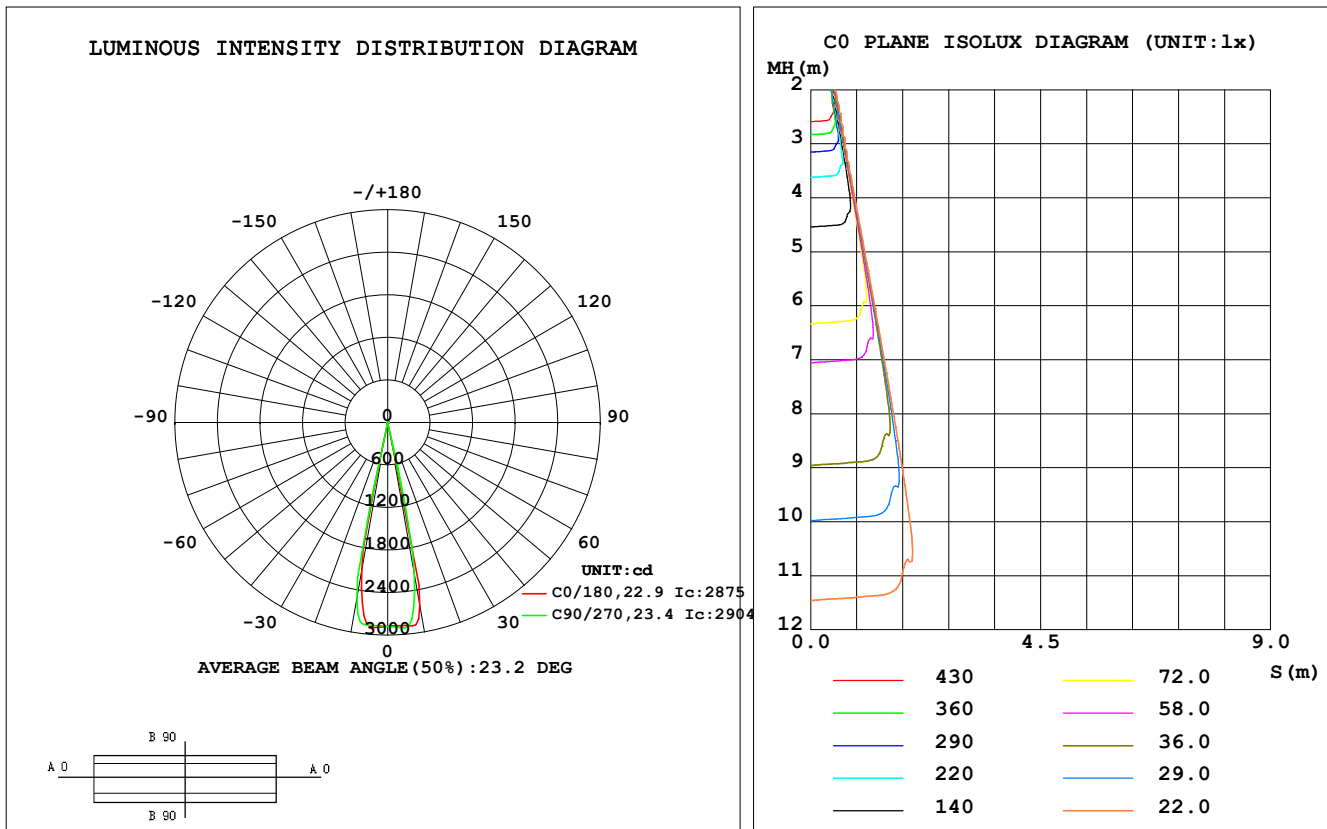


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:224.9V I:0.0570A P:11.50W PF:0.8890 Freq:50.00Hz Lamp Flux:368.402x1 lm		
NAME: ALT55F-12G40-Z1-Max	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:25	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 32.03 lm/W			
MODEL	4000K CRI90	I <sub>max</sub> (cd)	2905	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)	368.40	η UP,DN(C0-180)	0.0,48.0
NOMINAL FLUX(lm)	368.402	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,52.0
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



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	2623	2416	2173	2029	2125	2266	2501	2686	0- 10	261.7	261.7	71,71
20	1.889	1.137	0.5542	0.3074	5.194	5.263	5.754	6.331	10- 20	96.98	358.7	97.4,97.4
30	2.130	1.152	0.4905	0.1626	8.200	8.572	9.491	10.33	20- 30	2.101	360.8	97.9,97.9
40	1.742	0.8900	0.3588	0.0901	5.414	5.767	6.538	7.333	30- 40	2.826	363.6	98.7,98.7
50	1.129	0.5056	0.0950	0	3.069	3.325	3.806	4.372	40- 50	1.970	365.6	99.2,99.2
60	0.4259	0.2214	0.0317	0	1.851	1.961	2.160	2.398	50- 60	1.456	367.0	99.6,99.6
70	0.0264	0.0106	0	0	0.9802	0.9886	1.022	1.067	60- 70	0.7660	367.8	99.8,99.8
80	0	0	0	0	0.5140	0.5207	0.5426	0.5547	70- 80	0.4051	368.2	99.9,99.9
90	0	0	0	0	0.2099	0.2052	0.2109	0.2115	80- 90	0.2109	368.4	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): 364.68 lm

%lum = 99.0%

%lamp = 99.0%

Conical surface Flux(120deg): 367.02 lm

%lum = 99.6%

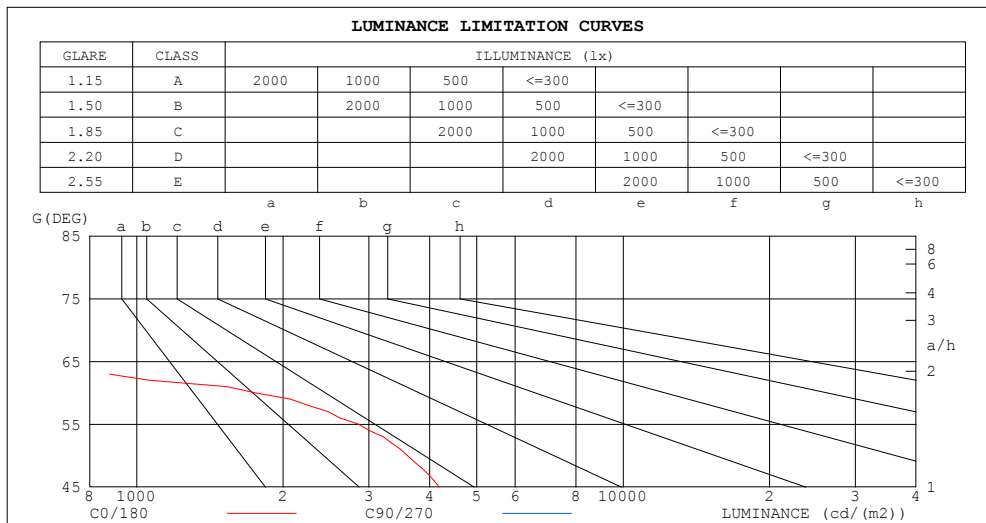
%lamp = 99.6%

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:0.0570A P:11.50W PF:0.8890 Freq:50.00Hz Lamp Flux:368.402x1 lm		
NAME: ALT55F-12G40-Z1-Max	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:25	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	0	0
80	0	0
75	0	0
70	159	0
65	689	0
60	1746	129
55	2853	225
50	3600	302
45	4185	564

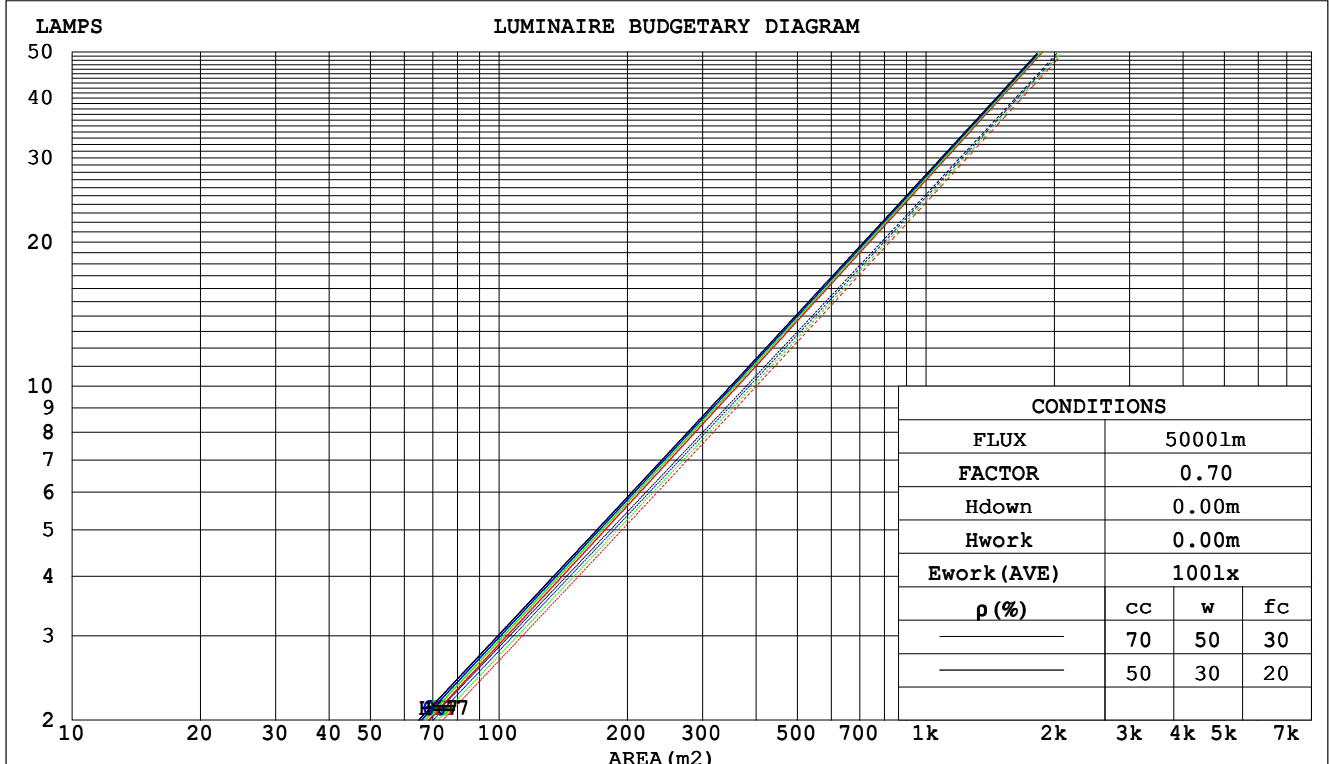
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZR  
Test Date:2021-07-16

$\gamma$  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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:224.9V I:0.0570A P:11.50W PF:0.8890 Freq:50.00Hz Lamp Flux:368.402x1 lm		
NAME: ALT55F-12G40-Z1-Max	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	.99
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	.99	.97
3.0	1.07	1.05	1.02	1.06	1.04	1.02	1.04	1.02	1.00	1.01	.00	.99	.99	.98	.97	.96
4.0	1.05	1.02	.00	1.04	1.01	.99	1.02	.00	.98	1.00	.98	.97	.99	.97	.96	.95
5.0	1.03	.00	.97	1.02	.99	.97	1.00	.98	.96	.99	.97	.95	.98	.96	.95	.94
6.0	1.01	.98	.96	1.00	.97	.95	.99	.96	.95	.98	.96	.94	.97	.95	.94	.93
7.0	.99	.96	.94	.99	.96	.94	.98	.95	.93	.97	.95	.93	.96	.94	.93	.92
8.0	.98	.95	.93	.97	.95	.93	.96	.94	.92	.96	.94	.92	.95	.93	.92	.91
9.0	.96	.94	.92	.96	.93	.92	.95	.93	.91	.95	.93	.91	.94	.92	.91	.90
10.0	.95	.92	.91	.95	.92	.91	.94	.92	.90	.94	.92	.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:0.0570A P:11.50W PF:0.8890 Freq:50.00Hz Lamp Flux:368.402x1 lm					
NAME: ALT55F-12G40-Z1-Max			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	.111	.063	.020	.105	.060	.019	.092	.053	.017	.081	.047	.015	.071	.041	.013		
2.0	.100	.055	.017	.095	.052	.016	.085	.047	.015	.076	.042	.013	.067	.038	.012		
3.0	.091	.048	.014	.087	.046	.014	.078	.042	.013	.071	.039	.012	.064	.035	.011		
4.0	.083	.043	.013	.080	.042	.012	.073	.039	.012	.067	.036	.011	.061	.033	.010		
5.0	.077	.039	.011	.074	.038	.011	.068	.035	.010	.063	.033	.010	.058	.031	.009		
6.0	.071	.036	.010	.069	.035	.010	.064	.033	.010	.059	.031	.009	.055	.029	.009		
7.0	.066	.033	.009	.064	.032	.009	.060	.030	.009	.056	.029	.008	.053	.027	.008		
8.0	.062	.030	.009	.060	.030	.008	.057	.028	.008	.054	.027	.008	.051	.026	.008		
9.0	.059	.028	.008	.057	.028	.008	.054	.027	.008	.051	.026	.007	.049	.025	.007		
10.0	.056	.027	.007	.054	.026	.007	.052	.025	.007	.049	.024	.007	.047	.023	.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	.097	.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	.099	.084	.072	.068	.059	.051	.040	.034	.030	.013	.011	.010	
5.0	.104	.084	.070	.089	.073	.061	.062	.051	.043	.036	.030	.026	.011	.010	.008	
6.0	.094	.074	.060	.081	.064	.052	.056	.045	.037	.032	.026	.022	.010	.009	.007	
7.0	.085	.065	.051	.073	.057	.045	.051	.040	.032	.029	.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	.066	.047	.034	.057	.041	.030	.040	.029	.021	.023	.017	.013	.007	.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:0.0570A P:11.50W PF:0.8890 Freq:50.00Hz Lamp Flux:368.402x1 lm											
NAME: ALT55F-12G40-Z1-Max					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	2H	2.7	3.2	2.9	3.3	3.5	-4.6	-4.1	-4.4	-4.0	-3.8
	3H	2.6	3.1	2.9	3.3	3.4	-4.7	-4.3	-4.5	-4.1	-3.9
	4H	2.6	3.0	2.8	3.2	3.4	-4.8	-4.4	-4.5	-4.2	-4.0
	6H	2.5	2.9	2.8	3.1	3.3	-4.9	-4.5	-4.6	-4.2	-4.0
	8H	2.4	2.8	2.7	3.1	3.3	-4.9	-4.5	-4.6	-4.3	-4.0
	12H	2.4	2.8	2.7	3.0	3.3	-4.9	-4.6	-4.6	-4.3	-4.1
4H	2H	2.6	3.0	2.8	3.2	3.4	-3.9	-3.5	-3.7	-3.3	-3.1
	3H	2.5	2.9	2.8	3.1	3.4	-4.1	-3.7	-3.8	-3.4	-3.2
	4H	2.4	2.7	2.7	3.0	3.3	-4.2	-3.8	-3.8	-3.5	-3.2
	6H	2.3	2.6	2.6	2.9	3.3	-4.3	-4.0	-3.9	-3.6	-3.3
	8H	2.2	2.5	2.6	2.9	3.2	-4.3	-4.0	-4.0	-3.7	-3.3
	12H	2.2	2.4	2.6	2.8	3.2	-4.4	-4.1	-4.0	-3.7	-3.4
8H	4H	2.2	2.5	2.6	2.9	3.2	-4.3	-4.0	-4.0	-3.7	-3.3
	6H	2.1	2.4	2.5	2.7	3.1	-4.5	-4.2	-4.0	-3.8	-3.4
	8H	2.0	2.3	2.5	2.7	3.1	-4.5	-4.3	-4.1	-3.9	-3.4
	12H	2.0	2.2	2.4	2.6	3.1	-4.6	-4.4	-4.1	-4.0	-3.5
12H	4H	2.2	2.4	2.6	2.8	3.2	-4.4	-4.1	-4.0	-3.7	-3.4
	6H	2.0	2.3	2.5	2.7	3.1	-4.5	-4.3	-4.1	-3.9	-3.4
	8H	2.0	2.2	2.4	2.6	3.1	-4.6	-4.4	-4.1	-4.0	-3.5
Variations with the observer position at spacings:											
S = 1.0H	+ 1.4 / - 1.4					+ 2.6 / - 5.2					
1.5H	+ 2.1 / - 4.0					+ 2.4 / - 5.6					
2.0H	+ 3.9 / - 8.8					+ 4.7 / -10.3					

CIE Pub.117, 368.4 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -3.5)

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:0.0570A P:11.50W PF:0.8890 Freq:50.00Hz Lamp Flux:368.402x1 lm		
NAME: ALT55F-12G40-Z1-Max	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:25	Shielding Angle:

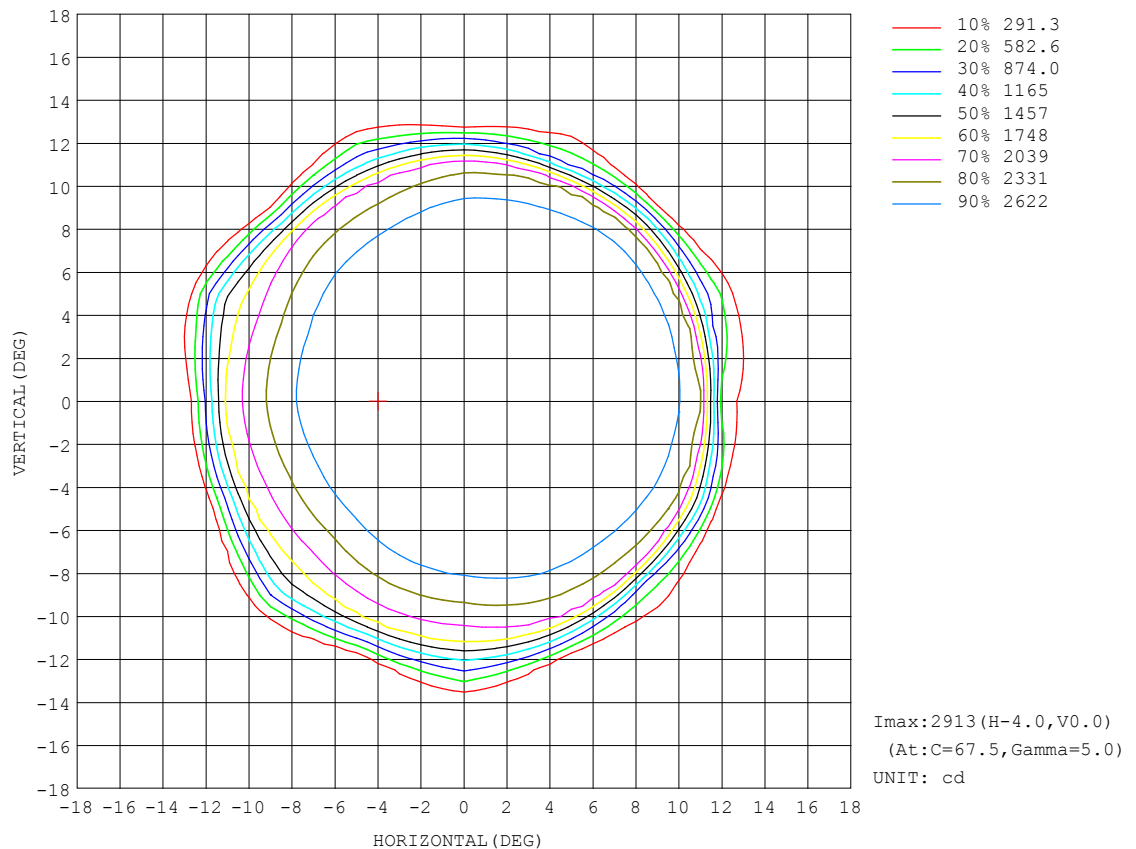
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	91	85	82	90	85	82	90	85	81	78
0.80	98	92	89	97	92	89	96	92	89	85
1.00	101	96	93	101	96	93	99	96	92	89
1.25	105	100	97	104	100	97	102	99	96	92
1.50	107	103	100	106	102	100	104	101	99	94
2.00	110	106	103	108	105	102	106	103	101	96
2.50	111	108	105	110	106	104	107	104	102	96
3.00	113	109	107	111	108	106	107	105	104	97
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

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:

## ISOCANDELA DIAGRAM

Test:U:224.9V I:0.0570A P:11.50W PF:0.8890 Freq:50.00Hz Lamp Flux:368.402x1 lm		
NAME: ALT55F-12G40-Z1-Max	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:25	Shielding Angle:



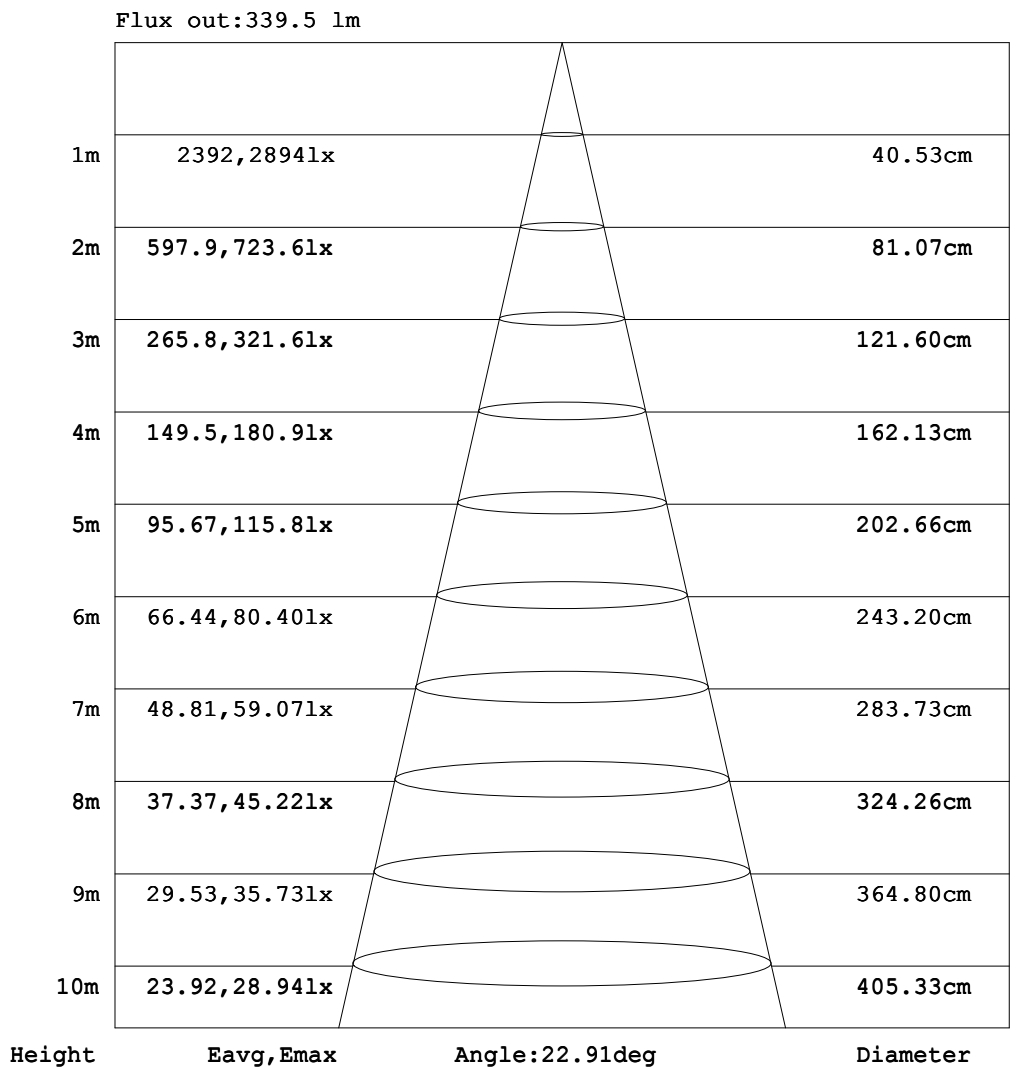
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZR  
Test Date:2021-07-16

$\gamma$  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:0.0570A P:11.50W PF:0.8890 Freq:50.00Hz Lamp Flux:368.402x1 lm		
NAME: ALT55F-12G40-Z1-Max	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:25	Shielding Angle:



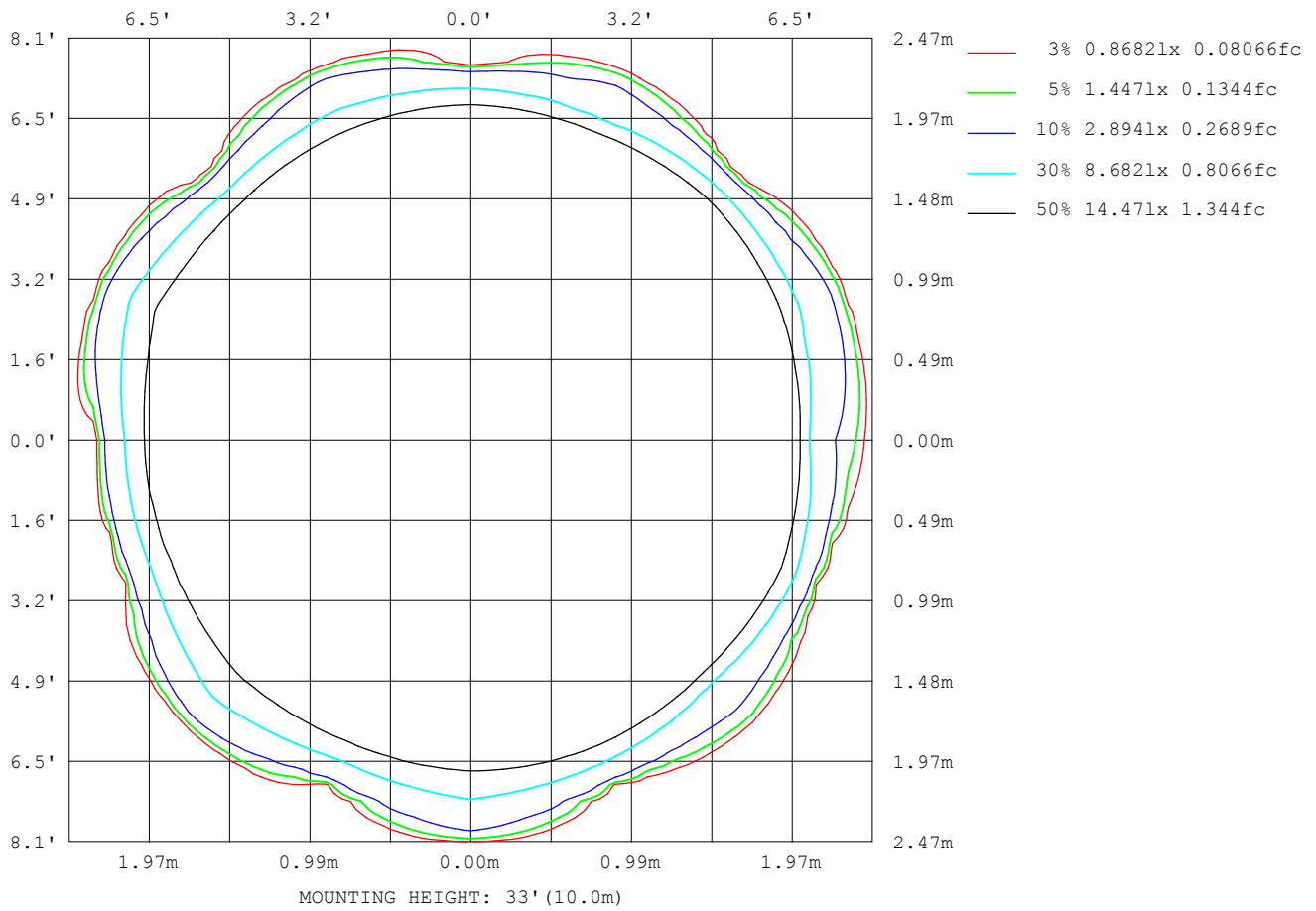
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.0570A P:11.50W PF:0.8890 Freq:50.00Hz Lamp Flux:368.402x1 lm		
NAME: ALT55F-12G40-Z1-Max	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:0.0570A P:11.50W PF:0.8890 Freq:50.00Hz Lamp Flux:368.402x1 lm		
NAME: ALT55F-12G40-Z1-Max	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:25	Shielding Angle:

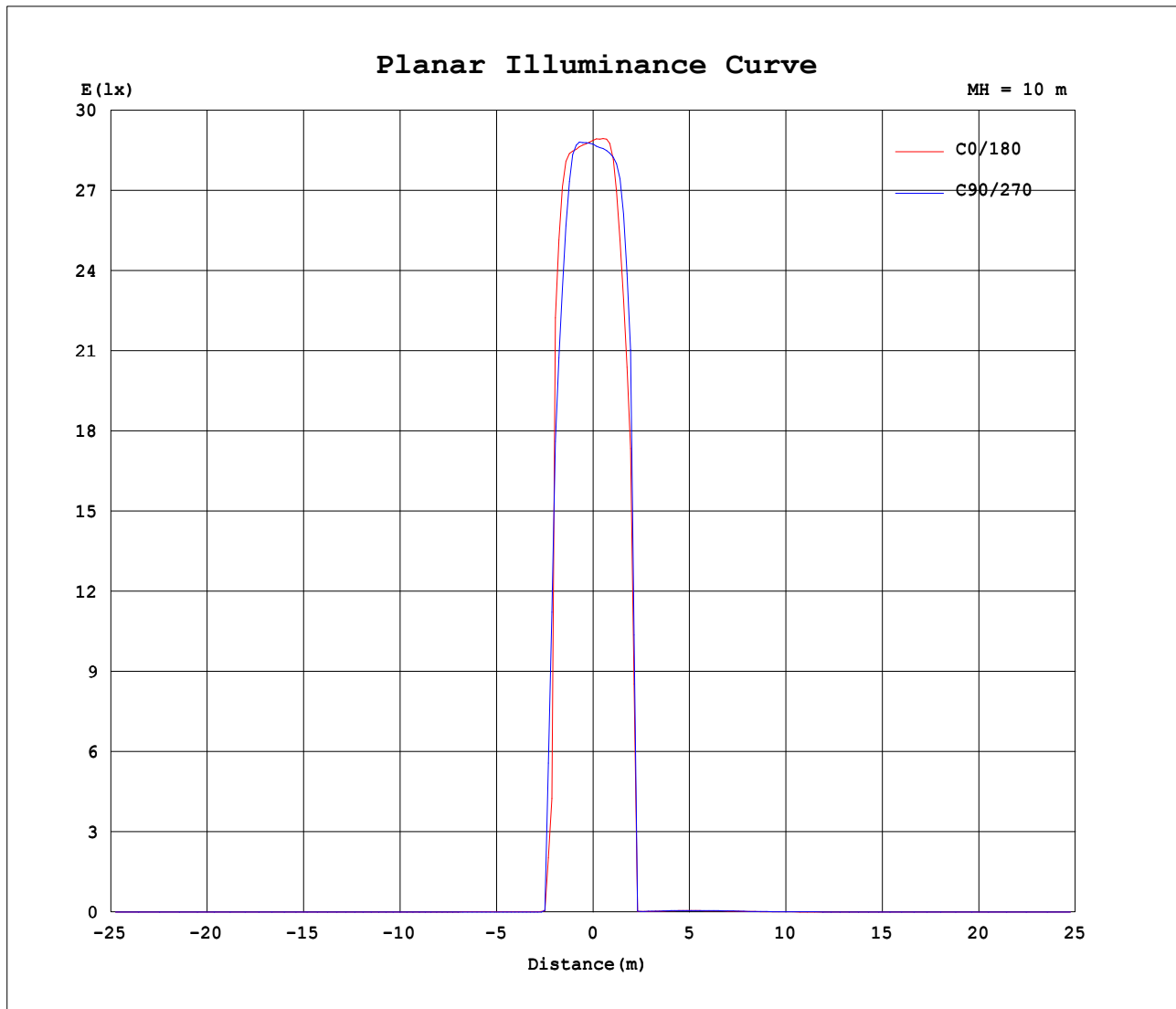
AvgL	cd/m2
L_0~180 (65) av	3558
L_0~180 (75) av	2791
L_0~180 (85) av	3990
L_90~270 (65) av	3549
L_90~270 (75) av	2867
L_90~270 (85) av	4131
L_45 (65) av	3660
L_45 (75) av	2858
L_45 (85) av	4194

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:

```