

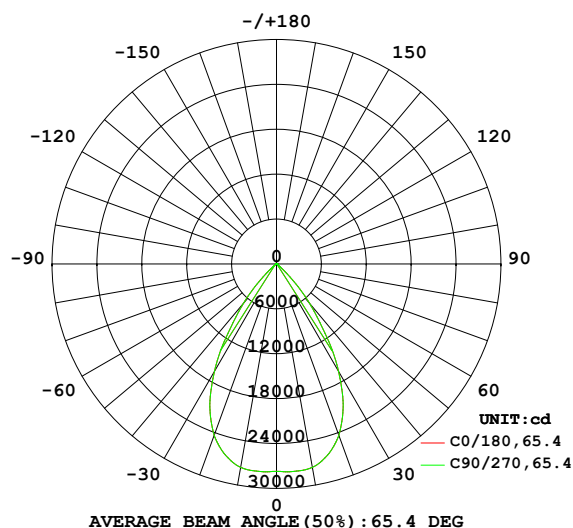
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

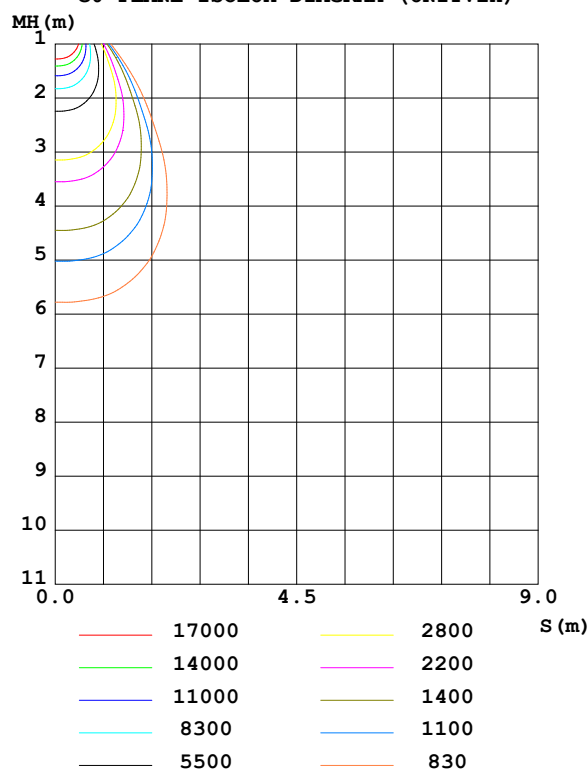
Test:U:230.1V I:0.8980A P:201.46W PF:0.9749 Freq:50.00Hz Lamp Flux:29623.9x1 lm		
NAME: HB01-200-5070-H00C10+H00B20	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 147.05 lm/W			
MODEL	3030	I _{max} (cd)	27829	S/MH (C0/180)	0.96
NOMINAL POWER (W)	200	LOR (%)	100.0	S/MH (C90/270)	0.96
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	29624	η UP,DN (C0-180)	0.0,50.0
NOMINAL FLUX (lm)	29623.9	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	1.00

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 2.5DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:2019-01-11

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:9.470m [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	2761	2761	2761	2761	2761	2761	2761	2761	0- 10	2651	2651	8.95,8.95
20	2436	2436	2436	2436	2436	2436	2436	2436	10- 20	7401	10052	33.9,33.9
30	1659	1659	1659	1659	1659	1659	1659	1659	20- 30	9538	19590	66.1,66.1
40	688.3	688.3	688.3	688.3	688.3	688.3	688.3	688.3	30- 40	7099	26689	90.1,90.1
50	85.72	85.72	85.72	85.72	85.72	85.72	85.72	85.72	40- 50	2553	29243	98.7,98.7
60	8.335	8.335	8.335	8.335	8.335	8.335	8.335	8.335	50- 60	304.7	29547	99.7,99.7
70	3.075	3.075	3.075	3.075	3.075	3.075	3.075	3.075	60- 70	47.40	29595	99.9,99.9
80	1.302	1.302	1.302	1.302	1.302	1.302	1.302	1.302	70- 80	21.93	29617	100,100
90	0.1659	0.1659	0.1659	0.1659	0.1659	0.1659	0.1659	0.1659	80- 90	7.144	29624	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): 28511 lm

%lum = 96.2%

%lamp = 96.2%

Conical surface Flux(120deg): 29547 lm

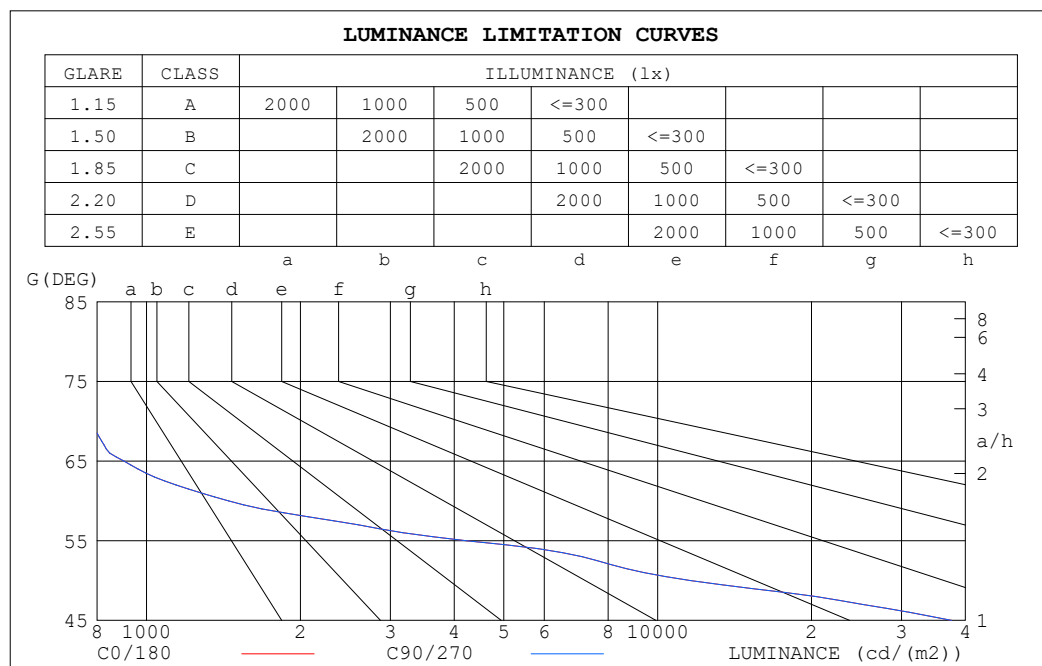
%lum = 99.7%

%lamp = 99.7%

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Test Distance:9.470m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	688	688
80	651	651
75	675	675
70	780	780
65	903	903
60	1447	1447
55	4223	4223
50	11576	11576
45	37574	37574

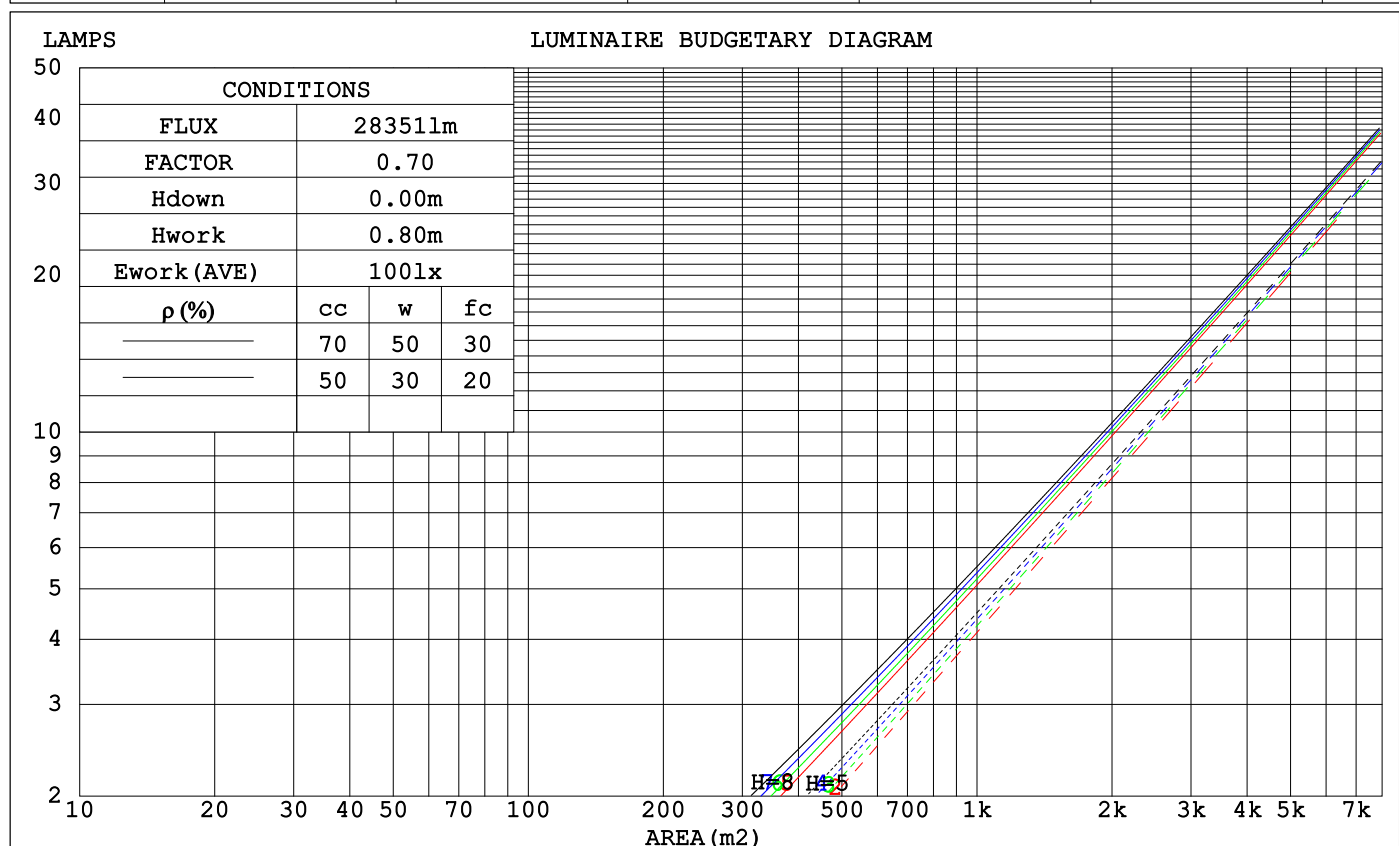
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C Interval: 2.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 2019-01-11

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γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
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Test Distance: 9.470m [K=1.0000]
Remarks:

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	1.11	1.08	1.06	1.08	1.06	1.04	1.04	1.02	1.01	1.01	.99	.98	.97	.96	.95	.93
2.0	1.03	.98	.95	1.01	.97	.94	.98	.94	.92	.95	.92	.90	.92	.90	.88	.86
3.0	.95	.90	.86	.94	.89	.85	.91	.87	.84	.89	.85	.83	.86	.84	.81	.80
4.0	.89	.83	.79	.87	.82	.78	.85	.81	.77	.83	.79	.76	.81	.78	.75	.74
5.0	.83	.77	.72	.82	.76	.72	.80	.75	.71	.78	.74	.71	.77	.73	.70	.68
6.0	.77	.71	.67	.76	.71	.66	.75	.70	.66	.73	.69	.65	.72	.68	.65	.63
7.0	.72	.66	.62	.72	.66	.61	.70	.65	.61	.69	.64	.61	.68	.64	.60	.59
8.0	.68	.62	.57	.67	.61	.57	.66	.61	.57	.65	.60	.57	.64	.60	.56	.55
9.0	.64	.58	.53	.63	.57	.53	.62	.57	.53	.61	.56	.53	.60	.56	.53	.51
10.0	.60	.54	.50	.60	.54	.50	.59	.53	.50	.58	.53	.50	.57	.53	.50	.48



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 Operators:
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 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
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 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

WEC AND CCEC

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						Wall Exitance Coefficients (WEC)										
0.0																	
1.0	.183	.104	.033	.176	.100	.032	.163	.094	.030	.152	.087	.028	.141	.082	.026		
2.0	.176	.096	.030	.170	.094	.029	.160	.089	.028	.150	.084	.026	.141	.080	.025		
3.0	.168	.090	.027	.163	.088	.026	.154	.084	.025	.146	.080	.025	.138	.076	.024		
4.0	.161	.084	.025	.157	.082	.024	.149	.079	.024	.141	.076	.023	.135	.073	.022		
5.0	.154	.078	.023	.150	.077	.022	.143	.075	.022	.137	.072	.021	.131	.070	.021		
6.0	.147	.074	.021	.144	.073	.021	.138	.071	.021	.132	.069	.020	.127	.067	.020		
7.0	.141	.069	.020	.138	.069	.020	.132	.067	.019	.127	.065	.019	.122	.064	.019		
8.0	.135	.066	.018	.132	.065	.018	.127	.064	.018	.123	.062	.018	.118	.061	.018		
9.0	.129	.062	.017	.127	.062	.017	.122	.060	.017	.118	.059	.017	.114	.058	.017		
10.0	.124	.059	.016	.122	.059	.016	.118	.058	.016	.114	.057	.016	.111	.056	.016		

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						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	.100	.093	.086	.058	.054	.050	.019	.017	.016		
2.0	.157	.132	.112	.134	.114	.097	.092	.079	.068	.053	.046	.040	.017	.015	.013		
3.0	.145	.114	.089	.124	.098	.077	.085	.068	.054	.049	.040	.032	.016	.013	.010		
4.0	.135	.099	.071	.116	.086	.062	.080	.060	.044	.046	.035	.026	.015	.011	.009		
5.0	.127	.088	.059	.109	.076	.051	.075	.053	.036	.043	.031	.021	.014	.010	.007		
6.0	.120	.078	.049	.103	.068	.042	.071	.048	.030	.041	.028	.018	.013	.009	.006		
7.0	.113	.071	.041	.098	.061	.036	.067	.043	.025	.039	.025	.015	.013	.008	.005		
8.0	.108	.065	.035	.093	.056	.031	.064	.039	.022	.037	.023	.013	.012	.008	.004		
9.0	.103	.060	.031	.089	.052	.027	.061	.036	.019	.036	.022	.011	.012	.007	.004		
10.0	.098	.055	.027	.085	.048	.023	.059	.034	.017	.034	.020	.010	.011	.007	.003		

C Range: 0 - 360DEG
 C Interval: 2.5DEG
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 Operators:
 Test Date:2019-01-11

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
 Humidity:65.0%
 Test Distance:9.470m [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	2H	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
	3H	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
	4H	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
	6H	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
	8H	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
	12H	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
4H	2H	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
	3H	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
	4H	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
	6H	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
	8H	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
	12H	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
8H	4H	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
	6H	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
	8H	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
	12H	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
12H	4H	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
	6H	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
	8H	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
CIE190: 2010											

CIE190: 2010
Area: 0.1152 m2

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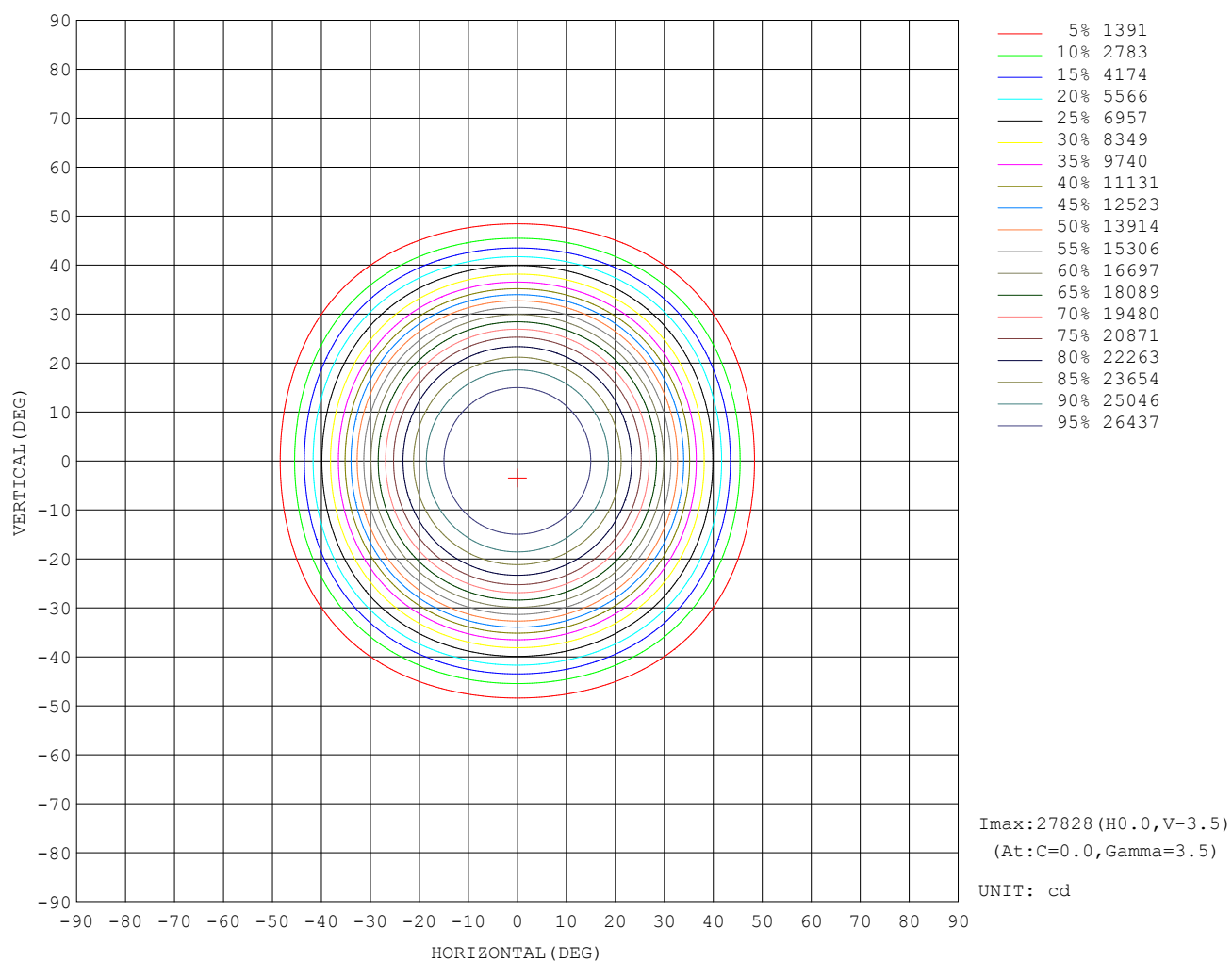
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	85	79	75	85	78	74	84	78	74	71
0.80	93	87	83	92	87	83	91	86	83	79
1.00	98	92	89	97	92	88	96	92	88	84
1.25	102	97	93	101	96	93	99	95	92	88
1.50	105	100	97	104	100	96	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	111	109	107	108	106	104	97
5.00	115	112	110	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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 Humidity: 65.0%
 Test Distance: 9.470m [K=1.0000]
 Remarks:

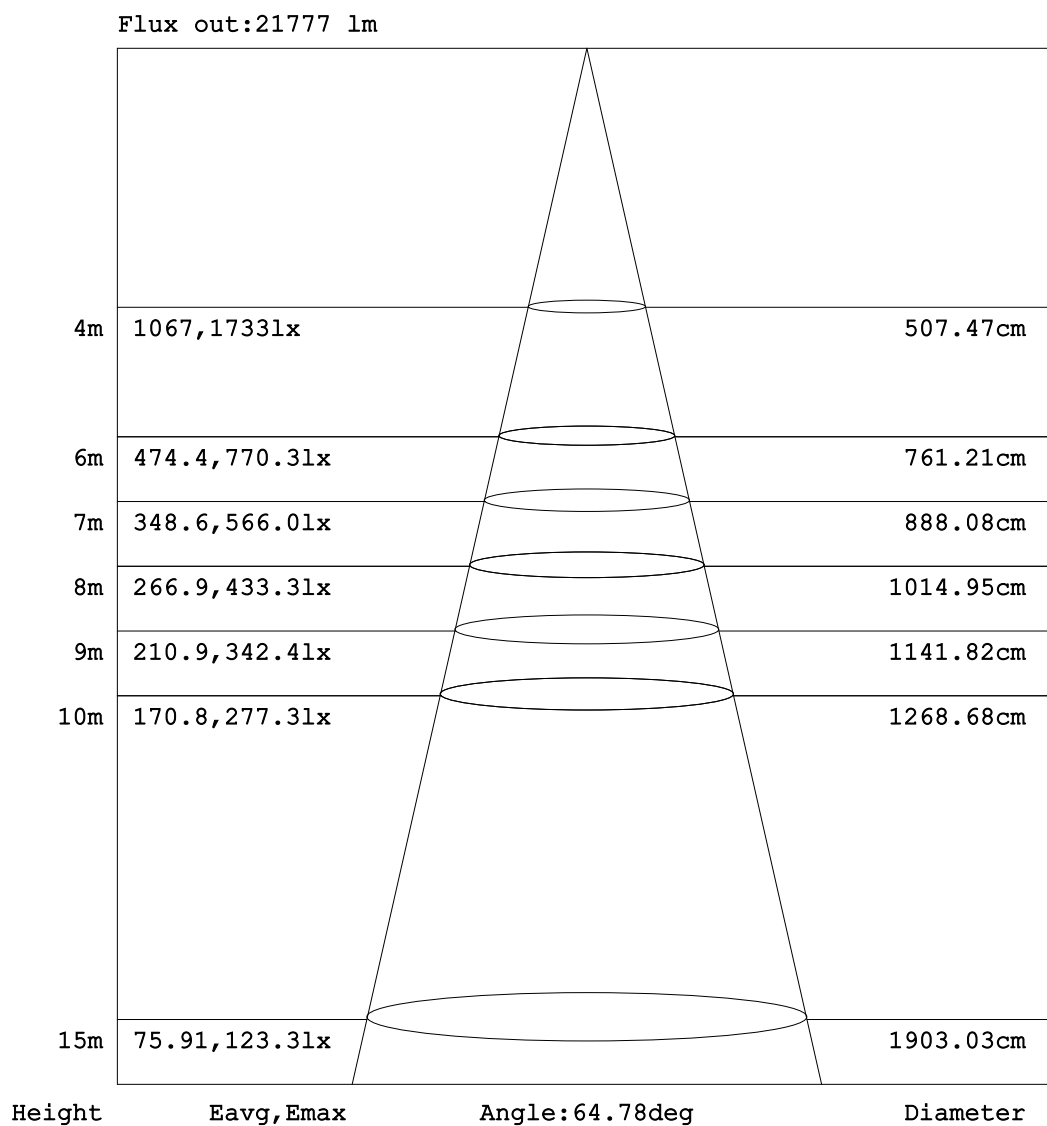
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
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Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 2019-01-11

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 γ Interval: 0.5DEG
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Humidity: 65.0%
Test Distance: 9.470m [K=1.0000]
Remarks:

AAI Figure



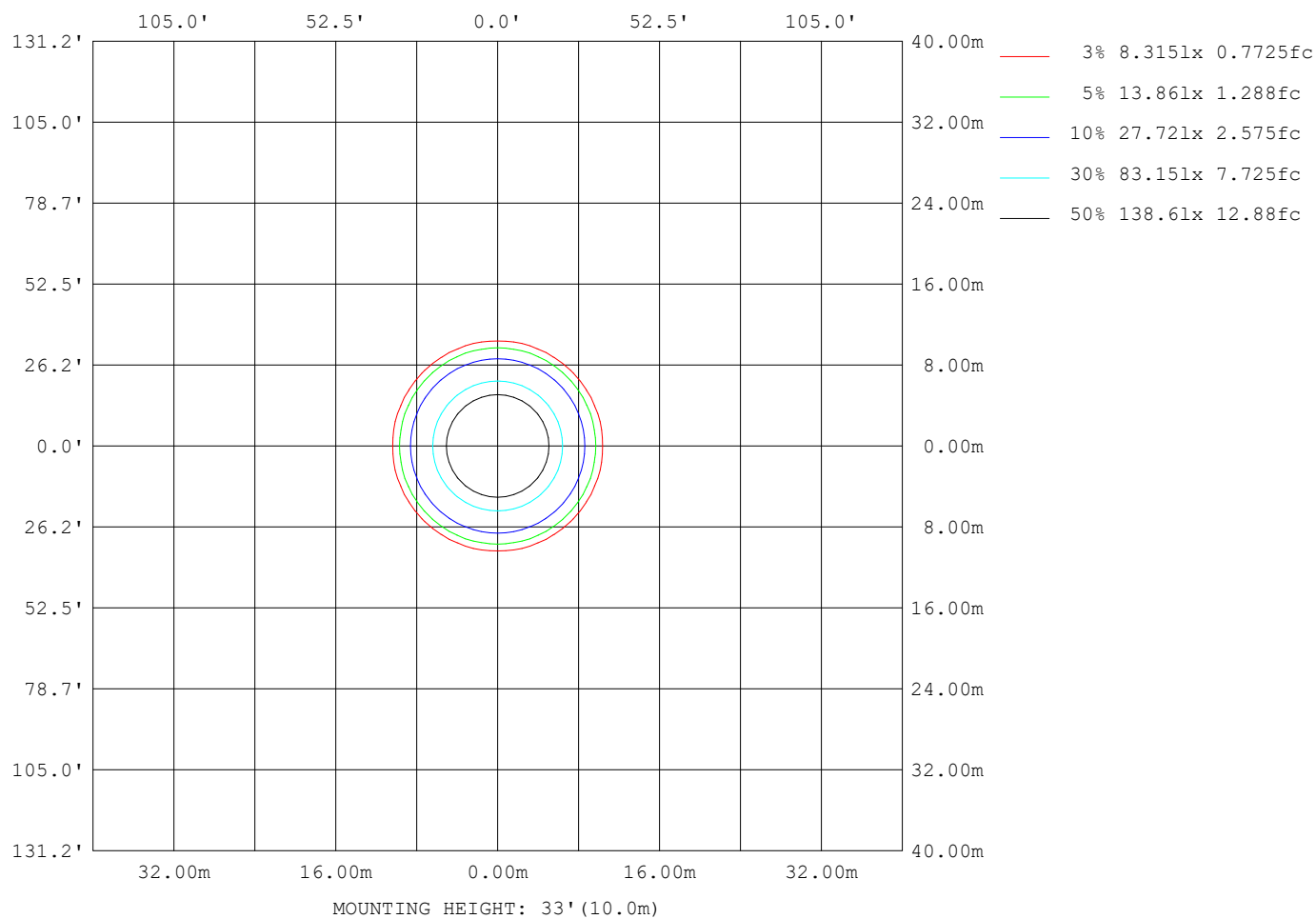
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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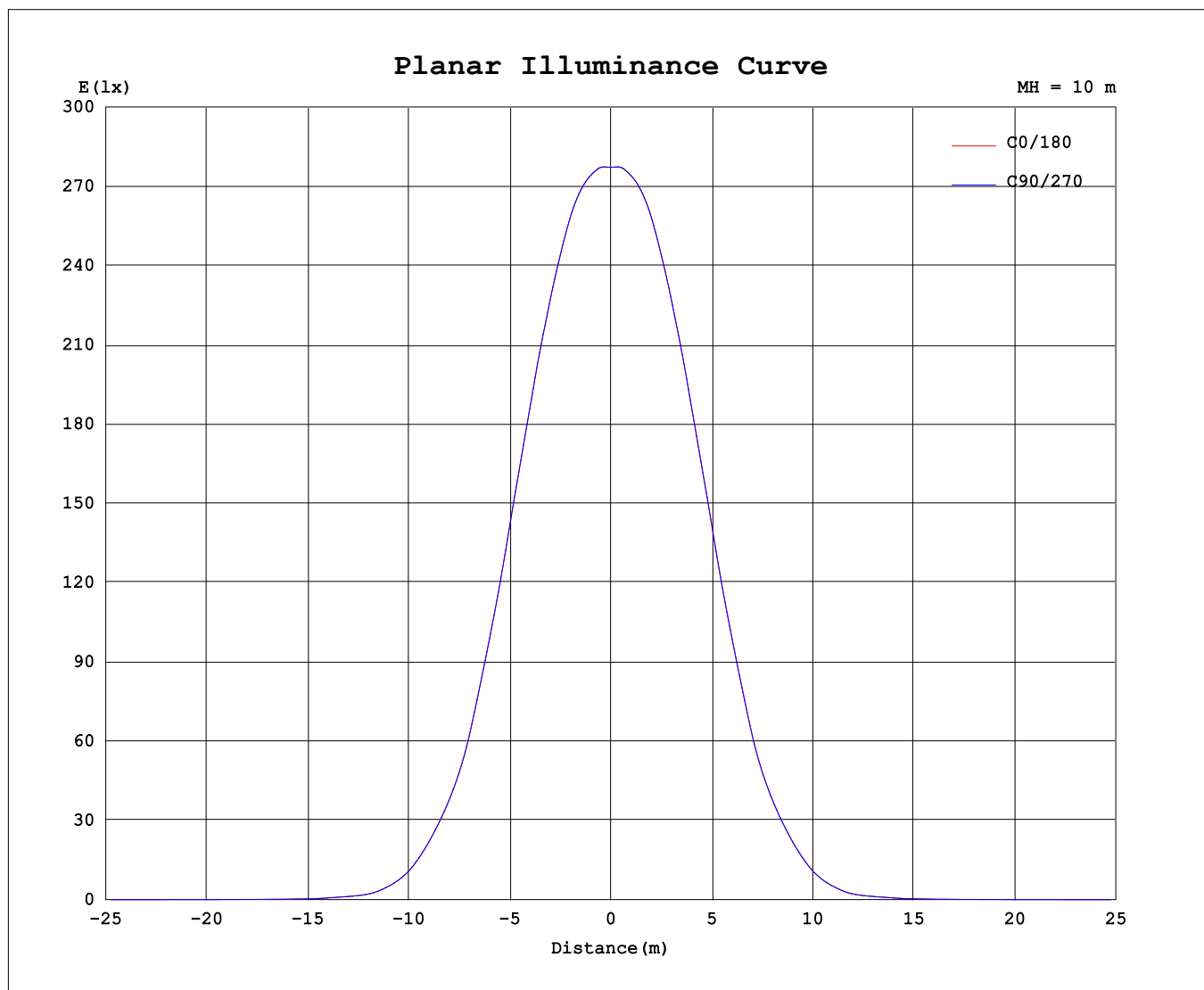
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 2.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 2019-01-11

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 9.470m [K=1.0000]
Remarks:

Planar Illuminance Curve



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Operators:
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γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
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Humidity: 65.0%
Test Distance: 9.470m [K=1.0000]
Remarks: