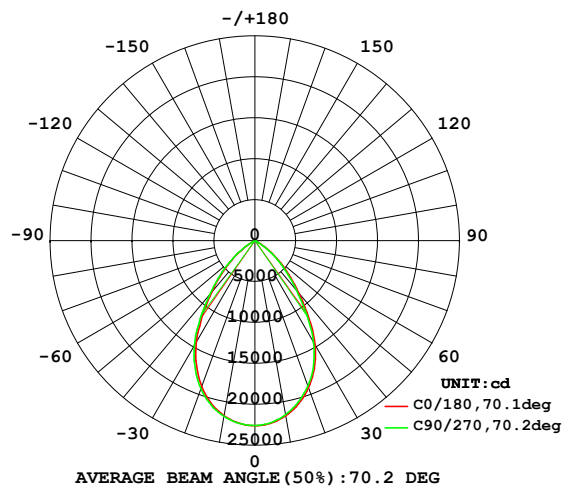


LUMINAIRE PHOTOMETRIC TEST REPORT

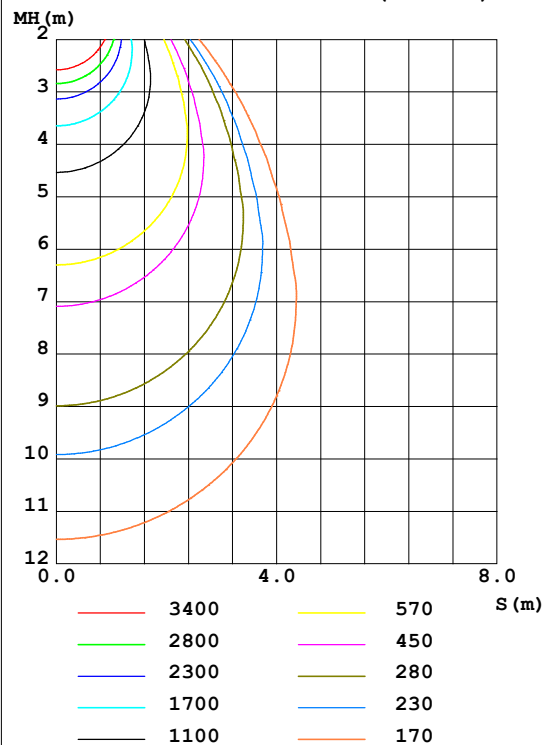
Test:U:277.1V I:0.7602A P:199.8W PF:0.9484 Lamp Flux:29139.5x1 lm		
NAME: LM-200W	TYPE:glass+70°AL cover	WEIGHT:5.508kg
SPEC.:5000k R80 480L	DIM.: D430mm*347mm	SERIAL No.:
MFR.:	SUR.:0.215m*0.215m*3.14	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 145.86 lm/W			
MODEL	SMD3030 (757G P20D41)	I _{max} (cd)	22615	S/MH (C0/180)	1.02
NOMINAL POWER (W)	200	LOR (%)	100.0	S/MH (C90/270)	1.04
RATED VOLTAGE (V)	277	TOTAL FLUX (lm)	29139	η UP,DN (C0-180)	0.0, 49.6
NOMINAL FLUX (lm)	29139.5	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0, 50.4
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE (V)	277	η down (%)	100.0	CIBSE SHR MAX	1.05

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



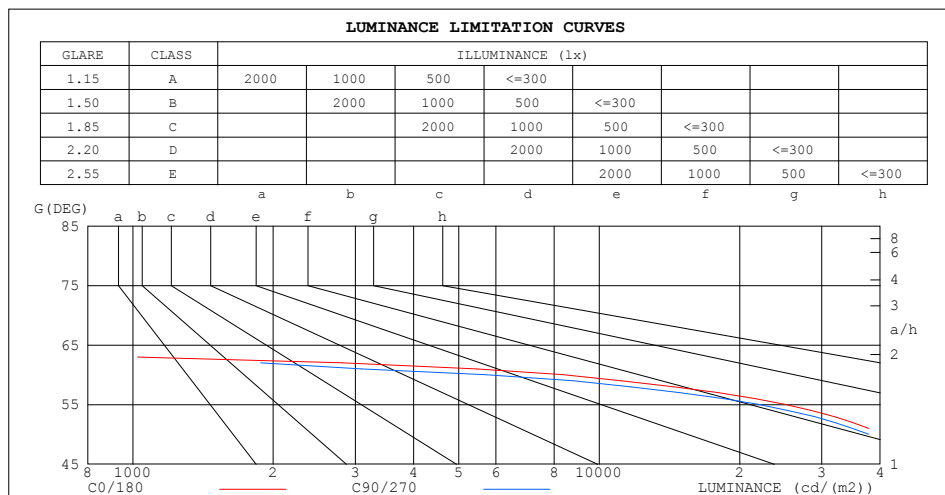
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: DEG
 Operators: GUANLINGAO
 Test Date: 2017-12-28

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	2174	2170	2159	2164	2172	2172	2180	2170	0- 10	2114	2114	7.25, 7.25
20	1916	1922	1894	1900	1899	1899	1929	1920	10- 20	5784	7897	27.1, 27.1
30	1470	1466	1434	1434	1431	1456	1479	1478	20- 30	7807	15704	53.9, 53.9
40	838.5	814.8	794.9	804.4	819.5	837.4	855.0	845.8	30- 40	7070	22774	78.2, 78.2
50	381.2	361.6	353.0	352.3	361.4	378.2	383.1	384.7	40- 50	4494	27268	93.6, 93.6
60	60.71	54.97	41.38	43.39	43.95	45.78	58.36	58.20	50- 60	1764	29032	99.6, 99.6
70	2.137	2.262	1.706	1.873	2.133	2.094	1.973	1.999	60- 70	91.17	29123	99.9, 99.9
80	0.7145	0.7792	0.5858	0.5785	0.6297	0.7168	0.6474	0.6470	70- 80	13.02	29136	100, 100
90	0.0978	0.0841	0.0874	0.1017	0.0874	0.0789	0.0815	0.0913	80- 90	3.635	29139	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: $\times 10\text{cd}$ $\text{MAX} (I_i - I_{\text{avg}}) / I_{\text{avg}} (0-135) = 156.2 \%$									UNIT: lm		



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	282	224
80	283	232
75	336	273
70	431	344
65	614	465
60	8366	5702
55	25051	22011
50	40863	37831
45	57534	53745

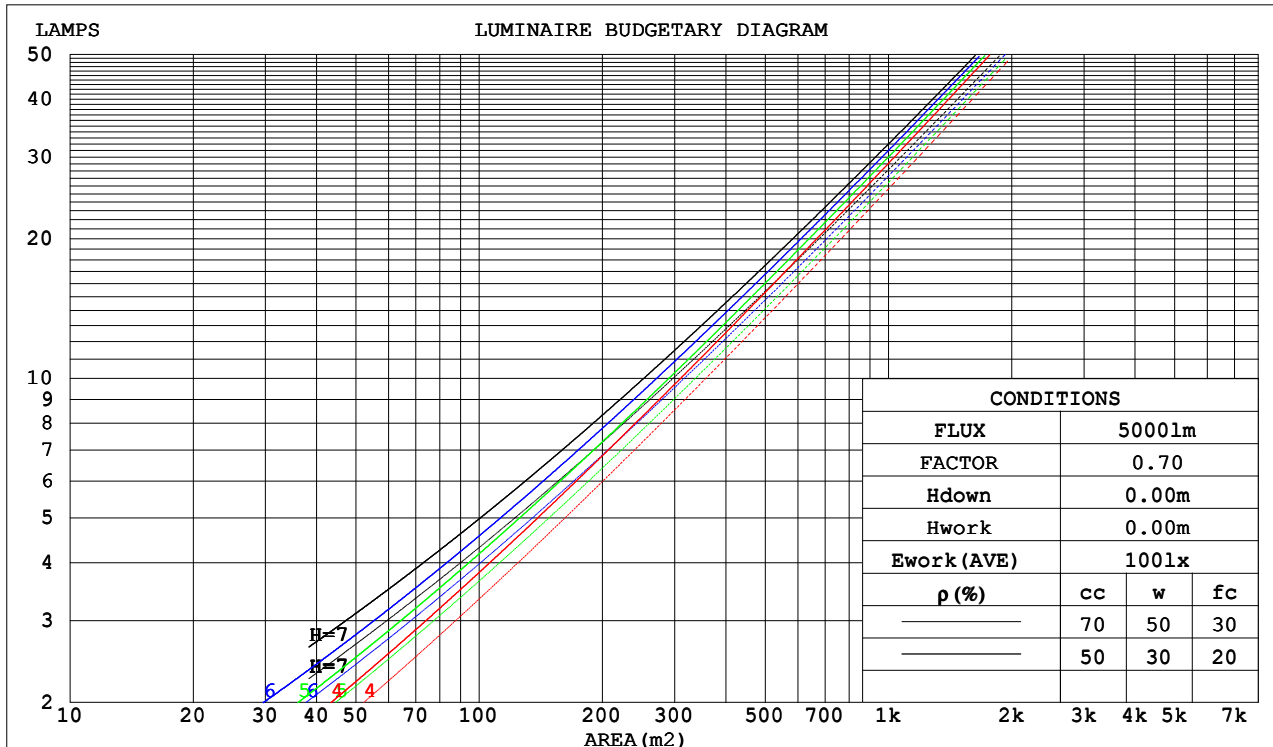
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: DEG
 Operators: GUANLINGAO
 Test Date: 2017-12-28

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:0.7602A P:199.8W PF:0.9484 Lamp Flux:29139.5x1 lm		
NAME: LM-200W	TYPE:glass+70°AL cover	WEIGHT:5.508kg
SPEC.:5000k R80 480L	DIM.: D430mm*347mm	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	1.10	1.07	1.04	1.07	1.05	1.03	1.03	1.01	.00	.00	.98	.97	.96	.95	.94	.92
2.0	1.01	.96	.92	.99	.95	.91	.96	.92	.89	.93	.90	.87	.90	.87	.85	.84
3.0	.92	.87	.82	.91	.86	.82	.88	.84	.80	.86	.82	.79	.83	.80	.78	.76
4.0	.85	.79	.74	.84	.78	.73	.82	.77	.72	.79	.75	.72	.78	.74	.71	.69
5.0	.78	.72	.67	.77	.71	.66	.76	.70	.66	.74	.69	.65	.72	.68	.65	.63
6.0	.72	.66	.61	.72	.65	.61	.70	.64	.60	.69	.64	.60	.67	.63	.59	.58
7.0	.67	.60	.56	.66	.60	.55	.65	.59	.55	.64	.59	.55	.63	.58	.54	.53
8.0	.63	.56	.51	.62	.55	.51	.61	.55	.51	.60	.54	.50	.59	.54	.50	.49
9.0	.58	.52	.47	.58	.51	.47	.57	.51	.47	.56	.50	.47	.55	.50	.46	.45
10.0	.55	.48	.44	.54	.48	.44	.53	.47	.43	.52	.47	.43	.52	.47	.43	.42



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:0.7602A P:199.8W PF:0.9484 Lamp Flux:29139.5x1 lm														
NAME: LM-200W					TYPE:glass+70°AL cover					WEIGHT:5.508kg				
SPEC.:5000k R80 480L					DIM.: D430mm*347mm					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	.199	.113	.036	.192	.109	.035	.179	.103	.033	.168	.097	.031	.157	.091	.029	
2.0	.194	.106	.033	.188	.104	.032	.177	.099	.031	.167	.094	.029	.158	.089	.028	
3.0	.186	.099	.030	.181	.097	.029	.172	.093	.028	.163	.090	.027	.155	.086	.027	
4.0	.178	.093	.027	.174	.091	.027	.166	.088	.026	.158	.085	.026	.151	.082	.025	
5.0	.170	.087	.025	.166	.085	.025	.159	.083	.024	.152	.080	.024	.146	.078	.023	
6.0	.162	.081	.023	.159	.080	.023	.152	.078	.023	.146	.076	.022	.141	.074	.022	
7.0	.155	.076	.022	.152	.075	.022	.146	.074	.021	.141	.072	.021	.136	.070	.021	
8.0	.147	.072	.020	.145	.071	.020	.140	.070	.020	.135	.068	.020	.130	.067	.019	
9.0	.141	.068	.019	.138	.067	.019	.134	.066	.019	.129	.065	.019	.125	.064	.018	
10.0	.134	.064	.018	.132	.064	.018	.128	.063	.018	.124	.062	.018	.120	.061	.017	

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	.173	.157	.143	.148	.135	.123	.101	.093	.085	.058	.054	.050	.019	.017	.016	
2.0	.159	.132	.110	.136	.114	.095	.093	.079	.066	.054	.046	.039	.017	.015	.013	
3.0	.148	.114	.086	.127	.098	.075	.087	.068	.052	.050	.040	.031	.016	.013	.010	
4.0	.139	.099	.069	.120	.086	.060	.082	.060	.042	.048	.035	.025	.015	.011	.008	
5.0	.132	.088	.056	.113	.076	.049	.078	.053	.034	.045	.031	.020	.015	.010	.007	
6.0	.125	.079	.047	.107	.069	.041	.074	.048	.029	.043	.028	.017	.014	.009	.006	
7.0	.119	.072	.039	.102	.062	.034	.071	.044	.024	.041	.026	.014	.013	.008	.005	
8.0	.113	.066	.034	.097	.057	.029	.067	.040	.021	.039	.024	.012	.013	.008	.004	
9.0	.108	.061	.029	.093	.053	.025	.065	.037	.018	.038	.022	.011	.012	.007	.004	
10.0	.103	.057	.026	.089	.049	.022	.062	.035	.016	.036	.020	.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:0.7602A P:199.8W PF:0.9484 Lamp Flux:29139.5x1 lm										
NAME: LM-200W					TYPE:glass+70°AL cover			WEIGHT:5.508kg		
SPEC.:5000k R80 480L					DIM.: D430mm*347mm			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	23.0	24.2	23.3	24.3	24.5	22.8	23.9	23.0	24.0	24.2
3H	22.9	23.9	23.1	24.1	24.3	22.6	23.6	22.8	23.8	24.0
4H	22.8	23.7	23.1	23.9	24.2	22.5	23.4	22.8	23.7	23.9
6H	22.7	23.6	23.0	23.8	24.1	22.4	23.3	22.7	23.5	23.8
8H	22.6	23.5	22.9	23.7	24.0	22.3	23.2	22.7	23.5	23.7
12H	22.6	23.4	22.9	23.7	24.0	22.3	23.1	22.6	23.4	23.7
4H 2H	22.8	23.8	23.1	24.0	24.2	22.6	23.5	22.8	23.7	24.0
3H	22.6	23.5	23.0	23.7	24.0	22.4	23.2	22.7	23.5	23.7
4H	22.6	23.3	22.9	23.6	23.9	22.3	23.0	22.6	23.3	23.6
6H	22.5	23.1	22.8	23.4	23.8	22.2	22.8	22.6	23.2	23.5
8H	22.4	23.0	22.8	23.4	23.7	22.1	22.7	22.5	23.1	23.5
12H	22.4	22.9	22.8	23.3	23.7	22.1	22.6	22.5	23.0	23.4
8H 4H	22.4	23.0	22.8	23.4	23.7	22.1	22.7	22.5	23.1	23.5
6H	22.3	22.8	22.7	23.2	23.6	22.0	22.5	22.5	22.9	23.3
8H	22.3	22.7	22.7	23.1	23.6	22.0	22.4	22.4	22.8	23.3
12H	22.2	22.6	22.7	23.0	23.5	21.9	22.3	22.4	22.7	23.2
12H 4H	22.4	22.9	22.8	23.3	23.7	22.1	22.6	22.5	23.0	23.4
6H	22.3	22.7	22.7	23.1	23.6	22.0	22.4	22.4	22.8	23.3
8H	22.2	22.6	22.7	23.0	23.5	21.9	22.3	22.4	22.7	23.2
Variations with the observer position at spacings:										
S = 1.0H	+ 2.2 / - 5.4					+ 2.2 / - 6.3				
1.5H	+ 2.0 / - 3.3					+ 2.0 / - 3.3				
2.0H	+ 4.5 / -22.4					+ 4.6 / -22.7				

CIE Pub.117 Corrected 29139 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:0.7602A P:199.8W PF:0.9484 Lamp Flux:29139.5x1 lm		
NAME: LM-200W	TYPE:glass+70°AL cover	WEIGHT:5.508kg
SPEC.:5000k R80 480L	DIM.: D430mm*347mm	SERIAL No.:
MFR.:	SUR.:0.215m*0.215m*3.14	PROTECTION ANGLE:

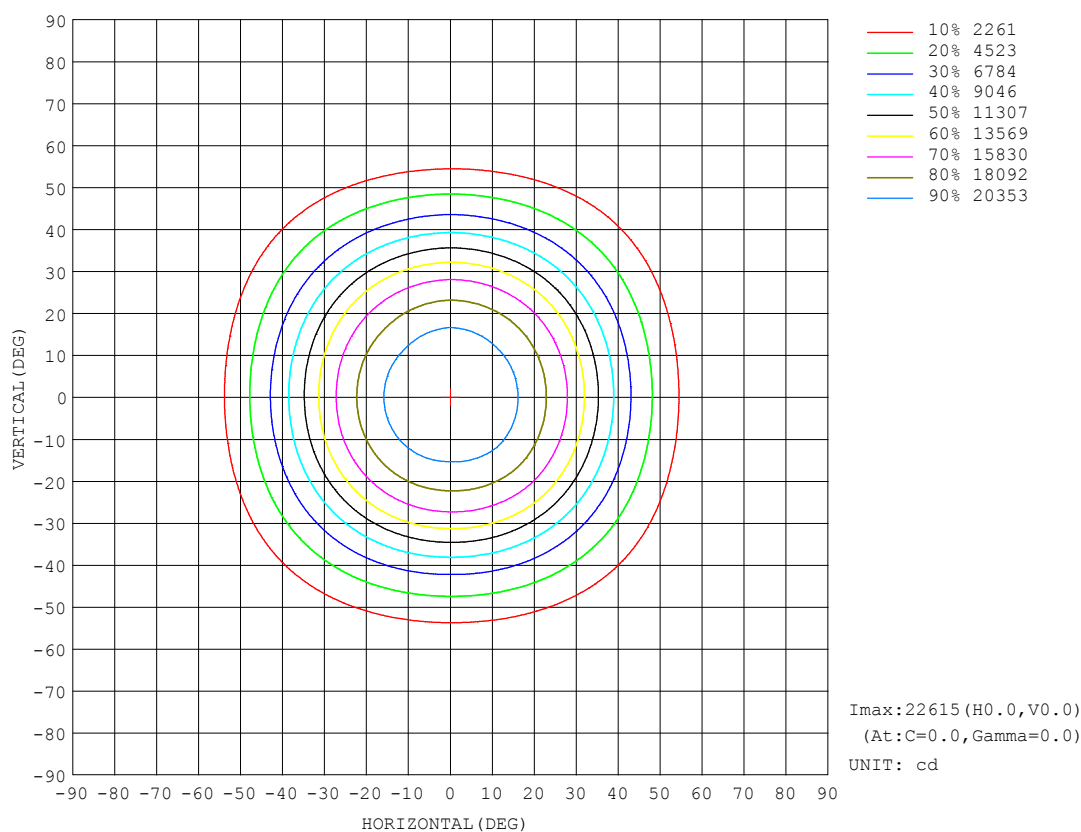
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	77	69	64	77	69	64	76	69	64	59
0.80	86	79	74	86	79	74	84	78	74	69
1.00	93	86	82	92	86	81	90	86	81	76
1.25	99	92	88	97	92	87	95	90	87	82
1.50	102	96	92	101	95	92	98	94	90	85
2.00	106	101	97	104	100	96	102	98	95	89
2.50	108	103	100	106	102	99	103	100	97	91
3.00	110	106	103	108	104	102	105	102	99	93
4.00	112	109	106	110	107	105	106	104	102	95
5.00	113	111	108	111	109	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: 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:0.7602A P:199.8W PF:0.9484 Lamp Flux:29139.5x1 lm		
NAME: LM-200W	TYPE:glass+70°AL cover	WEIGHT:5.508kg
SPEC.:5000k R80 480L	DIM.: D430mm*347mm	SERIAL No.:
MFR.:	SUR.:0.215m*0.215m*3.14	PROTECTION ANGLE:

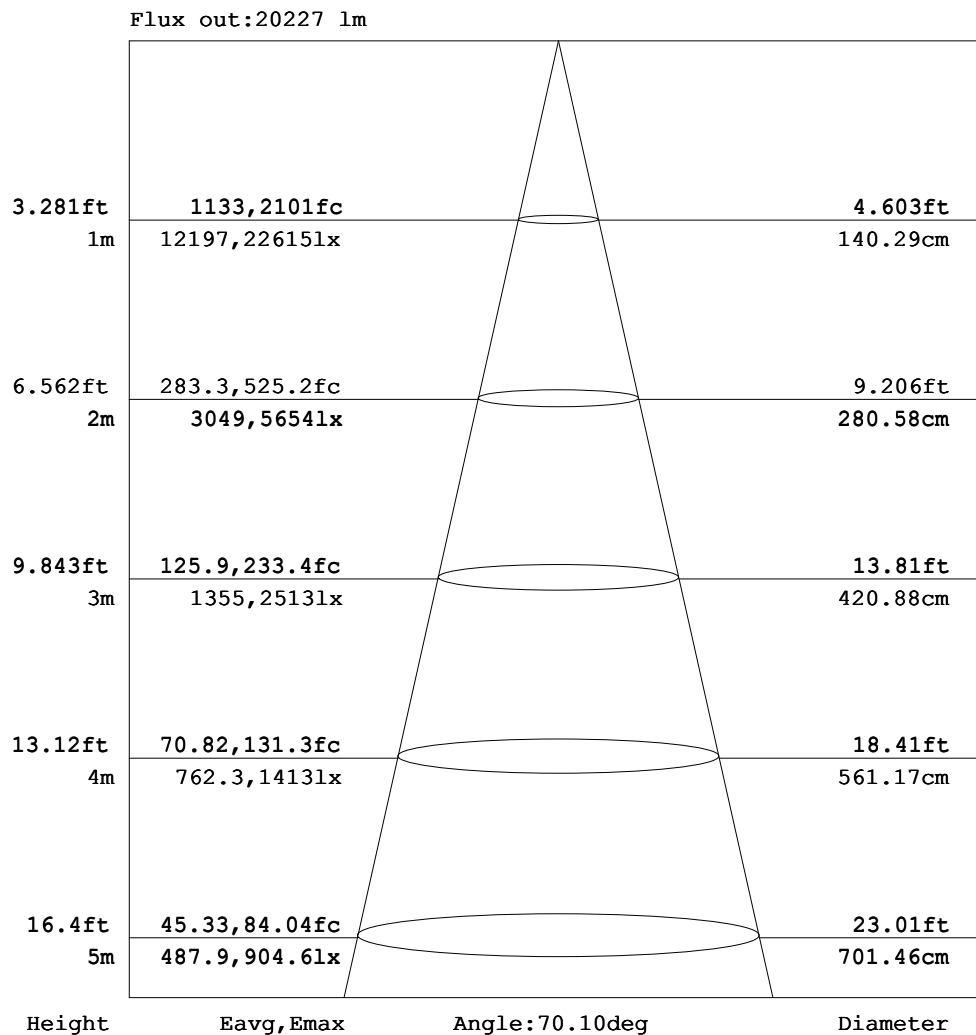


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:DEG
Operators:GUANLINGAO
Test Date:2017-12-28

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:0.7602A P:199.8W PF:0.9484 Lamp Flux:29139.5x1 lm		
NAME: LM-200W	TYPE:glass+70°AL cover	WEIGHT:5.508kg
SPEC.:5000k R80 480L	DIM.: D430mm*347mm	SERIAL No.:
MFR.:	SUR.:0.215m*0.215m*3.14	PROTECTION ANGLE:



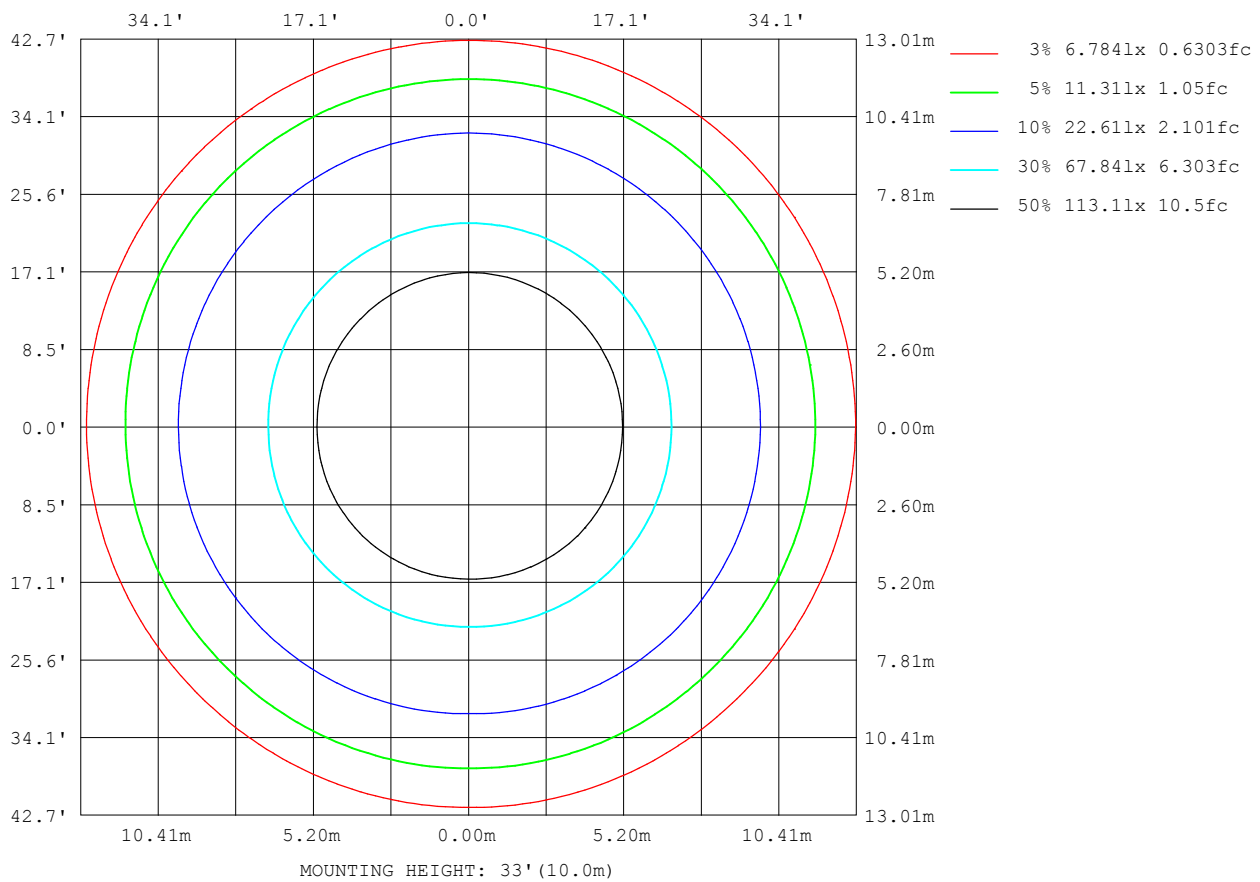
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

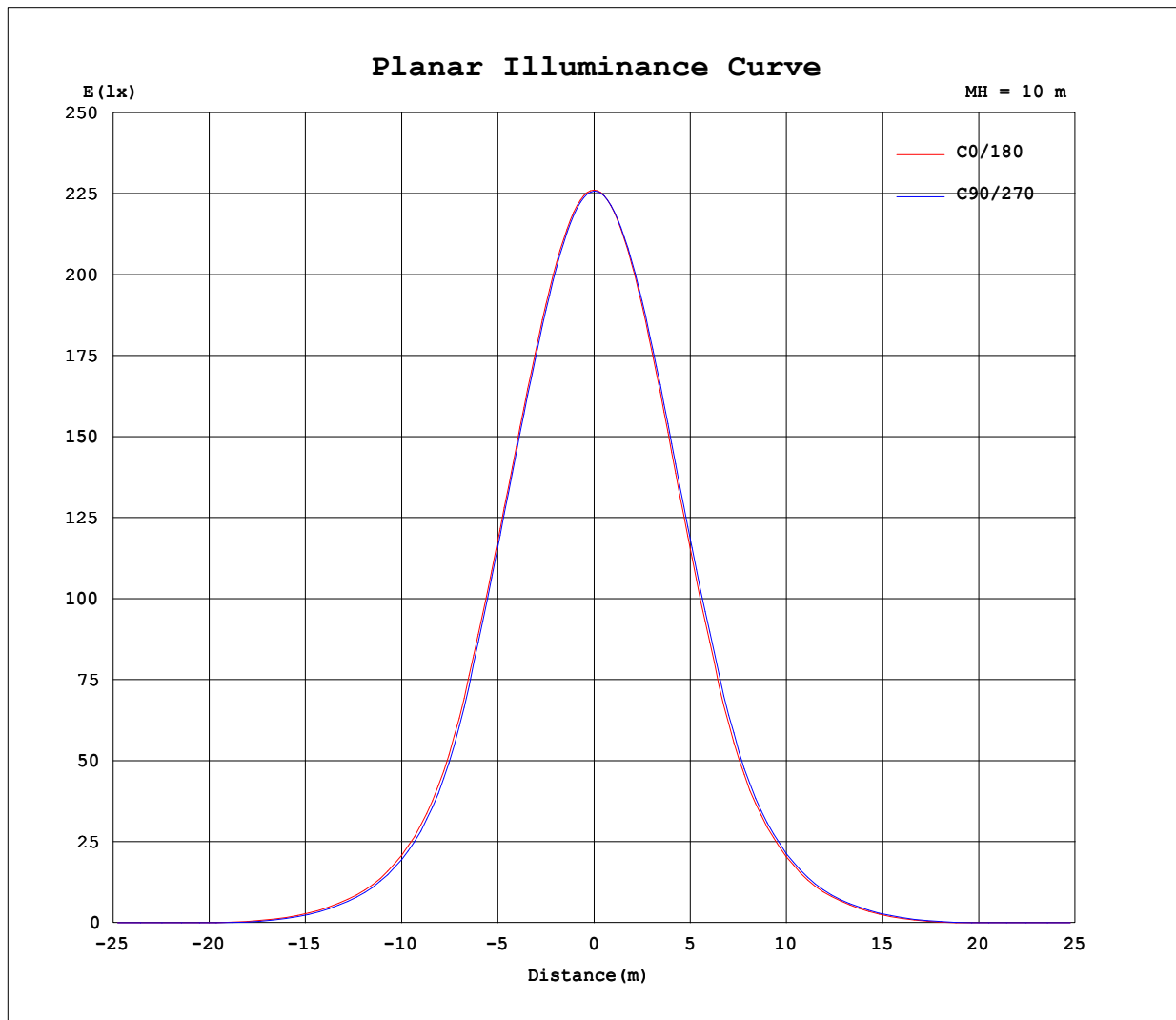
Test:U:277.1V I:0.7602A P:199.8W PF:0.9484 Lamp Flux:29139.5x1 lm		
NAME: LM-200W	TYPE:glass+70°AL cover	WEIGHT:5.508kg
SPEC.:5000k R80 480L	DIM.: D430mm*347mm	SERIAL No.:
MFR.:	SUR.:0.215m*0.215m*3.14	PROTECTION ANGLE:



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

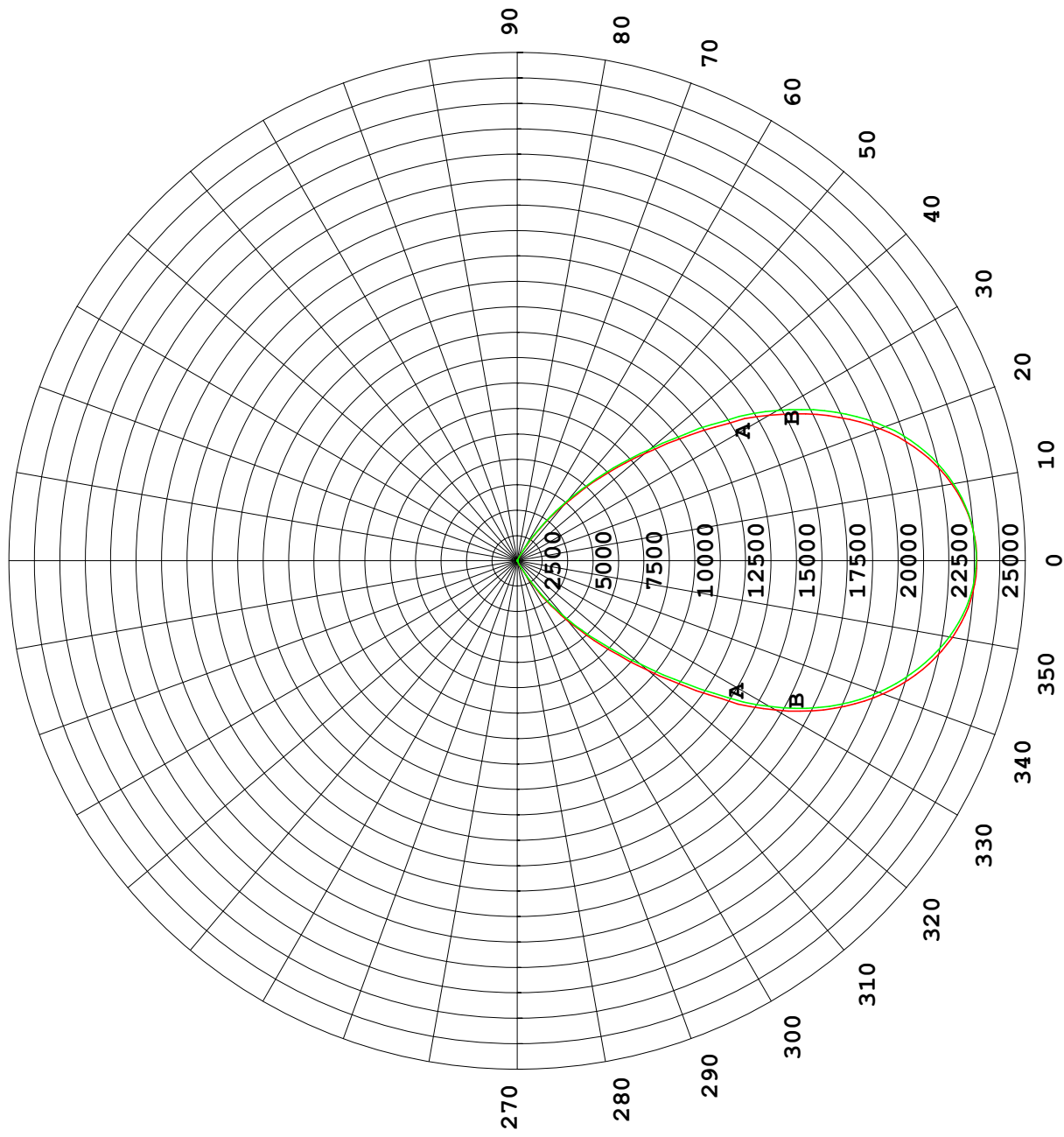
γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity: 65.0%
Test Distance: 9.390m [K=1.0000]
Remarks: 0-90°

```

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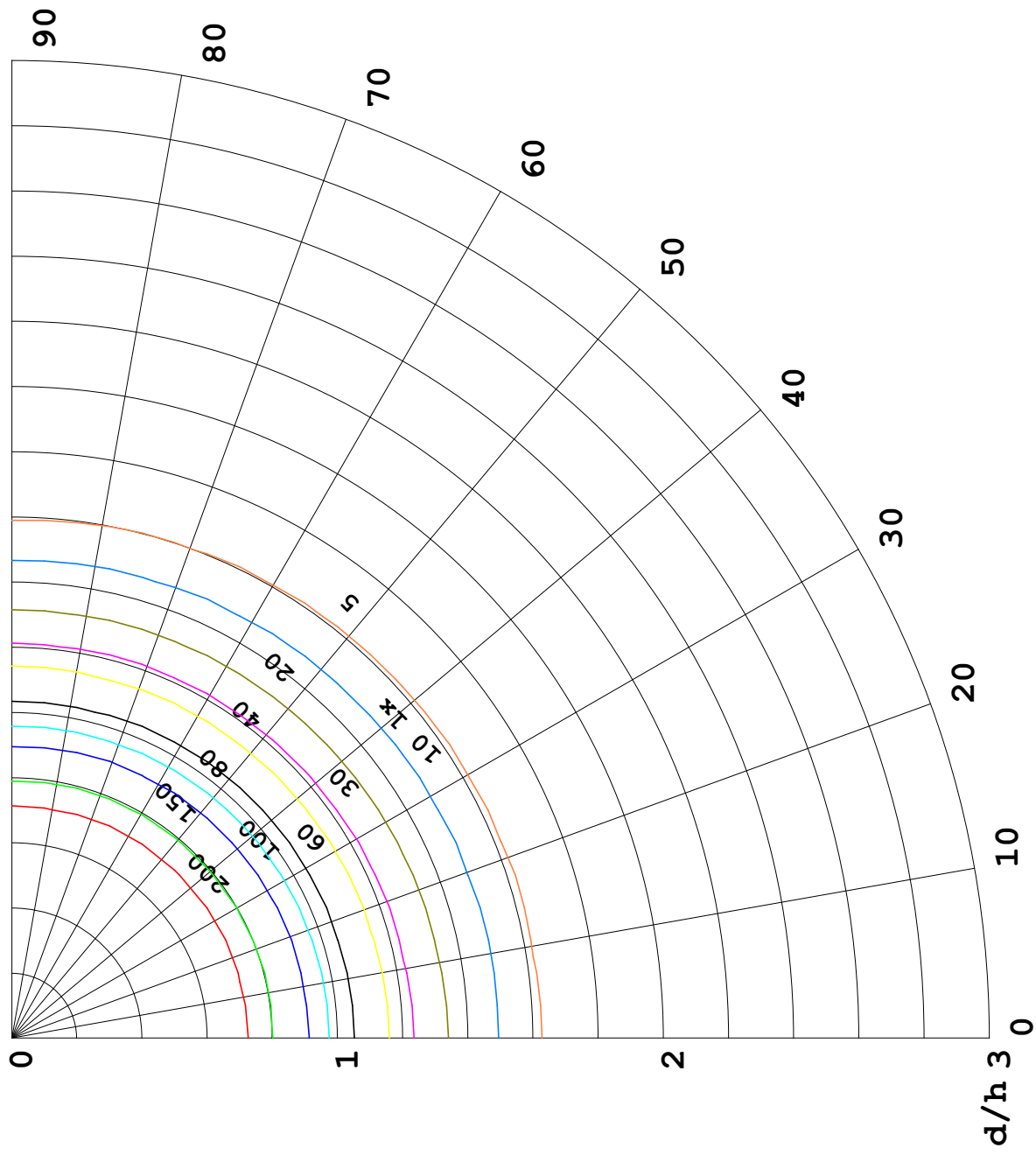
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I (cd)



$\kappa = 1$

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

