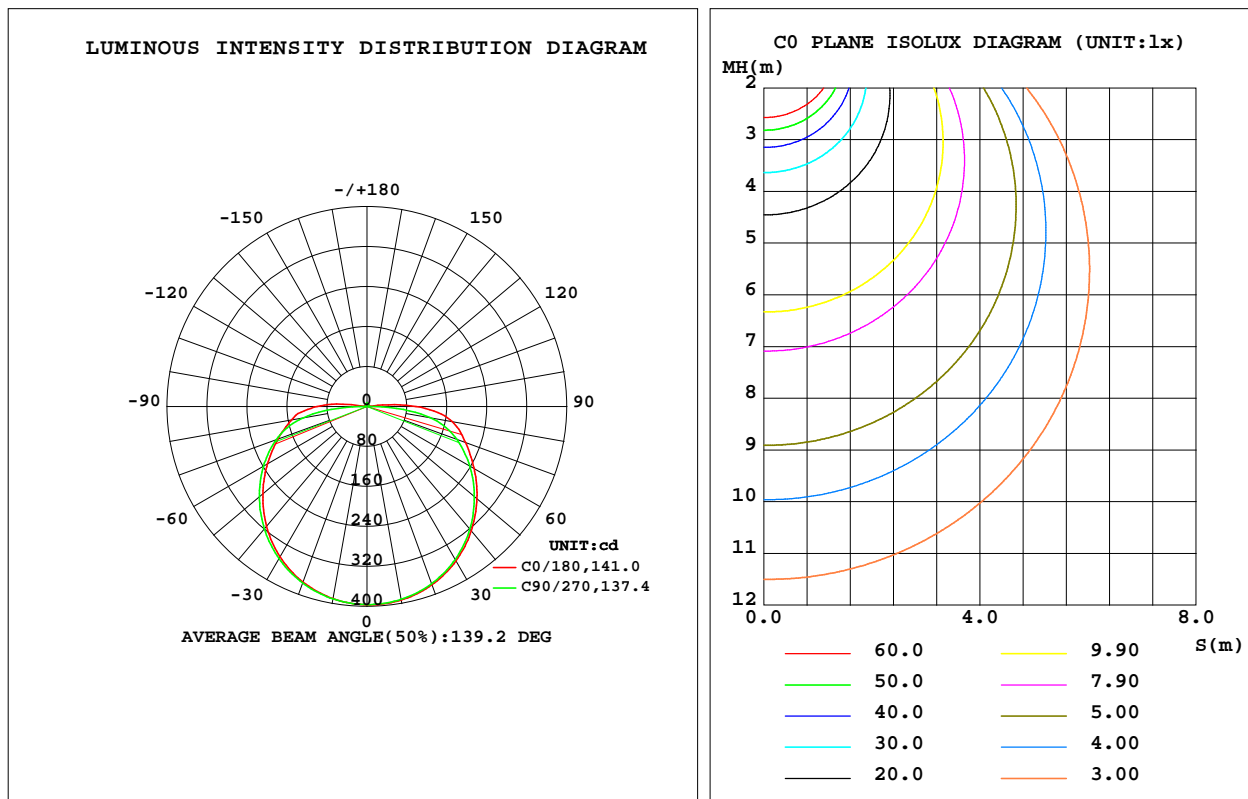


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.22V I:0.6000A P:14.53W PF:1.000 Freq:0Hz Lamp Flux:1584.61x1 lm		
NAME: FD1922410NO	TYPE:	WEIGHT:
SPEC.:FD1922410NO-9NWSA012BC0100	DIM.: 1000*10*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*10mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 109.07 lm/W			
MODEL	FD1922410NO	I _{max} (cd)	397.0	S/MH(C0/180)	1.34
NOMINAL POWER(W)	14.4	LOR(%)	100.0	S/MH(C90/270)	1.32
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	1584.6	h UP,DN(C0-180)	1.8,48.6
NOMINAL FLUX(lm)	1584.61	CIE CLASS	DIRECT	h UP,DN(C180-360)	1.7,47.9
LAMPS INSIDE	1	h up(%)	3.6	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	24	h down(%)	96.4	CIBSE SHR MAX	1.55



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2021-01-09

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:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

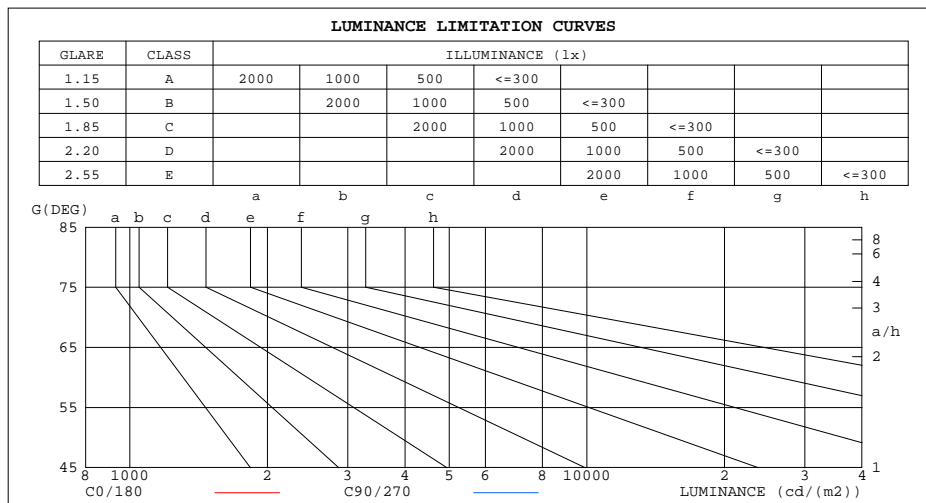
g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	393.3	393.5	391.9	390.8	390.4	390.5	390.9	391.7	0- 10	37.62	37.62	2.37,2.37
20	379.8	380.2	377.5	375.4	374.0	374.3	376.1	377.4	10- 20	108.9	146.5	9.25,9.25
30	356.6	357.0	353.4	350.1	347.8	348.6	351.8	353.8	20- 30	168.8	315.3	19.9,19.9
40	324.8	325.3	320.3	316.1	312.9	314.8	319.6	322.1	30- 40	211.0	526.3	33.2,33.2
50	287.2	287.4	280.7	276.0	272.3	275.5	281.2	285.0	40- 50	232.2	758.5	47.9,47.9
60	247.6	246.7	237.3	233.5	230.1	234.3	239.2	245.6	50- 60	233.0	991.5	62.6,62.6
70	209.8	207.1	190.8	192.2	189.4	194.1	192.8	207.2	60- 70	216.6	1208	76.2,76.2
80	172.8	174.4	127.9	156.5	152.8	160.1	129.1	175.9	70- 80	187.8	1396	88.1,88.1
90	98.21	93.16	5.784	99.19	99.98	100.6	5.984	94.29	80- 90	131.9	1528	96.4,96.4
100	5.352	4.929	3.817	4.822	3.079	2.772	2.436	2.539	90-100	34.30	1562	98.6,98.6
110	4.203	4.251	3.513	4.374	3.468	2.972	3.233	2.958	100-110	3.862	1566	98.8,98.8
120	4.034	4.089	4.148	4.015	3.902	3.440	3.547	3.486	110-120	3.642	1570	99.1,99.1
130	4.615	4.535	4.582	4.415	4.423	3.980	3.875	3.847	120-130	3.644	1573	99.3,99.3
140	5.115	4.903	5.016	4.856	4.943	4.602	4.148	4.121	130-140	3.485	1577	99.5,99.5
150	5.450	5.117	5.250	5.451	5.203	5.250	4.623	4.321	140-150	3.068	1580	99.7,99.7
160	5.983	5.371	5.857	6.032	5.645	5.884	5.638	4.801	150-160	2.467	1582	99.9,99.9
170	6.199	6.112	6.612	6.539	5.862	6.364	6.539	5.956	160-170	1.680	1584	100,100
180	6.199	7.120	7.254	7.281	6.199	7.100	7.261	7.281	170-180	0.6185	1585	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:2021-01-09

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:

LUMINANCE LIMITATION CURVES

Test:U:24.22V I:0.6000A P:14.53W PF:1.000 Freq:0Hz Lamp Flux:1584.61x1 lm		
NAME: FD1922410NO	TYPE:	WEIGHT:
SPEC.:FD1922410NO-9NWNSA012BC0100	DIM.: 1000*10*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*10mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(180)	C0/180	C90/270
85	163858	84060
80	99503	73667
75	74522	63369
70	61354	55799
65	53954	50792
60	49524	47468
55	46641	45231
50	44685	43670
45	43330	42578

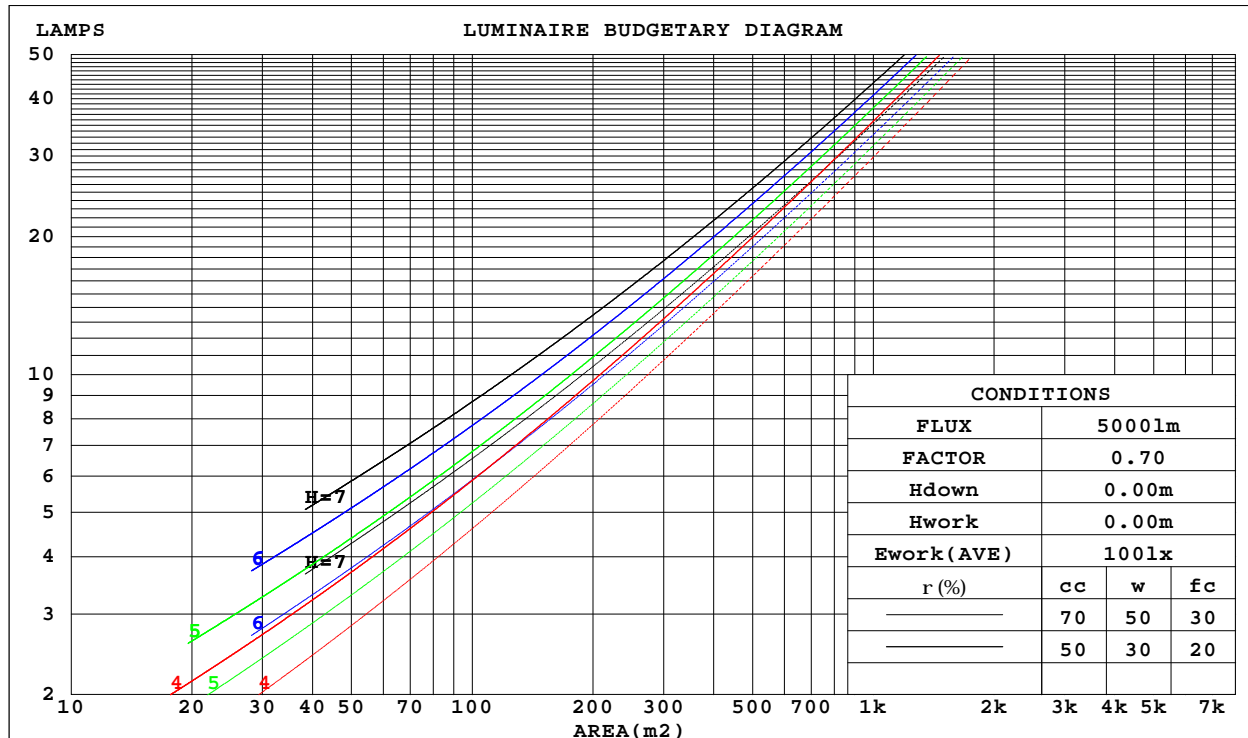
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:JYH
 Test Date:2021-01-09

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:24.22V I:0.6000A P:14.53W PF:1.000 Freq:0Hz Lamp Flux:1584.6lx1 lm		
NAME: FD1922410NO	TYPE:	WEIGHT:
SPEC.:FD1922410NO-9NWNSA012BC0100	DIM.: 1000*10*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*10mm	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	1.18	1.18	1.18	1.15	1.15	1.15	1.09	1.09	1.09	1.04	1.04	1.04	.99	.99	.99	.96
1.0	.98	.92	.87	.95	.90	.85	.90	.86	.82	.85	.82	.79	.81	.78	.76	.73
2.0	.83	.75	.68	.81	.73	.67	.77	.70	.65	.73	.67	.63	.69	.65	.61	.58
3.0	.72	.63	.55	.70	.61	.54	.66	.59	.53	.63	.57	.51	.60	.55	.50	.47
4.0	.63	.53	.46	.62	.52	.45	.58	.50	.44	.56	.49	.43	.53	.47	.42	.40
5.0	.56	.46	.39	.55	.45	.38	.52	.44	.38	.50	.42	.37	.47	.41	.36	.34
6.0	.50	.40	.33	.49	.40	.33	.47	.39	.33	.45	.37	.32	.43	.36	.31	.29
7.0	.45	.36	.29	.44	.35	.29	.42	.34	.29	.41	.33	.28	.39	.32	.28	.25
8.0	.41	.32	.26	.40	.32	.26	.39	.31	.25	.37	.30	.25	.36	.29	.25	.22
9.0	.38	.29	.23	.37	.29	.23	.35	.28	.23	.34	.27	.22	.33	.27	.22	.20
10.0	.35	.26	.21	.34	.26	.21	.33	.25	.20	.32	.25	.20	.30	.24	.20	.18



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2021-01-09

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:

WEC AND CCEC

Test:U:24.22V I:0.6000A P:14.53W PF:1.000 Freq:0Hz Lamp Flux:1584.61x1 lm		
NAME: FD1922410NO	TYPE:	WEIGHT:
SPEC.:FD1922410NO-9NWNSA012BC0100	DIM.: 1000*10*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*10mm	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	.407	.232	.073	.399	.227	.072	.383	.220	.070	.369	.213	.068	.355	.206	.066	
2.0	.352	.193	.059	.344	.190	.058	.330	.184	.057	.317	.178	.056	.305	.172	.054	
3.0	.311	.166	.050	.305	.163	.049	.292	.158	.048	.280	.154	.047	.269	.149	.046	
4.0	.279	.145	.043	.273	.143	.042	.262	.139	.041	.251	.135	.041	.242	.131	.040	
5.0	.253	.129	.037	.248	.127	.037	.238	.124	.036	.228	.120	.036	.219	.117	.035	
6.0	.231	.116	.033	.226	.114	.033	.217	.111	.032	.209	.109	.032	.201	.106	.031	
7.0	.213	.105	.030	.208	.104	.030	.200	.101	.029	.193	.099	.029	.186	.096	.028	
8.0	.197	.096	.027	.193	.095	.027	.186	.093	.027	.179	.091	.026	.172	.089	.026	
9.0	.183	.089	.025	.180	.088	.025	.173	.086	.024	.167	.084	.024	.161	.082	.024	
10.0	.171	.082	.023	.168	.081	.023	.162	.079	.022	.157	.078	.022	.151	.076	.022	

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	.218	.218	.218	.186	.186	.186	.127	.127	.127	.073	.073	.073	.023	.023	.023	
1.0	.215	.183	.154	.184	.157	.133	.126	.108	.092	.072	.062	.053	.023	.020	.017	
2.0	.208	.159	.118	.178	.137	.102	.122	.095	.071	.070	.055	.042	.023	.018	.014	
3.0	.200	.142	.096	.172	.123	.084	.118	.085	.059	.068	.050	.035	.022	.016	.011	
4.0	.192	.130	.082	.165	.112	.071	.113	.078	.050	.066	.046	.030	.021	.015	.010	
5.0	.184	.120	.072	.158	.103	.063	.109	.072	.044	.063	.042	.026	.020	.014	.009	
6.0	.176	.111	.065	.152	.096	.056	.105	.068	.040	.061	.040	.024	.020	.013	.008	
7.0	.169	.105	.060	.145	.091	.052	.100	.064	.037	.058	.037	.022	.019	.012	.007	
8.0	.162	.099	.056	.139	.086	.048	.096	.060	.034	.056	.036	.020	.018	.012	.007	
9.0	.155	.094	.052	.134	.081	.046	.093	.057	.032	.054	.034	.019	.017	.011	.006	
10.0	.149	.090	.050	.129	.078	.044	.089	.055	.031	.052	.032	.018	.017	.011	.006	

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2021-01-09

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:24.22V I:0.6000A P:14.53W PF:1.000 Freq:0Hz Lamp Flux:1584.61x1 lm										
NAME: FD1922410NO					TYPE:			WEIGHT:		
SPEC.:FD1922410NO-9NWSA012BC0100					DIM.: 1000*10*1.5mm			SERIAL No.:		
MFR.: COLORS					SUR.:1000*10mm			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	24.5	26.1	24.8	26.4	26.7	24.3	26.0	24.7	26.2	26.5
3H	27.0	28.5	27.3	28.8	29.1	26.7	28.2	27.0	28.5	28.8
4H	28.4	29.8	28.7	30.1	30.5	27.9	29.3	28.3	29.6	30.0
6H	29.9	31.2	30.3	31.6	32.0	29.0	30.4	29.4	30.8	31.1
8H	30.7	32.0	31.1	32.4	32.8	29.6	30.9	30.0	31.3	31.6
12H	31.5	32.8	32.0	33.2	33.6	30.0	31.3	30.4	31.6	32.0
4H 2H	25.3	26.8	25.7	27.1	27.5	25.2	26.7	25.6	27.0	27.3
3H	28.0	29.3	28.4	29.7	30.1	27.8	29.1	28.2	29.4	29.8
4H	29.6	30.8	30.0	31.2	31.6	29.2	30.4	29.6	30.8	31.2
6H	31.3	32.4	31.8	32.8	33.3	30.6	31.6	31.0	32.0	32.5
8H	32.2	33.2	32.7	33.7	34.1	31.2	32.2	31.6	32.6	33.1
12H	33.2	34.1	33.7	34.6	35.1	31.7	32.6	32.2	33.1	33.6
8H 4H	30.2	31.2	30.7	31.7	32.1	29.9	30.9	30.3	31.3	31.8
6H	32.2	33.1	32.7	33.6	34.1	31.6	32.4	32.1	32.9	33.4
8H	33.3	34.1	33.9	34.6	35.1	32.4	33.2	32.9	33.7	34.2
12H	34.5	35.2	35.1	35.7	36.3	33.1	33.8	33.7	34.3	34.9
12H 4H	30.3	31.3	30.8	31.7	32.2	30.0	31.0	30.5	31.4	31.9
6H	32.5	33.3	33.0	33.7	34.3	31.9	32.7	32.4	33.2	33.7
8H	33.7	34.4	34.2	34.9	35.5	32.9	33.5	33.4	34.1	34.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.4					+ 0.2 / - 0.4				

CIE Pub.117, 1585 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.6)

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2021-01-09

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:24.22V I:0.6000A P:14.53W PF:1.000 Freq:0Hz Lamp Flux:1584.61x1 lm		
NAME: FD1922410NO	TYPE:	WEIGHT:
SPEC.:FD1922410NO-9NWSA012BC0100	DIM.: 1000*10*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*10mm	Shielding Angle:

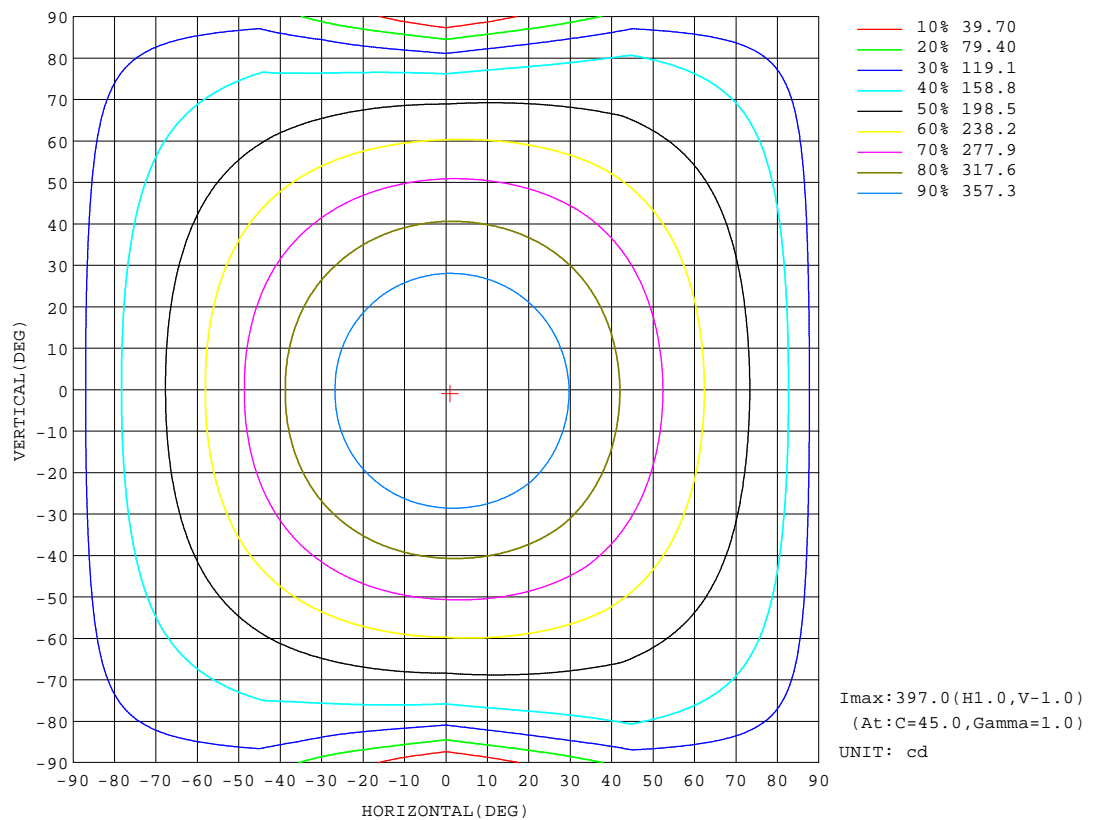
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	51	39	31	50	38	31	49	38	31	24
0.80	61	48	39	59	47	39	57	46	39	31
1.00	68	56	47	67	55	47	64	57	46	38
1.25	75	63	55	74	62	54	70	60	53	45
1.50	80	69	60	79	67	60	75	65	58	49
2.00	88	77	69	86	76	68	81	73	66	57
2.50	92	82	75	90	81	74	85	78	71	61
3.00	96	87	80	93	85	79	89	82	76	66
4.00	101	93	87	98	91	85	93	87	82	71
5.00	104	97	91	101	95	90	95	90	86	75
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:2021-01-09

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:24.22V I:0.6000A P:14.53W PF:1.000 Freq:0Hz Lamp Flux:1584.61x1 lm		
NAME: FD1922410NO	TYPE:	WEIGHT:
SPEC.:FD1922410NO-9NWNSA012BC0100	DIM.: 1000*10*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*10mm	Shielding Angle:



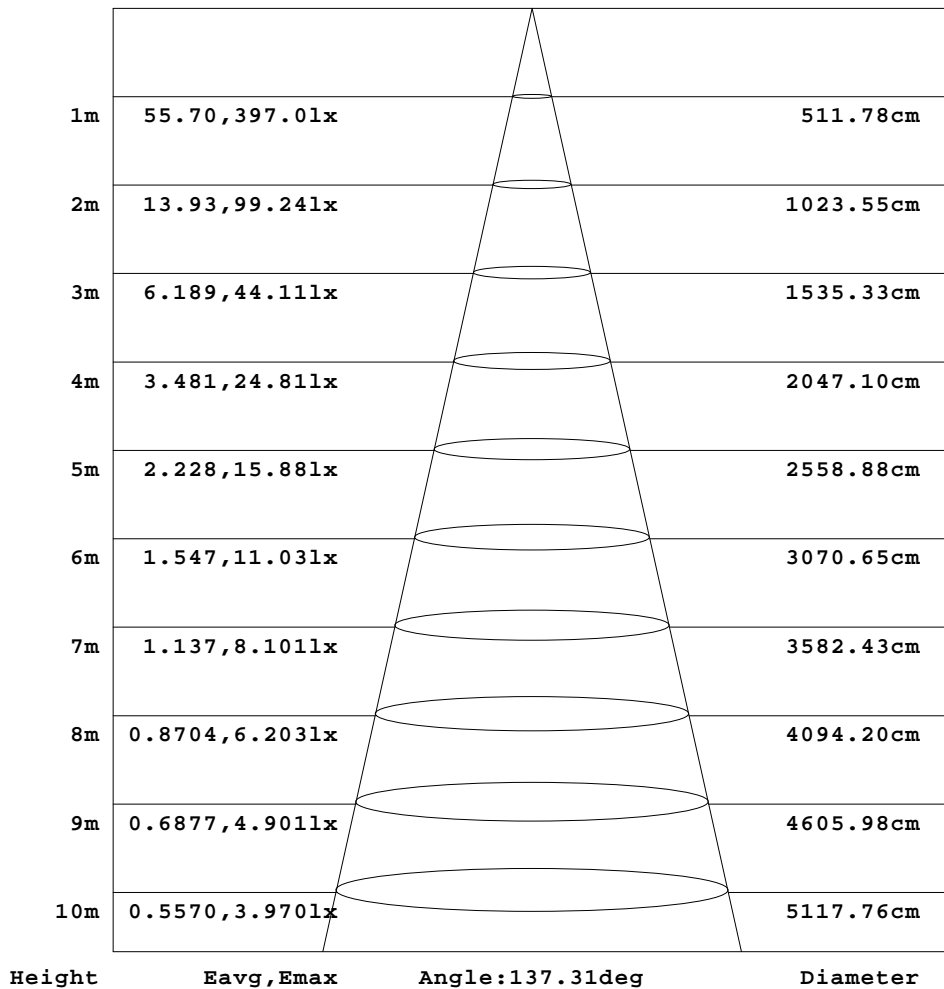
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2021-01-09

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:24.22V I:0.6000A P:14.53W PF:1.000 Freq:0Hz Lamp Flux:1584.61x1 lm		
NAME: FD1922410NO	TYPE:	WEIGHT:
SPEC.:FD1922410NO-9NWSA012BC0100	DIM.: 1000*10*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*10mm	Shielding Angle:

Flux out:1188 lm



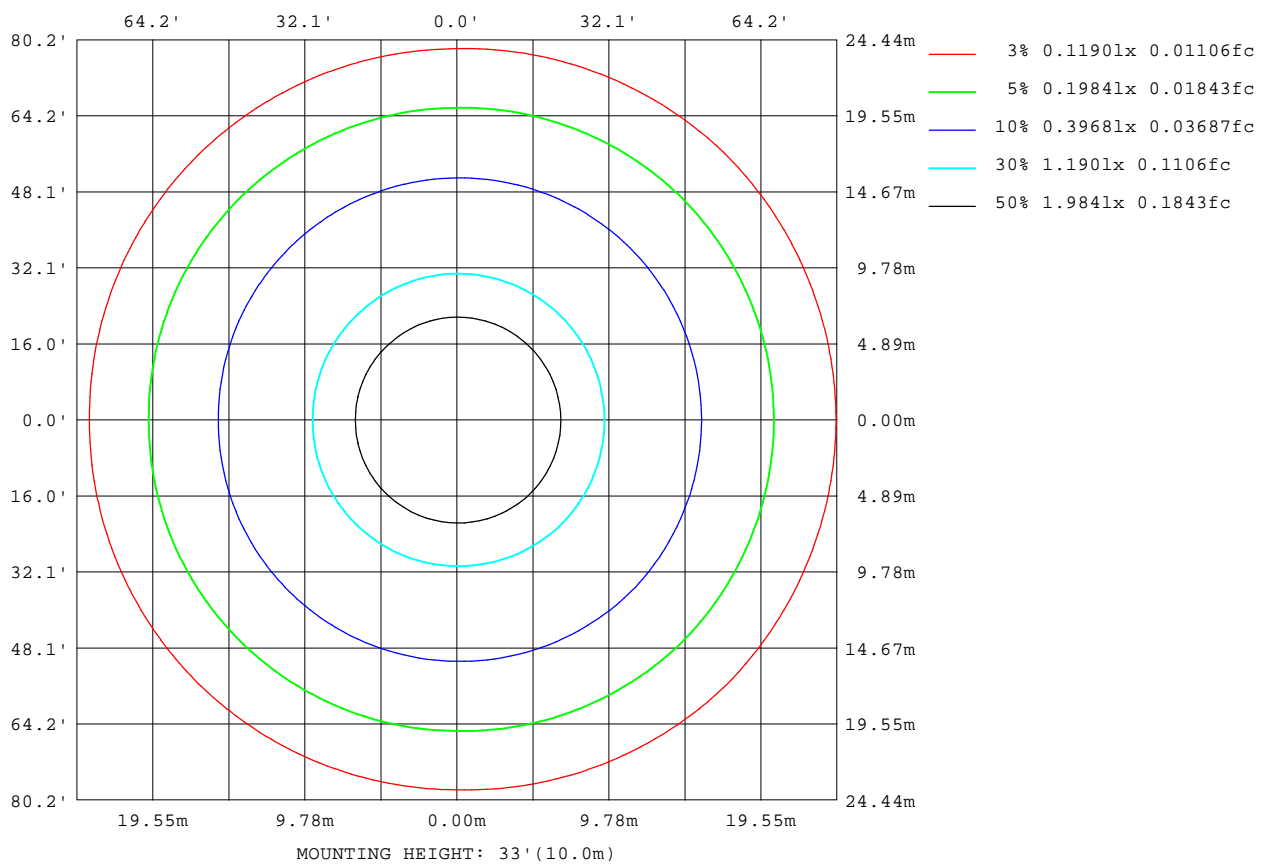
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2021-01-09

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

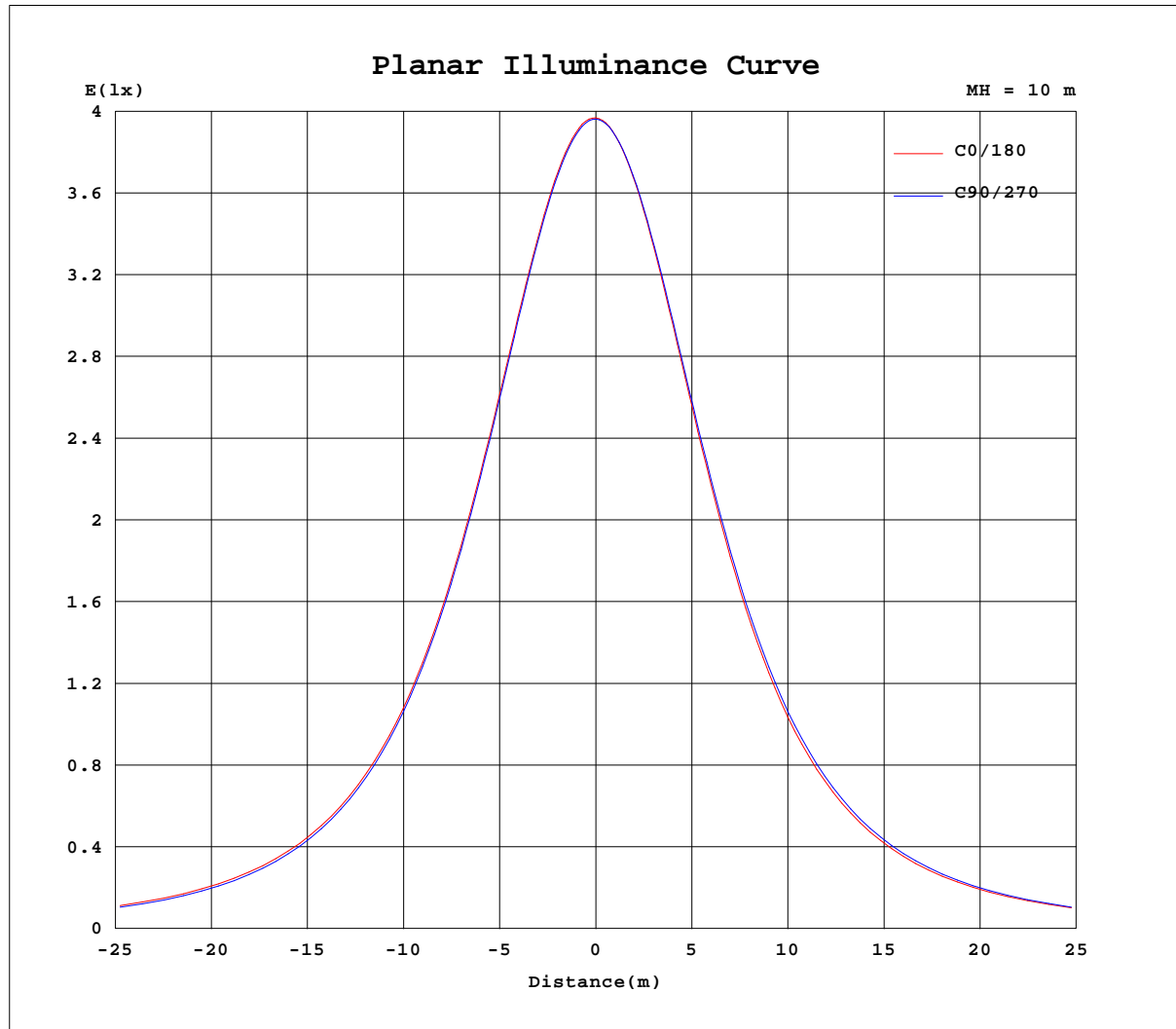
Test:U:24.22V I:0.6000A P:14.53W PF:1.000 Freq:0Hz Lamp Flux:1584.61x1 lm		
NAME: FD1922410NO	TYPE:	WEIGHT:
SPEC.:FD1922410NO-9NWNSA012BC0100	DIM.: 1000*10*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*10mm	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:JYH
 Test Date:2021-01-09

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: 2021-01-09

deg Range: 0 - 180DEG
deg 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:24.22V I:0.6000A P:14.53W PF:1.000 Freq:0Hz Lamp Flux:1584.61x1 lm		
NAME: FD1922410NO	TYPE:	WEIGHT:
SPEC.:FD1922410NO-9NWSA012BC0100	DIM.: 1000*10*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*10mm	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	45	90	135	180	225	270	315										
0	397	397	396	396	397	397	396	396										
5	396	396	395	395	395	395	395	395										
10	393	393	392	391	390	391	391	392										
15	388	388	386	384	383	384	385	386										
20	380	380	378	375	374	374	376	377										
25	369	370	367	364	362	363	365	367										
30	357	357	353	350	348	349	352	354										
35	342	342	338	334	331	333	337	339										
40	325	325	320	316	313	315	320	322										
45	306	307	301	296	293	295	301	304										
50	287	287	281	276	272	275	281	285										
55	268	267	259	255	251	255	261	265										
60	248	247	237	234	230	234	239	246										
65	228	227	215	212	209	214	217	226										
70	210	207	191	192	189	194	193	207										
75	193	190	164	174	171	176	166	191										
80	173	174	128	157	153	160	129	176										
85	143	148	73.3	139	133	144	72.3	148										
90	98.2	93.2	5.78	99.2	100.0	101	5.98	94.3										
95	43.6	20.7	3.71	38.4	61.1	24.1	1.53	21.4										
100	5.35	4.93	3.82	4.82	3.08	2.77	2.44	2.54										
105	4.37	4.69	3.72	4.67	3.29	2.87	2.95	2.73										
110	4.20	4.25	3.51	4.37	3.47	2.97	3.23	2.96										
115	3.99	3.87	3.86	3.85	3.65	3.19	3.40	3.19										
120	4.03	4.09	4.15	4.01	3.90	3.44	3.55	3.49										
125	4.33	4.32	4.37	4.21	4.16	3.69	3.71	3.72										
130	4.62	4.54	4.58	4.42	4.42	3.98	3.87	3.85										
135	4.88	4.75	4.81	4.62	4.68	4.28	4.01	4.03										
140	5.12	4.90	5.02	4.86	4.94	4.60	4.15	4.12										
145	5.26	5.02	5.13	5.16	5.09	4.94	4.30	4.16										
150	5.45	5.12	5.25	5.45	5.20	5.25	4.62	4.32										
155	5.68	5.22	5.47	5.77	5.42	5.57	5.13	4.48										
160	5.98	5.37	5.86	6.03	5.64	5.88	5.64	4.80										
165	6.18	5.64	6.26	6.27	5.86	6.06	6.09	5.31										
170	6.20	6.11	6.61	6.54	5.86	6.36	6.54	5.96										
175	6.02	6.65	6.99	6.90	5.79	6.71	6.95	6.64										
180	6.20	7.12	7.25	7.28	6.20	7.10	7.26	7.28										

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2021-01-09

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: