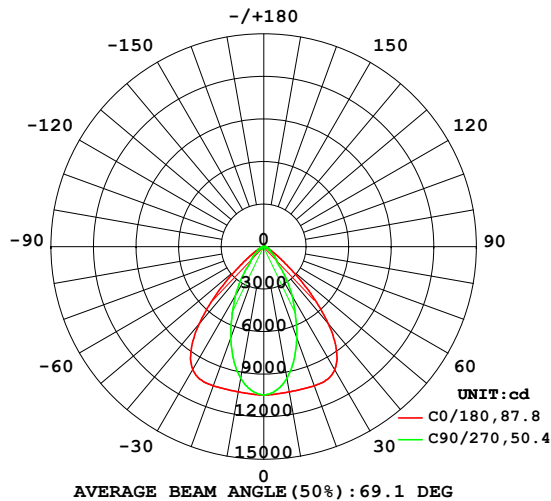


LUMINAIRE PHOTOMETRIC TEST REPORT

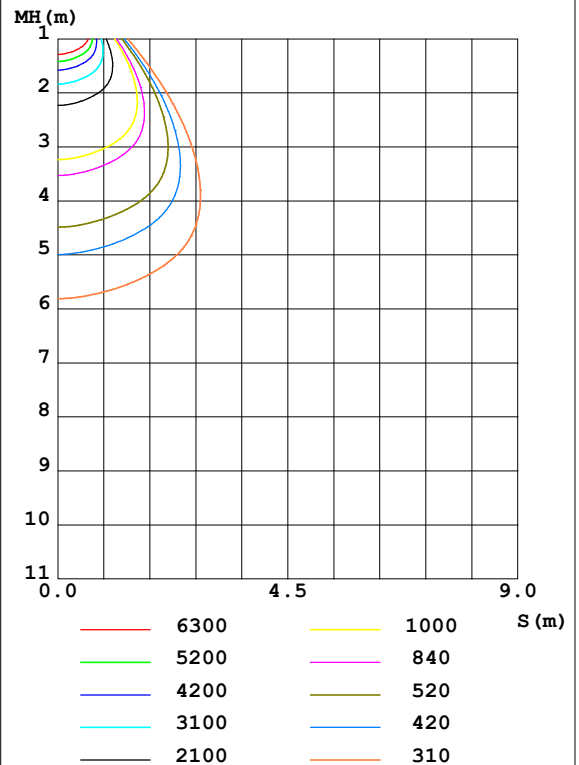
Test:U:230.0V I:0.4082A P:90.62W PF:0.9651 Lamp Flux:13252.5x1 lm		
NAME: LHB01-90H	TYPE:90W	WEIGHT:
SPEC.:4000K Ra80 5090DEG L06402	DIM.: 0.718*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.7*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 146.24 lm/W			
MODEL	LHB01-90H	Imax(cd)	10463	S/MH(C0/180)	1.26
NOMINAL POWER(W)	90	LOR(%)	100.0	S/MH(C90/270)	0.78
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	13252	η UP,DN(C0-180)	0.0,49.8
NOMINAL FLUX(lm)	13252.5	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.2
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	0.85

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:2017-06-05

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	1043	1028	1017	1028	1043	1030	1017	1030	0- 5	248.0	248.0	1.87,1.87
10	1040	982.9	943.0	982.9	1040	988.7	943.0	988.7	5- 10	721.4	969.4	7.31,7.31
15	1041	916.3	826.2	916.3	1041	923.3	826.2	923.3	10- 15	1135	2105	15.9,15.9
20	1044	824.2	682.2	824.2	1044	829.2	682.2	829.2	15- 20	1458	3563	26.9,26.9
25	1040	700.9	529.2	700.9	1040	704.1	529.2	704.1	20- 25	1662	5225	39.4,39.4
30	1002	550.2	401.7	550.2	1002	552.4	401.7	552.4	25- 30	1730	6955	52.5,52.5
35	895.7	404.8	277.5	404.8	895.7	406.8	277.5	406.8	30- 35	1656	8611	65,65
40	708.6	298.3	153.3	298.3	708.6	299.7	153.3	299.7	35- 40	1427	10039	75.7,75.7
45	471.0	197.4	118.9	197.4	471.0	198.0	118.9	198.0	40- 45	1093	11132	84,84
50	256.2	104.9	84.43	104.9	256.2	104.8	84.43	104.8	45- 50	762.6	11894	89.8,89.8
55	130.5	77.74	52.50	77.74	130.5	77.59	52.50	77.59	50- 55	487.6	12382	93.4,93.4
60	65.42	52.33	40.52	52.33	65.42	52.02	40.52	52.02	55- 60	307.7	12690	95.8,95.8
65	35.75	32.58	31.03	32.58	35.75	32.13	31.03	32.13	60- 65	205.0	12895	97.3,97.3
70	22.77	23.38	21.54	23.38	22.77	23.20	21.54	23.20	65- 70	142.8	13037	98.4,98.4
75	12.52	14.51	16.27	14.51	12.52	14.58	16.27	14.58	70- 75	98.65	13136	99.1,99.1
80	5.635	9.428	11.00	9.428	5.635	9.519	11.00	9.519	75- 80	65.06	13201	99.6,99.6
85	0.3677	4.918	5.738	4.918	0.3677	4.997	5.738	4.997	80- 85	37.59	13239	99.9,99.9
90	0.1933	0.4754	0.4708	0.4754	0.1933	0.5348	0.4708	0.5348	85- 90	13.83	13252	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): 11132 lm

%lum = 84.0%

%lamp = 84.0%

Conical surface Flux(120deg): 12690 lm

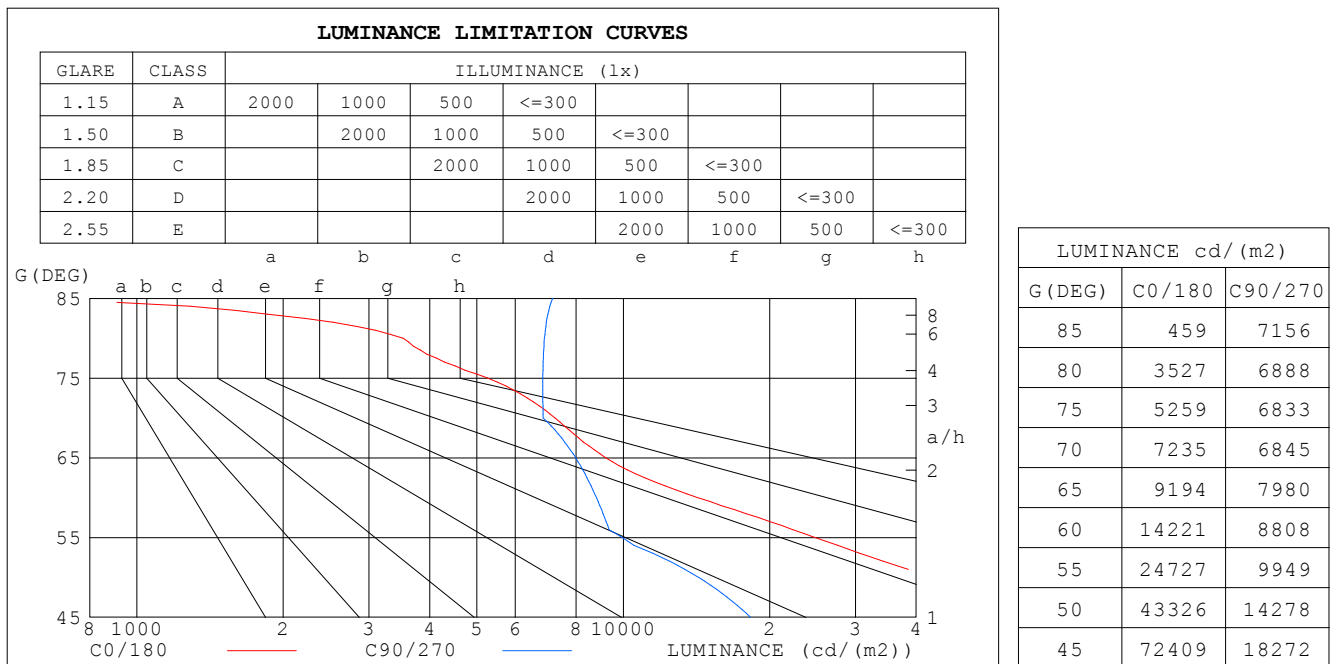
%lum = 95.8%

%lamp = 95.8%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-06-05

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

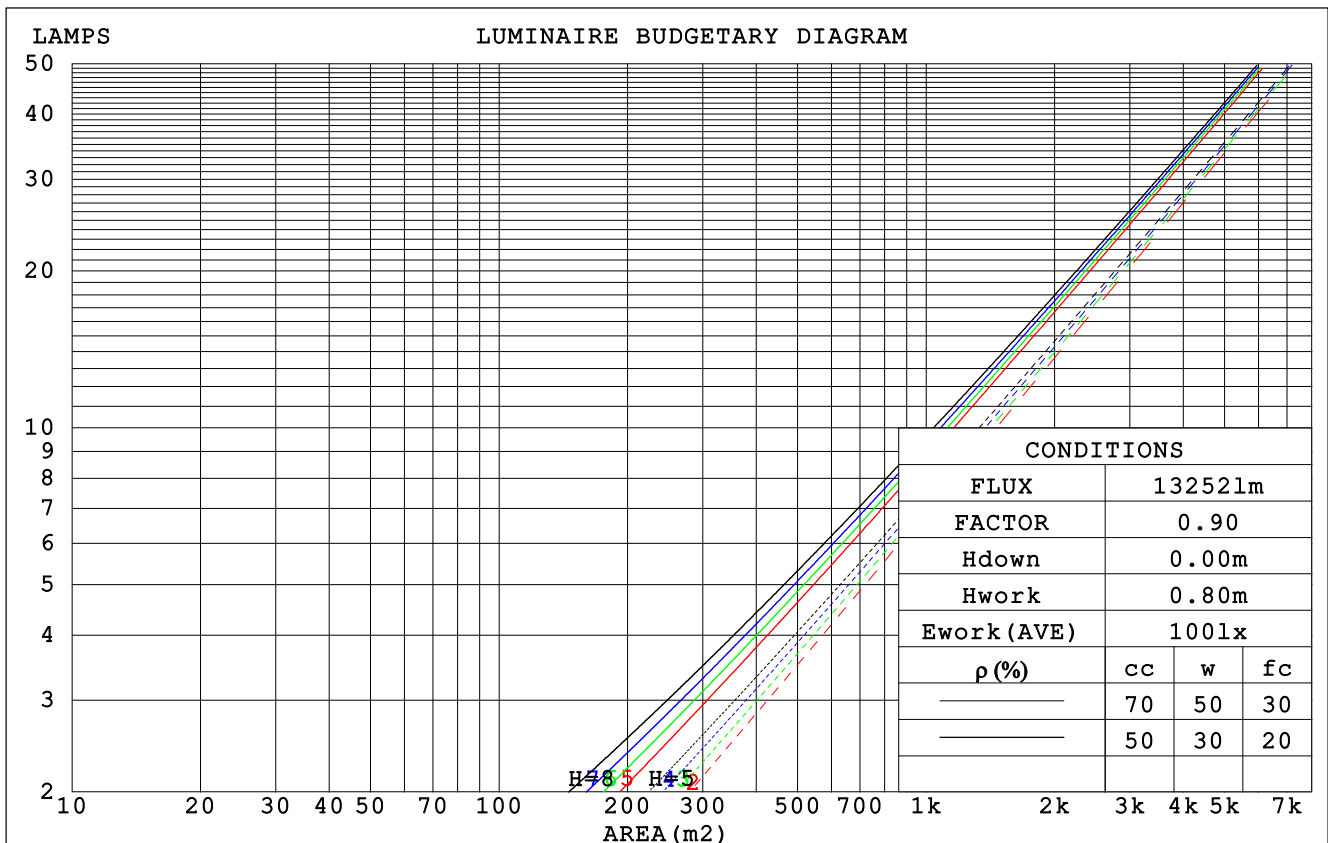


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-06-05

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	1.09	1.06	1.03	1.07	1.04	1.02	1.03	1.00	.98	.99	.97	.95	.95	.94	.93	.91
2.0	.99	.95	.90	.98	.93	.89	.94	.91	.87	.91	.88	.86	.88	.86	.84	.82
3.0	.91	.85	.80	.89	.84	.80	.87	.82	.78	.84	.80	.77	.82	.79	.76	.74
4.0	.83	.77	.72	.82	.76	.71	.80	.75	.71	.78	.73	.70	.76	.72	.69	.67
5.0	.77	.70	.65	.76	.69	.65	.74	.68	.64	.72	.67	.63	.71	.66	.63	.61
6.0	.71	.64	.59	.70	.64	.59	.69	.63	.58	.67	.62	.58	.66	.61	.58	.56
7.0	.66	.59	.54	.65	.59	.54	.64	.58	.54	.63	.57	.53	.61	.57	.53	.51
8.0	.61	.54	.50	.61	.54	.50	.60	.54	.49	.58	.53	.49	.57	.52	.49	.47
9.0	.57	.50	.46	.57	.50	.46	.56	.50	.46	.55	.49	.45	.54	.49	.45	.44
10.0	.54	.47	.43	.53	.47	.43	.52	.46	.42	.51	.46	.42	.51	.46	.42	.41



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-06-05

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	.214	.122	.039	.207	.118	.038	.194	.111	.036	.183	.105	.034	.172	.100	.032	
2.0	.206	.113	.035	.200	.110	.034	.189	.105	.033	.179	.100	.031	.170	.096	.030	
3.0	.196	.104	.031	.191	.102	.031	.181	.098	.030	.173	.095	.029	.164	.091	.028	
4.0	.186	.096	.028	.181	.095	.028	.173	.092	.027	.165	.089	.027	.158	.086	.026	
5.0	.176	.090	.026	.172	.088	.026	.165	.086	.025	.158	.083	.025	.152	.081	.024	
6.0	.167	.084	.024	.163	.082	.024	.157	.080	.023	.151	.078	.023	.145	.076	.023	
7.0	.158	.078	.022	.155	.077	.022	.149	.075	.022	.144	.074	.021	.139	.072	.021	
8.0	.150	.073	.021	.148	.073	.021	.142	.071	.020	.138	.070	.020	.133	.068	.020	
9.0	.143	.069	.019	.141	.069	.019	.136	.067	.019	.132	.066	.019	.127	.065	.019	
10.0	.136	.065	.018	.134	.065	.018	.130	.064	.018	.126	.063	.018	.122	.061	.018	

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	.174	.157	.142	.149	.135	.122	.102	.093	.084	.059	.054	.049	.019	.017	.016	
2.0	.161	.132	.108	.138	.114	.094	.094	.079	.065	.054	.046	.038	.017	.015	.012	
3.0	.150	.114	.085	.129	.098	.074	.088	.068	.052	.051	.040	.030	.016	.013	.010	
4.0	.141	.100	.068	.121	.086	.059	.083	.060	.041	.048	.035	.025	.016	.011	.008	
5.0	.133	.088	.055	.114	.076	.048	.079	.053	.034	.046	.031	.020	.015	.010	.007	
6.0	.126	.080	.046	.109	.069	.040	.075	.048	.028	.043	.028	.017	.014	.009	.006	
7.0	.120	.072	.039	.103	.063	.034	.071	.044	.024	.041	.026	.014	.013	.008	.005	
8.0	.114	.066	.033	.098	.057	.029	.068	.040	.021	.040	.024	.012	.013	.008	.004	
9.0	.109	.061	.029	.094	.053	.025	.065	.037	.018	.038	.022	.011	.012	.007	.004	
10.0	.104	.057	.025	.090	.049	.022	.062	.035	.016	.036	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-05

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	24.0	25.2	24.3	25.4	25.5	18.5	19.7	18.7	19.8	20.0
3H	24.0	25.1	24.3	25.3	25.5	18.9	20.0	19.2	20.2	20.4
4H	24.0	25.0	24.3	25.2	25.4	19.1	20.1	19.4	20.4	20.6
6H	23.9	24.8	24.2	25.1	25.4	19.3	20.3	19.7	20.5	20.8
8H	23.9	24.8	24.2	25.0	25.3	19.4	20.3	19.8	20.6	20.9
12H	23.8	24.7	24.2	25.0	25.2	19.5	20.4	19.8	20.6	20.9
4H 2H	23.8	24.8	24.1	25.1	25.3	18.8	19.8	19.1	20.0	20.2
3H	23.9	24.7	24.2	25.0	25.3	19.3	20.2	19.6	20.4	20.7
4H	23.9	24.7	24.3	25.0	25.3	19.6	20.4	20.0	20.7	21.0
6H	23.9	24.6	24.3	24.9	25.3	19.9	20.6	20.3	21.0	21.3
8H	23.9	24.5	24.3	24.8	25.2	20.1	20.7	20.5	21.1	21.4
12H	23.8	24.4	24.2	24.8	25.2	20.2	20.8	20.6	21.2	21.6
8H 4H	23.8	24.4	24.2	24.8	25.2	19.7	20.3	20.1	20.7	21.0
6H	23.8	24.4	24.3	24.7	25.2	20.1	20.6	20.5	21.0	21.4
8H	23.8	24.3	24.3	24.7	25.1	20.3	20.8	20.8	21.2	21.7
12H	23.8	24.2	24.3	24.6	25.1	20.5	20.9	21.0	21.4	21.8
12H 4H	23.8	24.4	24.2	24.7	25.1	19.7	20.2	20.1	20.6	21.0
6H	23.8	24.3	24.3	24.7	25.1	20.1	20.6	20.6	21.0	21.4
8H	23.8	24.2	24.3	24.6	25.1	20.4	20.8	20.8	21.2	21.7
Variations with the observer position at spacings:										
S = 1.0H	+ 2.8 / - 3.2					+ 0.9 / - 1.3				
1.5H	+ 3.6 / - 3.7					+ 1.0 / - 1.0				
2.0H	+ 5.5 / - 3.9					+ 1.2 / - 0.9				

CIE Pub.117 Corrected 13252 lm Total Lamp Luminous Flux.(8log(F/F0) = 9.0)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-05

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:

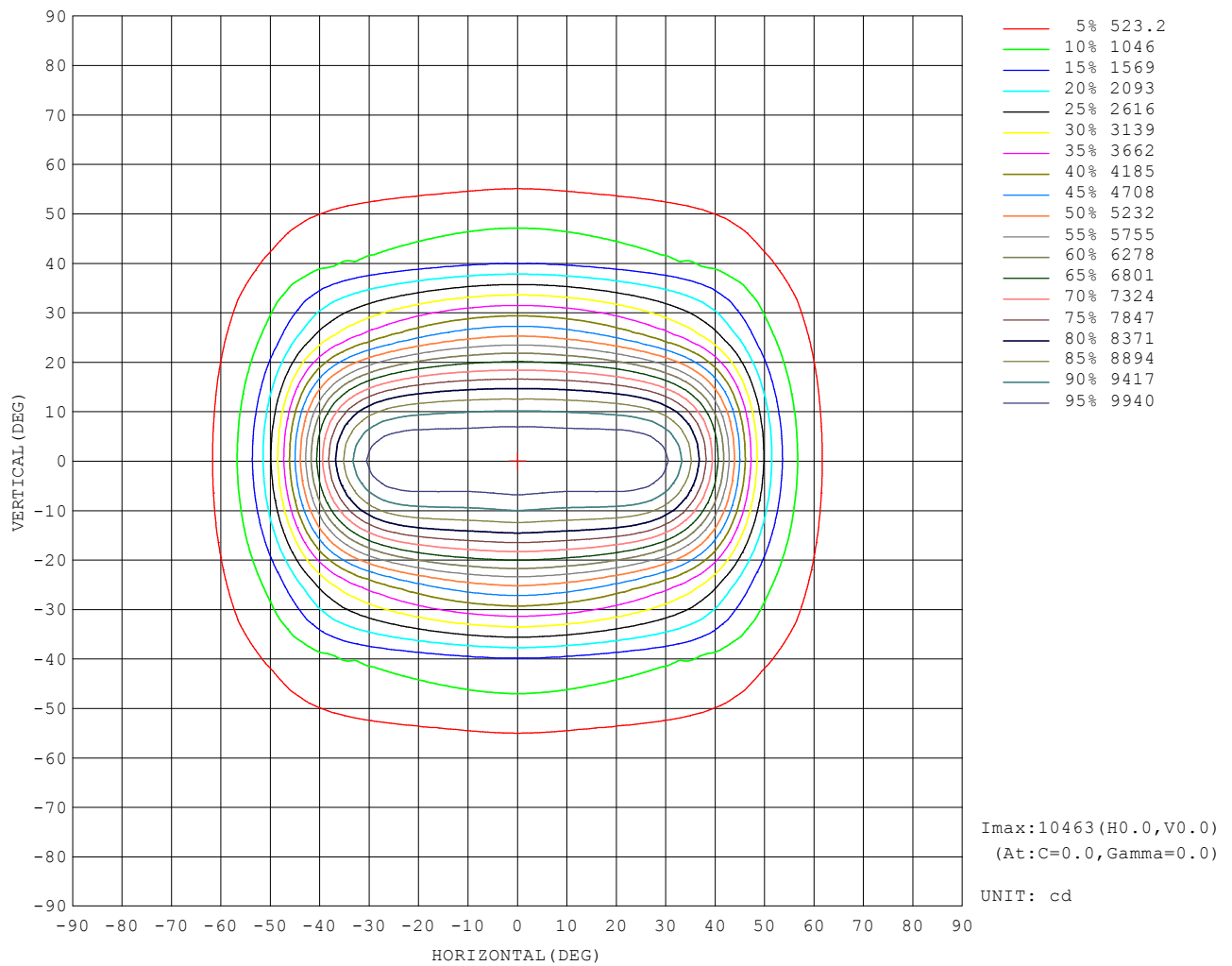
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	76	68	63	76	68	63	75	67	63	58
0.80	85	77	72	84	77	72	83	76	72	67
1.00	92	84	79	91	84	79	89	84	79	74
1.25	97	90	85	96	89	85	94	88	84	79
1.50	100	94	90	99	93	89	97	92	88	83
2.00	105	99	95	103	98	94	100	96	93	87
2.50	107	102	98	105	101	97	102	98	95	89
3.00	109	105	101	107	103	100	104	100	98	91
4.00	112	108	105	109	106	104	106	103	101	93
5.00	113	110	107	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: 2017-06-05

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:

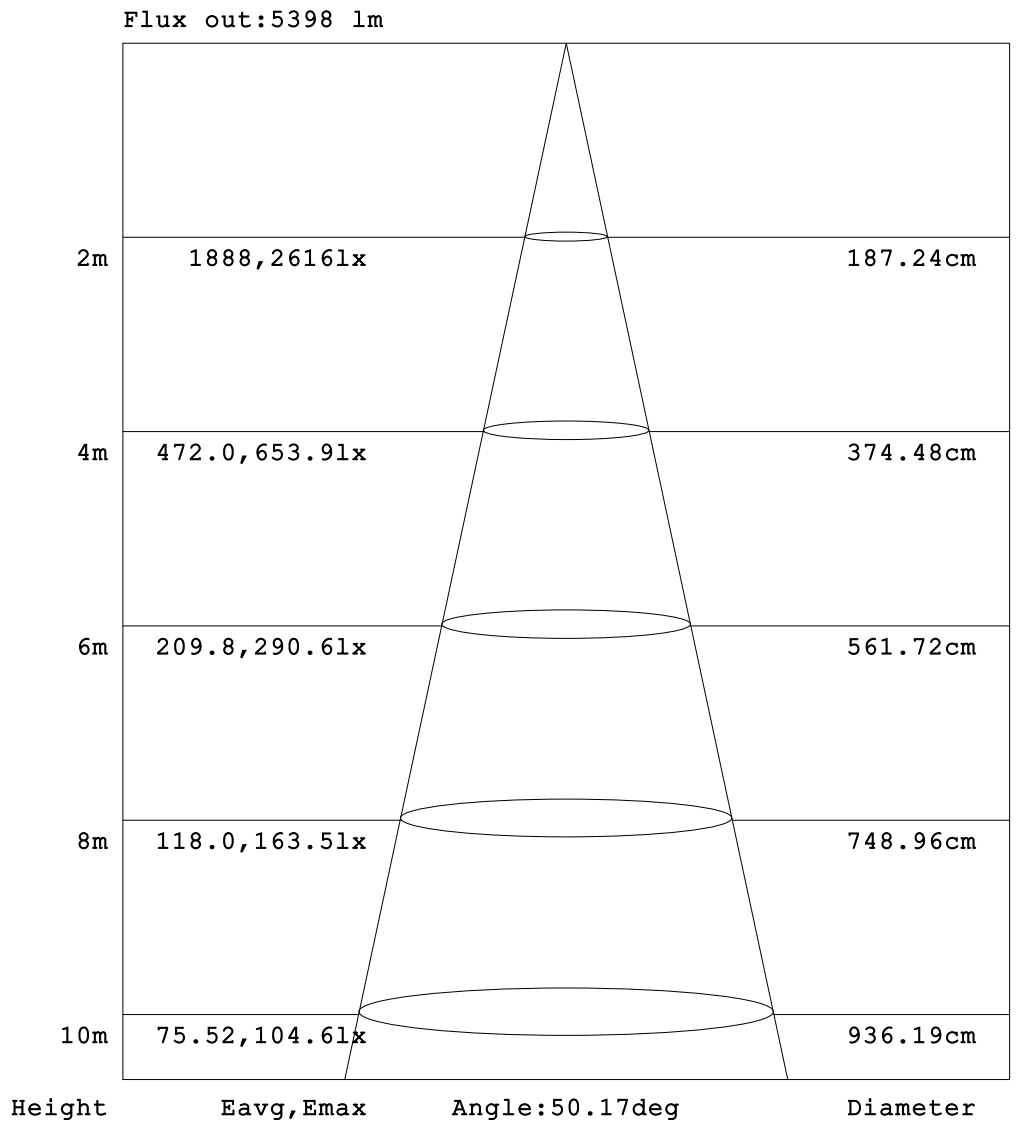
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-05

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

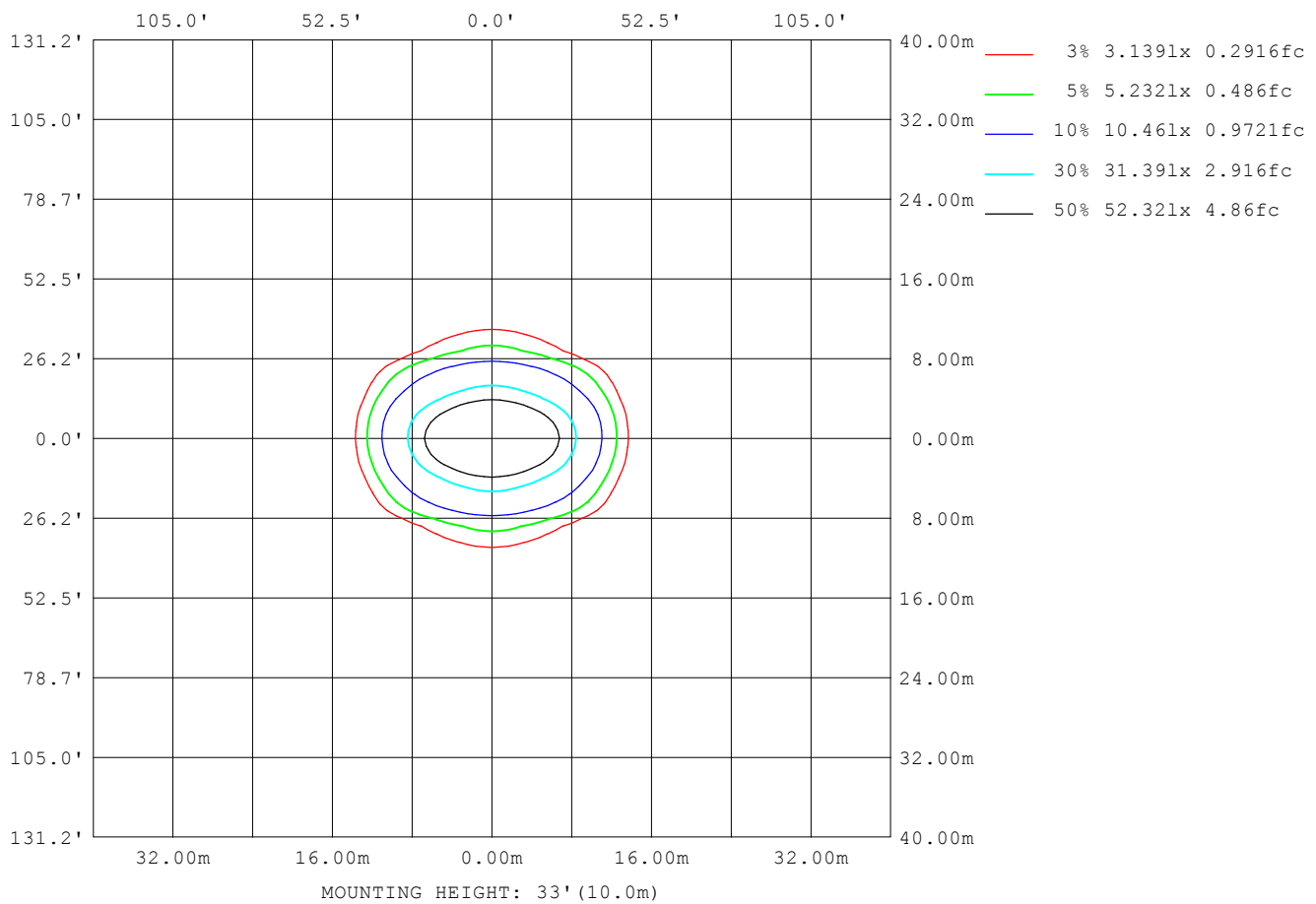


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-06-05

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:2017-06-05

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:0.4082A P:90.62W PF:0.9651 Lamp Flux:13252.5x1 lm		
NAME: LHB01-90H	TYPE:90W	WEIGHT:
SPEC.:4000K Ra80 5090DEG L06402	DIM.: 0.718*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.7*0.1	Shielding Angle:

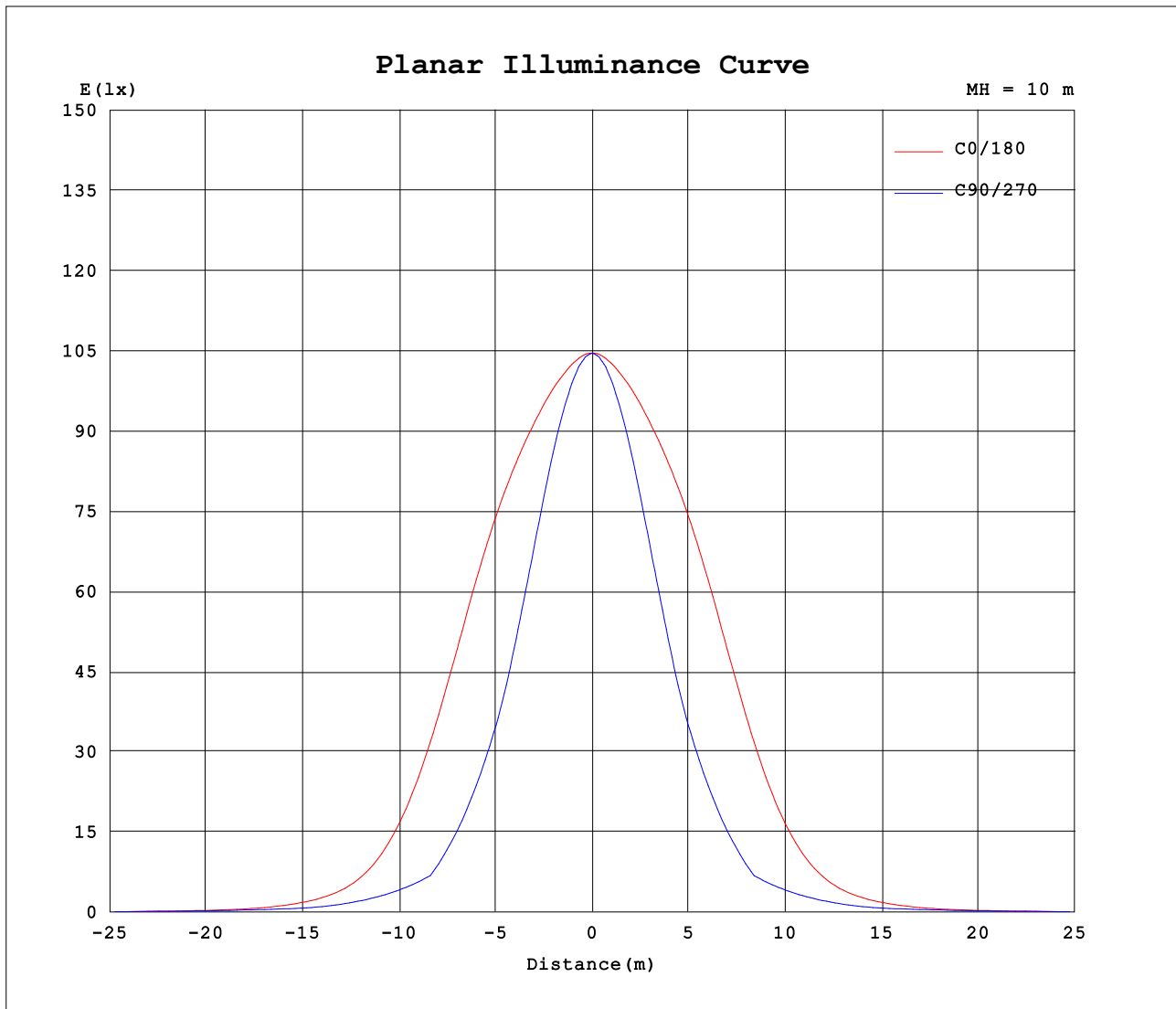
AvgL	cd/m2
L_0~180 (65) av	9194
L_0~180 (75) av	5259
L_0~180 (85) av	459
L_90~270 (65) av	7980
L_90~270 (75) av	6833
L_90~270 (85) av	7156
L_45 (65) av	8322
L_45 (75) av	6108
L_45 (85) av	6183

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-05

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: 2017-06-05

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:

```

```

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:

```