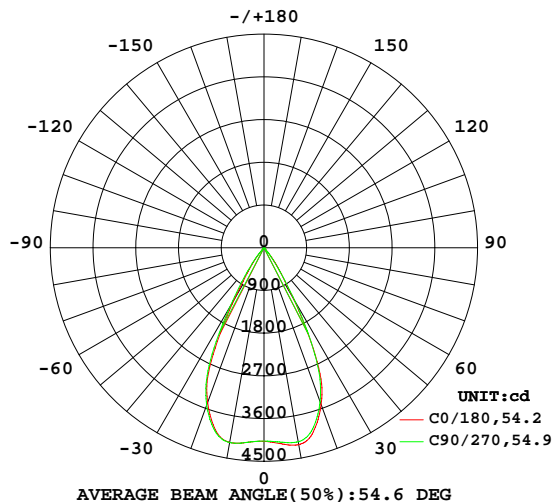


## LUMINAIRE PHOTOMETRIC TEST REPORT

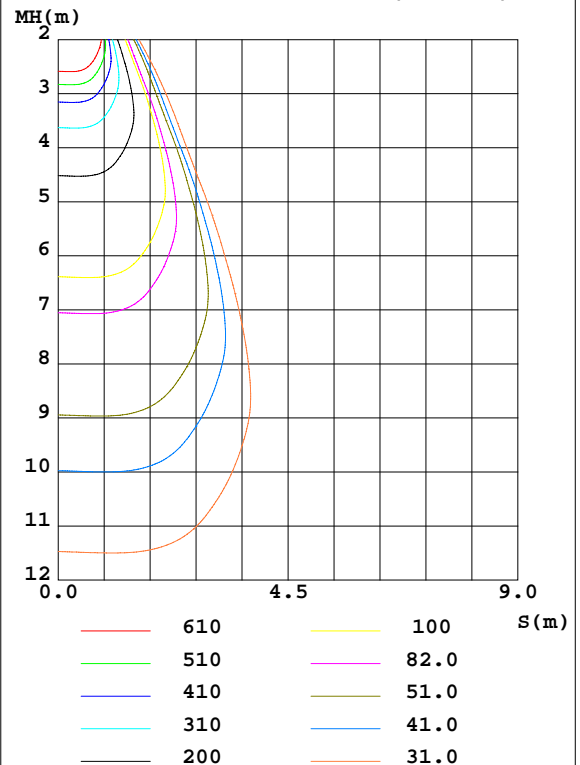
Test:U:229.90V I:0.1333A P:30.021W PF:0.9798 Freq:49.71Hz Lamp Flux:3047.05x1 lm					
NAME: LENO-RO		TYPE:		WEIGHT:	
SPEC.:		DIM.: 954*35*52		SERIAL No.:	
MFR.: NEXOL		SUR.:0.954*0.03		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA Eff: 101.50 lm/W			
MODEL		Imax(cd)	4211	S/MH(C0/180)	0.79
NOMINAL POWER(W)	30	LOR(%)	100.0	S/MH(C90/270)	0.79
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	3047.0	$\eta$ UP,DN(C0-180)	0.0,49.6
NOMINAL FLUX(lm)	3047.05	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,50.4
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	230.0	$\eta$ down(%)	100.0	CIBSE SHR MAX	0.75

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: MEDIUM  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-01-21

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.10  
 Humidity:65.0%  
 Test Distance:9.370m [K=1.0000]  
 Remarks:

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

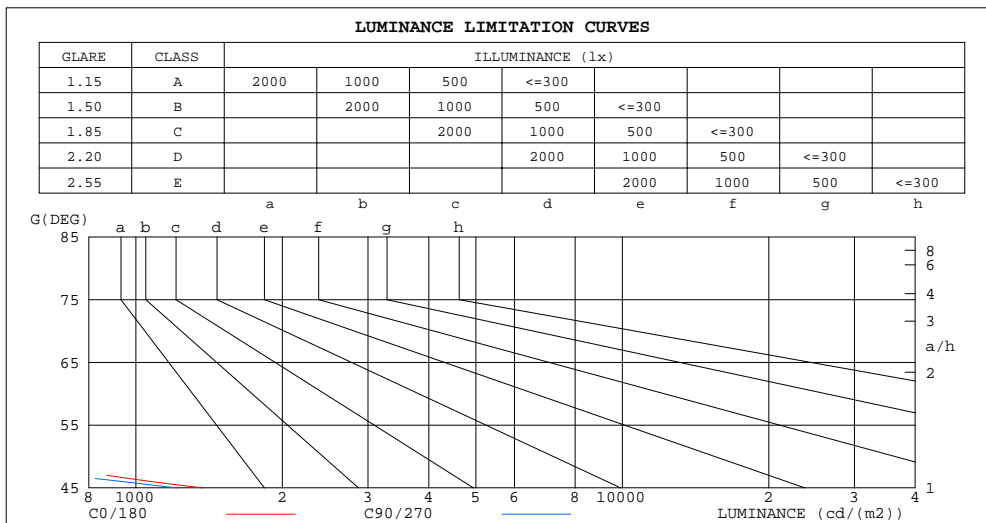
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\%lum, lamp$
10	4211	4182	4150	4150	4163	4161	4166	4197	0- 10	395.4	395.4	13,13
20	3517	3476	3455	3434	3471	3498	3529	3534	10- 20	1103	1499	49.2,49.2
30	1277	1279	1319	1249	1236	1340	1425	1323	20- 30	1147	2646	86.8,86.8
40	158.0	166.8	140.2	165.7	133.6	195.0	178.4	190.8	30- 40	358.4	3005	98.6,98.6
50	7.948	13.10	6.660	11.54	6.831	13.37	7.940	14.87	40- 50	38.88	3044	99.9,99.9
60	0.3595	0.8636	0.3155	0.7055	0.2200	0.8153	0.3288	0.9838	50- 60	3.094	3047	100,100
70	0.1402	0.1380	0.1431	0.1347	0.1047	0.1102	0.1102	0.1102	60- 70	0.2068	3047	100,100
80	0.1164	0.1220	0.1196	0.1129	0.1047	0.1102	0.1102	0.1102	70- 80	0.1237	3047	100,100
90	0.0992	0.1102	0.1102	0.0992	0.1047	0.1102	0.1102	0.1102	80- 90	0.1192	3047	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		

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: MEDIUM  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-01-21

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.10  
 Humidity:65.0%  
 Test Distance:9.370m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

Test:U:229.90V I:0.1333A P:30.021W PF:0.9798 Freq:49.71Hz Lamp Flux:3047.05x1 lm		
NAME: LENO-RO	TYPE:	WEIGHT:
SPEC.:	DIM.: 954*35*52	SERIAL No.:
MFR.: NEXOL	SUR.:0.954*0.03	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	41	46
80	23	24
75	17	17
70	14	15
65	14	13
60	25	22
55	135	105
50	432	362
45	1377	1214

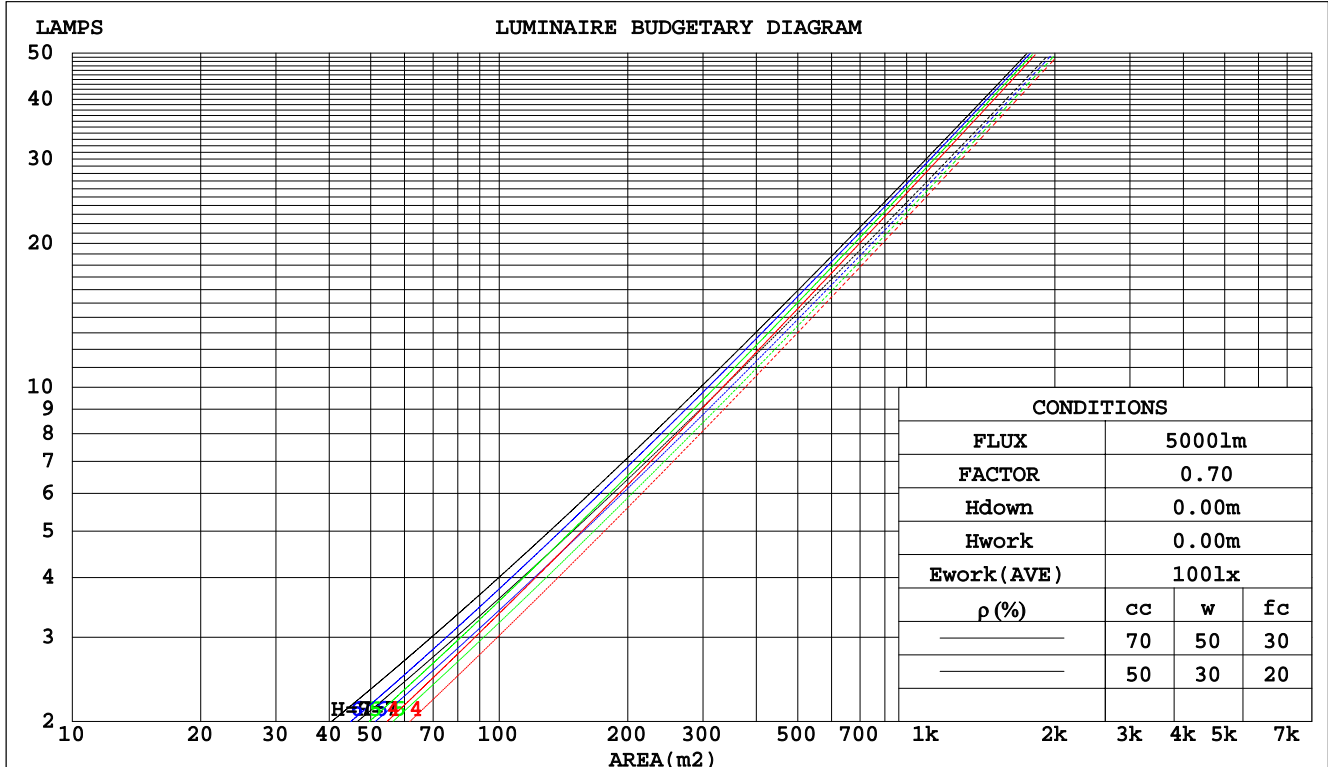
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:  
Test Date:2021-01-21

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.10  
Humidity:65.0%  
Test Distance:9.370m [K=1.0000]  
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:229.90V I:0.1333A P:30.021W PF:0.9798 Freq:49.71Hz Lamp Flux:3047.05x1 lm		
NAME: LENO-RO	TYPE:	WEIGHT:
SPEC.:	DIM.: 954*35*52	SERIAL No.:
MFR.: NEXOL	SUR.:0.954*0.03	Shielding 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	1.19	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	1.09	1.07	1.09	1.07	1.06	1.05	1.04	1.02	1.02	1.00	.99	.98	.97	.96	.95
2.0	1.05	1.01	.98	1.03	.99	.97	.99	.97	.95	.97	.95	.93	.94	.93	.91	.89
3.0	.99	.94	.91	.97	.93	.90	.95	.91	.89	.92	.90	.87	.90	.88	.86	.84
4.0	.93	.88	.84	.92	.88	.84	.90	.86	.83	.88	.85	.82	.86	.83	.81	.80
5.0	.88	.83	.79	.87	.82	.79	.86	.81	.78	.84	.80	.77	.82	.79	.77	.75
6.0	.84	.78	.74	.83	.78	.74	.81	.77	.74	.80	.76	.73	.79	.75	.73	.71
7.0	.79	.74	.70	.79	.74	.70	.77	.73	.70	.76	.72	.69	.75	.72	.69	.68
8.0	.75	.70	.66	.75	.70	.66	.74	.69	.66	.73	.69	.66	.72	.68	.65	.64
9.0	.72	.66	.63	.71	.66	.63	.70	.66	.63	.70	.65	.62	.69	.65	.62	.61
10.0	.68	.63	.60	.68	.63	.60	.67	.63	.59	.66	.62	.59	.66	.62	.59	.58



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:  
Test Date:2021-01-21

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.10  
Humidity:65.0%  
Test Distance:9.370m [K=1.0000]  
Remarks:

## WEC AND CCEC

Test:U:229.90V I:0.1333A P:30.021W PF:0.9798 Freq:49.71Hz Lamp Flux:3047.05x1 lm		
NAME: LENO-RO	TYPE:	WEIGHT:
SPEC.:	DIM.: 954*35*52	SERIAL No.:
MFR.: NEXOL	SUR.:0.954*0.03	Shielding 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	.162	.092	.029	.156	.089	.028	.143	.082	.026	.132	.076	.024	.121	.070	.023	
2.0	.154	.084	.026	.148	.082	.025	.138	.077	.024	.128	.072	.023	.119	.067	.021	
3.0	.146	.078	.023	.141	.076	.023	.132	.072	.022	.124	.068	.021	.117	.065	.020	
4.0	.139	.072	.021	.135	.071	.021	.127	.067	.020	.120	.065	.019	.114	.062	.019	
5.0	.132	.067	.020	.129	.066	.019	.122	.064	.019	.116	.061	.018	.110	.059	.018	
6.0	.127	.063	.018	.123	.062	.018	.118	.060	.018	.112	.058	.017	.107	.057	.017	
7.0	.121	.060	.017	.119	.059	.017	.113	.057	.017	.109	.056	.016	.104	.054	.016	
8.0	.116	.057	.016	.114	.056	.016	.109	.055	.016	.105	.053	.015	.101	.052	.015	
9.0	.112	.054	.015	.110	.053	.015	.106	.052	.015	.102	.051	.015	.098	.050	.014	
10.0	.108	.052	.014	.106	.051	.014	.102	.050	.014	.099	.049	.014	.095	.048	.014	

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	.170	.157	.146	.146	.135	.126	.100	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.154	.133	.115	.132	.114	.099	.090	.079	.069	.052	.046	.041	.017	.015	.013	
3.0	.141	.113	.092	.121	.098	.080	.083	.068	.056	.048	.040	.033	.015	.013	.011	
4.0	.130	.099	.075	.111	.085	.065	.077	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.120	.087	.062	.103	.075	.054	.071	.052	.038	.041	.031	.023	.013	.010	.007	
6.0	.113	.077	.052	.097	.067	.045	.067	.047	.032	.039	.028	.019	.013	.009	.006	
7.0	.106	.069	.044	.091	.060	.038	.063	.042	.027	.037	.025	.016	.012	.008	.005	
8.0	.100	.063	.038	.086	.055	.033	.060	.038	.023	.035	.023	.014	.011	.007	.005	
9.0	.095	.058	.033	.082	.050	.028	.057	.035	.020	.033	.021	.012	.011	.007	.004	
10.0	.091	.053	.028	.078	.046	.025	.054	.033	.018	.032	.019	.011	.010	.006	.003	

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:  
Test Date:2021-01-21

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.10  
Humidity:65.0%  
Test Distance:9.370m [K=1.0000]  
Remarks:

## UGR(Unified Glare Rating) Table

Test:U:229.90V I:0.1333A P:30.021W PF:0.9798 Freq:49.71Hz Lamp Flux:3047.05x1 lm											
NAME: LENO-RO					TYPE:			WEIGHT:			
SPEC.:					DIM.: 954*35*52			SERIAL No.:			
MFR.: NEXOL					SUR.:0.954*0.03			Shielding 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		11.8	12.6	12.0	12.8	12.9	12.0	12.8	12.2	13.0	13.2
3H		11.6	12.4	11.9	12.6	12.8	11.8	12.6	12.1	12.8	13.0
4H		11.5	12.3	11.8	12.5	12.7	11.7	12.5	12.0	12.7	12.9
6H		11.4	12.1	11.7	12.4	12.6	11.7	12.3	12.0	12.6	12.8
8H		11.4	12.1	11.7	12.3	12.6	11.6	12.3	11.9	12.5	12.8
12H		11.4	12.0	11.7	12.3	12.5	11.6	12.2	11.9	12.5	12.7
4H 2H		11.5	12.3	11.8	12.5	12.7	11.7	12.5	12.0	12.7	12.9
3H		11.4	12.0	11.7	12.3	12.5	11.6	12.2	11.9	12.5	12.7
4H		11.3	11.8	11.6	12.1	12.4	11.5	12.1	11.8	12.3	12.7
6H		11.2	11.7	11.5	12.0	12.3	11.4	11.9	11.8	12.2	12.6
8H		11.1	11.6	11.5	11.9	12.3	11.3	11.8	11.7	12.1	12.5
12H		11.1	11.5	11.5	11.9	12.2	11.3	11.7	11.7	12.1	12.5
8H 4H		11.1	11.6	11.5	11.9	12.3	11.3	11.8	11.7	12.1	12.5
6H		11.0	11.4	11.4	11.8	12.2	11.2	11.6	11.6	12.0	12.4
8H		10.9	11.3	11.4	11.7	12.1	11.2	11.5	11.6	11.9	12.4
12H		10.9	11.2	11.4	11.6	12.1	11.1	11.4	11.6	11.8	12.3
12H 4H		11.1	11.5	11.5	11.9	12.2	11.3	11.7	11.7	12.1	12.5
6H		10.9	11.3	11.4	11.7	12.1	11.2	11.5	11.6	11.9	12.4
8H		10.9	11.2	11.4	11.6	12.1	11.1	11.4	11.6	11.8	12.3
Variations with the observer position at spacings:											
S = 1.0H		+ 4.2 / -26.1					+ 4.2 / -27.0				
1.5H		+ 7.0 / -19.9					+ 6.9 / -20.2				
2.0H		+ 6.9 / -16.5					+ 6.8 / -15.4				

CIE Pub.117, 3047 lm Total Lamp Luminous Flux Corrected ( $8\log(F/F_0) = 3.9$ )

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:  
Test Date:2021-01-21

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.10  
Humidity:65.0%  
Test Distance:9.370m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:229.90V I:0.1333A P:30.021W PF:0.9798 Freq:49.71Hz Lamp Flux:3047.05x1 lm		
NAME: LENO-RO	TYPE:	WEIGHT:
SPEC.:	DIM.: 954*35*52	SERIAL No.:
MFR.: NEXOL	SUR.:0.954*0.03	Shielding Angle:

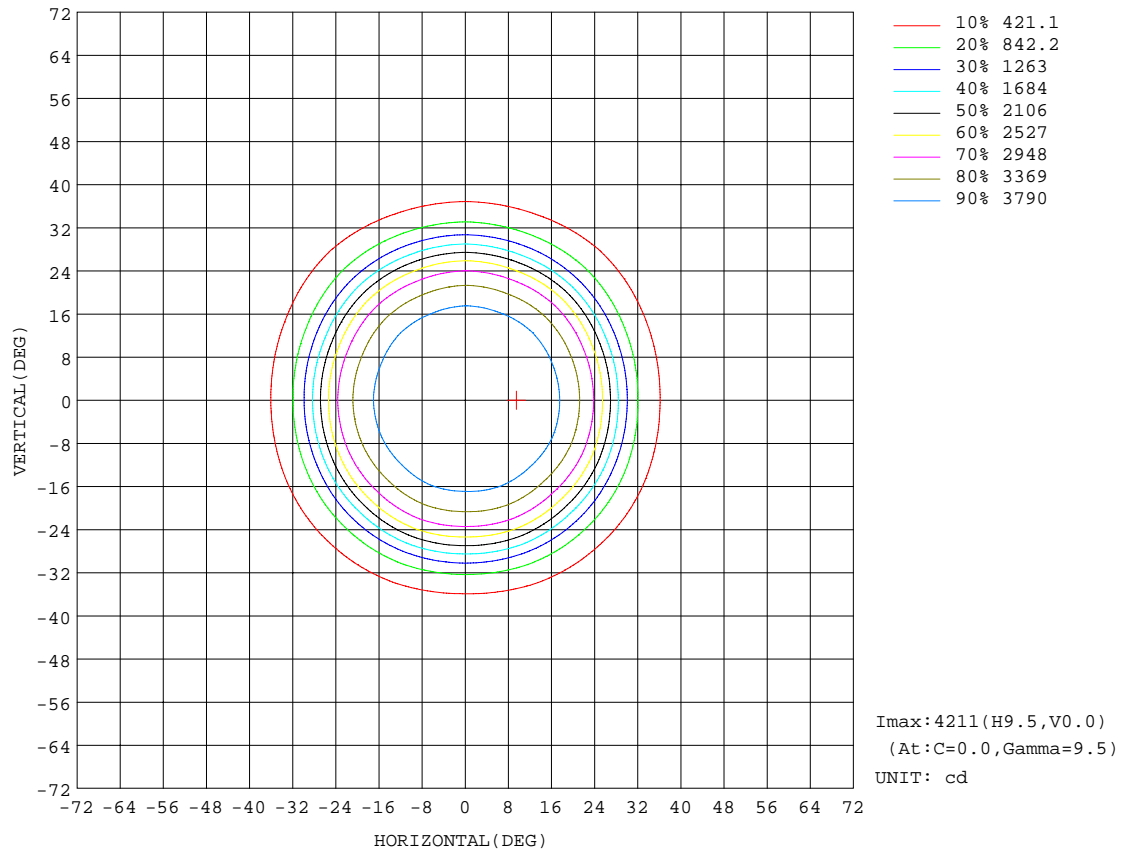
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	91	85	82	90	85	81	89	84	81	78
0.80	98	92	89	97	92	89	96	92	89	85
1.00	102	97	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: 22.5DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:  
Test Date:2021-01-21

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.10  
Humidity:65.0%  
Test Distance:9.370m [K=1.0000]  
Remarks:

## ISOCANDELA DIAGRAM

Test:U:229.90V I:0.1333A P:30.021W PF:0.9798 Freq:49.71Hz Lamp Flux:3047.05x1 lm		
NAME: LENO-RO	TYPE:	WEIGHT:
SPEC.:	DIM.: 954*35*52	SERIAL No.:
MFR.: NEXOL	SUR.:0.954*0.03	Shielding Angle:



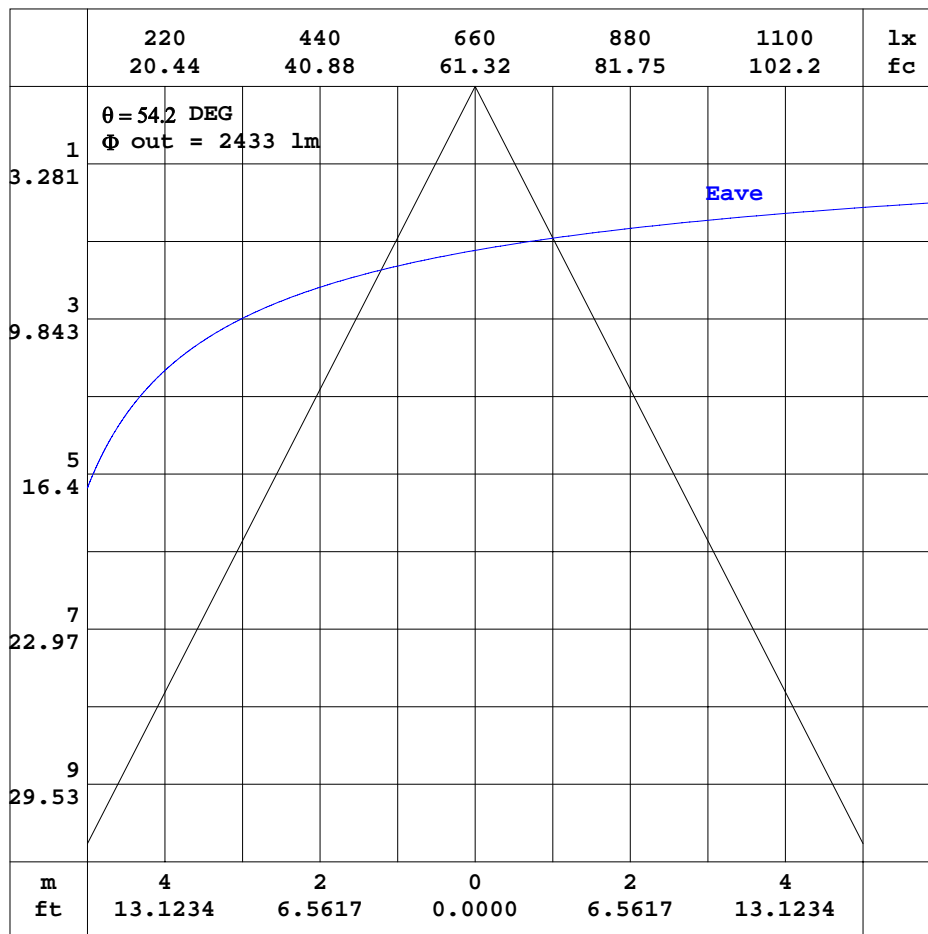
C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: MEDIUM  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2021-01-21

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.10  
 Humidity: 65.0%  
 Test Distance: 9.370m [K=1.0000]  
 Remarks:



### AAI CURVES

Test:U:229.90V I:0.1333A P:30.021W PF:0.9798 Freq:49.71Hz Lamp Flux:3047.05x1 lm		
NAME: LENO-RO	TYPE:	WEIGHT:
SPEC.:	DIM.: 954*35*52	SERIAL No.:
MFR.: NEXOL	SUR.:0.954*0.03	Shielding Angle:



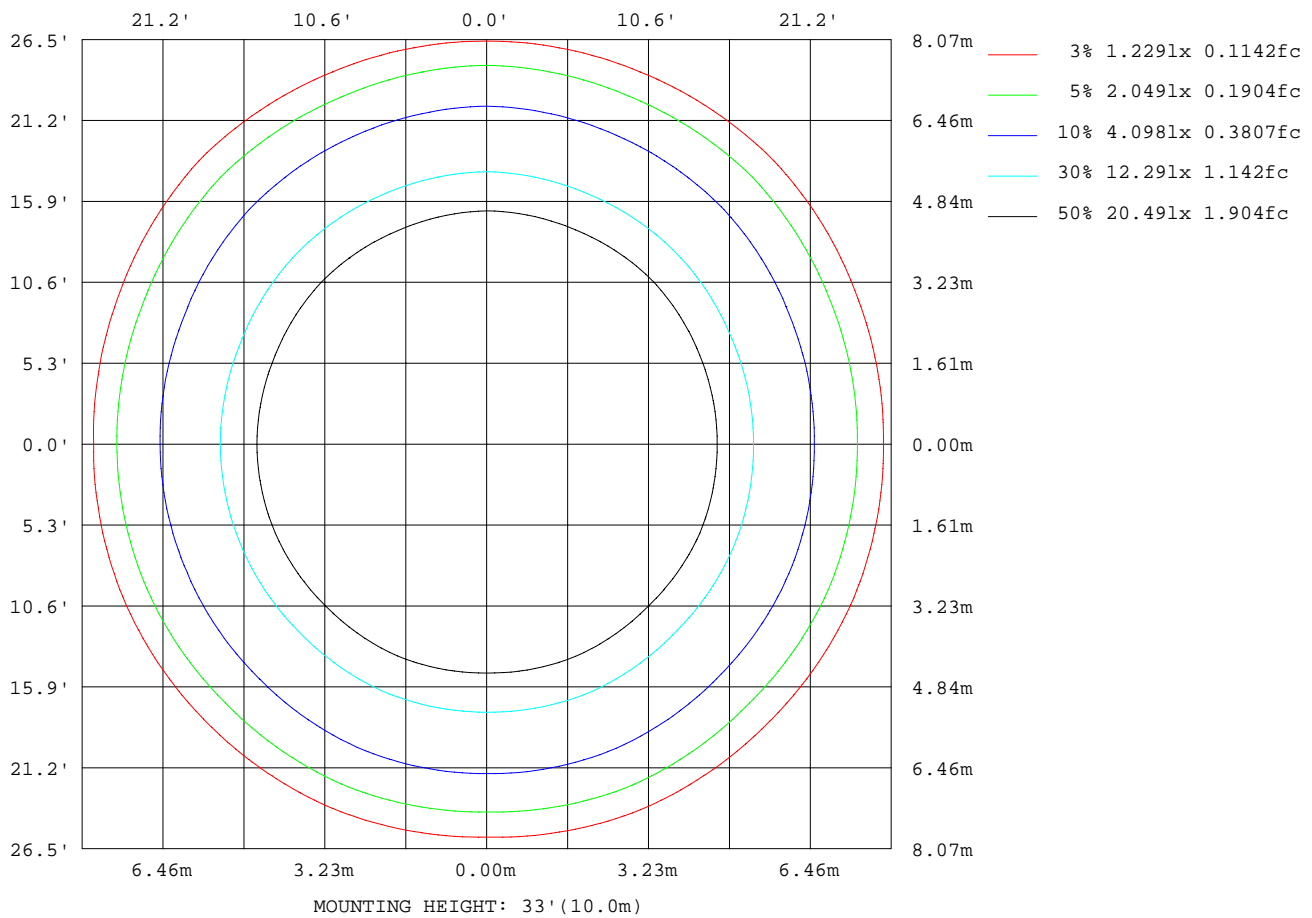
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: MEDIUM  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-01-21

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.10  
 Humidity:65.0%  
 Test Distance:9.370m [K=1.0000]  
 Remarks:

## ISOLUX DIAGRAM

Test:U:229.90V I:0.1333A P:30.021W PF:0.9798 Freq:49.71Hz Lamp Flux:3047.05x1 lm		
NAME: LENO-RO	TYPE:	WEIGHT:
SPEC.:	DIM.: 954*35*52	SERIAL No.:
MFR.: NEXOL	SUR.:0.954*0.03	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: MEDIUM  
Temperature: 25.3DEG  
Operators:  
Test Date: 2021-01-21

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.10  
Humidity: 65.0%  
Test Distance: 9.370m [K=1.0000]  
Remarks:

## LED Avg.L Report

Test:U:229.90V I:0.1333A P:30.021W PF:0.9798 Freq:49.71Hz Lamp Flux:3047.05x1 lm		
NAME: LENO-RO	TYPE:	WEIGHT:
SPEC.:	DIM.: 954*35*52	SERIAL No.:
MFR.: NEXOL	SUR.:0.954*0.03	Shielding Angle:

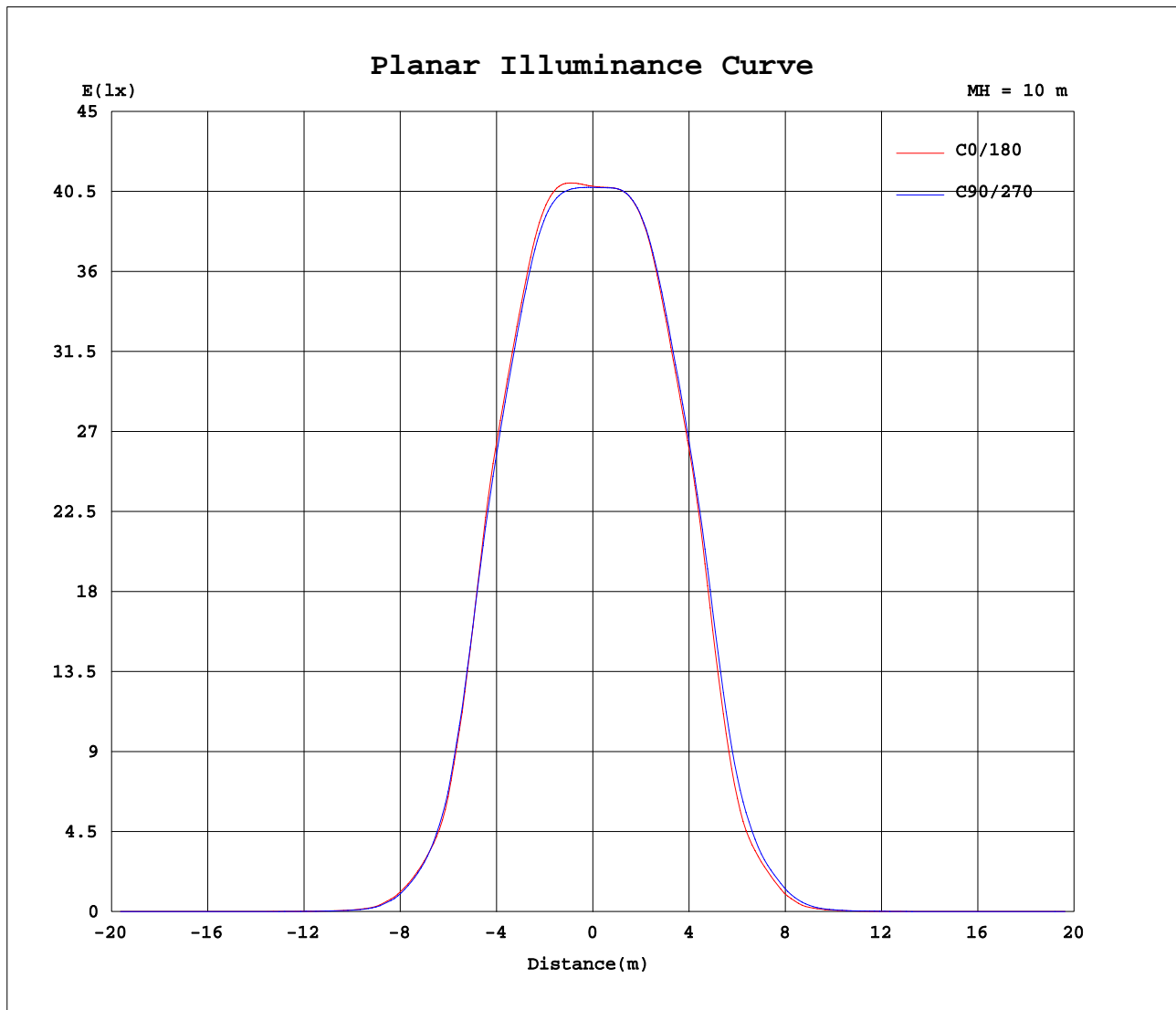
AvgL	cd/m2
L_0~180(65)av	11
L_0~180(75)av	16
L_0~180(85)av	42
L_90~270(65)av	11
L_90~270(75)av	16
L_90~270(85)av	45
L_45(65)av	16
L_45(75)av	16
L_45(85)av	44

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: MEDIUM  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-01-21

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.10  
 Humidity:65.0%  
 Test Distance:9.370m [K=1.0000]  
 Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: MEDIUM  
Temperature: 25.3DEG  
Operators:  
Test Date: 2021-01-21

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.10  
Humidity: 65.0%  
Test Distance: 9.370m [K=1.0000]  
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.406.10
Humidity:65.0%
Test Distance:9.370m [K=1.0000]
Remarks:

```