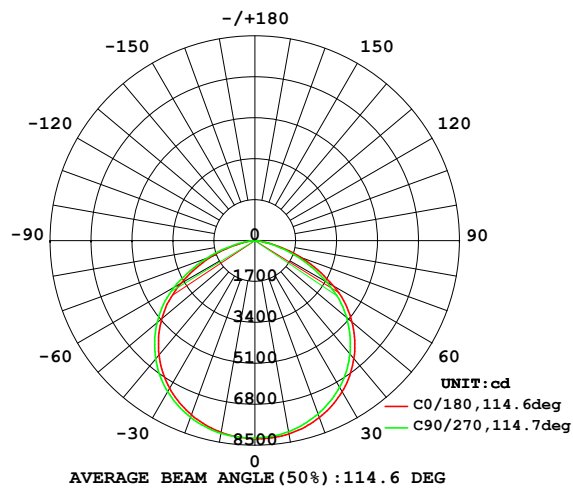


LUMINAIRE PHOTOMETRIC TEST REPORT

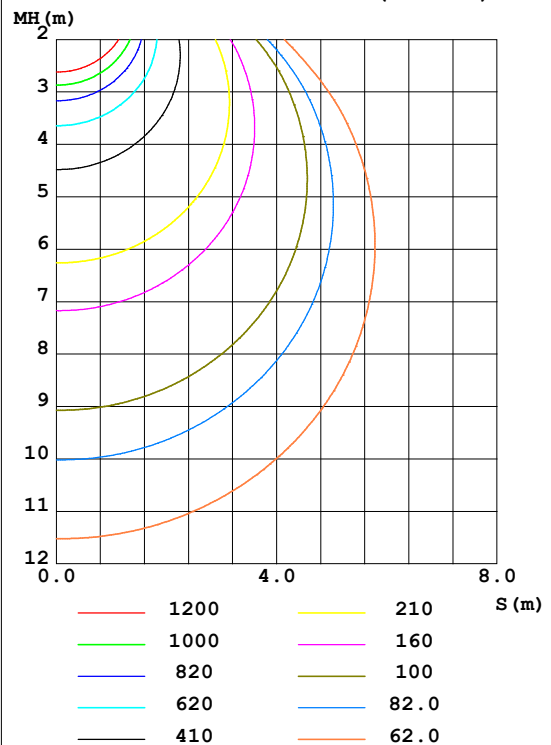
Test:U:277.1V I:0.5708A P:150.1W PF:0.9490 Lamp Flux:23276.5x1 lm		
NAME: LM-150W	TYPE:120°glass	WEIGHT:4.608kg
SPEC.:5000k R80 360L	DIM.: D280mm*200mm	SERIAL No.:
MFR.:	SUR.:0.12m*0.12m*3.14	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 155.04 lm/W			
MODEL	SMD3030 (757G P20D41)	I _{max} (cd)	8231	S/MH (C0/180)	1.28
NOMINAL POWER (W)	150	LOR (%)	100.0	S/MH (C90/270)	1.31
RATED VOLTAGE (V)	277	TOTAL FLUX (lm)	23277	η UP,DN (C0-180)	0.2, 49.1
NOMINAL FLUX (lm)	23276.5	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.2, 50.5
LAMPS INSIDE	1	η up (%)	0.4	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	277	η down (%)	99.6	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT: lx)



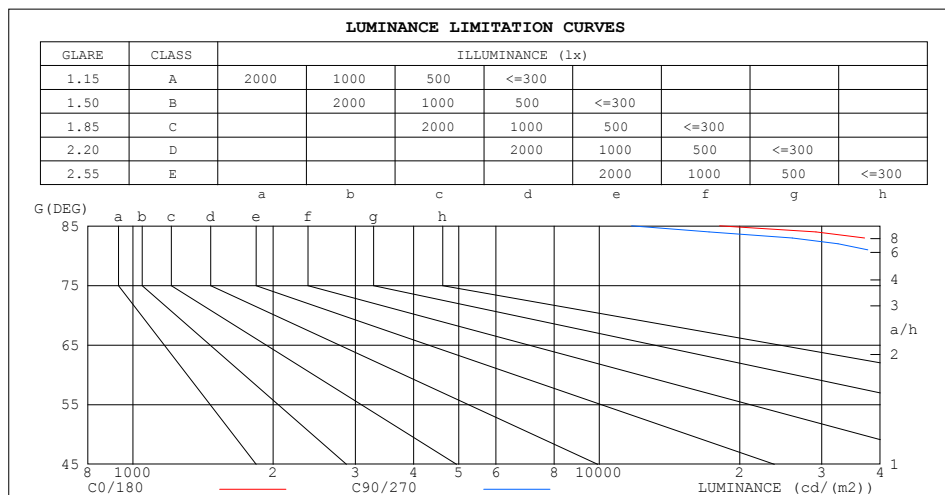
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: DEG
 Operators: guanlingao
 Test Date: 2017-12-29

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 AND LUMINANCE LIMITATION CURVES

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	8151	8104	8054	8038	8089	8106	8128	8129	0- 10	778.4	778.4	3.34, 3.34
20	7821	7742	7663	7639	7702	7750	7810	7816	10- 20	2246	3024	13, 13
30	7247	7148	7039	7008	7086	7159	7248	7261	20- 30	3447	6472	27.8, 27.8
40	6394	6272	6140	6109	6197	6294	6409	6422	30- 40	4222	10694	45.9, 45.9
50	5268	5125	4977	4953	5047	5163	5302	5305	40- 50	4428	15121	65, 65
60	3771	3561	3444	3449	3541	3751	3871	3838	50- 60	3969	19090	82, 82
70	2015	1878	1765	1771	1863	1991	2106	2088	60- 70	2749	21839	93.8, 93.8
80	470.7	411.5	355.8	390.4	433.6	483.6	552.9	519.2	70- 80	1200	23040	99, 99
90	3.843	2.995	3.116	3.054	3.034	2.168	2.125	2.034	80- 90	140.0	23180	99.6, 99.6
100	6.987	6.343	6.667	6.506	5.567	4.367	4.086	4.165	90-100	4.326	23184	99.6, 99.6
110	11.66	12.08	11.62	11.46	9.853	8.604	8.144	8.226	100-110	8.219	23192	99.6, 99.6
120	16.67	17.10	16.74	16.63	14.55	13.32	12.82	12.83	110-120	12.53	23205	99.7, 99.7
130	21.16	21.60	21.26	21.21	19.06	17.83	17.40	17.39	120-130	15.56	23220	99.8, 99.8
140	25.00	25.44	25.00	24.99	21.60	21.23	20.82	20.74	130-140	16.61	23237	99.8, 99.8
150	27.84	28.25	27.71	27.72	25.45	24.18	23.85	23.67	140-150	15.49	23253	99.9, 99.9
160	30.19	30.45	29.79	29.77	28.10	26.82	26.64	26.39	150-160	12.62	23265	100, 100
170	32.10	32.22	31.40	31.34	30.37	29.25	29.08	28.95	160-170	8.350	23274	100, 100
180	33.01	32.96	31.90	31.88	33.05	32.13	31.92	31.86	170-180	2.988	23277	100, 100
DEG	LUMINOUS INTENSITY:cd MAX (Ii - Iavg)/Iavg (0-135) = 148.7 %									UNIT:lm		



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	18123	11728
80	59952	45320
75	98708	81966
70	130327	114152
65	150692	135595
60	166793	152324
55	177136	165086
50	181261	171227
45	183520	174889

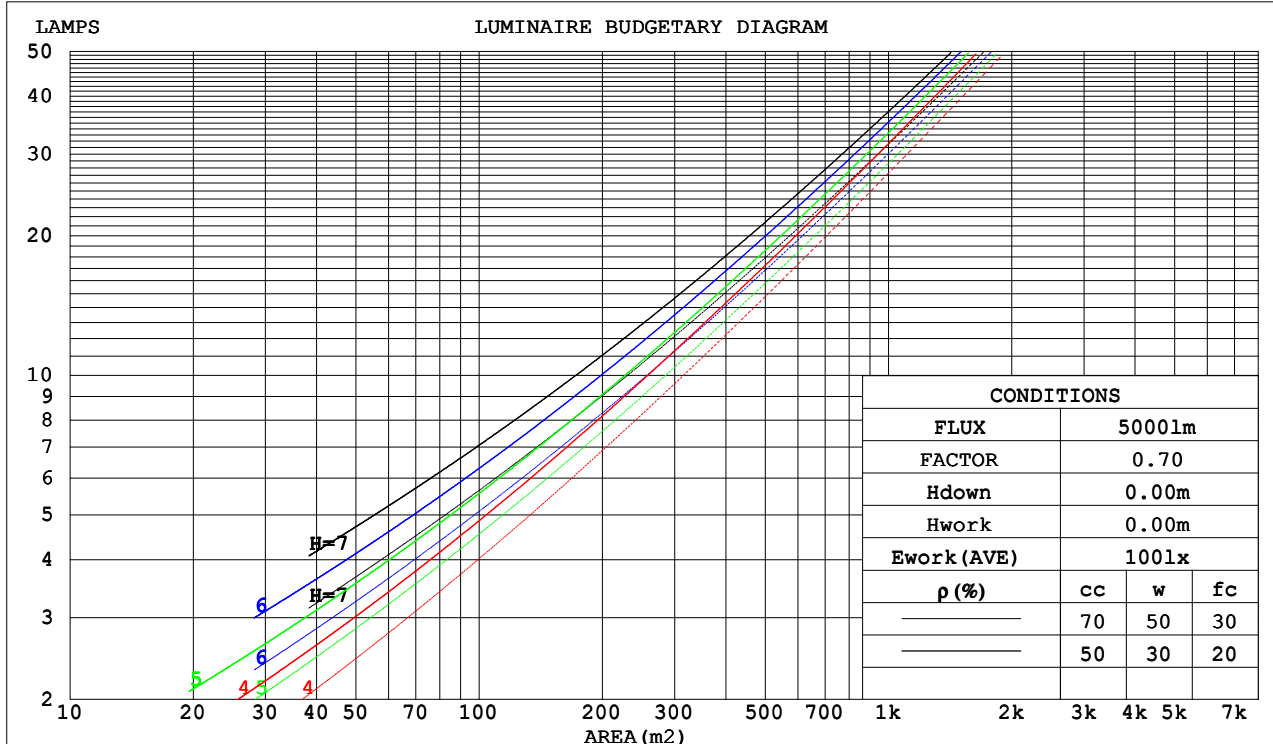
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: DEG
 Operators: guanlingao
 Test Date: 2017-12-29

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:277.1V I:0.5708A P:150.1W PF:0.9490 Lamp Flux:23276.5x1 lm		
NAME: LM-150W	TYPE:120°glass	WEIGHT:4.608kg
SPEC.:5000k R80 360L	DIM.: D280mm*200mm	SERIAL No.:
MFR.:	SUR.:0.12m*0.12m*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	.00
1.0	1.05	1.01	.97	1.03	.99	.96	.98	.95	.93	.94	.92	.90	.91	.89	.87	.85
2.0	.92	.85	.80	.90	.84	.79	.86	.81	.77	.83	.79	.75	.80	.76	.73	.71
3.0	.81	.73	.67	.79	.72	.66	.76	.70	.65	.73	.68	.64	.71	.66	.62	.60
4.0	.72	.63	.56	.70	.62	.56	.68	.61	.55	.65	.59	.54	.63	.58	.54	.51
5.0	.64	.55	.49	.63	.54	.48	.61	.53	.48	.59	.52	.47	.57	.51	.47	.44
6.0	.57	.49	.42	.57	.48	.42	.55	.47	.42	.53	.46	.41	.51	.45	.41	.39
7.0	.52	.43	.37	.51	.43	.37	.50	.42	.37	.48	.42	.37	.47	.41	.36	.34
8.0	.47	.39	.33	.47	.39	.33	.45	.38	.33	.44	.37	.33	.43	.37	.32	.31
9.0	.44	.35	.30	.43	.35	.30	.42	.35	.30	.41	.34	.29	.40	.34	.29	.27
10.0	.40	.32	.27	.40	.32	.27	.39	.32	.27	.38	.31	.27	.37	.31	.27	.25



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: DEG
 Operators: guanlingao
 Test Date: 2017-12-29

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:277.1V I:0.5708A P:150.1W PF:0.9490 Lamp Flux:23276.5x1 lm														
NAME: LM-150W					TYPE:120°glass					WEIGHT:4.608kg				
SPEC.:5000k R80 360L					DIM.: D280mm*200mm					SERIAL No.:				
MFR.:					SUR.:0.12m*0.12m*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	.287	.163	.052	.280	.160	.051	.267	.153	.049	.254	.147	.047	.243	.141	.045			
2.0	.277	.152	.047	.271	.149	.046	.259	.144	.045	.248	.139	.044	.238	.135	.043			
3.0	.260	.139	.041	.255	.136	.041	.244	.132	.040	.235	.129	.039	.226	.125	.039			
4.0	.242	.126	.037	.237	.124	.037	.228	.121	.036	.220	.118	.036	.212	.115	.035			
5.0	.225	.115	.033	.221	.113	.033	.213	.111	.033	.205	.108	.032	.198	.106	.032			
6.0	.210	.105	.030	.206	.104	.030	.199	.102	.030	.192	.100	.029	.185	.098	.029			
7.0	.196	.097	.027	.193	.096	.027	.186	.094	.027	.180	.092	.027	.174	.090	.027			
8.0	.184	.090	.025	.180	.089	.025	.175	.087	.025	.169	.086	.025	.164	.084	.024			
9.0	.172	.083	.023	.170	.083	.023	.164	.081	.023	.159	.080	.023	.155	.078	.023			
10.0	.162	.078	.022	.160	.077	.022	.155	.076	.021	.150	.075	.021	.146	.074	.021			

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	.194	.194	.194	.165	.165	.165	.113	.113	.113	.065	.065	.065	.021	.021	.021	
1.0	.182	.160	.139	.156	.137	.120	.106	.094	.083	.061	.055	.048	.020	.018	.016	
2.0	.174	.135	.103	.149	.116	.089	.102	.081	.062	.059	.047	.036	.019	.015	.012	
3.0	.166	.117	.079	.142	.101	.068	.098	.070	.048	.056	.041	.028	.018	.013	.009	
4.0	.158	.104	.063	.136	.090	.054	.093	.063	.038	.054	.037	.023	.017	.012	.007	
5.0	.151	.094	.051	.130	.081	.044	.089	.057	.031	.052	.033	.019	.017	.011	.006	
6.0	.144	.085	.043	.124	.074	.037	.086	.052	.026	.050	.030	.016	.016	.010	.005	
7.0	.138	.078	.037	.118	.068	.032	.082	.048	.023	.048	.028	.014	.015	.009	.004	
8.0	.131	.073	.032	.113	.063	.028	.078	.044	.020	.046	.026	.012	.015	.009	.004	
9.0	.125	.068	.029	.108	.059	.025	.075	.041	.018	.044	.024	.011	.014	.008	.004	
10.0	.120	.063	.026	.103	.055	.023	.072	.039	.016	.042	.023	.010	.014	.008	.003	

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: DEG
 Operators: guanlingao
 Test Date: 2017-12-29

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:277.1V I:0.5708A P:150.1W PF:0.9490 Lamp Flux:23276.5x1 lm										
NAME: LM-150W					TYPE:120°glass			WEIGHT:4.608kg		
SPEC.:5000k R80 360L					DIM.: D280mm*200mm			SERIAL No.:		
MFR.:					SUR.:0.12m*0.12m*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	30.9	32.4	31.2	32.6	32.8	30.6	32.1	30.9	32.3	32.5
3H	32.1	33.5	32.4	33.7	33.9	31.7	33.0	32.0	33.3	33.5
4H	32.4	33.7	32.7	34.0	34.2	31.9	33.2	32.3	33.5	33.8
6H	32.5	33.7	32.9	34.0	34.3	32.0	33.2	32.3	33.5	33.8
8H	32.5	33.7	32.8	34.0	34.3	32.0	33.1	32.3	33.4	33.7
12H	32.5	33.6	32.8	33.9	34.2	31.9	33.0	32.3	33.3	33.7
4H 2H	31.4	32.7	31.7	32.9	33.2	31.1	32.4	31.4	32.7	32.9
3H	32.7	33.8	33.1	34.1	34.4	32.4	33.5	32.7	33.8	34.1
4H	33.1	34.1	33.5	34.5	34.8	32.7	33.7	33.1	34.0	34.4
6H	33.3	34.2	33.7	34.5	34.9	32.8	33.7	33.2	34.1	34.4
8H	33.3	34.1	33.7	34.5	34.9	32.8	33.6	33.2	34.0	34.4
12H	33.2	34.0	33.7	34.4	34.8	32.7	33.5	33.2	33.9	34.3
8H 4H	33.2	34.0	33.6	34.4	34.8	32.8	33.6	33.2	34.0	34.4
6H	33.4	34.1	33.8	34.5	34.9	33.0	33.7	33.4	34.1	34.5
8H	33.4	34.0	33.9	34.5	34.9	33.0	33.6	33.4	34.0	34.5
12H	33.4	33.9	33.9	34.4	34.9	32.9	33.5	33.4	33.9	34.4
12H 4H	33.2	33.9	33.6	34.3	34.7	32.8	33.5	33.2	33.9	34.3
6H	33.4	34.0	33.8	34.4	34.9	32.9	33.6	33.4	34.0	34.4
8H	33.4	33.9	33.9	34.4	34.9	33.0	33.5	33.4	33.9	34.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
1.5H	+ 0.3 / - 0.4					+ 0.3 / - 0.5				
2.0H	+ 0.4 / - 0.4					+ 0.4 / - 0.4				

CIE Pub.117 Corrected 23277 lm Total Lamp Luminous Flux. (8log(F/F0) = 10.9)

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: DEG
Operators: guanlingao
Test Date: 2017-12-29

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:277.1V I:0.5708A P:150.1W PF:0.9490 Lamp Flux:23276.5x1 lm		
NAME: LM-150W	TYPE:120°glass	WEIGHT:4.608kg
SPEC.:5000k R80 360L	DIM.: D280mm*200mm	SERIAL No.:
MFR.:	SUR.:0.12m*0.12m*3.14	PROTECTION ANGLE:

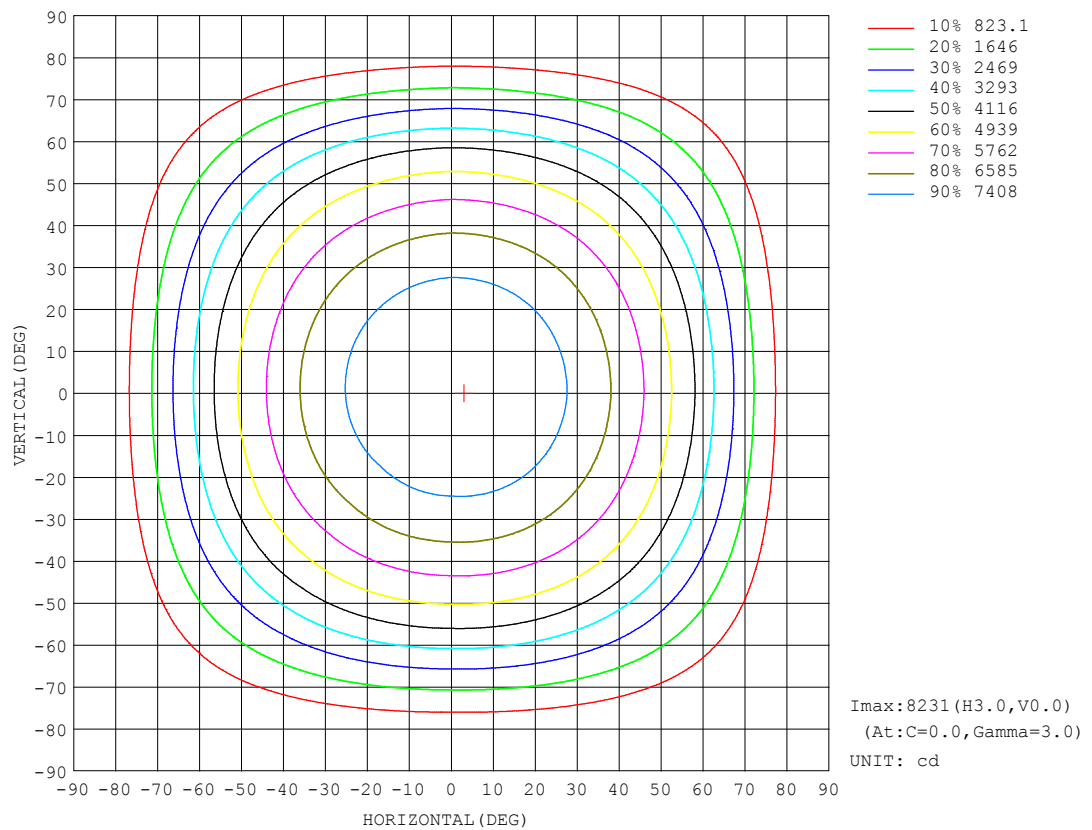
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	58	46	40	57	46	39	56	46	39	33
0.80	68	57	50	67	56	49	65	56	49	42
1.00	77	66	59	76	66	59	74	67	58	51
1.25	84	74	67	83	73	67	80	72	66	59
1.50	89	80	73	88	79	73	85	77	71	64
2.00	96	88	82	94	87	81	91	85	80	72
2.50	100	93	87	98	91	86	94	88	84	76
3.00	103	97	92	101	95	90	97	92	88	80
4.00	107	102	97	105	100	96	100	97	93	84
5.00	109	105	101	107	103	99	102	99	96	87
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: 2017-12-29

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:277.1V I:0.5708A P:150.1W PF:0.9490 Lamp Flux:23276.5x1 lm		
NAME: LM-150W	TYPE:120°glass	WEIGHT:4.608kg
SPEC.:5000k R80 360L	DIM.: D280mm*200mm	SERIAL No.:
MFR.:	SUR.:0.12m*0.12m*3.14	PROTECTION ANGLE:

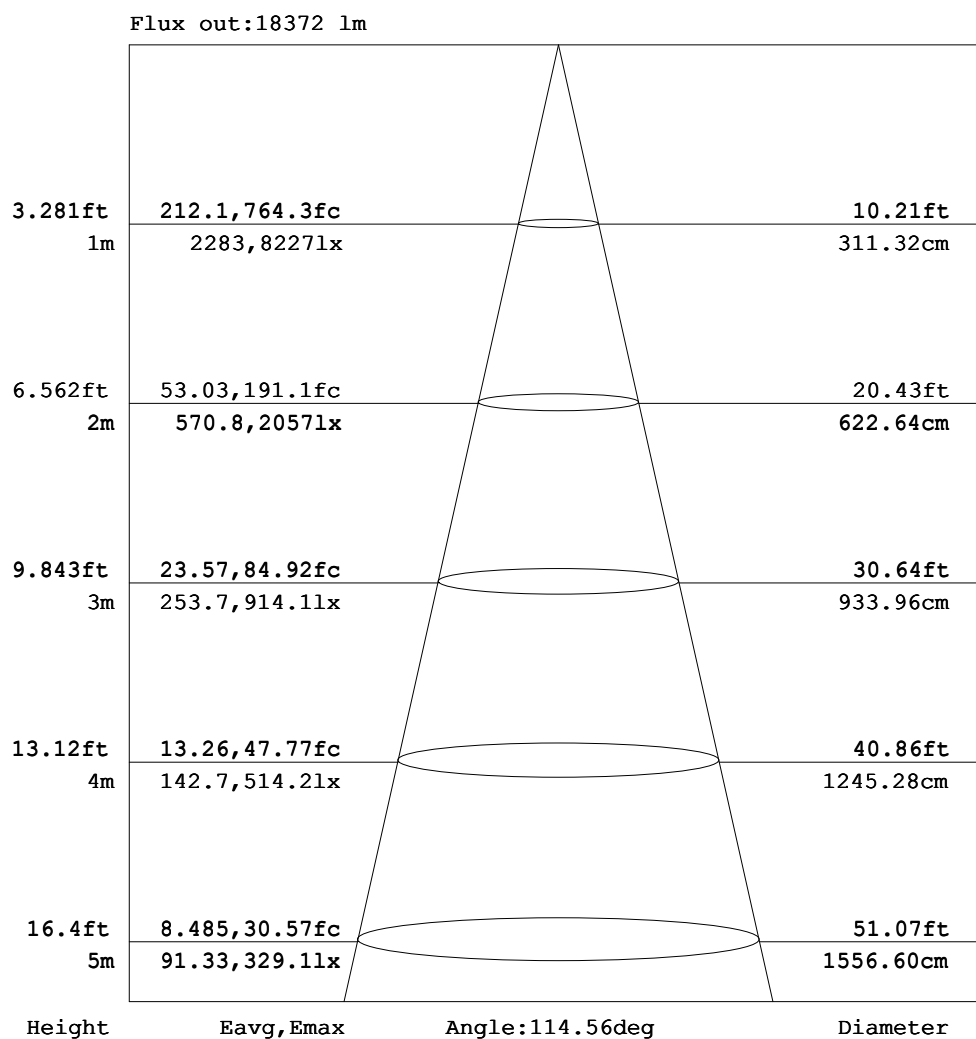


C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: DEG
 Operators: guanlingao
 Test Date: 2017-12-29

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:277.1V I:0.5708A P:150.1W PF:0.9490 Lamp Flux:23276.5x1 lm		
NAME: LM-150W	TYPE:120°glass	WEIGHT:4.608kg
SPEC.:5000k R80 360L	DIM.: D280mm*200mm	SERIAL No.:
MFR.:	SUR.:0.12m*0.12m*3.14	PROTECTION ANGLE:



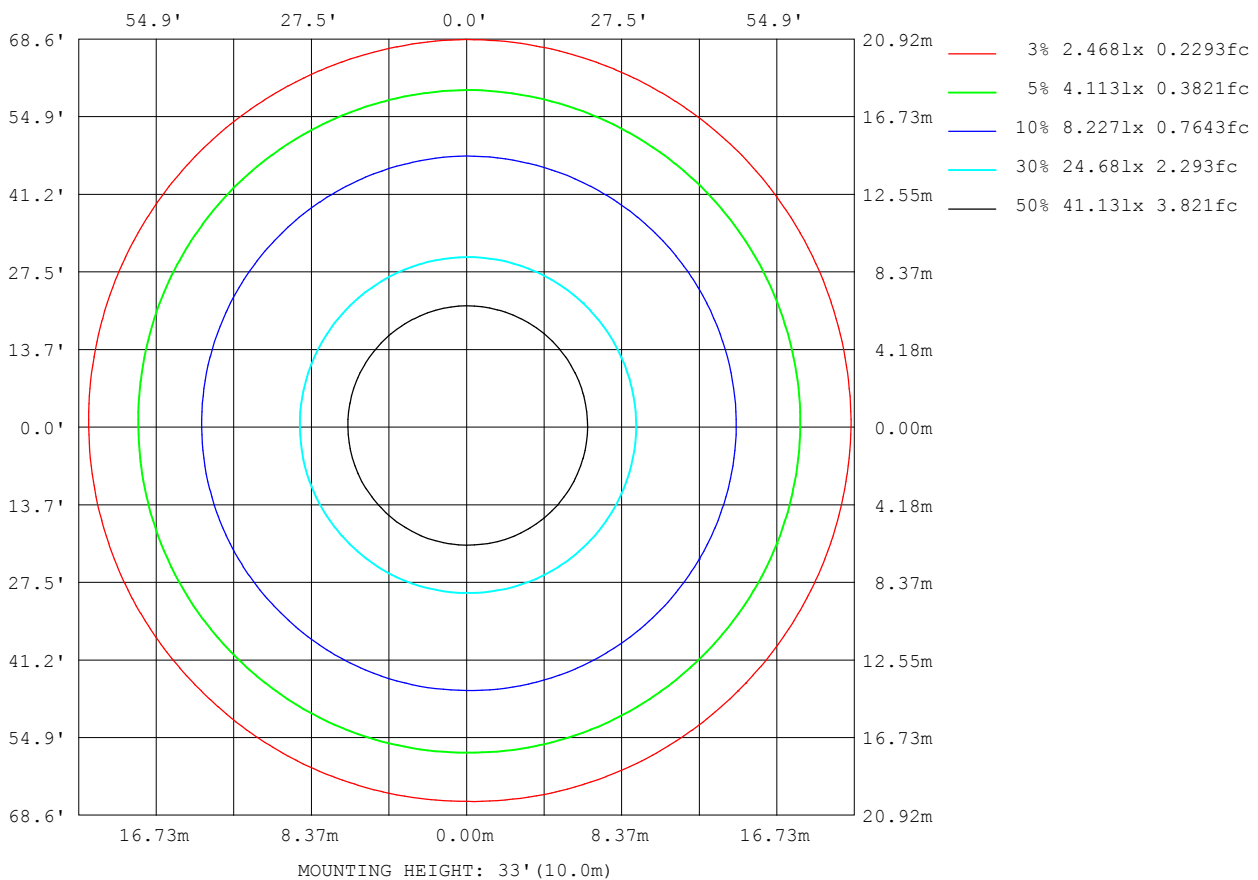
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: DEG
Operators: guanlingao
Test Date: 2017-12-29

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

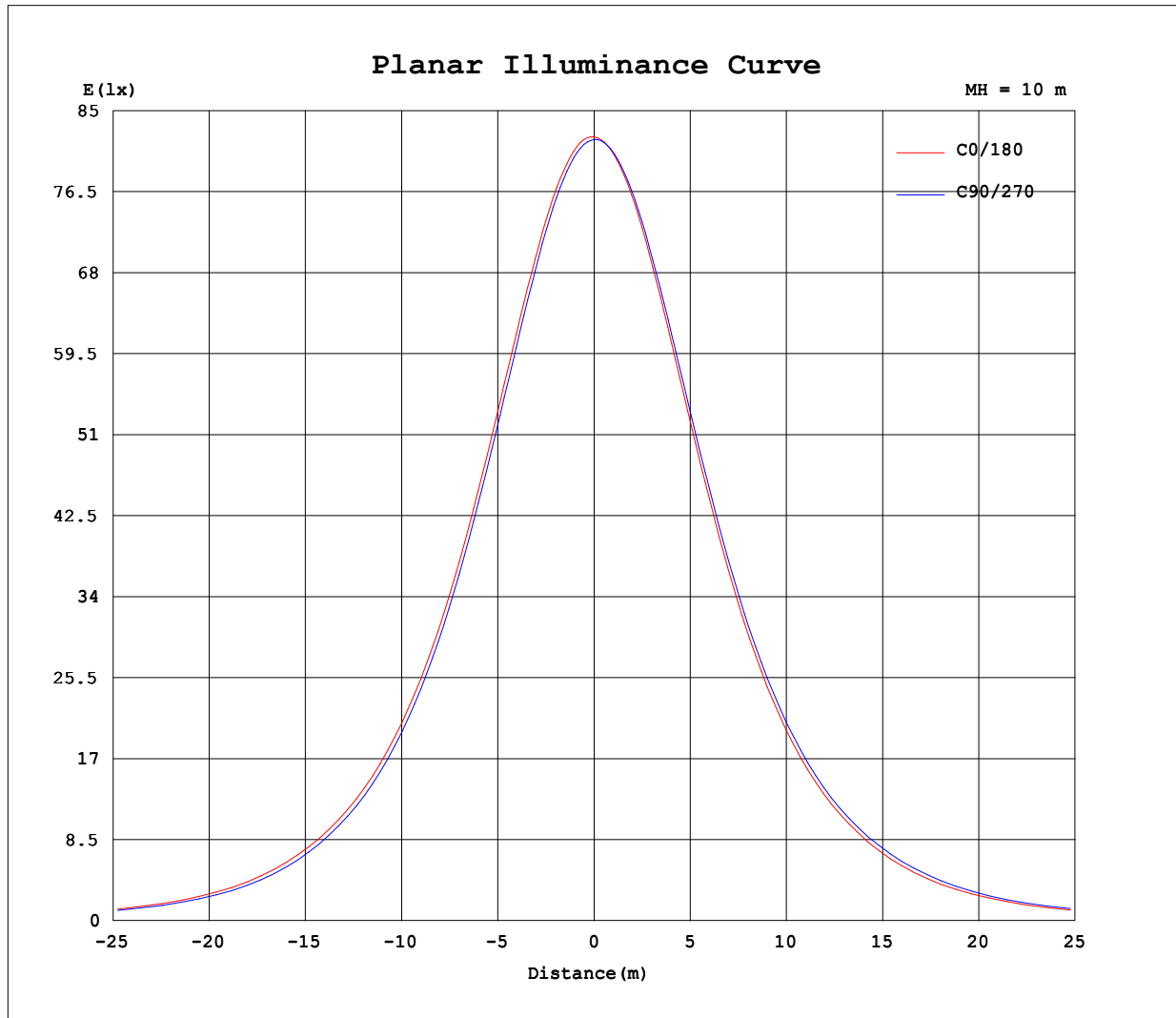
Test:U:277.1V I:0.5708A P:150.1W PF:0.9490 Lamp Flux:23276.5x1 lm		
NAME: LM-150W	TYPE:120°glass	WEIGHT:4.608kg
SPEC.:5000k R80 360L	DIM.: D280mm*200mm	SERIAL No.:
MFR.:	SUR.:0.12m*0.12m*3.14	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: DEG
 Operators: guanlingao
 Test Date: 2017-12-29

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: 45.0DEG
Test Speed: HIGH
Temperature: DEG
Operators: guanlingao
Test Date: 2017-12-29

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:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:277.1V I:0.5708A P:150.1W PF:0.9490 Lamp Flux:23276.5x1 lm		
NAME: LM-150W	TYPE:120°glass	WEIGHT:4.608kg
SPEC.:5000k R80 360L	DIM.: D280mm*200mm	SERIAL No.:
MFR.:	SUR.:0.12m*0.12m*3.14	PROTECTION ANGLE:

Table--1

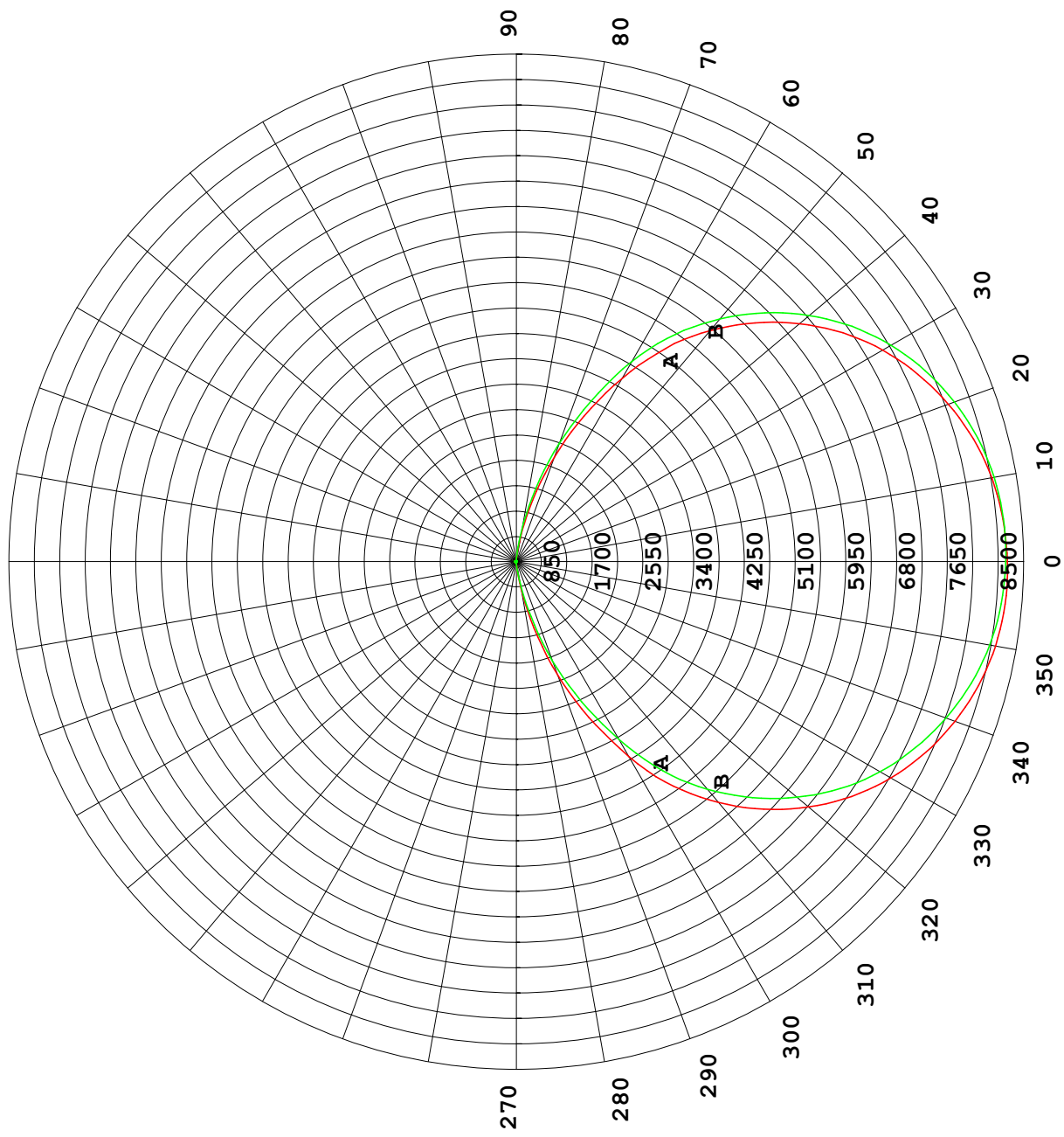
UNIT: cd

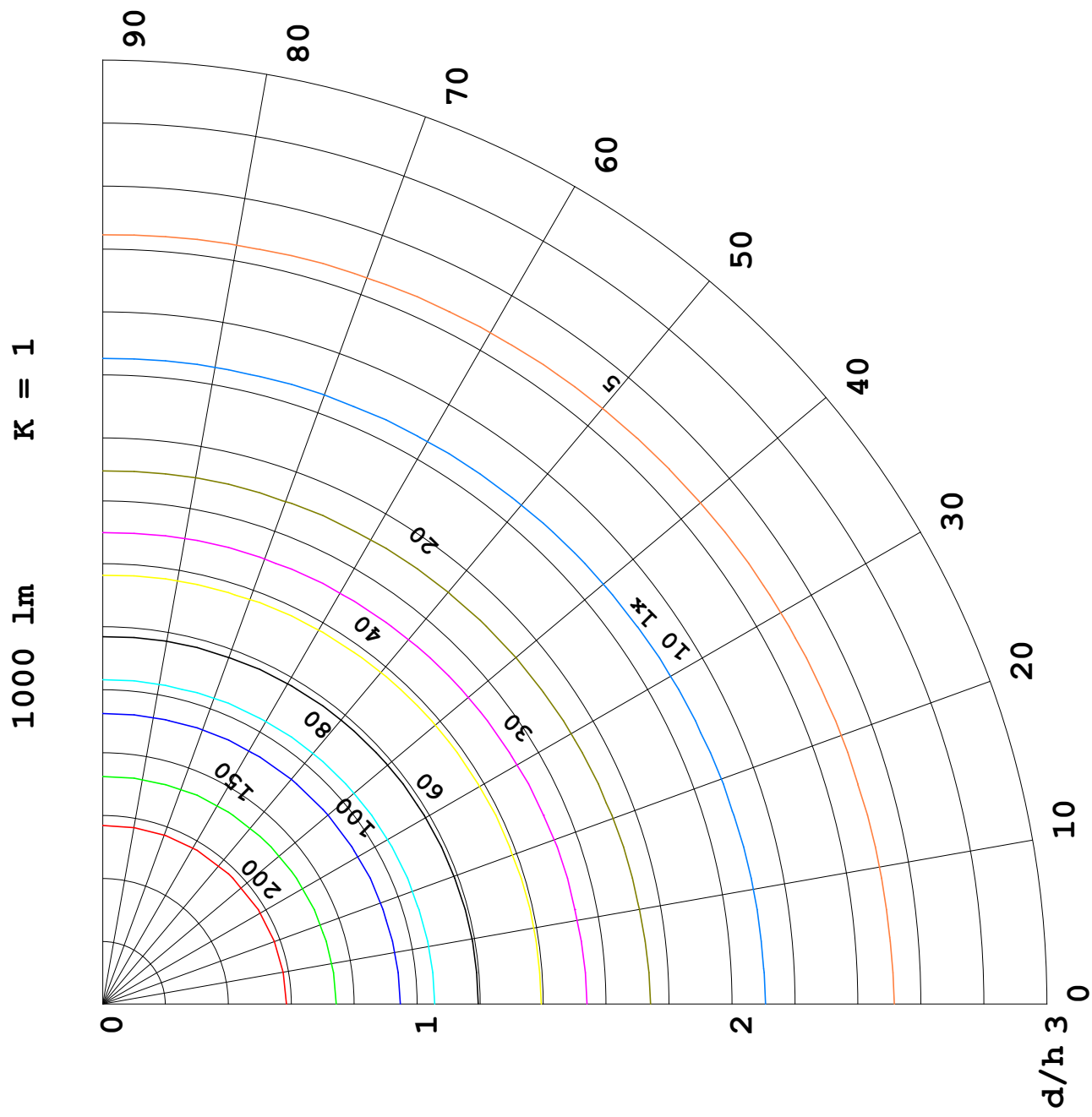
C (DEG) γ (DEG)	0	45	90	135	180	225	270	315										
0	8227	8212	8199	8193	8227	8212	8199	8193										
5	8220	8189	8156	8141	8183	8186	8191	8191										
10	8151	8104	8054	8038	8089	8106	8128	8129										
15	8018	7955	7889	7871	7929	7961	8002	8005										
20	7821	7742	7663	7639	7702	7750	7810	7816										
25	7566	7475	7378	7350	7422	7484	7560	7571										
30	7247	7148	7039	7008	7086	7159	7248	7261										
35	6859	6747	6628	6593	6679	6759	6867	6883										
40	6394	6272	6140	6109	6197	6294	6409	6422										
45	5868	5729	5592	5563	5655	5764	5892	5901										
50	5268	5125	4977	4953	5047	5163	5302	5305										
55	4594	4444	4281	4252	4356	4496	4648	4639										
60	3771	3561	3444	3449	3541	3751	3871	3838										
65	2880	2708	2591	2587	2691	2836	2961	2943										
70	2015	1878	1765	1771	1863	1991	2106	2088										
75	1155	1052	959	985	1062	1159	1264	1223										
80	471	412	356	390	434	484	553	519										
85	71.4	52.1	46.2	56.1	71.6	89.0	109	89.9										
90	3.84	3.00	3.12	3.05	3.03	2.17	2.13	2.03										
95	5.12	4.37	4.62	4.47	3.99	2.89	2.70	2.75										
100	6.99	6.34	6.67	6.51	5.57	4.37	4.09	4.16										
105	9.23	8.66	9.06	8.90	7.58	6.34	5.94	6.04										
110	11.7	12.1	11.6	11.5	9.85	8.60	8.14	8.23										
115	14.2	14.6	14.2	14.1	12.2	11.0	10.4	10.5										
120	16.7	17.1	16.7	16.6	14.5	13.3	12.8	12.8										
125	19.0	19.5	19.1	19.0	16.8	15.6	15.1	15.2										
130	21.2	21.6	21.3	21.2	19.1	17.8	17.4	17.4										
135	23.1	23.6	23.2	23.2	21.1	19.8	19.3	19.3										
140	25.0	25.4	25.0	25.0	21.6	21.2	20.8	20.7										
145	26.5	26.9	26.4	26.4	24.2	22.9	22.5	22.5										
150	27.8	28.3	27.7	27.7	25.5	24.2	23.8	23.7										
155	29.0	29.3	28.8	28.8	26.8	25.6	25.3	25.1										
160	30.2	30.4	29.8	29.8	28.1	26.8	26.6	26.4										
165	31.3	31.5	30.8	30.8	29.0	27.9	27.7	27.6										
170	32.1	32.2	31.4	31.3	30.4	29.3	29.1	28.9										
175	32.4	32.4	31.6	31.4	32.4	31.4	31.2	31.1										
180	33.0	33.0	31.9	31.9	33.1	32.1	31.9	31.9										

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: DEG
Operators: guanlingao
Test Date: 2017-12-29

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)





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

