

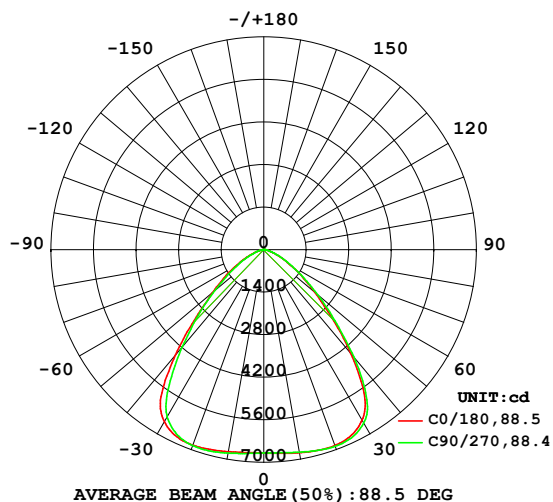
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

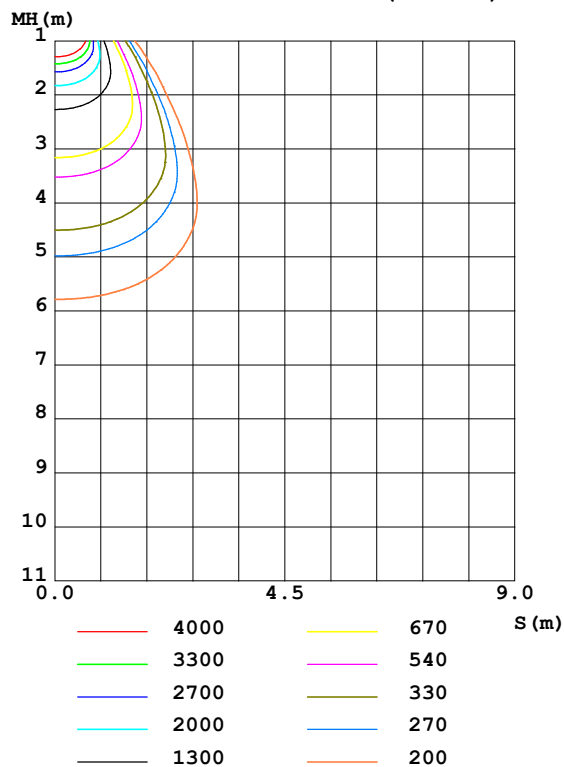
Test:U:230.1V I:0.4428A P:100.7W PF:0.9889 Lamp Flux:13899.3x1 lm		
NAME: HB39-100-5080-H00125	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:#0.24	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 137.97 lm/W			
MODEL	SE303	I _{max} (cd)	6903	S/MH(C0/180)	1.26
NOMINAL POWER(W)	100	LOR(%)	100.0	S/MH(C90/270)	1.23
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	13899	η UP,DN(C0-180)	0.0,50.8
NOMINAL FLUX(lm)	13899.3	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.2
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.30

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 2.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LI
Test Date:2019-12-17

Checker: LI

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:9.432m [K=1.0000]
Remarks:

Assessor:

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
5	6727	6716	6708	6709	6704	6715	6731	6742	0- 5	160.3	160.3	1.15,1.15
10	6785	6774	6766	6776	6751	6768	6798	6819	5- 10	483.1	643.4	4.63,4.63
15	6842	6836	6841	6858	6811	6825	6858	6883	10- 15	808.7	1452	10.4,10.4
20	6856	6867	6885	6902	6845	6843	6859	6869	15- 20	1131	2583	18.6,18.6
25	6763	6803	6830	6819	6790	6754	6728	6698	20- 25	1433	4016	28.9,28.9
30	6475	6555	6581	6500	6543	6465	6359	6252	25- 30	1679	5695	41,41
35	5754	5925	5889	5612	5907	5708	5424	5239	30- 35	1801	7497	53.9,53.9
40	4451	4596	4620	4276	4525	4351	4178	4037	35- 40	1673	9170	66,66
45	3173	3361	3323	3120	3145	3134	3039	2971	40- 45	1382	10552	75.9,75.9
50	2222	2368	2326	2199	2213	2192	2125	2113	45- 50	1076	11628	83.7,83.7
55	1546	1591	1587	1497	1564	1456	1455	1441	50- 55	802.8	12430	89.4,89.4
60	996.2	1021	1036	995.5	1030	938.8	947.0	955.3	55- 60	570.4	13001	93.5,93.5
65	646.4	644.9	676.7	622.8	660.9	589.2	597.2	602.2	60- 65	386.2	13387	96.3,96.3
70	366.5	388.6	392.0	383.9	375.6	350.7	342.2	360.7	65- 70	247.6	13635	98.1,98.1
75	205.6	220.0	225.9	226.5	204.3	195.2	200.1	210.5	70- 75	148.7	13783	99.2,99.2
80	98.38	99.55	113.2	102.2	96.77	82.75	91.24	90.98	75- 80	81.15	13864	99.7,99.7
85	22.62	24.60	29.73	26.77	21.60	18.74	20.10	21.02	80- 85	29.95	13894	100,100
90	4.515	4.393	4.263	4.263	4.579	4.765	4.779	4.643	85- 90	4.926	13899	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:cd									UNIT:lm		

Conical surface Flux(90deg): 10552 lm

%lum = 75.9%

%lamp = 75.9%

Conical surface Flux(120deg): 13001 lm

%lum = 93.5%

%lamp = 93.5%

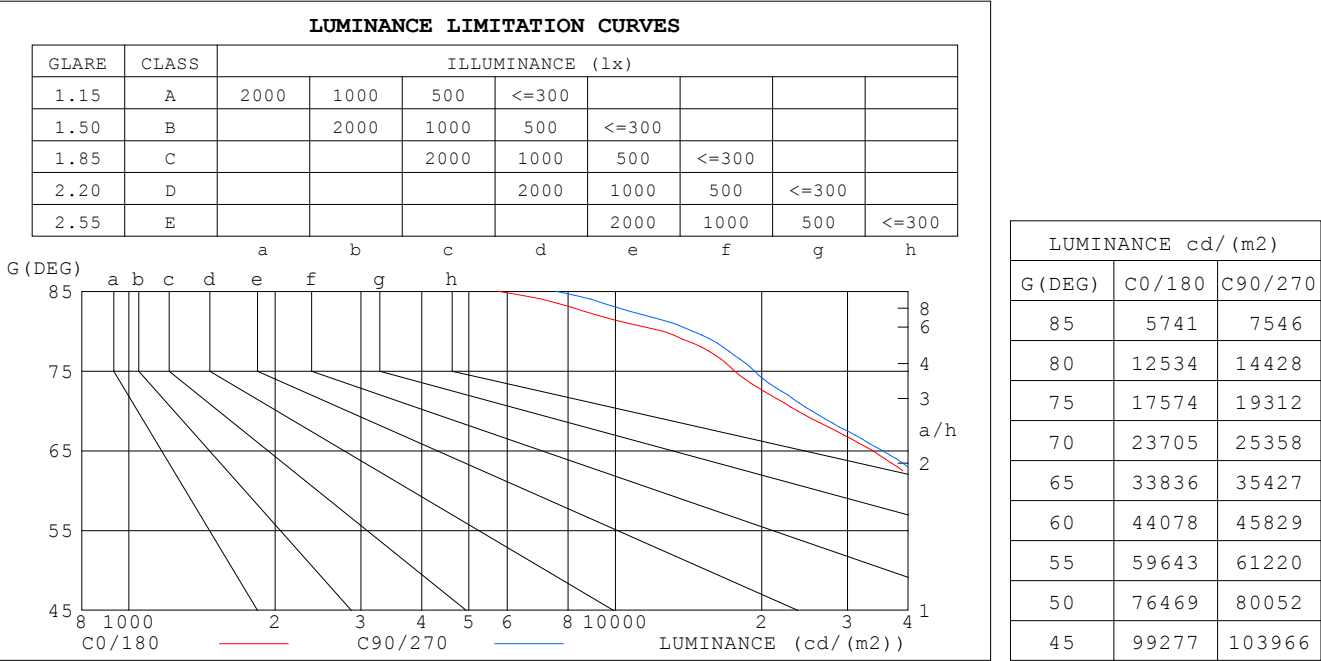
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C Interval: 2.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LI
Test Date:2019-12-17

Checker: LI

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:9.432m [K=1.0000]
Remarks:

Assessor:

LUMINANCE LIMITATION CURVES



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Test Date:2019-12-17

Checker: LI

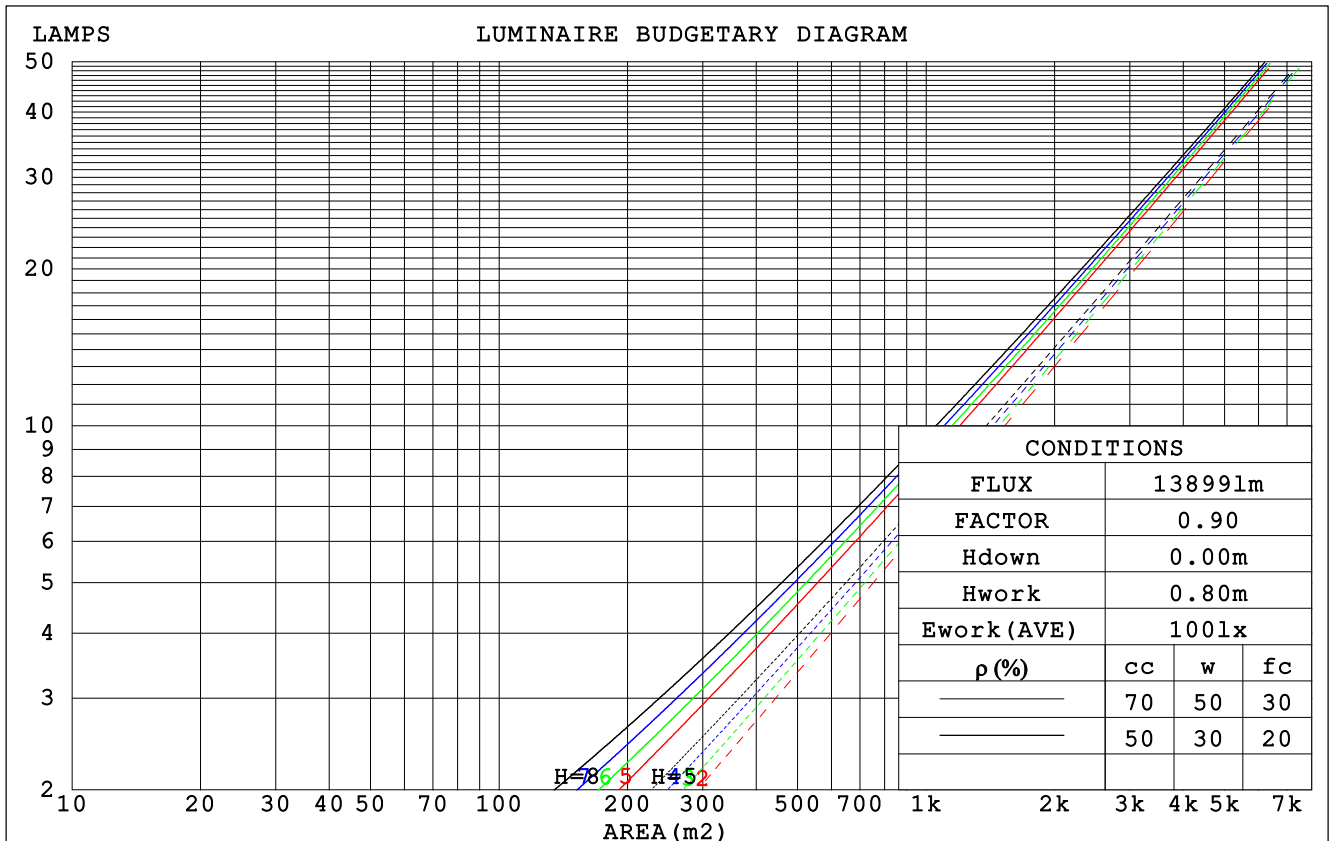
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Test Distance:9.432m [K=1.0000]
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EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

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	1.08	1.05	1.02	1.06	1.03	1.00	1.02	.99	.97	.98	.96	.94	.94	.93	.91	.89
2.0	.97	.92	.87	.95	.90	.86	.92	.88	.84	.89	.85	.83	.86	.83	.81	.79
3.0	.88	.81	.76	.86	.80	.75	.83	.78	.74	.81	.76	.73	.78	.75	.72	.70
4.0	.79	.72	.67	.78	.71	.66	.76	.70	.65	.74	.69	.65	.72	.67	.64	.62
5.0	.72	.65	.59	.71	.64	.59	.69	.63	.58	.67	.62	.58	.66	.61	.57	.55
6.0	.66	.58	.53	.65	.58	.53	.63	.57	.52	.62	.56	.52	.60	.55	.51	.50
7.0	.61	.53	.47	.60	.52	.47	.58	.52	.47	.57	.51	.47	.56	.50	.46	.45
8.0	.56	.48	.43	.55	.48	.43	.54	.47	.43	.53	.47	.42	.52	.46	.42	.41
9.0	.52	.44	.39	.51	.44	.39	.50	.43	.39	.49	.43	.39	.48	.43	.39	.37
10.0	.48	.41	.36	.47	.40	.36	.46	.40	.36	.45	.40	.36	.45	.39	.35	.34



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 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
 Humidity: 65.0%
 Test Distance: 9.432m [K=1.0000]
 Remarks:

Checker: LI

Assessor:

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	.233	.133	.042	.226	.129	.041	.214	.123	.039	.202	.116	.037	.191	.111	.036		
2.0	.227	.124	.038	.221	.122	.038	.210	.117	.036	.200	.112	.035	.190	.108	.034		
3.0	.216	.115	.034	.211	.113	.034	.202	.109	.033	.193	.106	.032	.184	.102	.032		
4.0	.205	.106	.031	.200	.105	.031	.192	.102	.030	.184	.099	.030	.177	.096	.029		
5.0	.194	.099	.029	.190	.097	.028	.182	.095	.028	.175	.092	.027	.168	.090	.027		
6.0	.183	.092	.026	.179	.091	.026	.173	.088	.026	.166	.086	.025	.160	.084	.025		
7.0	.173	.086	.024	.170	.085	.024	.164	.083	.024	.158	.081	.024	.153	.079	.023		
8.0	.164	.080	.023	.161	.079	.022	.156	.078	.022	.151	.076	.022	.146	.075	.022		
9.0	.155	.075	.021	.153	.074	.021	.148	.073	.021	.143	.072	.021	.139	.071	.020		
10.0	.148	.071	.020	.145	.070	.020	.141	.069	.019	.137	.068	.019	.133	.067	.019		

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	.140	.150	.135	.121	.102	.093	.084	.059	.054	.049	.019	.017	.016		
2.0	.164	.132	.106	.140	.114	.091	.096	.079	.064	.055	.046	.037	.018	.015	.012		
3.0	.154	.114	.082	.132	.098	.071	.091	.068	.050	.052	.040	.029	.017	.013	.010		
4.0	.146	.100	.065	.125	.086	.056	.086	.060	.040	.050	.035	.023	.016	.011	.008		
5.0	.139	.089	.053	.119	.077	.046	.082	.054	.032	.047	.032	.019	.015	.010	.006		
6.0	.132	.080	.044	.113	.070	.038	.078	.049	.027	.045	.029	.016	.015	.009	.005		
7.0	.126	.073	.037	.108	.064	.032	.075	.045	.023	.043	.026	.013	.014	.009	.004		
8.0	.120	.068	.031	.103	.059	.027	.071	.041	.019	.042	.024	.012	.013	.008	.004		
9.0	.115	.063	.027	.099	.054	.024	.068	.038	.017	.040	.023	.010	.013	.007	.003		
10.0	.110	.058	.024	.095	.051	.021	.066	.036	.015	.038	.021	.009	.012	.007	.003		

C Range: 0 - 360DEG
 C Interval: 2.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LI
 Test Date:2019-12-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
 Humidity:65.0%
 Test Distance:9.432m [K=1.0000]
 Remarks:

Checker: LI

Assessor:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

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	26.5	27.8	26.7	27.9	28.1	26.7	28.0	26.9	28.2	28.3
3H	26.7	27.8	27.0	28.1	28.3	26.9	28.1	27.2	28.3	28.5
4H	26.7	27.8	27.0	28.0	28.3	27.0	28.1	27.3	28.3	28.5
6H	26.7	27.7	27.0	28.0	28.2	27.0	28.0	27.3	28.2	28.5
8H	26.6	27.6	27.0	27.9	28.2	26.9	27.9	27.3	28.2	28.5
12H	26.6	27.5	26.9	27.8	28.1	26.9	27.8	27.2	28.1	28.4
4H 2H	26.6	27.7	26.9	27.9	28.1	26.7	27.8	27.0	28.1	28.3
3H	26.8	27.8	27.2	28.1	28.4	27.1	28.0	27.4	28.3	28.6
4H	26.9	27.8	27.3	28.1	28.4	27.2	28.0	27.5	28.4	28.7
6H	26.9	27.7	27.3	28.0	28.4	27.2	28.0	27.6	28.3	28.7
8H	26.9	27.6	27.3	28.0	28.3	27.2	27.9	27.6	28.3	28.6
12H	26.9	27.5	27.3	27.9	28.3	27.2	27.8	27.6	28.2	28.6
8H 4H	26.9	27.6	27.3	27.9	28.3	27.1	27.8	27.5	28.2	28.6
6H	26.9	27.5	27.4	27.9	28.3	27.2	27.8	27.6	28.2	28.6
8H	26.9	27.4	27.4	27.8	28.3	27.2	27.7	27.7	28.1	28.6
12H	26.9	27.3	27.4	27.8	28.2	27.2	27.6	27.7	28.1	28.5
12H 4H	26.8	27.5	27.3	27.8	28.2	27.1	27.7	27.5	28.1	28.5
6H	26.9	27.4	27.3	27.8	28.3	27.2	27.7	27.6	28.1	28.5
8H	26.9	27.3	27.4	27.8	28.2	27.2	27.6	27.7	28.1	28.5
Variations with the observer position at spacings:										
S = 1.0H	+ 1.1 / - 1.6					+ 1.0 / - 1.5				
1.5H	+ 1.1 / - 1.1					+ 1.0 / - 0.8				
2.0H	+ 2.3 / - 2.3					+ 2.1 / - 1.9				

CIE Pub.117 Corrected 13899 lm Total Lamp Luminous Flux.(8log(F/F0) = 9.1)

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γ Range: 0 - 90DEG
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Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:9.432m [K=1.0000]
Remarks:

Assessor:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

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) $k(RI) \times RCR = 5$									
$k = 0.60$	70	61	55	69	60	55	68	60	55	49
0.80	80	71	65	79	70	65	77	70	64	59
1.00	87	79	73	86	78	73	84	79	72	67
1.25	93	85	80	92	85	80	90	84	79	73
1.50	97	90	85	96	89	85	93	88	83	78
2.00	102	96	92	101	95	91	98	93	89	83
2.50	105	99	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		

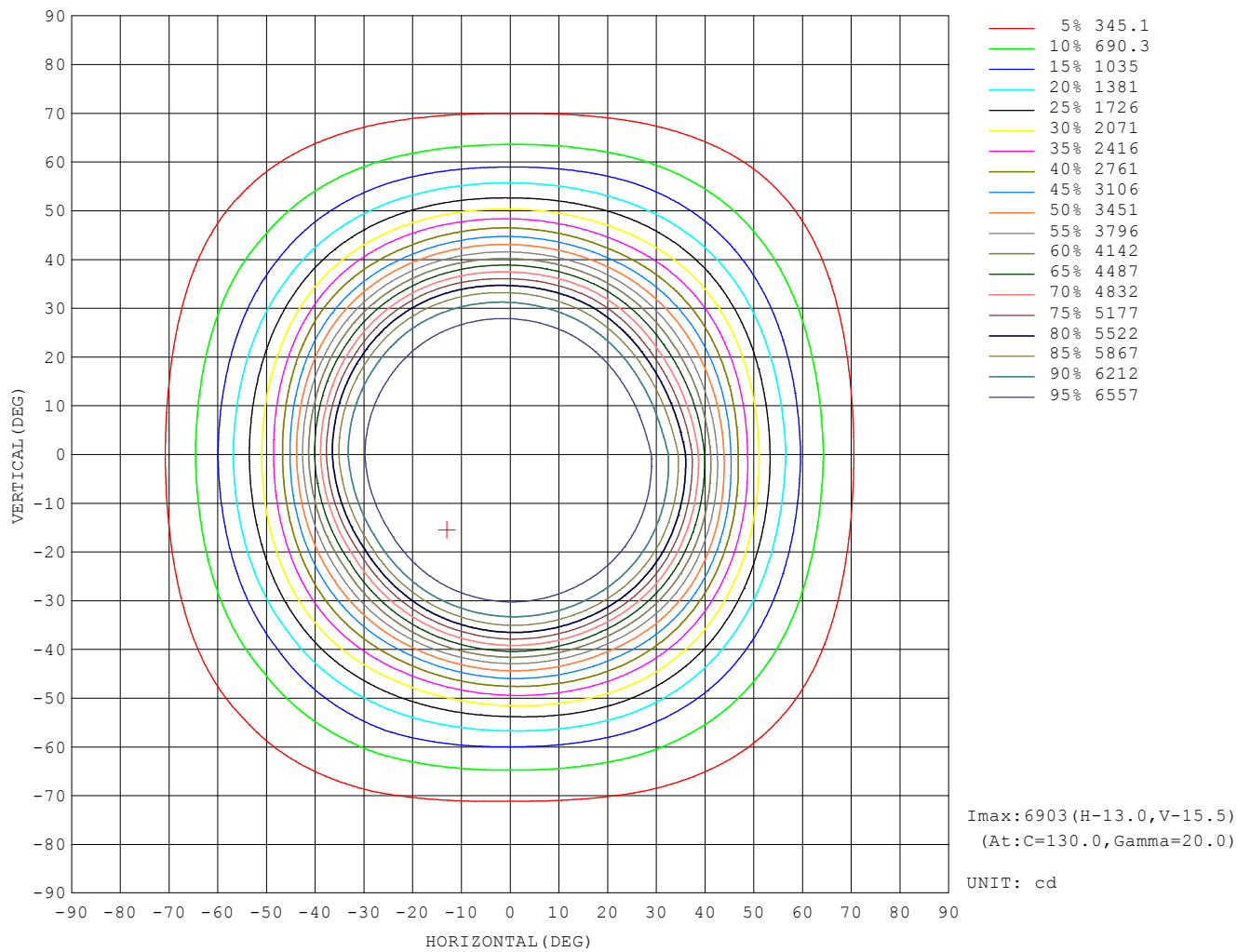
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ISOCANDELA DIAGRAM



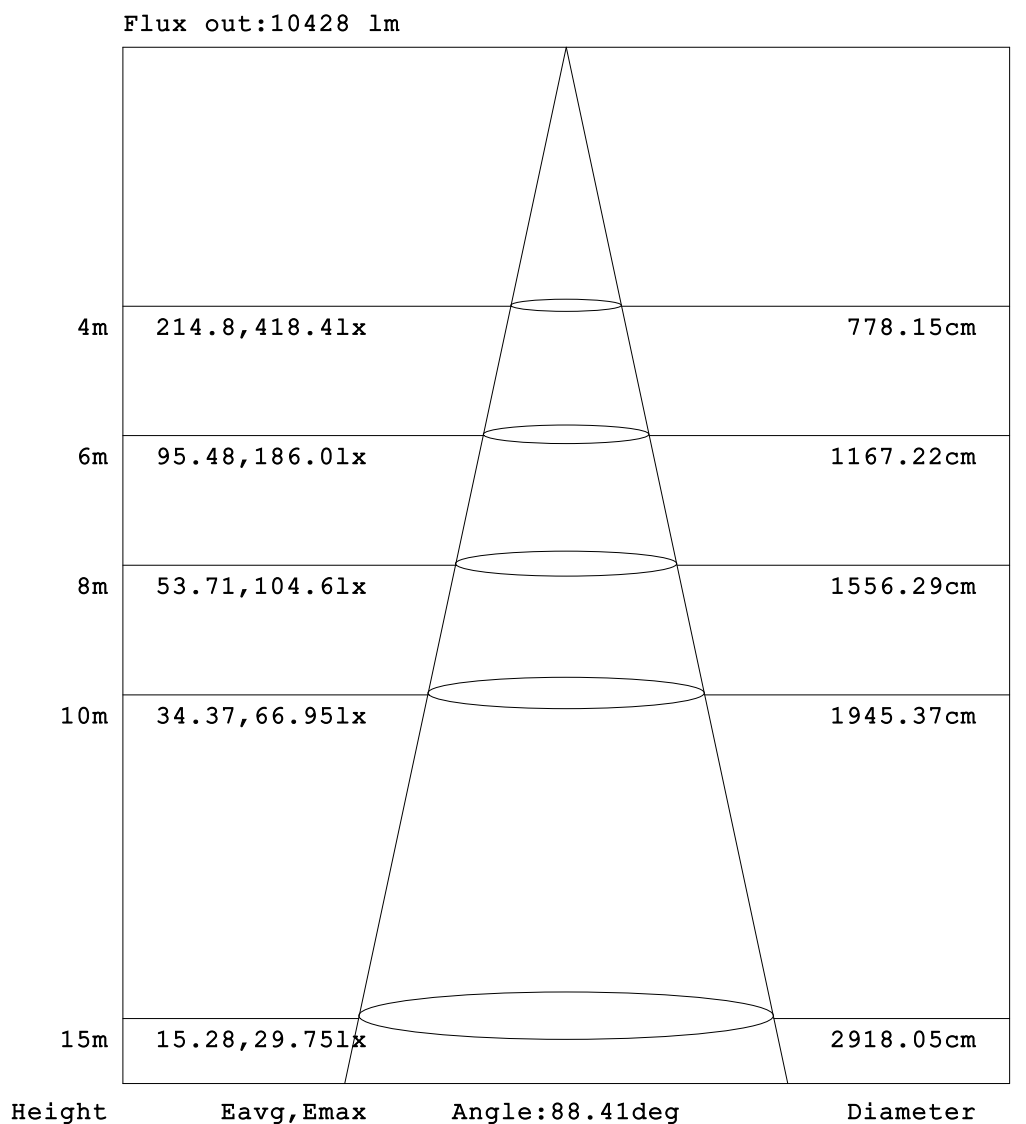
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Remarks:

Checker: LI

Assessor:

AAI Figure



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

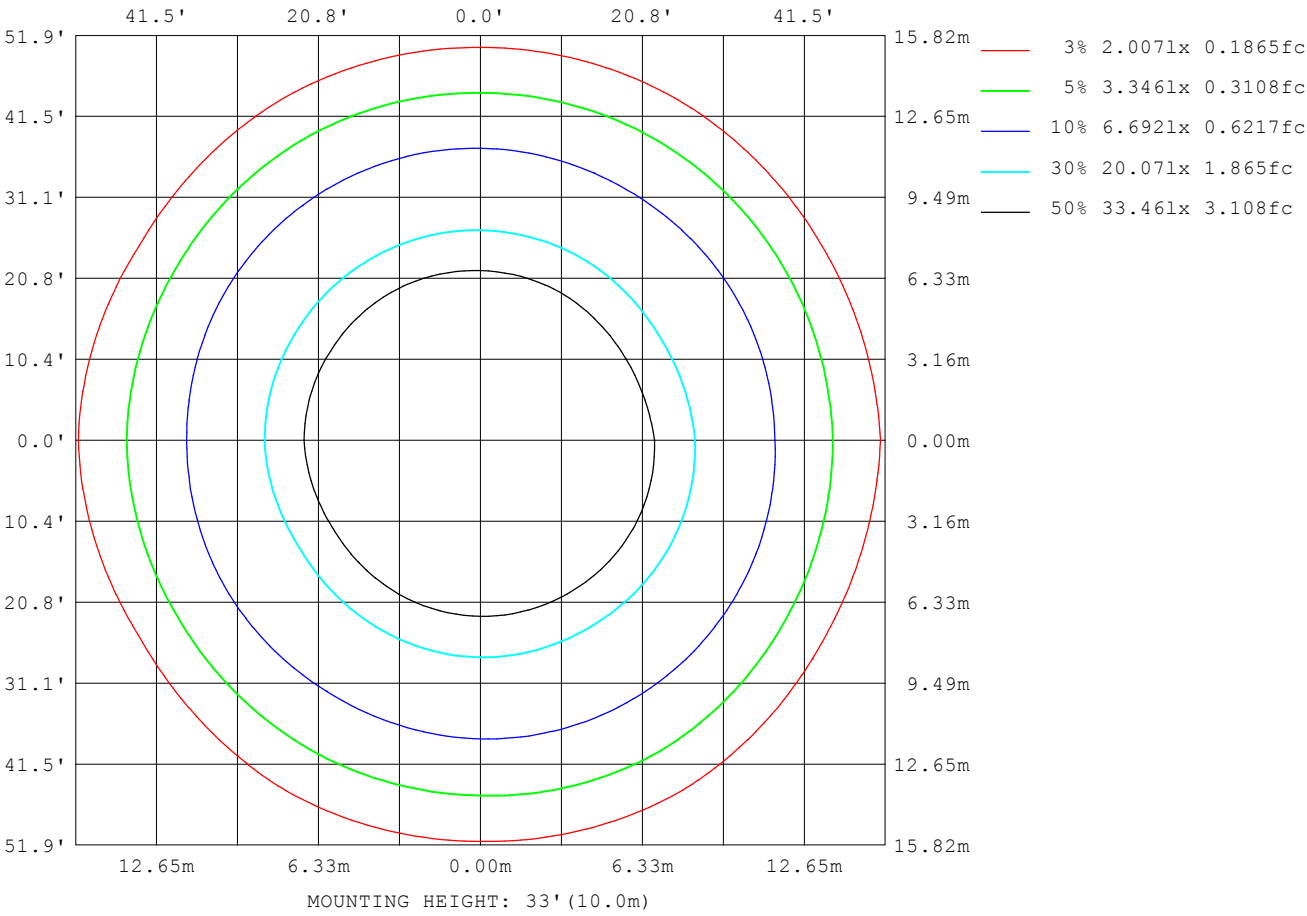
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Test Distance:9.432m [K=1.0000]
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ISOLUX DIAGRAM



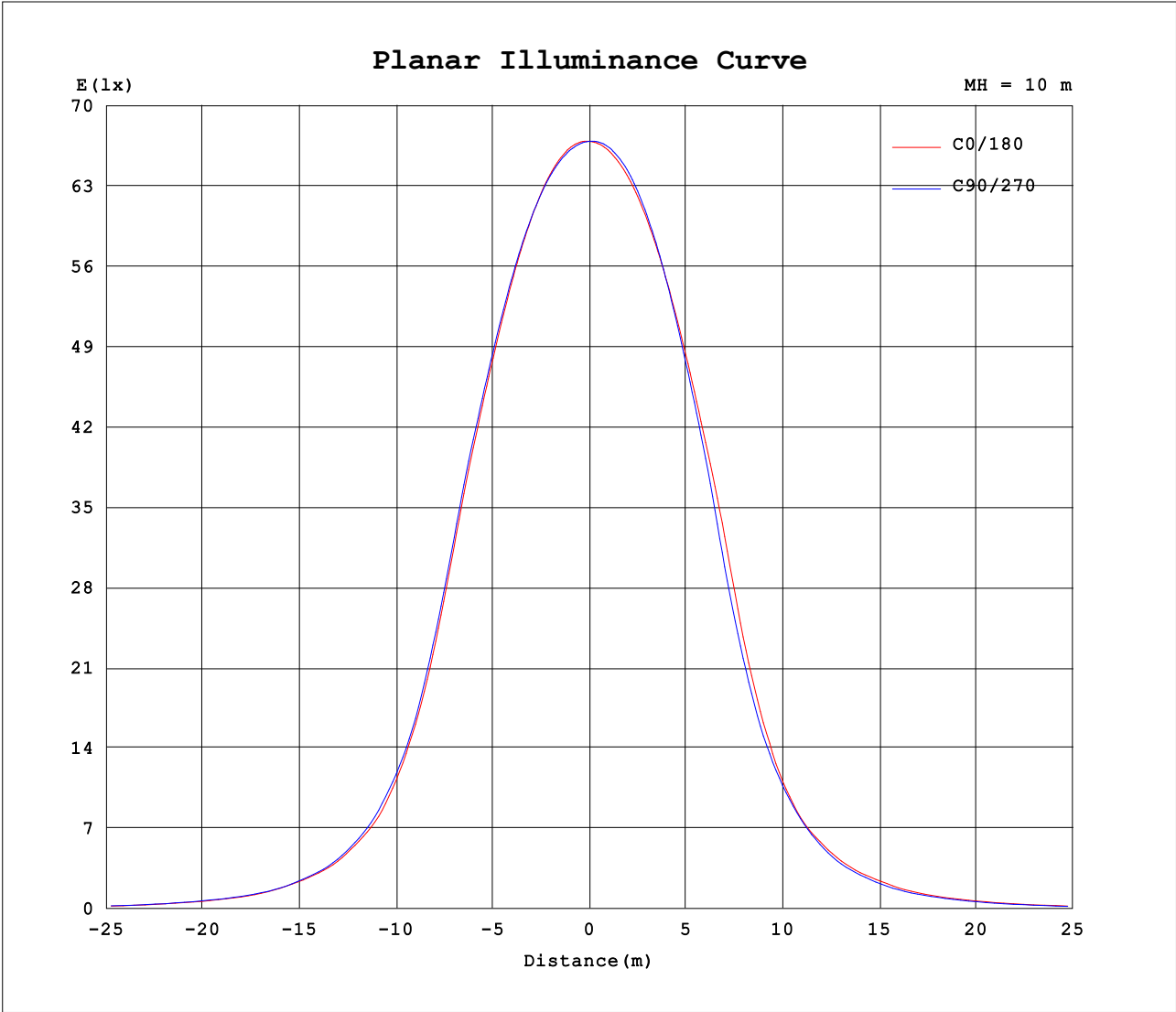
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Planar Illuminance Curve



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