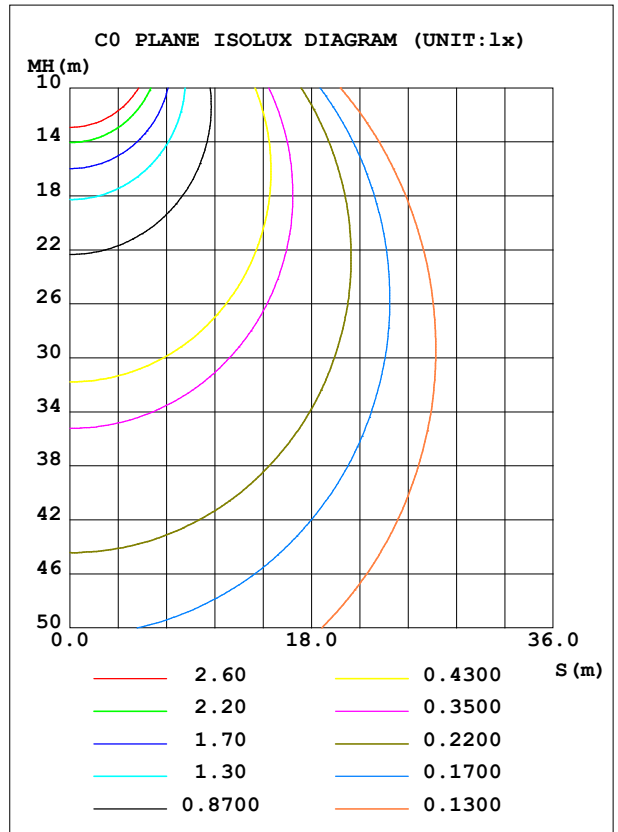
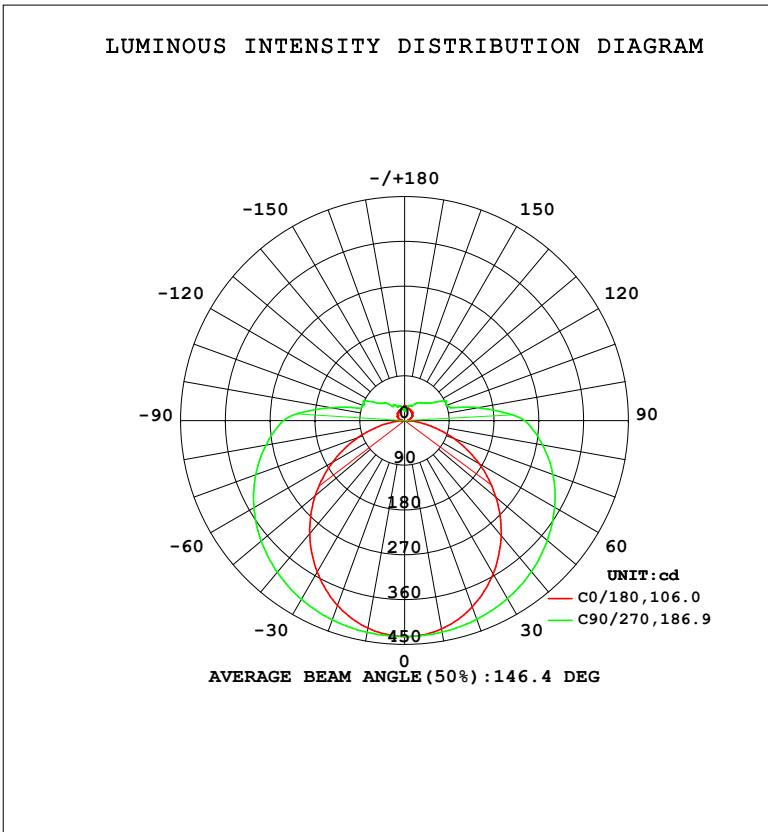


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:119.94V I:0.2177A P:23.849W PF:0.9135 Freq:59.98Hz Lamp Flux:1997.85x1 lm		
NAME: WS24-085-BN 24W 40K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 83.77 lm/W
MODEL	4000K	I _{max} (cd)	434.2	S/MH (C0/180)	1.21	
NOMINAL POWER (W)	24	LOR (%)	100.0	S/MH (C90/270)	1.44	
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	1997.8	η UP, DN (C0-180)	8.5, 41.8	
NOMINAL FLUX (lm)	1997.85	CIE CLASS	SEMI-D.	η UP, DN (C180-360)	8.3, 41.5	
LAMPS INSIDE	1	η up (%)	16.7	CIBSE SHR NOM	1.50	
TEST VOLTAGE (V)	120	η down (%)	83.3	CIBSE SHR MAX	1.55	



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3 °C
 Operators: DAMIN
 Test Date: 20 April 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	425.3	431.7	423.5	432.1				0- 10	41.15	41.15	2.06,2.06
20	398.2	424.7	395.3	426.1				10- 20	118.9	160.1	8.01,8.01
30	355.8	413.2	351.7	414.9				20- 30	183.9	344.0	17.2,17.2
40	302.1	396.2	296.9	397.8				30- 40	229.9	573.9	28.7,28.7
50	239.9	374.5	234.7	376.3				40- 50	253.4	827.2	41.4,41.4
60	173.0	348.2	166.9	349.7				50- 60	253.6	1081	54.1,54.1
70	104.9	317.3	99.27	318.3				60- 70	232.8	1314	65.7,65.7
80	42.80	281.4	38.27	282.5				70- 80	195.8	1509	75.6,75.6
90	6.645	241.6	5.883	243.3				80- 90	153.9	1663	83.3,83.3
100	8.769	150.2	7.978	151.0				90-100	112.9	1776	88.9,88.9
110	12.65	91.78	12.39	90.82				100-110	63.38	1840	92.1,92.1
120	18.01	76.88	17.72	76.73				110-120	51.28	1891	94.6,94.6
130	20.58	55.64	18.65	55.15				120-130	36.47	1927	96.5,96.5
140	22.48	47.04	21.08	37.21				130-140	27.31	1955	97.8,97.8
150	24.10	36.72	22.71	36.13				140-150	19.67	1974	98.8,98.8
160	25.87	32.32	24.26	31.80				150-160	13.20	1987	99.5,99.5
170	26.11	26.37	24.95	27.32				160-170	7.888	1995	99.9,99.9
180	30.04	19.33	30.05	19.34				170-180	2.489	1998	100,100
DEG	LUMINOUS INTENSITY:cd								UNIT:lm		

Conical surface Flux(90deg): 699.08 lm

%lum = 35.0%

%lamp = 35.0%

Conical surface Flux(120deg): 1080.8 lm

%lum = 54.1%

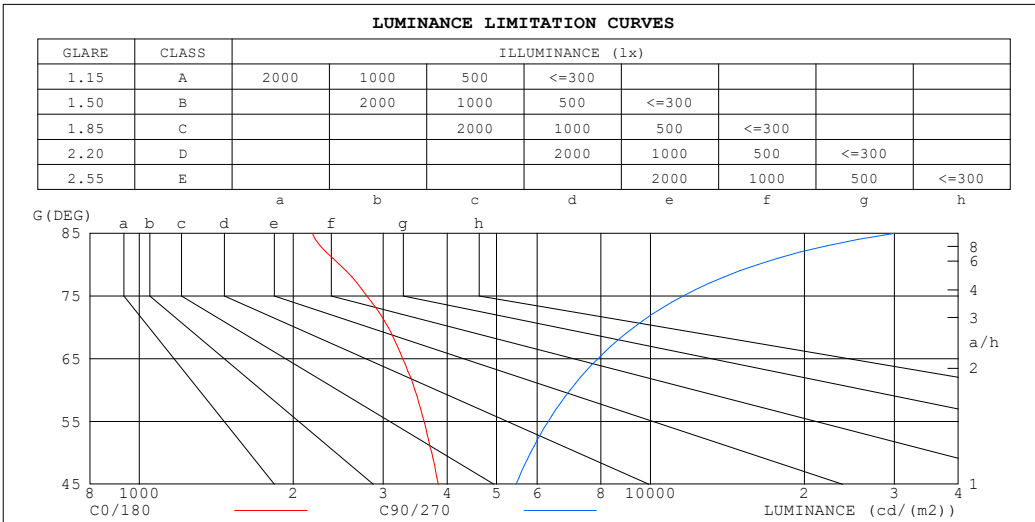
%lamp = 54.1%

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:DAMIN
 Test Date:20 April 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:119.94V I:0.2177A P:23.849W PF:0.9135 Freq:59.98Hz Lamp Flux:1997.85x1 lm		
NAME: WS24-085-BN 24W 40K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:



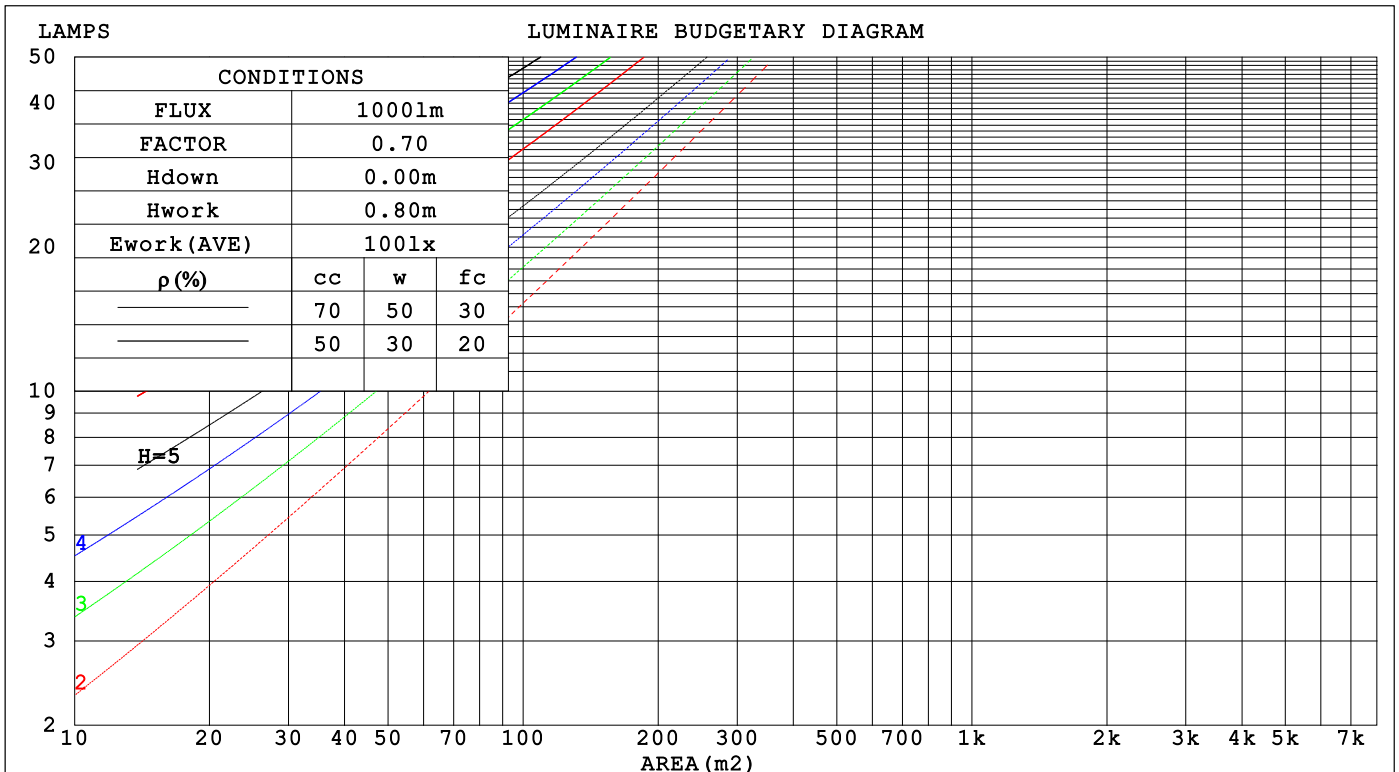
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3 °C
 Operators: DAMIN
 Test Date: 20 April 2026

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:119.94V I:0.2177A P:23.849W PF:0.9135 Freq:59.98Hz Lamp Flux:1997.85x1 lm		
NAME: WS24-085-BN 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	1.15	1.15	1.15	1.10	1.10	1.10	1.02	1.02	1.02	.94	.94	.94	.87	.87	.87	.83
1.0	.96	.90	.85	.92	.87	.82	.84	.80	.77	.77	.74	.71	.71	.69	.66	.63
2.0	.82	.74	.67	.78	.71	.65	.72	.66	.61	.66	.61	.57	.61	.57	.53	.50
3.0	.71	.62	.54	.68	.60	.53	.62	.56	.50	.57	.52	.47	.53	.48	.44	.41
4.0	.62	.53	.45	.60	.51	.44	.55	.48	.42	.51	.44	.39	.47	.41	.37	.34
5.0	.55	.46	.38	.53	.44	.37	.49	.41	.36	.45	.39	.34	.42	.36	.32	.29
6.0	.49	.40	.33	.47	.39	.32	.44	.36	.31	.41	.34	.29	.38	.32	.28	.25
7.0	.44	.35	.29	.43	.34	.28	.40	.32	.27	.37	.30	.26	.34	.29	.24	.22
8.0	.40	.32	.26	.39	.31	.25	.36	.29	.24	.34	.27	.23	.31	.26	.22	.19
9.0	.37	.29	.23	.36	.28	.22	.33	.26	.21	.31	.25	.20	.29	.23	.19	.17
10.0	.34	.26	.21	.33	.25	.20	.31	.24	.19	.29	.23	.18	.27	.21	.18	.16



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3 °C
 Operators:DAMIN
 Test Date:20 April 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:119.94V I:0.2177A P:23.849W PF:0.9135 Freq:59.98Hz Lamp Flux:1997.85x1 lm		
NAME: WS24-085-BN 24W 40K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

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	.390	.222	.070	.377	.215	.068	.354	.203	.065	.333	.192	.062	.313	.182	.059	
2.0	.337	.184	.057	.325	.179	.055	.305	.169	.053	.285	.160	.050	.267	.151	.048	
3.0	.299	.159	.048	.289	.155	.047	.270	.146	.044	.252	.138	.042	.236	.131	.040	
4.0	.269	.140	.041	.260	.136	.040	.242	.129	.038	.227	.122	.037	.212	.115	.035	
5.0	.244	.124	.036	.236	.121	.035	.220	.115	.034	.206	.109	.032	.192	.103	.031	
6.0	.223	.112	.032	.216	.109	.031	.202	.103	.030	.189	.098	.029	.176	.093	.028	
7.0	.206	.102	.029	.199	.099	.028	.186	.094	.027	.174	.089	.026	.163	.085	.025	
8.0	.191	.093	.026	.185	.091	.026	.173	.086	.025	.162	.082	.024	.151	.078	.023	
9.0	.178	.086	.024	.172	.084	.024	.161	.080	.023	.151	.076	.022	.141	.072	.021	
10.0	.166	.080	.022	.161	.078	.022	.151	.074	.021	.142	.070	.020	.133	.067	.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	.318	.318	.318	.272	.272	.272	.186	.186	.186	.107	.107	.107	.034	.034	.034	
1.0	.314	.284	.257	.269	.244	.221	.184	.168	.153	.106	.097	.089	.034	.031	.029	
2.0	.308	.261	.222	.264	.225	.192	.181	.156	.134	.104	.090	.078	.033	.029	.026	
3.0	.300	.245	.200	.257	.211	.174	.177	.147	.122	.102	.086	.072	.033	.028	.024	
4.0	.292	.232	.186	.251	.201	.162	.173	.140	.114	.100	.082	.067	.032	.027	.022	
5.0	.285	.222	.176	.244	.192	.153	.168	.134	.108	.098	.079	.064	.031	.026	.021	
6.0	.277	.214	.169	.238	.186	.147	.164	.130	.104	.095	.076	.062	.031	.025	.020	
7.0	.270	.208	.164	.232	.180	.143	.160	.126	.101	.093	.074	.060	.030	.024	.020	
8.0	.263	.202	.160	.227	.175	.140	.157	.123	.099	.091	.073	.059	.030	.024	.020	
9.0	.257	.197	.157	.221	.171	.137	.153	.120	.097	.089	.071	.058	.029	.023	.019	
10.0	.251	.193	.155	.216	.168	.135	.150	.118	.096	.088	.070	.057	.028	.023	.019	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:DAMIN
 Test Date:20 April 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:119.94V I:0.2177A P:23.849W PF:0.9135 Freq:59.98Hz Lamp Flux:1997.85x1 lm		
NAME: WS24-085-BN 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	13.7	15.1	14.2	15.6	16.2	16.2	17.6	16.7	18.1	18.6
3H	15.2	16.5	15.8	17.0	17.6	19.0	20.3	19.6	20.9	21.4
4H	15.8	17.1	16.4	17.6	18.2	20.7	21.9	21.2	22.4	23.0
6H	16.3	17.4	16.8	18.0	18.6	22.4	23.6	23.0	24.2	24.8
8H	16.4	17.5	17.0	18.1	18.7	23.4	24.6	24.0	25.1	25.8
12H	16.5	17.6	17.1	18.1	18.8	24.6	25.7	25.2	26.2	26.9
4H 2H	14.9	16.1	15.5	16.7	17.3	16.7	17.9	17.2	18.5	19.1
3H	16.7	17.8	17.3	18.4	19.0	19.7	20.8	20.3	21.4	22.1
4H	17.5	18.5	18.1	19.1	19.8	21.5	22.5	22.1	23.1	23.8
6H	18.2	19.1	18.8	19.7	20.4	23.5	24.4	24.1	25.0	25.7
8H	18.4	19.2	19.0	19.9	20.6	24.6	25.5	25.3	26.1	26.9
12H	18.6	19.3	19.2	20.0	20.8	25.9	26.7	26.6	27.4	28.1
8H 4H	18.6	19.4	19.2	20.1	20.8	21.8	22.6	22.4	23.3	24.0
6H	19.6	20.3	20.3	21.0	21.8	24.0	24.7	24.7	25.4	26.2
8H	20.1	20.7	20.8	21.4	22.2	25.4	26.0	26.1	26.7	27.5
12H	20.5	21.0	21.2	21.7	22.5	26.9	27.5	27.6	28.2	29.0
12H 4H	18.9	19.7	19.6	20.4	21.1	21.8	22.6	22.5	23.2	24.0
6H	20.2	20.8	20.9	21.5	22.3	24.1	24.8	24.8	25.5	26.2
8H	20.8	21.4	21.5	22.1	22.9	25.5	26.1	26.3	26.8	27.6
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.2				
2.0H	+ 0.3 / - 0.5					+ 0.2 / - 0.3				

CIE Pub.117, 1998 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.4)
Area: 0.1 m2

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:20 April 2026	Remarks:

UTILIZATION FACTORS TABLE

Test:U:119.94V I:0.2177A P:23.849W PF:0.9135 Freq:59.98Hz Lamp Flux:1997.85x1 lm		
NAME: WS24-085-BN 24W 40K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

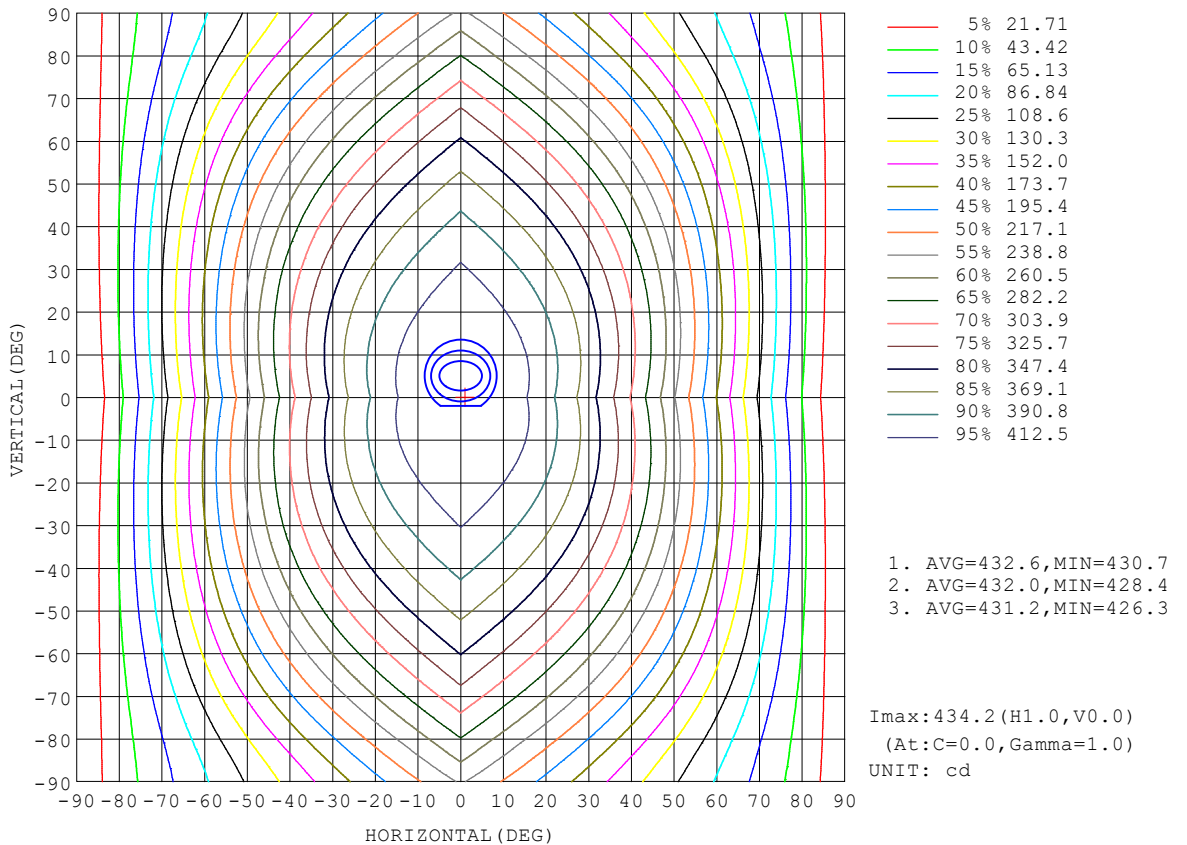
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	48	35	28	47	35	28	45	34	28	21
0.80	57	44	36	56	43	36	53	42	35	27
1.00	65	52	43	63	51	43	59	51	42	33
1.25	72	59	51	69	58	50	65	55	48	39
1.50	77	65	56	74	63	55	69	60	53	43
2.00	84	73	65	81	71	63	76	67	61	49
2.50	89	78	70	85	76	69	79	72	65	53
3.00	92	83	76	89	80	74	82	75	70	57
4.00	97	89	83	93	86	80	86	81	76	61
5.00	100	93	87	96	90	85	89	84	79	65
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:20 April 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:119.94V I:0.2177A P:23.849W PF:0.9135 Freq:59.98Hz Lamp Flux:1997.85x1 lm		
NAME: WS24-085-BN 24W 40K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

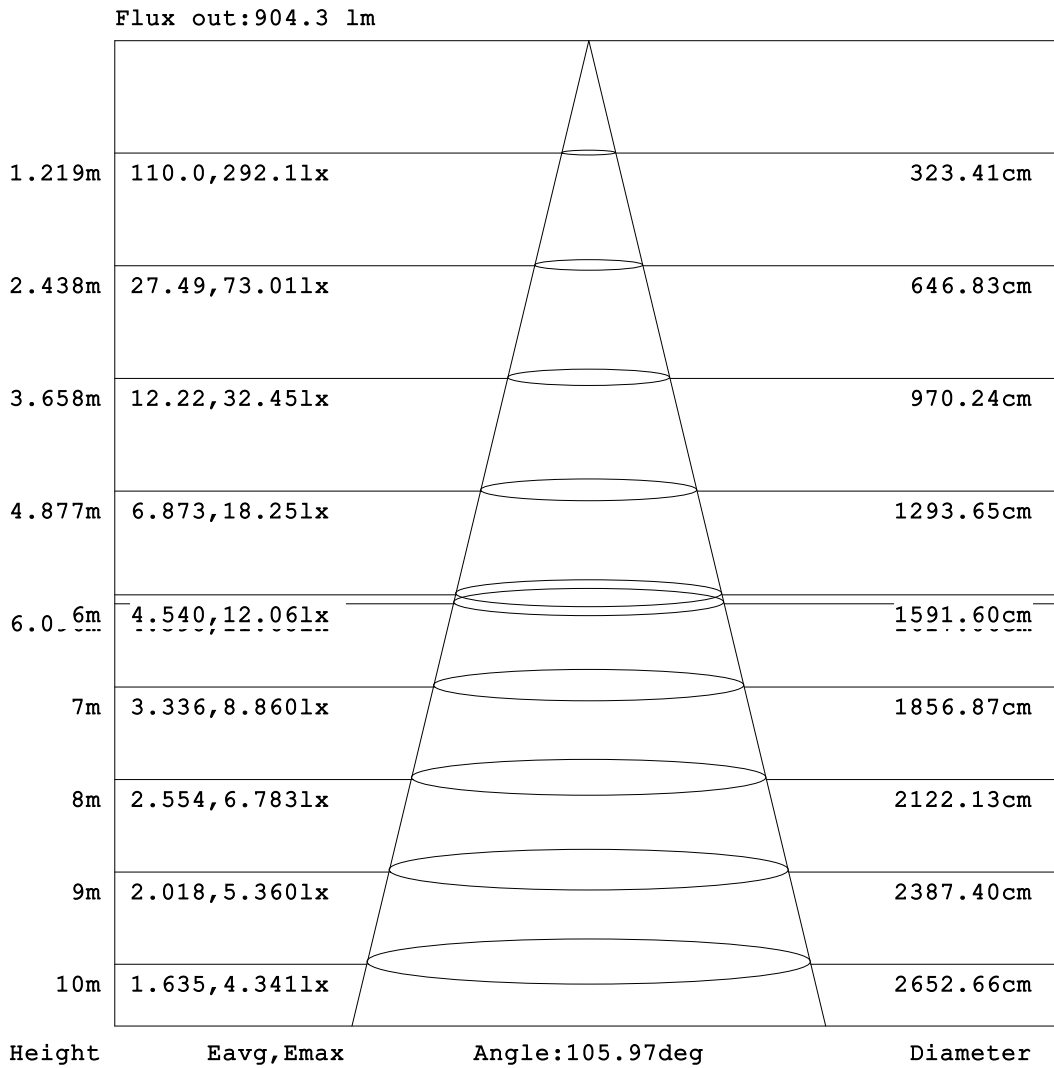


C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3 °C
 Operators: DAMIN
 Test Date: 20 April 2026

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:119.94V I:0.2177A P:23.849W PF:0.9135 Freq:59.98Hz Lamp Flux:1997.85x1 lm		
NAME: WS24-085-BN 24W 40K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:



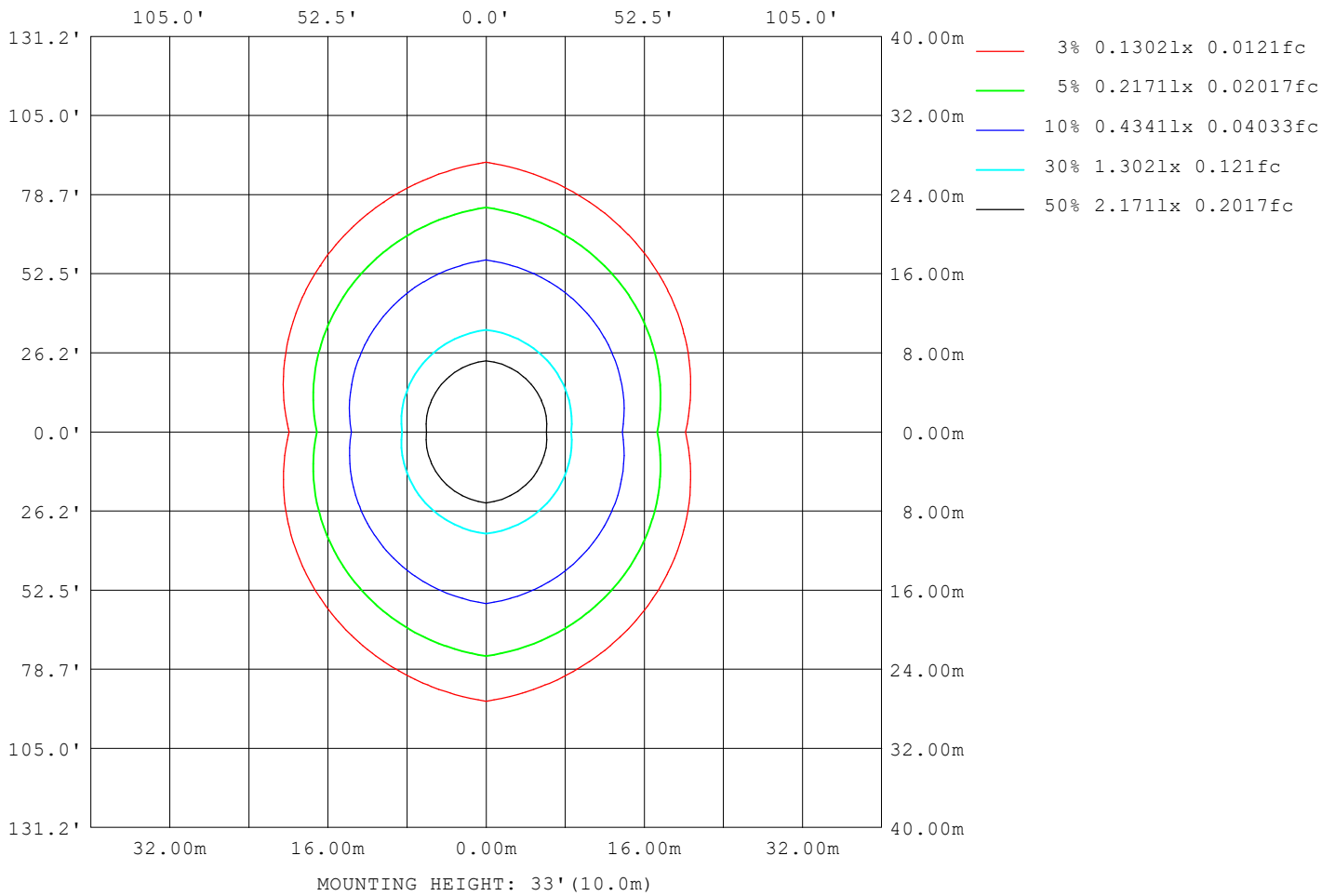
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3 °C
Operators:DAMIN
Test Date:20 April 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:119.94V I:0.2177A P:23.849W PF:0.9135 Freq:59.98Hz Lamp Flux:1997.85x1 lm		
NAME: WS24-085-BN 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:20 April 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:119.94V I:0.2177A P:23.849W PF:0.9135 Freq:59.98Hz Lamp Flux:1997.85x1 lm		
NAME: WS24-085-BN 24W 40K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

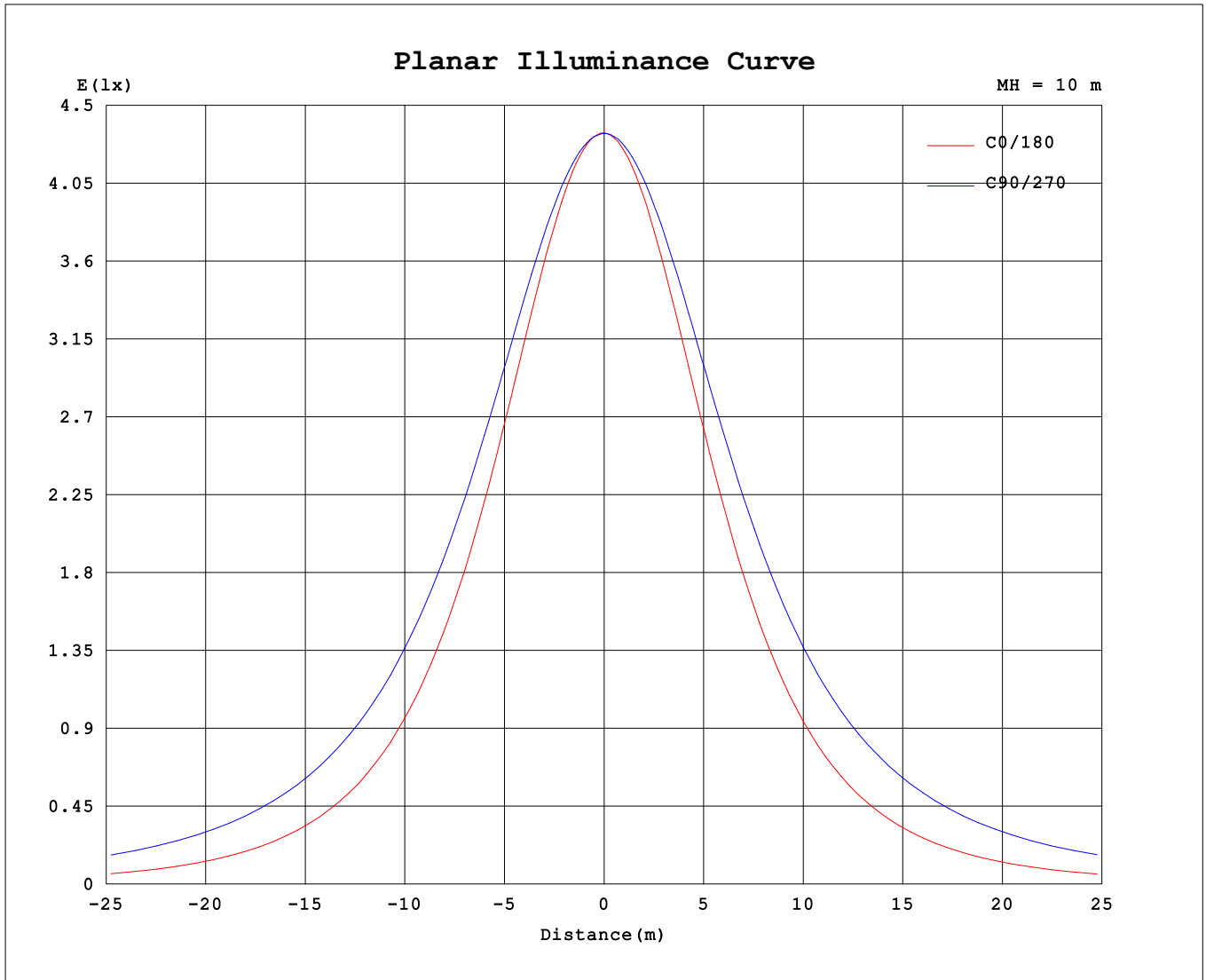
AvgL	cd/m2
L_0~180 (65) av	3210
L_0~180 (75) av	2692
L_0~180 (85) av	1986
L_90~270 (65) av	7902
L_90~270 (75) av	11609
L_90~270 (85) av	30174
L_45 (65) av	6138
L_45 (75) av	8259
L_45 (85) av	19591

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:DAMIN
 Test Date:20 April 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: 20 April 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:119.94V I:0.2177A P:23.849W PF:0.9135 Freq:59.98Hz Lamp Flux:1997.85x1 lm		
NAME: WS24-085-BN 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	434	434	434	434															
5	432	433	431	433															
10	425	432	423	432															
15	414	429	411	430															
20	398	425	395	426															
25	379	420	375	421															
30	356	413	352	415															
35	330	405	325	407															
40	302	396	297	398															
45	272	386	267	388															
50	240	374	235	376															
55	207	362	201	364															
60	173	348	167	350															
65	138	333	133	335															
70	105	317	99.3	318															
75	72.1	300	67.2	301															
80	42.8	281	38.3	283															
85	19.0	262	15.6	264															
90	6.65	242	5.88	243															
95	7.21	199	6.62	203															
100	8.77	150	7.98	151															
105	10.5	100	9.92	99.0															
110	12.7	91.8	12.4	90.8															
115	15.4	93.3	15.2	91.7															
120	18.0	76.9	17.7	76.7															
125	18.3	62.1	16.8	60.6															
130	20.6	55.6	18.6	55.1															
135	22.3	50.9	20.7	49.0															
140	22.5	47.0	21.1	37.2															
145	23.1	42.6	21.7	37.8															
150	24.1	36.7	22.7	36.1															
155	25.1	33.0	23.6	30.8															
160	25.9	32.3	24.3	31.8															
165	25.9	30.5	24.7	29.9															
170	26.1	26.4	24.9	27.3															
175	30.1	22.6	28.7	24.8															
180	30.0	19.3	30.0	19.3															

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