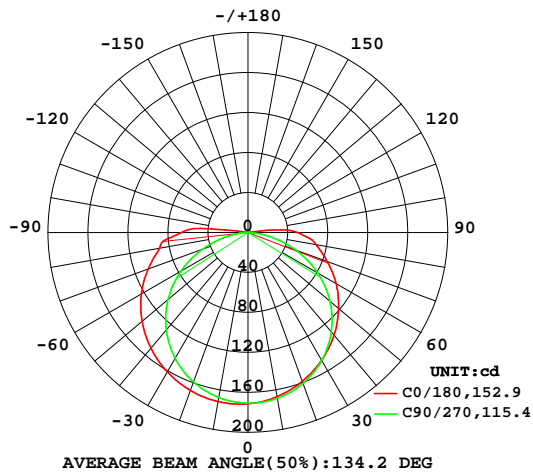


LUMINAIRE PHOTOMETRIC TEST REPORT

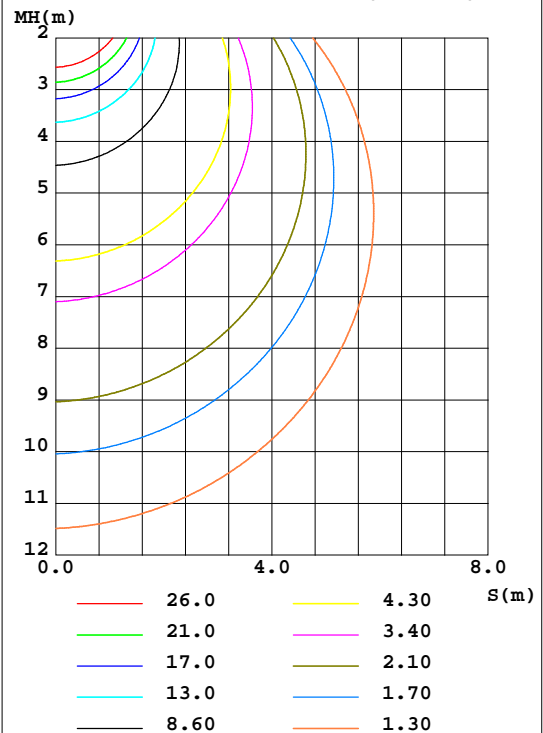
Test:U:24.00V I:0.3800A P:9.120W PF:1.000 Freq:0Hz Lamp Flux:647.77lx1 lm		
NAME: DF72404NO	TYPE:	WEIGHT:
SPEC.:DF72404NO-9WWNSA012YC0100	DIM.: 1000*4*1mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*4mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 71.03 lm/W			
MODEL	DF72404NO	I _{max} (cd)	172.2	S/MH(C0/180)	1.29
NOMINAL POWER(W)	9.12	LOR(%)	100.0	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	647.77	h UP,DN(C0-180)	2.2,47.2
NOMINAL FLUX(lm)	647.771	CIE CLASS	DIRECT	h UP,DN(C180-360)	2.1,48.5
LAMPS INSIDE	1	h up(%)	4.3	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	24	h down(%)	95.7	CIBSE SHR MAX	1.55

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:2020-08-12

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:

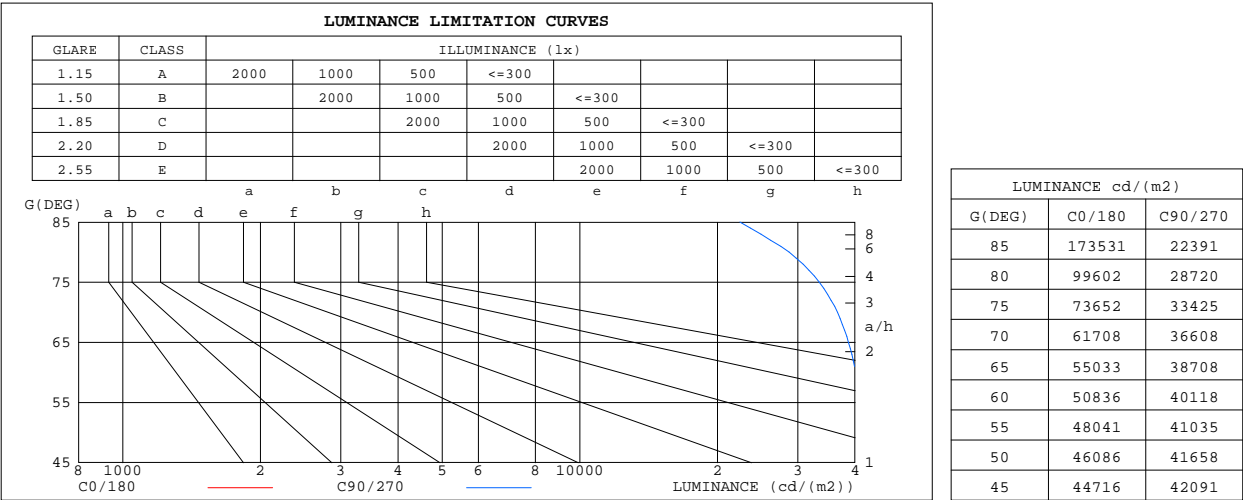
g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	166.8	167.5	168.5	170.5	171.8	170.5	167.7	165.6	0- 10	16.21	16.21	2.5,2.5
20	158.6	159.0	160.8	165.8	168.2	164.9	159.2	156.3	10- 20	46.80	63.01	9.73,9.73
30	147.6	146.3	147.8	156.9	161.2	154.9	145.7	143.2	20- 30	72.21	135.2	20.9,20.9
40	134.1	130.2	129.8	144.0	151.2	141.3	127.3	127.0	30- 40	89.84	225.1	34.7,34.7
50	118.5	111.1	107.1	127.8	138.4	124.5	104.5	108.0	40- 50	97.99	323.1	49.9,49.9
60	101.7	90.25	80.24	109.2	123.2	105.4	77.56	87.62	50- 60	96.15	419.2	64.7,64.7
70	84.42	68.90	50.08	88.80	106.2	84.75	47.78	67.05	60- 70	85.12	504.3	77.9,77.9
80	69.18	49.67	19.95	68.64	89.90	64.31	18.43	48.49	70- 80	67.44	571.8	88.3,88.3
90	49.49	30.24	1.015	47.41	66.78	43.42	0.4852	30.92	80- 90	48.31	620.1	95.7,95.7
100	4.561	1.718	0.6079	1.937	2.107	0.8153	0.4417	1.143	90-100	19.03	639.1	98.7,98.7
110	2.253	1.692	0.8074	1.453	1.283	0.9080	0.8493	1.235	100-110	1.361	640.5	98.9,98.9
120	2.071	1.757	1.236	1.343	1.463	1.122	1.163	1.462	110-120	1.357	641.8	99.1,99.1
130	2.244	1.964	1.562	1.550	1.664	1.389	1.423	1.640	120-130	1.403	643.2	99.3,99.3
140	2.331	2.097	1.817	1.784	1.857	1.670	1.617	1.703	130-140	1.372	644.6	99.5,99.5
150	2.411	2.178	2.005	2.051	1.971	1.983	1.831	1.836	140-150	1.222	645.8	99.7,99.7
160	2.558	2.278	2.331	2.351	2.191	2.297	2.279	2.003	150-160	0.9948	646.8	99.9,99.9
170	2.615	2.645	2.671	2.592	2.336	2.538	2.672	2.518	160-170	0.6865	647.5	100,100
180	2.518	2.979	2.986	2.992	2.538	2.959	2.986	2.972	170-180	0.2546	647.8	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:2020-08-12

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:0.3800A P:9.120W PF:1.000 Freq:0Hz Lamp Flux:647.771x1 lm		
NAME: DF72404NO	TYPE:	WEIGHT:
SPEC.:DF72404NO-9WWNSA012YC0100	DIM.: 1000*4*1mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*4mm	Shielding Angle:



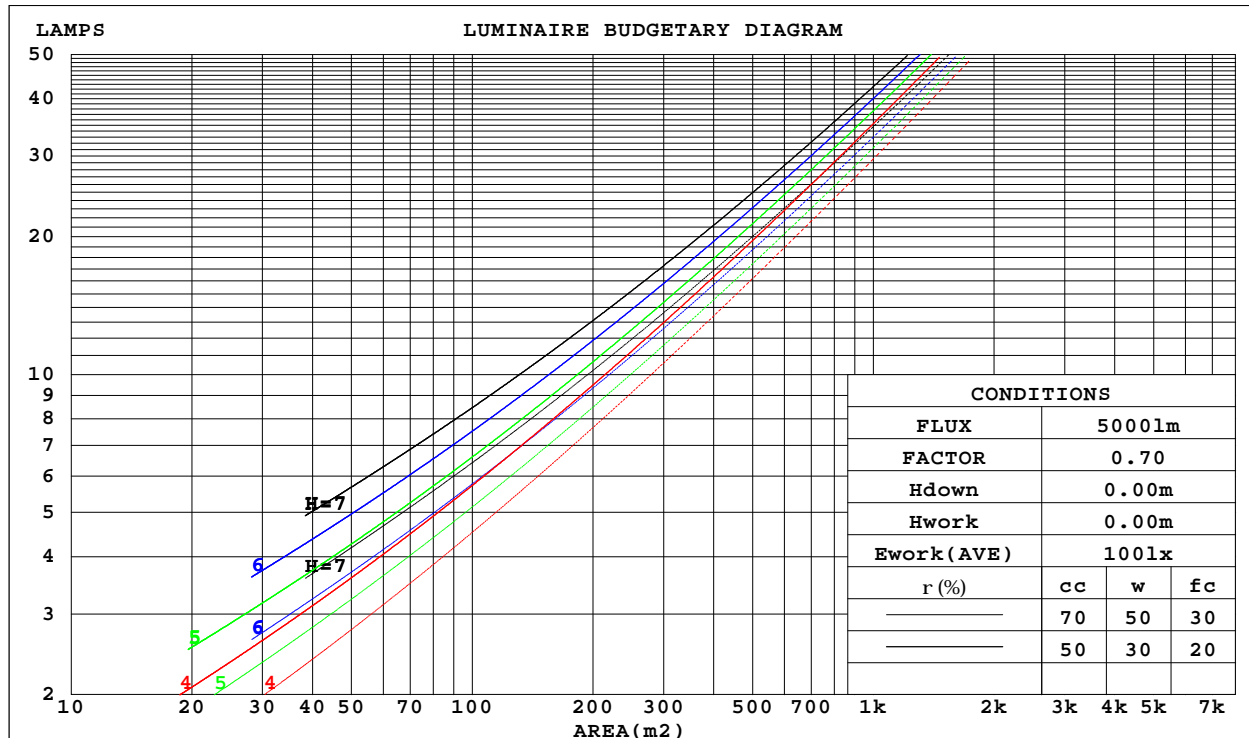
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-08-12

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:0.3800A P:9.120W PF:1.000 Freq:0Hz Lamp Flux:647.771x1 lm		
NAME: DF72404NO	TYPE:	WEIGHT:
SPEC.:DF72404NO-9WWNSA012YC0100	DIM.: 1000*4*1mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*4mm	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	1.03	1.03	1.03	.98	.98	.98	.96
1.0	.99	.93	.88	.96	.91	.86	.91	.87	.83	.86	.83	.80	.82	.79	.76	.74
2.0	.84	.76	.70	.82	.75	.68	.78	.72	.66	.74	.68	.64	.70	.66	.62	.59
3.0	.73	.64	.57	.71	.63	.56	.68	.60	.54	.64	.58	.53	.61	.56	.51	.49
4.0	.64	.55	.47	.63	.54	.47	.60	.52	.46	.57	.50	.44	.54	.48	.43	.41
5.0	.57	.47	.40	.56	.47	.40	.53	.45	.39	.51	.44	.38	.48	.42	.37	.35
6.0	.51	.42	.35	.50	.41	.34	.48	.40	.34	.46	.38	.33	.44	.37	.32	.30
7.0	.46	.37	.30	.45	.36	.30	.43	.35	.30	.41	.34	.29	.40	.33	.29	.26
8.0	.42	.33	.27	.41	.33	.27	.39	.32	.26	.38	.31	.26	.36	.30	.25	.23
9.0	.39	.30	.24	.38	.30	.24	.36	.29	.24	.35	.28	.23	.34	.27	.23	.21
10.0	.35	.27	.22	.35	.27	.22	.33	.26	.21	.32	.26	.21	.31	.25	.21	.19



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-08-12

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:0.3800A P:9.120W PF:1.000 Freq:0Hz Lamp Flux:647.771x1 lm		
NAME: DF72404NO	TYPE:	WEIGHT:
SPEC.:DF72404NO-9WWNSA012YC0100	DIM.: 1000*4*1mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*4mm	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															

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	.223	.223	.223	.191	.191	.191	.130	.130	.130	.075	.075	.075	.024	.024	.024	
1.0	.219	.188	.161	.187	.162	.138	.128	.111	.096	.074	.064	.056	.024	.021	.018	
2.0	.212	.165	.125	.181	.142	.108	.124	.098	.076	.072	.057	.044	.023	.018	.014	
3.0	.204	.148	.103	.175	.127	.089	.120	.089	.063	.069	.052	.037	.022	.017	.012	
4.0	.196	.135	.088	.168	.117	.077	.116	.081	.054	.067	.048	.032	.022	.015	.010	
5.0	.188	.125	.078	.162	.108	.068	.111	.075	.048	.064	.044	.028	.021	.014	.009	
6.0	.180	.117	.071	.155	.101	.062	.107	.071	.044	.062	.042	.026	.020	.014	.009	
7.0	.173	.110	.065	.149	.095	.057	.103	.067	.040	.060	.039	.024	.019	.013	.008	
8.0	.166	.104	.061	.143	.090	.053	.099	.063	.038	.058	.037	.023	.019	.012	.007	
9.0	.160	.099	.058	.138	.086	.051	.095	.060	.036	.056	.036	.021	.018	.012	.007	
10.0	.154	.095	.056	.133	.082	.049	.092	.058	.034	.054	.034	.021	.017	.011	.007	

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-08-12

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:0.3800A P:9.120W PF:1.000 Freq:0Hz Lamp Flux:647.771x1 lm										
NAME: DF72404NO					TYPE:			WEIGHT:		
SPEC.:DF72404NO-9WWNSA012YC0100					DIM.: 1000*4*1mm			SERIAL No.:		
MFR.: COLORS					SUR.:1000*4mm			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	27.4	29.0	27.8	29.3	29.6	26.7	28.2	27.0	28.5	28.8
	29.9	31.3	30.2	31.6	32.0	28.3	29.8	28.7	30.1	30.4
	31.2	32.6	31.6	32.9	33.3	28.9	30.3	29.3	30.7	31.0
	32.7	34.0	33.1	34.3	34.7	29.4	30.7	29.8	31.1	31.5
	33.5	34.8	33.9	35.2	35.6	29.5	30.8	30.0	31.2	31.6
	34.5	35.7	34.9	36.1	36.5	29.6	30.9	30.0	31.2	31.6
4H	28.1	29.5	28.5	29.8	30.2	27.5	28.9	27.9	29.2	29.6
	30.7	31.9	31.1	32.3	32.7	29.4	30.6	29.8	31.0	31.4
	32.2	33.3	32.6	33.7	34.2	30.2	31.4	30.7	31.8	32.2
	33.9	34.9	34.3	35.3	35.8	30.9	31.9	31.4	32.4	32.8
	34.8	35.8	35.3	36.3	36.7	31.1	32.1	31.6	32.5	33.0
	35.9	36.8	36.4	37.3	37.8	31.3	32.2	31.8	32.7	33.2
8H	32.6	33.5	33.0	34.0	34.5	30.9	31.9	31.4	32.4	32.8
	34.5	35.3	35.0	35.8	36.4	31.9	32.8	32.5	33.2	33.8
	35.7	36.4	36.2	36.9	37.5	32.4	33.1	32.9	33.6	34.2
	37.0	37.7	37.6	38.2	38.8	32.7	33.4	33.3	33.9	34.5
12H	32.6	33.5	33.1	34.0	34.5	31.1	32.0	31.6	32.5	33.0
	34.7	35.4	35.2	35.9	36.4	32.3	33.1	32.9	33.6	34.1
	35.9	36.6	36.5	37.1	37.7	32.9	33.6	33.5	34.1	34.7
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.4				

CIE Pub.117, 647.8 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.5)

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-08-12

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:0.3800A P:9.120W PF:1.000 Freq:0Hz Lamp Flux:647.77lx1 lm		
NAME: DF72404NO	TYPE:	WEIGHT:
SPEC.:DF72404NO-9WWNSA012YC0100	DIM.: 1000*4*1mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*4mm	Shielding Angle:

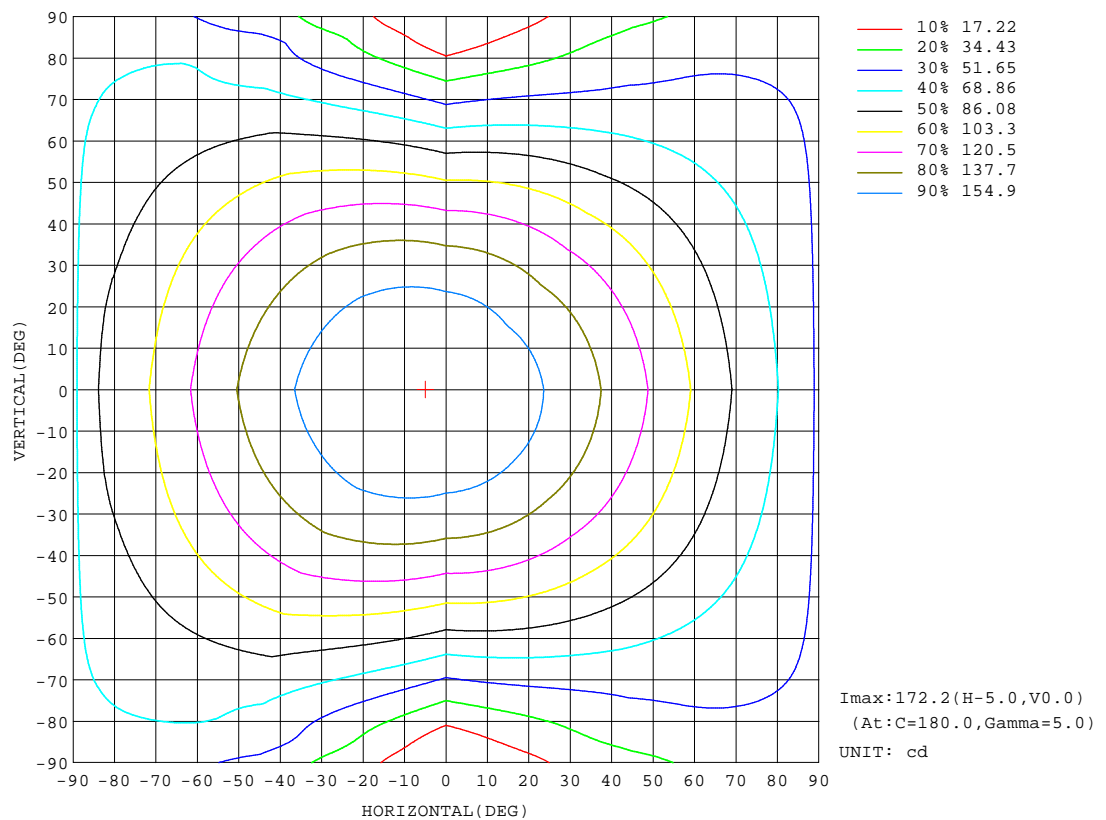
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	52	40	32	51	39	32	50	39	32	25
0.80	61	49	41	60	48	40	58	47	40	32
1.00	69	57	49	68	56	48	65	58	48	40
1.25	76	64	56	75	63	55	71	62	55	46
1.50	81	70	61	79	69	61	76	67	60	51
2.00	89	78	70	86	77	69	82	74	68	58
2.50	93	83	76	90	82	75	86	79	73	63
3.00	97	88	81	94	86	80	89	83	77	67
4.00	101	94	88	98	92	86	93	88	83	72
5.00	104	98	92	101	95	90	96	91	87	76
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:2020-08-12

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:0.3800A P:9.120W PF:1.000 Freq:0Hz Lamp Flux:647.77lx1 lm		
NAME: DF72404NO	TYPE:	WEIGHT:
SPEC.:DF72404NO-9WWNSA012YC0100	DIM.: 1000*4*1mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*4mm	Shielding Angle:



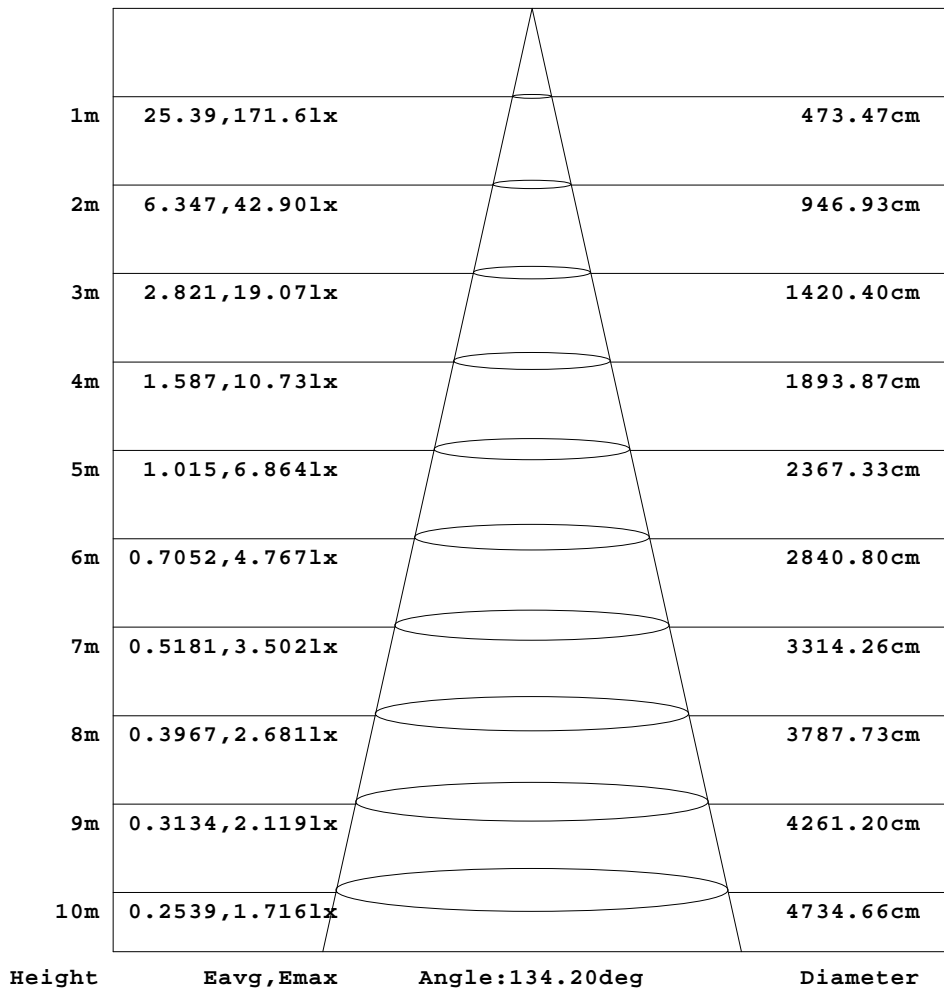
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-08-12

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:0.3800A P:9.120W PF:1.000 Freq:0Hz Lamp Flux:647.771x1 lm		
NAME: DF72404NO	TYPE:	WEIGHT:
SPEC.:DF72404NO-9WWNSA012YC0100	DIM.: 1000*4*1mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*4mm	Shielding Angle:

Flux out:488.6 lm



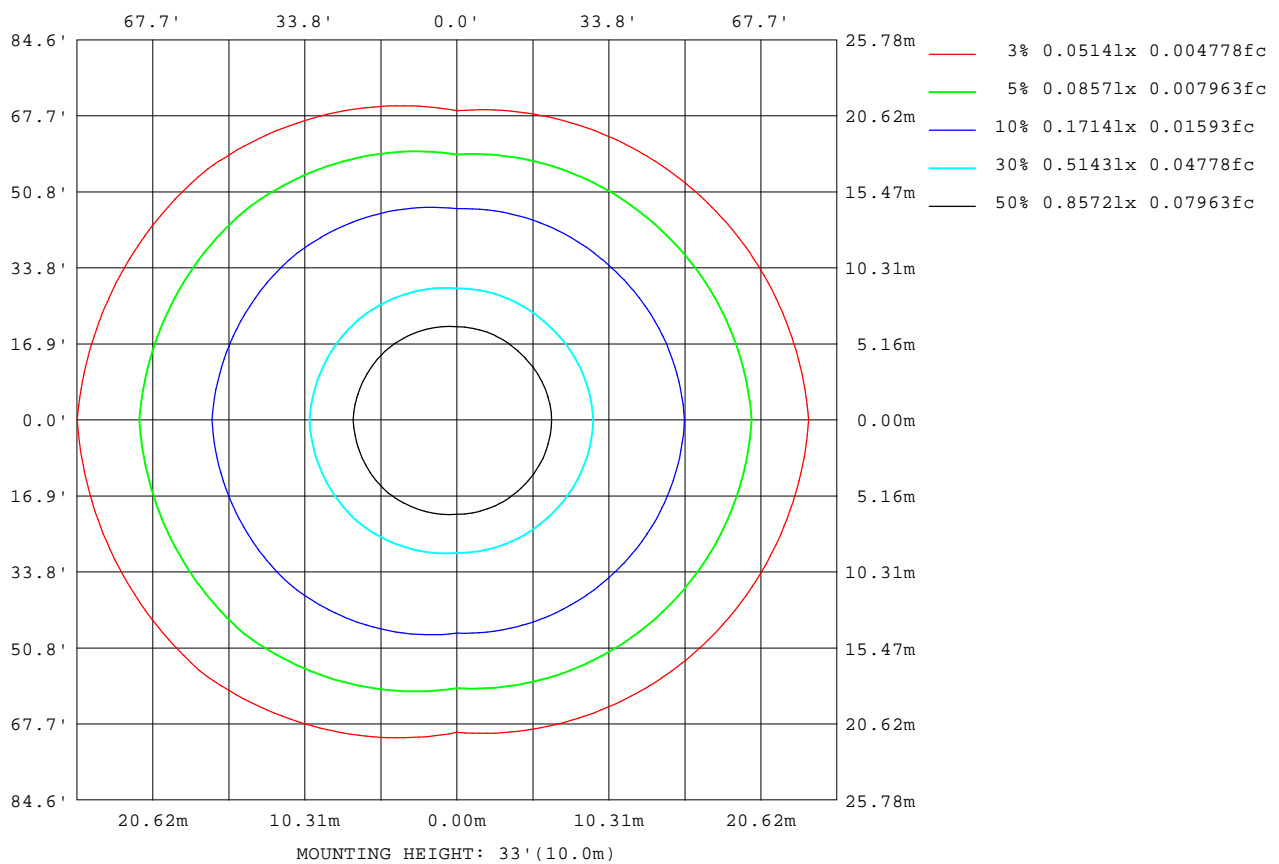
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-08-12

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

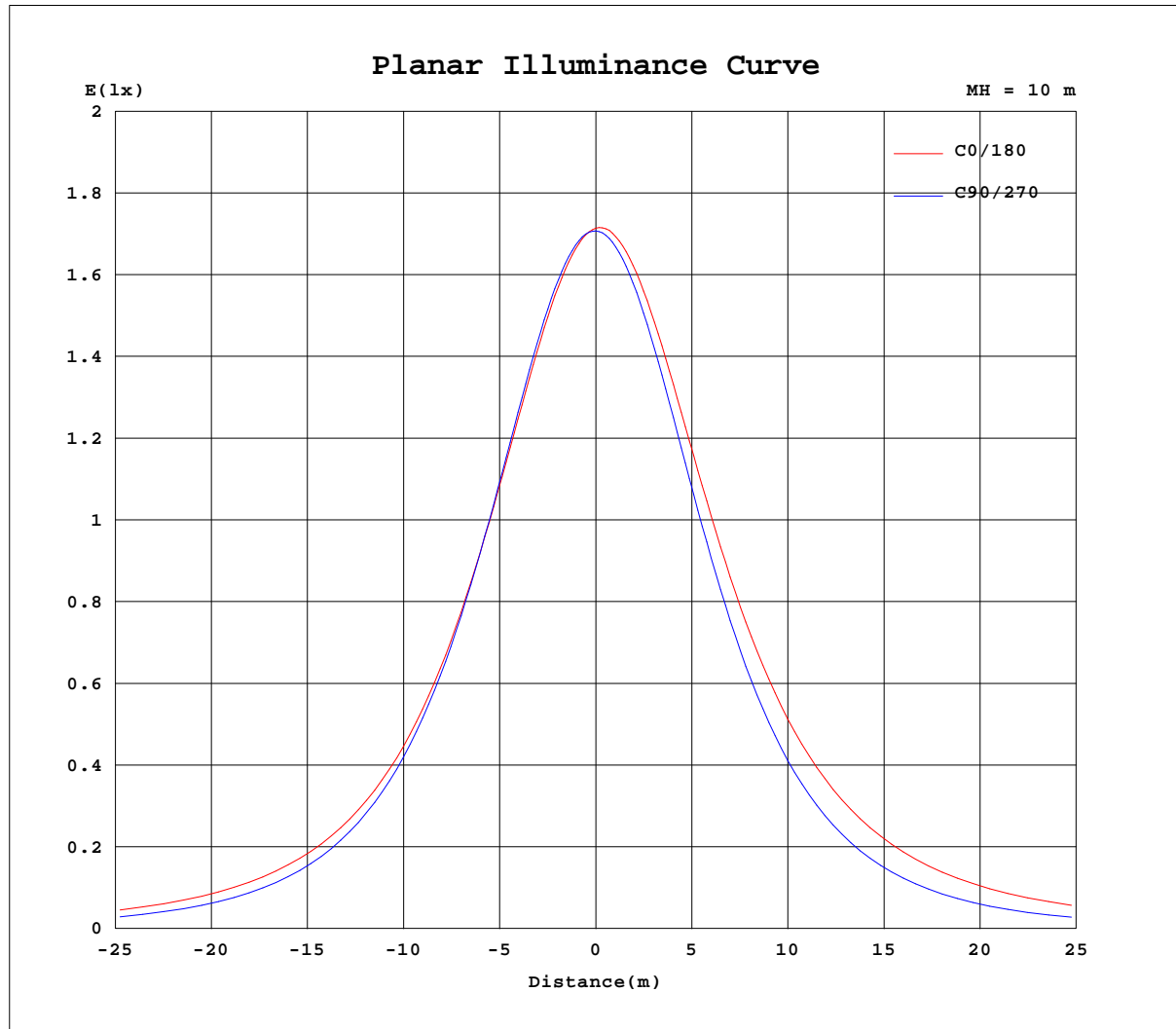
Test:U:24.00V I:0.3800A P:9.120W PF:1.000 Freq:0Hz Lamp Flux:647.77lx1 lm		
NAME: DF72404NO	TYPE:	WEIGHT:
SPEC.:DF72404NO-9WWNSA012YC0100	DIM.: 1000*4*1mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*4mm	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-08-12

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: 2020-08-12

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:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.00V I:0.3800A P:9.120W PF:1.000 Freq:0Hz Lamp Flux:647.771x1 lm		
NAME: DF72404NO	TYPE:	WEIGHT:
SPEC.:DF72404NO-9WWSA012YC0100	DIM.: 1000*4*1mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*4mm	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	45	90	135	180	225	270	315										
0	171	171	171	170	171	171	171	170										
5	170	170	170	171	172	172	170	169										
10	167	168	168	170	172	171	168	166										
15	163	164	165	169	170	168	164	162										
20	159	159	161	166	168	165	159	156										
25	153	153	155	162	165	160	153	150										
30	148	146	148	157	161	155	146	143										
35	141	139	139	151	157	149	137	136										
40	134	130	130	144	151	141	127	127										
45	126	121	119	136	145	133	116	118										
50	118	111	107	128	138	124	104	108										
55	110	101	94.1	119	131	115	91.5	97.9										
60	102	90.2	80.2	109	123	105	77.6	87.6										
65	93.0	79.5	65.4	99.2	115	95.2	62.9	77.3										
70	84.4	68.9	50.1	88.8	106	84.8	47.8	67.1										
75	76.2	58.7	34.6	78.4	97.5	74.2	32.6	57.2										
80	69.2	49.7	19.9	68.6	89.9	64.3	18.4	48.5										
85	60.5	42.3	7.81	62.4	82.7	58.7	6.77	41.2										
90	49.5	30.2	1.01	47.4	66.8	43.4	0.49	30.9										
95	32.9	11.1	0.68	22.1	48.1	12.1	0.25	12.5										
100	4.56	1.72	0.61	1.94	2.11	0.82	0.44	1.14										
105	2.26	1.70	0.63	1.48	1.22	0.81	0.66	1.15										
110	2.25	1.69	0.81	1.45	1.28	0.91	0.85	1.23										
115	2.15	1.67	1.05	1.28	1.36	1.01	1.02	1.34										
120	2.07	1.76	1.24	1.34	1.46	1.12	1.16	1.46										
125	2.11	1.87	1.43	1.45	1.55	1.24	1.30	1.56										
130	2.24	1.96	1.56	1.55	1.66	1.39	1.42	1.64										
135	2.29	2.04	1.70	1.66	1.76	1.52	1.53	1.68										
140	2.33	2.10	1.82	1.78	1.86	1.67	1.62	1.70										
145	2.37	2.14	1.91	1.92	1.94	1.83	1.69	1.80										
150	2.41	2.18	2.00	2.05	1.97	1.98	1.83	1.84										
155	2.50	2.24	2.11	2.18	2.09	2.12	2.05	1.87										
160	2.56	2.28	2.33	2.35	2.19	2.30	2.28	2.00										
165	2.65	2.42	2.54	2.48	2.32	2.42	2.49	2.23										
170	2.61	2.65	2.67	2.59	2.34	2.54	2.67	2.52										
175	2.50	2.85	2.86	2.80	2.35	2.75	2.85	2.77										
180	2.52	2.98	2.99	2.99	2.54	2.96	2.99	2.97										

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-08-12

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: