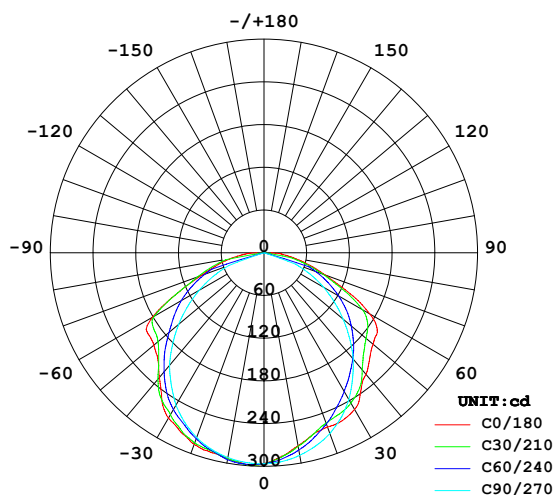


LUMINAIRE PHOTOMETRIC TEST REPORT

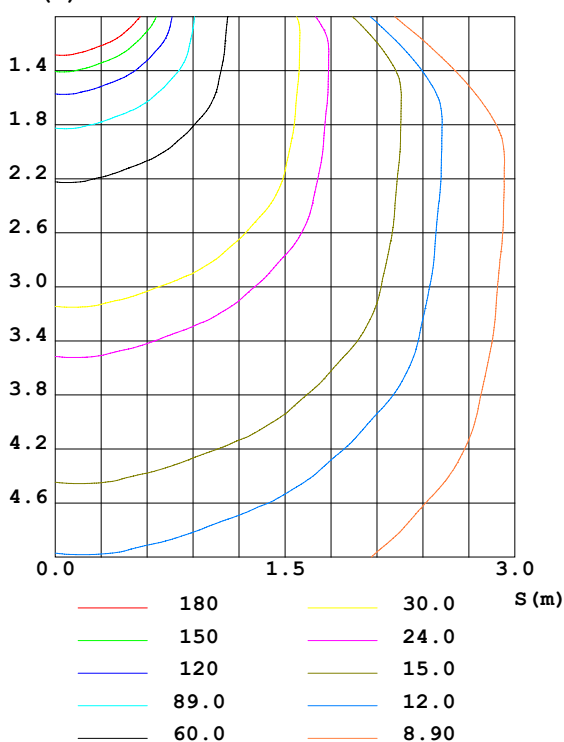
NAME: x-Glo-72-12v		WEIGHT:100g/m
DIM.: 6*13.5mm	SPEC.:	SERIAL No.:
MFR.:	SUR.:13.5*1000mm	PROTECTION ANGLE:/

DATA OF LAMP		PHOTOMETRIC DATA Eff: 75.76 lm/W			
MODEL	2835	I _{max} (cd)	299.0	S/MH (C0/180)	1.33
NOMINAL POWER (W)	12	LOR (%)	96.1	S/MH (C90/270)	1.24
RATED VOLTAGE (V)	12	TOTAL FLUX (lm)	832.74	η UP, DN (C0-180)	0.0, 49.1
NOMINAL FLUX (lm)	866.74	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 47.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	12	η down (%)	96.1	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LI
Test Date:2015-07-01

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.257
Humidity:46%
Test Distance:7.600m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
5	298.6	298.5	295.5	289.7	286.9	289.0	294.3	297.5	0- 5	7.055	7.055	0.85,0.81
10	293.6	293.5	292.1	280.5	275.4	278.8	288.9	292.1	5- 10	20.76	27.81	3.34,3.21
15	290.0	287.4	285.7	269.1	264.5	266.3	280.9	284.4	10- 15	33.51	61.32	7.36,7.07
20	286.4	280.3	276.4	256.8	260.5	253.1	270.3	276.1	15- 20	45.15	106.5	12.8,12.3
25	277.5	272.3	263.2	246.5	260.3	242.1	255.8	266.5	20- 25	55.55	162.0	19.5,18.7
30	268.2	259.1	247.3	239.0	254.3	233.0	238.4	252.6	25- 30	64.29	226.3	27.2,26.1
35	250.5	242.7	226.9	231.3	237.1	223.0	216.8	235.6	30- 35	70.91	297.2	35.7,34.3
40	228.8	226.8	206.5	220.0	222.9	209.4	195.1	221.1	35- 40	74.55	371.8	44.6,42.9
45	211.0	208.5	181.5	204.1	210.0	192.1	170.1	203.2	40- 45	75.90	447.7	53.8,51.6
50	201.9	187.0	156.5	183.7	200.1	173.3	145.1	181.6	45- 50	75.55	523.2	62.8,60.4
55	198.9	171.1	130.5	171.6	194.3	156.7	120.6	164.4	50- 55	74.56	597.8	71.8,69
60	180.6	160.8	104.6	160.5	171.1	142.5	96.20	151.6	55- 60	71.96	669.7	80.4,77.3
65	133.8	136.6	78.69	131.7	129.6	118.9	71.75	127.7	60- 65	63.07	732.8	88,84.5
70	94.52	107.5	52.77	100.9	90.94	92.46	47.31	99.61	65- 70	49.87	782.7	94,90.3
75	68.69	75.81	0	70.96	65.35	64.70	0	69.82	70- 75	31.15	813.8	97.7,93.9
80	47.74	0	0	0	42.58	0	0	0	75- 80	13.27	827.1	99.3,95.4
85	28.90	0	0	0	26.26	0	0	0	80- 85	4.672	831.8	99.9,96
90	10.00	0	0	0	10.09	0	0	0	85- 90	0.9749	832.7	100,96.1
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

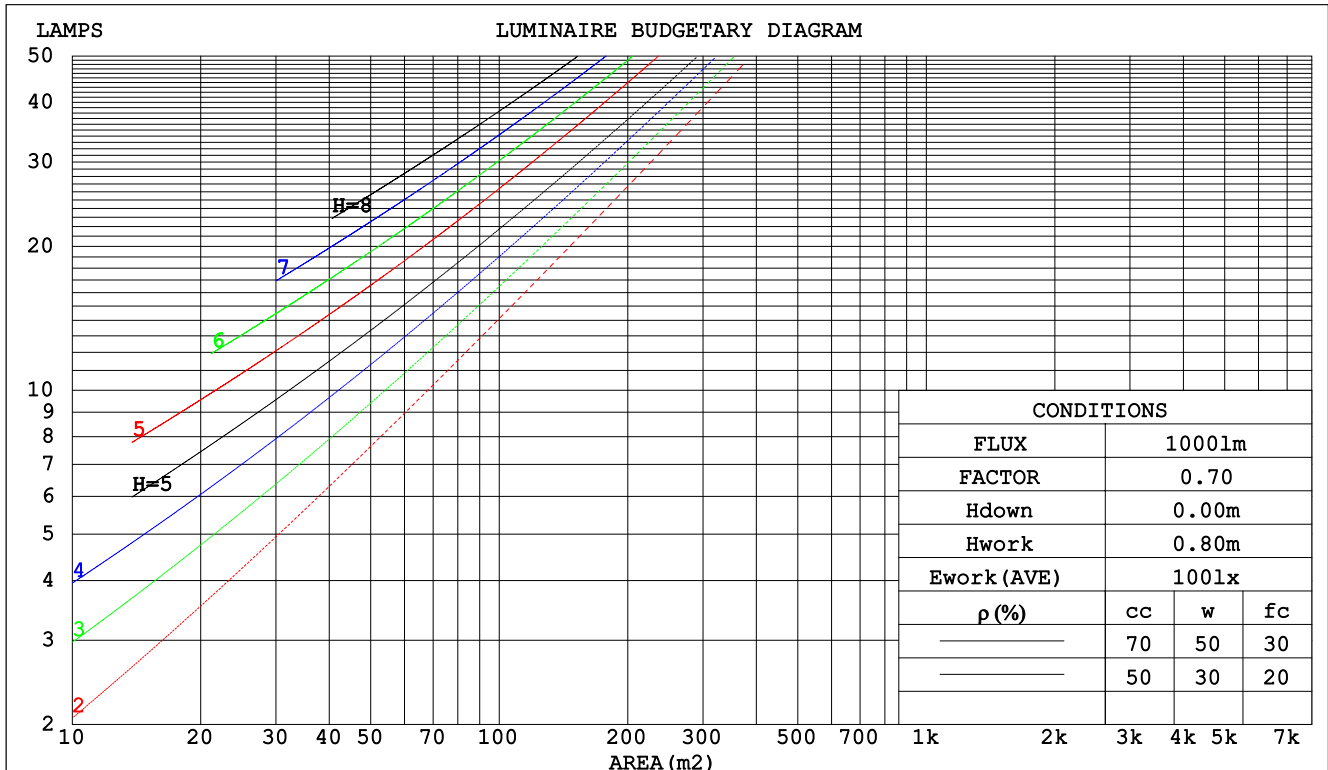
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LI
Test Date:2015-07-01

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.257
Humidity:46%
Test Distance:7.600m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: x-Glo-72-12v	WEIGHT:100g/m	
DIM.: 6*13.5mm	SPEC.:	SERIAL No.:
MFR.:	SUR.:13.5*1000mm	PROTECTION ANGLE:/

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.14	1.14	1.14	1.12	1.12	1.12	1.07	1.07	1.07	1.02	1.02	1.02	.98	.98	.98	.96
1.0	1.01	.97	.93	.98	.95	.92	.94	.91	.89	.91	.88	.86	.87	.85	.84	.82
2.0	.88	.81	.76	.86	.80	.75	.83	.78	.73	.79	.75	.72	.77	.73	.70	.68
3.0	.77	.69	.63	.75	.68	.62	.73	.66	.61	.70	.65	.60	.67	.63	.59	.57
4.0	.68	.60	.53	.67	.59	.53	.64	.58	.52	.62	.56	.51	.60	.55	.51	.49
5.0	.61	.52	.46	.60	.51	.45	.58	.50	.45	.56	.49	.44	.54	.48	.44	.42
6.0	.55	.46	.40	.54	.45	.40	.52	.45	.39	.50	.44	.39	.49	.43	.38	.36
7.0	.49	.41	.35	.49	.41	.35	.47	.40	.35	.46	.39	.34	.44	.39	.34	.32
8.0	.45	.37	.31	.44	.36	.31	.43	.36	.31	.42	.35	.31	.41	.35	.30	.29
9.0	.41	.33	.28	.41	.33	.28	.40	.33	.28	.39	.32	.28	.38	.32	.27	.26
10.0	.38	.30	.25	.38	.30	.25	.37	.30	.25	.36	.29	.25	.35	.29	.25	.23



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LI
Test Date:2015-07-01

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.257
Humidity:46%
Test Distance:7.600m [K=1.0000]
Remarks

WEC AND CCEC

NAME: x-Glo-72-12v	WEIGHT:100g/m	
DIM.: 6*13.5mm	SPEC.:	SERIAL No.:
MFR.:	SUR.:13.5*1000mm	PROTECTION ANGLE:/

pcc	80%	70%	50%	30%	10%	0
pw	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
pfc	20%	20%	20%	20%	20%	0
RCR	RCR:Room Cavity Ratio					Wall Exitance Coefficients(WEC)
0.0						
1.0	.282 .160 .051	.275 .157 .050	.262 .151 .048	.251 .145 .046	.240 .139 .045	
2.0	.272 .149 .046	.266 .147 .045	.255 .142 .044	.245 .137 .043	.235 .133 .042	
3.0	.255 .136 .041	.250 .134 .040	.240 .130 .039	.230 .126 .039	.222 .123 .038	
4.0	.237 .123 .036	.232 .121 .036	.223 .118 .035	.215 .116 .035	.208 .113 .034	
5.0	.220 .112 .032	.216 .111 .032	.208 .108 .032	.201 .106 .031	.194 .104 .031	
6.0	.204 .102 .029	.201 .101 .029	.194 .099 .029	.187 .097 .029	.181 .095 .028	
7.0	.191 .094 .027	.187 .093 .027	.181 .092 .026	.175 .090 .026	.170 .088 .026	
8.0	.178 .087 .024	.175 .086 .024	.170 .085 .024	.164 .083 .024	.159 .082 .024	
9.0	.167 .081 .023	.164 .080 .022	.159 .079 .022	.155 .078 .022	.150 .076 .022	
10.0	.157 .075 .021	.155 .075 .021	.150 .074 .021	.146 .072 .021	.142 .071 .020	

pcc	80%	70%	50%	30%	10%	0
pw	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
pfc	20%	20%	20%	20%	20%	0
RCR	RCR:Room Cavity Ratio					Ceiling Cavity Exitance Coefficients(CCEC)
0.0	.183 .183 .183	.156 .156 .156	.107 .107 .107	.061 .061 .061	.020 .020 .020	
1.0	.172 .150 .130	.147 .129 .112	.101 .089 .078	.058 .051 .045	.019 .017 .015	
2.0	.164 .127 .095	.141 .109 .082	.096 .076 .057	.056 .044 .034	.018 .014 .011	
3.0	.157 .110 .072	.135 .095 .062	.092 .066 .044	.053 .038 .026	.017 .012 .008	
4.0	.150 .097 .056	.129 .084 .049	.089 .058 .035	.051 .034 .020	.016 .011 .007	
5.0	.143 .087 .046	.123 .075 .040	.085 .053 .028	.049 .031 .017	.016 .010 .005	
6.0	.136 .079 .038	.117 .068 .033	.081 .048 .023	.047 .028 .014	.015 .009 .005	
7.0	.130 .072 .032	.112 .063 .028	.077 .044 .020	.045 .026 .012	.014 .008 .004	
8.0	.124 .067 .028	.107 .058 .024	.074 .041 .017	.043 .024 .010	.014 .008 .003	
9.0	.118 .062 .024	.102 .054 .021	.070 .038 .015	.041 .022 .009	.013 .007 .003	
10.0	.113 .058 .022	.097 .050 .019	.067 .035 .013	.039 .021 .008	.013 .007 .003	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LI
Test Date:2015-07-01

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.257
Humidity:46%
Test Distance:7.600m [K=1.0000]
Remarks:

Uncorrected UGR Table

NAME: x-Glo-72-12v					WEIGHT:100g/m						
DIM.: 6*13.5mm					SPEC.:			SERIAL No.:			
MFR.:					SUR.:13.5*1000mm			PROTECTION 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		24.9	26.4	25.1	26.6	26.8	22.9	24.4	23.2	24.6	24.8
	3H	26.3	27.7	26.6	28.0	28.2	23.9	25.3	24.2	25.5	25.8
	4H	26.9	28.2	27.2	28.5	28.7	23.8	25.1	24.1	25.4	25.6
	6H	27.4	28.7	27.7	28.9	29.2	23.7	24.9	24.0	25.2	25.5
	8H	27.6	28.8	28.0	29.1	29.4	23.6	24.8	24.0	25.1	25.4
	12H	27.8	29.0	28.2	29.3	29.6	23.6	24.7	23.9	25.0	25.3
4H	2H	25.5	26.8	25.8	27.0	27.3	24.0	25.4	24.3	25.6	25.9
	3H	27.1	28.3	27.5	28.6	28.9	25.3	26.4	25.6	26.7	27.0
	4H	27.9	28.9	28.2	29.2	29.6	25.2	26.2	25.6	26.6	26.9
	6H	28.5	29.5	28.9	29.8	30.2	25.1	26.0	25.5	26.4	26.7
	8H	28.8	29.7	29.2	30.1	30.4	25.0	25.9	25.5	26.3	26.7
	12H	29.1	29.9	29.5	30.3	30.7	25.0	25.8	25.4	26.2	26.6
8H	4H	28.0	28.9	28.4	29.3	29.6	25.6	26.4	26.0	26.8	27.2
	6H	28.8	29.5	29.3	29.9	30.4	25.5	26.2	25.9	26.6	27.0
	8H	29.2	29.8	29.6	30.2	30.7	25.4	26.1	25.9	26.5	27.0
	12H	29.5	30.1	30.0	30.5	31.0	25.4	25.9	25.9	26.4	26.9
12H	4H	28.0	28.8	28.4	29.2	29.6	25.6	26.4	26.0	26.8	27.2
	6H	28.8	29.4	29.2	29.8	30.3	25.5	26.1	26.0	26.6	27.0
	8H	29.1	29.7	29.6	30.1	30.6	25.5	26.0	26.0	26.5	26.9
Variations with the observer position at spacings:											
S = 1.0H		+ 0.2 / - 0.3					+ 0.3 / - 0.4				
1.5H		+ 0.4 / - 0.6					+ 0.3 / - 0.6				
2.0H		+ 0.5 / - 0.9					+ 0.6 / - 1.3				

CIE Pub.117 Corrected 866.7 lm Total Lamp Luminous Flux.(8log(F/F0) = -0.5)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LI
Test Date:2015-07-01

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.257
Humidity:46%
Test Distance:7.600m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

NAME: x-Glo-72-12v	WEIGHT:100g/m	
DIM.: 6*13.5mm	SPEC.:	SERIAL No.:
MFR.:	SUR.:13.5*1000mm	PROTECTION ANGLE: /

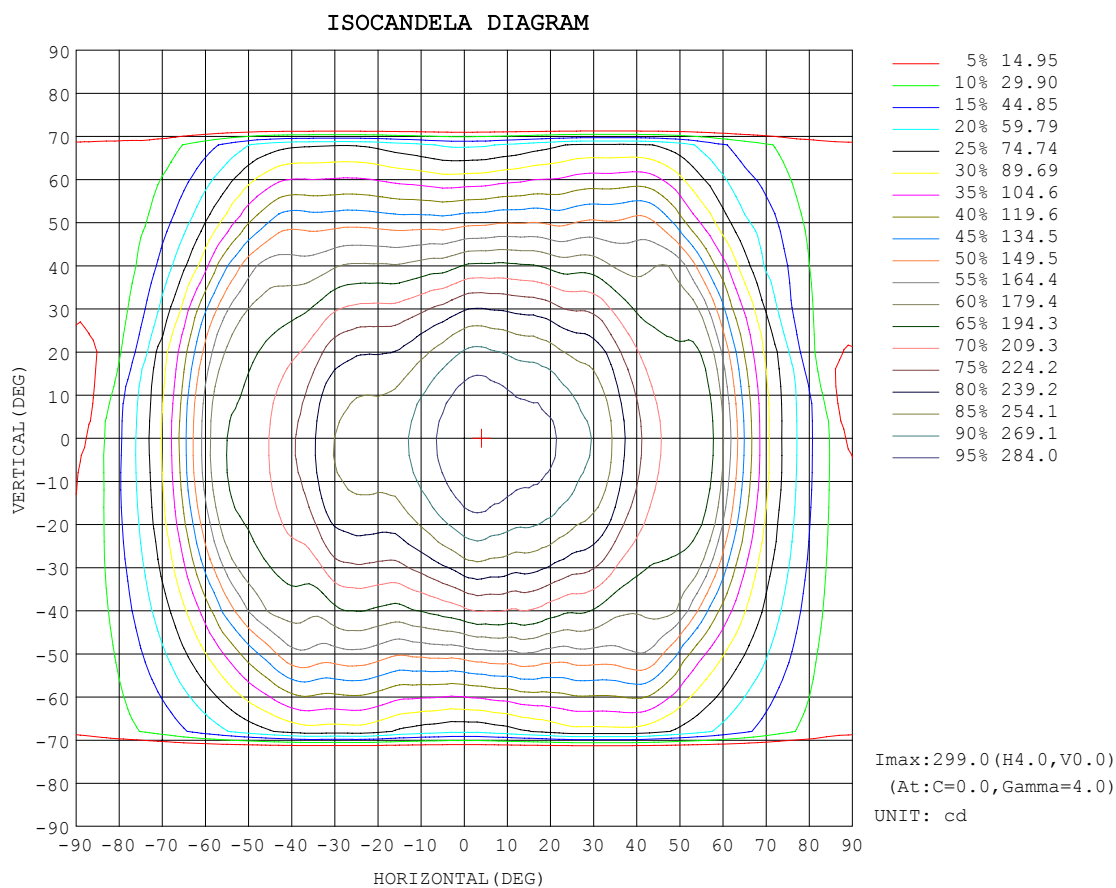
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) k (RI) x RCR = 5									
k = 0.60	55	44	37	54	44	37	53	43	37	31
0.80	65	54	47	64	53	47	62	53	46	40
1.00	73	63	56	72	62	55	70	63	55	48
1.25	80	70	63	79	70	63	76	68	62	55
1.50	85	76	69	84	75	69	81	73	68	60
2.00	92	84	78	90	83	77	87	81	76	68
2.50	96	88	83	94	87	82	90	85	80	72
3.00	99	93	87	97	91	86	93	88	84	76
4.00	103	98	93	100	96	92	96	93	89	81
5.00	105	101	97	103	99	95	98	95	93	84
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004										
Suspended										
SHRNOM = 1.25										

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LI
Test Date:2015-07-01

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.257
Humidity:46%
Test Distance:7.600m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: x-G1o-72-12v	WEIGHT:100g/m	
DIM.: 6*13.5mm	SPEC.:	SERIAL No.:
MFR.:	SUR.:13.5*1000mm	PROTECTION ANGLE:/

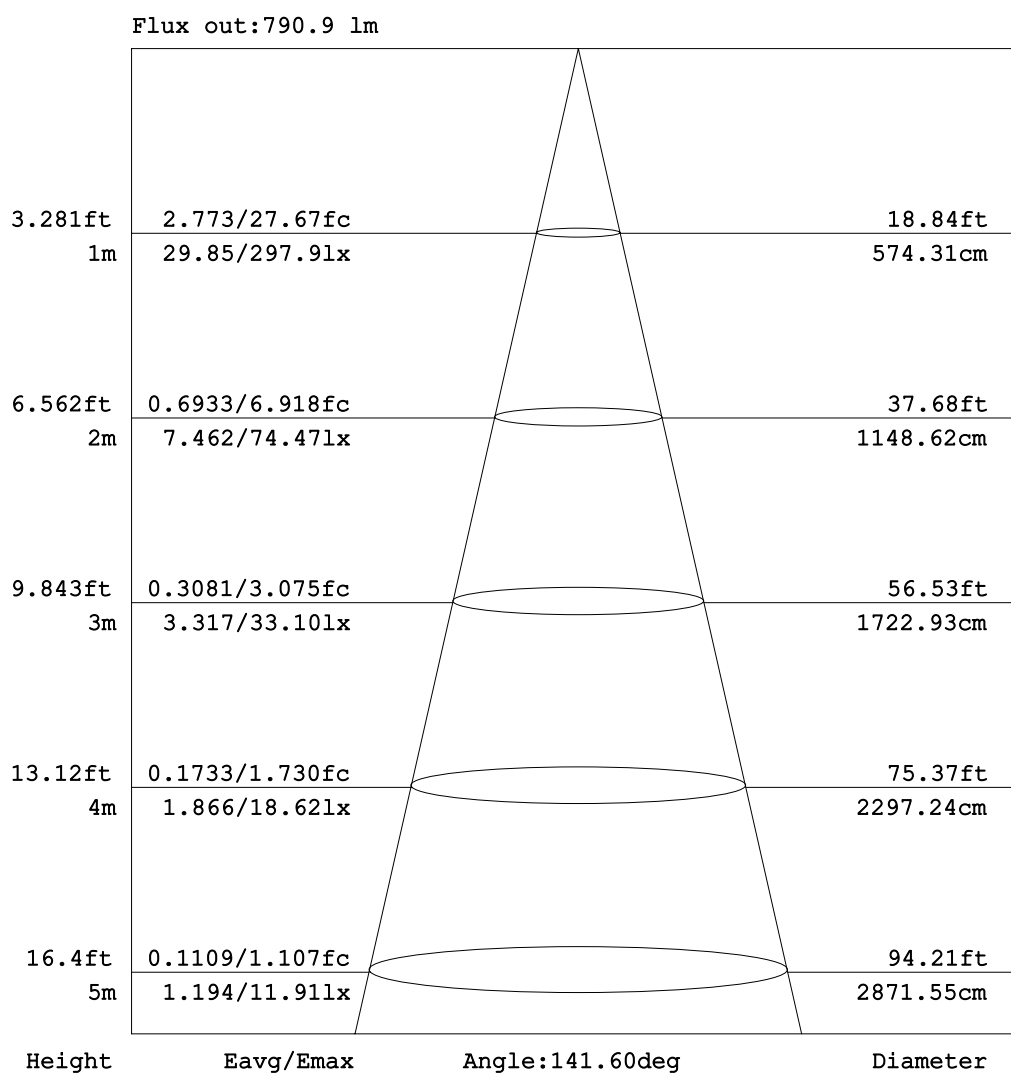


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LI
Test Date:2015-07-01

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.257
Humidity:46%
Test Distance:7.600m [K=1.0000]
Remarks:

AAI Figure

NAME: x-Glo-72-12v	WEIGHT:100g/m	
DIM.: 6*13.5mm	SPEC.:	SERIAL No.:
MFR.:	SUR.:13.5*1000mm	PROTECTION ANGLE:/



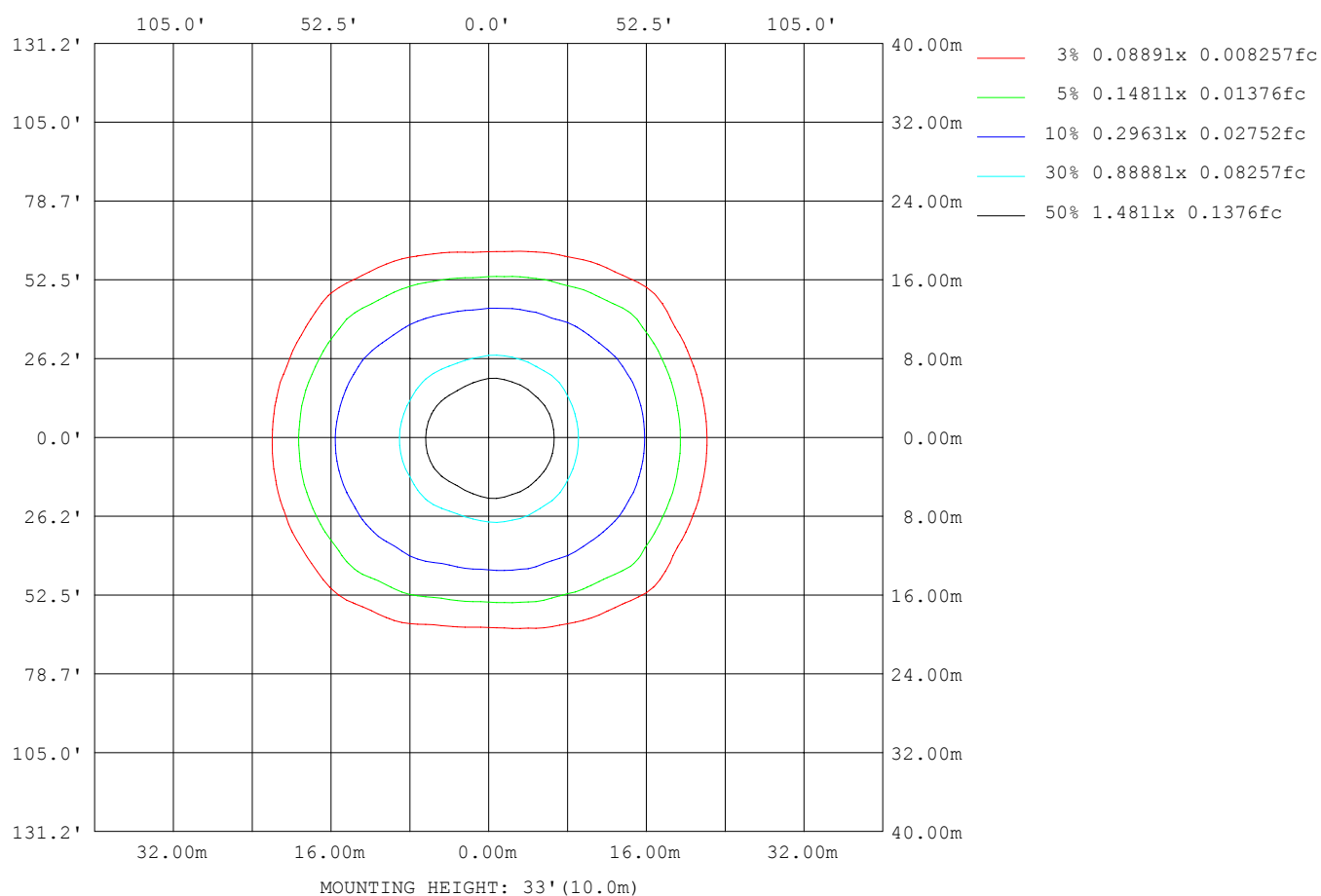
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LI
Test Date:2015-07-01

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.257
Humidity:46%
Test Distance:7.600m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

NAME: x-Glo-72-12v	WEIGHT:100g/m	
DIM.: 6*13.5mm	SPEC.:	SERIAL No.:
MFR.:	SUR.:13.5*1000mm	PROTECTION ANGLE:/



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LI
Test Date:2015-07-01

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.257
Humidity:46%
Test Distance:7.600m [K=1.0000]
Remarks:

Average Luminance Table (CIBSE)

NAME: x-Glo-72-12v	WEIGHT:100g/m	
DIM.: 6*13.5mm	SPEC.:	SERIAL No.:
MFR.:	SUR.:13.5*1000mm	PROTECTION ANGLE:/

Parameter description for average Luminance	Symbol	Value	Unit
Luminance in Azimuth Plane	Bc	refer Table 2	cd/sq.m.
Intensity at angle Gamma in given azimuth plane	I	from data	cd/klm
Number of lamps	N	1	
Output of each lamp(initial lumens as specified)	F	866.74	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.0135	sq.m.
Angle to the downward vertical from light centre	Gamma	from data	deg

Table 1. Calculation parameters for determination of CIBSE LG3:1996 Average Luminance

G	C plane(deg)																		
deg	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
55	25682	25538	25123	24355	22806	21548	19892	18987	17774	16859	17069	17806	20259	21283	23277	24143	24660	25119	25091
60	26759	26731	26604	26292	25118	21832	19826	18048	16504	15499	15934	17310	19890	21731	24066	24746	25256	25509	25355
65	23444	23622	23598	23485	24946	21859	19552	17079	14942	13793	14573	16768	19374	21795	23098	22930	22978	22977	22710
70	20471	20785	21227	21510	23342	21738	19141	16073	12833	11428	12793	16055	18652	21288	21749	21308	20584	19994	19696
75	19658	19926	20494	21363	22045	14018	0	0	0	0	0	0	0	13307	20692	20506	19811	19140	18704
80	20364	20709	21457	16403	0	0	0	0	0	0	0	0	0	0	0	14970	19835	19282	18163
85	24560	25565	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24402	22318

Table 2. Average Luminance(cd/sq.m.) for defined C plane,Gamma angle

CIBSE Category	Gamma (deg)	Average Luminance		Patch Luminance	
		maximum	specified	maximum	specified
		calculated	maximum	measured	maximum
Category 1	55 to 90	26759	200	---	500
Category 2	65 to 90	25565	200	---	500
Category 3	75 to 90	25565	200	---	500

Table 3. Tabulation of Average and Patch Luminance(cd/sq.m.) for defined CIBSE categories

No match

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LI
Test Date:2015-07-01

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.257
Humidity:46%
Test Distance:7.600m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.257
Humidity:46%
Test Distance:7.600m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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Humidity:46%
Test Distance:7.600m [K=1.0000]
Remarks

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