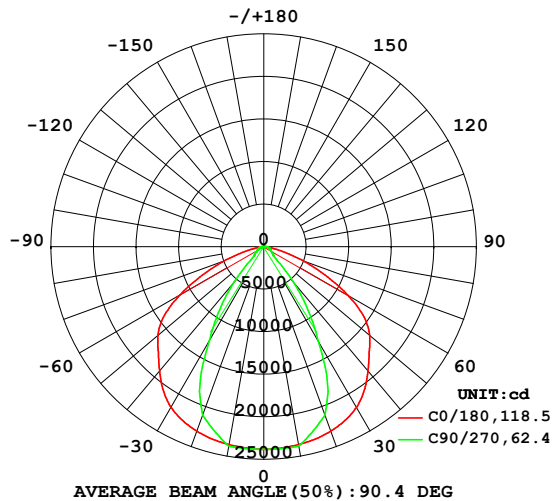


LUMINAIRE PHOTOMETRIC TEST REPORT

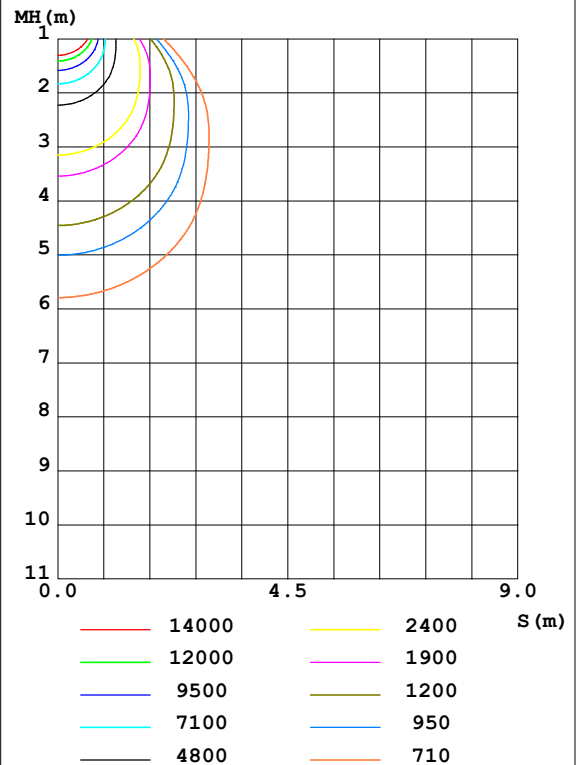
Test:U:230.0V I:1.328A P:294.7W PF:0.9652 Lamp Flux:40376.3x1 lm		
NAME: LHB03-300	TYPE:300W	WEIGHT:
SPEC.:5000K Ra70 60*120DEG L00302	DIM.: 0.906*0.307*0.061	SERIAL No.:
MFR.:	SUR.:0.855*0.274	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 136.99 lm/W			
MODEL	LHB03-300	I _{max} (cd)	23815	S/MH (C0/180)	1.35
NOMINAL POWER(W)	300	LOR(%)	100.0	S/MH (C90/270)	0.94
RATED VOLTAGE(V)	230	TOTAL FLUX (lm)	40376	η UP,DN (C0-180)	0.0,50.0
NOMINAL FLUX(lm)	40376.3	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,50.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE (V)	230	η down (%)	100.0	CIBSE SHR MAX	1.05

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

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:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
5	2376	2378	2381	2378	2376	2378	2381	2378	0- 5	569.0	569.0	1.41,1.41
10	2362	2371	2381	2371	2362	2371	2381	2371	5- 10	1699	2268	5.62,5.62
15	2341	2339	2243	2339	2341	2338	2243	2338	10- 15	2780	5048	12.5,12.5
20	2306	2212	2104	2212	2306	2211	2104	2211	15- 20	3729	8776	21.7,21.7
25	2256	2069	1778	2069	2256	2064	1778	2064	20- 25	4481	13258	32.8,32.8
30	2181	1816	1280	1816	2181	1808	1280	1808	25- 30	4850	18108	44.8,44.8
35	2060	1407	909.2	1407	2060	1402	909.2	1402	30- 35	4742	22850	56.6,56.6
40	1906	932.8	538.5	932.8	1906	933.6	538.5	933.6	35- 40	4286	27135	67.2,67.2
45	1754	675.9	202.1	675.9	1754	678.0	202.1	678.0	40- 45	3552	30687	76,76
50	1625	459.5	141.4	459.5	1625	460.3	141.4	460.3	45- 50	2778	33465	82.9,82.9
55	1438	287.4	115.0	287.4	1438	286.6	115.0	286.6	50- 55	2200	35665	88.3,88.3
60	1140	211.6	88.73	211.6	1140	211.2	88.73	211.2	55- 60	1657	37322	92.4,92.4
65	799.6	152.1	78.56	152.1	799.6	152.6	78.56	152.6	60- 65	1170	38492	95.3,95.3
70	498.1	109.2	68.40	109.2	498.1	109.7	68.40	109.7	65- 70	809.0	39301	97.3,97.3
75	241.0	71.26	57.56	71.26	241.0	71.40	57.56	71.40	70- 75	540.8	39842	98.7,98.7
80	81.48	33.38	41.30	33.38	81.48	33.69	41.30	33.69	75- 80	319.3	40161	99.5,99.5
85	16.81	18.24	24.36	18.24	16.81	18.38	24.36	18.38	80- 85	157.1	40319	99.9,99.9
90	1.328	2.658	7.425	2.658	1.328	2.673	7.425	2.673	85- 90	57.72	40376	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): 30687 lm

%lum = 76.0%

%lamp = 76.0%

Conical surface Flux(120deg): 37322 lm

%lum = 92.4%

%lamp = 92.4%

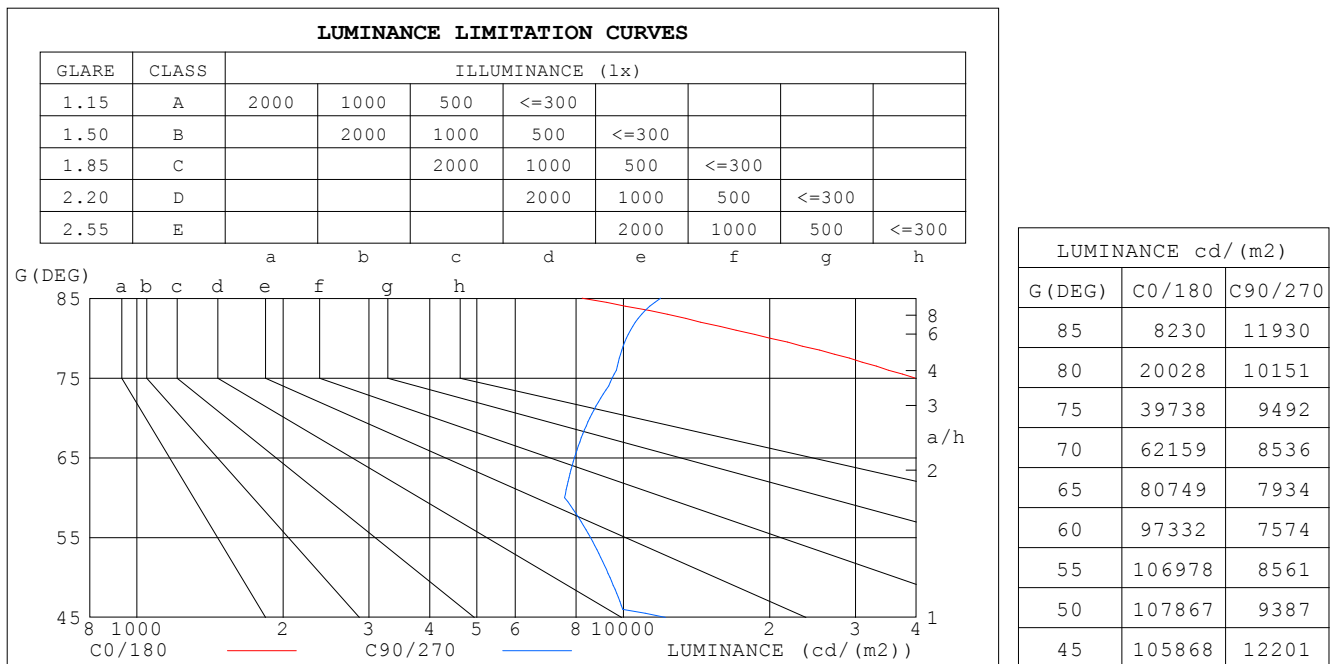
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-03-02

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

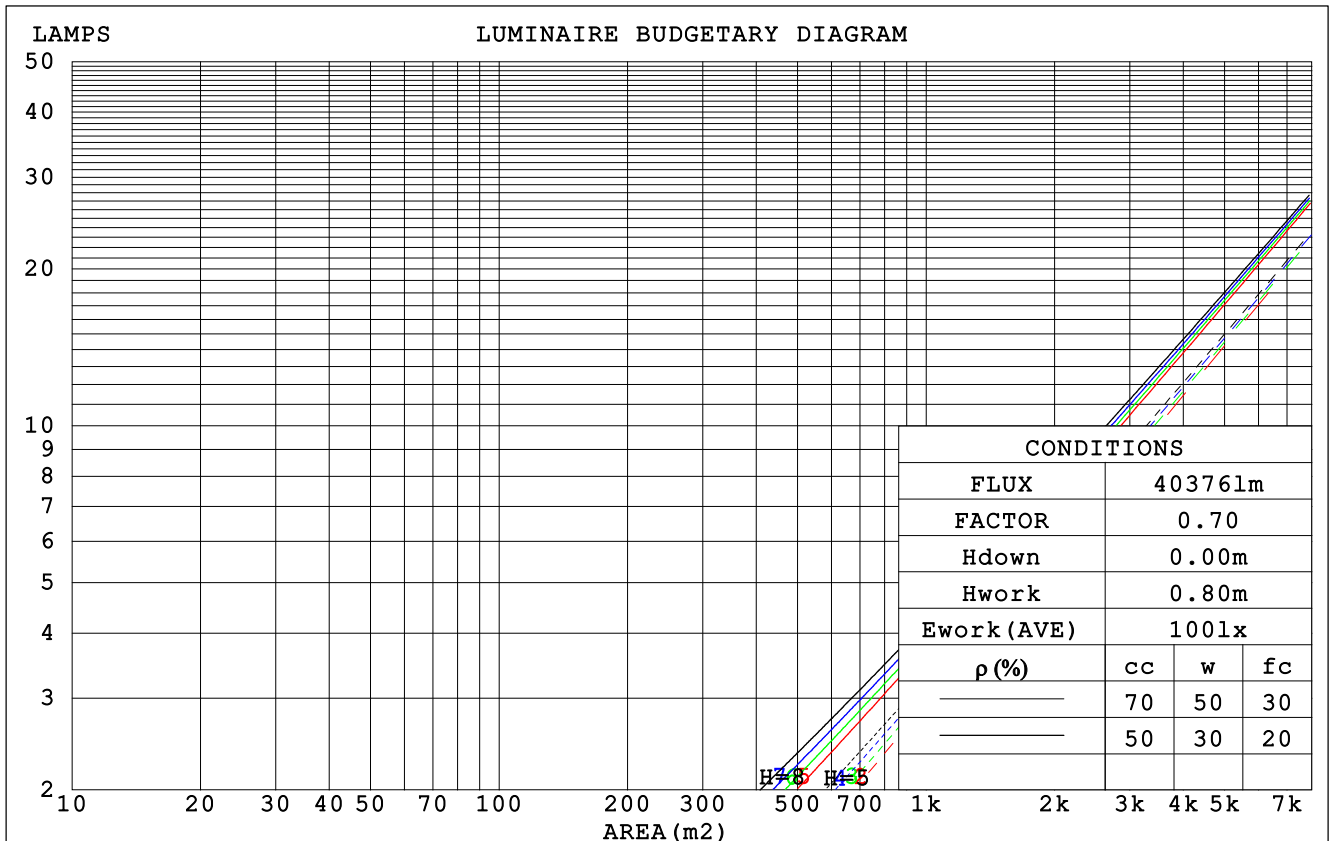
Checker:

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	.00
1.0	1.08	1.04	1.02	1.06	1.03	.00	1.01	.99	.97	.98	.96	.94	.94	.93	.91	.89
2.0	.97	.92	.87	.95	.91	.86	.92	.88	.84	.89	.86	.83	.86	.83	.81	.79
3.0	.88	.81	.76	.86	.80	.76	.84	.79	.74	.81	.77	.73	.79	.75	.72	.70
4.0	.80	.73	.67	.79	.72	.67	.76	.71	.66	.74	.69	.65	.72	.68	.64	.63
5.0	.73	.66	.60	.72	.65	.60	.70	.64	.59	.68	.63	.59	.66	.62	.58	.56
6.0	.67	.59	.54	.66	.59	.54	.64	.58	.53	.63	.57	.53	.61	.56	.52	.51
7.0	.62	.54	.49	.61	.54	.49	.59	.53	.48	.58	.52	.48	.57	.52	.48	.46
8.0	.57	.50	.45	.56	.49	.44	.55	.49	.44	.54	.48	.44	.53	.48	.44	.42
9.0	.53	.46	.41	.52	.45	.41	.51	.45	.41	.50	.45	.40	.49	.44	.40	.39
10.0	.49	.42	.38	.49	.42	.38	.48	.42	.37	.47	.41	.37	.46	.41	.37	.36



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	.235	.134	.042	.228	.130	.041	.215	.124	.039	.204	.117	.038	.193	.112	.036	
2.0	.227	.124	.038	.221	.122	.037	.210	.117	.036	.199	.112	.035	.190	.107	.034	
3.0	.215	.114	.034	.210	.112	.034	.200	.108	.033	.191	.105	.032	.183	.101	.031	
4.0	.202	.105	.031	.198	.104	.031	.189	.100	.030	.182	.097	.029	.174	.095	.029	
5.0	.191	.097	.028	.187	.096	.028	.179	.093	.027	.172	.091	.027	.166	.089	.027	
6.0	.180	.090	.026	.176	.089	.026	.170	.087	.025	.163	.085	.025	.158	.083	.025	
7.0	.170	.084	.024	.167	.083	.024	.161	.081	.023	.155	.080	.023	.150	.078	.023	
8.0	.161	.079	.022	.158	.078	.022	.153	.076	.022	.148	.075	.022	.143	.073	.021	
9.0	.152	.074	.021	.150	.073	.020	.145	.072	.020	.140	.070	.020	.136	.069	.020	
10.0	.145	.069	.019	.142	.069	.019	.138	.068	.019	.134	.067	.019	.130	.065	.019	

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	.103	.093	.083	.059	.054	.049	.019	.017	.016	
2.0	.164	.132	.106	.140	.114	.092	.096	.079	.064	.055	.046	.037	.018	.015	.012	
3.0	.154	.114	.082	.132	.098	.071	.091	.068	.050	.052	.040	.029	.017	.013	.010	
4.0	.145	.100	.065	.125	.086	.057	.086	.060	.040	.050	.035	.024	.016	.011	.008	
5.0	.138	.089	.053	.118	.077	.046	.081	.054	.033	.047	.032	.019	.015	.010	.006	
6.0	.131	.080	.044	.112	.070	.038	.078	.049	.027	.045	.029	.016	.015	.009	.005	
7.0	.124	.073	.037	.107	.063	.032	.074	.044	.023	.043	.026	.014	.014	.009	.005	
8.0	.119	.067	.032	.102	.058	.028	.071	.041	.020	.041	.024	.012	.013	.008	.004	
9.0	.113	.062	.028	.098	.054	.024	.068	.038	.017	.039	.022	.010	.013	.007	.003	
10.0	.108	.058	.024	.093	.050	.021	.065	.035	.015	.038	.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	27.8	29.1	28.1	29.3	29.5	19.0	20.3	19.3	20.5	20.6
3H	28.7	29.9	29.0	30.1	30.3	19.4	20.5	19.6	20.7	20.9
4H	28.9	30.0	29.2	30.2	30.5	19.6	20.7	19.9	21.0	21.2
6H	29.0	30.0	29.3	30.3	30.5	20.0	21.0	20.3	21.3	21.5
8H	29.0	29.9	29.3	30.2	30.5	20.1	21.1	20.5	21.4	21.7
12H	28.9	29.9	29.3	30.1	30.4	20.3	21.2	20.6	21.5	21.8
4H 2H	27.6	28.7	27.9	28.9	29.2	19.6	20.7	19.9	20.9	21.2
3H	28.5	29.5	28.9	29.7	30.0	20.0	21.0	20.4	21.2	21.5
4H	28.8	29.6	29.1	29.9	30.2	20.4	21.2	20.7	21.5	21.8
6H	28.8	29.6	29.2	29.9	30.3	20.8	21.5	21.2	21.9	22.2
8H	28.8	29.5	29.2	29.9	30.3	21.0	21.7	21.4	22.1	22.4
12H	28.8	29.5	29.2	29.8	30.2	21.2	21.9	21.7	22.2	22.6
8H 4H	28.6	29.3	29.1	29.7	30.1	20.6	21.3	21.0	21.7	22.0
6H	28.8	29.3	29.2	29.7	30.2	21.1	21.7	21.5	22.1	22.5
8H	28.8	29.3	29.2	29.7	30.1	21.4	21.9	21.9	22.3	22.8
12H	28.8	29.2	29.2	29.6	30.1	21.7	22.1	22.2	22.6	23.1
12H 4H	28.6	29.2	29.0	29.6	30.0	20.6	21.3	21.0	21.6	22.0
6H	28.7	29.2	29.2	29.7	30.1	21.2	21.7	21.6	22.1	22.5
8H	28.7	29.2	29.2	29.6	30.1	21.5	21.9	21.9	22.3	22.8
Variations with the observer position at spacings:										
S = 1.0H	+ 1.2 / - 2.2					+ 1.1 / - 1.4				
1.5H	+ 2.4 / - 4.1					+ 1.4 / - 1.4				
2.0H	+ 3.6 / - 6.3					+ 1.3 / - 1.0				

CIE Pub.117 Corrected 40376 lm Total Lamp Luminous Flux.(8log(F/F0) = 12.8)

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) $k(RI) \times RCR = 5$									
$k = 0.60$	71	62	56	70	61	56	69	61	56	51
0.80	80	71	66	79	71	66	78	70	65	60
1.00	88	79	74	86	79	73	85	79	73	67
1.25	93	86	80	92	85	80	90	84	79	73
1.50	97	90	85	96	89	85	93	88	84	78
2.00	102	96	91	101	95	91	98	93	89	83
2.50	105	99	95	103	98	94	100	96	92	85
3.00	107	102	98	105	101	97	102	98	95	88
4.00	110	106	103	108	104	101	104	101	99	91
5.00	112	108	106	110	107	104	105	103	101	93
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

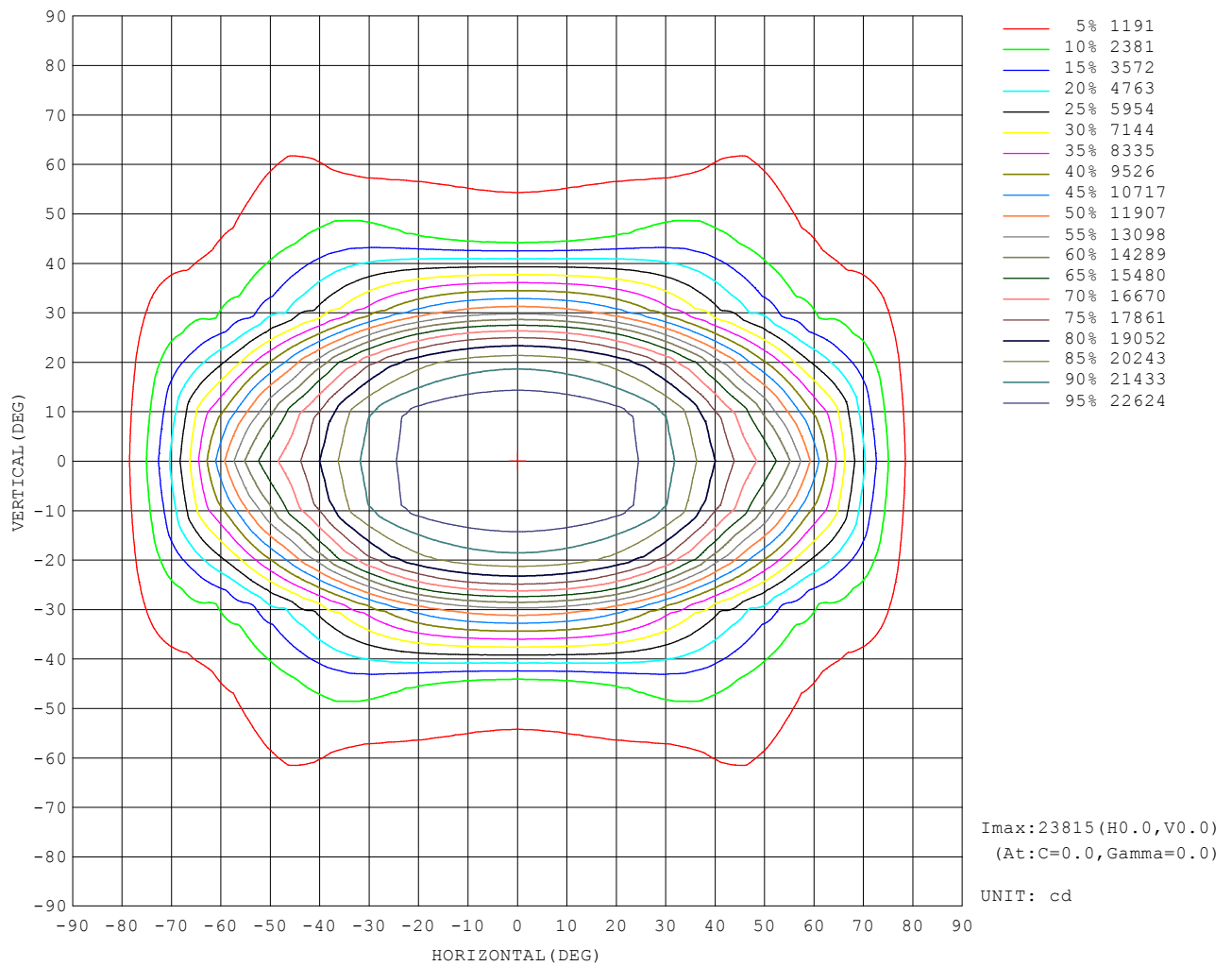
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-03-02

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



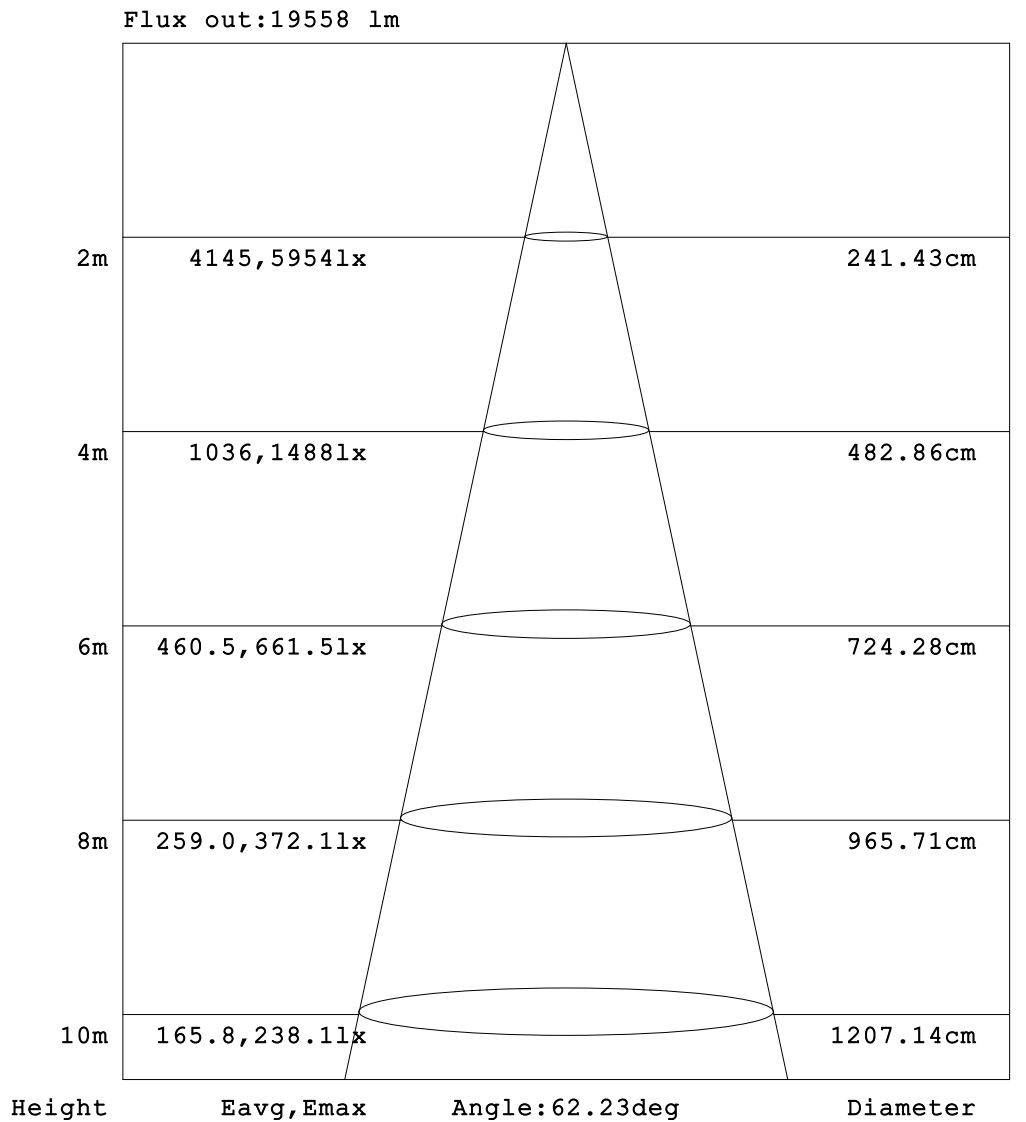
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-02

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.

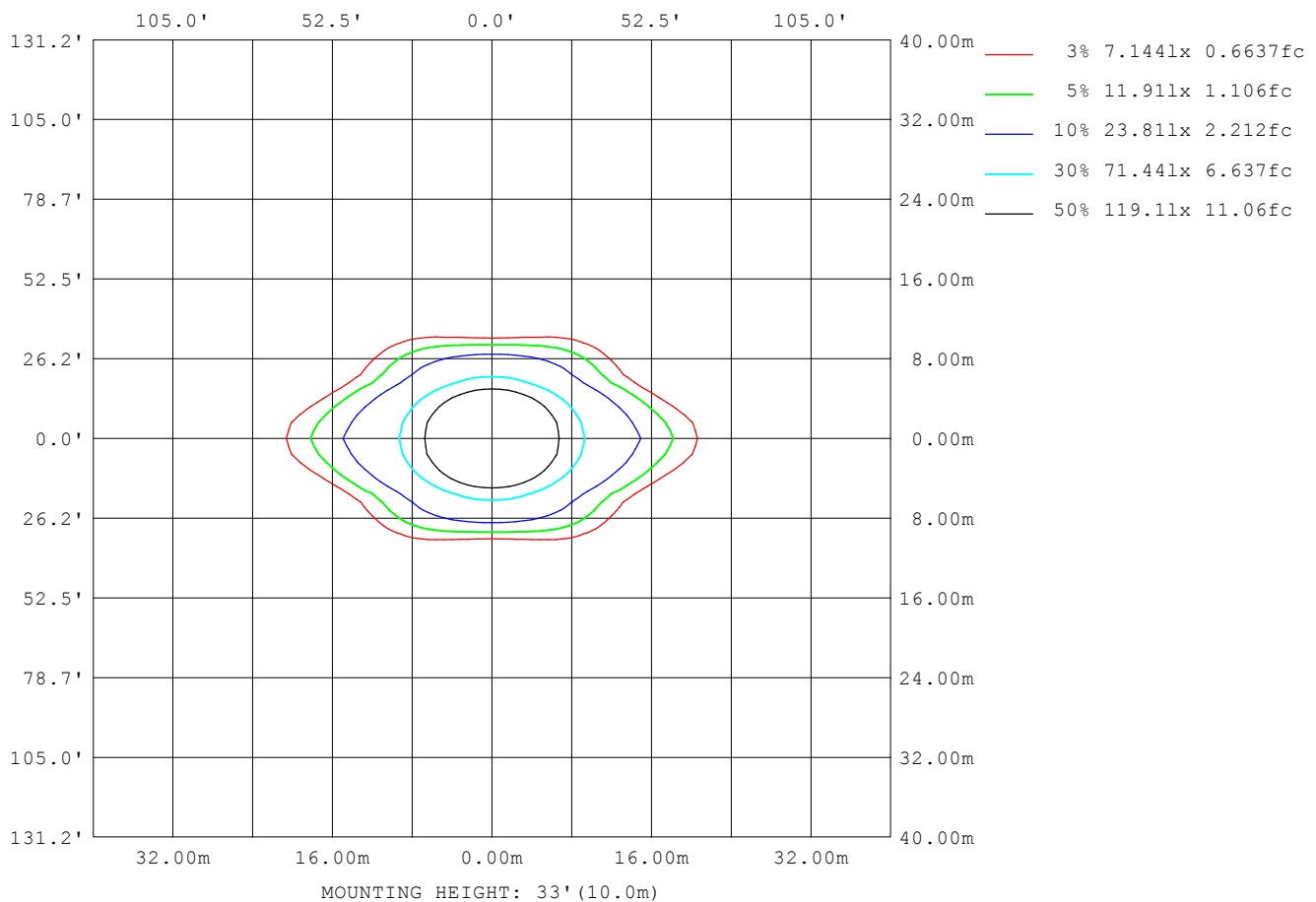
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-02

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



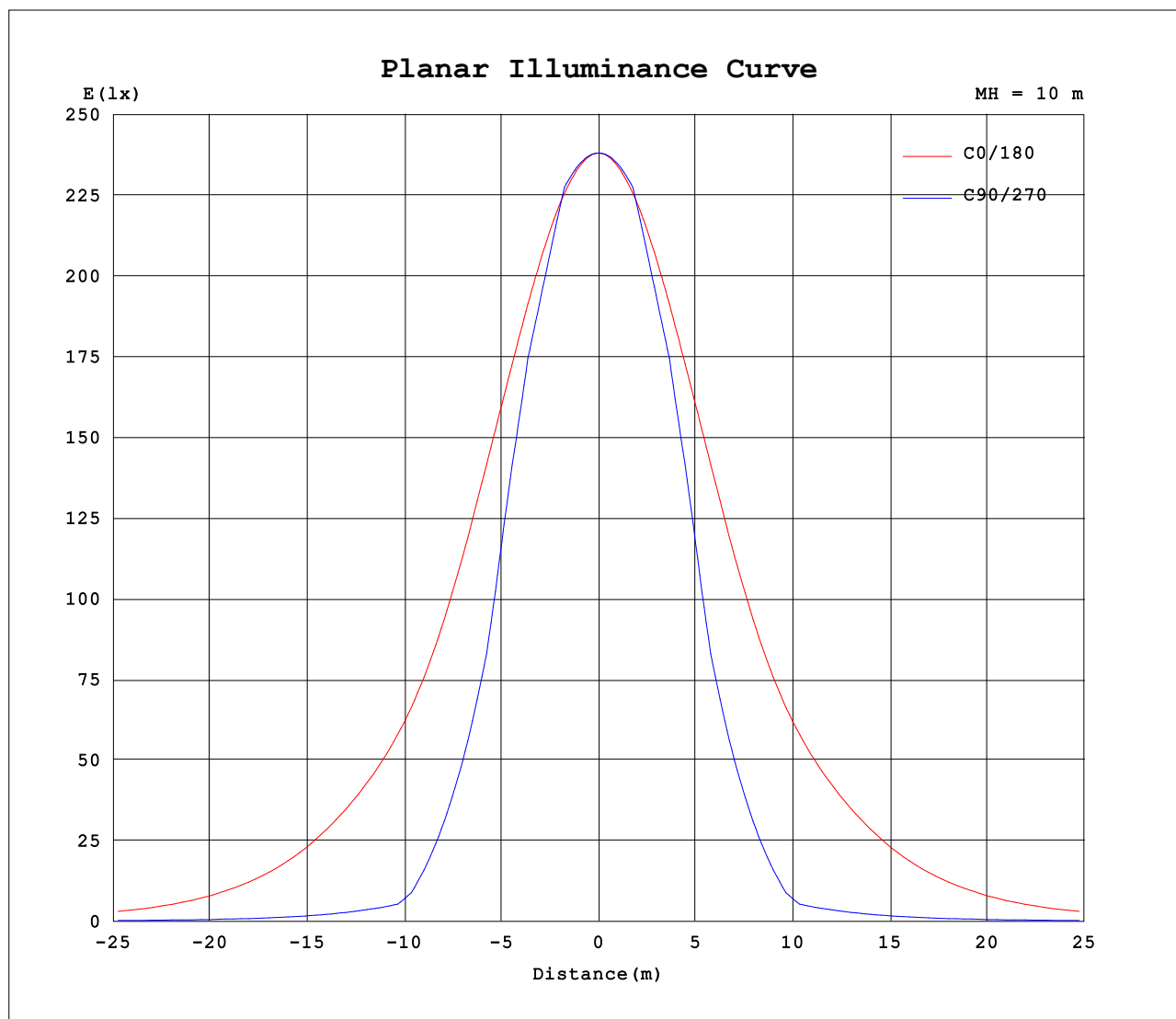
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-02

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:

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:

UNIT: $\times 10 \text{cd}$

Assessor: