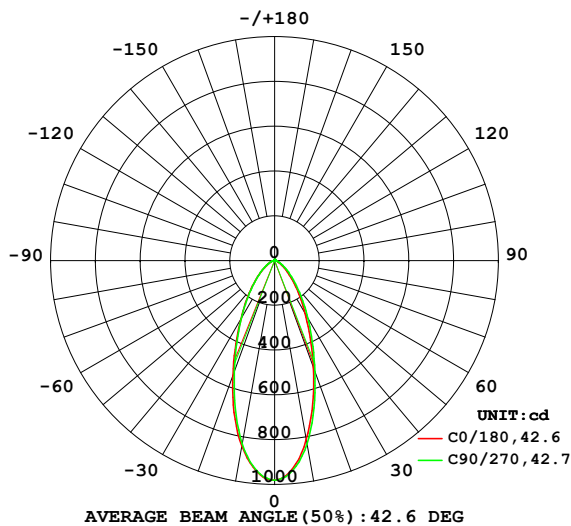


## LUMINAIRE PHOTOMETRIC TEST REPORT

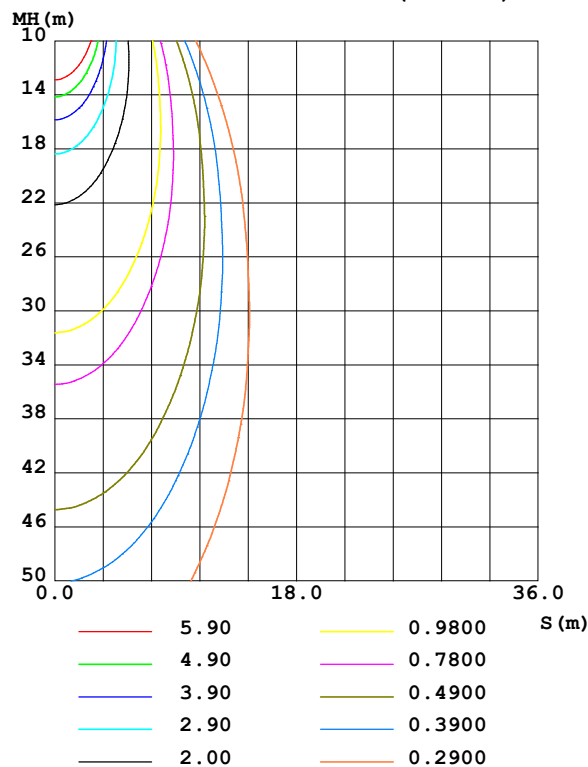
Test:U:120.03V I:0.0746A P:8.7251W PF:0.9745 Freq:60.60Hz Lamp Flux:789.07lx1 lm		
NAME: DL04-148 9W 40K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 90.44 lm/W
MODEL	4000K	I <sub>max</sub> (cd)	981.4	S/MH (C0/180)	0.69	
NOMINAL POWER (W)	9	LOR (%)	100.0	S/MH (C90/270)	0.67	
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	789.07	η UP, DN (C0-180)	1.3, 47.6	
NOMINAL FLUX (lm)	789.071	CIE CLASS	DIRECT	η UP, DN (C180-360)	1.3, 49.9	
LAMPS INSIDE	1	η up (%)	2.5	CIBSE SHR NOM	0.75	
TEST VOLTAGE (V)	120	η down (%)	97.5	CIBSE SHR MAX	0.75	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 180DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature: 25.3 °C  
Operators: DAMIN  
Test Date: 22 April 2024

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.471  
Humidity: 65.0%  
Test Distance: 7.382m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

$\gamma$	C0	C90	C180	C270					$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	813.6	832.3	842.0	832.3					0- 10	86.15	86.15	10.9,10.9
20	509.5	527.6	546.8	527.6					10- 20	188.2	274.4	34.8,34.8
30	272.6	299.1	302.6	299.1					20- 30	182.1	456.5	57.9,57.9
40	141.3	159.1	164.0	159.1					30- 40	135.6	592.0	75,75
50	67.65	82.14	80.48	82.14					40- 50	86.67	678.7	86,86
60	31.55	40.26	37.59	40.26					50- 60	49.38	728.1	92.3,92.3
70	14.83	18.61	17.98	18.61					60- 70	25.95	754.0	95.6,95.6
80	3.826	6.712	4.910	6.712					70- 80	11.77	765.8	97.1,97.1
90	1.696	2.011	1.655	2.011					80- 90	3.338	769.1	97.5,97.5
100	2.004	1.994	1.903	1.994					90-100	2.045	771.2	97.7,97.7
110	2.508	2.409	2.389	2.409					100-110	2.302	773.5	98,98
120	3.180	3.066	3.042	3.066					110-120	2.725	776.2	98.4,98.4
130	3.852	3.853	3.733	3.853					120-130	3.095	779.3	98.8,98.8
140	4.360	4.309	4.256	4.309					130-140	3.144	782.4	99.2,99.2
150	4.617	4.558	4.517	4.558					140-150	2.798	785.2	99.5,99.5
160	4.606	4.613	4.524	4.613					150-160	2.128	787.4	99.8,99.8
170	4.443	4.413	4.354	4.413					160-170	1.281	788.7	99.9,99.9
180	4.376	4.361	4.324	4.361					170-180	0.4170	789.1	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 640.94 lm

%lum = 81.2%

%lamp = 81.2%

Conical surface Flux(120deg): 728.08 lm

%lum = 92.3%

%lamp = 92.3%

C Range: 0 - 180DEG

C Interval: 90.0DEG

Test Speed: HIGH

Temperature:25.3℃

Operators:DAMIN

Test Date:22 April 2024

 $\gamma$  Range: 0 - 180DEG $\gamma$  Interval: 1.0DEG

Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.471

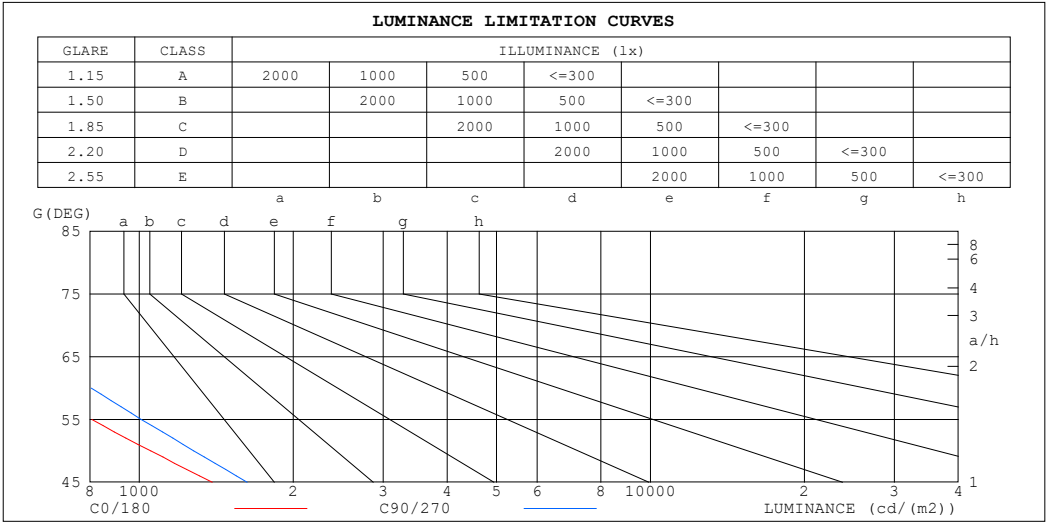
Humidity:65.0%

Test Distance:7.382m [K=1.0000]

Remarks:

LUMINANCE LIMITATION CURVES

Test:U:120.03V I:0.0746A P:8.7251W PF:0.9745 Freq:60.60Hz Lamp Flux:789.07lx1 lm		
NAME: DL04-148 9W 40K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	275	280
80	220	387
75	321	492
70	434	544
65	512	652
60	631	805
55	807	1008
50	1052	1278
45	1388	1624

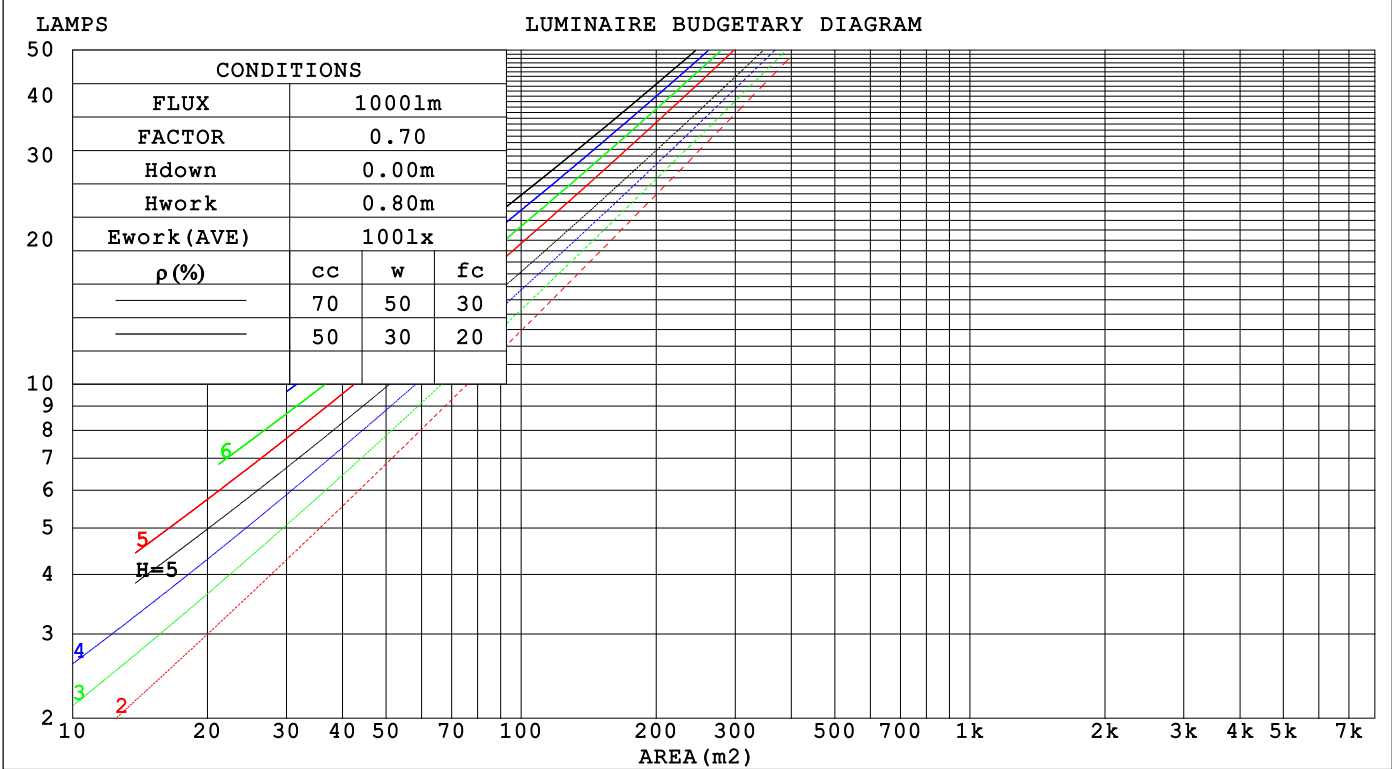
C Range: 0 - 180DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:22 April 2024

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.471  
Humidity:65.0%  
Test Distance:7.382m [K=1.0000]  
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.03V I:0.0746A P:8.7251W PF:0.9745 Freq:60.60Hz		
Lamp Flux:789.07lx1 lm		
NAME: DL04-148 9W 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	1.18	1.18	1.18	1.15	1.15	1.15	1.10	1.10	1.10	1.05	1.05	1.05	.00	.00	.00	.97														
1.0	1.08	1.06	1.03	1.06	1.03	1.01	1.01	.99	.97	.97	.96	.94	.93	.92	.91	.89														
2.0	.99	.95	.91	.97	.93	.89	.94	.90	.87	.90	.87	.85	.87	.85	.83	.81														
3.0	.91	.86	.81	.90	.84	.80	.87	.82	.78	.84	.80	.77	.81	.78	.75	.74														
4.0	.84	.78	.73	.83	.77	.72	.80	.75	.71	.78	.74	.70	.76	.72	.69	.67														
5.0	.78	.72	.67	.77	.71	.66	.75	.69	.65	.73	.68	.65	.71	.67	.64	.62														
6.0	.73	.66	.61	.72	.66	.61	.70	.64	.60	.68	.63	.60	.67	.62	.59	.57														
7.0	.68	.61	.57	.67	.61	.56	.66	.60	.56	.64	.59	.55	.63	.58	.55	.53														
8.0	.64	.57	.53	.63	.57	.53	.62	.56	.52	.60	.55	.52	.59	.55	.51	.50														
9.0	.60	.54	.49	.59	.53	.49	.58	.53	.49	.57	.52	.48	.56	.52	.48	.47														
10.0	.57	.50	.46	.56	.50	.46	.55	.50	.46	.54	.49	.46	.53	.49	.45	.44														



C Range: 0 - 180DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:22 April 2024

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.471  
Humidity:65.0%  
Test Distance:7.382m [K=1.0000]  
Remarks:

## WEC AND CCEC

Test:U:120.03V I:0.0746A P:8.7251W PF:0.9745 Freq:60.60Hz Lamp Flux:789.071x1 lm		
NAME: DL04-148 9W 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	.210	.120	.038	.203	.116	.037	.189	.108	.035	.175	.101	.032	.163	.095	.031		
2.0	.201	.110	.034	.194	.107	.033	.182	.101	.031	.171	.096	.030	.160	.091	.029		
3.0	.190	.101	.030	.184	.099	.030	.173	.094	.029	.164	.090	.027	.154	.086	.026		
4.0	.179	.093	.027	.174	.091	.027	.164	.087	.026	.156	.084	.025	.148	.080	.024		
5.0	.169	.086	.025	.164	.084	.025	.156	.081	.024	.148	.078	.023	.141	.075	.023		
6.0	.159	.080	.023	.155	.078	.023	.148	.076	.022	.141	.073	.022	.135	.071	.021		
7.0	.151	.074	.021	.147	.073	.021	.141	.071	.020	.134	.069	.020	.129	.067	.020		
8.0	.143	.070	.020	.140	.069	.019	.134	.067	.019	.128	.065	.019	.123	.063	.018		
9.0	.136	.066	.018	.133	.065	.018	.127	.063	.018	.122	.061	.018	.118	.060	.017		
10.0	.129	.062	.017	.127	.061	.017	.122	.060	.017	.117	.058	.017	.113	.057	.016		

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	.210	.210	.210	.179	.179	.179	.122	.122	.122	.070	.070	.070	.022	.022	.022		
1.0	.193	.176	.162	.165	.151	.139	.113	.104	.096	.065	.060	.056	.021	.019	.018		
2.0	.180	.152	.129	.154	.131	.111	.105	.090	.078	.061	.053	.045	.020	.017	.015		
3.0	.169	.133	.105	.145	.115	.091	.099	.080	.064	.057	.047	.038	.018	.015	.012		
4.0	.159	.119	.089	.137	.103	.077	.094	.072	.054	.054	.042	.032	.017	.014	.011		
5.0	.151	.108	.076	.130	.093	.066	.089	.065	.047	.052	.038	.028	.017	.012	.009		
6.0	.144	.099	.067	.123	.086	.058	.085	.060	.041	.049	.035	.024	.016	.012	.008		
7.0	.137	.092	.060	.118	.079	.052	.081	.056	.037	.047	.033	.022	.015	.011	.007		
8.0	.131	.086	.054	.113	.074	.047	.078	.052	.033	.045	.031	.020	.015	.010	.007		
9.0	.126	.080	.050	.108	.070	.043	.075	.049	.031	.044	.029	.018	.014	.010	.006		
10.0	.121	.076	.046	.104	.066	.040	.072	.046	.029	.042	.027	.017	.014	.009	.006		

C Range: 0 - 180DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:22 April 2024

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.471  
Humidity:65.0%  
Test Distance:7.382m [K=1.0000]  
Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.03V I:0.0746A P:8.7251W PF:0.9745 Freq:60.60Hz Lamp Flux:789.07lx1 lm										
NAME: DL04-148 9W 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	10.7	11.8	11.0	12.0	12.2	11.4	12.5	11.7	12.7	12.9
3H	11.1	12.0	11.4	12.3	12.6	11.8	12.8	12.1	13.1	13.3
4H	11.2	12.1	11.5	12.4	12.6	12.0	12.9	12.3	13.2	13.5
6H	11.2	12.0	11.5	12.3	12.6	12.1	13.0	12.5	13.3	13.6
8H	11.1	12.0	11.5	12.3	12.6	12.1	13.0	12.5	13.3	13.6
12H	11.1	11.9	11.5	12.3	12.6	12.1	12.9	12.5	13.2	13.6
4H 2H	10.9	11.8	11.2	12.1	12.3	11.5	12.4	11.8	12.7	12.9
3H	11.4	12.2	11.7	12.5	12.8	12.1	12.9	12.4	13.2	13.5
4H	11.5	12.3	11.9	12.6	13.0	12.3	13.0	12.7	13.4	13.8
6H	11.6	12.2	12.0	12.6	13.0	12.5	13.1	12.9	13.5	13.9
8H	11.6	12.2	12.0	12.6	13.0	12.5	13.1	13.0	13.5	14.0
12H	11.6	12.1	12.1	12.6	13.0	12.6	13.1	13.0	13.5	14.0
8H 4H	11.6	12.2	12.0	12.6	13.0	12.3	12.9	12.8	13.3	13.7
6H	11.7	12.2	12.2	12.6	13.1	12.6	13.0	13.0	13.5	14.0
8H	11.7	12.1	12.2	12.6	13.1	12.6	13.1	13.1	13.5	14.0
12H	11.8	12.1	12.3	12.6	13.1	12.7	13.0	13.2	13.5	14.1
12H 4H	11.5	12.1	12.0	12.5	13.0	12.3	12.8	12.7	13.2	13.7
6H	11.7	12.1	12.2	12.6	13.1	12.5	13.0	13.0	13.4	13.9
8H	11.7	12.1	12.2	12.6	13.1	12.6	13.0	13.1	13.5	14.0
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 1.0 / - 1.4					+ 0.8 / - 1.0				
1.5H	+ 1.1 / - 0.9					+ 1.0 / - 0.8				
2.0H	+ 1.8 / - 1.4					+ 1.7 / - 1.3				

CIE Pub.117, 789.1 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.8)  
Area: 0.1 m2

C Range: 0 - 180DEG

C Interval: 90.0DEG

Test Speed: HIGH

Temperature:25.3℃

Operators:DAMIN

Test Date:22 April 2024

 $\gamma$  Range: 0 - 180DEG $\gamma$  Interval: 1.0DEG

Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.471

Humidity:65.0%

Test Distance:7.382m [K=1.0000]

Remarks:

## UTILIZATION FACTORS TABLE

Test:U:120.03V I:0.0746A P:8.7251W PF:0.9745 Freq:60.60Hz Lamp Flux:789.07lx1 lm		
NAME: DL04-148 9W 40K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

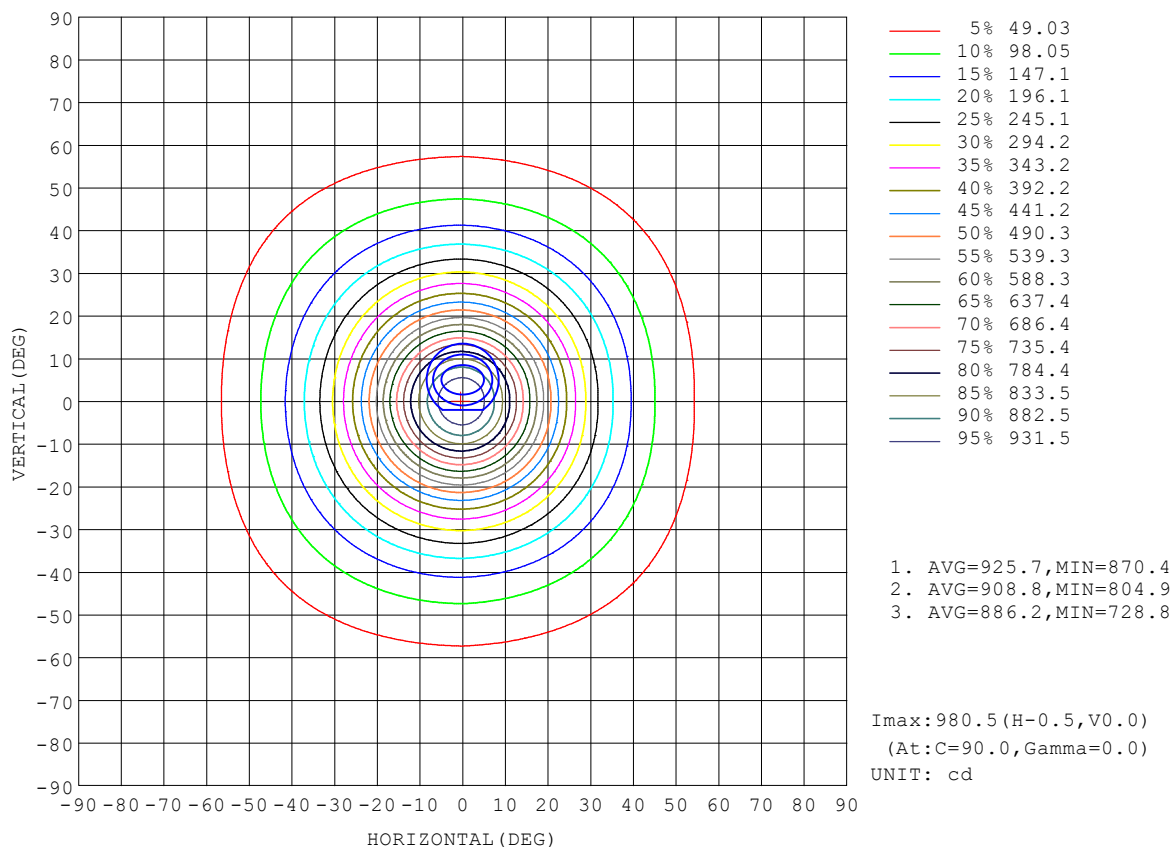
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	76	68	63	75	67	63	74	67	62	58
0.80	85	77	72	84	76	71	82	75	71	66
1.00	91	83	78	90	83	78	88	83	77	72
1.25	96	89	84	95	88	84	92	87	83	77
1.50	99	93	88	98	92	88	95	90	87	81
2.00	104	98	94	102	97	93	99	94	91	85
2.50	106	101	97	104	99	96	100	97	94	86
3.00	108	104	100	106	102	99	102	99	96	89
4.00	111	107	104	108	105	102	104	102	99	91
5.00	112	109	107	110	107	105	105	103	101	92
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 180DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators: DAMIN  
 Test Date: 22 April 2024

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.471  
 Humidity: 65.0%  
 Test Distance: 7.382m [K=1.0000]  
 Remarks:

## ISOCANDELA DIAGRAM

Test:U:120.03V I:0.0746A P:8.7251W PF:0.9745 Freq:60.60Hz Lamp Flux:789.07lx1 lm		
NAME: DL04-148 9W 40K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

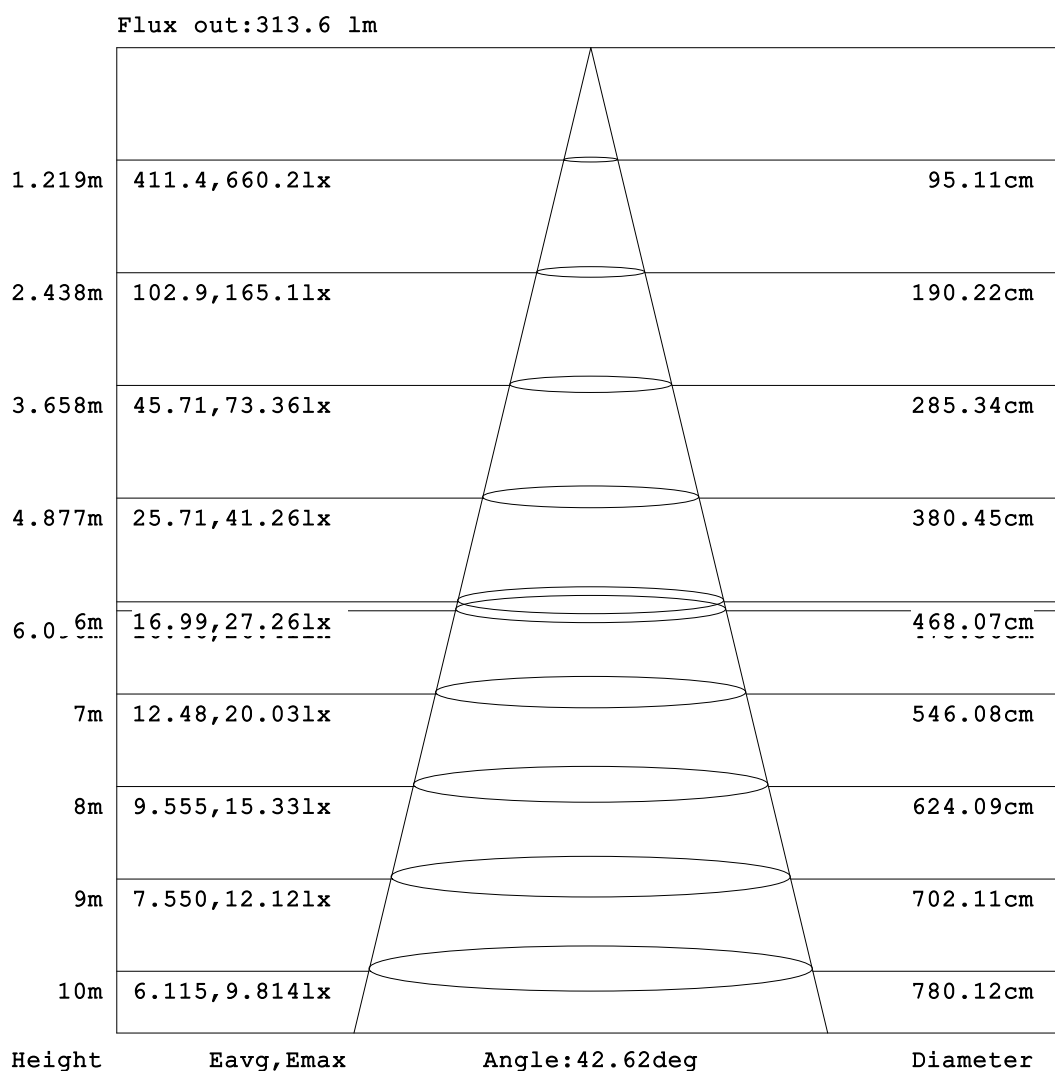


C Range: 0 - 180DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:22 April 2024

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.471  
Humidity:65.0%  
Test Distance:7.382m [K=1.0000]  
Remarks:

## AAI Figure

Test:U:120.03V I:0.0746A P:8.7251W PF:0.9745 Freq:60.60Hz Lamp Flux:789.07lx1 lm		
NAME: DL04-148 9W 40K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:



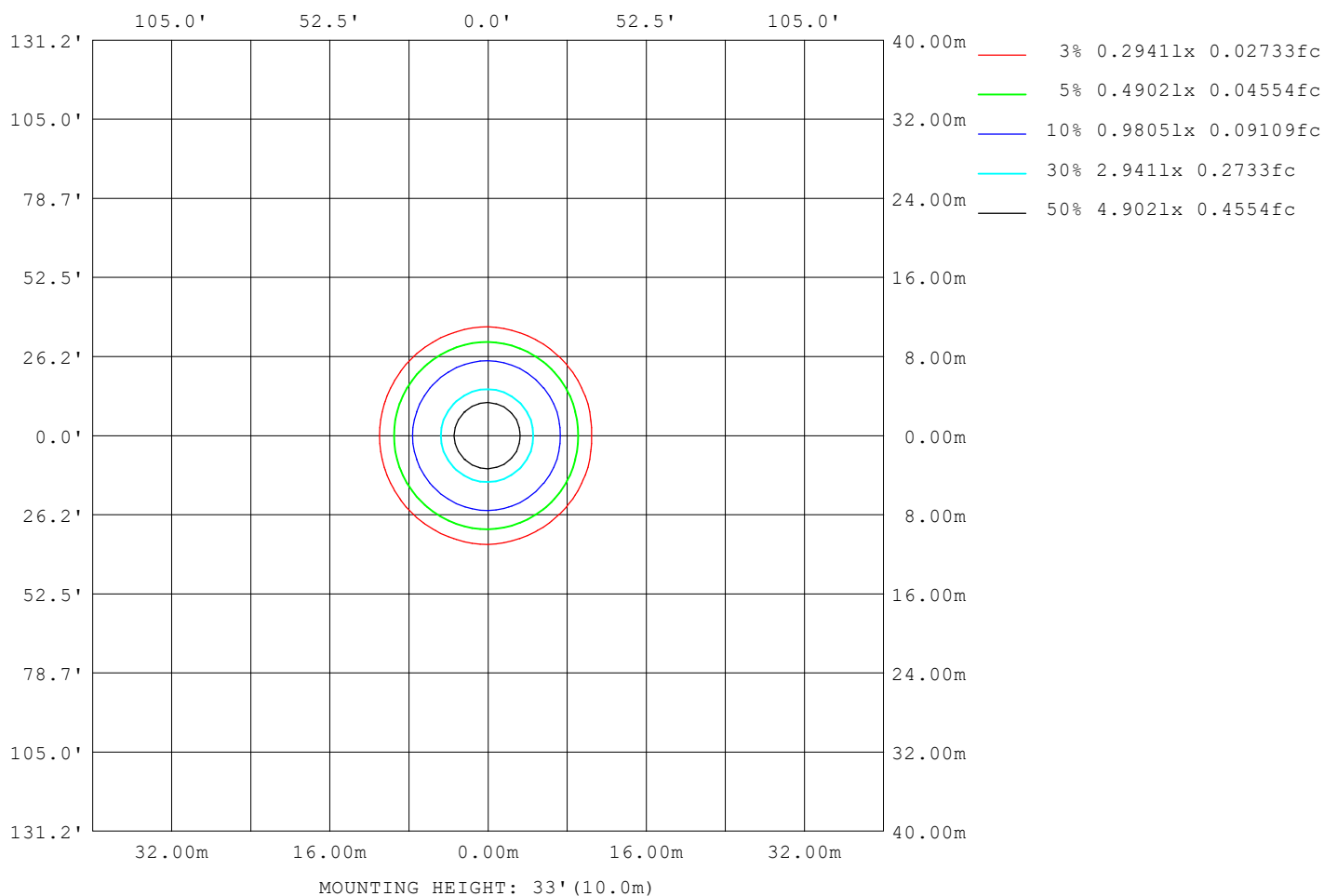
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 180DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:22 April 2024

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.471  
Humidity:65.0%  
Test Distance:7.382m [K=1.0000]  
Remarks:

## ISOLUX DIAGRAM

Test:U:120.03V I:0.0746A P:8.7251W PF:0.9745 Freq:60.60Hz Lamp Flux:789.07lx1 lm		
NAME: DL04-148 9W 40K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:



C Range: 0 - 180DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: DAMIN  
Test Date: 22 April 2024

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.471  
Humidity: 65.0%  
Test Distance: 7.382m [K=1.0000]  
Remarks:

## LED Avg.L Report

Test:U:120.03V I:0.0746A P:8.7251W PF:0.9745 Freq:60.60Hz Lamp Flux:789.07lx1 lm		
NAME: DL04-148 9W 40K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.: 1
MFR.: EVERFINE	SUR.:	Shielding Angle:

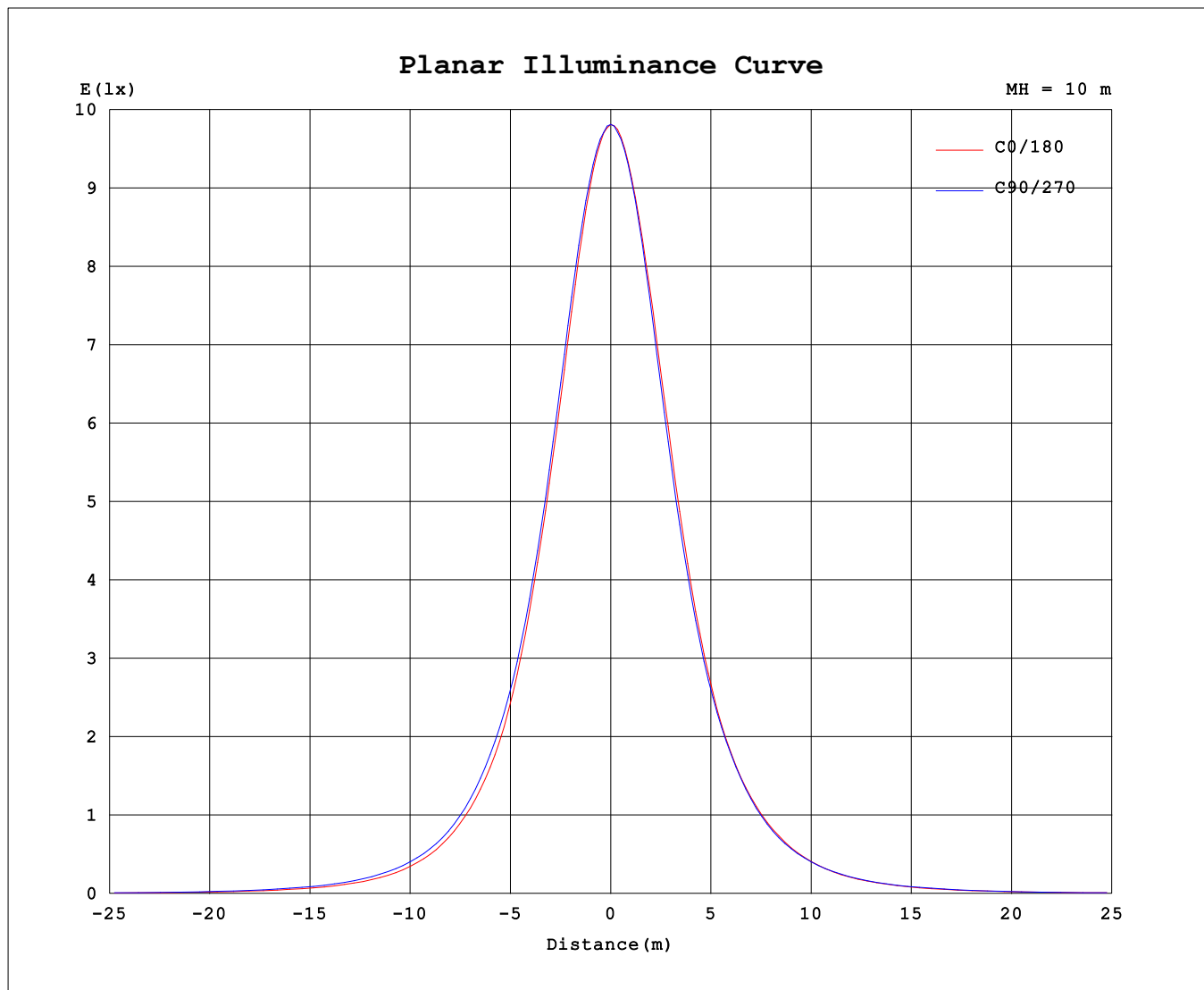
AvgL	cd/m2
L_0~180 (65) av	562
L_0~180 (75) av	352
L_0~180 (85) av	309
L_90~270 (65) av	652
L_90~270 (75) av	492
L_90~270 (85) av	280
L_45 (65) av	621
L_45 (75) av	441
L_45 (85) av	293

Standard: GB/T 29293-2012

C Range: 0 - 180DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:22 April 2024

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.471  
Humidity:65.0%  
Test Distance:7.382m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 180DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature: 25.3 °C  
Operators: DAMIN  
Test Date: 22 April 2024

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.471  
Humidity: 65.0%  
Test Distance: 7.382m [K=1.0000]  
Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.03V I:0.0746A P:8.7251W PF:0.9745 Freq:60.60Hz Lamp Flux:789.071x1 lm		
NAME: DL04-148 9W 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	980	981	981	981														
5	933	940	944	940														
10	814	832	842	832														
15	660	682	701	682														
20	510	528	547	528														
25	377	398	411	398														
30	273	299	303	299														
35	199	220	224	220														
40	141	159	164	159														
45	98.2	115	116	115														
50	67.6	82.1	80.5	82.1														
55	46.3	57.8	55.0	57.8														
60	31.5	40.3	37.6	40.3														
65	21.6	27.5	25.9	27.5														
70	14.8	18.6	18.0	18.6														
75	8.30	12.7	9.90	12.7														
80	3.83	6.71	4.91	6.71														
85	2.40	2.44	2.99	2.44														
90	1.70	2.01	1.65	2.01														
95	1.83	1.95	1.73	1.95														
100	2.00	1.99	1.90	1.99														
105	2.23	2.14	2.12	2.14														
110	2.51	2.41	2.39	2.41														
115	2.83	2.72	2.70	2.72														
120	3.18	3.07	3.04	3.07														
125	3.53	3.45	3.39	3.45														
130	3.85	3.85	3.73	3.85														
135	4.13	4.05	4.02	4.05														
140	4.36	4.31	4.26	4.31														
145	4.52	4.46	4.42	4.46														
150	4.62	4.56	4.52	4.56														
155	4.64	4.62	4.56	4.62														
160	4.61	4.61	4.52	4.61														
165	4.53	4.54	4.45	4.54														
170	4.44	4.41	4.35	4.41														
175	4.39	4.36	4.31	4.36														
180	4.38	4.36	4.32	4.36														

C Range: 0 - 180DEG

C Interval: 90.0DEG

Test Speed: HIGH

Temperature:25.3℃

Operators:DAMIN

Test Date:22 April 2024

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.471

Humidity:65.0%

Test Distance:7.382m [K=1.0000]

Remarks: