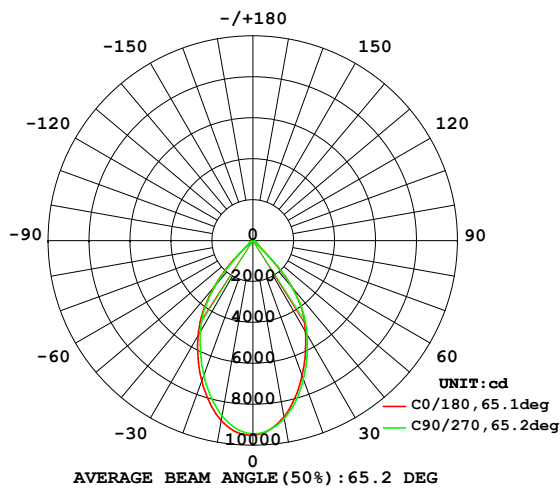


LUMINAIRE PHOTOMETRIC TEST REPORT

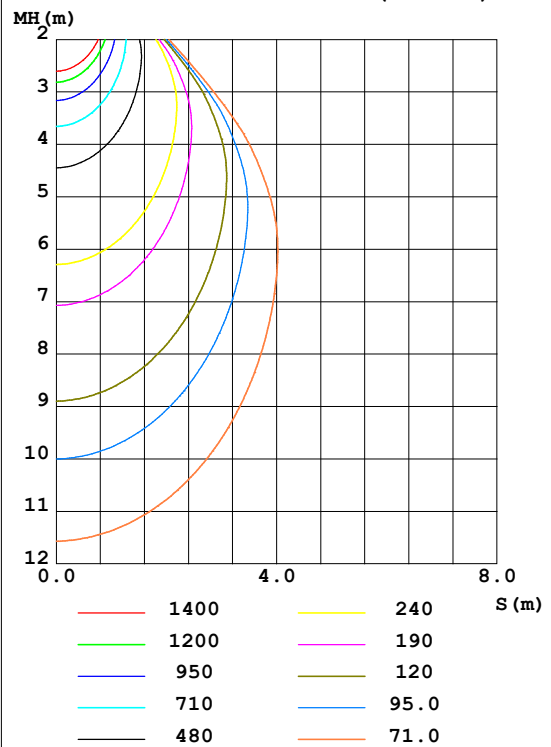
Test:U:231.1V I:0.4595A P:102.0W PF:0.9608 Lamp Flux:10027x1 lm		
NAME: BT-AS100W-10	TYPE:AL reflector	WEIGHT:
SPEC.:5000k COB 60D	DIM.: 270*197mm	SERIAL No.:
MFR.: EVERFINE	SUR.:230*230mm	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 96.98 lm/W
MODEL	COB	I _{max} (cd)	9508	S/MH(C0/180)	0.93	
NOMINAL POWER(W)	100	LOR(%)	98.7	S/MH(C90/270)	0.90	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	9895.7	η UP,DN(C0-180)	0.2,49.3	
NOMINAL FLUX(lm)	10027	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.2,49.0	
LAMPS INSIDE	1	η up(%)	0.4	CIBSE SHR NOM	1.00	
TEST VOLTAGE(V)	230	η down(%)	98.3	CIBSE SHR MAX	1.05	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:30DEG
 Operators:
 Test Date:2015-08-15

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.284
 Humidity:65.0%
 Test Distance:9.390m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	8742	8830	8926	8691					0- 10	871.4	871.4	8.81, 8.69
20	7031	7215	7309	7015					10- 20	2248	3119	31.5, 31.1
30	5140	5306	5361	5133					20- 30	2837	5956	60.2, 59.4
40	3012	2966	2912	2829					30- 40	2596	8552	86.4, 85.3
50	344.6	301.4	282.5	305.9					40- 50	1022	9574	96.7, 95.5
60	152.9	148.4	138.0	150.3					50- 60	199.9	9774	98.8, 97.5
70	3.827	7.262	13.55	3.618					60- 70	77.12	9851	99.5, 98.2
80	1.150	2.078	3.668	1.058					70- 80	3.858	9855	99.6, 98.3
90	0.1618	0.1370	1.546	0.0914					80- 90	1.178	9856	99.6, 98.3
100	0.2671	0.3196	1.755	0.1955					90-100	0.5871	9857	99.6, 98.3
110	0.7942	0.7574	1.879	0.2932					100-110	0.7696	9857	99.6, 98.3
120	3.029	2.839	3.178	1.720					110-120	1.633	9859	99.6, 98.3
130	7.220	6.846	6.214	4.855					120-130	3.849	9863	99.7, 98.4
140	12.88	12.37	10.88	9.445					130-140	6.729	9870	99.7, 98.4
150	17.75	17.27	15.42	14.01					140-150	8.616	9878	99.8, 98.5
160	22.74	22.28	20.90	19.44					150-160	8.589	9887	99.9, 98.6
170	25.54	25.26	25.16	23.39					160-170	6.547	9893	100, 98.7
180	26.28	26.24	28.27	26.15					170-180	2.438	9896	100, 98.7
DEG	LUMINOUS INTENSITY:cd MAX (Ii - Iavg)/Iavg (0-135) = 334.2 %									UNIT:lm		

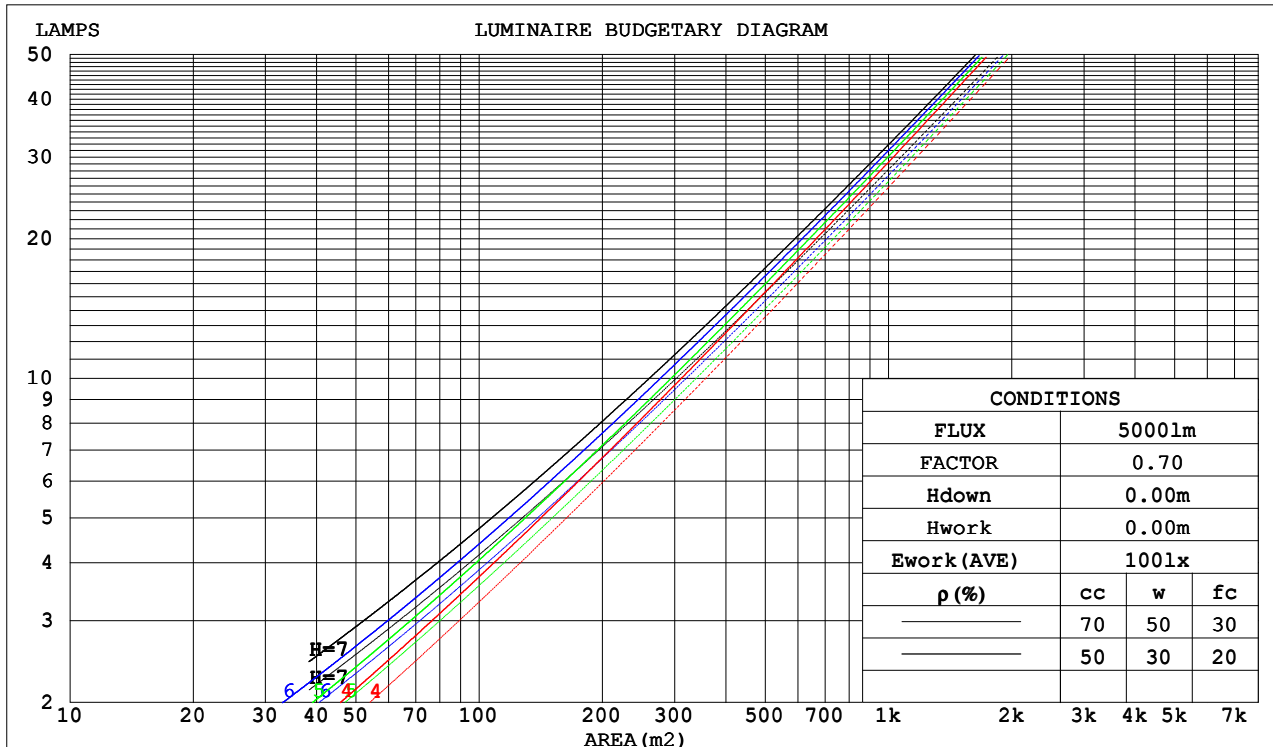
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 30DEG
 Operators:
 Test Date: 2015-08-15

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.284
 Humidity: 65.0%
 Test Distance: 9.390m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:231.1V I:0.4595A P:102.0W PF:0.9608 Lamp Flux:10027x1 lm		
NAME: BT-AS100W-10	TYPE:AL reflector	WEIGHT:
SPEC.:5000k COB 60D	DIM.: 270*197mm	SERIAL No.:
MFR.: EVERFINE	SUR.:230*230mm	PROTECTION ANGLE:

pcc	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	1.17	1.17	1.17	1.15	1.15	1.15	1.09	1.09	1.09	1.05	1.05	1.05	1.00	1.00	1.00	.98
1.0	1.09	1.06	1.04	1.06	1.04	1.02	1.02	1.01	.99	.99	.97	.96	.95	.94	.93	.91
2.0	1.00	.96	.93	.99	.95	.91	.95	.92	.89	.92	.90	.87	.90	.87	.86	.84
3.0	.93	.88	.83	.91	.87	.83	.89	.85	.81	.86	.83	.80	.84	.81	.79	.77
4.0	.86	.80	.76	.85	.79	.75	.83	.78	.74	.81	.77	.73	.79	.75	.72	.71
5.0	.80	.74	.69	.79	.73	.69	.77	.72	.68	.75	.71	.68	.74	.70	.67	.65
6.0	.74	.68	.64	.74	.68	.63	.72	.67	.63	.71	.66	.62	.69	.65	.62	.60
7.0	.69	.63	.59	.69	.63	.58	.67	.62	.58	.66	.61	.58	.65	.61	.57	.56
8.0	.65	.59	.54	.64	.58	.54	.63	.58	.54	.62	.57	.54	.61	.57	.53	.52
9.0	.61	.55	.50	.60	.54	.50	.59	.54	.50	.58	.54	.50	.58	.53	.50	.48
10.0	.57	.51	.47	.57	.51	.47	.56	.51	.47	.55	.50	.47	.54	.50	.47	.45



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:30DEG
 Operators:
 Test Date:2015-08-15

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.284
 Humidity:65.0%
 Test Distance:9.390m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:231.1V I:0.4595A P:102.0W PF:0.9608 Lamp Flux:10027x1 lm														
NAME: BT-AS100W-10					TYPE:AL reflector					WEIGHT:				
SPEC.:5000k COB 60D					DIM.: 270*197mm					SERIAL No.:				
MFR.: EVERFINE					SUR.:230*230mm					PROTECTION 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	.186	.106	.034	.180	.102	.033	.167	.096	.031	.155	.089	.029	.144	.084	.027	
2.0	.180	.099	.030	.175	.096	.030	.164	.091	.028	.154	.086	.027	.145	.082	.026	
3.0	.173	.092	.028	.168	.090	.027	.159	.086	.026	.150	.082	.025	.142	.079	.024	
4.0	.165	.086	.025	.161	.084	.025	.153	.081	.024	.145	.078	.024	.138	.075	.023	
5.0	.157	.080	.023	.154	.079	.023	.147	.076	.022	.140	.074	.022	.134	.072	.021	
6.0	.150	.075	.022	.147	.074	.021	.141	.072	.021	.135	.070	.021	.129	.068	.020	
7.0	.144	.071	.020	.141	.070	.020	.135	.068	.020	.130	.067	.019	.125	.065	.019	
8.0	.137	.067	.019	.135	.066	.019	.130	.065	.018	.125	.063	.018	.120	.062	.018	
9.0	.131	.064	.018	.129	.063	.018	.124	.062	.017	.120	.060	.017	.116	.059	.017	
10.0	.126	.060	.017	.124	.060	.017	.120	.059	.017	.116	.057	.016	.112	.056	.016	

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	.191	.191	.191	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.173	.158	.145	.148	.136	.125	.101	.093	.086	.058	.054	.050	.019	.017	.016	
2.0	.159	.134	.113	.136	.115	.098	.093	.080	.068	.054	.046	.040	.017	.015	.013	
3.0	.147	.115	.090	.126	.099	.078	.087	.069	.055	.050	.040	.032	.016	.013	.011	
4.0	.138	.101	.073	.118	.087	.063	.081	.061	.044	.047	.036	.026	.015	.012	.009	
5.0	.130	.090	.060	.112	.078	.052	.077	.054	.037	.045	.032	.022	.014	.010	.007	
6.0	.123	.081	.050	.106	.070	.044	.073	.049	.031	.042	.029	.018	.014	.009	.006	
7.0	.117	.073	.043	.101	.064	.038	.069	.045	.027	.040	.026	.016	.013	.009	.005	
8.0	.111	.067	.037	.096	.059	.033	.066	.041	.023	.039	.024	.014	.012	.008	.005	
9.0	.106	.062	.033	.092	.054	.029	.064	.038	.020	.037	.023	.012	.012	.007	.004	
10.0	.102	.058	.029	.088	.051	.025	.061	.036	.018	.036	.021	.011	.012	.007	.004	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:
Test Date:2015-08-15

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity:65.0%
Test Distance:9.390m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:231.1V I:0.4595A P:102.0W PF:0.9608 Lamp Flux:10027x1 lm										
NAME: BT-AS100W-10					TYPE:AL reflector			WEIGHT:		
SPEC.:5000k COB 60D					DIM.: 270*197mm			SERIAL No.:		
MFR.: EVERFINE					SUR.:230*230mm			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	27.6	28.7	27.9	28.9	29.0	27.7	28.7	27.9	28.9	29.1
3H	27.5	28.4	27.8	28.6	28.9	27.5	28.5	27.8	28.7	28.9
4H	27.4	28.3	27.7	28.5	28.7	27.4	28.3	27.7	28.6	28.8
6H	27.3	28.1	27.6	28.4	28.6	27.3	28.2	27.6	28.4	28.7
8H	27.3	28.1	27.6	28.3	28.6	27.3	28.1	27.6	28.4	28.6
12H	27.2	28.0	27.5	28.2	28.5	27.2	28.0	27.6	28.3	28.6
4H 2H	27.4	28.3	27.7	28.5	28.8	27.4	28.3	27.7	28.6	28.8
3H	27.2	28.0	27.6	28.3	28.6	27.3	28.1	27.6	28.3	28.6
4H	27.1	27.8	27.5	28.1	28.5	27.2	27.9	27.5	28.2	28.5
6H	27.1	27.7	27.4	28.0	28.4	27.1	27.7	27.5	28.0	28.4
8H	27.0	27.6	27.4	27.9	28.3	27.0	27.6	27.4	28.0	28.3
12H	27.0	27.5	27.4	27.8	28.2	27.0	27.5	27.4	27.9	28.3
8H 4H	27.0	27.6	27.4	27.9	28.3	27.0	27.6	27.4	28.0	28.3
6H	26.9	27.4	27.3	27.8	28.2	26.9	27.4	27.4	27.8	28.2
8H	26.9	27.3	27.3	27.7	28.1	26.9	27.3	27.4	27.7	28.2
12H	26.8	27.1	27.3	27.6	28.1	26.8	27.2	27.3	27.6	28.1
12H 4H	27.0	27.5	27.4	27.8	28.2	27.0	27.5	27.4	27.9	28.3
6H	26.9	27.3	27.3	27.7	28.1	26.9	27.3	27.4	27.7	28.2
8H	26.8	27.1	27.3	27.6	28.1	26.8	27.2	27.3	27.6	28.1
Variations with the observer position at spacings:										
S = 1.0H	+ 2.4 / -10.1					+ 2.4 / -10.3				
1.5H	+ 4.8 / - 8.0					+ 4.7 / - 8.7				
2.0H	+ 6.4 / - 4.3					+ 7.4 / - 4.8				

CIE Pub.117 Corrected 10027 lm Total Lamp Luminous Flux. (8log(F/F0) = 8.0)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:
Test Date:2015-08-15

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity:65.0%
Test Distance:9.390m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:231.1V I:0.4595A P:102.0W PF:0.9608 Lamp Flux:10027x1 lm		
NAME: BT-AS100W-10	TYPE:AL reflector	WEIGHT:
SPEC.:5000k COB 60D	DIM.: 270*197mm	SERIAL No.:
MFR.: EVERFINE	SUR.:230*230mm	PROTECTION ANGLE:

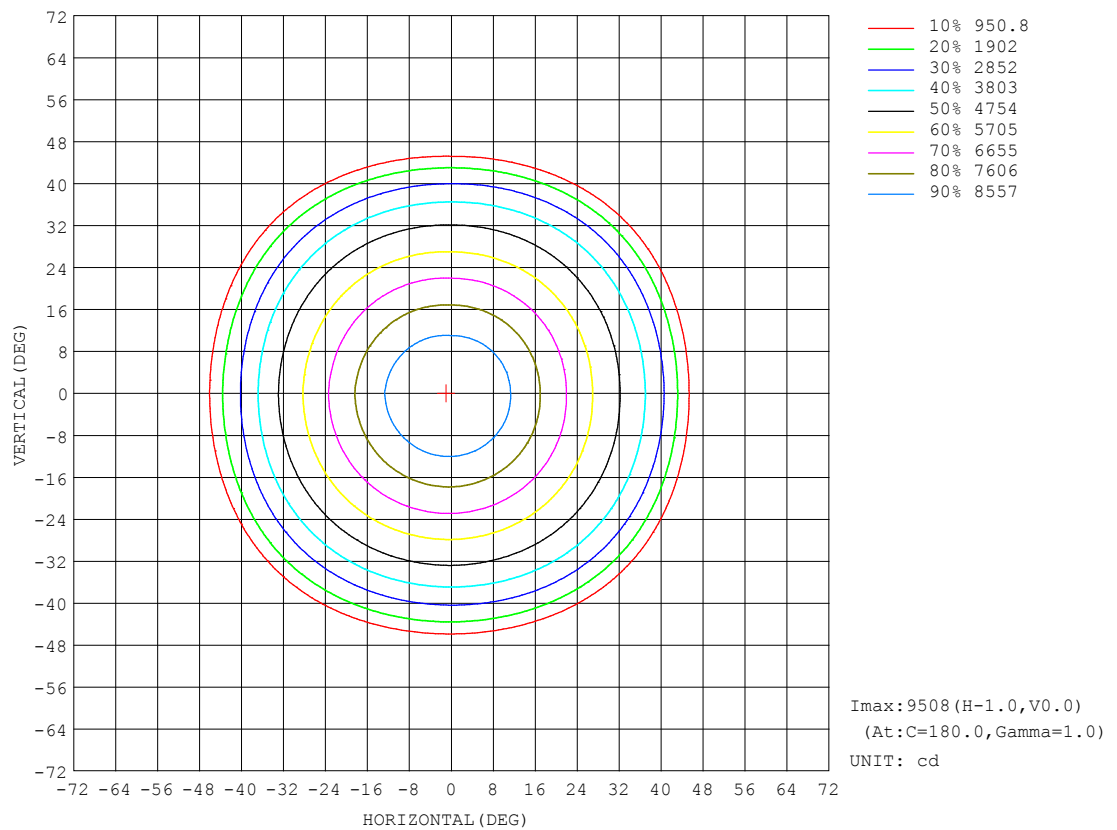
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	82	75	71	81	75	71	80	74	70	66
0.80	90	83	79	89	83	79	88	82	79	75
1.00	95	89	85	94	89	85	93	89	84	80
1.25	100	94	90	99	94	90	97	92	89	85
1.50	103	98	94	101	97	93	99	95	92	88
2.00	106	101	98	104	100	97	102	98	96	90
2.50	108	104	100	106	102	100	103	100	98	92
3.00	109	106	103	108	104	102	104	102	100	93
4.00	112	109	106	109	107	105	106	104	102	95
5.00	113	110	108	111	108	107	107	105	104	96
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:
Test Date:2015-08-15

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity:65.0%
Test Distance:9.390m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:231.1V I:0.4595A P:102.0W PF:0.9608 Lamp Flux:10027x1 lm		
NAME: BT-AS100W-10	TYPE:AL reflector	WEIGHT:
SPEC.:5000k COB 60D	DIM.: 270*197mm	SERIAL No.:
MFR.: EVERFINE	SUR.:230*230mm	PROTECTION ANGLE:

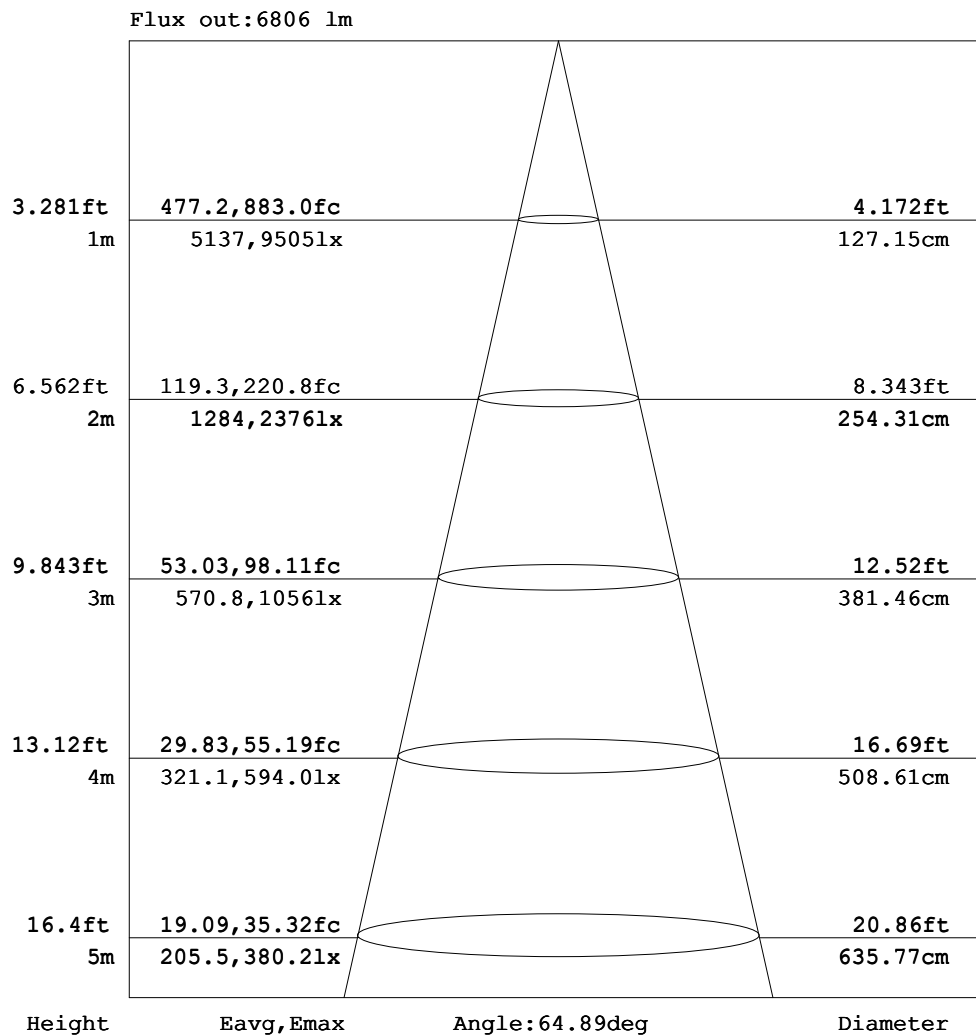


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:
Test Date:2015-08-15

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity:65.0%
Test Distance:9.390m [K=1.0000]
Remarks:

AAI Figure

Test:U:231.1V I:0.4595A P:102.0W PF:0.9608 Lamp Flux:10027x1 lm		
NAME: BT-AS100W-10	TYPE:AL reflector	WEIGHT:
SPEC.:5000k COB 60D	DIM.: 270*197mm	SERIAL No.:
MFR.: EVERFINE	SUR.:230*230mm	PROTECTION ANGLE:



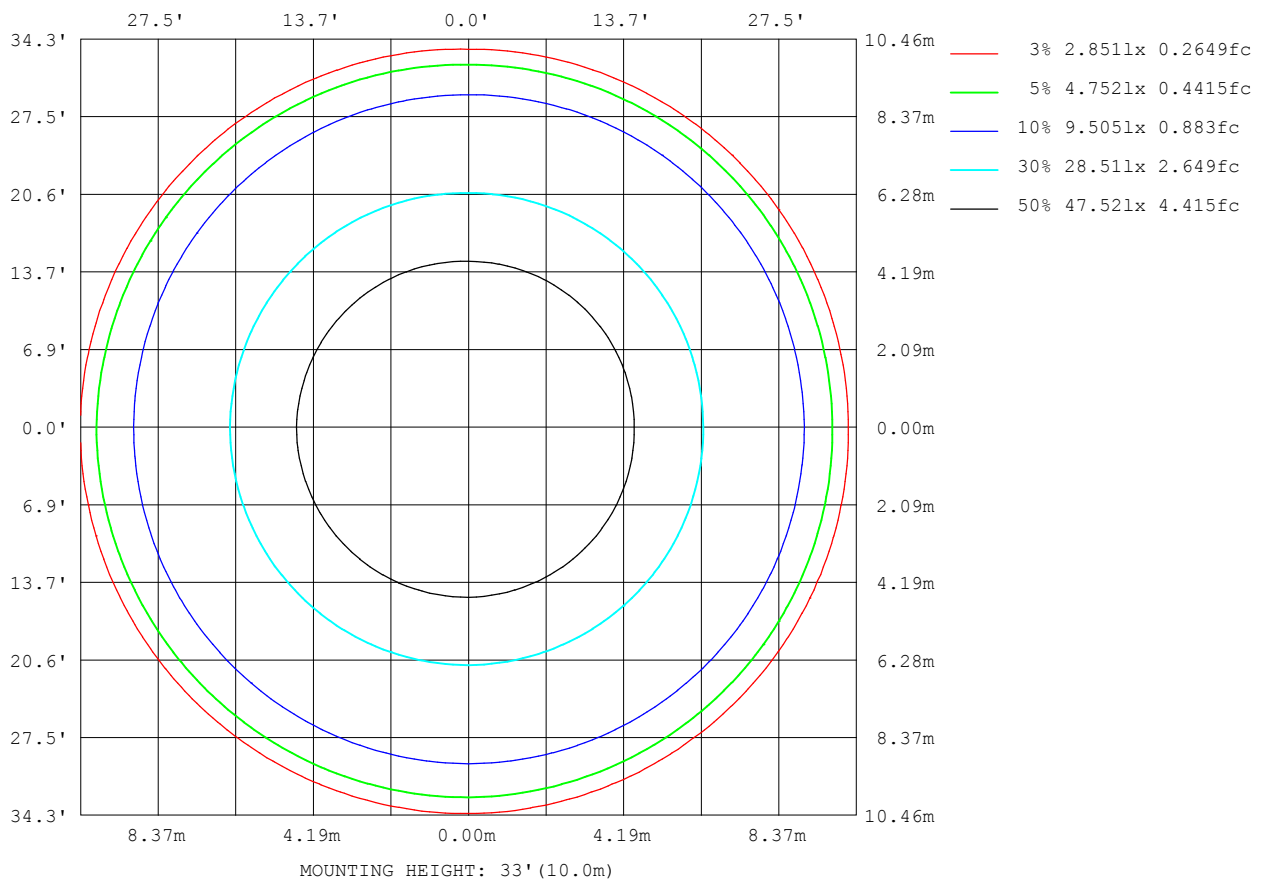
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 30DEG
Operators:
Test Date: 2015-08-15

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity: 65.0%
Test Distance: 9.390m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

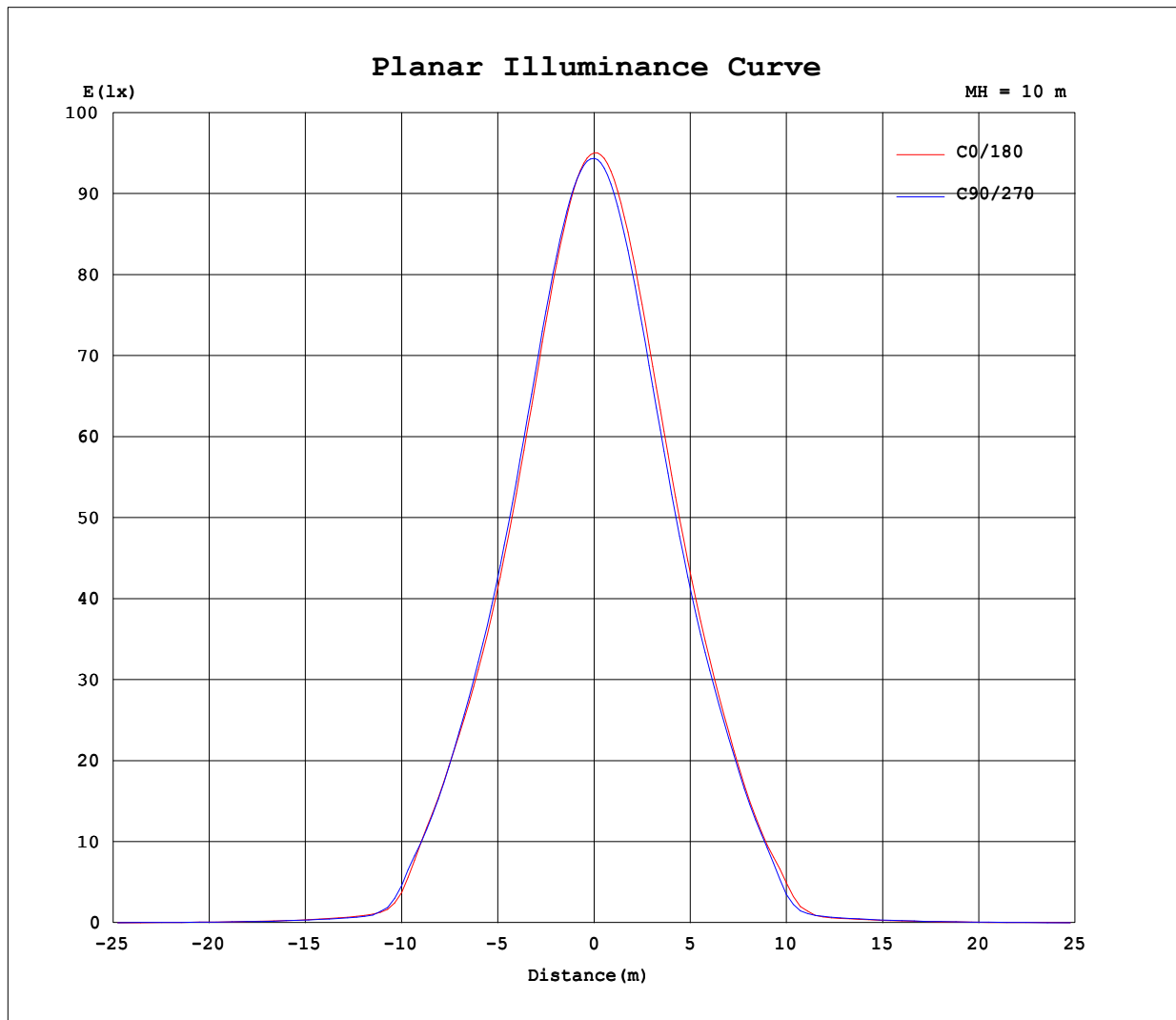
Test:U:231.1V I:0.4595A P:102.0W PF:0.9608 Lamp Flux:10027x1 lm		
NAME: BT-AS100W-10	TYPE:AL reflector	WEIGHT:
SPEC.:5000k COB 60D	DIM.: 270*197mm	SERIAL No.:
MFR.: EVERFINE	SUR.:230*230mm	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:
Test Date:2015-08-15

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity:65.0%
Test Distance:9.390m [K=1.0000]
Remarks:

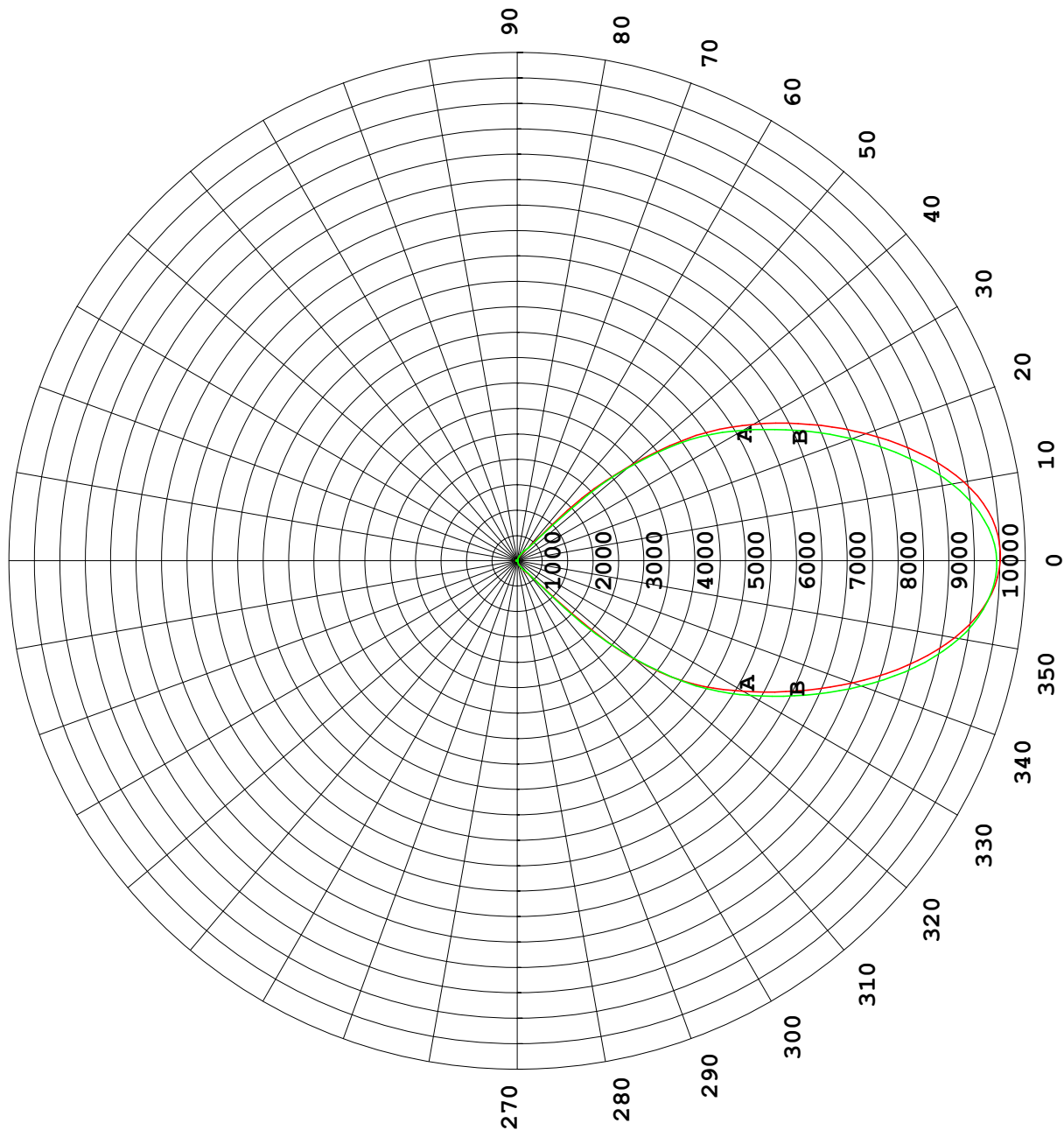
Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 30DEG
Operators:
Test Date: 2015-08-15

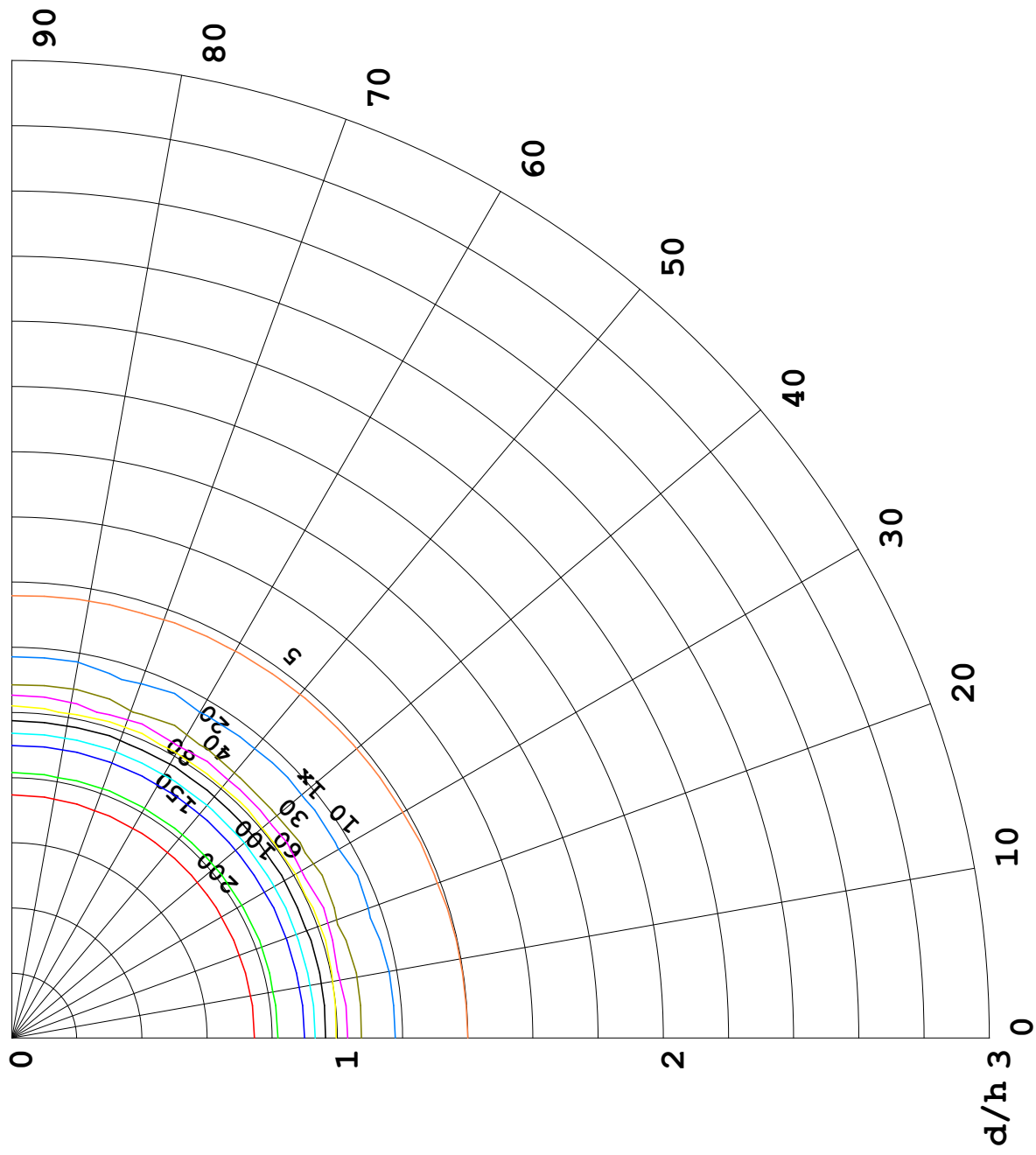
γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity: 65.0%
Test Distance: 9.390m [K=1.0000]
Remarks:

I (cd)



$\kappa = 1$

1000 lm



F = 5000 lm
K = 0.7
Hcc = 0.0 m
Hfc = 0.0 m
Eave = 100 lx

	Pcc	Pw	Pfc
—————	70	50	30
—————	50	30	20

