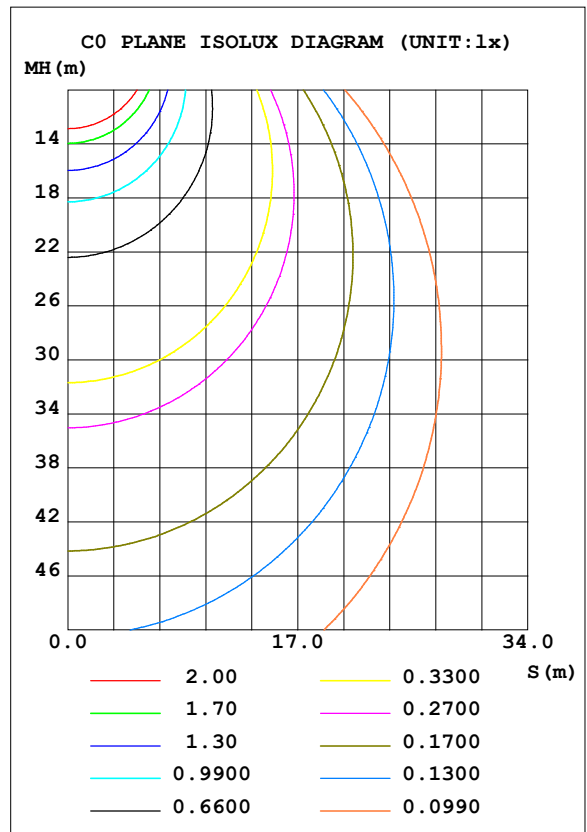
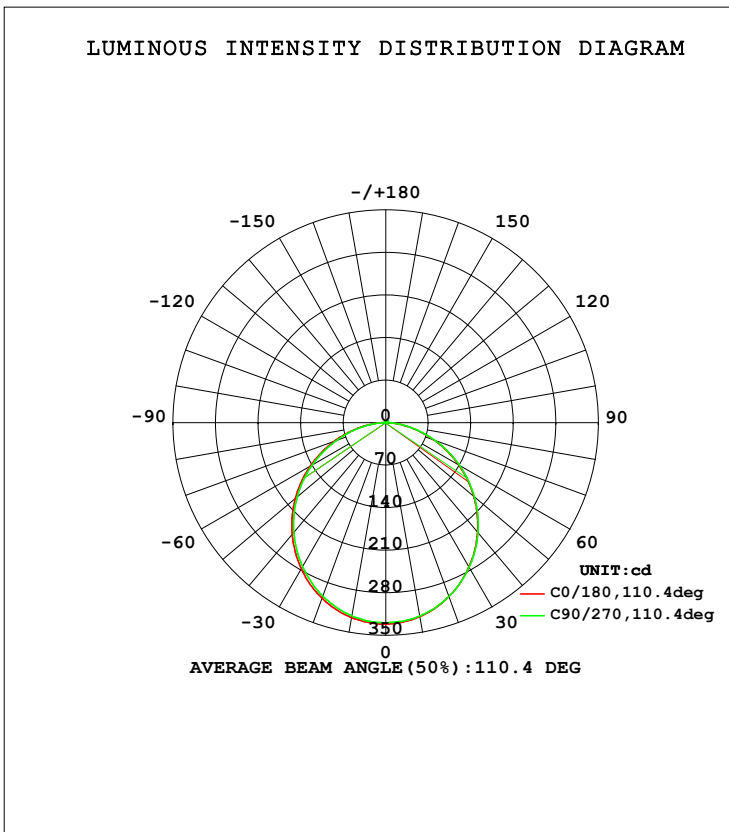


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:229.3V I:0.0559A P:10.98W PF:0.8562 Lamp Flux:936.489x1 lm		
NAME: 筒灯12W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 85.32 lm/W			
MODEL		Imax (cd)	331.5	S/MH (C0/180)	1.24
NOMINAL POWER (W)	12	LOR (%)	100.0	S/MH (C90/270)	1.24
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	936.49	η UP, DN (C0-180)	0.7, 49.0
NOMINAL FLUX (lm)	936.489	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.6, 49.7
LAMPS INSIDE	1	η up (%)	1.3	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	229.3	η down (%)	98.7	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2021-08-31

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity: 55.0%
 Test Distance: 8.852m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270				γ	Φ zone	Φ total	%lum,lamp	
5	329.3	327.8	330.1	327.6				0- 5	7.877	7.877	0.84,0.84	
10	324.1	323.0	325.8	322.7				5- 10	23.34	31.22	3.33,3.33	
15	315.9	315.4	317.9	314.6				10- 15	37.96	69.18	7.39,7.39	
20	304.4	304.1	307.4	303.5				15- 20	51.16	120.3	12.8,12.8	
25	290.6	290.7	293.9	290.0				20- 25	62.53	182.9	19.5,19.5	
30	274.0	274.5	277.9	273.8				25- 30	71.66	254.5	27.2,27.2	
35	255.6	256.2	259.8	255.8				30- 35	78.33	332.8	35.5,35.5	
40	235.1	236.2	239.7	235.5				35- 40	82.31	415.2	44.3,44.3	
45	212.9	214.1	217.9	213.6				40- 45	83.54	498.7	53.3,53.3	
50	189.2	190.6	194.5	190.4				45- 50	81.98	580.7	62,62	
55	164.2	165.7	169.6	165.7				50- 55	77.71	658.4	70.3,70.3	
60	138.2	139.9	143.8	139.8				55- 60	70.89	729.3	77.9,77.9	
65	111.7	113.2	117.3	113.4				60- 65	61.81	791.1	84.5,84.5	
70	85.02	86.48	90.52	86.81				65- 70	50.88	842.0	89.9,89.9	
75	59.18	60.45	64.39	60.87				70- 75	38.72	880.7	94,94	
80	35.11	36.43	39.89	36.70				75- 80	26.18	906.9	96.8,96.8	
85	12.97	15.16	17.27	15.22				80- 85	14.08	920.9	98.3,98.3	
90	0.5612	0.5614	0.5035	0.4945				85- 90	3.286	924.2	98.7,98.7	
95	0.6974	0.7238	0.6347	0.5926				90- 95	0.3208	924.6	98.7,98.7	
100	0.9120	0.9337	0.8183	0.7815				95-100	0.4125	925.0	98.8,98.8	
105	1.132	1.160	1.034	0.9961				100-105	0.5185	925.5	98.8,98.8	
110	1.395	1.411	1.275	1.242				105-110	0.6294	926.1	98.9,98.9	
115	1.646	1.668	1.516	1.505				110-115	0.7378	926.8	99,99	
120	1.903	1.914	1.768	1.730				115-120	0.8295	927.7	99.1,99.1	
125	2.171	2.182	2.025	1.987				120-125	0.9043	928.6	99.2,99.2	
130	2.438	2.455	2.282	2.249				125-130	0.9653	929.5	99.3,99.3	
135	2.679	2.702	2.534	2.501				130-135	1.001	930.5	99.4,99.4	
140	2.916	2.932	2.780	2.722				135-140	1.007	931.6	99.5,99.5	
145	3.115	3.152	3.000	2.947				140-145	0.9833	932.5	99.6,99.6	
150	3.315	3.346	3.221	3.167				145-150	0.9298	933.5	99.7,99.7	
155	3.498	3.520	3.409	3.346				150-155	0.8473	934.3	99.8,99.8	
160	3.640	3.677	3.577	3.519				155-160	0.7381	935.1	99.8,99.8	
165	3.771	3.808	3.745	3.676				160-165	0.6056	935.7	99.9,99.9	
170	3.886	3.918	3.882	3.828				165-170	0.4517	936.1	100,100	
175	3.970	4.007	4.002	3.902				170-175	0.2809	936.4	100,100	
180	4.038	4.033	4.038	3.981				175-180	0.0957	936.5	100,100	
DEG	LUMINOUS INTENSITY:cd							UNIT:lm				

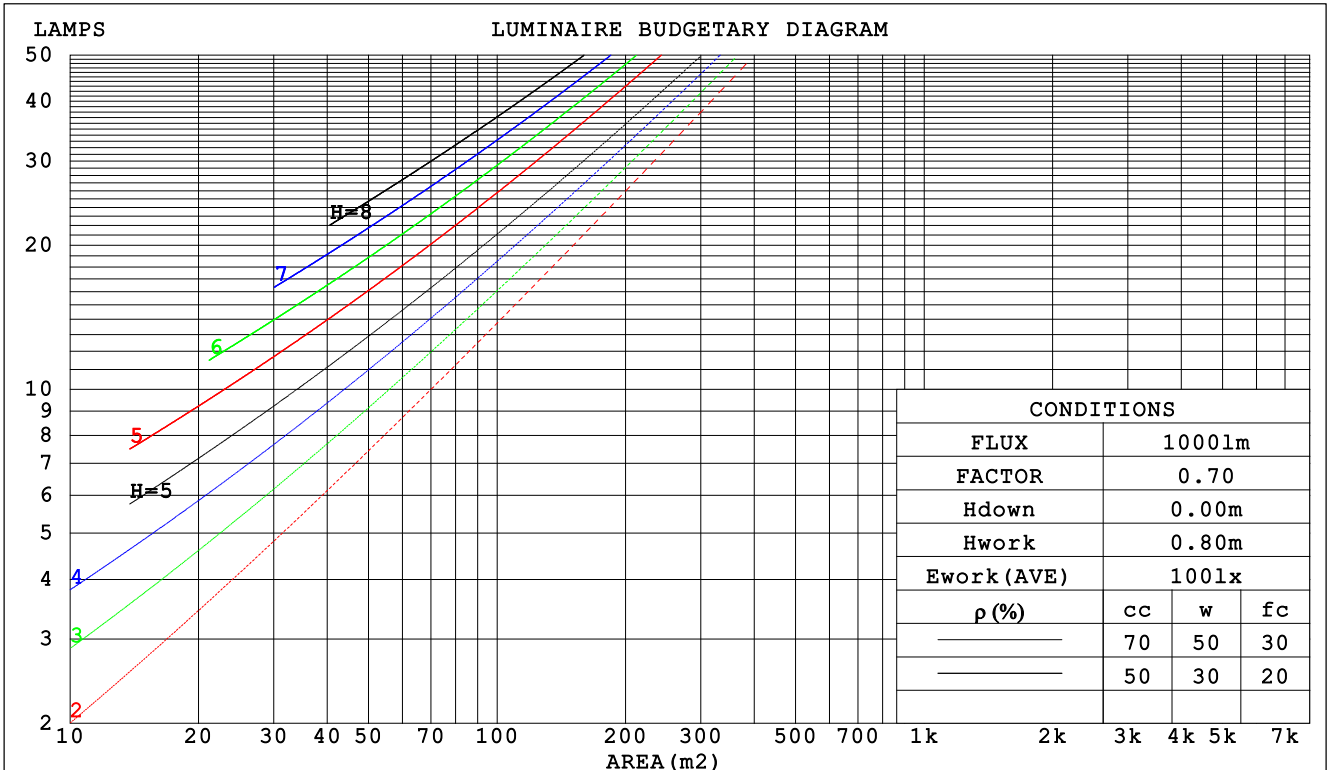
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2021-08-31

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:55.0%
 Test Distance:8.852m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:229.3V I:0.0559A P:10.98W PF:0.8562 Lamp Flux:936.489x1 lm		
NAME: 筒灯12W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	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	1.10	1.10	1.10	1.05	1.05	1.05	1.01	1.01	1.01	.99
1.0	1.04	.99	.95	1.01	.97	.94	.97	.94	.91	.93	.90	.88	.89	.87	.85	.83
2.0	.90	.83	.78	.88	.82	.77	.84	.79	.75	.81	.77	.73	.78	.74	.71	.69
3.0	.79	.71	.65	.78	.70	.64	.74	.68	.63	.71	.66	.61	.69	.64	.60	.58
4.0	.70	.61	.55	.69	.61	.54	.66	.59	.53	.64	.57	.52	.61	.56	.52	.49
5.0	.63	.54	.47	.61	.53	.47	.59	.52	.46	.57	.51	.45	.55	.49	.45	.43
6.0	.56	.47	.41	.55	.47	.41	.53	.46	.40	.52	.45	.40	.50	.44	.39	.37
7.0	.51	.42	.36	.50	.42	.36	.49	.41	.36	.47	.40	.35	.46	.40	.35	.33
8.0	.47	.38	.32	.46	.38	.32	.44	.37	.32	.43	.36	.32	.42	.36	.31	.29
9.0	.43	.35	.29	.42	.34	.29	.41	.34	.29	.40	.33	.29	.39	.33	.28	.26
10.0	.40	.32	.26	.39	.31	.26	.38	.31	.26	.37	.30	.26	.36	.30	.26	.24



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2021-08-31

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:55.0%
 Test Distance:8.852m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:229.3V I:0.0559A P:10.98W PF:0.8562 Lamp Flux:936.489x1 lm												
NAME: 筒灯12W						TYPE:			WEIGHT:			
DIM.:						SPEC.:			SERIAL No.:			
MFR.:						SUR.:			PROTECTION ANGLE:			

ρ _{cc}	80%			70%			50%			30%			10%			0
ρ _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ _{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.308	.175	.056	.301	.172	.055	.287	.165	.053	.274	.158	.051	.262	.152	.049	
2.0	.290	.159	.049	.284	.156	.048	.271	.151	.047	.260	.146	.046	.249	.141	.044	
3.0	.269	.143	.043	.263	.141	.042	.252	.137	.041	.242	.132	.041	.232	.129	.040	
4.0	.248	.129	.038	.243	.127	.038	.233	.124	.037	.224	.120	.036	.216	.117	.036	
5.0	.229	.117	.034	.225	.115	.034	.216	.112	.033	.208	.110	.033	.200	.107	.032	
6.0	.213	.107	.031	.209	.105	.030	.201	.103	.030	.194	.101	.030	.187	.098	.029	
7.0	.198	.098	.028	.194	.097	.028	.187	.095	.027	.181	.093	.027	.175	.091	.027	
8.0	.185	.090	.025	.182	.089	.025	.175	.088	.025	.170	.086	.025	.164	.084	.025	
9.0	.173	.084	.023	.170	.083	.023	.165	.081	.023	.159	.080	.023	.154	.078	.023	
10.0	.163	.078	.022	.160	.077	.022	.155	.076	.021	.150	.075	.021	.146	.073	.021	

ρ _{cc}	80%			70%			50%			30%			10%			0
ρ _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ _{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.200	.200	.200	.171	.171	.171	.117	.117	.117	.067	.067	.067	.021	.021	.021	
1.0	.190	.166	.145	.163	.143	.124	.111	.098	.086	.064	.057	.050	.021	.018	.016	
2.0	.182	.142	.108	.156	.122	.094	.107	.085	.065	.062	.049	.038	.020	.016	.012	
3.0	.174	.124	.085	.150	.107	.073	.103	.075	.051	.059	.044	.030	.019	.014	.010	
4.0	.167	.111	.069	.143	.096	.060	.098	.067	.042	.057	.039	.025	.018	.013	.008	
5.0	.159	.101	.058	.137	.087	.050	.094	.061	.035	.055	.036	.021	.018	.012	.007	
6.0	.152	.092	.050	.131	.080	.043	.090	.056	.031	.052	.033	.018	.017	.011	.006	
7.0	.145	.086	.044	.125	.074	.038	.086	.052	.027	.050	.031	.016	.016	.010	.005	
8.0	.139	.080	.039	.120	.069	.034	.083	.049	.024	.048	.029	.014	.016	.009	.005	
9.0	.133	.075	.036	.115	.065	.031	.079	.046	.022	.046	.027	.013	.015	.009	.004	
10.0	.127	.071	.033	.110	.061	.029	.076	.043	.020	.044	.025	.012	.014	.008	.004	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2021-08-31

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:55.0%
 Test Distance:8.852m [K=1.0000]
 Remarks:

Uncorrected UGR Table

Test:U:229.3V I:0.0559A P:10.98W PF:0.8562 Lamp Flux:936.489x1 lm										
NAME: 筒灯12W					TYPE:			WEIGHT:		
DIM.:					SPEC.:			SERIAL No.:		
MFR.:					SUR.:			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	20.6	22.1	20.9	22.3	22.5	20.6	22.1	20.9	22.3	22.6
3H	22.1	23.4	22.4	23.7	24.0	22.1	23.5	22.4	23.8	24.0
4H	22.6	23.9	23.0	24.2	24.5	22.7	24.0	23.0	24.3	24.6
6H	23.0	24.3	23.4	24.6	24.9	23.1	24.4	23.5	24.7	25.0
8H	23.2	24.4	23.5	24.7	25.0	23.3	24.5	23.6	24.8	25.1
12H	23.2	24.4	23.6	24.7	25.0	23.3	24.5	23.7	24.8	25.1
4H 2H	21.2	22.5	21.5	22.8	23.1	21.2	22.5	21.5	22.8	23.1
3H	22.8	24.0	23.2	24.3	24.6	22.9	24.0	23.3	24.4	24.7
4H	23.5	24.6	23.9	24.9	25.3	23.6	24.6	24.0	25.0	25.4
6H	24.1	25.0	24.5	25.4	25.8	24.1	25.1	24.6	25.5	25.8
8H	24.2	25.1	24.7	25.5	25.9	24.3	25.2	24.8	25.6	26.0
12H	24.3	25.1	24.8	25.5	26.0	24.4	25.2	24.9	25.7	26.1
8H 4H	23.8	24.7	24.2	25.1	25.5	23.8	24.7	24.3	25.1	25.5
6H	24.5	25.2	24.9	25.6	26.1	24.5	25.3	25.0	25.7	26.1
8H	24.7	25.4	25.2	25.8	26.3	24.8	25.4	25.3	25.9	26.4
12H	24.9	25.4	25.4	25.9	26.4	25.0	25.5	25.5	26.0	26.5
12H 4H	23.8	24.6	24.3	25.0	25.4	23.9	24.7	24.3	25.1	25.5
6H	24.5	25.2	25.0	25.6	26.1	24.6	25.2	25.1	25.7	26.2
8H	24.8	25.4	25.3	25.8	26.3	24.9	25.4	25.4	25.9	26.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117 Corrected 936.5 lm Total Lamp Luminous Flux. (8log(F/F0) = -0.2)

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2021-08-31

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:55.0%
 Test Distance:8.852m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:229.3V I:0.0559A P:10.98W PF:0.8562 Lamp Flux:936.489x1 lm		
NAME: 筒灯12W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

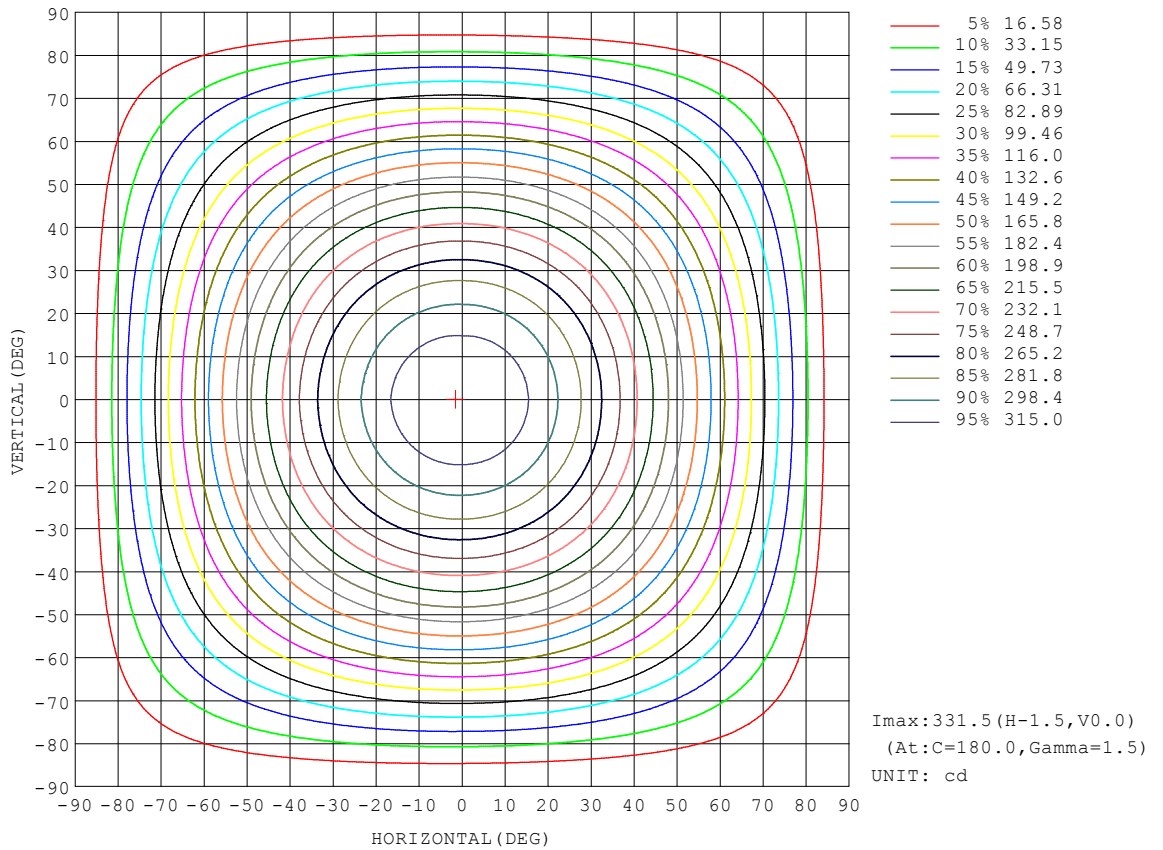
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	57	46	39	57	45	39	55	45	38	32
0.80	67	56	48	66	55	48	64	54	48	41
1.00	76	65	57	74	64	57	72	65	56	49
1.25	83	72	65	81	72	65	78	70	64	56
1.50	88	78	71	86	77	70	83	75	69	61
2.00	95	86	80	93	85	79	89	82	77	69
2.50	99	91	85	96	89	84	92	86	82	73
3.00	102	95	89	100	93	88	95	90	86	77
4.00	106	100	96	103	98	94	99	95	91	82
5.00	108	103	99	106	101	98	101	98	94	85
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:25.3DEG
 Operators:
 Test Date:2021-08-31

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:55.0%
 Test Distance:8.852m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:229.3V I:0.0559A P:10.98W PF:0.8562 Lamp Flux:936.489x1 lm		
NAME: 筒灯12W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

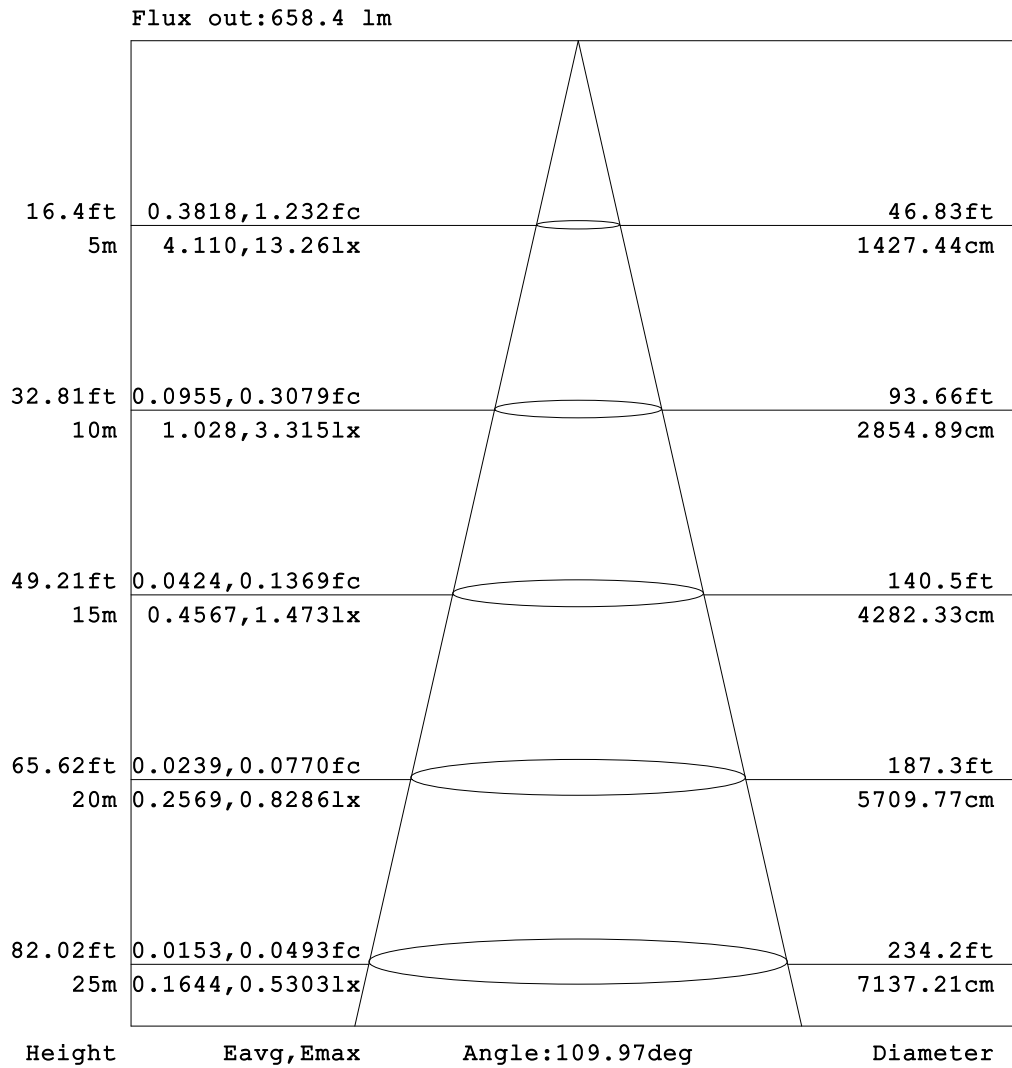


C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2021-08-31

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:55.0%
 Test Distance:8.852m [K=1.0000]
 Remarks:

AAI Figure

Test:U:229.3V I:0.0559A P:10.98W PF:0.8562 Lamp Flux:936.489x1 lm		
NAME: 筒灯12W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



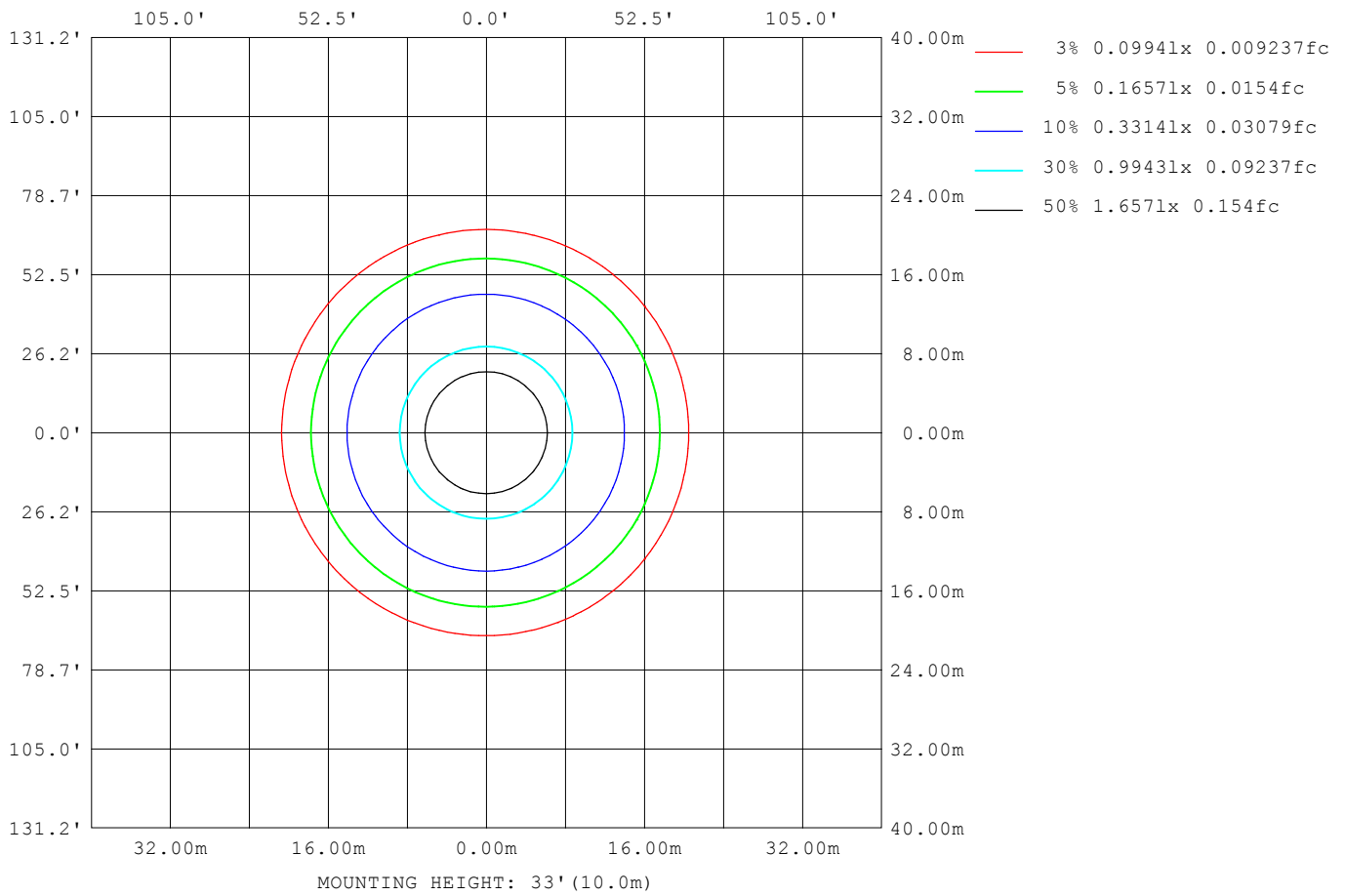
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2021-08-31

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:55.0%
 Test Distance:8.852m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

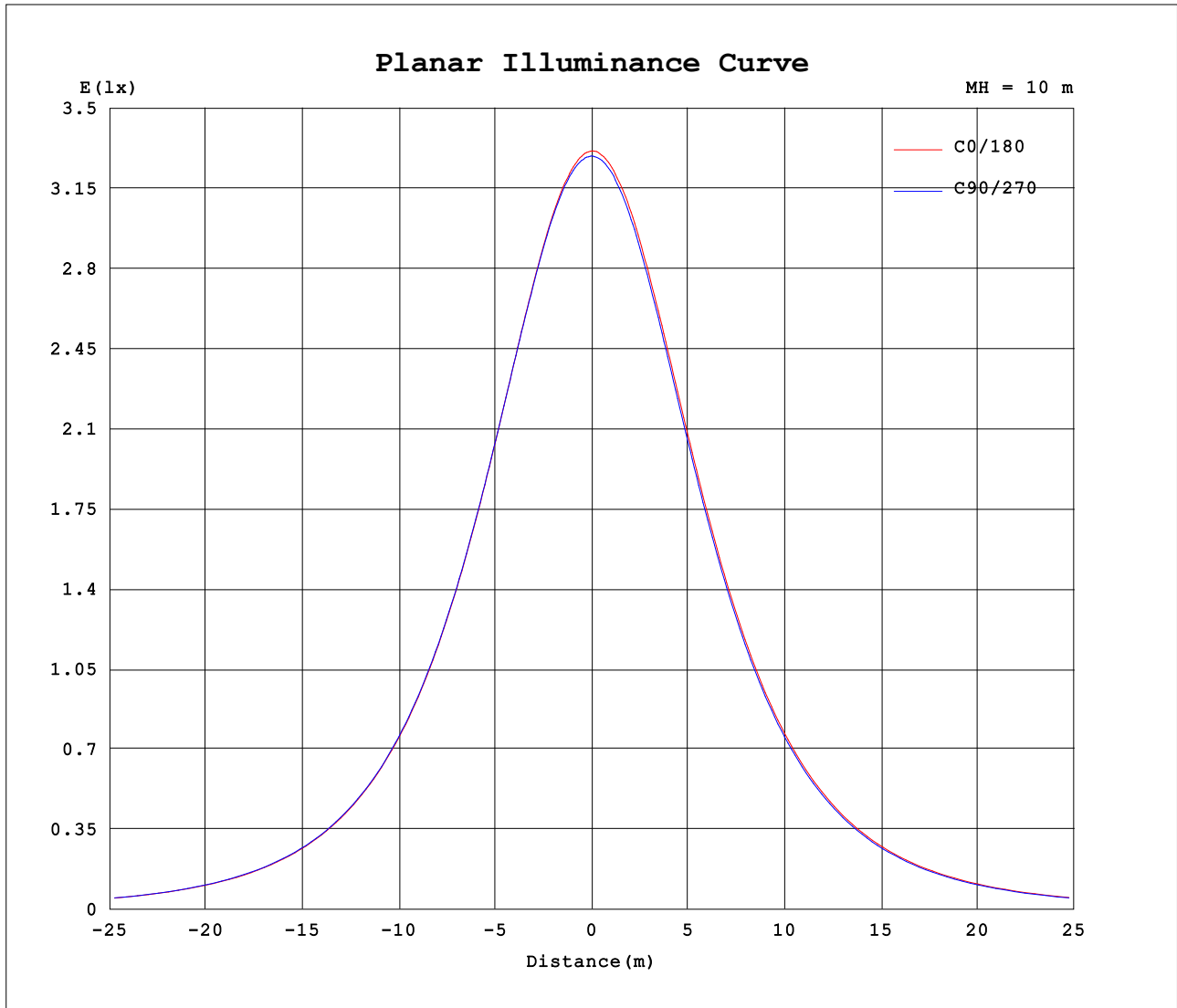
Test:U:229.3V I:0.0559A P:10.98W PF:0.8562 Lamp Flux:936.489x1 lm		
NAME: 筒灯12W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2021-08-31

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:55.0%
 Test Distance:8.852m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2021-08-31

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity: 55.0%
 Test Distance: 8.852m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:229.3V I:0.0559A P:10.98W PF:0.8562 Lamp Flux:936.489x1 lm		
NAME: 筒灯12W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C (DEG) \ γ (DEG)	0	90	180	270															
0	331	329	331	329															
5	329	328	330	328															
10	324	323	326	323															
15	316	315	318	315															
20	304	304	307	304															
25	291	291	294	290															
30	274	275	278	274															
35	256	256	260	256															
40	235	236	240	236															
45	213	214	218	214															
50	189	191	194	190															
55	164	166	170	166															
60	138	140	144	140															
65	112	113	117	113															
70	85.0	86.5	90.5	86.8															
75	59.2	60.4	64.4	60.9															
80	35.1	36.4	39.9	36.7															
85	13.0	15.2	17.3	15.2															
90	0.56	0.56	0.50	0.49															
95	0.70	0.72	0.63	0.59															
100	0.91	0.93	0.82	0.78															
105	1.13	1.16	1.03	1.00															
110	1.40	1.41	1.27	1.24															
115	1.65	1.67	1.52	1.50															
120	1.90	1.91	1.77	1.73															
125	2.17	2.18	2.02	1.99															
130	2.44	2.45	2.28	2.25															
135	2.68	2.70	2.53	2.50															
140	2.92	2.93	2.78	2.72															
145	3.12	3.15	3.00	2.95															
150	3.31	3.35	3.22	3.17															
155	3.50	3.52	3.41	3.35															
160	3.64	3.68	3.58	3.52															
165	3.77	3.81	3.74	3.68															
170	3.89	3.92	3.88	3.83															
175	3.97	4.01	4.00	3.90															
180	4.04	4.03	4.04	3.98															

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2021-08-31

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:55.0%
 Test Distance:8.852m [K=1.0000]
 Remarks: