

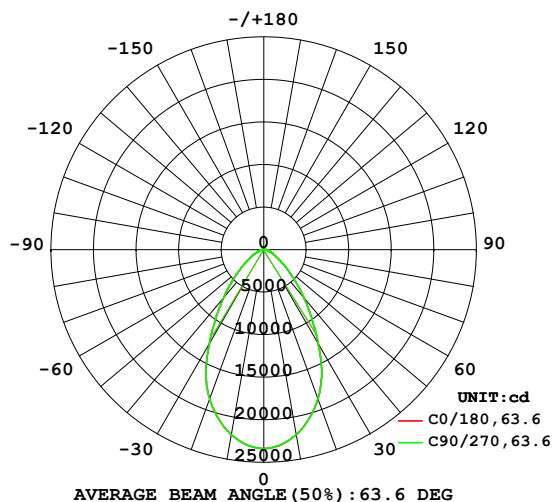
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

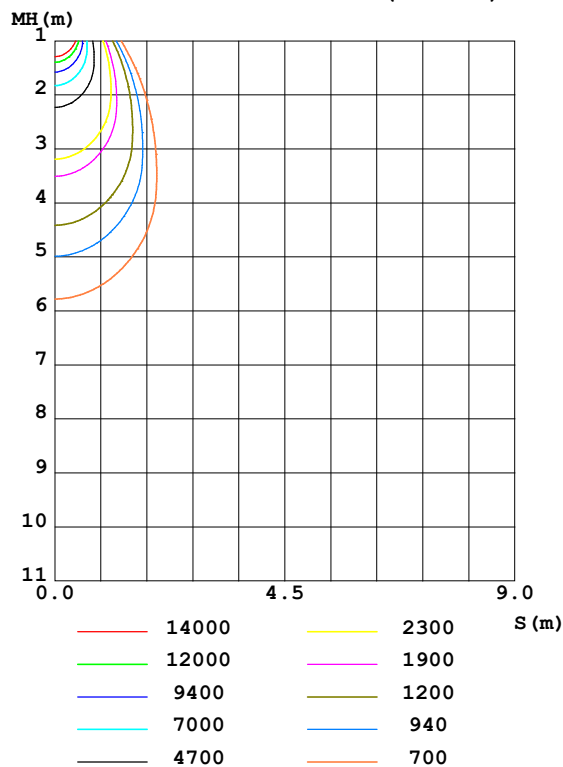
Test:U:229.8V I:0.8242A P:186.41W PF:0.9842 Freq:50.00Hz Lamp Flux:29923.7x1 lm		
NAME: HB44-200-3080+5080-H00111	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 160.52 lm/W			
MODEL	/	I _{max} (cd)	23383	S/MH(C0/180)	0.95
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	0.95
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	29924	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	29923.7	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)	/	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: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LTF
Test Date:2020-06-21

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:

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	2207	2207	2207	2207	2207	2207	2207	2207	0- 10	2167	2167	7.24, 7.24
20	1866	1866	1866	1866	1866	1866	1866	1866	10- 20	5762	7929	26.5, 26.5
30	1285	1285	1285	1285	1285	1285	1285	1285	20- 30	7318	15247	51, 51
40	733.0	733.0	733.0	733.0	733.0	733.0	733.0	733.0	30- 40	6169	21415	71.6, 71.6
50	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	40- 50	4108	25523	85.3, 85.3
60	173.0	173.0	173.0	173.0	173.0	173.0	173.0	173.0	50- 60	2297	27820	93, 93
70	84.92	84.92	84.92	84.92	84.92	84.92	84.92	84.92	60- 70	1211	29031	97, 97
80	48.05	48.05	48.05	48.05	48.05	48.05	48.05	48.05	70- 80	650.2	29681	99.2, 99.2
90	0.9336	0.9336	0.9336	0.9336	0.9336	0.9336	0.9336	0.9336	80- 90	242.4	29924	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): 23735 lm

%lum = 79.3%

%lamp = 79.3%

Conical surface Flux(120deg): 27820 lm

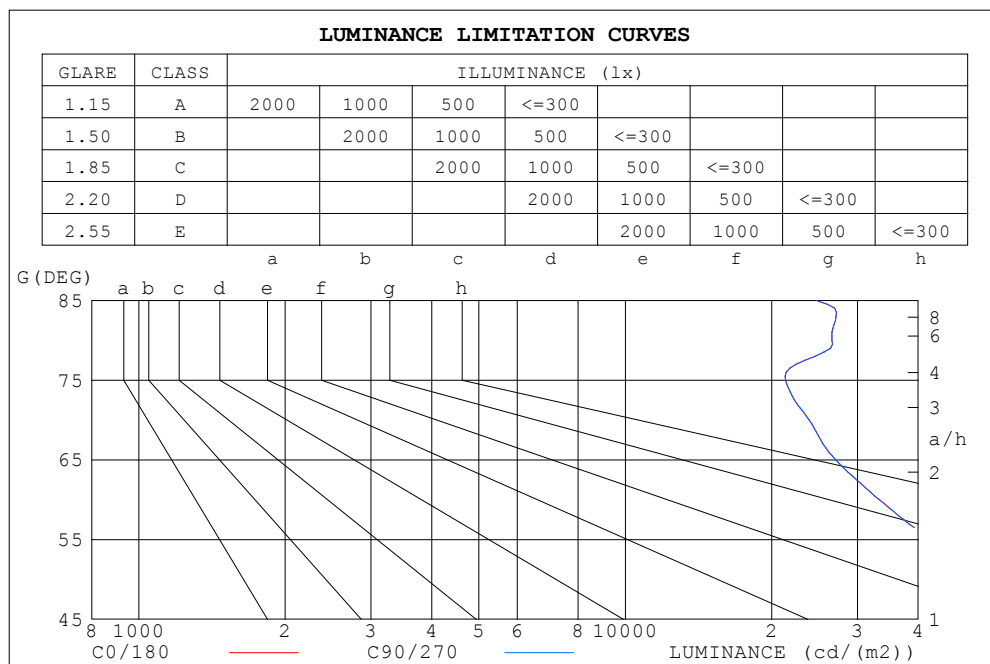
%lum = 93.0%

%lamp = 93.0%

C Range: 0 - 360DEG
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Temperature:25.3DEG
Operators:LTF
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γ Range: 0 - 90DEG
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Test Distance:9.432m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	24742	24742
80	26605	26605
75	21340	21340
70	23874	23874
65	27097	27097
60	33271	33271
55	42284	42284
50	54866	54866
45	72068	72068

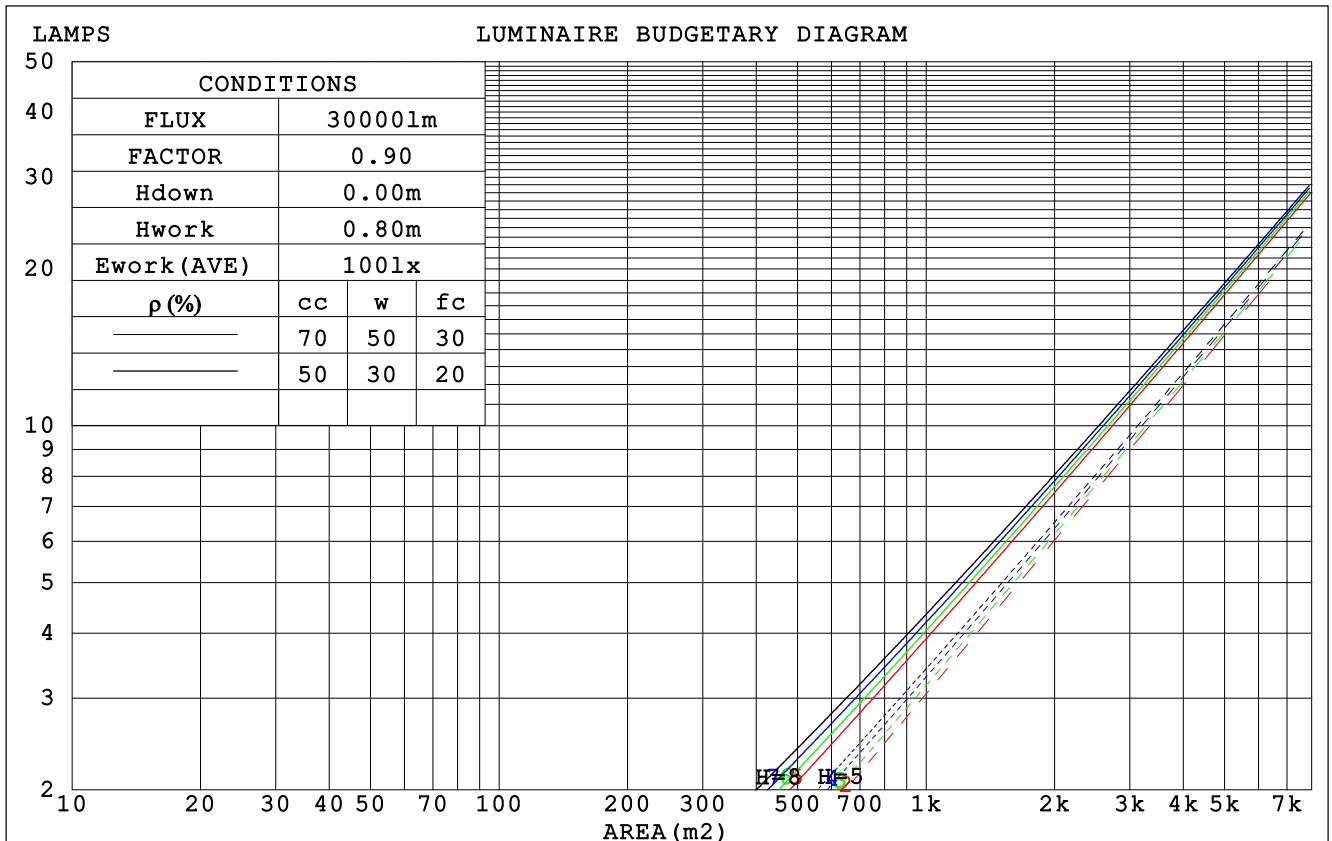
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Temperature: 25.3DEG
Operators: LTF
Test Date: 2020-06-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
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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	.89	.96	.92	.88	.93	.89	.86	.90	.87	.84	.87	.84	.82	.80
3.0	.89	.83	.78	.88	.82	.77	.85	.80	.76	.83	.78	.75	.80	.77	.74	.72
4.0	.82	.75	.70	.81	.74	.69	.78	.73	.68	.76	.71	.68	.74	.70	.67	.65
5.0	.75	.68	.63	.74	.67	.62	.72	.66	.62	.70	.65	.61	.69	.64	.61	.59
6.0	.69	.62	.57	.69	.62	.57	.67	.61	.56	.65	.60	.56	.64	.59	.56	.54
7.0	.64	.57	.52	.64	.57	.52	.62	.56	.52	.61	.55	.51	.60	.55	.51	.49
8.0	.60	.53	.48	.59	.52	.48	.58	.52	.48	.57	.51	.47	.56	.51	.47	.45
9.0	.56	.49	.44	.55	.49	.44	.54	.48	.44	.53	.48	.44	.52	.47	.44	.42
10.0	.52	.46	.41	.52	.45	.41	.51	.45	.41	.50	.45	.41	.49	.44	.41	.39



C Range: 0 - 360DEG
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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:

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	.229	.130	.041	.222	.127	.040	.209	.120	.038	.197	.114	.036	.186	.108	.035	
2.0	.218	.119	.037	.212	.117	.036	.201	.112	.035	.191	.107	.034	.181	.103	.032	
3.0	.206	.109	.033	.200	.107	.032	.191	.103	.031	.182	.100	.031	.174	.096	.030	
4.0	.193	.101	.030	.189	.099	.029	.181	.096	.029	.173	.093	.028	.166	.090	.027	
5.0	.182	.093	.027	.178	.092	.027	.171	.089	.026	.164	.087	.026	.158	.084	.025	
6.0	.172	.086	.025	.168	.085	.024	.162	.083	.024	.156	.081	.024	.150	.079	.023	
7.0	.162	.080	.023	.159	.079	.023	.154	.078	.022	.148	.076	.022	.143	.074	.022	
8.0	.154	.075	.021	.151	.074	.021	.146	.073	.021	.141	.071	.021	.136	.070	.020	
9.0	.146	.071	.020	.143	.070	.020	.139	.069	.019	.134	.067	.019	.130	.066	.019	
10.0	.139	.067	.018	.137	.066	.018	.132	.065	.018	.128	.064	.018	.125	.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	.149	.135	.121	.102	.093	.084	.059	.054	.049	.019	.017	.016		
2.0	.162	.132	.107	.139	.114	.092	.095	.079	.064	.055	.046	.038	.018	.015	.012		
3.0	.152	.114	.083	.130	.098	.072	.090	.068	.051	.052	.040	.030	.017	.013	.010		
4.0	.143	.100	.067	.123	.086	.058	.084	.060	.041	.049	.035	.024	.016	.011	.008		
5.0	.135	.089	.054	.116	.077	.047	.080	.054	.033	.046	.031	.020	.015	.010	.007		
6.0	.128	.080	.045	.110	.069	.039	.076	.048	.028	.044	.028	.017	.014	.009	.005		
7.0	.122	.073	.038	.105	.063	.033	.072	.044	.024	.042	.026	.014	.014	.009	.005		
8.0	.116	.067	.033	.100	.058	.029	.069	.041	.020	.040	.024	.012	.013	.008	.004		
9.0	.110	.062	.029	.095	.053	.025	.066	.038	.018	.038	.022	.011	.012	.007	.003		
10.0	.105	.057	.025	.091	.050	.022	.063	.035	.016	.037	.021	.009	.012	.007	.003		

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LTF
 Test Date:2020-06-21

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:

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	22.2	23.4	22.5	23.7	24.1	22.2	23.4	22.5	23.7	24.1
3H	23.2	24.3	23.5	24.6	25.0	23.2	24.3	23.5	24.6	25.0
4H	23.5	24.6	23.9	24.9	25.3	23.5	24.6	23.9	24.9	25.3
6H	24.0	25.0	24.4	25.4	25.8	24.0	25.0	24.4	25.4	25.8
8H	24.2	25.2	24.7	25.5	26.0	24.2	25.2	24.7	25.5	26.0
12H	24.4	25.3	24.8	25.7	26.1	24.4	25.3	24.8	25.7	26.1
4H 2H	22.4	23.5	22.8	23.8	24.2	22.4	23.5	22.8	23.8	24.2
3H	23.7	24.5	24.1	24.9	25.3	23.7	24.5	24.1	24.9	25.3
4H	24.2	24.9	24.6	25.4	25.8	24.2	24.9	24.6	25.4	25.8
6H	24.8	25.5	25.3	26.0	26.4	24.8	25.5	25.3	26.0	26.4
8H	25.1	25.8	25.6	26.2	26.7	25.1	25.8	25.6	26.2	26.7
12H	25.4	25.9	25.8	26.4	26.9	25.4	25.9	25.8	26.4	26.9
8H 4H	24.3	25.0	24.8	25.4	25.9	24.3	25.0	24.8	25.4	25.9
6H	25.2	25.7	25.7	26.2	26.7	25.2	25.7	25.7	26.2	26.7
8H	25.6	26.1	26.2	26.6	27.1	25.6	26.1	26.2	26.6	27.1
12H	26.0	26.4	26.5	26.9	27.4	26.0	26.4	26.5	26.9	27.4
12H 4H	24.4	24.9	24.9	25.4	25.9	24.4	24.9	24.9	25.4	25.9
6H	25.3	25.8	25.8	26.2	26.8	25.3	25.8	25.8	26.2	26.8
8H	25.8	26.2	26.3	26.7	27.3	25.8	26.2	26.3	26.7	27.3
CIE190: 2010										

CIE190: 2010
Area: 0.104 m2

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γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
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UTILIZATION FACTORS TABLE

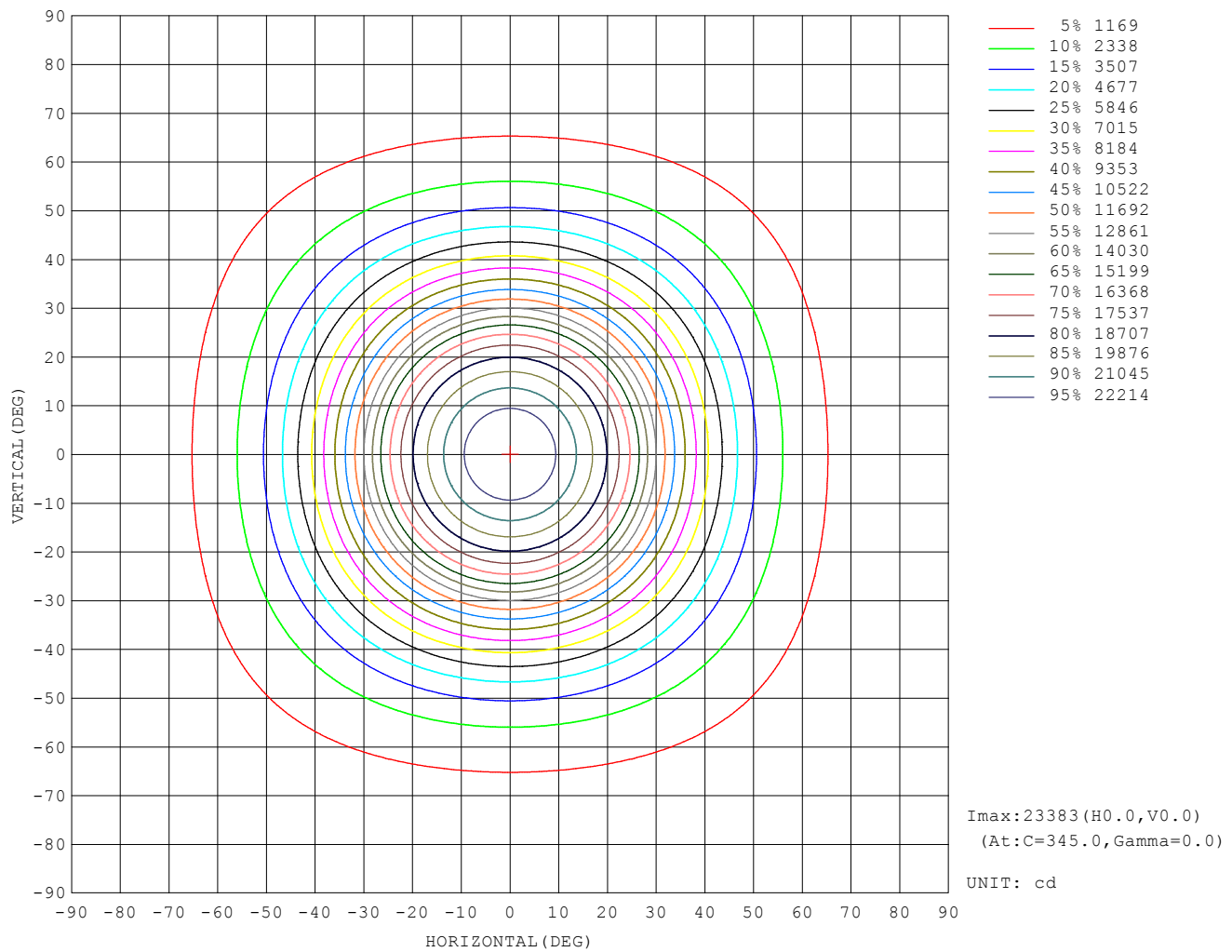
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	74	65	60	73	65	60	72	64	59	55
0.80	83	74	69	82	74	69	80	73	68	63
1.00	89	81	76	88	81	76	87	81	75	70
1.25	95	88	83	94	87	82	91	86	81	76
1.50	99	92	87	97	91	87	95	89	85	80
2.00	103	97	93	102	96	92	99	94	91	84
2.50	106	100	96	104	99	95	101	97	93	86
3.00	108	103	99	106	102	98	102	99	96	89
4.00	111	107	104	109	105	102	105	102	99	92
5.00	112	109	106	110	107	105	106	104	102	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
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EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

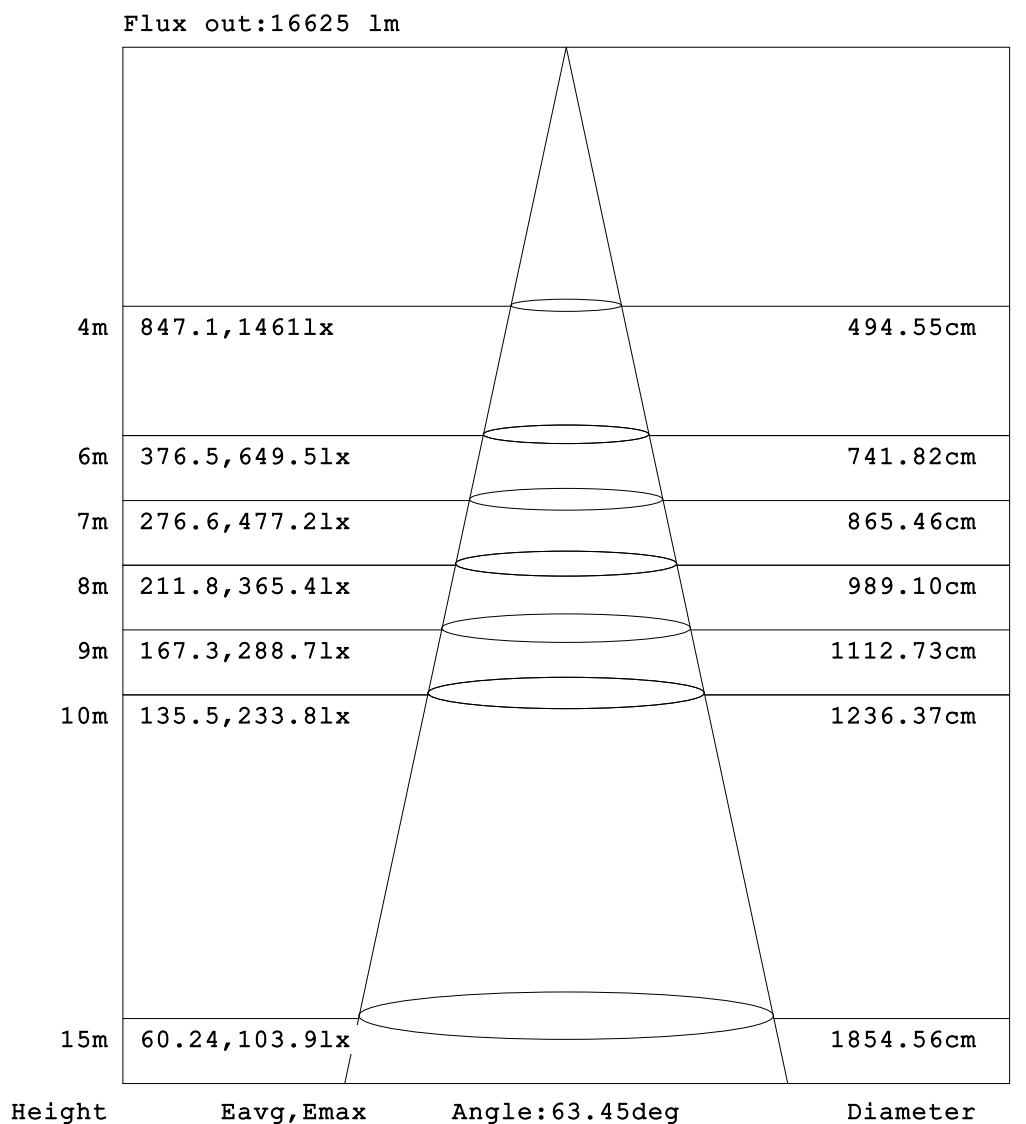
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
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Remarks:

AAI Figure



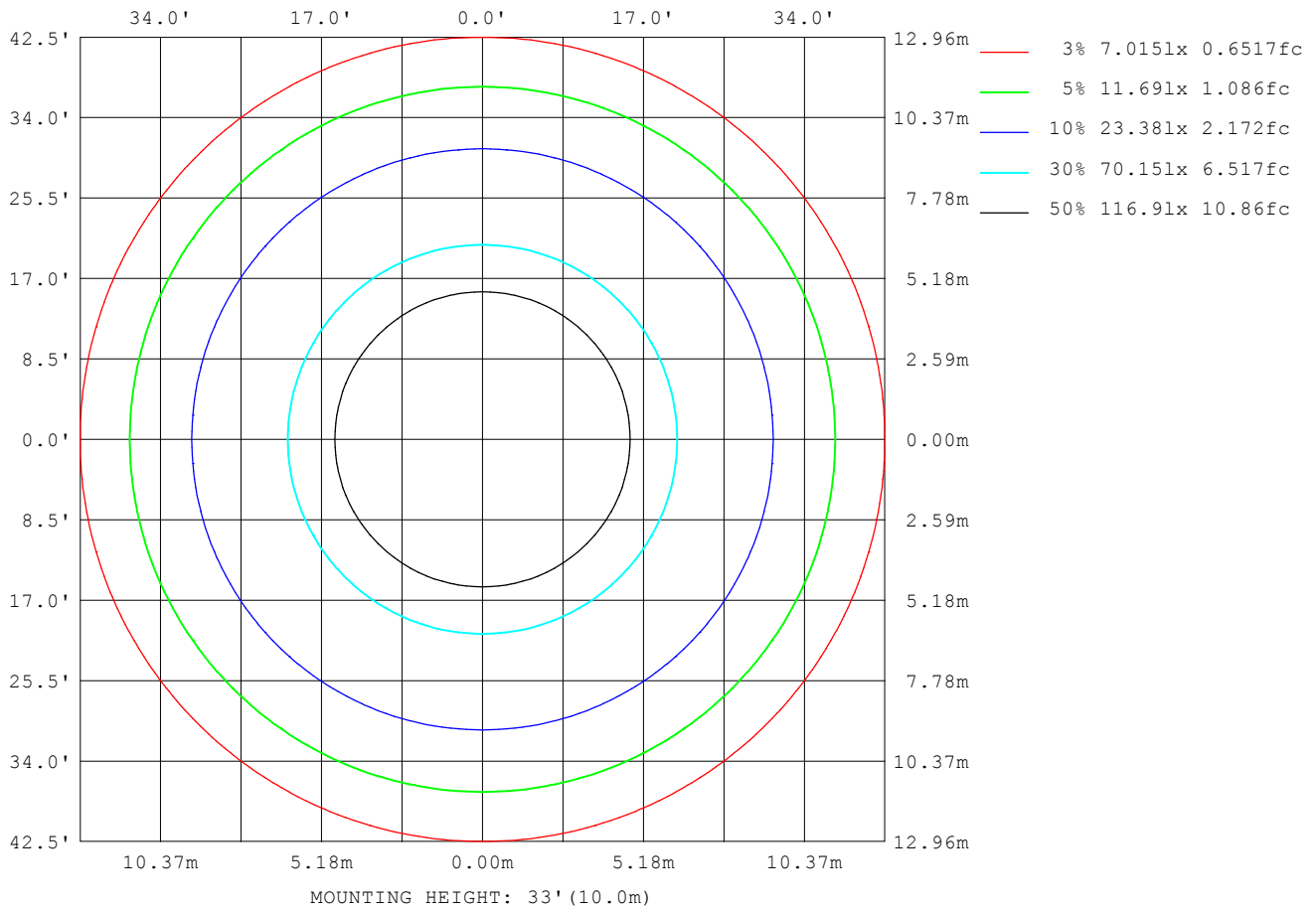
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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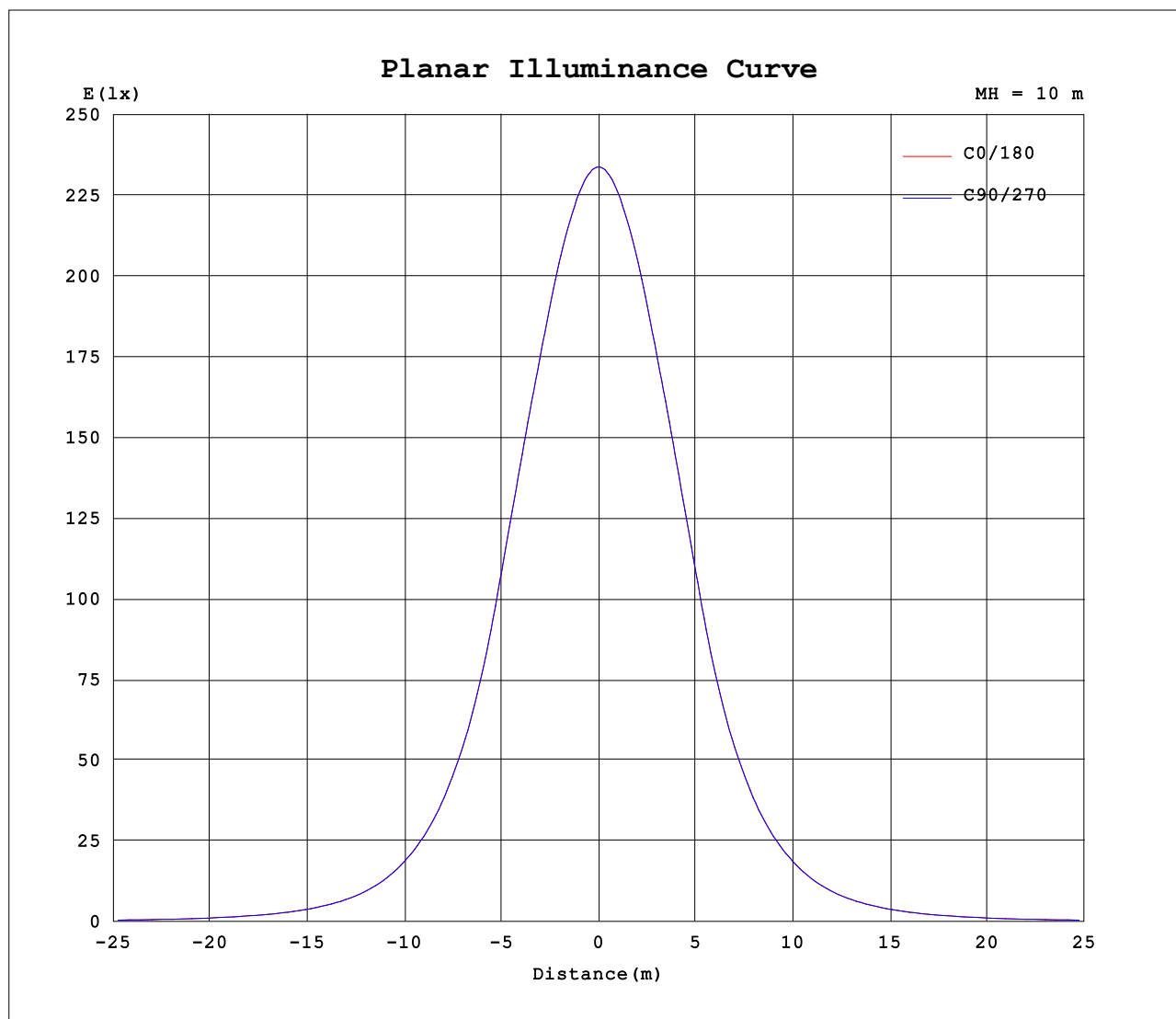
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LTF
Test Date: 2020-06-21

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:

Planar Illuminance Curve



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C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LTF
Test Date: 2020-06-21

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: