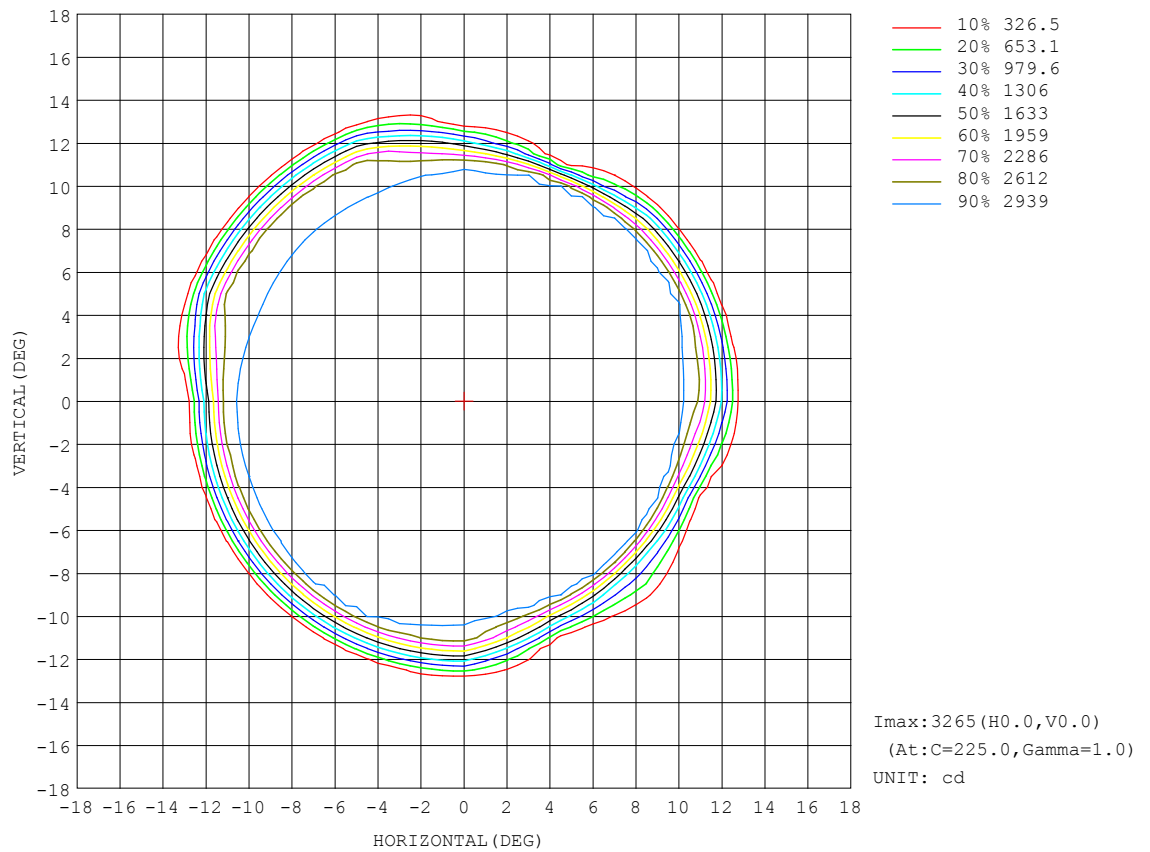
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	91	85	82	90	85	82	90	85	82	78
0.80	98	93	89	97	92	89	96	92	89	86
1.00	102	97	93	101	96	93	99	96	93	89
1.25	105	100	97	104	100	97	102	99	96	92
1.50	108	103	100	106	103	100	104	101	99	95
2.00	110	106	103	108	105	102	106	103	101	96
2.50	111	108	105	110	107	104	107	104	102	97
3.00	113	109	107	111	108	106	108	105	104	98
4.00	114	112	110	112	110	109	109	107	106	99
5.00	116	114	112	114	112	110	110	108	107	100
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:ZR  
Test Date:2021-07-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
Humidity:65.0%  
Test Distance:8.402m [K=1.0000]  
Remarks:

## ISOCANDELA DIAGRAM

Test:U:224.9V I:0.0590A P:11.90W PF:0.8920 Freq:50.00Hz Lamp Flux:431.382x1 lm		
NAME: ALT55F-12G40-Z2-Min	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:25	Shielding Angle:



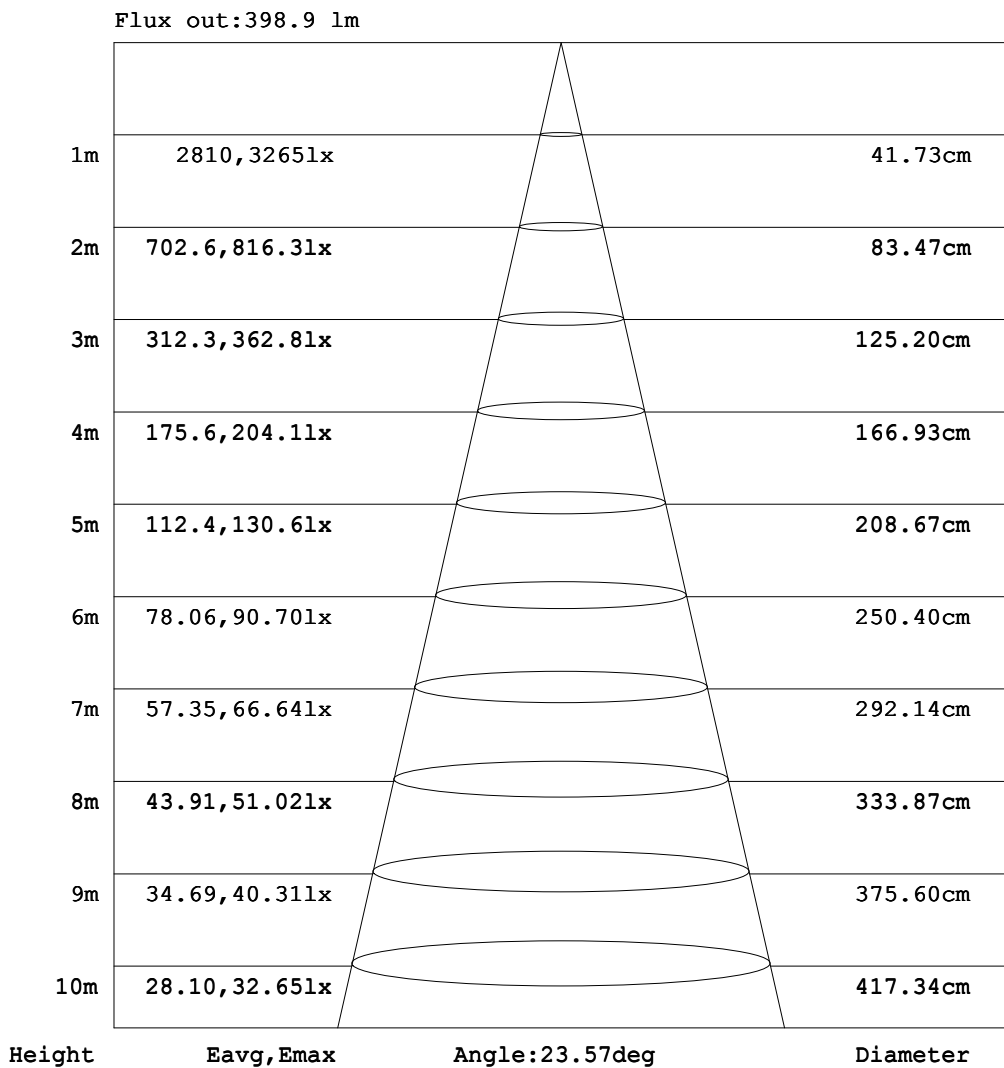
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZR  
Test Date:2021-07-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
Humidity:65.0%  
Test Distance:8.402m [K=1.0000]  
Remarks:



### AAI Figure

Test:U:224.9V I:0.0590A P:11.90W PF:0.8920 Freq:50.00Hz Lamp Flux:431.382x1 lm		
NAME: ALT55F-12G40-Z2-Min	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:25	Shielding Angle:



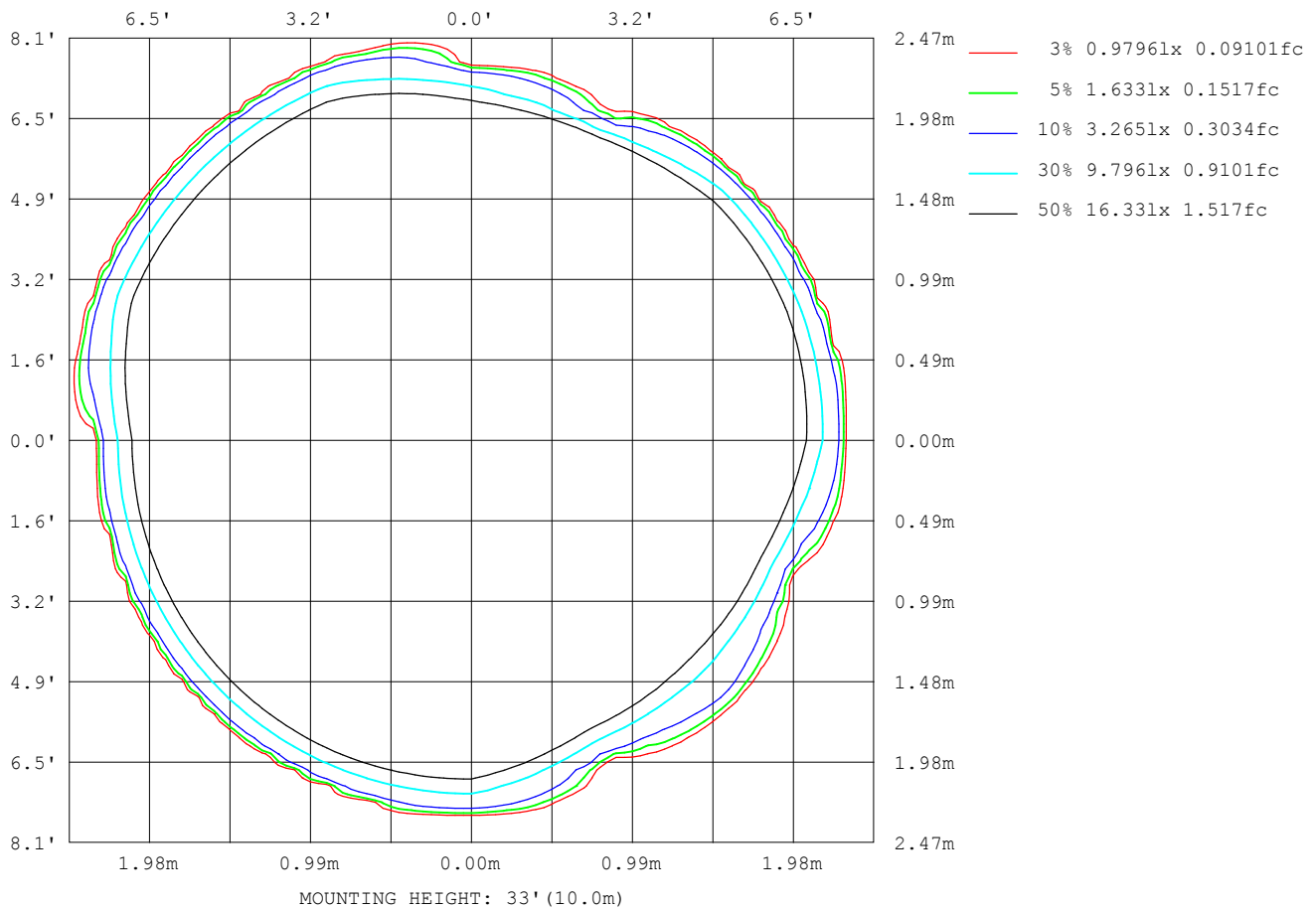
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZR  
Test Date:2021-07-16

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
Humidity:65.0%  
Test Distance:8.402m [K=1.0000]  
Remarks:

# ISOLUX DIAGRAM

Test:U:224.9V I:0.0590A P:11.90W PF:0.8920 Freq:50.00Hz Lamp Flux:431.382x1 lm		
NAME: ALT55F-12G40-Z2-Min	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:25	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZR  
Test Date:2021-07-16

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
Humidity:65.0%  
Test Distance:8.402m [K=1.0000]  
Remarks:

## LED Avg.L Report

Test:U:224.9V I:0.0590A P:11.90W PF:0.8920 Freq:50.00Hz Lamp Flux:431.382x1 lm		
NAME: ALT55F-12G40-Z2-Min	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:25	Shielding Angle:

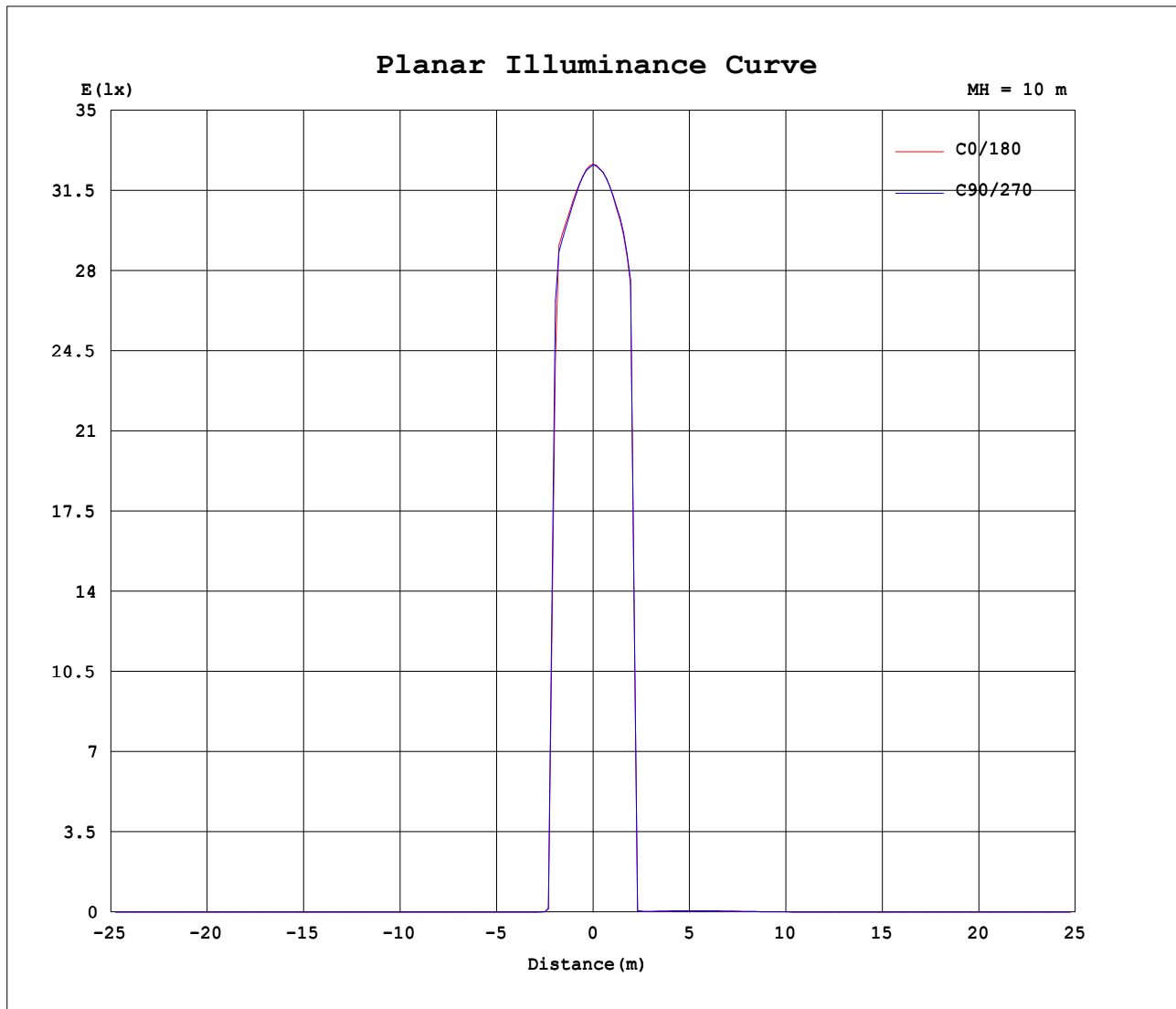
AvgL	cd/m2
L_0~180 (65) av	3824
L_0~180 (75) av	3838
L_0~180 (85) av	6834
L_90~270 (65) av	3815
L_90~270 (75) av	3882
L_90~270 (85) av	7149
L_45 (65) av	3808
L_45 (75) av	3759
L_45 (85) av	6718

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:ZR  
 Test Date:2021-07-16

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
 Humidity:65.0%  
 Test Distance:8.402m [K=1.0000]  
 Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: ZR  
Test Date: 2021-07-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
Humidity: 65.0%  
Test Distance: 8.402m [K=1.0000]  
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.354
Humidity:65.0%
Test Distance:8.402m [K=1.0000]
Remarks:

```