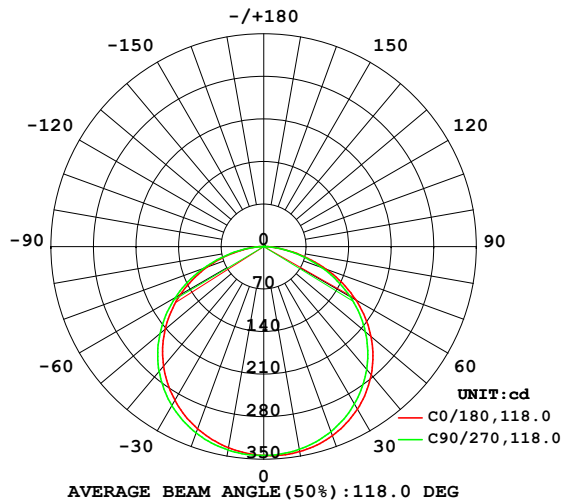


## LUMINAIRE PHOTOMETRIC TEST REPORT

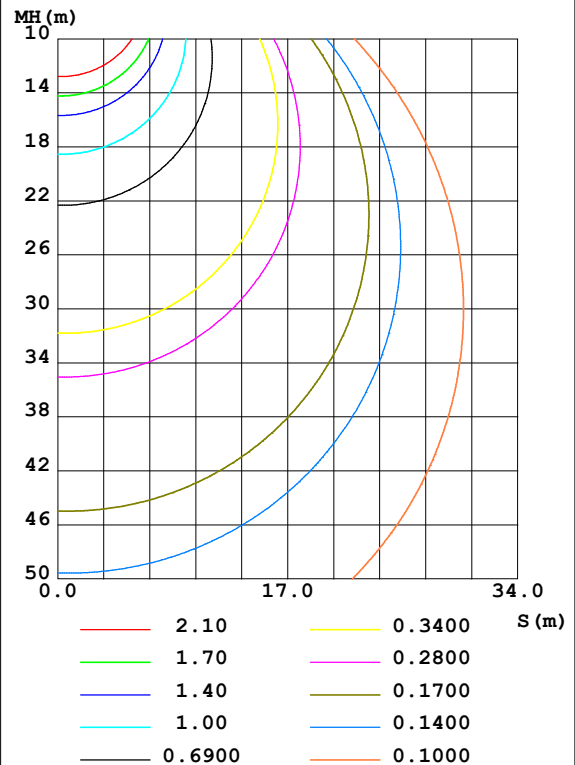
NAME: Nerja 3100+6500	TYPE:	WEIGHT:
SPEC.:	DIM.: 10x 2x500mm	SERIAL No.:
MFR.: Luz Negra s.l.	SUR.:22	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 100.00 lm/W			
MODEL	33.032	Imax(cd)	344.3	S/MH(C0/180)	1.27
NOMINAL POWER(W)	19,2W/m	LOR(%)	100.0	S/MH(C90/270)	1.31
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	1046.3	$\eta$ UP,DN(C0-180)	0.1,49.8
NOMINAL FLUX(lm)	1046.33	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.1,49.9
LAMPS INSIDE	1	$\eta$ up(%)	0.2	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	24	$\eta$ down(%)	99.8	CIBSE SHR MAX	1.50

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:

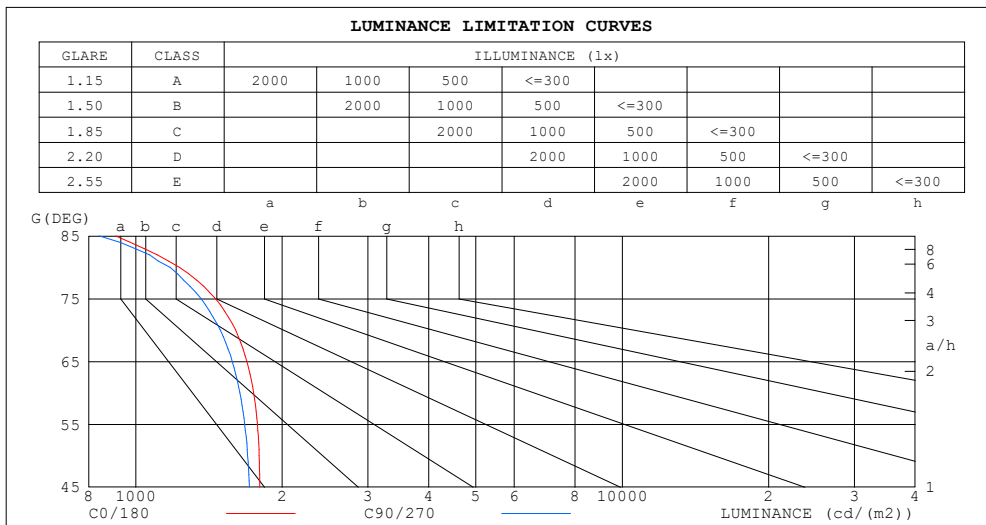
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	342.4	341.1	338.6	336.6	336.1	337.3	339.8	342.0	0- 10	32.60	32.60	3.12,3.12
20	330.9	328.4	323.8	319.8	318.8	321.4	326.1	330.1	10- 20	94.15	126.7	12.1,12.1
30	308.7	305.2	298.8	293.7	292.2	296.1	302.2	307.8	20- 30	144.8	271.5	26,26
40	275.3	271.0	263.7	258.1	256.7	261.1	267.9	274.2	30- 40	178.0	449.6	43,43
50	230.4	225.9	218.3	213.3	211.9	216.5	223.0	229.4	40- 50	188.8	638.4	61,61
60	174.5	170.1	163.8	160.0	158.9	163.1	168.2	173.7	50- 60	174.1	812.4	77.6,77.6
70	109.7	106.2	102.1	100.2	99.38	102.6	105.8	109.3	60- 70	134.5	947.0	90.5,90.5
80	42.65	41.89	40.86	40.45	39.66	42.19	43.62	44.17	70- 80	76.54	1023	97.8,97.8
90	1.662	2.486	0.4430	2.731	1.582	3.265	0.9611	3.116	80- 90	20.28	1044	99.8,99.8
100	0.7856	0.9744	0.7816	0.8260	1.004	1.040	0.8523	1.039	90-100	1.342	1045	99.9,99.9
110	1.070	1.315	1.180	1.158	1.306	1.568	1.267	1.215	100-110	1.137	1046	100,100
120	0	0	0	0	0	0	0	0	110-120	0.0656	1046	100,100
130	0	0	0	0	0	0	0	0	120-130	0	1046	100,100
140	0	0	0	0	0	0	0	0	130-140	0	1046	100,100
150	0	0	0	0	0	0	0	0	140-150	0	1046	100,100
160	0	0	0	0	0	0	0	0	150-160	0	1046	100,100
170	0	0	0	0	0	0	0	0	160-170	0	1046	100,100
180	0	0	0	0	0	0	0	0	170-180	0	1046	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:

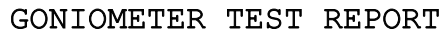
### LUMINANCE LIMITATION CURVES

NAME: Nerja 3100+6500	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+6500	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	.315	.179	.057	.307	.175	.056	.294	.169	.054	.282	.162	.052	.270	.157	.051		
2.0	.296	.162	.050	.290	.160	.049	.278	.154	.048	.267	.150	.047	.257	.145	.046		
3.0	.274	.146	.044	.268	.144	.043	.258	.140	.042	.248	.136	.042	.239	.132	.041		
4.0	.252	.131	.039	.247	.129	.038	.238	.126	.038	.229	.123	.037	.221	.120	.037		
5.0	.233	.119	.034	.229	.117	.034	.220	.115	.034	.213	.112	.033	.205	.110	.033		
6.0	.216	.108	.031	.212	.107	.031	.205	.105	.031	.198	.103	.030	.191	.101	.030		
7.0	.201	.099	.028	.197	.098	.028	.191	.096	.028	.185	.095	.028	.179	.093	.027		
8.0	.187	.092	.026	.184	.091	.026	.178	.089	.025	.173	.088	.025	.168	.086	.025		
9.0	.176	.085	.024	.173	.084	.024	.167	.083	.023	.162	.081	.023	.158	.080	.023		
10.0	.165	.079	.022	.162	.078	.022	.158	.077	.022	.153	.076	.022	.149	.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	.183	.158	.136	.156	.136	.117	.107	.093	.081	.061	.054	.047	.020	.017	.015		
2.0	.175	.134	.099	.150	.115	.086	.103	.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	.160	.103	.060	.137	.089	.052	.094	.062	.037	.054	.036	.022	.018	.012	.007		
5.0	.152	.093	.049	.131	.080	.042	.090	.056	.030	.052	.033	.018	.017	.011	.006		
6.0	.145	.084	.041	.125	.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	.132	.072	.030	.113	.062	.026	.078	.044	.019	.046	.026	.011	.015	.008	.004		
9.0	.125	.067	.027	.108	.058	.023	.075	.041	.017	.044	.024	.010	.014	.008	.003		
10.0	.120	.062	.024	.103	.054	.021	.072	.038	.015	.042	.023	.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+6500					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					14.9	16.4	15.2	16.7	16.9	14.7	16.2	14.9	16.4	16.6
3H					16.5	17.9	16.8	18.2	18.4	16.2	17.6	16.5	17.8	18.1
4H					17.1	18.5	17.4	18.7	19.0	16.8	18.1	17.1	18.4	18.6
6H					17.5	18.8	17.8	19.0	19.3	17.2	18.4	17.5	18.7	19.0
8H					17.6	18.8	17.9	19.1	19.4	17.3	18.5	17.6	18.8	19.1
12H					17.6	18.8	18.0	19.1	19.4	17.3	18.5	17.7	18.8	19.1
4H 2H					15.5	16.9	15.8	17.1	17.4	15.3	16.7	15.6	16.9	17.2
3H					17.3	18.5	17.6	18.8	19.1	17.0	18.2	17.4	18.5	18.8
4H					18.0	19.1	18.4	19.4	19.8	17.7	18.8	18.1	19.1	19.5
6H					18.5	19.5	18.9	19.8	20.2	18.2	19.2	18.6	19.6	19.9
8H					18.7	19.6	19.1	19.9	20.3	18.4	19.3	18.8	19.7	20.0
12H					18.7	19.6	19.2	20.0	20.4	18.5	19.3	18.9	19.7	20.1
8H 4H					18.2	19.1	18.7	19.5	19.9	18.0	18.9	18.4	19.3	19.7
6H					18.9	19.6	19.3	20.0	20.5	18.6	19.4	19.1	19.8	20.2
8H					19.1	19.8	19.6	20.2	20.7	18.9	19.5	19.3	20.0	20.4
12H					19.3	19.8	19.7	20.3	20.8	19.0	19.6	19.5	20.0	20.5
12H 4H					18.2	19.1	18.7	19.5	19.9	18.0	18.8	18.4	19.2	19.6
6H					18.9	19.6	19.4	20.0	20.5	18.7	19.4	19.2	19.8	20.2
8H					19.2	19.8	19.7	20.2	20.7	19.0	19.5	19.4	20.0	20.5
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, 1046 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 0.2$ )

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+6500	TYPE:	WEIGHT:
SPEC.:	DIM.: 10x 2x500mm	SERIAL No.:
MFR.: Luz Negra s.l.	SUR.:22	Shielding Angle:

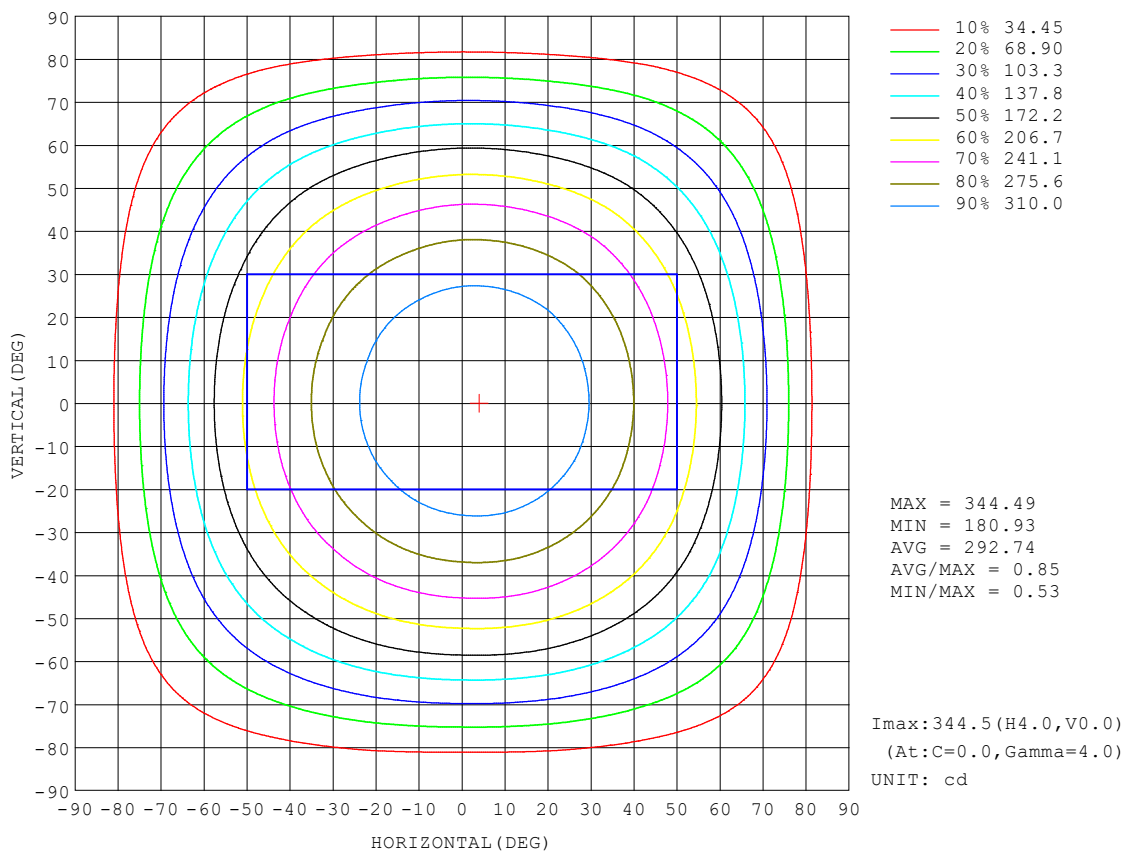
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT)    k(RI) x RCR = 5									
k = 0.60	57	45	38	56	45	38	55	44	37	31
0.80	67	55	47	66	54	47	64	54	47	40
1.00	75	64	56	74	63	56	72	65	56	48
1.25	82	72	64	81	71	64	78	69	63	56
1.50	87	77	70	86	76	70	83	75	69	61
2.00	94	86	79	92	84	78	89	82	77	69
2.50	98	90	84	96	89	83	92	86	81	73
3.00	102	95	89	100	93	88	95	90	86	77
4.00	106	100	95	103	98	94	99	95	91	82
5.00	108	103	99	106	101	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

$\gamma$  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:

## ISOCANDELA DIAGRAM

NAME: Nerja 3100+6500	TYPE:	WEIGHT:
SPEC.:	DIM.: 10x 2x500mm	SERIAL No.:
MFR.: Luz Negra s.l.	SUR.:22	Shielding Angle:



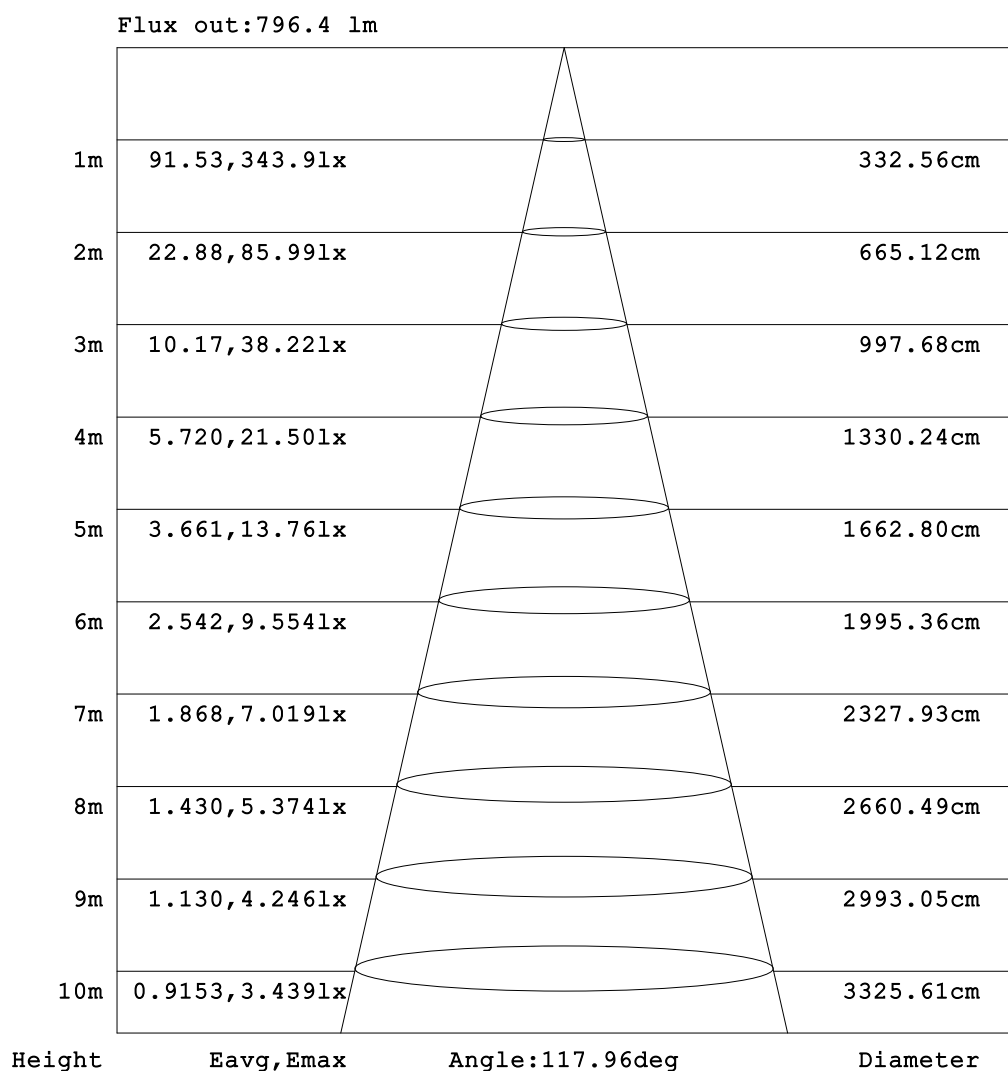
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:Marçal Huguet  
Test Date:14 April 2021

$\gamma$  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+6500	TYPE:	WEIGHT:
SPEC.:	DIM.: 10x 2x500mm	SERIAL No.:
MFR.: Luz Negra s.l.	SUR.:22	Shielding Angle:



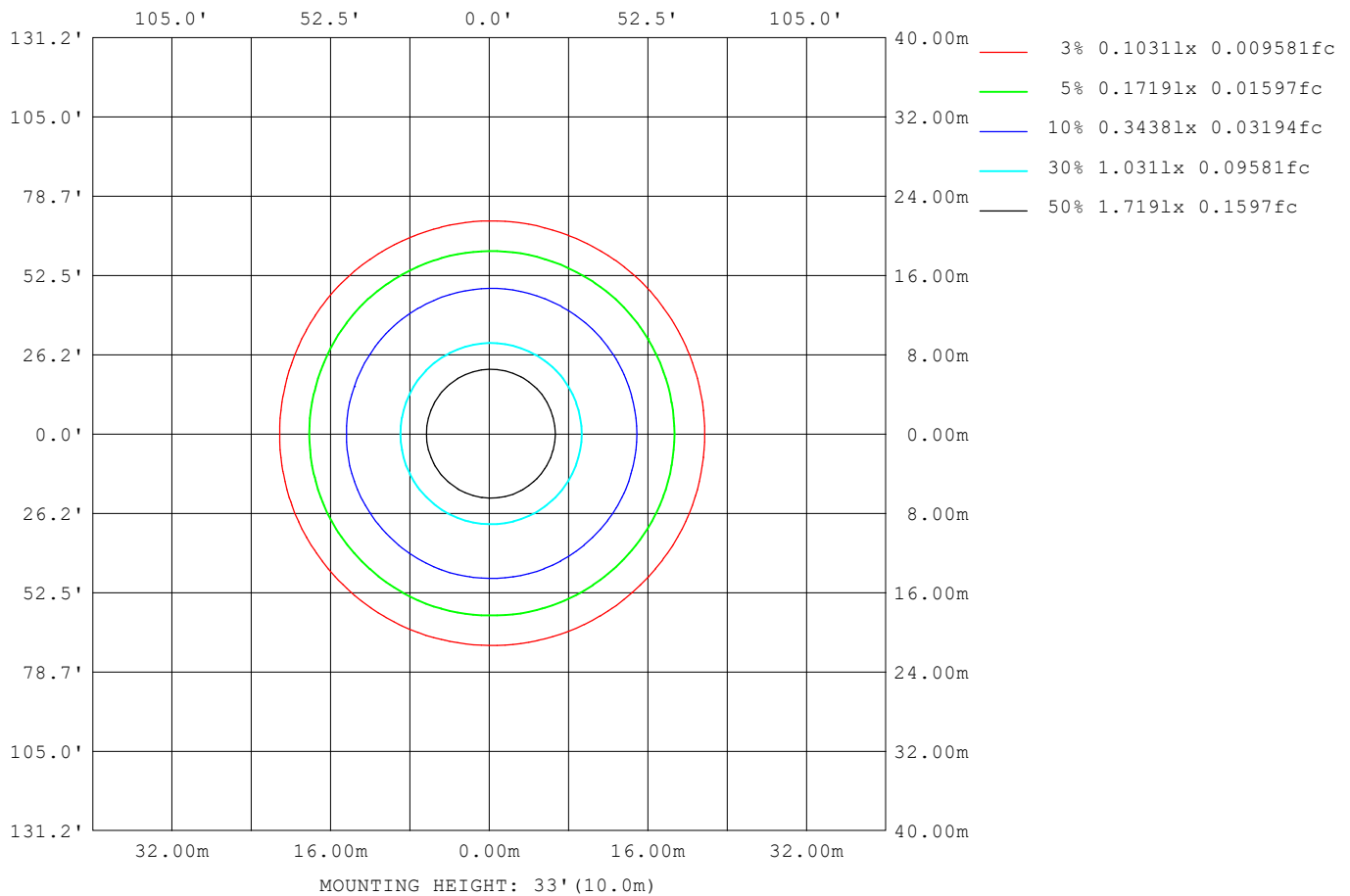
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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+6500	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+6500	TYPE:	WEIGHT:
SPEC.:	DIM.: 10x 2x500mm	SERIAL No.:
MFR.: Luz Negra s.l.	SUR.:22	Shielding Angle:

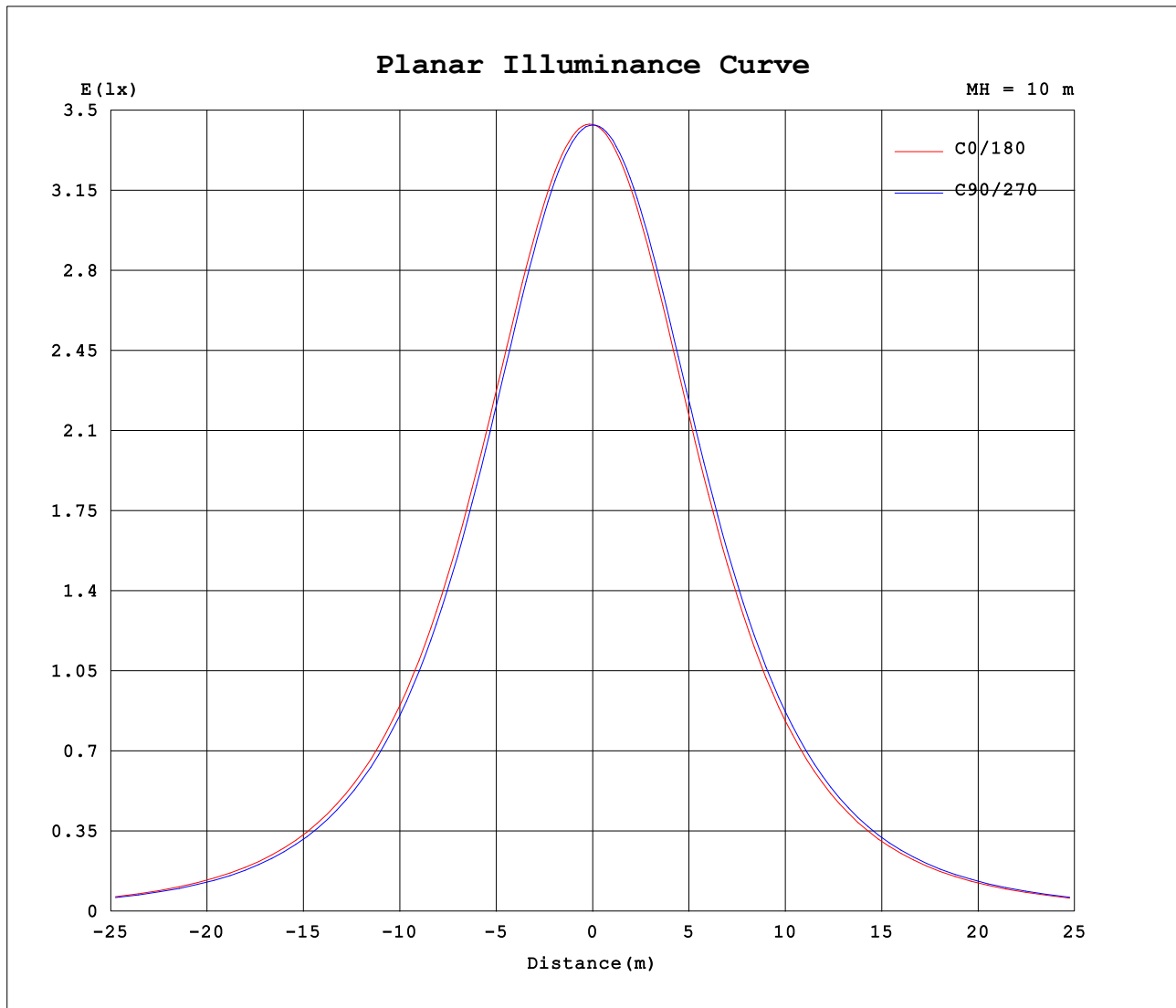
AvgL	cd/m2
L_0~180 (65) av	1614
L_0~180 (75) av	1394
L_0~180 (85) av	898
L_90~270 (65) av	1604
L_90~270 (75) av	1394
L_90~270 (85) av	945
L_45 (65) av	1613
L_45 (75) av	1400
L_45 (85) av	995

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+6500	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	344	344	344	344	344	344	344	344	344	344	344	344	344	344	344	344			
5	344	344	344	343	342	342	341	341	341	341	342	342	343	343	344	344			
10	342	342	341	340	339	338	337	336	336	336	337	338	340	341	342	342			
15	338	337	336	334	332	331	329	329	329	329	331	332	334	336	337	338			
20	331	330	328	326	324	322	320	319	319	319	321	324	326	328	330	331			
25	321	320	318	316	313	310	308	307	307	308	310	312	315	318	320	321			
30	309	308	305	302	299	296	294	293	292	293	296	299	302	305	308	309			
35	293	292	289	287	282	280	277	276	276	277	280	283	286	289	292	293			
40	275	274	271	268	264	261	258	257	257	258	261	264	268	271	274	275			
45	254	253	250	247	242	240	237	236	235	236	240	243	247	250	253	254			
50	230	230	226	223	218	216	213	212	212	213	217	219	223	226	229	230			
55	204	203	199	196	192	190	188	187	186	187	191	193	197	199	203	204			
60	175	174	170	168	164	162	160	159	159	160	163	165	168	170	174	174			
65	143	143	139	137	133	133	131	130	130	131	133	135	138	139	142	143			
70	110	109	106	105	102	102	100	100	99.4	100.0	103	103	106	107	109	109			
75	75.5	75.2	73.1	72.4	70.6	70.6	69.4	69.4	68.8	69.3	71.5	72.1	73.8	74.1	75.8	75.4			
80	42.6	42.9	41.9	42.1	40.9	41.5	40.4	40.4	39.7	40.2	42.2	42.7	43.6	43.5	44.2	42.9			
85	15.8	16.7	16.5	17.3	14.7	17.7	16.7	16.2	15.5	16.1	18.0	18.3	18.3	18.1	18.2	16.6			
90	1.66	2.09	2.49	2.63	0.44	3.07	2.73	2.13	1.58	2.10	3.27	3.44	0.96	3.13	3.12	2.31			
95	0.65	1.05	1.45	0.88	0.60	0.74	1.49	1.15	0.88	1.30	1.67	0.92	0.66	1.02	1.68	1.18			
100	0.79	1.00	0.97	0.89	0.78	0.77	0.83	0.95	1.00	1.09	1.04	1.19	0.85	0.84	1.04	1.11			
105	0.90	0.96	1.09	1.15	0.97	0.97	0.96	0.96	1.11	1.23	1.30	1.07	1.06	1.03	1.04	1.08			
110	1.07	1.14	1.31	1.63	1.18	1.18	1.16	1.16	1.31	1.53	1.57	1.28	1.27	1.22	1.21	1.22			
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: