

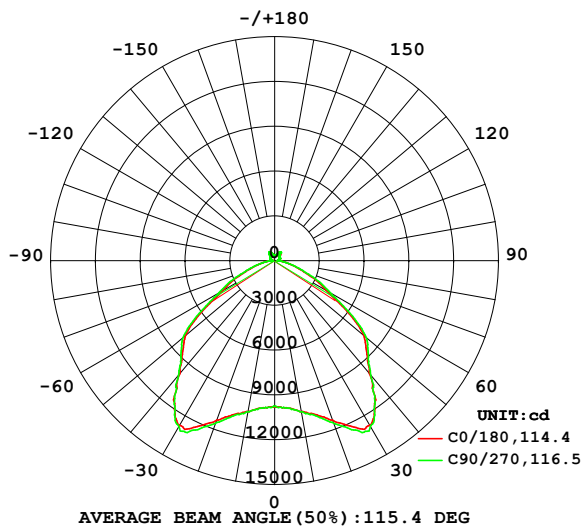
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

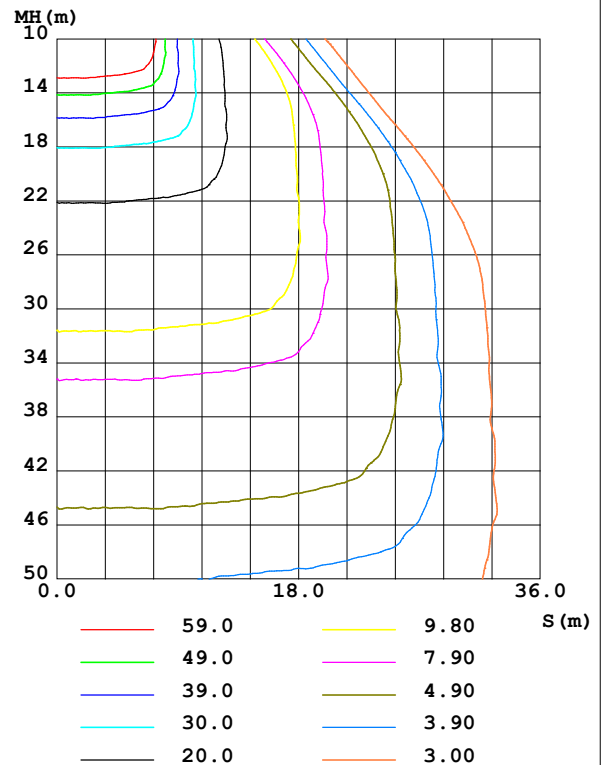
Test:U:229.5V I:0.880A P:197.7W PF:0.979 Freq:50.00Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:36600.7x1 lm		
NAME: HB68-200H-5070-H00191+H00C01B	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 185.14 lm/W			
MODEL	/	I _{max} (cd)	13056	S/MH(C0/180)	1.58
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	1.59
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	36601	η UP,DN(C0-180)	3.3,46.7
NOMINAL FLUX(lm)	36600.7	CIE CLASS	DIRECT	η UP,DN(C180-360)	3.3,46.7
LAMPS INSIDE	1	η up (%)	6.5	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	/	η down (%)	93.5	CIBSE SHR MAX	1.55

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-13

γ Range: 0 - 180DEG
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	1028	1026	1029	1026	1028	1026	1029	1026	0- 10	958.1	958.1	2.62,2.62
20	1138	1144	1160	1144	1138	1144	1160	1144	10- 20	3078	4036	11,11
30	1274	1277	1284	1277	1274	1277	1284	1277	20- 30	5734	9770	26.7,26.7
40	988.6	1015	1001	1015	988.6	1015	1001	1015	30- 40	7269	17038	46.6,46.6
50	778.8	797.3	802.5	797.3	778.8	797.3	802.5	797.3	40- 50	6852	23891	65.3,65.3
60	399.9	409.9	431.4	409.9	399.9	409.9	431.4	409.9	50- 60	5398	29289	80,80
70	193.3	196.9	206.6	196.9	193.3	196.9	206.6	196.9	60- 70	3041	32330	88.3,88.3
80	76.60	75.40	77.92	75.40	76.60	75.40	77.92	75.40	70- 80	1400	33730	92.2,92.2
90	22.77	23.21	23.61	23.21	22.77	23.21	23.61	23.21	80- 90	486.2	34217	93.5,93.5
100	23.20	23.58	23.67	23.58	23.20	23.58	23.67	23.58	90-100	225.3	34442	94.1,94.1
110	33.25	33.43	33.78	33.43	33.25	33.43	33.78	33.43	100-110	298.9	34741	94.9,94.9
120	36.20	37.72	37.27	37.72	36.20	37.72	37.27	37.72	110-120	357.5	35098	95.9,95.9
130	37.17	38.09	38.76	38.09	37.17	38.09	38.76	38.09	120-130	336.4	35435	96.8,96.8
140	56.39	58.66	59.24	58.66	56.39	58.66	59.24	58.66	130-140	351.2	35786	97.8,97.8
150	63.19	64.99	66.54	64.99	63.19	64.99	66.54	64.99	140-150	409.3	36195	98.9,98.9
160	44.98	46.47	46.81	46.47	44.98	46.47	46.81	46.47	150-160	264.8	36460	99.6,99.6
170	32.25	32.16	32.60	32.16	32.25	32.16	32.60	32.16	160-170	109.5	36569	99.9,99.9
180	40.43	36.35	39.85	36.35	40.43	36.35	39.85	36.35	170-180	31.32	36601	100,100
DEG	LUMINOUS INTENSITY:X10cd									UNIT:lm		

Conical surface Flux(90deg): 20501 lm

%lum = 56.0%

%lamp = 56.0%

Conical surface Flux(130deg): 31054 lm

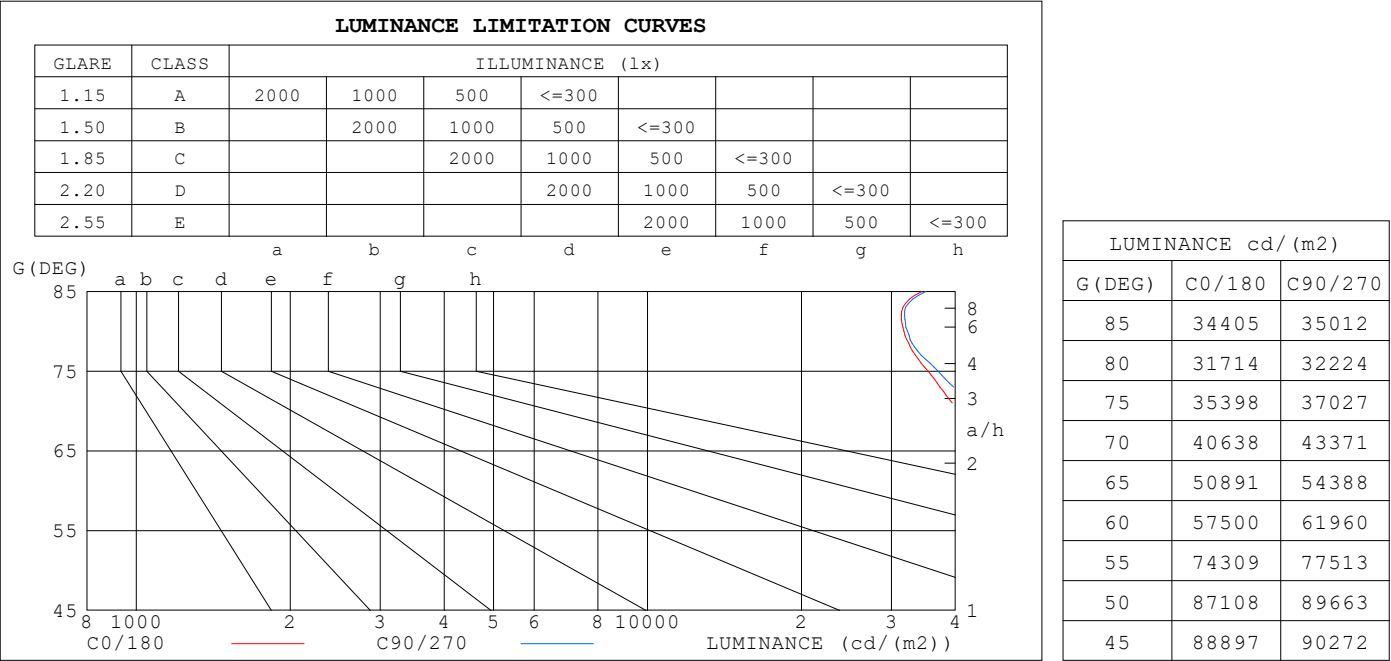
%lum = 84.8%

%lamp = 84.8%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-07-13

γ Range: 0 - 180DEG
 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:

LUMINANCE LIMITATION CURVES



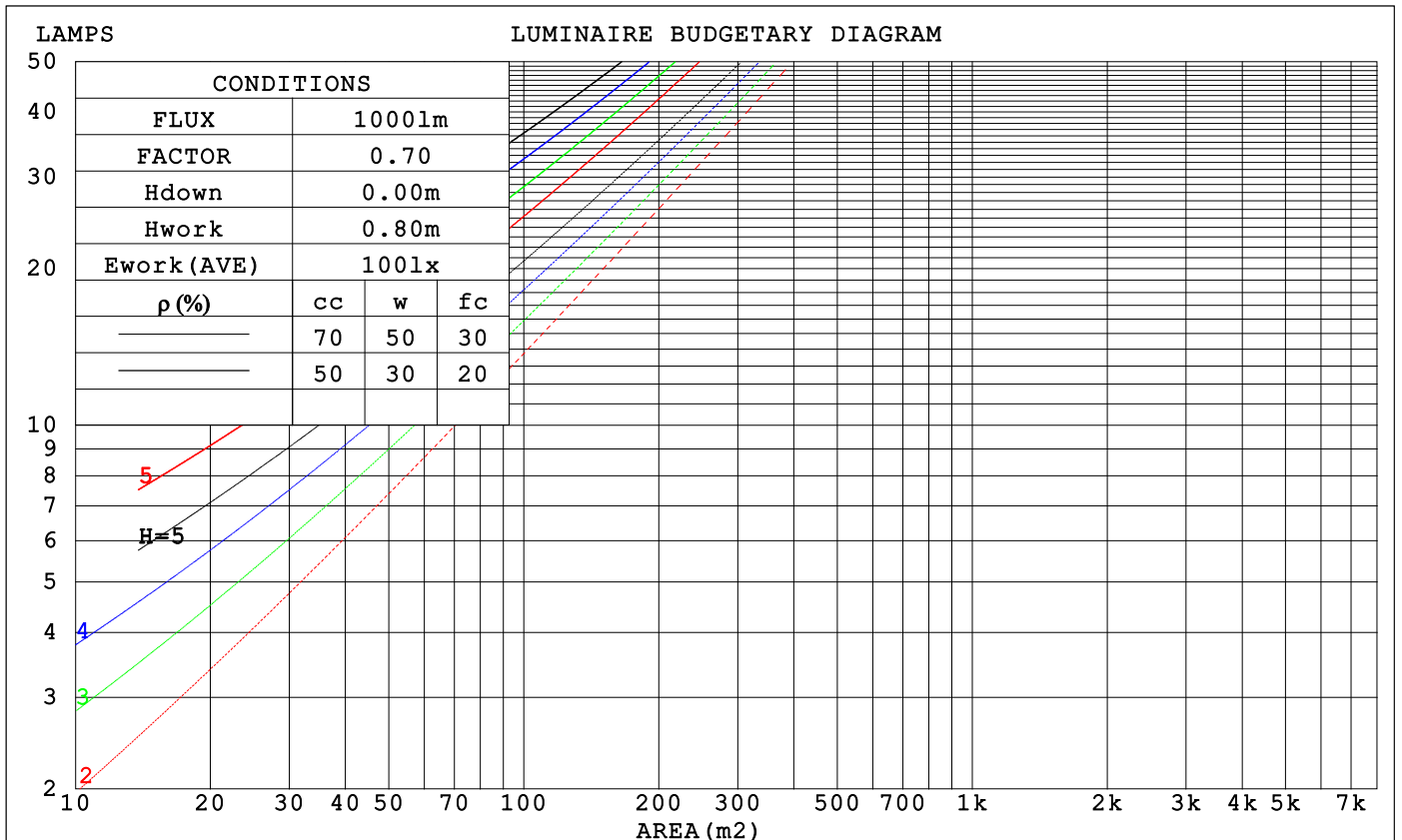
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-13

γ Range: 0 - 180DEG
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	1.17	1.17	1.17	1.14	1.14	1.14	1.07	1.07	1.07	1.02	1.02	1.02	.96	.96	.96	.93
1.0	1.04	.00	.96	1.01	.97	.94	.96	.93	.90	.91	.88	.86	.86	.84	.83	.80
2.0	.91	.85	.80	.89	.83	.78	.84	.80	.76	.80	.76	.73	.76	.73	.70	.68
3.0	.81	.73	.67	.79	.72	.66	.75	.69	.64	.71	.66	.62	.68	.64	.60	.58
4.0	.72	.63	.57	.70	.62	.56	.67	.60	.55	.64	.58	.53	.61	.56	.52	.50
5.0	.64	.56	.49	.63	.55	.49	.60	.53	.48	.57	.51	.46	.55	.50	.45	.43
6.0	.58	.49	.43	.56	.48	.43	.54	.47	.42	.52	.46	.41	.50	.44	.40	.38
7.0	.52	.44	.38	.51	.43	.37	.49	.42	.37	.47	.41	.36	.45	.40	.35	.33
8.0	.48	.39	.34	.47	.39	.33	.45	.38	.33	.43	.37	.32	.41	.36	.32	.30
9.0	.44	.36	.30	.43	.35	.30	.41	.34	.29	.40	.33	.29	.38	.33	.28	.27
10.0	.40	.32	.27	.39	.32	.27	.38	.31	.26	.36	.30	.26	.35	.30	.26	.24



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-13

γ Range: 0 - 180DEG
 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	.281	.160	.051	.272	.155	.049	.256	.147	.047	.240	.138	.044	.226	.131	.042	
2.0	.268	.147	.045	.260	.143	.044	.245	.136	.042	.231	.130	.041	.219	.124	.039	
3.0	.251	.134	.040	.244	.131	.039	.231	.125	.038	.218	.120	.037	.207	.115	.035	
4.0	.234	.122	.036	.228	.119	.035	.216	.115	.034	.205	.110	.033	.195	.106	.032	
5.0	.219	.111	.032	.213	.109	.032	.202	.105	.031	.192	.101	.030	.183	.098	.029	
6.0	.204	.102	.029	.199	.101	.029	.190	.097	.028	.180	.094	.028	.172	.091	.027	
7.0	.191	.095	.027	.187	.093	.027	.178	.090	.026	.170	.087	.025	.162	.084	.025	
8.0	.180	.088	.025	.175	.086	.024	.167	.084	.024	.160	.081	.023	.153	.078	.023	
9.0	.169	.082	.023	.165	.081	.023	.158	.078	.022	.151	.076	.022	.145	.073	.021	
10.0	.160	.076	.021	.156	.075	.021	.149	.073	.021	.143	.071	.020	.137	.069	.020	

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	.240	.240	.240	.205	.205	.205	.140	.140	.140	.080	.080	.080	.026	.026	.026	
1.0	.228	.206	.187	.195	.177	.161	.134	.122	.111	.077	.071	.065	.025	.023	.021	
2.0	.219	.182	.151	.188	.157	.131	.129	.109	.091	.074	.063	.053	.024	.020	.017	
3.0	.211	.165	.128	.181	.142	.111	.124	.099	.078	.072	.058	.046	.023	.019	.015	
4.0	.204	.152	.111	.175	.131	.097	.120	.091	.068	.070	.053	.040	.022	.017	.013	
5.0	.197	.141	.100	.169	.122	.087	.117	.085	.061	.068	.050	.036	.022	.016	.012	
6.0	.190	.133	.092	.164	.115	.080	.113	.081	.056	.065	.047	.034	.021	.015	.011	
7.0	.184	.126	.086	.158	.109	.075	.109	.077	.053	.064	.045	.031	.021	.015	.010	
8.0	.178	.120	.081	.153	.104	.071	.106	.073	.050	.062	.043	.030	.020	.014	.010	
9.0	.172	.116	.077	.148	.100	.067	.103	.070	.048	.060	.042	.029	.019	.014	.009	
10.0	.167	.111	.074	.144	.097	.065	.100	.068	.046	.058	.040	.028	.019	.013	.009	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:ZZX
 Test Date:2023-07-13

γ Range: 0 - 180DEG
 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

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	25.8	27.2	26.3	27.7	28.1	26.1	27.5	26.5	27.9	28.4
3H	26.9	28.2	27.4	28.6	29.2	27.1	28.4	27.6	28.8	29.3
4H	27.3	28.5	27.8	28.9	29.5	27.4	28.6	27.9	29.1	29.6
6H	27.5	28.6	28.0	29.1	29.7	27.7	28.8	28.2	29.3	29.8
8H	27.6	28.7	28.1	29.2	29.7	27.8	28.8	28.3	29.3	29.9
12H	27.7	28.7	28.2	29.2	29.8	27.8	28.9	28.4	29.4	29.9
4H 2H	26.2	27.4	26.7	27.9	28.4	26.4	27.6	26.9	28.1	28.6
3H	27.5	28.5	28.0	29.0	29.6	27.6	28.6	28.1	29.1	29.7
4H	28.0	28.9	28.5	29.4	30.0	28.1	29.0	28.6	29.5	30.1
6H	28.3	29.1	28.9	29.7	30.3	28.4	29.2	29.0	29.8	30.4
8H	28.5	29.2	29.0	29.7	30.4	28.6	29.3	29.1	29.8	30.5
12H	28.6	29.2	29.2	29.8	30.4	28.7	29.3	29.3	29.9	30.5
8H 4H	28.1	28.8	28.7	29.4	30.0	28.2	28.9	28.8	29.5	30.1
6H	28.6	29.2	29.2	29.8	30.4	28.7	29.3	29.3	29.9	30.5
8H	28.8	29.3	29.4	29.9	30.6	28.9	29.4	29.5	30.0	30.6
12H	29.0	29.5	29.6	30.1	30.8	29.1	29.5	29.7	30.1	30.8
12H 4H	28.1	28.8	28.7	29.4	30.0	28.2	28.9	28.8	29.5	30.1
6H	28.6	29.1	29.2	29.7	30.4	28.7	29.2	29.3	29.8	30.5
8H	28.8	29.3	29.4	29.9	30.6	28.9	29.4	29.5	30.0	30.7
CIE190: 2010										

CIE190: 2010
Area: 0.1392 m2

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-13

γ Range: 0 - 180DEG
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

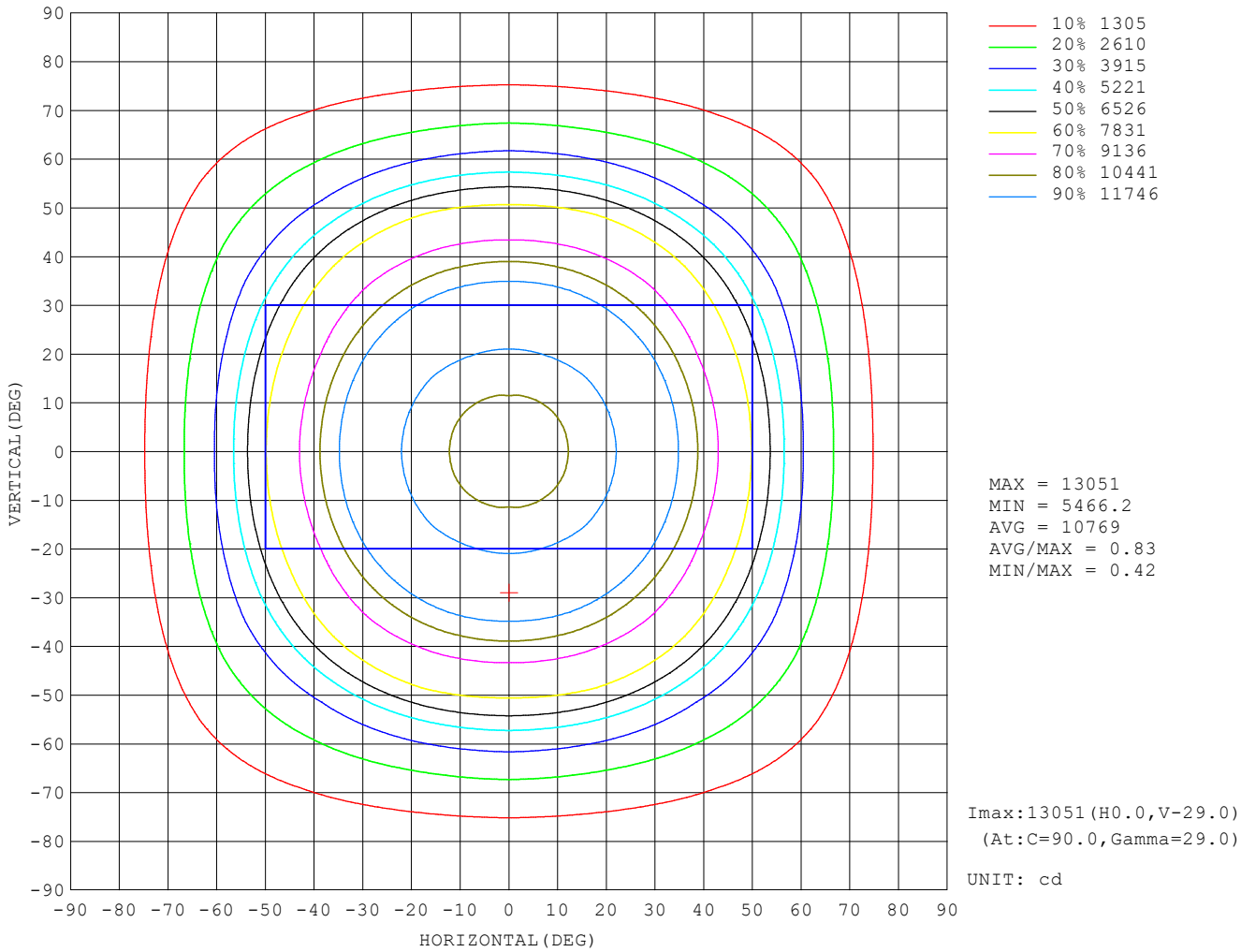
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	58	47	40	57	47	40	56	46	40	33
0.80	68	57	50	67	57	50	65	56	49	42
1.00	77	66	60	75	66	59	73	66	58	51
1.25	84	74	67	82	73	67	79	71	66	58
1.50	89	80	73	87	78	72	83	76	71	63
2.00	95	87	81	93	86	80	89	83	78	69
2.50	99	92	86	96	90	85	92	86	82	73
3.00	102	96	90	99	94	89	94	90	86	76
4.00	106	100	96	103	98	94	98	94	90	80
5.00	108	103	99	105	101	97	99	96	93	82
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: ZZX
 Test Date: 2023-07-13

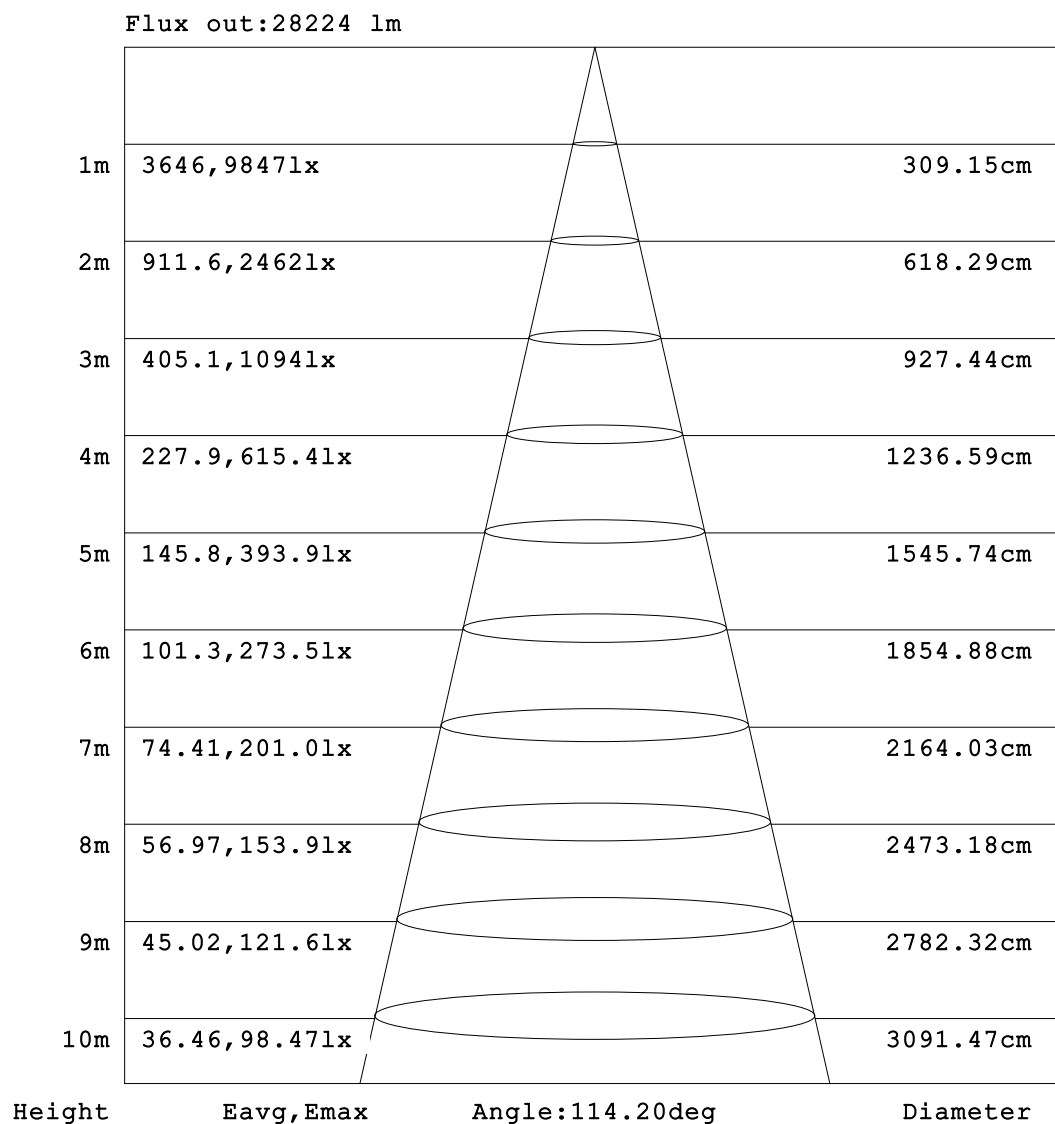
γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.465
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4556]
 Remarks:

ISOCANDELA DIAGRAM



C Range: 0 - 360DEG	γ Range: 0 - 180DEG
C Interval: 22.5DEG	γ Interval: 0.5DEG
Test Speed: HIGH	Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Temperature:25.3°C	Humidity:65.0%
Operators:ZZX	Test Distance:26.000m [K=0.4556]
Test Date:2023-07-13	Remarks:

AAI Figure



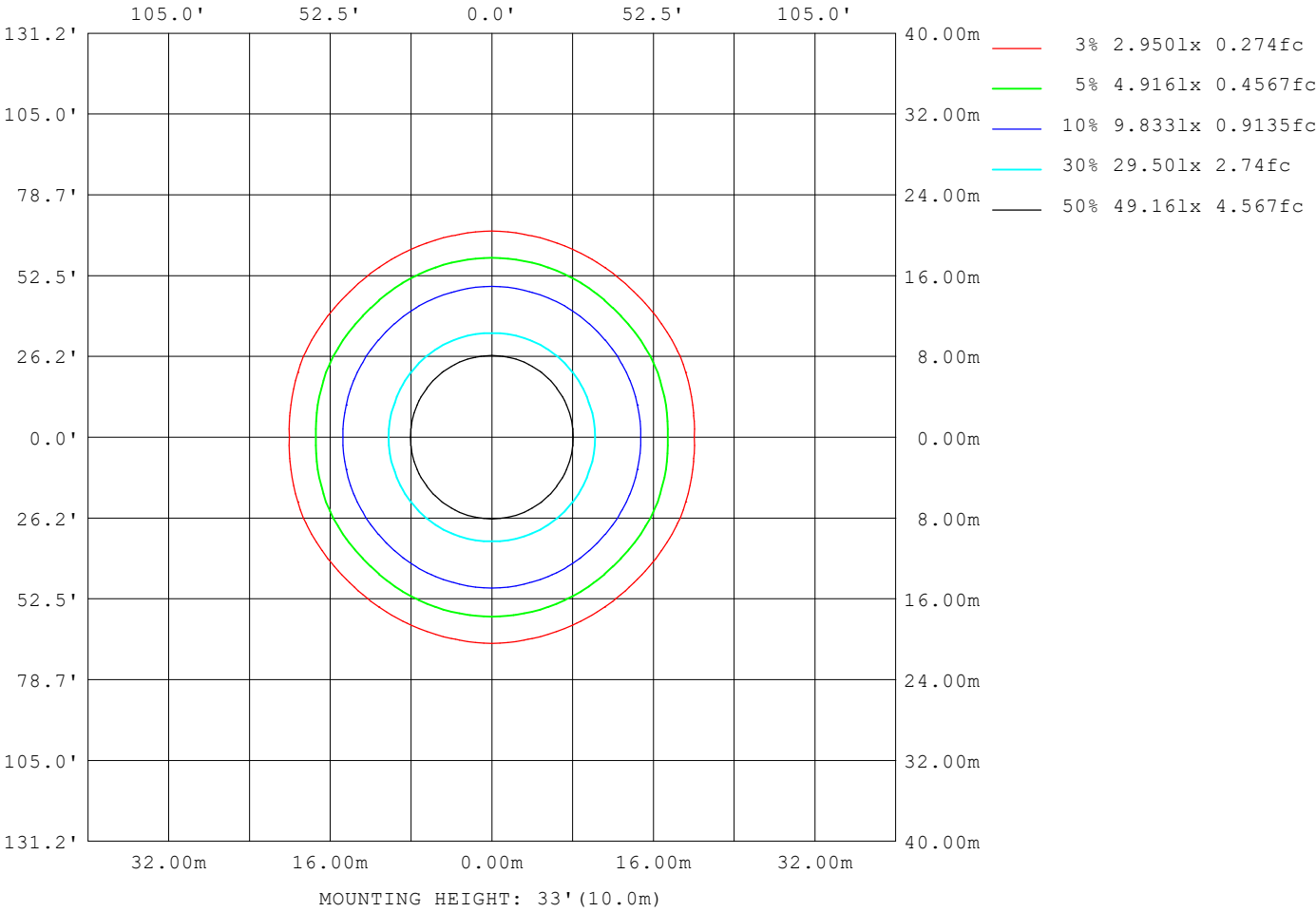
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-13

γ Range: 0 - 180DEG
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

ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZK
Test Date: 2023-07-13

γ Range: 0 - 180DEG
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

LED Avg.L Report

Test:U:229.5V I:0.880A P:197.7W PF:0.979 Freq:50.00Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:36600.7x1 lm		
NAME: HB68-200H-5070-H00191+H00C01B	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

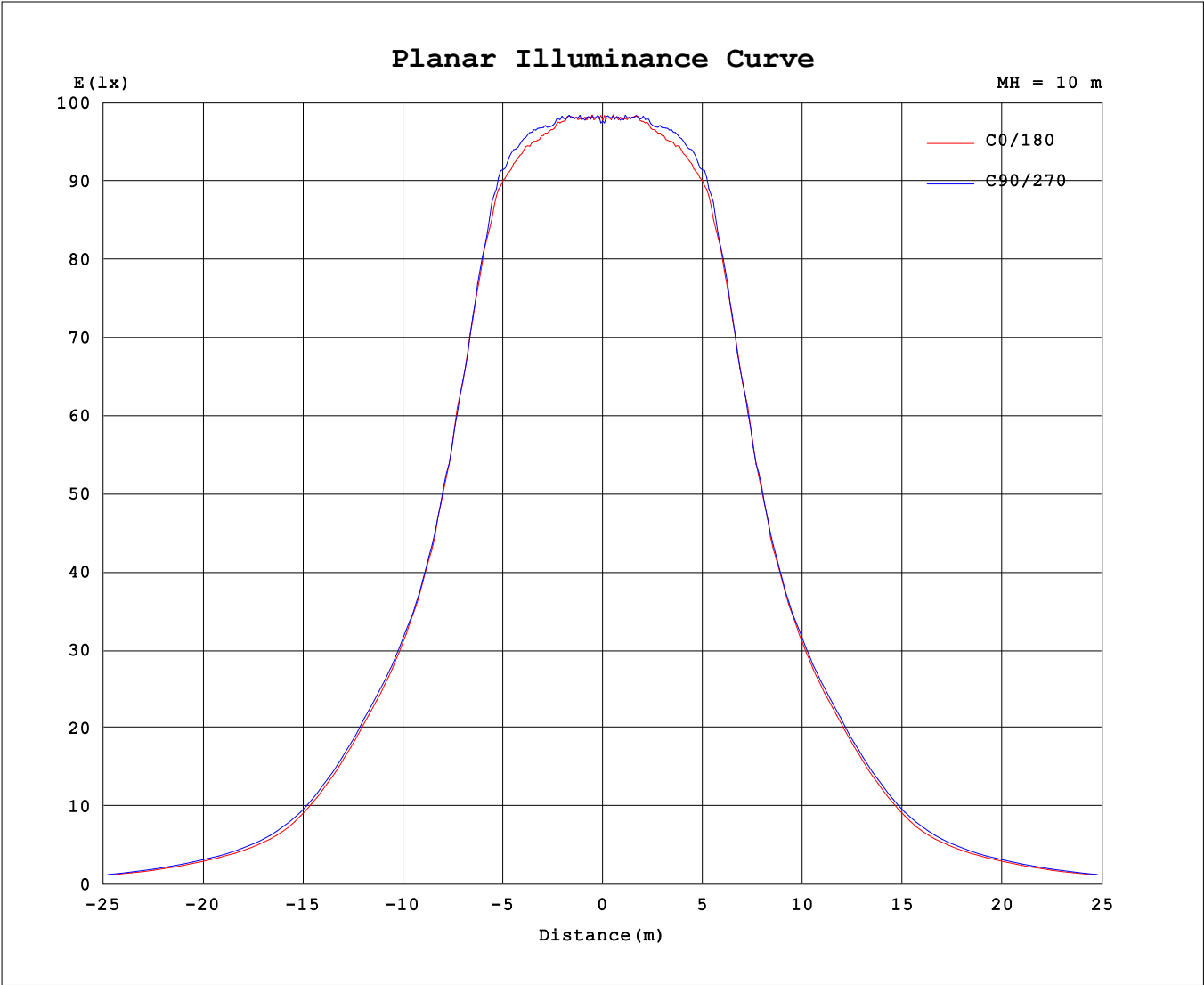
AvgL	cd/m2
L_0~180 (65) av	50850
L_0~180 (75) av	35370
L_0~180 (85) av	34377
L_90~270 (65) av	54407
L_90~270 (75) av	37040
L_90~270 (85) av	35024
L_45 (65) av	51734
L_45 (75) av	35523
L_45 (85) av	34089

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-13

γ Range: 0 - 180DEG
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
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-07-13

γ Range: 0 - 180DEG
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: