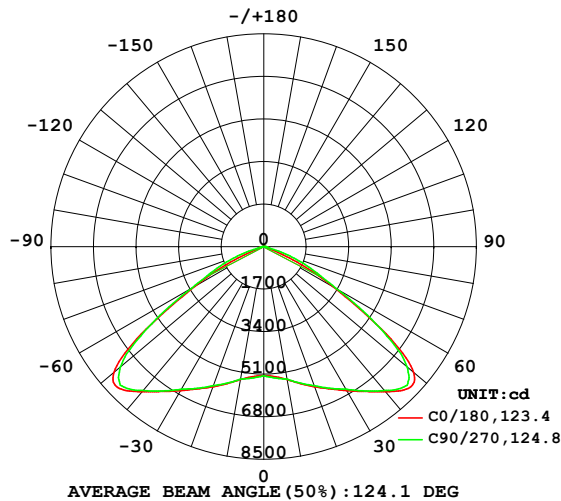


LUMINAIRE PHOTOMETRIC TEST REPORT

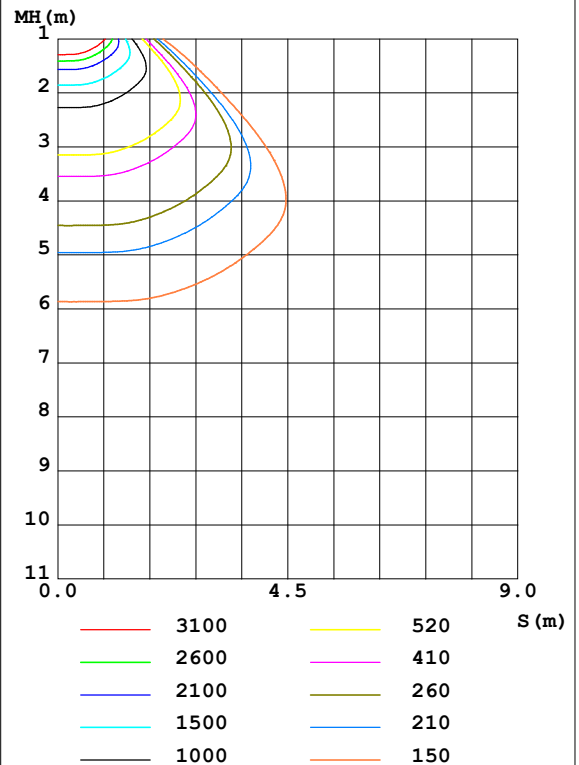
Test:U:229.9V I:0.8187A P:181.8W PF:0.9659 Lamp Flux:22612.7x1 lm		
NAME: LHB01-180	TYPE:180W	WEIGHT:
SPEC.:5000K Ra80 120DEG L02803	DIM.: 0.718*0.275*0.102	SERIAL No.:
MFR.:	SUR.:0.255*0.69	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 124.36 lm/W			
MODEL	LHB01-180	I _{max} (cd)	8158	S/MH(C0/180)	1.95
NOMINAL POWER(W)	180	LOR(%)	100.0	S/MH(C90/270)	1.93
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	22613	η UP,DN(C0-180)	0.0,50.1
NOMINAL FLUX(lm)	22612.7	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:2017-06-16

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	5220	5272	5270	5272	5220	5266	5270	5266	0- 5	124.9	124.9	0.55,0.55
10	5395	5439	5379	5439	5395	5420	5379	5420	5- 10	382.2	507.0	2.24,2.24
15	5664	5666	5645	5666	5664	5643	5645	5643	10- 15	657.6	1165	5.15,5.15
20	5959	5974	5912	5974	5959	5965	5912	5965	15- 20	958.8	2124	9.39,9.39
25	6272	6282	6242	6282	6272	6285	6242	6285	20- 25	1283	3407	15.1,15.1
30	6643	6636	6573	6636	6643	6660	6573	6660	25- 30	1634	5041	22.3,22.3
35	7066	7039	7040	7039	7066	7095	7040	7095	30- 35	2016	7057	31.2,31.2
40	7565	7475	7506	7475	7565	7530	7506	7530	35- 40	2436	9493	42,42
45	8061	7893	7924	7893	8061	7716	7924	7716	40- 45	2875	12367	54.7,54.7
50	7817	7943	7484	7943	7817	7470	7484	7470	45- 50	3185	15553	68.8,68.8
55	5736	5749	5649	5749	5736	5692	5649	5692	50- 55	2939	18492	81.8,81.8
60	3178	3196	3330	3196	3178	3224	3330	3224	55- 60	2048	20540	90.8,90.8
65	1472	1422	2084	1422	1472	1443	2084	1443	60- 65	1143	21683	95.9,95.9
70	277.3	542.0	1116	542.0	277.3	598.1	1116	598.1	65- 70	551.8	22235	98.3,98.3
75	169.0	280.8	240.2	280.8	169.0	303.6	240.2	303.6	70- 75	237.0	22472	99.4,99.4
80	109.8	94.56	101.5	94.56	109.8	91.38	101.5	91.38	75- 80	84.23	22556	99.7,99.7
85	35.42	52.28	55.07	52.28	35.42	49.87	55.07	49.87	80- 85	41.01	22597	99.9,99.9
90	6.010	10.17	8.587	10.17	6.010	8.339	8.587	8.339	85- 90	15.77	22613	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): 12367 lm

%lum = 54.7%

%lamp = 54.7%

Conical surface Flux(120deg): 20540 lm

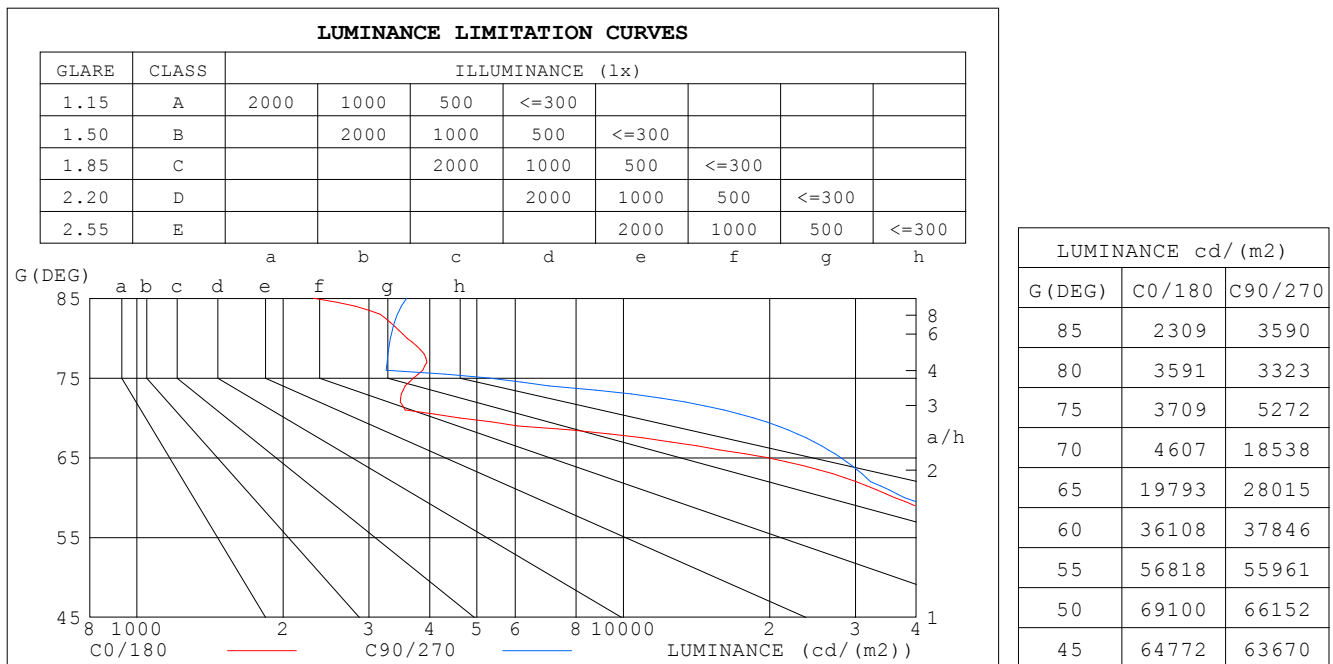
%lum = 90.8%

%lamp = 90.8%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-06-16

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

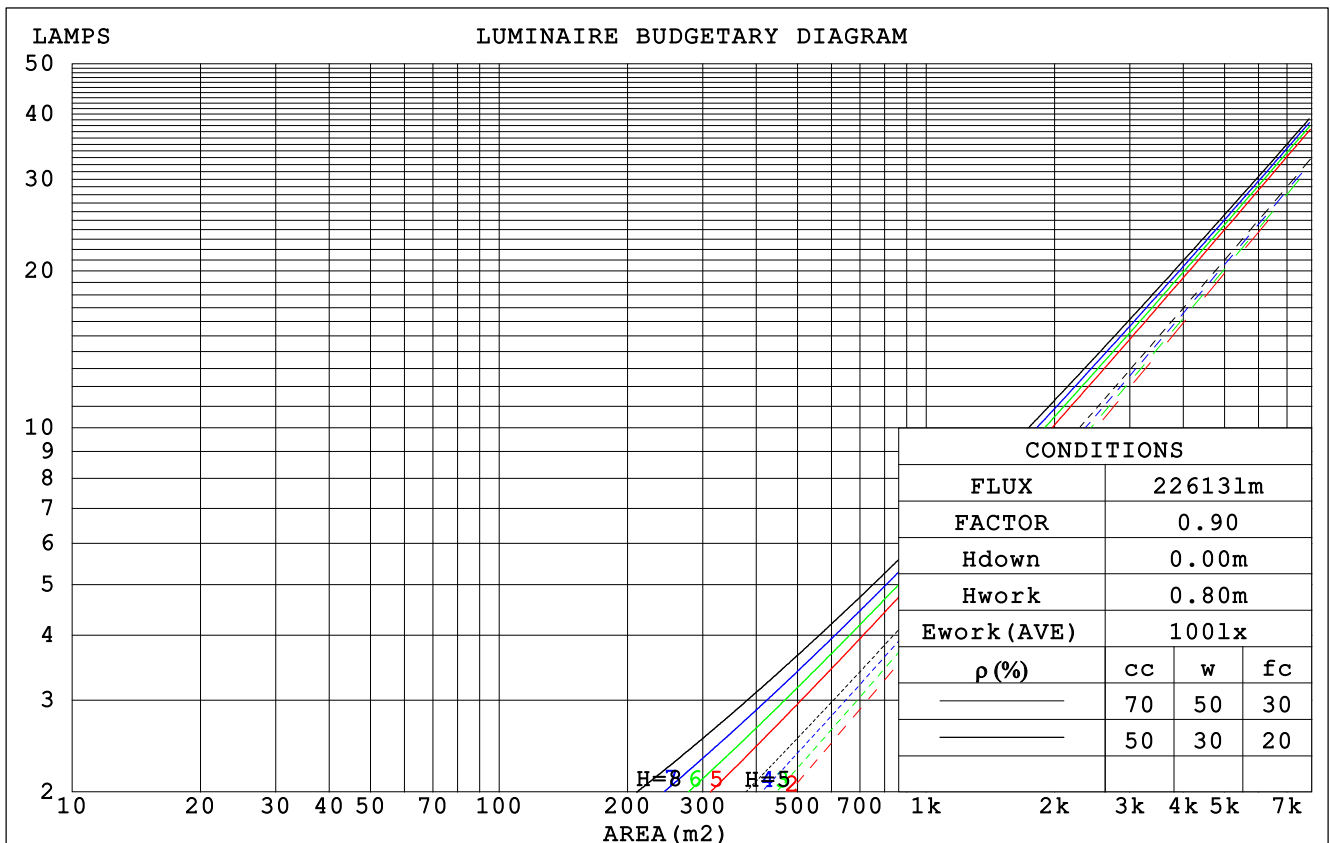


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-06-16

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	.00
1.0	1.06	1.02	.99	1.04	1.01	.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	.48	.61	.54	.48	.59	.52	.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	.42	.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: 2017-06-16

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	.247	.137	.043	.236	.132	.041	.226	.128	.040	
3.0	.253	.135	.040	.247	.133	.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	.208	.105	.030	.200	.103	.030	.194	.101	.030	.187	.099	.029	
7.0	.199	.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	.015	.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:2017-06-16

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	27.4	28.9	29.1	27.2	28.7	27.5	28.9	29.1
3H	27.1	28.5	27.4	28.7	28.9	27.5	28.8	27.8	29.1	29.3
4H	27.0	28.3	27.3	28.5	28.8	27.4	28.7	27.7	29.0	29.2
6H	26.9	28.1	27.2	28.4	28.7	27.3	28.5	27.6	28.8	29.1
8H	26.9	28.0	27.2	28.3	28.6	27.3	28.4	27.6	28.7	29.0
12H	26.8	27.9	27.2	28.2	28.5	27.2	28.3	27.6	28.6	28.9
4H 2H	27.2	28.5	27.5	28.8	29.0	27.3	28.6	27.6	28.8	29.1
3H	27.2	28.3	27.5	28.6	28.9	27.6	28.7	27.9	29.0	29.3
4H	27.1	28.1	27.5	28.4	28.7	27.5	28.6	27.9	28.9	29.2
6H	27.0	27.9	27.4	28.3	28.6	27.5	28.3	27.9	28.7	29.1
8H	27.0	27.8	27.4	28.2	28.5	27.4	28.2	27.8	28.6	29.0
12H	26.9	27.7	27.4	28.1	28.5	27.4	28.1	27.8	28.5	28.9
8H 4H	27.0	27.8	27.4	28.2	28.6	27.4	28.2	27.8	28.6	29.0
6H	26.9	27.6	27.4	28.0	28.4	27.4	28.0	27.8	28.4	28.9
8H	26.9	27.5	27.4	27.9	28.4	27.3	27.9	27.8	28.3	28.8
12H	26.9	27.4	27.4	27.8	28.3	27.3	27.8	27.8	28.3	28.7
12H 4H	27.0	27.7	27.4	28.1	28.5	27.4	28.1	27.8	28.5	28.9
6H	26.9	27.5	27.4	27.9	28.4	27.3	27.9	27.8	28.3	28.8
8H	26.9	27.4	27.4	27.8	28.3	27.3	27.8	27.8	28.2	28.7
Variations with the observer position at spacings:										
S = 1.0H	+ 0.4 / - 0.6					+ 0.3 / - 0.5				
1.5H	+ 1.1 / - 2.7					+ 1.0 / - 2.2				
2.0H	+ 2.2 / - 3.8					+ 1.9 / - 3.8				

CIE Pub.117 Corrected 22613 lm Total Lamp Luminous Flux.(8log(F/F0) = 10.8)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-16

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:

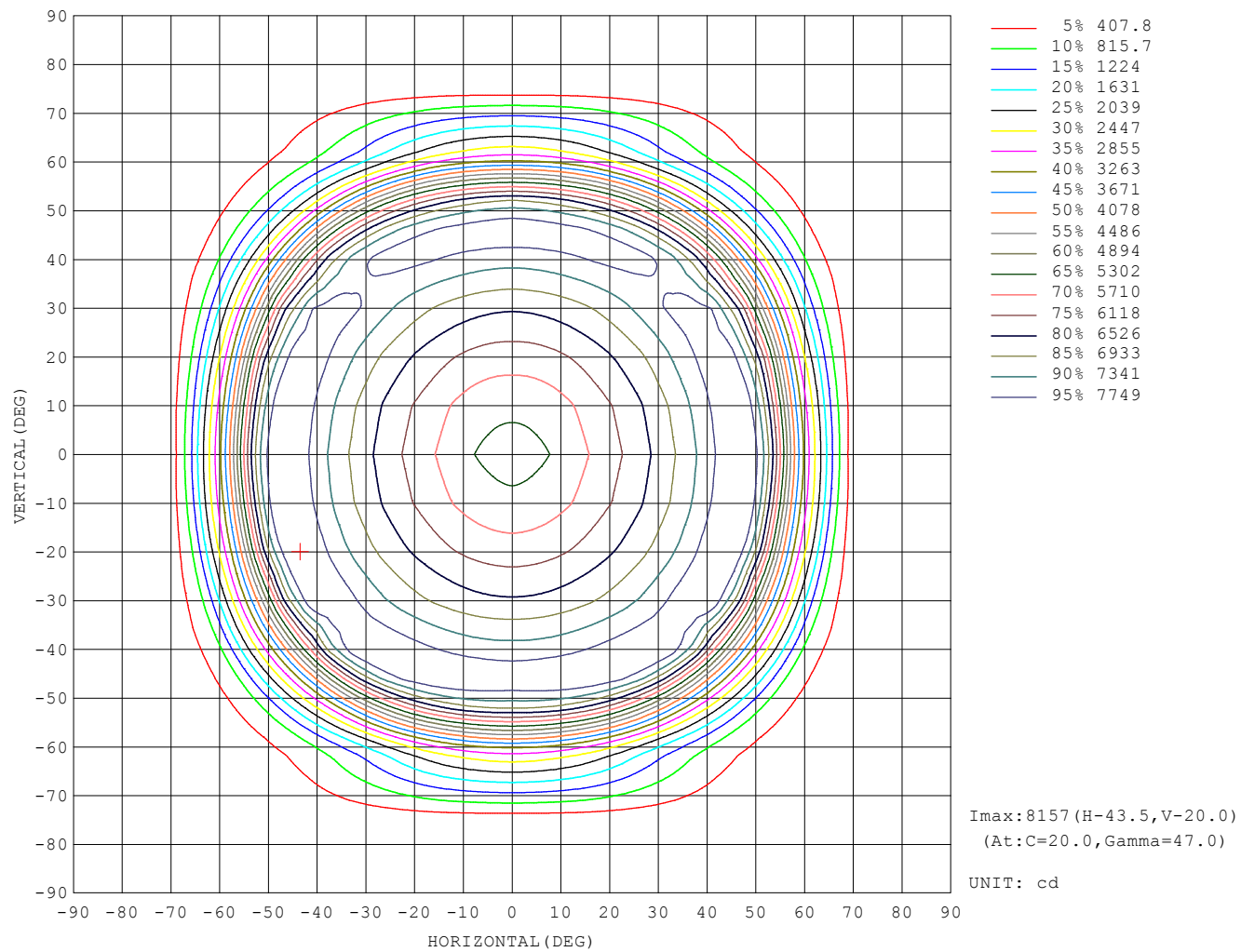
UTILIZATION FACTORS TABLE

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	41	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	65
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: 2017-06-16

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:

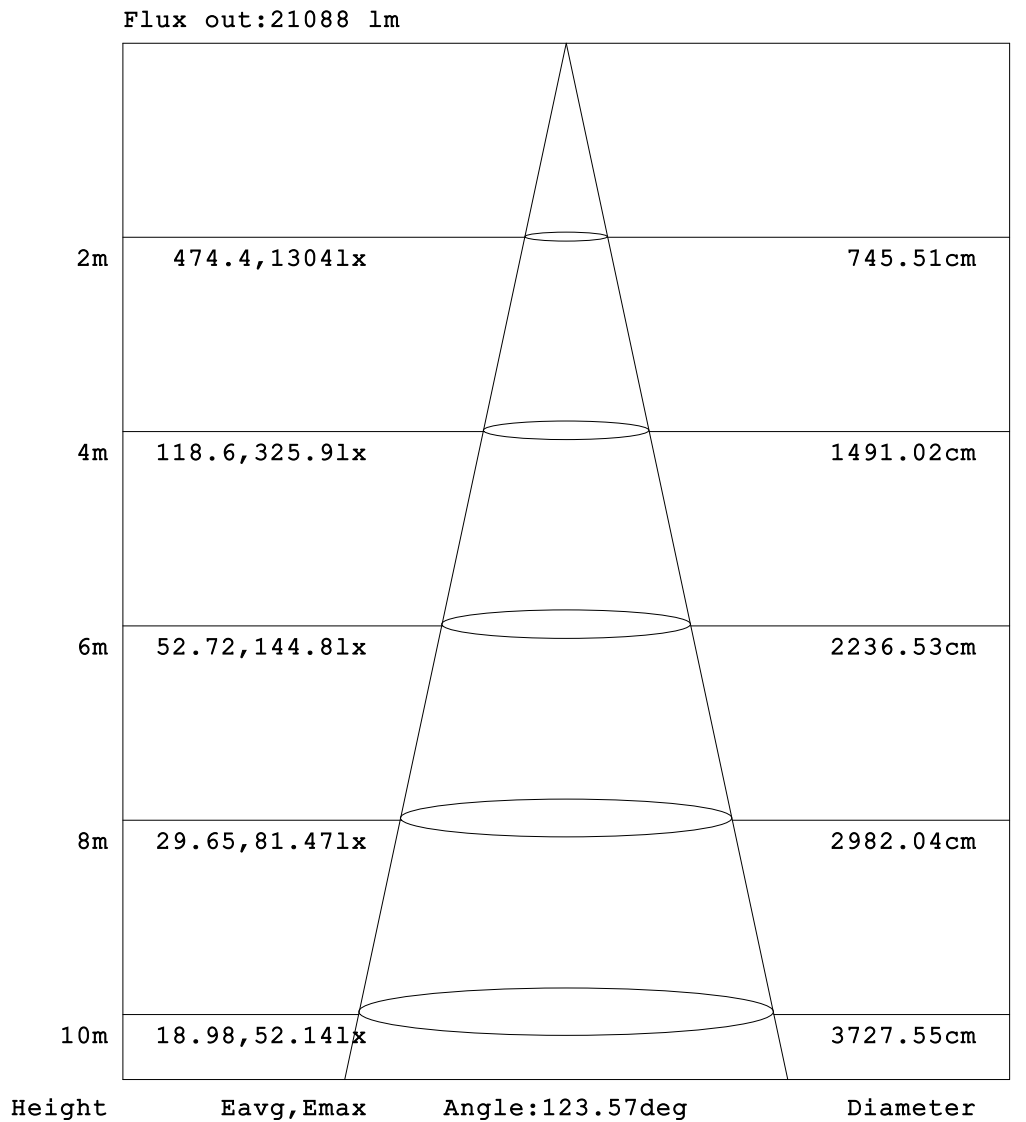
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-06-16

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

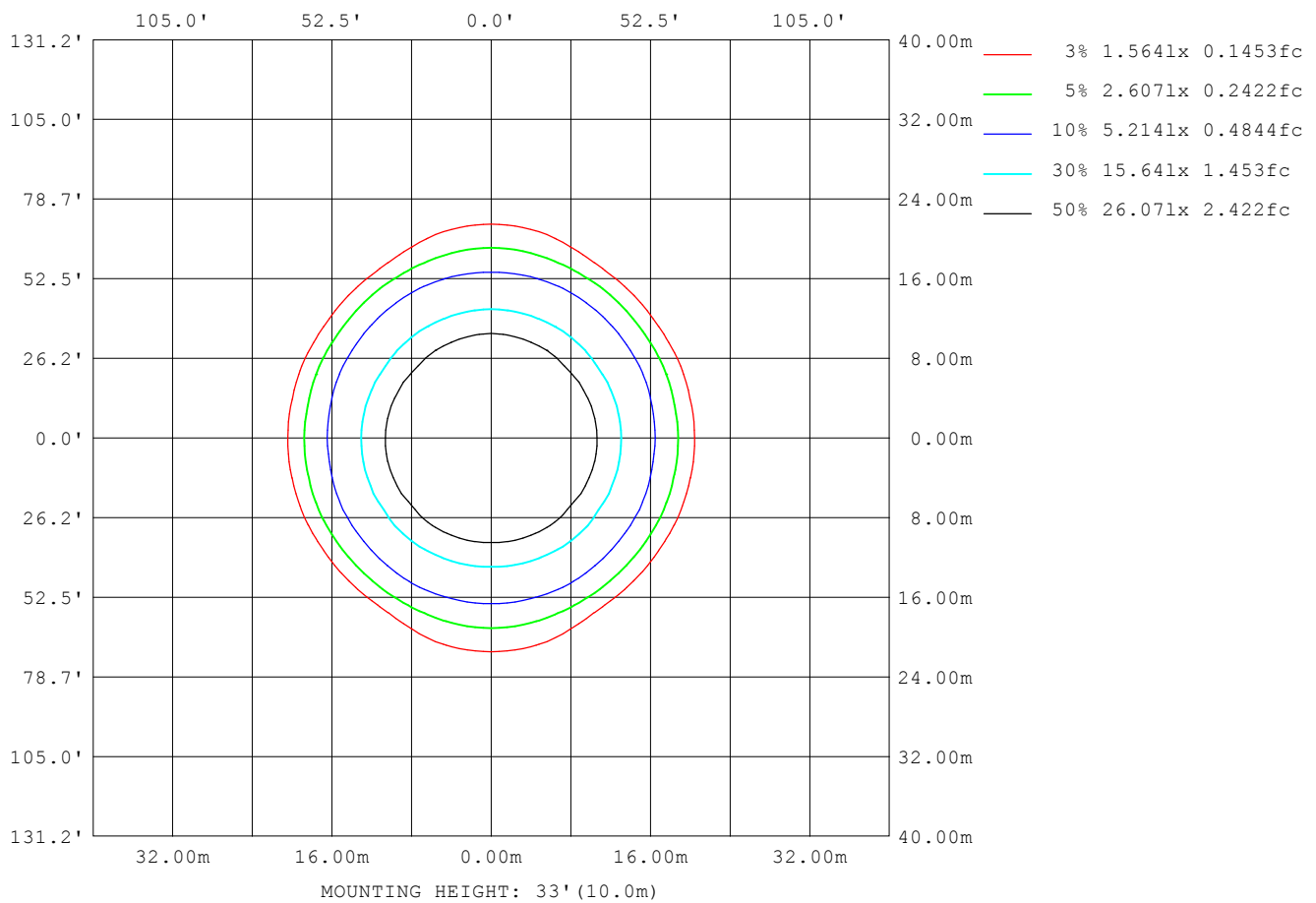


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-16

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: 2017-06-16

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:229.9V I:0.8187A P:181.8W PF:0.9659 Lamp Flux:22612.7x1 lm		
NAME: LHB01-180	TYPE:180W	WEIGHT:
SPEC.:5000K Ra80 120DEG L02803	DIM.: 0.718*0.275*0.102	SERIAL No.:
MFR.:	SUR.:0.255*0.69	Shielding Angle:

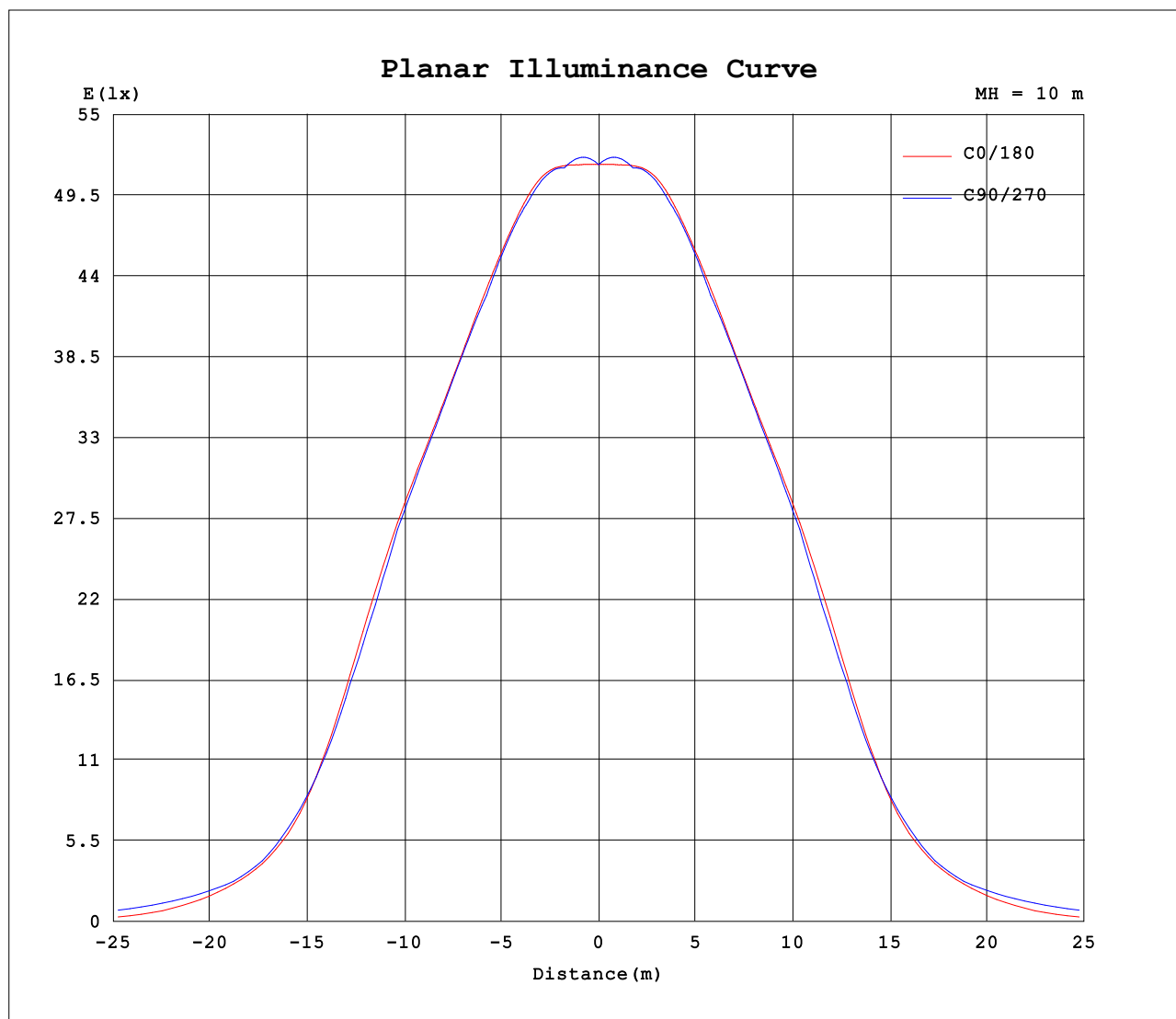
AvgL	cd/m2
L_0~180 (65) av	19793
L_0~180 (75) av	3709
L_0~180 (85) av	2309
L_90~270 (65) av	28015
L_90~270 (75) av	5272
L_90~270 (85) av	3590
L_45 (65) av	19256
L_45 (75) av	6415
L_45 (85) av	3329

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-16

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: 2017-06-16

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:

```

```

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:

```