

## ANEXO 23-0951-4-A RALED I 16 LED's RA10 50W

DRIVER ADVANCE XITANIUM 55W 0.1-1.8A 0-10V Dimming

MODULO LED 2X8 Z15 5050 4K SAMSUNG

SURGE PROTECTIVE DEVICE SPD-10KP320

LENTE: RA10 (4UND)



Light Output Ratio: 100.0%  
Luminaire Power: 50.43 W

I80 = 49.8 cd per klm. I88 = 0.0 cd per klm.  
I90 = 0.9 cd per klm. I80/I88 = 6663.623

**C Range: 0 - 360DEG**  
**C Interval: 22.5DEG**  
**Test Speed: HIGH**  
**Temperature: 25±1°CDEG**  
**Operators: Fabian Loaiza**  
**Test Date: 2023-11-06**

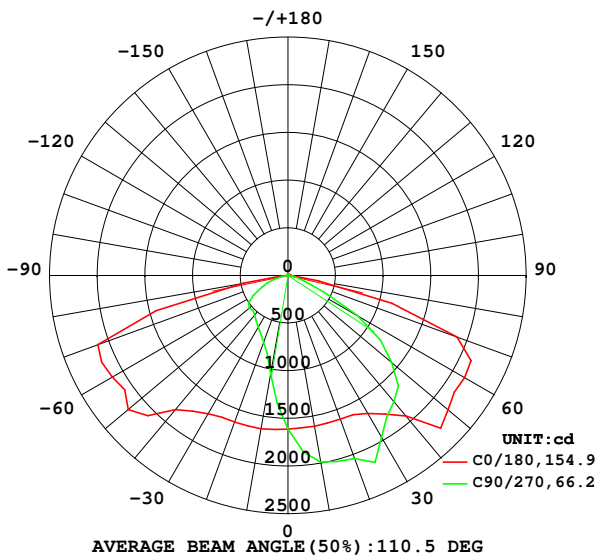
**γ Range: 0 - 180DEG**  
**γ Interval: 5.0DEG**  
**Test System: EVERFINE GO-2000H\_V1 SYSTEM V2.0.406.10**  
**Humidity: MAX: 52.1-MIN: 41.4%**  
**Test Distance: 7.080m [K=1.0000]**  
**Remarks: ANEXO 23-0951-4-A RALED I 16 LED's 50W**  
**DRIVER ADVANCE 55W 0.1.-1.8A 0-10V**  
**MODULO LED 2X8 Z15 5050 4K SAMSUNG**  
**Corriente de programacion: 945mA**

## STREETLIGHT PHOTOMETRIC TEST REPORT

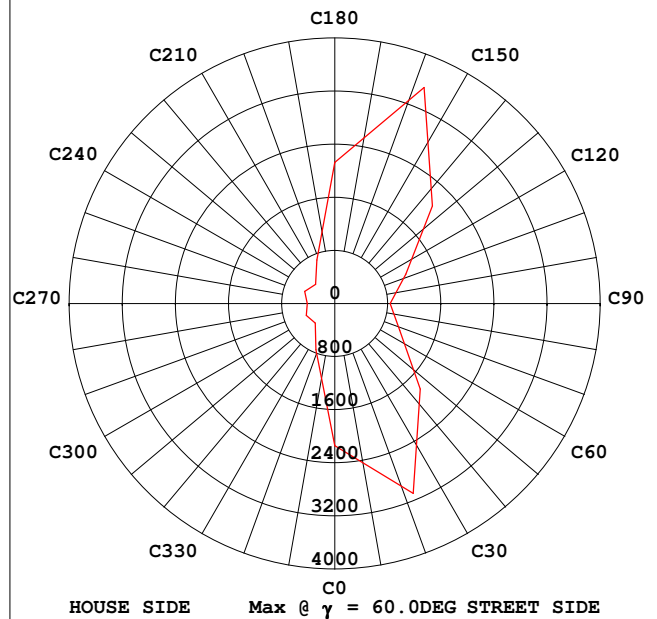
Test:U:220.09V I:0.2314A P:50.428W PF:0.9899 Freq:60.01Hz Lamp Flux:6615.03x1 lm		
NAME: ANEXO 23-0951-4-A RALED I 16 LED's 50W	TYPE: Alumbrado Publico	WEIGHT: ----
SPEC.: 16 LED's 50W	DIM.: ----	SERIAL No.: 23-0951-4
MFR.: ROY ALPHA	SUR.: ----	Shielding Angle: ----

DATA OF LAMP		PHOTOMETRIC DATA Eff: 131.18 lm/W			
MODEL	2X8 Z15 5050	Imax(cd)	3526	$\eta$ street_up(%)	0.3
NOMINAL POWER(W)	50	LOR(%)	100.0	$\eta$ street_down(%)	70.0
RATED VOLTAGE(V)	----	TOTAL FLUX(lm)	6615	$\eta$ house_up(%)	0.5
NOMINAL FLUX(lm)	6615.03	MAXIMUM @ (C, $\gamma$ )	158,60.0	$\eta$ house_down(%)	29.2
LAMPS INSIDE	1	$\eta$ up(%)	0.8	76 FLASHAREA(m2)	
TEST VOLTAGE(V)	220	$\eta$ down(%)	99.2	SLI	

**INTENSITY DISTRIBUTION DIAGRAM  
IN C PLANS**



**MAX INTENSITY CONE SURFACE  
DISTRIBUTION DIAGRAM**

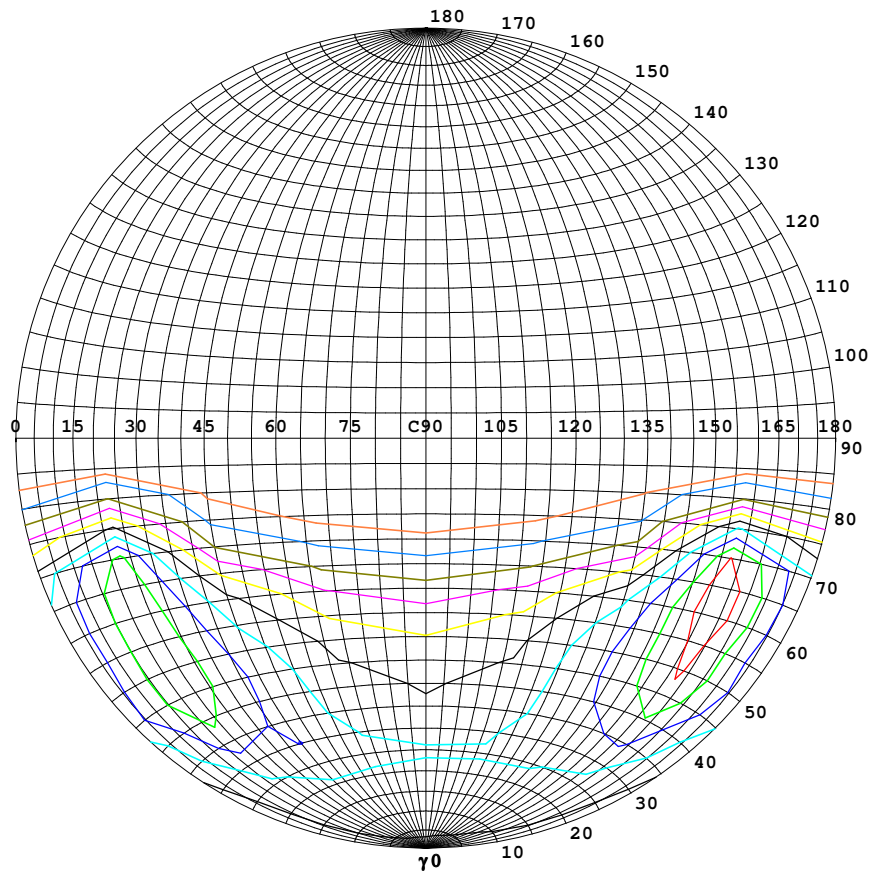


C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25 $\pm$ 1°C DEG  
Operators: Fabian Loaiza  
Test Date: 2023-11-06

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Humidity: MAX: 52.1-MIN: 41.4%  
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DRIVER ADVANCE 55W 0.1.-1.8A 0-10V  
MODULO LED 2X8 Z15 5050 4K SAMSUNG  
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## STREETLIGHT ISOCANDELA DIAGRAM

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MFR.: ROY ALPHA	SUR.:-----	Shielding Angle:-----



### Classification:

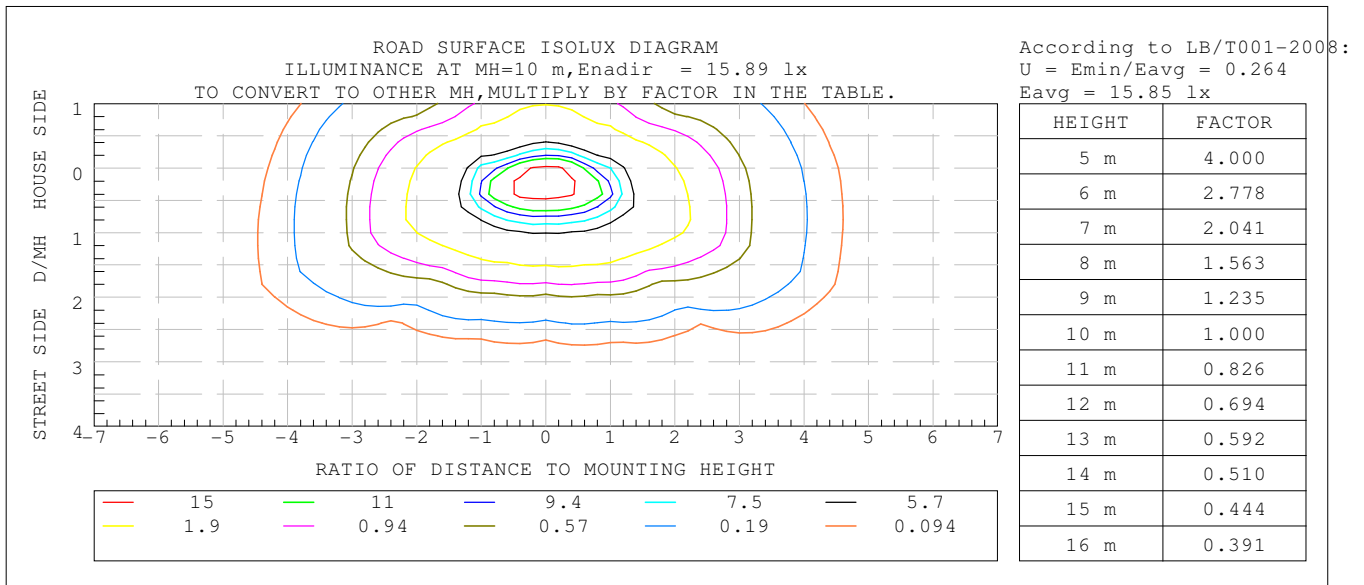
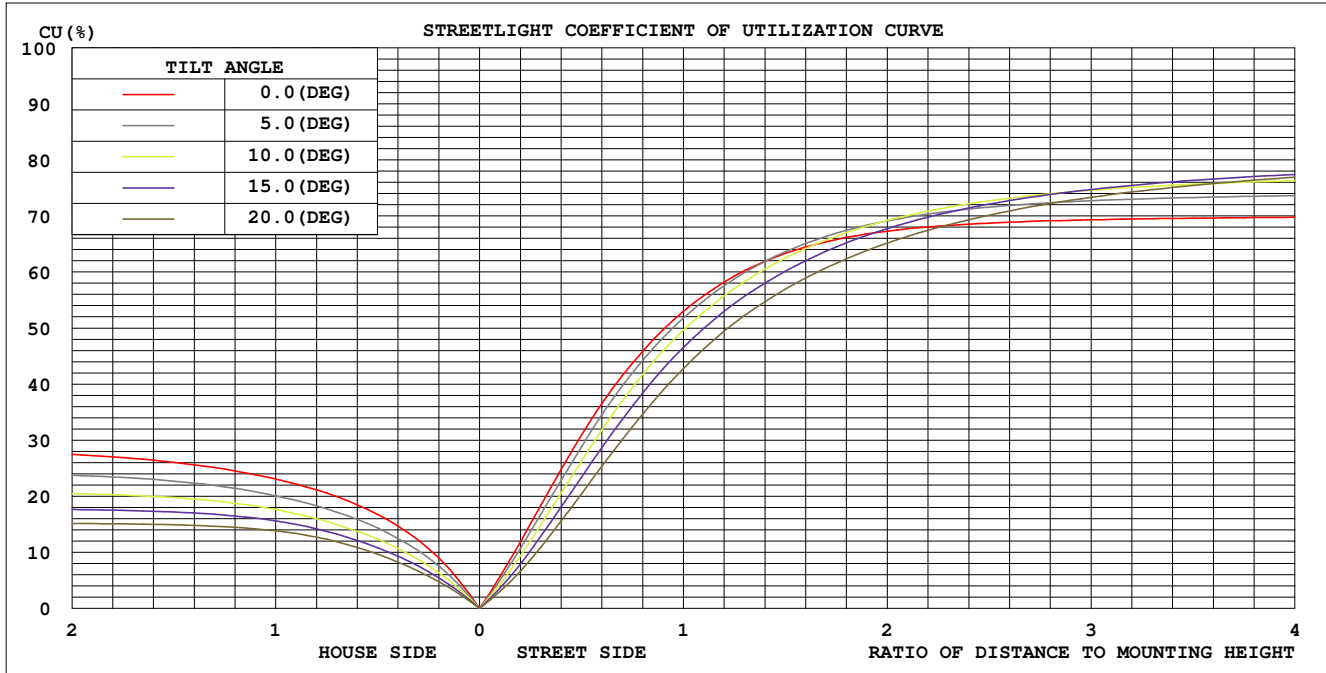
IES:Type II - Short  
CIE:Average - Intermediate  
IES:Semi cut-off  
CIE:Non-cut-off  
Max.At80:104.3cd/klm  
Max.At90:0.8728cd/klm  
Max.80-90:104.3cd/klm  
NRB 5101:Semi limited[10.4%]

ISOCANDELA DIAGRAM	
UNIT	cd
Imax=100%	3526
90%	3173
80%	2821
70%	2468
60%	2115
50%	1763
40%	1410
30%	1058
20%	705
10%	353
5%	176

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25±1°CDEG  
Operators:Fabian Loaiza  
Test Date:2023-11-06

γ Range: 0 - 180DEG  
γ Interval: 5.0DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.406.10  
Humidity:MAX:52.1-MIN:41.4%  
Test Distance:7.080m [K=1.0000]  
Remarks: ANEXO 23-0951-4-A RALED I 16 LED's 50W  
DRIVER ADVANCE 55W 0.1.-1.8A 0-10V  
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Corriente de programacion:945mA

## COEFFICIENT OF UTILIZATION CURVE AND ISOLUX DIAGRAM



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Test Speed: HIGH  
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$\gamma$  Range: 0 - 180DEG  
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MODULO LED 2X8 Z15 5050 4K SAMSUNG  
Corriente de programacion: 945mA

## ZONAL FLUX DIAGRAM

Test:U:220.09V I:0.2314A P:50.428W PF:0.9899 Freq:60.01Hz Lamp Flux:6615.03x1 lm		
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SPEC.:16 LED's 50W	DIM.: ----	SERIAL No.:23-0951-4
MFR.: ROY ALPHA	SUR.:-----	Shielding Angle:-----

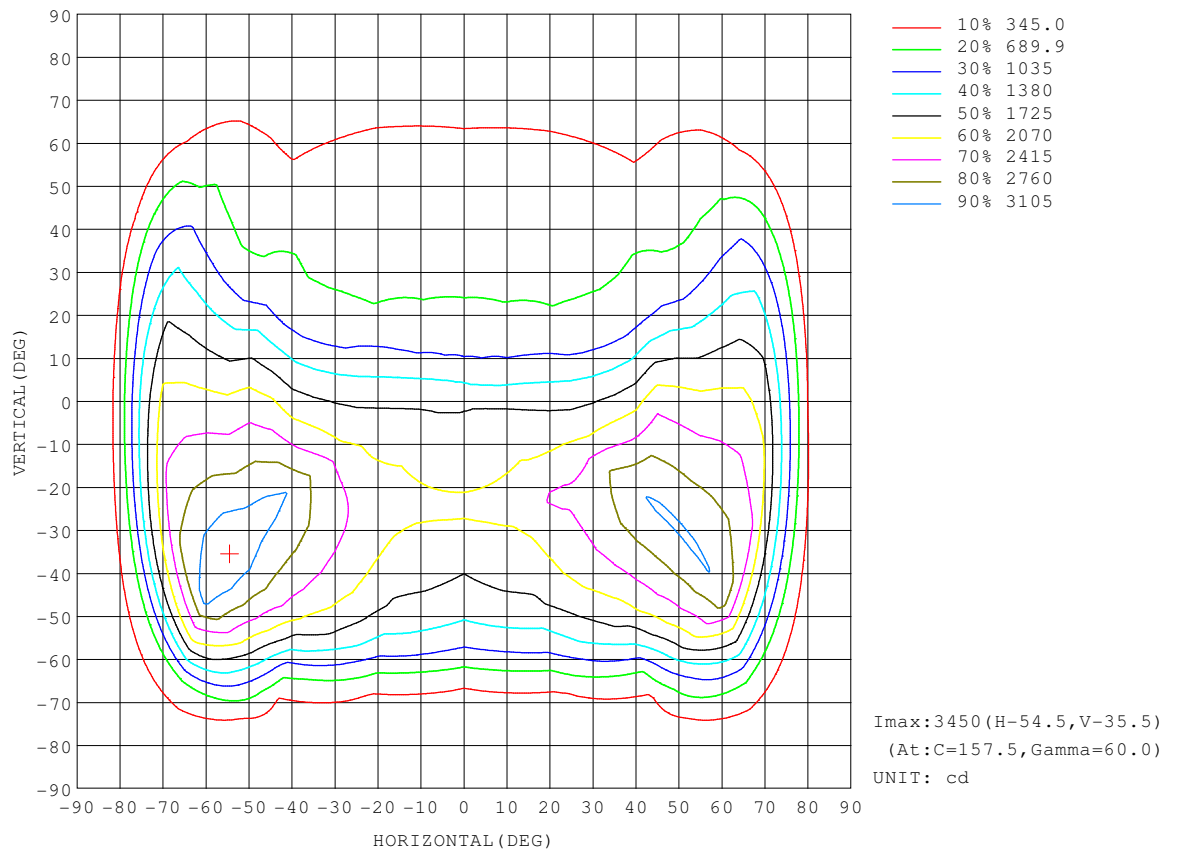
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	lum, lamp
10	1606	1913	1987	1957	1632	1239	1052	1212	0- 10	152.4	152.4	2.3,2.3
20	1604	2056	2044	2091	1637	882.0	748.5	867.7	10- 20	433.3	585.6	8.85,8.85
30	1672	2442	1964	2388	1675	686.3	625.8	699.2	20- 30	696.2	1282	19.4,19.4
40	1927	2345	1730	2426	1839	570.8	543.7	584.6	30- 40	947.9	2230	33.7,33.7
50	2193	2235	1423	2430	2189	504.7	534.3	527.5	40- 50	1195	3425	51.8,51.8
60	2142	1823	838.5	2081	2130	415.7	419.1	418.4	50- 60	1298	4723	71.4,71.4
70	1888	680.5	195.8	810.4	2122	258.4	231.9	255.4	60- 70	1148	5871	88.8,88.8
80	329.4	144.8	54.12	174.0	475.7	92.68	62.42	96.21	70- 80	615.6	6487	98.1,98.1
90	5.774	1.403	0.7996	1.689	2.153	1.163	0.2996	1.440	80- 90	74.06	6561	99.2,99.2
100	11.22	2.493	1.670	2.417	6.388	3.532	1.099	4.470	90-100	3.173	6564	99.2,99.2
110	15.76	3.832	2.974	3.725	11.74	7.906	3.501	8.619	100-110	6.262	6570	99.3,99.3
120	16.90	5.160	3.899	4.585	14.81	13.33	6.995	12.81	110-120	8.734	6579	99.5,99.5
130	16.32	6.044	4.432	5.089	15.32	15.90	10.66	15.66	120-130	9.505	6588	99.6,99.6
140	14.60	7.201	5.097	5.914	14.28	15.27	13.36	16.44	130-140	8.770	6597	99.7,99.7
150	13.51	8.772	6.372	7.211	13.04	13.94	14.87	16.11	140-150	7.286	6604	99.8,99.8
160	13.23	10.54	8.765	9.027	12.67	15.23	15.51	15.13	150-160	5.619	6610	99.9,99.9
170	13.32	13.00	11.57	11.03	12.95	14.32	14.80	14.14	160-170	3.638	6614	100,100
180	14.39	14.66	14.22	13.40	14.39	14.62	14.25	13.44	170-180	1.295	6615	100,100
DEG	LUMINOUS INTENSITY:cd Less than 35% Percent = 13.4 %									UNIT:lm		

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Temperature:25±1°CDEG  
Operators:Fabian Loaiza  
Test Date:2023-11-06

γ Range: 0 - 180DEG  
γ Interval: 5.0DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.406.10  
Humidity:MAX:52.1-MIN:41.4%  
Test Distance:7.080m [K=1.0000]  
Remarks: ANEXO 23-0951-4-A RALED I 16 LED's 50W  
DRIVER ADVANCE 55W 0.1.-1.8A 0-10V  
MODULO LED 2X8 Z15 5050 4K SAMSUNG  
Corriente de programacion:945mA

## ISOCANDELA DIAGRAM

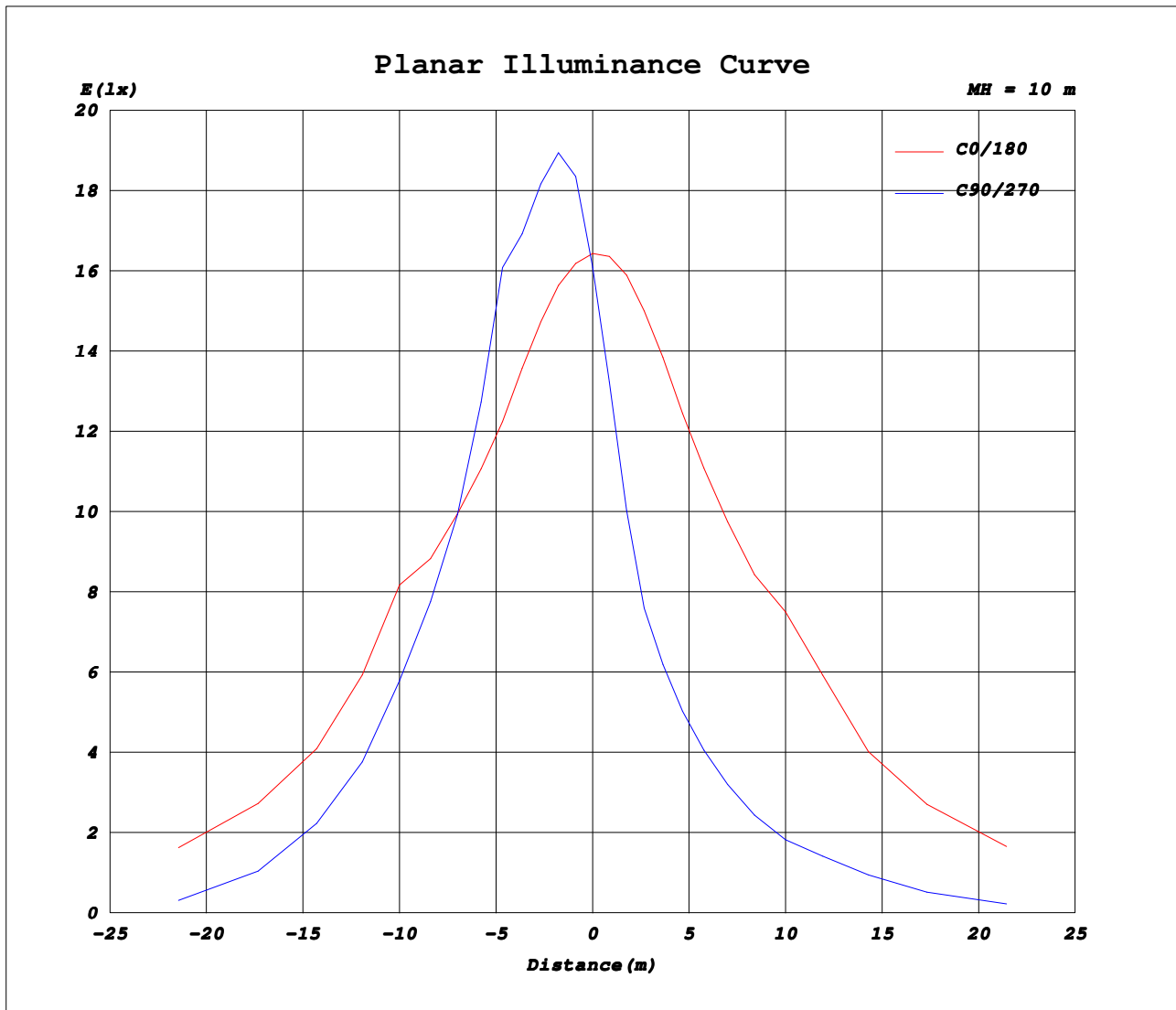
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SPEC.:16 LED's 50W	DIM.: ----	SERIAL No.:23-0951-4
MFR.: ROY ALPHA	SUR.:-----	Shielding Angle:-----



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## Planar Illuminance Curve



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 Corriente de programacion: 945mA

DRIVER ADVANCE XITANIUM 55W 0.1-1.8A 0-10V Dimming  
MODULO LED 2X8 Z15 5050 4K SAMSUNG  
SURGE PROTECTIVE DEVICE SPD-10KP320  
LENTE: RA10 (4UND)

Test Distance: 7.080 metres  
Test Temperature: 25±1°C degrees Celsius

Significance: ENSAYO FOTOMETRICO A LUMINARIAS  
ROY ALPHA S.A  
CALLE 15 No 32-598  
Acopi Yumbo

Special Notes: EQUIPOS UTILIZADOS  
Fotogoniómetro EQEN-023  
Fuente de tensión INCO-011  
Luxómetro INME-039  
Flexómetro INME-050  
Controlador de temperatura INME-046  
Analizador de potencia INME-013  
Datalogger INME-062-3  
El presente reporte de pruebas no se debe reproducir en forma parcial,  
sin la aprobación del Laboratorio de ensayos de Roy Alpha.

Realizó/revisó Realizó  
Fabian Loaiza.

Revisó  
Luis Asprilla.

Testing Procedure: Las pruebas fueron realizadas de acuerdo con la norma LM 79 de 2019.  
Tiempo de estabilización: 0:17':50"  
Tiempo de ensayo: 0:10':16"

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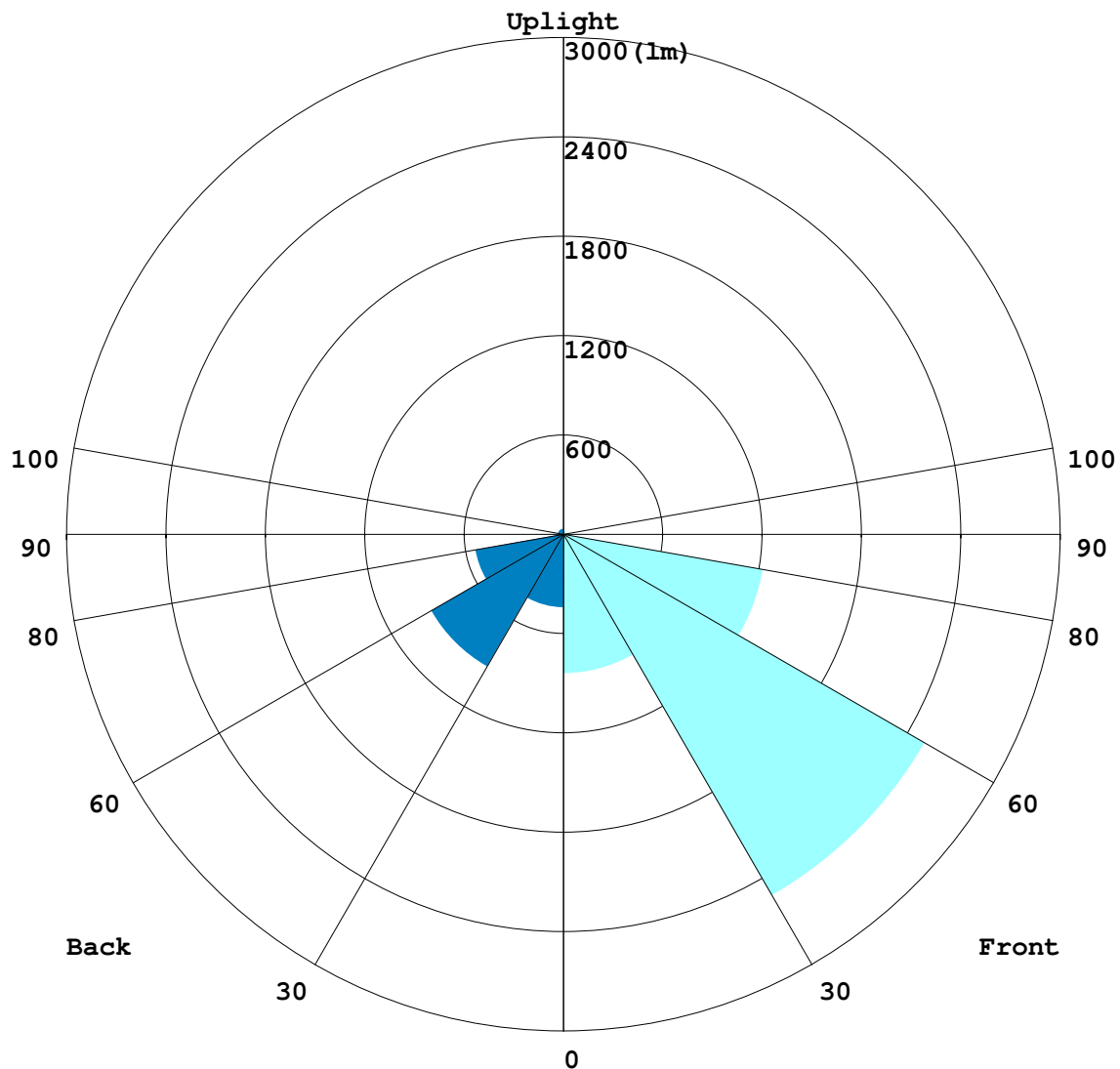
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## LCS REPORT

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### LUMINAIRE CLASSIFICATION SYSTEM(LCS) GRAPH



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## BUG REPORT

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### IESNA Luminaire Flux Distribution Table:

Zone	Lumens	Luminaire %
FL - Front-Low(0-30)	839.98	12.7
FM - Front-Medium(30-60)	2518.7	38.1
FH - Front-High(60-80)	1223	18.5
FVH - Front-Very High(80-90)	47.452	0.7
Total Forward Light	4650.1	70.3

BL - Back-Low(0-30)	441.85	6.7
BM - Back-Medium(30-60)	922.65	13.9
BH - Back-High(60-80)	540.42	8.2
BVH - Back-Very High(80-90)	26.611	0.4
Total Back Light	1964.9	29.7

UL - Uplight-Low(90-100)	3.1725	0.0
UH - Uplight-High(100-180)	51.106	0.8
Total Up Light	54.279	0.8

BUG (Back, Up, Glare) Rating	B2-U3-G2
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Zone	Downward Lumens	Upward Lumens	Total Lumens
House Side	1931.5	33.37	1964.9
Street Side	4629.2	20.909	4650.1

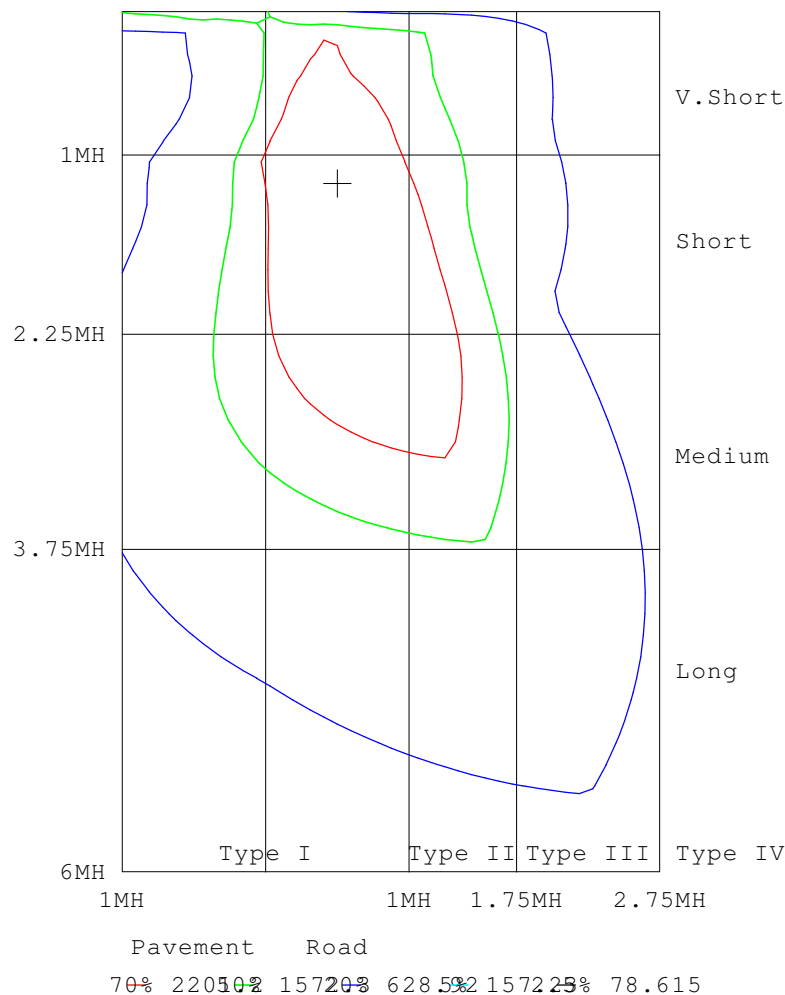
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Corriente de programacion:945mA

## ROAD ISOCANDELA REPORT

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SPEC.:16 LED's 50W	DIM.: ----	SERIAL No.:23-0951-4
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ROAD SURFACE ISOCANDELA DIAGRAM



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## LUMINOUS DISTRIBUTION INTENSITY DATA

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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	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612			
5	1606	1705	1784	1838	1859	1850	1801	1725	1624	1521	1431	1367	1341	1356	1415	1500			
10	1606	1799	1913	1970	1987	2000	1957	1827	1632	1429	1239	1098	1052	1085	1212	1399			
15	1603	1867	1982	2020	2020	2043	2037	1916	1633	1334	1041	887	845	879	1020	1299			
20	1604	1932	2056	2064	2044	2068	2091	1993	1637	1236	882	768	749	771	868	1193			
25	1614	2037	2197	2189	2164	2176	2166	2087	1641	1125	761	692	677	695	767	1083			
30	1672	2244	2442	2095	1964	2108	2388	2252	1675	1012	686	632	626	639	699	985			
35	1775	2616	2355	1955	1809	1975	2394	2586	1740	918	621	585	584	596	635	914			
40	1927	2852	2345	1879	1730	1896	2426	2863	1839	845	571	546	544	556	585	866			
45	2268	3039	2334	1778	1640	1813	2447	3167	2082	817	531	508	518	522	544	875			
50	2193	3095	2235	1650	1423	1714	2430	3286	2189	881	505	523	534	534	527	904			
55	2131	3096	2069	1373	1186	1480	2326	3361	2092	723	533	528	505	512	547	768			
60	2142	3096	1823	1064	839	1160	2081	3526	2130	711	416	491	419	466	418	754			
65	2119	3069	1348	637	426	694	1533	3525	2158	740	333	350	309	337	336	757			
70	1888	2863	681	281	196	317	810	3254	2122	759	258	252	232	239	255	718			
75	1131	1786	273	130	114	140	334	2192	1434	557	175	171	145	161	174	476			
80	329	690	145	61.5	54.1	68.0	174	685	476	152	92.7	79.5	62.4	72.8	96.2	122			
85	33.8	57.8	27.8	17.9	12.4	21.2	39.1	72.8	57.7	25.6	23.1	18.8	15.6	16.7	18.4	19.3			
90	5.77	2.92	1.40	1.13	0.80	1.27	1.69	3.12	2.15	2.93	1.16	0.50	0.30	0.53	1.44	2.92			
95	8.14	3.85	1.80	1.36	1.20	1.31	1.71	3.59	3.95	4.88	1.81	0.62	0.56	0.90	2.56	5.70			
100	11.2	5.37	2.49	1.91	1.67	1.86	2.42	5.15	6.39	7.92	3.53	1.36	1.10	1.83	4.47	9.11			
105	14.1	6.75	3.17	2.48	2.39	2.43	3.09	6.82	9.10	11.5	5.65	2.59	2.11	3.28	6.55	13.1			
110	15.8	7.66	3.83	3.05	2.97	3.02	3.73	7.92	11.7	14.9	7.91	4.19	3.50	5.02	8.62	16.7			
115	16.6	8.38	4.50	3.62	3.49	3.54	4.23	8.65	13.7	17.3	10.7	6.12	5.13	6.86	10.8	18.1			
120	16.9	9.07	5.16	4.10	3.90	3.84	4.59	9.10	14.8	18.6	13.3	8.28	6.99	8.70	12.8	18.7			
125	16.8	9.65	5.62	4.52	4.19	4.08	4.84	9.25	15.3	19.1	15.0	9.74	8.85	10.4	14.4	18.7			
130	16.3	9.95	6.04	4.89	4.43	4.30	5.09	9.14	15.3	18.9	15.9	10.7	10.7	12.1	15.7	18.0			
135	15.4	10.1	6.56	5.30	4.70	4.54	5.48	8.97	15.0	18.5	16.1	11.9	12.2	13.5	16.3	17.0			
140	14.6	10.4	7.20	5.84	5.10	4.99	5.91	8.96	14.3	17.8	15.3	12.9	13.4	14.5	16.4	16.0			
145	13.9	10.9	7.93	6.53	5.66	5.60	6.50	8.96	13.7	16.5	14.2	13.9	14.3	15.1	16.4	15.2			
150	13.5	11.3	8.77	7.39	6.37	6.38	7.21	9.12	13.0	14.3	13.9	15.4	14.9	15.4	16.1	14.7			
155	13.3	11.9	9.49	8.38	7.49	7.45	8.14	9.68	12.7	13.8	14.2	16.9	15.4	15.5	15.7	14.3			
160	13.2	12.2	10.5	9.80	8.76	8.57	9.03	10.10	12.7	13.9	15.2	17.0	15.5	15.4	15.1	14.0			
165	13.3	12.9	11.8	11.2	10.1	9.80	9.97	10.7	12.7	13.9	15.0	15.5	15.1	15.0	14.6	13.7			
170	13.3	13.8	13.0	12.8	11.6	11.1	11.0	11.4	13.0	13.7	14.3	14.8	14.8	14.7	14.1	13.4			
175	13.9	14.5	14.2	14.4	13.1	12.5	12.2	12.3	13.3	13.6	14.1	14.7	14.6	14.4	13.8	13.3			
180	14.4	14.5	14.7	15.2	14.2	13.8	13.4	13.2	14.4	14.5	14.6	15.2	14.3	13.8	13.4	13.2			

C Range: 0 - 360DEG

C Interval: 22.5DEG

Test Speed: HIGH

Temperature:25±1°CDEG

Operators:Fabian Loaiza

Test Date:2023-11-06

γ Range: 0 - 180DEG

γ Interval: 5.0DEG

Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.406.10

Humidity:MAX:52.1-MIN:41.4%

Test Distance:7.080m [K=1.0000]

Remarks: ANEXO 23-0951-4-A RALED I 16 LED's 50W

DRIVER ADVANCE 55W 0.1.-1.8A 0-10V

MODULO LED 2X8 Z15 5050 4K SAMSUNG

Corriente de programacion:945mA

## Photometric Data Table [cd]

G/C	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0	202.5
0.0	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612
5.0	1606	1705	1784	1838	1859	1850	1801	1725	1624	1521
10.0	1606	1799	1913	1970	1987	2000	1957	1827	1632	1429
15.0	1603	1867	1982	2020	2020	2043	2037	1916	1633	1334
20.0	1604	1932	2056	2064	2044	2068	2091	1993	1637	1236
25.0	1614	2037	2197	2189	2164	2176	2166	2087	1641	1125
30.0	1672	2244	2442	2095	1964	2108	2388	2252	1675	1012
35.0	1775	2616	2355	1955	1809	1975	2394	2586	1740	918.0
40.0	1927	2852	2345	1879	1730	1896	2426	2863	1839	844.9
45.0	2268	3039	2334	1778	1640	1813	2447	3167	2082	816.6
50.0	2193	3095	2235	1650	1423	1714	2430	3286	2189	880.6
55.0	2131	3096	2069	1373	1186	1480	2326	3361	2092	722.6
60.0	2142	3096	1823	1064	838.5	1160	2081	3526	2130	710.6
65.0	2119	3069	1348	637.5	425.6	694.3	1533	3525	2158	739.7
70.0	1888	2863	680.5	281.0	195.8	317.1	810.4	3254	2122	758.8
75.0	1131	1786	273.3	130.0	113.7	140.4	334.1	2192	1434	557.0
80.0	329.4	690.0	144.8	61.45	54.12	67.98	174.0	685.1	475.7	152.0
85.0	33.78	57.82	27.84	17.88	12.42	21.23	39.14	72.83	57.65	25.62
90.0	5.774	2.924	1.403	1.133	0.7996	1.267	1.689	3.121	2.153	2.927
95.0	8.138	3.852	1.800	1.357	1.196	1.312	1.709	3.586	3.949	4.883
100.0	11.22	5.372	2.493	1.906	1.670	1.855	2.417	5.153	6.388	7.917
105.0	14.10	6.748	3.171	2.484	2.385	2.430	3.087	6.823	9.103	11.47
110.0	15.76	7.664	3.832	3.048	2.974	3.018	3.725	7.922	11.74	14.94
115.0	16.63	8.381	4.503	3.622	3.489	3.543	4.230	8.649	13.67	17.28
120.0	16.90	9.069	5.160	4.098	3.899	3.838	4.585	9.100	14.81	18.56
125.0	16.80	9.646	5.619	4.515	4.194	4.079	4.840	9.249	15.30	19.11
130.0	16.32	9.951	6.044	4.892	4.432	4.298	5.089	9.143	15.32	18.93
135.0	15.37	10.12	6.560	5.298	4.699	4.539	5.478	8.969	14.96	18.46
140.0	14.60	10.43	7.201	5.838	5.097	4.985	5.914	8.957	14.28	17.78
145.0	13.91	10.86	7.926	6.528	5.662	5.597	6.500	8.961	13.67	16.52
150.0	13.51	11.30	8.772	7.388	6.372	6.379	7.211	9.115	13.04	14.32
155.0	13.31	11.89	9.494	8.375	7.489	7.448	8.144	9.680	12.67	13.78
160.0	13.23	12.23	10.54	9.798	8.765	8.574	9.027	10.10	12.67	13.95
165.0	13.29	12.91	11.81	11.19	10.12	9.796	9.970	10.67	12.73	13.88
170.0	13.32	13.78	13.00	12.77	11.57	11.10	11.03	11.41	12.95	13.73
175.0	13.95	14.55	14.25	14.42	13.05	12.54	12.25	12.32	13.30	13.63
180.0	14.39	14.52	14.66	15.19	14.22	13.83	13.40	13.20	14.39	14.50

G/C	225.0	247.5	270.0	292.5	315.0	337.5
0.0	1612	1612	1612	1612	1612	1612
5.0	1431	1367	1341	1356	1415	1500
10.0	1239	1098	1052	1085	1212	1399
15.0	1041	887.0	845.0	878.8	1020	1299
20.0	882.0	768.4	748.5	770.8	867.7	1193
25.0	761.3	691.6	677.3	695.1	767.3	1083
30.0	686.3	632.2	625.8	639.4	699.2	985.1
35.0	621.5	585.4	584.0	596.3	635.4	913.6
40.0	570.8	546.0	543.7	555.8	584.6	865.7
45.0	530.5	508.1	518.2	522.4	544.5	875.4
50.0	504.7	522.6	534.3	533.7	527.5	904.2
55.0	533.1	528.1	505.0	512.4	546.7	767.6
60.0	415.7	490.5	419.1	466.1	418.4	754.2
65.0	332.7	350.2	309.0	337.3	335.6	756.6
70.0	258.4	251.8	231.9	239.5	255.4	718.4
75.0	174.5	170.7	144.9	161.2	173.9	476.1
80.0	92.68	79.50	62.42	72.80	96.21	122.0
85.0	23.09	18.79	15.58	16.68	18.39	19.26
90.0	1.163	0.5017	0.2996	0.5283	1.440	2.919
95.0	1.806	0.6215	0.5575	0.8986	2.560	5.700
100.0	3.532	1.358	1.099	1.825	4.470	9.112
105.0	5.646	2.593	2.114	3.281	6.548	13.10
110.0	7.906	4.191	3.501	5.025	8.619	16.69
115.0	10.70	6.123	5.130	6.863	10.80	18.06
120.0	13.33	8.276	6.995	8.700	12.81	18.70
125.0	15.04	9.741	8.847	10.43	14.44	18.68
130.0	15.90	10.66	10.66	12.12	15.66	18.04
135.0	16.07	11.87	12.19	13.52	16.34	17.03
140.0	15.27	12.92	13.36	14.48	16.44	16.01
145.0	14.20	13.90	14.26	15.12	16.36	15.25
150.0	13.94	15.43	14.87	15.44	16.11	14.67
155.0	14.21	16.91	15.38	15.53	15.73	14.33
160.0	15.23	16.96	15.51	15.40	15.13	14.05
165.0	15.00	15.54	15.09	15.00	14.55	13.68
170.0	14.32	14.84	14.80	14.65	14.14	13.42

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25±1°CDEG  
Operators: Fabian Loaiza  
Test Date: 2023-11-06

γ Range: 0 - 180DEG  
γ Interval: 5.0DEG  
Test System: EVERFINE GO-2000H\_V1 SYSTEM V2.0.406.10  
Humidity: MAX: 52.1-MIN: 41.4%  
Test Distance: 7.080m [K=1.0000]  
Remarks: ANEXO 23-0951-4-A RALED I 16 LED's 50W  
DRIVER ADVANCE 55W 0.1.-1.8A 0-10V  
MODULO LED 2X8 Z15 5050 4K SAMSUNG  
Corriente de programacion: 945mA

**Photometric Data Table [cd]**

175.0	14.13	14.65	14.58	14.36	13.78	13.32
180.0	14.62	15.18	14.25	13.83	13.44	13.20

**C Range: 0 - 360DEG**  
**C Interval: 22.5DEG**  
**Test Speed: HIGH**  
**Temperature: 25±1°CDEG**  
**Operators: Fabian Loaiza**  
**Test Date: 2023-11-06**

**γ Range: 0 - 180DEG**  
**γ Interval: 5.0DEG**  
**Test System: EVERFINE GO-2000H\_V1 SYSTEM V2.0.406.10**  
**Humidity: MAX: 52.1-MIN: 41.4%**  
**Test Distance: 7.080m [K=1.0000]**  
**Remarks: ANEXO 23-0951-4-A RALÉD I 16 LED's 50W**  
**DRIVER ADVANCE 55W 0.1.-1.8A 0-10V**  
**MODULO LED 2X8 Z15 5050 4K SAMSUNG**  
**Corriente de programacion: 945mA**