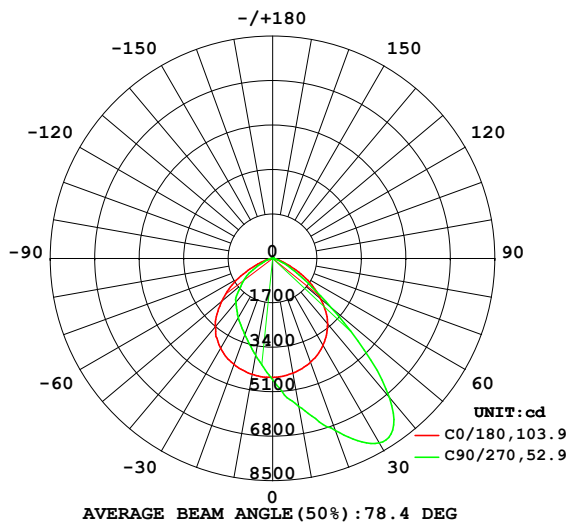


## LUMINAIRE PHOTOMETRIC TEST REPORT

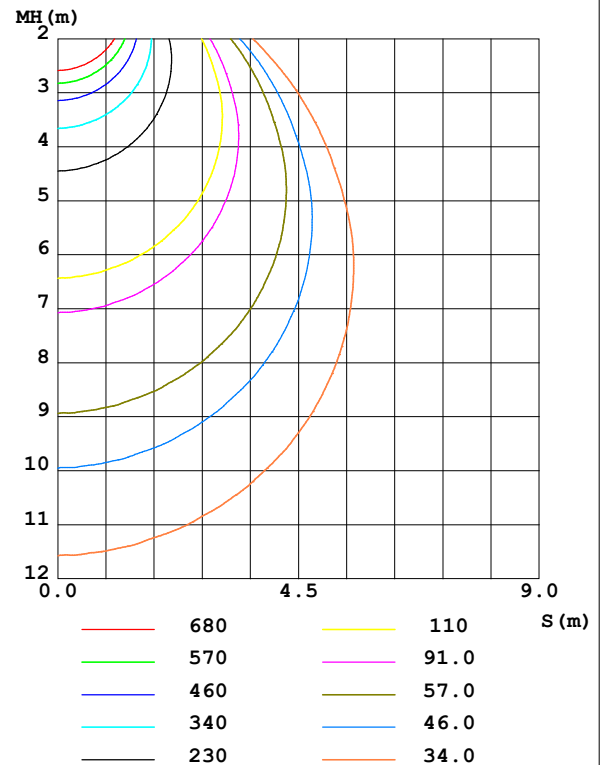
Test:U:230.50V I:0.4457A P:98.686W PF:0.9607 Freq:50.01Hz Lamp Flux:11737.2x1 lm		
NAME: HLK-100W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 118.93 lm/W
MODEL	SMD3030	I <sub>max</sub> (cd)	8183	S/MH (C0/180)	1.29	
NOMINAL POWER(W)	100	LOR (%)	100.0	S/MH (C90/270)	0.84	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	11737	η UP,DN (C0-180)	0.4,59.0	
NOMINAL FLUX(lm)	11737.2	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.4,40.2	
LAMPS INSIDE	1	η up (%)	0.8	CIBSE SHR NOM	1.00	
TEST VOLTAGE (V)	230	η down (%)	99.2	CIBSE SHR MAX	1.15	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
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:

$\gamma$	C0	C90	C180	C270					$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	4452	5738	4501	3754					0- 10	440.3	440.3	3.75, 3.75
20	4223	6994	4312	3113					10- 20	1316	1756	15, 15
30	3851	8144	3982	2629					20- 30	2167	3923	33.4, 33.4
40	3274	6946	3413	2189					30- 40	2748	6671	56.8, 56.8
50	2387	2937	2529	1559					40- 50	2445	9116	77.7, 77.7
60	1363	960.5	1518	885.4					50- 60	1549	10665	90.9, 90.9
70	451.7	284.9	542.6	319.4					60- 70	724.7	11389	97, 97
80	68.84	58.54	98.42	92.33					70- 80	226.1	11615	99, 99
90	2.015	1.463	1.606	1.702					80- 90	26.97	11642	99.2, 99.2
100	5.069	3.261	3.825	3.315					90-100	2.790	11645	99.2, 99.2
110	10.23	6.353	7.506	9.141					100-110	6.235	11651	99.3, 99.3
120	15.96	9.856	12.06	18.17					110-120	11.00	11662	99.4, 99.4
130	20.57	13.23	16.87	26.18					120-130	14.97	11677	99.5, 99.5
140	25.24	16.64	22.04	30.54					130-140	16.57	11694	99.6, 99.6
150	30.07	21.22	27.26	33.55					140-150	16.11	11710	99.8, 99.8
160	33.53	27.01	31.51	38.53					150-160	13.99	11724	99.9, 99.9
170	35.46	33.11	34.70	41.18					160-170	9.759	11734	100, 100
180	35.68	38.83	35.69	38.79					170-180	3.512	11737	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 8003.3 lm

%lum = 68.2%

%lamp = 68.2%

Conical surface Flux(120deg): 10665 lm

%lum = 90.9%

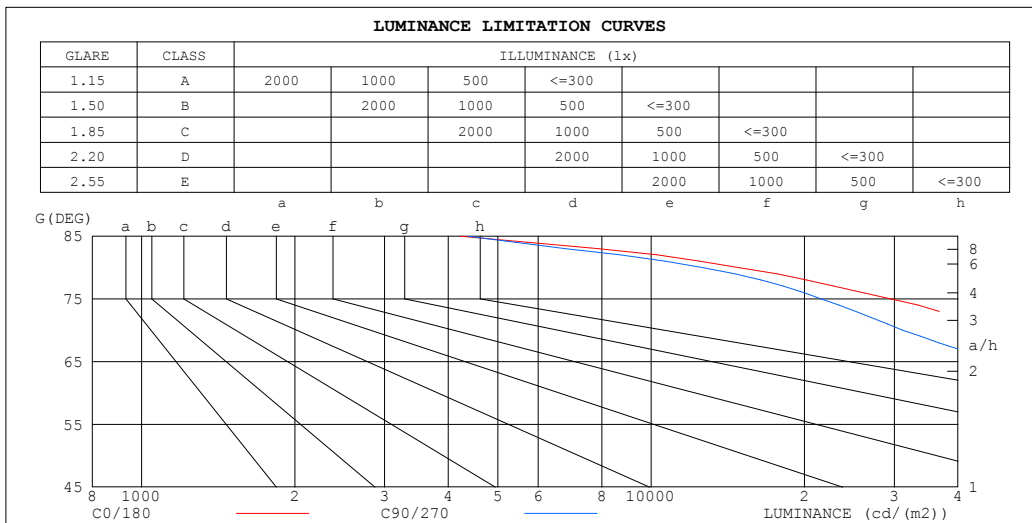
%lamp = 90.9%

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.1℃  
Operators:  
Test Date:2024-07-18

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  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:230.50V I:0.4457A P:98.686W PF:0.9607 Freq:50.01Hz Lamp Flux:11737.2x1 lm		
NAME: HLK-100W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:



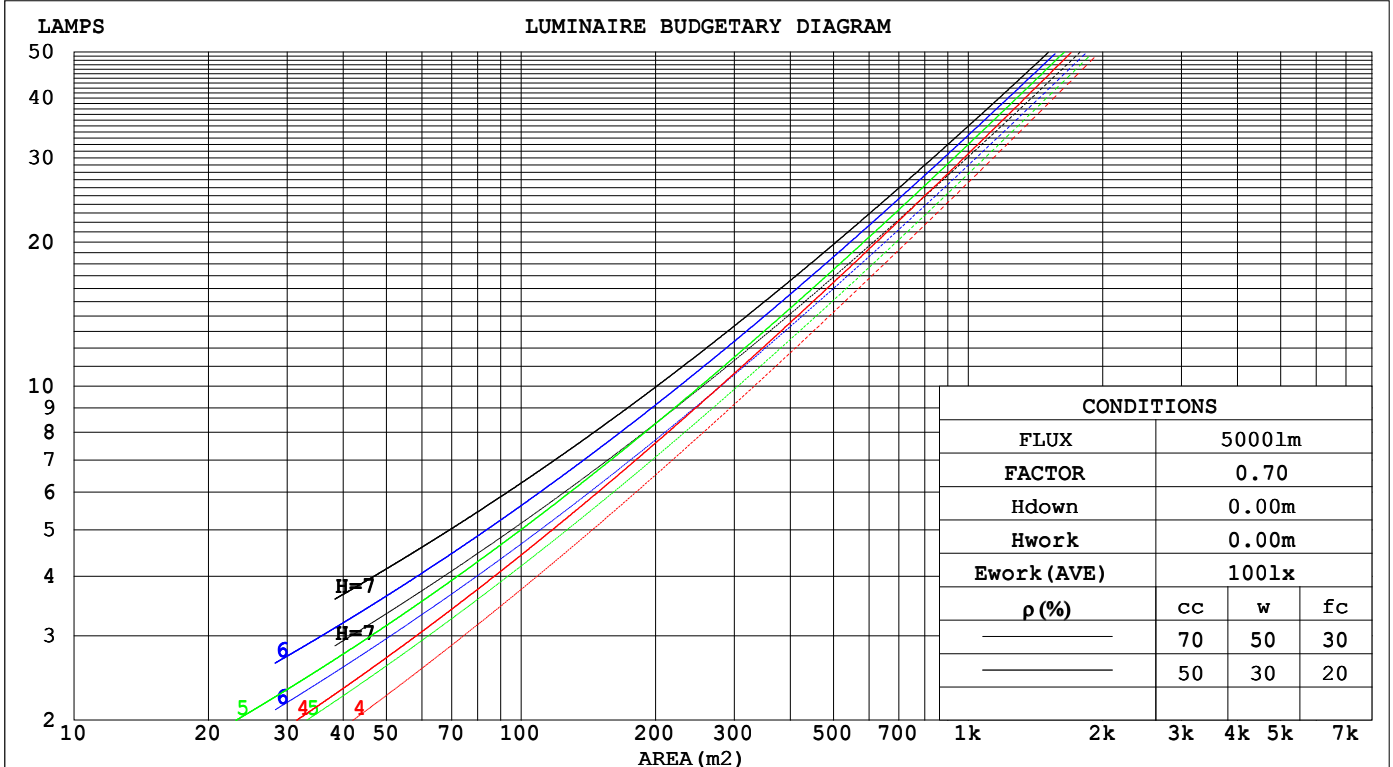
C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature: 25.1°C  
Operators:  
Test Date: 2024-07-18

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:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.50V I:0.4457A P:98.686W PF:0.9607 Freq:50.01Hz Lamp Flux:11737.2x1 lm		
NAME: HLK-100W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-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: 90.0DEG  
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:230.50V I:0.4457A P:98.686W PF:0.9607 Freq:50.01Hz Lamp Flux:11737.2x1 lm		
NAME: HLK-100W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

pcc	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						Wall Exitance Coefficients (WEC)										
0.0																	
1.0	.248	.141	.045	.241	.137	.044	.227	.130	.042	.215	.124	.040	.204	.118	.038		
2.0	.242	.133	.041	.236	.130	.040	.224	.125	.039	.214	.120	.038	.204	.115	.036		
3.0	.231	.123	.037	.225	.121	.036	.215	.117	.035	.206	.113	.035	.197	.109	.034		
4.0	.218	.113	.033	.213	.112	.033	.204	.108	.032	.196	.105	.032	.188	.102	.031		
5.0	.206	.105	.030	.201	.103	.030	.193	.101	.030	.186	.098	.029	.179	.095	.029		
6.0	.194	.097	.028	.190	.096	.028	.183	.094	.027	.176	.091	.027	.170	.089	.027		
7.0	.183	.090	.026	.179	.089	.025	.173	.087	.025	.167	.085	.025	.161	.084	.025		
8.0	.172	.084	.024	.169	.083	.024	.163	.082	.023	.158	.080	.023	.153	.078	.023		
9.0	.163	.079	.022	.160	.078	.022	.155	.077	.022	.150	.075	.022	.145	.074	.021		
10.0	.154	.074	.021	.152	.073	.020	.147	.072	.020	.143	.071	.020	.138	.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	.197	.197	.197	.168	.168	.168	.115	.115	.115	.066	.066	.066	.021	.021	.021	
1.0	.182	.163	.145	.156	.140	.125	.107	.096	.087	.061	.056	.050	.020	.018	.016	
2.0	.172	.138	.110	.147	.119	.095	.101	.082	.066	.058	.048	.039	.019	.016	.013	
3.0	.163	.120	.086	.140	.104	.075	.096	.072	.052	.055	.042	.031	.018	.014	.010	
4.0	.156	.107	.069	.133	.092	.060	.092	.064	.042	.053	.038	.025	.017	.012	.008	
5.0	.148	.096	.057	.127	.083	.050	.088	.058	.035	.051	.034	.021	.016	.011	.007	
6.0	.142	.087	.048	.122	.076	.042	.084	.053	.030	.049	.031	.018	.016	.010	.006	
7.0	.136	.080	.042	.117	.070	.036	.081	.049	.026	.047	.029	.015	.015	.009	.005	
8.0	.130	.075	.037	.112	.065	.032	.077	.045	.023	.045	.027	.014	.015	.009	.004	
9.0	.124	.070	.033	.107	.061	.029	.074	.043	.020	.043	.025	.012	.014	.008	.004	
10.0	.119	.066	.030	.103	.057	.026	.071	.040	.018	.042	.024	.011	.013	.008	.004	

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
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:230.50V I:0.4457A P:98.686W PF:0.9607 Freq:50.01Hz Lamp Flux:11737.2x1 lm											
NAME: HLK-100W					TYPE: Glass-50*100D			WEIGHT:			
SPEC.: 3000K-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	27.5	29.0	27.9	29.3	29.6	26.9	28.3	27.3	28.7	29.0	
	3H	28.1	29.4	28.5	29.7	30.1	27.3	28.5	27.7	28.9	29.3
	4H	28.2	29.4	28.6	29.7	30.1	27.3	28.5	27.7	28.9	29.3
	6H	28.1	29.2	28.6	29.6	30.0	27.3	28.4	27.7	28.8	29.2
	8H	28.1	29.2	28.6	29.6	30.0	27.3	28.3	27.7	28.7	29.1
	12H	28.1	29.1	28.5	29.5	29.9	27.2	28.2	27.7	28.6	29.1
4H 2H	27.6	28.8	28.0	29.2	29.6	27.2	28.4	27.6	28.8	29.2	
	3H	28.3	29.2	28.7	29.6	30.1	27.7	28.7	28.1	29.1	29.5
	4H	28.4	29.2	28.8	29.7	30.1	27.8	28.6	28.2	29.1	29.5
	6H	28.4	29.1	28.8	29.6	30.1	27.8	28.5	28.3	29.0	29.5
	8H	28.3	29.0	28.8	29.5	30.0	27.7	28.4	28.2	28.9	29.4
	12H	28.3	28.9	28.8	29.4	29.9	27.7	28.3	28.2	28.8	29.3
8H 4H	28.3	29.0	28.8	29.5	29.9	27.8	28.5	28.3	28.9	29.4	
	6H	28.3	28.9	28.8	29.4	29.9	27.8	28.4	28.3	28.9	29.4
	8H	28.3	28.8	28.8	29.3	29.8	27.8	28.3	28.3	28.8	29.3
	12H	28.2	28.7	28.7	29.2	29.8	27.7	28.2	28.3	28.7	29.3
12H 4H	28.3	28.9	28.8	29.4	29.9	27.8	28.4	28.3	28.9	29.4	
	6H	28.3	28.8	28.8	29.3	29.8	27.8	28.3	28.3	28.8	29.3
	8H	28.2	28.7	28.7	29.2	29.8	27.7	28.2	28.3	28.7	29.3
CIE190: 2010											

CIE190: 2010  
Area: 0.026741 m2

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
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:230.50V I:0.4457A P:98.686W PF:0.9607 Freq:50.01Hz Lamp Flux:11737.2x1 lm		
NAME: HLK-100W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

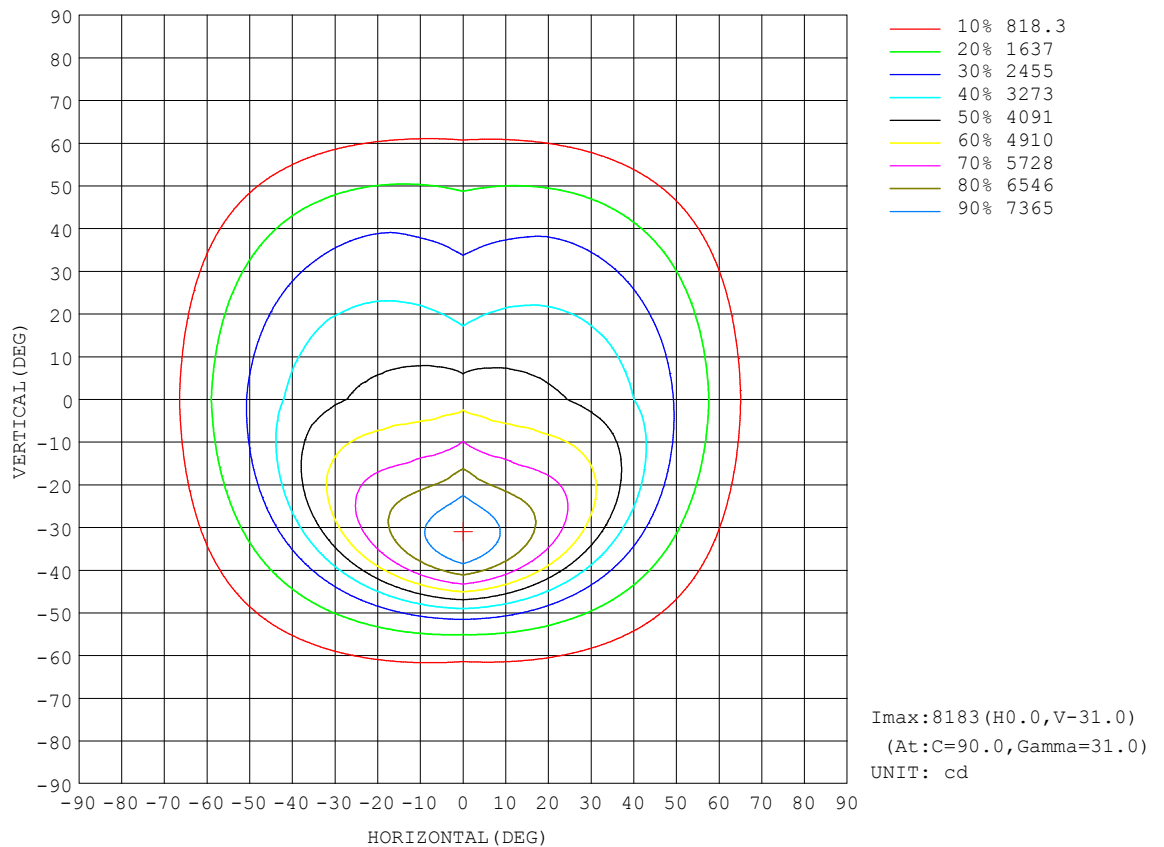
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	64	54	47	63	53	47	62	53	47	41
0.80	75	64	58	74	64	58	72	63	57	51
1.00	83	74	67	82	73	67	80	74	67	60
1.25	90	81	75	88	80	75	86	79	74	68
1.50	94	86	81	93	85	80	90	84	79	72
2.00	100	93	88	98	92	87	95	90	86	79
2.50	103	97	92	101	96	91	98	93	89	82
3.00	106	100	96	104	99	95	100	96	93	85
4.00	109	105	101	107	103	99	103	99	97	88
5.00	111	107	104	108	105	102	104	101	99	90
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: 25.1°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:

## ISOCANDELA DIAGRAM

Test:U:230.50V I:0.4457A P:98.686W PF:0.9607 Freq:50.01Hz Lamp Flux:11737.2x1 lm		
NAME: HLK-100W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:



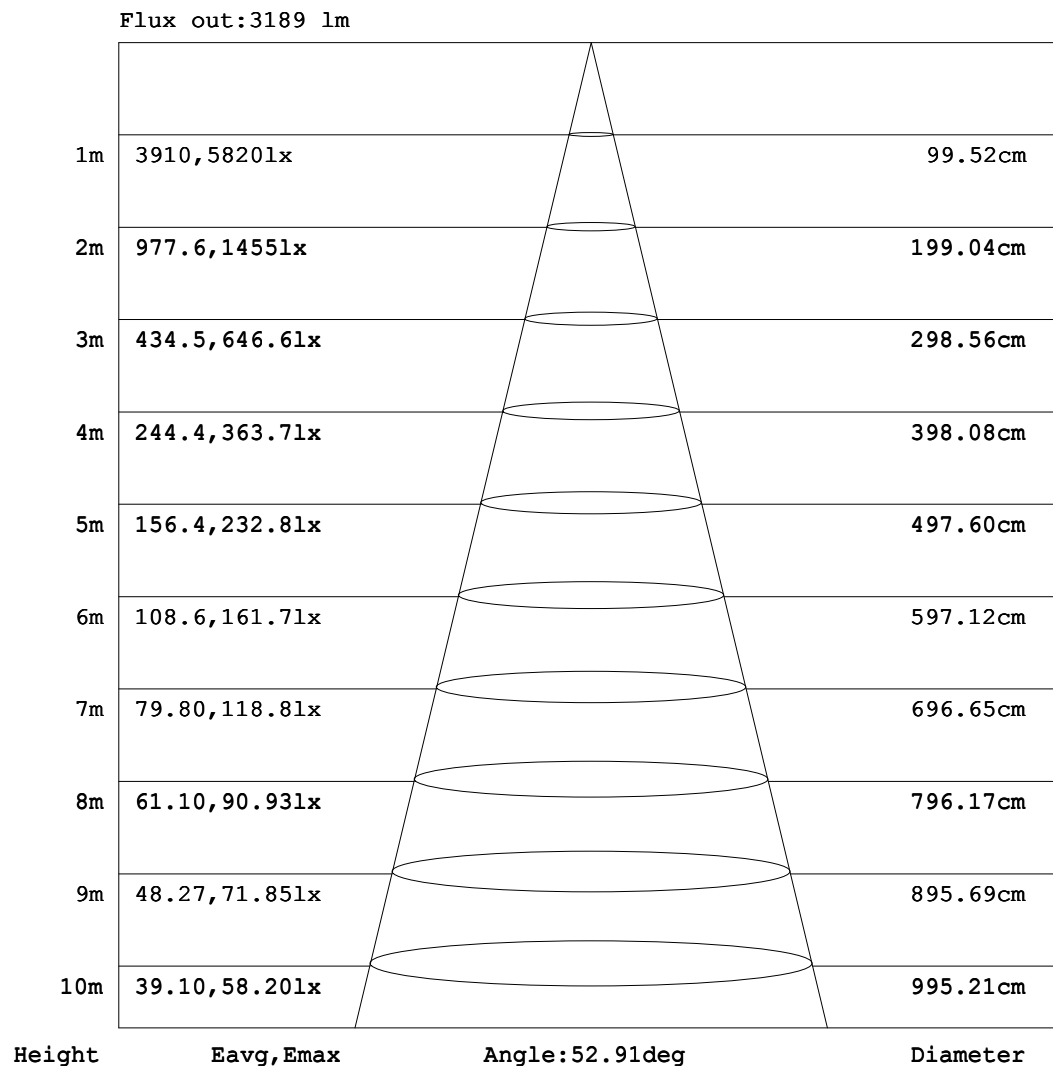
C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.1℃  
Operators:  
Test Date:2024-07-18

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:230.50V I:0.4457A P:98.686W PF:0.9607 Freq:50.01Hz Lamp Flux:11737.2x1 lm		
NAME: HLK-100W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:



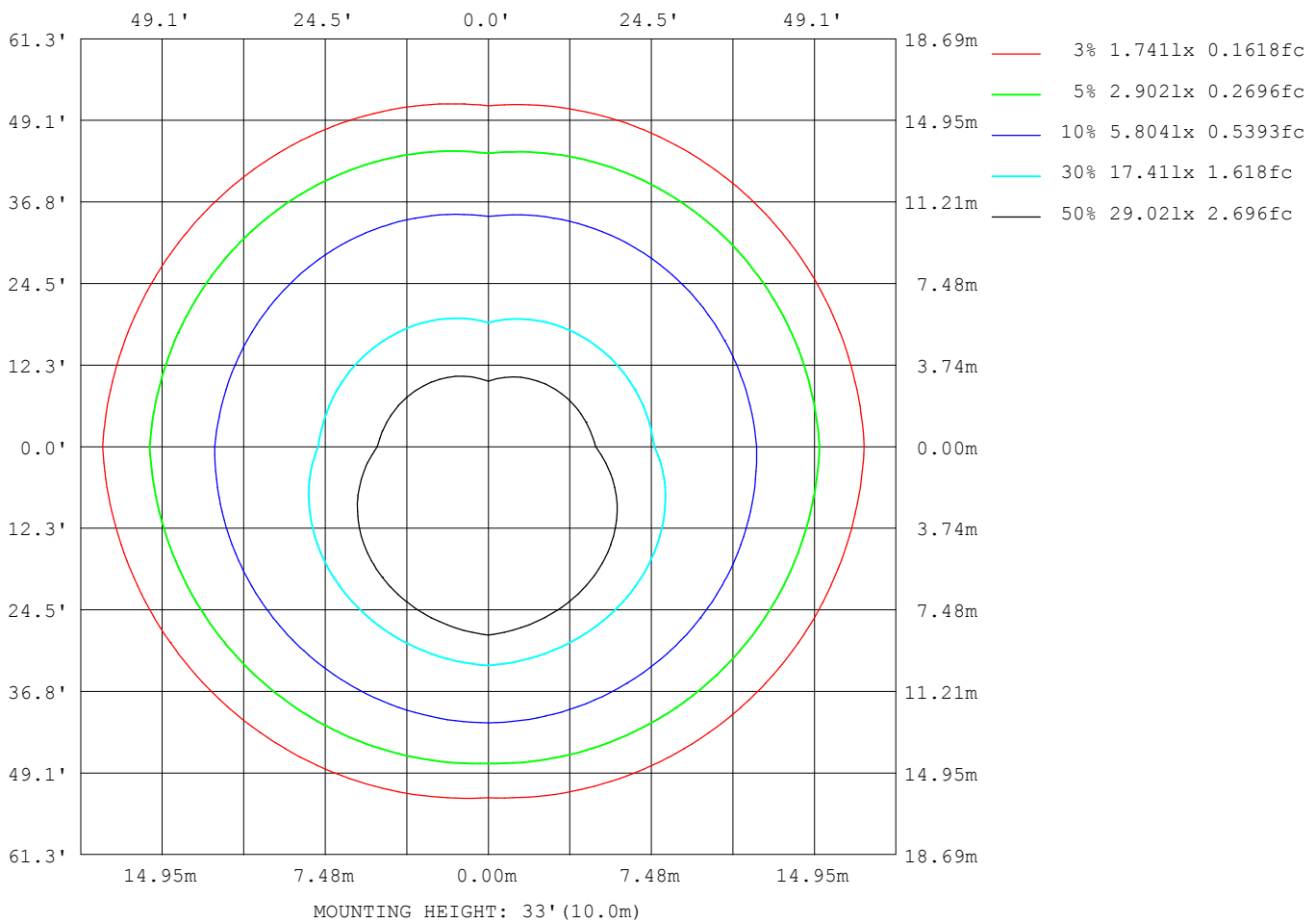
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
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:230.50V I:0.4457A P:98.686W PF:0.9607 Freq:50.01Hz Lamp Flux:11737.2x1 lm		
NAME: HLK-100W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
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:230.50V I:0.4457A P:98.686W PF:0.9607 Freq:50.01Hz Lamp Flux:11737.2x1 lm		
NAME: HLK-100W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

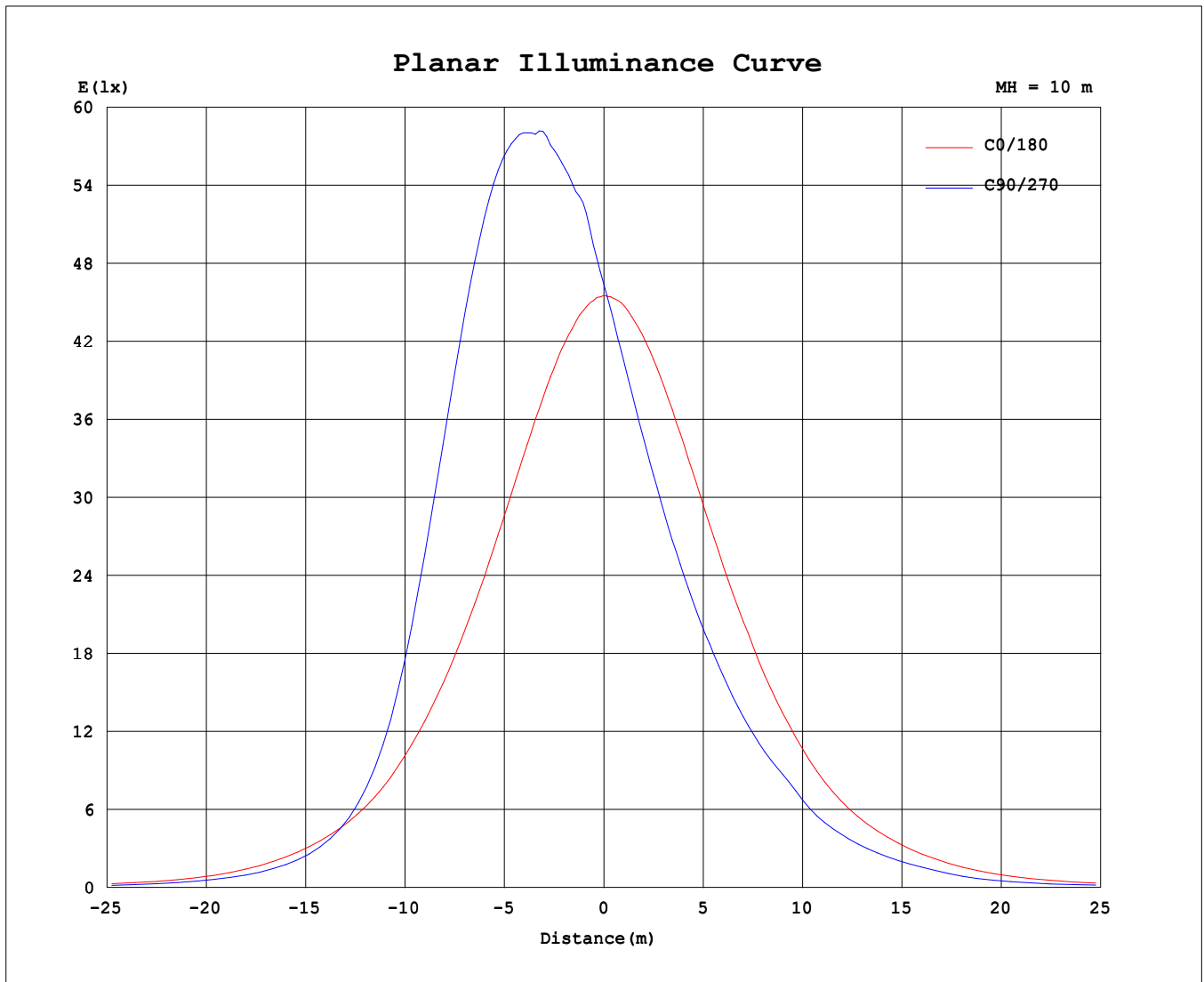
AvgL	cd/m2
L_0~180 (65) av	78551
L_0~180 (75) av	33697
L_0~180 (85) av	6488
L_90~270 (65) av	46186
L_90~270 (75) av	24829
L_90~270 (85) av	7782
L_45 (65) av	58681
L_45 (75) av	28413
L_45 (85) av	7438

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
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: 90.0DEG  
 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:

## LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.50V I:0.4457A P:98.686W PF:0.9607 Freq:50.01Hz Lamp Flux:11737.2x1 lm		
NAME: HLK-100W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270															
0	4554	4636	4554	4636															
5	4519	5247	4549	4171															
10	4452	5738	4501	3754															
15	4358	6336	4431	3413															
20	4223	6994	4312	3113															
25	4062	7682	4176	2856															
30	3851	8144	3982	2629															
35	3589	8006	3731	2395															
40	3274	6946	3413	2189															
45	2877	4962	3016	1913															
50	2387	2937	2529	1559															
55	1904	1660	2054	1262															
60	1363	960	1518	885															
65	823	540	952	504															
70	452	285	543	319															
75	205	149	262	194															
80	68.8	58.5	98.4	92.3															
85	9.84	10.2	20.4	26.1															
90	2.01	1.46	1.61	1.70															
95	3.23	2.23	2.51	1.91															
100	5.07	3.26	3.83	3.31															
105	7.42	4.66	5.51	5.67															
110	10.2	6.35	7.51	9.14															
115	13.1	8.11	9.72	13.5															
120	16.0	9.86	12.1	18.2															
125	18.5	11.6	14.4	22.6															
130	20.6	13.2	16.9	26.2															
135	23.1	14.9	19.4	28.6															
140	25.2	16.6	22.0	30.5															
145	27.9	18.7	24.7	31.6															
150	30.1	21.2	27.3	33.5															
155	32.1	24.1	29.5	35.9															
160	33.5	27.0	31.5	38.5															
165	34.7	30.0	33.3	41.2															
170	35.5	33.1	34.7	41.2															
175	35.8	36.3	35.4	40.9															
180	35.7	38.8	35.7	38.8															

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.1℃  
Operators:  
Test Date:2024-07-18

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
γ Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity:50.0%  
Test Distance:10.026m [K=1.0000]  
Remarks: