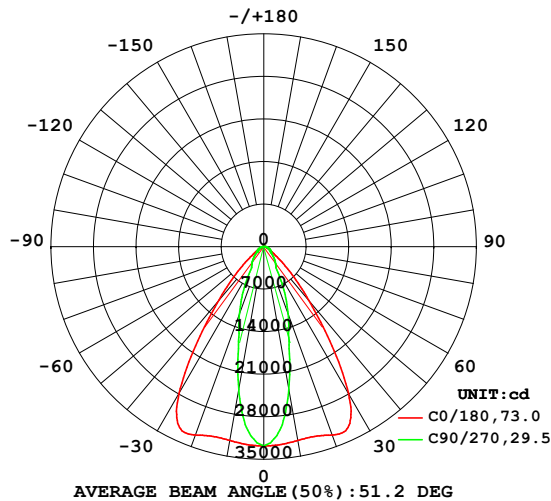


LUMINAIRE PHOTOMETRIC TEST REPORT

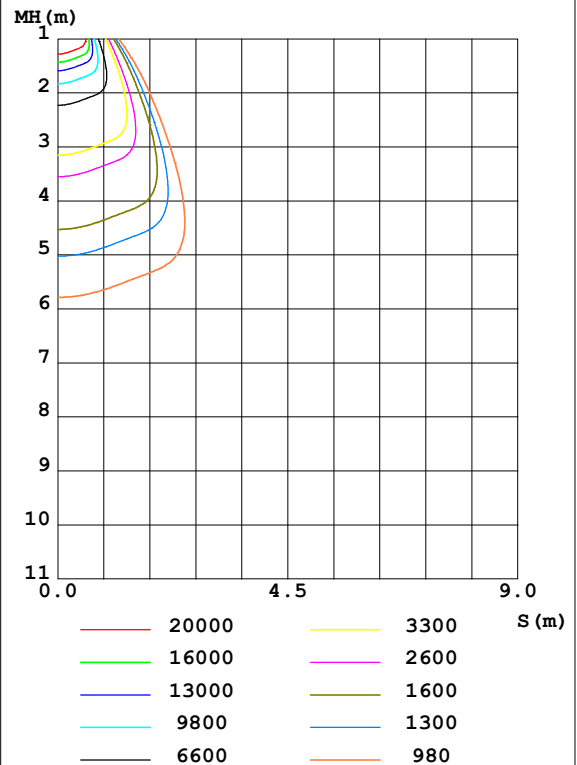
Test:U:230.0V I:0.8090A P:179.2W PF:0.9633 Lamp Flux:28631.2x1 lm		
NAME: LHB01-180H	TYPE:180W	WEIGHT:
SPEC.:5000K Ra70 3070DEG L06401	DIM.: 0.718*0.275*0.102	SERIAL No.:
MFR.:	SUR.:0.255*0.69	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 159.74 lm/W			
MODEL	LHB01-180H	I _{max} (cd)	33256	S/MH (C0/180)	1.06
NOMINAL POWER(W)	180	LOR(%)	100.0	S/MH (C90/270)	0.49
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	28631	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	28631.2	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	0.65

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:2017-06-02

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	3267	3133	3031	3139	3267	3139	3031	3133	0- 5	765.6	765.6	2.67,2.67
10	3238	2776	2389	2791	3238	2791	2389	2776	5- 10	2121	2887	10.1,10.1
15	3232	2260	1609	2269	3232	2269	1609	2260	10- 15	3029	5916	20.7,20.7
20	3298	1714	1177	1695	3298	1695	1177	1714	15- 20	3535	9451	33,33
25	3284	1391	791.4	1349	3284	1349	791.4	1391	20- 25	3871	13322	46.5,46.5
30	2790	1085	405.7	1045	2790	1045	405.7	1085	25- 30	3811	17133	59.8,59.8
35	1891	704.5	342.7	693.8	1891	693.8	342.7	704.5	30- 35	3177	20310	70.9,70.9
40	1153	351.5	279.8	356.8	1153	356.8	279.8	351.5	35- 40	2363	22674	79.2,79.2
45	693.1	286.1	216.8	288.3	693.1	288.3	216.8	286.1	40- 45	1708	24381	85.2,85.2
50	368.2	224.1	153.9	223.8	368.2	223.8	153.9	224.1	45- 50	1228	25610	89.4,89.4
55	196.0	164.4	133.9	162.8	196.0	162.8	133.9	164.4	50- 55	862.7	26472	92.5,92.5
60	122.8	111.3	114.0	109.2	122.8	109.2	114.0	111.3	55- 60	637.8	27110	94.7,94.7
65	85.95	87.68	94.04	86.41	85.95	86.41	94.04	87.68	60- 65	495.6	27606	96.4,96.4
70	59.45	63.75	74.09	63.29	59.45	63.29	74.09	63.75	65- 70	385.2	27991	97.8,97.8
75	41.63	40.08	55.86	40.45	41.63	40.45	55.86	40.08	70- 75	286.2	28277	98.8,98.8
80	26.52	25.96	37.64	26.35	26.52	26.35	37.64	25.96	75- 80	196.6	28474	99.5,99.5
85	7.834	13.43	19.41	13.74	7.834	13.74	19.41	13.43	80- 85	116.2	28590	99.9,99.9
90	0.4205	1.092	1.180	1.309	0.4205	1.309	1.180	1.092	85- 90	41.03	28631	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): 24381 lm

%lum = 85.2%

%lamp = 85.2%

Conical surface Flux(120deg): 27110 lm

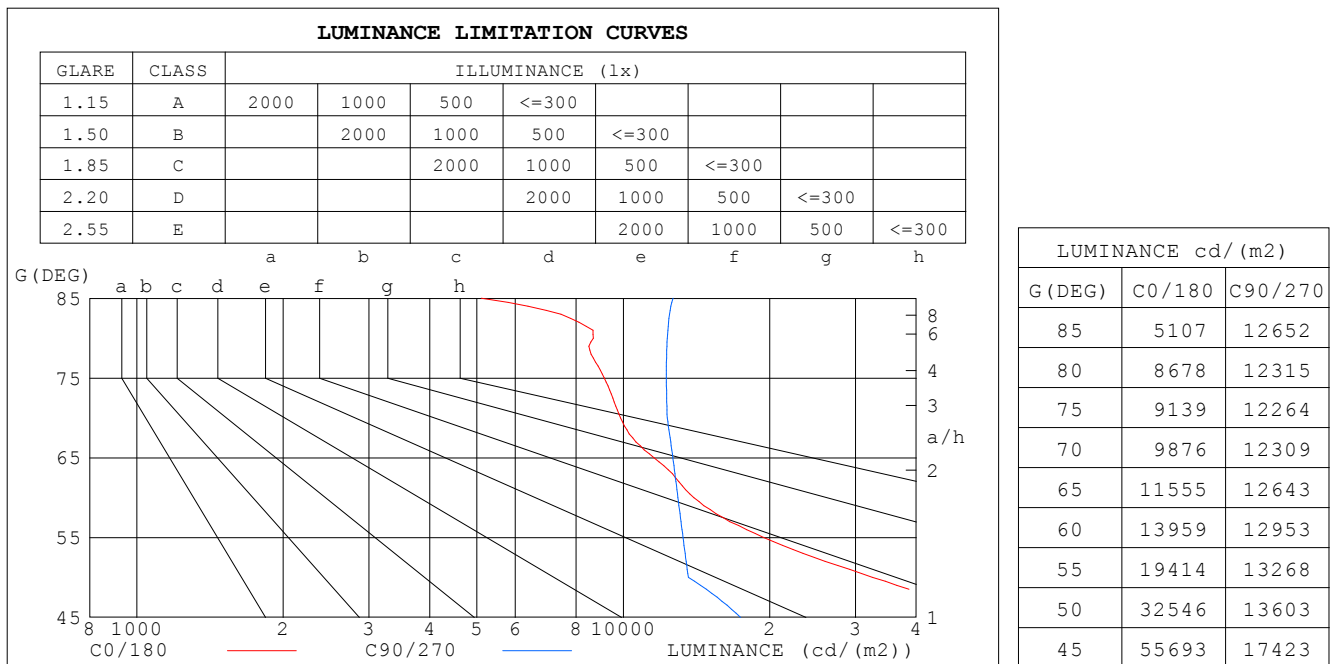
%lum = 94.7%

%lamp = 94.7%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-06-02

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

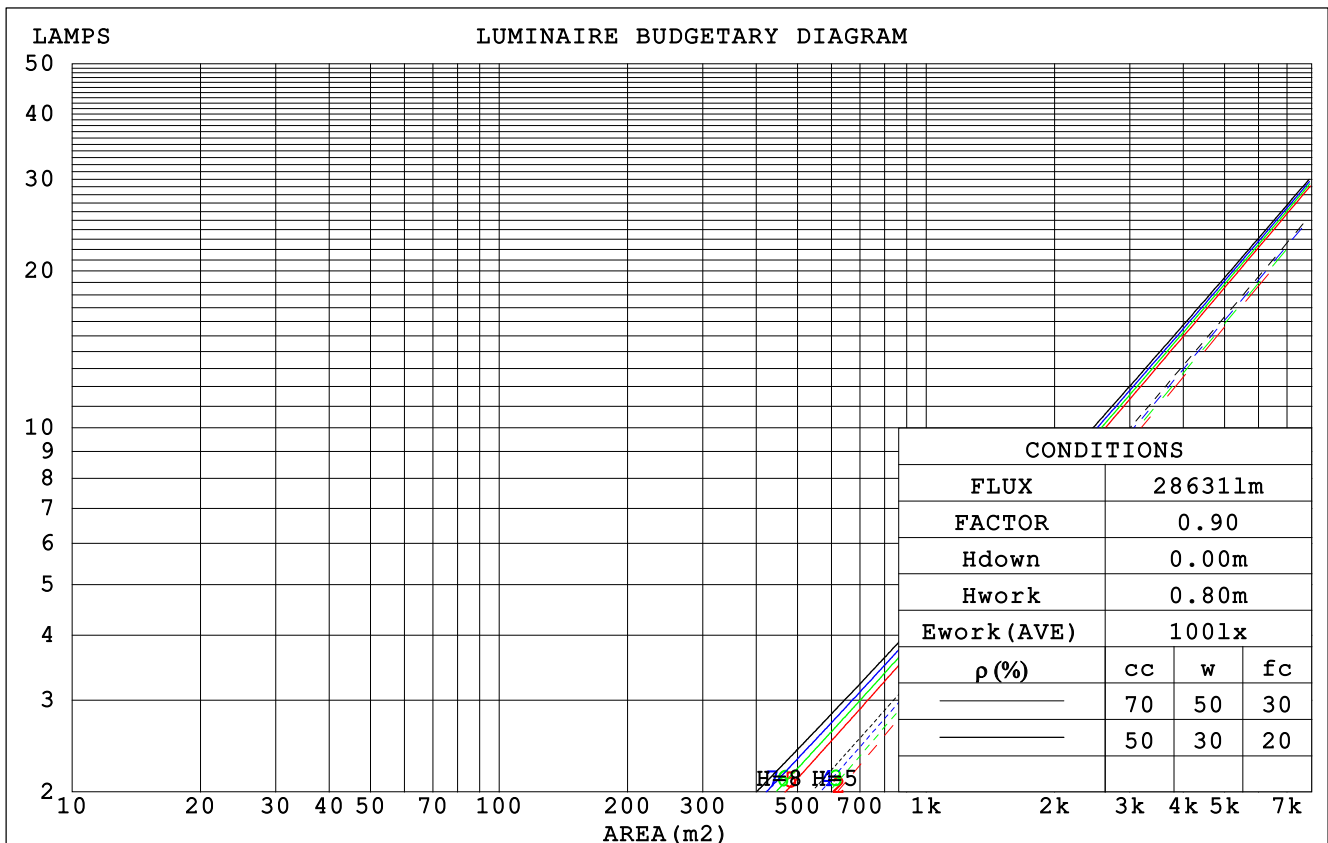


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-06-02

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	1.09	1.06	1.04	1.07	1.04	1.02	1.03	1.01	.99	.99	.97	.96	.96	.94	.93	.91
2.0	.00	.95	.91	.98	.94	.90	.95	.91	.88	.92	.89	.86	.89	.87	.85	.83
3.0	.92	.86	.82	.91	.85	.81	.88	.83	.80	.85	.82	.78	.83	.80	.77	.75
4.0	.85	.79	.74	.84	.78	.73	.82	.77	.73	.80	.75	.72	.78	.74	.71	.69
5.0	.79	.72	.67	.78	.72	.67	.76	.71	.66	.74	.70	.66	.73	.69	.65	.64
6.0	.73	.67	.62	.73	.66	.62	.71	.65	.61	.70	.65	.61	.68	.64	.60	.59
7.0	.69	.62	.57	.68	.62	.57	.67	.61	.57	.65	.60	.56	.64	.60	.56	.55
8.0	.64	.58	.53	.64	.57	.53	.63	.57	.53	.61	.56	.53	.60	.56	.52	.51
9.0	.60	.54	.50	.60	.54	.50	.59	.53	.49	.58	.53	.49	.57	.52	.49	.48
10.0	.57	.51	.47	.57	.51	.46	.56	.50	.46	.55	.50	.46	.54	.49	.46	.45



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-06-02

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	.210	.119	.038	.203	.116	.037	.191	.109	.035	.179	.103	.033	.168	.097	.031		
2.0	.200	.110	.034	.194	.107	.033	.183	.102	.032	.173	.097	.030	.164	.093	.029		
3.0	.189	.101	.030	.184	.098	.030	.175	.095	.029	.166	.091	.028	.158	.087	.027		
4.0	.178	.093	.027	.174	.091	.027	.166	.088	.026	.158	.085	.026	.151	.082	.025		
5.0	.168	.086	.025	.164	.084	.025	.157	.082	.024	.150	.079	.024	.144	.077	.023		
6.0	.159	.080	.023	.156	.079	.023	.149	.077	.022	.143	.075	.022	.138	.073	.022		
7.0	.151	.074	.021	.148	.074	.021	.142	.072	.021	.137	.070	.020	.132	.069	.020		
8.0	.143	.070	.020	.140	.069	.020	.135	.068	.019	.131	.066	.019	.126	.065	.019		
9.0	.136	.066	.018	.134	.065	.018	.129	.064	.018	.125	.063	.018	.121	.061	.018		
10.0	.130	.062	.017	.128	.062	.017	.123	.060	.017	.120	.059	.017	.116	.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	.142	.148	.135	.122	.101	.093	.085	.058	.054	.049	.019	.017	.016	
2.0	.160	.132	.109	.137	.114	.094	.094	.079	.066	.054	.046	.039	.017	.015	.013	
3.0	.149	.114	.086	.128	.098	.074	.088	.068	.052	.051	.040	.031	.016	.013	.010	
4.0	.139	.099	.069	.120	.086	.060	.082	.060	.042	.048	.035	.025	.015	.011	.008	
5.0	.131	.088	.056	.113	.076	.049	.078	.053	.035	.045	.031	.021	.014	.010	.007	
6.0	.124	.079	.047	.106	.068	.041	.073	.048	.029	.043	.028	.017	.014	.009	.006	
7.0	.117	.072	.040	.101	.062	.035	.070	.044	.025	.040	.026	.015	.013	.008	.005	
8.0	.111	.066	.034	.096	.057	.030	.066	.040	.021	.039	.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	.061	.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:2017-06-02

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	23.1	24.2	23.4	24.4	24.6	18.0	19.1	18.3	19.3	19.5
3H	23.3	24.3	23.5	24.5	24.7	19.3	20.3	19.6	20.5	20.7
4H	23.3	24.3	23.6	24.5	24.7	19.9	20.9	20.2	21.1	21.3
6H	23.4	24.2	23.7	24.5	24.7	20.5	21.4	20.8	21.6	21.9
8H	23.4	24.2	23.7	24.5	24.7	20.7	21.5	21.0	21.8	22.1
12H	23.3	24.2	23.7	24.4	24.7	20.9	21.7	21.2	22.0	22.2
4H 2H	23.1	24.0	23.3	24.2	24.5	18.5	19.5	18.8	19.7	19.9
3H	23.3	24.1	23.6	24.4	24.7	19.9	20.7	20.3	21.0	21.3
4H	23.4	24.2	23.8	24.5	24.8	20.7	21.4	21.0	21.7	22.0
6H	23.5	24.2	23.9	24.5	24.9	21.4	22.0	21.7	22.4	22.7
8H	23.6	24.2	24.0	24.5	24.9	21.7	22.3	22.0	22.6	23.0
12H	23.6	24.1	24.0	24.5	24.9	21.9	22.5	22.3	22.8	23.2
8H 4H	23.4	24.0	23.8	24.4	24.8	20.8	21.4	21.2	21.8	22.1
6H	23.6	24.1	24.0	24.5	24.9	21.6	22.1	22.1	22.5	23.0
8H	23.6	24.1	24.1	24.5	25.0	22.0	22.5	22.5	22.9	23.3
12H	23.7	24.1	24.2	24.5	25.0	22.4	22.8	22.8	23.2	23.7
12H 4H	23.4	23.9	23.8	24.3	24.7	20.8	21.4	21.2	21.7	22.1
6H	23.6	24.0	24.0	24.4	24.9	21.7	22.1	22.1	22.5	23.0
8H	23.7	24.0	24.1	24.5	25.0	22.1	22.5	22.6	22.9	23.4
Variations with the observer position at spacings:										
S = 1.0H	+ 2.8 / - 2.2					+ 0.4 / - 0.4				
1.5H	+ 4.1 / - 2.6					+ 0.3 / - 0.4				
2.0H	+ 4.2 / - 1.8					+ 0.4 / - 0.3				

CIE Pub.117 Corrected 28631 lm Total Lamp Luminous Flux.(8log(F/F0) = 11.7)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-02

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:

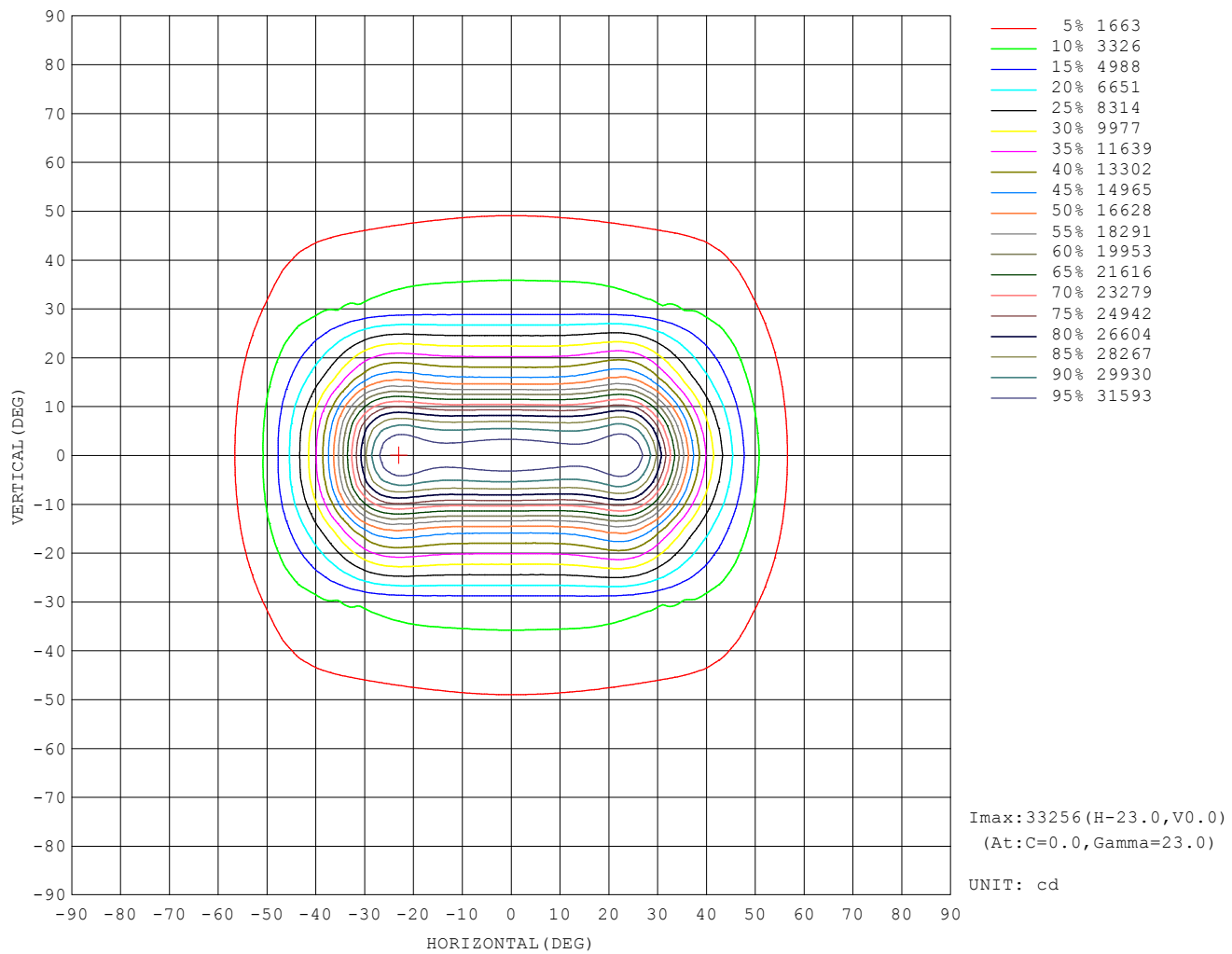
UTILIZATION FACTORS TABLE

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	66	78	70	66	77	70	66	61
0.80	87	79	75	86	79	75	85	78	74	70
1.00	93	86	81	92	85	81	90	85	80	75
1.25	98	91	87	97	91	86	94	89	85	80
1.50	101	95	91	100	94	90	97	93	89	84
2.00	105	100	96	103	99	95	101	97	93	87
2.50	107	102	99	106	101	98	102	99	96	89
3.00	109	105	101	107	103	100	104	101	98	91
4.00	112	108	105	110	107	104	106	103	101	94
5.00	113	110	108	111	108	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: 2017-06-02

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:

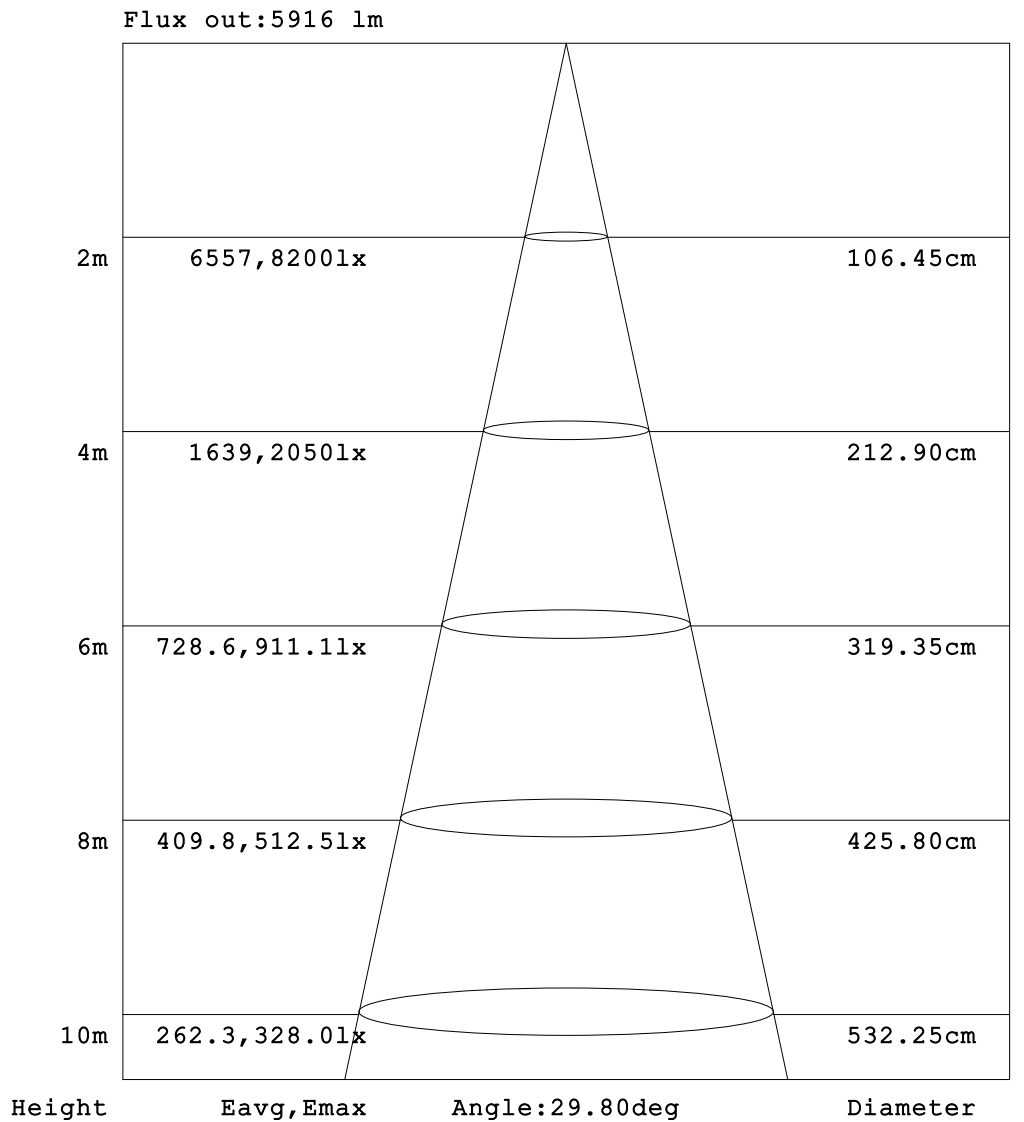
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-06-02

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

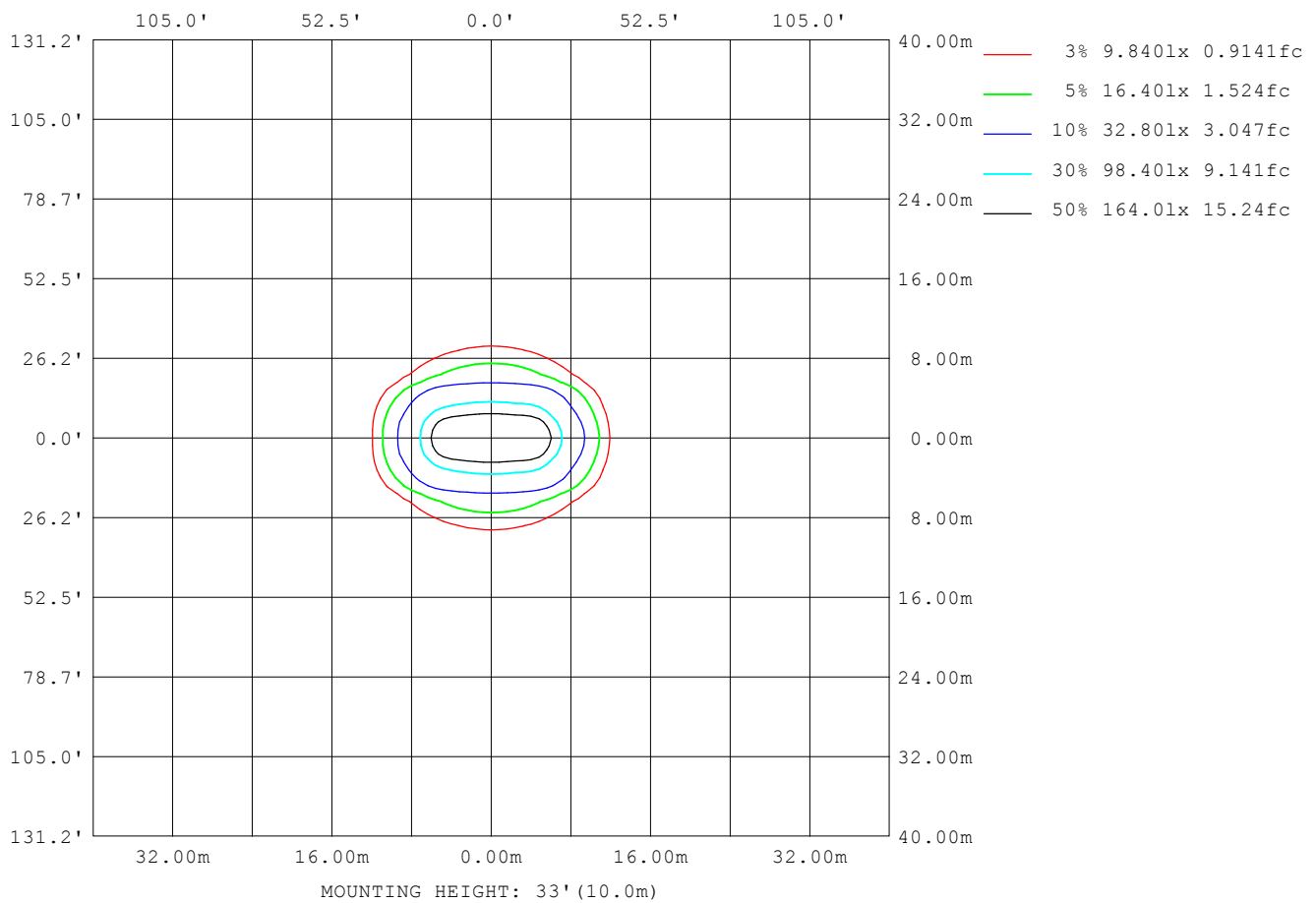


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-06-02

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: 2017-06-02

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:0.8090A P:179.2W PF:0.9633 Lamp Flux:28631.2x1 lm		
NAME: LHB01-180H	TYPE:180W	WEIGHT:
SPEC.:5000K Ra70 3070DEG L06401	DIM.: 0.718*0.275*0.102	SERIAL No.:
MFR.:	SUR.:0.255*0.69	Shielding Angle:

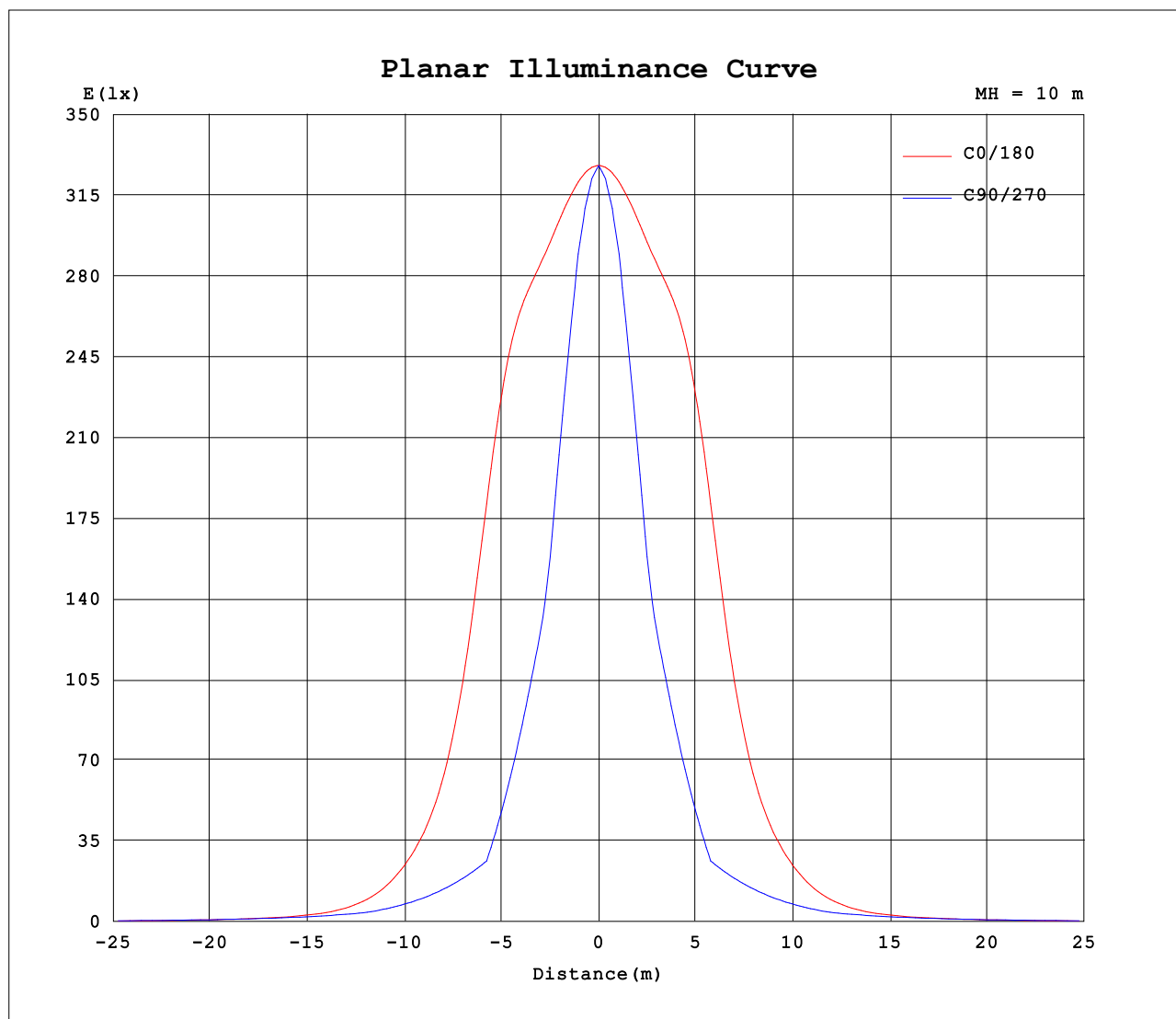
AvgL	cd/m2
L_0~180 (65) av	11555
L_0~180 (75) av	9139
L_0~180 (85) av	5107
L_90~270 (65) av	12643
L_90~270 (75) av	12264
L_90~270 (85) av	12652
L_45 (65) av	11703
L_45 (75) av	8839
L_45 (85) av	8854

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-02

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: 2017-06-02

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:

```