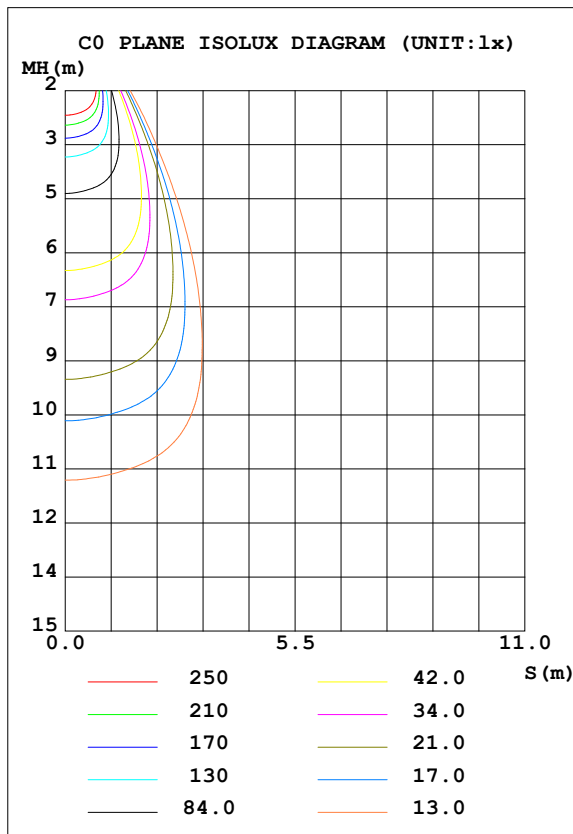
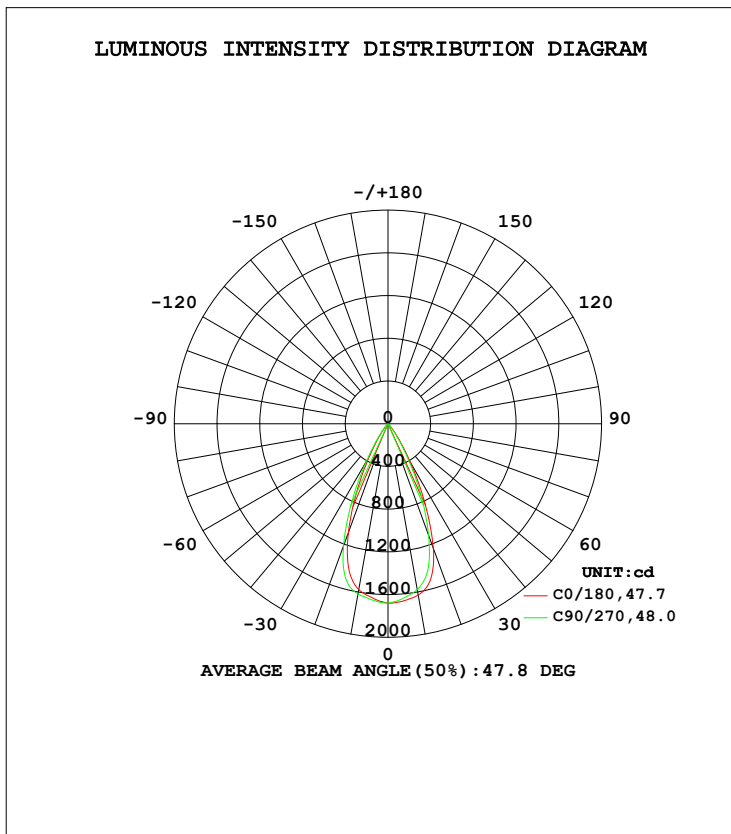


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:33.700V I:0.3500A P:11.795W PF:1.0000 Freq:0Hz Lamp Flux:1022.82x1 lm		
NAME: XDL E4-WRA-L29030-50DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
MFR.: SBC XICATO CORP.		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 86.72 lm/W			
MODEL	XOB CRI 90 3000K	I <sub>max</sub> (cd)	1680	S/MH (C0/180)	0.70
NOMINAL POWER (W)	13	LOR (%)	100.0	S/MH (C90/270)	0.73
RATED VOLTAGE (V)	36	TOTAL FLUX (lm)	1022.8	η UP, DN (C0-180)	0.0, 50.7
NOMINAL FLUX (lm)	1022.82	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 49.3
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE (V)	34	η down (%)	100.0	CIBSE SHR MAX	0.75



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	1629	1578	1577	1619					0- 10	156.0	156.0	15.3,15.3
20	1241	1111	1084	1219					10- 20	401.4	557.4	54.5,54.5
30	430.6	365.1	332.3	406.5					20- 30	340.3	897.7	87.8,87.8
40	66.17	48.56	51.00	61.11					30- 40	109.6	1007	98.5,98.5
50	2.161	1.083	1.264	2.469					40- 50	14.90	1022	99.9,99.9
60	0.2801	0.1904	0.1778	0.2864					50- 60	0.4644	1023	100,100
70	0.0636	0.0318	0.0318	0.0764					60- 70	0.1162	1023	100,100
80	0.0318	0.0318	0.0318	0.0382					70- 80	0.0406	1023	100,100
90	0.0318	0.0318	0.0318	0.0318					80- 90	0.0347	1023	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): 1019.1 lm

%lum = 99.6%  
 %lamp = 99.6%

Conical surface Flux(120deg): 1022.6 lm

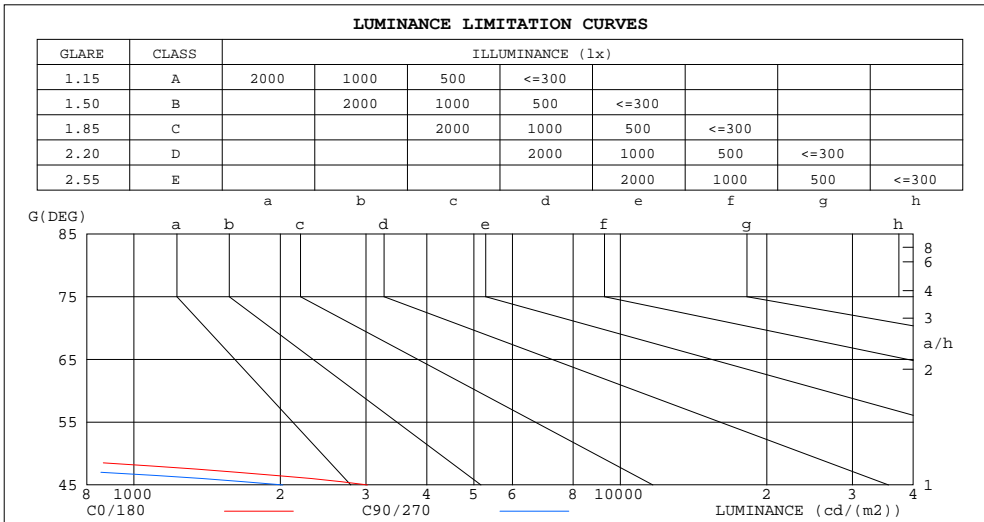
%lum = 100.0%  
 %lamp = 100.0%

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:33.700V I:0.3500A P:11.795W PF:1.0000 Freq:0Hz Lamp Flux:1022.82x1 lm		
NAME: XDL E4-WRA-L29030-50DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
MFR.: SBC XICATO CORP.		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	40	40
80	20	20
75	16	13
70	20	10
65	38	18
60	61	42
55	91	71
50	367	184
45	3021	2023

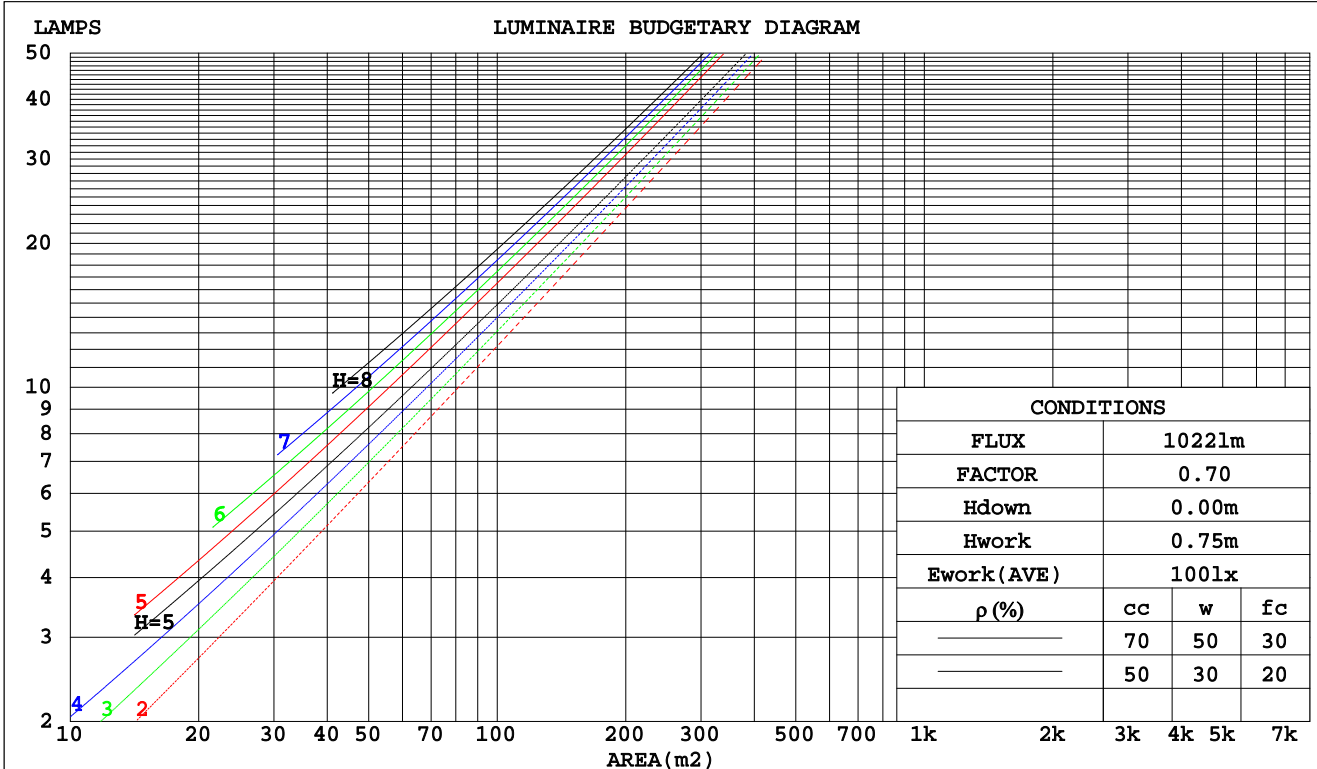
C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Jasoan  
 Test Date: 2024-05-22

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:33.700V I:0.3500A P:11.795W PF:1.0000 Freq:0Hz Lamp Flux:1022.82x1 lm		
NAME: XDL E4-WRA-L29030-50DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
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	1.00
1.0	1.12	1.10	1.08	1.10	1.08	1.06	1.06	1.04	1.03	1.02	1.01	.00	.99	.98	.97	.95
2.0	1.05	1.02	.99	1.04	1.00	.98	1.00	.98	.95	.97	.95	.93	.95	.93	.92	.90
3.0	.99	.95	.92	.98	.94	.91	.95	.92	.89	.93	.90	.88	.91	.89	.87	.85
4.0	.94	.89	.86	.93	.88	.85	.91	.87	.84	.89	.86	.83	.87	.84	.82	.81
5.0	.89	.84	.80	.88	.84	.80	.87	.82	.79	.85	.81	.79	.83	.80	.78	.77
6.0	.85	.80	.76	.84	.79	.76	.83	.78	.75	.81	.77	.75	.80	.77	.74	.73
7.0	.81	.75	.72	.80	.75	.72	.79	.74	.71	.78	.74	.71	.77	.73	.70	.69
8.0	.77	.72	.68	.76	.71	.68	.75	.71	.68	.74	.70	.67	.73	.70	.67	.66
9.0	.73	.68	.65	.73	.68	.65	.72	.68	.64	.71	.67	.64	.70	.67	.64	.63
10.0	.70	.65	.62	.70	.65	.62	.69	.65	.61	.68	.64	.61	.68	.64	.61	.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:

WEC AND CCEC

Test:U:33.700V I:0.3500A P:11.795W PF:1.0000 Freq:0Hz Lamp Flux:1022.82x1 lm		
NAME: XDL E4-WRA-L29030-50DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
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	.159	.090	.029	.152	.087	.028	.140	.080	.026	.128	.074	.024	.118	.068	.022	
2.0	.150	.082	.025	.145	.080	.025	.134	.075	.023	.125	.070	.022	.116	.065	.021	
3.0	.142	.076	.023	.137	.074	.022	.129	.070	.021	.121	.066	.020	.113	.063	.019	
4.0	.135	.070	.021	.131	.069	.020	.123	.065	.020	.116	.063	.019	.110	.060	.018	
5.0	.129	.066	.019	.125	.064	.019	.119	.062	.018	.113	.059	.018	.107	.057	.017	
6.0	.123	.062	.018	.120	.060	.017	.114	.058	.017	.109	.057	.017	.104	.055	.016	
7.0	.118	.058	.016	.115	.057	.016	.110	.056	.016	.105	.054	.016	.101	.052	.015	
8.0	.113	.055	.015	.110	.054	.015	.106	.053	.015	.102	.052	.015	.098	.050	.015	
9.0	.108	.052	.015	.106	.052	.015	.102	.051	.014	.098	.049	.014	.095	.048	.014	
10.0	.104	.050	.014	.102	.049	.014	.099	.048	.014	.095	.047	.013	.092	.046	.013	

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	.170	.157	.146	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.153	.133	.115	.131	.114	.100	.090	.079	.069	.052	.046	.041	.017	.015	.013	
3.0	.140	.113	.092	.120	.098	.080	.082	.068	.056	.048	.040	.033	.015	.013	.011	
4.0	.129	.098	.075	.110	.085	.065	.076	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.119	.087	.062	.103	.075	.054	.071	.052	.038	.041	.031	.023	.013	.010	.007	
6.0	.111	.077	.052	.096	.067	.045	.066	.047	.032	.038	.027	.019	.012	.009	.006	
7.0	.105	.069	.044	.090	.060	.039	.062	.042	.027	.036	.025	.016	.012	.008	.005	
8.0	.099	.063	.038	.085	.054	.033	.059	.038	.024	.034	.023	.014	.011	.007	.005	
9.0	.094	.057	.033	.081	.050	.029	.056	.035	.020	.033	.021	.012	.011	.007	.004	
10.0	.089	.053	.029	.077	.046	.025	.053	.032	.018	.031	.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:33.700V I:0.3500A P:11.795W PF:1.0000 Freq:0Hz Lamp Flux:1022.82x1 lm		
NAME: XDL E4-WRA-L29030-50DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
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	12.4	13.2	12.6	13.3	13.5	11.6	12.4	11.8	12.5	12.7
3H	12.2	13.0	12.5	13.2	13.3	11.4	12.1	11.6	12.3	12.5
4H	12.1	12.8	12.4	13.0	13.3	11.3	12.0	11.6	12.2	12.5
6H	12.0	12.7	12.3	12.9	13.2	11.2	11.9	11.5	12.1	12.4
8H	12.0	12.6	12.3	12.9	13.1	11.2	11.8	11.5	12.1	12.3
12H	11.9	12.6	12.3	12.8	13.1	11.1	11.7	11.4	12.0	12.3
4H 2H	12.1	12.8	12.4	13.0	13.3	11.3	12.0	11.6	12.2	12.5
3H	11.9	12.6	12.3	12.8	13.1	11.1	11.7	11.4	12.0	12.3
4H	11.8	12.4	12.2	12.7	13.0	11.0	11.6	11.4	11.9	12.2
6H	11.8	12.2	12.1	12.6	12.9	10.9	11.4	11.3	11.8	12.1
8H	11.7	12.2	12.1	12.5	12.9	10.9	11.3	11.3	11.7	12.1
12H	11.6	12.1	12.1	12.4	12.8	10.8	11.2	11.2	11.6	12.0
8H 4H	11.7	12.2	12.1	12.5	12.9	10.9	11.3	11.3	11.7	12.1
6H	11.6	12.0	12.0	12.4	12.8	10.8	11.2	11.2	11.5	12.0
8H	11.5	11.9	12.0	12.3	12.7	10.7	11.1	11.2	11.5	11.9
12H	11.5	11.8	11.9	12.2	12.7	10.7	10.9	11.1	11.4	11.9
12H 4H	11.6	12.1	12.1	12.4	12.8	10.8	11.2	11.2	11.6	12.0
6H	11.5	11.9	12.0	12.3	12.7	10.7	11.1	11.2	11.5	11.9
8H	11.5	11.8	11.9	12.2	12.7	10.7	10.9	11.1	11.4	11.9
Variations with the observer position at spacings:										
S = 1.0H	+ 4.3 / -27.2					+ 3.9 / -27.4				
1.5H	+ 6.9 / -25.4					+ 6.6 / -24.7				
2.0H	+ 8.9 / -18.2					+ 8.7 / -16.5				

CIE Pub.117, 1023 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 0.1)  
 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:33.700V I:0.3500A P:11.795W PF:1.0000 Freq:0Hz Lamp Flux:1022.82x1 lm		
NAME: XDL E4-WRA-L29030-50DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
MFR.: SBC XICATO CORP.		

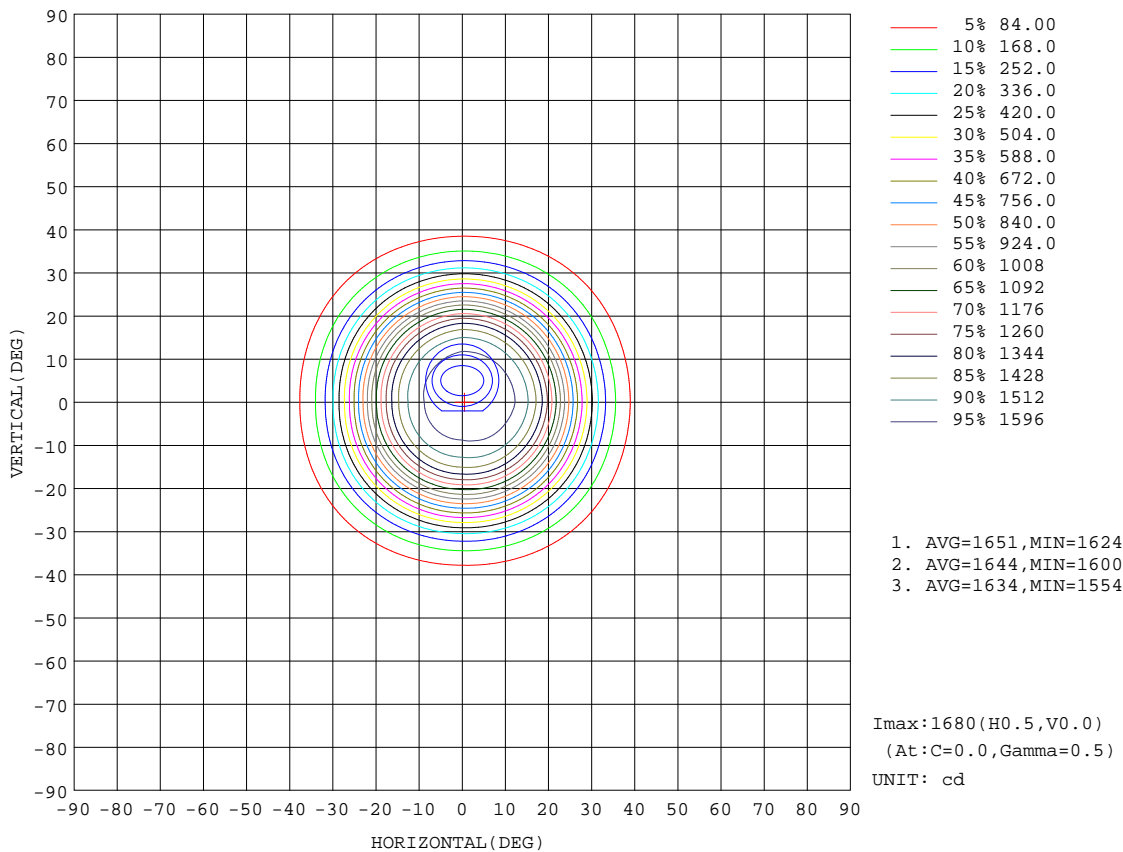
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	91	85	81	90	85	81	89	84	81	78
0.80	98	92	89	97	92	89	96	91	89	85
1.00	101	96	93	101	96	93	99	96	92	89
1.25	105	100	97	104	100	97	102	99	96	92
1.50	108	103	100	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	105	104	98
4.00	114	112	110	112	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:33.700V I:0.3500A P:11.795W PF:1.0000 Freq:0Hz Lamp Flux:1022.82x1 lm		
NAME: XDL E4-WRA-L29030-50DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
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

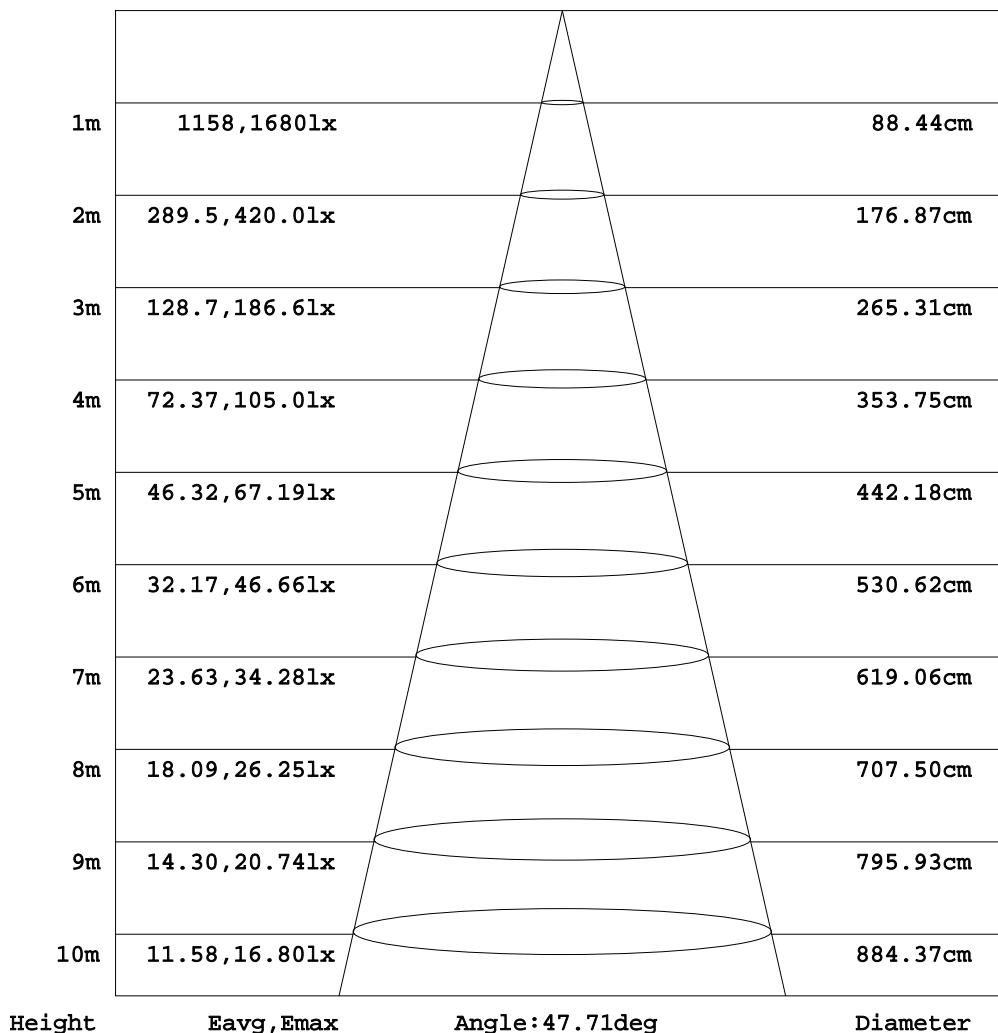
γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.421  
 Humidity:58%  
 Test Distance:9.016m [K=1.0000]  
 Remarks:



AAI Figure

Test:U:33.700V I:0.3500A P:11.795W PF:1.0000 Freq:0Hz Lamp Flux:1022.82x1 lm		
NAME: XDL E4-WRA-L29030-50DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
MFR.: SBC XICATO CORP.		

Flux out:721.1 lm



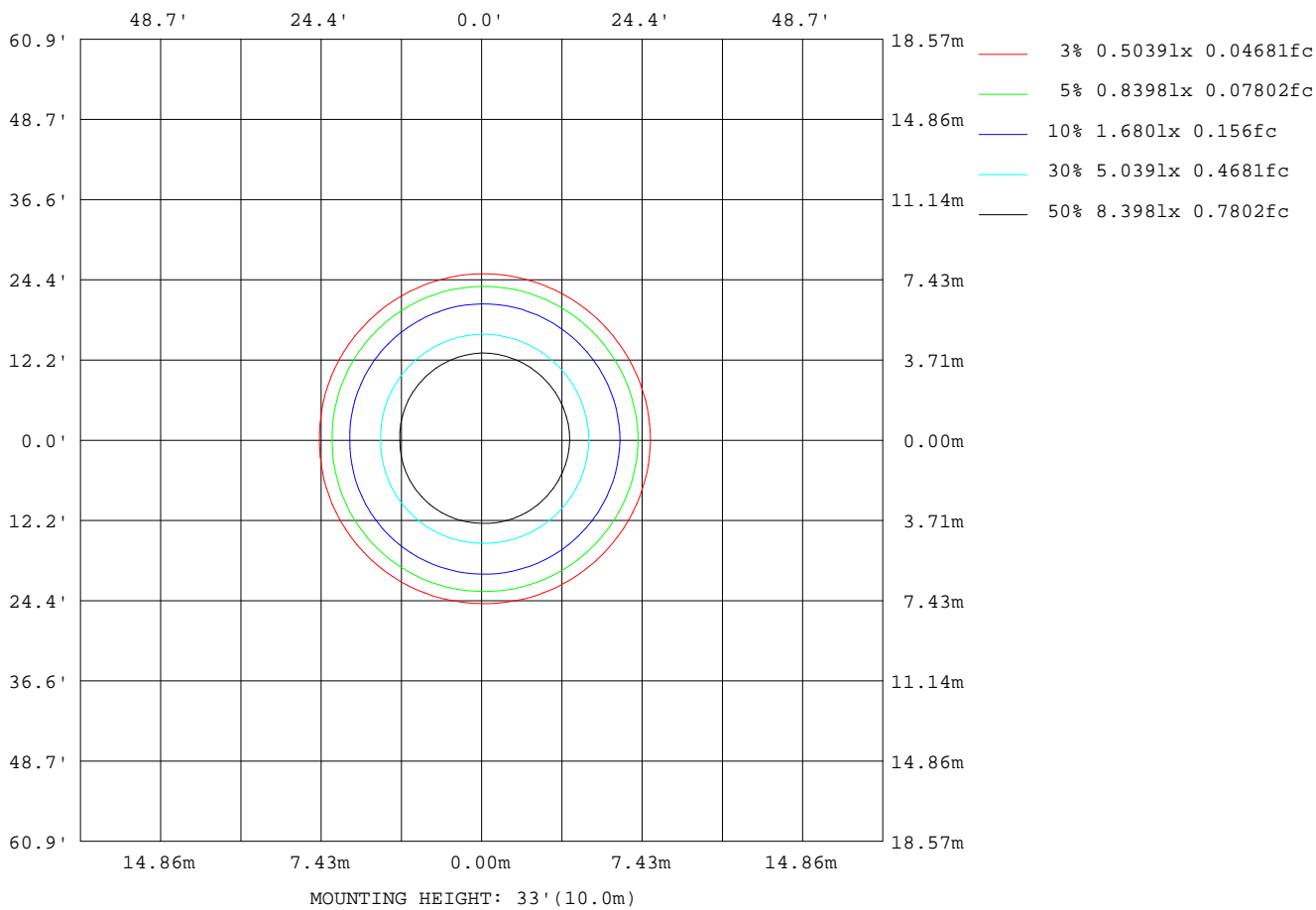
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:33.700V I:0.3500A P:11.795W PF:1.0000 Freq:0Hz Lamp Flux:1022.82x1 lm		
NAME: XDL E4-WRA-L29030-50DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
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:33.700V I:0.3500A P:11.795W PF:1.0000 Freq:0Hz Lamp Flux:1022.82x1 lm		
NAME: XDL E4-WRA-L29030-50DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
MFR.: SBC XICATO CORP.		

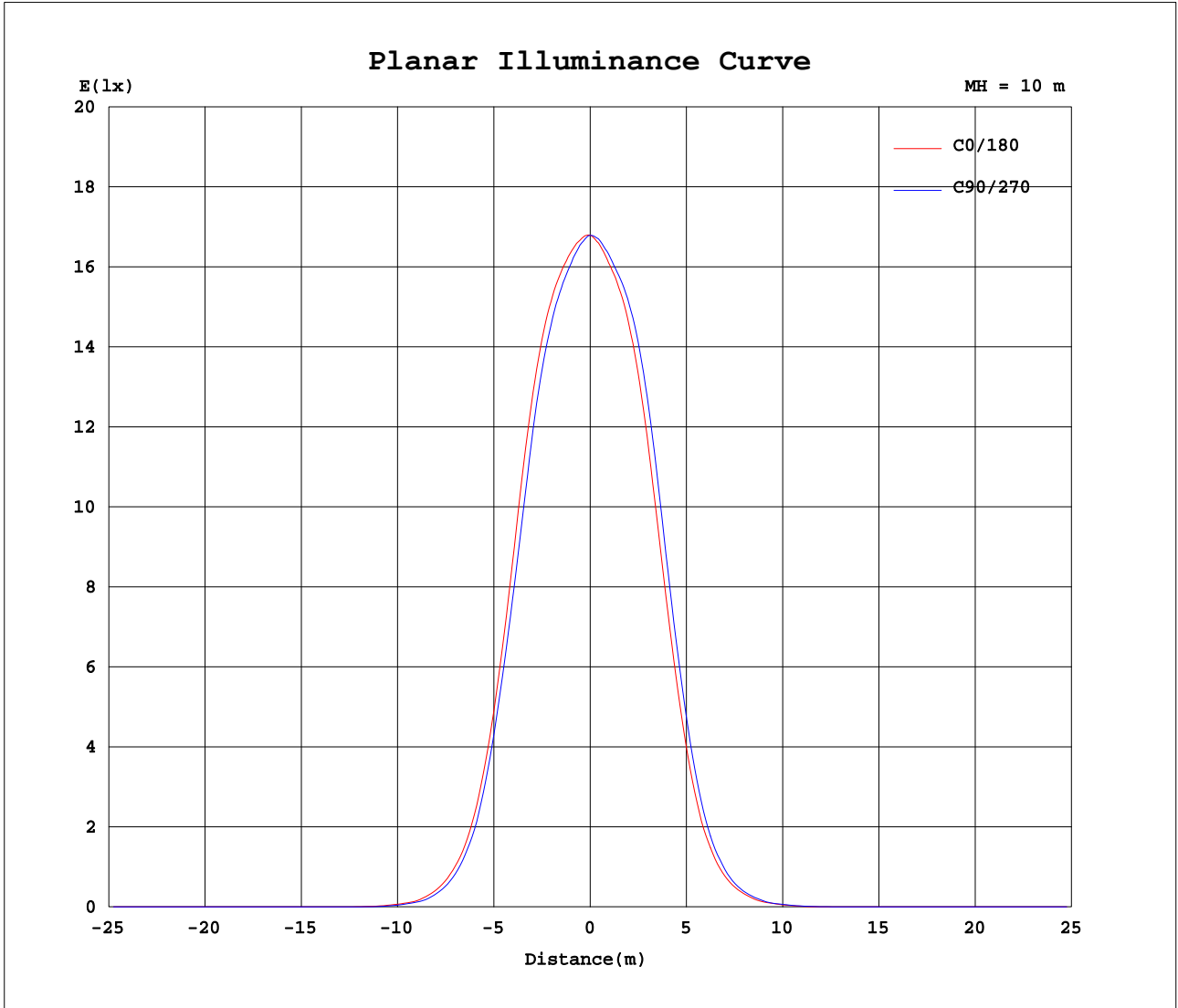
AvgL	cd/m2
L_0~180 (65) av	28
L_0~180 (75) av	15
L_0~180 (85) av	40
L_90~270 (65) av	31
L_90~270 (75) av	15
L_90~270 (85) av	40
L_45 (65) av	29
L_45 (75) av	15
L_45 (85) av	40

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:

