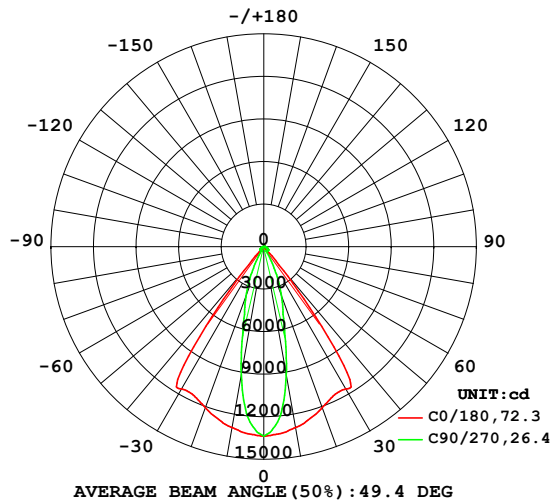


LUMINAIRE PHOTOMETRIC TEST REPORT

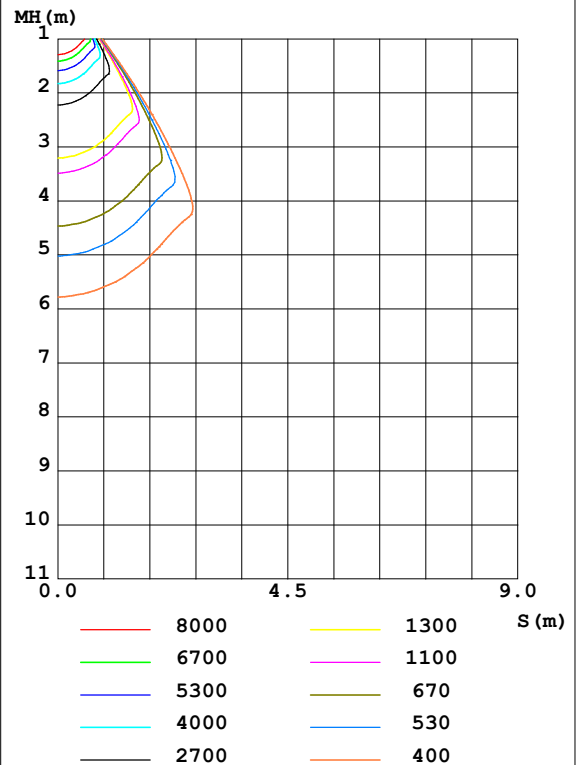
Test:U:230.1V I:0.2780A P:63.17W PF:0.9877 Lamp Flux:8263.61x1 lm		
NAME: LHB01-60	TYPE:60W	WEIGHT:
SPEC.:5000K Ra70 3070DEG L02801	DIM.: 0.486*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.466*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 130.81 lm/W			
MODEL	LHB01-60	I _{max} (cd)	13364	S/MH (C0/180)	1.04
NOMINAL POWER(W)	60	LOR(%)	100.0	S/MH (C90/270)	0.45
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	8263.6	η UP,DN (C0-180)	0.0,49.1
NOMINAL FLUX(lm)	8263.61	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,50.9
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	230	η down (%)	100.0	CIBSE SHR MAX	0.50

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:2017-03-29

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	1323	1261	1221	1261	1323	1264	1221	1264	0- 5	309.7	309.7	3.75,3.75
10	1294	1094	919.0	1094	1294	1107	919.0	1107	5- 10	846.5	1156	14,14
15	1255	830.7	552.6	830.7	1255	843.6	552.6	843.6	10- 15	1163	2319	28.1,28.1
20	1207	533.1	366.0	533.1	1207	551.4	366.0	551.4	15- 20	1264	3583	43.4,43.4
25	1162	367.4	201.7	367.4	1162	383.5	201.7	383.5	20- 25	1261	4843	58.6,58.6
30	1159	246.3	37.33	246.3	1159	257.5	37.33	257.5	25- 30	1166	6009	72.7,72.7
35	863.2	131.8	37.32	131.8	863.2	136.9	37.32	136.9	30- 35	1019	7028	85,85
40	168.4	35.23	37.30	35.23	168.4	37.24	37.30	37.24	35- 40	571.3	7599	92,92
45	22.04	27.54	37.29	27.54	22.04	31.22	37.29	31.22	40- 45	178.0	7777	94.1,94.1
50	17.46	20.62	37.28	20.62	17.46	23.71	37.28	23.71	45- 50	98.81	7876	95.3,95.3
55	14.53	16.53	31.55	16.53	14.53	17.85	31.55	17.85	50- 55	86.77	7963	96.4,96.4
60	12.55	14.35	25.82	14.35	12.55	14.87	25.82	14.87	55- 60	77.12	8040	97.3,97.3
65	10.55	11.34	20.10	11.34	10.55	12.01	20.10	12.01	60- 65	68.03	8108	98.1,98.1
70	8.398	8.399	14.37	8.399	8.398	9.246	14.37	9.246	65- 70	57.04	8165	98.8,98.8
75	5.682	5.420	10.86	5.420	5.682	6.507	10.86	6.507	70- 75	43.76	8209	99.3,99.3
80	2.147	3.617	7.354	3.617	2.147	4.401	7.354	4.401	75- 80	30.07	8239	99.7,99.7
85	0.0788	1.984	3.848	1.984	0.0788	2.368	3.848	2.368	80- 85	17.72	8257	99.9,99.9
90	0.0586	0.3607	0.3410	0.3607	0.0586	0.3272	0.3410	0.3272	85- 90	6.950	8264	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): 7777.4 lm

%lum = 94.1%

%lamp = 94.1%

Conical surface Flux(120deg): 8040.1 lm

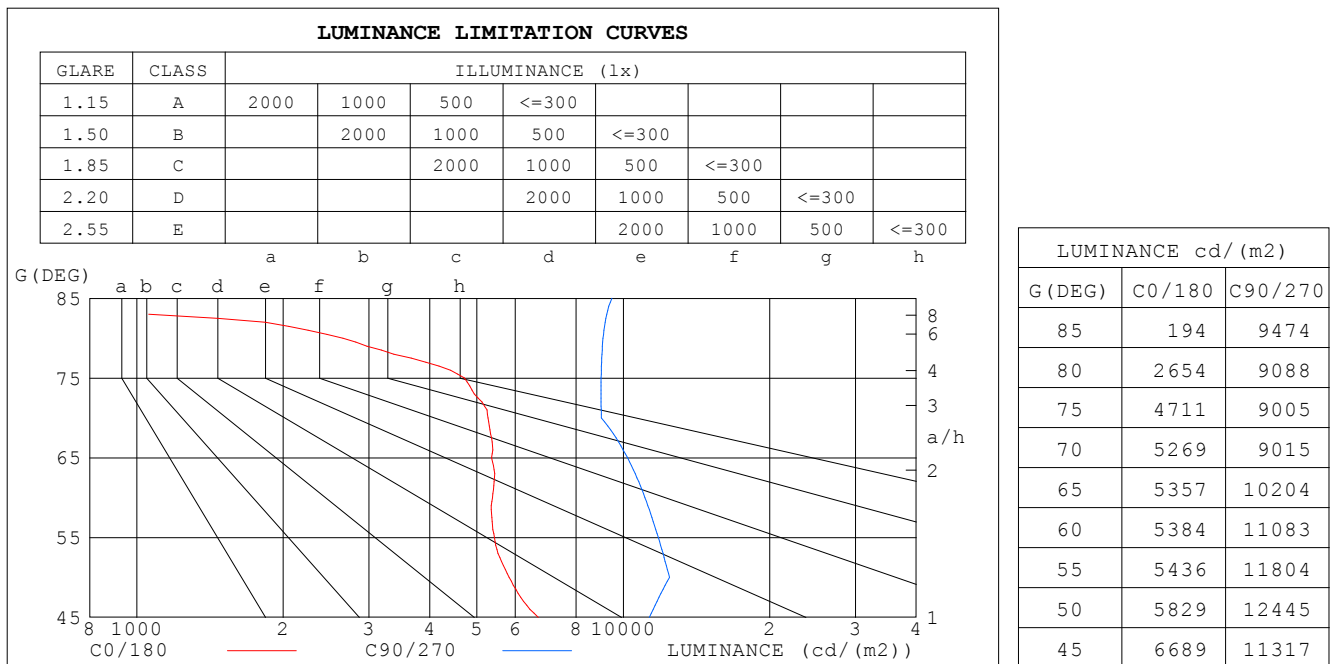
%lum = 97.3%

%lamp = 97.3%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-03-29

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

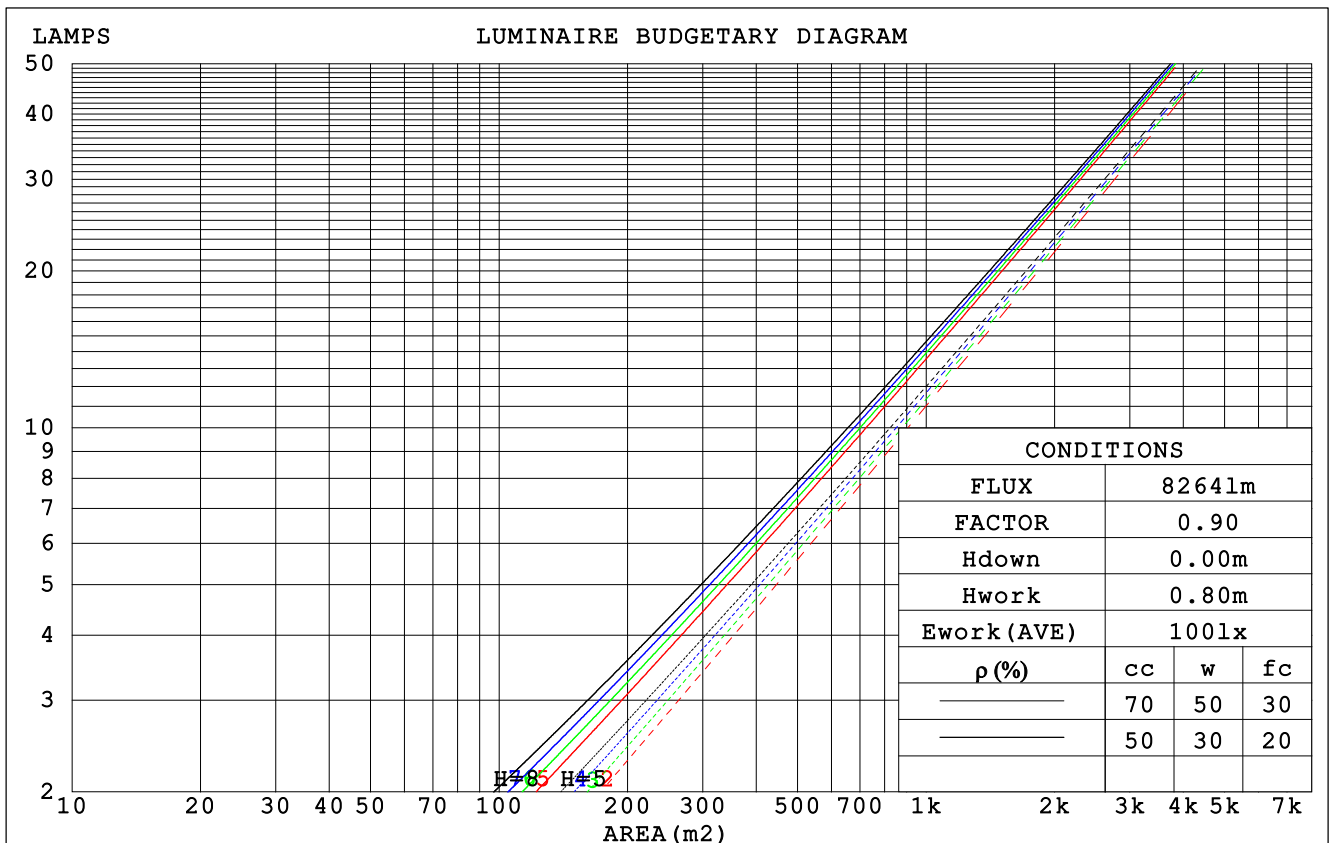


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-29

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	1.10	1.08	1.06	1.08	1.06	1.04	1.04	1.02	1.01	1.01	.99	.98	.97	.96	.95	.93
2.0	1.03	.99	.95	1.01	.97	.94	.98	.95	.92	.95	.92	.90	.92	.90	.88	.87
3.0	.96	.91	.87	.95	.90	.86	.92	.88	.85	.90	.86	.84	.87	.85	.82	.81
4.0	.90	.84	.80	.89	.84	.80	.87	.82	.79	.85	.81	.78	.83	.80	.77	.75
5.0	.84	.79	.74	.83	.78	.74	.82	.77	.73	.80	.76	.73	.78	.75	.72	.71
6.0	.80	.74	.69	.79	.73	.69	.77	.72	.69	.76	.72	.68	.75	.71	.68	.66
7.0	.75	.69	.65	.74	.69	.65	.73	.68	.65	.72	.68	.64	.71	.67	.64	.63
8.0	.71	.65	.61	.71	.65	.61	.69	.64	.61	.68	.64	.61	.67	.63	.60	.59
9.0	.67	.62	.58	.67	.61	.58	.66	.61	.58	.65	.61	.57	.64	.60	.57	.56
10.0	.64	.58	.55	.64	.58	.55	.63	.58	.54	.62	.58	.54	.61	.57	.54	.53



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-03-29

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	.183	.104	.033	.176	.101	.032	.164	.094	.030	.152	.088	.028	.141	.082	.026	
2.0	.173	.095	.029	.168	.092	.028	.157	.087	.027	.147	.083	.026	.138	.078	.025	
3.0	.164	.087	.026	.159	.085	.026	.150	.081	.025	.141	.077	.024	.134	.074	.023	
4.0	.155	.080	.024	.151	.079	.023	.143	.076	.023	.136	.073	.022	.129	.070	.021	
5.0	.147	.075	.022	.143	.073	.021	.136	.071	.021	.130	.069	.020	.124	.066	.020	
6.0	.139	.070	.020	.136	.069	.020	.130	.067	.019	.125	.065	.019	.119	.063	.019	
7.0	.133	.066	.019	.130	.065	.018	.125	.063	.018	.120	.061	.018	.115	.060	.018	
8.0	.127	.062	.017	.124	.061	.017	.119	.060	.017	.115	.058	.017	.111	.057	.017	
9.0	.121	.059	.016	.119	.058	.016	.115	.057	.016	.111	.055	.016	.107	.054	.016	
10.0	.116	.056	.015	.114	.055	.015	.110	.054	.015	.107	.053	.015	.103	.052	.015	

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	.172	.157	.144	.147	.135	.124	.100	.093	.086	.058	.054	.050	.019	.017	.016	
2.0	.156	.132	.112	.134	.114	.097	.092	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.144	.114	.089	.123	.098	.077	.085	.068	.054	.049	.040	.032	.016	.013	.010	
4.0	.134	.099	.072	.115	.085	.063	.079	.060	.044	.046	.035	.026	.015	.011	.009	
5.0	.125	.087	.060	.107	.075	.052	.074	.053	.037	.043	.031	.022	.014	.010	.007	
6.0	.117	.078	.050	.101	.067	.043	.069	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.110	.070	.042	.095	.061	.037	.066	.043	.026	.038	.025	.016	.012	.008	.005	
8.0	.105	.064	.036	.090	.056	.032	.062	.039	.022	.036	.023	.013	.012	.008	.004	
9.0	.099	.059	.031	.086	.051	.027	.059	.036	.019	.035	.021	.012	.011	.007	.004	
10.0	.095	.054	.028	.082	.047	.024	.057	.033	.017	.033	.020	.010	.011	.006	.003	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-29

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	23.7	24.6	23.9	24.8	25.0	13.7	14.6	13.9	14.8	14.9
3H	23.6	24.4	23.8	24.6	24.8	15.3	16.2	15.6	16.4	16.6
4H	23.5	24.3	23.8	24.6	24.8	16.1	16.9	16.4	17.2	17.4
6H	23.4	24.2	23.7	24.5	24.7	16.9	17.6	17.2	17.9	18.1
8H	23.4	24.1	23.7	24.4	24.7	17.2	17.9	17.5	18.2	18.4
12H	23.4	24.1	23.7	24.3	24.6	17.4	18.1	17.7	18.4	18.7
4H 2H	23.5	24.3	23.7	24.5	24.7	14.0	14.8	14.2	15.0	15.2
3H	23.4	24.1	23.7	24.4	24.6	15.7	16.4	16.1	16.7	17.0
4H	23.3	24.0	23.7	24.3	24.6	16.6	17.3	17.0	17.6	17.9
6H	23.3	23.9	23.7	24.2	24.5	17.5	18.0	17.8	18.4	18.7
8H	23.2	23.8	23.6	24.1	24.5	17.8	18.4	18.2	18.7	19.1
12H	23.2	23.7	23.6	24.0	24.4	18.2	18.7	18.6	19.0	19.4
8H 4H	23.2	23.8	23.6	24.1	24.5	16.7	17.2	17.1	17.6	18.0
6H	23.2	23.6	23.6	24.0	24.4	17.7	18.1	18.1	18.5	18.9
8H	23.2	23.5	23.6	24.0	24.4	18.1	18.5	18.6	18.9	19.4
12H	23.1	23.4	23.6	23.9	24.4	18.6	18.9	19.0	19.3	19.8
12H 4H	23.2	23.7	23.6	24.1	24.4	16.7	17.2	17.1	17.6	18.0
6H	23.2	23.5	23.6	24.0	24.4	17.7	18.1	18.1	18.5	18.9
8H	23.1	23.5	23.6	23.9	24.4	18.2	18.5	18.6	18.9	19.4
Variations with the observer position at spacings:										
S = 1.0H	+ 5.7 / - 6.1					+ 0.2 / - 0.2				
1.5H	+ 8.4 / - 6.1					+ 0.7 / - 0.4				
2.0H	+ 0.2 / - 0.2					+ 1.3 / - 1.0				

CIE Pub.117 Corrected 8264 lm Total Lamp Luminous Flux.(8log(F/F0) = 7.3)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-29

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:

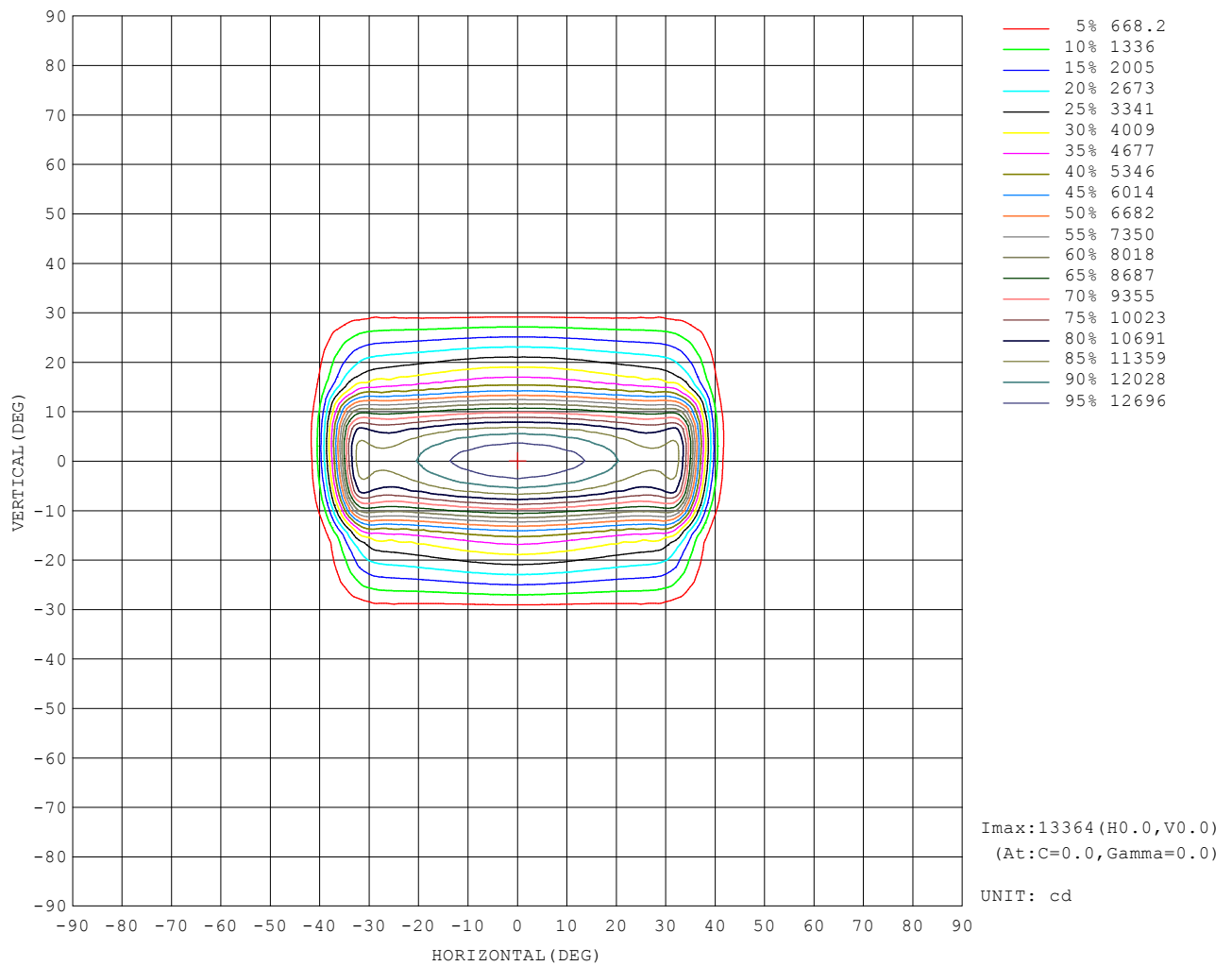
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	87	80	76	86	80	76	85	80	76	72
0.80	94	88	84	93	88	84	92	87	84	80
1.00	98	93	89	98	92	89	96	92	88	84
1.25	102	97	93	101	96	93	99	95	92	88
1.50	105	100	97	104	99	96	102	98	95	91
2.00	108	104	100	106	102	99	104	101	98	93
2.50	110	106	103	108	104	102	105	102	100	94
3.00	111	108	105	109	106	104	106	104	102	95
4.00	113	111	108	111	109	107	108	106	104	97
5.00	115	112	110	113	111	109	109	107	106	98
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: 2017-03-29

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:

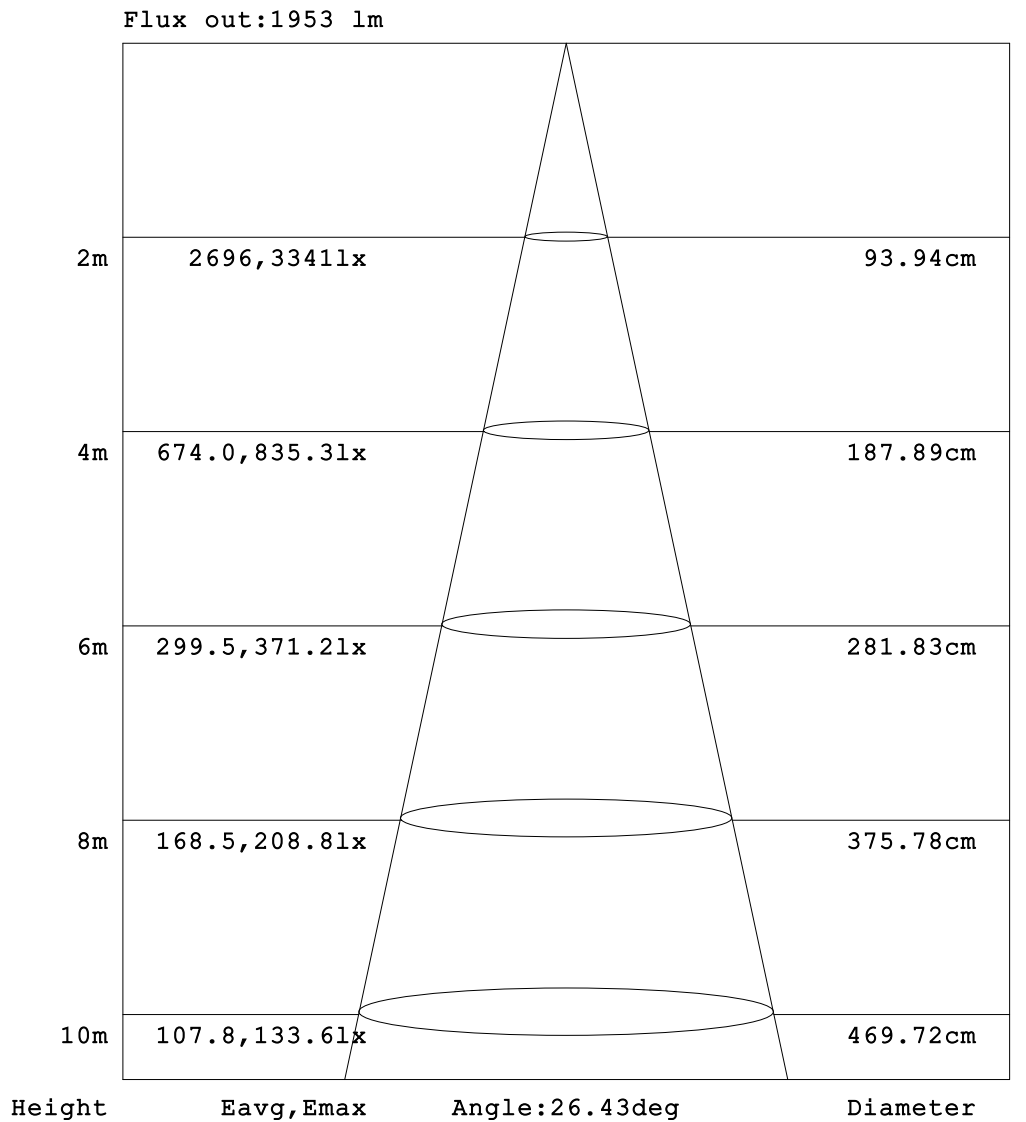
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-29

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

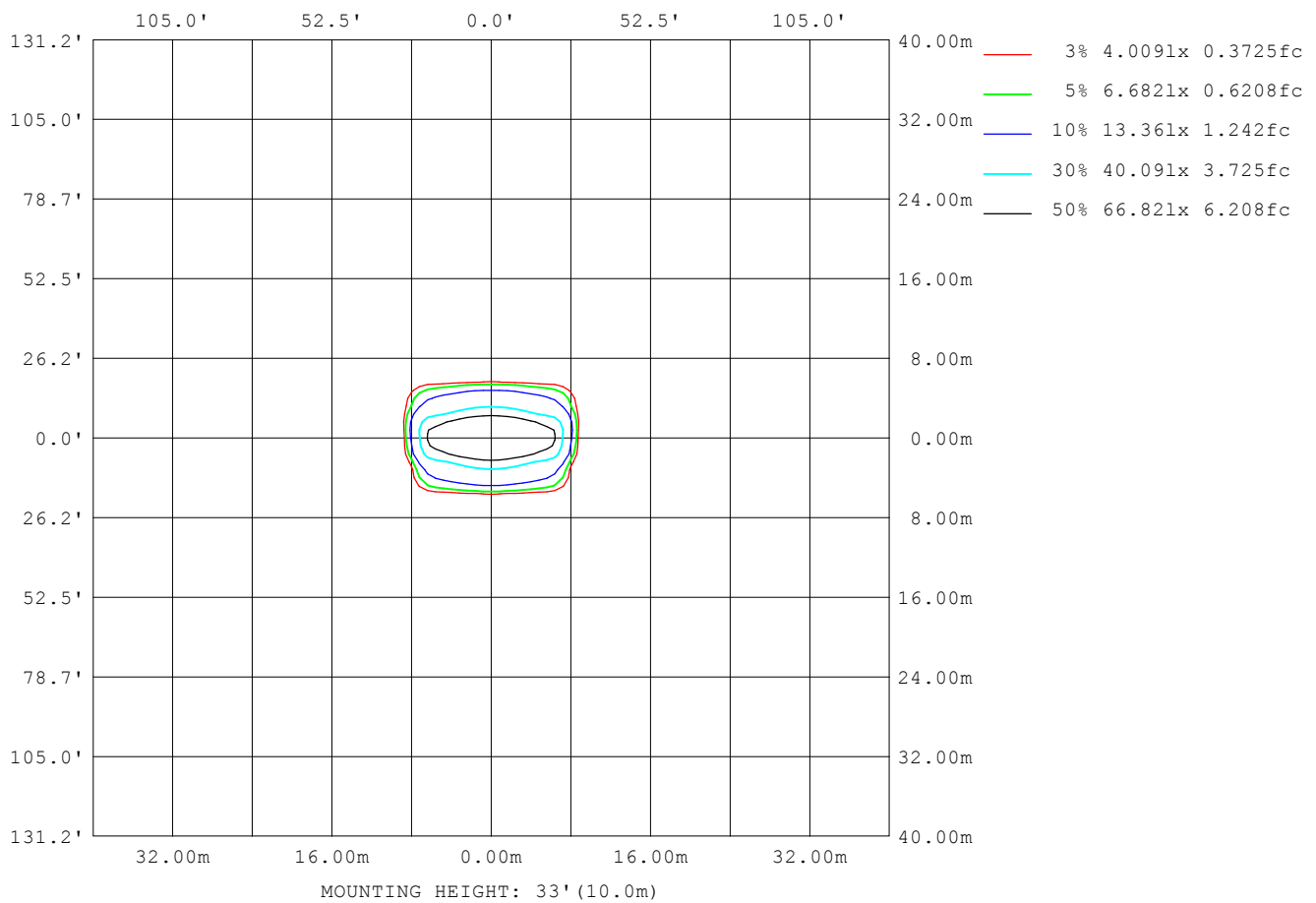


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-29

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:2017-03-29

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:230.1V I:0.2780A P:63.17W PF:0.9877 Lamp Flux:8263.61x1 lm		
NAME: LHB01-60	TYPE:60W	WEIGHT:
SPEC.:5000K Ra70 3070DEG L02801	DIM.: 0.486*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.466*0.1	Shielding Angle:

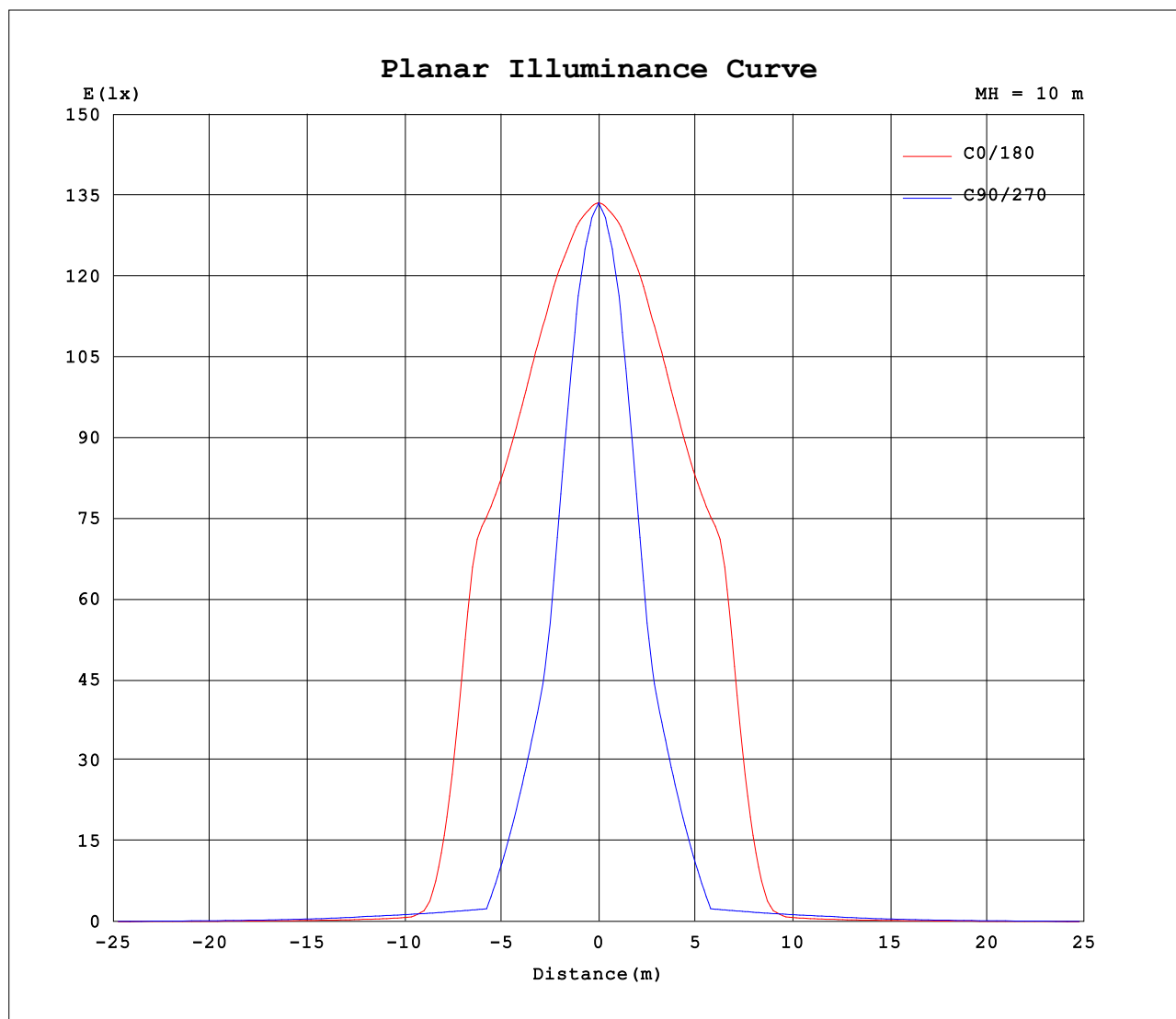
AvgL	cd/m2
L_0~180 (65) av	5357
L_0~180 (75) av	4711
L_0~180 (85) av	194
L_90~270 (65) av	10204
L_90~270 (75) av	9005
L_90~270 (85) av	9474
L_45 (65) av	5930
L_45 (75) av	4944
L_45 (85) av	5357

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-03-29

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: 2017-03-29

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:

```