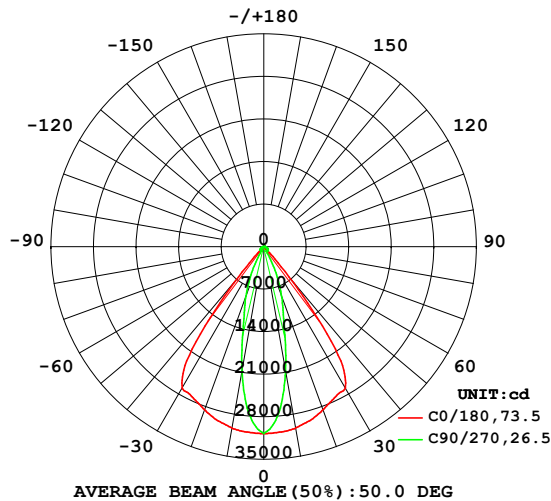


LUMINAIRE PHOTOMETRIC TEST REPORT

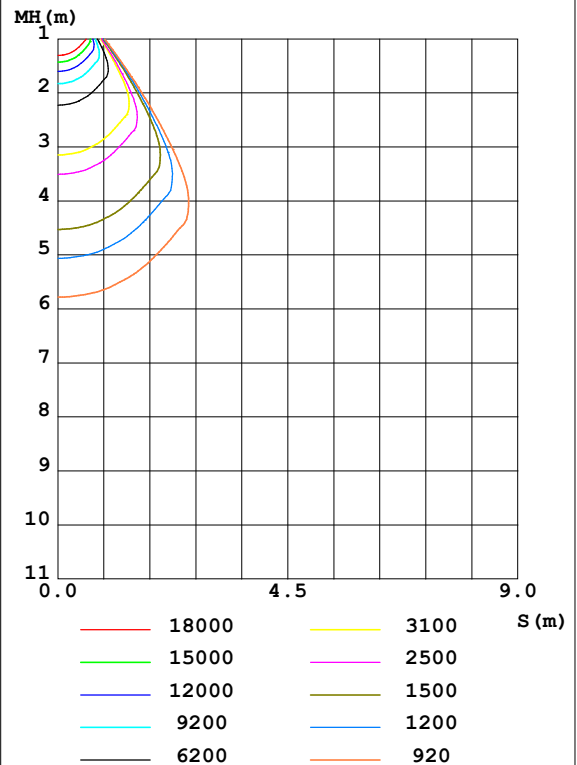
Test:U:230.0V I:0.6908A P:152.7W PF:0.9613 Lamp Flux:19458.9x1 lm		
NAME: LHB01-150	TYPE:150W	WEIGHT:
SPEC.:5000K Ra80 3070DEG L02801	DIM.: 1.178*0.137*0.102	SERIAL No.:
MFR.:	SUR.:1.17*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 127.41 lm/W			
MODEL	LHB01-150	I _{max} (cd)	30756	S/MH (C0/180)	1.06
NOMINAL POWER(W)	150	LOR(%)	100.0	S/MH (C90/270)	0.45
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	19459	η UP,DN(C0-180)	0.0,49.1
NOMINAL FLUX(lm)	19458.9	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.9
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	230	η down (%)	100.0	CIBSE SHR MAX	0.50

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:2017-06-14

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	3063	2889	2767	2889	3063	2896	2767	2896	0- 5	711.0	711.0	3.65,3.65
10	3031	2492	2076	2492	3031	2515	2076	2515	5- 10	1937	2648	13.6,13.6
15	2959	1909	1292	1909	2959	1945	1292	1945	10- 15	2677	5325	27.4,27.4
20	2855	1265	861.4	1265	2855	1309	861.4	1309	15- 20	2953	8278	42.5,42.5
25	2750	883.5	475.2	883.5	2750	920.6	475.2	920.6	20- 25	2971	11248	57.8,57.8
30	2687	591.2	88.90	591.2	2687	618.6	88.90	618.6	25- 30	2751	13999	71.9,71.9
35	2058	311.9	87.30	311.9	2058	325.2	87.30	325.2	30- 35	2321	16320	83.9,83.9
40	652.8	77.57	85.71	77.57	652.8	80.08	85.71	80.08	35- 40	1463	17783	91.4,91.4
45	76.61	63.87	84.11	63.87	76.61	68.72	84.11	68.72	40- 45	540.9	18324	94.2,94.2
50	46.31	49.93	82.51	49.93	46.31	54.09	82.51	54.09	45- 50	245.8	18570	95.4,95.4
55	37.58	39.75	68.97	39.75	37.58	41.36	68.97	41.36	50- 55	203.5	18774	96.5,96.5
60	31.64	33.49	55.43	33.49	31.64	33.60	55.43	33.60	55- 60	178.8	18952	97.4,97.4
65	26.45	26.78	41.89	26.78	26.45	26.92	41.89	26.92	60- 65	155.8	19108	98.2,98.2
70	20.79	20.26	28.36	20.26	20.79	20.45	28.36	20.45	65- 70	128.8	19237	98.9,98.9
75	14.42	13.71	21.42	13.71	14.42	13.98	21.42	13.98	70- 75	98.05	19335	99.4,99.4
80	7.202	9.158	14.49	9.158	7.202	9.384	14.49	9.384	75- 80	68.02	19403	99.7,99.7
85	1.890	4.877	7.556	4.877	1.890	5.024	7.556	5.024	80- 85	40.65	19444	99.9,99.9
90	0.1429	0.5964	0.6223	0.5964	0.1429	0.6506	0.6223	0.6506	85- 90	15.27	19459	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): 18324 lm

%lum = 94.2%

%lamp = 94.2%

Conical surface Flux(120deg): 18952 lm

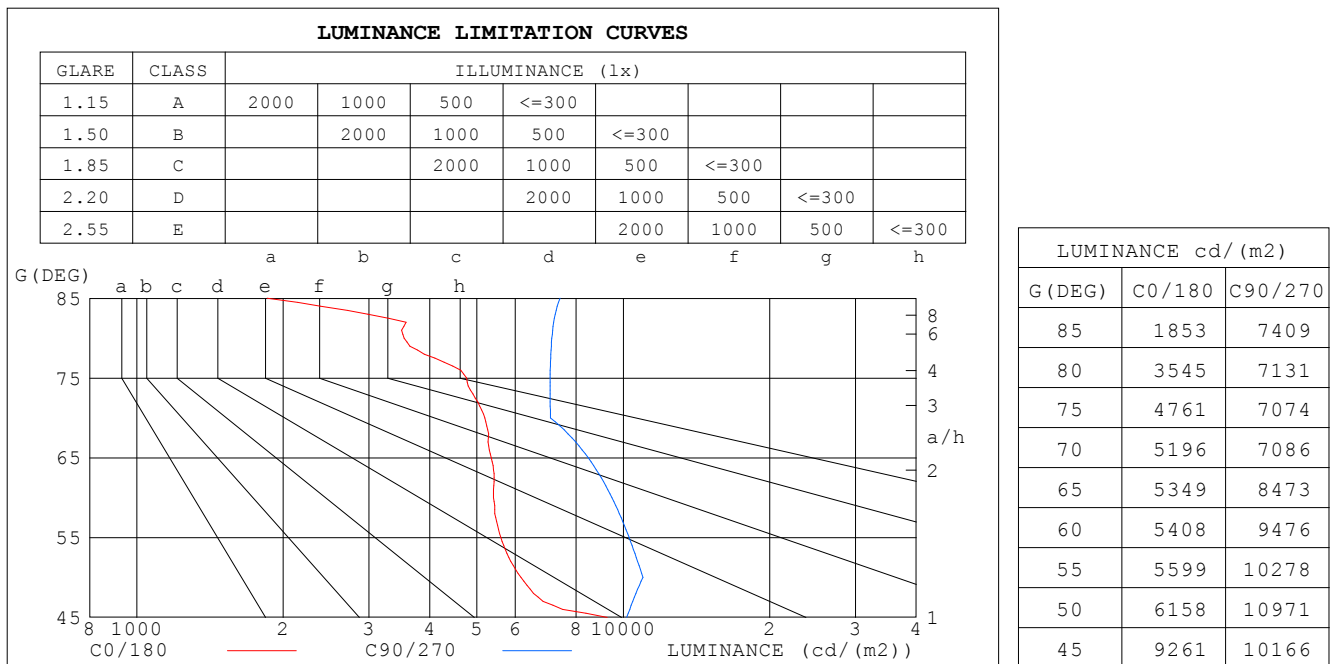
%lum = 97.4%

%lamp = 97.4%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-06-14

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

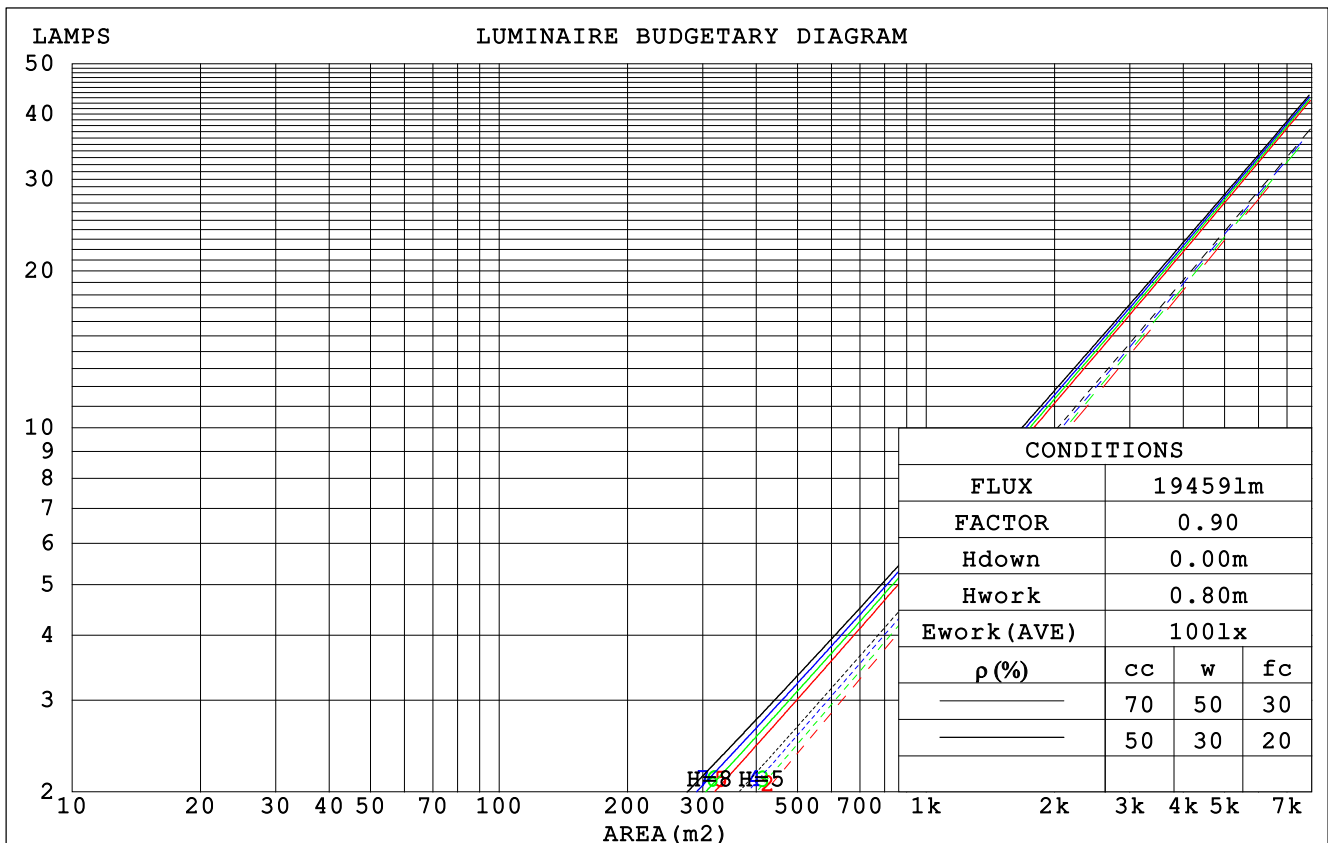


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-06-14

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	1.10	1.08	1.06	1.08	1.06	1.04	1.04	1.02	1.01	1.01	.99	.98	.97	.96	.95	.93
2.0	1.03	.99	.95	1.01	.97	.94	.98	.95	.92	.95	.92	.90	.92	.90	.88	.86
3.0	.96	.91	.87	.94	.90	.86	.92	.88	.85	.89	.86	.83	.87	.84	.82	.81
4.0	.90	.84	.80	.89	.83	.79	.86	.82	.78	.84	.81	.78	.83	.79	.77	.75
5.0	.84	.78	.74	.83	.78	.74	.81	.77	.73	.80	.76	.72	.78	.75	.72	.70
6.0	.79	.73	.69	.78	.73	.69	.77	.72	.68	.76	.71	.68	.74	.70	.67	.66
7.0	.75	.69	.65	.74	.68	.65	.73	.68	.64	.72	.67	.64	.71	.67	.63	.62
8.0	.71	.65	.61	.70	.65	.61	.69	.64	.60	.68	.63	.60	.67	.63	.60	.59
9.0	.67	.61	.57	.67	.61	.57	.66	.61	.57	.65	.60	.57	.64	.60	.57	.55
10.0	.64	.58	.54	.63	.58	.54	.62	.57	.54	.62	.57	.54	.61	.57	.54	.52



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-06-14

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	.184	.104	.033	.177	.101	.032	.164	.094	.030	.153	.088	.028	.142	.082	.027	
2.0	.174	.095	.029	.168	.093	.029	.158	.088	.027	.148	.083	.026	.139	.079	.025	
3.0	.165	.088	.026	.160	.086	.026	.151	.082	.025	.142	.078	.024	.135	.074	.023	
4.0	.156	.081	.024	.152	.079	.023	.144	.076	.023	.136	.073	.022	.130	.070	.021	
5.0	.148	.075	.022	.144	.074	.022	.137	.071	.021	.131	.069	.021	.125	.067	.020	
6.0	.140	.070	.020	.137	.069	.020	.131	.067	.020	.126	.065	.019	.120	.063	.019	
7.0	.134	.066	.019	.131	.065	.019	.126	.063	.018	.121	.062	.018	.116	.060	.018	
8.0	.128	.062	.018	.125	.062	.017	.120	.060	.017	.116	.059	.017	.112	.057	.017	
9.0	.122	.059	.016	.120	.058	.016	.115	.057	.016	.111	.056	.016	.108	.055	.016	
10.0	.117	.056	.016	.115	.055	.015	.111	.054	.015	.107	.053	.015	.104	.052	.015	

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	.172	.157	.144	.147	.135	.124	.100	.093	.086	.058	.054	.050	.019	.017	.016	
2.0	.157	.132	.112	.134	.114	.097	.092	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.144	.114	.089	.124	.098	.077	.085	.068	.054	.049	.040	.032	.016	.013	.010	
4.0	.134	.099	.072	.115	.085	.063	.079	.060	.044	.046	.035	.026	.015	.011	.009	
5.0	.125	.087	.059	.107	.076	.052	.074	.053	.037	.043	.031	.022	.014	.010	.007	
6.0	.117	.078	.050	.101	.068	.043	.070	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.111	.070	.042	.095	.061	.037	.066	.043	.026	.038	.025	.015	.012	.008	.005	
8.0	.105	.064	.036	.090	.056	.031	.063	.039	.022	.036	.023	.013	.012	.008	.004	
9.0	.100	.059	.031	.086	.051	.027	.060	.036	.019	.035	.021	.012	.011	.007	.004	
10.0	.095	.055	.028	.082	.047	.024	.057	.033	.017	.033	.020	.010	.011	.006	.003	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-14

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	23.0	23.9	23.2	24.1	24.3	13.3	14.3	13.5	14.4	14.6
3H	22.9	23.8	23.2	24.0	24.2	14.8	15.7	15.1	15.9	16.1
4H	22.8	23.7	23.1	23.9	24.1	15.5	16.3	15.8	16.5	16.8
6H	22.8	23.6	23.1	23.8	24.0	16.1	16.9	16.4	17.1	17.4
8H	22.7	23.5	23.1	23.7	24.0	16.4	17.1	16.7	17.4	17.7
12H	22.7	23.4	23.0	23.7	24.0	16.6	17.3	16.9	17.6	17.9
4H 2H	22.8	23.6	23.1	23.8	24.0	13.6	14.5	13.9	14.7	14.9
3H	22.7	23.4	23.0	23.7	24.0	15.3	16.0	15.6	16.2	16.5
4H	22.7	23.3	23.0	23.6	23.9	16.0	16.7	16.4	17.0	17.3
6H	22.6	23.2	23.0	23.5	23.9	16.8	17.4	17.2	17.7	18.1
8H	22.6	23.1	23.0	23.5	23.9	17.1	17.7	17.5	18.0	18.4
12H	22.6	23.1	23.0	23.4	23.8	17.4	17.9	17.8	18.3	18.7
8H 4H	22.6	23.1	23.0	23.5	23.8	16.2	16.7	16.6	17.1	17.4
6H	22.6	23.0	23.0	23.4	23.8	17.1	17.5	17.5	17.9	18.3
8H	22.5	22.9	23.0	23.4	23.8	17.5	17.9	17.9	18.3	18.7
12H	22.5	22.9	23.0	23.3	23.8	17.9	18.2	18.3	18.6	19.1
12H 4H	22.5	23.0	22.9	23.4	23.8	16.2	16.7	16.6	17.0	17.4
6H	22.5	22.9	23.0	23.3	23.8	17.1	17.5	17.5	17.9	18.3
8H	22.5	22.9	23.0	23.3	23.8	17.5	17.9	18.0	18.3	18.8
Variations with the observer position at spacings:										
S = 1.0H	+ 5.7 / - 6.7					+ 0.1 / - 0.2				
1.5H	+ 8.4 / - 6.6					+ 0.6 / - 0.3				
2.0H	+ 1.1 / - 0.2					+ 1.1 / - 0.9				

CIE Pub.117 Corrected 19459 lm Total Lamp Luminous Flux.(8log(F/F0) = 10.3)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-14

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:

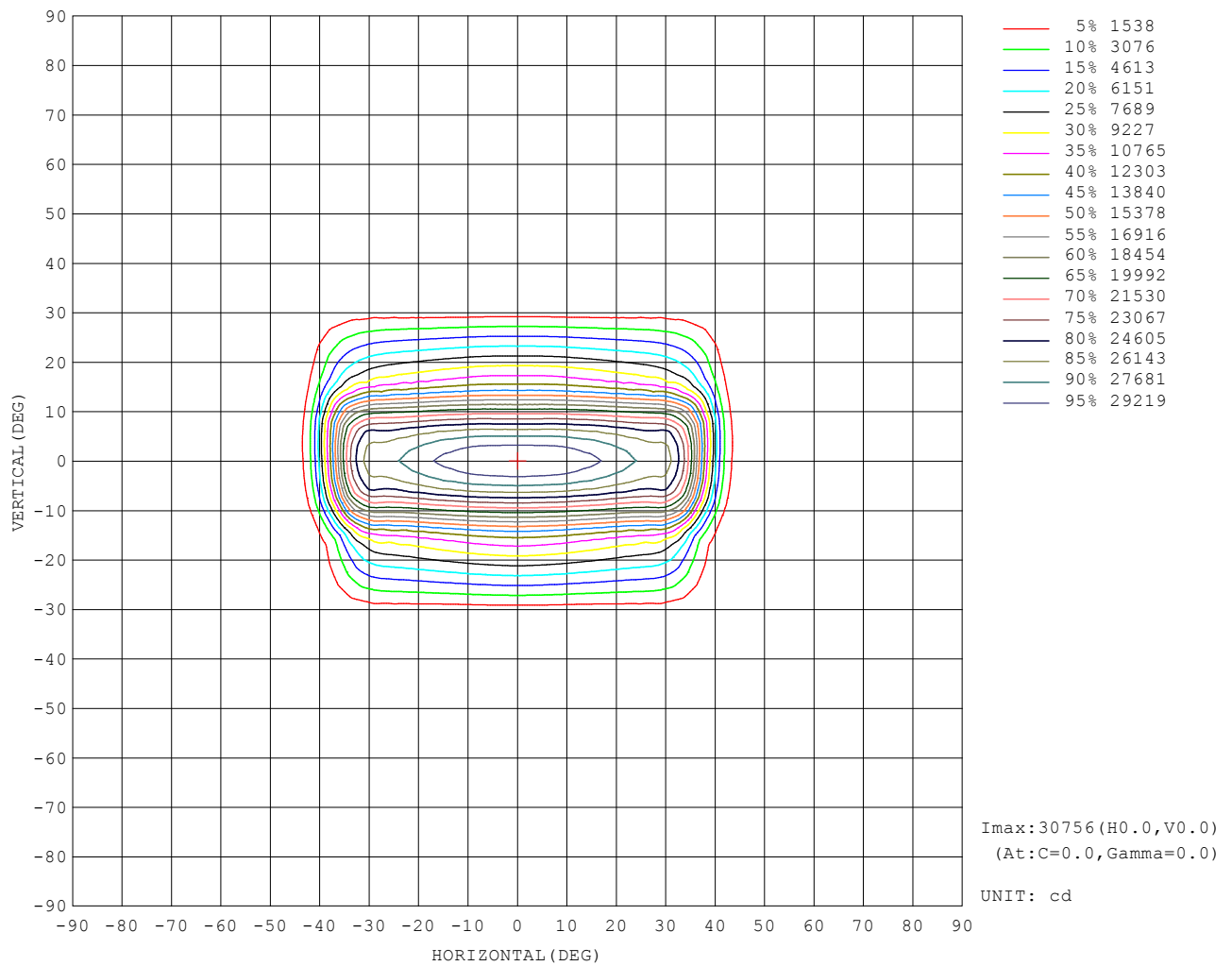
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	86	80	76	86	80	76	85	79	76	72
0.80	94	88	84	93	87	84	92	87	83	79
1.00	98	92	89	97	92	88	96	92	88	84
1.25	102	97	93	101	96	93	99	95	92	88
1.50	105	100	97	104	99	96	102	98	95	90
2.00	108	103	100	106	102	99	104	100	98	92
2.50	110	106	102	108	104	102	105	102	100	94
3.00	111	108	105	109	106	104	106	104	102	95
4.00	113	110	108	111	109	107	108	106	104	97
5.00	115	112	110	113	111	109	109	107	106	98
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: 2017-06-14

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:

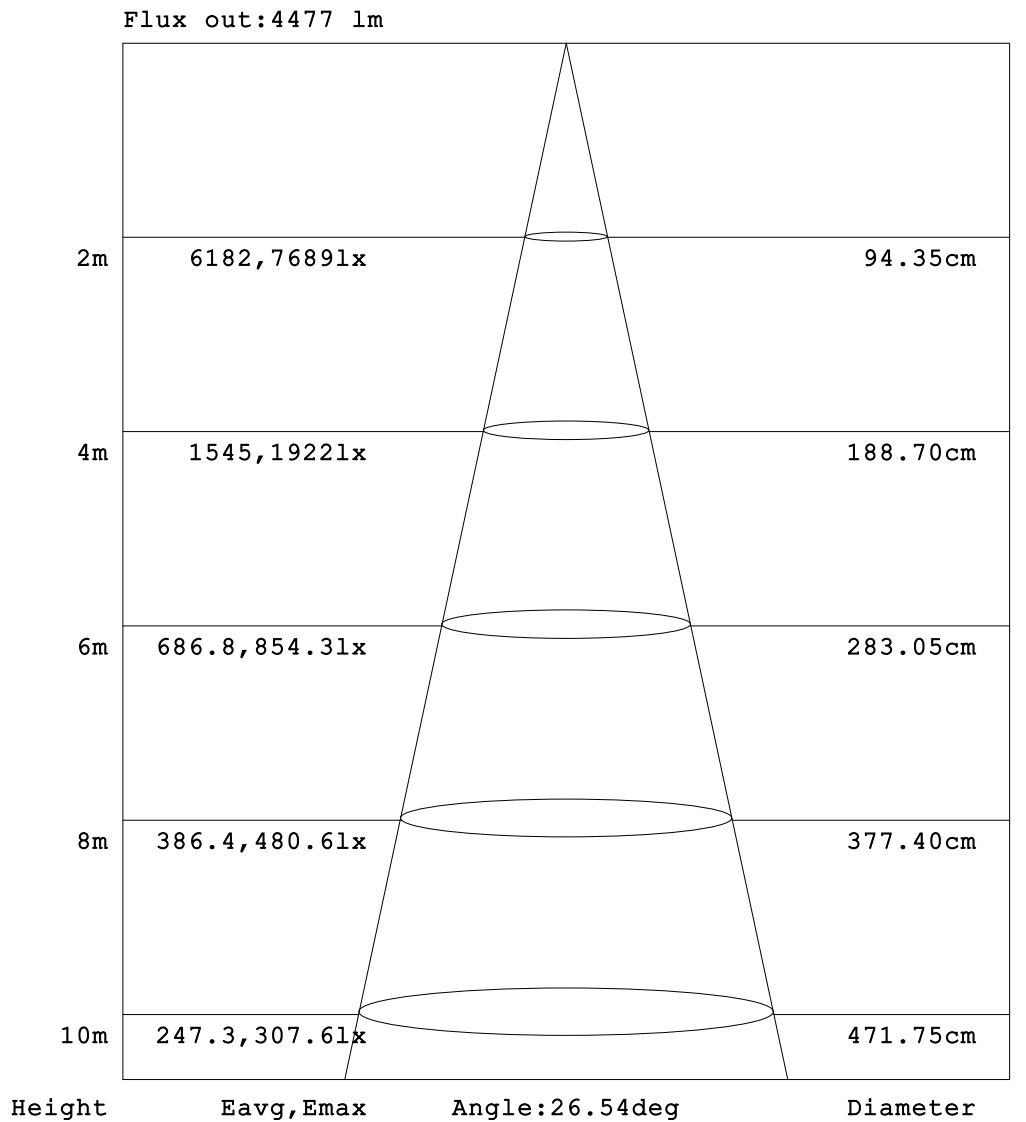
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-06-14

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

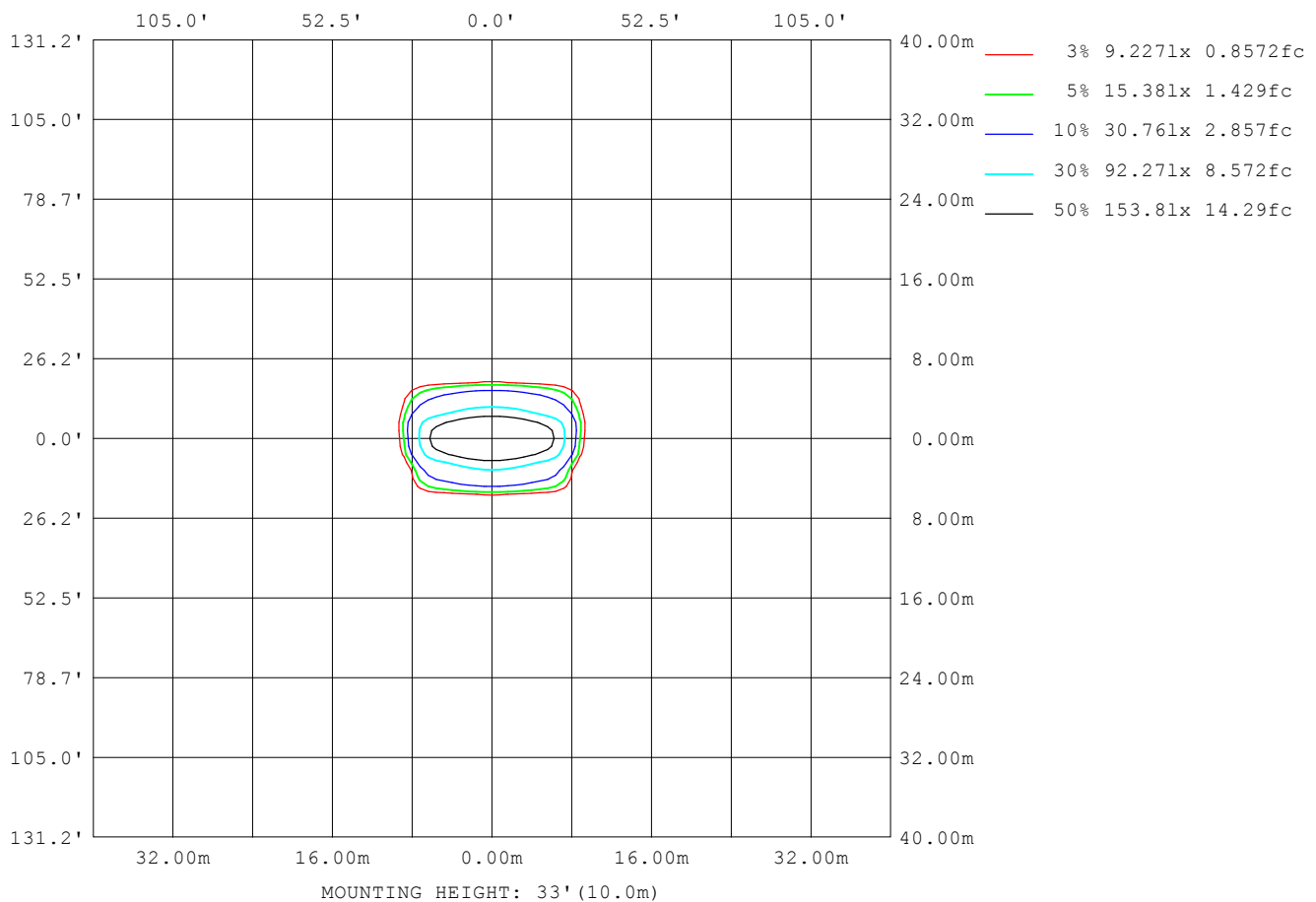


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-06-14

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: 2017-06-14

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:0.6908A P:152.7W PF:0.9613 Lamp Flux:19458.9x1 lm		
NAME: LHB01-150	TYPE:150W	WEIGHT:
SPEC.:5000K Ra80 3070DEG L02801	DIM.: 1.178*0.137*0.102	SERIAL No.:
MFR.:	SUR.:1.17*0.1	Shielding Angle:

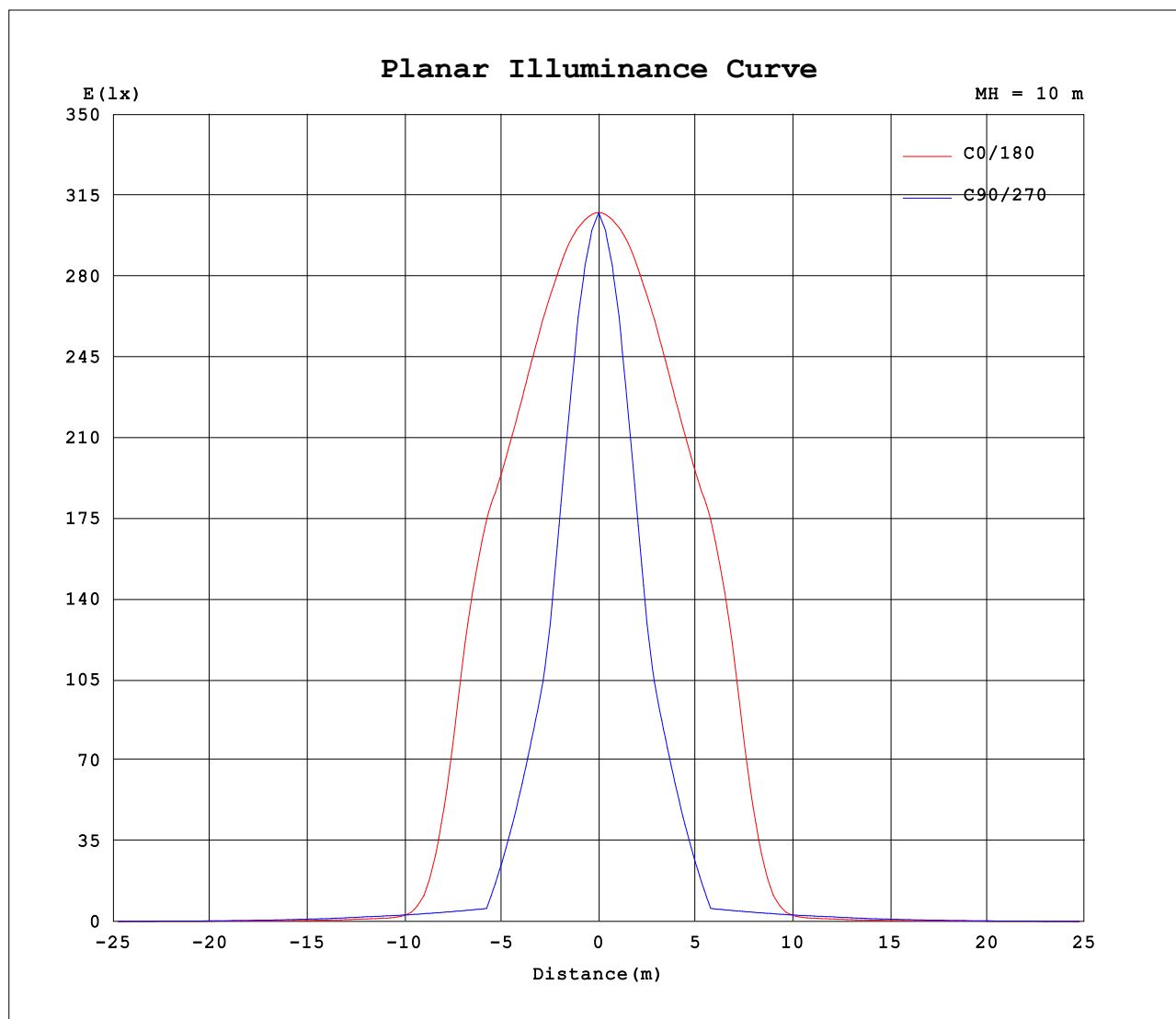
AvgL	cd/m2
L_0~180 (65) av	5349
L_0~180 (75) av	4761
L_0~180 (85) av	1853
L_90~270 (65) av	8473
L_90~270 (75) av	7074
L_90~270 (85) av	7409
L_45 (65) av	5431
L_45 (75) av	4572
L_45 (85) av	4855

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-14

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: 2017-06-14

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: $\times 10 \text{cd}$

```

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:

```