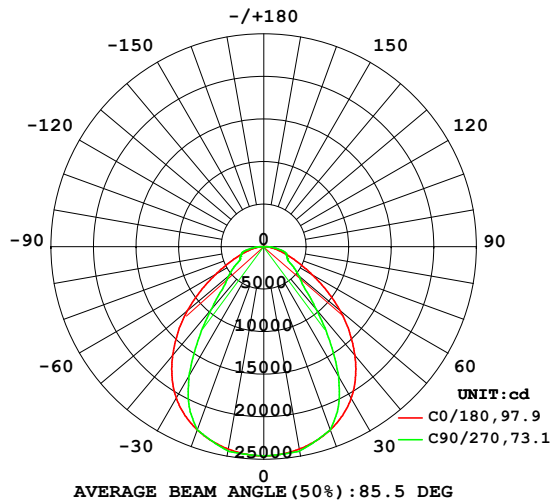


LUMINAIRE PHOTOMETRIC TEST REPORT

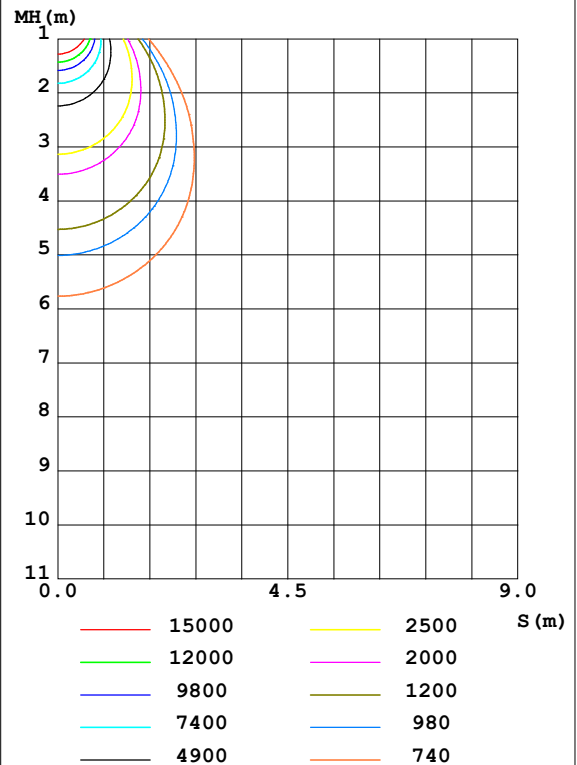
Test:U:229.9V I:1.741A P:388.5W PF:0.9708 Lamp Flux:49107.1x1 lm		
NAME: LHB03-400	TYPE:400W	WEIGHT:
SPEC.:5000K Ra70 80*100DEG L00303	DIM.: 0.906*0.307*0.061	SERIAL No.:
MFR.:	SUR.:0.855*0.274	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 126.40 lm/W			
MODEL	LHB03-400	I _{max} (cd)	24591	S/MH (C0/180)	1.24
NOMINAL POWER(W)	400	LOR(%)	100.0	S/MH (C90/270)	1.06
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	49107	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	49107.1	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	2447	2446	2449	2446	2447	2446	2449	2446	0- 5	586.2	586.2	1.19,1.19
10	2415	2422	2439	2422	2415	2422	2439	2422	5- 10	1742	2328	4.74,4.74
15	2364	2379	2364	2379	2364	2379	2364	2379	10- 15	2844	5172	10.5,10.5
20	2290	2286	2290	2286	2290	2286	2290	2286	15- 20	3838	9009	18.3,18.3
25	2190	2178	2075	2178	2190	2178	2075	2178	20- 25	4667	13677	27.9,27.9
30	2056	2007	1760	2007	2056	2007	1760	2007	25- 30	5205	18882	38.4,38.4
35	1881	1760	1353	1760	1881	1760	1353	1760	30- 35	5354	24235	49.4,49.4
40	1667	1447	956.3	1447	1667	1447	956.3	1447	35- 40	5087	29323	59.7,59.7
45	1429	1108	671.1	1108	1429	1108	671.1	1108	40- 45	4501	33824	68.9,68.9
50	1175	793.5	543.4	793.5	1175	793.5	543.4	793.5	45- 50	3798	37622	76.6,76.6
55	902.1	558.6	435.4	558.6	902.1	558.6	435.4	558.6	50- 55	3127	40749	83,83
60	655.1	420.0	327.4	420.0	655.1	420.0	327.4	420.0	55- 60	2463	43212	88,88
65	449.9	290.5	306.2	290.5	449.9	290.5	306.2	290.5	60- 65	1870	45081	91.8,91.8
70	300.4	198.1	285.0	198.1	300.4	198.1	285.0	198.1	65- 70	1444	46525	94.7,94.7
75	194.4	146.4	257.3	146.4	194.4	146.4	257.3	146.4	70- 75	1128	47653	97,97
80	114.0	93.47	177.0	93.47	114.0	93.47	177.0	93.47	75- 80	821.3	48475	98.7,98.7
85	44.61	47.70	90.11	47.70	44.61	47.70	90.11	47.70	80- 85	473.5	48948	99.7,99.7
90	1.560	3.032	3.246	3.032	1.560	3.032	3.246	3.032	85- 90	159.0	49107	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): 33824 lm

%lum = 68.9%

%lamp = 68.9%

Conical surface Flux(120deg): 43212 lm

%lum = 88.0%

%lamp = 88.0%

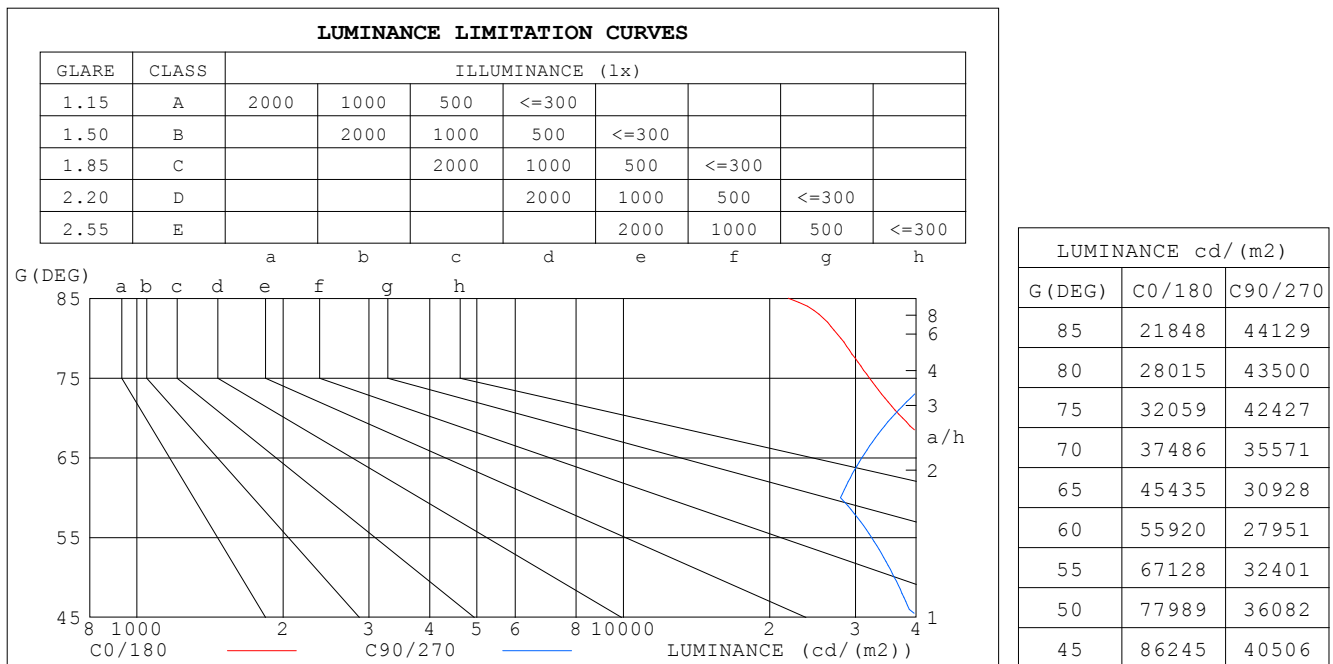
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-03-02

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

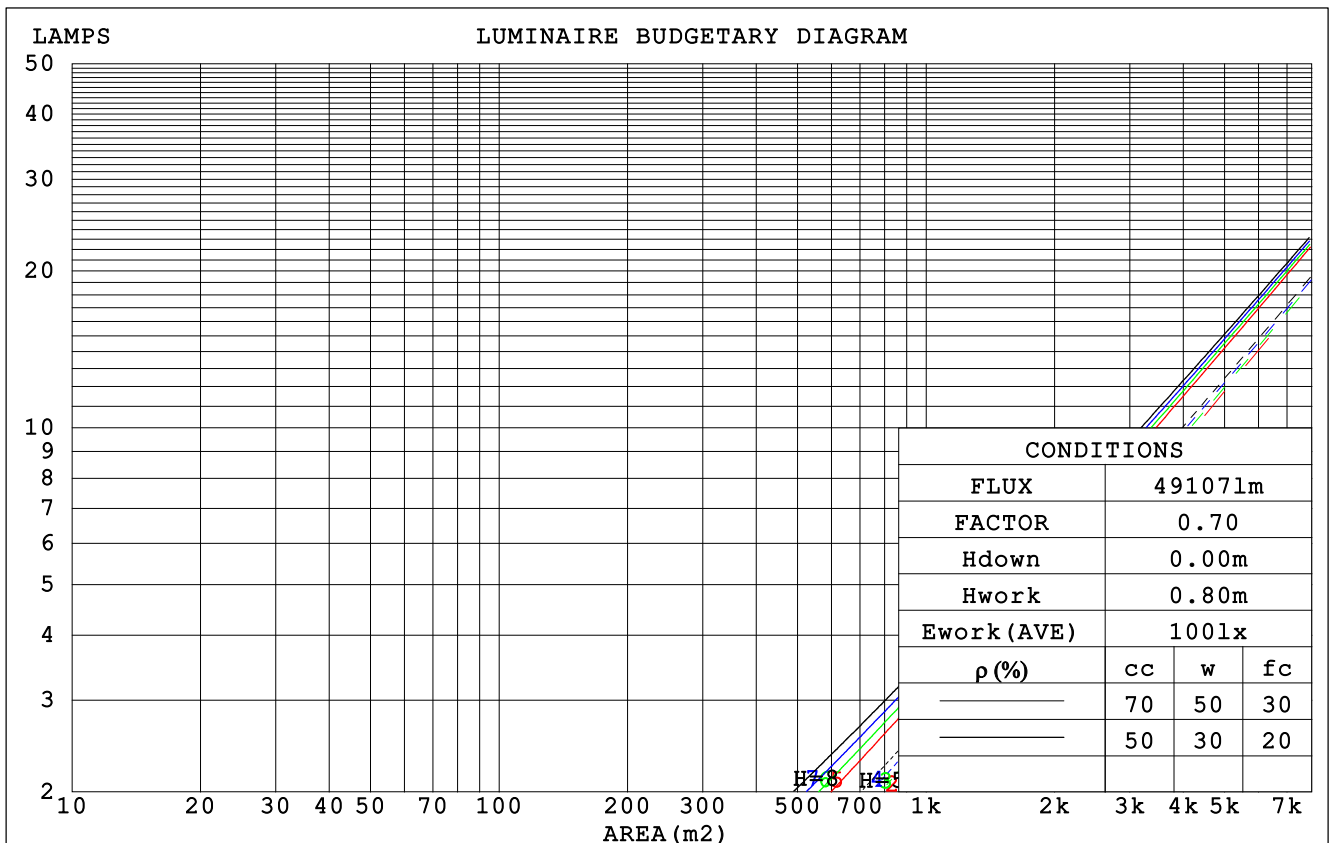
γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 9.500m [K=1.0000]
Remarks:

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	1.06	1.03	.99	1.04	1.01	.98	.00	.97	.95	.96	.94	.92	.93	.91	.89	.87
2.0	.95	.89	.84	.93	.88	.83	.90	.85	.81	.86	.83	.79	.83	.80	.78	.76
3.0	.85	.78	.72	.83	.77	.72	.81	.75	.70	.78	.73	.69	.76	.71	.68	.66
4.0	.77	.69	.63	.75	.68	.63	.73	.67	.62	.71	.65	.61	.69	.64	.60	.58
5.0	.70	.61	.56	.68	.61	.55	.66	.60	.55	.65	.59	.54	.63	.58	.54	.52
6.0	.63	.55	.50	.62	.55	.49	.61	.54	.49	.59	.53	.49	.58	.52	.48	.46
7.0	.58	.50	.45	.57	.50	.44	.56	.49	.44	.54	.48	.44	.53	.48	.43	.42
8.0	.53	.46	.40	.53	.45	.40	.52	.45	.40	.50	.44	.40	.49	.44	.40	.38
9.0	.49	.42	.37	.49	.42	.37	.48	.41	.36	.47	.41	.36	.46	.40	.36	.34
10.0	.46	.39	.34	.45	.38	.34	.44	.38	.33	.44	.38	.33	.43	.37	.33	.32



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	.263	.150	.047	.256	.146	.046	.243	.139	.045	.231	.133	.043	.220	.128	.041	
2.0	.250	.137	.042	.244	.134	.041	.232	.129	.040	.222	.124	.039	.212	.120	.038	
3.0	.234	.124	.037	.229	.122	.037	.219	.118	.036	.209	.115	.035	.201	.111	.034	
4.0	.218	.114	.033	.214	.112	.033	.205	.109	.032	.197	.106	.032	.189	.103	.031	
5.0	.204	.104	.030	.200	.103	.030	.192	.100	.029	.185	.098	.029	.179	.095	.029	
6.0	.191	.096	.027	.188	.095	.027	.181	.093	.027	.174	.091	.027	.168	.089	.026	
7.0	.180	.089	.025	.177	.088	.025	.170	.086	.025	.165	.084	.025	.159	.083	.024	
8.0	.169	.083	.023	.166	.082	.023	.161	.080	.023	.156	.079	.023	.151	.077	.023	
9.0	.160	.077	.022	.157	.077	.022	.152	.075	.021	.148	.074	.021	.143	.073	.021	
10.0	.151	.073	.020	.149	.072	.020	.144	.071	.020	.140	.070	.020	.136	.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	.157	.138	.152	.134	.119	.104	.092	.082	.060	.053	.048	.019	.017	.015		
2.0	.167	.132	.103	.143	.114	.089	.098	.079	.062	.056	.046	.036	.018	.015	.012		
3.0	.158	.114	.079	.135	.098	.069	.093	.068	.048	.054	.040	.028	.017	.013	.009		
4.0	.149	.100	.063	.128	.087	.055	.088	.060	.038	.051	.035	.023	.016	.012	.007		
5.0	.142	.090	.051	.122	.077	.044	.084	.054	.031	.049	.032	.019	.016	.010	.006		
6.0	.135	.081	.042	.116	.070	.037	.080	.049	.026	.046	.029	.016	.015	.009	.005		
7.0	.128	.074	.036	.110	.064	.031	.076	.045	.022	.044	.026	.013	.014	.009	.004		
8.0	.122	.068	.031	.105	.059	.027	.073	.041	.019	.042	.024	.011	.014	.008	.004		
9.0	.117	.063	.027	.100	.055	.023	.070	.038	.017	.041	.023	.010	.013	.007	.003		
10.0	.111	.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	27.0	28.3	27.2	28.5	28.7	23.6	25.0	23.9	25.2	25.4
3H	27.7	28.9	27.9	29.1	29.3	25.0	26.3	25.3	26.5	26.7
4H	27.9	29.1	28.2	29.3	29.6	26.0	27.2	26.3	27.4	27.7
6H	28.0	29.1	28.4	29.4	29.7	27.0	28.1	27.3	28.3	28.6
8H	28.1	29.1	28.4	29.4	29.7	27.3	28.4	27.6	28.6	28.9
12H	28.1	29.1	28.4	29.4	29.7	27.5	28.6	27.9	28.9	29.2
4H 2H	27.0	28.1	27.3	28.4	28.6	24.1	25.3	24.4	25.6	25.8
3H	27.8	28.8	28.2	29.1	29.4	25.6	26.7	26.0	26.9	27.2
4H	28.2	29.1	28.5	29.4	29.7	26.8	27.7	27.2	28.1	28.4
6H	28.4	29.2	28.8	29.6	29.9	27.9	28.8	28.3	29.1	29.5
8H	28.5	29.2	28.9	29.6	30.0	28.4	29.1	28.8	29.5	29.9
12H	28.5	29.2	28.9	29.6	30.0	28.7	29.4	29.1	29.8	30.2
8H 4H	28.2	29.0	28.6	29.3	29.7	27.0	27.7	27.4	28.1	28.5
6H	28.6	29.2	29.0	29.6	30.0	28.2	28.9	28.7	29.3	29.7
8H	28.7	29.2	29.1	29.7	30.1	28.8	29.4	29.3	29.8	30.2
12H	28.7	29.2	29.2	29.7	30.1	29.3	29.8	29.8	30.2	30.7
12H 4H	28.2	28.9	28.6	29.3	29.7	27.0	27.7	27.4	28.0	28.4
6H	28.6	29.1	29.0	29.6	30.0	28.3	28.8	28.7	29.2	29.7
8H	28.7	29.2	29.2	29.7	30.1	28.9	29.3	29.3	29.8	30.3
Variations with the observer position at spacings:										
S = 1.0H	+ 0.4 / - 0.5					+ 0.3 / - 0.3				
1.5H	+ 0.4 / - 0.7					+ 0.2 / - 0.3				
2.0H	+ 1.2 / - 1.6					+ 0.2 / - 0.4				

CIE Pub.117 Corrected 49107 lm Total Lamp Luminous Flux.(8log(F/F0) = 13.5)

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	66	56	50	65	56	50	44
0.80	76	66	60	75	66	60	74	65	59	54
1.00	84	74	68	83	74	68	81	75	68	61
1.25	90	81	75	89	81	75	86	79	74	68
1.50	94	86	80	93	85	80	90	84	79	72
2.00	100	93	88	98	92	87	95	90	85	78
2.50	103	97	92	101	95	91	97	93	89	81
3.00	106	100	95	104	98	94	100	96	92	84
4.00	109	104	100	107	102	99	103	99	96	88
5.00	111	107	103	108	105	102	104	101	99	90
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

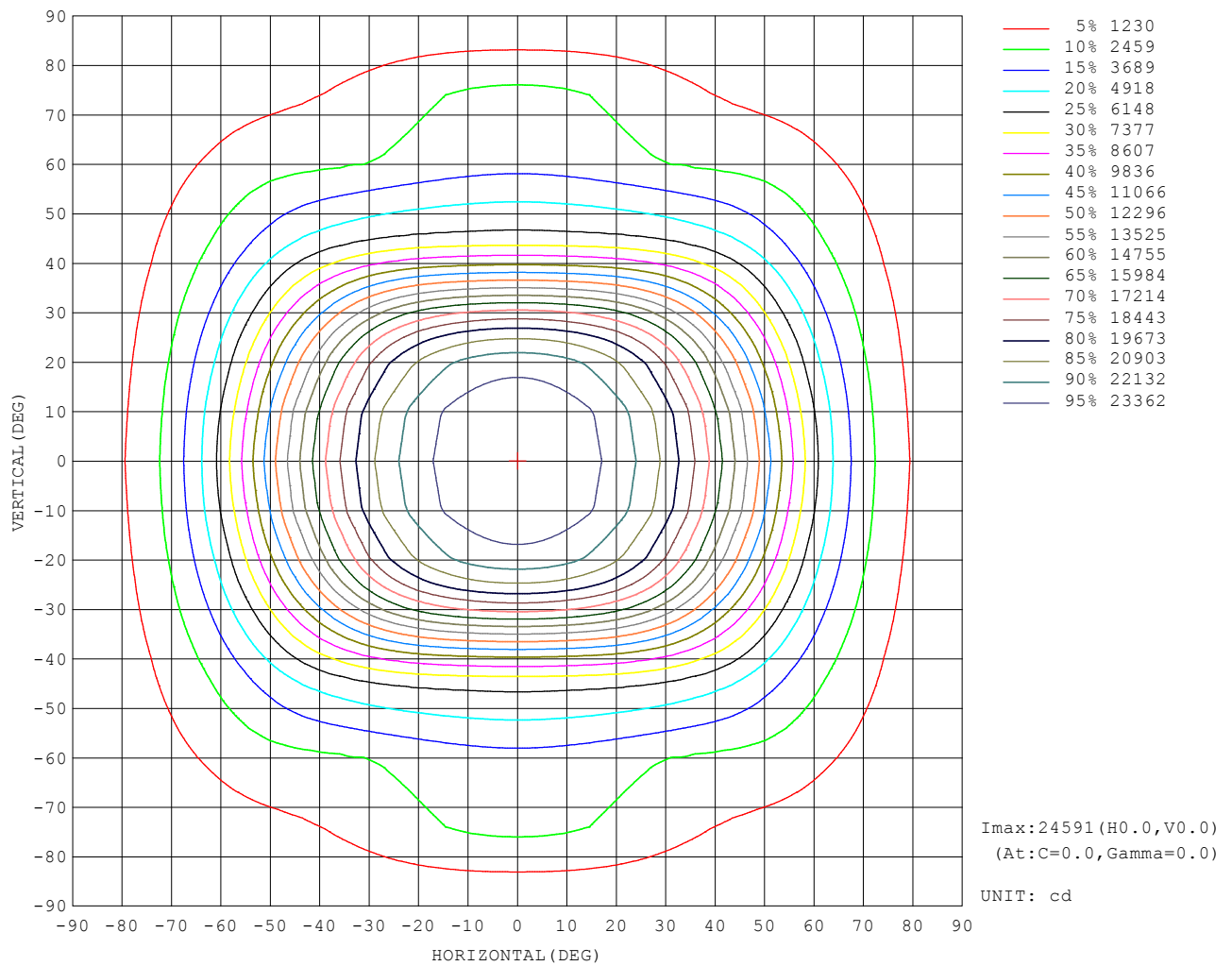
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-02

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



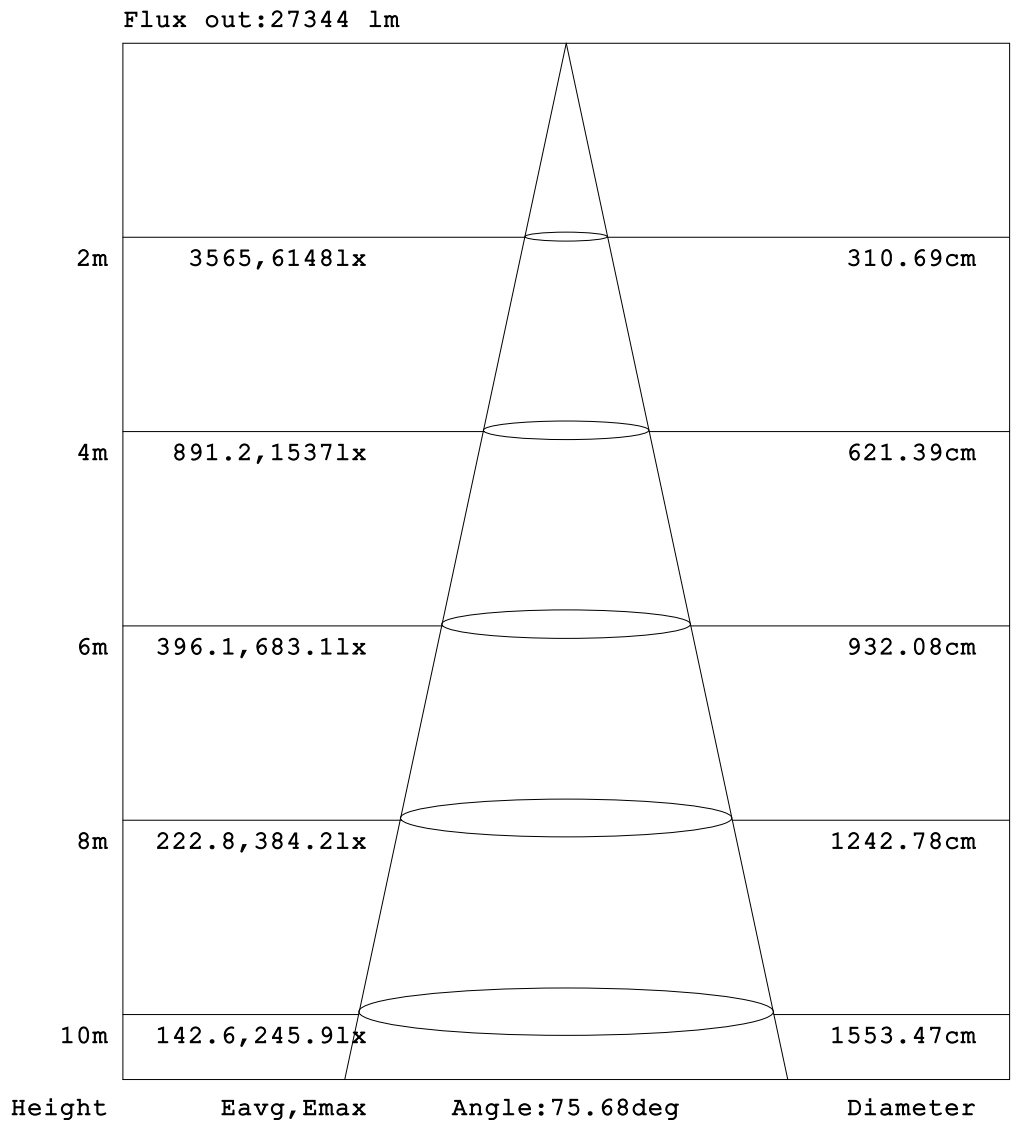
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-02

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.

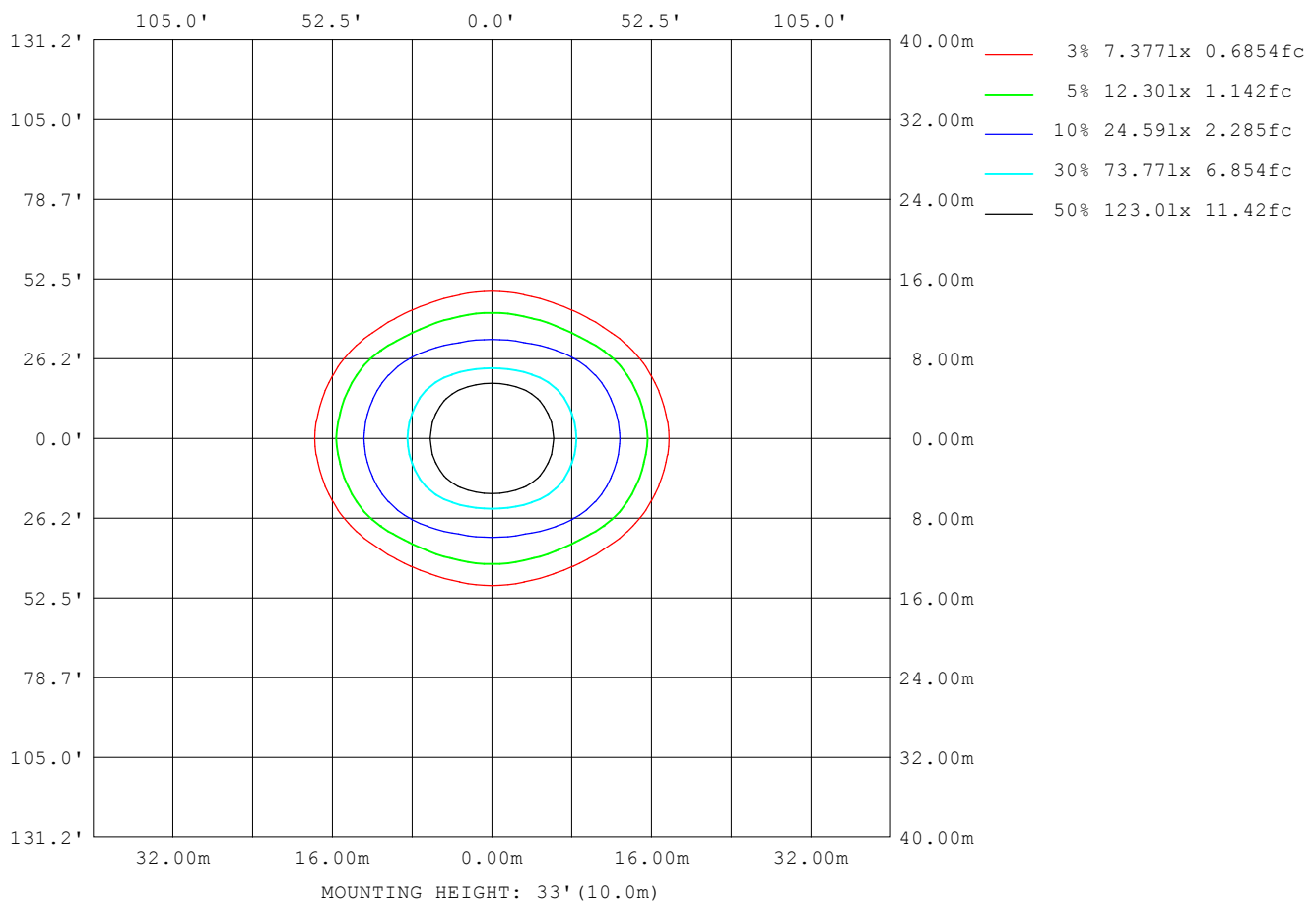
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-02

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



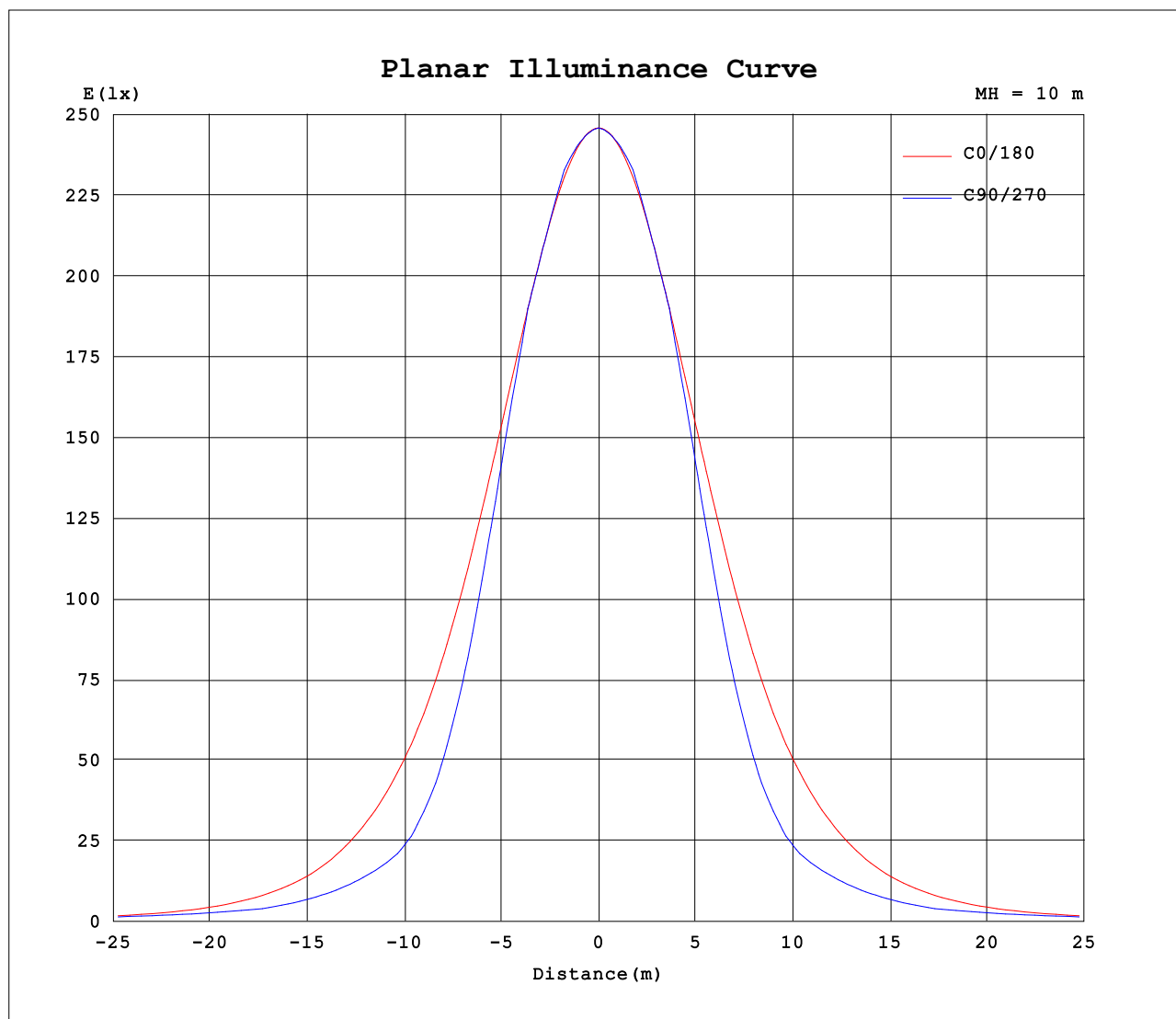
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-02

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:

