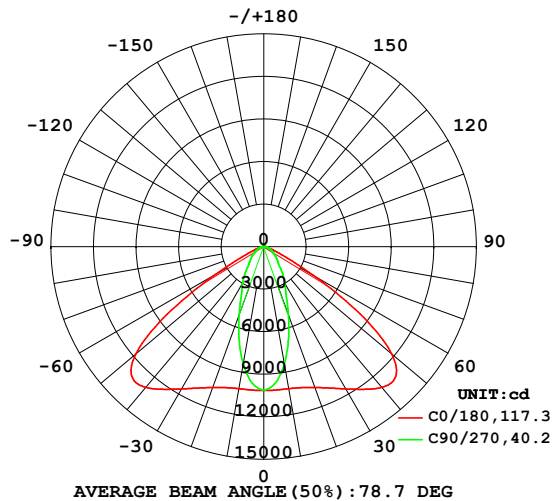


LUMINAIRE PHOTOMETRIC TEST REPORT

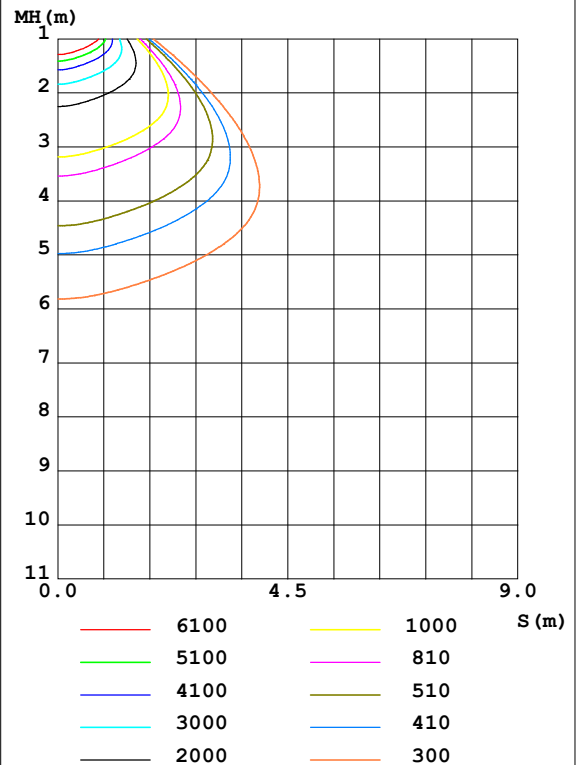
Test:U:230.0V I:0.5431A P:121.3W PF:0.9705 Lamp Flux:17326.7x1 lm		
NAME: LHB01-120H	TYPE:120W	WEIGHT:
SPEC.:5000K Ra80 L06404	DIM.: 0.948*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.92*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 142.89 lm/W			
MODEL	LHB01-120H	I _{max} (cd)	13164	S/MH(C0/180)	1.80
NOMINAL POWER(W)	120	LOR(%)	100.0	S/MH(C90/270)	0.64
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	17327	η UP,DN(C0-180)	0.0,50.3
NOMINAL FLUX(lm)	17326.7	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.7
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	0.80

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:2017-09-26

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	1015	985.8	963.8	985.8	1015	985.0	963.8	985.0	0- 5	238.8	238.8	1.38,1.38
10	1017	921.0	839.5	921.0	1017	918.6	839.5	918.6	5- 10	682.8	921.6	5.32,5.32
15	1029	822.8	676.0	822.8	1029	818.8	676.0	818.8	10- 15	1041	1963	11.3,11.3
20	1057	710.4	510.0	710.4	1057	704.8	510.0	704.8	15- 20	1298	3261	18.8,18.8
25	1100	592.9	375.8	592.9	1100	586.1	375.8	586.1	20- 25	1469	4730	27.3,27.3
30	1158	479.7	300.7	479.7	1158	471.6	300.7	471.6	25- 30	1591	6321	36.5,36.5
35	1228	387.7	232.4	387.7	1228	380.2	232.4	380.2	30- 35	1698	8018	46.3,46.3
40	1296	327.9	164.0	327.9	1296	321.2	164.0	321.2	35- 40	1772	9791	56.5,56.5
45	1310	257.4	137.9	257.4	1310	252.8	137.9	252.8	40- 45	1804	11595	66.9,66.9
50	1180	174.2	111.8	174.2	1180	172.7	111.8	172.7	45- 50	1755	13350	77.1,77.1
55	829.2	142.7	86.71	142.7	829.2	141.5	86.71	141.5	50- 55	1511	14862	85.8,85.8
60	402.1	106.2	69.18	106.2	402.1	105.5	69.18	105.5	55- 60	1049	15910	91.8,91.8
65	154.0	71.04	52.60	71.04	154.0	70.84	52.60	70.84	60- 65	609.2	16520	95.3,95.3
70	64.60	50.99	36.01	50.99	64.60	50.68	36.01	50.68	65- 70	355.0	16875	97.4,97.4
75	30.46	30.80	27.15	30.80	30.46	30.29	27.15	30.29	70- 75	216.3	17091	98.6,98.6
80	15.84	19.92	18.28	19.92	15.84	19.49	18.28	19.49	75- 80	133.8	17225	99.4,99.4
85	3.900	10.30	9.416	10.30	3.900	10.03	9.416	10.03	80- 85	75.41	17300	99.8,99.8
90	0.6383	0.7103	0.5493	0.7103	0.6383	0.6508	0.5493	0.6508	85- 90	26.61	17327	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): 11595 lm

%lum = 66.9%

%lamp = 66.9%

Conical surface Flux(120deg): 15910 lm

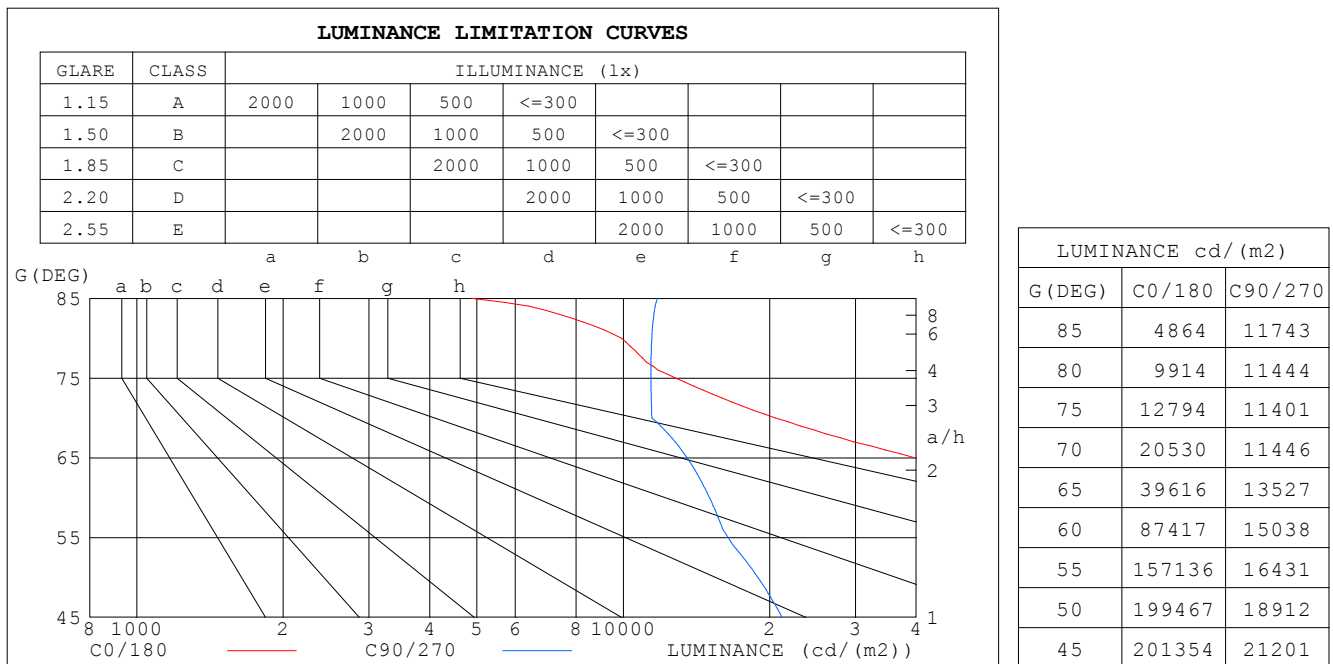
%lum = 91.8%

%lamp = 91.8%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-09-26

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

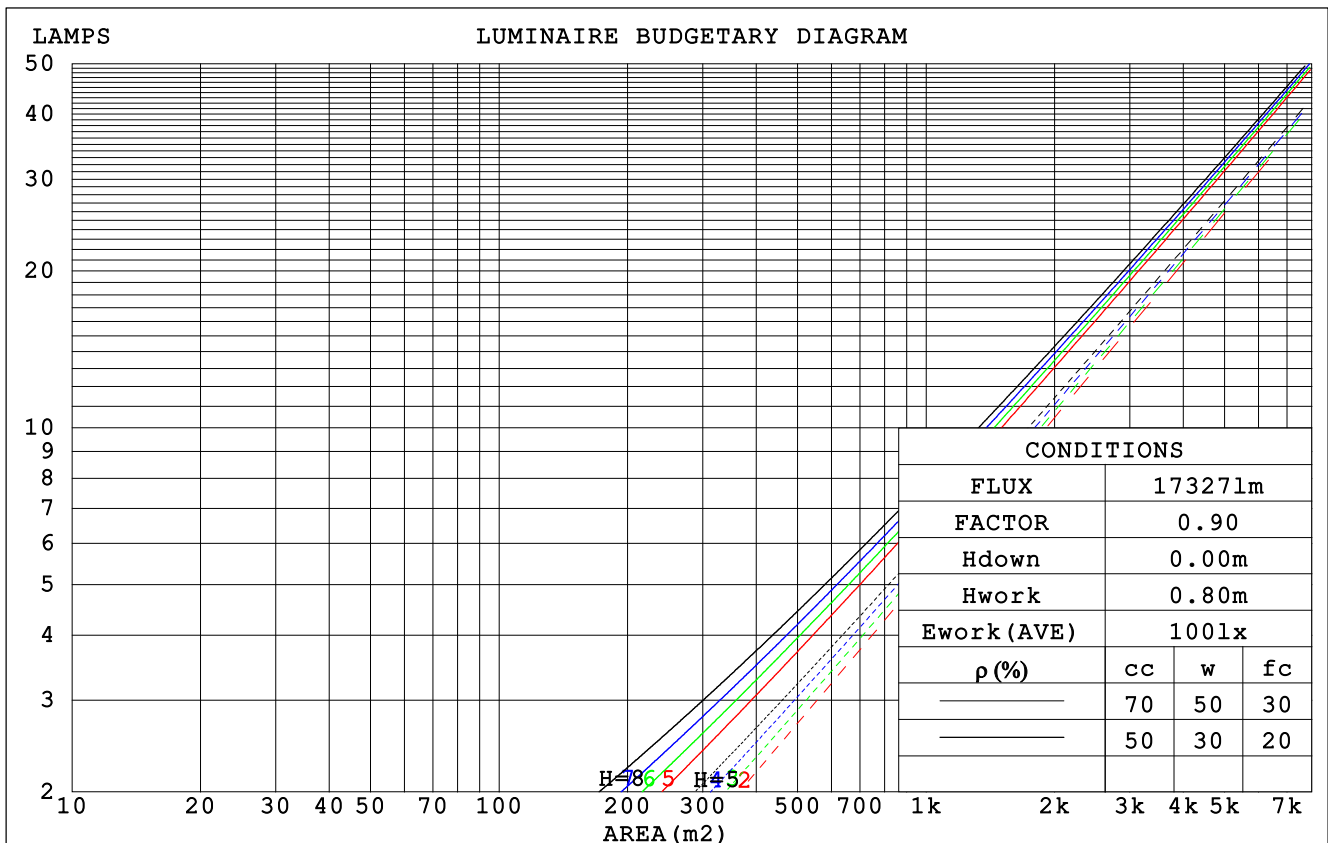


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-09-26

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	1.07	1.04	1.01	1.05	1.02	.99	1.01	.98	.96	.97	.95	.93	.93	.92	.90	.88
2.0	.96	.90	.85	.94	.89	.84	.90	.86	.82	.87	.84	.81	.84	.81	.79	.77
3.0	.86	.79	.73	.84	.78	.73	.81	.76	.71	.79	.74	.70	.76	.72	.69	.67
4.0	.77	.69	.64	.76	.69	.63	.73	.67	.62	.71	.66	.62	.69	.65	.61	.59
5.0	.70	.62	.56	.69	.61	.56	.67	.60	.55	.65	.59	.54	.63	.58	.54	.52
6.0	.63	.55	.50	.63	.55	.49	.61	.54	.49	.59	.53	.49	.58	.52	.48	.46
7.0	.58	.50	.44	.57	.50	.44	.56	.49	.44	.54	.48	.44	.53	.48	.43	.42
8.0	.53	.45	.40	.53	.45	.40	.51	.45	.40	.50	.44	.40	.49	.43	.39	.38
9.0	.49	.42	.36	.49	.41	.36	.48	.41	.36	.46	.40	.36	.46	.40	.36	.34
10.0	.46	.38	.33	.45	.38	.33	.44	.38	.33	.43	.37	.33	.42	.37	.33	.31



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-09-26

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	.249	.141	.045	.242	.138	.044	.229	.131	.042	.217	.125	.040	.206	.119	.038		
2.0	.241	.132	.041	.235	.130	.040	.224	.125	.039	.214	.120	.037	.204	.115	.036		
3.0	.229	.122	.037	.224	.120	.036	.214	.116	.035	.205	.112	.034	.196	.109	.034		
4.0	.216	.112	.033	.211	.111	.033	.203	.107	.032	.195	.104	.032	.187	.102	.031		
5.0	.203	.104	.030	.199	.102	.030	.191	.100	.029	.184	.097	.029	.178	.095	.029		
6.0	.191	.096	.027	.188	.095	.027	.181	.093	.027	.174	.091	.027	.168	.089	.026		
7.0	.180	.089	.025	.177	.088	.025	.171	.086	.025	.165	.085	.025	.159	.083	.024		
8.0	.170	.083	.023	.167	.082	.023	.161	.081	.023	.156	.079	.023	.151	.078	.023		
9.0	.160	.078	.022	.158	.077	.022	.153	.076	.021	.148	.074	.021	.144	.073	.021		
10.0	.152	.073	.020	.149	.072	.020	.145	.071	.020	.141	.070	.020	.137	.069	.020		

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	.176	.157	.139	.151	.134	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016		
2.0	.165	.132	.104	.142	.114	.090	.097	.079	.063	.056	.046	.037	.018	.015	.012		
3.0	.157	.114	.080	.134	.098	.069	.092	.068	.049	.053	.040	.029	.017	.013	.009		
4.0	.149	.100	.063	.128	.087	.055	.088	.060	.039	.051	.035	.023	.016	.012	.008		
5.0	.141	.090	.051	.121	.077	.045	.084	.054	.031	.048	.032	.019	.016	.010	.006		
6.0	.135	.081	.042	.116	.070	.037	.080	.049	.026	.046	.029	.016	.015	.009	.005		
7.0	.128	.074	.036	.110	.064	.031	.076	.045	.022	.044	.026	.013	.014	.009	.004		
8.0	.122	.068	.031	.105	.059	.027	.073	.041	.019	.042	.024	.011	.014	.008	.004		
9.0	.117	.063	.027	.101	.055	.023	.070	.038	.017	.041	.023	.010	.013	.007	.003		
10.0	.112	.059	.024	.096	.051	.021	.067	.036	.015	.039	.021	.009	.013	.007	.003		

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-09-26

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	30.7	32.0	30.9	32.2	32.4	19.7	21.0	20.0	21.2	21.4
3H	30.7	31.9	31.0	32.1	32.4	20.4	21.6	20.7	21.9	22.1
4H	30.6	31.8	30.9	32.0	32.3	20.7	21.9	21.0	22.1	22.4
6H	30.6	31.7	30.9	31.9	32.2	21.0	22.1	21.4	22.4	22.7
8H	30.5	31.6	30.9	31.8	32.1	21.2	22.2	21.5	22.5	22.8
12H	30.5	31.5	30.8	31.8	32.1	21.3	22.3	21.6	22.6	22.8
4H 2H	30.4	31.6	30.7	31.8	32.1	20.9	22.1	21.2	22.3	22.6
3H	30.5	31.5	30.8	31.8	32.1	21.6	22.6	22.0	22.9	23.2
4H	30.5	31.4	30.8	31.7	32.0	22.0	22.9	22.4	23.2	23.5
6H	30.4	31.2	30.8	31.6	31.9	22.4	23.2	22.7	23.5	23.9
8H	30.4	31.2	30.8	31.5	31.9	22.5	23.3	22.9	23.6	24.0
12H	30.4	31.1	30.8	31.4	31.8	22.6	23.3	23.1	23.7	24.1
8H 4H	30.4	31.1	30.8	31.5	31.9	22.2	23.0	22.6	23.3	23.7
6H	30.4	31.0	30.8	31.4	31.8	22.7	23.3	23.2	23.7	24.2
8H	30.3	30.9	30.8	31.3	31.7	23.0	23.5	23.4	23.9	24.4
12H	30.3	30.8	30.8	31.2	31.7	23.2	23.6	23.7	24.1	24.6
12H 4H	30.3	31.0	30.8	31.4	31.8	22.2	22.9	22.7	23.3	23.7
6H	30.3	30.9	30.8	31.3	31.7	22.8	23.3	23.2	23.7	24.2
8H	30.3	30.8	30.8	31.2	31.7	23.1	23.5	23.5	24.0	24.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.5 / - 1.3					+ 0.6 / - 0.8				
1.5H	+ 3.1 / - 5.5					+ 0.5 / - 0.6				
2.0H	+ 4.2 / - 7.2					+ 0.6 / - 0.7				

CIE Pub.117 Corrected 17327 lm Total Lamp Luminous Flux.(8log(F/F0) = 9.9)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-09-26

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:

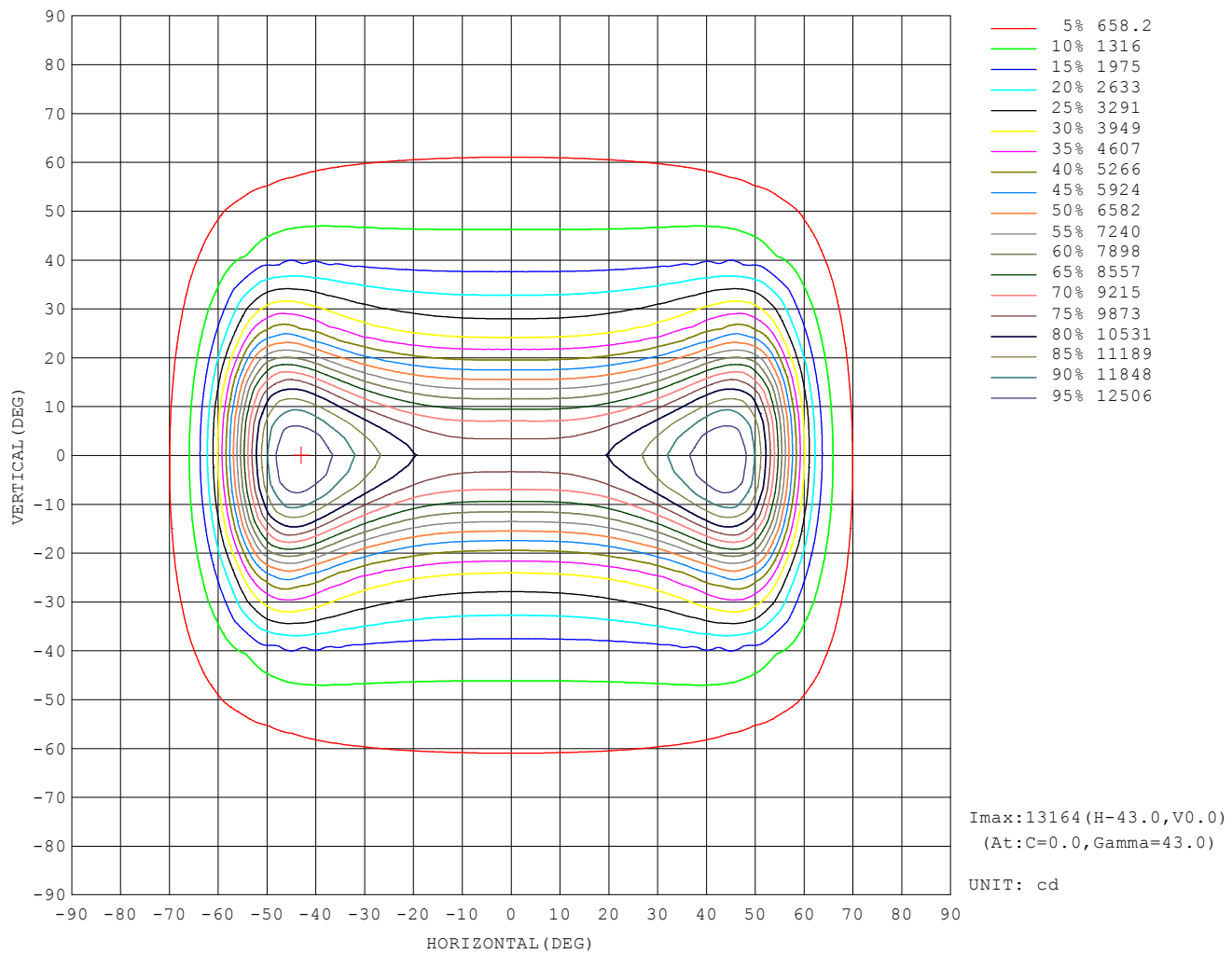
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	64	53	47	63	53	47	62	52	47	41
0.80	74	64	58	73	64	57	72	63	57	51
1.00	83	73	67	82	73	67	80	74	66	60
1.25	90	81	75	88	80	75	86	79	74	68
1.50	94	86	80	93	85	80	90	84	79	72
2.00	100	93	88	99	92	87	95	90	86	79
2.50	103	97	92	101	96	91	98	93	89	82
3.00	106	100	96	104	99	95	100	96	93	85
4.00	109	104	101	107	103	99	103	99	97	88
5.00	111	107	104	109	105	102	104	101	99	90
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: 2017-09-26

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:

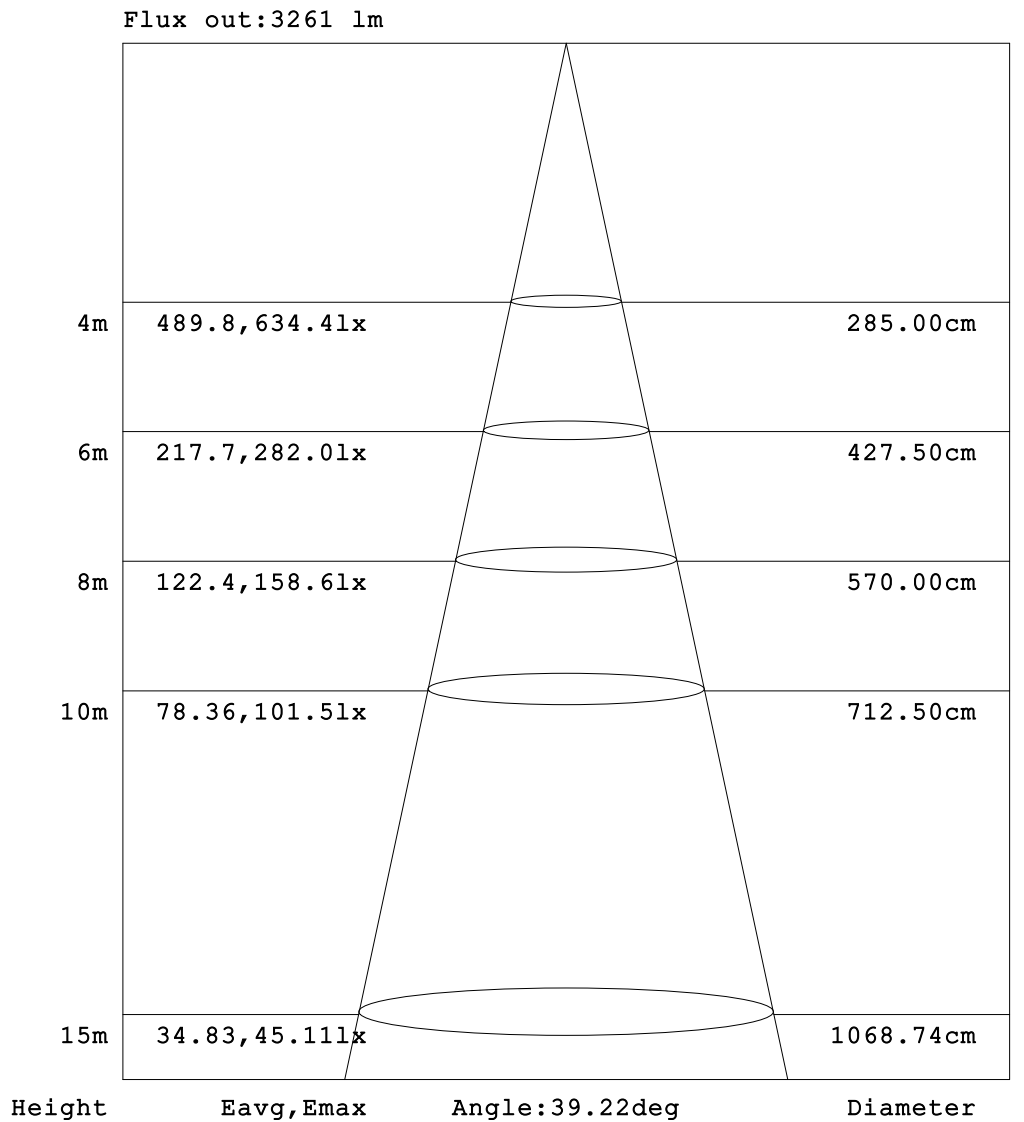
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-09-26

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

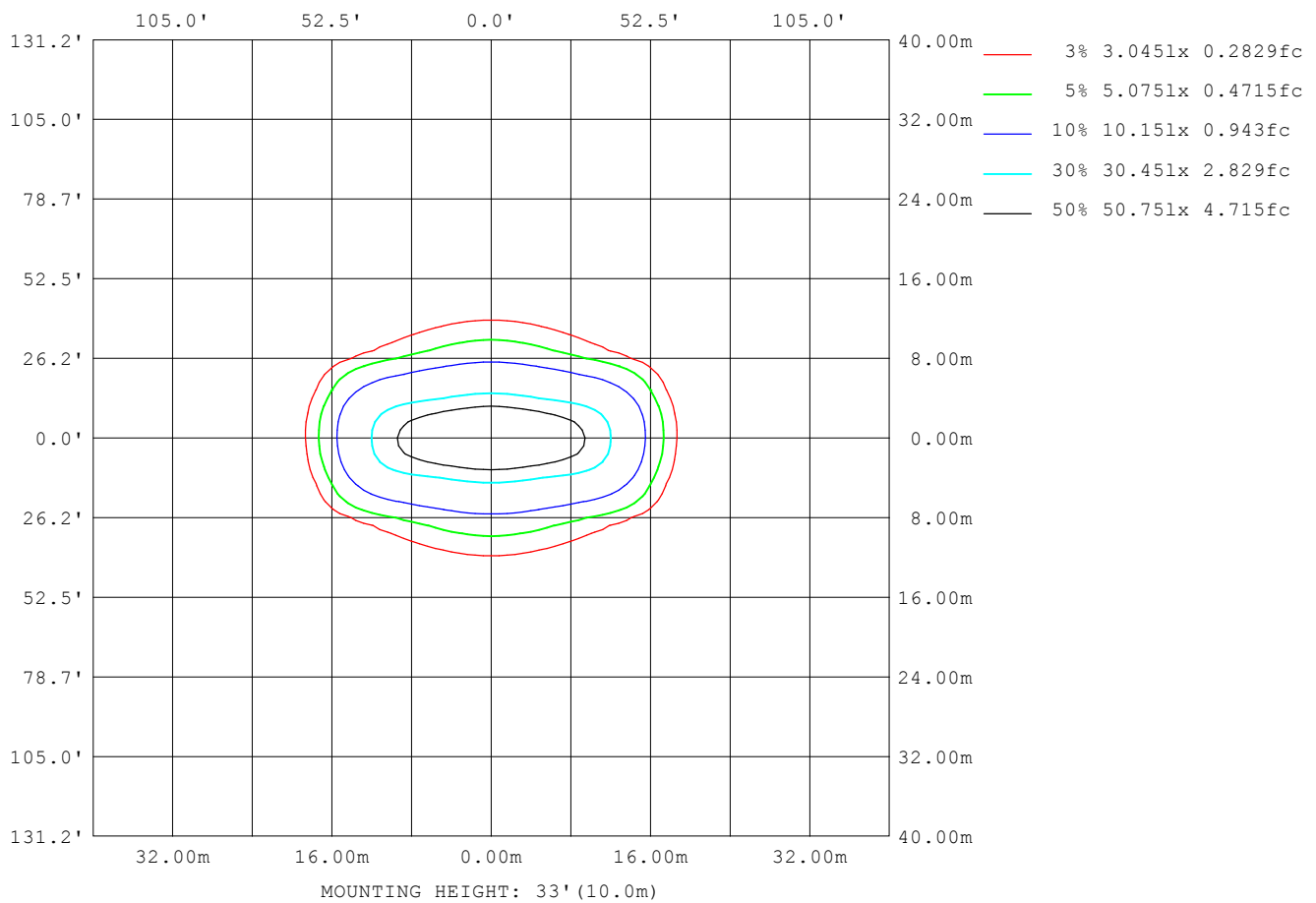


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-09-26

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:2017-09-26

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:0.5431A P:121.3W PF:0.9705 Lamp Flux:17326.7x1 lm		
NAME: LHB01-120H	TYPE:120W	WEIGHT:
SPEC.:5000K Ra80 L06404	DIM.: 0.948*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.92*0.1	Shielding Angle:

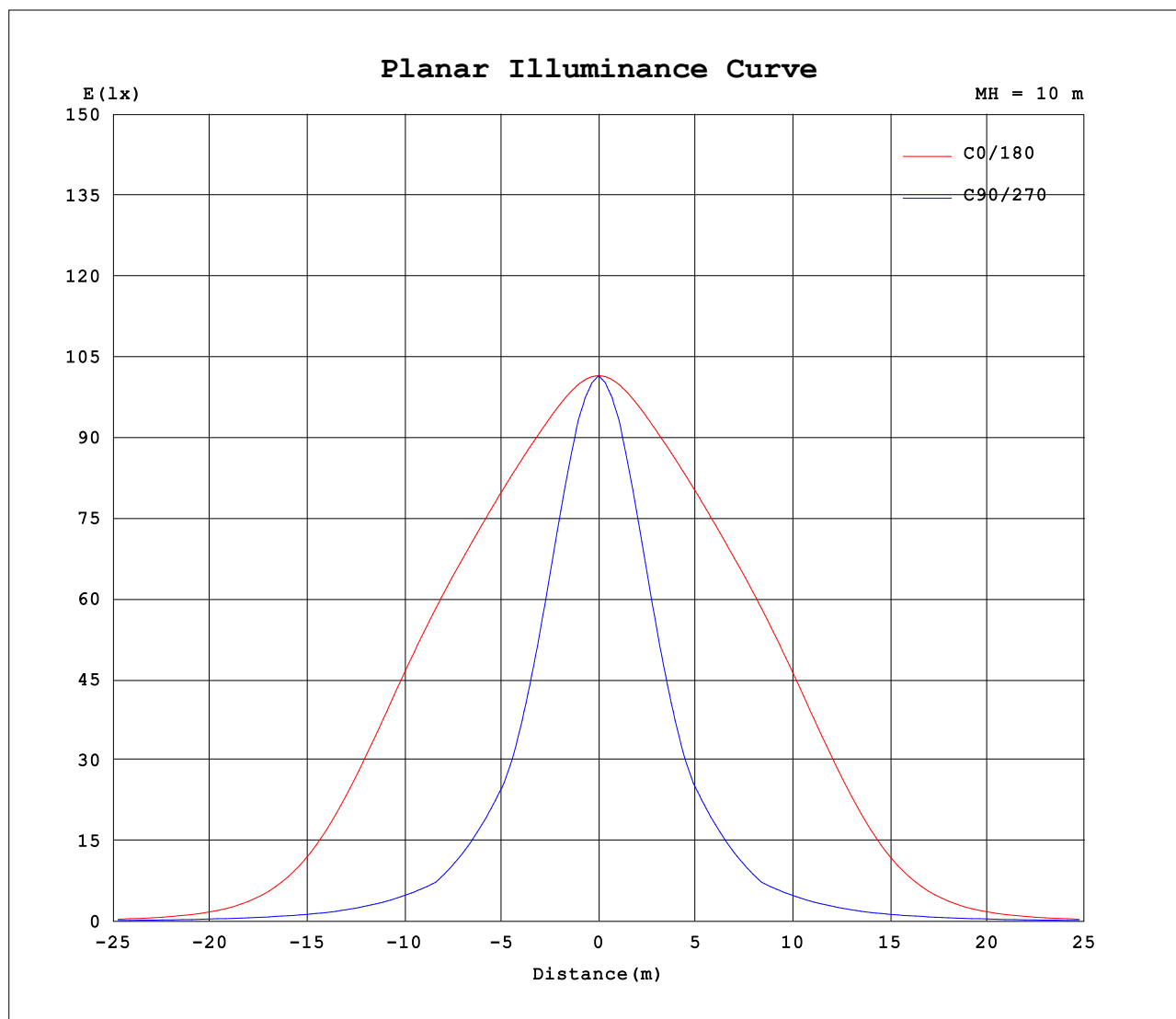
AvgL	cd/m2
L_0~180 (65) av	39616
L_0~180 (75) av	12794
L_0~180 (85) av	4864
L_90~270 (65) av	13527
L_90~270 (75) av	11401
L_90~270 (85) av	11743
L_45 (65) av	18245
L_45 (75) av	12827
L_45 (85) av	12679

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-09-26

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: 2017-09-26

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:

```

```

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:

```

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:

```