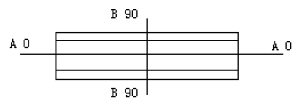
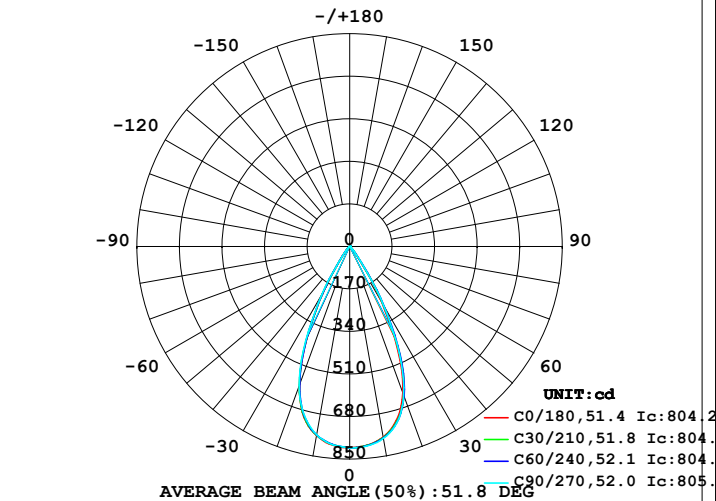


LUMINAIRE PHOTOMETRIC TEST REPORT

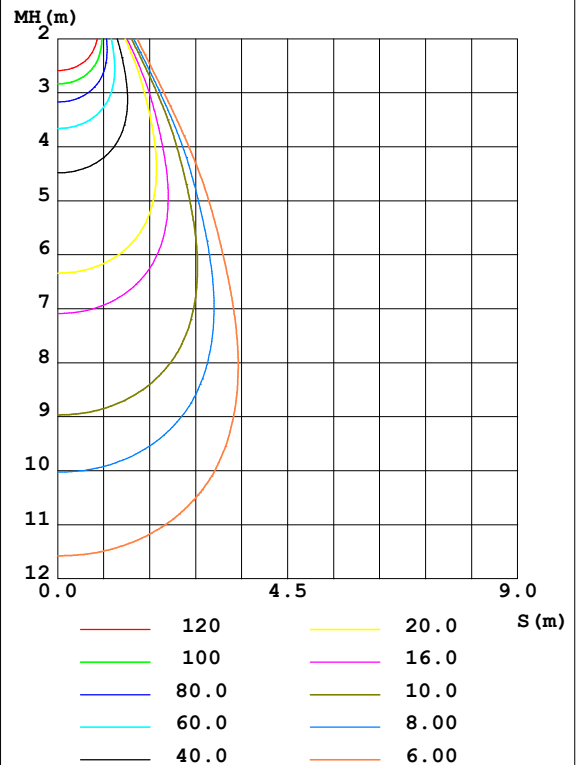
Test:U:225.0V I:0.0410A P:9.110W PF:0.9680 Freq:0Hz Lamp Flux:546.478x1 lm					
NAME: ALST45-09G30-WF		TYPE:		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.:		SUR.:38		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 59.99 lm/W
MODEL	3000K CRI90	I _{max} (cd)	805.4	S/MH(C0/180)	0.75	
NOMINAL POWER(W)	9	LOR(%)	100.0	S/MH(C90/270)	0.76	
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	546.48	η UP,DN(C0-180)	0.0,51.5	
NOMINAL FLUX(lm)	546.478	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,48.5	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75	
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	0.80	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:AE
 Test Date:2020-11-09

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:7.240m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	773.1	776.3	778.4	770.5	766.8	763.7	764.2	764.0	0- 10	75.25	75.25	13.8,13.8
20	622.1	640.3	631.3	607.1	589.2	579.9	591.1	599.1	10- 20	197.3	272.6	49.9,49.9
30	256.0	282.7	273.3	246.7	217.1	214.5	227.1	239.4	20- 30	195.1	467.7	85.6,85.6
40	33.74	37.06	35.57	32.94	30.40	30.27	31.50	32.41	30- 40	64.59	532.3	97.4,97.4
50	5.293	5.878	5.236	5.108	5.070	4.950	5.356	5.597	40- 50	11.77	544.1	99.6,99.6
60	0.8591	0.8401	0.8313	0.7454	0.7532	0.6863	0.7761	0.8619	50- 60	2.060	546.2	99.9,99.9
70	0.1100	0.1135	0.1530	0.1014	0.0348	0.0082	0	0.0785	60- 70	0.3049	546.5	100,100
80	0	0	0	0	0	0	0	0	70- 80	0.0166	546.5	100,100
90	0	0	0	0	0	0	0	0	80- 90	0	546.5	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): 540.59 lm

%lum = 98.9%

%lamp = 98.9%

Conical surface Flux(120deg): 546.16 lm

%lum = 99.9%

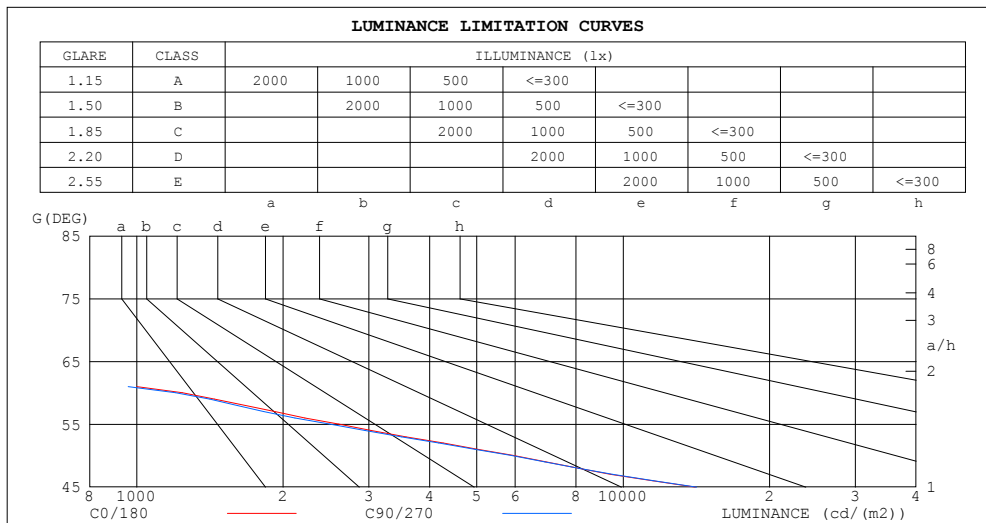
%lamp = 99.9%

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:AE
 Test Date:2020-11-09

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:7.240m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:225.0V I:0.0410A P:9.110W PF:0.9680 Freq:0Hz Lamp Flux:546.478x1 lm		
NAME: ALST45-09G30-WF	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:38	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	0	0
80	0	0
75	0	88
70	232	323
65	482	529
60	1241	1201
55	2604	2495
50	5948	5887
45	14067	14156

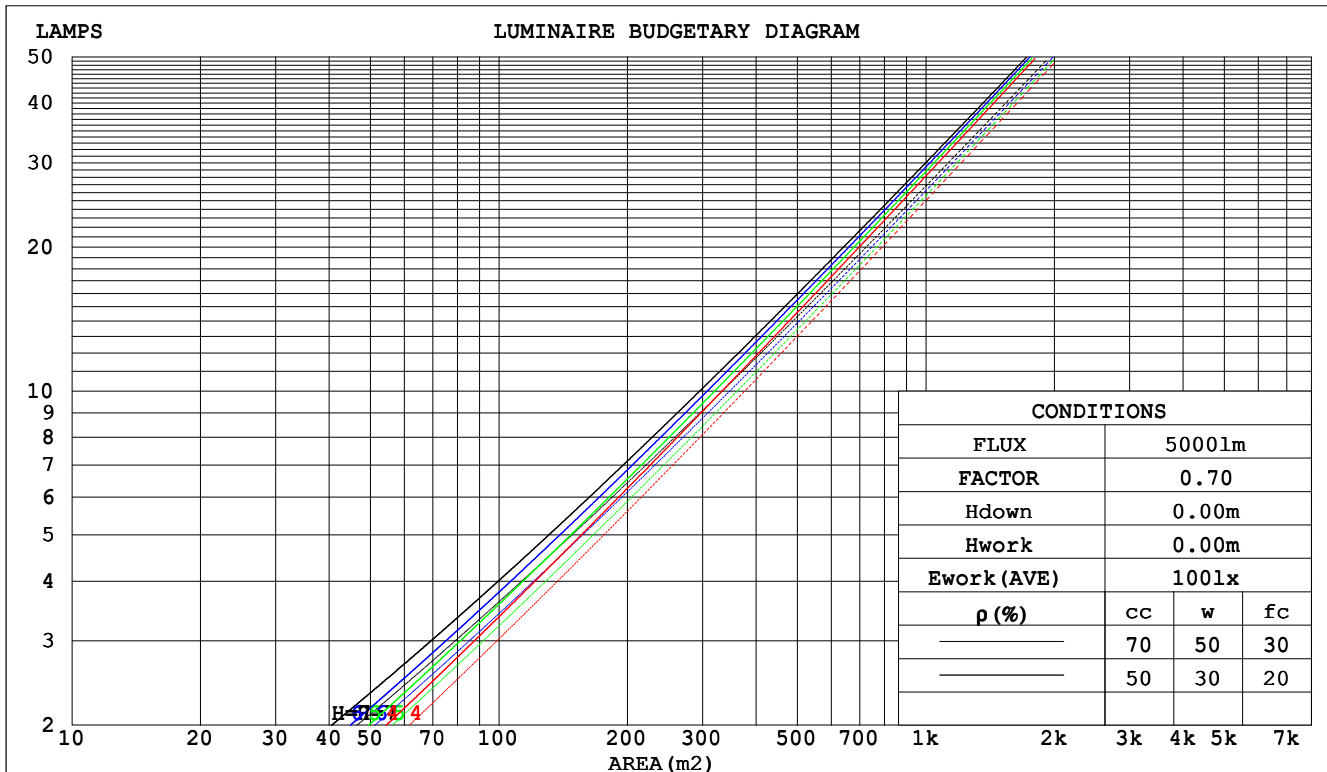
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-11-09

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:225.0V I:0.0410A P:9.110W PF:0.9680 Freq:0Hz Lamp Flux:546.478x1 lm		
NAME: ALST45-09G30-WF	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:38	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	1.12	1.09	1.07	1.09	1.07	1.06	1.05	1.04	1.02	1.02	1.00	.99	.98	.97	.96	.95
2.0	1.05	1.01	.98	1.03	.99	.97	.99	.97	.95	.97	.95	.93	.94	.92	.91	.89
3.0	.99	.94	.91	.97	.93	.90	.95	.91	.88	.92	.89	.87	.90	.88	.86	.84
4.0	.93	.88	.84	.92	.87	.84	.90	.86	.83	.88	.85	.82	.86	.83	.81	.80
5.0	.88	.83	.79	.87	.82	.79	.85	.81	.78	.84	.80	.77	.82	.79	.77	.75
6.0	.83	.78	.74	.83	.78	.74	.81	.77	.73	.80	.76	.73	.79	.75	.73	.71
7.0	.79	.74	.70	.79	.73	.70	.77	.73	.69	.76	.72	.69	.75	.72	.69	.67
8.0	.75	.70	.66	.75	.70	.66	.74	.69	.66	.73	.69	.66	.72	.68	.65	.64
9.0	.72	.66	.63	.71	.66	.63	.70	.66	.62	.69	.65	.62	.69	.65	.62	.61
10.0	.68	.63	.60	.68	.63	.60	.67	.63	.59	.66	.62	.59	.66	.62	.59	.58



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:AE
 Test Date:2020-11-09

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:7.240m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:225.0V I:0.0410A P:9.110W PF:0.9680 Freq:0Hz Lamp Flux:546.478x1 lm					
NAME: ALST45-09G30-WF			TYPE:		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:
MFR.:			SUR.:38		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	.163	.093	.029	.156	.089	.028	.144	.082	.026	.132	.076	.024	.121	.070	.023		
2.0	.154	.085	.026	.149	.082	.025	.138	.077	.024	.129	.072	.023	.120	.068	.021		
3.0	.147	.078	.023	.142	.076	.023	.133	.072	.022	.125	.068	.021	.117	.065	.020		
4.0	.139	.072	.021	.135	.071	.021	.128	.068	.020	.121	.065	.020	.114	.062	.019		
5.0	.133	.068	.020	.129	.066	.019	.123	.064	.019	.117	.062	.018	.111	.059	.018		
6.0	.127	.064	.018	.124	.063	.018	.118	.061	.018	.113	.059	.017	.108	.057	.017		
7.0	.121	.060	.017	.119	.059	.017	.114	.057	.017	.109	.056	.016	.104	.054	.016		
8.0	.116	.057	.016	.114	.056	.016	.110	.055	.016	.105	.053	.015	.101	.052	.015		
9.0	.112	.054	.015	.110	.053	.015	.106	.052	.015	.102	.051	.015	.098	.050	.014		
10.0	.108	.052	.014	.106	.051	.014	.102	.050	.014	.099	.049	.014	.095	.048	.014		

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	.170	.157	.146	.146	.135	.126	.100	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.154	.133	.115	.132	.114	.099	.090	.079	.069	.052	.046	.041	.017	.015	.013	
3.0	.141	.113	.092	.121	.098	.080	.083	.068	.056	.048	.040	.033	.015	.013	.011	
4.0	.130	.099	.075	.111	.085	.065	.077	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.121	.087	.062	.104	.075	.054	.071	.052	.038	.041	.031	.022	.013	.010	.007	
6.0	.113	.077	.052	.097	.067	.045	.067	.047	.032	.039	.028	.019	.013	.009	.006	
7.0	.106	.069	.044	.091	.060	.038	.063	.042	.027	.037	.025	.016	.012	.008	.005	
8.0	.100	.063	.038	.086	.055	.033	.060	.038	.023	.035	.023	.014	.011	.007	.005	
9.0	.095	.058	.033	.082	.050	.028	.057	.035	.020	.033	.021	.012	.011	.007	.004	
10.0	.091	.053	.028	.078	.046	.025	.054	.033	.018	.032	.019	.011	.010	.006	.003	

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-11-09

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:225.0V I:0.0410A P:9.110W PF:0.9680 Freq:0Hz Lamp Flux:546.478x1 lm											
NAME: ALST45-09G30-WF						TYPE:		WEIGHT:			
SPEC.:						DIM.:		SERIAL No.:			
MFR.:						SUR.:38		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		19.8	20.7	20.1	20.8	21.0	20.2	21.1	20.5	21.3	21.4
	3H	19.7	20.5	19.9	20.6	20.8	20.1	20.9	20.3	21.1	21.3
	4H	19.6	20.3	19.9	20.5	20.8	20.0	20.7	20.3	21.0	21.2
	6H	19.5	20.2	19.8	20.4	20.7	19.9	20.6	20.2	20.8	21.1
	8H	19.5	20.1	19.8	20.4	20.6	19.9	20.5	20.2	20.8	21.0
	12H	19.4	20.0	19.7	20.3	20.6	19.8	20.5	20.1	20.7	21.0
4H	2H	19.6	20.3	19.9	20.5	20.8	20.0	20.7	20.3	21.0	21.2
	3H	19.4	20.1	19.7	20.3	20.6	19.8	20.5	20.1	20.7	21.0
	4H	19.3	19.9	19.7	20.2	20.5	19.7	20.3	20.1	20.6	20.9
	6H	19.2	19.7	19.6	20.1	20.4	19.6	20.1	20.0	20.5	20.8
	8H	19.2	19.6	19.6	20.0	20.4	19.6	20.1	20.0	20.4	20.8
	12H	19.1	19.5	19.5	19.9	20.3	19.5	20.0	19.9	20.3	20.7
8H	4H	19.2	19.6	19.6	20.0	20.4	19.6	20.1	20.0	20.4	20.8
	6H	19.1	19.5	19.5	19.8	20.3	19.5	19.9	19.9	20.3	20.7
	8H	19.0	19.4	19.5	19.8	20.2	19.4	19.8	19.9	20.2	20.6
	12H	18.9	19.2	19.4	19.7	20.2	19.4	19.7	19.8	20.1	20.6
12H	4H	19.1	19.5	19.5	19.9	20.3	19.5	20.0	19.9	20.3	20.7
	6H	19.0	19.4	19.5	19.8	20.2	19.4	19.8	19.9	20.2	20.6
	8H	18.9	19.2	19.4	19.7	20.2	19.4	19.7	19.8	20.1	20.6
Variations with the observer position at spacings:											
S = 1.0H	+ 3.4 / -14.9					+ 3.6 / -15.5					
1.5H	+ 5.7 / -11.5					+ 5.9 / -11.8					
2.0H	+ 6.7 / -12.8					+ 6.7 / -12.8					

CIE Pub.117, 546.5 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -2.1)

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-11-09

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:225.0V I:0.0410A P:9.110W PF:0.9680 Freq:0Hz Lamp Flux:546.478x1 lm		
NAME: ALST45-09G30-WF	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:38	Shielding Angle:

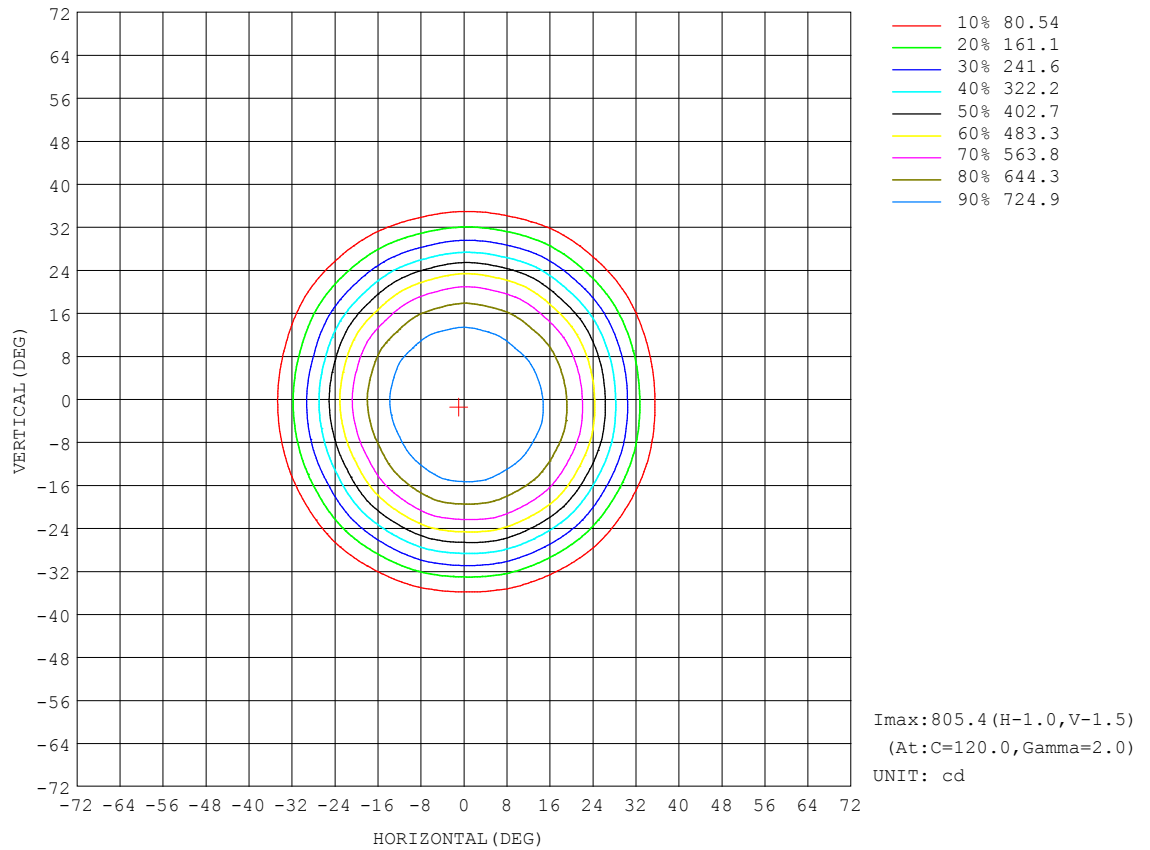
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	90	84	81	89	84	80	89	84	80	77
0.80	97	92	88	96	91	88	95	91	88	84
1.00	101	96	93	100	95	92	99	95	92	88
1.25	105	100	97	104	99	96	102	98	96	92
1.50	107	103	100	106	102	99	104	101	98	94
2.00	110	106	103	108	105	102	105	103	100	95
2.50	111	108	105	109	106	104	106	104	102	96
3.00	112	109	107	111	108	106	107	105	103	97
4.00	114	112	110	112	110	108	109	107	106	99
5.00	116	113	112	113	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: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-11-09

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:225.0V I:0.0410A P:9.110W PF:0.9680 Freq:0Hz Lamp Flux:546.478x1 lm		
NAME: ALST45-09G30-WF	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:38	Shielding Angle:

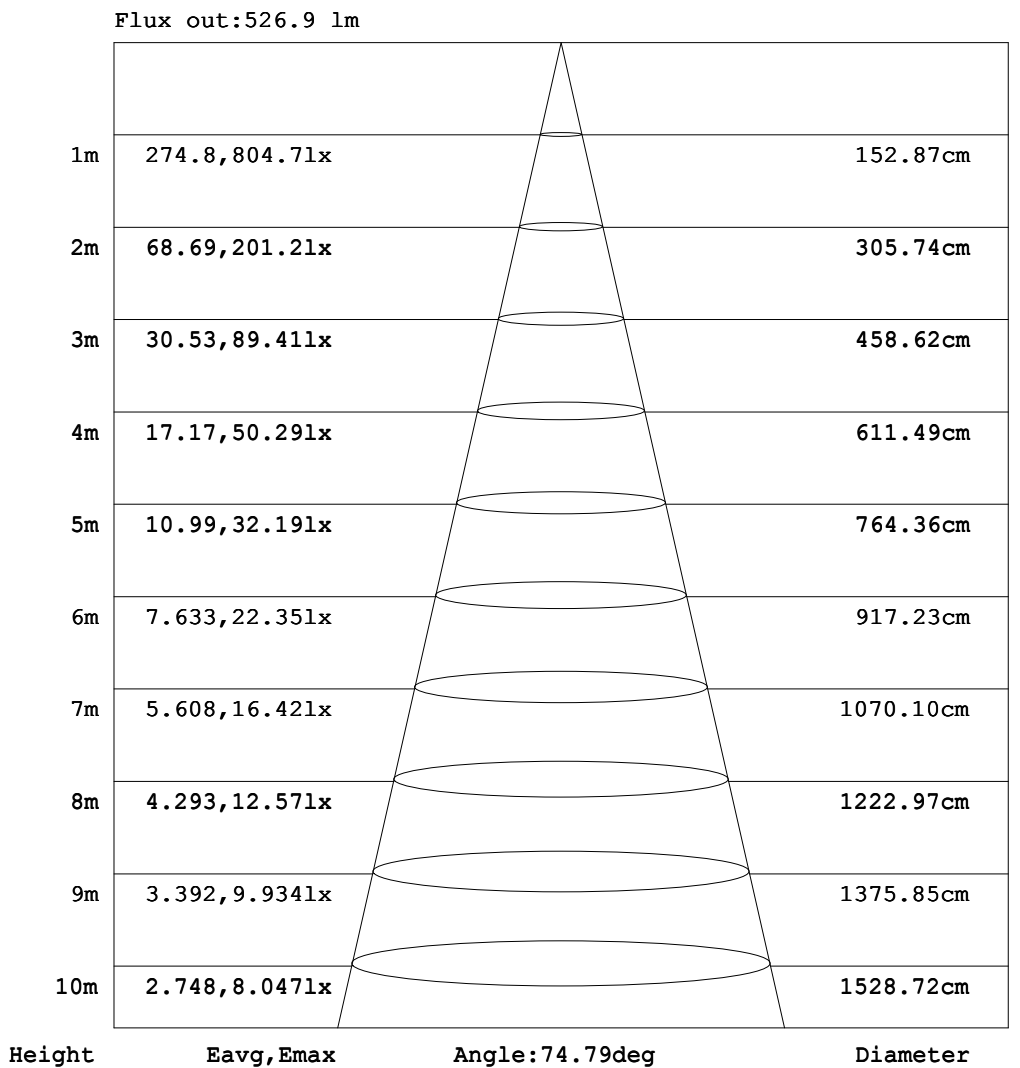


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-11-09

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

AAI Figure

Test:U:225.0V I:0.0410A P:9.110W PF:0.9680 Freq:0Hz Lamp Flux:546.478x1 lm		
NAME: ALST45-09G30-WF	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:38	Shielding Angle:



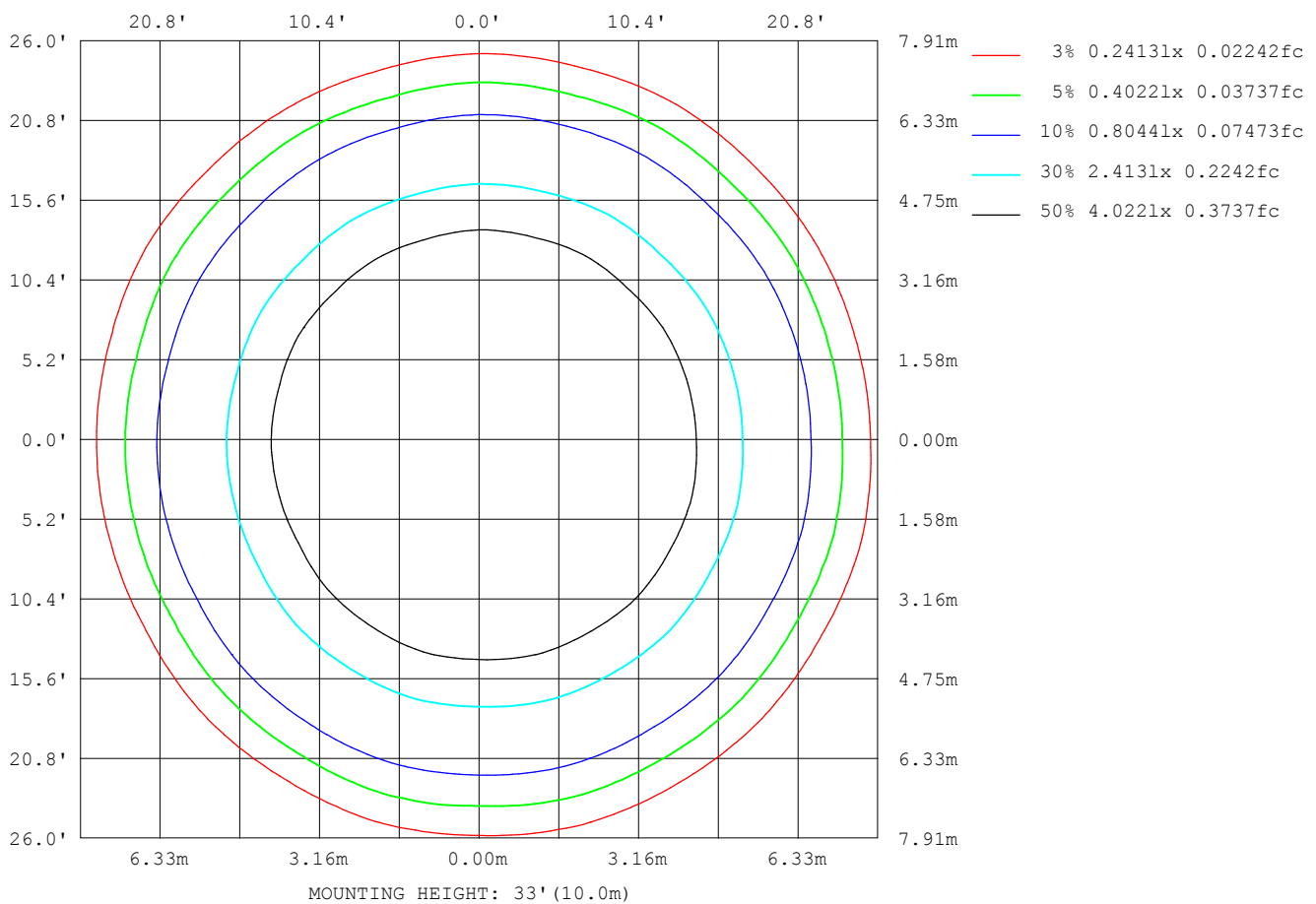
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: AE
 Test Date: 2020-11-09

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity: 65.0%
 Test Distance: 7.240m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:225.0V I:0.0410A P:9.110W PF:0.9680 Freq:0Hz Lamp Flux:546.478x1 lm		
NAME: ALST45-09G30-WF	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:38	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-11-09

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:225.0V I:0.0410A P:9.110W PF:0.9680 Freq:0Hz Lamp Flux:546.478x1 lm		
NAME: ALST45-09G30-WF	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:38	Shielding Angle:

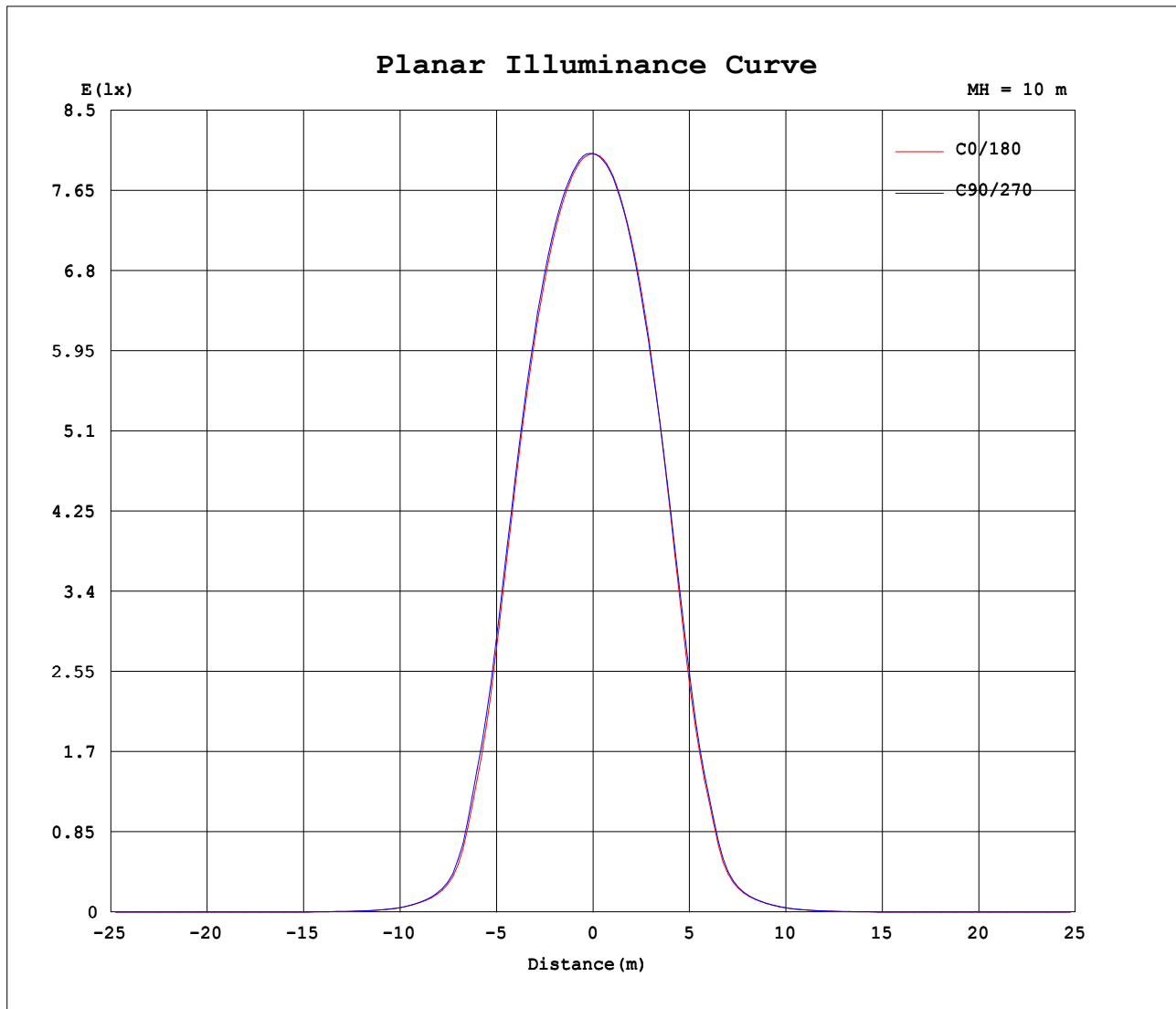
AvgL	cd/m2
L_0~180 (65) av	448
L_0~180 (75) av	0
L_0~180 (85) av	0
L_90~270 (65) av	442
L_90~270 (75) av	44
L_90~270 (85) av	0
L_45 (65) av	457
L_45 (75) av	0
L_45 (85) av	0

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:AE
 Test Date:2020-11-09

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:7.240m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: AE
Test Date: 2020-11-09

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 7.240m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

```