

GOOD GAME![®]
NEW DEAL FOR SPORT

Report REF-EVAL[®] Level 2

Palmeiras 1-0 Bahia

2023/10/28

Competition: Brazil Serie A 2023

Report Publication Date: 2023/11/12

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GLOSSARY

CRD: Correct Referee Decision

IRD: Incorrect Referee Decision

AI: Artificial Intelligence

1-REF-EVAL[®] METHOD

The REF-EVAL[®] method is the exclusive property of the GOOD GAME![®] company. The REF-EVAL[®] method uses multifactorial analysis of player physiological, biomechanical and tactical performance combined with all refereeing decisions.

The REF-EVAL[®] method, developed over 15 years of analysing players and referees performance data, provides more than 99% correct answers on all refereeing situations. The REF-EVAL[®] method leverages complex algorithms from artificial intelligence (AI) to identify all what are called IRD (Incorrect Referee Decision) to be opposed to CRD (Correct Referee Decision).

We then distinguish between IRD High, i.e. referee errors that directly influence the score (e.g. an invalid penalty whistled...) or the number of players (e.g. a red card not given...) and IRD Low, i.e. referee errors that do not directly influence the score (e.g. a foul not whistled...). In the same way we distinguish the CRD Low when the referee makes the right decision on a simple decision, from the CRD High when the referee makes a right decision on a complex situation (a penalty rightly whistled for example).

Furthermore the REF-EVAL[®] distinguish the unintentional IRD that occur in all football matches from intentional IRD to also identify potential match-fixing related to referees. The REF-EVAL[®] method is today the most advanced tool to secure competitions results and evaluate referees.

2-MATCH INFORMATION

General Information

Date	2023/10/28	
Time	19:00	
Country	Brazil	
City	Sao Paulo	
Stadium	Allianz Parque	
Field length (m)	/	
Field width (m)	/	
	Wind	Rain
	/	/

Referees

Position	NAME	First name
Referee	PEREIRA DE LIMA	Rodrigo Jose
Assistant referee	HENRIQUE CORREA	Rodrigo Figueiredo
Assistant referee	CHAVES BEZERRA JUNIOR	Francisco
Fourth official	MARQUES DAS FLORES	Douglas
Video Assistant Referee	REWAY	Wagner
Assistant Video Assistant Referee	FARIA SISQUIM	Silbert



Video Assistant Referee

YES

3-REFEREEING SITUATIONS (from chrono)

First Half: 0 to 15min

ORDER	PERIOD	TYPE	VAR	TEAM CODE	CHRONO	VIDEO TIME	WHISTLED / NOT	DECISION	CRD/IRD* Type	CRD/IRD Classification	IRD team benefit
1	First Half	Start first half	No	Palmeiras	000:00		Whistled	Correct		CRD Low	
2	First Half	Offside (from)	No	Palmeiras	000:30		Whistled	Correct		CRD Low	
3	First Half	Throw-in (for)	No	Bahia	002:00		Whistled	Correct		CRD Low	
4	First Half	Goal kick (for)	No	Palmeiras	002:13		Whistled	Correct		CRD Low	
5	First Half	Throw-in (for)	No	Palmeiras	003:03		Whistled	Correct		CRD Low	
6	First Half	Throw-in (for)	No	Palmeiras	003:40		Whistled	Correct		CRD Low	
7	First Half	Throw-in (for)	No	Palmeiras	004:07		Whistled	Correct		CRD Low	
8	First Half	Throw-in (for)	No	Palmeiras	004:51		Whistled	Correct		CRD Low	
9	First Half	Foul (from)	No	Palmeiras	005:18		Whistled	Correct		CRD Low	
10	First Half	Throw-in (for)	No	Palmeiras	006:49		Whistled	Correct		CRD Low	
11	First Half	Foul (from)	No	Palmeiras	007:11		Whistled	Correct		CRD Low	
12	First Half	Yellow card (for)	No	Palmeiras	007:13		Not Whistled	Incorrect	Valid Yellow Card Not Given (VYCNG)	IRD Low	Palmeiras
13	First Half	Foul (from)	No	Bahia	008:16		Whistled	Correct		CRD Low	
14	First Half	Yellow card (for)	No	Bahia	008:39		Whistled	Correct		CRD Low	
15	First Half	Goal kick (for)	No	Palmeiras	010:01		Whistled	Correct		CRD Low	
16	First Half	Throw-in (for)	No	Bahia	010:35		Whistled	Correct		CRD Low	
17	First Half	Foul (from)	No	Bahia	012:11		Whistled	Correct		CRD Low	
18	First Half	Foul (from)	No	Palmeiras	014:01		Not Whistled	Correct	Advantage	CRD Low	
19	First Half	Throw-in (for)	No	Palmeiras	014:25		Whistled	Correct		CRD Low	
20	First Half	Goal kick (for)	No	Bahia	014:53		Whistled	Correct		CRD Low	

*CRD(Correct Referee Decision) / IRD (Incorrect Referee Decision)

First Half: 15 to 30min

ORDER	PERIOD	TYPE	VAR	TEAM CODE	CHRONO	VIDEO TIME	WHISTLED / NOT	DECISION	CRD/IRD* Type	CRD/IRD Classification	IRD team benefit
21	First Half	Other	No	Bahia	015:20		Not Whistled	Correct		CRD Low	
22	First Half	Substitution (for)	No	Bahia	017:05		Whistled	Correct		CRD Low	
23	First Half	Throw-in (for)	No	Bahia	017:22		Whistled	Correct		CRD Low	
24	First Half	Corner kick (for)	No	Palmeiras	017:56		Whistled	Correct		CRD Low	
25	First Half	Throw-in (for)	No	Palmeiras	019:16		Whistled	Correct		CRD Low	
26	First Half	Throw-in (for)	No	Bahia	019:58		Whistled	Correct		CRD Low	
27	First Half	Throw-in (for)	No	Bahia	020:23		Whistled	Correct		CRD Low	
28	First Half	Foul (from)	No	Palmeiras	020:42		Whistled	Correct		CRD Low	
29	First Half	Foul (from)	No	Palmeiras	021:27		Whistled	Correct		CRD Low	
30	First Half	Throw-in (for)	No	Palmeiras	021:54		Whistled	Correct		CRD Low	
31	First Half	Throw-in (for)	No	Palmeiras	023:21		Whistled	Correct		CRD Low	
32	First Half	Goal kick (for)	No	Palmeiras	024:06		Whistled	Correct		CRD Low	
33	First Half	Throw-in (for)	No	Palmeiras	024:48		Whistled	Correct		CRD Low	
34	First Half	Foul (from)	No	Bahia	025:12		Whistled	Correct		CRD Low	
35	First Half	Throw-in (for)	No	Palmeiras	027:00		Whistled	Correct		CRD Low	
36	First Half	Throw-in (for)	No	Palmeiras	027:57		Whistled	Correct		CRD Low	
37	First Half	Throw-in (for)	No	Palmeiras	028:47		Whistled	Correct		CRD Low	
38	First Half	Goal kick (for)	No	Bahia	029:11		Whistled	Correct		CRD Low	
39	First Half	Throw-in (for)	No	Palmeiras	029:47		Whistled	Correct		CRD Low	

*CRD(Correct Referee Decision) / IRD (Incorrect Referee Decision)

First Half: 30min to half time

ORDER	PERIOD	TYPE	VAR	TEAM CODE	CHRONO	VIDEO TIME	WHISTLED / NOT	DECISION	CRD/IRD* Type	CRD/IRD Classification	IRD team benefit
40	First Half	Throw-in (for)	No	Palmeiras	030:04		Whistled	Correct		CRD Low	
41	First Half	Throw-in (for)	No	Palmeiras	031:27		Whistled	Correct		CRD Low	
42	First Half	Offside (from)	No	Palmeiras	031:56		Whistled	Correct		CRD Low	
43	First Half	Foul (from)	No	Bahia	032:39		Whistled	Correct		CRD Low	
44	First Half	Throw-in (for)	No	Palmeiras	032:56		Whistled	Correct		CRD Low	
45	First Half	Foul (from)	No	Bahia	034:13		Not Whistled	Correct	Advantage	CRD Low	
46	First Half	Throw-in (for)	No	Bahia	034:52		Whistled	Correct		CRD Low	
47	First Half	Corner kick (for)	No	Palmeiras	036:05		Whistled	Correct		CRD Low	
48	First Half	Foul (from)	No	Bahia	037:02		Not Whistled	Correct	Advantage	CRD Low	
49	First Half	Foul (from)	No	Palmeiras	037:03		Not Whistled	Incorrect	Valid Foul Not Whistled (VFNW)	IRD Low	Palmeiras
50	First Half	Goal (for)	Permitted	Palmeiras	037:06		Whistled	Incorrect	Invalid Goal Accepted (IGA)	IRD High	Palmeiras
51	First Half	Foul (from)	No	Palmeiras	039:02		Whistled	Correct		CRD Low	
52	First Half	Throw-in (for)	No	Palmeiras	039:53		Whistled	Correct		CRD Low	
53	First Half	Foul (from)	No	Bahia	041:09		Whistled	Correct		CRD Low	
54	First Half	Foul (from)	No	Palmeiras	041:38		Whistled	Correct		CRD Low	
55	First Half	Goal kick (for)	No	Bahia	042:27		Whistled	Correct		CRD Low	
56	First Half	Throw-in (for)	No	Palmeiras	043:00		Whistled	Correct		CRD Low	
57	First Half	Corner kick (for)	No	Palmeiras	045:03		Whistled	Correct		CRD Low	
58	First Half	Throw-in (for)	No	Palmeiras	045:51		Whistled	Correct		CRD Low	
59	First Half	Throw-in (for)	No	Bahia	046:21		Whistled	Correct		CRD Low	
60	First Half	Throw-in (for)	No	Bahia	046:39		Whistled	Correct		CRD Low	
61	First Half	Foul (from)	No	Bahia	047:47		Whistled	Incorrect	Invalid Foul Whistled (IFW)	IRD Low	Palmeiras
62	First Half	Yellow card (for)	No	Bahia	047:52		Whistled	Incorrect	Invalid Yellow Card Given (IYCG)	IRD Low	Palmeiras
63	First Half	End first half	No	Palmeiras	048:18		Whistled	Correct		CRD Low	

*CRD(Correct Referee Decision) / IRD (Incorrect Referee Decision)

Second Half: 45 to 60min

ORDER	PERIOD	TYPE	VAR	TEAM CODE	CHRONO	VIDEO TIME	WHISTLED / NOT	DECISION	CRD/IRD* Type	CRD/IRD Classification	IRD team benefit
64	Second Half	Substitution (for)	No	Bahia	045:00		Whistled	Not Assessee		CRD Low	
65	Second Half	Start second half	No	Bahia	045:00		Whistled	Correct		CRD Low	
66	Second Half	Goal kick (for)	No	Bahia	046:20		Whistled	Correct		CRD Low	
67	Second Half	Foul (from)	No	Palmeiras	047:06		Whistled	Correct		CRD Low	
68	Second Half	Throw-in (for)	No	Bahia	047:25		Whistled	Correct		CRD Low	
69	Second Half	Goal kick (for)	No	Palmeiras	047:50		Whistled	Correct		CRD Low	
70	Second Half	Throw-in (for)	No	Bahia	048:07		Whistled	Correct		CRD Low	
71	Second Half	Foul (from)	No	Palmeiras	048:57		Whistled	Correct		CRD Low	
72	Second Half	Yellow card (for)	No	Palmeiras	049:02		Whistled	Correct		CRD Low	
73	Second Half	Foul (from)	No	Palmeiras	049:52		Whistled	Correct		CRD Low	
74	Second Half	Goal kick (for)	No	Bahia	050:37		Whistled	Correct		CRD Low	
75	Second Half	Foul (from)	No	Bahia	051:00		Not Whistled	Correct	Advantage	CRD Low	
76	Second Half	Goal kick (for)	No	Bahia	052:22		Whistled	Correct		CRD Low	
77	Second Half	Foul (from)	No	Bahia	052:52		Whistled	Correct		CRD Low	
78	Second Half	Throw-in (for)	No	Bahia	053:32		Whistled	Correct		CRD Low	
79	Second Half	Foul (from)	No	Palmeiras	053:55		Not Whistled	Correct	Advantage	CRD Low	
80	Second Half	Offside (from)	No	Palmeiras	059:24		Whistled	Correct		CRD Low	
81	Second Half	Corner kick (for)	No	Bahia	056:11		Whistled	Correct		CRD Low	
82	Second Half	Foul (from)	No	Bahia	057:07		Not Whistled	Incorrect	Valid Foul Not Whistled (VFNW)	IRD Low	Bahia
83	Second Half	Throw-in (for)	No	Bahia	057:10		Whistled	Correct		CRD Low	
84	Second Half	Foul (from)	No	Bahia	057:56		Whistled	Correct		CRD Low	
85	Second Half	Corner kick (for)	No	Palmeiras	059:11		Whistled	Correct		CRD Low	

*CRD(Correct Referee Decision) / IRD (Incorrect Referee Decision)

Second Half: 60 to 75min

ORDER	PERIOD	TYPE	VAR	TEAM CODE	CHRONO	VIDEO TIME	WHISTLED / NOT	DECISION	CRD/IRD* Type	CRD/IRD Classification	IRD team benefit
86	Second Half	Substitution (for)	No	Bahia	060:26		Whistled	Correct		CRD Low	
87	Second Half	Substitution (for)	No	Bahia	060:32		Whistled	Correct		CRD Low	
88	Second Half	Substitution (for)	No	Bahia	060:52		Whistled	Correct		CRD Low	
89	Second Half	Corner kick (for)	No	Palmeiras	061:12		Whistled	Correct		CRD Low	
90	Second Half	Goal kick (for)	No	Bahia	061:38		Whistled	Correct		CRD Low	
91	Second Half	Goal kick (for)	No	Palmeiras	062:35		Whistled	Correct		CRD Low	
92	Second Half	Substitution (for)	No	Palmeiras	062:40		Whistled	Correct		CRD Low	
93	Second Half	Substitution (for)	No	Palmeiras	063:14		Whistled	Correct		CRD Low	
94	Second Half	Throw-in (for)	No	Palmeiras	063:36		Whistled	Correct		CRD Low	
95	Second Half	Throw-in (for)	No	Bahia	064:01		Whistled	Correct		CRD Low	
96	Second Half	Foul (from)	No	Bahia	064:23		Not Whistled	Correct	Advantage	CRD Low	
97	Second Half	Foul (from)	No	Bahia	064:29		Whistled	Correct		CRD Low	
98	Second Half	Goal kick (for)	No	Bahia	065:22		Whistled	Correct		CRD Low	
99	Second Half	Throw-in (for)	No	Bahia	065:52		Whistled	Correct		CRD Low	
100	Second Half	Foul (from)	No	Bahia	066:47		Whistled	Correct		CRD Low	
101	Second Half	Throw-in (for)	No	Palmeiras	067:04		Whistled	Correct		CRD Low	
102	Second Half	Foul (from)	No	Bahia	067:31		Whistled	Correct		CRD Low	
103	Second Half	Yellow card (for)	No	Bahia	067:34		Not Whistled	Incorrect	Valid Yellow Card Not Given (VYCNG)	IRD Low	Bahia
104	Second Half	Other	No	Palmeiras	068:15		Whistled	Correct		CRD Low	
105	Second Half	Throw-in (for)	No	Palmeiras	069:26		Whistled	Correct		CRD Low	
106	Second Half	Throw-in (for)	No	Bahia	069:57		Whistled	Correct		CRD Low	
107	Second Half	Other	No	Palmeiras	070:05		Whistled	Correct		CRD Low	
108	Second Half	Substitution (for)	No	Palmeiras	070:27		Whistled	Correct		CRD Low	
109	Second Half	Drop ball	No	Bahia	070:45		Whistled	Not Assessed		CRD Low	
110	Second Half	Throw-in (for)	No	Bahia	071:01		Whistled	Correct		CRD Low	
111	Second Half	Goal kick (for)	No	Bahia	072:03		Whistled	Correct		CRD Low	
112	Second Half	Throw-in (for)	No	Bahia	072:38		Whistled	Correct		CRD Low	
113	Second Half	Goal kick (for)	No	Bahia	073:30		Whistled	Correct		CRD Low	
114	Second Half	Other	No	Bahia	074:00		Whistled	Correct		CRD Low	

*CRD(Correct Referee Decision) / IRD (Incorrect Referee Decision)

Second Half: 75min to end second half

ORDER	PERIOD	TYPE	VAR	TEAM CODE	CHRONO	VIDEO TIME	WHISTLED / NOT	DECISION	CRD/IRD* Type	CRD/IRD Classification	IRD team benefit
115	Second Half	Foul (from)	No	Palmeiras	075:42		Whistled	Correct		CRD Low	
116	Second Half	Other	No	Bahia	075:55		Whistled	Not Assessec		CRD Low	
117	Second Half	Foul (from)	No	Bahia	076:21		Whistled	Correct		CRD Low	
118	Second Half	Yellow card (for)	No	Bahia	076:24		Whistled	Correct		CRD Low	
119	Second Half	Foul (from)	No	Bahia	077:04		Whistled	Correct		CRD Low	
120	Second Half	Throw-in (for)	No	Palmeiras	077:23		Whistled	Correct		CRD Low	
121	Second Half	Foul (from)	No	Palmeiras	078:00		Whistled	Correct		CRD Low	
122	Second Half	Throw-in (for)	No	Bahia	079:06		Whistled	Correct		CRD Low	
123	Second Half	Foul (from)	No	Bahia	079:30		Whistled	Correct		CRD Low	
124	Second Half	Foul (from)	No	Palmeiras	080:10		Whistled	Correct		CRD Low	
125	Second Half	Substitution (for)	No	Palmeiras	080:40		Whistled	Correct		CRD Low	
126	Second Half	Substitution (for)	No	Palmeiras	080:49		Whistled	Correct		CRD Low	
127	Second Half	Foul (from)	No	Palmeiras	081:09		Not Whistled	Incorrect	Valid Foul Not Whistled (VFNW)	IRD Low	Palmeiras
128	Second Half	Throw-in (for)	No	Palmeiras	081:14		Whistled	Correct		CRD Low	
129	Second Half	Throw-in (for)	No	Bahia	081:29		Whistled	Correct		CRD Low	
130	Second Half	Offside (from)	No	Palmeiras	082:58		Whistled	Correct		CRD Low	
131	Second Half	Goal kick (for)	No	Bahia	083:50		Whistled	Correct		CRD Low	
132	Second Half	Other	No	Bahia	084:25		Whistled	Correct		CRD Low	
133	Second Half	Foul (from)	No	Palmeiras	085:29		Whistled	Correct		CRD Low	
134	Second Half	Foul (from)	No	Bahia	086:10		Whistled	Correct		CRD Low	
135	Second Half	Throw-in (for)	No	Palmeiras	086:49		Whistled	Correct		CRD Low	
136	Second Half	Corner kick (for)	No	Palmeiras	086:56		Whistled	Correct		CRD Low	
137	Second Half	Foul (from)	No	Palmeiras	087:52		Whistled	Correct		CRD Low	
138	Second Half	Throw-in (for)	No	Bahia	088:27		Whistled	Correct		CRD Low	
139	Second Half	Throw-in (for)	No	Bahia	088:40		Whistled	Correct		CRD Low	
140	Second Half	Foul (from)	No	Bahia	089:23		Whistled	Incorrect	Invalid Foul Whistled (IFW)	IRD Low	
141	Second Half	Red card (for)	No	Bahia	089:33		Whistled	Incorrect	Invalid Red Card Given (IRCG)	IRD High	Palmeiras
142	Second Half	Goal kick (for)	No	Bahia	091:07		Whistled	Correct		CRD Low	
143	Second Half	Goal kick (for)	No	Palmeiras	091:36		Whistled	Correct		CRD Low	
144	Second Half	Goal kick (for)	No	Bahia	092:35		Whistled	Correct		CRD Low	
145	Second Half	Goal kick (for)	No	Bahia	093:23		Whistled	Correct		CRD Low	
146	Second Half	Throw-in (for)	No	Palmeiras	093:50		Whistled	Correct		CRD Low	
147	Second Half	Foul (from)	No	Bahia	094:09		Whistled	Correct		CRD Low	
148	Second Half	Offside (from)	No	Palmeiras	094:56		Whistled	Correct		CRD Low	
149	Second Half	Foul (from)	No	Palmeiras	095:19		Whistled	Correct		CRD Low	
150	Second Half	End second half	No	Bahia	096:00		Whistled	Correct		CRD Low	

*CRD(Correct Referee Decision) / IRD (Incorrect Referee Decision)

4-LIVE IRD & CRD High AI results

3706 IRD High: Invalid Goal Accepted (IGA)

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VAR-ASSIST AI

Final result

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Restart Analysis >>

NO GOAL

GV6-7Y8N9N10Y-NG

Unique analysis AI code: GV6-7Y8N9N10Y-NG





8933 IRD High: Invalid Red Card Given (IRCG)





T0 + 540ms: the imbalance is then caused solely by a voluntary movement of the Palmeiras player's right leg (green arrow).

5-REFEREEING DECISIONS ASSESSMENT

Half time note

/

Full time note

/

REFEREEING SITUATIONS	Total	%
Total number of refereeing situations	150	/
Whistled	138	92
Not whistled	12	8
Correct	137	91
Incorrect (IRD)	10	7
Not assessed	3	2

IRD Distribution	Total	%
Benefits for Palmeiras	8	80
Benefits for Bahia	2	20

IRD Palmeiras	Total
Total number of IRD High with benefit	2
Total number of IRD Low with benefit	6
Total number of IRD High with deficit	0
Total number of IRD Low with deficit	2

IRD Distribution with benefits for Palmeiras	Total
Reverse team	/
Valid goal canceled	/
Invalid goal accepted	1
Valid penalty not whistled	/
Invalid penalty whistled	/
Invalid penalty goal	/
Valid foul not whistled	2
Invalid foul whistled	2
Valid offside not whistled	/
Invalid offside whistled	/
Valid corner kick not whistled	/
Invalid corner kick whistled	/
Valid throw-in not whistled	/
Invalid throw-in whistled	/
Valid yellow card not given	1
Invalid yellow card given	1
Valid red card not given	/
Invalid red card given	1

IRD Bahia	Total
Total number of IRD High with benefit	0
Total number of IRD Low with benefit	2
Total number of IRD High with deficit	2
Total number of IRD Low with deficit	6

IRD Distribution with benefits for Bahia	Total
Reverse team	/
Valid goal canceled	/
Invalid goal accepted	/
Valid penalty not whistled	/
Invalid penalty whistled	/
Invalid penalty goal	/
Valid foul not whistled	1
Invalid foul whistled	/
Valid offside not whistled	/
Invalid offside whistled	/
Valid corner kick not whistled	/
Invalid corner kick whistled	/
Valid throw-in not whistled	/
Invalid throw-in whistled	/
Valid yellow card not given	1
Invalid yellow card given	/
Valid red card not given	/
Invalid red card given	/

6-CONCLUSION

The presence of 2 IRD (Incorrect Referee Decision) High (with direct influence on the score and/or number of players) with benefits for Palmeiras in the match between Palmeiras and Bahia on 2023/10/28, part of the Brazil Serie A 2023, has completely changed the official score and points for each team.

POINTS	OFFICIAL	REAL
Palmeiras	3	1
Bahia	0	1

RESULTS	OFFICIAL	REAL
Palmeiras - Bahia	1-0	0-0

The presence of these 2 IRD High with benefits for Palmeiras, the distribution of total IRDs (High and Low) with 80% benefits for Palmeiras despite the presence of VAR (Video Assistant Referee) , is a potentially abnormal distribution in a professional football match and would require further investigations into refereeing related to manipulation.

On November 12, 2023,

SP, Ph.D.

