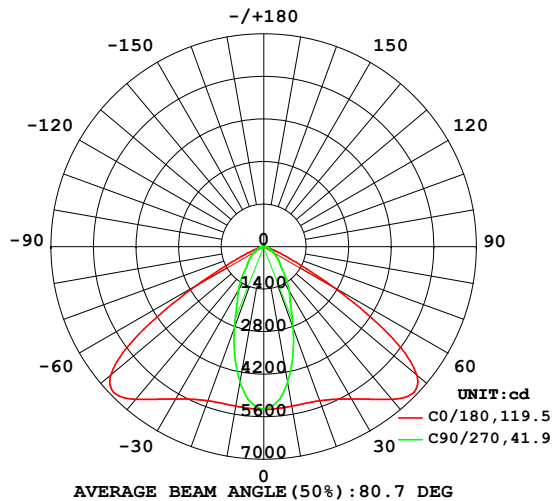


LUMINAIRE PHOTOMETRIC TEST REPORT

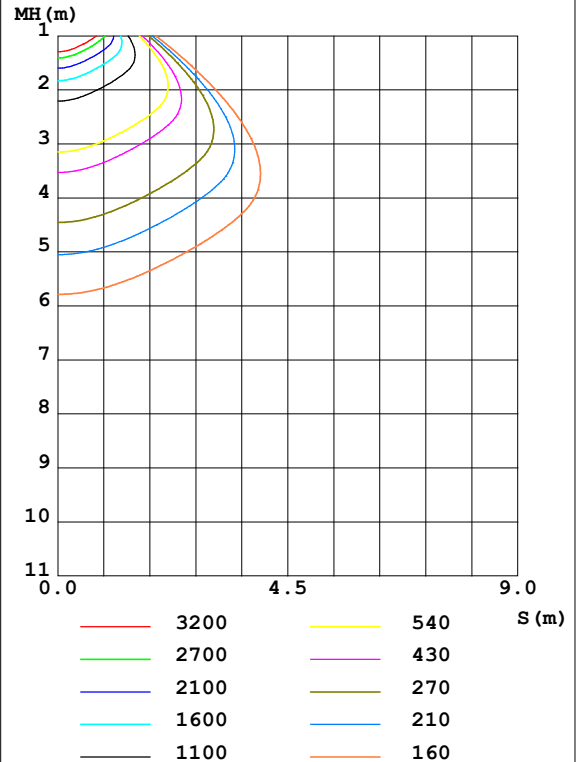
Test:U:230.0V I:0.2678A P:60.58W PF:0.9834 Lamp Flux:9341.72x1 lm		
NAME: LHB01-60H	TYPE:60W	WEIGHT:
SPEC.:5000K Ra70 L06404	DIM.: 0.486*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.466*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 154.21 lm/W			
MODEL	LHB01-60H	Imax(cd)	6884	S/MH(C0/180)	1.85
NOMINAL POWER(W)	60	LOR(%)	100.0	S/MH(C90/270)	0.66
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	9341.7	η UP,DN(C0-180)	0.0,50.2
NOMINAL FLUX(lm)	9341.72	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	0.85

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	5346	5218	5123	5218	5346	5216	5123	5216	0- 5	126.2	126.2	1.35,1.35
10	5330	4901	4524	4901	5330	4894	4524	4894	5- 10	362.3	488.5	5.23,5.23
15	5336	4402	3702	4402	5336	4390	3702	4390	10- 15	554.5	1043	11.2,11.2
20	5398	3818	2831	3818	5398	3799	2831	3799	15- 20	691.4	1734	18.6,18.6
25	5543	3188	2102	3188	5543	3164	2102	3164	20- 25	778.0	2512	26.9,26.9
30	5787	2576	1674	2576	5787	2550	1674	2550	25- 30	836.0	3348	35.8,35.8
35	6130	2089	1282	2089	6130	2065	1282	2065	30- 35	886.2	4235	45.3,45.3
40	6555	1765	888.9	1765	6555	1740	888.9	1740	35- 40	923.3	5158	55.2,55.2
45	6875	1392	740.5	1392	6875	1371	740.5	1371	40- 45	949.0	6107	65.4,65.4
50	6573	954.4	592.1	954.4	6573	941.4	592.1	941.4	45- 50	951.5	7058	75.6,75.6
55	5003	783.0	449.5	783.0	5003	772.7	449.5	772.7	50- 55	860.4	7919	84.8,84.8
60	2558	581.7	353.6	581.7	2558	575.8	353.6	575.8	55- 60	624.4	8543	91.5,91.5
65	969.4	383.0	263.4	383.0	969.4	381.3	263.4	381.3	60- 65	362.0	8905	95.3,95.3
70	389.4	268.7	173.2	268.7	389.4	267.1	173.2	267.1	65- 70	200.7	9106	97.5,97.5
75	172.0	151.6	130.6	151.6	172.0	149.8	130.6	149.8	70- 75	115.8	9222	98.7,98.7
80	89.14	96.42	87.96	96.42	89.14	94.93	87.96	94.93	75- 80	68.89	9291	99.5,99.5
85	15.89	49.83	45.31	49.83	15.89	48.87	45.31	48.87	80- 85	37.95	9329	99.9,99.9
90	3.633	3.539	2.670	3.539	3.633	3.218	2.670	3.218	85- 90	13.20	9342	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): 6106.9 lm

%lum = 65.4%

%lamp = 65.4%

Conical surface Flux(120deg): 8543.2 lm

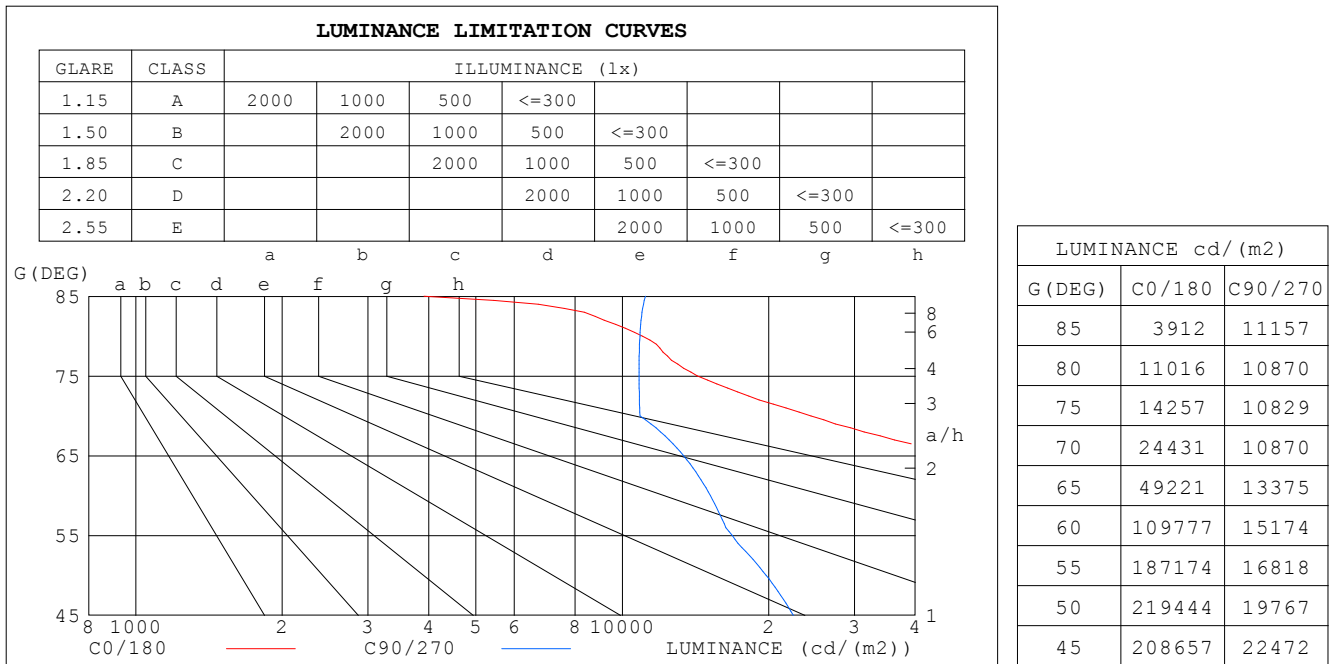
%lum = 91.5%

%lamp = 91.5%

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

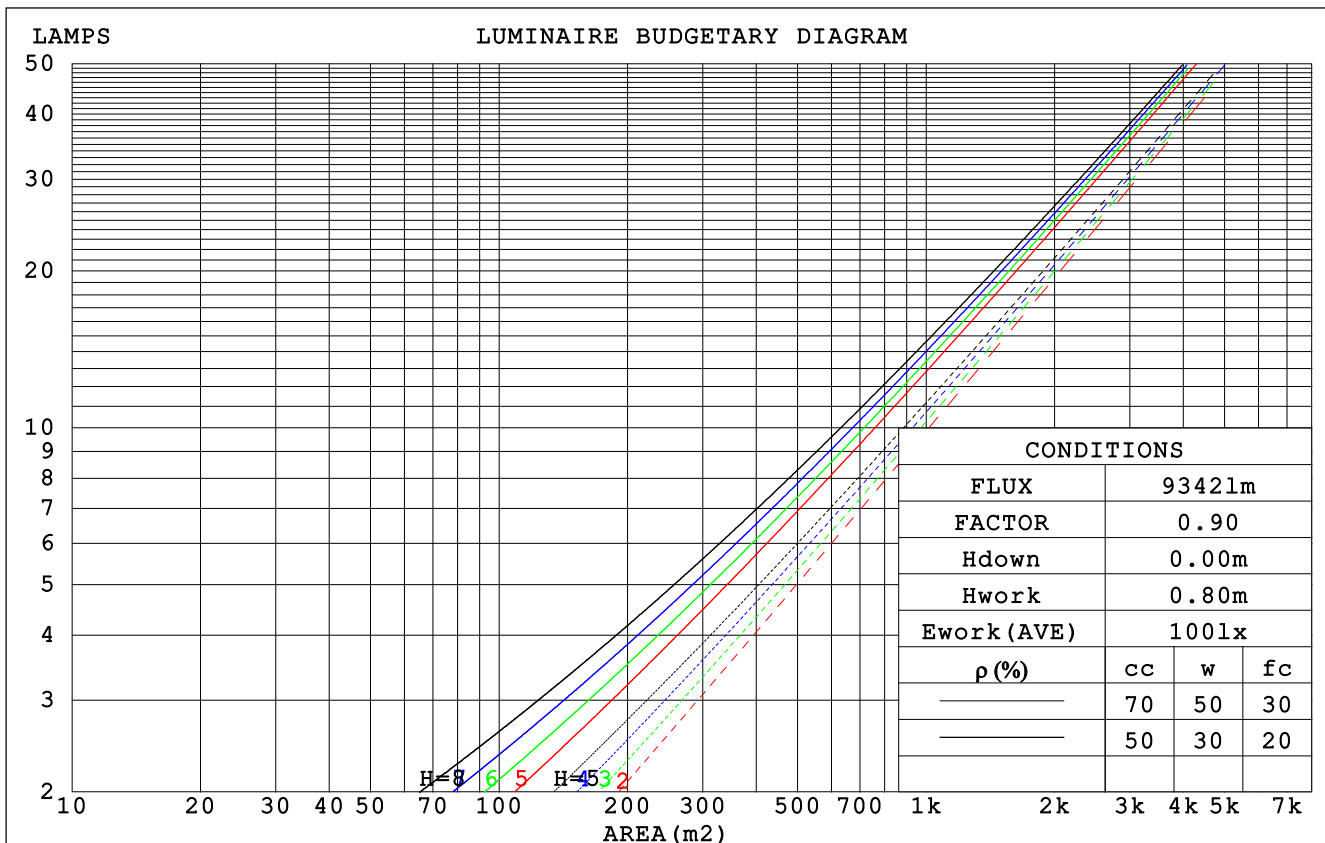


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-09-26

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

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	1.03	1.00	1.05	1.02	.99	1.01	.98	.96	.97	.95	.93	.93	.92	.90	.88
2.0	.95	.90	.85	.94	.88	.84	.90	.86	.82	.87	.83	.80	.84	.81	.78	.76
3.0	.85	.78	.73	.84	.77	.72	.81	.75	.71	.78	.74	.70	.76	.72	.69	.67
4.0	.77	.69	.63	.75	.68	.63	.73	.67	.62	.71	.65	.61	.69	.64	.60	.58
5.0	.69	.61	.55	.68	.61	.55	.66	.60	.54	.64	.58	.54	.63	.57	.53	.51
6.0	.63	.55	.49	.62	.54	.49	.60	.53	.48	.59	.53	.48	.57	.52	.48	.46
7.0	.57	.49	.44	.57	.49	.44	.55	.48	.43	.54	.48	.43	.53	.47	.43	.41
8.0	.53	.45	.40	.52	.45	.39	.51	.44	.39	.50	.43	.39	.49	.43	.39	.37
9.0	.49	.41	.36	.48	.41	.36	.47	.40	.36	.46	.40	.35	.45	.39	.35	.34
10.0	.45	.38	.33	.45	.38	.33	.44	.37	.33	.43	.37	.32	.42	.36	.32	.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	.250	.142	.045	.243	.139	.044	.230	.132	.042	.219	.126	.040	.208	.120	.039	
2.0	.243	.133	.041	.237	.131	.040	.226	.126	.039	.216	.121	.038	.206	.117	.037	
3.0	.231	.123	.037	.226	.121	.036	.216	.117	.036	.207	.113	.035	.199	.110	.034	
4.0	.218	.113	.033	.213	.112	.033	.205	.109	.032	.197	.106	.032	.189	.103	.031	
5.0	.205	.104	.030	.201	.103	.030	.193	.101	.030	.186	.098	.029	.179	.096	.029	
6.0	.193	.097	.028	.189	.096	.027	.182	.093	.027	.176	.091	.027	.170	.089	.027	
7.0	.181	.090	.025	.178	.089	.025	.172	.087	.025	.166	.085	.025	.161	.084	.025	
8.0	.171	.084	.023	.168	.083	.023	.163	.081	.023	.157	.080	.023	.152	.078	.023	
9.0	.161	.078	.022	.159	.077	.022	.154	.076	.022	.149	.075	.021	.145	.074	.021	
10.0	.153	.073	.020	.150	.073	.020	.146	.071	.020	.142	.070	.020	.138	.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	.135	.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	.007	
5.0	.142	.090	.051	.122	.078	.044	.084	.054	.031	.049	.032	.019	.016	.010	.006	
6.0	.135	.081	.042	.116	.070	.037	.080	.049	.026	.047	.029	.015	.015	.009	.005	
7.0	.129	.074	.036	.111	.064	.031	.077	.045	.022	.044	.026	.013	.014	.009	.004	
8.0	.123	.068	.031	.106	.059	.027	.073	.042	.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	.097	.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	31.4	32.7	31.6	32.9	33.1	19.8	21.2	20.1	21.4	21.6
3H	31.4	32.6	31.7	32.9	33.1	20.4	21.7	20.7	21.9	22.1
4H	31.3	32.5	31.7	32.8	33.0	20.7	21.8	21.0	22.1	22.3
6H	31.3	32.4	31.6	32.6	32.9	20.9	22.0	21.2	22.3	22.6
8H	31.2	32.3	31.6	32.6	32.8	21.0	22.1	21.4	22.4	22.6
12H	31.2	32.2	31.5	32.5	32.8	21.1	22.1	21.4	22.4	22.7
4H 2H	31.1	32.3	31.4	32.5	32.8	21.2	22.4	21.5	22.6	22.9
3H	31.2	32.2	31.5	32.5	32.8	21.8	22.8	22.1	23.1	23.4
4H	31.2	32.1	31.6	32.4	32.7	22.1	23.0	22.4	23.3	23.6
6H	31.1	31.9	31.5	32.3	32.7	22.4	23.2	22.7	23.5	23.9
8H	31.1	31.9	31.5	32.2	32.6	22.5	23.2	22.9	23.6	24.0
12H	31.1	31.8	31.5	32.1	32.5	22.6	23.3	23.0	23.7	24.1
8H 4H	31.1	31.8	31.5	32.2	32.6	22.3	23.0	22.7	23.4	23.8
6H	31.0	31.7	31.5	32.1	32.5	22.7	23.3	23.1	23.7	24.1
8H	31.0	31.6	31.5	32.0	32.4	22.9	23.4	23.4	23.9	24.3
12H	31.0	31.5	31.5	31.9	32.4	23.1	23.5	23.6	24.0	24.5
12H 4H	31.0	31.7	31.4	32.1	32.5	22.3	23.0	22.7	23.4	23.8
6H	31.0	31.6	31.5	32.0	32.4	22.8	23.3	23.2	23.7	24.2
8H	31.0	31.5	31.5	31.9	32.4	23.0	23.4	23.5	23.9	24.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.7 / - 1.2					+ 0.8 / - 1.0				
1.5H	+ 3.2 / - 5.1					+ 0.6 / - 0.7				
2.0H	+ 4.1 / - 7.4					+ 0.7 / - 0.8				

CIE Pub.117 Corrected 9342 lm Total Lamp Luminous Flux.(8log(F/F0) = 7.8)

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:

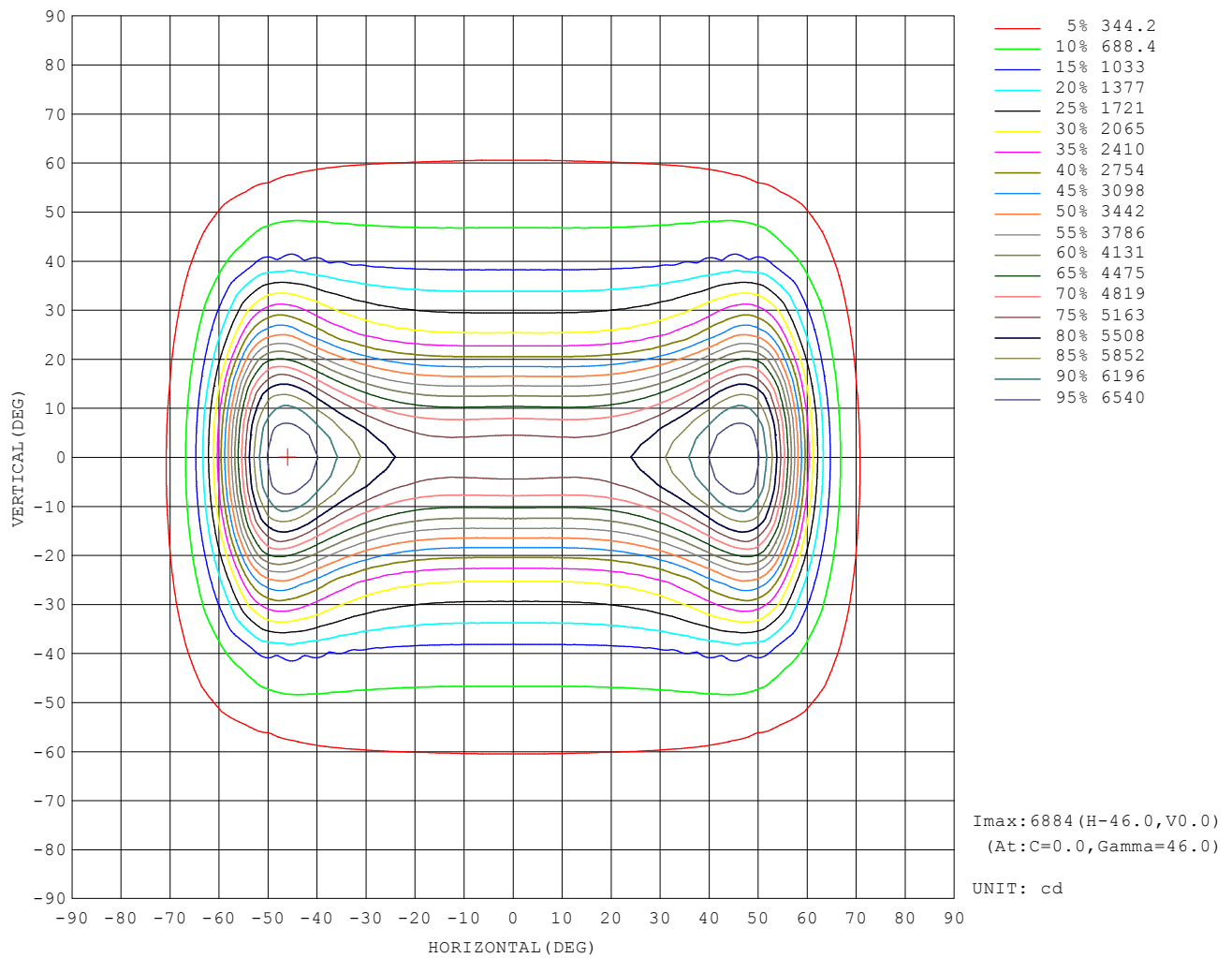
UTILIZATION FACTORS TABLE

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	51	45	39
0.80	73	63	57	73	63	56	71	62	56	50
1.00	82	73	66	81	72	66	79	73	66	59
1.25	89	80	74	88	80	74	85	78	73	67
1.50	94	86	80	92	85	79	90	83	78	72
2.00	100	93	88	98	92	87	95	90	85	78
2.50	103	97	92	101	95	91	97	93	89	81
3.00	106	100	96	104	99	95	100	96	92	85
4.00	109	104	100	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:

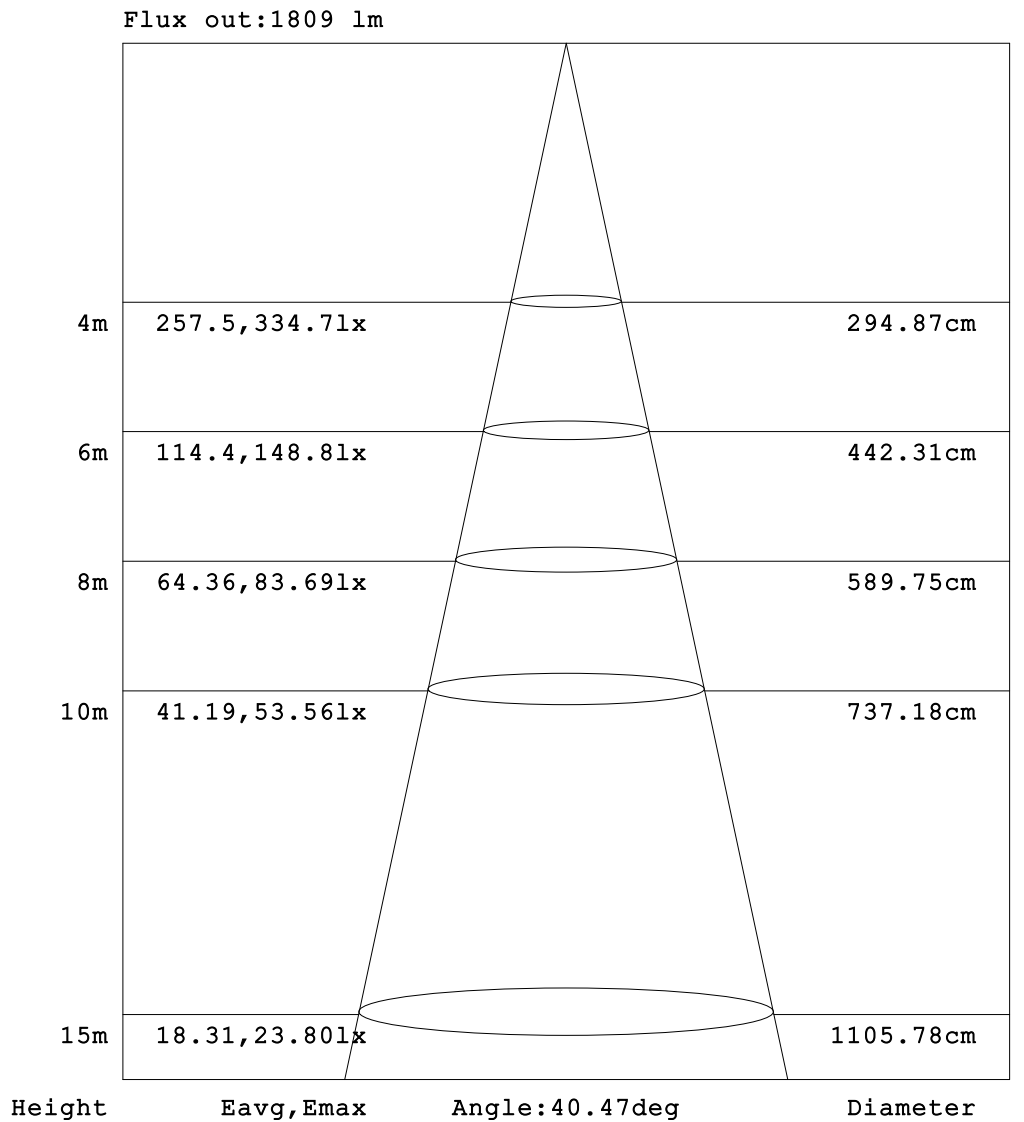
ISOCANDELA DIAGRAM



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

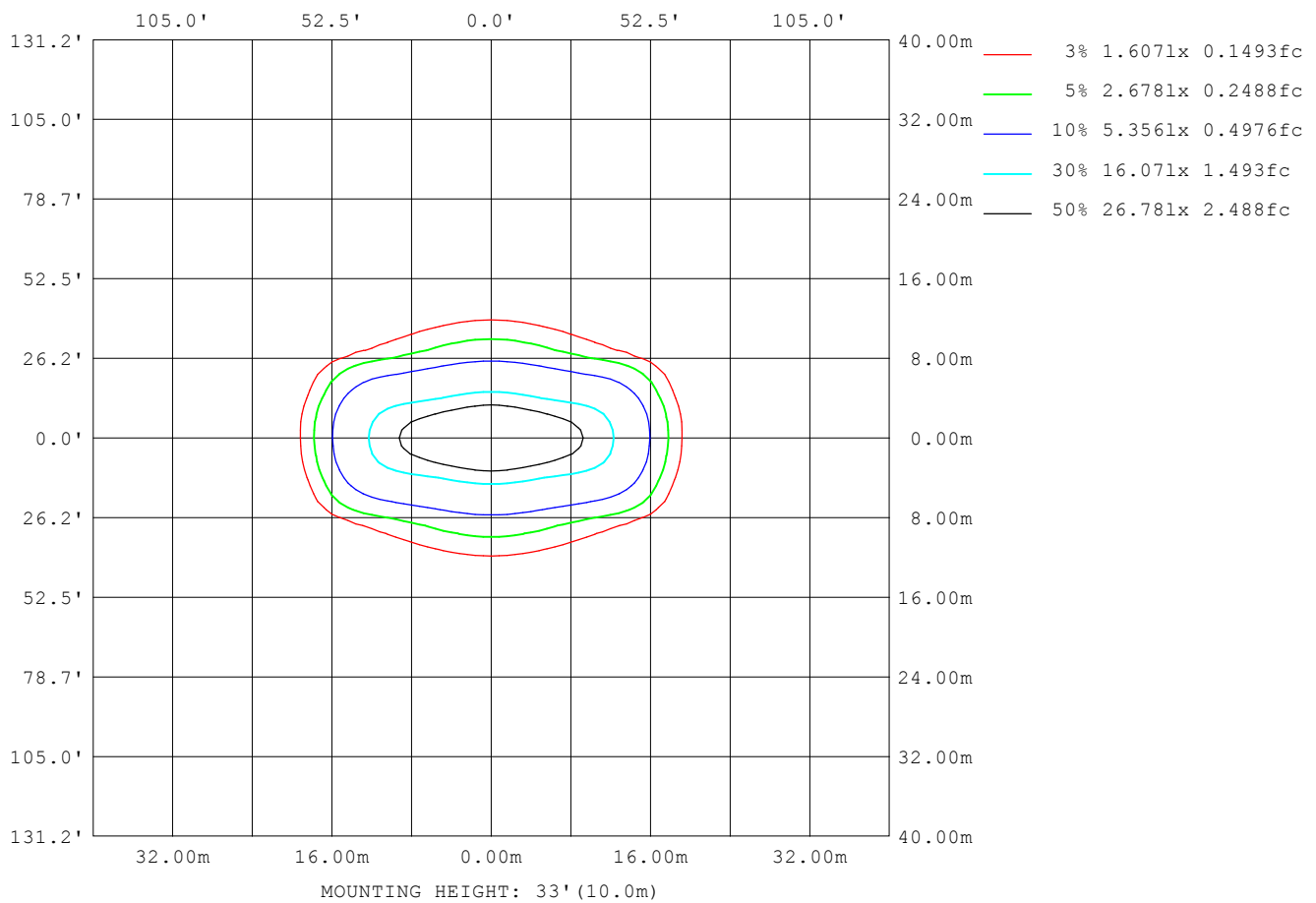


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 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:

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:0.2678A P:60.58W PF:0.9834 Lamp Flux:9341.72x1 lm		
NAME: LHB01-60H	TYPE:60W	WEIGHT:
SPEC.:5000K Ra70 L06404	DIM.: 0.486*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.466*0.1	Shielding Angle:

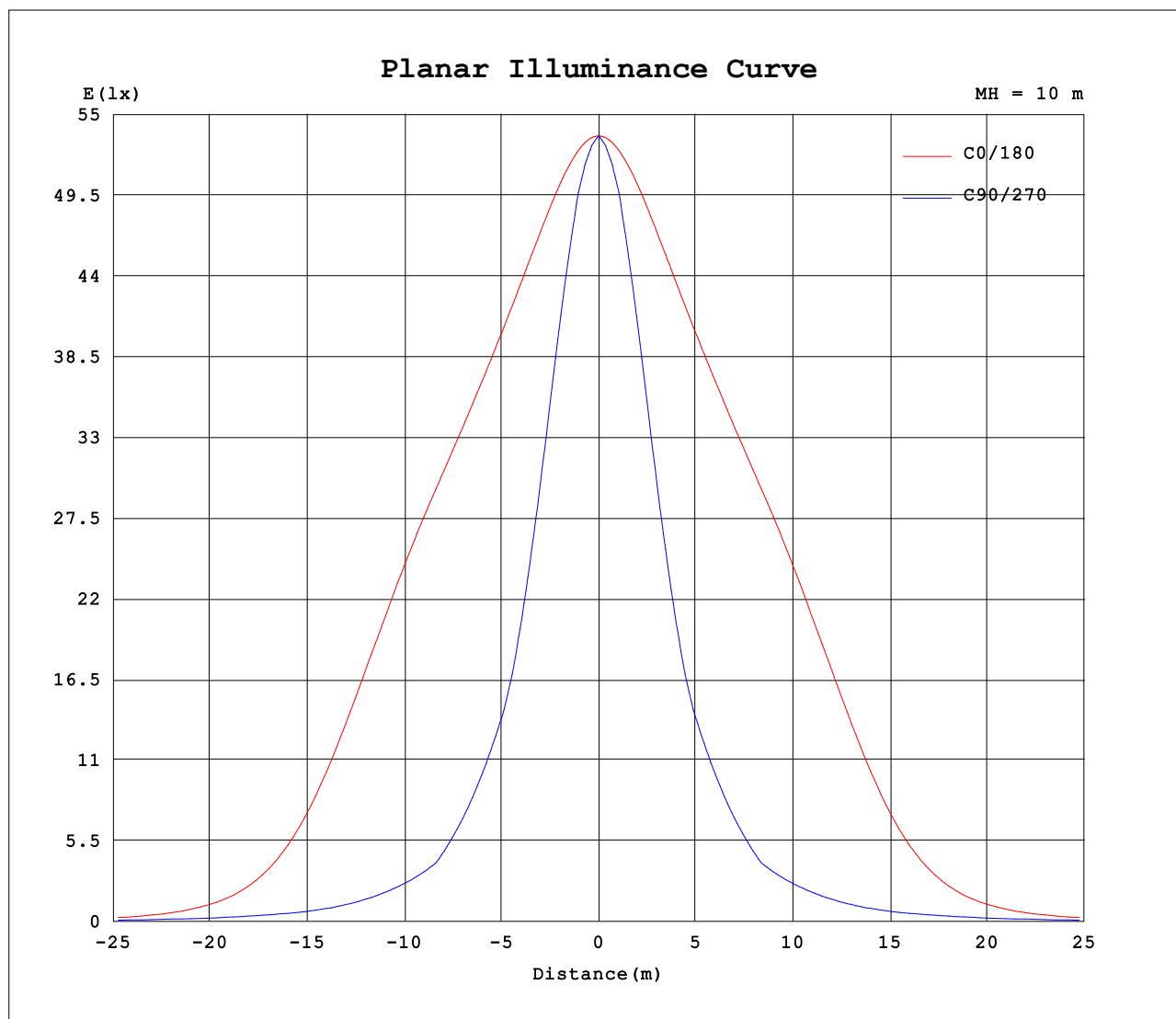
AvgL	cd/m2
L_0~180 (65) av	49221
L_0~180 (75) av	14257
L_0~180 (85) av	3912
L_90~270 (65) av	13375
L_90~270 (75) av	10829
L_90~270 (85) av	11157
L_45 (65) av	19404
L_45 (75) av	12491
L_45 (85) av	12151

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:

```

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:

```