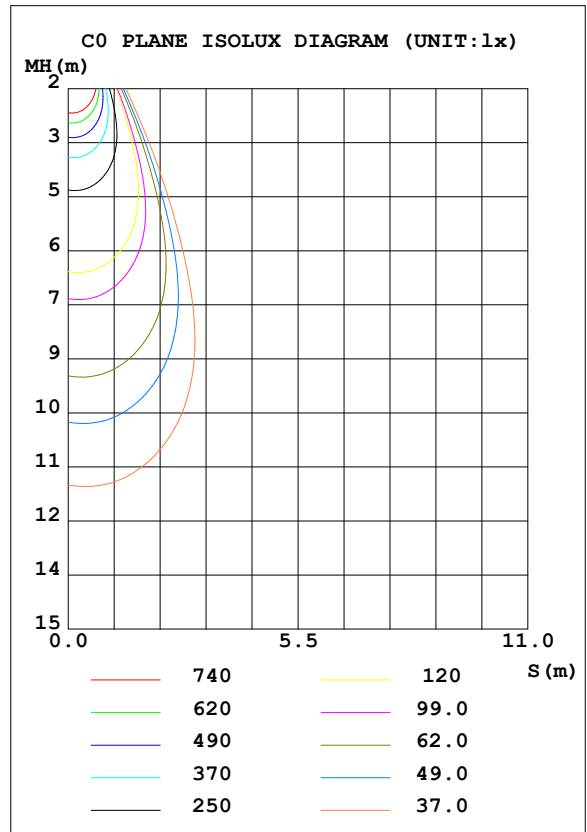
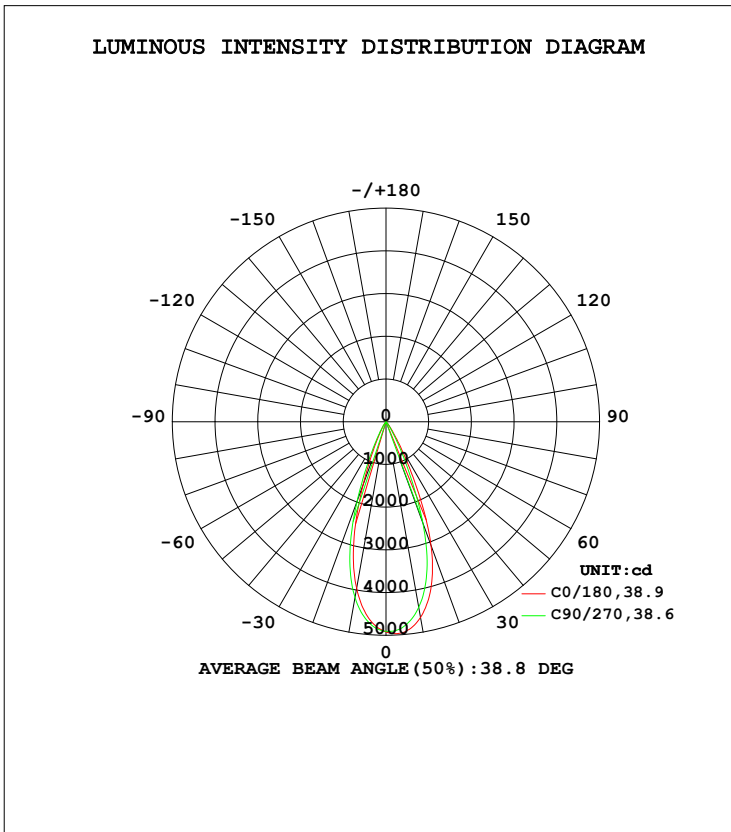


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:33.900V I:0.7000A P:23.730W PF:1.0000 Freq:0Hz Lamp Flux:2031.2x1 lm		
NAME: XDL E4-WRA-L49030-36DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: ϕ 108mm*H154mm	
MFR.: SBC XICATO CORP.		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 85.60 lm/W			
MODEL	XOB CRI 90 3000K	I _{max} (cd)	4967	S/MH (C0/180)	0.52
NOMINAL POWER (W)	18	LOR (%)	100.0	S/MH (C90/270)	0.56
RATED VOLTAGE (V)	36	TOTAL FLUX (lm)	2031.2	η UP, DN (C0-180)	0.0, 58.2
NOMINAL FLUX (lm)	2031.2	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 41.8
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	33.4	η down (%)	100.0	CIBSE SHR MAX	0.60



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Jasoan
 Test Date: 2024-05-22

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.421
 Humidity: 58%
 Test Distance: 9.016m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270				γ	Φ zone	Φ total	%lum, lamp
10	4652	4414	3962	4179				0- 10	440.5	440.5	21.7,21.7
20	3085	2531	1556	1978				10- 20	937.9	1378	67.9,67.9
30	683.1	450.6	222.3	302.3				20- 30	521.3	1900	93.5,93.5
40	98.76	76.81	30.60	44.17				30- 40	111.7	2011	99,99
50	8.595	5.495	1.441	1.723				40- 50	18.06	2029	99.9,99.9
60	0.8786	0.7177	0.4000	0.5093				50- 60	1.314	2031	100,100
70	0.1593	0.0827	0.0636	0.0889				60- 70	0.2923	2031	100,100
80	0.0700	0.0636	0.0636	0.0636				70- 80	0.0773	2031	100,100
90	0.0700	0.0636	0.0636	0.0636				80- 90	0.0711	2031	100,100
100								90-100			
110								100-110			
120								110-120			
130								120-130			
140								130-140			
150								140-150			
160								150-160			
170								160-170			
180								170-180			
DEG	LUMINOUS INTENSITY:cd								UNIT:lm		

Conical surface Flux(90deg): 2025.3 lm

%lum = 99.7%
 %lamp = 99.7%

Conical surface Flux(120deg): 2030.8 lm

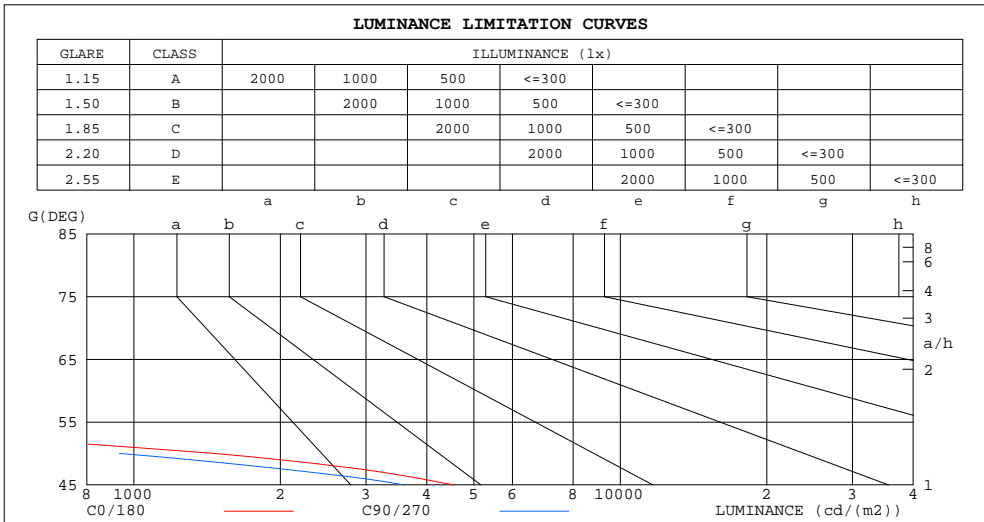
%lum = 100.0%
 %lamp = 100.0%

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2024-05-22

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
 Humidity:58%
 Test Distance:9.016m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:33.900V I:0.7000A P:23.730W PF:1.0000 Freq:0Hz Lamp Flux:2031.2x1 lm		
NAME: XDL E4-WRA-L49030-36DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H154mm	
MFR.: SBC XICATO CORP.		



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	88	80
80	44	40
75	30	27
70	51	26
65	119	84
60	192	157
55	287	240
50	1460	934
45	4549	3593

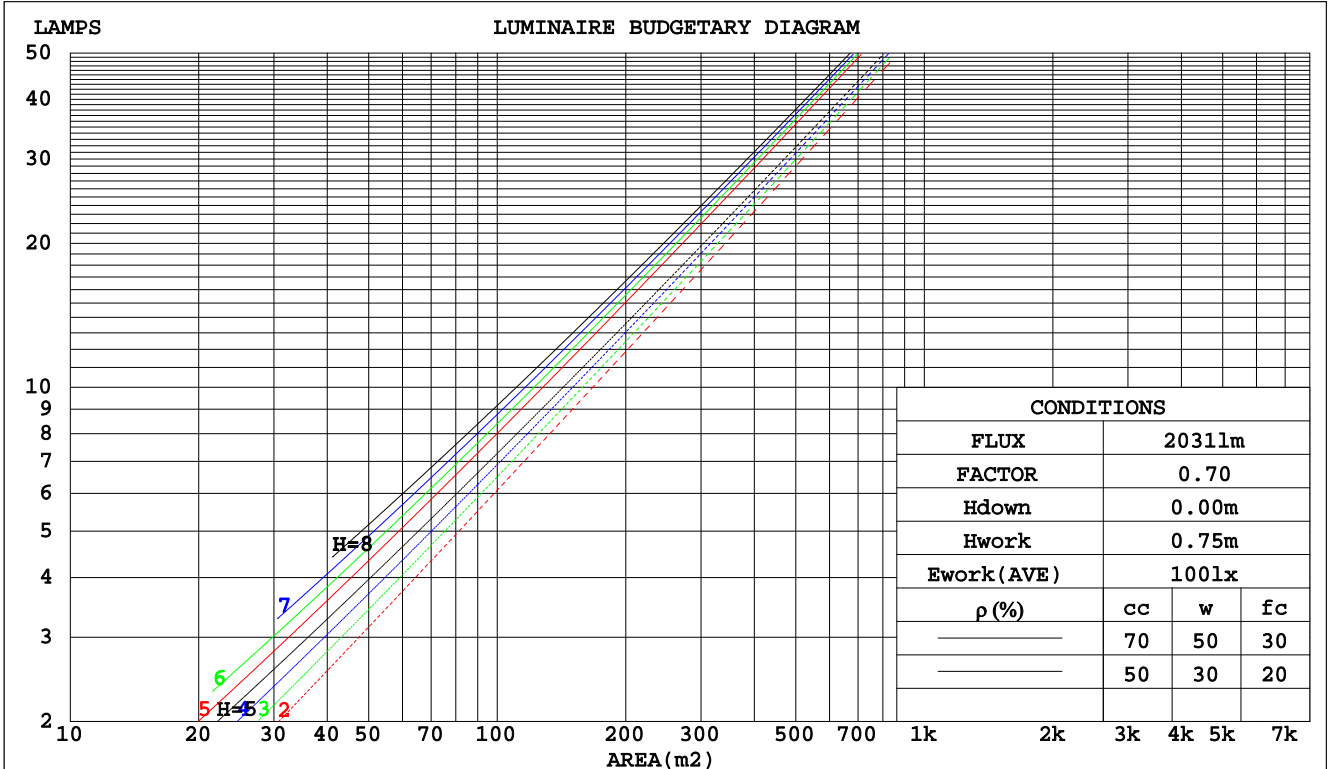
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Jasoan
 Test Date: 2024-05-22

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.421
 Humidity: 58%
 Test Distance: 9.016m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:33.900V I:0.7000A P:23.730W PF:1.0000 Freq:0Hz Lamp Flux:2031.2x1 lm		
NAME: XDL E4-WRA-L49030-36DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H154mm	
MFR.: SBC XICATO CORP.		

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															
	Coefficients of Utilization(CU)															
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	.00
1.0	1.12	1.10	1.08	1.10	1.08	1.07	1.06	1.05	1.03	1.02	1.01	1.00	.99	.98	.97	.96
2.0	1.06	1.03	1.00	1.05	1.02	.99	1.02	.99	.97	.99	.97	.95	.96	.94	.93	.92
3.0	1.01	.97	.94	.90	.96	.93	.97	.94	.92	.95	.92	.90	.93	.91	.89	.88
4.0	.96	.92	.89	.95	.91	.88	.93	.90	.87	.91	.89	.86	.90	.87	.85	.84
5.0	.92	.88	.84	.91	.87	.84	.90	.86	.83	.88	.85	.82	.87	.84	.82	.80
6.0	.88	.84	.80	.88	.83	.80	.86	.82	.79	.85	.81	.79	.84	.81	.78	.77
7.0	.85	.80	.77	.84	.80	.76	.83	.79	.76	.82	.78	.76	.81	.78	.75	.74
8.0	.81	.77	.73	.81	.76	.73	.80	.76	.73	.79	.75	.73	.78	.75	.72	.71
9.0	.78	.74	.70	.78	.73	.70	.77	.73	.70	.76	.73	.70	.75	.72	.70	.69
10.0	.75	.71	.68	.75	.71	.68	.74	.70	.68	.74	.70	.67	.73	.70	.67	.66



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Jasoan
 Test Date: 2024-05-22

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.421
 Humidity: 58%
 Test Distance: 9.016m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:33.900V I:0.7000A P:23.730W PF:1.0000 Freq:0Hz Lamp Flux:2031.2x1 lm		
NAME: XDL E4-WRA-L49030-36DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H154mm	
MFR.: SBC XICATO CORP.		

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.148	.084	.027	.142	.081	.026	.129	.074	.024	.118	.068	.022	.107	.062	.020	
2.0	.139	.076	.023	.133	.073	.023	.123	.068	.021	.113	.064	.020	.105	.059	.019	
3.0	.130	.069	.021	.126	.067	.020	.117	.064	.019	.109	.060	.018	.102	.056	.017	
4.0	.123	.064	.019	.119	.062	.018	.112	.059	.018	.105	.056	.017	.099	.054	.016	
5.0	.117	.060	.017	.114	.058	.017	.107	.056	.016	.101	.053	.016	.096	.051	.015	
6.0	.111	.056	.016	.108	.055	.016	.103	.053	.015	.098	.051	.015	.093	.049	.015	
7.0	.106	.053	.015	.104	.052	.015	.099	.050	.014	.094	.048	.014	.090	.047	.014	
8.0	.102	.050	.014	.100	.049	.014	.095	.048	.014	.091	.046	.013	.088	.045	.013	
9.0	.098	.047	.013	.096	.047	.013	.092	.045	.013	.088	.044	.013	.085	.043	.012	
10.0	.094	.045	.013	.092	.045	.012	.089	.043	.012	.086	.043	.012	.083	.042	.012	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.169	.158	.147	.145	.135	.127	.099	.093	.088	.057	.054	.051	.018	.017	.016	
2.0	.152	.133	.117	.130	.114	.101	.089	.079	.070	.051	.046	.041	.016	.015	.013	
3.0	.138	.113	.094	.118	.098	.082	.081	.068	.057	.047	.040	.034	.015	.013	.011	
4.0	.126	.098	.077	.108	.085	.067	.074	.059	.047	.043	.035	.028	.014	.011	.009	
5.0	.116	.086	.064	.100	.074	.056	.069	.052	.039	.040	.031	.023	.013	.010	.008	
6.0	.108	.076	.054	.092	.066	.047	.064	.046	.033	.037	.027	.020	.012	.009	.007	
7.0	.100	.068	.046	.086	.059	.040	.060	.042	.028	.035	.024	.017	.011	.008	.006	
8.0	.094	.062	.039	.081	.054	.034	.056	.038	.024	.033	.022	.015	.011	.007	.005	
9.0	.089	.056	.034	.077	.049	.030	.053	.034	.021	.031	.020	.013	.010	.007	.004	
10.0	.084	.052	.030	.073	.045	.026	.050	.032	.019	.029	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2024-05-22

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
 Humidity:58%
 Test Distance:9.016m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:33.900V I:0.7000A P:23.730W PF:1.0000 Freq:0Hz Lamp Flux:2031.2x1 lm		
NAME: XDL E4-WRA-L49030-36DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H154mm	
MFR.: SBC XICATO CORP.		

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	12.2	13.0	12.4	13.1	13.3	10.6	11.3	10.8	11.5	11.6
3H	12.1	12.8	12.3	12.9	13.1	10.4	11.1	10.7	11.3	11.5
4H	12.0	12.6	12.3	12.9	13.1	10.3	11.0	10.6	11.2	11.4
6H	11.9	12.5	12.2	12.8	13.0	10.3	10.9	10.5	11.1	11.3
8H	11.9	12.5	12.2	12.7	13.0	10.2	10.8	10.5	11.0	11.3
12H	11.8	12.4	12.1	12.6	12.9	10.2	10.7	10.5	11.0	11.3
4H 2H	12.0	12.6	12.3	12.9	13.1	10.3	11.0	10.6	11.2	11.4
3H	11.8	12.4	12.1	12.6	12.9	10.2	10.7	10.5	11.0	11.3
4H	11.7	12.2	12.1	12.5	12.8	10.1	10.6	10.4	10.9	11.2
6H	11.6	12.1	12.0	12.4	12.8	10.0	10.4	10.3	10.8	11.1
8H	11.6	12.0	12.0	12.3	12.7	9.9	10.3	10.3	10.7	11.1
12H	11.5	11.9	11.9	12.3	12.7	9.9	10.3	10.3	10.6	11.0
8H 4H	11.6	12.0	12.0	12.3	12.7	9.9	10.3	10.3	10.7	11.1
6H	11.5	11.8	11.9	12.2	12.6	9.8	10.2	10.2	10.5	11.0
8H	11.4	11.7	11.8	12.1	12.6	9.7	10.1	10.2	10.5	10.9
12H	11.3	11.6	11.8	12.0	12.5	9.7	10.0	10.2	10.4	10.9
12H 4H	11.5	11.9	11.9	12.3	12.7	9.9	10.3	10.3	10.6	11.0
6H	11.4	11.7	11.8	12.1	12.6	9.7	10.1	10.2	10.5	10.9
8H	11.3	11.6	11.8	12.0	12.5	9.7	10.0	10.2	10.4	10.9
Variations with the observer position at spacings:										
S = 1.0H	+ 3.9 / -22.0					+ 3.3 / -21.7				
1.5H	+ 6.4 / -20.0					+ 5.9 / -19.2				
2.0H	+ 7.9 / -13.8					+ 7.6 / -13.1				

CIE Pub.117, 2031 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 2.5)
 Area: 0.00915624 m2

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2024-05-22

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
 Humidity:58%
 Test Distance:9.016m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:33.900V I:0.7000A P:23.730W PF:1.0000 Freq:0Hz Lamp Flux:2031.2x1 lm		
NAME: XDL E4-WRA-L49030-36DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H154mm	
MFR.: SBC XICATO CORP.		

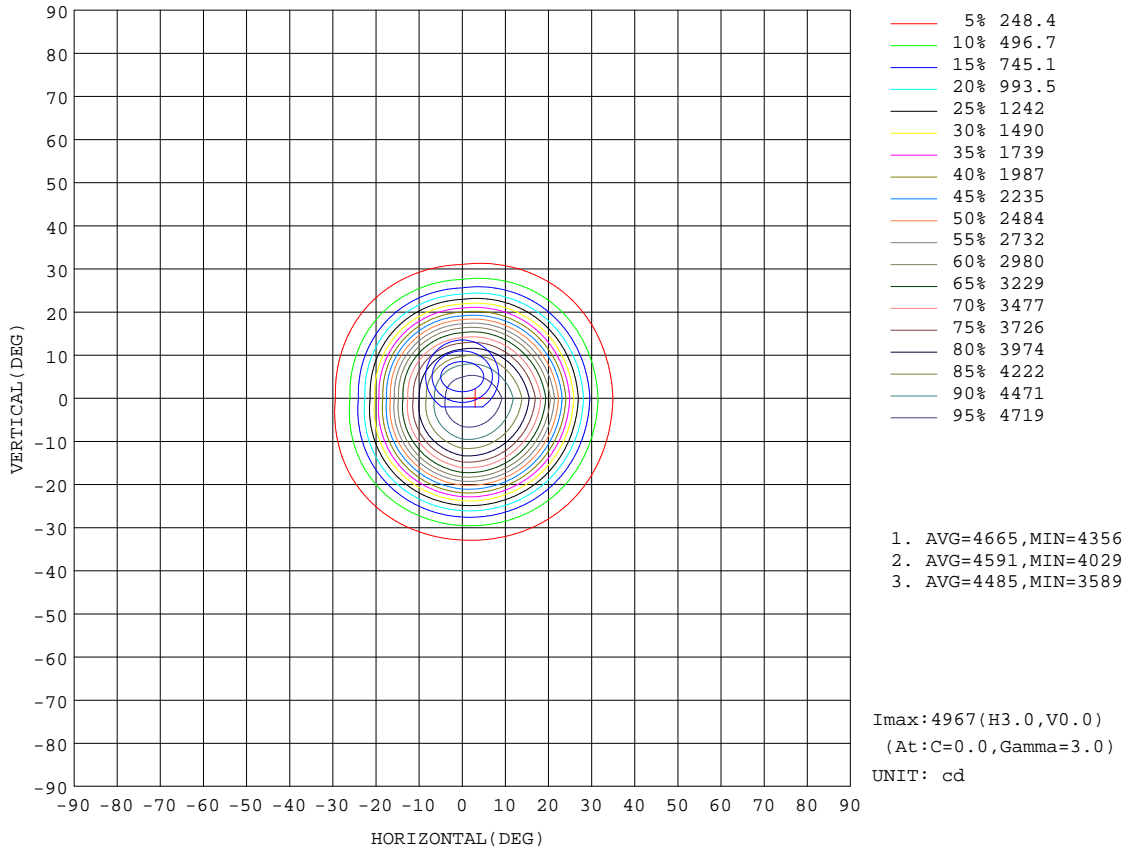
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	91	85	82	90	85	82	90	85	82	78
0.80	98	93	89	97	92	89	96	92	89	86
1.00	102	97	93	101	96	93	99	96	93	89
1.25	105	101	98	104	100	97	102	99	96	93
1.50	108	103	101	106	103	100	104	101	99	95
2.00	110	106	103	108	105	102	106	103	101	96
2.50	111	108	105	110	107	104	107	104	102	97
3.00	113	110	107	111	108	106	108	106	104	98
4.00	115	112	110	113	110	109	109	107	106	99
5.00	116	114	112	114	112	110	110	108	107	100
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2024-05-22

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
 Humidity:58%
 Test Distance:9.016m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:33.900V I:0.7000A P:23.730W PF:1.0000 Freq:0Hz Lamp Flux:2031.2x1 lm		
NAME: XDL E4-WRA-L49030-36DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H154mm	
MFR.: SBC XICATO CORP.		



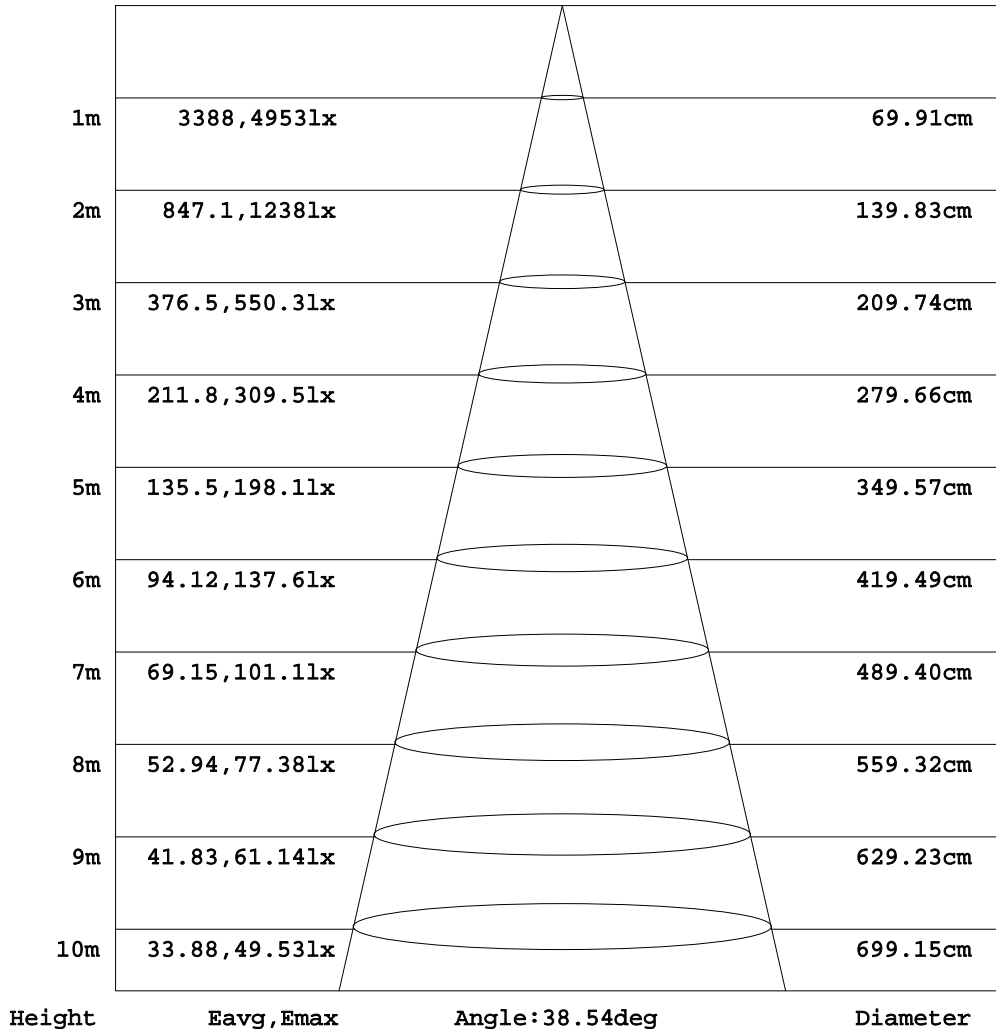
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Jasoan
 Test Date: 2024-05-22

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.421
 Humidity: 58%
 Test Distance: 9.016m [K=1.0000]
 Remarks:

AAI Figure

Test:U:33.900V I:0.7000A P:23.730W PF:1.0000 Freq:0Hz Lamp Flux:2031.2x1 lm		
NAME: XDL E4-WRA-L49030-36DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H154mm	
MFR.: SBC XICATO CORP.		

Flux out:1335 lm



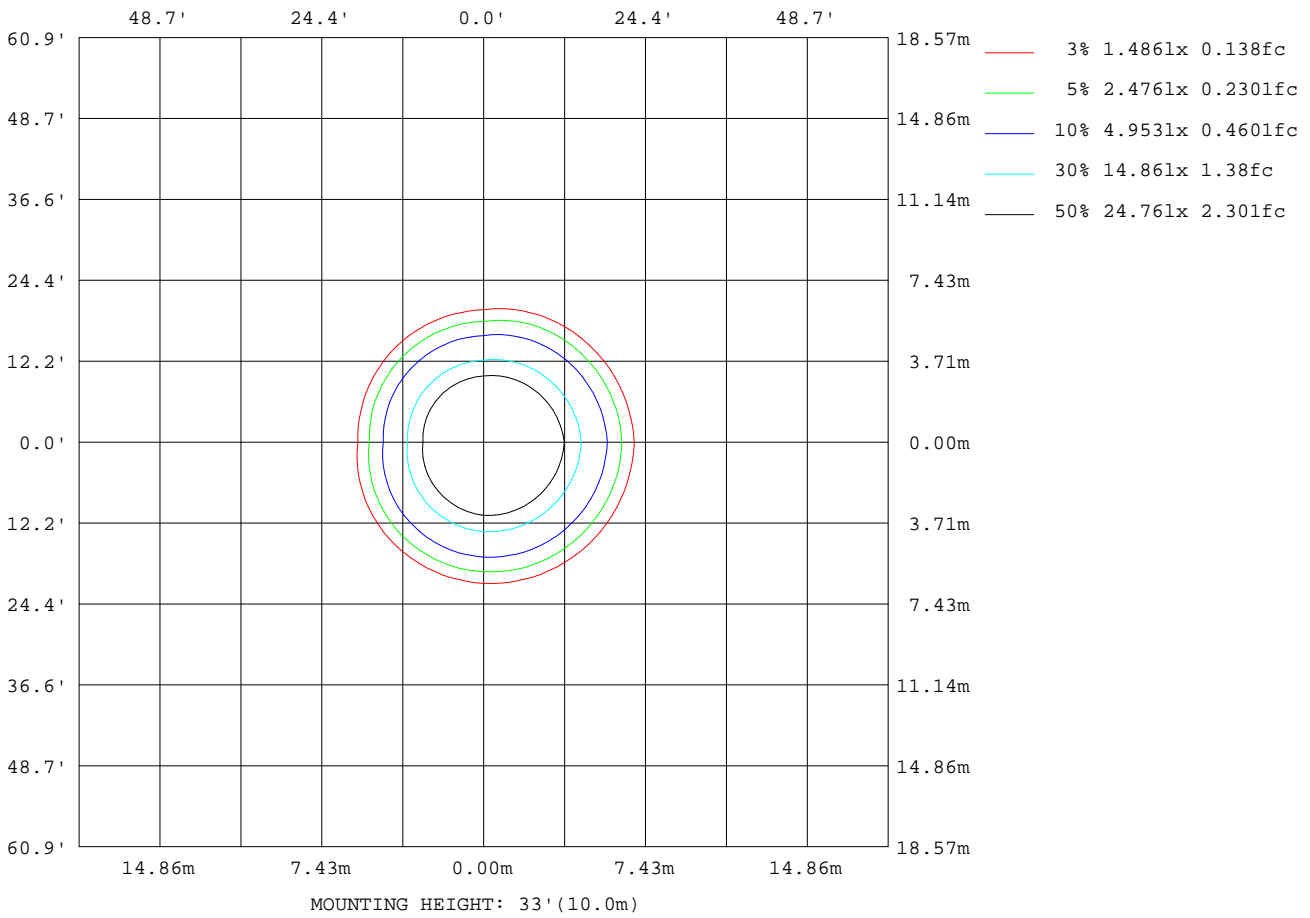
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2024-05-22

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
 Humidity:58%
 Test Distance:9.016m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:33.900V I:0.7000A P:23.730W PF:1.0000 Freq:0Hz Lamp Flux:2031.2x1 lm		
NAME: XDL E4-WRA-L49030-36DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H154mm	
MFR.: SBC XICATO CORP.		



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2024-05-22

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
Humidity:58%
Test Distance:9.016m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:33.900V I:0.7000A P:23.730W PF:1.0000 Freq:0Hz Lamp Flux:2031.2x1 lm		
NAME: XDL E4-WRA-L49030-36DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H154mm	
MFR.: SBC XICATO CORP.		

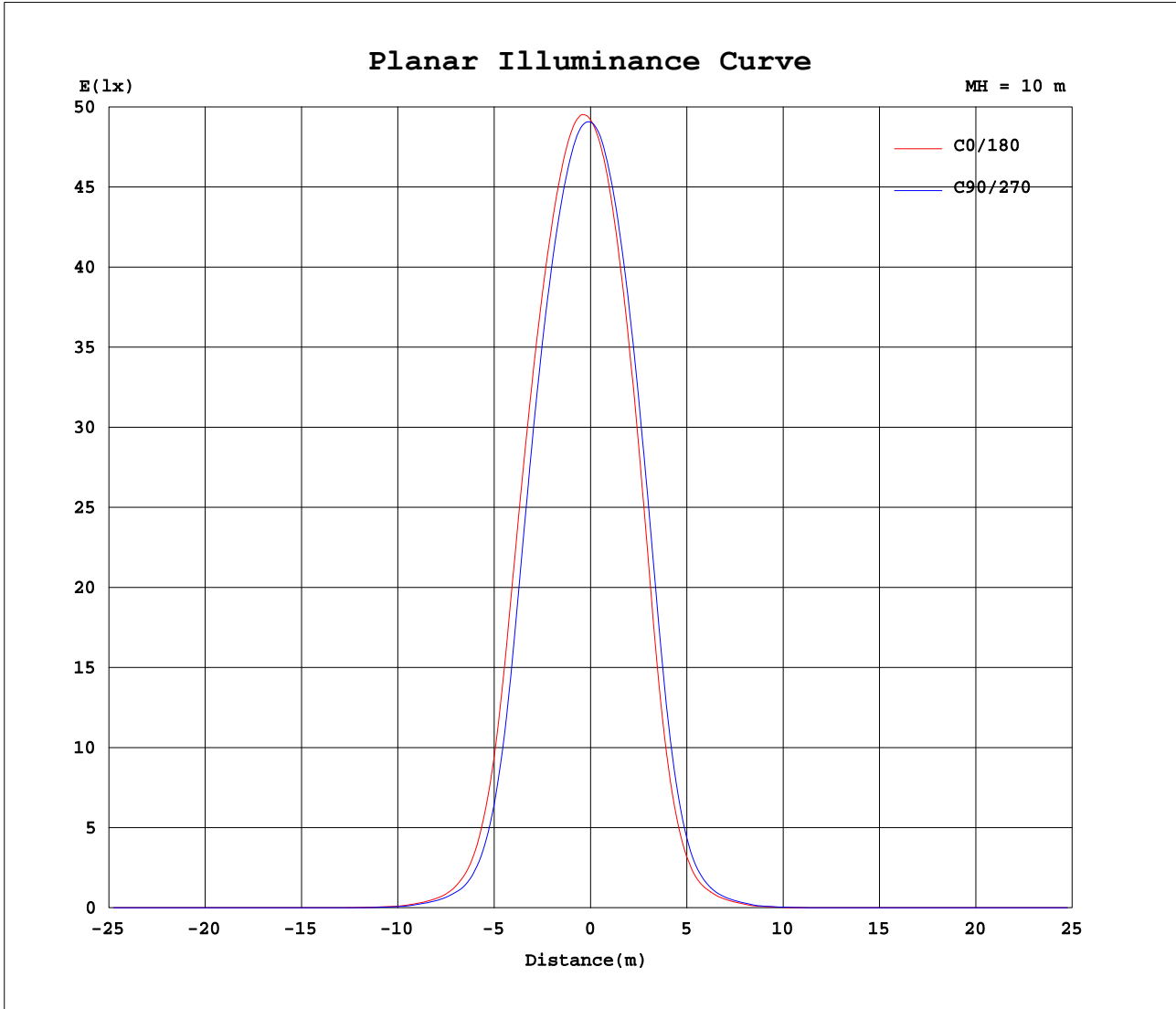
AvgL	cd/m2
L_0~180 (65) av	72
L_0~180 (75) av	28
L_0~180 (85) av	84
L_90~270 (65) av	64
L_90~270 (75) av	28
L_90~270 (85) av	80
L_45 (65) av	64
L_45 (75) av	28
L_45 (85) av	81

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2024-05-22

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
 Humidity:58%
 Test Distance:9.016m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jasoan
Test Date: 2024-05-22

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.421
Humidity: 58%
Test Distance: 9.016m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:33.900V I:0.7000A P:23.730W PF:1.0000 Freq:0Hz Lamp Flux:2031.2x1 lm		
NAME: XDL E4-WRA-L49030-36DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H154mm	
MFR.: SBC XICATO CORP.		

Table--1

UNIT: cd

C (DEG) \ γ (DEG)	0	90	180	270															
0	4920	4906	4920	4906															
5	4941	4812	4621	4709															
10	4652	4414	3962	4179															
15	4058	3687	2921	3272															
20	3085	2531	1556	1978															
25	1718	1210	615	839															
30	683	451	222	302															
35	245	176	96.5	121															
40	98.8	76.8	30.6	44.2															
45	29.5	23.3	9.14	13.0															
50	8.60	5.49	1.44	1.72															
55	1.51	1.26	0.82	0.96															
60	0.88	0.72	0.40	0.51															
65	0.46	0.32	0.10	0.17															
70	0.16	0.08	0.06	0.09															
75	0.07	0.06	0.06	0.07															
80	0.07	0.06	0.06	0.06															
85	0.07	0.06	0.06	0.06															
90	0.07	0.06	0.06	0.06															

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2024-05-22

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
 Humidity:58%
 Test Distance:9.016m [K=1.0000]
 Remarks: