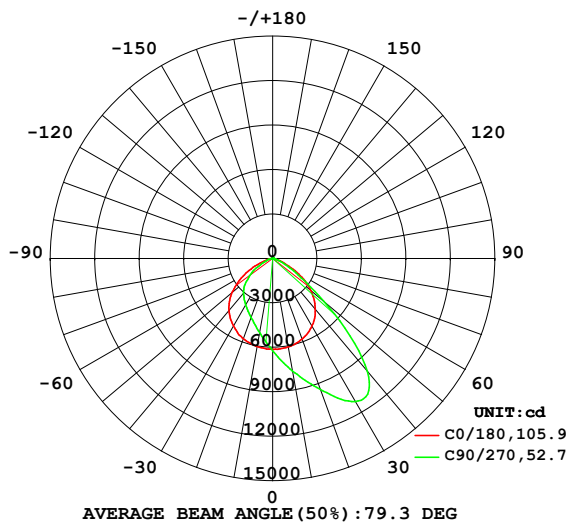


LUMINAIRE PHOTOMETRIC TEST REPORT

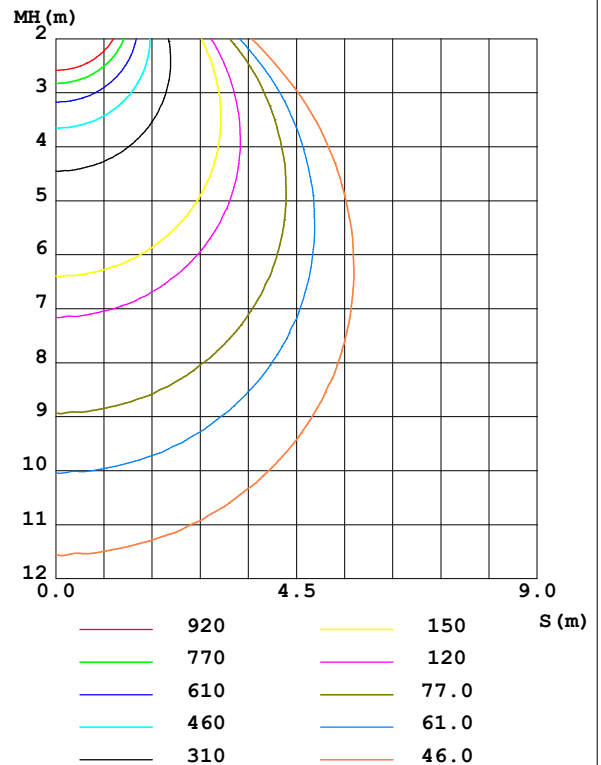
Test:U:230.55V I:0.5210A P:117.98W PF:0.9822 Freq:50.01Hz Lamp Flux:16386.7x1 lm		
NAME: HLK-120W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 5000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 138.89 lm/W
MODEL	SMD3030	I _{max} (cd)	11292	S/MH (C0/180)	1.28	
NOMINAL POWER(W)	120	LOR (%)	100.0	S/MH (C90/270)	0.87	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	16387	η UP,DN (C0-180)	0.4,59.3	
NOMINAL FLUX(lm)	16386.7	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.4,39.9	
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	606.5	770.6	604.8	508.8					0- 10	592.4	592.4	3.62, 3.62
20	580.9	940.4	578.1	426.0					10- 20	1777	2369	14.5, 14.5
30	530.3	1116	528.3	364.0					20- 30	2942	5311	32.4, 32.4
40	449.4	995.4	458.8	306.5					30- 40	3790	9102	55.5, 55.5
50	337.2	451.7	357.9	222.6					40- 50	3483	12584	76.8, 76.8
60	188.8	149.8	221.4	119.5					50- 60	2239	14824	90.5, 90.5
70	61.04	44.32	83.73	45.01					60- 70	1058	15881	96.9, 96.9
80	9.627	10.09	15.66	12.98					70- 80	334.0	16215	99, 99
90	0.2955	0.1992	0.2237	0.2339					80- 90	41.09	16256	99.2, 99.2
100	0.7419	0.4530	0.5372	0.5287					90-100	4.047	16260	99.2, 99.2
110	1.445	0.8740	1.044	1.404					100-110	9.026	16269	99.3, 99.3
120	2.196	1.368	1.658	2.668					110-120	15.63	16285	99.4, 99.4
130	2.794	1.825	2.305	3.687					120-130	20.84	16306	99.5, 99.5
140	3.381	2.269	2.986	4.174					130-140	22.68	16329	99.6, 99.6
150	3.977	2.860	3.658	4.603					140-150	21.80	16350	99.8, 99.8
160	4.393	3.584	4.200	5.245					150-160	18.75	16369	99.9, 99.9
170	4.639	4.348	4.575	5.542					160-170	12.97	16382	100, 100
180	4.711	5.170	4.703	5.175					170-180	4.643	16387	100, 100
DEG	LUMINOUS INTENSITY:X10cd									UNIT: lm		

Conical surface Flux(90deg): 10975 lm

%lum = 67.0%

%lamp = 67.0%

Conical surface Flux(120deg): 14824 lm

%lum = 90.5%

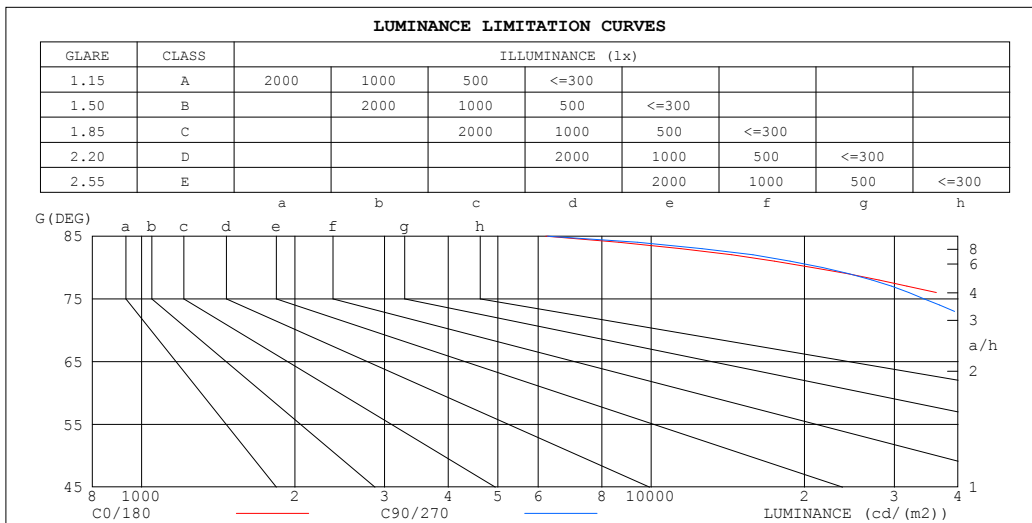
%lamp = 90.5%

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:0.5210A P:117.98W PF:0.9822 Freq:50.01Hz Lamp Flux:16386.7x1 lm		
NAME: HLK-120W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 5000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:



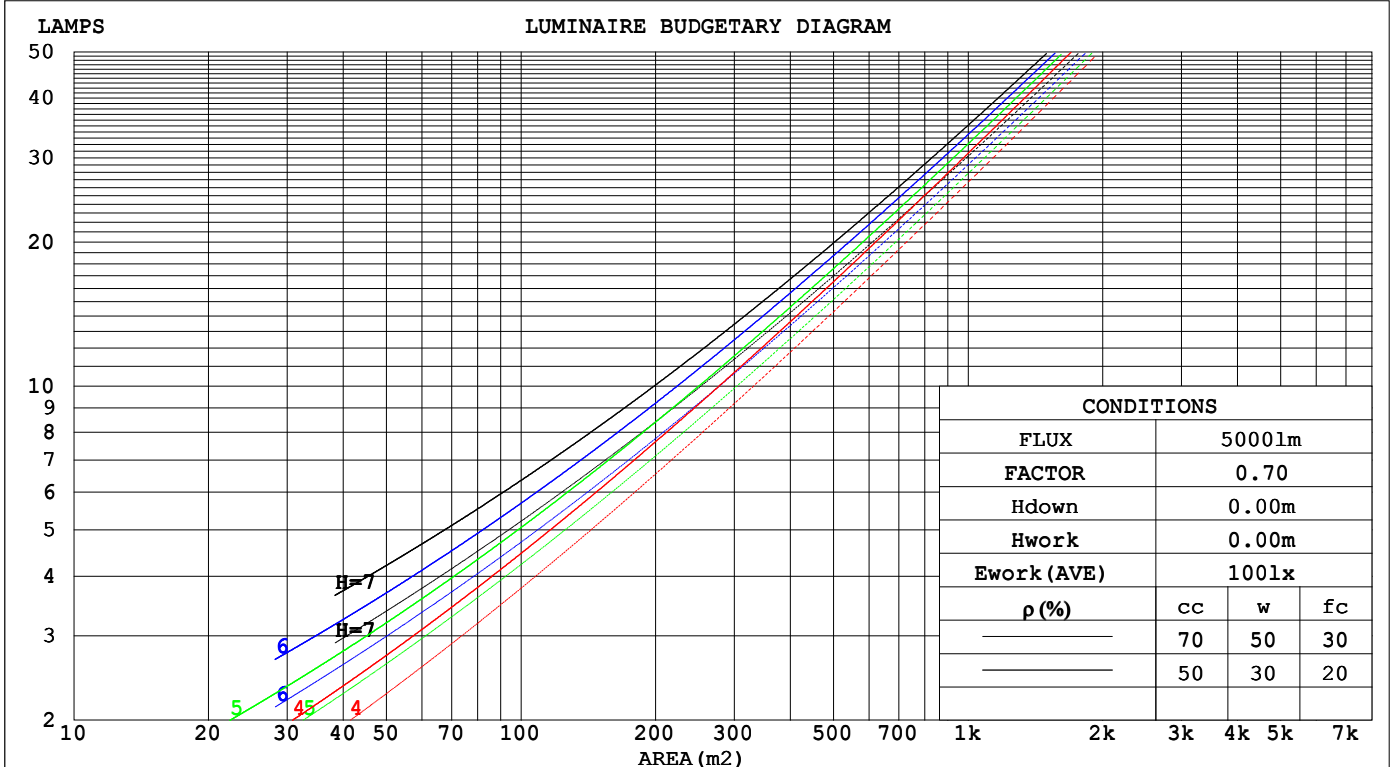
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.1℃
Operators:
Test Date: 2024-07-18

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.55V I:0.5210A P:117.98W PF:0.9822 Freq:50.01Hz Lamp Flux:16386.7x1 lm		
NAME: HLK-120W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 5000K-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:0.5210A P:117.98W PF:0.9822 Freq:50.01Hz		
Lamp Flux:16386.7x1 lm		
NAME: HLK-120W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 5000K-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	.251	.143	.045	.243	.139	.044	.230	.132	.042	.218	.126	.040	.206	.120	.039		
2.0	.245	.134	.041	.239	.132	.041	.227	.126	.039	.216	.121	.038	.206	.117	.037		
3.0	.233	.124	.037	.228	.122	.037	.218	.118	.036	.208	.114	.035	.199	.110	.034		
4.0	.220	.115	.034	.216	.113	.033	.206	.109	.033	.198	.106	.032	.190	.103	.031		
5.0	.208	.106	.031	.203	.104	.030	.195	.102	.030	.188	.099	.029	.180	.096	.029		
6.0	.195	.098	.028	.192	.097	.028	.184	.094	.027	.177	.092	.027	.171	.090	.027		
7.0	.184	.091	.026	.181	.090	.026	.174	.088	.025	.168	.086	.025	.162	.084	.025		
8.0	.174	.085	.024	.171	.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	.073	.020	.144	.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	.041	.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	.028	.074	.043	.020	.043	.025	.012	.014	.008	.004	
10.0	.120	.066	.030	.103	.057	.026	.072	.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:0.5210A P:117.98W PF:0.9822 Freq:50.01Hz Lamp Flux:16386.7x1 lm											
NAME: HLK-120W					TYPE: Glass-50*100D			WEIGHT:			
SPEC.: 5000K-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	30.7	31.0	28.7	30.1	29.1	30.5	30.8
3H		29.4	30.7	29.8	31.0	31.4	29.1	30.4	29.5	30.7	31.1
4H		29.4	30.6	29.8	31.0	31.4	29.1	30.3	29.5	30.7	31.1
6H		29.4	30.5	29.8	30.9	31.3	29.1	30.2	29.6	30.6	31.0
8H		29.4	30.4	29.8	30.8	31.3	29.1	30.2	29.5	30.6	31.0
12H		29.4	30.4	29.8	30.8	31.2	29.1	30.1	29.5	30.5	30.9
4H 2H		29.0	30.2	29.4	30.5	30.9	29.0	30.2	29.4	30.6	31.0
3H		29.5	30.5	30.0	30.9	31.4	29.5	30.5	30.0	30.9	31.4
4H		29.6	30.5	30.1	31.0	31.4	29.6	30.5	30.1	30.9	31.4
6H		29.7	30.4	30.1	30.9	31.4	29.7	30.4	30.1	30.9	31.4
8H		29.6	30.3	30.1	30.8	31.3	29.6	30.3	30.1	30.8	31.3
12H		29.6	30.2	30.1	30.7	31.2	29.6	30.2	30.1	30.7	31.2
8H 4H		29.6	30.3	30.1	30.8	31.2	29.7	30.4	30.1	30.8	31.3
6H		29.6	30.2	30.1	30.7	31.2	29.7	30.3	30.2	30.8	31.3
8H		29.6	30.1	30.1	30.6	31.1	29.7	30.2	30.2	30.7	31.2
12H		29.5	30.0	30.0	30.5	31.1	29.6	30.1	30.1	30.6	31.2
12H 4H		29.6	30.2	30.1	30.7	31.2	29.6	30.3	30.1	30.8	31.2
6H		29.6	30.1	30.1	30.6	31.1	29.7	30.2	30.2	30.7	31.2
8H		29.5	30.0	30.1	30.5	31.1	29.6	30.1	30.2	30.6	31.2
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:0.5210A P:117.98W PF:0.9822 Freq:50.01Hz Lamp Flux:16386.7x1 lm		
NAME: HLK-120W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 5000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

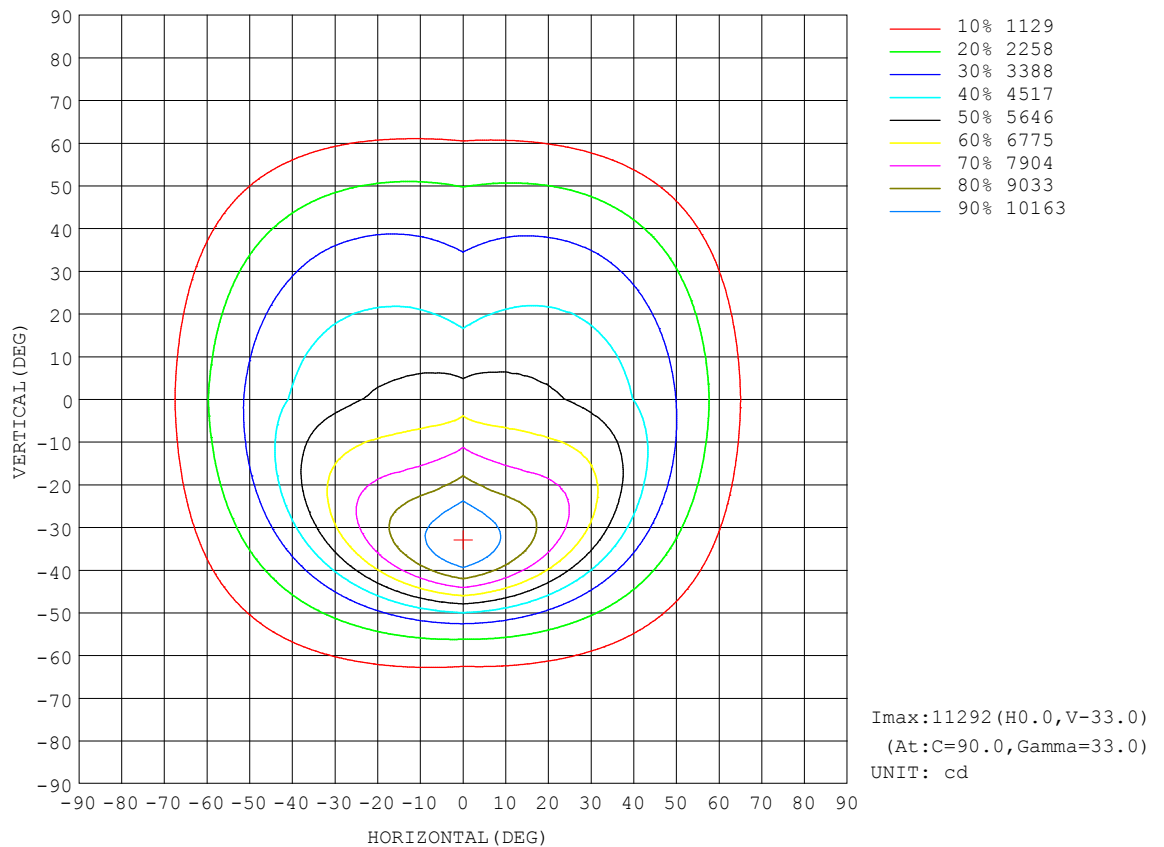
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	63	53	46	63	53	46	61	52	46	40
0.80	74	64	57	73	63	57	71	62	56	50
1.00	82	73	67	81	72	66	79	73	66	59
1.25	89	80	74	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	89	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	102	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:0.5210A P:117.98W PF:0.9822 Freq:50.01Hz Lamp Flux:16386.7x1 lm		
NAME: HLK-120W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 5000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

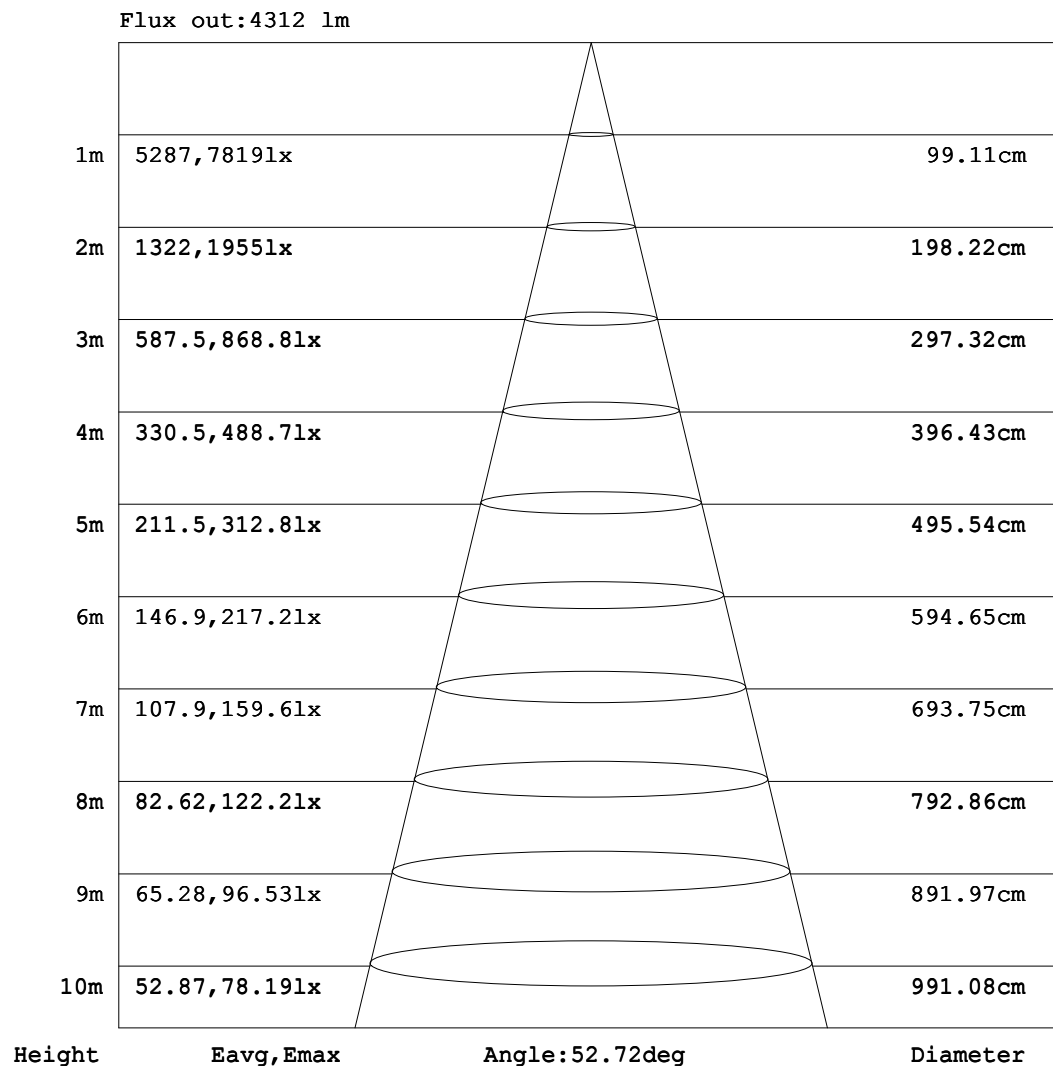


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-07-18

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:0.5210A P:117.98W PF:0.9822 Freq:50.01Hz Lamp Flux:16386.7x1 lm		
NAME: HLK-120W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 5000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:



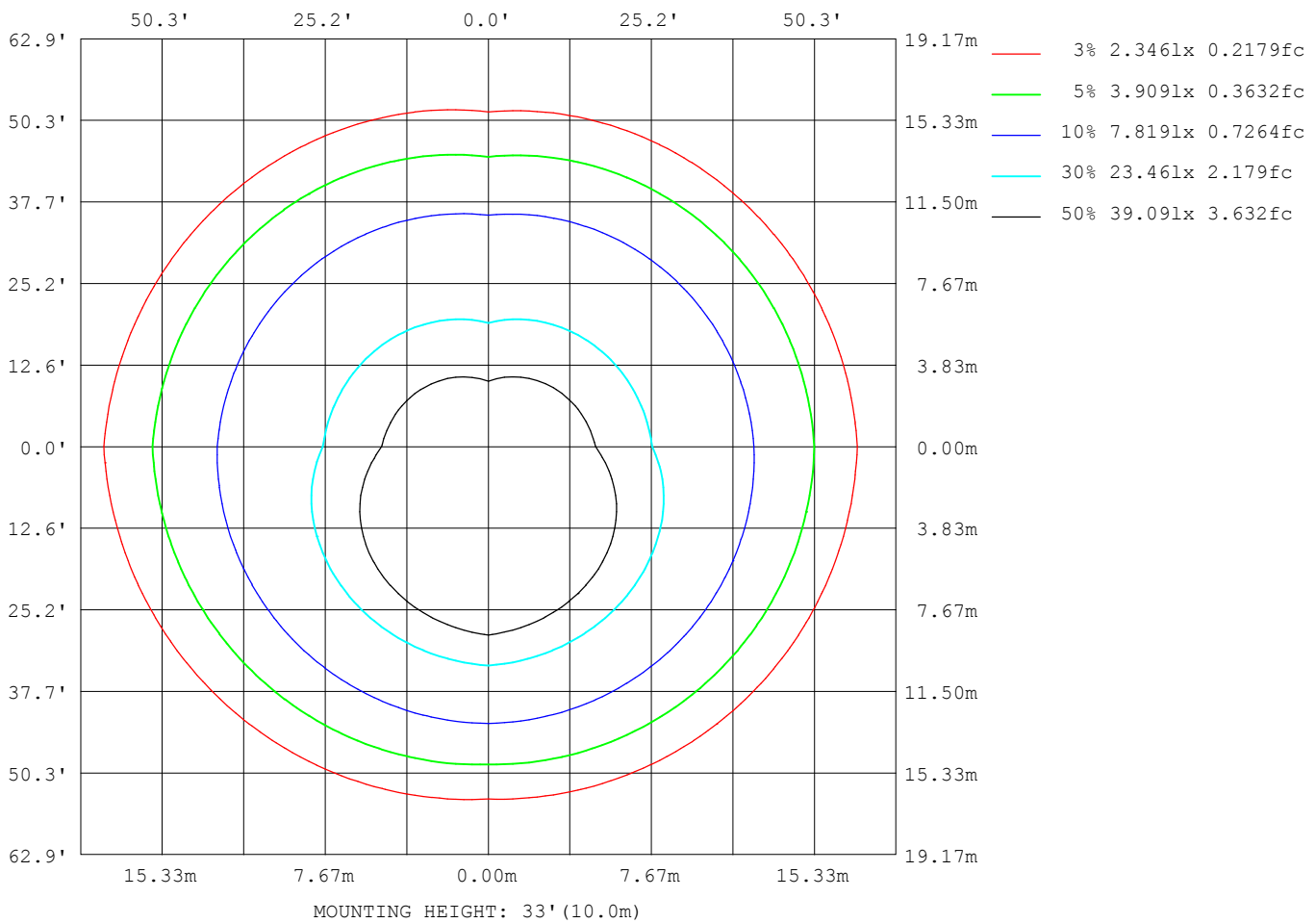
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.5210A P:117.98W PF:0.9822 Freq:50.01Hz Lamp Flux:16386.7x1 lm		
NAME: HLK-120W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 5000K-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:0.5210A P:117.98W PF:0.9822 Freq:50.01Hz Lamp Flux:16386.7x1 lm		
NAME: HLK-120W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 5000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

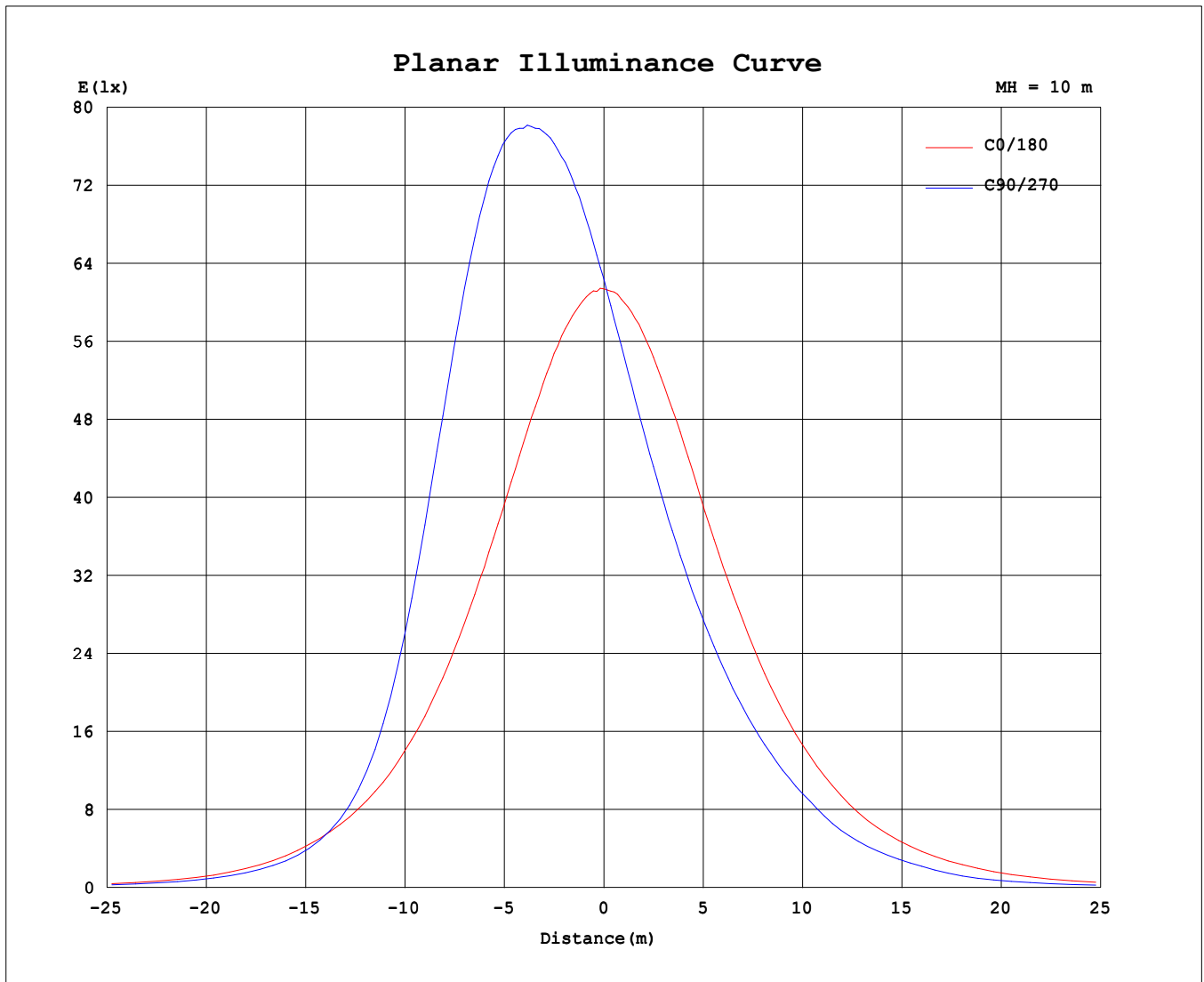
AvgL	cd/m2
L_0~180 (65) av	115539
L_0~180 (75) av	49029
L_0~180 (85) av	10471
L_90~270 (65) av	68285
L_90~270 (75) av	37029
L_90~270 (85) av	10731
L_45 (65) av	86953
L_45 (75) av	42078
L_45 (85) av	10900

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:0.5210A P:117.98W PF:0.9822 Freq:50.01Hz Lamp Flux:16386.7x1 lm		
NAME: HLK-120W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 5000K-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	614	624	614	624															
5	613	693	610	562															
10	607	771	605	509															
15	596	853	592	465															
20	581	940	578	426															
25	559	1040	557	394															
30	530	1116	528	364															
35	494	1118	498	335															
40	449	995	459	307															
45	398	738	414	273															
50	337	452	358	223															
55	269	259	292	176															
60	189	150	221	120															
65	113	84.4	148	69.9															
70	61.0	44.3	83.7	45.0															
75	27.8	23.8	40.0	27.5															
80	9.63	10.1	15.7	13.0															
85	1.45	1.46	3.43	3.54															
90	0.30	0.20	0.22	0.23															
95	0.48	0.30	0.35	0.30															
100	0.74	0.45	0.54	0.53															
105	1.07	0.64	0.77	0.89															
110	1.44	0.87	1.04	1.40															
115	1.82	1.13	1.34	2.03															
120	2.20	1.37	1.66	2.67															
125	2.52	1.60	1.97	3.25															
130	2.79	1.82	2.31	3.69															
135	3.10	2.04	2.65	3.98															
140	3.38	2.27	2.99	4.17															
145	3.68	2.54	3.33	4.34															
150	3.98	2.86	3.66	4.60															
155	4.22	3.21	3.95	4.91															
160	4.39	3.58	4.20	5.24															
165	4.54	3.95	4.41	5.56															
170	4.64	4.35	4.57	5.54															
175	4.70	4.78	4.67	5.47															
180	4.71	5.17	4.70	5.17															

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: