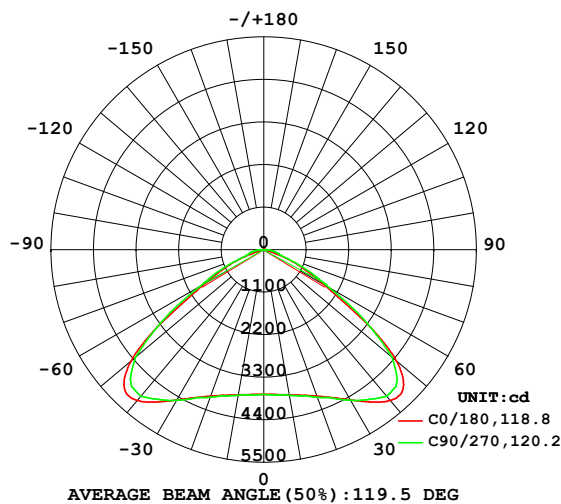


LUMINAIRE PHOTOMETRIC TEST REPORT

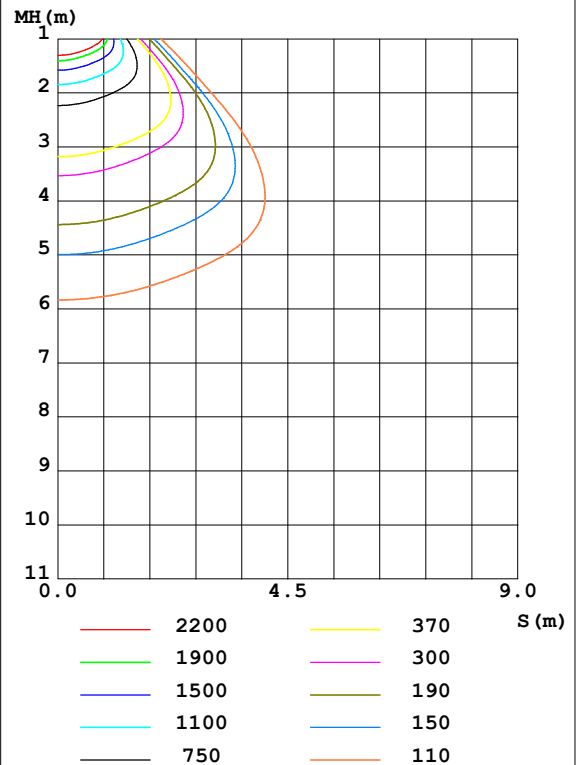
Test:U:230.1V I:0.4063A P:89.96W PF:0.9625 Lamp Flux:14440x1 lm		
NAME: LHB01-90H	TYPE:90W	WEIGHT:
SPEC.:5000K Ra70 L06403	DIM.: 0.718*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.7*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 160.52 lm/W			
MODEL	LHB01-90H	Imax(cd)	5154	S/MH(C0/180)	1.81
NOMINAL POWER(W)	90	LOR(%)	100.0	S/MH(C90/270)	1.80
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	14440	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	14440	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.75
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.75

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	3761	3773	3772	3773	3761	3775	3772	3775	0- 5	89.90	89.90	0.62,0.62
10	3813	3816	3825	3816	3813	3825	3825	3825	5- 10	271.6	361.5	2.5,2.5
15	3899	3909	3914	3909	3899	3928	3914	3928	10- 15	459.1	820.6	5.68,5.68
20	4031	4034	4061	4034	4031	4061	4061	4061	15- 20	656.0	1477	10.2,10.2
25	4222	4225	4241	4225	4222	4256	4241	4256	20- 25	868.8	2345	16.2,16.2
30	4486	4478	4496	4478	4486	4510	4496	4510	25- 30	1105	3450	23.9,23.9
35	4808	4762	4730	4762	4808	4798	4730	4798	30- 35	1367	4817	33.4,33.4
40	5092	4998	4949	4998	5092	5050	4949	5050	35- 40	1637	6454	44.7,44.7
45	5095	4882	4860	4882	5095	4966	4860	4966	40- 45	1860	8314	57.6,57.6
50	4480	4404	4335	4404	4480	4445	4335	4445	45- 50	1908	10222	70.8,70.8
55	3039	3184	3168	3184	3039	3035	3168	3035	50- 55	1639	11861	82.1,82.1
60	1762	1906	1891	1906	1762	1826	1891	1826	55- 60	1130	12992	90,90
65	1084	1131	1199	1131	1084	1123	1199	1123	60- 65	713.9	13706	94.9,94.9
70	455.1	555.1	506.8	555.1	455.1	570.4	506.8	570.4	65- 70	416.7	14122	97.8,97.8
75	79.83	147.8	381.1	147.8	79.83	145.5	381.1	145.5	70- 75	167.0	14289	99,99
80	45.91	69.29	255.4	69.29	45.91	68.87	255.4	68.87	75- 80	83.60	14373	99.5,99.5
85	10.65	35.51	129.7	35.51	10.65	35.72	129.7	35.72	80- 85	49.29	14422	99.9,99.9
90	3.959	4.093	3.936	4.093	3.959	4.262	3.936	4.262	85- 90	17.66	14440	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): 8314.3 lm

%lum = 57.6%

%lamp = 57.6%

Conical surface Flux(120deg): 12992 lm

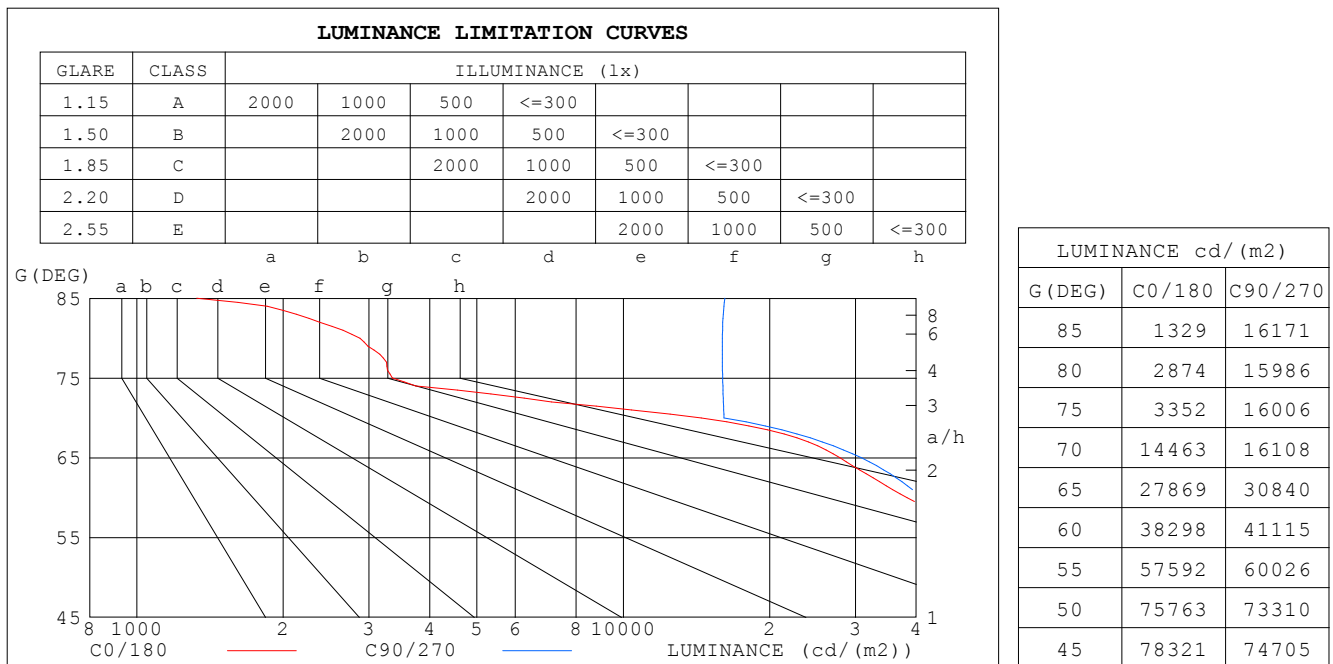
%lum = 90.0%

%lamp = 90.0%

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

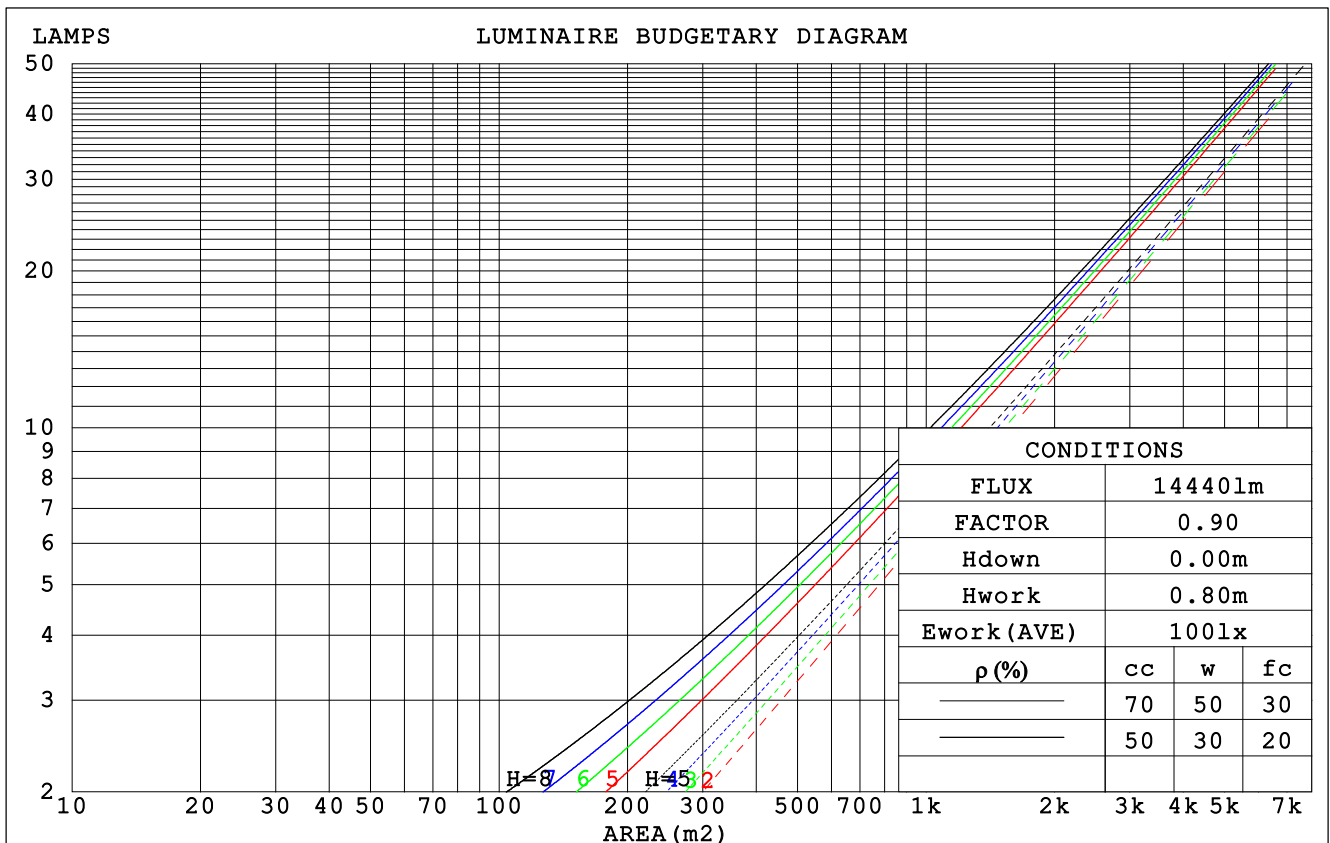


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-09-26

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

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	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	1.06	1.02	.99	1.04	1.00	.97	.00	.97	.94	.96	.94	.92	.92	.90	.89	.87
2.0	.93	.87	.82	.92	.86	.81	.88	.83	.79	.85	.81	.77	.82	.79	.76	.74
3.0	.82	.75	.69	.81	.74	.68	.78	.72	.67	.75	.70	.66	.73	.68	.65	.63
4.0	.73	.65	.58	.72	.64	.58	.69	.62	.57	.67	.61	.56	.65	.60	.55	.53
5.0	.65	.56	.50	.64	.56	.49	.62	.54	.49	.60	.53	.48	.58	.52	.48	.46
6.0	.58	.49	.43	.57	.49	.43	.55	.48	.42	.54	.47	.42	.52	.46	.42	.40
7.0	.52	.43	.37	.51	.43	.37	.50	.42	.37	.48	.42	.37	.47	.41	.36	.34
8.0	.47	.39	.33	.47	.38	.33	.45	.38	.33	.44	.37	.32	.43	.37	.32	.30
9.0	.43	.35	.29	.42	.34	.29	.41	.34	.29	.40	.34	.29	.39	.33	.29	.27
10.0	.39	.31	.26	.39	.31	.26	.38	.31	.26	.37	.30	.26	.36	.30	.26	.24



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	.267	.152	.048	.260	.148	.047	.247	.142	.045	.235	.136	.044	.224	.130	.042	
2.0	.262	.144	.044	.256	.141	.043	.245	.136	.042	.234	.131	.041	.225	.127	.040	
3.0	.250	.133	.040	.245	.131	.039	.235	.127	.039	.226	.124	.038	.217	.120	.037	
4.0	.236	.123	.036	.232	.121	.036	.223	.118	.035	.214	.115	.035	.206	.112	.034	
5.0	.222	.113	.033	.218	.112	.033	.210	.109	.032	.203	.107	.032	.196	.104	.031	
6.0	.209	.105	.030	.205	.104	.030	.198	.101	.029	.191	.099	.029	.185	.097	.029	
7.0	.196	.097	.027	.193	.096	.027	.186	.094	.027	.180	.092	.027	.175	.091	.027	
8.0	.184	.090	.025	.181	.089	.025	.176	.088	.025	.170	.086	.025	.165	.085	.025	
9.0	.174	.084	.023	.171	.083	.023	.166	.082	.023	.161	.081	.023	.156	.079	.023	
10.0	.164	.079	.022	.162	.078	.022	.157	.077	.022	.152	.076	.022	.148	.075	.021	

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	.177	.157	.138	.152	.134	.119	.104	.092	.082	.060	.053	.048	.019	.017	.015	
2.0	.168	.132	.102	.144	.114	.088	.099	.079	.061	.057	.046	.036	.018	.015	.012	
3.0	.161	.114	.077	.138	.098	.067	.095	.068	.047	.055	.040	.028	.018	.013	.009	
4.0	.154	.101	.060	.132	.087	.052	.091	.061	.037	.052	.036	.022	.017	.012	.007	
5.0	.147	.090	.048	.126	.078	.042	.087	.055	.030	.050	.032	.018	.016	.010	.006	
6.0	.141	.082	.040	.121	.071	.035	.083	.050	.025	.048	.029	.015	.016	.010	.005	
7.0	.134	.075	.034	.116	.065	.029	.080	.046	.021	.046	.027	.012	.015	.009	.004	
8.0	.128	.069	.029	.111	.060	.025	.076	.042	.018	.045	.025	.011	.014	.008	.004	
9.0	.123	.065	.025	.106	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.022	.101	.052	.020	.070	.037	.014	.041	.022	.008	.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	27.2	28.7	27.5	28.9	29.1	27.3	28.8	27.6	29.0	29.2
3H	27.4	28.7	27.7	28.9	29.2	27.5	28.9	27.8	29.1	29.3
4H	27.3	28.5	27.6	28.8	29.0	27.5	28.8	27.8	29.1	29.3
6H	27.2	28.4	27.5	28.6	28.9	27.6	28.8	27.9	29.0	29.3
8H	27.1	28.3	27.5	28.5	28.8	27.6	28.7	27.9	29.0	29.3
12H	27.1	28.2	27.4	28.5	28.8	27.6	28.7	27.9	29.0	29.3
4H 2H	27.4	28.6	27.7	28.9	29.1	27.4	28.7	27.7	29.0	29.2
3H	27.6	28.7	27.9	28.9	29.2	27.7	28.8	28.1	29.1	29.4
4H	27.5	28.5	27.8	28.8	29.1	27.8	28.8	28.1	29.1	29.4
6H	27.4	28.3	27.8	28.6	29.0	27.9	28.7	28.3	29.1	29.4
8H	27.4	28.2	27.8	28.5	28.9	27.9	28.7	28.3	29.1	29.5
12H	27.3	28.1	27.7	28.4	28.8	27.9	28.7	28.4	29.1	29.5
8H 4H	27.4	28.2	27.8	28.6	28.9	27.7	28.5	28.1	28.8	29.2
6H	27.3	28.0	27.8	28.4	28.8	27.8	28.5	28.2	28.9	29.3
8H	27.3	27.9	27.7	28.3	28.7	27.9	28.5	28.4	28.9	29.3
12H	27.3	27.8	27.7	28.2	28.7	28.0	28.5	28.5	28.9	29.4
12H 4H	27.4	28.1	27.8	28.5	28.9	27.6	28.4	28.1	28.7	29.2
6H	27.3	27.9	27.7	28.3	28.7	27.8	28.4	28.2	28.8	29.2
8H	27.3	27.8	27.7	28.2	28.7	27.9	28.4	28.3	28.8	29.3
Variations with the observer position at spacings:										
S = 1.0H	+ 0.7 / - 0.8					+ 0.4 / - 0.5				
1.5H	+ 0.6 / - 1.7					+ 0.6 / - 1.4				
2.0H	+ 1.9 / - 2.4					+ 1.5 / - 2.2				

CIE Pub.117 Corrected 14440 lm Total Lamp Luminous Flux.(8log(F/F0) = 9.3)

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:

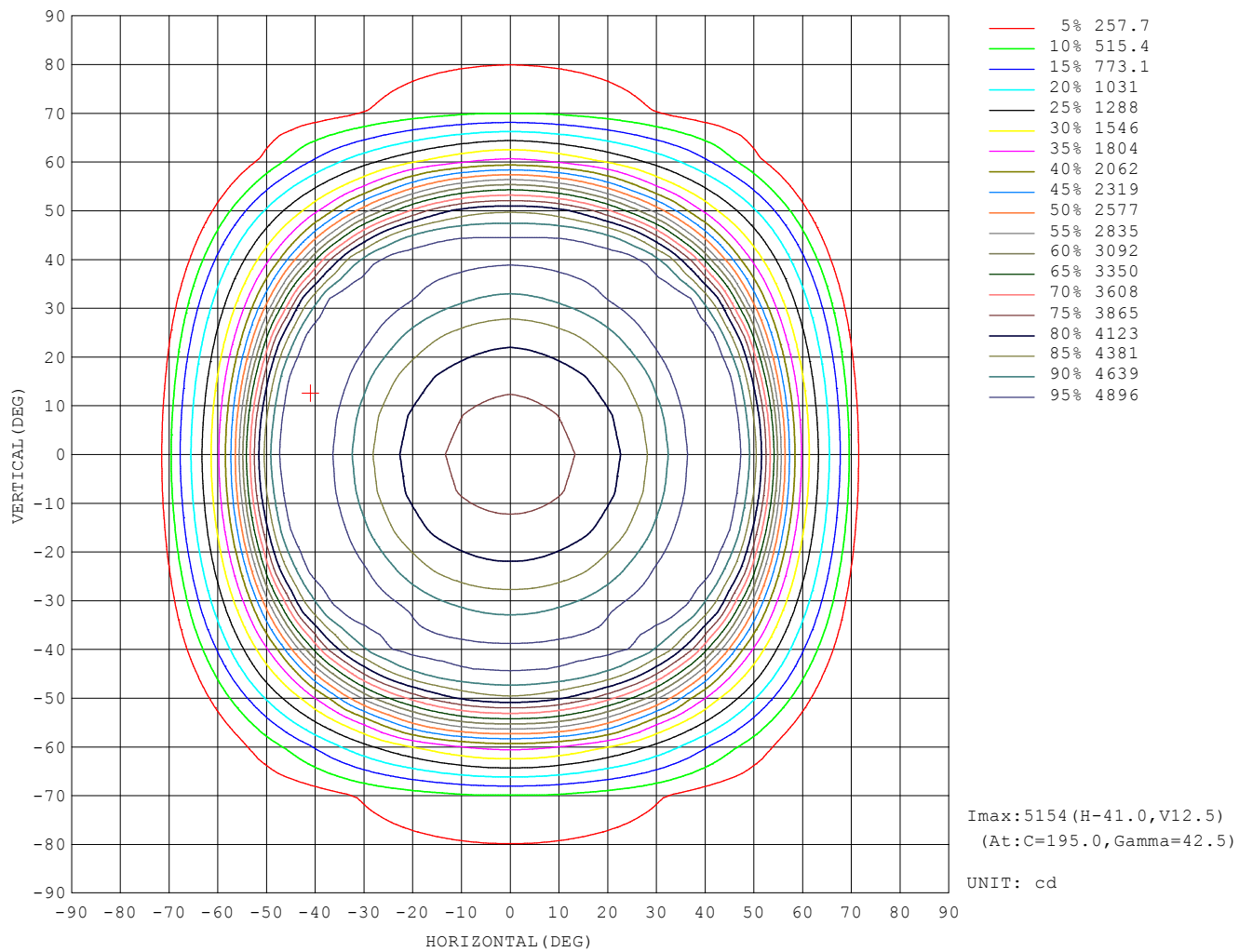
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	56	44	37	55	44	37	54	43	37	30
0.80	68	56	49	67	56	49	65	55	48	41
1.00	78	67	60	77	67	60	74	68	59	52
1.25	86	76	69	84	75	69	82	74	68	61
1.50	91	82	75	89	81	75	86	79	74	66
2.00	98	90	84	96	89	84	93	87	82	75
2.50	101	94	89	99	93	88	96	90	86	78
3.00	104	98	93	102	97	92	98	94	90	82
4.00	108	103	98	105	101	97	101	98	94	86
5.00	110	105	102	107	103	100	103	100	97	88
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:

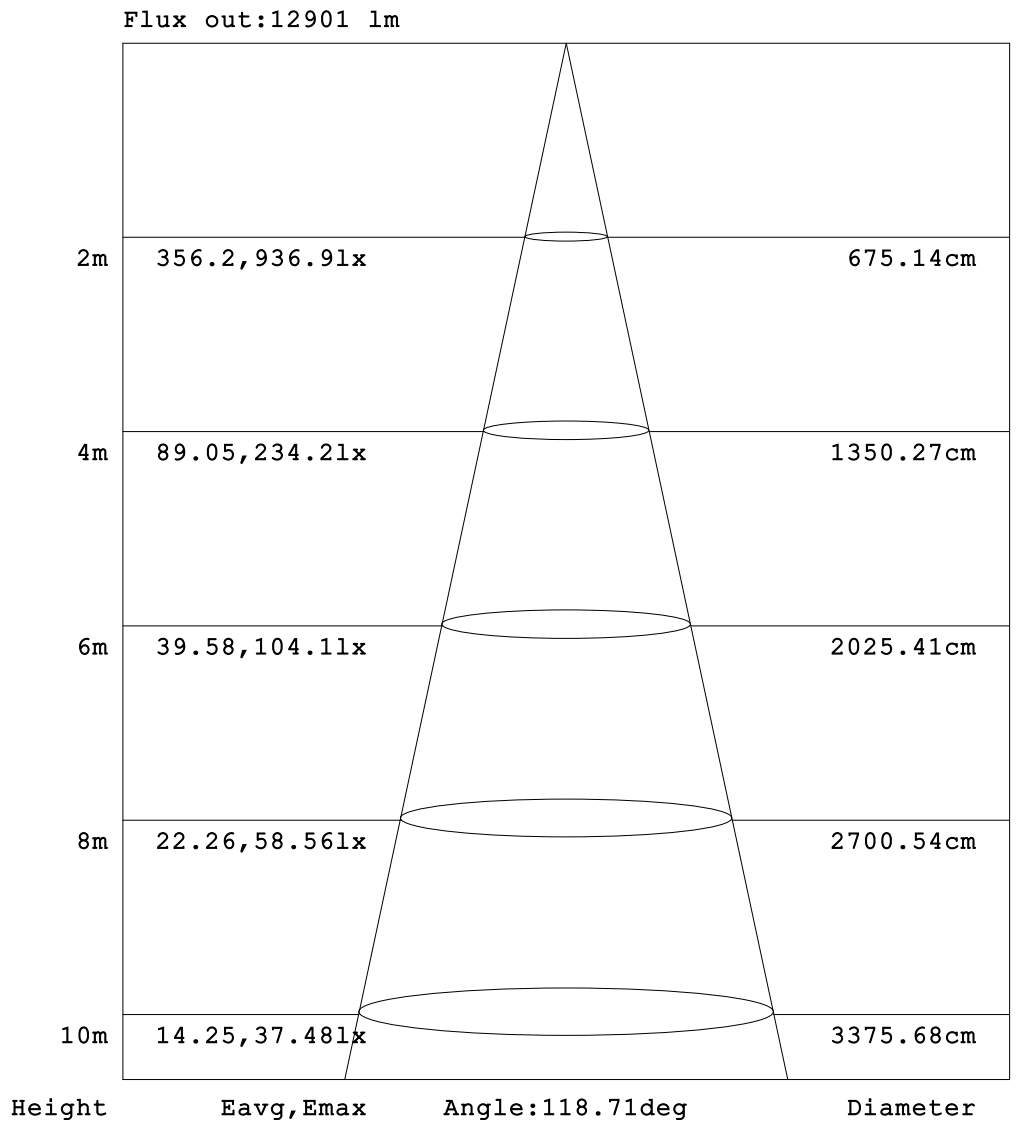
ISOCANDELA DIAGRAM



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

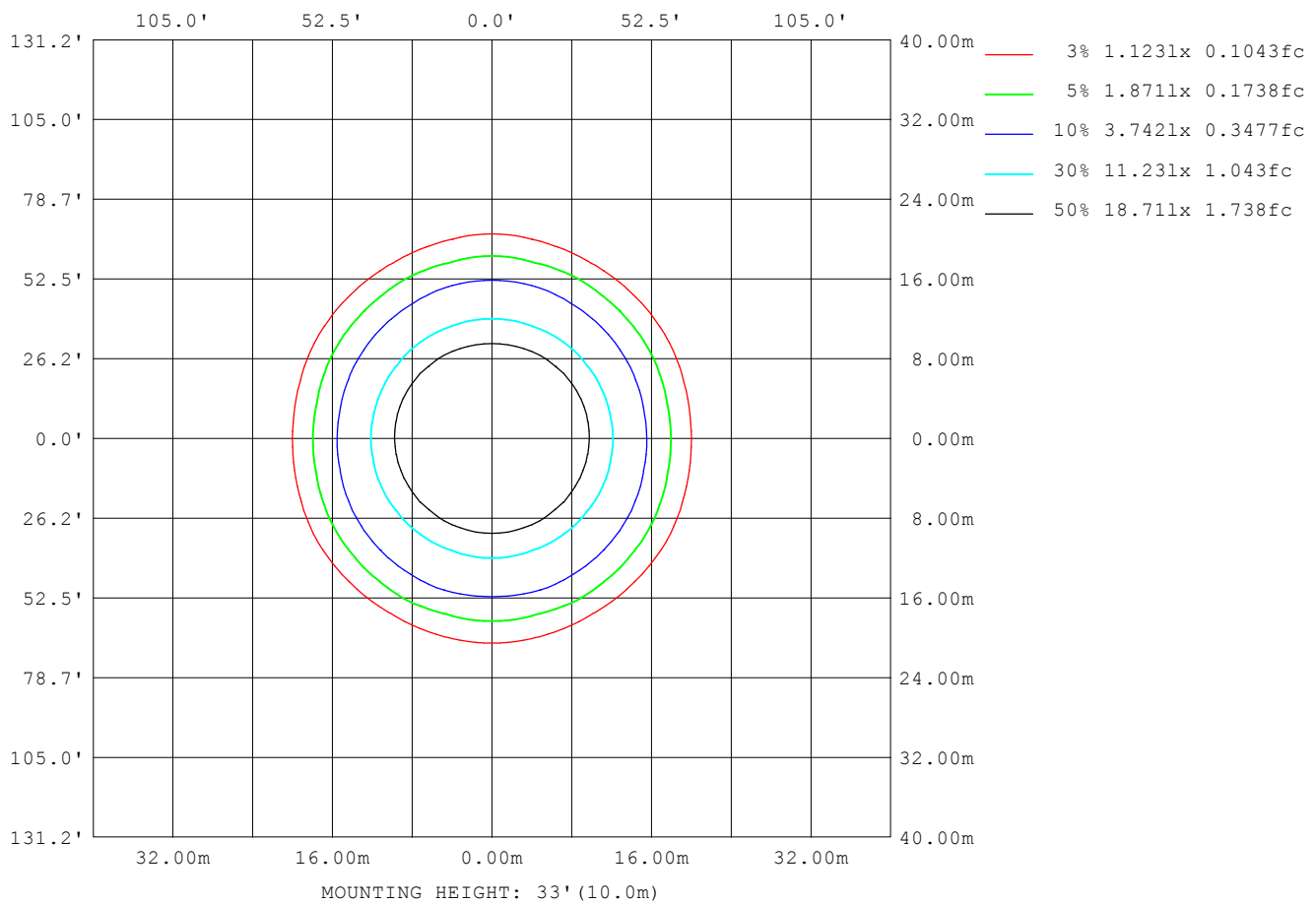


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:230.1V I:0.4063A P:89.96W PF:0.9625 Lamp Flux:14440x1 lm		
NAME: LHB01-90H	TYPE:90W	WEIGHT:
SPEC.:5000K Ra70 L06403	DIM.: 0.718*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.7*0.1	Shielding Angle:

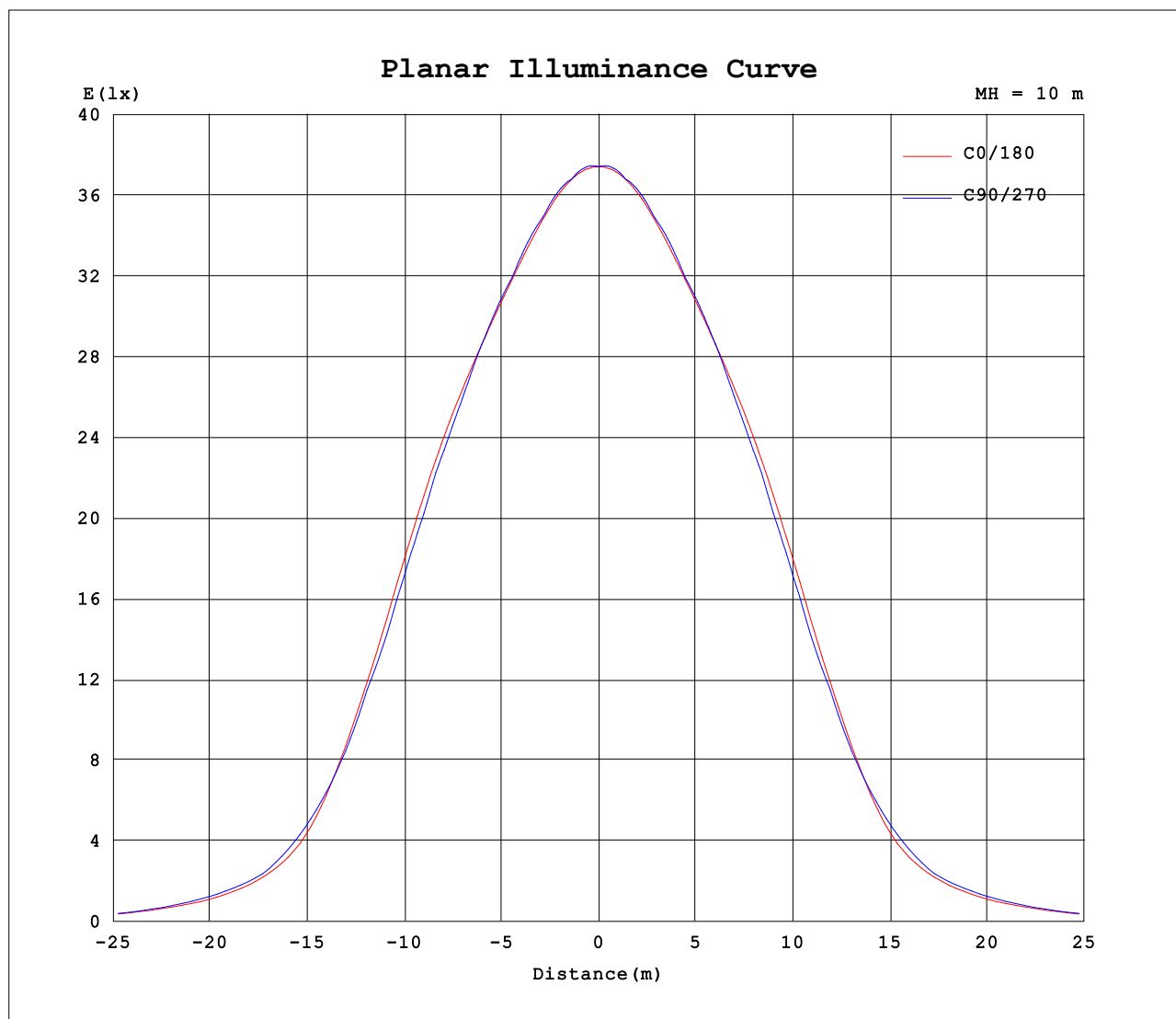
AvgL	cd/m2
L_0~180 (65) av	27869
L_0~180 (75) av	3352
L_0~180 (85) av	1329
L_90~270 (65) av	30840
L_90~270 (75) av	16006
L_90~270 (85) av	16171
L_45 (65) av	28983
L_45 (75) av	6159
L_45 (85) av	4441

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:

```

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:

```

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:

```