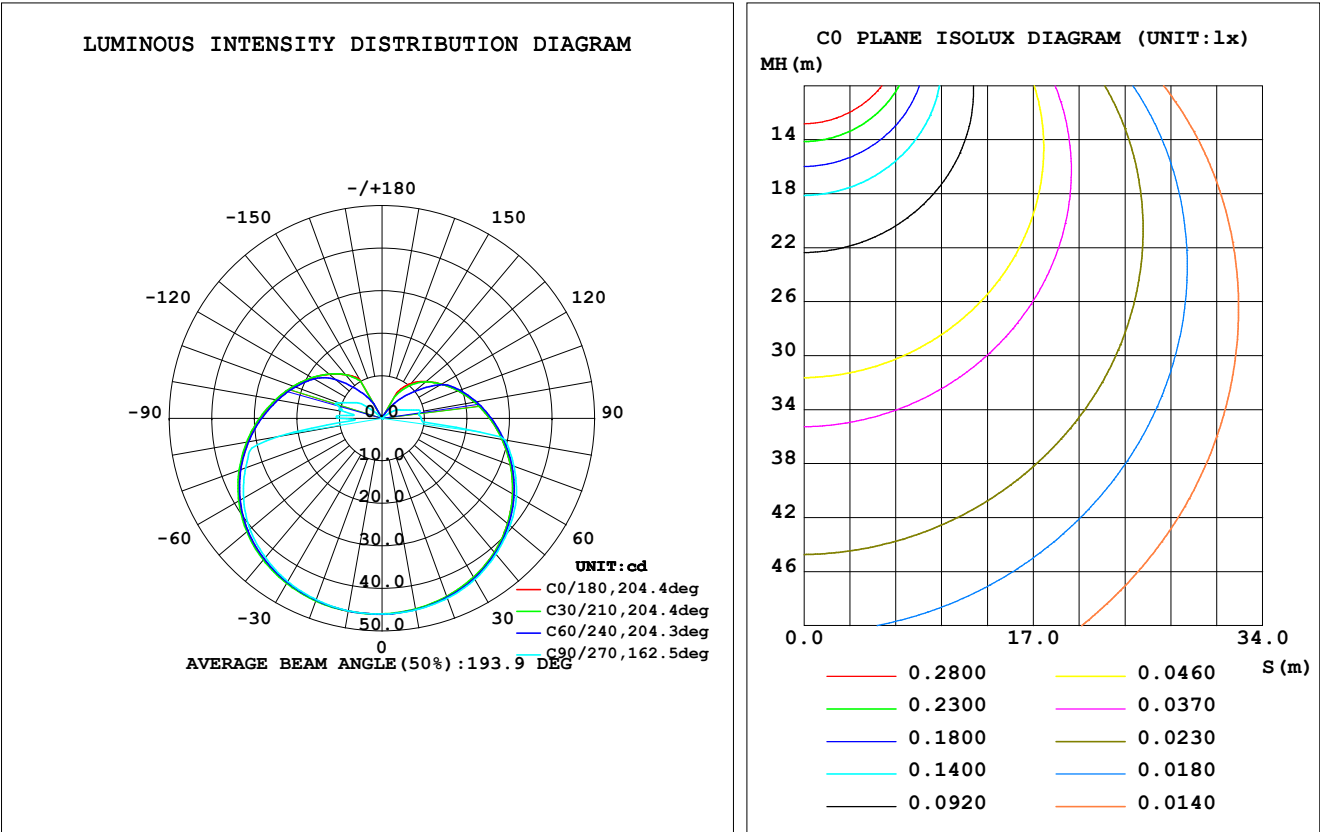


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: ASL-G60	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Led spot s.a. de c.v.	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 67.62 lm/W
MODEL		Imax (cd)	46.06	S/MH (C0/180)	1.41	
NOMINAL POWER (W)	5	LOR (%)	100	S/MH (C90/270)	1.43	
RATED VOLTAGE (V)	234	TOTAL FLUX (lm)	315.80	η UP, DN (C0-180)	19.0, 51.1	
NOMINAL FLUX (lm)	316	CIE CLASS	SEMI-D.	η UP, DN (C180-360)	20.3, 52.4	
LAMPS INSIDE	1	η up (%)	27.7	CIBSE SHR NOM	1.50	
TEST VOLTAGE (V)	233.5	η down (%)	72.3	CIBSE SHR MAX	1.55	



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: ming
Test Date: 2014-08-02

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.279
Humidity: 65.0%
Test Distance: 11.200m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

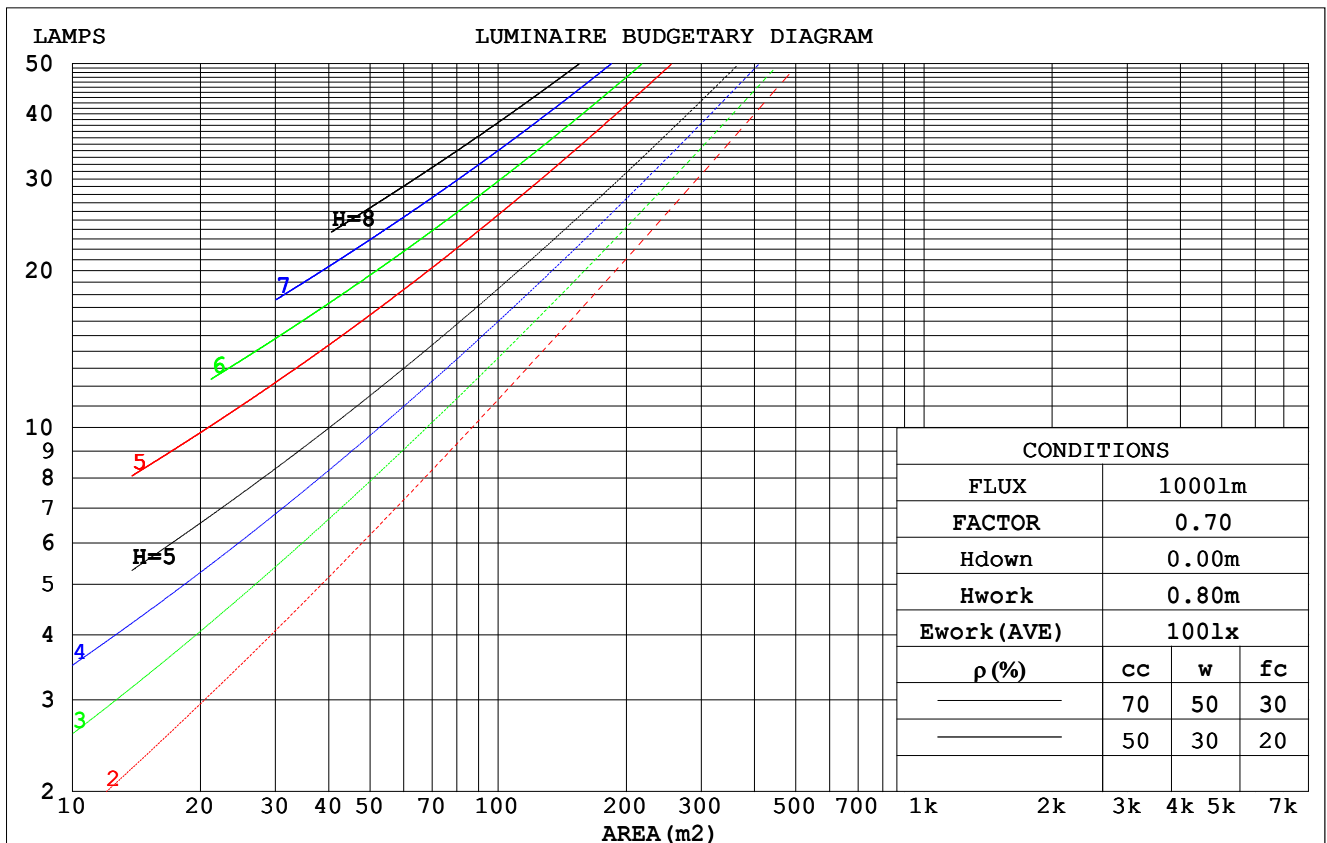
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	45.55	45.56	45.72	45.93	45.97	45.99	45.96	45.70	0- 10	4.382	4.382	1.39,1.98
20	44.57	44.66	45.02	45.36	45.55	45.59	45.34	44.87	10- 20	12.89	17.27	5.47,7.81
30	43.11	43.25	43.71	44.26	44.68	44.68	44.31	43.57	20- 30	20.61	37.88	12,17.1
40	41.11	41.25	41.69	42.65	43.24	43.30	42.68	41.78	30- 40	27.07	64.95	20.6,29.4
50	38.51	38.68	39.30	40.45	41.24	41.34	40.55	39.32	40- 50	31.82	96.78	30.6,43.8
60	35.46	35.64	36.49	37.67	38.62	38.70	37.56	36.34	50- 60	34.56	131.3	41.6,59.4
70	32.14	32.30	33.02	34.47	35.53	35.56	34.12	33.08	60- 70	35.18	166.5	52.7,75.3
80	28.67	28.85	29.44	31.08	32.16	32.10	24.64	29.67	70- 80	33.86	200.4	63.4,90.6
90	25.34	25.52	9.211	27.69	28.70	28.57	10.07	26.26	80- 90	28.48	228.9	72.5,103
100	22.14	22.32	9.121	24.42	25.33	25.17	8.824	23.00	90-100	24.68	253.5	80.3,115
110	19.07	19.25	5.814	21.23	22.14	21.94	10.72	19.72	100-110	21.15	274.7	87,124
120	16.17	16.01	4.179	18.20	19.08	18.87	7.429	16.87	110-120	16.70	291.4	92.3,132
130	13.47	11.56	0.4645	15.04	16.14	15.23	2.711	11.88	120-130	12.40	303.8	96.2,137
140	10.78	7.440	0.0751	11.41	13.44	10.95	0.2045	7.918	130-140	7.625	311.4	98.6,141
150	7.009	3.400	0.0834	7.973	10.73	7.047	0.0240	3.321	140-150	4.259	315.7	100,143
160	0	0	0	0	0	0	0	0	150-160	0.1380	315.8	100,143
170	0	0	0	0	0	0	0	0	160-170	0	315.8	100,143
180	0	0	0	0	0	0	0	0	170-180	0	315.8	100,143
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:ming
 Test Date:2014-08-02

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.279
 Humidity:65.0%
 Test Distance:11.200m [K=1.0000]
 Remarks:

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	1.61	1.61	1.61	1.52	1.52	1.52	1.37	1.37	1.37	1.23	1.23	1.23	1.10	1.10	1.10	1.03
1.0	1.31	1.23	1.16	1.24	1.17	1.10	1.11	1.05	.99	.98	.94	.89	.87	.83	.80	.74
2.0	1.11	.99	.90	1.05	.94	.85	.93	.85	.77	.83	.76	.70	.73	.67	.63	.57
3.0	.96	.82	.72	.90	.78	.69	.80	.70	.62	.71	.63	.56	.62	.56	.51	.45
4.0	.84	.70	.59	.79	.66	.57	.70	.60	.52	.62	.54	.47	.55	.48	.42	.37
5.0	.74	.60	.50	.70	.57	.48	.62	.52	.43	.55	.46	.39	.49	.41	.35	.31
6.0	.66	.52	.42	.62	.50	.41	.56	.45	.37	.50	.41	.34	.44	.36	.31	.27
7.0	.59	.46	.37	.56	.44	.35	.50	.40	.32	.45	.36	.30	.40	.32	.27	.23
8.0	.54	.41	.32	.51	.39	.31	.46	.36	.28	.41	.32	.26	.36	.29	.24	.20
9.0	.49	.37	.29	.46	.35	.27	.42	.32	.25	.37	.29	.23	.33	.26	.21	.18
10.0	.45	.33	.26	.43	.32	.25	.38	.29	.23	.35	.26	.21	.31	.24	.19	.16



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: ming
 Test Date: 2014-08-02

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.279
 Humidity: 65.0%
 Test Distance: 11.200m [K=1.0000]
 Remarks:

WEC AND CCEC

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						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.587	.334	.106	.565	.322	.102	.523	.300	.096	.484	.279	.090	.449	.260	.084	
2.0	.498	.273	.084	.478	.263	.081	.440	.244	.076	.405	.227	.071	.372	.210	.066	
3.0	.437	.233	.070	.419	.224	.068	.384	.208	.063	.352	.193	.059	.322	.179	.055	
4.0	.390	.203	.060	.374	.196	.058	.342	.181	.054	.313	.168	.051	.286	.155	.047	
5.0	.353	.180	.052	.338	.173	.050	.309	.161	.047	.282	.149	.044	.257	.137	.041	
6.0	.322	.161	.046	.308	.156	.045	.281	.144	.042	.257	.133	.039	.234	.123	.037	
7.0	.296	.146	.041	.283	.141	.040	.259	.131	.038	.236	.121	.035	.215	.111	.033	
8.0	.273	.134	.038	.262	.129	.036	.239	.120	.034	.218	.111	.032	.199	.102	.030	
9.0	.254	.123	.034	.243	.119	.033	.223	.110	.031	.203	.102	.029	.185	.094	.027	
10.0	.237	.114	.032	.227	.110	.031	.208	.102	.029	.190	.094	.027	.173	.087	.025	

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						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.572	.572	.572	.488	.488	.488	.333	.333	.333	.192	.192	.192	.061	.061	.061	
1.0	.570	.524	.482	.487	.449	.415	.333	.309	.287	.192	.179	.167	.061	.058	.054	
2.0	.561	.492	.434	.480	.424	.375	.329	.293	.262	.190	.170	.153	.061	.055	.050	
3.0	.551	.469	.404	.472	.405	.351	.324	.281	.246	.187	.164	.145	.060	.053	.047	
4.0	.540	.452	.385	.463	.391	.335	.318	.272	.236	.184	.159	.139	.059	.052	.046	
5.0	.529	.438	.372	.454	.379	.324	.313	.265	.228	.181	.156	.136	.058	.051	.045	
6.0	.518	.427	.363	.445	.370	.316	.307	.259	.223	.178	.152	.133	.057	.050	.044	
7.0	.508	.418	.356	.437	.363	.310	.302	.254	.220	.175	.150	.131	.057	.049	.043	
8.0	.498	.410	.350	.429	.356	.305	.297	.250	.217	.173	.147	.129	.056	.048	.043	
9.0	.489	.404	.346	.421	.350	.302	.292	.246	.214	.170	.145	.128	.055	.048	.042	
10.0	.481	.398	.343	.414	.346	.299	.287	.243	.213	.168	.144	.127	.054	.047	.042	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:ming
 Test Date:2014-08-02

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.279
 Humidity:65.0%
 Test Distance:11.200m [K=1.0000]
 Remarks:

Uncorrected UGR 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	13.8	15.1	14.4	15.8	16.5	13.9	15.2	14.5	15.9	16.6
3H	16.5	17.7	17.2	18.4	19.2	16.7	17.9	17.3	18.6	19.3
4H	18.1	19.2	18.7	19.9	20.7	18.2	19.4	18.9	20.0	20.9
6H	19.8	20.8	20.5	21.6	22.4	20.0	21.0	20.7	21.7	22.6
8H	20.7	21.8	21.4	22.5	23.3	20.7	21.7	21.4	22.4	23.3
12H	21.8	22.8	22.5	23.5	24.4	20.9	21.9	21.6	22.6	23.5
4H 2H	14.7	15.8	15.4	16.5	17.3	14.8	15.9	15.4	16.6	17.4
3H	17.6	18.6	18.3	19.3	20.2	17.7	18.7	18.4	19.4	20.3
4H	19.3	20.2	20.0	20.9	21.8	19.4	20.3	20.1	21.1	22.0
6H	21.2	22.0	21.9	22.7	23.7	21.3	22.1	22.1	22.9	23.8
8H	22.2	23.0	23.0	23.8	24.7	22.1	22.9	22.9	23.7	24.6
12H	23.4	24.1	24.2	24.9	25.9	22.5	23.2	23.3	24.0	24.9
8H 4H	19.9	20.7	20.7	21.5	22.4	20.0	20.8	20.8	21.6	22.5
6H	22.1	22.7	22.9	23.5	24.5	22.2	22.9	23.0	23.7	24.7
8H	23.3	23.9	24.1	24.7	25.7	23.2	23.8	24.0	24.6	25.6
12H	24.7	25.3	25.6	26.1	27.1	23.9	24.4	24.7	25.2	26.2
12H 4H	20.1	20.8	20.9	21.6	22.6	20.2	20.9	21.0	21.7	22.6
6H	22.4	23.0	23.2	23.8	24.8	22.5	23.1	23.3	23.9	24.9
8H	23.7	24.2	24.5	25.1	26.1	23.6	24.2	24.5	25.0	26.0
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.2				
2.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4				

CIE Pub.117 Corrected 221.2 lm Total Lamp Luminous Flux. (8log(F/F0) = -5.2)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: ming
 Test Date: 2014-08-02

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.279
 Humidity: 65.0%
 Test Distance: 11.200m [K=1.0000]
 Remarks:

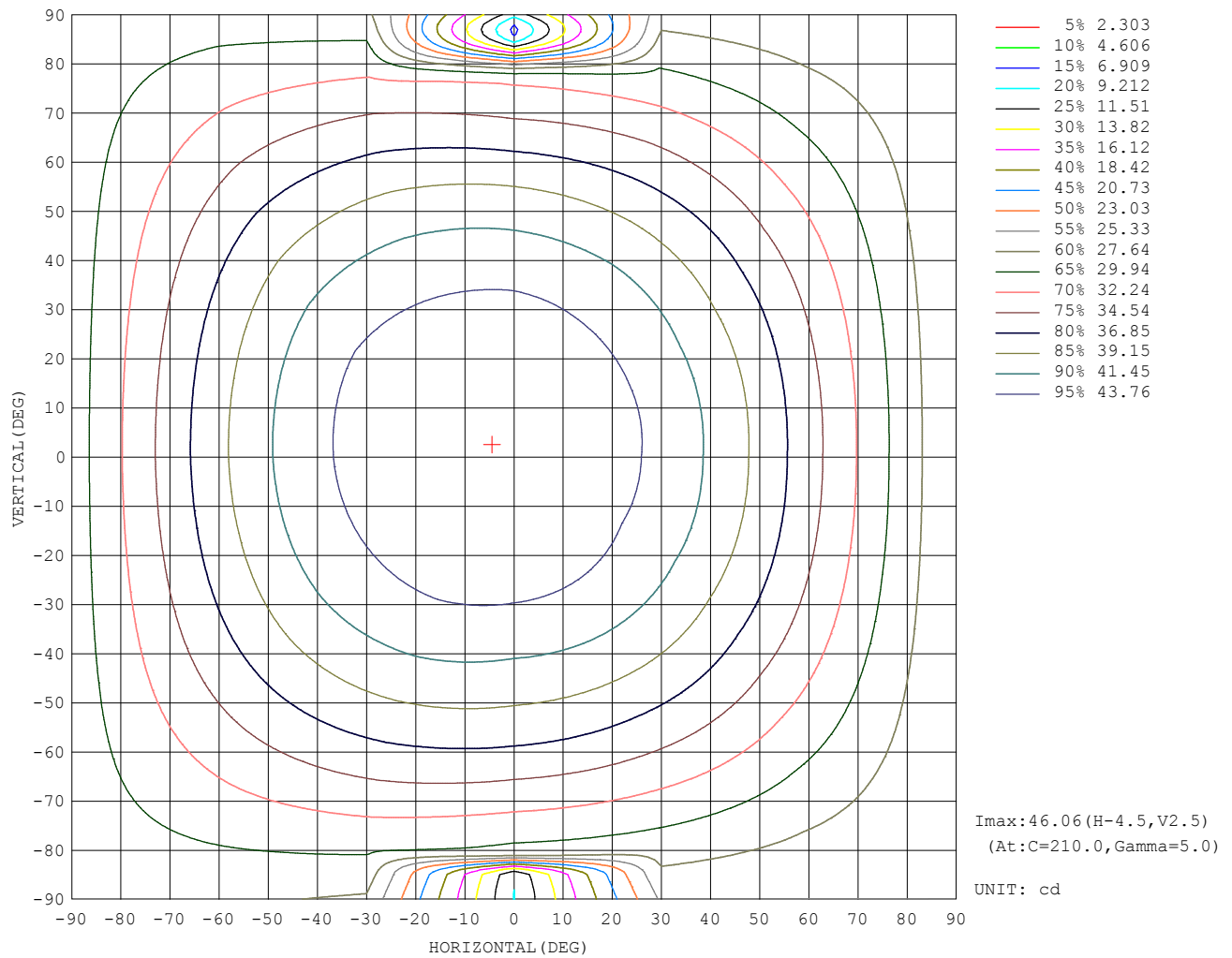
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	61	43	32	59	42	32	56	40	31	21
0.80	74	54	42	71	53	41	66	50	40	28
1.00	84	65	52	81	63	51	75	63	49	35
1.25	94	75	62	90	72	60	83	68	57	42
1.50	102	83	69	97	80	68	89	74	64	47
2.00	112	95	82	107	91	79	97	84	74	55
2.50	119	103	91	114	99	88	103	91	81	60
3.00	125	110	98	119	105	95	107	97	88	65
4.00	132	120	109	125	114	105	113	104	96	72
5.00	137	126	116	130	120	111	117	109	102	76
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: ming
 Test Date: 2014-08-02

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.279
 Humidity: 65.0%
 Test Distance: 11.200m [K=1.0000]
 Remarks:

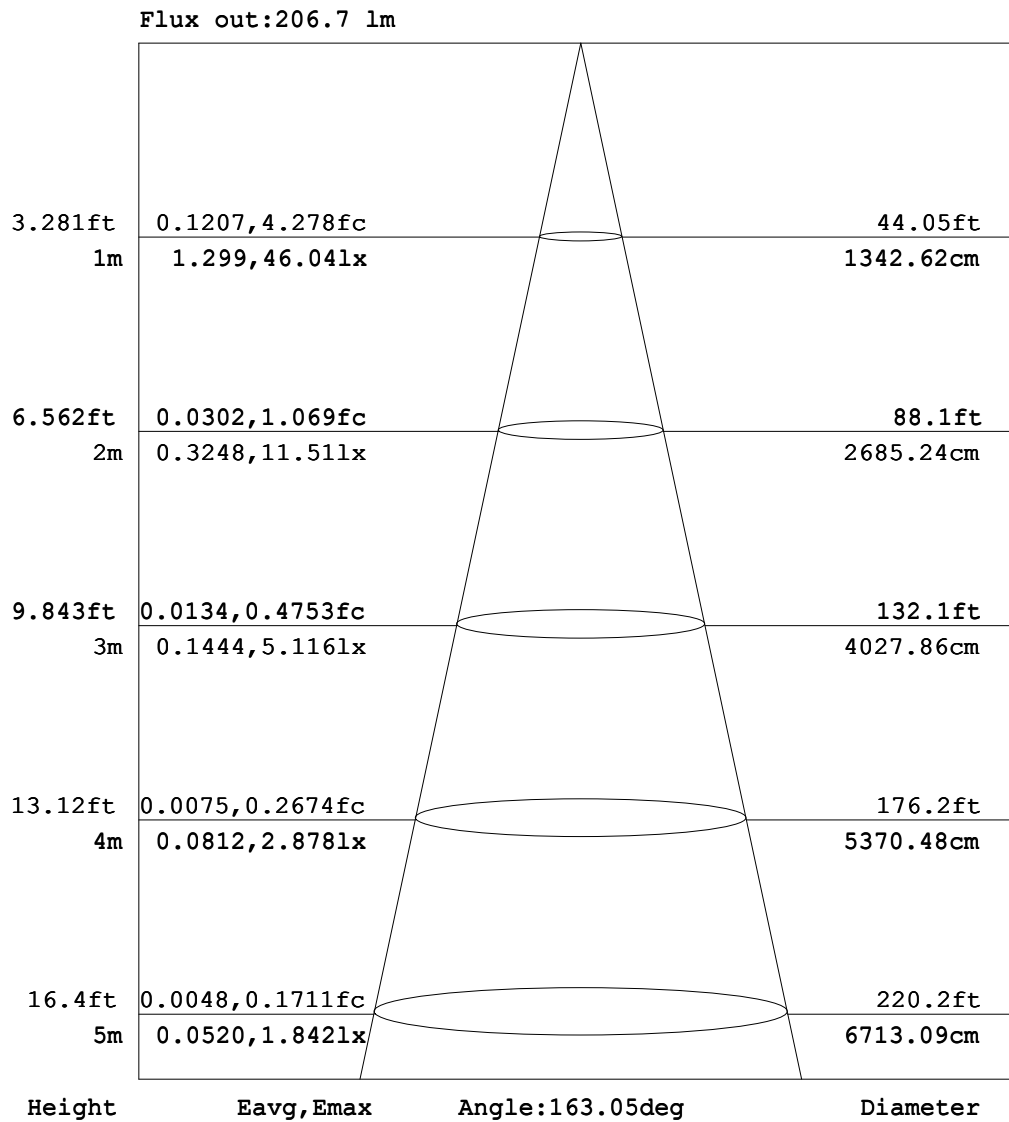
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ming
Test Date:2014-08-02

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.279
Humidity:65.0%
Test Distance:11.200m [K=1.0000]
Remarks:

AAI Figure

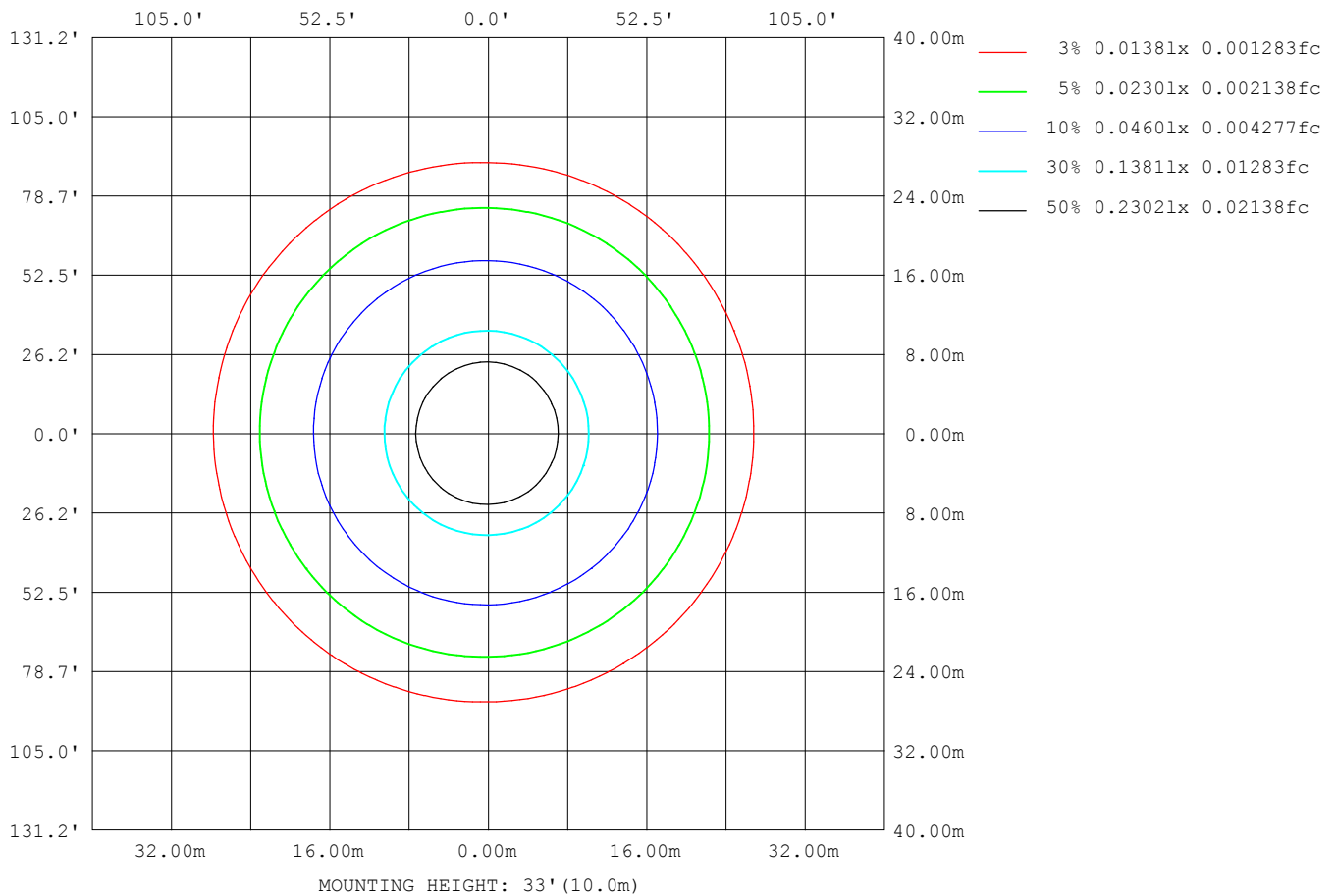


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: ming
Test Date: 2014-08-02

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.279
Humidity: 65.0%
Test Distance: 11.200m [K=1.0000]
Remarks:

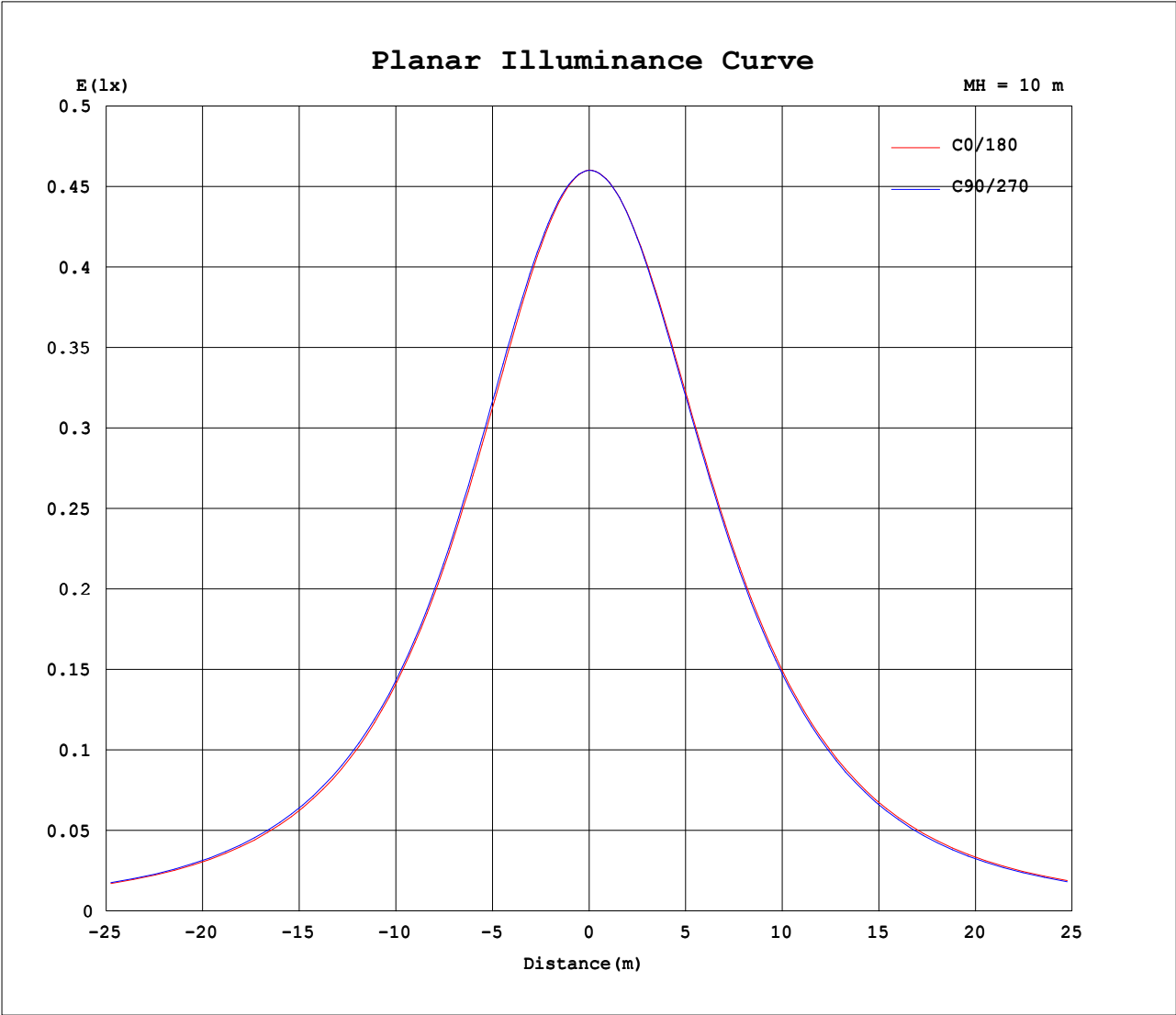
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: ming
Test Date: 2014-08-02

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.279
Humidity: 65.0%
Test Distance: 11.200m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ming
Test Date:2014-08-02

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.279
Humidity:65.0%
Test Distance:11.200m [K=1.0000]
Remarks: