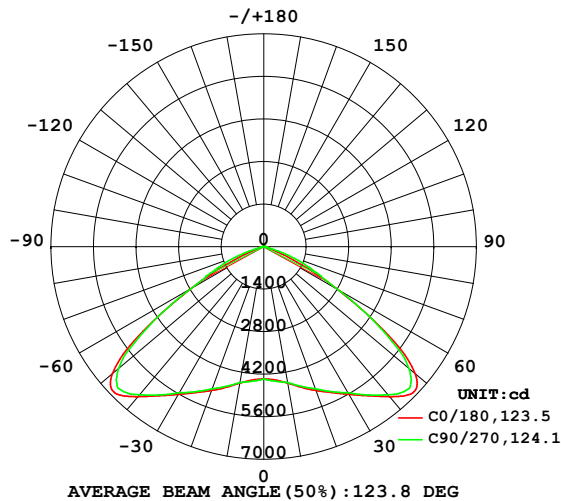


LUMINAIRE PHOTOMETRIC TEST REPORT

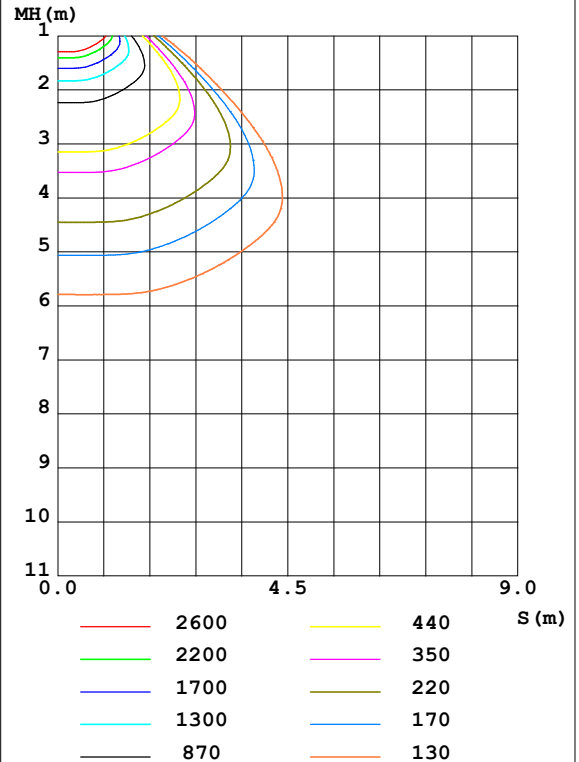
Test:U:230.0V I:0.6912A P:152.8W PF:0.9615 Lamp Flux:19084.4x1 lm		
NAME: LHB01-150	TYPE:150W	WEIGHT:
SPEC.:5000K Ra80 120DEG L02803	DIM.: 1.178*0.137*0.102	SERIAL No.:
MFR.:	SUR.:1.17*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 124.87 lm/W			
MODEL	LHB01-150	I _{max} (cd)	6931	S/MH(C0/180)	1.94
NOMINAL POWER(W)	150	LOR(%)	100.0	S/MH(C90/270)	1.93
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	19084	η UP,DN(C0-180)	0.0,50.1
NOMINAL FLUX(lm)	19084.4	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.9
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	2.00
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	0.00

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	4407	4450	4447	4450	4407	4444	4447	4444	0- 5	105.4	105.4	0.55,0.55
10	4560	4594	4539	4594	4560	4574	4539	4574	5- 10	322.7	428.0	2.24,2.24
15	4791	4790	4759	4790	4791	4761	4759	4761	10- 15	555.3	983.4	5.15,5.15
20	5037	5051	4980	5051	5037	5033	4980	5033	15- 20	809.6	1793	9.39,9.39
25	5299	5307	5265	5307	5299	5310	5265	5310	20- 25	1083	2876	15.1,15.1
30	5613	5605	5551	5605	5613	5641	5551	5641	25- 30	1381	4257	22.3,22.3
35	5991	5948	5957	5948	5991	6026	5957	6026	30- 35	1706	5963	31.2,31.2
40	6445	6326	6364	6326	6445	6398	6364	6398	35- 40	2065	8028	42.1,42.1
45	6852	6694	6663	6694	6852	6477	6663	6477	40- 45	2436	10464	54.8,54.8
50	6507	6734	6245	6734	6507	6178	6245	6178	45- 50	2677	13141	68.9,68.9
55	4854	4826	4722	4826	4854	4775	4722	4775	50- 55	2461	15602	81.8,81.8
60	2756	2686	2759	2686	2756	2745	2759	2745	55- 60	1731	17334	90.8,90.8
65	1204	1184	1714	1184	1204	1244	1714	1244	60- 65	962.6	18296	95.9,95.9
70	248.6	436.6	916.4	436.6	248.6	532.1	916.4	532.1	65- 70	464.2	18760	98.3,98.3
75	143.4	229.9	194.9	229.9	143.4	273.4	194.9	273.4	70- 75	201.7	18962	99.4,99.4
80	90.74	79.23	81.20	79.23	90.74	84.73	81.20	84.73	75- 80	72.97	19035	99.7,99.7
85	24.65	42.91	43.47	42.91	24.65	45.61	43.47	45.61	80- 85	35.93	19071	99.9,99.9
90	5.733	6.463	5.739	6.463	5.733	6.306	5.739	6.306	85- 90	13.37	19084	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): 10464 lm

%lum = 54.8%

%lamp = 54.8%

Conical surface Flux(120deg): 17334 lm

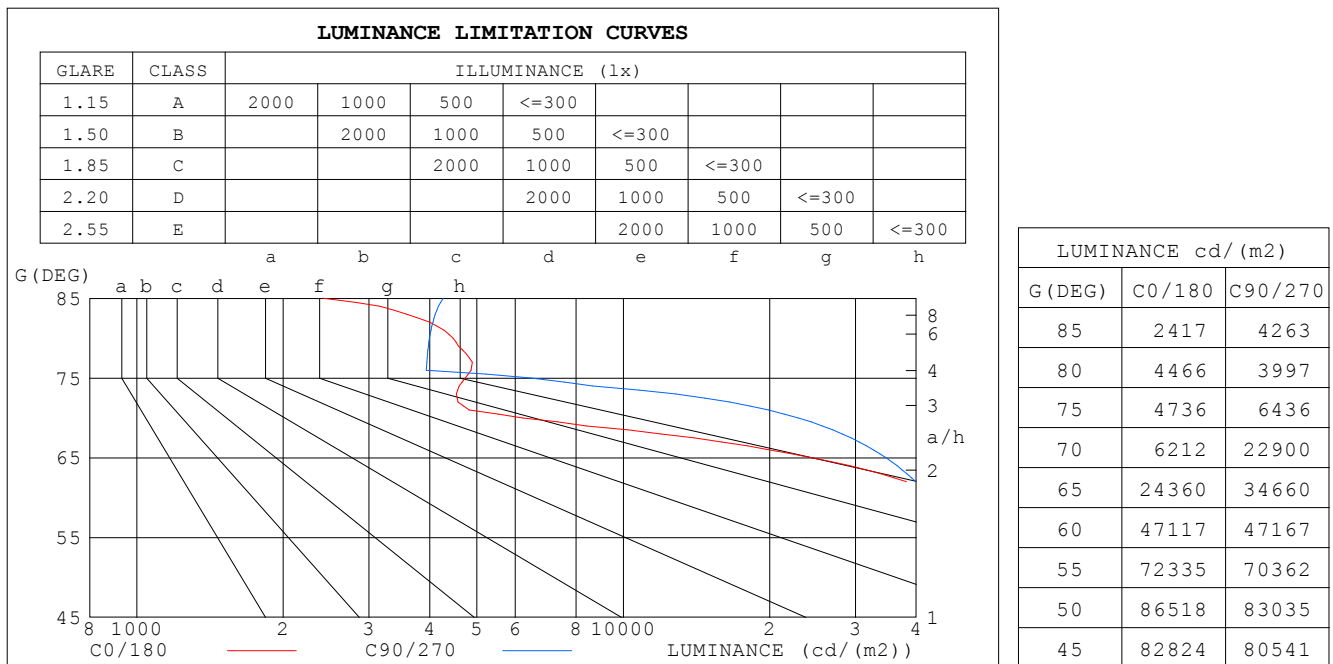
%lum = 90.8%

%lamp = 90.8%

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

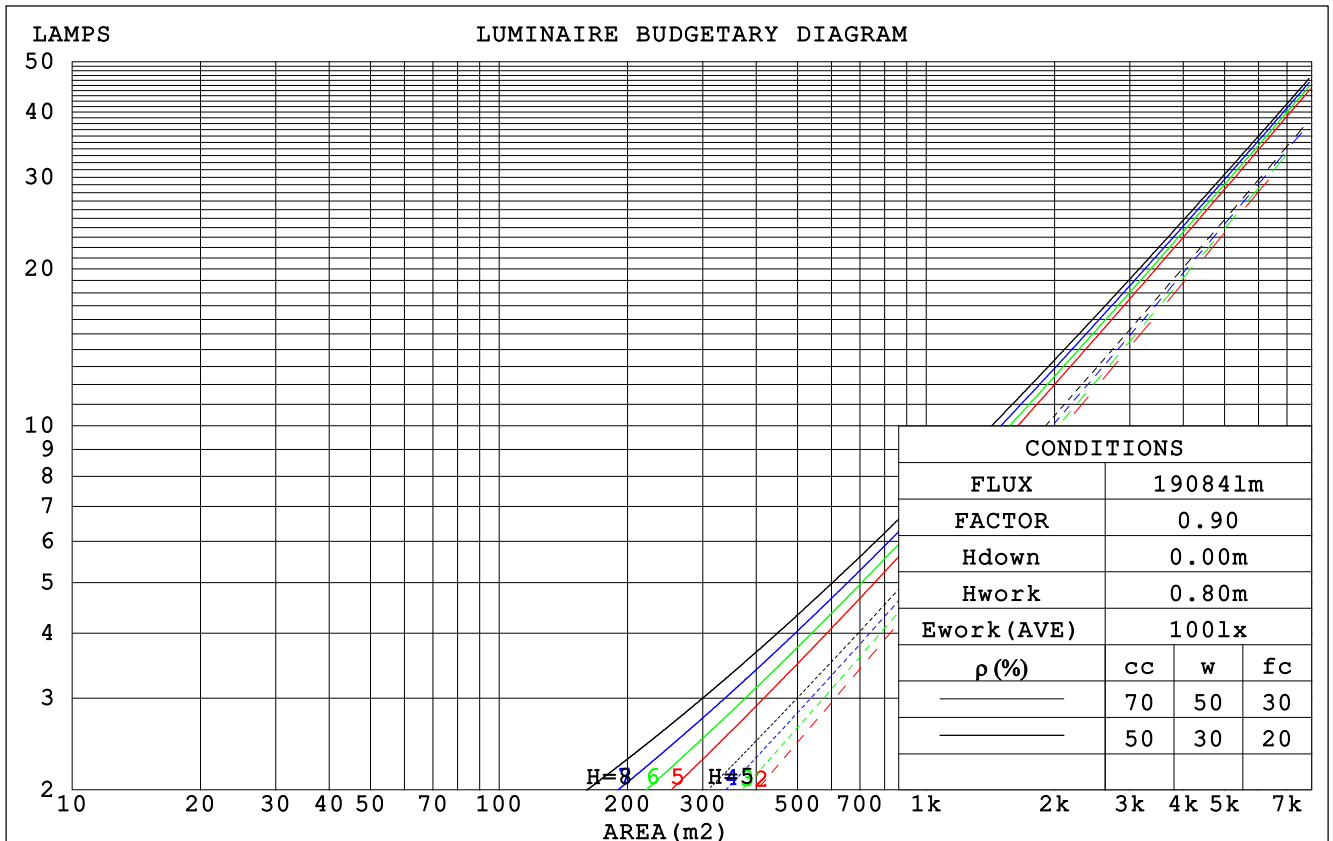


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-06-14

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	1.00
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	.91	.86	.81	.88	.83	.79	.85	.81	.77	.82	.79	.76	.74
3.0	.82	.74	.68	.80	.73	.68	.78	.71	.66	.75	.70	.65	.72	.68	.64	.62
4.0	.72	.64	.57	.71	.63	.57	.69	.62	.56	.66	.60	.55	.64	.59	.55	.53
5.0	.64	.55	.49	.63	.55	.49	.61	.54	.48	.59	.53	.47	.57	.51	.47	.45
6.0	.57	.48	.42	.56	.48	.42	.54	.47	.41	.53	.46	.41	.51	.45	.41	.39
7.0	.51	.43	.36	.50	.42	.36	.49	.41	.36	.47	.41	.36	.46	.40	.35	.33
8.0	.46	.38	.32	.46	.37	.32	.44	.37	.31	.43	.36	.31	.42	.36	.31	.29
9.0	.42	.34	.28	.41	.33	.28	.40	.33	.28	.39	.32	.28	.38	.32	.28	.26
10.0	.38	.30	.25	.38	.30	.25	.37	.30	.25	.36	.29	.25	.35	.29	.25	.23



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	.267	.152	.048	.260	.148	.047	.247	.142	.045	.235	.136	.043	.224	.130	.042	
2.0	.264	.145	.044	.258	.142	.044	.246	.137	.043	.236	.132	.041	.226	.128	.040	
3.0	.253	.135	.040	.247	.132	.040	.237	.129	.039	.228	.125	.038	.219	.121	.038	
4.0	.239	.124	.037	.234	.123	.036	.225	.119	.036	.217	.116	.035	.209	.114	.035	
5.0	.225	.115	.033	.221	.113	.033	.213	.111	.033	.205	.108	.032	.198	.106	.032	
6.0	.211	.106	.030	.207	.105	.030	.200	.103	.030	.194	.101	.030	.187	.099	.029	
7.0	.198	.098	.028	.195	.097	.028	.189	.095	.027	.183	.094	.027	.177	.092	.027	
8.0	.187	.091	.026	.184	.090	.026	.178	.089	.025	.172	.087	.025	.167	.086	.025	
9.0	.176	.085	.024	.173	.084	.024	.168	.083	.024	.163	.082	.023	.158	.080	.023	
10.0	.166	.080	.022	.163	.079	.022	.159	.078	.022	.154	.077	.022	.150	.075	.022	

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	.169	.132	.101	.144	.114	.088	.099	.079	.061	.057	.046	.036	.018	.015	.012	
3.0	.161	.114	.077	.138	.099	.067	.095	.068	.047	.055	.040	.028	.018	.013	.009	
4.0	.154	.101	.060	.132	.087	.052	.091	.061	.037	.053	.036	.022	.017	.012	.007	
5.0	.148	.090	.048	.127	.078	.042	.087	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.141	.082	.039	.122	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.135	.075	.033	.116	.065	.029	.080	.046	.021	.047	.027	.012	.015	.009	.004	
8.0	.129	.070	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.014	.008	.003	
9.0	.124	.065	.025	.107	.056	.022	.074	.040	.015	.043	.023	.009	.014	.008	.003	
10.0	.118	.061	.022	.102	.053	.019	.071	.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:2017-06-14

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	28.0	29.5	28.3	29.7	29.9	28.0	29.5	28.3	29.7	29.9
3H	27.9	29.3	28.2	29.6	29.8	28.2	29.6	28.5	29.8	30.1
4H	27.9	29.1	28.2	29.4	29.7	28.2	29.5	28.5	29.7	30.0
6H	27.8	29.0	28.1	29.2	29.5	28.1	29.3	28.4	29.6	29.8
8H	27.7	28.9	28.0	29.2	29.4	28.0	29.2	28.4	29.5	29.8
12H	27.7	28.8	28.0	29.1	29.4	28.0	29.1	28.3	29.4	29.7
4H 2H	28.1	29.4	28.4	29.6	29.9	28.0	29.3	28.4	29.6	29.8
3H	28.0	29.1	28.4	29.4	29.7	28.4	29.5	28.7	29.8	30.1
4H	27.9	29.0	28.3	29.3	29.6	28.3	29.3	28.7	29.6	30.0
6H	27.9	28.8	28.3	29.1	29.5	28.2	29.1	28.6	29.5	29.8
8H	27.8	28.7	28.2	29.0	29.4	28.2	29.0	28.6	29.4	29.8
12H	27.8	28.5	28.2	28.9	29.3	28.2	28.9	28.6	29.3	29.7
8H 4H	27.8	28.7	28.3	29.0	29.4	28.2	29.0	28.6	29.4	29.8
6H	27.8	28.5	28.2	28.9	29.3	28.1	28.8	28.6	29.2	29.6
8H	27.8	28.3	28.2	28.8	29.2	28.1	28.7	28.6	29.1	29.6
12H	27.7	28.2	28.2	28.7	29.2	28.1	28.6	28.6	29.0	29.5
12H 4H	27.8	28.5	28.2	28.9	29.3	28.2	28.9	28.6	29.3	29.7
6H	27.8	28.3	28.2	28.8	29.2	28.1	28.7	28.6	29.1	29.6
8H	27.7	28.2	28.2	28.7	29.1	28.1	28.6	28.5	29.0	29.5
Variations with the observer position at spacings:										
S = 1.0H	+ 0.4 / - 0.5					+ 0.3 / - 0.5				
1.5H	+ 1.0 / - 2.7					+ 1.0 / - 2.2				
2.0H	+ 2.1 / - 3.8					+ 1.9 / - 3.8				

CIE Pub.117 Corrected 19084 lm Total Lamp Luminous Flux.(8log(F/F0) = 10.2)

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:

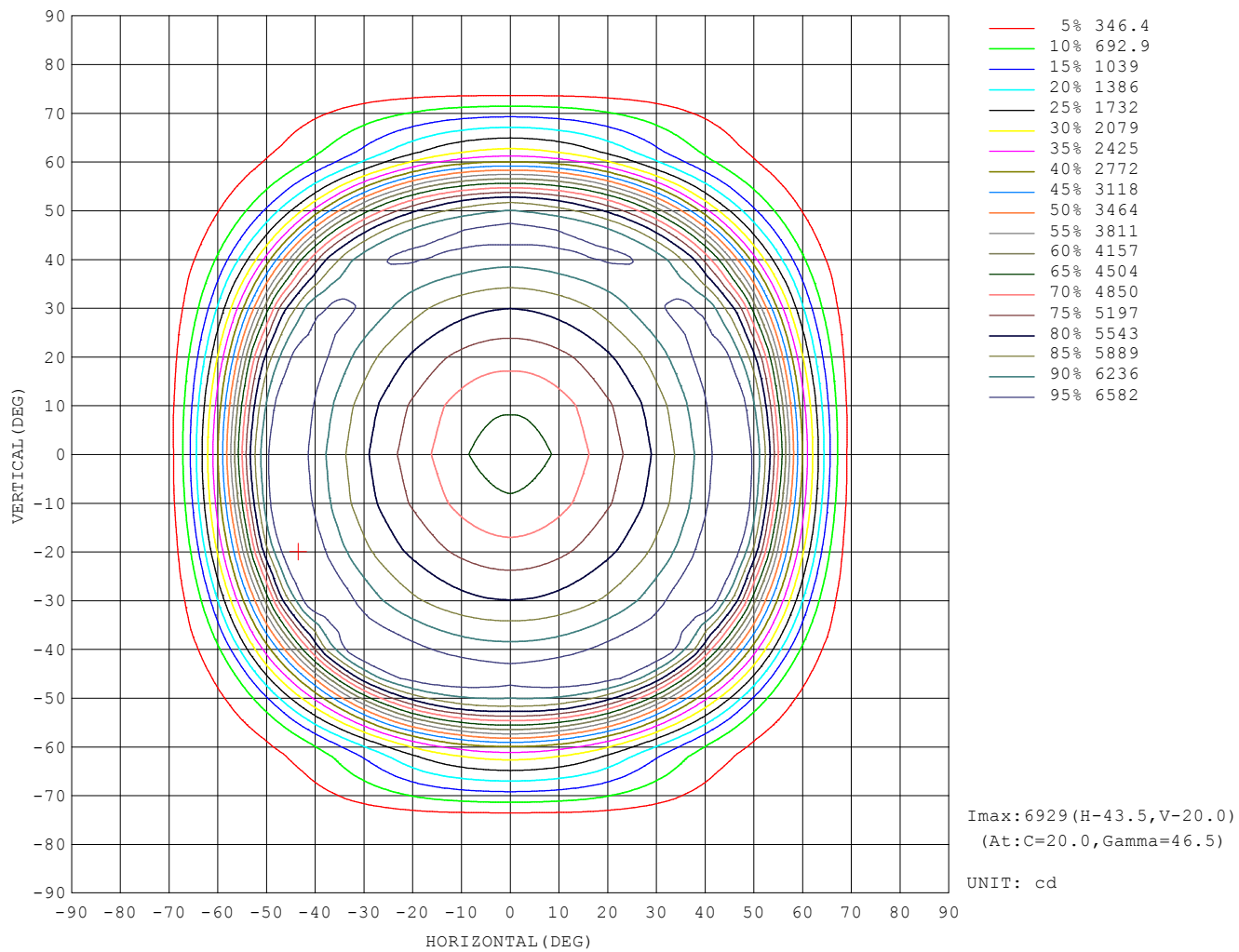
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	54	42	34	53	42	34	52	41	34	27
0.80	66	54	47	65	54	46	63	53	46	39
1.00	77	66	59	76	65	58	73	67	58	51
1.25	85	75	68	83	74	68	81	73	67	60
1.50	90	81	74	89	80	74	86	78	73	66
2.00	97	90	84	96	88	83	92	86	82	74
2.50	101	94	88	99	92	87	95	90	86	78
3.00	104	98	93	102	96	92	98	94	90	82
4.00	108	102	98	105	101	97	101	97	94	86
5.00	110	105	101	107	103	100	103	99	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: 2017-06-14

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:

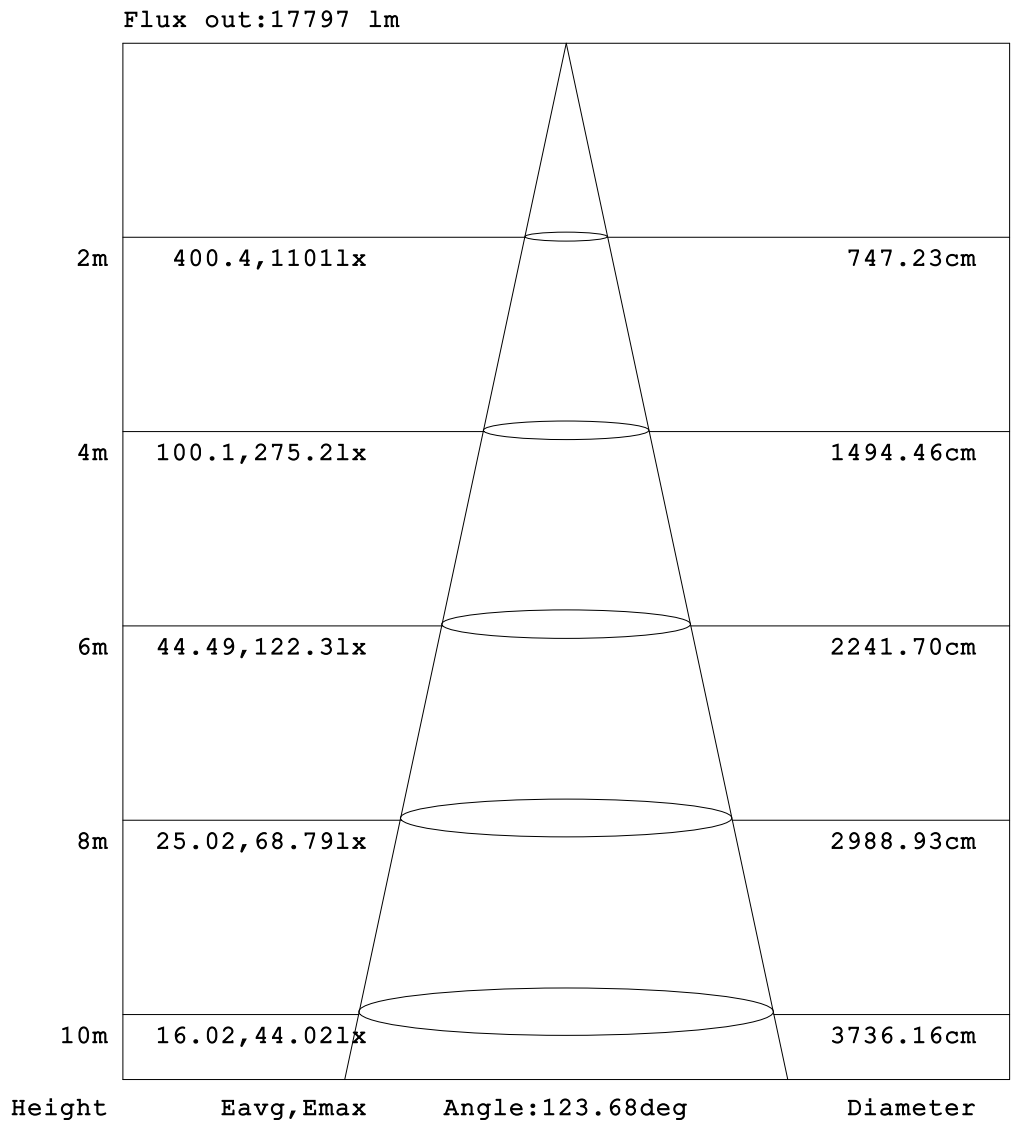
ISOCANDELA DIAGRAM



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

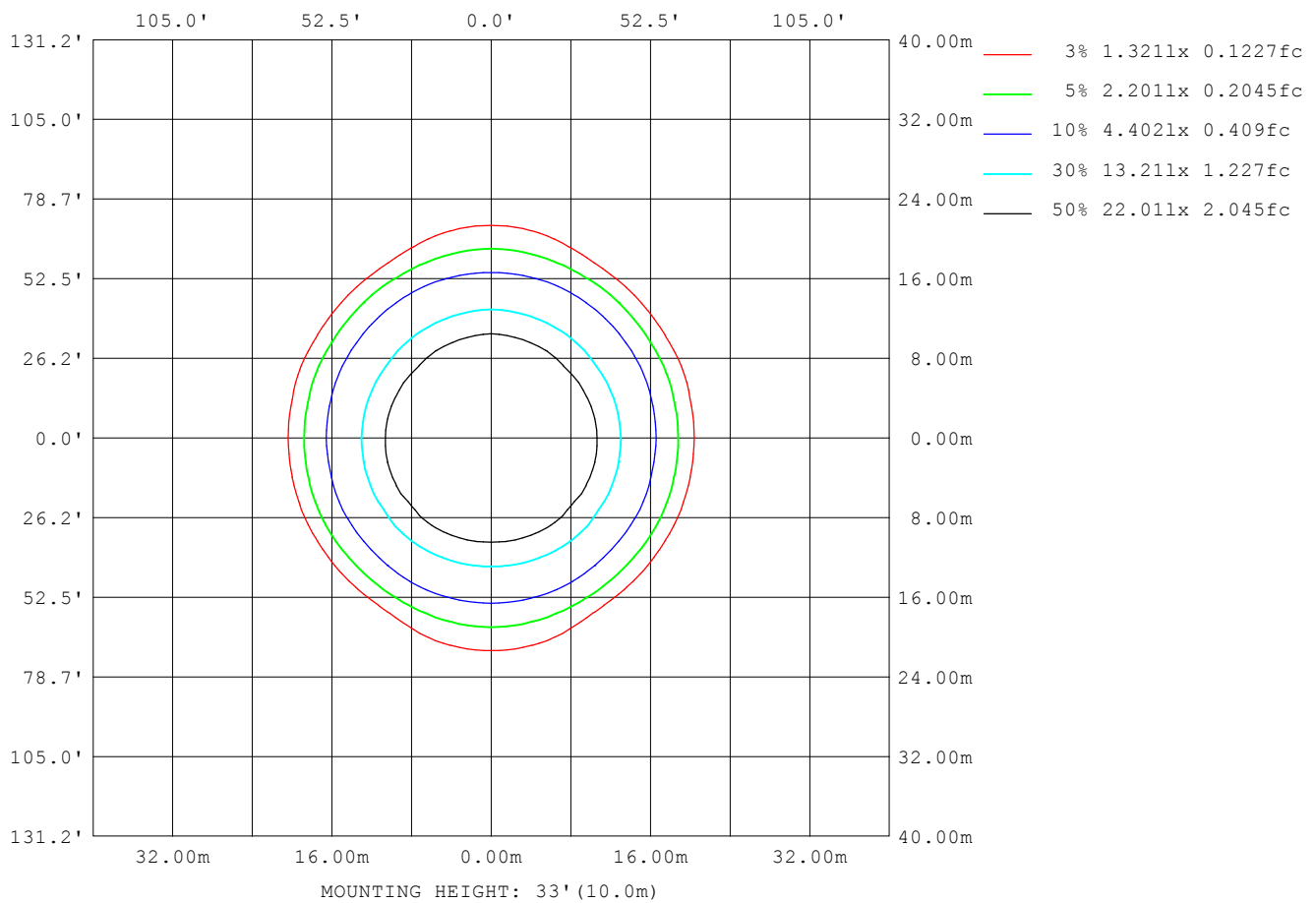


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.6912A P:152.8W PF:0.9615 Lamp Flux:19084.4x1 lm		
NAME: LHB01-150	TYPE:150W	WEIGHT:
SPEC.:5000K Ra80 120DEG L02803	DIM.: 1.178*0.137*0.102	SERIAL No.:
MFR.:	SUR.:1.17*0.1	Shielding Angle:

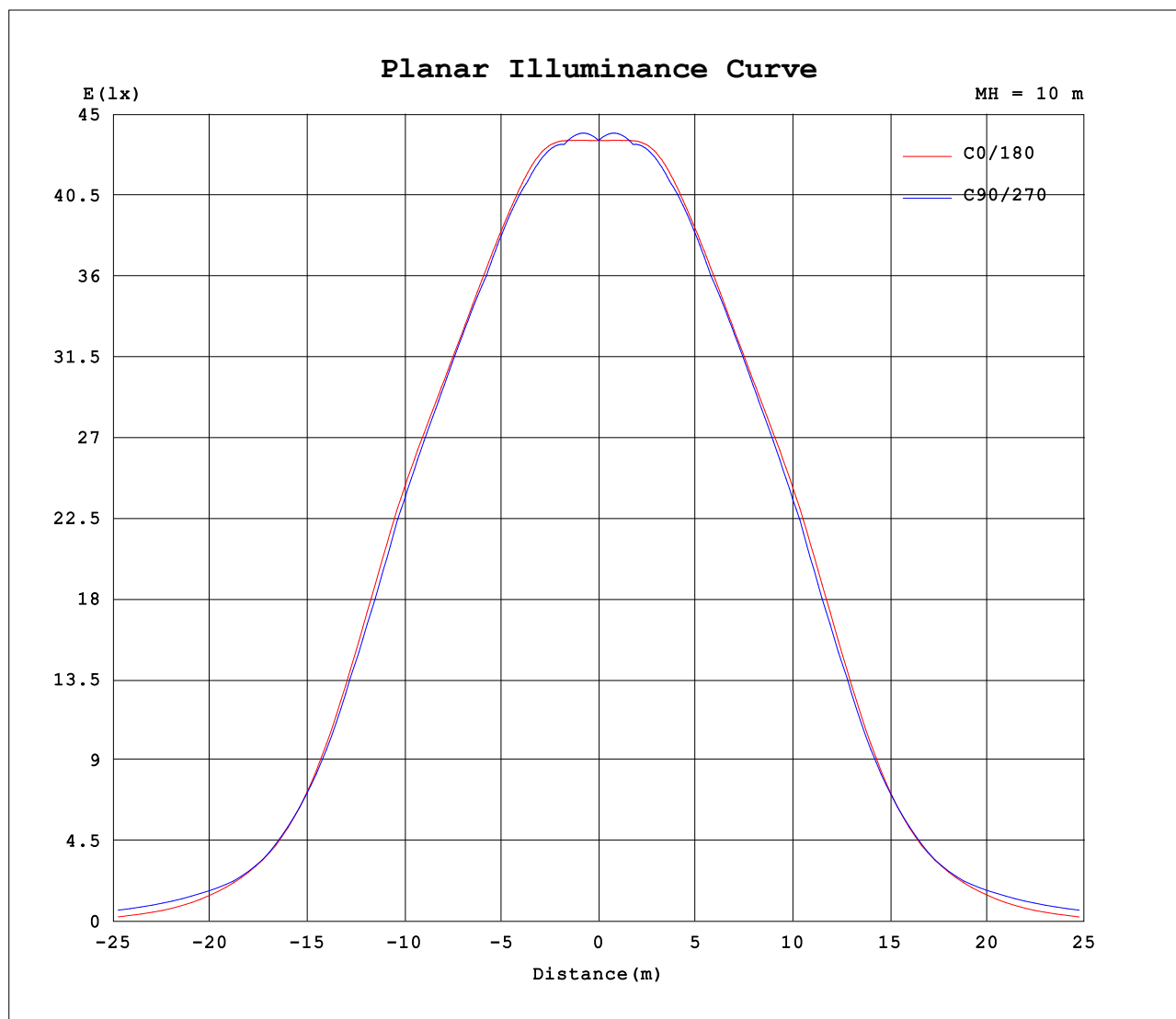
AvgL	cd/m2
L_0~180 (65) av	24360
L_0~180 (75) av	4736
L_0~180 (85) av	2417
L_90~270 (65) av	34660
L_90~270 (75) av	6436
L_90~270 (85) av	4263
L_45 (65) av	24555
L_45 (75) av	8311
L_45 (85) av	4341

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:

```

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:

```

```

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:

```