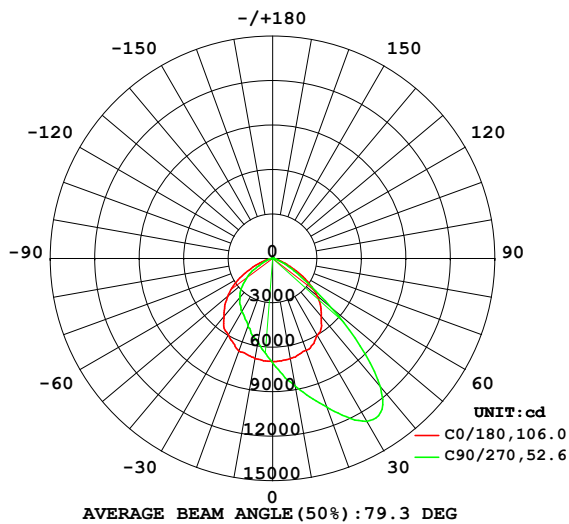


LUMINAIRE PHOTOMETRIC TEST REPORT

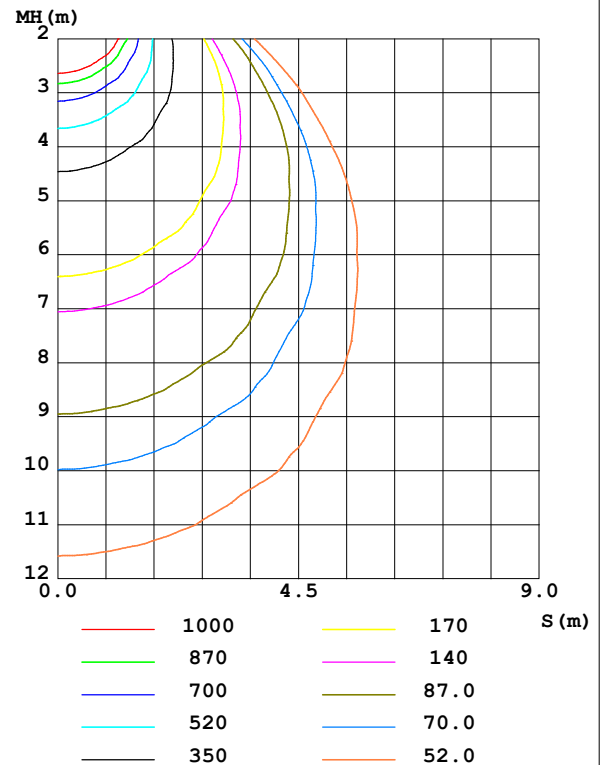
Test:U:230.55V I:0.6337A P:144.43W PF:0.9886 Freq:50.01Hz Lamp Flux:18601.1x1 lm		
NAME: HLK-150W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 128.79 lm/W
MODEL	SMD3030	I _{max} (cd)	12839	S/MH (C0/180)	1.29	
NOMINAL POWER(W)	150	LOR (%)	100.0	S/MH (C90/270)	0.87	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	18601	η UP,DN (C0-180)	0.4,59.6	
NOMINAL FLUX(lm)	18601.1	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.4,39.6	
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: 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:

γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	687.1	874.0	687.0	574.9					0- 10	671.6	671.6	3.61, 3.61
20	659.7	1068	667.4	487.5					10- 20	2018	2690	14.5, 14.5
30	601.3	1269	598.8	416.2					20- 30	3347	6037	32.5, 32.5
40	513.4	1135	513.2	345.2					30- 40	4322	10359	55.7, 55.7
50	394.4	517.1	397.2	252.6					40- 50	3950	14309	76.9, 76.9
60	217.8	168.7	241.8	134.1					50- 60	2533	16842	90.5, 90.5
70	68.31	50.50	92.98	50.28					60- 70	1189	18031	96.9, 96.9
80	10.67	11.53	18.22	14.38					70- 80	375.6	18407	99, 99
90	0.3341	0.2244	0.2556	0.2676					80- 90	46.44	18453	99.2, 99.2
100	0.8250	0.5135	0.6154	0.5992					90-100	4.576	18458	99.2, 99.2
110	1.603	0.9858	1.195	1.636					100-110	10.20	18468	99.3, 99.3
120	2.491	1.572	1.894	3.017					110-120	17.71	18486	99.4, 99.4
130	3.134	2.077	2.641	4.188					120-130	23.62	18509	99.5, 99.5
140	3.792	2.582	3.447	4.723					130-140	25.72	18535	99.6, 99.6
150	4.472	3.300	4.182	5.303					140-150	24.83	18560	99.8, 99.8
160	4.957	4.135	4.894	5.940					150-160	21.32	18581	99.9, 99.9
170	5.366	4.938	5.210	6.289					160-170	14.77	18596	100, 100
180	5.341	5.934	5.347	5.973					170-180	5.294	18601	100, 100
DEG	LUMINOUS INTENSITY:X10cd									UNIT: lm		

Conical surface Flux(90deg): 12477 lm

%lum = 67.1%

%lamp = 67.1%

Conical surface Flux(120deg): 16842 lm

%lum = 90.5%

%lamp = 90.5%

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:

LUMINANCE LIMITATION CURVES

Test:U:230.55V I:0.6337A P:144.43W PF:0.9886 Freq:50.01Hz
Lamp Flux:18601.1x1 lm

NAME: HLK-150W

TYPE: Glass-50*100D

WEIGHT:

SPEC.: 3000K-RA80

DIM.:

SERIAL No.:

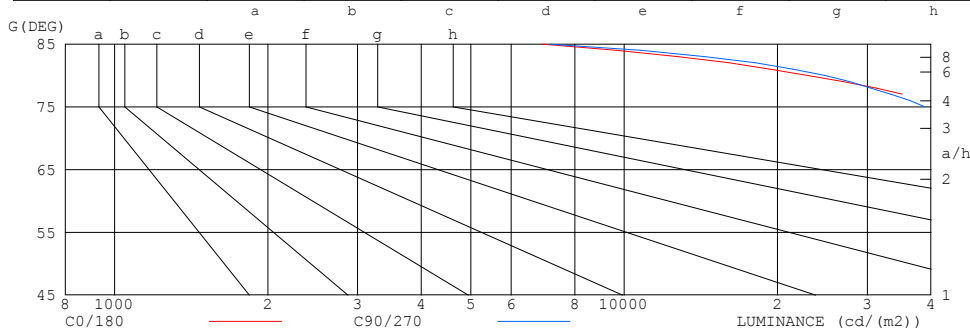
MFR.:

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



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	6926	7153
80	22980	24839
75	44507	38926
70	74690	55216
65	116847	83367
60	162927	126193
55	200864	189846
50	229462	300837
45	243649	441799

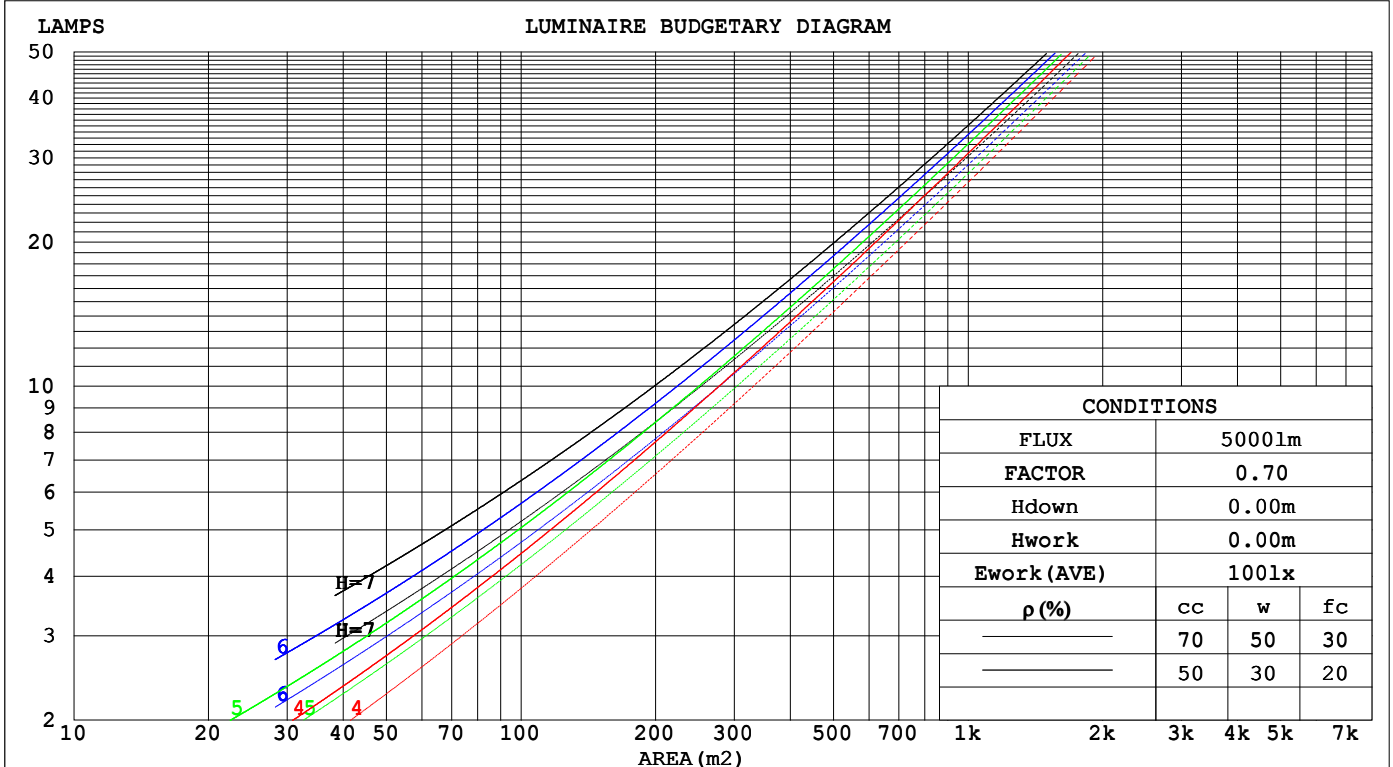
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-07-18

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.55V I:0.6337A P:144.43W PF:0.9886 Freq:50.01Hz Lamp Flux:18601.1x1 lm		
NAME: HLK-150W	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:230.55V I:0.6337A P:144.43W PF:0.9886 Freq:50.01Hz Lamp Flux:18601.1x1 lm					
NAME: HLK-150W			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	
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	.250	.142	.045	.243	.139	.044	.230	.132	.042	.217	.125	.040	.206	.119	.038		
2.0	.245	.134	.041	.238	.131	.040	.227	.126	.039	.216	.121	.038	.206	.117	.037		
3.0	.233	.124	.037	.228	.122	.037	.217	.118	.036	.208	.114	.035	.199	.110	.034		
4.0	.220	.114	.034	.215	.113	.033	.206	.109	.033	.198	.106	.032	.190	.103	.031		
5.0	.207	.106	.031	.203	.104	.030	.195	.101	.030	.187	.099	.029	.180	.096	.029		
6.0	.195	.098	.028	.191	.097	.028	.184	.094	.027	.177	.092	.027	.171	.090	.027		
7.0	.184	.091	.026	.180	.090	.026	.174	.088	.025	.168	.086	.025	.162	.084	.025		
8.0	.174	.085	.024	.170	.084	.024	.165	.082	.023	.159	.081	.023	.154	.079	.023		
9.0	.164	.079	.022	.161	.079	.022	.156	.077	.022	.151	.076	.022	.146	.074	.021		
10.0	.155	.074	.021	.153	.074	.021	.148	.072	.020	.143	.071	.020	.139	.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	.086	.061	.056	.050	.020	.018	.016	
2.0	.172	.138	.110	.147	.119	.095	.101	.082	.066	.058	.048	.039	.019	.015	.013	
3.0	.164	.120	.086	.140	.104	.074	.096	.072	.052	.056	.042	.031	.018	.014	.010	
4.0	.156	.107	.069	.134	.092	.060	.092	.064	.042	.053	.038	.025	.017	.012	.008	
5.0	.149	.096	.057	.128	.083	.049	.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	.078	.045	.023	.045	.027	.013	.015	.009	.004	
9.0	.125	.070	.033	.107	.061	.029	.074	.043	.020	.043	.025	.012	.014	.008	.004	
10.0	.120	.066	.030	.103	.057	.026	.071	.040	.018	.042	.024	.011	.014	.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:230.55V I:0.6337A P:144.43W PF:0.9886 Freq:50.01Hz Lamp Flux:18601.1x1 lm											
NAME: HLK-150W					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		29.5	30.9	29.8	31.2	31.6	29.0	30.5	29.4	30.8	31.2
3H		29.9	31.2	30.3	31.6	32.0	29.4	30.7	29.8	31.1	31.4
4H		30.0	31.2	30.4	31.6	32.0	29.5	30.7	29.9	31.0	31.4
6H		30.0	31.1	30.4	31.5	31.9	29.5	30.6	29.9	31.0	31.4
8H		29.9	31.0	30.4	31.4	31.8	29.4	30.5	29.9	30.9	31.3
12H		29.9	30.9	30.4	31.3	31.8	29.4	30.4	29.9	30.8	31.3
4H 2H		29.5	30.8	30.0	31.1	31.5	29.4	30.6	29.8	30.9	31.3
3H		30.1	31.1	30.5	31.5	31.9	29.9	30.9	30.3	31.3	31.7
4H		30.2	31.1	30.6	31.5	32.0	30.0	30.8	30.4	31.3	31.7
6H		30.2	30.9	30.7	31.4	31.9	30.0	30.8	30.5	31.2	31.7
8H		30.2	30.9	30.6	31.3	31.8	30.0	30.7	30.4	31.1	31.6
12H		30.1	30.7	30.6	31.2	31.7	29.9	30.6	30.4	31.1	31.5
8H 4H		30.1	30.8	30.6	31.3	31.8	30.0	30.7	30.5	31.2	31.7
6H		30.1	30.7	30.6	31.2	31.7	30.0	30.6	30.5	31.1	31.6
8H		30.1	30.6	30.6	31.1	31.6	30.0	30.5	30.5	31.1	31.6
12H		30.1	30.5	30.6	31.0	31.6	30.0	30.4	30.5	30.9	31.5
12H 4H		30.1	30.7	30.6	31.2	31.7	30.0	30.6	30.5	31.1	31.6
6H		30.1	30.6	30.6	31.1	31.7	30.0	30.5	30.5	31.0	31.6
8H		30.1	30.5	30.6	31.0	31.6	30.0	30.4	30.5	31.0	31.5
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:230.55V I:0.6337A P:144.43W PF:0.9886 Freq:50.01Hz Lamp Flux:18601.1x1 lm		
NAME: HLK-150W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

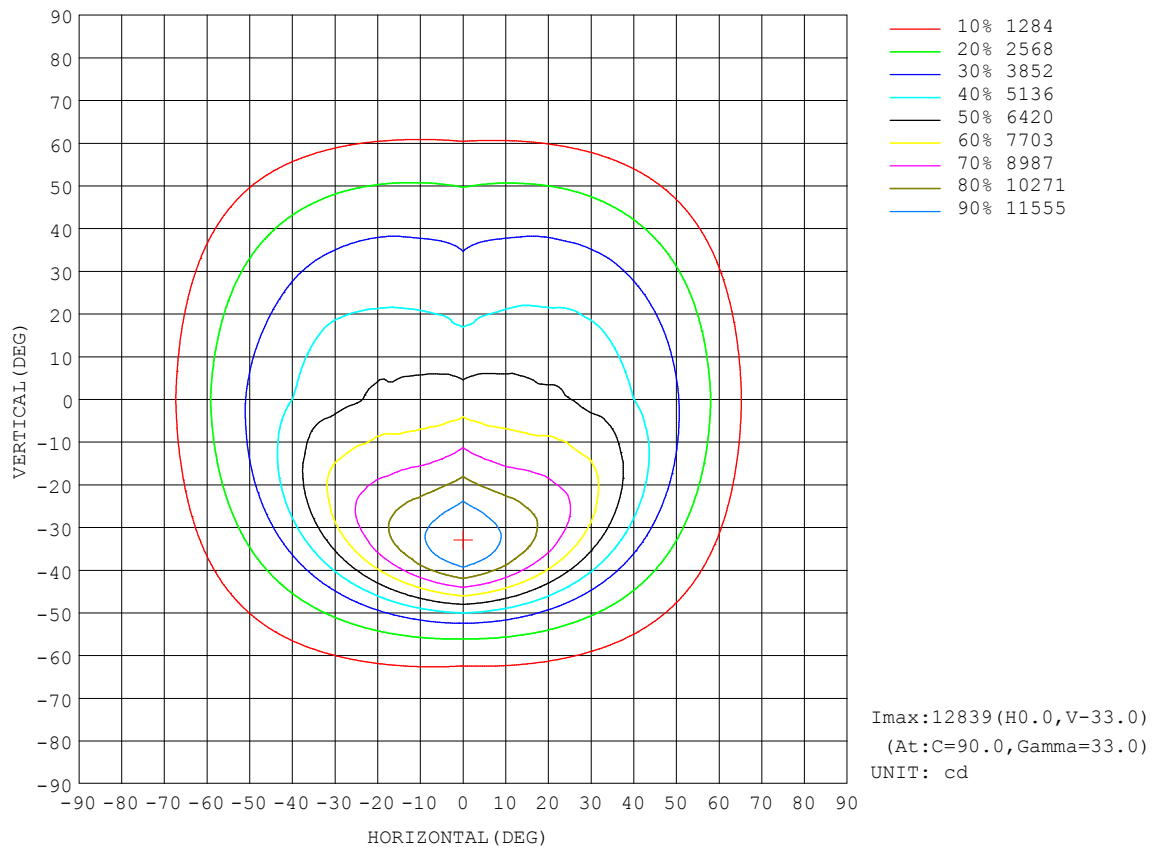
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	63	53	47	63	53	46	62	52	46	40
0.80	74	64	57	73	63	57	71	62	57	50
1.00	82	73	67	81	72	66	79	73	66	60
1.25	89	81	75	88	80	74	85	78	73	67
1.50	94	86	80	92	85	79	89	83	78	72
2.00	100	93	88	98	92	87	95	90	85	78
2.50	103	97	92	101	95	91	97	93	89	81
3.00	106	100	96	104	99	95	100	96	92	84
4.00	109	104	101	107	103	99	102	99	96	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℃
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:230.55V I:0.6337A P:144.43W PF:0.9886 Freq:50.01Hz Lamp Flux:18601.1x1 lm		
NAME: HLK-150W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

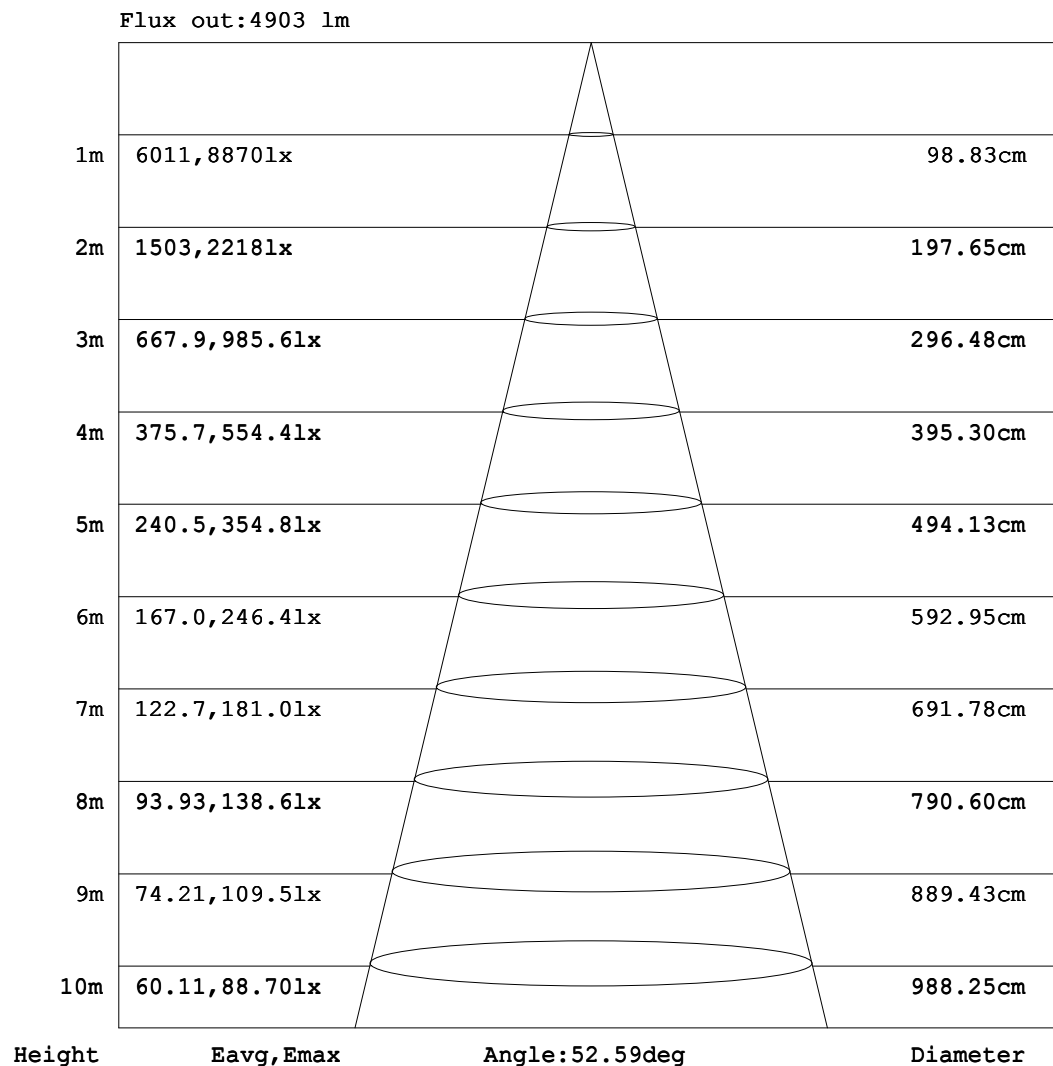


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-07-18

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:230.55V I:0.6337A P:144.43W PF:0.9886 Freq:50.01Hz Lamp Flux:18601.1x1 lm		
NAME: HLK-150W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:



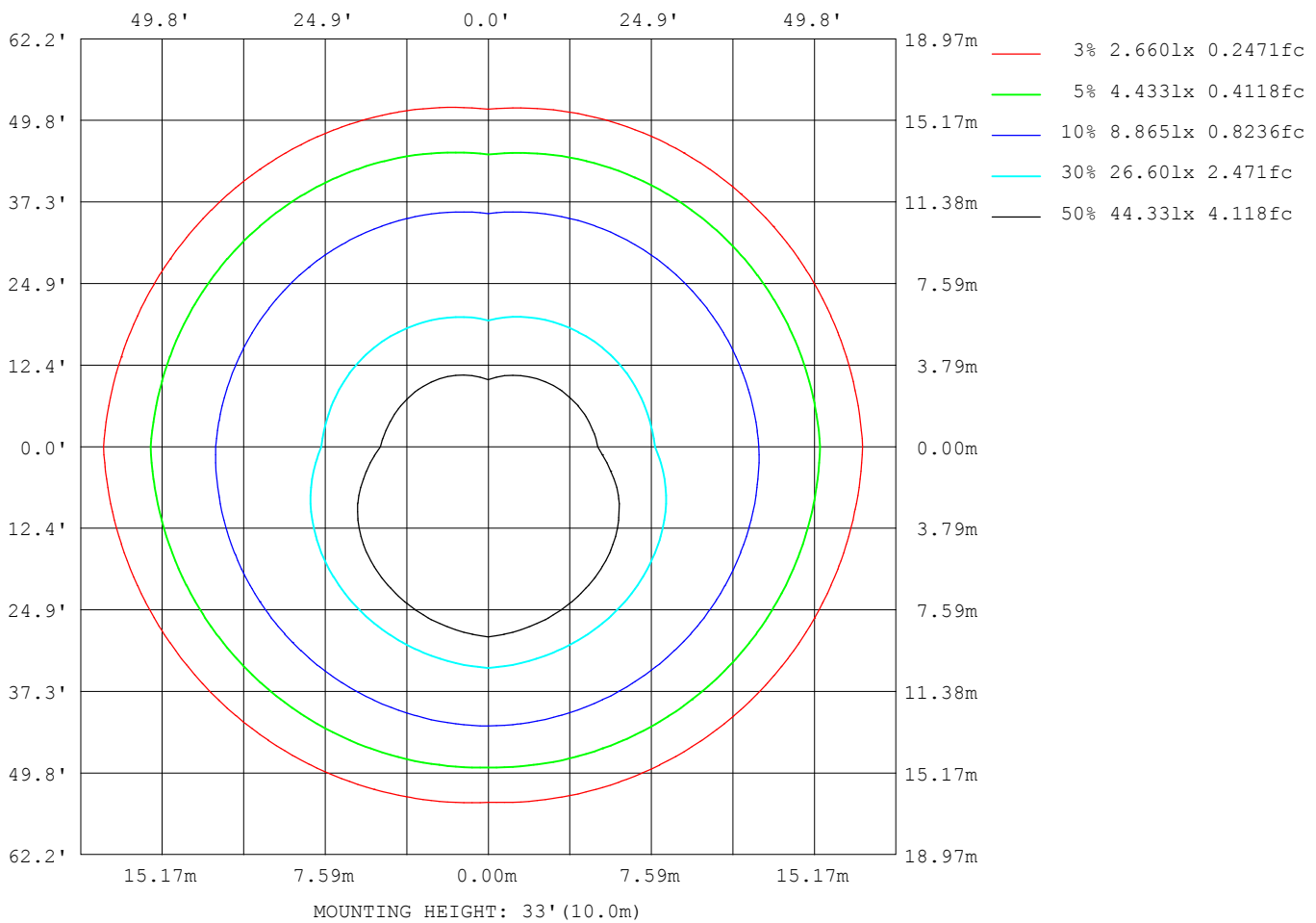
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:230.55V I:0.6337A P:144.43W PF:0.9886 Freq:50.01Hz Lamp Flux:18601.1x1 lm		
NAME: HLK-150W	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:

LED Avg.L Report

Test:U:230.55V I:0.6337A P:144.43W PF:0.9886 Freq:50.01Hz Lamp Flux:18601.1x1 lm		
NAME: HLK-150W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

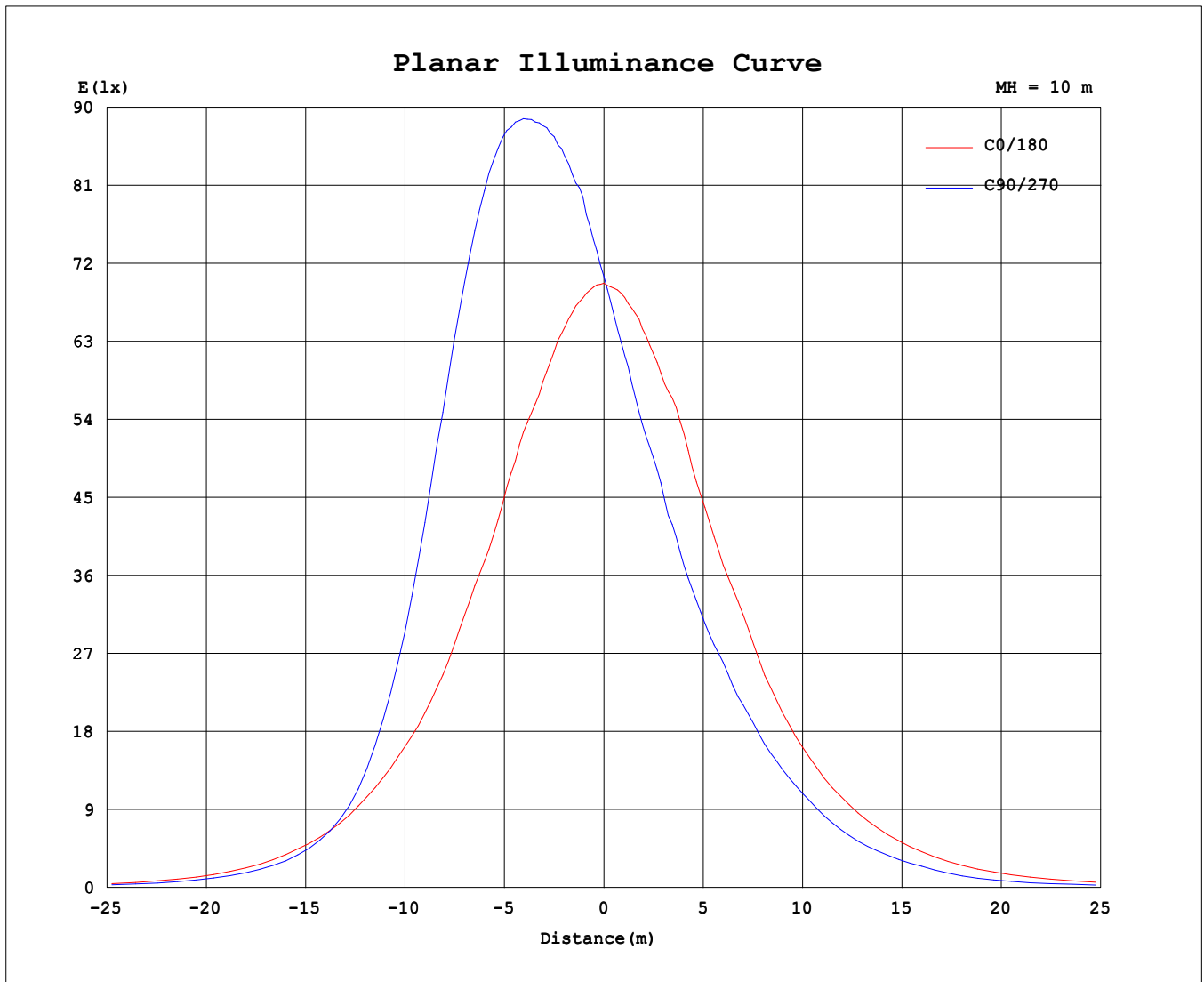
AvgL	cd/m2
L_0~180 (65) av	130784
L_0~180 (75) av	55512
L_0~180 (85) av	12040
L_90~270 (65) av	76267
L_90~270 (75) av	41617
L_90~270 (85) av	11935
L_45 (65) av	97582
L_45 (75) av	47516
L_45 (85) av	12294

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:230.55V I:0.6337A P:144.43W PF:0.9886 Freq:50.01Hz Lamp Flux:18601.1x1 lm		
NAME: HLK-150W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

Table--1

UNIT: X10cd

C (DEG) γ (DEG)	0	90	180	270														
0	697	705	697	705														
5	693	785	693	636														
10	687	874	687	575														
15	673	965	672	535														
20	660	1068	667	487														
25	643	1178	629	445														
30	601	1269	599	416														
35	572	1270	573	384														
40	513	1135	513	345														
45	461	835	458	307														
50	394	517	397	253														
55	308	291	325	198														
60	218	169	242	134														
65	132	94.2	164	78.2														
70	68.3	50.5	93.0	50.3														
75	30.8	26.9	46.0	30.7														
80	10.7	11.5	18.2	14.4														
85	1.61	1.67	4.00	3.90														
90	0.33	0.22	0.26	0.27														
95	0.53	0.34	0.40	0.35														
100	0.83	0.51	0.62	0.60														
105	1.19	0.74	0.88	1.01														
110	1.60	0.99	1.20	1.64														
115	2.06	1.27	1.56	2.29														
120	2.49	1.57	1.89	3.02														
125	2.82	1.85	2.25	3.67														
130	3.13	2.08	2.64	4.19														
135	3.47	2.31	3.01	4.54														
140	3.79	2.58	3.45	4.72														
145	4.21	2.87	3.81	4.94														
150	4.47	3.30	4.18	5.30														
155	4.75	3.64	4.51	5.57														
160	4.96	4.13	4.89	5.94														
165	5.12	4.49	5.03	6.41														
170	5.37	4.94	5.21	6.29														
175	5.34	5.43	5.41	6.21														
180	5.34	5.93	5.35	5.97														

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: