

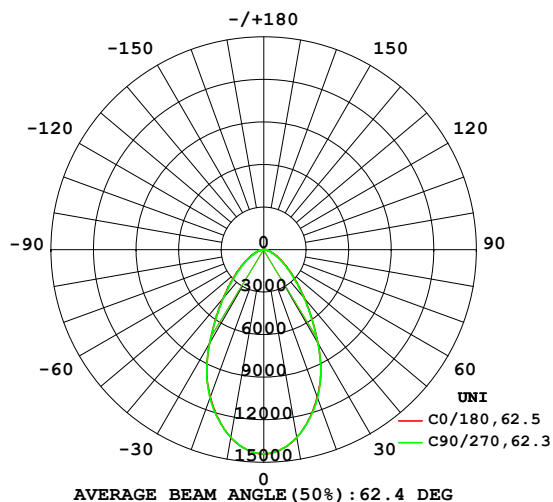
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

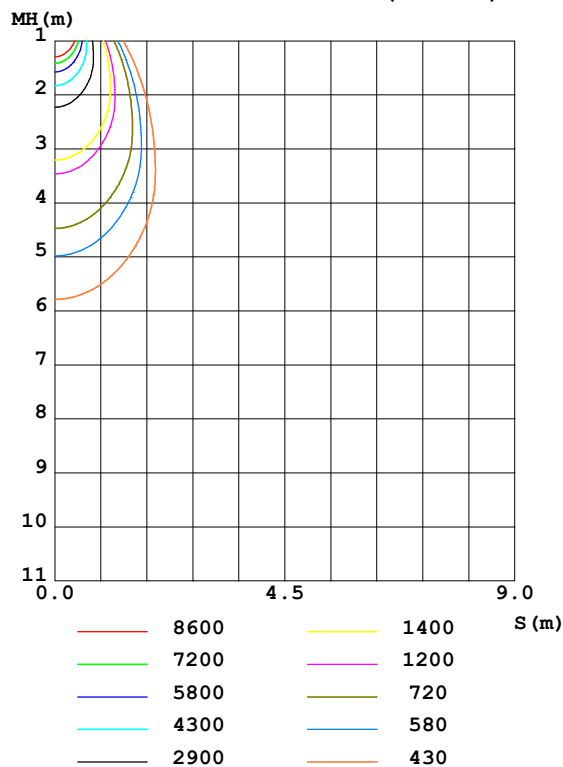
Test:U:229.9V I:0.5774A P:129.6W PF:0.9762 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:18433.6x1 lm		
NAME: HB38-120-5080-H00138N	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 142.25 lm/W			
MODEL	/	I _{max} (cd)	14401	S/MH(C0/180)	0.92
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	0.92
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	18434	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	18433.6	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	1344	1345	1343	1345	1344	1345	1343	1345	0- 10	1328	1328	7.2,7.2
20	1106	1111	1111	1111	1106	1111	1111	1111	10- 20	3466	4794	26,26
30	768.8	769.8	763.6	769.8	768.8	769.8	763.6	769.8	20- 30	4346	9140	49.6,49.6
40	447.9	444.1	438.8	444.1	447.9	444.1	438.8	444.1	30- 40	3704	12844	69.7,69.7
50	245.5	240.9	237.0	240.9	245.5	240.9	237.0	240.9	40- 50	2573	15417	83.6,83.6
60	128.0	125.9	122.6	125.9	128.0	125.9	122.6	125.9	50- 60	1603	17020	92.3,92.3
70	62.11	61.50	59.75	61.50	62.11	61.50	59.75	61.50	60- 70	905.9	17926	97.2,97.2
80	20.96	20.87	20.58	20.87	20.96	20.87	20.58	20.87	70- 80	417.5	18343	99.5,99.5
90	0.5586	0.5336	0.5224	0.5336	0.5586	0.5336	0.5224	0.5336	80- 90	90.45	18434	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): 14267 lm

%lum = 77.4%

%lamp = 77.4%

Conical surface Flux(120deg): 17020 lm

%lum = 92.3%

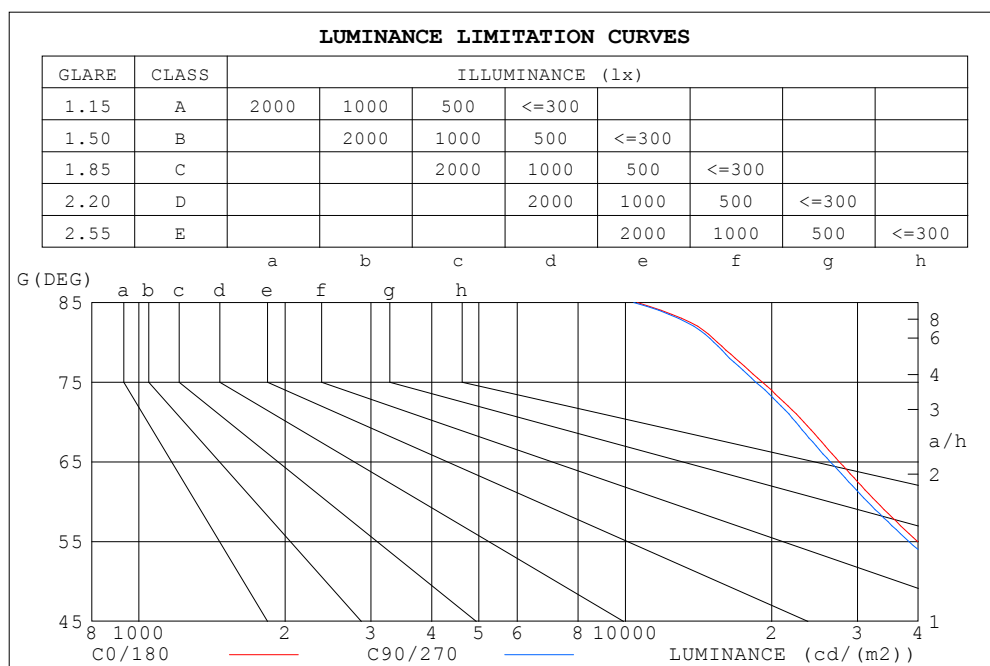
%lamp = 92.3%

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%
Test Distance:26.000m [K=0.4551]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	10580	10402
80	15466	15204
75	19134	18550
70	23274	22407
65	27533	26385
60	32816	31447
55	39882	38287
50	48955	47293
45	60253	58761

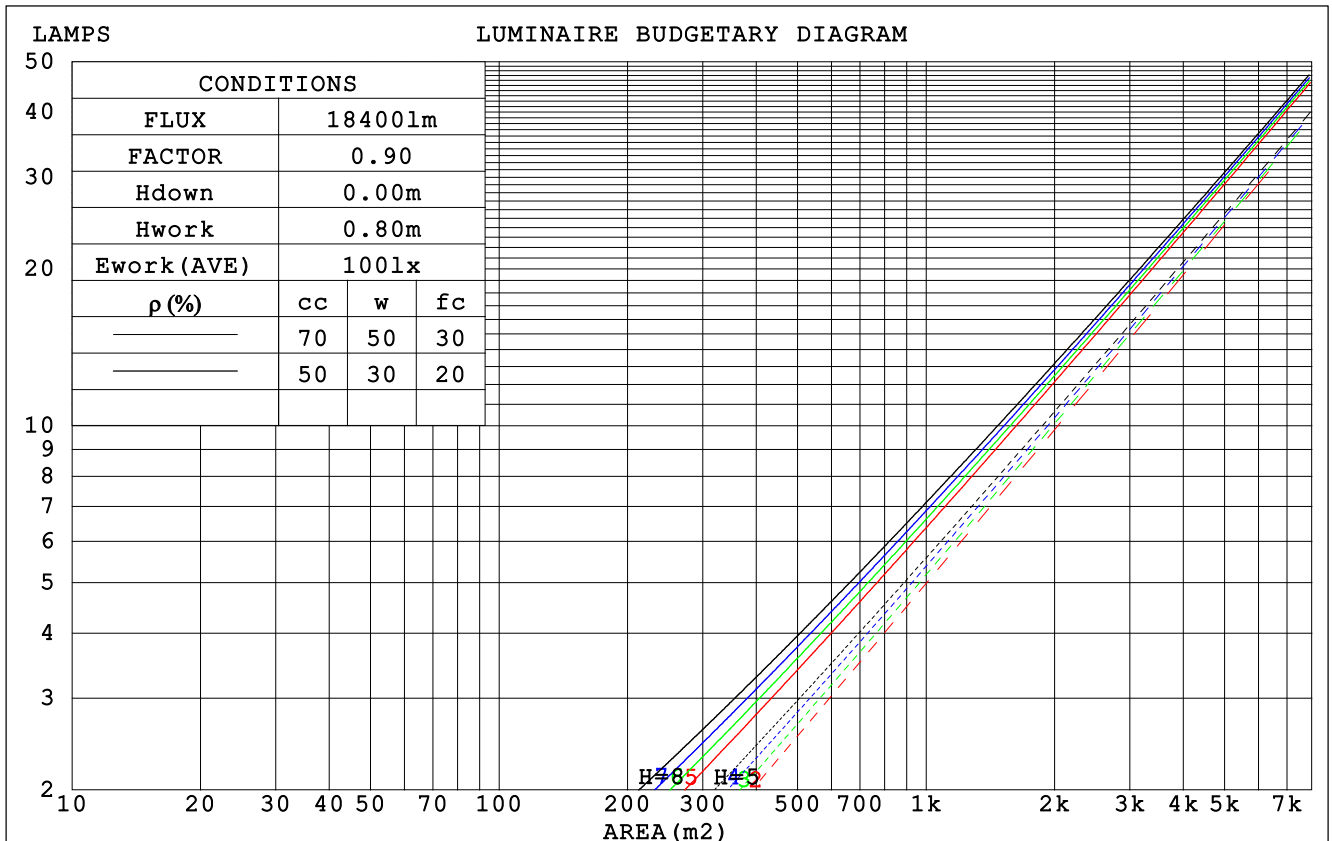
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: LYJ
 Test Date: 2021-06-28

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

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	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	.78	.87	.82	.77	.85	.80	.76	.82	.78	.74	.80	.76	.73	.71
4.0	.81	.74	.69	.80	.74	.68	.78	.72	.68	.76	.71	.67	.74	.69	.66	.64
5.0	.75	.67	.62	.74	.67	.62	.72	.66	.61	.70	.65	.60	.68	.64	.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	.51	.46	.55	.50	.46	.45
9.0	.55	.48	.43	.55	.48	.43	.54	.47	.43	.53	.47	.43	.52	.47	.43	.41
10.0	.52	.45	.40	.51	.45	.40	.50	.44	.40	.49	.44	.40	.49	.43	.40	.38



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

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	.120	.038	.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	.203	.109	.033	.194	.105	.032	.185	.101	.031	.177	.098	.030		
4.0	.196	.102	.030	.192	.100	.030	.183	.097	.029	.176	.094	.028	.168	.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	.024	.158	.082	.024	.152	.080	.024		
7.0	.164	.081	.023	.161	.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	.147	.071	.020	.145	.071	.020	.140	.069	.020	.136	.068	.019	.132	.067	.019		
10.0	.140	.067	.019	.138	.067	.019	.134	.065	.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	.122	.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	.091	.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:

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	22.7	24.0	23.1	24.3	24.6	22.5	23.8	22.8	24.1	24.4
3H	23.8	24.9	24.1	25.2	25.6	23.5	24.7	23.9	25.0	25.4
4H	24.1	25.2	24.5	25.5	25.9	23.8	24.9	24.2	25.3	25.7
6H	24.3	25.3	24.7	25.6	26.0	24.0	25.0	24.4	25.4	25.8
8H	24.3	25.3	24.7	25.6	26.1	24.1	25.0	24.5	25.4	25.8
12H	24.3	25.2	24.8	25.6	26.0	24.1	25.0	24.5	25.4	25.8
4H 2H	23.0	24.1	23.4	24.4	24.8	22.8	23.9	23.2	24.2	24.6
3H	24.3	25.1	24.7	25.5	26.0	24.1	24.9	24.5	25.3	25.7
4H	24.7	25.5	25.1	25.9	26.3	24.5	25.3	24.9	25.7	26.1
6H	25.0	25.7	25.4	26.1	26.6	24.8	25.5	25.2	25.9	26.4
8H	25.0	25.7	25.5	26.1	26.6	24.8	25.5	25.3	25.9	26.4
12H	25.1	25.6	25.5	26.1	26.6	24.9	25.4	25.4	25.9	26.4
8H 4H	24.8	25.4	25.3	25.9	26.3	24.6	25.2	25.1	25.7	26.2
6H	25.1	25.7	25.7	26.2	26.6	25.0	25.5	25.5	26.0	26.5
8H	25.3	25.7	25.8	26.2	26.7	25.1	25.5	25.6	26.1	26.6
12H	25.3	25.7	25.8	26.2	26.8	25.1	25.6	25.7	26.1	26.6
12H 4H	24.8	25.3	25.3	25.8	26.3	24.6	25.1	25.1	25.6	26.1
6H	25.1	25.6	25.7	26.1	26.6	25.0	25.4	25.5	25.9	26.4
8H	25.3	25.7	25.8	26.2	26.8	25.1	25.5	25.6	26.0	26.6
CIE190: 2010										

CIE190: 2010
Area: 0.078 m2

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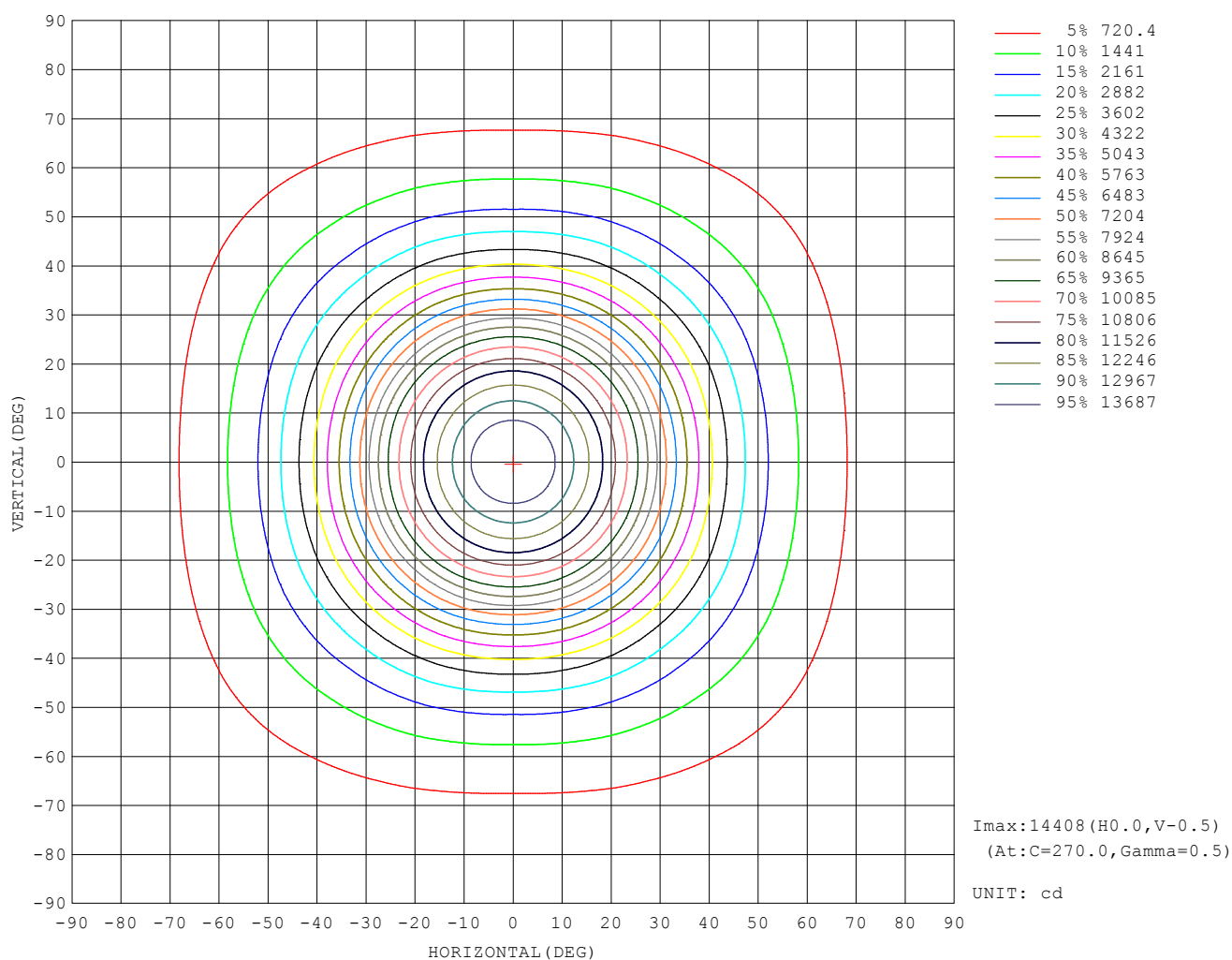
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	73	64	58	72	63	58	71	63	58	53
0.80	82	73	68	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	94	90	84
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 Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4551]
 Remarks:

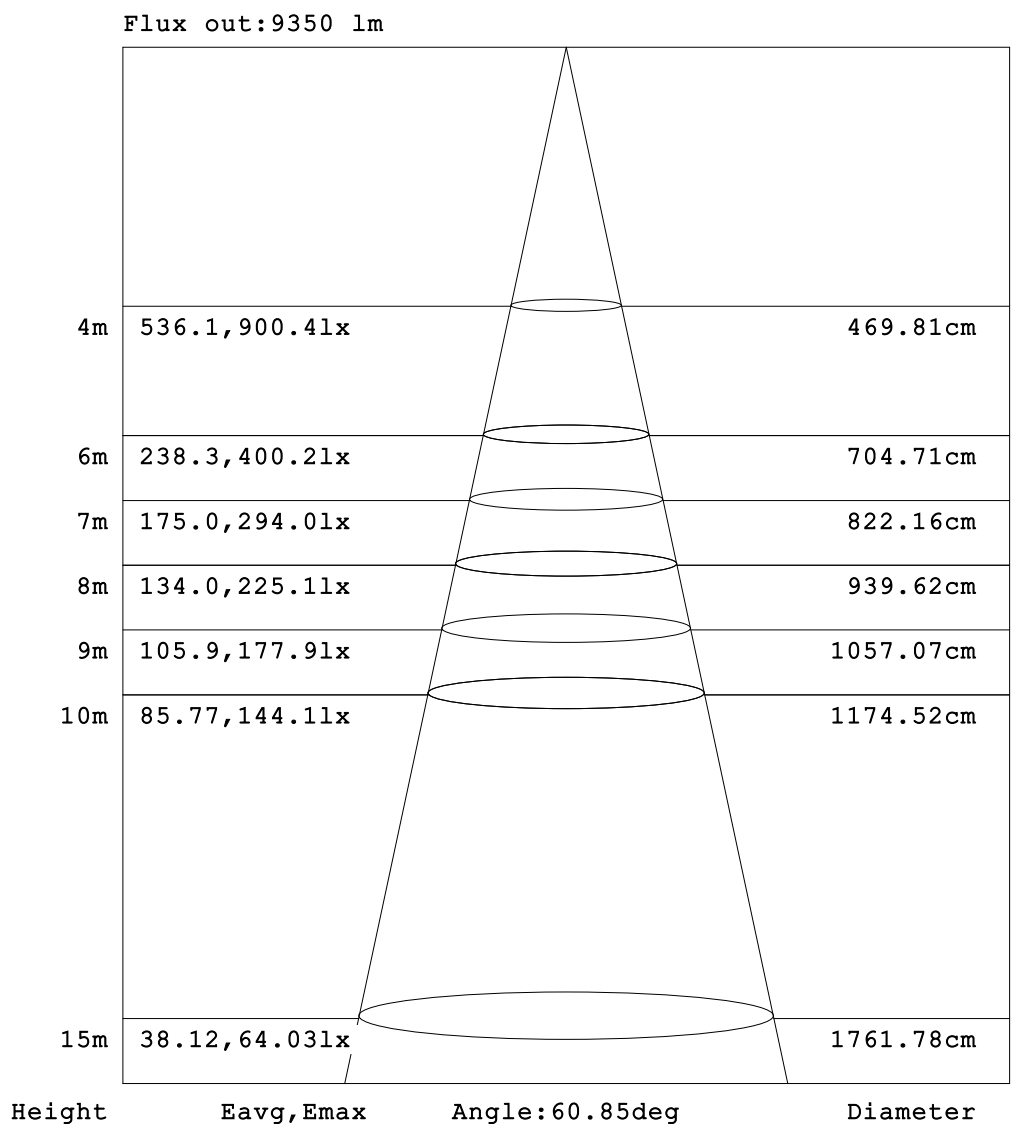
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
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Test Date:2021-06-28

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Remarks:

AAI Figure



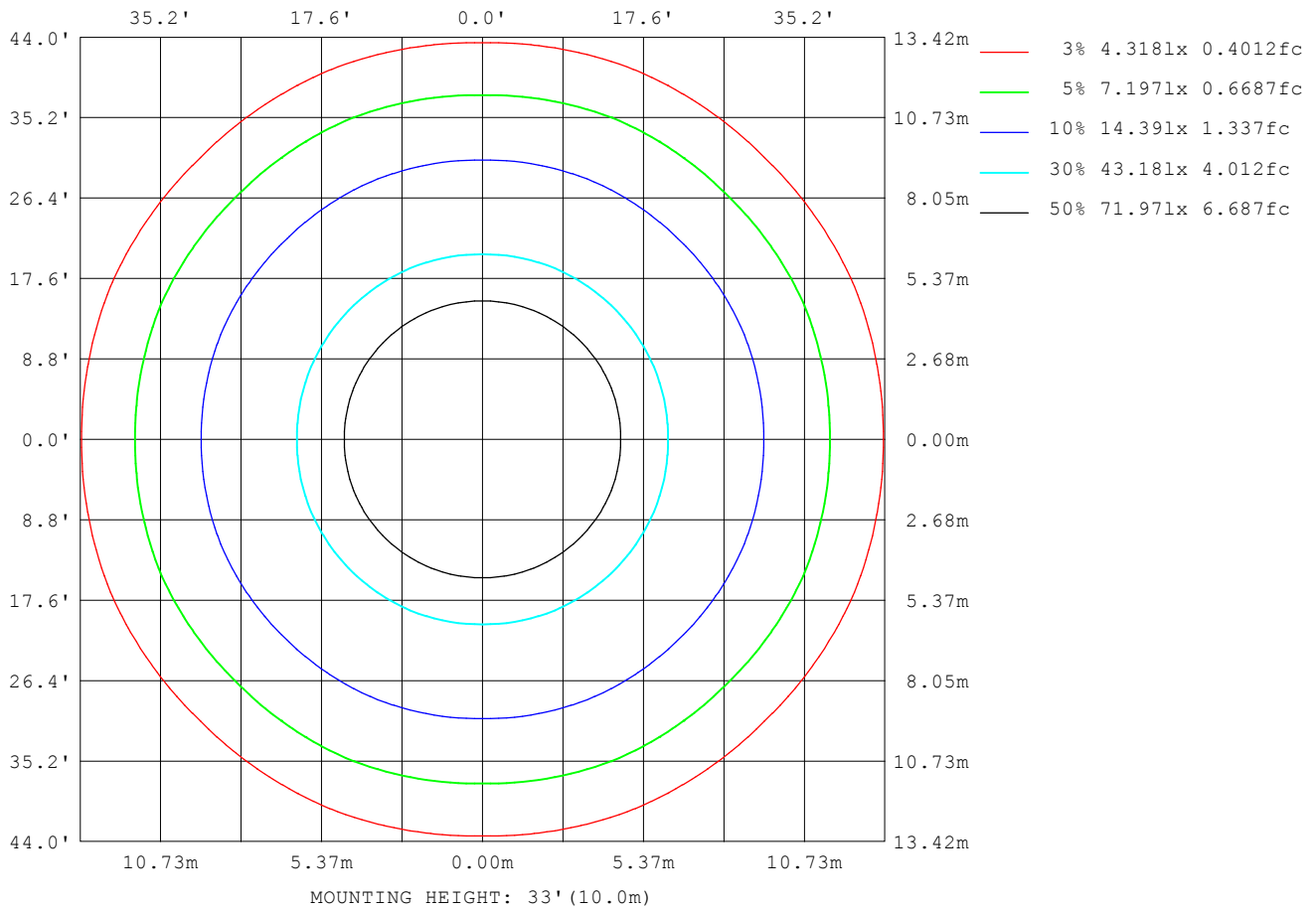
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

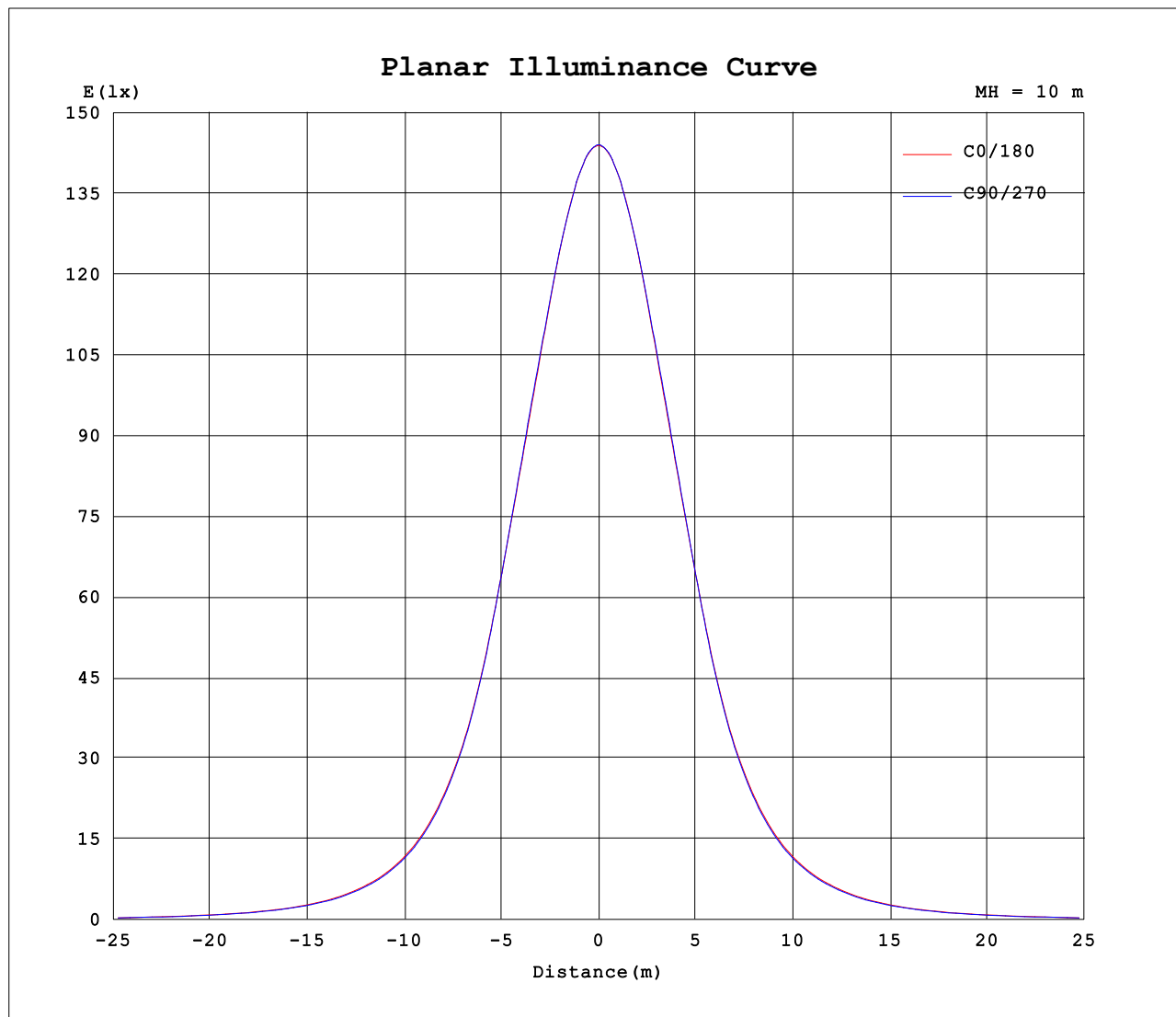
ISOLUX DIAGRAM



C Range: 0 - 360DEG
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Temperature: 25.3DEG
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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:

Planar Illuminance Curve



C Range: 0 - 360DEG
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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: