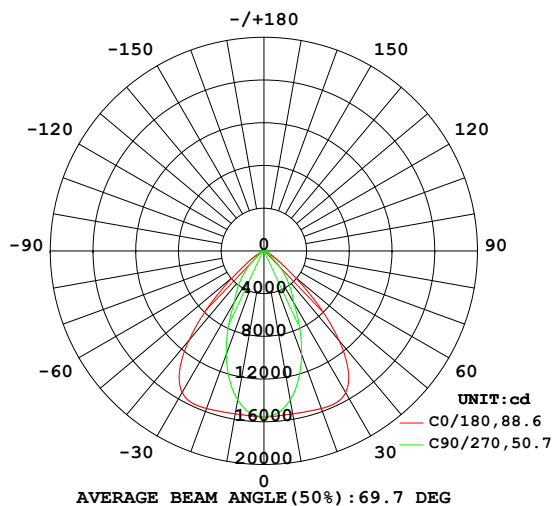


LUMINAIRE PHOTOMETRIC TEST REPORT

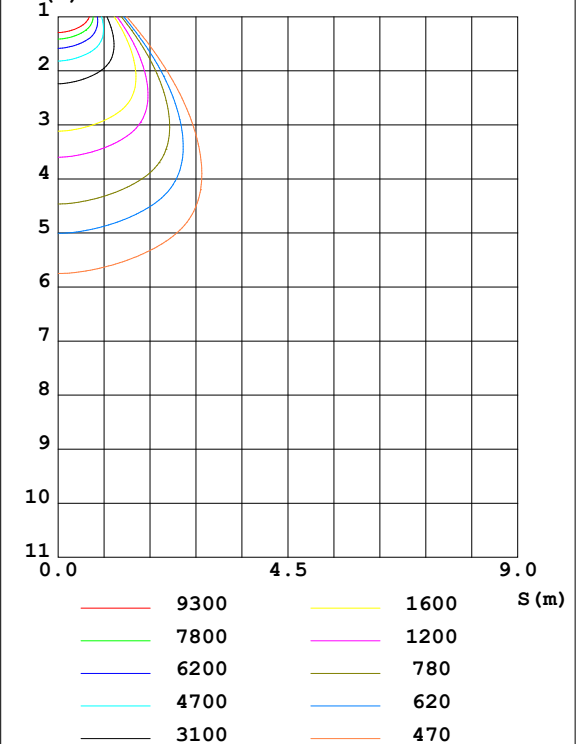
Test:U:230.0V I:0.5388A P:120.3W PF:0.9710 Lamp Flux:19741.5x1 lm		
NAME: LHB01-120	TYPE:120W	WEIGHT:
SPEC.:5000K Ra70 5090DEG L06402	DIM.: 0.948*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.92*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 164.10 lm/W			
MODEL	LHB01-120	I _{max} (cd)	15767	S/MH (C0/180)	1.28
NOMINAL POWER(W)	120	LOR(%)	100.0	S/MH (C90/270)	0.79
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	19742	η UP,DN (C0-180)	0.0,50.0
NOMINAL FLUX(lm)	19741.5	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:2017-05-05

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	1549	1530	1519	1530	1549	1533	1519	1533	0- 5	368.6	368.6	1.87,1.87
10	1549	1475	1417	1475	1549	1480	1417	1480	5- 10	1078	1446	7.33,7.33
15	1557	1385	1247	1385	1557	1387	1247	1387	10- 15	1704	3151	16,16
20	1570	1248	1033	1248	1570	1248	1033	1248	15- 20	2198	5349	27.1,27.1
25	1576	1066	794.1	1066	1576	1060	794.1	1060	20- 25	2514	7862	39.8,39.8
30	1531	829.7	553.0	829.7	1531	821.0	553.0	821.0	25- 30	2600	10462	53,53
35	1379	574.4	437.0	574.4	1379	564.9	437.0	564.9	30- 35	2452	12914	65.4,65.4
40	1094	371.7	321.0	371.7	1094	363.1	321.0	363.1	35- 40	2141	15055	76.3,76.3
45	725.2	281.9	205.0	281.9	725.2	275.2	205.0	275.2	40- 45	1685	16740	84.8,84.8
50	373.2	198.6	89.06	198.6	373.2	194.3	89.06	194.3	45- 50	1142	17882	90.6,90.6
55	174.8	121.5	74.55	121.5	174.8	119.2	74.55	119.2	50- 55	669.0	18551	94,94
60	87.72	59.25	60.04	59.25	87.72	57.79	60.04	57.79	55- 60	417.3	18968	96.1,96.1
65	48.95	45.36	45.54	45.36	48.95	44.33	45.54	44.33	60- 65	279.4	19247	97.5,97.5
70	32.61	32.14	31.03	32.14	32.61	31.50	31.03	31.50	65- 70	196.3	19444	98.5,98.5
75	18.56	19.57	23.46	19.57	18.56	19.27	23.46	19.27	70- 75	135.9	19580	99.2,99.2
80	8.280	12.70	15.88	12.70	8.280	12.58	15.88	12.58	75- 80	89.98	19670	99.6,99.6
85	1.778	6.659	8.310	6.659	1.778	6.668	8.310	6.668	80- 85	52.42	19722	99.9,99.9
90	0.3021	0.6963	0.7356	0.6963	0.3021	0.8331	0.7356	0.8331	85- 90	19.52	19742	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): 16740 lm

%lum = 84.8%

%lamp = 84.8%

Conical surface Flux(120deg): 18968 lm

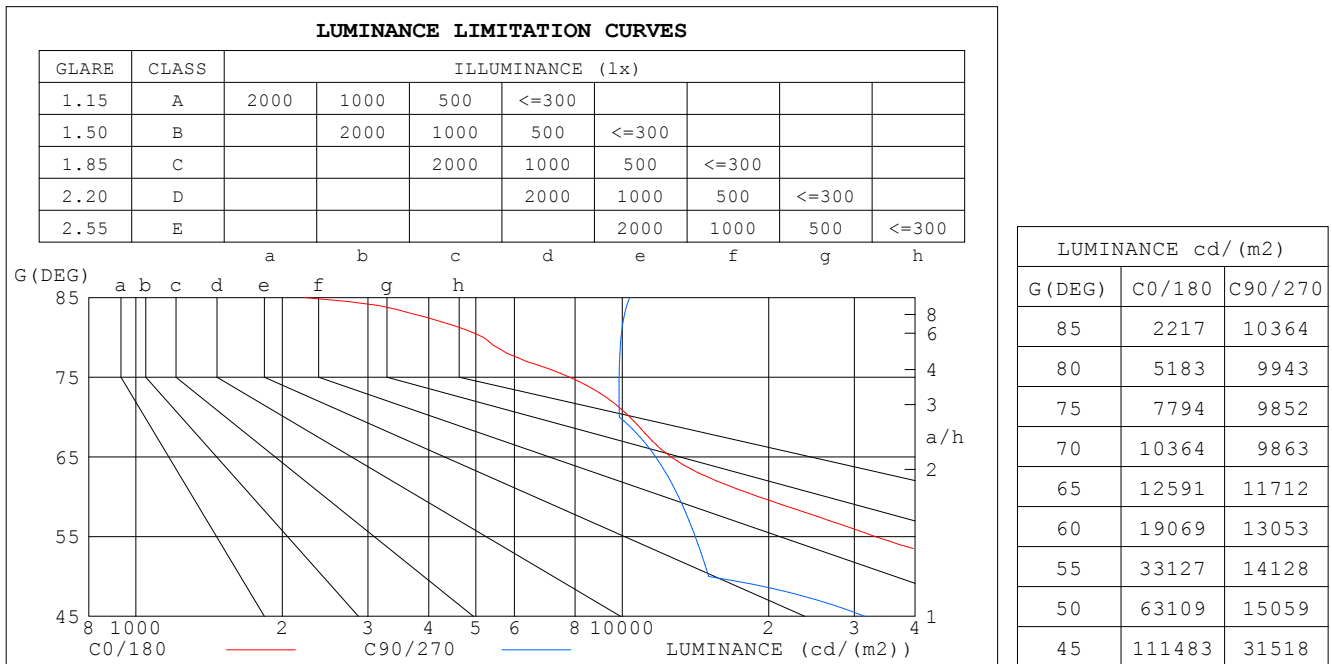
%lum = 96.1%

%lamp = 96.1%

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

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

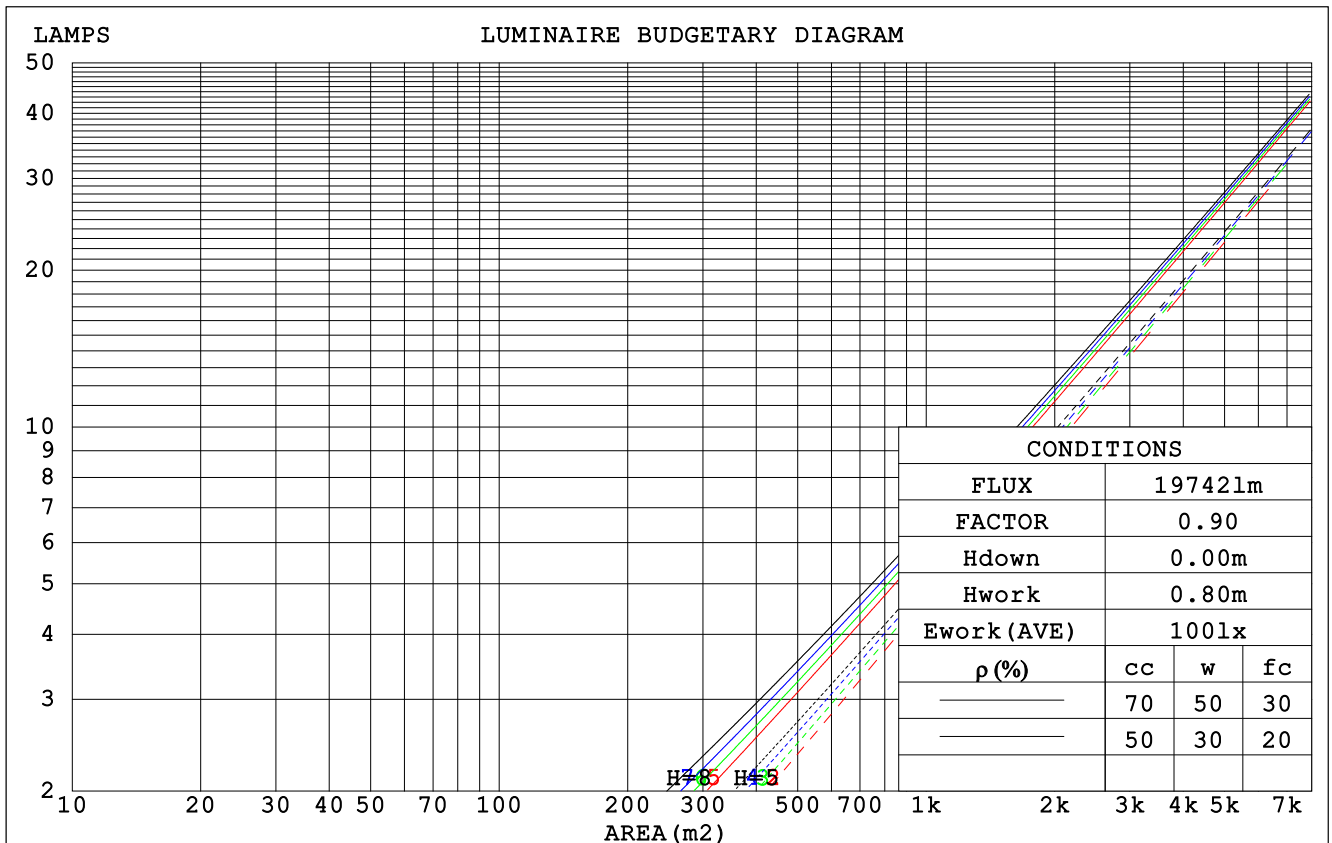


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-05-05

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
p _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
p _{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	1.00
1.0	1.09	1.06	1.03	1.07	1.04	1.02	1.03	1.01	.99	.99	.97	.96	.95	.94	.93	.91
2.0	.90	.95	.91	.98	.93	.90	.94	.91	.88	.91	.88	.86	.89	.86	.84	.82
3.0	.91	.85	.81	.90	.84	.80	.87	.82	.79	.84	.81	.77	.82	.79	.76	.74
4.0	.84	.77	.72	.83	.76	.72	.80	.75	.71	.78	.74	.70	.76	.72	.69	.67
5.0	.77	.70	.65	.76	.70	.65	.74	.69	.64	.73	.68	.64	.71	.67	.63	.61
6.0	.71	.64	.59	.71	.64	.59	.69	.63	.59	.67	.62	.58	.66	.61	.58	.56
7.0	.66	.59	.54	.65	.59	.54	.64	.58	.54	.63	.58	.54	.62	.57	.53	.52
8.0	.62	.55	.50	.61	.54	.50	.60	.54	.50	.59	.53	.49	.58	.53	.49	.48
9.0	.58	.51	.46	.57	.51	.46	.56	.50	.46	.55	.50	.46	.54	.49	.46	.44
10.0	.54	.47	.43	.53	.47	.43	.53	.47	.43	.52	.46	.43	.51	.46	.42	.41



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

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

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.212	.121	.038	.205	.117	.037	.192	.110	.035	.181	.104	.033	.170	.098	.032	
2.0	.204	.112	.034	.198	.109	.034	.187	.104	.032	.177	.100	.031	.168	.095	.030	
3.0	.194	.103	.031	.189	.101	.031	.180	.097	.030	.171	.094	.029	.163	.090	.028	
4.0	.184	.096	.028	.180	.094	.028	.172	.091	.027	.164	.088	.027	.157	.085	.026	
5.0	.175	.089	.026	.171	.088	.026	.164	.085	.025	.157	.083	.025	.150	.080	.024	
6.0	.166	.083	.024	.162	.082	.024	.156	.080	.023	.150	.078	.023	.144	.076	.023	
7.0	.157	.078	.022	.154	.077	.022	.149	.075	.022	.143	.073	.021	.138	.072	.021	
8.0	.150	.073	.021	.147	.072	.020	.142	.071	.020	.137	.069	.020	.132	.068	.020	
9.0	.142	.069	.019	.140	.068	.019	.135	.067	.019	.131	.066	.019	.127	.064	.019	
10.0	.136	.065	.018	.134	.065	.018	.129	.063	.018	.125	.062	.018	.122	.061	.018	

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						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	.148	.135	.122	.102	.093	.085	.058	.054	.049	.019	.017	.016	
2.0	.161	.132	.109	.138	.114	.094	.094	.079	.065	.054	.046	.038	.017	.015	.013	
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	.042	.048	.035	.025	.015	.011	.008	
5.0	.133	.088	.055	.114	.076	.048	.079	.053	.034	.046	.031	.020	.015	.010	.007	
6.0	.126	.079	.046	.108	.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:2017-05-05

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	25.4	26.5	25.6	26.7	26.9	19.9	21.1	20.2	21.2	21.4
3H	25.3	26.4	25.6	26.6	26.8	20.3	21.3	20.6	21.6	21.8
4H	25.3	26.3	25.6	26.5	26.7	20.5	21.5	20.8	21.7	21.9
6H	25.2	26.1	25.5	26.4	26.7	20.7	21.6	21.0	21.9	22.1
8H	25.2	26.1	25.5	26.3	26.6	20.8	21.7	21.1	21.9	22.2
12H	25.1	26.0	25.5	26.3	26.6	20.8	21.7	21.2	22.0	22.2
4H 2H	25.2	26.2	25.5	26.4	26.6	20.1	21.1	20.4	21.3	21.5
3H	25.2	26.0	25.5	26.3	26.6	20.6	21.4	20.9	21.7	22.0
4H	25.2	25.9	25.5	26.3	26.6	20.9	21.6	21.2	21.9	22.3
6H	25.1	25.8	25.5	26.2	26.5	21.2	21.9	21.6	22.2	22.6
8H	25.1	25.8	25.5	26.1	26.5	21.3	22.0	21.7	22.3	22.7
12H	25.1	25.7	25.5	26.0	26.4	21.4	22.0	21.9	22.4	22.8
8H 4H	25.1	25.7	25.5	26.1	26.4	20.9	21.5	21.3	21.9	22.3
6H	25.1	25.6	25.5	26.0	26.4	21.3	21.8	21.7	22.2	22.6
8H	25.1	25.5	25.5	26.0	26.4	21.5	22.0	22.0	22.4	22.8
12H	25.1	25.5	25.5	25.9	26.4	21.7	22.1	22.2	22.6	23.0
12H 4H	25.0	25.6	25.5	26.0	26.4	20.9	21.5	21.3	21.8	22.2
6H	25.1	25.5	25.5	25.9	26.4	21.3	21.8	21.8	22.2	22.6
8H	25.1	25.4	25.5	25.9	26.4	21.6	21.9	22.0	22.4	22.9
Variations with the observer position at spacings:										
S = 1.0H	+ 3.0 / - 3.9					+ 1.1 / - 1.6				
1.5H	+ 3.9 / - 3.9					+ 1.4 / - 2.0				
2.0H	+ 6.0 / - 4.2					+ 2.0 / - 0.9				

CIE Pub.117 Corrected 19742 lm Total Lamp Luminous Flux.(8log(F/F0) = 10.4)

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

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:

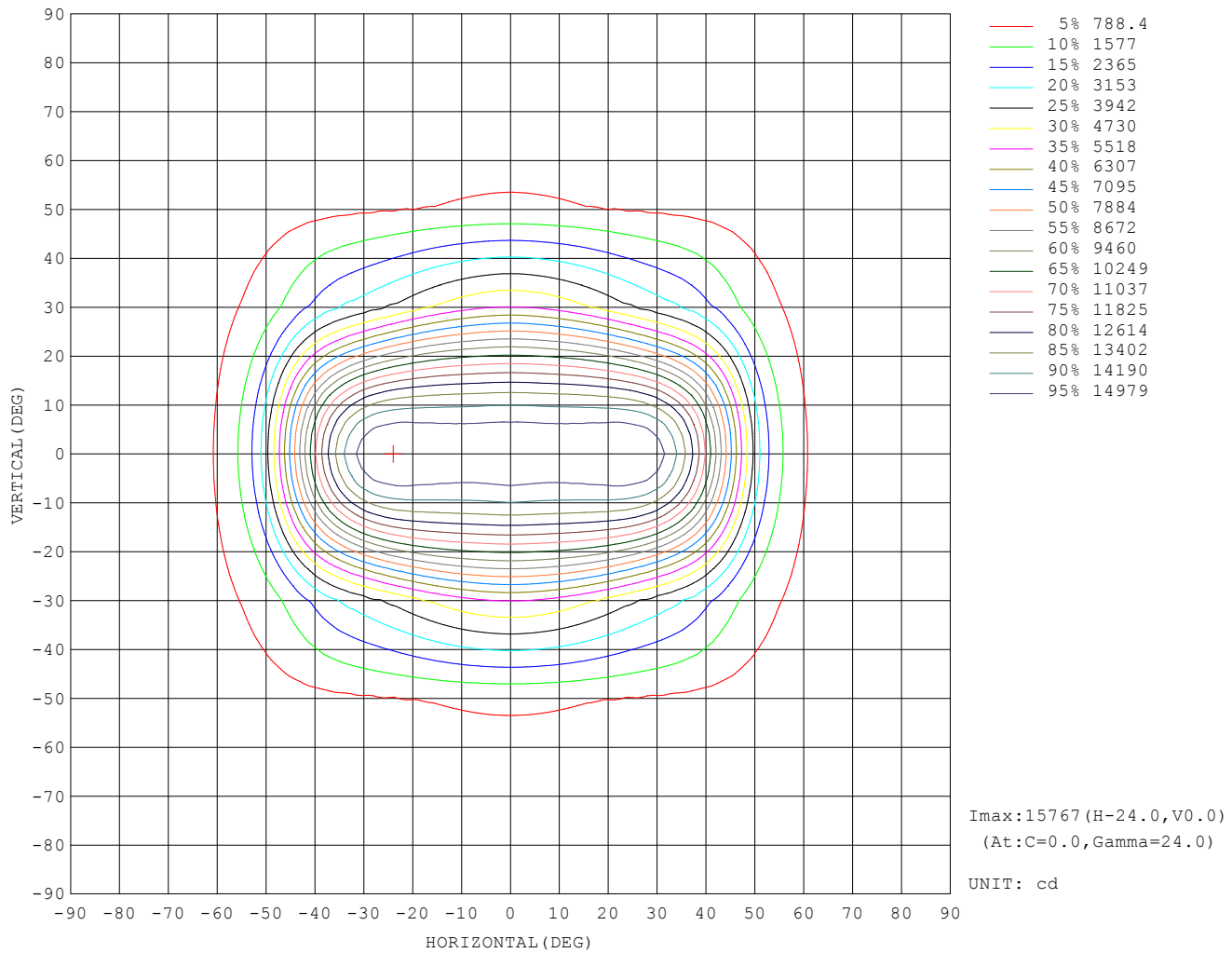
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	77	68	63	76	68	63	75	68	63	58
0.80	85	78	73	85	77	73	83	77	72	67
1.00	92	85	80	91	84	79	89	84	79	74
1.25	97	90	86	96	90	85	94	89	85	80
1.50	101	94	90	99	94	90	97	92	88	83
2.00	105	99	95	103	98	95	100	96	93	87
2.50	107	102	98	105	101	97	102	98	96	89
3.00	109	105	101	107	103	100	104	101	98	91
4.00	112	108	105	109	106	104	106	103	101	93
5.00	113	110	108	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: 2017-05-05

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:

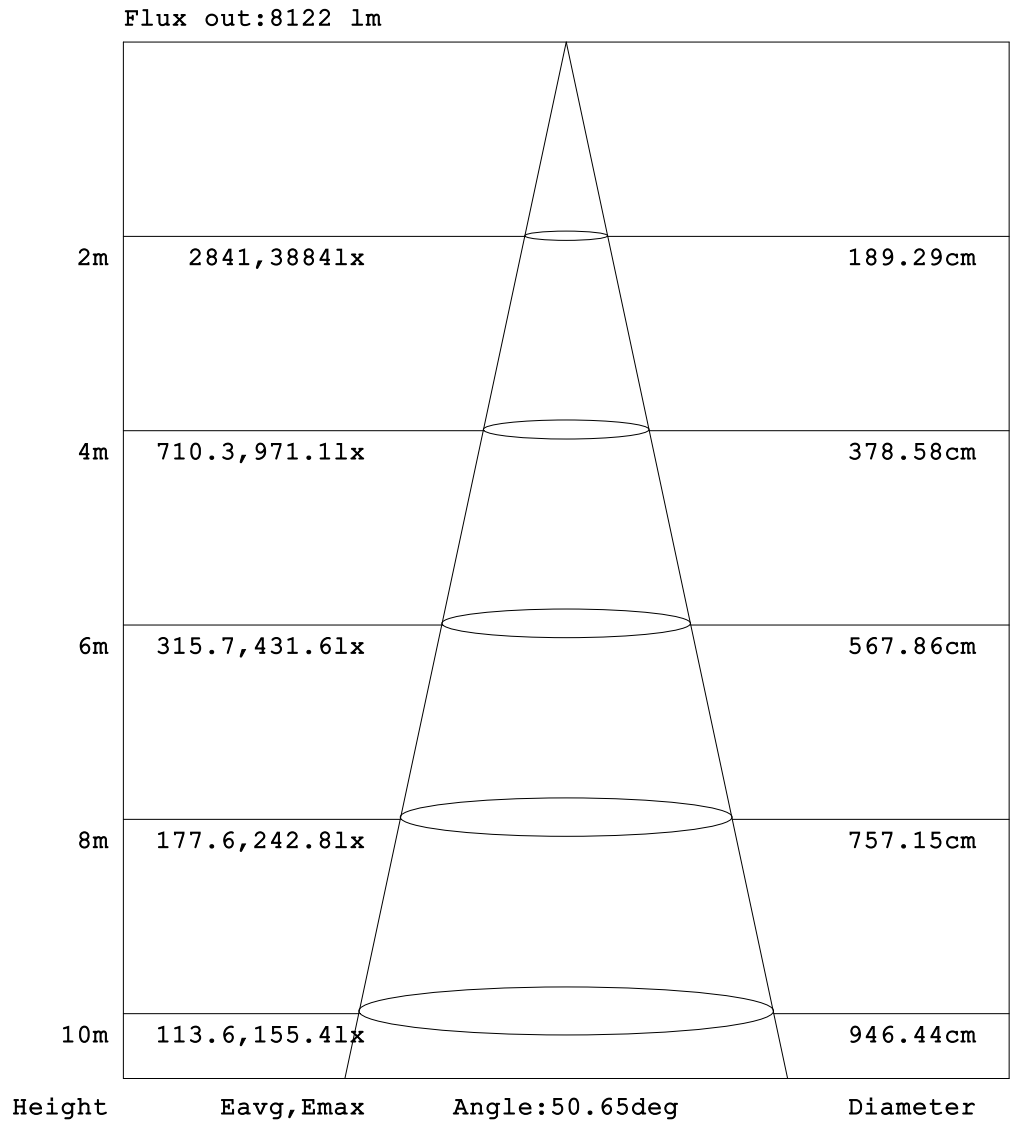
ISOCANDELA DIAGRAM



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

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

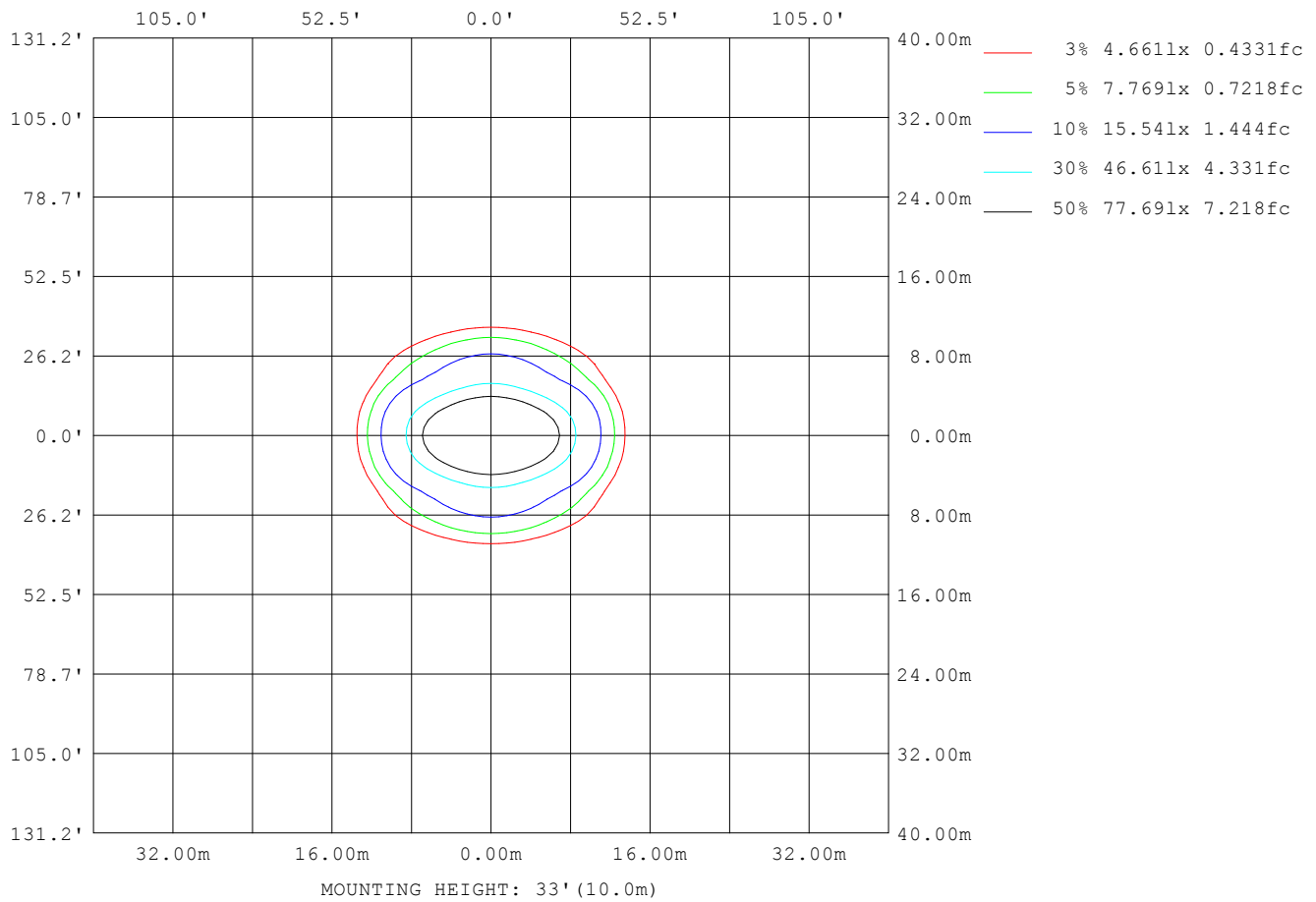


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

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: 2017-05-05

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:0.5388A P:120.3W PF:0.9710 Lamp Flux:19741.5x1 lm		
NAME: LHB01-120	TYPE:120W	WEIGHT:
SPEC.:5000K Ra70 6090DEG L06402	DIM.: 0.948*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.92*0.1	Shielding Angle:

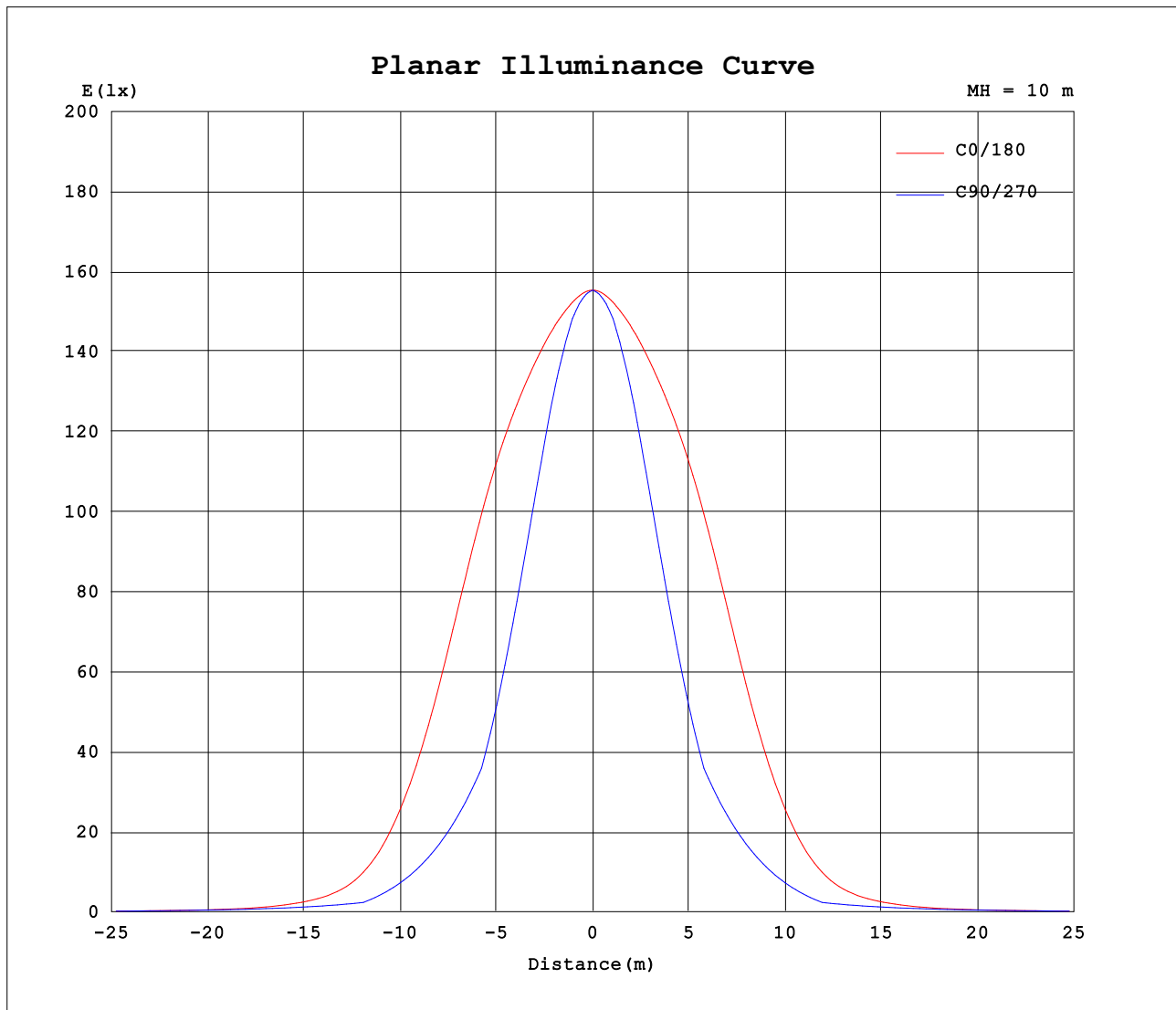
AvgL	cd/m2
L_0~180 (65) av	12591
L_0~180 (75) av	7794
L_0~180 (85) av	2217
L_90~270 (65) av	11712
L_90~270 (75) av	9852
L_90~270 (85) av	10364
L_45 (65) av	11535
L_45 (75) av	8158
L_45 (85) av	8310

Standard: GB/T 29293-2012

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

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: 2017-05-05

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:

```

```

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:

```