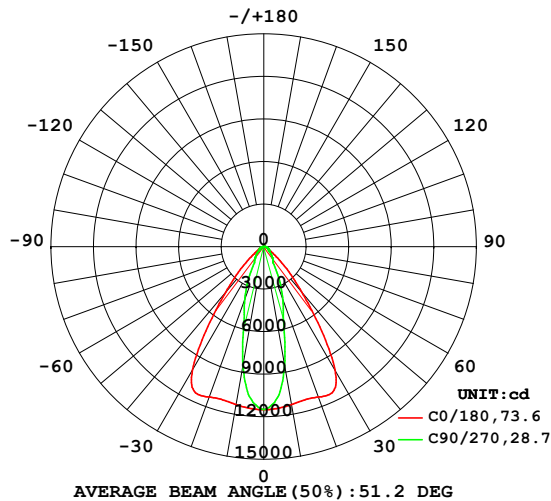


LUMINAIRE PHOTOMETRIC TEST REPORT

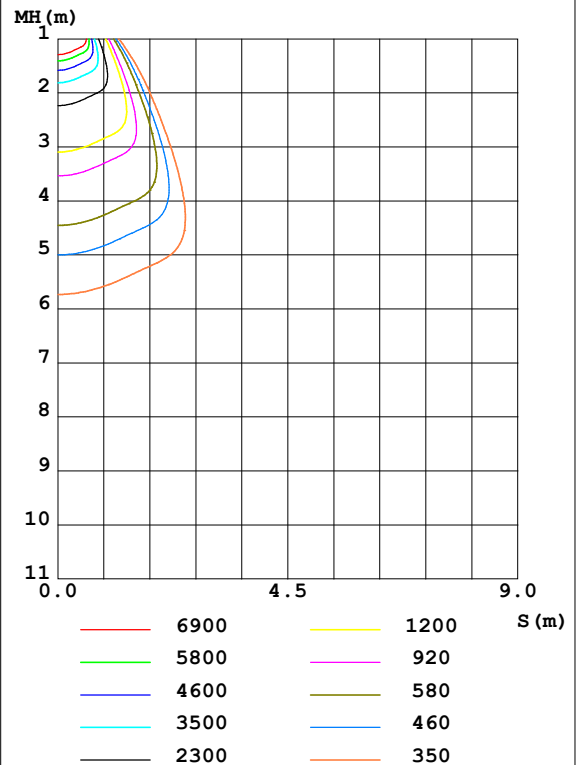
Test:U:230.0V I:0.2740A P:62.18W PF:0.9865 Lamp Flux:9882.33x1 lm		
NAME: LHB01-60H	TYPE:60W	WEIGHT:
SPEC.:5000K Ra70 3070DEG L06401	DIM.: 0.486*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.466*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 158.94 lm/W			
MODEL	LHB01-60H	Imax(cd)	11501	S/MH(C0/180)	1.07
NOMINAL POWER(W)	60	LOR(%)	100.0	S/MH(C90/270)	0.48
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	9882.3	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	9882.33	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	0.60

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:2017-06-01

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	1144	1104	1074	1106	1144	1106	1074	1104	0- 5	269.1	269.1	2.72,2.72
10	1131	990.3	849.8	994.3	1131	994.3	849.8	990.3	5- 10	750.5	1020	10.3,10.3
15	1119	798.6	545.8	799.9	1119	799.9	545.8	798.6	10- 15	1065	2085	21.1,21.1
20	1129	579.8	395.3	571.0	1129	571.0	395.3	579.8	15- 20	1221	3306	33.5,33.5
25	1138	461.9	264.8	444.9	1138	444.9	264.8	461.9	20- 25	1327	4634	46.9,46.9
30	1007	360.6	134.3	345.7	1007	345.7	134.3	360.6	25- 30	1325	5959	60.3,60.3
35	689.4	234.1	113.0	231.8	689.4	231.8	113.0	234.1	30- 35	1122	7080	71.6,71.6
40	416.5	112.8	91.67	117.8	416.5	117.8	91.67	112.8	35- 40	828.1	7908	80,80
45	252.5	91.73	70.38	95.62	252.5	95.62	70.38	91.73	40- 45	589.1	8498	86,86
50	132.9	71.67	49.09	74.25	132.9	74.25	49.09	71.67	45- 50	419.9	8917	90.2,90.2
55	67.36	52.07	42.44	53.84	67.36	53.84	42.44	52.07	50- 55	290.0	9207	93.2,93.2
60	39.51	34.35	35.79	35.61	39.51	35.61	35.79	34.35	55- 60	208.7	9416	95.3,95.3
65	25.74	26.61	29.14	28.16	25.74	28.16	29.14	26.61	60- 65	157.1	9573	96.9,96.9
70	16.93	18.81	22.49	20.57	16.93	20.57	22.49	18.81	65- 70	118.5	9692	98.1,98.1
75	10.96	11.13	16.96	13.02	10.96	13.02	16.96	11.13	70- 75	85.93	9778	98.9,98.9
80	6.098	7.153	11.43	8.451	6.098	8.451	11.43	7.153	75- 80	58.19	9836	99.5,99.5
85	1.552	3.780	5.895	4.345	1.552	4.345	5.895	3.780	80- 85	34.16	9870	99.9,99.9
90	0.1530	0.4732	0.3633	0.2869	0.1530	0.2869	0.3633	0.4732	85- 90	12.33	9882	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): 8497.5 lm

%lum = 86.0%

%lamp = 86.0%

Conical surface Flux(120deg): 9416.2 lm

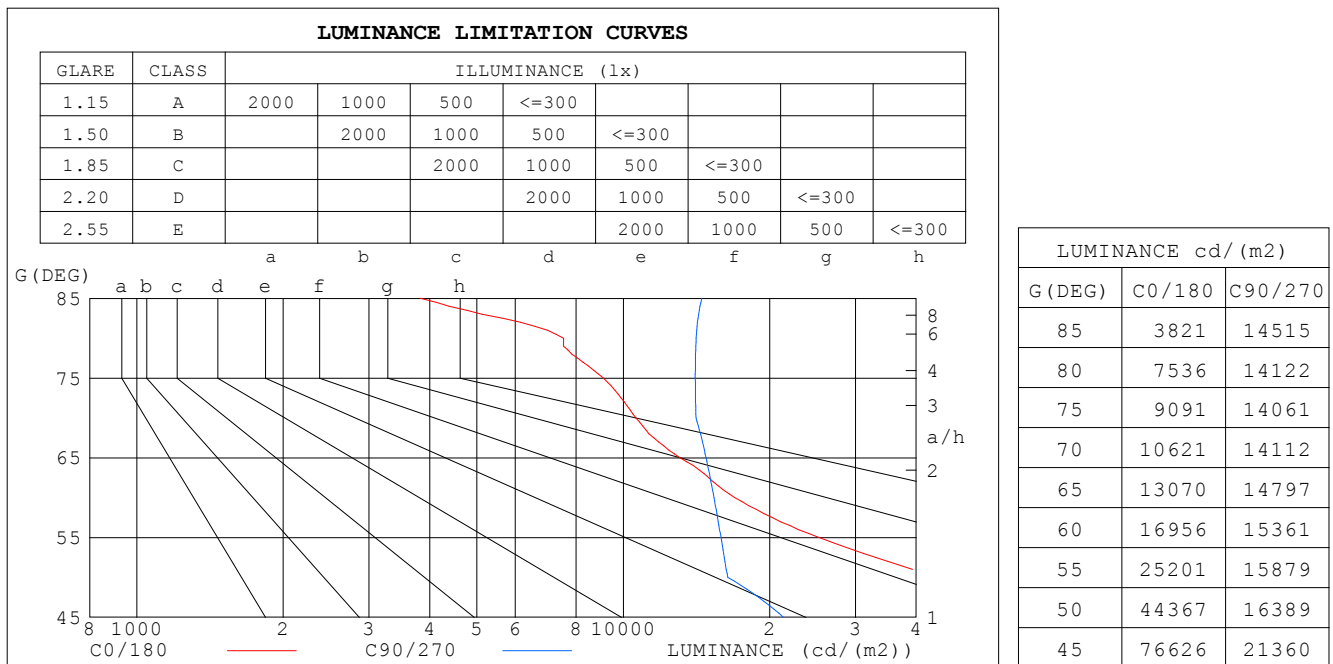
%lum = 95.3%

%lamp = 95.3%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-06-01

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

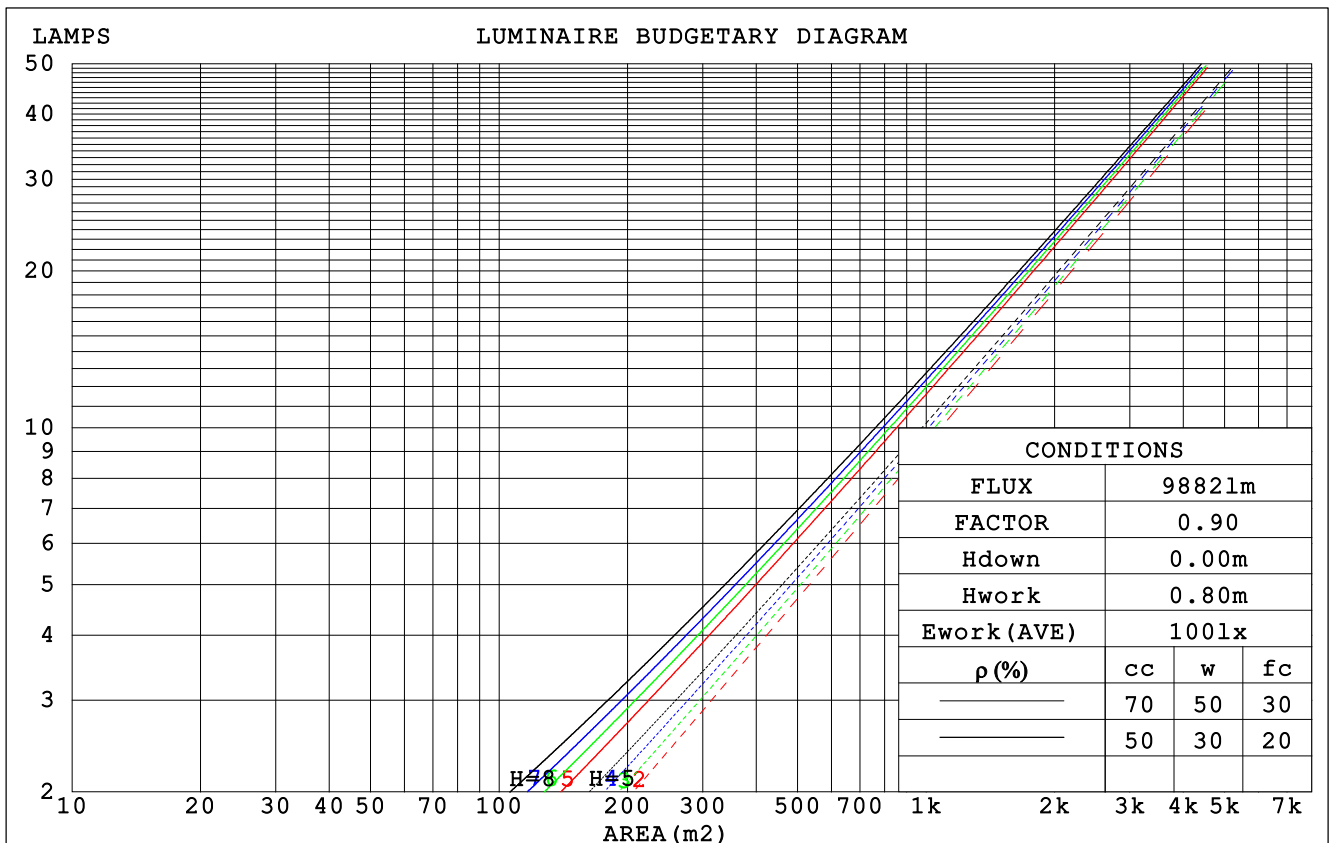


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-06-01

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	1.09	1.06	1.04	1.07	1.04	1.02	1.03	1.01	.99	.99	.98	.96	.96	.94	.93	.91
2.0	1.00	.96	.92	.99	.94	.91	.95	.92	.89	.92	.89	.87	.89	.87	.85	.83
3.0	.92	.87	.82	.91	.86	.81	.88	.84	.80	.86	.82	.79	.83	.80	.78	.76
4.0	.85	.79	.74	.84	.78	.74	.82	.77	.73	.80	.76	.72	.78	.74	.71	.70
5.0	.79	.73	.68	.78	.72	.68	.76	.71	.67	.75	.70	.66	.73	.69	.66	.64
6.0	.74	.67	.62	.73	.67	.62	.71	.66	.62	.70	.65	.61	.69	.64	.61	.59
7.0	.69	.62	.58	.68	.62	.58	.67	.61	.57	.66	.61	.57	.65	.60	.57	.55
8.0	.65	.58	.54	.64	.58	.54	.63	.57	.53	.62	.57	.53	.61	.56	.53	.51
9.0	.61	.54	.50	.60	.54	.50	.59	.54	.50	.58	.53	.50	.58	.53	.49	.48
10.0	.57	.51	.47	.57	.51	.47	.56	.51	.47	.55	.50	.47	.55	.50	.46	.45



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-01

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	.207	.118	.037	.200	.114	.036	.187	.107	.034	.176	.101	.032	.165	.095	.031	
2.0	.197	.108	.033	.192	.105	.033	.181	.100	.031	.171	.096	.030	.161	.091	.029	
3.0	.187	.099	.030	.182	.097	.029	.172	.093	.028	.164	.090	.028	.156	.086	.027	
4.0	.176	.092	.027	.172	.090	.027	.164	.087	.026	.156	.084	.025	.149	.081	.025	
5.0	.166	.085	.025	.163	.084	.024	.156	.081	.024	.149	.079	.023	.143	.076	.023	
6.0	.158	.079	.023	.154	.078	.022	.148	.076	.022	.142	.074	.022	.137	.072	.021	
7.0	.149	.074	.021	.146	.073	.021	.141	.071	.021	.136	.070	.020	.131	.068	.020	
8.0	.142	.069	.020	.139	.069	.019	.134	.067	.019	.130	.066	.019	.125	.064	.019	
9.0	.135	.065	.018	.133	.065	.018	.128	.063	.018	.124	.062	.018	.120	.061	.018	
10.0	.129	.062	.017	.127	.061	.017	.123	.060	.017	.119	.059	.017	.115	.058	.017	

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	.173	.157	.143	.148	.135	.123	.101	.093	.085	.058	.054	.049	.019	.017	.016	
2.0	.160	.132	.109	.137	.114	.095	.094	.079	.066	.054	.046	.039	.017	.015	.013	
3.0	.148	.114	.086	.127	.098	.075	.087	.068	.052	.050	.040	.031	.016	.013	.010	
4.0	.139	.099	.069	.119	.086	.060	.082	.060	.042	.047	.035	.025	.015	.011	.008	
5.0	.131	.088	.057	.112	.076	.049	.077	.053	.035	.045	.031	.021	.014	.010	.007	
6.0	.123	.079	.047	.106	.068	.041	.073	.048	.029	.042	.028	.017	.014	.009	.006	
7.0	.117	.072	.040	.100	.062	.035	.069	.044	.025	.040	.026	.015	.013	.008	.005	
8.0	.111	.065	.034	.095	.057	.030	.066	.040	.021	.038	.024	.013	.012	.008	.004	
9.0	.106	.060	.030	.091	.052	.026	.063	.037	.018	.037	.022	.011	.012	.007	.004	
10.0	.101	.056	.026	.087	.049	.023	.060	.034	.016	.035	.020	.010	.011	.007	.003	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-01

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	24.2	25.3	24.5	25.5	25.7	18.3	19.4	18.6	19.6	19.7
3H	24.3	25.2	24.5	25.5	25.7	19.5	20.5	19.7	20.7	20.9
4H	24.3	25.2	24.5	25.4	25.6	20.0	21.0	20.3	21.2	21.4
6H	24.2	25.1	24.5	25.4	25.6	20.6	21.4	20.9	21.7	21.9
8H	24.2	25.0	24.5	25.3	25.6	20.8	21.6	21.1	21.9	22.2
12H	24.2	25.0	24.5	25.2	25.5	20.9	21.8	21.3	22.0	22.3
4H 2H	24.1	25.0	24.4	25.3	25.5	18.8	19.7	19.1	20.0	20.2
3H	24.2	25.0	24.5	25.3	25.6	20.1	20.9	20.4	21.2	21.4
4H	24.3	25.0	24.6	25.3	25.6	20.7	21.5	21.1	21.8	22.1
6H	24.3	24.9	24.7	25.3	25.6	21.4	22.0	21.8	22.4	22.7
8H	24.3	24.9	24.7	25.2	25.6	21.7	22.3	22.1	22.6	23.0
12H	24.2	24.8	24.6	25.2	25.6	21.9	22.5	22.3	22.8	23.2
8H 4H	24.2	24.8	24.6	25.2	25.5	20.8	21.4	21.2	21.8	22.2
6H	24.3	24.8	24.7	25.2	25.6	21.6	22.1	22.0	22.5	22.9
8H	24.3	24.7	24.7	25.1	25.6	22.0	22.4	22.4	22.9	23.3
12H	24.3	24.6	24.7	25.1	25.6	22.3	22.7	22.8	23.2	23.6
12H 4H	24.2	24.7	24.6	25.1	25.5	20.8	21.4	21.2	21.7	22.1
6H	24.2	24.7	24.7	25.1	25.5	21.6	22.1	22.1	22.5	22.9
8H	24.3	24.6	24.7	25.1	25.6	22.0	22.4	22.5	22.9	23.3
Variations with the observer position at spacings:										
S = 1.0H	+ 3.3 / - 2.9					+ 0.4 / - 0.5				
1.5H	+ 4.6 / - 3.4					+ 0.3 / - 0.4				
2.0H	+ 5.0 / - 2.3					+ 0.5 / - 0.4				

CIE Pub.117 Corrected 9882 lm Total Lamp Luminous Flux.(8log(F/F0) = 8.0)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-01

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:

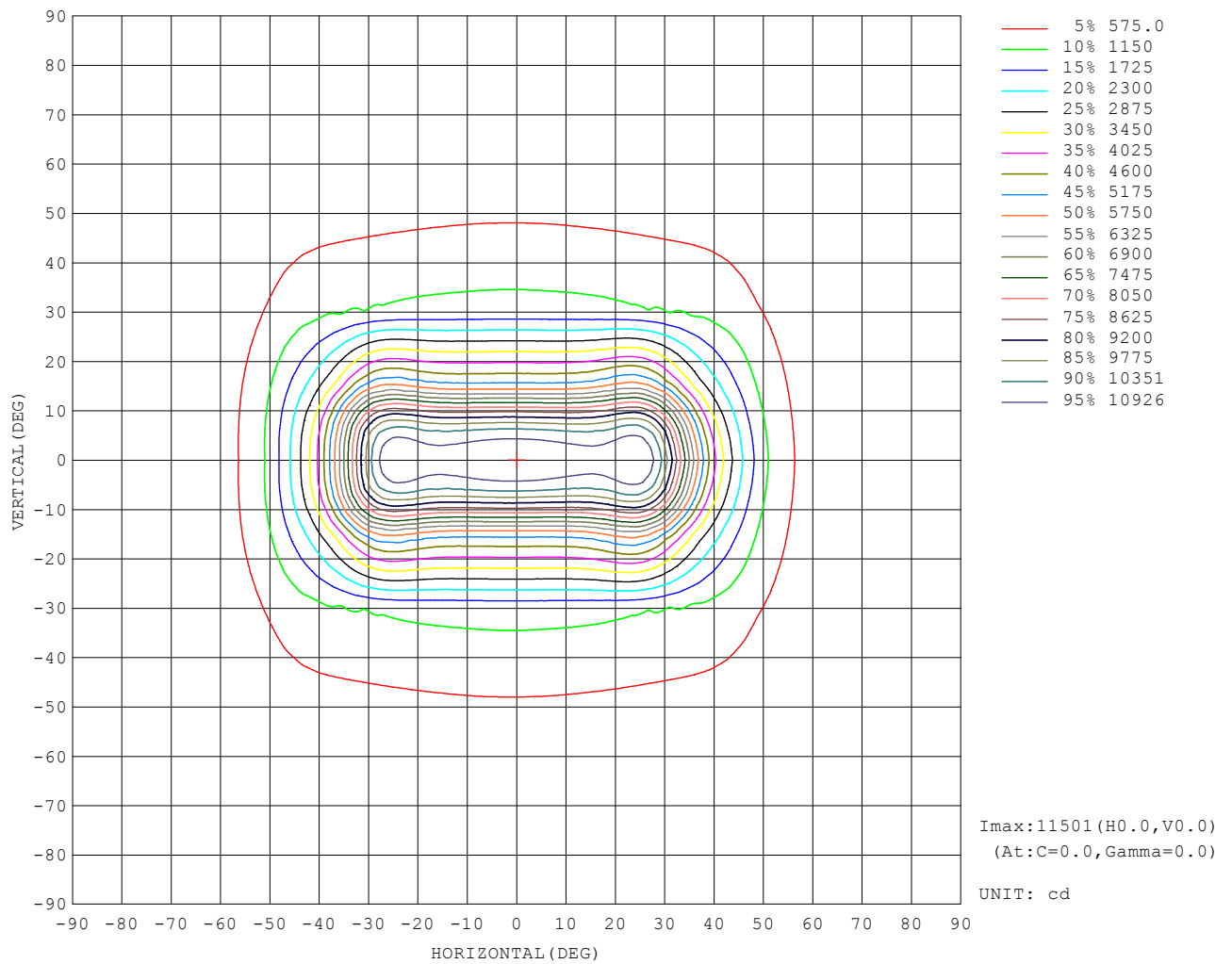
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	79	71	67	78	71	66	78	71	66	62
0.80	87	80	75	87	80	75	85	79	75	70
1.00	93	86	82	92	86	81	91	86	81	76
1.25	98	92	87	97	91	87	95	90	86	81
1.50	101	95	91	100	95	91	98	93	90	84
2.00	105	100	96	104	99	95	101	97	94	88
2.50	107	103	99	106	101	98	102	99	96	90
3.00	109	105	102	108	104	101	104	101	99	92
4.00	112	108	106	110	107	104	106	104	102	94
5.00	113	110	108	111	109	106	107	105	103	95
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: 2017-06-01

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:

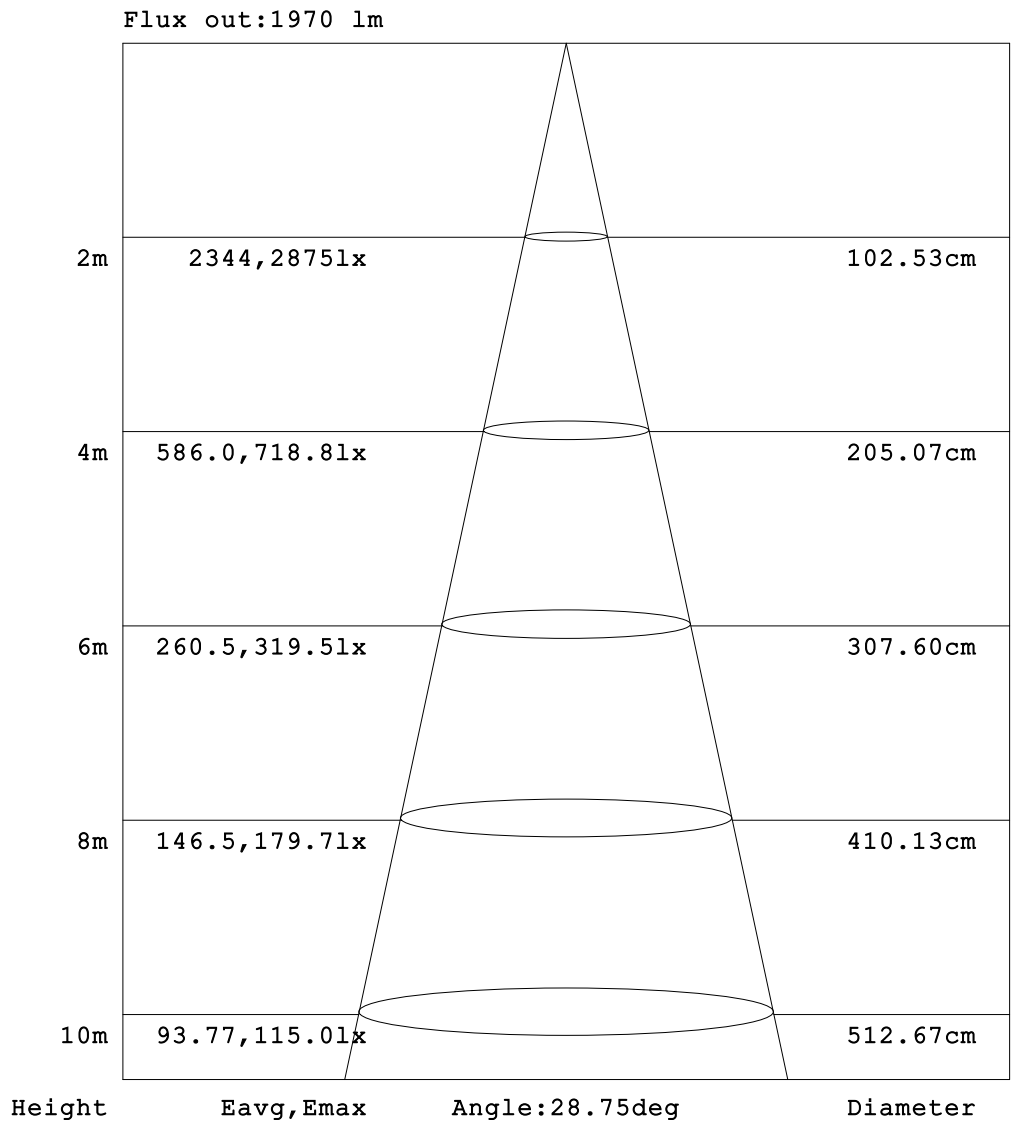
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-01

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

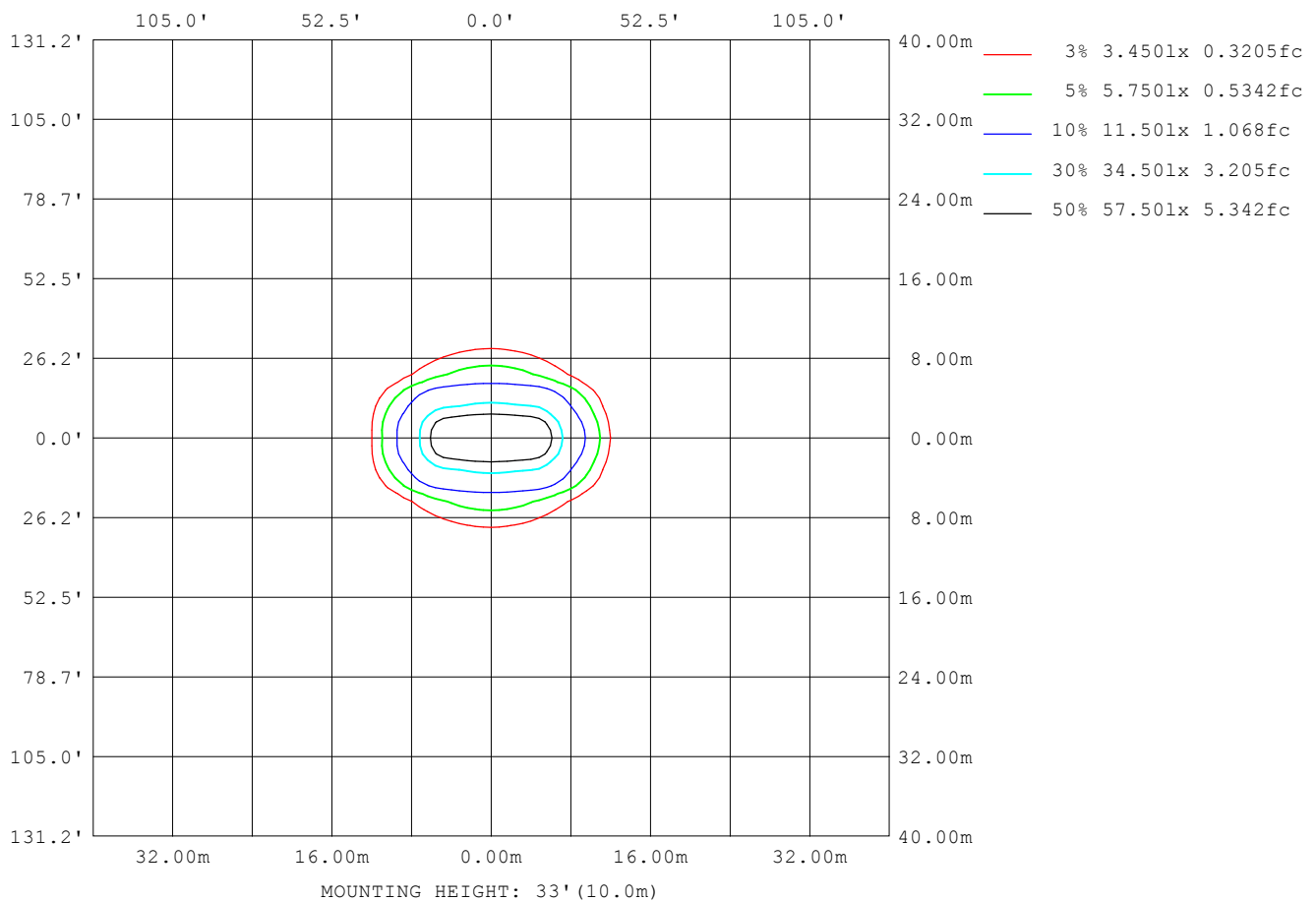


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-06-01

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: 2017-06-01

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:0.2740A P:62.18W PF:0.9865 Lamp Flux:9882.33x1 lm		
NAME: LHB01-60H	TYPE:60W	WEIGHT:
SPEC.:5000K Ra70 3070DEG L06401	DIM.: 0.486*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.466*0.1	Shielding Angle:

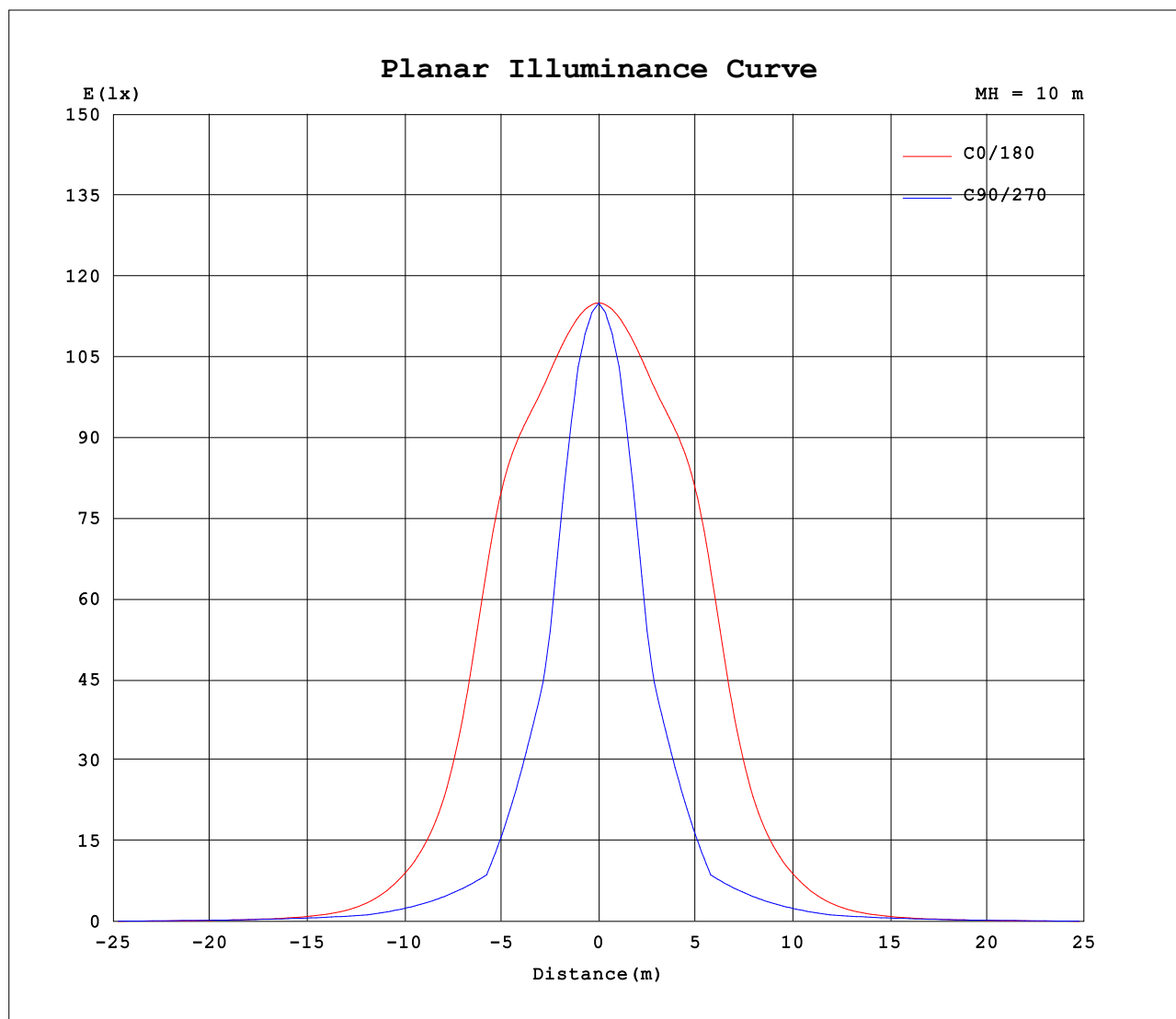
AvgL	cd/m2
L_0~180 (65) av	13070
L_0~180 (75) av	9091
L_0~180 (85) av	3821
L_90~270 (65) av	14797
L_90~270 (75) av	14061
L_90~270 (85) av	14515
L_45 (65) av	13907
L_45 (75) av	10012
L_45 (85) av	10003

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-06-01

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: 2017-06-01

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:

```

```

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: $\times 10 \text{cd}$

```

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:

```