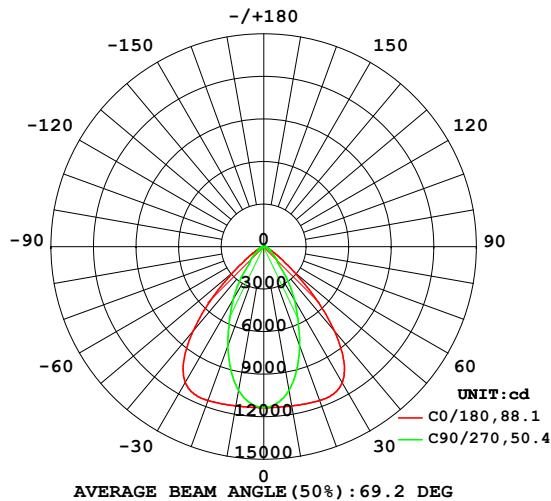


LUMINAIRE PHOTOMETRIC TEST REPORT

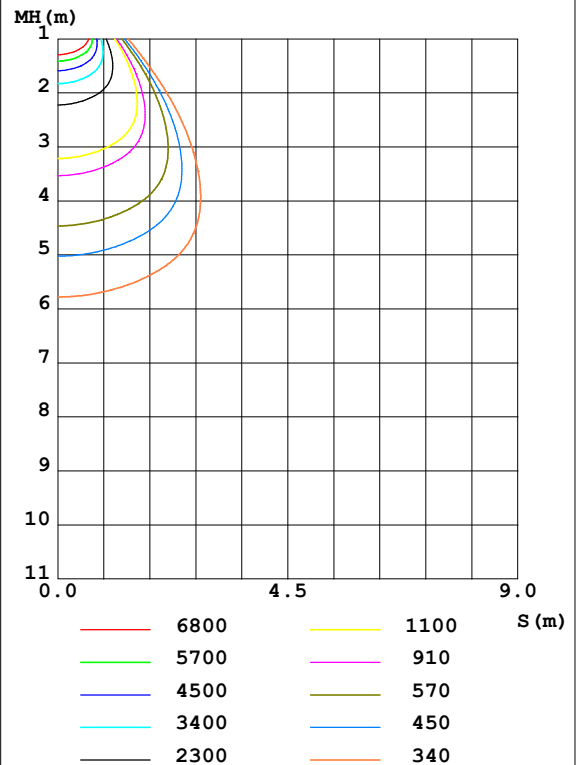
Test:U:230.0V I:0.4081A P:90.49W PF:0.9638 Lamp Flux:14497x1 lm		
NAME: LHB01-90H	TYPE:90W	WEIGHT:
SPEC.:5000K Ra70 5090DEG L06402	DIM.: 0.718*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.7*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 160.21 lm/W			
MODEL	LHB01-90H	I _{max} (cd)	11558	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)	14497	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	14497	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.0
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	1136	1121	1107	1121	1136	1122	1107	1122	0- 5	269.6	269.6	1.86,1.86
10	1140	1079	1029	1079	1140	1081	1029	1081	5- 10	788.2	1058	7.3,7.3
15	1147	1010	900.3	1010	1147	1011	900.3	1011	10- 15	1245	2303	15.9,15.9
20	1154	907.8	741.5	907.8	1154	906.8	741.5	906.8	15- 20	1601	3904	26.9,26.9
25	1151	770.8	573.4	770.8	1151	768.0	573.4	768.0	20- 25	1826	5730	39.5,39.5
30	1107	603.9	434.8	603.9	1107	600.1	434.8	600.1	25- 30	1899	7629	52.6,52.6
35	984.7	442.7	300.1	442.7	984.7	439.8	300.1	439.8	30- 35	1814	9442	65.1,65.1
40	774.3	325.8	165.5	325.8	774.3	323.7	165.5	323.7	35- 40	1556	10999	75.9,75.9
45	517.9	214.8	128.3	214.8	517.9	213.7	128.3	213.7	40- 45	1188	12186	84.1,84.1
50	283.0	113.7	91.15	113.7	283.0	113.7	91.15	113.7	45- 50	829.3	13016	89.8,89.8
55	145.0	84.25	56.70	84.25	145.0	83.97	56.70	83.97	50- 55	530.4	13546	93.4,93.4
60	72.89	56.77	43.81	56.77	72.89	56.19	43.81	56.19	55- 60	335.6	13882	95.8,95.8
65	39.72	35.45	33.61	35.45	39.72	34.71	33.61	34.71	60- 65	224.0	14106	97.3,97.3
70	25.13	25.55	23.42	25.55	25.13	25.06	23.42	25.06	65- 70	156.0	14262	98.4,98.4
75	13.81	15.98	17.70	15.98	13.81	15.78	17.70	15.78	70- 75	107.8	14369	99.1,99.1
80	6.300	10.41	11.97	10.41	6.300	10.32	11.97	10.32	75- 80	71.19	14441	99.6,99.6
85	0.3983	5.444	6.252	5.444	0.3983	5.434	6.252	5.434	80- 85	41.18	14482	99.9,99.9
90	0.2219	0.5472	0.5288	0.5472	0.2219	0.6158	0.5288	0.6158	85- 90	15.20	14497	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): 12186 lm

%lum = 84.1%

%lamp = 84.1%

Conical surface Flux(120deg): 13882 lm

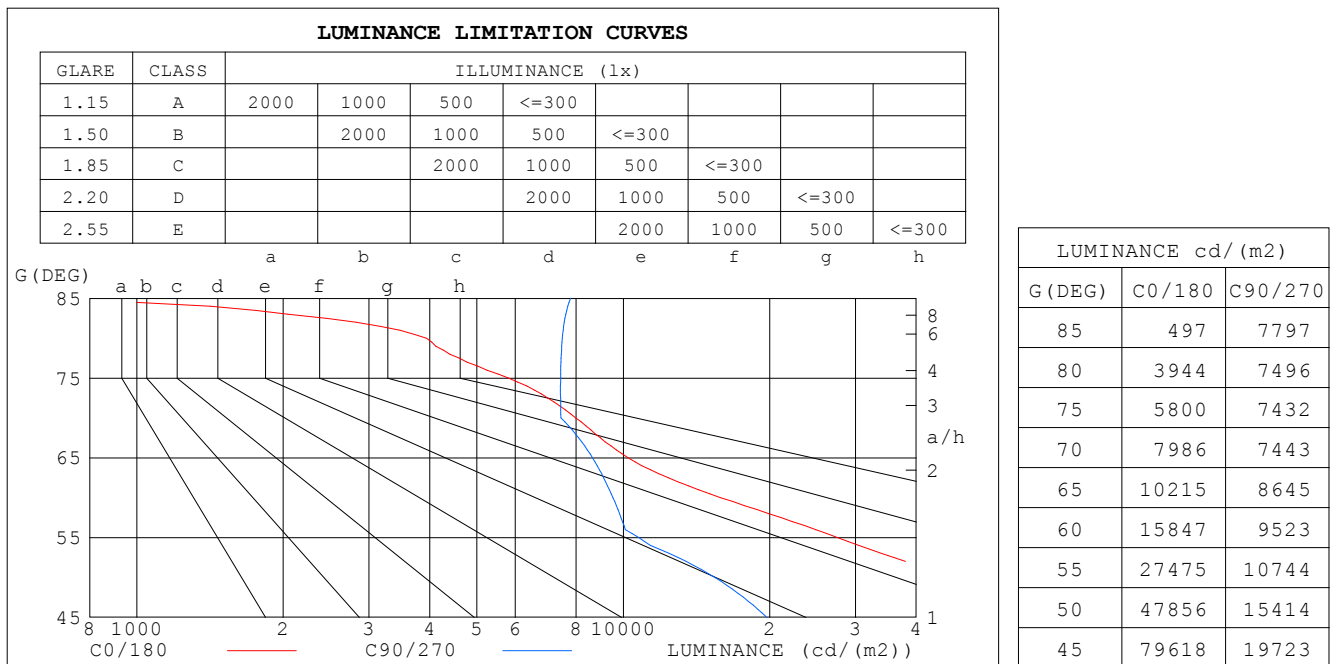
%lum = 95.8%

%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

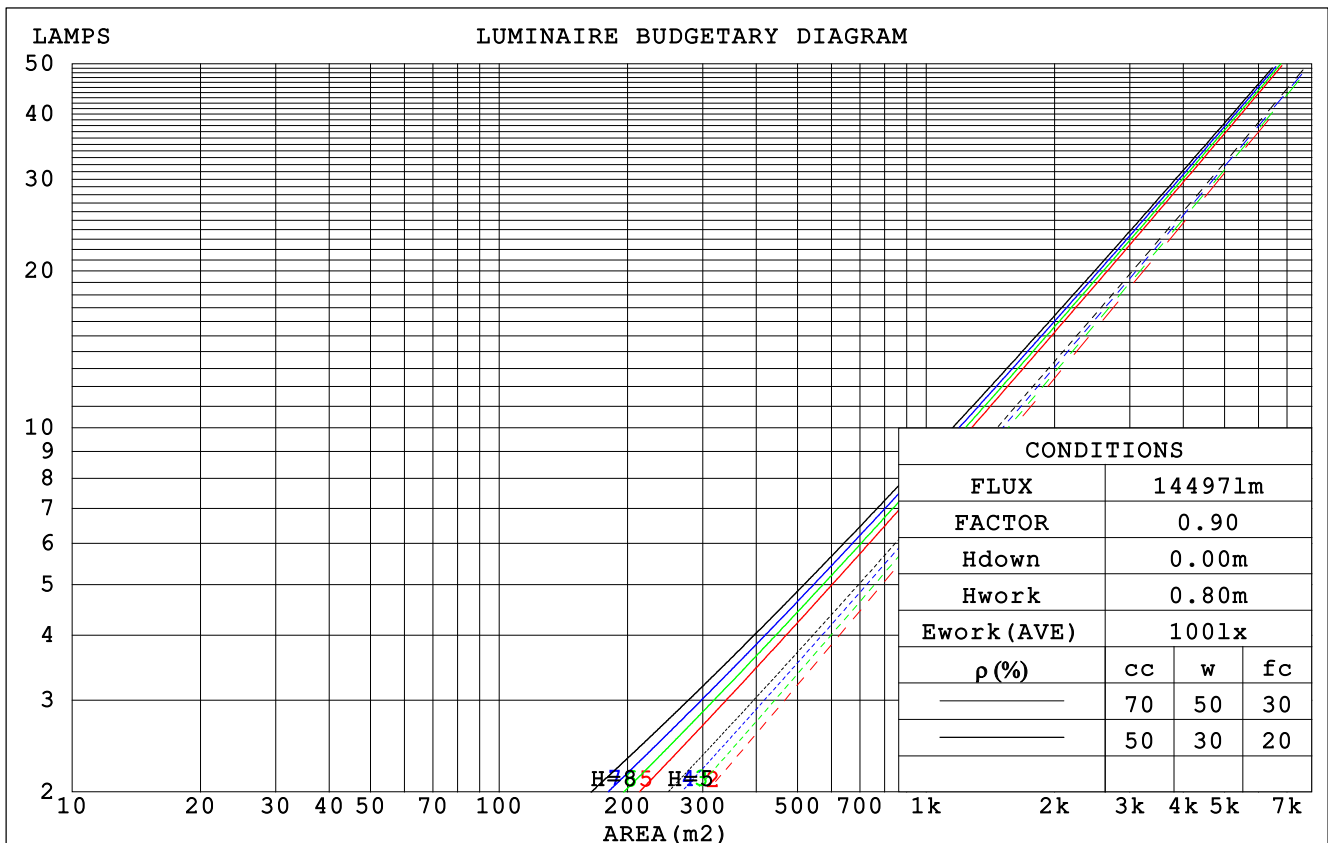


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-06-05

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	1.00
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	.90	.84	.80	.87	.82	.78	.84	.80	.77	.82	.79	.76	.74
4.0	.84	.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	.53	.49	.47
9.0	.57	.51	.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	.037	.194	.111	.036	.182	.105	.034	.172	.099	.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	.172	.094	.029	.164	.091	.028	
4.0	.185	.096	.028	.181	.095	.028	.173	.092	.027	.165	.089	.027	.158	.086	.026	
5.0	.176	.089	.026	.172	.088	.026	.165	.086	.025	.158	.083	.025	.151	.081	.024	
6.0	.166	.083	.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	.147	.073	.021	.142	.071	.020	.137	.070	.020	.133	.068	.020	
9.0	.143	.069	.019	.140	.068	.019	.136	.067	.019	.131	.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	.079	.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	24.4	25.6	24.7	25.8	25.9	18.8	19.9	19.0	20.1	20.3
3H	24.4	25.5	24.7	25.7	25.9	19.2	20.3	19.5	20.5	20.7
4H	24.4	25.4	24.7	25.6	25.8	19.4	20.4	19.7	20.6	20.9
6H	24.3	25.2	24.6	25.5	25.8	19.6	20.6	19.9	20.8	21.1
8H	24.3	25.2	24.6	25.4	25.7	19.7	20.6	20.0	20.9	21.2
12H	24.2	25.1	24.6	25.4	25.6	19.8	20.7	20.1	20.9	21.2
4H 2H	24.2	25.2	24.5	25.5	25.7	19.0	20.0	19.3	20.3	20.5
3H	24.3	25.1	24.6	25.4	25.7	19.6	20.4	19.9	20.7	21.0
4H	24.3	25.1	24.7	25.4	25.7	19.9	20.7	20.3	21.0	21.3
6H	24.3	25.0	24.7	25.3	25.6	20.2	20.9	20.6	21.3	21.6
8H	24.2	24.9	24.6	25.2	25.6	20.4	21.0	20.8	21.4	21.7
12H	24.2	24.8	24.6	25.2	25.6	20.5	21.1	20.9	21.5	21.9
8H 4H	24.2	24.8	24.6	25.2	25.6	20.0	20.6	20.4	21.0	21.3
6H	24.2	24.7	24.7	25.1	25.6	20.4	20.9	20.8	21.3	21.7
8H	24.2	24.7	24.7	25.1	25.5	20.6	21.1	21.1	21.5	22.0
12H	24.2	24.6	24.7	25.0	25.5	20.8	21.2	21.3	21.7	22.2
12H 4H	24.2	24.8	24.6	25.1	25.5	20.0	20.5	20.4	20.9	21.3
6H	24.2	24.7	24.7	25.1	25.5	20.4	20.9	20.9	21.3	21.7
8H	24.2	24.6	24.7	25.0	25.5	20.7	21.1	21.2	21.5	22.0
Variations with the observer position at spacings:										
S = 1.0H	+ 2.7 / - 3.2					+ 1.0 / - 1.3				
1.5H	+ 3.6 / - 3.8					+ 1.0 / - 1.0				
2.0H	+ 5.5 / - 3.9					+ 1.2 / - 0.9				

CIE Pub.117 Corrected 14497 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:2017-06-05

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:

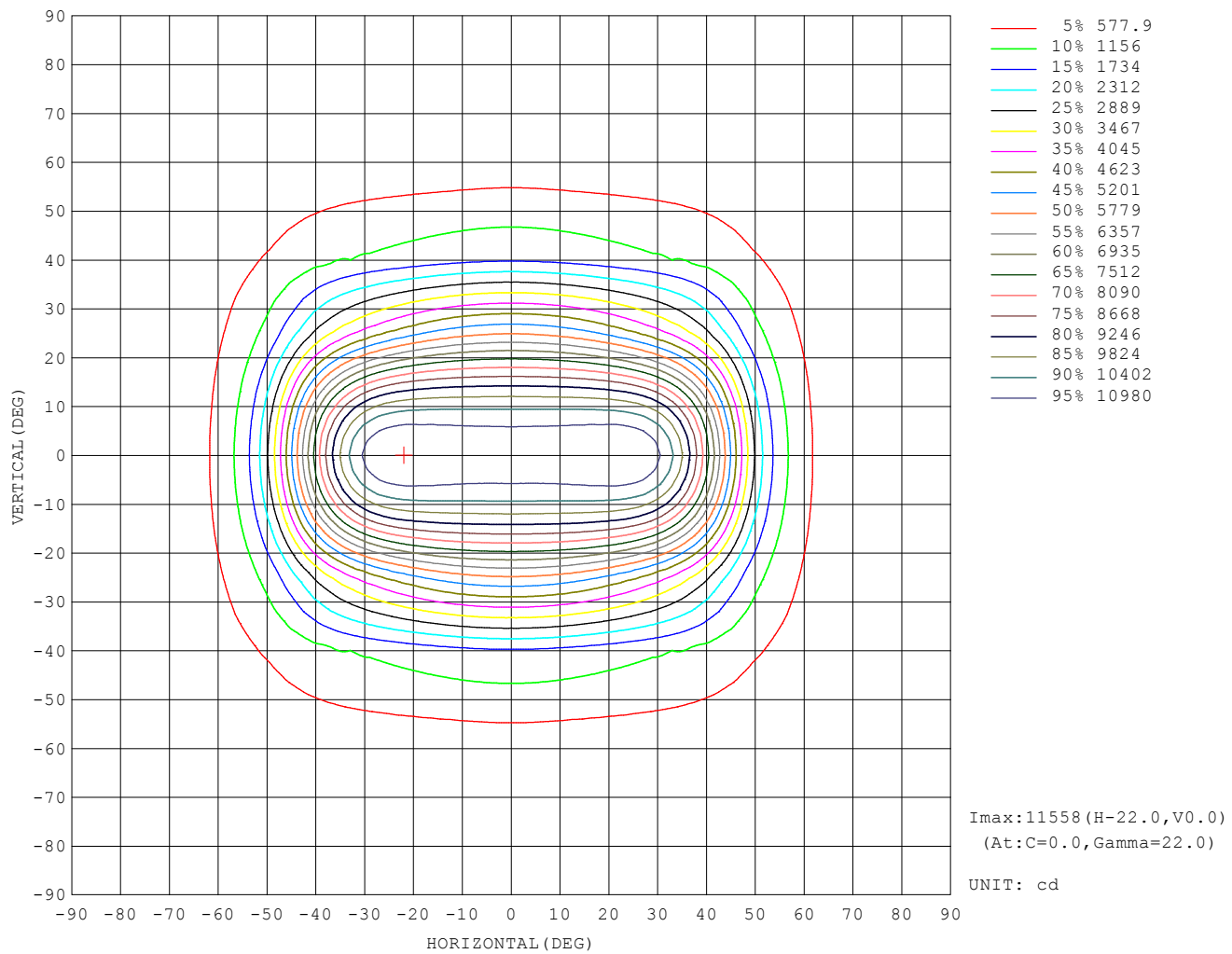
UTILIZATION FACTORS TABLE

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	86	96	90	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:

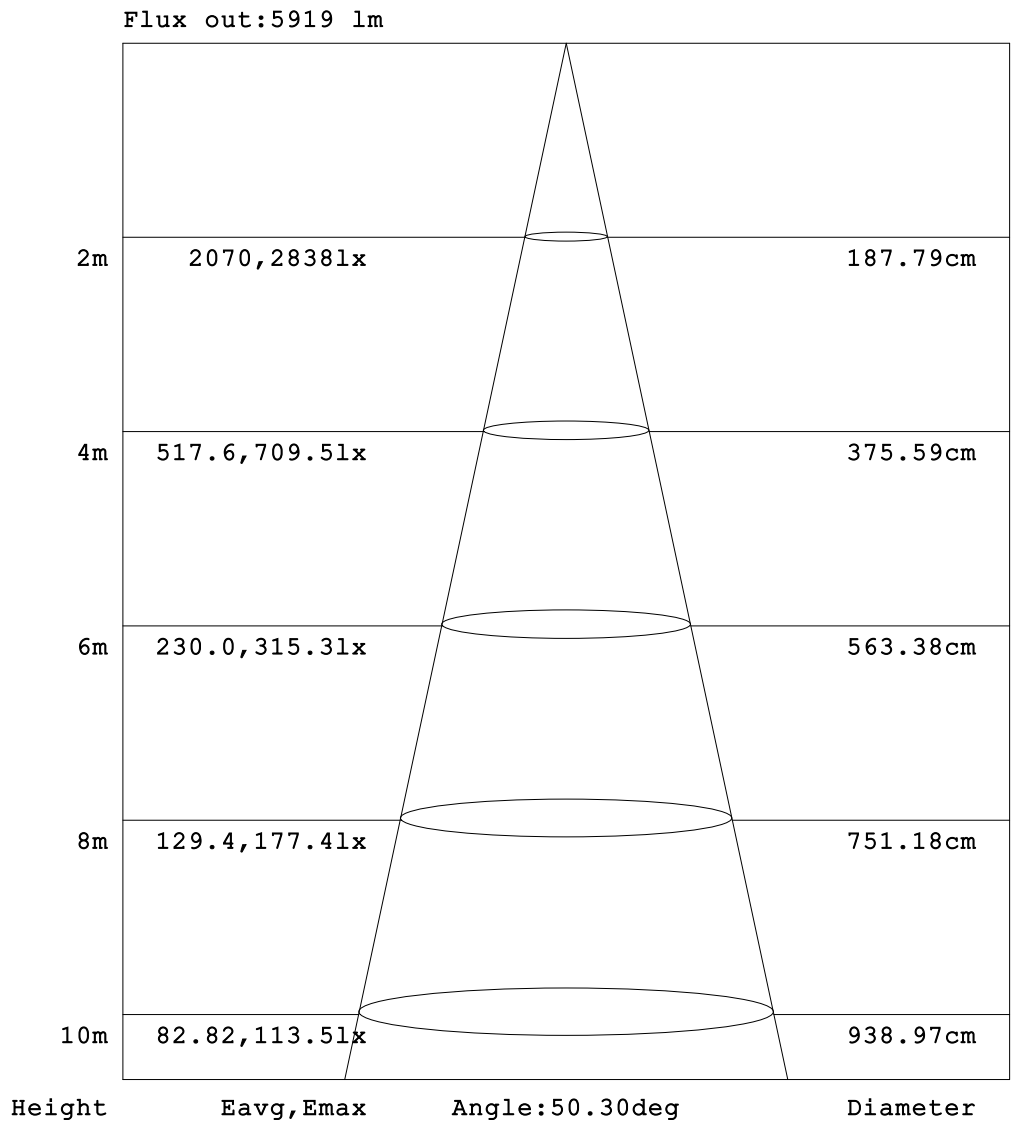
ISOCANDELA DIAGRAM



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

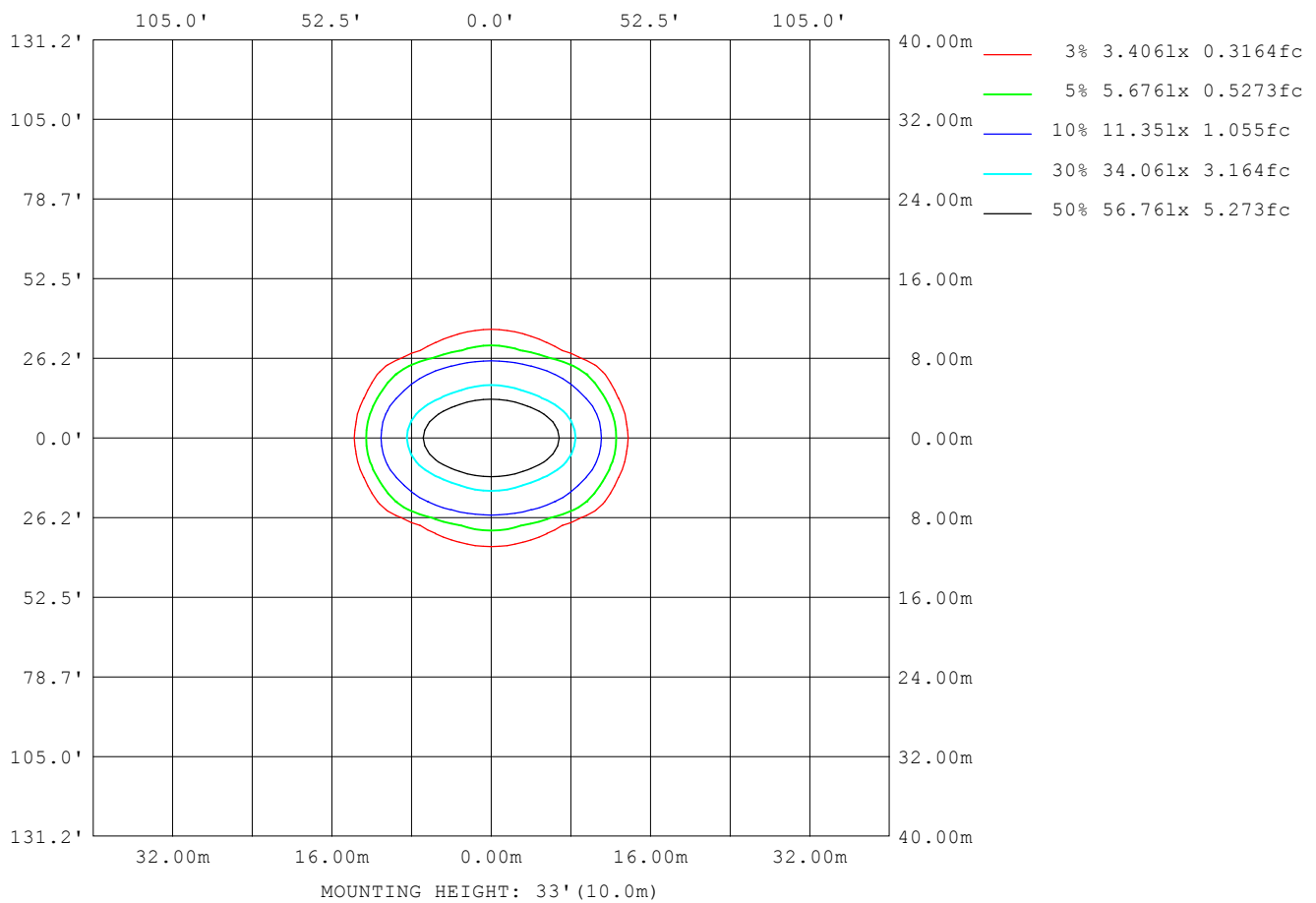


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.4081A P:90.49W PF:0.9638 Lamp Flux:14497x1 lm		
NAME: LHB01-90H	TYPE:90W	WEIGHT:
SPEC.:5000K Ra70 5090DEG L06402	DIM.: 0.718*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.7*0.1	Shielding Angle:

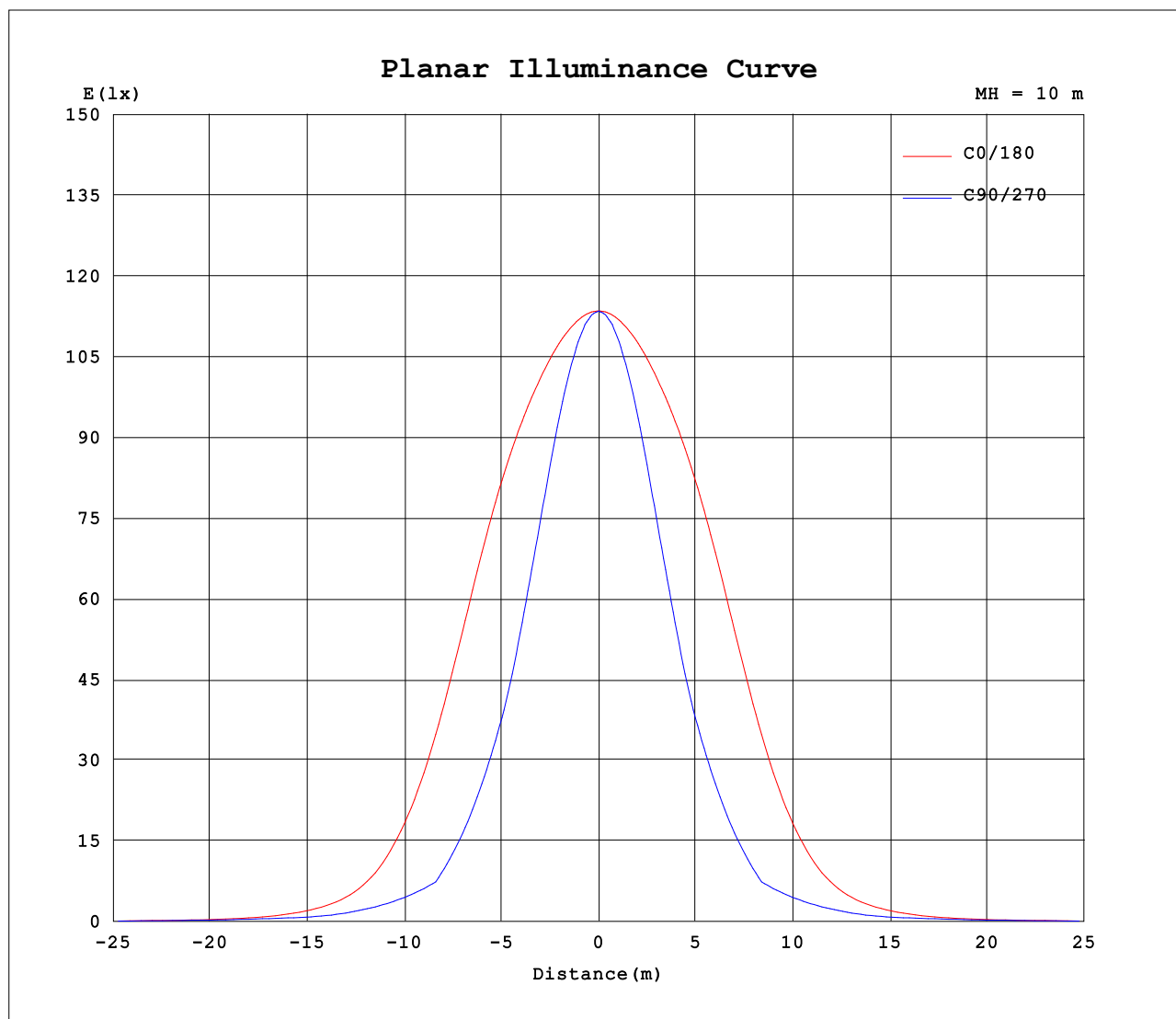
AvgL	cd/m2
L_0~180 (65) av	10215
L_0~180 (75) av	5800
L_0~180 (85) av	497
L_90~270 (65) av	8645
L_90~270 (75) av	7432
L_90~270 (85) av	7797
L_45 (65) av	9022
L_45 (75) av	6668
L_45 (85) av	6783

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:

```

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:

```