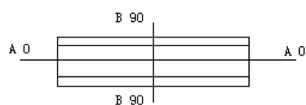
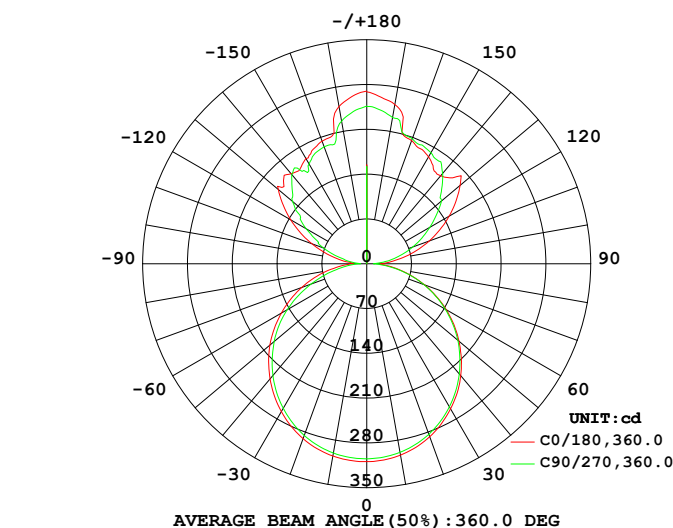


LUMINAIRE PHOTOMETRIC TEST REPORT

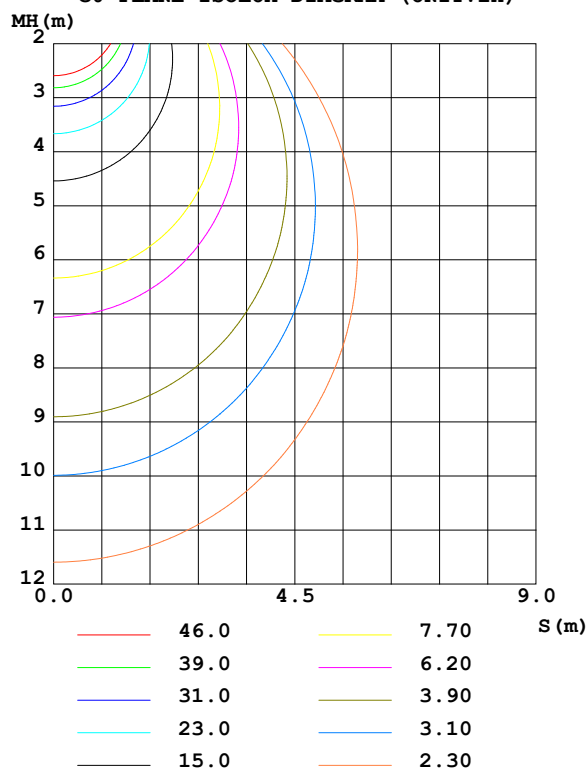
Test:U:220.07V I:0.1746A P:30.564W PF:0.7954 Freq:50.00Hz		
Lamp Flux:1655.45x1 lm		
NAME: SB-U101 A30WSZ 30W		WEIGHT:
TYPE: SPEC.: 4000K	DIM.: 23.62"	SERIAL No.:
MFR.: SNOWBALL	SUR.: 600mm	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 54.16 lm/W
MODEL		I _{max} (cd)	309.3	S/MH (C0/180)	1.28	
NOMINAL POWER(W)		LOR (%)	100.0	S/MH (C90/270)	1.27	
RATED VOLTAGE (V)	--	TOTAL FLUX (lm)	1655.4	η UP,DN (C0-180)	22.4,28.1	
NOMINAL FLUX (lm)	1655.45	CIE CLASS	DIFFUSE	η UP,DN (C180-360)	21.1,28.4	
LAMPS INSIDE	1	η up (%)	43.6	CIBSE SHR NOM	1.25	
TEST VOLTAGE (V)	--	η down (%)	56.4	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: DAMIN
Test Date: 2023-09-20

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:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	303.6	301.5	299.2	297.1	305.1	303.1	300.3	297.3	0~ 10	28.91	28.91	1.75,1.75
20	287.6	285.4	283.6	281.9	290.9	288.1	285.6	282.4	10~ 20	82.98	111.9	6.76,6.76
30	261.9	259.8	258.3	257.3	266.9	263.9	260.9	257.7	20~ 30	126.2	238.1	14.4,14.4
40	228.5	226.5	224.9	225.4	235.0	231.7	228.1	225.8	30~ 40	153.3	391.4	23.6,23.6
50	188.2	186.5	185.9	187.8	197.4	194.3	188.7	186.4	40~ 50	161.2	552.6	33.4,33.4
60	143.3	141.7	141.5	145.1	154.1	150.2	143.3	142.8	50~ 60	149.8	702.3	42.4,42.4
70	95.67	94.08	94.80	98.85	108.0	102.4	92.08	94.41	60~ 70	120.1	822.4	49.7,49.7
80	49.91	48.22	47.10	54.09	61.70	52.40	44.55	45.63	70~ 80	77.60	900.0	54.4,54.4
90	23.16	18.14	10.89	17.75	24.76	18.72	11.79	15.40	80~ 90	34.35	934.4	56.4,56.4
100	58.30	44.40	40.53	39.02	47.67	37.85	34.26	42.66	90~100	29.32	963.7	58.2,58.2
110	103.6	84.11	76.28	78.10	90.90	73.33	71.77	72.84	100~110	63.92	1028	62.1,62.1
120	148.5	124.8	113.5	118.6	137.0	115.2	109.3	110.1	110~120	97.24	1125	67.9,67.9
130	190.4	133.8	152.6	133.5	180.5	130.7	151.4	122.2	120~130	122.2	1247	75.3,75.3
140	179.7	179.6	184.5	167.9	183.8	159.4	182.2	162.8	130~140	124.3	1371	82.8,82.8
150	193.1	192.1	200.6	177.9	190.1	171.2	180.1	181.3	140~150	113.9	1485	89.7,89.7
160	204.8	203.3	208.2	187.1	204.0	175.6	194.5	194.3	150~160	88.18	1573	95,95
170	252.8	242.8	232.2	216.0	249.6	229.9	226.2	236.2	160~170	58.88	1632	98.6,98.6
180	268.7	251.7	245.5	247.7	269.8	252.7	246.5	246.8	170~180	23.20	1655	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 472.2 lm

%lum = 28.5%

%lamp = 28.5%

Conical surface Flux(120deg): 702.33 lm

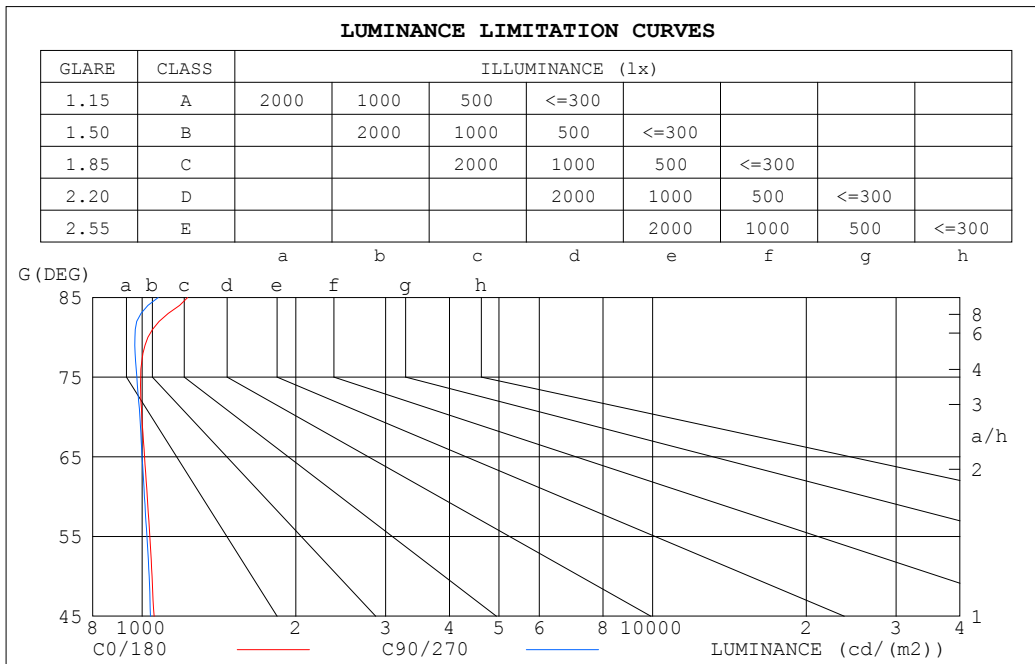
%lum = 42.4%

%lamp = 42.4%

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: 10.0deg/s
 Temperature:25.3℃
 Operators:DAMIN
 Test Date:2023-09-20

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:

LUMINANCE LIMITATION CURVES



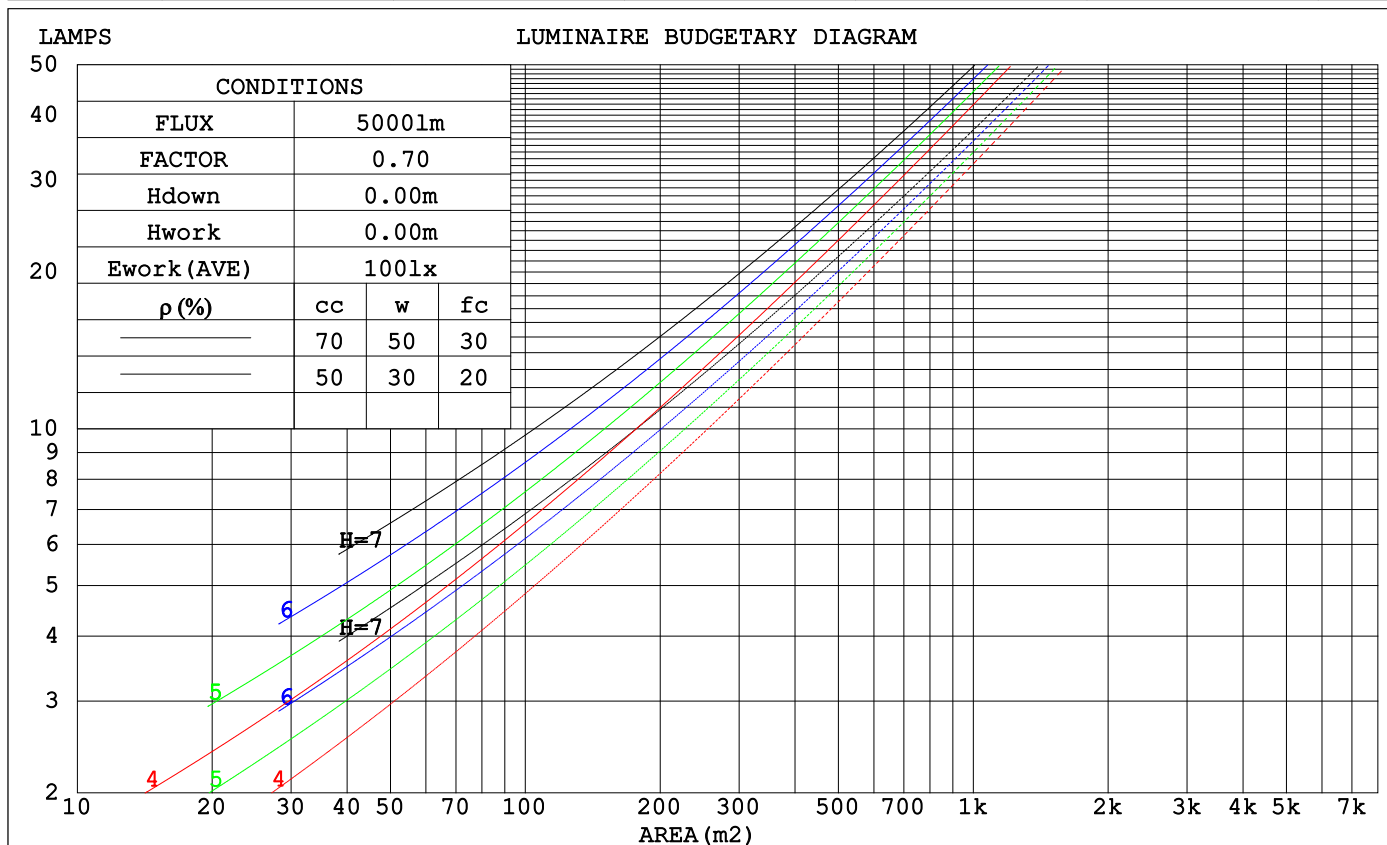
LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1228	1075
80	1026	969
75	994	977
70	999	990
65	1012	1000
60	1023	1011
55	1036	1022
50	1046	1033
45	1056	1038

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: 10.0deg/s
Temperature:25.3°C
Operators:DAMIN
Test Date:2023-09-20

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	1.09	1.09	1.09	1.01	1.01	1.01	.87	.87	.87	.74	.74	.74	.62	.62	.62	.56
1.0	.94	.90	.86	.87	.84	.80	.75	.72	.70	.64	.62	.60	.54	.52	.51	.46
2.0	.81	.75	.69	.76	.70	.65	.65	.61	.57	.56	.52	.50	.47	.44	.42	.38
3.0	.71	.64	.57	.66	.60	.54	.57	.52	.48	.49	.45	.41	.41	.38	.36	.32
4.0	.63	.55	.48	.59	.51	.46	.51	.45	.40	.43	.39	.35	.37	.33	.30	.27
5.0	.56	.47	.41	.52	.45	.39	.45	.39	.35	.39	.34	.30	.33	.29	.26	.23
6.0	.50	.42	.36	.47	.39	.34	.41	.35	.30	.35	.30	.26	.30	.26	.23	.20
7.0	.45	.37	.31	.42	.35	.30	.37	.31	.26	.32	.27	.23	.27	.23	.20	.18
8.0	.41	.33	.27	.38	.31	.26	.34	.28	.23	.29	.24	.21	.25	.21	.18	.16
9.0	.37	.30	.24	.35	.28	.23	.31	.25	.21	.27	.22	.19	.23	.19	.16	.14
10.0	.34	.27	.22	.32	.25	.21	.28	.23	.19	.25	.20	.17	.21	.17	.15	.13



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: 10.0deg/s
 Temperature: 25.3°C
 Operators: DAMIN
 Test Date: 2023-09-20

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:

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	.302	.172	.054	.282	.161	.051	.244	.140	.045	.209	.121	.039	.177	.103	.033	
2.0	.277	.152	.047	.259	.143	.044	.224	.125	.039	.193	.108	.034	.163	.092	.029	
3.0	.254	.135	.041	.237	.127	.038	.206	.112	.034	.177	.097	.030	.150	.083	.026	
4.0	.234	.121	.036	.218	.114	.034	.189	.100	.030	.163	.087	.026	.138	.075	.023	
5.0	.216	.110	.032	.202	.103	.030	.175	.091	.027	.150	.079	.024	.127	.068	.020	
6.0	.200	.100	.029	.187	.094	.027	.162	.083	.024	.140	.073	.021	.118	.062	.018	
7.0	.186	.092	.026	.174	.087	.025	.151	.077	.022	.130	.067	.019	.110	.057	.017	
8.0	.174	.085	.024	.163	.080	.023	.142	.071	.020	.122	.062	.018	.103	.053	.015	
9.0	.163	.079	.022	.152	.074	.021	.133	.066	.019	.114	.057	.016	.097	.049	.014	
10.0	.153	.073	.020	.143	.069	.019	.125	.061	.017	.108	.054	.015	.091	.046	.013	

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	.522	.522	.522	.446	.446	.446	.305	.305	.305	.175	.175	.175	.056	.056	.056		
1.0	.514	.491	.470	.440	.421	.404	.301	.290	.280	.173	.168	.163	.056	.054	.053		
2.0	.507	.469	.437	.434	.404	.377	.298	.279	.263	.172	.162	.154	.055	.053	.050		
3.0	.500	.453	.415	.429	.391	.360	.294	.271	.253	.170	.158	.149	.055	.051	.049		
4.0	.493	.441	.401	.423	.381	.348	.291	.265	.245	.168	.155	.145	.054	.051	.048		
5.0	.486	.431	.391	.418	.373	.340	.288	.261	.240	.167	.153	.142	.054	.050	.047		
6.0	.480	.424	.383	.413	.367	.334	.285	.257	.236	.165	.151	.140	.053	.049	.046		
7.0	.474	.418	.378	.408	.362	.330	.282	.254	.234	.164	.150	.139	.053	.049	.046		
8.0	.468	.412	.374	.403	.358	.326	.279	.251	.231	.162	.148	.138	.052	.049	.046		
9.0	.462	.408	.371	.398	.354	.324	.276	.249	.230	.161	.147	.137	.052	.048	.045		
10.0	.457	.404	.369	.394	.351	.322	.273	.247	.228	.159	.146	.136	.052	.048	.045		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: 10.0deg/s
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2023-09-20

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	10.2	11.2	11.0	12.0	13.0	10.2	11.2	11.0	12.0	13.0
3H	11.8	12.8	12.7	13.6	14.6	11.8	12.7	12.6	13.5	14.5
4H	12.5	13.4	13.4	14.2	15.3	12.5	13.3	13.3	14.2	15.2
6H	13.1	13.9	14.0	14.8	15.9	13.0	13.8	13.9	14.7	15.7
8H	13.4	14.1	14.2	15.0	16.1	13.2	14.0	14.1	14.8	15.9
12H	13.6	14.3	14.5	15.2	16.3	13.4	14.1	14.3	15.0	16.1
4H 2H	10.7	11.6	11.6	12.4	13.5	10.7	11.5	11.5	12.4	13.4
3H	12.5	13.2	13.4	14.1	15.2	12.4	13.2	13.3	14.1	15.2
4H	13.3	14.0	14.2	14.9	16.0	13.3	13.9	14.2	14.8	16.0
6H	14.1	14.6	15.0	15.6	16.7	13.9	14.5	14.9	15.4	16.6
8H	14.4	14.9	15.3	15.8	17.0	14.2	14.7	15.1	15.7	16.8
12H	14.7	15.2	15.6	16.1	17.3	14.4	14.9	15.4	15.9	17.1
8H 4H	13.6	14.1	14.5	15.0	16.2	13.5	14.0	14.4	15.0	16.1
6H	14.5	14.9	15.4	15.9	17.1	14.3	14.8	15.3	15.7	16.9
8H	14.9	15.3	15.9	16.3	17.5	14.7	15.1	15.7	16.1	17.3
12H	15.3	15.7	16.3	16.6	17.9	15.1	15.4	16.0	16.4	17.6
12H 4H	13.5	14.0	14.5	15.0	16.2	13.5	14.0	14.4	14.9	16.1
6H	14.5	14.9	15.5	15.9	17.1	14.4	14.8	15.4	15.7	17.0
8H	15.0	15.4	16.0	16.3	17.6	14.8	15.2	15.8	16.1	17.4
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, 1655 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 1.8$)
Area: 0.28 m²

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: 10.0deg/s
Temperature:25.3°C
Operators:DAMIN
Test Date:2023-09-20

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:

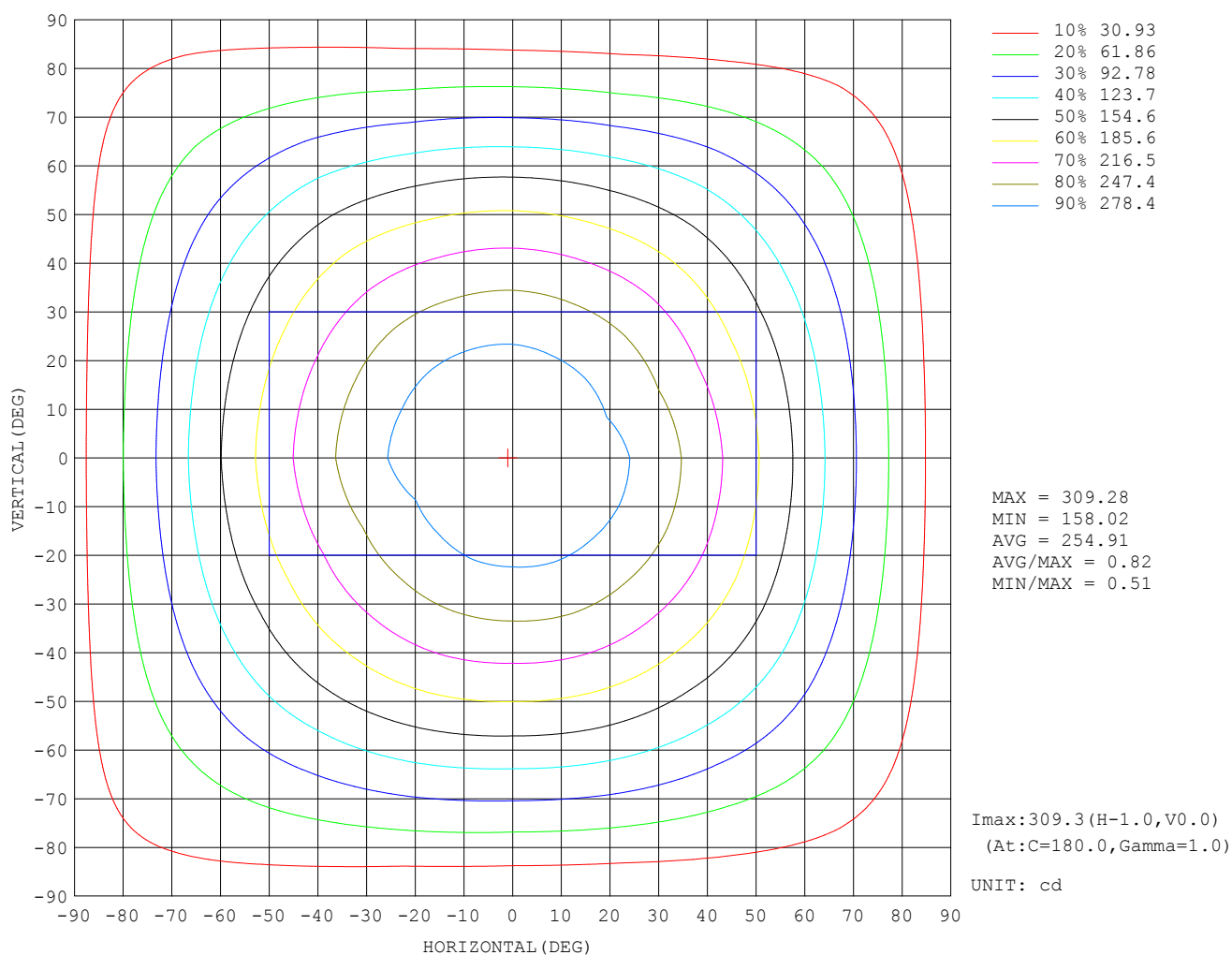
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	45	33	27	42	32	26	39	30	24	17
0.80	54	42	35	51	40	34	46	37	31	22
1.00	62	50	42	58	48	41	52	45	38	26
1.25	69	57	50	65	55	48	57	49	44	31
1.50	74	63	55	69	60	53	61	54	48	33
2.00	81	71	64	76	67	61	66	60	55	38
2.50	86	77	70	80	72	66	70	64	59	40
3.00	89	81	75	83	76	71	72	67	63	43
4.00	94	87	81	87	82	77	76	71	68	46
5.00	96	91	86	90	85	81	78	74	71	47
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: DAMIN
 Test Date: 2023-09-20

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:

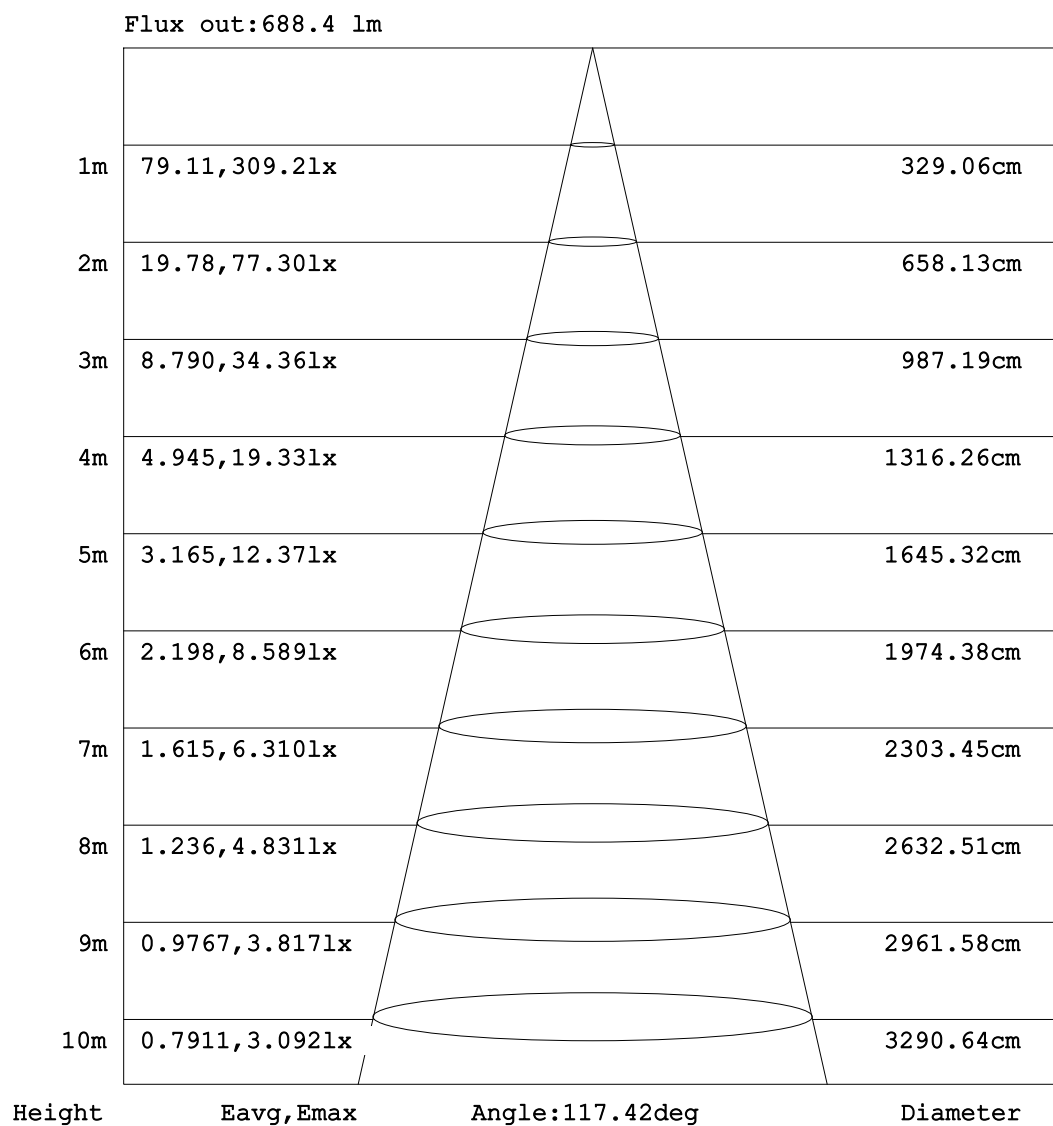
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: 10.0deg/s
Temperature:25.3°C
Operators:DAMIN
Test Date:2023-09-20

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

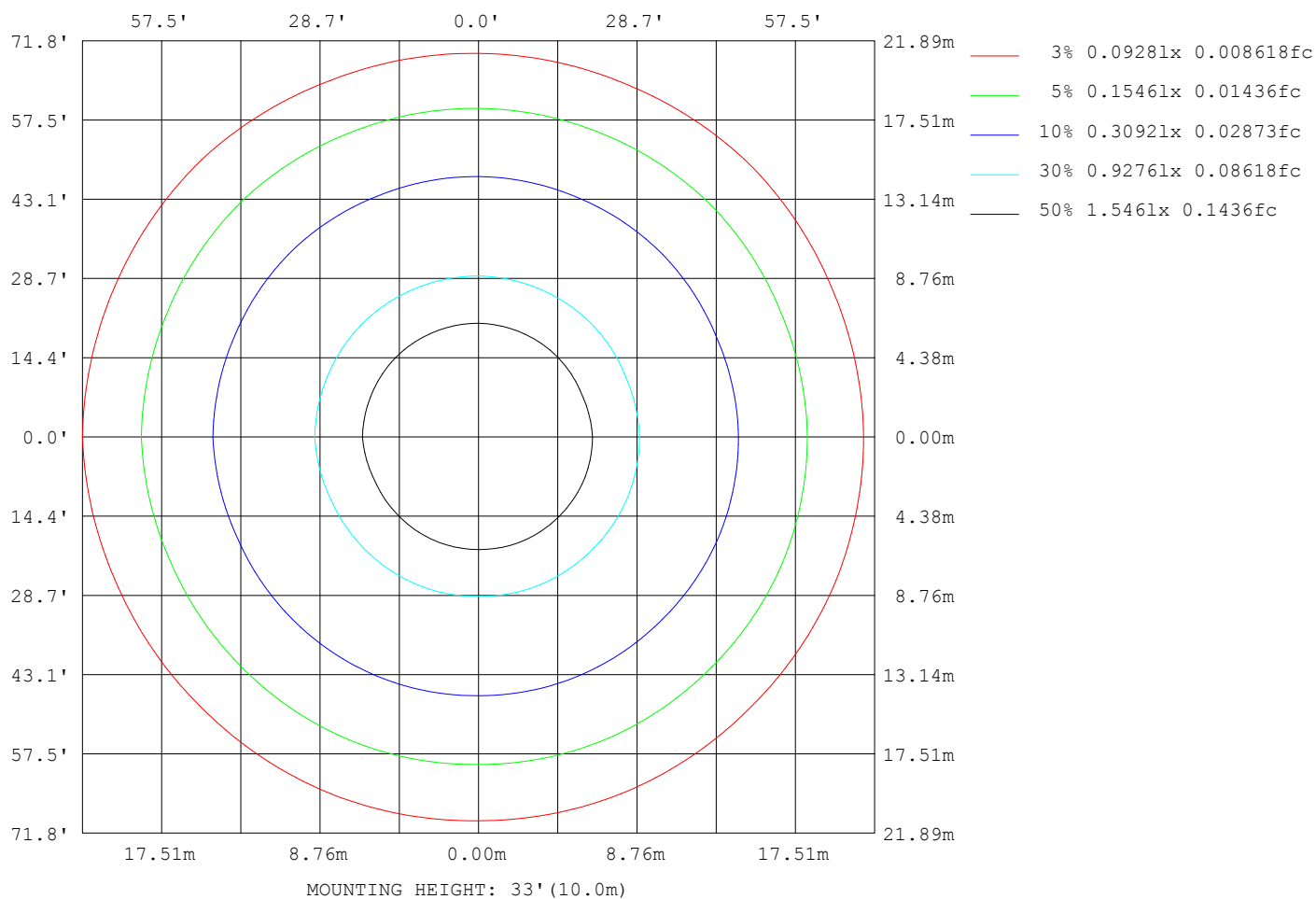


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: 10.0deg/s
Temperature:25.3℃
Operators:DAMIN
Test Date:2023-09-20

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:

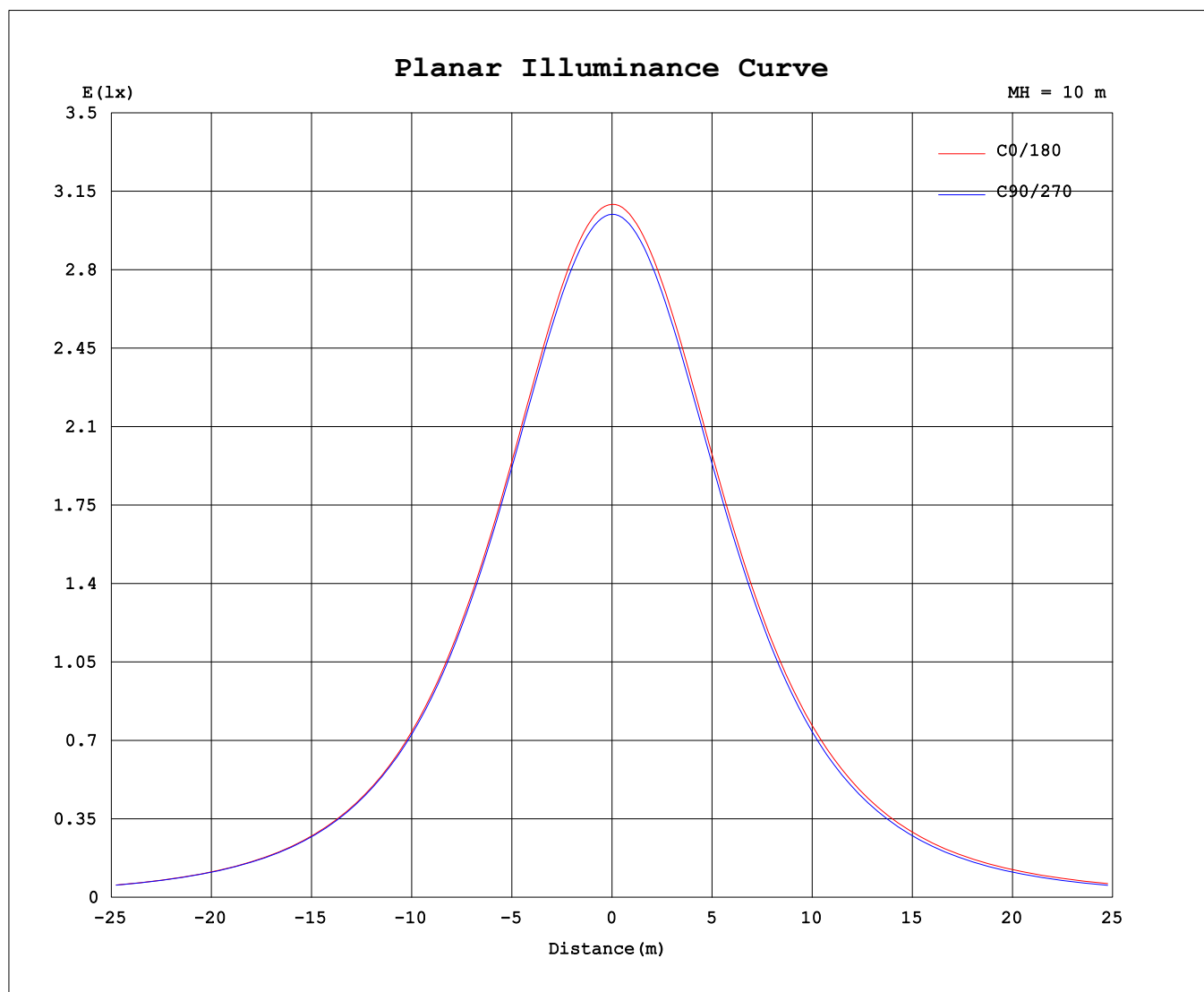
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: 10.0deg/s
Temperature: 25.3°C
Operators: DAMIN
Test Date: 2023-09-20

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: DAMIN
Test Date: 2023-09-20

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	309	309	307	306	305	304	302	301	309	309	307	306	305	304	302	301			
5	308	307	306	305	303	302	301	300	308	307	306	305	304	302	301	300			
10	304	303	301	301	299	298	297	296	305	304	303	301	300	299	297	296			
15	297	296	295	294	293	292	291	290	299	298	297	295	294	292	291	289			
20	288	287	285	285	284	283	282	282	291	289	288	287	286	283	282	280			
25	276	275	274	273	272	272	271	271	280	278	277	275	274	272	271	269			
30	262	262	260	260	258	258	257	258	267	265	264	262	261	259	258	256			
35	246	246	244	244	243	243	242	243	252	250	249	246	246	243	243	241			
40	228	228	227	227	225	226	225	227	235	233	232	229	228	226	226	224			
45	209	209	207	207	206	207	207	209	217	214	213	210	209	207	207	204			
50	188	189	186	187	186	188	188	190	197	195	194	190	189	186	186	184			
55	166	167	165	165	164	166	167	169	176	174	173	169	167	165	165	163			
60	143	144	142	142	142	144	145	147	154	152	150	145	143	142	143	141			
65	120	120	118	119	118	121	122	125	131	129	127	121	118	117	119	118			
70	95.7	96.1	94.1	95.1	94.8	97.4	98.9	103	108	106	102	94.7	92.1	90.9	94.4	94.9			
75	72.0	72.4	70.5	71.1	70.8	73.8	76.1	80.0	84.7	82.3	76.7	69.5	67.6	66.0	69.4	71.6			
80	49.9	49.1	48.2	46.5	47.1	48.9	54.1	57.7	61.7	59.0	52.4	46.6	44.6	43.8	45.6	49.2			
85	30.0	29.2	26.1	25.3	26.2	28.5	33.3	37.5	40.8	38.6	34.1	29.5	26.7	25.6	27.4	29.9			
90	23.2	22.2	18.1	13.2	10.9	10.4	17.8	22.1	24.8	23.7	18.7	13.4	11.8	11.0	15.4	20.6			
95	38.1	34.8	28.4	24.1	23.0	20.7	24.2	26.9	26.2	24.8	23.8	18.7	18.8	21.2	26.3	32.7			
100	58.3	52.5	44.4	40.6	40.5	36.7	39.0	44.0	47.7	43.9	37.8	31.4	34.3	34.0	42.7	49.3			
105	80.7	73.4	64.1	56.3	57.6	52.3	58.2	63.4	68.3	63.3	54.4	44.0	51.7	48.3	58.5	70.1			
110	104	95.0	84.1	74.0	76.3	73.4	78.1	85.1	90.9	82.5	73.3	64.9	71.8	75.5	72.8	91.1			
115	126	117	105	74.4	95.0	82.7	98.5	107	114	103	92.0	73.2	85.6	76.4	89.8	113			
120	149	139	125	103	113	89.3	119	129	137	124	115	95.1	109	100	110	134			
125	170	161	134	125	133	121	134	150	159	144	131	119	126	119	118	145			
130	190	182	134	149	153	139	133	170	180	164	131	138	151	141	122	163			
135	190	169	165	164	166	156	136	163	184	152	132	156	165	157	147	150			
140	180	167	180	184	185	176	168	165	184	155	159	174	182	175	163	150			
145	181	187	195	197	196	188	183	180	181	175	179	181	176	183	178	172			
150	193	197	192	199	201	194	178	179	190	170	171	179	180	191	181	182			
155	199	201	196	203	205	197	180	185	198	176	171	183	191	196	189	190			
160	205	206	203	207	208	200	187	186	204	182	176	186	195	199	194	195			
165	213	213	212	212	213	202	190	187	207	188	186	187	194	204	203	204			
170	253	255	243	237	232	228	216	230	250	233	230	228	226	229	236	245			
175	261	261	248	245	241	238	238	244	263	248	245	240	239	238	245	252			
180	269	259	252	251	246	244	248	252	270	258	253	250	247	243	247	251			

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: 10.0deg/s
Temperature:25.3℃
Operators:DAMIN
Test Date:2023-09-20

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: