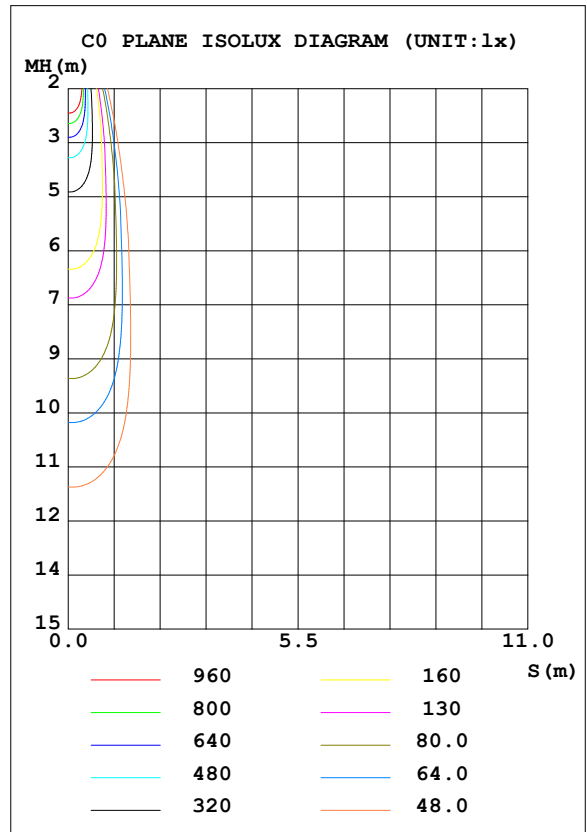
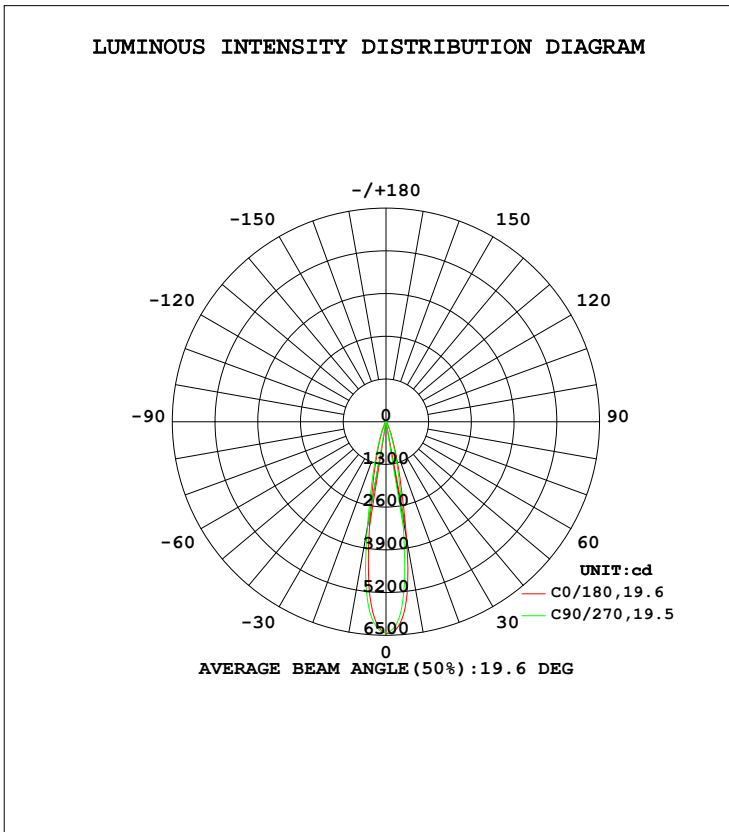


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:34.000V I:0.3500A P:11.900W PF:1.0000 Freq:0Hz Lamp Flux:1006.23x1 lm		
NAME: XDL E4-WRA-L29030-20DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
MFR.: SBC XICATO CORP.		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 84.56 lm/W			
MODEL	XOB CRI 90 3000K	I _{max} (cd)	6441	S/MH (C0/180)	0.31
NOMINAL POWER (W)	13	LOR (%)	100.0	S/MH (C90/270)	0.34
RATED VOLTAGE (V)	36	TOTAL FLUX (lm)	1006.2	η UP, DN (C0-180)	0.0, 51.4
NOMINAL FLUX (lm)	1006.23	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 48.6
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE (V)	34	η down (%)	100.0	CIBSE SHR MAX	1.00



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	3599	2894	2687	3284				0- 10	458.0	458.0	45.5,45.5
20	611.4	523.7	489.6	565.6				10- 20	380.8	838.8	83.4,83.4
30	119.6	115.6	108.2	120.3				20- 30	118.9	957.7	95.2,95.2
40	26.85	25.30	27.49	29.96				30- 40	39.79	997.5	99.1,99.1
50	1.741	1.205	1.842	2.282				40- 50	7.906	1005	99.9,99.9
60	0.3184	0.2666	0.3492	0.3564				50- 60	0.5711	1006	100,100
70	0.0635	0.0318	0.0317	0.0701				60- 70	0.1499	1006	100,100
80	0.0318	0.0318	0.0318	0.0318				70- 80	0.0382	1006	100,100
90	0.0318	0.0318	0.0318	0.0318				80- 90	0.0347	1006	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): 1003.5 lm

%lum = 99.7%
 %lamp = 99.7%

Conical surface Flux(120deg): 1006 lm

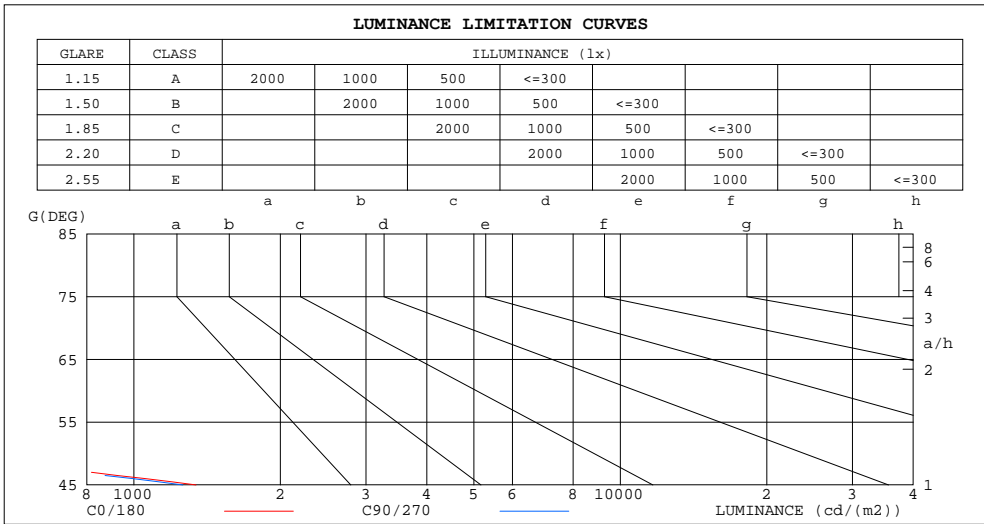
%lum = 100.0%
 %lamp = 100.0%

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:34.000V I:0.3500A P:11.900W PF:1.0000 Freq:0Hz Lamp Flux:1006.23x1 lm		
NAME: XDL E4-WRA-L29030-20DW	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	19	13
70	20	10
65	38	21
60	70	58
55	104	93
50	296	205
45	1341	1261

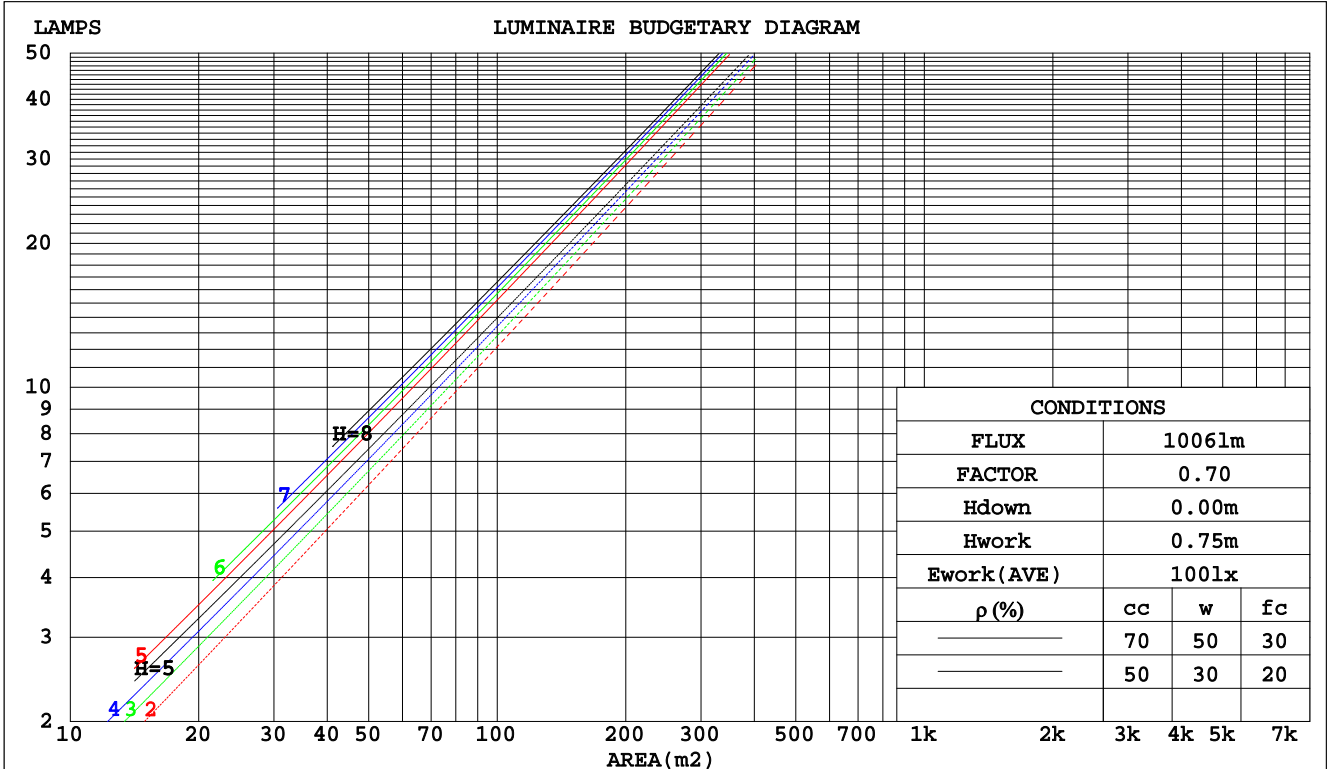
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Jasoan
 Test Date: 2024-05-22

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:34.000V I:0.3500A P:11.900W PF:1.0000 Freq:0Hz Lamp Flux:1006.23x1 lm		
NAME: XDL E4-WRA-L29030-20DW	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	1.13	1.12	1.10	1.11	1.10	1.08	1.07	1.06	1.05	1.04	1.03	1.02	1.00	.00	.99	.97
2.0	1.08	1.06	1.03	1.07	1.04	1.02	1.04	1.02	.00	1.01	.99	.98	.98	.97	.96	.94
3.0	1.04	1.01	.98	1.03	.00	.97	1.01	.98	.96	.98	.96	.95	.96	.95	.93	.92
4.0	1.01	.97	.94	.00	.96	.94	.98	.95	.93	.96	.93	.92	.94	.92	.91	.89
5.0	.97	.94	.91	.97	.93	.90	.95	.92	.90	.93	.91	.89	.92	.90	.88	.87
6.0	.94	.91	.88	.94	.90	.88	.92	.89	.87	.91	.89	.86	.90	.88	.86	.85
7.0	.92	.88	.85	.91	.88	.85	.90	.87	.85	.89	.86	.84	.88	.86	.84	.83
8.0	.89	.86	.83	.89	.85	.83	.88	.85	.83	.87	.84	.82	.86	.84	.82	.81
9.0	.87	.83	.81	.87	.83	.81	.86	.83	.81	.85	.82	.80	.85	.82	.80	.79
10.0	.85	.82	.79	.85	.81	.79	.84	.81	.79	.84	.81	.79	.83	.80	.78	.78



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:34.000V I:0.3500A P:11.900W PF:1.0000 Freq:0Hz Lamp Flux:1006.23x1 lm		
NAME: XDL E4-WRA-L29030-20DW	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	.129	.073	.023	.123	.070	.022	.110	.063	.020	.099	.057	.018	.088	.051	.017	
2.0	.119	.065	.020	.114	.063	.019	.103	.058	.018	.094	.053	.017	.086	.048	.015	
3.0	.110	.059	.018	.106	.057	.017	.098	.053	.016	.090	.049	.015	.083	.046	.014	
4.0	.103	.054	.016	.099	.052	.015	.092	.049	.015	.086	.046	.014	.080	.043	.013	
5.0	.097	.049	.014	.094	.048	.014	.088	.046	.013	.082	.043	.013	.077	.041	.012	
6.0	.091	.046	.013	.089	.045	.013	.083	.043	.012	.079	.041	.012	.074	.039	.012	
7.0	.086	.043	.012	.084	.042	.012	.080	.040	.012	.076	.039	.011	.072	.037	.011	
8.0	.082	.040	.011	.080	.039	.011	.076	.038	.011	.073	.037	.011	.069	.036	.010	
9.0	.078	.038	.011	.077	.037	.010	.073	.036	.010	.070	.035	.010	.067	.034	.010	
10.0	.075	.036	.010	.073	.035	.010	.070	.034	.010	.068	.034	.010	.065	.033	.009	

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	.168	.158	.149	.144	.135	.128	.098	.093	.088	.057	.054	.051	.018	.017	.017	
2.0	.149	.133	.119	.128	.114	.103	.088	.079	.072	.050	.046	.042	.016	.015	.014	
3.0	.134	.113	.097	.115	.098	.084	.079	.068	.059	.045	.040	.035	.015	.013	.011	
4.0	.121	.098	.080	.104	.084	.070	.071	.059	.049	.041	.034	.029	.013	.011	.010	
5.0	.110	.085	.067	.094	.074	.058	.065	.052	.041	.038	.030	.024	.012	.010	.008	
6.0	.101	.075	.057	.087	.065	.049	.060	.046	.035	.035	.027	.021	.011	.009	.007	
7.0	.093	.067	.049	.080	.058	.042	.055	.041	.030	.032	.024	.018	.010	.008	.006	
8.0	.086	.060	.042	.074	.052	.037	.051	.037	.026	.030	.022	.015	.010	.007	.005	
9.0	.080	.054	.036	.069	.047	.032	.048	.033	.023	.028	.020	.013	.009	.006	.004	
10.0	.075	.049	.032	.065	.043	.028	.045	.030	.020	.026	.018	.012	.009	.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:34.000V I:0.3500A P:11.900W PF:1.0000 Freq:0Hz Lamp Flux:1006.23x1 lm		
NAME: XDL E4-WRA-L29030-20DW	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	4.9	5.5	5.1	5.6	5.8	4.8	5.4	5.0	5.5	5.7
3H	4.7	5.3	5.0	5.5	5.6	4.6	5.2	4.9	5.4	5.6
4H	4.6	5.2	4.9	5.4	5.6	4.6	5.1	4.8	5.3	5.5
6H	4.6	5.1	4.8	5.3	5.5	4.5	5.0	4.8	5.2	5.5
8H	4.5	5.0	4.8	5.2	5.5	4.4	4.9	4.7	5.2	5.4
12H	4.5	4.9	4.8	5.2	5.5	4.4	4.9	4.7	5.1	5.4
4H 2H	4.6	5.2	4.9	5.4	5.6	4.6	5.1	4.8	5.3	5.5
3H	4.5	4.9	4.8	5.2	5.5	4.4	4.9	4.7	5.1	5.4
4H	4.4	4.8	4.7	5.1	5.4	4.3	4.7	4.6	5.0	5.3
6H	4.3	4.7	4.6	5.0	5.3	4.2	4.6	4.6	4.9	5.2
8H	4.2	4.6	4.6	4.9	5.3	4.1	4.5	4.5	4.9	5.2
12H	4.2	4.5	4.6	4.9	5.2	4.1	4.4	4.5	4.8	5.2
8H 4H	4.2	4.6	4.6	4.9	5.3	4.1	4.5	4.5	4.8	5.2
6H	4.1	4.4	4.5	4.8	5.2	4.0	4.3	4.4	4.7	5.1
8H	4.0	4.3	4.5	4.7	5.2	4.0	4.2	4.4	4.6	5.1
12H	4.0	4.2	4.4	4.6	5.1	3.9	4.1	4.4	4.6	5.0
12H 4H	4.2	4.5	4.6	4.9	5.2	4.1	4.4	4.5	4.8	5.2
6H	4.0	4.3	4.5	4.7	5.2	4.0	4.2	4.4	4.6	5.1
8H	4.0	4.2	4.4	4.6	5.1	3.9	4.1	4.4	4.6	5.0
Variations with the observer position at spacings:										
S = 1.0H	+ 3.8 / -20.0					+ 3.8 / -20.5				
1.5H	+ 6.4 / -18.0					+ 6.3 / -18.1				
2.0H	+ 8.2 / -12.3					+ 8.2 / -12.5				

CIE Pub.117, 1006 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 0.0)
 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:34.000V I:0.3500A P:11.900W PF:1.0000 Freq:0Hz Lamp Flux:1006.23x1 lm		
NAME: XDL E4-WRA-L29030-20DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
MFR.: SBC XICATO CORP.		

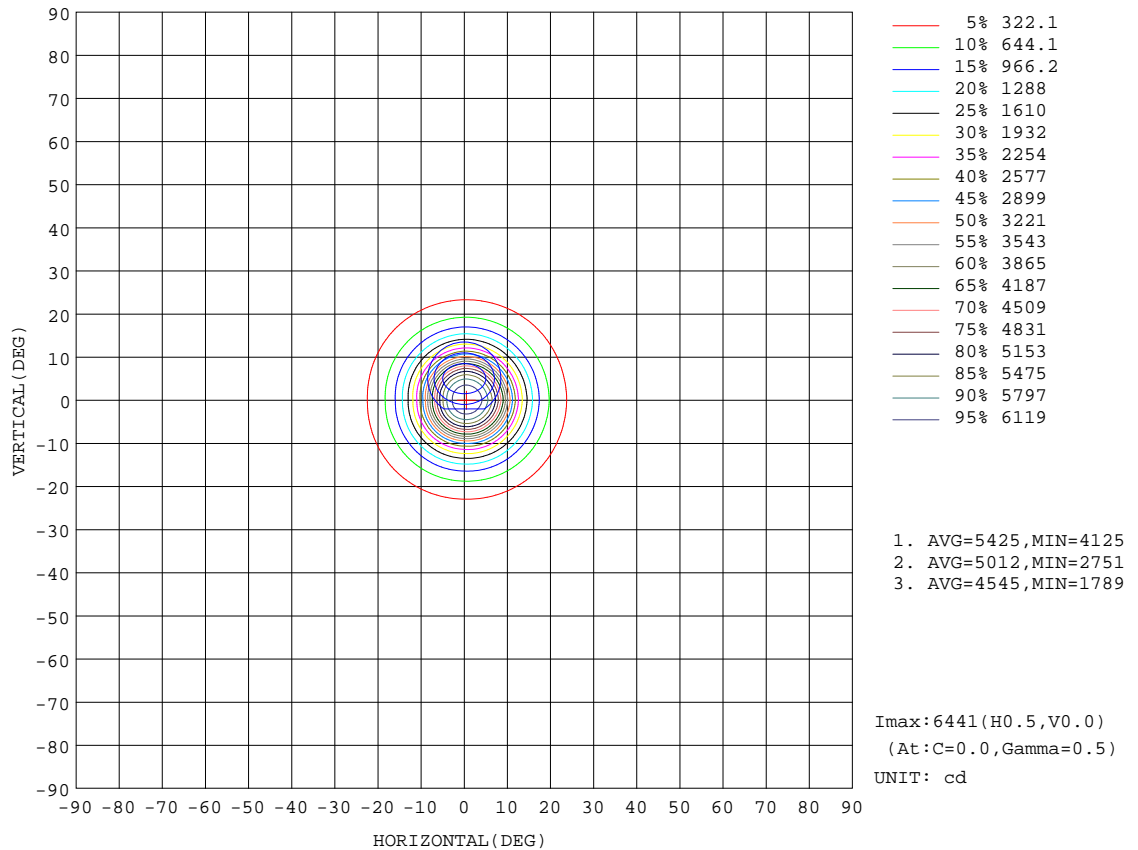
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	91	85	82	91	85	82	90	85	82	79
0.80	98	93	90	97	92	89	96	92	89	86
1.00	102	97	94	101	96	93	99	96	93	89
1.25	105	101	98	104	100	97	102	99	96	93
1.50	108	103	101	107	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	111	110	109	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:34.000V I:0.3500A P:11.900W PF:1.0000 Freq:0Hz Lamp Flux:1006.23x1 lm		
NAME: XDL E4-WRA-L29030-20DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
MFR.: SBC XICATO CORP.		

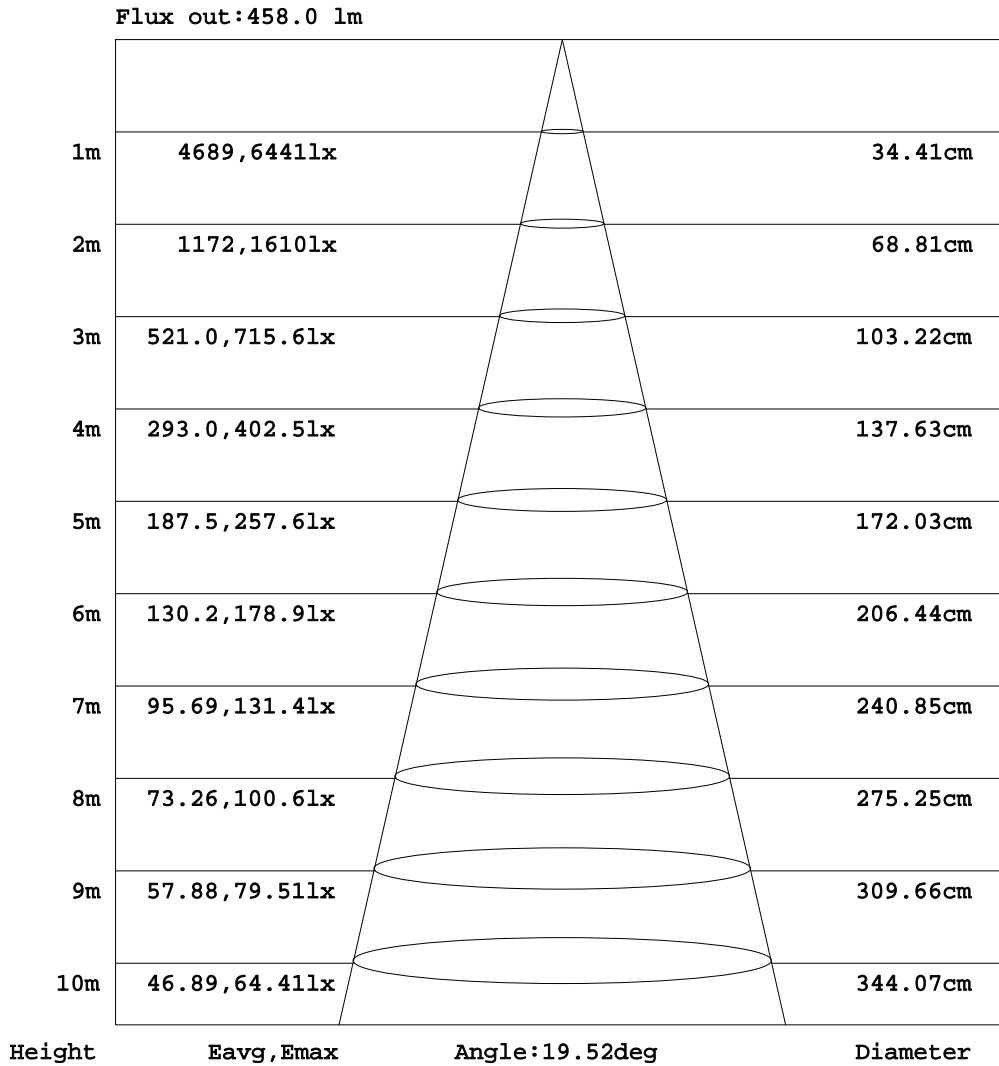


C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2024-05-22

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:34.000V I:0.3500A P:11.900W PF:1.0000 Freq:0Hz Lamp Flux:1006.23x1 lm		
NAME: XDL E4-WRA-L29030-20DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
MFR.: SBC XICATO CORP.		



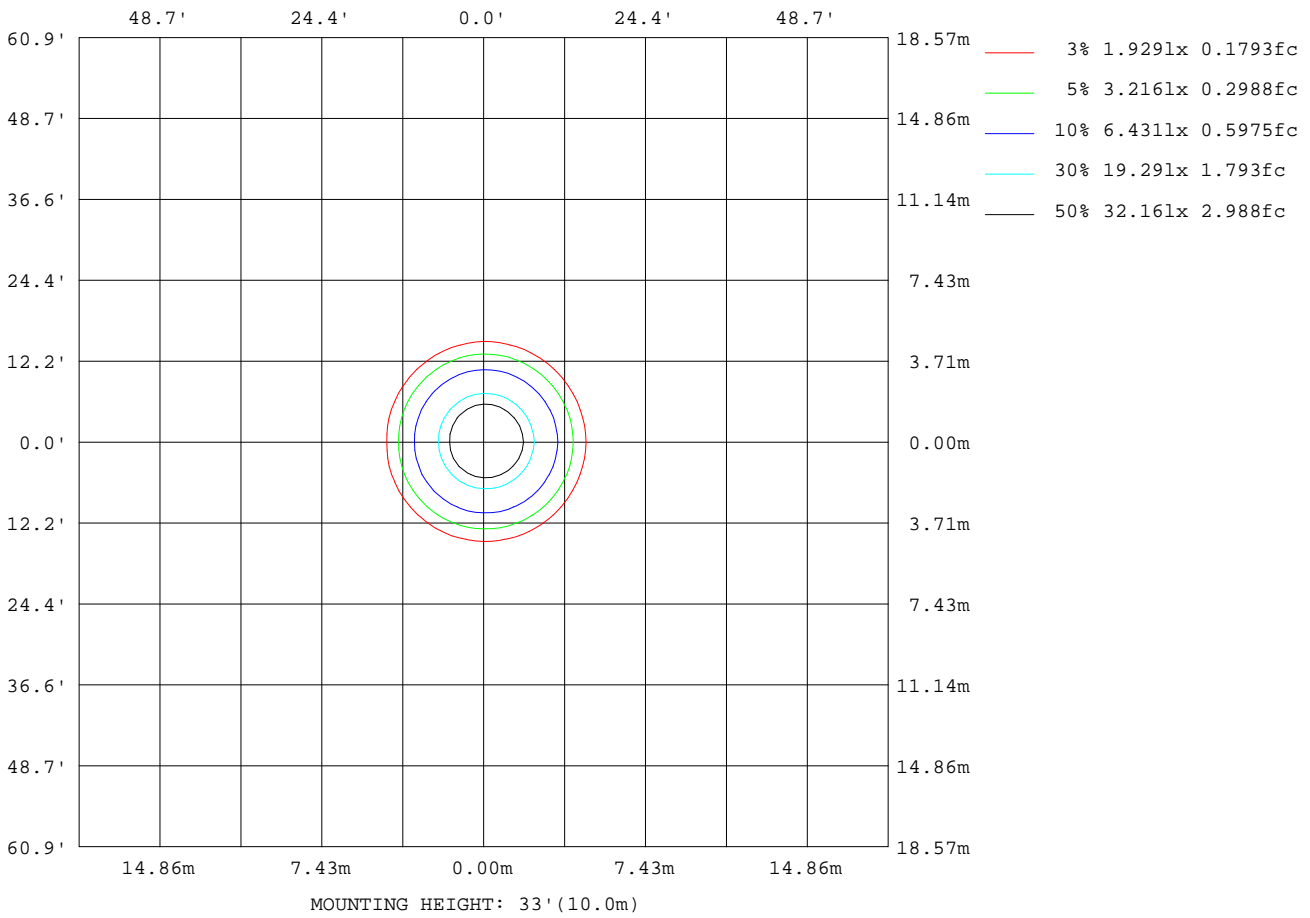
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:34.000V I:0.3500A P:11.900W PF:1.0000 Freq:0Hz Lamp Flux:1006.23x1 lm		
NAME: XDL E4-WRA-L29030-20DW	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:34.000V I:0.3500A P:11.900W PF:1.0000 Freq:0Hz Lamp Flux:1006.23x1 lm		
NAME: XDL E4-WRA-L29030-20DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
MFR.: SBC XICATO CORP.		

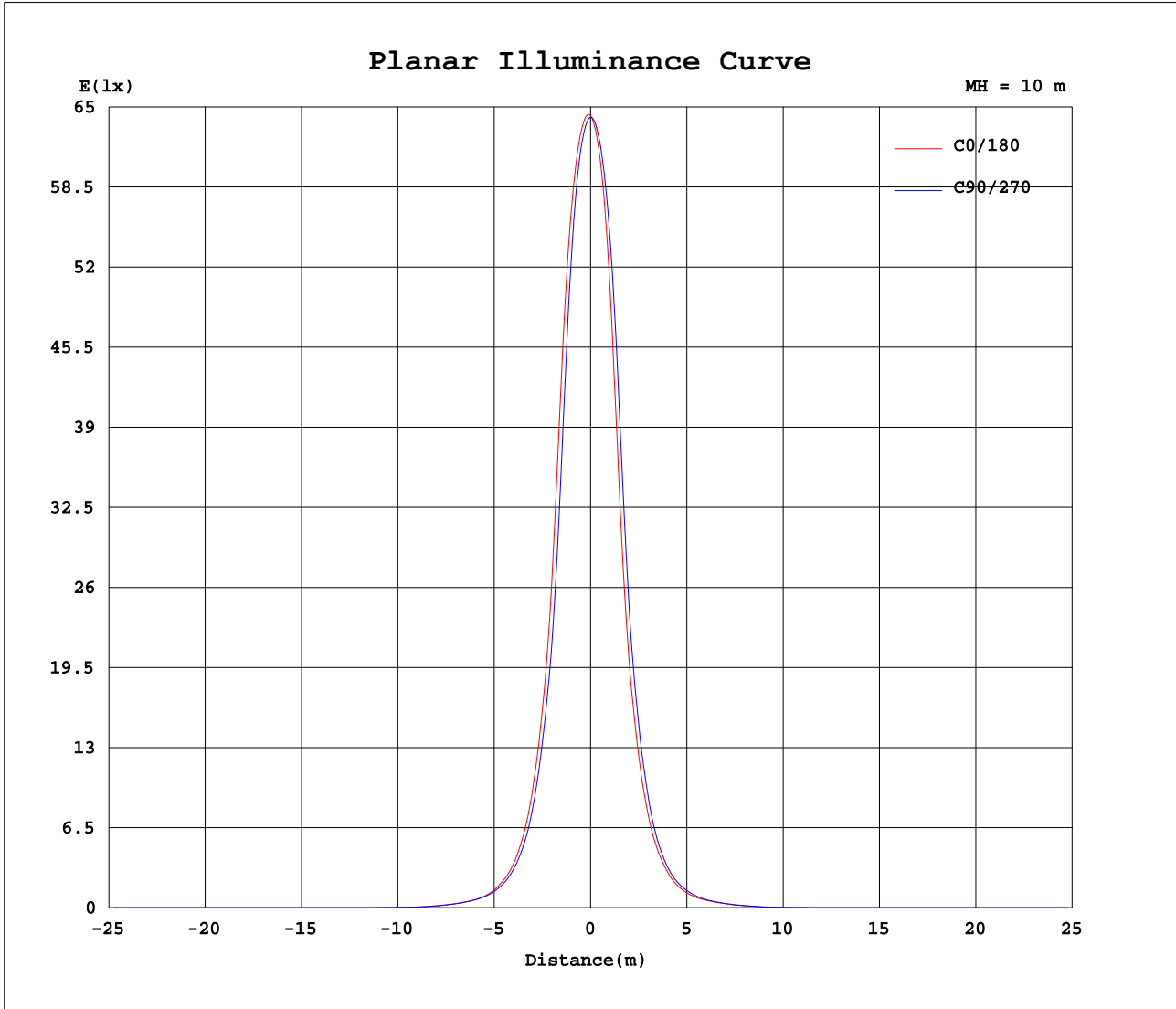
AvgL	cd/m2
L_0~180 (65) av	37
L_0~180 (75) av	15
L_0~180 (85) av	40
L_90~270 (65) av	33
L_90~270 (75) av	13
L_90~270 (85) av	40
L_45 (65) av	34
L_45 (75) av	14
L_45 (85) av	40

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:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:34.000V I:0.3500A P:11.900W PF:1.0000 Freq:0Hz Lamp Flux:1006.23x1 lm		
NAME: XDL E4-WRA-L29030-20DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: ϕ 108mm*H126mm	
MFR.: SBC XICATO CORP.		

Table--1

UNIT: cd

C (DEG) \ γ (DEG)	0	90	180	270															
0	6431	6418	6431	6418															
5	5936	5625	5450	5773															
10	3599	2894	2687	3284															
15	1487	1243	1144	1379															
20	611	524	490	566															
25	265	236	214	247															
30	120	116	108	120															
35	62.2	60.6	60.7	64.8															
40	26.8	25.3	27.5	30.0															
45	8.68	8.16	9.28	9.87															
50	1.74	1.20	1.84	2.28															
55	0.55	0.49	0.60	0.59															
60	0.32	0.27	0.35	0.36															
65	0.15	0.08	0.14	0.17															
70	0.06	0.03	0.03	0.07															
75	0.04	0.03	0.03	0.03															
80	0.03	0.03	0.03	0.03															
85	0.03	0.03	0.03	0.03															
90	0.03	0.03	0.03	0.03															

C Range: 0 - 360DEG	γ Range: 0 - 90DEG
C Interval: 90.0DEG	γ Interval: 0.5DEG
Test Speed: HIGH	Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
Temperature:25.3DEG	Humidity:58%
Operators:Jasoan	Test Distance:9.016m [K=1.0000]
Test Date:2024-05-22	Remarks: