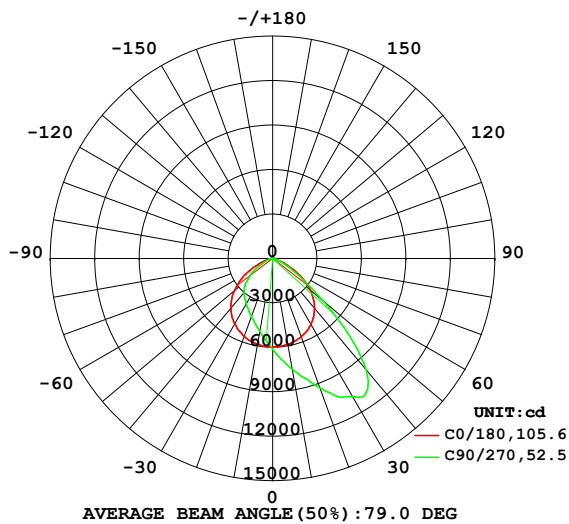


LUMINAIRE PHOTOMETRIC TEST REPORT

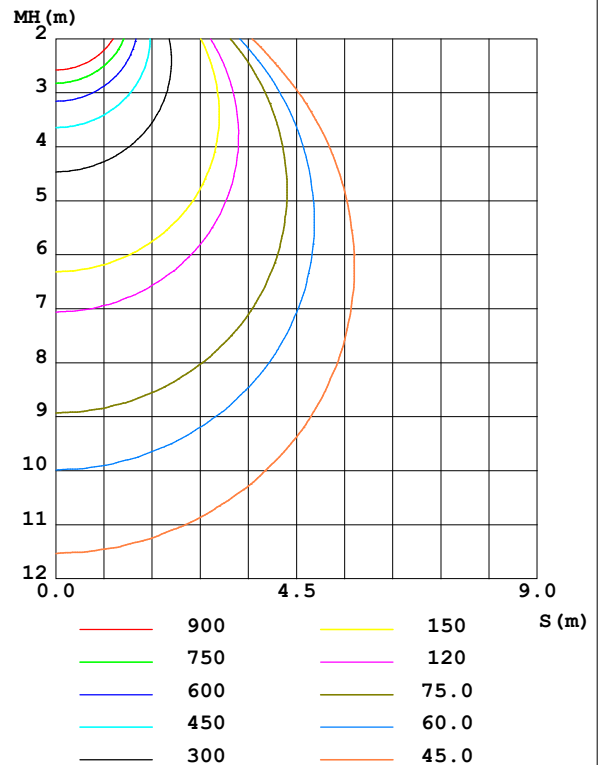
Test:U:230.40V I:0.5223A P:118.22W PF:0.9824 Freq:50.01Hz Lamp Flux:15967x1 lm		
NAME: HLK-120W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 135.06 lm/W
MODEL	SMD3030	Imax (cd)	11133	S/MH (C0/180)	1.27	
NOMINAL POWER(W)	120	LOR (%)	100.0	S/MH (C90/270)	0.86	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	15967	η UP,DN (C0-180)	0.4,59.6	
NOMINAL FLUX(lm)	15967	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	588.8	759.2	589.1	500.4					0- 10	579.9	579.9	3.63, 3.63
20	563.8	928.1	561.3	418.6					10- 20	1737	2317	14.5, 14.5
30	516.2	1076	511.5	357.6					20- 30	2870	5187	32.5, 32.5
40	440.8	981.0	439.4	300.5					30- 40	3706	8893	55.7, 55.7
50	332.9	442.8	337.2	218.4					40- 50	3394	12287	76.9, 76.9
60	186.5	143.7	207.8	116.9					50- 60	2170	14457	90.5, 90.5
70	59.19	43.28	79.78	43.76					60- 70	1019	15475	96.9, 96.9
80	9.227	9.852	15.70	12.61					70- 80	324.2	15800	99, 99
90	0.2837	0.1942	0.2195	0.2305					80- 90	40.20	15840	99.2, 99.2
100	0.7067	0.4429	0.5272	0.5203					90-100	3.938	15844	99.2, 99.2
110	1.376	0.8514	1.028	1.377					100-110	8.746	15852	99.3, 99.3
120	2.099	1.347	1.623	2.616					110-120	15.22	15868	99.4, 99.4
130	2.683	1.791	2.263	3.625					120-130	20.32	15888	99.5, 99.5
140	3.253	2.235	2.935	4.100					130-140	22.14	15910	99.6, 99.6
150	3.831	2.766	3.593	4.542					140-150	21.32	15931	99.8, 99.8
160	4.250	3.491	4.121	5.157					150-160	18.28	15950	99.9, 99.9
170	4.541	4.242	4.483	5.445					160-170	12.64	15962	100, 100
180	4.592	5.046	4.584	5.097					170-180	4.537	15967	100, 100
DEG	LUMINOUS INTENSITY:X10cd									UNIT: lm		

Conical surface Flux(90deg): 10722 lm

%lum = 67.2%

%lamp = 67.2%

Conical surface Flux(120deg): 14457 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
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:230.40V I:0.5223A P:118.22W PF:0.9824 Freq:50.01Hz

Lamp Flux:15967x1 lm

NAME: HLK-120W

TYPE: Glass-50*100D

WEIGHT:

SPEC.: 3000K-RA80

DIM.:

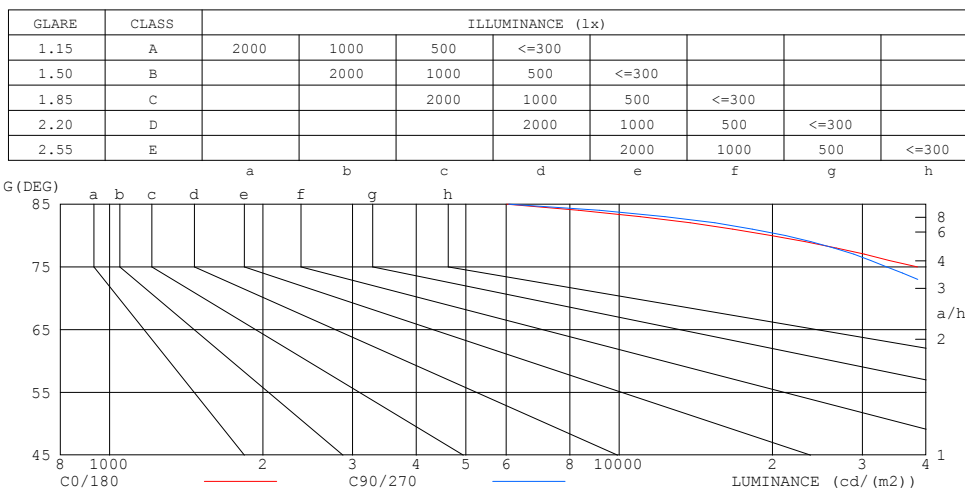
SERIAL No.:

MFR.:

SUR.: 0.221m*0.121m

Shielding Angle:

LUMINANCE LIMITATION CURVES



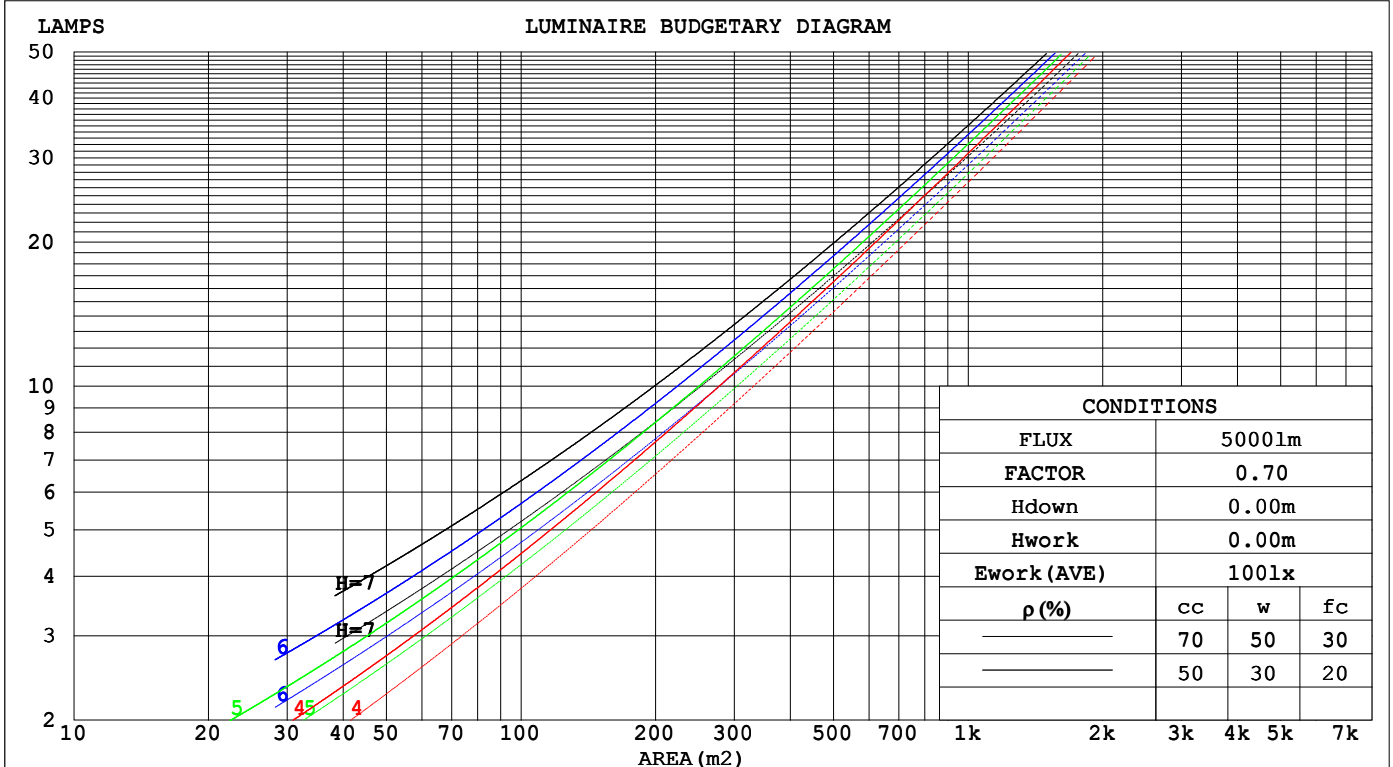
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-07-18

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:230.40V I:0.5223A P:118.22W PF:0.9824 Freq:50.01Hz Lamp Flux:15967x1 lm		
NAME: HLK-120W	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:230.40V I:0.5223A P:118.22W PF:0.9824 Freq:50.01Hz					
Lamp Flux:15967x1 lm					
NAME: HLK-120W			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	.173	.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:230.40V I:0.5223A P:118.22W PF:0.9824 Freq:50.01Hz Lamp Flux:15967x1 lm										
NAME: HLK-120W					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	28.9	30.3	29.2	30.6	31.0	28.5	29.9	28.9	30.3	30.6
3H	29.3	30.6	29.7	31.0	31.4	28.9	30.2	29.3	30.5	30.9
4H	29.4	30.6	29.8	31.0	31.4	28.9	30.1	29.3	30.5	30.9
6H	29.4	30.5	29.8	30.9	31.3	28.9	30.0	29.4	30.4	30.8
8H	29.3	30.4	29.8	30.8	31.2	28.9	30.0	29.3	30.4	30.8
12H	29.3	30.3	29.8	30.7	31.2	28.9	29.9	29.3	30.3	30.7
4H 2H	28.9	30.1	29.4	30.5	30.9	28.8	30.0	29.2	30.4	30.8
3H	29.5	30.5	29.9	30.9	31.3	29.3	30.3	29.8	30.7	31.1
4H	29.6	30.5	30.0	30.9	31.4	29.4	30.3	29.9	30.7	31.2
6H	29.6	30.4	30.1	30.8	31.3	29.5	30.2	29.9	30.7	31.2
8H	29.6	30.3	30.0	30.7	31.2	29.4	30.1	29.9	30.6	31.1
12H	29.5	30.2	30.0	30.7	31.1	29.4	30.0	29.9	30.5	31.0
8H 4H	29.5	30.3	30.0	30.7	31.2	29.5	30.2	29.9	30.6	31.1
6H	29.5	30.1	30.1	30.6	31.1	29.5	30.1	30.0	30.6	31.1
8H	29.5	30.0	30.0	30.6	31.1	29.5	30.0	30.0	30.5	31.0
12H	29.5	29.9	30.0	30.4	31.0	29.4	29.9	30.0	30.4	31.0
12H 4H	29.5	30.1	30.0	30.6	31.1	29.4	30.1	29.9	30.6	31.0
6H	29.5	30.0	30.0	30.5	31.1	29.5	30.0	30.0	30.5	31.0
8H	29.5	29.9	30.0	30.4	31.0	29.4	29.9	30.0	30.4	31.0
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:230.40V I:0.5223A P:118.22W PF:0.9824 Freq:50.01Hz Lamp Flux:15967x1 lm		
NAME: HLK-120W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

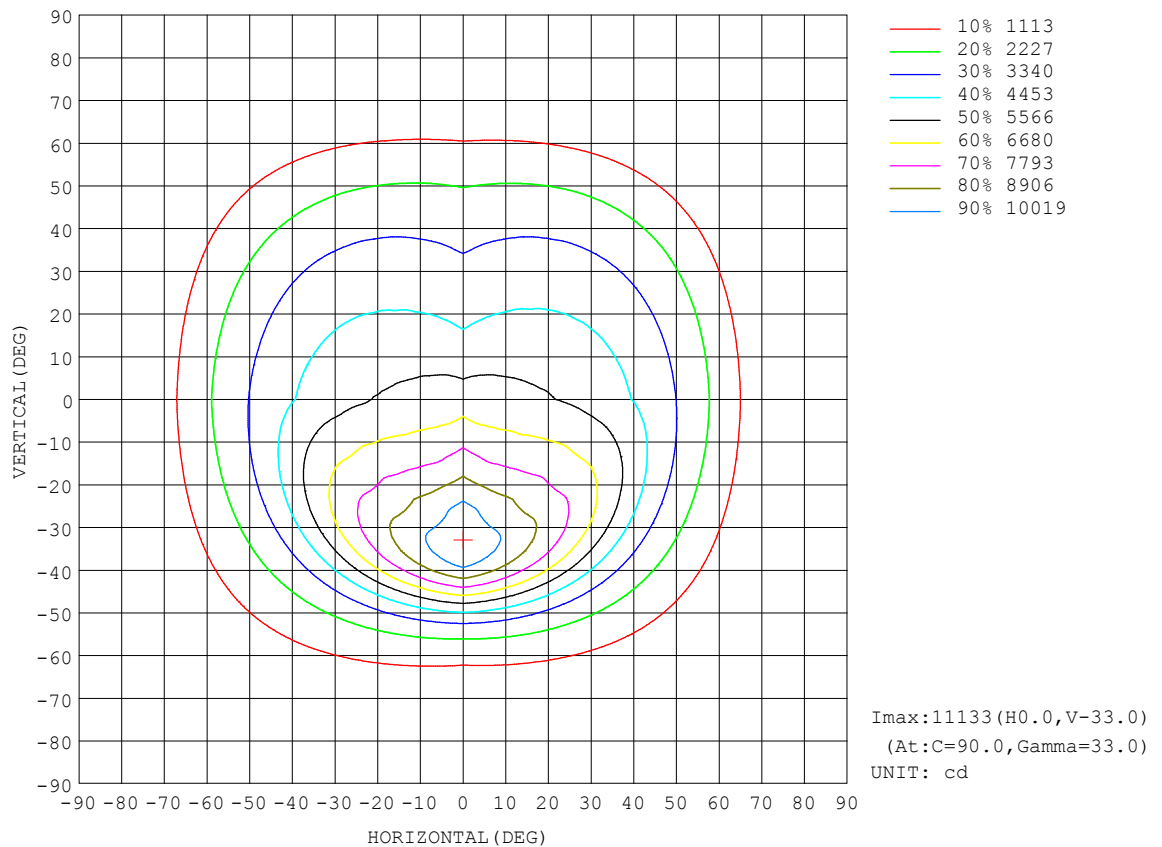
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	63	53	47	63	53	46	62	52	46	40
0.80	74	64	57	73	63	57	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:230.40V I:0.5223A P:118.22W PF:0.9824 Freq:50.01Hz Lamp Flux:15967x1 lm		
NAME: HLK-120W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

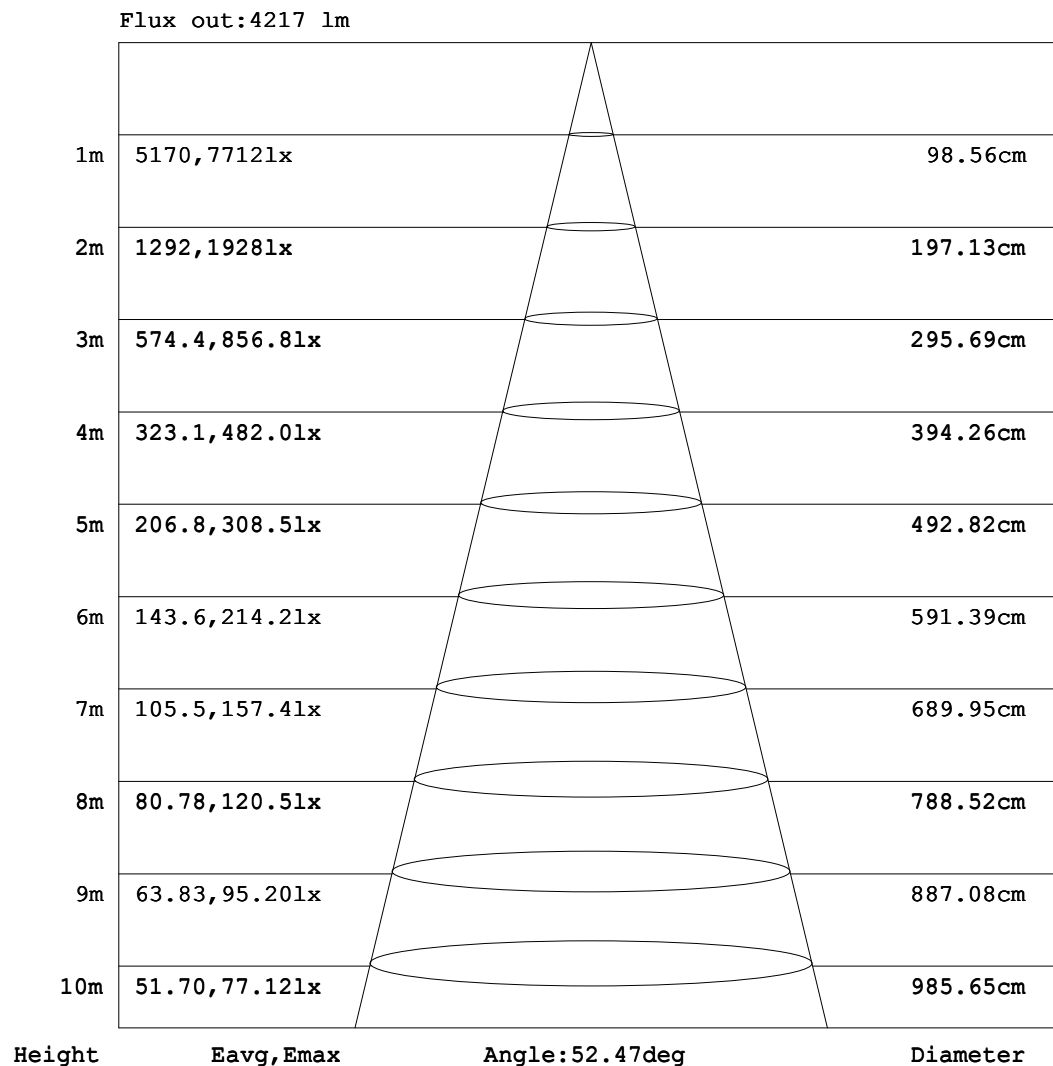


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-07-18

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:230.40V I:0.5223A P:118.22W PF:0.9824 Freq:50.01Hz Lamp Flux:15967x1 lm		
NAME: HLK-120W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:



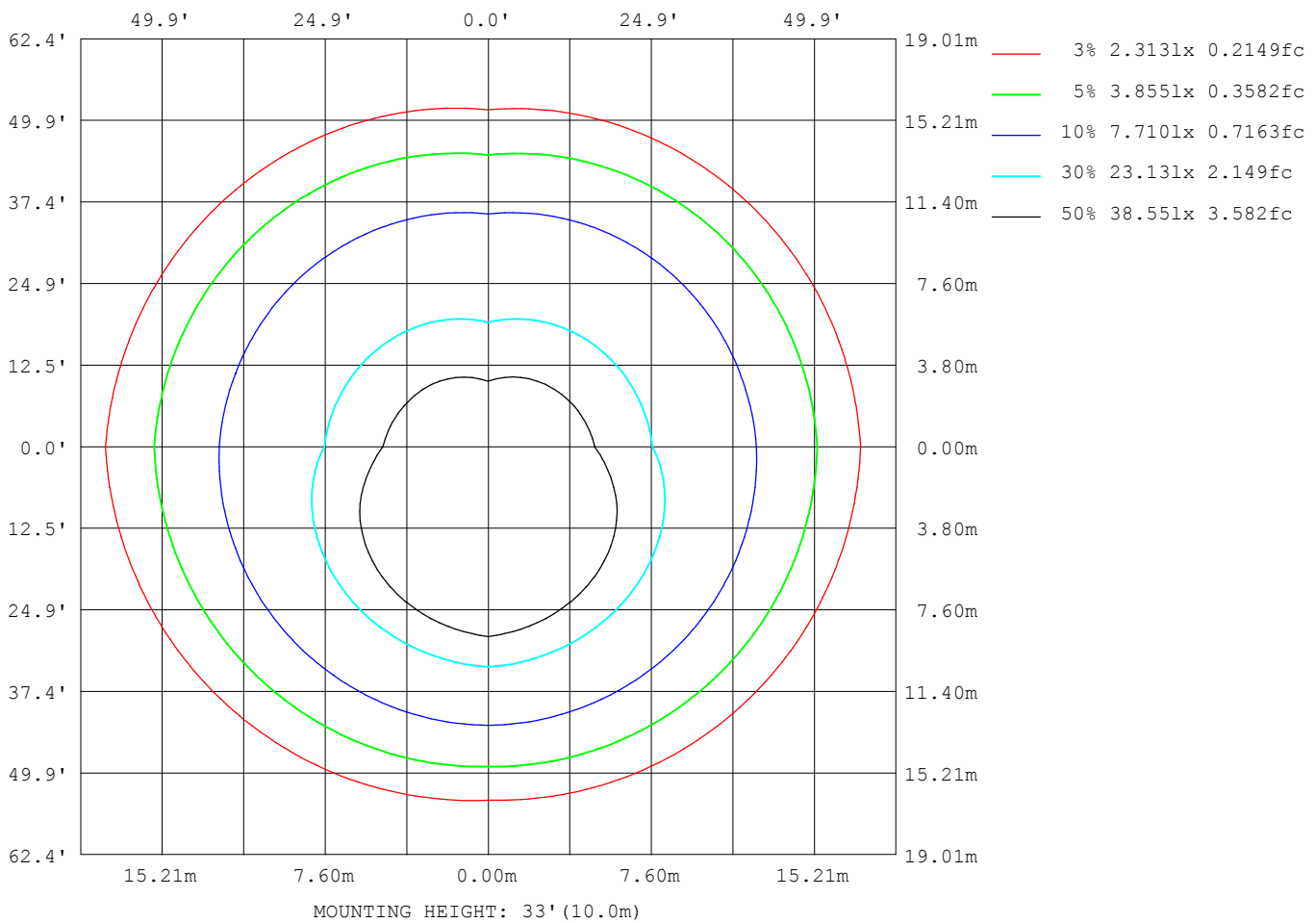
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:230.40V I:0.5223A P:118.22W PF:0.9824 Freq:50.01Hz Lamp Flux:15967x1 lm		
NAME: HLK-120W	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:230.40V I:0.5223A P:118.22W PF:0.9824 Freq:50.01Hz Lamp Flux:15967x1 lm		
NAME: HLK-120W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

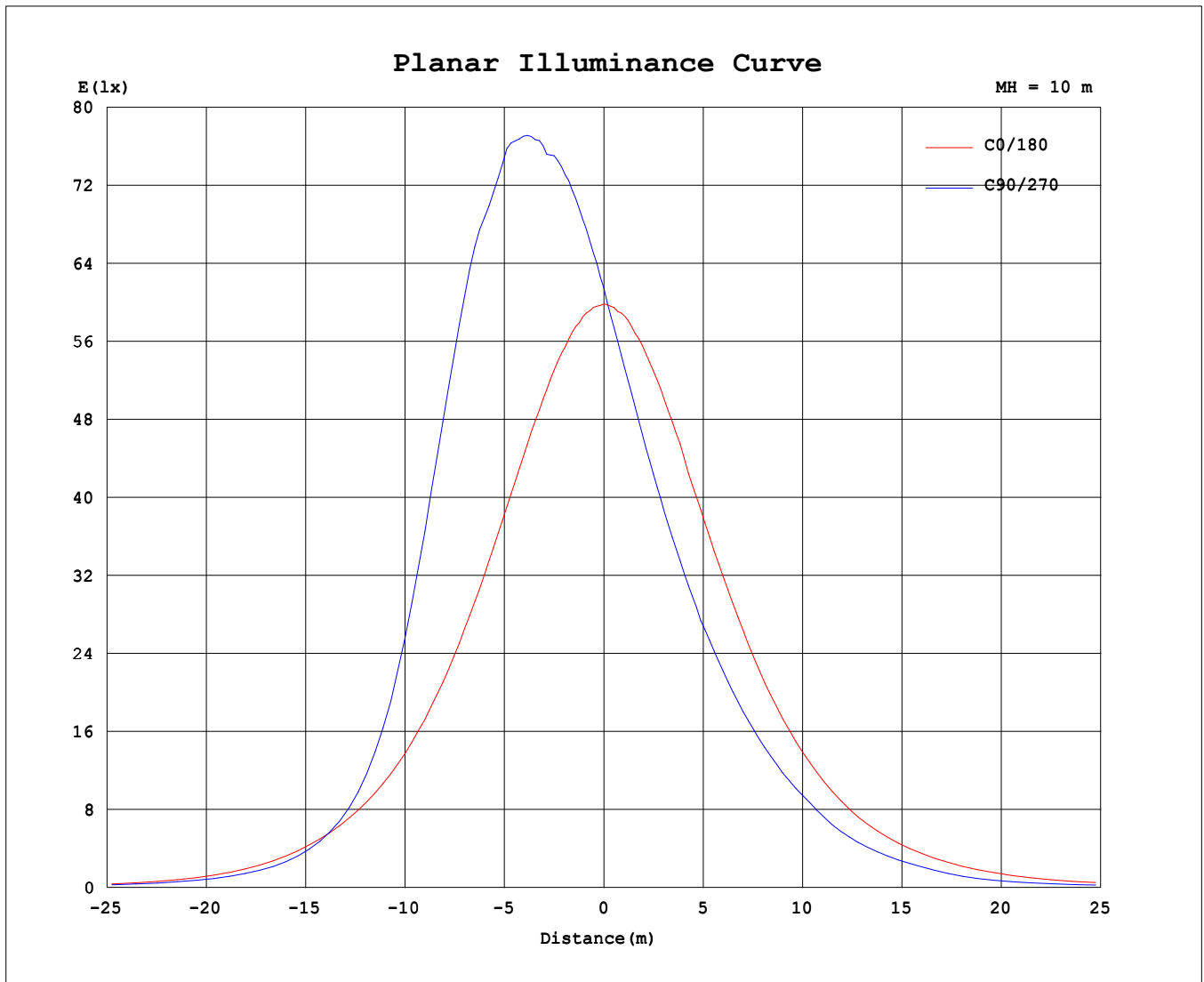
AvgL	cd/m2
L_0~180 (65) av	110726
L_0~180 (75) av	47923
L_0~180 (85) av	10308
L_90~270 (65) av	66517
L_90~270 (75) av	36052
L_90~270 (85) av	10448
L_45 (65) av	83848
L_45 (75) av	41094
L_45 (85) av	10663

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:230.40V I:0.5223A P:118.22W PF:0.9824 Freq:50.01Hz Lamp Flux:15967x1 lm		
NAME: HLK-120W	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	599	614	599	614															
5	596	683	596	552															
10	589	759	589	500															
15	579	834	578	456															
20	564	928	561	419															
25	543	1026	538	386															
30	516	1076	512	358															
35	483	1102	480	328															
40	441	981	439	301															
45	390	724	393	268															
50	333	443	337	218															
55	265	253	274	173															
60	187	144	208	117															
65	112	82.0	139	68.3															
70	59.2	43.3	79.8	43.8															
75	26.6	23.2	39.7	26.7															
80	9.23	9.85	15.7	12.6															
85	1.40	1.42	3.40	3.45															
90	0.28	0.19	0.22	0.23															
95	0.46	0.30	0.34	0.30															
100	0.71	0.44	0.53	0.52															
105	1.02	0.62	0.76	0.86															
110	1.38	0.85	1.03	1.38															
115	1.74	1.10	1.32	1.98															
120	2.10	1.35	1.62	2.62															
125	2.42	1.58	1.94	3.19															
130	2.68	1.79	2.26	3.62															
135	2.97	2.01	2.59	3.91															
140	3.25	2.23	2.94	4.10															
145	3.55	2.49	3.28	4.28															
150	3.83	2.77	3.59	4.54															
155	4.07	3.14	3.87	4.78															
160	4.25	3.49	4.12	5.16															
165	4.39	3.85	4.32	5.35															
170	4.54	4.24	4.48	5.45															
175	4.58	4.66	4.57	5.27															
180	4.59	5.05	4.58	5.10															

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: