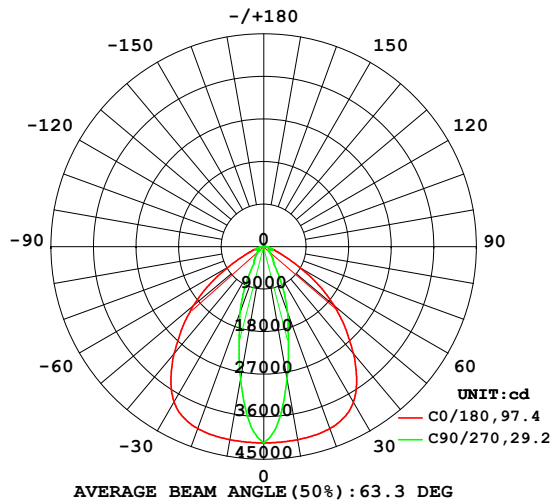


LUMINAIRE PHOTOMETRIC TEST REPORT

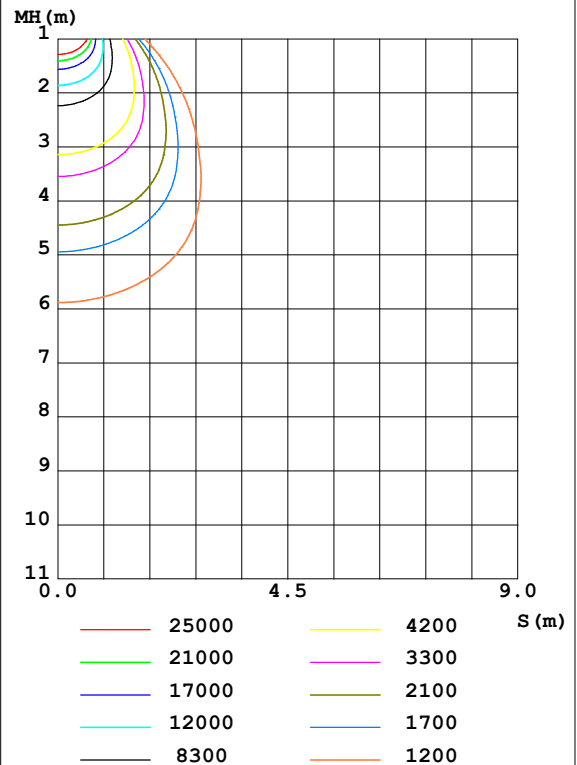
Test:U:229.9V I:1.322A P:296.7W PF:0.9765 Lamp Flux:39756.8x1 lm		
NAME: LHB03-300	TYPE:300W	WEIGHT:
SPEC.:5000K Ra80 30100DEG L00301	DIM.: 0.906*0.307*0.061	SERIAL No.:
MFR.:	SUR.:0.855*0.27	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 134.02 lm/W			
MODEL	LHB03-300	I _{max} (cd)	41528	S/MH (C0/180)	1.32
NOMINAL POWER(W)	300	LOR(%)	100.0	S/MH (C90/270)	0.48
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	39757	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	39756.8	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:2017-07-03

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	4150	3873	3687	3873	4150	3872	3687	3872	0- 5	955.5	955.5	2.4, 2.4
10	4146	3329	2844	3329	4146	3324	2844	3324	5- 10	2596	3552	8.93, 8.93
15	4132	2675	2023	2675	4132	2673	2023	2673	10- 15	3684	7235	18.2, 18.2
20	4094	2045	1469	2045	4094	2043	1469	2043	15- 20	4269	11505	28.9, 28.9
25	4000	1581	949.4	1581	4000	1578	949.4	1578	20- 25	4500	16004	40.3, 40.3
30	3796	1156	429.4	1156	3796	1152	429.4	1152	25- 30	4340	20345	51.2, 51.2
35	3427	722.2	351.7	722.2	3427	718.2	351.7	718.2	30- 35	3909	24254	61, 61
40	2948	337.8	274.0	337.8	2948	334.3	274.0	334.3	35- 40	3467	27721	69.7, 69.7
45	2443	268.3	196.3	268.3	2443	265.3	196.3	265.3	40- 45	2950	30671	77.1, 77.1
50	1944	200.0	118.7	200.0	1944	197.8	118.7	197.8	45- 50	2403	33074	83.2, 83.2
55	1421	130.1	137.2	130.1	1421	129.2	137.2	129.2	50- 55	1857	34931	87.9, 87.9
60	874.5	70.83	155.7	70.83	874.5	71.20	155.7	71.20	55- 60	1415	36346	91.4, 91.4
65	475.3	64.93	174.2	64.93	475.3	65.21	174.2	65.21	60- 65	1117	37463	94.2, 94.2
70	278.1	57.18	192.6	57.18	278.1	57.37	192.6	57.37	65- 70	886.0	38349	96.5, 96.5
75	140.7	48.18	145.0	48.18	140.7	48.34	145.0	48.34	70- 75	666.1	39015	98.1, 98.1
80	53.75	32.13	97.34	32.13	53.75	32.29	97.34	32.29	75- 80	428.3	39444	99.2, 99.2
85	13.14	16.89	49.68	16.89	13.14	17.08	49.68	17.08	80- 85	233.1	39677	99.8, 99.8
90	1.346	2.453	2.027	2.453	1.346	2.656	2.027	2.656	85- 90	80.16	39757	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): 30671 lm

%lum = 77.1%

%lamp = 77.1%

Conical surface Flux(120deg): 36346 lm

%lum = 91.4%

%lamp = 91.4%

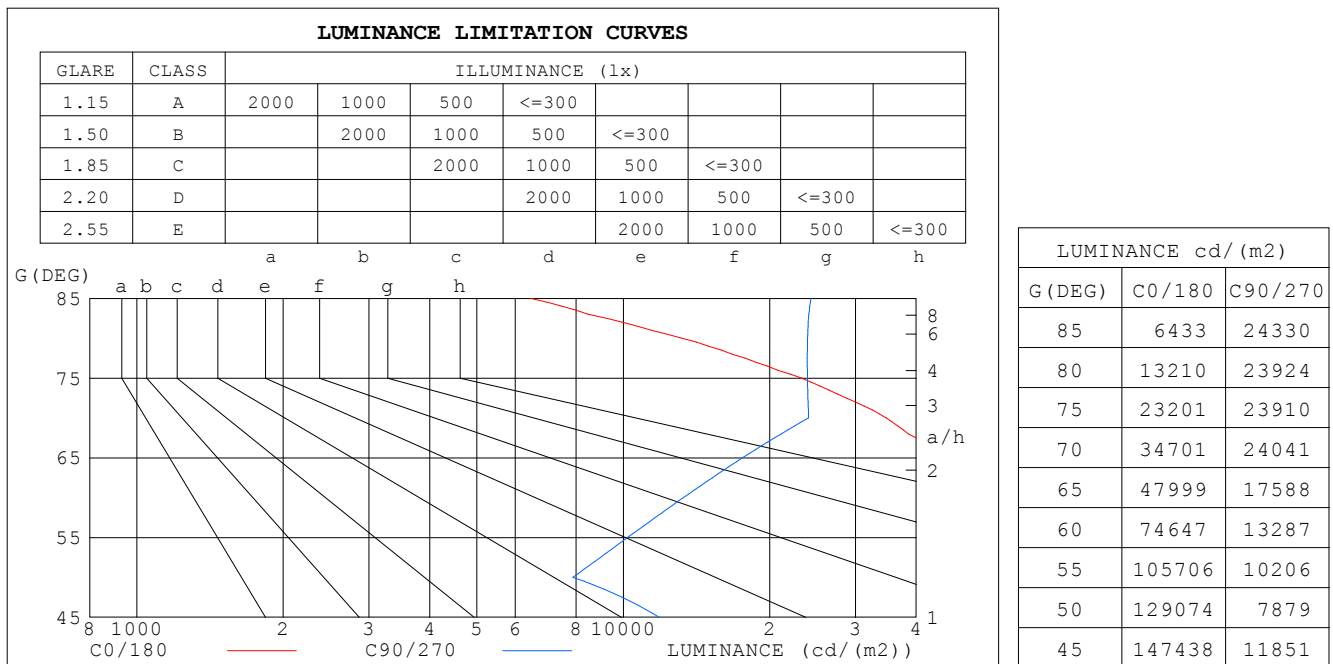
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-07-03

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: 2017-07-03

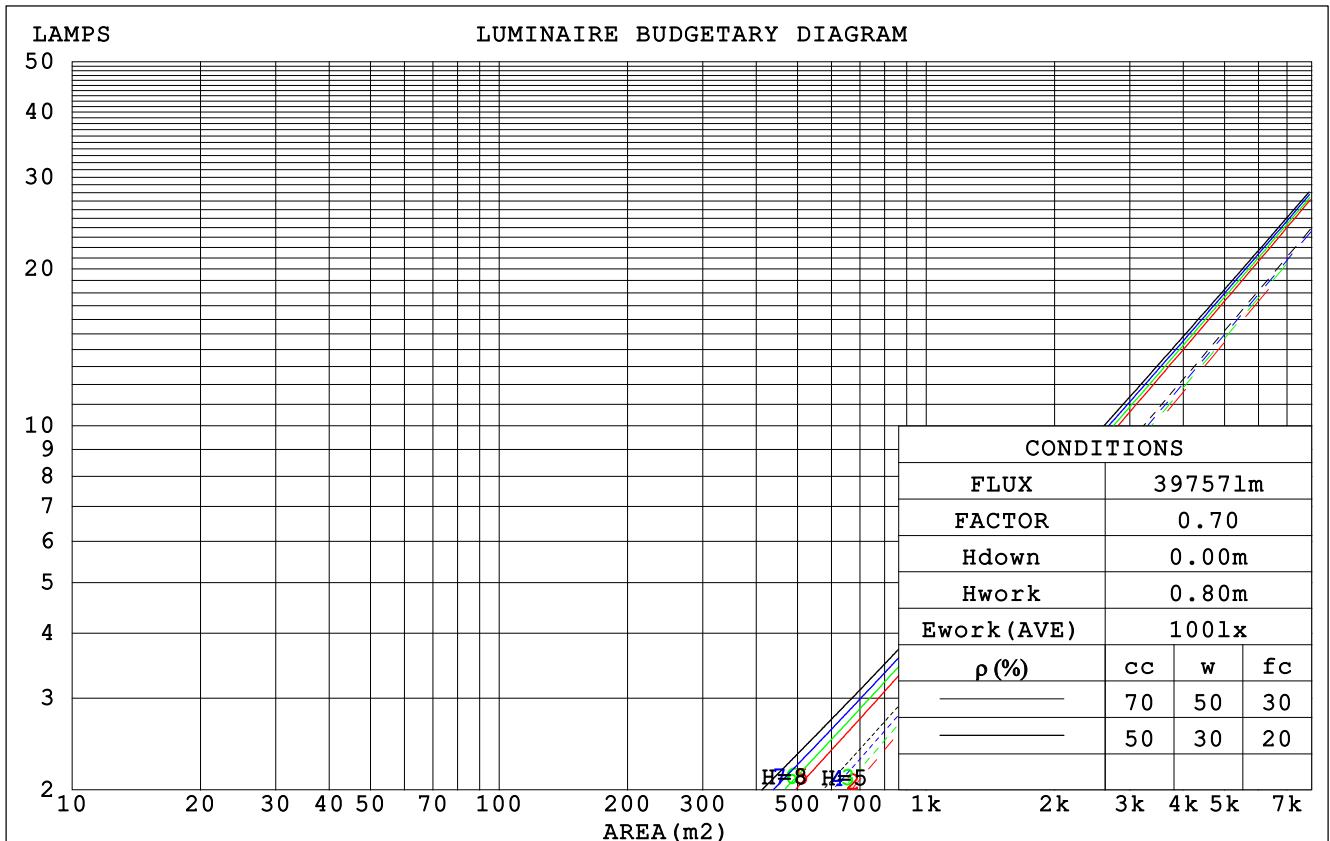
γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 9.500m [K=1.0000]
Remarks:

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	.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	.60	.59
6.0	.69	.62	.57	.69	.62	.57	.67	.61	.56	.65	.60	.56	.64	.59	.55	.54
7.0	.64	.57	.52	.64	.57	.52	.62	.56	.52	.61	.56	.51	.60	.55	.51	.49
8.0	.60	.53	.48	.59	.53	.48	.58	.52	.48	.57	.52	.48	.56	.51	.47	.46
9.0	.56	.49	.45	.56	.49	.45	.55	.49	.44	.54	.48	.44	.53	.48	.44	.43
10.0	.53	.46	.42	.52	.46	.42	.51	.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: 2017-07-03

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	.232	.132	.042	.225	.129	.041	.212	.122	.039	.201	.116	.037	.190	.110	.035	
2.0	.221	.121	.037	.215	.118	.037	.204	.113	.035	.194	.109	.034	.184	.104	.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	.172	.089	.026	.165	.087	.026	.158	.085	.025	
6.0	.172	.086	.025	.169	.085	.025	.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	.073	.021	.140	.071	.021	.136	.070	.020	
9.0	.145	.070	.020	.143	.070	.020	.138	.068	.019	.134	.067	.019	.129	.066	.019	
10.0	.138	.066	.018	.136	.065	.018	.131	.064	.018	.127	.063	.018	.124	.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	.141	.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	.152	.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	.122	.073	.038	.105	.063	.033	.072	.044	.024	.042	.026	.014	.014	.009	.005	
8.0	.116	.067	.033	.099	.058	.029	.069	.041	.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	.091	.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:2017-07-03

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	28.2	29.4	28.5	29.6	29.8	16.4	17.5	16.6	17.7	17.9
3H	28.9	30.0	29.2	30.2	30.4	20.2	21.3	20.5	21.6	21.8
4H	29.1	30.1	29.4	30.4	30.6	21.9	22.9	22.1	23.1	23.4
6H	29.1	30.1	29.4	30.3	30.6	23.0	24.0	23.3	24.2	24.5
8H	29.1	30.0	29.4	30.3	30.5	23.4	24.3	23.7	24.6	24.9
12H	29.0	29.9	29.4	30.2	30.5	23.7	24.6	24.0	24.9	25.2
4H 2H	27.9	29.0	28.2	29.2	29.4	16.8	17.8	17.1	18.1	18.3
3H	28.6	29.6	29.0	29.8	30.1	20.8	21.7	21.1	22.0	22.2
4H	28.9	29.7	29.2	30.0	30.3	22.6	23.4	22.9	23.7	24.0
6H	28.9	29.7	29.3	30.0	30.4	23.9	24.7	24.3	25.0	25.4
8H	28.9	29.6	29.3	30.0	30.4	24.5	25.1	24.9	25.5	25.9
12H	28.9	29.5	29.3	29.9	30.3	24.9	25.5	25.3	25.9	26.3
8H 4H	28.7	29.4	29.1	29.8	30.2	22.6	23.3	23.0	23.7	24.0
6H	28.8	29.4	29.3	29.8	30.2	24.2	24.7	24.6	25.1	25.5
8H	28.9	29.4	29.3	29.8	30.2	24.8	25.3	25.3	25.7	26.2
12H	28.9	29.3	29.3	29.7	30.2	25.4	25.8	25.8	26.2	26.7
12H 4H	28.7	29.3	29.1	29.7	30.1	22.6	23.2	23.0	23.6	24.0
6H	28.8	29.3	29.3	29.7	30.2	24.1	24.6	24.6	25.1	25.5
8H	28.8	29.3	29.3	29.7	30.2	24.8	25.2	25.3	25.7	26.2
Variations with the observer position at spacings:										
S = 1.0H	+ 1.6 / - 1.5					+ 0.2 / - 0.2				
1.5H	+ 2.8 / - 3.3					+ 0.1 / - 0.2				
2.0H	+ 4.3 / - 5.2					+ 0.3 / - 0.3				

CIE Pub.117 Corrected 39757 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:2017-07-03

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	58	72	64	58	71	63	58	53
0.80	82	73	68	81	73	67	79	72	67	62
1.00	88	80	75	87	80	75	85	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	103	96	92	101	95	91	98	93	89	83
2.50	105	100	95	103	98	94	100	96	92	85
3.00	108	103	99	106	101	98	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		

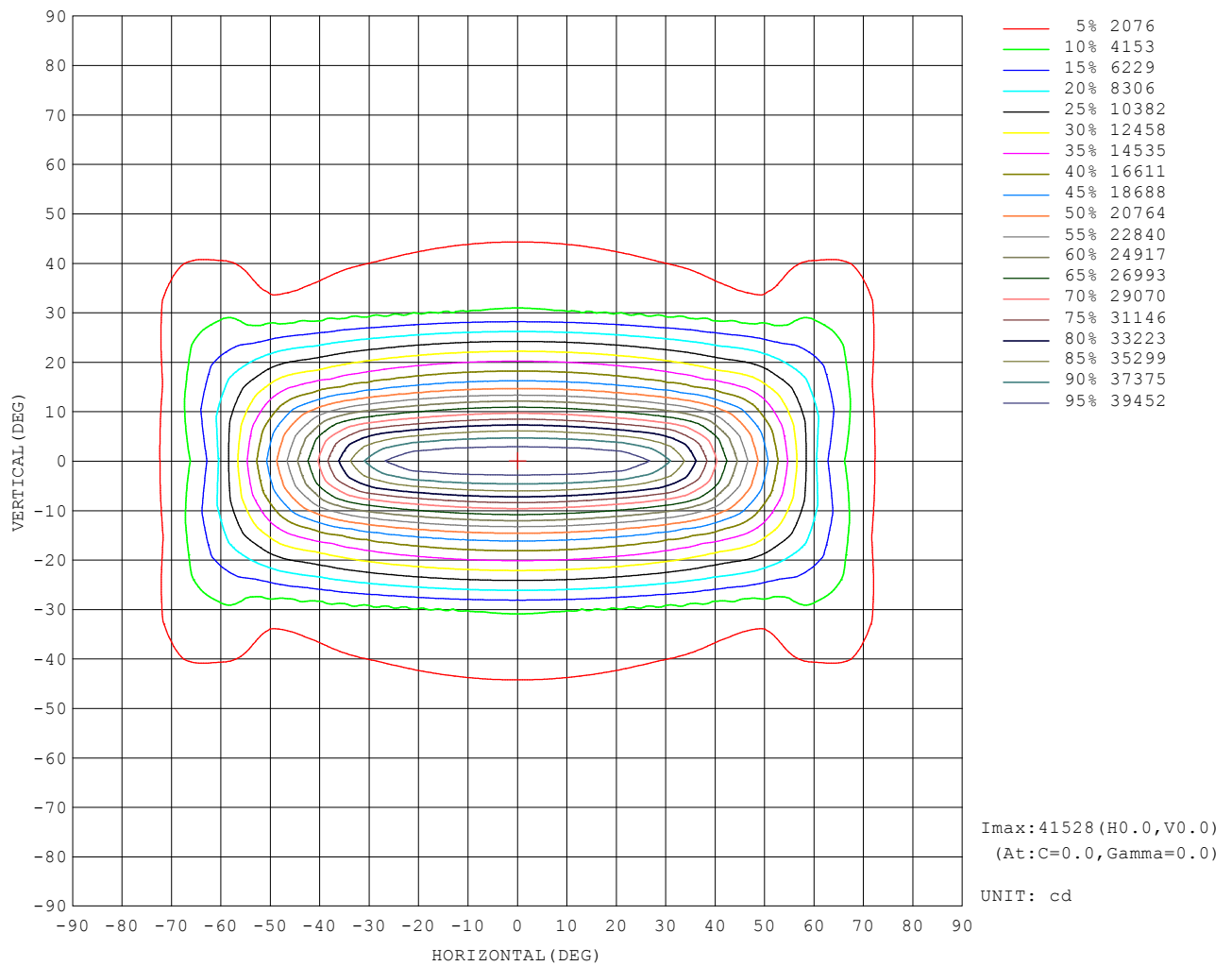
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-07-03

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



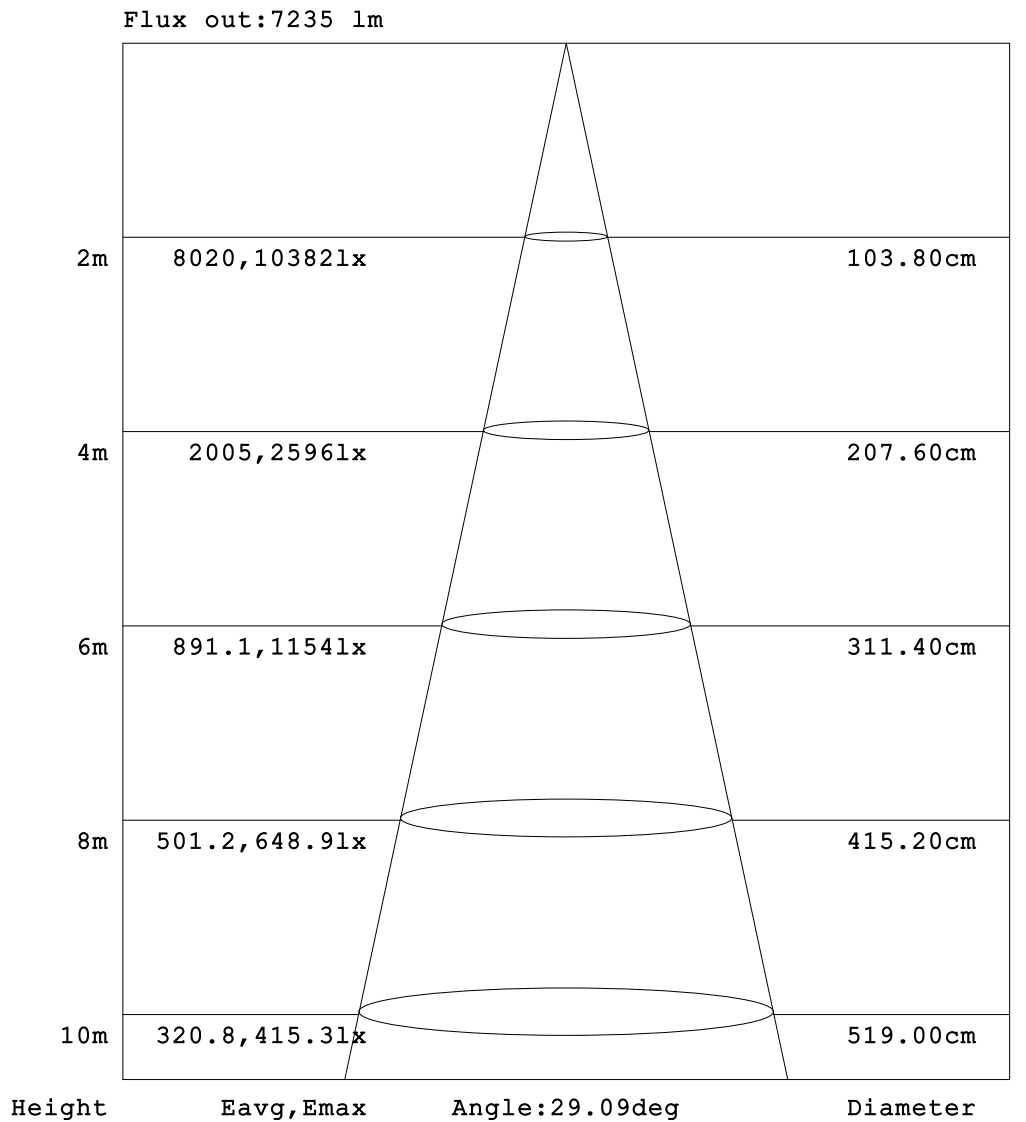
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-07-03

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.

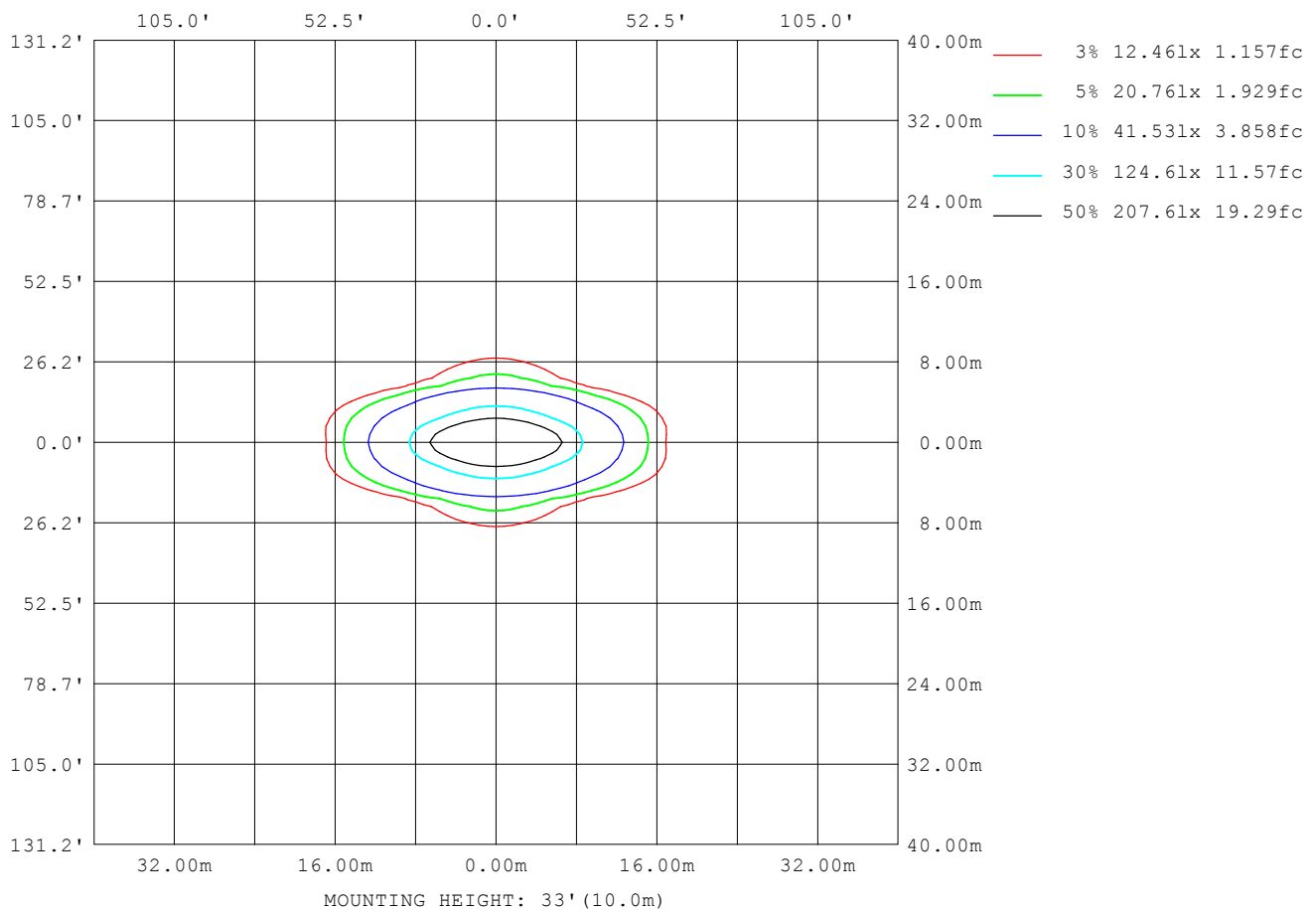
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-07-03

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



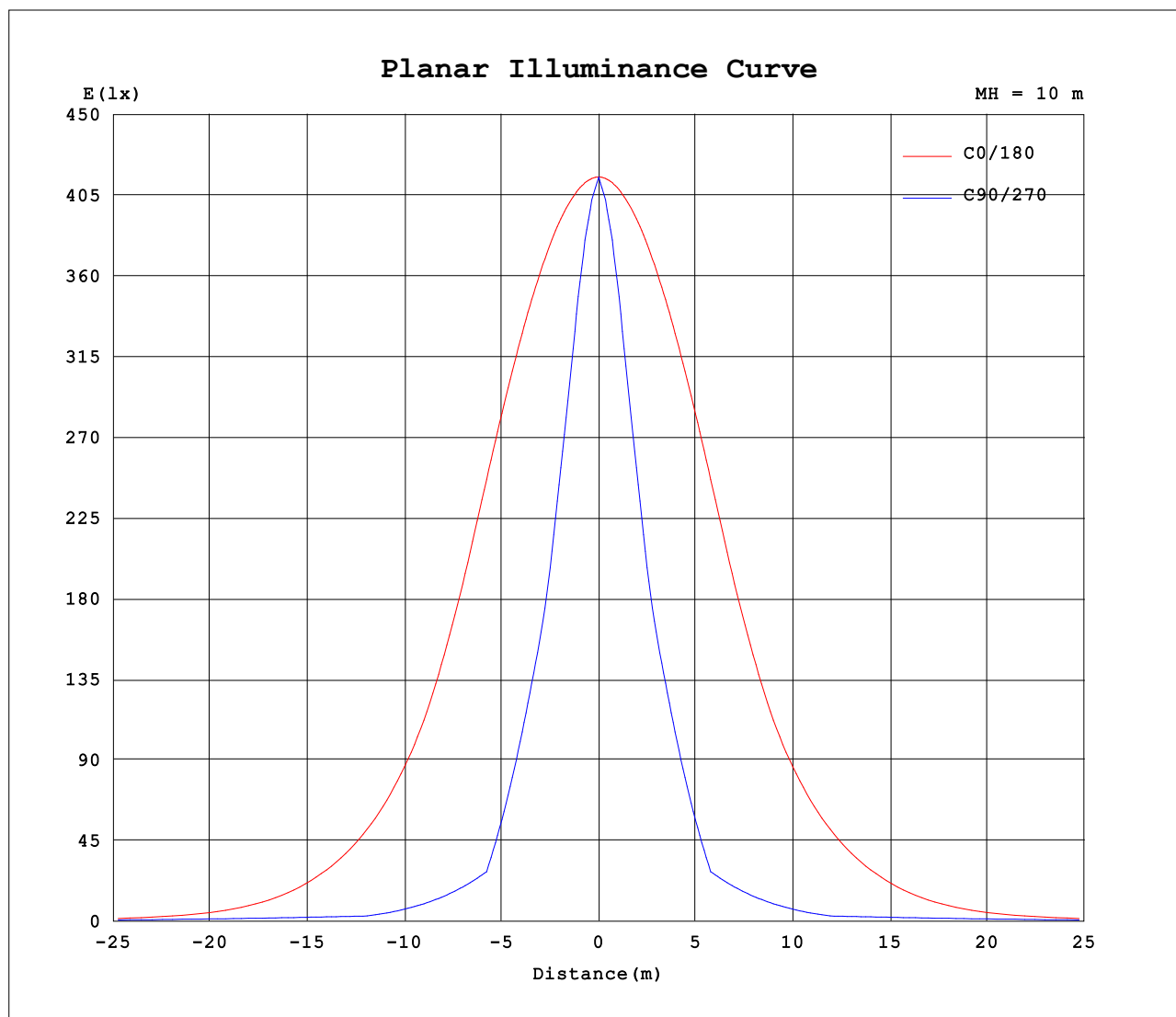
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-07-03

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: 2017-07-03

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:

```

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:

```

Assessor: