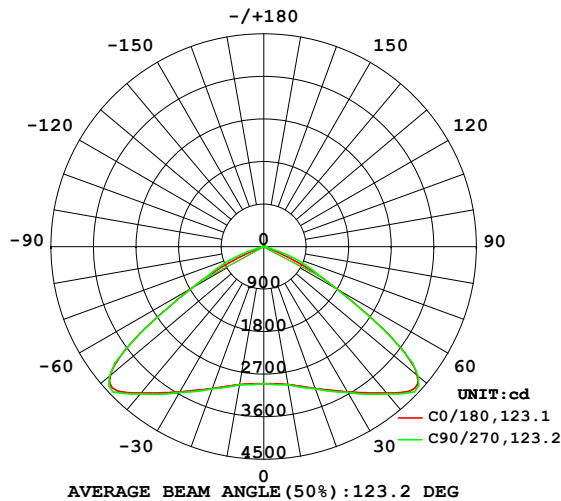


LUMINAIRE PHOTOMETRIC TEST REPORT

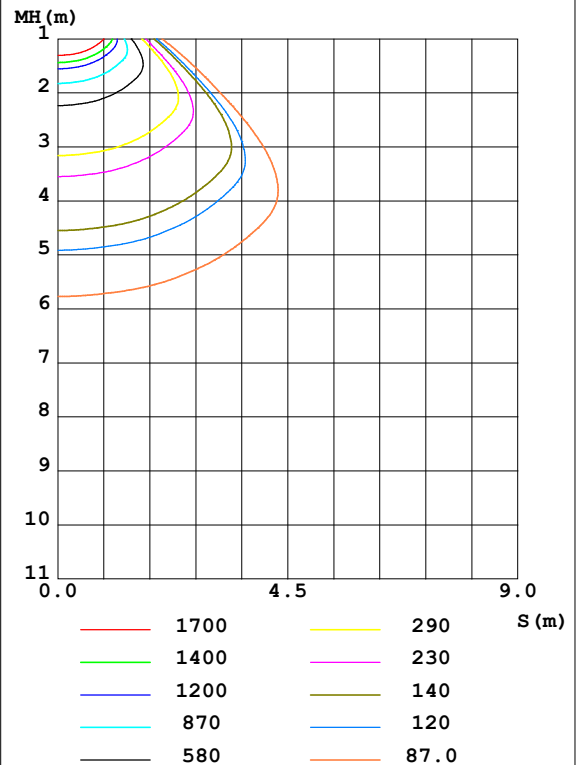
Test:U:230.0V I:0.4138A P:91.79W PF:0.9642 Lamp Flux:12280.6x1 lm		
NAME: LHB01-90	TYPE:90W	WEIGHT:
SPEC.:5000K Ra70 120DEG L02803	DIM.: 0.718*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.7*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 133.79 lm/W			
MODEL	LHB01-90	I _{max} (cd)	4453	S/MH (C0/180)	1.94
NOMINAL POWER(W)	90	LOR(%)	100.0	S/MH (C90/270)	1.93
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	12281	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	12280.6	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	2.00
TEST VOLTAGE (V)	230	η down (%)	100.0	CIBSE SHR MAX	0.00

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:2017-03-31

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	2912	2929	2930	2931	2912	2931	2930	2929	0- 5	69.70	69.70	0.57,0.57
10	2964	2980	2963	2988	2964	2988	2963	2980	5- 10	211.2	280.9	2.29,2.29
15	3061	3068	3081	3079	3061	3079	3081	3068	10- 15	359.2	640.1	5.21,5.21
20	3193	3212	3198	3220	3193	3220	3198	3212	15- 20	518.3	1158	9.43,9.43
25	3349	3368	3378	3379	3349	3379	3378	3368	20- 25	689.9	1848	15.1,15.1
30	3547	3559	3558	3583	3547	3583	3558	3559	25- 30	877.9	2726	22.2,22.2
35	3774	3780	3812	3818	3774	3818	3812	3780	30- 35	1084	3810	31,31
40	4042	4017	4066	4066	4042	4066	4066	4017	35- 40	1311	5121	41.7,41.7
45	4328	4261	4372	4263	4328	4263	4372	4261	40- 45	1555	6675	54.4,54.4
50	4237	4324	4265	4258	4237	4258	4265	4324	45- 50	1752	8428	68.6,68.6
55	3189	3224	3157	3176	3189	3176	3157	3224	50- 55	1645	10072	82,82
60	1778	1746	1731	1730	1778	1730	1731	1746	55- 60	1120	11193	91.1,91.1
65	808.9	758.1	1080	762.1	808.9	762.1	1080	758.1	60- 65	616.7	11809	96.2,96.2
70	108.4	254.6	572.6	281.8	108.4	281.8	572.6	254.6	65- 70	287.6	12097	98.5,98.5
75	71.35	131.0	113.7	144.4	71.35	144.4	113.7	131.0	70- 75	117.3	12214	99.5,99.5
80	41.28	43.48	44.71	45.01	41.28	45.01	44.71	43.48	75- 80	39.42	12254	99.8,99.8
85	4.411	23.96	24.45	24.79	4.411	24.79	24.45	23.96	80- 85	19.18	12273	99.9,99.9
90	3.399	4.484	4.187	4.578	3.399	4.578	4.187	4.484	85- 90	7.503	12281	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:cd									UNIT:lm		

Conical surface Flux(90deg): 6675.4 lm

%lum = 54.4%

%lamp = 54.4%

Conical surface Flux(120deg): 11193 lm

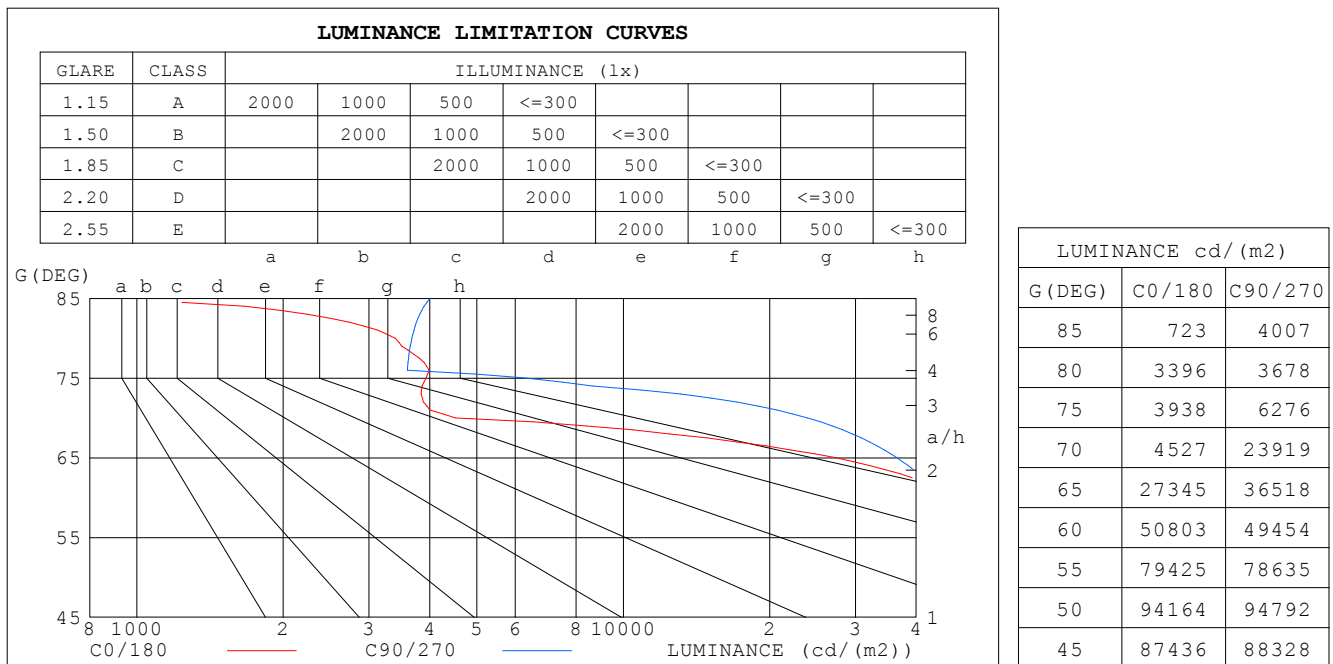
%lum = 91.1%

%lamp = 91.1%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-03-31

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

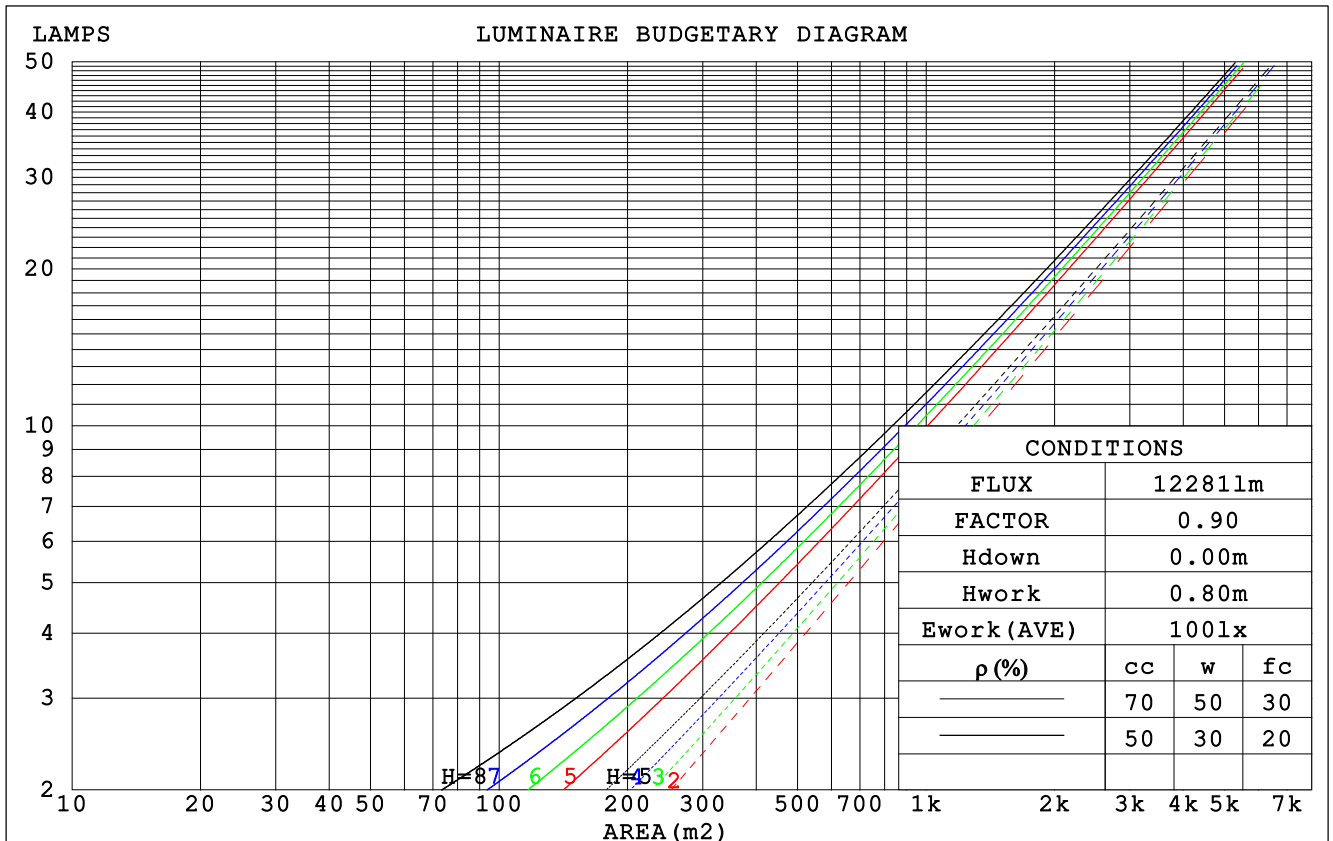


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-31

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	1.06	1.02	.99	1.04	1.01	.98	.00	.97	.94	.96	.94	.92	.92	.91	.89	.87
2.0	.93	.87	.82	.92	.86	.81	.88	.83	.79	.85	.81	.77	.82	.79	.76	.74
3.0	.82	.74	.68	.81	.73	.68	.78	.71	.66	.75	.70	.65	.72	.68	.64	.62
4.0	.72	.64	.57	.71	.63	.57	.69	.62	.56	.66	.60	.55	.64	.59	.55	.53
5.0	.64	.55	.49	.63	.55	.48	.61	.54	.48	.59	.52	.47	.57	.51	.47	.45
6.0	.57	.48	.42	.56	.48	.42	.54	.47	.41	.53	.46	.41	.51	.45	.41	.39
7.0	.51	.42	.36	.50	.42	.36	.49	.41	.36	.47	.41	.36	.46	.40	.35	.33
8.0	.46	.38	.32	.46	.37	.32	.44	.37	.31	.43	.36	.31	.42	.36	.31	.29
9.0	.42	.34	.28	.41	.33	.28	.40	.33	.28	.39	.32	.28	.38	.32	.27	.26
10.0	.38	.30	.25	.38	.30	.25	.37	.30	.25	.36	.29	.25	.35	.29	.25	.23



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-03-31

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	.266	.151	.048	.259	.148	.047	.246	.141	.045	.234	.135	.043	.223	.129	.042		
2.0	.264	.144	.044	.257	.142	.044	.246	.137	.042	.235	.132	.041	.226	.128	.040		
3.0	.253	.134	.040	.247	.132	.040	.237	.128	.039	.228	.125	.038	.219	.121	.038		
4.0	.239	.124	.037	.234	.123	.036	.225	.119	.036	.217	.116	.035	.209	.114	.035		
5.0	.225	.115	.033	.221	.113	.033	.213	.111	.033	.205	.108	.032	.198	.106	.032		
6.0	.211	.106	.030	.208	.105	.030	.200	.103	.030	.194	.101	.030	.187	.099	.029		
7.0	.199	.098	.028	.195	.097	.028	.189	.095	.027	.183	.094	.027	.177	.092	.027		
8.0	.187	.091	.026	.184	.090	.026	.178	.089	.025	.172	.087	.025	.167	.086	.025		
9.0	.176	.085	.024	.173	.084	.024	.168	.083	.024	.163	.082	.023	.158	.080	.023		
10.0	.166	.080	.022	.163	.079	.022	.159	.078	.022	.154	.077	.022	.150	.075	.022		

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	.177	.157	.138	.152	.134	.119	.104	.092	.082	.060	.053	.048	.019	.017	.015		
2.0	.168	.132	.101	.144	.114	.088	.099	.079	.061	.057	.046	.036	.018	.015	.012		
3.0	.161	.114	.077	.138	.098	.067	.095	.068	.047	.055	.040	.028	.018	.013	.009		
4.0	.154	.101	.060	.132	.087	.052	.091	.061	.037	.053	.036	.022	.017	.012	.007		
5.0	.148	.090	.048	.127	.078	.042	.087	.055	.029	.051	.032	.017	.016	.010	.006		
6.0	.141	.082	.039	.122	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005		
7.0	.135	.075	.033	.116	.065	.029	.080	.046	.021	.047	.027	.012	.015	.009	.004		
8.0	.129	.070	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.015	.008	.003		
9.0	.124	.065	.025	.107	.056	.022	.074	.040	.015	.043	.023	.009	.014	.008	.003		
10.0	.118	.061	.022	.102	.053	.019	.071	.037	.014	.041	.022	.008	.013	.007	.003		

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-31

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	28.3	29.8	28.6	30.0	30.2	28.3	29.9	28.6	30.1	30.3
3H	28.2	29.6	28.5	29.8	30.1	28.6	29.9	28.9	30.2	30.4
4H	28.1	29.4	28.4	29.7	29.9	28.5	29.8	28.8	30.0	30.3
6H	28.0	29.2	28.3	29.5	29.8	28.4	29.6	28.7	29.9	30.2
8H	28.0	29.1	28.3	29.4	29.7	28.4	29.5	28.7	29.8	30.1
12H	27.9	29.0	28.3	29.3	29.6	28.3	29.4	28.7	29.7	30.0
4H 2H	28.3	29.6	28.7	29.9	30.1	28.4	29.7	28.7	29.9	30.2
3H	28.3	29.4	28.6	29.7	30.0	28.7	29.8	29.0	30.1	30.4
4H	28.2	29.2	28.6	29.5	29.9	28.6	29.6	29.0	30.0	30.3
6H	28.1	29.0	28.5	29.4	29.7	28.5	29.4	28.9	29.8	30.1
8H	28.1	28.9	28.5	29.3	29.7	28.5	29.3	28.9	29.7	30.1
12H	28.1	28.8	28.5	29.2	29.6	28.5	29.2	28.9	29.6	30.0
8H 4H	28.1	28.9	28.5	29.3	29.7	28.5	29.3	28.9	29.7	30.1
6H	28.0	28.7	28.5	29.1	29.5	28.4	29.1	28.9	29.5	29.9
8H	28.0	28.6	28.5	29.0	29.5	28.4	29.0	28.9	29.4	29.9
12H	28.0	28.5	28.5	28.9	29.4	28.4	28.9	28.9	29.3	29.8
12H 4H	28.1	28.8	28.5	29.2	29.6	28.5	29.2	28.9	29.6	30.0
6H	28.0	28.6	28.5	29.0	29.5	28.4	29.0	28.9	29.4	29.9
8H	28.0	28.5	28.5	28.9	29.4	28.4	28.9	28.9	29.3	29.8
Variations with the observer position at spacings:										
S = 1.0H	+ 0.3 / - 0.5					+ 0.2 / - 0.4				
1.5H	+ 1.1 / - 2.8					+ 1.0 / - 2.4				
2.0H	+ 2.1 / - 3.8					+ 2.1 / - 4.0				

CIE Pub.117 Corrected 12281 lm Total Lamp Luminous Flux.(8log(F/F0) = 8.7)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-31

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:

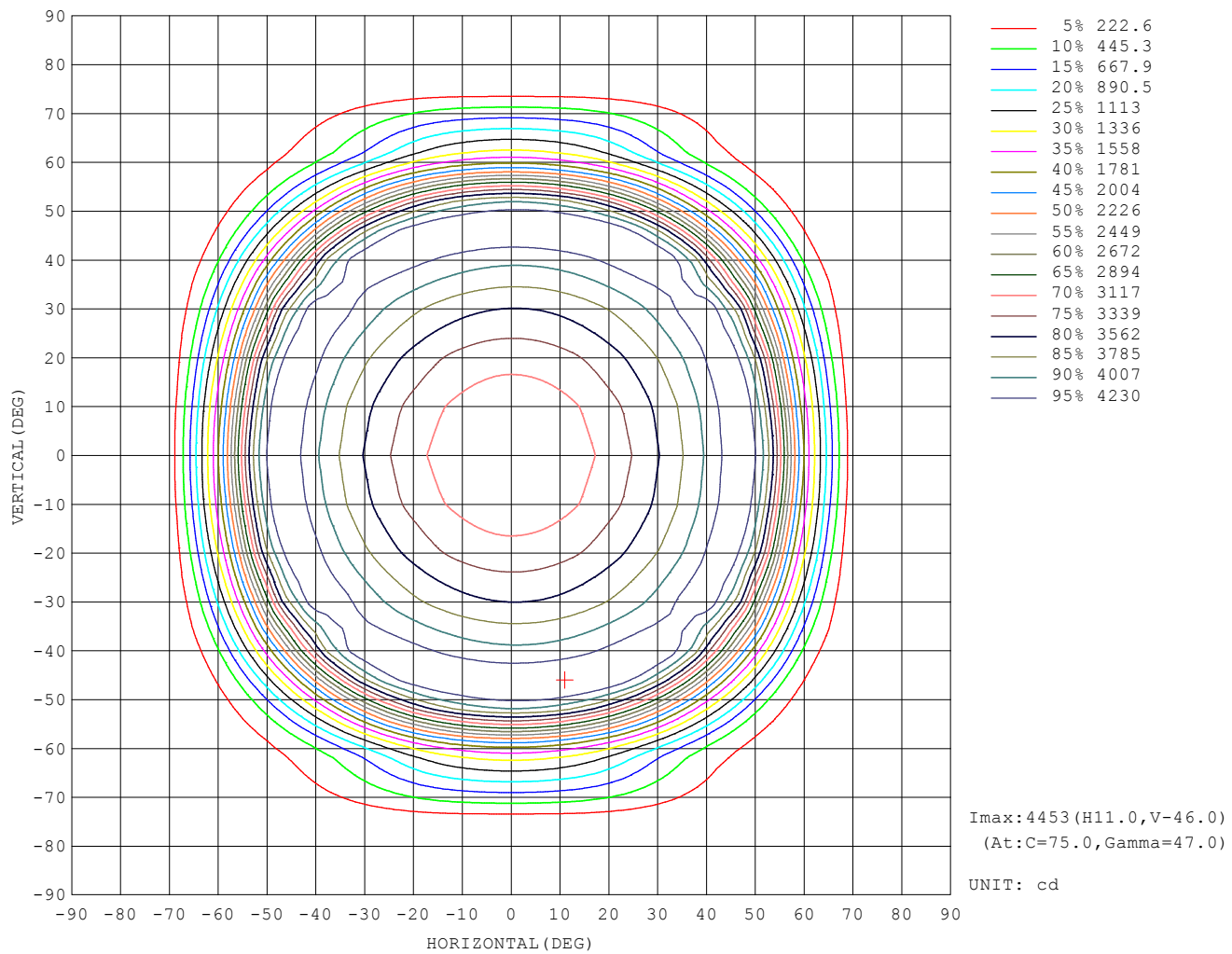
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	54	41	34	53	41	34	52	41	34	27
0.80	66	54	46	65	53	46	63	53	46	39
1.00	77	66	58	75	65	58	73	66	58	51
1.25	85	75	68	83	74	67	81	73	67	60
1.50	90	81	74	88	80	74	86	78	73	65
2.00	97	90	84	96	88	83	92	86	82	74
2.50	101	94	88	99	92	87	95	90	86	78
3.00	104	98	93	102	96	92	98	94	90	82
4.00	108	102	98	105	101	97	101	97	94	86
5.00	110	105	101	107	103	100	103	99	97	88
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: 2017-03-31

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:

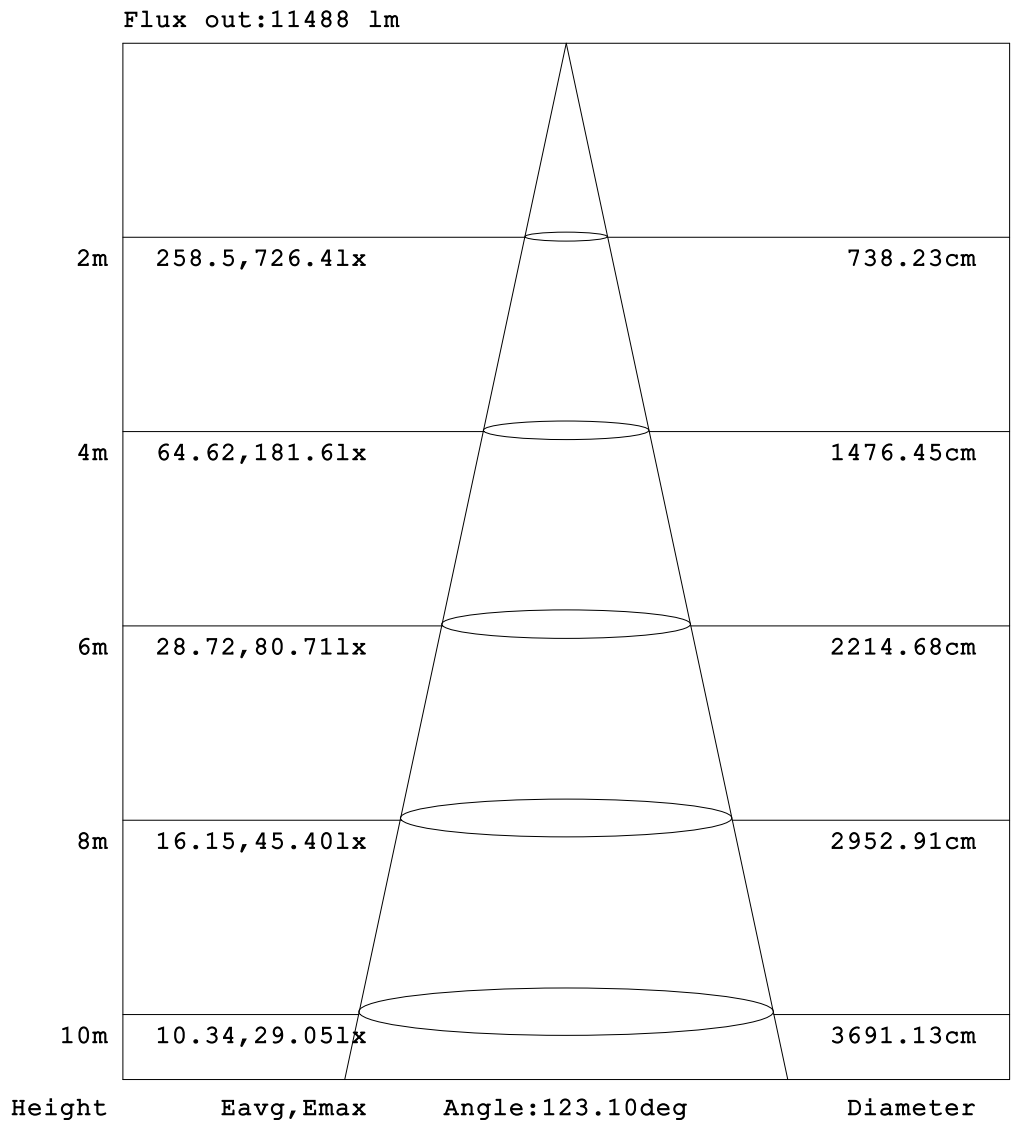
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-31

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

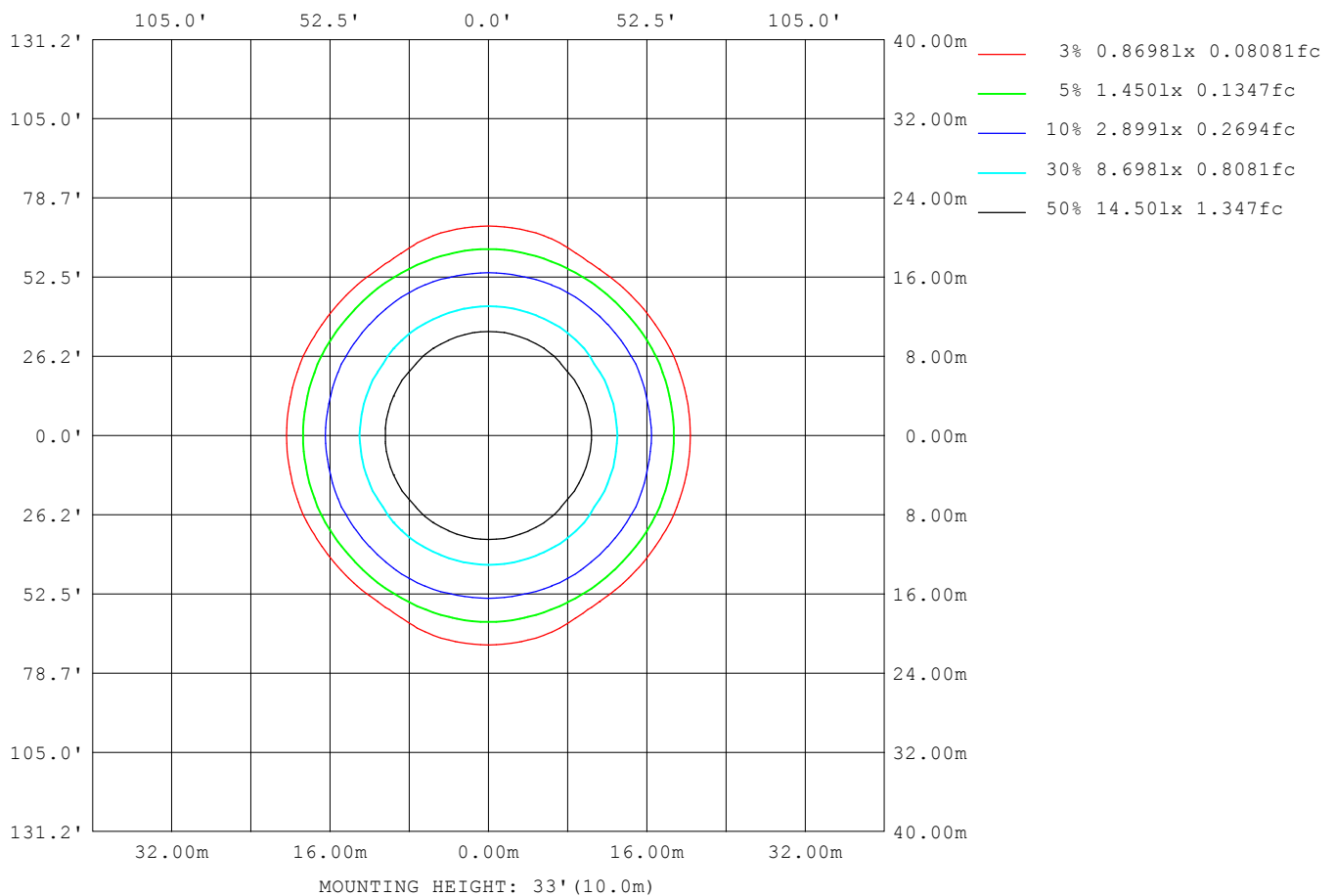


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-31

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: 2017-03-31

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:0.4138A P:91.79W PF:0.9642 Lamp Flux:12280.6x1 lm		
NAME: LHB01-90	TYPE:90W	WEIGHT:
SPEC.:5000K Ra70 120DEG L02803	DIM.: 0.718*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.7*0.1	Shielding Angle:

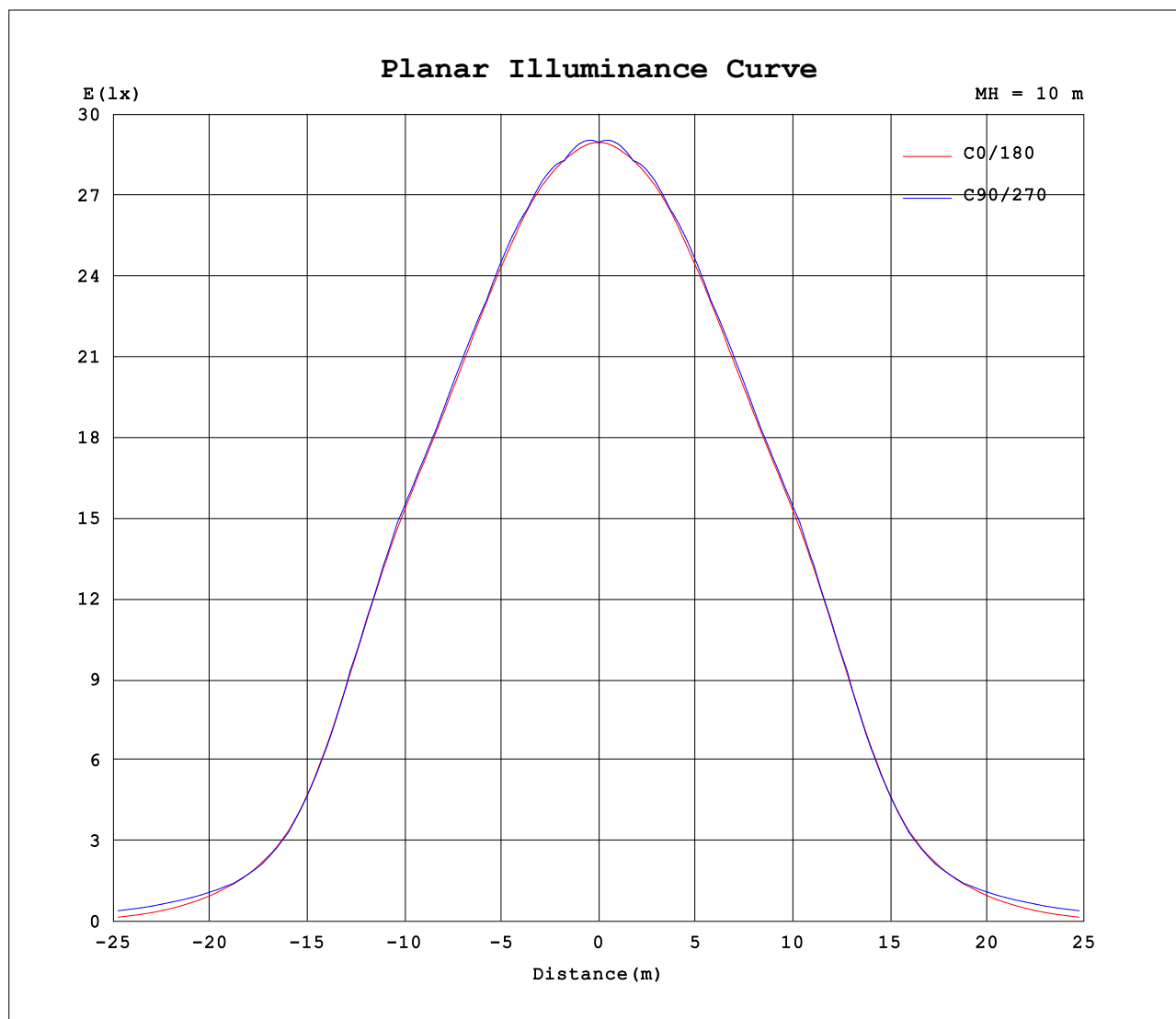
AvgL	cd/m2
L_0~180 (65) av	27345
L_0~180 (75) av	3938
L_0~180 (85) av	723
L_90~270 (65) av	36518
L_90~270 (75) av	6276
L_90~270 (85) av	4007
L_45 (65) av	25693
L_45 (75) av	7602
L_45 (85) av	3995

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-03-31

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: 2017-03-31

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:

```

```

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:

```

```

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:

```