

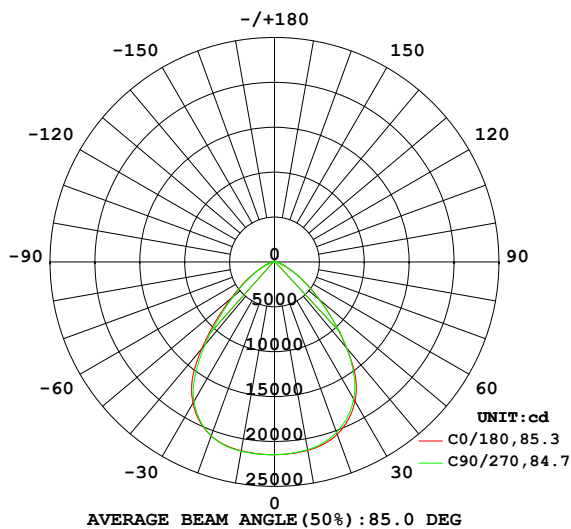
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

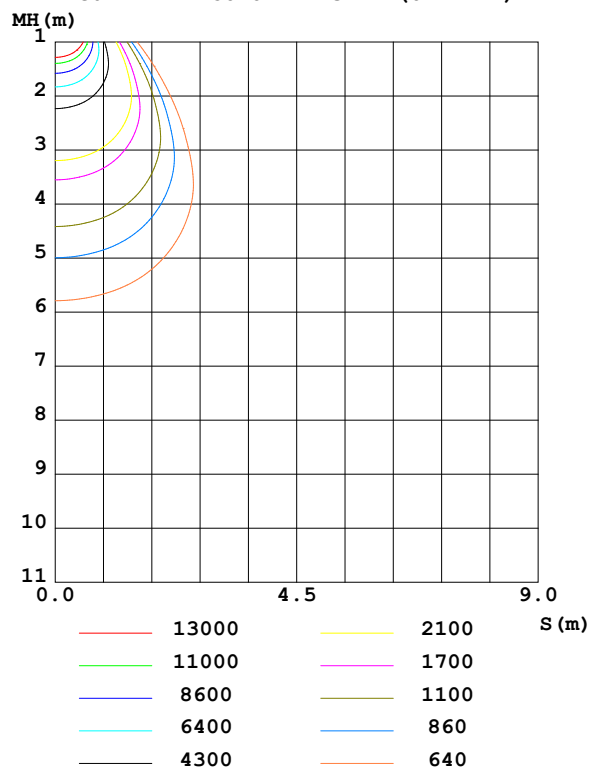
Test:U:229.7V I:0.884A P:199.0W PF:0.980 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:40141x1 lm		
NAME: HB68-200H-5070-H00192	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 201.69 lm/W			
MODEL	/	Imax (cd)	21485	S/MH (C0/180)	1.21
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	1.19
RATED VOLTAGE (V)	/	TOTAL FLUX (lm)	40141	η UP,DN (C0-180)	0.0,50.5
NOMINAL FLUX (lm)	40141	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,49.5
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	/	η down (%)	100.0	CIBSE SHR MAX	1.25

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:LYJ
Test Date:2023-06-02

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4556]
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	2131	2124	2123	2129	2135	2140	2139	2135	0- 10	2042	2042	5.09,5.09
20	2043	2023	2021	2035	2062	2066	2059	2051	10- 20	5938	7980	19.9,19.9
30	1791	1762	1764	1772	1815	1798	1795	1774	20- 30	8899	16878	42,42
40	1245	1228	1253	1212	1258	1179	1204	1168	30- 40	9565	26443	65.9,65.9
50	654.1	685.5	645.5	639.0	630.6	621.8	598.8	613.3	40- 50	6962	33406	83.2,83.2
60	294.8	326.4	288.7	301.7	282.3	290.1	265.5	293.4	50- 60	3991	37397	93.2,93.2
70	103.7	117.6	105.5	109.3	101.5	105.5	98.83	108.2	60- 70	1829	39226	97.7,97.7
80	41.21	45.26	44.43	42.11	39.24	38.42	37.50	39.55	70- 80	729.7	39956	99.5,99.5
90	0.3543	0.6654	0.7547	0.4685	0.2483	0.2004	0.1945	0.2220	80- 90	185.3	40141	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): 30339 lm

%lum = 75.6%

%lamp = 75.6%

Conical surface Flux(120deg): 37397 lm

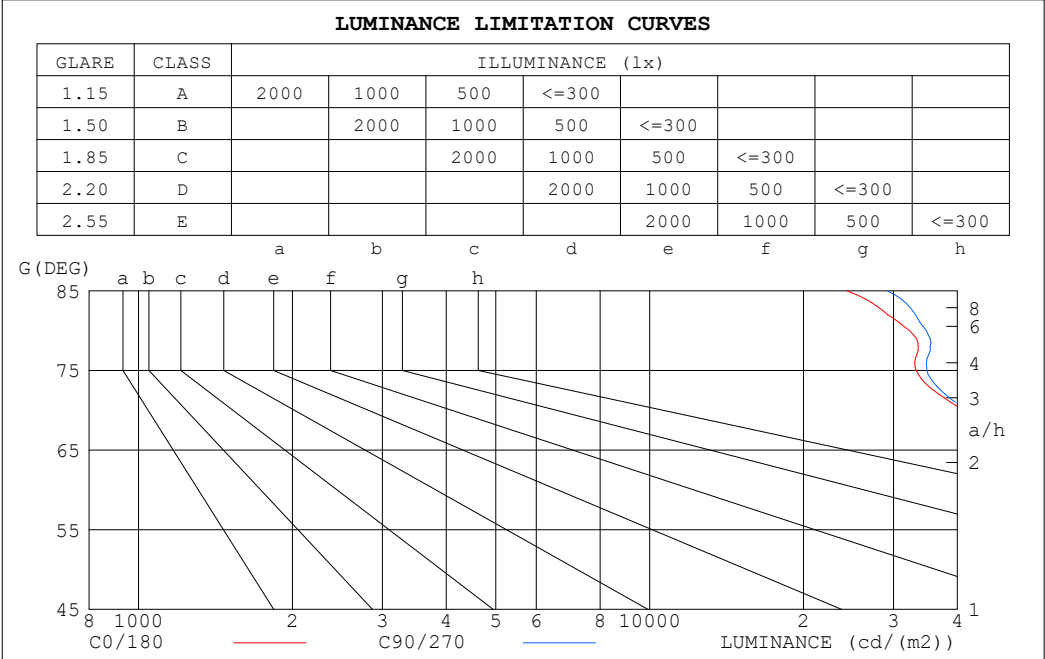
%lum = 93.2%

%lamp = 93.2%

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γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
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Humidity:65.0%
Test Distance:26.000m [K=0.4556]
Remarks:

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	24326	29197
80	32239	34780
75	33230	34876
70	41183	41935
65	57166	56431
60	80103	78484
55	106086	103703
50	138237	136504
45	178627	178711

C Range: 0 - 360DEG

C Interval: 22.5DEG

Test Speed: HIGH

Temperature:25.3℃

Operators:LYJ

Test Date:2023-06-02

γ Range: 0 - 90DEG

γ Interval: 0.5DEG

Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465

Humidity:65.0%

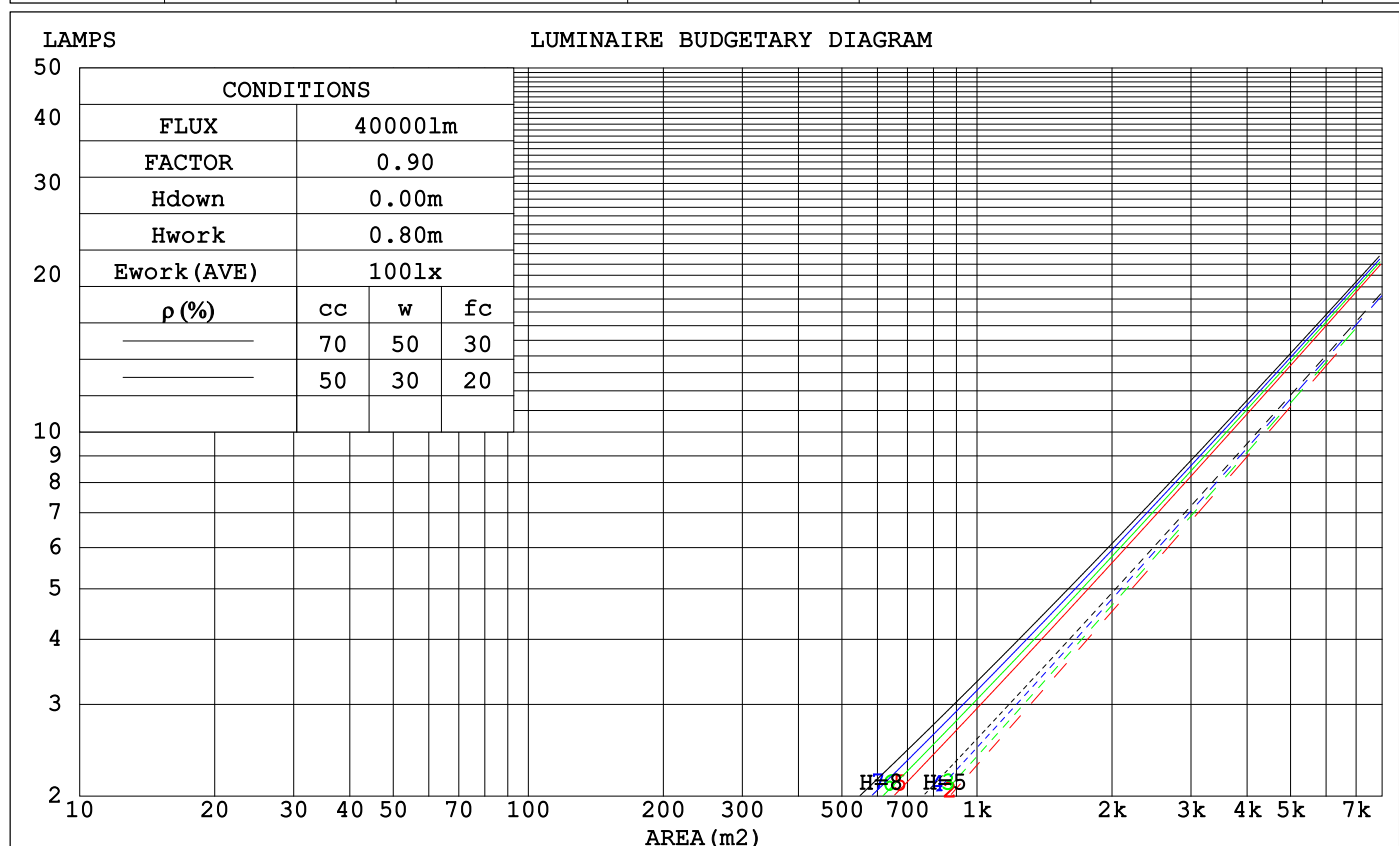
Test Distance:26.000m [K=0.4556]

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	1.08	1.04	1.02	1.06	1.03	.00	1.01	.99	.97	.98	.96	.94	.94	.93	.91	.89
2.0	.97	.92	.87	.95	.90	.86	.92	.88	.84	.89	.85	.82	.86	.83	.81	.79
3.0	.88	.81	.76	.86	.80	.75	.83	.78	.74	.81	.76	.73	.78	.75	.72	.70
4.0	.80	.72	.67	.78	.72	.66	.76	.70	.65	.74	.69	.65	.72	.67	.64	.62
5.0	.72	.65	.59	.71	.64	.59	.69	.63	.58	.68	.62	.58	.66	.61	.57	.55
6.0	.66	.59	.53	.65	.58	.53	.64	.57	.52	.62	.56	.52	.61	.56	.52	.50
7.0	.61	.53	.48	.60	.53	.48	.59	.52	.47	.57	.51	.47	.56	.51	.47	.45
8.0	.56	.49	.43	.55	.48	.43	.54	.48	.43	.53	.47	.43	.52	.47	.43	.41
9.0	.52	.45	.40	.51	.44	.40	.50	.44	.39	.49	.43	.39	.48	.43	.39	.37
10.0	.48	.41	.36	.48	.41	.36	.47	.41	.36	.46	.40	.36	.45	.40	.36	.34



C Range: 0 - 360DEG
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γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
 Humidity:65.0%
 Test Distance:26.000m [K=0.4556]
 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	.235	.134	.042	.228	.130	.041	.215	.124	.039	.204	.117	.038	.193	.112	.036	
2.0	.228	.125	.038	.222	.122	.038	.211	.117	.036	.200	.112	.035	.191	.108	.034	
3.0	.216	.115	.034	.211	.113	.034	.201	.109	.033	.192	.105	.032	.184	.102	.032	
4.0	.204	.106	.031	.200	.105	.031	.191	.101	.030	.183	.099	.030	.176	.096	.029	
5.0	.193	.098	.028	.189	.097	.028	.181	.094	.028	.174	.092	.027	.168	.090	.027	
6.0	.182	.091	.026	.179	.090	.026	.172	.088	.026	.166	.086	.025	.160	.084	.025	
7.0	.172	.085	.024	.169	.084	.024	.163	.082	.024	.157	.081	.023	.152	.079	.023	
8.0	.163	.080	.022	.160	.079	.022	.155	.077	.022	.150	.076	.022	.145	.074	.022	
9.0	.154	.075	.021	.152	.074	.021	.147	.073	.021	.142	.071	.020	.138	.070	.020	
10.0	.147	.070	.020	.144	.070	.019	.140	.069	.019	.136	.067	.019	.132	.066	.019	

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	.175	.157	.140	.150	.135	.121	.103	.093	.083	.059	.054	.049	.019	.017	.016	
2.0	.164	.132	.106	.140	.114	.091	.096	.079	.064	.055	.046	.037	.018	.015	.012	
3.0	.154	.114	.082	.132	.098	.071	.091	.068	.050	.052	.040	.029	.017	.013	.010	
4.0	.146	.100	.065	.125	.086	.056	.086	.060	.040	.050	.035	.024	.016	.011	.008	
5.0	.138	.089	.053	.119	.077	.046	.082	.054	.032	.047	.032	.019	.015	.010	.006	
6.0	.132	.080	.044	.113	.070	.038	.078	.049	.027	.045	.029	.016	.015	.009	.005	
7.0	.125	.073	.037	.108	.064	.032	.074	.045	.023	.043	.026	.014	.014	.009	.004	
8.0	.120	.067	.032	.103	.058	.028	.071	.041	.020	.041	.024	.012	.013	.008	.004	
9.0	.114	.062	.028	.098	.054	.024	.068	.038	.017	.040	.023	.010	.013	.007	.003	
10.0	.109	.058	.024	.094	.051	.021	.065	.036	.015	.038	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:LYJ
 Test Date:2023-06-02

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
 Humidity:65.0%
 Test Distance:26.000m [K=0.4556]
 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	2H	25.9	27.2	26.2	27.5	27.8	26.5	27.8	26.8	28.1	28.4
	3H	26.4	27.6	26.8	28.0	28.3	27.0	28.2	27.4	28.5	28.9
	4H	26.6	27.7	27.0	28.1	28.4	27.1	28.2	27.5	28.6	29.0
	6H	26.7	27.8	27.2	28.1	28.5	27.3	28.3	27.7	28.6	29.0
	8H	26.8	27.7	27.2	28.1	28.5	27.3	28.3	27.7	28.7	29.1
	12H	26.8	27.7	27.2	28.1	28.5	27.3	28.2	27.7	28.6	29.1
	4H	2H	26.2	27.3	26.6	27.6	28.0	26.6	27.7	27.0	28.1
	3H	26.9	27.8	27.3	28.2	28.6	27.3	28.2	27.7	28.6	29.0
	4H	27.1	27.9	27.5	28.3	28.8	27.5	28.3	27.9	28.7	29.2
	6H	27.3	28.0	27.8	28.5	29.0	27.7	28.4	28.2	28.9	29.3
	8H	27.4	28.1	27.9	28.5	29.0	27.8	28.5	28.3	28.9	29.4
	12H	27.4	28.0	27.9	28.5	29.0	27.8	28.4	28.3	28.9	29.4
	8H	4H	27.2	27.8	27.6	28.3	28.7	27.5	28.2	28.0	28.6
	6H	27.5	28.0	28.0	28.5	29.0	27.8	28.4	28.3	28.9	29.4
	8H	27.6	28.1	28.1	28.6	29.1	28.0	28.4	28.5	29.0	29.4
	12H	27.7	28.1	28.2	28.6	29.2	28.1	28.5	28.6	29.0	29.5
	12H	4H	27.2	27.7	27.6	28.2	28.7	27.5	28.1	28.0	28.6
	6H	27.5	28.0	28.0	28.5	29.0	27.8	28.3	28.4	28.8	29.3
	8H	27.7	28.1	28.2	28.6	29.1	28.0	28.4	28.5	28.9	29.5
CIE190: 2010											

CIE190: 2010
Area: 0.07354 m2

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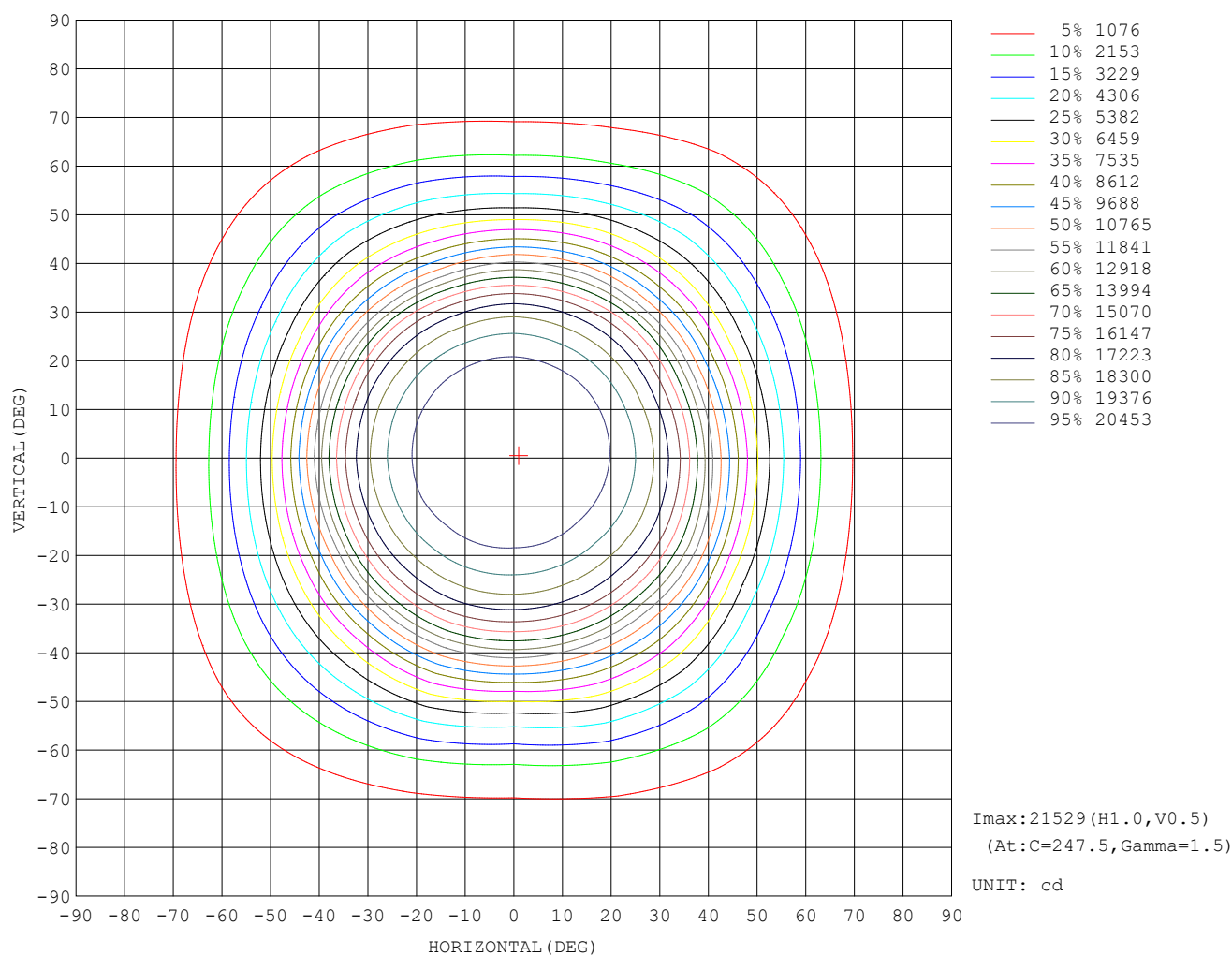
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	70	60	55	69	60	55	68	60	55	49
0.80	80	71	65	79	70	65	77	69	64	59
1.00	87	79	73	86	78	73	84	79	72	67
1.25	93	85	80	92	85	80	90	83	79	73
1.50	97	90	85	96	89	84	93	88	83	77
2.00	102	96	91	101	95	91	98	93	89	83
2.50	105	99	95	103	98	94	100	95	92	85
3.00	107	102	98	105	101	97	102	98	95	88
4.00	110	106	103	108	104	101	104	101	99	91
5.00	112	108	105	110	107	104	105	103	101	92
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 V2.00.465
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4556]
 Remarks:

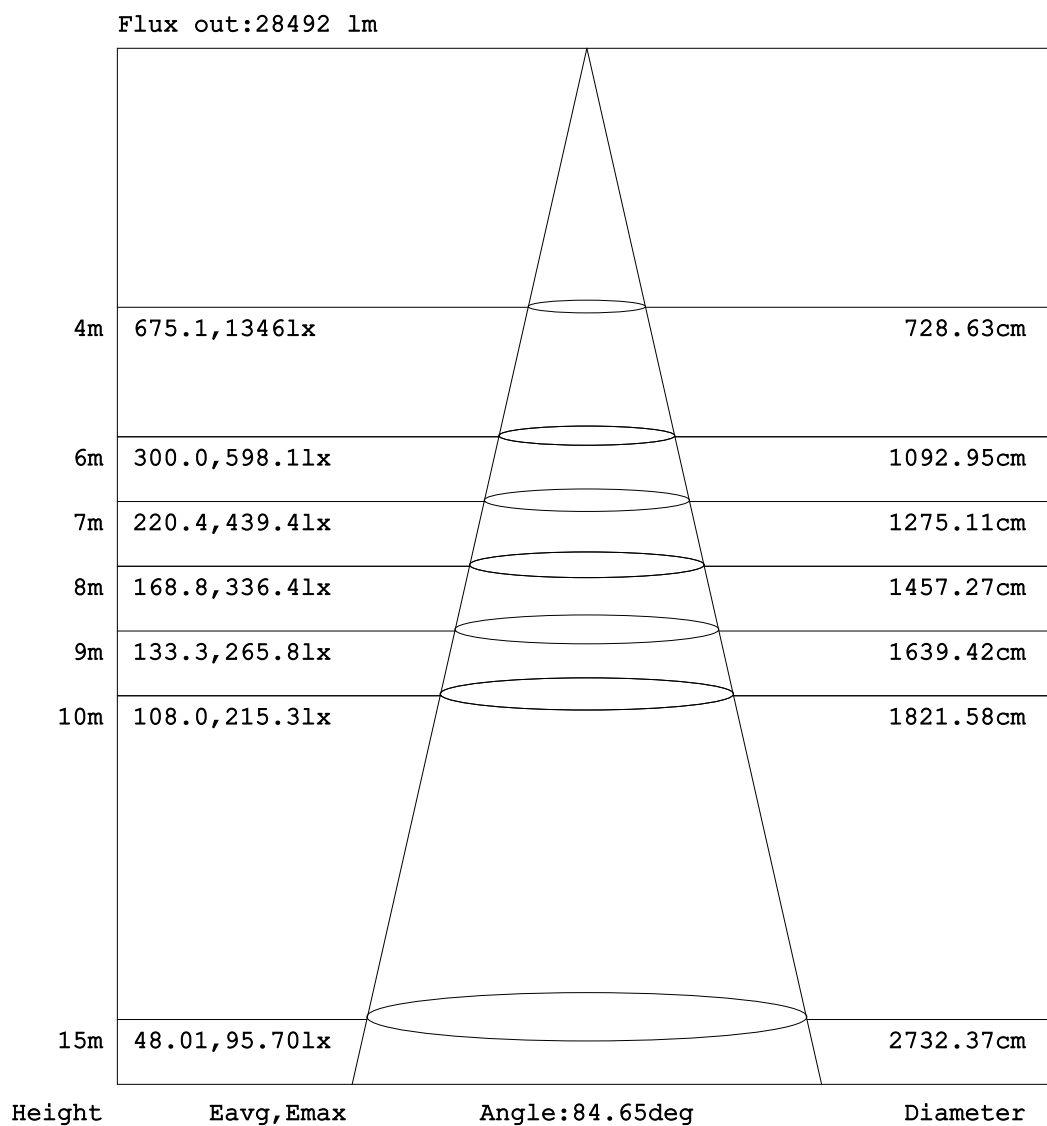
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
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Operators: LYJ
Test Date: 2023-06-02

γ Range: 0 - 90DEG
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Remarks:

AAI Figure



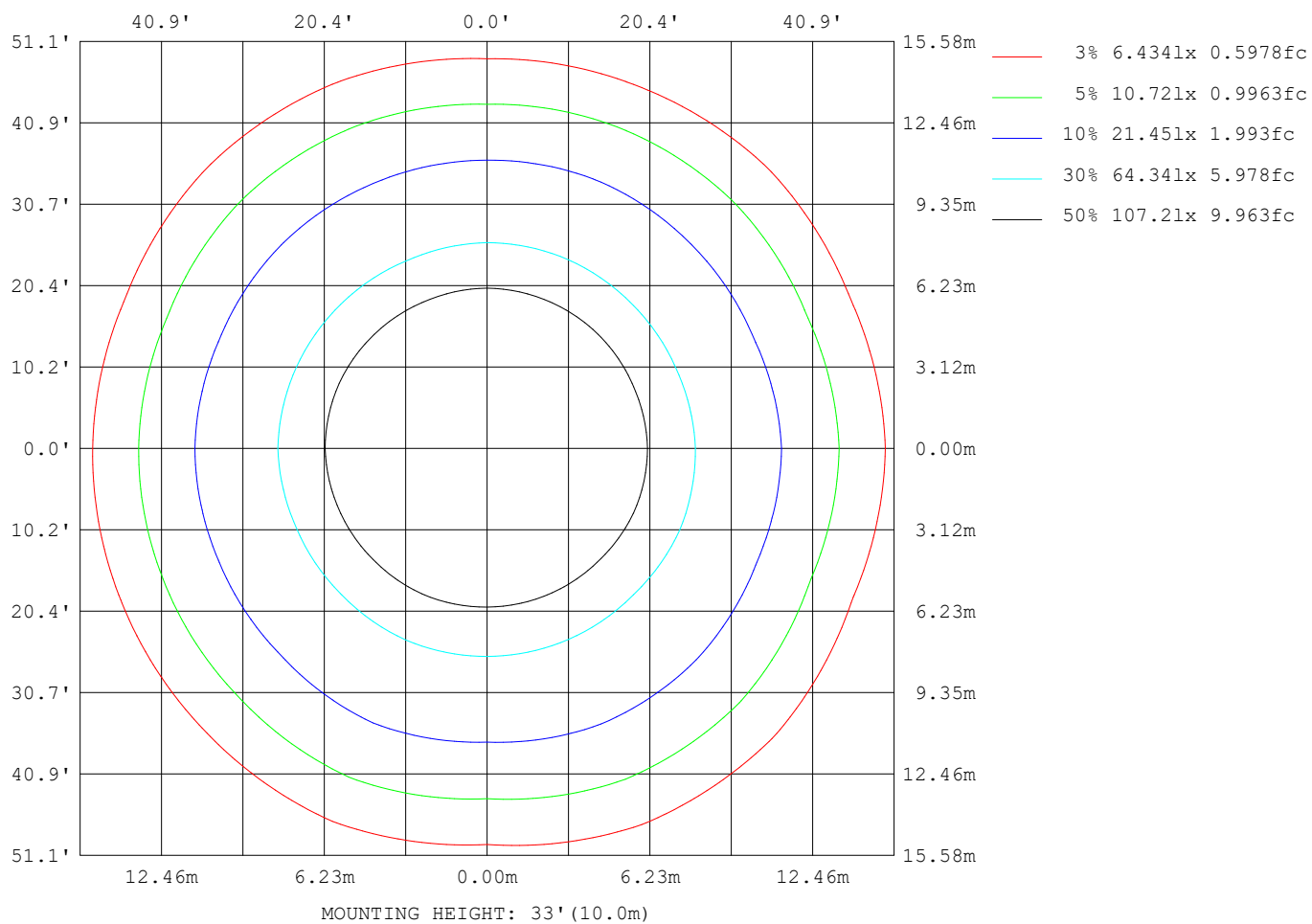
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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C Interval: 22.5DEG
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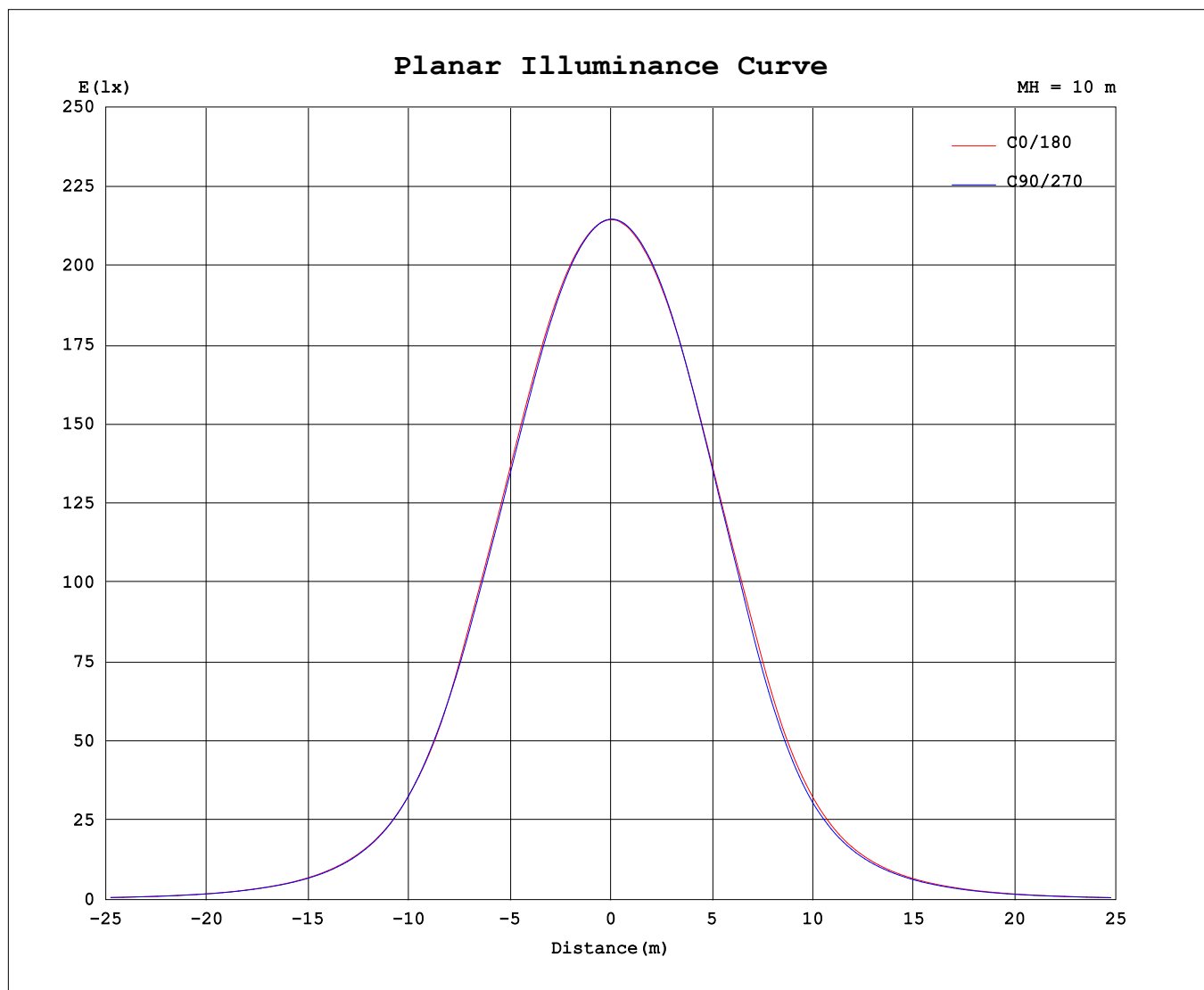
ISOLUX DIAGRAM



C Range: 0 - 360DEG
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Test Speed: HIGH
Temperature: 25.3°C
Operators: LYJ
Test Date: 2023-06-02

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity: 65.0%
Test Distance: 26.000m [K=0.4556]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
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Temperature: 25.3°C
Operators: LYJ
Test Date: 2023-06-02

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity: 65.0%
Test Distance: 26.000m [K=0.4556]
Remarks: