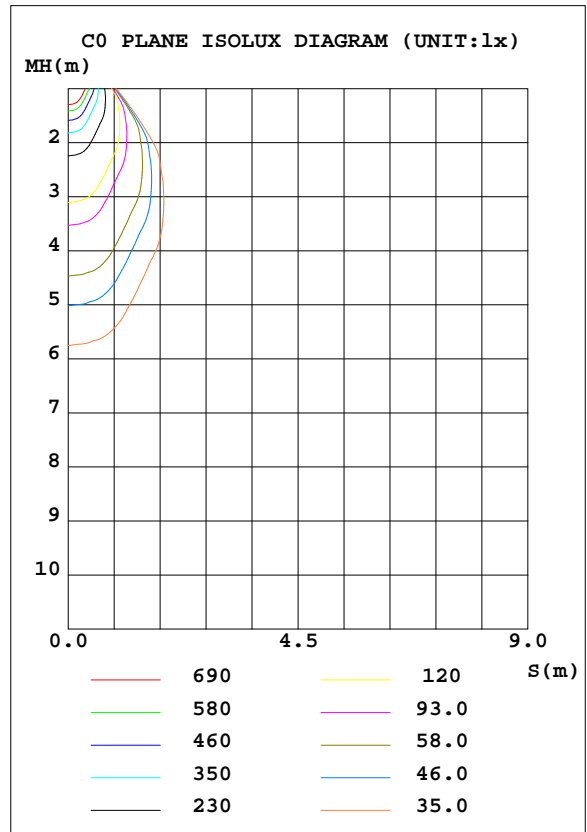
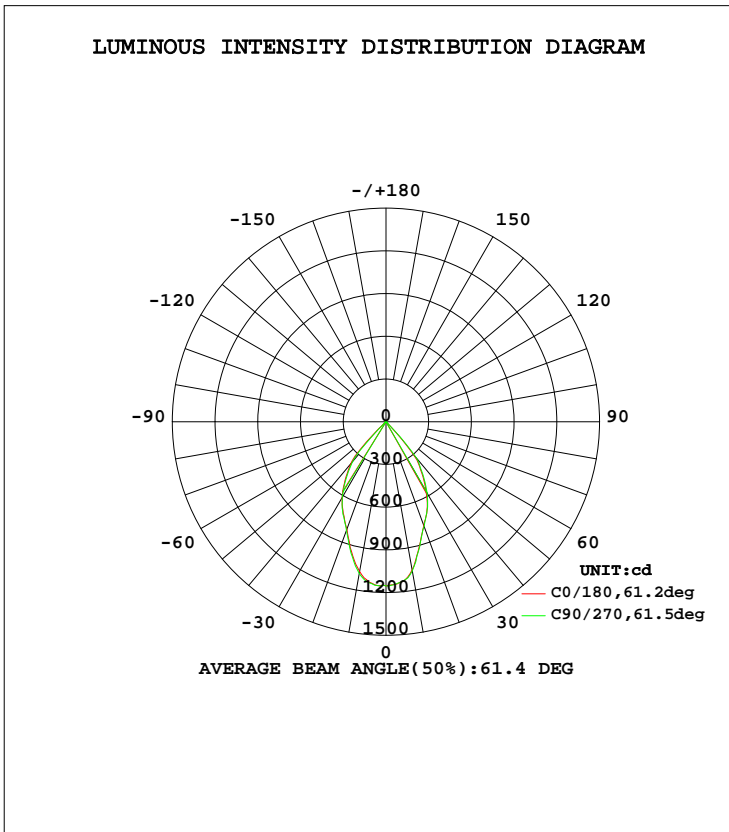


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:240.9V I:0.0540A P:12.70W PF:0.9780 Lamp Flux:1085.26x1 lm		
NAME: DL22-3-13W-D	TYPE:13W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:
MFR.: EVERFINE	SUR.:0.032	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 85.45 lm/W			
MODEL	DL22-3-13W-D	I _{max} (cd)	1161	S/MH(C0/180)	0.83
NOMINAL POWER(W)	13	LOR(%)	100.0	S/MH(C90/270)	0.83
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	1085.3	η UP, DN(C0-180)	0.0, 48.3
NOMINAL FLUX(lm)	1085.26	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 51.7
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	240.9	η down(%)	100.0	CIBSE SHR MAX	1.00



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2020-07-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:10.237m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	Φ lum,lamp
10	1057	1069	1063	1069	1068	1075	1082	1078	0- 10	106.8	106.8	9.84,9.84
20	775.4	785.4	783.1	781.8	803.3	809.1	812.7	804.6	10- 20	259.3	366.1	33.7,33.7
30	562.5	570.6	577.7	592.8	616.6	616.0	617.2	597.4	20- 30	319.9	686.0	63.2,63.2
40	294.3	318.1	333.2	358.4	383.0	376.1	368.3	342.6	30- 40	292.9	978.9	90.2,90.2
50	9.979	10.40	10.73	13.81	18.52	16.49	13.01	10.59	40- 50	88.18	1067	98.3,98.3
60	7.272	7.393	7.471	7.098	7.737	7.454	7.314	7.504	50- 60	7.832	1075	99,99
70	4.834	4.914	5.139	6.157	7.055	6.782	6.114	4.905	60- 70	7.274	1082	99.7,99.7
80	0.0788	0.0422	0.2022	0.7011	0.9791	0.8152	0.6399	0.1743	70- 80	2.993	1085	100,100
90	0.0140	0	0	0.0070	0.0140	0.0212	0.0070	0.0141	80- 90	0.0639	1085	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

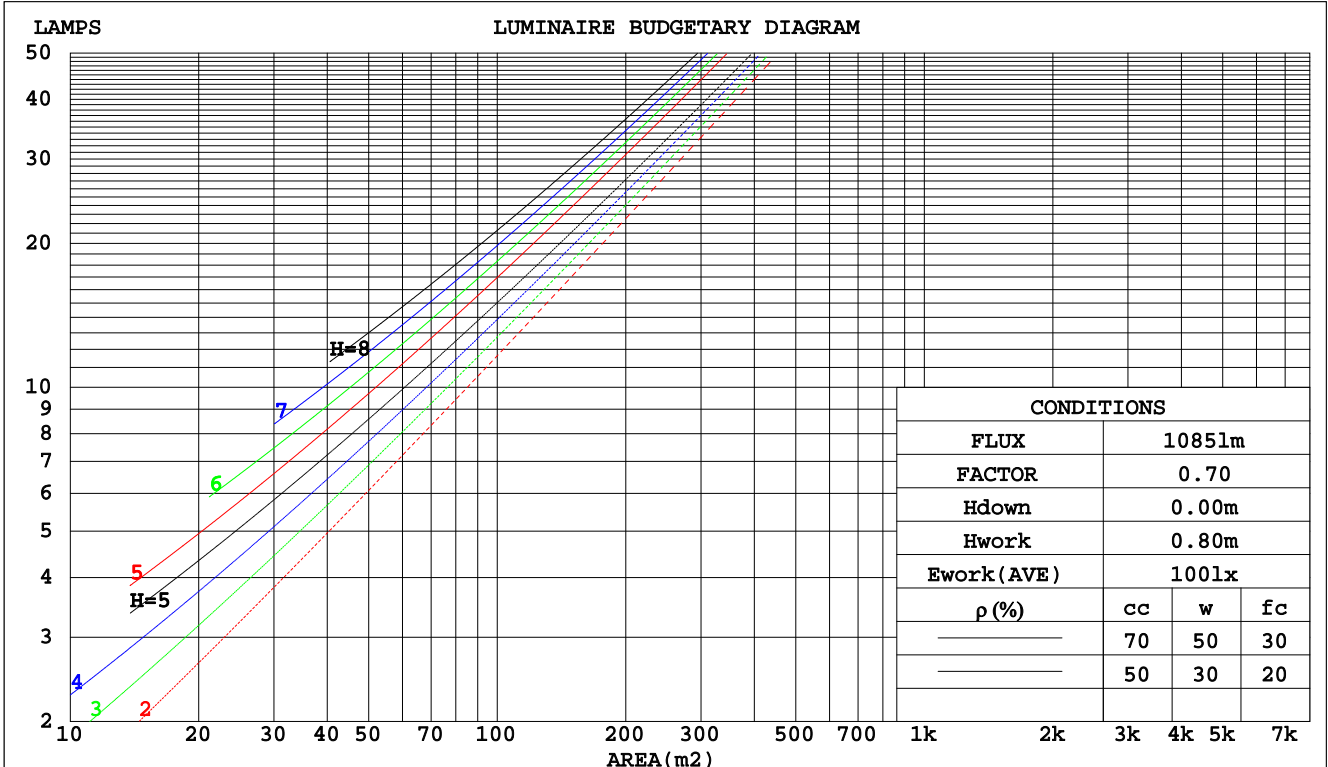
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2020-07-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:10.237m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:240.9V I:0.0540A P:12.70W PF:0.9780 Lamp Flux:1085.26x1 lm		
NAME: DL22-3-13W-D	TYPE:13W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:
MFR.: EVERFINE	SUR.:0.032	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio Coefficients of Utilization(CU)															
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1.0	1.10	1.08	1.06	1.08	1.06	1.04	1.04	1.02	1.01	1.00	.99	.98	.97	.96	.95	.93
2.0	1.02	.98	.95	1.01	.97	.93	.97	.94	.91	.94	.92	.89	.92	.89	.88	.86
3.0	.95	.90	.86	.94	.89	.85	.91	.87	.84	.88	.85	.82	.86	.83	.81	.79
4.0	.88	.83	.78	.87	.82	.78	.85	.80	.77	.83	.79	.76	.81	.78	.75	.73
5.0	.82	.76	.72	.81	.76	.71	.79	.75	.71	.78	.73	.70	.76	.72	.69	.68
6.0	.77	.71	.66	.76	.70	.66	.74	.69	.65	.73	.68	.65	.72	.68	.65	.63
7.0	.72	.66	.61	.71	.65	.61	.70	.65	.61	.69	.64	.60	.68	.63	.60	.59
8.0	.67	.61	.57	.67	.61	.57	.66	.60	.57	.65	.60	.56	.64	.59	.56	.55
9.0	.63	.57	.53	.63	.57	.53	.62	.57	.53	.61	.56	.53	.60	.56	.52	.51
10.0	.60	.54	.50	.59	.54	.50	.58	.53	.49	.58	.53	.49	.57	.52	.49	.48



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2020-07-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity: 65.0%
 Test Distance: 10.237m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:240.9V I:0.0540A P:12.70W PF:0.9780 Lamp Flux:1085.26x1 lm		
NAME: DL22-3-13W-D	TYPE:13W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:
MFR.: EVERFINE	SUR.:0.032	PROTECTION ANGLE:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.185	.105	.033	.178	.102	.032	.165	.095	.030	.154	.089	.028	.143	.083	.027	
2.0	.178	.098	.030	.172	.095	.029	.162	.090	.028	.152	.085	.027	.143	.081	.025	
3.0	.170	.091	.027	.165	.089	.027	.156	.085	.026	.148	.081	.025	.140	.077	.024	
4.0	.162	.084	.025	.158	.083	.024	.150	.080	.024	.143	.077	.023	.136	.074	.023	
5.0	.155	.079	.023	.151	.078	.023	.144	.075	.022	.138	.073	.022	.132	.070	.021	
6.0	.148	.074	.021	.145	.073	.021	.139	.071	.021	.133	.069	.020	.128	.067	.020	
7.0	.142	.070	.020	.139	.069	.020	.133	.067	.019	.128	.066	.019	.123	.064	.019	
8.0	.135	.066	.019	.133	.065	.018	.128	.064	.018	.123	.063	.018	.119	.061	.018	
9.0	.130	.063	.018	.127	.062	.017	.123	.061	.017	.119	.060	.017	.115	.058	.017	
10.0	.124	.060	.017	.122	.059	.016	.118	.058	.016	.115	.057	.016	.111	.056	.016	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.172	.157	.144	.147	.135	.124	.100	.093	.086	.058	.054	.050	.019	.017	.016	
2.0	.157	.132	.112	.135	.114	.097	.092	.079	.067	.053	.046	.040	.017	.015	.013	
3.0	.145	.114	.088	.125	.098	.077	.085	.068	.054	.049	.040	.032	.016	.013	.010	
4.0	.135	.099	.071	.116	.086	.062	.080	.060	.044	.046	.035	.026	.015	.011	.008	
5.0	.127	.088	.058	.109	.076	.051	.075	.053	.036	.044	.031	.021	.014	.010	.007	
6.0	.120	.078	.049	.103	.068	.042	.071	.048	.030	.041	.028	.018	.013	.009	.006	
7.0	.114	.071	.041	.098	.062	.036	.068	.043	.025	.039	.025	.015	.013	.008	.005	
8.0	.108	.065	.035	.093	.056	.031	.064	.040	.022	.038	.023	.013	.012	.008	.004	
9.0	.103	.060	.030	.089	.052	.027	.062	.036	.019	.036	.022	.011	.012	.007	.004	
10.0	.099	.055	.027	.085	.048	.023	.059	.034	.017	.034	.020	.010	.011	.007	.003	

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2020-07-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:10.237m [K=1.0000]
 Remarks:

Uncorrected UGR Table

Test:U:240.9V I:0.0540A P:12.70W PF:0.9780 Lamp Flux:1085.26x1 lm										
NAME: DL22-3-13W-D					TYPE:13W			WEIGHT:		
DIM.:					SPEC.:3000K			SERIAL No.:		
MFR.: EVERFINE					SUR.:0.032			PROTECTION 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	21.9	22.9	22.1	23.0	23.2	22.2	23.2	22.4	23.4	23.5
3H	21.7	22.7	22.0	22.9	23.1	22.1	23.0	22.3	23.2	23.4
4H	21.7	22.5	21.9	22.8	23.0	22.0	22.9	22.3	23.1	23.3
6H	21.6	22.4	21.9	22.6	22.9	21.9	22.7	22.2	23.0	23.2
8H	21.5	22.3	21.8	22.6	22.8	21.9	22.6	22.2	22.9	23.2
12H	21.5	22.2	21.8	22.5	22.8	21.8	22.6	22.1	22.8	23.1
4H 2H	21.6	22.5	21.9	22.7	22.9	22.0	22.8	22.2	23.0	23.3
3H	21.5	22.3	21.8	22.5	22.8	21.8	22.6	22.2	22.9	23.1
4H	21.4	22.1	21.8	22.4	22.7	21.8	22.4	22.1	22.7	23.0
6H	21.3	21.9	21.7	22.3	22.6	21.7	22.3	22.1	22.6	22.9
8H	21.3	21.8	21.7	22.2	22.6	21.6	22.2	22.0	22.5	22.9
12H	21.2	21.7	21.7	22.1	22.5	21.6	22.1	22.0	22.4	22.8
8H 4H	21.3	21.9	21.7	22.2	22.6	21.6	22.2	22.0	22.5	22.9
6H	21.2	21.7	21.6	22.0	22.5	21.5	22.0	22.0	22.4	22.8
8H	21.2	21.5	21.6	22.0	22.4	21.5	21.9	21.9	22.3	22.7
12H	21.1	21.4	21.6	21.9	22.3	21.4	21.8	21.9	22.2	22.7
12H 4H	21.3	21.8	21.7	22.1	22.5	21.6	22.1	22.0	22.5	22.8
6H	21.2	21.5	21.6	22.0	22.4	21.5	21.9	21.9	22.3	22.7
8H	21.1	21.4	21.6	21.9	22.3	21.4	21.8	21.9	22.2	22.7
Variations with the observer position at spacings:										
S = 1.0H	+ 3.0 / -12.3					+ 2.9 / -12.0				
1.5H	+ 5.7 / -12.0					+ 5.6 / -11.8				
2.0H	+ 3.4 / - 1.4					+ 4.8 / - 1.6				

CIE Pub.117 Corrected 1085 lm Total Lamp Luminous Flux.(8log(F/F0) = 0.3)

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2020-07-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:10.237m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:240.9V I:0.0540A P:12.70W PF:0.9780 Lamp Flux:1085.26x1 lm		
NAME: DL22-3-13W-D	TYPE:13W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:
MFR.: EVERFINE	SUR.:0.032	PROTECTION ANGLE:

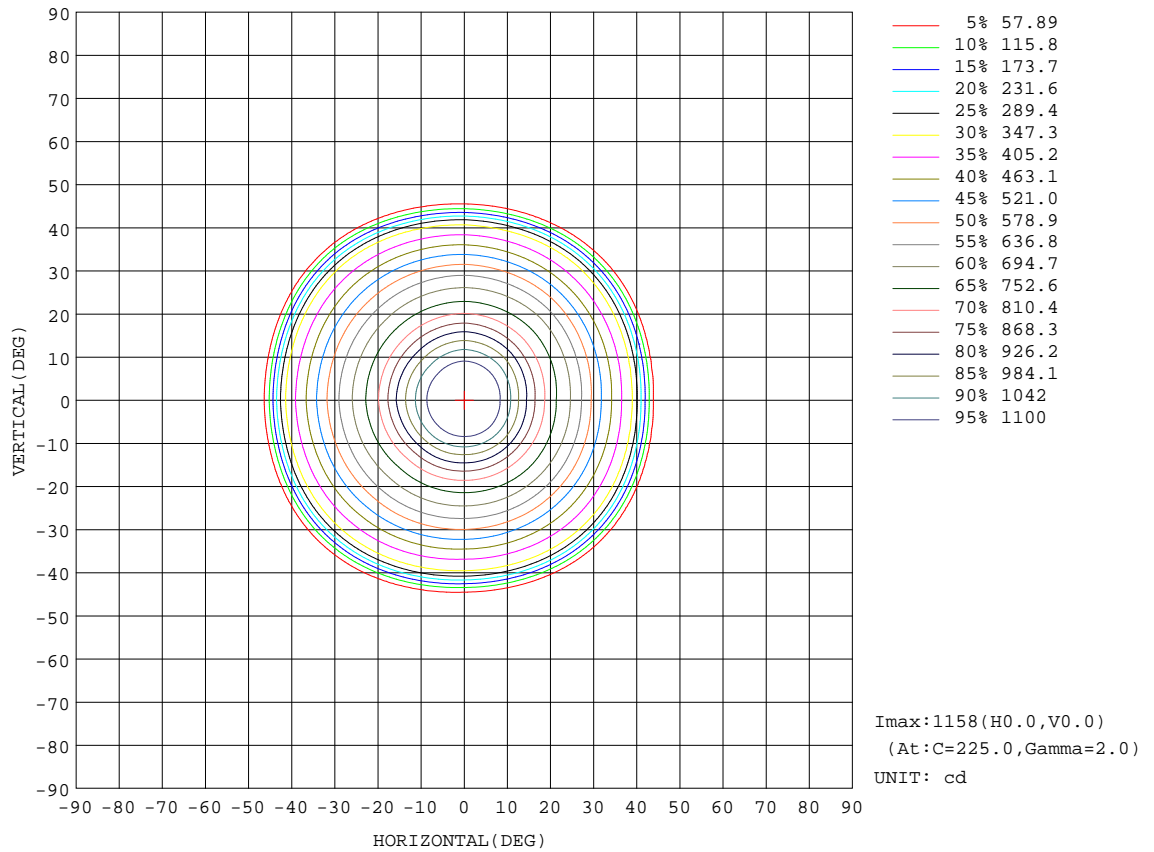
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	85	79	75	85	79	75	84	78	75	71
0.80	93	87	83	93	87	83	91	86	83	79
1.00	98	92	88	97	92	88	96	92	88	84
1.25	102	97	93	101	96	93	99	95	92	88
1.50	105	100	97	104	99	96	102	98	95	91
2.00	108	104	100	107	103	100	104	101	98	93
2.50	110	106	103	108	105	102	105	102	100	94
3.00	111	108	105	110	107	104	106	104	102	95
4.00	114	111	108	111	109	107	108	106	104	97
5.00	115	112	110	113	111	109	109	107	106	98
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2020-07-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:10.237m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:240.9V I:0.0540A P:12.70W PF:0.9780 Lamp Flux:1085.26x1 lm		
NAME: DL22-3-13W-D	TYPE:13W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:
MFR.: EVERFINE	SUR.:0.032	PROTECTION ANGLE:

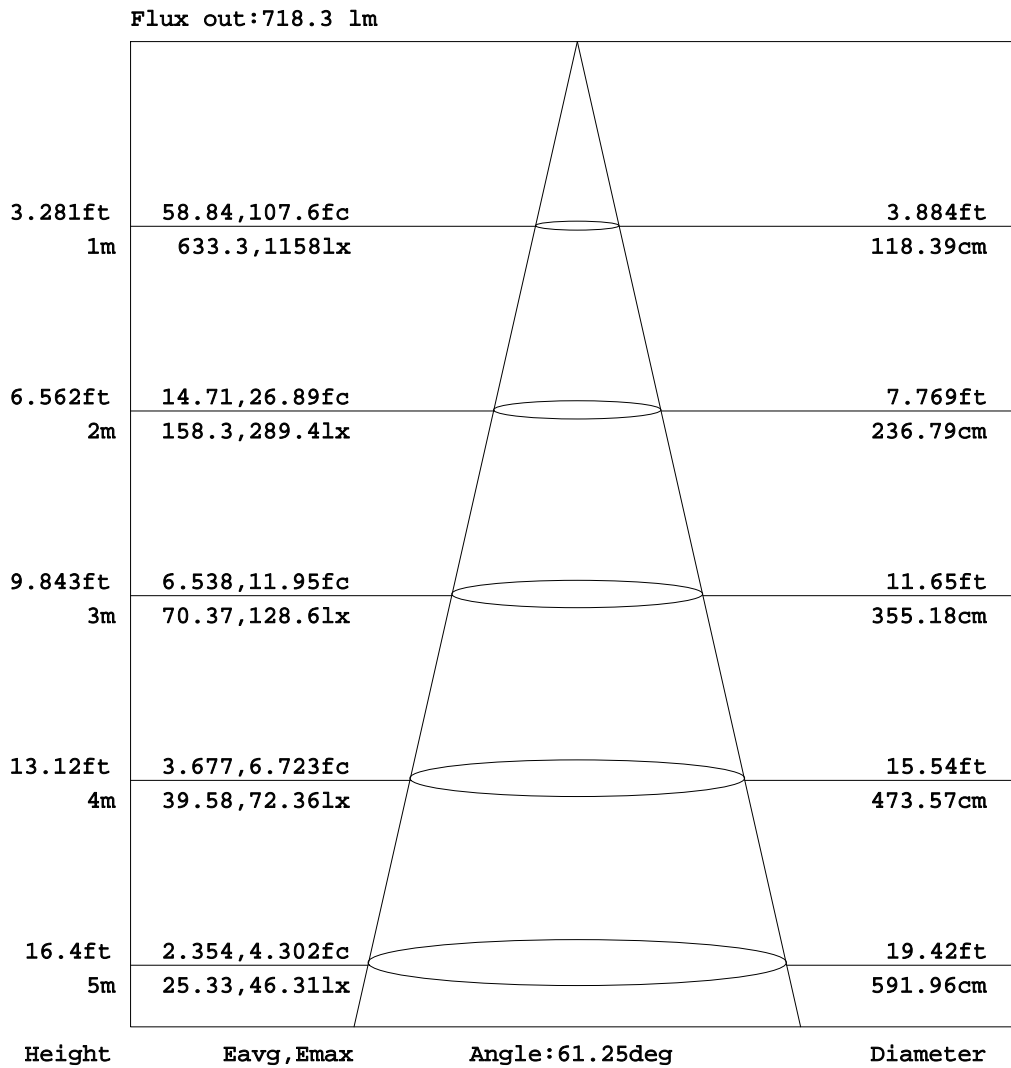


C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2020-07-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:10.237m [K=1.0000]
 Remarks:

AAI Figure

Test:U:240.9V I:0.0540A P:12.70W PF:0.9780 Lamp Flux:1085.26x1 lm		
NAME: DL22-3-13W-D	TYPE:13W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:
MFR.: EVERFINE	SUR.:0.032	PROTECTION ANGLE:



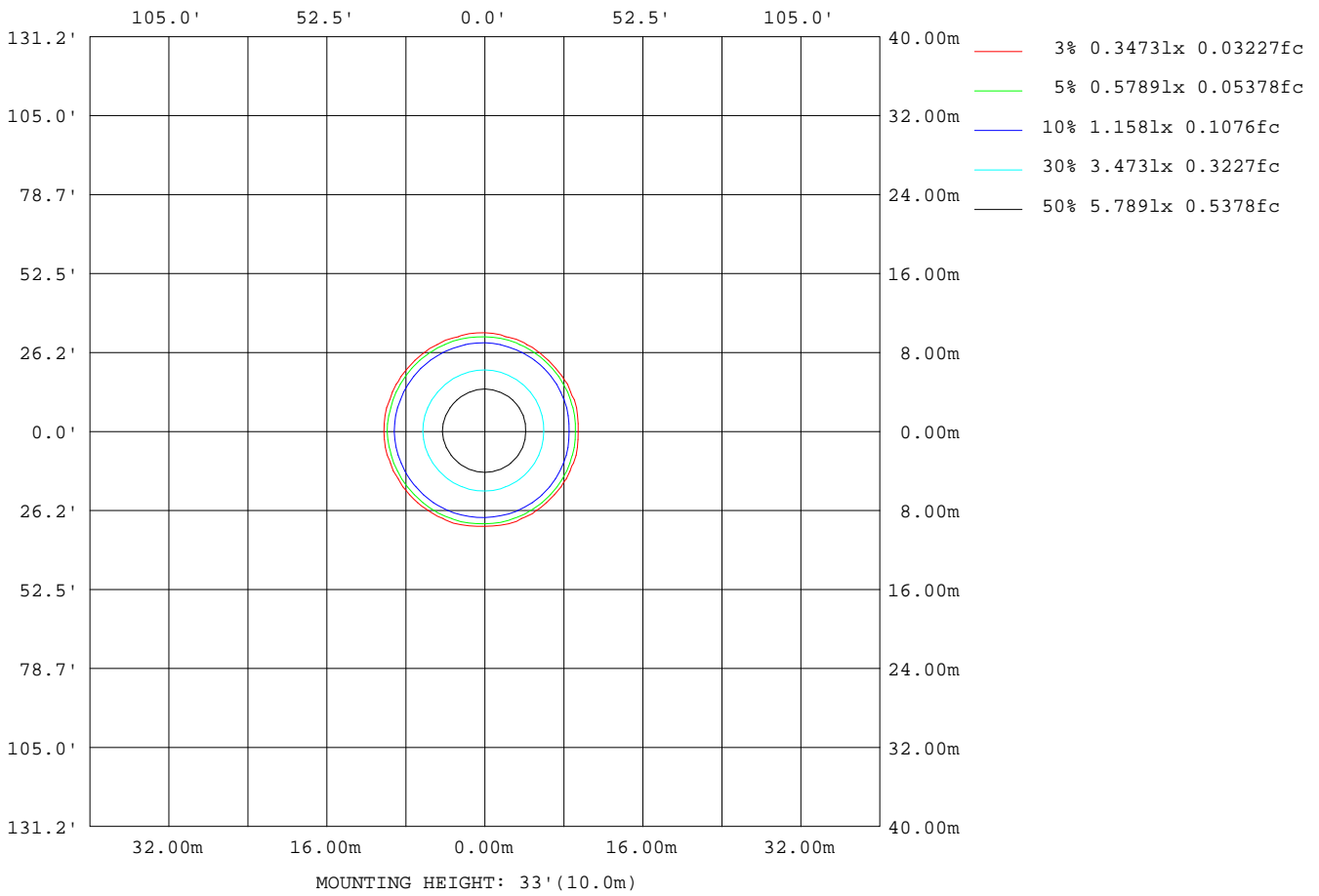
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2020-07-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:10.237m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

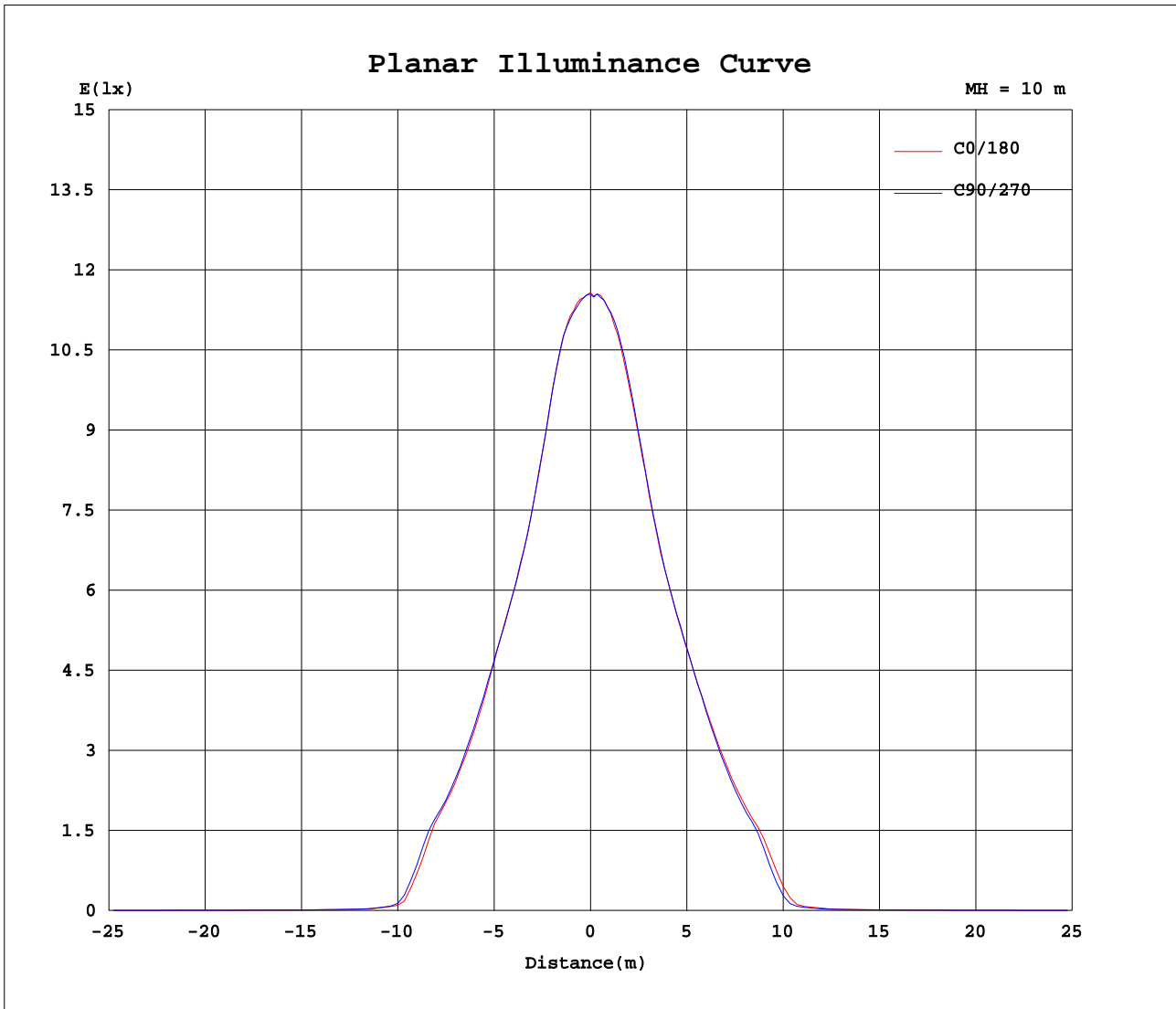
Test:U:240.9V I:0.0540A P:12.70W PF:0.9780 Lamp Flux:1085.26x1 lm		
NAME: DL22-3-13W-D	TYPE:13W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:
MFR.: EVERFINE	SUR.:0.032	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
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γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:10.237m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2020-07-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity: 65.0%
 Test Distance: 10.237m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:240.9V I:0.0540A P:12.70W PF:0.9780 Lamp Flux:1085.26x1 lm		
NAME: DL22-3-13W-D	TYPE:13W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:
MFR.: EVERFINE	SUR.:0.032	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	45	90	135	180	225	270	315										
0	1153	1153	1153	1153	1153	1153	1153	1153										
5	1132	1141	1133	1132	1139	1150	1142	1144										
10	1057	1069	1063	1069	1068	1075	1082	1078										
15	905	914	912	921	941	944	953	939										
20	775	785	783	782	803	809	813	805										
25	683	686	686	691	710	710	716	709										
30	562	571	578	593	617	616	617	597										
35	437	449	451	472	503	498	492	464										
40	294	318	333	358	383	376	368	343										
45	28.1	31.3	38.1	74.8	128	117	79.2	40.8										
50	9.98	10.4	10.7	13.8	18.5	16.5	13.0	10.6										
55	7.58	8.21	8.37	8.15	8.70	8.54	8.50	8.37										
60	7.27	7.39	7.47	7.10	7.74	7.45	7.31	7.50										
65	7.83	7.58	7.78	8.16	8.08	8.06	7.70	7.54										
70	4.83	4.91	5.14	6.16	7.06	6.78	6.11	4.91										
75	2.15	2.31	2.48	3.16	3.49	3.31	2.93	2.27										
80	0.08	0.04	0.20	0.70	0.98	0.82	0.64	0.17										
85	0.03	0.00	0.04	0.01	0.01	0.04	0.01	0.04										
90	0.01	0.00	0.00	0.01	0.01	0.02	0.01	0.01										

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2020-07-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:10.237m [K=1.0000]
 Remarks: