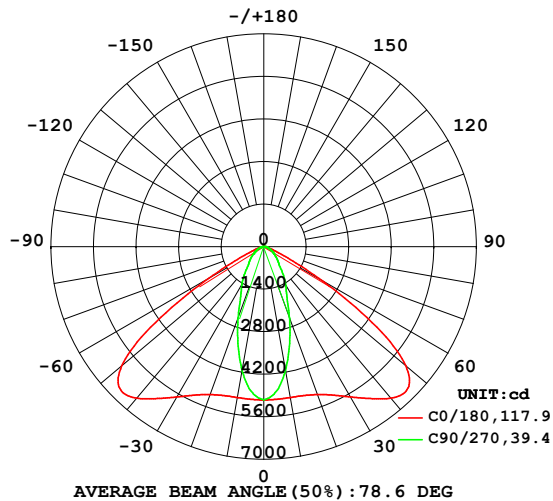


LUMINAIRE PHOTOMETRIC TEST REPORT

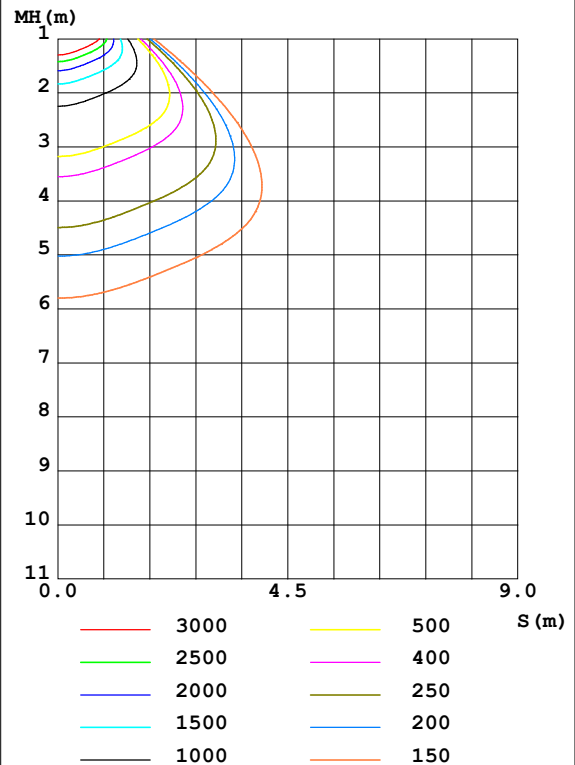
Test:U:230.0V I:0.2695A P:60.95W PF:0.9830 Lamp Flux:8537.74x1 lm		
NAME: LHB01-60H	TYPE:60W	WEIGHT:
SPEC.:5000K Ra80 L06404	DIM.: 0.486*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.466*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 140.08 lm/W			
MODEL	LHB01-60H	Imax(cd)	6678	S/MH(C0/180)	1.83
NOMINAL POWER(W)	60	LOR(%)	100.0	S/MH(C90/270)	0.63
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	8537.7	η UP,DN(C0-180)	0.0,50.2
NOMINAL FLUX(lm)	8537.74	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: 2017-09-28

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	5042	4892	4780	4892	5042	4891	4780	4891	0- 5	118.6	118.6	1.39,1.39
10	5042	4550	4136	4550	5042	4545	4136	4545	5- 10	338.3	456.9	5.35,5.35
15	5076	4032	3300	4032	5076	4021	3300	4021	10- 15	512.9	969.7	11.4,11.4
20	5182	3443	2476	3443	5182	3426	2476	3426	15- 20	635.2	1605	18.8,18.8
25	5392	2842	1812	2842	5392	2820	1812	2820	20- 25	714.2	2319	27.2,27.2
30	5711	2275	1449	2275	5711	2253	1449	2253	25- 30	771.7	3091	36.2,36.2
35	6103	1826	1120	1826	6103	1809	1120	1809	30- 35	825.9	3917	45.9,45.9
40	6508	1548	791.3	1548	6508	1533	791.3	1533	35- 40	867.8	4785	56,56
45	6668	1222	661.6	1222	6668	1213	661.6	1213	40- 45	891.9	5676	66.5,66.5
50	6103	836.8	532.0	836.8	6103	836.3	532.0	836.3	45- 50	878.1	6555	76.8,76.8
55	4355	682.3	407.2	682.3	4355	683.1	407.2	683.1	50- 55	764.6	7319	85.7,85.7
60	2097	504.9	322.3	504.9	2097	506.3	322.3	506.3	55- 60	529.7	7849	91.9,91.9
65	794.7	334.9	242.3	334.9	794.7	335.1	242.3	335.1	60- 65	302.5	8151	95.5,95.5
70	333.7	238.7	162.3	238.7	333.7	237.5	162.3	237.5	65- 70	172.2	8324	97.5,97.5
75	158.4	141.4	122.3	141.4	158.4	138.6	122.3	138.6	70- 75	103.1	8427	98.7,98.7
80	84.79	91.07	82.36	91.07	84.79	88.71	82.36	88.71	75- 80	63.30	8490	99.4,99.4
85	15.37	47.09	42.40	47.09	15.37	45.66	42.40	45.66	80- 85	35.48	8525	99.9,99.9
90	3.059	3.283	2.438	3.283	3.059	2.975	2.438	2.975	85- 90	12.35	8538	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): 5676.4 lm

%lum = 66.5%

%lamp = 66.5%

Conical surface Flux(120deg): 7848.8 lm

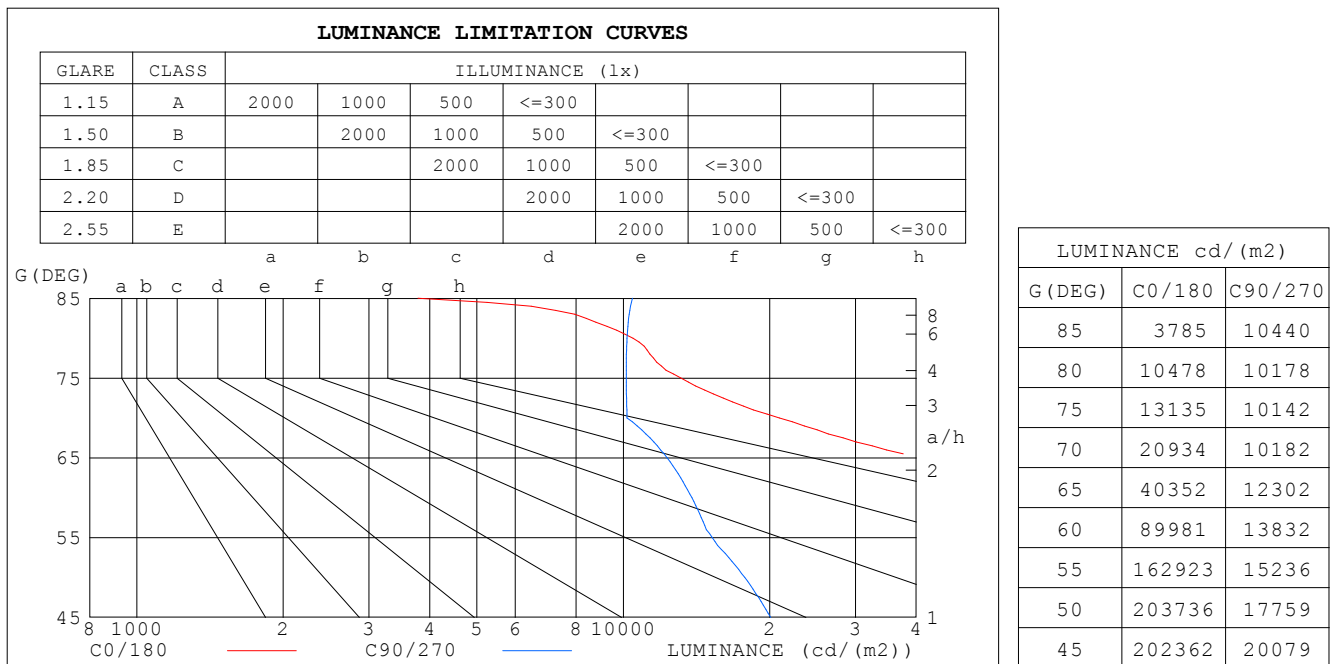
%lum = 91.9%

%lamp = 91.9%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-09-28

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

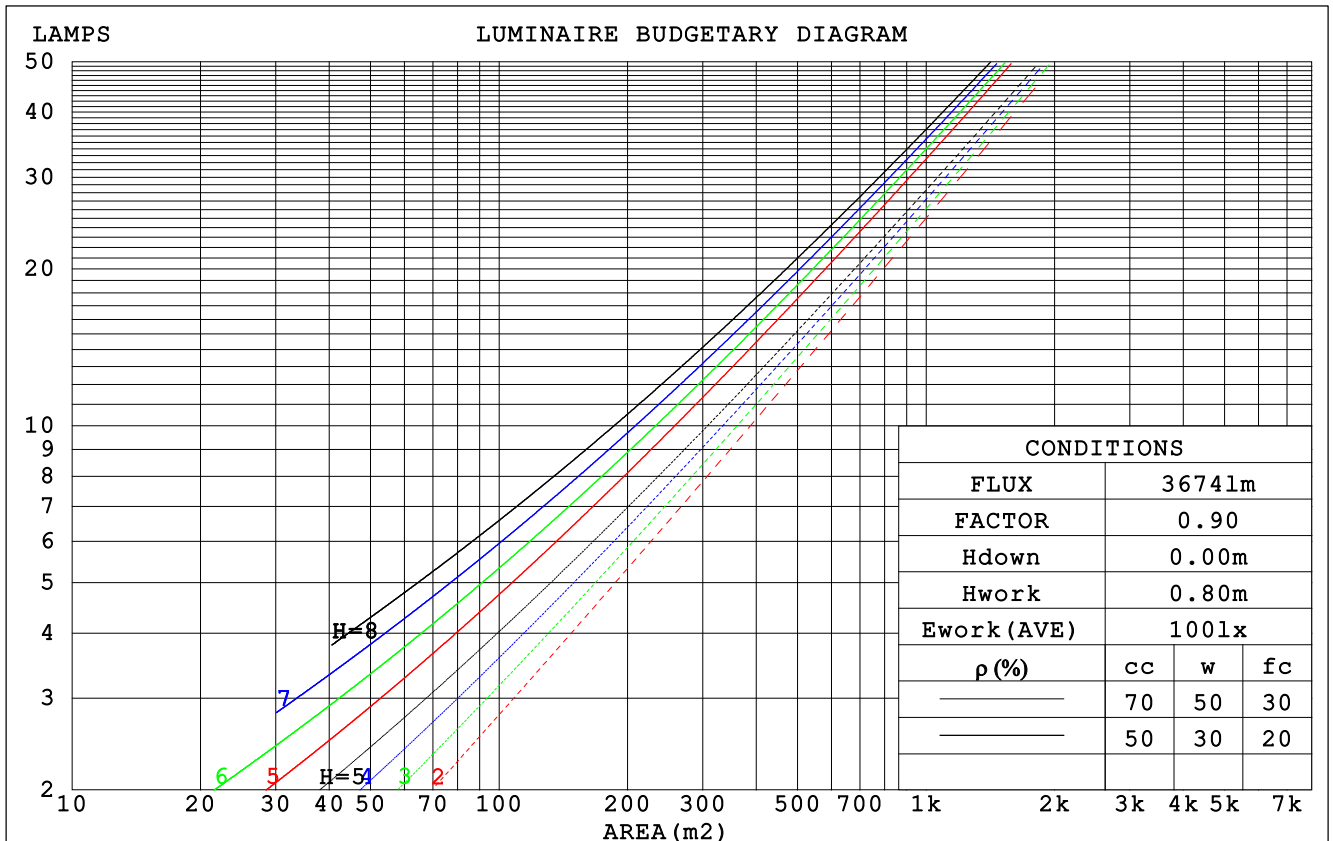


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-09-28

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	1.00
1.0	1.07	1.04	1.01	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	.73	.81	.76	.71	.79	.74	.70	.76	.72	.69	.67
4.0	.77	.69	.64	.76	.69	.63	.73	.67	.62	.71	.66	.61	.69	.65	.61	.59
5.0	.70	.62	.56	.69	.61	.56	.67	.60	.55	.65	.59	.54	.63	.58	.54	.52
6.0	.63	.55	.49	.62	.55	.49	.61	.54	.49	.59	.53	.48	.58	.52	.48	.46
7.0	.58	.50	.44	.57	.50	.44	.56	.49	.44	.54	.48	.44	.53	.47	.43	.41
8.0	.53	.45	.40	.53	.45	.40	.51	.44	.40	.50	.44	.39	.49	.43	.39	.37
9.0	.49	.41	.36	.49	.41	.36	.47	.41	.36	.46	.40	.36	.45	.40	.36	.34
10.0	.46	.38	.33	.45	.38	.33	.44	.38	.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: 2017-09-28

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	.248	.141	.045	.242	.138	.044	.229	.131	.042	.217	.125	.040	.206	.119	.038	
2.0	.241	.132	.041	.235	.130	.040	.224	.125	.039	.214	.120	.038	.204	.115	.036	
3.0	.229	.122	.037	.224	.120	.036	.214	.116	.035	.205	.112	.034	.197	.109	.034	
4.0	.216	.112	.033	.212	.111	.033	.203	.108	.032	.195	.105	.032	.187	.102	.031	
5.0	.204	.104	.030	.199	.102	.030	.192	.100	.029	.185	.097	.029	.178	.095	.029	
6.0	.191	.096	.027	.188	.095	.027	.181	.093	.027	.175	.091	.027	.169	.089	.026	
7.0	.180	.089	.025	.177	.088	.025	.171	.086	.025	.165	.085	.025	.160	.083	.024	
8.0	.170	.083	.023	.167	.082	.023	.162	.081	.023	.156	.079	.023	.152	.078	.023	
9.0	.161	.078	.022	.158	.077	.022	.153	.076	.021	.148	.074	.021	.144	.073	.021	
10.0	.152	.073	.020	.150	.072	.020	.145	.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	.048	.032	.019	.016	.010	.006	
6.0	.135	.081	.042	.116	.070	.037	.080	.049	.026	.046	.029	.016	.015	.009	.005	
7.0	.128	.074	.036	.110	.064	.031	.076	.045	.022	.044	.026	.013	.014	.009	.004	
8.0	.122	.068	.031	.105	.059	.027	.073	.041	.019	.042	.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:2017-09-28

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	30.9	32.2	31.1	32.4	32.6	19.3	20.7	19.6	20.9	21.1
3H	30.9	32.1	31.2	32.3	32.6	20.0	21.2	20.3	21.4	21.7
4H	30.8	32.0	31.1	32.2	32.5	20.3	21.4	20.6	21.7	21.9
6H	30.8	31.8	31.1	32.1	32.4	20.5	21.6	20.9	21.9	22.2
8H	30.7	31.8	31.0	32.0	32.3	20.7	21.7	21.0	22.0	22.3
12H	30.7	31.7	31.0	32.0	32.3	20.7	21.8	21.1	22.0	22.3
4H 2H	30.6	31.8	30.9	32.0	32.3	20.6	21.8	20.9	22.0	22.2
3H	30.7	31.7	31.0	32.0	32.3	21.2	22.2	21.6	22.5	22.8
4H	30.7	31.6	31.0	31.9	32.2	21.6	22.5	21.9	22.8	23.1
6H	30.6	31.4	31.0	31.8	32.1	21.9	22.7	22.3	23.0	23.4
8H	30.6	31.3	31.0	31.7	32.1	22.0	22.8	22.4	23.1	23.5
12H	30.6	31.2	31.0	31.6	32.0	22.2	22.8	22.6	23.2	23.6
8H 4H	30.5	31.3	30.9	31.6	32.0	21.8	22.6	22.2	22.9	23.3
6H	30.5	31.1	31.0	31.5	32.0	22.3	22.9	22.7	23.3	23.7
8H	30.5	31.0	31.0	31.5	31.9	22.5	23.0	22.9	23.4	23.9
12H	30.5	30.9	31.0	31.4	31.9	22.7	23.1	23.2	23.6	24.1
12H 4H	30.5	31.2	30.9	31.6	32.0	21.8	22.5	22.2	22.9	23.3
6H	30.5	31.0	30.9	31.4	31.9	22.3	22.9	22.8	23.3	23.7
8H	30.5	30.9	31.0	31.4	31.9	22.6	23.0	23.1	23.5	24.0
Variations with the observer position at spacings:										
S = 1.0H	+ 0.6 / - 1.4					+ 0.7 / - 0.8				
1.5H	+ 3.2 / - 5.6					+ 0.5 / - 0.7				
2.0H	+ 4.3 / - 7.4					+ 0.6 / - 0.7				

CIE Pub.117 Corrected 8538 lm Total Lamp Luminous Flux.(8log(F/F0) = 7.5)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-09-28

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:

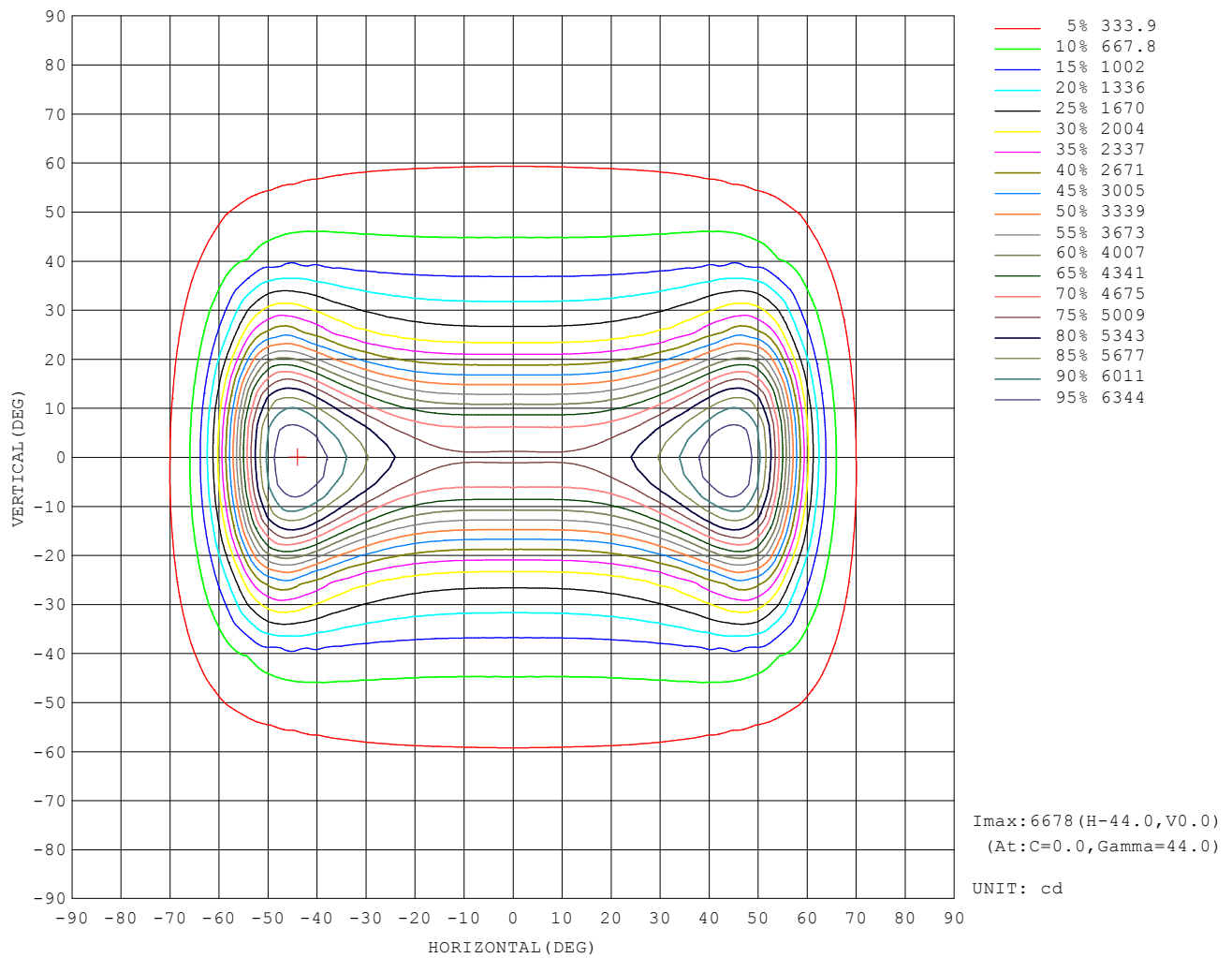
UTILIZATION FACTORS TABLE

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	53	46	63	53	46	62	52	46	40
0.80	74	64	57	73	63	57	71	63	57	50
1.00	83	73	67	82	73	67	80	74	66	60
1.25	90	81	75	88	80	74	86	79	74	67
1.50	94	86	80	93	85	80	90	84	79	72
2.00	100	93	88	98	92	87	95	90	86	79
2.50	103	97	92	101	96	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	97	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: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-09-28

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:

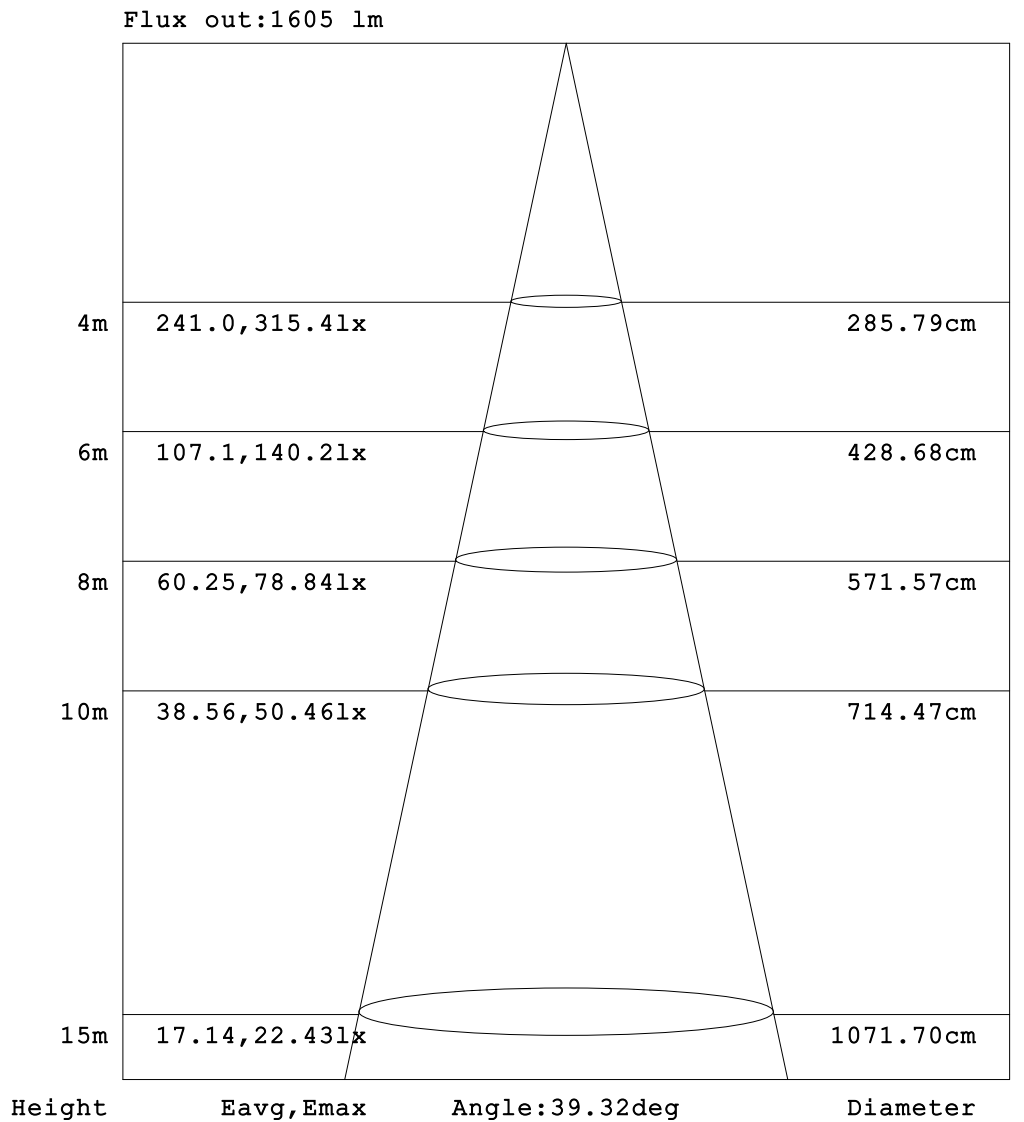
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-09-28

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

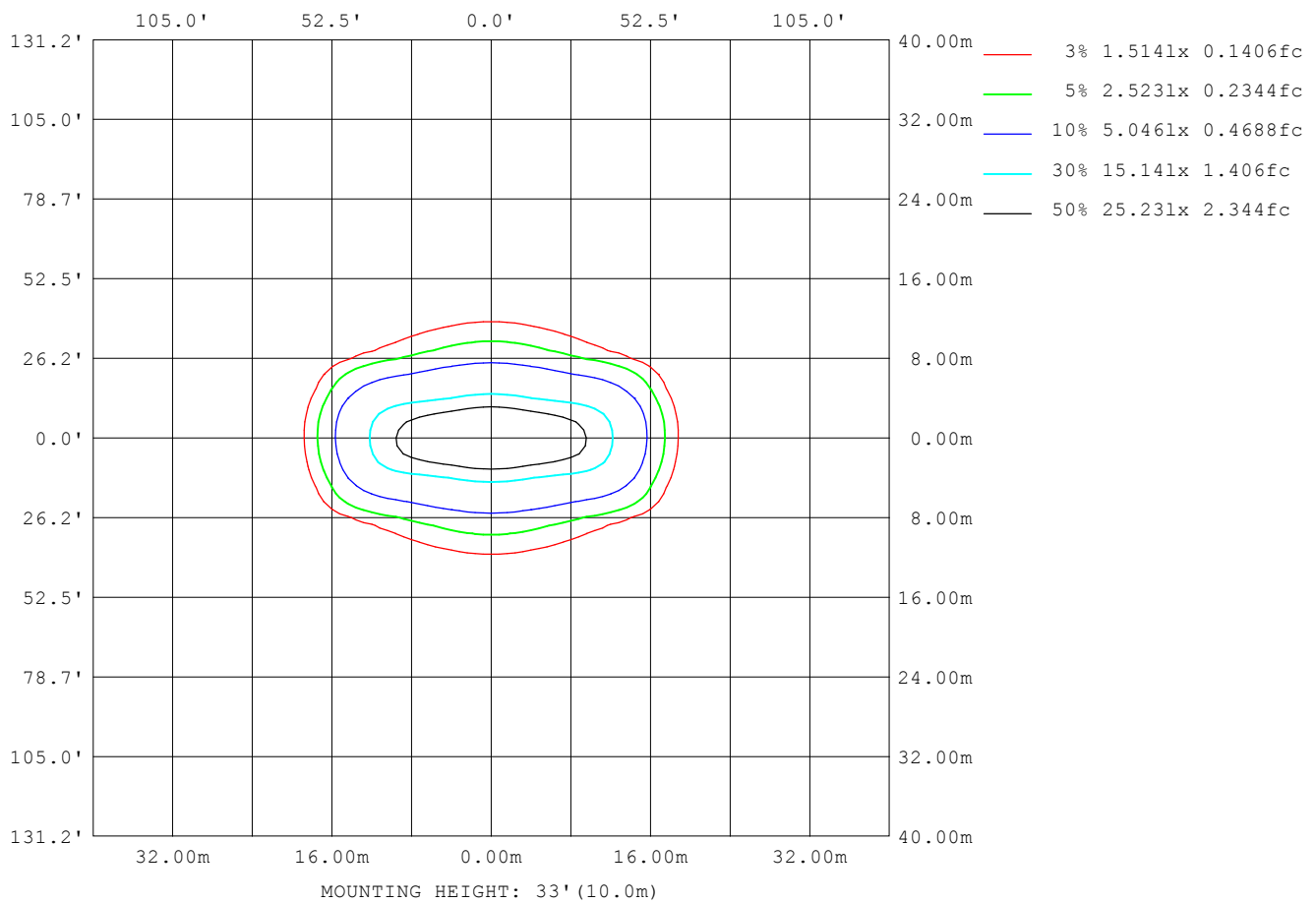


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-09-28

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:2017-09-28

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:0.2695A P:60.95W PF:0.9830 Lamp Flux:8537.74x1 lm		
NAME: LHB01-60H	TYPE:60W	WEIGHT:
SPEC.:5000K Ra80 L06404	DIM.: 0.486*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.466*0.1	Shielding Angle:

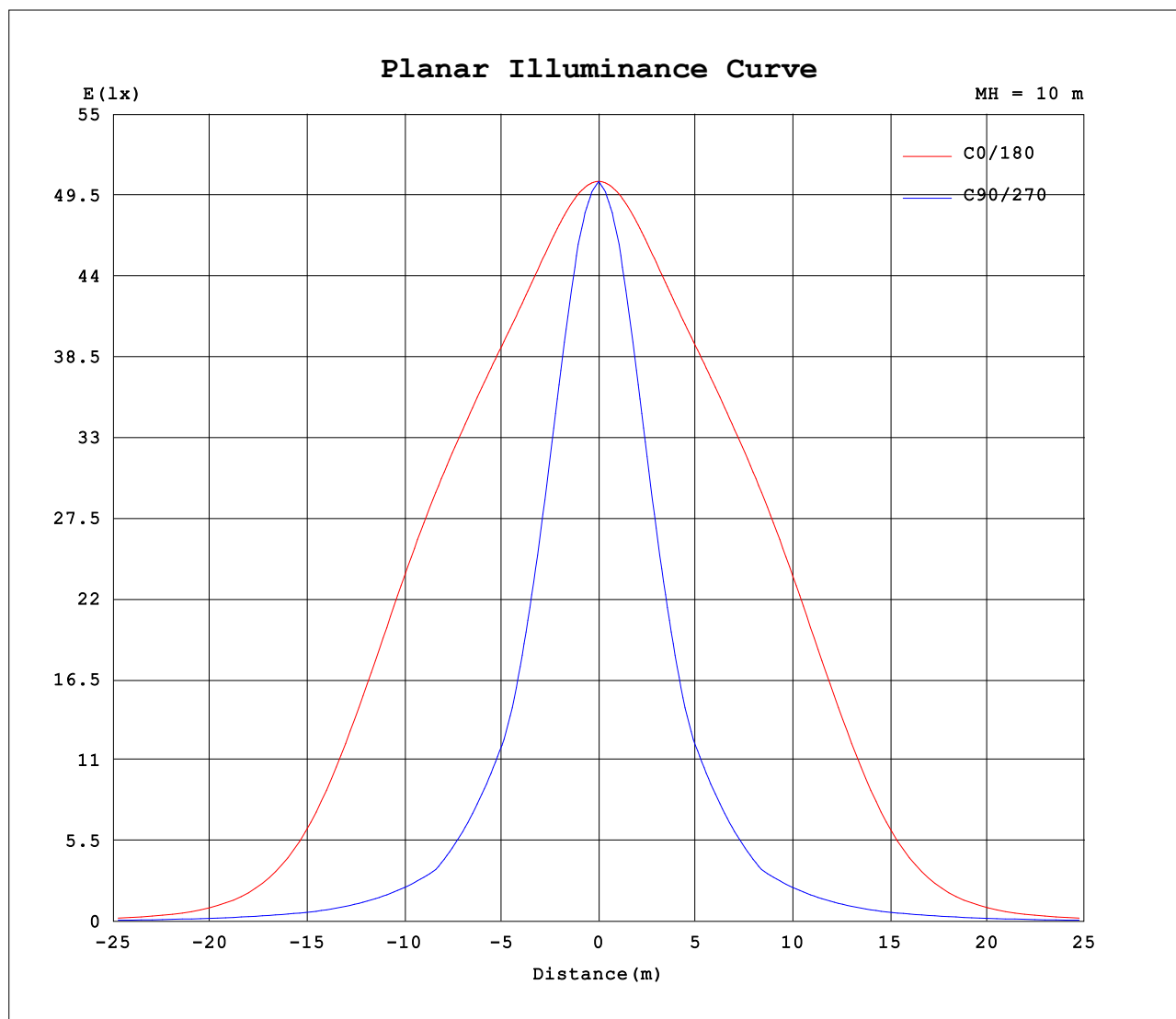
AvgL	cd/m2
L_0~180 (65) av	40352
L_0~180 (75) av	13135
L_0~180 (85) av	3785
L_90~270 (65) av	12302
L_90~270 (75) av	10142
L_90~270 (85) av	10440
L_45 (65) av	17008
L_45 (75) av	11609
L_45 (85) av	11418

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-09-28

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: 2017-09-28

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:

```

UNIT: cd

```

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:

```