

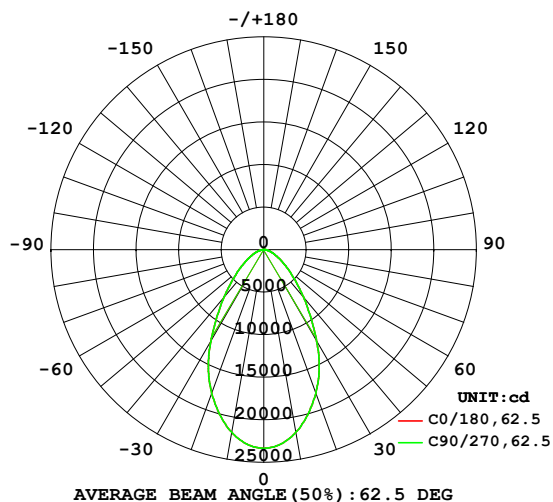
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

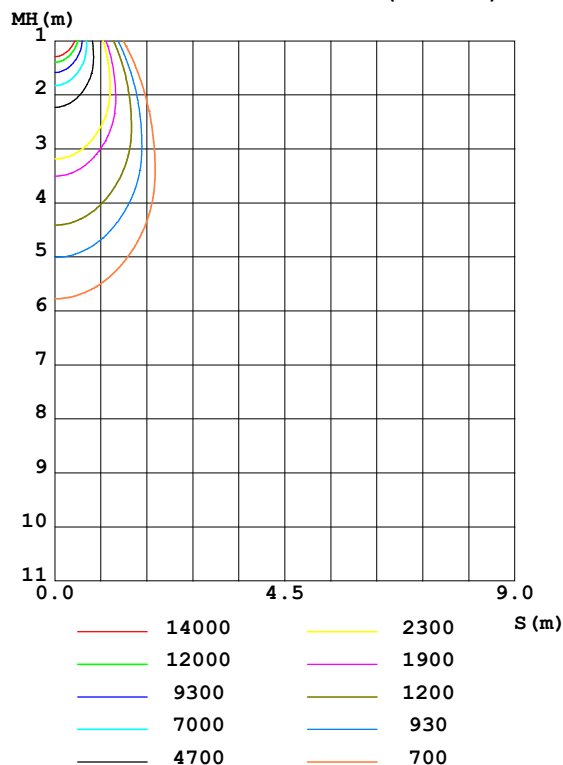
Test:U:229.6V I:0.9401A P:213.7W PF:0.9903 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:29920.3x1 lm		
NAME: HB38-200-5080-H00138N	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 139.99 lm/W			
MODEL	/	I _{max} (cd)	23347	S/MH(C0/180)	0.92
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	0.92
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	29920	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	29920.3	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	1.00

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2021-06-28

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.4551]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	2179	2179	2179	2179	2179	2179	2179	2179	0- 10	2153	2153	7.2,7.2
20	1792	1792	1792	1792	1792	1792	1792	1792	10- 20	5606	7759	25.9,25.9
30	1247	1247	1247	1247	1247	1247	1247	1247	20- 30	7028	14788	49.4,49.4
40	726.2	726.2	726.2	726.2	726.2	726.2	726.2	726.2	30- 40	6014	20802	69.5,69.5
50	398.1	398.1	398.1	398.1	398.1	398.1	398.1	398.1	40- 50	4198	25000	83.6,83.6
60	207.6	207.6	207.6	207.6	207.6	207.6	207.6	207.6	50- 60	2619	27619	92.3,92.3
70	100.7	100.7	100.7	100.7	100.7	100.7	100.7	100.7	60- 70	1477	29097	97.2,97.2
80	33.98	33.98	33.98	33.98	33.98	33.98	33.98	33.98	70- 80	676.8	29774	99.5,99.5
90	0.9057	0.9057	0.9057	0.9057	0.9057	0.9057	0.9057	0.9057	80- 90	146.7	29920	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:X10cd									UNIT:lm		

Conical surface Flux(90deg): 23123 lm

%lum = 77.3%

%lamp = 77.3%

Conical surface Flux(120deg): 27619 lm

%lum = 92.3%

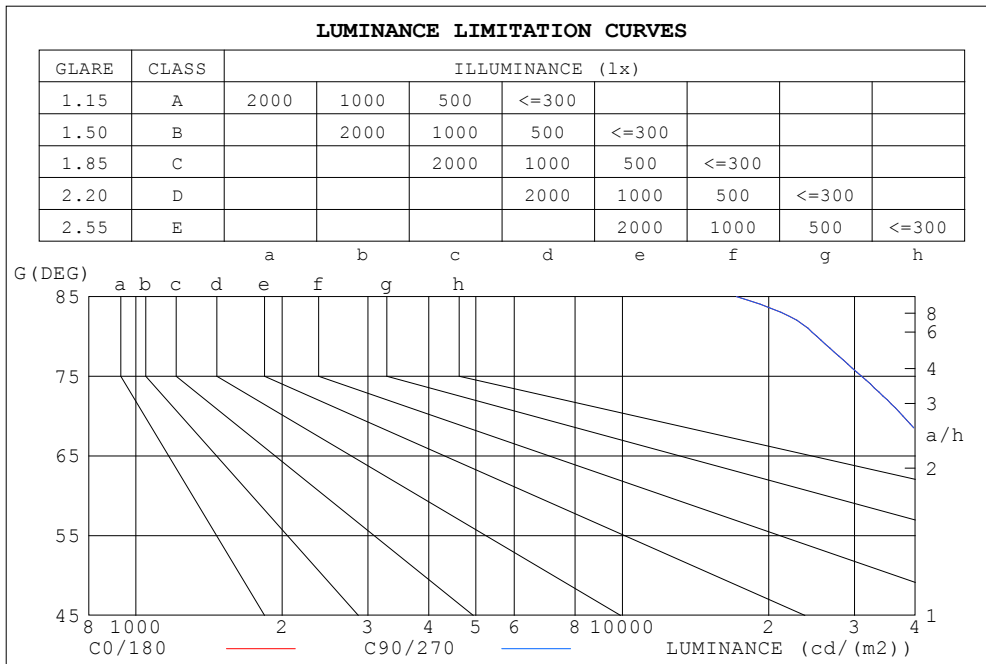
%lamp = 92.3%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2021-06-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
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Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	17159	17159
80	25084	25084
75	31033	31033
70	37747	37747
65	44656	44656
60	53223	53223
55	64685	64685
50	79399	79399
45	97724	97724

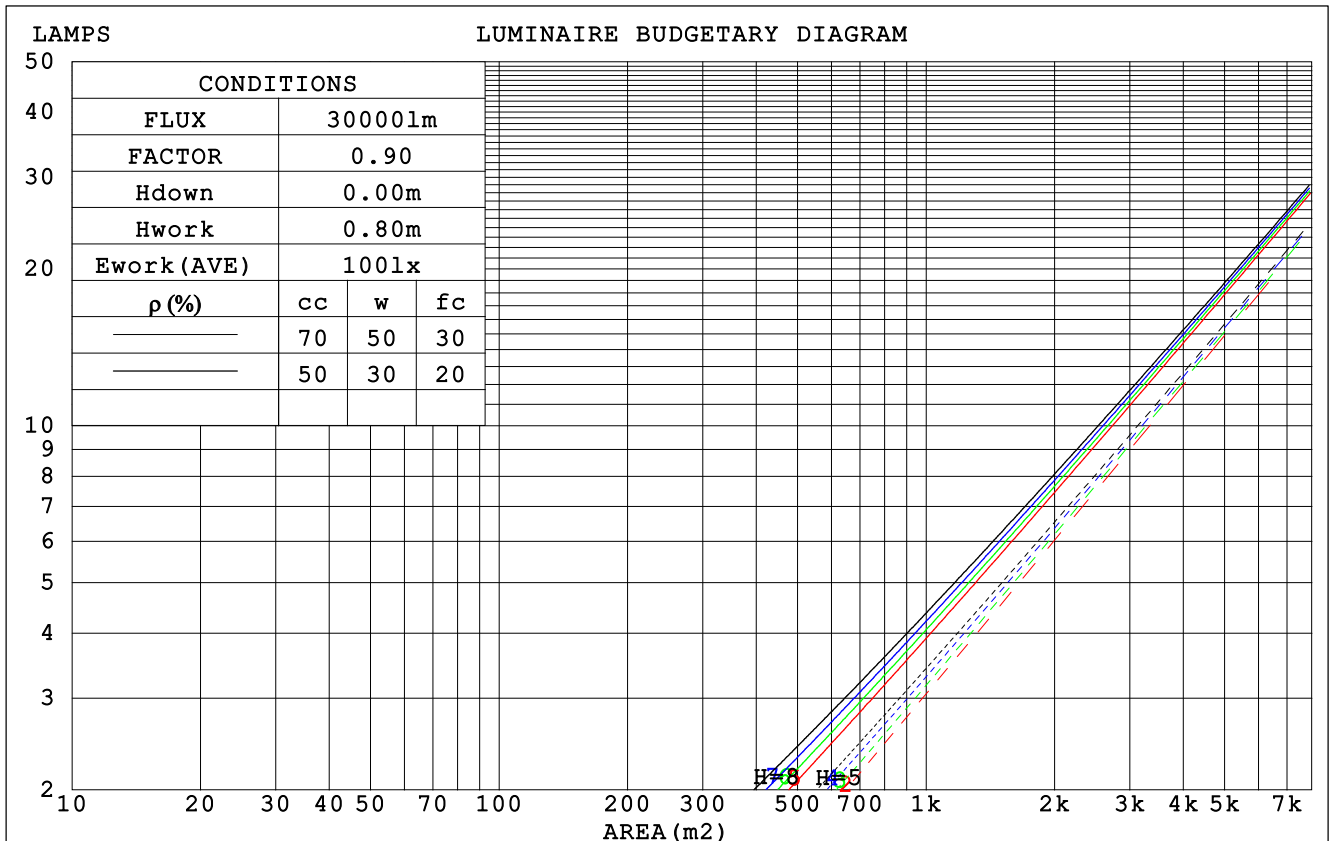
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: LYJ
 Test Date: 2021-06-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity: 65.0%
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 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

pcc	80%			70%			50%			30%			10%			0
p _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
p _{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	1.08	1.05	1.02	1.06	1.03	1.00	1.02	.99	.97	.98	.96	.94	.94	.93	.92	.90
2.0	.98	.93	.88	.96	.91	.87	.93	.89	.85	.90	.86	.83	.87	.84	.82	.80
3.0	.89	.83	.77	.87	.82	.77	.85	.80	.76	.82	.78	.74	.80	.76	.73	.71
4.0	.81	.74	.69	.80	.73	.68	.78	.72	.68	.75	.71	.67	.73	.69	.66	.64
5.0	.74	.67	.62	.73	.67	.62	.72	.66	.61	.70	.64	.60	.68	.63	.60	.58
6.0	.69	.61	.56	.68	.61	.56	.66	.60	.55	.65	.59	.55	.63	.58	.55	.53
7.0	.64	.56	.51	.63	.56	.51	.61	.55	.51	.60	.55	.50	.59	.54	.50	.48
8.0	.59	.52	.47	.58	.52	.47	.57	.51	.47	.56	.50	.46	.55	.50	.46	.45
9.0	.55	.48	.43	.55	.48	.43	.53	.47	.43	.53	.47	.43	.52	.46	.43	.41
10.0	.52	.45	.40	.51	.45	.40	.50	.44	.40	.49	.44	.40	.49	.43	.40	.38



C Range: 0 - 360DEG
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 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: LYJ
 Test Date: 2021-06-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4551]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

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	.230	.131	.041	.223	.127	.040	.210	.121	.039	.198	.114	.037	.187	.109	.035		
2.0	.221	.121	.037	.215	.118	.036	.204	.113	.035	.194	.109	.034	.184	.104	.033		
3.0	.209	.111	.033	.204	.109	.033	.194	.105	.032	.185	.101	.031	.177	.098	.030		
4.0	.197	.102	.030	.192	.101	.030	.184	.097	.029	.176	.094	.028	.169	.092	.028		
5.0	.185	.094	.027	.181	.093	.027	.174	.090	.027	.167	.088	.026	.160	.086	.026		
6.0	.174	.087	.025	.171	.086	.025	.164	.084	.025	.158	.082	.024	.152	.080	.024		
7.0	.165	.081	.023	.162	.080	.023	.156	.079	.023	.150	.077	.022	.145	.075	.022		
8.0	.156	.076	.021	.153	.075	.021	.148	.074	.021	.143	.072	.021	.138	.071	.021		
9.0	.148	.071	.020	.145	.071	.020	.140	.069	.020	.136	.068	.020	.132	.067	.019		
10.0	.140	.067	.019	.138	.067	.019	.134	.066	.018	.130	.064	.018	.126	.063	.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	.153	.114	.083	.131	.098	.072	.090	.068	.050	.052	.040	.030	.017	.013	.010	
4.0	.144	.100	.066	.123	.086	.057	.085	.060	.040	.049	.035	.024	.016	.011	.008	
5.0	.136	.089	.054	.117	.077	.047	.080	.054	.033	.047	.032	.020	.015	.010	.006	
6.0	.129	.080	.045	.111	.069	.039	.076	.048	.028	.044	.029	.016	.014	.009	.005	
7.0	.123	.073	.038	.105	.063	.033	.073	.044	.023	.042	.026	.014	.014	.009	.005	
8.0	.117	.067	.033	.100	.058	.028	.069	.041	.020	.040	.024	.012	.013	.008	.004	
9.0	.111	.062	.028	.096	.054	.025	.066	.038	.018	.039	.022	.010	.013	.007	.003	
10.0	.106	.057	.025	.092	.050	.022	.063	.035	.015	.037	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYJ
 Test Date:2021-06-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity:65.0%
 Test Distance:26.000m [K=0.4551]
 Remarks:

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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	24.3	25.6	24.6	25.9	26.2	24.3	25.6	24.6	25.9	26.2
3H	25.3	26.5	25.7	26.8	27.2	25.3	26.5	25.7	26.8	27.2
4H	25.6	26.7	26.0	27.1	27.5	25.6	26.7	26.0	27.1	27.5
6H	25.8	26.8	26.3	27.2	27.6	25.8	26.8	26.3	27.2	27.6
8H	25.9	26.8	26.3	27.2	27.6	25.9	26.8	26.3	27.2	27.6
12H	25.9	26.8	26.3	27.2	27.6	25.9	26.8	26.3	27.2	27.6
4H 2H	24.6	25.7	25.0	26.0	26.4	24.6	25.7	25.0	26.0	26.4
3H	25.8	26.7	26.3	27.1	27.5	25.8	26.7	26.3	27.1	27.5
4H	26.3	27.1	26.7	27.5	27.9	26.3	27.1	26.7	27.5	27.9
6H	26.6	27.2	27.0	27.7	28.1	26.6	27.2	27.0	27.7	28.1
8H	26.6	27.3	27.1	27.7	28.2	26.6	27.3	27.1	27.7	28.2
12H	26.6	27.2	27.1	27.7	28.2	26.6	27.2	27.1	27.7	28.2
8H 4H	26.4	27.0	26.8	27.5	27.9	26.4	27.0	26.8	27.5	27.9
6H	26.7	27.3	27.2	27.8	28.2	26.7	27.3	27.2	27.8	28.2
8H	26.8	27.3	27.4	27.8	28.3	26.8	27.3	27.4	27.8	28.3
12H	26.9	27.3	27.4	27.8	28.4	26.9	27.3	27.4	27.8	28.4
12H 4H	26.4	26.9	26.8	27.4	27.9	26.4	26.9	26.8	27.4	27.9
6H	26.7	27.2	27.3	27.7	28.2	26.7	27.2	27.3	27.7	28.2
8H	26.9	27.3	27.4	27.8	28.4	26.9	27.3	27.4	27.8	28.4
CIE190: 2010										

CIE190: 2010
Area: 0.078 m2

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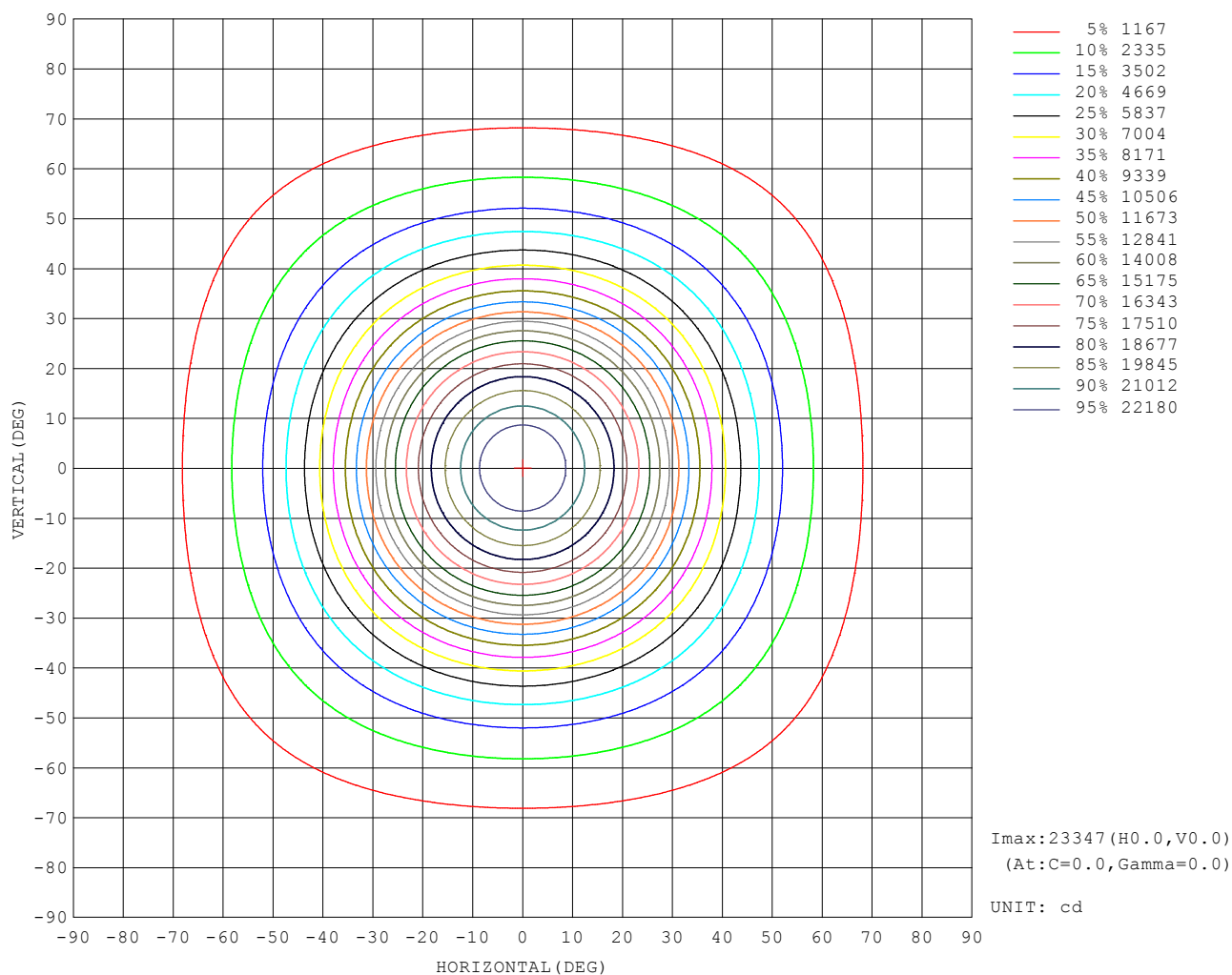
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	72	63	58	72	63	58	71	63	58	53
0.80	82	73	67	81	73	67	79	72	67	62
1.00	88	80	75	87	80	75	86	80	74	69
1.25	94	87	81	93	86	81	91	85	80	75
1.50	98	91	86	97	90	86	94	89	84	79
2.00	103	97	92	101	96	91	98	93	90	83
2.50	105	100	96	104	99	95	100	96	93	86
3.00	108	103	99	106	101	98	102	99	96	88
4.00	111	107	103	108	105	102	104	102	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		

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γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4551]
 Remarks:

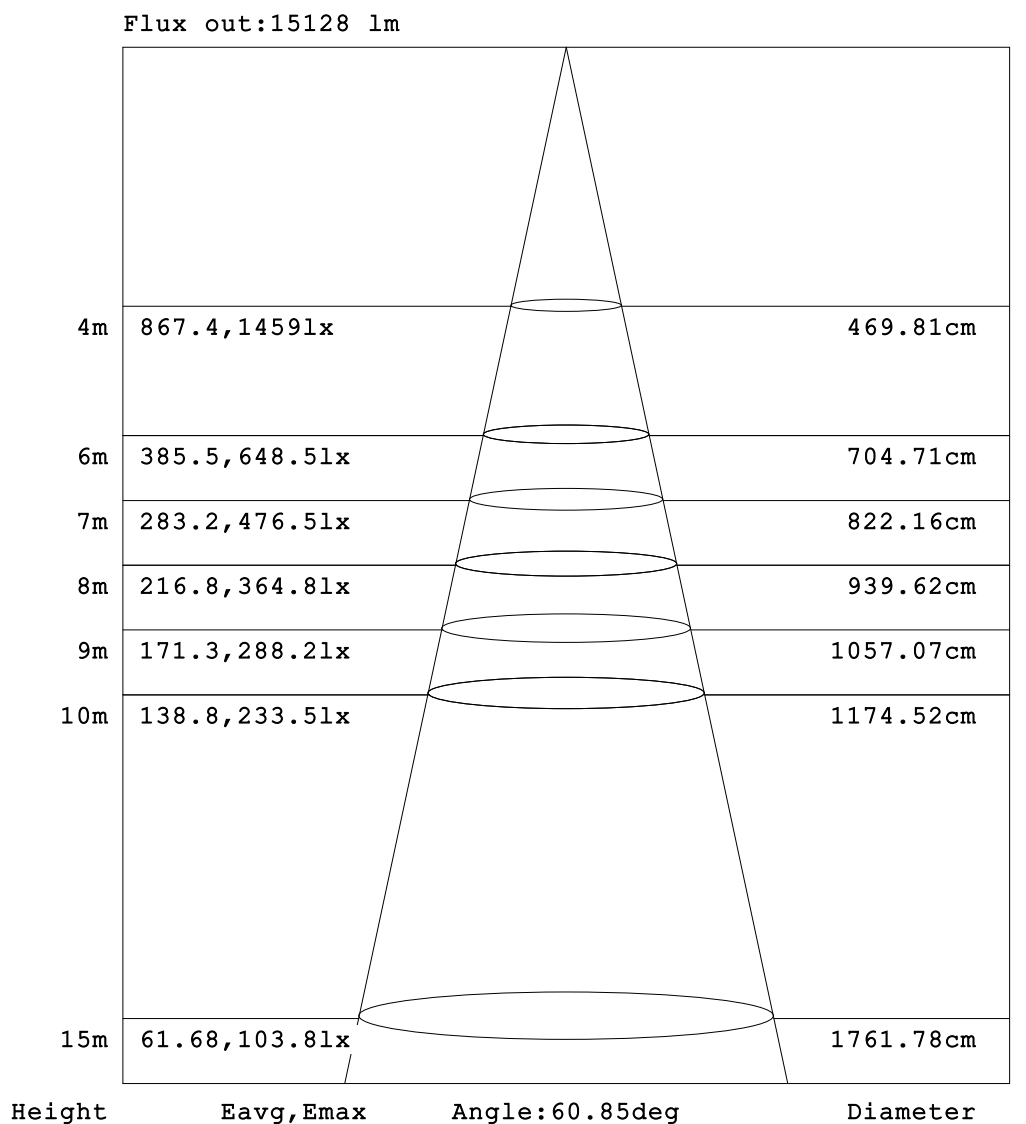
ISOCANDELA DIAGRAM



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Remarks:

AAI Figure



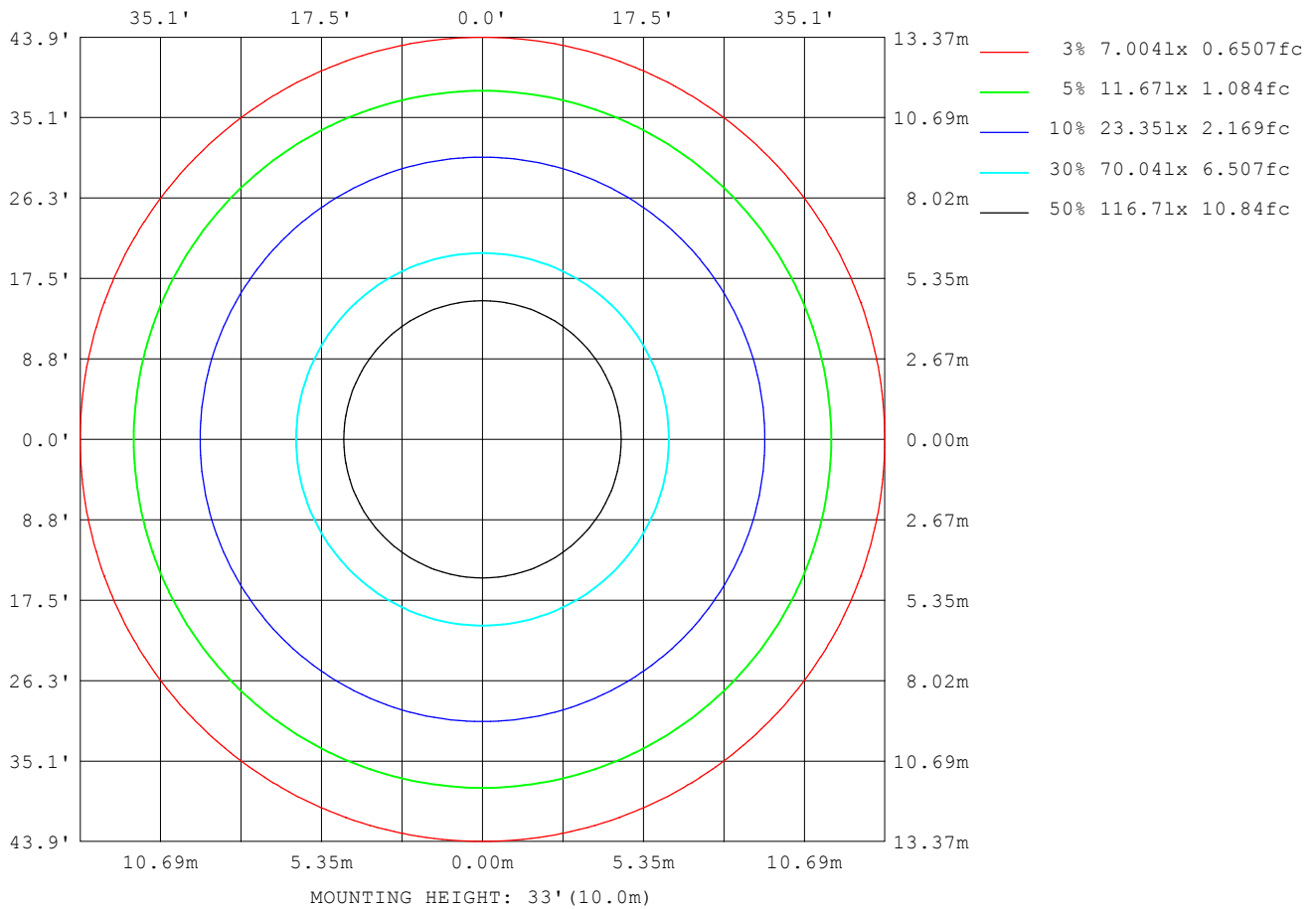
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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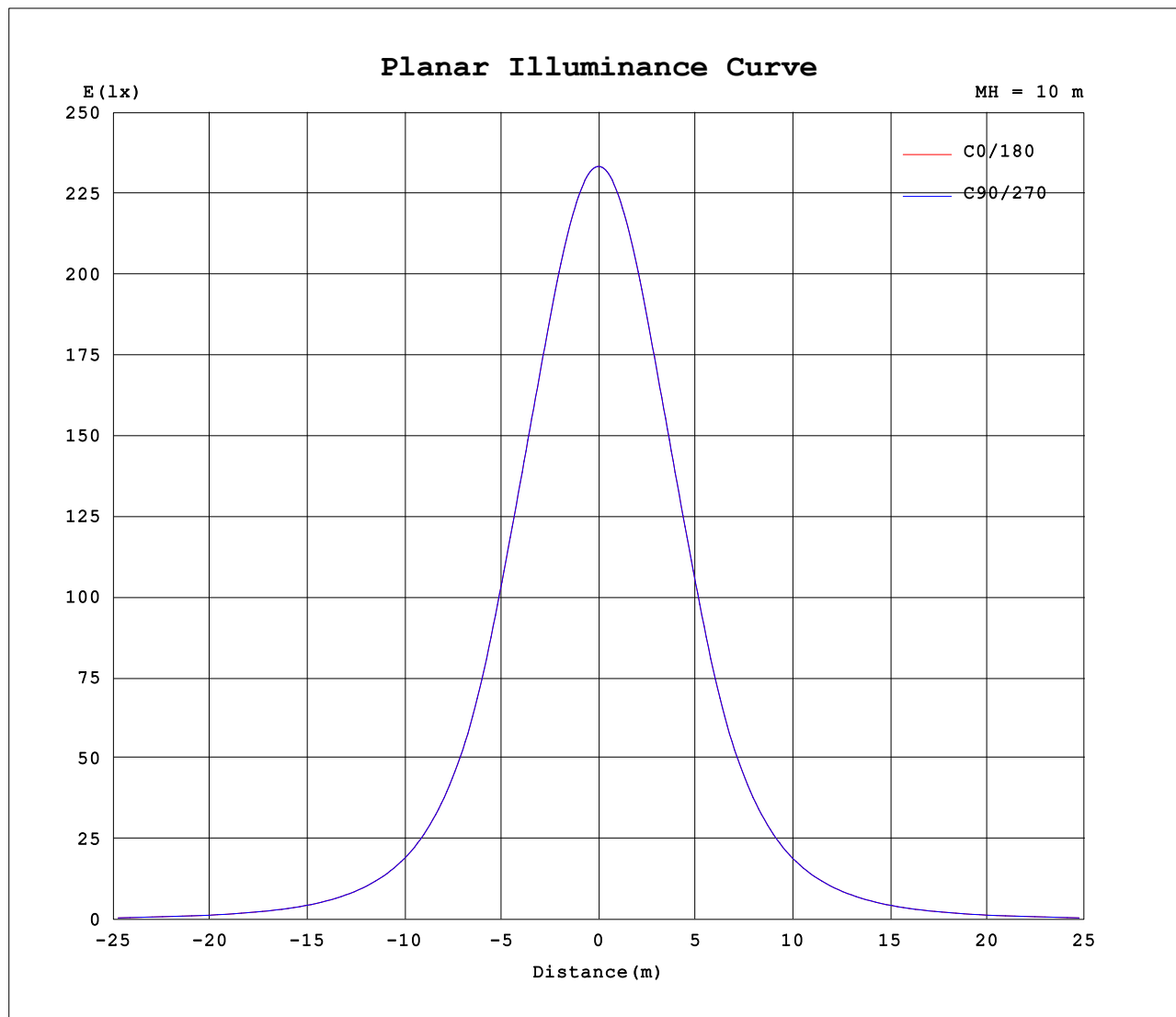
ISOLUX DIAGRAM



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Temperature: 25.3DEG
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 γ Interval: 0.5DEG
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Remarks:

Planar Illuminance Curve



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Remarks: