

ANEXO 24-0491-1-A RALÉD III 80 LED RA10 900mA

Driver ADVANCE XITANIUM 180W 0.1-0.9A 0-10V Dimming SimpleSet

Driver ADVANCE XITANIUM 100W 1.1A 0-10V Dimming

MOD LED 2X8 Z15 5050 4K SEOUL (5 UND)

ABLE AP5P277MG



Light Output Ratio: 100.0%
Luminaire Power: 230.7 W

I80 = 82.0 cd per klm. I88 = 3.1 cd per klm.
I90 = 1.1 cd per klm. I80/I88 = 26.086

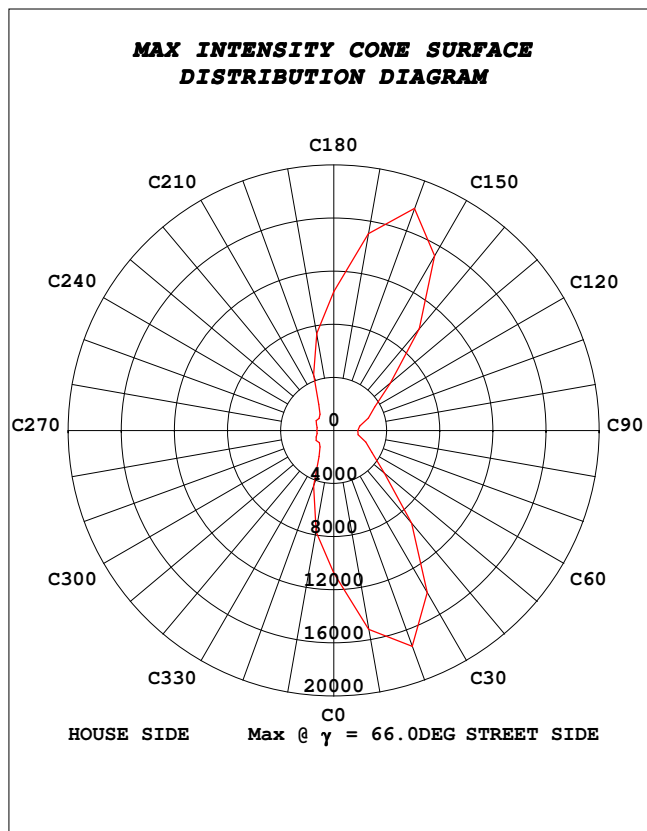
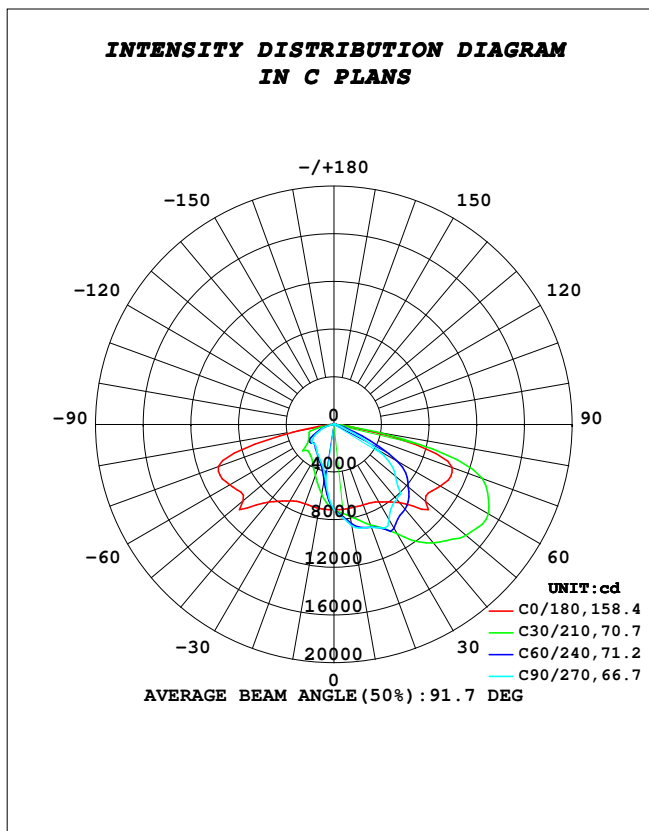
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25±1°CDEG
Operators: Fabian Loaiza
Test Date: 2024-08-05

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System: EVERFINE GO-2000H_V1 SYSTEM V2.0.406.10
Humidity: MAX: 52.5-MIN: 42.7%
Test Distance: 7.080m [K=1.0000]
Remarks: ANEXO 24-0491-1-A RALÉD III 80 LED
Driver XITANIUM 180W 0.1-0.9A 0-10V Dimm
Driver XITANIUM 100W 1.1A 0-10V Dimming
MOD LED 2X8 Z15 5050 4K SEOUL

STREETLIGHT PHOTOMETRIC TEST REPORT

Test:U:220.13V I:1.0605A P:230.68W PF:0.9882 Freq:60.01Hz Lamp Flux:32309.1x1 lm		
NAME: ANEXO 24-0491-1-A RALD III 80 LED	TYPE: Alumbrado Publico	WEIGHT:-----
SPEC.: 80 LED	DIM.: -----	SERIAL No.: 24-0491-1
MFR.: ROY ALPHA	SUR.: -----	Shielding Angle:-----

DATA OF LAMP		PHOTOMETRIC DATA Eff: 140.06 lm/W			
MODEL	2X8 Z15 5050 4K	Imax(cd)	17805	η street_up(%)	0.3
NOMINAL POWER(W)	-----	LOR(%)	100.0	η street_down(%)	71.7
RATED VOLTAGE(V)	-----	TOTAL FLUX(lm)	32309	η house_up(%)	0.7
NOMINAL FLUX(lm)	32309.1	MAXIMUM @ (C, γ)	160,66.0	η house_down(%)	27.3
LAMPS INSIDE	1	η up(%)	1.0	76 FLASHAREA(m2)	
TEST VOLTAGE(V)	220	η down(%)	99.0	SLI	

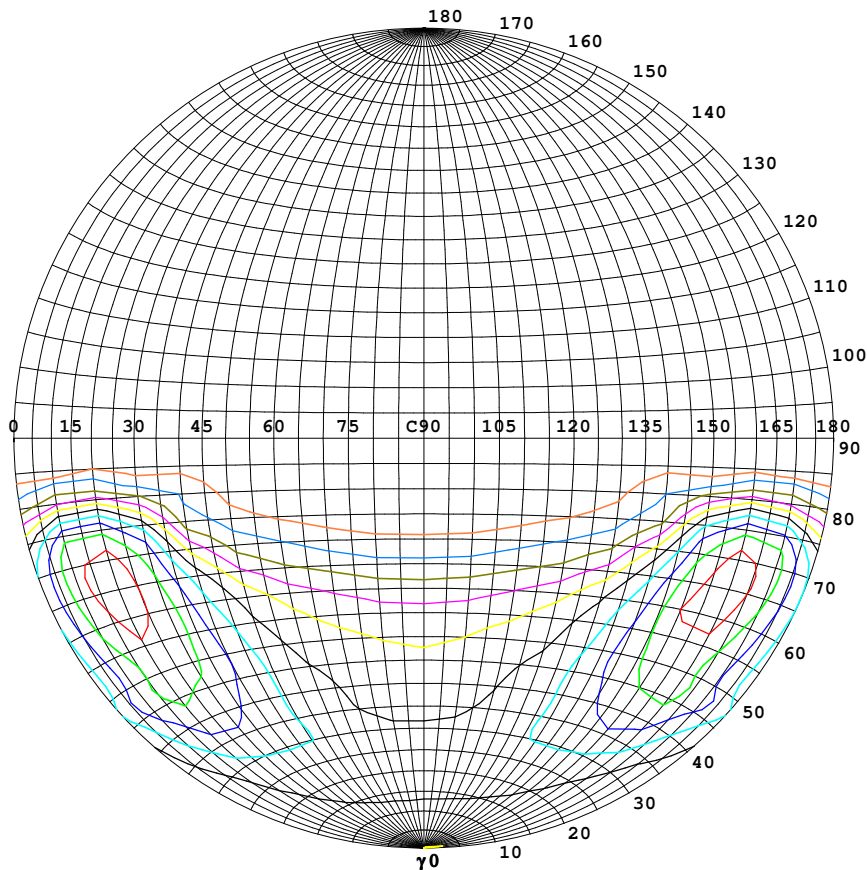


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STREETLIGHT ISOCANDELA DIAGRAM

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SPEC.: 80 LED	DIM.: -----	SERIAL No.: 24-0491-1
MFR.: ROY APLHA	SUR.: -----	Shielding Angle:-----



Classification:

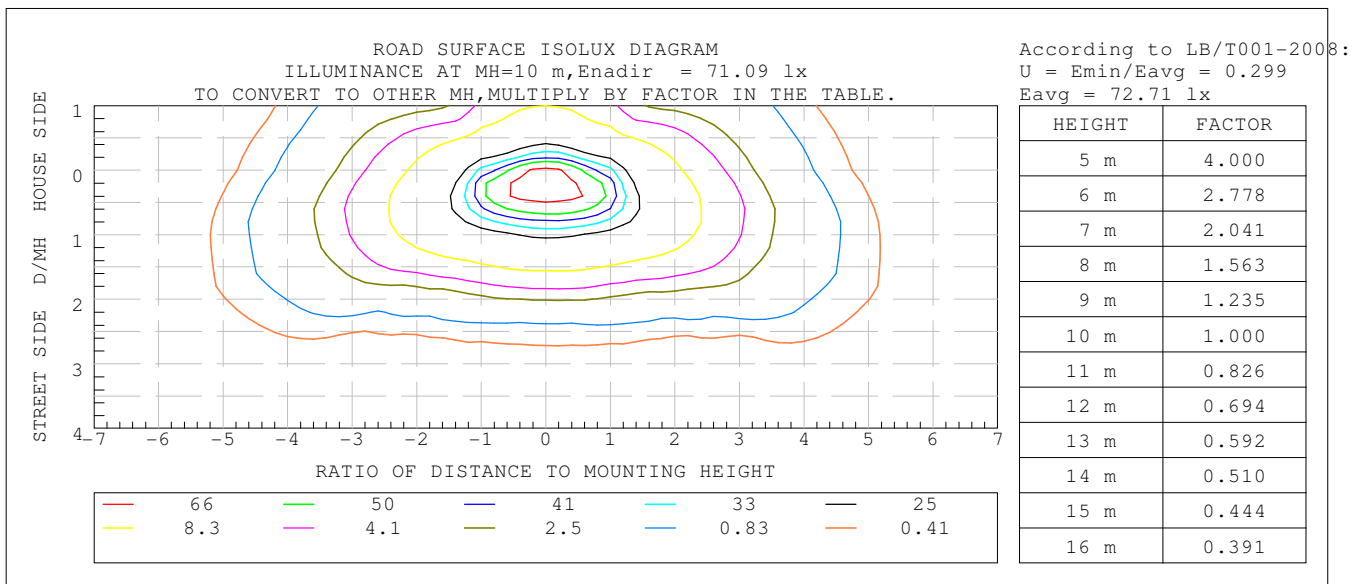
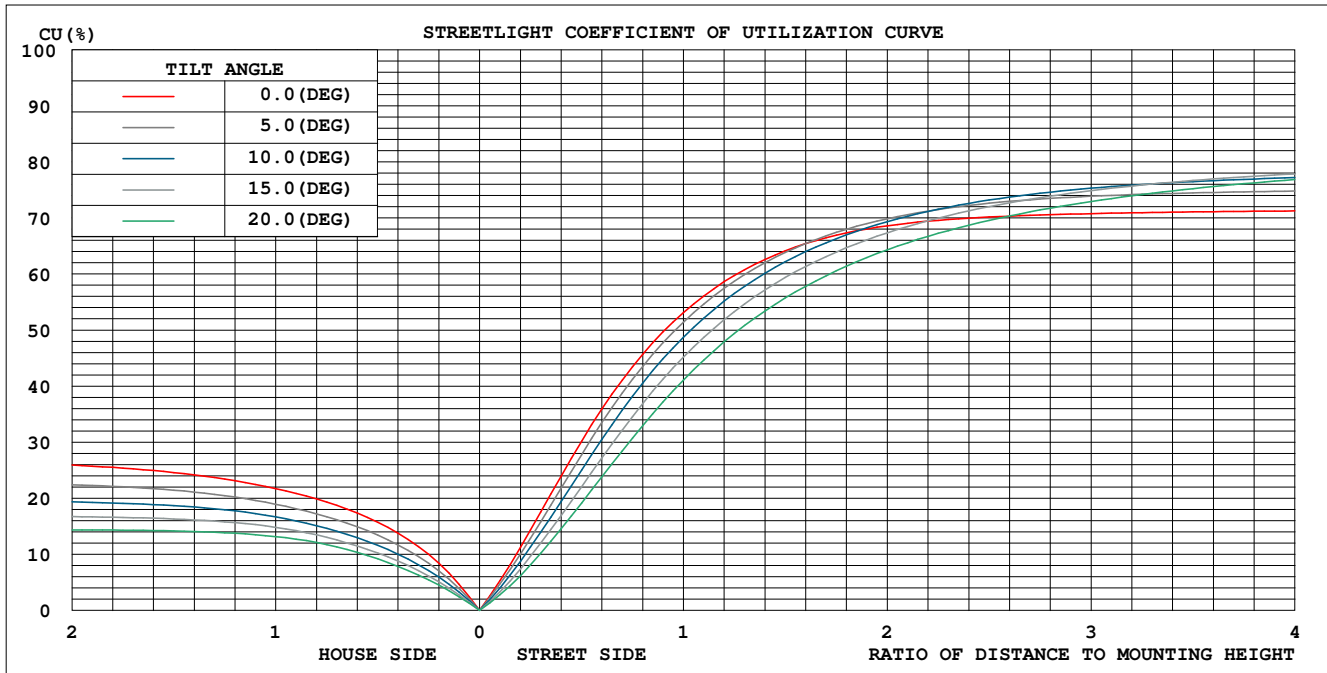
IES: Type III - Short
CIE: Average - Intermediate
IES: Semi cut-off
CIE: Non-cut-off
Max. At 80: 197.1cd/klm
Max. At 90: 1.467cd/klm
Max. 80-90: 197.1cd/klm
NRB 5101: Non limited[39.4%]

ISOCANDELA DIAGRAM	
UNIT	cd
Imax=100%	17805
90%	16025
80%	14244
70%	12464
60%	10683
50%	8903
40%	7122
30%	5342
20%	3561
10%	1781
5%	890

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COEFFICIENT OF UTILIZATION CURVE AND ISOLUX DIAGRAM



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ZONAL FLUX DIAGRAM

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SPEC.:80 LED	DIM.: -----	SERIAL No.:24-0491-1
MFR.: ROY APLHA	SUR.:-----	Shielding Angle:-----

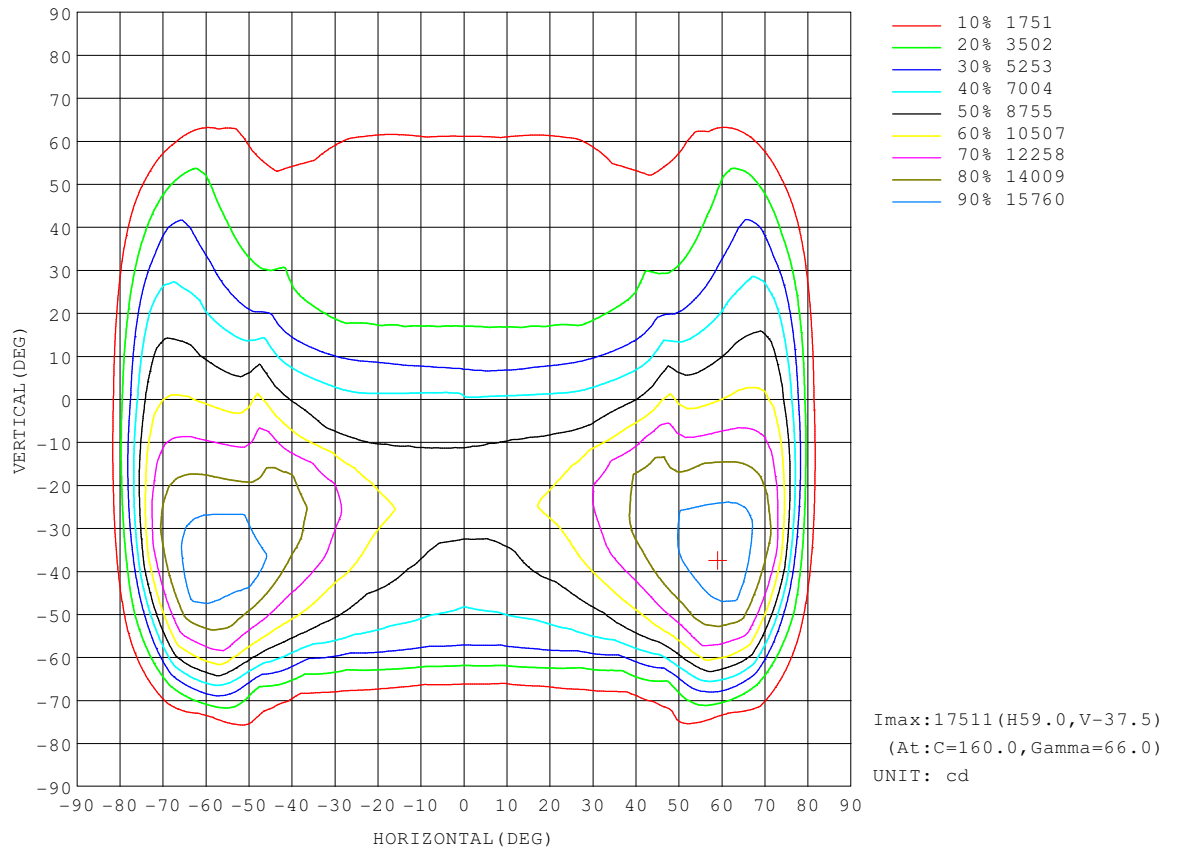
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	Φ lum, lamp
10	715.9	816.5	861.6	810.7	715.1	532.0	442.1	517.3	0- 10	659.3	659.3	2.04,2.04
20	719.4	922.4	919.3	933.2	711.0	378.3	329.9	380.6	10- 20	1884	2544	7.87,7.87
30	751.7	1069	923.9	1096	741.2	306.3	279.2	313.3	20- 30	3098	5642	17.5,17.5
40	857.3	1111	820.9	1178	851.0	268.0	239.9	275.1	30- 40	4360	10002	31,31
50	1005	1102	674.6	1187	995.5	251.8	239.9	254.1	40- 50	5655	15656	48.5,48.5
60	1034	946.2	425.8	1031	1013	196.0	187.6	195.9	50- 60	6282	21938	67.9,67.9
70	1057	462.5	97.12	539.7	1033	126.2	100.9	125.6	60- 70	5865	27803	86.1,86.1
80	265.0	113.2	27.48	124.5	299.3	47.70	21.85	48.48	70- 80	3729	31532	97.6,97.6
90	3.567	0.9515	0.5387	0.9665	3.593	2.000	0.5141	2.253	80- 90	457.1	31989	99,99
100	5.265	1.229	0.7894	1.140	8.384	4.870	1.560	5.410	90-100	30.14	32019	99.1,99.1
110	7.963	1.829	1.238	1.701	9.663	7.158	3.324	7.744	100-110	48.14	32068	99.3,99.3
120	8.747	2.329	1.714	2.134	9.478	8.087	4.941	8.774	110-120	54.20	32122	99.4,99.4
130	7.974	2.828	2.123	2.487	9.201	7.985	6.295	9.244	120-130	52.36	32174	99.6,99.6
140	7.334	3.407	2.453	2.953	8.507	7.713	7.187	9.107	130-140	45.81	32220	99.7,99.7
150	6.764	4.070	3.030	3.396	7.869	7.623	7.690	8.564	140-150	37.36	32257	99.8,99.8
160	6.593	4.837	3.941	3.995	7.605	7.573	7.684	7.842	150-160	28.01	32285	99.9,99.9
170	6.896	5.787	5.041	4.900	7.444	7.346	7.259	7.127	160-170	17.69	32303	100,100
180	7.293	6.696	6.273	6.193	7.294	6.698	6.274	6.195	170-180	6.138	32309	100,100
DEG	LUMINOUS INTENSITY: ≤ 10 cd Less than 35% Percent = 13.6 %									UNIT:lm		

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C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25 \pm 1°CDEG
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Test Date:2024-08-05

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.406.10
Humidity:MAX:52.5-MIN:42.7%
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MOD LED 2X8 Z15 5050 4K SEOUL

ISOCANDELA DIAGRAM

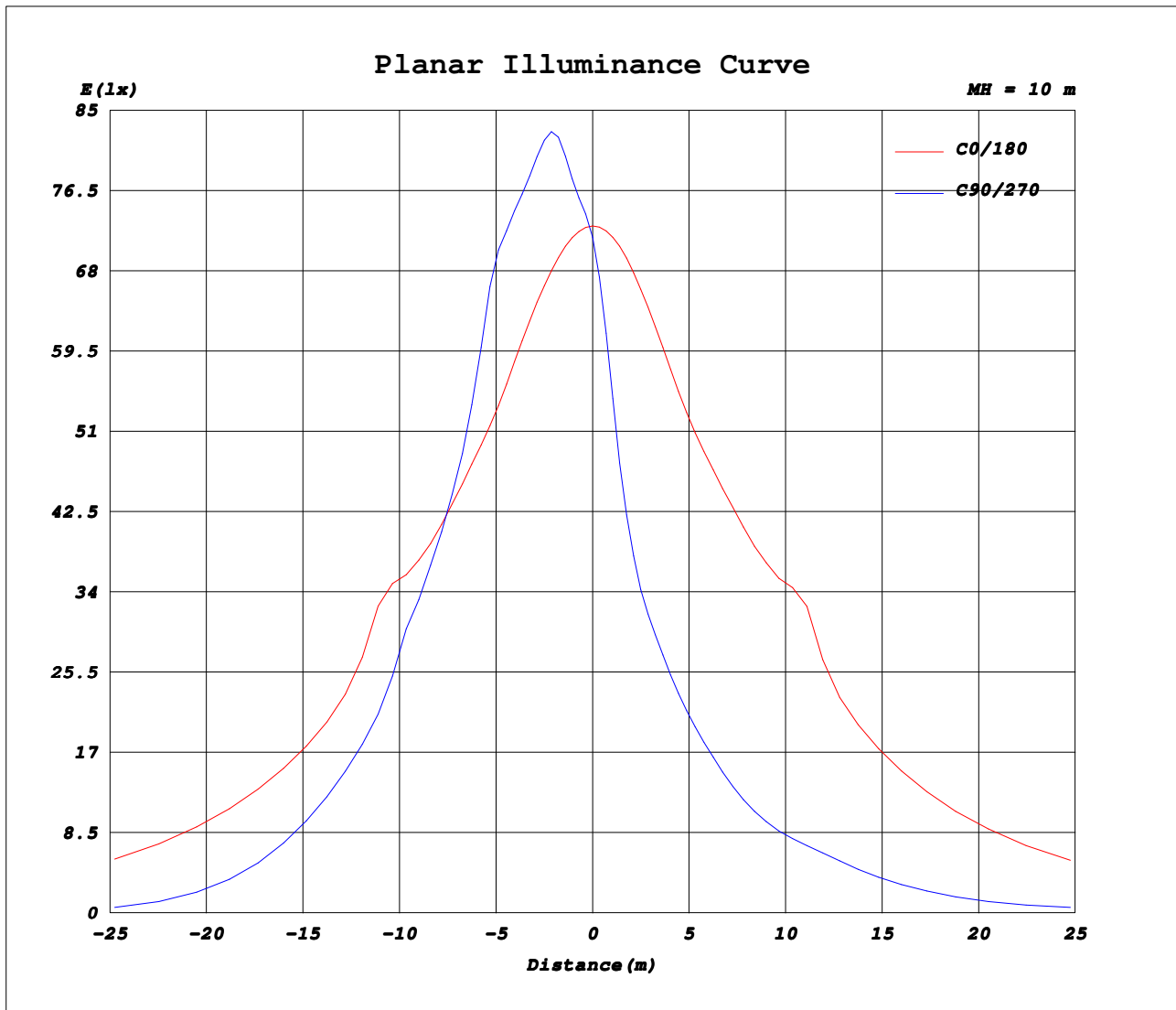
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Planar Illuminance Curve



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MOD LED 2X8 Z15 5050 4K SEOUL (5 UND)
ABLE AP5P277MG

Test Distance: 7.080 metres
Test Tempertature: 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
Luxometro INME-039
Flexometro INME-041
Controlador de temperatura INME-046
Analizador de potencia INME-013
Datalogger INME-021-1
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 prueba fue realizada de acuerdo con la norma LM 79 de 2019.
Tiempo de estabilizacion: 0:41':10"
Tiempo de ensayo: 0:20':30"

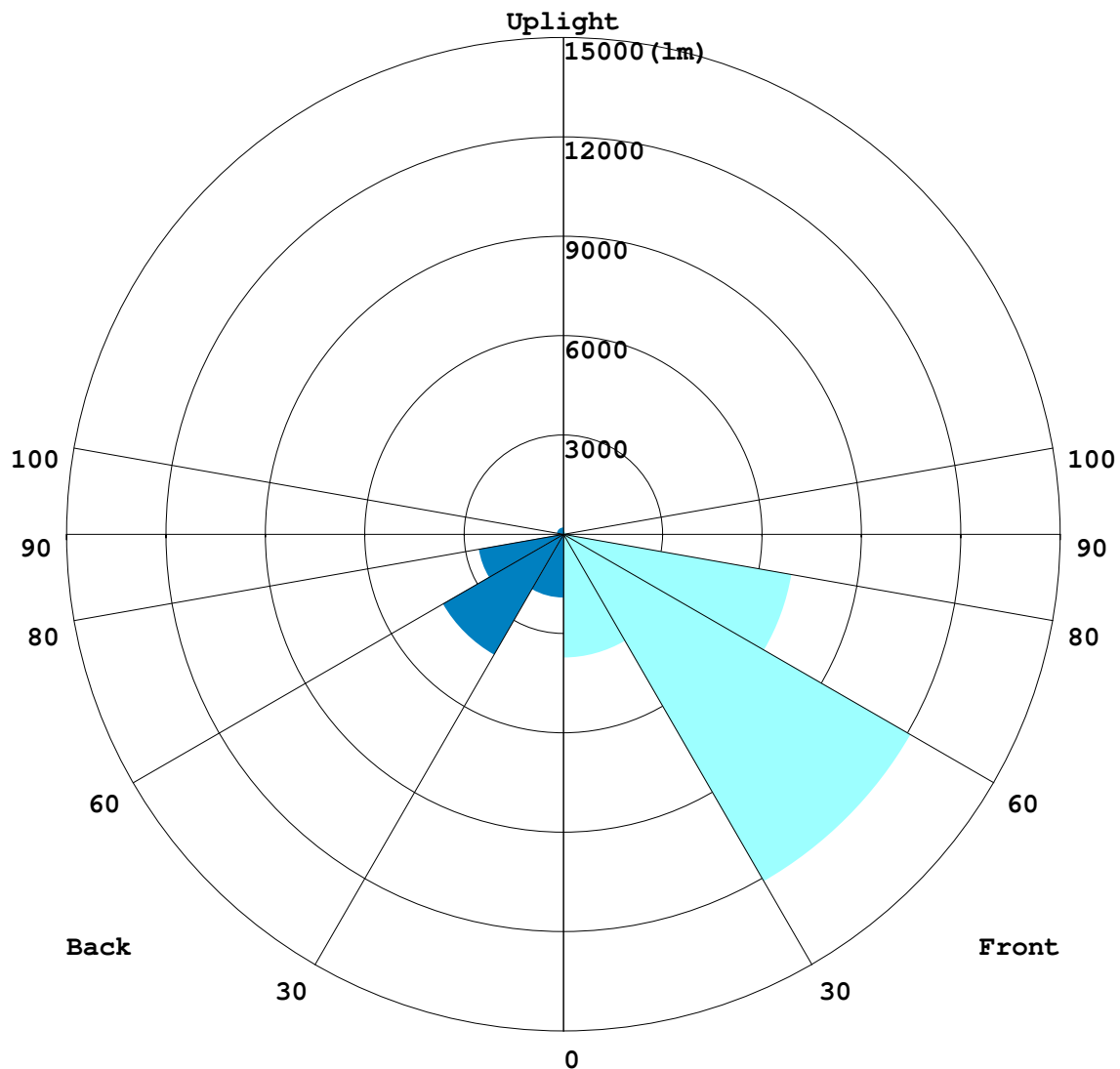
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LCS REPORT

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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)	3728.2	11.5
FM - Front-Medium(30-60)	12102	37.5
FH - Front-High(60-80)	6996.9	21.7
FVH - Front-Very High(80-90)	330.49	1.0
Total Forward Light	23255	72.0

BL - Back-Low(0-30)	1913.5	5.9
BM - Back-Medium(30-60)	4194.4	13.0
BH - Back-High(60-80)	2596.8	8.0
BVH - Back-Very High(80-90)	126.58	0.4
Total Back Light	9053.9	28.0

UL - Uplight-Low(90-100)	30.135	0.1
UH - Uplight-High(100-180)	289.71	0.9
Total Up Light	319.85	1.0

BUG (Back, Up, Glare) Rating	B4-U3-G4
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Zone	Downward Lumens	Upward Lumens	Total Lumens
House Side	8831.4	222.56	9053.9
Street Side	23158	97.29	23255

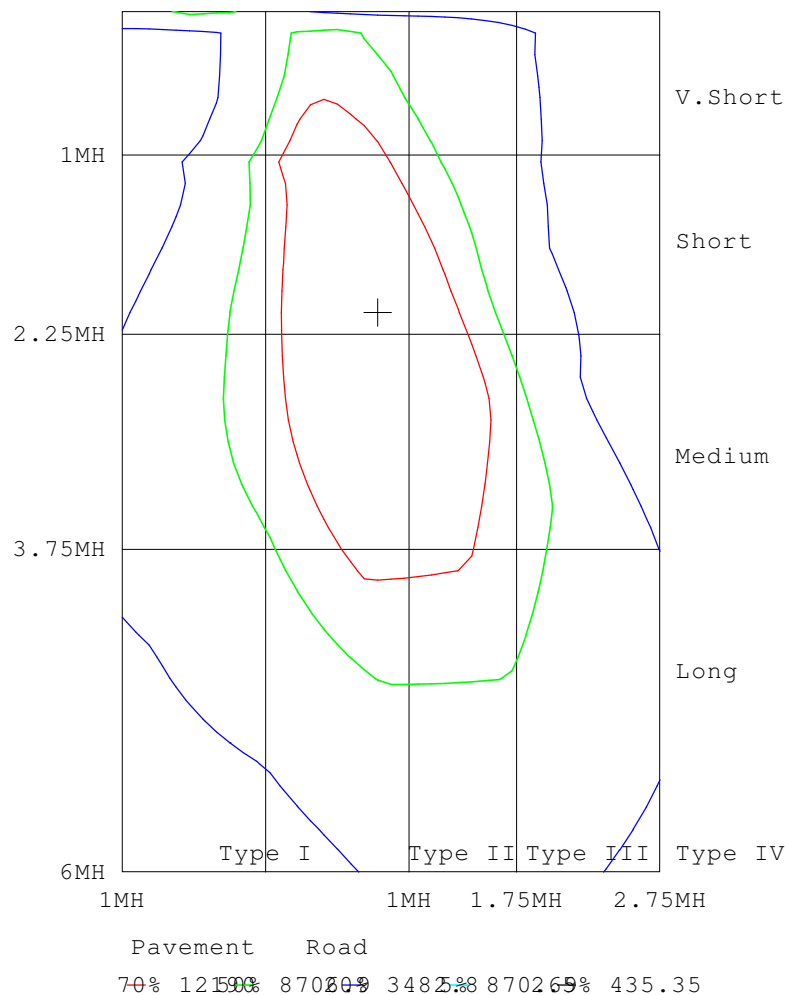
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ROAD ISOCANDELA REPORT

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ROAD SURFACE ISOCANDELA DIAGRAM



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LUMINOUS DISTRIBUTION INTENSITY DATA

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Table--1

UNIT: μA10cd

C (DEG) γ (DEG)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
0	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717
5	716	725	733	740	746	752	756	761	762	764	763	763	760	758	752	747	738	728	717
10	716	738	759	783	806	827	843	854	859	862	859	853	840	822	800	779	760	742	715
15	716	747	782	824	859	881	890	895	894	898	897	901	895	880	850	811	774	747	712
20	719	765	835	897	922	923	917	918	917	919	919	924	928	938	929	884	813	757	711
25	724	787	884	946	958	954	950	951	948	950	952	958	960	970	976	943	858	772	714
30	752	859	1000	1058	1075	1064	1009	957	921	924	937	989	1045	1092	1100	1073	980	835	741
35	786	946	1120	1174	1142	1059	959	896	856	856	874	932	1011	1112	1187	1206	1109	914	777
40	857	1119	1309	1299	1180	1043	929	859	822	821	837	892	979	1108	1248	1367	1324	1082	851
45	948	1259	1419	1355	1206	1036	900	826	797	810	807	857	954	1108	1280	1434	1458	1226	938
50	1005	1311	1490	1448	1224	980	816	764	695	675	713	795	869	1061	1312	1528	1513	1287	996
55	982	1331	1536	1482	1189	918	761	672	616	608	632	710	810	1001	1287	1576	1562	1304	968
60	1034	1433	1662	1498	1092	800	609	511	438	426	449	535	647	873	1190	1629	1690	1402	1013
65	1068	1498	1722	1443	1000	624	424	343	277	264	289	362	454	681	1081	1576	1767	1474	1044
70	1057	1538	1654	1323	635	290	182	114	98.6	97.1	102	123	194	324	756	1396	1708	1530	1033
75	892	1402	1430	1075	318	136	93.4	75.0	62.4	62.4	64.0	79.2	99.3	146	398	1172	1463	1386	871
80	265	497	586	364	162	64.6	35.6	32.1	27.8	27.5	29.2	33.3	38.8	71.3	178	409	637	502	299
85	75.3	80.1	140	72.8	78.9	28.2	15.1	12.1	11.9	10.9	11.7	12.8	16.7	30.1	83.2	69.2	108	81.5	56.0
90	3.57	2.78	1.99	1.50	1.08	0.82	0.68	0.65	0.52	0.54	0.51	0.67	0.68	0.81	1.12	1.34	1.96	2.60	3.59
95	4.14	3.16	2.20	1.48	1.02	0.76	0.65	0.59	0.57	0.55	0.56	0.57	0.62	0.72	0.94	1.32	2.02	2.95	5.30
100	5.27	4.08	2.89	1.97	1.40	1.06	0.90	0.83	0.80	0.79	0.79	0.81	0.86	0.99	1.29	1.82	2.72	3.92	8.38
105	6.28	4.85	3.45	2.36	1.69	1.28	1.08	0.98	0.97	0.96	0.96	0.96	1.03	1.19	1.56	2.20	3.29	4.74	9.44
110	7.96	6.09	4.33	2.96	2.08	1.58	1.33	1.22	1.24	1.24	1.23	1.21	1.28	1.47	1.93	2.78	4.19	6.02	9.66
115	8.53	6.57	4.71	3.23	2.30	1.77	1.48	1.41	1.44	1.43	1.42	1.38	1.42	1.65	2.13	3.04	4.57	6.53	9.54
120	8.75	6.87	5.05	3.58	2.62	2.03	1.76	1.73	1.73	1.71	1.69	1.67	1.67	1.87	2.40	3.32	4.79	6.71	9.48
125	8.57	6.88	5.16	3.76	2.81	2.24	1.94	1.96	1.92	1.89	1.87	1.85	1.82	2.03	2.50	3.38	4.73	6.49	9.45
130	7.97	6.64	5.23	3.99	3.11	2.55	2.32	2.25	2.17	2.12	2.09	2.08	2.12	2.27	2.70	3.43	4.51	5.90	9.20
135	7.70	6.55	5.29	4.13	3.30	2.79	2.55	2.42	2.32	2.25	2.20	2.20	2.28	2.48	2.86	3.50	4.45	5.61	8.97
140	7.33	6.39	5.34	4.33	3.63	3.18	2.86	2.67	2.54	2.45	2.38	2.37	2.50	2.77	3.13	3.65	4.38	5.30	8.51
145	6.99	6.22	5.39	4.54	3.89	3.43	3.09	2.88	2.74	2.63	2.55	2.56	2.67	2.95	3.32	3.77	4.35	5.07	8.20
150	6.76	6.20	5.52	4.83	4.29	3.85	3.47	3.30	3.14	3.03	2.96	2.95	3.03	3.24	3.55	3.92	4.35	4.91	7.87
155	6.63	6.17	5.63	5.06	4.57	4.16	3.76	3.63	3.48	3.36	3.29	3.28	3.33	3.49	3.74	4.03	4.36	4.83	7.72
160	6.59	6.21	5.79	5.41	5.01	4.66	4.26	4.22	4.07	3.94	3.86	3.83	3.84	3.93	4.07	4.29	4.56	4.96	7.60
165	6.60	6.29	5.98	5.68	5.34	5.04	4.65	4.64	4.48	4.37	4.29	4.23	4.20	4.25	4.36	4.56	4.79	5.11	7.53
170	6.90	6.67	6.46	6.19	5.91	5.67	5.26	5.29	5.14	5.04	4.94	4.86	4.80	4.84	4.96	5.14	5.34	5.57	7.44
175	7.20	6.98	6.75	6.50	6.25	6.05	5.68	5.75	5.60	5.50	5.38	5.31	5.27	5.33	5.45	5.63	5.81	6.03	7.40
180	7.29	7.21	7.05	6.91	6.75	6.65	6.36	6.45	6.33	6.27	6.19	6.17	6.14	6.18	6.20	6.28	6.32	6.42	7.29

C Range: 0 - 360DEG

C Interval: 10.0DEG

Test Speed: HIGH

Temperature:25±1°CDEG

Operators:Fabian Loaiza

Test Date:2024-08-05

γ Range: 0 - 180DEG

γ Interval: 2.0DEG

Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.406.10

Humidity:MAX:52.5-MIN:42.7%

Test Distance:7.080m [K=1.0000]

Remarks: ANEXO 24-0491-1-A RALED III 80 LED

Driver XITANIUM 180W 0.1-0.9A 0-10V Dimm

Driver XITANIUM 100W 1.1A 0-10V Dimming

MOD LED 2X8 Z15 5050 4K SEOUL

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.13V I:1.0605A P:230.68W PF:0.9882 Freq:60.01Hz Lamp Flux:32309.1x1 lm		
NAME: ANEXO 24-0491-1-A RALED III 80 LED	TYPE:Alumbrado Publico	WEIGHT:-----
SPEC.:80 LED	DIM.: -----	SERIAL No.:24-0491-1
MFR.: ROY APLHA	SUR.:-----	Shielding Angle:-----

Table--2

UNIT: $\mu\text{A}10\text{cd}$

C (DEG) γ (DEG)	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350		
0	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717		
5	706	694	681	667	653	643	631	626	620	622	623	633	642	657	671	687	703		
10	686	646	598	553	511	481	458	448	442	446	453	472	497	537	583	633	680		
15	671	610	539	478	433	406	388	379	376	379	387	402	429	468	526	598	667		
20	653	555	459	397	359	343	334	330	330	331	337	347	363	398	455	548	654		
25	641	520	416	358	331	318	309	305	306	307	312	322	338	362	417	516	644		
30	634	470	362	317	296	284	280	278	279	280	283	289	303	324	366	470	641		
35	640	450	338	297	277	268	265	262	262	264	268	273	284	303	343	451	648		
40	658	436	321	279	257	245	245	241	240	241	249	250	264	286	325	435	665		
45	695	438	313	271	243	234	233	231	234	233	237	239	251	277	315	432	703		
50	742	465	346	268	236	243	240	236	240	239	244	250	242	267	342	459	759		
55	711	417	280	256	248	253	237	227	229	226	236	257	249	258	281	408	729		
60	723	426	244	200	192	228	216	190	188	189	216	229	191	201	241	416	747		
65	752	445	232	174	160	174	162	146	145	146	163	174	159	173	229	437	778		
70	712	458	223	139	113	115	110	102	101	102	110	114	113	138	217	460	755		
75	586	404	210	116	79.6	82.1	81.8	70.9	67.2	71.3	82.3	82.7	79.9	114	204	420	607		
80	197	108	65.9	58.6	36.7	35.0	28.6	25.1	21.9	25.1	29.2	35.0	37.3	59.7	66.5	126	195		
85	43.3	29.0	16.9	16.2	11.4	9.74	10.3	7.48	8.04	7.54	10.7	9.97	11.6	16.2	16.7	32.9	43.3		
90	4.57	4.57	3.78	2.50	1.49	0.86	0.62	0.52	0.51	0.56	0.70	1.00	1.72	2.79	4.07	4.74	4.55		
95	6.74	6.87	5.71	3.81	2.34	1.42	1.02	0.84	0.83	0.89	1.14	1.62	2.65	4.22	6.16	7.15	6.78		
100	10.5	10.7	8.80	5.88	3.85	2.56	1.91	1.59	1.56	1.67	2.10	2.87	4.29	6.53	9.44	11.0	10.5		
105	11.4	11.5	9.77	7.02	4.92	3.50	2.67	2.26	2.21	2.36	2.91	3.88	5.46	7.71	10.4	11.9	11.4		
110	11.3	11.5	10.2	8.07	6.24	4.83	3.89	3.40	3.32	3.50	4.13	5.27	6.82	8.67	10.7	11.9	11.4		
115	11.0	11.3	10.2	8.47	6.84	5.48	4.56	4.10	4.01	4.18	4.78	5.93	7.43	9.06	10.7	11.5	11.1		
120	10.7	10.8	10.0	8.76	7.41	6.22	5.47	5.01	4.94	5.08	5.65	6.71	8.08	9.47	10.6	11.1	10.6		
125	10.4	10.4	9.63	8.64	7.63	6.63	6.02	5.57	5.52	5.65	6.23	7.13	8.43	9.62	10.5	10.7	10.11		
130	9.81	9.56	8.92	8.29	7.68	7.13	6.67	6.31	6.30	6.44	6.94	7.74	8.77	9.72	10.2	9.95	9.15		
135	9.45	9.17	8.54	8.01	7.63	7.30	6.95	6.70	6.72	6.87	7.30	8.03	8.89	9.62	9.88	9.47	8.61		
140	8.89	8.69	8.19	7.81	7.62	7.36	7.20	7.10	7.19	7.32	7.64	8.21	8.92	9.29	9.27	8.79	7.98		
145	8.52	8.41	8.09	7.79	7.61	7.40	7.36	7.32	7.44	7.54	7.80	8.24	8.78	9.07	8.94	8.44	7.66		
150	8.13	8.07	7.88	7.68	7.57	7.42	7.53	7.57	7.69	7.75	7.90	8.15	8.50	8.63	8.47	8.04	7.37		
155	7.95	7.92	7.78	7.62	7.54	7.41	7.57	7.64	7.74	7.77	7.87	8.02	8.25	8.31	8.17	7.82	7.29		
160	7.77	7.78	7.71	7.60	7.55	7.38	7.55	7.60	7.68	7.68	7.71	7.76	7.85	7.83	7.76	7.56	7.23		
165	7.64	7.65	7.60	7.54	7.52	7.34	7.50	7.51	7.55	7.53	7.53	7.54	7.58	7.56	7.50	7.35	7.11		
170	7.48	7.45	7.40	7.35	7.34	7.15	7.31	7.26	7.26	7.21	7.18	7.15	7.16	7.09	7.04	6.98	6.87		
175	7.39	7.30	7.22	7.14	7.09	6.88	7.01	6.95	6.93	6.87	6.84	6.80	6.80	6.73	6.71	6.69	6.69		
180	7.21	7.06	6.91	6.75	6.65	6.36	6.45	6.33	6.27	6.20	6.17	6.14	6.18	6.21	6.29	6.32	6.42		

C Range: 0 - 360DEG

C Interval: 10.0DEG

Test Speed: HIGH

Temperature:25±1°CDEG

Operators:Fabian Loaiza

Test Date:2024-08-05

γ Range: 0 - 180DEG

γ Interval: 2.0DEG

Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.406.10

Humidity:MAX:52.5-MIN:42.7%

Test Distance:7.080m [K=1.0000]

Remarks: ANEXO 24-0491-1-A RALED III 80 LED

Driver XITANIUM 180W 0.1-0.9A 0-10V Dimm

Driver XITANIUM 100W 1.1A 0-10V Dimming

MOD LED 2X8 Z15 5050 4K SEOUL

Photometric Data Table [cd]

G/C	0.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
0.0	7168	7168	7168	7168	7168	7168	7168	7168	7168	7168
2.0	7166	7213	7251	7292	7320	7356	7375	7404	7410	7430
4.0	7163	7254	7329	7403	7459	7520	7565	7607	7624	7644
6.0	7161	7296	7409	7521	7625	7725	7806	7870	7906	7919
8.0	7163	7339	7495	7661	7824	7976	8108	8199	8254	8267
10.0	7159	7377	7592	7825	8064	8267	8427	8536	8589	8616
12.0	7160	7419	7697	8018	8326	8560	8704	8795	8817	8856
14.0	7165	7466	7822	8237	8593	8809	8897	8949	8937	8977
16.0	7175	7522	7975	8479	8835	8989	9011	9031	9000	9036
18.0	7183	7586	8153	8730	9039	9124	9089	9089	9059	9092
20.0	7194	7653	8348	8971	9216	9231	9172	9176	9166	9193
22.0	7219	7741	8576	9204	9384	9355	9305	9327	9326	9349
24.0	7236	7871	8835	9457	9585	9543	9504	9508	9476	9496
26.0	7290	8046	9140	9754	9856	9804	9790	9722	9667	9689
28.0	7386	8286	9522	10133	10216	10222	10158	9877	9619	9654
30.0	7517	8593	9999	10578	10750	10635	10087	9566	9209	9239
32.0	7680	8994	10551	11172	11176	10669	9826	9225	8826	8841
34.0	7857	9461	11200	11739	11424	10588	9594	8959	8561	8558
36.0	8060	9981	11858	12204	11588	10497	9446	8785	8406	8395
38.0	8284	10579	12488	12625	11701	10455	9374	8689	8302	8269
40.0	8573	11187	13088	12992	11795	10429	9292	8591	8215	8209
42.0	8970	11831	13661	13281	11928	10404	9170	8442	8130	8104
44.0	9482	12593	14194	13553	12058	10360	9002	8256	7969	8103
46.0	10256	13416	14530	13859	12231	10245	8757	7992	7707	7499
48.0	10691	13492	14776	14258	12303	10064	8463	7806	7314	7051
50.0	10045	13113	14901	14478	12239	9796	8156	7640	6955	6746
52.0	9791	13049	15026	14619	12106	9492	7882	7175	6563	6448
54.0	9817	13307	15363	14818	11895	9178	7608	6724	6164	6084
56.0	9973	13645	15775	14994	11614	8861	7255	6318	5688	5600
58.0	10153	13991	16204	15057	11274	8504	6781	5799	5099	4993
60.0	10344	14331	16620	14977	10918	8001	6091	5114	4378	4258
62.0	10516	14656	16977	14746	10542	7256	5207	4284	3583	3465
64.0	10675	14981	17224	14434	10003	6235	4235	3426	2771	2645
66.0	10732	15218	17297	14107	9118	4986	3311	2576	1877	1826
68.0	10709	15370	17072	13760	7806	3807	2521	1730	1186	1176
70.0	10565	15380	16537	13228	6346	2897	1823	1137	986.3	971.2
72.0	10058	15005	15637	12305	4833	1988	1177	931.8	791.0	784.2
74.0	8920	14015	14297	10755	3176	1356	933.6	750.1	623.7	624.3
76.0	7168	12106	12504	8590	2231	1028	694.5	580.7	486.8	491.7
78.0	4903	8889	9615	5898	1804	840.1	503.1	444.8	374.3	367.2
80.0	2650	4966	5860	3642	1615	646.1	355.6	321.3	278.4	274.8
82.0	1337	2873	2500	1404	1299	442.7	244.2	220.8	187.9	182.3
84.0	753.0	801.4	1405	728.2	789.0	281.6	151.4	120.8	118.7	109.0
86.0	170.6	434.4	336.8	401.2	278.9	121.1	88.54	62.19	49.76	47.38
88.0	101.6	71.85	173.1	76.61	143.5	36.80	25.90	23.51	15.59	13.26
90.0	35.67	27.80	19.88	14.96	10.80	8.225	6.805	6.493	5.177	5.387
92.0	37.91	28.75	19.90	13.24	9.112	6.779	5.846	5.309	5.063	4.919
94.0	41.40	31.60	22.00	14.76	10.23	7.612	6.523	5.891	5.692	5.483
96.0	44.91	34.49	24.22	16.36	11.43	8.576	7.301	6.673	6.447	6.277
98.0	48.50	37.48	26.50	17.99	12.68	9.539	8.117	7.463	7.221	7.072
100.0	52.65	40.75	28.91	19.73	13.99	10.58	9.023	8.253	8.000	7.894
102.0	57.39	44.47	31.55	21.60	15.38	11.68	9.921	9.034	8.804	8.763
104.0	62.85	48.53	34.49	23.61	16.86	12.80	10.81	9.804	9.657	9.648
106.0	68.87	52.91	37.59	25.72	18.31	13.85	11.67	10.57	10.54	10.56
108.0	74.76	57.17	40.65	27.77	19.64	14.82	12.51	11.36	11.47	11.46
110.0	79.63	60.85	43.30	29.58	20.82	15.75	13.31	12.23	12.43	12.38
112.0	83.15	63.67	45.44	31.06	21.89	16.71	14.10	13.16	13.40	13.33
114.0	85.30	65.65	47.06	32.30	23.00	17.66	14.85	14.14	14.37	14.27
116.0	86.61	67.03	48.36	33.50	24.11	18.60	15.66	15.01	15.35	15.24
118.0	87.33	68.04	49.50	34.71	25.20	19.49	16.59	16.10	16.31	16.19
120.0	87.47	68.73	50.46	35.84	26.22	20.35	17.56	17.27	17.29	17.14
122.0	86.92	68.97	51.19	36.82	27.19	21.34	18.58	18.51	18.26	18.06
124.0	85.74	68.78	51.60	37.59	28.11	22.36	19.43	19.64	19.19	18.92
126.0	84.03	68.11	51.78	38.34	29.11	23.41	20.57	20.63	20.08	19.72
128.0	81.86	67.16	51.98	39.08	30.11	24.47	21.83	21.61	20.92	20.49
130.0	79.74	66.37	52.28	39.86	31.06	25.49	23.16	22.53	21.72	21.23
132.0	78.23	65.90	52.66	40.62	31.99	26.52	24.48	23.36	22.49	21.93
134.0	77.02	65.50	52.94	41.28	32.95	27.85	25.51	24.16	23.20	22.54
136.0	75.81	64.98	53.13	41.96	33.78	29.19	26.53	24.96	23.90	23.15
138.0	74.57	64.41	53.32	42.59	35.03	30.52	27.60	25.79	24.65	23.78
140.0	73.34	63.85	53.38	43.30	36.31	31.81	28.62	26.69	25.43	24.53
142.0	71.39	62.76	53.39	44.34	37.59	32.97	29.71	27.69	26.35	25.37
144.0	69.88	62.21	53.90	45.35	38.91	34.30	30.92	28.82	27.42	26.35
146.0	68.97	62.06	54.39	46.39	40.11	35.64	32.16	30.07	28.63	27.50

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25±1°CDEG
Operators: Fabian Loaiza
Test Date: 2024-08-05

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System: EVERFINE GO-2000H_V1 SYSTEM V2.0.406.10
Humidity: MAX: 52.5-MIN: 42.7%
Test Distance: 7.080m [K=1.0000]
Remarks: ANEXO 24-0491-1-A RALED III 80 LED
Driver XITANIUM 180W 0.1-0.9A 0-10V Dimm
Driver XITANIUM 100W 1.1A 0-10V Dimming
MOD LED 2X8 Z15 5050 4K SEOUL

Photometric Data Table [cd]

148.0	68.24	62.00	54.92	47.36	41.49	37.03	33.41	31.47	29.98	28.85
150.0	67.64	61.96	55.22	48.34	42.90	38.49	34.71	32.97	31.45	30.30
152.0	66.58	61.62	55.71	49.52	44.27	39.99	36.10	34.59	33.06	31.90
154.0	66.27	61.75	56.33	50.56	45.67	41.56	37.57	36.33	34.81	33.65
156.0	66.24	61.89	56.82	51.67	47.11	43.17	39.15	38.20	36.72	35.50
158.0	66.07	61.95	57.34	52.84	48.57	44.86	40.85	40.13	38.68	37.41
160.0	65.93	62.13	57.94	54.07	50.09	46.64	42.62	42.16	40.68	39.41
162.0	65.88	62.44	58.76	55.39	51.72	48.49	44.52	44.25	42.75	41.55
164.0	66.05	62.95	59.80	56.83	53.40	50.44	46.47	46.36	44.84	43.73
166.0	66.59	63.79	61.10	58.39	55.23	52.48	48.48	48.52	46.98	45.92
168.0	67.53	65.02	62.72	60.10	57.09	54.55	50.57	50.68	49.18	48.16
170.0	68.96	66.67	64.57	61.86	59.06	56.68	52.61	52.92	51.44	50.41
172.0	70.69	68.66	66.32	63.60	60.94	58.62	54.69	55.20	53.74	52.69
174.0	71.95	69.79	67.55	65.02	62.53	60.50	56.84	57.51	56.05	54.96
176.0	72.26	70.47	68.50	66.33	64.13	62.43	59.03	59.72	58.36	57.30
178.0	72.51	71.27	69.53	67.75	65.83	64.52	61.40	62.23	60.90	60.07
180.0	72.93	72.13	70.53	69.10	67.45	66.47	63.59	64.49	63.25	62.73
G/C	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0	190.0
0.0	7168	7168	7168	7168	7168	7168	7168	7168	7168	7168
2.0	7425	7435	7417	7407	7370	7334	7284	7230	7169	7118
4.0	7633	7634	7597	7575	7519	7467	7383	7284	7167	7061
6.0	7899	7872	7806	7743	7654	7576	7470	7335	7166	7000
8.0	8241	8182	8074	7950	7806	7679	7541	7382	7163	6932
10.0	8592	8530	8397	8217	7998	7793	7601	7418	7151	6857
12.0	8843	8827	8710	8515	8235	7931	7664	7444	7138	6781
14.0	8973	9012	8950	8804	8497	8106	7743	7471	7124	6712
16.0	9036	9105	9103	9049	8780	8321	7847	7502	7118	6652
18.0	9093	9163	9195	9238	9045	8566	7975	7533	7112	6591
20.0	9188	9238	9281	9378	9286	8837	8131	7569	7110	6532
22.0	9349	9374	9393	9518	9512	9121	8332	7623	7118	6469
24.0	9520	9582	9604	9697	9759	9430	8582	7719	7139	6408
26.0	9744	9853	9927	9976	10061	9785	8892	7862	7190	6364
28.0	9752	10135	10398	10400	10449	10212	9291	8066	7281	6342
30.0	9368	9894	10450	10917	10996	10729	9798	8346	7412	6343
32.0	9006	9589	10282	11076	11525	11387	10406	8706	7580	6365
34.0	8742	9322	10107	11121	11874	12058	11089	9142	7770	6396
36.0	8579	9141	9957	11098	12159	12621	11828	9620	7992	6439
38.0	8471	9031	9872	11073	12353	13160	12522	10190	8232	6501
40.0	8370	8924	9793	11084	12478	13669	13244	10825	8510	6582
42.0	8272	8768	9686	11100	12623	14029	13946	11477	8904	6719
44.0	8070	8566	9536	11081	12800	14342	14578	12258	9384	6954
46.0	7823	8327	9310	11026	13015	14651	14901	13233	10124	7385
48.0	7600	8100	9011	10875	13152	15063	15086	13439	10685	7916
50.0	7126	7954	8690	10612	13124	15280	15125	12871	9955	7420
52.0	6748	7596	8404	10317	13028	15450	15249	12778	9645	7150
54.0	6323	7105	8103	10006	12866	15756	15621	13040	9679	7112
56.0	5843	6616	7729	9670	12629	16046	16033	13357	9815	7133
58.0	5223	6063	7212	9264	12299	16246	16466	13681	9973	7173
60.0	4493	5351	6468	8728	11897	16290	16899	14019	10133	7227
62.0	3700	4504	5537	7915	11418	16120	17326	14373	10270	7298
64.0	2887	3624	4541	6808	10814	15760	17674	14740	10439	7517
66.0	1994	2783	3566	5544	10012	15217	17805	15051	10475	7441
68.0	1247	1944	2742	4339	8920	14606	17625	15273	10479	7264
70.0	1025	1234	1942	3236	7557	13958	17075	15303	10328	7117
72.0	809.6	978.4	1251	2134	5854	13119	16115	14918	9836	6699
74.0	639.6	792.0	992.8	1465	3981	11722	14626	13859	8710	5860
76.0	500.0	614.9	736.6	1123	2575	9582	12723	11799	6822	4592
78.0	386.1	466.3	542.9	923.8	2015	6784	10103	8734	4674	3262
80.0	291.9	333.4	388.5	712.6	1778	4092	6367	5019	2993	1975
82.0	198.1	230.4	267.6	473.9	1384	1419	2799	2910	1322	1079
84.0	117.5	127.9	166.6	301.1	832.0	691.6	1077	815.1	559.7	432.8
86.0	51.82	66.66	97.12	129.1	279.2	385.8	365.3	443.6	308.2	148.7
88.0	16.38	25.16	27.98	39.04	144.8	81.54	192.3	73.91	60.64	96.05
90.0	5.144	6.657	6.824	8.150	11.18	13.39	19.58	26.00	35.93	45.71
92.0	4.920	5.261	5.579	6.400	8.279	11.79	18.10	26.61	43.58	55.01
94.0	5.566	5.736	6.247	7.187	9.358	13.23	20.18	29.52	53.05	67.41
96.0	6.330	6.485	6.999	8.079	10.49	14.83	22.41	32.55	63.60	81.20
98.0	7.108	7.286	7.795	8.968	11.67	16.47	24.76	35.70	74.34	94.74
100.0	7.900	8.083	8.619	9.905	12.90	18.21	27.21	39.19	83.84	105.1
102.0	8.739	8.865	9.480	10.91	14.19	20.07	29.91	43.16	90.55	111.2
104.0	9.594	9.629	10.31	11.93	15.56	22.02	32.87	47.40	94.43	113.9
106.0	10.50	10.41	11.16	12.92	16.93	24.06	36.04	51.85	96.21	114.7
108.0	11.41	11.21	11.95	13.83	18.17	26.09	39.17	56.26	96.78	114.3
110.0	12.34	12.06	12.76	14.74	19.28	27.85	41.93	60.19	96.63	113.3

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25±1°CDEG
Operators: Fabian Loaiza
Test Date: 2024-08-05

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System: EVERFINE GO-2000H_V1 SYSTEM V2.0.406.10
Humidity: MAX: 52.5-MIN: 42.7%
Test Distance: 7.080m [K=1.0000]
Remarks: ANEXO 24-0491-1-A RALED III 80 LED
Driver XITANIUM 180W 0.1-0.9A 0-10V Dimm
Driver XITANIUM 100W 1.1A 0-10V Dimming
MOD LED 2X8 Z15 5050 4K SEOUL

Photometric Data Table [cd]

112.0	13.27	12.95	13.49	15.65	20.29	29.27	44.13	63.25	96.08	111.8
114.0	14.18	13.81	14.22	16.50	21.32	30.44	45.68	65.34	95.41	110.2
116.0	15.11	14.67	15.02	17.30	22.32	31.54	46.76	66.64	94.90	108.8
118.0	16.02	15.66	15.82	17.99	23.22	32.45	47.53	67.24	94.77	107.7
120.0	16.94	16.70	16.65	18.72	23.96	33.19	47.87	67.13	94.78	106.5
122.0	17.83	17.71	17.47	19.50	24.49	33.61	47.81	66.33	94.76	105.2
124.0	18.66	18.52	18.20	20.28	25.03	33.78	47.30	64.88	94.54	103.7
126.0	19.47	19.33	19.11	21.09	25.69	33.83	46.58	63.06	93.90	101.9
128.0	20.24	20.10	20.13	21.93	26.34	33.99	45.78	61.09	93.04	100.0
130.0	20.92	20.80	21.15	22.71	27.03	34.32	45.11	59.00	92.01	98.08
132.0	21.51	21.41	22.02	23.70	27.79	34.62	44.81	57.25	90.87	96.28
134.0	22.02	21.95	22.77	24.77	28.58	34.97	44.50	56.12	89.66	94.54
136.0	22.53	22.49	23.49	25.83	29.38	35.51	44.26	55.00	88.28	92.70
138.0	23.10	23.08	24.19	26.87	30.39	35.96	44.16	53.97	86.71	90.73
140.0	23.75	23.74	24.96	27.71	31.35	36.48	43.78	53.04	85.07	88.86
142.0	24.54	24.58	25.78	28.57	32.30	37.12	43.55	51.68	83.46	86.92
144.0	25.52	25.56	26.74	29.46	33.15	37.72	43.54	50.69	81.99	85.22
146.0	26.70	26.72	27.81	30.38	33.88	38.35	43.56	50.03	80.78	83.81
148.0	28.08	28.06	29.03	31.36	34.65	38.74	43.68	49.49	79.61	82.43
150.0	29.61	29.53	30.35	32.44	35.47	39.16	43.52	49.11	78.69	81.32
152.0	31.21	31.09	31.76	33.62	36.36	39.67	43.42	48.37	77.81	80.25
154.0	32.93	32.76	33.28	34.90	37.37	40.34	43.57	48.29	77.25	79.49
156.0	34.75	34.50	34.90	36.30	38.42	41.09	44.09	48.64	76.77	78.80
158.0	36.66	36.34	36.61	37.73	39.50	41.92	44.76	49.06	76.38	78.24
160.0	38.63	38.28	38.37	39.25	40.66	42.94	45.62	49.63	76.05	77.69
162.0	40.74	40.28	40.19	40.84	42.02	44.16	46.69	50.30	75.70	77.09
164.0	42.88	42.31	42.02	42.49	43.57	45.56	47.89	51.09	75.27	76.43
166.0	45.05	44.37	43.90	44.26	45.32	47.23	49.45	52.25	75.02	75.91
168.0	47.22	46.47	45.89	46.24	47.31	49.16	51.19	53.78	74.75	75.39
170.0	49.38	48.59	47.98	48.43	49.58	51.39	53.41	55.74	74.44	74.81
172.0	51.56	50.79	50.27	50.81	52.03	53.89	55.81	58.19	74.22	74.37
174.0	53.77	53.15	52.75	53.34	54.46	56.27	58.11	60.31	73.96	73.91
176.0	56.21	55.69	55.42	56.01	56.91	58.39	59.74	61.59	73.55	73.38
178.0	59.11	58.76	58.55	59.08	59.67	60.87	61.68	63.05	73.19	72.81
180.0	61.93	61.71	61.39	61.83	62.03	62.85	63.24	64.19	72.94	72.13
G/C	200.0	210.0	220.0	230.0	240.0	250.0	260.0	270.0	280.0	290.0
0.0	7168	7168	7168	7168	7168	7168	7168	7168	7168	7168
2.0	7065	7007	6956	6898	6858	6810	6791	6759	6765	6767
4.0	6940	6805	6674	6527	6427	6309	6261	6197	6220	6234
6.0	6798	6558	6326	6075	5893	5709	5630	5548	5581	5625
8.0	6636	6280	5938	5587	5329	5101	5000	4919	4955	5018
10.0	6458	5983	5535	5105	4811	4580	4480	4421	4455	4529
12.0	6275	5681	5139	4675	4389	4187	4091	4047	4082	4159
14.0	6096	5386	4781	4328	4061	3876	3787	3758	3788	3867
16.0	5922	5107	4470	4046	3791	3636	3577	3573	3590	3654
18.0	5745	4840	4204	3802	3573	3479	3431	3431	3445	3506
20.0	5555	4595	3974	3590	3428	3344	3297	3299	3311	3370
22.0	5376	4370	3768	3439	3299	3216	3165	3171	3180	3241
24.0	5201	4164	3582	3314	3177	3089	3049	3059	3065	3115
26.0	5020	3968	3421	3197	3057	2977	2944	2959	2962	3008
28.0	4849	3785	3288	3074	2945	2879	2855	2872	2874	2914
30.0	4704	3623	3167	2958	2843	2795	2778	2792	2796	2834
32.0	4587	3486	3059	2856	2754	2721	2703	2710	2720	2759
34.0	4501	3383	2970	2767	2677	2647	2621	2624	2637	2683
36.0	4435	3302	2901	2696	2603	2572	2540	2539	2555	2604
38.0	4390	3246	2844	2632	2529	2505	2476	2461	2481	2535
40.0	4361	3208	2793	2567	2455	2432	2408	2399	2409	2485
42.0	4350	3168	2749	2496	2390	2395	2347	2362	2360	2426
44.0	4382	3135	2708	2434	2339	2329	2313	2339	2329	2369
46.0	4506	3145	2674	2387	2316	2306	2316	2357	2342	2359
48.0	4830	3264	2653	2358	2341	2354	2348	2392	2378	2410
50.0	4649	3456	2676	2360	2433	2397	2360	2399	2386	2435
52.0	4262	3058	2820	2388	2502	2416	2349	2376	2355	2429
54.0	4167	2798	2557	2476	2526	2370	2272	2290	2260	2363
56.0	4167	2647	2295	2394	2488	2367	2181	2168	2152	2320
58.0	4201	2537	2145	2116	2435	2381	2098	2039	2053	2331
60.0	4262	2443	2001	1919	2279	2163	1902	1876	1888	2160
62.0	4345	2375	1866	1757	1993	1877	1659	1654	1662	1871
64.0	4452	2325	1736	1603	1735	1618	1456	1451	1464	1629
66.0	4501	2302	1627	1457	1534	1406	1286	1285	1285	1415
68.0	4548	2240	1518	1307	1340	1242	1146	1147	1142	1242
70.0	4576	2227	1393	1130	1146	1097	1021	1009	1016	1098
72.0	4469	2217	1272	954.1	976.0	951.2	890.4	881.2	887.4	954.0
74.0	4040	2099	1158	795.7	820.6	818.0	708.5	671.7	713.3	823.4

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25±1°CDEG
Operators: Fabian Loaiza
Test Date: 2024-08-05

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System: EVERFINE GO-2000H_V1 SYSTEM V2.0.406.10
Humidity: MAX: 52.5-MIN: 42.7%
Test Distance: 7.080m [K=1.0000]
Remarks: ANEXO 24-0491-1-A RALEED III 80 LED
Driver XITANIUM 180W 0.1-0.9A 0-10V Dimm
Driver XITANIUM 100W 1.1A 0-10V Dimming
MOD LED 2X8 Z15 5050 4K SEOUL

Photometric Data Table [cd]

76.0	3050	1627	1049	650.6	676.5	619.4	511.9	467.9	511.3	632.9
78.0	2061	1143	862.2	517.2	528.5	433.2	356.9	330.0	356.5	442.8
80.0	1080	659.2	586.4	367.2	350.0	285.8	250.6	218.5	250.5	292.2
82.0	490.5	379.1	374.3	240.4	223.4	175.6	144.4	135.0	145.0	182.5
84.0	290.4	169.3	162.2	113.8	97.37	102.8	74.84	80.37	75.40	106.7
86.0	92.28	104.2	77.24	41.40	36.91	30.09	27.81	26.08	28.13	31.18
88.0	49.72	39.50	28.63	16.43	11.44	7.288	6.788	6.090	6.730	7.679
90.0	45.72	37.78	25.05	14.94	8.565	6.185	5.157	5.141	5.650	7.014
92.0	55.80	46.63	31.11	18.94	11.13	8.006	6.565	6.428	7.023	9.033
94.0	68.70	57.11	38.12	23.45	14.18	10.23	8.401	8.290	8.925	11.37
96.0	82.99	68.47	45.28	28.21	17.55	12.83	10.61	10.43	11.24	14.22
98.0	96.88	79.36	52.28	33.25	21.40	15.82	13.12	12.85	13.81	17.41
100.0	106.9	87.96	58.84	38.52	25.60	19.13	15.91	15.60	16.71	21.00
102.0	112.6	93.88	64.89	43.96	30.21	22.83	19.12	18.68	20.00	24.92
104.0	115.3	97.68	70.18	49.24	34.99	26.75	22.61	22.14	23.57	29.06
106.0	116.3	100.0	74.52	54.15	39.76	30.91	26.35	25.82	27.39	33.37
108.0	116.3	101.3	77.94	58.56	44.26	35.01	30.25	29.59	31.23	37.51
110.0	115.4	101.7	80.71	62.41	48.28	38.88	34.03	33.24	34.98	41.27
112.0	114.0	101.8	82.87	65.70	51.77	42.38	37.63	36.74	38.47	44.67
114.0	112.5	101.9	84.73	68.42	54.75	45.61	41.04	40.07	41.78	47.77
116.0	111.2	101.9	86.23	70.66	57.39	48.67	44.20	43.30	44.89	50.66
118.0	109.7	101.4	87.31	72.57	59.85	51.73	47.22	46.38	47.90	53.63
120.0	108.0	100.2	87.60	74.12	62.24	54.73	50.15	49.41	50.82	56.54
122.0	105.9	98.47	87.27	75.37	64.49	57.61	52.96	52.35	53.67	59.54
124.0	103.6	96.28	86.37	76.27	66.26	60.22	55.66	55.16	56.48	62.30
126.0	101.1	93.97	85.44	76.91	68.13	62.66	58.37	57.87	59.22	64.86
128.0	98.37	91.54	84.27	77.19	69.84	64.85	60.82	60.52	61.89	67.29
130.0	95.65	89.20	82.88	76.81	71.33	66.67	63.13	62.95	64.37	69.43
132.0	93.49	87.14	81.50	76.52	72.43	68.26	65.21	65.21	66.66	71.32
134.0	91.65	85.45	80.13	76.34	73.02	69.48	66.97	67.21	68.69	72.96
136.0	90.04	84.14	78.91	76.23	73.32	70.46	68.50	68.96	70.40	74.33
138.0	88.48	82.82	78.37	76.22	73.46	71.28	69.85	70.53	71.90	75.44
140.0	86.90	81.91	78.08	76.18	73.57	72.04	71.01	71.87	73.20	76.36
142.0	85.39	81.36	78.00	76.12	73.77	72.77	72.12	73.15	74.37	77.21
144.0	84.13	80.88	77.94	76.09	74.02	73.60	73.25	74.36	75.45	78.02
146.0	82.95	80.36	77.66	76.04	74.22	74.36	74.27	75.40	76.28	78.58
148.0	81.73	79.52	77.15	75.82	74.23	74.91	75.06	76.25	76.95	78.87
150.0	80.74	78.85	76.77	75.69	74.24	75.35	75.74	76.90	77.48	78.98
152.0	79.87	78.23	76.44	75.54	74.20	75.61	76.17	77.27	77.72	78.99
154.0	79.24	77.83	76.22	75.45	74.10	75.69	76.39	77.42	77.70	78.72
156.0	78.69	77.47	76.03	75.33	73.94	75.62	76.32	77.39	77.51	78.24
158.0	78.26	77.29	76.00	75.36	73.85	75.58	76.18	77.21	77.24	77.71
160.0	77.80	77.06	75.98	75.48	73.81	75.49	75.96	76.84	76.77	77.10
162.0	77.25	76.65	75.83	75.48	73.72	75.31	75.63	76.25	76.14	76.28
164.0	76.50	76.05	75.39	75.19	73.41	75.03	75.05	75.54	75.26	75.30
166.0	75.89	75.55	75.00	74.90	73.10	74.76	74.53	74.93	74.48	74.47
168.0	75.21	74.86	74.35	74.29	72.52	74.12	73.77	73.99	73.48	73.24
170.0	74.46	74.04	73.54	73.39	71.54	73.05	72.59	72.59	72.08	71.81
172.0	73.73	73.15	72.51	72.25	70.25	71.69	71.17	70.99	70.43	70.16
174.0	73.04	72.22	71.36	70.94	68.81	70.10	69.50	69.30	68.69	68.38
176.0	72.26	71.28	70.19	69.58	67.26	68.32	67.55	67.26	66.69	66.40
178.0	71.46	70.27	68.94	68.13	65.59	66.49	65.48	65.12	64.47	64.20
180.0	70.58	69.10	67.49	66.46	63.62	64.50	63.28	62.74	61.95	61.70
G/C	300.0	310.0	320.0	330.0	340.0	350.0				
0.0	7168	7168	7168	7168	7168	7168				
2.0	6809	6841	6904	6962	7033	7102				
4.0	6329	6424	6572	6712	6875	7026				
6.0	5778	5942	6189	6434	6700	6948				
8.0	5208	5438	5780	6135	6519	6873				
10.0	4716	4974	5372	5832	6334	6796				
12.0	4340	4593	5001	5535	6149	6726				
14.0	4016	4289	4683	5257	5977	6671				
16.0	3790	4032	4417	4999	5817	6631				
18.0	3610	3807	4181	4763	5654	6590				
20.0	3471	3634	3977	4549	5484	6540				
22.0	3343	3500	3789	4353	5316	6490				
24.0	3217	3376	3625	4172	5159	6442				
26.0	3099	3259	3492	3993	4988	6405				
28.0	2992	3140	3363	3818	4831	6396				
30.0	2893	3026	3241	3662	4699	6408				
32.0	2806	2924	3129	3533	4592	6440				
34.0	2731	2840	3034	3432	4509	6477				
36.0	2656	2768	2961	3358	4440	6520				
38.0	2580	2702	2907	3298	4391	6577				

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25±1°CDEG
Operators: Fabian Loaiza
Test Date: 2024-08-05

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System: EVERFINE GO-2000H_V1 SYSTEM V2.0.406.10
Humidity: MAX: 52.5-MIN: 42.7%
Test Distance: 7.080m [K=1.0000]
Remarks: ANEXO 24-0491-1-A RALED III 80 LED
Driver XITANIUM 180W 0.1-0.9A 0-10V Dimm
Driver XITANIUM 100W 1.1A 0-10V Dimming
MOD LED 2X8 Z15 5050 4K SEOUL

Photometric Data Table [cd]

40.0	2501	2639	2863	3249	4350	6654
42.0	2436	2574	2823	3197	4324	6783
44.0	2390	2511	2771	3152	4323	7026
46.0	2365	2460	2720	3136	4411	7490
48.0	2403	2425	2669	3218	4703	8007
50.0	2497	2415	2667	3422	4591	7592
52.0	2561	2433	2818	3103	4211	7324
54.0	2566	2494	2578	2810	4080	7290
56.0	2492	2432	2339	2635	4066	7329
58.0	2419	2136	2165	2510	4094	7394
60.0	2290	1912	2006	2414	4162	7473
62.0	2007	1742	1858	2348	4251	7588
64.0	1742	1591	1731	2292	4368	7779
66.0	1532	1445	1622	2262	4459	7769
68.0	1330	1299	1506	2206	4520	7683
70.0	1142	1127	1385	2168	4596	7549
72.0	976.0	955.1	1252	2153	4574	7042
74.0	826.8	799.3	1136	2044	4198	6066
76.0	681.4	659.4	1035	1599	3349	4678
78.0	532.9	527.7	871.5	1132	2303	3182
80.0	350.3	372.9	596.6	665.2	1261	1945
82.0	224.6	246.4	378.3	375.7	564.5	1188
84.0	99.73	116.5	162.1	167.3	329.1	432.6
86.0	38.92	42.10	74.80	103.1	93.84	141.6
88.0	12.21	17.52	29.45	40.77	50.91	93.05
90.0	9.996	17.20	27.86	40.72	47.40	45.54
92.0	12.90	21.58	34.56	50.36	58.13	55.44
94.0	16.22	26.47	42.20	61.59	71.46	67.82
96.0	19.95	31.73	50.13	73.91	86.30	81.49
98.0	24.10	37.20	57.97	85.59	100.4	95.01
100.0	28.70	42.93	65.26	94.45	110.4	105.3
102.0	33.66	48.87	71.83	100.2	116.0	111.4
104.0	38.81	54.63	77.15	103.7	118.7	114.2
106.0	43.90	59.76	81.20	105.7	119.7	115.0
108.0	48.58	64.28	84.26	106.7	119.5	114.7
110.0	52.74	68.21	86.65	107.0	118.5	113.6
112.0	56.30	71.54	88.76	106.9	116.9	112.2
114.0	59.35	74.28	90.62	106.8	115.3	110.6
116.0	62.06	76.73	92.16	106.8	113.8	109.1
118.0	64.64	78.87	93.52	106.7	112.4	107.5
120.0	67.06	80.79	94.69	106.4	110.9	105.6
122.0	69.41	82.62	95.59	106.0	109.2	103.5
124.0	71.32	84.28	96.19	105.2	107.1	101.1
126.0	73.37	85.80	96.62	104.1	104.9	98.27
128.0	75.44	87.01	96.99	102.9	102.2	94.94
130.0	77.38	87.70	97.17	101.8	99.49	91.49
132.0	79.09	88.29	96.98	100.4	97.13	88.60
134.0	80.31	88.89	96.24	98.80	94.75	86.13
136.0	81.09	89.24	95.02	96.89	92.38	83.90
138.0	81.65	89.37	94.00	94.69	90.12	81.68
140.0	82.05	89.19	92.94	92.67	87.93	79.76
142.0	82.31	88.57	91.81	90.97	85.94	77.97
144.0	82.39	87.84	90.69	89.38	84.37	76.57
146.0	82.33	87.05	89.35	87.92	82.98	75.45
148.0	82.04	86.09	87.79	86.27	81.59	74.39
150.0	81.55	85.03	86.25	84.69	80.40	73.69
152.0	80.89	83.79	84.67	83.13	79.22	73.17
154.0	80.18	82.45	83.09	81.70	78.23	72.87
156.0	79.35	81.01	81.41	80.18	77.23	72.60
158.0	78.51	79.76	79.86	78.91	76.32	72.33
160.0	77.57	78.53	78.31	77.64	75.60	72.29
162.0	76.51	77.19	77.04	76.52	74.77	71.87
164.0	75.36	75.84	75.56	75.03	73.53	71.12
166.0	74.30	74.51	74.11	73.52	72.37	70.46
168.0	72.94	73.10	72.58	72.02	71.15	69.66
170.0	71.50	71.60	70.94	70.42	69.77	68.72
172.0	69.83	69.79	69.15	68.74	68.33	67.77
174.0	68.03	67.97	67.34	67.07	66.91	66.87
176.0	66.07	66.08	65.67	65.59	65.57	65.97
178.0	63.92	64.13	63.99	64.30	64.39	65.14
180.0	61.42	61.84	62.06	62.86	63.25	64.21

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
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Operators: Fabian Loaiza
Test Date: 2024-08-05

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System: EVERFINE GO-2000H_V1 SYSTEM V2.0.406.10
Humidity: MAX: 52.5-MIN: 42.7%
Test Distance: 7.080m [K=1.0000]
Remarks: ANEXO 24-0491-1-A RALÉD III 80 LED
Driver XITANIUM 180W 0.1-0.9A 0-10V Dimm
Driver XITANIUM 100W 1.1A 0-10V Dimming
MOD LED 2X8 Z15 5050 4K SEOUL