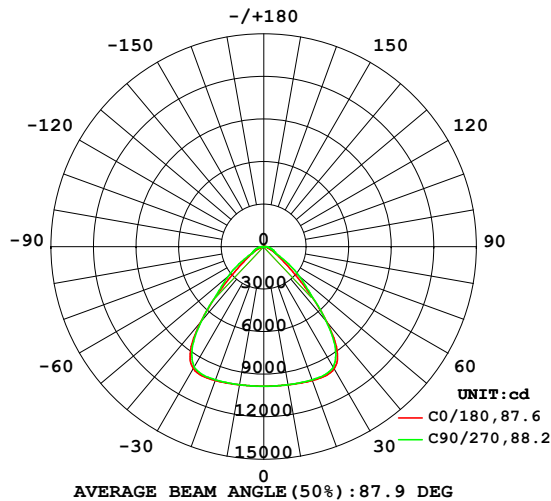


LUMINAIRE PHOTOMETRIC TEST REPORT

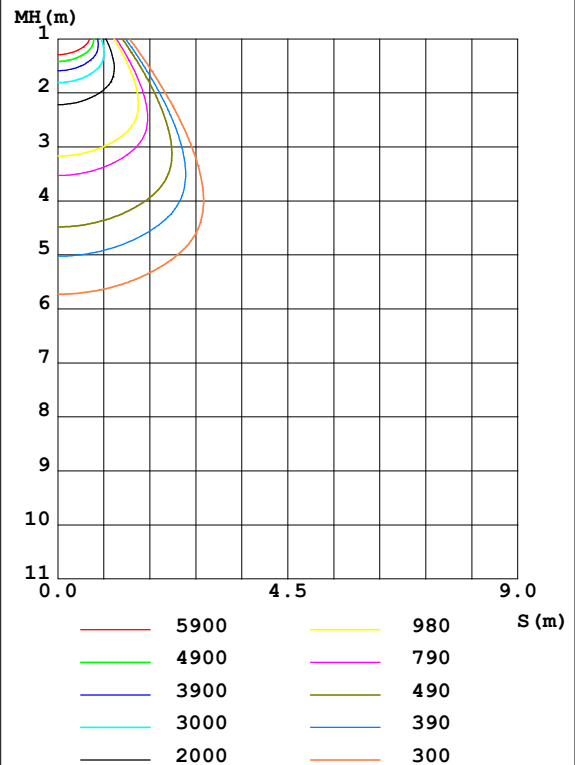
Test:U:230.0V I:0.6666A P:148.0W PF:0.9656 Lamp Flux:20067.9x1 lm		
NAME: LHB01-150	TYPE:150W	WEIGHT:
SPEC.:5000K Ra70 90DEG L02805	DIM.: 1.178*0.137*0.102	SERIAL No.:
MFR.:	SUR.:1.17*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 135.58 lm/W			
MODEL	LHB01-150	I _{max} (cd)	10100	S/MH(C0/180)	1.27
NOMINAL POWER(W)	150	LOR(%)	100.0	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	20068	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	20067.9	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.30

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:2017-03-23

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	985.5	986.1	985.9	986.1	985.5	986.1	985.9	986.1	0- 5	235.6	235.6	1.17,1.17
10	989.7	989.7	989.0	989.7	989.7	989.7	989.0	989.7	5- 10	706.7	942.3	4.7,4.7
15	996.4	995.9	993.9	995.9	996.4	995.9	993.9	995.9	10- 15	1178	2120	10.6,10.6
20	1005	1003	999.0	1003	1005	1003	999.0	1003	15- 20	1647	3767	18.8,18.8
25	1010	1003	1002	1003	1010	1003	1002	1003	20- 25	2107	5874	29.3,29.3
30	993.9	981.9	982.5	981.9	993.9	981.9	982.5	981.9	25- 30	2527	8401	41.9,41.9
35	904.3	892.5	881.6	892.5	904.3	892.5	881.6	892.5	30- 35	2783	11184	55.7,55.7
40	693.0	687.9	686.1	687.9	693.0	687.9	686.1	687.9	35- 40	2651	13835	68.9,68.9
45	431.6	440.2	461.3	440.2	431.6	440.2	461.3	440.2	40- 45	2074	15909	79.3,79.3
50	243.9	255.2	332.3	255.2	243.9	255.2	332.3	255.2	45- 50	1402	17310	86.3,86.3
55	146.5	153.8	215.2	153.8	146.5	153.8	215.2	153.8	50- 55	942.0	18252	91,91
60	94.70	105.2	98.08	105.2	94.70	105.2	98.08	105.2	55- 60	624.1	18876	94.1,94.1
65	62.88	68.05	81.82	68.05	62.88	68.05	81.82	68.05	60- 65	403.9	19280	96.1,96.1
70	41.48	44.81	65.56	44.81	41.48	44.81	65.56	44.81	65- 70	296.7	19577	97.6,97.6
75	25.18	32.83	49.29	32.83	25.18	32.83	49.29	32.83	70- 75	220.3	19797	98.7,98.7
80	8.027	21.62	33.03	21.62	8.027	21.62	33.03	21.62	75- 80	151.9	19949	99.4,99.4
85	1.996	10.94	16.76	10.94	1.996	10.94	16.76	10.94	80- 85	88.11	20037	99.8,99.8
90	0.3457	0.5244	0.4956	0.5244	0.3457	0.5244	0.4956	0.5244	85- 90	30.63	20068	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): 15909 lm

%lum = 79.3%

%lamp = 79.3%

Conical surface Flux(120deg): 18876 lm

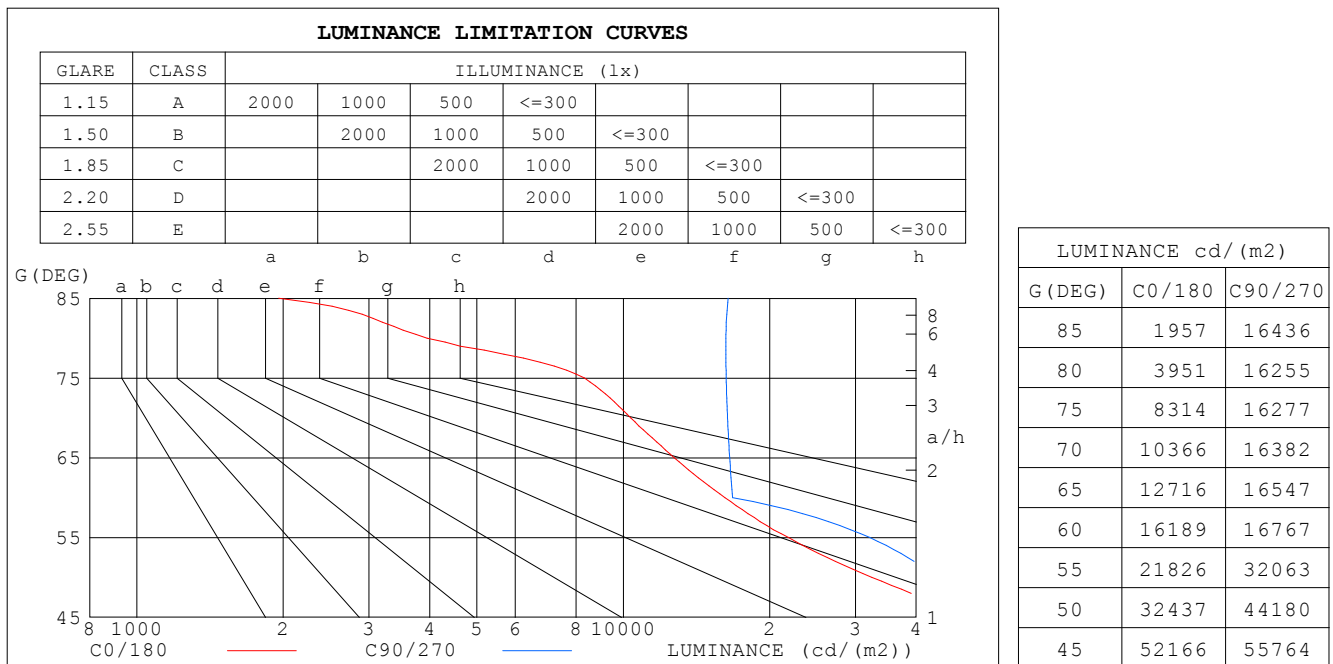
%lum = 94.1%

%lamp = 94.1%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-03-23

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

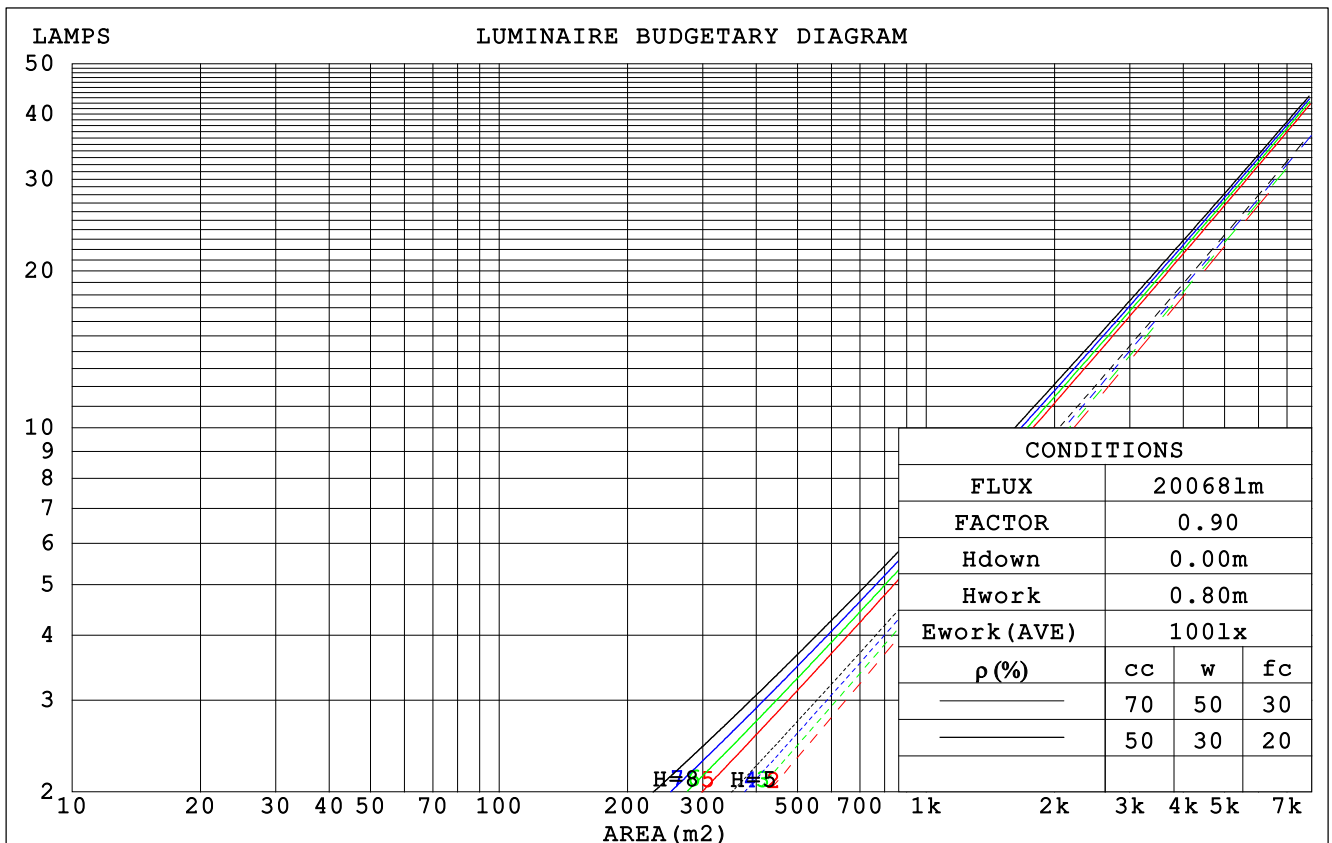


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-23

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

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	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	1.08	1.05	1.02	1.06	1.03	1.00	1.02	.99	.97	.98	.96	.94	.94	.93	.91	.89
2.0	.97	.92	.88	.96	.91	.87	.92	.88	.85	.89	.86	.83	.86	.84	.81	.79
3.0	.88	.82	.77	.87	.81	.76	.84	.79	.75	.81	.77	.73	.79	.75	.72	.70
4.0	.80	.73	.68	.79	.72	.67	.77	.71	.66	.74	.69	.65	.72	.68	.65	.63
5.0	.73	.66	.60	.72	.65	.60	.70	.64	.59	.68	.63	.59	.67	.62	.58	.56
6.0	.67	.59	.54	.66	.59	.54	.64	.58	.53	.63	.57	.53	.61	.56	.52	.51
7.0	.61	.54	.49	.61	.53	.48	.59	.53	.48	.58	.52	.48	.57	.51	.47	.46
8.0	.57	.49	.44	.56	.49	.44	.55	.48	.44	.54	.48	.43	.52	.47	.43	.42
9.0	.52	.45	.40	.52	.45	.40	.51	.44	.40	.50	.44	.40	.49	.43	.40	.38
10.0	.49	.41	.37	.48	.41	.37	.47	.41	.37	.46	.40	.36	.45	.40	.36	.35



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-03-23

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	.233	.132	.042	.226	.129	.041	.213	.122	.039	.201	.116	.037	.190	.110	.036		
2.0	.224	.123	.038	.218	.120	.037	.207	.115	.036	.197	.111	.035	.188	.106	.033		
3.0	.213	.113	.034	.208	.111	.034	.198	.107	.033	.189	.104	.032	.181	.100	.031		
4.0	.202	.105	.031	.197	.103	.030	.189	.100	.030	.181	.097	.029	.173	.094	.029		
5.0	.190	.097	.028	.187	.096	.028	.179	.093	.027	.172	.091	.027	.166	.088	.027		
6.0	.180	.090	.026	.177	.089	.026	.170	.087	.025	.164	.085	.025	.158	.083	.025		
7.0	.171	.084	.024	.167	.083	.024	.161	.082	.024	.156	.080	.023	.151	.078	.023		
8.0	.162	.079	.022	.159	.078	.022	.154	.077	.022	.149	.075	.022	.144	.074	.022		
9.0	.154	.074	.021	.151	.074	.021	.146	.072	.020	.142	.071	.020	.137	.070	.020		
10.0	.146	.070	.019	.144	.069	.019	.139	.068	.019	.135	.067	.019	.131	.066	.019		

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	.175	.157	.140	.150	.135	.121	.102	.093	.084	.059	.054	.049	.019	.017	.016		
2.0	.163	.132	.106	.140	.114	.092	.096	.079	.064	.055	.046	.038	.018	.015	.012		
3.0	.154	.114	.082	.132	.098	.071	.090	.068	.050	.052	.040	.030	.017	.013	.010		
4.0	.145	.100	.065	.125	.086	.057	.086	.060	.040	.050	.035	.024	.016	.011	.008		
5.0	.138	.089	.053	.118	.077	.046	.081	.054	.033	.047	.032	.019	.015	.010	.006		
6.0	.131	.080	.044	.113	.070	.038	.078	.049	.027	.045	.029	.016	.015	.009	.005		
7.0	.125	.073	.037	.107	.063	.032	.074	.044	.023	.043	.026	.014	.014	.009	.005		
8.0	.119	.067	.032	.103	.058	.028	.071	.041	.020	.041	.024	.012	.013	.008	.004		
9.0	.114	.062	.028	.098	.054	.024	.068	.038	.017	.040	.022	.010	.013	.007	.003		
10.0	.109	.058	.024	.094	.050	.021	.065	.036	.015	.038	.021	.009	.012	.007	.003		

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-23

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	23.3	24.6	23.6	24.8	25.0	24.0	25.3	24.2	25.4	25.6
3H	23.4	24.6	23.7	24.8	25.0	24.3	25.4	24.6	25.7	25.9
4H	23.5	24.5	23.8	24.8	25.0	24.5	25.6	24.8	25.8	26.1
6H	23.4	24.4	23.7	24.7	25.0	24.7	25.7	25.0	26.0	26.2
8H	23.4	24.4	23.7	24.6	24.9	24.8	25.8	25.1	26.0	26.3
12H	23.3	24.3	23.7	24.6	24.8	24.8	25.8	25.2	26.1	26.4
4H 2H	23.3	24.4	23.6	24.6	24.9	23.9	25.0	24.2	25.2	25.5
3H	23.5	24.5	23.9	24.7	25.0	24.3	25.3	24.7	25.6	25.9
4H	23.6	24.5	24.0	24.8	25.1	24.7	25.5	25.0	25.8	26.1
6H	23.6	24.4	24.0	24.7	25.1	25.0	25.7	25.4	26.1	26.4
8H	23.6	24.3	24.0	24.7	25.0	25.2	25.8	25.6	26.2	26.6
12H	23.6	24.2	24.0	24.6	25.0	25.3	25.9	25.7	26.3	26.7
8H 4H	23.6	24.3	24.0	24.7	25.1	24.6	25.3	25.0	25.7	26.1
6H	23.7	24.3	24.2	24.7	25.1	25.1	25.7	25.5	26.1	26.5
8H	23.7	24.2	24.2	24.7	25.1	25.3	25.8	25.8	26.2	26.7
12H	23.7	24.2	24.2	24.6	25.1	25.5	26.0	26.0	26.4	26.9
12H 4H	23.6	24.2	24.0	24.6	25.0	24.6	25.2	25.0	25.6	26.0
6H	23.7	24.2	24.2	24.7	25.1	25.1	25.6	25.5	26.0	26.4
8H	23.8	24.2	24.3	24.7	25.1	25.3	25.8	25.8	26.2	26.7
Variations with the observer position at spacings:										
S = 1.0H	+ 1.5 / - 2.6					+ 0.9 / - 1.2				
1.5H	+ 2.2 / - 2.2					+ 1.3 / - 1.1				
2.0H	+ 3.3 / - 2.1					+ 2.3 / - 2.0				

CIE Pub.117 Corrected 20068 lm Total Lamp Luminous Flux.(8log(F/F0) = 10.4)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-23

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:

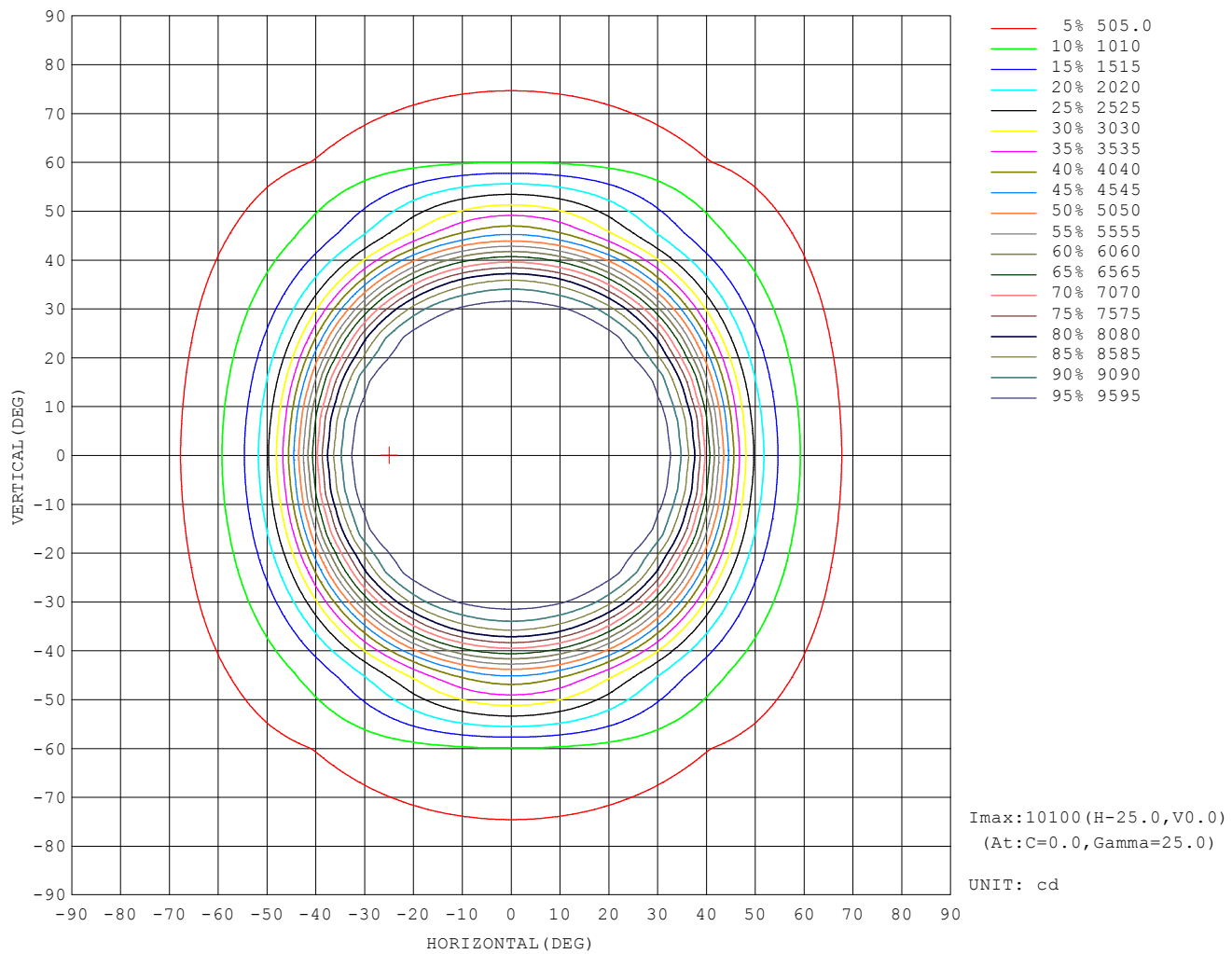
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	72	63	57	71	63	57	70	62	57	52
0.80	81	73	67	81	72	67	79	72	67	61
1.00	89	80	75	88	80	75	86	80	74	69
1.25	94	87	82	93	86	81	91	85	81	75
1.50	98	91	86	97	90	86	94	89	85	79
2.00	103	97	93	101	96	92	98	94	90	84
2.50	106	100	96	104	99	95	100	96	93	86
3.00	108	103	99	106	102	98	102	99	96	89
4.00	111	107	103	108	105	102	104	102	99	91
5.00	112	109	106	110	107	104	106	103	101	93
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: 2017-03-23

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:

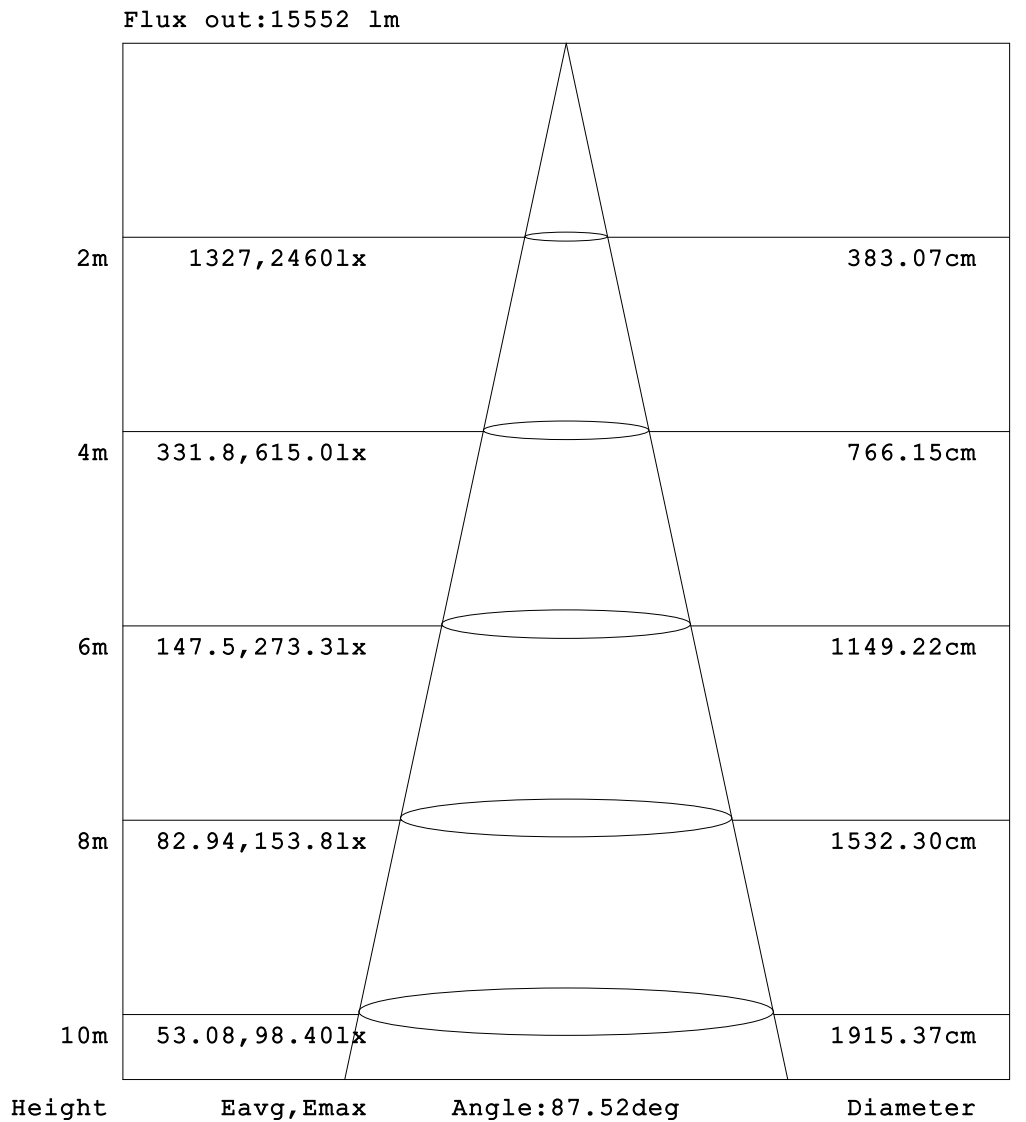
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-23

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

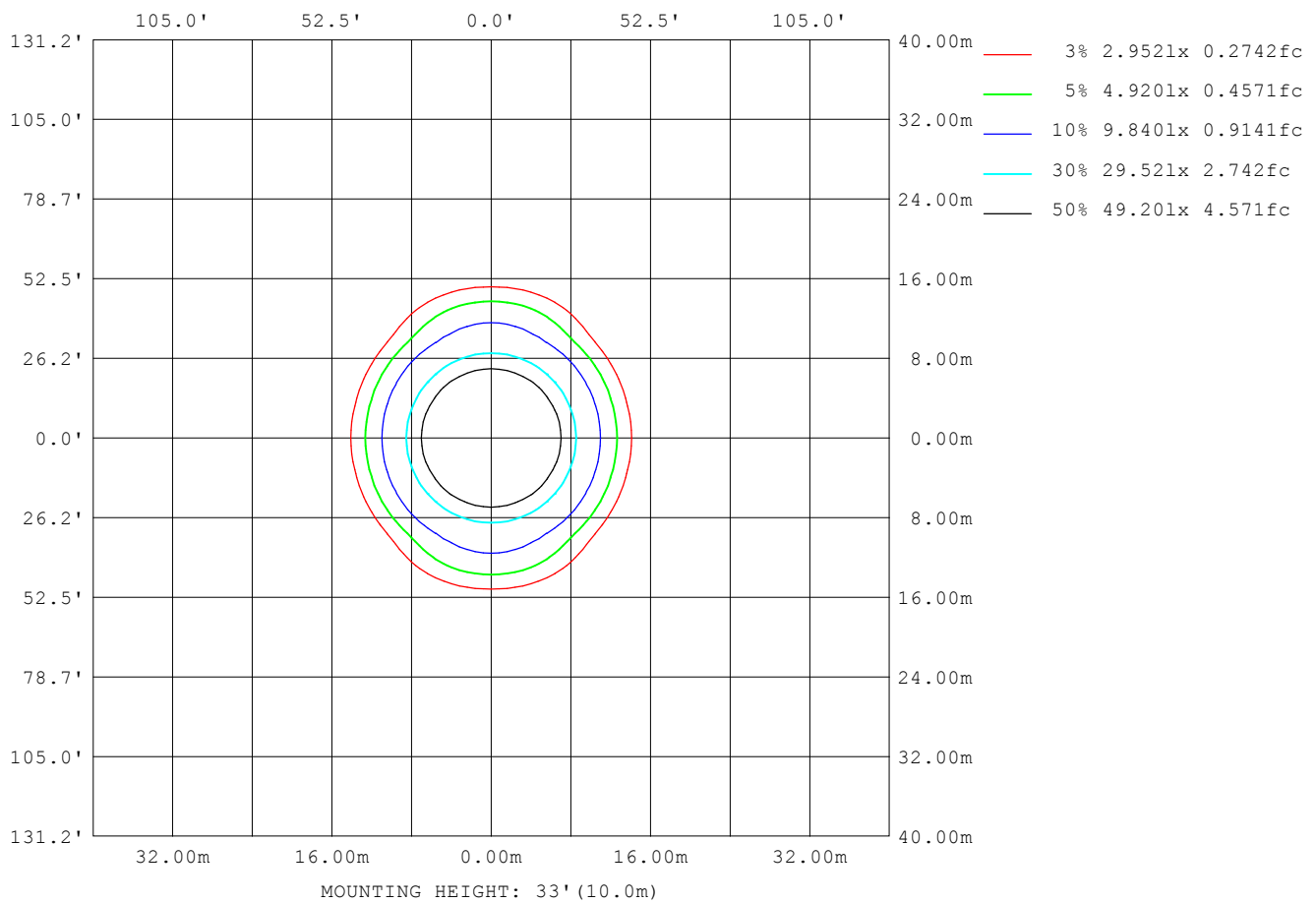


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-23

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: 2017-03-23

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:0.6666A P:148.0W PF:0.9656 Lamp Flux:20067.9x1 lm		
NAME: LHB01-150	TYPE:150W	WEIGHT:
SPEC.:5000K Ra70 90DEG L02805	DIM.: 1.178*0.137*0.102	SERIAL No.:
MFR.:	SUR.:1.17*0.1	Shielding Angle:

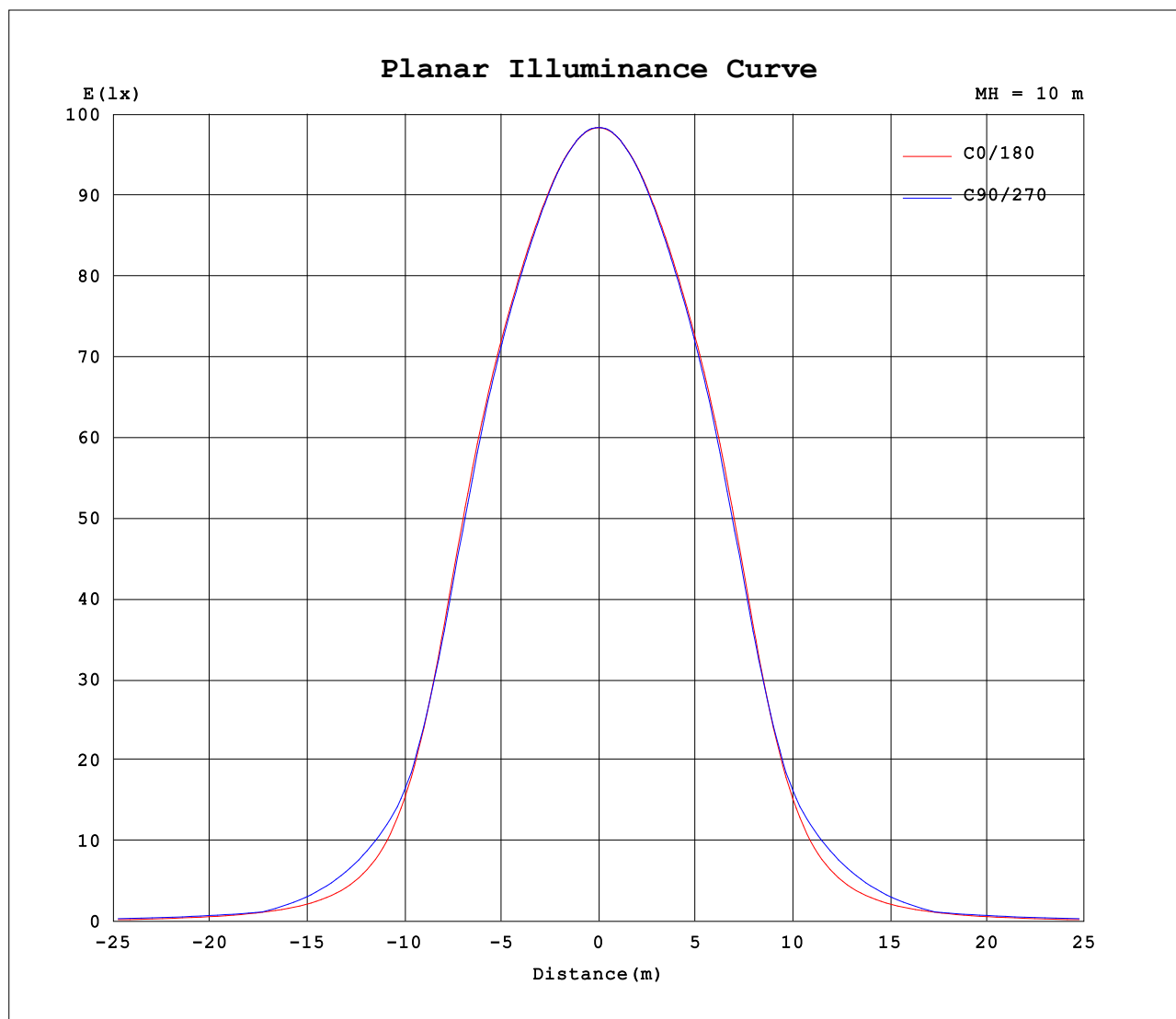
AvgL	cd/m2
L_0~180 (65) av	12716
L_0~180 (75) av	8314
L_0~180 (85) av	1957
L_90~270 (65) av	16547
L_90~270 (75) av	16277
L_90~270 (85) av	16436
L_45 (65) av	13763
L_45 (75) av	10840
L_45 (85) av	10725

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-03-23

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: 2017-03-23

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:

```

```

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:

```