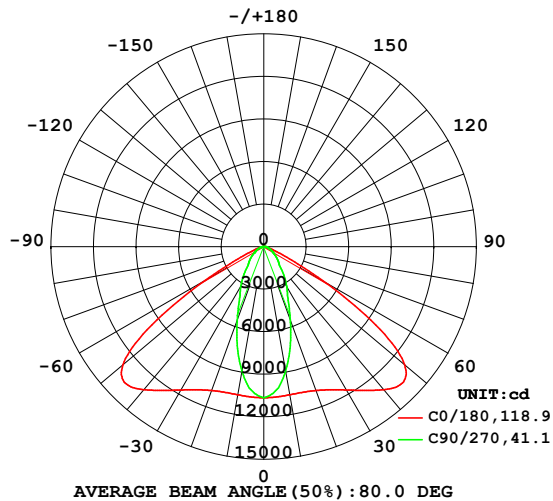


LUMINAIRE PHOTOMETRIC TEST REPORT

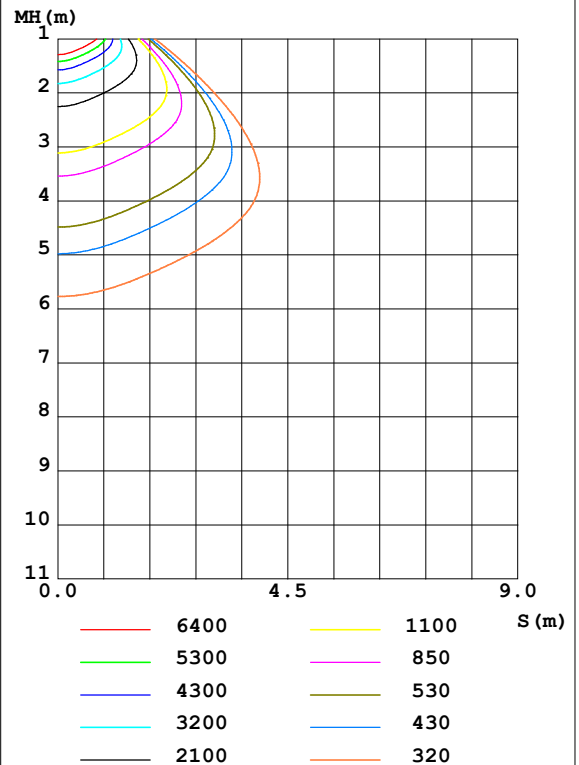
Test:U:230.0V I:0.5246A P:118.9W PF:0.9858 Lamp Flux:18373.1x1 lm		
NAME: LHB01-120H	TYPE:120W	WEIGHT:
SPEC.:5000K Ra70 L06404	DIM.: 0.948*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.92*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 154.51 lm/W			
MODEL	LHB01-120H	Imax(cd)	13716	S/MH(C0/180)	1.84
NOMINAL POWER(W)	120	LOR(%)	100.0	S/MH(C90/270)	0.65
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	18373	η UP,DN(C0-180)	0.0,50.2
NOMINAL FLUX(lm)	18373.1	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.8
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	0.80

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:2017-09-26

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	1064	1036	1017	1036	1064	1036	1017	1036	0- 5	250.9	250.9	1.37,1.37
10	1061	970.2	891.7	970.2	1061	969.6	891.7	969.6	5- 10	718.7	969.6	5.28,5.28
15	1064	867.6	723.4	867.6	1064	865.5	723.4	865.5	10- 15	1096	2066	11.2,11.2
20	1080	749.5	550.0	749.5	1080	744.6	550.0	744.6	15- 20	1364	3430	18.7,18.7
25	1114	625.1	407.3	625.1	1114	616.9	407.3	616.9	20- 25	1535	4965	27,27
30	1167	506.2	324.9	506.2	1167	495.3	324.9	495.3	25- 30	1654	6619	36,36
35	1238	411.1	249.5	411.1	1238	399.5	249.5	399.5	30- 35	1759	8378	45.6,45.6
40	1317	348.3	174.0	348.3	1317	336.7	174.0	336.7	35- 40	1835	10214	55.6,55.6
45	1372	274.6	145.2	274.6	1372	265.1	145.2	265.1	40- 45	1882	12095	65.8,65.8
50	1297	186.7	116.3	186.7	1297	182.4	116.3	182.4	45- 50	1874	13969	76,76
55	964.1	152.9	88.63	152.9	964.1	149.6	88.63	149.6	50- 55	1674	15644	85.1,85.1
60	481.7	113.4	69.89	113.4	481.7	111.5	69.89	111.5	55- 60	1197	16840	91.7,91.7
65	180.6	74.80	52.27	74.80	180.6	74.31	52.27	74.31	60- 65	689.7	17530	95.4,95.4
70	71.04	52.70	34.65	52.70	71.04	52.35	34.65	52.35	65- 70	385.1	17915	97.5,97.5
75	31.32	30.17	26.14	30.17	31.32	29.80	26.14	29.80	70- 75	223.7	18139	98.7,98.7
80	15.57	19.31	17.64	19.31	15.57	18.98	17.64	18.98	75- 80	133.6	18273	99.5,99.5
85	3.598	10.05	9.126	10.05	3.598	9.812	9.126	9.812	80- 85	74.07	18347	99.9,99.9
90	0.7299	0.8469	0.6168	0.8469	0.7299	0.7389	0.6168	0.7389	85- 90	26.54	18373	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): 12095 lm

%lum = 65.8%

%lamp = 65.8%

Conical surface Flux(120deg): 16840 lm

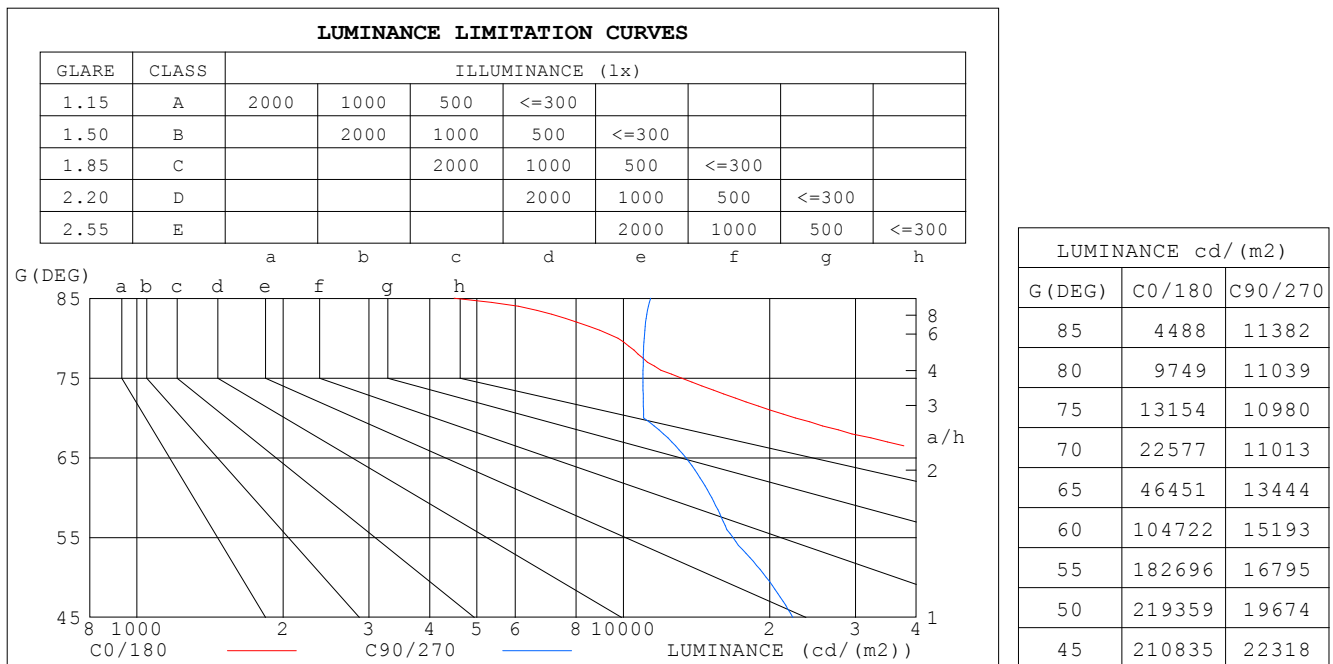
%lum = 91.7%

%lamp = 91.7%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-09-26

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

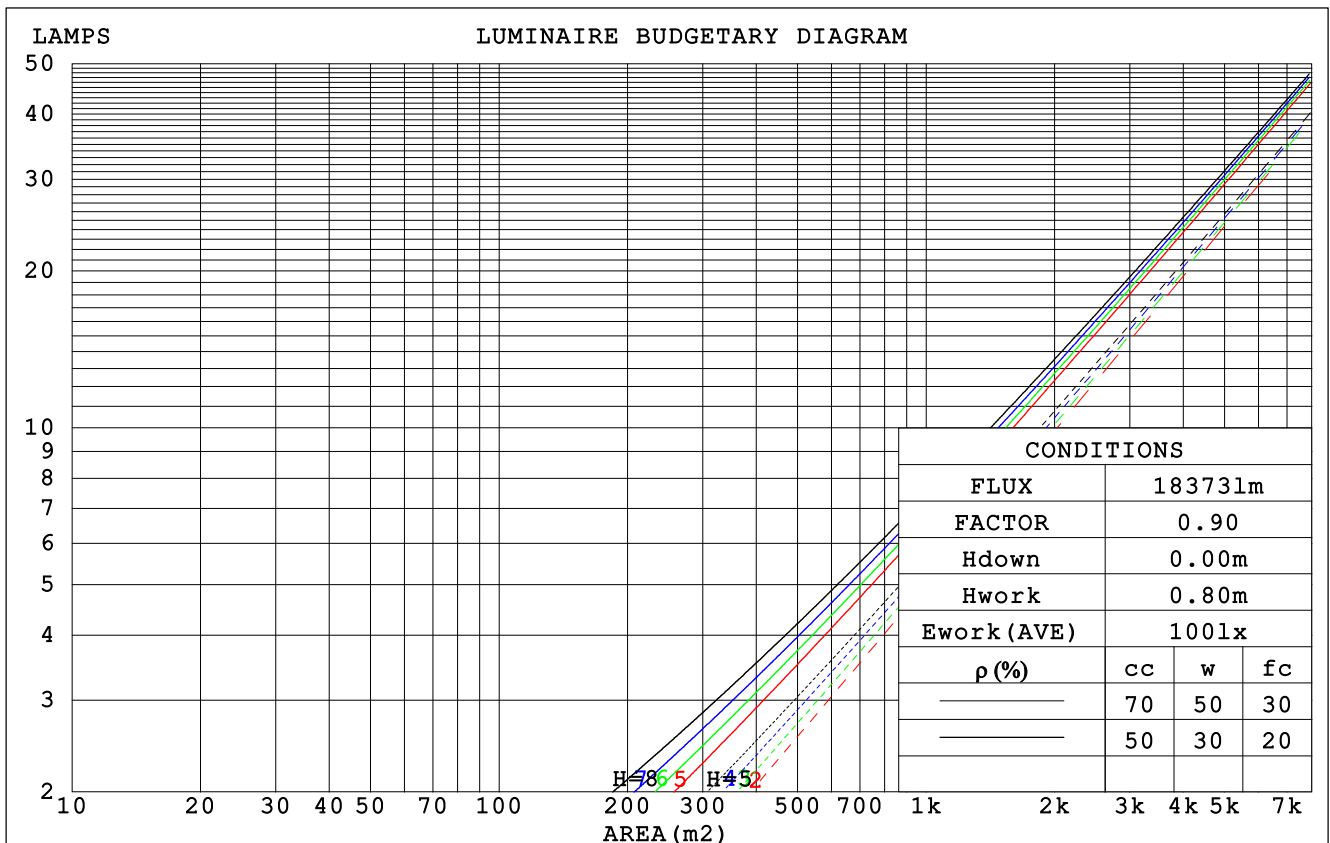


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-09-26

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	.00
1.0	1.07	1.04	1.00	1.05	1.02	.99	1.01	.98	.96	.97	.95	.93	.93	.92	.90	.88
2.0	.96	.90	.85	.94	.89	.84	.90	.86	.82	.87	.84	.80	.84	.81	.79	.77
3.0	.86	.79	.73	.84	.78	.72	.81	.76	.71	.79	.74	.70	.76	.72	.69	.67
4.0	.77	.69	.63	.76	.68	.63	.73	.67	.62	.71	.66	.61	.69	.64	.60	.58
5.0	.69	.61	.56	.68	.61	.55	.66	.60	.55	.64	.59	.54	.63	.58	.54	.52
6.0	.63	.55	.49	.62	.55	.49	.60	.54	.49	.59	.53	.48	.57	.52	.48	.46
7.0	.58	.50	.44	.57	.49	.44	.55	.49	.44	.54	.48	.43	.53	.47	.43	.41
8.0	.53	.45	.40	.52	.45	.40	.51	.44	.39	.50	.44	.39	.49	.43	.39	.37
9.0	.49	.41	.36	.48	.41	.36	.47	.41	.36	.46	.40	.36	.45	.40	.35	.34
10.0	.45	.38	.33	.45	.38	.33	.44	.37	.33	.43	.37	.33	.42	.37	.33	.31



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-09-26

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	.249	.142	.045	.243	.138	.044	.230	.132	.042	.218	.126	.040	.207	.120	.039	
2.0	.243	.133	.041	.237	.130	.040	.225	.125	.039	.215	.121	.038	.205	.116	.037	
3.0	.230	.123	.037	.225	.121	.036	.215	.117	.035	.206	.113	.035	.198	.109	.034	
4.0	.217	.113	.033	.213	.111	.033	.204	.108	.032	.196	.105	.032	.188	.102	.031	
5.0	.204	.104	.030	.200	.103	.030	.193	.100	.030	.185	.098	.029	.179	.095	.029	
6.0	.192	.096	.028	.189	.095	.027	.182	.093	.027	.175	.091	.027	.169	.089	.026	
7.0	.181	.089	.025	.178	.089	.025	.172	.087	.025	.166	.085	.025	.160	.083	.024	
8.0	.171	.083	.023	.168	.083	.023	.162	.081	.023	.157	.080	.023	.152	.078	.023	
9.0	.161	.078	.022	.158	.077	.022	.153	.076	.022	.149	.075	.021	.144	.073	.021	
10.0	.152	.073	.020	.150	.072	.020	.146	.071	.020	.141	.070	.020	.137	.069	.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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.176	.157	.139	.151	.134	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016	
2.0	.166	.132	.104	.142	.114	.090	.097	.079	.063	.056	.046	.037	.018	.015	.012	
3.0	.157	.114	.080	.134	.098	.069	.092	.068	.049	.053	.040	.029	.017	.013	.009	
4.0	.149	.100	.063	.128	.087	.055	.088	.060	.039	.051	.035	.023	.016	.012	.008	
5.0	.142	.090	.051	.122	.077	.044	.084	.054	.031	.049	.032	.019	.016	.010	.006	
6.0	.135	.081	.042	.116	.070	.037	.080	.049	.026	.046	.029	.015	.015	.009	.005	
7.0	.129	.074	.036	.111	.064	.031	.076	.045	.022	.044	.026	.013	.014	.009	.004	
8.0	.123	.068	.031	.106	.059	.027	.073	.041	.019	.043	.024	.011	.014	.008	.004	
9.0	.117	.063	.027	.101	.055	.023	.070	.039	.017	.041	.023	.010	.013	.007	.003	
10.0	.112	.059	.024	.096	.051	.021	.067	.036	.015	.039	.021	.009	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-09-26

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	31.2	32.6	31.5	32.8	33.0	19.8	21.2	20.1	21.3	21.5
3H	31.2	32.5	31.5	32.7	32.9	20.4	21.7	20.7	21.9	22.1
4H	31.2	32.4	31.5	32.6	32.8	20.7	21.9	21.0	22.1	22.4
6H	31.1	32.2	31.4	32.5	32.7	21.0	22.1	21.3	22.3	22.6
8H	31.1	32.1	31.4	32.4	32.7	21.1	22.1	21.4	22.4	22.7
12H	31.0	32.0	31.4	32.3	32.6	21.1	22.2	21.5	22.4	22.7
4H 2H	31.0	32.1	31.3	32.4	32.6	21.1	22.3	21.4	22.5	22.8
3H	31.0	32.1	31.4	32.3	32.6	21.7	22.7	22.1	23.0	23.3
4H	31.0	31.9	31.4	32.2	32.6	22.0	22.9	22.4	23.3	23.6
6H	31.0	31.8	31.4	32.1	32.5	22.3	23.1	22.7	23.5	23.8
8H	30.9	31.7	31.3	32.0	32.4	22.5	23.2	22.9	23.6	24.0
12H	30.9	31.6	31.3	32.0	32.4	22.6	23.3	23.0	23.7	24.1
8H 4H	30.9	31.6	31.3	32.0	32.4	22.3	23.0	22.7	23.4	23.7
6H	30.9	31.5	31.3	31.9	32.3	22.7	23.3	23.1	23.7	24.1
8H	30.9	31.4	31.3	31.8	32.3	22.9	23.4	23.4	23.9	24.3
12H	30.8	31.3	31.3	31.7	32.2	23.1	23.6	23.6	24.0	24.5
12H 4H	30.9	31.5	31.3	31.9	32.3	22.3	22.9	22.7	23.3	23.7
6H	30.8	31.4	31.3	31.8	32.2	22.7	23.3	23.2	23.7	24.1
8H	30.8	31.3	31.3	31.7	32.2	23.0	23.4	23.5	23.9	24.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.7 / - 1.3					+ 0.7 / - 0.9				
1.5H	+ 3.3 / - 5.4					+ 0.6 / - 0.7				
2.0H	+ 4.2 / - 7.5					+ 0.7 / - 0.8				

CIE Pub.117 Corrected 18373 lm Total Lamp Luminous Flux.(8log(F/F0) = 10.1)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-09-26

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:

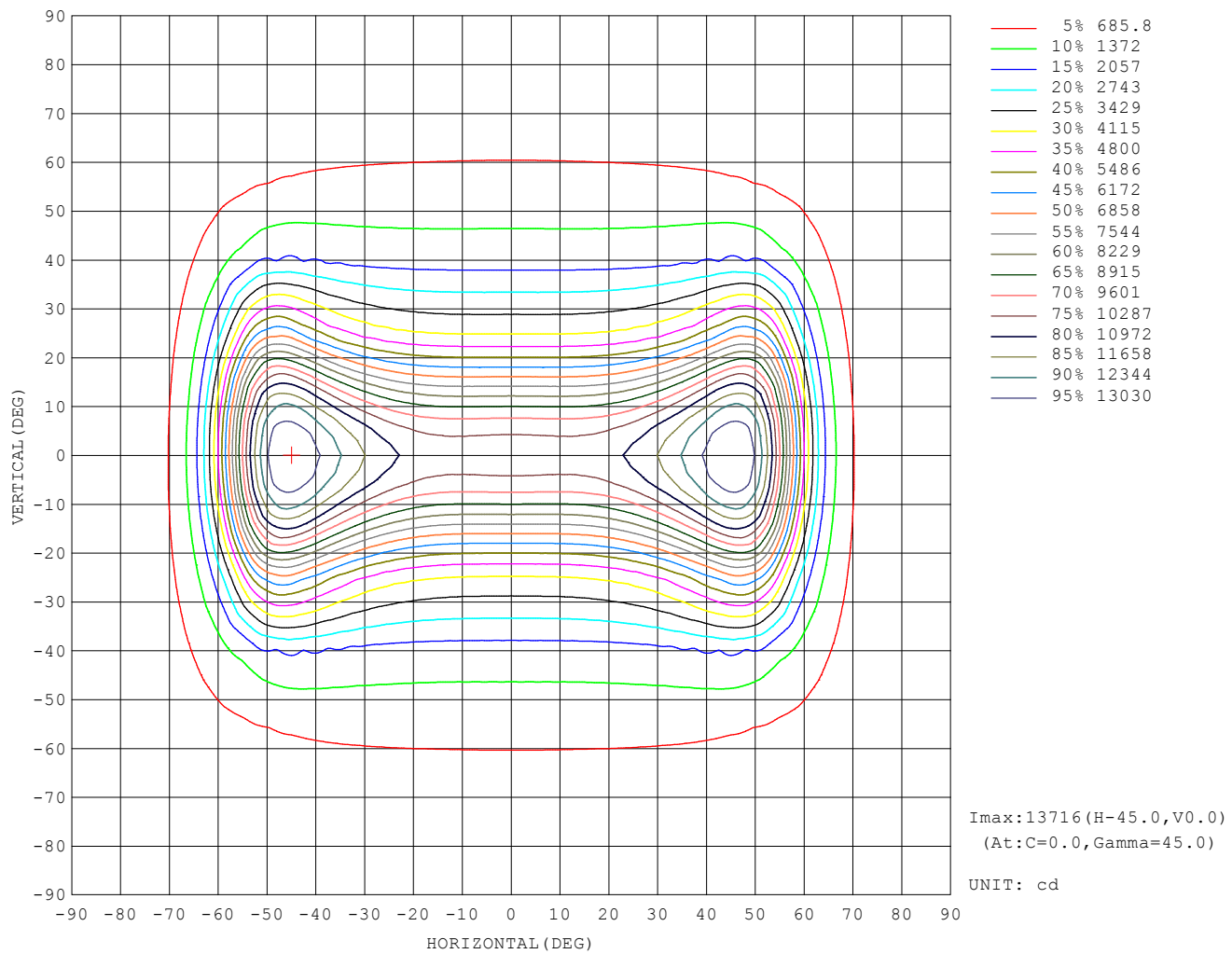
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	63	52	46	62	52	46	61	52	46	40
0.80	74	63	57	73	63	57	71	62	56	50
1.00	82	73	67	81	72	66	79	73	66	60
1.25	89	81	75	88	80	74	86	79	73	67
1.50	94	86	80	92	85	80	90	83	78	72
2.00	100	93	88	98	92	87	95	90	86	79
2.50	103	97	92	101	95	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	96	88
5.00	111	107	103	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: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-09-26

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:

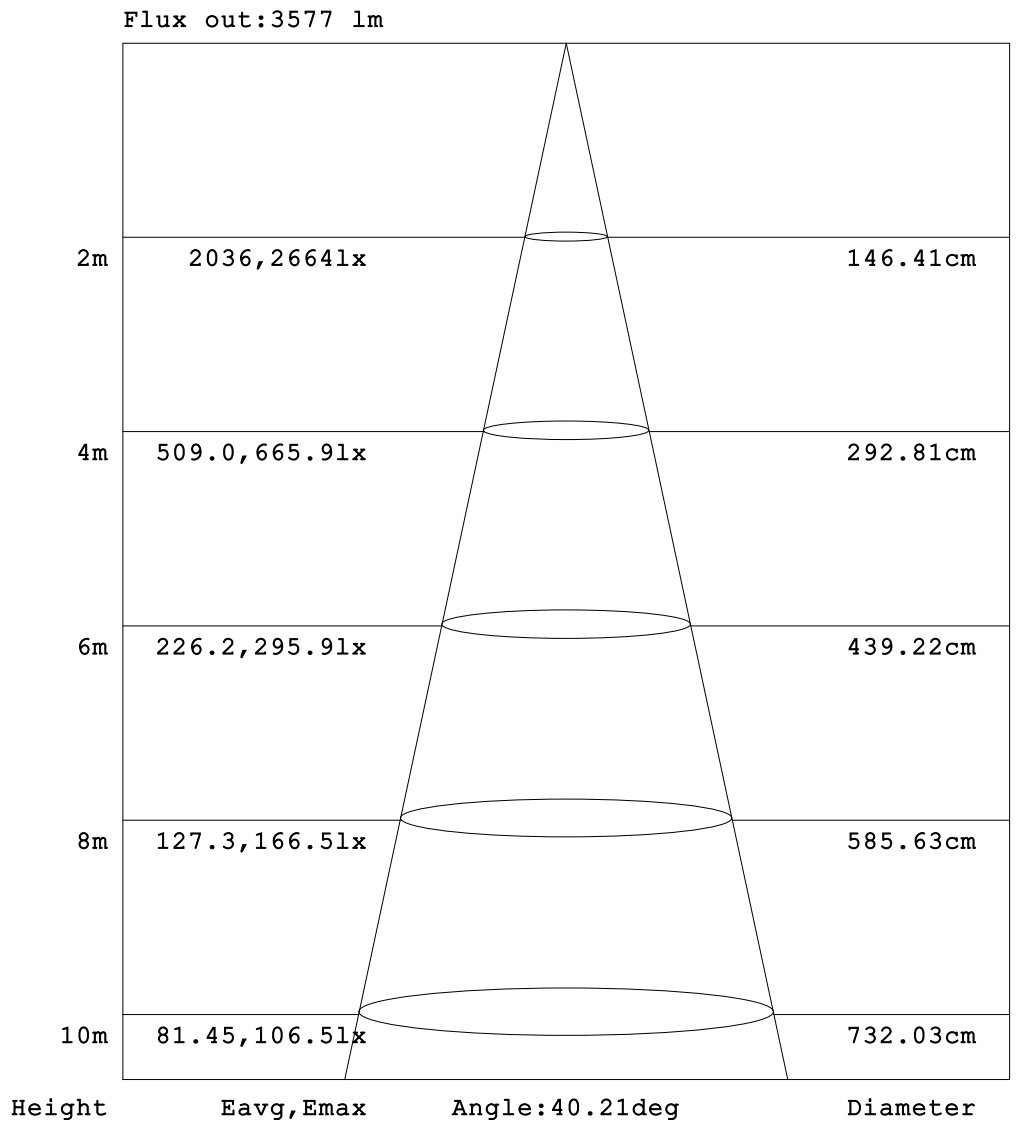
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-09-26

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

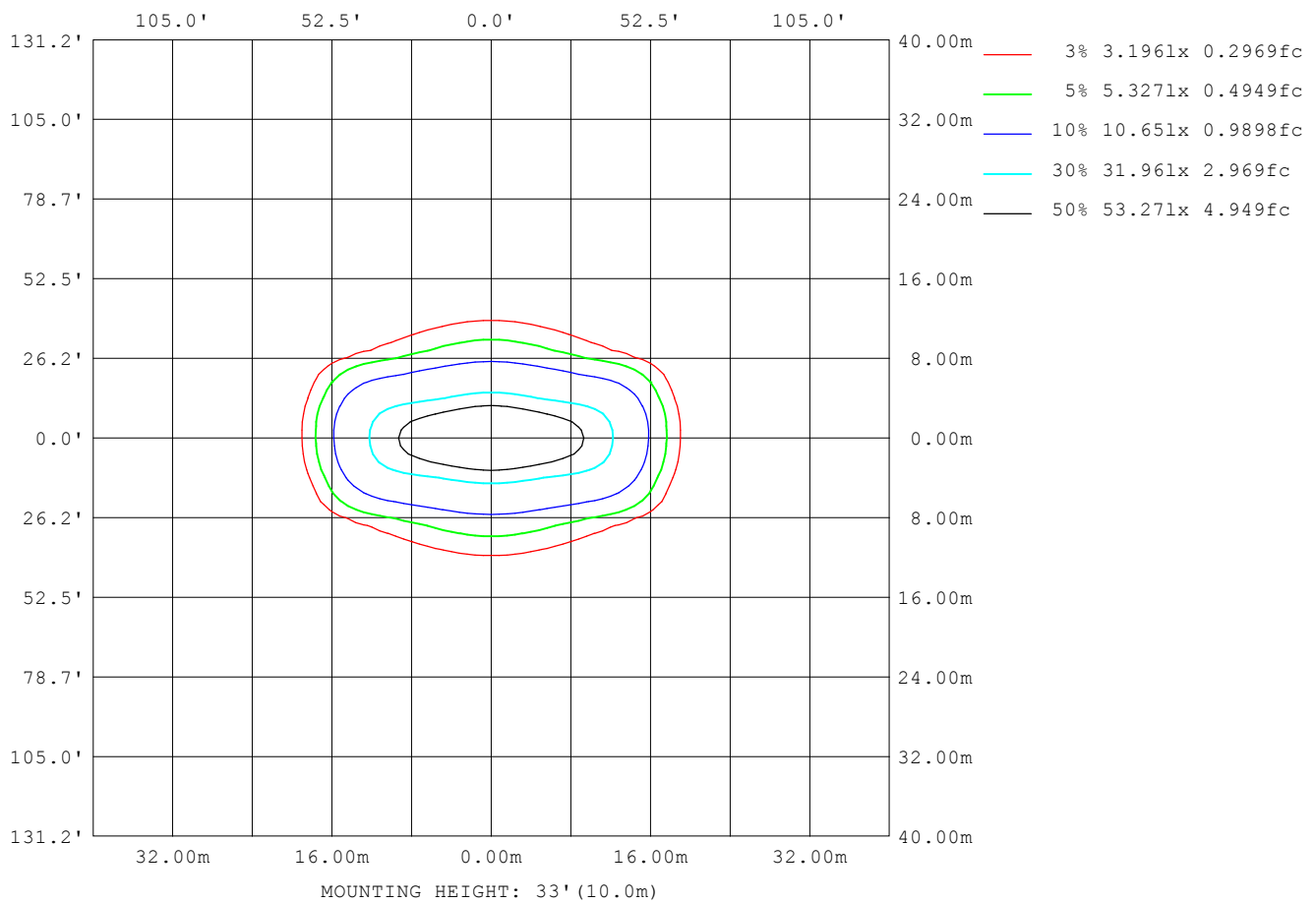


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360 DEG
C Interval: 5.0 DEG
Test Speed: HIGH
Temperature: 25.3 DEG
Operators:
Test Date: 2017-09-26

γ Range: 0 - 90 DEG
 γ Interval: 0.5 DEG
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:2017-09-26

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:0.5246A P:118.9W PF:0.9858 Lamp Flux:18373.1x1 lm		
NAME: LHB01-120H	TYPE:120W	WEIGHT:
SPEC.:5000K Ra70 L06404	DIM.: 0.948*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.92*0.1	Shielding Angle:

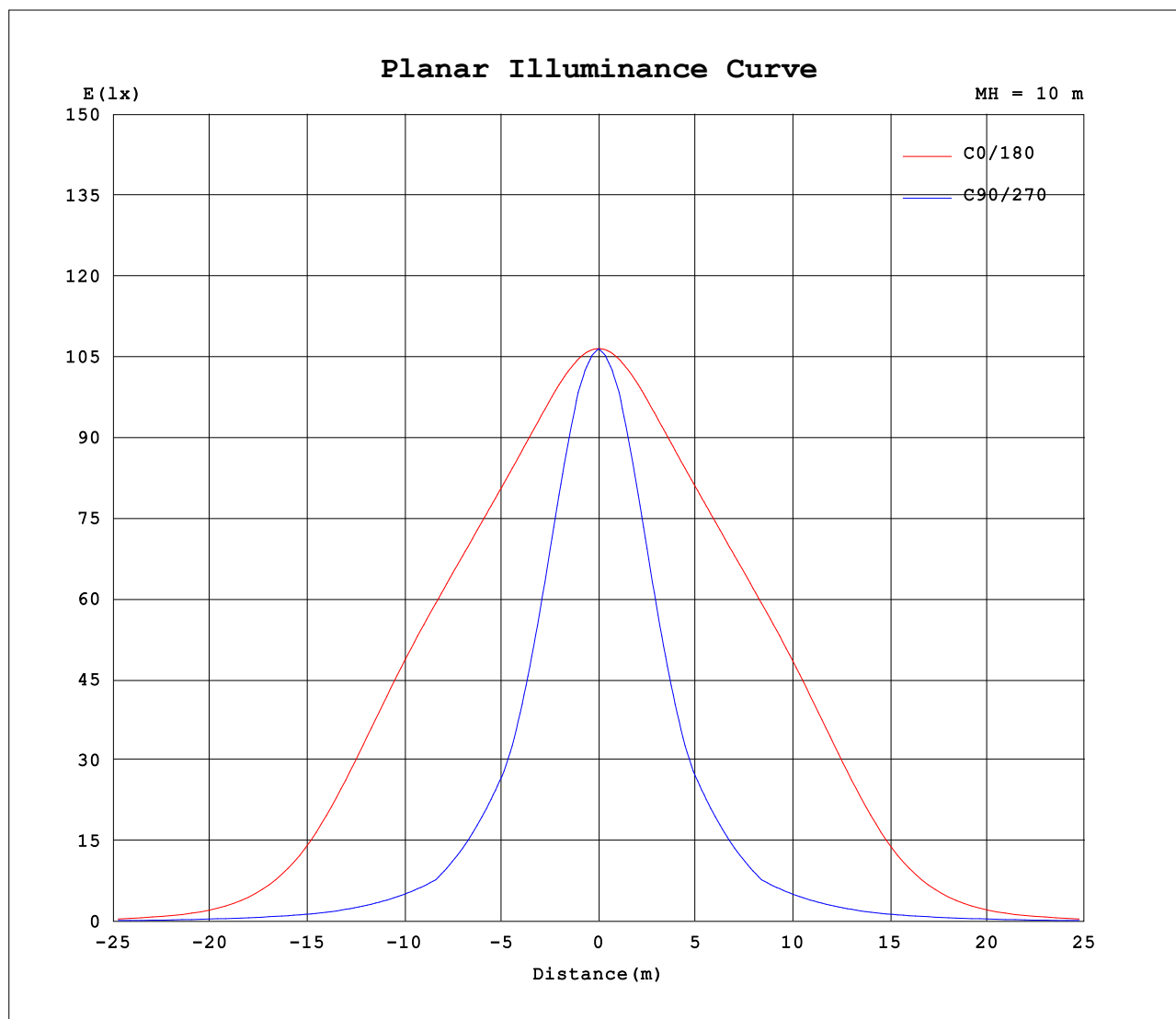
AvgL	cd/m2
L_0~180 (65) av	46451
L_0~180 (75) av	13154
L_0~180 (85) av	4488
L_90~270 (65) av	13444
L_90~270 (75) av	10980
L_90~270 (85) av	11382
L_45 (65) av	19175
L_45 (75) av	12595
L_45 (85) av	12385

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-09-26

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: 2017-09-26

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:

```

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:

```

```

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:

```