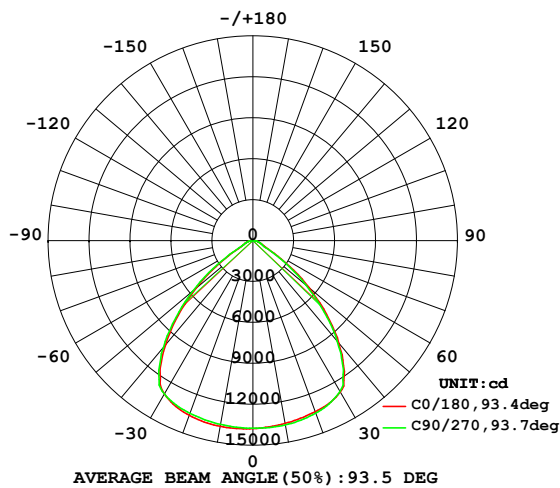


LUMINAIRE PHOTOMETRIC TEST REPORT

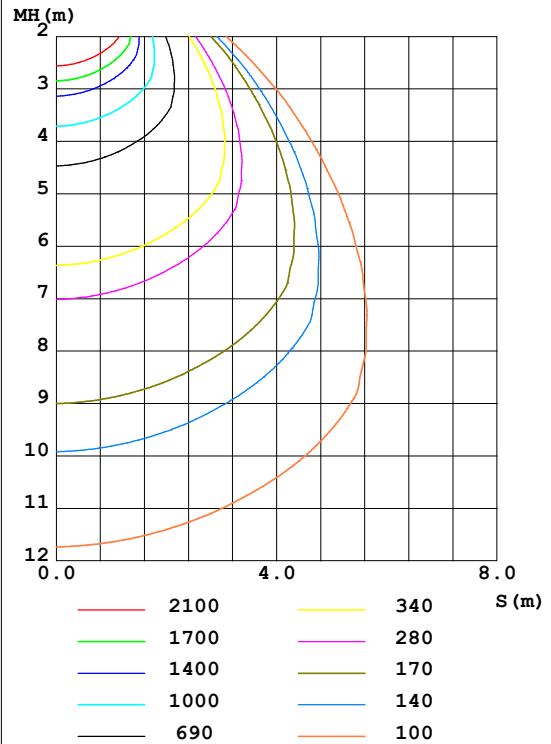
Test:U:277.1V I:0.7614A P:200.1W PF:0.9481 Lamp Flux:28917.2x1 lm		
NAME: LM-200W	TYPE:Glass+90°AL cover	WEIGHT:5.595kg
SPEC.:5000k R80 480L	DIM.: D430mm*347	SERIAL No.:
MFR.:	SUR.:0.215m*0.215m*3.14	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 144.54 lm/W			
MODEL	SMD3030 (757G P20D41)	I _{max} (cd)	13830	S/MH(C0/180)	1.31
NOMINAL POWER(W)	200	LOR(%)	100.0	S/MH(C90/270)	1.33
RATED VOLTAGE(V)	277	TOTAL FLUX(lm)	28917	η UP,DN(C0-180)	0.0,49.2
NOMINAL FLUX(lm)	28917.2	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.8
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	277	η down(%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



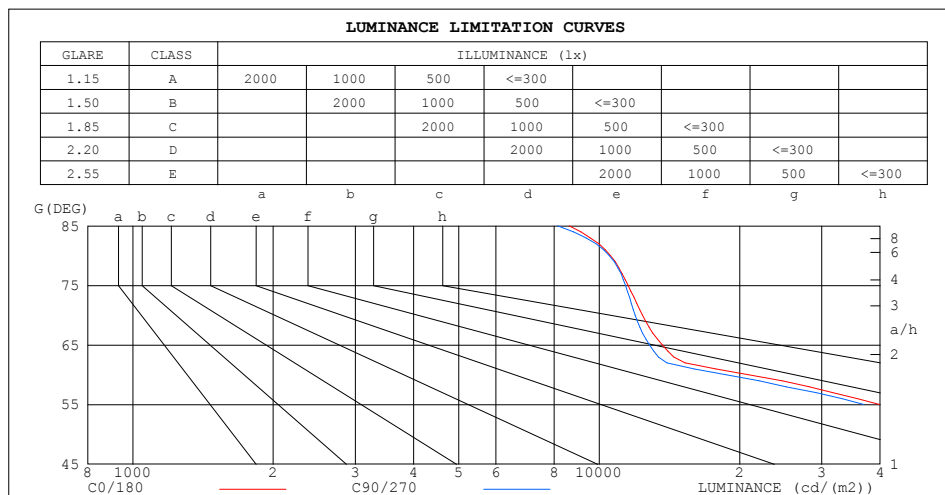
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: DEG
 Operators: GUANLINGAO
 Test Date: 2017-12-28

γ Range: 0 - 90DEG
 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: 0-90°

ZONAL FLUX DIAGRAM AND LUMINANCE LIMITATION CURVES

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1360	1364	1371	1375	1382	1377	1367	1357	0- 10	1310	1310	4.53,4.53
20	1335	1340	1345	1348	1363	1363	1347	1333	10- 20	3851	5161	17.8,17.8
30	1281	1282	1276	1273	1298	1312	1297	1283	20- 30	6118	11279	39,39
40	979.4	968.5	959.6	969.7	993.9	1018	1020	1002	30- 40	7282	18561	64.2,64.2
50	539.6	530.9	509.9	528.2	542.4	566.5	573.0	551.3	40- 50	5908	24468	84.6,84.6
60	151.3	145.7	135.5	138.5	148.2	168.3	168.8	159.3	50- 60	2986	27454	94.9,94.9
70	61.44	64.50	59.22	55.05	60.94	66.84	59.71	56.88	60- 70	870.0	28324	97.9,97.9
80	26.65	27.57	26.47	25.75	28.88	31.41	27.64	25.33	70- 80	460.7	28784	99.5,99.5
90	0.3900	0.5061	0.5107	0.3254	0.2791	0.3424	0.3867	0.2726	80- 90	132.9	28917	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:×10cd MAX (Ii - Iavg)/Iavg (0-135) = 100.0 %									UNIT:lm		



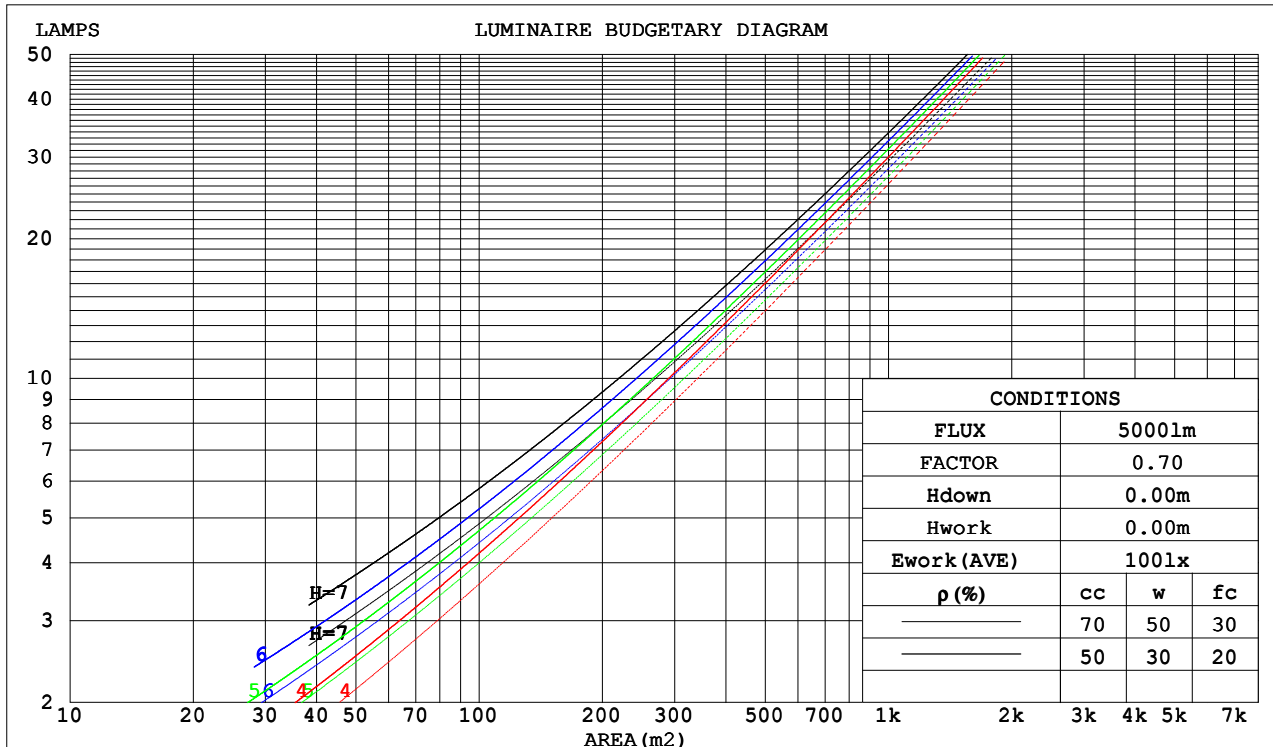
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: DEG
 Operators: GUANLINGAO
 Test Date: 2017-12-28

γ Range: 0 - 90DEG
 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: 0-90°

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:277.1V I:0.7614A P:200.1W PF:0.9481 Lamp Flux:28917.2x1 lm		
NAME: LM-200W	TYPE:Glass+90°AL cover	WEIGHT:5.595kg
SPEC.:5000k R80 480L	DIM.: D430mm*347	SERIAL No.:
MFR.:	SUR.:0.215m*0.215m*3.14	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	1.08	1.05	1.02	1.06	1.03	.00	1.01	.99	.97	.98	.96	.94	.94	.93	.91	.89
2.0	.97	.92	.87	.95	.90	.86	.92	.88	.84	.89	.85	.82	.86	.83	.81	.79
3.0	.88	.81	.76	.86	.80	.75	.83	.78	.74	.81	.76	.73	.78	.75	.71	.70
4.0	.79	.72	.66	.78	.71	.66	.76	.70	.65	.74	.68	.64	.72	.67	.64	.62
5.0	.72	.64	.59	.71	.64	.58	.69	.63	.58	.67	.62	.57	.65	.61	.57	.55
6.0	.66	.58	.52	.65	.57	.52	.63	.57	.52	.62	.56	.51	.60	.55	.51	.49
7.0	.60	.52	.47	.59	.52	.47	.58	.51	.47	.57	.51	.46	.55	.50	.46	.44
8.0	.55	.48	.42	.55	.47	.42	.53	.47	.42	.52	.46	.42	.51	.46	.42	.40
9.0	.51	.44	.39	.50	.43	.38	.49	.43	.38	.48	.42	.38	.47	.42	.38	.36
10.0	.47	.40	.35	.47	.40	.35	.46	.39	.35	.45	.39	.35	.44	.39	.35	.33



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: DEG
 Operators: GUANLINGAO
 Test Date: 2017-12-28

γ Range: 0 - 90DEG
 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: 0-90°

WEC AND CCEC

Test:U:277.1V I:0.7614A P:200.1W PF:0.9481 Lamp Flux:28917.2x1 lm		
NAME: LM-200W	TYPE:Glass+90°AL cover	WEIGHT:5.595kg
SPEC.:5000k R80 480L	DIM.: D430mm*347	SERIAL No.:
MFR.:	SUR.:0.215m*0.215m*3.14	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	.234	.133	.042	.227	.130	.041	.214	.123	.039	.203	.117	.038	.192	.111	.036		
2.0	.227	.125	.038	.221	.122	.038	.210	.117	.036	.200	.112	.035	.191	.108	.034		
3.0	.217	.115	.035	.212	.113	.034	.202	.109	.033	.193	.106	.032	.185	.102	.032		
4.0	.205	.107	.031	.201	.105	.031	.192	.102	.030	.184	.099	.030	.177	.096	.029		
5.0	.194	.099	.029	.190	.098	.028	.183	.095	.028	.176	.093	.028	.169	.090	.027		
6.0	.184	.092	.026	.180	.091	.026	.174	.089	.026	.167	.087	.026	.161	.085	.025		
7.0	.174	.086	.024	.171	.085	.024	.165	.083	.024	.159	.082	.024	.154	.080	.024		
8.0	.165	.081	.023	.162	.080	.023	.157	.078	.022	.152	.077	.022	.147	.075	.022		
9.0	.156	.076	.021	.154	.075	.021	.149	.074	.021	.144	.072	.021	.140	.071	.021		
10.0	.149	.071	.020	.146	.071	.020	.142	.070	.020	.138	.068	.019	.134	.067	.019		

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	.175	.157	.140	.150	.135	.121	.102	.093	.084	.059	.054	.049	.019	.017	.016	
2.0	.164	.132	.106	.140	.114	.091	.096	.079	.064	.055	.046	.037	.018	.015	.012	
3.0	.154	.114	.082	.132	.098	.071	.091	.068	.050	.052	.040	.029	.017	.013	.010	
4.0	.146	.100	.065	.125	.086	.056	.086	.060	.040	.050	.035	.023	.016	.011	.008	
5.0	.139	.089	.053	.119	.077	.046	.082	.054	.032	.048	.032	.019	.015	.010	.006	
6.0	.132	.080	.043	.114	.070	.038	.078	.049	.027	.045	.029	.016	.015	.009	.005	
7.0	.126	.073	.037	.108	.064	.032	.075	.045	.023	.044	.026	.013	.014	.009	.004	
8.0	.120	.068	.031	.104	.059	.027	.072	.041	.019	.042	.024	.012	.013	.008	.004	
9.0	.115	.063	.027	.099	.054	.024	.069	.038	.017	.040	.023	.010	.013	.007	.003	
10.0	.110	.058	.024	.095	.051	.021	.066	.036	.015	.038	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: DEG
 Operators: GUANLINGAO
 Test Date: 2017-12-28

γ Range: 0 - 90DEG
 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: 0-90°

UGR(Unified Glare Rating) Table

Test:U:277.1V I:0.7614A P:200.1W PF:0.9481 Lamp Flux:28917.2x1 lm										
NAME: LM-200W					TYPE:Glass+90°AL cover			WEIGHT:5.595kg		
SPEC.:5000k R80 480L					DIM.: D430mm*347			SERIAL No.:		
MFR.:					SUR.:0.215m*0.215m*3.14			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	24.9	26.2	25.2	26.4	26.6	24.8	26.1	25.0	26.2	26.4
3H	25.0	26.1	25.3	26.4	26.6	24.8	26.0	25.1	26.2	26.4
4H	25.0	26.1	25.3	26.3	26.6	24.8	25.9	25.1	26.2	26.4
6H	25.0	26.0	25.3	26.3	26.6	24.8	25.9	25.1	26.1	26.4
8H	25.0	26.0	25.3	26.3	26.5	24.8	25.8	25.2	26.1	26.4
12H	25.0	25.9	25.3	26.2	26.5	24.8	25.8	25.1	26.0	26.3
4H 2H	24.9	26.0	25.2	26.2	26.4	24.7	25.8	25.0	26.0	26.3
3H	25.0	25.9	25.3	26.2	26.5	24.8	25.8	25.1	26.0	26.3
4H	25.1	25.9	25.4	26.2	26.6	24.9	25.8	25.3	26.1	26.4
6H	25.1	25.9	25.5	26.2	26.6	25.0	25.7	25.4	26.1	26.4
8H	25.2	25.9	25.6	26.2	26.6	25.0	25.7	25.4	26.1	26.4
12H	25.2	25.8	25.6	26.2	26.6	25.0	25.6	25.4	26.0	26.4
8H 4H	25.0	25.7	25.4	26.1	26.5	24.9	25.6	25.3	25.9	26.3
6H	25.2	25.7	25.6	26.1	26.6	25.0	25.6	25.5	26.0	26.4
8H	25.2	25.7	25.7	26.2	26.6	25.1	25.6	25.5	26.0	26.5
12H	25.3	25.7	25.7	26.1	26.6	25.1	25.5	25.6	26.0	26.5
12H 4H	25.0	25.6	25.4	26.0	26.4	24.8	25.5	25.3	25.9	26.3
6H	25.2	25.7	25.6	26.1	26.5	25.0	25.5	25.5	25.9	26.4
8H	25.2	25.7	25.7	26.1	26.6	25.1	25.5	25.6	26.0	26.4
Variations with the observer position at spacings:										
S = 1.0H	+ 1.2 / - 1.9					+ 1.3 / - 2.0				
1.5H	+ 0.7 / - 1.4					+ 0.8 / - 1.4				
2.0H	+ 3.0 / - 3.8					+ 3.0 / - 3.6				

CIE Pub.117 Corrected 28917 lm Total Lamp Luminous Flux. (8log(F/F0) = 11.7)

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: DEG
Operators: GUANLINGAO
Test Date: 2017-12-28

γ Range: 0 - 90DEG
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: 0-90°

UTILIZATION FACTORS TABLE

Test:U:277.1V I:0.7614A P:200.1W PF:0.9481 Lamp Flux:28917.2x1 lm		
NAME: LM-200W	TYPE:Glass+90°AL cover	WEIGHT:5.595kg
SPEC.:5000k R80 480L	DIM.: D430mm*347	SERIAL No.:
MFR.:	SUR.:0.215m*0.215m*3.14	PROTECTION ANGLE:

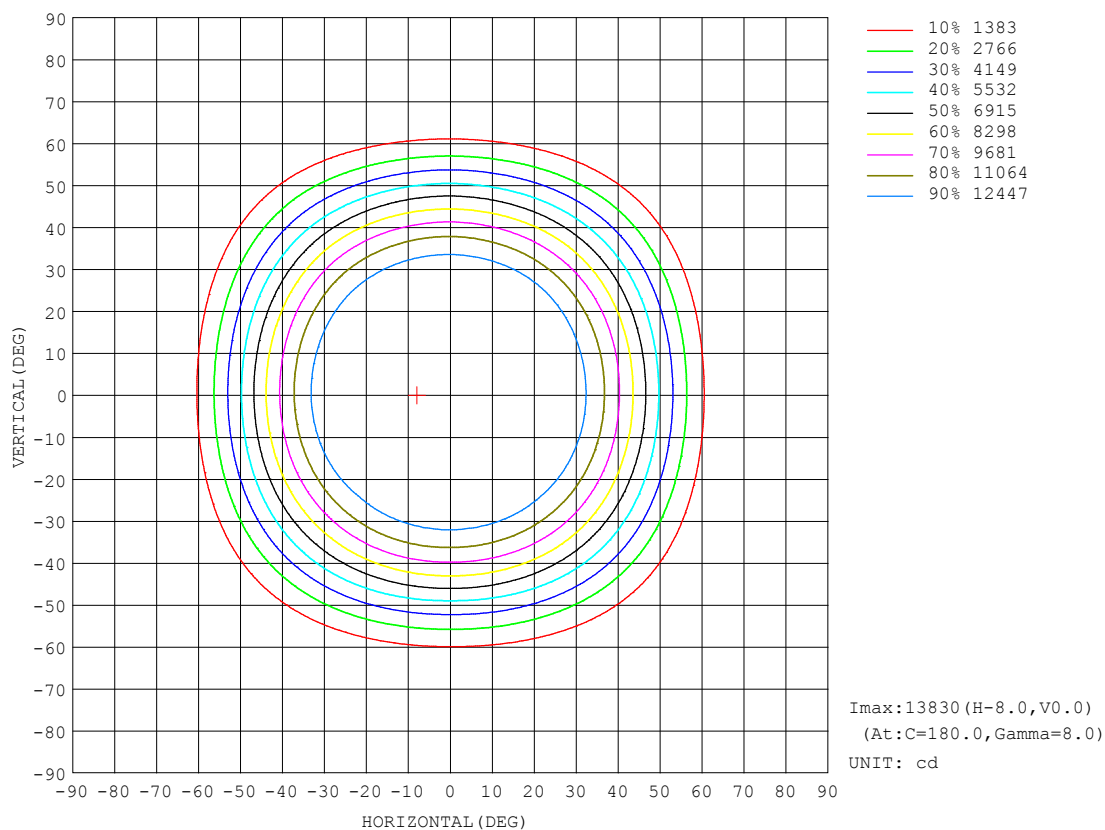
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	69	59	53	68	59	53	67	58	53	47
0.80	79	69	64	78	69	63	76	68	63	57
1.00	87	78	73	86	78	72	84	78	72	66
1.25	93	85	80	92	84	79	89	83	79	73
1.50	97	90	85	96	89	84	93	87	83	77
2.00	102	96	91	101	95	91	98	93	89	83
2.50	105	99	95	103	98	94	100	95	92	85
3.00	107	102	98	105	101	97	102	98	95	88
4.00	110	106	103	108	104	101	104	101	98	90
5.00	112	108	105	109	106	104	105	103	100	92
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: DEG
Operators: GUANLINGAO
Test Date: 2017-12-28

γ Range: 0 - 90DEG
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: 0-90°

ISOCANDELA DIAGRAM

Test:U:277.1V I:0.7614A P:200.1W PF:0.9481 Lamp Flux:28917.2x1 lm		
NAME: LM-200W	TYPE:Glass+90°AL cover	WEIGHT:5.595kg
SPEC.:5000k R80 480L	DIM.: D430mm*347	SERIAL No.:
MFR.:	SUR.:0.215m*0.215m*3.14	PROTECTION ANGLE:

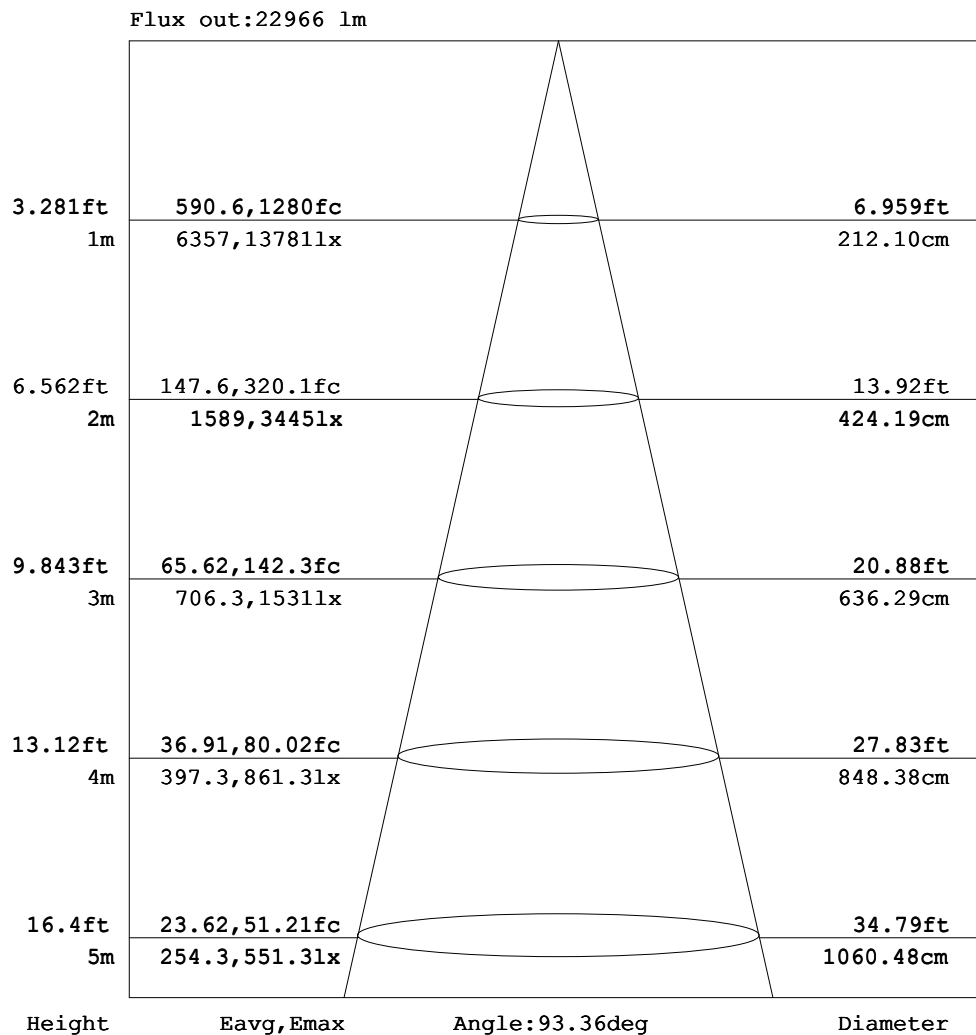


C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: DEG
 Operators: GUANLINGAO
 Test Date: 2017-12-28

γ Range: 0 - 90DEG
 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: 0-90°

AAI Figure

Test:U:277.1V I:0.7614A P:200.1W PF:0.9481 Lamp Flux:28917.2x1 lm		
NAME: LM-200W	TYPE:Glass+90°AL cover	WEIGHT:5.595kg
SPEC.:5000k R80 480L	DIM.: D430mm*347	SERIAL No.:
MFR.:	SUR.:0.215m*0.215m*3.14	PROTECTION ANGLE:



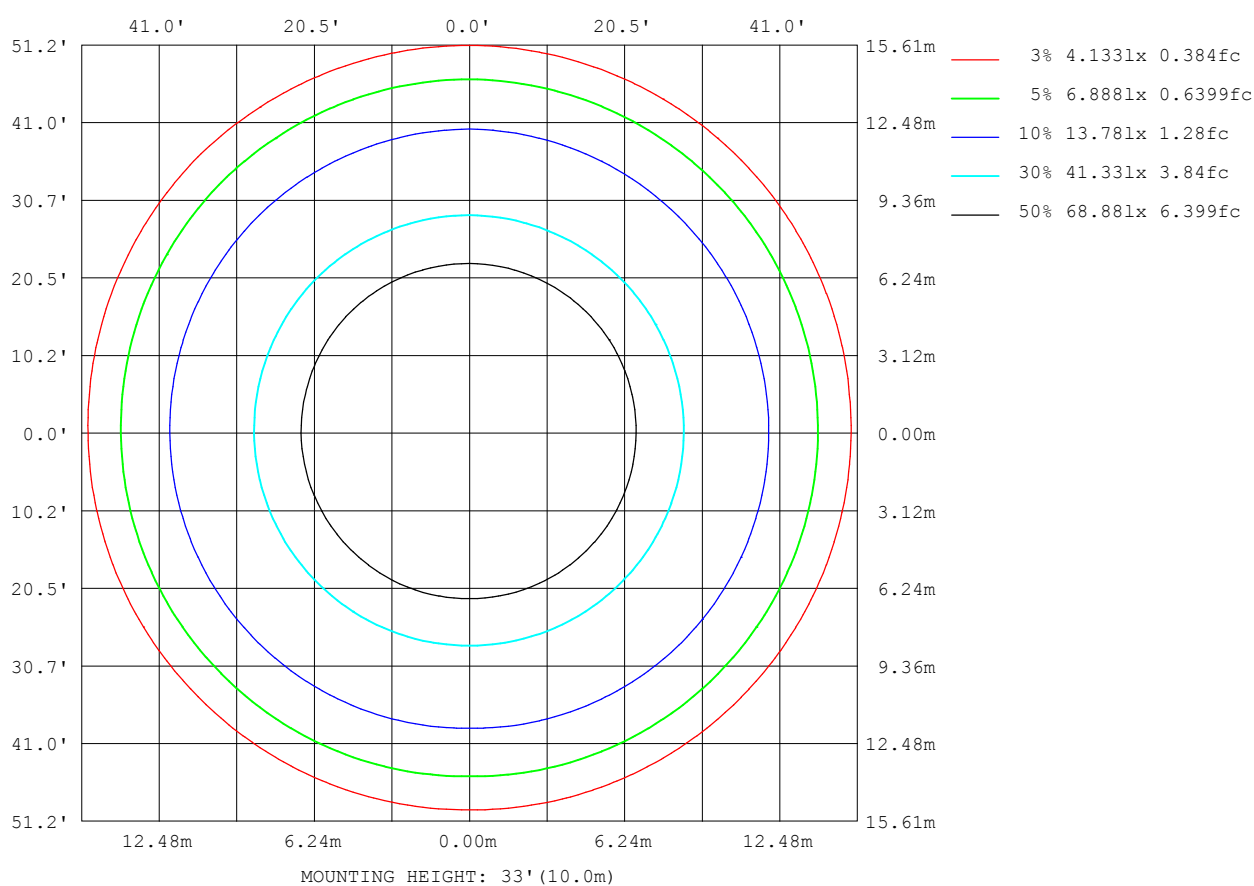
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:DEG
Operators:GUANLINGAO
Test Date:2017-12-28

γ Range: 0 - 90DEG
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: 0-90°

ISOLUX DIAGRAM

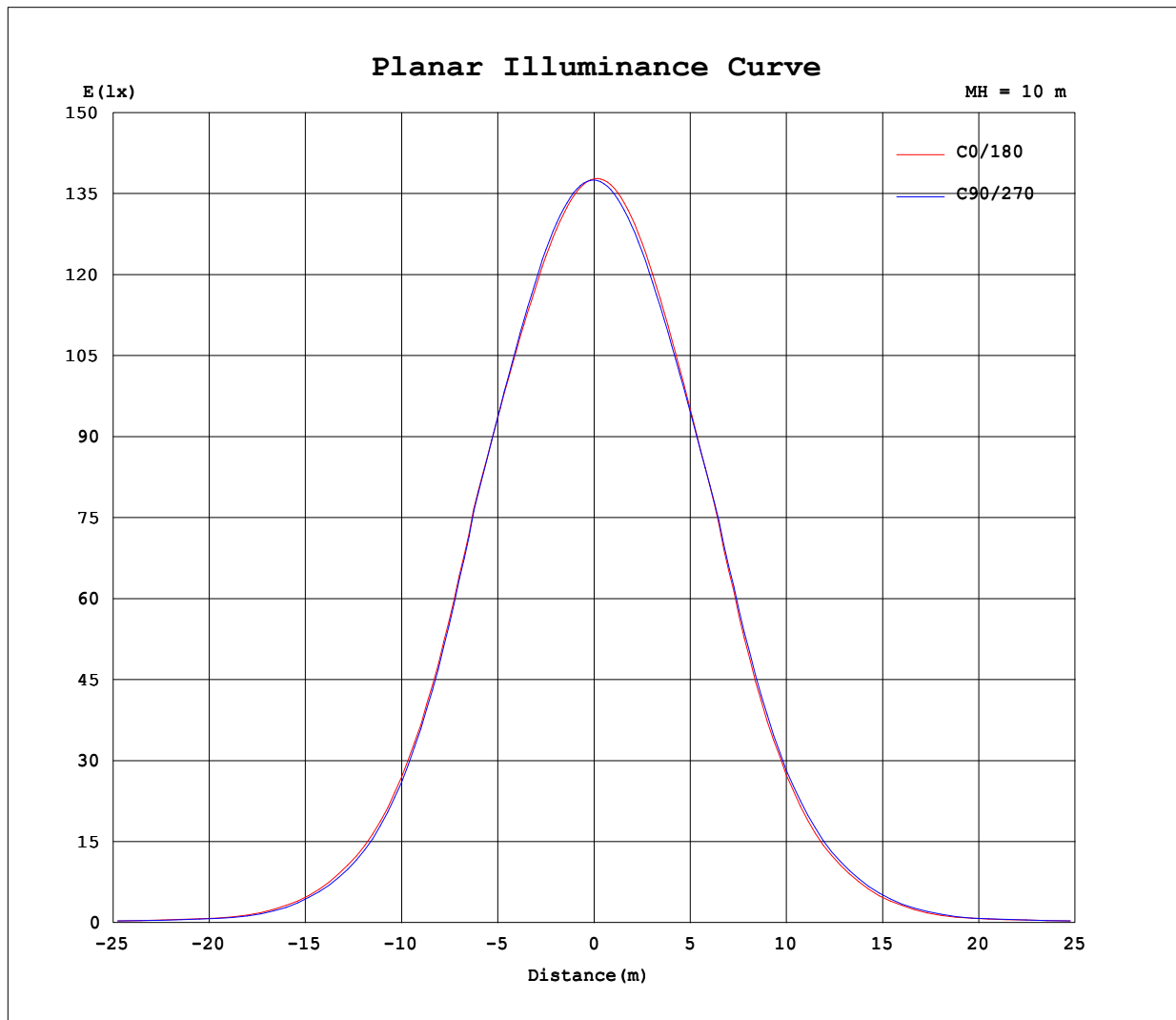
Test:U:277.1V I:0.7614A P:200.1W PF:0.9481 Lamp Flux:28917.2x1 lm		
NAME: LM-200W	TYPE:Glass+90°AL cover	WEIGHT:5.595kg
SPEC.:5000k R80 480L	DIM.: D430mm*347	SERIAL No.:
MFR.:	SUR.:0.215m*0.215m*3.14	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: DEG
Operators: GUANLINGAO
Test Date: 2017-12-28

γ Range: 0 - 90DEG
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: 0-90°

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: DEG
Operators: GUANLINGAO
Test Date: 2017-12-28

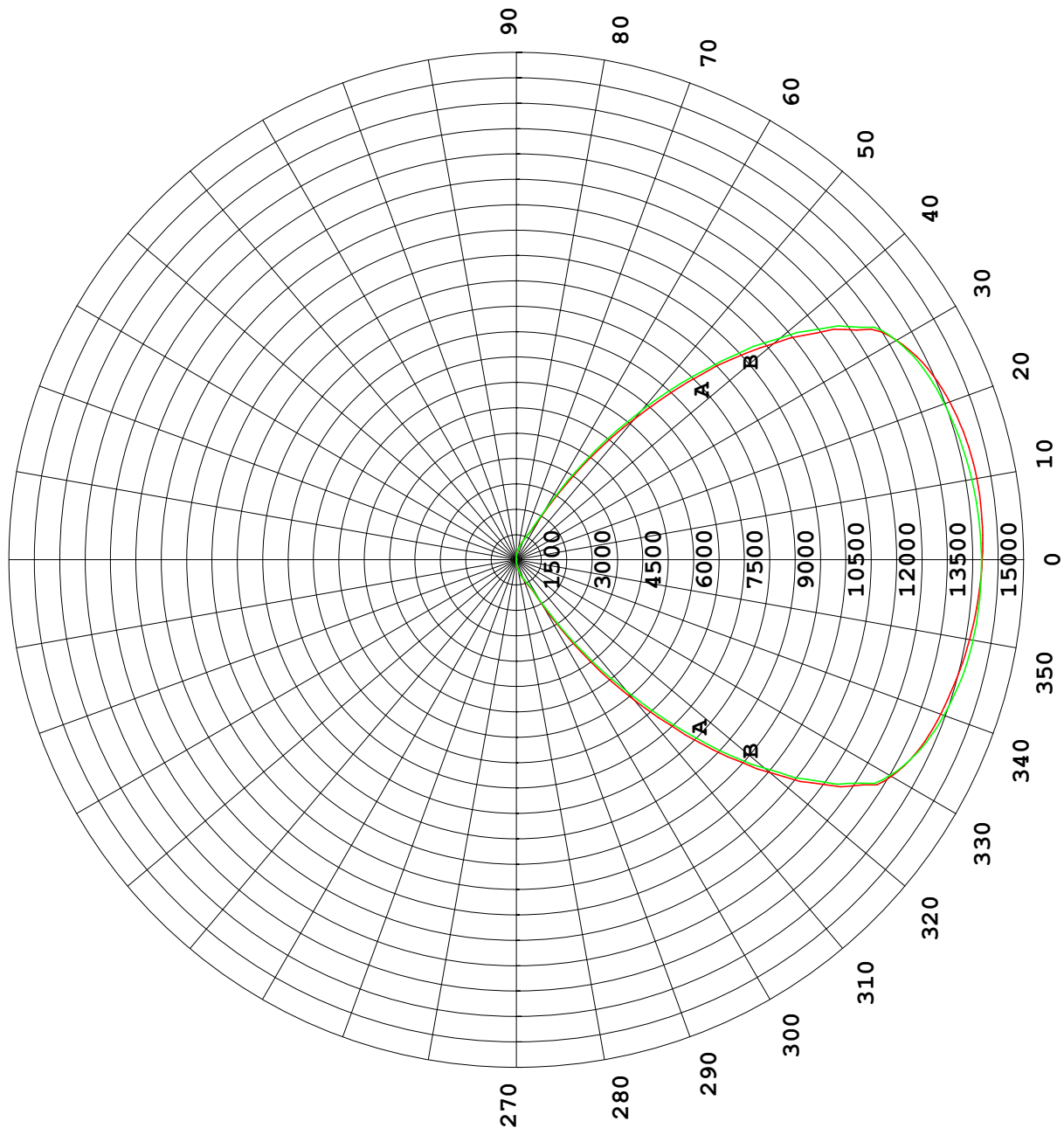
γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity: 65.0%
Test Distance: 9.390m [K=1.0000]
Remarks: 0-90°

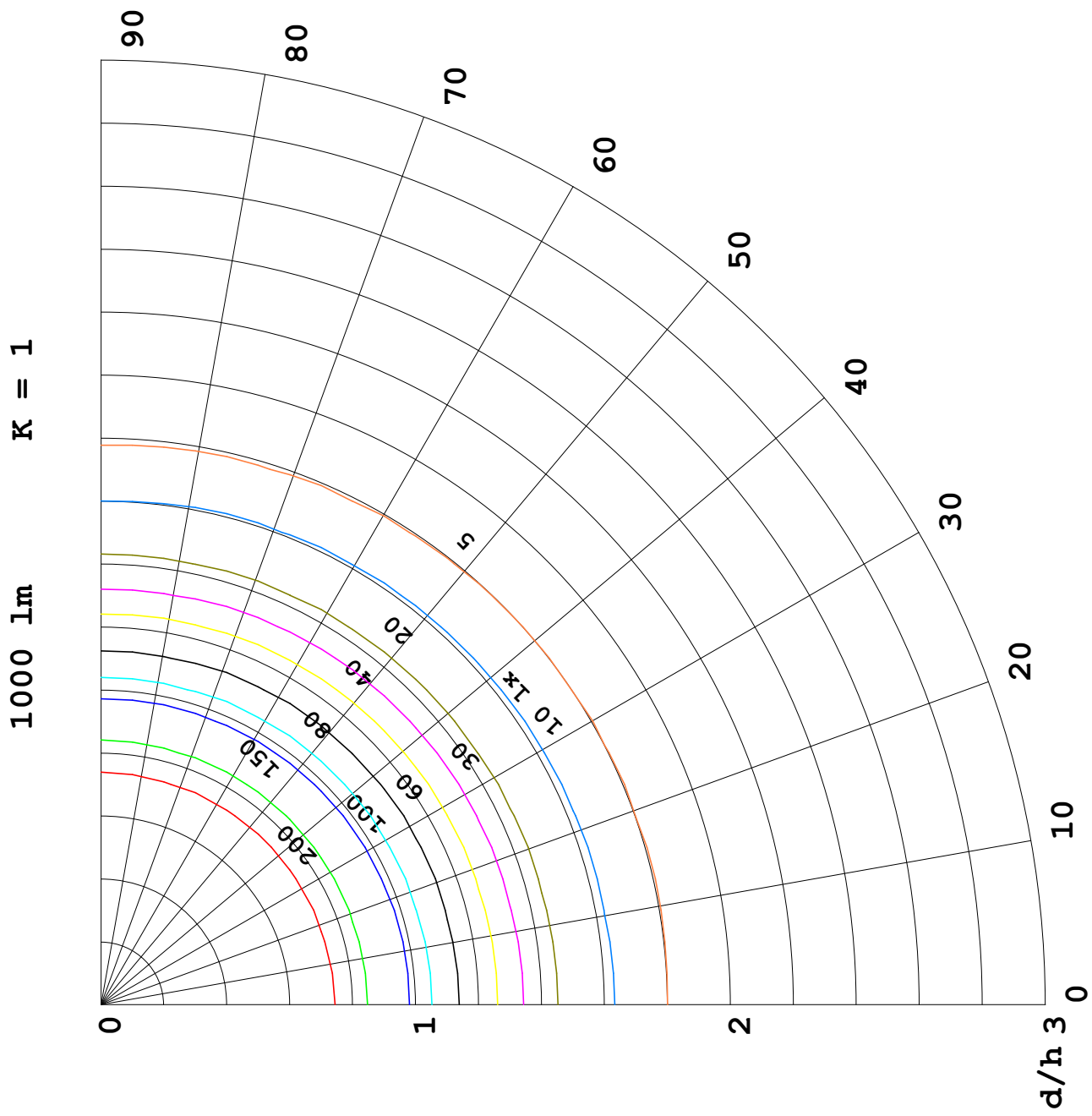
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γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity:65.0%
Test Distance:9.390m [K=1.0000]
Remarks: 0-90°

```

I (cd)





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

Pcc
70
50

Pw
50
30

Pfc
30
20

