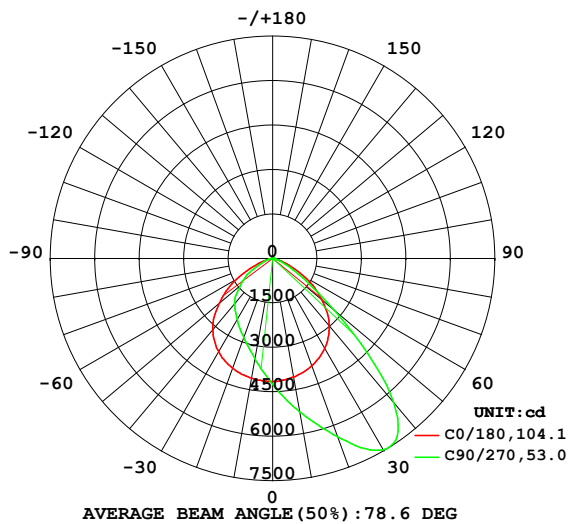


LUMINAIRE PHOTOMETRIC TEST REPORT

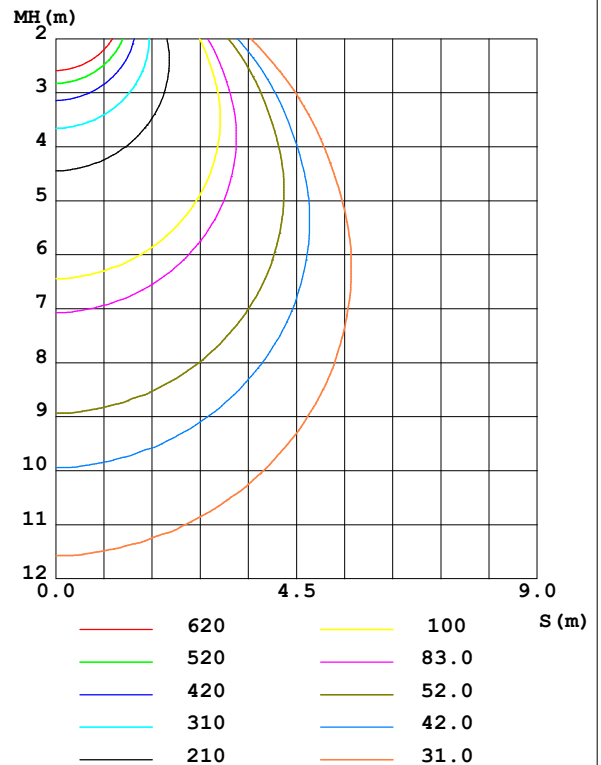
Test:U:230.59V I:0.3492A P:75.102W PF:0.9328 Freq:50.01Hz Lamp Flux:10743.7x1 lm		
NAME: HLK-80W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 143.05 lm/W
MODEL	SMD3030	I _{max} (cd)	7484	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)	10744	η UP,DN (C0-180)	0.4,58.8	
NOMINAL FLUX(lm)	10743.7	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.4,40.4	
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	4059	5255	4102	3446					0- 10	401.6	401.6	3.74, 3.74
20	3857	6386	3945	2847					10- 20	1201	1603	14.9, 14.9
30	3514	7454	3636	2391					20- 30	1981	3584	33.4, 33.4
40	2979	6371	3148	2003					30- 40	2513	6097	56.8, 56.8
50	2165	2691	2344	1430					40- 50	2239	8337	77.6, 77.6
60	1240	883.6	1415	813.7					50- 60	1422	9759	90.8, 90.8
70	417.6	262.0	496.8	294.2					60- 70	666.3	10425	97, 97
80	63.96	53.75	89.81	85.01					70- 80	206.9	10632	99, 99
90	1.847	1.353	1.463	1.567					80- 90	24.74	10657	99.2, 99.2
100	4.650	3.001	3.464	3.021					90-100	2.550	10659	99.2, 99.2
110	9.427	5.807	6.792	8.394					100-110	5.708	10665	99.3, 99.3
120	14.72	9.041	10.96	16.68					110-120	10.08	10675	99.4, 99.4
130	18.91	12.12	15.32	24.02					120-130	13.71	10689	99.5, 99.5
140	23.13	15.24	20.04	27.69					130-140	15.15	10704	99.6, 99.6
150	27.58	19.46	24.78	30.73					140-150	14.73	10719	99.8, 99.8
160	30.70	24.74	28.66	35.32					150-160	12.79	10732	99.9, 99.9
170	32.38	30.30	31.59	37.65					160-170	8.922	10740	100, 100
180	32.58	35.51	32.54	35.59					170-180	3.210	10744	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 7316.7 lm

%lum = 68.1%

%lamp = 68.1%

Conical surface Flux(120deg): 9758.9 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:230.59V I:0.3492A P:75.102W PF:0.9328 Freq:50.01Hz
Lamp Flux:10743.7x1 lm

NAME: HLK-80W

TYPE: Glass-50*100D

WEIGHT:

SPEC.: 4000K-RA80

DIM.:

SERIAL No.:

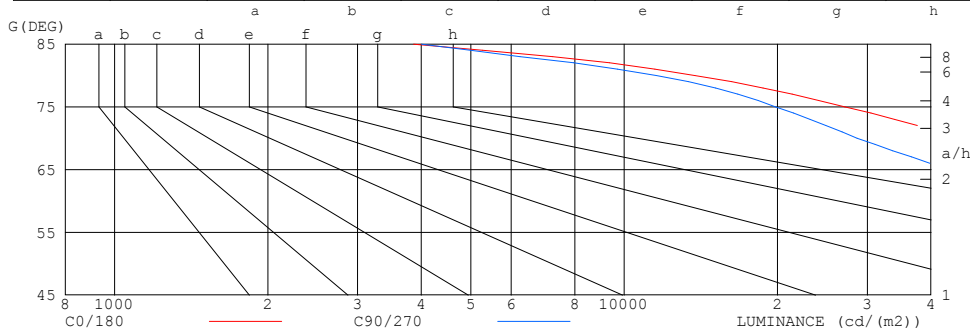
MFR.:

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	3861	4004
80	13774	11575
75	27127	19827
70	45664	28643
65	66882	43925
60	92773	66083
55	112761	99379
50	125931	156581
45	138048	240096

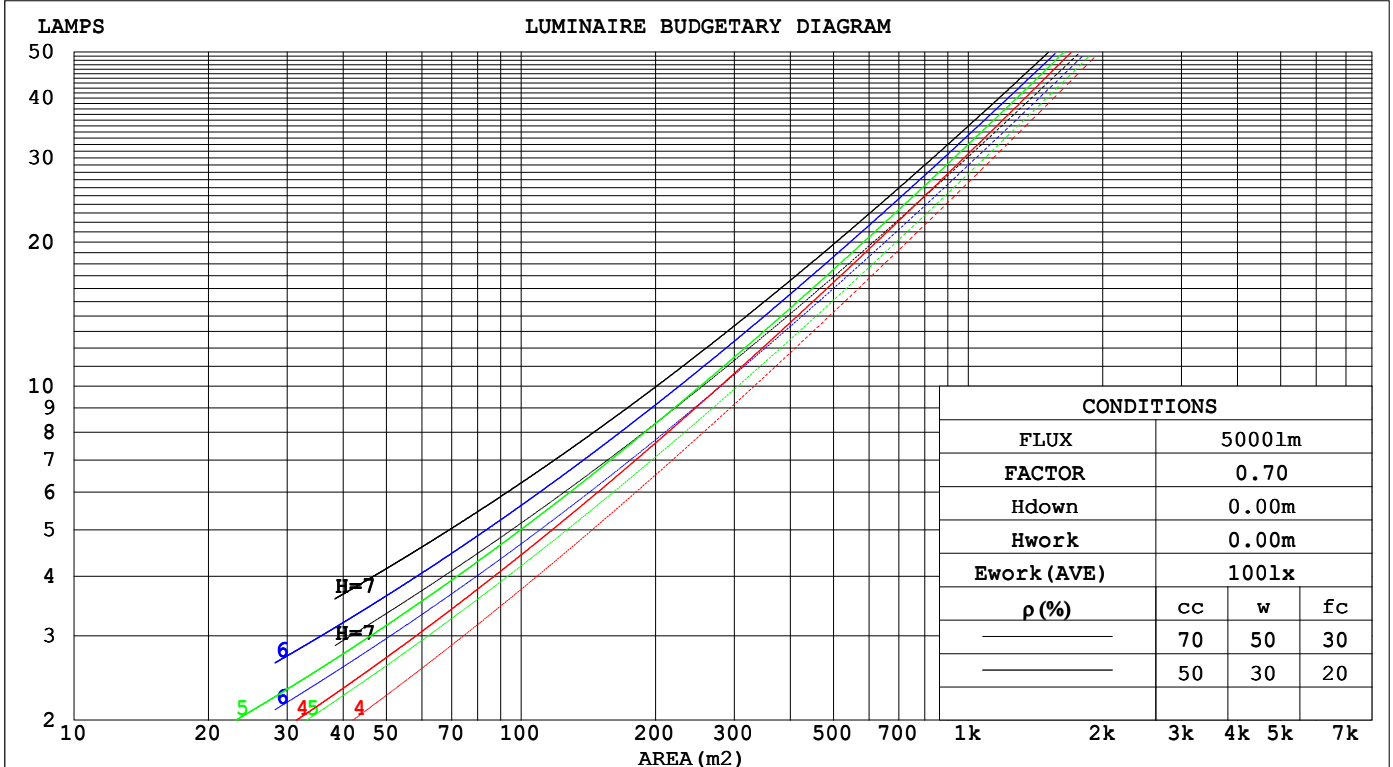
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-07-18

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:230.59V I:0.3492A P:75.102W PF:0.9328 Freq:50.01Hz Lamp Flux:10743.7x1 lm		
NAME: HLK-80W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-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:230.59V I:0.3492A P:75.102W PF:0.9328 Freq:50.01Hz Lamp Flux:10743.7x1 lm		
NAME: HLK-80W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

pcc	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						Wall Exitance Coefficients (WEC)										
0.0																	
1.0	.248	.141	.045	.241	.137	.044	.227	.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	.215	.117	.035	.206	.113	.035	.197	.109	.034		
4.0	.218	.113	.033	.214	.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	.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	.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	.056	.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	.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:230.59V I:0.3492A P:75.102W PF:0.9328 Freq:50.01Hz Lamp Flux:10743.7x1 lm											
NAME: HLK-80W					TYPE: Glass-50*100D			WEIGHT:			
SPEC.: 4000K-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	27.2	28.6	27.5	28.9	29.3	26.6	28.1	27.0	28.4	28.8	
	3H	27.7	29.0	28.1	29.4	29.7	27.0	28.3	27.4	28.6	29.0
	4H	27.8	29.0	28.2	29.4	29.8	27.0	28.2	27.5	28.6	29.0
	6H	27.8	28.9	28.2	29.3	29.7	27.0	28.1	27.5	28.5	28.9
	8H	27.8	28.8	28.2	29.2	29.6	27.0	28.0	27.4	28.4	28.9
	12H	27.7	28.7	28.2	29.1	29.6	27.0	28.0	27.4	28.4	28.8
4H 2H	27.3	28.4	27.7	28.8	29.2	27.0	28.2	27.4	28.5	28.9	
	3H	27.9	28.9	28.3	29.3	29.7	27.4	28.4	27.9	28.8	29.2
	4H	28.0	28.9	28.5	29.3	29.8	27.5	28.4	28.0	28.8	29.3
	6H	28.0	28.8	28.5	29.2	29.7	27.5	28.3	28.0	28.7	29.2
	8H	28.0	28.7	28.5	29.1	29.6	27.5	28.2	28.0	28.6	29.1
	12H	27.9	28.6	28.4	29.1	29.6	27.4	28.1	27.9	28.6	29.1
8H 4H	27.9	28.6	28.4	29.1	29.6	27.5	28.2	28.0	28.7	29.2	
	6H	28.0	28.5	28.5	29.0	29.5	27.5	28.1	28.0	28.6	29.1
	8H	27.9	28.4	28.4	29.0	29.5	27.5	28.0	28.0	28.5	29.0
	12H	27.9	28.3	28.4	28.8	29.4	27.5	27.9	28.0	28.4	29.0
12H 4H	27.9	28.5	28.4	29.0	29.5	27.5	28.1	28.0	28.6	29.1	
	6H	27.9	28.4	28.4	28.9	29.5	27.5	28.0	28.0	28.5	29.1
	8H	27.9	28.3	28.4	28.8	29.4	27.5	27.9	28.0	28.4	29.0
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:230.59V I:0.3492A P:75.102W PF:0.9328 Freq:50.01Hz Lamp Flux:10743.7x1 lm		
NAME: HLK-80W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

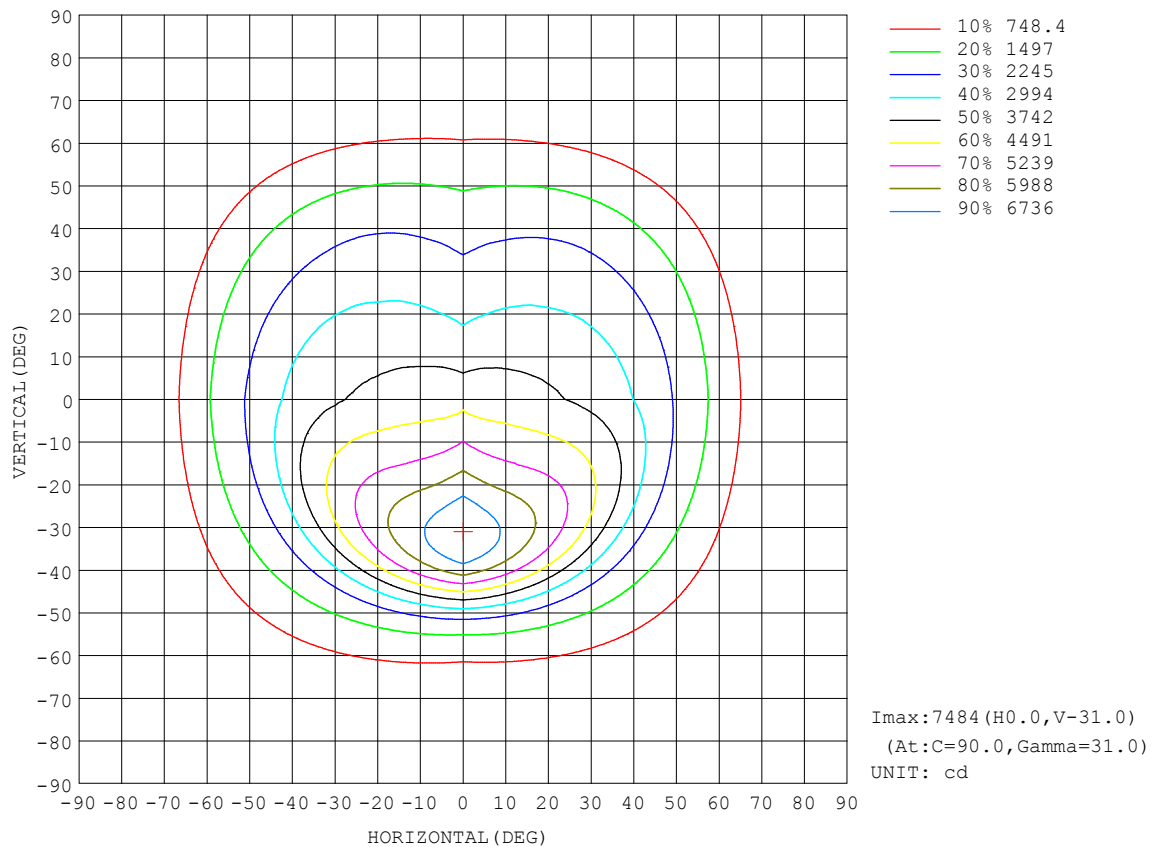
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	64	54	47	63	53	47	62	53	47	41
0.80	74	64	58	74	64	58	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	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:230.59V I:0.3492A P:75.102W PF:0.9328 Freq:50.01Hz Lamp Flux:10743.7x1 lm		
NAME: HLK-80W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

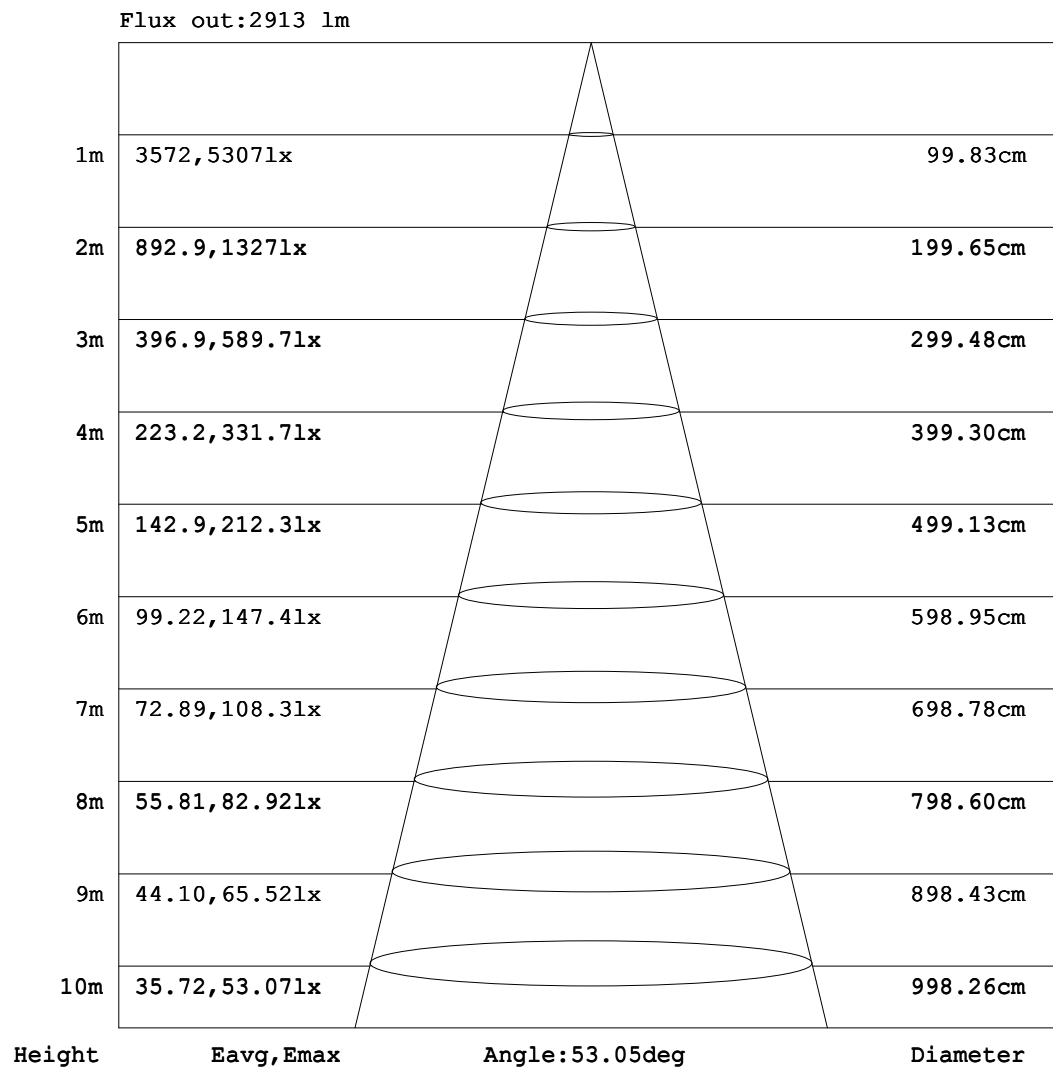


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-07-18

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:230.59V I:0.3492A P:75.102W PF:0.9328 Freq:50.01Hz Lamp Flux:10743.7x1 lm		
NAME: HLK-80W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:



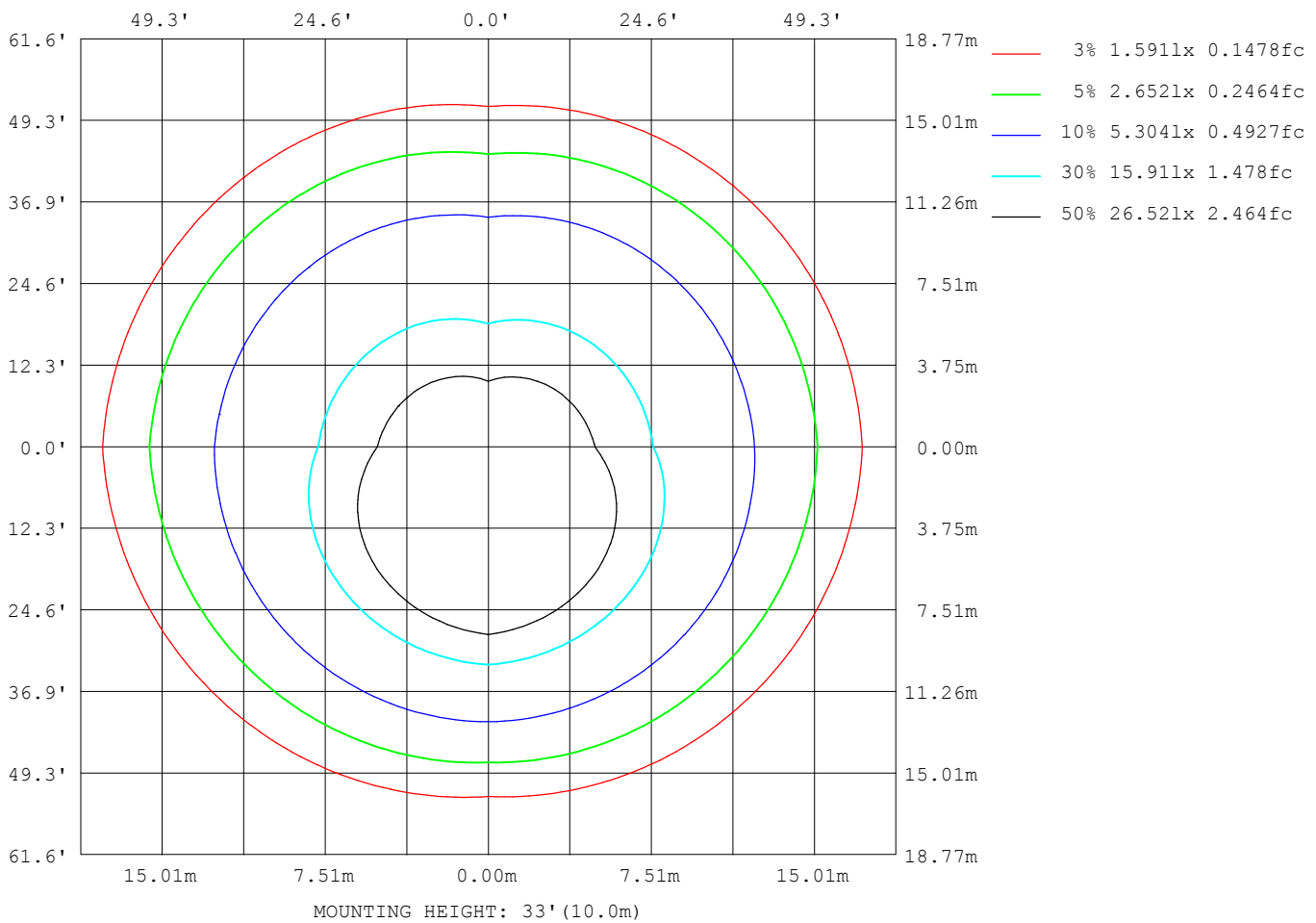
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:230.59V I:0.3492A P:75.102W PF:0.9328 Freq:50.01Hz Lamp Flux:10743.7x1 lm		
NAME: HLK-80W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-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:230.59V I:0.3492A P:75.102W PF:0.9328 Freq:50.01Hz Lamp Flux:10743.7x1 lm		
NAME: HLK-80W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

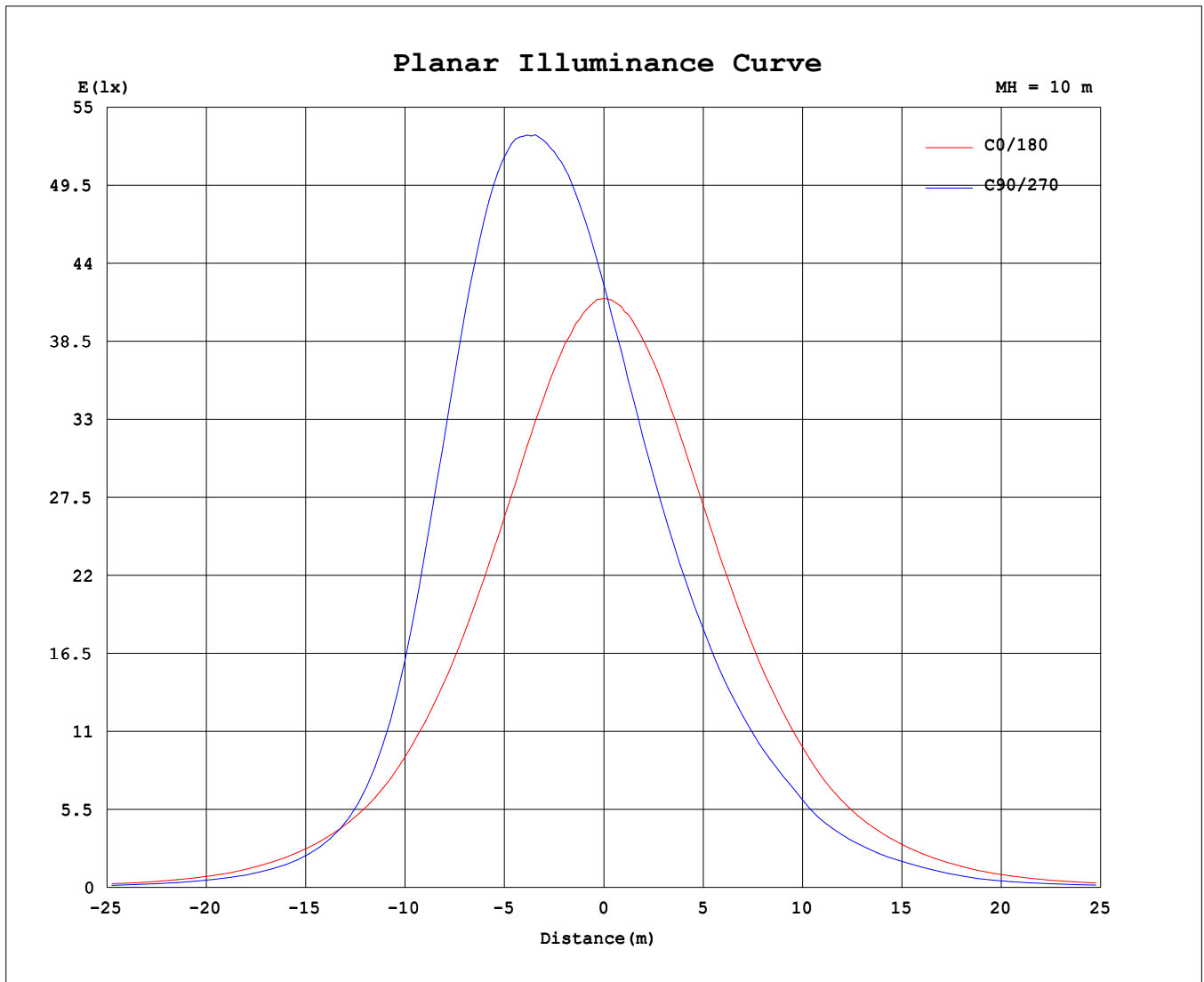
AvgL	cd/m2
L_0~180 (65) av	72458
L_0~180 (75) av	30692
L_0~180 (85) av	5875
L_90~270 (65) av	42457
L_90~270 (75) av	22765
L_90~270 (85) av	7238
L_45 (65) av	54056
L_45 (75) av	25960
L_45 (85) av	6853

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:230.59V I:0.3492A P:75.102W PF:0.9328 Freq:50.01Hz Lamp Flux:10743.7x1 lm		
NAME: HLK-80W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-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	4154	4246	4154	4246															
5	4120	4733	4143	3826															
10	4059	5255	4102	3446															
15	3980	5787	4045	3120															
20	3857	6386	3945	2847															
25	3704	7038	3816	2617															
30	3514	7454	3636	2391															
35	3270	7330	3420	2195															
40	2979	6371	3148	2003															
45	2610	4540	2802	1751															
50	2165	2691	2344	1430															
55	1730	1524	1911	1159															
60	1240	884	1415	814															
65	756	496	882	463															
70	418	262	497	294															
75	188	137	237	178															
80	64.0	53.7	89.8	85.0															
85	9.00	9.33	18.4	24.4															
90	1.85	1.35	1.46	1.57															
95	2.97	2.04	2.28	1.73															
100	4.65	3.00	3.46	3.02															
105	6.85	4.26	4.99	5.19															
110	9.43	5.81	6.79	8.39															
115	12.1	7.45	8.80	12.4															
120	14.7	9.04	11.0	16.7															
125	17.1	10.7	13.1	20.7															
130	18.9	12.1	15.3	24.0															
135	21.2	13.6	17.7	26.2															
140	23.1	15.2	20.0	27.7															
145	25.4	17.1	22.5	28.9															
150	27.6	19.5	24.8	30.7															
155	29.3	22.1	26.8	32.8															
160	30.7	24.7	28.7	35.3															
165	31.7	27.5	30.3	37.7															
170	32.4	30.3	31.6	37.6															
175	32.8	33.2	32.3	37.4															
180	32.6	35.5	32.5	35.6															

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: