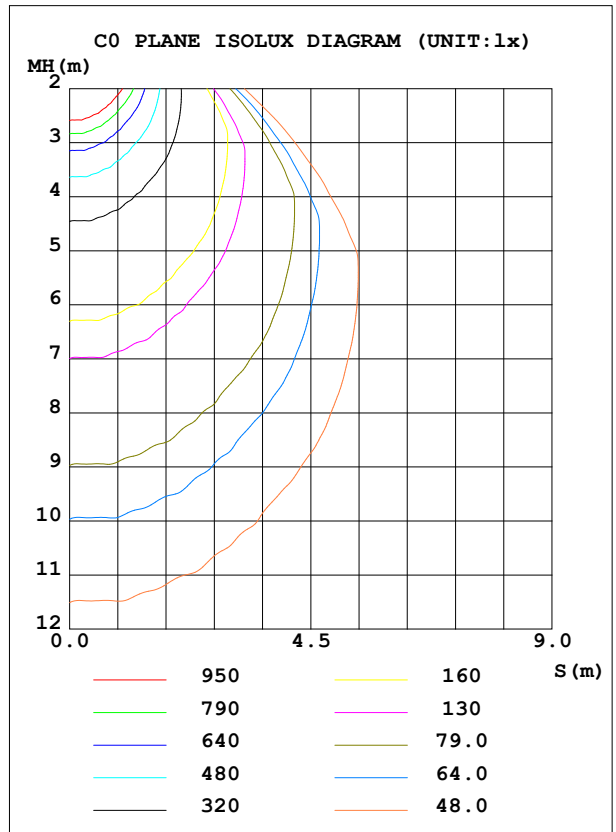
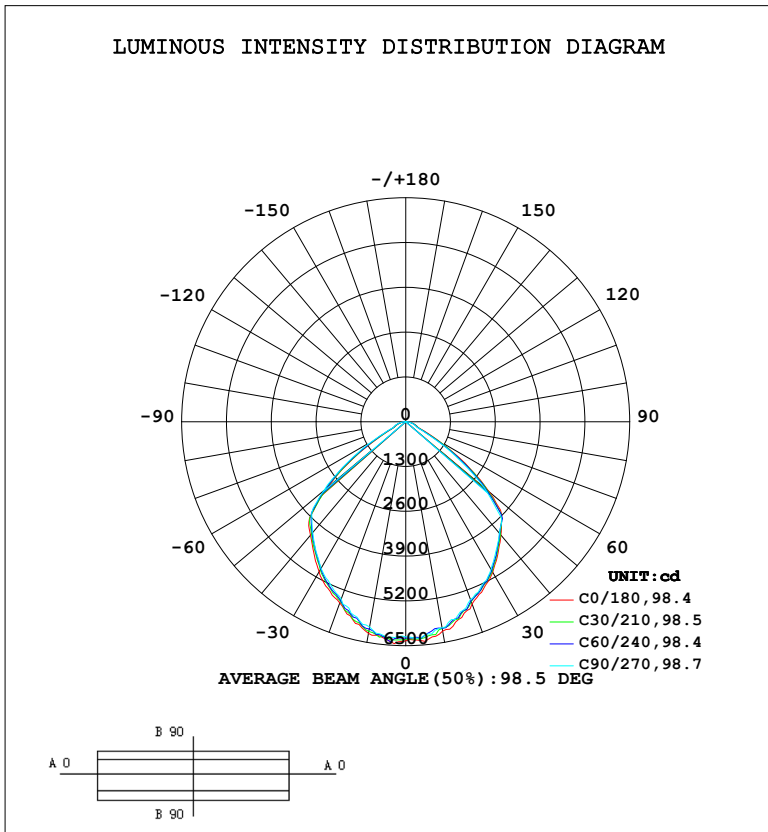


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.60V I:0.4498A P:97.317W PF:0.9808 Freq:50.00Hz		
Lamp Flux:12947.5x1 lm		
NAME: GGL-710-100W,6500K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	

DATA OF LAMP		PHOTOMETRIC DATA Eff: 133.04 lm/W			
MODEL		I _{max} (cd)	6445	S/MH (C0/180)	1.18
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.18
RATED VOLTAGE (V)	--	TOTAL FLUX (lm)	12947	η UP, DN (C0-180)	0.0,49.7
NOMINAL FLUX (lm)	12947.5	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0,50.3
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	--	η down (%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2023-08-04

γ Range: 0 - 90DEG
 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	6168	6070	6069	6050	6236	6162	6048	6015	0- 10	591.4	591.4	4.57,4.57
20	5632	5571	5498	5491	5595	5526	5478	5484	10- 20	1645	2237	17.3,17.3
30	5051	5006	4953	4910	5029	4940	4919	4898	20- 30	2420	4657	36,36
40	4296	4255	4225	4204	4304	4232	4203	4172	30- 40	2866	7523	58.1,58.1
50	3148	3106	2982	2896	3000	3008	3087	3171	40- 50	2913	10436	80.6,80.6
60	1074	969.7	813.5	752.6	816.4	921.2	1064	1112	50- 60	1747	12183	94.1,94.1
70	325.3	302.3	274.3	267.0	287.0	300.7	326.4	332.9	60- 70	463.4	12646	97.7,97.7
80	157.9	142.7	123.7	117.5	126.2	136.3	154.9	161.4	70- 80	233.2	12879	99.5,99.5
90	2.893	2.752	2.741	3.100	3.975	3.152	2.818	2.940	80- 90	67.99	12947	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:cd									UNIT:lm		

Conical surface Flux(90deg): 9025.5 lm

%lum = 69.7%
 %lamp = 69.7%

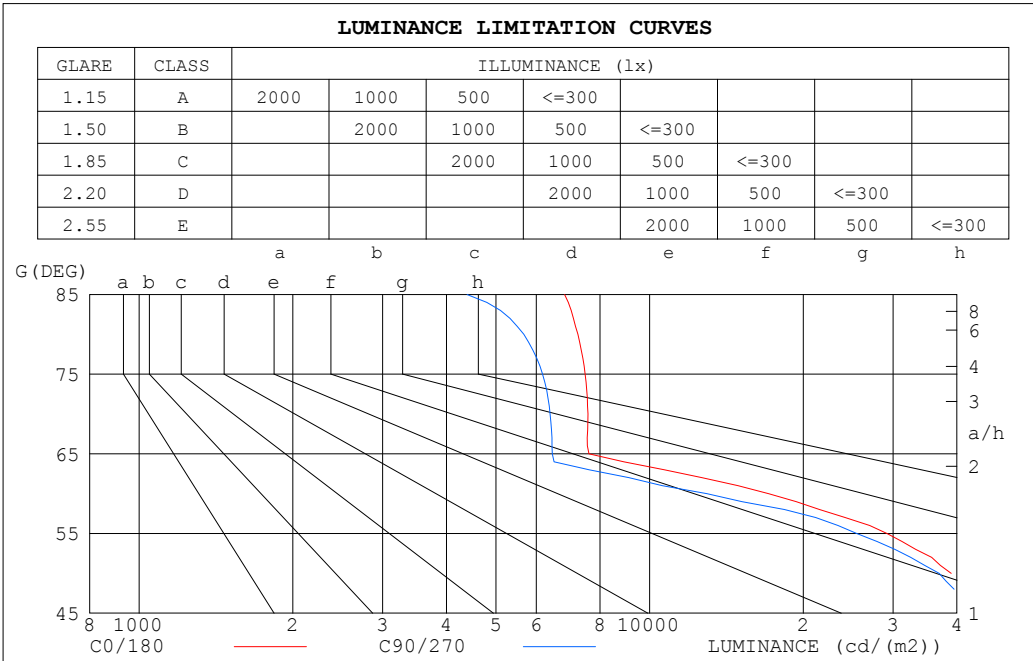
Conical surface Flux(120deg): 12183 lm

%lum = 94.1%
 %lamp = 94.1%

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2023-08-04

γ Range: 0 - 90DEG
 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



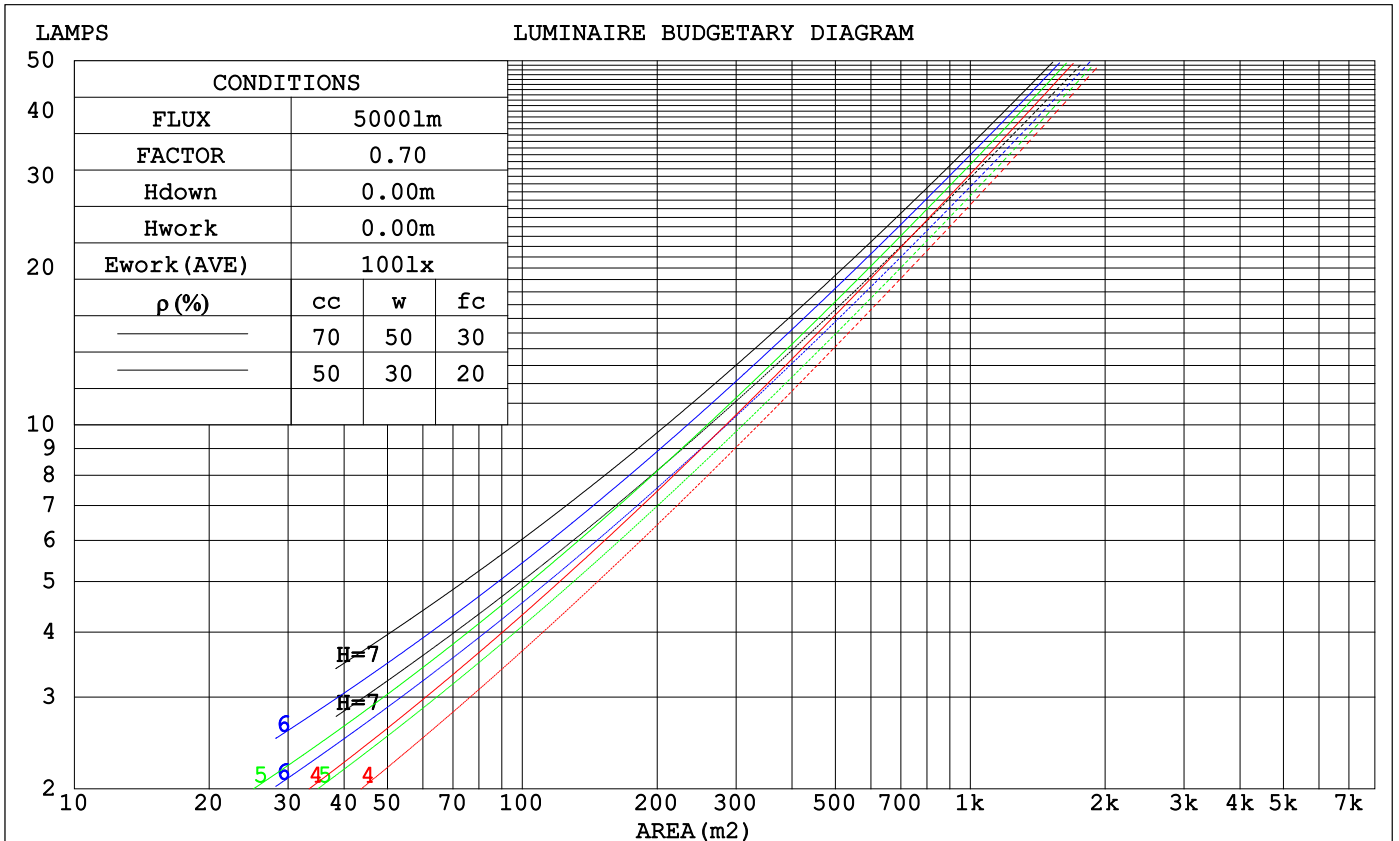
LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	6817	4391
80	7239	5670
75	7479	6169
70	7574	6386
65	7610	6450
60	17109	12953
55	29193	25458
50	38996	36934
45	44319	44098

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature: 25.3°C
 Operators: DAMIN
 Test Date: 2023-08-04

γ Range: 0 - 90DEG
 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

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	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1.0	1.07	1.04	1.01	1.05	1.02	.99	1.01	.99	.96	.97	.95	.93	.94	.92	.91	.89
2.0	.96	.91	.86	.94	.89	.85	.91	.87	.83	.88	.84	.81	.85	.82	.79	.78
3.0	.86	.80	.74	.85	.79	.73	.82	.77	.72	.79	.75	.71	.77	.73	.70	.68
4.0	.78	.70	.64	.77	.70	.64	.74	.68	.63	.72	.67	.62	.70	.65	.62	.60
5.0	.70	.62	.57	.69	.62	.56	.67	.61	.56	.65	.60	.55	.64	.59	.55	.53
6.0	.64	.56	.50	.63	.56	.50	.61	.55	.50	.60	.54	.49	.58	.53	.49	.47
7.0	.58	.50	.45	.58	.50	.45	.56	.49	.44	.55	.49	.44	.53	.48	.44	.42
8.0	.54	.46	.40	.53	.45	.40	.52	.45	.40	.50	.44	.40	.49	.44	.40	.38
9.0	.49	.42	.37	.49	.41	.36	.48	.41	.36	.47	.41	.36	.46	.40	.36	.34
10.0	.46	.38	.33	.45	.38	.33	.44	.38	.33	.43	.37	.33	.42	.37	.33	.31



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2023-08-04

γ Range: 0 - 90DEG
 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

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	.243	.138	.044	.236	.135	.043	.223	.128	.041	.211	.122	.039	.200	.116	.037	
2.0	.236	.129	.040	.230	.127	.039	.219	.122	.038	.209	.117	.037	.199	.113	.035	
3.0	.225	.120	.036	.220	.118	.035	.210	.114	.035	.201	.110	.034	.192	.107	.033	
4.0	.213	.111	.033	.208	.109	.032	.200	.106	.032	.192	.103	.031	.184	.100	.030	
5.0	.201	.102	.030	.197	.101	.029	.189	.098	.029	.182	.096	.029	.175	.094	.028	
6.0	.190	.095	.027	.186	.094	.027	.179	.092	.027	.173	.090	.026	.167	.088	.026	
7.0	.179	.088	.025	.176	.088	.025	.170	.086	.025	.164	.084	.024	.159	.082	.024	
8.0	.169	.083	.023	.166	.082	.023	.161	.080	.023	.156	.079	.023	.151	.077	.023	
9.0	.160	.077	.022	.158	.077	.022	.153	.075	.021	.148	.074	.021	.144	.073	.021	
10.0	.152	.073	.020	.149	.072	.020	.145	.071	.020	.141	.070	.020	.137	.069	.020	

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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.176	.157	.140	.150	.135	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016	
2.0	.165	.132	.105	.141	.114	.091	.097	.079	.063	.056	.046	.037	.018	.015	.012	
3.0	.156	.114	.081	.134	.098	.070	.092	.068	.049	.053	.040	.029	.017	.013	.009	
4.0	.148	.100	.064	.127	.087	.055	.087	.060	.039	.050	.035	.023	.016	.012	.008	
5.0	.141	.089	.052	.121	.077	.045	.083	.054	.032	.048	.032	.019	.016	.010	.006	
6.0	.134	.081	.043	.115	.070	.037	.080	.049	.026	.046	.029	.016	.015	.009	.005	
7.0	.128	.074	.036	.110	.064	.031	.076	.045	.022	.044	.026	.013	.014	.009	.004	
8.0	.122	.068	.031	.105	.059	.027	.073	.041	.019	.042	.024	.011	.014	.008	.004	
9.0	.117	.063	.027	.101	.055	.023	.070	.038	.017	.041	.023	.010	.013	.007	.003	
10.0	.112	.059	.024	.096	.051	.021	.067	.036	.015	.039	.021	.009	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2023-08-04

γ Range: 0 - 90DEG
 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	24.0	25.4	24.3	25.6	25.8	23.7	25.0	23.9	25.2	25.4
3H	24.0	25.2	24.3	25.5	25.7	23.6	24.9	23.9	25.1	25.3
4H	24.1	25.2	24.4	25.4	25.7	23.6	24.8	23.9	25.0	25.3
6H	24.1	25.1	24.4	25.4	25.7	23.6	24.7	23.9	25.0	25.2
8H	24.1	25.1	24.4	25.4	25.7	23.6	24.6	23.9	24.9	25.2
12H	24.1	25.1	24.4	25.3	25.6	23.6	24.6	23.9	24.9	25.2
4H 2H	24.0	25.1	24.3	25.4	25.6	23.6	24.8	23.9	25.0	25.3
3H	24.0	25.0	24.4	25.3	25.6	23.7	24.7	24.0	24.9	25.2
4H	24.1	25.0	24.5	25.3	25.6	23.7	24.6	24.1	24.9	25.3
6H	24.2	25.0	24.6	25.3	25.7	23.8	24.6	24.2	24.9	25.3
8H	24.2	25.0	24.7	25.3	25.7	23.8	24.5	24.2	24.9	25.3
12H	24.3	24.9	24.7	25.3	25.7	23.8	24.5	24.2	24.8	25.2
8H 4H	24.1	24.8	24.5	25.2	25.5	23.7	24.4	24.1	24.8	25.2
6H	24.2	24.8	24.7	25.2	25.6	23.8	24.4	24.2	24.8	25.2
8H	24.3	24.8	24.8	25.2	25.7	23.9	24.4	24.3	24.8	25.2
12H	24.4	24.8	24.8	25.3	25.7	23.9	24.3	24.4	24.8	25.2
12H 4H	24.0	24.7	24.5	25.1	25.5	23.7	24.3	24.1	24.7	25.1
6H	24.2	24.7	24.7	25.2	25.6	23.8	24.3	24.3	24.7	25.2
8H	24.3	24.8	24.8	25.2	25.7	23.9	24.3	24.3	24.8	25.2
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.8 / - 1.1					+ 1.0 / - 1.3				
1.5H	+ 0.7 / - 1.0					+ 0.8 / - 0.9				
2.0H	+ 2.4 / - 4.5					+ 2.6 / - 5.2				

CIE Pub.117, 12947 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 8.9)
 Area: 0.1256 m2

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2023-08-04

γ Range: 0 - 90DEG
 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:

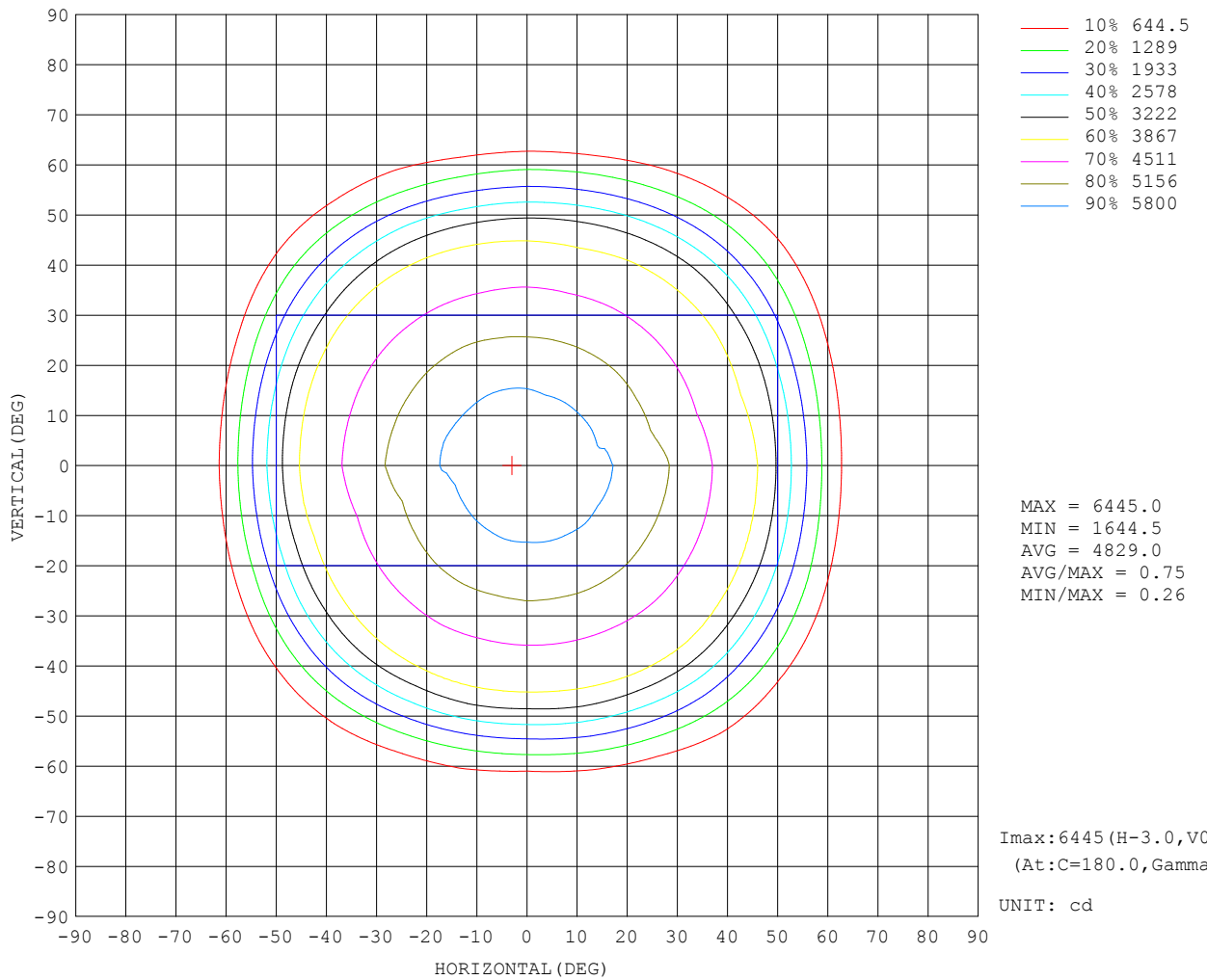
UTILIZATION FACTORS TABLE

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	64	54	48	64	54	48	63	53	48	42
0.80	75	65	59	74	65	59	73	64	58	52
1.00	84	75	69	83	74	68	81	75	68	62
1.25	91	82	77	89	82	76	87	80	75	69
1.50	95	87	82	94	87	81	91	85	80	74
2.00	101	94	89	99	93	89	96	91	87	80
2.50	104	98	93	102	96	92	98	94	90	83
3.00	106	101	97	104	100	96	101	97	94	86
4.00	109	105	101	107	103	100	103	100	97	89
5.00	111	107	104	109	105	102	104	102	99	91
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature: 25.3°C
 Operators: DAMIN
 Test Date: 2023-08-04

γ Range: 0 - 90DEG
 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:

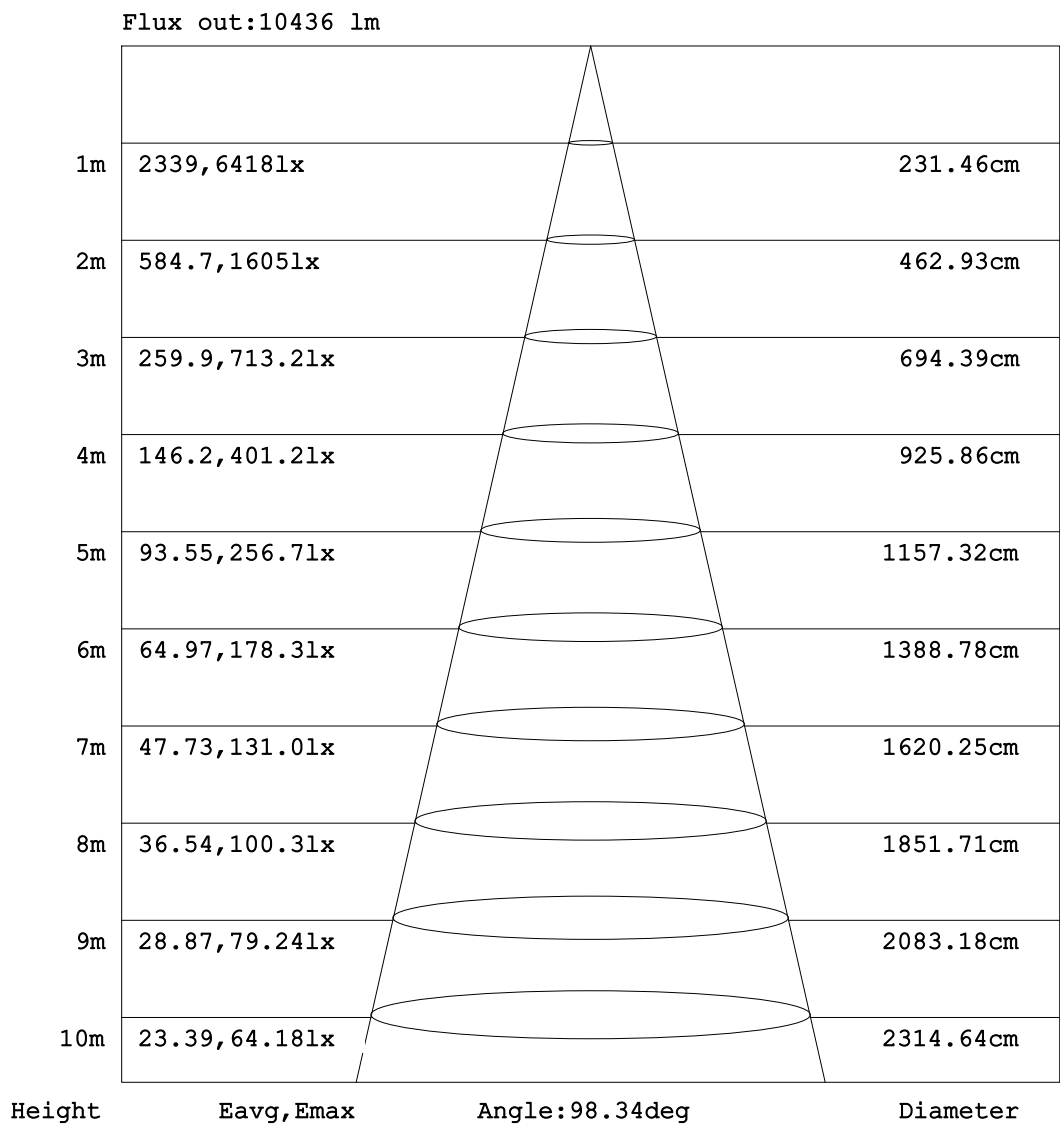
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature: 25.3°C
 Operators: DAMIN
 Test Date: 2023-08-04

γ Range: 0 - 90DEG
 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

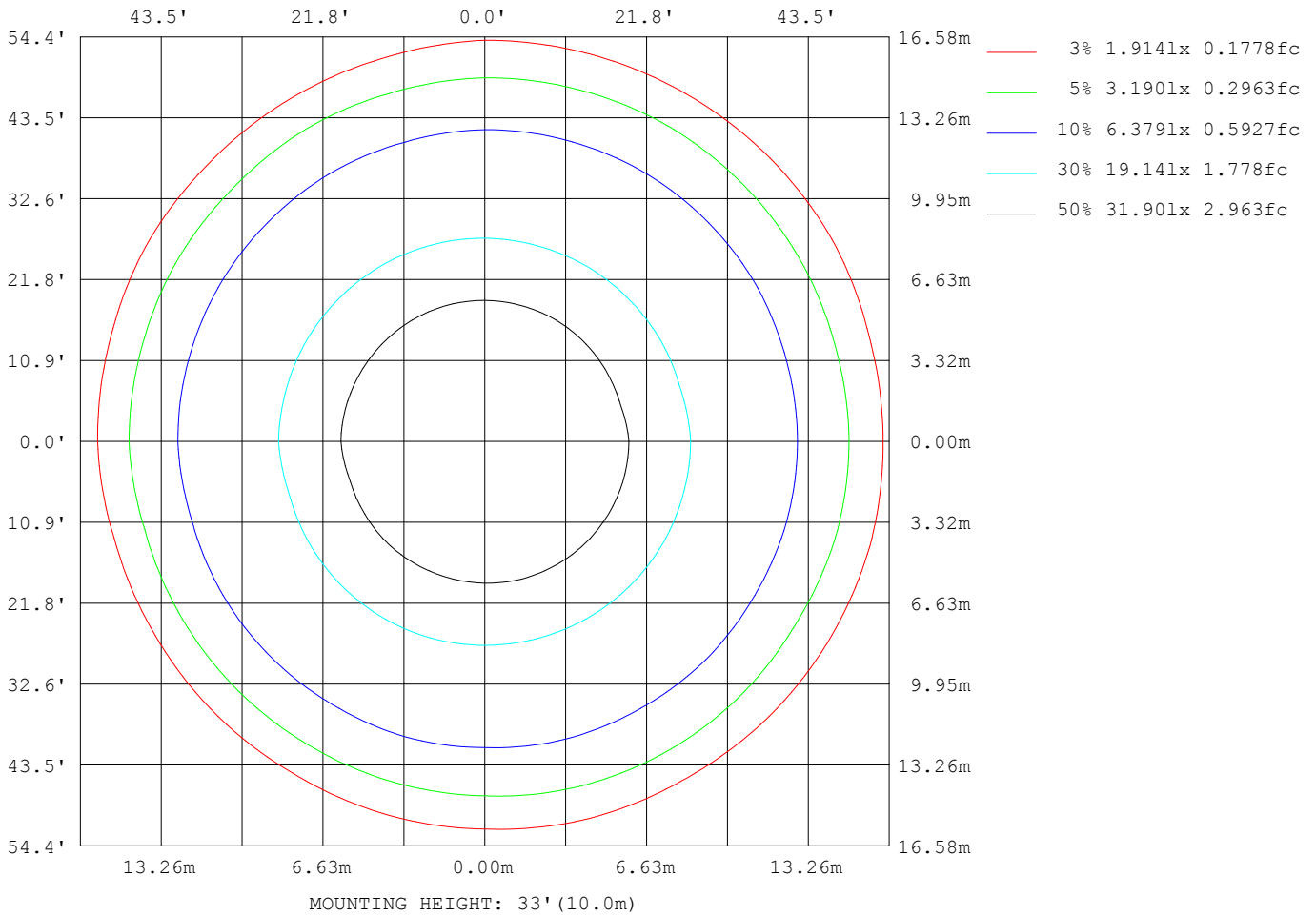


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2023-08-04

γ Range: 0 - 90DEG
 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:

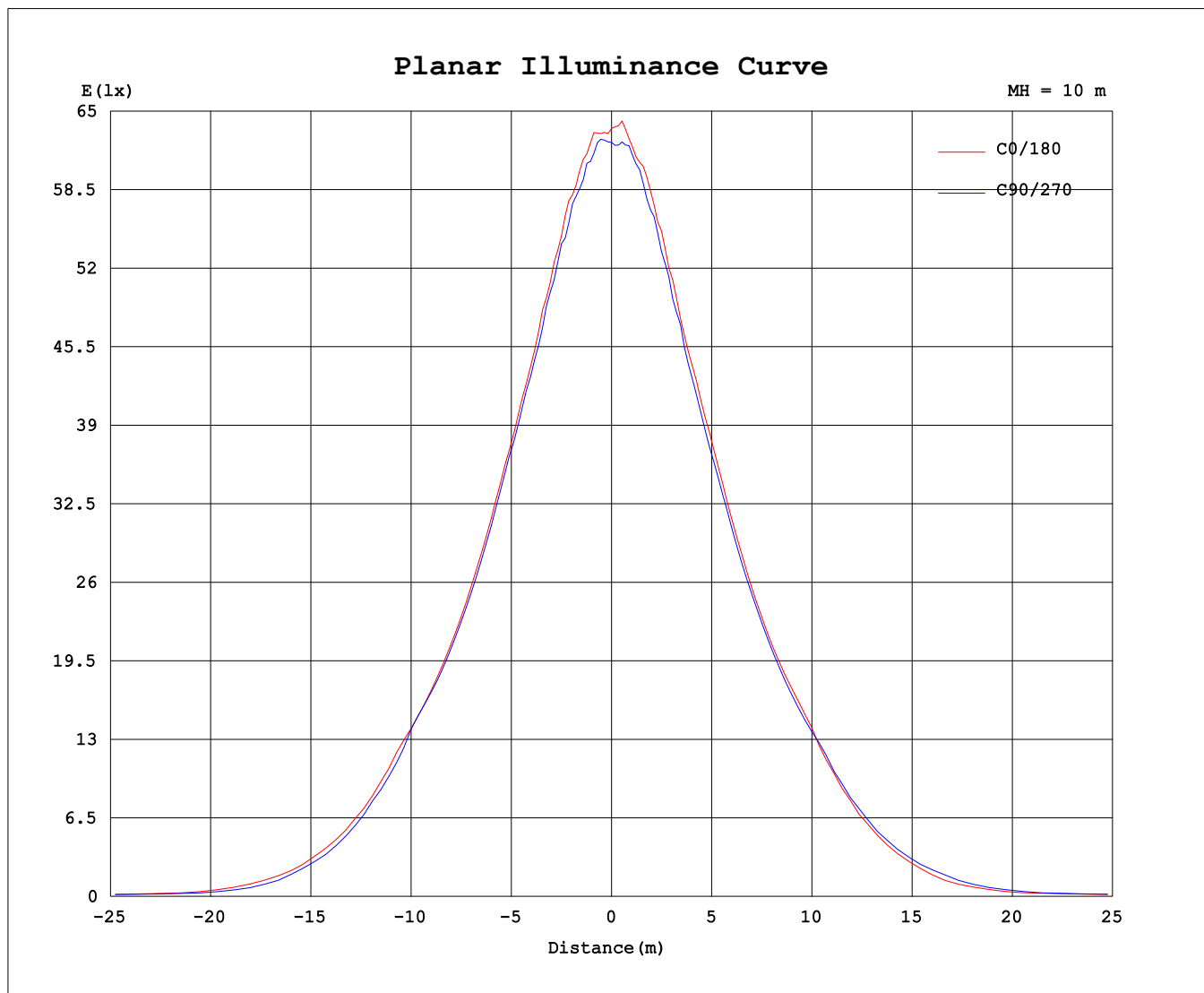
ISOLUX DIAGRAM



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature: 25.3°C
 Operator: DAMIN
 Test Date: 2023-08-04

γ Range: 0 - 90DEG
 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: 15.0DEG
Test Speed: 10.0deg/s
Temperature:25.3°C
Operators:DAMIN
Test Date:2023-08-04

γ Range: 0 - 90DEG
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	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	6358	6332	6311	6291	6273	6254	6242	6241	6228	6216	6206	6187	6358	6332	6311	6291	6273	6254	6242
5	6397	6442	6289	6284	6234	6214	6223	6209	6207	6188	6188	6156	6344	6323	6296	6302	6342	6327	6286
10	6168	6137	6087	6070	6083	6062	6069	6050	6064	6050	6058	6067	6236	6208	6177	6162	6108	6089	6048
15	5937	5914	5922	5911	5893	5856	5827	5835	5801	5786	5767	5781	5949	5926	5933	5912	5874	5844	5813
20	5632	5598	5555	5571	5533	5523	5498	5496	5492	5491	5466	5455	5595	5574	5541	5526	5524	5510	5478
25	5348	5325	5291	5306	5271	5281	5239	5244	5223	5240	5195	5202	5338	5297	5279	5249	5256	5223	5195
30	5051	5024	5021	5006	4989	4979	4953	4920	4906	4910	4883	4895	5029	4997	4964	4940	4933	4924	4919
35	4670	4653	4631	4621	4604	4589	4573	4553	4550	4532	4525	4523	4648	4618	4595	4580	4567	4546	4552
40	4296	4277	4275	4255	4244	4228	4225	4225	4217	4204	4193	4179	4304	4273	4260	4232	4225	4210	4203
45	3936	3935	3938	3956	3969	3952	3916	3904	3846	3811	3759	3793	3951	3948	3934	3905	3886	3869	3855
50	3148	3161	3094	3106	3042	3029	2982	2948	2900	2896	2898	2884	3000	2995	3024	3008	3037	3066	3087
55	2103	2084	2029	2033	1977	1936	1834	1806	1758	1747	1742	1758	1880	1881	1902	1943	2002	2034	2068
60	1074	1065	1001	970	905	844	813	814	785	753	744	750	816	822	880	921	980	1027	1064
65	404	397	382	375	360	354	342	342	334	335	331	337	362	363	374	378	391	396	408
70	325	321	308	302	290	284	274	273	266	267	264	269	287	288	297	301	312	316	326
75	243	239	230	224	214	209	201	199	193	193	191	194	206	208	215	219	228	232	241
80	158	155	147	143	134	130	124	122	117	118	116	119	126	127	133	136	144	148	155
85	74.6	72.6	66.6	62.4	56.7	51.8	48.1	45.1	43.0	41.9	42.0	43.3	47.8	50.4	54.2	58.3	62.2	66.4	72.0
90	2.89	2.97	2.84	2.75	2.68	2.70	2.74	2.75	2.81	3.10	3.49	3.92	3.98	3.75	3.44	3.15	2.88	2.82	2.82

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature: 25.3°C
 Operators: DAMIN
 Test Date: 2023-08-04

γ Range: 0 - 90DEG
 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--2

UNIT: cd

C (DEG) γ (DEG)	285	300	315	330	345														
0	6241	6228	6216	6206	6187														
5	6306	6243	6274	6253	6239														
10	6015	6006	6015	6001	6034														
15	5779	5771	5768	5780	5775														
20	5457	5475	5484	5491	5486														
25	5194	5187	5196	5180	5195														
30	4901	4907	4898	4896	4894														
35	4528	4537	4531	4529	4527														
40	4178	4183	4172	4191	4184														
45	3828	3857	3856	3858	3831														
50	3118	3139	3171	3124	3152														
55	2066	2082	2096	2076	2078														
60	1086	1076	1112	1123	1080														
65	407	418	417	436	414														
70	326	334	333	336	329														
75	242	249	248	250	245														
80	157	162	161	163	159														
85	73.9	77.8	78.0	79.2	76.6														
90	2.82	2.83	2.94	3.00	3.01														

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2023-08-04

γ Range: 0 - 90DEG
 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: