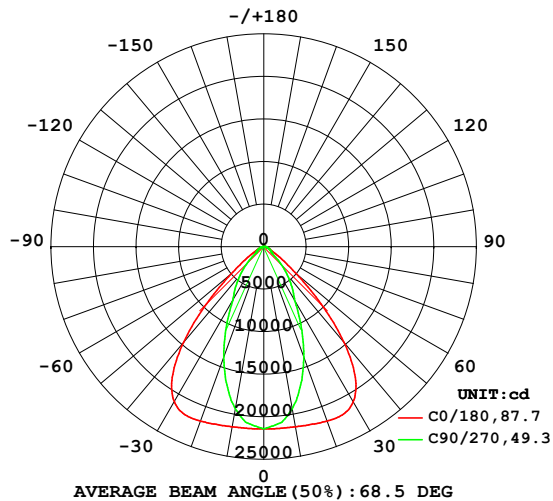


LUMINAIRE PHOTOMETRIC TEST REPORT

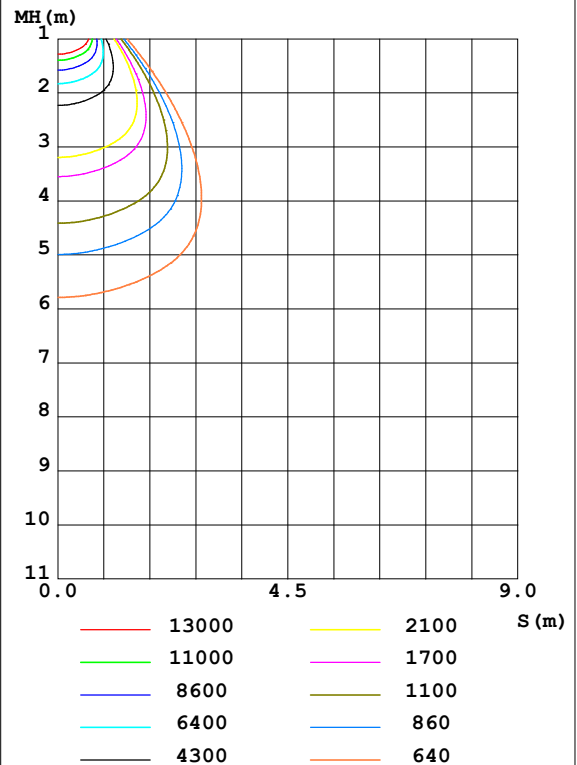
Test:U:229.8V I:0.8209A P:181.9W PF:0.9642 Lamp Flux:26972.2x1 lm		
NAME: LHB01-180H	TYPE:180W	WEIGHT:
SPEC.:4000K Ra80 5090DEG L06402	DIM.: 0.718*0.275*0.102	SERIAL No.:
MFR.:	SUR.:0.255*0.69	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 148.28 lm/W			
MODEL	LHB01-180H	Imax(cd)	21875	S/MH(C0/180)	1.26
NOMINAL POWER(W)	180	LOR(%)	100.0	S/MH(C90/270)	0.77
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	26972	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	26972.2	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	0.80

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:2017-06-02

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	2144	2101	2086	2105	2144	2105	2086	2101	0- 5	506.6	506.6	1.88,1.88
10	2149	2031	1934	2041	2149	2041	1934	2031	5- 10	1483	1989	7.38,7.38
15	2163	1894	1685	1903	2163	1903	1685	1894	10- 15	2339	4328	16,16
20	2181	1694	1379	1697	2181	1697	1379	1694	15- 20	3002	7331	27.2,27.2
25	2183	1427	1048	1426	2183	1426	1048	1427	20- 25	3412	10742	39.8,39.8
30	2105	1100	726.1	1100	2105	1100	726.1	1100	25- 30	3506	14249	52.8,52.8
35	1877	764.3	576.9	764.5	1877	764.5	576.9	764.3	30- 35	3297	17546	65.1,65.1
40	1467	507.8	427.7	505.2	1467	505.2	427.7	507.8	35- 40	2878	20424	75.7,75.7
45	954.0	389.4	278.5	387.0	954.0	387.0	278.5	389.4	40- 45	2263	22687	84.1,84.1
50	508.0	277.3	129.3	275.7	508.0	275.7	129.3	277.3	45- 50	1551	24238	89.9,89.9
55	258.2	173.1	108.2	172.3	258.2	172.3	108.2	173.1	50- 55	954.2	25192	93.4,93.4
60	131.0	89.38	87.08	88.35	131.0	88.35	87.08	89.38	55- 60	617.3	25809	95.7,95.7
65	75.05	68.48	65.99	67.90	75.05	67.90	65.99	68.48	60- 65	419.8	26229	97.2,97.2
70	50.51	48.53	44.89	48.31	50.51	48.31	44.89	48.53	65- 70	296.7	26526	98.3,98.3
75	30.16	29.52	33.92	29.55	30.16	29.55	33.92	29.52	70- 75	205.2	26731	99.1,99.1
80	14.89	19.09	22.95	19.17	14.89	19.17	22.95	19.09	75- 80	135.0	26866	99.6,99.6
85	4.488	9.971	11.98	10.08	4.488	10.08	11.98	9.971	80- 85	77.87	26944	99.9,99.9
90	0.4300	1.006	1.014	1.135	0.4300	1.135	1.014	1.006	85- 90	28.49	26972	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): 22687 lm

%lum = 84.1%

%lamp = 84.1%

Conical surface Flux(120deg): 25809 lm

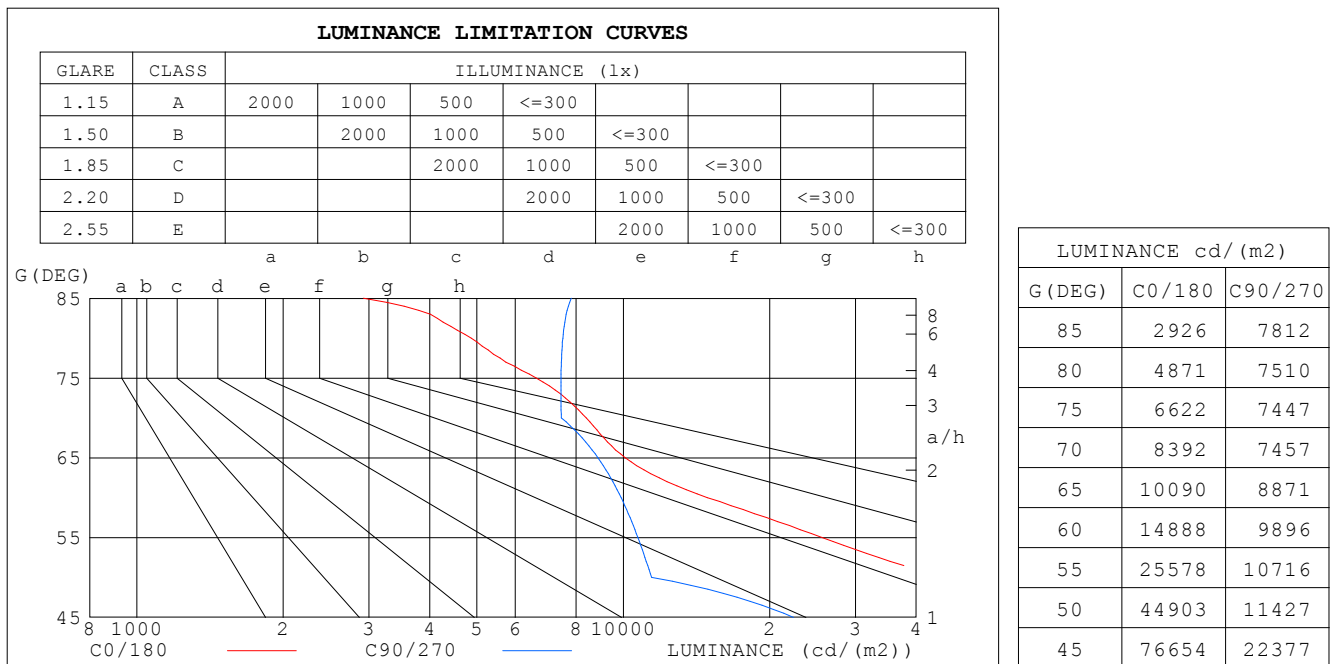
%lum = 95.7%

%lamp = 95.7%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-06-02

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

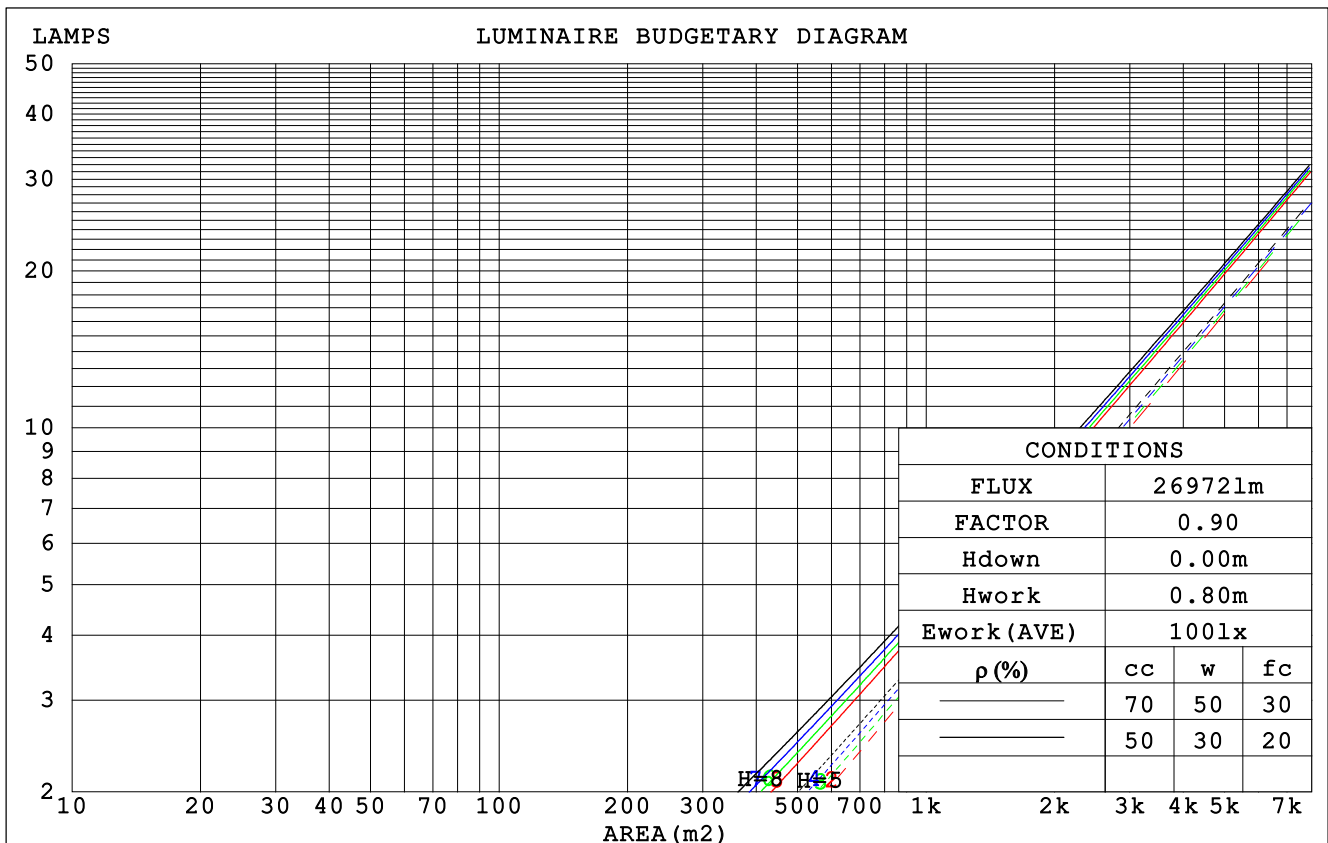


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-06-02

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	1.09	1.06	1.03	1.07	1.04	1.02	1.03	1.00	.98	.99	.97	.95	.95	.94	.93	.91
2.0	.99	.95	.90	.98	.93	.89	.94	.91	.87	.91	.88	.86	.88	.86	.84	.82
3.0	.91	.85	.80	.90	.84	.80	.87	.82	.78	.84	.80	.77	.82	.79	.76	.74
4.0	.84	.77	.72	.82	.76	.71	.80	.75	.71	.78	.73	.70	.76	.72	.69	.67
5.0	.77	.70	.65	.76	.70	.65	.74	.68	.64	.72	.67	.63	.71	.66	.63	.61
6.0	.71	.64	.59	.70	.64	.59	.69	.63	.58	.67	.62	.58	.66	.61	.58	.56
7.0	.66	.59	.54	.65	.59	.54	.64	.58	.54	.63	.57	.53	.61	.57	.53	.51
8.0	.61	.55	.50	.61	.54	.50	.60	.54	.49	.59	.53	.49	.57	.53	.49	.47
9.0	.57	.51	.46	.57	.50	.46	.56	.50	.46	.55	.49	.46	.54	.49	.45	.44
10.0	.54	.47	.43	.53	.47	.43	.52	.47	.43	.52	.46	.42	.51	.46	.42	.41



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-06-02

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	.214	.122	.039	.207	.118	.037	.194	.111	.036	.182	.105	.034	.172	.099	.032	
2.0	.206	.113	.035	.200	.110	.034	.189	.105	.033	.179	.100	.031	.170	.096	.030	
3.0	.196	.104	.031	.191	.102	.031	.181	.098	.030	.172	.094	.029	.164	.091	.028	
4.0	.185	.096	.028	.181	.095	.028	.173	.092	.027	.165	.089	.027	.158	.086	.026	
5.0	.175	.089	.026	.172	.088	.026	.164	.086	.025	.158	.083	.025	.151	.081	.024	
6.0	.166	.083	.024	.163	.082	.024	.156	.080	.023	.150	.078	.023	.145	.076	.023	
7.0	.158	.078	.022	.155	.077	.022	.149	.075	.022	.144	.074	.021	.139	.072	.021	
8.0	.150	.073	.021	.147	.073	.020	.142	.071	.020	.137	.070	.020	.133	.068	.020	
9.0	.143	.069	.019	.140	.068	.019	.136	.067	.019	.131	.066	.019	.127	.065	.019	
10.0	.136	.065	.018	.134	.065	.018	.130	.064	.018	.126	.062	.018	.122	.061	.018	

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	.174	.157	.142	.149	.135	.122	.102	.093	.084	.059	.054	.049	.019	.017	.016		
2.0	.161	.132	.108	.138	.114	.094	.094	.079	.065	.054	.046	.038	.017	.015	.012		
3.0	.150	.114	.085	.129	.098	.074	.088	.068	.052	.051	.040	.030	.016	.013	.010		
4.0	.141	.100	.068	.121	.086	.059	.083	.060	.041	.048	.035	.025	.015	.011	.008		
5.0	.133	.088	.055	.114	.076	.048	.079	.053	.034	.046	.031	.020	.015	.010	.007		
6.0	.126	.079	.046	.108	.069	.040	.075	.048	.028	.043	.028	.017	.014	.009	.006		
7.0	.120	.072	.039	.103	.063	.034	.071	.044	.024	.041	.026	.014	.013	.008	.005		
8.0	.114	.066	.033	.098	.057	.029	.068	.040	.021	.040	.024	.012	.013	.008	.004		
9.0	.109	.061	.029	.094	.053	.025	.065	.037	.018	.038	.022	.011	.012	.007	.004		
10.0	.104	.057	.025	.090	.049	.022	.062	.035	.016	.036	.021	.009	.012	.007	.003		

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-02

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	24.2	25.3	24.4	25.5	25.7	18.9	20.0	19.1	20.2	20.4
3H	24.2	25.2	24.4	25.4	25.6	19.3	20.3	19.6	20.6	20.8
4H	24.1	25.1	24.4	25.4	25.6	19.5	20.5	19.8	20.7	21.0
6H	24.1	25.0	24.4	25.3	25.5	19.7	20.7	20.0	20.9	21.2
8H	24.0	24.9	24.4	25.2	25.5	19.8	20.7	20.1	21.0	21.2
12H	24.0	24.9	24.3	25.1	25.4	19.9	20.7	20.2	21.0	21.3
4H 2H	24.0	25.0	24.3	25.2	25.4	19.1	20.1	19.4	20.3	20.5
3H	24.0	24.9	24.4	25.2	25.4	19.7	20.5	20.0	20.8	21.1
4H	24.1	24.8	24.4	25.1	25.4	20.0	20.7	20.3	21.1	21.4
6H	24.0	24.7	24.4	25.1	25.4	20.3	21.0	20.7	21.3	21.7
8H	24.0	24.7	24.4	25.0	25.4	20.5	21.1	20.9	21.4	21.8
12H	24.0	24.6	24.4	24.9	25.3	20.6	21.2	21.0	21.5	21.9
8H 4H	24.0	24.6	24.4	25.0	25.3	20.0	20.7	20.4	21.0	21.4
6H	24.0	24.5	24.4	24.9	25.3	20.5	21.0	20.9	21.4	21.8
8H	24.0	24.4	24.4	24.9	25.3	20.7	21.2	21.1	21.6	22.0
12H	24.0	24.4	24.4	24.8	25.3	20.9	21.3	21.4	21.7	22.2
12H 4H	23.9	24.5	24.3	24.9	25.3	20.0	20.6	20.4	21.0	21.4
6H	24.0	24.4	24.4	24.8	25.3	20.5	20.9	20.9	21.4	21.8
8H	24.0	24.4	24.4	24.8	25.3	20.7	21.1	21.2	21.6	22.0
Variations with the observer position at spacings:										
S = 1.0H	+ 2.9 / - 3.3					+ 1.0 / - 1.4				
1.5H	+ 3.9 / - 3.5					+ 1.2 / - 1.7				
2.0H	+ 5.6 / - 3.7					+ 1.8 / - 0.8				

CIE Pub.117 Corrected 26972 lm Total Lamp Luminous Flux.(8log(F/F0) = 11.4)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-02

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:

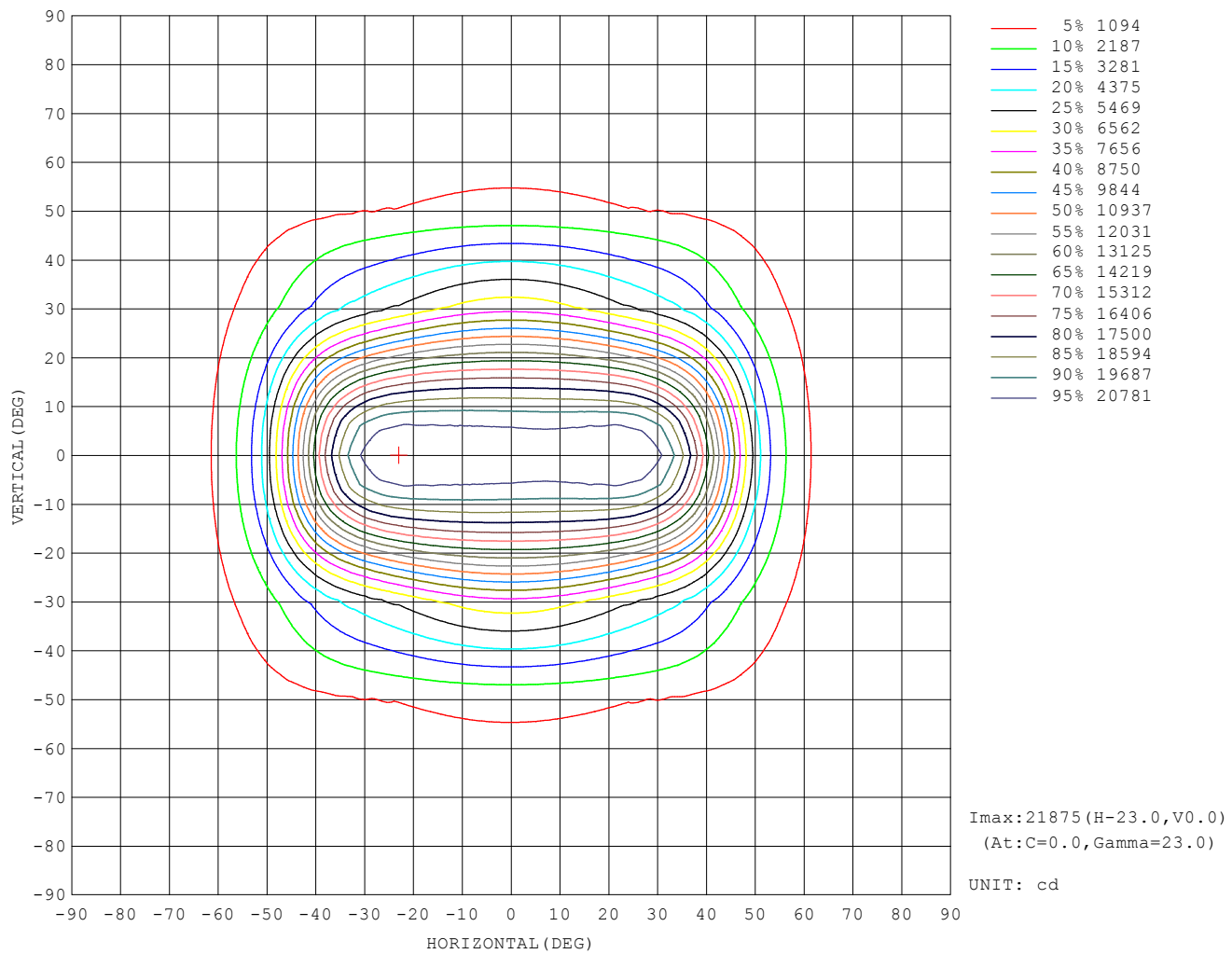
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	76	68	63	76	68	63	75	67	63	58
0.80	85	77	72	84	77	72	83	76	72	67
1.00	92	84	79	91	84	79	89	84	79	74
1.25	97	90	85	96	89	85	94	88	84	79
1.50	100	94	90	99	93	89	97	92	88	83
2.00	105	99	95	103	98	94	100	96	93	87
2.50	107	102	98	105	101	97	102	98	95	89
3.00	109	105	101	107	103	100	104	100	98	91
4.00	112	108	105	109	106	104	106	103	101	93
5.00	113	110	107	111	108	106	107	105	103	95
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: 2017-06-02

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:

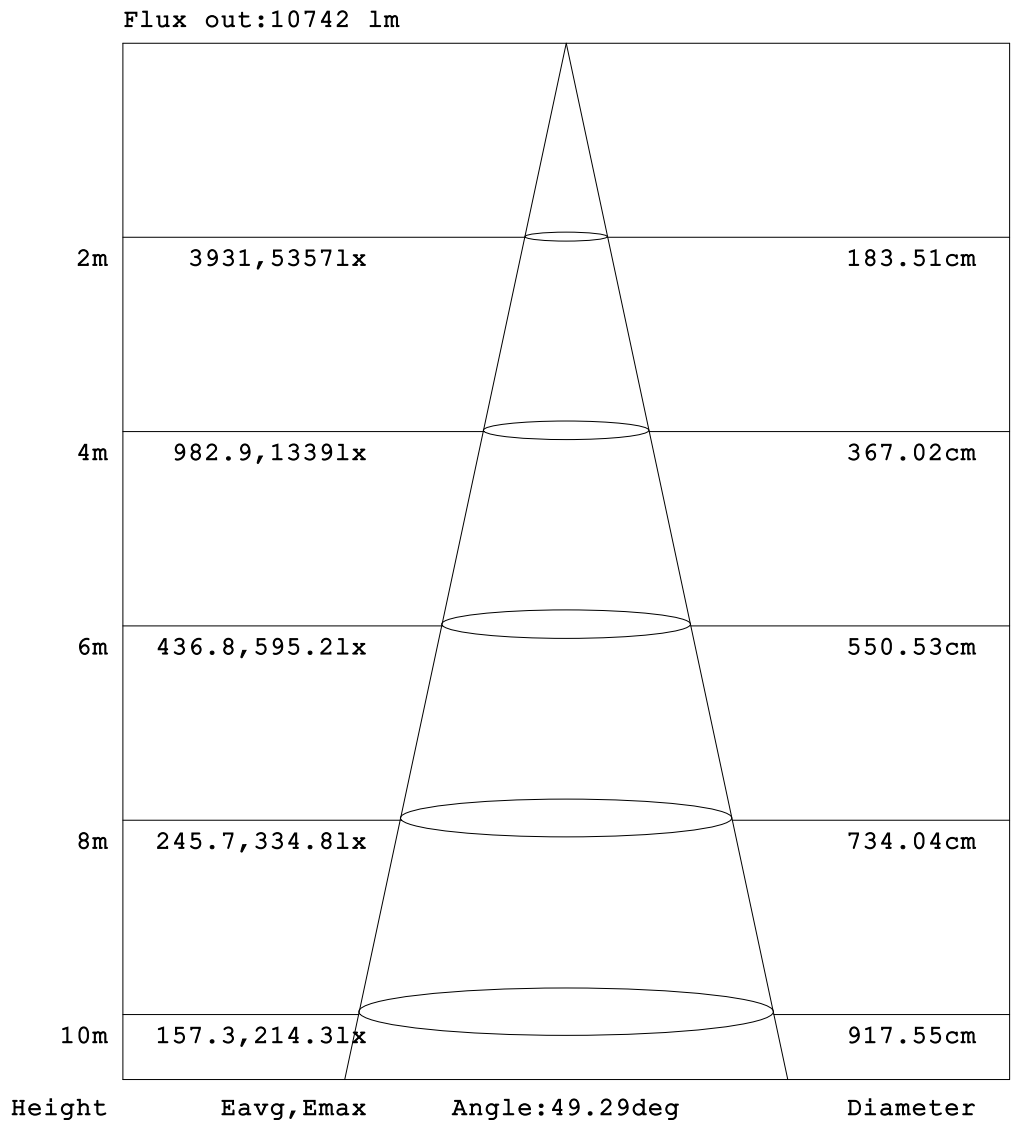
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-02

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

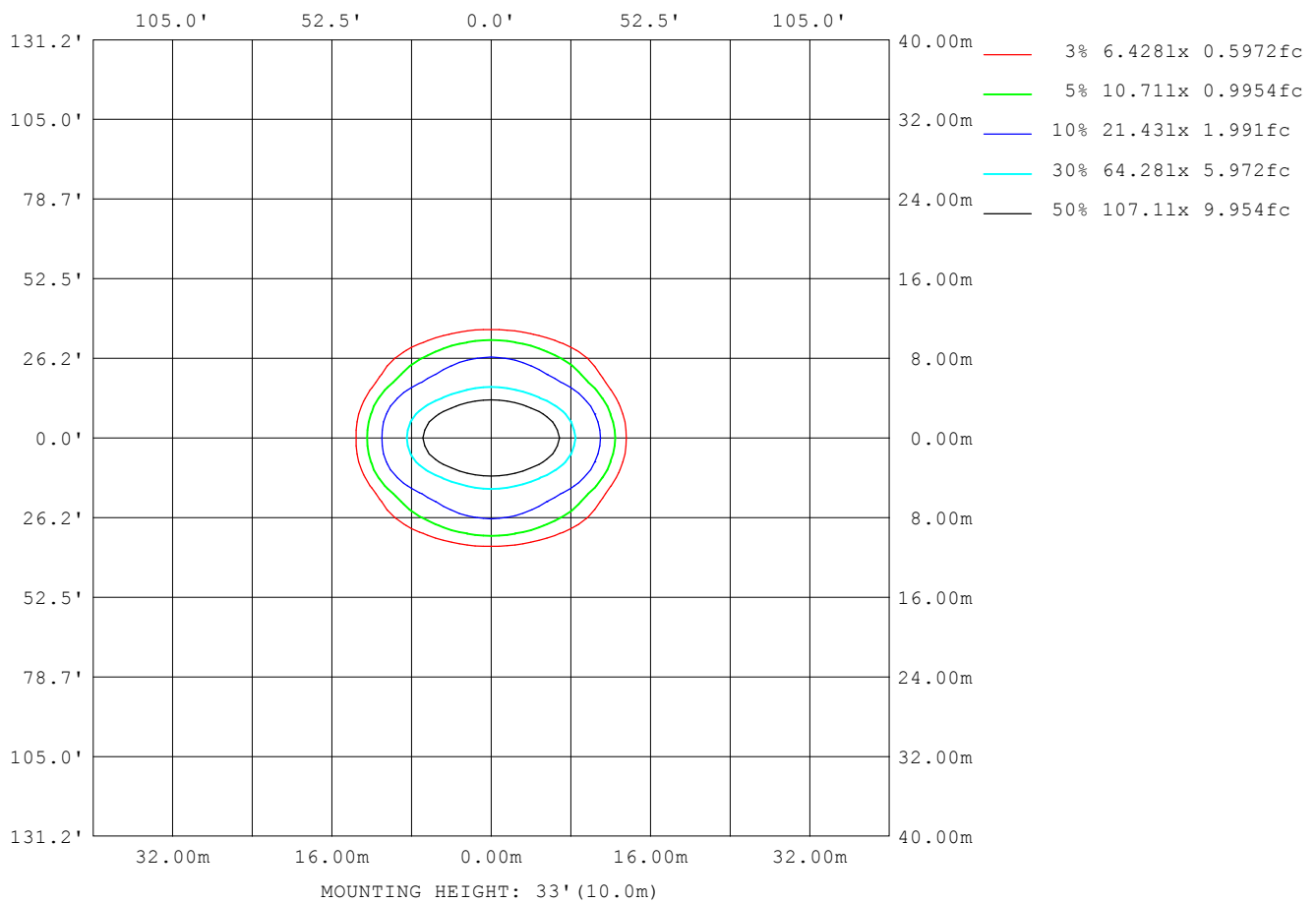


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-06-02

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: 2017-06-02

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:229.8V I:0.8209A P:181.9W PF:0.9642 Lamp Flux:26972.2x1 lm		
NAME: LHB01-180H	TYPE:180W	WEIGHT:
SPEC.:4000K Ra80 5090DEG L06402	DIM.: 0.718*0.275*0.102	SERIAL No.:
MFR.:	SUR.:0.255*0.69	Shielding Angle:

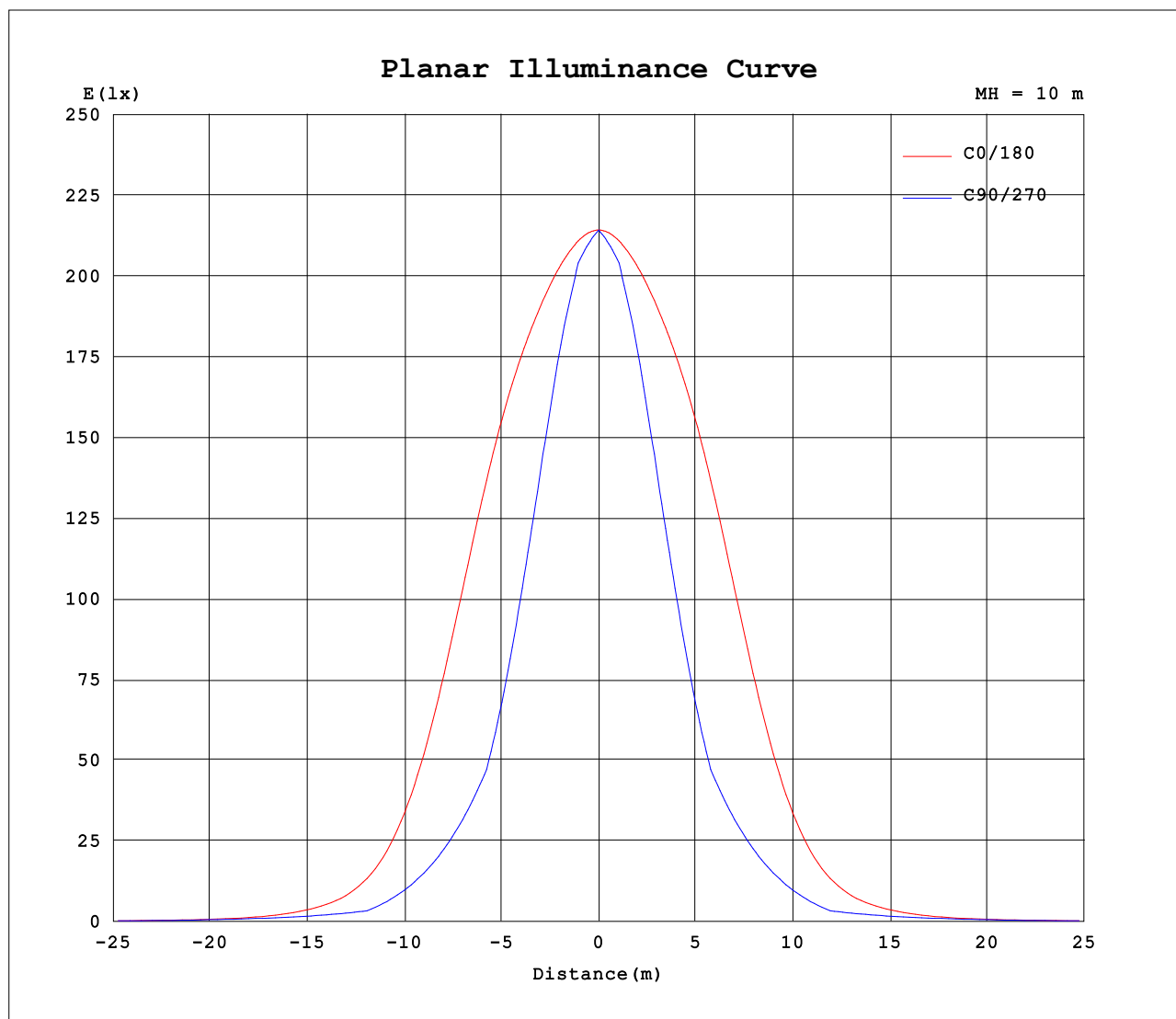
AvgL	cd/m2
L_0~180 (65) av	10090
L_0~180 (75) av	6622
L_0~180 (85) av	2926
L_90~270 (65) av	8871
L_90~270 (75) av	7447
L_90~270 (85) av	7812
L_45 (65) av	9168
L_45 (75) av	6484
L_45 (85) av	6535

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-02

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: 2017-06-02

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:

```

```

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:

```