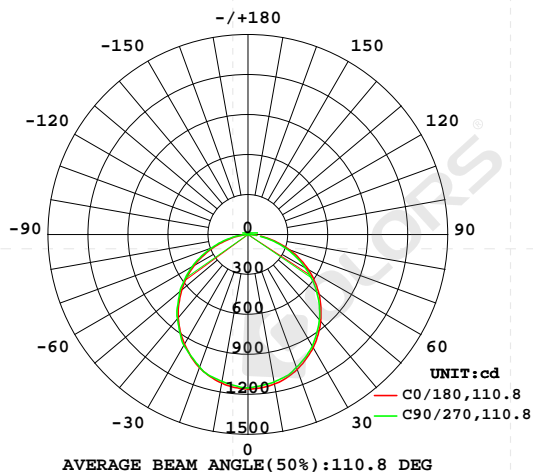


## LUMINAIRE PHOTOMETRIC TEST REPORT

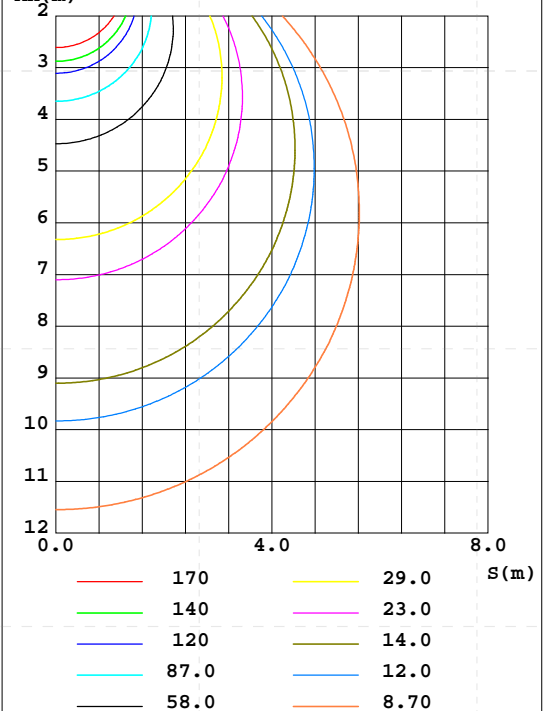
Test:U:220.0V I:0.1600A P:33.40W PF:0.9000 Freq:0Hz Lamp Flux:3247.35x1 lm		
NAME: LLS-LS40FDFWS1200(T)-T34WW8N-DC W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: COLORS	SUR.:1192*38mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 97.23 lm/W			
MODEL		I <sub>max</sub> (cd)	1162	S/MH(C0/180)	1.26
NOMINAL POWER(W)	33.4	LOR(%)	100.0	S/MH(C90/270)	1.24
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	3247.4	h UP,DN(C0-180)	0.5,49.9
NOMINAL FLUX(lm)	3247.35	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.6,49.0
LAMPS INSIDE	1	h up(%)	1.2	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	220	h down(%)	98.8	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2023-05-18

Range: 0 - 180DEG  
Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:

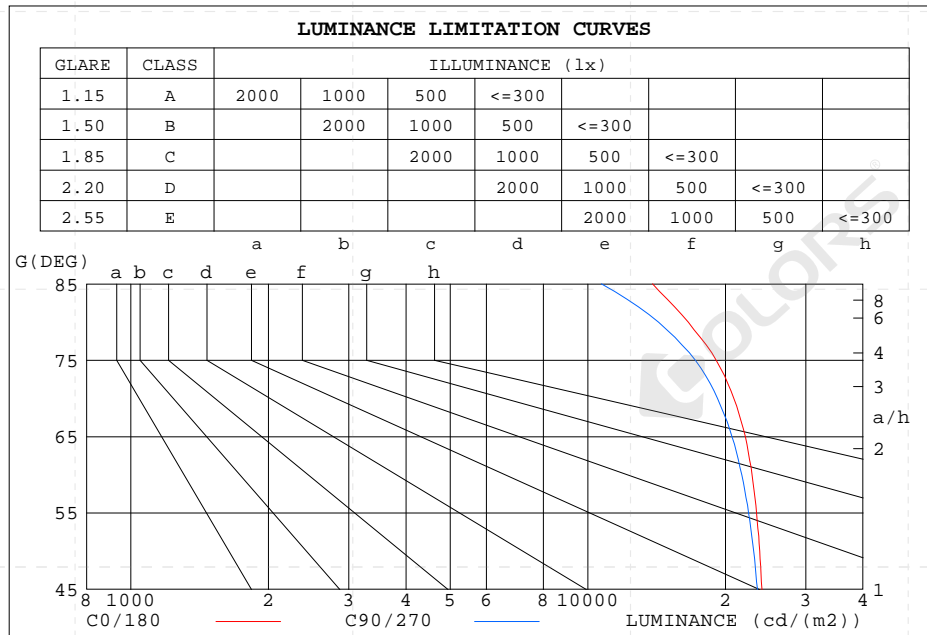
**ZONAL FLUX DIAGRAM**
**ZONAL FLUX DIAGRAM:**

g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	1140	1144	1124	1108	1133	1121	1120	1132	0- 10	108.8	108.8	3.35,3.35
20	1078	1094	1062	1037	1063	1053	1060	1083	10- 20	311.0	419.8	12.9,12.9
30	979.5	999.8	967.8	923.7	951.9	935.8	961.2	992.5	20- 30	469.8	889.6	27.4,27.4
40	849.3	876.7	833.8	785.5	814.9	800.3	824.6	869.3	30- 40	563.4	1453	44.7,44.7
50	696.8	723.4	676.2	619.9	649.3	632.1	669.1	718.4	40- 50	582.2	2035	62.7,62.7
60	521.4	547.9	495.4	435.2	467.1	445.8	483.7	545.6	50- 60	522.8	2558	78.8,78.8
70	325.3	351.7	299.9	236.6	264.3	249.9	288.0	356.2	60- 70	391.0	2949	90.8,90.8
80	131.4	154.4	113.1	63.37	83.24	72.65	106.1	165.1	70- 80	212.0	3161	97.3,97.3
90	6.491	0	3.067	2.512	1.257	1.377	0.9096	21.30	80- 90	49.08	3210	98.8,98.8
100	3.370	0	2.589	3.156	2.689	2.443	2.018	2.181	90-100	2.435	3212	98.9,98.9
110	5.399	0	4.187	4.639	4.626	4.021	4.502	3.806	100-110	3.221	3216	99,99
120	7.758	0	6.893	6.224	6.532	5.722	6.541	5.834	110-120	4.763	3220	99.2,99.2
130	9.941	0	8.855	7.835	8.243	7.446	8.098	7.239	120-130	5.786	3226	99.3,99.3
140	11.52	0	10.33	9.522	9.654	9.356	9.259	8.447	130-140	6.087	3232	99.5,99.5
150	12.52	0	11.61	11.36	10.40	11.57	10.61	9.512	140-150	5.697	3238	99.7,99.7
160	13.46	0	13.49	13.33	12.00	13.55	13.05	10.89	150-160	4.802	3243	99.9,99.9
170	14.98	0	14.97	15.23	13.97	15.11	15.03	12.76	160-170	3.368	3246	100,100
180	15.36	0	16.56	15.90	15.40	16.51	16.61	15.89	170-180	1.266	3247	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:JYH  
 Test Date:2023-05-18

g Range: 0 - 180DEG  
 Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity:65.0%  
 Test Distance:10.950m [K=1.0000]  
 Remarks:

LUMINANCE LIMITATION CURVES



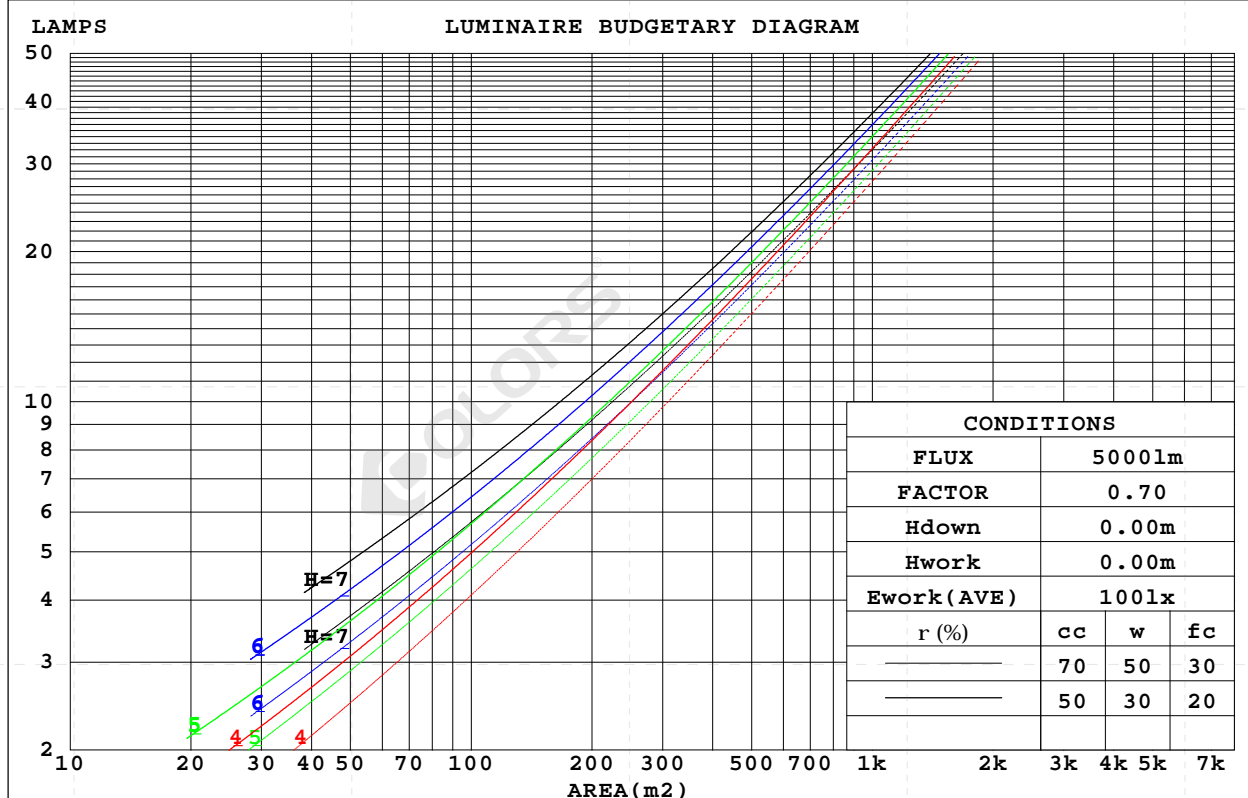
LUMINANCE cd/(m2)		
G( DEG )	C0/180	C90/270
85	13856	10696
80	16592	14278
75	19085	17202
70	20857	19230
65	22108	20678
60	22870	21726
55	23397	22489
50	23774	23070
45	24046	23494

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: JYH  
 Test Date: 2023-05-18

G Range: 0 - 180DEG  
 G Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity: 65.0%  
 Test Distance: 10.950m [K=1.0000]  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	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	1.10	1.10	1.10	1.06	1.06	1.06	1.01	1.01	1.01	.99
1.0	1.04	.90	.96	1.02	.98	.94	.97	.94	.91	.93	.90	.88	.89	.87	.85	.83
2.0	.91	.84	.78	.89	.82	.77	.85	.80	.75	.81	.77	.73	.78	.75	.72	.69
3.0	.80	.71	.65	.78	.70	.64	.75	.68	.63	.72	.66	.62	.69	.65	.61	.58
4.0	.71	.62	.55	.69	.61	.55	.66	.59	.54	.64	.58	.53	.62	.56	.52	.50
5.0	.63	.54	.47	.62	.53	.47	.60	.52	.46	.57	.51	.46	.55	.50	.45	.43
6.0	.57	.48	.41	.56	.47	.41	.54	.46	.41	.52	.45	.40	.50	.44	.40	.38
7.0	.51	.43	.37	.51	.42	.36	.49	.41	.36	.47	.41	.36	.46	.40	.35	.33
8.0	.47	.38	.33	.46	.38	.32	.45	.37	.32	.43	.37	.32	.42	.36	.32	.30
9.0	.43	.35	.29	.42	.35	.29	.41	.34	.29	.40	.33	.29	.39	.33	.29	.27
10.0	.40	.32	.27	.39	.32	.26	.38	.31	.26	.37	.31	.26	.36	.30	.26	.24



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: JYH  
Test Date: 2023-05-18

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity: 65.0%  
Test Distance: 10.950m [K=1.0000]  
Remarks:

## WEC AND CCEC

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.303	.172	.055	.296	.169	.054	.282	.162	.052	.269	.155	.050	.257	.149	.048	
2.0	.287	.157	.048	.281	.155	.048	.268	.149	.046	.257	.144	.045	.247	.139	.044	
3.0	.267	.142	.042	.261	.140	.042	.250	.135	.041	.240	.131	.040	.231	.128	.040	
4.0	.247	.128	.038	.241	.126	.037	.232	.123	.037	.223	.120	.036	.214	.117	.035	
5.0	.228	.116	.034	.224	.115	.033	.215	.112	.033	.207	.109	.033	.200	.107	.032	
6.0	.212	.106	.030	.208	.105	.030	.200	.103	.030	.193	.100	.029	.186	.098	.029	
7.0	.197	.098	.028	.194	.097	.028	.187	.095	.027	.180	.093	.027	.174	.091	.027	
8.0	.185	.090	.025	.181	.089	.025	.175	.087	.025	.169	.086	.025	.164	.084	.024	
9.0	.173	.084	.023	.170	.083	.023	.165	.081	.023	.159	.080	.023	.154	.078	.023	
10.0	.163	.078	.022	.160	.077	.022	.155	.076	.021	.150	.075	.021	.146	.073	.021	

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio Ceiling Cavity Exitance Coefficients(CCEC)															
0.0	.199	.199	.199	.170	.170	.170	.116	.116	.116	.067	.067	.067	.021	.021	.021	
1.0	.189	.165	.144	.161	.142	.124	.110	.097	.086	.064	.056	.050	.020	.018	.016	
2.0	.181	.141	.107	.155	.121	.093	.106	.084	.065	.061	.049	.038	.020	.016	.012	
3.0	.173	.123	.084	.148	.106	.073	.102	.074	.051	.059	.043	.030	.019	.014	.010	
4.0	.165	.110	.068	.142	.095	.059	.097	.066	.041	.056	.039	.025	.018	.013	.008	
5.0	.158	.100	.056	.136	.086	.049	.093	.060	.035	.054	.035	.021	.017	.012	.007	
6.0	.151	.091	.048	.130	.079	.042	.089	.055	.030	.052	.033	.018	.017	.011	.006	
7.0	.144	.084	.042	.124	.073	.037	.086	.051	.026	.050	.030	.016	.016	.010	.005	
8.0	.138	.079	.038	.118	.068	.033	.082	.048	.023	.048	.028	.014	.015	.009	.005	
9.0	.132	.074	.034	.113	.064	.030	.079	.045	.021	.046	.027	.013	.015	.009	.004	
10.0	.126	.069	.032	.109	.060	.028	.075	.042	.020	.044	.025	.012	.014	.008	.004	

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2023-05-18

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:

## UGR(Unified Glare Rating) Table

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	20.0	21.5	20.3	21.7	21.9	19.8	21.3	20.1	21.5	21.8
3H	21.5	22.9	21.8	23.2	23.4	21.3	22.6	21.6	22.9	23.2
4H	22.1	23.4	22.4	23.7	24.0	21.8	23.1	22.1	23.4	23.7
6H	22.5	23.8	22.9	24.0	24.3	22.2	23.4	22.5	23.7	24.0
8H	22.6	23.8	23.0	24.1	24.4	22.2	23.4	22.6	23.7	24.0
12H	22.7	23.8	23.1	24.2	24.5	22.3	23.4	22.6	23.7	24.1
4H 2H	20.6	22.0	21.0	22.2	22.5	20.5	21.8	20.8	22.1	22.4
3H	22.4	23.5	22.8	23.8	24.2	22.2	23.3	22.5	23.6	24.0
4H	23.1	24.2	23.5	24.5	24.9	22.8	23.9	23.2	24.2	24.6
6H	23.6	24.6	24.1	24.9	25.3	23.3	24.2	23.7	24.6	25.0
8H	23.8	24.7	24.2	25.1	25.5	23.4	24.3	23.9	24.7	25.1
12H	23.9	24.7	24.3	25.1	25.5	23.5	24.3	23.9	24.7	25.1
8H 4H	23.4	24.3	23.8	24.7	25.1	23.2	24.0	23.6	24.4	24.8
6H	24.1	24.8	24.6	25.2	25.7	23.8	24.5	24.3	24.9	25.4
8H	24.3	25.0	24.8	25.4	25.9	24.0	24.6	24.5	25.1	25.6
12H	24.5	25.0	25.0	25.5	26.0	24.1	24.7	24.6	25.1	25.6
12H 4H	23.4	24.2	23.9	24.6	25.0	23.2	24.0	23.6	24.4	24.8
6H	24.2	24.8	24.6	25.2	25.7	23.9	24.5	24.4	25.0	25.4
8H	24.4	25.0	24.9	25.5	26.0	24.1	24.7	24.6	25.1	25.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.4				
2.0H	+ 0.2 / - 0.4					+ 0.2 / - 0.4				

CIE Pub.117, 3247 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 4.1$ )

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: JYH  
Test Date: 2023-05-18

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity: 65.0%  
Test Distance: 10.950m [K=1.0000]  
Remarks:

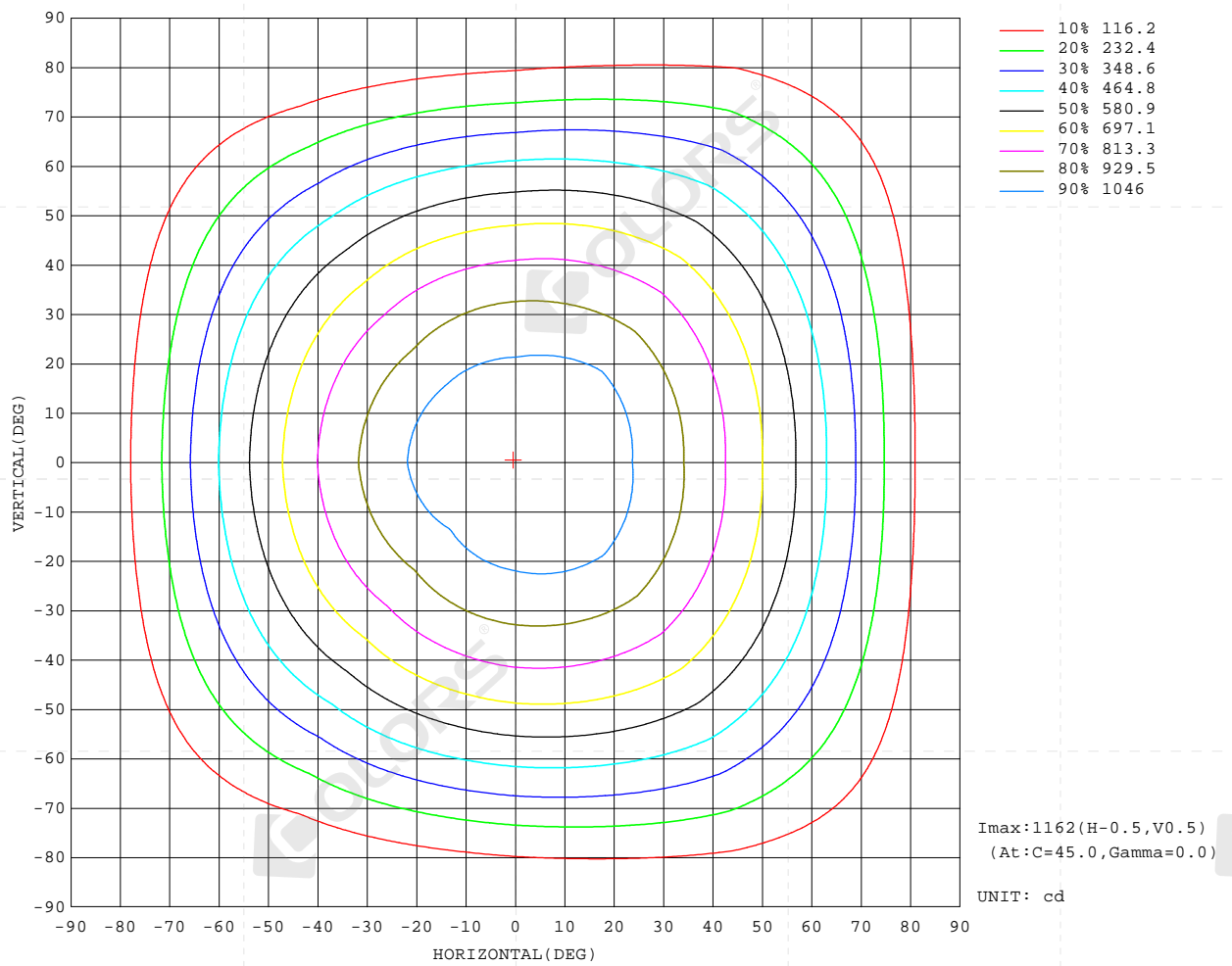
**UTILIZATION FACTORS TABLE**

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) $k(RI) \times RCR = 5$									
$k = 0.60$	58	46	39	57	46	39	55	45	39	32
0.80	68	56	49	67	56	49	65	55	48	41
1.00	76	65	58	75	64	57	72	66	57	50
1.25	83	73	66	82	72	65	79	70	64	57
1.50	88	78	71	86	77	71	83	75	70	62
2.00	95	87	80	93	85	79	89	83	78	70
2.50	99	91	85	97	90	84	93	87	82	74
3.00	102	95	90	100	94	89	96	91	87	78
4.00	106	101	96	104	99	95	99	95	92	83
5.00	109	104	100	106	102	98	101	98	95	85
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: JYH  
 Test Date: 2023-05-18

g Range: 0 - 180DEG  
 g Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity: 65.0%  
 Test Distance: 10.950m [K=1.0000]  
 Remarks:

# ISOCANDELA DIAGRAM

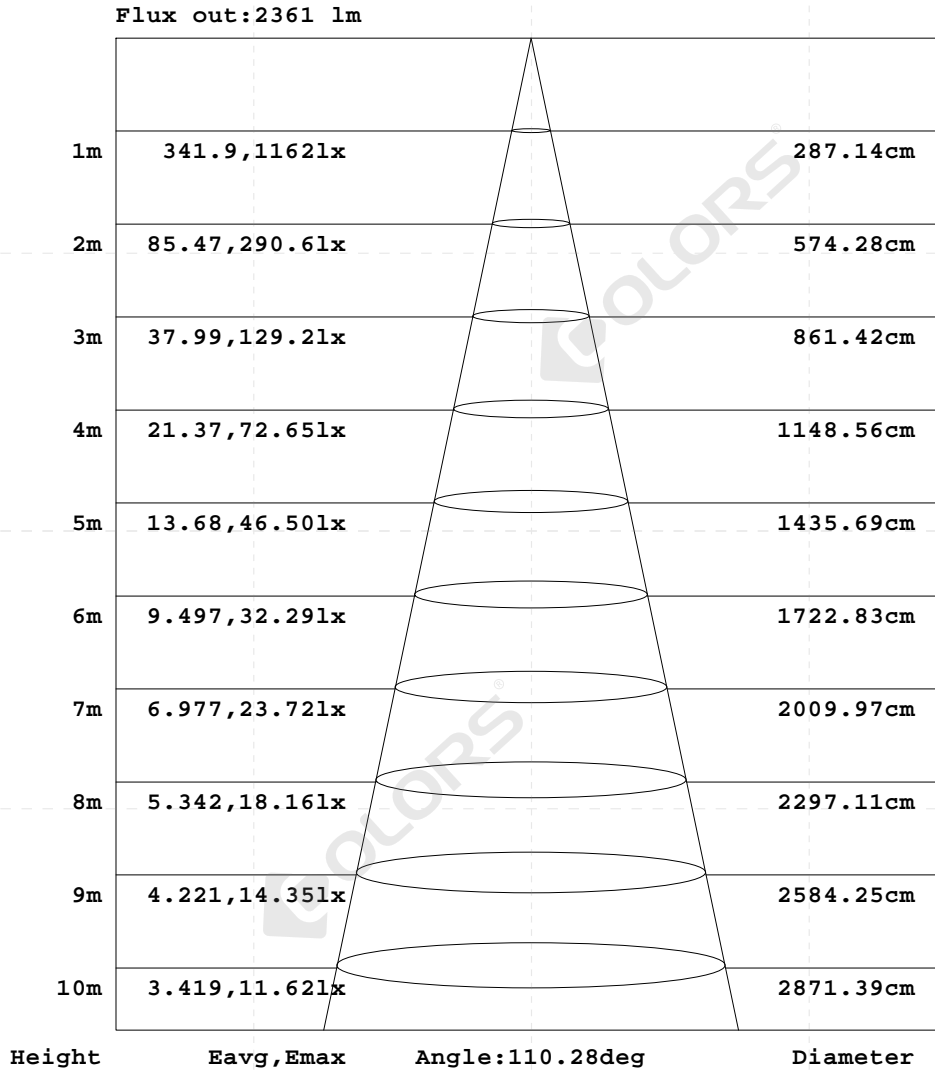


C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2023-05-18

Range: 0 - 180DEG  
Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:



AAI Figure

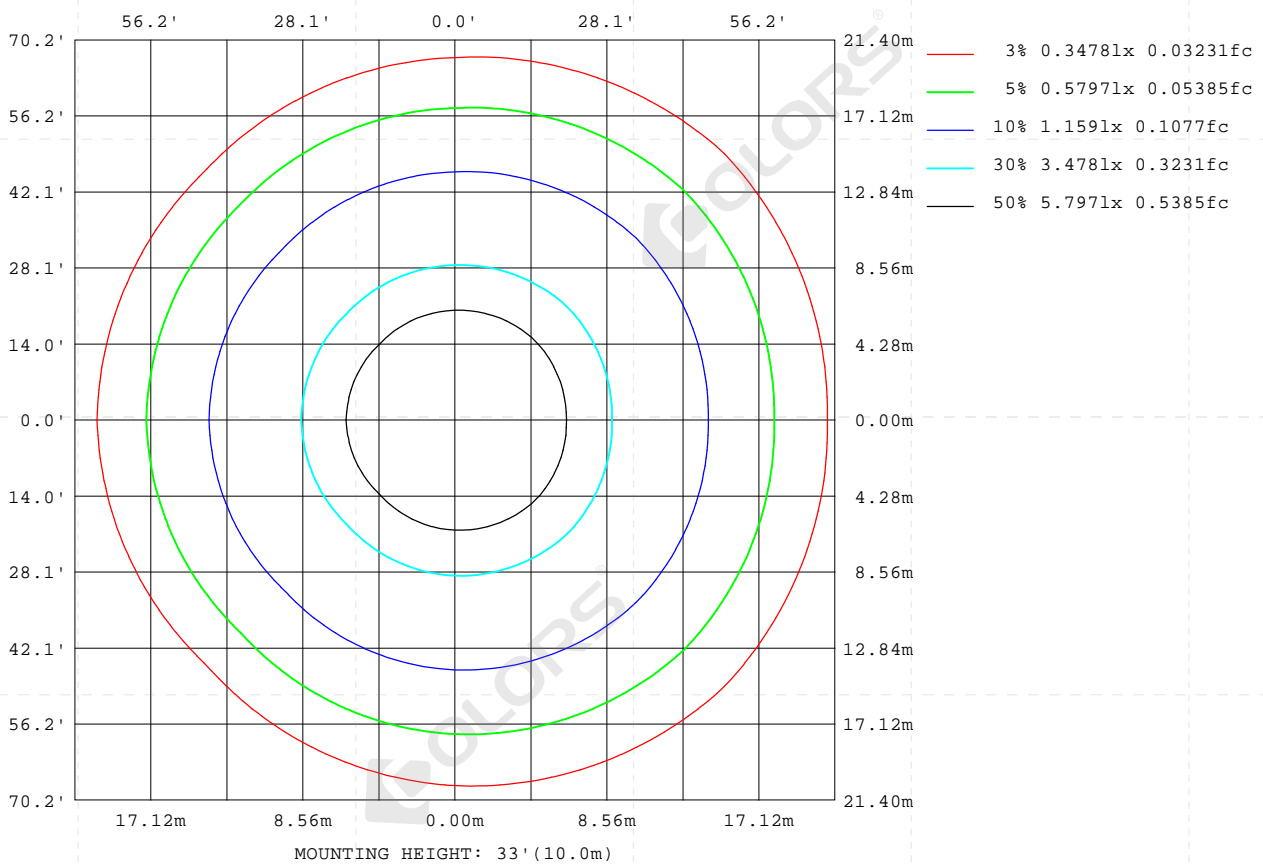


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360 DEG  
C Interval: 45.0 DEG  
Test Speed: HIGH  
Temperature: 25.3 DEG  
Operators: JYH  
Test Date: 2023-05-18

Range: 0 - 180 DEG  
Interval: 1.0 DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity: 65.0%  
Test Distance: 10.950m [K=1.0000]  
Remarks:

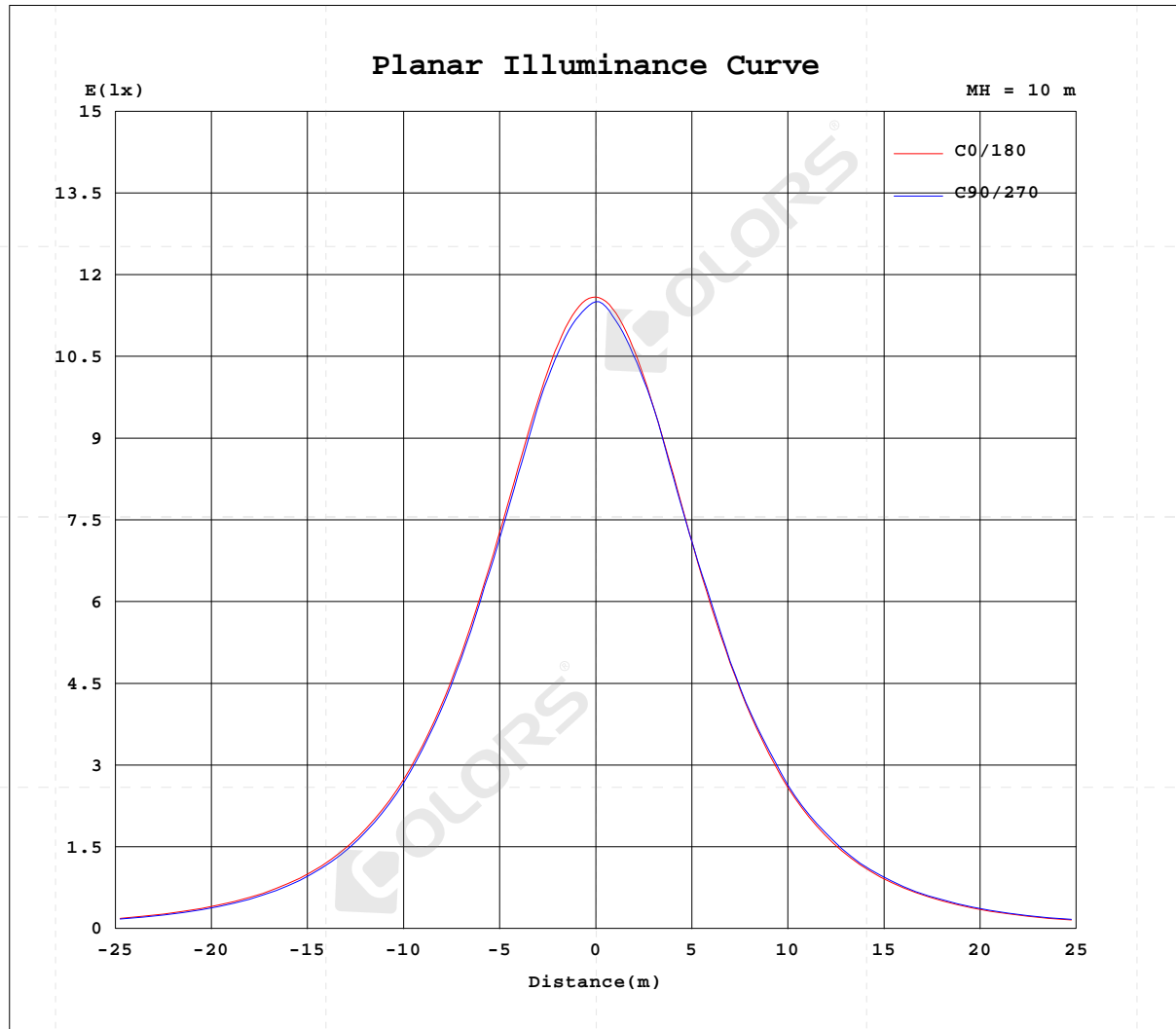
ISOLUX DIAGRAM



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: JYH  
Test Date: 2023-05-18

Range: 0 - 180DEG  
Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity: 65.0%  
Test Distance: 10.950m [K=1.0000]  
Remarks:

# Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: JYH  
 Test Date: 2023-05-18

Range: 0 - 180DEG  
 Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity: 65.0%  
 Test Distance: 10.950m [K=1.0000]  
 Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

Table--1

UNIT: cd

C( DEG) g (DEG)	0	45	90	135	180	225	270	315										
0	1159	1162	1151	1150	1159	1162	1151	1150										
5	1155	1155	1138	1131	1152	1148	1138	1146										
10	1140	1144	1124	1108	1133	1121	1120	1132										
15	1115	1123	1103	1076	1103	1088	1099	1111										
20	1078	1094	1062	1037	1063	1053	1060	1083										
25	1033	1053	1017	985	1012	1001	1009	1048										
30	979	1000	968	924	952	936	961	993										
35	918	942	902	858	887	870	893	933										
40	849	877	834	786	815	800	825	869										
45	775	803	758	705	734	716	747	799										
50	697	723	676	620	649	632	669	718										
55	612	638	588	530	561	541	577	636										
60	521	548	495	435	467	446	484	546										
65	426	453	398	334	365	348	385	453										
70	325	352	300	237	264	250	288	356										
75	225	253	203	143	167	154	193	260										
80	131	154	113	63.4	83.2	72.7	106	165										
85	55.1	45.8	42.5	10.1	21.8	15.3	38.3	82.1										
90	6.49	0.00	3.07	2.51	1.26	1.38	0.91	21.3										
95	2.74	0.00	2.71	2.70	1.80	1.72	1.20	1.85										
100	3.37	0.00	2.59	3.16	2.69	2.44	2.02	2.18										
105	4.30	0.00	2.96	3.84	3.63	3.20	3.24	3.00										
110	5.40	0.00	4.19	4.64	4.63	4.02	4.50	3.81										
115	6.58	0.00	5.61	5.45	5.61	4.89	5.62	4.87										
120	7.76	0.00	6.89	6.22	6.53	5.72	6.54	5.83										
125	8.84	0.00	7.97	7.02	7.41	6.59	7.37	6.60										
130	9.94	0.00	8.85	7.84	8.24	7.45	8.10	7.24										
135	10.9	0.00	9.69	8.66	9.05	8.33	8.70	7.81										
140	11.5	0.00	10.3	9.52	9.65	9.36	9.26	8.45										
145	12.1	0.00	11.0	10.5	9.93	10.4	9.73	9.09										
150	12.5	0.00	11.6	11.4	10.4	11.6	10.6	9.51										
155	12.9	0.00	12.6	12.4	11.2	12.5	11.8	9.97										
160	13.5	0.00	13.5	13.3	12.0	13.6	13.1	10.9										
165	14.1	0.00	14.2	14.3	12.9	14.4	14.2	11.4										
170	15.0	0.00	15.0	15.2	14.0	15.1	15.0	12.8										
175	15.2	0.00	15.9	16.0	14.4	16.3	15.9	14.3										
180	15.4	0.00	16.6	15.9	15.4	16.5	16.6	15.9										

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2023-05-18

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks: