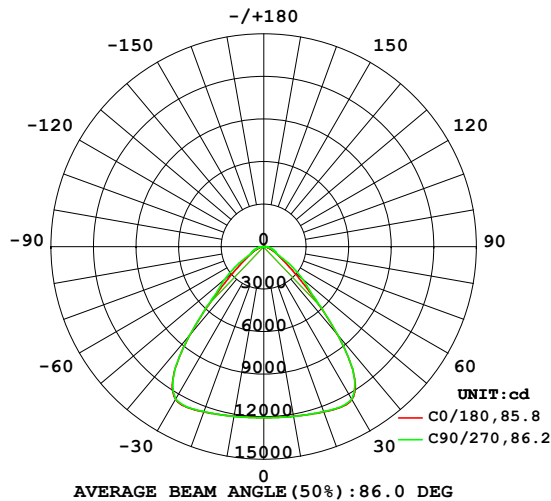


LUMINAIRE PHOTOMETRIC TEST REPORT

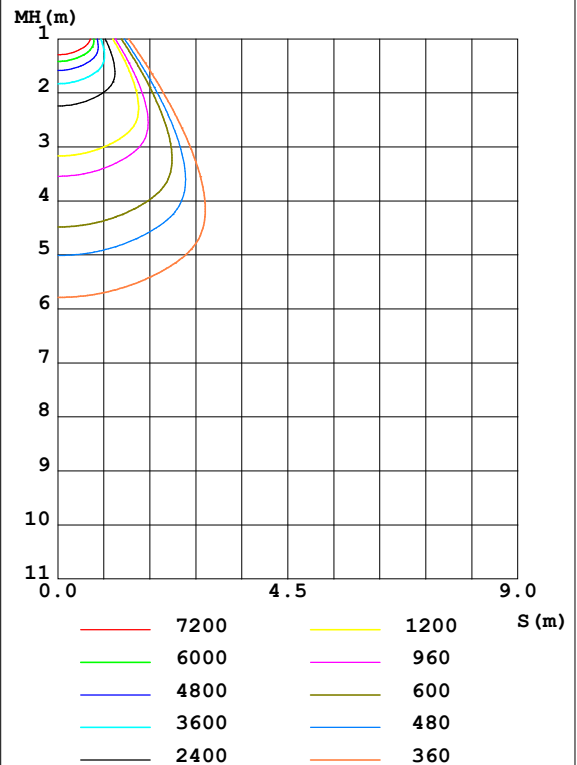
Test:U:229.9V I:0.8026A P:178.2W PF:0.9660 Lamp Flux:24090.2x1 lm		
NAME: LHB01-180	TYPE:180W	WEIGHT:
SPEC.:5000K Ra70 90DEG L02805	DIM.: 0.718*0.275*0.102	SERIAL No.:
MFR.:	SUR.:0.255*0.69	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 135.15 lm/W			
MODEL	LHB01-180	I _{max} (cd)	12579	S/MH(C0/180)	1.25
NOMINAL POWER(W)	180	LOR(%)	100.0	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	24090	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	24090.2	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.25

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:2017-03-24

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	1208	1209	1209	1209	1208	1209	1209	1209	0- 5	288.7	288.7	1.2,1.2
10	1215	1216	1215	1216	1215	1216	1215	1216	5- 10	867.4	1156	4.8,4.8
15	1226	1227	1225	1227	1226	1227	1225	1227	10- 15	1449	2605	10.8,10.8
20	1240	1241	1238	1241	1240	1241	1238	1241	15- 20	2033	4637	19.3,19.3
25	1256	1250	1252	1250	1256	1250	1252	1250	20- 25	2616	7254	30.1,30.1
30	1244	1234	1243	1234	1244	1234	1243	1234	25- 30	3166	10420	43.3,43.3
35	1112	1110	1108	1110	1112	1110	1108	1110	30- 35	3490	13910	57.7,57.7
40	806.7	807.7	812.5	807.7	806.7	807.7	812.5	807.7	35- 40	3217	17126	71.1,71.1
45	477.2	481.2	502.6	481.2	477.2	481.2	502.6	481.2	40- 45	2349	19476	80.8,80.8
50	271.3	274.7	359.1	274.7	271.3	274.7	359.1	274.7	45- 50	1518	20994	87.1,87.1
55	167.8	170.9	234.5	170.9	167.8	170.9	234.5	170.9	50- 55	1029	22023	91.4,91.4
60	111.1	119.1	109.9	119.1	111.1	119.1	109.9	119.1	55- 60	698.1	22721	94.3,94.3
65	75.51	78.43	91.75	78.43	75.51	78.43	91.75	78.43	60- 65	463.2	23185	96.2,96.2
70	50.74	52.25	73.55	52.25	50.74	52.25	73.55	52.25	65- 70	342.8	23527	97.7,97.7
75	30.96	38.28	55.35	38.28	30.96	38.28	55.35	38.28	70- 75	253.4	23781	98.7,98.7
80	10.25	25.26	37.16	25.26	10.25	25.26	37.16	25.26	75- 80	173.5	23954	99.4,99.4
85	2.633	12.86	18.96	12.86	2.633	12.86	18.96	12.86	80- 85	100.4	24055	99.9,99.9
90	0.3824	0.7751	0.7691	0.7751	0.3824	0.7751	0.7691	0.7751	85- 90	35.41	24090	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): 19476 lm

%lum = 80.8%

%lamp = 80.8%

Conical surface Flux(120deg): 22721 lm

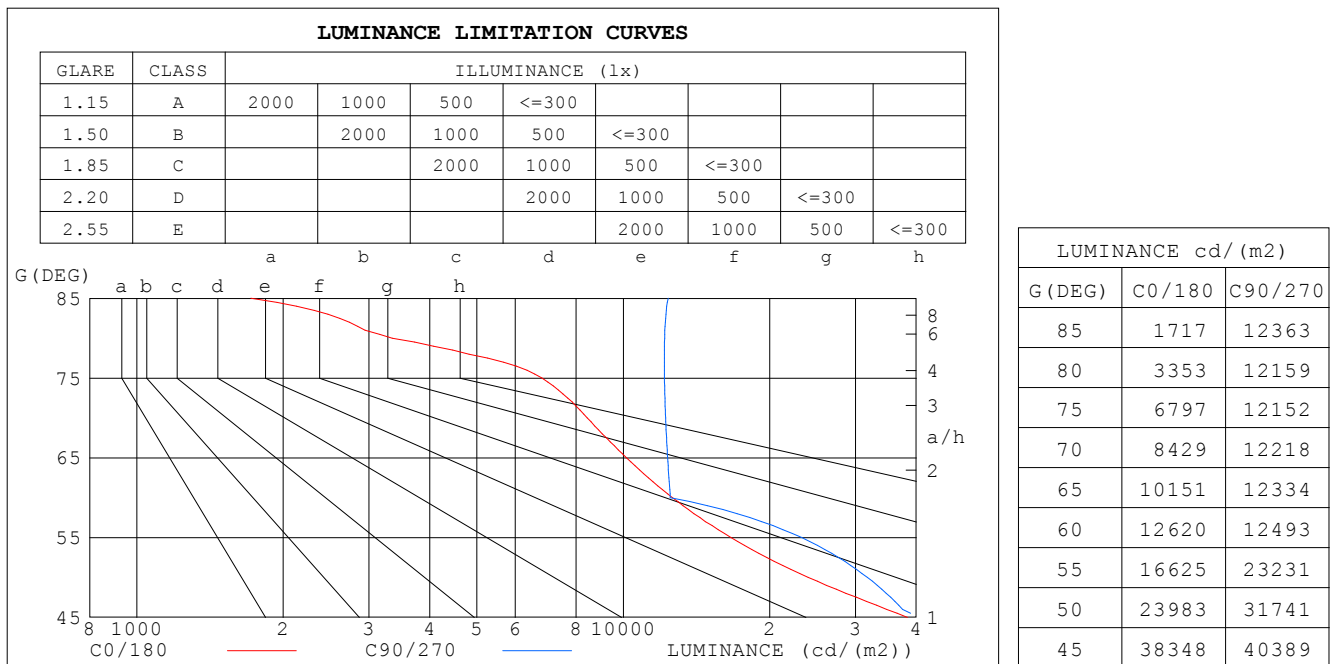
%lum = 94.3%

%lamp = 94.3%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-03-24

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

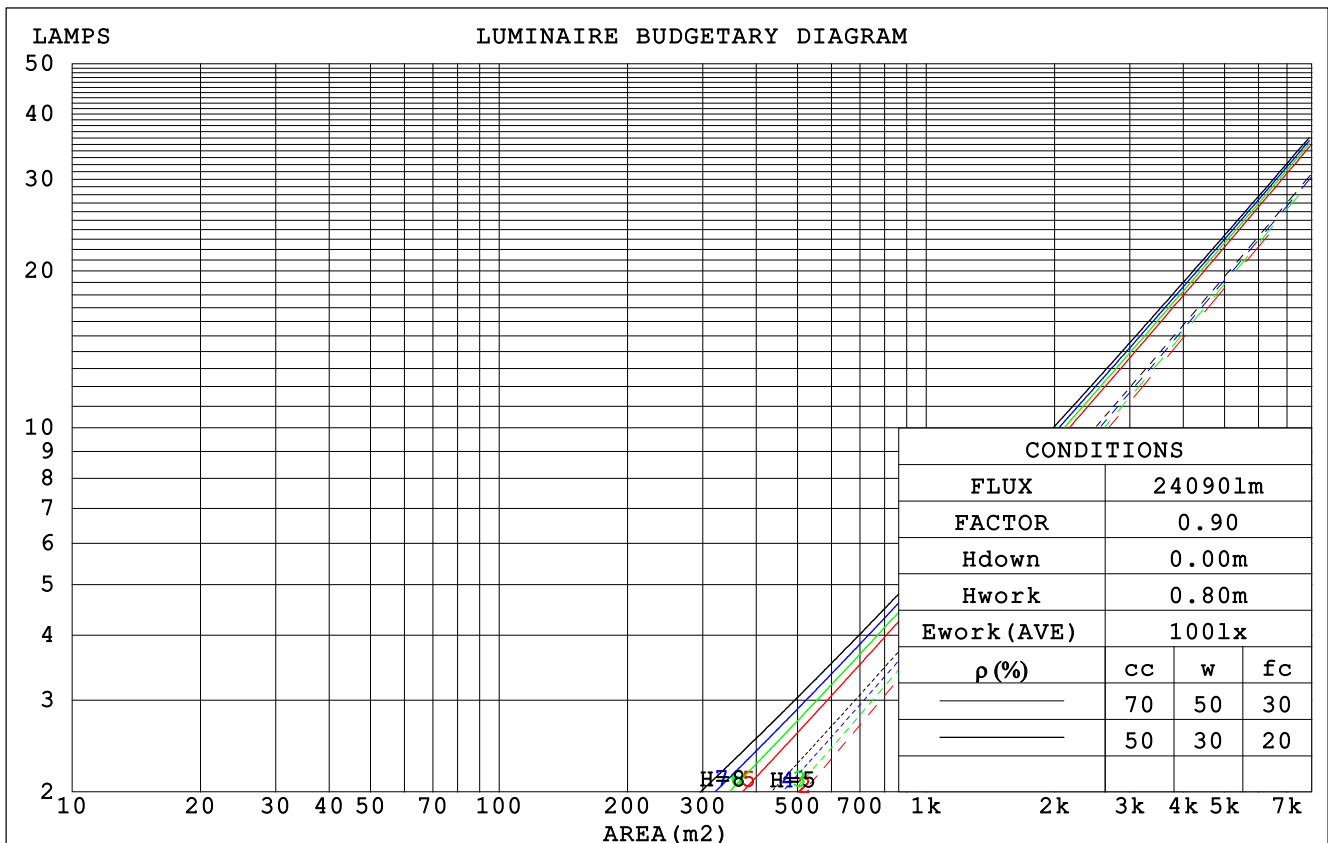


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-24

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	1.08	1.05	1.02	1.06	1.03	1.00	1.02	.99	.97	.98	.96	.94	.94	.93	.92	.90
2.0	.98	.93	.88	.96	.91	.87	.93	.89	.85	.90	.86	.83	.87	.84	.82	.80
3.0	.89	.82	.77	.87	.81	.77	.84	.79	.75	.82	.78	.74	.79	.76	.73	.71
4.0	.81	.74	.68	.79	.73	.68	.77	.71	.67	.75	.70	.66	.73	.69	.65	.63
5.0	.74	.66	.61	.73	.66	.61	.71	.65	.60	.69	.64	.59	.67	.63	.59	.57
6.0	.67	.60	.55	.67	.60	.54	.65	.59	.54	.63	.58	.54	.62	.57	.53	.51
7.0	.62	.55	.49	.61	.54	.49	.60	.54	.49	.59	.53	.49	.57	.52	.48	.47
8.0	.57	.50	.45	.57	.50	.45	.55	.49	.44	.54	.48	.44	.53	.48	.44	.42
9.0	.53	.46	.41	.52	.46	.41	.51	.45	.41	.50	.45	.40	.49	.44	.40	.39
10.0	.49	.42	.37	.49	.42	.37	.48	.42	.37	.47	.41	.37	.46	.41	.37	.35



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-03-24

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	.230	.131	.041	.223	.127	.040	.210	.120	.038	.198	.114	.037	.187	.109	.035	
2.0	.221	.121	.037	.215	.119	.037	.204	.114	.035	.194	.109	.034	.185	.104	.033	
3.0	.210	.112	.034	.205	.110	.033	.195	.106	.032	.187	.102	.031	.178	.099	.031	
4.0	.199	.103	.030	.194	.102	.030	.186	.099	.029	.178	.096	.029	.171	.093	.028	
5.0	.188	.096	.028	.184	.095	.028	.177	.092	.027	.170	.090	.027	.163	.087	.026	
6.0	.178	.089	.026	.175	.088	.025	.168	.086	.025	.162	.084	.025	.156	.082	.024	
7.0	.169	.083	.024	.166	.083	.024	.160	.081	.023	.154	.079	.023	.149	.077	.023	
8.0	.160	.078	.022	.157	.077	.022	.152	.076	.022	.147	.074	.021	.142	.073	.021	
9.0	.152	.074	.021	.150	.073	.020	.145	.072	.020	.140	.070	.020	.136	.069	.020	
10.0	.145	.069	.019	.143	.069	.019	.138	.068	.019	.134	.067	.019	.130	.066	.019	

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	.175	.157	.141	.150	.135	.121	.102	.093	.084	.059	.054	.049	.019	.017	.016	
2.0	.163	.132	.107	.139	.114	.092	.096	.079	.064	.055	.046	.038	.018	.015	.012	
3.0	.153	.114	.083	.131	.098	.072	.090	.068	.050	.052	.040	.030	.017	.013	.010	
4.0	.144	.100	.066	.124	.086	.057	.085	.060	.040	.049	.035	.024	.016	.011	.008	
5.0	.137	.089	.053	.118	.077	.046	.081	.054	.033	.047	.032	.019	.015	.010	.006	
6.0	.130	.080	.044	.112	.069	.039	.077	.049	.027	.045	.029	.016	.014	.009	.005	
7.0	.124	.073	.037	.107	.063	.033	.074	.044	.023	.043	.026	.014	.014	.009	.005	
8.0	.118	.067	.032	.102	.058	.028	.071	.041	.020	.041	.024	.012	.013	.008	.004	
9.0	.113	.062	.028	.098	.054	.024	.068	.038	.017	.039	.022	.010	.013	.007	.003	
10.0	.108	.058	.024	.093	.050	.021	.065	.035	.015	.038	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-24

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	22.3	23.5	22.5	23.7	23.9	22.8	24.1	23.1	24.3	24.4
3H	22.4	23.6	22.7	23.8	24.0	23.1	24.3	23.4	24.5	24.7
4H	22.4	23.5	22.7	23.8	24.0	23.3	24.4	23.6	24.6	24.9
6H	22.4	23.4	22.7	23.7	23.9	23.5	24.5	23.8	24.8	25.0
8H	22.4	23.3	22.7	23.6	23.9	23.6	24.6	23.9	24.8	25.1
12H	22.3	23.3	22.7	23.5	23.8	23.7	24.6	24.0	24.9	25.2
4H 2H	22.3	23.3	22.6	23.6	23.8	22.8	23.8	23.1	24.1	24.3
3H	22.5	23.4	22.8	23.7	24.0	23.2	24.1	23.5	24.4	24.7
4H	22.6	23.4	22.9	23.7	24.0	23.5	24.3	23.9	24.6	25.0
6H	22.6	23.3	23.0	23.7	24.0	23.8	24.6	24.2	24.9	25.3
8H	22.6	23.3	23.0	23.6	24.0	24.0	24.7	24.4	25.0	25.4
12H	22.5	23.2	23.0	23.5	23.9	24.1	24.7	24.5	25.1	25.5
8H 4H	22.6	23.3	23.0	23.6	24.0	23.5	24.2	23.9	24.5	24.9
6H	22.7	23.2	23.1	23.6	24.1	23.9	24.5	24.4	24.9	25.3
8H	22.7	23.2	23.2	23.6	24.1	24.2	24.7	24.6	25.1	25.5
12H	22.7	23.1	23.2	23.6	24.0	24.4	24.8	24.8	25.2	25.7
12H 4H	22.6	23.2	23.0	23.6	24.0	23.5	24.1	23.9	24.5	24.8
6H	22.7	23.2	23.2	23.6	24.1	23.9	24.4	24.4	24.8	25.3
8H	22.7	23.2	23.2	23.6	24.1	24.2	24.6	24.6	25.0	25.5
Variations with the observer position at spacings:										
S = 1.0H	+ 1.5 / - 2.6					+ 1.0 / - 1.4				
1.5H	+ 2.5 / - 2.3					+ 1.7 / - 1.3				
2.0H	+ 3.2 / - 2.0					+ 2.2 / - 1.8				

CIE Pub.117 Corrected 24090 lm Total Lamp Luminous Flux.(8log(F/F0) = 11.1)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-24

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:

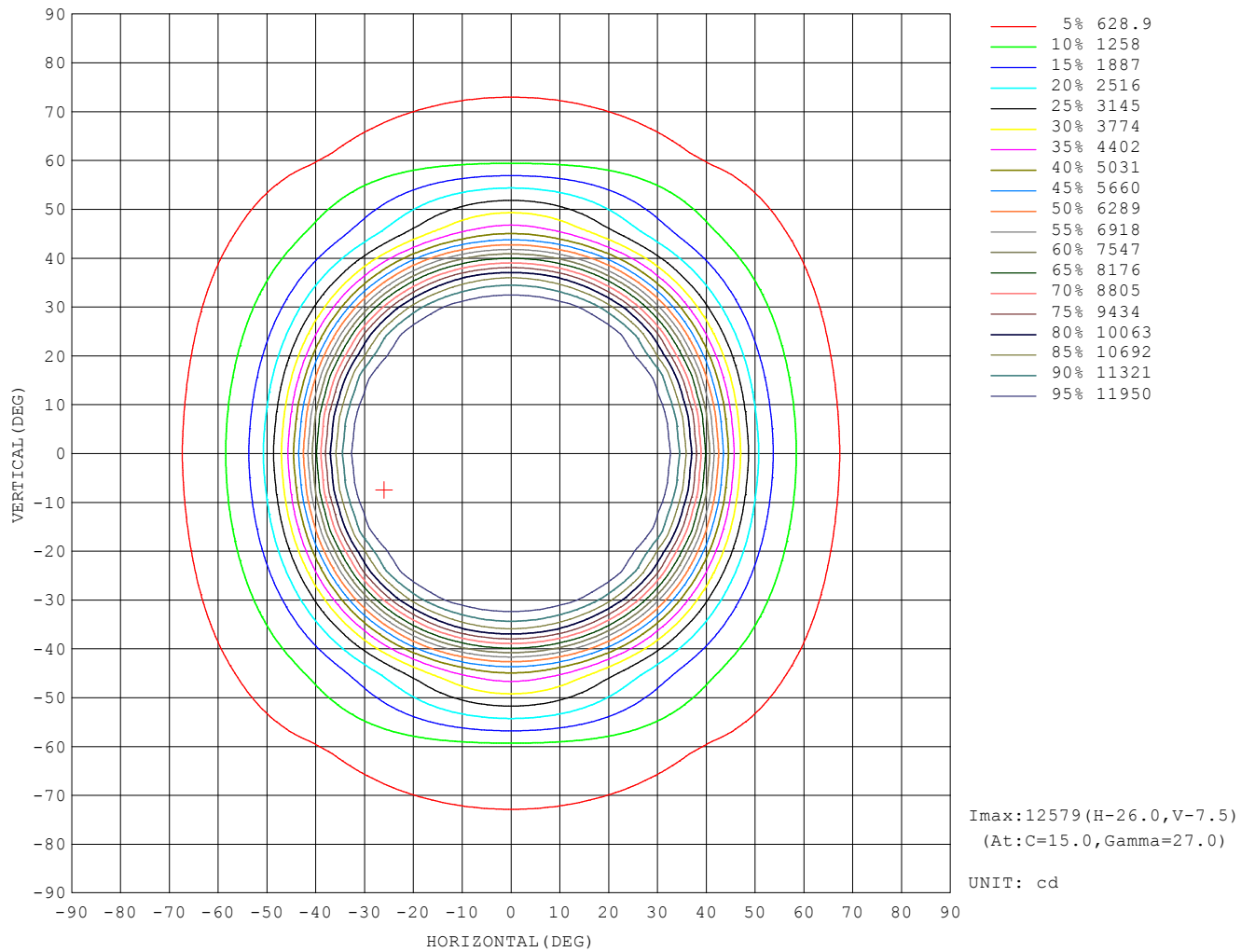
UTILIZATION FACTORS TABLE

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	73	64	59	72	64	59	54
0.80	83	74	69	82	74	69	80	73	68	63
1.00	89	82	76	88	81	76	87	82	76	70
1.25	95	88	83	94	87	82	92	86	82	76
1.50	99	92	87	97	91	87	95	90	86	80
2.00	103	98	93	102	97	92	99	94	91	85
2.50	106	101	96	104	99	96	101	97	94	87
3.00	108	103	100	106	102	99	103	99	96	89
4.00	111	107	104	109	105	102	105	102	100	92
5.00	112	109	106	110	107	105	106	104	102	93
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: 2017-03-24

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:

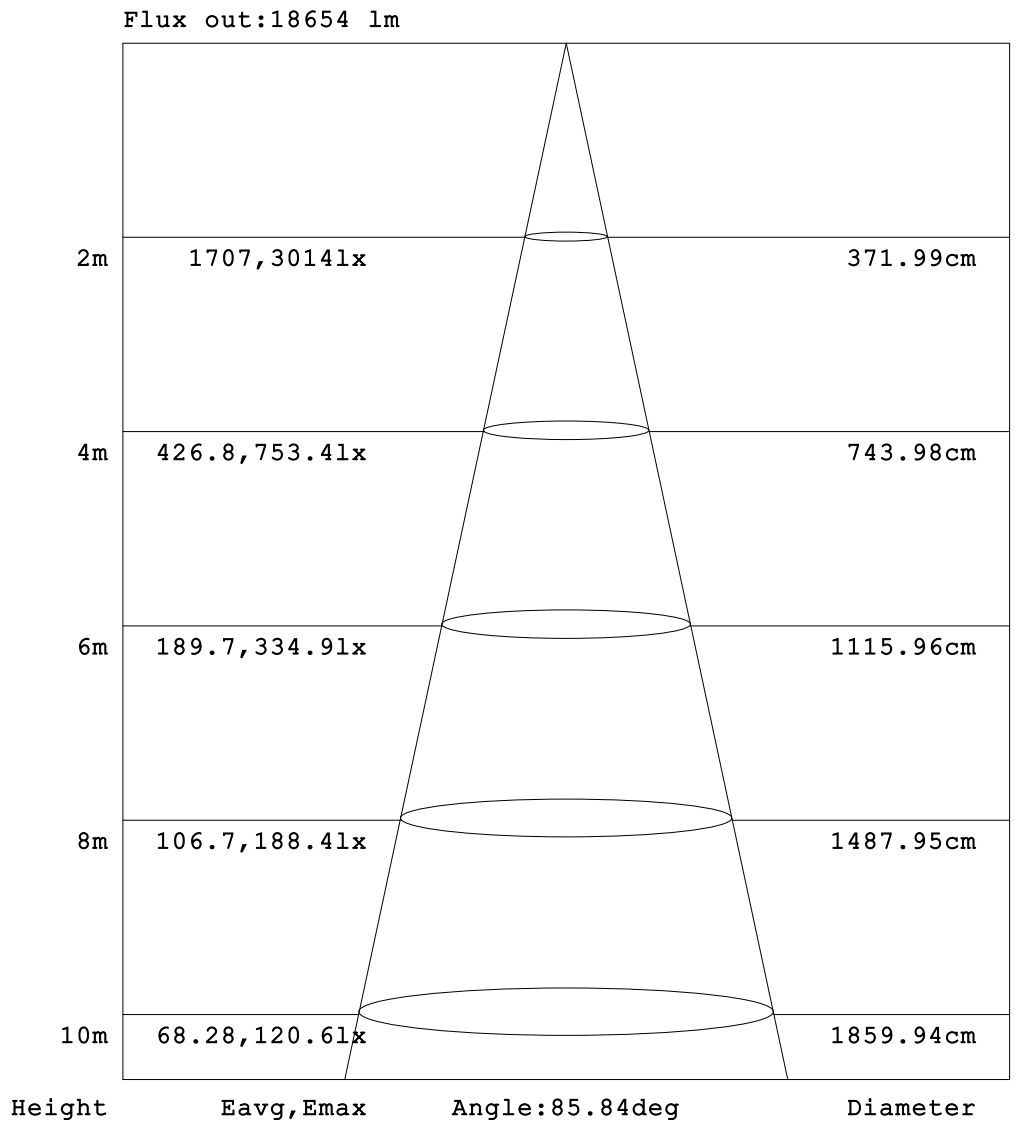
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-24

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

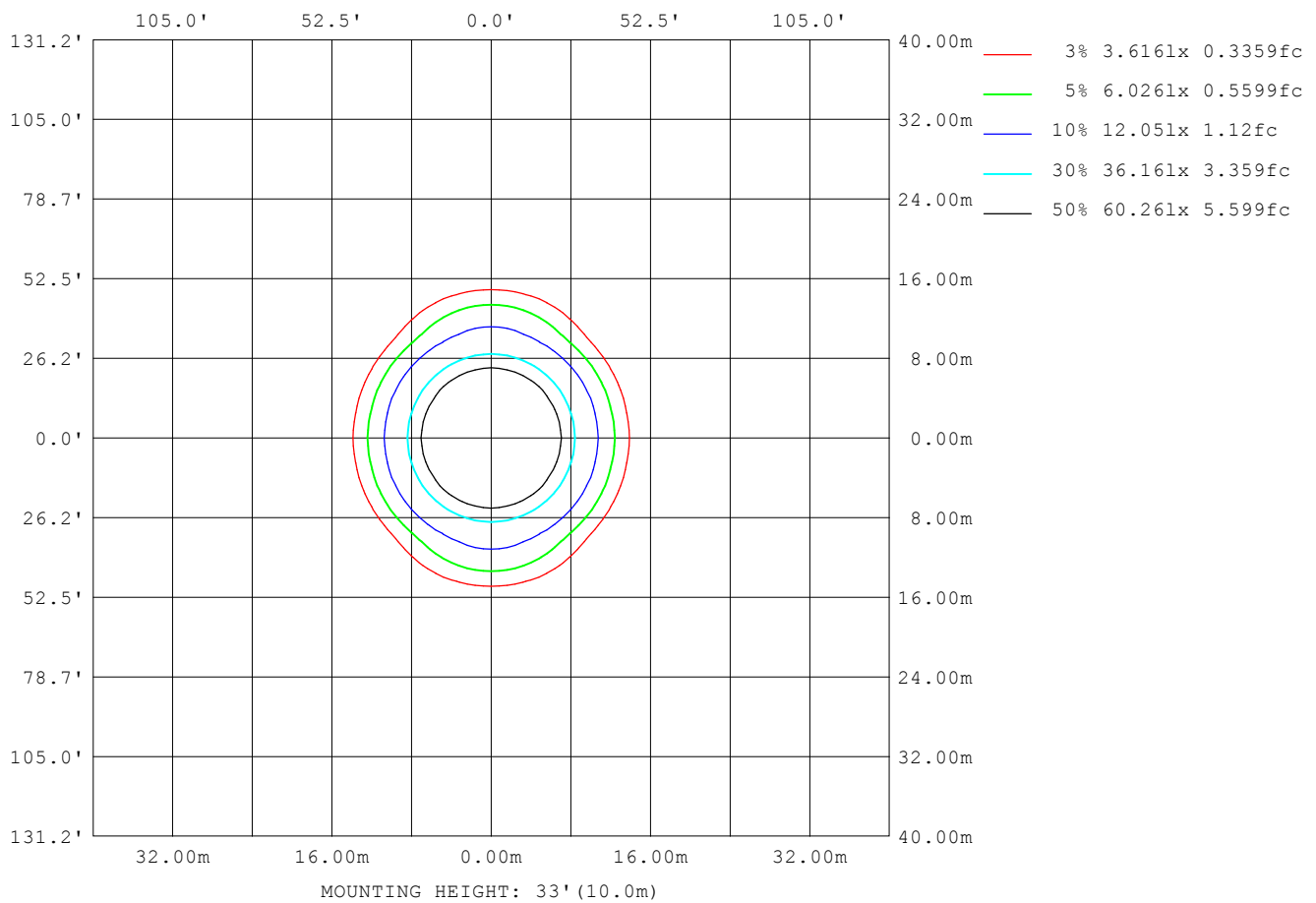


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-24

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:2017-03-24

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:229.9V I:0.8026A P:178.2W PF:0.9660 Lamp Flux:24090.2x1 lm		
NAME: LHB01-180	TYPE:180W	WEIGHT:
SPEC.:5000K Ra70 90DEG L02805	DIM.: 0.718*0.275*0.102	SERIAL No.:
MFR.:	SUR.:0.255*0.69	Shielding Angle:

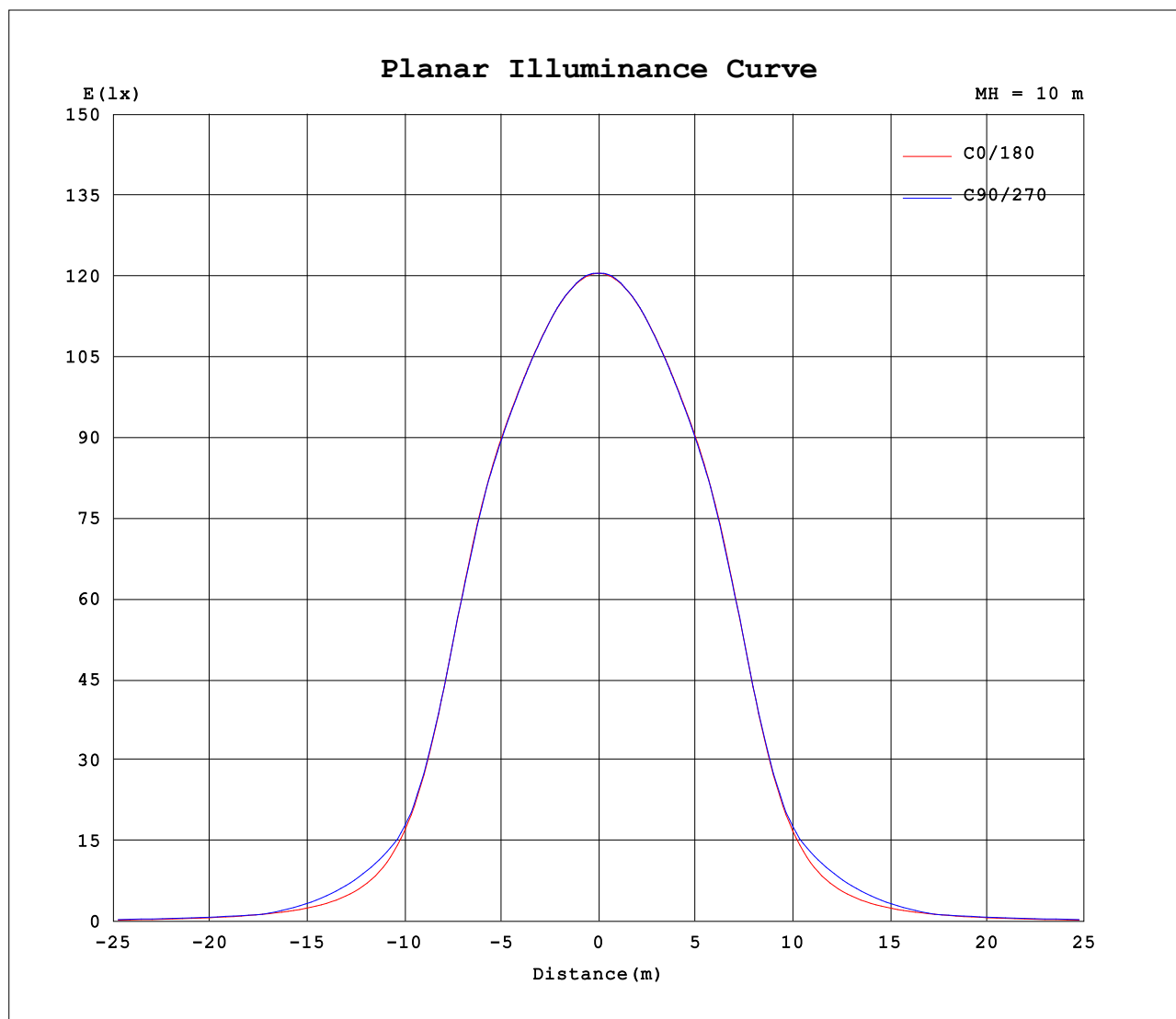
AvgL	cd/m2
L_0~180 (65) av	10151
L_0~180 (75) av	6797
L_0~180 (85) av	1717
L_90~270 (65) av	12334
L_90~270 (75) av	12152
L_90~270 (85) av	12363
L_45 (65) av	10544
L_45 (75) av	8403
L_45 (85) av	8382

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-03-24

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: 2017-03-24

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:

```

```

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:

```

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:

```