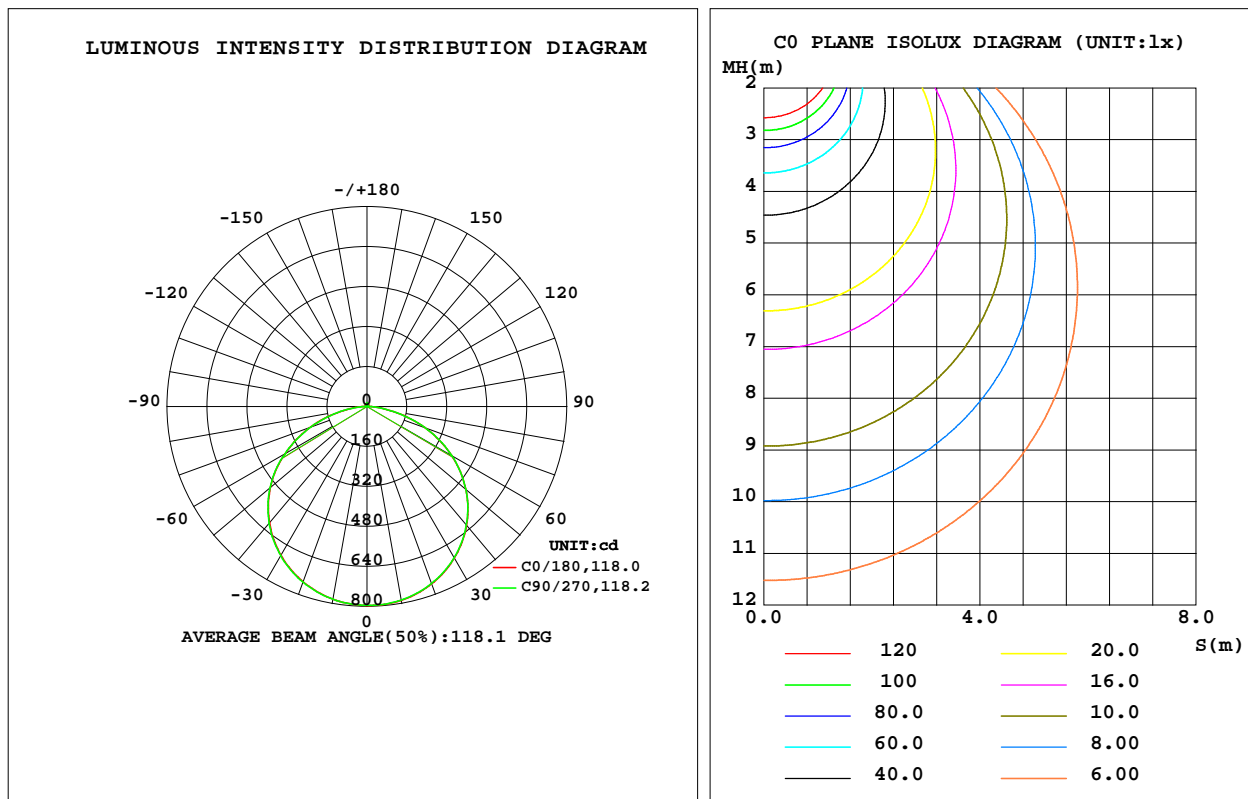


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.00V I:0.8461A P:20.30W PF:1.000 Freq:0Hz Lamp Flux:2456.05x1 lm		
NAME: D82402410NO	TYPE:	WEIGHT:
SPEC.:D82402410NO-9NWDA012WC0500	DIM.: 1000*10*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*10	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 120.96 lm/W			
MODEL	D82402410NO	I _{max} (cd)	797.5	S/MH(C0/180)	1.31
NOMINAL POWER(W)	20	LOR(%)	100.0	S/MH(C90/270)	1.29
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	2456.0	h UP,DN(C0-180)	0.9,49.6
NOMINAL FLUX(lm)	2456.05	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.8,48.7
LAMPS INSIDE	1	h up(%)	1.7	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	24	h down(%)	98.3	CIBSE SHR MAX	1.50



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-12-09

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:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

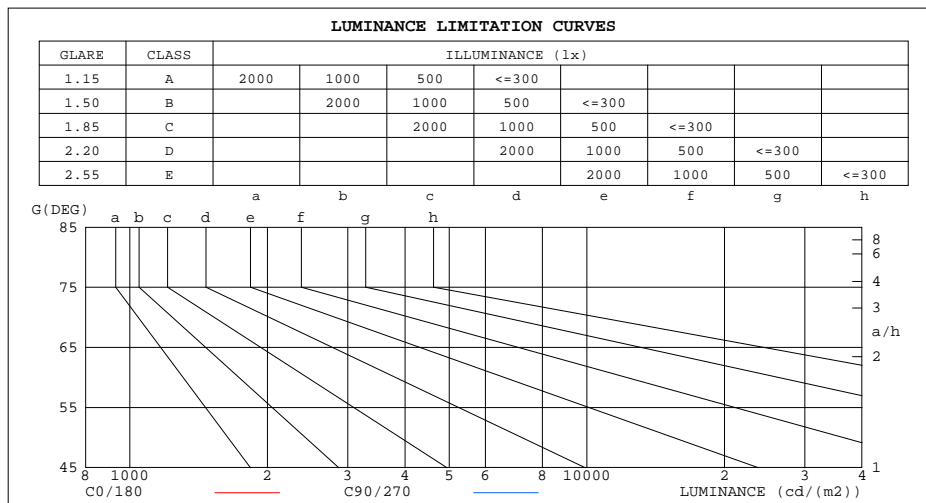
g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	788.0	789.9	786.6	785.3	783.1	782.8	783.5	787.0	0- 10	75.53	75.53	3.08,3.08
20	755.9	759.1	754.2	750.7	746.9	745.8	748.4	753.5	10- 20	217.9	293.5	11.9,11.9
30	700.2	704.7	698.4	692.9	688.2	686.1	690.2	696.7	20- 30	334.9	628.3	25.6,25.6
40	620.4	626.4	619.3	612.5	607.3	604.3	609.5	617.0	30- 40	411.4	1040	42.3,42.3
50	517.0	524.4	517.0	509.5	504.8	500.7	506.8	513.9	40- 50	436.5	1476	60.1,60.1
60	390.5	397.1	391.2	382.4	378.9	376.6	379.6	388.6	50- 60	403.4	1880	76.5,76.5
70	245.5	249.9	245.8	241.0	239.4	235.6	238.1	245.8	60- 70	311.9	2192	89.2,89.2
80	95.99	101.6	96.14	97.91	96.59	91.76	93.83	98.87	70- 80	177.5	2369	96.5,96.5
90	6.530	7.070	3.922	7.782	5.346	4.697	1.843	10.01	80- 90	45.84	2415	98.3,98.3
100	3.072	3.184	2.946	3.348	2.334	2.218	2.027	3.367	90-100	3.435	2418	98.5,98.5
110	4.819	4.661	4.246	4.879	4.560	4.141	4.312	4.025	100-110	3.739	2422	98.6,98.6
120	6.920	6.755	6.474	6.829	6.603	5.858	5.927	6.054	110-120	5.417	2427	98.8,98.8
130	8.723	8.337	7.973	8.318	8.372	7.452	7.168	7.474	120-130	6.477	2434	99.1,99.1
140	10.03	9.432	9.191	9.539	9.786	9.013	8.117	8.249	130-140	6.651	2441	99.4,99.4
150	10.88	10.03	9.958	10.70	10.62	10.45	9.119	8.669	140-150	6.032	2447	99.6,99.6
160	11.83	10.59	11.29	11.91	11.48	11.66	11.09	9.591	150-160	4.887	2451	99.8,99.8
170	12.25	12.09	12.95	12.93	11.64	12.70	12.85	11.91	160-170	3.332	2455	100,100
180	12.18	14.06	14.30	14.43	12.16	14.03	14.31	14.41	170-180	1.221	2456	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:2020-12-09

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:24.00V I:0.8461A P:20.30W PF:1.000 Freq:0Hz Lamp Flux:2456.05x1 lm		
NAME: D82402410NO	TYPE:	WEIGHT:
SPEC.:D82402410NO-9NWDA012WC0500	DIM.: 1000*10*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*10	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	41062	40808
80	55276	55367
75	65074	65264
70	71770	71861
65	75692	75734
60	78098	78236
55	79592	79656
50	80429	80423
45	80864	80766

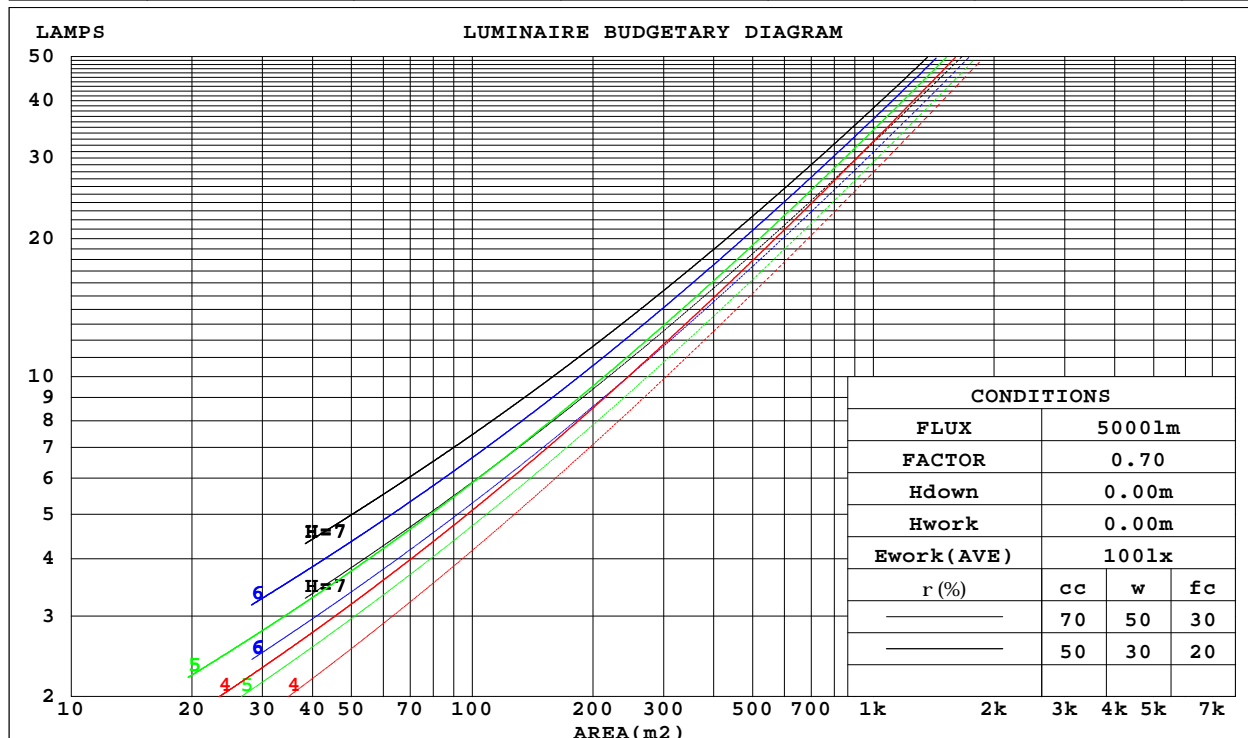
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:JYH
 Test Date:2020-12-09

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:24.00V I:0.8461A P:20.30W PF:1.000 Freq:0Hz Lamp Flux:2456.05x1 lm		
NAME: D82402410NO	TYPE:	WEIGHT:
SPEC.:D82402410NO-9NWDA012WC0500	DIM.: 1000*10*1.5mm	SERIAL No.:
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															



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-12-09

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:

WEC AND CCEC

Test:U:24.00V I:0.8461A P:20.30W PF:1.000 Freq:0Hz Lamp Flux:2456.05x1 lm		
NAME: D82402410NO	TYPE:	WEIGHT:
SPEC.:D82402410NO-9NWDA012WC0500	DIM.: 1000*10*1.5mm	SERIAL No.:
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	.313	.178	.056	.306	.174	.055	.292	.167	.053	.279	.161	.052	.266	.154	.050	
2.0	.295	.162	.050	.288	.159	.049	.276	.153	.048	.264	.148	.046	.253	.143	.045	
3.0	.273	.145	.044	.267	.143	.043	.256	.139	.042	.245	.134	.041	.236	.131	.040	
4.0	.252	.131	.038	.246	.129	.038	.236	.125	.037	.227	.122	.037	.219	.119	.036	
5.0	.232	.118	.034	.228	.117	.034	.219	.114	.034	.211	.111	.033	.203	.108	.033	
6.0	.215	.108	.031	.211	.107	.031	.203	.104	.030	.196	.102	.030	.189	.099	.030	
7.0	.200	.099	.028	.197	.098	.028	.189	.096	.028	.183	.094	.027	.176	.092	.027	
8.0	.187	.091	.026	.184	.090	.026	.177	.089	.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	.165	.079	.022	.162	.078	.022	.157	.077	.022	.152	.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	.193	.169	.147	.166	.145	.126	.113	.100	.087	.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	.043	.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	.095	.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	.036	.085	.050	.026	.049	.030	.015	.016	.010	.005	
9.0	.137	.078	.038	.118	.068	.033	.082	.048	.024	.047	.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:2020-12-09

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:24.00V I:0.8461A P:20.30W PF:1.000 Freq:0Hz Lamp Flux:2456.05x1 lm											
NAME: D82402410NO					TYPE:			WEIGHT:			
SPEC.:D82402410NO-9NWDA012WC0500					DIM.: 1000*10*1.5mm			SERIAL No.:			
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	26.6	25.3	26.8	27.0	25.1	26.6	25.3	26.8	27.0	
	3H	26.6	28.0	26.9	28.3	28.5	26.6	28.0	26.9	28.3	28.6
	4H	27.2	28.5	27.5	28.8	29.1	27.2	28.5	27.5	28.8	29.1
	6H	27.6	28.8	27.9	29.1	29.5	27.6	28.9	28.0	29.2	29.5
	8H	27.7	28.9	28.1	29.2	29.5	27.7	28.9	28.1	29.2	29.6
	12H	27.7	28.9	28.1	29.2	29.6	27.7	28.9	28.1	29.2	29.6
4H	2H	25.7	27.0	26.0	27.3	27.6	25.7	27.0	26.0	27.3	27.6
	3H	27.4	28.6	27.8	28.9	29.3	27.4	28.6	27.8	28.9	29.3
	4H	28.1	29.2	28.5	29.6	29.9	28.1	29.2	28.5	29.6	29.9
	6H	28.6	29.6	29.1	30.0	30.4	28.6	29.6	29.1	30.0	30.4
	8H	28.8	29.7	29.2	30.1	30.5	28.8	29.7	29.2	30.1	30.5
	12H	28.9	29.7	29.3	30.1	30.5	28.9	29.7	29.3	30.1	30.5
8H	4H	28.4	29.3	28.8	29.7	30.1	28.4	29.3	28.8	29.7	30.1
	6H	29.0	29.8	29.5	30.2	30.7	29.1	29.8	29.5	30.2	30.7
	8H	29.3	29.9	29.8	30.4	30.9	29.3	29.9	29.8	30.4	30.9
	12H	29.4	30.0	29.9	30.4	31.0	29.4	30.0	29.9	30.4	31.0
12H	4H	28.4	29.2	28.9	29.6	30.1	28.4	29.2	28.9	29.6	30.1
	6H	29.1	29.7	29.6	30.2	30.7	29.1	29.7	29.6	30.2	30.7
	8H	29.4	29.9	29.9	30.4	30.9	29.4	29.9	29.9	30.4	30.9
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, 2456 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 3.1)

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-12-09

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:24.00V I:0.8461A P:20.30W PF:1.000 Freq:0Hz Lamp Flux:2456.05x1 lm		
NAME: D82402410NO	TYPE:	WEIGHT:
SPEC.:D82402410NO-9NWDA012WC0500	DIM.: 1000*10*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*10	Shielding Angle:

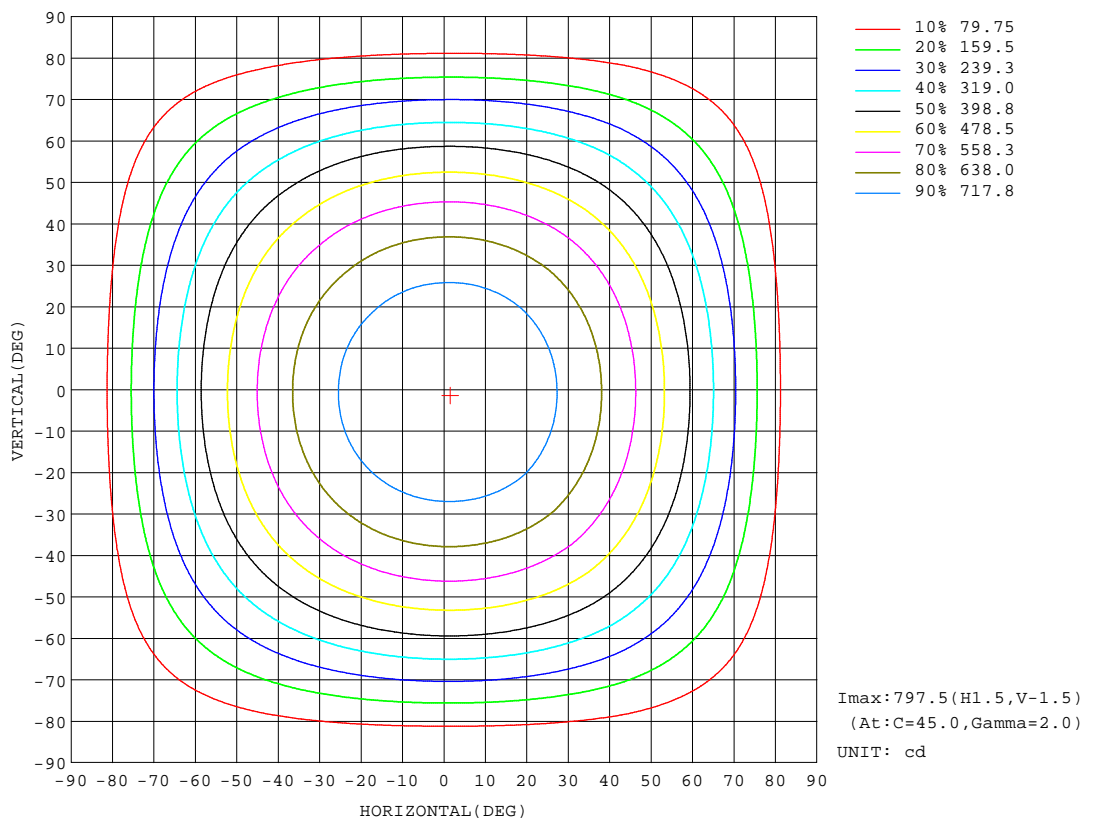
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	44	37	55	44	37	54	44	37	30
0.80	66	54	47	65	54	47	63	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	90	85	76
4.00	106	100	95	103	98	93	98	94	91	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:2020-12-09

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:24.00V I:0.8461A P:20.30W PF:1.000 Freq:0Hz Lamp Flux:2456.05x1 lm		
NAME: D82402410NO	TYPE:	WEIGHT:
SPEC.:D82402410NO-9NWDA012WC0500	DIM.: 1000*10*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*10	Shielding Angle:



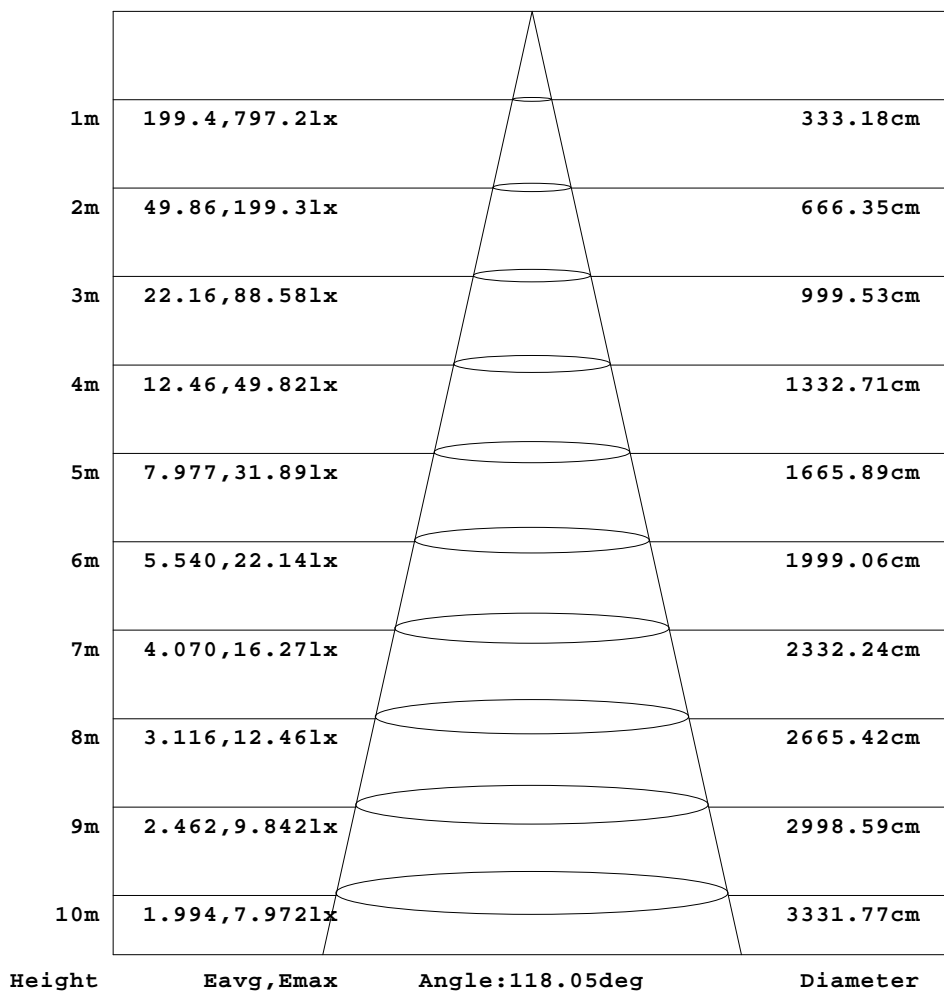
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:JYH
 Test Date:2020-12-09

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:0.8461A P:20.30W PF:1.000 Freq:0Hz Lamp Flux:2456.05x1 lm		
NAME: D82402410NO	TYPE:	WEIGHT:
SPEC.:D82402410NO-9NWDA012WC0500	DIM.: 1000*10*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*10	Shielding Angle:

Flux out:1880 lm



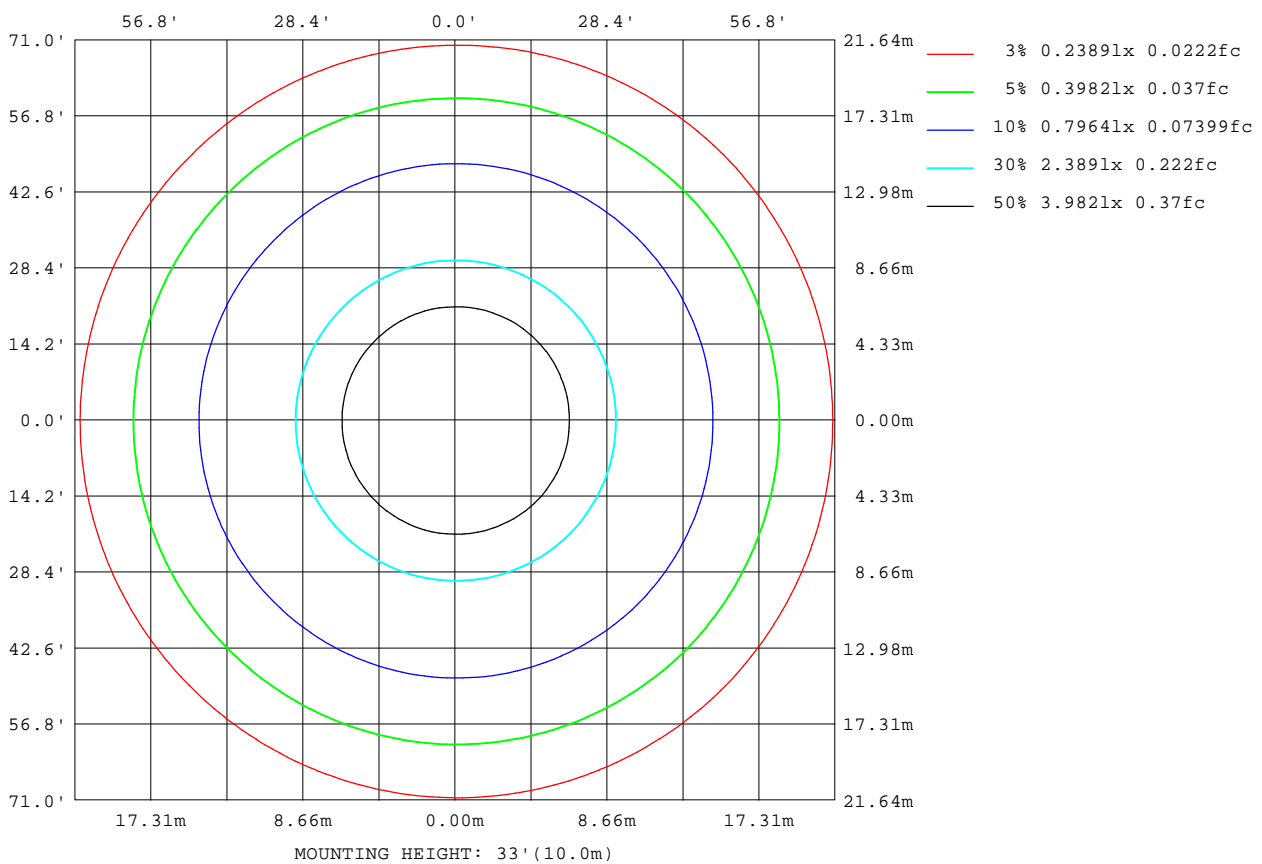
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-12-09

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

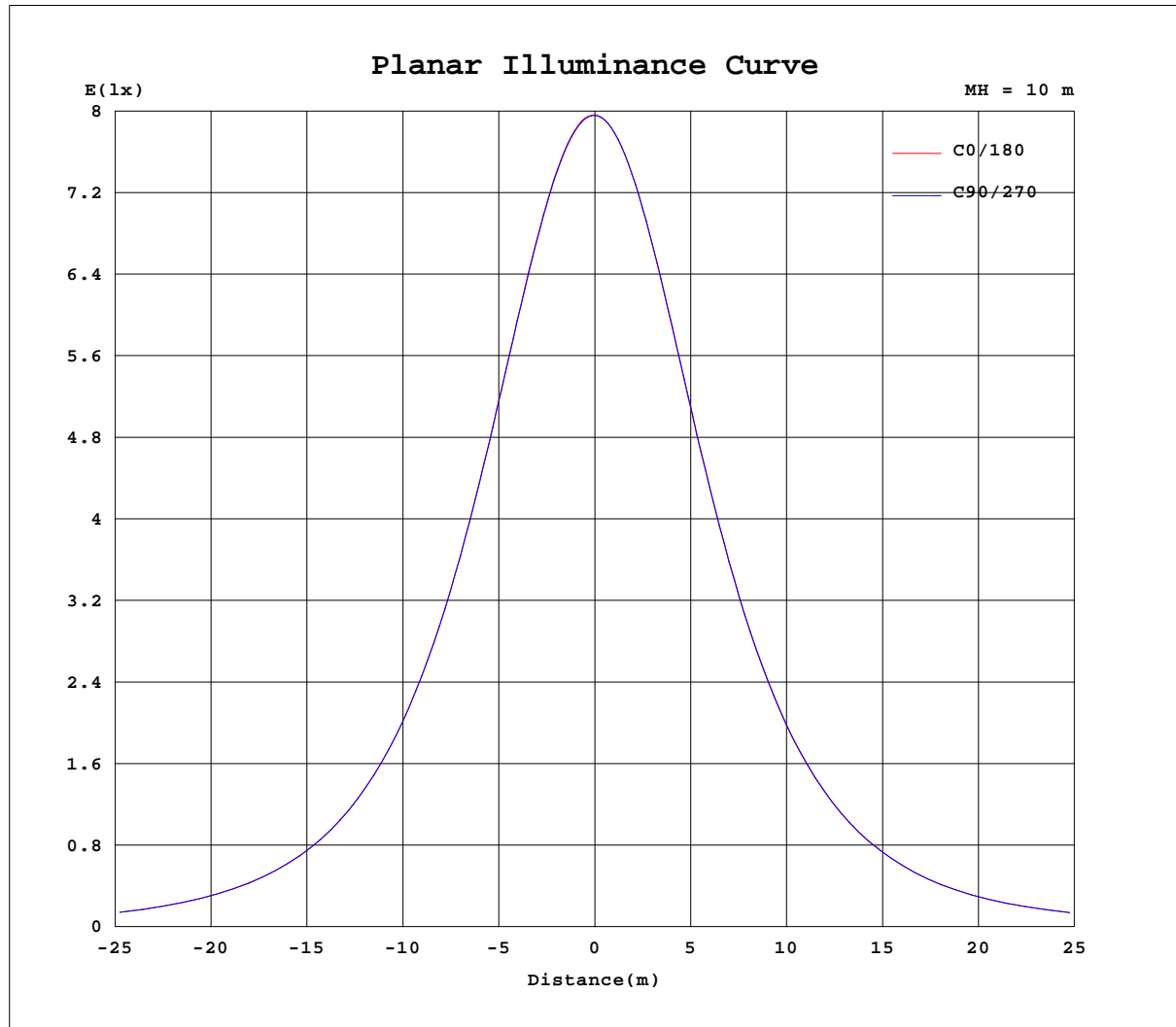
Test:U:24.00V I:0.8461A P:20.30W PF:1.000 Freq:0Hz Lamp Flux:2456.05x1 lm		
NAME: D82402410NO	TYPE:	WEIGHT:
SPEC.:D82402410NO-9NWDA012WC0500	DIM.: 1000*10*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*10	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:JYH
 Test Date:2020-12-09

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:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: JYH
Test Date: 2020-12-09

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:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.00V I:0.8461A P:20.30W PF:1.000 Freq:0Hz Lamp Flux:2456.05x1 lm		
NAME: D82402410NO	TYPE:	WEIGHT:
SPEC.:D82402410NO-9NWDA012WC0500	DIM.: 1000*10*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*10	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	45	90	135	180	225	270	315										
0	796	797	796	797	796	797	796	797										
5	795	796	794	794	793	793	793	795										
10	788	790	787	785	783	783	784	787										
15	775	777	773	771	768	767	769	773										
20	756	759	754	751	747	746	748	754										
25	731	735	729	725	720	719	722	728										
30	700	705	698	693	688	686	690	697										
35	663	669	662	656	651	648	653	660										
40	620	626	619	612	607	604	610	617										
45	572	578	571	564	559	555	561	568										
50	517	524	517	510	505	501	507	514										
55	457	464	457	450	446	441	447	454										
60	390	397	391	382	379	377	380	389										
65	320	325	320	313	311	308	311	319										
70	245	250	246	241	239	236	238	246										
75	168	174	169	168	167	161	164	170										
80	96.0	102	96.1	97.9	96.6	91.8	93.8	98.9										
85	35.8	40.4	35.6	39.8	37.8	34.6	35.4	39.9										
90	6.53	7.07	3.92	7.78	5.35	4.70	1.84	10.0										
95	3.13	3.30	3.05	3.59	1.85	1.86	1.10	4.51										
100	3.07	3.18	2.95	3.35	2.33	2.22	2.03	3.37										
105	3.78	3.77	3.27	3.99	3.43	3.24	3.29	3.17										
110	4.82	4.66	4.25	4.88	4.56	4.14	4.31	4.02										
115	5.89	5.74	5.42	5.91	5.60	5.03	5.19	5.09										
120	6.92	6.75	6.47	6.83	6.60	5.86	5.93	6.05										
125	7.86	7.62	7.26	7.63	7.53	6.65	6.58	6.86										
130	8.72	8.34	7.97	8.32	8.37	7.45	7.17	7.47										
135	9.45	8.95	8.60	8.92	9.12	8.24	7.68	7.97										
140	10.0	9.43	9.19	9.54	9.79	9.01	8.12	8.25										
145	10.5	9.77	9.60	10.1	10.3	9.79	8.49	8.47										
150	10.9	10.0	9.96	10.7	10.6	10.5	9.12	8.67										
155	11.4	10.3	10.5	11.3	11.1	11.1	10.0	8.96										
160	11.8	10.6	11.3	11.9	11.5	11.7	11.1	9.59										
165	12.4	11.1	12.2	12.4	11.8	12.2	12.0	10.6										
170	12.2	12.1	13.0	12.9	11.6	12.7	12.9	11.9										
175	11.8	13.1	13.7	13.6	11.3	13.3	13.6	13.2										
180	12.2	14.1	14.3	14.4	12.2	14.0	14.3	14.4										

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-12-09

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: