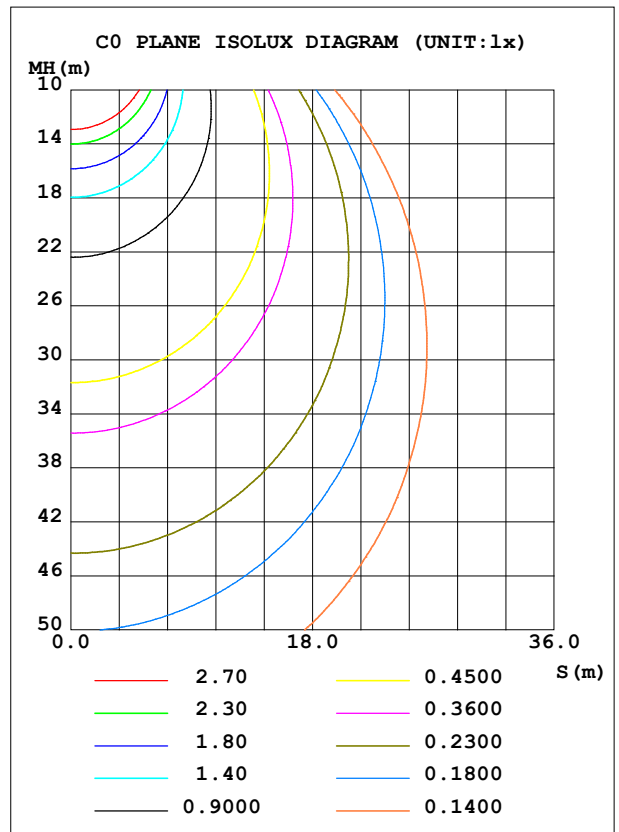
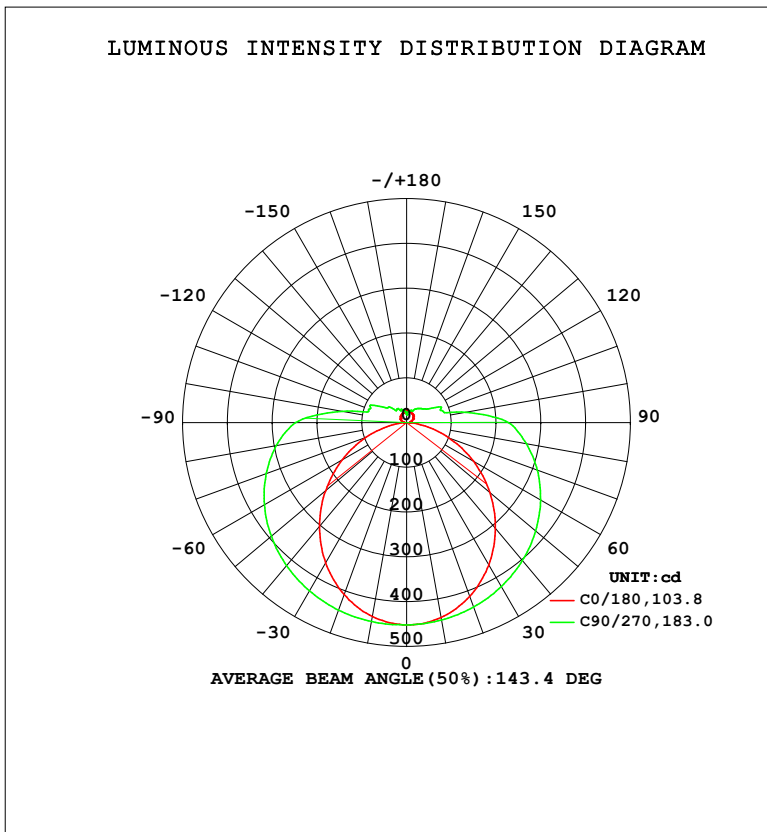


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.04V I:0.2183A P:24.000W PF:0.9158 Freq:59.98Hz Lamp Flux:2007.81x1 lm		
NAME: WS24-085-BK 24W 35K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 83.66 lm/W
MODEL	3500K	I <sub>max</sub> (cd)	452.0	S/MH (C0/180)	1.20	
NOMINAL POWER (W)	24	LOR (%)	100.0	S/MH (C90/270)	1.45	
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	2007.8	η UP, DN (C0-180)	7.7, 41.6	
NOMINAL FLUX (lm)	2007.81	CIE CLASS	SEMI-D.	η UP, DN (C180-360)	8.1, 42.7	
LAMPS INSIDE	1	η up (%)	15.8	CIBSE SHR NOM	1.50	
TEST VOLTAGE (V)	120	η down (%)	84.2	CIBSE SHR MAX	1.55	



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3 °C  
 Operators: DAMIN  
 Test Date: 08 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:

$\gamma$	C0	C90	C180	C270				$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
10	442.1	447.8	440.0	451.1				0- 10	42.81	42.81	2.13,2.13
20	413.0	438.2	408.8	445.5				10- 20	123.5	166.3	8.28,8.28
30	367.4	422.9	361.6	434.0				20- 30	190.3	356.6	17.8,17.8
40	308.9	402.2	302.9	416.8				30- 40	236.8	593.4	29.6,29.6
50	242.7	376.4	235.9	394.4				40- 50	259.4	852.8	42.5,42.5
60	172.4	345.7	165.6	366.8				50- 60	257.6	1110	55.3,55.3
70	100.8	310.6	96.06	333.7				60- 70	234.4	1345	67,67
80	37.73	271.3	34.47	295.3				70- 80	195.1	1540	76.7,76.7
90	6.150	227.7	5.930	248.4				80- 90	151.6	1692	84.2,84.2
100	8.535	134.7	8.155	146.4				90-100	108.3	1800	89.6,89.6
110	12.50	80.89	12.22	89.15				100-110	58.81	1859	92.6,92.6
120	17.53	64.74	16.93	75.43				110-120	48.38	1907	95,95
130	20.42	48.60	18.24	53.62				120-130	33.88	1941	96.7,96.7
140	22.53	41.71	20.20	36.36				130-140	25.59	1966	97.9,97.9
150	24.28	32.41	22.01	35.44				140-150	18.73	1985	98.9,98.9
160	25.79	29.05	23.44	31.58				150-160	12.65	1998	99.5,99.5
170	25.57	23.45	23.43	27.22				160-170	7.559	2005	99.9,99.9
180	28.72	18.50	28.71	18.51				170-180	2.369	2008	100,100
DEG	LUMINOUS INTENSITY:cd								UNIT:lm		

Conical surface Flux(90deg): 721.82 lm

%lum = 36.0%

%lamp = 36.0%

Conical surface Flux(120deg): 1110.5 lm

%lum = 55.3%

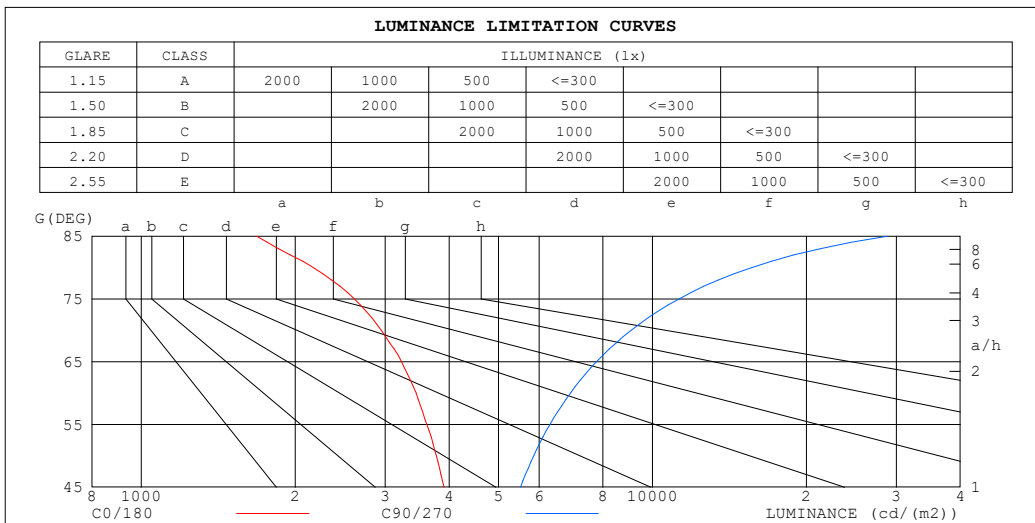
%lamp = 55.3%

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:DAMIN  
 Test Date:08 April 2026

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  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:120.04V I:0.2183A P:24.000W PF:0.9158 Freq:59.98Hz Lamp Flux:2007.81x1 lm		
NAME: WS24-085-BK 24W 35K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1683	28785
80	2173	15625
75	2610	11264
70	2946	9081
65	3227	7773
60	3448	6915
55	3619	6303
50	3776	5855
45	3910	5516

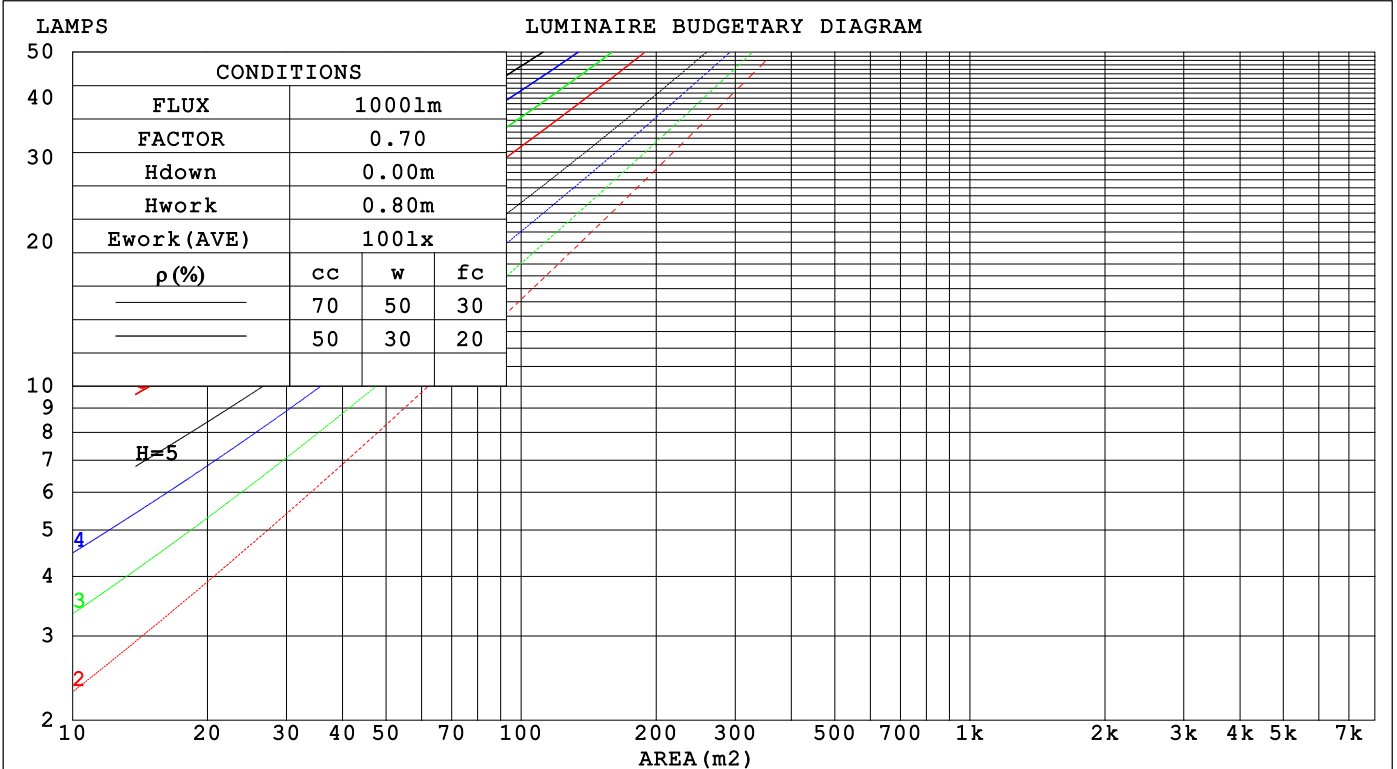
C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3 °C  
 Operators: DAMIN  
 Test Date: 08 April 2026

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:120.04V I:0.2183A P:24.000W PF:0.9158 Freq:59.98Hz Lamp Flux:2007.81x1 lm		
NAME: WS24-085-BK 24W 35K	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	1.11	1.11	1.11	1.02	1.02	1.02	.95	.95	.95	.88	.88	.88	.84
1.0	.96	.91	.86	.92	.87	.83	.85	.81	.77	.78	.75	.72	.72	.70	.67	.64
2.0	.82	.74	.68	.79	.72	.66	.73	.67	.62	.67	.62	.58	.62	.58	.54	.51
3.0	.71	.62	.55	.68	.60	.53	.63	.56	.50	.58	.52	.48	.54	.49	.45	.42
4.0	.63	.53	.46	.60	.51	.45	.56	.48	.42	.51	.45	.40	.47	.42	.38	.35
5.0	.55	.46	.39	.53	.45	.38	.49	.42	.36	.46	.39	.34	.42	.37	.32	.30
6.0	.50	.40	.34	.48	.39	.33	.44	.37	.31	.41	.35	.30	.38	.33	.28	.26
7.0	.45	.36	.29	.43	.35	.29	.40	.33	.27	.37	.31	.26	.35	.29	.25	.23
8.0	.41	.32	.26	.39	.31	.25	.37	.29	.24	.34	.28	.23	.32	.26	.22	.20
9.0	.37	.29	.23	.36	.28	.23	.34	.27	.22	.31	.25	.21	.29	.24	.20	.18
10.0	.34	.26	.21	.33	.26	.20	.31	.24	.20	.29	.23	.19	.27	.22	.18	.16



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3 °C  
 Operators:DAMIN  
 Test Date:08 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:120.04V I:0.2183A P:24.000W PF:0.9158 Freq:59.98Hz Lamp Flux:2007.81x1 lm		
NAME: WS24-085-BK 24W 35K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

ρ <sub>CC</sub>	80%			70%			50%			30%			10%			0
ρ <sub>w</sub>	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ <sub>fc</sub>	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.387	.220	.070	.375	.214	.068	.353	.202	.065	.332	.191	.061	.313	.181	.058	
2.0	.335	.184	.056	.324	.179	.055	.304	.169	.052	.285	.160	.050	.268	.151	.048	
3.0	.298	.158	.047	.288	.154	.046	.270	.146	.044	.253	.138	.042	.237	.131	.041	
4.0	.268	.139	.041	.259	.136	.040	.242	.129	.038	.227	.122	.037	.213	.116	.035	
5.0	.243	.124	.036	.236	.121	.035	.220	.115	.034	.206	.109	.032	.193	.103	.031	
6.0	.223	.112	.032	.216	.109	.031	.202	.104	.030	.189	.098	.029	.177	.093	.028	
7.0	.206	.102	.029	.199	.099	.028	.187	.094	.027	.175	.090	.026	.164	.085	.025	
8.0	.191	.093	.026	.185	.091	.026	.173	.087	.025	.162	.082	.024	.152	.078	.023	
9.0	.178	.086	.024	.172	.084	.024	.162	.080	.023	.152	.076	.022	.142	.072	.021	
10.0	.166	.080	.022	.161	.078	.022	.151	.074	.021	.142	.071	.020	.134	.067	.019	

ρ <sub>CC</sub>	80%			70%			50%			30%			10%			0
ρ <sub>w</sub>	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ <sub>fc</sub>	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.311	.311	.311	.265	.265	.265	.181	.181	.181	.104	.104	.104	.033	.033	.033	
1.0	.307	.276	.249	.262	.237	.215	.179	.163	.148	.103	.094	.086	.033	.030	.028	
2.0	.300	.254	.215	.257	.218	.185	.176	.151	.129	.101	.088	.076	.033	.028	.025	
3.0	.292	.237	.193	.251	.204	.167	.172	.142	.117	.099	.083	.069	.032	.027	.023	
4.0	.284	.224	.179	.244	.194	.155	.168	.135	.109	.097	.079	.065	.031	.026	.021	
5.0	.277	.215	.169	.238	.186	.147	.164	.130	.104	.095	.076	.061	.031	.025	.020	
6.0	.269	.207	.162	.231	.179	.141	.160	.125	.100	.093	.074	.059	.030	.024	.020	
7.0	.262	.200	.156	.225	.173	.136	.156	.122	.097	.091	.072	.057	.029	.023	.019	
8.0	.255	.194	.152	.220	.169	.133	.152	.118	.094	.089	.070	.056	.029	.023	.019	
9.0	.249	.190	.149	.215	.165	.130	.149	.116	.092	.087	.068	.055	.028	.022	.018	
10.0	.243	.185	.147	.210	.161	.128	.145	.113	.091	.085	.067	.054	.028	.022	.018	

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3℃  
 Operators:DAMIN  
 Test Date:08 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:120.04V I:0.2183A P:24.000W PF:0.9158 Freq:59.98Hz										
Lamp Flux:2007.81x1 lm										
NAME: WS24-085-BK 24W 35K					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	16.1	16.2	17.6	16.6	18.0	18.6
3H	15.1	16.4	15.7	16.9	17.5	18.9	20.2	19.5	20.7	21.3
4H	15.7	16.9	16.2	17.5	18.0	20.5	21.7	21.0	22.3	22.9
6H	16.1	17.2	16.6	17.8	18.4	22.2	23.4	22.8	24.0	24.6
8H	16.2	17.3	16.7	17.8	18.5	23.2	24.3	23.8	24.9	25.5
12H	16.2	17.3	16.8	17.9	18.5	24.3	25.4	24.9	26.0	26.6
4H 2H	14.9	16.1	15.4	16.6	17.2	16.6	17.9	17.2	18.4	19.0
3H	16.6	17.7	17.2	18.2	18.9	19.6	20.7	20.2	21.3	21.9
4H	17.4	18.3	17.9	18.9	19.6	21.4	22.4	22.0	22.9	23.6
6H	17.9	18.8	18.6	19.4	20.1	23.3	24.2	23.9	24.8	25.5
8H	18.1	19.0	18.8	19.6	20.3	24.4	25.3	25.0	25.9	26.6
12H	18.3	19.0	18.9	19.7	20.4	25.7	26.5	26.3	27.1	27.8
8H 4H	18.4	19.2	19.0	19.9	20.6	21.6	22.5	22.3	23.1	23.8
6H	19.4	20.1	20.0	20.7	21.5	23.8	24.5	24.5	25.2	26.0
8H	19.8	20.4	20.5	21.1	21.9	25.1	25.8	25.8	26.4	27.2
12H	20.1	20.7	20.8	21.4	22.2	26.7	27.2	27.4	27.9	28.7
12H 4H	18.7	19.5	19.4	20.2	20.9	21.6	22.4	22.3	23.0	23.8
6H	19.9	20.6	20.6	21.2	22.0	23.9	24.5	24.6	25.2	26.0
8H	20.5	21.1	21.2	21.8	22.6	25.3	25.9	26.0	26.5	27.4
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	+ 0.3 / - 0.5					+ 0.2 / - 0.3				

CIE Pub.117, 2008 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:08 April 2026	Remarks:

**UTILIZATION FACTORS TABLE**

Test:U:120.04V I:0.2183A P:24.000W PF:0.9158 Freq:59.98Hz Lamp Flux:2007.81x1 lm		
NAME: WS24-085-BK 24W 35K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

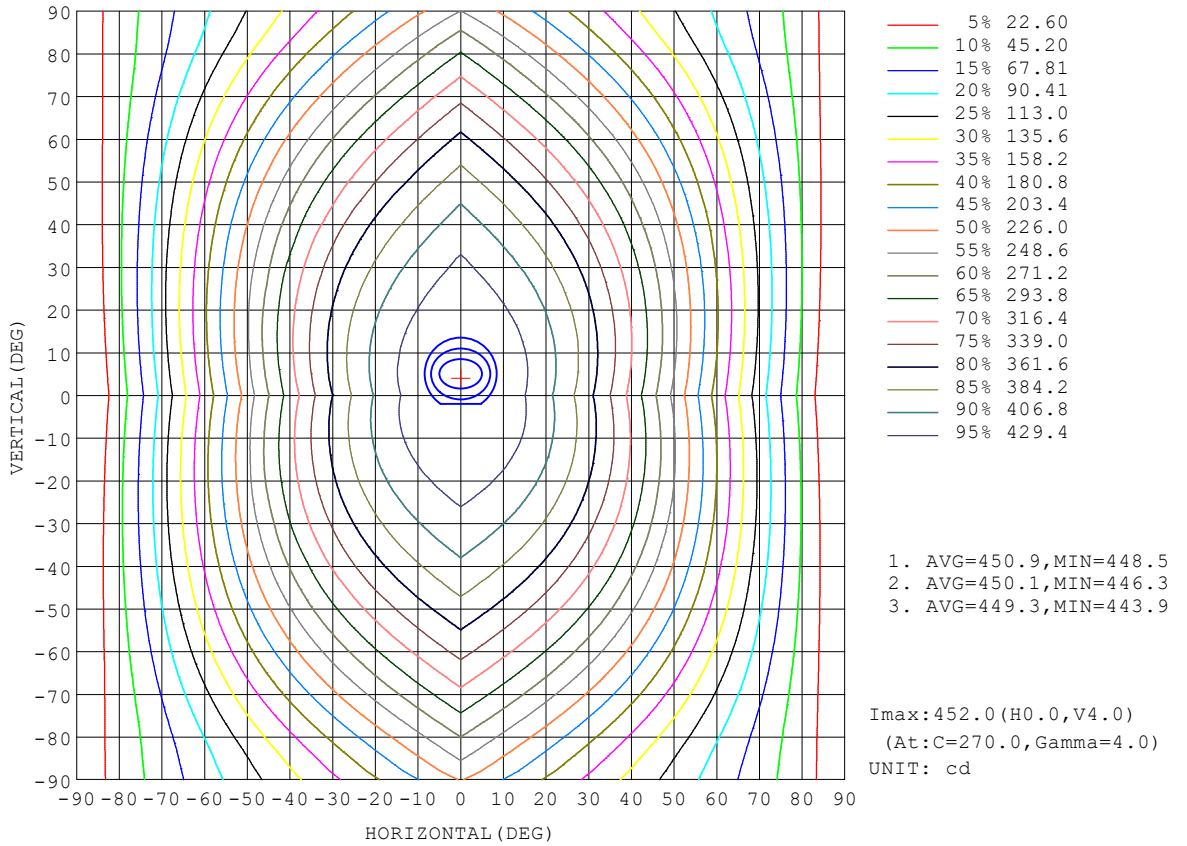
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	48	36	29	47	36	29	45	35	28	21
0.80	58	45	37	56	44	36	53	43	35	28
1.00	65	53	44	64	52	44	60	52	43	34
1.25	72	60	51	70	58	50	66	56	49	39
1.50	77	65	57	75	64	56	70	61	54	44
2.00	85	74	65	82	72	64	76	68	61	50
2.50	89	79	71	86	77	69	80	72	66	54
3.00	93	84	76	89	81	74	83	76	71	58
4.00	98	90	83	94	87	81	87	81	76	63
5.00	101	94	88	97	90	85	89	85	80	66
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: 08 April 2026

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  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:120.04V I:0.2183A P:24.000W PF:0.9158 Freq:59.98Hz Lamp Flux:2007.81x1 lm		
NAME: WS24-085-BK 24W 35K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

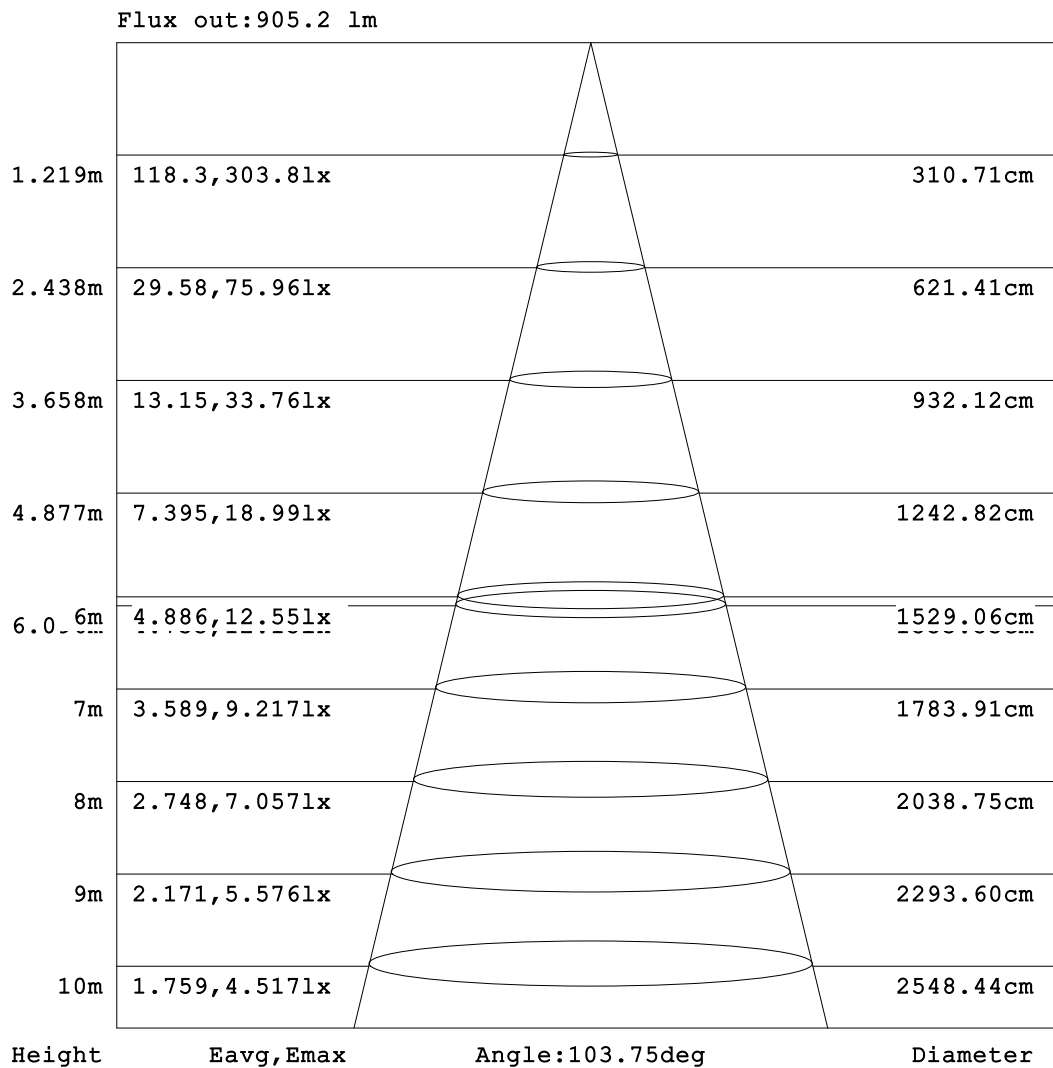


C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature: 25.3 °C  
Operators: DAMIN  
Test Date: 08 April 2026

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:120.04V I:0.2183A P:24.000W PF:0.9158 Freq:59.98Hz Lamp Flux:2007.81x1 lm		
NAME: WS24-085-BK 24W 35K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:



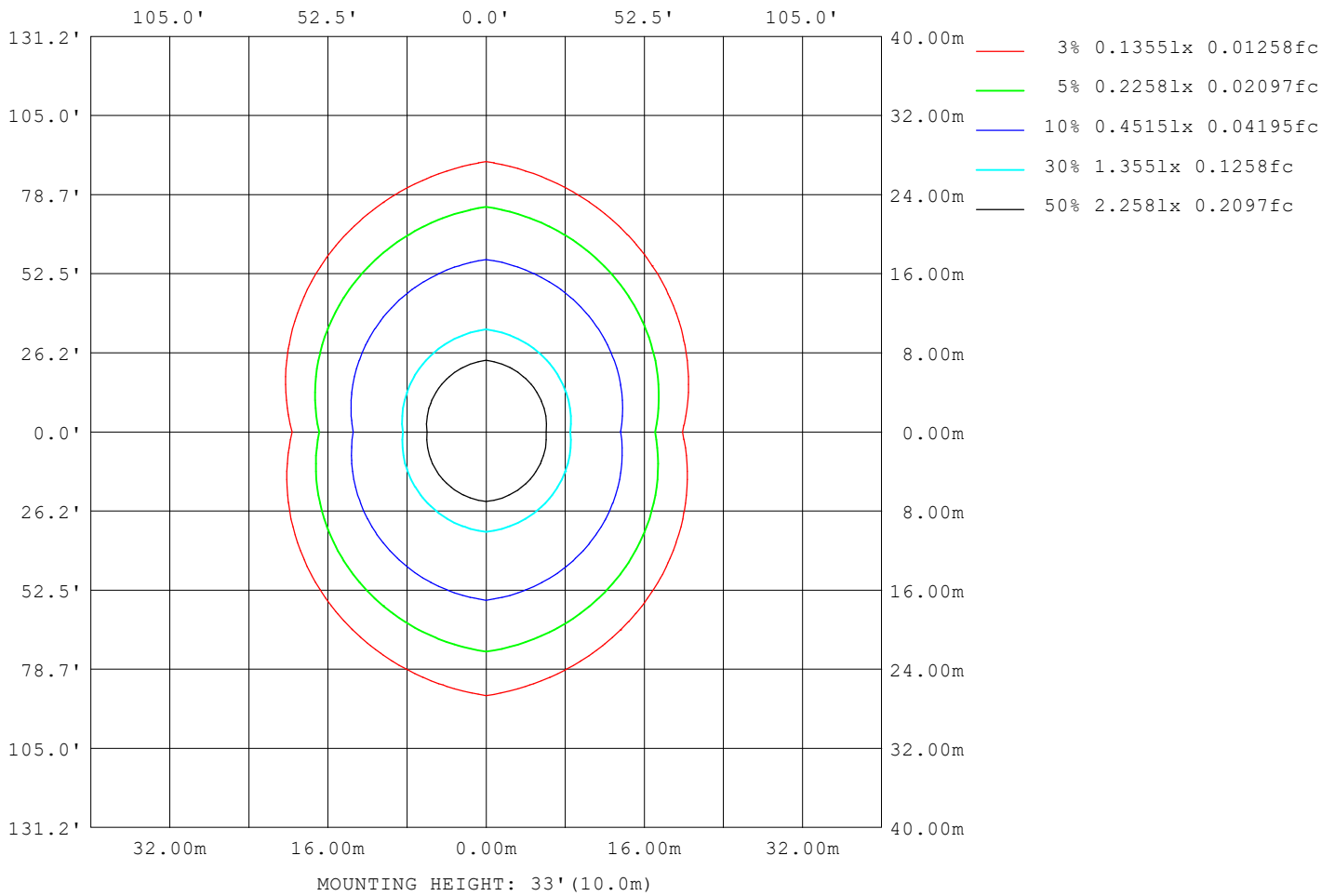
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:DAMIN  
Test Date:08 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:120.04V I:0.2183A P:24.000W PF:0.9158 Freq:59.98Hz Lamp Flux:2007.81x1 lm		
NAME: WS24-085-BK 24W 35K	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:08 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:120.04V I:0.2183A P:24.000W PF:0.9158 Freq:59.98Hz Lamp Flux:2007.81x1 lm		
NAME: WS24-085-BK 24W 35K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

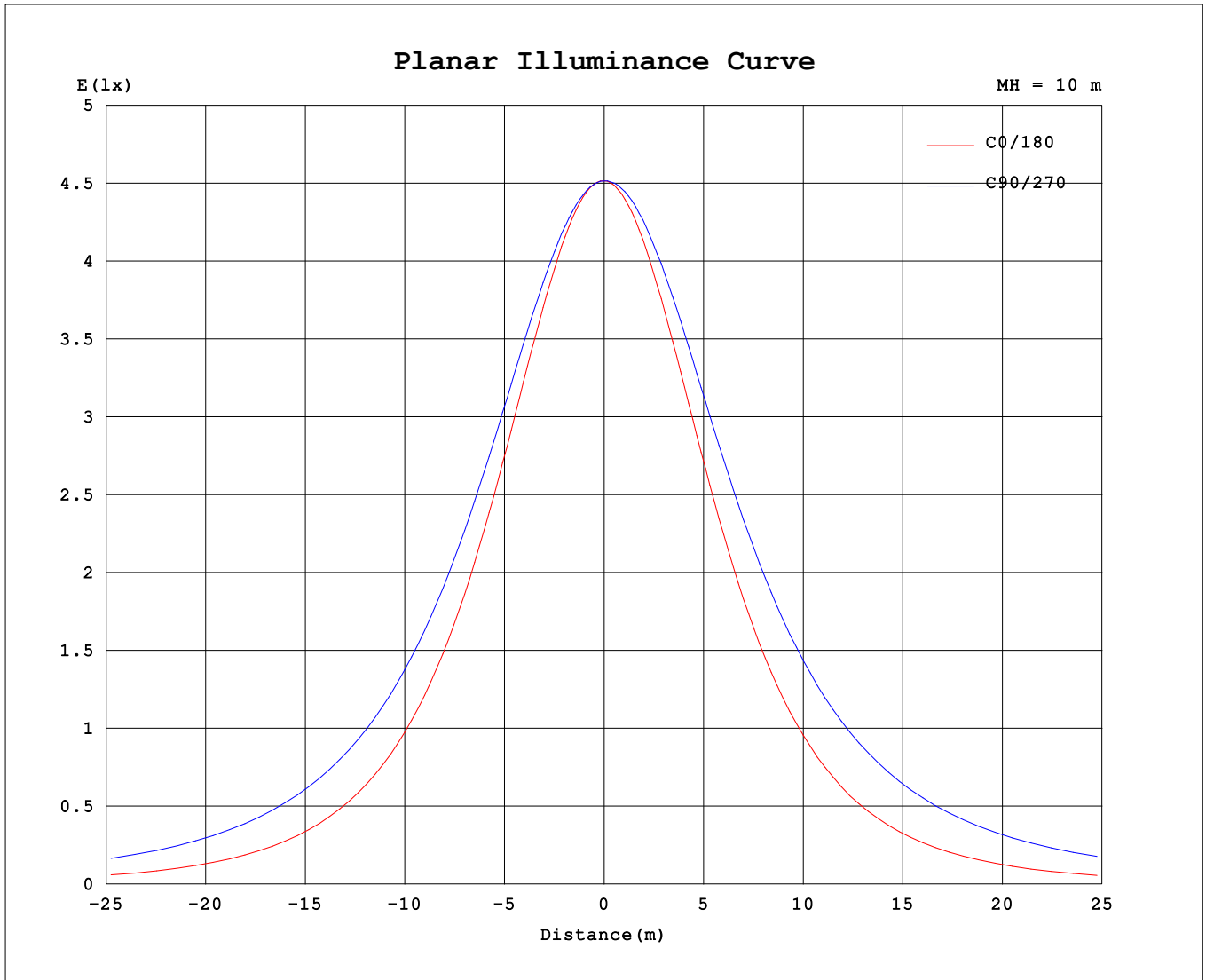
AvgL	cd/m2
L_0~180 (65) av	3157
L_0~180 (75) av	2532
L_0~180 (85) av	1559
L_90~270 (65) av	8037
L_90~270 (75) av	11718
L_90~270 (85) av	30072
L_45 (65) av	6203
L_45 (75) av	8268
L_45 (85) av	19372

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3℃  
 Operators:DAMIN  
 Test Date:08 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: 08 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:120.04V I:0.2183A P:24.000W PF:0.9158 Freq:59.98Hz Lamp Flux:2007.81x1 lm		
NAME: WS24-085-BK 24W 35K	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	452	452	452	452															
5	450	450	448	452															
10	442	448	440	451															
15	430	444	426	449															
20	413	438	409	446															
25	392	431	387	441															
30	367	423	362	434															
35	339	413	333	426															
40	309	402	303	417															
45	276	390	271	406															
50	243	376	236	394															
55	208	362	201	381															
60	172	346	166	367															
65	136	329	130	351															
70	101	311	96.1	334															
75	67.6	292	63.5	315															
80	37.7	271	34.5	295															
85	14.7	251	12.5	273															
90	6.15	228	5.93	248															
95	6.97	183	6.81	201															
100	8.53	135	8.16	146															
105	10.4	87.8	9.92	91.9															
110	12.5	80.9	12.2	89.1															
115	15.1	84.0	14.8	90.8															
120	17.5	64.7	16.9	75.4															
125	18.4	53.4	16.4	59.0															
130	20.4	48.6	18.2	53.6															
135	21.9	44.7	19.7	46.3															
140	22.5	41.7	20.2	36.4															
145	23.3	37.7	21.1	36.9															
150	24.3	32.4	22.0	35.4															
155	25.1	29.7	22.8	30.4															
160	25.8	29.0	23.4	31.6															
165	26.2	27.8	23.8	29.3															
170	25.6	23.4	23.4	27.2															
175	29.1	19.5	26.9	24.4															
180	28.7	18.5	28.7	18.5															

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3℃  
 Operators:DAMIN  
 Test Date:08 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: