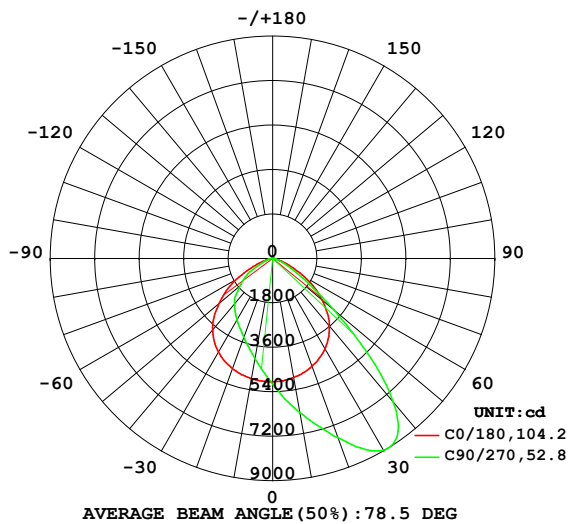


LUMINAIRE PHOTOMETRIC TEST REPORT

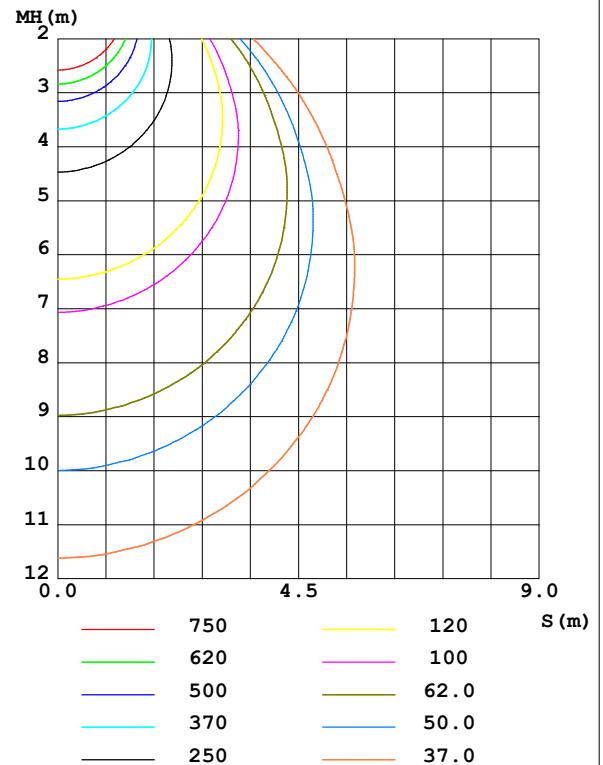
Test:U:230.56V I:0.4234A P:93.315W PF:0.9560 Freq:50.01Hz Lamp Flux:13722x1 lm		
NAME: HLK-100W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 147.05 lm/W
MODEL	SMD3030	I _{max} (cd)	8992	S/MH (C0/180)	1.30	
NOMINAL POWER(W)	100	LOR (%)	100.0	S/MH (C90/270)	0.84	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	13722	η UP,DN (C0-180)	0.3,63.5	
NOMINAL FLUX(lm)	13722	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.4,35.7	
LAMPS INSIDE	1	η up (%)	0.8	CIBSE SHR NOM	1.25	
TEST VOLTAGE (V)	230	η down (%)	99.2	CIBSE SHR MAX	1.25	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.1℃
Operators:
Test Date: 2024-07-18

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity: 50.0%
Test Distance: 10.026m [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	4900	5880	6327	5845	4946	4370	4127	4317	0- 10	484.6	484.6	3.53, 3.53
20	4652	6632	7716	6634	4755	3704	3407	3716	10- 20	1452	1936	14.1, 14.1
30	4234	7287	8967	7348	4390	3114	2886	3088	20- 30	2394	4331	31.6, 31.6
40	3585	7136	7607	7185	3786	2565	2414	2548	30- 40	3112	7443	54.2, 54.2
50	2608	4953	3215	4972	2825	1952	1730	1948	40- 50	2981	10423	76, 76
60	1490	2118	1042	2058	1704	1137	996.7	1154	50- 60	1974	12397	90.3, 90.3
70	501.6	660.9	312.9	613.0	601.0	494.8	357.7	519.5	60- 70	916.2	13314	97, 97
80	76.39	77.12	62.38	63.35	107.7	89.30	106.1	108.4	70- 80	274.3	13588	99, 99
90	2.241	2.084	1.629	2.093	1.791	2.561	2.010	2.863	80- 90	29.40	13617	99.2, 99.2
100	5.648	4.345	3.651	4.463	4.195	5.464	3.625	5.288	90-100	3.331	13621	99.3, 99.3
110	11.37	7.983	7.043	8.059	8.229	11.45	9.913	11.53	100-110	7.238	13628	99.3, 99.3
120	17.76	12.03	11.04	12.09	13.19	18.93	19.83	19.17	110-120	12.34	13640	99.4, 99.4
130	22.74	15.73	14.62	16.06	18.49	25.08	28.74	25.55	120-130	16.38	13657	99.5, 99.5
140	27.97	19.82	18.37	20.39	24.16	30.55	33.21	29.93	130-140	17.95	13675	99.7, 99.7
150	33.18	24.95	23.42	25.65	29.86	37.03	36.94	34.08	140-150	17.52	13692	99.8, 99.8
160	36.99	30.81	29.81	31.51	34.53	42.48	42.36	38.44	150-160	15.34	13707	99.9, 99.9
170	39.05	36.49	36.53	36.95	38.01	44.62	45.57	42.17	160-170	10.73	13718	100, 100
180	39.23	41.24	42.76	40.79	39.19	41.24	42.73	40.77	170-180	3.873	13722	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 9025.3 lm

%lum = 65.8%

%lamp = 65.8%

Conical surface Flux(120deg): 12397 lm

%lum = 90.3%

%lamp = 90.3%

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.1℃
 Operators:
 Test Date: 2024-07-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.462
 Humidity: 50.0%
 Test Distance: 10.026m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.56V I:0.4234A P:93.315W PF:0.9560 Freq:50.01Hz

Lamp Flux:13722x1 lm

NAME: HLK-100W

TYPE: Glass-50*100D

WEIGHT:

SPEC.: 4000K-RA80

DIM.:

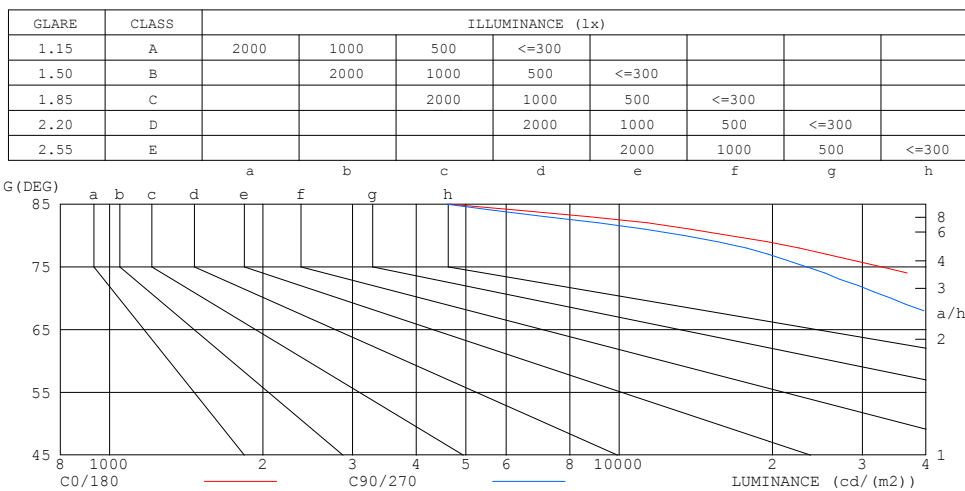
SERIAL No.:

MFR.:

SUR.: 0.221m*0.121m

Shielding Angle:

LUMINANCE LIMITATION CURVES



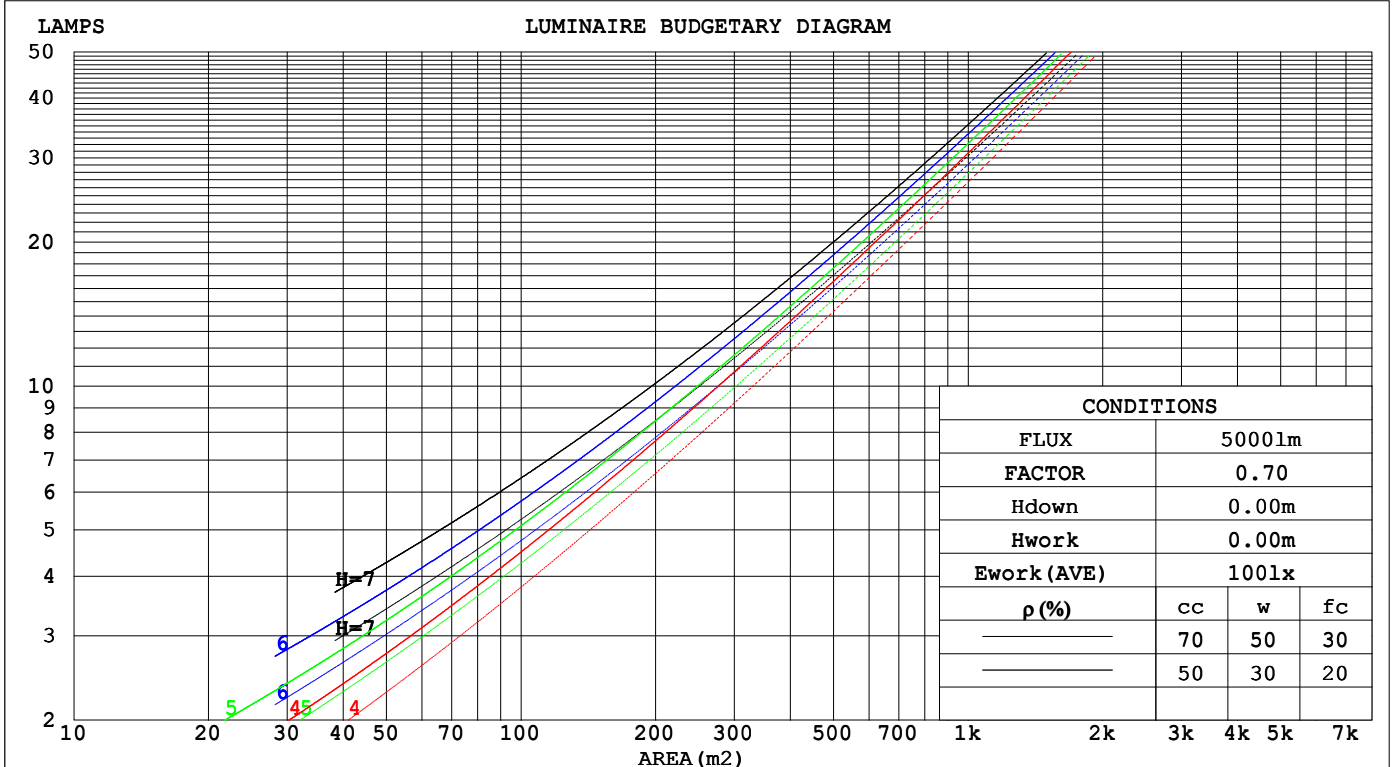
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.1℃
Operators:
Test Date: 2024-07-18

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity: 50.0%
Test Distance: 10.026m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.56V I:0.4234A P:93.315W PF:0.9560 Freq:50.01Hz Lamp Flux:13722x1 lm		
NAME: HLK-100W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-07-18

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity:50.0%
Test Distance:10.026m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:230.56V I:0.4234A P:93.315W PF:0.9560 Freq:50.01Hz		
Lamp Flux:13722x1 lm		
NAME: HLK-100W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding 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	.252	.143	.045	.245	.140	.044	.231	.133	.042	.219	.126	.041	.208	.120	.039		
2.0	.247	.135	.041	.241	.132	.041	.229	.127	.040	.218	.122	.038	.208	.118	.037		
3.0	.235	.125	.037	.230	.123	.037	.219	.119	.036	.210	.115	.035	.201	.111	.034		
4.0	.222	.115	.034	.217	.114	.034	.208	.110	.033	.200	.107	.032	.192	.104	.032		
5.0	.209	.107	.031	.205	.105	.031	.197	.102	.030	.189	.100	.030	.182	.097	.029		
6.0	.197	.099	.028	.193	.097	.028	.186	.095	.028	.179	.093	.027	.173	.091	.027		
7.0	.185	.092	.026	.182	.091	.026	.175	.089	.026	.169	.087	.025	.164	.085	.025		
8.0	.175	.085	.024	.172	.085	.024	.166	.083	.024	.160	.081	.023	.155	.080	.023		
9.0	.165	.080	.022	.162	.079	.022	.157	.078	.022	.152	.076	.022	.147	.075	.022		
10.0	.156	.075	.021	.154	.074	.021	.149	.073	.021	.144	.072	.020	.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	.196	.196	.196	.168	.168	.168	.115	.115	.115	.066	.066	.066	.021	.021	.021	
1.0	.182	.163	.145	.156	.139	.125	.107	.096	.086	.061	.056	.050	.020	.018	.016	
2.0	.172	.138	.109	.147	.119	.095	.101	.082	.066	.058	.048	.039	.019	.015	.013	
3.0	.164	.120	.085	.140	.104	.074	.096	.072	.052	.056	.042	.031	.018	.014	.010	
4.0	.156	.106	.068	.134	.092	.059	.092	.064	.042	.053	.038	.025	.017	.012	.008	
5.0	.149	.096	.056	.128	.083	.049	.088	.058	.035	.051	.034	.021	.016	.011	.007	
6.0	.143	.087	.048	.123	.076	.041	.085	.053	.029	.049	.031	.017	.016	.010	.006	
7.0	.136	.080	.041	.117	.070	.036	.081	.049	.025	.047	.029	.015	.015	.009	.005	
8.0	.130	.075	.036	.112	.065	.031	.078	.045	.022	.045	.027	.013	.015	.009	.004	
9.0	.125	.070	.032	.108	.060	.028	.075	.042	.020	.043	.025	.012	.014	.008	.004	
10.0	.120	.065	.029	.103	.057	.026	.072	.040	.018	.042	.024	.011	.014	.008	.004	

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-07-18

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity:50.0%
Test Distance:10.026m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.56V I:0.4234A P:93.315W PF:0.9560 Freq:50.01Hz										
Lamp Flux:13722x1 lm										
NAME: HLK-100W					TYPE: Glass-50*100D			WEIGHT:		
SPEC.: 4000K-RA80					DIM.:			SERIAL No.:		
MFR.:					SUR.: 0.221m*0.121m			Shielding 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	30.4	31.9	30.8	32.2	32.6	28.4	29.8	28.7	30.2	30.5
3H	30.8	32.1	31.2	32.5	32.9	28.6	29.9	29.0	30.3	30.6
4H	30.9	32.1	31.3	32.4	32.8	28.6	29.8	29.0	30.2	30.6
6H	30.8	31.9	31.2	32.3	32.7	28.6	29.7	29.0	30.1	30.5
8H	30.8	31.9	31.2	32.3	32.7	28.6	29.6	29.0	30.0	30.4
12H	30.8	31.8	31.2	32.2	32.6	28.5	29.5	29.0	29.9	30.4
4H 2H	30.7	31.9	31.1	32.2	32.6	28.9	30.1	29.3	30.5	30.9
3H	31.2	32.2	31.6	32.6	33.0	29.2	30.2	29.7	30.6	31.1
4H	31.2	32.1	31.7	32.6	33.0	29.3	30.2	29.7	30.6	31.0
6H	31.2	32.0	31.7	32.4	32.9	29.2	30.0	29.7	30.5	30.9
8H	31.2	31.9	31.7	32.4	32.8	29.2	29.9	29.7	30.4	30.9
12H	31.1	31.8	31.6	32.3	32.8	29.2	29.8	29.7	30.3	30.8
8H 4H	31.2	31.9	31.7	32.4	32.9	29.3	30.0	29.7	30.4	30.9
6H	31.2	31.8	31.7	32.3	32.8	29.2	29.8	29.7	30.3	30.8
8H	31.1	31.6	31.6	32.2	32.7	29.2	29.7	29.7	30.2	30.7
12H	31.1	31.5	31.6	32.1	32.6	29.1	29.6	29.7	30.1	30.7
12H 4H	31.2	31.8	31.7	32.3	32.8	29.2	29.9	29.7	30.4	30.8
6H	31.1	31.6	31.7	32.1	32.7	29.2	29.7	29.7	30.2	30.7
8H	31.1	31.5	31.6	32.1	32.6	29.1	29.6	29.7	30.1	30.7
CIE190: 2010										

CIE190: 2010
Area: 0.026741 m2

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-07-18

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity:50.0%
Test Distance:10.026m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.56V I:0.4234A P:93.315W PF:0.9560 Freq:50.01Hz Lamp Flux:13722x1 lm		
NAME: HLK-100W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

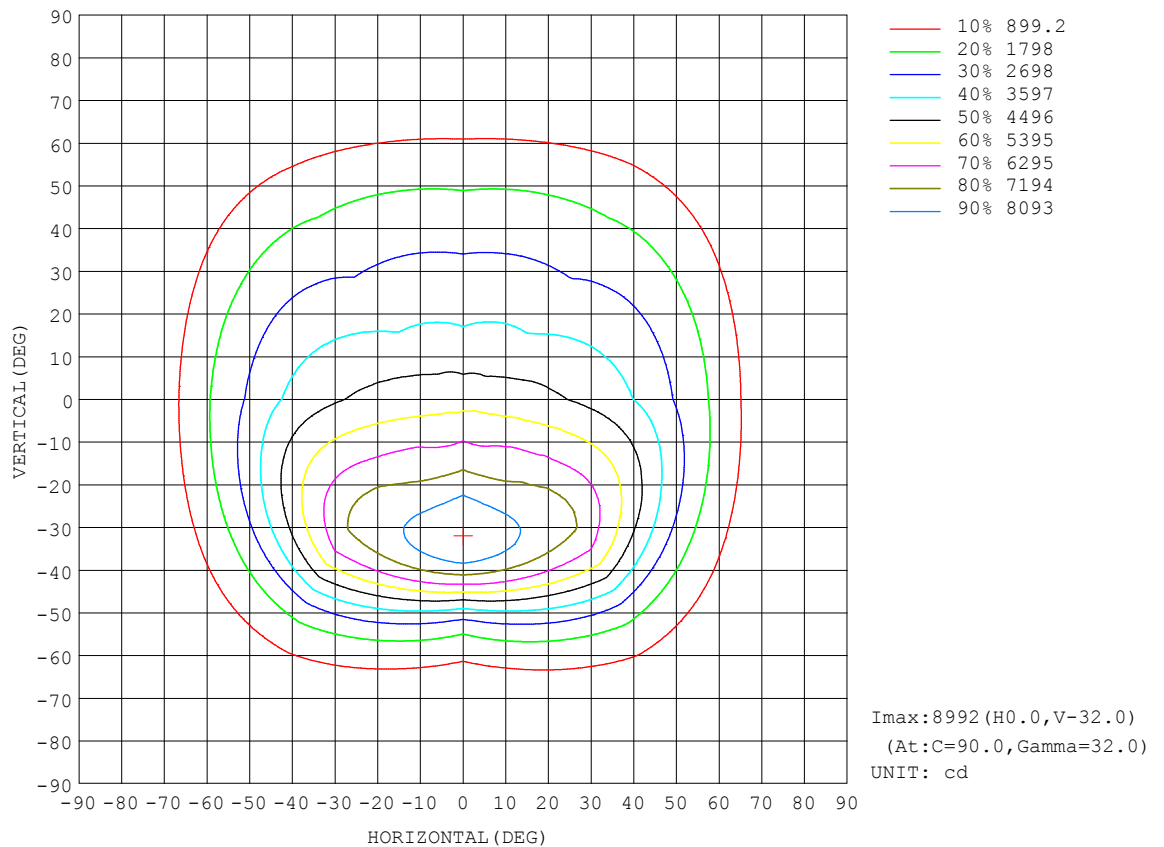
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	62	52	45	62	51	45	61	51	45	39
0.80	73	63	56	72	62	56	70	61	55	49
1.00	82	72	66	81	72	66	79	73	65	59
1.25	89	80	74	87	79	73	85	78	72	66
1.50	93	85	79	92	84	79	89	83	78	71
2.00	100	93	87	98	91	86	94	89	85	78
2.50	103	96	91	101	95	90	97	92	88	81
3.00	106	100	95	103	98	94	100	95	92	84
4.00	109	104	100	106	102	99	102	99	96	88
5.00	111	107	103	108	105	102	104	101	98	90
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: 25.1℃
Operators:
Test Date: 2024-07-18

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity: 50.0%
Test Distance: 10.026m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:230.56V I:0.4234A P:93.315W PF:0.9560 Freq:50.01Hz Lamp Flux:13722x1 lm		
NAME: HLK-100W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

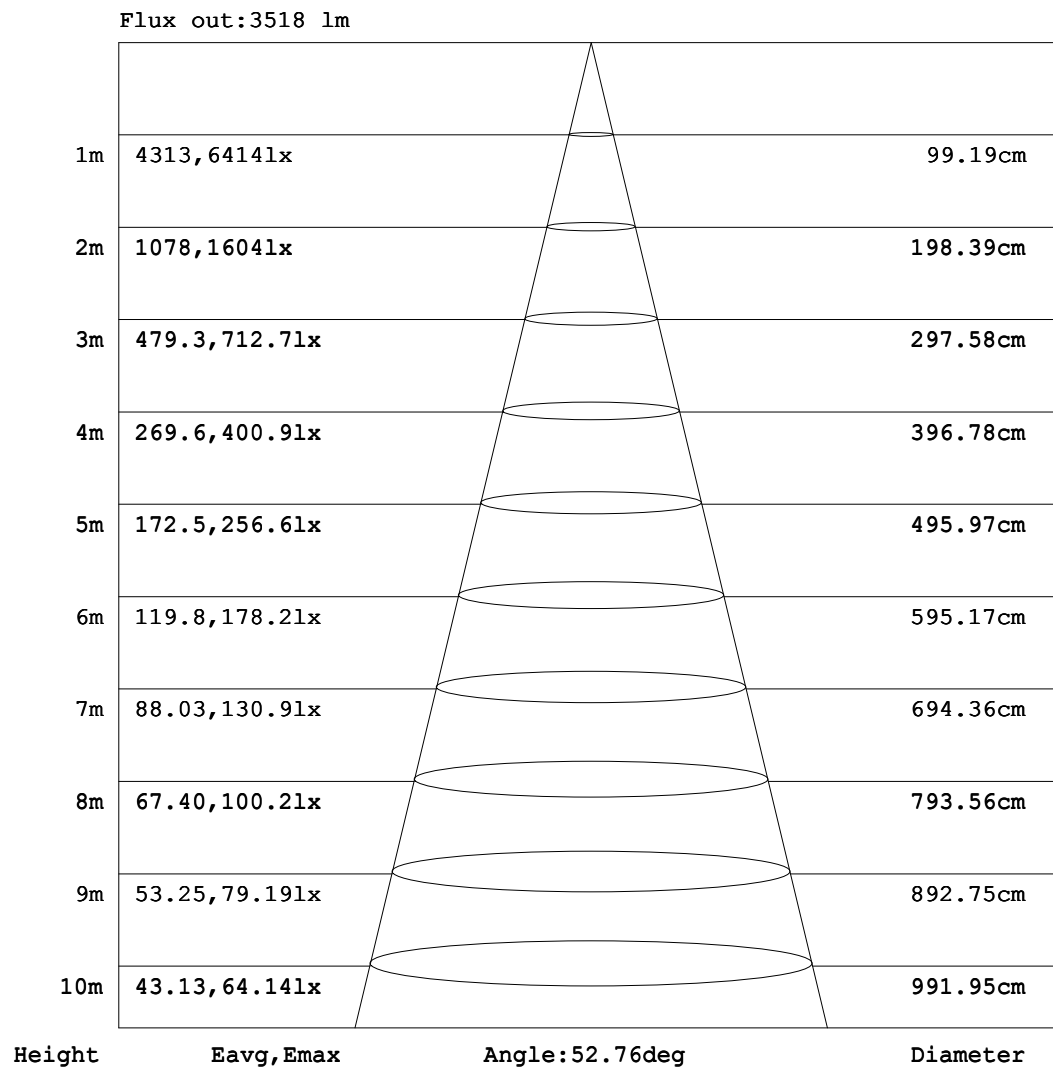


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-07-18

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity:50.0%
Test Distance:10.026m [K=1.0000]
Remarks:

AAI Figure

Test:U:230.56V I:0.4234A P:93.315W PF:0.9560 Freq:50.01Hz Lamp Flux:13722x1 lm		
NAME: HLK-100W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:



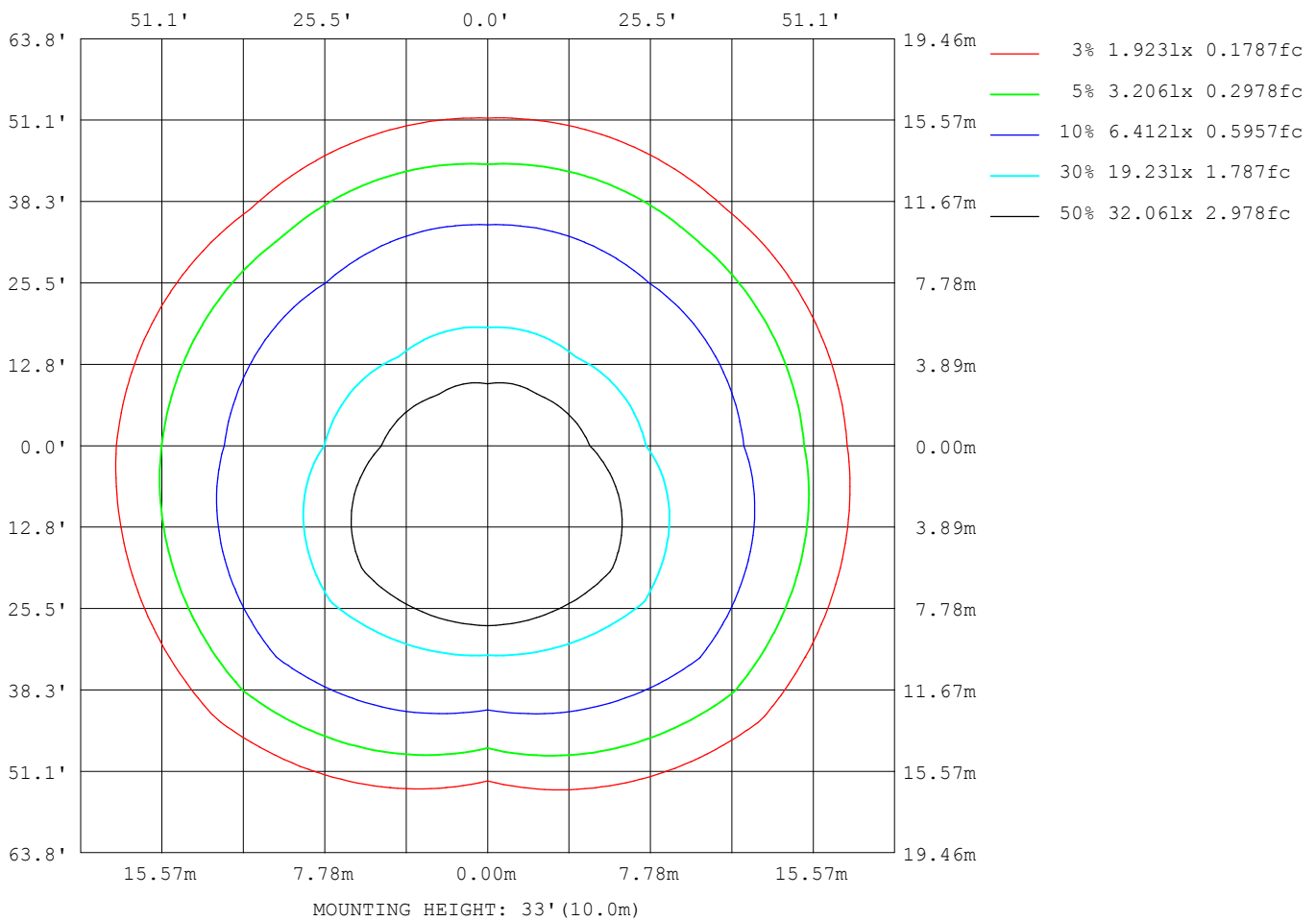
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-07-18

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity:50.0%
Test Distance:10.026m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:230.56V I:0.4234A P:93.315W PF:0.9560 Freq:50.01Hz Lamp Flux:13722x1 lm		
NAME: HLK-100W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-07-18

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity:50.0%
Test Distance:10.026m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:230.56V I:0.4234A P:93.315W PF:0.9560 Freq:50.01Hz Lamp Flux:13722x1 lm		
NAME: HLK-100W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

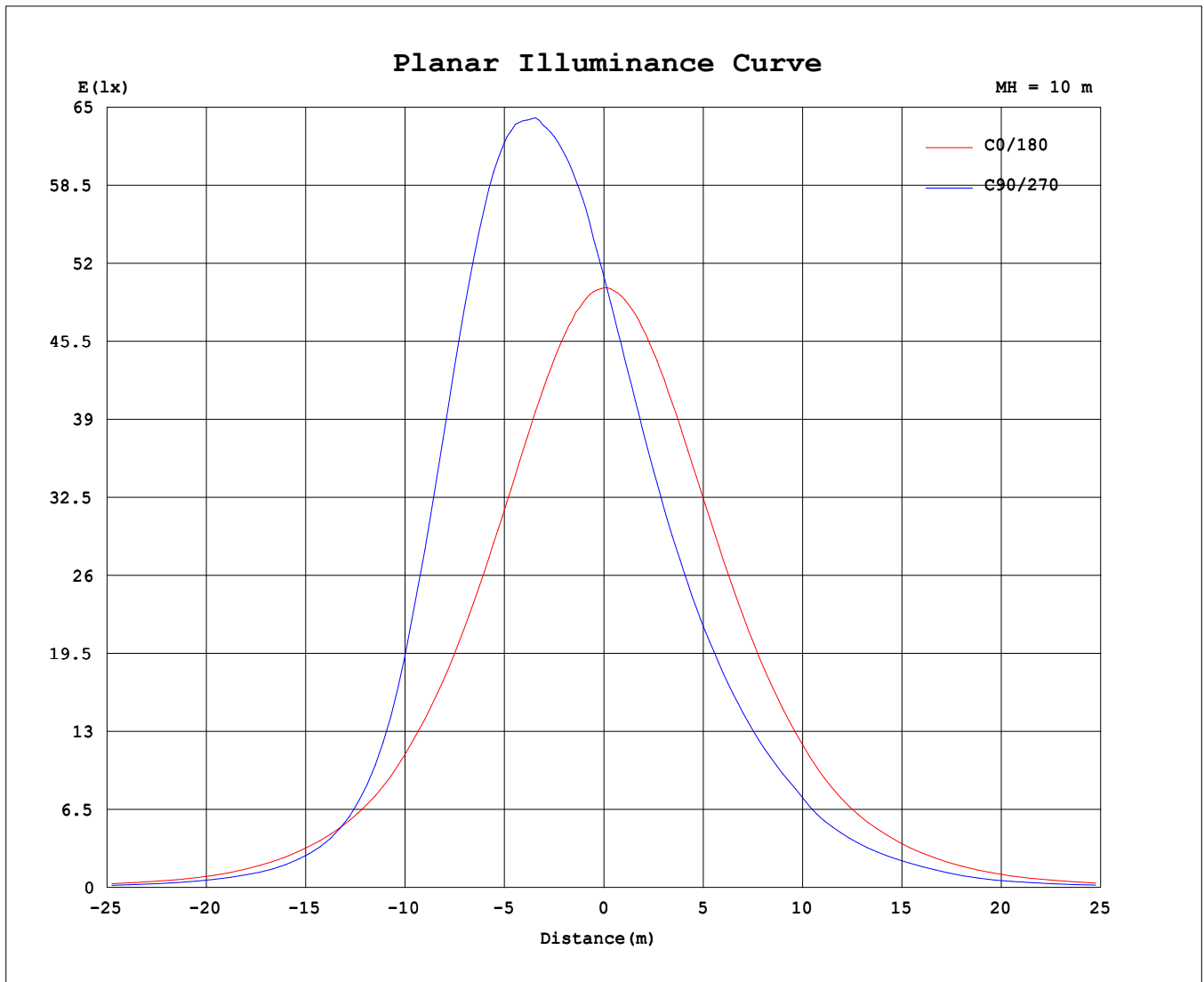
AvgL	cd/m2
L_0~180 (65) av	87325
L_0~180 (75) av	36947
L_0~180 (85) av	7080
L_90~270 (65) av	50850
L_90~270 (75) av	27393
L_90~270 (85) av	8896
L_45 (65) av	90228
L_45 (75) av	37722
L_45 (85) av	7521

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-07-18

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity:50.0%
Test Distance:10.026m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.1°C
 Operators:
 Test Date: 2024-07-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.462
 Humidity: 50.0%
 Test Distance: 10.026m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.56V I:0.4234A P:93.315W PF:0.9560 Freq:50.01Hz Lamp Flux:13722x1 lm		
NAME: HLK-100W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	45	90	135	180	225	270	315										
0	4997	5105	5093	5054	4997	5105	5093	5054										
5	4966	5487	5707	5445	4987	4727	4578	4691										
10	4900	5880	6327	5845	4946	4370	4127	4317										
15	4791	6254	6986	6249	4869	4029	3739	4002										
20	4652	6632	7716	6634	4755	3704	3407	3716										
25	4462	6991	8468	7005	4597	3401	3129	3368										
30	4234	7287	8967	7348	4390	3114	2886	3088										
35	3941	7415	8790	7479	4124	2840	2648	2816										
40	3585	7136	7607	7185	3786	2565	2414	2548										
45	3145	6278	5471	6339	3369	2259	2120	2253										
50	2608	4953	3215	4972	2825	1952	1730	1948										
55	2081	3461	1801	3397	2302	1585	1403	1576										
60	1490	2118	1042	2058	1704	1137	997	1154										
65	909	1253	582	1206	1065	801	567	818										
70	502	661	313	613	601	495	358	519										
75	227	281	162	239	284	247	218	277										
80	76.4	77.1	62.4	63.4	108	89.3	106	108										
85	10.8	11.7	10.7	8.08	22.2	20.9	30.8	29.4										
90	2.24	2.08	1.63	2.09	1.79	2.56	2.01	2.86										
95	3.61	2.92	2.48	3.04	2.77	3.34	2.11	3.23										
100	5.65	4.35	3.65	4.46	4.20	5.46	3.62	5.29										
105	8.27	6.07	5.18	6.14	6.02	8.26	6.15	8.08										
110	11.4	7.98	7.04	8.06	8.23	11.5	9.91	11.5										
115	14.6	10.1	9.02	10.1	10.7	15.3	14.6	15.4										
120	17.8	12.0	11.0	12.1	13.2	18.9	19.8	19.2										
125	20.5	14.1	12.8	14.1	15.8	22.2	24.8	22.6										
130	22.7	15.7	14.6	16.1	18.5	25.1	28.7	25.5										
135	25.5	17.7	16.4	18.1	21.2	27.7	31.4	27.9										
140	28.0	19.8	18.4	20.4	24.2	30.6	33.2	29.9										
145	30.7	22.2	20.6	22.8	27.1	33.7	34.7	31.8										
150	33.2	24.9	23.4	25.7	29.9	37.0	36.9	34.1										
155	35.4	28.0	26.6	28.7	32.3	40.0	39.4	36.2										
160	37.0	30.8	29.8	31.5	34.5	42.5	42.4	38.4										
165	38.2	33.6	33.0	34.2	36.5	44.2	45.4	40.5										
170	39.1	36.5	36.5	36.9	38.0	44.6	45.6	42.2										
175	39.4	39.0	40.0	39.2	38.8	43.3	45.0	42.3										
180	39.2	41.2	42.8	40.8	39.2	41.2	42.7	40.8										

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-07-18

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity:50.0%
Test Distance:10.026m [K=1.0000]
Remarks: