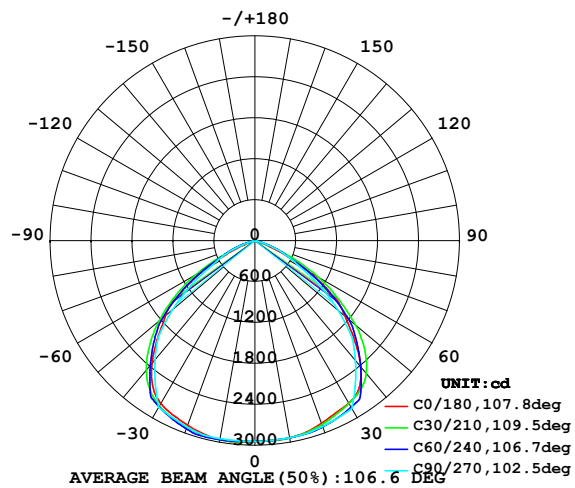


LUMINAIRE PHOTOMETRIC TEST REPORT

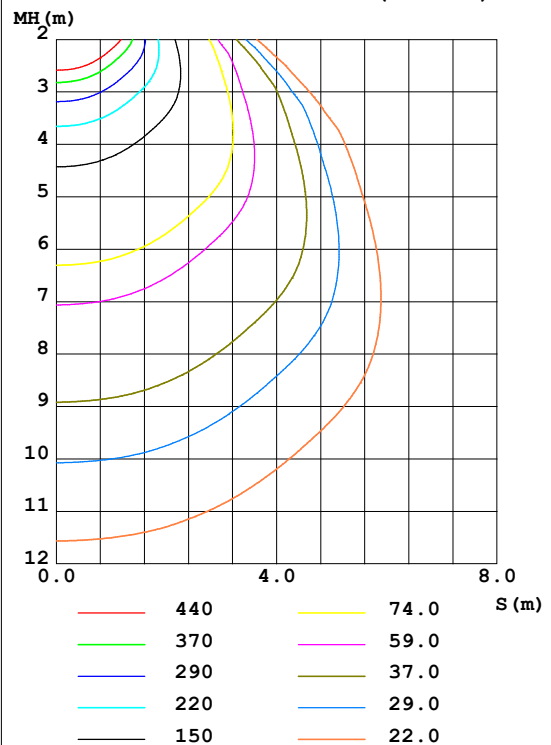
Test:U:231.1V I:0.3113A P:71.34W PF:0.9914 Lamp Flux:7490.14x1 lm		
NAME: BT-FL70W	TYPE:glass+Al cover	WEIGHT:2.818kg
SPEC.:5000K 84LEDs 120D R80	DIM.: L282.5*W227*H121.8mm	SERIAL No.:
MFR.: EVERFINE	SUR.:160*140mm	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 105.00 lm/W			
MODEL	SMD3030 (phipis)	Imax(cd)	2967	S/MH(C0/180)	1.38
NOMINAL POWER(W)	70	LOR(%)	100.0	S/MH(C90/270)	1.36
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	7490.1	η UP,DN(C0-180)	0.0,50.2
NOMINAL FLUX(lm)	7490.14	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.8
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.55

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:
Test Date:2015-11-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
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	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
5	2943	2938	2938	2951	2962	2956	2945	2943	0- 5	70.42	70.42	0.94, 0.94
10	2939	2936	2933	2956	2962	2967	2947	2945	5- 10	210.9	281.4	3.76, 3.76
15	2906	2923	2928	2944	2933	2961	2949	2935	10- 15	349.0	630.4	8.42, 8.42
20	2851	2899	2900	2921	2881	2943	2906	2914	15- 20	481.0	1111	14.8, 14.8
25	2793	2842	2871	2854	2825	2874	2863	2848	20- 25	602.6	1714	22.9, 22.9
30	2753	2772	2843	2770	2759	2787	2820	2768	25- 30	713.4	2427	32.4, 32.4
35	2658	2700	2567	2676	2611	2689	2549	2683	30- 35	803.3	3231	43.1, 43.1
40	2414	2588	2292	2539	2347	2544	2277	2562	35- 40	847.2	4078	54.4, 54.4
45	2068	2280	2017	2226	2012	2216	2005	2256	40- 45	841.0	4919	65.7, 65.7
50	1727	1931	1593	1885	1712	1860	1573	1908	45- 50	784.0	5703	76.1, 76.1
55	1382	1545	1169	1520	1324	1489	1142	1526	50- 55	680.7	6384	85.2, 85.2
60	898.5	1043	745.4	1028	861.2	1005	710.4	1032	55- 60	525.8	6909	92.2, 92.2
65	450.9	560.8	501.2	542.6	395.2	524.2	476.9	549.4	60- 65	339.3	7249	96.8, 96.8
70	67.48	230.3	256.9	209.7	39.03	192.7	243.5	216.6	65- 70	173.1	7422	99.1, 99.1
75	9.798	99.53	12.68	90.40	11.26	80.10	10.06	91.22	70- 75	58.67	7480	99.9, 99.9
80	4.987	4.726	0	5.482	5.724	4.852	0	4.610	75- 80	8.568	7489	100, 100
85	1.533	0	0	0	1.612	0	0	0	80- 85	0.9824	7490	100, 100
90	0	0	0	0	0.7238	0	0	0	85- 90	0.1091	7490	100, 100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd MAX (Ii - Iavg)/Iavg (0-135) = 100.0 %									UNIT:lm		

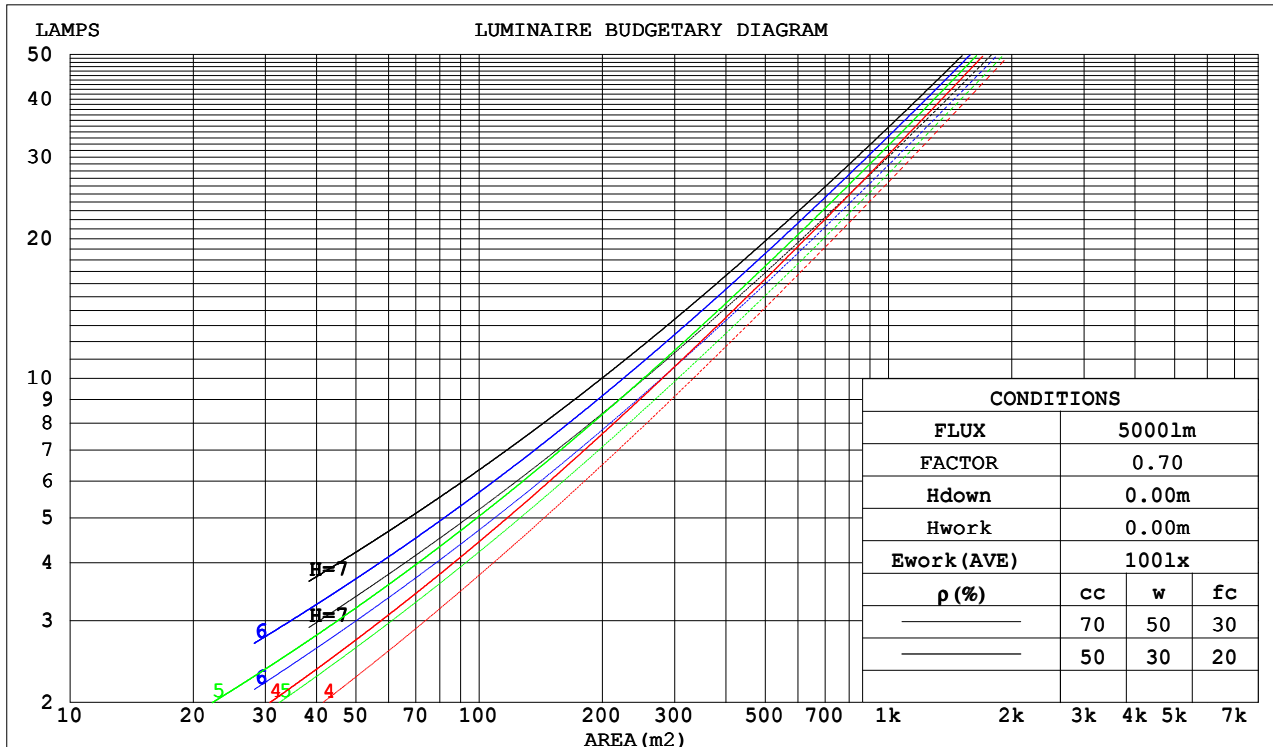
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 30DEG
 Operators:
 Test Date: 2015-11-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 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:0.3113A P:71.34W PF:0.9914 Lamp Flux:7490.14x1 lm		
NAME: BT-FL70W	TYPE:glass+Al cover	WEIGHT:2.818kg
SPEC.:5000K 84LEDs 120D R80	DIM.: L282.5*W227*H121.8mm	SERIAL No.:
MFR.: EVERFINE	SUR.:160*140mm	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						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	1.07	1.04	1.01	1.05	1.02	.99	1.01	.98	.96	.97	.95	.93	.94	.92	.90	.88
2.0	.96	.90	.85	.94	.88	.84	.90	.86	.82	.87	.84	.80	.84	.81	.79	.77
3.0	.85	.78	.72	.84	.77	.72	.81	.75	.71	.78	.73	.69	.76	.72	.68	.66
4.0	.76	.68	.62	.75	.68	.62	.73	.66	.61	.70	.65	.60	.68	.64	.60	.58
5.0	.69	.60	.54	.67	.60	.54	.65	.59	.53	.64	.58	.53	.62	.57	.52	.50
6.0	.62	.54	.48	.61	.53	.48	.59	.52	.47	.58	.51	.47	.56	.51	.46	.44
7.0	.56	.48	.42	.55	.48	.42	.54	.47	.42	.53	.46	.42	.51	.46	.41	.39
8.0	.51	.43	.38	.51	.43	.38	.49	.42	.38	.48	.42	.37	.47	.41	.37	.35
9.0	.47	.39	.34	.47	.39	.34	.45	.39	.34	.44	.38	.34	.43	.38	.34	.32
10.0	.43	.36	.31	.43	.36	.31	.42	.35	.31	.41	.35	.31	.40	.35	.30	.29



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:30DEG
 Operators:
 Test Date:2015-11-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 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:0.3113A P:71.34W PF:0.9914 Lamp Flux:7490.14x1 lm		
NAME: BT-FL70W	TYPE:glass+Al cover	WEIGHT:2.818kg
SPEC.:5000K 84LEDs 120D R80	DIM.: L282.5*W227*H121.8mm	SERIAL No.:
MFR.: EVERFINE	SUR.:160*140mm	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	.246	.140	.044	.239	.136	.043	.226	.129	.041	.214	.123	.040	.203	.118	.038		
2.0	.243	.133	.041	.237	.130	.040	.225	.125	.039	.215	.121	.038	.205	.116	.037		
3.0	.233	.124	.037	.227	.122	.037	.217	.118	.036	.208	.114	.035	.200	.111	.034		
4.0	.220	.115	.034	.216	.113	.033	.207	.110	.033	.199	.107	.032	.191	.104	.032		
5.0	.208	.106	.031	.204	.105	.030	.196	.102	.030	.189	.100	.030	.182	.097	.029		
6.0	.196	.098	.028	.192	.097	.028	.185	.095	.028	.179	.093	.027	.173	.091	.027		
7.0	.185	.091	.026	.181	.090	.026	.175	.089	.026	.169	.087	.025	.164	.085	.025		
8.0	.174	.085	.024	.171	.084	.024	.166	.083	.024	.161	.081	.023	.156	.080	.023		
9.0	.165	.080	.022	.162	.079	.022	.157	.078	.022	.152	.076	.022	.148	.075	.022		
10.0	.156	.075	.021	.154	.074	.021	.149	.073	.021	.145	.072	.020	.141	.071	.020		

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	.176	.157	.139	.150	.134	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016	
2.0	.166	.132	.104	.142	.114	.090	.097	.079	.063	.056	.046	.037	.018	.015	.012	
3.0	.157	.114	.080	.135	.098	.069	.093	.068	.048	.053	.040	.029	.017	.013	.009	
4.0	.150	.100	.063	.129	.087	.054	.088	.060	.038	.051	.035	.023	.016	.012	.007	
5.0	.143	.090	.050	.123	.078	.044	.084	.054	.031	.049	.032	.018	.016	.010	.006	
6.0	.136	.081	.042	.117	.070	.036	.081	.049	.026	.047	.029	.015	.015	.009	.005	
7.0	.130	.074	.035	.112	.064	.031	.077	.045	.022	.045	.027	.013	.015	.009	.004	
8.0	.124	.068	.030	.107	.059	.026	.074	.042	.019	.043	.025	.011	.014	.008	.004	
9.0	.119	.064	.026	.102	.055	.023	.071	.039	.016	.041	.023	.010	.013	.008	.003	
10.0	.114	.059	.023	.098	.052	.020	.068	.036	.014	.040	.021	.009	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:30DEG
 Operators:
 Test Date:2015-11-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 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:0.3113A P:71.34W PF:0.9914 Lamp Flux:7490.14x1 lm										
NAME: BT-FL70W					TYPE:glass+Al cover			WEIGHT:2.818kg		
SPEC.:5000K 84LEDs 120D R80					DIM.: L282.5*W227*H121.8mm			SERIAL No.:		
MFR.: EVERFINE					SUR.:160*140mm			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	29.2	30.5	29.4	30.7	30.9	28.5	29.9	28.7	30.1	30.2
3H	29.2	30.4	29.5	30.7	30.9	28.8	30.0	29.0	30.2	30.5
4H	29.1	30.3	29.4	30.5	30.7	28.7	29.9	29.0	30.1	30.4
6H	29.0	30.1	29.3	30.3	30.6	28.6	29.7	28.9	30.0	30.2
8H	28.9	30.0	29.2	30.3	30.5	28.5	29.6	28.9	29.9	30.2
12H	28.9	29.9	29.2	30.2	30.5	28.5	29.5	28.8	29.8	30.1
4H 2H	29.4	30.6	29.7	30.8	31.1	28.8	30.0	29.1	30.2	30.5
3H	29.4	30.5	29.8	30.8	31.1	29.2	30.2	29.5	30.5	30.8
4H	29.4	30.3	29.7	30.6	30.9	29.1	30.0	29.5	30.3	30.7
6H	29.3	30.1	29.7	30.4	30.8	29.0	29.8	29.4	30.2	30.5
8H	29.2	30.0	29.6	30.3	30.7	29.0	29.7	29.4	30.1	30.5
12H	29.2	29.9	29.6	30.2	30.6	28.9	29.6	29.3	30.0	30.4
8H 4H	29.3	30.0	29.7	30.4	30.7	29.0	29.7	29.4	30.1	30.5
6H	29.2	29.8	29.6	30.2	30.6	28.9	29.5	29.4	29.9	30.3
8H	29.1	29.7	29.6	30.1	30.5	28.9	29.4	29.3	29.8	30.3
12H	29.1	29.5	29.6	30.0	30.5	28.8	29.3	29.3	29.7	30.2
12H 4H	29.2	29.9	29.6	30.3	30.7	29.0	29.6	29.4	30.0	30.4
6H	29.1	29.7	29.6	30.1	30.5	28.9	29.4	29.3	29.8	30.3
8H	29.1	29.5	29.6	30.0	30.5	28.8	29.3	29.3	29.7	30.2
Variations with the observer position at spacings:										
S = 1.0H	+ 0.6 / - 0.6					+ 0.7 / - 0.8				
1.5H	+ 0.6 / - 1.1					+ 0.6 / - 0.8				
2.0H	+ 0.9 / - 1.7					+ 1.3 / - 2.5				

CIE Pub.117 Corrected 7490 lm Total Lamp Luminous Flux. (8log(F/F0) = 7.0)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:
Test Date:2015-11-28

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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:0.3113A P:71.34W PF:0.9914 Lamp Flux:7490.14x1 lm		
NAME: BT-FL70W	TYPE:glass+Al cover	WEIGHT:2.818kg
SPEC.:5000K 84LEDs 120D R80	DIM.: L282.5*W227*H121.8mm	SERIAL No.:
MFR.: EVERFINE	SUR.:160*140mm	PROTECTION ANGLE:

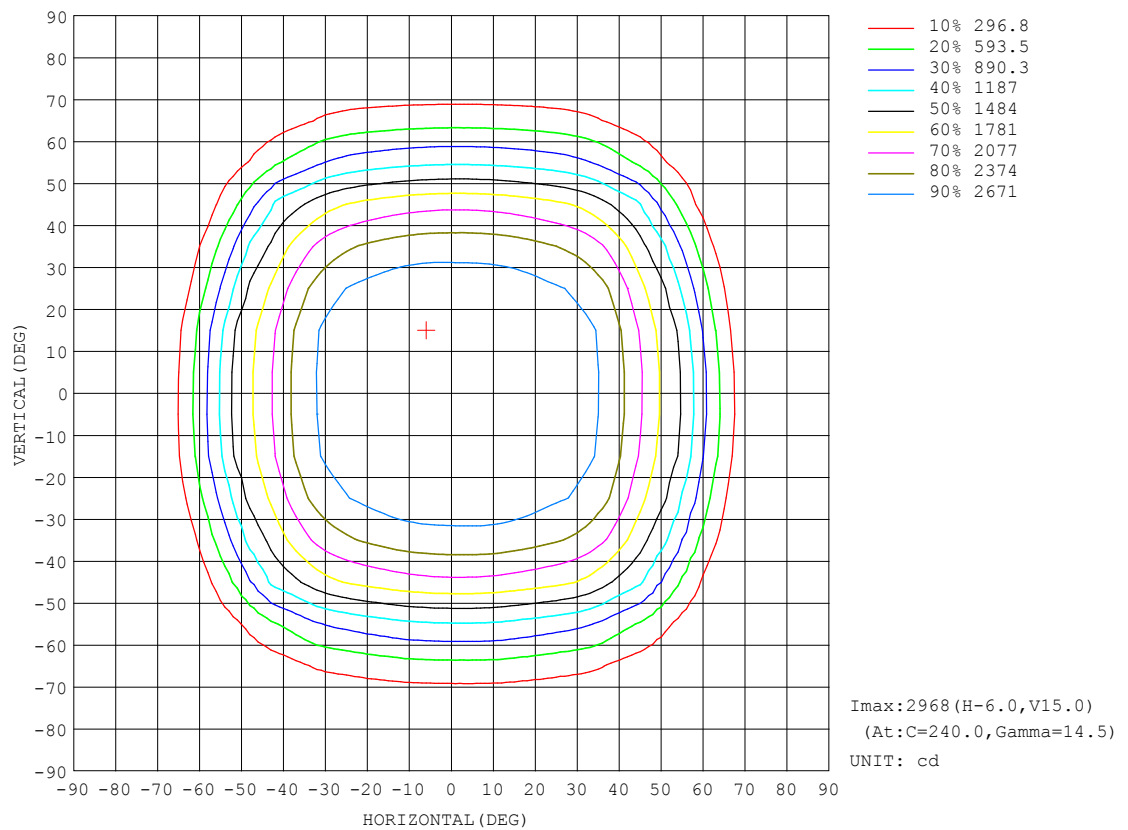
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	62	52	45	62	51	45	60	51	45	39
0.80	73	63	56	72	62	56	71	62	56	49
1.00	82	73	66	81	72	66	79	73	65	59
1.25	89	80	74	88	80	74	85	78	73	67
1.50	94	86	80	92	85	79	90	83	78	72
2.00	100	93	88	98	92	87	95	90	86	79
2.50	103	97	92	101	96	91	98	93	89	82
3.00	106	101	96	104	99	95	100	96	93	85
4.00	109	105	101	107	103	100	103	100	97	89
5.00	111	107	104	109	105	102	104	102	99	91
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:
Test Date:2015-11-28

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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:0.3113A P:71.34W PF:0.9914 Lamp Flux:7490.14x1 lm		
NAME: BT-FL70W	TYPE:glass+Al cover	WEIGHT:2.818kg
SPEC.:5000K 84LEDs 120D R80	DIM.: L282.5*W227*H121.8mm	SERIAL No.:
MFR.: EVERFINE	SUR.:160*140mm	PROTECTION ANGLE:

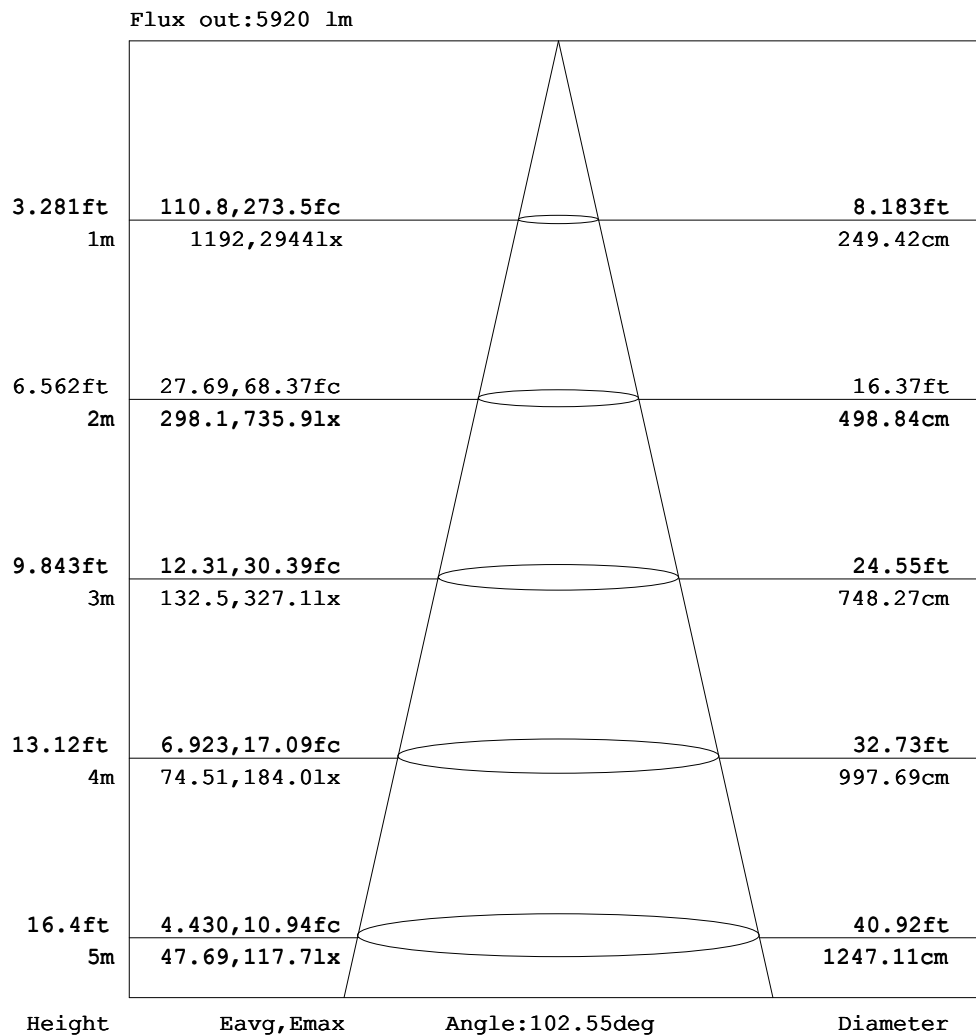


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:
Test Date:2015-11-28

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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:0.3113A P:71.34W PF:0.9914 Lamp Flux:7490.14x1 lm		
NAME: BT-FL70W	TYPE:glass+Al cover	WEIGHT:2.818kg
SPEC.:5000K 84LEDs 120D R80	DIM.: L282.5*W227*H121.8mm	SERIAL No.:
MFR.: EVERFINE	SUR.:160*140mm	PROTECTION ANGLE:



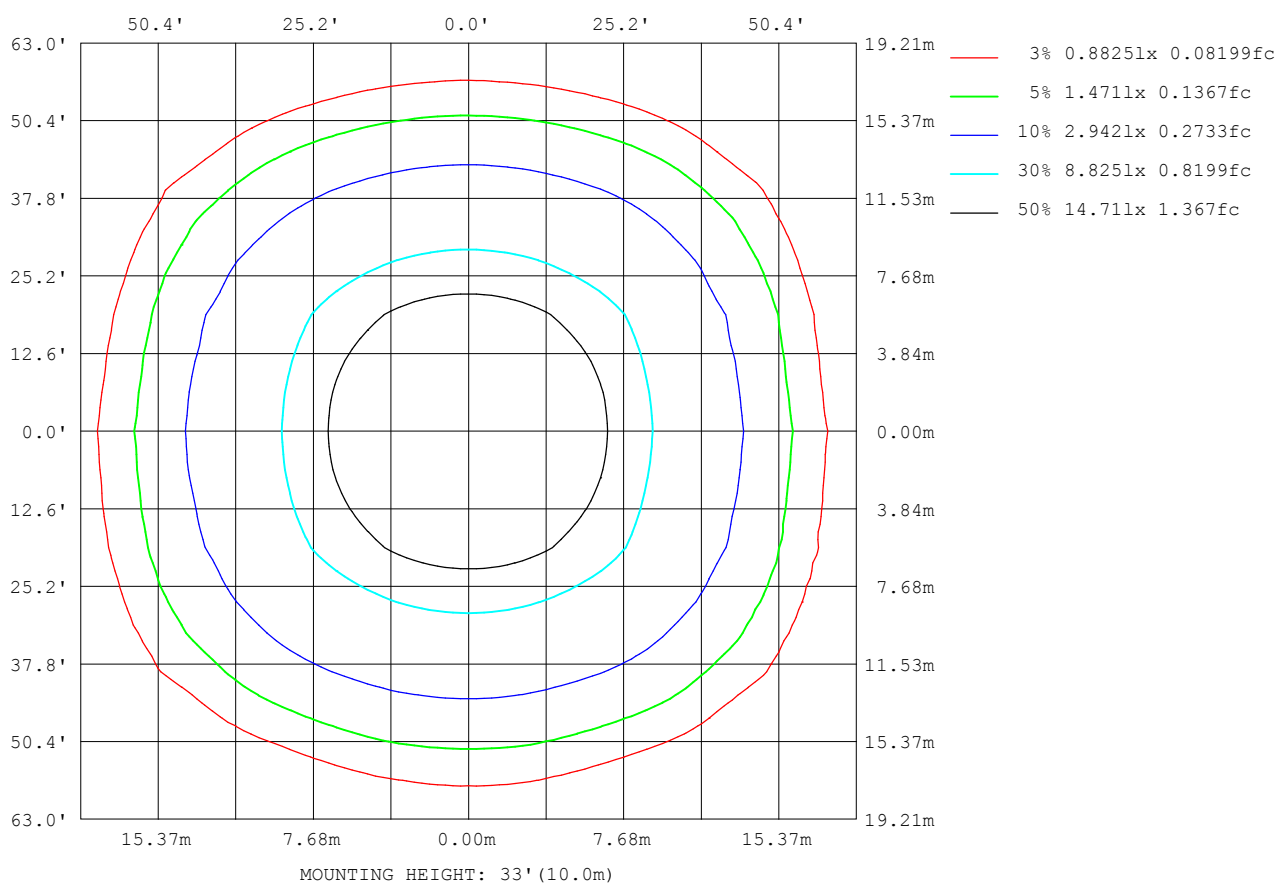
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 30DEG
Operators:
Test Date: 2015-11-28

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity: 65.0%
Test Distance: 9.390m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

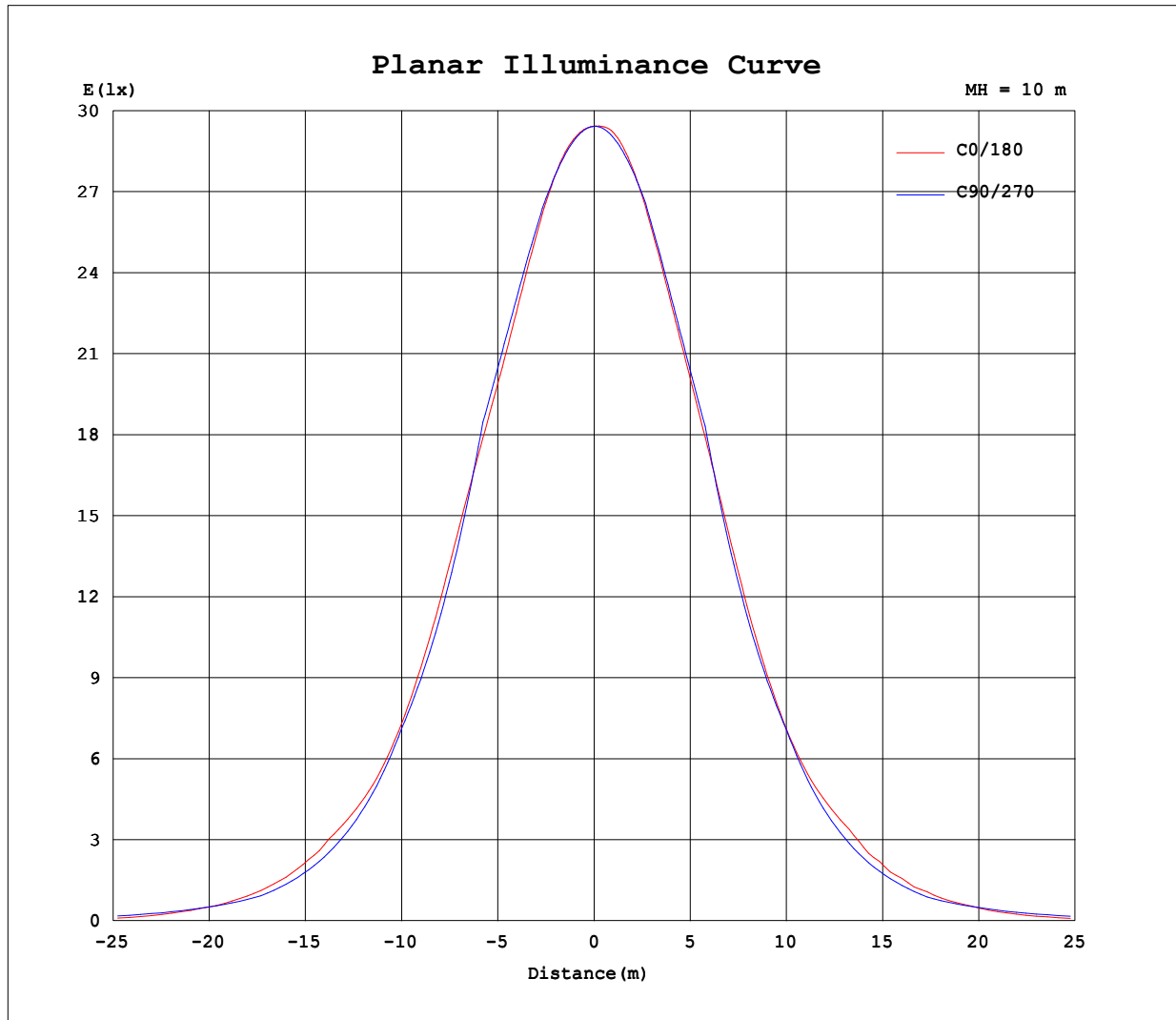
Test:U:231.1V I:0.3113A P:71.34W PF:0.9914 Lamp Flux:7490.14x1 lm		
NAME: BT-FL70W	TYPE:glass+Al cover	WEIGHT:2.818kg
SPEC.:5000K 84LEDs 120D R80	DIM.: L282.5*W227*H121.8mm	SERIAL No.:
MFR.: EVERFINE	SUR.:160*140mm	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:
Test Date:2015-11-28

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity:65.0%
Test Distance:9.390m [K=1.0000]
Remarks:

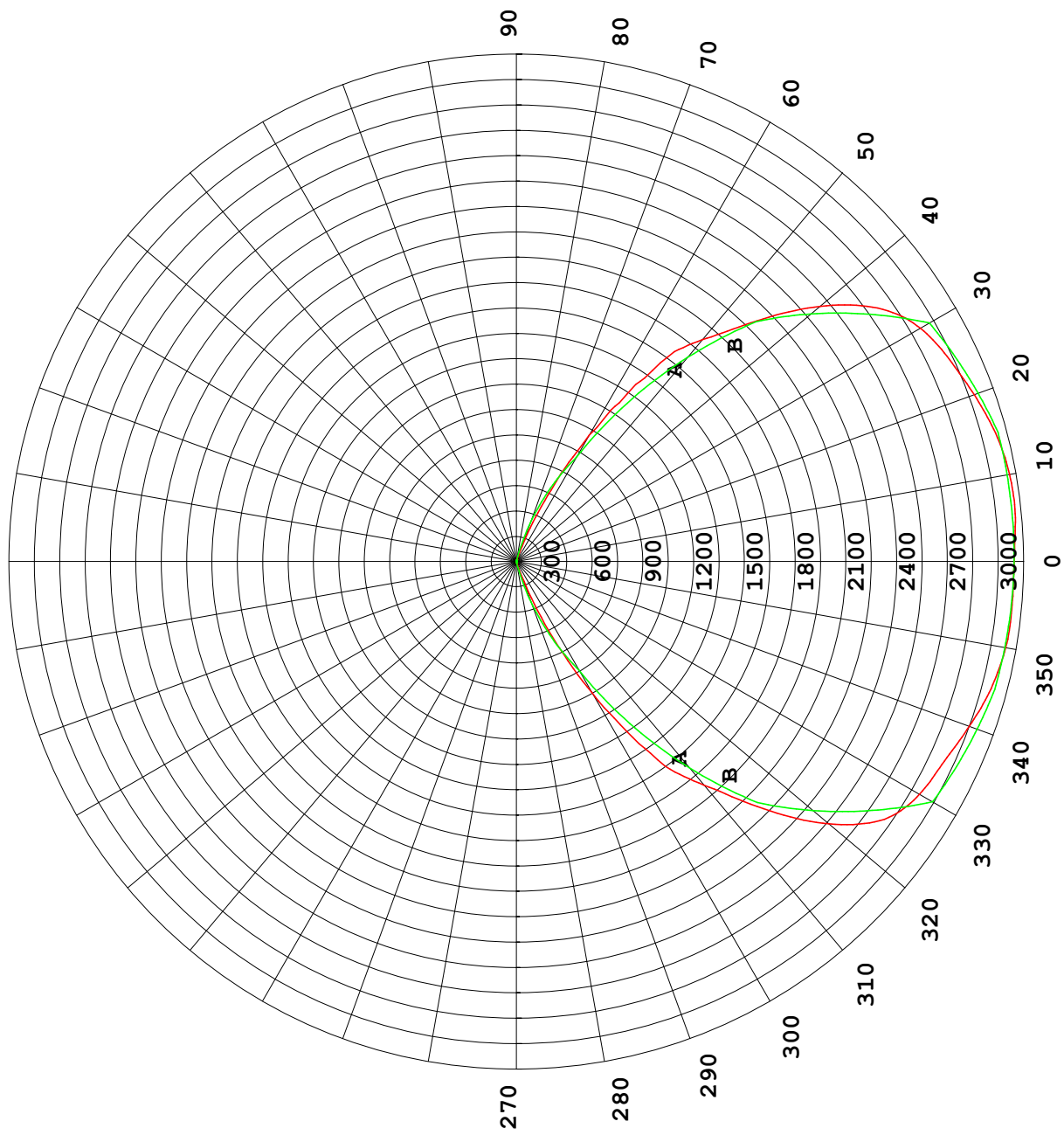
Planar Illuminance Curve

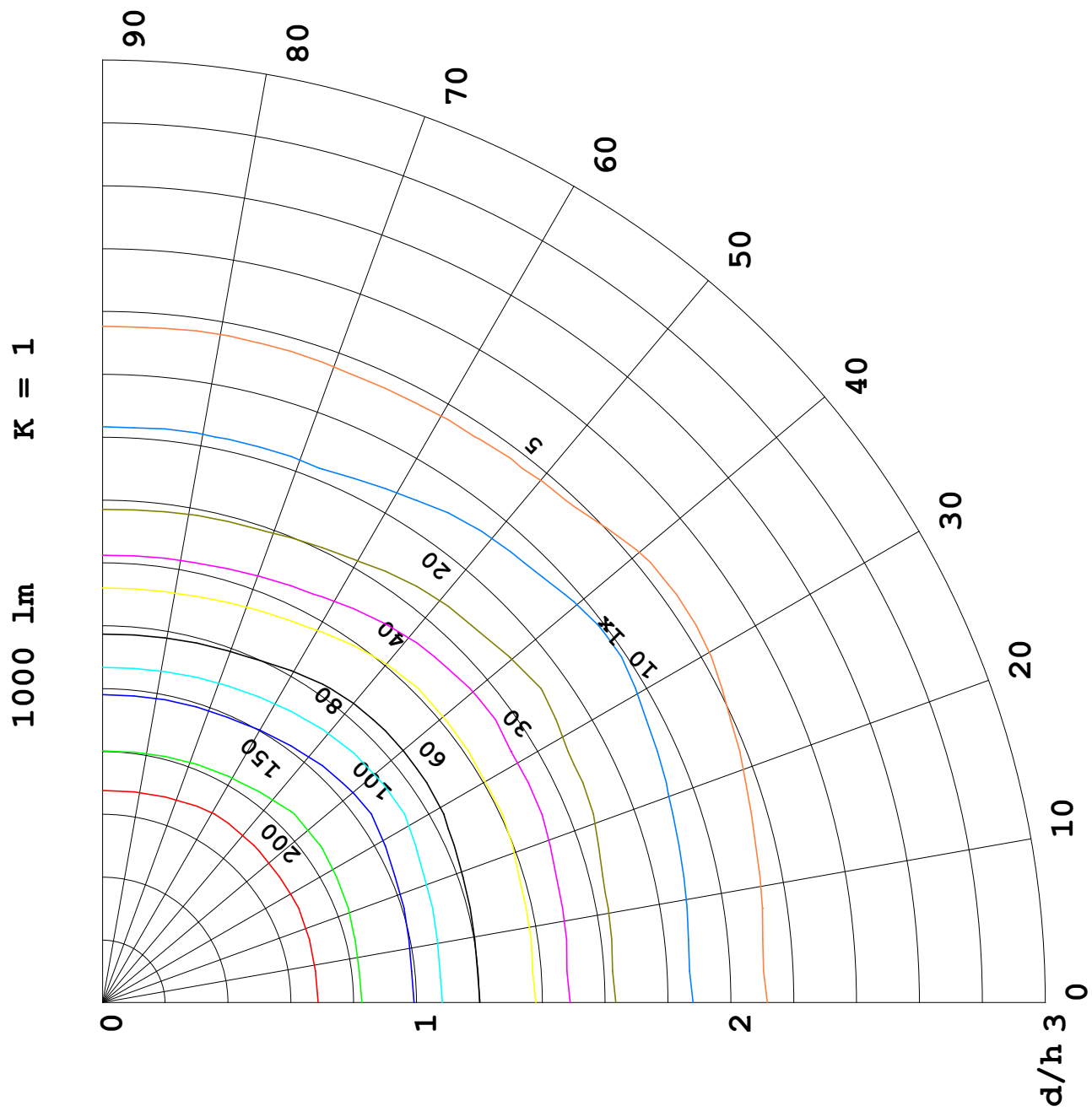


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 30DEG
Operators:
Test Date: 2015-11-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity: 65.0%
Test Distance: 9.390m [K=1.0000]
Remarks:

I (cd)





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

