

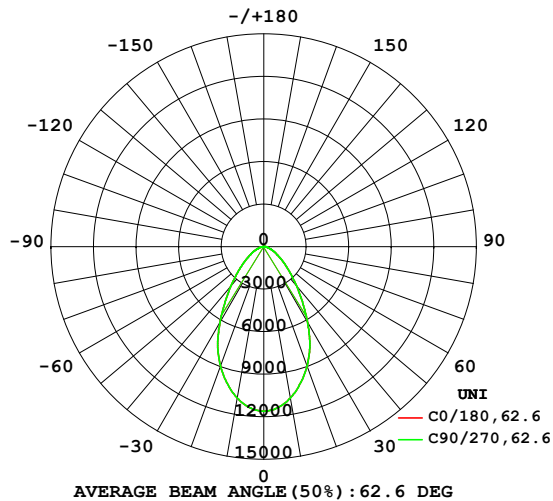
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

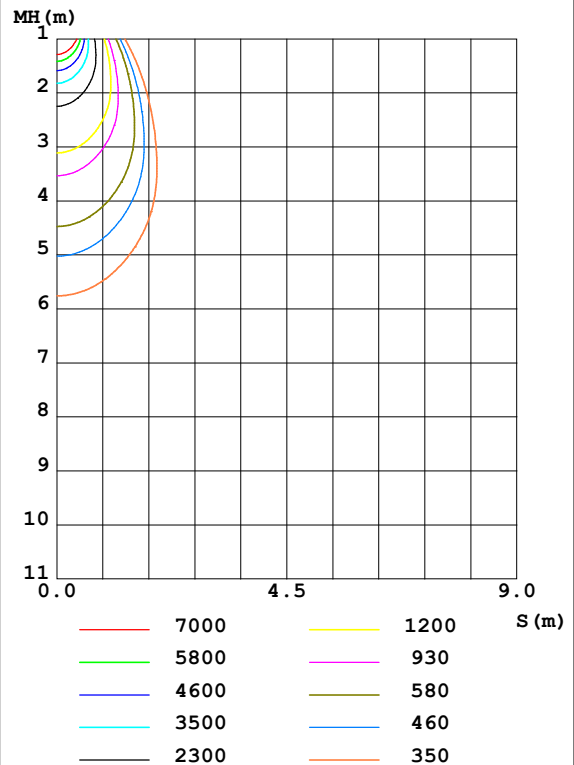
Test:U:230.0V I:0.4793A P:106.8W PF:0.9687 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:14861.7x1 lm		
NAME: HB38-100-5080-H00138N	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 139.16 lm/W			
MODEL	/	I _{max} (cd)	11609	S/MH(C0/180)	0.92
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	0.92
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	14862	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	14861.7	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	1084	1084	1084	1084	1084	1084	1084	1084	0- 10	1070	1070	7.2,7.2
20	894.9	894.9	894.9	894.9	894.9	894.9	894.9	894.9	10- 20	2794	3865	26,26
30	620.4	620.4	620.4	620.4	620.4	620.4	620.4	620.4	20- 30	3504	7369	49.6,49.6
40	358.7	358.7	358.7	358.7	358.7	358.7	358.7	358.7	30- 40	2986	10355	69.7,69.7
50	196.4	196.4	196.4	196.4	196.4	196.4	196.4	196.4	40- 50	2074	12429	83.6,83.6
60	102.5	102.5	102.5	102.5	102.5	102.5	102.5	102.5	50- 60	1292	13722	92.3,92.3
70	49.94	49.94	49.94	49.94	49.94	49.94	49.94	49.94	60- 70	730.3	14452	97.2,97.2
80	16.92	16.92	16.92	16.92	16.92	16.92	16.92	16.92	70- 80	336.6	14789	99.5,99.5
90	0.4351	0.4351	0.4351	0.4351	0.4351	0.4351	0.4351	0.4351	80- 90	72.92	14862	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): 11502 lm

%lum = 77.4%

%lamp = 77.4%

Conical surface Flux(120deg): 13722 lm

%lum = 92.3%

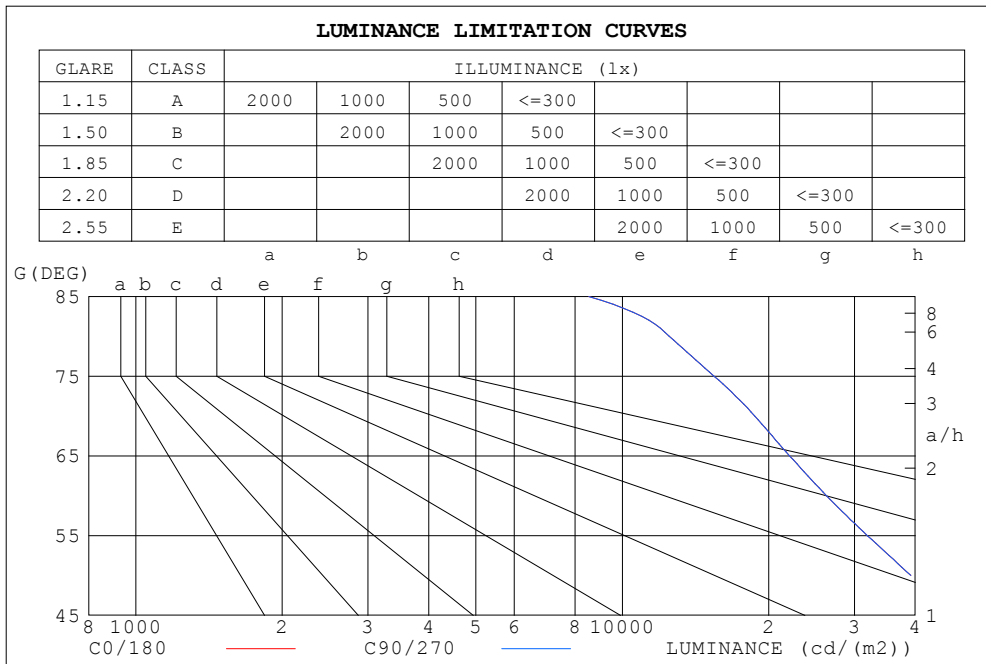
%lamp = 92.3%

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 $\text{cd}/(\text{m}^2)$		
G (DEG)	C0/180	C90/270
85	8538	8538
80	12492	12492
75	15438	15438
70	18718	18718
65	22075	22075
60	26279	26279
55	31907	31907
50	39180	39180
45	48331	48331

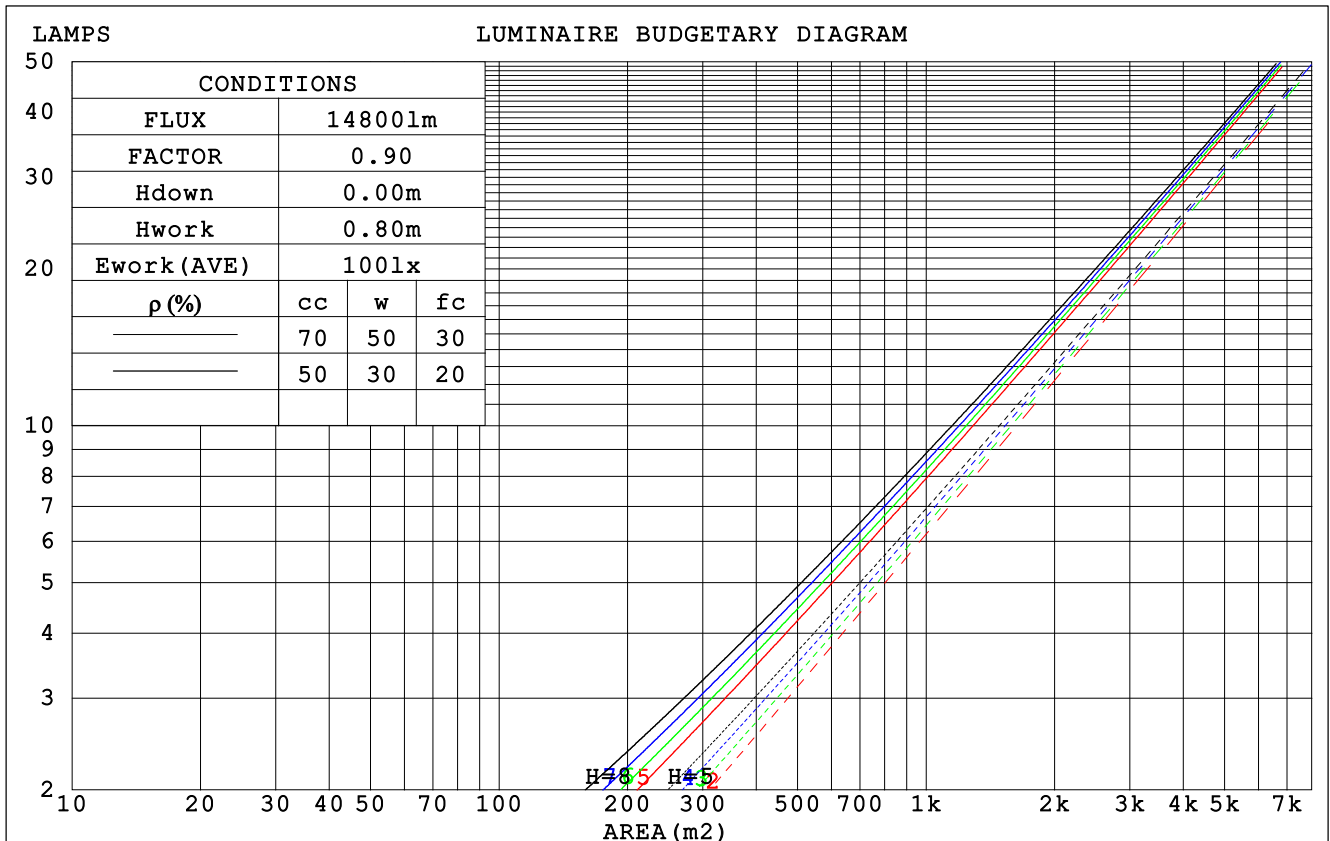
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: LYJ
 Test Date: 2021-06-28

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	21.8	23.1	22.1	23.4	23.7	21.8	23.1	22.1	23.4	23.7
3H	22.8	24.0	23.2	24.3	24.7	22.8	24.0	23.2	24.3	24.7
4H	23.2	24.3	23.6	24.6	25.0	23.2	24.3	23.6	24.6	25.0
6H	23.4	24.4	23.8	24.7	25.1	23.4	24.4	23.8	24.7	25.1
8H	23.4	24.4	23.9	24.8	25.2	23.4	24.4	23.9	24.8	25.2
12H	23.4	24.3	23.9	24.7	25.1	23.4	24.3	23.9	24.7	25.1
4H 2H	22.1	23.2	22.5	23.6	23.9	22.1	23.2	22.5	23.6	23.9
3H	23.4	24.3	23.8	24.7	25.1	23.4	24.3	23.8	24.7	25.1
4H	23.8	24.6	24.2	25.0	25.5	23.8	24.6	24.2	25.0	25.5
6H	24.1	24.8	24.6	25.2	25.7	24.1	24.8	24.6	25.2	25.7
8H	24.2	24.8	24.6	25.3	25.7	24.2	24.8	24.6	25.3	25.7
12H	24.2	24.8	24.7	25.2	25.7	24.2	24.8	24.7	25.2	25.7
8H 4H	23.9	24.6	24.4	25.0	25.5	23.9	24.6	24.4	25.0	25.5
6H	24.3	24.8	24.8	25.3	25.8	24.3	24.8	24.8	25.3	25.8
8H	24.4	24.9	24.9	25.4	25.9	24.4	24.9	24.9	25.4	25.9
12H	24.5	24.9	25.0	25.4	25.9	24.5	24.9	25.0	25.4	25.9
12H 4H	23.9	24.5	24.4	25.0	25.4	23.9	24.5	24.4	25.0	25.4
6H	24.3	24.8	24.8	25.2	25.8	24.3	24.8	24.8	25.2	25.8
8H	24.4	24.8	24.9	25.3	25.9	24.4	24.8	24.9	25.3	25.9
CIE190: 2010										

CIE190: 2010
Area: 0.078 m2

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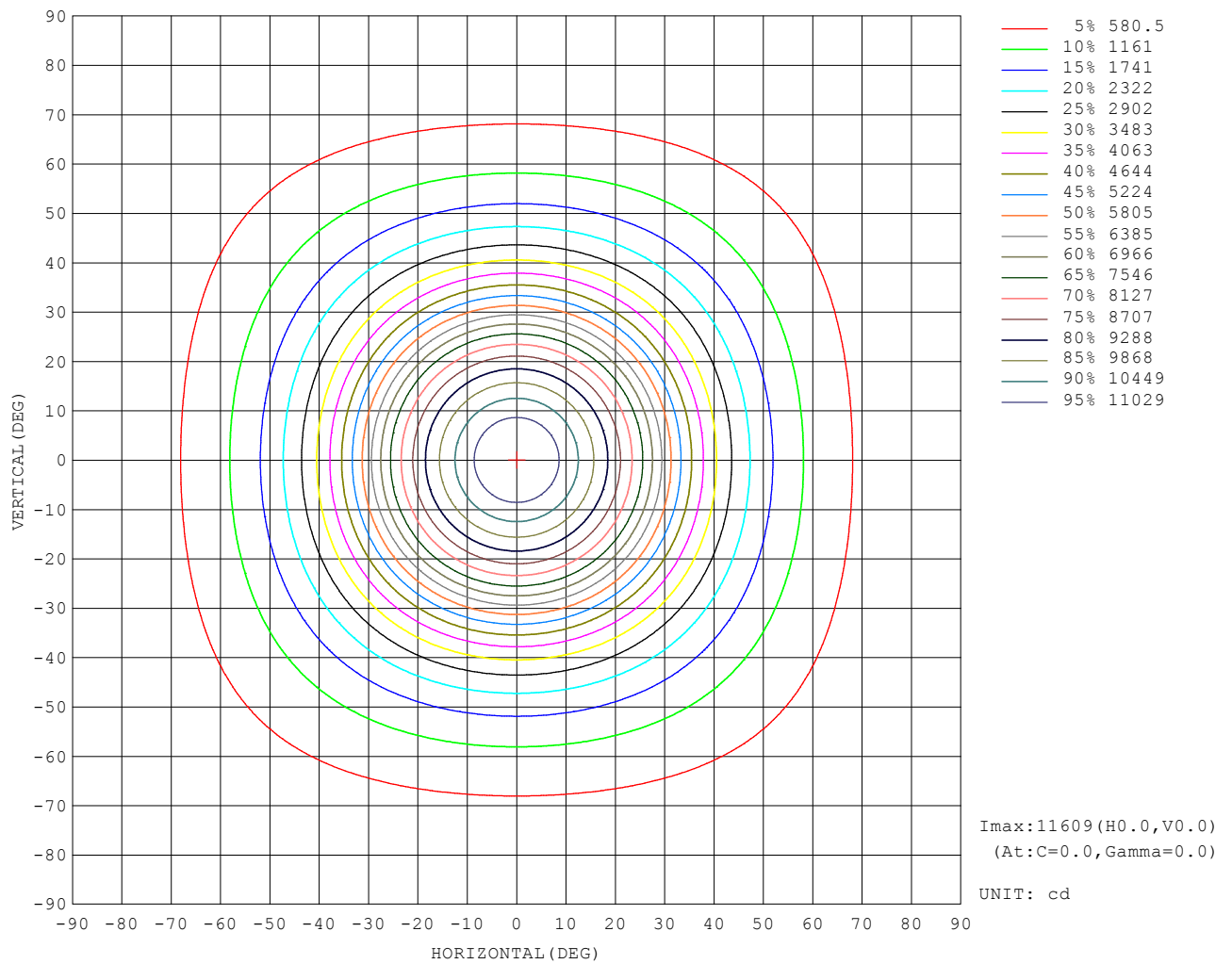
UTILIZATION FACTORS TABLE

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		

C Range: 0 - 360DEG
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 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:

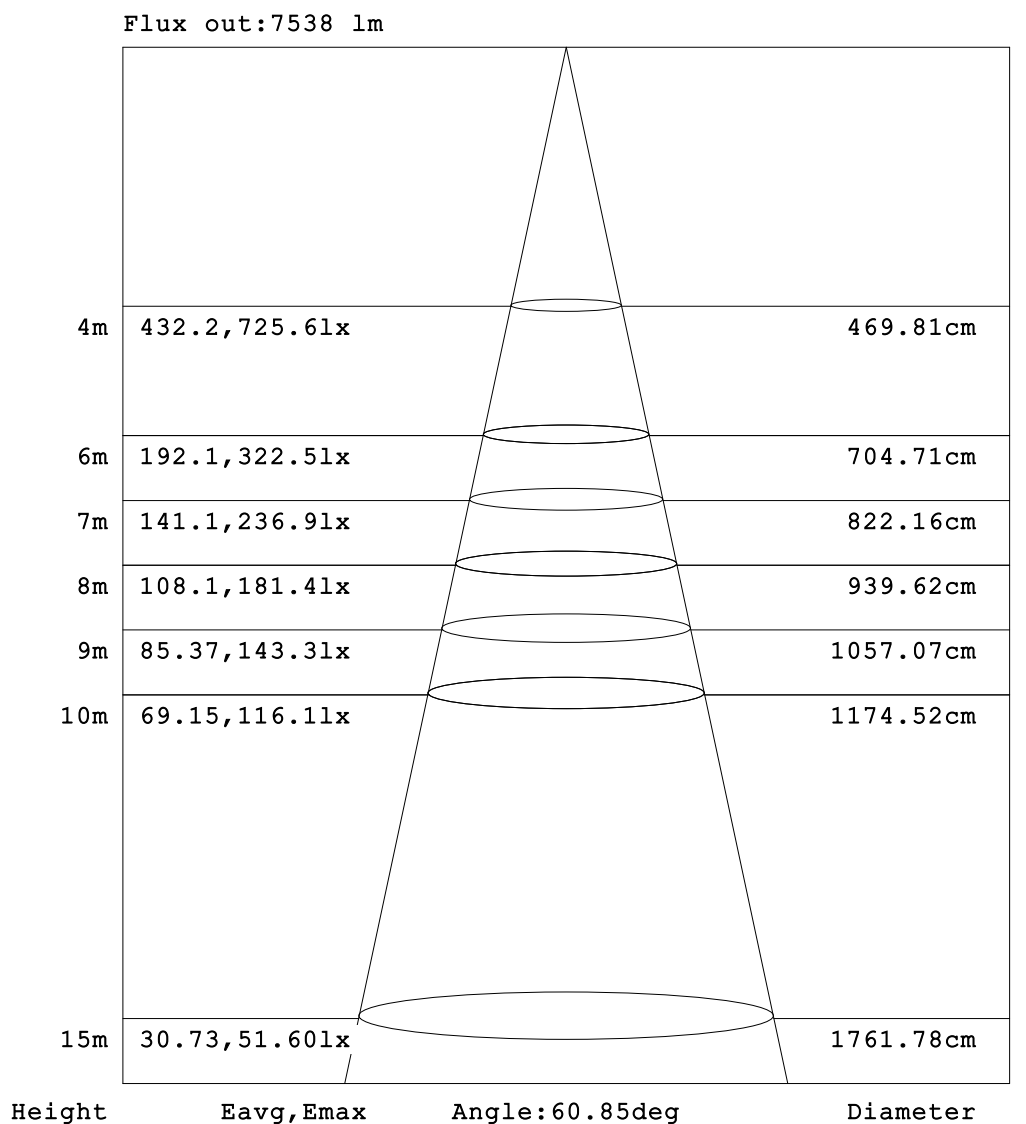
ISOCANDELA DIAGRAM



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

γ Range: 0 - 90DEG
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Humidity: 65.0%
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Remarks:

AAI Figure



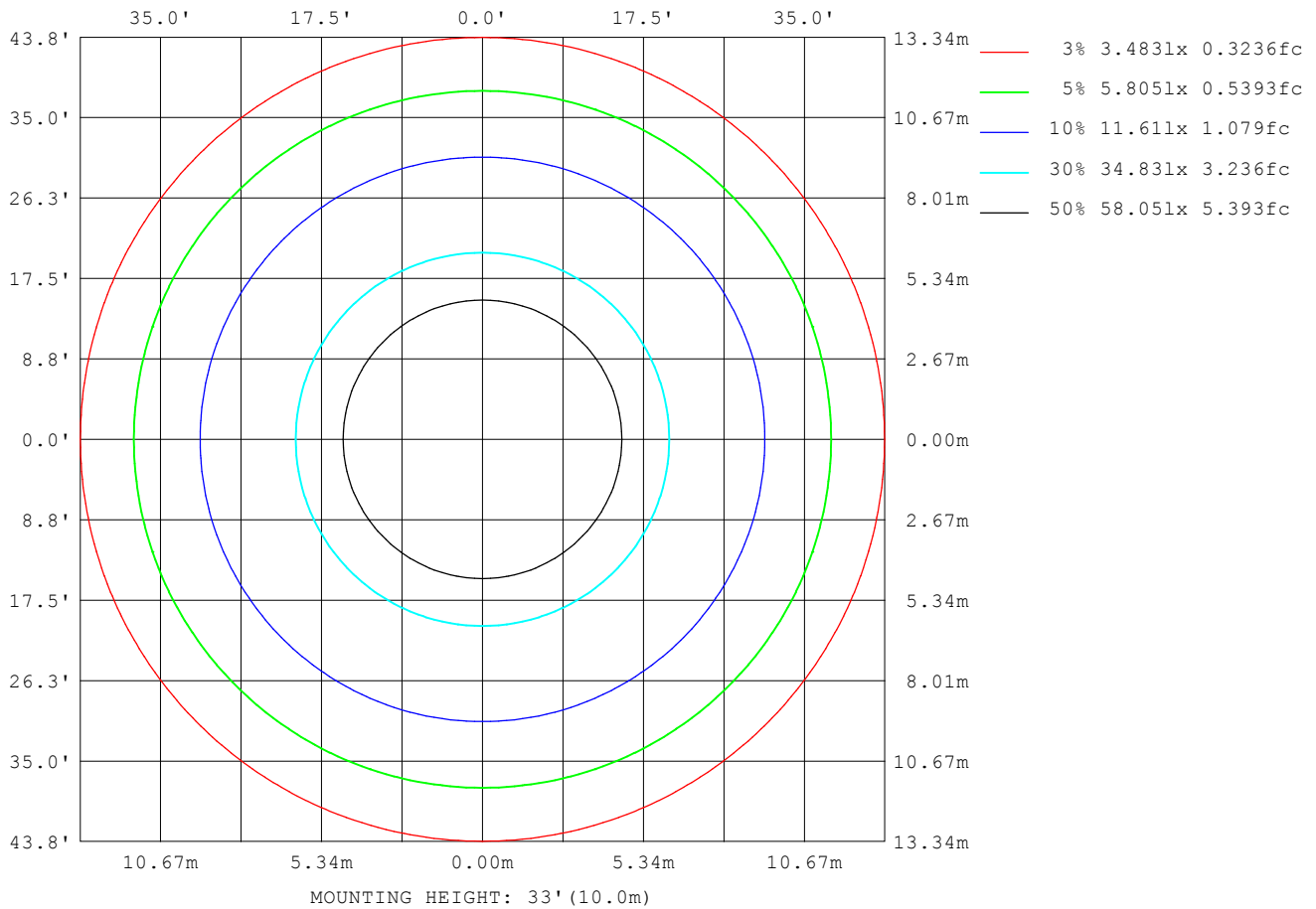
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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C Interval: 22.5DEG
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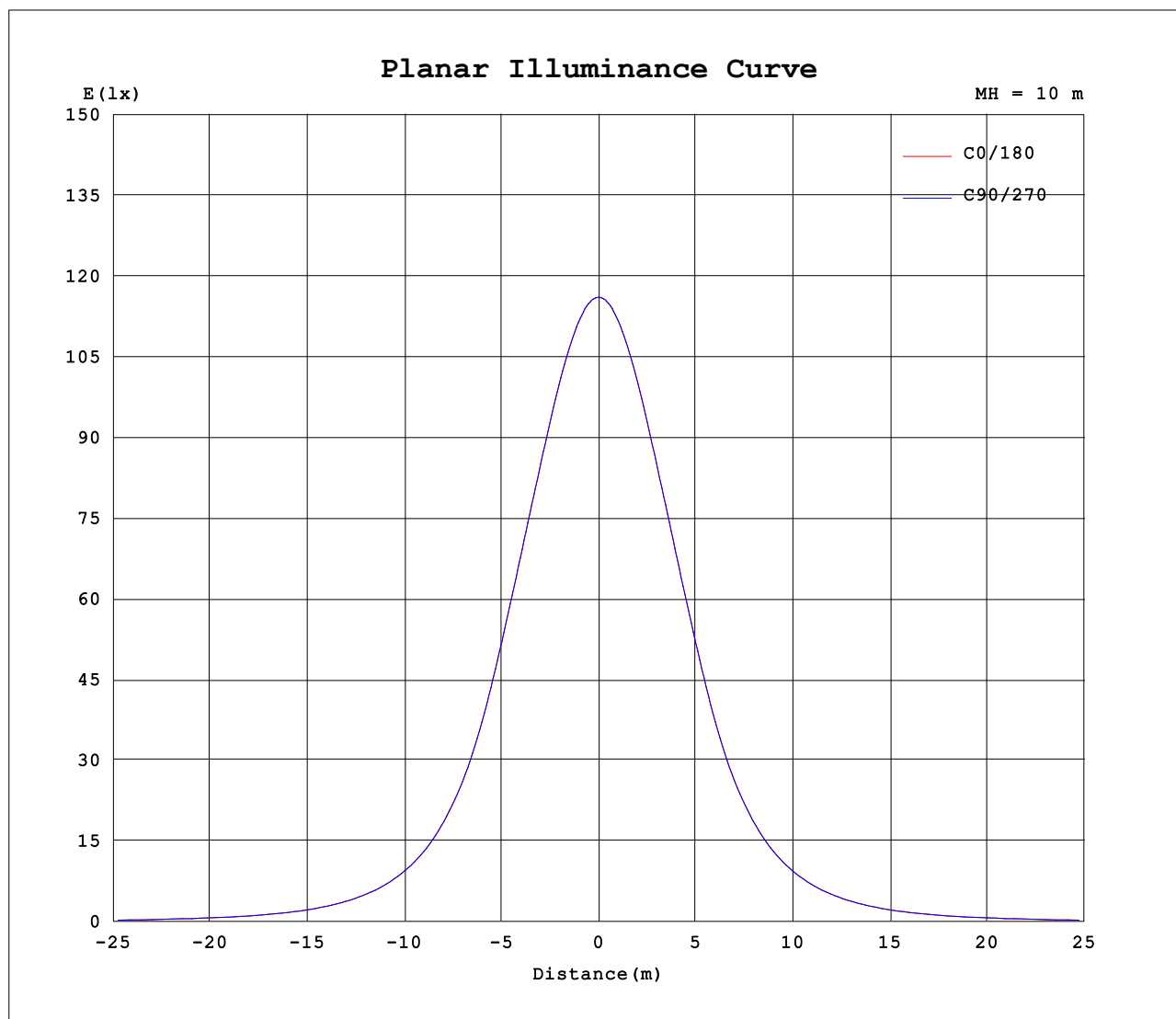
ISOLUX DIAGRAM



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:

Planar Illuminance Curve



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