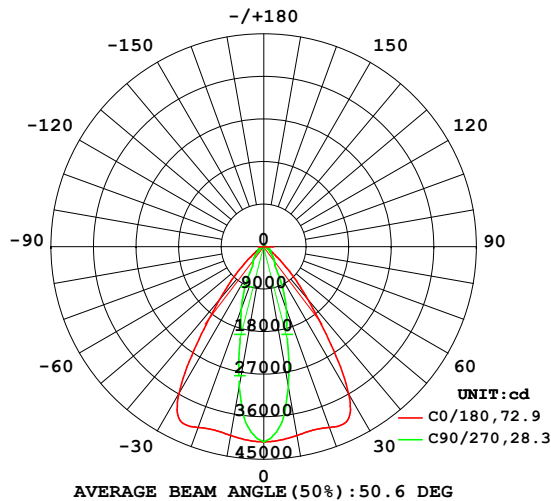


LUMINAIRE PHOTOMETRIC TEST REPORT

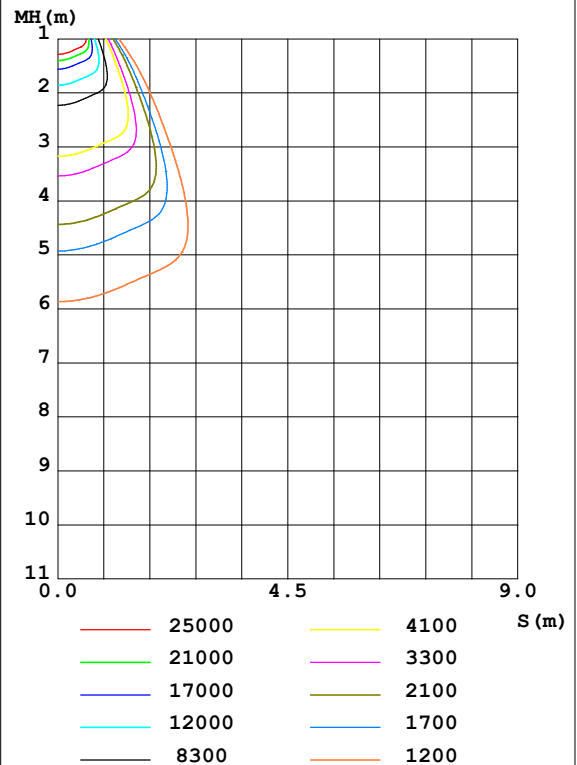
Test:U:229.9V I:1.063A P:238.7W PF:0.9765 Lamp Flux:34939x1 lm		
NAME: LHB01-240H	TYPE:240W	WEIGHT:
SPEC.:4000K Ra80 3070DEG L06401	DIM.: 0.948*0.275*0.102	SERIAL No.:
MFR.:	SUR.:0.92*0.2	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 146.37 lm/W			
MODEL	LHB01-240H	I _{max} (cd)	41292	S/MH (C0/180)	1.06
NOMINAL POWER(W)	240	LOR(%)	100.0	S/MH (C90/270)	0.48
RATED VOLTAGE(V)	230	TOTAL FLUX (lm)	34939	η UP,DN (C0-180)	0.0,50.0
NOMINAL FLUX(lm)	34939	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,50.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	230	η down (%)	100.0	CIBSE SHR MAX	0.60

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:

Checker:

Assessor:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
5	4106	3950	3831	3951	4106	3951	3831	3950	0- 5	963.9	963.9	2.76,2.76
10	4055	3517	3003	3518	4055	3518	3003	3517	5- 10	2674	3638	10.4,10.4
15	4020	2821	1926	2816	4020	2816	1926	2821	10- 15	3781	7419	21.2,21.2
20	4069	2036	1396	2027	4069	2027	1396	2036	15- 20	4333	11752	33.6,33.6
25	4106	1610	937.5	1599	4106	1599	937.5	1610	20- 25	4714	16466	47.1,47.1
30	3596	1255	479.0	1243	3596	1243	479.0	1255	25- 30	4707	21173	60.6,60.6
35	2394	825.8	403.3	820.7	2394	820.7	403.3	825.8	30- 35	3955	25128	71.9,71.9
40	1439	406.7	327.5	406.0	1439	406.0	327.5	406.7	35- 40	2884	28012	80.2,80.2
45	868.4	330.0	251.7	328.2	868.4	328.2	251.7	330.0	40- 45	2050	30062	86,86
50	452.3	257.3	175.9	255.0	452.3	255.0	175.9	257.3	45- 50	1460	31523	90.2,90.2
55	231.5	187.8	153.3	185.0	231.5	185.0	153.3	187.8	50- 55	1010	32533	93.1,93.1
60	141.2	125.5	130.7	122.4	141.2	122.4	130.7	125.5	55- 60	733.3	33266	95.2,95.2
65	96.91	98.00	108.1	95.75	96.91	95.75	108.1	98.00	60- 65	559.1	33825	96.8,96.8
70	66.02	70.24	85.46	68.84	66.02	68.84	85.46	70.24	65- 70	426.2	34251	98,98
75	43.73	42.92	64.50	42.53	43.73	42.53	64.50	42.92	70- 75	310.4	34562	98.9,98.9
80	24.45	27.67	43.55	27.55	24.45	27.55	43.55	27.67	75- 80	209.3	34771	99.5,99.5
85	6.201	14.46	22.59	14.49	6.201	14.49	22.59	14.46	80- 85	122.7	34894	99.9,99.9
90	0.5135	1.546	1.633	1.696	0.5135	1.696	1.633	1.546	85- 90	45.15	34939	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): 30062 lm

%lum = 86.0%

%lamp = 86.0%

Conical surface Flux(120deg): 33266 lm

%lum = 95.2%

%lamp = 95.2%

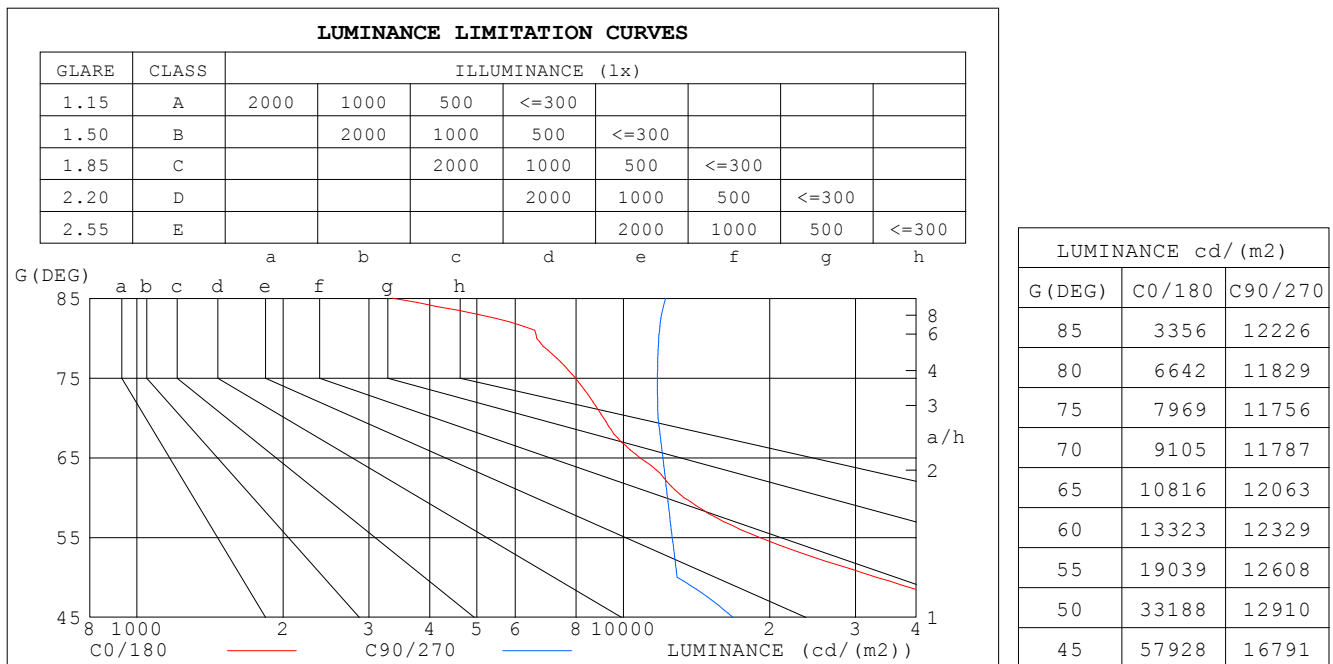
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-06-02

Checker:

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:

Assessor:

LUMINANCE LIMITATION CURVES



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

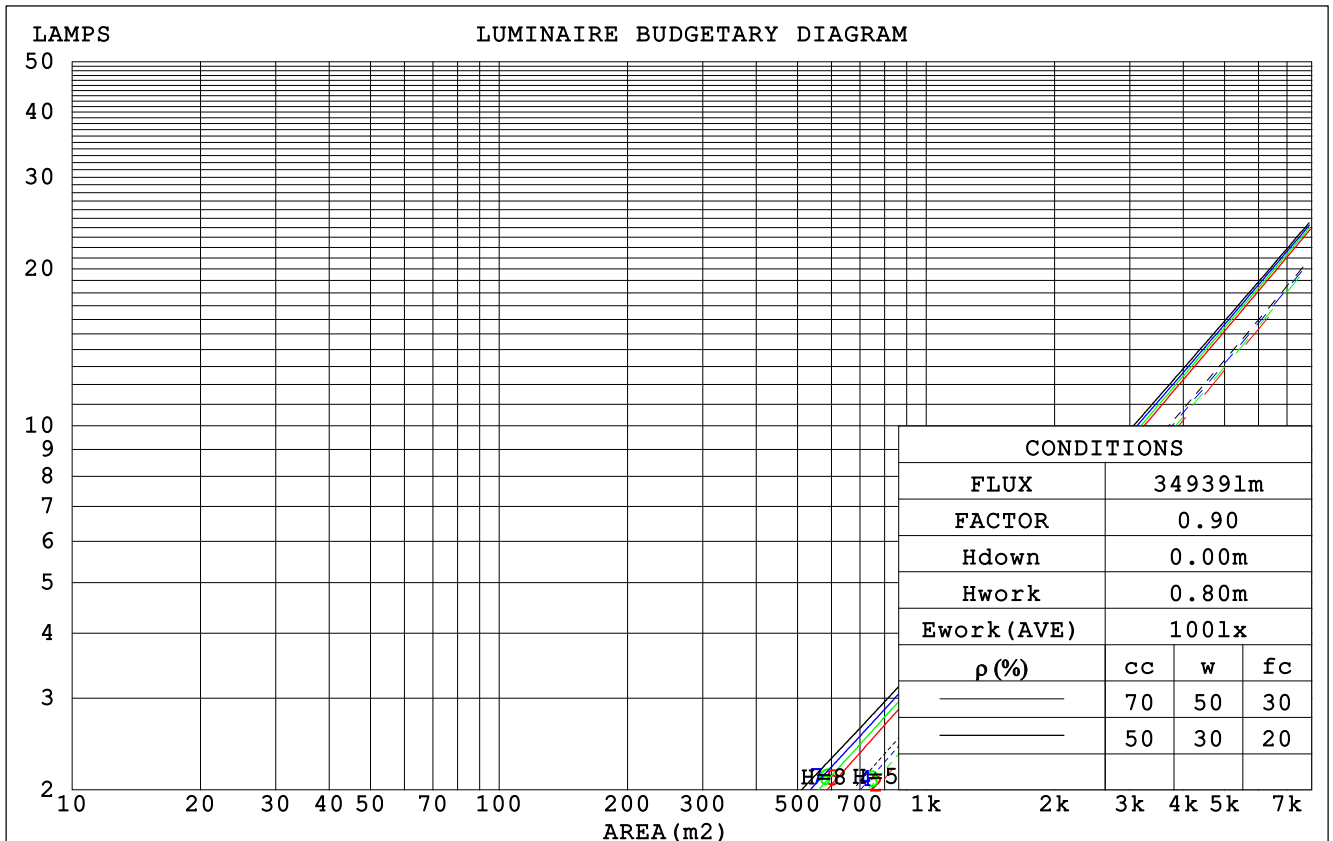
γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 9.500m [K=1.0000]
Remarks:

Checker:

Assessor:

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	1.04	1.07	1.04	1.02	1.03	1.01	.99	.99	.98	.96	.96	.94	.93	.91
2.0	1.00	.96	.92	.99	.94	.91	.95	.92	.89	.92	.89	.87	.89	.87	.85	.83
3.0	.92	.87	.82	.91	.86	.82	.88	.84	.80	.86	.82	.79	.83	.80	.78	.76
4.0	.85	.79	.74	.84	.78	.74	.82	.77	.73	.80	.76	.72	.78	.74	.71	.70
5.0	.79	.73	.68	.78	.72	.68	.77	.71	.67	.75	.70	.66	.73	.69	.66	.64
6.0	.74	.67	.63	.73	.67	.62	.72	.66	.62	.70	.65	.61	.69	.64	.61	.59
7.0	.69	.63	.58	.68	.62	.58	.67	.61	.57	.66	.61	.57	.65	.60	.57	.55
8.0	.65	.58	.54	.64	.58	.54	.63	.57	.53	.62	.57	.53	.61	.56	.53	.51
9.0	.61	.55	.50	.60	.54	.50	.59	.54	.50	.59	.53	.50	.58	.53	.50	.48
10.0	.58	.51	.47	.57	.51	.47	.56	.51	.47	.55	.50	.47	.55	.50	.47	.45



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:

Checker:

Assessor:

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	.207	.118	.037	.200	.114	.036	.187	.107	.034	.175	.101	.032	.165	.095	.031		
2.0	.197	.108	.033	.191	.105	.032	.181	.100	.031	.171	.096	.030	.161	.091	.029		
3.0	.186	.099	.030	.181	.097	.029	.172	.093	.028	.163	.090	.027	.155	.086	.027		
4.0	.176	.091	.027	.172	.090	.027	.163	.087	.026	.156	.084	.025	.149	.081	.025		
5.0	.166	.085	.025	.162	.083	.024	.155	.081	.024	.149	.078	.023	.143	.076	.023		
6.0	.157	.079	.023	.154	.078	.022	.148	.076	.022	.142	.074	.022	.136	.072	.021		
7.0	.149	.074	.021	.146	.073	.021	.141	.071	.020	.135	.069	.020	.131	.068	.020		
8.0	.142	.069	.019	.139	.068	.019	.134	.067	.019	.129	.066	.019	.125	.064	.019		
9.0	.135	.065	.018	.133	.065	.018	.128	.063	.018	.124	.062	.018	.120	.061	.018		
10.0	.129	.062	.017	.127	.061	.017	.123	.060	.017	.119	.059	.017	.115	.058	.017		

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	.173	.157	.143	.148	.135	.123	.101	.093	.085	.058	.054	.049	.019	.017	.016	
2.0	.160	.132	.109	.137	.114	.095	.094	.079	.066	.054	.046	.039	.017	.015	.013	
3.0	.148	.114	.086	.127	.098	.075	.087	.068	.052	.050	.040	.031	.016	.013	.010	
4.0	.139	.099	.069	.119	.086	.060	.082	.060	.042	.047	.035	.025	.015	.011	.008	
5.0	.130	.088	.057	.112	.076	.049	.077	.053	.035	.045	.031	.021	.014	.010	.007	
6.0	.123	.079	.047	.106	.068	.041	.073	.048	.029	.042	.028	.017	.014	.009	.006	
7.0	.117	.072	.040	.100	.062	.035	.069	.043	.025	.040	.026	.015	.013	.008	.005	
8.0	.111	.065	.034	.095	.057	.030	.066	.040	.021	.038	.024	.013	.012	.008	.004	
9.0	.106	.060	.030	.091	.052	.026	.063	.037	.018	.037	.022	.011	.012	.007	.004	
10.0	.101	.056	.026	.087	.049	.023	.060	.034	.016	.035	.020	.010	.011	.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:

Checker:

Assessor:

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	23.4	24.5	23.7	24.7	24.9	17.6	18.7	17.9	18.9	19.1
3H	23.5	24.5	23.8	24.7	24.9	18.9	19.9	19.2	20.1	20.3
4H	23.5	24.4	23.8	24.7	24.9	19.5	20.4	19.8	20.7	20.9
6H	23.5	24.4	23.8	24.6	24.9	20.1	20.9	20.4	21.2	21.5
8H	23.5	24.3	23.8	24.6	24.8	20.3	21.1	20.6	21.4	21.7
12H	23.4	24.3	23.8	24.5	24.8	20.5	21.3	20.8	21.6	21.8
4H 2H	23.3	24.3	23.6	24.5	24.7	18.1	19.1	18.4	19.3	19.5
3H	23.5	24.3	23.8	24.5	24.8	19.5	20.3	19.8	20.6	20.9
4H	23.5	24.3	23.9	24.6	24.9	20.2	21.0	20.6	21.3	21.6
6H	23.5	24.2	23.9	24.5	24.9	20.9	21.6	21.3	21.9	22.3
8H	23.5	24.2	23.9	24.5	24.9	21.2	21.8	21.6	22.2	22.6
12H	23.5	24.1	23.9	24.5	24.8	21.5	22.0	21.9	22.4	22.8
8H 4H	23.5	24.1	23.9	24.4	24.8	20.3	20.9	20.7	21.3	21.7
6H	23.5	24.0	24.0	24.4	24.9	21.2	21.7	21.6	22.1	22.5
8H	23.6	24.0	24.0	24.4	24.9	21.6	22.0	22.0	22.4	22.9
12H	23.6	23.9	24.0	24.4	24.9	21.9	22.3	22.4	22.7	23.2
12H 4H	23.4	24.0	23.9	24.4	24.8	20.3	20.9	20.7	21.2	21.6
6H	23.5	24.0	24.0	24.4	24.8	21.2	21.6	21.6	22.0	22.5
8H	23.6	23.9	24.0	24.4	24.9	21.6	22.0	22.1	22.4	22.9
Variations with the observer position at spacings:										
S = 1.0H	+ 3.0 / - 2.8					+ 0.4 / - 0.4				
1.5H	+ 4.4 / - 3.2					+ 0.3 / - 0.4				
2.0H	+ 4.7 / - 2.2					+ 0.4 / - 0.3				

CIE Pub.117 Corrected 34939 lm Total Lamp Luminous Flux.(8log(F/F0) = 12.3)

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:

Checker:

Assessor:

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) $k(RI) \times RCR = 5$									
$k = 0.60$	79	71	67	79	71	67	78	71	66	62
0.80	88	80	75	87	80	75	85	79	75	70
1.00	93	86	82	92	86	81	91	86	81	76
1.25	98	92	87	97	91	87	95	90	86	81
1.50	102	96	91	100	95	91	98	93	90	84
2.00	105	100	96	104	99	95	101	97	94	88
2.50	107	103	99	106	101	98	103	99	96	90
3.00	109	105	102	108	104	101	104	101	99	92
4.00	112	108	106	110	107	104	106	104	102	94
5.00	113	111	108	111	109	107	107	105	103	95
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

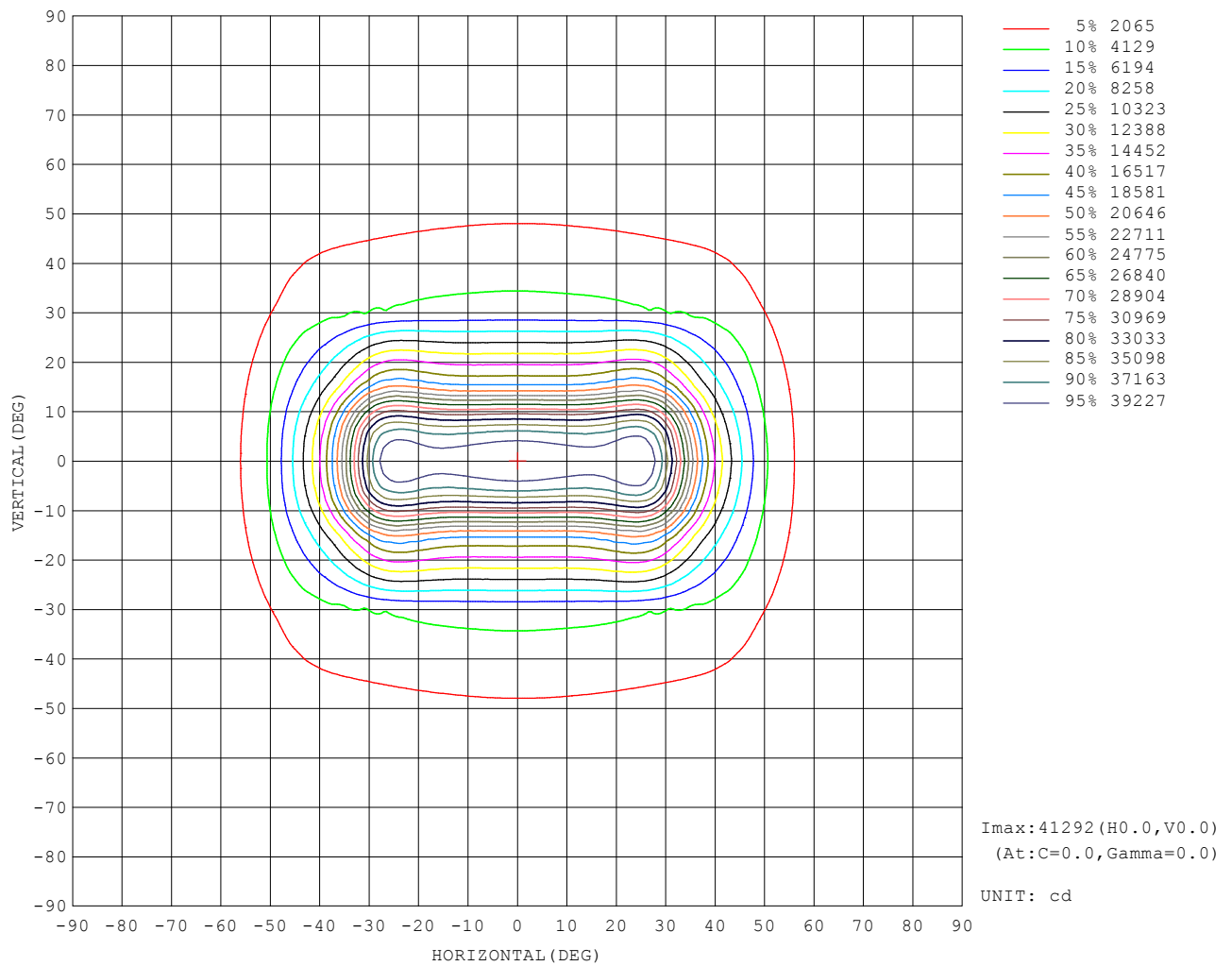
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-06-02

Checker:

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:

Assessor:

ISOCANDELA DIAGRAM



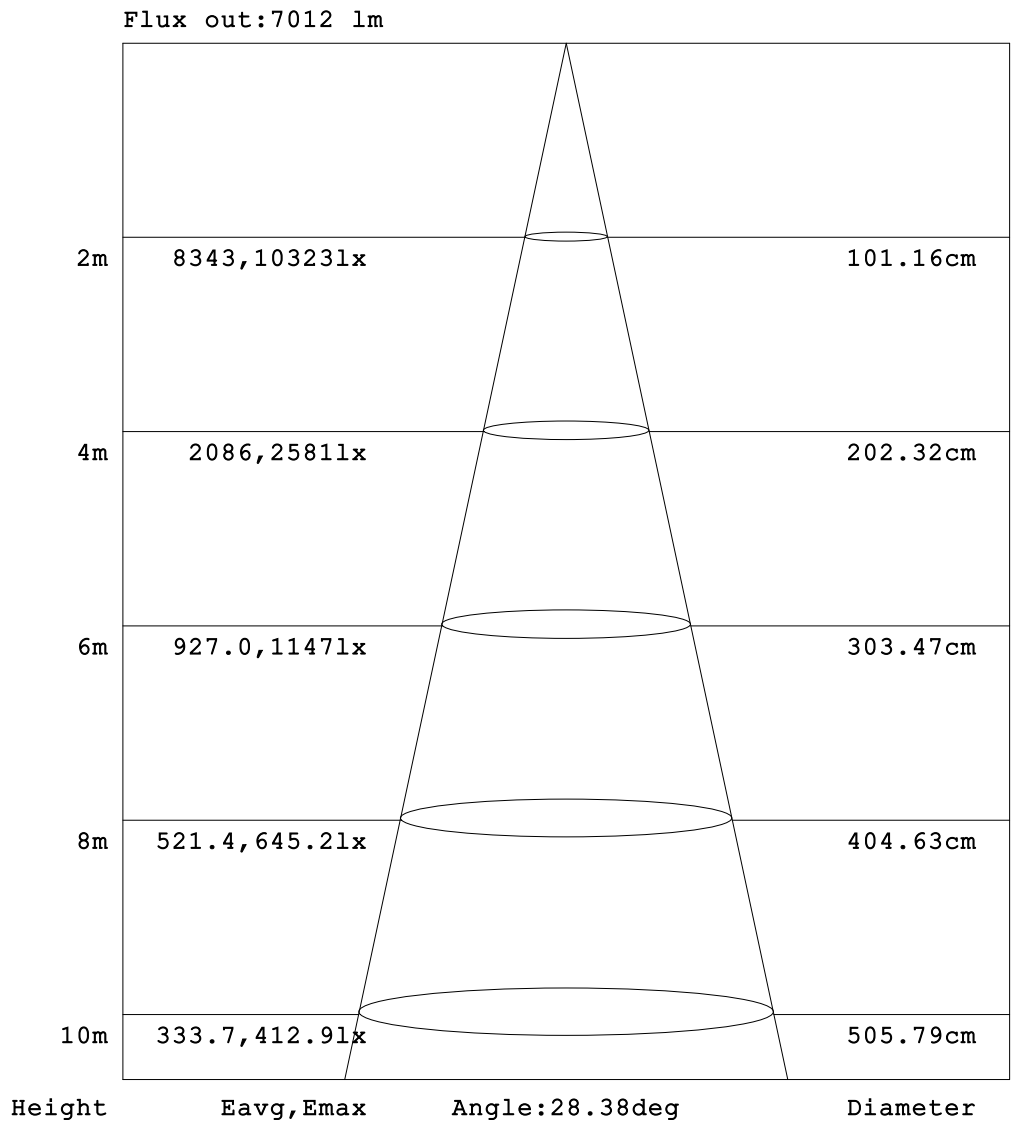
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-06-02

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:

Checker:

Assessor:

AAI Figure



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

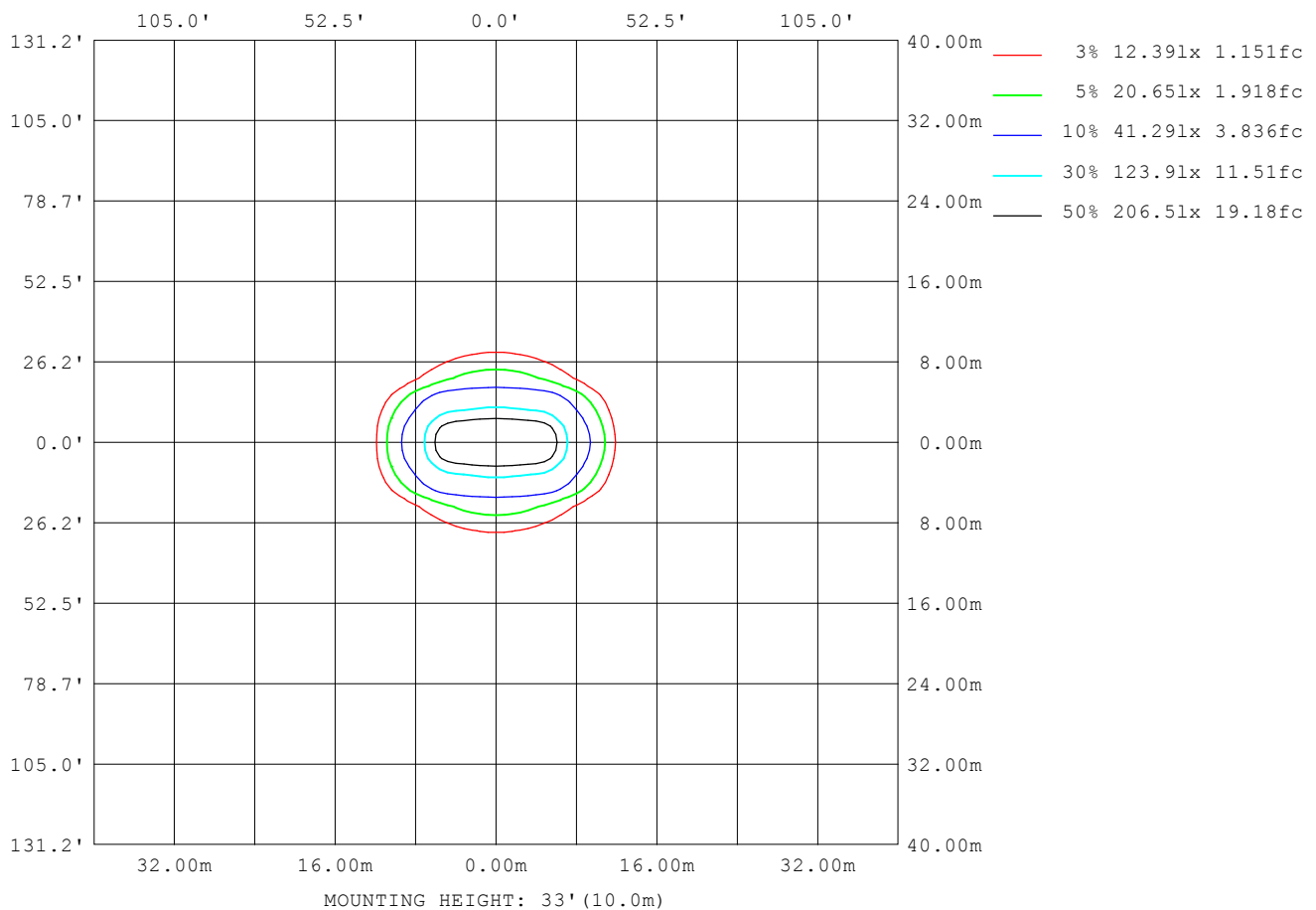
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-06-02

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:

Checker:

Assessor:

ISOLUX DIAGRAM



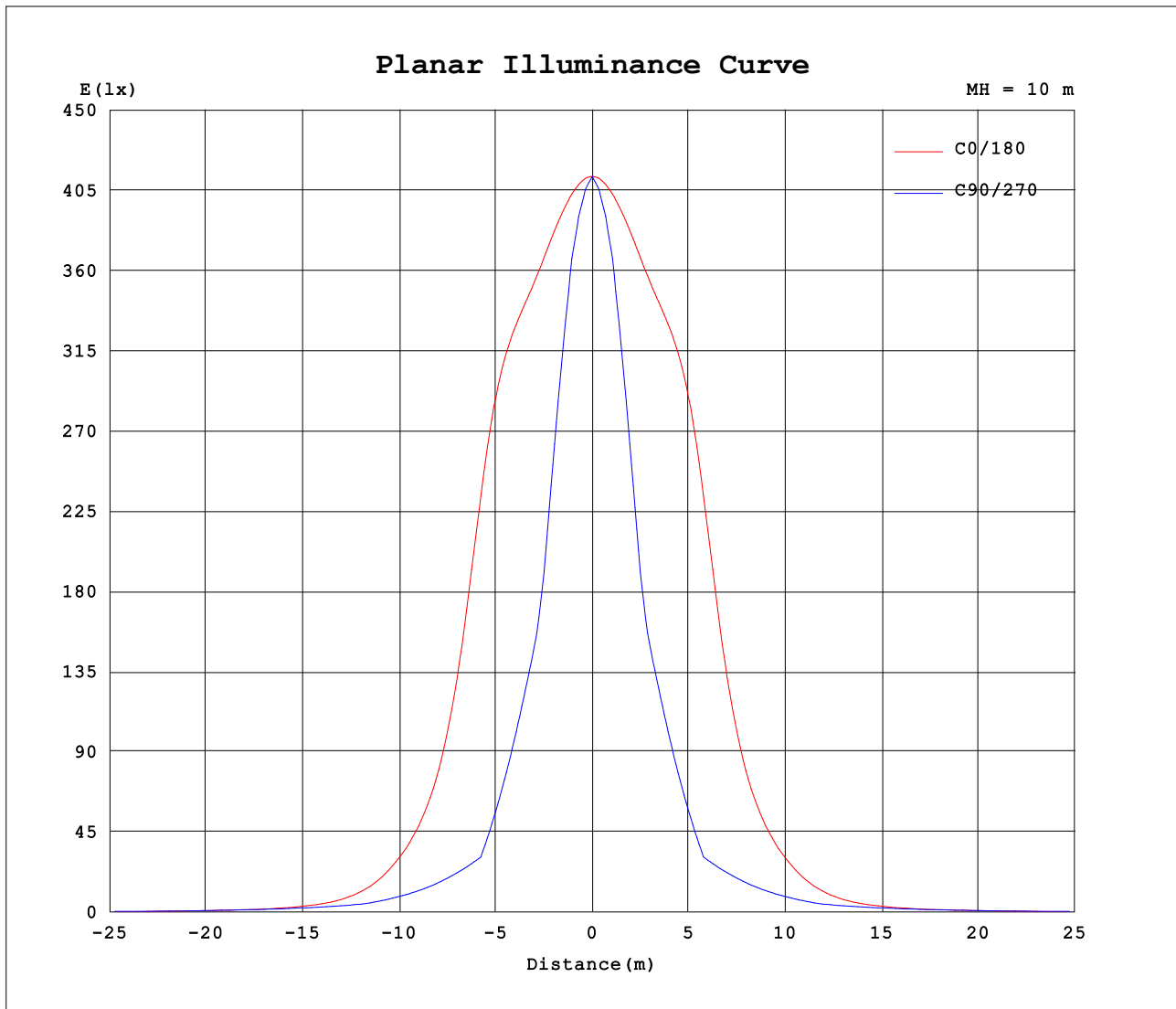
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-06-02

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:

Checker:

Assessor:

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:

Checker:

Assessor:

Assessor:

Assessor:

Assessor:

Assessor: