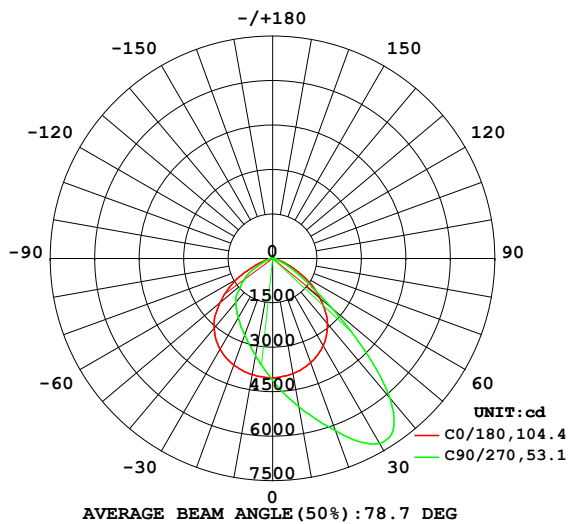


LUMINAIRE PHOTOMETRIC TEST REPORT

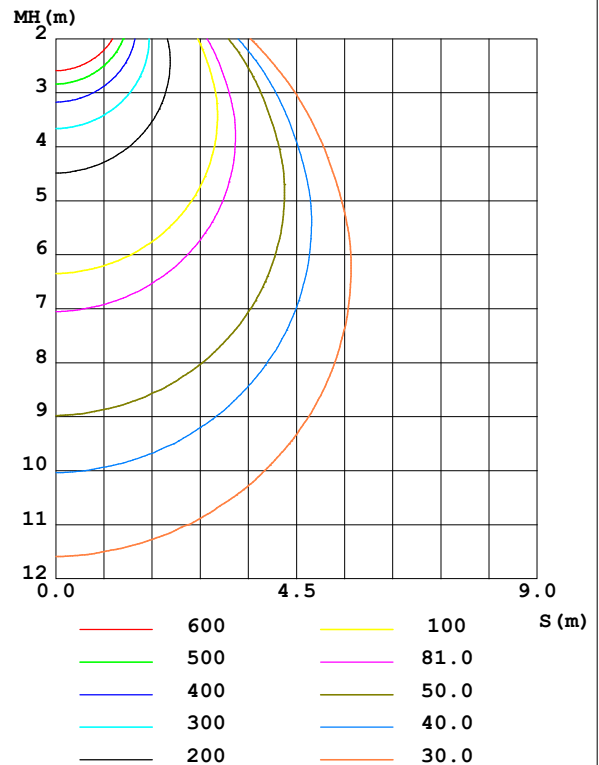
Test:U:230.61V I:0.3662A P:79.308W PF:0.9392 Freq:50.01Hz Lamp Flux:10426.2x1 lm		
NAME: HLK-80W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 5000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 131.46 lm/W
MODEL	SMD3030	Imax (cd)	7237	S/MH (C0/180)	1.30	
NOMINAL POWER(W)	80	LOR (%)	100.0	S/MH (C90/270)	0.84	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	10426	η UP,DN (C0-180)	0.4,58.6	
NOMINAL FLUX(lm)	10426.2	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.4,40.5	
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:

γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	3947	5071	3980	3341					0- 10	389.2	389.2	3.73, 3.73
20	3753	6174	3831	2758					10- 20	1164	1553	14.9, 14.9
30	3411	7203	3543	2320					20- 30	1920	3473	33.3, 33.3
40	2877	6163	3084	1944					30- 40	2436	5909	56.7, 56.7
50	2082	2608	2314	1387					40- 50	2175	8084	77.5, 77.5
60	1195	855.9	1399	790.6					50- 60	1383	9467	90.8, 90.8
70	404.2	254.8	484.5	285.3					60- 70	649.8	10117	97.9, 97.9
80	62.77	52.49	85.31	82.88					70- 80	201.0	10318	99.9, 99.9
90	1.796	1.320	1.413	1.508					80- 90	24.02	10342	99.2, 99.2
100	4.549	2.908	3.346	2.929					90-100	2.478	10344	99.2, 99.2
110	9.226	5.639	6.581	8.108					100-110	5.546	10350	99.3, 99.3
120	14.40	8.764	10.62	16.12					110-120	9.795	10360	99.4, 99.4
130	18.44	11.74	14.81	23.24					120-130	13.31	10373	99.5, 99.5
140	22.56	14.76	19.39	26.80					130-140	14.68	10388	99.6, 99.6
150	26.86	18.80	23.98	29.73					140-150	14.27	10402	99.8, 99.8
160	29.87	23.88	27.77	34.15					150-160	12.39	10414	99.9, 99.9
170	31.50	29.26	30.55	36.47					160-170	8.635	10423	100, 100
180	31.55	34.36	31.53	34.40					170-180	3.107	10426	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 7092 lm

%lum = 68.0%

%lamp = 68.0%

Conical surface Flux(120deg): 9467.1 lm

%lum = 90.8%

%lamp = 90.8%

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:

LUMINANCE LIMITATION CURVES

Test:U:230.61V I:0.3662A P:79.308W PF:0.9392 Freq:50.01Hz
Lamp Flux:10426.2x1 lm

NAME: HLK-80W

TYPE: Glass-50*100D

WEIGHT:

SPEC.: 5000K-RA80

DIM.:

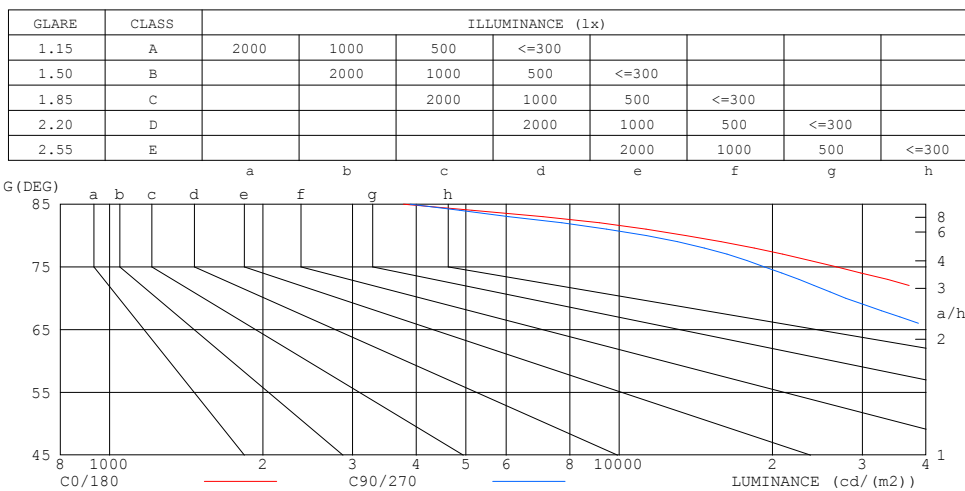
SERIAL No.:

MFR.:

SUR.: 0.221m*0.121m

Shielding Angle:

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)

G (DEG)	C0/180	C90/270
85	3774	3889
80	13517	11304
75	26727	19275
70	44196	27861
65	64697	42901
60	89343	64013
55	108494	96480
50	121102	151719
45	133132	232989

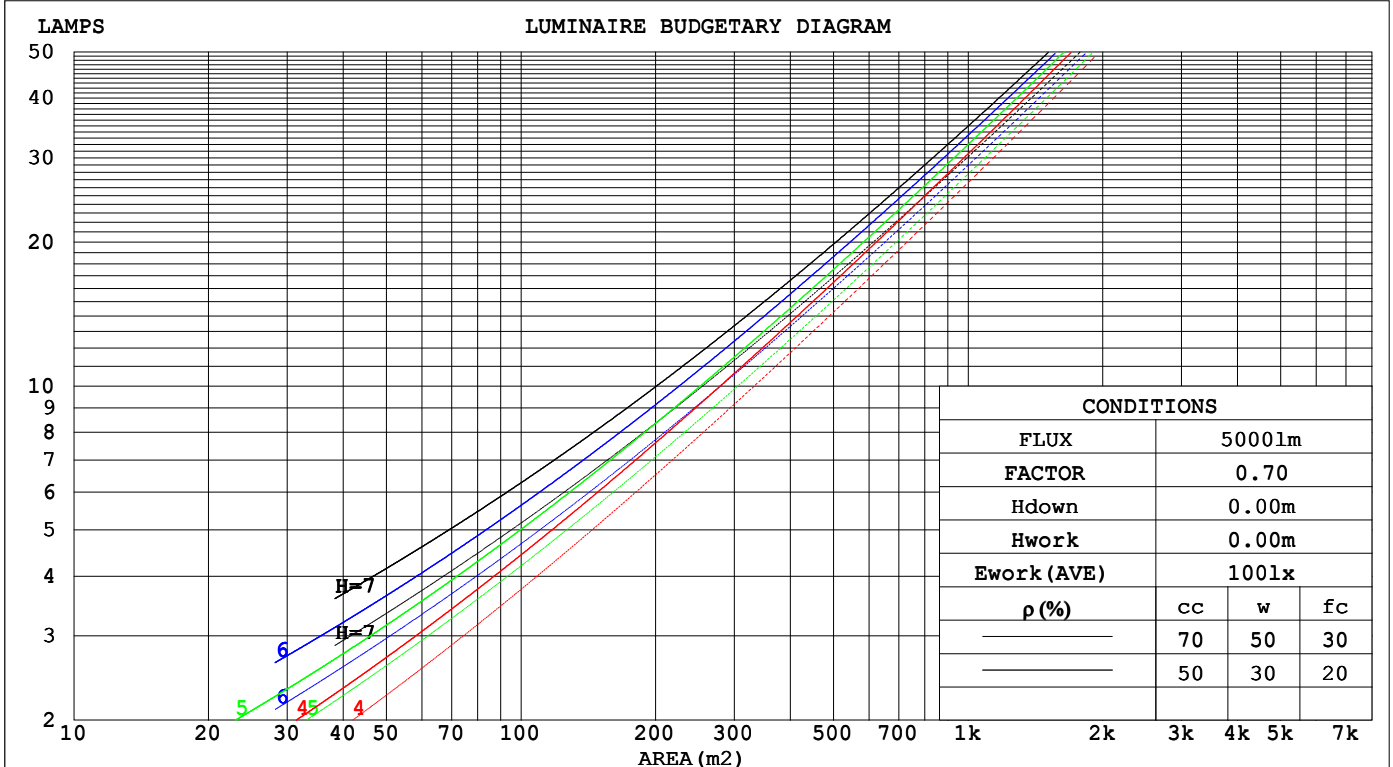
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-07-18

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:230.61V I:0.3662A P:79.308W PF:0.9392 Freq:50.01Hz Lamp Flux:10426.2x1 lm		
NAME: HLK-80W	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															



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:230.61V I:0.3662A P:79.308W PF:0.9392 Freq:50.01Hz Lamp Flux:10426.2x1 lm					
NAME: HLK-80W			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	.248	.141	.045	.241	.137	.044	.228	.131	.042	.215	.124	.040	.204	.118	.038		
2.0	.243	.133	.041	.236	.130	.040	.225	.125	.039	.214	.120	.038	.204	.115	.036		
3.0	.231	.123	.037	.226	.121	.036	.216	.117	.035	.206	.113	.035	.197	.109	.034		
4.0	.218	.114	.033	.214	.112	.033	.205	.108	.032	.196	.105	.032	.188	.102	.031		
5.0	.206	.105	.030	.202	.103	.030	.193	.101	.030	.186	.098	.029	.179	.096	.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	.164	.082	.023	.158	.080	.023	.153	.079	.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	.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	.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:230.61V I:0.3662A P:79.308W PF:0.9392 Freq:50.01Hz Lamp Flux:10426.2x1 lm											
NAME: HLK-80W					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	2H	27.0	28.4	27.4	28.8	29.1	26.6	28.0	26.9	28.3	28.7
	3H	27.6	28.9	28.0	29.2	29.6	26.9	28.2	27.3	28.5	28.9
	4H	27.7	28.9	28.1	29.2	29.6	27.0	28.2	27.4	28.5	28.9
	6H	27.7	28.7	28.1	29.1	29.5	26.9	28.0	27.4	28.4	28.8
	8H	27.6	28.7	28.1	29.1	29.5	26.9	28.0	27.4	28.4	28.8
	12H	27.6	28.6	28.0	29.0	29.4	26.9	27.9	27.3	28.3	28.7
4H	2H	27.1	28.3	27.5	28.6	29.0	26.9	28.1	27.3	28.5	28.9
	3H	27.8	28.7	28.2	29.1	29.6	27.4	28.3	27.8	28.8	29.2
	4H	27.9	28.7	28.3	29.2	29.6	27.4	28.3	27.9	28.7	29.2
	6H	27.9	28.6	28.4	29.1	29.6	27.4	28.2	27.9	28.7	29.1
	8H	27.8	28.5	28.3	29.0	29.5	27.4	28.1	27.9	28.6	29.1
	12H	27.8	28.4	28.3	28.9	29.4	27.4	28.0	27.9	28.5	29.0
8H	4H	27.8	28.5	28.3	29.0	29.5	27.5	28.2	27.9	28.6	29.1
	6H	27.8	28.4	28.3	28.9	29.4	27.5	28.0	28.0	28.5	29.0
	8H	27.8	28.3	28.3	28.8	29.3	27.4	27.9	28.0	28.5	29.0
	12H	27.7	28.2	28.3	28.7	29.3	27.4	27.8	27.9	28.4	28.9
12H	4H	27.8	28.4	28.3	28.9	29.4	27.4	28.0	27.9	28.5	29.0
	6H	27.8	28.3	28.3	28.8	29.3	27.4	27.9	28.0	28.4	29.0
	8H	27.7	28.2	28.3	28.7	29.3	27.4	27.9	27.9	28.4	28.9
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:230.61V I:0.3662A P:79.308W PF:0.9392 Freq:50.01Hz Lamp Flux:10426.2x1 lm		
NAME: HLK-80W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 5000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

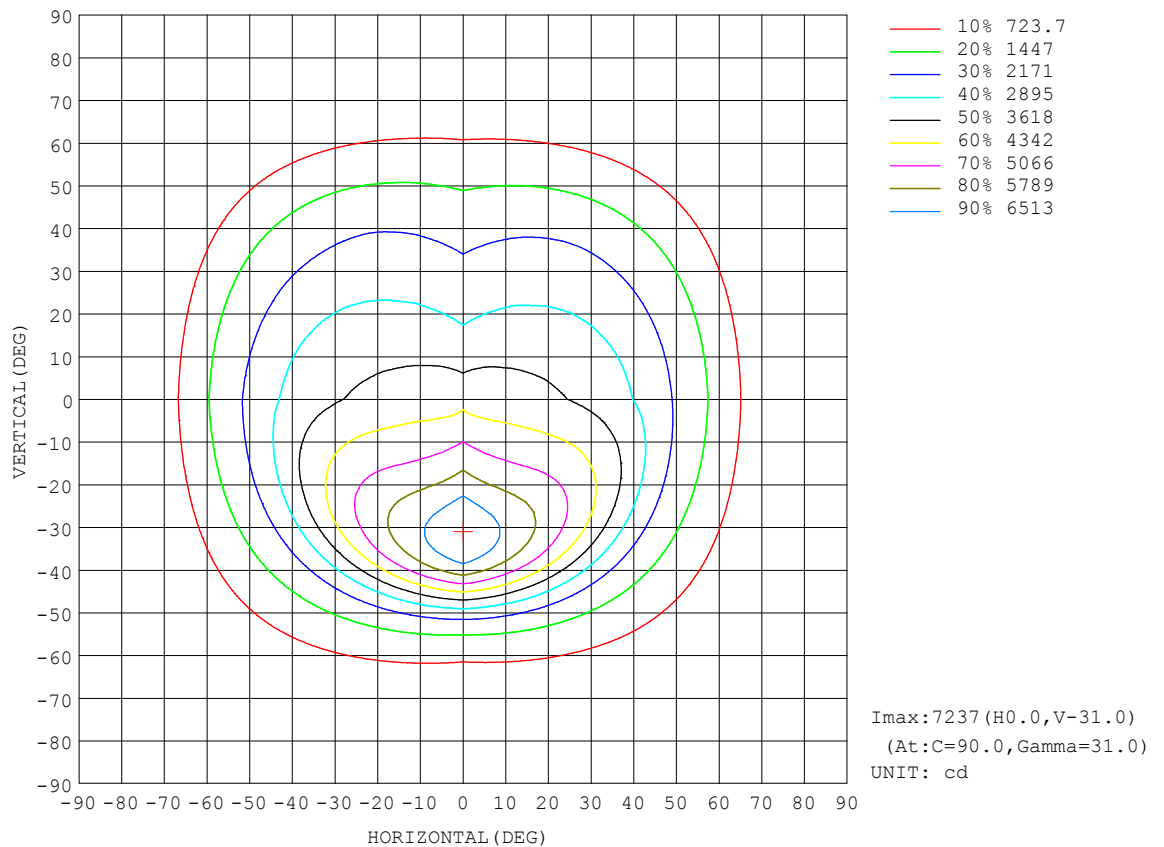
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	64	54	47	63	53	47	62	53	47	41
0.80	74	64	58	73	64	58	72	63	57	51
1.00	83	74	67	82	73	67	80	74	66	60
1.25	90	81	75	88	80	75	86	79	74	67
1.50	94	86	80	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	104	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℃
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:230.61V I:0.3662A P:79.308W PF:0.9392 Freq:50.01Hz Lamp Flux:10426.2x1 lm		
NAME: HLK-80W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 5000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

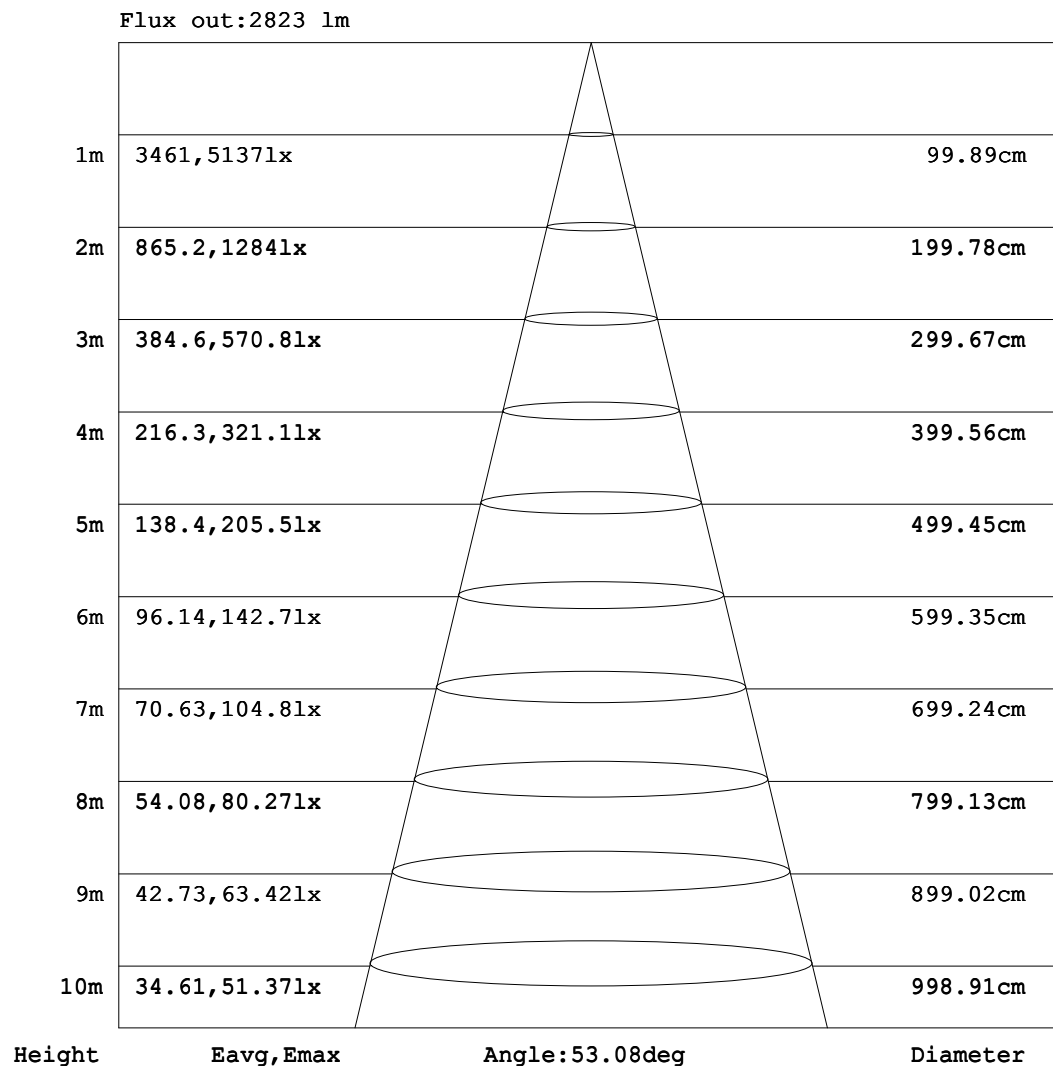


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-07-18

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:230.61V I:0.3662A P:79.308W PF:0.9392 Freq:50.01Hz Lamp Flux:10426.2x1 lm		
NAME: HLK-80W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 5000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:



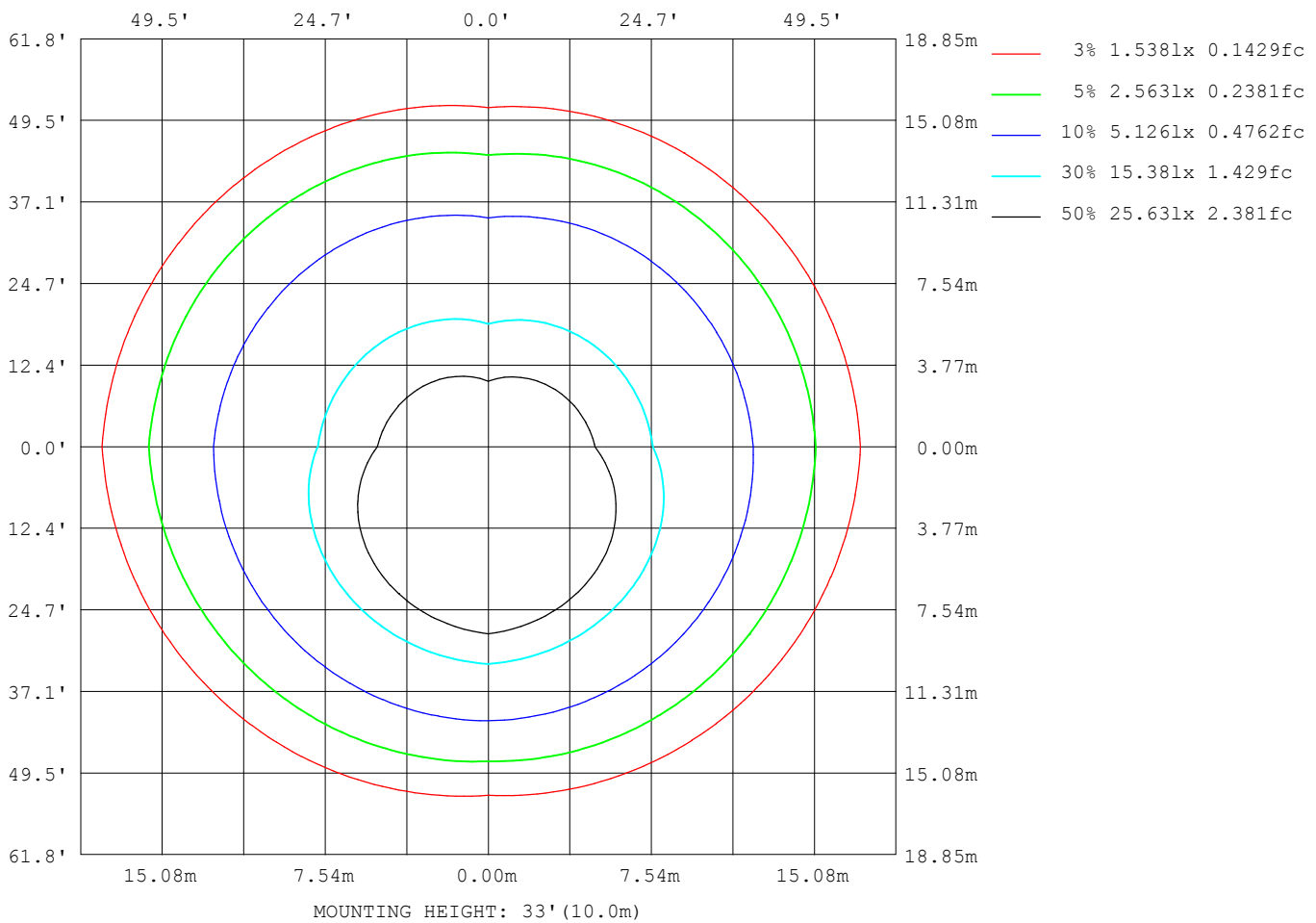
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:230.61V I:0.3662A P:79.308W PF:0.9392 Freq:50.01Hz Lamp Flux:10426.2x1 lm		
NAME: HLK-80W	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:230.61V I:0.3662A P:79.308W PF:0.9392 Freq:50.01Hz Lamp Flux:10426.2x1 lm		
NAME: HLK-80W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 5000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

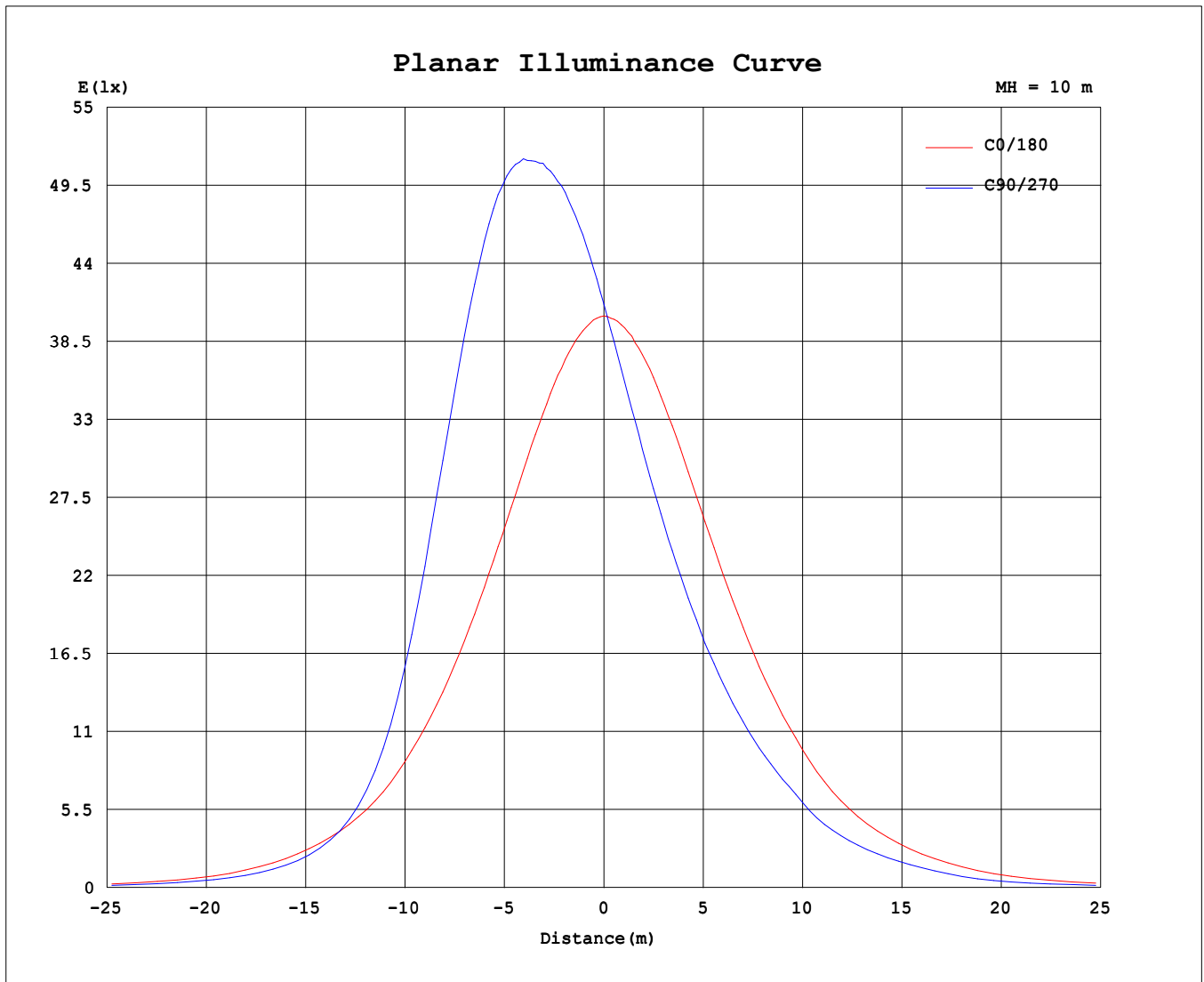
AvgL	cd/m2
L_0~180 (65) av	70998
L_0~180 (75) av	29757
L_0~180 (85) av	5730
L_90~270 (65) av	41390
L_90~270 (75) av	22122
L_90~270 (85) av	6997
L_45 (65) av	52887
L_45 (75) av	25175
L_45 (85) av	6644

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:230.61V I:0.3662A P:79.308W PF:0.9392 Freq:50.01Hz Lamp Flux:10426.2x1 lm		
NAME: HLK-80W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 5000K-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	4030	4113	4030	4113															
5	3997	4578	4014	3697															
10	3947	5071	3980	3341															
15	3865	5604	3920	3025															
20	3753	6174	3831	2758															
25	3600	6801	3705	2538															
30	3411	7203	3543	2320															
35	3165	7079	3339	2131															
40	2877	6163	3084	1944															
45	2517	4406	2752	1700															
50	2082	2608	2314	1387															
55	1664	1480	1882	1125															
60	1195	856	1399	791															
65	731	485	874	451															
70	404	255	485	285															
75	185	133	227	173															
80	62.8	52.5	85.3	82.9															
85	8.80	9.06	17.9	23.5															
90	1.80	1.32	1.41	1.51															
95	2.90	1.98	2.20	1.68															
100	4.55	2.91	3.35	2.93															
105	6.70	4.15	4.83	5.04															
110	9.23	5.64	6.58	8.11															
115	11.8	7.22	8.52	12.0															
120	14.4	8.76	10.6	16.1															
125	16.6	10.3	12.7	20.1															
130	18.4	11.7	14.8	23.2															
135	20.6	13.1	17.1	25.3															
140	22.6	14.8	19.4	26.8															
145	24.8	16.6	21.7	28.0															
150	26.9	18.8	24.0	29.7															
155	28.5	21.3	25.9	31.7															
160	29.9	23.9	27.8	34.2															
165	30.8	26.6	29.3	36.4															
170	31.5	29.3	30.6	36.5															
175	31.8	32.2	31.2	36.3															
180	31.6	34.4	31.5	34.4															

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: