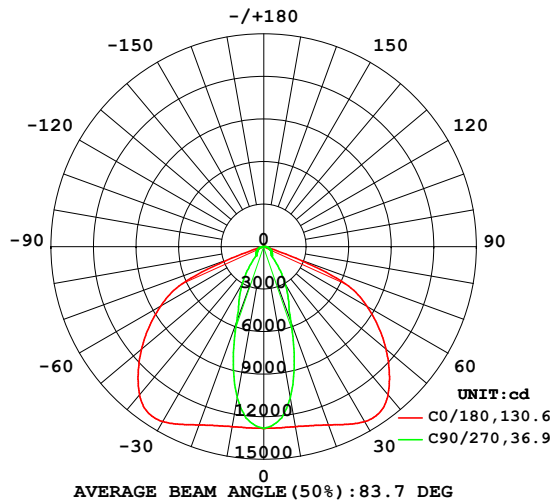


LUMINAIRE PHOTOMETRIC TEST REPORT

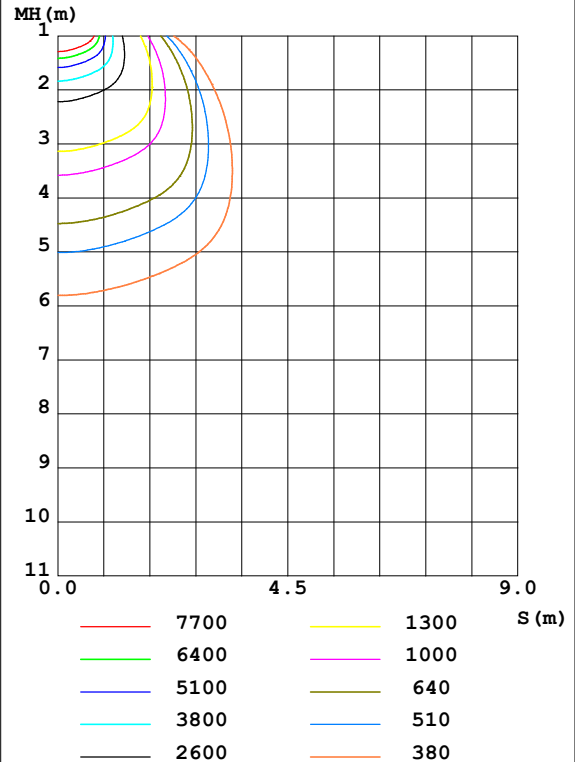
Test:U:230.0V I:0.6908A P:152.7W PF:0.9612 Lamp Flux:18691.7x1 lm		
NAME: LHB01-150	TYPE:150W	WEIGHT:
SPEC.:5000K Ra80 40130DEG L02804	DIM.: 1.178*0.137*0.102	SERIAL No.:
MFR.:	SUR.:1.17*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 122.38 lm/W			
MODEL	LHB01-150	I _{max} (cd)	14327	S/MH(C0/180)	1.64
NOMINAL POWER(W)	150	LOR(%)	100.0	S/MH(C90/270)	0.61
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	18692	η UP,DN(C0-180)	0.0,49.7
NOMINAL FLUX(lm)	18691.7	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.3
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	0.70

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:2017-06-15

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	1282	1251	1231	1251	1282	1255	1231	1255	0- 5	302.7	302.7	1.62,1.62
10	1289	1175	1081	1175	1289	1187	1081	1187	5- 10	871.9	1175	6.28,6.28
15	1307	1042	833.9	1042	1307	1061	833.9	1061	10- 15	1330	2505	13.4,13.4
20	1338	863.5	555.1	863.5	1338	878.5	555.1	878.5	15- 20	1619	4124	22.1,22.1
25	1383	665.1	413.5	665.1	1383	662.2	413.5	662.2	20- 25	1762	5886	31.5,31.5
30	1424	505.0	305.0	505.0	1424	485.8	305.0	485.8	25- 30	1857	7743	41.4,41.4
35	1427	418.7	196.5	418.7	1427	401.4	196.5	401.4	30- 35	1881	9624	51.5,51.5
40	1364	321.8	88.05	321.8	1364	308.2	88.05	308.2	35- 40	1790	11414	61.1,61.1
45	1252	214.0	77.70	214.0	1252	203.0	77.70	203.0	40- 45	1607	13022	69.7,69.7
50	1125	99.79	70.42	99.79	1125	87.31	70.42	87.31	45- 50	1427	14449	77.3,77.3
55	988.4	76.78	63.53	76.78	988.4	68.80	63.53	68.80	50- 55	1246	15695	84,84
60	840.8	64.60	56.64	64.60	840.8	58.25	56.64	58.25	55- 60	1056	16751	89.6,89.6
65	659.8	51.81	49.46	51.81	659.8	47.53	49.46	47.53	60- 65	860.0	17611	94.2,94.2
70	243.0	36.91	39.95	36.91	243.0	35.65	39.95	35.65	65- 70	583.1	18194	97.3,97.3
75	40.58	25.78	30.15	25.78	40.58	25.76	30.15	25.76	70- 75	264.3	18458	98.8,98.8
80	15.43	17.45	20.35	17.45	15.43	17.43	20.35	17.43	75- 80	132.0	18591	99.5,99.5
85	4.234	9.138	10.55	9.138	4.234	9.127	10.55	9.127	80- 85	73.93	18664	99.9,99.9
90	0.9503	0.8430	0.7491	0.8430	0.9503	0.8476	0.7491	0.8476	85- 90	27.27	18692	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): 13022 lm

%lum = 69.7%

%lamp = 69.7%

Conical surface Flux(120deg): 16751 lm

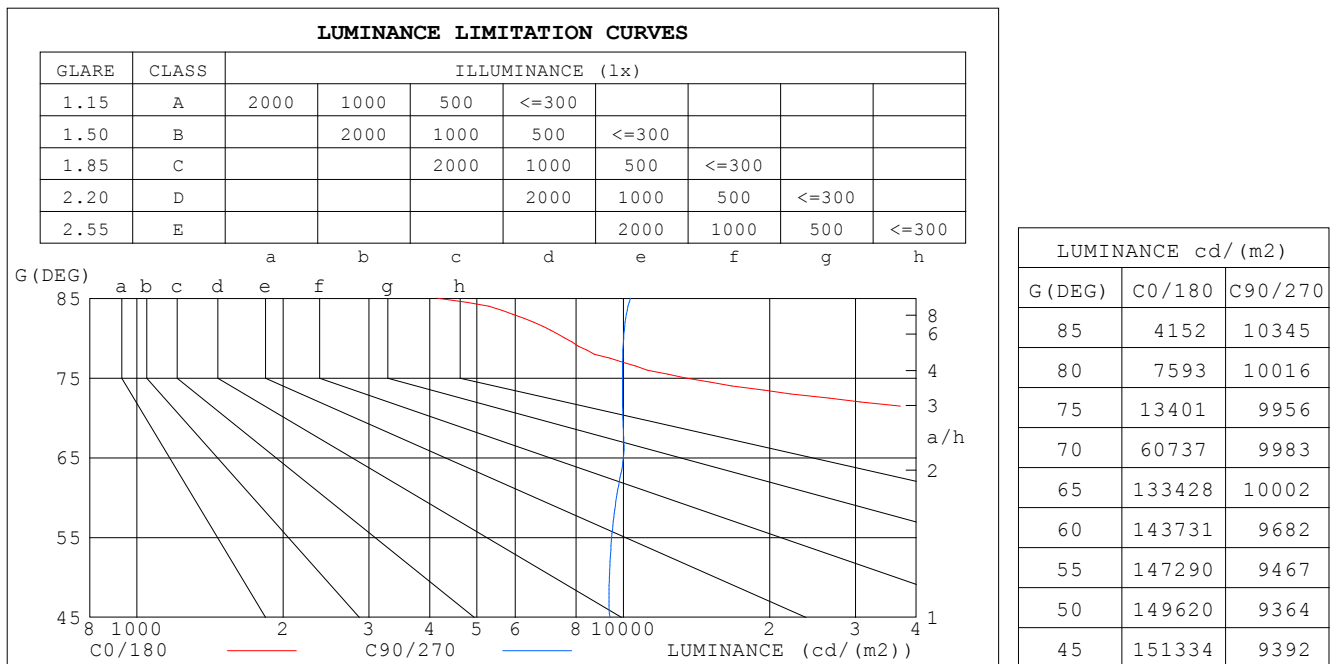
%lum = 89.6%

%lamp = 89.6%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-06-15

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

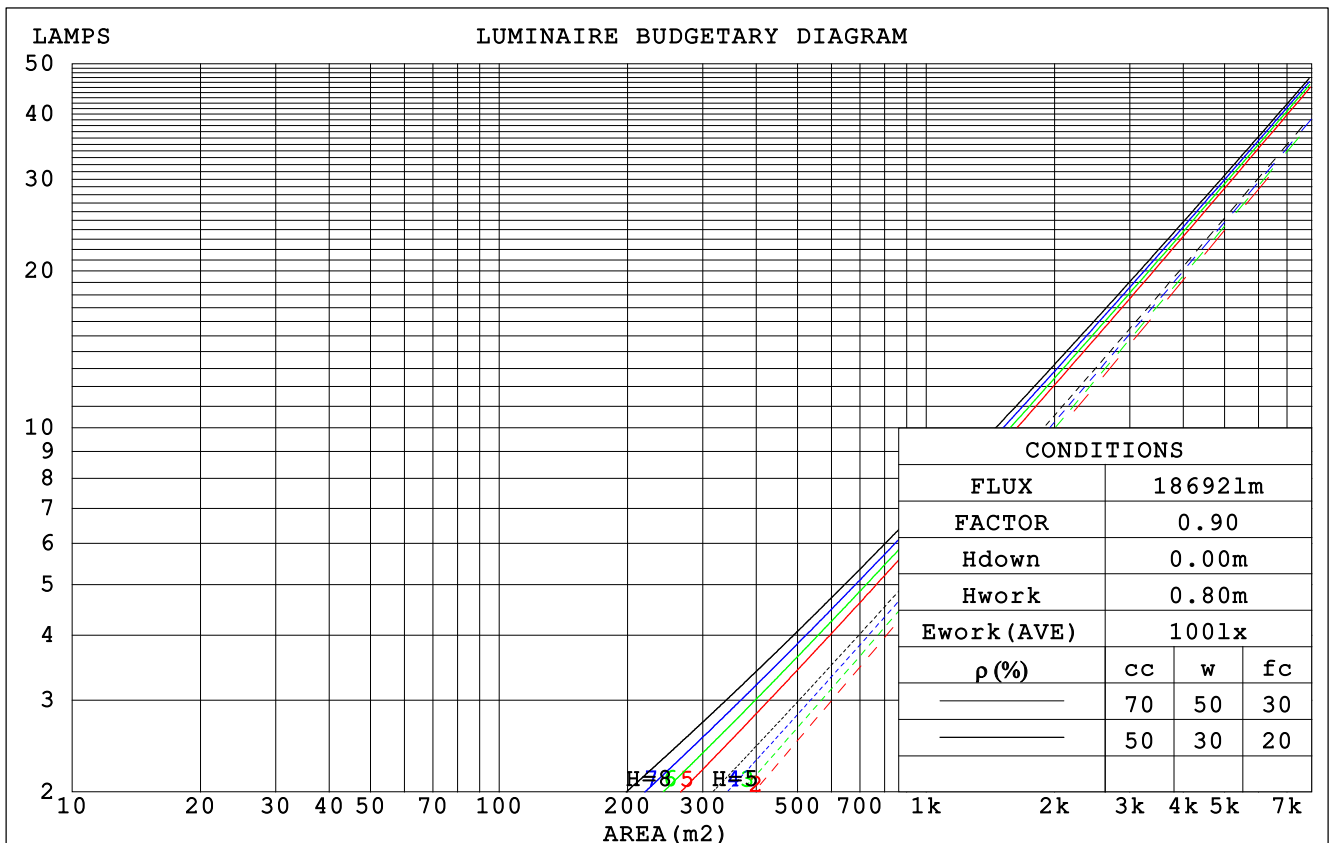


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-06-15

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	.94	.92	.90	.88
2.0	.96	.90	.86	.94	.89	.85	.91	.87	.83	.88	.84	.81	.85	.82	.79	.77
3.0	.86	.80	.74	.85	.79	.73	.82	.77	.72	.79	.75	.71	.77	.73	.70	.68
4.0	.78	.71	.65	.77	.70	.64	.75	.68	.64	.72	.67	.63	.70	.66	.62	.60
5.0	.71	.63	.58	.70	.63	.57	.68	.62	.57	.66	.60	.56	.64	.59	.56	.54
6.0	.65	.57	.51	.64	.57	.51	.62	.56	.51	.61	.55	.50	.59	.54	.50	.48
7.0	.60	.52	.47	.59	.52	.46	.58	.51	.46	.56	.50	.46	.55	.50	.45	.44
8.0	.55	.48	.42	.55	.47	.42	.53	.47	.42	.52	.46	.42	.51	.46	.42	.40
9.0	.51	.44	.39	.51	.44	.39	.50	.43	.39	.49	.43	.38	.48	.42	.38	.37
10.0	.48	.41	.36	.47	.40	.36	.46	.40	.36	.45	.40	.35	.45	.39	.35	.34



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-06-15

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	.246	.140	.044	.239	.136	.043	.226	.130	.041	.214	.123	.040	.203	.118	.038	
2.0	.238	.130	.040	.232	.128	.039	.220	.123	.038	.210	.118	.037	.200	.113	.036	
3.0	.225	.120	.036	.220	.118	.035	.210	.114	.035	.201	.110	.034	.192	.106	.033	
4.0	.211	.110	.032	.207	.108	.032	.198	.105	.031	.190	.102	.031	.183	.099	.030	
5.0	.198	.101	.029	.194	.100	.029	.187	.097	.029	.180	.095	.028	.173	.092	.028	
6.0	.186	.093	.027	.183	.092	.027	.176	.090	.026	.170	.088	.026	.164	.086	.026	
7.0	.175	.087	.025	.172	.086	.024	.166	.084	.024	.160	.082	.024	.155	.081	.024	
8.0	.165	.081	.023	.162	.080	.023	.157	.078	.022	.152	.077	.022	.147	.075	.022	
9.0	.156	.075	.021	.153	.075	.021	.149	.073	.021	.144	.072	.021	.140	.071	.020	
10.0	.148	.071	.020	.145	.070	.020	.141	.069	.019	.137	.068	.019	.133	.067	.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	.176	.157	.139	.150	.134	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016		
2.0	.165	.132	.105	.141	.114	.090	.097	.079	.063	.056	.046	.037	.018	.015	.012		
3.0	.156	.114	.081	.134	.098	.070	.092	.068	.049	.053	.040	.029	.017	.013	.009		
4.0	.148	.100	.064	.127	.087	.056	.087	.060	.039	.050	.035	.023	.016	.012	.008		
5.0	.140	.089	.052	.120	.077	.045	.083	.054	.032	.048	.032	.019	.015	.010	.006		
6.0	.133	.081	.043	.114	.070	.038	.079	.049	.027	.046	.029	.016	.015	.009	.005		
7.0	.126	.074	.036	.109	.064	.032	.075	.045	.022	.044	.026	.013	.014	.009	.004		
8.0	.120	.068	.031	.104	.059	.027	.072	.041	.019	.042	.024	.012	.014	.008	.004		
9.0	.115	.063	.027	.099	.054	.024	.069	.038	.017	.040	.023	.010	.013	.007	.003		
10.0	.110	.058	.024	.095	.051	.021	.066	.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:2017-06-15

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	30.4	31.7	30.6	31.9	32.1	16.5	17.8	16.8	18.0	18.2
3H	31.5	32.7	31.8	33.0	33.2	17.8	19.0	18.1	19.2	19.4
4H	31.5	32.6	31.8	32.9	33.1	18.4	19.6	18.7	19.8	20.0
6H	31.4	32.5	31.7	32.7	33.0	19.0	20.1	19.3	20.3	20.6
8H	31.4	32.4	31.7	32.7	32.9	19.2	20.2	19.5	20.5	20.8
12H	31.3	32.3	31.7	32.6	32.9	19.4	20.4	19.7	20.7	21.0
4H 2H	30.1	31.2	30.4	31.5	31.7	17.9	19.0	18.2	19.3	19.5
3H	31.3	32.3	31.6	32.6	32.9	19.0	20.0	19.4	20.3	20.6
4H	31.3	32.2	31.6	32.5	32.8	19.7	20.5	20.0	20.9	21.2
6H	31.2	32.0	31.6	32.3	32.7	20.3	21.1	20.7	21.4	21.8
8H	31.2	31.9	31.6	32.3	32.6	20.6	21.3	21.0	21.6	22.0
12H	31.1	31.8	31.5	32.2	32.6	20.8	21.4	21.2	21.8	22.2
8H 4H	31.1	31.9	31.5	32.2	32.6	20.0	20.7	20.4	21.1	21.4
6H	31.1	31.7	31.5	32.1	32.5	20.7	21.3	21.2	21.7	22.1
8H	31.1	31.6	31.5	32.0	32.5	21.1	21.6	21.5	22.0	22.5
12H	31.0	31.5	31.5	31.9	32.4	21.4	21.8	21.9	22.3	22.8
12H 4H	31.1	31.8	31.5	32.1	32.5	20.0	20.7	20.4	21.0	21.4
6H	31.0	31.6	31.5	32.0	32.4	20.8	21.3	21.2	21.7	22.2
8H	31.0	31.5	31.5	31.9	32.4	21.2	21.6	21.6	22.1	22.5
Variations with the observer position at spacings:										
S = 1.0H	+ 1.2 / - 1.1					+ 0.6 / - 0.7				
1.5H	+ 2.5 / - 4.4					+ 0.9 / - 0.6				
2.0H	+ 3.8 / - 8.5					+ 0.1 / - 0.2				

CIE Pub.117 Corrected 18692 lm Total Lamp Luminous Flux.(8log(F/F0) = 10.2)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-15

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:

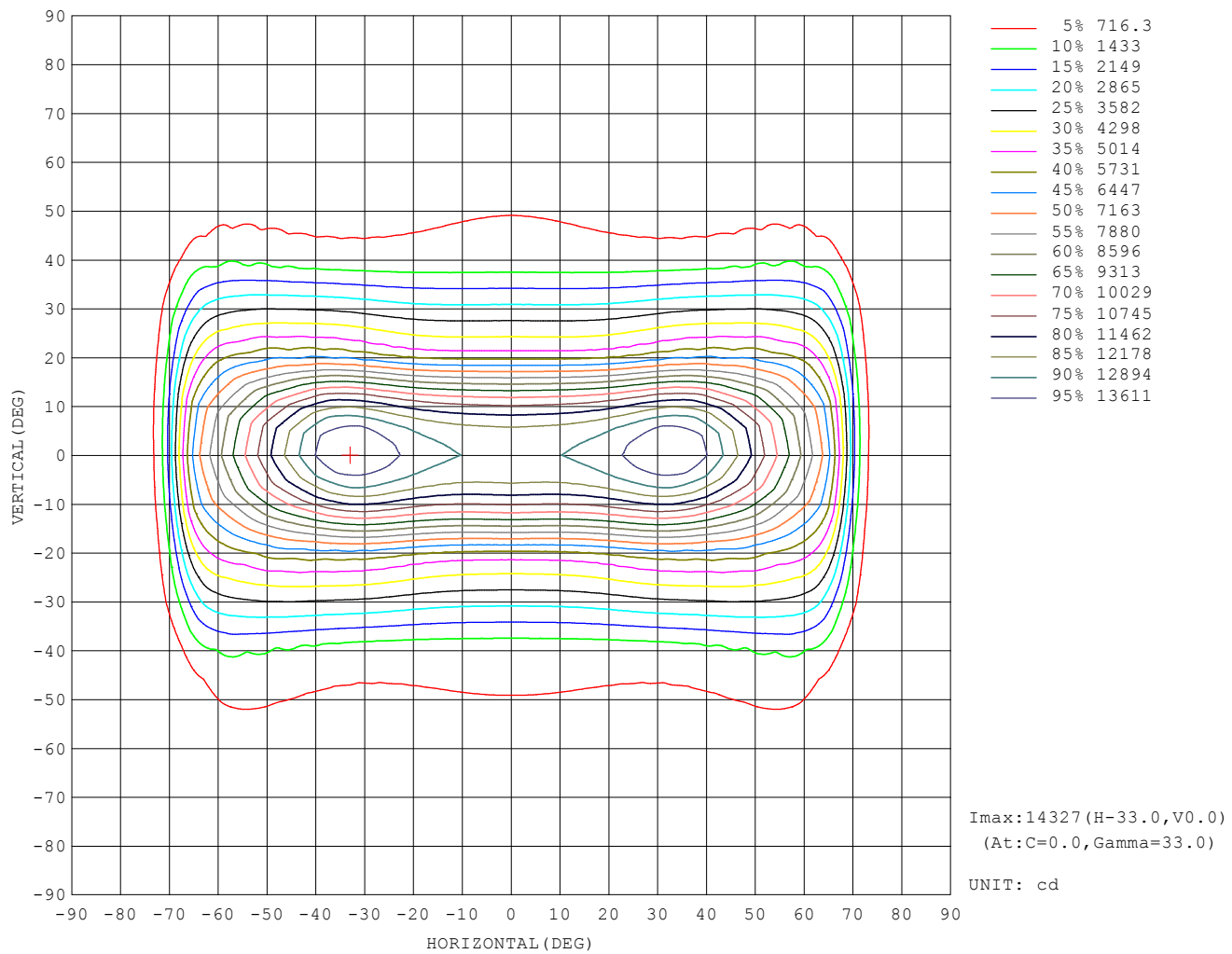
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	67	57	51	66	57	51	65	57	51	45
0.80	77	67	61	76	67	61	74	66	60	55
1.00	84	75	69	83	75	69	81	76	69	63
1.25	91	82	77	90	82	76	87	80	75	69
1.50	95	87	82	94	86	81	91	85	80	74
2.00	101	94	89	99	93	88	96	91	87	80
2.50	104	98	93	102	96	92	98	94	90	83
3.00	106	101	97	104	100	96	101	97	93	86
4.00	110	105	102	107	103	100	103	100	97	89
5.00	111	108	105	109	106	103	105	102	100	91
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: 2017-06-15

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:

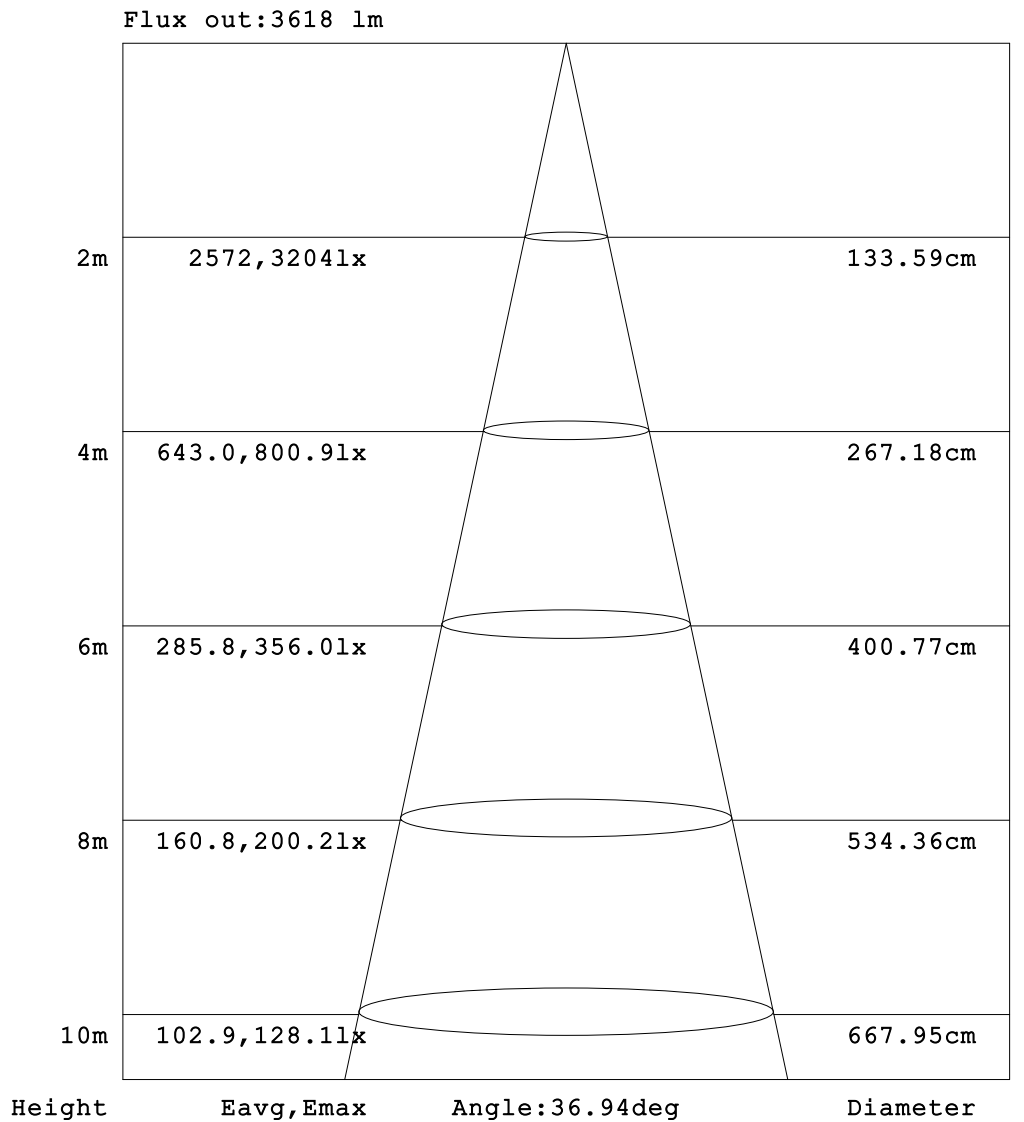
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-15

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

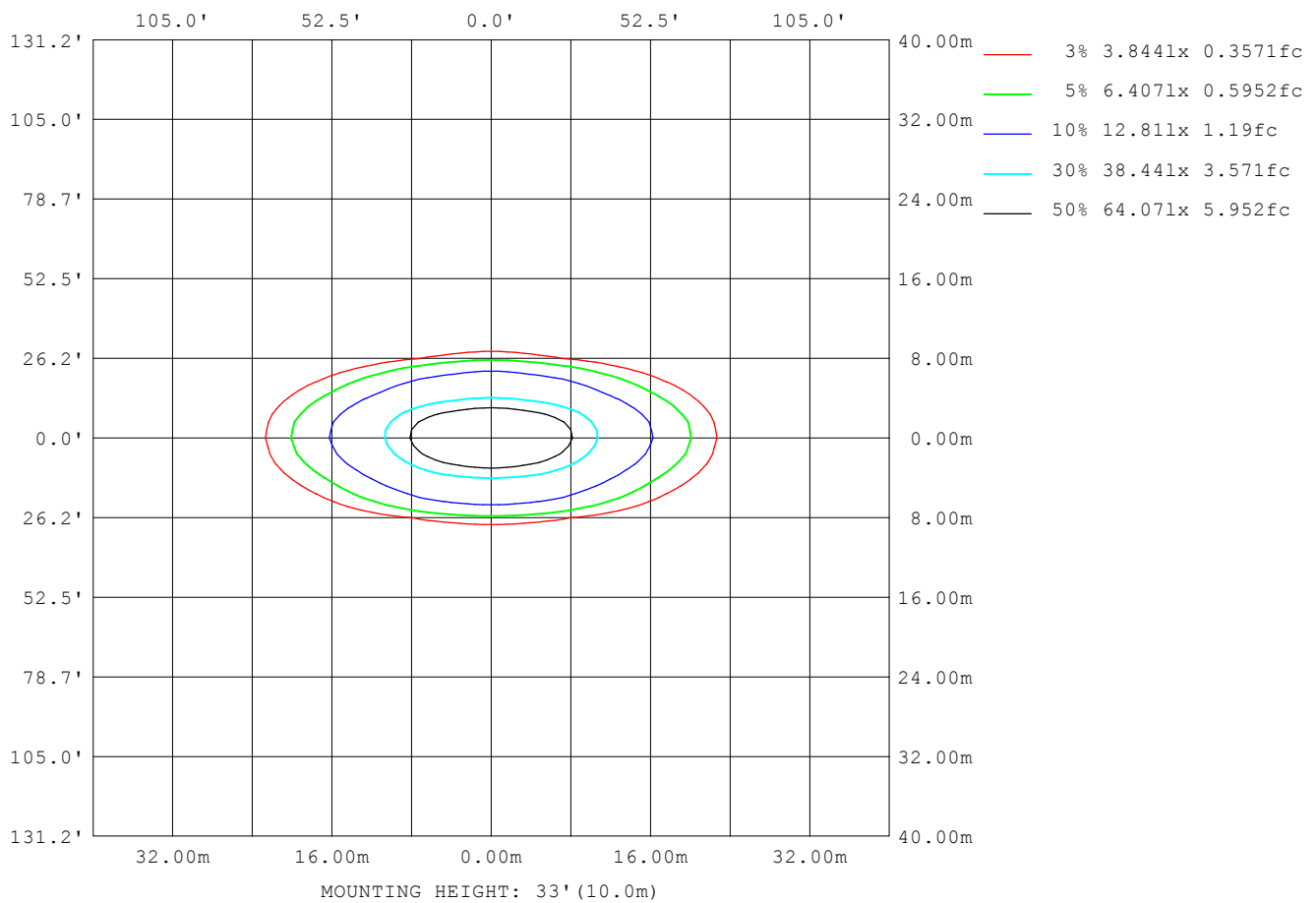


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-06-15

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:2017-06-15

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:0.6908A P:152.7W PF:0.9612 Lamp Flux:18691.7x1 lm		
NAME: LHB01-150	TYPE:150W	WEIGHT:
SPEC.:5000K Ra80 40130DEG L02804	DIM.: 1.178*0.137*0.102	SERIAL No.:
MFR.:	SUR.:1.17*0.1	Shielding Angle:

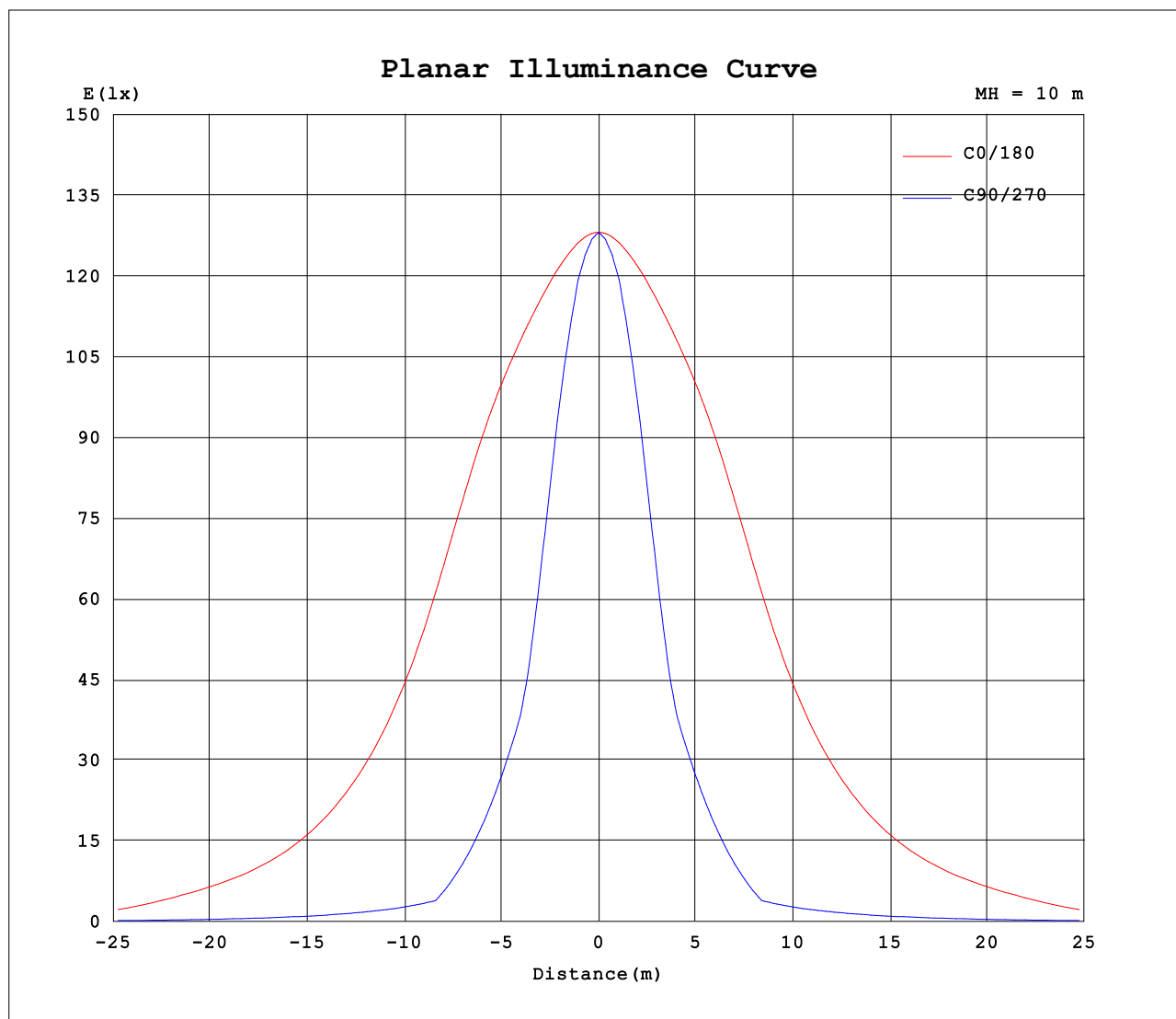
AvgL	cd/m2
L_0~180 (65) av	133428
L_0~180 (75) av	13401
L_0~180 (85) av	4152
L_90~270 (65) av	10002
L_90~270 (75) av	9956
L_90~270 (85) av	10345
L_45 (65) av	10045
L_45 (75) av	8510
L_45 (85) av	8956

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-15

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: 2017-06-15

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:

```

```

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:

```