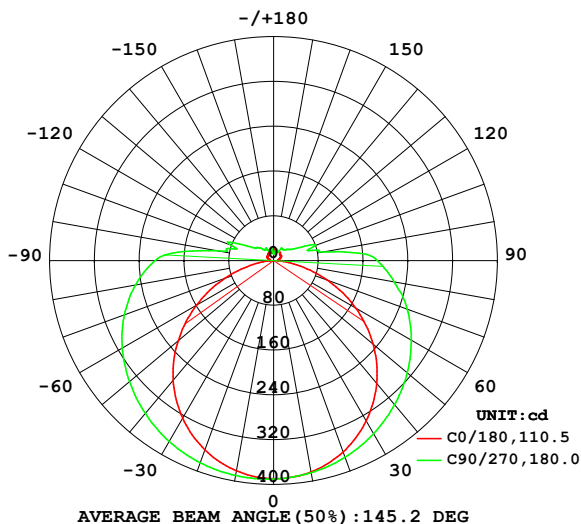


LUMINAIRE PHOTOMETRIC TEST REPORT

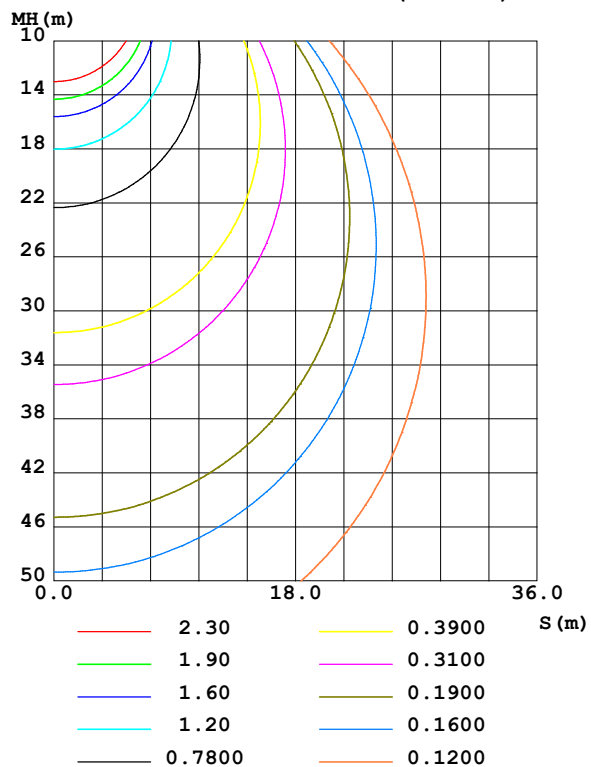
Test:U:120.08V I:0.2175A P:24.582W PF:0.9411 Freq:59.98Hz Lamp Flux:1720x1 lm		
NAME: WS24-033B-BK 24W 40K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 69.97 lm/W			
MODEL	4000K	I _{max} (cd)	390.7	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)	1720.0	η UP,DN(C0-180)	6.9,42.0
NOMINAL FLUX(lm)	1720	CIE CLASS	SEMI-D.	η UP,DN(C180-360)	7.5,43.6
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	383.5	384.8	381.5	389.7					0- 10	36.98	36.98	2.15,2.15
20	363.7	373.8	359.5	384.3					10- 20	107.0	144.0	8.37,8.37
30	330.9	357.3	325.1	373.3					20- 30	165.9	309.9	18,18
40	286.5	336.1	279.4	356.5					30- 40	207.7	517.6	30.1,30.1
50	232.0	311.7	222.2	336.0					40- 50	228.6	746.2	43.4,43.4
60	169.3	284.0	158.7	312.3					50- 60	227.2	973.3	56.6,56.6
70	101.6	254.1	92.48	283.7					60- 70	205.4	1179	68.5,68.5
80	37.52	218.7	32.25	250.4					70- 80	167.5	1346	78.3,78.3
90	6.921	185.4	7.583	211.7					80- 90	127.3	1474	85.7,85.7
100	8.605	89.56	7.967	102.8					90-100	90.11	1564	90.9,90.9
110	11.74	79.46	10.95	81.34					100-110	46.75	1610	93.6,93.6
120	14.78	43.06	14.07	50.78					110-120	39.96	1650	96,96
130	15.77	31.22	14.09	36.62					120-130	23.87	1674	97.3,97.3
140	17.71	26.30	15.80	25.91					130-140	17.39	1692	98.4,98.4
150	17.56	19.88	15.85	24.55					140-150	13.41	1705	99.1,99.1
160	16.44	18.31	14.87	19.78					150-160	8.269	1713	99.6,99.6
170	16.37	17.69	15.56	22.20					160-170	5.059	1718	99.9,99.9
180	20.45	13.81	20.43	13.82					170-180	1.615	1720	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 630.65 lm

%lum = 36.7%

%lamp = 36.7%

Conical surface Flux(120deg): 973.34 lm

%lum = 56.6%

%lamp = 56.6%

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:0.2175A P:24.582W PF:0.9411 Freq:59.98Hz

Lamp Flux:1720x1 lm

NAME: WS24-033B-BK 24W 40K

TYPE:

WEIGHT:

SPEC.:

DIM.:

SERIAL No.: 1

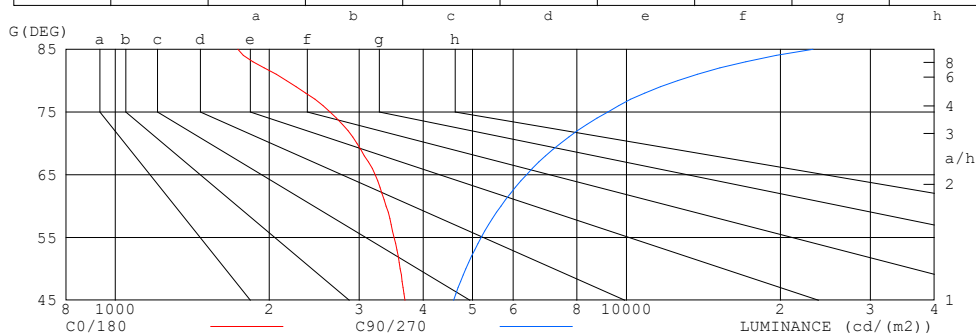
MFR.: EVERFINE

SUR.:

Shielding Angle:

LUMINANCE LIMITATION CURVES

GLARE	CLASS	ILLUMINANCE (lx)							
1.15	A	2000	1000	500	<=300				
1.50	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.20	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1736	23177
80	2161	12597
75	2632	9192
70	2971	7430
65	3224	6373
60	3387	5680
55	3509	5199
50	3610	4850
45	3684	4588

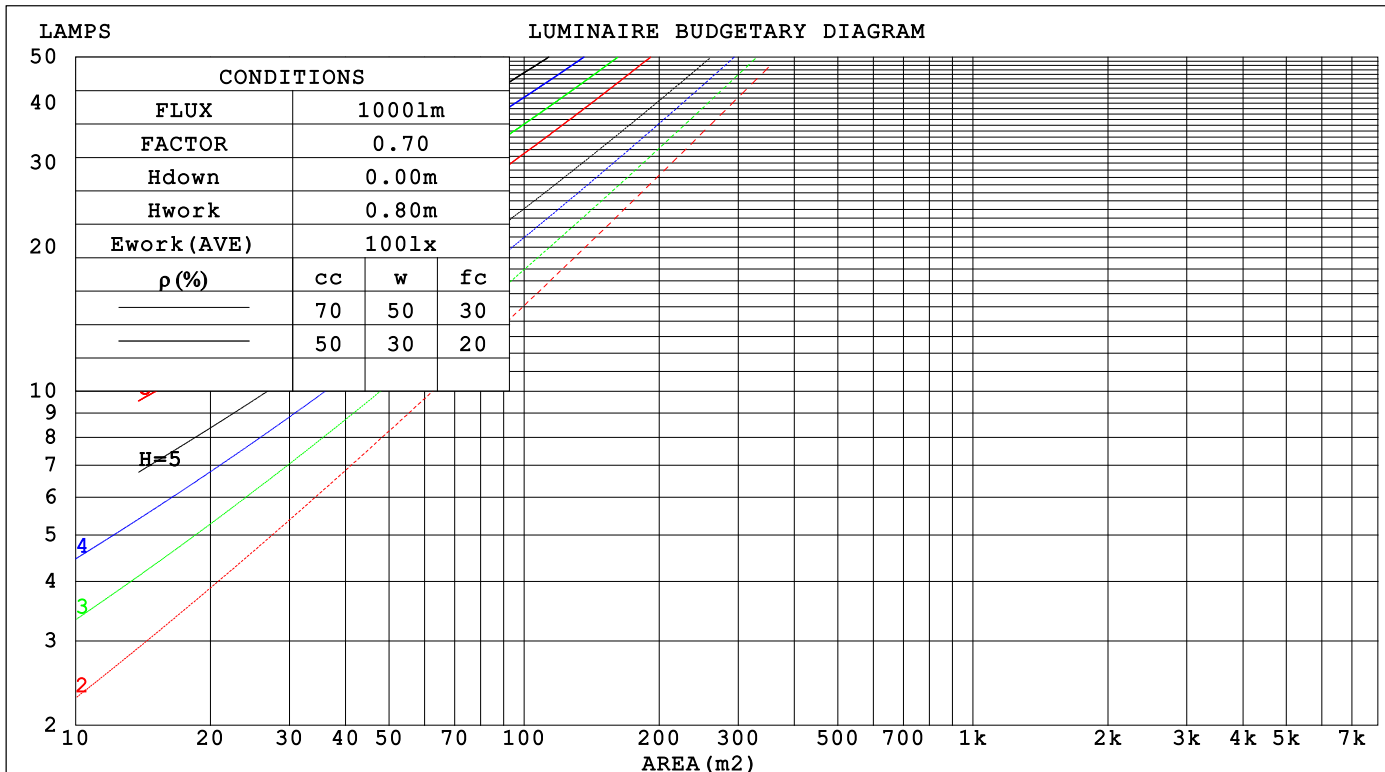
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:10 February 2026

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.08V I:0.2175A P:24.582W PF:0.9411 Freq:59.98Hz Lamp Flux:1720x1 lm		
NAME: WS24-033B-BK 24W 40K	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	.83	.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	.71	.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	.38	.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	.31	.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	.25	.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	.20	.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:0.2175A P:24.582W PF:0.9411 Freq:59.98Hz Lamp Flux:1720x1 lm		
NAME: WS24-033B-BK 24W 40K	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	.220	.070	.375	.214	.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	.140	.043	.239	.133	.041		
4.0	.268	.140	.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	.032	.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	.186	.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	.300	.300	.300	.256	.256	.256	.175	.175	.175	.100	.100	.100	.032	.032	.032	
1.0	.296	.266	.238	.253	.228	.205	.173	.157	.142	.100	.091	.083	.032	.029	.027	
2.0	.289	.243	.204	.247	.209	.176	.170	.144	.123	.098	.084	.072	.031	.027	.023	
3.0	.281	.226	.182	.241	.195	.158	.166	.135	.111	.096	.079	.065	.031	.026	.021	
4.0	.274	.213	.167	.235	.184	.145	.161	.128	.102	.093	.075	.061	.030	.024	.020	
5.0	.266	.203	.157	.228	.176	.137	.157	.123	.097	.091	.072	.057	.029	.024	.019	
6.0	.258	.195	.150	.222	.169	.131	.153	.118	.093	.089	.070	.055	.029	.023	.018	
7.0	.251	.189	.145	.216	.164	.126	.149	.115	.090	.087	.068	.053	.028	.022	.018	
8.0	.244	.183	.141	.210	.159	.123	.146	.112	.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	.136	.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:0.2175A P:24.582W PF:0.9411 Freq:59.98Hz Lamp Flux:1720x1 lm										
NAME: WS24-033B-BK 24W 40K					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	16.9	18.1	18.7	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	18.0	17.4	18.5	19.1	22.9	24.1	23.5	24.6	25.2
12H	16.9	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	20.1	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	19.5	19.2	20.1	20.8	24.1	25.0	24.8	25.6	26.3
12H	18.7	19.5	19.4	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	19.7	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	21.4	22.1	24.9	25.5	25.5	26.2	26.9
12H	20.4	20.9	21.1	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, 1720 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.9)
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:0.2175A P:24.582W PF:0.9411 Freq:59.98Hz Lamp Flux:1720x1 lm		
NAME: WS24-033B-BK 24W 40K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

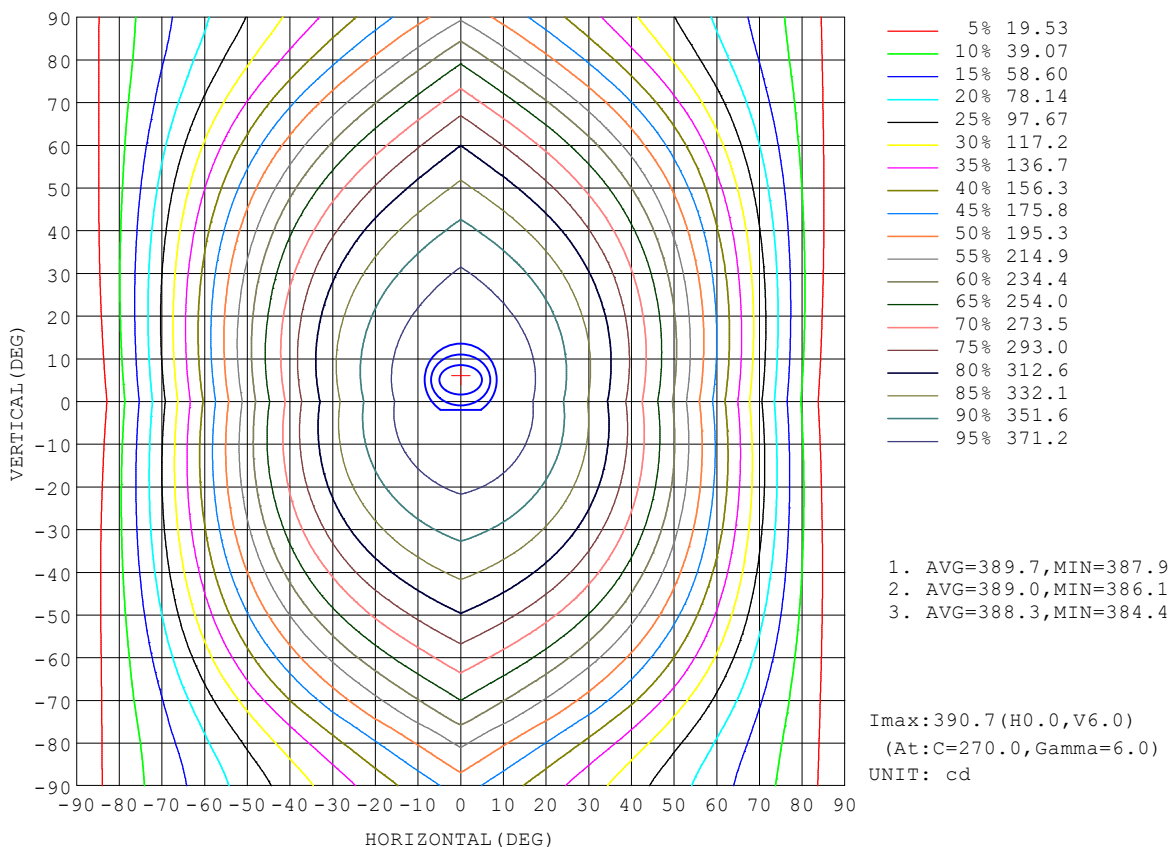
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	49	36	29	48	36	29	46	35	28	22
0.80	58	45	37	57	44	37	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	61	55	45
2.00	85	74	66	82	72	65	77	69	62	51
2.50	90	80	72	86	77	70	81	73	67	55
3.00	93	84	77	90	82	75	84	77	71	59
4.00	98	90	84	94	87	81	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:0.2175A P:24.582W PF:0.9411 Freq:59.98Hz Lamp Flux:1720x1 lm		
NAME: WS24-033B-BK 24W 40K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

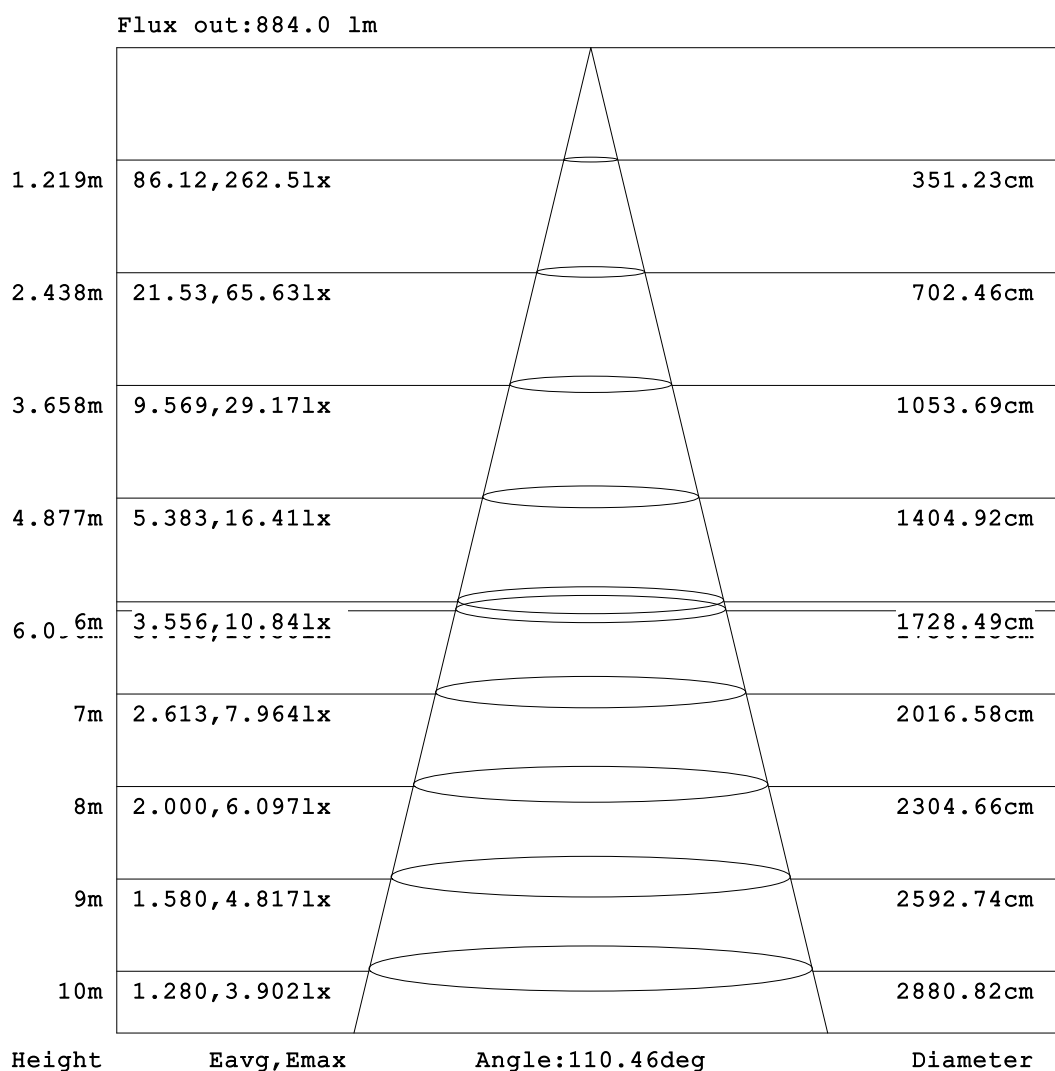


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:10 February 2026

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:0.2175A P:24.582W PF:0.9411 Freq:59.98Hz Lamp Flux:1720x1 lm		
NAME: WS24-033B-BK 24W 40K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:



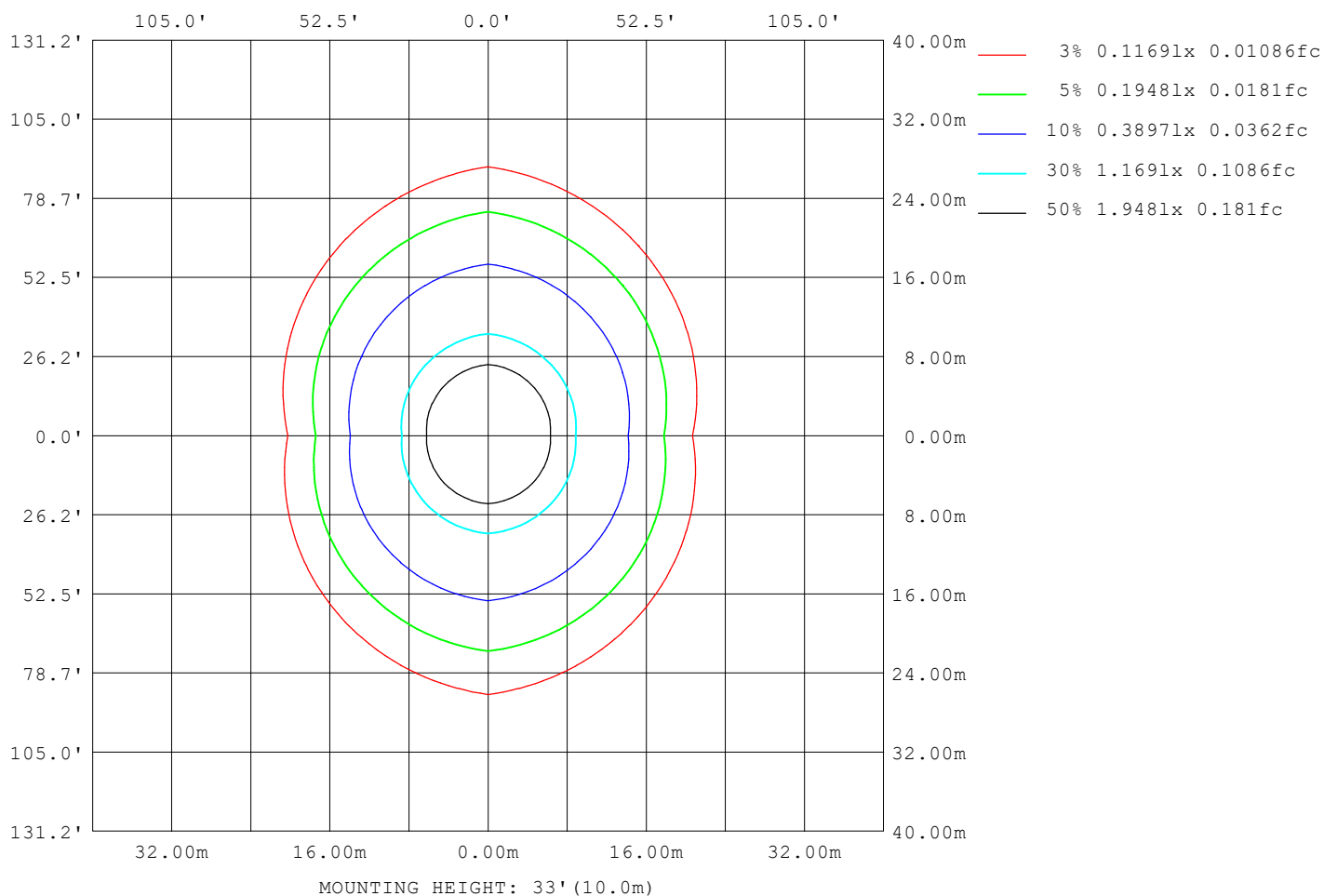
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.2175A P:24.582W PF:0.9411 Freq:59.98Hz Lamp Flux:1720x1 lm		
NAME: WS24-033B-BK 24W 40K	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:0.2175A P:24.582W PF:0.9411 Freq:59.98Hz Lamp Flux:1720x1 lm		
NAME: WS24-033B-BK 24W 40K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

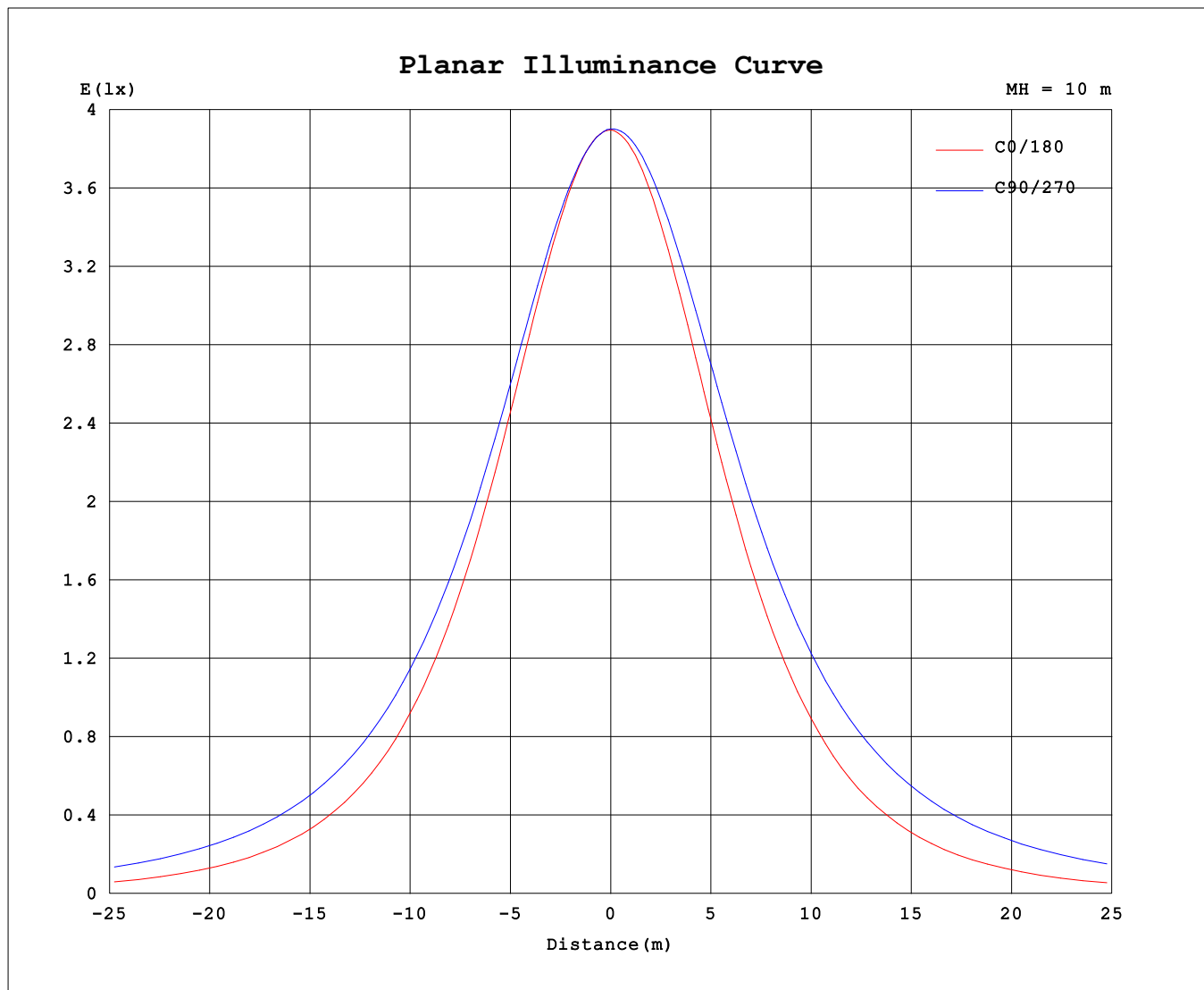
AvgL	cd/m2
L_0~180 (65) av	3098
L_0~180 (75) av	2485
L_0~180 (85) av	1645
L_90~270 (65) av	6720
L_90~270 (75) av	9768
L_90~270 (85) av	24883
L_45 (65) av	5354
L_45 (75) av	7027
L_45 (85) av	16163

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:0.2175A P:24.582W PF:0.9411 Freq:59.98Hz Lamp Flux:1720x1 lm		
NAME: WS24-033B-BK 24W 40K	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	390	390	390	390														
5	388	388	387	391														
10	383	385	381	390														
15	375	380	372	388														
20	364	374	360	384														
25	349	366	344	379														
30	331	357	325	373														
35	310	347	304	365														
40	287	336	279	356														
45	261	324	253	347														
50	232	312	222	336														
55	201	298	191	325														
60	169	284	159	312														
65	136	269	126	299														
70	102	254	92.5	284														
75	68.1	238	60.5	268														
80	37.5	219	32.3	250														
85	15.1	202	13.5	232														
90	6.92	185	7.58	212														
95	7.45	154	7.50	172														
100	8.60	89.6	7.97	103														
105	10.1	72.5	9.15	85.1														
110	11.7	79.5	11.0	81.3														
115	13.1	60.9	12.9	74.0														
120	14.8	43.1	14.1	50.8														
125	15.7	35.1	14.1	38.4														
130	15.8	31.2	14.1	36.6														
135	15.9	28.1	14.2	31.1														
140	17.7	26.3	15.8	25.9														
145	18.4	25.7	16.5	25.1														
150	17.6	19.9	15.9	24.5														
155	17.3	18.2	15.6	20.2														
160	16.4	18.3	14.9	19.8														
165	15.7	21.6	14.2	22.3														
170	16.4	17.7	15.6	22.2														
175	19.0	12.8	18.1	15.2														
180	20.4	13.8	20.4	13.8														

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: