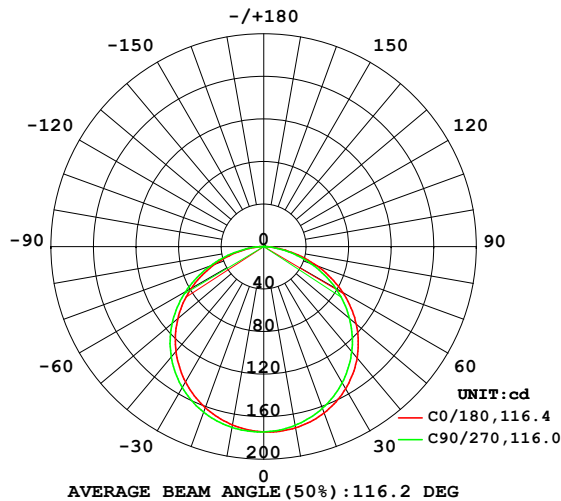


## LUMINAIRE PHOTOMETRIC TEST REPORT

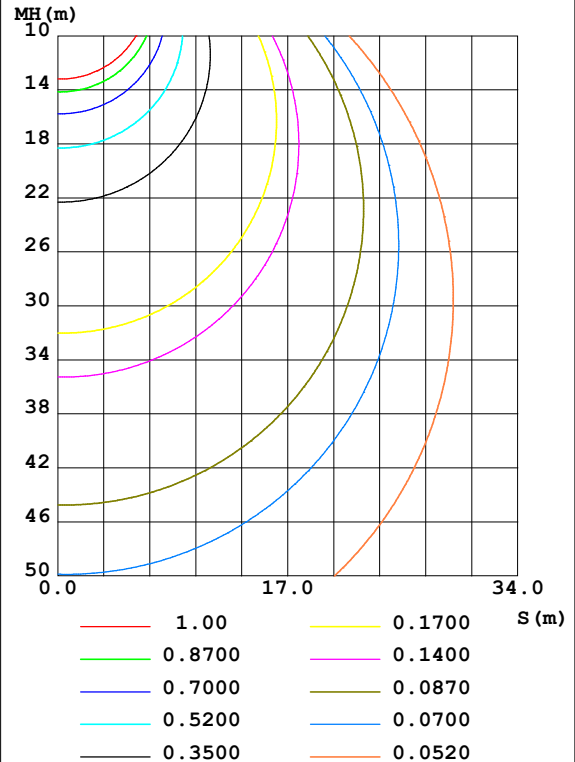
NAME: Nerja 3100	TYPE:	WEIGHT:
SPEC.:	DIM.: 10x 2x500mm	SERIAL No.:
MFR.: Luz Negra s.l.	SUR.:22	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 99.72 lm/W
MODEL	33.032	Imax(cd)	174.5	S/MH(C0/180)	1.26	
NOMINAL POWER(W)	19,2W/m	LOR(%)	100.0	S/MH(C90/270)	1.31	
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	519.55	$\eta$ UP,DN(C0-180)	0.1,49.1	
NOMINAL FLUX(lm)	519.546	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.1,50.7	
LAMPS INSIDE	1	$\eta$ up(%)	0.2	CIBSE SHR NOM	1.25	
TEST VOLTAGE(V)	24	$\eta$ down(%)	99.8	CIBSE SHR MAX	1.35	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:Marçal Huguet  
Test Date:14 April 2021

$\gamma$  Range: 0 - 110DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.400  
Humidity:37%  
Test Distance:8.200m [K=1.0000]  
Remarks:

### ZONAL FLUX DIAGRAM

#### ZONAL FLUX DIAGRAM:

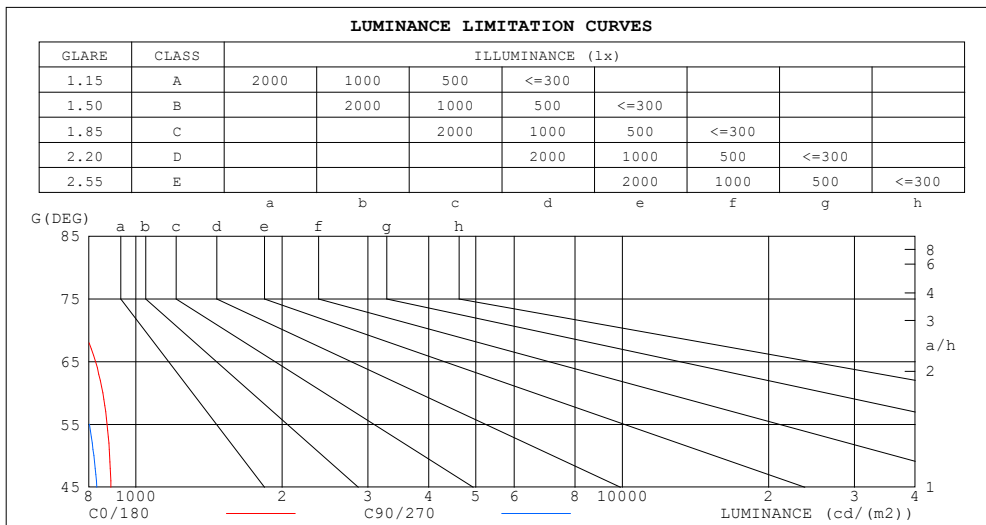
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	173.0	171.9	170.6	169.9	170.2	171.3	172.6	173.3	0- 10	16.51	16.51	3.18,3.18
20	166.4	164.3	161.7	160.5	161.1	163.2	165.6	167.0	10- 20	47.53	64.04	12.3,12.3
30	154.2	151.2	147.7	146.2	147.1	150.0	153.2	155.1	20- 30	72.74	136.8	26.3,26.3
40	136.6	132.9	128.8	127.2	128.4	131.8	135.4	137.6	30- 40	88.89	225.7	43.4,43.4
50	113.6	109.5	105.4	104.1	105.5	109.0	112.5	114.7	40- 50	93.62	319.3	61.5,61.5
60	85.60	81.58	77.89	77.21	78.69	81.98	84.88	86.78	50- 60	85.79	405.1	78,78
70	53.47	50.13	47.65	47.54	48.99	51.75	53.71	54.79	60- 70	65.90	471.0	90.7,90.7
80	20.78	19.37	18.49	18.67	19.44	21.80	22.85	22.81	70- 80	37.38	508.4	97.8,97.8
90	0.7926	0.7534	0.2016	0.8379	0.6832	2.083	0.4174	2.053	80- 90	9.968	518.3	99.8,99.8
100	0.3625	0.3842	0.3754	0.3798	0.4720	0.4894	0.3803	0.5586	90-100	0.6417	519.0	99.9,99.9
110	0.5069	0.6379	0.5766	0.5589	0.6206	0.7297	0.5810	0.5590	100-110	0.5347	519.5	100,100
120	0	0	0	0	0	0	0	0	110-120	0.0312	519.5	100,100
130	0	0	0	0	0	0	0	0	120-130	0	519.5	100,100
140	0	0	0	0	0	0	0	0	130-140	0	519.5	100,100
150	0	0	0	0	0	0	0	0	140-150	0	519.5	100,100
160	0	0	0	0	0	0	0	0	150-160	0	519.5	100,100
170	0	0	0	0	0	0	0	0	160-170	0	519.5	100,100
180	0	0	0	0	0	0	0	0	170-180	0	519.5	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25DEG  
 Operators:Marçal Huguet  
 Test Date:14 April 2021

$\gamma$  Range: 0 - 110DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.400  
 Humidity:37%  
 Test Distance:8.200m [K=1.0000]  
 Remarks:

### LUMINANCE LIMITATION CURVES

NAME: Nerja 3100	TYPE:	WEIGHT:
SPEC.:	DIM.: 10x 2x500mm	SERIAL No.:
MFR.: Luz Negra s.l.	SUR.:22	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25DEG  
 Operators:Marçal Huguet  
 Test Date:14 April 2021

γ Range: 0 - 110DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.400  
 Humidity:37%  
 Test Distance:8.200m [K=1.0000]  
 Remarks:



# WEC AND CCEC

NAME: Nerja 3100	TYPE:	WEIGHT:
SPEC.:	DIM.: 10x 2x500mm	SERIAL No.:
MFR.: Luz Negra s.l.	SUR.:22	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	.313	.178	.056	.306	.174	.055	.292	.168	.054	.280	.162	.052	.269	.156	.050		
2.0	.295	.161	.050	.288	.159	.049	.276	.154	.048	.266	.149	.047	.255	.144	.046		
3.0	.273	.145	.043	.267	.143	.043	.256	.139	.042	.247	.135	.041	.238	.132	.041		
4.0	.251	.131	.038	.246	.129	.038	.237	.126	.038	.228	.123	.037	.220	.120	.036		
5.0	.232	.118	.034	.228	.117	.034	.220	.114	.034	.212	.112	.033	.205	.109	.033		
6.0	.215	.108	.031	.211	.107	.031	.204	.105	.030	.197	.102	.030	.191	.100	.030		
7.0	.200	.099	.028	.197	.098	.028	.190	.096	.028	.184	.094	.027	.178	.093	.027		
8.0	.187	.091	.026	.184	.090	.026	.178	.089	.025	.172	.087	.025	.167	.086	.025		
9.0	.175	.085	.024	.172	.084	.024	.167	.083	.023	.162	.081	.023	.157	.080	.023		
10.0	.165	.079	.022	.162	.078	.022	.157	.077	.022	.153	.076	.022	.148	.075	.021		

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	.192	.192	.192	.164	.164	.164	.112	.112	.112	.064	.064	.064	.021	.021	.021		
1.0	.182	.158	.136	.156	.136	.117	.107	.093	.081	.061	.054	.047	.020	.017	.015		
2.0	.174	.134	.099	.149	.115	.086	.102	.080	.060	.059	.046	.035	.019	.015	.011		
3.0	.167	.116	.076	.143	.100	.066	.098	.070	.046	.057	.041	.027	.018	.013	.009		
4.0	.159	.103	.060	.137	.089	.052	.094	.062	.037	.054	.036	.022	.017	.012	.007		
5.0	.152	.092	.049	.130	.080	.042	.090	.056	.030	.052	.033	.018	.017	.011	.006		
6.0	.145	.084	.041	.124	.073	.035	.086	.051	.025	.050	.030	.015	.016	.010	.005		
7.0	.138	.077	.035	.119	.067	.030	.082	.047	.022	.048	.028	.013	.015	.009	.004		
8.0	.131	.071	.030	.113	.062	.026	.078	.044	.019	.045	.026	.011	.015	.008	.004		
9.0	.125	.067	.027	.108	.058	.023	.075	.041	.017	.044	.024	.010	.014	.008	.003		
10.0	.119	.062	.024	.103	.054	.021	.071	.038	.015	.042	.022	.009	.014	.007	.003		

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:Marçal Huguet  
Test Date:14 April 2021

γ Range: 0 - 110DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.400  
Humidity:37%  
Test Distance:8.200m [K=1.0000]  
Remarks:

### UGR(Unified Glare Rating) Table

NAME: Nerja 3100					TYPE:			WEIGHT:			
SPEC.:					DIM.: 10x 2x500mm			SERIAL No.:			
MFR.: Luz Negra s.l.					SUR.:22			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	2H	14.8	16.3	15.1	16.5	16.7	14.4	15.9	14.7	16.2	16.4
	3H	16.3	17.8	16.6	18.0	18.2	15.9	17.3	16.2	17.5	17.8
	4H	16.9	18.3	17.3	18.5	18.8	16.4	17.8	16.8	18.0	18.3
	6H	17.3	18.6	17.7	18.9	19.2	16.8	18.1	17.1	18.3	18.6
	8H	17.4	18.7	17.8	18.9	19.2	16.9	18.1	17.2	18.4	18.7
	12H	17.5	18.7	17.8	19.0	19.3	16.9	18.1	17.3	18.4	18.7
4H	2H	15.4	16.7	15.7	17.0	17.2	15.1	16.4	15.4	16.7	16.9
	3H	17.1	18.3	17.4	18.6	18.9	16.7	17.9	17.1	18.2	18.5
	4H	17.8	18.9	18.2	19.2	19.6	17.4	18.5	17.8	18.8	19.1
	6H	18.3	19.3	18.7	19.6	20.0	17.8	18.8	18.3	19.2	19.5
	8H	18.5	19.4	18.9	19.7	20.1	18.0	18.9	18.4	19.3	19.6
	12H	18.5	19.4	19.0	19.8	20.2	18.0	18.9	18.5	19.3	19.7
8H	4H	18.0	18.9	18.4	19.3	19.7	17.6	18.5	18.1	18.9	19.3
	6H	18.7	19.4	19.1	19.8	20.2	18.3	19.0	18.7	19.4	19.8
	8H	18.9	19.5	19.3	20.0	20.4	18.5	19.1	18.9	19.5	20.0
	12H	19.0	19.6	19.5	20.0	20.5	18.6	19.1	19.1	19.6	20.1
12H	4H	18.0	18.8	18.5	19.2	19.6	17.7	18.5	18.1	18.9	19.3
	6H	18.7	19.4	19.2	19.8	20.2	18.3	19.0	18.8	19.4	19.8
	8H	19.0	19.5	19.4	20.0	20.5	18.5	19.1	19.0	19.6	20.0
Variations with the observer position at spacings:											
S = 1.0H		+ 0.1 / - 0.2					+ 0.2 / - 0.2				
1.5H		+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H		+ 0.2 / - 0.3					+ 0.2 / - 0.4				

CIE Pub.117, 519.5 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = -2.3$ )

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:Marçal Huguet  
Test Date:14 April 2021

γ Range: 0 - 110DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.400  
Humidity:37%  
Test Distance:8.200m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

NAME: Nerja 3100	TYPE:	WEIGHT:
SPEC.:	DIM.: 10x 2x500mm	SERIAL No.:
MFR.: Luz Negra s.l.	SUR.:22	Shielding Angle:

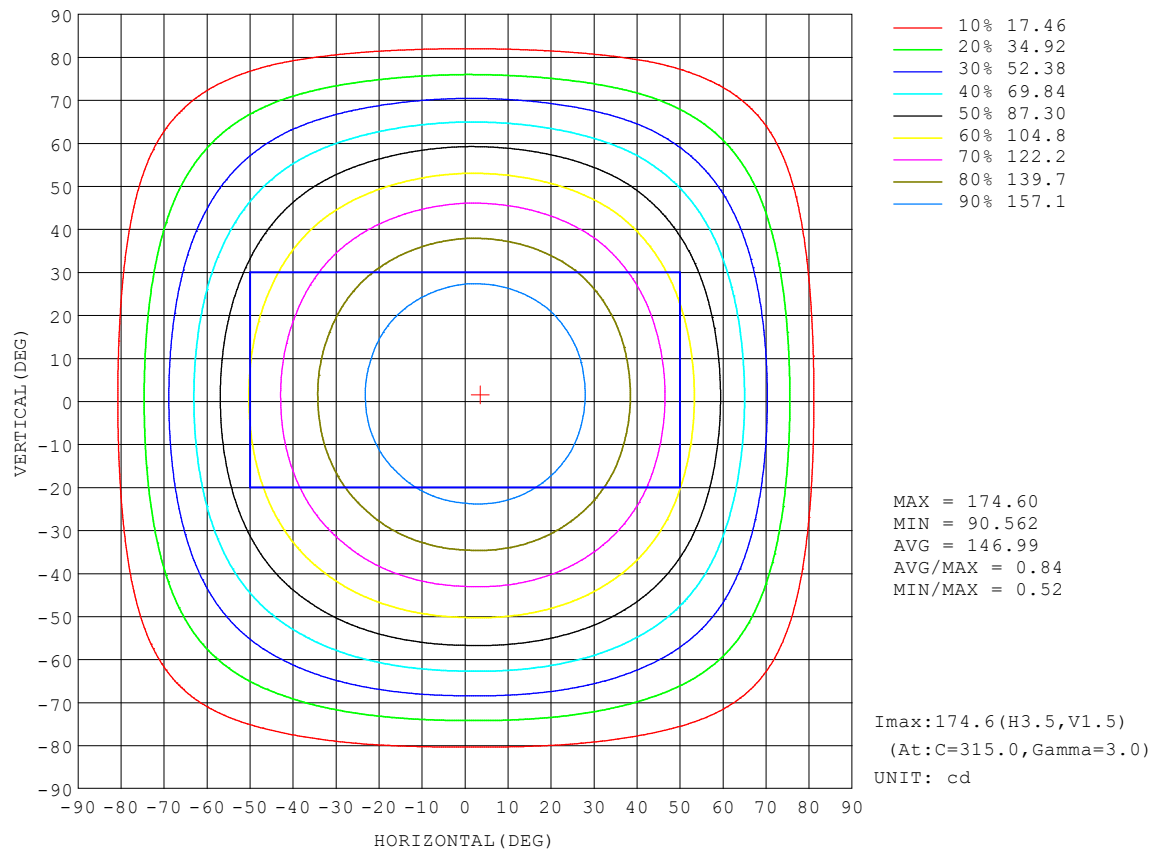
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT)    k(RI) x RCR = 5									
k = 0.60	57	45	38	56	45	38	55	44	38	31
0.80	67	55	48	66	55	47	64	54	47	40
1.00	75	64	57	74	63	56	72	65	56	49
1.25	83	72	65	81	71	64	78	70	63	56
1.50	88	78	70	86	77	70	83	75	69	61
2.00	95	86	79	93	85	79	89	82	77	69
2.50	98	91	84	96	89	84	93	87	82	73
3.00	102	95	89	100	93	88	96	90	86	77
4.00	106	100	95	104	98	94	99	95	91	82
5.00	108	104	99	106	102	98	101	98	95	85
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: HIGH  
 Temperature: 25DEG  
 Operators: Marçal Huguet  
 Test Date: 14 April 2021

γ Range: 0 - 110DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.400  
 Humidity: 37%  
 Test Distance: 8.200m [K=1.0000]  
 Remarks:

## ISOCANDELA DIAGRAM

NAME: Nerja 3100	TYPE:	WEIGHT:
SPEC.:	DIM.: 10x 2x500mm	SERIAL No.:
MFR.: Luz Negra s.l.	SUR.:22	Shielding Angle:



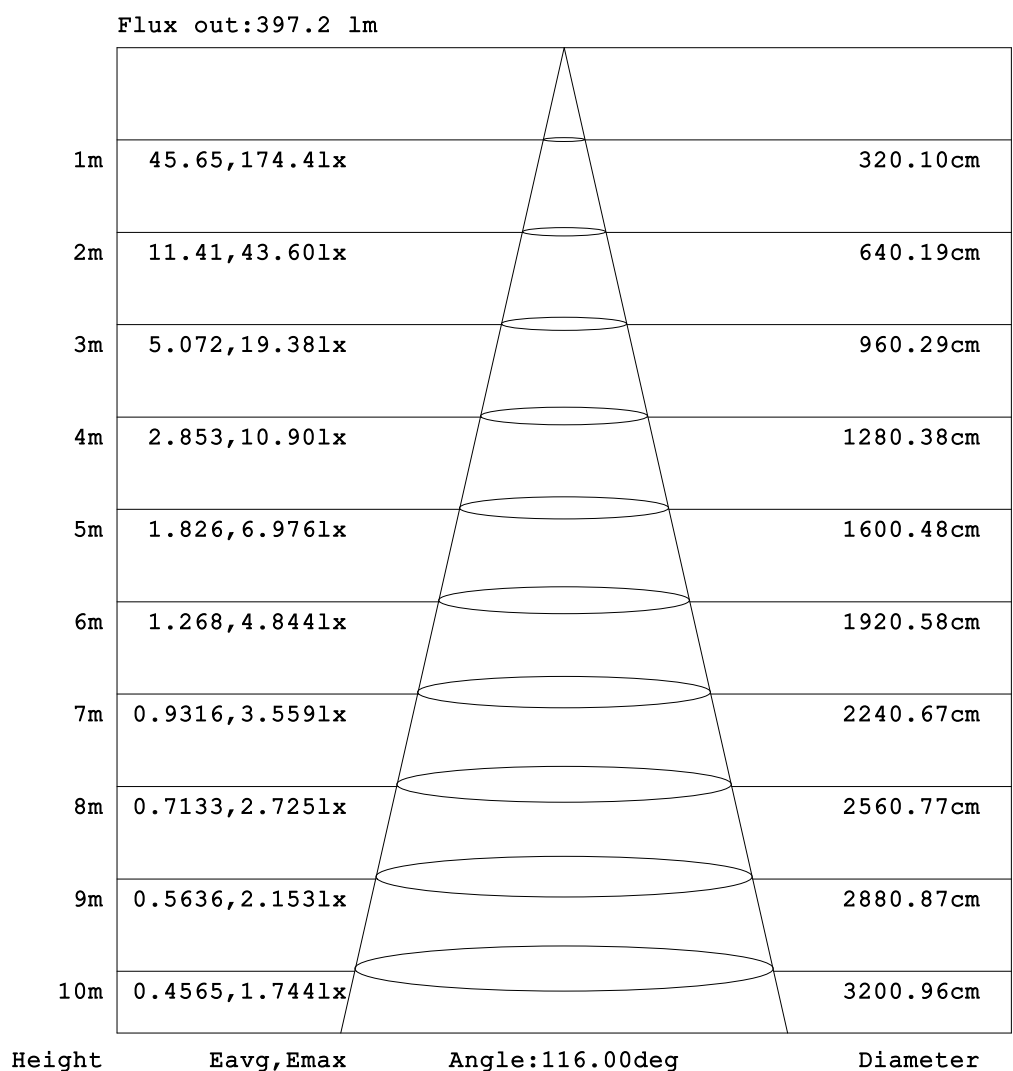
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:Marçal Huguet  
Test Date:14 April 2021

$\gamma$  Range: 0 - 110DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.400  
Humidity:37%  
Test Distance:8.200m [K=1.0000]  
Remarks:



### AAI Figure

NAME: Nerja 3100	TYPE:	WEIGHT:
SPEC.:	DIM.: 10x 2x500mm	SERIAL No.:
MFR.: Luz Negra s.l.	SUR.:22	Shielding Angle:



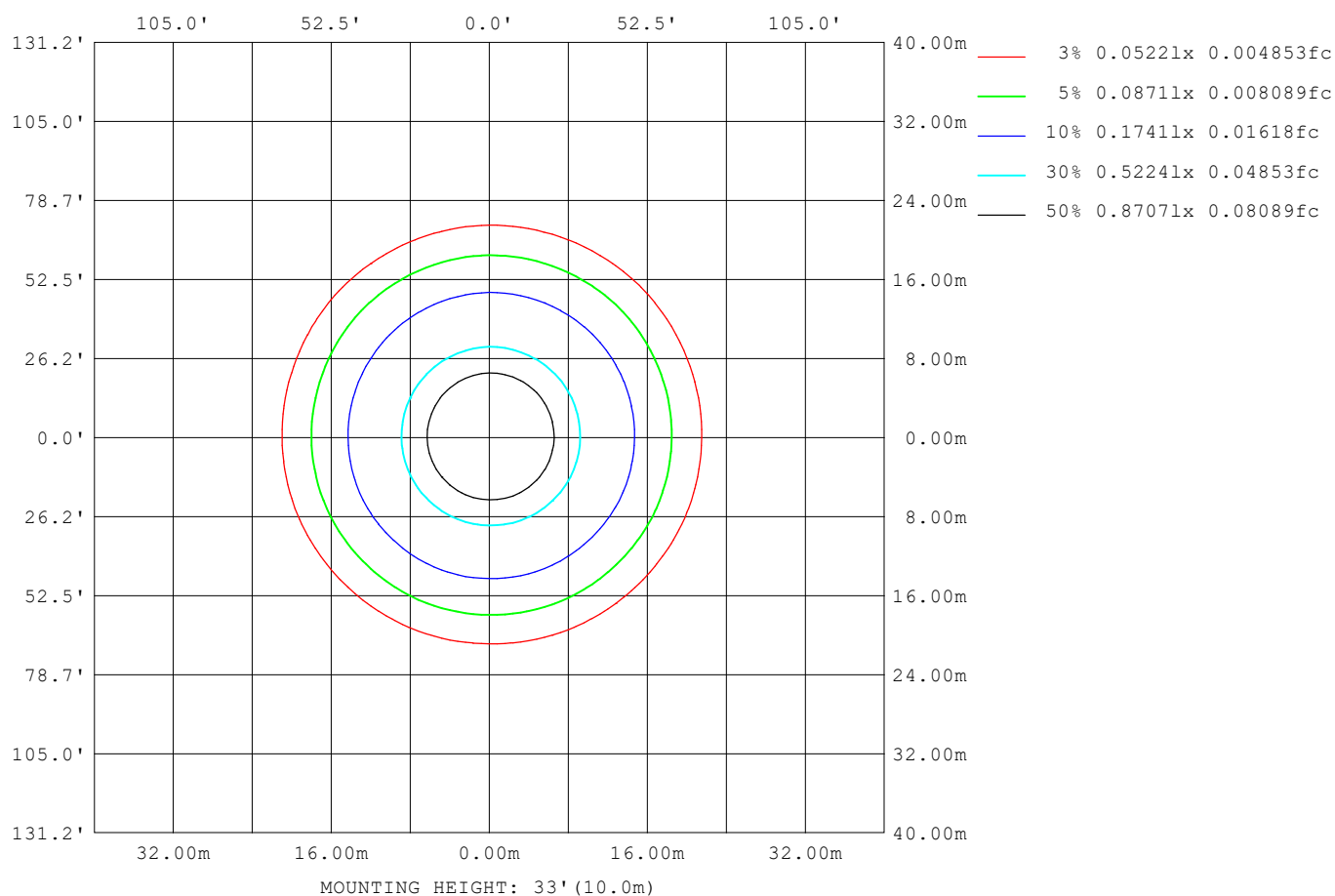
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:Marçal Huguet  
Test Date:14 April 2021

γ Range: 0 - 110DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.400  
Humidity:37%  
Test Distance:8.200m [K=1.0000]  
Remarks:

## ISOLUX DIAGRAM

NAME: Nerja 3100	TYPE:	WEIGHT:
SPEC.:	DIM.: 10x 2x500mm	SERIAL No.:
MFR.: Luz Negra s.l.	SUR.:22	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:Marçal Huguet  
Test Date:14 April 2021

γ Range: 0 - 110DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.400  
Humidity:37%  
Test Distance:8.200m [K=1.0000]  
Remarks:

### LED Avg.L Report

NAME: Nerja 3100	TYPE:	WEIGHT:
SPEC.:	DIM.: 10x 2x500mm	SERIAL No.:
MFR.: Luz Negra s.l.	SUR.:22	Shielding Angle:

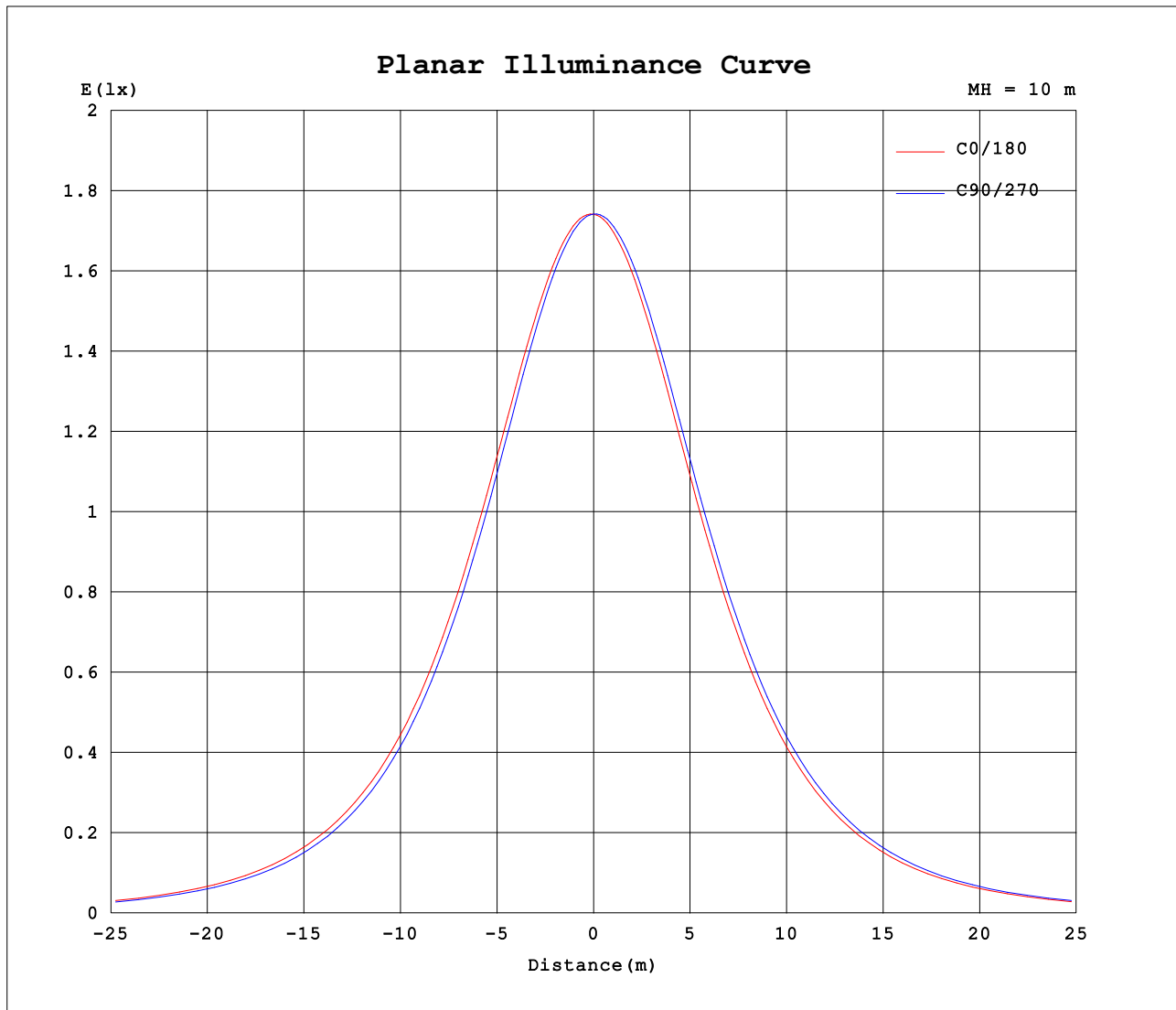
AvgL	cd/m2
L_0~180 (65) av	793
L_0~180 (75) av	682
L_0~180 (85) av	440
L_90~270 (65) av	784
L_90~270 (75) av	680
L_90~270 (85) av	467
L_45 (65) av	790
L_45 (75) av	683
L_45 (85) av	492

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:Marçal Huguet  
Test Date:14 April 2021

γ Range: 0 - 110DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.400  
Humidity:37%  
Test Distance:8.200m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25DEG  
 Operators: Marçal Huguet  
 Test Date: 14 April 2021

γ Range: 0 - 110DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.400  
 Humidity: 37%  
 Test Distance: 8.200m [K=1.0000]  
 Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Nerja 3100	TYPE:	WEIGHT:
SPEC.:	DIM.: 10x 2x500mm	SERIAL No.:
MFR.: Luz Negra s.l.	SUR.:22	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174			
5	174	174	174	173	173	173	173	173	173	173	173	174	174	174	174	174			
10	173	173	172	171	171	170	170	170	170	171	171	172	173	173	173	173			
15	170	170	169	168	167	166	166	166	166	167	168	169	170	170	171	171			
20	166	166	164	163	162	161	160	161	161	162	163	164	166	166	167	167			
25	161	160	158	157	155	155	154	154	155	156	157	159	160	161	162	162			
30	154	153	151	150	148	147	146	146	147	148	150	151	153	154	155	155			
35	146	145	143	141	139	138	137	138	138	140	141	143	145	146	147	147			
40	137	135	133	131	129	128	127	128	128	130	132	133	135	137	138	137			
45	126	124	122	120	118	117	116	117	117	119	121	123	125	126	127	127			
50	114	112	110	107	105	105	104	105	105	107	109	111	113	114	115	114			
55	100	98.8	96.1	94.1	92.1	91.6	91.1	91.8	92.5	93.8	96.0	97.4	99.3	100	101	101			
60	85.6	84.2	81.6	79.8	77.9	77.5	77.2	78.0	78.7	79.9	82.0	83.2	84.9	85.7	86.8	86.4			
65	69.9	68.7	66.2	64.6	63.0	62.8	62.6	63.5	64.1	65.1	67.1	68.1	69.6	70.1	71.2	70.6			
70	53.5	52.4	50.1	49.0	47.7	47.7	47.5	48.5	49.0	49.9	51.7	52.5	53.7	54.0	54.8	54.1			
75	36.8	35.9	34.2	33.5	32.6	32.7	32.6	33.4	33.8	34.7	36.3	37.0	37.8	37.9	38.3	37.5			
80	20.8	20.3	19.4	19.1	18.5	18.8	18.7	19.2	19.4	20.3	21.8	22.4	22.9	22.8	22.8	21.6			
85	7.81	7.85	7.40	7.47	6.28	7.57	7.39	7.53	7.53	8.25	9.67	10.2	9.98	10.1	9.82	8.67			
90	0.79	0.80	0.75	0.71	0.20	0.90	0.84	0.75	0.68	1.22	2.08	2.32	0.42	2.13	2.05	1.37			
95	0.30	0.31	0.32	0.30	0.28	0.30	0.36	0.36	0.41	0.82	1.17	0.46	0.29	0.62	1.24	0.76			
100	0.36	0.37	0.38	0.43	0.38	0.37	0.38	0.40	0.47	0.56	0.49	0.54	0.38	0.38	0.56	0.64			
105	0.42	0.43	0.53	0.56	0.47	0.46	0.45	0.45	0.52	0.58	0.59	0.49	0.48	0.47	0.48	0.52			
110	0.51	0.55	0.64	0.81	0.58	0.57	0.56	0.55	0.62	0.72	0.73	0.59	0.58	0.56	0.56	0.58			
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			

C Range: 0 - 360DEG

C Interval: 22.5DEG

Test Speed: HIGH

Temperature:25DEG

Operators:Marçal Huguet

Test Date:14 April 2021

γ Range: 0 - 110DEG

γ Interval: 1.0DEG

Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.400

Humidity:37%

Test Distance:8.200m [K=1.0000]

Remarks: