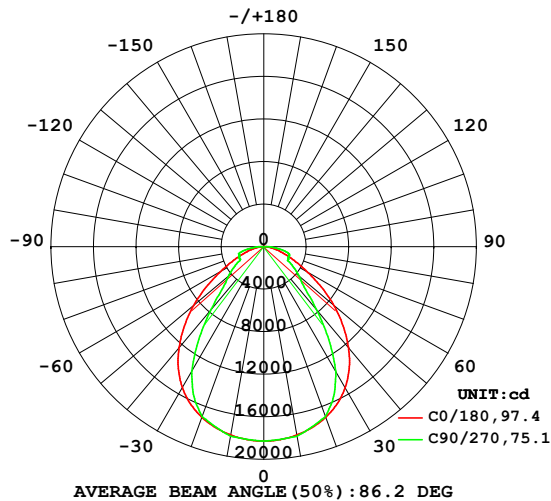


LUMINAIRE PHOTOMETRIC TEST REPORT

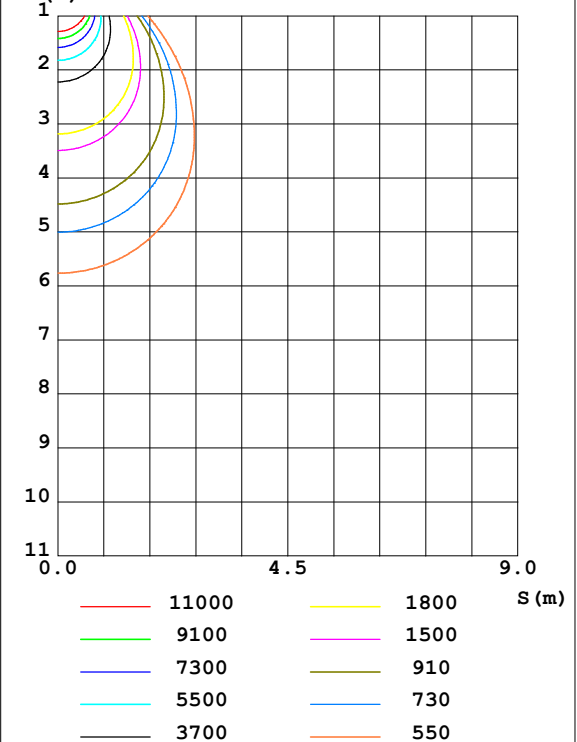
Test:U:229.9V I:1.327A P:294.6W PF:0.9653 Lamp Flux:37461.9x1 lm		
NAME: LHB03-300	TYPE:300W	WEIGHT:
SPEC.:5000K Ra70 80*100DEG L00303	DIM.: 0.906*0.307*0.061	SERIAL No.:
MFR.:	SUR.:0.855*0.274	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 127.14 lm/W			
MODEL	LHB03-300	I _{max} (cd)	18280	S/MH(C0/180)	1.24
NOMINAL POWER(W)	300	LOR(%)	100.0	S/MH(C90/270)	1.09
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	37462	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	37461.9	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.25

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	1821	1817	1818	1817	1821	1817	1818	1817	0- 5	435.6	435.6	1.16,1.16
10	1798	1800	1809	1800	1798	1799	1809	1799	5- 10	1294	1730	4.62,4.62
15	1761	1767	1754	1767	1761	1766	1754	1766	10- 15	2112	3842	10.3,10.3
20	1707	1698	1699	1698	1707	1698	1699	1698	15- 20	2851	6694	17.9,17.9
25	1632	1618	1555	1618	1632	1618	1555	1618	20- 25	3471	10165	27.1,27.1
30	1531	1494	1354	1494	1531	1494	1354	1494	25- 30	3890	14055	37.5,37.5
35	1401	1319	1066	1319	1401	1319	1066	1319	30- 35	4038	18093	48.3,48.3
40	1240	1105	768.3	1105	1240	1106	768.3	1106	35- 40	3876	21969	58.6,58.6
45	1056	860.6	539.5	860.6	1056	862.9	539.5	862.9	40- 45	3455	25424	67.9,67.9
50	862.1	628.8	435.8	628.8	862.1	631.8	435.8	631.8	45- 50	2924	28348	75.7,75.7
55	659.8	446.2	347.7	446.2	659.8	448.4	347.7	448.4	50- 55	2413	30761	82.1,82.1
60	471.3	335.1	259.7	335.1	471.3	336.5	259.7	336.5	55- 60	1902	32663	87.2,87.2
65	323.2	232.6	255.2	232.6	323.2	233.3	255.2	233.3	60- 65	1447	34111	91.1,91.1
70	213.9	160.6	250.8	160.6	213.9	161.2	250.8	161.2	65- 70	1145	35255	94.1,94.1
75	137.5	121.0	238.8	121.0	137.5	122.0	238.8	122.0	70- 75	931.0	36186	96.6,96.6
80	80.28	79.99	166.4	79.99	80.28	81.15	166.4	81.15	75- 80	706.9	36893	98.5,98.5
85	30.88	41.48	86.46	41.48	30.88	42.04	86.46	42.04	80- 85	420.6	37314	99.6,99.6
90	1.136	4.006	6.490	4.006	1.136	4.079	6.490	4.079	85- 90	148.4	37462	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): 25424 lm

%lum = 67.9%

%lamp = 67.9%

Conical surface Flux(120deg): 32663 lm

%lum = 87.2%

%lamp = 87.2%

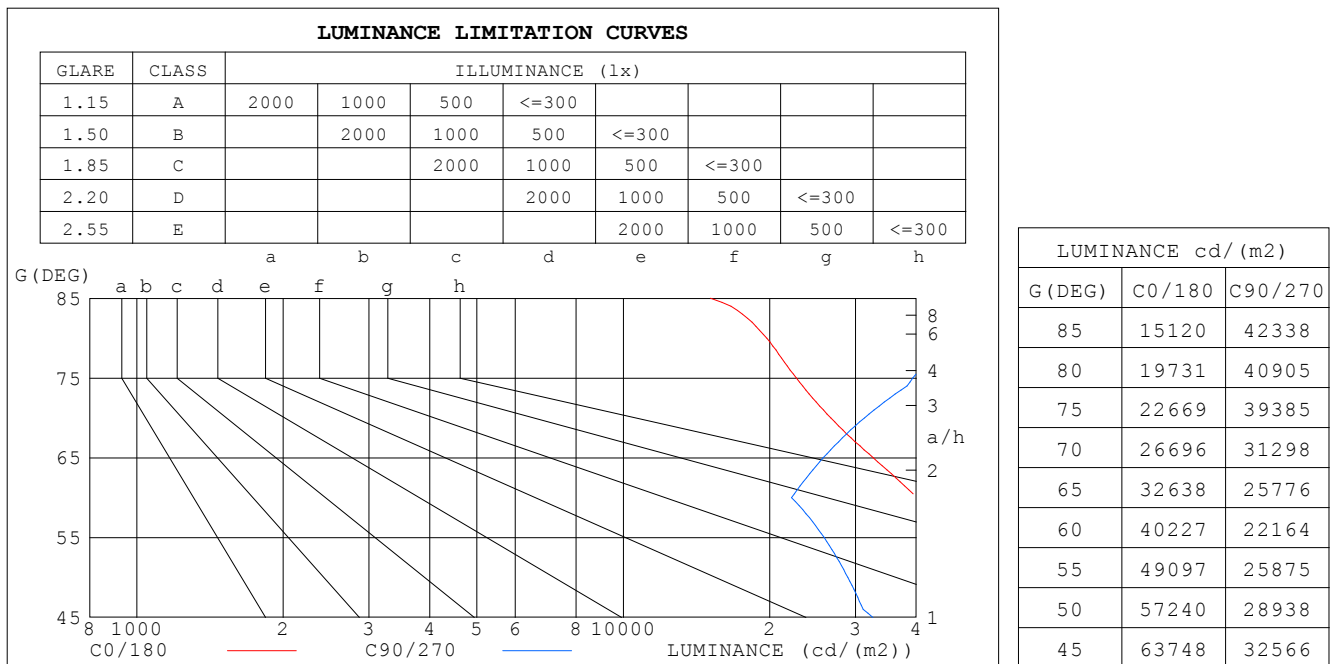
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-03-02

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

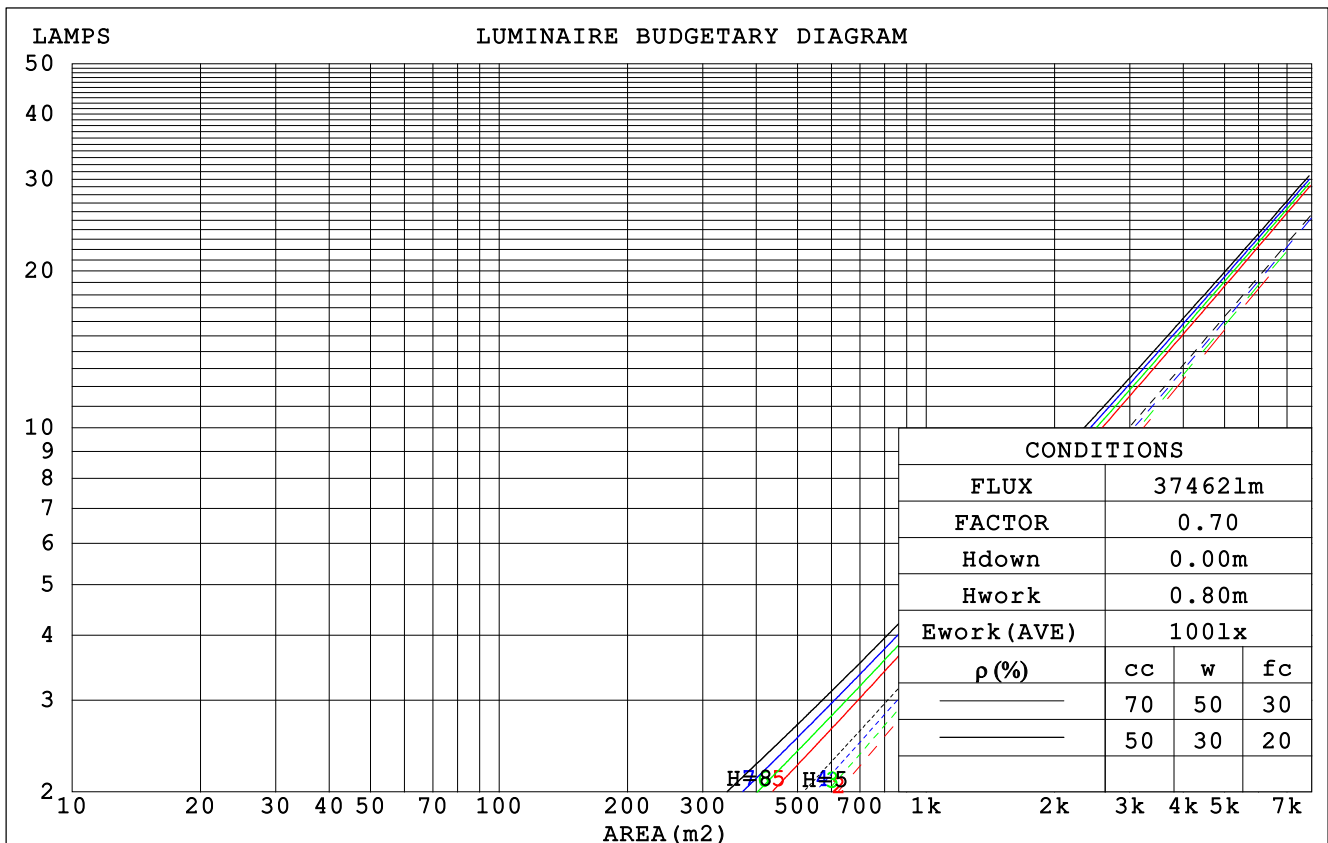
Checker:

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

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	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	1.06	1.02	.99	1.04	1.00	.97	.00	.97	.94	.96	.93	.91	.92	.90	.89	.87
2.0	.94	.88	.83	.93	.87	.82	.89	.85	.81	.86	.82	.79	.83	.80	.77	.75
3.0	.85	.77	.72	.83	.76	.71	.80	.74	.70	.77	.73	.69	.75	.71	.67	.65
4.0	.76	.68	.62	.75	.68	.62	.72	.66	.61	.70	.65	.60	.68	.63	.59	.57
5.0	.69	.61	.55	.68	.60	.55	.66	.59	.54	.64	.58	.53	.62	.57	.53	.51
6.0	.63	.55	.49	.62	.54	.49	.60	.53	.48	.59	.52	.48	.57	.52	.47	.46
7.0	.58	.49	.44	.57	.49	.44	.55	.48	.43	.54	.48	.43	.53	.47	.43	.41
8.0	.53	.45	.40	.52	.45	.40	.51	.44	.39	.50	.44	.39	.49	.43	.39	.37
9.0	.49	.41	.36	.48	.41	.36	.47	.41	.36	.46	.40	.36	.45	.40	.36	.34
10.0	.45	.38	.33	.45	.38	.33	.44	.37	.33	.43	.37	.33	.42	.37	.33	.31



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	.269	.153	.048	.262	.149	.047	.249	.143	.046	.237	.136	.044	.226	.131	.042		
2.0	.254	.139	.043	.248	.136	.042	.236	.131	.041	.226	.127	.040	.216	.122	.039		
3.0	.237	.126	.038	.232	.124	.037	.222	.120	.037	.213	.116	.036	.204	.113	.035		
4.0	.221	.115	.034	.216	.113	.033	.208	.110	.033	.199	.107	.032	.192	.104	.032		
5.0	.206	.105	.030	.202	.104	.030	.194	.101	.030	.187	.099	.029	.181	.096	.029		
6.0	.193	.097	.028	.190	.096	.028	.183	.094	.027	.176	.092	.027	.170	.090	.027		
7.0	.181	.090	.025	.178	.089	.025	.172	.087	.025	.166	.085	.025	.161	.083	.025		
8.0	.171	.083	.023	.168	.083	.023	.162	.081	.023	.157	.080	.023	.152	.078	.023		
9.0	.161	.078	.022	.158	.077	.022	.153	.076	.021	.149	.075	.021	.144	.073	.021		
10.0	.152	.073	.020	.150	.072	.020	.145	.071	.020	.141	.070	.020	.137	.069	.020		

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	.177	.156	.138	.152	.134	.118	.104	.092	.082	.060	.053	.048	.019	.017	.015		
2.0	.167	.132	.103	.143	.114	.089	.098	.079	.062	.057	.046	.036	.018	.015	.012		
3.0	.158	.114	.079	.136	.098	.068	.093	.068	.048	.054	.040	.028	.017	.013	.009		
4.0	.150	.100	.063	.129	.087	.054	.088	.060	.038	.051	.035	.023	.016	.012	.007		
5.0	.142	.090	.051	.122	.078	.044	.084	.054	.031	.049	.032	.018	.016	.010	.006		
6.0	.135	.081	.042	.116	.070	.037	.080	.049	.026	.047	.029	.015	.015	.009	.005		
7.0	.129	.074	.036	.111	.064	.031	.077	.045	.022	.044	.026	.013	.014	.009	.004		
8.0	.123	.068	.031	.106	.059	.027	.073	.041	.019	.043	.024	.011	.014	.008	.004		
9.0	.117	.063	.027	.101	.055	.023	.070	.039	.017	.041	.023	.010	.013	.007	.003		
10.0	.112	.059	.024	.096	.051	.021	.067	.036	.015	.039	.021	.009	.013	.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	25.8	27.2	26.1	27.4	27.6	23.0	24.4	23.3	24.5	24.7
3H	26.5	27.8	26.8	28.0	28.2	24.6	25.8	24.9	26.1	26.3
4H	26.8	27.9	27.1	28.2	28.4	25.8	27.0	26.1	27.3	27.5
6H	26.9	28.0	27.2	28.3	28.6	26.9	28.0	27.3	28.3	28.6
8H	27.0	28.0	27.3	28.3	28.6	27.3	28.4	27.7	28.7	29.0
12H	27.0	28.0	27.3	28.3	28.6	27.6	28.7	28.0	29.0	29.3
4H 2H	25.9	27.1	26.2	27.3	27.6	23.5	24.7	23.8	24.9	25.2
3H	26.7	27.8	27.1	28.1	28.4	25.2	26.2	25.5	26.5	26.8
4H	27.1	28.0	27.5	28.3	28.7	26.6	27.6	27.0	27.9	28.2
6H	27.4	28.2	27.7	28.5	28.9	27.9	28.8	28.3	29.1	29.5
8H	27.4	28.2	27.8	28.6	29.0	28.4	29.2	28.9	29.6	30.0
12H	27.5	28.2	27.9	28.6	29.0	28.9	29.6	29.3	29.9	30.3
8H 4H	27.2	28.0	27.6	28.3	28.7	26.8	27.5	27.2	27.9	28.3
6H	27.6	28.2	28.0	28.6	29.0	28.2	28.9	28.7	29.3	29.7
8H	27.7	28.3	28.1	28.7	29.1	28.9	29.5	29.3	29.9	30.3
12H	27.8	28.3	28.3	28.7	29.2	29.5	29.9	29.9	30.4	30.9
12H 4H	27.2	27.9	27.6	28.3	28.7	26.8	27.5	27.2	27.8	28.2
6H	27.6	28.2	28.1	28.6	29.0	28.3	28.8	28.7	29.3	29.7
8H	27.8	28.3	28.3	28.7	29.2	28.9	29.4	29.4	29.9	30.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.4 / - 0.5					+ 0.3 / - 0.3				
1.5H	+ 0.3 / - 0.6					+ 0.2 / - 0.2				
2.0H	+ 1.1 / - 1.3					+ 0.2 / - 0.4				

CIE Pub.117 Corrected 37462 lm Total Lamp Luminous Flux.(8log(F/F0) = 12.6)

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) $k(RI) \times RCR = 5$									
$k = 0.60$	66	56	50	65	55	49	64	55	49	44
0.80	75	66	59	75	65	59	73	64	59	53
1.00	83	74	68	82	73	67	80	74	67	61
1.25	89	81	75	88	80	74	86	79	73	67
1.50	94	86	80	92	85	79	89	83	78	72
2.00	99	92	87	98	91	86	94	89	85	78
2.50	103	96	91	101	95	90	97	92	88	81
3.00	105	100	95	103	98	94	99	95	92	84
4.00	109	104	100	106	102	98	102	99	96	87
5.00	110	106	103	108	104	101	104	101	98	90
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

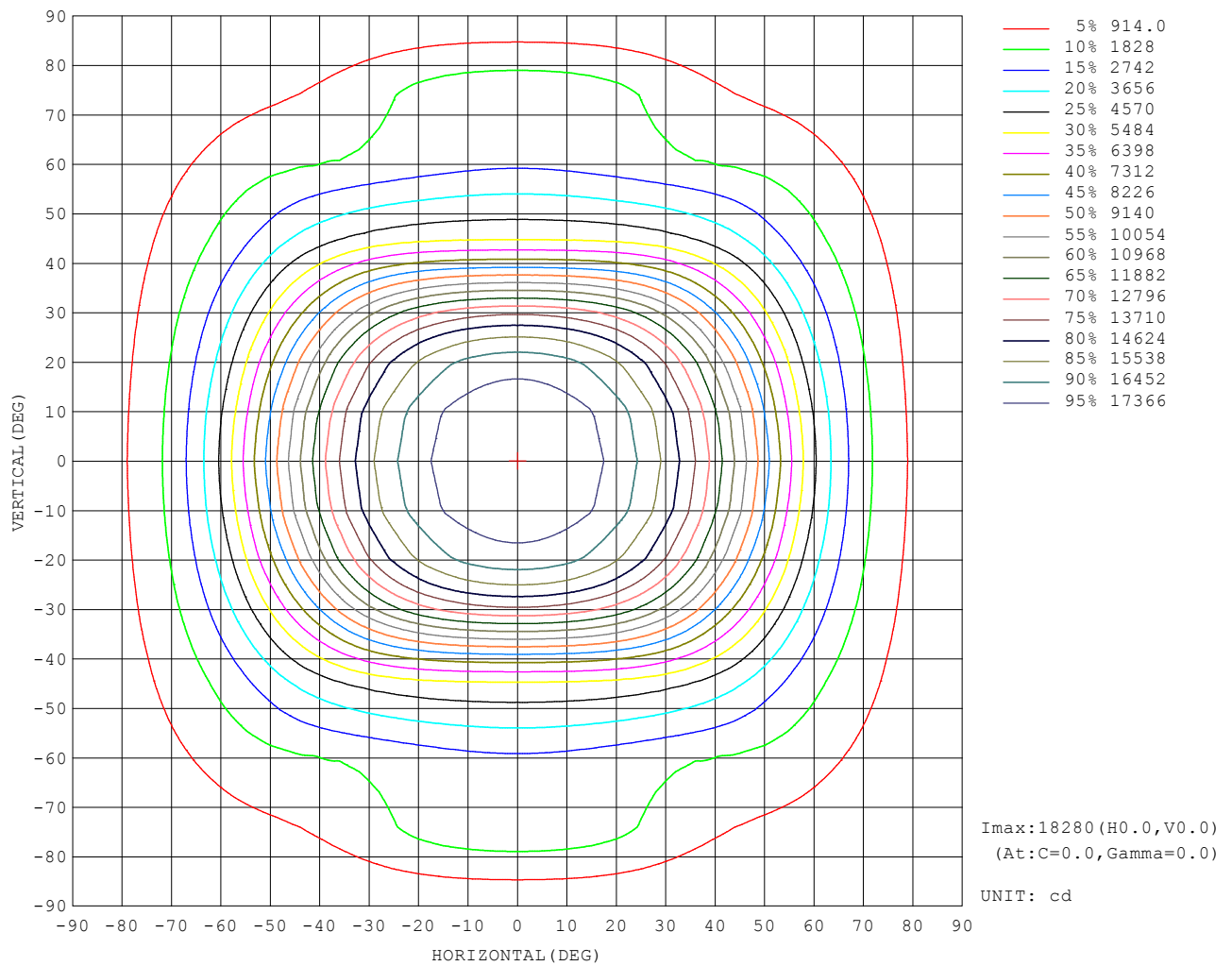
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-03-02

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



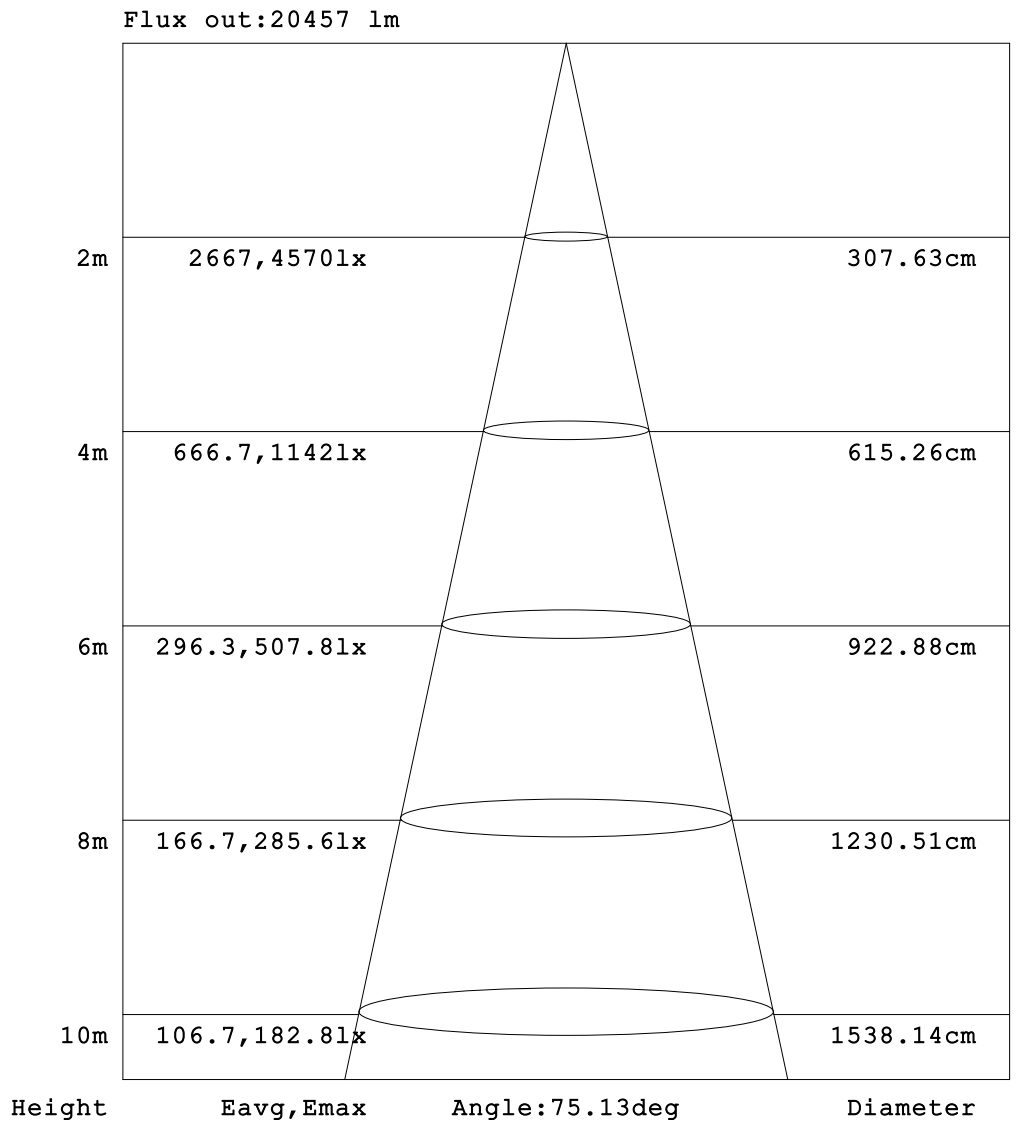
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
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Test Date:2017-03-02

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.

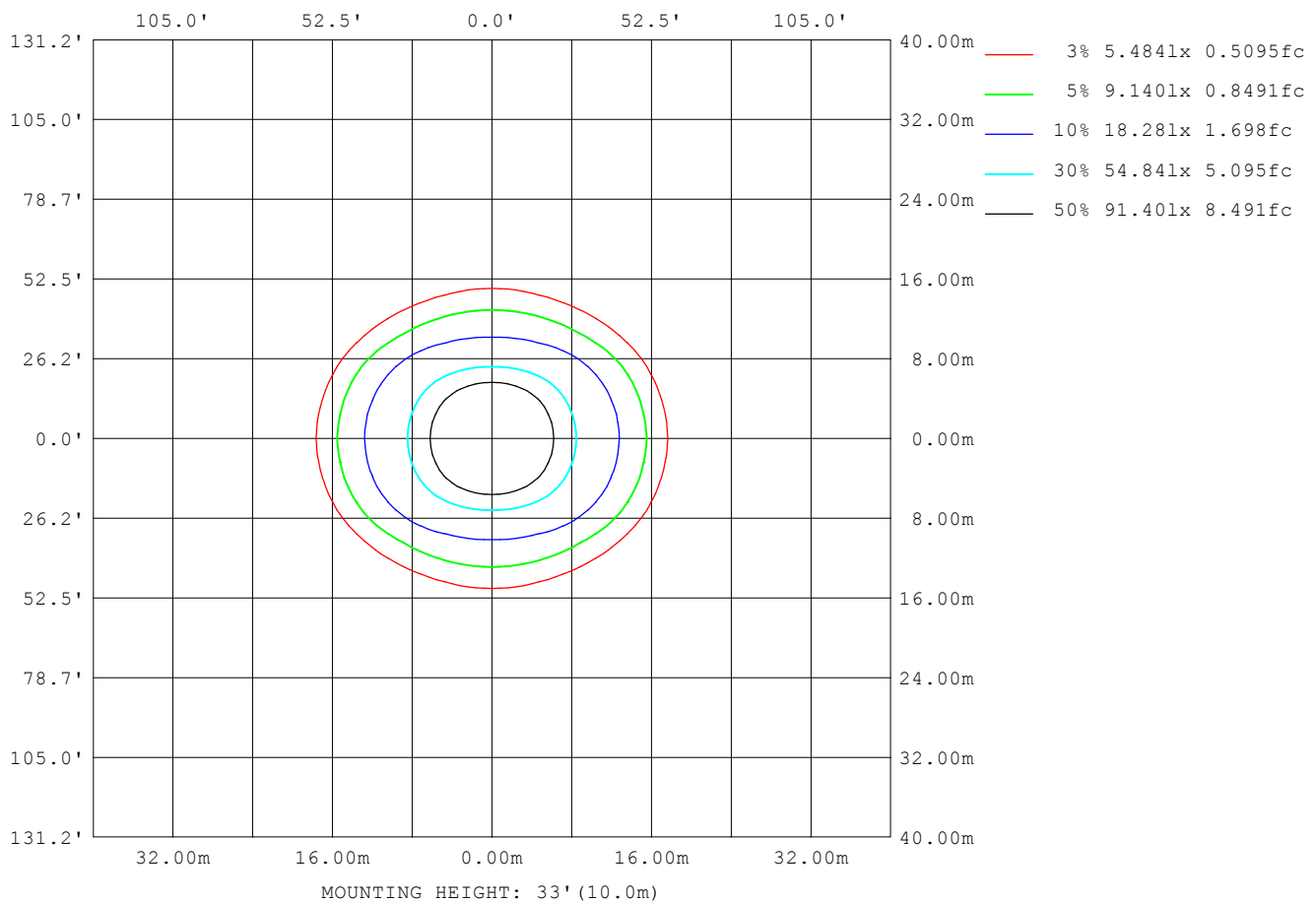
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-02

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



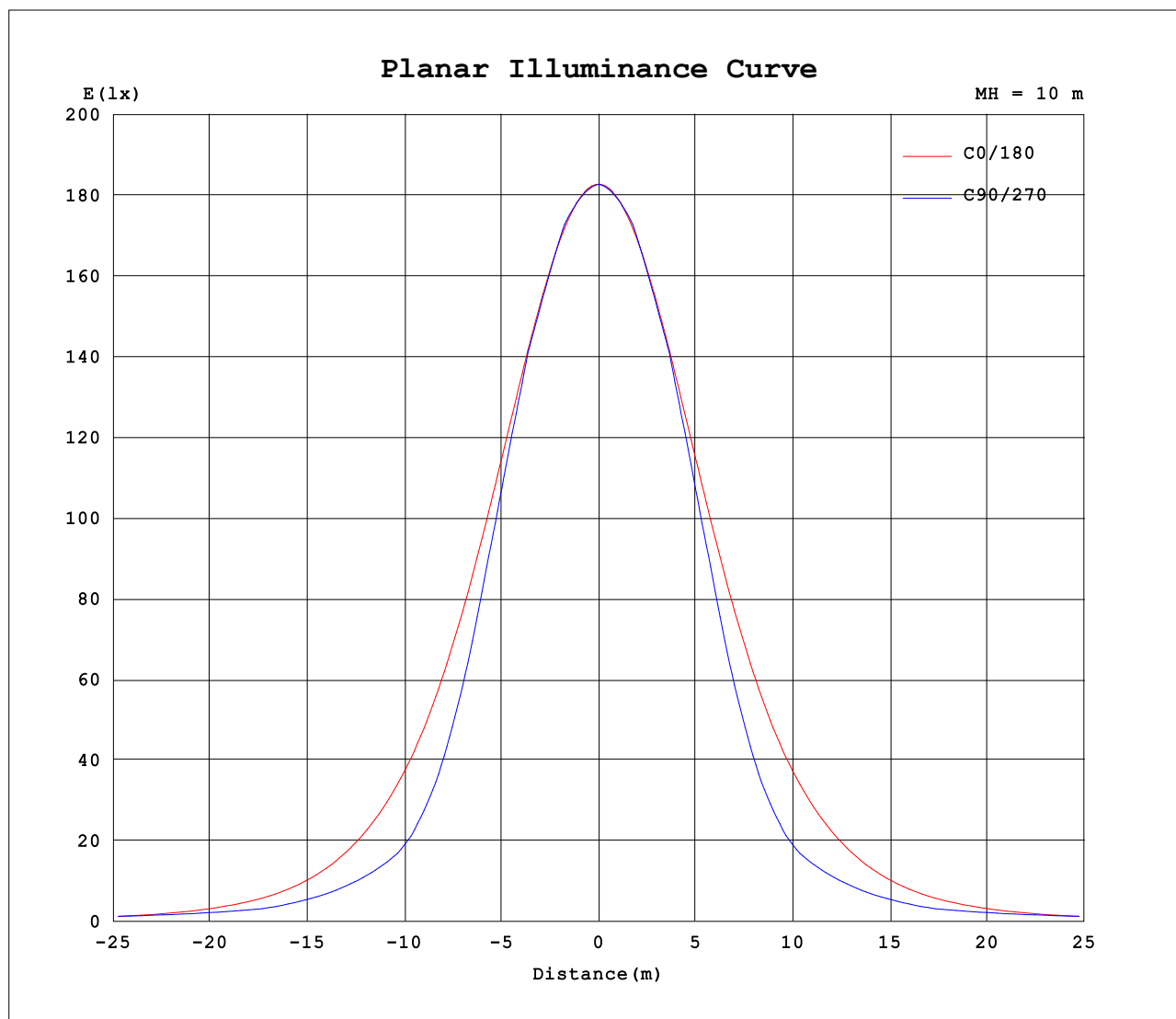
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-02

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:

Assessor: