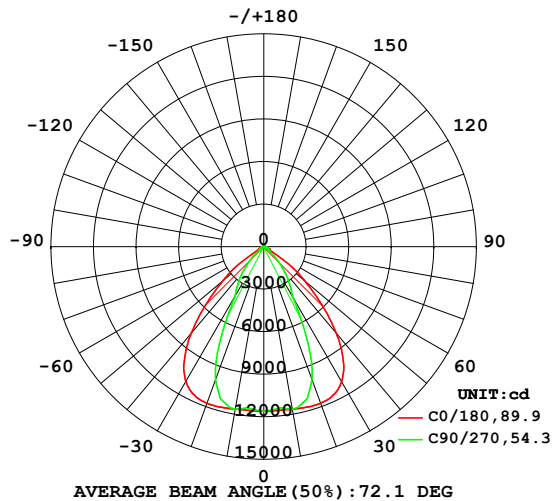


LUMINAIRE PHOTOMETRIC TEST REPORT

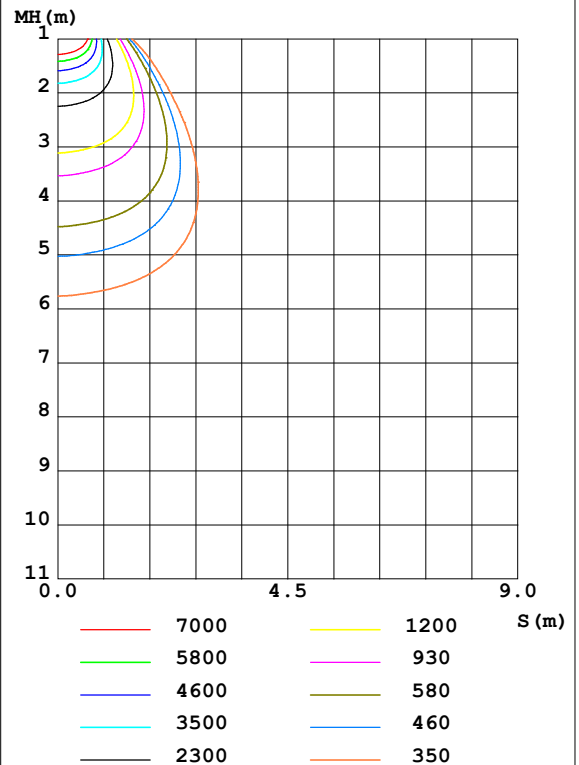
Test:U:229.8V I:0.6919A P:152.9W PF:0.9613 Lamp Flux:19674x1 lm		
NAME: LHB01-150	TYPE:150W	WEIGHT:
SPEC.:5000K Ra80 6090DEG L02802	DIM.: 1.178*0.137*0.102	SERIAL No.:
MFR.:	SUR.:1.17*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 128.71 lm/W			
MODEL	LHB01-150	I _{max} (cd)	13510	S/MH(C0/180)	1.28
NOMINAL POWER(W)	150	LOR(%)	100.0	S/MH(C90/270)	0.80
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	19674	η UP,DN(C0-180)	0.0,49.9
NOMINAL FLUX(lm)	19674	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.1
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.00

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	1159	1150	1146	1150	1159	1152	1146	1152	0- 5	276.1	276.1	1.4,1.4
10	1164	1158	1165	1158	1164	1162	1165	1162	5- 10	825.9	1102	5.6,5.6
15	1172	1205	1125	1205	1172	1218	1125	1218	10- 15	1389	2491	12.7,12.7
20	1175	1223	996.3	1223	1175	1262	996.3	1262	15- 20	1930	4421	22.5,22.5
25	1157	1207	722.7	1207	1157	1244	722.7	1244	20- 25	2369	6790	34.5,34.5
30	1100	1113	406.3	1113	1100	1134	406.3	1134	25- 30	2567	9357	47.6,47.6
35	978.7	846.1	316.9	846.1	978.7	861.0	316.9	861.0	30- 35	2530	11887	60.4,60.4
40	794.9	575.2	227.4	575.2	794.9	555.0	227.4	555.0	35- 40	2362	14249	72.4,72.4
45	578.0	451.6	138.0	451.6	578.0	444.1	138.0	444.1	40- 45	2005	16254	82.6,82.6
50	382.0	311.2	48.55	311.2	382.0	310.8	48.55	310.8	45- 50	1479	17733	90.1,90.1
55	211.2	165.0	40.73	165.0	211.2	167.9	40.73	167.9	50- 55	897.5	18630	94.7,94.7
60	45.29	44.76	32.91	44.76	45.29	45.01	32.91	45.01	55- 60	448.9	19079	97,97
65	38.87	34.49	25.09	34.49	38.87	34.95	25.09	34.95	60- 65	229.9	19309	98.1,98.1
70	21.95	24.00	17.27	24.00	21.95	24.44	17.27	24.44	65- 70	146.1	19455	98.9,98.9
75	14.06	13.60	13.39	13.60	14.06	13.75	13.39	13.75	70- 75	97.05	19552	99.4,99.4
80	8.127	8.882	9.507	8.882	8.127	8.914	9.507	8.914	75- 80	65.01	19617	99.7,99.7
85	2.220	4.789	5.623	4.789	2.220	4.792	5.623	4.792	80- 85	40.72	19658	99.9,99.9
90	0.3074	0.6336	1.739	0.6336	0.3074	0.6341	1.739	0.6341	85- 90	16.19	19674	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): 16254 lm

%lum = 82.6%

%lamp = 82.6%

Conical surface Flux(120deg): 19079 lm

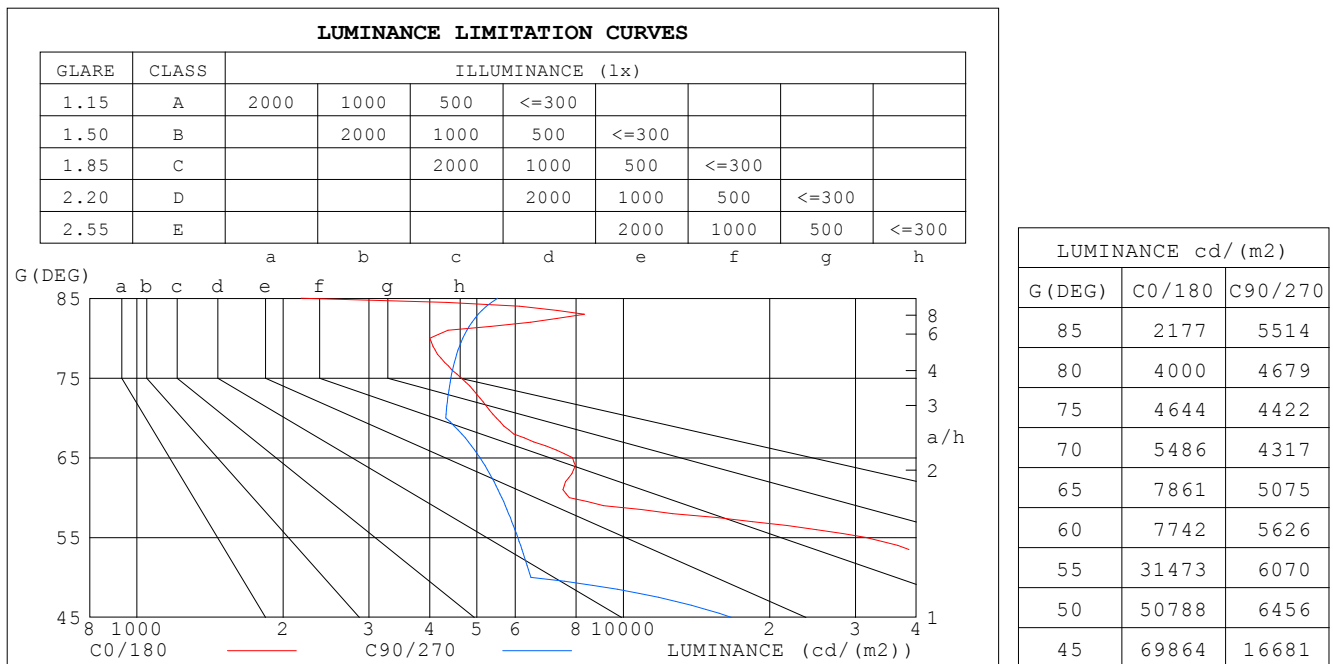
%lum = 97.0%

%lamp = 97.0%

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

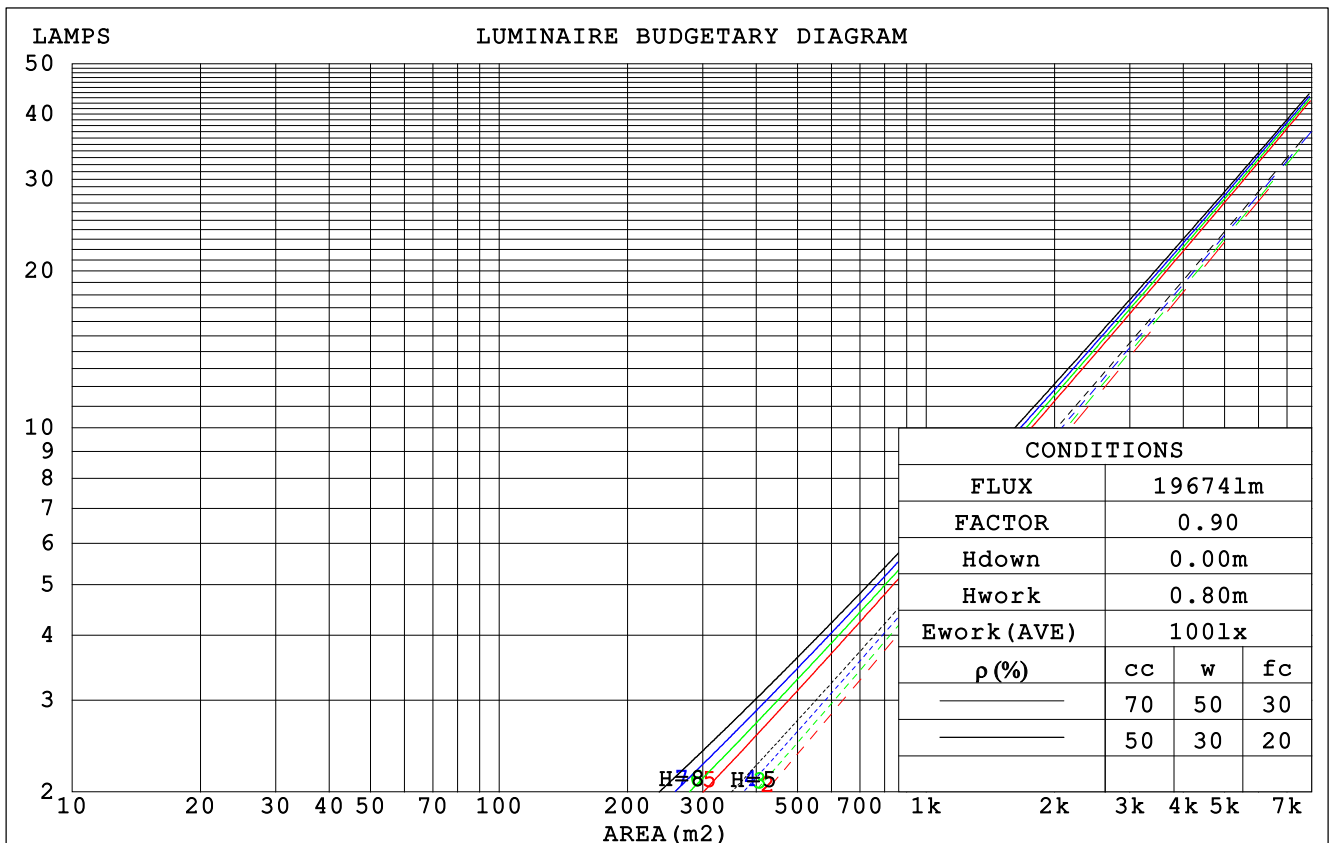


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-06-14

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	.00
1.0	1.09	1.06	1.03	1.07	1.04	1.01	1.02	1.00	.98	.99	.97	.95	.95	.94	.93	.91
2.0	.99	.94	.90	.97	.93	.89	.94	.90	.87	.91	.88	.85	.88	.85	.83	.81
3.0	.90	.84	.79	.89	.83	.79	.86	.81	.77	.83	.79	.76	.81	.78	.75	.73
4.0	.82	.76	.70	.81	.75	.70	.79	.73	.69	.77	.72	.68	.75	.71	.67	.66
5.0	.76	.68	.63	.75	.68	.63	.73	.67	.62	.71	.66	.62	.69	.65	.61	.59
6.0	.69	.62	.57	.69	.62	.57	.67	.61	.56	.65	.60	.56	.64	.59	.56	.54
7.0	.64	.57	.52	.63	.56	.52	.62	.56	.51	.61	.55	.51	.59	.54	.51	.49
8.0	.59	.52	.47	.59	.52	.47	.57	.51	.47	.56	.51	.47	.55	.50	.46	.45
9.0	.55	.48	.43	.54	.48	.43	.53	.47	.43	.52	.47	.43	.51	.46	.43	.41
10.0	.51	.44	.40	.51	.44	.40	.50	.44	.40	.49	.43	.39	.48	.43	.39	.38



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	.216	.123	.039	.209	.119	.038	.196	.113	.036	.185	.106	.034	.174	.101	.032	
2.0	.210	.115	.035	.204	.112	.035	.193	.107	.033	.183	.102	.032	.173	.098	.031	
3.0	.200	.107	.032	.195	.105	.031	.186	.101	.031	.177	.097	.030	.169	.093	.029	
4.0	.191	.099	.029	.186	.097	.029	.178	.094	.028	.170	.091	.028	.163	.089	.027	
5.0	.181	.092	.027	.177	.091	.026	.170	.088	.026	.163	.086	.026	.157	.084	.025	
6.0	.172	.086	.025	.168	.085	.024	.162	.083	.024	.156	.081	.024	.150	.079	.023	
7.0	.163	.081	.023	.160	.080	.023	.154	.078	.022	.149	.076	.022	.144	.075	.022	
8.0	.155	.076	.021	.153	.075	.021	.147	.074	.021	.142	.072	.021	.138	.071	.021	
9.0	.148	.072	.020	.145	.071	.020	.141	.070	.020	.136	.068	.020	.132	.067	.019	
10.0	.141	.068	.019	.139	.067	.019	.134	.066	.019	.130	.065	.018	.127	.064	.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	.093	.095	.079	.065	.055	.046	.038	.018	.015	.012	
3.0	.151	.114	.084	.130	.098	.073	.089	.068	.051	.051	.040	.030	.017	.013	.010	
4.0	.142	.100	.067	.122	.086	.058	.084	.060	.041	.049	.035	.024	.016	.011	.008	
5.0	.135	.089	.055	.116	.077	.047	.080	.054	.033	.046	.031	.020	.015	.010	.007	
6.0	.128	.080	.045	.110	.069	.039	.076	.048	.028	.044	.028	.017	.014	.009	.005	
7.0	.122	.073	.038	.105	.063	.033	.073	.044	.023	.042	.026	.014	.014	.009	.005	
8.0	.116	.067	.033	.100	.058	.028	.069	.041	.020	.040	.024	.012	.013	.008	.004	
9.0	.111	.062	.028	.096	.054	.025	.066	.038	.018	.039	.022	.010	.013	.007	.003	
10.0	.106	.057	.025	.092	.050	.022	.064	.035	.015	.037	.021	.009	.012	.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	25.8	27.0	26.0	27.2	27.3	19.2	20.3	19.4	20.5	20.7
3H	25.7	26.7	25.9	27.0	27.2	19.2	20.2	19.4	20.5	20.7
4H	25.6	26.6	25.9	26.8	27.1	19.2	20.2	19.5	20.4	20.7
6H	25.5	26.5	25.8	26.7	27.0	19.2	20.1	19.5	20.4	20.7
8H	25.5	26.4	25.8	26.6	26.9	19.2	20.1	19.5	20.4	20.6
12H	25.4	26.3	25.8	26.6	26.9	19.2	20.1	19.5	20.4	20.6
4H 2H	25.5	26.6	25.8	26.8	27.0	19.4	20.4	19.7	20.6	20.9
3H	25.4	26.3	25.8	26.6	26.9	19.5	20.3	19.8	20.6	20.9
4H	25.4	26.2	25.7	26.5	26.8	19.5	20.3	19.9	20.6	20.9
6H	25.3	26.0	25.7	26.4	26.7	19.6	20.3	20.0	20.6	21.0
8H	25.3	25.9	25.7	26.3	26.7	19.6	20.3	20.0	20.6	21.0
12H	25.3	25.9	25.7	26.2	26.6	19.7	20.3	20.1	20.6	21.0
8H 4H	25.3	25.9	25.7	26.3	26.6	19.5	20.1	19.9	20.5	20.9
6H	25.2	25.8	25.7	26.1	26.6	19.6	20.2	20.1	20.6	21.0
8H	25.2	25.7	25.7	26.1	26.5	19.7	20.2	20.2	20.6	21.0
12H	25.2	25.6	25.7	26.0	26.5	19.8	20.2	20.3	20.6	21.1
12H 4H	25.2	25.8	25.6	26.2	26.6	19.5	20.1	19.9	20.4	20.8
6H	25.2	25.6	25.6	26.1	26.5	19.6	20.1	20.1	20.5	21.0
8H	25.2	25.6	25.6	26.0	26.5	19.7	20.1	20.2	20.6	21.0
Variations with the observer position at spacings:										
S = 1.0H	+ 2.4 / - 4.5					+ 2.2 / - 3.8				
1.5H	+ 2.4 / - 3.4					+ 3.4 / - 4.5				
2.0H	+ 5.2 / - 8.0					+ 3.7 / - 2.3				

CIE Pub.117 Corrected 19674 lm Total Lamp Luminous Flux.(8log(F/F0) = 10.4)

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:

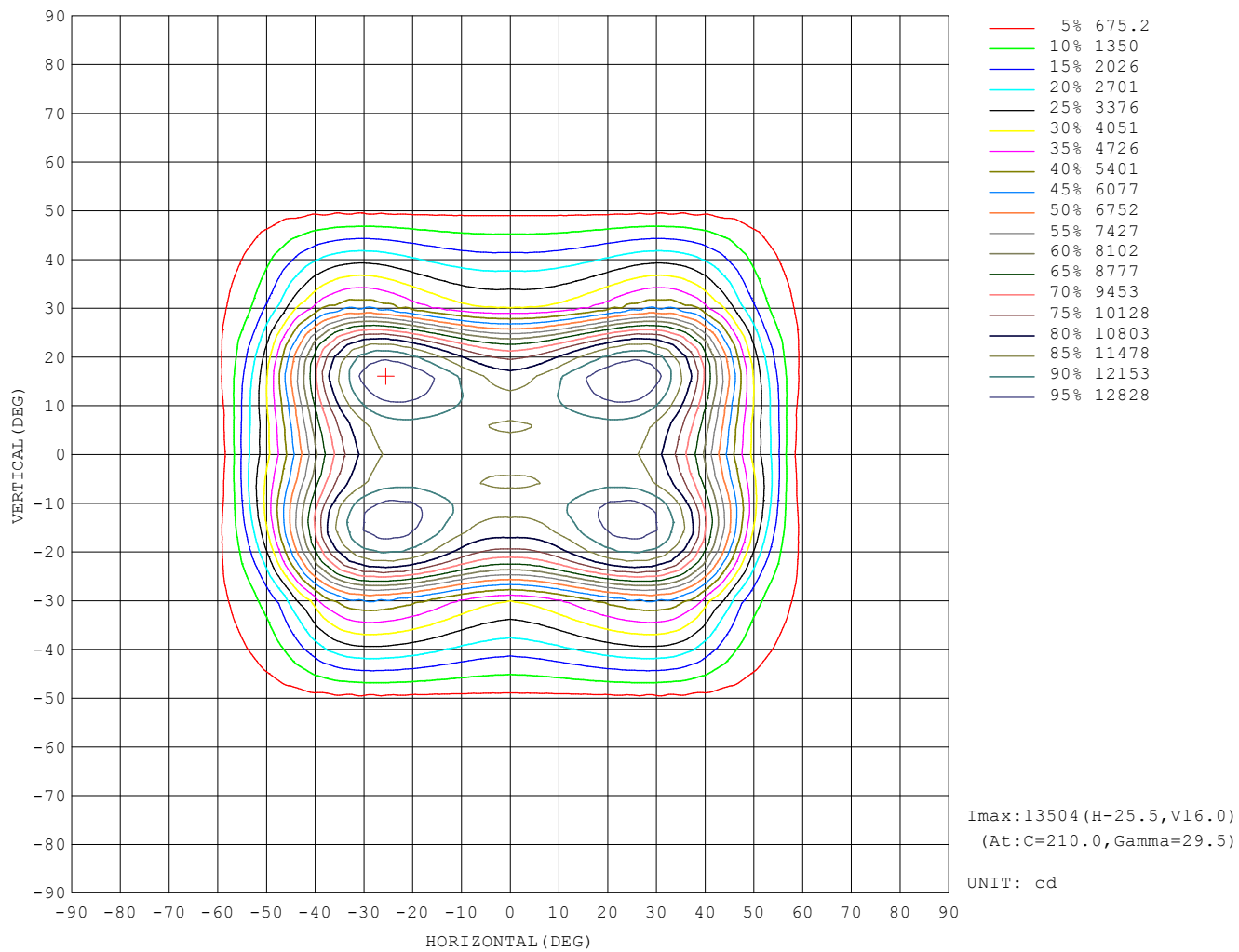
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	74	65	60	73	65	60	72	65	60	55
0.80	83	75	70	83	75	70	81	74	69	64
1.00	90	83	78	89	82	77	88	83	77	72
1.25	96	89	84	95	88	84	93	87	83	78
1.50	100	93	89	98	93	88	96	91	87	82
2.00	104	99	95	103	98	94	100	96	92	86
2.50	107	102	98	105	100	97	102	98	95	88
3.00	109	104	101	107	103	100	103	100	97	90
4.00	111	108	105	109	106	103	105	103	100	93
5.00	113	110	107	111	108	105	106	104	102	94
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:

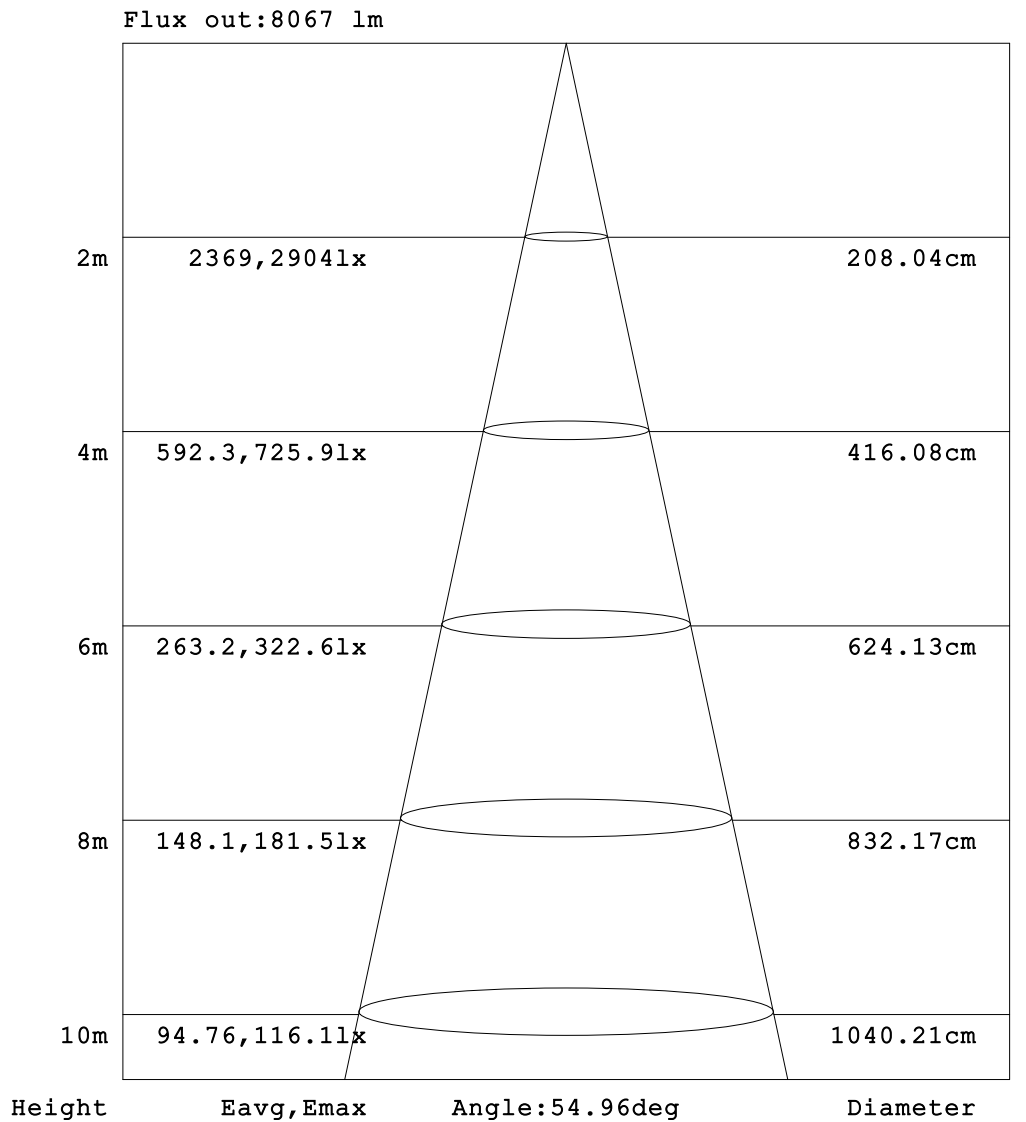
ISOCANDELA DIAGRAM



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

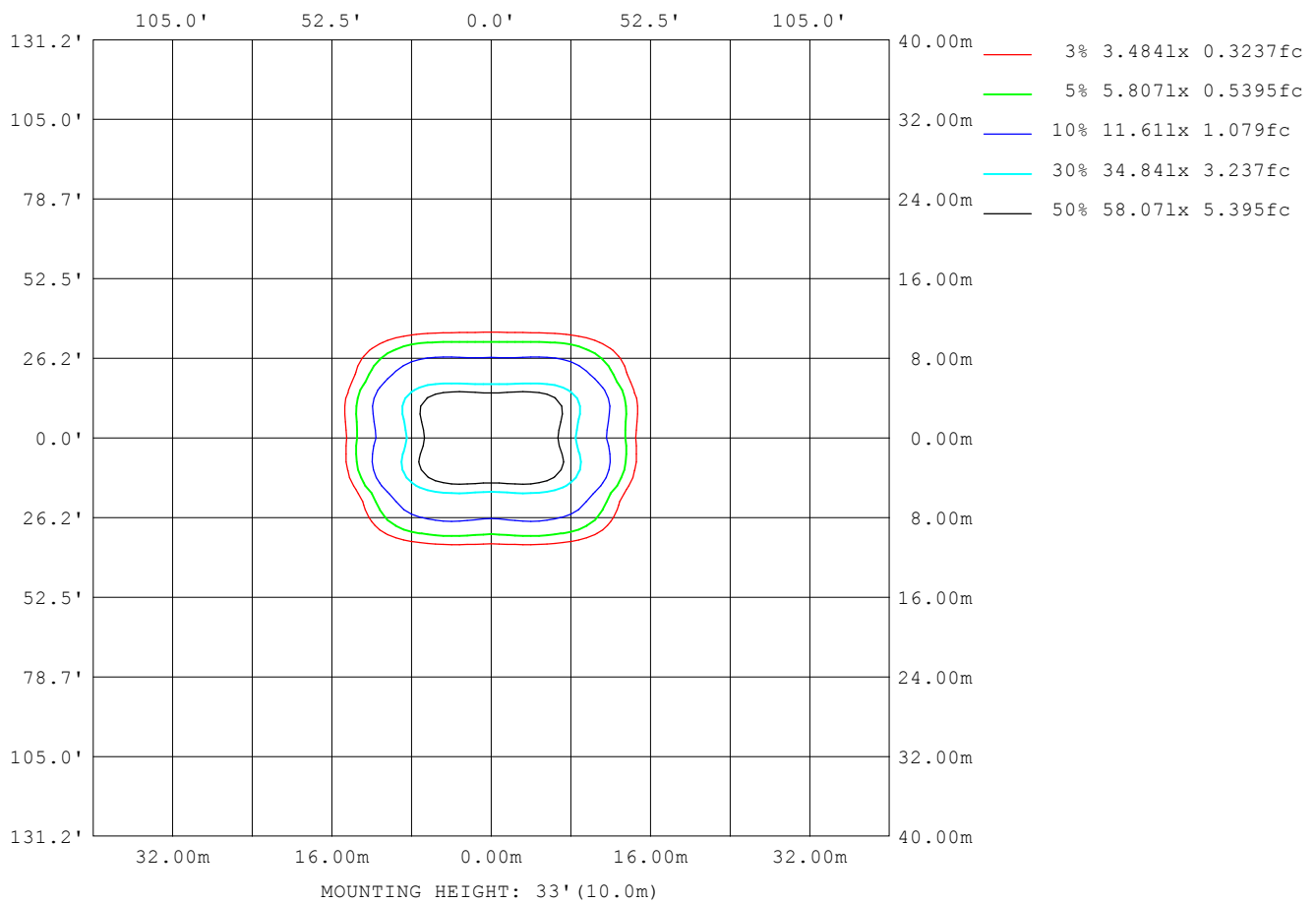


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:229.8V I:0.6919A P:152.9W PF:0.9613 Lamp Flux:19674x1 lm		
NAME: LHB01-150	TYPE:150W	WEIGHT:
SPEC.:5000K Ra80 6090DEG L02802	DIM.: 1.178*0.137*0.102	SERIAL No.:
MFR.:	SUR.:1.17*0.1	Shielding Angle:

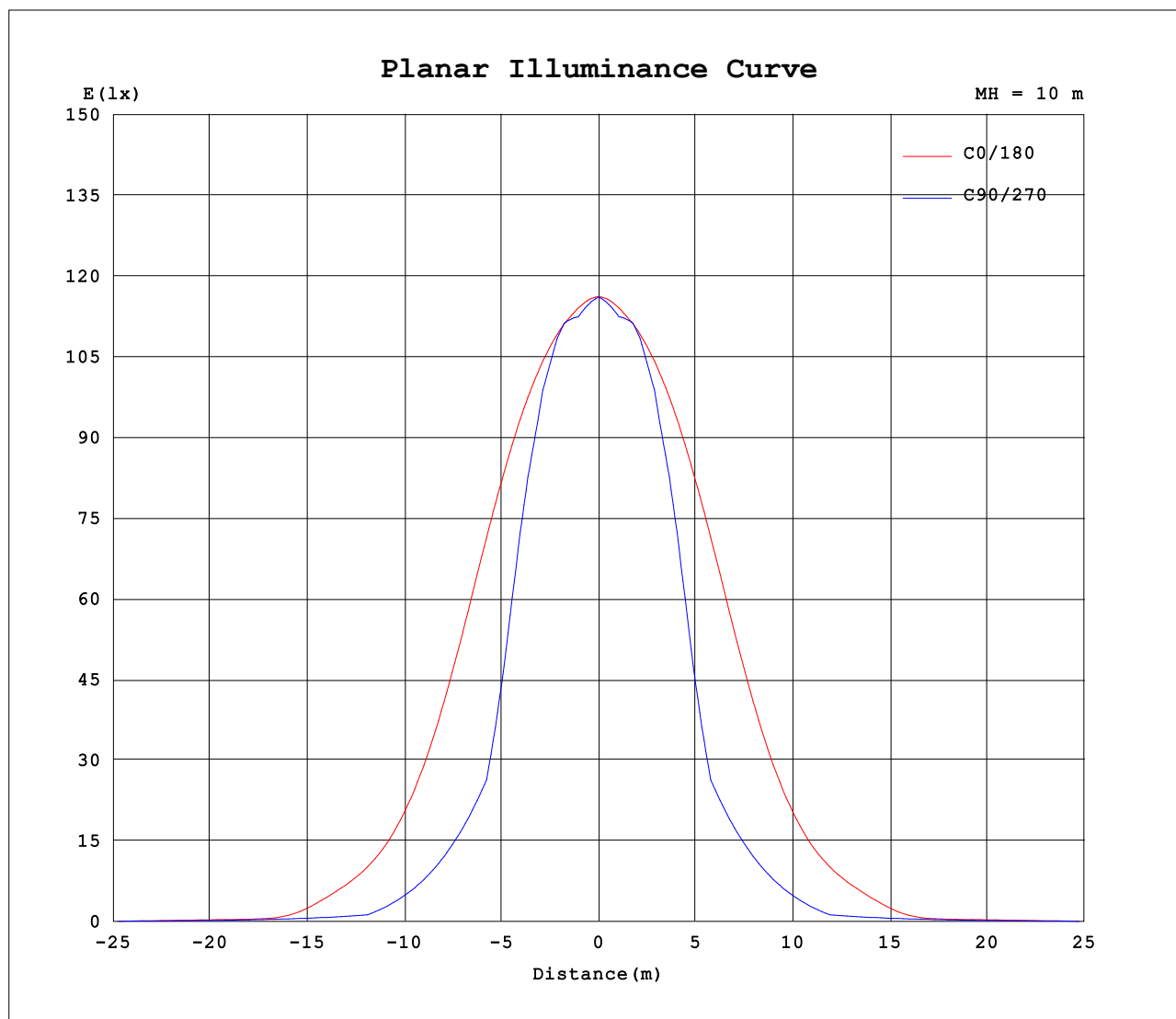
AvgL	cd/m2
L_0~180 (65) av	7861
L_0~180 (75) av	4644
L_0~180 (85) av	2177
L_90~270 (65) av	5075
L_90~270 (75) av	4422
L_90~270 (85) av	5514
L_45 (65) av	7022
L_45 (75) av	4516
L_45 (85) av	4698

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:

```

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:

```