

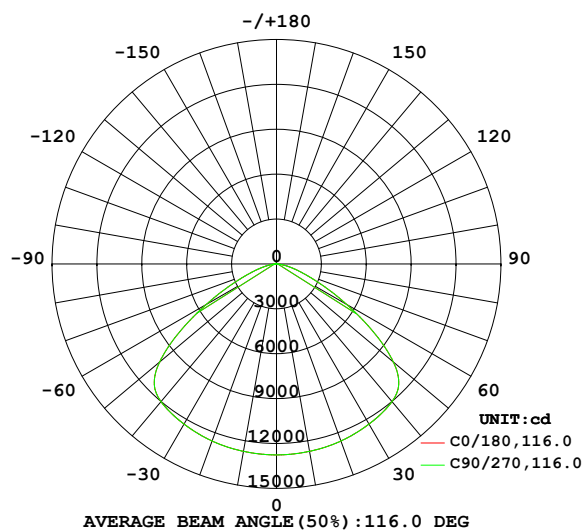
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

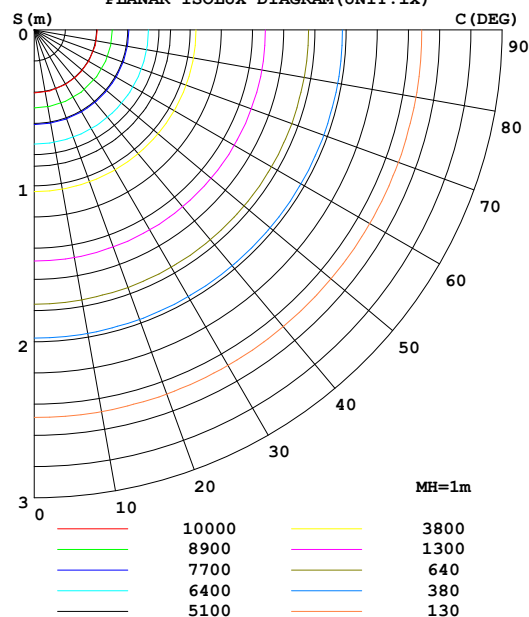
Test:U:230.0V I:1.054A P:240.0W PF:0.990 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:39027.5x1 lm		
NAME: HB74-240-5080-H00219	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 162.61 lm/W			
MODEL	/	Imax (cd)	12762	S/MH (C0/180)	1.47
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	1.47
RATED VOLTAGE (V)	/	TOTAL FLUX (lm)	39028	η UP,DN (C0-180)	0.0,50.0
NOMINAL FLUX (lm)	39027.5	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,50.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.50
TEST VOLTAGE (V)	/	η down (%)	100.0	CIBSE SHR MAX	1.55

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



PLANAR ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-10-09

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=0.4559]
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	1272	1272	1272	1272	1272	1272	1272	1272	0- 10	1216	1216	3.12,3.12
20	1259	1259	1259	1259	1259	1259	1259	1259	10- 20	3588	4803	12.3,12.3
30	1236	1236	1236	1236	1236	1236	1236	1236	20- 30	5774	10577	27.1,27.1
40	1201	1201	1201	1201	1201	1201	1201	1201	30- 40	7662	18240	46.7,46.7
50	1019	1019	1019	1019	1019	1019	1019	1019	40- 50	8801	27040	69.3,69.3
60	542.8	542.8	542.8	542.8	542.8	542.8	542.8	542.8	50- 60	7012	34052	87.3,87.3
70	203.3	203.3	203.3	203.3	203.3	203.3	203.3	203.3	60- 70	3479	37531	96.2,96.2
80	56.18	56.18	56.18	56.18	56.18	56.18	56.18	56.18	70- 80	1263	38794	99.4,99.4
90	0.3538	0.3538	0.3538	0.3538	0.3538	0.3538	0.3538	0.3538	80- 90	233.4	39028	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): 22614 lm

%lum = 57.9%

%lamp = 57.9%

Conical surface Flux(130deg): 36180 lm

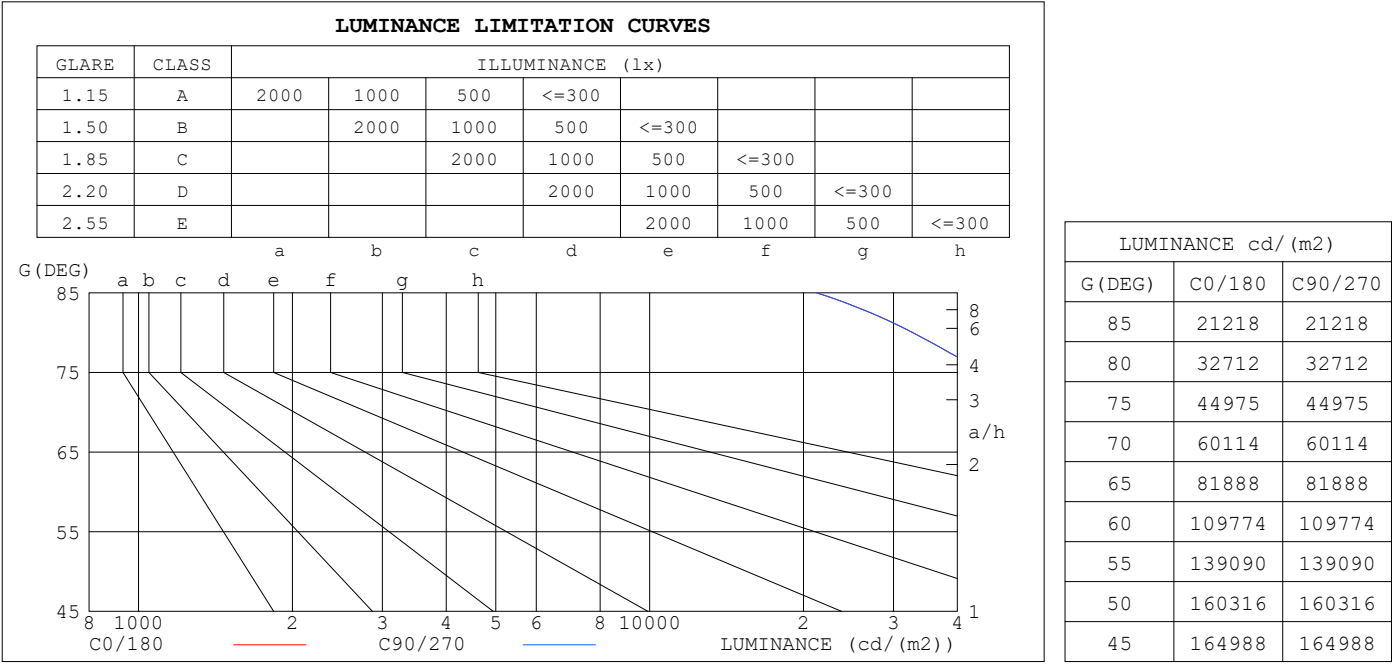
%lum = 92.7%

%lamp = 92.7%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-10-09

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=0.4559]
Remarks:

LUMINANCE LIMITATION CURVES



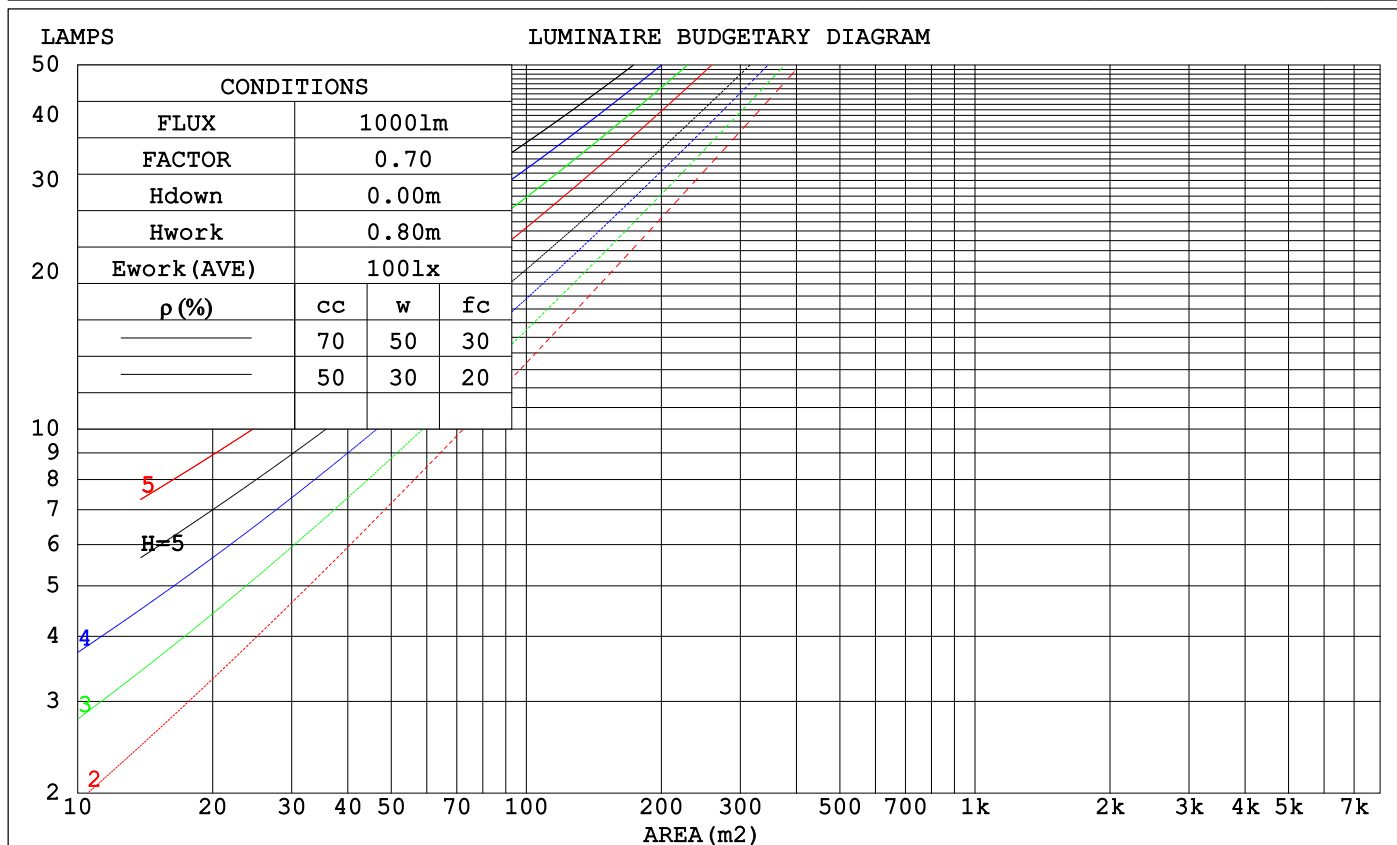
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-10-09

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=0.4559]
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	1.06	1.02	.99	1.04	1.00	.97	.99	.96	.94	.95	.93	.91	.92	.90	.88	.86
2.0	.93	.87	.82	.91	.85	.81	.88	.83	.79	.85	.80	.77	.82	.78	.75	.73
3.0	.82	.74	.68	.81	.74	.68	.78	.72	.67	.75	.70	.65	.72	.68	.64	.62
4.0	.73	.65	.58	.72	.64	.58	.69	.62	.57	.67	.61	.56	.65	.60	.55	.53
5.0	.65	.56	.50	.64	.56	.50	.62	.55	.49	.60	.54	.49	.58	.53	.48	.46
6.0	.58	.50	.43	.58	.49	.43	.56	.48	.43	.54	.48	.43	.53	.47	.42	.40
7.0	.53	.44	.38	.52	.44	.38	.51	.43	.38	.49	.42	.38	.48	.42	.37	.35
8.0	.48	.40	.34	.47	.39	.34	.46	.39	.34	.45	.38	.33	.44	.38	.33	.31
9.0	.44	.36	.30	.43	.36	.30	.42	.35	.30	.41	.35	.30	.40	.34	.30	.28
10.0	.40	.33	.27	.40	.32	.27	.39	.32	.27	.38	.32	.27	.37	.31	.27	.25



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-10-09

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=0.4559]
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	.274	.156	.049	.267	.152	.048	.254	.145	.046	.242	.139	.045	.230	.134	.043	
2.0	.266	.146	.045	.260	.143	.044	.249	.138	.043	.238	.134	.042	.228	.129	.041	
3.0	.252	.134	.040	.247	.132	.040	.236	.128	.039	.227	.124	.038	.218	.121	.037	
4.0	.236	.123	.036	.232	.121	.036	.223	.118	.035	.214	.115	.035	.207	.112	.034	
5.0	.221	.113	.033	.217	.111	.032	.209	.109	.032	.202	.106	.032	.195	.104	.031	
6.0	.207	.104	.030	.203	.103	.030	.196	.101	.029	.190	.099	.029	.183	.097	.029	
7.0	.194	.096	.027	.191	.095	.027	.184	.093	.027	.178	.091	.027	.173	.090	.026	
8.0	.182	.089	.025	.179	.088	.025	.174	.087	.025	.168	.085	.025	.163	.084	.024	
9.0	.172	.083	.023	.169	.082	.023	.164	.081	.023	.159	.080	.023	.154	.078	.023	
10.0	.162	.078	.022	.159	.077	.021	.155	.076	.021	.150	.075	.021	.146	.074	.021	

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	.178	.156	.137	.152	.134	.118	.104	.092	.082	.060	.053	.047	.019	.017	.015	
2.0	.169	.132	.101	.145	.114	.087	.099	.079	.061	.057	.046	.036	.018	.015	.012	
3.0	.161	.114	.077	.138	.098	.067	.095	.068	.047	.055	.040	.028	.018	.013	.009	
4.0	.154	.101	.060	.132	.087	.052	.091	.061	.037	.052	.036	.022	.017	.012	.007	
5.0	.147	.090	.049	.126	.078	.042	.087	.055	.030	.050	.032	.018	.016	.010	.006	
6.0	.140	.082	.040	.120	.071	.035	.083	.050	.025	.048	.029	.015	.016	.010	.005	
7.0	.134	.075	.034	.115	.065	.029	.079	.046	.021	.046	.027	.012	.015	.009	.004	
8.0	.128	.069	.029	.110	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.122	.064	.025	.105	.056	.022	.073	.039	.016	.042	.023	.009	.014	.008	.003	
10.0	.116	.060	.023	.100	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:ZZX
 Test Date:2023-10-09

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=0.4559]
 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	29.0	30.6	29.4	30.9	31.3	29.0	30.6	29.4	30.9	31.3
	3H	29.7	31.1	30.1	31.4	31.8	29.7	31.1	30.1	31.4	31.8
	4H	29.9	31.2	30.3	31.5	31.9	29.9	31.2	30.3	31.5	31.9
	6H	29.9	31.2	30.4	31.5	31.9	29.9	31.2	30.4	31.5	31.9
	8H	30.0	31.1	30.4	31.5	31.9	30.0	31.1	30.4	31.5	31.9
	12H	29.9	31.1	30.4	31.4	31.9	29.9	31.1	30.4	31.4	31.9
4H	2H	29.3	30.6	29.7	31.0	31.4	29.3	30.6	29.7	31.0	31.4
	3H	30.1	31.2	30.5	31.6	32.0	30.1	31.2	30.5	31.6	32.0
	4H	30.3	31.3	30.8	31.7	32.2	30.3	31.3	30.8	31.7	32.2
	6H	30.5	31.3	30.9	31.8	32.2	30.5	31.3	30.9	31.8	32.2
	8H	30.5	31.3	31.0	31.7	32.2	30.5	31.3	31.0	31.7	32.2
	12H	30.5	31.2	31.0	31.7	32.2	30.5	31.2	31.0	31.7	32.2
8H	4H	30.4	31.2	30.9	31.6	32.1	30.4	31.2	30.9	31.6	32.1
	6H	30.6	31.2	31.1	31.7	32.2	30.6	31.2	31.1	31.7	32.2
	8H	30.6	31.2	31.1	31.7	32.2	30.6	31.2	31.1	31.7	32.2
	12H	30.6	31.1	31.1	31.6	32.2	30.6	31.1	31.1	31.6	32.2
12H	4H	30.4	31.1	30.9	31.6	32.0	30.4	31.1	30.9	31.6	32.0
	6H	30.6	31.1	31.1	31.6	32.2	30.6	31.1	31.1	31.6	32.2
	8H	30.6	31.1	31.1	31.6	32.2	30.6	31.1	31.1	31.6	32.2
CIE190: 2010											

CIE190: 2010
Area: 0.0989 m2

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-10-09

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=0.4559]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

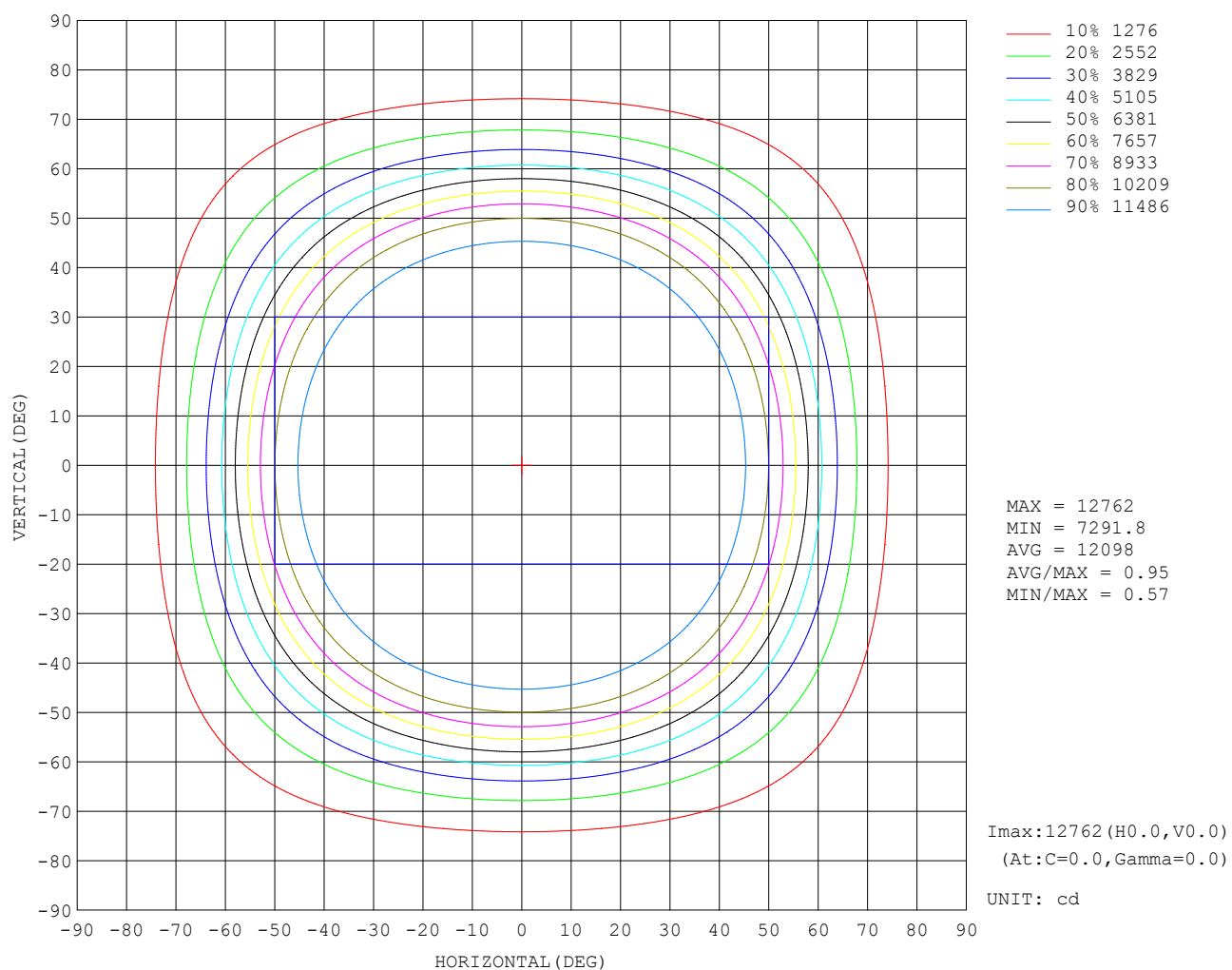
UTILIZATION FACTORS TABLE

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	46	39	57	46	39	56	45	39	33
0.80	69	57	50	68	57	50	66	56	50	43
1.00	78	68	61	77	67	60	75	68	60	53
1.25	86	76	69	84	75	69	82	74	68	61
1.50	91	81	75	89	81	75	86	79	73	66
2.00	97	90	84	96	89	83	92	86	82	74
2.50	101	94	88	99	93	88	95	90	86	78
3.00	104	98	93	102	96	92	98	94	90	82
4.00	108	103	98	105	101	97	101	97	94	86
5.00	110	105	102	107	103	100	103	100	97	88
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: 2023-10-09

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=0.4559]
 Remarks:

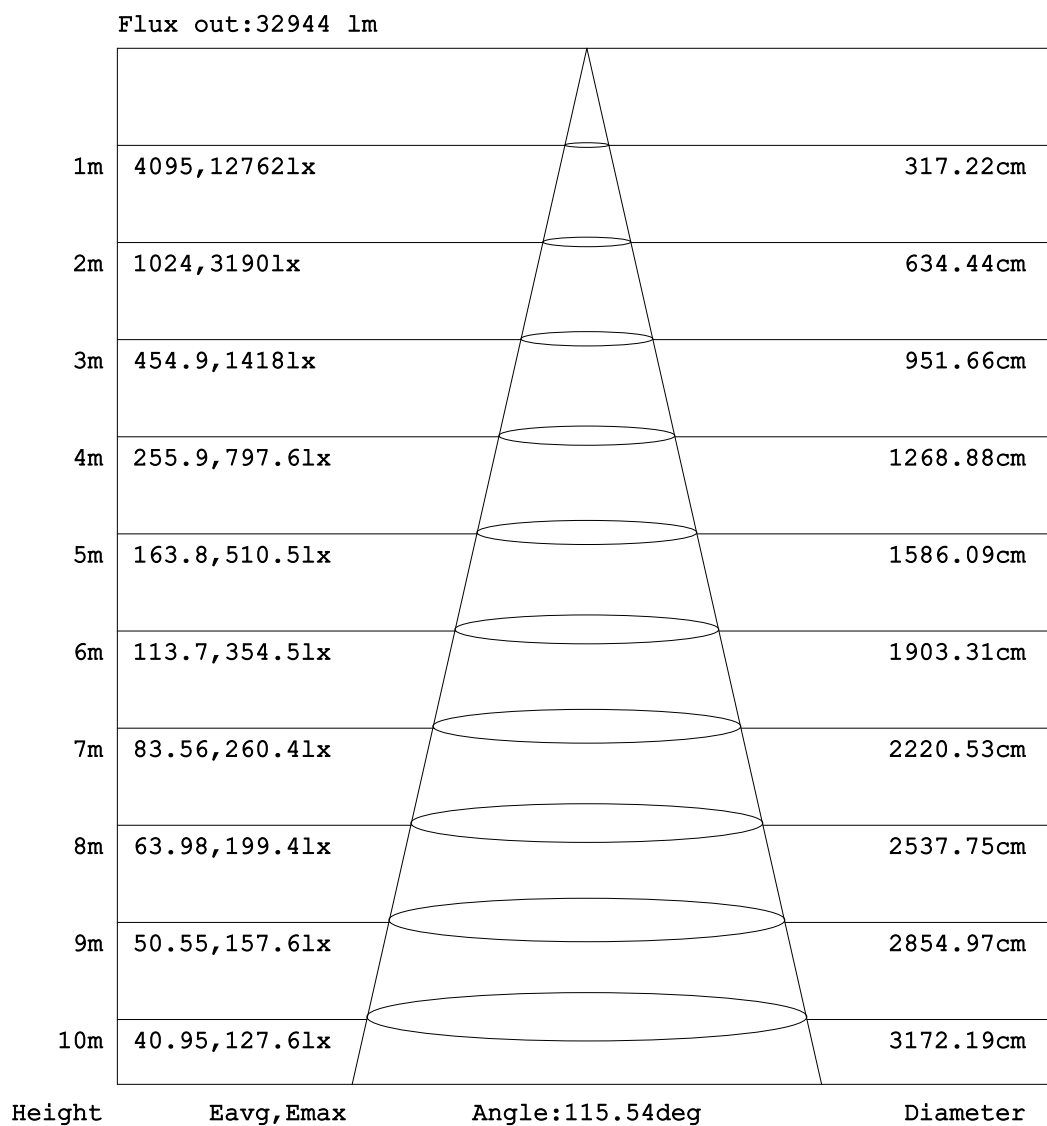
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-10-09

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=0.4559]
Remarks:

AAI Figure



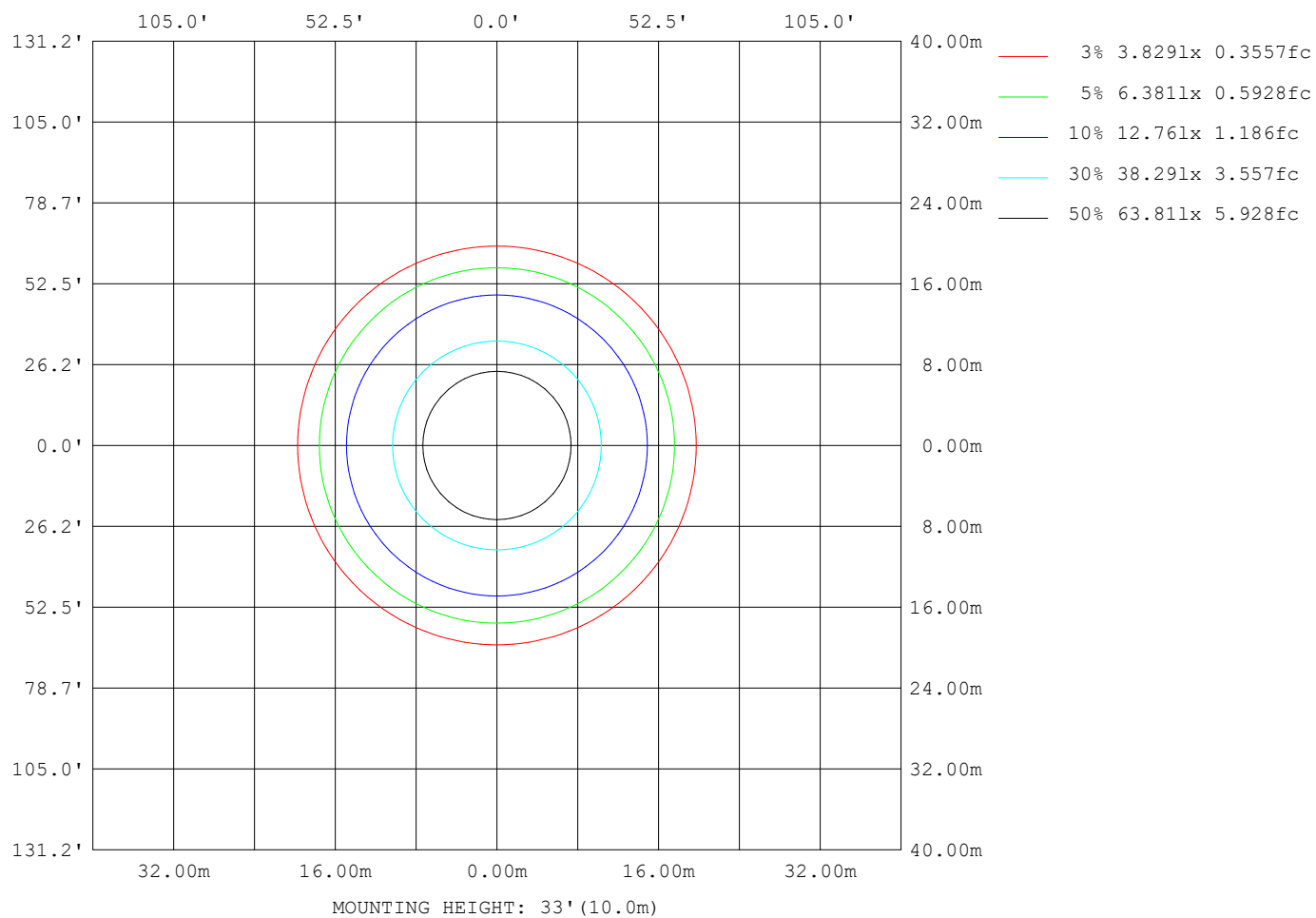
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2023-10-09

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=0.4559]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZX
Test Date: 2023-10-09

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=0.4559]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LED Avg.L Report

Test:U:230.0V I:1.054A P:240.0W PF:0.990 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:39027.5x1 lm		
NAME: HB74-240-5080-H00219	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

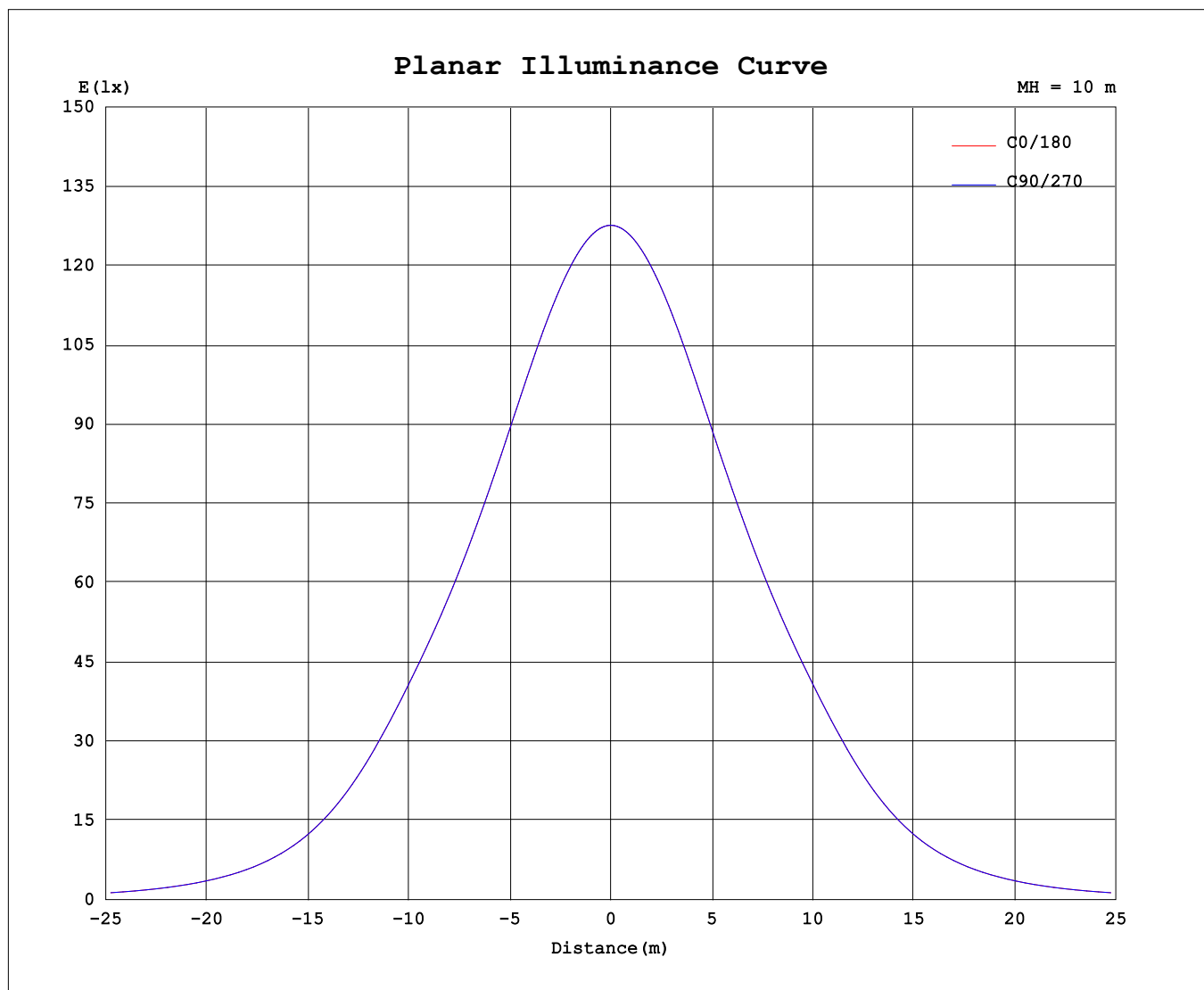
AvgL	cd/m2
L_0~180 (65) av	81888
L_0~180 (75) av	44975
L_0~180 (85) av	21218
L_90~270 (65) av	81888
L_90~270 (75) av	44975
L_90~270 (85) av	21218
L_45 (65) av	81888
L_45 (75) av	44975
L_45 (85) av	21218

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2023-10-09

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=0.4559]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZX
Test Date: 2023-10-09

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=0.4559]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

UNIT: X10cd

[illegible]

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZX
Test Date: 2023-10-09

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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=0.4559]
Remarks:

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