



IDEA

/ DUORO R 06.AA28.2020.____



Light Output Ratio:	100.0%	
Luminaire Power:	13.22 W	
SHR Nominal:	0.50	Calculated using the TM5
SHR Maximum:	0.50	fine grid method.

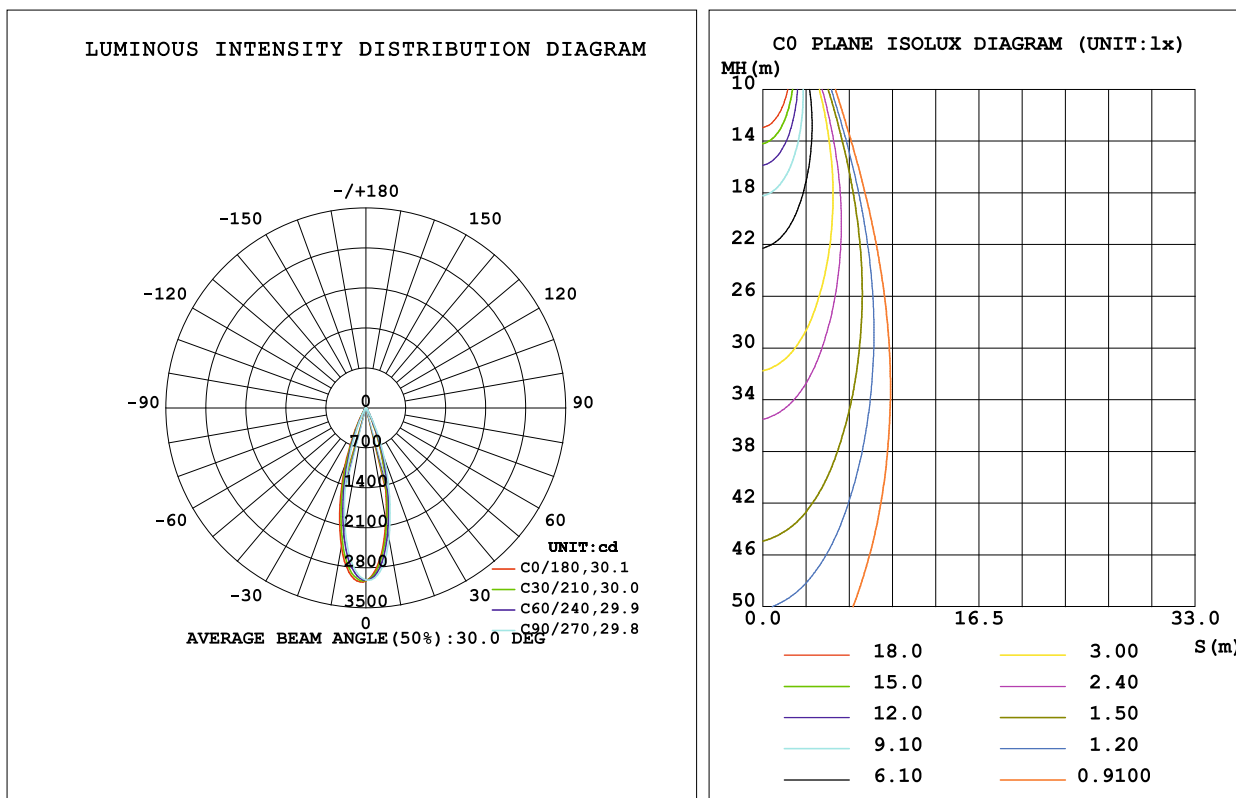
C Range: 0 - 360DEG	γ Range: 0 - 90DEG
C Interval: 15.0DEG	γ Interval: 1.0DEG
Test Speed: HIGH	Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.411
Temperature:25.3DEG	Humidity:65.0%
	Test Distance:9.060m [K=1.0000]
	Remarks:



LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.31V I:0.0627A P:13.215W PF:0.9553 Freq:50.00Hz Lamp Flux:919.995x1 lm		
NAME: DUORO	TYPE:	WEIGHT:
SPEC.:14W 350mA 2700K 24° CRI80	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP			PHOTOMETRIC DATA			Eff: 69.62 lm/W
MODEL			I _{max} (cd)	3048	S/MH (C0/180)	0.55
NOMINAL POWER (W)	14		LOR (%)	100.0	S/MH (C90/270)	0.48
RATED VOLTAGE (V)			TOTAL FLUX (lm)	920.00	η UP,DN (C0-180)	0.0,51.8
NOMINAL FLUX (lm)	919.995		CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,48.2
LAMPS INSIDE	1		η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	0		η down (%)	100.0	CIBSE SHR MAX	0.50



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 Humidity: 65.0%
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 Remarks:



ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	2025	2167	2328	2445	2478	2289	2115	2004	0- 10	249.3	249.3	27.1, 27.1
20	700.3	811.3	951.0	1048	1067	907.7	756.7	683.2	10- 20	410.9	660.2	71.8, 71.8
30	114.7	132.3	167.3	191.4	191.2	152.0	124.5	113.7	20- 30	186.7	846.9	92.1, 92.1
40	35.06	38.89	44.23	46.75	46.27	40.15	36.13	33.91	30- 40	47.83	894.7	97.3, 97.3
50	11.04	13.77	16.17	17.03	16.27	13.45	11.93	10.90	40- 50	19.13	913.9	99.3, 99.3
60	0.5715	0.7750	1.022	1.208	0.7739	0.8955	0.7225	0.6716	50- 60	5.529	919.4	99.9, 99.9
70	0.2574	0.2788	0.2703	0.3049	0.2307	0.3053	0.2527	0.3008	60- 70	0.4431	919.8	100, 100
80	0	0.0129	0	0	0	0.0003	0	0.0049	70- 80	0.1634	920.0	100, 100
90	0	0	0	0	0	0	0	0	80- 90	0.0001	920.0	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): 906.34 lm

%lum = 98.5%

%lamp = 98.5%

Conical surface Flux(120deg): 919.39 lm

%lum = 99.9%

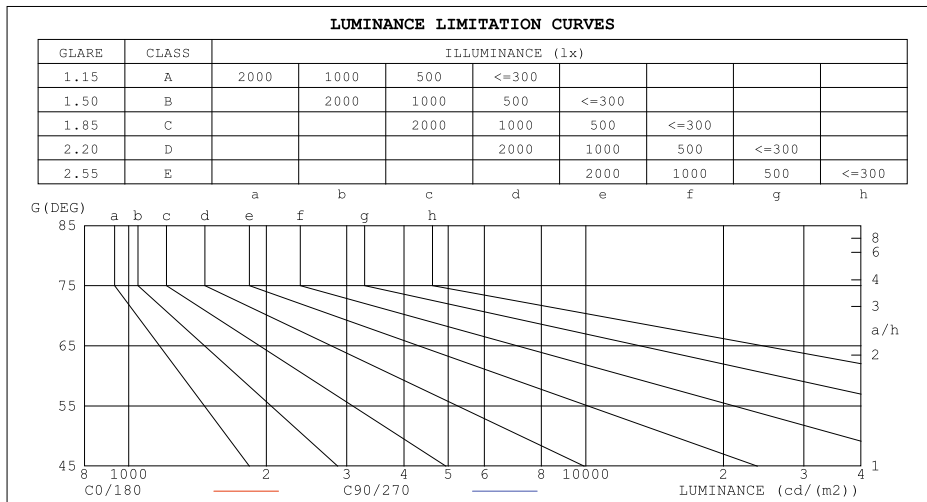
%lamp = 99.9%

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 Remarks:



LUMINANCE LIMITATION CURVES



LUMINANCE cd/ (m2)		
G (DEG)	C0/180	C90/270
85	0	0
80	0	0
75	4	8
70	8	8
65	8	10
60	11	20
55	72	134
50	172	251
45	291	387

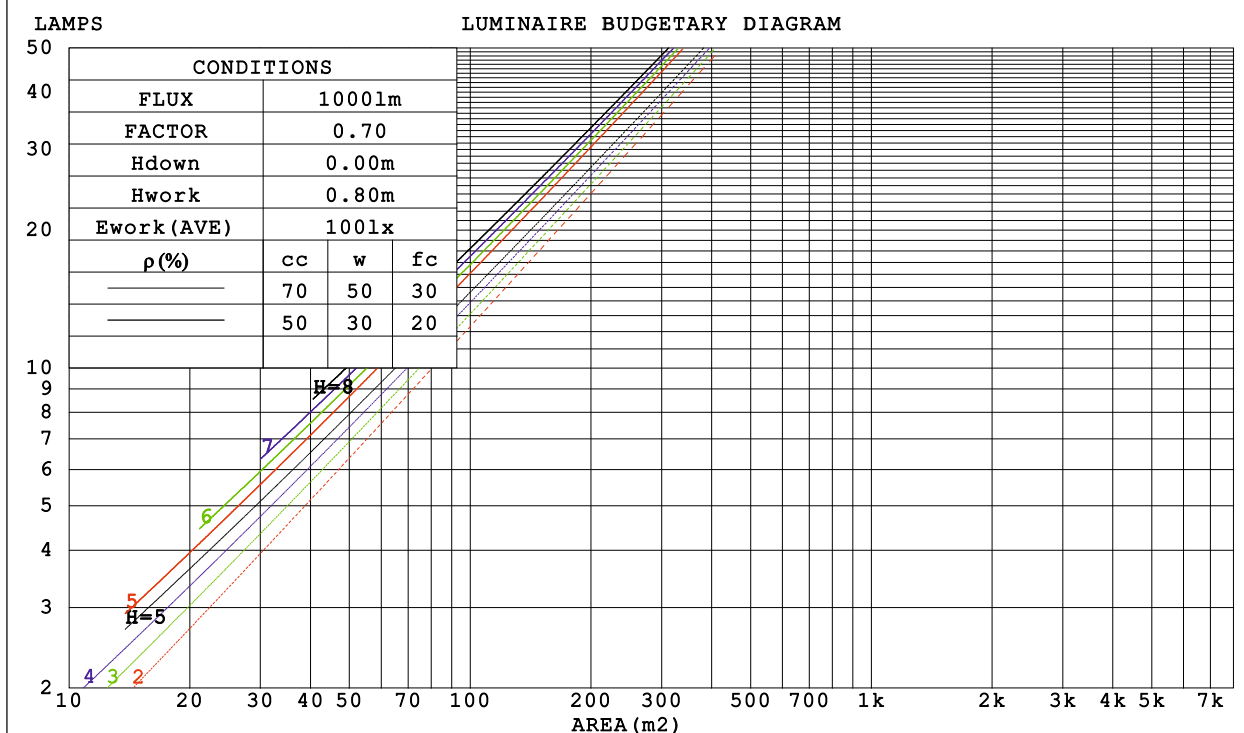
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

pcc	80%			70%			50%			30%			10%			0
p _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
p _{fc}	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	1.09	1.10	1.09	1.07	1.06	1.05	1.04	1.03	1.02	1.01	.99	.98	.98	.96
2.0	1.07	1.03	1.01	1.05	1.02	.00	1.02	.00	.97	.99	.97	.95	.96	.95	.93	.92
3.0	1.02	.98	.95	1.00	.97	.94	.98	.95	.92	.95	.93	.91	.93	.91	.90	.88
4.0	.97	.93	.89	.96	.92	.89	.94	.91	.88	.92	.89	.87	.90	.88	.86	.85
5.0	.93	.88	.85	.92	.88	.85	.90	.87	.84	.89	.86	.83	.87	.85	.83	.81
6.0	.89	.85	.81	.88	.84	.81	.87	.83	.81	.86	.83	.80	.85	.82	.80	.78
7.0	.86	.81	.78	.85	.81	.78	.84	.80	.77	.83	.80	.77	.82	.79	.77	.76
8.0	.83	.78	.75	.82	.78	.75	.81	.77	.75	.80	.77	.74	.79	.76	.74	.73
9.0	.80	.75	.72	.79	.75	.72	.79	.75	.72	.78	.74	.72	.77	.74	.72	.71
10.0	.77	.73	.70	.77	.73	.70	.76	.72	.70	.75	.72	.69	.75	.72	.69	.68



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WEC AND CCEC

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	.146	.083	.026	.139	.079	.025	.127	.073	.023	.115	.066	.021	.105	.061	.020	
2.0	.136	.075	.023	.131	.072	.022	.120	.067	.021	.111	.062	.019	.102	.058	.018	
3.0	.128	.068	.020	.123	.066	.020	.115	.062	.019	.107	.058	.018	.099	.055	.017	
4.0	.120	.063	.018	.117	.061	.018	.109	.058	.017	.102	.055	.017	.096	.052	.016	
5.0	.114	.058	.017	.111	.057	.017	.104	.054	.016	.099	.052	.015	.093	.050	.015	
6.0	.108	.054	.016	.105	.053	.015	.100	.051	.015	.095	.049	.014	.090	.047	.014	
7.0	.103	.051	.014	.101	.050	.014	.096	.048	.014	.091	.047	.014	.087	.045	.013	
8.0	.099	.048	.014	.096	.047	.013	.092	.046	.013	.088	.045	.013	.085	.043	.013	
9.0	.094	.046	.013	.092	.045	.013	.089	.044	.012	.085	.043	.012	.082	.042	.012	
10.0	.091	.043	.012	.089	.043	.012	.085	.042	.012	.082	.041	.012	.079	.040	.011	

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	.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	.151	.133	.117	.130	.114	.101	.089	.079	.070	.051	.046	.041	.016	.015	.013	
3.0	.137	.113	.094	.118	.098	.082	.081	.068	.057	.047	.040	.034	.015	.013	.011	
4.0	.125	.098	.077	.107	.085	.067	.074	.059	.047	.043	.035	.028	.014	.011	.009	
5.0	.115	.086	.064	.099	.074	.056	.068	.052	.040	.039	.031	.023	.013	.010	.008	
6.0	.107	.076	.054	.092	.066	.047	.063	.046	.033	.037	.027	.020	.012	.009	.007	
7.0	.099	.068	.046	.085	.059	.040	.059	.041	.029	.034	.024	.017	.011	.008	.006	
8.0	.093	.061	.040	.080	.053	.035	.055	.037	.025	.032	.022	.015	.010	.007	.005	
9.0	.088	.056	.035	.075	.049	.030	.052	.034	.021	.030	.020	.013	.010	.007	.004	
10.0	.083	.051	.030	.071	.045	.026	.050	.031	.019	.029	.019	.011	.009	.006	.004	

C Range: 0 - 360DEG
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γ Range: 0 - 90DEG
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 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.411
 Humidity:65.0%
 Test Distance:9.060m [K=1.0000]
 Remarks:



UGR(Unified Glare Rating) Table

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	-1.2	-0.5	-1.0	-0.3	-0.2	0.1	0.8	0.3	1.0	1.1
3H	-1.3	-0.7	-1.1	-0.5	-0.3	-0.0	0.6	0.2	0.8	1.0
4H	-1.4	-0.8	-1.2	-0.6	-0.4	-0.1	0.5	0.2	0.7	0.9
6H	-1.5	-0.9	-1.2	-0.7	-0.4	-0.2	0.4	0.1	0.6	0.9
8H	-1.5	-1.0	-1.2	-0.7	-0.5	-0.2	0.3	0.1	0.6	0.8
12H	-1.6	-1.0	-1.3	-0.8	-0.5	-0.3	0.3	0.0	0.5	0.8
4H 2H	-1.4	-0.8	-1.1	-0.5	-0.3	-0.1	0.5	0.2	0.7	1.0
3H	-1.6	-1.0	-1.2	-0.7	-0.5	-0.3	0.3	0.0	0.5	0.8
4H	-1.6	-1.1	-1.3	-0.9	-0.6	-0.4	0.1	-0.0	0.4	0.7
6H	-1.7	-1.3	-1.4	-1.0	-0.6	-0.5	-0.0	-0.1	0.3	0.7
8H	-1.8	-1.4	-1.4	-1.0	-0.7	-0.5	-0.1	-0.1	0.2	0.6
12H	-1.9	-1.5	-1.5	-1.1	-0.7	-0.6	-0.2	-0.2	0.2	0.6
8H 4H	-1.8	-1.4	-1.4	-1.0	-0.7	-0.5	-0.1	-0.1	0.2	0.6
6H	-1.9	-1.6	-1.5	-1.2	-0.8	-0.6	-0.3	-0.2	0.1	0.5
8H	-2.0	-1.7	-1.5	-1.3	-0.8	-0.7	-0.4	-0.2	0.0	0.5
12H	-2.0	-1.8	-1.6	-1.3	-0.9	-0.7	-0.5	-0.3	-0.0	0.4
12H 4H	-1.9	-1.5	-1.5	-1.1	-0.7	-0.6	-0.2	-0.2	0.2	0.6
6H	-2.0	-1.7	-1.5	-1.3	-0.8	-0.7	-0.4	-0.2	0.0	0.5
8H	-2.0	-1.8	-1.6	-1.3	-0.9	-0.7	-0.5	-0.3	-0.0	0.4
Variations with the observer position at spacings:										
S = 1.0H	+ 2.6 / -15.2					+ 3.0 / -11.8				
1.5H	+ 3.4 / - 5.9					+ 3.8 / - 5.7				
2.0H	+ 5.4 / -14.9					+ 5.5 / -15.4				

CIE Pub.117, 920.0 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.3)
Area: 0.1 m2

C Range: 0 - 360DEG
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γ Range: 0 - 90DEG
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Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.411
Humidity:65.0%
Test Distance:9.060m [K=1.0000]
Remarks:



UTILIZATION FACTORS TABLE

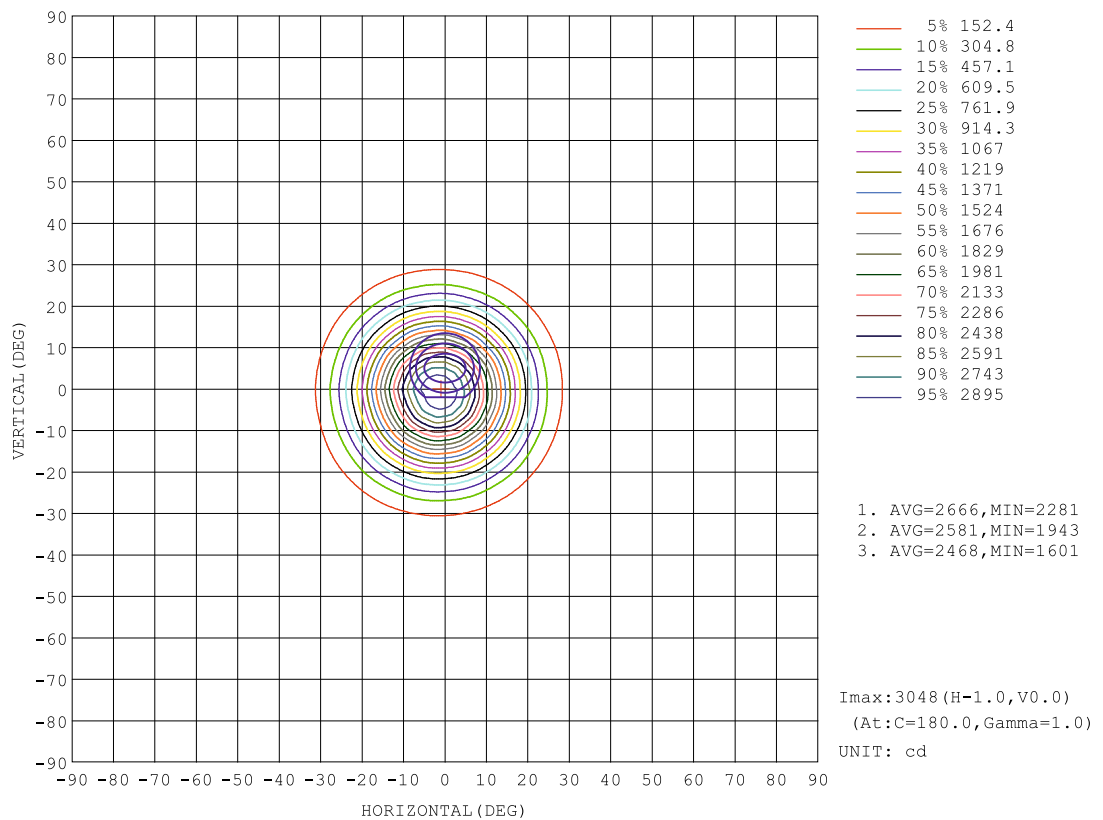
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	90	84	80	89	84	80	89	83	80	77
0.80	97	92	88	96	91	88	95	91	88	84
1.00	101	96	92	100	95	92	99	95	92	88
1.25	105	100	97	104	99	96	102	98	96	92
1.50	107	103	100	106	102	99	104	101	98	94
2.00	109	106	103	108	105	102	105	103	100	95
2.50	111	107	105	109	106	104	106	104	102	96
3.00	112	109	107	111	108	106	107	105	103	97
4.00	114	112	110	112	110	108	109	107	106	99
5.00	116	113	112	113	112	110	109	108	107	100
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

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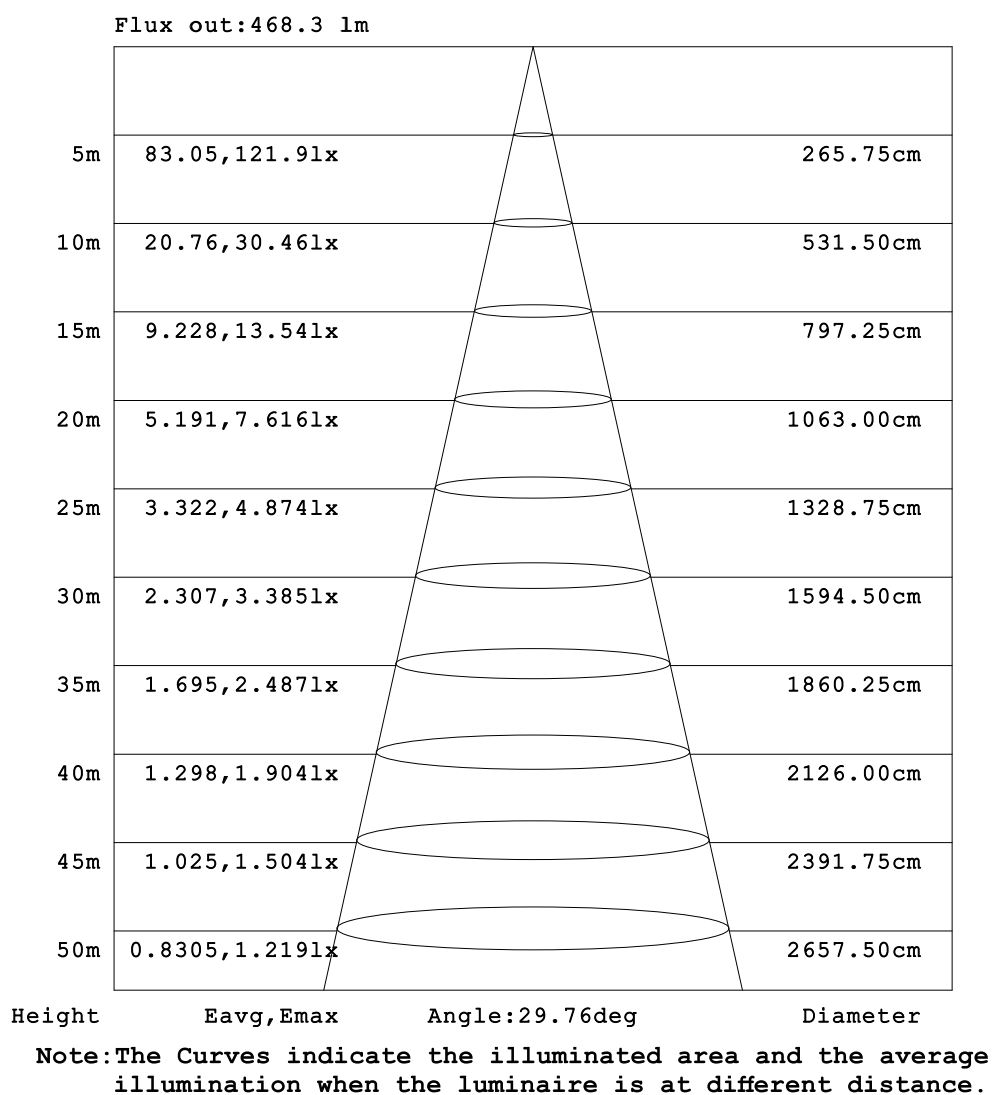
ISOCANDELA DIAGRAM



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AAI Figure

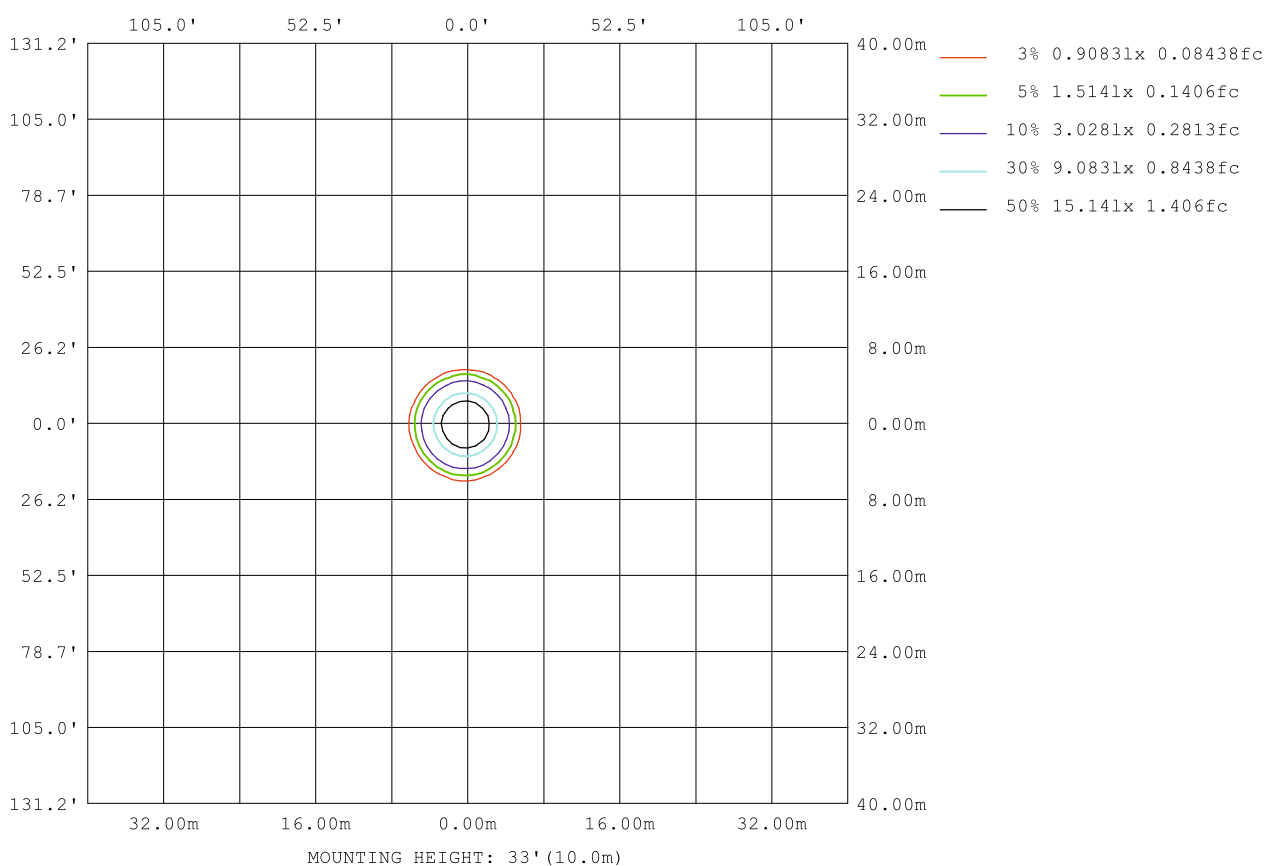


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ISOLUX DIAGRAM



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Remarks:



LED Avg.L Report

AvgL	cd/m2
L_0~180 (65) av	7
L_0~180 (75) av	3
L_0~180 (85) av	0
L_90~270 (65) av	9
L_90~270 (75) av	7
L_90~270 (85) av	0
L_45 (65) av	10
L_45 (75) av	8
L_45 (85) av	0

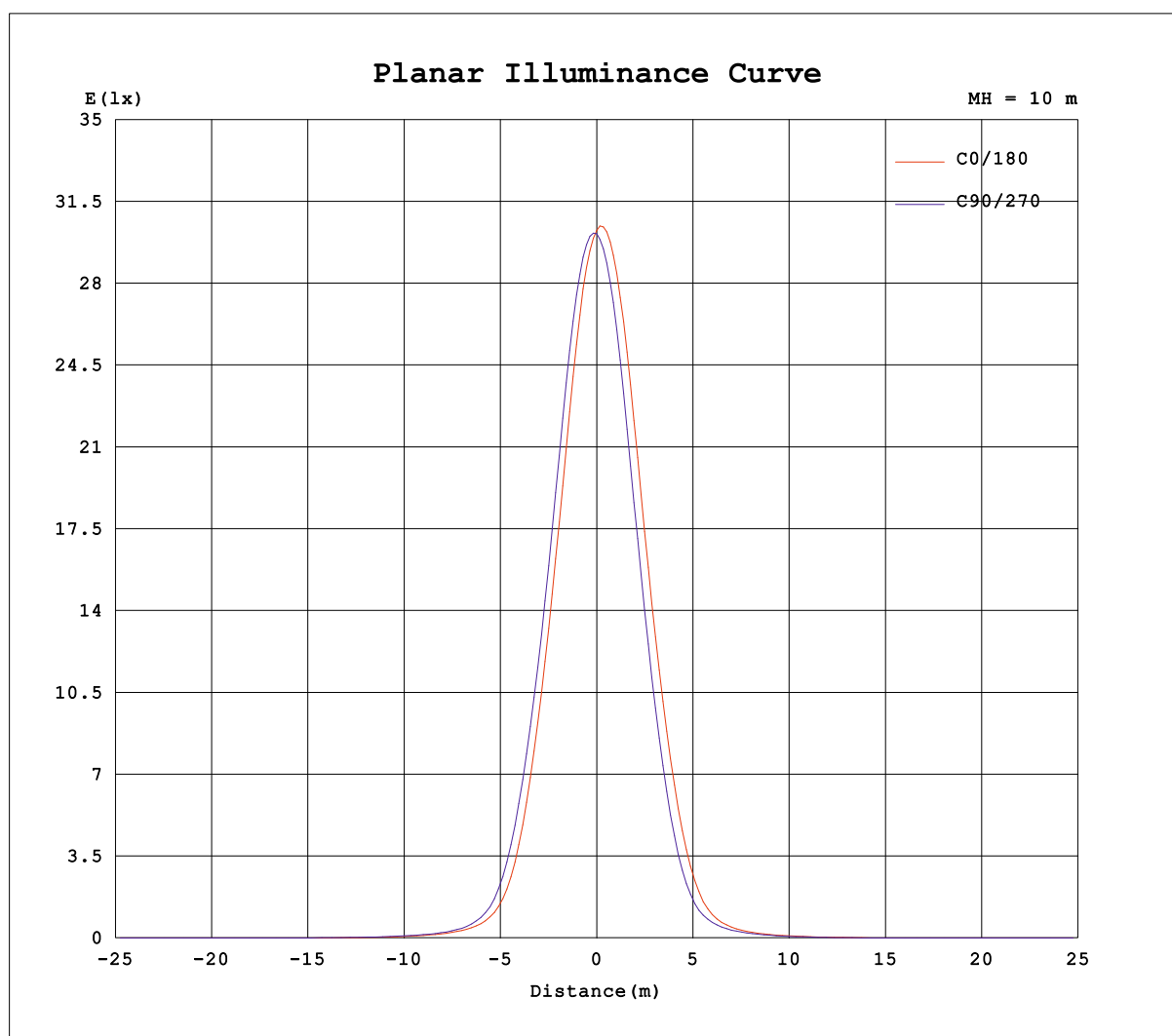
Standard: GB/T 29293-2012

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Planar Illuminance Curve



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Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

UNIT: cd

[illegible]

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γ Range: 0 - 90DEG
γ Interval: 1.0DEG
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15 de 15