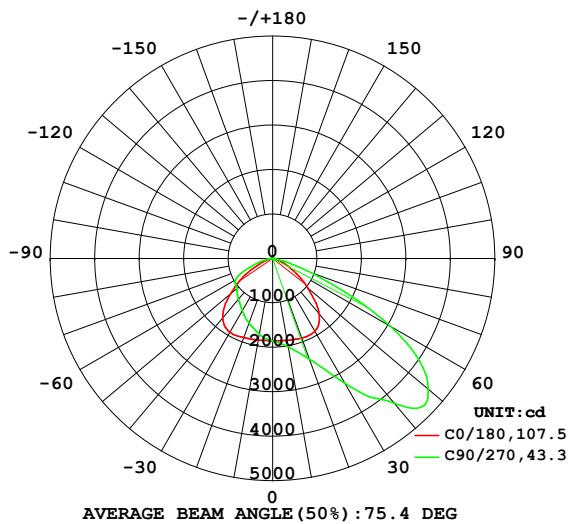


## LUMINAIRE PHOTOMETRIC TEST REPORT

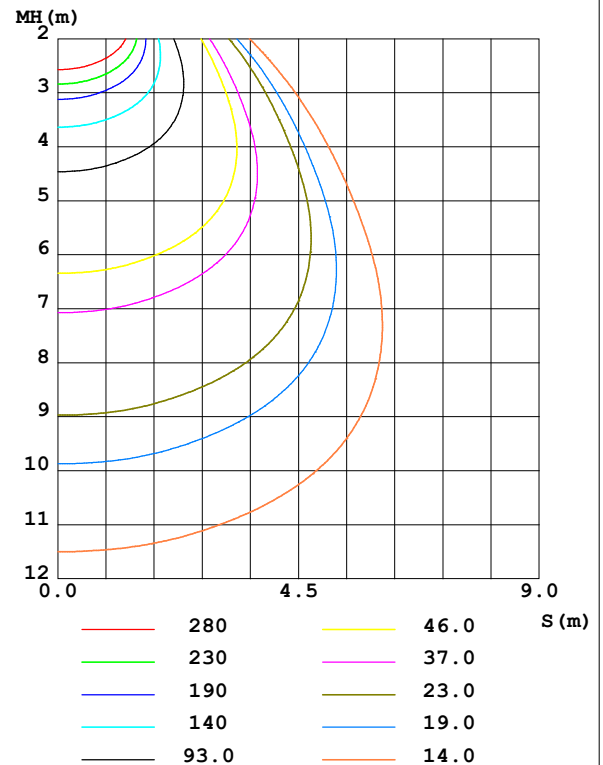
Test:U:230.51V I:0.2307A P:48.367W PF:0.9095 Freq:50.01Hz Lamp Flux:7187.56x1 lm		
NAME: HLK-100W	TYPE: 50*100D	WEIGHT:
SPEC.: 4000K-RA80-170L	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 148.61 lm/W
MODEL	ShineOn3030	Imax(cd)	4752	S/MH(C0/180)	1.51	
NOMINAL POWER(W)	100	LOR(%)	100.0	S/MH(C90/270)	1.11	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	7187.6	$\eta$ UP,DN(C0-180)	0.0,66.9	
NOMINAL FLUX(lm)	7187.56	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,33.1	
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	1.50	
TEST VOLTAGE(V)	230	$\eta$ down(%)	100.0	CIBSE SHR MAX	1.55	

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:2024-12-19

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity:50.0%  
Test Distance:10.026m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	1872	1953	2020	1946	1866	1791	1733	1775	0- 10	177.8	177.8	2.47, 2.47
20	1908	2182	2406	2175	1898	1637	1553	1607	10- 20	536.2	714.0	9.93, 9.93
30	1897	2615	3234	2641	1921	1385	1364	1366	20- 30	919.6	1634	22.7, 22.7
40	1629	3138	4246	3168	1749	1094	1199	1085	30- 40	1331	2964	41.2, 41.2
50	1032	3219	4564	3230	1240	892.9	1058	895.3	40- 50	1657	4621	64.3, 64.3
60	521.7	1782	3062	1793	663.2	636.3	966.8	664.0	50- 60	1513	6134	85.3, 85.3
70	200.5	437.7	854.7	413.2	234.9	346.3	486.9	381.1	60- 70	801.6	6936	96.5, 96.5
80	45.37	58.21	87.51	54.36	66.40	91.92	123.1	102.8	70- 80	224.4	7160	99.6, 99.6
90	1.193	1.310	1.756	1.361	0.7728	2.100	3.116	2.680	80- 90	27.22	7188	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): 3770.7 lm

%lum = 52.5%

%lamp = 52.5%

Conical surface Flux(120deg): 6134.4 lm

%lum = 85.3%

%lamp = 85.3%

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature: 25.1℃  
 Operators:  
 Test Date: 2024-12-19

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:230.51V I:0.2307A P:48.367W PF:0.9095 Freq:50.01Hz

Lamp Flux:7187.56x1 lm

NAME: HLK-100W

TYPE: 50\*100D

WEIGHT:

SPEC.: 4000K-RA80-170L

DIM.:

SERIAL No.:

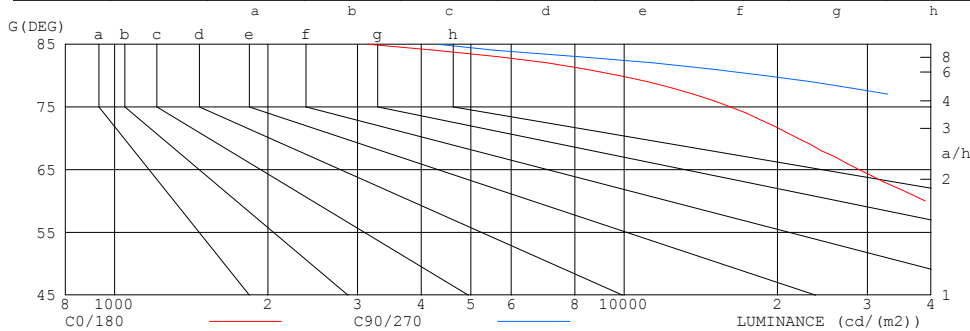
MFR.:

SUR.: 0.221m\*0.121m

Shielding Angle:

LUMINANCE LIMITATION CURVES

GLARE	CLASS	ILLUMINANCE (lx)							
1.15	A	2000	1000	500	<=300				
1.50	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.20	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300



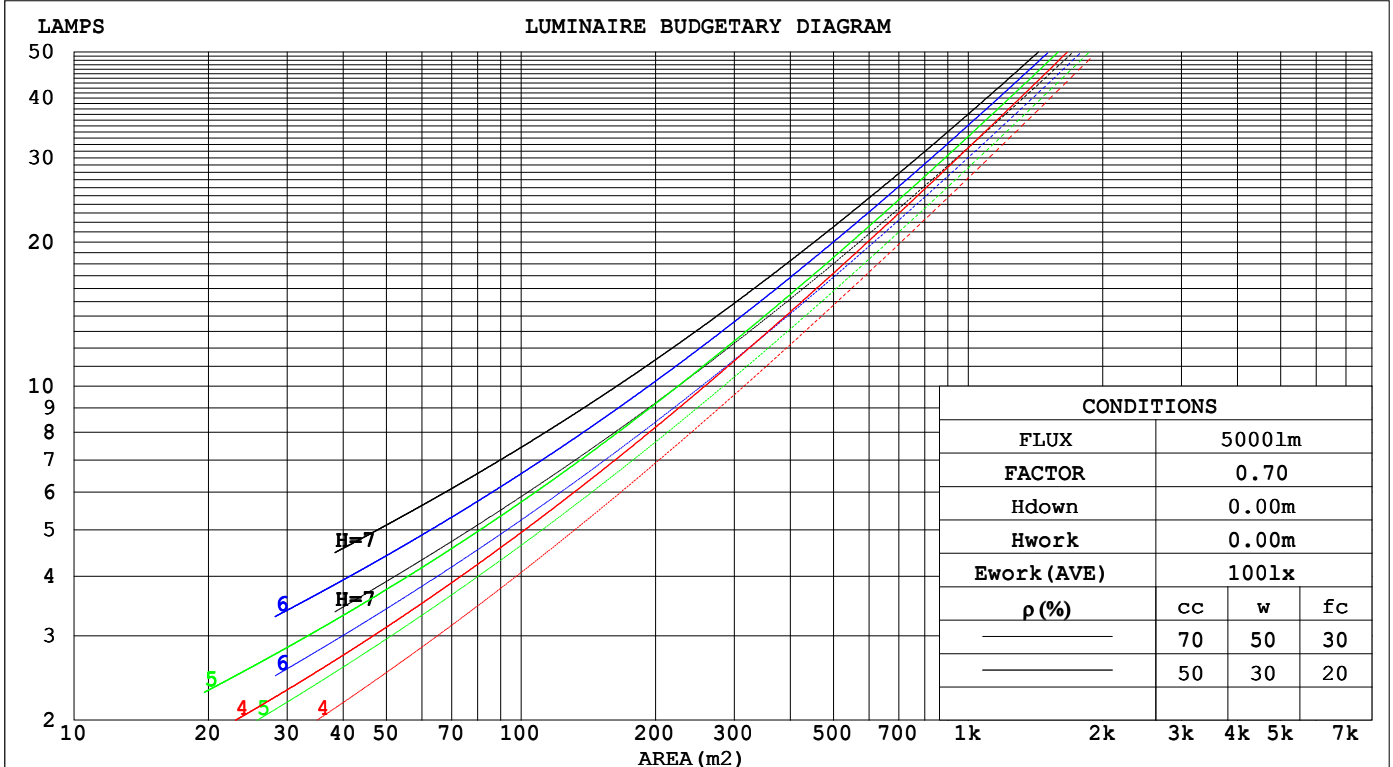
C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.1℃  
Operators:  
Test Date: 2024-12-19

γ Range: 0 - 90DEG  
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:230.51V I:0.2307A P:48.367W PF:0.9095 Freq:50.01Hz Lamp Flux:7187.56x1 lm		
NAME: HLK-100W	TYPE: 50*100D	WEIGHT:
SPEC.: 4000K-RA80-170L	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	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	1.05	1.01	.98	1.03	.99	.96	.99	.96	.93	.95	.93	.90	.91	.89	.88	.86
2.0	.92	.86	.80	.90	.84	.79	.87	.82	.77	.83	.79	.75	.80	.77	.74	.72
3.0	.81	.73	.66	.79	.72	.66	.76	.70	.64	.73	.68	.63	.71	.66	.62	.60
4.0	.71	.62	.55	.70	.61	.55	.67	.60	.54	.65	.59	.54	.63	.57	.53	.51
5.0	.63	.54	.47	.62	.53	.47	.60	.52	.46	.58	.51	.46	.56	.50	.45	.43
6.0	.56	.47	.41	.55	.47	.40	.53	.46	.40	.52	.45	.40	.50	.44	.39	.37
7.0	.50	.41	.35	.50	.41	.35	.48	.40	.35	.47	.40	.35	.45	.39	.34	.32
8.0	.46	.37	.31	.45	.37	.31	.44	.36	.31	.42	.35	.30	.41	.35	.30	.28
9.0	.41	.33	.27	.41	.33	.27	.40	.32	.27	.39	.32	.27	.38	.31	.27	.25
10.0	.38	.30	.25	.37	.30	.24	.36	.29	.24	.35	.29	.24	.35	.28	.24	.22



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1℃  
Operators:  
Test Date:2024-12-19

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 $\gamma$  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:230.51V I:0.2307A P:48.367W PF:0.9095 Freq:50.01Hz Lamp Flux:7187.56x1 lm					
NAME: HLK-100W			TYPE: 50*100D		WEIGHT:
SPEC.: 4000K-RA80-170L			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	.282	.161	.051	.275	.157	.050	.262	.150	.048	.250	.144	.046	.239	.138	.045	
2.0	.277	.152	.047	.270	.149	.046	.259	.144	.045	.248	.139	.044	.238	.135	.043	
3.0	.262	.140	.042	.257	.138	.041	.247	.134	.041	.237	.130	.040	.228	.126	.039	
4.0	.246	.128	.038	.241	.126	.037	.232	.123	.037	.224	.120	.036	.216	.117	.036	
5.0	.230	.117	.034	.226	.116	.034	.218	.113	.033	.210	.111	.033	.203	.108	.033	
6.0	.215	.108	.031	.211	.107	.031	.204	.104	.030	.197	.102	.030	.191	.100	.030	
7.0	.201	.099	.028	.198	.098	.028	.191	.097	.028	.185	.095	.028	.179	.093	.027	
8.0	.188	.092	.026	.185	.091	.026	.179	.090	.026	.174	.088	.025	.169	.087	.025	
9.0	.177	.086	.024	.174	.085	.024	.169	.084	.024	.164	.082	.024	.159	.081	.023	
10.0	.167	.080	.022	.164	.079	.022	.159	.078	.022	.155	.077	.022	.151	.076	.022	

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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.178	.156	.137	.153	.134	.118	.104	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.170	.132	.100	.146	.114	.086	.100	.079	.060	.058	.046	.035	.018	.015	.011	
3.0	.163	.114	.075	.140	.099	.065	.096	.068	.046	.055	.040	.027	.018	.013	.009	
4.0	.156	.101	.059	.134	.087	.051	.092	.061	.036	.053	.036	.021	.017	.012	.007	
5.0	.149	.091	.047	.128	.078	.041	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.143	.082	.039	.123	.071	.034	.085	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.136	.075	.033	.117	.065	.029	.081	.046	.020	.047	.027	.012	.015	.009	.004	
8.0	.130	.070	.028	.112	.061	.025	.077	.042	.018	.045	.025	.010	.015	.008	.003	
9.0	.124	.065	.025	.107	.056	.022	.074	.040	.015	.043	.023	.009	.014	.008	.003	
10.0	.119	.061	.022	.102	.053	.019	.071	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1℃  
Operators:  
Test Date:2024-12-19

γ Range: 0 - 90DEG  
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:230.51V I:0.2307A P:48.367W PF:0.9095 Freq:50.01Hz Lamp Flux:7187.56x1 lm											
NAME: HLK-100W					TYPE: 50*100D			WEIGHT:			
SPEC.: 4000K-RA80-170L					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	2H	28.3	29.9	28.6	30.2	30.6	34.4	36.1	34.8	36.4	36.7
	3H	28.5	30.0	28.9	30.3	30.7	34.9	36.4	35.3	36.7	37.1
	4H	28.5	29.9	28.9	30.3	30.6	35.0	36.3	35.3	36.7	37.1
	6H	28.5	29.8	28.9	30.2	30.6	34.9	36.2	35.3	36.6	37.0
	8H	28.5	29.7	28.9	30.1	30.5	34.9	36.1	35.3	36.5	36.9
	12H	28.5	29.6	28.9	30.0	30.4	34.9	36.0	35.3	36.4	36.8
4H	2H	29.0	30.4	29.4	30.8	31.2	34.5	35.9	34.9	36.2	36.6
	3H	29.3	30.5	29.8	30.9	31.3	35.0	36.1	35.4	36.5	36.9
	4H	29.4	30.4	29.8	30.8	31.2	35.0	36.1	35.5	36.5	36.9
	6H	29.4	30.2	29.8	30.7	31.1	35.0	35.9	35.5	36.4	36.8
	8H	29.3	30.2	29.8	30.6	31.1	35.0	35.8	35.4	36.3	36.7
	12H	29.3	30.0	29.8	30.5	31.0	35.0	35.7	35.4	36.2	36.7
8H	4H	29.4	30.2	29.9	30.7	31.1	35.0	35.8	35.4	36.2	36.7
	6H	29.4	30.1	29.9	30.6	31.0	34.9	35.6	35.4	36.1	36.6
	8H	29.3	30.0	29.9	30.5	31.0	34.9	35.5	35.4	36.0	36.5
	12H	29.3	29.9	29.8	30.4	30.9	34.9	35.4	35.4	35.9	36.5
12H	4H	29.4	30.1	29.9	30.6	31.1	34.9	35.7	35.4	36.2	36.6
	6H	29.4	30.0	29.9	30.4	31.0	34.9	35.5	35.4	36.0	36.5
	8H	29.3	29.9	29.8	30.4	30.9	34.9	35.4	35.4	35.9	36.5
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:2024-12-19

γ Range: 0 - 90DEG  
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:230.51V I:0.2307A P:48.367W PF:0.9095 Freq:50.01Hz Lamp Flux:7187.56x1 lm		
NAME: HLK-100W	TYPE: 50*100D	WEIGHT:
SPEC.: 4000K-RA80-170L	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

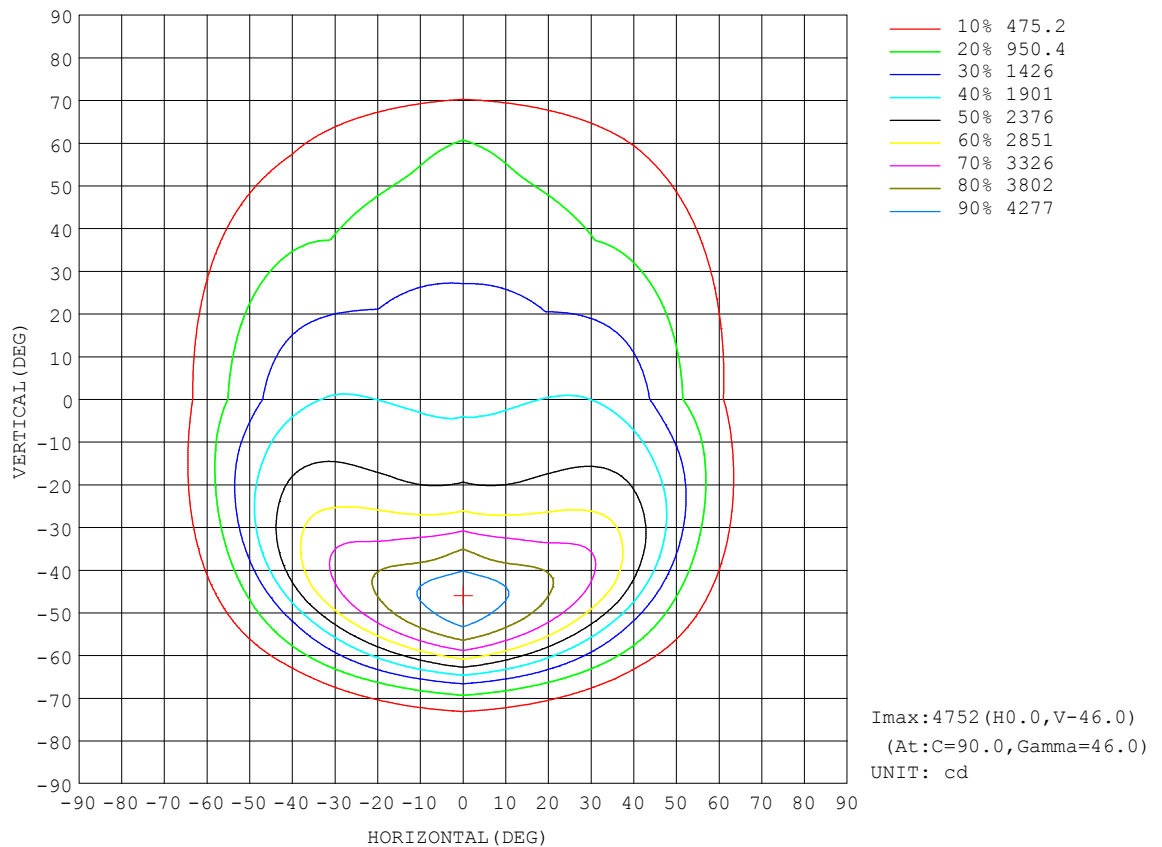
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	54	42	35	54	42	35	52	41	35	28
0.80	66	54	46	65	53	46	63	52	45	38
1.00	76	64	57	74	64	57	72	65	56	49
1.25	83	73	66	82	72	66	79	71	65	57
1.50	89	79	72	87	78	72	84	76	71	63
2.00	96	88	82	94	87	81	91	85	79	72
2.50	100	92	87	98	91	86	94	88	84	76
3.00	103	97	92	101	95	91	97	92	88	80
4.00	107	102	97	105	100	96	101	97	93	85
5.00	109	105	101	107	103	99	102	99	96	87
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°C  
Operators:  
Test Date: 2024-12-19

γ Range: 0 - 90DEG  
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:230.51V I:0.2307A P:48.367W PF:0.9095 Freq:50.01Hz Lamp Flux:7187.56x1 lm		
NAME: HLK-100W	TYPE: 50*100D	WEIGHT:
SPEC.: 4000K-RA80-170L	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:



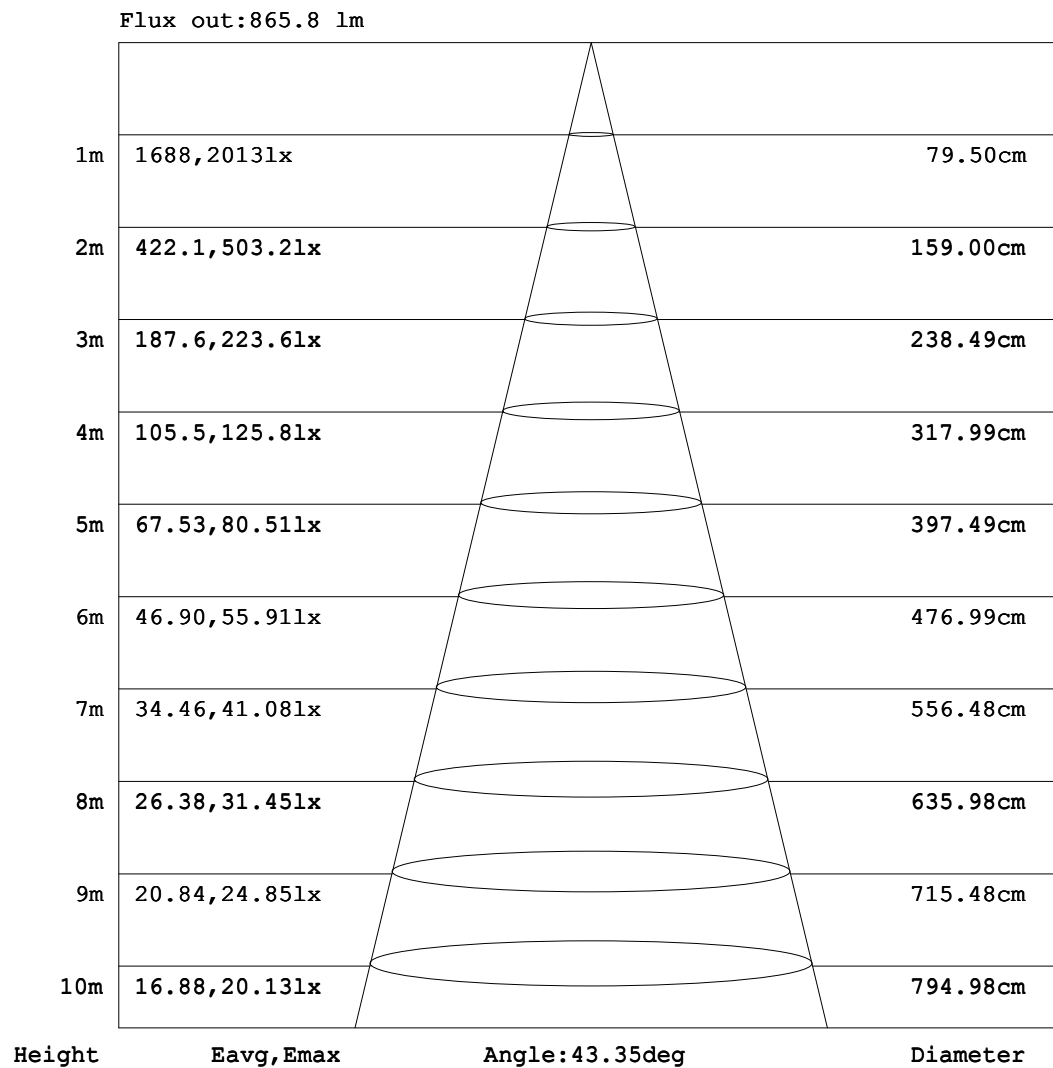
C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1℃  
Operators:  
Test Date:2024-12-19

γ Range: 0 - 90DEG  
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:230.51V I:0.2307A P:48.367W PF:0.9095 Freq:50.01Hz Lamp Flux:7187.56x1 lm		
NAME: HLK-100W	TYPE: 50*100D	WEIGHT:
SPEC.: 4000K-RA80-170L	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:



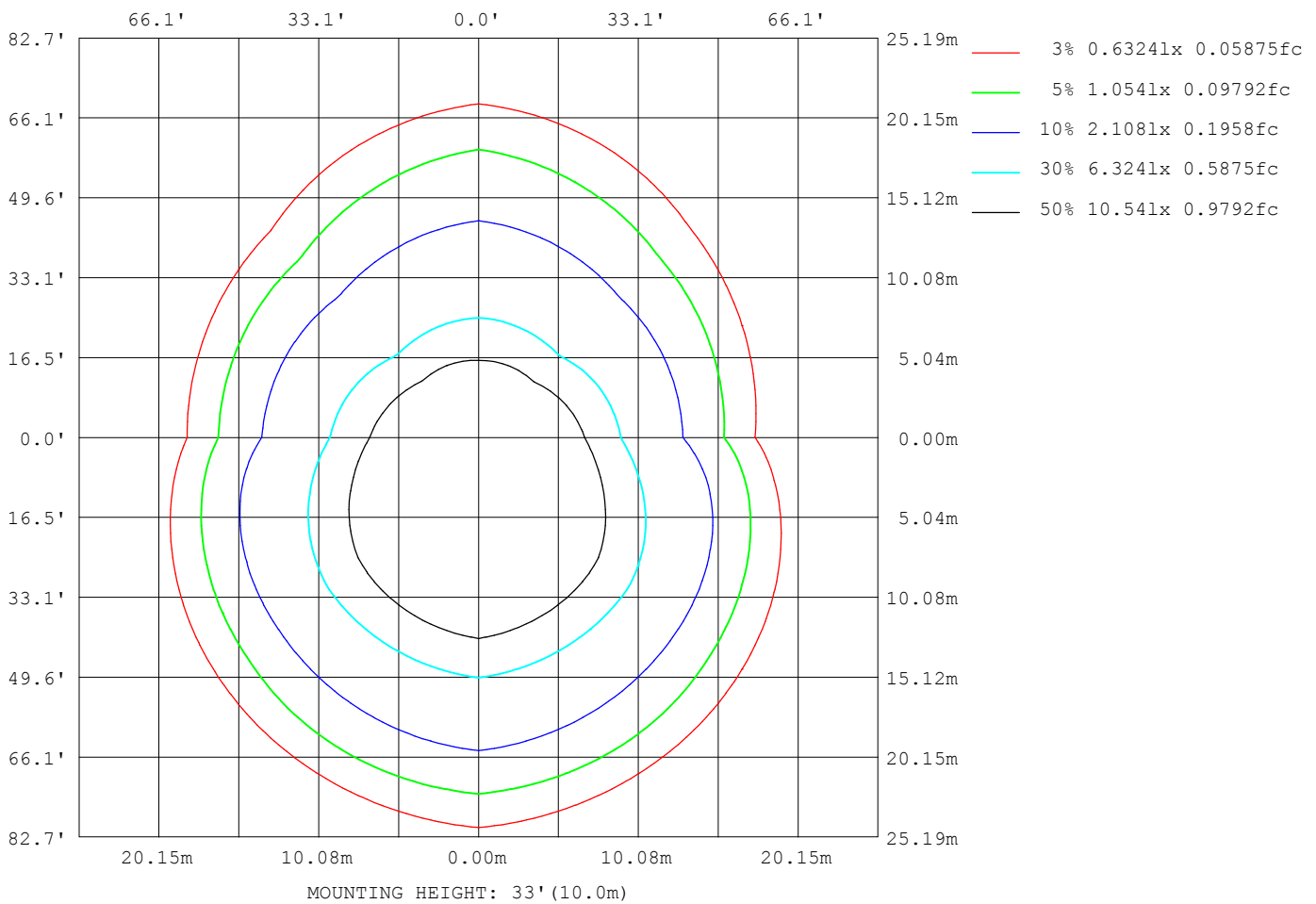
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.1℃  
 Operators:  
 Test Date:2024-12-19

γ Range: 0 - 90DEG  
 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:230.51V I:0.2307A P:48.367W PF:0.9095 Freq:50.01Hz Lamp Flux:7187.56x1 lm		
NAME: HLK-100W	TYPE: 50*100D	WEIGHT:
SPEC.: 4000K-RA80-170L	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:2024-12-19

γ Range: 0 - 90DEG  
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:230.51V I:0.2307A P:48.367W PF:0.9095 Freq:50.01Hz Lamp Flux:7187.56x1 lm		
NAME: HLK-100W	TYPE: 50*100D	WEIGHT:
SPEC.: 4000K-RA80-170L	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

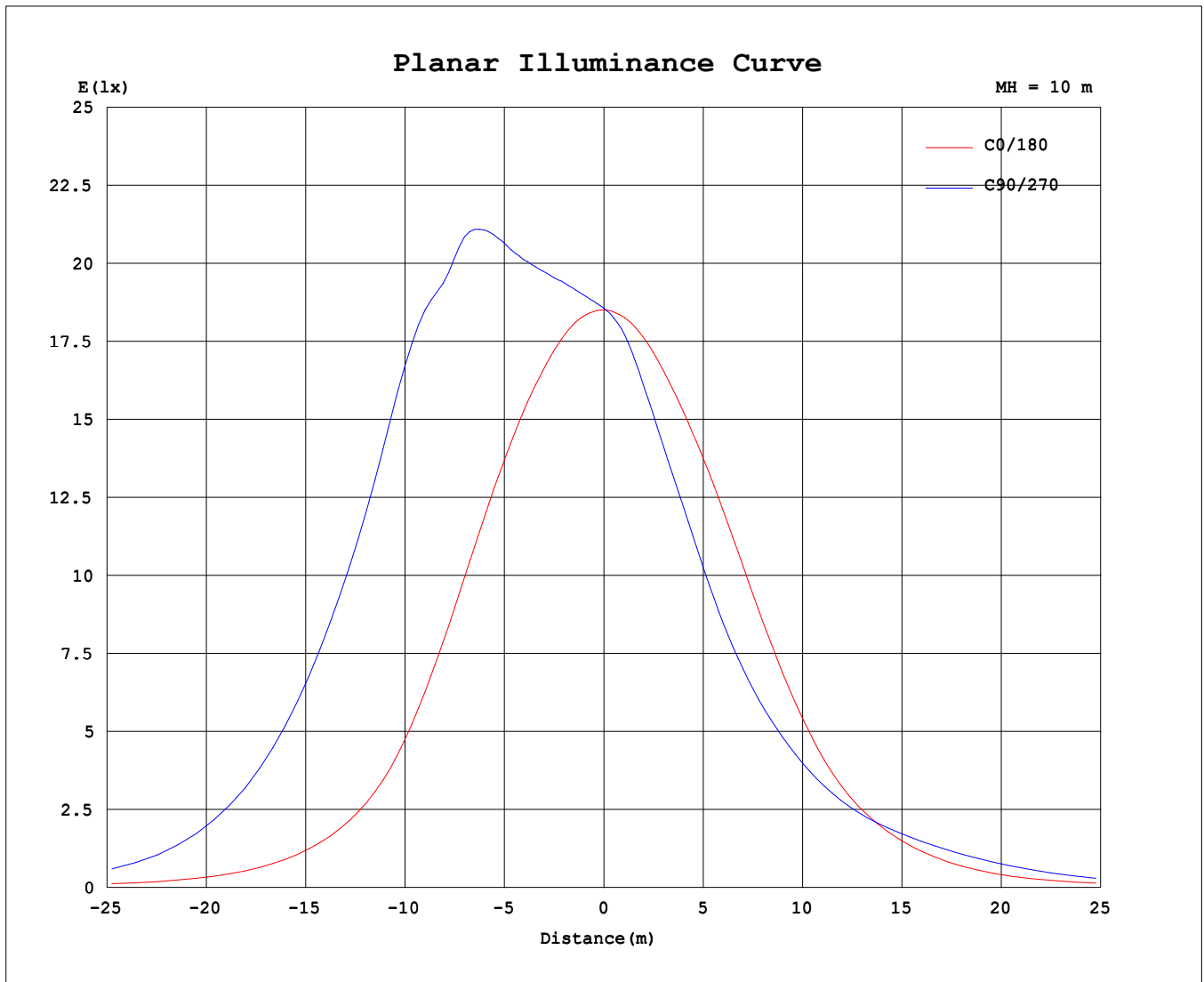
AvgL	cd/m2
L_0~180 (65) av	31891
L_0~180 (75) av	18064
L_0~180 (85) av	5362
L_90~270 (65) av	114589
L_90~270 (75) av	42906
L_90~270 (85) av	8964
L_45 (65) av	68802
L_45 (75) av	26169
L_45 (85) av	7272

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1℃  
Operators:  
Test Date:2024-12-19

γ Range: 0 - 90DEG  
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: 2024-12-19

γ Range: 0 - 90DEG  
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:

```

γ Range: 0 - 90DEG
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:

```