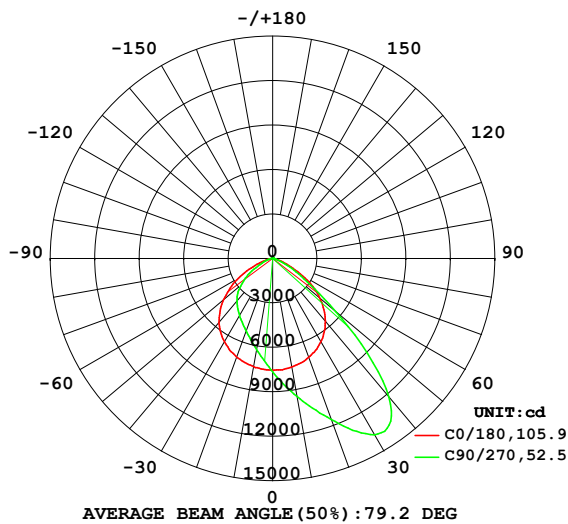


LUMINAIRE PHOTOMETRIC TEST REPORT

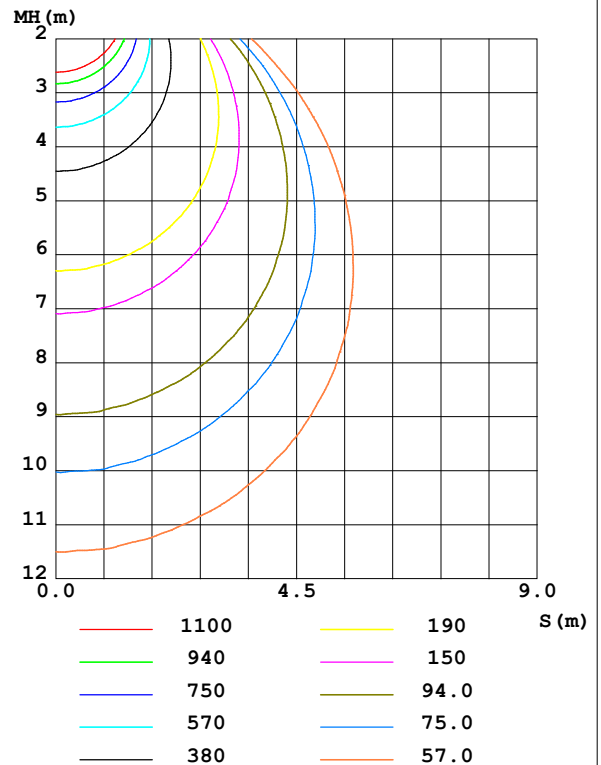
Test:U:230.58V I:0.6090A P:138.71W PF:0.9877 Freq:50.01Hz Lamp Flux:20098x1 lm		
NAME: HLK-150W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 144.90 lm/W
MODEL	SMD3030	I _{max} (cd)	13900	S/MH (C0/180)	1.28	
NOMINAL POWER(W)	150	LOR (%)	100.0	S/MH (C90/270)	0.87	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	20098	η UP,DN (C0-180)	0.4,59.4	
NOMINAL FLUX(lm)	20098	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.4,39.8	
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	743.9	943.9	741.9	624.7					0- 10	727.6	727.6	3.62, 3.62
20	711.8	1156	710.2	522.4					10- 20	2181	2908	14.5, 14.5
30	651.2	1374	650.9	446.9					20- 30	3614	6523	32.5, 32.5
40	554.2	1221	564.5	374.7					30- 40	4658	11181	55.6, 55.6
50	416.7	557.5	432.2	275.0					40- 50	4269	15450	76.9, 76.9
60	233.4	183.3	268.0	145.8					50- 60	2740	18190	90.5, 90.5
70	74.95	54.55	101.7	54.74					60- 70	1289	19479	96.9, 96.9
80	11.67	12.30	19.43	15.78					70- 80	408.2	19887	99, 99
90	0.3651	0.2446	0.2774	0.2863					80- 90	50.27	19938	99.2, 99.2
100	0.9056	0.5556	0.6667	0.6529					90-100	4.986	19943	99.2, 99.2
110	1.762	1.076	1.294	1.728					100-110	11.09	19954	99.3, 99.3
120	2.677	1.686	2.045	3.280					110-120	19.19	19973	99.4, 99.4
130	3.417	2.242	2.848	4.543					120-130	25.59	19999	99.5, 99.5
140	4.135	2.788	3.696	5.137					130-140	27.86	20026	99.6, 99.6
150	4.861	3.513	4.519	5.660					140-150	26.80	20053	99.8, 99.8
160	5.384	4.389	5.176	6.447					150-160	23.06	20076	99.9, 99.9
170	5.709	5.344	5.641	6.815					160-170	15.94	20092	100, 100
180	5.785	6.370	5.786	6.361					170-180	5.712	20098	100, 100
DEG	LUMINOUS INTENSITY:X10cd									UNIT: lm		

Conical surface Flux(90deg): 13478 lm

%lum = 67.1%

%lamp = 67.1%

Conical surface Flux(120deg): 18190 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:230.58V I:0.6090A P:138.71W PF:0.9877 Freq:50.01Hz

Lamp Flux:20098x1 lm

NAME: HLK-150W

TYPE: Glass-50*100D

WEIGHT:

SPEC.: 4000K-RA80

DIM.:

SERIAL No.:

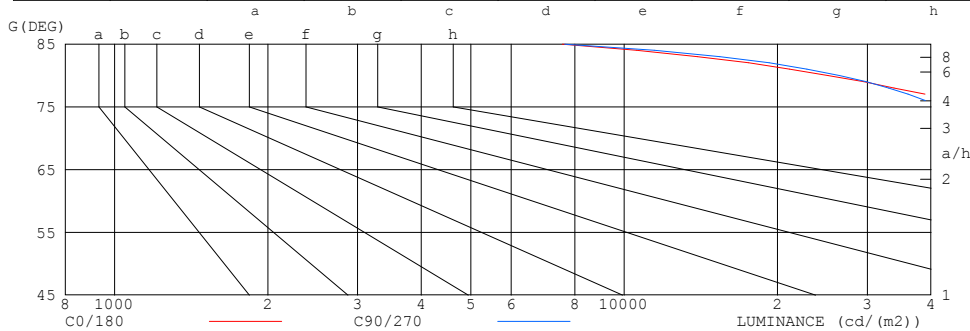
MFR.:

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	7570	7641
80	25134	26488
75	48608	41934
70	81948	59640
65	123140	91228
60	174594	137104
55	216470	206113
50	242402	324358
45	259490	478810

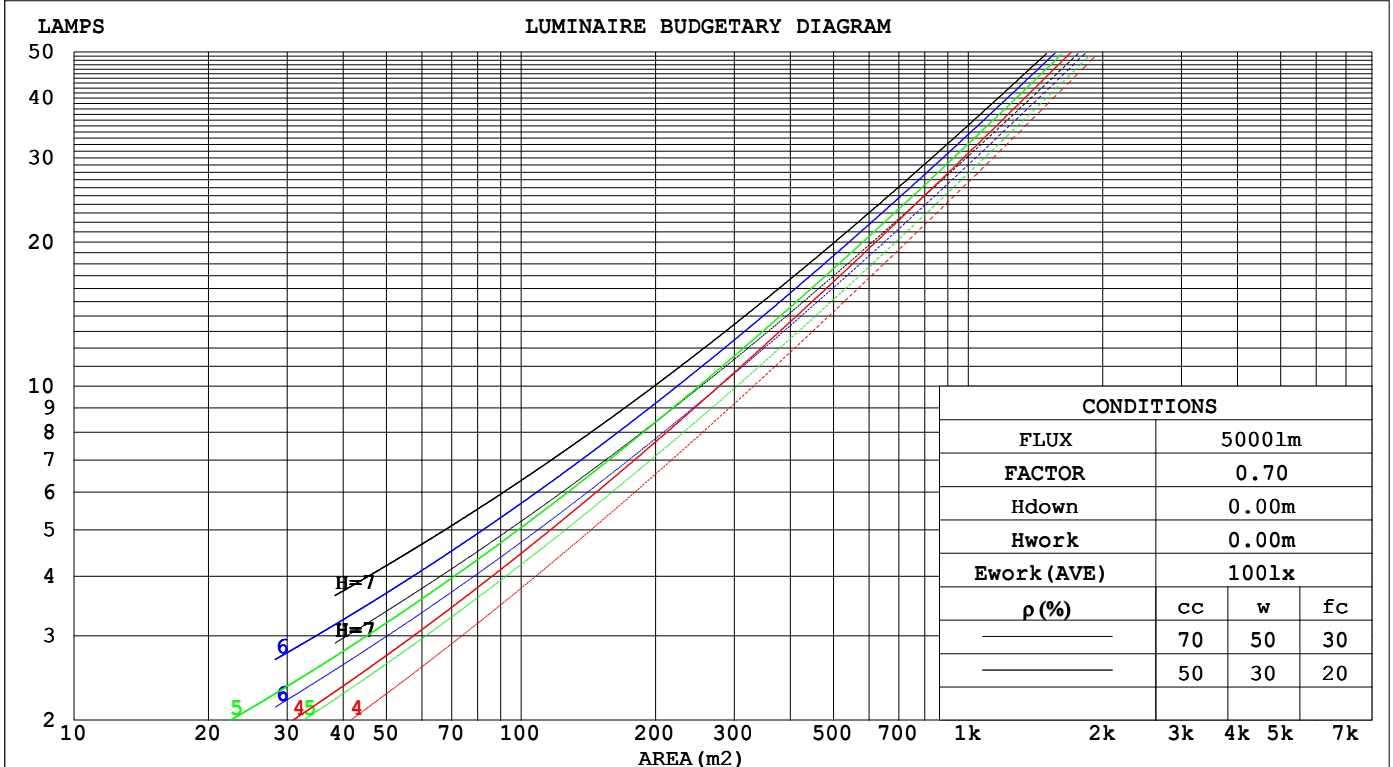
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-07-18

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:230.58V I:0.6090A P:138.71W PF:0.9877 Freq:50.01Hz Lamp Flux:20098x1 lm		
NAME: HLK-150W	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:230.58V I:0.6090A P:138.71W PF:0.9877 Freq:50.01Hz Lamp Flux:20098x1 lm					
NAME: HLK-150W			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	
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	.218	.125	.040	.206	.119	.039		
2.0	.245	.134	.041	.239	.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	.102	.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	.181	.090	.026	.174	.088	.025	.168	.086	.025	.162	.084	.025		
8.0	.174	.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	.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:230.58V I:0.6090A P:138.71W PF:0.9877 Freq:50.01Hz											
Lamp Flux:20098x1 lm											
NAME: HLK-150W					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		29.7	31.1	30.0	31.5	31.8	29.4	30.8	29.7	31.2	31.5
3H		30.1	31.4	30.5	31.8	32.2	29.7	31.0	30.1	31.4	31.8
4H		30.2	31.4	30.6	31.8	32.2	29.8	31.0	30.2	31.4	31.8
6H		30.2	31.3	30.6	31.7	32.1	29.8	30.9	30.2	31.3	31.7
8H		30.2	31.2	30.6	31.6	32.0	29.8	30.8	30.2	31.2	31.7
12H		30.1	31.1	30.6	31.5	32.0	29.7	30.7	30.2	31.1	31.6
4H 2H		29.7	31.0	30.2	31.3	31.7	29.7	30.9	30.1	31.3	31.7
3H		30.3	31.3	30.7	31.7	32.1	30.2	31.2	30.6	31.6	32.0
4H		30.4	31.3	30.8	31.7	32.2	30.3	31.2	30.7	31.6	32.1
6H		30.4	31.2	30.9	31.6	32.1	30.3	31.1	30.8	31.5	32.0
8H		30.4	31.1	30.8	31.5	32.0	30.3	31.0	30.8	31.5	31.9
12H		30.3	31.0	30.8	31.5	32.0	30.3	30.9	30.8	31.4	31.9
8H 4H		30.3	31.1	30.8	31.5	32.0	30.3	31.0	30.8	31.5	32.0
6H		30.3	30.9	30.9	31.4	31.9	30.4	30.9	30.9	31.4	31.9
8H		30.3	30.8	30.8	31.4	31.9	30.3	30.9	30.9	31.4	31.9
12H		30.3	30.7	30.8	31.2	31.8	30.3	30.8	30.8	31.3	31.9
12H 4H		30.3	30.9	30.8	31.4	31.9	30.3	30.9	30.8	31.4	31.9
6H		30.3	30.8	30.8	31.3	31.9	30.3	30.9	30.9	31.3	31.9
8H		30.3	30.7	30.8	31.3	31.8	30.3	30.8	30.8	31.3	31.9
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:230.58V I:0.6090A P:138.71W PF:0.9877 Freq:50.01Hz Lamp Flux:20098x1 lm		
NAME: HLK-150W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

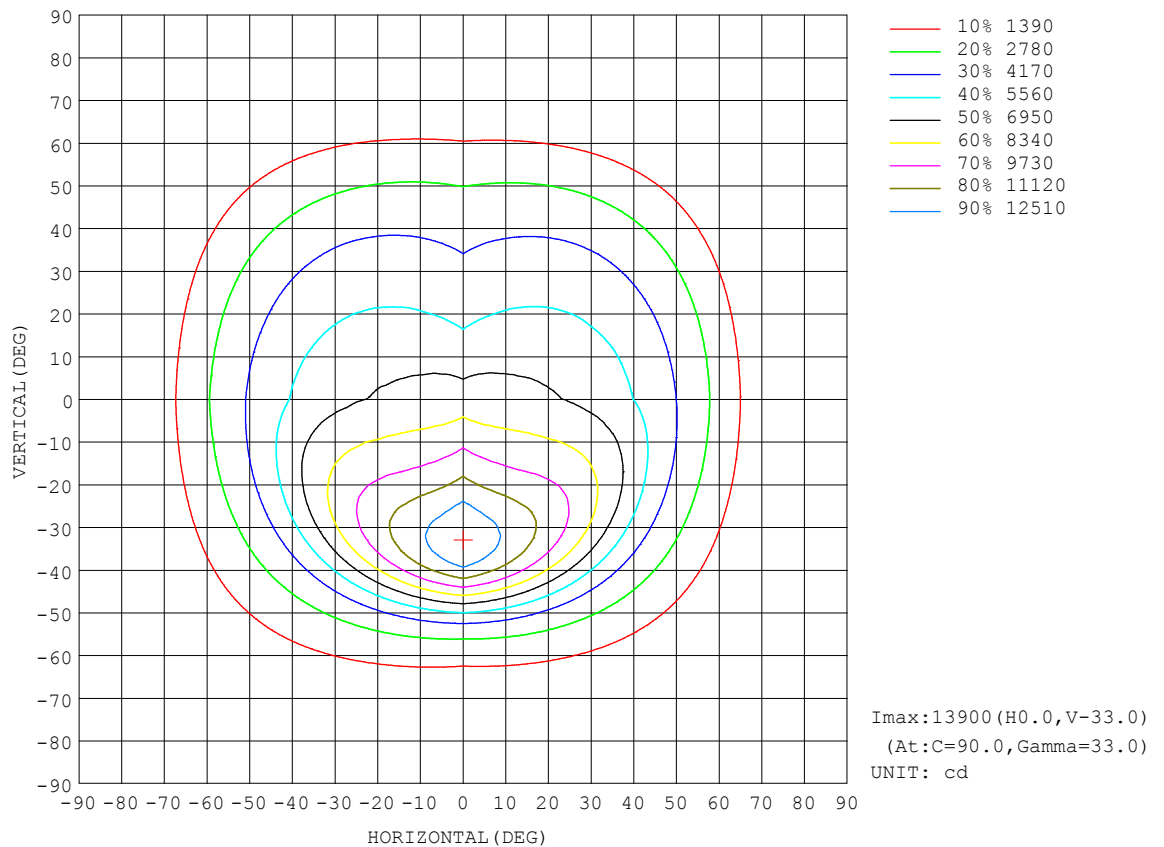
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	63	53	46	63	53	46	61	52	46	40
0.80	74	64	57	73	63	57	71	62	57	50
1.00	82	73	67	81	72	66	79	73	66	60
1.25	89	80	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	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:230.58V I:0.6090A P:138.71W PF:0.9877 Freq:50.01Hz Lamp Flux:20098x1 lm		
NAME: HLK-150W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

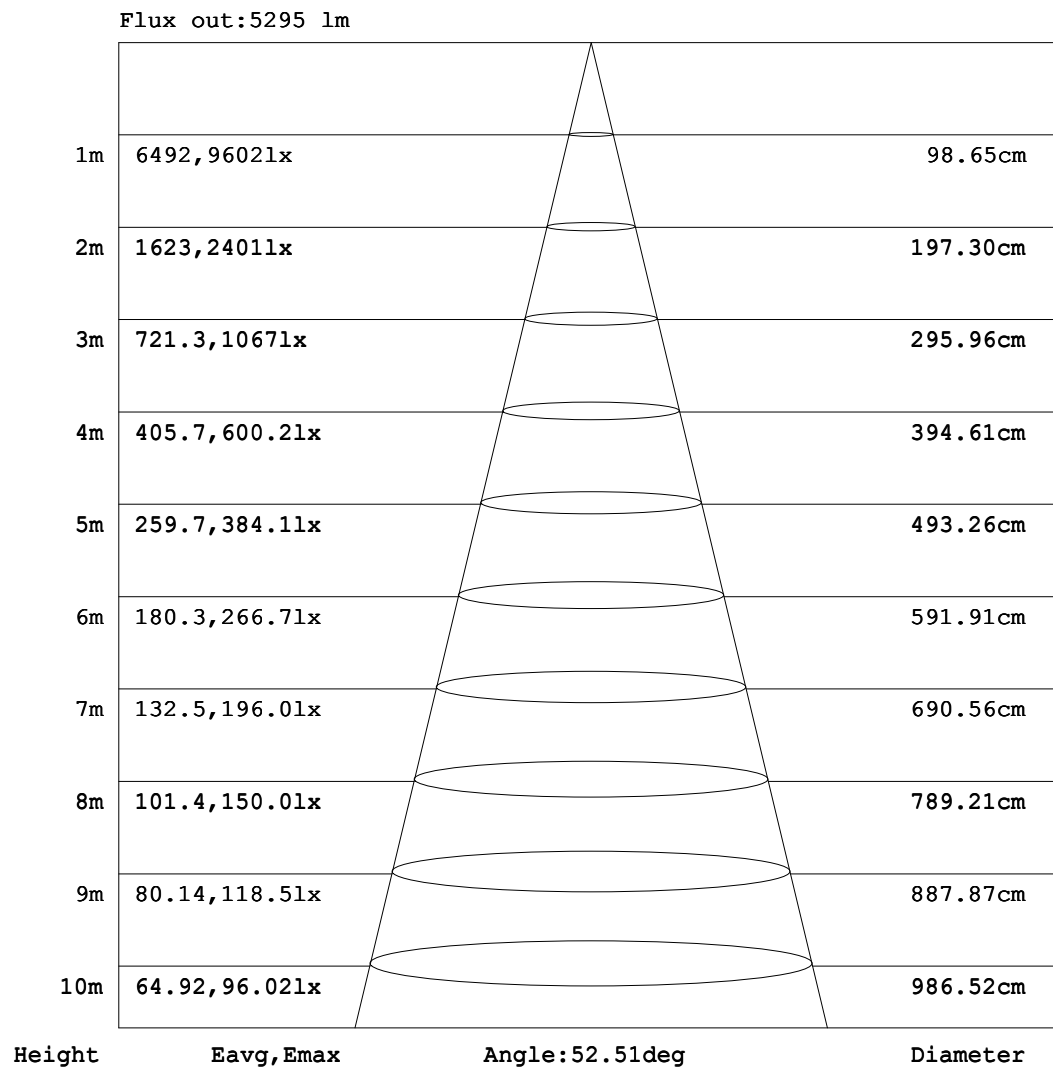


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-07-18

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:230.58V I:0.6090A P:138.71W PF:0.9877 Freq:50.01Hz Lamp Flux:20098x1 lm		
NAME: HLK-150W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:



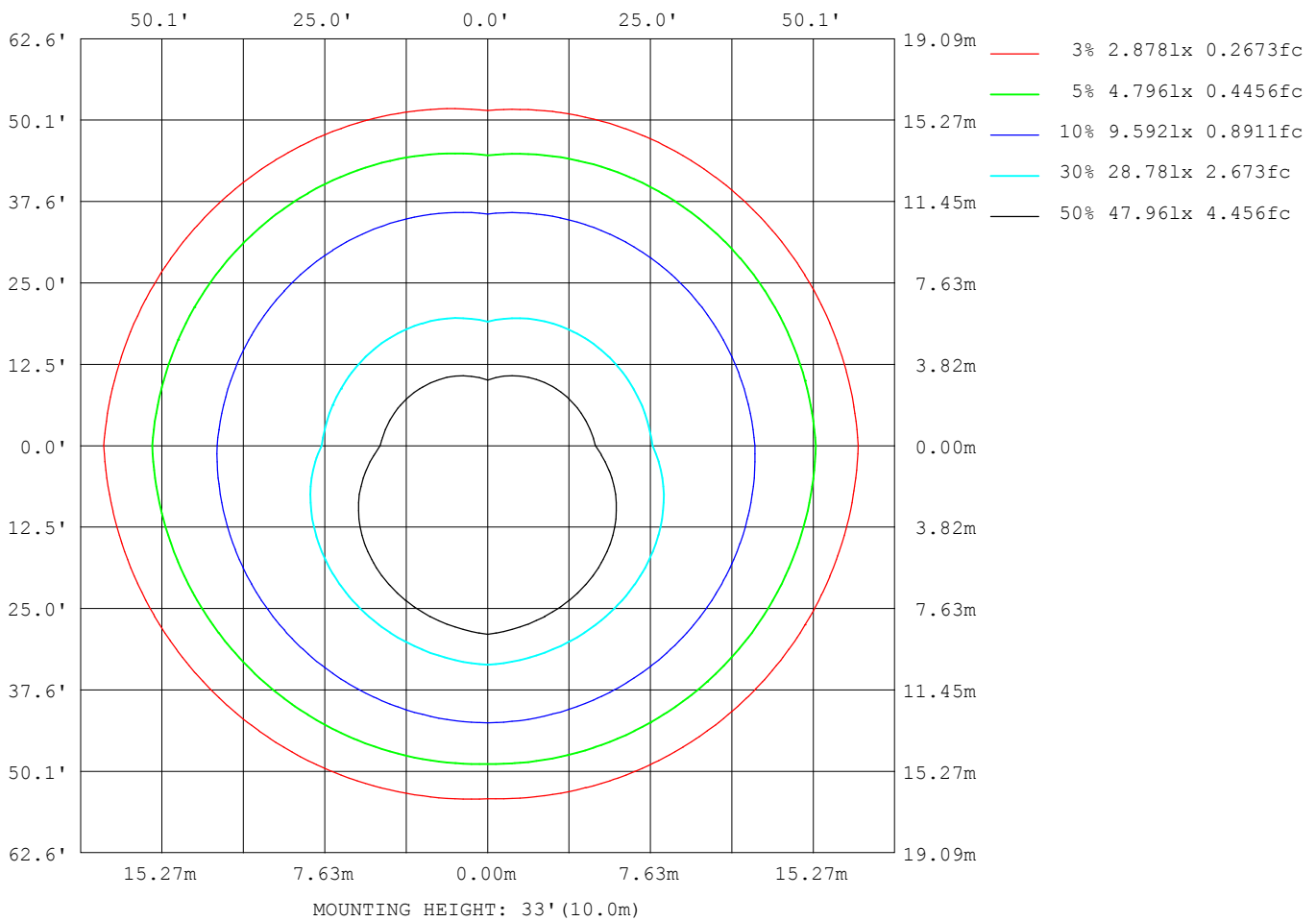
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:230.58V I:0.6090A P:138.71W PF:0.9877 Freq:50.01Hz Lamp Flux:20098x1 lm		
NAME: HLK-150W	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:230.58V I:0.6090A P:138.71W PF:0.9877 Freq:50.01Hz Lamp Flux:20098x1 lm		
NAME: HLK-150W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-RA80	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.221m*0.121m	Shielding Angle:

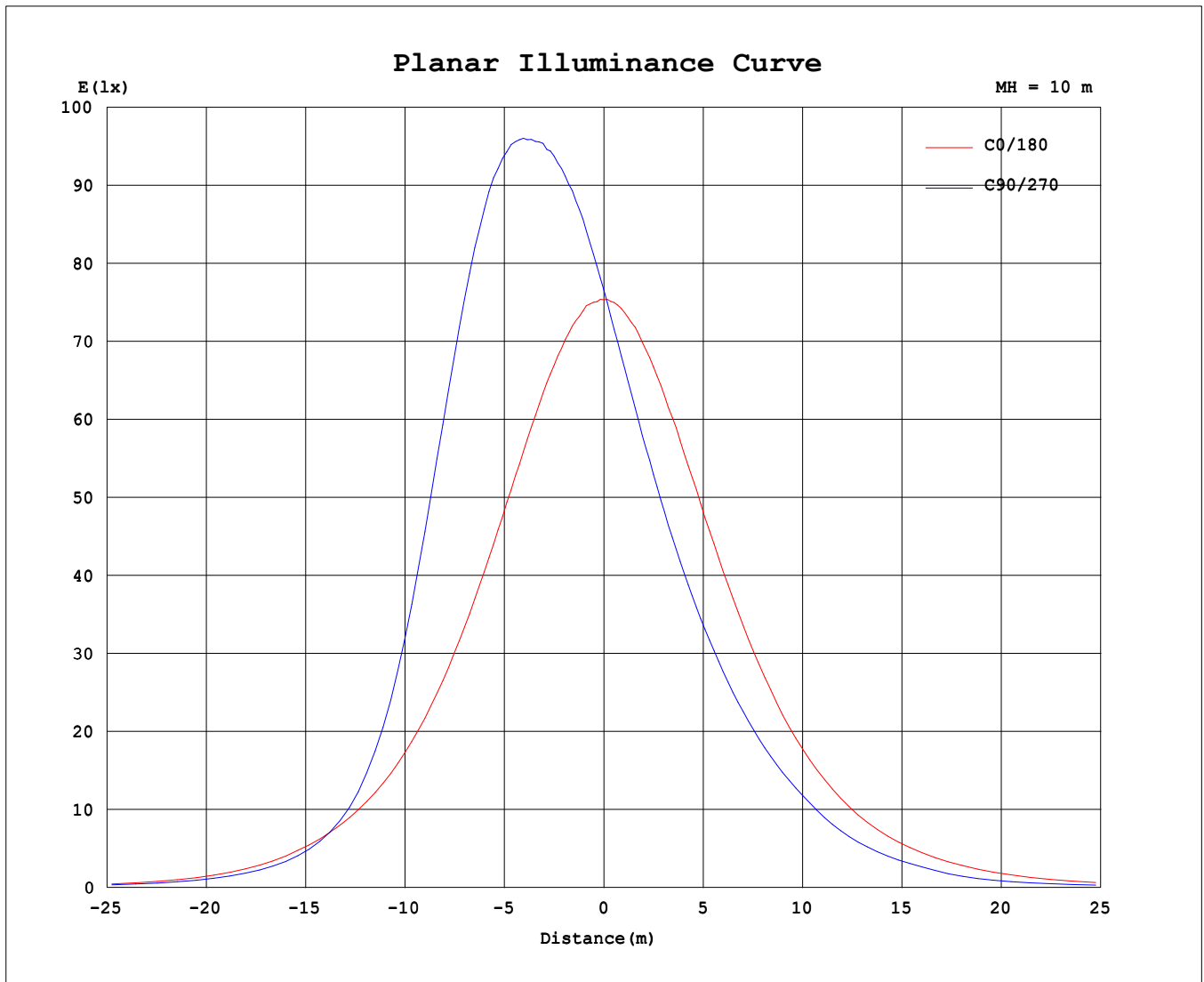
AvgL	cd/m2
L_0~180 (65) av	140299
L_0~180 (75) av	60897
L_0~180 (85) av	12942
L_90~270 (65) av	83443
L_90~270 (75) av	45099
L_90~270 (85) av	13043
L_45 (65) av	105836
L_45 (75) av	51791
L_45 (85) av	13341

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:230.58V I:0.6090A P:138.71W PF:0.9877 Freq:50.01Hz Lamp Flux:20098x1 lm		
NAME: HLK-150W	TYPE: Glass-50*100D	WEIGHT:
SPEC.: 4000K-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	754	765	754	765														
5	755	852	751	689														
10	744	944	742	625														
15	731	1047	727	570														
20	712	1156	710	522														
25	685	1279	685	482														
30	651	1374	651	447														
35	607	1372	612	411														
40	554	1221	564	375														
45	491	905	503	335														
50	417	558	432	275														
55	332	316	352	216														
60	233	183	268	146														
65	139	103	178	85.5														
70	74.9	54.5	102	54.7														
75	33.6	29.0	50.7	33.4														
80	11.7	12.3	19.4	15.8														
85	1.76	1.78	4.27	4.30														
90	0.37	0.24	0.28	0.29														
95	0.58	0.37	0.43	0.38														
100	0.91	0.56	0.67	0.65														
105	1.30	0.79	0.95	1.10														
110	1.76	1.08	1.29	1.73														
115	2.23	1.38	1.66	2.48														
120	2.68	1.69	2.04	3.28														
125	3.08	1.97	2.44	3.99														
130	3.42	2.24	2.85	4.54														
135	3.78	2.52	3.26	4.90														
140	4.14	2.79	3.70	5.14														
145	4.50	3.11	4.12	5.37														
150	4.86	3.51	4.52	5.66														
155	5.17	3.95	4.88	6.05														
160	5.38	4.39	5.18	6.45														
165	5.56	4.86	5.44	6.85														
170	5.71	5.34	5.64	6.82														
175	5.78	5.88	5.76	6.73														
180	5.79	6.37	5.79	6.36														

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: