

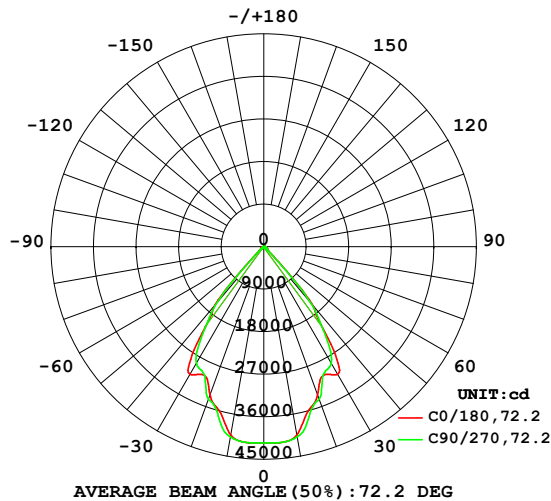
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

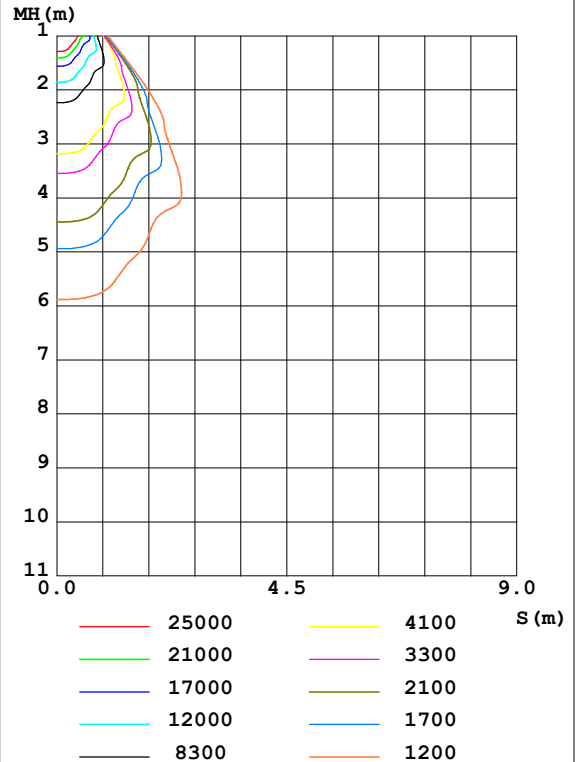
Test:U:230.0V I:1.7539A P:401.40W PF:0.9951 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:45945.9x1 lm		
NAME: LHB09-400-5070-L03902+GRID28	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 114.46 lm/W			
MODEL	/	I _{max} (cd)	41679	S/MH(C0/180)	1.05
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	1.02
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	45946	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	45945.9	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	1.05

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2021-10-11

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=0.4538]
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	4046	4129	4084	4129	4046	4129	4084	4129	0- 10	3957	3957	8.61,8.61
20	3334	3335	3430	3335	3334	3335	3430	3335	10- 20	10561	14517	31.6,31.6
30	3120	2485	2852	2485	3120	2485	2852	2485	20- 30	13965	28482	62,62
40	1593	1035	1526	1035	1593	1035	1526	1035	30- 40	13269	41751	90.9,90.9
50	101.6	90.07	81.07	90.07	101.6	90.07	81.07	90.07	40- 50	3336	45087	98.1,98.1
60	58.82	35.76	33.53	35.76	58.82	35.76	33.53	35.76	50- 60	523.6	45611	99.3,99.3
70	30.60	11.81	9.438	11.81	30.60	11.81	9.438	11.81	60- 70	245.7	45857	99.8,99.8
80	4.733	2.807	2.345	2.807	4.733	2.807	2.345	2.807	70- 80	75.51	45932	100,100
90	0.0819	0.0905	0.0638	0.0905	0.0819	0.0905	0.0638	0.0905	80- 90	13.85	45946	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): 44510 lm

%lum = 96.9%

%lamp = 96.9%

Conical surface Flux(120deg): 45611 lm

%lum = 99.3%

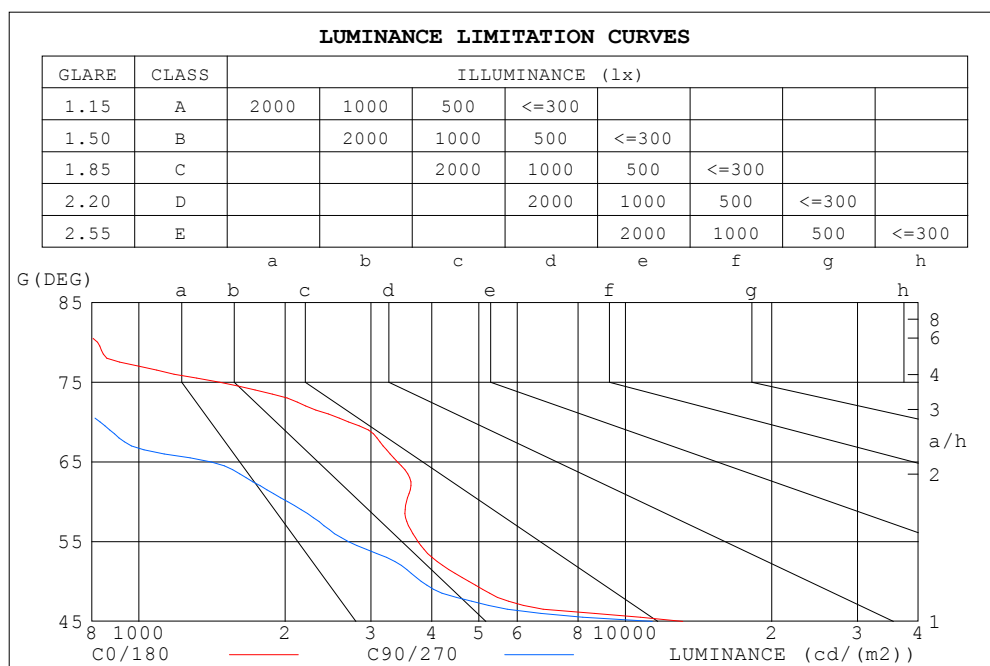
%lamp = 99.3%

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C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2021-10-11

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=0.4538]
Remarks:

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LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	648	326
80	822	407
75	1467	565
70	2699	832
65	3403	1408
60	3549	2023
55	3748	2699
50	4768	3805
45	13124	11358

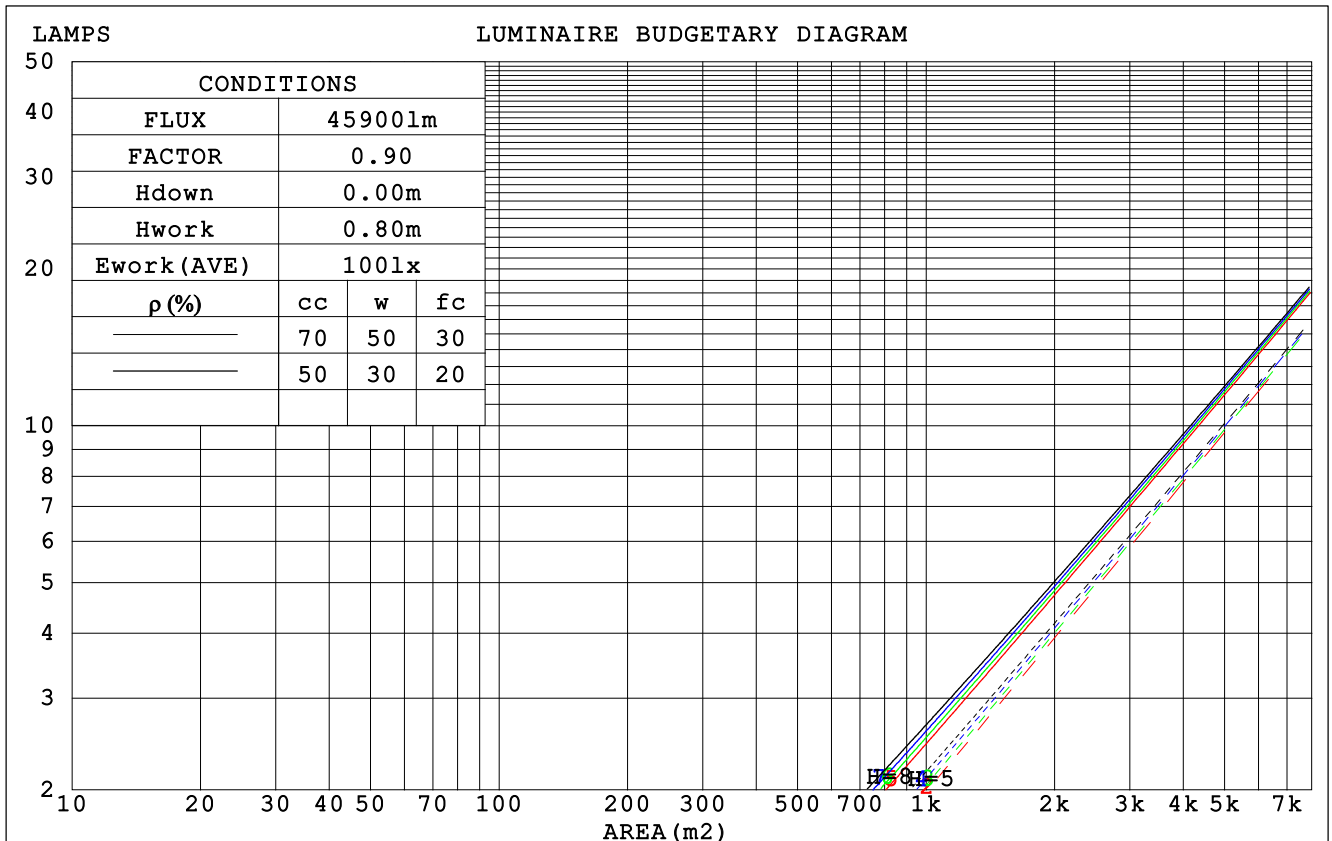
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 C Interval: 10.0DEG
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 Temperature: 25.3DEG
 Operators: LYJ
 Test Date: 2021-10-11

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=0.4538]
 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	1.10	1.08	1.05	1.08	1.06	1.04	1.04	1.02	1.01	1.00	.99	.98	.97	.96	.95	.93
2.0	1.02	.98	.94	1.00	.97	.93	.97	.94	.91	.94	.92	.89	.91	.89	.87	.86
3.0	.95	.89	.85	.93	.88	.85	.91	.87	.83	.88	.85	.82	.86	.83	.81	.79
4.0	.88	.82	.78	.87	.81	.77	.85	.80	.76	.83	.79	.75	.81	.77	.74	.73
5.0	.82	.76	.71	.81	.75	.71	.79	.74	.70	.77	.73	.70	.76	.72	.69	.67
6.0	.76	.70	.65	.75	.70	.65	.74	.69	.65	.72	.68	.64	.71	.67	.64	.62
7.0	.71	.65	.60	.71	.65	.60	.69	.64	.60	.68	.63	.60	.67	.63	.59	.58
8.0	.67	.60	.56	.66	.60	.56	.65	.60	.56	.64	.59	.55	.63	.59	.55	.54
9.0	.63	.56	.52	.62	.56	.52	.61	.56	.52	.60	.55	.52	.59	.55	.51	.50
10.0	.59	.53	.49	.58	.53	.49	.58	.52	.48	.57	.52	.48	.56	.51	.48	.47



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2021-10-11

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=0.4538]
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	.186	.106	.034	.179	.102	.032	.167	.096	.031	.155	.089	.029	.144	.084	.027		
2.0	.180	.098	.030	.174	.096	.029	.163	.091	.028	.153	.086	.027	.144	.082	.026		
3.0	.172	.091	.027	.167	.089	.027	.158	.086	.026	.149	.082	.025	.141	.078	.024		
4.0	.164	.085	.025	.160	.084	.025	.152	.081	.024	.145	.078	.023	.138	.075	.023		
5.0	.157	.080	.023	.153	.079	.023	.146	.076	.022	.140	.074	.022	.134	.071	.021		
6.0	.150	.075	.022	.147	.074	.021	.140	.072	.021	.135	.070	.021	.129	.068	.020		
7.0	.143	.071	.020	.140	.070	.020	.135	.068	.020	.130	.067	.019	.125	.065	.019		
8.0	.137	.067	.019	.135	.066	.019	.130	.065	.019	.125	.063	.018	.121	.062	.018		
9.0	.131	.064	.018	.129	.063	.018	.125	.062	.017	.121	.060	.017	.117	.059	.017		
10.0	.126	.060	.017	.124	.060	.017	.120	.059	.017	.116	.058	.016	.113	.057	.016		

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	.172	.157	.144	.147	.135	.124	.101	.093	.086	.058	.054	.050	.019	.017	.016		
2.0	.157	.132	.112	.135	.114	.096	.092	.079	.067	.053	.046	.039	.017	.015	.013		
3.0	.146	.114	.088	.125	.098	.076	.086	.068	.054	.049	.040	.032	.016	.013	.010		
4.0	.136	.099	.071	.117	.086	.062	.080	.060	.043	.046	.035	.026	.015	.011	.008		
5.0	.128	.088	.058	.110	.076	.051	.076	.053	.036	.044	.031	.021	.014	.010	.007		
6.0	.121	.079	.048	.104	.068	.042	.072	.048	.030	.042	.028	.018	.013	.009	.006		
7.0	.114	.071	.041	.098	.062	.036	.068	.043	.025	.040	.025	.015	.013	.008	.005		
8.0	.109	.065	.035	.094	.056	.030	.065	.040	.022	.038	.023	.013	.012	.008	.004		
9.0	.104	.060	.030	.090	.052	.026	.062	.037	.019	.036	.022	.011	.012	.007	.004		
10.0	.099	.056	.026	.086	.048	.023	.060	.034	.016	.035	.020	.010	.011	.007	.003		

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYJ
 Test Date:2021-10-11

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=0.4538]
 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	7.2	8.2	7.6	8.5	8.8	5.1	6.1	5.5	6.4	6.7
3H	8.5	9.4	8.9	9.7	10.1	5.3	6.2	5.7	6.5	6.9
4H	8.7	9.5	9.1	9.9	10.3	5.4	6.2	5.8	6.5	6.9
6H	8.7	9.4	9.1	9.8	10.2	5.3	6.1	5.8	6.5	6.9
8H	8.7	9.4	9.1	9.8	10.2	5.3	6.0	5.8	6.4	6.8
12H	8.6	9.3	9.1	9.7	10.1	5.3	5.9	5.7	6.3	6.8
4H 2H	7.2	8.0	7.6	8.3	8.7	5.3	6.1	5.7	6.4	6.8
3H	8.5	9.2	8.9	9.6	10.0	5.6	6.2	6.0	6.6	7.0
4H	8.7	9.3	9.2	9.8	10.2	5.6	6.2	6.1	6.6	7.1
6H	8.8	9.3	9.3	9.7	10.2	5.6	6.1	6.1	6.6	7.1
8H	8.8	9.2	9.2	9.7	10.2	5.6	6.1	6.1	6.5	7.0
12H	8.7	9.1	9.2	9.6	10.1	5.6	6.0	6.1	6.5	6.9
8H 4H	8.6	9.1	9.1	9.5	10.0	5.6	6.1	6.1	6.5	7.0
6H	8.7	9.0	9.2	9.5	10.0	5.6	6.0	6.1	6.5	7.0
8H	8.7	9.0	9.2	9.5	10.0	5.6	5.9	6.1	6.5	7.0
12H	8.7	8.9	9.2	9.4	10.0	5.6	5.9	6.1	6.4	7.0
12H 4H	8.6	9.0	9.1	9.4	9.9	5.6	6.0	6.1	6.5	6.9
6H	8.6	8.9	9.1	9.4	10.0	5.6	5.9	6.1	6.4	6.9
8H	8.6	8.9	9.1	9.4	10.0	5.6	5.9	6.1	6.4	7.0
CIE190: 2010										

CIE190: 2010
Area: 0.3315 m2

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Operators:LYJ
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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=0.4538]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

UTILIZATION FACTORS TABLE

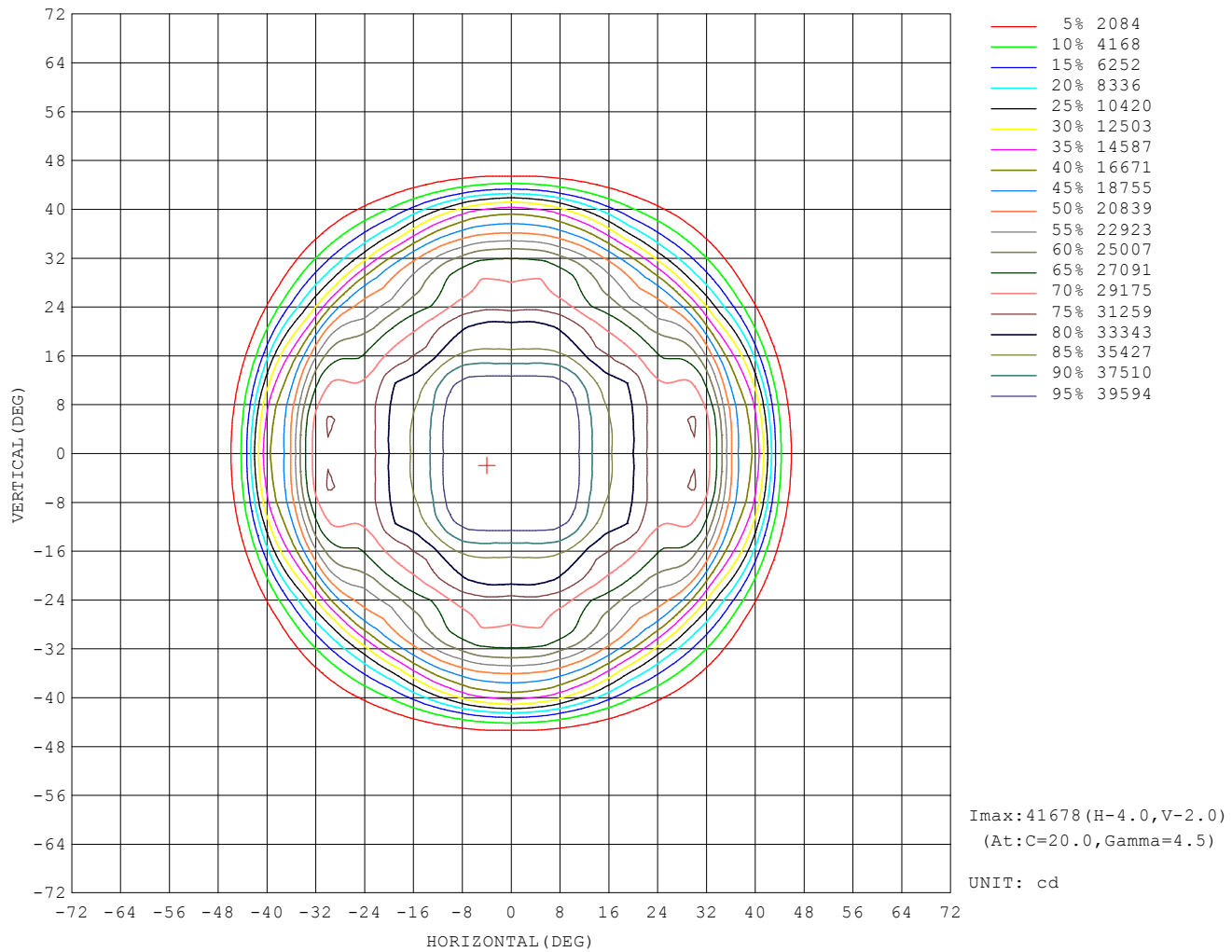
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	86	79	75	85	79	75	85	79	75	71
0.80	94	87	84	93	87	83	92	86	83	79
1.00	98	93	89	98	92	89	96	92	88	84
1.25	103	97	94	101	97	93	100	95	92	88
1.50	105	100	97	104	100	97	102	98	95	91
2.00	108	104	101	107	103	100	104	101	98	93
2.50	110	106	103	108	105	102	105	102	100	94
3.00	112	108	105	110	107	104	106	104	102	96
4.00	114	111	108	112	109	107	108	106	104	97
5.00	115	112	111	113	111	109	109	107	106	98
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

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 Operators: LYJ
 Test Date: 2021-10-11

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=0.4538]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

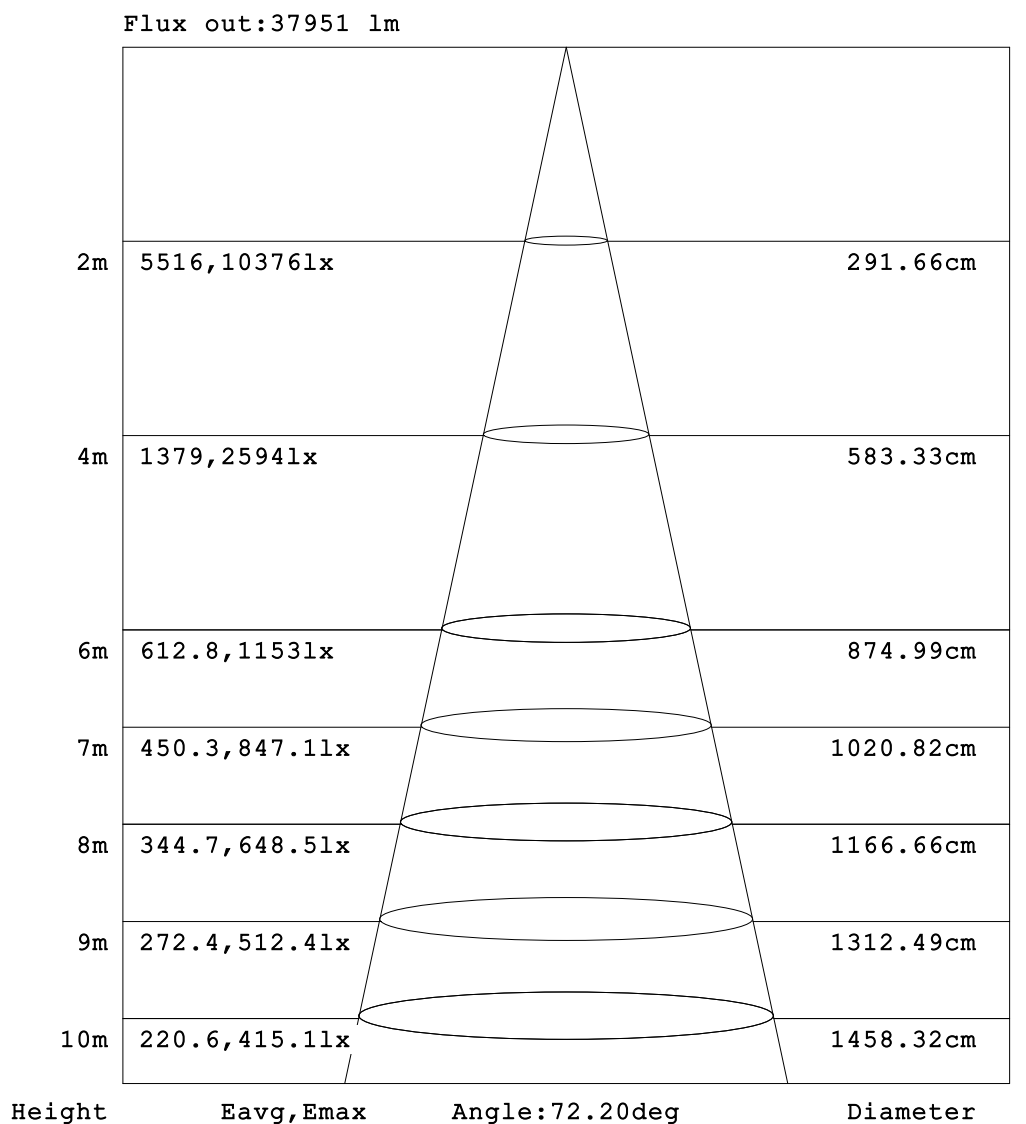
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
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Test Date: 2021-10-11

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
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Test Distance: 26.000m [K=0.4538]
Remarks:

AAI Figure



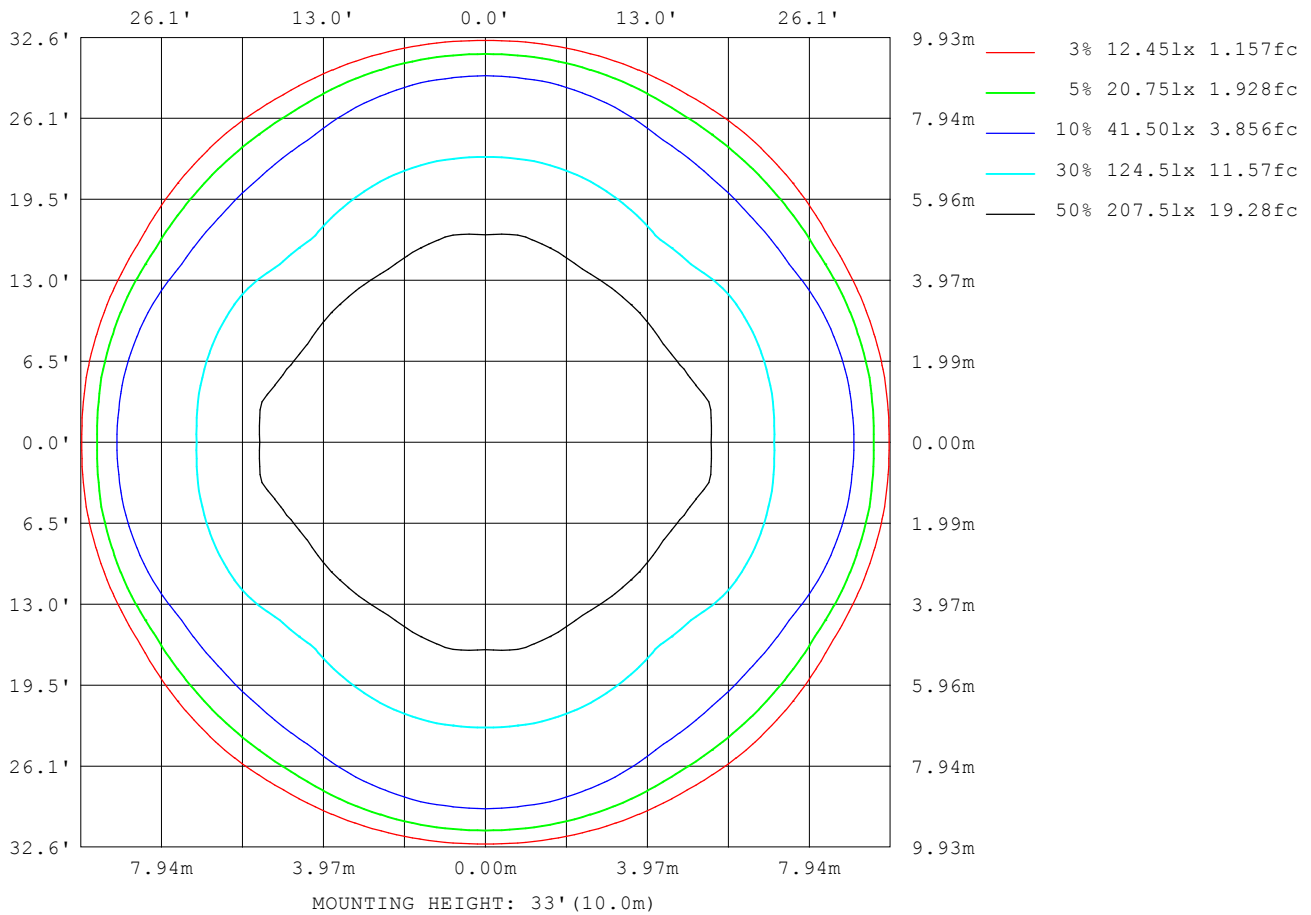
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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γ Range: 0 - 90DEG
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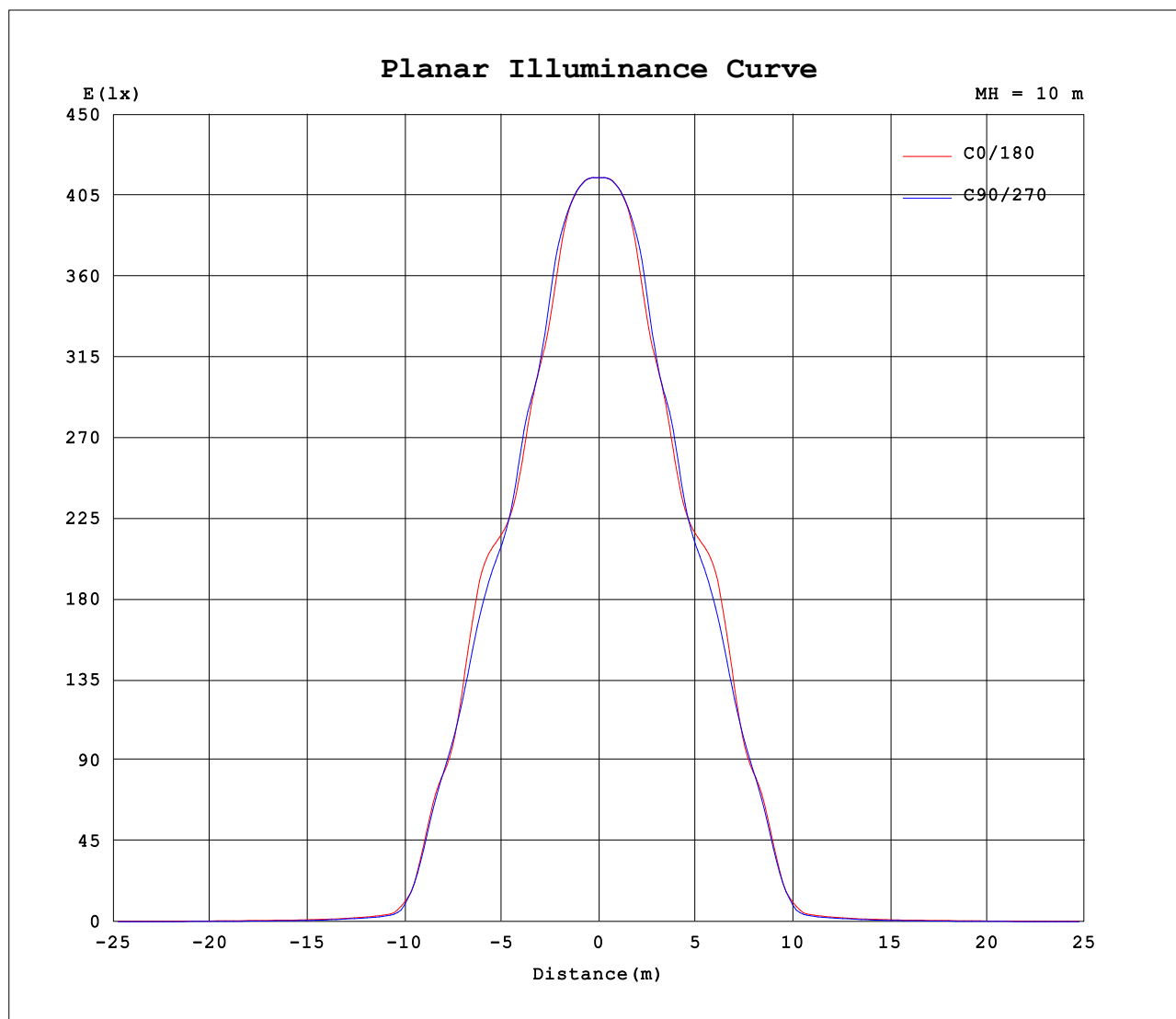
ISOLUX DIAGRAM



C Range: 0 - 360DEG
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Temperature: 25.3DEG
Operators: LYJ
Test Date: 2021-10-11

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=0.4538]
Remarks:

Planar Illuminance Curve



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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=0.4538]
Remarks: