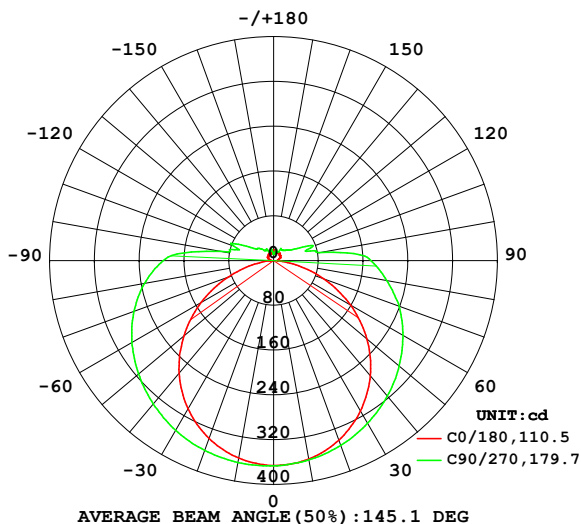


LUMINAIRE PHOTOMETRIC TEST REPORT

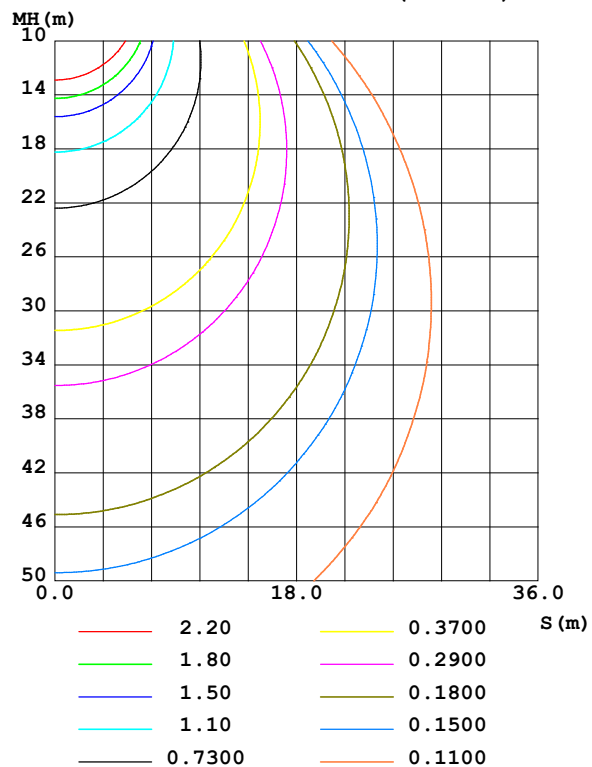
Test:U:120.08V I:0.2154A P:24.266W PF:0.9381 Freq:59.98Hz Lamp Flux:1612.52x1 lm		
NAME: WS24-033B-BK 24W 30K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 66.45 lm/W
MODEL	3000K	I _{max} (cd)	367.1	S/MH(C0/180)	1.24	
NOMINAL POWER(W)	24	LOR(%)	100.0	S/MH(C90/270)	1.44	
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	1612.5	η UP,DN(C0-180)	6.9,42.1	
NOMINAL FLUX(lm)	1612.52	CIE CLASS	SEMI-D.	η UP,DN(C180-360)	7.4,43.7	
LAMPS INSIDE	1	η up(%)	14.3	CIBSE SHR NOM	1.50	
TEST VOLTAGE(V)	120	η down(%)	85.7	CIBSE SHR MAX	1.55	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:10 February 2026

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.459
Humidity:65.0%
Test Distance:7.380m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	360.0	361.6	358.4	366.1					0- 10	34.74	34.74	2.15,2.15
20	341.3	351.3	337.8	360.8					10- 20	100.5	135.3	8.39,8.39
30	310.7	335.8	305.6	350.3					20- 30	155.8	291.1	18.1,18.1
40	268.8	316.0	262.7	334.3					30- 40	195.0	486.1	30.1,30.1
50	217.5	293.0	209.0	315.0					40- 50	214.5	700.6	43.5,43.5
60	158.7	266.8	149.4	292.3					50- 60	213.2	913.8	56.7,56.7
70	94.79	238.6	86.92	265.4					60- 70	192.5	1106	68.6,68.6
80	35.00	205.3	30.15	234.1					70- 80	156.8	1263	78.3,78.3
90	6.371	174.0	6.860	197.2					80- 90	119.0	1382	85.7,85.7
100	8.072	84.10	7.325	95.91					90-100	84.21	1466	90.9,90.9
110	11.02	74.55	10.12	75.67					100-110	43.74	1510	93.6,93.6
120	13.71	40.56	12.98	47.58					110-120	37.41	1547	96,96
130	14.69	29.34	13.04	34.25					120-130	22.34	1570	97.4,97.4
140	16.55	24.65	14.64	24.05					130-140	16.25	1586	98.4,98.4
150	16.44	18.70	14.72	22.75					140-150	12.51	1599	99.1,99.1
160	15.51	17.17	13.66	18.48					150-160	7.722	1606	99.6,99.6
170	15.23	16.55	14.55	20.72					160-170	4.724	1611	99.9,99.9
180	19.07	12.68	19.10	12.78					170-180	1.505	1613	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 592.27 lm

%lum = 36.7%

%lamp = 36.7%

Conical surface Flux(120deg): 913.85 lm

%lum = 56.7%

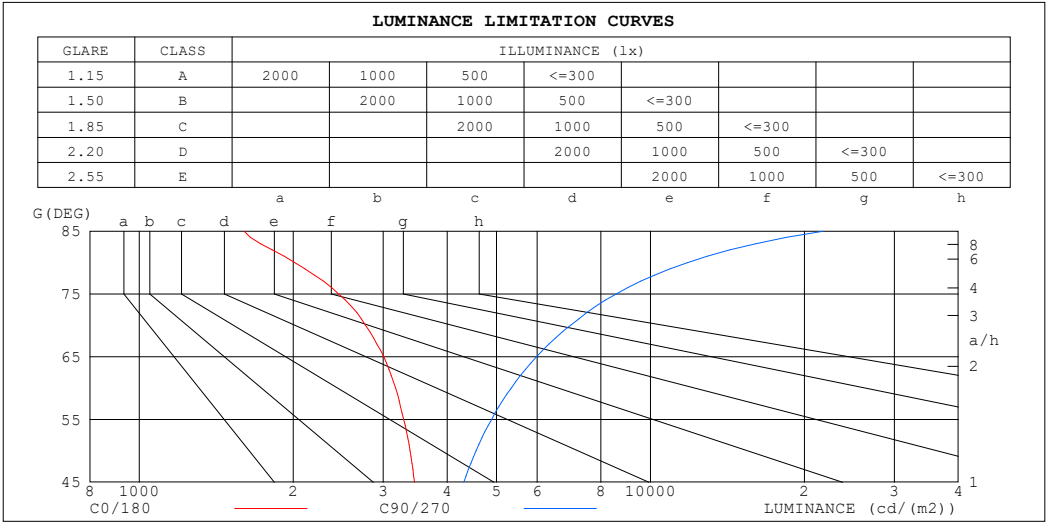
%lamp = 56.7%

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:DAMIN
 Test Date:10 February 2026

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.459
 Humidity:65.0%
 Test Distance:7.380m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:120.08V I:0.2154A P:24.266W PF:0.9381 Freq:59.98Hz Lamp Flux:1612.52x1 lm		
NAME: WS24-033B-BK 24W 30K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:



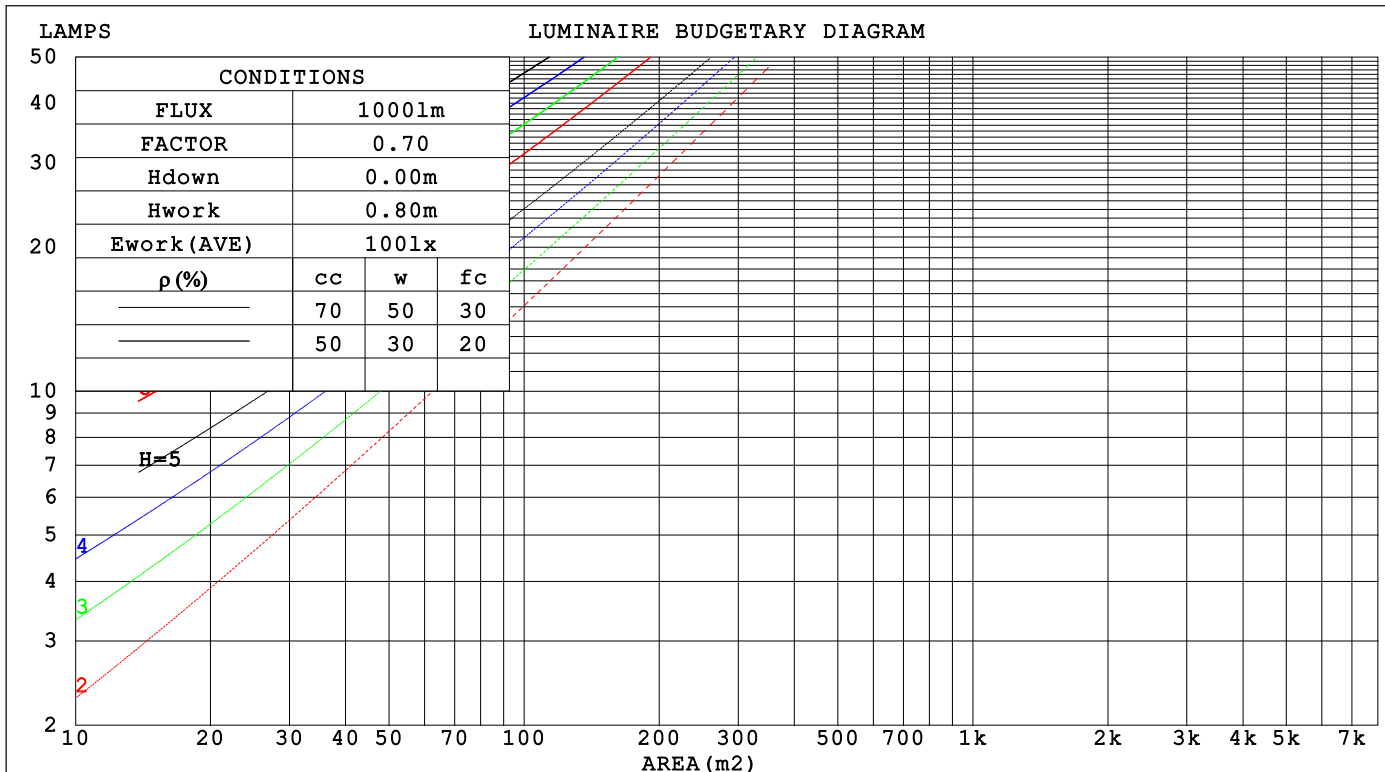
LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1605	21742
80	2016	11822
75	2455	8571
70	2771	6976
65	3010	5985
60	3173	5337
55	3290	4887
50	3384	4558
45	3455	4313

C Range: 0 - 360DEG	γ Range: 0 - 180DEG
C Interval: 90.0DEG	γ Interval: 1.0DEG
Test Speed: HIGH	Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.459
Temperature:25.3℃	Humidity:65.0%
Operators:DAMIN	Test Distance:7.380m [K=1.0000]
Test Date:10 February 2026	Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.08V I:0.2154A P:24.266W PF:0.9381 Freq:59.98Hz Lamp Flux:1612.52x1 lm		
NAME: WS24-033B-BK 24W 30K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

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	1.16	1.16	1.16	1.11	1.11	1.11	1.03	1.03	1.03	.96	.96	.96	.89	.89	.89	.86														
1.0	.96	.91	.86	.93	.88	.84	.86	.82	.78	.79	.76	.73	.73	.71	.69	.65														
2.0	.82	.75	.68	.79	.72	.66	.73	.67	.62	.68	.63	.59	.63	.59	.55	.52														
3.0	.72	.62	.55	.69	.60	.54	.64	.57	.51	.59	.53	.48	.55	.50	.46	.43														
4.0	.63	.53	.46	.60	.52	.45	.56	.49	.43	.52	.46	.41	.48	.43	.39	.36														
5.0	.56	.46	.39	.54	.45	.38	.50	.42	.36	.46	.40	.35	.43	.37	.33	.30														
6.0	.50	.40	.34	.48	.39	.33	.45	.37	.32	.42	.35	.30	.39	.33	.29	.26														
7.0	.45	.36	.29	.43	.35	.29	.41	.33	.28	.38	.31	.26	.35	.30	.25	.23														
8.0	.41	.32	.26	.40	.31	.26	.37	.30	.24	.35	.28	.23	.32	.27	.22	.20														
9.0	.37	.29	.23	.36	.28	.23	.34	.27	.22	.32	.26	.21	.30	.24	.20	.18														
10.0	.34	.26	.21	.33	.26	.21	.31	.24	.20	.29	.23	.19	.28	.22	.18	.16														



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:10 February 2026

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.459
Humidity:65.0%
Test Distance:7.380m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:120.08V I:0.2154A P:24.266W PF:0.9381 Freq:59.98Hz Lamp Flux:1612.52x1 lm		
NAME: WS24-033B-BK 24W 30K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

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	.386	.219	.070	.374	.213	.068	.353	.202	.065	.333	.192	.062	.314	.182	.059		
2.0	.335	.184	.056	.325	.179	.055	.305	.170	.053	.287	.161	.050	.270	.153	.048		
3.0	.298	.159	.048	.289	.155	.047	.271	.147	.045	.255	.139	.043	.239	.133	.041		
4.0	.268	.139	.041	.260	.136	.040	.244	.129	.039	.229	.123	.037	.215	.117	.036		
5.0	.244	.124	.036	.236	.121	.035	.222	.116	.034	.208	.110	.033	.196	.105	.031		
6.0	.224	.112	.032	.217	.109	.031	.204	.104	.030	.191	.099	.029	.180	.095	.028		
7.0	.206	.102	.029	.200	.100	.028	.188	.095	.027	.177	.091	.026	.166	.086	.025		
8.0	.191	.093	.026	.185	.091	.026	.175	.087	.025	.164	.083	.024	.154	.079	.023		
9.0	.178	.086	.024	.173	.084	.024	.163	.081	.023	.153	.077	.022	.144	.073	.021		
10.0	.167	.080	.022	.162	.078	.022	.153	.075	.021	.144	.071	.020	.136	.068	.020		

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	.299	.299	.299	.256	.256	.256	.175	.175	.175	.100	.100	.100	.032	.032	.032		
1.0	.295	.265	.238	.253	.228	.205	.173	.157	.142	.099	.091	.082	.032	.029	.027		
2.0	.289	.242	.203	.247	.208	.176	.169	.144	.123	.098	.084	.072	.031	.027	.023		
3.0	.281	.226	.181	.241	.195	.157	.165	.135	.110	.096	.079	.065	.031	.026	.021		
4.0	.273	.213	.167	.234	.184	.145	.161	.128	.102	.093	.075	.060	.030	.024	.020		
5.0	.265	.203	.157	.228	.176	.137	.157	.123	.097	.091	.072	.057	.029	.024	.019		
6.0	.258	.195	.150	.222	.169	.131	.153	.118	.092	.089	.070	.055	.029	.023	.018		
7.0	.251	.188	.145	.216	.163	.126	.149	.115	.089	.087	.067	.053	.028	.022	.018		
8.0	.244	.183	.141	.210	.159	.123	.145	.111	.087	.085	.066	.052	.027	.022	.017		
9.0	.238	.178	.138	.205	.155	.120	.142	.109	.085	.083	.064	.051	.027	.021	.017		
10.0	.232	.174	.135	.200	.151	.118	.139	.106	.084	.081	.063	.050	.026	.021	.017		

C Range: 0 - 360DEG

C Interval: 90.0DEG

Test Speed: HIGH

Temperature:25.3℃

Operators:DAMIN

Test Date:10 February 2026

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.459

Humidity:65.0%

Test Distance:7.380m [K=1.0000]

Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.08V I:0.2154A P:24.266W PF:0.9381 Freq:59.98Hz Lamp Flux:1612.52x1 lm										
NAME: WS24-033B-BK 24W 30K					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.: 1		
MFR.: EVERFINE					SUR.:			Shielding Angle:		
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	14.3	15.7	14.7	16.1	16.6	16.1	17.5	16.5	17.9	18.4
3H	15.8	17.1	16.3	17.6	18.1	18.8	20.1	19.3	20.6	21.1
4H	16.3	17.6	16.8	18.1	18.6	20.3	21.6	20.8	22.1	22.6
6H	16.7	17.9	17.2	18.4	19.0	22.0	23.2	22.5	23.7	24.3
8H	16.8	17.9	17.3	18.5	19.1	22.9	24.1	23.5	24.6	25.2
12H	16.8	18.0	17.4	18.5	19.1	24.0	25.1	24.6	25.7	26.3
4H 2H	15.3	16.5	15.8	17.0	17.6	16.6	17.9	17.1	18.4	18.9
3H	17.1	18.2	17.6	18.7	19.3	19.5	20.6	20.1	21.2	21.8
4H	17.8	18.8	18.4	19.4	20.0	21.2	22.2	21.8	22.8	23.4
6H	18.4	19.3	19.0	19.9	20.6	23.1	24.0	23.7	24.6	25.2
8H	18.6	19.4	19.2	20.0	20.7	24.1	25.0	24.8	25.6	26.3
12H	18.7	19.5	19.3	20.1	20.8	25.4	26.2	26.0	26.8	27.5
8H 4H	18.7	19.6	19.3	20.2	20.9	21.5	22.3	22.1	22.9	23.6
6H	19.6	20.4	20.3	21.0	21.7	23.6	24.3	24.2	25.0	25.7
8H	20.0	20.7	20.7	21.3	22.1	24.9	25.5	25.5	26.2	26.9
12H	20.4	20.9	21.0	21.6	22.4	26.4	26.9	27.0	27.6	28.4
12H 4H	19.0	19.8	19.6	20.4	21.1	21.5	22.3	22.1	22.9	23.6
6H	20.1	20.8	20.8	21.4	22.2	23.7	24.3	24.3	25.0	25.7
8H	20.7	21.3	21.4	21.9	22.7	25.0	25.6	25.7	26.3	27.0
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.2				
2.0H	+ 0.2 / - 0.5					+ 0.2 / - 0.3				

CIE Pub.117, 1613 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.7)
Area: 0.1 m2

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:10 February 2026

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.459
Humidity:65.0%
Test Distance:7.380m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.08V I:0.2154A P:24.266W PF:0.9381 Freq:59.98Hz Lamp Flux:1612.52x1 lm		
NAME: WS24-033B-BK 24W 30K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

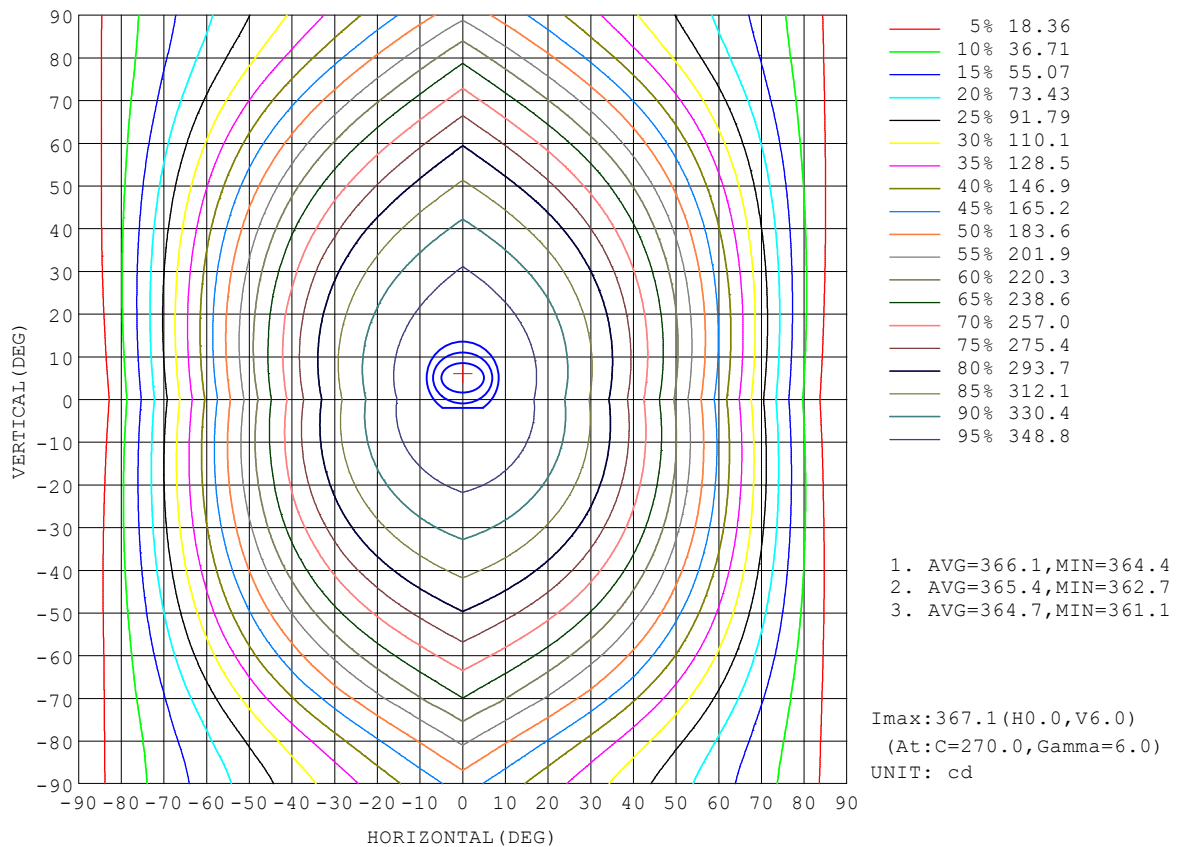
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	49	36	29	48	36	29	46	35	28	22
0.80	58	45	37	57	44	37	54	43	36	28
1.00	66	53	45	64	52	44	61	53	43	35
1.25	73	60	52	71	59	51	67	57	50	40
1.50	78	66	57	75	64	56	71	62	55	45
2.00	85	74	66	82	72	65	77	69	62	51
2.50	90	80	72	87	77	70	81	73	67	55
3.00	93	84	77	90	82	75	84	77	72	59
4.00	98	90	84	94	87	82	88	82	77	64
5.00	101	94	88	97	91	86	90	85	81	67
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: DAMIN
Test Date: 10 February 2026

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.459
Humidity: 65.0%
Test Distance: 7.380m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:120.08V I:0.2154A P:24.266W PF:0.9381 Freq:59.98Hz Lamp Flux:1612.52x1 lm		
NAME: WS24-033B-BK 24W 30K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

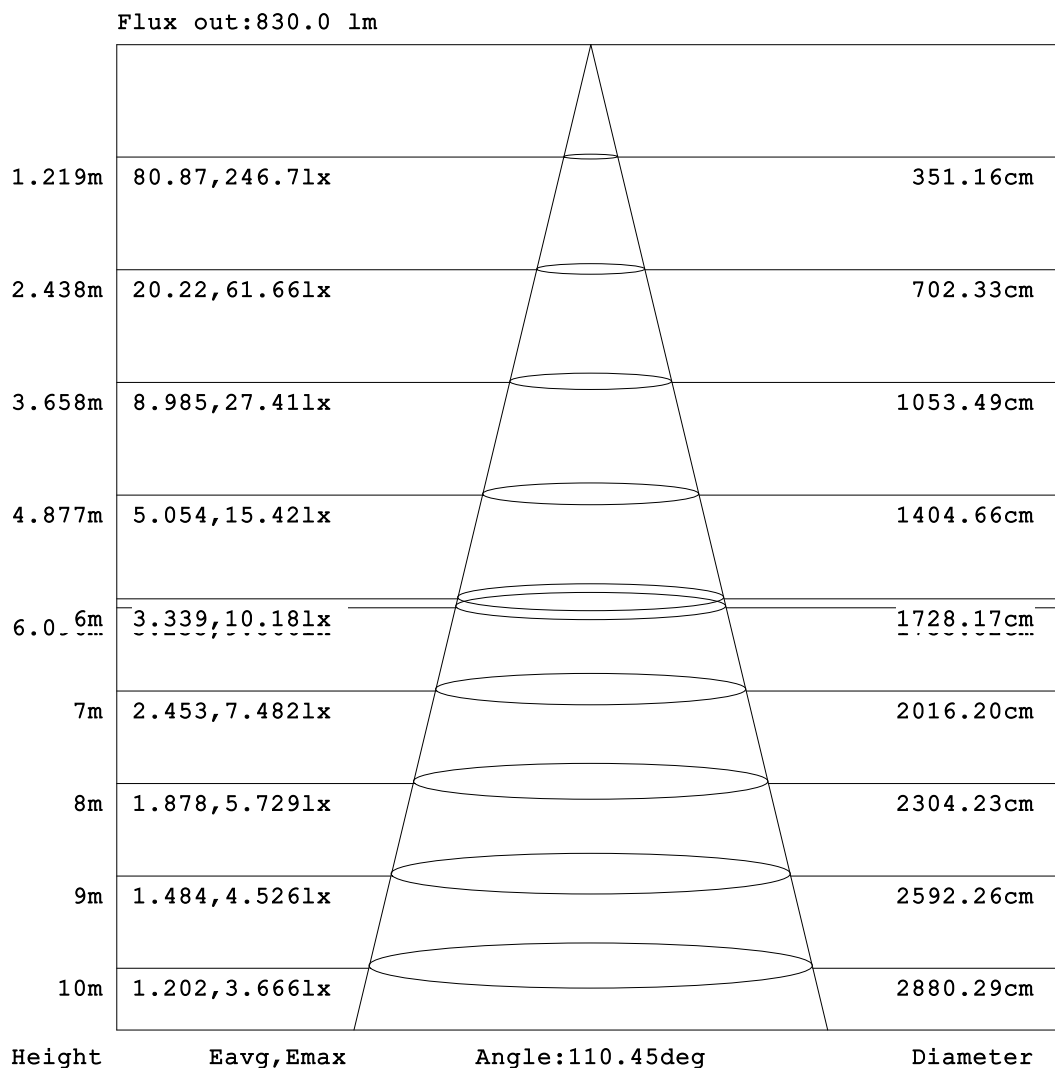


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: DAMIN
Test Date: 10 February 2026

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.459
Humidity: 65.0%
Test Distance: 7.380m [K=1.0000]
Remarks:

AAI Figure

Test:U:120.08V I:0.2154A P:24.266W PF:0.9381 Freq:59.98Hz Lamp Flux:1612.52x1 lm		
NAME: WS24-033B-BK 24W 30K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:



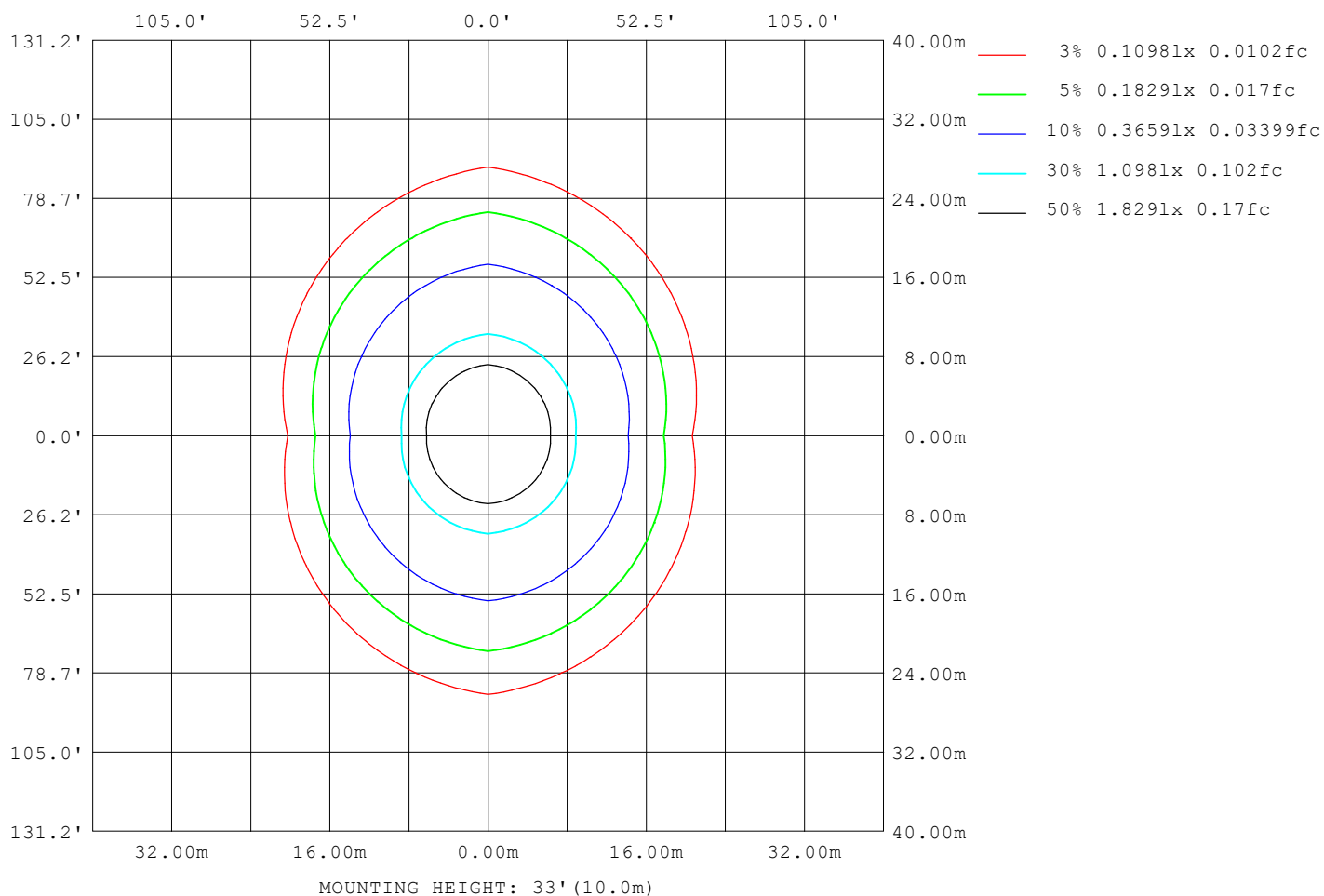
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:10 February 2026

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.459
Humidity:65.0%
Test Distance:7.380m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:120.08V I:0.2154A P:24.266W PF:0.9381 Freq:59.98Hz Lamp Flux:1612.52x1 lm		
NAME: WS24-033B-BK 24W 30K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: DAMIN
Test Date: 10 February 2026

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.459
Humidity: 65.0%
Test Distance: 7.380m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:120.08V I:0.2154A P:24.266W PF:0.9381 Freq:59.98Hz Lamp Flux:1612.52x1 lm		
NAME: WS24-033B-BK 24W 30K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

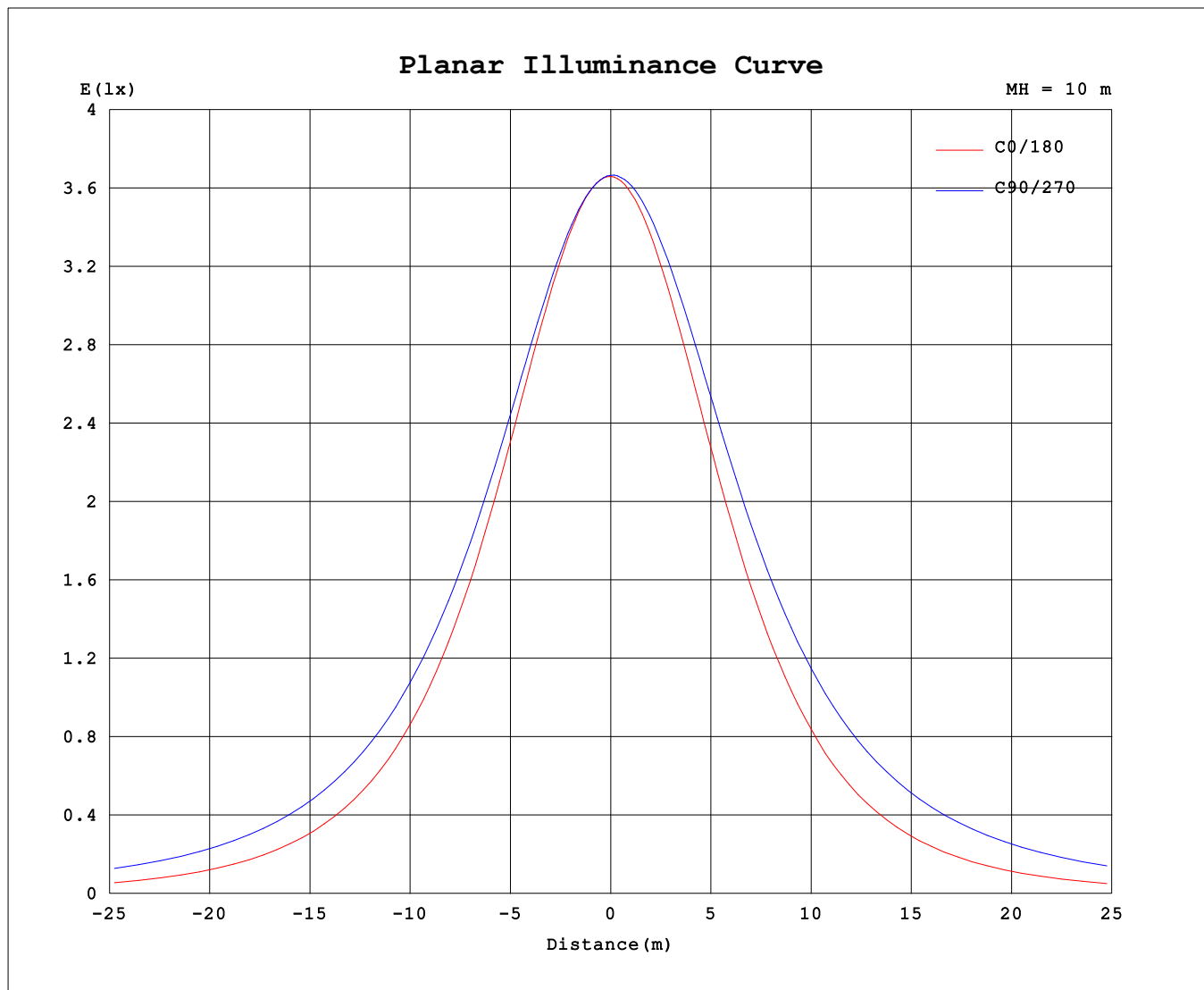
AvgL	cd/m2
L_0~180 (65) av	2903
L_0~180 (75) av	2324
L_0~180 (85) av	1513
L_90~270 (65) av	6297
L_90~270 (75) av	9121
L_90~270 (85) av	23275
L_45 (65) av	5018
L_45 (75) av	6564
L_45 (85) av	15108

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:10 February 2026

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.459
Humidity:65.0%
Test Distance:7.380m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3 °C
Operators: DAMIN
Test Date: 10 February 2026

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.459
Humidity: 65.0%
Test Distance: 7.380m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.08V I:0.2154A P:24.266W PF:0.9381 Freq:59.98Hz Lamp Flux:1612.52x1 lm		
NAME: WS24-033B-BK 24W 30K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270														
0	366	367	366	367														
5	365	365	364	367														
10	360	362	358	366														
15	352	357	350	364														
20	341	351	338	361														
25	327	344	323	356														
30	311	336	306	350														
35	291	326	285	343														
40	269	316	263	334														
45	244	305	238	325														
50	218	293	209	315														
55	189	280	180	304														
60	159	267	149	292														
65	127	253	118	279														
70	94.8	239	86.9	265														
75	63.5	222	56.8	250														
80	35.0	205	30.2	234														
85	14.0	189	12.4	216														
90	6.37	174	6.86	197														
95	7.04	144	6.87	161														
100	8.07	84.1	7.33	95.9														
105	9.35	68.0	8.40	79.4														
110	11.0	74.6	10.1	75.7														
115	12.4	57.3	11.9	69.4														
120	13.7	40.6	13.0	47.6														
125	14.7	33.0	13.0	36.0														
130	14.7	29.3	13.0	34.2														
135	14.8	26.4	13.1	29.1														
140	16.5	24.7	14.6	24.1														
145	17.2	24.1	15.3	23.3														
150	16.4	18.7	14.7	22.7														
155	16.2	17.1	14.4	18.9														
160	15.5	17.2	13.7	18.5														
165	14.7	20.2	13.1	20.7														
170	15.2	16.5	14.6	20.7														
175	17.7	11.8	16.9	14.2														
180	19.1	12.7	19.1	12.8														

C Range: 0 - 360DEG

C Interval: 90.0DEG

Test Speed: HIGH

Temperature:25.3℃

Operators:DAMIN

Test Date:10 February 2026

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.459

Humidity:65.0%

Test Distance:7.380m [K=1.0000]

Remarks: