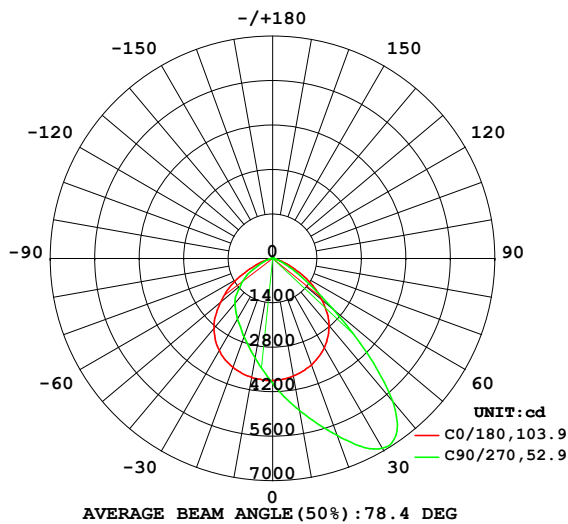


LUMINAIRE PHOTOMETRIC TEST REPORT

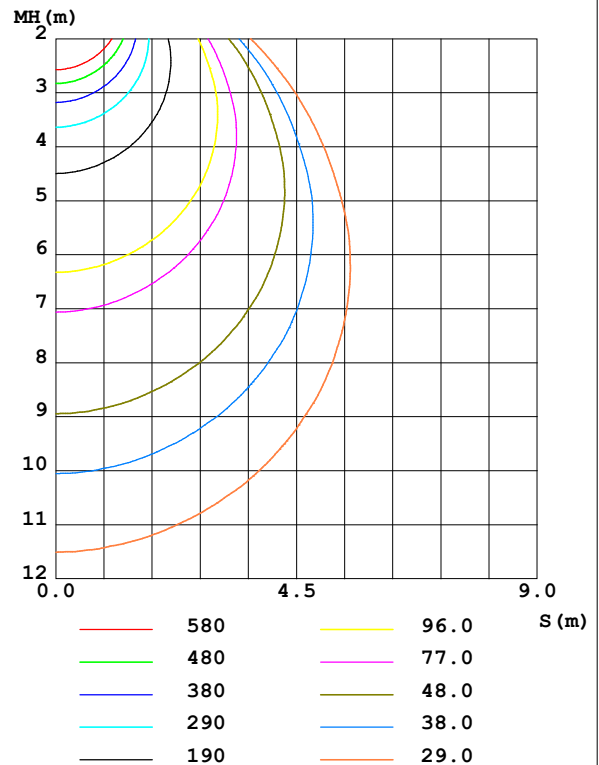
Test:U:230.61V I:0.3644A P:78.876W PF:0.9387 Freq:50.01Hz Lamp Flux:9922.29x1 lm		
NAME: HLK-80W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 125.80 lm/W
MODEL	SMD3030	I _{max} (cd)	6940	S/MH (C0/180)	1.29	
NOMINAL POWER(W)	80	LOR (%)	100.0	S/MH (C90/270)	0.84	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	9922.3	η UP,DN (C0-180)	0.4,59.0	
NOMINAL FLUX(lm)	9922.29	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.4,40.2	
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	3763	4856	3810	3187					0- 10	372.0	372.0	3.75, 3.75
20	3570	5925	3649	2635					10- 20	1112	1484	15, 15
30	3258	6905	3359	2217					20- 30	1833	3317	33.4, 33.4
40	2766	5895	2878	1852					30- 40	2324	5640	56.8, 56.8
50	2019	2486	2134	1320					40- 50	2064	7705	77.7, 77.7
60	1160	813.4	1282	751.1					50- 60	1309	9014	90.8, 90.8
70	383.6	241.2	457.1	270.8					60- 70	614.0	9628	97, 97
80	58.61	49.50	83.77	78.01					70- 80	191.1	9819	99, 99
90	1.671	1.227	1.337	1.432					80- 90	22.80	9842	99.2, 99.2
100	4.263	2.774	3.203	2.770					90-100	2.342	9844	99.2, 99.2
110	8.613	5.362	6.329	7.722					100-110	5.253	9850	99.3, 99.3
120	13.45	8.352	10.19	15.37					110-120	9.291	9859	99.4, 99.4
130	17.35	11.22	14.24	22.20					120-130	12.65	9872	99.5, 99.5
140	21.30	14.11	18.60	25.60					130-140	13.99	9886	99.6, 99.6
150	25.41	18.00	23.00	28.47					140-150	13.62	9899	99.8, 99.8
160	28.32	22.85	26.69	32.76					150-160	11.83	9911	99.9, 99.9
170	29.91	28.04	29.29	34.96					160-170	8.258	9919	100, 100
180	30.16	32.87	30.14	32.90					170-180	2.971	9922	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 6763.7 lm

%lum = 68.2%

%lamp = 68.2%

Conical surface Flux(120deg): 9014.2 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
 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:0.3644A P:78.876W PF:0.9387 Freq:50.01Hz
Lamp Flux:9922.29x1 lm

NAME: HLK-80W

TYPE: Glass-50*100D

WEIGHT:

SPEC.: 3000K-RA80

DIM.:

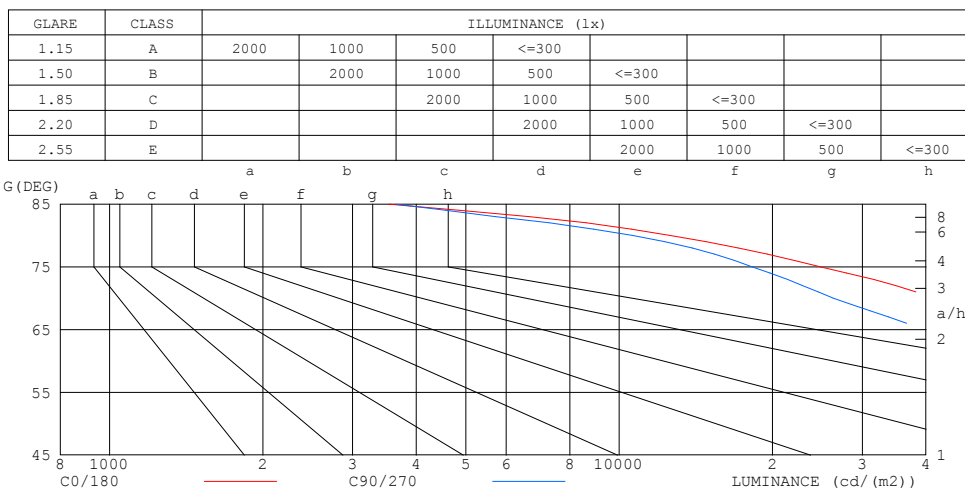
SERIAL No.:

MFR.:

SUR.: 0.221m*0.121m

Shielding Angle:

LUMINANCE LIMITATION CURVES



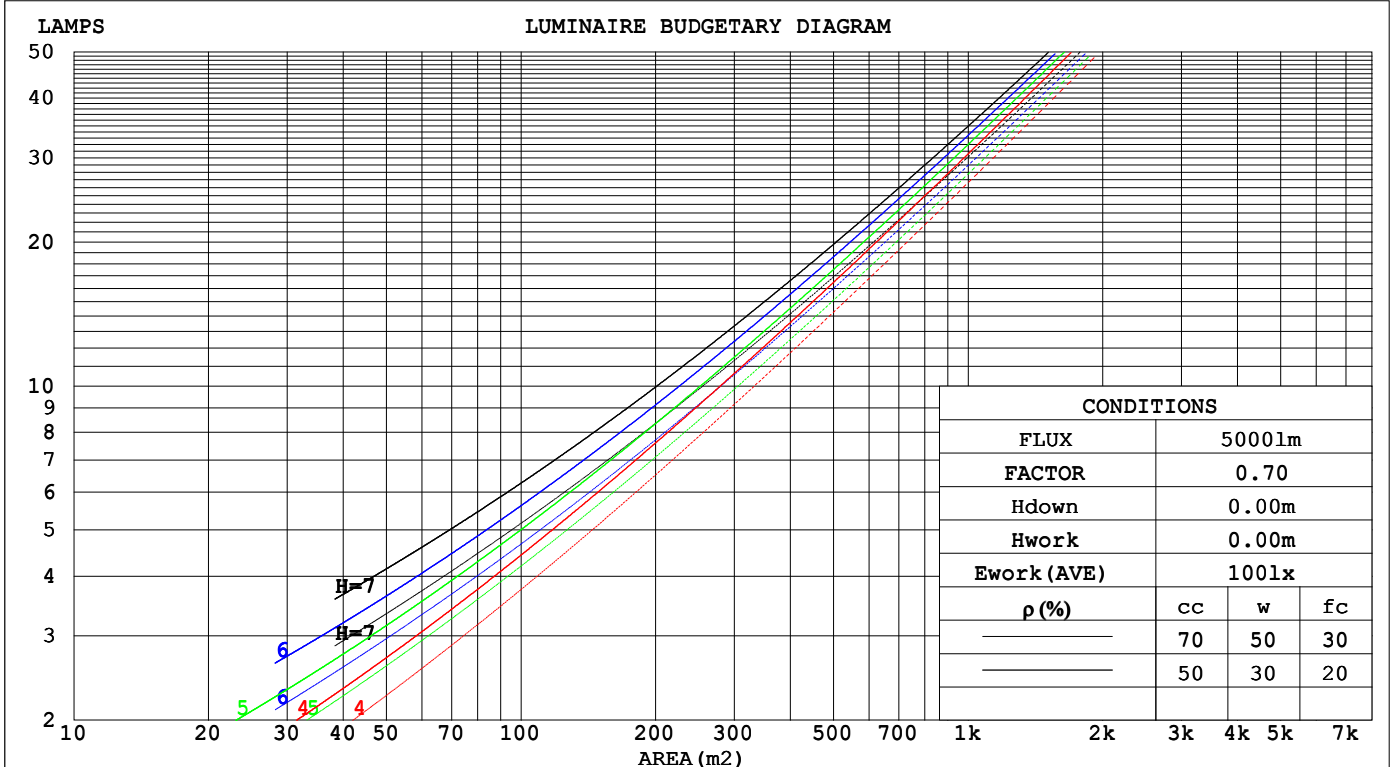
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.1℃
Operators:
Test Date: 2024-07-18

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:230.61V I:0.3644A P:78.876W PF:0.9387 Freq:50.01Hz Lamp Flux:9922.29x1 lm		
NAME: HLK-80W	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:230.61V I:0.3644A P:78.876W PF:0.9387 Freq:50.01Hz		
Lamp Flux:9922.29x1 lm		
NAME: HLK-80W	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	.248	.141	.045	.241	.137	.044	.227	.130	.042	.215	.124	.040	.204	.118	.038		
2.0	.242	.133	.041	.236	.130	.040	.224	.125	.039	.214	.120	.038	.204	.115	.036		
3.0	.231	.123	.037	.226	.121	.036	.215	.117	.035	.206	.113	.035	.197	.109	.034		
4.0	.218	.113	.033	.213	.112	.033	.204	.108	.032	.196	.105	.032	.188	.102	.031		
5.0	.206	.105	.030	.201	.103	.030	.193	.101	.030	.186	.098	.029	.179	.095	.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	.163	.082	.023	.158	.080	.023	.153	.078	.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	.055	.042	.031	.018	.014	.010	
4.0	.156	.107	.069	.133	.092	.060	.092	.064	.042	.053	.038	.025	.017	.012	.008	
5.0	.148	.096	.057	.127	.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:0.3644A P:78.876W PF:0.9387 Freq:50.01Hz Lamp Flux:9922.29x1 lm											
NAME: HLK-80W					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	2H	26.9	28.4	27.3	28.7	29.1	26.3	27.8	26.7	28.1	28.4
	3H	27.5	28.8	27.9	29.1	29.5	26.7	28.0	27.1	28.3	28.7
	4H	27.6	28.8	28.0	29.1	29.5	26.7	27.9	27.1	28.3	28.7
	6H	27.6	28.7	28.0	29.0	29.5	26.7	27.8	27.1	28.2	28.6
	8H	27.5	28.6	28.0	29.0	29.4	26.7	27.7	27.1	28.1	28.5
	12H	27.5	28.5	27.9	28.9	29.3	26.6	27.6	27.1	28.0	28.5
4H	2H	27.0	28.2	27.4	28.6	29.0	26.6	27.8	27.0	28.2	28.6
	3H	27.7	28.6	28.1	29.1	29.5	27.1	28.1	27.5	28.5	28.9
	4H	27.8	28.6	28.2	29.1	29.5	27.2	28.1	27.6	28.5	28.9
	6H	27.8	28.5	28.3	29.0	29.5	27.2	27.9	27.7	28.4	28.9
	8H	27.7	28.4	28.2	28.9	29.4	27.2	27.9	27.6	28.3	28.8
	12H	27.7	28.3	28.2	28.8	29.3	27.1	27.7	27.6	28.2	28.7
8H	4H	27.7	28.4	28.2	28.9	29.4	27.2	27.9	27.7	28.4	28.9
	6H	27.7	28.3	28.2	28.8	29.3	27.2	27.8	27.7	28.3	28.8
	8H	27.7	28.2	28.2	28.7	29.2	27.2	27.7	27.7	28.2	28.7
	12H	27.6	28.1	28.2	28.6	29.2	27.1	27.6	27.7	28.1	28.7
12H	4H	27.7	28.3	28.2	28.8	29.3	27.2	27.8	27.7	28.3	28.8
	6H	27.7	28.2	28.2	28.7	29.2	27.2	27.7	27.7	28.2	28.7
	8H	27.6	28.1	28.2	28.6	29.2	27.2	27.6	27.7	28.1	28.7
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:0.3644A P:78.876W PF:0.9387 Freq:50.01Hz Lamp Flux:9922.29x1 lm		
NAME: HLK-80W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

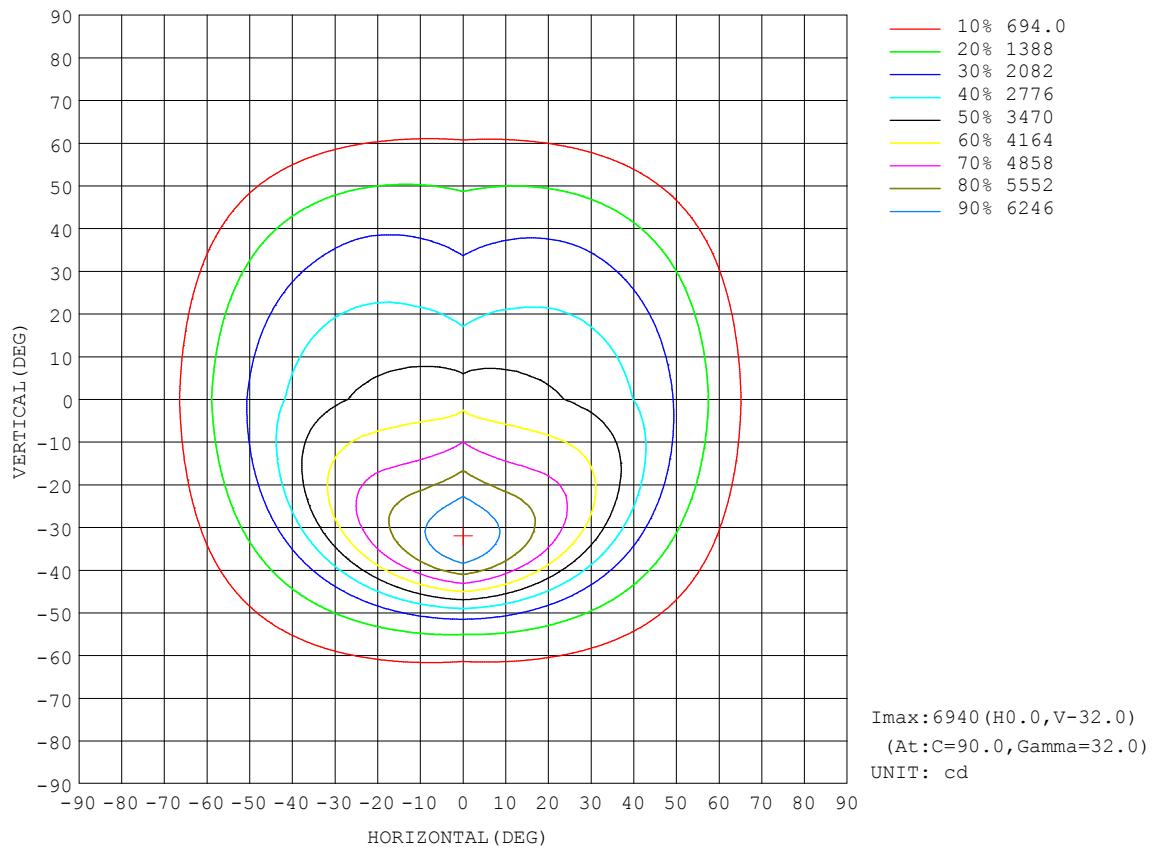
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	64	54	47	63	53	47	62	53	47	41
0.80	75	64	58	74	64	58	72	63	57	51
1.00	83	74	67	82	73	67	80	74	67	60
1.25	90	81	75	88	80	75	86	79	74	68
1.50	94	86	81	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	105	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:0.3644A P:78.876W PF:0.9387 Freq:50.01Hz Lamp Flux:9922.29x1 lm		
NAME: HLK-80W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

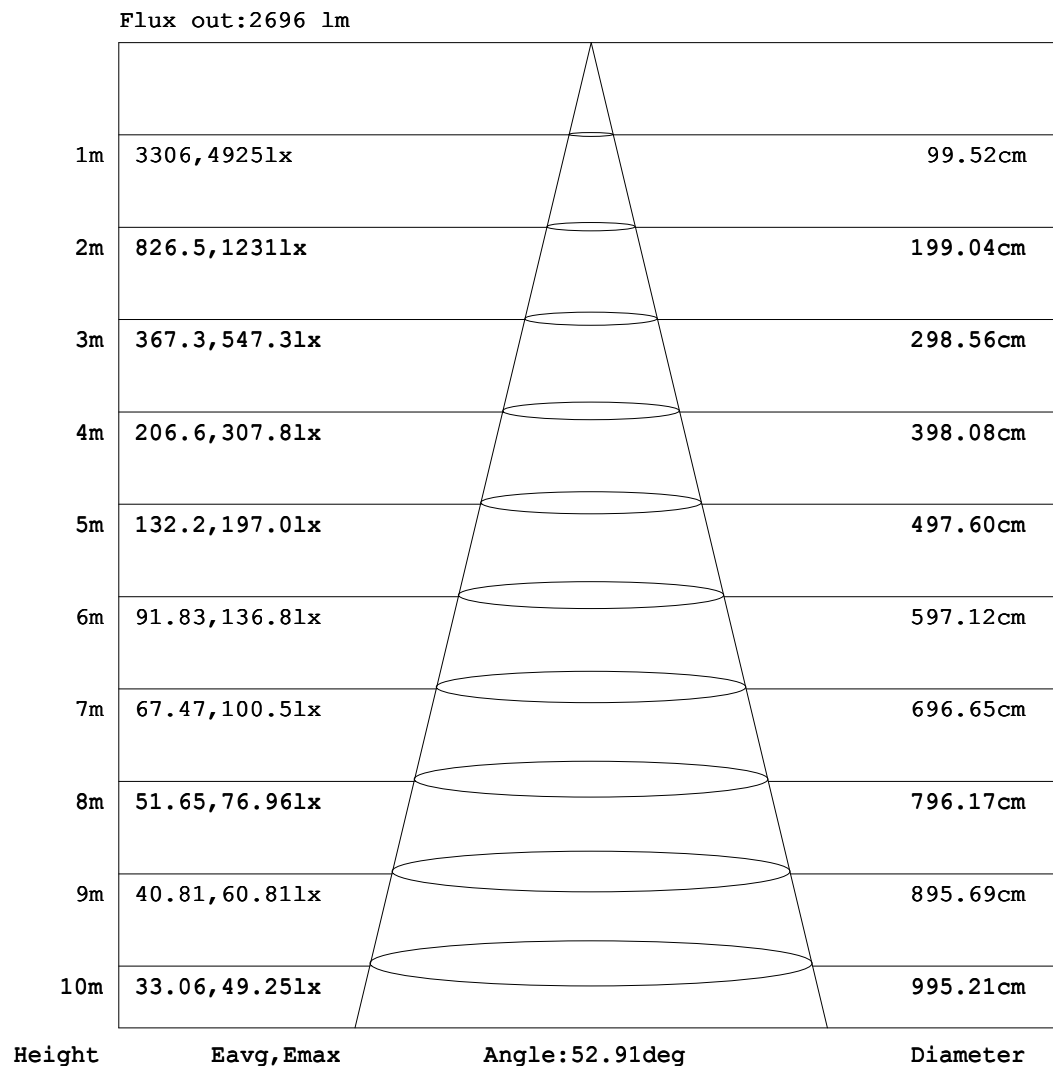


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-07-18

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:230.61V I:0.3644A P:78.876W PF:0.9387 Freq:50.01Hz Lamp Flux:9922.29x1 lm		
NAME: HLK-80W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:



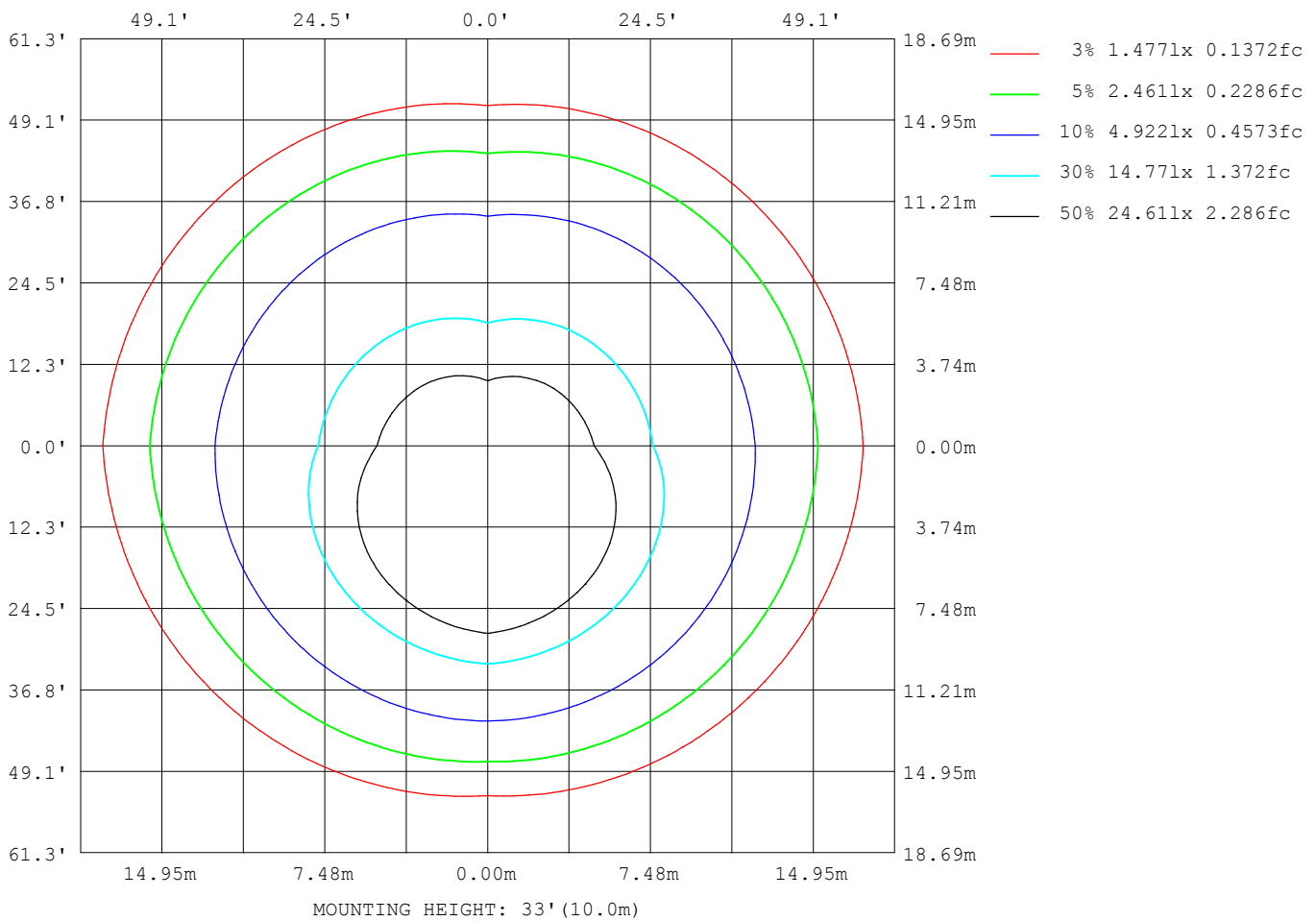
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:230.61V I:0.3644A P:78.876W PF:0.9387 Freq:50.01Hz Lamp Flux:9922.29x1 lm		
NAME: HLK-80W	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:230.61V I:0.3644A P:78.876W PF:0.9387 Freq:50.01Hz Lamp Flux:9922.29x1 lm		
NAME: HLK-80W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

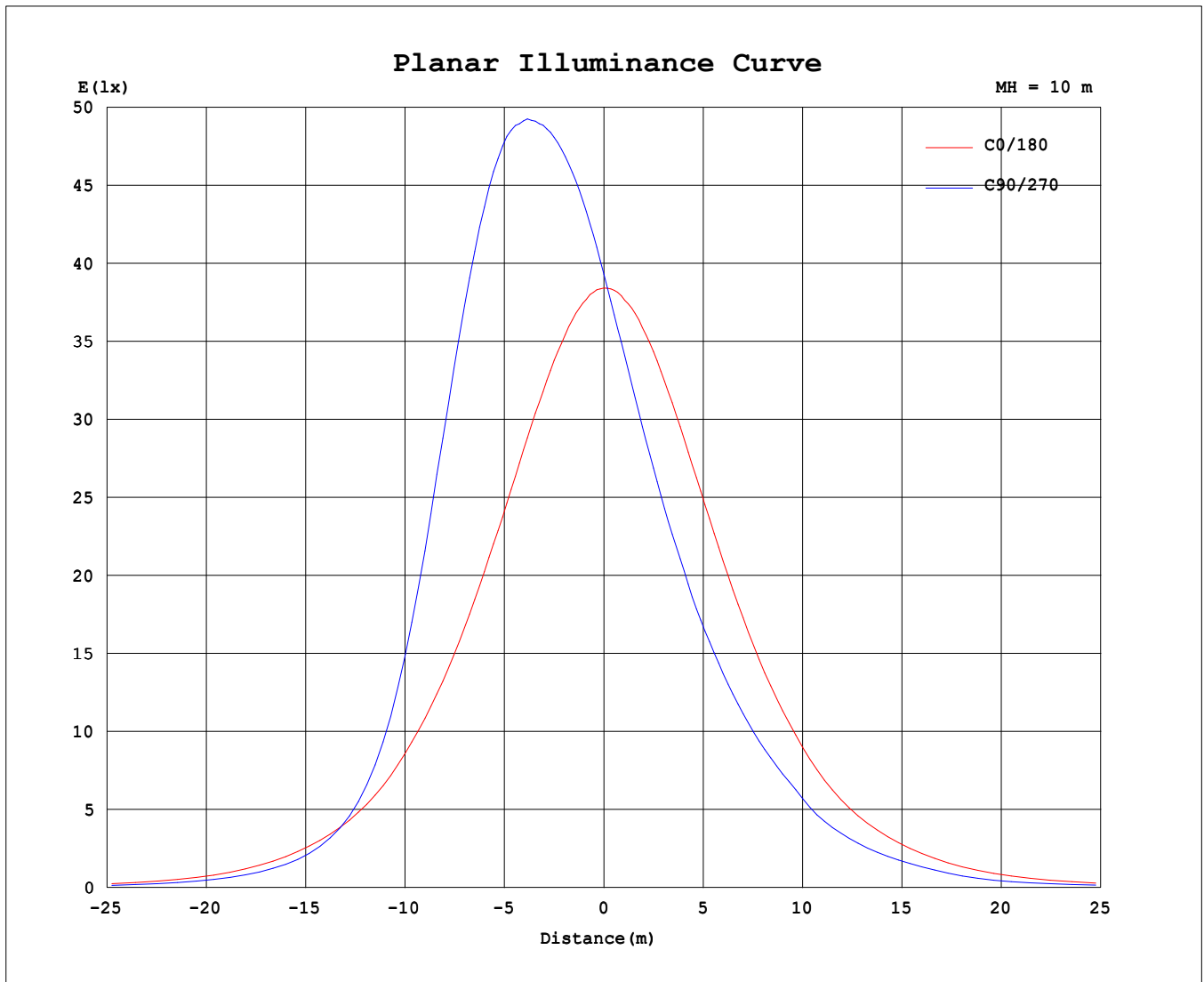
AvgL	cd/m2
L_0~180 (65) av	66742
L_0~180 (75) av	28431
L_0~180 (85) av	5434
L_90~270 (65) av	38955
L_90~270 (75) av	20928
L_90~270 (85) av	6590
L_45 (65) av	49653
L_45 (75) av	23963
L_45 (85) av	6275

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°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:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.61V I:0.3644A P:78.876W PF:0.9387 Freq:50.01Hz Lamp Flux:9922.29x1 lm		
NAME: HLK-80W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 3000K-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	3842	3930	3842	3930														
5	3813	4384	3837	3537														
10	3763	4856	3810	3187														
15	3676	5372	3746	2887														
20	3570	5925	3649	2635														
25	3430	6520	3530	2399														
30	3258	6905	3359	2217														
35	3032	6780	3147	2030														
40	2766	5895	2878	1852														
45	2431	4197	2548	1619														
50	2019	2486	2134	1320														
55	1609	1406	1735	1069														
60	1160	813	1282	751														
65	704	454	805	427														
70	384	241	457	271														
75	172	126	221	163														
80	58.6	49.5	83.8	78.0														
85	8.24	8.50	17.1	22.2														
90	1.67	1.23	1.34	1.43														
95	2.70	1.87	2.10	1.59														
100	4.26	2.77	3.20	2.77														
105	6.25	3.93	4.63	4.78														
110	8.61	5.36	6.33	7.72														
115	11.1	6.87	8.19	11.4														
120	13.5	8.35	10.2	15.4														
125	15.6	9.83	12.2	19.1														
130	17.4	11.2	14.2	22.2														
135	19.5	12.6	16.4	24.2														
140	21.3	14.1	18.6	25.6														
145	23.4	15.8	20.8	26.8														
150	25.4	18.0	23.0	28.5														
155	27.1	20.4	24.9	30.4														
160	28.3	22.9	26.7	32.8														
165	29.3	25.4	28.2	34.9														
170	29.9	28.0	29.3	35.0														
175	30.2	30.8	29.9	34.7														
180	30.2	32.9	30.1	32.9														

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: