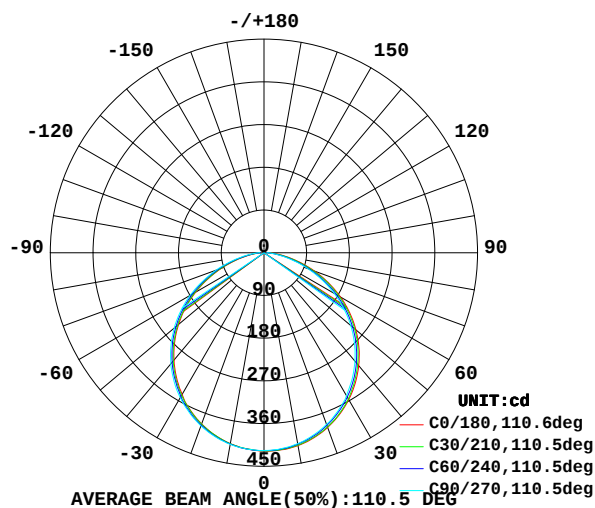


LUMINAIRE PHOTOMETRIC TEST REPORT

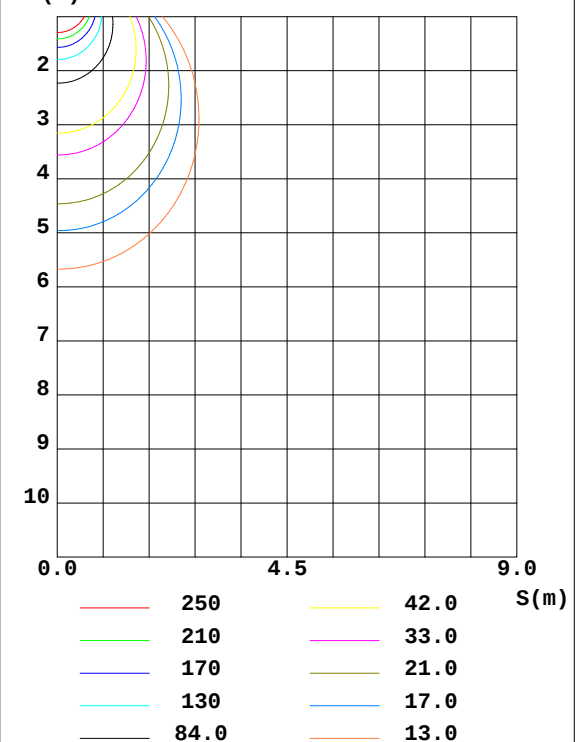
Test:U:240.1V I:0.0490A P:11.20W PF:0.9360 Lamp Flux:1161.89x1 lm		
NAME: AL08B-10-12W	TYPE:12W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.1085	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 103.74 lm/W			
MODEL	AL08B-10-12W	I _{max} (cd)	418.2	S/MH(C0/180)	1.27
NOMINAL POWER(W)	12	LOR(%)	100.0	S/MH(C90/270)	1.24
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	1161.9	η UP, DN(C0-180)	0.0, 49.7
NOMINAL FLUX(lm)	1161.89	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 50.3
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	240.1	η down(%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2020-03-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [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	412.5	410.5	408.4	406.4	408.4	408.8	409.8	410.7	0- 10	39.44	39.44	3.39, 3.39
20	392.1	388.9	384.8	382.2	384.0	385.7	388.3	390.3	10- 20	112.8	152.3	13.1, 13.1
30	357.2	353.4	347.8	343.9	345.1	348.5	352.7	356.1	20- 30	170.7	323.0	27.8, 27.8
40	310.4	305.0	298.1	294.1	295.2	299.3	305.3	308.9	30- 40	204.8	527.8	45.4, 45.4
50	252.8	246.6	238.7	234.1	235.1	240.0	247.2	251.6	40- 50	211.1	738.9	63.6, 63.6
60	185.9	179.1	170.5	165.5	166.4	171.7	180.0	185.2	50- 60	187.7	926.6	79.8, 79.8
70	113.6	106.6	98.69	93.42	94.57	99.68	107.3	113.2	60- 70	137.8	1064	91.6, 91.6
80	48.62	42.62	37.14	33.63	34.39	38.23	44.36	48.81	70- 80	74.30	1139	98, 98
90	10.09	7.255	6.127	4.811	4.645	6.301	9.095	11.18	80- 90	23.21	1162	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		

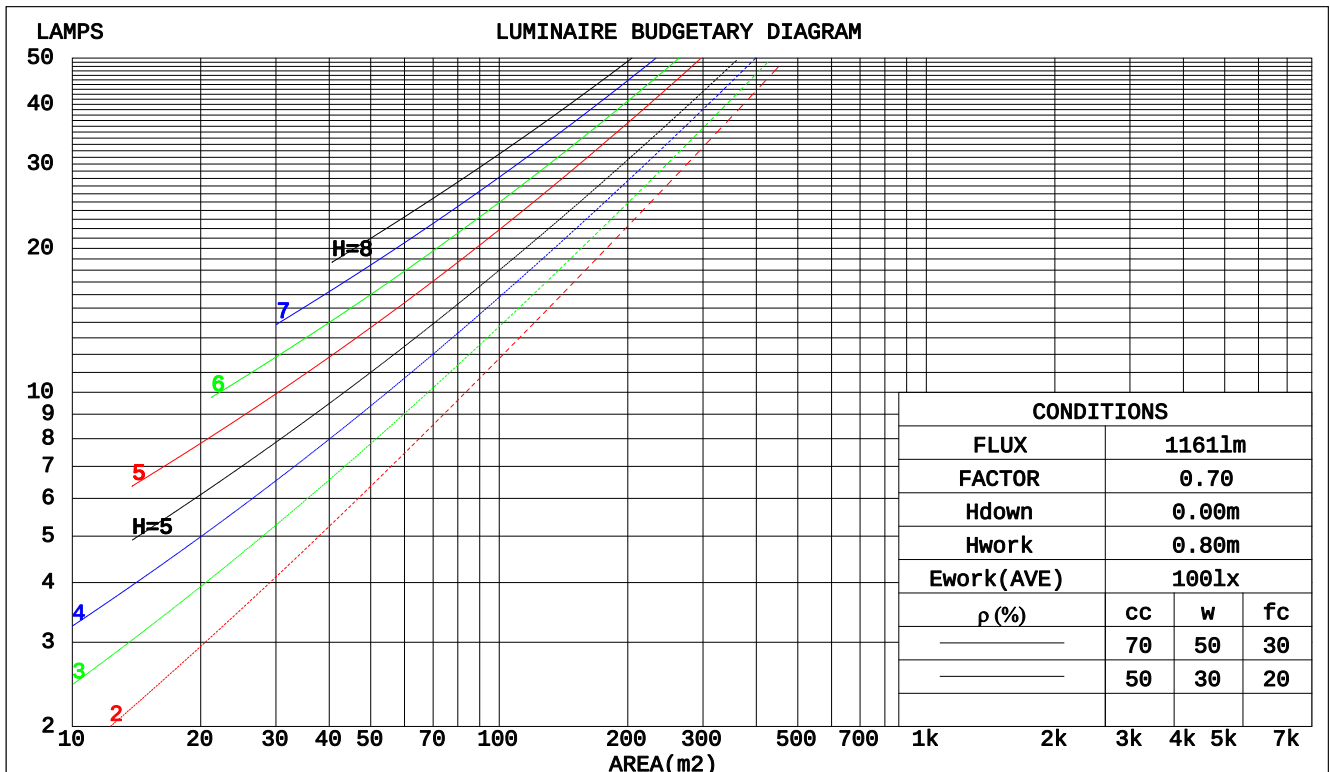
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2020-03-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 γ Test System: EVERFINE G0-2000A_V1 SYSTEM V2.0.276
 Humidity: 65.0%
 Test Distance: 9.443m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:240.1V I:0.0490A P:11.20W PF:0.9360 Lamp Flux:1161.89x1 lm		
NAME: AL08B-10-12W	TYPE:12W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.1085	PROTECTION ANGLE:

ρ_{CC}	80%			70%			50%			30%			10%			0
ρ_W	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	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	1.04	.90	.96	1.02	.98	.94	.98	.94	.91	.94	.91	.89	.90	.88	.86	.84
2.0	.91	.84	.78	.89	.83	.77	.85	.80	.76	.82	.78	.74	.79	.75	.72	.70
3.0	.80	.72	.65	.78	.71	.65	.75	.69	.63	.72	.67	.62	.70	.65	.61	.59
4.0	.71	.62	.55	.69	.61	.55	.67	.60	.54	.65	.58	.53	.62	.57	.53	.50
5.0	.63	.54	.48	.62	.54	.47	.60	.52	.47	.58	.51	.46	.56	.50	.46	.44
6.0	.57	.48	.42	.56	.47	.41	.54	.47	.41	.52	.46	.41	.51	.45	.40	.38
7.0	.52	.43	.37	.51	.42	.37	.49	.42	.36	.48	.41	.36	.46	.40	.36	.34
8.0	.47	.39	.33	.46	.38	.33	.45	.38	.32	.44	.37	.32	.43	.37	.32	.30
9.0	.43	.35	.29	.43	.35	.29	.41	.34	.29	.40	.34	.29	.39	.33	.29	.27
10.0	.40	.32	.27	.39	.32	.27	.38	.31	.27	.37	.31	.26	.37	.31	.26	.25



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2020-03-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-2000A_V1 SYSTEM V2.0.276
 Humidity: 65.0%
 Test Distance: 9.443m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:240.1V I:0.0490A P:11.20W PF:0.9360 Lamp Flux:1161.89x1 lm								
NAME: AL08B-10-12W				TYPE:12W			WEIGHT:	
DIM.:				SPEC.:4000K			SERIAL No.:1	
MFR.:				SUR.:0.1085			PROTECTION ANGLE:	

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.307	.174	.055	.299	.171	.054	.286	.164	.052	.274	.158	.051	.263	.152	.049	
2.0	.288	.158	.048	.282	.155	.048	.271	.150	.047	.260	.146	.046	.250	.141	.045	
3.0	.267	.142	.043	.262	.140	.042	.251	.136	.041	.242	.133	.041	.233	.129	.040	
4.0	.247	.128	.038	.242	.127	.037	.233	.124	.037	.225	.121	.036	.217	.118	.036	
5.0	.229	.117	.034	.224	.115	.034	.216	.113	.033	.209	.110	.033	.202	.108	.032	
6.0	.212	.106	.030	.208	.105	.030	.201	.103	.030	.194	.101	.030	.188	.099	.029	
7.0	.198	.098	.028	.194	.097	.028	.188	.095	.027	.182	.093	.027	.176	.091	.027	
8.0	.185	.090	.025	.182	.089	.025	.176	.088	.025	.170	.086	.025	.165	.085	.025	
9.0	.173	.084	.023	.171	.083	.023	.165	.082	.023	.160	.080	.023	.156	.079	.023	
10.0	.163	.078	.022	.161	.078	.022	.156	.076	.021	.151	.075	.021	.147	.074	.021	

ρ _{cc}	80%			70%			50%			30%			10%			0
ρ _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ _{fc}	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	.180	.156	.135	.154	.134	.116	.105	.092	.080	.061	.053	.047	.019	.017	.015	
2.0	.172	.132	.098	.147	.114	.085	.101	.079	.059	.058	.046	.035	.019	.015	.011	
3.0	.164	.114	.075	.141	.099	.065	.097	.068	.045	.056	.040	.027	.018	.013	.009	
4.0	.156	.101	.059	.134	.087	.051	.092	.061	.036	.053	.036	.021	.017	.012	.007	
5.0	.149	.091	.047	.128	.078	.041	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.142	.082	.039	.122	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.135	.075	.033	.116	.065	.029	.080	.046	.021	.047	.027	.012	.015	.009	.004	
8.0	.129	.069	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.014	.008	.004	
9.0	.123	.064	.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:
Test Date:2020-03-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.443m [K=1.0000]
Remarks:

Uncorrected UGR Table

Test:U:240.1V I:0.0490A P:11.20W PF:0.9360 Lamp Flux:1161.89x1 lm											
NAME: AL08B-10-12W					TYPE:12W			WEIGHT:			
DIM.:					SPEC.:4000K			SERIAL No.:1			
MFR.:					SUR.:0.1085			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	2H	21.1	22.6	21.3	22.8	23.0	20.8	22.3	21.0	22.5	22.7
	3H	22.6	23.9	22.8	24.2	24.4	22.1	23.5	22.4	23.7	24.0
	4H	23.1	24.5	23.4	24.7	25.0	22.6	23.9	22.9	24.1	24.4
	6H	23.5	24.8	23.9	25.1	25.3	22.9	24.1	23.2	24.4	24.7
	8H	23.7	24.9	24.0	25.2	25.5	22.9	24.2	23.3	24.4	24.7
	12H	23.8	25.0	24.2	25.3	25.6	23.0	24.2	23.4	24.5	24.8
4H	2H	21.6	23.0	21.9	23.2	23.5	21.4	22.7	21.7	23.0	23.2
	3H	23.3	24.4	23.6	24.7	25.0	22.9	24.0	23.2	24.3	24.6
	4H	24.0	25.0	24.4	25.4	25.7	23.5	24.5	23.8	24.8	25.2
	6H	24.5	25.5	24.9	25.8	26.2	23.9	24.8	24.3	25.2	25.5
	8H	24.7	25.6	25.1	26.0	26.4	24.0	24.9	24.4	25.3	25.6
	12H	24.9	25.7	25.3	26.1	26.5	24.1	24.9	24.5	25.3	25.7
8H	4H	24.2	25.1	24.6	25.4	25.8	23.7	24.6	24.1	25.0	25.4
	6H	24.9	25.6	25.3	26.0	26.4	24.3	25.0	24.7	25.4	25.8
	8H	25.2	25.8	25.6	26.2	26.7	24.5	25.1	24.9	25.5	26.0
	12H	25.4	26.0	25.9	26.4	26.9	24.6	25.2	25.1	25.6	26.1
12H	4H	24.2	25.0	24.6	25.4	25.8	23.7	24.5	24.2	24.9	25.3
	6H	24.9	25.6	25.4	26.0	26.4	24.3	25.0	24.8	25.4	25.9
	8H	25.2	25.8	25.7	26.3	26.7	24.6	25.1	25.1	25.6	26.1
Variations with the observer position at spacings:											
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.2					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.4					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					

CIE Pub.117 Corrected 1162 lm Total Lamp Luminous Flux.(8log(F/F0) = 0.5)

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2020-03-04

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.443m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:240.1V I:0.0490A P:11.20W PF:0.9360 Lamp Flux:1161.89x1 lm		
NAME: AL08B-10-12W	TYPE:12W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.1085	PROTECTION ANGLE:

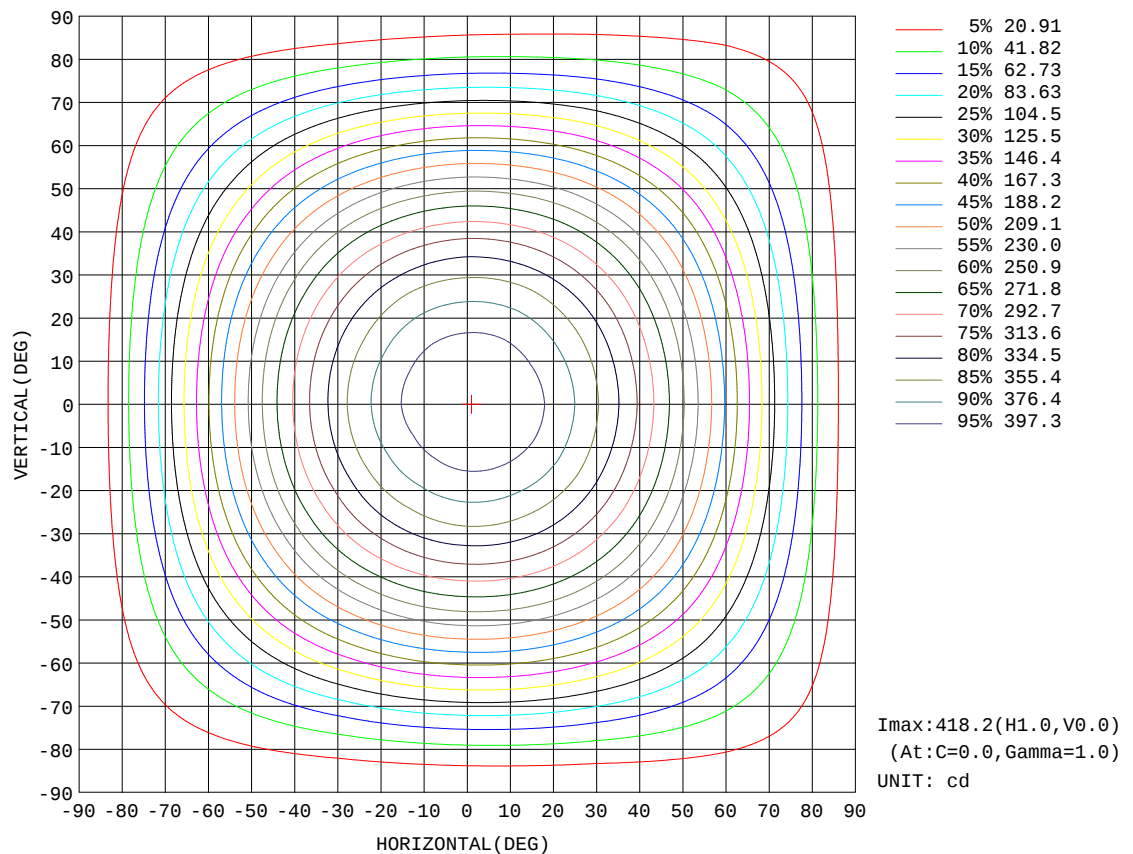
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	58	46	39	57	46	39	56	46	39	33
0.80	68	56	49	67	56	49	65	55	49	42
1.00	76	65	58	75	65	58	73	66	57	50
1.25	84	73	66	82	72	66	79	71	65	58
1.50	89	79	72	87	78	71	84	76	70	63
2.00	95	87	80	93	86	80	90	83	78	70
2.50	99	91	85	97	90	85	93	87	83	74
3.00	102	96	90	100	94	89	96	91	87	79
4.00	106	101	96	104	99	95	100	96	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:
Test Date:2020-03-04

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.443m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:240.1V I:0.0490A P:11.20W PF:0.9360 Lamp Flux:1161.89x1 lm		
NAME: AL08B-10-12W	TYPE:12W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.1085	PROTECTION ANGLE:

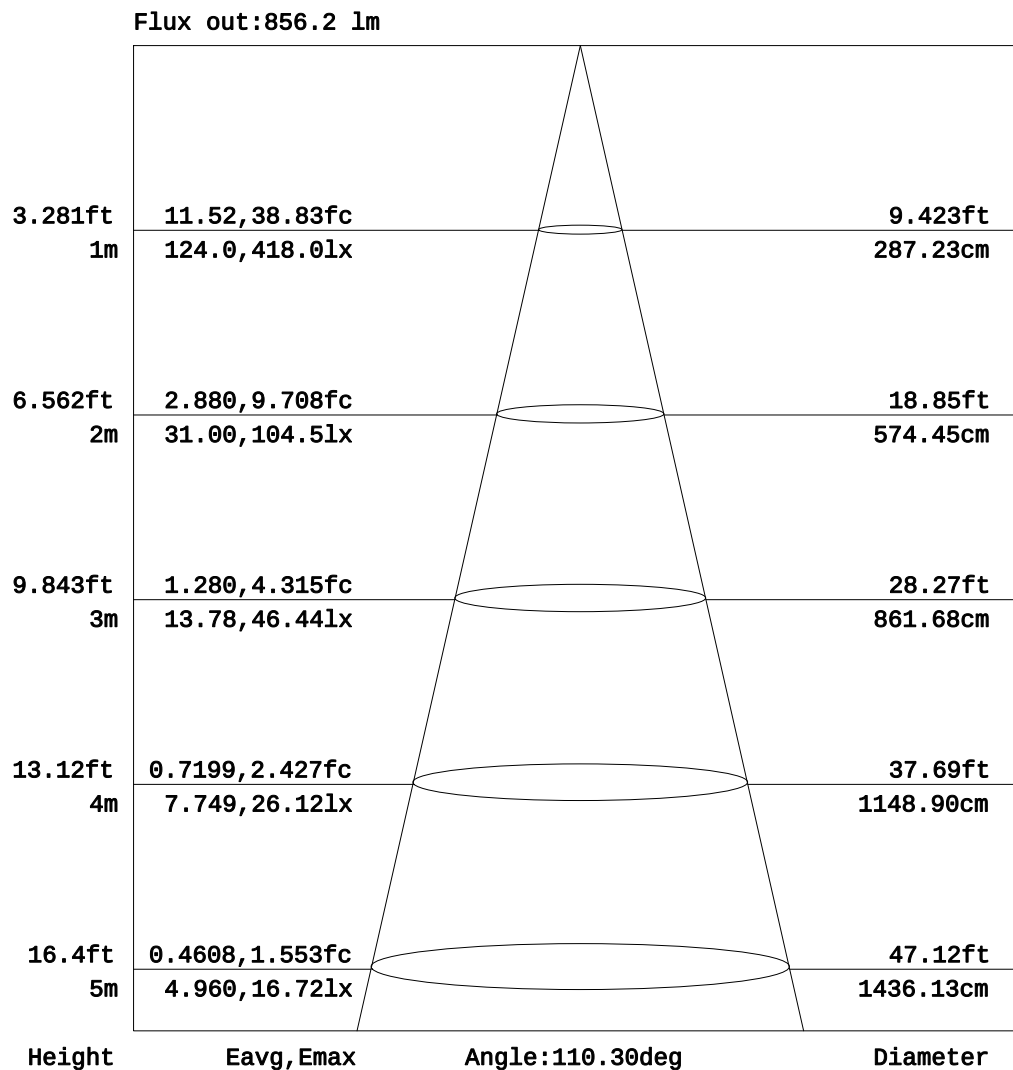


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2020-03-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.443m [K=1.0000]
Remarks:

AAI Figure

Test:U:240.1V I:0.0490A P:11.20W PF:0.9360 Lamp Flux:1161.89x1 lm		
NAME: AL08B-10-12W	TYPE:12W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.1085	PROTECTION ANGLE:



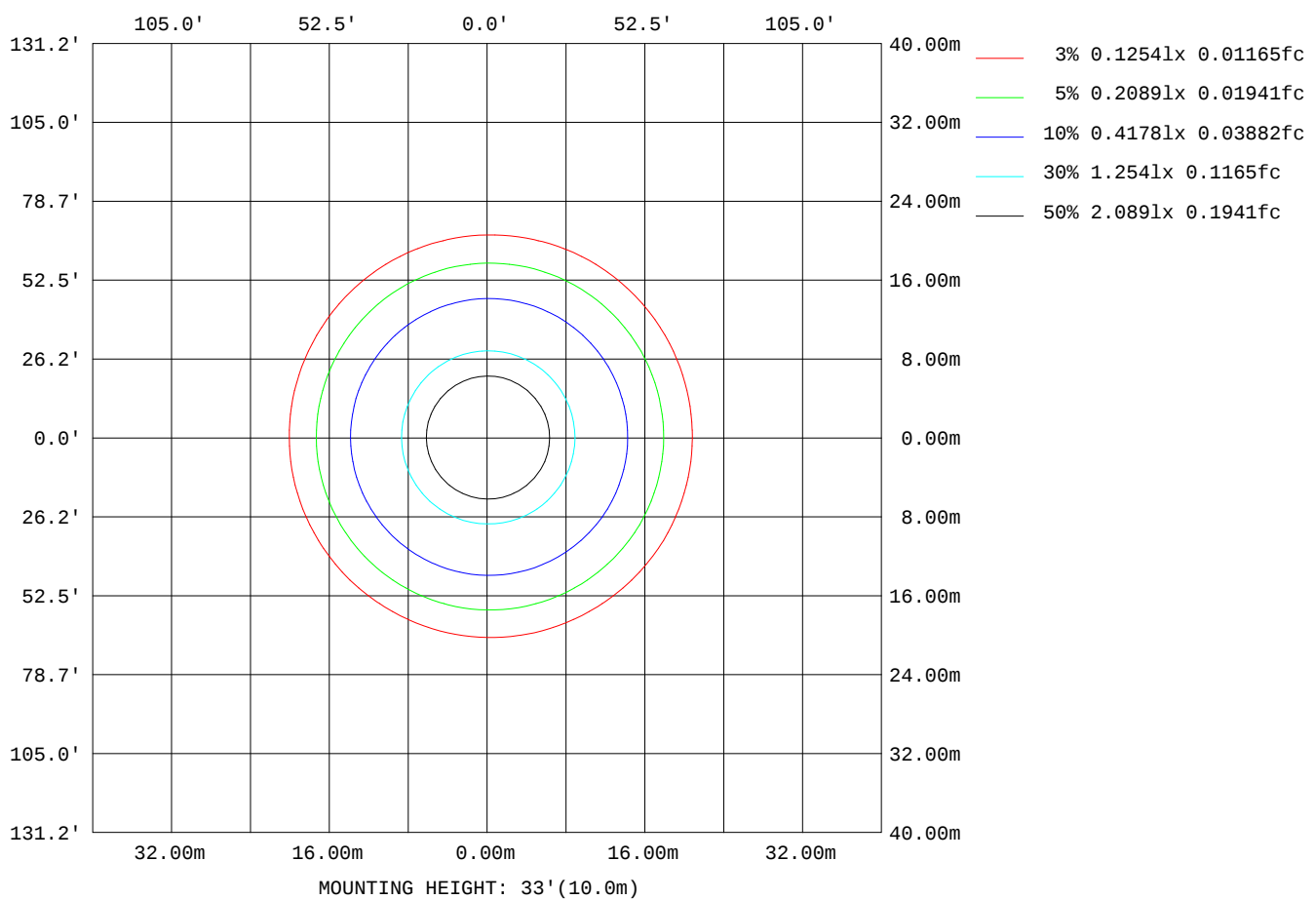
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2020-03-04

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.443m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

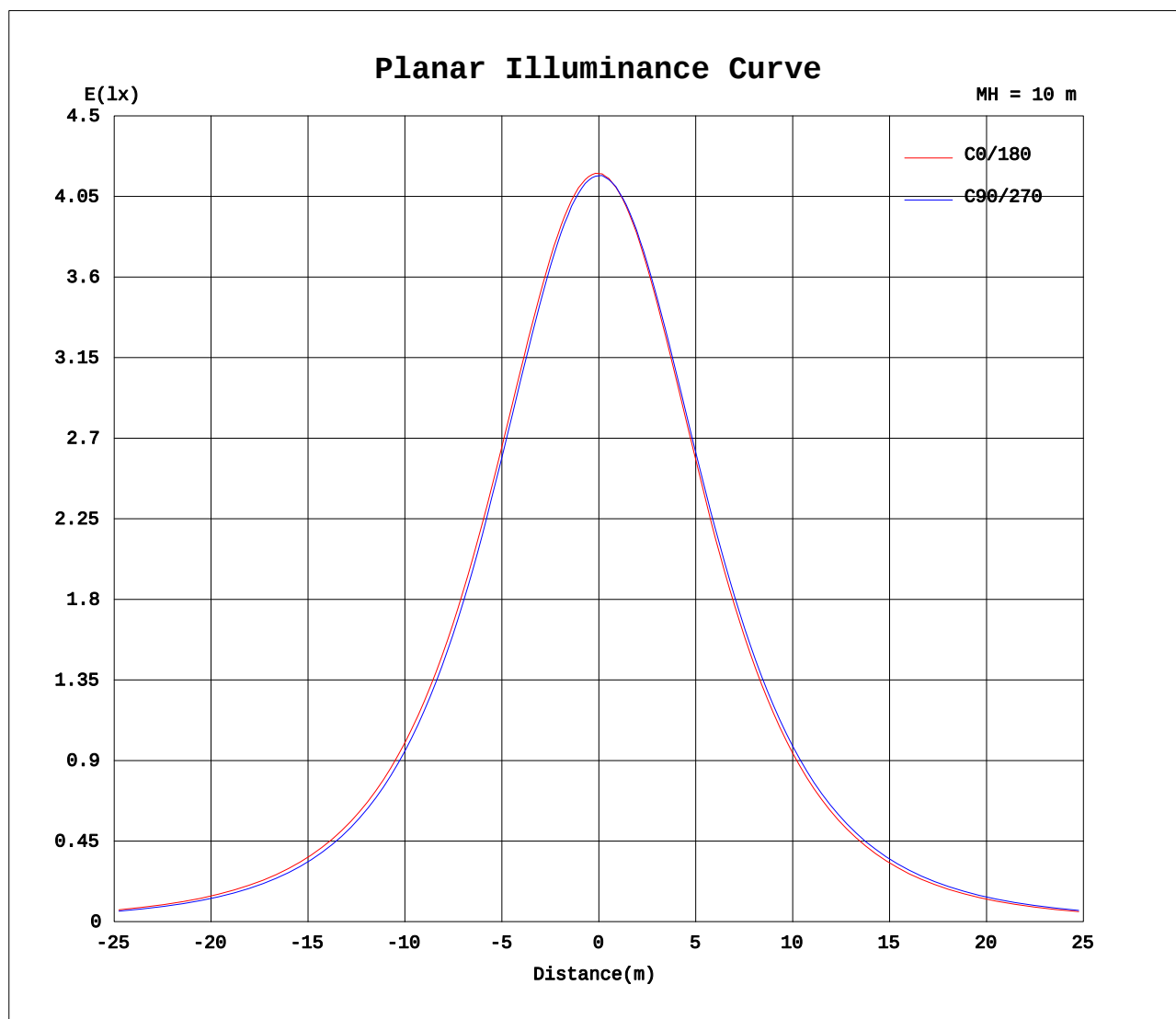
Test:U:240.1V I:0.0490A P:11.20W PF:0.9360 Lamp Flux:1161.89x1 lm		
NAME: AL08B-10-12W	TYPE:12W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.1085	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2020-03-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2020-03-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000A_V1 SYSTEM V2.0.276
Humidity: 65.0%
Test Distance: 9.443m [K=1.0000]
Remarks:

```

Range: 0 - 90DEG
Interval: 1.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.443m [K=1.0000]
Remarks:

```