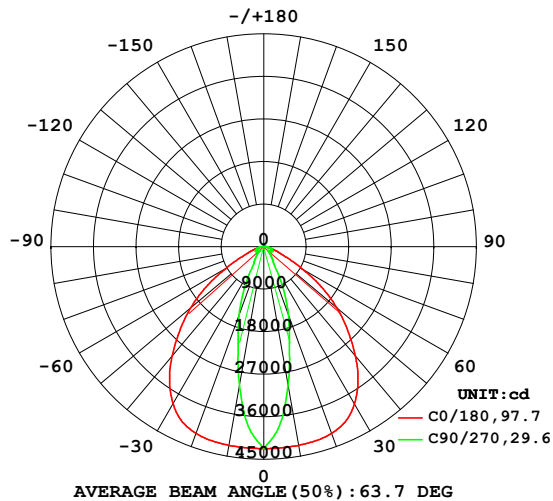


LUMINAIRE PHOTOMETRIC TEST REPORT

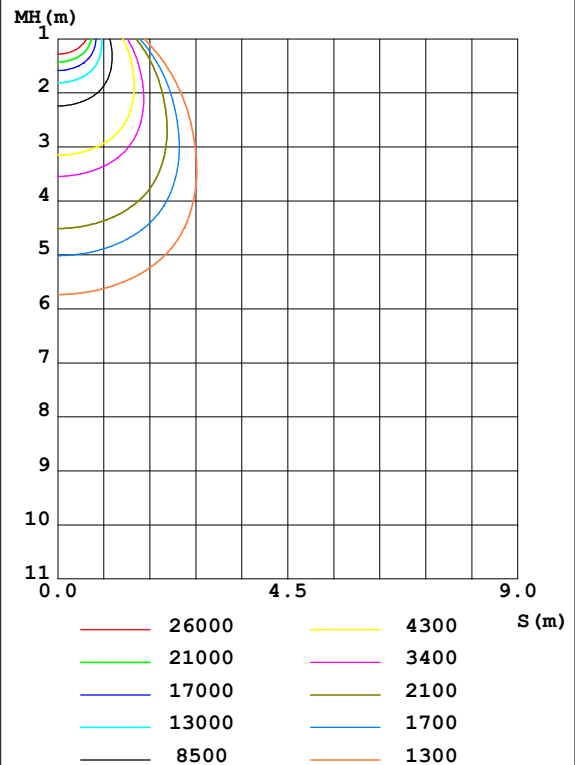
Test:U:229.9V I:1.327A P:294.6W PF:0.9652 Lamp Flux:40851.4x1 lm		
NAME: LHB03-300	TYPE:300W	WEIGHT:
SPEC.:5000K Ra70 30*100DEG L00301	DIM.: 0.906*0.307*0.061	SERIAL No.:
MFR.:	SUR.:0.855*0.274	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 138.67 lm/W			
MODEL	LHB03-300	I _{max} (cd)	42727	S/MH(C0/180)	1.30
NOMINAL POWER(W)	300	LOR(%)	100.0	S/MH(C90/270)	0.49
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	40851	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	40851.4	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:2017-03-02

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	4271	3972	3805	3972	4271	3968	3805	3968	0- 5	978.1	978.1	2.39,2.39
10	4267	3471	2984	3471	4267	3462	2984	3462	5- 10	2680	3658	8.95,8.95
15	4252	2814	2111	2814	4252	2802	2111	2802	10- 15	3825	7483	18.3,18.3
20	4203	2142	1528	2142	4203	2130	1528	2130	15- 20	4437	11920	29.2,29.2
25	4084	1648	980.5	1648	4084	1639	980.5	1639	20- 25	4671	16591	40.6,40.6
30	3841	1199	433.4	1199	3841	1193	433.4	1193	25- 30	4485	21076	51.6,51.6
35	3479	743.0	326.9	743.0	3479	739.6	326.9	739.6	30- 35	3996	25072	61.4,61.4
40	3018	339.3	220.5	339.3	3018	337.6	220.5	337.6	35- 40	3493	28566	69.9,69.9
45	2516	251.1	127.8	251.1	2516	250.2	127.8	250.2	40- 45	2928	31494	77.1,77.1
50	2023	163.7	145.2	163.7	2023	164.1	145.2	164.1	45- 50	2367	33861	82.9,82.9
55	1493	88.99	176.4	88.99	1493	89.40	176.4	89.40	50- 55	1903	35764	87.5,87.5
60	935.7	80.12	207.5	80.12	935.7	80.63	207.5	80.63	55- 60	1505	37269	91.2,91.2
65	512.7	73.58	186.9	73.58	512.7	74.22	186.9	74.22	60- 65	1196	38465	94.2,94.2
70	295.9	63.37	166.3	63.37	295.9	64.21	166.3	64.21	65- 70	899.9	39365	96.4,96.4
75	149.8	51.60	143.2	51.60	149.8	52.44	143.2	52.44	70- 75	670.2	40035	98,98
80	57.78	39.15	99.50	39.15	57.78	39.94	99.50	39.94	75- 80	462.9	40498	99.1,99.1
85	14.54	21.10	53.27	21.10	14.54	21.55	53.27	21.55	80- 85	258.4	40756	99.8,99.8
90	1.310	4.248	7.047	4.248	1.310	4.387	7.047	4.387	85- 90	95.21	40851	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): 31494 lm

%lum = 77.1%

%lamp = 77.1%

Conical surface Flux(120deg): 37269 lm

%lum = 91.2%

%lamp = 91.2%

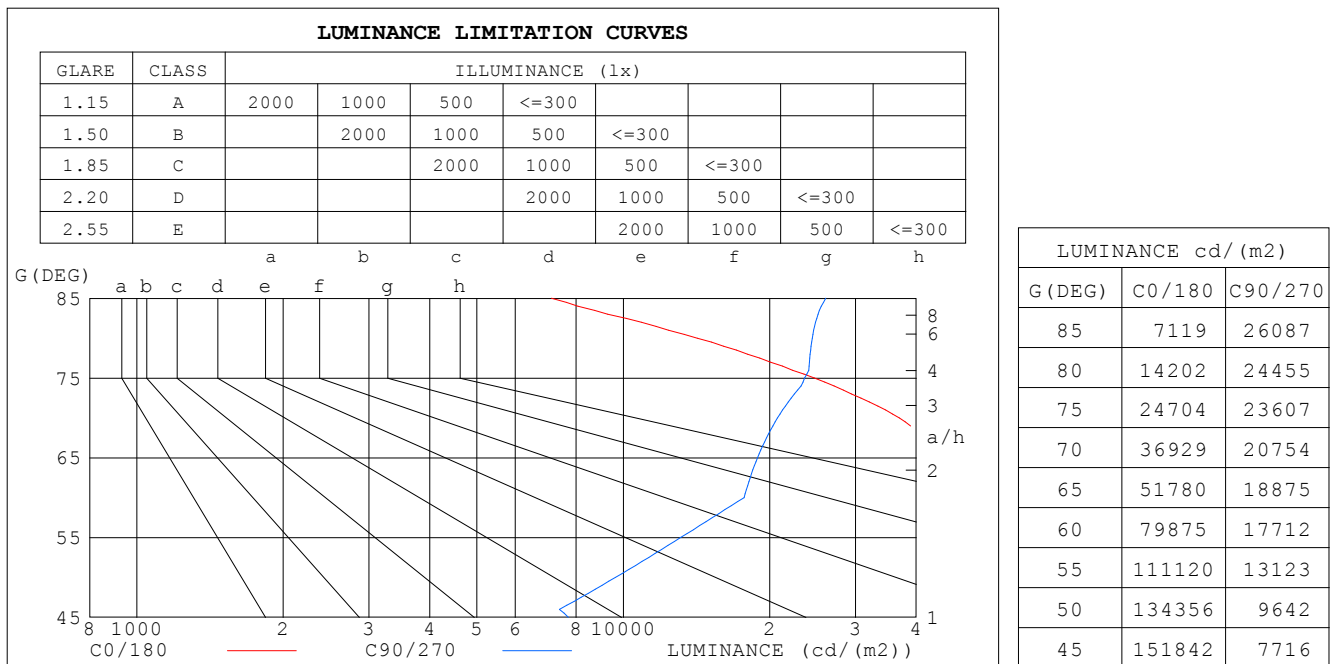
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-03-02

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: 2017-03-02

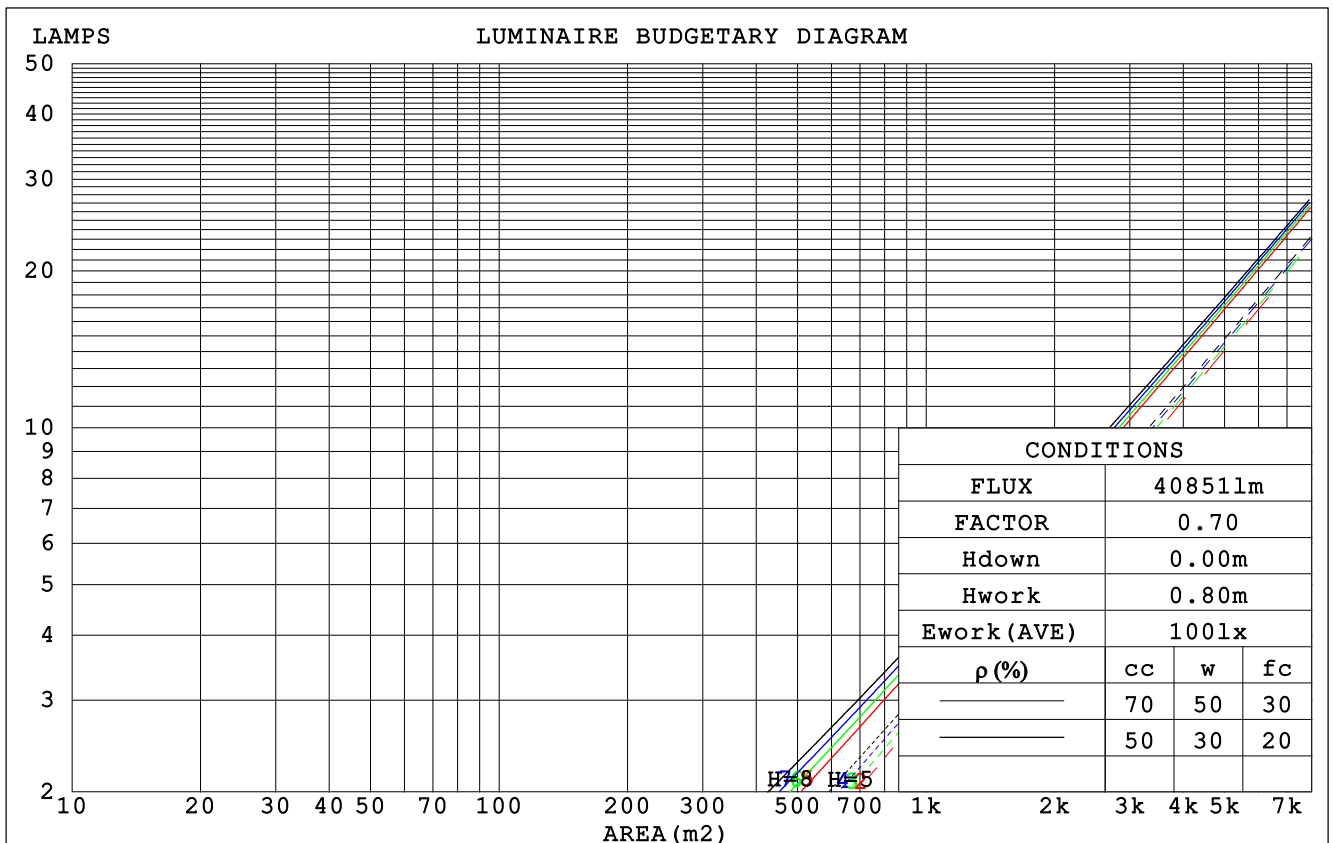
Checker:

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:

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	1.08	1.05	1.02	1.06	1.03	1.00	1.02	.99	.97	.98	.96	.94	.94	.93	.91	.89
2.0	.98	.93	.88	.96	.91	.87	.93	.89	.85	.90	.86	.83	.87	.84	.82	.80
3.0	.89	.83	.78	.88	.82	.77	.85	.80	.76	.82	.78	.75	.80	.76	.73	.71
4.0	.82	.75	.69	.80	.74	.69	.78	.72	.68	.76	.71	.67	.74	.70	.66	.65
5.0	.75	.68	.63	.74	.67	.62	.72	.66	.62	.70	.65	.61	.69	.64	.61	.59
6.0	.69	.62	.57	.69	.62	.57	.67	.61	.56	.65	.60	.56	.64	.59	.56	.54
7.0	.65	.57	.52	.64	.57	.52	.62	.56	.52	.61	.56	.52	.60	.55	.51	.50
8.0	.60	.53	.48	.60	.53	.48	.58	.52	.48	.57	.52	.48	.56	.51	.47	.46
9.0	.56	.49	.45	.56	.49	.45	.55	.49	.45	.54	.48	.44	.53	.48	.44	.43
10.0	.53	.46	.42	.52	.46	.42	.52	.46	.42	.51	.45	.41	.50	.45	.41	.40



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-03-02

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	.233	.133	.042	.226	.129	.041	.213	.122	.039	.201	.116	.037	.191	.110	.036	
2.0	.221	.121	.037	.215	.119	.037	.204	.114	.035	.194	.109	.034	.185	.105	.033	
3.0	.208	.111	.033	.203	.109	.033	.193	.105	.032	.184	.101	.031	.176	.097	.030	
4.0	.195	.101	.030	.190	.100	.029	.182	.096	.029	.174	.094	.028	.167	.091	.028	
5.0	.183	.093	.027	.179	.092	.027	.171	.089	.026	.165	.087	.026	.158	.085	.025	
6.0	.172	.086	.025	.168	.085	.024	.162	.083	.024	.156	.081	.024	.150	.079	.023	
7.0	.162	.080	.023	.159	.079	.023	.153	.077	.022	.148	.076	.022	.143	.074	.022	
8.0	.153	.075	.021	.150	.074	.021	.145	.072	.021	.140	.071	.020	.136	.070	.020	
9.0	.145	.070	.020	.142	.069	.019	.138	.068	.019	.133	.067	.019	.129	.066	.019	
10.0	.138	.066	.018	.135	.065	.018	.131	.064	.018	.127	.063	.018	.123	.062	.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	.175	.157	.140	.150	.135	.121	.102	.093	.084	.059	.054	.049	.019	.017	.016	
2.0	.163	.132	.107	.139	.114	.092	.096	.079	.064	.055	.046	.038	.018	.015	.012	
3.0	.153	.114	.083	.131	.098	.072	.090	.068	.051	.052	.040	.030	.017	.013	.010	
4.0	.143	.100	.066	.123	.086	.058	.085	.060	.041	.049	.035	.024	.016	.011	.008	
5.0	.135	.089	.054	.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	.121	.073	.038	.105	.063	.033	.072	.044	.024	.042	.026	.014	.014	.009	.005	
8.0	.115	.067	.033	.099	.058	.029	.069	.040	.020	.040	.024	.012	.013	.008	.004	
9.0	.110	.061	.029	.095	.053	.025	.066	.037	.018	.038	.022	.011	.012	.007	.004	
10.0	.105	.057	.025	.090	.050	.022	.063	.035	.016	.037	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-02

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	28.3	29.5	28.6	29.7	29.9	17.0	18.2	17.3	18.4	18.6
3H	29.0	30.1	29.3	30.4	30.6	20.2	21.3	20.4	21.5	21.7
4H	29.2	30.3	29.5	30.5	30.7	21.7	22.7	22.0	23.0	23.2
6H	29.3	30.2	29.6	30.5	30.7	22.9	23.9	23.2	24.1	24.4
8H	29.2	30.2	29.5	30.4	30.7	23.3	24.3	23.7	24.6	24.8
12H	29.2	30.1	29.5	30.4	30.7	23.7	24.6	24.0	24.9	25.2
4H 2H	28.1	29.1	28.4	29.3	29.6	17.4	18.4	17.7	18.6	18.9
3H	28.8	29.7	29.1	30.0	30.3	20.7	21.6	21.0	21.9	22.2
4H	29.0	29.8	29.4	30.1	30.5	22.5	23.3	22.8	23.6	23.9
6H	29.1	29.8	29.5	30.2	30.5	23.9	24.7	24.3	25.0	25.4
8H	29.1	29.8	29.5	30.1	30.5	24.5	25.2	24.9	25.5	25.9
12H	29.1	29.7	29.5	30.1	30.5	24.9	25.6	25.4	25.9	26.3
8H 4H	28.9	29.6	29.3	29.9	30.3	22.6	23.2	23.0	23.6	24.0
6H	29.0	29.6	29.5	30.0	30.4	24.2	24.8	24.7	25.2	25.6
8H	29.0	29.5	29.5	29.9	30.4	25.0	25.5	25.4	25.9	26.3
12H	29.0	29.4	29.5	29.9	30.4	25.6	26.0	26.1	26.5	26.9
12H 4H	28.9	29.5	29.3	29.9	30.3	22.5	23.2	23.0	23.5	23.9
6H	29.0	29.5	29.4	29.9	30.3	24.2	24.7	24.7	25.2	25.6
8H	29.0	29.4	29.5	29.9	30.4	25.0	25.4	25.5	25.9	26.3
Variations with the observer position at spacings:										
S = 1.0H	+ 1.5 / - 1.4					+ 0.2 / - 0.2				
1.5H	+ 2.8 / - 3.5					+ 0.2 / - 0.2				
2.0H	+ 4.2 / - 5.6					+ 0.3 / - 0.4				

CIE Pub.117 Corrected 40851 lm Total Lamp Luminous Flux.(8log(F/F0) = 12.9)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-02

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) $k(RI) \times RCR = 5$									
$k = 0.60$	73	64	59	72	64	58	71	63	58	53
0.80	82	73	68	81	73	68	79	72	67	62
1.00	88	80	75	87	80	75	86	80	74	69
1.25	94	86	81	93	86	81	90	84	80	74
1.50	98	91	86	96	90	85	94	88	84	78
2.00	102	96	92	101	95	91	98	93	89	83
2.50	105	100	95	103	98	94	100	96	92	85
3.00	107	103	99	106	101	97	102	98	95	88
4.00	110	106	103	108	105	102	104	101	99	91
5.00	112	109	106	110	107	104	106	103	101	93
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

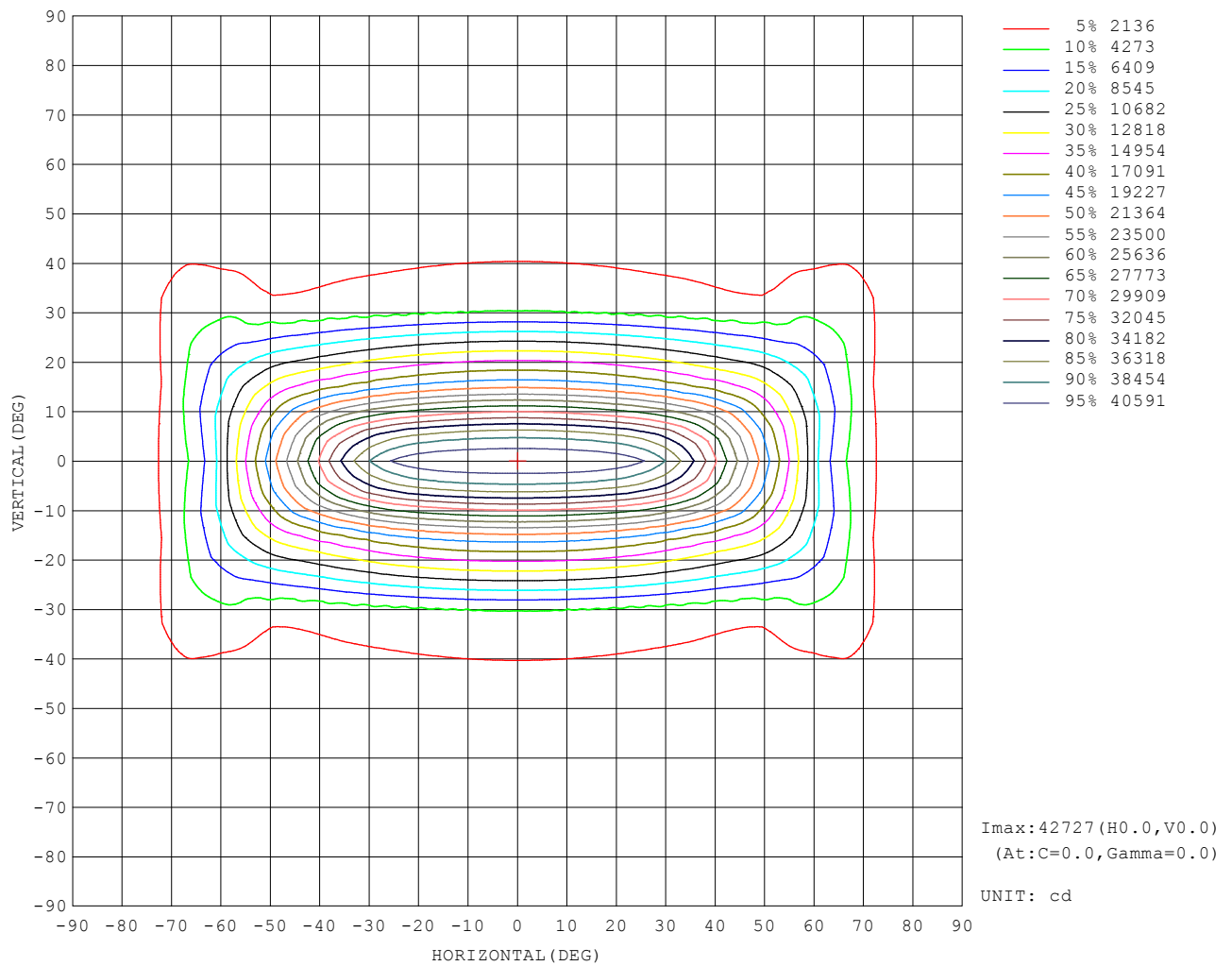
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-03-02

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



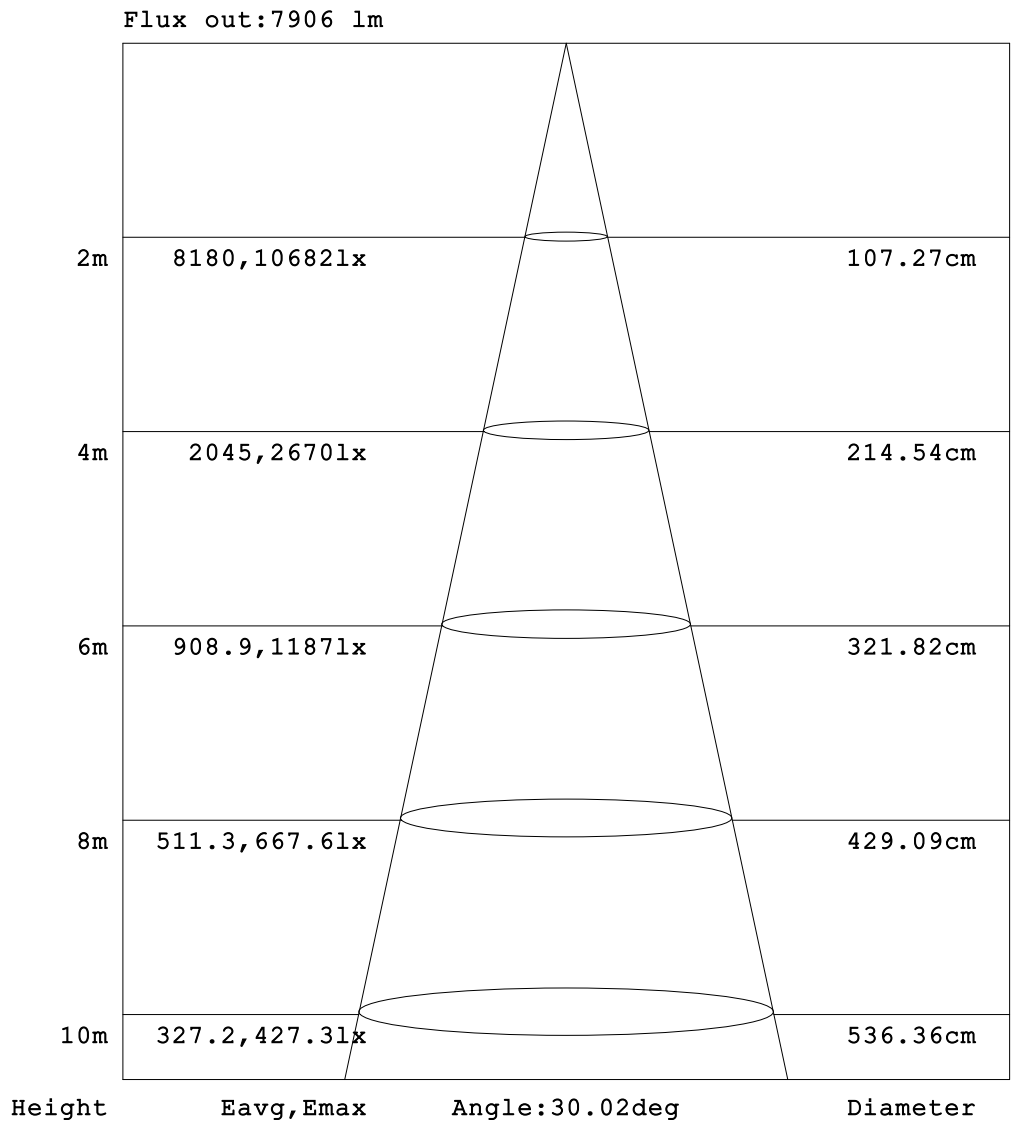
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-02

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.

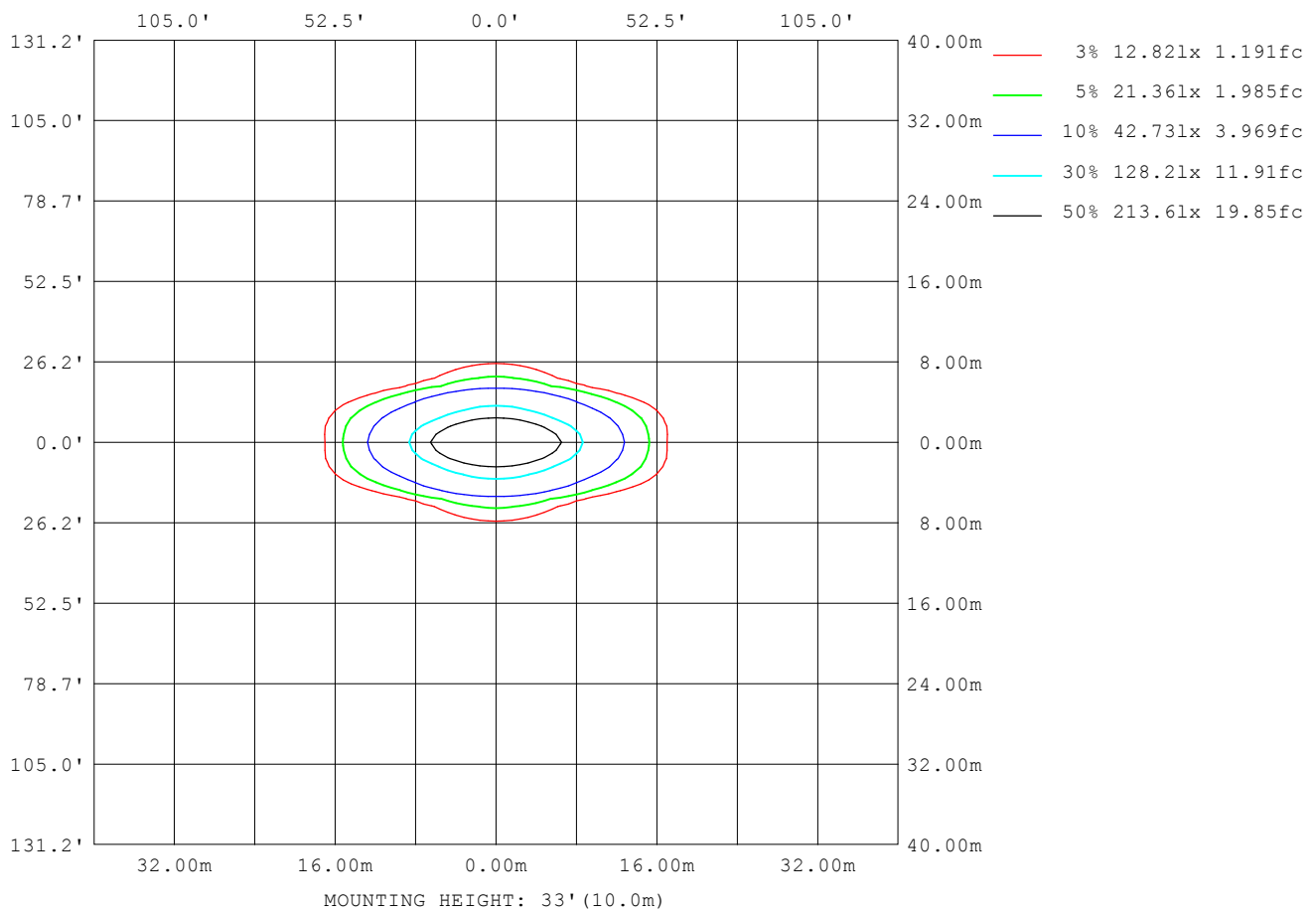
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-02

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



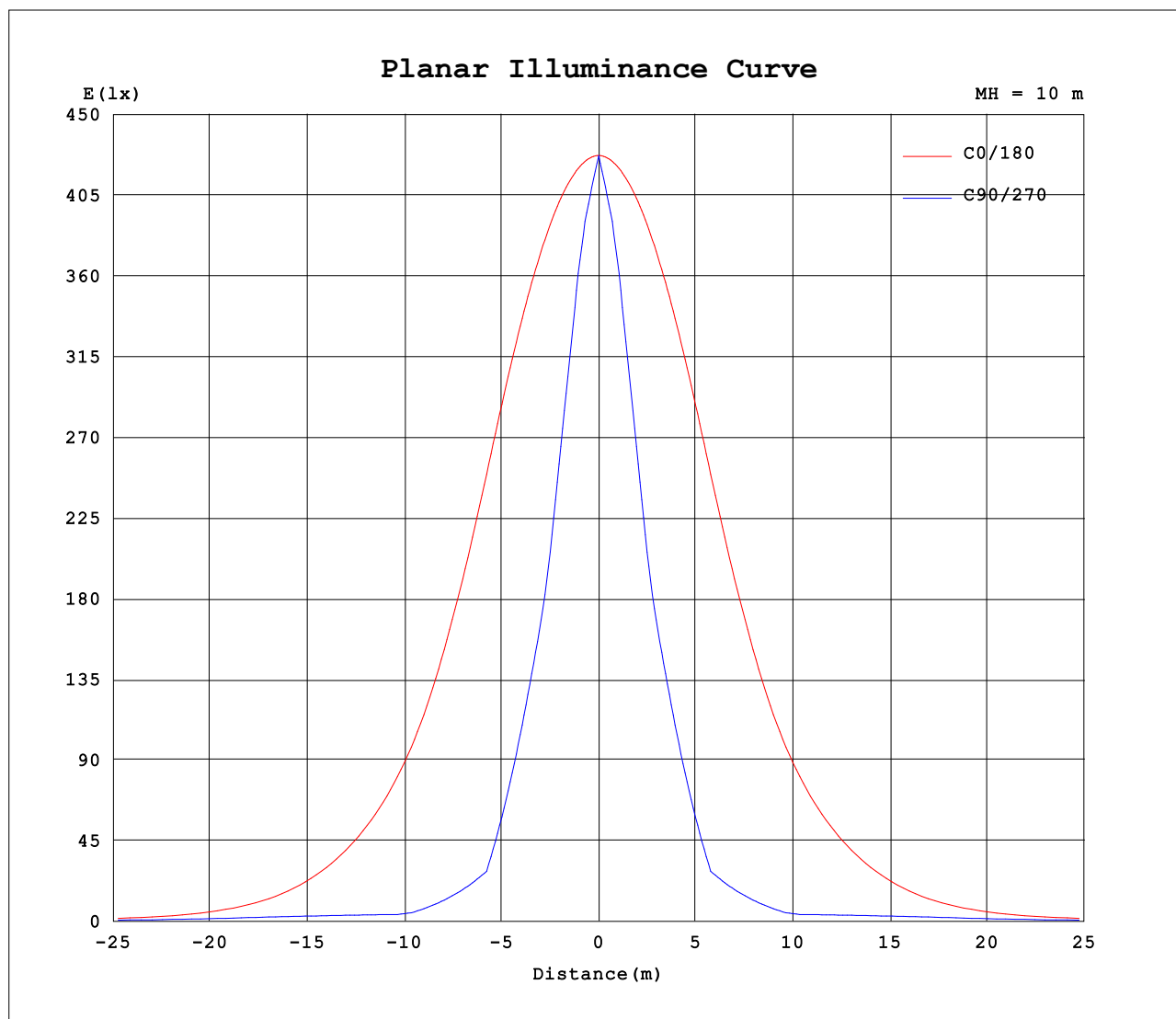
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-02

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: 2017-03-02

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: