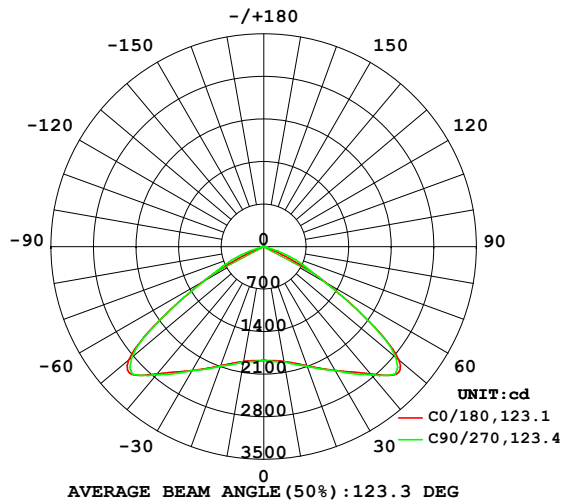


LUMINAIRE PHOTOMETRIC TEST REPORT

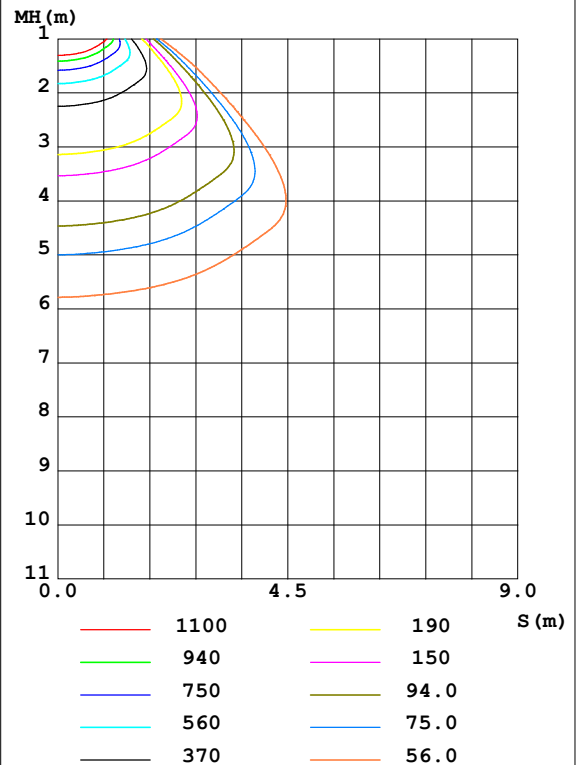
Test:U:230.0V I:0.2779A P:63.13W PF:0.9876 Lamp Flux:8153.71x1 lm		
NAME: LHB01-60	TYPE:60W	WEIGHT:
SPEC.:5000K Ra70 120DEG L02803	DIM.: 0.486*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.466*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 129.15 lm/W			
MODEL	LHB01-60	I _{max} (cd)	3036	S/MH (C0/180)	1.94
NOMINAL POWER(W)	60	LOR(%)	100.0	S/MH (C90/270)	1.94
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	8153.7	η UP,DN(C0-180)	0.0,49.3
NOMINAL FLUX(lm)	8153.71	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.7
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:2017-03-29

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	1883	1897	1899	1897	1883	1898	1899	1898	0- 5	45.11	45.11	0.55,0.55
10	1920	1935	1924	1935	1920	1937	1924	1937	5- 10	136.9	182.0	2.23,2.23
15	1988	1998	2007	1998	1988	1999	2007	1999	10- 15	233.3	415.4	5.09,5.09
20	2086	2106	2091	2106	2086	2101	2091	2101	15- 20	338.0	753.4	9.24,9.24
25	2211	2224	2222	2224	2211	2218	2222	2218	20- 25	452.8	1206	14.8,14.8
30	2354	2371	2352	2371	2354	2363	2352	2363	25- 30	580.1	1786	21.9,21.9
35	2518	2540	2551	2540	2518	2535	2551	2535	30- 35	720.8	2507	30.7,30.7
40	2732	2731	2749	2731	2732	2727	2749	2727	35- 40	880.8	3388	41.6,41.6
45	2991	2902	2979	2902	2991	2895	2979	2895	40- 45	1059	4447	54.5,54.5
50	2900	2873	2834	2873	2900	2907	2834	2907	45- 50	1193	5640	69.2,69.2
55	2047	1931	2048	1931	2047	2165	2048	2165	50- 55	1082	6722	82.4,82.4
60	1163	1027	1133	1027	1163	1222	1133	1222	55- 60	725.8	7448	91.3,91.3
65	445.7	397.1	709.0	397.1	445.7	543.0	709.0	543.0	60- 65	392.9	7841	96.2,96.2
70	82.87	150.1	380.8	150.1	82.87	217.8	380.8	217.8	65- 70	180.5	8021	98.4,98.4
75	52.86	82.97	83.74	82.97	52.86	117.2	83.74	117.2	70- 75	80.48	8102	99.4,99.4
80	27.03	31.36	36.06	31.36	27.03	42.48	36.06	42.48	75- 80	30.59	8132	99.7,99.7
85	1.347	17.40	19.56	17.40	1.347	22.81	19.56	22.81	80- 85	15.31	8148	99.9,99.9
90	1.944	3.531	3.056	3.531	1.944	3.161	3.056	3.161	85- 90	5.949	8154	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): 4447.3 lm

%lum = 54.5%

%lamp = 54.5%

Conical surface Flux(120deg): 7448 lm

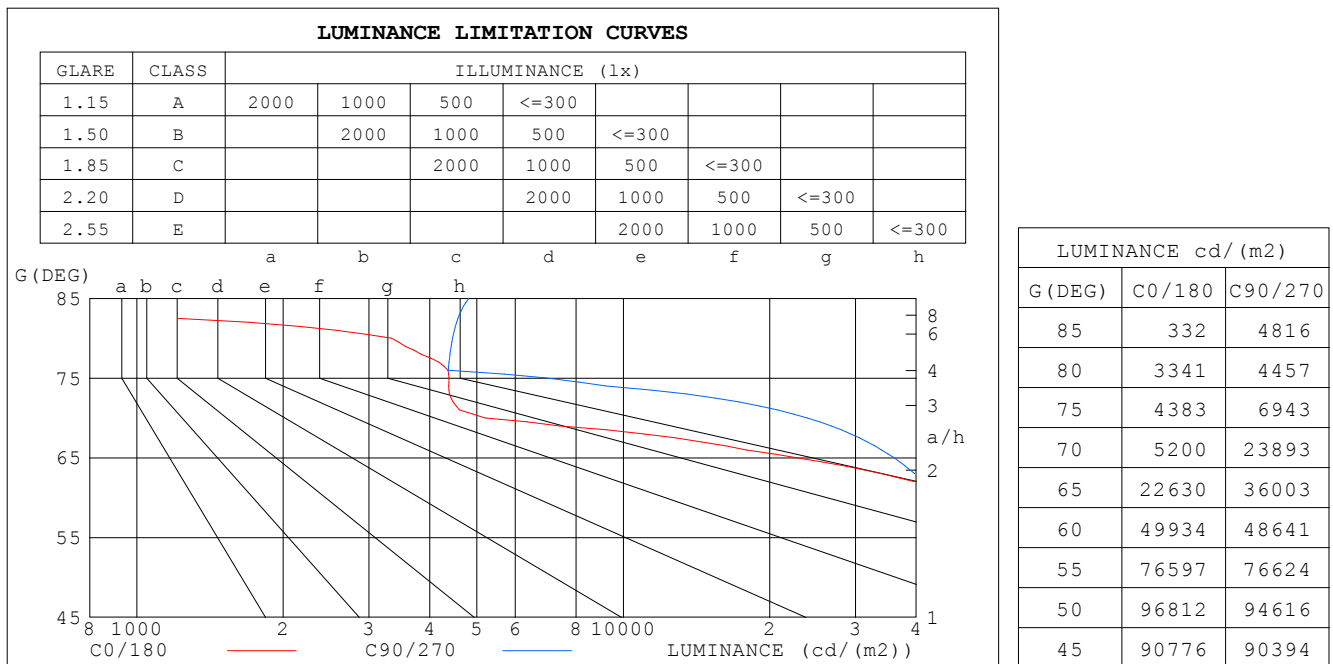
%lum = 91.3%

%lamp = 91.3%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-03-29

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

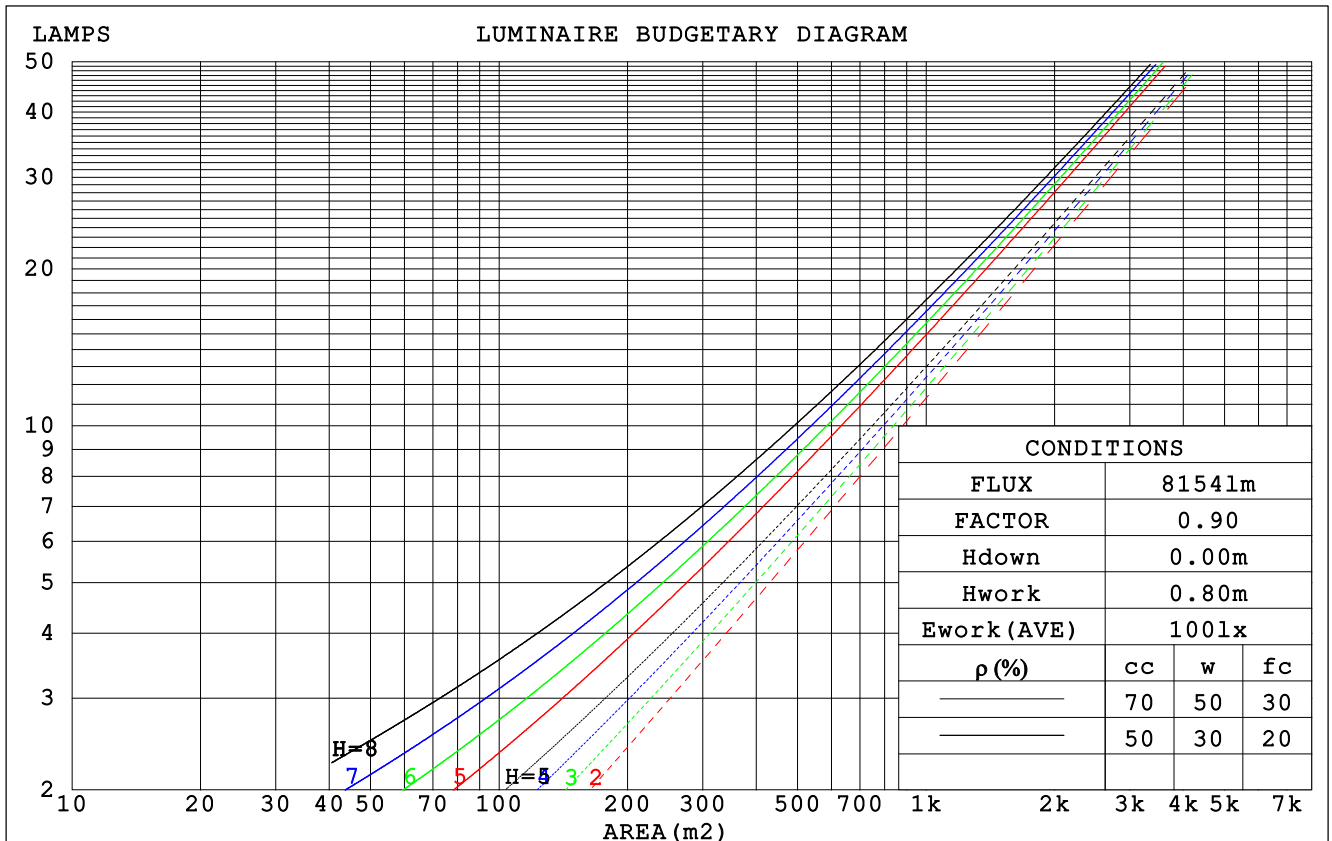


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-29

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	1.06	1.02	.99	1.04	1.01	.97	.00	.97	.94	.96	.94	.92	.92	.91	.89	.87
2.0	.93	.87	.82	.92	.86	.81	.88	.83	.79	.85	.81	.77	.82	.79	.76	.74
3.0	.82	.74	.68	.81	.73	.68	.78	.72	.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	.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	.27	.26
10.0	.38	.30	.25	.38	.30	.25	.37	.30	.25	.36	.29	.25	.35	.29	.24	.23



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-29

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	.266	.151	.048	.259	.148	.047	.246	.141	.045	.234	.135	.043	.223	.129	.042	
2.0	.264	.144	.044	.257	.142	.044	.246	.137	.042	.235	.132	.041	.226	.128	.040	
3.0	.252	.134	.040	.247	.132	.040	.237	.128	.039	.228	.125	.038	.219	.121	.037	
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	.164	.079	.022	.159	.078	.022	.154	.077	.022	.150	.076	.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	.168	.132	.101	.144	.114	.088	.099	.079	.061	.057	.046	.036	.018	.015	.012	
3.0	.161	.114	.077	.138	.098	.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:2017-03-29

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	28.1	29.6	28.3	29.8	30.0	28.2	29.7	28.4	29.9	30.1
3H	27.9	29.3	28.2	29.6	29.8	28.4	29.7	28.7	30.0	30.2
4H	27.9	29.1	28.2	29.4	29.7	28.3	29.6	28.6	29.8	30.1
6H	27.8	29.0	28.1	29.2	29.5	28.2	29.4	28.5	29.7	30.0
8H	27.7	28.9	28.0	29.1	29.4	28.2	29.3	28.5	29.6	29.9
12H	27.7	28.8	28.0	29.1	29.4	28.1	29.2	28.5	29.5	29.8
4H 2H	28.1	29.4	28.4	29.6	29.9	28.1	29.4	28.5	29.7	29.9
3H	28.0	29.1	28.3	29.4	29.7	28.4	29.5	28.7	29.8	30.1
4H	27.9	28.9	28.3	29.2	29.5	28.4	29.4	28.7	29.7	30.0
6H	27.8	28.7	28.2	29.0	29.4	28.3	29.2	28.7	29.5	29.9
8H	27.8	28.6	28.2	28.9	29.3	28.2	29.1	28.6	29.4	29.8
12H	27.7	28.5	28.2	28.9	29.3	28.2	28.9	28.6	29.3	29.7
8H 4H	27.8	28.6	28.2	29.0	29.3	28.2	29.0	28.6	29.4	29.8
6H	27.7	28.4	28.2	28.8	29.2	28.2	28.8	28.6	29.2	29.7
8H	27.7	28.3	28.1	28.7	29.1	28.1	28.7	28.6	29.1	29.6
12H	27.7	28.2	28.1	28.6	29.1	28.1	28.6	28.6	29.1	29.5
12H 4H	27.7	28.5	28.2	28.9	29.3	28.2	28.9	28.6	29.3	29.7
6H	27.7	28.3	28.1	28.7	29.1	28.1	28.7	28.6	29.1	29.6
8H	27.7	28.2	28.1	28.6	29.1	28.1	28.6	28.6	29.1	29.5
Variations with the observer position at spacings:										
S = 1.0H	+ 0.5 / - 0.6					+ 0.4 / - 0.5				
1.5H	+ 1.1 / - 2.9					+ 1.0 / - 2.4				
2.0H	+ 2.3 / - 5.0					+ 2.2 / - 4.9				

CIE Pub.117 Corrected 8154 lm Total Lamp Luminous Flux.(8log(F/F0) = 7.3)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-29

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:

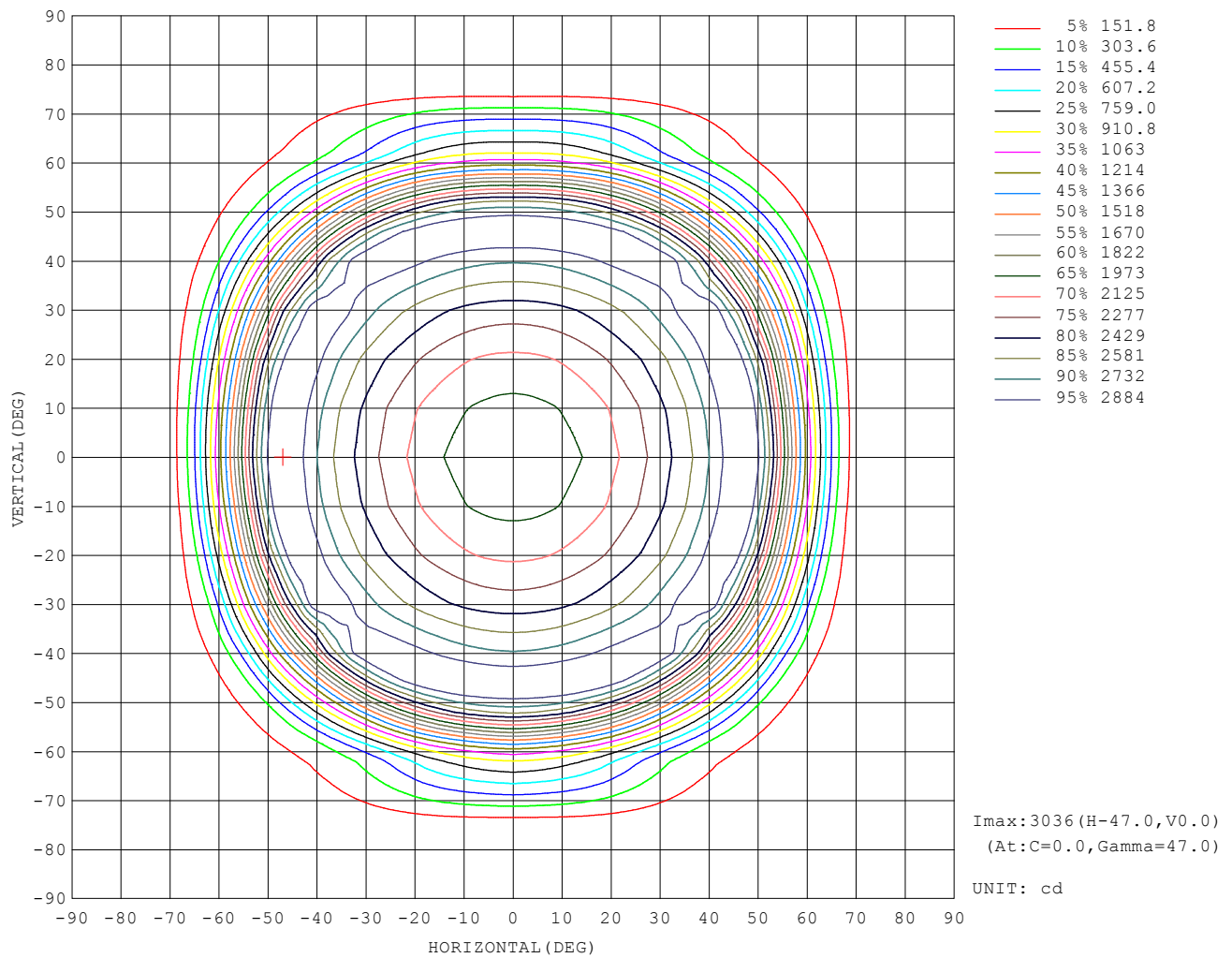
UTILIZATION FACTORS TABLE

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	41	34	53	41	34	52	41	34	27
0.80	66	54	46	65	53	46	63	53	46	39
1.00	77	66	58	75	65	58	73	66	58	51
1.25	85	75	68	83	74	67	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	85
5.00	109	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: 2017-03-29

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:

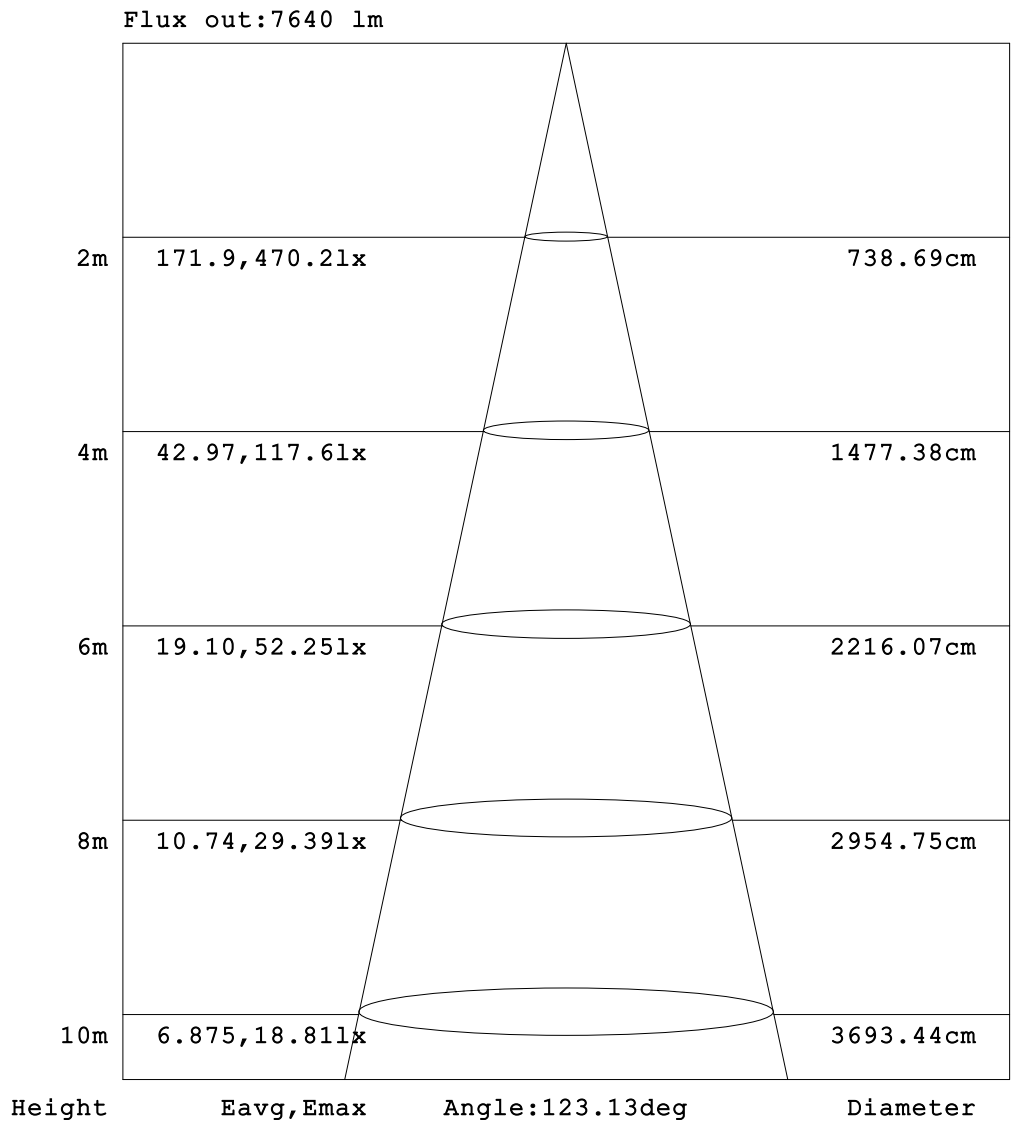
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-29

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

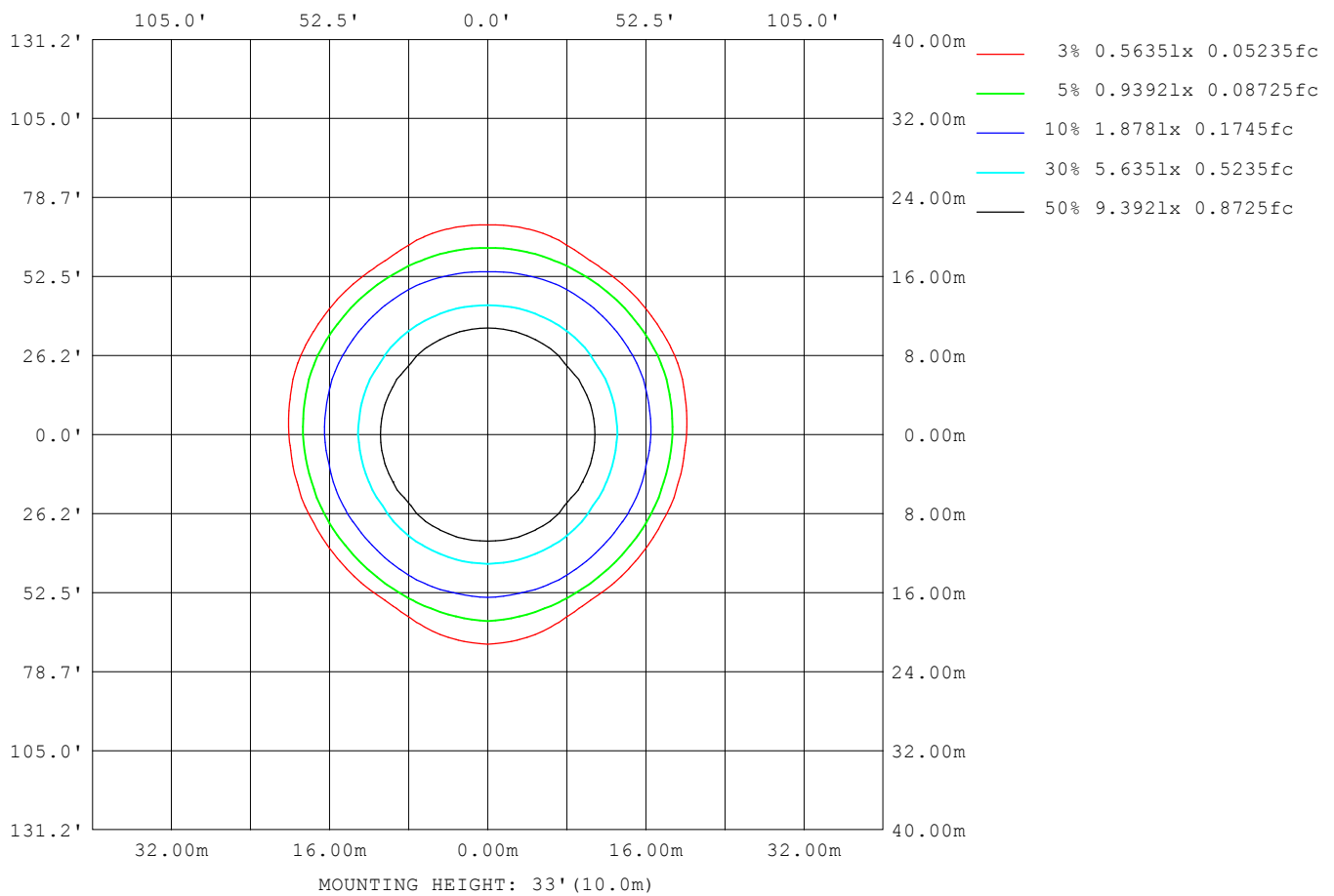


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-29

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: 2017-03-29

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:0.2779A P:63.13W PF:0.9876 Lamp Flux:8153.71x1 lm		
NAME: LHB01-60	TYPE:60W	WEIGHT:
SPEC.:5000K Ra70 120DEG L02803	DIM.: 0.486*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.466*0.1	Shielding Angle:

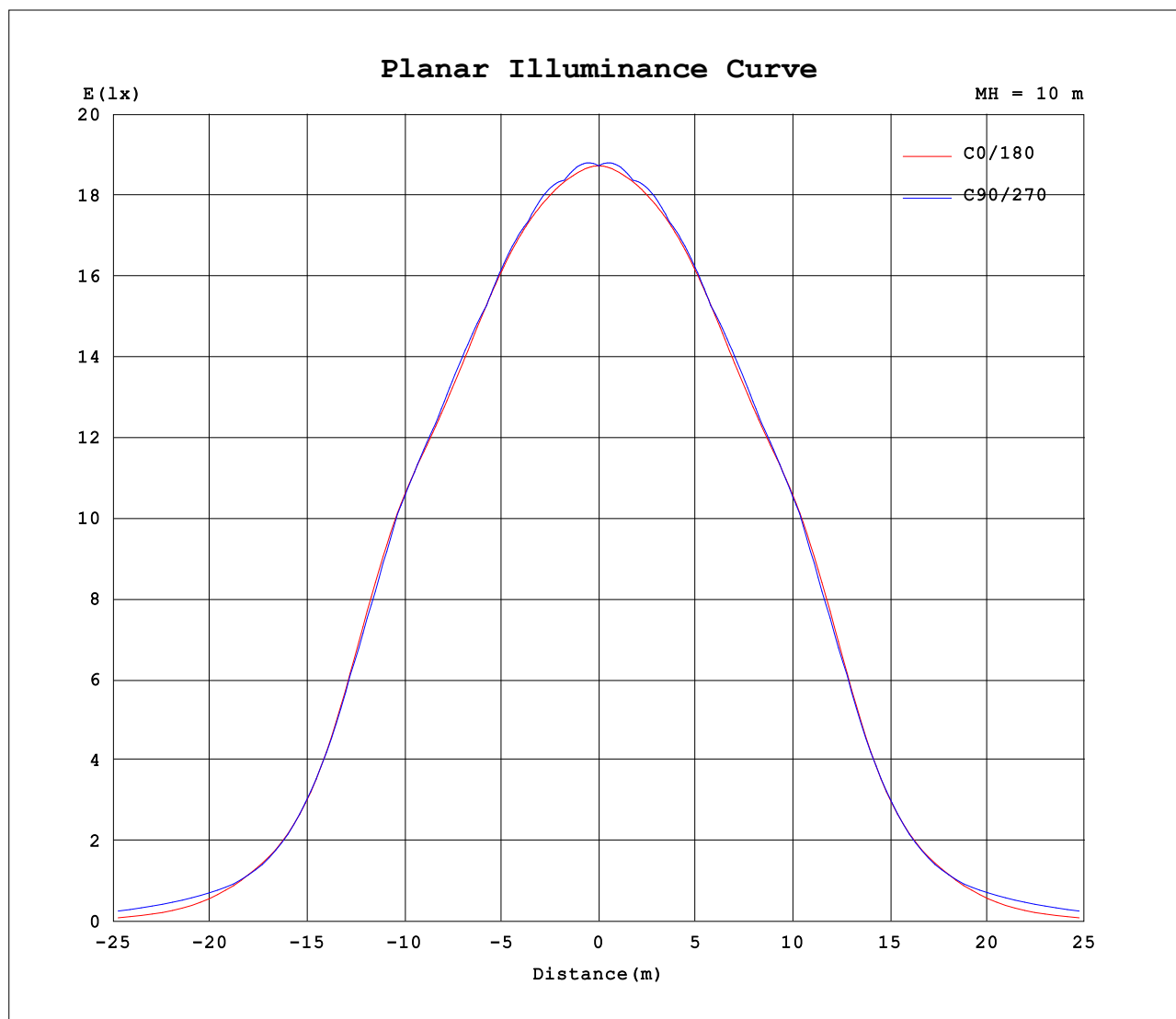
AvgL	cd/m2
L_0~180 (65) av	22630
L_0~180 (75) av	4383
L_0~180 (85) av	332
L_90~270 (65) av	36003
L_90~270 (75) av	6943
L_90~270 (85) av	4816
L_45 (65) av	23869
L_45 (75) av	8299
L_45 (85) av	4951

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-03-29

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: 2017-03-29

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: 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:

```