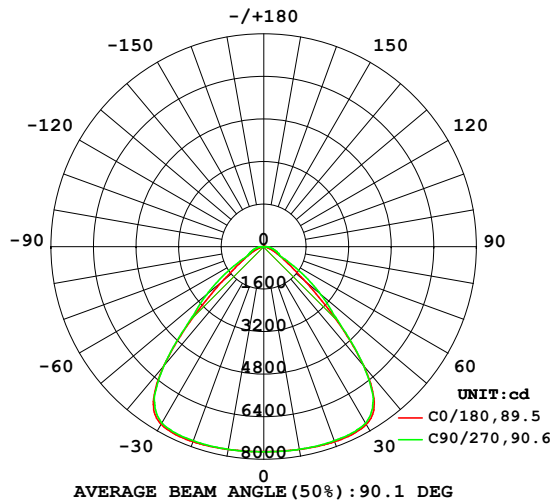


LUMINAIRE PHOTOMETRIC TEST REPORT

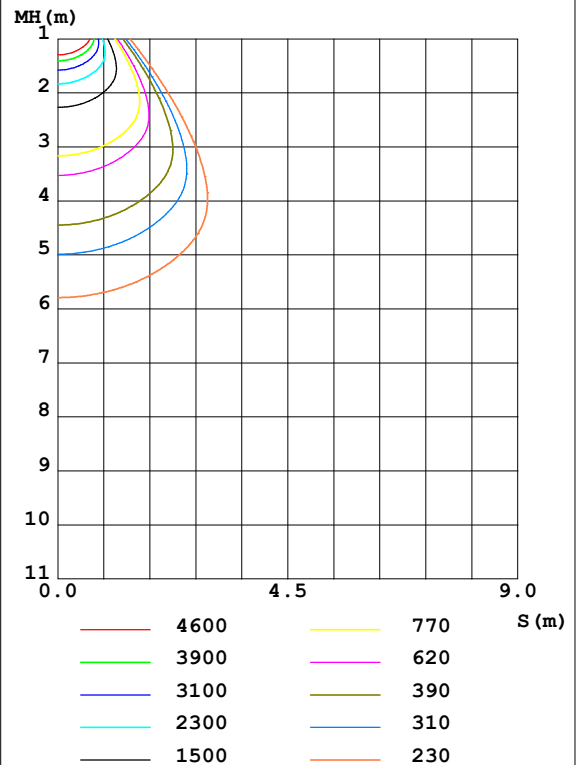
Test:U:230.1V I:0.5373A P:120.5W PF:0.9745 Lamp Flux:16027x1 lm		
NAME: LHB01-120	TYPE:120W	WEIGHT:
SPEC.:5000K Ra70 90DEG L02805	DIM.: 0.948*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.92*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 133.04 lm/W			
MODEL	LHB01-120	I _{max} (cd)	7822	S/MH(C0/180)	1.30
NOMINAL POWER(W)	120	LOR(%)	100.0	S/MH(C90/270)	1.30
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	16027	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	16027	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	1.35

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:2017-03-31

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	7719	7725	7724	7725	7719	7723	7724	7723	0- 5	184.5	184.5	1.15,1.15
10	7743	7747	7740	7747	7743	7741	7740	7741	5- 10	553.3	737.8	4.6,4.6
15	7776	7781	7762	7781	7776	7766	7762	7766	10- 15	920.5	1658	10.3,10.3
20	7807	7809	7767	7809	7807	7786	7767	7786	15- 20	1283	2941	18.4,18.4
25	7807	7793	7760	7793	7807	7768	7760	7768	20- 25	1634	4576	28.6,28.6
30	7719	7682	7670	7682	7719	7659	7670	7659	25- 30	1961	6536	40.8,40.8
35	7251	7219	7165	7219	7251	7199	7165	7199	30- 35	2204	8741	54.5,54.5
40	5839	5867	5846	5867	5839	5840	5846	5840	35- 40	2196	10936	68.2,68.2
45	3761	3808	3956	3808	3761	3805	3956	3805	40- 45	1783	12720	79.4,79.4
50	2065	2110	2808	2110	2065	2127	2808	2127	45- 50	1197	13917	86.8,86.8
55	1145	1189	1763	1189	1145	1202	1763	1202	50- 55	771.9	14689	91.7,91.7
60	698.8	788.0	718.4	788.0	698.8	794.9	718.4	794.9	55- 60	484.6	15174	94.7,94.7
65	441.3	491.8	599.5	491.8	441.3	494.6	599.5	494.6	60- 65	295.3	15469	96.5,96.5
70	280.2	313.9	480.6	313.9	280.2	315.2	480.6	315.2	65- 70	211.6	15680	97.8,97.8
75	160.1	229.8	361.7	229.8	160.1	230.9	361.7	230.9	70- 75	155.5	15836	98.8,98.8
80	44.80	151.5	242.9	151.5	44.80	152.4	242.9	152.4	75- 80	106.8	15943	99.5,99.5
85	8.336	77.11	124.0	77.11	8.336	77.86	124.0	77.86	80- 85	62.12	16005	99.9,99.9
90	2.574	4.757	5.100	4.757	2.574	5.410	5.100	5.410	85- 90	22.08	16027	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:cd									UNIT:lm		

Conical surface Flux(90deg): 12720 lm

%lum = 79.4%

%lamp = 79.4%

Conical surface Flux(120deg): 15174 lm

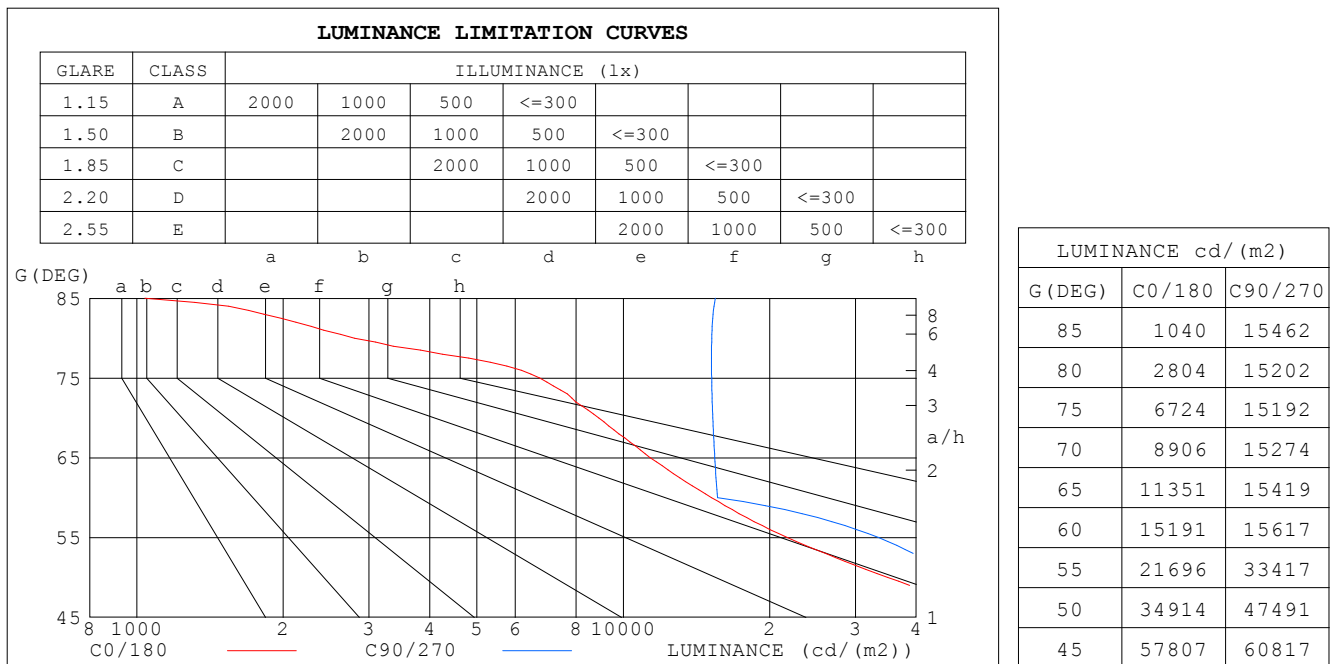
%lum = 94.7%

%lamp = 94.7%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-03-31

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

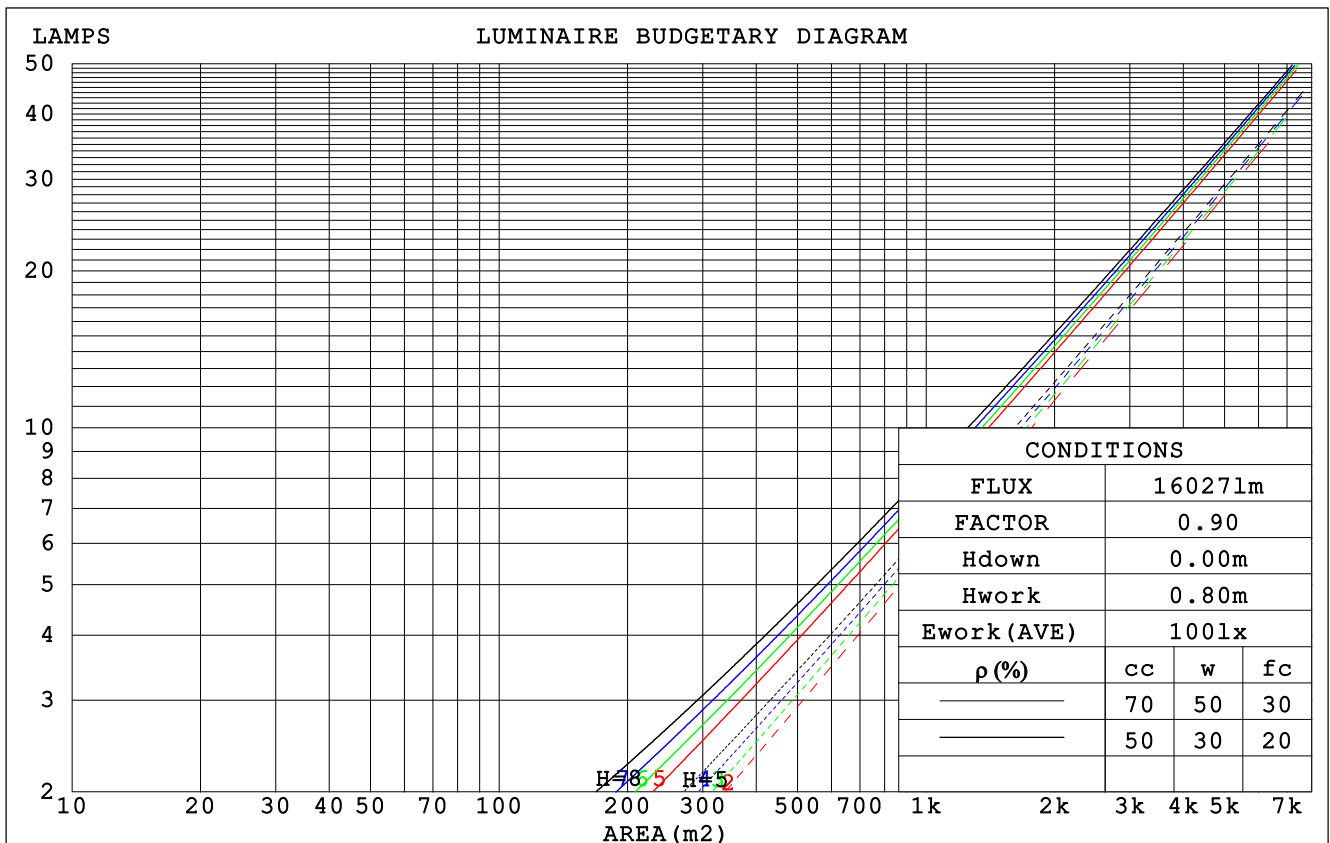


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-31

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	1.08	1.05	1.02	1.06	1.03	1.00	1.02	.99	.97	.98	.96	.94	.94	.93	.91	.90
2.0	.98	.92	.88	.96	.91	.87	.92	.88	.85	.89	.86	.83	.86	.84	.81	.79
3.0	.88	.82	.77	.87	.81	.76	.84	.79	.75	.81	.77	.73	.79	.75	.72	.70
4.0	.80	.73	.68	.79	.72	.67	.77	.71	.66	.74	.69	.65	.72	.68	.65	.63
5.0	.73	.66	.60	.72	.65	.60	.70	.64	.59	.68	.63	.59	.66	.62	.58	.56
6.0	.67	.59	.54	.66	.59	.53	.64	.58	.53	.63	.57	.53	.61	.56	.52	.50
7.0	.61	.54	.48	.60	.53	.48	.59	.53	.48	.58	.52	.48	.56	.51	.47	.46
8.0	.56	.49	.44	.56	.49	.44	.54	.48	.43	.53	.47	.43	.52	.47	.43	.41
9.0	.52	.45	.40	.51	.45	.40	.50	.44	.40	.49	.44	.39	.48	.43	.39	.38
10.0	.48	.41	.36	.48	.41	.36	.47	.41	.36	.46	.40	.36	.45	.40	.36	.34



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-03-31

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	.231	.132	.042	.224	.128	.041	.212	.121	.039	.200	.115	.037	.189	.109	.035	
2.0	.224	.123	.038	.218	.120	.037	.207	.115	.036	.196	.110	.034	.187	.106	.033	
3.0	.213	.113	.034	.208	.111	.033	.198	.107	.033	.189	.104	.032	.181	.100	.031	
4.0	.202	.105	.031	.197	.103	.030	.189	.100	.030	.181	.097	.029	.173	.094	.029	
5.0	.191	.097	.028	.187	.096	.028	.179	.093	.027	.172	.091	.027	.166	.089	.027	
6.0	.181	.091	.026	.177	.089	.026	.170	.087	.025	.164	.085	.025	.158	.083	.025	
7.0	.171	.085	.024	.168	.084	.024	.162	.082	.024	.156	.080	.023	.151	.079	.023	
8.0	.162	.079	.022	.159	.079	.022	.154	.077	.022	.149	.076	.022	.144	.074	.022	
9.0	.154	.075	.021	.152	.074	.021	.147	.073	.021	.142	.071	.020	.138	.070	.020	
10.0	.147	.070	.020	.144	.070	.019	.140	.069	.019	.136	.067	.019	.132	.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	.106	.140	.114	.092	.096	.079	.064	.055	.046	.038	.018	.015	.012	
3.0	.153	.114	.082	.132	.098	.071	.090	.068	.050	.052	.040	.030	.017	.013	.010	
4.0	.145	.100	.065	.125	.086	.057	.086	.060	.040	.050	.035	.024	.016	.011	.008	
5.0	.138	.089	.053	.118	.077	.046	.081	.054	.033	.047	.032	.019	.015	.010	.006	
6.0	.131	.080	.044	.113	.070	.038	.078	.049	.027	.045	.029	.016	.015	.009	.005	
7.0	.125	.073	.037	.107	.063	.032	.074	.045	.023	.043	.026	.014	.014	.009	.004	
8.0	.119	.067	.032	.103	.058	.028	.071	.041	.020	.041	.024	.012	.013	.008	.004	
9.0	.114	.062	.028	.098	.054	.024	.068	.038	.017	.040	.022	.010	.013	.007	.003	
10.0	.109	.058	.024	.094	.051	.021	.065	.036	.015	.038	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-31

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	23.6	24.8	23.8	25.0	25.2	24.3	25.5	24.5	25.7	25.9
3H	23.6	24.7	23.9	25.0	25.2	24.5	25.6	24.8	25.8	26.1
4H	23.6	24.7	23.9	24.9	25.1	24.6	25.7	24.9	25.9	26.2
6H	23.5	24.5	23.8	24.8	25.0	24.8	25.8	25.1	26.0	26.3
8H	23.5	24.4	23.8	24.7	25.0	24.8	25.8	25.2	26.1	26.4
12H	23.4	24.4	23.8	24.6	24.9	24.9	25.8	25.2	26.1	26.4
4H 2H	23.5	24.6	23.8	24.8	25.1	24.2	25.2	24.5	25.5	25.7
3H	23.6	24.5	23.9	24.8	25.1	24.5	25.4	24.8	25.7	26.0
4H	23.6	24.5	24.0	24.8	25.1	24.7	25.5	25.1	25.9	26.2
6H	23.6	24.4	24.0	24.7	25.1	25.0	25.7	25.4	26.1	26.4
8H	23.6	24.3	24.0	24.6	25.0	25.1	25.8	25.5	26.2	26.5
12H	23.5	24.2	24.0	24.6	24.9	25.2	25.8	25.6	26.2	26.6
8H 4H	23.6	24.3	24.0	24.7	25.0	24.7	25.3	25.1	25.7	26.1
6H	23.7	24.2	24.1	24.6	25.0	25.0	25.6	25.5	26.0	26.4
8H	23.7	24.2	24.1	24.6	25.0	25.2	25.7	25.7	26.1	26.6
12H	23.6	24.1	24.1	24.5	25.0	25.4	25.8	25.9	26.3	26.7
12H 4H	23.6	24.2	24.0	24.6	25.0	24.6	25.3	25.0	25.6	26.0
6H	23.7	24.2	24.1	24.6	25.0	25.0	25.5	25.5	25.9	26.4
8H	23.7	24.1	24.2	24.6	25.0	25.2	25.6	25.7	26.1	26.6
Variations with the observer position at spacings:										
S = 1.0H	+ 1.7 / - 3.2					+ 1.1 / - 1.5				
1.5H	+ 2.2 / - 2.9					+ 1.4 / - 1.5				
2.0H	+ 3.9 / - 2.8					+ 2.7 / - 2.5				

CIE Pub.117 Corrected 16027 lm Total Lamp Luminous Flux.(8log(F/F0) = 9.6)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-31

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:

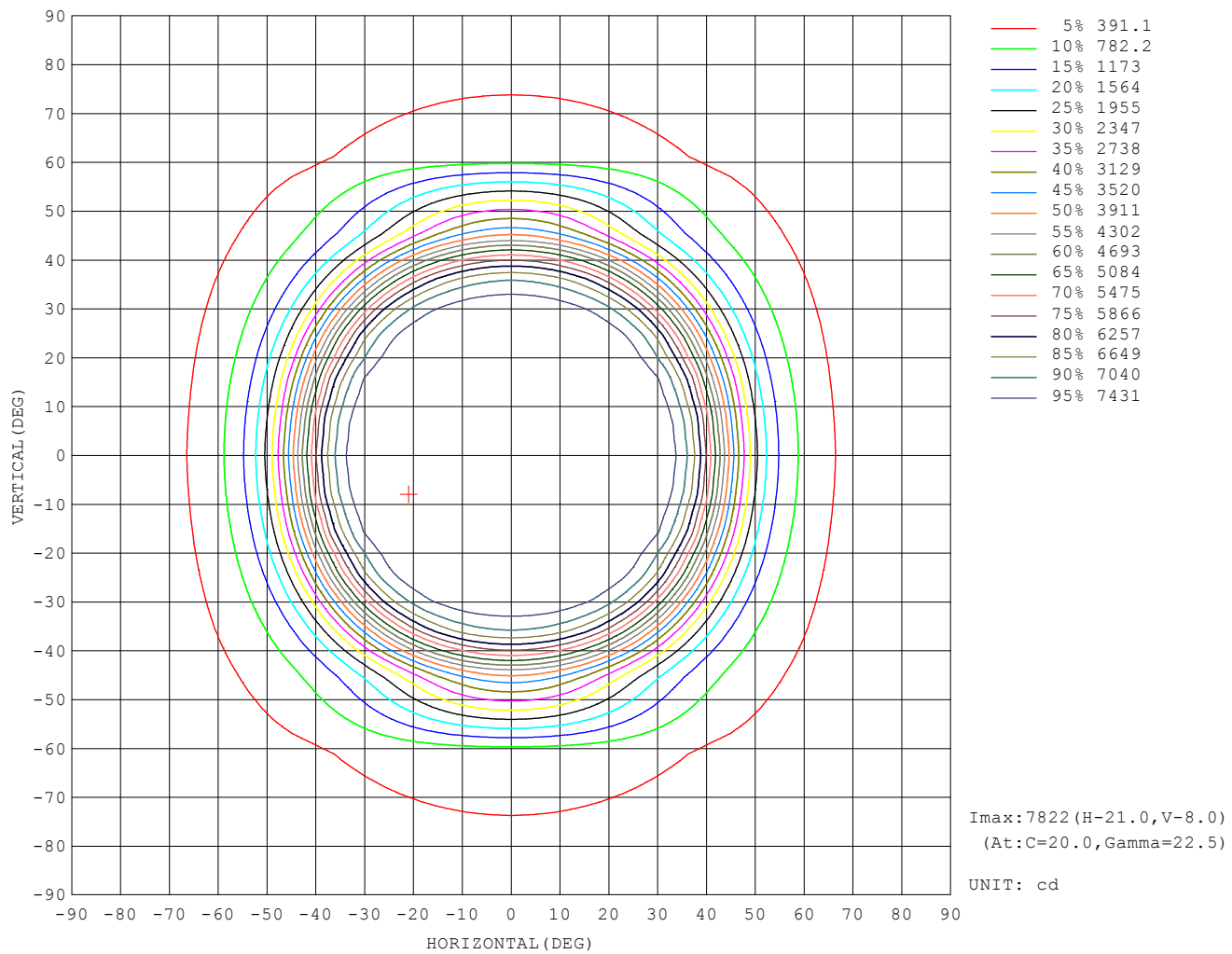
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	71	62	57	71	62	57	70	62	56	51
0.80	81	72	67	80	72	67	79	71	66	61
1.00	88	80	75	87	80	75	85	80	74	69
1.25	94	87	82	93	86	81	91	85	80	75
1.50	98	91	86	97	90	86	94	89	85	79
2.00	103	97	93	101	96	92	98	94	90	84
2.50	106	100	96	104	99	95	100	96	93	86
3.00	108	103	99	106	102	98	102	99	96	89
4.00	111	107	103	108	105	102	104	102	99	91
5.00	112	109	106	110	107	104	106	103	101	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: 2017-03-31

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:

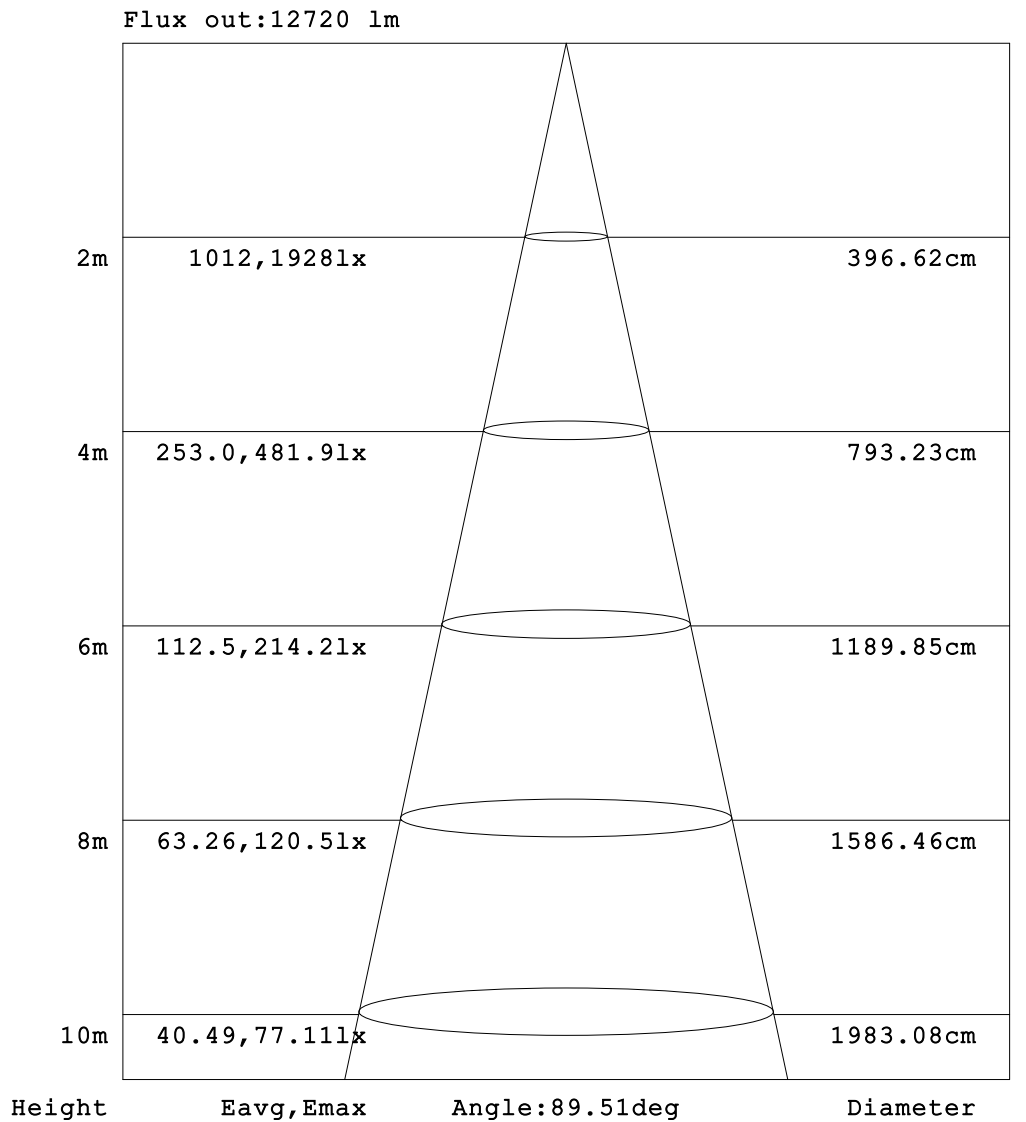
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-31

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

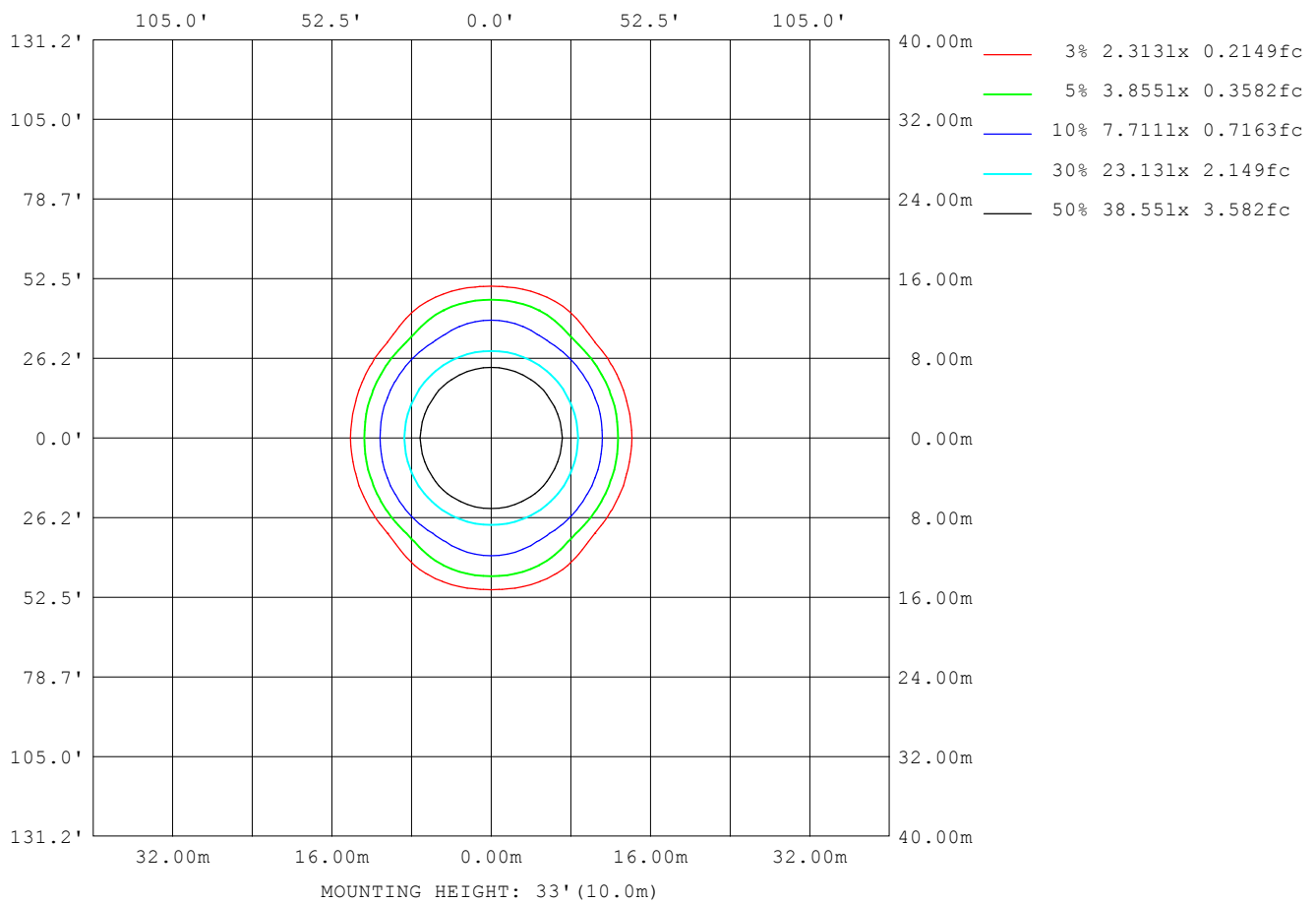


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-31

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: 2017-03-31

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:0.5373A P:120.5W PF:0.9745 Lamp Flux:16027x1 lm		
NAME: LHB01-120	TYPE:120W	WEIGHT:
SPEC.:5000K Ra70 90DEG L02805	DIM.: 0.948*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.92*0.1	Shielding Angle:

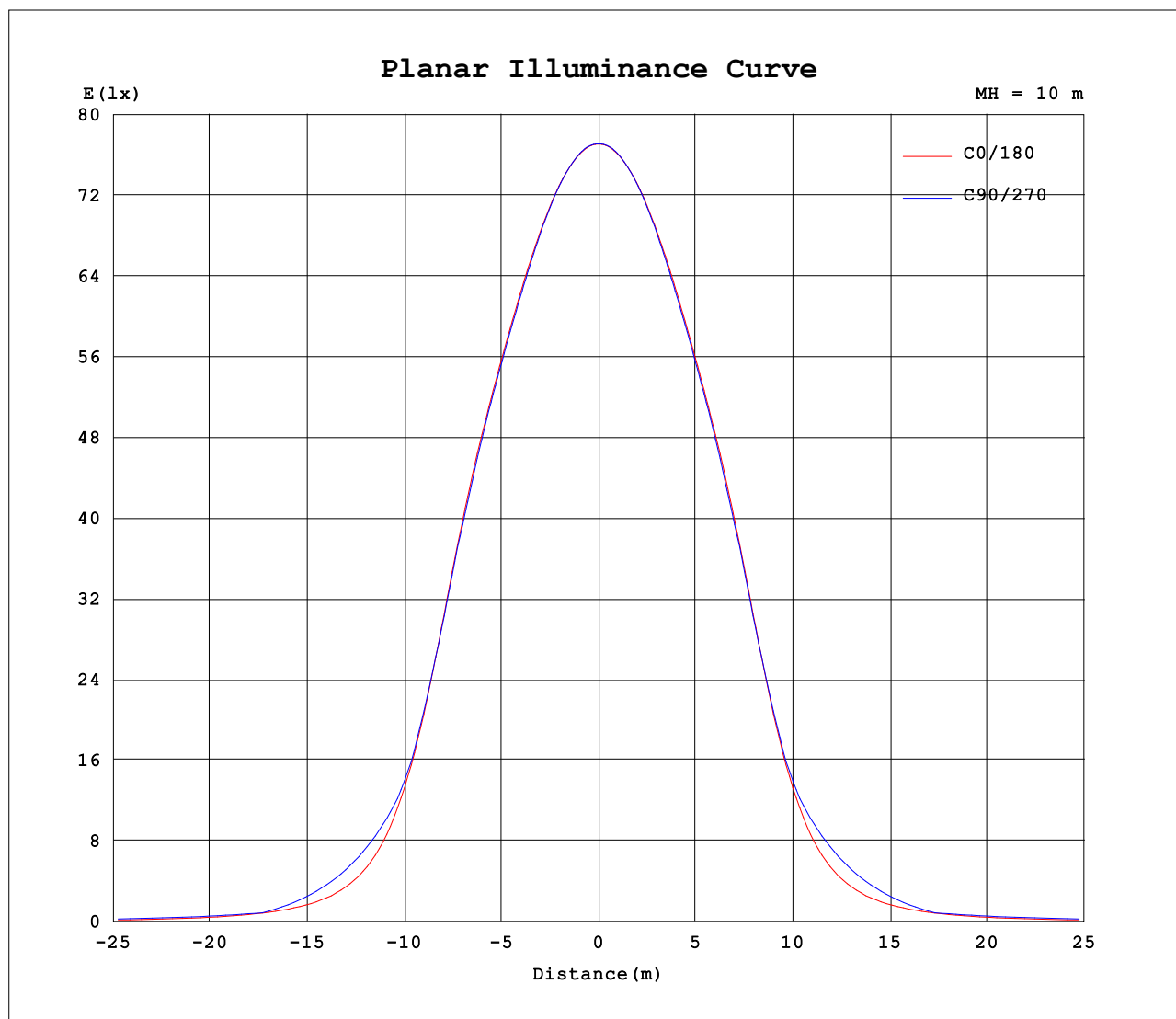
AvgL	cd/m2
L_0~180 (65) av	11351
L_0~180 (75) av	6724
L_0~180 (85) av	1040
L_90~270 (65) av	15419
L_90~270 (75) av	15192
L_90~270 (85) av	15462
L_45 (65) av	12686
L_45 (75) av	9673
L_45 (85) av	9663

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-03-31

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: 2017-03-31

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:

```

```

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: 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:

```