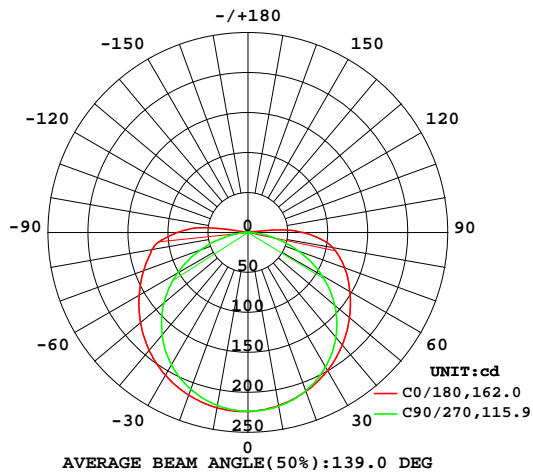


LUMINAIRE PHOTOMETRIC TEST REPORT

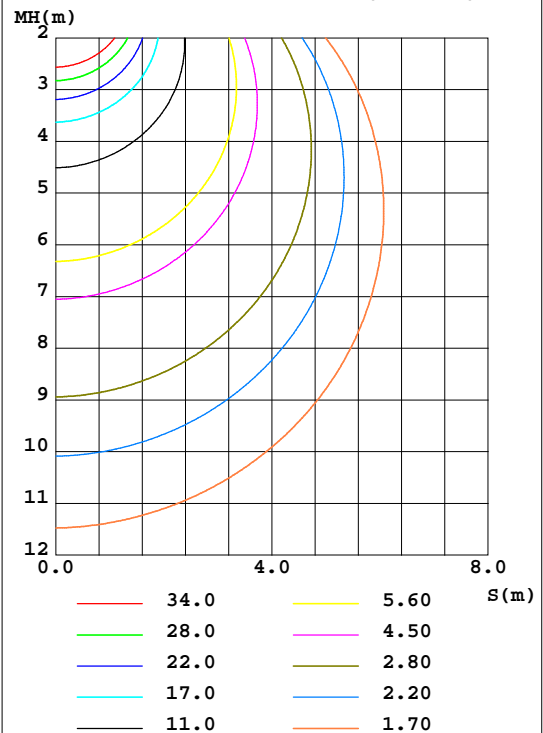
Test:U:48.00V I:0.2060A P:9.800W PF:1.000 Freq:0Hz Lamp Flux:872.802x1 lm		
NAME: DF84810NO	TYPE:	WEIGHT:
SPEC.:DF84810NO-9NWNSA012WC0500	DIM.: 1000*10*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*10mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 89.06 lm/W			
MODEL	DF84810NO	I _{max} (cd)	224.0	S/MH(C0/180)	1.33
NOMINAL POWER(W)	9.8	LOR(%)	100.0	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	48	TOTAL FLUX(lm)	872.80	h UP,DN(C0-180)	2.2,47.8
NOMINAL FLUX(lm)	872.802	CIE CLASS	DIRECT	h UP,DN(C180-360)	2.3,47.7
LAMPS INSIDE	1	h up(%)	4.6	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	48	h down(%)	95.4	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:2020-09-04

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:

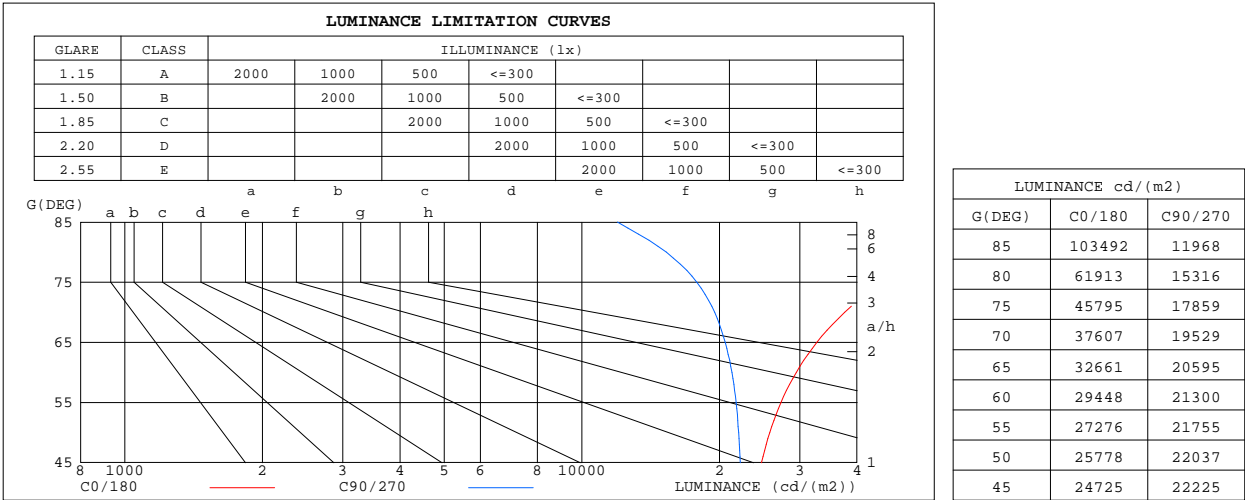
g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	219.9	220.3	220.6	222.3	222.6	221.5	219.7	219.2	0- 10	21.22	21.22	2.43,2.43
20	211.5	210.9	210.8	214.9	216.4	213.1	208.8	208.9	10- 20	61.32	82.54	9.46,9.46
30	199.3	196.4	194.2	202.2	206.4	199.3	191.3	193.5	20- 30	94.82	177.4	20.3,20.3
40	183.6	177.2	171.0	184.8	192.4	181.0	167.3	173.7	30- 40	118.3	295.7	33.9,33.9
50	165.7	154.1	141.6	163.1	175.5	158.5	137.3	150.2	40- 50	129.6	425.2	48.7,48.7
60	147.2	129.3	106.5	138.8	157.2	133.9	101.9	125.4	50- 60	128.1	553.3	63.4,63.4
70	128.6	105.5	66.79	114.5	138.8	109.5	62.48	101.5	60- 70	115.7	669.0	76.7,76.7
80	107.5	81.81	26.60	92.83	121.5	87.69	23.59	78.05	70- 80	95.46	764.5	87.6,87.6
90	69.19	46.15	1.344	62.94	88.48	57.56	0.6123	42.39	80- 90	68.49	833.0	95.4,95.4
100	7.688	3.385	0.8416	2.955	15.04	1.390	0.6212	2.583	90-100	27.33	860.3	98.6,98.6
110	3.187	2.344	1.129	2.317	2.091	1.469	1.162	1.763	100-110	2.407	862.7	98.8,98.8
120	2.705	2.298	1.676	2.044	2.265	1.729	1.617	2.077	110-120	1.948	864.7	99.1,99.1
130	2.872	2.558	2.090	2.292	2.525	2.044	1.970	2.311	120-130	1.967	866.6	99.3,99.3
140	3.066	2.725	2.424	2.585	2.732	2.418	2.238	2.425	130-140	1.902	868.5	99.5,99.5
150	3.159	2.799	2.638	2.907	2.839	2.785	2.499	2.518	140-150	1.675	870.2	99.7,99.7
160	3.326	2.926	3.065	3.240	3.046	3.159	3.033	2.745	150-160	1.342	871.6	99.9,99.9
170	3.387	3.387	3.493	3.514	3.086	3.413	3.507	3.339	160-170	0.9124	872.5	100,100
180	3.293	3.834	3.834	3.941	3.300	3.827	3.894	3.934	170-180	0.3342	872.8	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:2020-09-04

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:48.00V I:0.2060A P:9.800W PF:1.000 Freq:0Hz Lamp Flux:872.802x1 lm		
NAME: DF84810NO	TYPE:	WEIGHT:
SPEC.:DF84810NO-9NWNSA012WC0500	DIM.: 1000*10*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*10mm	Shielding Angle:



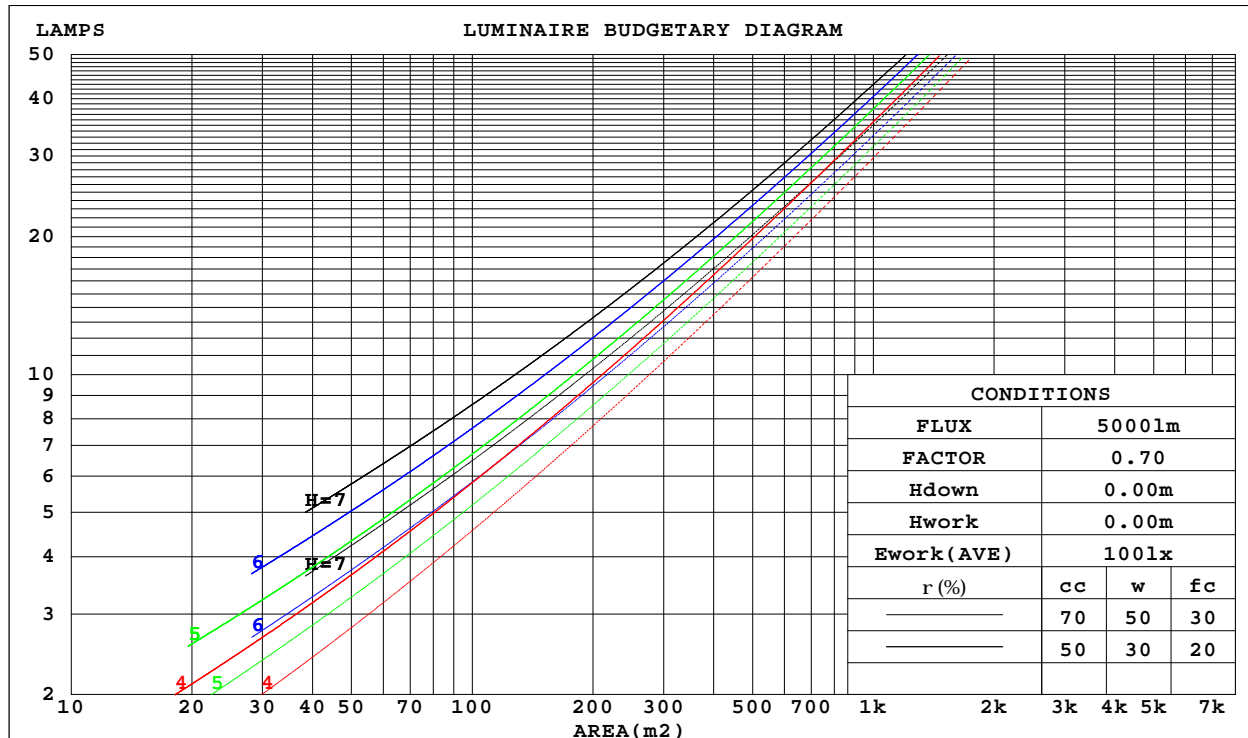
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-09-04

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:48.00V I:0.2060A P:9.800W PF:1.000 Freq:0Hz Lamp Flux:872.802x1 lm		
NAME: DF84810NO	TYPE:	WEIGHT:
SPEC.:DF84810NO-9NWSA012WC0500	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	1.03	1.03	1.03	.98	.98	.98	.95
1.0	.98	.93	.88	.95	.90	.86	.90	.86	.82	.85	.82	.79	.81	.78	.76	.73
2.0	.84	.76	.69	.81	.74	.68	.77	.71	.65	.73	.68	.63	.69	.65	.61	.58
3.0	.73	.63	.56	.71	.62	.55	.67	.60	.53	.63	.57	.52	.60	.55	.50	.48
4.0	.64	.54	.47	.62	.53	.46	.59	.51	.45	.56	.49	.44	.53	.47	.43	.40
5.0	.57	.47	.40	.55	.46	.39	.52	.44	.38	.50	.43	.37	.48	.41	.36	.34
6.0	.51	.41	.34	.49	.40	.34	.47	.39	.33	.45	.38	.32	.43	.37	.32	.29
7.0	.46	.36	.30	.45	.36	.30	.43	.35	.29	.41	.34	.29	.39	.33	.28	.26
8.0	.42	.33	.26	.41	.32	.26	.39	.31	.26	.37	.30	.25	.36	.30	.25	.23
9.0	.38	.30	.24	.37	.29	.23	.36	.28	.23	.34	.28	.23	.33	.27	.22	.20
10.0	.35	.27	.21	.34	.27	.21	.33	.26	.21	.32	.25	.21	.31	.25	.20	.18



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-09-04

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:48.00V I:0.2060A P:9.800W PF:1.000 Freq:0Hz Lamp Flux:872.802x1 lm		
NAME: DF84810NO	TYPE:	WEIGHT:
SPEC.:DF84810NO-9NWN5A012WC0500	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	.397	.226	.072	.388	.221	.070	.372	.213	.068	.357	.206	.066	.343	.199	.064															
2.0	.344	.189	.058	.337	.185	.057	.322	.179	.056	.309	.173	.054	.296	.168	.053															
3.0	.306	.163	.049	.299	.160	.048	.286	.155	.047	.274	.150	.046	.263	.145	.045															
4.0	.275	.143	.042	.269	.141	.042	.257	.136	.041	.246	.132	.040	.236	.128	.039															
5.0	.250	.127	.037	.244	.125	.037	.234	.122	.036	.224	.118	.035	.215	.115	.035															
6.0	.229	.115	.033	.224	.113	.033	.214	.110	.032	.206	.107	.031	.197	.104	.031															
7.0	.211	.104	.030	.206	.103	.029	.198	.100	.029	.190	.097	.028	.182	.095	.028															
8.0	.195	.095	.027	.191	.094	.027	.184	.092	.026	.176	.089	.026	.170	.087	.025															
9.0	.182	.088	.025	.178	.087	.024	.171	.085	.024	.165	.083	.024	.159	.081	.023															
10.0	.170	.082	.023	.167	.081	.022	.160	.079	.022	.155	.077	.022	.149	.075	.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	.225	.225	.225	.192	.192	.192	.131	.131	.131	.075	.075	.075	.024	.024	.024		
1.0	.221	.190	.163	.189	.163	.140	.130	.112	.097	.075	.065	.056	.024	.021	.018		
2.0	.215	.167	.127	.184	.144	.110	.126	.099	.077	.073	.058	.045	.023	.019	.015		
3.0	.207	.150	.105	.177	.129	.091	.122	.090	.064	.070	.053	.038	.023	.017	.012		
4.0	.199	.137	.090	.171	.119	.078	.117	.083	.055	.068	.048	.033	.022	.016	.011		
5.0	.191	.127	.080	.164	.110	.070	.113	.077	.049	.065	.045	.029	.021	.015	.010		
6.0	.183	.119	.073	.157	.103	.063	.109	.072	.045	.063	.042	.027	.020	.014	.009		
7.0	.176	.112	.068	.151	.097	.059	.104	.068	.042	.061	.040	.025	.020	.013	.008		
8.0	.169	.106	.064	.145	.092	.055	.101	.065	.039	.059	.038	.023	.019	.013	.008		
9.0	.162	.101	.060	.140	.088	.053	.097	.062	.037	.056	.037	.022	.018	.012	.007		
10.0	.156	.097	.058	.135	.084	.050	.093	.059	.036	.055	.035	.021	.018	.012	.007		

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-09-04

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:48.00V I:0.2060A P:9.800W PF:1.000 Freq:0Hz Lamp Flux:872.802x1 lm											
NAME: DF84810NO					TYPE:			WEIGHT:			
SPEC.:DF84810NO-9NWN5A012WC0500					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	24.7	26.2	25.0	26.5	26.8	23.6	25.1	23.9	25.4	25.7	
	3H	27.3	28.8	27.6	29.1	29.4	25.2	26.7	25.6	27.0	27.4
	4H	28.7	30.1	29.1	30.5	30.9	25.9	27.3	26.3	27.7	28.0
	6H	30.3	31.7	30.7	32.0	32.4	26.4	27.7	26.8	28.1	28.5
	8H	31.2	32.5	31.6	32.9	33.3	26.5	27.8	27.0	28.2	28.6
	12H	32.1	33.4	32.5	33.8	34.2	26.6	27.9	27.1	28.3	28.7
4H	2H	25.3	26.7	25.7	27.1	27.5	24.5	25.9	24.9	26.3	26.6
	3H	28.2	29.4	28.6	29.8	30.2	26.5	27.8	26.9	28.1	28.6
	4H	29.8	31.0	30.2	31.4	31.8	27.4	28.6	27.9	29.0	29.4
	6H	31.6	32.6	32.1	33.1	33.5	28.1	29.2	28.6	29.6	30.1
	8H	32.6	33.5	33.1	34.0	34.5	28.4	29.3	28.8	29.8	30.3
	12H	33.6	34.5	34.1	35.0	35.5	28.5	29.4	29.0	29.9	30.4
8H	4H	30.2	31.2	30.7	31.7	32.1	28.3	29.3	28.8	29.7	30.2
	6H	32.3	33.1	32.8	33.6	34.1	29.4	30.2	29.9	30.7	31.2
	8H	33.5	34.2	34.0	34.7	35.3	29.9	30.6	30.4	31.1	31.7
	12H	34.8	35.4	35.3	35.9	36.5	30.2	30.9	30.8	31.4	32.0
12H	4H	30.3	31.2	30.8	31.7	32.2	28.6	29.5	29.1	29.9	30.4
	6H	32.4	33.2	33.0	33.7	34.3	29.9	30.6	30.4	31.1	31.7
	8H	33.7	34.4	34.3	34.9	35.5	30.5	31.2	31.0	31.7	32.3
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1					
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.4					

CIE Pub.117, 872.8 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.5)

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-09-04

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:48.00V I:0.2060A P:9.800W PF:1.000 Freq:0Hz Lamp Flux:872.802x1 lm		
NAME: DF84810NO	TYPE:	WEIGHT:
SPEC.:DF84810NO-9NWNSA012WC0500	DIM.: 1000*10*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*10mm	Shielding Angle:

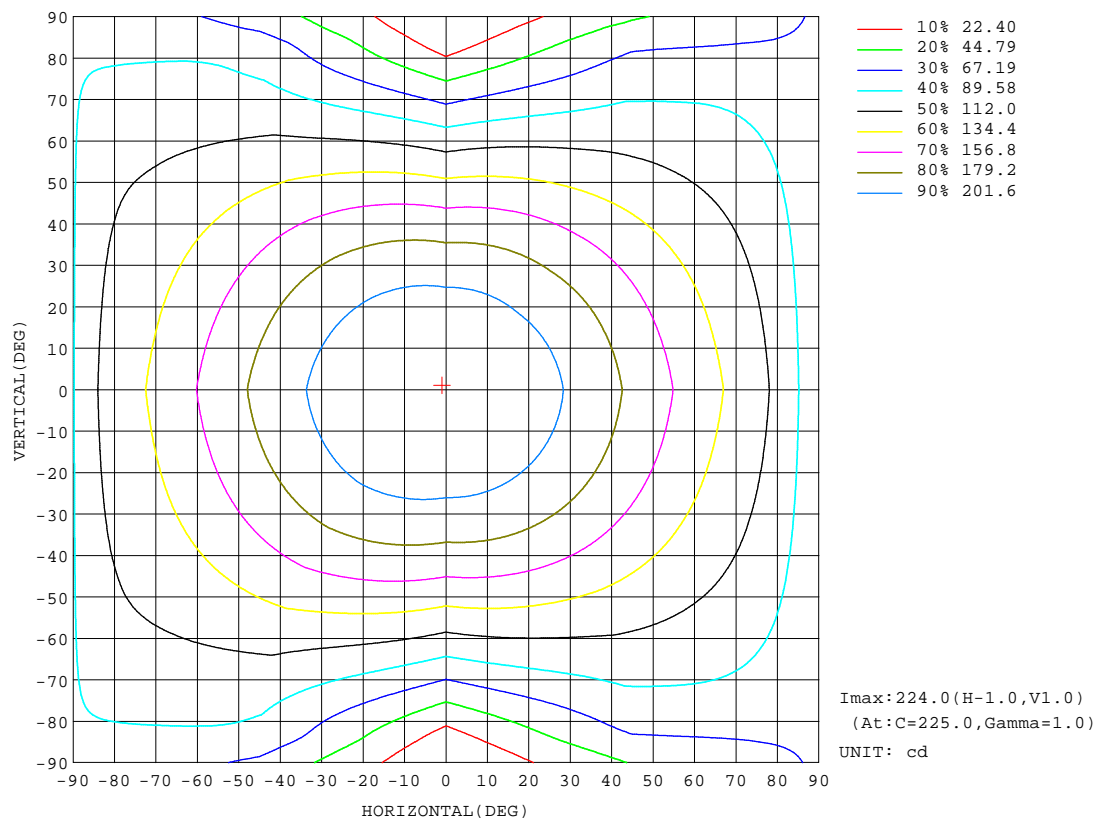
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	51	39	32	51	39	31	49	38	31	24
0.80	61	48	40	60	47	40	58	47	39	32
1.00	69	56	48	67	55	47	65	57	47	39
1.25	76	63	55	74	63	55	71	61	54	45
1.50	81	69	61	79	68	60	75	66	59	50
2.00	88	77	69	86	76	69	82	73	67	57
2.50	92	83	75	90	81	74	85	78	72	62
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:2020-09-04

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:48.00V I:0.2060A P:9.800W PF:1.000 Freq:0Hz Lamp Flux:872.802x1 lm		
NAME: DF84810NO	TYPE:	WEIGHT:
SPEC.:DF84810NO-9NWNSA012WC0500	DIM.: 1000*10*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*10mm	Shielding Angle:



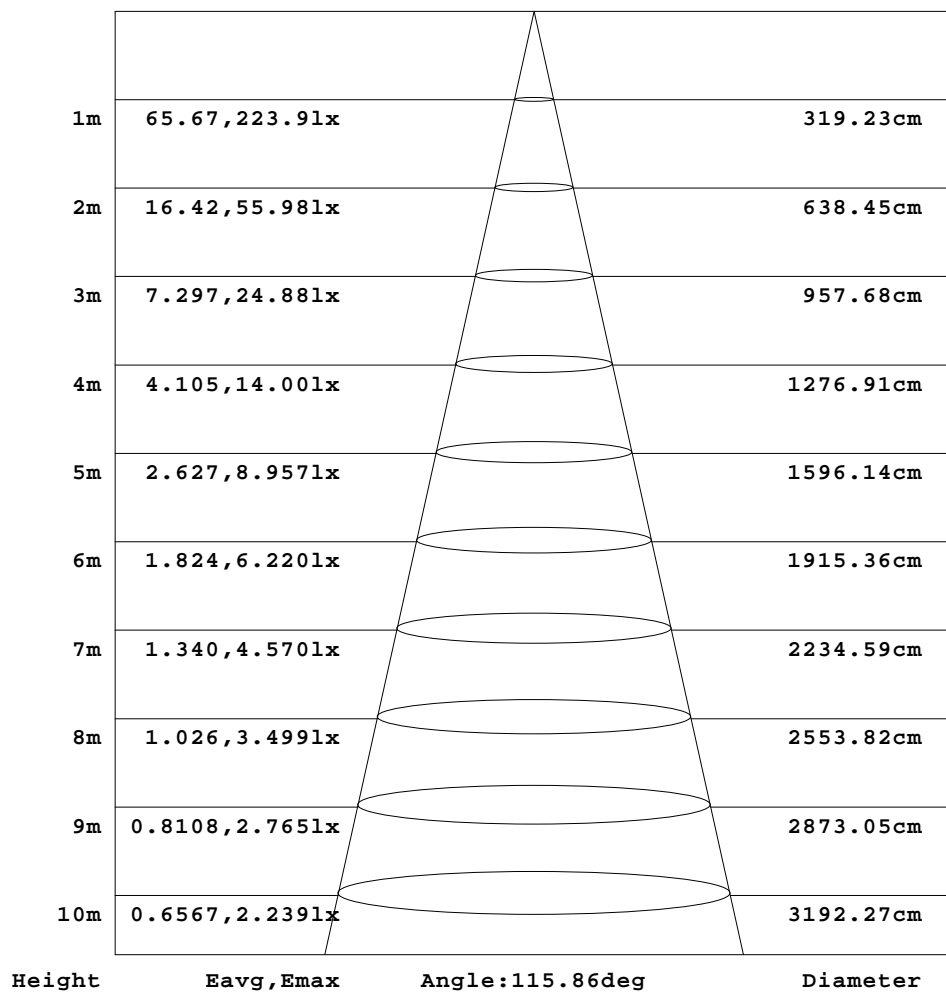
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-09-04

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:48.00V I:0.2060A P:9.800W PF:1.000 Freq:0Hz Lamp Flux:872.802x1 lm		
NAME: DF84810NO	TYPE:	WEIGHT:
SPEC.:DF84810NO-9NWSA012WC0500	DIM.: 1000*10*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*10mm	Shielding Angle:

Flux out:528.4 lm



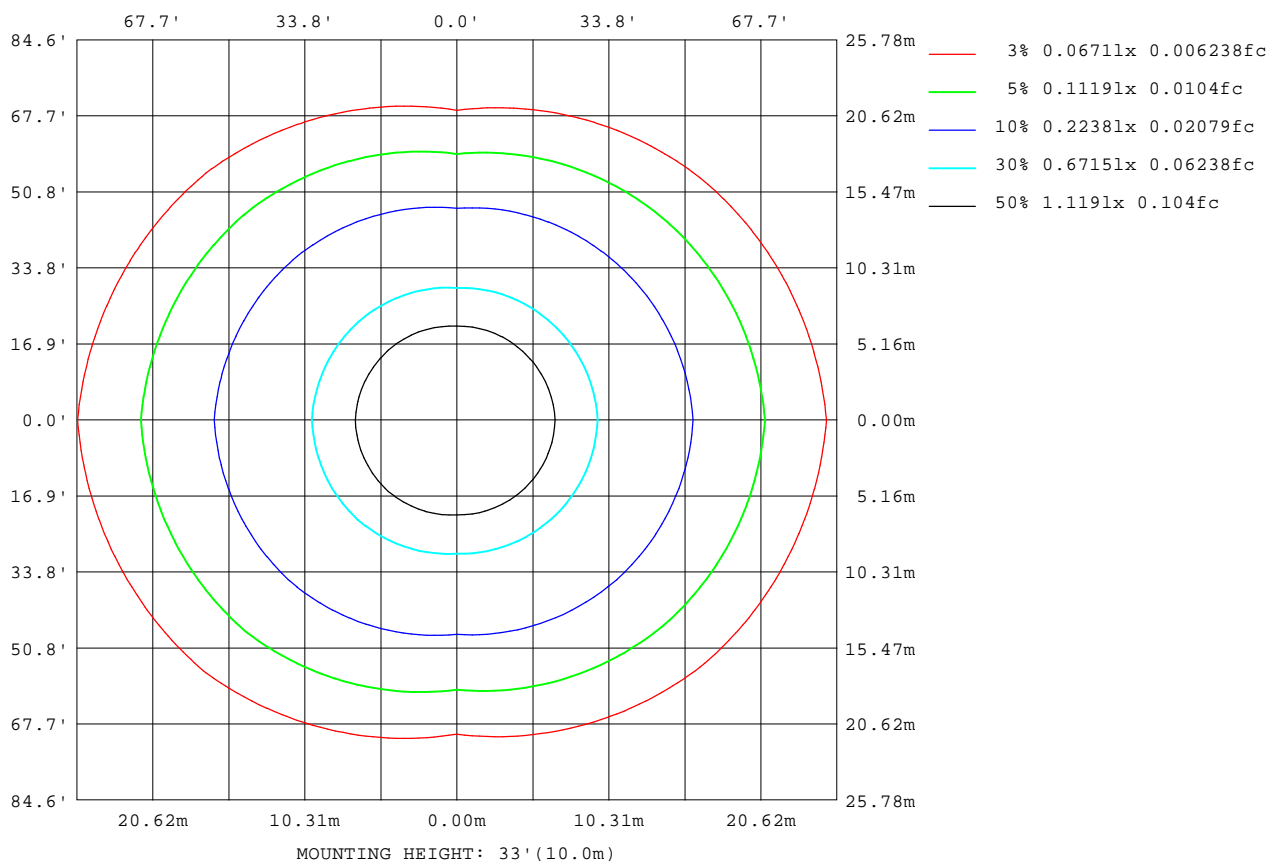
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: JYH
Test Date: 2020-09-04

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

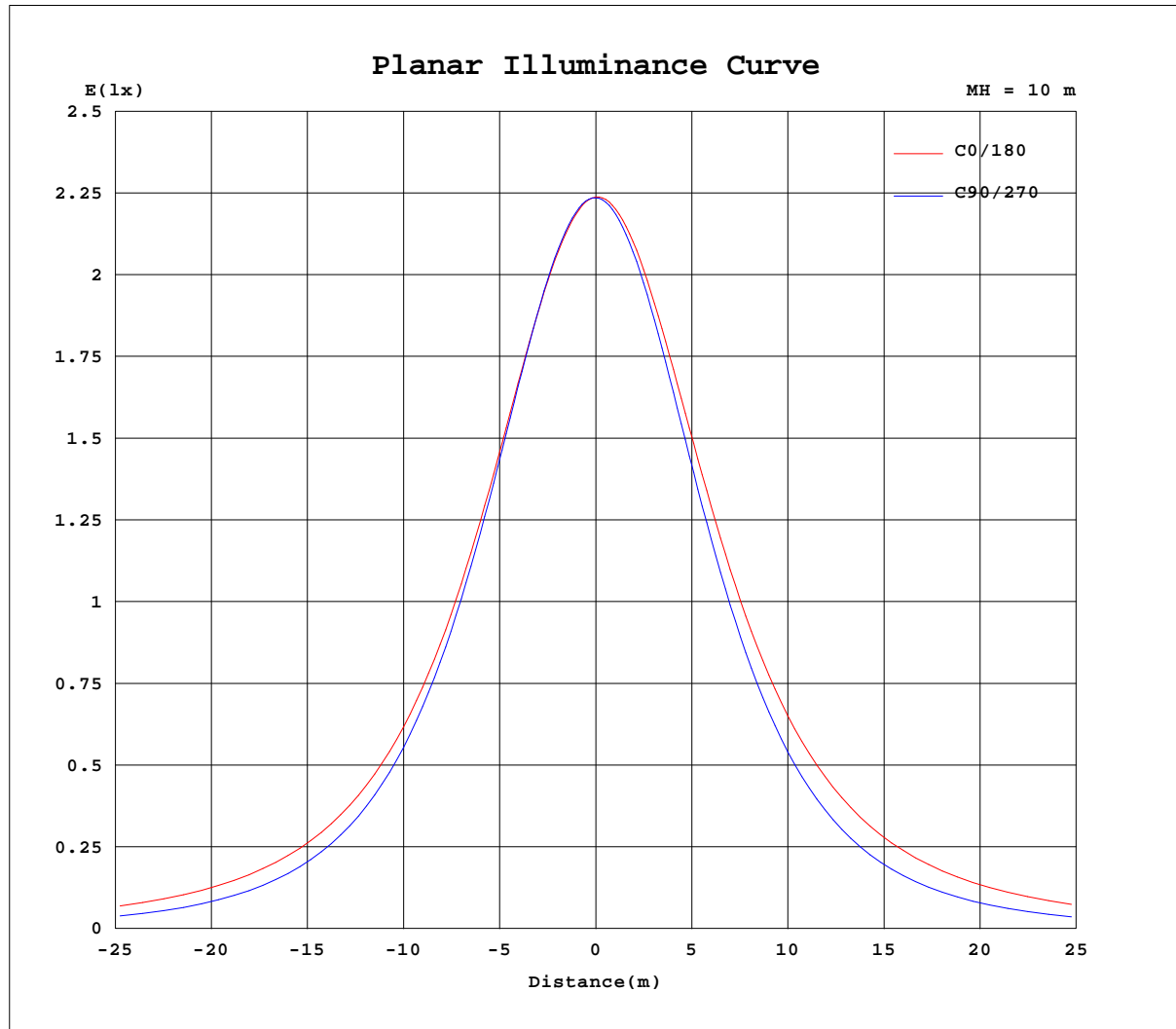
Test:U:48.00V I:0.2060A P:9.800W PF:1.000 Freq:0Hz Lamp Flux:872.802x1 lm		
NAME: DF84810NO	TYPE:	WEIGHT:
SPEC.:DF84810NO-9NWN5A012WC0500	DIM.: 1000*10*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*10mm	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-09-04

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: 2020-09-04

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:48.00V I:0.2060A P:9.800W PF:1.000 Freq:0Hz Lamp Flux:872.802x1 lm		
NAME: DF84810NO	TYPE:	WEIGHT:
SPEC.:DF84810NO-9NWN5A012WC0500	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	224	224	224	224	224	224	224	224										
5	222	223	223	224	224	224	223	222										
10	220	220	221	222	223	222	220	219										
15	216	216	217	219	220	218	215	215										
20	211	211	211	215	216	213	209	209										
25	206	204	203	209	212	207	201	202										
30	199	196	194	202	206	199	191	193										
35	192	187	183	194	200	191	180	184										
40	184	177	171	185	192	181	167	174										
45	175	166	157	174	184	170	153	162										
50	166	154	142	163	176	158	137	150										
55	156	142	125	151	166	146	120	138										
60	147	129	106	139	157	134	102	125										
65	138	117	87.0	126	148	121	82.5	113										
70	129	106	66.8	114	139	109	62.5	102										
75	119	93.9	46.2	103	130	98.2	42.4	90.0										
80	108	81.8	26.6	92.8	121	87.7	23.6	78.0										
85	90.2	67.7	10.4	83.6	108	77.6	8.47	63.5										
90	69.2	46.2	1.34	62.9	88.5	57.6	0.61	42.4										
95	40.7	15.0	0.88	37.1	66.8	31.5	0.37	13.7										
100	7.69	3.38	0.84	2.96	15.0	1.39	0.62	2.58										
105	4.15	2.52	0.87	2.42	2.00	1.44	0.90	1.81										
110	3.19	2.34	1.13	2.32	2.09	1.47	1.16	1.76										
115	2.81	2.20	1.43	2.05	2.17	1.59	1.41	1.91										
120	2.71	2.30	1.68	2.04	2.26	1.73	1.62	2.08										
125	2.76	2.44	1.88	2.17	2.40	1.89	1.80	2.18										
130	2.87	2.56	2.09	2.29	2.52	2.04	1.97	2.31										
135	2.97	2.65	2.30	2.44	2.63	2.24	2.12	2.35										
140	3.07	2.73	2.42	2.59	2.73	2.42	2.24	2.42										
145	3.07	2.77	2.53	2.75	2.80	2.62	2.36	2.44										
150	3.16	2.80	2.64	2.91	2.84	2.79	2.50	2.52										
155	3.22	2.86	2.84	3.09	2.94	2.97	2.77	2.56										
160	3.33	2.93	3.07	3.24	3.05	3.16	3.03	2.75										
165	3.42	3.10	3.28	3.37	3.16	3.28	3.27	2.99										
170	3.39	3.39	3.49	3.51	3.09	3.41	3.51	3.34										
175	3.23	3.66	3.71	3.72	3.08	3.61	3.72	3.69										
180	3.29	3.83	3.83	3.94	3.30	3.83	3.89	3.93										

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
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g Range: 0 - 180DEG
g Interval: 1.0DEG
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Humidity:65.0%
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