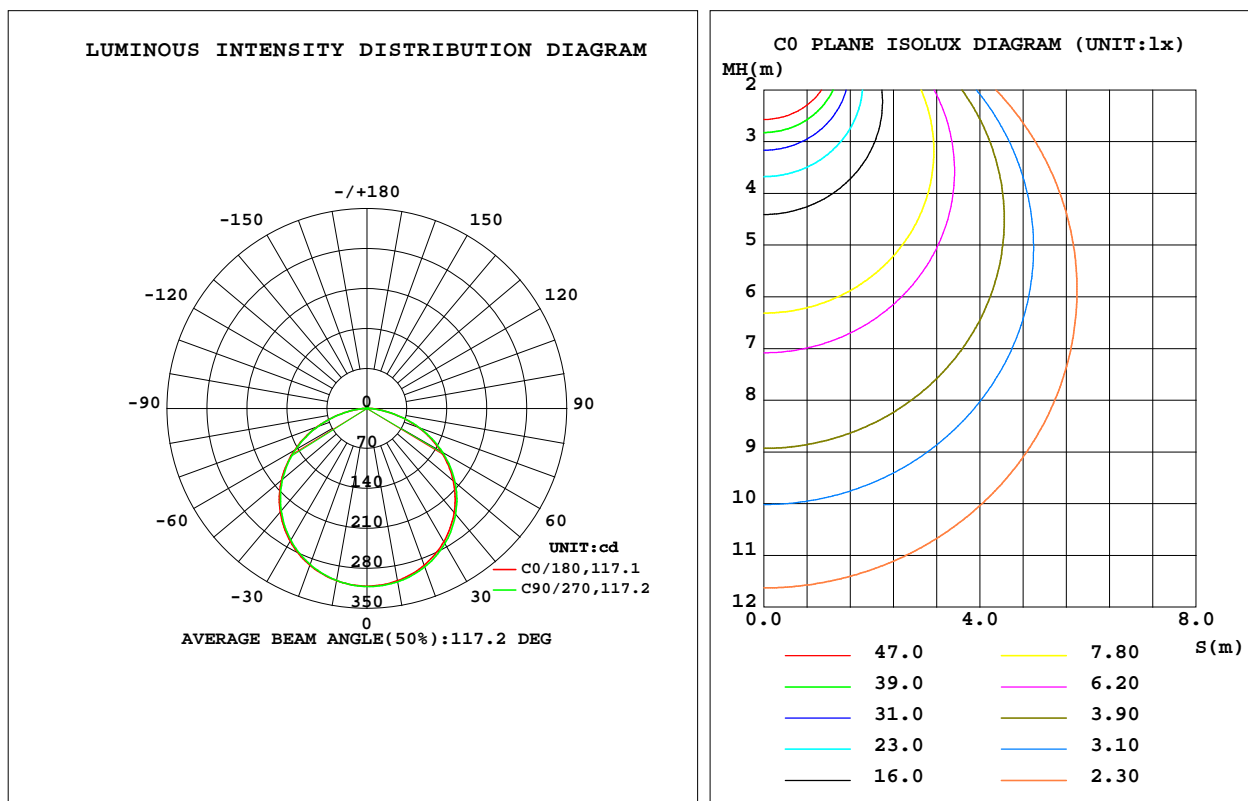


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.00V I:0.2000A P:4.800W PF:1.000 Freq:0Hz Lamp Flux:951.598x1 lm		
NAME: D8902410NO	TYPE:	WEIGHT:
SPEC.:D8902410NO-8SWNSA012WC0100	DIM.: 1000*10*1.5mm	SERIAL No.:01
MFR.: COLORS	SUR.:1000*10	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 198.25 lm/W			
MODEL	D8902410NO	I _{max} (cd)	312.7	S/MH(C0/180)	1.29
NOMINAL POWER(W)	4.8	LOR(%)	100.0	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	951.60	h UP,DN(C0-180)	0.9,49.9
NOMINAL FLUX(lm)	951.598	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.8,48.4
LAMPS INSIDE	1	h up(%)	1.7	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	h down(%)	98.3	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2021-01-29

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:

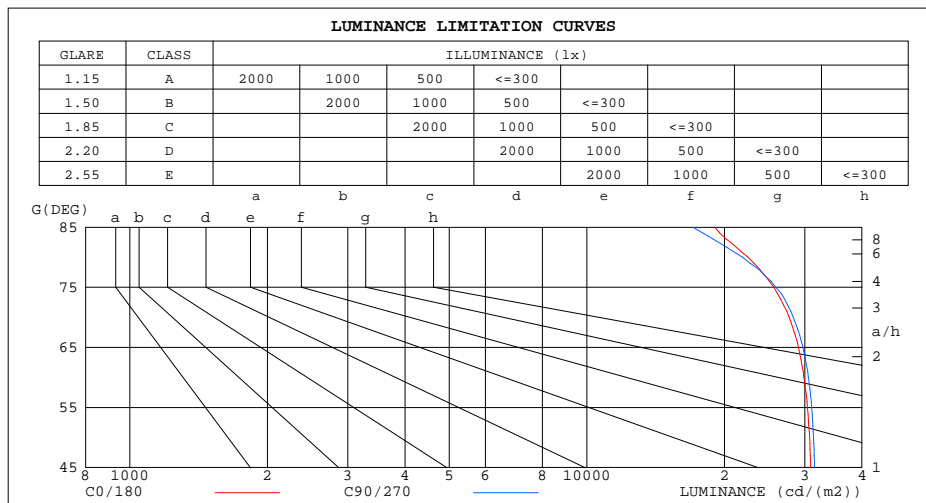
g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	306.3	307.6	308.2	309.1	306.2	305.8	305.8	306.7	0- 10	29.53	29.53	3.1,3.1
20	292.4	294.5	295.3	296.1	292.1	291.0	290.7	291.6	10- 20	85.03	114.6	12,12
30	269.4	272.1	273.0	273.8	268.8	266.9	266.5	267.4	20- 30	130.2	244.8	25.7,25.7
40	237.6	240.8	241.7	242.2	236.6	234.3	233.8	234.8	30- 40	159.4	404.2	42.5,42.5
50	197.4	200.6	201.4	201.6	195.7	193.2	193.0	193.8	40- 50	168.4	572.7	60.2,60.2
60	149.3	152.4	152.7	152.7	146.8	144.5	144.6	145.4	50- 60	155.2	727.9	76.5,76.5
70	94.80	97.27	96.83	96.76	91.44	89.64	90.35	91.01	60- 70	120.2	848.1	89.1,89.1
80	39.08	40.70	38.01	39.93	35.95	35.07	36.06	36.50	70- 80	68.67	916.7	96.3,96.3
90	4.732	4.829	2.109	4.164	2.389	2.790	1.523	4.050	80- 90	18.76	935.5	98.3,98.3
100	1.289	1.256	1.055	1.217	0.8968	0.8134	0.8099	0.8949	90-100	1.519	937.0	98.5,98.5
110	1.788	1.797	1.656	1.718	1.713	1.514	1.858	1.522	100-110	1.408	938.4	98.6,98.6
120	2.632	2.681	2.736	2.493	2.474	2.104	2.646	2.449	110-120	2.095	940.5	98.8,98.8
130	3.385	3.454	3.492	3.127	3.121	2.665	3.019	3.213	120-130	2.573	943.1	99.1,99.1
140	3.860	4.042	4.021	3.594	3.641	3.172	3.206	3.600	130-140	2.652	945.7	99.4,99.4
150	4.255	4.375	4.248	3.988	3.941	3.626	3.273	3.607	140-150	2.376	948.1	99.6,99.6
160	4.582	4.408	4.375	4.315	4.275	3.954	3.494	3.613	150-160	1.861	950.0	99.8,99.8
170	4.709	4.429	4.694	4.495	4.382	4.227	4.303	3.813	160-170	1.200	951.2	100,100
180	4.629	4.916	5.210	5.030	4.642	4.909	5.243	5.003	170-180	0.4327	951.6	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:2021-01-29

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

Test:U:24.00V I:0.2000A P:4.800W PF:1.000 Freq:0Hz Lamp Flux:951.598x1 lm		
NAME: D8902410NO	TYPE:	WEIGHT:
SPEC.:D8902410NO-8SWNSA012WC0100	DIM.: 1000*10*1.5mm	SERIAL No.:01
MFR.: COLORS	SUR.:1000*10	Shielding Angle:



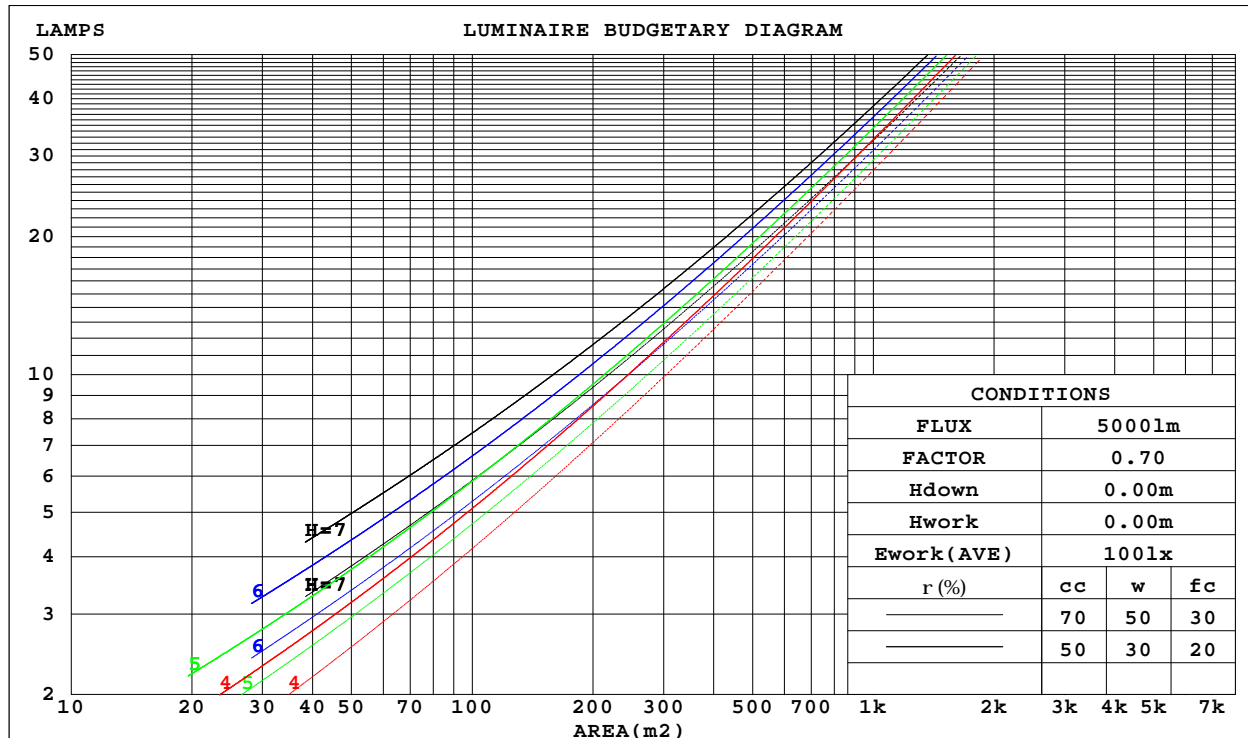
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:JYH
 Test Date:2021-01-29

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

Test:U:24.00V I:0.2000A P:4.800W PF:1.000 Freq:0Hz Lamp Flux:951.598x1 lm		
NAME: D8902410NO	TYPE:	WEIGHT:
SPEC.:D8902410NO-8SWNSA012WC0100	DIM.: 1000*10*1.5mm	SERIAL No.:01
MFR.: COLORS	SUR.:1000*10	Shielding Angle:

r _{cc}	80%			70%			50%			30%			10%			0
r _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r _{fc}	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	1.05	1.05	1.05	1.00	1.00	1.00	.98
1.0	1.03	.99	.95	1.01	.97	.93	.96	.93	.90	.92	.89	.87	.88	.86	.84	.82
2.0	.90	.83	.77	.88	.81	.76	.84	.78	.74	.80	.76	.72	.77	.73	.70	.68
3.0	.79	.70	.64	.77	.69	.63	.74	.67	.62	.71	.65	.60	.68	.63	.59	.57
4.0	.69	.60	.54	.68	.60	.53	.65	.58	.52	.63	.56	.51	.60	.55	.50	.48
5.0	.62	.53	.46	.61	.52	.46	.58	.51	.45	.56	.49	.44	.54	.48	.44	.41
6.0	.56	.46	.40	.55	.46	.40	.53	.45	.39	.51	.44	.39	.49	.43	.38	.36
7.0	.50	.41	.35	.49	.41	.35	.48	.40	.35	.46	.39	.34	.45	.39	.34	.32
8.0	.46	.37	.31	.45	.37	.31	.44	.36	.31	.42	.35	.31	.41	.35	.30	.28
9.0	.42	.34	.28	.41	.33	.28	.40	.33	.28	.39	.32	.27	.38	.32	.27	.25
10.0	.39	.31	.25	.38	.30	.25	.37	.30	.25	.36	.29	.25	.35	.29	.25	.23



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2021-01-29

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

Test:U:24.00V I:0.2000A P:4.800W PF:1.000 Freq:0Hz Lamp Flux:951.598x1 lm		
NAME: D8902410NO	TYPE:	WEIGHT:
SPEC.:D8902410NO-8SWNSA012WC0100	DIM.: 1000*10*1.5mm	SERIAL No.:01
MFR.: COLORS	SUR.:1000*10	Shielding Angle:

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	.314	.179	.057	.307	.175	.056	.292	.168	.054	.279	.161	.052	.267	.155	.050	
2.0	.295	.162	.050	.288	.159	.049	.276	.153	.048	.264	.148	.046	.253	.143	.045	
3.0	.273	.145	.043	.267	.143	.043	.256	.139	.042	.245	.134	.041	.236	.130	.040	
4.0	.251	.131	.038	.246	.129	.038	.236	.125	.037	.227	.122	.037	.218	.119	.036	
5.0	.232	.118	.034	.228	.117	.034	.219	.114	.034	.210	.111	.033	.203	.108	.033	
6.0	.215	.108	.031	.211	.107	.031	.203	.104	.030	.196	.102	.030	.189	.099	.029	
7.0	.200	.099	.028	.196	.098	.028	.189	.096	.028	.183	.094	.027	.176	.092	.027	
8.0	.187	.091	.026	.183	.090	.026	.177	.088	.025	.171	.087	.025	.165	.085	.025	
9.0	.175	.085	.024	.172	.084	.024	.166	.082	.023	.161	.081	.023	.156	.079	.023	
10.0	.164	.079	.022	.162	.078	.022	.156	.077	.022	.151	.075	.021	.147	.074	.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	.203	.203	.203	.174	.174	.174	.119	.119	.119	.068	.068	.068	.022	.022	.022	
1.0	.194	.169	.147	.166	.145	.127	.113	.100	.088	.065	.058	.051	.021	.019	.016	
2.0	.186	.145	.111	.159	.125	.096	.109	.086	.067	.063	.050	.039	.020	.016	.013	
3.0	.178	.127	.087	.153	.110	.075	.105	.076	.053	.061	.045	.031	.019	.014	.010	
4.0	.171	.114	.071	.146	.099	.062	.101	.069	.044	.058	.040	.026	.019	.013	.008	
5.0	.163	.104	.060	.140	.090	.052	.097	.063	.037	.056	.037	.022	.018	.012	.007	
6.0	.156	.096	.052	.134	.083	.045	.093	.058	.032	.054	.034	.019	.017	.011	.006	
7.0	.149	.089	.046	.128	.077	.040	.089	.054	.029	.052	.032	.017	.017	.010	.006	
8.0	.143	.083	.042	.123	.072	.037	.085	.051	.026	.049	.030	.015	.016	.010	.005	
9.0	.137	.078	.038	.118	.068	.034	.082	.048	.024	.048	.028	.014	.015	.009	.005	
10.0	.131	.074	.036	.113	.064	.031	.078	.045	.022	.046	.027	.013	.015	.009	.004	

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2021-01-29

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

Test:U:24.00V I:0.2000A P:4.800W PF:1.000 Freq:0Hz Lamp Flux:951.598x1 lm											
NAME: D8902410NO						TYPE:		WEIGHT:			
SPEC.:D8902410NO-8SWNSA012WC0100						DIM.: 1000*10*1.5mm		SERIAL No.:01			
MFR.: COLORS						SUR.:1000*10		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	25.0	26.5	25.3	26.7	27.0	25.0	26.6	25.3	26.8	27.0	
	3H	26.5	27.9	26.9	28.2	28.5	26.6	28.0	27.0	28.3	28.6
	4H	27.2	28.5	27.5	28.8	29.1	27.3	28.6	27.6	28.9	29.2
	6H	27.6	28.8	28.0	29.2	29.5	27.7	28.9	28.0	29.2	29.5
	8H	27.7	28.9	28.1	29.2	29.6	27.8	29.0	28.1	29.3	29.6
	12H	27.8	29.0	28.2	29.3	29.6	27.8	29.0	28.2	29.3	29.7
4H	2H	25.6	26.9	26.0	27.2	27.5	25.7	27.0	26.0	27.3	27.6
	3H	27.4	28.5	27.8	28.9	29.2	27.5	28.6	27.8	28.9	29.3
	4H	28.1	29.2	28.5	29.5	29.9	28.2	29.3	28.6	29.6	30.0
	6H	28.7	29.6	29.1	30.0	30.4	28.7	29.7	29.1	30.0	30.5
	8H	28.8	29.7	29.3	30.1	30.5	28.9	29.8	29.3	30.2	30.6
	12H	29.0	29.8	29.4	30.2	30.6	29.0	29.8	29.4	30.2	30.6
8H	4H	28.4	29.3	28.8	29.7	30.1	28.5	29.3	28.9	29.7	30.2
	6H	29.1	29.8	29.6	30.3	30.7	29.1	29.9	29.6	30.3	30.8
	8H	29.4	30.0	29.8	30.5	30.9	29.4	30.0	29.9	30.5	31.0
	12H	29.5	30.1	30.0	30.6	31.1	29.5	30.1	30.0	30.6	31.1
12H	4H	28.4	29.2	28.9	29.6	30.1	28.5	29.3	28.9	29.7	30.1
	6H	29.2	29.8	29.6	30.3	30.7	29.2	29.8	29.7	30.3	30.8
	8H	29.4	30.0	30.0	30.5	31.0	29.5	30.0	30.0	30.5	31.0
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					

CIE Pub.117, 951.6 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.2)

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2021-01-29

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

Test:U:24.00V I:0.2000A P:4.800W PF:1.000 Freq:0Hz Lamp Flux:951.598x1 lm		
NAME: D8902410NO	TYPE:	WEIGHT:
SPEC.:D8902410NO-8SWNSA012WC0100	DIM.: 1000*10*1.5mm	SERIAL No.:01
MFR.: COLORS	SUR.:1000*10	Shielding Angle:

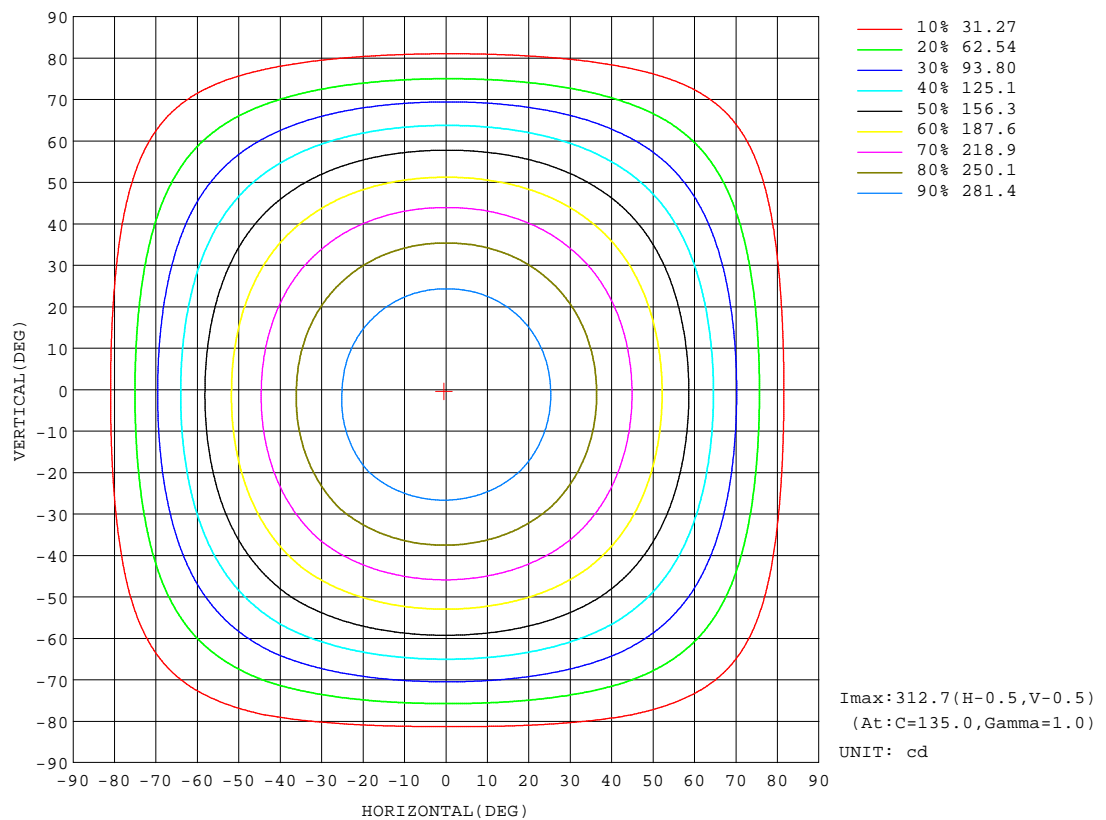
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	44	37	55	44	37	54	44	37	31
0.80	66	54	47	65	54	47	63	53	46	39
1.00	75	63	56	73	63	56	71	64	55	48
1.25	82	71	64	80	70	63	77	69	62	55
1.50	87	77	70	85	76	69	82	74	68	60
2.00	94	85	79	92	84	78	88	81	76	68
2.50	98	90	84	96	89	83	92	86	81	72
3.00	101	94	89	99	93	88	95	89	85	76
4.00	105	100	95	103	98	93	98	94	90	81
5.00	108	103	99	105	101	97	101	97	94	84
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:2021-01-29

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

Test:U:24.00V I:0.2000A P:4.800W PF:1.000 Freq:0Hz Lamp Flux:951.598x1 lm		
NAME: D8902410NO	TYPE:	WEIGHT:
SPEC.:D8902410NO-8SWNSA012WC0100	DIM.: 1000*10*1.5mm	SERIAL No.:01
MFR.: COLORS	SUR.:1000*10	Shielding Angle:



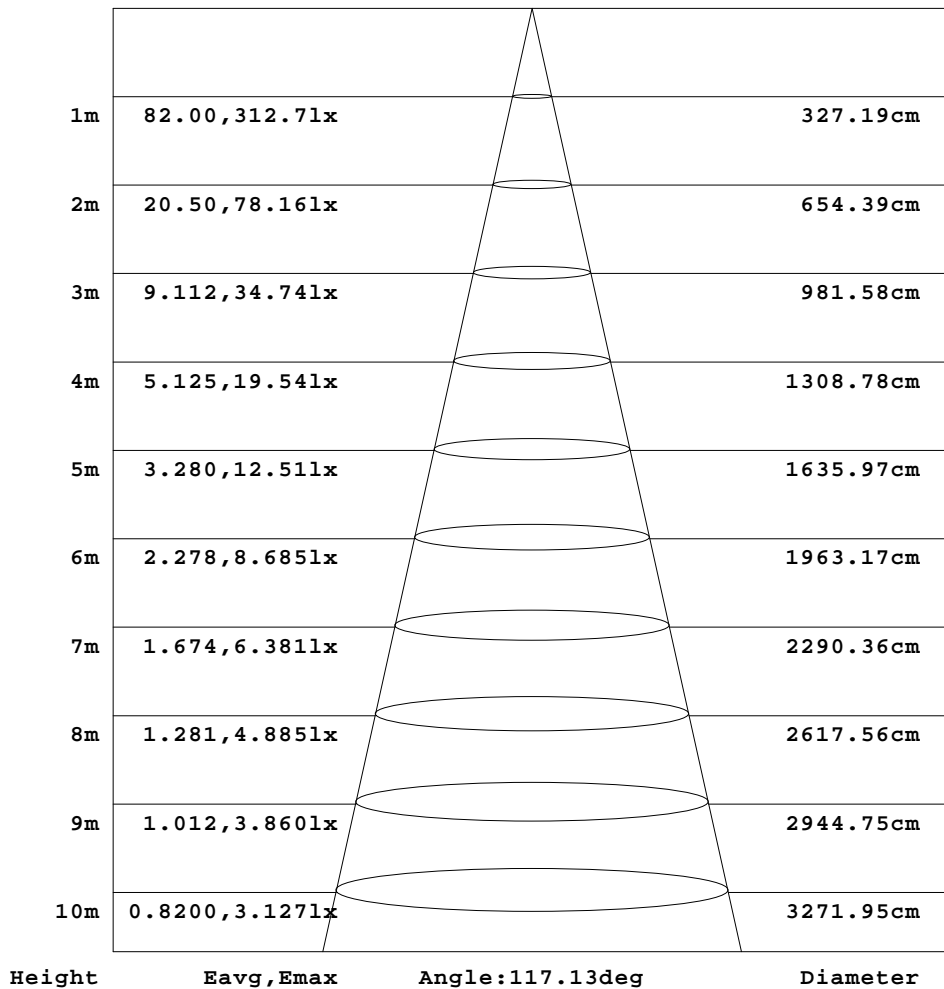
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2021-01-29

deg 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

Test:U:24.00V I:0.2000A P:4.800W PF:1.000 Freq:0Hz Lamp Flux:951.598x1 lm		
NAME: D8902410NO	TYPE:	WEIGHT:
SPEC.:D8902410NO-8SWNSA012WC0100	DIM.: 1000*10*1.5mm	SERIAL No.:01
MFR.: COLORS	SUR.:1000*10	Shielding Angle:

Flux out:713.6 lm



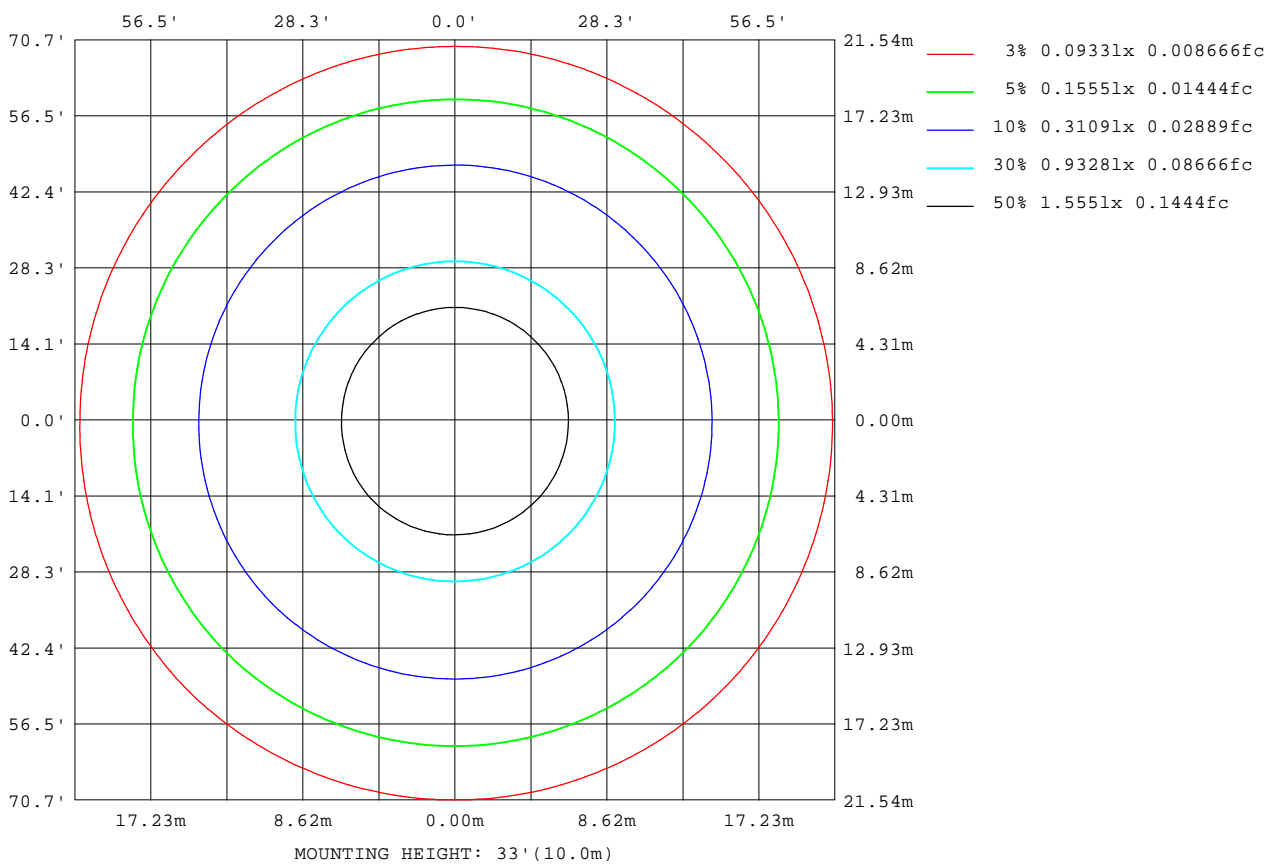
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2021-01-29

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:

ISOLUX DIAGRAM

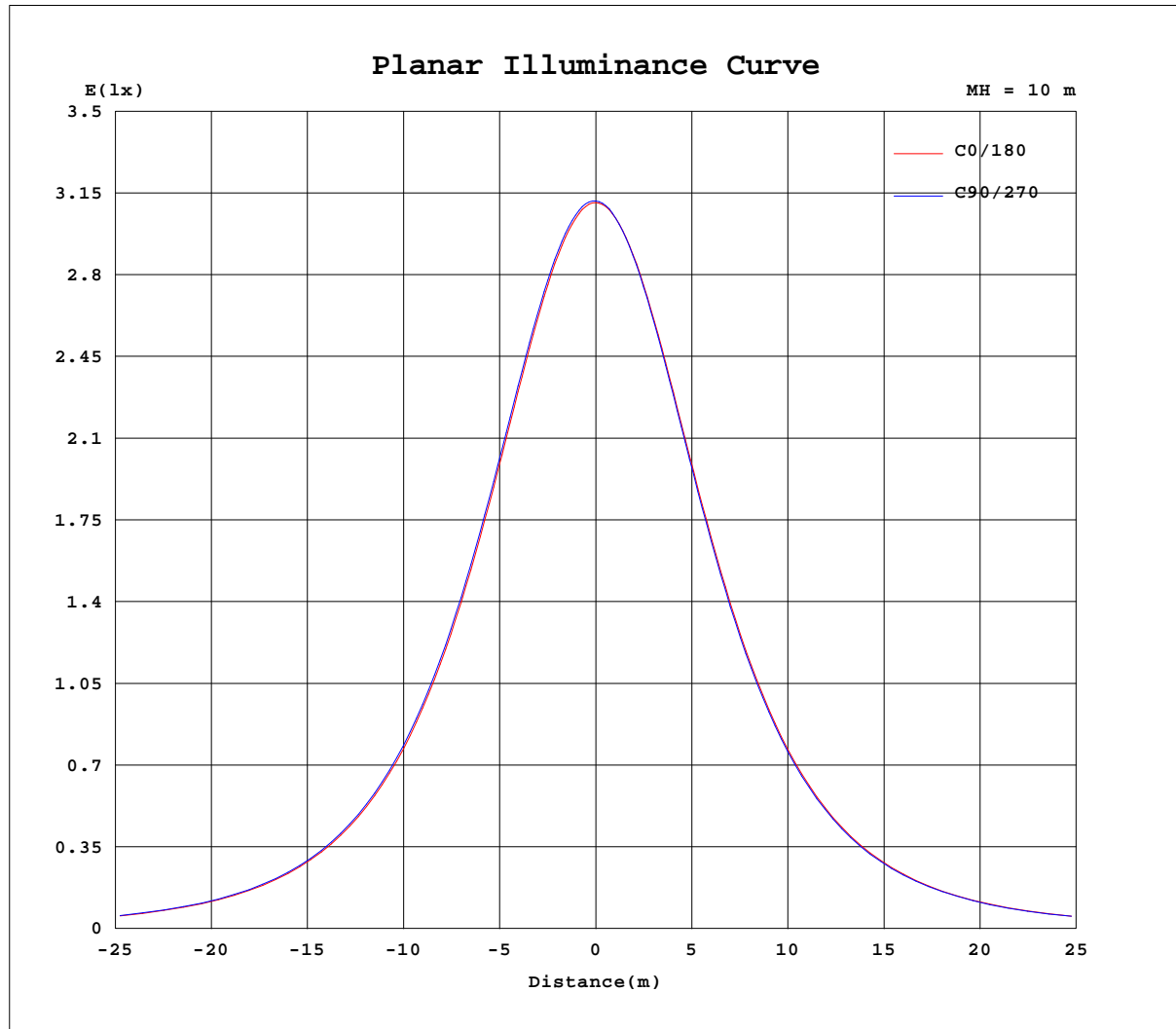
Test:U:24.00V I:0.2000A P:4.800W PF:1.000 Freq:0Hz Lamp Flux:951.598x1 lm		
NAME: D8902410NO	TYPE:	WEIGHT:
SPEC.:D8902410NO-8SWNSA012WC0100	DIM.: 1000*10*1.5mm	SERIAL No.:01
MFR.: COLORS	SUR.:1000*10	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:JYH
 Test Date:2021-01-29

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:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: JYH
Test Date: 2021-01-29

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

Test:U:24.00V I:0.2000A P:4.800W PF:1.000 Freq:0Hz Lamp Flux:951.598x1 lm		
NAME: D8902410NO	TYPE:	WEIGHT:
SPEC.:D8902410NO-8SWNSA012WC0100	DIM.: 1000*10*1.5mm	SERIAL No.:01
MFR.: COLORS	SUR.:1000*10	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	45	90	135	180	225	270	315										
0	311	311	312	313	311	311	312	313										
5	310	311	311	312	310	310	310	311										
10	306	308	308	309	306	306	306	307										
15	301	302	303	304	300	300	299	300										
20	292	294	295	296	292	291	291	292										
25	282	284	285	286	282	280	280	281										
30	269	272	273	274	269	267	267	267										
35	255	258	259	259	254	252	251	252										
40	238	241	242	242	237	234	234	235										
45	219	222	223	223	217	215	214	215										
50	197	201	201	202	196	193	193	194										
55	174	177	178	178	172	170	170	170										
60	149	152	153	153	147	145	145	145										
65	123	126	126	125	120	118	118	119										
70	94.8	97.3	96.8	96.8	91.4	89.6	90.3	91.0										
75	66.3	68.5	67.1	67.6	62.9	61.4	62.4	62.9										
80	39.1	40.7	38.0	39.9	36.0	35.1	36.1	36.5										
85	16.6	17.6	14.8	17.2	14.2	13.8	14.7	15.1										
90	4.73	4.83	2.11	4.16	2.39	2.79	1.52	4.05										
95	1.72	1.65	1.15	1.31	0.62	0.67	0.43	1.18										
100	1.29	1.26	1.06	1.22	0.90	0.81	0.81	0.89										
105	1.43	1.45	1.18	1.42	1.30	1.18	1.35	1.25										
110	1.79	1.80	1.66	1.72	1.71	1.51	1.86	1.52										
115	2.20	2.23	2.20	2.10	2.08	1.81	2.31	1.97										
120	2.63	2.68	2.74	2.49	2.47	2.10	2.65	2.45										
125	3.01	3.08	3.15	2.83	2.81	2.41	2.87	2.86										
130	3.39	3.45	3.49	3.13	3.12	2.66	3.02	3.21										
135	3.63	3.79	3.77	3.37	3.40	2.91	3.13	3.53										
140	3.86	4.04	4.02	3.59	3.64	3.17	3.21	3.60										
145	4.05	4.24	4.16	3.79	3.83	3.40	3.24	3.61										
150	4.25	4.38	4.25	3.99	3.94	3.63	3.27	3.61										
155	4.39	4.41	4.37	4.18	4.11	3.81	3.31	3.61										
160	4.58	4.41	4.37	4.32	4.28	3.95	3.49	3.61										
165	4.78	4.41	4.47	4.40	4.41	4.04	3.85	3.61										
170	4.71	4.43	4.69	4.50	4.38	4.23	4.30	3.81										
175	4.52	4.63	4.93	4.72	4.34	4.47	4.80	4.37										
180	4.63	4.92	5.21	5.03	4.64	4.91	5.24	5.00										

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2021-01-29

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: