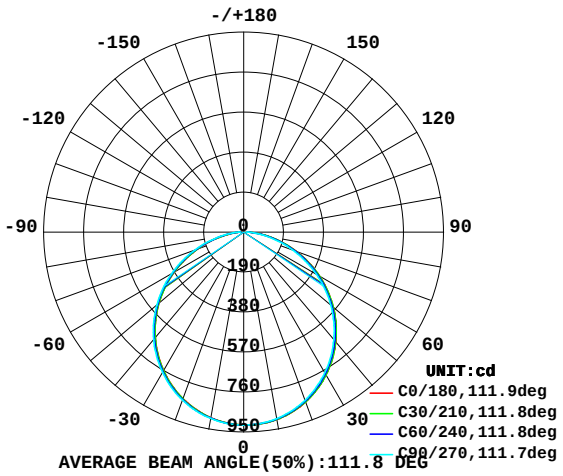
LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:240.5V I:0.1110A P:25.30W PF:0.9470 Lamp Flux:2611.96x1 lm		
NAME: AL12-12-25W-P3	TYPE:25W	WEIGHT:
DIM.:	SPEC.:5700K	SERIAL No.:1
MFR.:	SUR.:0.265X0.265	PROTECTION ANGLE:

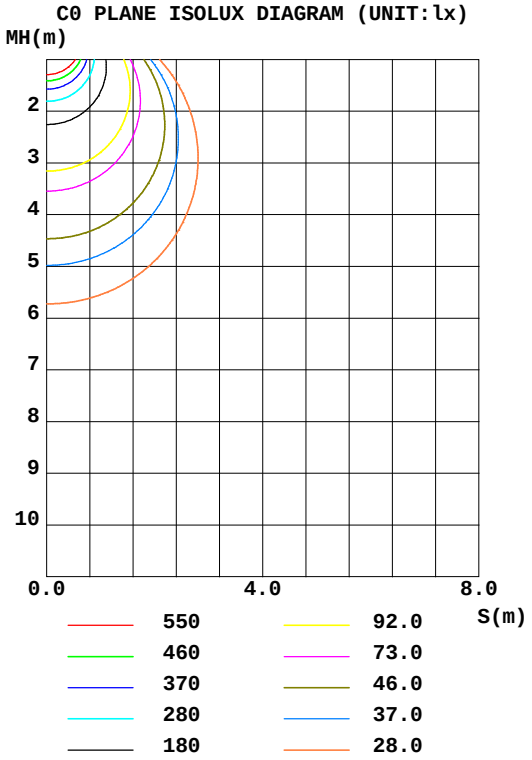
DATA OF LAMP		PHOTOMETRIC DATA Eff: 103.24 lm/W			
MODEL	AL12-12-25W-P3	Imax(cd)	917.0	S/MH(C0/180)	1.27
NOMINAL POWER(W)	25	LOR(%)	100.0	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	2612.0	η UP,DN(C0-180)	0.0,50.3
NOMINAL FLUX(lm)	2611.96	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.7
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	240.5	η down(%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



AVERAGE BEAM ANGLE(50%):111.8 DEG

C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-10-23

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.600m [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	904.2	903.3	900.1	897.2	895.8	897.4	899.8	903.4	0- 10	86.73	86.73	3.32,3.32
20	859.4	857.1	851.0	845.2	842.8	845.5	850.3	857.2	10- 20	248.2	334.9	12.8,12.8
30	783.4	780.4	771.8	763.7	760.7	764.2	771.0	780.5	20- 30	375.6	710.5	27.2,27.2
40	681.3	677.6	667.1	657.2	653.7	657.9	666.3	677.7	30- 40	452.0	1163	44.5,44.5
50	556.7	552.7	540.8	529.8	525.9	530.1	539.6	552.8	40- 50	467.8	1630	62.4,62.4
60	415.5	411.0	398.5	386.6	382.5	386.4	396.5	410.7	50- 60	421.2	2052	78.5,78.5
70	264.4	259.4	246.3	235.3	230.6	234.6	245.2	258.6	60- 70	319.3	2371	90.8,90.8
80	119.1	115.3	104.5	94.94	91.72	95.49	104.5	114.7	70- 80	183.4	2554	97.8,97.8
90	17.13	17.51	13.60	11.61	10.42	12.52	13.86	18.11	80- 90	57.71	2612	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		

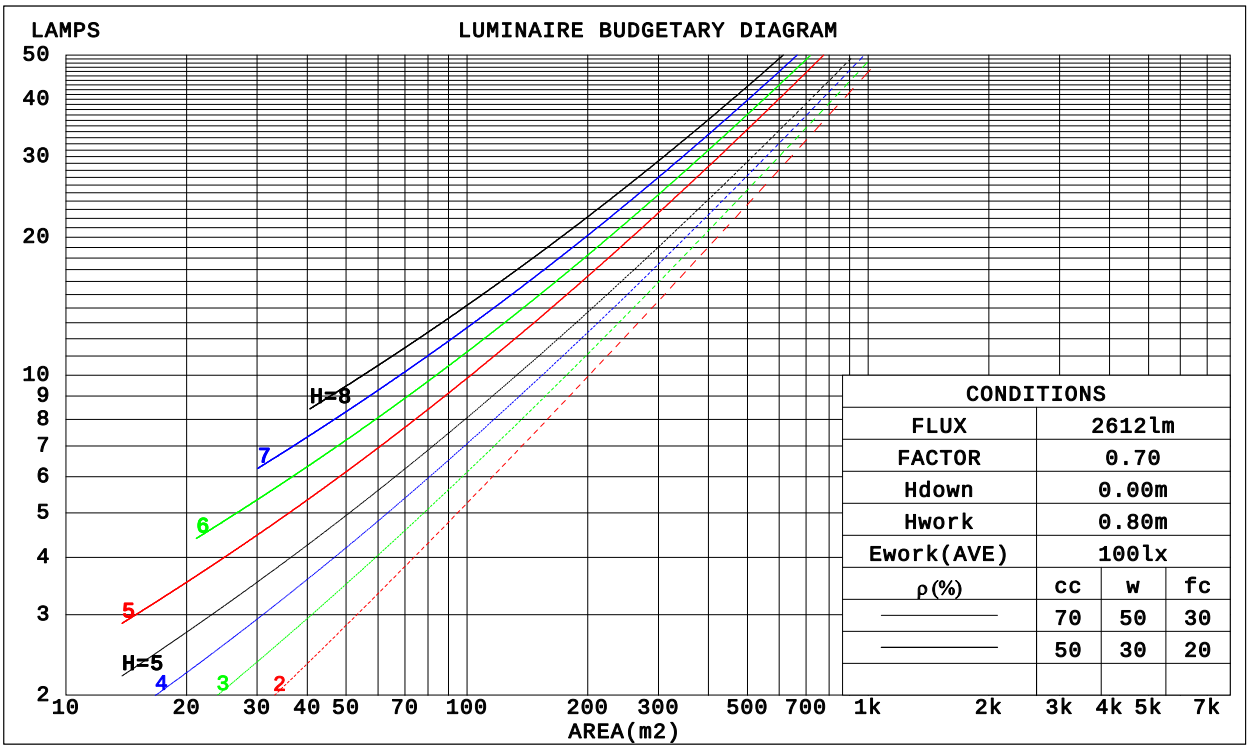
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-10-23

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.600m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:240.5V I:0.1110A P:25.30W PF:0.9470 Lamp Flux:2611.96x1 lm		
NAME: AL12-12-25W-P3	TYPE:25W	WEIGHT:
DIM.:	SPEC.:5700K	SERIAL No.:1
MFR.:	SUR.:0.265X0.265	PROTECTION ANGLE:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	1.04	.99	.95	1.01	.97	.94	.97	.94	.91	.93	.91	.88	.90	.87	.85	.83
2.0	.90	.83	.78	.88	.82	.77	.85	.79	.75	.82	.77	.73	.78	.75	.71	.69
3.0	.79	.71	.64	.78	.70	.64	.75	.68	.63	.72	.66	.62	.69	.65	.60	.58
4.0	.70	.61	.54	.69	.61	.54	.66	.59	.53	.64	.58	.53	.62	.56	.52	.50
5.0	.63	.54	.47	.62	.53	.47	.59	.52	.46	.57	.51	.46	.56	.50	.45	.43
6.0	.56	.47	.41	.55	.47	.41	.54	.46	.40	.52	.45	.40	.50	.44	.40	.38
7.0	.51	.42	.36	.50	.42	.36	.49	.41	.36	.47	.40	.35	.46	.40	.35	.33
8.0	.47	.38	.32	.46	.38	.32	.45	.37	.32	.43	.37	.32	.42	.36	.31	.30
9.0	.43	.35	.29	.42	.34	.29	.41	.34	.29	.40	.33	.29	.39	.33	.28	.27
10.0	.39	.32	.26	.39	.31	.26	.38	.31	.26	.37	.30	.26	.36	.30	.26	.24



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-10-23

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.600m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:240.5V I:0.1110A P:25.30W PF:0.9470 Lamp Flux:2611.96x1 lm		
NAME: AL12-12-25W-P3	TYPE:25W	WEIGHT:
DIM.:	SPEC.:5700K	SERIAL No.:1
MFR.:	SUR.:0.265X0.265	PROTECTION ANGLE:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coeffcients(WEC)									
0.0																
1.0	.313	.178	.056	.306	.174	.055	.293	.168	.054	.280	.162	.052	.269	.156	.050	
2.0	.293	.161	.049	.287	.158	.049	.275	.153	.048	.264	.148	.046	.254	.144	.045	
3.0	.271	.144	.043	.265	.142	.043	.255	.138	.042	.245	.134	.041	.237	.131	.041	
4.0	.250	.130	.038	.245	.128	.038	.236	.125	.037	.227	.122	.037	.219	.119	.036	
5.0	.231	.118	.034	.226	.116	.034	.218	.114	.033	.211	.111	.033	.204	.109	.033	
6.0	.214	.107	.031	.210	.106	.031	.203	.104	.030	.196	.102	.030	.190	.100	.030	
7.0	.199	.098	.028	.196	.097	.028	.189	.096	.028	.183	.094	.027	.177	.092	.027	
8.0	.186	.091	.026	.183	.090	.025	.177	.088	.025	.172	.087	.025	.166	.085	.025	
9.0	.174	.084	.024	.171	.084	.023	.166	.082	.023	.161	.081	.023	.157	.080	.023	
10.0	.164	.079	.022	.161	.078	.022	.157	.077	.022	.152	.076	.021	.148	.074	.021	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	.181	.156	.134	.154	.134	.115	.106	.092	.080	.061	.053	.046	.019	.017	.015	
2.0	.172	.132	.098	.148	.114	.085	.101	.079	.059	.058	.046	.035	.019	.015	.011	
3.0	.165	.114	.074	.141	.099	.064	.097	.069	.045	.056	.040	.027	.018	.013	.009	
4.0	.157	.101	.058	.135	.087	.051	.093	.061	.036	.054	.036	.021	.017	.012	.007	
5.0	.150	.091	.047	.128	.078	.041	.088	.055	.029	.051	.032	.017	.017	.010	.006	
6.0	.142	.082	.039	.122	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.136	.075	.033	.117	.065	.029	.081	.046	.020	.047	.027	.012	.015	.009	.004	
8.0	.129	.070	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.014	.008	.003	
9.0	.123	.065	.025	.106	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.022	.101	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-10-23

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.600m [K=1.0000]
Remarks:

Uncorrected UGR Table

Test:U:240.5V I:0.1110A P:25.30W PF:0.9470 Lamp Flux:2611.96x1 lm		
NAME: AL12-12-25W-P3	TYPE:25W	WEIGHT:
DIM.:	SPEC.:5700K	SERIAL No.:1
MFR.:	SUR.:0.265X0.265	PROTECTION 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	21.7	23.2	21.9	23.4	23.6	21.5	23.0	21.8	23.2	23.4
	3H	23.2	24.6	23.5	24.9	25.1	23.0	24.4	23.3	24.6	24.9
	4H	23.9	25.2	24.2	25.5	25.7	23.6	24.9	23.9	25.2	25.4
	6H	24.4	25.6	24.7	25.9	26.2	24.0	25.3	24.3	25.5	25.8
	8H	24.5	25.8	24.9	26.0	26.3	24.1	25.4	24.5	25.7	25.9
	12H	24.7	25.8	25.0	26.1	26.4	24.2	25.4	24.6	25.7	26.0
4H	2H	22.3	23.6	22.6	23.9	24.1	22.1	23.5	22.5	23.7	24.0
	3H	24.0	25.2	24.4	25.5	25.8	23.8	25.0	24.2	25.3	25.6
	4H	24.8	25.9	25.2	26.2	26.5	24.5	25.6	24.9	25.9	26.3
	6H	25.4	26.4	25.8	26.7	27.1	25.1	26.1	25.5	26.4	26.8
	8H	25.7	26.6	26.1	26.9	27.3	25.3	26.2	25.7	26.6	26.9
	12H	25.9	26.7	26.3	27.1	27.5	25.4	26.3	25.9	26.6	27.1
8H	4H	25.1	26.0	25.5	26.3	26.7	24.9	25.7	25.3	26.1	26.5
	6H	25.9	26.6	26.3	27.0	27.5	25.6	26.3	26.0	26.7	27.1
	8H	26.2	26.9	26.7	27.3	27.7	25.9	26.5	26.3	26.9	27.4
	12H	26.5	27.1	27.0	27.5	28.0	26.1	26.7	26.6	27.1	27.6
12H	4H	25.1	25.9	25.5	26.3	26.7	24.9	25.7	25.3	26.1	26.5
	6H	25.9	26.6	26.4	27.0	27.5	25.7	26.3	26.1	26.7	27.2
	8H	26.3	26.9	26.8	27.3	27.8	26.0	26.6	26.5	27.0	27.5
Variations with the observer position at spacings:											
S = 1.0H		+ 0.1 / - 0.2					+ 0.2 / - 0.2				
1.5H		+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H		+ 0.1 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117 Corrected 2612 lm Total Lamp Luminous Flux.(8log(F/F0) = 3.3)

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-10-23

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.600m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:240.5V I:0.1110A P:25.30W PF:0.9470 Lamp Flux:2611.96x1 lm		
NAME: AL12-12-25W-P3	TYPE:25W	WEIGHT:
DIM.:	SPEC.:5700K	SERIAL No.:1
MFR.:	SUR.:0.265X0.265	PROTECTION ANGLE:

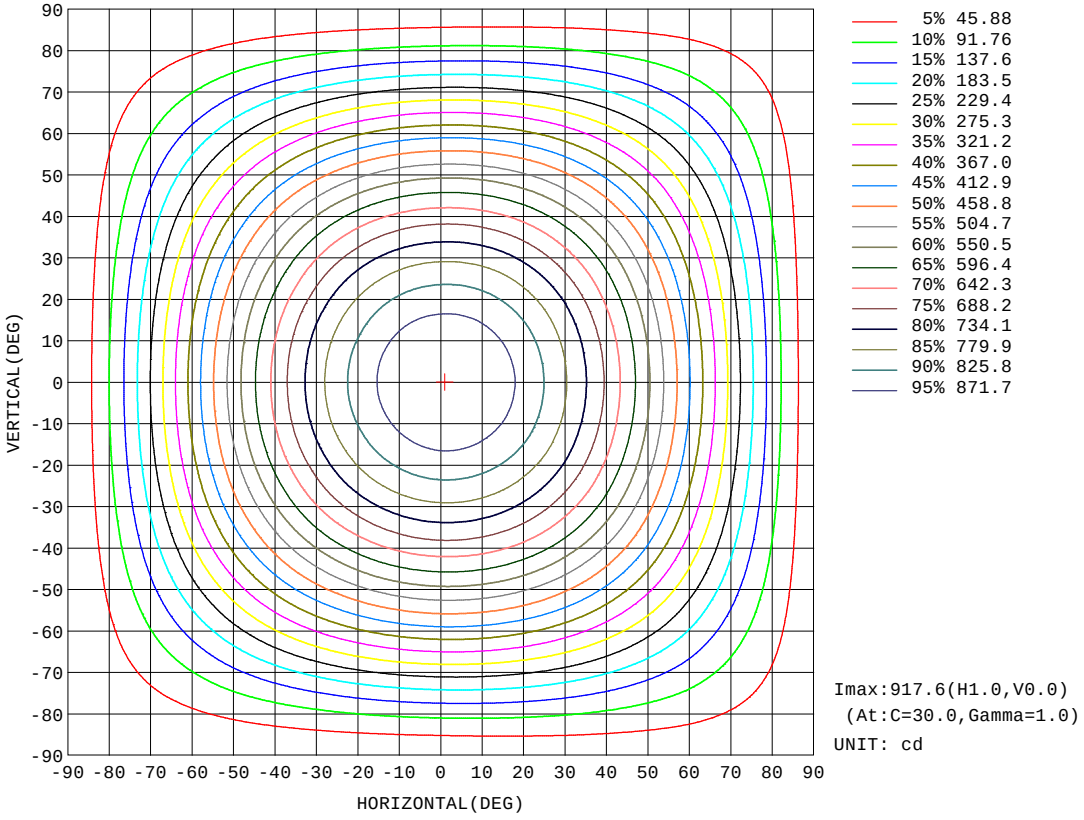
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	57	46	39	57	46	39	56	45	39	32
0.80	67	56	48	66	55	48	65	55	48	41
1.00	76	65	57	75	64	57	72	66	57	49
1.25	83	72	65	82	72	65	79	70	64	57
1.50	88	78	71	86	77	71	83	75	69	62
2.00	95	86	80	93	85	79	89	83	77	70
2.50	99	91	85	97	90	84	93	87	82	74
3.00	102	95	90	100	94	89	96	91	86	78
4.00	106	100	96	104	99	94	99	95	92	83
5.00	109	104	100	106	102	98	102	98	95	86
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004				Suspended					SHRNOM = 1.25	

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-10-23

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.600m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:240.5V I:0.1110A P:25.30W PF:0.9470 Lamp Flux:2611.96x1 lm		
NAME: AL12-12-25W-P3	TYPE:25W	WEIGHT:
DIM.:	SPEC.:5700K	SERIAL No.:1
MFR.:	SUR.:0.265X0.265	PROTECTION ANGLE:



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C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
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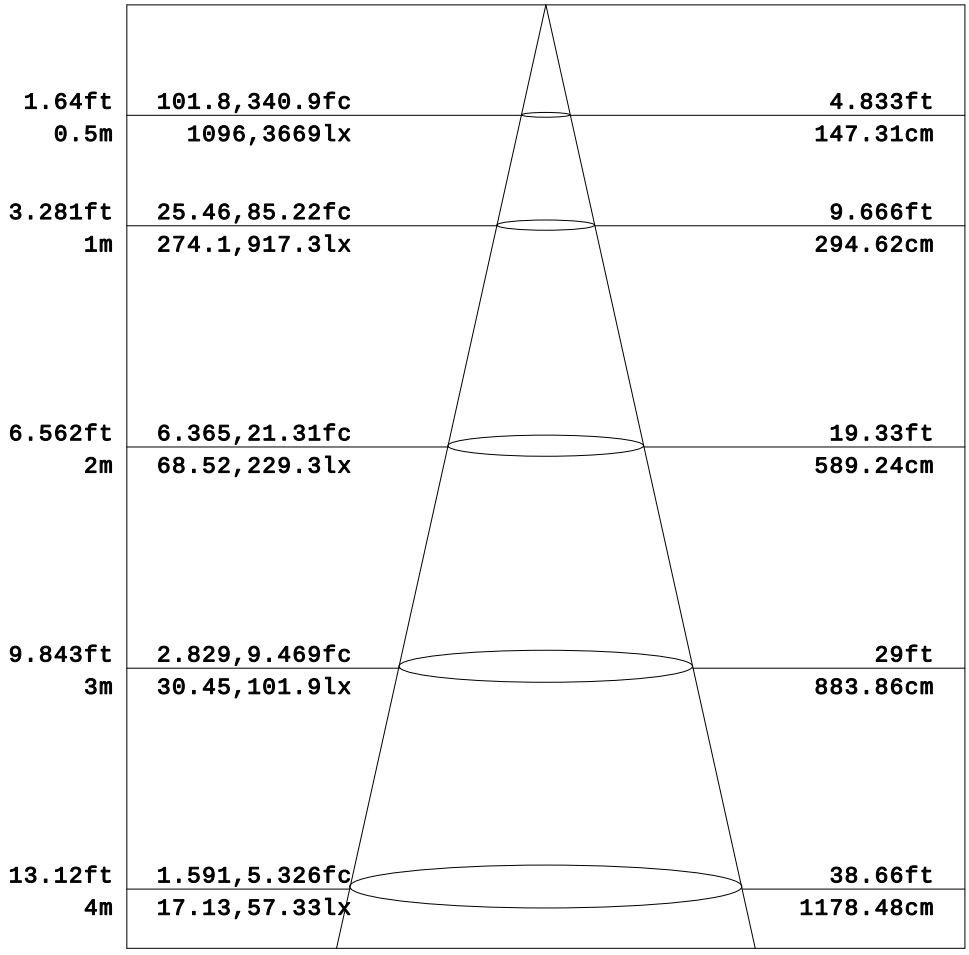
Test Date:2017-10-23

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.600m [K=1.0000]
Remarks:

AAI Figure

Test:U:240.5V I:0.1110A P:25.30W PF:0.9470 Lamp Flux:2611.96x1 lm		
NAME: AL12-12-25W-P3	TYPE:25W	WEIGHT:
DIM.:	SPEC.:5700K	SERIAL No.:1
MFR.:	SUR.:0.265X0.265	PROTECTION ANGLE:

Flux out:1892 lm



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

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C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
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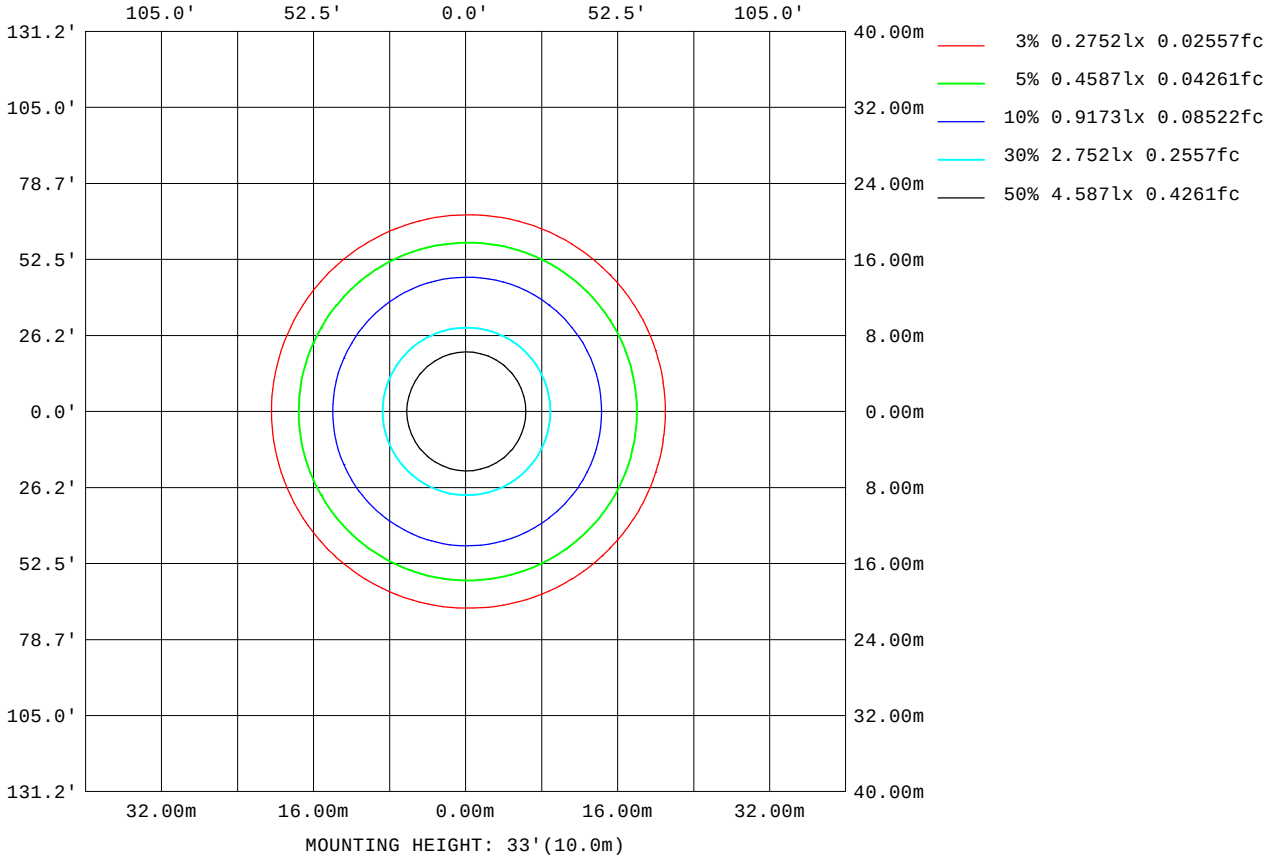
Test Date:2017-10-23

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.600m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:240.5V I:0.1110A P:25.30W PF:0.9470 Lamp Flux:2611.96x1 lm		
NAME: AL12-12-25W-P3	TYPE:25W	WEIGHT:
DIM.:	SPEC.:5700K	SERIAL No.:1
MFR.:	SUR.:0.265X0.265	PROTECTION ANGLE:



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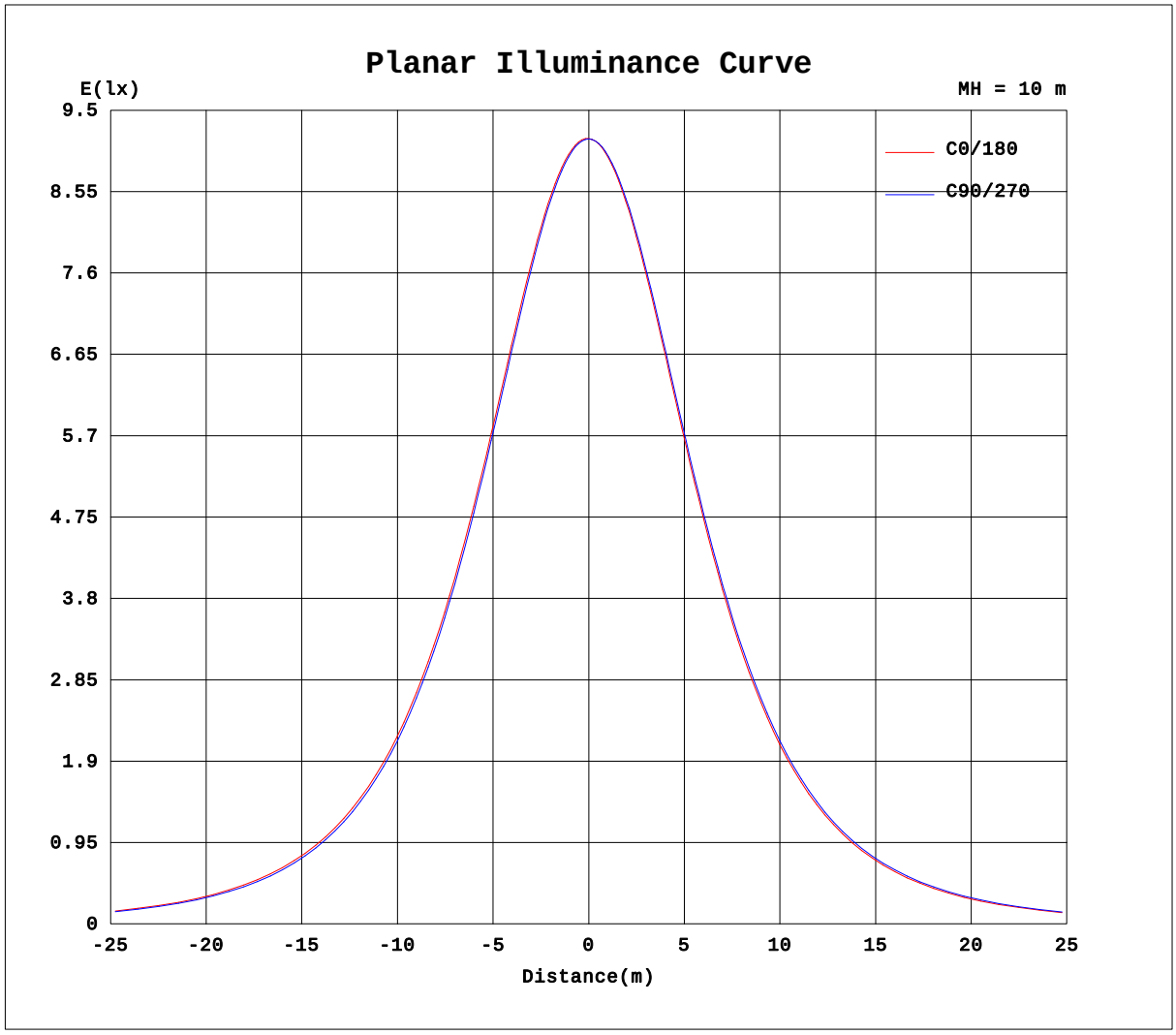
γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.600m [K=1.0000]
Remarks:

Planar Illuminance Curve



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Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.600m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:240.5V I:0.1110A P:25.30W PF:0.9470 Lamp Flux:2611.96x1 lm		
NAME: AL12-12-25W-P3	TYPE:25W	WEIGHT:
DIM.:	SPEC.:5700K	SERIAL No.:1
MFR.:	SUR.:0.265X0.265	PROTECTION ANGLE:

Table--1 UNIT: cd

γ (DEG) \ C(DEG)	0	30	60	90	120	150	180	210	240	270	300	330
0	917	917	917	917	917	917	917	917	917	917	917	917
5	914	915	914	913	912	911	911	911	912	913	914	915
10	904	904	902	900	898	896	896	897	898	900	903	904
15	886	886	883	880	876	874	873	874	877	879	883	885
20	859	859	855	851	847	844	843	844	847	850	855	859
25	825	825	820	815	810	806	805	806	810	814	820	825
30	783	783	778	772	766	762	761	762	766	771	778	783
35	735	735	729	722	715	711	710	711	717	722	730	735
40	681	681	675	667	659	655	654	655	661	666	675	681
45	621	621	614	606	599	593	592	593	599	605	615	621
50	557	556	549	541	533	527	526	527	533	540	550	556
55	488	487	480	471	462	457	456	456	463	470	480	486
60	416	415	407	398	389	384	382	383	390	397	407	414
65	340	339	332	322	314	308	306	307	313	321	331	339
70	264	263	256	246	238	232	231	231	238	245	255	262
75	190	188	181	172	164	159	158	158	165	172	181	188
80	119	119	112	105	97.2	92.7	91.7	92.4	98.6	105	112	117
85	59.1	58.3	54.1	48.1	43.8	40.2	38.8	41.4	46.5	51.0	55.6	58.4
90	17.1	18.2	16.8	13.6	12.3	11.0	10.4	11.8	13.3	13.9	16.9	19.3

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-10-23

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.600m [K=1.0000]
Remarks: