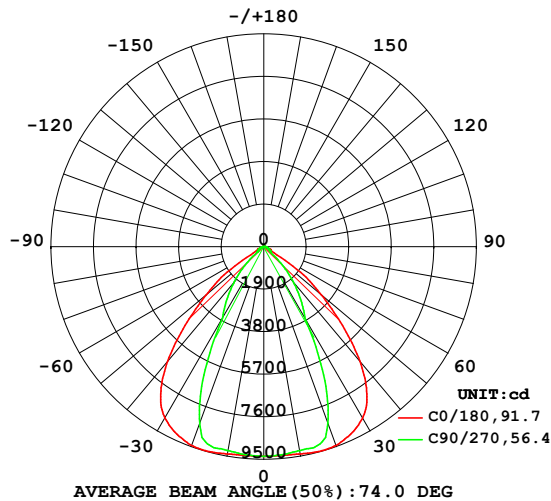


LUMINAIRE PHOTOMETRIC TEST REPORT

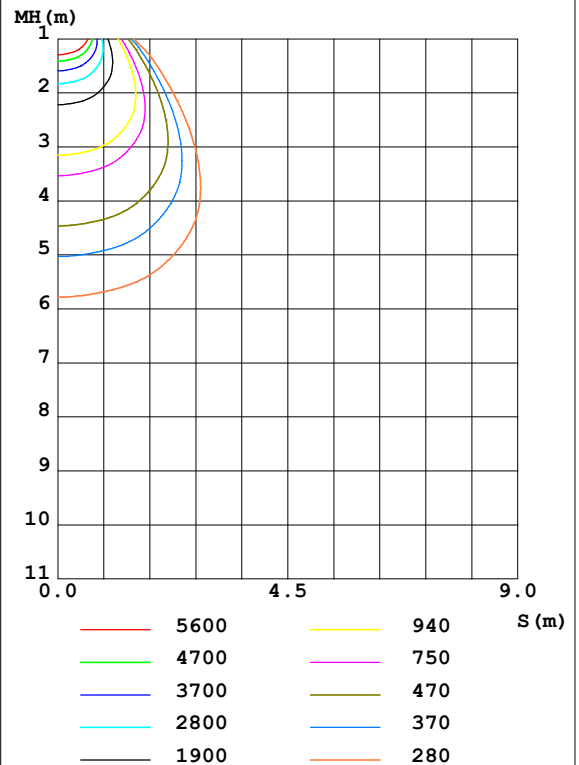
Test:U:230.0V I:0.5362A P:120.2W PF:0.9744 Lamp Flux:16584.5x1 lm		
NAME: LHB01-120	TYPE:120W	WEIGHT:
SPEC.:5000K Ra70 6090DEG L02802	DIM.: 0.948*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.92*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 138.01 lm/W			
MODEL	LHB01-120	I _{max} (cd)	10841	S/MH(C0/180)	1.30
NOMINAL POWER(W)	120	LOR(%)	100.0	S/MH(C90/270)	0.83
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	16585	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	16584.5	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.05

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:2017-04-01

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	935.9	934.1	932.6	934.1	935.9	933.3	932.6	933.3	0- 5	223.5	223.5	1.35,1.35
10	940.1	934.4	924.7	934.4	940.1	932.3	924.7	932.3	5- 10	667.4	890.9	5.37,5.37
15	947.3	949.7	921.3	949.7	947.3	952.0	921.3	952.0	10- 15	1112	2002	12.1,12.1
20	944.3	999.9	838.3	999.9	944.3	1002	838.3	1002	15- 20	1559	3561	21.5,21.5
25	922.2	1032	633.0	1032	922.2	1029	633.0	1029	20- 25	1929	5490	33.1,33.1
30	883.1	937.9	370.0	937.9	883.1	940.0	370.0	940.0	25- 30	2119	7609	45.9,45.9
35	803.5	746.3	287.5	746.3	803.5	747.3	287.5	747.3	30- 35	2122	9732	58.7,58.7
40	667.4	516.3	205.1	516.3	667.4	511.2	205.1	511.2	35- 40	2022	11754	70.9,70.9
45	497.9	407.3	122.6	407.3	497.9	403.7	122.6	403.7	40- 45	1763	13516	81.5,81.5
50	336.9	283.2	40.20	283.2	336.9	281.1	40.20	281.1	45- 50	1336	14852	89.6,89.6
55	201.0	150.9	33.54	150.9	201.0	150.9	33.54	150.9	50- 55	833.6	15686	94.6,94.6
60	36.43	37.13	26.87	37.13	36.43	38.86	26.87	38.86	55- 60	415.3	16101	97.1,97.1
65	30.24	28.43	20.21	28.43	30.24	29.56	20.21	29.56	60- 65	196.7	16298	98.3,98.3
70	16.77	19.46	13.54	19.46	16.77	20.02	13.54	20.02	65- 70	119.1	16417	99,99
75	10.46	10.52	10.29	10.52	10.46	10.52	10.29	10.52	70- 75	75.80	16493	99.4,99.4
80	5.751	6.793	7.045	6.793	5.751	6.770	7.045	6.770	75- 80	49.54	16542	99.7,99.7
85	1.255	3.673	3.796	3.673	1.255	3.682	3.796	3.682	80- 85	30.43	16573	99.9,99.9
90	0.2569	0.5146	0.5483	0.5146	0.2569	0.5528	0.5483	0.5528	85- 90	11.84	16585	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): 13516 lm

%lum = 81.5%

%lamp = 81.5%

Conical surface Flux(120deg): 16101 lm

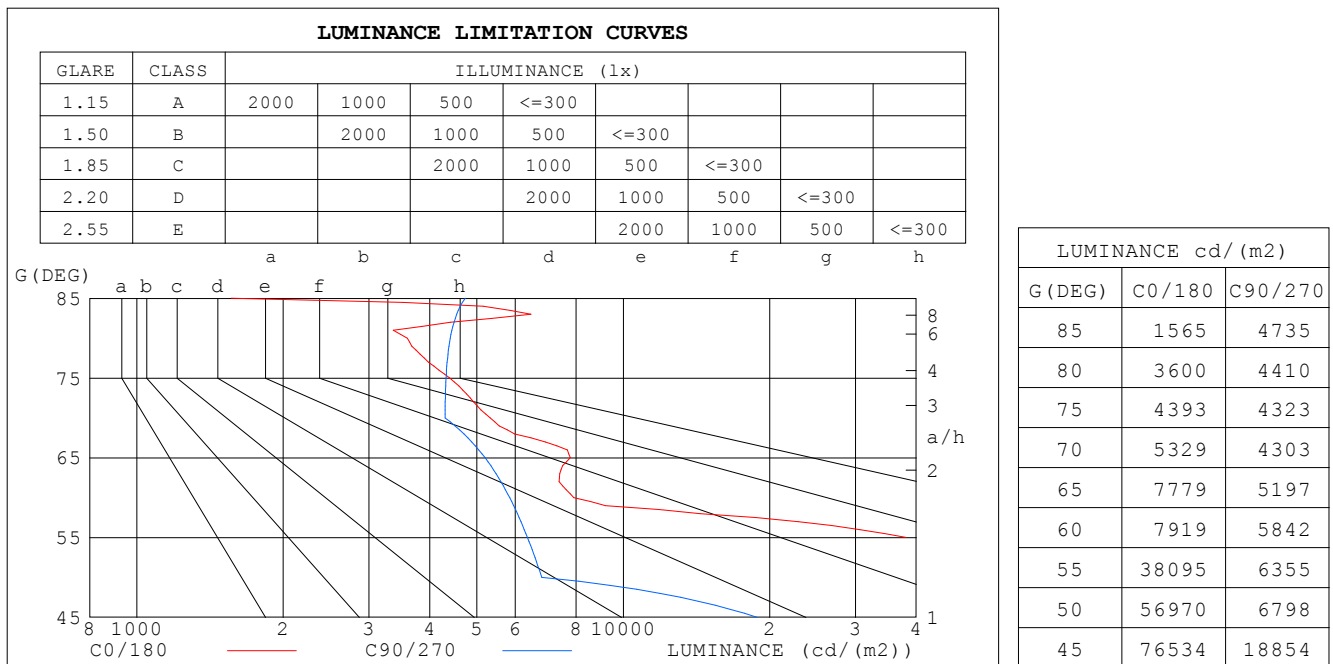
%lum = 97.1%

%lamp = 97.1%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-04-01

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

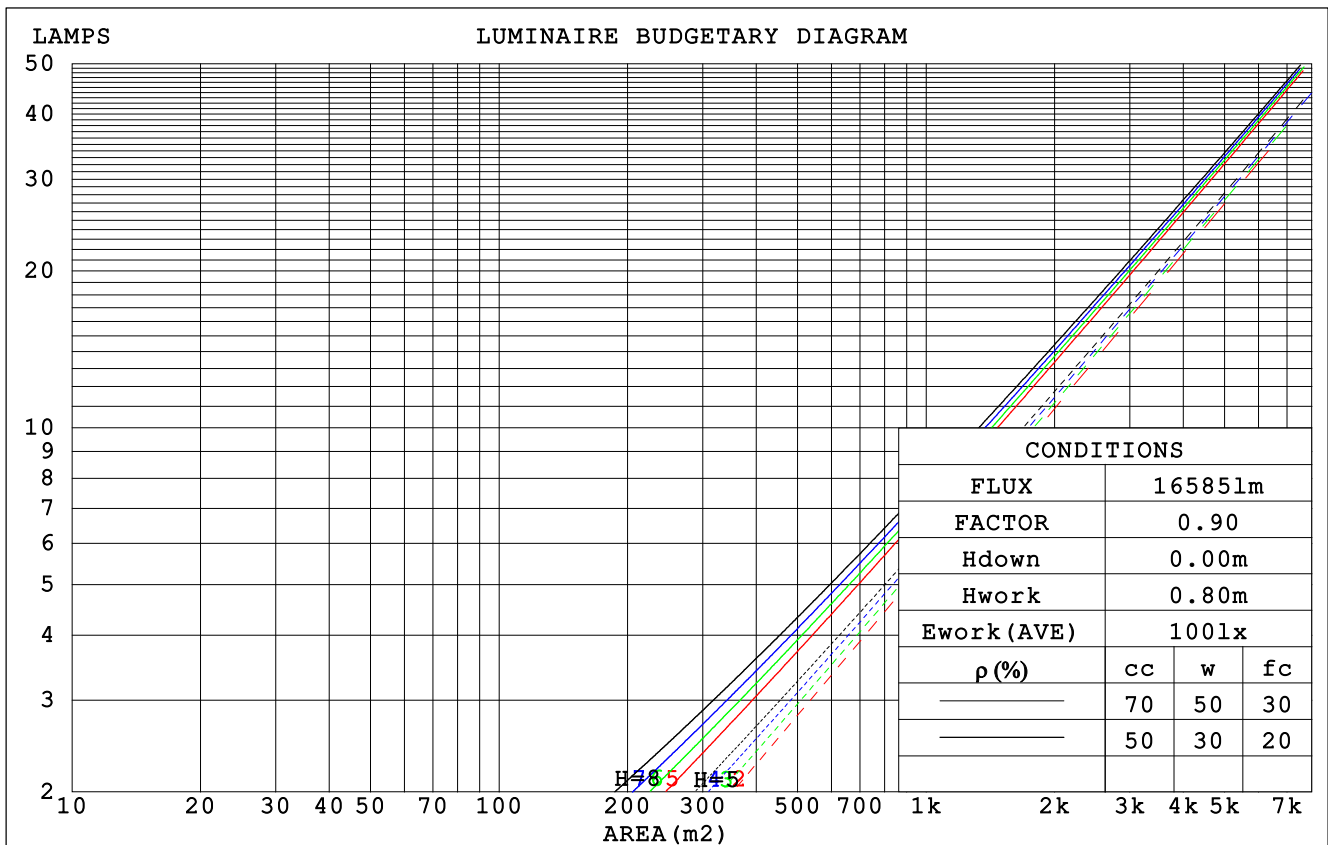


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-04-01

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
p _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
p _{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	1.09	1.06	1.03	1.06	1.04	1.01	1.02	1.00	.98	.99	.97	.95	.95	.94	.92	.91
2.0	.99	.94	.90	.97	.92	.89	.94	.90	.87	.91	.87	.85	.88	.85	.83	.81
3.0	.90	.84	.79	.88	.83	.78	.86	.81	.77	.83	.79	.76	.81	.77	.74	.73
4.0	.82	.75	.70	.81	.74	.69	.78	.73	.69	.76	.72	.68	.74	.70	.67	.65
5.0	.75	.68	.62	.74	.67	.62	.72	.66	.62	.70	.65	.61	.69	.64	.60	.59
6.0	.69	.61	.56	.68	.61	.56	.66	.60	.56	.65	.59	.55	.63	.59	.55	.53
7.0	.63	.56	.51	.63	.56	.51	.61	.55	.50	.60	.54	.50	.59	.54	.50	.48
8.0	.59	.51	.46	.58	.51	.46	.57	.50	.46	.56	.50	.46	.54	.49	.46	.44
9.0	.54	.47	.42	.54	.47	.42	.53	.46	.42	.52	.46	.42	.51	.46	.42	.40
10.0	.50	.44	.39	.50	.43	.39	.49	.43	.39	.48	.43	.39	.47	.42	.38	.37



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	.217	.124	.039	.211	.120	.038	.198	.113	.036	.186	.107	.034	.175	.102	.033	
2.0	.212	.116	.036	.206	.113	.035	.195	.108	.034	.185	.104	.032	.175	.099	.031	
3.0	.202	.108	.032	.197	.106	.032	.188	.102	.031	.179	.098	.030	.171	.095	.029	
4.0	.193	.100	.029	.188	.099	.029	.180	.095	.028	.172	.092	.028	.165	.090	.027	
5.0	.183	.093	.027	.179	.092	.027	.172	.089	.026	.165	.087	.026	.158	.085	.025	
6.0	.174	.087	.025	.170	.086	.025	.164	.084	.024	.158	.082	.024	.152	.080	.024	
7.0	.165	.082	.023	.162	.081	.023	.156	.079	.023	.151	.077	.022	.146	.076	.022	
8.0	.157	.077	.022	.154	.076	.021	.149	.074	.021	.144	.073	.021	.139	.072	.021	
9.0	.149	.072	.020	.147	.072	.020	.142	.070	.020	.138	.069	.020	.133	.068	.020	
10.0	.142	.068	.019	.140	.068	.019	.136	.067	.019	.132	.065	.019	.128	.064	.018	

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	.174	.157	.142	.149	.135	.122	.102	.093	.084	.059	.054	.049	.019	.017	.016	
2.0	.162	.132	.108	.138	.114	.093	.095	.079	.065	.055	.046	.038	.018	.015	.012	
3.0	.151	.114	.084	.130	.098	.073	.089	.068	.051	.051	.040	.030	.017	.013	.010	
4.0	.143	.100	.067	.123	.086	.058	.084	.060	.041	.049	.035	.024	.016	.011	.008	
5.0	.135	.089	.054	.116	.077	.047	.080	.054	.033	.046	.031	.020	.015	.010	.007	
6.0	.129	.080	.045	.111	.069	.039	.076	.048	.028	.044	.029	.016	.014	.009	.005	
7.0	.123	.073	.038	.106	.063	.033	.073	.044	.023	.042	.026	.014	.014	.009	.005	
8.0	.117	.067	.032	.101	.058	.028	.070	.041	.020	.041	.024	.012	.013	.008	.004	
9.0	.112	.062	.028	.096	.054	.025	.067	.038	.017	.039	.022	.010	.013	.007	.003	
10.0	.107	.058	.025	.092	.050	.022	.064	.035	.015	.037	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-04-01

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	26.5	27.7	26.7	27.8	28.0	19.7	20.9	20.0	21.1	21.3
3H	26.3	27.4	26.6	27.6	27.8	19.7	20.8	20.0	21.0	21.2
4H	26.2	27.3	26.5	27.5	27.7	19.7	20.7	20.0	21.0	21.2
6H	26.1	27.1	26.5	27.4	27.6	19.7	20.6	20.0	20.9	21.2
8H	26.1	27.0	26.4	27.3	27.6	19.7	20.6	20.0	20.9	21.1
12H	26.1	27.0	26.4	27.2	27.5	19.7	20.6	20.0	20.8	21.1
4H 2H	26.2	27.2	26.5	27.5	27.7	20.1	21.1	20.4	21.4	21.6
3H	26.1	27.0	26.4	27.3	27.5	20.1	21.0	20.4	21.3	21.5
4H	26.0	26.8	26.4	27.1	27.5	20.1	20.9	20.5	21.2	21.5
6H	26.0	26.7	26.3	27.0	27.4	20.1	20.9	20.5	21.2	21.5
8H	25.9	26.6	26.3	26.9	27.3	20.2	20.8	20.6	21.2	21.5
12H	25.9	26.5	26.3	26.9	27.2	20.2	20.8	20.6	21.1	21.5
8H 4H	25.9	26.6	26.3	26.9	27.3	20.1	20.7	20.5	21.1	21.4
6H	25.8	26.4	26.3	26.8	27.2	20.2	20.7	20.6	21.1	21.5
8H	25.8	26.3	26.3	26.7	27.2	20.2	20.7	20.7	21.1	21.5
12H	25.8	26.2	26.3	26.6	27.1	20.3	20.7	20.7	21.1	21.6
12H 4H	25.9	26.5	26.3	26.8	27.2	20.0	20.6	20.5	21.0	21.4
6H	25.8	26.3	26.3	26.7	27.1	20.1	20.6	20.6	21.0	21.5
8H	25.8	26.2	26.3	26.6	27.1	20.2	20.6	20.7	21.0	21.5
Variations with the observer position at spacings:										
S = 1.0H	+ 2.1 / - 4.0					+ 2.2 / - 4.6				
1.5H	+ 1.7 / - 2.6					+ 3.5 / - 5.2				
2.0H	+ 4.7 / - 9.3					+ 4.1 / - 2.7				

CIE Pub.117 Corrected 16585 lm Total Lamp Luminous Flux.(8log(F/F0) = 9.8)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-04-01

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:

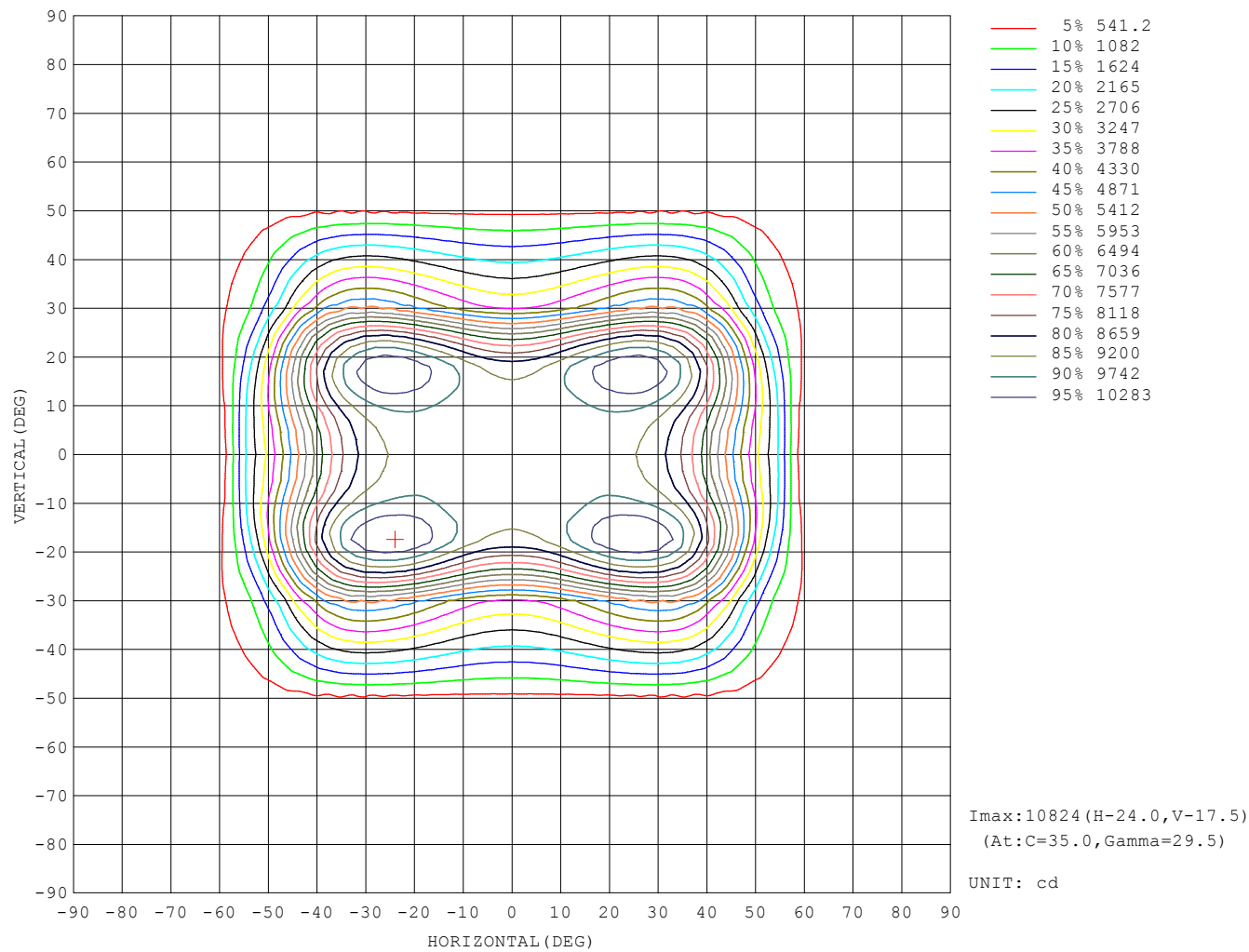
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	73	64	59	72	64	58	71	63	58	53
0.80	82	74	69	82	74	69	80	73	68	63
1.00	90	82	77	89	82	77	87	82	76	71
1.25	96	88	84	94	88	83	92	87	82	77
1.50	99	93	88	98	92	88	96	90	87	81
2.00	104	98	94	103	97	93	100	95	92	86
2.50	106	101	97	105	100	96	101	98	94	88
3.00	109	104	100	107	103	99	103	100	97	90
4.00	111	107	104	109	106	103	105	102	100	92
5.00	113	109	107	110	107	105	106	104	102	94
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: 2017-04-01

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:

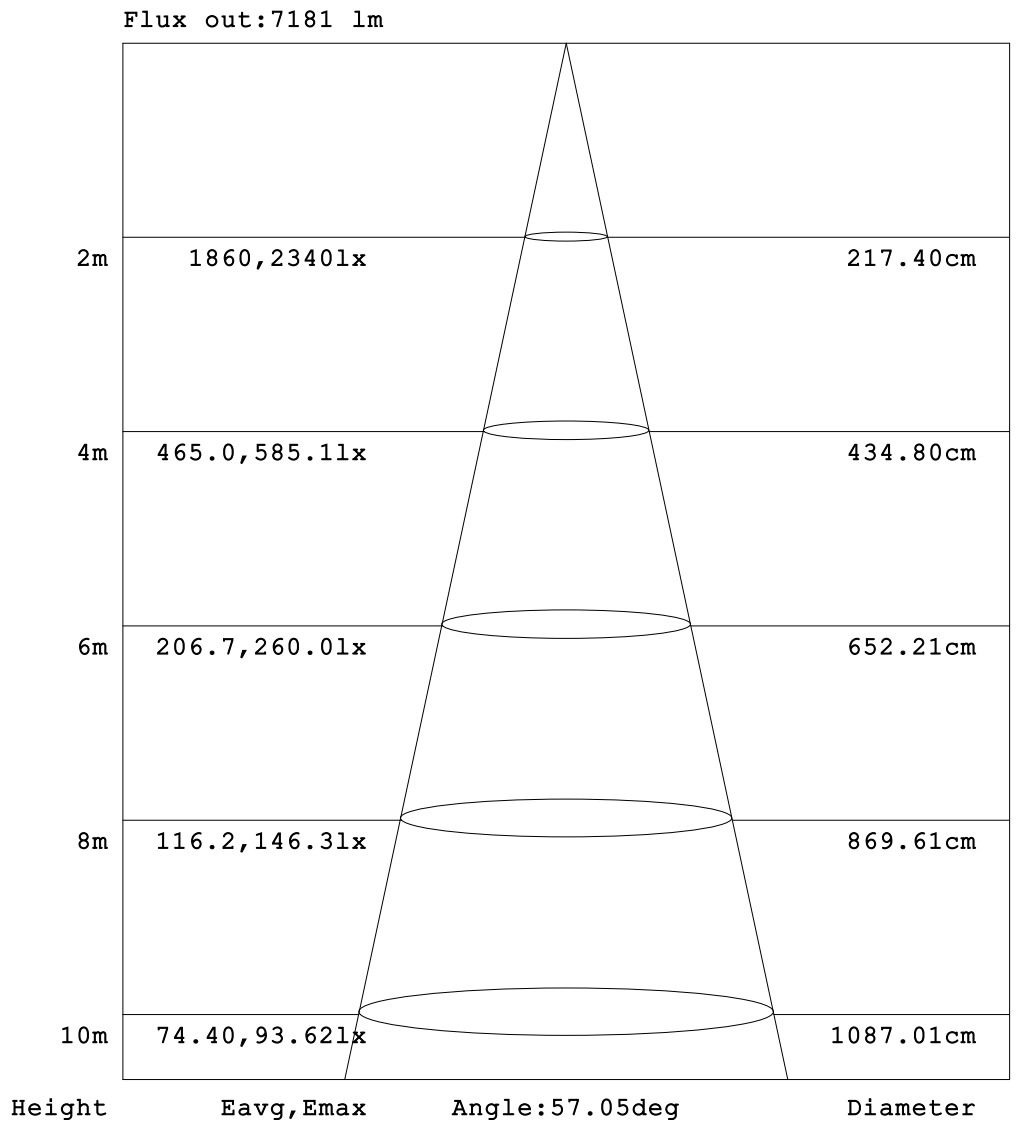
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-04-01

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

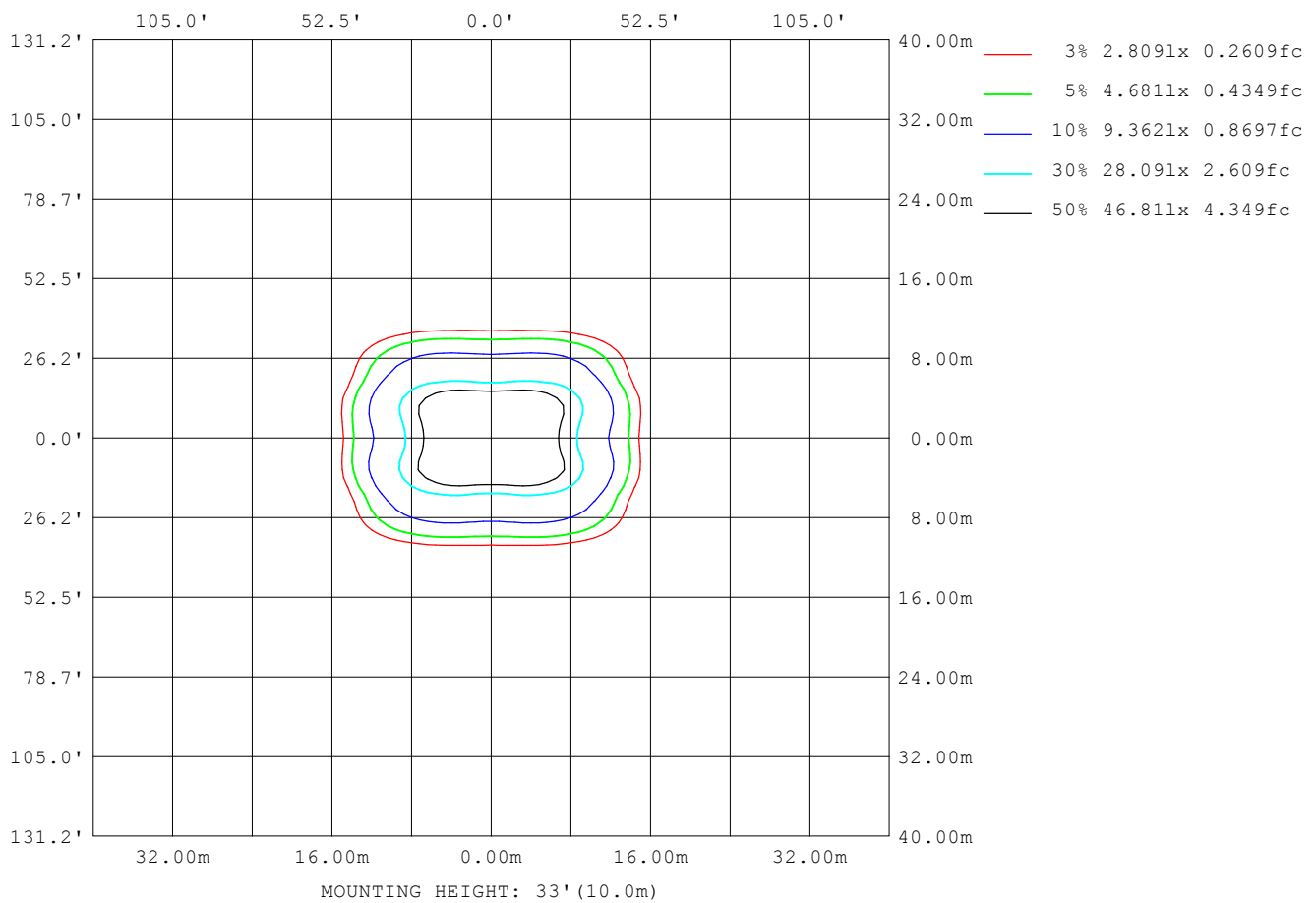


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-04-01

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:2017-04-01

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:0.5362A P:120.2W PF:0.9744 Lamp Flux:16584.5x1 lm		
NAME: LHB01-120	TYPE:120W	WEIGHT:
SPEC.:5000K Ra70 6090DEG L02802	DIM.: 0.948*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.92*0.1	Shielding Angle:

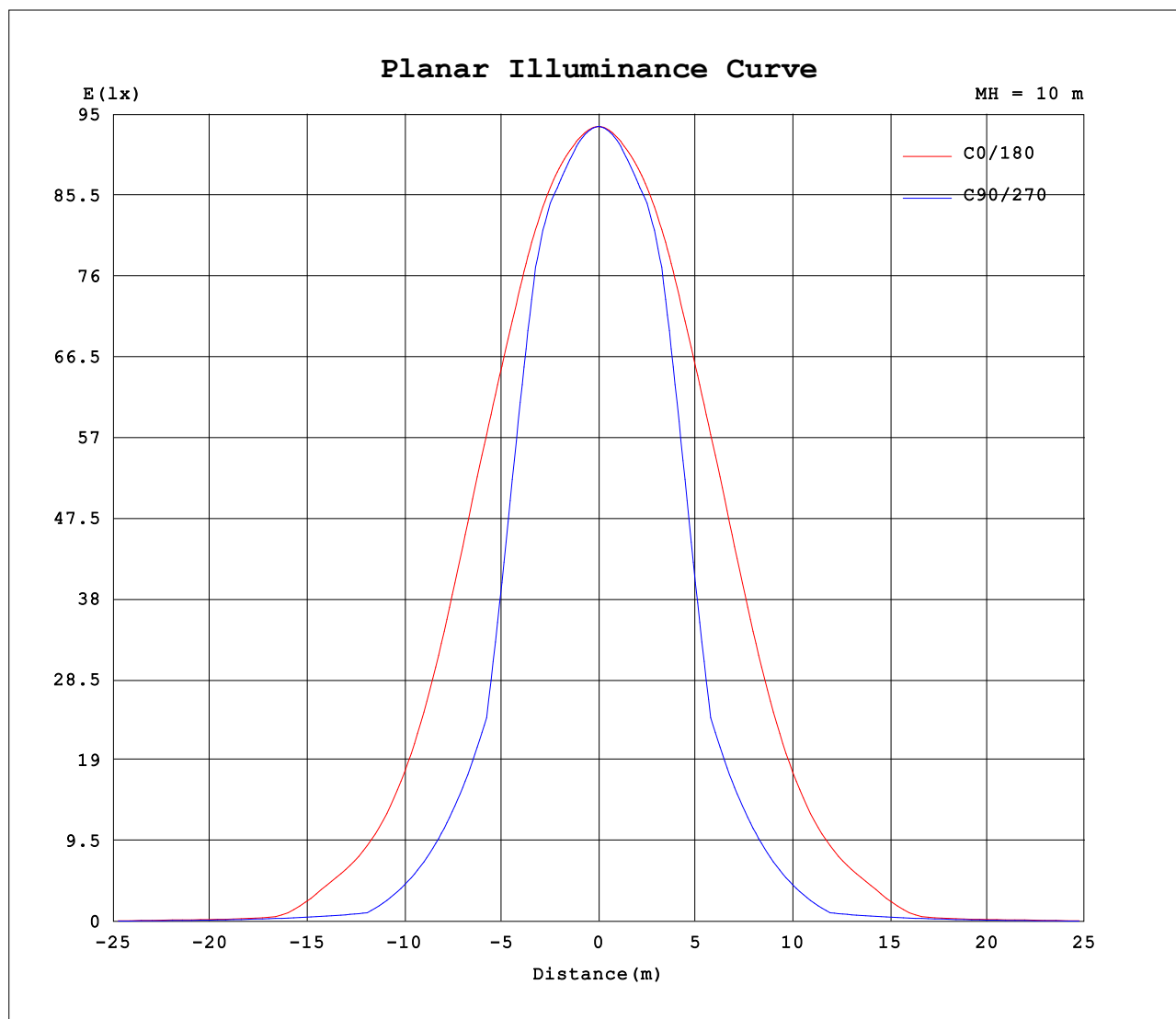
AvgL	cd/m2
L_0~180 (65) av	7779
L_0~180 (75) av	4393
L_0~180 (85) av	1565
L_90~270 (65) av	5197
L_90~270 (75) av	4323
L_90~270 (85) av	4735
L_45 (65) av	7458
L_45 (75) av	4417
L_45 (85) av	4587

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-04-01

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: 2017-04-01

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:

```

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: $\times 10 \text{cd}$

```

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:

```