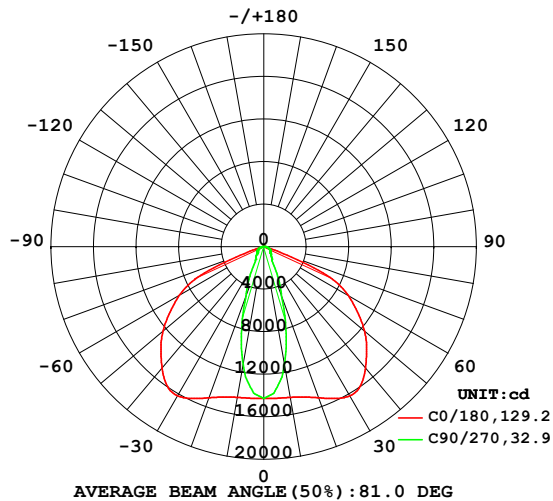


LUMINAIRE PHOTOMETRIC TEST REPORT

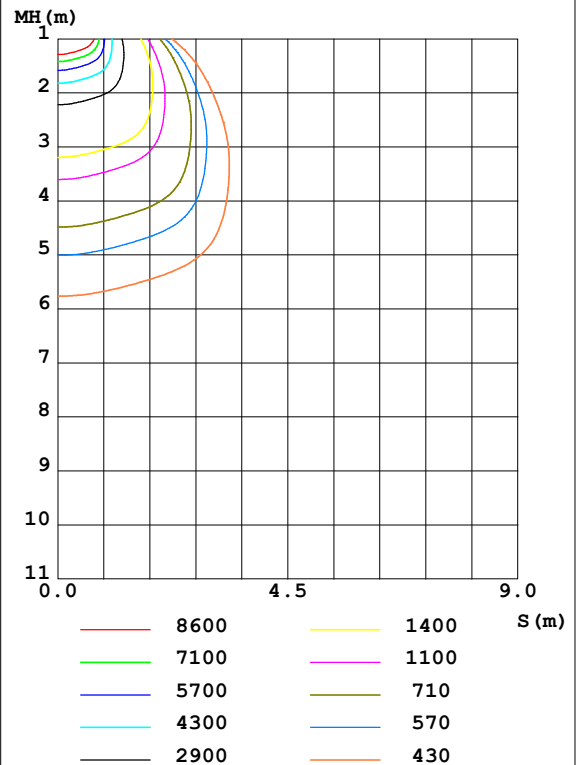
Test:U:230.0V I:0.6669A P:148.1W PF:0.9656 Lamp Flux:18780.8x1 lm		
NAME: LHB01-150	TYPE:150W	WEIGHT:
SPEC.:5000K Ra70 40130DEG L02804	DIM.: 1.178*0.137*0.102	SERIAL No.:
MFR.:	SUR.:1.17*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 126.84 lm/W			
MODEL	LHB01-150	Imax(cd)	16212	S/MH(C0/180)	1.61
NOMINAL POWER(W)	150	LOR(%)	100.0	S/MH(C90/270)	0.55
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	18781	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	18780.8	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:2017-03-23

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	1431	1388	1345	1388	1431	1388	1345	1388	0- 5	335.4	335.4	1.79,1.79
10	1439	1273	1124	1273	1439	1273	1124	1273	5- 10	951.8	1287	6.85,6.85
15	1465	1092	809.8	1092	1465	1092	809.8	1092	10- 15	1416	2703	14.4,14.4
20	1513	864.5	489.9	864.5	1513	864.5	489.9	864.5	15- 20	1680	4383	23.3,23.3
25	1576	625.8	323.3	625.8	1576	625.8	323.3	625.8	20- 25	1795	6178	32.9,32.9
30	1620	447.4	156.8	447.4	1620	447.4	156.8	447.4	25- 30	1831	8009	42.6,42.6
35	1591	309.0	133.9	309.0	1591	309.0	133.9	309.0	30- 35	1783	9792	52.1,52.1
40	1488	175.7	111.0	175.7	1488	175.7	111.0	175.7	35- 40	1699	11491	61.2,61.2
45	1369	148.0	89.70	148.0	1369	148.0	89.70	148.0	40- 45	1567	13058	69.5,69.5
50	1238	113.2	81.81	113.2	1238	113.2	81.81	113.2	45- 50	1420	14478	77.1,77.1
55	1078	75.01	75.59	75.01	1078	75.01	75.59	75.01	50- 55	1261	15738	83.8,83.8
60	917.9	61.78	69.37	61.78	917.9	61.78	69.37	61.78	55- 60	1084	16822	89.6,89.6
65	688.6	49.84	57.93	49.84	688.6	49.84	57.93	49.84	60- 65	884.5	17707	94.3,94.3
70	195.2	38.38	46.49	38.38	195.2	38.38	46.49	38.38	65- 70	569.2	18276	97.3,97.3
75	37.36	28.90	35.06	28.90	37.36	28.90	35.06	28.90	70- 75	252.8	18529	98.7,98.7
80	15.85	19.51	23.62	19.51	15.85	19.51	23.62	19.51	75- 80	139.9	18669	99.4,99.4
85	4.718	10.16	12.18	10.16	4.718	10.16	12.18	10.16	80- 85	82.00	18751	99.8,99.8
90	0.9675	0.8439	0.7470	0.8439	0.9675	0.8439	0.7470	0.8439	85- 90	30.02	18781	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): 13058 lm

%lum = 69.5%

%lamp = 69.5%

Conical surface Flux(120deg): 16822 lm

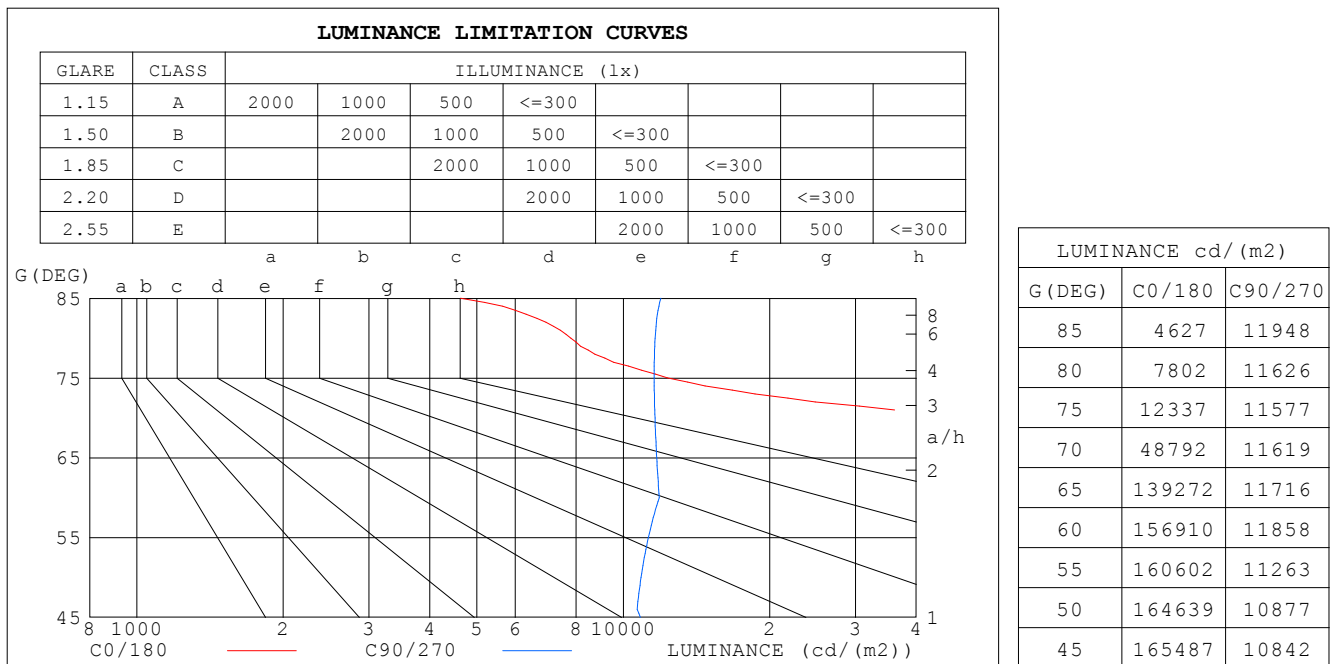
%lum = 89.6%

%lamp = 89.6%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-03-23

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

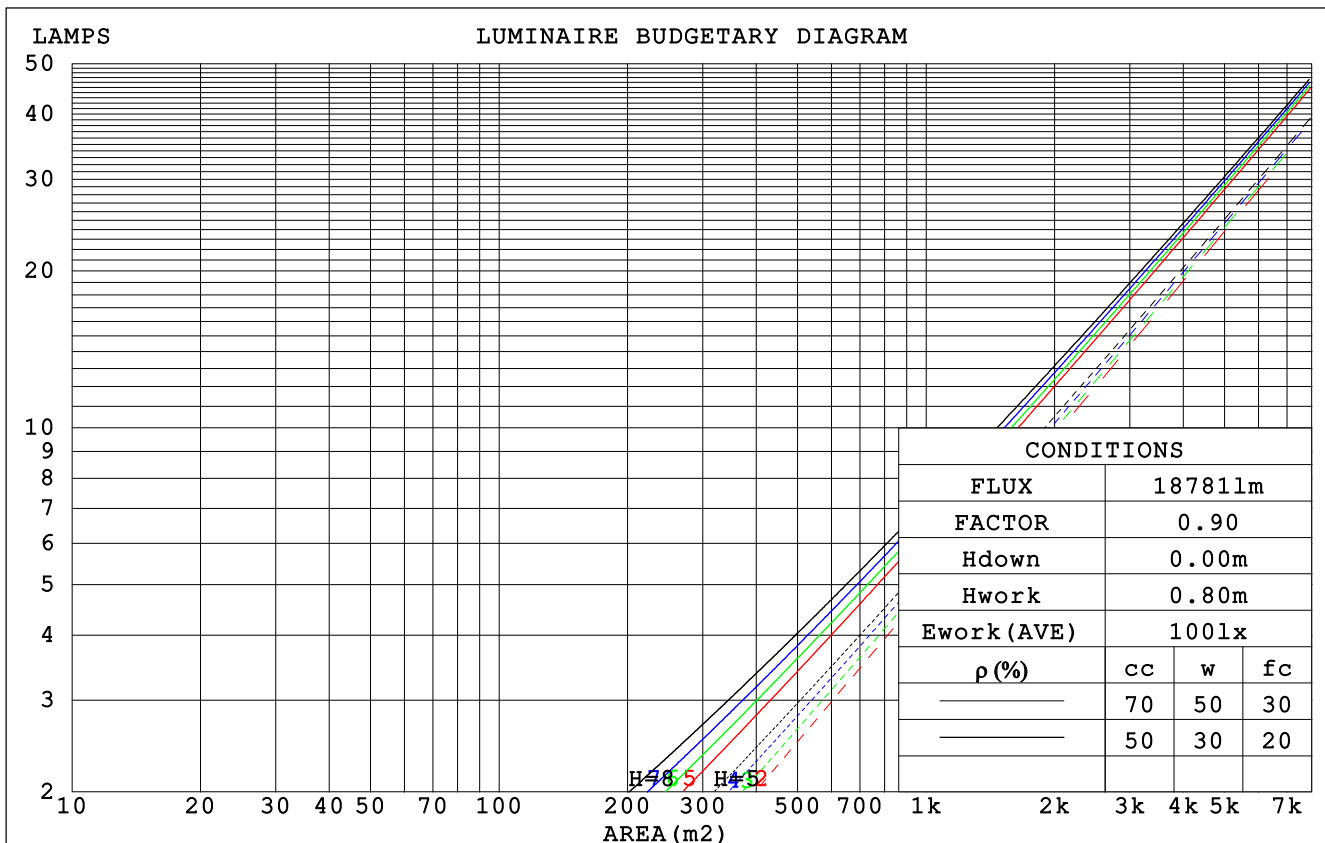


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-23

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	1.07	1.04	1.01	1.05	1.02	.99	1.01	.98	.96	.97	.95	.93	.94	.92	.90	.88
2.0	.96	.91	.86	.94	.89	.85	.91	.87	.83	.88	.84	.81	.85	.82	.79	.77
3.0	.87	.80	.74	.85	.79	.74	.82	.77	.72	.80	.75	.71	.77	.73	.70	.68
4.0	.78	.71	.65	.77	.70	.65	.75	.69	.64	.73	.67	.63	.71	.66	.62	.60
5.0	.71	.64	.58	.70	.63	.58	.68	.62	.57	.66	.61	.56	.65	.60	.56	.54
6.0	.65	.58	.52	.64	.57	.52	.63	.56	.51	.61	.55	.51	.60	.55	.51	.49
7.0	.60	.52	.47	.59	.52	.47	.58	.51	.47	.57	.51	.46	.55	.50	.46	.44
8.0	.56	.48	.43	.55	.48	.43	.54	.47	.43	.53	.47	.42	.52	.46	.42	.40
9.0	.52	.44	.39	.51	.44	.39	.50	.44	.39	.49	.43	.39	.48	.43	.39	.37
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: 2017-03-23

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	.245	.139	.044	.238	.136	.043	.225	.129	.041	.213	.123	.039	.202	.117	.038	
2.0	.236	.130	.040	.231	.127	.039	.219	.122	.038	.209	.117	.037	.199	.113	.036	
3.0	.224	.119	.036	.218	.117	.035	.209	.113	.034	.200	.109	.034	.191	.106	.033	
4.0	.210	.109	.032	.205	.108	.032	.197	.104	.031	.189	.101	.031	.181	.099	.030	
5.0	.197	.100	.029	.193	.099	.029	.185	.097	.028	.178	.094	.028	.172	.092	.028	
6.0	.185	.093	.027	.181	.092	.026	.175	.090	.026	.168	.087	.026	.162	.086	.025	
7.0	.174	.086	.024	.171	.085	.024	.165	.083	.024	.159	.082	.024	.154	.080	.023	
8.0	.164	.080	.023	.161	.079	.022	.156	.078	.022	.151	.076	.022	.146	.075	.022	
9.0	.155	.075	.021	.152	.074	.021	.147	.073	.021	.143	.072	.020	.139	.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	.176	.157	.139	.150	.134	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016	
2.0	.165	.132	.105	.141	.114	.091	.097	.079	.063	.056	.046	.037	.018	.015	.012	
3.0	.156	.114	.081	.133	.098	.070	.092	.068	.049	.053	.040	.029	.017	.013	.009	
4.0	.147	.100	.064	.126	.087	.056	.087	.060	.039	.050	.035	.023	.016	.011	.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	.073	.037	.108	.064	.032	.075	.045	.023	.044	.026	.013	.014	.009	.004	
8.0	.120	.068	.031	.103	.059	.027	.071	.041	.019	.042	.024	.012	.013	.008	.004	
9.0	.114	.062	.027	.099	.054	.024	.068	.038	.017	.040	.023	.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:2017-03-23

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	30.8	32.1	31.1	32.3	32.5	16.4	17.7	16.6	17.8	18.0
3H	31.8	33.0	32.1	33.2	33.4	18.1	19.3	18.4	19.5	19.7
4H	31.7	32.9	32.0	33.1	33.3	18.9	20.0	19.2	20.2	20.5
6H	31.6	32.7	32.0	33.0	33.2	19.5	20.6	19.9	20.9	21.1
8H	31.6	32.6	31.9	32.9	33.2	19.8	20.8	20.1	21.1	21.4
12H	31.5	32.5	31.9	32.8	33.1	20.0	21.0	20.4	21.3	21.6
4H 2H	30.5	31.7	30.8	31.9	32.1	17.5	18.6	17.8	18.9	19.1
3H	31.5	32.5	31.9	32.8	33.1	19.1	20.1	19.5	20.4	20.7
4H	31.5	32.4	31.8	32.7	33.0	20.0	20.8	20.3	21.2	21.5
6H	31.4	32.2	31.8	32.5	32.9	20.7	21.5	21.1	21.8	22.2
8H	31.4	32.1	31.8	32.5	32.8	21.0	21.8	21.5	22.1	22.5
12H	31.3	32.0	31.7	32.4	32.8	21.3	22.0	21.7	22.4	22.8
8H 4H	31.3	32.1	31.8	32.4	32.8	20.2	21.0	20.6	21.3	21.7
6H	31.3	31.9	31.7	32.3	32.7	21.1	21.7	21.6	22.1	22.6
8H	31.3	31.8	31.7	32.2	32.7	21.6	22.1	22.0	22.5	23.0
12H	31.2	31.7	31.7	32.1	32.6	21.9	22.4	22.4	22.8	23.3
12H 4H	31.3	32.0	31.7	32.3	32.7	20.3	20.9	20.7	21.3	21.7
6H	31.3	31.8	31.7	32.2	32.7	21.2	21.7	21.7	22.2	22.6
8H	31.2	31.7	31.7	32.1	32.6	21.7	22.1	22.1	22.6	23.0
Variations with the observer position at spacings:										
S = 1.0H	+ 1.4 / - 1.9					+ 0.3 / - 0.4				
1.5H	+ 2.7 / - 5.1					+ 0.5 / - 0.3				
2.0H	+ 4.1 / - 9.0					+ 0.1 / - 0.2				

CIE Pub.117 Corrected 18781 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:2017-03-23

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:

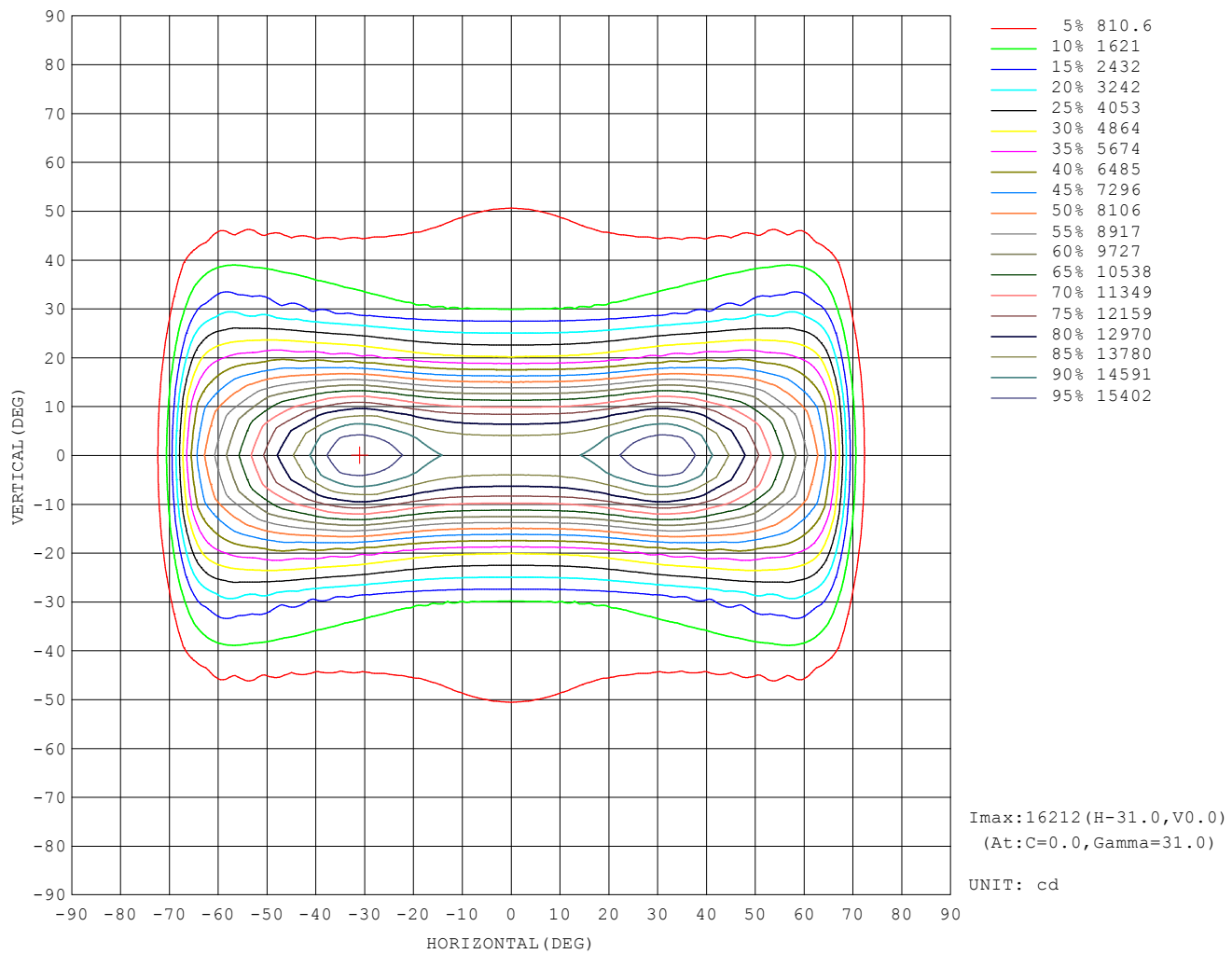
UTILIZATION FACTORS TABLE

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	46
0.80	77	67	61	76	67	61	74	66	61	55
1.00	85	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: 2017-03-23

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:

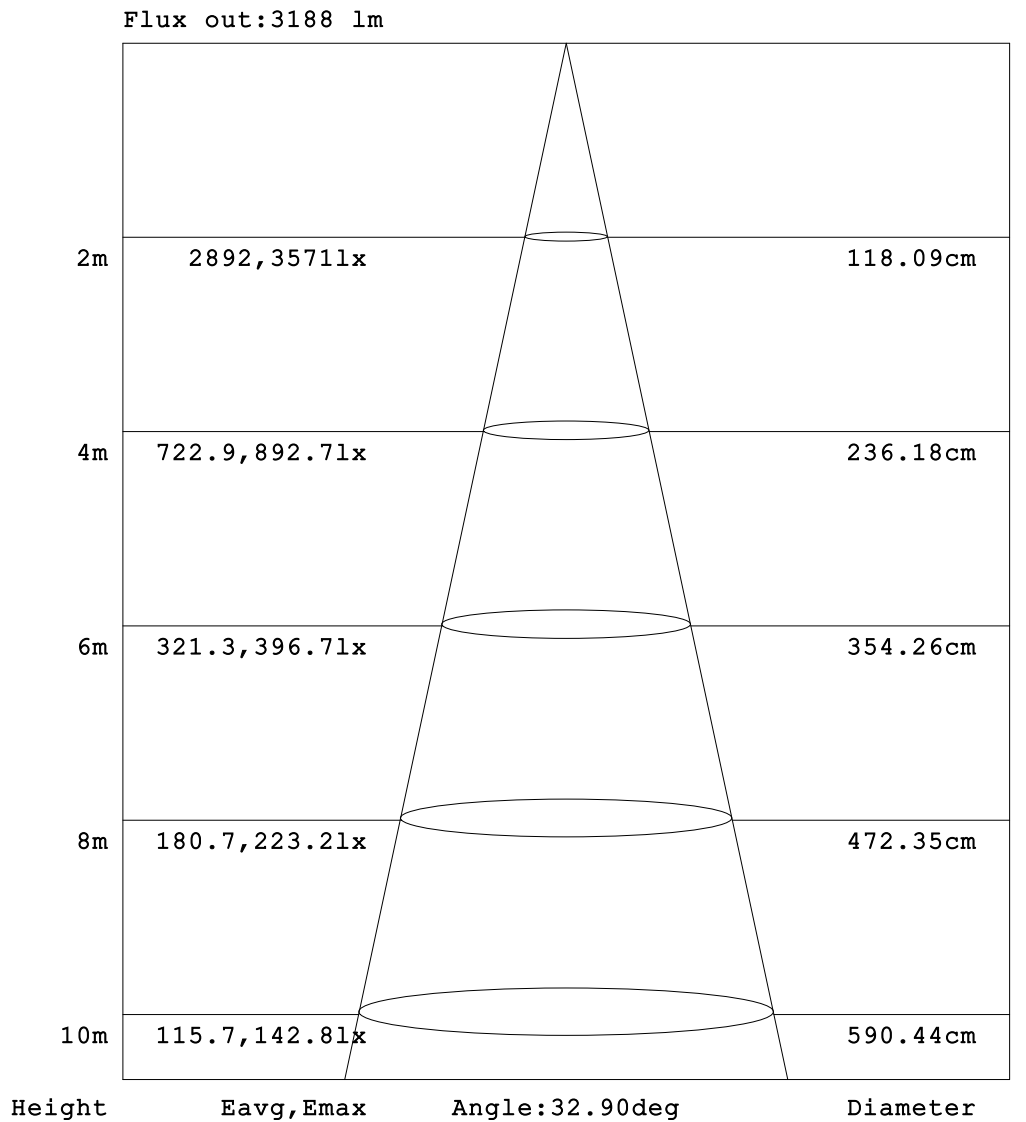
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-23

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

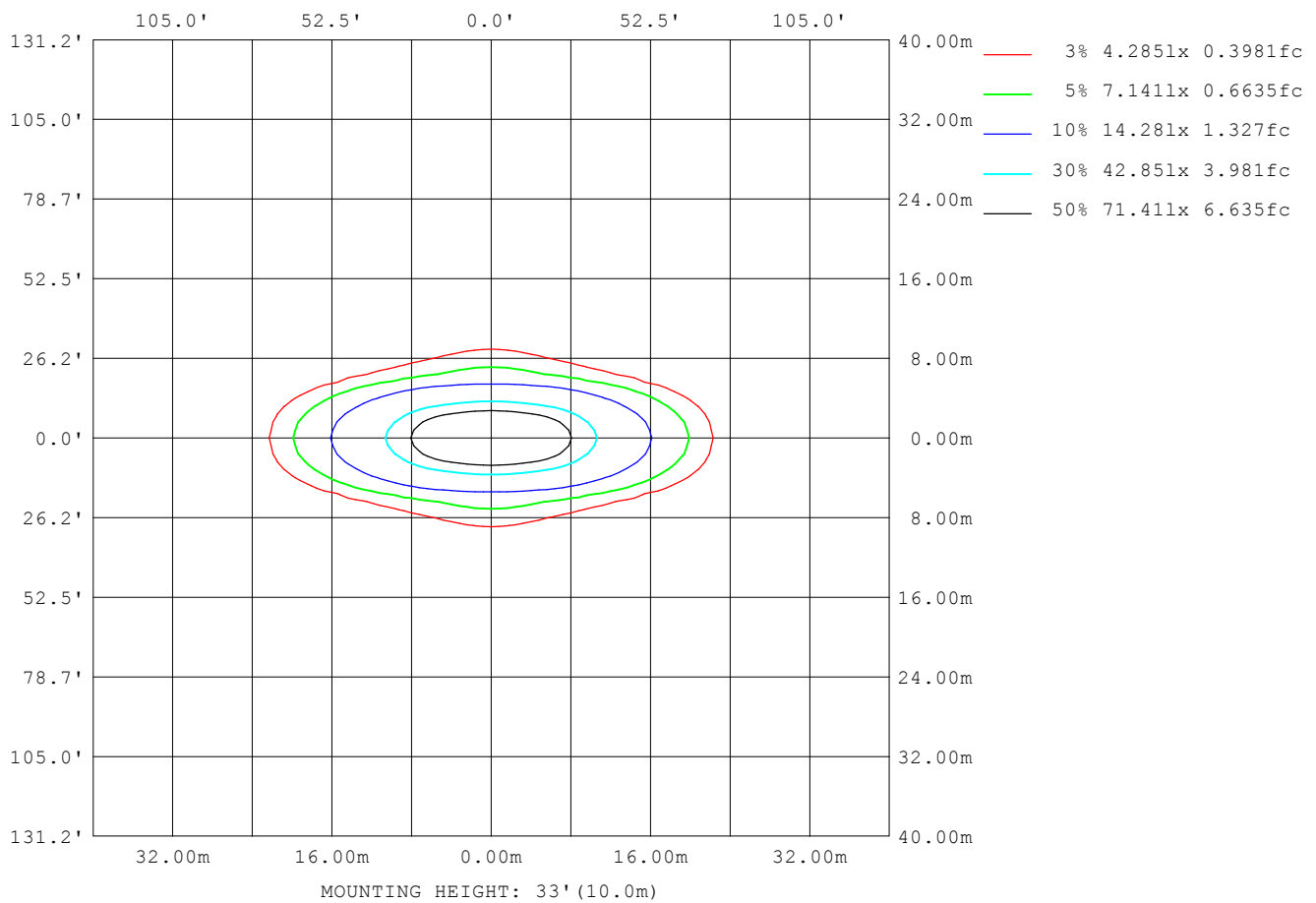


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-23

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:2017-03-23

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:0.6669A P:148.1W PF:0.9656 Lamp Flux:18780.8x1 lm		
NAME: LHB01-150	TYPE:150W	WEIGHT:
SPEC.:5000K Ra70 40130DEG L02804	DIM.: 1.178*0.137*0.102	SERIAL No.:
MFR.:	SUR.:1.17*0.1	Shielding Angle:

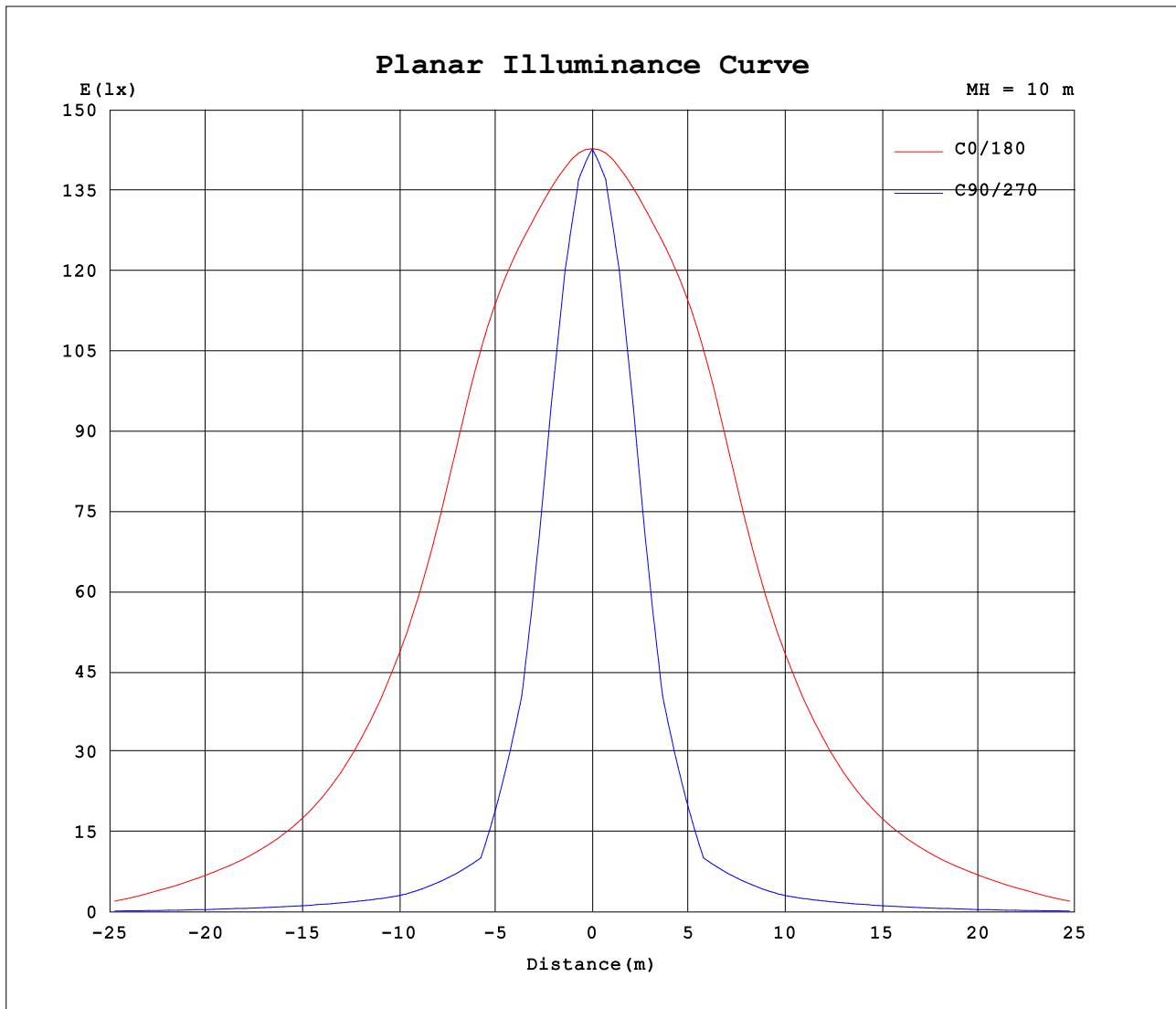
AvgL	cd/m2
L_0~180 (65) av	139272
L_0~180 (75) av	12337
L_0~180 (85) av	4627
L_90~270 (65) av	11716
L_90~270 (75) av	11577
L_90~270 (85) av	11948
L_45 (65) av	10080
L_45 (75) av	9544
L_45 (85) av	9965

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-23

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: 2017-03-23

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:

```

