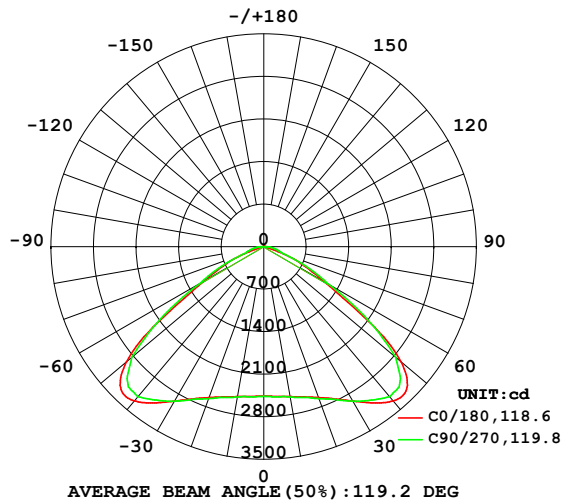


LUMINAIRE PHOTOMETRIC TEST REPORT

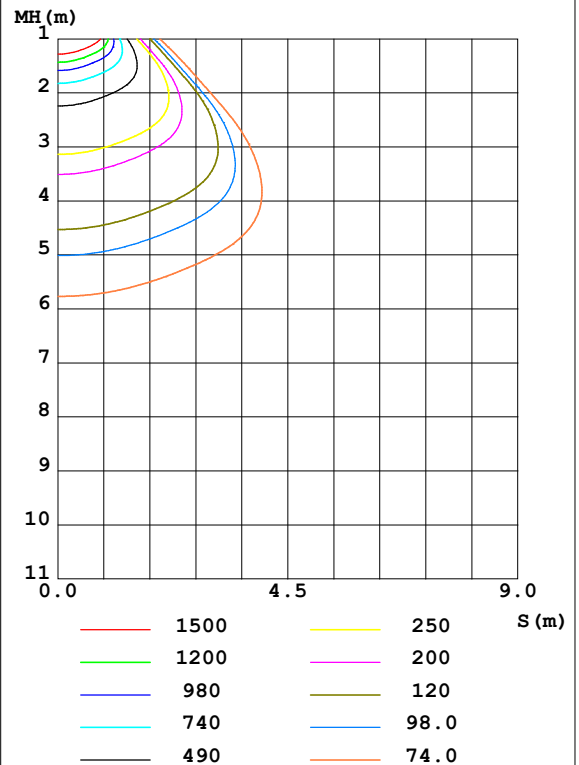
Test:U:230.0V I:0.2650A P:59.89W PF:0.9826 Lamp Flux:9431.29x1 lm		
NAME: LHB01-60H	TYPE:60W	WEIGHT:
SPEC.:5000K Ra70 L06403	DIM.: 0.486*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.466*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 157.48 lm/W			
MODEL	LHB01-60H	I _{max} (cd)	3366	S/MH (C0/180)	1.82
NOMINAL POWER(W)	60	LOR(%)	100.0	S/MH (C90/270)	1.79
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	9431.3	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	9431.29	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.75
TEST VOLTAGE(V)	230	η down (%)	100.0	CIBSE SHR MAX	1.75

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:2017-09-26

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	2474	2480	2480	2480	2474	2482	2480	2482	0- 5	59.11	59.11	0.63,0.63
10	2506	2508	2513	2508	2506	2514	2513	2514	5- 10	178.5	237.6	2.52,2.52
15	2559	2566	2569	2566	2559	2579	2569	2579	10- 15	301.5	539.1	5.72,5.72
20	2642	2645	2662	2645	2642	2661	2662	2661	15- 20	430.3	969.4	10.3,10.3
25	2765	2765	2775	2765	2765	2784	2775	2784	20- 25	569.0	1538	16.3,16.3
30	2934	2924	2936	2924	2934	2946	2936	2946	25- 30	722.4	2261	24,24
35	3137	3100	3083	3100	3137	3132	3083	3132	30- 35	892.0	3153	33.4,33.4
40	3315	3241	3223	3241	3315	3300	3223	3300	35- 40	1066	4219	44.7,44.7
45	3323	3170	3167	3170	3323	3251	3167	3251	40- 45	1211	5431	57.6,57.6
50	2949	2883	2832	2883	2949	2917	2832	2917	45- 50	1247	6678	70.8,70.8
55	2001	2094	2077	2094	2001	1983	2077	1983	50- 55	1077	7755	82.2,82.2
60	1148	1228	1214	1228	1148	1180	1214	1180	55- 60	737.7	8493	90,90
65	706.5	723.6	771.9	723.6	706.5	731.7	771.9	731.7	60- 65	461.3	8954	94.9,94.9
70	303.5	355.0	329.7	355.0	303.5	376.3	329.7	376.3	65- 70	271.5	9225	97.8,97.8
75	51.06	91.14	247.9	91.14	51.06	93.81	247.9	93.81	70- 75	108.8	9334	99,99
80	29.07	42.56	166.1	42.56	29.07	43.64	166.1	43.64	75- 80	53.88	9388	99.5,99.5
85	6.642	22.01	84.26	22.01	6.642	22.55	84.26	22.55	80- 85	31.79	9420	99.9,99.9
90	2.504	2.745	2.459	2.745	2.504	2.551	2.459	2.551	85- 90	11.38	9431	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): 5430.6 lm

%lum = 57.6%

%lamp = 57.6%

Conical surface Flux(120deg): 8492.8 lm

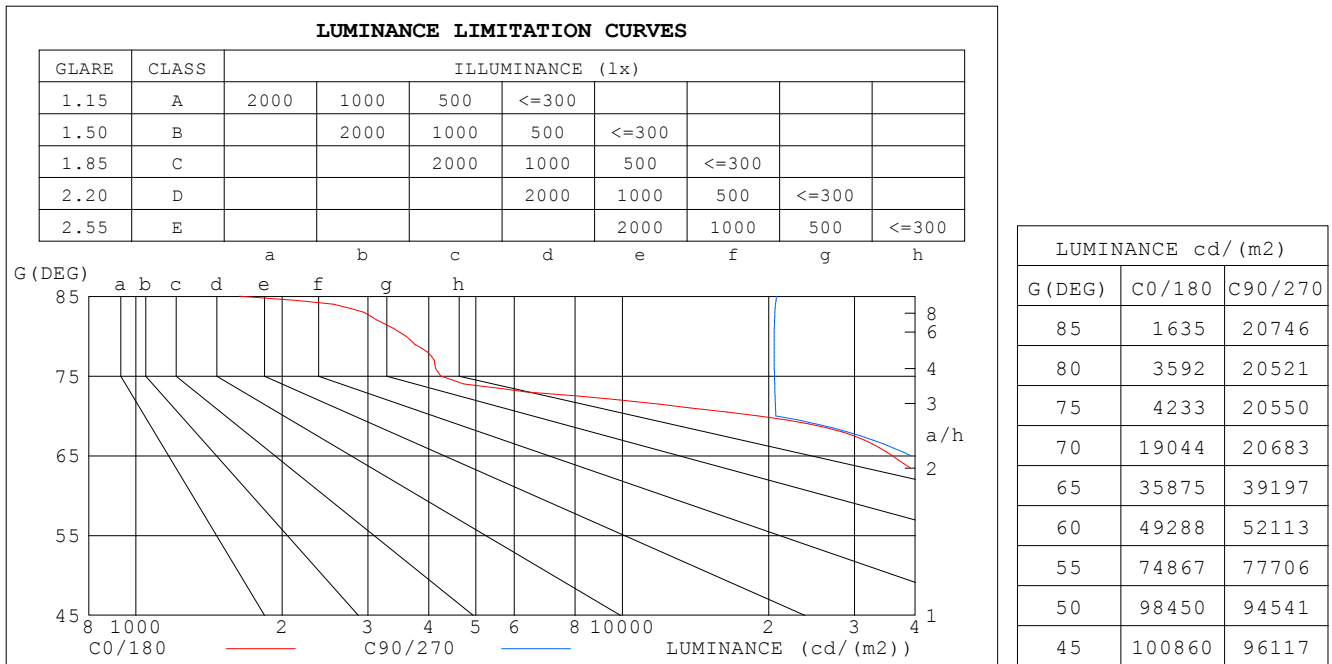
%lum = 90.0%

%lamp = 90.0%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-09-26

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

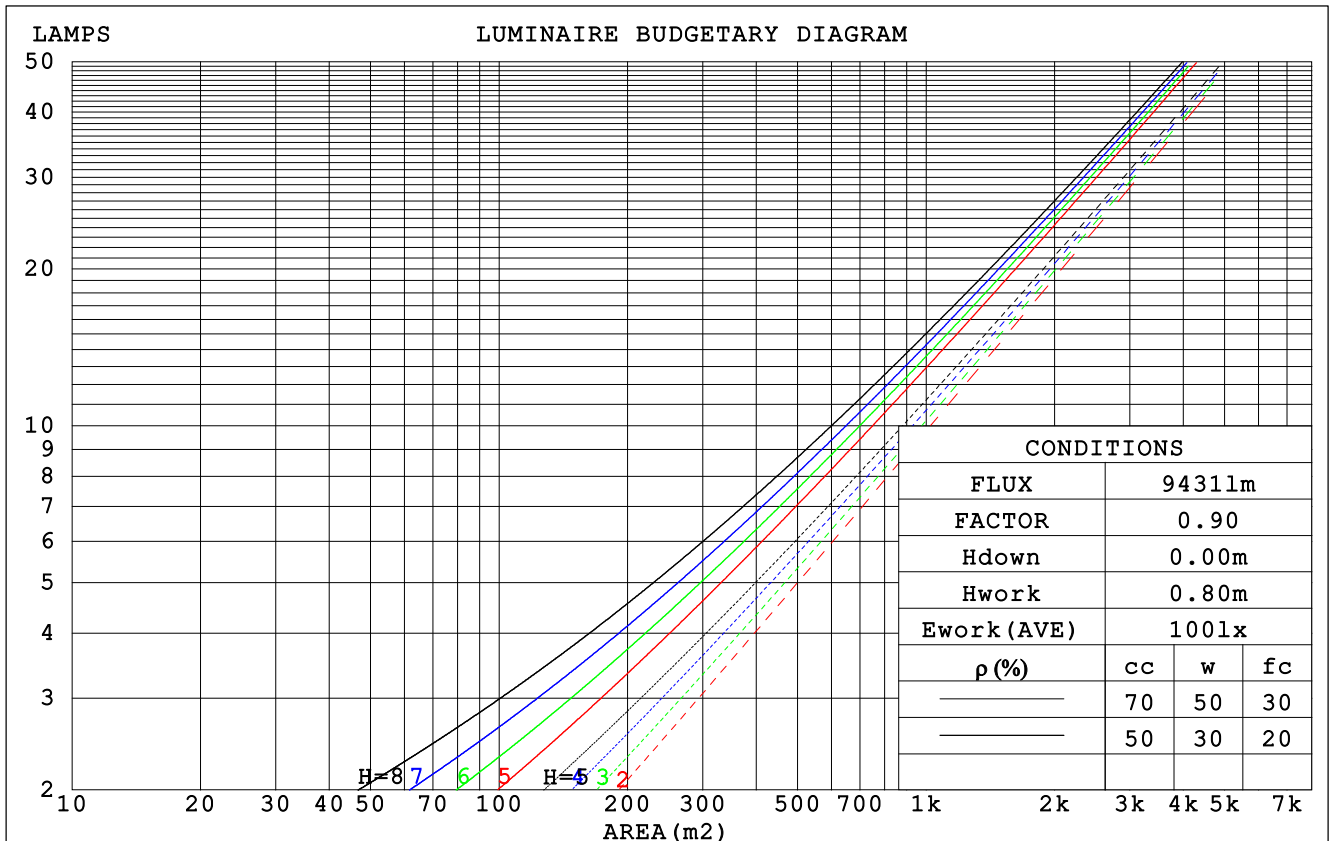


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-09-26

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	.90	.89	.87
2.0	.94	.87	.82	.92	.86	.81	.88	.83	.79	.85	.81	.78	.82	.79	.76	.74
3.0	.82	.75	.69	.81	.74	.68	.78	.72	.67	.75	.70	.66	.73	.68	.65	.63
4.0	.73	.65	.58	.72	.64	.58	.69	.62	.57	.67	.61	.56	.65	.60	.55	.53
5.0	.65	.56	.50	.64	.56	.49	.62	.54	.49	.60	.53	.48	.58	.52	.48	.46
6.0	.58	.49	.43	.57	.49	.43	.55	.48	.42	.54	.47	.42	.52	.46	.42	.40
7.0	.52	.44	.37	.51	.43	.37	.50	.42	.37	.48	.42	.37	.47	.41	.36	.34
8.0	.47	.39	.33	.47	.38	.33	.45	.38	.33	.44	.37	.32	.43	.37	.32	.30
9.0	.43	.35	.29	.42	.35	.29	.41	.34	.29	.40	.34	.29	.39	.33	.29	.27
10.0	.39	.31	.26	.39	.31	.26	.38	.31	.26	.37	.30	.26	.36	.30	.26	.24



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-09-26

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	.262	.144	.044	.256	.141	.043	.245	.136	.042	.234	.131	.041	.224	.127	.040		
3.0	.250	.133	.040	.245	.131	.039	.235	.127	.039	.225	.123	.038	.217	.120	.037		
4.0	.236	.123	.036	.231	.121	.036	.222	.118	.035	.214	.115	.035	.206	.112	.034		
5.0	.222	.113	.033	.218	.112	.033	.210	.109	.032	.202	.107	.032	.195	.104	.031		
6.0	.209	.105	.030	.205	.103	.030	.198	.101	.029	.191	.099	.029	.185	.097	.029		
7.0	.196	.097	.027	.193	.096	.027	.186	.094	.027	.180	.092	.027	.175	.091	.027		
8.0	.184	.090	.025	.181	.089	.025	.176	.088	.025	.170	.086	.025	.165	.085	.025		
9.0	.174	.084	.023	.171	.083	.023	.166	.082	.023	.161	.081	.023	.156	.079	.023		
10.0	.164	.079	.022	.162	.078	.022	.157	.077	.022	.152	.076	.022	.148	.075	.021		

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	.102	.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	.052	.036	.022	.017	.012	.007		
5.0	.147	.090	.048	.126	.078	.042	.087	.055	.030	.050	.032	.018	.016	.010	.006		
6.0	.141	.082	.040	.121	.071	.035	.083	.050	.025	.048	.029	.015	.016	.010	.005		
7.0	.134	.075	.034	.116	.065	.029	.080	.046	.021	.046	.027	.012	.015	.009	.004		
8.0	.128	.069	.029	.111	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.004		
9.0	.123	.065	.025	.106	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003		
10.0	.117	.060	.022	.101	.052	.020	.070	.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:2017-09-26

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	28.4	29.8	30.0	28.2	29.6	28.4	29.8	30.0
3H	28.3	29.6	28.5	29.8	30.1	28.4	29.7	28.7	30.0	30.2
4H	28.2	29.4	28.5	29.7	29.9	28.4	29.7	28.7	29.9	30.2
6H	28.1	29.3	28.4	29.5	29.8	28.4	29.6	28.7	29.9	30.2
8H	28.0	29.2	28.4	29.4	29.7	28.4	29.6	28.8	29.9	30.1
12H	28.0	29.1	28.3	29.4	29.7	28.4	29.5	28.8	29.8	30.1
4H 2H	28.2	29.5	28.6	29.8	30.0	28.3	29.6	28.6	29.8	30.1
3H	28.4	29.5	28.8	29.8	30.1	28.6	29.7	28.9	30.0	30.3
4H	28.4	29.4	28.7	29.7	30.0	28.6	29.6	29.0	29.9	30.3
6H	28.3	29.2	28.7	29.5	29.9	28.7	29.6	29.1	29.9	30.3
8H	28.2	29.0	28.7	29.4	29.8	28.8	29.6	29.2	29.9	30.3
12H	28.2	28.9	28.6	29.3	29.7	28.8	29.5	29.2	29.9	30.3
8H 4H	28.3	29.1	28.7	29.4	29.8	28.5	29.3	28.9	29.7	30.1
6H	28.2	28.9	28.6	29.3	29.7	28.7	29.3	29.1	29.7	30.1
8H	28.2	28.8	28.6	29.2	29.6	28.7	29.3	29.2	29.7	30.2
12H	28.1	28.6	28.6	29.1	29.6	28.8	29.3	29.3	29.8	30.2
12H 4H	28.2	29.0	28.7	29.4	29.8	28.5	29.2	28.9	29.6	30.0
6H	28.2	28.8	28.6	29.2	29.6	28.6	29.2	29.1	29.6	30.1
8H	28.1	28.6	28.6	29.1	29.6	28.7	29.2	29.2	29.7	30.1
Variations with the observer position at spacings:										
S = 1.0H	+ 0.7 / - 0.8					+ 0.4 / - 0.6				
1.5H	+ 0.7 / - 1.7					+ 0.6 / - 1.5				
2.0H	+ 2.0 / - 2.6					+ 1.6 / - 2.3				

CIE Pub.117 Corrected 9431 lm Total Lamp Luminous Flux.(8log(F/F0) = 7.8)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-09-26

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:

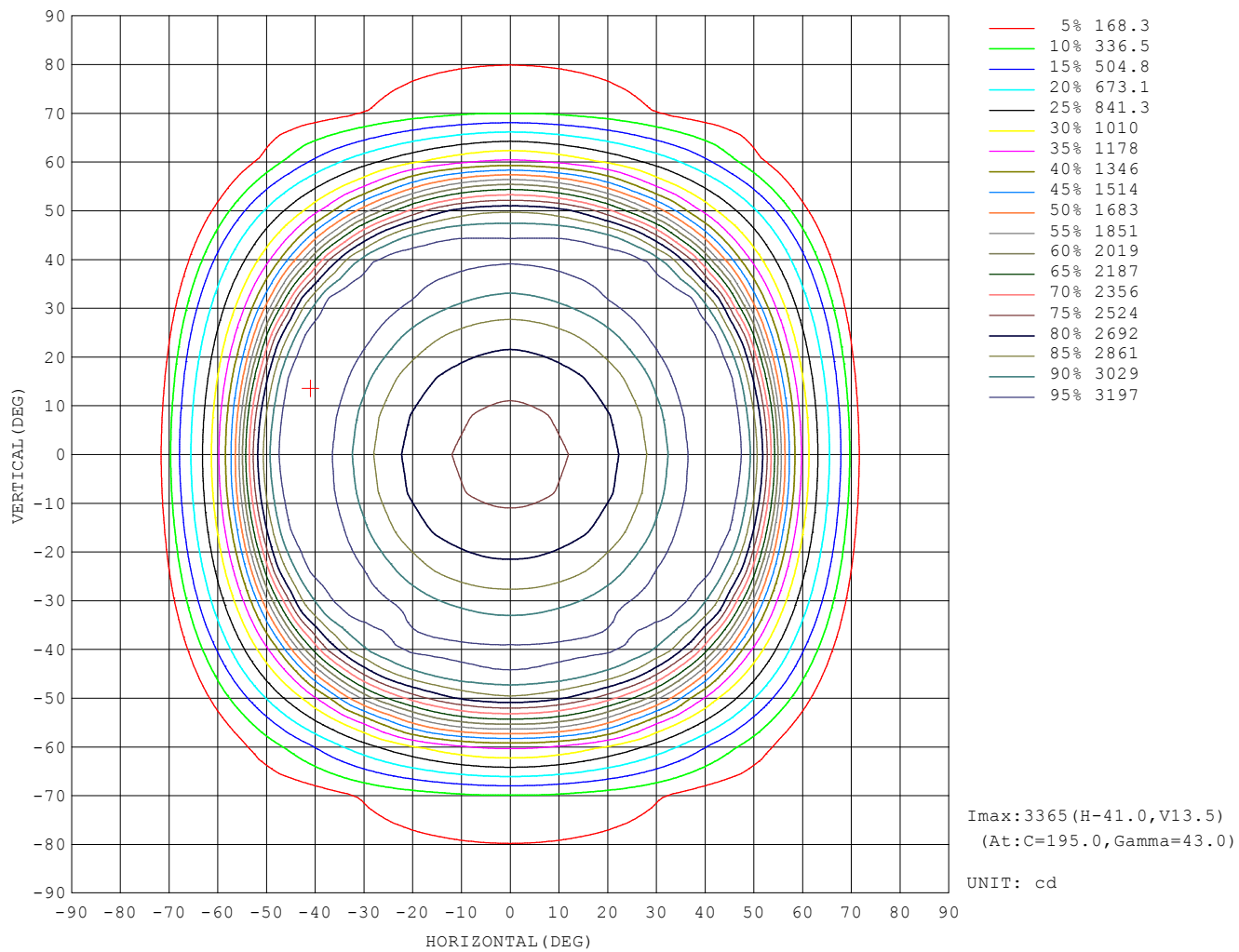
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	56	44	37	55	44	37	54	43	37	30
0.80	68	56	49	67	56	49	65	55	48	41
1.00	78	67	60	77	67	60	74	68	59	52
1.25	86	76	69	84	75	69	82	74	68	61
1.50	91	82	75	89	81	75	86	79	74	67
2.00	98	90	84	96	89	84	93	87	82	75
2.50	101	94	89	99	93	88	96	90	86	78
3.00	104	98	93	102	97	92	98	94	90	82
4.00	108	103	98	105	101	97	101	98	94	86
5.00	110	105	102	107	103	100	103	100	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: 2017-09-26

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:

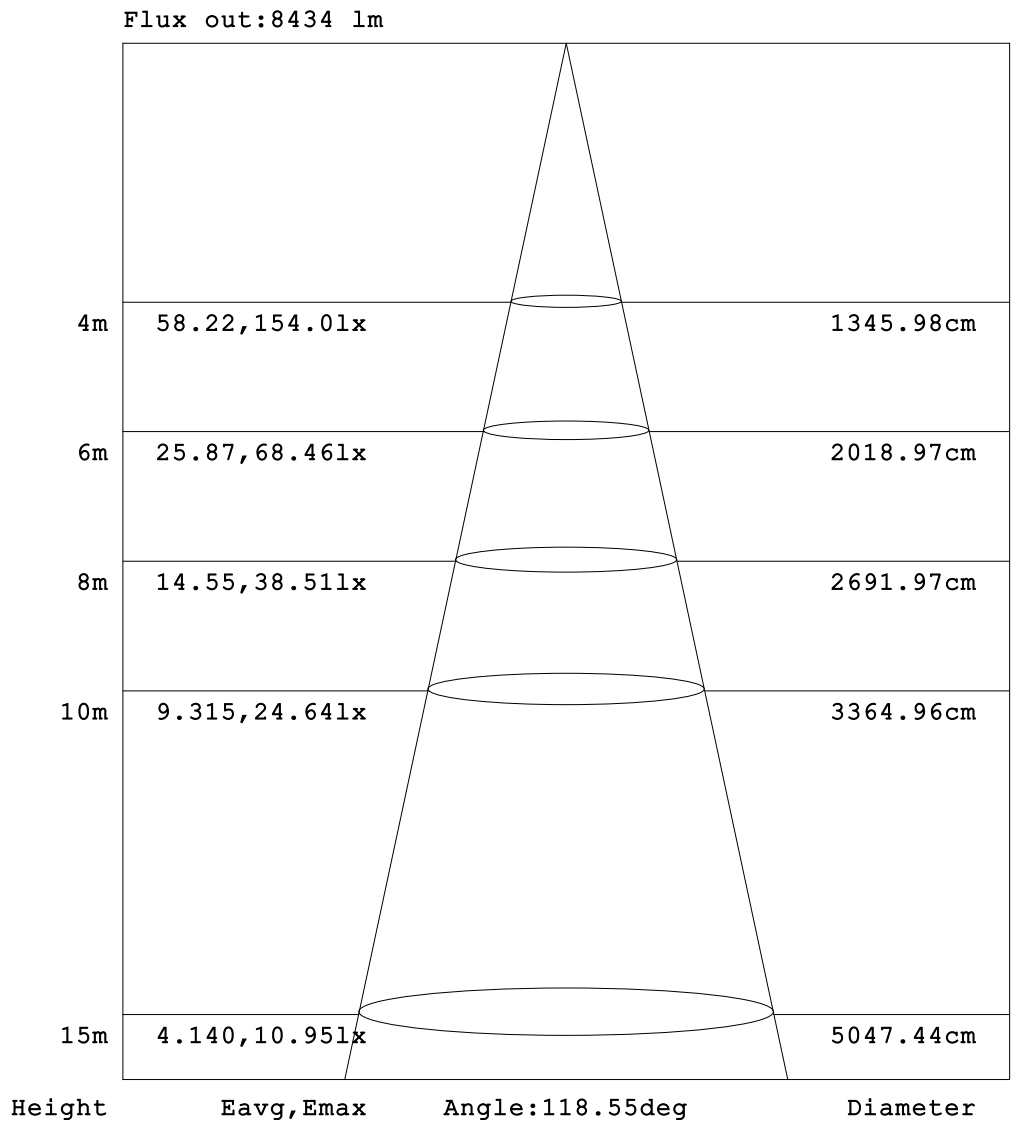
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-09-26

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

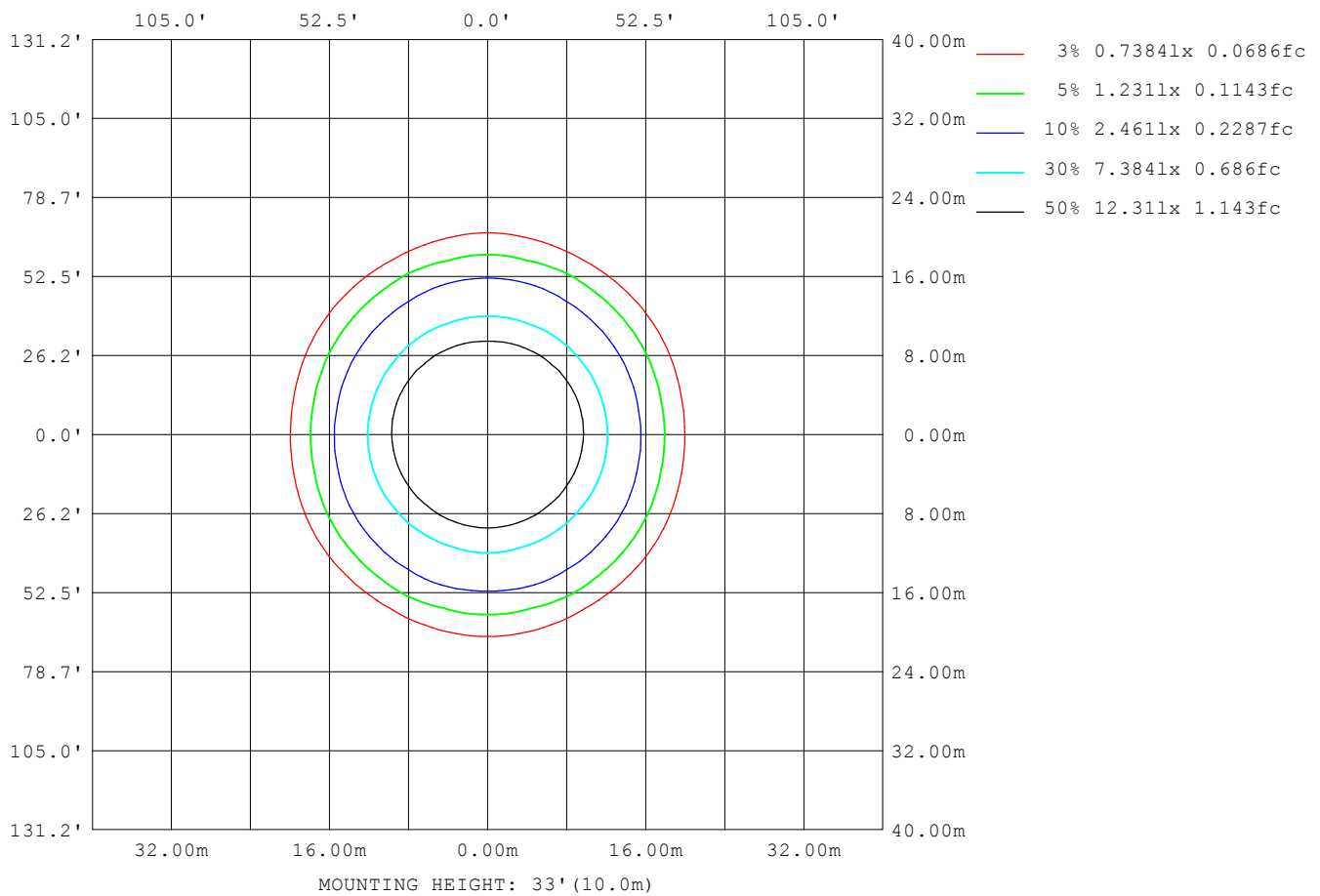


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-09-26

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: 2017-09-26

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:0.2650A P:59.89W PF:0.9826 Lamp Flux:9431.29x1 lm		
NAME: LHB01-60H	TYPE:60W	WEIGHT:
SPEC.:5000K Ra70 L06403	DIM.: 0.486*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.466*0.1	Shielding Angle:

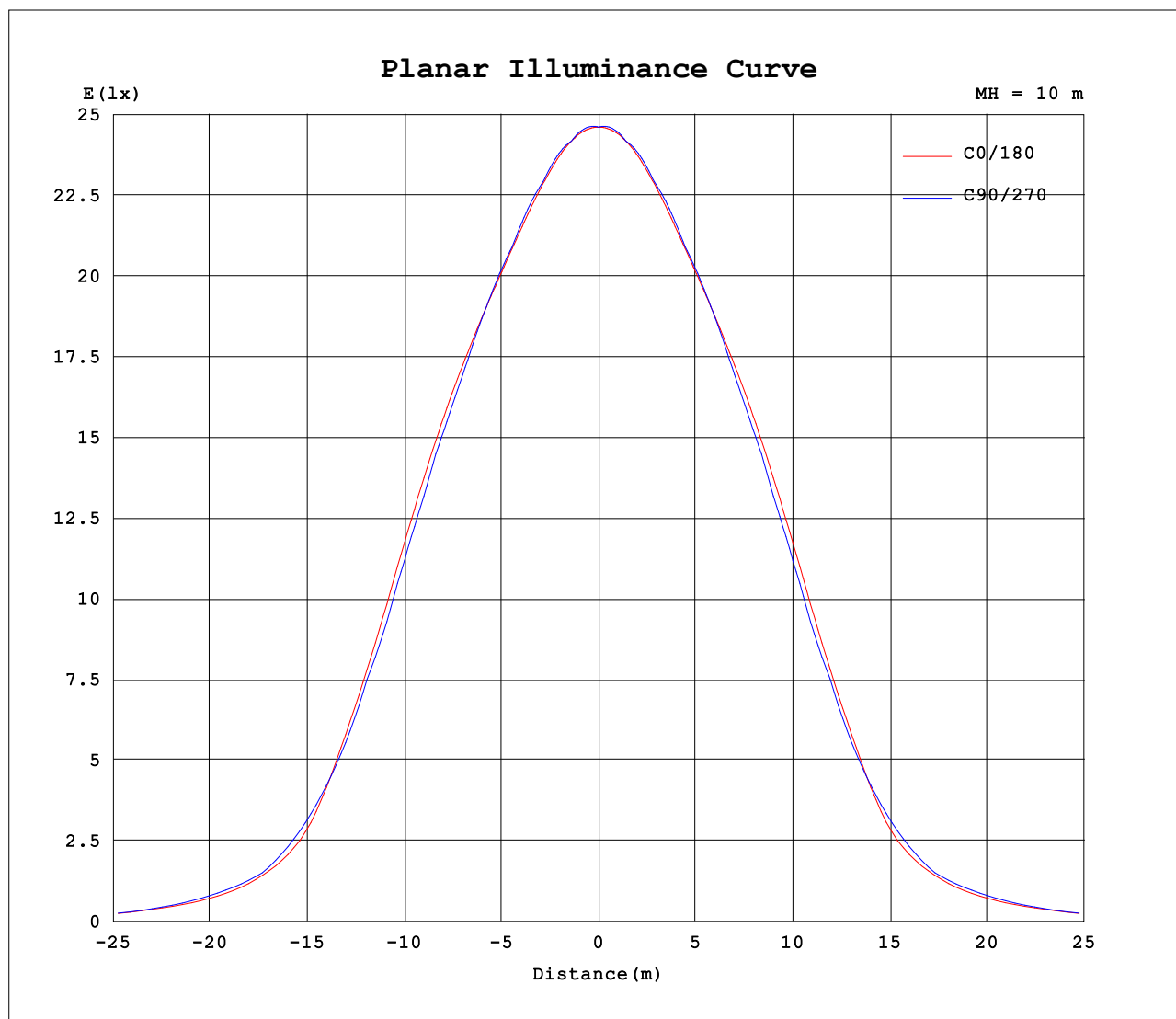
AvgL	cd/m2
L_0~180 (65) av	35875
L_0~180 (75) av	4233
L_0~180 (85) av	1635
L_90~270 (65) av	39197
L_90~270 (75) av	20550
L_90~270 (85) av	20746
L_45 (65) av	36949
L_45 (75) av	7667
L_45 (85) av	5486

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-09-26

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: 2017-09-26

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:

```

```

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:

```