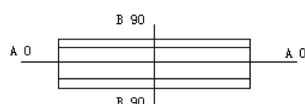
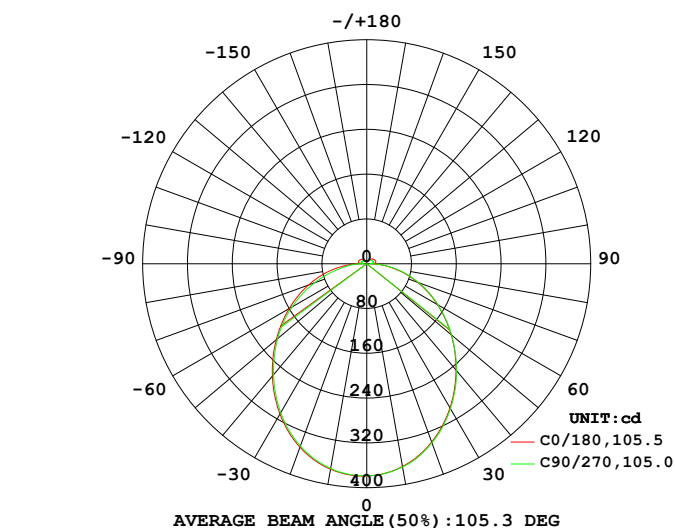


## LUMINAIRE PHOTOMETRIC TEST REPORT

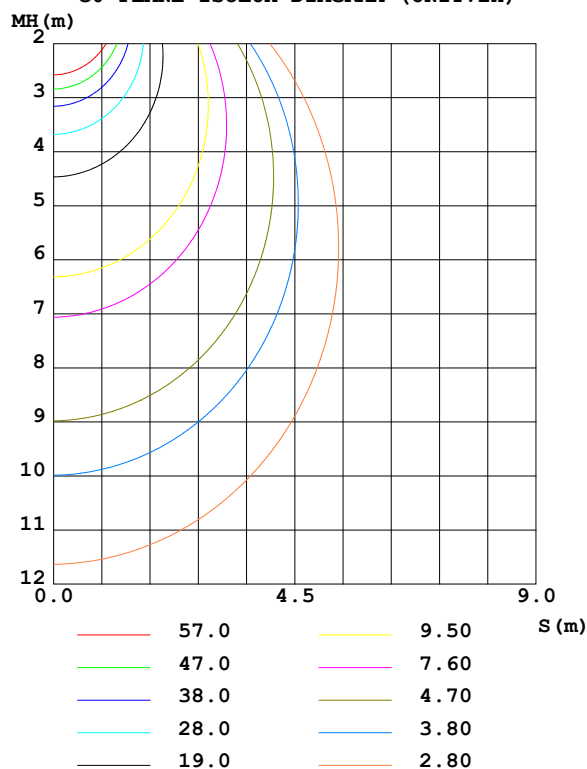
Test:U:220.10V I:0.1769A P:37.957W PF:0.9747 Freq:50.00Hz Lamp Flux:1102.02x1 lm		
NAME: 2061-U	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	

DATA OF LAMP		PHOTOMETRIC DATA Eff: 29.03 lm/W			
MODEL		Imax (cd)	379.2	S/MH (C0/180)	1.22
NOMINAL POWER(W)		LOR (%)	100.0	S/MH (C90/270)	1.21
RATED VOLTAGE (V)	--	TOTAL FLUX(lm)	1102.0	$\eta$ UP,DN (C0-180)	3.2,46.5
NOMINAL FLUX(lm)	1102.02	CIE CLASS	DIRECT	$\eta$ UP,DN (C180-360)	2.8,47.6
LAMPS INSIDE	1	$\eta$ up (%)	5.9	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	--	$\eta$ down (%)	94.1	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: 10.0deg/s  
Temperature: 25.3°C  
Operators:  
Test Date: 2023-09-27

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
Humidity: 65.0%  
Test Distance: 9.000m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	367.6	367.5	368.5	369.8	372.7	372.6	371.3	369.4	0~ 10	35.73	35.73	3.24, 3.24
20	339.0	338.7	340.4	343.6	348.7	348.6	346.5	342.9	10~ 20	101.1	136.8	12.4, 12.4
30	297.3	296.9	299.1	303.5	310.1	310.1	307.2	302.8	20~ 30	149.6	286.4	26, 26
40	248.1	247.8	249.6	254.8	262.2	262.3	259.0	254.3	30~ 40	174.9	461.3	41.9, 41.9
50	196.7	196.6	197.6	203.6	210.9	210.9	207.4	202.8	40~ 50	176.9	638.2	57.9, 57.9
60	145.8	145.8	147.0	152.8	159.7	158.9	154.0	151.2	50~ 60	158.8	797.0	72.3, 72.3
70	96.64	96.90	98.62	103.4	110.3	106.2	98.93	99.12	60~ 70	125.2	922.1	83.7, 83.7
80	49.26	50.02	51.96	56.29	62.57	53.14	47.19	47.09	70~ 80	80.83	1003	91, 91
90	10.26	7.706	5.920	8.849	18.49	13.51	9.610	8.531	80~ 90	33.53	1036	94.1, 94.1
100	16.52	14.61	12.68	13.39	15.15	11.73	9.022	12.39	90~100	11.00	1047	95.1, 95.1
110	16.57	15.08	12.24	14.01	15.42	12.45	9.602	13.15	100~110	14.22	1062	96.3, 96.3
120	15.26	14.11	11.66	12.96	14.10	11.32	9.425	12.25	110~120	12.95	1075	97.5, 97.5
130	13.38	11.81	10.61	11.01	12.23	9.470	8.388	9.981	120~130	10.47	1085	98.5, 98.5
140	10.28	10.14	8.791	8.244	9.248	7.233	7.065	8.252	130~140	7.541	1093	99.2, 99.2
150	7.162	8.106	6.868	6.626	6.599	6.124	5.308	6.731	140~150	4.813	1097	99.6, 99.6
160	5.920	5.974	5.457	5.019	4.938	4.800	4.529	5.262	150~160	2.761	1100	99.8, 99.8
170	5.314	5.047	4.958	4.397	3.983	4.019	4.058	4.665	160~170	1.367	1102	100, 100
180	3.946	3.685	3.817	3.869	3.947	3.689	3.823	3.878	170~180	0.4078	1102	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 550.85 lm

%lum = 50.0%

%lamp = 50.0%

Conical surface Flux(120deg): 796.98 lm

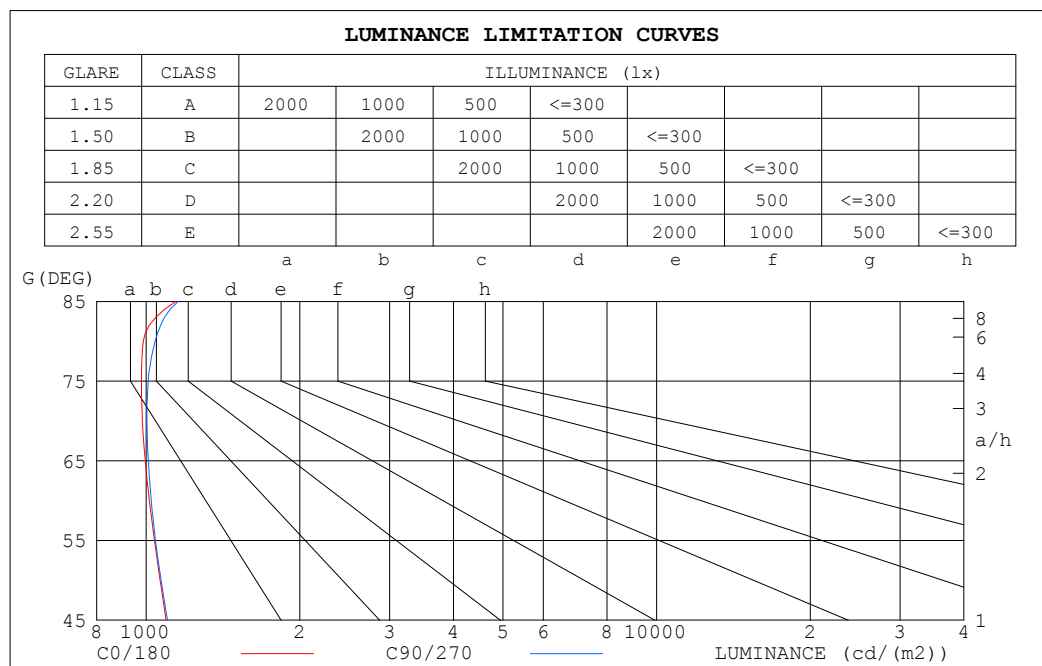
%lum = 72.3%

%lamp = 72.3%

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: 10.0deg/s  
 Temperature:25.3°C  
 Operators:  
 Test Date:2023-09-27

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity:65.0%  
 Test Distance:9.000m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

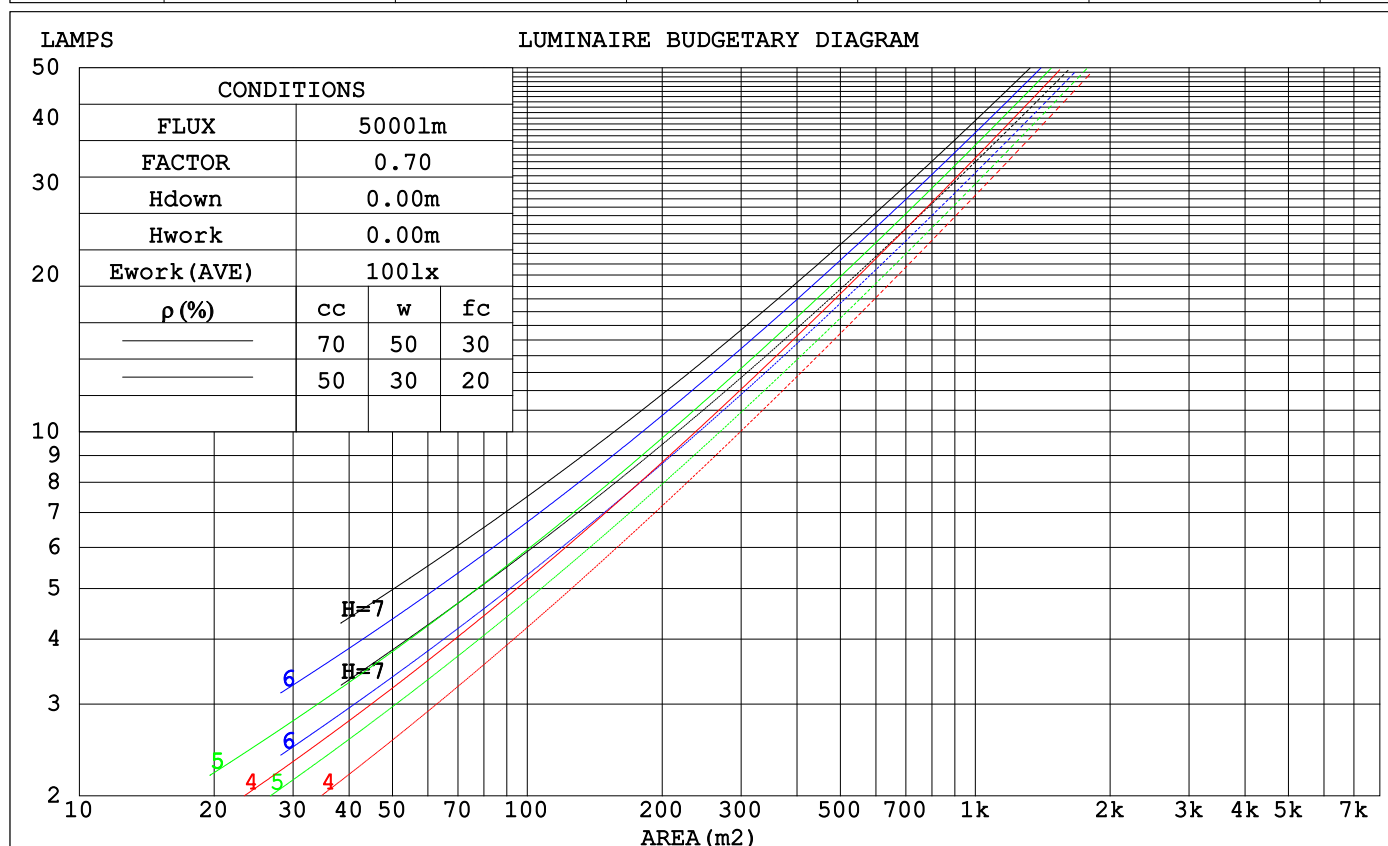


C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: 10.0deg/s  
Temperature: 25.3°C  
Operators:  
Test Date: 2023-09-27

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
Humidity: 65.0%  
Test Distance: 9.000m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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	1.18	1.18	1.18	1.14	1.14	1.14	1.08	1.08	1.08	1.02	1.02	1.02	.97	.97	.97	.94
1.0	1.02	.97	.93	.99	.95	.91	.94	.90	.87	.89	.86	.84	.84	.82	.80	.78
2.0	.89	.82	.76	.86	.80	.74	.82	.76	.72	.77	.73	.69	.74	.70	.67	.64
3.0	.78	.69	.63	.76	.68	.62	.72	.65	.60	.68	.63	.58	.65	.60	.57	.54
4.0	.69	.60	.53	.67	.59	.53	.64	.57	.51	.61	.55	.50	.58	.53	.49	.46
5.0	.62	.53	.46	.60	.52	.45	.57	.50	.44	.55	.48	.43	.52	.47	.42	.40
6.0	.55	.46	.40	.54	.46	.40	.52	.44	.39	.49	.43	.38	.47	.42	.37	.35
7.0	.50	.42	.35	.49	.41	.35	.47	.40	.34	.45	.39	.34	.43	.38	.33	.31
8.0	.46	.37	.32	.45	.37	.31	.43	.36	.31	.41	.35	.30	.40	.34	.30	.28
9.0	.42	.34	.28	.41	.34	.28	.40	.33	.28	.38	.32	.27	.37	.31	.27	.25
10.0	.39	.31	.26	.38	.31	.26	.37	.30	.25	.35	.29	.25	.34	.29	.24	.23



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: 10.0deg/s  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 2023-09-27

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity: 65.0%  
 Test Distance: 9.000m [K=1.0000]  
 Remarks:

## WEC AND CCEC

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	.322	.183	.058	.313	.178	.057	.296	.170	.054	.281	.162	.052	.266	.154	.050	
2.0	.296	.162	.050	.288	.159	.049	.273	.152	.047	.260	.146	.046	.247	.140	.044	
3.0	.271	.144	.043	.264	.142	.043	.251	.136	.041	.239	.131	.040	.227	.126	.039	
4.0	.249	.129	.038	.243	.127	.038	.231	.122	.037	.220	.118	.036	.210	.114	.035	
5.0	.229	.117	.034	.224	.115	.033	.213	.111	.033	.203	.107	.032	.194	.104	.031	
6.0	.212	.106	.030	.207	.105	.030	.198	.101	.029	.189	.098	.029	.180	.095	.028	
7.0	.197	.098	.028	.193	.096	.027	.184	.093	.027	.176	.090	.026	.168	.087	.026	
8.0	.184	.090	.025	.180	.089	.025	.172	.086	.025	.165	.083	.024	.158	.081	.024	
9.0	.172	.083	.023	.169	.082	.023	.161	.080	.023	.155	.078	.022	.148	.075	.022	
10.0	.162	.078	.022	.159	.077	.021	.152	.074	.021	.146	.072	.021	.140	.070	.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	.236	.236	.236	.202	.202	.202	.138	.138	.138	.079	.079	.079	.025	.025	.025		
1.0	.227	.202	.179	.194	.173	.154	.133	.119	.107	.076	.069	.062	.024	.022	.020		
2.0	.219	.178	.143	.187	.153	.124	.128	.106	.087	.074	.062	.051	.024	.020	.017		
3.0	.211	.161	.120	.181	.138	.104	.124	.096	.073	.072	.056	.043	.023	.018	.014		
4.0	.203	.147	.105	.174	.127	.091	.120	.089	.064	.069	.052	.038	.022	.017	.012		
5.0	.196	.137	.094	.168	.119	.082	.116	.083	.058	.067	.049	.034	.022	.016	.011		
6.0	.189	.129	.086	.162	.112	.075	.112	.078	.053	.065	.046	.032	.021	.015	.010		
7.0	.182	.122	.080	.156	.106	.070	.108	.074	.050	.063	.044	.030	.020	.014	.010		
8.0	.175	.116	.076	.151	.101	.066	.104	.071	.047	.061	.042	.028	.020	.014	.009		
9.0	.169	.111	.072	.146	.097	.063	.101	.068	.045	.059	.040	.027	.019	.013	.009		
10.0	.164	.107	.070	.141	.093	.061	.098	.065	.043	.057	.039	.026	.018	.013	.009		

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: 10.0deg/s  
Temperature:25.3℃  
Operators:  
Test Date:2023-09-27

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
Humidity:65.0%  
Test Distance:9.000m [K=1.0000]  
Remarks:

UGR(Unified Glare Rating) Table

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	12.4	13.9	12.8	14.2	14.5	12.5	13.9	12.8	14.2	14.5
3H	14.1	15.4	14.4	15.7	16.1	14.1	15.4	14.5	15.8	16.1
4H	14.8	16.1	15.2	16.4	16.8	14.9	16.1	15.3	16.5	16.9
6H	15.4	16.6	15.8	17.0	17.4	15.5	16.7	15.9	17.1	17.5
8H	15.7	16.8	16.1	17.2	17.6	15.8	16.9	16.2	17.3	17.7
12H	15.9	17.0	16.3	17.4	17.8	16.0	17.1	16.4	17.5	17.9
4H 2H	13.0	14.3	13.4	14.7	15.0	13.1	14.3	13.5	14.7	15.1
3H	14.9	16.0	15.3	16.4	16.8	14.9	16.0	15.3	16.4	16.8
4H	15.8	16.8	16.2	17.2	17.6	15.8	16.8	16.3	17.2	17.7
6H	16.5	17.4	17.0	17.9	18.4	16.6	17.5	17.1	18.0	18.5
8H	16.8	17.7	17.3	18.1	18.7	16.9	17.8	17.4	18.3	18.8
12H	17.1	17.9	17.6	18.4	18.9	17.2	18.0	17.8	18.5	19.0
8H 4H	16.1	16.9	16.6	17.4	17.9	16.1	17.0	16.6	17.4	17.9
6H	17.0	17.7	17.6	18.2	18.8	17.1	17.8	17.6	18.3	18.9
8H	17.5	18.1	18.0	18.6	19.2	17.6	18.2	18.1	18.7	19.3
12H	17.9	18.4	18.4	19.0	19.6	18.0	18.5	18.6	19.1	19.7
12H 4H	16.1	16.9	16.6	17.4	17.9	16.2	16.9	16.7	17.4	17.9
6H	17.1	17.8	17.7	18.3	18.9	17.2	17.8	17.8	18.4	18.9
8H	17.6	18.2	18.2	18.7	19.3	17.7	18.3	18.3	18.8	19.4
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.1 / - 0.3					+ 0.1 / - 0.3				

CIE Pub.117, 1102 lm Total Lamp Luminous Flux Corrected ( $8\log(F/F_0) = 0.3$ )  
Area: 0.2873 m<sup>2</sup>

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: 10.0deg/s  
Temperature:25.3°C  
Operators:  
Test Date:2023-09-27

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
Humidity:65.0%  
Test Distance:9.000m [K=1.0000]  
Remarks:

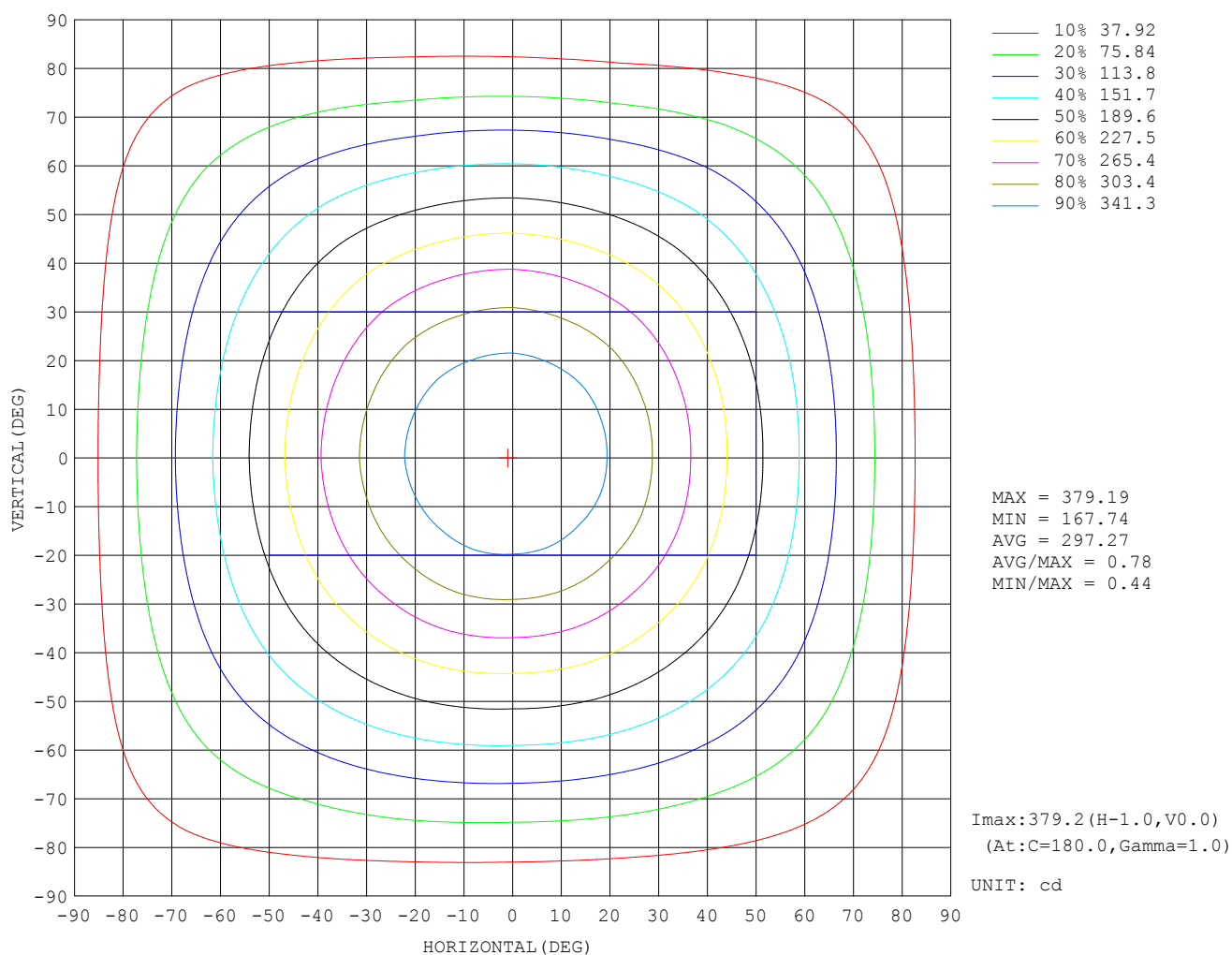
## UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	56	44	37	55	44	37	54	43	37	30
0.80	66	54	46	64	53	46	62	52	46	38
1.00	74	62	55	72	62	54	69	63	54	46
1.25	81	70	62	79	69	62	76	67	61	53
1.50	86	75	68	84	74	67	80	72	66	57
2.00	92	83	77	90	82	76	86	79	74	65
2.50	96	88	82	94	86	81	89	83	78	68
3.00	100	92	87	97	90	85	92	87	82	72
4.00	104	98	93	101	96	91	96	91	88	77
5.00	106	101	97	103	99	95	98	94	91	80
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: 10.0deg/s  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 2023-09-27

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity: 65.0%  
 Test Distance: 9.000m [K=1.0000]  
 Remarks:

## ISOCANDELA DIAGRAM

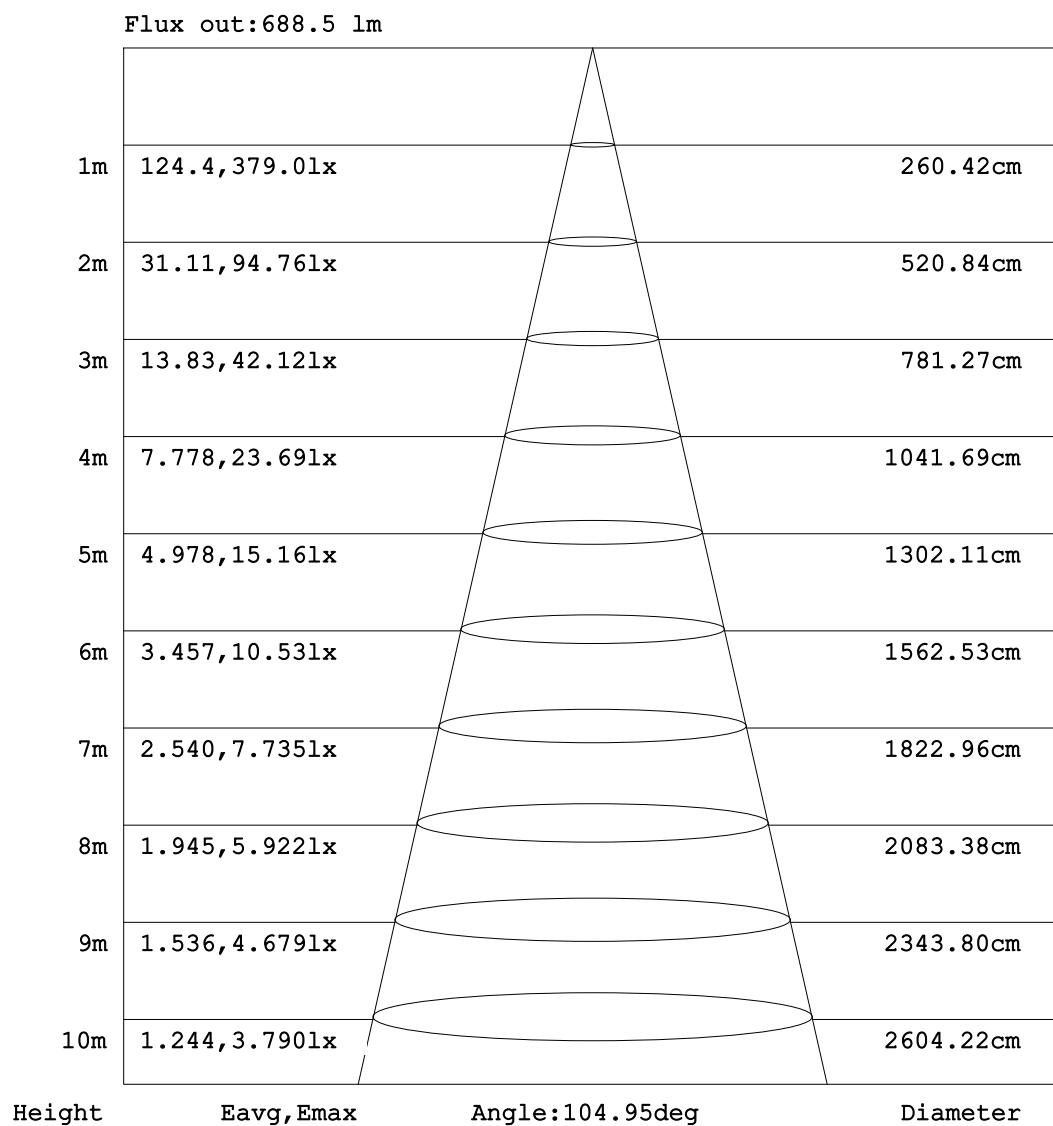


C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: 10.0deg/s  
Temperature: 25.3°C  
Operators:  
Test Date: 2023-09-27

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
Humidity: 65.0%  
Test Distance: 9.000m [K=1.0000]  
Remarks:



## AAI Figure

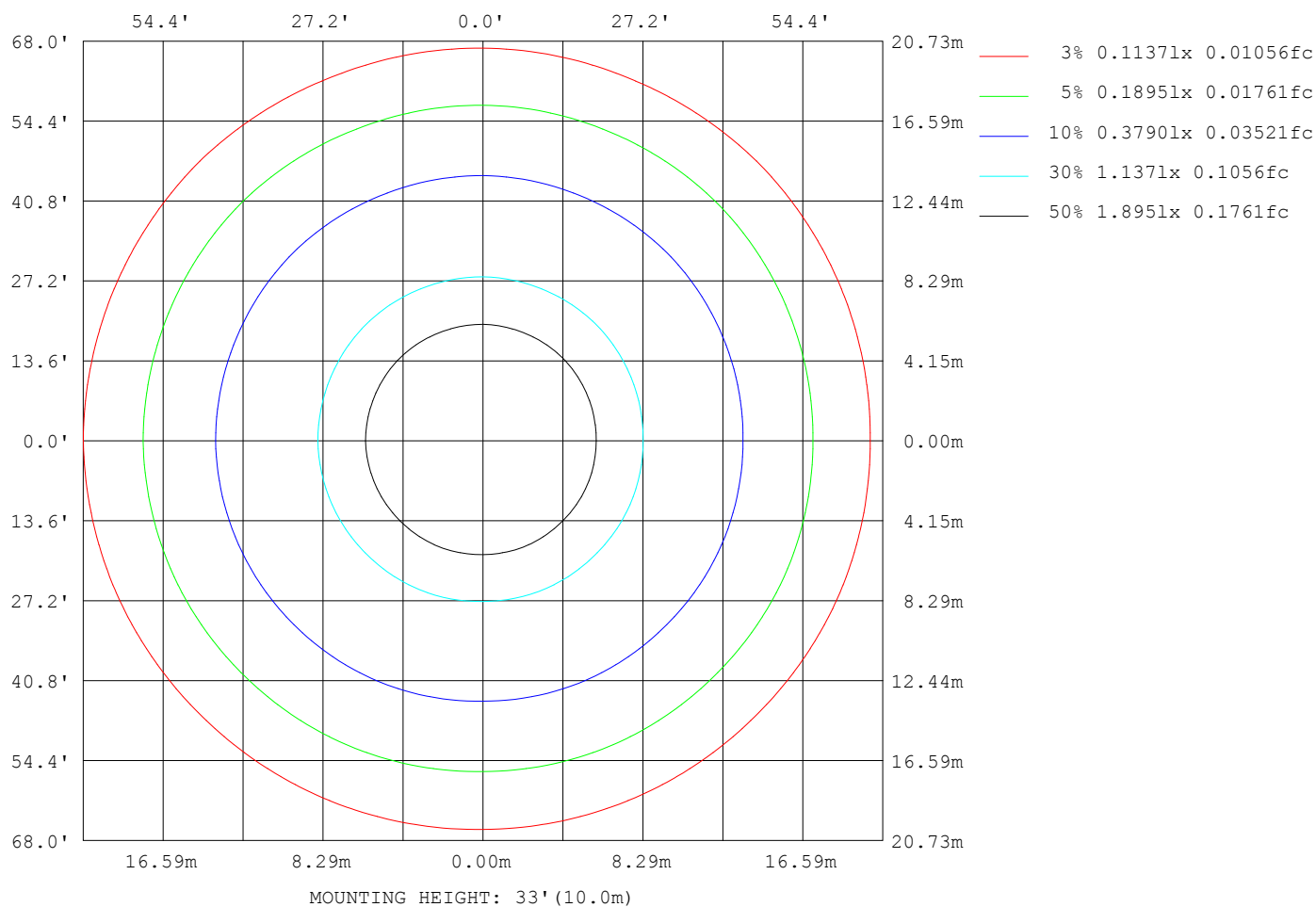


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: 10.0deg/s  
Temperature:25.3℃  
Operators:  
Test Date:2023-09-27

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
Humidity:65.0%  
Test Distance:9.000m [K=1.0000]  
Remarks:

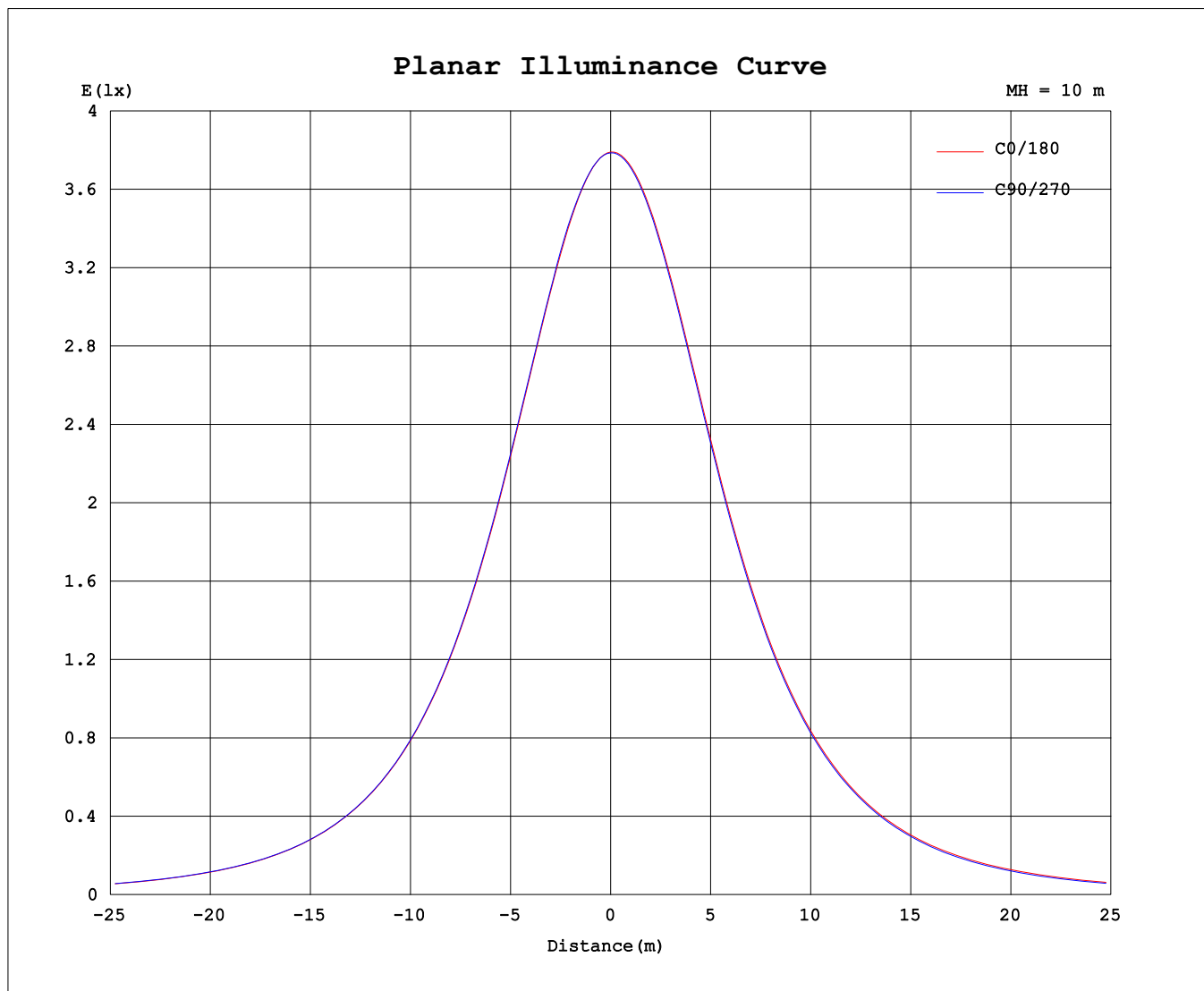
## ISOLUX DIAGRAM



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: 10.0deg/s  
Temperature: 25.3°C  
Operators:  
Test Date: 2023-09-27

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
Humidity: 65.0%  
Test Distance: 9.000m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: 10.0deg/s  
Temperature: 25.3°C  
Operators:  
Test Date: 2023-09-27

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
Humidity: 65.0%  
Test Distance: 9.000m [K=1.0000]  
Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	379	379	379	379	379	379	378	378	379	379	379	379	379	379	378	378			
5	376	376	375	376	376	376	376	377	378	378	378	377	377	377	376	375			
10	368	368	367	368	369	369	370	371	373	372	373	372	371	370	369	368			
15	355	355	355	356	357	358	359	361	363	363	363	362	361	359	358	356			
20	339	339	339	340	340	343	344	346	349	348	349	347	346	344	343	340			
25	319	320	319	321	321	324	325	328	331	330	331	329	328	326	324	321			
30	297	298	297	299	299	302	303	307	310	310	310	308	307	304	303	299			
35	273	274	273	275	275	278	280	283	287	287	287	285	284	281	279	276			
40	248	249	248	249	250	253	255	258	262	262	262	260	259	256	254	251			
45	222	223	222	224	224	227	229	233	237	236	237	234	234	230	229	225			
50	197	197	197	198	198	201	204	207	211	211	211	208	207	204	203	199			
55	171	172	171	172	172	176	178	182	185	185	185	182	181	178	177	174			
60	146	147	146	147	147	150	153	157	160	159	159	155	154	151	151	148			
65	121	122	121	122	123	125	128	132	135	134	133	128	127	125	125	123			
70	96.6	97.6	96.9	97.5	98.6	102	103	107	110	109	106	100	98.9	97.4	99.1	98.4			
75	72.9	73.9	73.2	74.7	75.1	78.1	79.1	83.6	86.3	84.4	79.8	73.3	71.9	70.4	73.4	74.4			
80	49.3	49.9	50.0	50.4	52.0	53.5	56.3	60.1	62.6	59.6	53.1	49.6	47.2	45.6	47.1	51.0			
85	28.6	26.8	27.6	27.8	28.9	31.0	33.8	37.1	38.7	36.4	33.0	29.9	28.3	26.4	26.8	28.4			
90	10.3	9.34	7.71	6.21	5.92	6.15	8.85	15.4	18.5	17.4	13.5	10.4	9.61	8.03	8.53	9.66			
95	14.7	14.3	12.1	9.39	7.11	8.69	10.5	10.8	10.2	9.14	7.15	5.42	4.90	5.74	10.0	13.4			
100	16.5	15.9	14.6	12.6	12.7	12.0	13.4	14.8	15.1	14.1	11.7	9.16	9.02	9.25	12.4	15.2			
105	16.8	16.5	15.1	13.4	12.6	12.6	14.1	15.3	15.5	14.6	12.5	9.45	8.96	9.89	13.2	15.6			
110	16.6	16.4	15.1	13.6	12.2	12.7	14.0	15.2	15.4	14.5	12.5	9.87	9.60	9.63	13.2	15.5			
115	16.0	15.9	14.7	12.6	12.0	12.4	13.6	14.7	14.9	14.1	12.0	9.36	9.85	10.1	12.9	15.1			
120	15.3	15.2	14.1	11.2	11.7	10.8	13.0	14.0	14.1	13.4	11.3	8.48	9.43	8.85	12.3	14.5			
125	14.4	14.4	13.4	11.4	11.2	10.4	12.2	13.1	13.2	12.5	10.8	8.61	8.98	8.71	10.9	13.6			
130	13.4	13.5	11.8	10.8	10.6	9.94	11.0	12.1	12.2	11.6	9.47	8.23	8.39	8.45	9.98	12.2			
135	12.4	12.5	10.3	10.3	9.99	8.90	8.89	10.7	10.5	10.1	7.47	7.31	7.71	8.12	8.56	11.4			
140	10.3	9.90	10.1	9.39	8.79	8.33	8.24	8.30	9.25	8.12	7.23	6.90	7.07	7.17	8.25	9.10			
145	8.22	8.58	9.12	8.55	8.16	7.76	7.52	7.64	7.59	7.33	7.06	6.39	6.50	6.42	7.18	7.47			
150	7.16	7.98	8.11	7.48	6.87	6.40	6.63	6.68	6.60	6.24	6.12	5.54	5.31	6.01	6.73	7.07			
155	6.57	7.12	6.97	6.35	6.00	5.91	5.68	5.77	5.71	5.44	5.35	5.03	5.02	5.27	5.97	6.27			
160	5.92	6.27	5.97	5.54	5.46	5.35	5.02	5.21	4.94	4.78	4.80	4.51	4.53	4.69	5.26	5.68			
165	5.44	5.62	5.22	4.98	4.98	4.77	4.57	4.59	4.26	4.24	4.32	4.11	4.03	4.16	4.64	5.12			
170	5.31	5.37	5.05	4.87	4.96	4.85	4.40	4.44	3.98	3.89	4.02	4.05	4.06	4.23	4.67	5.05			
175	4.83	4.73	4.53	4.56	4.44	4.05	3.96	3.95	3.77	3.62	3.65	3.64	3.67	3.85	4.18	4.51			
180	3.95	3.66	3.69	3.79	3.82	3.82	3.87	3.80	3.95	3.66	3.69	3.78	3.82	3.82	3.88	3.80			

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: 10.0deg/s  
Temperature:25.3℃  
Operators:  
Test Date:2023-09-27

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
Humidity:65.0%  
Test Distance:9.000m [K=1.0000]  
Remarks: