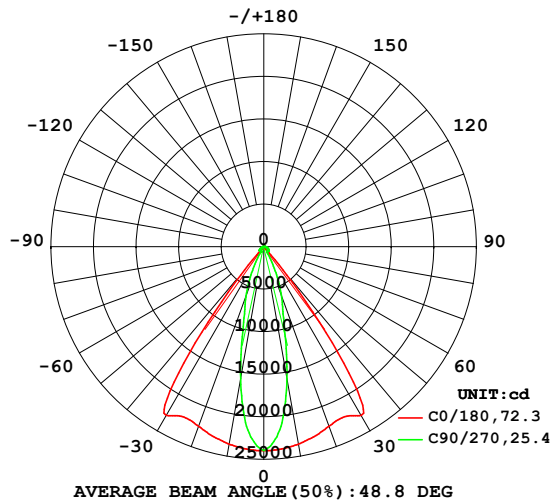


LUMINAIRE PHOTOMETRIC TEST REPORT

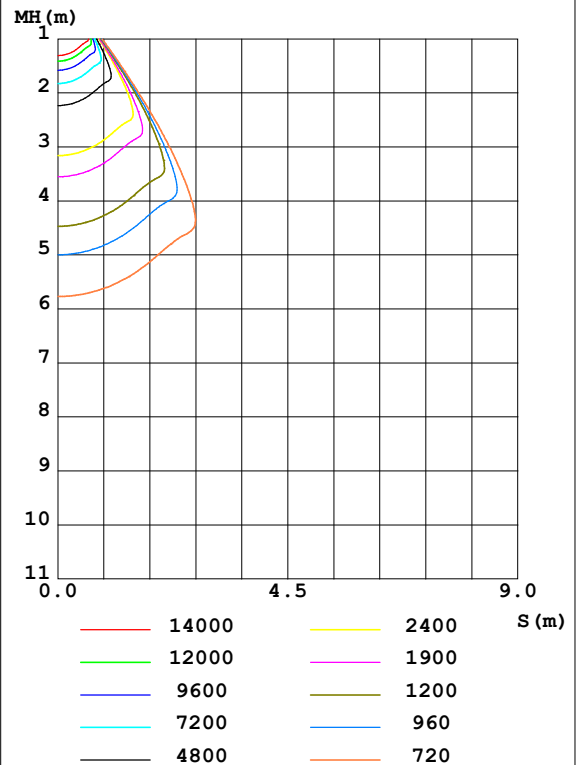
Test:U:230.0V I:0.5241A P:119.4W PF:0.9909 Lamp Flux:14399x1 lm		
NAME: LHB01-120	TYPE:120W	WEIGHT:
SPEC.:5000K Ra80 3070DEG L02801	DIM.: 0.948*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.92*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 120.55 lm/W			
MODEL	LHB01-120	Imax(cd)	23977	S/MH(C0/180)	1.04
NOMINAL POWER(W)	120	LOR(%)	100.0	S/MH(C90/270)	0.43
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	14399	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	14399	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.00

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-04-07

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:9.500m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
5	2387	2258	2160	2258	2387	2259	2160	2259	0- 5	555.2	555.2	3.86,3.86
10	2356	1921	1576	1921	2356	1920	1576	1920	5- 10	1501	2057	14.3,14.3
15	2308	1420	921.0	1420	2308	1422	921.0	1422	10- 15	2031	4087	28.4,28.4
20	2247	904.6	609.1	904.6	2247	905.5	609.1	905.5	15- 20	2182	6269	43.5,43.5
25	2214	631.0	339.9	631.0	2214	631.7	339.9	631.7	20- 25	2177	8446	58.7,58.7
30	2290	431.3	70.68	431.3	2290	432.4	70.68	432.4	25- 30	2043	10489	72.8,72.8
35	1527	236.7	70.65	236.7	1527	238.8	70.65	238.8	30- 35	1748	12237	85,85
40	281.0	69.93	70.61	69.93	281.0	71.74	70.61	71.74	35- 40	951.4	13188	91.6,91.6
45	40.86	56.64	70.57	56.64	40.86	55.83	70.57	55.83	40- 45	297.8	13486	93.7,93.7
50	32.64	41.28	70.54	41.28	32.64	40.16	70.54	40.16	45- 50	181.7	13668	94.9,94.9
55	27.26	31.26	59.77	31.26	27.26	31.18	59.77	31.18	50- 55	161.1	13829	96,96
60	23.36	26.79	49.01	26.79	23.36	26.76	49.01	26.76	55- 60	143.1	13972	97,97
65	19.95	21.60	38.24	21.60	19.95	21.63	38.24	21.63	60- 65	126.4	14098	97.9,97.9
70	16.04	16.63	27.48	16.63	16.04	16.66	27.48	16.66	65- 70	106.8	14205	98.7,98.7
75	11.71	11.64	21.53	11.64	11.71	11.66	21.53	11.66	70- 75	83.81	14289	99.2,99.2
80	5.537	7.836	15.59	7.836	5.537	7.847	15.59	7.847	75- 80	59.27	14348	99.6,99.6
85	1.084	4.221	9.645	4.221	1.084	4.198	9.645	4.198	80- 85	36.15	14384	99.9,99.9
90	0.1159	0.6190	3.701	0.6190	0.1159	0.5459	3.701	0.5459	85- 90	14.66	14399	100,100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:×10cd									UNIT:lm		

Conical surface Flux(90deg): 13486 lm

%lum = 93.7%

%lamp = 93.7%

Conical surface Flux(120deg): 13972 lm

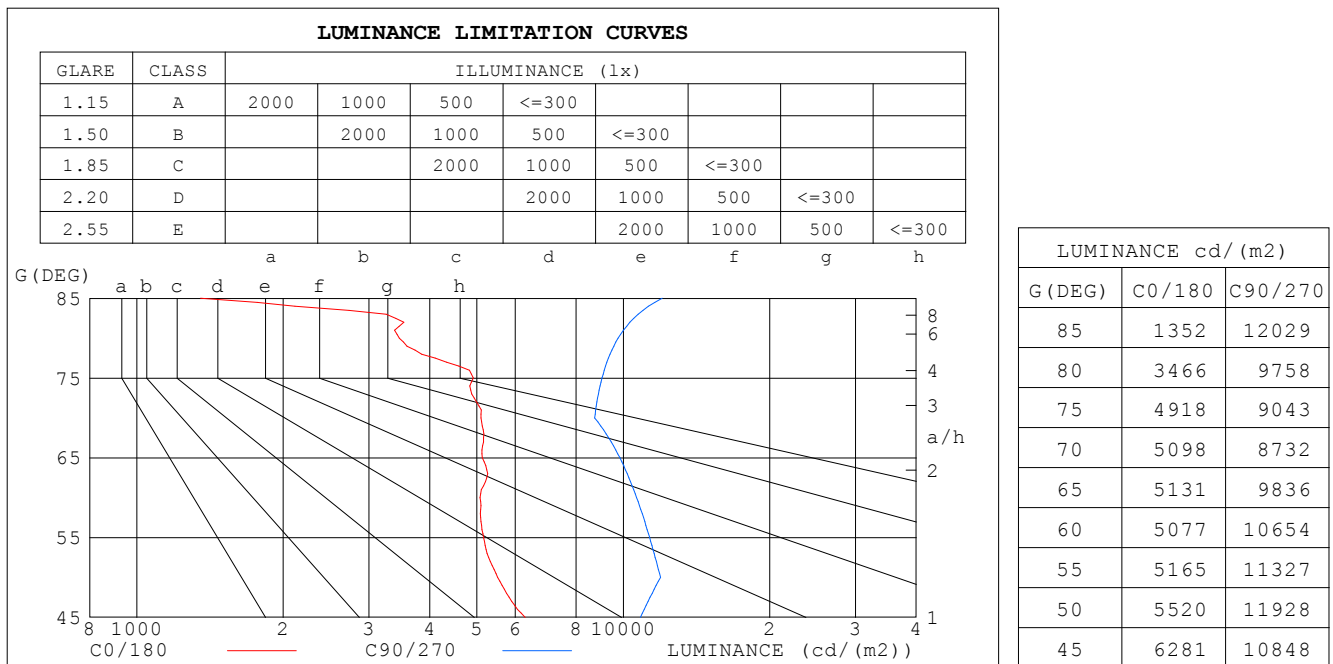
%lum = 97.0%

%lamp = 97.0%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-04-07

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
 Humidity:65.0%
 Test Distance:9.500m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

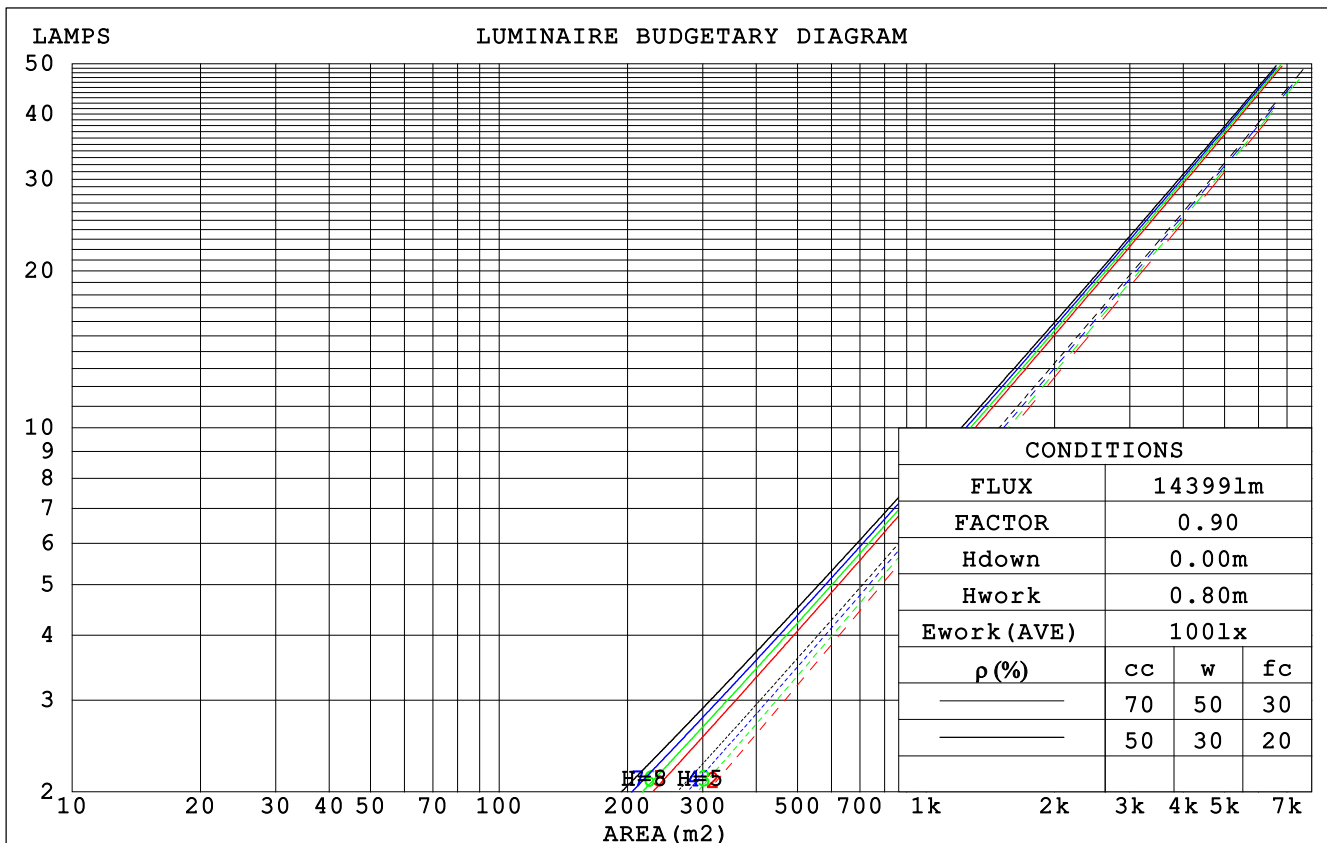


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-04-07

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 9.500m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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			Coefficients of Utilization(CU)												
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1.0	1.10	1.08	1.06	1.08	1.06	1.04	1.04	1.02	1.01	1.00	.99	.98	.97	.96	.95	.93
2.0	1.03	.99	.95	1.01	.97	.94	.98	.95	.92	.95	.92	.90	.92	.90	.88	.86
3.0	.96	.91	.87	.94	.90	.86	.92	.88	.85	.89	.86	.83	.87	.84	.82	.81
4.0	.90	.84	.80	.89	.84	.80	.87	.82	.79	.85	.81	.78	.83	.79	.77	.75
5.0	.84	.79	.74	.83	.78	.74	.82	.77	.73	.80	.76	.73	.78	.75	.72	.71
6.0	.79	.74	.69	.79	.73	.69	.77	.72	.69	.76	.72	.68	.75	.71	.68	.66
7.0	.75	.69	.65	.74	.69	.65	.73	.68	.65	.72	.68	.64	.71	.67	.64	.62
8.0	.71	.65	.61	.71	.65	.61	.69	.64	.61	.68	.64	.61	.67	.63	.60	.59
9.0	.67	.62	.58	.67	.61	.58	.66	.61	.58	.65	.61	.57	.64	.60	.57	.56
10.0	.64	.59	.55	.64	.58	.55	.63	.58	.55	.62	.58	.54	.61	.57	.54	.53



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-04-07

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
 Humidity: 65.0%
 Test Distance: 9.500m [K=1.0000]
 Remarks:

WEC AND CCEC

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	.184	.105	.033	.177	.101	.032	.165	.095	.030	.153	.088	.028	.142	.083	.027	
2.0	.174	.095	.029	.168	.093	.029	.158	.088	.027	.148	.083	.026	.139	.079	.025	
3.0	.164	.087	.026	.159	.085	.026	.150	.081	.025	.142	.078	.024	.134	.074	.023	
4.0	.155	.081	.024	.151	.079	.023	.143	.076	.023	.136	.073	.022	.129	.070	.021	
5.0	.147	.075	.022	.143	.074	.021	.137	.071	.021	.130	.069	.020	.124	.066	.020	
6.0	.139	.070	.020	.136	.069	.020	.130	.067	.019	.125	.065	.019	.120	.063	.019	
7.0	.133	.066	.019	.130	.065	.018	.125	.063	.018	.120	.061	.018	.115	.060	.018	
8.0	.127	.062	.017	.124	.061	.017	.119	.060	.017	.115	.058	.017	.111	.057	.017	
9.0	.121	.059	.016	.119	.058	.016	.115	.057	.016	.111	.055	.016	.107	.054	.016	
10.0	.116	.056	.015	.114	.055	.015	.110	.054	.015	.106	.053	.015	.103	.052	.015	

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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.172	.157	.144	.147	.135	.124	.100	.093	.086	.058	.054	.050	.019	.017	.016	
2.0	.157	.132	.112	.134	.114	.097	.092	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.144	.114	.089	.124	.098	.077	.085	.068	.054	.049	.040	.032	.016	.013	.010	
4.0	.134	.099	.072	.115	.085	.063	.079	.060	.044	.046	.035	.026	.015	.011	.009	
5.0	.125	.087	.060	.107	.076	.052	.074	.053	.037	.043	.031	.022	.014	.010	.007	
6.0	.117	.078	.050	.101	.067	.043	.069	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.110	.070	.042	.095	.061	.037	.066	.043	.026	.038	.025	.016	.012	.008	.005	
8.0	.105	.064	.036	.090	.056	.032	.062	.039	.022	.036	.023	.013	.012	.008	.004	
9.0	.099	.059	.031	.086	.051	.027	.059	.036	.019	.035	.021	.012	.011	.007	.004	
10.0	.095	.054	.028	.082	.047	.024	.057	.033	.017	.033	.020	.010	.011	.006	.003	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-04-07

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:9.500m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

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	22.9	23.9	23.2	24.1	24.2	14.0	14.9	14.2	15.1	15.2
3H	22.8	23.7	23.1	23.9	24.1	15.7	16.5	15.9	16.7	16.9
4H	22.8	23.6	23.1	23.8	24.1	16.5	17.3	16.8	17.5	17.7
6H	22.7	23.5	23.0	23.8	24.0	17.3	18.1	17.6	18.3	18.6
8H	22.7	23.4	23.0	23.7	24.0	17.7	18.4	18.0	18.7	18.9
12H	22.7	23.4	23.0	23.6	23.9	18.1	18.8	18.4	19.0	19.3
4H 2H	22.7	23.6	23.0	23.8	24.0	14.2	15.1	14.5	15.3	15.5
3H	22.7	23.4	23.0	23.7	23.9	16.1	16.8	16.4	17.0	17.3
4H	22.7	23.3	23.0	23.6	23.9	17.0	17.6	17.3	17.9	18.2
6H	22.6	23.2	23.0	23.5	23.9	17.9	18.5	18.3	18.8	19.2
8H	22.6	23.1	23.0	23.5	23.8	18.3	18.9	18.7	19.2	19.6
12H	22.6	23.0	23.0	23.4	23.8	18.8	19.3	19.2	19.7	20.1
8H 4H	22.6	23.1	23.0	23.5	23.8	17.1	17.6	17.5	18.0	18.4
6H	22.6	23.0	23.0	23.4	23.8	18.1	18.6	18.6	19.0	19.4
8H	22.6	22.9	23.0	23.4	23.8	18.6	19.0	19.1	19.4	19.9
12H	22.5	22.9	23.0	23.3	23.8	19.2	19.5	19.6	20.0	20.4
12H 4H	22.5	23.0	22.9	23.4	23.8	17.1	17.6	17.5	18.0	18.4
6H	22.5	22.9	23.0	23.3	23.8	18.1	18.5	18.6	19.0	19.4
8H	22.5	22.9	23.0	23.3	23.8	18.7	19.0	19.2	19.5	19.9
Variations with the observer position at spacings:										
S = 1.0H	+ 5.3 / - 5.7					+ 0.1 / - 0.2				
1.5H	+ 8.0 / - 5.6					+ 0.6 / - 0.3				
2.0H	+ 0.2 / - 0.1					+ 1.1 / - 1.0				

CIE Pub.117 Corrected 14399 lm Total Lamp Luminous Flux.(8log(F/F0) = 9.3)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-04-07

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:9.500m [K=1.0000]
Remarks:

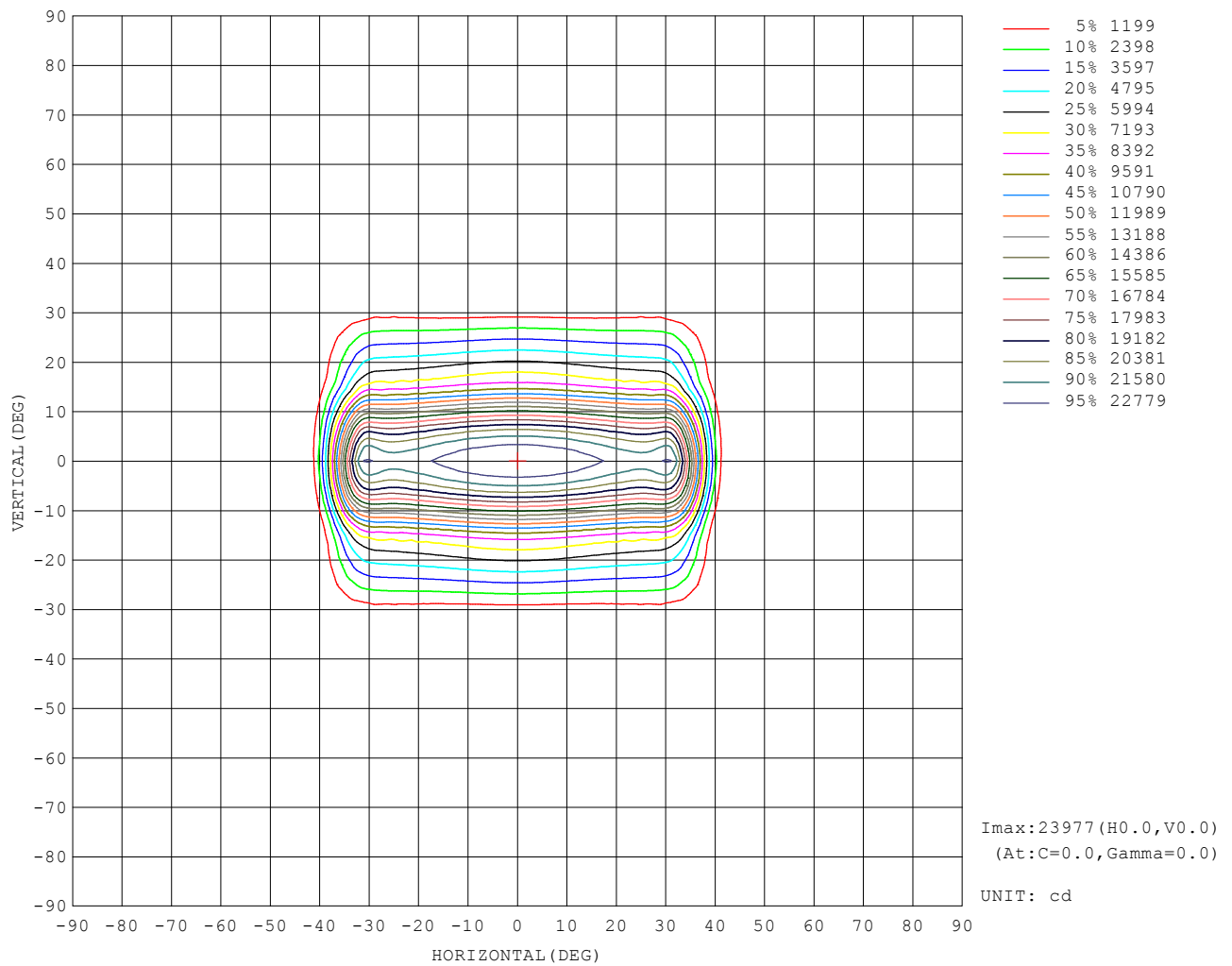
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	86	80	76	86	80	76	85	79	76	72
0.80	94	88	84	93	87	84	92	87	83	80
1.00	98	92	89	97	92	88	96	92	88	84
1.25	102	97	93	101	96	93	99	95	92	88
1.50	105	100	96	104	99	96	101	98	95	90
2.00	108	103	100	106	102	99	104	100	98	92
2.50	110	106	102	108	104	101	105	102	100	94
3.00	111	108	105	109	106	104	106	103	101	95
4.00	113	110	108	111	109	107	108	106	104	97
5.00	115	112	110	113	110	109	109	107	106	98
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-04-07

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 9.500m [K=1.0000]
Remarks:

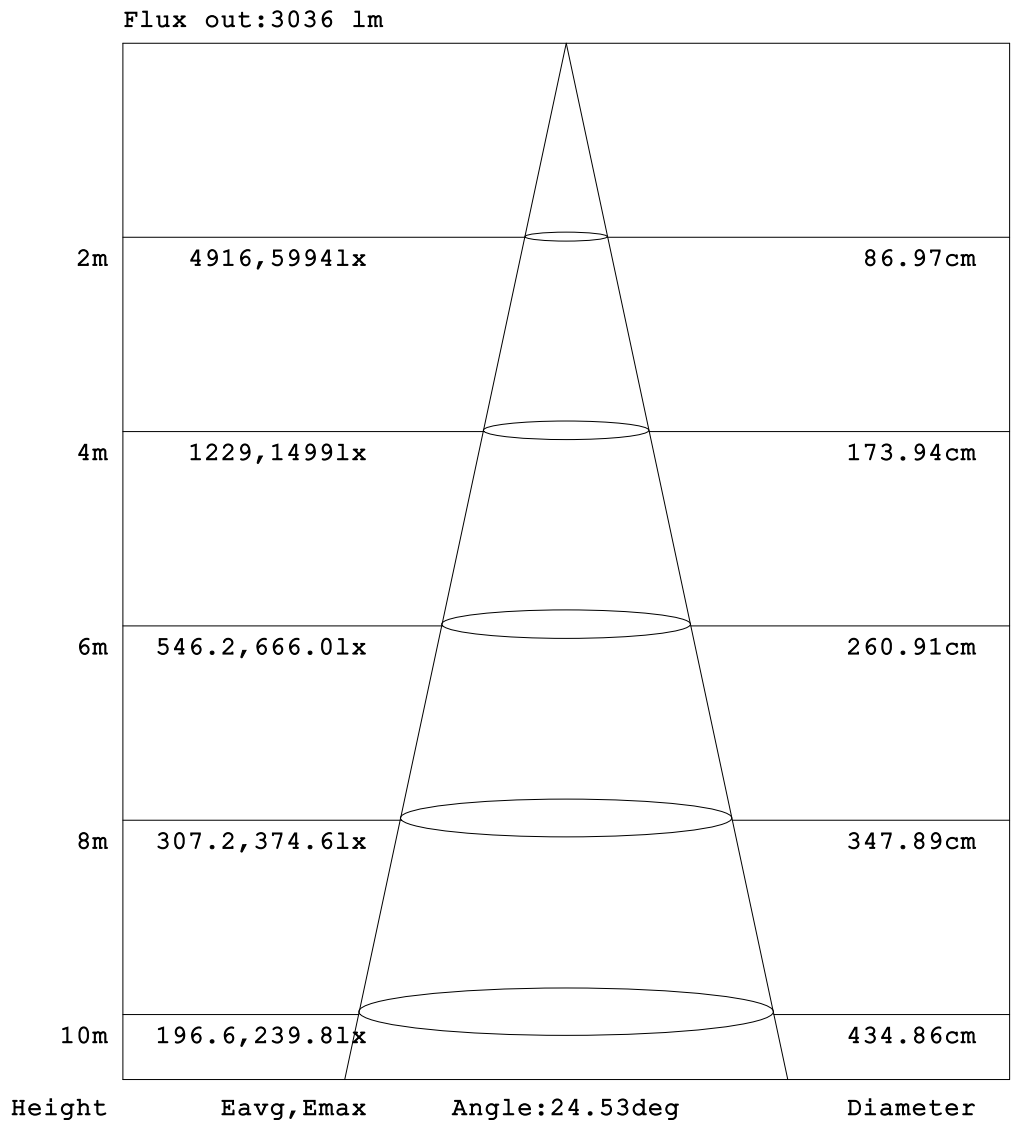
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-04-07

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 9.500m [K=1.0000]
Remarks:

AAI Figure

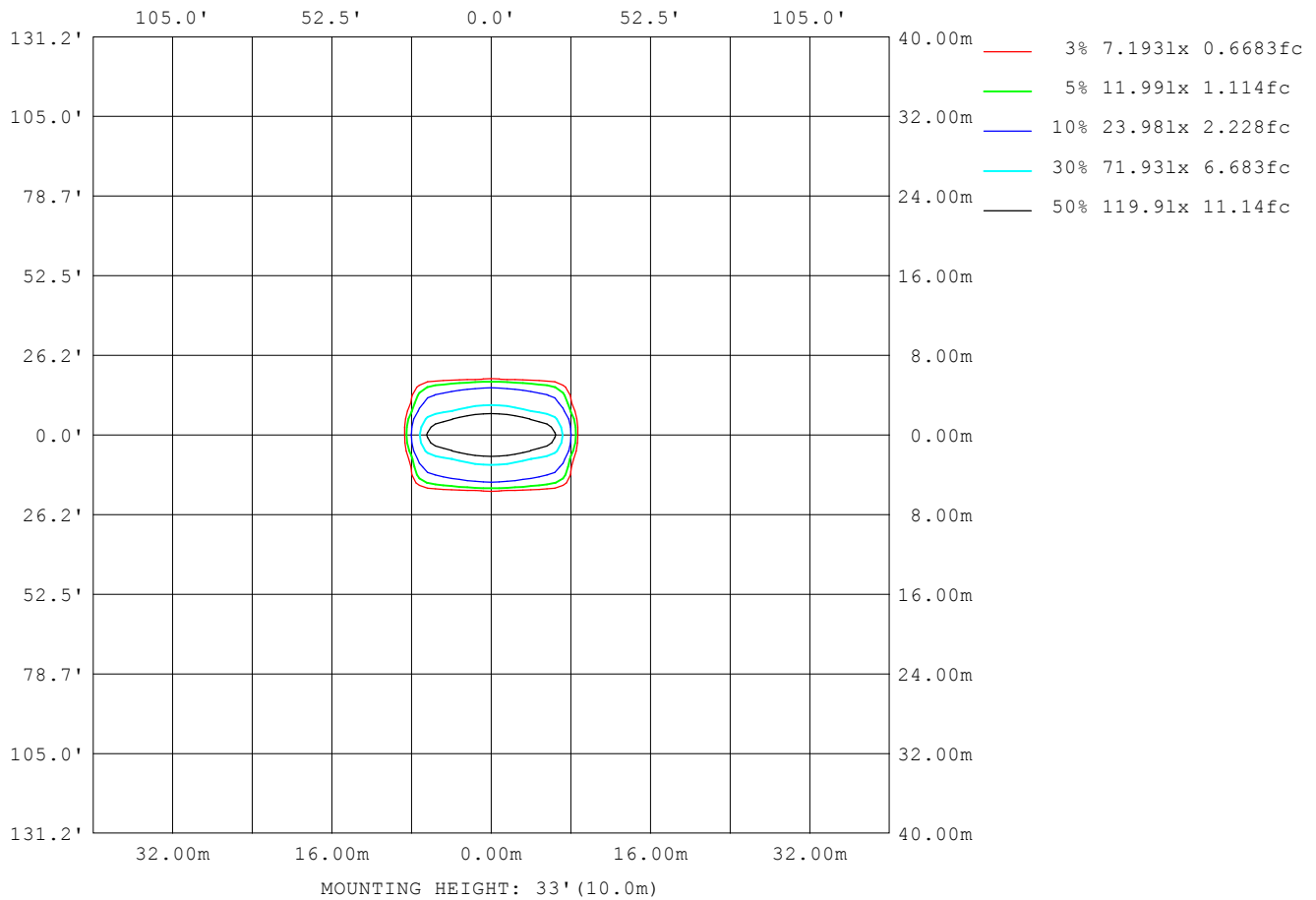


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-04-07

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 9.500m [K=1.0000]
Remarks:

ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-04-07

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 9.500m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:230.0V I:0.5241A P:119.4W PF:0.9909 Lamp Flux:14399x1 lm		
NAME: LHB01-120	TYPE:120W	WEIGHT:
SPEC.:5000K Ra80 3070DEG L02801	DIM.: 0.948*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.92*0.1	Shielding Angle:

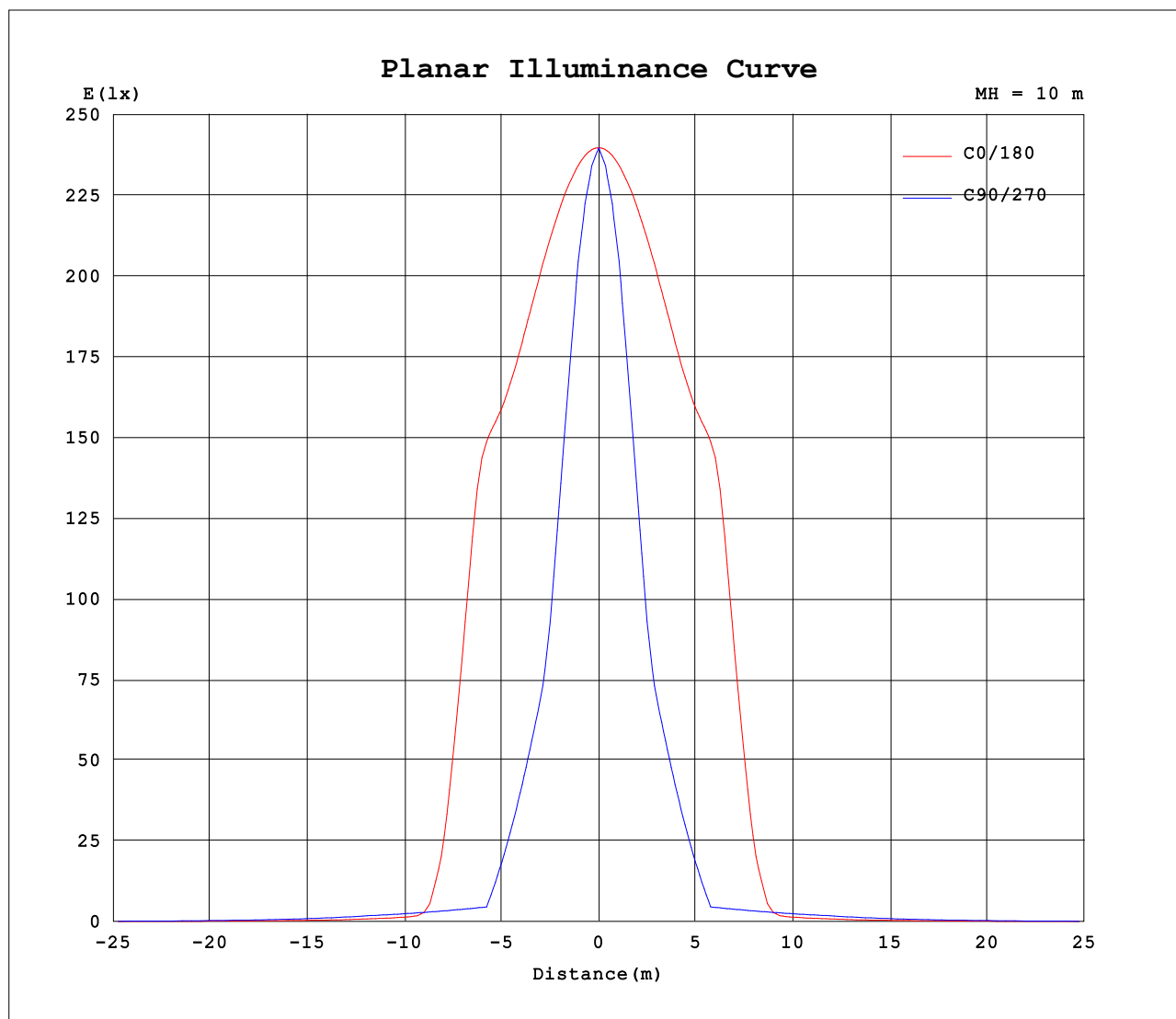
AvgL	cd/m2
L_0~180 (65) av	5131
L_0~180 (75) av	4918
L_0~180 (85) av	1352
L_90~270 (65) av	9836
L_90~270 (75) av	9043
L_90~270 (85) av	12029
L_45 (65) av	5560
L_45 (75) av	4892
L_45 (85) av	5250

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-04-07

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
 Humidity:65.0%
 Test Distance:9.500m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-04-07

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 9.500m [K=1.0000]
Remarks:

```

Range: 0 - 90DEG
Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:9.500m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:9.500m [K=1.0000]
Remarks:

```

```

Range: 0 - 90DEG
Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:9.500m [K=1.0000]
Remarks:

```

```

Range: 0 - 90DEG
Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:9.500m [K=1.0000]
Remarks:

```